

GENERAL PRODUCT GUIDE 2015

1 COMPONENTS FOR CENTRAL HEATING SYSTEMS

2 AIR SEPARATION AND VENTING DEVICES

3 VALVES AND ACCESSORIES FOR RADIATORS

4 DISTRIBUTION MANIFOLDS, ZONE VALVES, BOXES AND ACCESSORIES

5 RADIANT PANEL SYSTEM CONTROL

6 COMPONENTS FOR DOMESTIC WATER SYSTEMS

7 BACKFLOW PREVENTION DEVICES

8 BALANCING DEVICES

9 FITTINGS

10 GAS SAFETY

11 EXPANSION VESSELS, MIXING VALVES, CHRONO-THERMOSTATS

12 HEAT SYSTEMS

13A COMPONENTS FOR SOLAR THERMAL SYSTEMS

13B COMPONENTS FOR HEAT PUMP SYSTEMS

13C COMPONENTS FOR BIOMASS SYSTEMS

14 SPARE PARTS

15 FITTING COUPLING

GENERAL INDEX

SERIES	Page	SERIES	Page	SERIES	Page	SERIES	Page	SERIES	Page	SERIES	Page	SERIES	Page
100	178	201	52	264	230	332	135-157	391	83-123-124	5021	28-29	5322	8
103	171	202	53	265	231-265	333	135-157	391...S1	122	5022	29	5327	8
106	236	203	53	278	220-221	334	135-157	392	86	5024	29	5328	8
108	237	204	53	279	221	336	13	4001	44-46	5025	29	5330	133
109	237	205	45	280	250	337	31	4003	44÷47	5026	29	5330..H	130
110	240-241-244	209	44-46-52	281	254	338	42	4004	44÷47	5027	29	5331	133
111	242	210	53	282	252	3380	48	401	42	503	18	5331..H	131
112	243-246	210	51	2850	256	339	42	402	42	504	30	5332	133
113	244	220	49	2851	258	340	54	411	54	505	31	5332..H	130-131
116	140	221	49	2853	260	341	54	412	54	5054	31	5334	133
118	140-174	222	49	2855	262	342	42-48-54	421	43	5055	31	5334..H	130-131
120	166-168	223	49	3006	14	343	42-54	422	43	507	30	5335	132
121	164	224	49	3010	61-62	347	88-89	425	43	5080	31	5335..H	132
125	167-168	225	50	3011	61-62	347...S1	121	426	43	5081	31	5336	133
126	165	226	50	3012	61-62	348	55	431	42-54	510	12	5336..H	131
127	163	227	49	3013	61-62	349	76-78	432	42-54	5121	7	5337	133
130	176-242	240	222	3014	62	350	76	437	48-58-59	513	9	5337..H	131
130 _{≥ DN 65}	176	250	218	3015	62	351	76	438	58-59	514	9	5338	133
130	178	251	218-219	302	13	354	76-78-149	441	49	519	12-96-178	5338..H	131
132	175	2521	228	3037	134	356	77	444	88-90	520	141	5339	132
140	177	2522	229	3038	134	357	77	445	58-59	521	141	534	148
142	177	2523	229	3041	158	360	64-149	446	88	5213	143-144	5350	128
145	161	2527	229	3045	158	361	64	447	58	5217	143	5351	128
150	111-112- 204-225	253	218	3046	158	362	64	4490	49	5218	142	5360	129
151	111-204	2540	223	3047	158	363	64	4496	56	5219	141	5362	129
1520	97-204	2543	223	3048	158	3640	77	4497	56	522	141	5365	129
1522	264	2544	223	305	13-238	3641	77-149	4498	57	5230	145	5366	129
161	97-204	2545	223	309	9-148-227	3642	77-86-149	4501	55	5231	144	5370	134
165	94-96	2546	223	311	7	3642..S1	122	452	55-56	524	146	537	129
166	94	2547	223	312	7-9	381	57	453	56	525	134	538	15-177-178
167	95-96	2548	223	313	7	382	57-85	454	56	5261	147	539	130
171	102÷105	255	221-222	314	7	383	48-57-85	455	55	527 EST	6	540	11
172	106-107	257	224-225	315	15	384	57-85	459	56	529	12-249	541	10
174	98÷101	258	226	319	147	385	85	472	53	530	8	542	11-248
182	108÷111-115	259	222	3230	135-157	386	85-87-122	475	53	531	8	543	11-248
200	46-52	262	232-265	327	12	3871	57	501	28	5320	7	544	11-249
		263	233-265	328	56	3872	57	5020	28-122	5321	8	5453	21-38-39-239

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GENERAL INDEX

SERIES	Page	SERIES	Page	SERIES	Page	SERIES	Page	SERIES	Page	SERIES	Page	SERIES	Page
546	34-35	574	152-153	612	202	6452	67	679	60	8565	197	910	182
5461	34	574000	15	613	17-201	6453	67	679	58-59-88-89	860 _{≥ ∅ 75}	183	913	182
5462	19-36	574001	15	615	79	6459	67	680	88-89-121	860	183	914	182
5463	20-37	574011	14	6150	201	6460	66	681	48-58-59	861 _{≥ ∅ 75}	183	930	90-182
5465	19-36	575	154	6151	201	6470	66	683	12	861	183-246	933	90
5466	20-37	575 _{≥ DN 150}	154	6152	201	6480	66	687	18	862	184-246	936	48-57-90
5468	20-37	5750	155	616	203	6489	66	688	18-86	863 _{≥ ∅ 75}	184	940	91
5469	19-36	576	130	617	176-203	6490	66	689	18	863	184	941	91
547	12	577	26-155	618	205	650	79	690	16	864	184	942	91-246
547 _{≥ DN 100}	12	578	130	619	206	6509	147	691	16	865	184	943	91
548	22	579	26-155	620	206	6561	70-84-125	692	16	866	185	944	91
5495	23	5812	89	6205	125-206	6562	71-84-125	693	16	867	185	945	91
550	25	583	87	621	17	6563	70-84-125	694	16	868	185	946	91
551	28-32-33	584	87	622	17-111	6564	71-84-125	695	16	869	185	947	91
5520	6	585	87	623	17	657	86	738	111-205	870	185	948	91
552080	6	586	87	624	17	658	65-81-122	739	205	871	185-244-246	960	186
5521	6	588	92-222	625	17-201	659	65-120	740	207	875	183	961	186
553	14	5881	92	626	15	660	120	741	207	876	183	962	186
554	14	5890	65	627	206	661	110-120	75525	226	877	189	963	186
5557	148-200	5891	65	628	206	662	80-81-123-124	7558	137	878	189	964	186
556	200	591	89	630	69	6620	81	837	195	879	189	966	187
5560	18	592	78	632	69	6621	81	838	196	886	189	967	187
557	18	598	79	633	69	663	82-83	839	194	887	189	968	187
5580	16-201	5991	86-149	635	69	6630	83	841	193	888	184	970	187
558	16-201	5993	86-149	636	75	6631	83	842	193	890	188	975	187
559	24	5994	86	6370	203	664	123	8460	193	891	188	980	187
560	31-57	5995	86	637	75	664	123	8461	193	893	188	986	187
561	29	5996	81-122	638	74	666...S1	121	847	192	894	188	R59681	30
5620	30	6000	136-137	641	71	667...S1	121	848	192	900	180	R59720	30
5621	30	6001	137	642	71	668...S1	118-121	850	192	903	180	R96006	90
5622	30	6001	140	643	71	669	86	852	193	904	180		
568	200	6002	140	6440	68-72-73	670	114	8540	194	9050	180		
570	154	6005	138	6442	68-72	671	116	8541	195	9057	181		
570 _{≥ DN 150}	154-155	603	150-227	6443	72-73-227	675	115-117-122	855	197	9058	181		
572	152	605	112	6443 3BY	68	676	70	8561	196	9060	181		
573	152	610	202	6444	68	677	70	8562	196	9067	181		
573001	14	611	202	6450	67	678	70	8563	197	9068	182		

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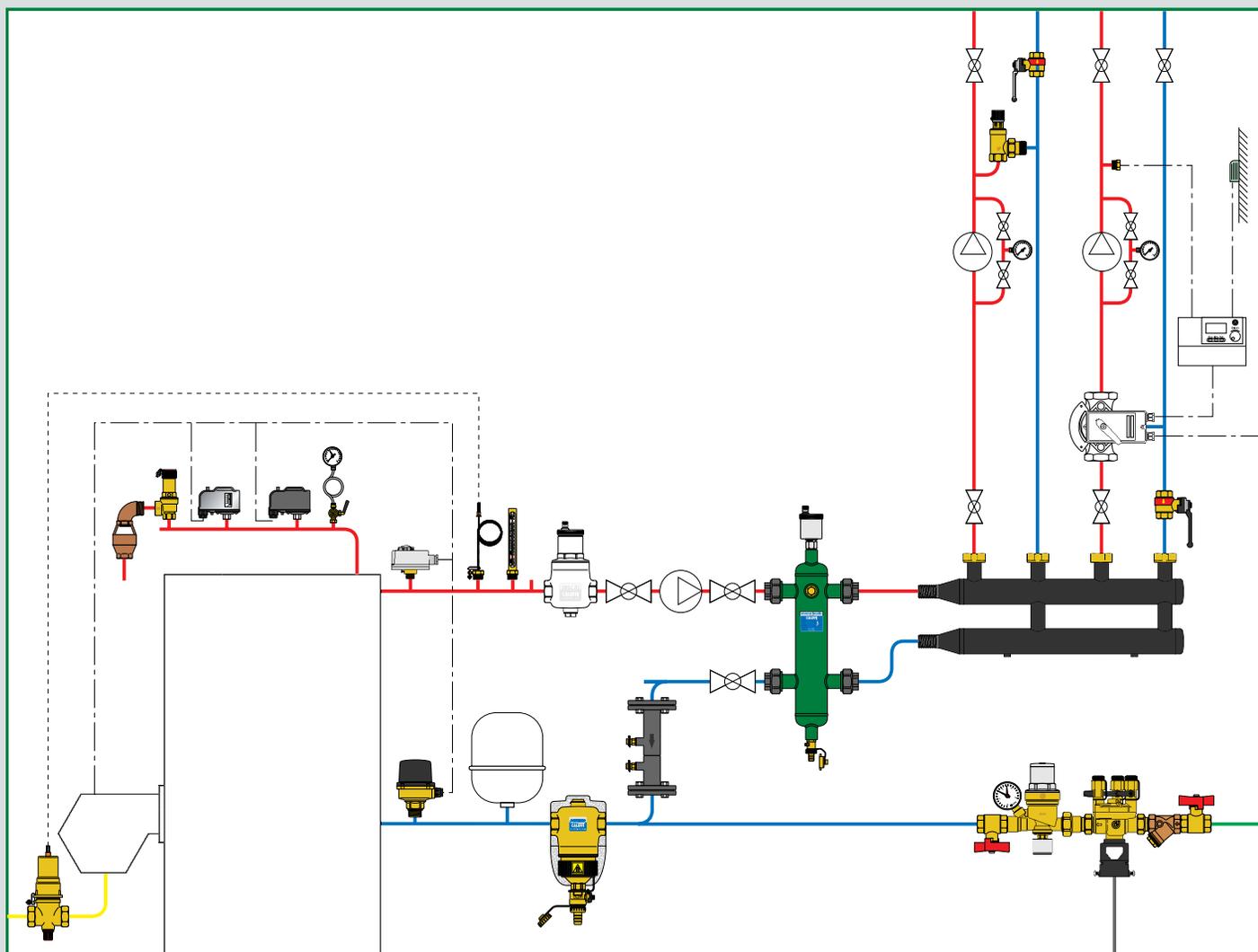
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APPROVAL & CERTIFICATIONS



COMPONENTS FOR CENTRAL HEATING SYSTEMS

This diagram is just an indication



- Safety relief valves
- Fuel shut-off valves
- Temperature relief valves
- Differential by-pass valve
- Air separators
- Automatic filling units
- Thermostats, pressure switches, flow switches
- Pressure gauges and temperature gauges
- Dirt separators DIRTICAL®
- Dirt separators with magnet DIRTMAG®
- Hydraulic separators
- Manifolds for central heating system
- Strainers



527 EST tech. broch. 01053

Safety relief valve.
Female connections.
Discharge overpressure 10%.
Closing differential 20%.
PN 10.
Temperature range: 5–110°C.
Settings: 2,25 - 2,5 - 2,7 - 3 - 3,5 - 4 -
4,5 - 5 - 5,4 - 6 bar.



Code			
5274 ●●EST	1/2" x 3/4"	1	25
5275 ●●EST	3/4" x 1"	1	20
5276 ●●EST	1" x 1 1/4"	1	5
5277 ●●EST	1 1/4" x 1 1/2"	1	5



527 EST tech. broch. 01053
Special settings

Safety relief valve.
Female connections.
Discharge overpressure 10%.
Closing differential 20%.
PN 10.
Temperature range: 5–110°C.
Non-standard pressure settings available
on request: 1 - 1,5 - 2 - 7 - 8 bar.



Code			
5274 ●●EST	1/2" x 3/4"	1	25
5275 ●●EST	3/4" x 1"	1	20
5276 ●●EST	1" x 1 1/4"	1	5
5277 ●●EST	1 1/4" x 1 1/2"	1	5

●● Code completion

bar	●●	bar	●●	bar	●●
1	10	2,7	27	5	50
1,5	15	3	30	5,4	54
2	20	3,5	35	6	60
2,25	22	4	40	7	70
2,5	25	4,5	45	8	80



5521 tech. broch. 01053

Elbow tundish.

Code			
552140	1/2" M x 3/4" F	1	–
552150	3/4" M x 3/4" F	1	–
552160	1" M x 1 1/4" F	1	–
552170	1 1/4" M x 1 1/4" F	1	–



5520 tech. broch. 01053

Straight tundish.

Code			
552050	3/4" F x 3/4" F	1	25
552070	1 1/4" F x 1 1/4" F	1	–



5520 tech. broch. 01053

Pre-formed "special" tundish.

Code			
552080	1 1/2" F	1	–



311  [tech. broch. 01253](#)

Safety relief valve.
Female connections.
Discharge overpressure 20%.
Closing differential 20%.
PN 10.
Temperature range: 5–110°C.
Settings: 2,5 - 3 - 3,5 - 4 - 5 - 6 - 7 - 8 bar.
2 bar for only 3/4" size.



Code			
3114 ●●	1/2"	1	50
3115 ●●	3/4"	1	50



311  [tech. broch. 01253](#)

Safety relief valve.
Female connections.
Discharge overpressure 20%.
Closing differential 15%.
Power rating: 110 kW.
Temperature range: 5–110°C.
Certified to NF P 52-001 - Class 2.



Code			
311431	1/2" 3 bar	1	50



312  [tech. broch. 01253](#)

Safety relief valve.
Male - female connections.
Discharge overpressure 20%.
Closing differential 20%.
PN 10.
Temperature range: 5–110°C.
Settings: 1,8 - 2,5 - 3 - 3,5 - 4 - 5 - 6 - 7 - 8 bar.



Code			
3124 ●●	1/2"	1	50



313  [tech. broch. 01253](#)

Safety relief valve.
Female connections.
With pressure gauge connection.
Discharge overpressure 20%.
Closing differential 15%.
Power rating: 110 kW.
Temperature range: 5–110°C.
Certified to NF P 52-001 - Class 2.



Code			
313433	1/2" 3 bar	50	–



313  [tech. broch. 01253](#)

Safety relief valve.
Female connections.
Discharge overpressure 20%.
Closing differential 20%.
PN 10.
Temperature range: 5–110°C.
Max. pressure gauge temperature: 90°C.
Settings: 2,5 - 3 - 6 - 7 - 8 bar.



Code			
3134 ●●	1/2" with pressure gauge	1	50
3135 ●●	3/4" with pressure gauge	1	50
313432	1/2" 3 bar with pressure gauge connection	1	50
313532	3/4" 3 bar with pressure gauge connection	1	50



5121

Safety relief valve.
Male - female connections.
Discharge overpressure 20%.
Closing differential 15%.
Power rating: 110 kW.
Temperature range: 5–110°C.
Certified to NF P 52-001 - Class 2.



Code			
512131	1/2" 3 bar	50	–



314  [tech. broch. 01253](#)

Safety relief valve.
Male - female connections.
Discharge overpressure 20%.
Closing differential 20%.
PN 10.
Temperature range: 5–110°C.
Max. pressure gauge temperature: 90°C.
Settings: 2,5 - 3 - 6 - 7 - 8 bar.



Code			
3144 ●●	1/2" with pressure gauge	1	50
314432	1/2" 3 bar with pressure gauge connection	1	50
314462	1/2" 6 bar with pressure gauge connection	1	50



5320

Safety relief valve.
Female connections.
Discharge overpressure 20%.
Closing differential 20%.
Power rating: 50 kW.
Max. percentage of glycol: 50%.
Temperature range: 5–120°C.



Code			
532042	1/2" x 3/4" 2,5 bar	1	50
532043	1/2" x 3/4" 3 bar	1	50



5321

Safety relief valve. Female connections.
Discharge overpressure 20%.
Closing differential 20%.
Power rating: 50 kW.
Max. percentage of glycol: 50%.
Temperature range: 5–120°C.
Max. pressure gauge temperature: 90°C.



Code				
532142	1/2" x 3/4" 2,5 bar	1	50	
532143	1/2" x 3/4" 3 bar	1	50	



530

Safety relief valve. Female connections.
Discharge overpressure 20%.
Closing differential 20%.
Max. percentage of glycol: 50%.
Temperature range: 5–120°C.



Code			
530525	3/4" x 1" 2,5 bar	1	25
530530	3/4" x 1" 3 bar	1	25



5322

Safety relief valve. Female connections.
With pressure gauge connection.
Discharge overpressure 20%.
Closing differential 20%.
Power rating: 50 kW.
Max. percentage of glycol: 50%.
Temperature range: 5–120°C.



Code			
532242	1/2" x 3/4" 2,5 bar	1	50
532243	1/2" x 3/4" 3 bar	1	50



530

Safety relief valve. Female connections.
Discharge overpressure 20%.
Closing differential 20%.
Max. percentage of glycol: 50%.
Temperature range: 5–120°C.



Code			
530625	1" x 1 1/4" 2,5 bar	1	25
530725	1 1/4" x 1 1/2" 2,5 bar	1	10
530630	1" x 1 1/4" 3 bar	1	25
530730	1 1/4" x 1 1/2" 3 bar	1	10



5327

Safety relief valve.
Male - female connections.
Discharge overpressure 20%.
Closing differential 20%.
Power rating: 50 kW.
Max. percentage of glycol: 50%.
Temperature range: 5–120°C.



Code			
532742	1/2" x 3/4" 2,5 bar	48	–
532743	1/2" x 3/4" 3 bar	48	–



531

Safety relief valve for domestic water systems.
Female connections.
Discharge overpressure 20%.
Closing differential 20%.
Medium: water.
Temperature range: 5–100°C.
Settings: 4 - 6 - 8 - 10 bar.



Code			
5314 ..	1/2" x 3/4"	1	50
5315 ..	3/4" x 1"	1	25



5328

Safety relief valve.
Male - female connections.
With pressure gauge connection.
Discharge overpressure 20%.
Closing differential 20%.
Power rating: 50 kW.
Max. percentage of glycol: 50%.
Temperature range: 5–120°C.



Code			
532842	1/2" x 3/4" 2,5 bar	1	50
532843	1/2" x 3/4" 3 bar	1	50



531

Safety relief valve for domestic water systems.
Female connections.
Discharge overpressure 20%.
Closing differential 20%.
Medium: water.
Temperature range: 5–100°C.
Settings: 4 - 6 - 8 - 10 bar.



Code			
5316 ..	1" x 1 1/4"	1	25
5317 ..	1 1/4" x 1 1/2"	1	10



513

tech. broch. 01253

Safety relief valve.
Female connections.
Discharge overpressure 20%.
Closing differential 20%.
PN 10.
Temperature range: 5–110°C.
Settings: 1,5 - 2 - 2,5 - 3 - 3,5 - 6 - 7 - 8 bar.



Code				
5134 ..	1/2"		1	50



513

tech. broch. 01253

Safety relief valve.
Female connections.
Discharge overpressure 20%.
Closing differential 20%.
PN 10.
Temperature range: 5–110°C.
Settings:
2,5 - 3 - 3,5 - 6 - 7 - 8 bar.
1,5 - 2 - 4 bar only for 1" x 1 1/4" size.



Code				
5136 ..	1" x 1 1/4"		1	25
5137 ..	1 1/4" x 1 1/2"		1	10



514

tech. broch. 01253

Safety relief valve.
Male - female connections.
Discharge overpressure 20%.
Closing differential 20%.
PN 10.
Temperature range: 5–110°C.
Settings: 2 - 2,5 - 3 - 3,5 - 4 - 5 - 6 - 7 - 8 bar.



Code				
5144 ..	1/2"		1	50



312

Safety relief valve.
CR dezincification resistant alloy body.
For domestic water systems.
M x Ø 15 compression end.
With stainless steel seat.
Discharge overpressure 20%.
Closing differential 20%.
Temperature range: 5–110°C.
Settings: 100 - 200 - 400 - 600 kPa.
5 - 8 bar.



Code				
312417	1/2" M x Ø 15 - 100 kPa		50	-
312406	1/2" M x Ø 15 - 200 kPa		50	-
312405	1/2" M x Ø 15 - 400 kPa		50	-
312407	1/2" M x Ø 15 - 600 kPa		50	-
312415	1/2" M x Ø 15 - 5 bar		50	-
312418	1/2" M x Ø 15 - 8 bar		50	-



309

tech. broch. 01130

Temperature and pressure relief valve.
CR dezincification resistant alloy body.
For domestic water system, to protect the hot water storage.
Set temperature: 90°C.
Discharge rating: 1/2" - 3/4" x Ø 15: 10 kW.
3/4" x Ø 22: 25 kW.
Settings: 3 - 4 - 6 - 7 - 10 bar.
Settings certified to EN 1490: 4 - 7 - 10 bar.



Code			Probe length (mm)		
309430	1/2" M x Ø 15	3 bar	100	1	20
309440	1/2" M x Ø 15	4 bar	100	1	20
309460	1/2" M x Ø 15	6 bar	100	1	20
309470	1/2" M x Ø 15	7 bar	100	1	20
309400	1/2" M x Ø 15	10 bar	100	1	20
309542	3/4" M x Ø 15	4 bar	100	1	20
309530	3/4" M x Ø 22	3 bar	100	1	20
309560	3/4" M x Ø 22	6 bar	100	1	20
309570	3/4" M x Ø 22	7 bar	100	1	20
309500	3/4" M x Ø 22	10 bar	100	1	20
309435	1/2" M x Ø 15	3 bar	200	1	20
309445	1/2" M x Ø 15	4 bar	200	1	20
309465	1/2" M x Ø 15	6 bar	200	1	20
309475	1/2" M x Ø 15	7 bar	200	1	20
309405	1/2" M x Ø 15	10 bar	200	1	20
309547	3/4" M x Ø 15	4 bar	200	1	20
309535	3/4" M x Ø 22	3 bar	200	1	20
309565	3/4" M x Ø 22	6 bar	200	1	20
309575	3/4" M x Ø 22	7 bar	200	1	20
309505	3/4" M x Ø 22	10 bar	200	1	20

NEW



309

Temperature and pressure relief valve.
CR dezincification resistant alloy body.
For domestic water system, to protect the hot water storage.
Set temperature: 95°C.
Discharge rating: 25 kW.
Setting: 6 bar.
For systems with nominal pressure of 400 kPa.



Code			Probe length (mm)		
309563	3/4" M x Ø 22	6 bar	100	1	20

•• Code completion

bar	••	bar	••	bar	••
1,5	15	3	30	6	60
1,8	28	3,5	35	7	70
2	20	4	40	8	80
2,5	25	5	50	10	10

FUEL SHUT-OFF VALVES



541  **tech. broch. 01046**

Fuel shut-off valve.
 Brass body.
 Female threaded connections.
 Max. working pressure: 50 kPa.
 Max. working temperature:
 85°C (valve side).
 Capillary length: 5 or 10 m.
 Settings: 98°C, 110°C, 120°C, 140°C,
 160°C, 180°C.



Code	Settings		
54104 ●	1/2" ...°C	1	–
54105 ●	3/4" ...°C	1	–
54106 ●	1" ...°C	1	–
54107 ●	1 1/4" ...°C	1	–
54108 ●	1 1/2" ...°C	1	–
54109 ●	2" ...°C	1	–
541140*	1/2" 110°C	1	–
541150*	3/4" 110°C	1	–
541160*	1" 110°C	1	–
541170*	1 1/4" 110°C	1	–
541180*	1 1/2" 110°C	1	–
541190*	2" 110°C	1	–

* Capillary length 5 m only



541  **tech. broch. 01046**

Fuel shut-off valve
 for high pressure use.
 Bronze body.
 Flanged connections PN 16.
 To be coupled
 with flat counterflanges EN 1092-1.
 Max. working pressure: 50 kPa.
 Max. working temperature:
 85°C (valve side).
 Capillary length: 5 or 10 m.
 Settings: 98°C, 110°C, 120°C, 140°C,
 160°C, 180°C.



Code	Settings		
54161 ●	DN 65 ...°C	1	–
54181 ●	DN 80 ...°C	1	–
541630*	DN 65 110°C	1	–
541830*	DN 80 110°C	1	–

* Capillary length 5 m only



541  **tech. broch. 01046**

Fuel shut-off valve.
 Bronze body.
 Flanged connections PN 16.
 To be coupled
 with flat counterflanges EN 1092-1.
 Max. working pressure: 11 kPa.
 Max. working temperature:
 85°C (valve side).
 Capillary length: 5 or 10 m.
 Settings: 98°C, 110°C, 120°C, 140°C,
 160°C, 180°C.



Code	Settings		
54160 ●	DN 65 ...°C	1	–
54180 ●	DN 80 ...°C	1	–
541620*	DN 65 110°C	1	–
541820*	DN 80 110°C	1	–

* Capillary length 5 m only

● Code completion

	541	540	capillary 5 m	capillary 10 m
setting	98°C	97°C	0	1
	120°C	120°C	2	3
	140°C	140°C	4	5
	160°C	160°C	6	7
	180°C	180°C	8	9

FUEL SHUT-OFF VALVES

NEW



540 tech. broch. 01074

Fuel shut-off valve.
Aluminium body.
Female threaded connections.
Max. working pressure: 50 kPa.
Max. working temperature:
50°C (valve side).
Capillary length: 5 m.
Setting: 98°C.



Code	Setting		
540040	1/2" 98°C	1	-
540050	3/4" 98°C	1	-
540060	1" 98°C	1	-
540070	1 1/4" 98°C	1	-
540080	1 1/2" 98°C	1	-
540090	2" 98°C	1	-

540 tech. broch. 01074

Fuel shut-off valve.
Aluminium body.
Flanged connections PN 16.
To be coupled
with flat counterflanges EN 1092-1.
Max. working pressure: 50 kPa.
Max. working temperature:
50°C (valve side).
Capillary length: 5 or 10 m.
Settings: 97°C, 110°C, 120°C, 140°C,
160°C, 180°C.



Code	Settings		
54060 •	DN 65 ...°C	1	-
54080 •	DN 80 ...°C	1	-
54010 •	DN 100 ...°C	1	-
540610*	DN 65 110°C	1	-
540810*	DN 80 110°C	1	-
540110*	DN 100 110°C	1	-

* Capillary length 5 m only

TEMPERATURE RELIEF VALVES



542 tech. broch. 01001

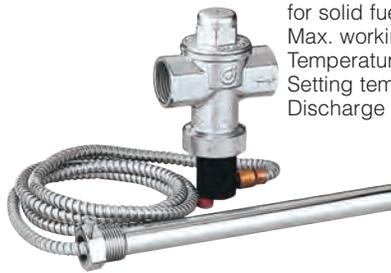
Temperature relief valve, with fail-safe action.
Manual reset for burner switch off
or alarm activation.
Working pressure: 0,3 bar ≤ P ≤ 10 bar.
Temperature range: 5–100°C.
Setting temperature: 98°C and 99°C.
Discharge rating:
1 1/2" x 1 1/4" - 136 kW.
1 1/2" x 1 1/2" - 419 kW.



Code	Setting		
542870	1 1/2" M x 1 1/4" F 98°C	1	10
542880	1 1/2" M x 1 1/2" F 99°C	1	10

543 tech. broch. 01057

Temperature safety relief valve,
with double safety sensor,
for solid fuel generators.
Max. working pressure: 10 bar.
Temperature range: 5–110°C.
Setting temperature: 98°C (0/-4°C).
Discharge flow rate with Δp of 1 bar
and T=110°C: 3000 l/h.
Capillary length: 1300 mm.
Certified to EN 14597.



Code	Setting		
543513	3/4" F 98°C	1	10

544 tech. broch. 01058

Temperature relief valve, with positive action
with automatic filling.
For solid fuel generators.
Max working pressure: 6 bar.
Max. working temperature: 110°C.
Temperature range: 5–110°C.
Ambient temperature range: 1–50°C.
Setting temperature: 100°C (0/-5°C).
Discharge flow rate with Δp of 1 bar
and T=110°C: 1600 l/h.
Capillary length: 1300 mm.



Code	Setting		
544400	1/2" 100°C	1	10

544
Temperature relief valve
with automatic filling for solid fuel generators,
with knob for manual discharge.
Max. working pressure: 6 bar.
Max. working temperature: 120°C.
Setting temperature: 100°C (0/-5°C).
Discharge flow rate with Δp of 1 bar
and T=110°C: 1800 l/h.



Code	Setting		
544501	3/4" 100°C	1	-



529  **tech. broch. 01226**
 Draught regulating valve.
 Male threaded connection.
 Adjustment temperature range: 30–90°C.
Certified to EN 14597.



Code			
529150	3/4" M ISO 7/1	1	10
529151	3/4" M ISO 7/1 long pocket	1	10



327 BALLSTOP  **tech. broch. 01021**
 Ball valve with built-in check valve for heating systems.
 Low head losses.
 Max. working pressure: 16 bar.
 Temperature range: 5–110°C.

Code			
327400	1/2" butterfly handle	10	–
327500	3/4" butterfly handle	10	–
327600	1" lever handle	4	–
327700	1 1/4" lever handle	4	–
327800	1 1/2" lever handle	2	–
327900	2" lever handle	1	–



510  **tech. broch. 01045**
 Anti-thermosiphon check valve to prevent natural circulation of water.
 Removable cap allows straight or angled installations.
 Max. working pressure: 10 bar.
 Temperature range: 5–110°C.

Code			
510500	3/4"	1	20
510600	1"	1	20
510700	1 1/4"	1	20



519  **tech. broch. 01007**
 Differential by-pass valve, adjustable with graduated scale.
 Max. working pressure: 10 bar.
 Temperature range: 0–110°C.
 Max. percentage of glycol: 30%.



Code		Setting range m.w.g.		
519500	3/4"	1–6	1	50
519504	3/4"	10–40	1	50
519700	1 1/4"	1–6	1	10



547
 Air separator.
 Cast iron body.
 Female connections.

Code			
547060	1"	1	10
547070	1 1/4"	1	10
547080	1 1/2"	1	10
547090	2"	1	10
547200	2 1/2"	1	–
547300	3"	1	–



547
 Air separator.
 Steel body.
 Flanged connections PN 16.
 To be coupled with flat counterflanges EN 1092-1.

Code			
547400	DN 100	1	–
547500	DN 125	1	–



683  **tech. broch. 01040**
 Flow rate metering device.
 Female connections.
 Equipped with pressure test ports.
 Max. working pressure: 10 bar.
 Temperature range: –5–110°C.

Code			
683005	3/4"	1	–
683006	1"	1	–



683  **tech. broch. 01040**
 Flow rate metering device.
 Steel body. Flanged connections.
 To be coupled with flat counterflanges EN 1092-1 DN 32–DN 100, PN 6; DN 125–DN 200, PN 16.
 Temperature range: –5–110°C.
 Equipped with pressure test ports, counterflanges, bolts and seals.

Code			
683030	DN 32	1	–
683040	DN 40	1	–
683050	DN 50	1	–
683060	DN 65	1	–
683080	DN 80	1	–
683100	DN 100	1	–
683120	DN 125	1	–
683150	DN 150	1	–
683170	DN 175	1	–
683200	DN 200	1	–

For flow rate measurement, the electronic measuring station 130 series (page 178), can be used.

336

Instrument holder for heating systems. Equipped with automatic shut-off cock for expansion vessel and male connection for safety valve 531 series.

Max. working temperature: 110°C. Up to 50 kW.



Code			
336600	3/4"	2	10

336

Assembled instrument holder for heating systems. Equipped with air vent, safety relief valve, pressure gauge and automatic shut-off cock for expansion vessel.

Max. working temperature: 110°C. Up to 50 kW.



Code			
336630	3/4" 3 bar with automatic shut-off cock	1	5
336631	3/4" 3 bar with automatic ball shut-off cock	1	5

302

Combined air separator with heating system accessories. Equipped with air vent, safety relief valve and pressure gauge. Max. working temperature: 110°C. Up to 50 kW.



Code			
302630	1" 3 bar	1	10
302631	1" 3 bar with pre-formed insulation	1	10

NEW

305

Instrument holder kit in composite material for heating systems. Equipped with air vent, safety relief valve in composite material, pressure gauge, automatic shut-off cock for expansion vessel and fixing bracket.

With insulation. Temperature range: 5–90°C. Up to 50 kW.



Code			
305503	3/4" 3 bar TÜV	1	–

NEW

305

Instrument holder in composite material for heating systems. Equipped with air vent, safety relief valve in composite material and pressure gauge.

With insulation. Temperature range: 5–90°C. Up to 50 kW.



Code			
305663	1" 3 bar TÜV	1	–

NEW

305

Instrument holder in composite material for heating systems. Equipped with air vent, safety relief valve and pressure gauge.

With insulation. Temperature range: 5–90°C. Up to 50 kW.



Code			
305572	3/4" 2,5 bar TÜV	1	–
305671	1" 1,8 bar	1	–
305673	1" 3 bar NF	1	–

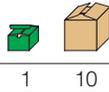
3006 ROBOFIL

Boiler filling loop.
CR dezincification resistant alloy body.
 Equipped with double check valve with shut-off valve, hose connection and shut-off valve.
 Max. working pressure: 10 bar.
 Max. working temperature: 95°C.
 Flexible hose length: 400 mm.



Code

300600



1 10

tech. broch. 01125

554

Pre-adjustable automatic filling unit for high flow rates, with double shut-off valve, check valve. Self-contained replaceable cartridge.

Setting pressure range: 1–6 bar.
 Max. inlet pressure: 16 bar.
 Max. working temperature: 60°C.

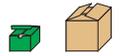


Code

554040 1/2" with pressure gauge connection

554140 1/2" with pressure gauge

554150 3/4" with pressure gauge



1 –
 1 –
 1 –

553

tech. broch. 01061

Pre-adjustable automatic filling unit, anti-scale, inspectionable, with pressure setting indicator, manual cock, strainer, check valve.
 Setting pressure range: 0,2–4 bar.
 Max. inlet pressure: 16 bar.
 Max. working temperature: 65°C.



Code

553540 1/2" with pressure gauge connection

553640 1/2" with pressure gauge



1 10
 1 10

553

Pre-adjustable automatic filling unit, anti-scale, inspectionable, with pressure setting indicator, manual cock, strainer and check valve. With hose connection.
 Setting pressure range: 0,2–4 bar.
 Max. inlet pressure: 16 bar.
 Max. working temperature: 65°C.



Code

553740 1/2" with pressure gauge connection

553840 1/2" with pressure gauge



1 10
 1 10

553

tech. broch. 01025

Automatic filling unit, with manual cock, strainer, check valve.
 Setting pressure range: 0,3–4 bar.
 Max. inlet pressure: 16 bar.
 Max. working temperature: 70°C.



Code

553040 1/2" with pressure gauge connection

553140 1/2" with pressure gauge



1 10
 1 10

573001

tech. broch. 01061

Automatic charging unit with **CAa type** backflow preventer and shut-off valve. Filling unit setting pressure range: 0,2–4 bar.
 Max. working pressure: 10 bar.
 Max. working temperature: 65°C.
 Backflow preventer certified to EN 14367 standard.



Code

573001 1/2"



1 5

574011

tech. broch. 01161

Compact automatic charging unit with **BA type** backflow preventer, shut-off valve and strainer. **With pre-formed insulation.**
 Filling unit setting pressure range: 0,2–4 bar.
 Max. working pressure: 10 bar.
 Max. working temperature: 65°C.

Backflow preventer certified to EN 12729 standard.



Code

574011 1/2"



1 5

574000

 **tech. broch. 01061**

Automatic charging unit with **BA type** backflow preventer, Y-strainer and shut-off valve. Filling unit setting pressure range: 0,2-4 bar. Max. working pressure: 10 bar. Max. working temperature: 65°C. Backflow preventer certified to EN 12729 standard.



Code			
574000	1/2"	1	5

574001

 **tech. broch. 01125**

Automatic charging unit with **BA type** backflow preventer, Y-strainer and shut-off valve. Pressure reducing valve setting pressure range: 1-6 bar. Max. working pressure: 10 bar. Max. working temperature: 60°C. Backflow preventer certified to EN 12729 standard.



Code			
574001	3/4"	1	-

315

Flow switch with magnetically operated contacts. 230 V - 0,02 A (an appropriate relays must be used in case of higher power consumption). Max. working pressure: 6 bar. Temperature range: -15-100°C.



Contact closing with **increasing flow rate** at: 156 l/h (1/2")
456 l/h (3/4")
Contact opening with **decreasing flow rate** at: 108 l/h (1/2")
348 l/h (3/4")



Code			
315400	1/2"	1	50
315500	3/4"	1	25

626

 **tech. broch. 01052**

Flow switch. Suitable for 1" to 8" pipes. 250 V (ac) - 15 (5) A. Max. working pressure: 10 bar. Temperature range: -30-120°C. Protection class: IP 54.



Code			
626600	1"	1	5
626009	set of blades	1	-

538

Boiler drain cock with hose connection and cap. Max. working pressure: 10 bar. Max. working temperature: 110°C.



Code			
538201	1/4" M without cap	1	-
538400	1/2" M	1	100



558

Automatic shut-off cock, for expansion vessels.
Max. working pressure: 10 bar.
Max. working temperature: 110°C.

Code			
558500	3/4"	1	50



558

Automatic shut-off cock, for expansion vessel, with drain cock.
Max. working pressure: 6 bar.
Max. working temperature: 85°C.

Code			
558510	3/4"	1	50

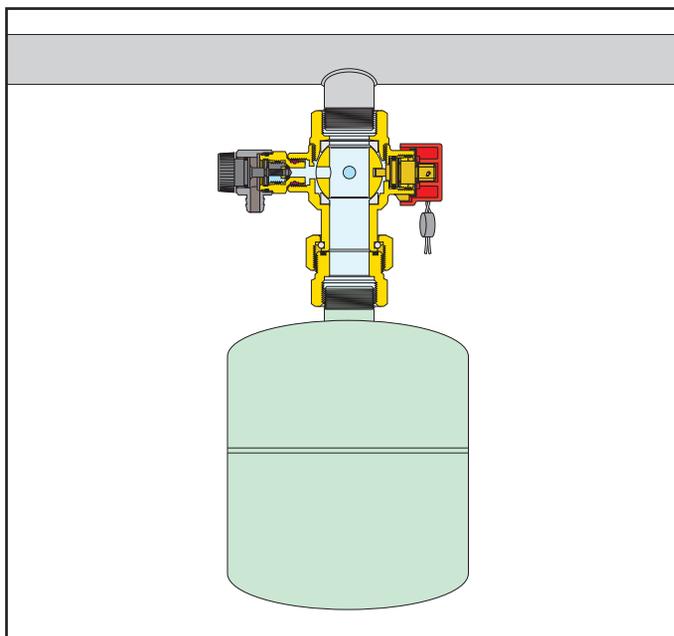


5580

Ball shut-off valve, for expansion vessels, with drain cock.
Max. working pressure: 6 bar.
Max. working temperature: 85°C.

Code			
558050	3/4"	1	20
558060	1"	1	20
558070	1 1/4"	1	20

Application diagram of shut-off valve 5580 series



690

Three way tap for INAIL master pressure gauge.
Max. working pressure: 15 bar.
Temperature range: 5–90°C.

Code			
690200	1/4"	5	–
690300	3/8"	5	–
690400	1/2"	5	–



691

Water hammer reducing loop. In chrome plated copper.

Code			
691200	1/4"	5	–
691300	3/8"	5	–
691400	1/2"	5	–



692

Thermometer in sleeve. 1/2" pocket connection.

Code	Pocket length	°C		
692000	45 mm	0–120	1	–



693

Bulb thermometer.

Code	°C		
693000	0–120	1	–



694

INAIL test pocket, 1/2" connection.

Code	Pocket length		
694045	45 mm	1	–
694100	100 mm	1	–



695

System filling test pump. Complete with pressure gauge and hose for connection to the system.
Max. working pressure: 50 bar.
Water content: 12 l.
Pressure gauge scale: 0–60 bar.
Hose connection: 1/2".
Hose length: 1,5 m.
Can be used also with glycol solutions for solar thermal systems.

Code		
695000	1	–

THERMOSTATS AND PRESSURE SWITCHES



621

Adjustable contact thermostat.
Temperature range: 20–90°C.
Protection class: IP 20.



Code		
621000	1	10



625

Safety pressure switch, with manual reset.
250 V - 16 (10) A.
Max. working pressure: 15 bar.
Ambient temperature range: -10–55°C.
Medium temperature range: 0–110°C.
1/4" female connection.
Protection class: IP 44.



Code	Setting range		
625000	1–5 bar	1	50



622

Adjustable immersion thermostat.
Temperature range: 0–90°C.
With 1/2" connection pocket.
Protection class: IP 40.



Code		
622000	1	10



625

Minimum pressure safety switch,
with manual reset.
250 V - 16 (10) A.
Max. working pressure: 5 bar.
Ambient temperature range: -10–55°C.
Medium temperature range: 0–110°C.
1/4" female connection.
Protection class: IP 44.



Code	Setting range		
625100	0,5–1,7 bar	1	10



623

Double immersion thermostat:
- safety thermostat with manual reset,
setting 100°C (+0°C -6°C),
setting 110°C (+0°C -6°C)
- adjustment thermostat,
temperature range: 0–90°C,
temperature range: 0–100°C.
With 1/2" connection pocket.
Protection class: IP 40.



Code		
623000	1	5
623100	1	5



625

Pressure switch for boosting sets.
Up to 500 V three-pole - 16 A.
Max. working pressure: 15 bar.
Ambient temperature range: -10–55°C.
Medium temperature range: 0–110°C.
1/4" female connection.
Protection class: IP 44.



Code	Setting range		
625005	1–5 bar	1	10
625010	3–12 bar	1	10



624

Immersion safety thermostat,
with manual reset,
- setting 100°C (+0°C -6°C),
- setting 110°C (+0°C -6°C).
With 1/2" connection pocket.
Protection class: IP 40.



Code		
624000	1	10
624100	1	10



613

Float switch,
250 V - 10 A.
Heavy duty approved.



Code	Cable length		
613030	3 m	1	5
613050	5 m	1	5



557

Pressure gauge.
Accuracy class: UNI 2,5.
Temperature range: -20-90°C.

Code	bar		Position	Ø		
557104	0-4	1/4"	central back conn.	50	1	-
557204	0-4	1/4"	"off-centred" back conn.	50	1	-
557304	0-4	1/4"	bottom conn.	50	1	-
557106	0-6	1/4"	central back conn.	50	1	-
557306	0-6	1/4"	bottom conn.	50	1	-
557310	0-10	1/4"	bottom conn.	50	1	-
557410	0-10	1/4"	central back conn.	63	1	-
557425	0-25	1/4"	central back conn.	63	1	-
557704	0-4	3/8"	bottom conn.	80	1	-
557706	0-6	3/8"	bottom conn.	80	1	-
557710	0-10	3/8"	bottom conn.	80	1	-



503

Temperature/pressure gauge.
1/2" central back connection.
With shut-off pocket.
Ø 80 mm.
Accuracy class:
- temperature gauge UNI 2;
- pressure gauge UNI 2,5.

Code	bar	°C		
503040	0-4	0-120	1	10
503060	0-6	0-120	1	10



503

Temperature/pressure gauge.
1/2" bottom connection.
With shut-off pocket.
Ø 80 mm.
Accuracy class:
- temperature gauge UNI 2;
- pressure gauge UNI 2,5.

Code	bar	°C		
503140	0-4	0-120	1	20
503160	0-6	0-120	1	20



5560

Pressure gauge
for expansion vessel pressure test.
Accuracy class: UNI 2,5.

Code	bar		
556000	0-10	1	-



688

Temperature gauge.
1/2" central back connection.
With pocket.
Ø 80 mm.
Accuracy class: UNI 2.

Code	Pocket length	°C		
688000	45 mm	0-120	1	10
688010	100 mm	0-120	1	5



688

Temperature gauge.
1/2" bottom connection.
With pocket.
Ø 80 mm.
Accuracy class: UNI 2.

Code	Pocket length	°C		
688100	45 mm	0-120	1	10



687

Temperature gauge for cooling systems.
1/2" central back connection.
With pocket.
Ø 80 mm.
Accuracy class: UNI 2.

Code	Pocket length	°C		
687000	45 mm	-30-50	1	-
687010	100 mm	-30-50	1	-



687

Temperature gauge for cooling.
1/2" bottom connection.
With pocket.
Ø 80 mm.
Accuracy class: UNI 2.

Code	Pocket length	°C		
687110	100 mm	-30-50	1	10



689

Flow gauge.
3/8" bottom connection.
Ø 80 mm.
Accuracy class: UNI 1,6.
Temperature range: -20-90°C.

Code	m w.g.		
689010	0-10	1	20
689016	0-16	1	20
689025	0-25	1	30

For higher pressures see pressure gauges 557 series.

DIRT SEPARATORS



5462
DIRTCAL®

tech. broch. 01137

Dirt separator.
Brass body.
Female connections.
Drain cock with hose connection.
Top connection with plug.
Max. working pressure: 10 bar.
Temperature range: 0–110°C.
Particle separation rating down to 5 µm.



Code				
546205	3/4"		1	6
546206	1"		1	6
546207	1 1/4"		1	6
546208	1 1/2"		1	6
546209	2"		1	6

For technical details see page 36



Pre-formed insulation
for dirt separators 5462 series.

Code	Use		
CBN546205	546205-546206	1	–
CBN546207	546207-546208	1	–
CBN546209	546209	1	–



5469
DIRTCAL®

tech. broch. 01137

Dirt separator for vertical pipes.
Brass body.
Female connections.
Drain cock with hose connection.
Max. working pressure: 10 bar.
Temperature range: 0–110°C.



Code			
546905	3/4"		1 5
546906	1"		1 5

For technical details see page 36



5469
DIRTCAL®

tech. broch. 01137

Dirt separator for vertical pipes.
Brass body.
Ø 22 with compression ends.
Drain cock with hose connection.
Max. working pressure: 10 bar.
Temperature range: 0–110°C.



Code			
546902	Ø 22		1 5

For technical details see page 36



5465
DIRTCAL®

tech. broch. 01137

Dirt separator.
Epoxy resin coated steel body.
Flanged connections PN 16.
To be coupled with flat counterflanges EN 1092-1.
With pre-formed insulation.
Max. working pressure: 10 bar.
Temperature range:
0–105°C (DN 50–DN 100),
0–100°C (DN 125–DN 150).
Particle separation rating down to 5 µm.



Code			
546550	DN 50	1	–
546560	DN 65	1	–
546580	DN 80	1	–
546510	DN 100	1	–
546512	DN 125	1	–
546515	DN 150	1	–

For technical details see page 36



5465
DIRTCAL®

tech. broch. 01137

Dirt separator.
Epoxy resin coated steel body.
Flanged connections PN 10.
To be coupled with flat counterflanges EN 1092-1.
Max. working pressure: 10 bar.
Temperature range: 0–110°C.
Temperature probe connection: 1/2" F.
Particle separation rating down to 5 µm.



Code			
546520	DN 200	1	–
546525	DN 250	1	–
546530	DN 300	1	–

For technical details see page 36

DIRT SEPARATORS WITH MAGNET



5463
DIRTMAG®

tech. broch. 01137

Dirt separator **with magnet**. Brass body.
Female connections.
Drain cock with hose connection.
Top connection with plug.
Max. working pressure: 10 bar.
Temperature range: 0–110°C.
Particle separation rating down to 5 µm.



Code

546305	3/4"	1	6
546306	1"	1	6
546307	1 1/4"	1	6
546308	1 1/2"	1	6
546309	2"	1	6

For technical details see page 37



5463
DIRTMAG®

tech. broch. 01137

Dirt separator **with magnet**. Brass body.
Female connections.
Drain cock with hose connection.
Top connection with plug.
With pre-formed insulation.
Max. working pressure: 10 bar.
Temperature range: 0–110°C.
Particle separation rating down to 5 µm.



Code

546315	3/4"	1	6
546316	1"	1	6
546317	1 1/4"	1	6
546318	1 1/2"	1	6
546319	2"	1	6

For technical details see page 37



5468
DIRTMAG®

tech. broch. 01137

Dirt separator **with magnet** for vertical pipes. Brass body.
Female connections.
Drain cock with hose connection.
Max. working pressure: 10 bar.
Temperature range: 0–110°C.



Code

546805	3/4"	1	–
546806	1"	1	–

For technical details see page 37



5468
DIRTMAG®

tech. broch. 01137

Dirt separator **with magnet** for vertical pipes. Brass body.
Ø 22 and Ø 28 with compression ends.
Drain cock with hose connection.
Max. working pressure: 10 bar.
Temperature range: 0–110°C.



Code

546802	Ø 22	1	–
546803	Ø 28	1	–

For technical details see page 37



5466
DIRTMAG®

tech. broch. 01137

Dirt separator **with magnet**. Epoxy resin coated steel body.
Flanged connections PN 16.
To be coupled with flat counterflanges EN 1092-1.
With pre-formed insulation.
Max. working pressure: 10 bar.
Temperature range: 0–100°C.

Code

546650	DN 50	1	–
546660	DN 65	1	–
546680	DN 80	1	–
546610	DN 100	1	–
546612	DN 125	1	–
546615	DN 150	1	–

Operating principle

The magnetic dirt separator, in addition to the traditional dirt separation function, is equipped with a patented device to collect ferrous impurities contained within the system water.

A magnetic probe is positioned inside the body to collect all the ferrous impurities and magnetite circulating within the system.

The ferrous particles are trapped in this way in the collection zone, thus avoiding they return in circulation.



Sludge discharge

Unscrew the handle and extract the magnet; perform the discharge, event with the system running, by opening the drain cock. To make the magnet extraction easier, a joint has been fitted into the central part.



DIRT SEPARATORS WITH MAGNET



5453 **DIRTMAG®**  *tech. broch. 01240*

Dirt separator **with magnet**.
Composite body.
Female connections.
Adjustable for horizontal and vertical pipes.
Drain cock with hose connection.
Max. working pressure: 3 bar.
Temperature range: 0–90°C.



Code			
545305	3/4"	1	–
545306	1"	1	–

For technical details see page 38



5453 **DIRTMAG®**  *tech. broch. 01240*

Dirt separator **with magnet**.
Composite body.
Ø 22 and Ø 28 with compression ends.
Adjustable for horizontal and vertical pipes.
Drain cock with hose connection.
Max. working pressure: 3 bar.
Temperature range: 0–90°C.



Code			
545302	Ø 22	1	–
545303	Ø 28	1	–

For technical details see page 38



5453 **DIRTMAG®** 

Dirt separator with ball valves **and magnet**.
Composite body.
Female connections.
Adjustable for horizontal and vertical pipes.
Drain cock with hose connection.
Max. working pressure: 3 bar.
Temperature range: 0–90°C.



Code			
545345	3/4"	1	–
545346	1"	1	–
545347	1 1/4"	1	–

For technical details see page 38

MULTIFUNCTION DEVICE

NEW



5453 **DIRTMAG PLUS®**  *tech. broch. 01258*

Multifunction device with dirt separator and strainer.
Specific for the complete cleaning of the hydraulic circuit, to protect continuously generator and components.
Composite body.
Dirt separator with tecnopolimer internal element, **with magnet**.
Two inspectable strainers with stainless steel mesh:
1 for initial cleaning (blue colour) already installed,
1 for maintenance (grey colour) to be bought separately.
Shut-off valve with nut, brass body.
Adjustable for horizontal, vertical or 45° pipes.
Female connections.
Drain cock with hose connection.
Max. working pressure: 3 bar.
Temperature range: 0–90°C.



Code			
545375	3/4"	1	–
545376	1"	1	–

For technical details see page 39

NEW



5453 **DIRTMAG PLUS®**  *tech. broch. 01258*

Multifunction device with dirt separator and strainer.
Specific for the complete cleaning of the hydraulic circuit, to protect continuously generator and components.
Composite body.
Dirt separator with tecnopolimer internal element, **with magnet**.
Two inspectable strainers with stainless steel mesh:
1 for initial cleaning (blue colour) already installed,
1 for maintenance (grey colour) to be bought separately.
Shut-off valve with nut, brass body.
Adjustable for horizontal, vertical or 45° pipes.
Ø 22 and Ø 28 with compression ends.
Drain cock with hose connection.
Max. working pressure: 3 bar.
Temperature range: 0–90°C.



Code			
545372	Ø 22	1	–
545373	Ø 28	1	–

For technical details see page 39

HYDRAULIC SEPARATORS

548

tech. broch. 01076



Hydraulic separator.
Epoxy resin coated steel body.
With pre-formed insulation.
Female union connections.
Max. working pressure: 10 bar.
Temperature range: 0–100°C.
Complete with:
air vent with automatic shut-off cock,
drain cock.

Code		Max. recommended flow rate m ³ /h		
548006	1"	2,5	1	–
548007	1 1/4"	4	1	–
548008	1 1/2"	6	1	–
548009	2"	8,5	1	–

Choice of hydraulic separator 548 series

The hydraulic separator should be sized according to the **maximum flow rate value at the inlet**. The selected design value must be the greatest between the primary circuit and the secondary circuit.

548

tech. broch. 01076



Hydraulic separator.
Epoxy resin coated steel body.
With pre-formed insulation.
Flanged connections PN 16.
To be coupled with flat counterflanges EN 1092-1.
Max. working pressure: 10 bar.
Temperature range:
0–105°C (DN 50–DN 100),
0–100°C (DN 125 - DN 150).
Temperature probe connection: 1/2" F.
Complete with:
automatic air vent, shut-off valve,
drain valve.

Code		Max. recommended flow rate m ³ /h		
548052	DN 50	9	1	–
548062	DN 65	18	1	–
548082	DN 80	28	1	–
548102	DN 100	56	1	–
548122	DN 125	75	1	–
548152	DN 150	110	1	–

548

tech. broch. 01076



Hydraulic separator.
Epoxy resin coated steel body.
Flanged connections PN 16.
To be coupled with flat counterflanges EN 1092-1.
Max. working pressure: 10 bar.
Temperature range: 0–110°C.
Temperature probe connection: 1/2" F.
Complete with:
automatic air vent, shut-off valve,
drain valve.

Code		Max. recommended flow rate m ³ /h		
548050	DN 50	9	1	–
548060	DN 65	18	1	–
548080	DN 80	28	1	–
548100	DN 100	56	1	–
548120	DN 125	75	1	–
548150	DN 150	110	1	–

548

tech. broch. 01076



Hydraulic separator.
Epoxy resin coated steel body.
Flanged connections PN 10.
To be coupled with flat counterflanges EN 1092-1.
Max. working pressure: 10 bar.
Temperature range: 0–110°C.
Temperature probe connection: 1/2" F.
Complete with:
automatic air vent, shut-off valve,
drain valve.

Code		Max. recommended flow rate m ³ /h		
548200	DN 200	180	1	–
548250	DN 250	300	1	–
548300	DN 300	420	1	–

MULTIFUNCTION HYDRAULIC SEPARATOR

NEW

5495
SEP4

tech. broch. 01249

Multifunction hydraulic separator.
Epoxy resin coated steel body.
With pre-formed insulation.
Female union connections.
Max. working pressure: 10 bar.
Temperature range: 0–100°C.
Complete with:
- hydraulic separator,
- automatic air vent,
- dirt separator,
- magnetic ring,
- drain cock with hose connection.

Function

The multifunction hydraulic separator combines different functional components, each of them to satisfy specific needs of air conditioning system circuits.

It is supplied complete with hot pre-formed shell insulation to ensure perfect thermal insulation when used with both hot and chilled water. The device is designed to carry out the following functions:

- Hydraulic separation

To keep connected hydraulic circuits totally independent from each other.

- Deaeration

Utilises the combined action of several physics principles: the widening of the cross section decreases the flow velocity and the technopolymer mesh creates whirling movements so as to facilitate the release of micro-bubbles. The bubbles, fusing with each other, increase in volume and, rising towards the top of the unit, are released through a float-operated automatic air vent.

- Dirt separation

The dirt separator separates and collects any impurities in the circuits as they collide with the surface of the internal element.

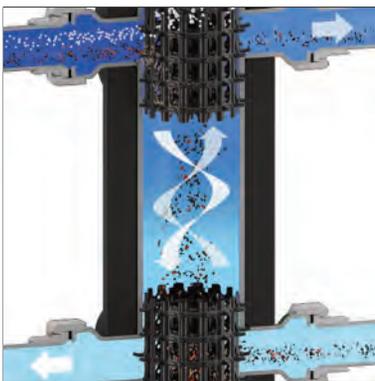
- Removal of magnetic particles

The special patented magnetic system also attracts ferromagnetic impurities in the water: the ferromagnetic particles are trapped in the collection zone, meaning they are prevented from being recirculated.

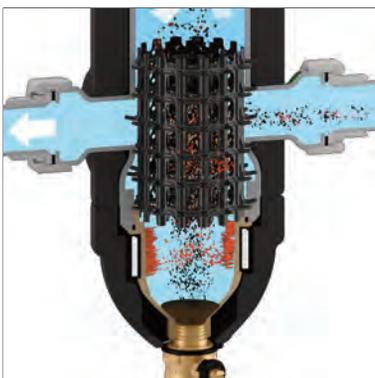


Code		Max. recommended flow rate m ³ /h		
549506	1"	2,5	1	–
549507	1 1/4"	4	1	–
549508	1 1/2"	6	1	–
549509	2"	8,5	1	–

Hydraulic separation



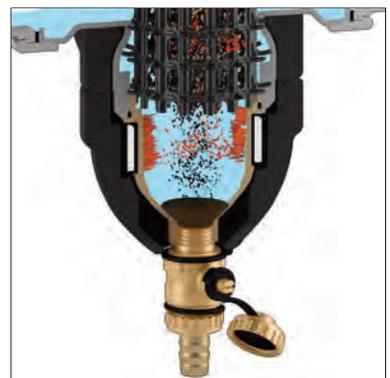
Dirt removal



Deaeration



Removal of magnetic particles



HYDRAULIC SEPARATORS-MANIFOLDS



559  **SEPCOLL 2+2.** tech. broch. 01084

Hydraulic separator-manifold for heating systems. Steel body, PN 6.
With pre-formed insulation.
 1 1/4" F main connections.
 1 1/2" outlet connections with captive nut: two at the top and two at the bottom.
 Temperature range: 0–110°C.
 Complete with mounting brackets.

Code	Outlet centre distance		
559222	125 mm	1	–



559  **SEPCOLL 2.** tech. broch. 01084

Hydraulic separator-manifold for heating and air conditioning systems. Steel body, PN 6.
With pre-formed insulation.
 1 1/4" F main connections.

Outlet connections: two 1 1/2" at the top with captive nut.
 Temperature range: 0–100°C.
 Fitted for use with bracket.

Code	Outlet centre distance		
559320	125 mm	1	–



559  **SEPCOLL 3+1.** tech. broch. 01084

Hydraulic separator-manifold for heating systems. Steel body, PN 6.
With pre-formed insulation.

1 1/4" F main connections.
 1 1/2" outlet connections with captive nut: three at the top and one at the bottom (can be inverted).
 Temperature range: 0–110°C.
 Complete with mounting brackets.

Code	Outlet centre distance		
559231	125 mm	1	–



559  **SEPCOLL 3+1.** tech. broch. 01084

Hydraulic separator-manifold for heating and air conditioning systems. Steel body, PN 6.
With pre-formed insulation.

1 1/4" F main connections.
 1 1/2" outlet connections with captive nut: three at the top and one at the bottom (can be inverted).
 Temperature range: 0–100°C.
 Complete with mounting brackets.

Code	Outlet centre distance		
559331	125 mm	1	–



559  **SEPCOLL 2+1.** tech. broch. 01084

Hydraulic separator-manifold for heating systems. Steel body, PN 6.
With pre-formed insulation.

1" F main connections.
 Outlet connections: two 1 1/2" with captive nut and one 1" F at the side.
 Temperature range: 0–110°C.
 Fitted for use with bracket.

Code	Outlet centre distance		
559221	125 mm	1	–



559  **SEPCOLL 2.** tech. broch. 01084

Hydraulic separator-manifold for heating systems. Steel body, PN 6.
With pre-formed insulation.
 1" F main connections.

Outlet connections: two 1 1/2" at the top with captive nut.
 Temperature range: 0–110°C.
 Fitted for use with bracket.

Code	Outlet centre distance		
559220	125 mm	1	–



559
 Pair of plugs with gaskets for unused outlets.

Code		
559001	1	–

Insulation

SEPCOLL versions with codes 559320 and 559331 are supplied complete with hot pre-formed shell insulation. This system ensures not only perfect thermal insulation, but also the tightness required to prevent water vapour entering the device from the ambient. For this reason, this type of insulation may also be used in chilled water circuits as it prevents condensation from forming on the surface of the body of the device.



MANIFOLDS FOR CENTRAL HEATING SYSTEM

NEW

550 2

 **tech. broch. 01261**

Manifold for heating and air conditioning systems. Steel body.
1 1/4" M main connections.
Outlet connections: 1 1/2" F with captive nut.
Max. working pressure: 10 bar.
Temperature range: 5–110°C.



Code	Outlet centre distance		
550020	125 mm	1	–

550 2+1

 **tech. broch. 01261**

Manifold for heating and air conditioning systems. Steel body.
1 1/4" M main connections.
Outlet connections: 1 1/2" F with captive nut.
Max. working pressure: 10 bar.
Temperature range: 5–110°C.



Code	Outlet centre distance		
550021	125 mm	1	–

550 3

 **tech. broch. 01261**

Manifold for heating and air conditioning systems. Steel body.
1 1/2" M main connections.
Outlet connections: 1 1/2" F with captive nut.
Max. working pressure: 10 bar.
Temperature range: 5–110°C.



Code	Outlet centre distance		
550030	125 mm	1	–

550 3+1

 **tech. broch. 01261**

Manifold for heating and air conditioning systems. Steel body.
1 1/2" M main connections.
Outlet connections: 1 1/2" F with captive nut.
Max. working pressure: 10 bar.
Temperature range: 5–110°C.



Code	Outlet centre distance		
550031	125 mm	1	–

550 4

 **tech. broch. 01261**

Manifold for heating and air conditioning systems. Steel body.
1 1/2" M main connections.
Outlet connections: 1 1/2" F with captive nut.
Max. working pressure: 10 bar.
Temperature range: 5–110°C.



Code	Outlet centre distance		
550040	125 mm	1	–

Insulation for manifolds for central heating system 550 series. For heating and air conditioning systems.



Code			
CBN550020	for manifold 2	1	–
CBN550021	for manifold 2+1	1	–
CBN550030	for manifold 3	1	–
CBN550031	for manifold 3+1	1	–
CBN550040	for manifold 4	1	–

STRAINERS



577

Y-strainer.
Bronze body,
1/2"-2": PN 16,
2 1/2" - 3": PN 10.
Female connections.
Temperature range: -20-110°C.
Max. percentage of glycol: 30%.
Strainer on stainless steel stretched plate.

Code		Mesh size Ø (mm)		
577004	1/2"	0,40	1	-
577005	3/4"	0,40	1	-
577006	1"	0,40	1	-
577007	1 1/4"	0,47	1	-
577008	1 1/2"	0,47	1	-
577009	2"	0,53	1	-
577020	2 1/2"	0,53	1	-
577030	3"	0,53	1	-

NEW

579

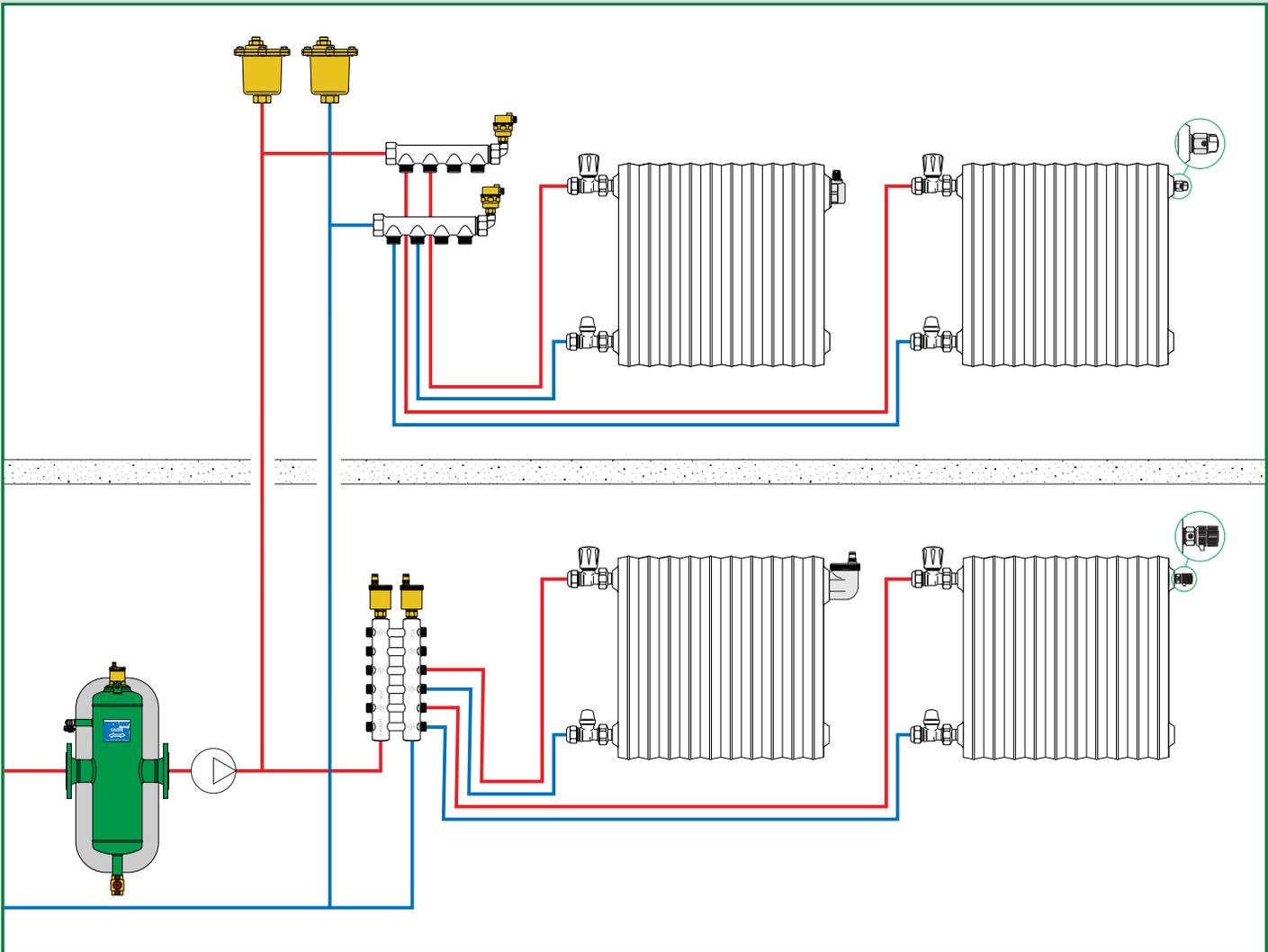
Y strainer for heating systems.
Grey cast iron body.
Max. working pressure: 16 bar.
Temperature range: -10-100°C.
Max. percentage of glycol: 50%.
Flanged connections PN 16.
To be coupled with flat counterflanges EN 1092-2.
Filtering mesh in stainless steel AISI 304.



Code		Mesh size Ø (mm)		
579051	DN 50	0,87	1	-
579061	DN 65	0,87	1	-
579081	DN 80	1,55	1	-
579101	DN 100	1,55	1	-
579121	DN 125	1,55	1	-
579151	DN 150	1,55*	1	-
579201	DN 200	1,55*	1	-
579251	DN 250	1,55*	1	-

* Rhomboidal reinforcing mesh

The diagram is just an indication



Automatic air vents

End plug for radiators with automatic air vent, AERCAL

Manual air vents

Drain cocks

Deaerators, DISCAL®

Deaerators-dirt separators, DISCALDIRT®

Dirt separators, DIRTCAL®

Dirt separators with magnet, DIRTMAG®

Dirt separators in composite with magnet, DIRTMAG®

Multifunction device with dirt separator and strainer, DIRTMAGPLUS®



501 MAXCAL  [tech. broch. 01031](#)

Automatic air vent for heating, air conditioning and refrigeration. High discharge capacity. Brass body and cover, stainless steel internal components. Max. working pressure: 16 bar. Max. discharge pressure: 6 bar. Temperature range: -20-120°C.



Code



501500	3/4" F x 3/8" F	1	5
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5020 MINICAL  [tech. broch. 01054](#)

Automatic air vent. In hot-stamped brass. Chrome plated. Max. working pressure: 10 bar. Max. discharge pressure: 2,5 bar. Max. working temperature: 120°C.



Code



502031	3/8" M	10	50
502041	1/2" M	10	50



551 DISCALAIR®  [tech. broch. 01124](#)

High performance automatic air vent. Brass body. **Female connection.** Max. working pressure: 10 bar. Max. discharge pressure: 10 bar. Temperature range: 0-110°C.



Code



551004	1/2"	1	10
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5020 MINICAL  [tech. broch. 01054](#)

Automatic air vent. In hot-stamped brass. Chrome plated. With hygroscopic safety cap. Max. working pressure: 10 bar. Max. discharge pressure: 2,5 bar. Max. working temperature: 120°C.



Code



502051	3/4" M	2	50
502061	1" M	2	50

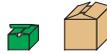


5020 MINICAL  [tech. broch. 01054](#)

Automatic air vent. In hot-stamped brass. Max. working pressure: 10 bar. Max. discharge pressure: 2,5 bar. Max. working temperature: 120°C.



Code



502030	3/8" M	10	50
502040	1/2" M	10	50



5021 MINICAL  [tech. broch. 01054](#)

Automatic air vent. In hot-stamped brass. With automatic shut-off cock. Max. working pressure: 10 bar. Max. discharge pressure: 2,5 bar. Max. working temperature: 110°C.



Code



502130	3/8" M	10	100
502140	1/2" M	10	100



5020 MINICAL  [tech. broch. 01054](#)

Automatic air vent. In hot-stamped brass. With hygroscopic safety cap. Max. working pressure: 10 bar. Max. discharge pressure: 2,5 bar. Max. working temperature: 120°C.



Code



502050	3/4" M	2	50
502060	1" M	2	50



5021 MINICAL  [tech. broch. 01054](#)

Automatic air vent. In hot-stamped brass. Chrome plated. With automatic shut-off cock. Max. working pressure: 10 bar. Max. discharge pressure: 2,5 bar. Max. working temperature: 110°C.



Code



502131	3/8" M	10	100
502141	1/2" M	10	100



**5021
MINICAL**

tech. broch. 01054

Automatic air vent.
In hot-stamped brass.
Chrome plated.
With automatic shut-off cock and
hygroscopic safety cap.
Max. working pressure: 10 bar.
Max. discharge pressure: 2,5 bar.
Max. working temperature: 110°C.



Code			
502132	3/8" M	10	100
502142	1/2" M	10	100



**5024
ROBOCAL**

tech. broch. 01033

Automatic air vent.
In hot-stamped brass.
Max. working pressure: 10 bar.
Max. discharge pressure: 4 bar.
Max. working temperature: 115°C.



Code			
502420	1/4" M	112	-
502430	3/8" M	1	50



**5022
VALCAL**

tech. broch. 01054

Automatic air vent.
In hot-stamped brass.
Chrome plated.
Max. working pressure: 10 bar.
Max. discharge pressure: 4 bar.
Max. working temperature: 120°C.

Code			
502221	1/4" M	1	25
502231	3/8" M	1	25
502241	1/2" M	1	25



**5025
ROBOCAL**

tech. broch. 01033

Automatic air vent.
In hot-stamped brass.
With automatic shut-off cock.
Max. working pressure: 10 bar.
Max. discharge pressure: 4 bar.
Max. working temperature: 110°C.



Code			
502533	3/8" M	10	100
502543	1/2" M	10	100



561

tech. broch. 01054

Automatic shut-off cock.
For automatic air vents 502. series.
PTFE seal on thread.
Max. working pressure: 10 bar.
Max. working temperature: 110°C.

Code			
561230	1/4" x 3/8" M	50	500
561300	3/8" x 3/8" M	10	-
561340	3/8" x 1/2" M	10	-
561400	1/2" x 1/2" M without PTFE seal on thread	10	-



**5026
ROBOCAL**

tech. broch. 01033

Automatic air vent.
In hot-stamped brass.
Max. working pressure: 10 bar.
Max. discharge pressure: 6 bar.
Max. working temperature: 115°C.



Code			
502630	3/8" M	10	50
502640	1/2" M	10	100



561

tech. broch. 01054

Automatic shut-off cock.
For automatic air vents 5020 and
5022 series.
Chrome plated.
PTFE seal on thread.
Max. working pressure: 10 bar.
Max. working temperature: 110°C.

Code			
561301	3/8" x 3/8" M	10	-
561401	1/2" x 1/2" M without PTFE seal on thread	10	-



**5027
ROBOCAL**

tech. broch. 01033

Automatic air vent.
In hot-stamped brass.
With automatic shut-off cock.
Max. working pressure: 10 bar.
Max. discharge pressure: 6 bar.
Max. working temperature: 110°C.



Code			
502730	3/8" M	10	100



**507
AERCAL**

[tech. broch. 01032](#)

End plug for radiators with automatic air vent. In hot-stamped brass. Chrome plated. With hygroscopic safety cap. With rubber seal. Max. working pressure: 10 bar. Max. discharge pressure: 6 bar. Max. working temperature: 100°C.

Code			
507611	1" M right	1	25
507621	1" M left	1	25
507711	1 1/4" M right	1	25
507721	1 1/4" M left	1	25



**504
AERCAL**

[tech. broch. 01055](#)

Automatic air vent for radiators. In hot-stamped brass. Chrome plated. With hygroscopic safety cap. Max. working pressure: 10 bar. Max. discharge pressure: 2,5 bar. Max. working temperature: 100°C.

Code			
504401	1/2" M	1	25
504501	3/4" M	1	25
504611	1" M right	1	25
504621	1" M left	1	25



**R59720
AQUASTOP**

[tech. broch. 01032](#)

Hygroscopic safety cap. For end plugs 507 series. Chrome plated.

Code		
R59720	1	-



**R59681
AQUASTOP**

[tech. broch. 01054](#)

Hygroscopic safety cap. For automatic air vents 5020 and 5021 series.

Code		
R59681	1	-



**5620
AQUASTOP**

[tech. broch. 01054](#)

Hygroscopic safety cap. For automatic air vents 5020, 5021, 5022 and 504 series. Chrome plated.

Code		
562000	50	-



5621

[tech. broch. 01054](#)

Anti-vacuum cap. For automatic air vents 5020, 5021 and 5022 series.

Code		
562100	100	-



5622

[tech. broch. 01033](#)

Anti-vacuum cap. For automatic air vents 5024, 5025, 5026 and 5027 series.

Code		
562200	100	-



505 tech. broch. 01056

Manual air vent for radiators.
Chrome plated.
White POM (acetal resin) knob.
PTFE seal on thread.
Max. working pressure: 10 bar.
Max. working temperature: 90°C.

Code			
505111	1/8" M	50	-
505121	1/4" M	50	500
505131	3/8" M	50	500



5080 tech. broch. 01056

Automatic hygroscopic air vent for radiators. Chrome plated.
White POM (acetal resin) knob.
PTFE seal on thread.
Max. working pressure: 10 bar.
Max. working temperature: 100°C.

Code			
508011	1/8" M	25	-
508021	1/4" M	25	-
508031	3/8" M	25	-
508041	1/2" M	25	-



5055 tech. broch. 01056

Manual air vent for radiators.
Rubber seal.
Chrome plated.
White POM (acetal resin) knob.
PTFE seal on thread.
Max. working pressure: 10 bar.
Max. working temperature: 90°C.

Code			
505511	1/8" M	10	100
505521	1/4" M	10	100
505531	3/8" M	10	100
505541	1/2" M	10	50



5081 tech. broch. 01056

Spare hygroscopic cartridge for 5080 series.

Code			
508100	12 p.1,5	25	-



337

Drain cock.
Adjustable outlet.
PTFE seal on thread.
Max. working pressure: 6 bar.
Max. working temperature: 85°C.



Code			
337121	1/4"	50	200
337131	3/8"	50	200



337

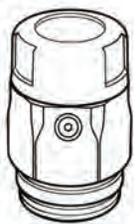
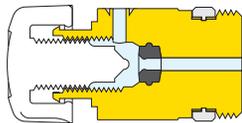
Drain cock with metal seal.
Adjustable outlet.
PTFE seal on thread.
Max. working pressure: 10 bar.
Max. working temperature: 100°C.



Code			
337221	1/4"	80	400
337231	3/8"	50	250

Manual air vent for radiators 5055 series

The identifying detail of this valve is an internal seal in a special elastic material which provides a tight seal in relation to limited tightening of the knob and possible temperature changes.



The knob of the valve is shaped so as to be similar in appearance to Caleffi thermostatic valve heads, which enhances the uniformity of the radiator component range.

For all the radiator air vents, the knob should be tightened with the system still cold.



5054 tech. broch. 01056

Manual air vent for radiators.
Chrome plated.
White POM (acetal resin) knob.
Adjustable outlet.
PTFE seal on thread.
Max. working pressure: 10 bar.
Max. working temperature: 90°C.

Code			
505411	1/8" M	50	-
505421	1/4" M	50	-
505431	3/8" M	50	-
505441	1/2" M	50	-



560 tech. broch. 01056

Drain cock for radiators and wall-mounted boilers.
Chrome plated.
Max. working pressure: 10 bar.
Max. working temperature: 100°C.

Code			
560421	♦ 1/2"	10	-
560000	extractor drain hose	25	-

♦ One extractor drain hose code 560000 is included in each 10-item package

DEAERATORS

Operating principle

The deaerator uses the combined action of several physical principles. The active part consists of an assembly of concentric metal mesh surfaces. These elements create the whirling movement required to facilitate the release of micro-bubbles and their adhesion to these surfaces. The bubbles, fusing with each other, increase in volume until the hydrostatic thrust is such as to overcome the adhesion force to the structure. They rise towards the top of the unit from which they are released through a float-operated automatic air release valve. It is designed in such a way that the direction in which the medium is flowing inside it makes no difference.



Low head losses

The vertical DISCAL® device, thanks to the internal shape of the valve body, features very low head losses. Therefore it can be used, without constraints, in the closed circuits of many different system applications.

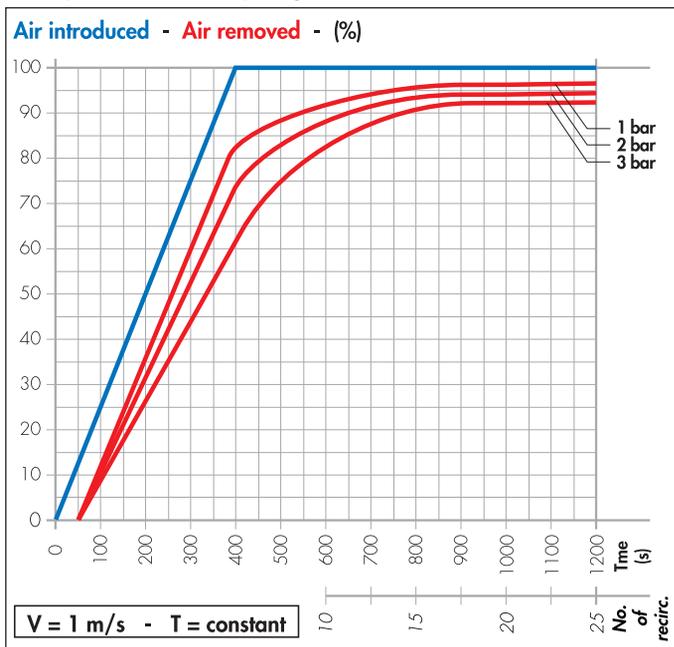
Air separation efficiency

DISCAL® devices are capable of continuously removing the air contained within a hydraulic circuit, with a high degree of separation efficiency. The amount of air which may be removed from a circuit depends on various parameters: it increases as the circulation speed and pressure values fall.

As illustrated on the graph below, after just 25 recirculations at the maximum recommended speed, almost all the air artificially introduced into the circuit is eliminated by the deaerator, with variable percentages according to the pressure within the circuit.

The small amount which remains is then gradually eliminated during normal system operation. In conditions where the speed is slower or the temperature of the medium is higher, the amount of air separated is even greater.

Air separation efficiency diagram for DISCAL® deaerator



551 DISCALAIR®

tech. broch. 01124

High performance automatic air vent. Brass body. **Female connection.** Max. working pressure: 10 bar. Max. discharge pressure: 10 bar. Temperature range: 0–110°C.

Code				
551004	1/2"		1	10



551 DISCAL®

tech. broch. 01060

Deaerator. Brass body. **Ø 22 mm with compression ends.** Max. working pressure: 10 bar. Max. discharge pressure: 10 bar. Temperature range: 0–110°C.

Code				
551002	Ø 22		1	10



551 DISCAL®

tech. broch. 01060

Deaerator. Brass body. **Female connections.** Max. working pressure: 10 bar. Max. discharge pressure: 10 bar. Temperature range: 0–110°C.

Code				
551003	3/4"		1	10



551 DISCAL®

tech. broch. 01060

Deaerator for vertical pipes. Brass body. **Ø 22 mm with compression ends.** Max. working pressure: 10 bar. Max. discharge pressure: 10 bar. Temperature range: 0–110°C.

Code				
551902	Ø 22		1	5



551 DISCAL®

tech. broch. 01060

Deaerator for vertical pipes. Brass body. **Female connections.** Max. working pressure: 10 bar. Max. discharge pressure: 10 bar. Temperature range: 0–110°C.

Code				
551905	3/4"		1	5
551906	1"		1	5

DEAERATORS



551 DISCAL® tech. broch. 01060

Deaerator.
Brass body.
Female connections.
With drain.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range: 0–110°C.



Code	Use		
551005	3/4"	1	–
551006	1"	1	–
551007	1 1/4"	1	–
551008	1 1/2"	1	–
551009	2"	1	–



Insulation
for deaerators 551 series.

Code	Use		
CBN551005	551005-551006	1	–
CBN551007	551007-551008	1	–
CBN551009	551009	1	–



551 DISCAL® tech. broch. 01060

Deaerator.
Epoxy resin coated steel body.
Flanged connections PN 16.
To be coupled with flat counterflanges EN 1092-1.
With insulation.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range:
0–105°C (DN 50–DN 100),
0–100°C (DN 125–DN 150),
0–110°C (without insulation).

Code	Use		
551052	DN 50	1	–
551062	DN 65	1	–
551082	DN 80	1	–
551102	DN 100	1	–
551122	DN 125	1	–
551152	DN 150	1	–
551050	DN 50 without insulation	1	–
551060	DN 65 without insulation	1	–
551080	DN 80 without insulation	1	–
551100	DN 100 without insulation	1	–
551120	DN 125 without insulation	1	–
551150	DN 150 without insulation	1	–



551 DISCAL® tech. broch. 01060

Deaerator.
Epoxy resin coated steel body.
Weld ends.
With insulation.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range:
0–105°C (DN 50–DN 100),
0–100°C (DN 125–DN 150),
0–110°C (without insulation).

Code	Use		
551053	DN 50	1	–
551063	DN 65	1	–
551083	DN 80	1	–
551103	DN 100	1	–
551123	DN 125	1	–
551153	DN 150	1	–
551051	DN 50 without insulation	1	–
551061	DN 65 without insulation	1	–
551081	DN 80 without insulation	1	–
551101	DN 100 without insulation	1	–
551121	DN 125 without insulation	1	–
551151	DN 150 without insulation	1	–



551 DISCAL® tech. broch. 01060

Deaerator.
Epoxy resin coated steel body.
Flanged connections PN 10.
To be coupled with flat counterflanges EN 1092-1.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range:
0–110°C.
Temperature probe connection: 1/2" F.

Code	Use		
551200	DN 200	1	–
551250	DN 250	1	–
551300	DN 300	1	–

DEAERATORS-DIRT SEPARATORS

Operating principle

The deaerator-dirt separator uses the combined action of several physical principles. The active part consists of an assembly of concentric metal mesh surfaces. These elements create the whirling movement required to facilitate the release of micro-bubbles and their adhesion to these surfaces. The bubbles, fusing with each other, increase in volume until the hydrostatic thrust is such as to overcome the adhesion force to the structure. They rise towards the top of the unit from which they are released through a float-operated automatic air release valve. The impurities in the water, colliding with the metal surfaces of the internal element, are separated out and fall to the bottom of the valve body.



5461 **DISCALDIRTMAG**  tech. broch. 01123

Deaerator-dirt separator **with magnet**.
Brass body.
Female connections.
Drain cock with hose connection.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range: 0–110°C.
Particle separation rating down to 5 µm.



Code

Code	Size		
546105	3/4"	1	–
546106	1"	1	–
546107	1 1/4"	1	–

546 **DISCALDIRT®**  tech. broch. 01123

Deaerator-dirt separator.
Brass body.
Ø 22 mm with compression ends.
Drain cock with hose connection.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range: 0–110°C.
Particle separation rating down to 5 µm.



Insulation
for deaerators-dirt separators 546 series.



Code

Code	Size		
546002	Ø 22	1	–

Code

Code	Use		
CBN546002	546002-546005-546006	1	–
CBN546007	546007	1	–

546 **DISCALDIRT®**  tech. broch. 01123

Deaerator-dirt separator.
Brass body.
Female connections.
Drain cock with hose connection.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range: 0–110°C.
Particle separation rating down to 5 µm.



Code

Code	Size		
546005	3/4"	1	–
546006	1"	1	–
546007	1 1/4"	1	–

DEAERATORS-DIRT SEPARATORS



546  **DISCALDIRT®** tech. broch. 01123

Deaerator-dirt separator.
Epoxy resin coated steel body.
Weld ends.
With insulation.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range:
0-105°C (DN 50-DN 100),
0-100°C (DN 125-DN 150),
0-110°C (without insulation).
Particle separation rating
down to 5 µm.

Code			
546053	DN 50	1	-
546063	DN 65	1	-
546083	DN 80	1	-
546103	DN 100	1	-
546123	DN 125	1	-
546153	DN 150	1	-
546051	DN 50 without insulation	1	-
546061	DN 65 without insulation	1	-
546081	DN 80 without insulation	1	-
546101	DN 100 without insulation	1	-
546121	DN 125 without insulation	1	-
546151	DN 150 without insulation	1	-



546  **DISCALDIRT®** tech. broch. 01123

Deaerator-dirt separator.
Epoxy resin coated steel body.
Flanged connections PN 10.
To be coupled with flat
counterflanges EN 1092-1.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range: 0-110°C.
Temperature probe connection: 1/2" F.
Particle separation rating
down to 5 µm.

Code			
546200	DN 200	1	-
546250	DN 250	1	-
546300	DN 300	1	-



546  **DISCALDIRT®** tech. broch. 01123

Deaerator-dirt separator.
Epoxy resin coated steel body.
Flanged connections PN 16.
To be coupled with flat
counterflanges EN 1092-1.
With insulation.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range:
0-105°C (DN 50-DN 100),
0-100°C (DN 125-DN 150),
0-110°C (without insulation).
Particle separation rating
down to 5 µm.

Code			
546052	DN 50	1	-
546062	DN 65	1	-
546082	DN 80	1	-
546102	DN 100	1	-
546122	DN 125	1	-
546152	DN 150	1	-
546050	DN 50 without insulation	1	-
546060	DN 65 without insulation	1	-
546080	DN 80 without insulation	1	-
546100	DN 100 without insulation	1	-
546120	DN 125 without insulation	1	-
546150	DN 150 without insulation	1	-

DIRT SEPARATORS

Operating principle

The separating action performed by the dirt separator is based on using the internal element with reticular surfaces in place of the ordinary filter. The screen, by its nature, offers little resistance to the flow of medium while ensuring separation. This occurs due to the particles colliding with the reticular surfaces and then settling, and not by filtration; an action by which the filter, over time, gets progressively clogged by the sludge it removes.



5462 *DIRTCAL*[®] tech. broch. 01137

Dirt separator. Brass body. **Female connections.** Drain cock with hose connection. Top connection with plug. Max. working pressure: 10 bar. Temperature range: 0–110°C. Particle separation rating down to 5 µm.



Code			
546205	3/4"	1	6
546206	1"	1	6
546207	1 1/4"	1	6
546208	1 1/2"	1	6
546209	2"	1	6



Insulation for dirt separators 5462 and 5463 series.

Code	Use		
CBN546205	546205-546206-546305-546306	1	–
CBN546207	546207-546208-546307-546308	1	–
CBN546209	546209-546309	1	–



5469 *DIRTCAL*[®] tech. broch. 01137

Dirt separator for vertical pipes. Brass body. **Ø 22 with compression ends.** Drain cock with hose connection. Max. working pressure: 10 bar. Temperature range: 0–110°C.



Code			
546902	Ø 22	1	5



5469 *DIRTCAL*[®] tech. broch. 01137

Dirt separator for vertical pipes. Brass body. **Female connections.** Drain cock with hose connection. Max. working pressure: 10 bar. Temperature range: 0–110°C.



Code			
546905	3/4"	1	5
546906	1"	1	5



5465 *DIRTCAL*[®] tech. broch. 01137

Dirt separator. Epoxy resin coated steel body. **Flanged connections PN 16.** To be coupled with flat counterflanges EN 1092-1. **With insulation.** Max. working pressure: 10 bar. Temperature range: 0–105°C (DN 50–DN 100), 0–100°C (DN 125–DN 150). Particle separation rating down to 5 µm.



Code			
546550	DN 50	1	–
546560	DN 65	1	–
546580	DN 80	1	–
546510	DN 100	1	–
546512	DN 125	1	–
546515	DN 150	1	–



5465 *DIRTCAL*[®] tech. broch. 01137

Dirt separator. Epoxy resin coated steel body. **Flanged connections PN 10.** To be coupled with flat counterflanges EN 1092-1. Max. working pressure: 10 bar. Temperature range: 0–110°C. Temperature probe connection: 1/2" F. Particle separation rating down to 5 µm.

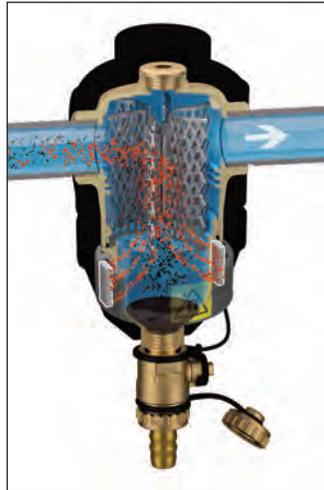


Code			
546520	DN 200	1	–
546525	DN 250	1	–
546530	DN 300	1	–

DIRT SEPARATORS WITH MAGNET

Operating principle

The magnetic dirt separator, in addition to the traditional dirt separation function, is equipped with a patented device to collect ferrous impurities contained within the system water. A specific ring, featuring two slots for housing the magnets, is placed outside the body in the part for collecting the impurities. The ferrous particles are trapped in this way in the collection zone, thus avoiding they return in circulation. By removing the ring and opening the drain cock, impurities and sludge are eliminated from the system.



5463 DIRTMAG® tech. broch. 01137

Dirt separator **with magnet**. Brass body.
Female connections.
 Drain cock with hose connection. Top connection with plug.
 Max. working pressure: 10 bar. Temperature range: 0–110°C.
 Particle separation rating down to 5 µm.



Code			
546305	3/4"	1	6
546306	1"	1	6
546307	1 1/4"	1	6
546308	1 1/2"	1	6
546309	2"	1	6



5463 DIRTMAG® tech. broch. 01137

Dirt separator **with magnet**. Brass body.
Female connections.
 Drain cock with hose connection. Top connection with plug.
With insulation.
 Max. working pressure: 10 bar. Temperature range: 0–110°C.
 Particle separation rating down to 5 µm.



Code			
546315	3/4"	1	–
546316	1"	1	–
546317	1 1/4"	1	–
546318	1 1/2"	1	–
546319	2"	1	–



5468 DIRTMAG® tech. broch. 01137

Dirt separator **with magnet** for vertical pipes. Brass body.
Female connections.
 Drain cock with hose connection. Max. working pressure: 10 bar. Temperature range: 0–110°C.



Code			
546805	3/4"	1	5
546806	1"	1	5



5468 DIRTMAG® tech. broch. 01137

Dirt separator **with magnet** for vertical pipes. Brass body.
Ø 22 and Ø 28 with compression ends.
 Drain cock with hose connection. Max. working pressure: 10 bar. Temperature range: 0–110°C.



Code			
546802	Ø 22	1	5
546803	Ø 28	1	5



5466 DIRTMAG® tech. broch. 01137

Dirt separator **with magnet**. Epoxy resin coated steel body.
Flanged connections PN 16.
 To be coupled with flat counterflanges EN 1092-1.
With pre-formed insulation.
 Max. working pressure: 10 bar. Temperature range: 0–100°C.

Code			
546650	DN 50	1	–
546660	DN 65	1	–
546680	DN 80	1	–
546610	DN 100	1	–
546612	DN 125	1	–
546615	DN 150	1	–

For technical details see page 20

DIRT SEPARATORS IN COMPOSITE WITH MAGNET



5453

DIRTMAG®

tech. broch. 01240

Dirt separator **with magnet**.
Technopolymer body.
Female connections.
Adjustable for horizontal and vertical pipes.
Drain cock with hose connection.
Max. working pressure: 3 bar.
Temperature range: 0-90°C.



Code			
545305	3/4"	1	5
545306	1"	1	5



5453

DIRTMAG®

NEW

Dirt separator with ball valves **and magnet**.
Composite body.
Female connections.
Adjustable for horizontal, vertical or 45° pipes.
Drain cock with hose connection.
Max. working pressure: 3 bar.
Temperature range: 0-90°C.



Code			
545345	3/4"	1	-
545346	1"	1	-
545347	1 1/4"	1	-



5453

DIRTMAG®

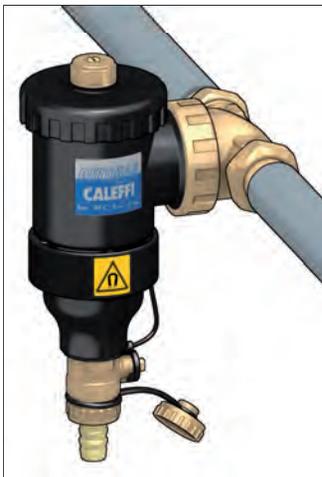
tech. broch. 01240

Dirt separator **with magnet**.
Technopolymer body.
Ø 22 and Ø 28 with compression ends.
Adjustable for horizontal and vertical pipes.
Drain cock with hose connection.
Max. working pressure: 3 bar.
Temperature range: 0-90°C.

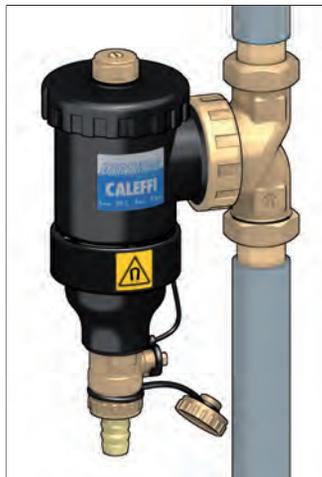


Code			
545302	Ø 22	1	5
545303	Ø 28	1	5

Example of horizontal installation of the 5453 serie dirt separator



Example of vertical installation of the 5453 series dirt separator



MULTIFUNCTION DEVICE IN COMPOSITE WITH DIRT SEPARATOR AND STRAINER

NEW

5453

tech. broch. 01258

DIRTMAGPLUS®



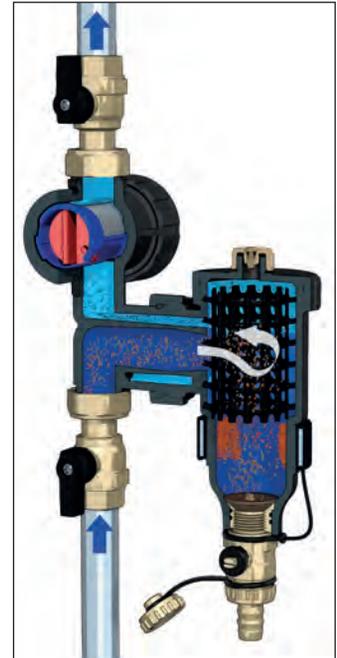
Multifunction device with dirt separator and strainer. Specific for the complete cleaning of the hydraulic circuit, to protect continuously generator and components. Composite body. Dirt separator with tecnopolimer internal element, **with magnet**. Two inspectable strainers with stainless steel mesh: 1 for initial cleaning (blue colour) already installed, 1 for maintenance (grey colour) to be bought separately. Shut-off valve with nut, brass body. **Adjustable for horizontal, vertical or 45° pipes. Female connections.** Drain cock with hose connection. Max. working pressure: 3 bar. Temperature range: 0-90°C.

PCT INTERNATIONAL APPLICATION PENDING

Code			
545375	3/4"	1	-
545376	1"	1	-

Operating principle

The multifunction device is obtained by coupling a dirt separator and a cartridge strainer arranged in series. The water circulating in the system flows, in sequence, first through the dirt separator and then through the cartridge strainer. The dirt separator separates the impurities contained in the water by means of the action of the internal element. Ferrous impurities are also trapped inside the body of the device thanks to the action of the two magnets inserted in a special removable outer ring. The first passage through the dirt separator makes it possible to separate a high percentage of the impurities in the circulating water, down to minimal particle sizes. The cartridge strainer separates impurities by means of mechanical selection of the particles in accordance with their size, by means of a special metal mesh. All the particles with diameter bigger than the mesh size are automatically stopped and separated, **with maximum separation efficiency at the first passage.**



NEW

5453

tech. broch. 01258

DIRTMAGPLUS®



Multifunction device with dirt separator and strainer. Specific for the complete cleaning of the hydraulic circuit, to protect continuously generator and components. Composite body. Dirt separator with tecnopolimer internal element, **with magnet**. Two inspectable strainers with stainless steel mesh: 1 for initial cleaning (blue colour) already installed, 1 for maintenance (grey colour) to be bought separately. Shut-off valve with nut, brass body. **Adjustable for horizontal, vertical or 45° pipes. Ø 22 and Ø 28 with compression ends.** Drain cock with hose connection. Max. working pressure: 3 bar. Temperature range: 0-90°C.

PCT INTERNATIONAL APPLICATION PENDING

Code			
545372	Ø 22	1	-
545373	Ø 28	1	-

Circuit cleaning and maintenance

The strainer (blue colour) downstream of the dirt separator and fitted with a specific strainer mesh is able to intercept all particles remaining in circulation, thereby ensuring optimal initial cleaning of the pipe, to protect generator and system components. The strainer is available also with a second cartridge (grey colour) fitted with a filtering mesh of bigger passage cross-section, which can be used **during maintenance phase after the first cleaning.**



Cartridge strainer

The high-capacity strainer cartridge consists of two parts: an outer body with stainless steel mesh and a specially shaped internal element for collecting impurities. The complete collection of impurities is always optimal, whether the installation is vertical, horizontal or 45°.

Accessory kit for circuit filling and flushing for device 5453 series.



Code			
F49476		1	-

Accessory kit for circuit filling and flushing

A specific accessory kit, composed of a plug with a drain cock and an internal element for flow separation (black colour), allows the connection to an external machine for system flushing.

Cartridge strainer

The high-capacity strainer cartridge consists of two parts: an outer body with stainless steel mesh and a specially shaped internal element for collecting impurities. The complete collection of impurities is always optimal, whether the installation is vertical, horizontal or 45°.



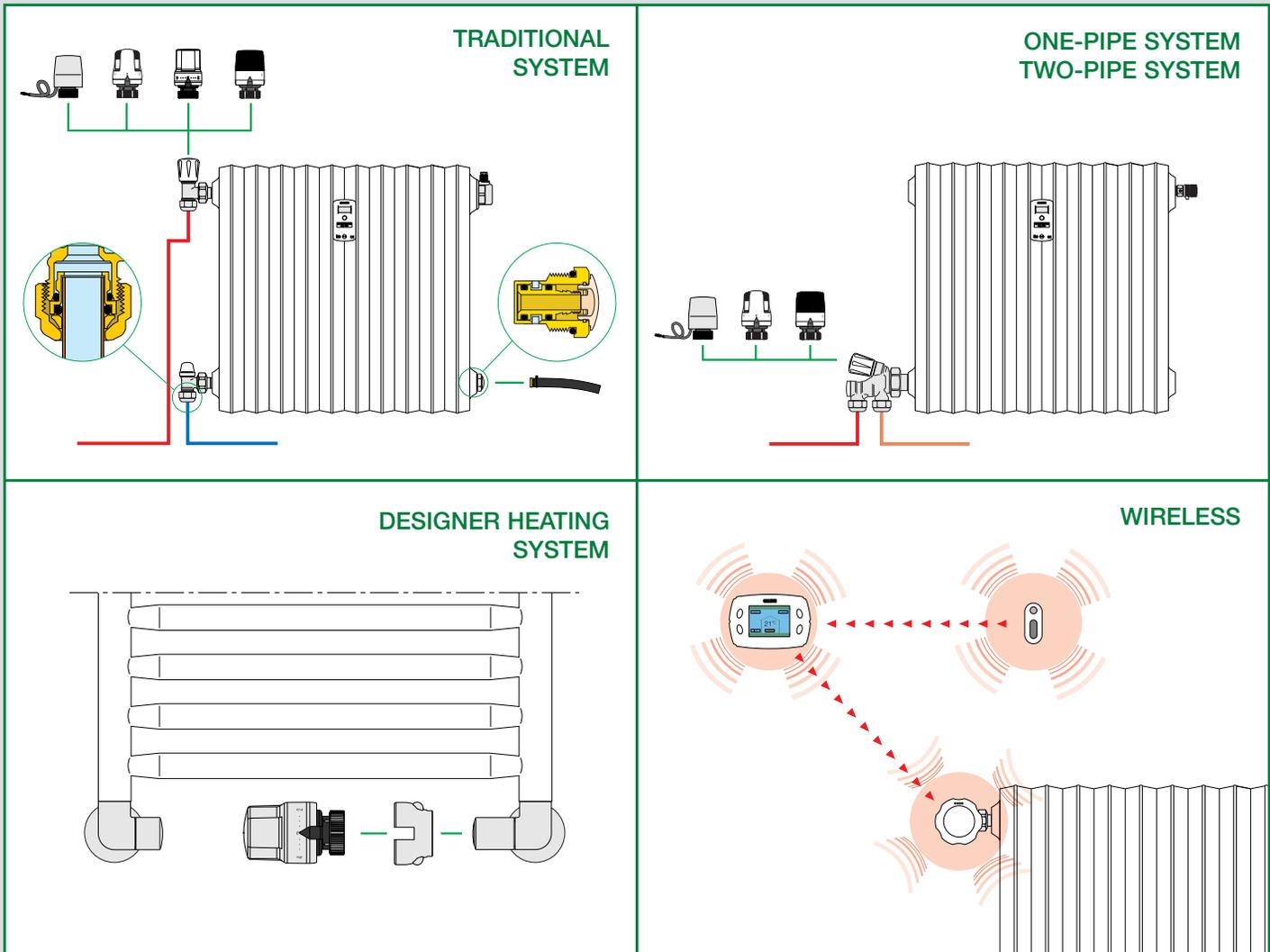
Strainer accessories.

Code			
F49474/BL	first cleaning strainer (blue colour)	1	-
F49474/GR	maintenance strainer (grey colour)	1	-

VALVES AND ACCESSORIES FOR RADIATORS

This diagram is just an indication

3



- Convertible radiator and lockshield valves
- Convertible radiator valves with pre-setting
- Convertible radiator valves for designer heating systems
- Thermostatic radiator valves
- Double-angled thermostatic radiator and lockshield valves
- Thermostatic control heads
- Electronic thermal control system for radiators
- Manual radiator and lockshield valves
- One-pipe and two-pipe radiator valves
- Drain cock
- Fittings
- Valves for panel radiators

CONVERTIBLE RADIATOR AND LOCKSHIELD VALVES



338

tech. broch. 01009

Angled convertible radiator valve fitted for thermostatic control heads and thermo-electric actuators. Chrome plated. For copper, single and multilayer plastic pipes. Max. working pressure: 10 bar. Temperature range: 5–100°C.

Code	Radiator connection	Pipe connection	Kv (m³/h)		
338302	3/8"	23 p.1,5	2,22	10	50
338402	1/2"	23 p.1,5	2,70	10	50
338452	1/2"	3/4"	2,70	10	50



342

tech. broch. 01009

Angled lockshield valve. Chrome plated. For copper, single and multilayer plastic pipes. Max. working pressure: 10 bar. Temperature range: 5–100°C.

Code	Radiator connection	Pipe connection	Kv (m³/h) fully open		
342302	3/8"	23 p.1,5	2,42	10	50
342402	1/2"	23 p.1,5	3,99	10	50
342452	1/2"	3/4"	3,99	10	50



339

tech. broch. 01009

Straight convertible radiator valve fitted for thermostatic control heads and thermo-electric actuators. Chrome plated. For copper, single and multilayer plastic pipes. Max. working pressure: 10 bar. Temperature range: 5–100°C.

Code	Radiator connection	Pipe connection	Kv (m³/h)		
339302	3/8"	23 p.1,5	1,35	10	50
339402	1/2"	23 p.1,5	1,79	10	50
339452	1/2"	3/4"	1,79	10	50



343

tech. broch. 01009

Straight lockshield valve. Chrome plated. For copper, single and multilayer plastic pipes. Max. working pressure: 10 bar. Temperature range: 5–100°C.

Code	Radiator connection	Pipe connection	Kv (m³/h) fully open		
343302	3/8"	23 p.1,5	1,32	10	50
343402	1/2"	23 p.1,5	2,17	10	50
343452	1/2"	3/4"	2,17	10	50



401

tech. broch. 01009

Angled convertible radiator valve fitted for thermostatic control heads and thermo-electric actuators. Chrome plated. For steel pipe. Max. working pressure: 10 bar. Temperature range: 5–100°C.

Code	Radiator connection	Kv (m³/h)		
401302	3/8"	2,22	10	50
401402	1/2"	2,70	10	50
401500	3/4" without rubber seal	3,36	5	25
401603	1" without rubber seal	4,47	5	25



431

tech. broch. 01009

Angled lockshield valve. Chrome plated. For steel pipe. Max. working pressure: 10 bar. Temperature range: 5–100°C.

Code	Radiator connection	Kv (m³/h) fully open		
431302	3/8"	2,42	10	50
431402	1/2"	3,99	10	50
431503	3/4" without rubber seal	4,52	5	25
431603	1" without rubber seal	5,64	5	25



402

tech. broch. 01009

Straight convertible radiator valve fitted for thermostatic control heads and thermo-electric actuators. Chrome plated. For steel pipe. Max. working pressure: 10 bar. Temperature range: 5–100°C.

Code	Radiator connection	Kv (m³/h)		
402302	3/8"	1,35	10	50
402402	1/2"	1,79	10	50
402500	3/4" without rubber seal	2,58	5	25
402603	1" without rubber seal	4,43	5	25



432

tech. broch. 01009

Straight lockshield valve. Chrome plated. For steel pipe. Max. working pressure: 10 bar. Temperature range: 5–100°C.

Code	Radiator connection	Kv (m³/h) fully open		
432302	3/8"	1,32	10	50
432402	1/2"	2,17	10	50
432503	3/4" without rubber seal	2,58	5	25
432603	1" without rubber seal	4,81	5	25

CONVERTIBLE RADIATOR VALVES WITH PRE-SETTING



425

tech. broch. 01195

Angled convertible radiator valve fitted for thermostatic control heads and thermo-electric actuators.

With pre-setting.

Chrome plated.

For copper, single and multilayer plastic pipes.

Max. working pressure: 10 bar.

Temperature range: 5–100°C.

Code	Radiator connection	Pipe connection		
425302	3/8"	23 p.1,5	1	20
425402	1/2"	23 p.1,5	1	20



426

tech. broch. 01195

Straight convertible radiator valve fitted for thermostatic control heads and thermo-electric actuators.

With pre-setting.

Chrome plated.

For copper, single and multilayer plastic pipes.

Max. working pressure: 10 bar.

Temperature range: 5–100°C.

Code	Radiator connection	Pipe connection		
426302	3/8"	23 p.1,5	1	20
426402	1/2"	23 p.1,5	1	20



421

tech. broch. 01195

Angled convertible radiator valve fitted for thermostatic control heads and thermo-electric actuators.

With pre-setting.

Chrome plated.

For steel pipe.

Max. working pressure: 10 bar.

Temperature range: 5–100°C.

Code	Radiator connection			
421302	3/8"		1	20
421402	1/2"		1	20
421500	3/4"	without rubber seal	1	20



422

tech. broch. 01195

Straight convertible radiator valve fitted for thermostatic control heads and thermo-electric actuators.

With pre-setting.

Chrome plated.

For steel pipe.

Max. working pressure: 10 bar.

Temperature range: 5–100°C.

Code	Radiator connection			
422302	3/8"		1	20
422402	1/2"		1	20
422500	3/4"		1	20

Pre-setting device

The convertible radiator valves are equipped with an internal device for pre-setting the head loss hydraulic characteristics.

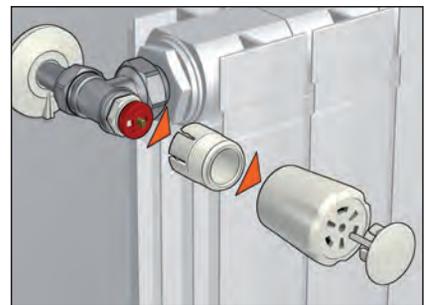
Specific passage cross sections can be selected by means of the control nut, in order to generate the required resistance to the motion of the medium.

Each passage cross section determines a specific Kv value for the creation of the head loss, which corresponds to a setting position on a graduated scale.

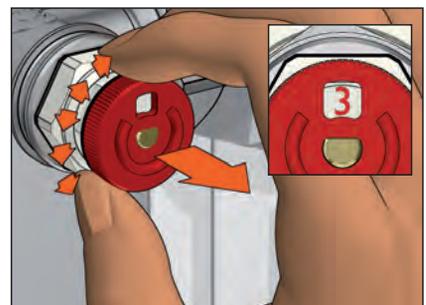
Depending on the position in the system, the valve can be pre-setted so as to obtain an immediate balancing of the hydraulic circuit, valid for both manual and thermostatic operation.

Pre-setting operation

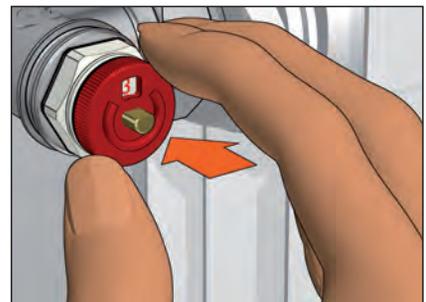
Remove the valve knob.



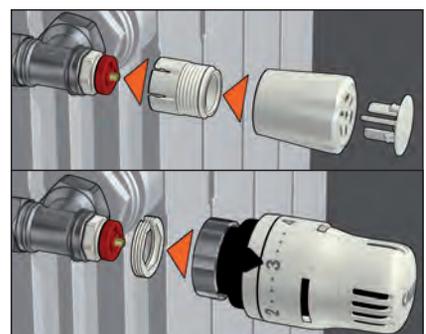
Lift the special control ring nut of the pre-setting device and turn the control stem to select the required position on the graduated scale.



Lower the ring nut again.



Position the manual knob, thermostatic control head or thermo-electric actuator on the valve.



HIGH-STYLE CONVERTIBLE RADIATOR VALVES FOR DESIGNER HEATING SYSTEMS

4001

Pair consisting of:
 - angled convertible radiator valve fitted for thermostatic control head **205 series**;
 - angled lockshield valve;
 - two pipe-covering/wall-covering shells and allen key.
 To be used with fittings 437, 447, 681 and 679 series.

White finish.
 Max. working pressure: 10 bar.
 Temperature range: 5–100°C.



Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
400101	1/2"	23 p.1,5	2,0	1,92	1	5

205

Thermostatic control head for designer heating system valves. Built-in sensor with liquid-filled element. For valves 4001, 4003 and 4004 series.
White finish.
 Graduated scale from * to 5 corresponding to a temperature adjustment range from 7°C to 28°C. With adapter, tamper-proof cap and special key for tamper-proof cap.



Code		
205005	1	10

4003

Pair consisting of:
 - double-angled convertible radiator valve fitted for thermostatic control head **205 series**;
 - lockshield valve, double-angled connections;
 - two pipe-covering/wall-covering shells and allen key.
Right-hand version.
 To be used with fittings 437, 447, 681 and 679 series.

White finish.
 Max. working pressure: 10 bar.
 Temperature range: 5–100°C.



Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
400301	1/2"	23 p.1,5	1,27	1,37	1	5

205

Thermostatic control head for designer heating system valves. Built-in sensor with liquid-filled element. For valves 4001, 4003 and 4004 series.
White finish.
 Graduated scale from * to 5 corresponding to a temperature adjustment range from 7°C to 28°C. With adapter.



Code		
205000	1	5

4004

Pair consisting of:
 - double-angled convertible radiator valve fitted for thermostatic control head **205 series**;
 - lockshield valve, double-angled connections;
 - two pipe-covering/wall-covering shells and allen key.
Left-hand version.
 To be used with fittings 437, 447, 681 and 679 series.

White finish.
 Max. working pressure: 10 bar.
 Temperature range: 5–100°C.



Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
400401	1/2"	23 p.1,5	1,27	1,37	1	5

209

 [tech. broch. 01034](#)

Tamper-proof anti-theft cap for use in public places. For thermostatic control heads 200, 204, 202 and 205 series.
 To be used with speciale allen key code 209001.



Code		
209000	1	10

209

 [tech. broch. 01034](#)

Special allen key for tamper-proof anti-theft cap. To be used with tamperproof cap 209 series.



Code		
209001	1	10

HIGH-STYLE CONVERTIBLE RADIATOR VALVES FOR DESIGNER HEATING SYSTEMS

4003

- Pair consisting of:
- double-angled convertible radiator valve fitted for thermostatic control head **205 series**;
 - lockshield valve, double-angled connections;
 - pipe-covering/wall-covering shell, connections: 50 mm centre distance.

**Central connections.
Right-hand version.**

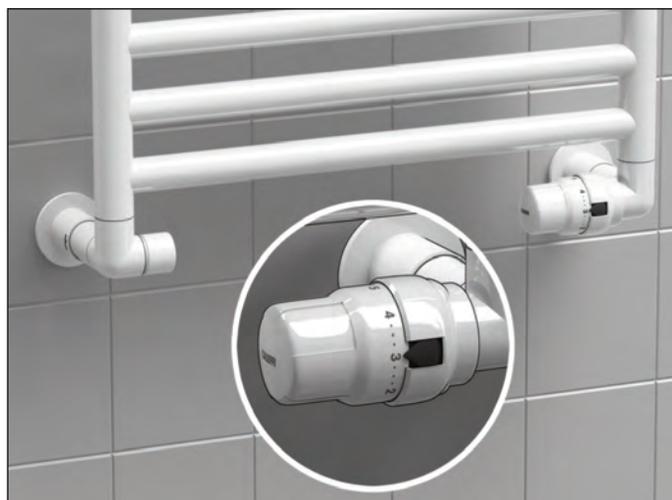
To be used with fittings 437, 447, 681 and 679 series.



White finish.
Max. working pressure: 10 bar.
Temperature range: 5–100°C.

Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
400311	1/2"	23 p.1,5	1,27	1,37	1	5

Example of HIGH-STYLE valve installation for designer heating systems, right-hand version, with thermostatic control head



4004

- Pair consisting of:
- double-angled convertible radiator valve fitted for thermostatic control head **205 series**;
 - lockshield valve, double-angled connections;
 - pipe-covering/wall-covering shell, connections: 50 mm centre distance.

**Central connections.
Left-hand version.**

To be used with fittings 437, 447, 681 and 679 series.



White finish.
Max. working pressure: 10 bar.
Temperature range: 5–100°C.

Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
400411	1/2"	23 p.1,5	1,27	1,37	1	5

Example of HIGH-STYLE valve installation for designer heating systems with central connection, left-hand version, with thermostatic control head



HIGH-STYLE CONVERTIBLE RADIATOR VALVES FOR DESIGNER HEATING SYSTEMS

4001

tech. broch. 01140

- angled-convertible radiator valve fitted for thermostatic control head code 200015;
- angled lockshield valve;
- two pipe-covering/wall-covering shells and allen key.

To be used with fittings 437, 447, 681 and 679 series.

High chrome finish.

Max. working pressure: 10 bar.
Temperature range: 5–100°C.



Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
400100	1/2"	23 p.1,5	2,0	1,92	1	5

200

tech. broch. 01140

Thermostatic control head for designer heating system valves. Built-in sensor with liquid-filled element. For valves 4001, 4003, 4004 and 3380 series.

High chrome finish.

Graduated scale from * to 5 corresponding to a temperature adjustment range from 7°C to 28°C. With adapter, tamper-proof cap and special key for tamper-proof cap.



Code		
200015	1	5

4003

tech. broch. 01140

- double-angled convertible radiator valve fitted for thermostatic control head code 200015;
- lockshield valve, double-angled connections;
- two pipe-covering/wall-covering shells and allen key.

Right-hand version.

To be used with fittings 437, 447, 681 and 679 series.

High chrome finish.

Max. working pressure: 10 bar.
Temperature range: 5–100°C.



Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
400300	1/2"	23 p.1,5	1,27	1,37	1	5

200

tech. broch. 01140

Thermostatic control head for designer heating system valves. Built-in sensor with liquid-filled element. For valves 4001, 4003, 4004 and 3380 series.

High chrome finish.

Graduated scale from * to 5 corresponding to a temperature adjustment range from 7°C to 28°C. With adapter.



Code		
200013	1	10

4004

tech. broch. 01140

- double-angled convertible radiator valve fitted for thermostatic control head code 200015;
- lockshield valve, double-angled connections;
- two pipe-covering/wall-covering shells and allen key.

Left-hand version.

To be used with fittings 437, 447, 681 and 679 series.

High chrome finish.

Max. working pressure: 10 bar.
Temperature range: 5–100°C.



Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
400400	1/2"	23 p.1,5	1,27	1,37	1	5



209

tech. broch. 01140

Tamper-proof anti-theft cap for use in public places. For thermostatic control heads 200 series.

High chrome finish.

To be used with speciale allen key code 209001.

Code		
209004	1	10

209

tech. broch. 01140

Special allen key for tamper-proof anti-theft cap. To be used with tamperproof cap 209 series.



Code		
209001	1	10

HIGH-STYLE CONVERTIBLE RADIATOR VALVES FOR DESIGNER HEATING SYSTEMS

4003

- Pair consisting of:
- double-angled convertible radiator valve fitted for thermostatic control head code 200015;
 - lockshield valve, double-angled connections;
 - pipe-covering/wall-covering shell, connections: 50 mm centre distance.

Central connections.
Right-hand version.

To be used with fittings 437, 447, 681 and 679 series.



High chrome finish.
Max. working pressure: 10 bar.
Temperature range: 5–100°C.

Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
400310	1/2"	23 p.1,5	1,27	1,37	1	5

Example of HIGH-STYLE valve installation for designer heating systems, right-hand version, with thermostatic control head



Example of HIGH-STYLE valve installation for designer heating systems with central connection, left-hand version, with thermostatic control head

4004

- Pair consisting of:
- double-angled convertible radiator valve fitted for thermostatic control head code 200015;
 - lockshield valve, double-angled connections;
 - pipe-covering/wall-covering shell, connections: 50 mm centre distance.

Central connections.
Left-hand version.

To be used with fittings 437, 447, 681 and 679 series.



High chrome finish.
Max. working pressure: 10 bar.
Temperature range: 5–100°C.

Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
400410	1/2"	23 p.1,5	1,27	1,37	1	5



CONVERTIBLE RADIATOR VALVES FOR DESIGNER HEATING SYSTEMS

3380



Pair consisting of:
- convertible radiator valve fitted for thermo-electric actuators and thermostatic control heads;
- lockshield valve.

Angled connections.
High chrome finish.
Max. working pressure: 10 bar.
Temperature range: 5–100°C.

Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
338040	1/2" M	23 p.1,5	2,70	3,99	1	5

437



Compression fitting, for annealed copper, hard copper, brass, mild and stainless steel pipes. With O-Ring seal. **High chrome finish.**
Max. working pressure: 10 bar.
Temperature range : -25–120°C.

Code			
437112	23 p.1,5 - Ø 12	1	50
437114	23 p.1,5 - Ø 14	1	50

681

DARCAL



Self-adjustable diameter fitting for single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range:
5–80°C (PE-X)
5–75°C (Multilayer marked 95°C).
High chrome finish.

Code		Ø _{inside}	Ø _{outside}		
681101	23 p.1,5	9,5÷10	12÷14,4	1	50
681124	23 p.1,5	11,5÷12	14÷16,4	1	50

NEW

383



Fitting for conversion from copper to steel connection.

Code			
383231	23 p.1,5 F x 3/8" F	1	10
383241	23 p.1,5 F x 1/2" F	1	10

CONVERTIBLE RADIATOR AND LOCKSHIELD VALVES WITH PUSH FIT CONNECTION

338



Angled convertible radiator valve fitted for thermostatic control head and thermo-electric actuators. Chrome plated.
Push fit connection for Ø 15 hard and annealed copper pipes or for extension code 936415.
Max. working pressure: 10 bar.
Temperature range: 5–100°C.

Code	Radiator connection	Pipe connection	Kv (m³/h)		
338415	1/2"	Ø 15	2,70	1	50

342



Angled lockshield valve. Chrome plated.
Push fit connection for Ø 15 hard and annealed copper pipes or for extension code 936415.
Max. working pressure: 10 bar.
Temperature range: 5–100°C.

Code	Radiator connection	Pipe connection	Kv (m³/h) fully open		
342415	1/2"	Ø 15	3,99	1	50

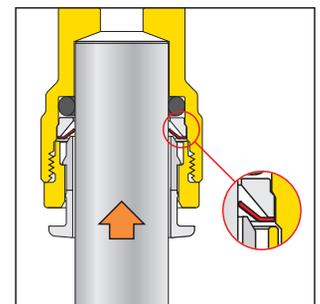
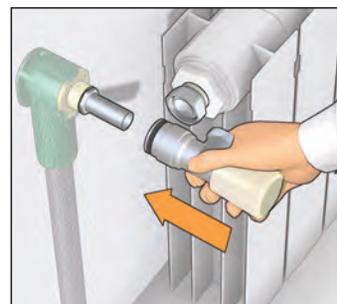
936



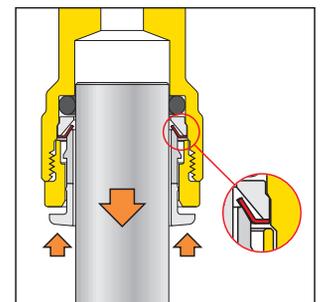
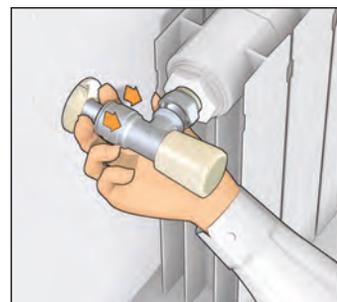
Extension for convertible radiator valves with push fit connection to wall connection fitting. In polished stainless steel. With shaped rubber seal. Length: 100 mm (useful 88 mm).

Code			
936415	1/2" x Ø 15	1	10

Installation of the valve on the pipe and locking with suitable clamps



Release by pressing on the outer ring



THERMOSTATIC RADIATOR VALVES



220

tech. broch. 01034

Angled thermostatic radiator valve fitted for thermostatic control heads and thermo-electric actuators. Chrome plated. For steel pipe (for copper pipe with 441 series). Max. working pressure: 10 bar. Temperature range: 5–100°C.

Code		Kvs (m ³ /h)*		
220302	3/8"	2,29	1	20
220402	1/2"	2,39	1	20
220500	3/4" without rubber seal	3,19	1	20



224

tech. broch. 01034

Reverse thermostatic radiator valve fitted for thermostatic control heads and thermo-electric actuators. Chrome plated. For steel pipe (for copper pipe with 441 series). Max. working pressure: 10 bar. Temperature range: 5–100°C.

Code		Kvs (m ³ /h)*		
224302	3/8"	0,93	1	20
224402	1/2"	1,39	1	20



221

tech. broch. 01034

Straight thermostatic radiator valve fitted for thermostatic control heads and thermo-electric actuators. Chrome plated. For steel pipe (for copper pipe with 441 series). Max. working pressure: 10 bar. Temperature range: 5–100°C.

Code		Kvs (m ³ /h)*		
221302	3/8"	1,05	1	20
221402	1/2"	1,52	1	20
221500	3/4" without rubber seal	2,20	1	20



227

tech. broch. 01034

Reverse thermostatic radiator valve fitted for thermostatic control heads and thermo-electric actuators. Chrome plated. For copper, single and multilayer plastic pipes. Max. working pressure: 10 bar. Temperature range: 5–100°C.

Code	Radiator connection	Pipe connection	Kvs (m ³ /h)*		
227402	1/2"	23 p.1,5	1,39	1	20



222

tech. broch. 01034

Angled thermostatic radiator valve fitted for thermostatic control heads and thermo-electric actuators. Chrome plated. For copper, single and multilayer plastic pipes. Max. working pressure: 10 bar. Temperature range: 5–100°C.

Code	Radiator connection	Pipe connection	Kvs (m ³ /h)*		
222402	1/2"	23 p.1,5	2,39	1	20



441

Compression fitting with metal olive. For valves 220, 221, 224 and 225 series. Chrome plated. For copper pipes.

Code				
441312	3/8" - Ø 12	olive	100	–
441414	1/2" - Ø 14	single groove	100	–
441415	1/2" - Ø 15	olive	100	–
441416	1/2" - Ø 16	single groove	100	–



223

tech. broch. 01034

Straight thermostatic radiator valve fitted for thermostatic control heads and thermo-electric actuators. Chrome plated. For copper, single and multilayer plastic pipes. Max. working pressure: 10 bar. Temperature range: 5–100°C.

Code	Radiator connection	Pipe connection	Kvs (m ³ /h)*		
223402	1/2"	23 p.1,5	1,52	1	20



4490

Knob for thermostatic radiator valves. For valves 220, 221, 222, 223, 224, 225, 227 series.

Code		
449010	1	100

*Kvs: flow rate for the valve equipped with thermostatic control head at the maximum open position.



The EN 215 certification covers the combination of codes 200000/200001 and 201, 204 series thermostatic control heads with valves 220, 221, 222, 223, 224, 225, 226 and 227 series.

DOUBLE-ANGLED THERMOSTATIC RADIATOR AND LOCKSHIELD VALVES



225

tech. broch. 01034

Double-angled thermostatic radiator valve fitted for thermostatic control heads and thermo-electric actuators.
Right-hand version. Chrome plated.
 For steel pipe (for copper pipe with 441 series).
 Max. working pressure: 10 bar.
 Temperature range: 5–100°C.

Code		Kvs (m ³ /h)*		
225312	3/8"	0,96	1	20
225412	1/2"	1,40	1	20

NEW



225

Double-angled lockshield valve.
Right-hand version. Chrome plated.
 For steel pipe (for copper pipe with 441 series).
 Max. working pressure: 10 bar.
 Temperature range: 5–100°C.

Code		Kvs (m ³ /h)*		
225352	3/8"	1,05	1	20
225452	1/2"	1,40	1	20



225

tech. broch. 01034

Double-angled thermostatic radiator valve fitted for thermostatic control heads and thermo-electric actuators.
Left-hand version. Chrome plated.
 For steel pipe (for copper pipe with 441 series).
 Max. working pressure: 10 bar.
 Temperature range: 5–100°C.

Code		Kvs (m ³ /h)*		
225322	3/8"	0,96	1	20
225422	1/2"	1,40	1	20

NEW



225

Double-angled lockshield valve.
Left-hand version. Chrome plated.
 For steel pipe (for copper pipe with 441 series).
 Max. working pressure: 10 bar.
 Temperature range: 5–100°C.

Code		Kvs (m ³ /h)*		
225362	3/8"	1,05	1	20
225462	1/2"	1,40	1	20

NEW



226

Double-angled thermostatic radiator valve fitted for thermostatic control heads and thermo-electric actuators.
Right-hand version. Chrome plated.
 For copper, single and multilayer plastic pipes.
 Max. working pressure: 10 bar.
 Temperature range: 5–100°C.

Code	Radiator connection	Pipe connection	Kvs (m ³ /h)*		
226412	1/2"	23 p.1,5	1,40	1	20

NEW



226

Double-angled lockshield valve.
Right-hand version. Chrome plated.
 For copper, single and multilayer plastic pipes.
 Max. working pressure: 10 bar.
 Temperature range: 5–100°C.

Code	Radiator connection	Pipe connection	Kvs (m ³ /h)*		
226452	1/2"	23 p.1,5	1,40	1	20

NEW



226

Double-angled thermostatic radiator valve fitted for thermostatic control heads and thermo-electric actuators.
Left-hand version. Chrome plated.
 For copper, single and multilayer plastic pipes.
 Max. working pressure: 10 bar.
 Temperature range: 5–100°C.

Code	Radiator connection	Pipe connection	Kvs (m ³ /h)*		
226422	1/2"	23 p.1,5	1,40	1	20

NEW



226

Double-angled lockshield valve.
Left-hand version. Chrome plated.
 For copper, single and multilayer plastic pipes.
 Max. working pressure: 10 bar.
 Temperature range: 5–100°C.

Code	Radiator connection	Pipe connection	Kvs (m ³ /h)*		
226462	1/2"	23 p.1,5	1,40	1	20

*Kvs: flow rate for the valve equipped with thermostatic control head at the maximum open position.

The EN 215 certification covers the combination of codes 200000/200001 and 201, 204 series thermostatic control heads 028 with valves 220, 221, 222, 223, 224, 225, 226 and 227 series.

ELECTRONIC THERMAL CONTROL SYSTEM FOR RADIATORS

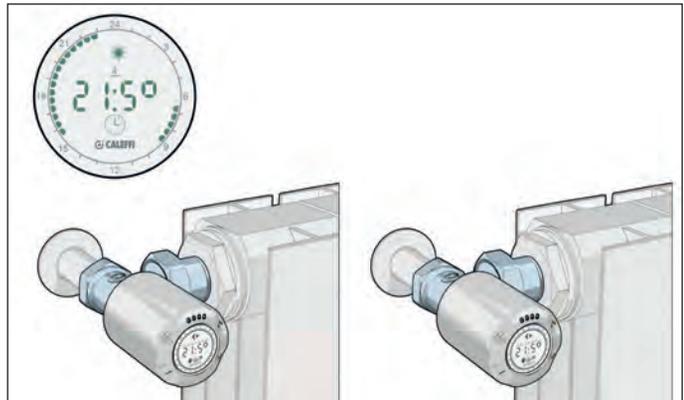
STAND ALONE system



210 WiCal®

Stand-alone chrono-thermostatic control head, with backlit display. For thermostatic and convertible radiator valves. Touch button operation, integrated temperature sensor. Programmable directly, with displaying of temperatures and comfort-set back cycles. Battery electric supply: 2 x 1,5 V AA. Quick-coupling installation with adaptor. Protection class: IP 30.

NEW



Code

210500



1 -

WIRELESS system



210 WiCal®

Electronic **wireless** control head. For thermostatic and convertible radiator valves. Touch button operation, integrated temperature sensor. Can be connected to multi-zone thermal controller code 210100. Radio communication RF 868MHz - Standard EnOcean EEP A5-04-01. Battery electric supply: 2 x 1,5 V AA. Quick-coupling installation with adaptor. Protection class: IP 30.

NEW

Operating principle

The **wireless** thermal control system comprises:

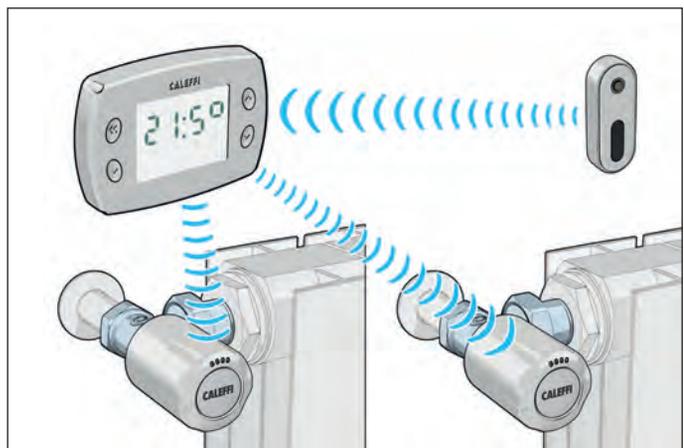
- multi-zone thermal controller
- electronic control head for radiator valve
- ambient temperature sensor (optional)

The thermal controller manages the temperature in different rooms by controlling the electronic actuators installed on the valves on each radiator.

The actual temperature is measured by the sensors in the room and/or integrated into the control head. Depending on the set temperature parameters and the comfort or set back cycles, the controller sends a modulating opening or closing signal to the actuators and an on/off signal to the boiler. The system is managed by radio wave signals.

The functional details include:

- easy and quick linking of wireless devices for rapid installation.
- Management of up to 8 temperature zones, which in turn are each able to control up to 4 actuators, thus with maximum system expansion of up to 32 actuators.
- easy individual time band programming for each zone, for every day of the week. Pre-set time band programmes and customisable programmes.



Code

210510



1 -



210 WiCal®

Wireless multi-zone thermal controller. For managing electronic control heads code 210510. Radio communication RF 868MHz - Standard EnOcean EEP A5-04-01. Transmission distance 30 m in closed rooms. Colour TFT graphic display. Touch button operation. Possibility to control the heat settings in up to 8 different zones. Weekly programmable clock. Auto - Holiday - Eco - Comfort functions. Electric supply: 24 V (dc). Auxiliary contact for heating request: 5 A. Protection class: IP 30.

Code

210100



1 -



210 WiCal®

Wireless ambient temperature sensor. For controlling the temperature in each zone or room. Radio communication RF 868MHz - Standard EnOcean EEP A5-04-01. Can be connected to multi-zone thermal controller 210 series. Electric supply: battery-less with photovoltaic cell. Protection class: IP 30.

Code

210001



1 -

Accessories

Code

- | | | | |
|---------------|--|---|---|
| 210011 | Wireless signal repeater with plug | 1 | - |
| 210010 | Wireless signal repeater with antenna | 1 | - |
| 210006 | Wireless interrupter remote control | 1 | - |
| 210004 | Power supply for regulation controller | 1 | - |



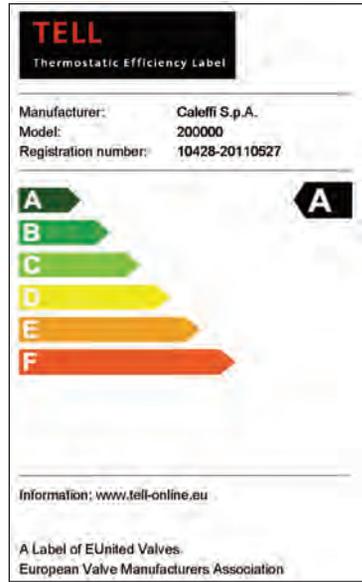
THERMOSTATIC CONTROL HEADS

Thermostatic control heads in A Class

EUnited Valves (The European Valve Manufacturers Association set up in Brussels) has prepared a classification system for products that manage home comfort and water responsibly in the residential field and, more specifically, for thermostatic valves.

Caleffi thermostatic control heads were included in the list of **TELL**-approved (Thermostatic Efficiency Label) products and were placed in the **A Efficiency Class**.

This classification guarantees that thermostatic valves are able to contribute to the energy saving of heating systems.



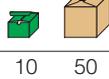
200

tech. broch. 01034

Thermostatic control head for convertible radiator valves. Built-in sensor with liquid-filled element. For valves 338, 339, 401, 402, 425, 426, 421, 422, 455, 220, 221, 222, 223, 224, 225, 226 and 227 series. Graduated scale from * to 5 corresponding to a temperature adjustment range from 7°C to 28°C. With adapter.

Code

200000



201

tech. broch. 01034

Thermostatic control head for thermostatic and convertible radiator valves. With remote sensor. For valves 338, 339, 401, 402, 425, 426, 421, 422, 455, 220, 221, 222, 223, 224, 225, 226 and 227 series. Graduated scale from * to 5 corresponding to a temperature adjustment range from 7°C to 28°C. Capillary length: 2 m. With adapter.

Code

201000



1 10



209

tech. broch. 01034

Tamper-proof anti-theft cap for use in public places. For thermostatic control heads 200, 204, 202 and 205 series. To be used with speciale allen key code 209001.

Code

209000



1 10



209

tech. broch. 01034

Special allen key for tamper-proof anti-theft cap. To be used with tamperproof cap 209 series.

Code

209001



1 10



200

tech. broch. 01034

Thermostatic control head for convertible radiator valves. Built-in sensor with liquid-filled element. For valves 220, 221, 222, 223, 224, 225, 226 and 227 series. Graduated scale from * to 5 corresponding to a temperature adjustment range from 7°C to 28°C.

Code

200001



1 10

THERMOSTATIC CONTROL HEADS

204

tech. broch. 01242



Thermostatic control head for convertible radiator valves. Built-in sensor with liquid-filled element. For valves 338, 339, 401, 402, 425, 426, 421, 422, 455, 220, 221, 222, 223, 224, 225, 226 and 227 series. Graduated scale from * to 5 corresponding to a temperature adjustment range from 7°C to 28°C. With adapter.

Code		
204000	10	50

204

tech. broch. 01242



Thermostatic control head for thermostatic and convertible radiator valves. With remote sensor. For valves 338, 339, 401, 402, 425, 426, 421, 422, 455, 220, 221, 222, 223, 224, 225, 226 and 227 series. Graduated scale from * to 5 corresponding to a temperature adjustment range from 7°C to 28°C. Capillary length: 2 m. With adapter.

Code		
204100	1	10

202

tech. broch. 01009



Thermostatic control head for radiator valves. Built-in sensor with liquid-filled element. With LCD type ambient temperature indicator. For valves 338, 339, 401, 402, 455, 220, 221, 222, 223, 224, 225, 226 and 227 series. Graduated scale from * to 5 corresponding to a temperature adjustment range from 7°C to 28°C. Room temperature indicator range: 16–26°C. With adapter.

Room temperature indicator

The room temperature indicator is a LCD type. It gets green coloured in correspondence with the actual room temperature reading. A particular pivoting system keeps the indicator always in vertical position, thus allowing its optimal visualization.

Code		
202000	1	5



203

tech. broch. 01034



Thermostatic control head for thermostatic and convertible radiator valves; with contact probe, for medium temperature limiting. For valves 220, 221, 222, 223, 224, 225, 226, 227, 338, 339, 401, 402 and 455 series. Pre-set temperature scale. Capillary length: 2 m.

Code	Temperature range		
203502	20–50°C	1	25
203702	40–90°C	1	–

475

Contact probe mounting bracket. For thermostatic control heads 203 series.



Code		
475001	1	–

475

Probe pocket. For thermostatic control heads 203 series.



Code		
475002	for code 203502	1 –
475003	for code 203702	1 –

472

Thermostatic control head with remote adjusting knob, liquid-filled element. For valves 220, 221, 222, 223, 224, 225, 226, 227 series (direct coupling). For valves 338, 339, 401, 402, 455 series (coupling with adapter). Temperature range: 6–28°C. Capillary length: 2 m.



Code		
472000	1	5

MANUAL RADIATOR AND LOCKSHIELD VALVES



340  **tech. broch. 01030**
 Angled manual radiator valve.
 Chrome plated.
 For copper, single and multilayer plastic pipes.
 Max. working pressure: 10 bar.
 Temperature range: 5–100°C.

Code	Radiator connection	Pipe connection	Kv (m³/h)		
340302	3/8"	23 p.1,5	2,42	10	50
340402	1/2"	23 p.1,5	3,99	10	50
340452	1/2"	3/4"	3,99	10	50



411  **tech. broch. 01030**
 Angled manual radiator valve.
 Chrome plated.
 For steel pipe.
 Max. working pressure: 10 bar.
 Temperature range: 5–100°C.

Code		Kv (m³/h)		
411302	3/8"	2,42	10	50
411402	1/2"	3,99	10	50
401500*	3/4" without rubber seal	3,36	5	25
401603*	1" without rubber seal	4,47	5	25

* convertible radiator valve



341  **tech. broch. 01030**
 Straight manual radiator valve.
 Chrome plated.
 For copper, single and multilayer plastic pipes.
 Max. working pressure: 10 bar.
 Temperature range: 5–100°C.

Code	Radiator connection	Pipe connection	Kv (m³/h)		
341302	3/8"	23 p.1,5	1,32	10	50
341402	1/2"	23 p.1,5	2,17	10	50



412  **tech. broch. 01030**
 Straight manual radiator valve.
 Chrome plated.
 For steel pipe.
 Max. working pressure: 10 bar.
 Temperature range: 5–100°C.

Code		Kv (m³/h)		
412302	3/8"	1,32	10	50
412402	1/2"	2,17	10	50
402500*	3/4" without rubber seal	2,58	5	25
402603*	1" without rubber seal	4,43	5	25

* convertible radiator valve



342  **tech. broch. 01030**
 Angled lockshield valve.
 Chrome plated.
 For copper, single and multilayer plastic pipes.
 Max. working pressure: 10 bar.
 Temperature range: 5–100°C.

Code	Radiator connection	Pipe connection	Kv (m³/h) fully open		
342302	3/8"	23 p.1,5	2,42	10	50
342402	1/2"	23 p.1,5	3,99	10	50
342452	1/2"	3/4"	3,99	10	50



431  **tech. broch. 01030**
 Angled lockshield valve.
 Chrome plated.
 For steel pipe.
 Max. working pressure: 10 bar.
 Temperature range: 5–100°C.

Code		Kv (m³/h) fully open		
431302	3/8"	2,42	10	50
431402	1/2"	3,99	10	50
431503	3/4" without rubber seal	4,52	5	25
431603	1" without rubber seal	5,64	5	25



343  **tech. broch. 01030**
 Straight lockshield valve.
 Chrome plated.
 For copper, single and multilayer plastic pipes.
 Max. working pressure: 10 bar.
 Temperature range: 5–100°C.

Code	Radiator connection	Pipe connection	Kv (m³/h) fully open		
343302	3/8"	23 p.1,5	1,32	10	50
343402	1/2"	23 p.1,5	2,17	10	50



432  **tech. broch. 01030**
 Straight lockshield valve.
 Chrome plated.
 For steel pipe.
 Max. working pressure: 10 bar.
 Temperature range: 5–100°C.

Code		Kv (m³/h) fully open		
432302	3/8"	1,32	10	50
432402	1/2"	2,17	10	50
432503	3/4" without rubber seal	2,58	5	25
432603	1" without rubber seal	4,81	5	25

ONE-PIPE AND TWO-PIPE RADIATOR VALVES

455

tech. broch. 01051

Convertible radiator valve fitted for thermostatic control heads and thermo-electric actuator. Chrome plated. Factory set for one-pipe systems, adjustable for two-pipe systems. For copper, single and multilayer plastic pipes. Outlet centre distance: 40 mm. Brass probe: 30 cm. Max. working pressure: 10 bar. Temperature range: 5–100°C.



Code	Radiator connection	Pipe connection	Kv (m³/h)			
			one-pipe	two-pipe		
455400	1/2"	23 p.1,5	2,00	1,10	10	–
455500	3/4"	23 p.1,5	2,00	1,10	10	–
455600	1" right	23 p.1,5	2,00	1,10	10	–
455601	1" left	23 p.1,5	2,00	1,10	10	–

4501

Radiator valve for one-pipe systems. Chrome plated. For copper, single and multilayer plastic pipes. Flow rate to the radiator: 100%. Without template and wall-covering plate. Outlet centre distance: 40 mm. Brass probe: 30 cm. Max. working pressure: 10 bar. Max. working temperature: 100°C.



Code	Radiator connection	Pipe connection	Kv (m³/h)		
450140	1/2"	23 p.1,5	3,20	10	40
450150	3/4"	23 p.1,5	3,70	10	–

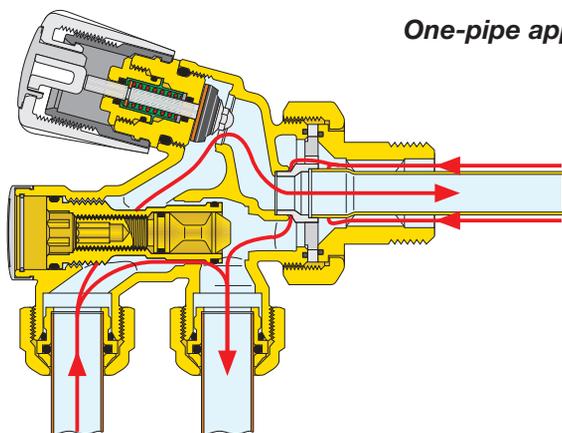
348

Radiator valve for one-pipe systems. Chrome plated. For copper, single and multilayer plastic pipes. Flow rate to the radiator: 100%. With front adjusting handle. Without template and wall-covering plate. Outlet centre distance: 40 mm. Brass probe: 30 cm. Max. working pressure: 10 bar. Max. working temperature: 100°C.

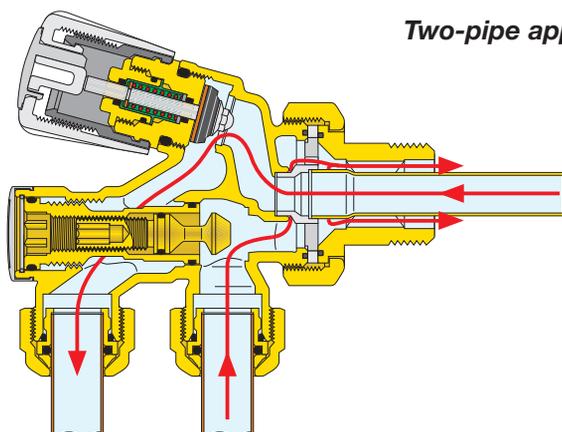


Code	Radiator connection	Pipe connection	Kv (m³/h)		
348400	1/2"	23 p.1,5	3,10	10	–
348500	3/4"	23 p.1,5	3,50	10	–

One-pipe application



Two-pipe application



452

Radiator valve for one-pipe systems. Chrome plated. For copper, single and multilayer plastic pipes. Flow rate to the radiator: 50%. For Ø 15 mm outside probe (454 series). Wall connections. Complete with template, wall-covering plate and probe connection. Outlet centre distance: 40 mm. Max. working pressure: 10 bar. Max. working temperature: 100°C.



Code	Radiator connection	Pipe connection	Kv (m³/h)		
452400	1/2"	23 p.1,5	2,20	36,35	1 25

ONE-PIPE AND TWO-PIPE RADIATOR VALVES AND ACCESSORIES

452

Radiator valve for two-pipe systems.
 Chrome plated.
 For copper, single and multilayer plastic pipes.
 For Ø 15 mm outside probe (454 series).
 Wall connections.
 Complete with template, wall-covering plate
 and probe connection.

Outlet centre distance: 40 mm.
 Max. working pressure: 10 bar.
 Max. working temperature: 100°C.



Code	Radiator connection	Pipe connection	Kv (m³/h)		
452401	1/2"	23 p.1,5	1,80	1	25

459

Angled connection for one-pipe valves 328 and 452 series and convertible radiator valves code 339402.
 Chrome plated.



Code			
459001	1/2" M x 3/4" F nut	10	-

4496

Wall template.
 For valves 4501, 452, 328, 348 and 455 series.
 Outlet centre distance: 40 mm.



Code			
449640		10	-

328

Radiator valve for one-pipe systems.
 Chrome plated.
 For copper, single and multilayer plastic pipes.
 Flow rate to the radiator: 50%.
 For Ø 15 mm outside probe (454 series).
 Floor connections.
 Complete with probe connection.

Outlet centre distance: 40 mm.
 Max. working pressure: 10 bar.
 Max. working temperature: 100°C.



Code	Radiator connection	Pipe connection	Kv (m³/h)		
328400	1/2"	23 p.1,5	2,20	1	20

4497

Wall-covering plate.
 For valves 4501, 452, 328, 348 and 455 series.
 In white ABS.
 Outlet centre distance: 40-50 mm.



Code			
449740		50	-

328

Radiator valve for two-pipe systems.
 Chrome plated.
 For copper, single and multilayer plastic pipes.
 For Ø 15 mm outside probe (454 series).
 Floor connections.
 Complete with probe connection.

Outlet centre distance: 40 mm.
 Max. working pressure: 10 bar.
 Max. working temperature: 100°C.



Code	Radiator connection	Pipe connection	Kv (m³/h)		
328401	1/2"	23 p.1,5	1,80	1	20

453

Brass pipe extension for probe.
 For valves 348, 4501 and 455 series.



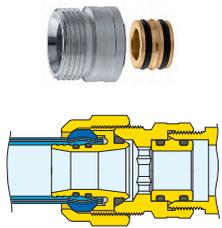
Code			
453020	200 mm (x 348-4501-455400-455500)	10	-
453030	300 mm (x 455600-455601)	10	-

454

Ø 15 mm brass outside probe. Chrome plated.
 To be connected with valves 452 and 328 series at the bottom and radiator valves 223, 227, 339 and 341 series.



Code			
454060	600 mm	5	-
454090	900 mm	5	-



383

Connection fitting with O-Ring seal for use with 3/4" 437, 679 and 681 series. Chrome plated.

Code			
383551	3/4" M x 23 p.1,5 F	10	100

936

Extension for connection between elbow fitting 933 series and radiator valves. Annealed copper, chrome plated. With shaped rubber seal. Length: 200 mm (useful 188 mm).



Code			
936400	1/2" x Ø 16	1	50

4498

Single wall-covering plate in white ABS.



Code			
449800		100	-

3871

Universal key. Use for 3/8" to 1" union tailpiece.



Code			
387127		1	10

3871

Wrench for 26 and 30 mm hexagonal nuts. For fittings 437, 444, 445, 447, 679, 680, 681 23 p.1,5 and 3/4" series.



Code			
387100		1	4

381

Telescopic union tailpiece with nut for radiator valves and lockshield valves. Extension range: 15 mm. Max. working pressure: 10 bar. Max. working temperature: 100°C. Chrome plated.



Code			
381302	1/2" F nut x 3/8" M	1	10
381402	3/4" F nut x 1/2" M	1	10

383

Female fitting - olive coupling. Chrome plated.



Code			
383151	3/4" M x 23 p.1,5 F	10	-

384

Male fitting - olive coupling. Chrome plated.



Code			
384031	3/8" M x 23 p.1,5 M	10	-
384041	1/2" M x 23 p.1,5 M	10	-

382

Fitting with 23 p.1,5 captive nut. Chrome plated. Max. working pressure: 10 bar. Max. working temperature: 100°C.



Code			
382000	23 p.1,5 M x 23 p.1,5 F nut	10	-

tech. broch. 01056

560

Drain cock for radiators and wall-mounted boilers. Max. working pressure: 10 bar. Max. working temperature: 100°C. Chrome plated.



Code			
560421 ♦	1/2"	10	-
560000	extractor hose connection	25	-

♦ One extractor hose connection code 560000 is included in each 10-item package.

3872

Replacement kit for convertible an thermostatic radiator valves headwork. Equipped with 20 spare headworks. Only for 3/8" and 1/2" valves. For valves 338, 339, 401, 402, 425, 426, 421, 422, 220, 221, 222, 223 224, 225, 226 and 227 series.



Code			
387200		1	-

FITTINGS

679

DARCAL



Fitting for multilayer plastic pipes for continuous high temperature use. Max. working pressure: 10 bar. Temperature range: 0-95°C. Chrome plated.

For a correct use, adjust the multilayer pipe diameter before installation using the Caleffi calibrator 679 series (see page 60).

Code			
679014	23 p.1,5 - Ø 14x2	10	100
679024	23 p.1,5 - Ø 16x2	10	100
679025	23 p.1,5 - Ø 16x2,25	10	100
679044	23 p.1,5 - Ø 18x2	10	100

681

DARCAL



Self-adjustable diameter fitting for single and multilayer plastic pipes. Max. working pressure: 10 bar. Temperature range: 5-80°C (PE-X) 5-75°C (Multilayer marked 95°C). Chrome plated.

Code		\varnothing_{inside}	$\varnothing_{outside}$		
681000	23 p.1,5	7,5- 8	12-14	10	100
681002	23 p.1,5	9 - 9,5	14-16	10	100
681001	23 p.1,5	9,5-10	12-14	10	100
681006	23 p.1,5	9,5-10	14-16	10	100
681015	23 p.1,5	10,5-11	14-16	10	100
681017	23 p.1,5	10,5-11	16-18	10	100
681024	23 p.1,5	11,5-12	14-16	10	100
681026	23 p.1,5	11,5-12	16-18	10	100
681035	23 p.1,5	12,5-13	16-18	10	100
681044	23 p.1,5	13,5-14	16-18	10	100

447



Pre-assembled compression fitting, for soft annealed copper, hard copper, brass, mild and stainless steel pipes. With O-Ring seal. Max. working pressure: 10 bar. Temperature range: -25-120°C. Chrome plated.

Code			
447010	23 p.1,5 - Ø 10	100	-
447012	23 p.1,5 - Ø 12	100	-
447014	23 p.1,5 - Ø 14	100	-
447015	23 p.1,5 - Ø 15	100	-
447016	23 p.1,5 - Ø 16	100	-

437



Compression fitting, for soft annealed copper, hard copper, brass, mild and stainless steel pipes. With O-Ring seal. Max. working pressure: 10 bar. Temperature range: -25-120°C. Chrome plated.

Code			
437010	23 p.1,5 - Ø 10	100	-
437012	23 p.1,5 - Ø 12	100	-
437014	23 p.1,5 - Ø 14	100	-
437015	23 p.1,5 - Ø 15	100	-
437016	23 p.1,5 - Ø 16	100	-

438



Compression fitting for copper pipe, with PTFE seal. Chrome plated.

Code			
438010	23 p.1,5 - Ø 10	100	-
438012	23 p.1,5 - Ø 12	100	-
438014	23 p.1,5 - Ø 14	100	-
438015	23 p.1,5 - Ø 15	100	-
438016	23 p.1,5 - Ø 16	100	-
438018	23 p.1,5 - Ø 18 with metal olive	100	-

445



Compression fitting, for PE coated copper pipes, "Q-tec" KME and "TUBOTECH" series. With O-Ring seal. Max. working pressure: 10 bar. Temperature range: 0-95°C. Chrome plated.

"Q-tec" and "TUBOTECH" pipes must be cut and prepared using the specific tool indicated by the manufacturer.

Code			
445014	23 p.1,5 - Ø 14	10	100
445016	23 p.1,5 - Ø 16	10	100

445



Compression fitting, for "VIEGA" multilayer pipes. With O-Ring seal. Max. working pressure: 10 bar. Temperature range: 0-95°C. Chrome plated.

"VIEGA" pipes must be calibrated using the specific tool indicated by the manufacturer.

Code			
445024	23 p.1,5 - Ø 16x2,2	10	100

FITTINGS



679

DARCAL

Fitting for multilayer plastic pipes for continuous high temperature use. Max. working pressure: 10 bar. Temperature range: 0–95°C. Chrome plated.

For a correct use, adjust the multilayer pipe diameter before installation using the Caleffi calibrator 679 series (see page 60).

Code				
679264	3/4"	- Ø 20x2	10	100
679265	3/4"	- Ø 20x2,25	10	100
679266	3/4"	- Ø 20x2,5	10	100



681

DARCAL

Self-adjustable diameter fitting for single and multilayer plastic pipes. Max. working pressure: 10 bar. Temperature range: 5–80°C (PE-X) 5–75°C (Multilayer marked 95°C). Chrome plated.

Code		Ø _{inside}	Ø _{outside}		
681502	3/4"	7,5– 8	12–14	10	100
681500	3/4"	9 – 9,5	14–16	10	100
681501	3/4"	9,5–10	12–14	10	100
681506	3/4"	9,5–10	14–16	10	100
681515	3/4"	10,5–11	14–16	10	100
681517	3/4"	10,5–11	16–18	10	100
681524	3/4"	11,5–12	14–16	10	100
681526	3/4"	11,5–12	16–18	10	100
681535	3/4"	12,5–13	16–18	10	100
681537	3/4"	12,5–13	18–20	10	100
681546	3/4"	13,5–14	18–20	10	100
681555	3/4"	14,5–15	18–20	10	100
681556	3/4"	15 –15,5	18–20	10	100
681564	3/4"	15,5–16	18–20	10	100

Example: 681 series fitting selection

Known both the outside and inside diameters (ex.: 17 mm and 13 mm);
or known the outside diameter (ex.: Ø_o 17 mm) and the thickness (ex.: th. 2 mm) and considering that:

$$\text{Ø}_{\text{outside}} - 2 \cdot \text{th.} = \text{Ø}_{\text{inside}}$$

$$17 - 2 \cdot 2 = 13 \text{ mm}$$

Look within the table for the code matching both diameters:

Code		Ø _{inside}	Ø _{outside}
681035	23 p.1,5	12,5–13	16–18



437

Compression fitting, for annealed copper, hard copper, brass, mild and stainless steel pipes. With O-Ring seal. Max. working pressure: 10 bar. Temperature range: -25–120°C. Chrome plated. For connecting pipes to special valves for panel radiators.

Code				
437510	3/4"	- Ø 10	100	–
437512	3/4"	- Ø 12	100	–
437514	3/4"	- Ø 14	100	–
437515	3/4"	- Ø 15	100	–
437516	3/4"	- Ø 16	100	–
437518	3/4"	- Ø 18	10	–



438

Compression fitting for copper pipe, with PTFE seal. Chrome plated.

Code				
438512	3/4"	- Ø 12	100	–
438514	3/4"	- Ø 14	100	–
438515	3/4"	- Ø 15	100	–
438516	3/4"	- Ø 16	100	–
438518	3/4"	- Ø 18	100	–



445

Compression fitting, for PE coated copper pipes, "Q-tec" KME and "TUBOTECH" series. With O-Ring seal. Max. working pressure: 10 bar. Temperature range: 0–95°C. Chrome plated.

"Q-tec" and "TUBOTECH" pipes must be cut and prepared using the specific tool indicated by the manufacturer.

Code				
445514	3/4"	- Ø 14	10	100
445516	3/4"	- Ø 16	10	100
445520	3/4"	- Ø 20	10	100



445

Compression fitting, for "VIEGA" multilayer pipes. With O-Ring seal. Max. working pressure: 10 bar. Temperature range: 0–95°C. Chrome plated.

"VIEGA" pipes must be calibrated using the specific tool indicated by the manufacturer.

Code				
445524	3/4"	- Ø 16x2,2	10	100
445546	3/4"	- Ø 20x2,8	10	100

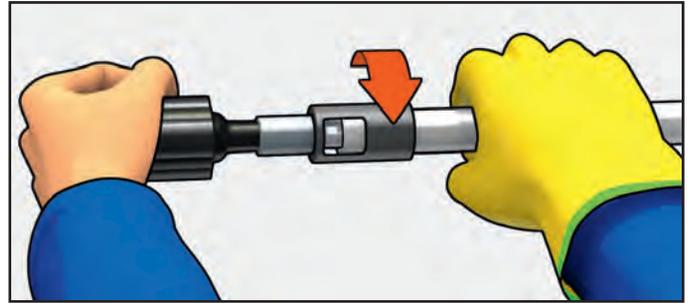
CALIBRATOR FOR MULTILAYER PIPES

679

Calibrator and handle to adjust multilayer pipes diameter before use with fittings 679 series.



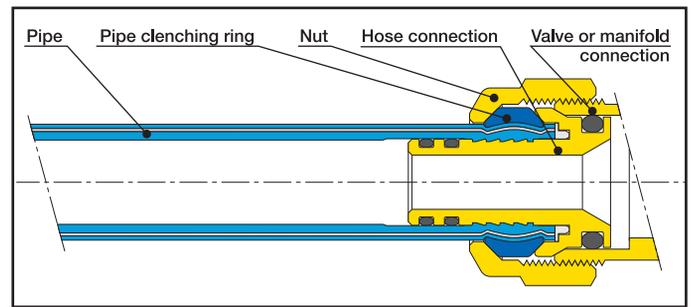
Multilayer pipe calibration and installation of fitting components 679 series



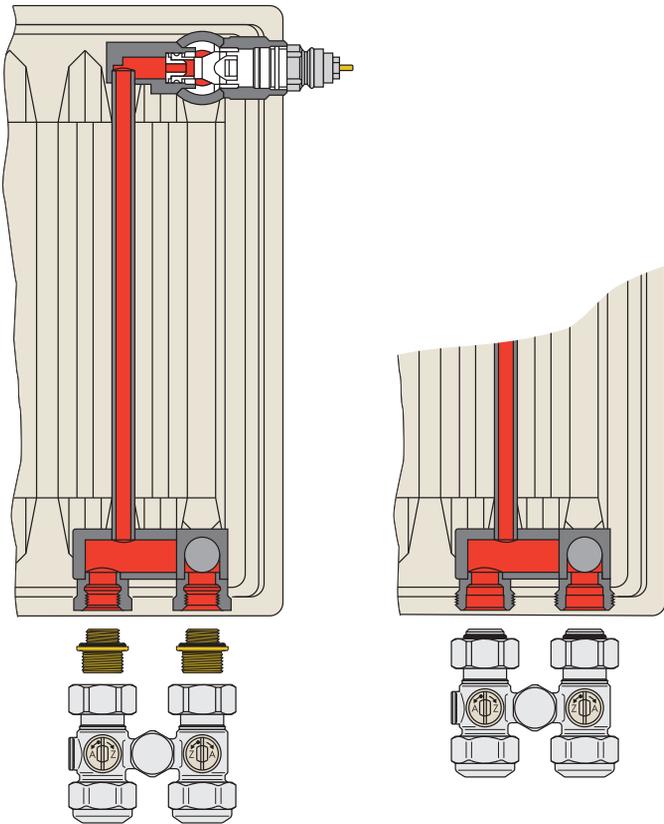
Code



679001	calibrator Ø 14x2	1	–
679002	calibrator Ø 16x2	1	–
679003	calibrator Ø 16x2,25	1	–
679004	calibrator Ø 18x2	1	–
679006	calibrator Ø 20x2	1	–
679007	calibrator Ø 20x2,25	1	–
679008	calibrator Ø 20x2,5	1	–
679009	handle for calibrator	1	–



VALVES FOR PANEL RADIATORS



This valves are installed on a particular kind of panel radiators, featuring both the connections at the bottom and an inner pipe, invisible from outside, providing the flow medium to the upper valve.

They come in two versions: for two-pipe and one-pipe systems. Both are available straight (pipes exiting the floor) and angled (pipes exiting the wall). The two-pipe version is equipped with two ball shut-off valves; the one-pipe, in addition to the shut-off valves, is equipped with an adjustable by-pass from 30% to 50% of the flow rate towards the radiator.

3010



Valve for panel radiators with built-in thermostatic valve unit. Single valve straight version (floor connections) with 1/2" F radiator connections.
Max. working pressure: 10 bar.
Max. working temperature: 100°C.

Code	Radiator connection	Pipe connection		
301040	1/2" M	3/4"	1	25

3011



Valve for panel radiators with built-in thermostatic valve unit. Single valve angled version (wall connections) with 1/2" F radiator connections.
Max. working pressure: 10 bar.
Max. working temperature: 100°C.

Code	Radiator connection	Pipe connection		
301140	1/2" M	3/4"	1	25

3012



Valve for panel radiators with built-in thermostatic valve unit. One-pipe straight version (floor connections) with 1/2" F radiator connections.
With adjustable by-pass.
With non-return device.
Max. working pressure: 10 bar.
Max. working temperature: 100°C.

Code	Radiator connection	Pipe connection		
301241	1/2" M	3/4"	1	25

3013



Valve for panel radiators with built-in thermostatic valve unit. One-pipe angled version (wall connections) with 1/2" F radiator connections.
With adjustable by-pass.
With non-return device.
Max. working pressure: 10 bar.
Max. working temperature: 100°C.

Code	Radiator connection	Pipe connection		
301341	1/2" M	3/4"	1	25

VALVES FOR PANEL RADIATORS



3010

Valve for panel radiators with built-in thermostatic valve unit. Single valve straight version (floor connections) with 3/4" M radiator connections. Max. working pressure: 10 bar. Max. working temperature: 100°C.

Code	Radiator connection	Pipe connection		
301050	3/4" F	3/4"	1	25



3014

Straight single valve for panel radiators with built-in thermostatic valve unit (floor connections) with 1/2" F radiator connections. Max. working pressure: 10 bar. Max. working temperature: 100°C.

Code	Radiator connection	Pipe connection		
301440	1/2" M	3/4"	1	50



3011

Valve for panel radiators with built-in thermostatic valve unit. Single valve angled version (wall connections) with 3/4" M radiator connections. Max. working pressure: 10 bar. Max. working temperature: 100°C.

Code	Radiator connection	Pipe connection		
301150	3/4" F	3/4"	1	25



3015

Angled single valve for panel radiators with built-in thermostatic valve unit (wall connections) with 1/2" F radiator connections. Max. working pressure: 10 bar. Max. working temperature: 100°C.

Code	Radiator connection	Pipe connection		
301540	1/2" M	3/4"	1	50



3012

Valve for panel radiators with built-in thermostatic valve unit. One-pipe straight version (floor connections) with 3/4" M radiator connections. With adjustable by-pass. **With non-return device.** Max. working pressure: 10 bar. Max. working temperature: 100°C.

Code	Radiator connection	Pipe connection		
301250	3/4" F	3/4"	1	25



3014

Straight single valve for panel radiators with built-in thermostatic valve unit (floor connections) with 3/4" M radiator connections. Max. working pressure: 10 bar. Max. working temperature: 100°C.

Code	Radiator connection	Pipe connection		
301450	3/4" F	3/4"	1	50



3013

Valve for panel radiators with built-in thermostatic valve unit. One-pipe angled version (wall connections) with 3/4" M radiator connections. With adjustable by-pass. **With non-return device.** Max. working pressure: 10 bar. Max. working temperature: 100°C.

Code	Radiator connection	Pipe connection		
301350	3/4" F	3/4"	1	25



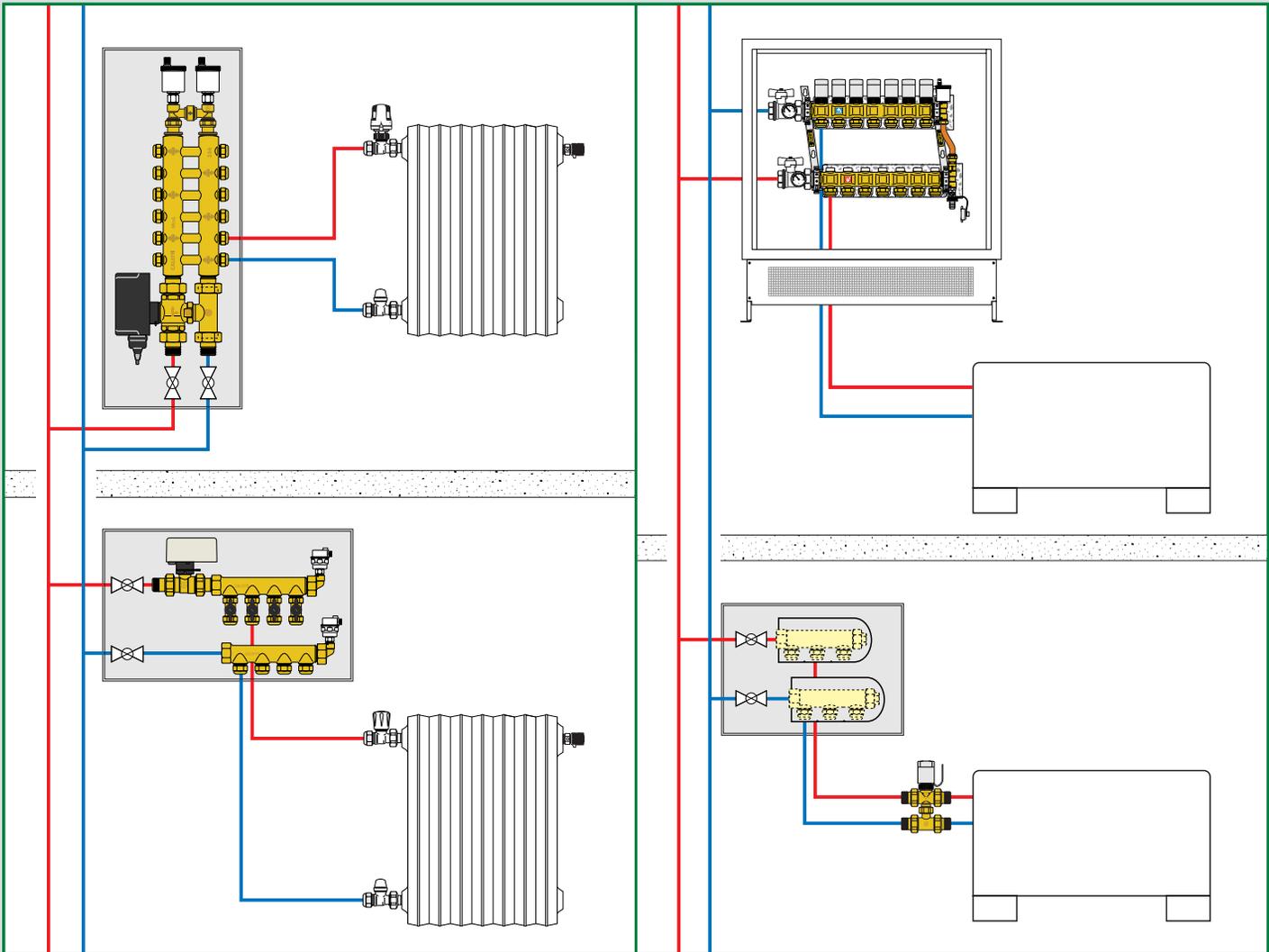
3015

Angled single valve for panel radiators with built-in thermostatic valve unit (wall connections) with 3/4" M radiator connections. Max. working pressure: 10 bar. Max. working temperature: 100°C.

Code	Radiator connection	Pipe connection		
301550	3/4" F	3/4"	1	50

DISTRIBUTION MANIFOLDS, ZONE VALVES, BOXES AND ACCESSORIES

This diagram is just an indication



4

Inspection wall boxes

Zone valves

Motorised ball valves

Motorised valves for central heating systems

Simple and dual distribution manifolds

Simple distribution manifolds for air conditioning systems

Distribution manifolds with shut-off and pre-regulating valves

Thermo-electric actuators

Accessories for distribution manifolds

Fittings

Fittings for polyethylene pipes (PE-X)

Three-piece union fittings

PLASTIC INSPECTION WALL BOXES



361

Plastic inspection wall port, with zinc plated sheet steel frame. White colour RAL 9010.

Code	Dim. (h x w)		
361032	320 x 250	1	5
361050	500 x 250	1	10



360

Plastic inspection wall box. For distribution manifolds 349, 350, 592 and 354 series. Version with foldable side walls. White colour RAL 9010.

Code	Dim. (h x w x d)		
360032	320 x 250 x 90	1	10
360050	500 x 250 x 90	1	10



363

tech. broch. 01091

Inspection wall port and frame in plastic. Ventilated. White colour RAL 9010.

Code	Dim. (h x w)		
363036	360 x 270	1	10
363056	560 x 330	1	5
363073	730 x 360	1	5



362

tech. broch. 01091

Plastic inspection wall box. For dual distribution manifolds 356, 357 series and single distribution manifolds 349, 350, 592 and 354 series. Ventilated. Equipped with lateral protections. Adjustable depth from 100 to 80 mm. White colour RAL 9010.

Code	Dim. (h x w x d)		
362036	360 x 270 x 100/80	1	10
362056	560 x 330 x 100/80	1	5
362073	730 x 360 x 100/80	1	5



360

tech. broch. 01091

Pair of mounting brackets for 3/4" and 1" dual distribution manifolds 356, 356 IS and 357 series. For plastic inspection boxes 360 and 362 series.

Code		
360003	1	-



360

Pair of stainless steel mounting brackets for distribution manifolds 354 series. For plastic inspection boxes 360 and 362 series.

Code		
360210	1	10



360

tech. broch. 01091

Mounting brackets for 1" single distribution manifolds 350 and 592 series, for 3/4" and 1" distribution manifolds 351 and 598 series. For plastic inspection boxes 360 and 362 series. In package:
- N. 2 long brackets
- N. 2 short brackets.

Code		
360001	1	10



360

tech. broch. 01091

Mounting brackets for 3/4" single distribution manifolds 349, 350 and 592 series. For plastic inspection boxes 360 and 362 series. In package:
- N. 2 long brackets
- N. 2 short brackets.

Code		
360002	1	10



362

tech. broch. 01091

Mounting brackets for dual distribution manifolds 356 and 357 series. For plastic inspection boxes 362 series.

Code		
362001	1	10

SHEET STEEL INSPECTION WALL BOXES



5890

Recessed inspection wall port with frame. In zinc plated sheet steel.

Code	Dim. (h x w)		
589003	370 x 275	1	10
589005	540 x 275	1	10



5891

Recessed inspection wall box with frame. For dual distribution manifolds 356 series. In zinc plated sheet steel. Adjustable depth 70, 90 or 110 mm. Supplied with manifold mounting bracket.

Code	Dim. (h x w x d)		
589103	370 x 275 x 70/90/110	1	3
589105	540 x 275 x 70/90/110	1	3



659

tech. broch. 01144

Inspection wall box for distribution manifolds 349, 350, 592, 662, 663, 671 and 668...S1 series. Wall or floor installations (with 660 series). Closure with a push-fit clamp. In painted sheet steel. **Adjustable depth from 110 to 140 mm.**

Code	Dim. (h x w x d)		
659044	500 x 400 x 110-140	1	-
659064	500 x 600 x 110-140	1	-
659084	500 x 800 x 110-140	1	-
659104	500 x 1000 x 110-140	1	-
659124	500 x 1200 x 110-140	1	-

NEW



659

tech. broch. 01144

Inspection wall port with frame. In painted sheet steel.

Code			
659504	for 659045	1	-
659506	for 659065	1	-
659508	for 659085	1	-
659510	for 659105	1	-



659

tech. broch. 01144

Inspection wall box for distribution manifolds 349, 350, 592, 662 and 671 series. Complete with specific support for manifold brackets. Closure with a push-fit clamp. In painted sheet steel. **Adjustable depth from 80 to 120 mm.**

Code	Dim. (h x w x d)		
659045	500 x 400 x 80-120	1	-
659065	500 x 600 x 80-120	1	-
659085	500 x 800 x 80-120	1	-
659105	500 x 1000 x 80-120	1	-

NEW



659

tech. broch. 01144

Inspection wall port with frame. In painted sheet steel.

Code			
659304	per 659044	1	-
659306	per 659064	1	-
659308	per 659084	1	-
659310	per 659104	1	-
659312	per 659124	1	-



658

Pair of mounting brackets for distribution manifolds 592, 350 and 351 series. With insulating clamps, screws and wall anchors. To be used with boxes 659 series or directly wall mounted.

Code			
658000		1	20



658

Pair of mounting brackets for distribution manifolds 663 and 668...S1 series. With screws and wall anchors. To be used with boxes 659 series or directly wall mounted.

Code			
658100		1	20



658

Pair of mounting brackets for 3/4" and 1" distribution manifolds 350 and 592 series. With clamps and screws. To connect manifolds to zone valves. To be used with boxes 659 series.

Code			
658200		1	-

MOTORISED BALL ZONE VALVES



6460 [tech. broch. 01015](#)

Actuator for ball zone valves 6470, 6480 and 6489 series.
Supply: 230 V (ac) or 24 V (ac).
With auxiliary microswitch.
Power consumption: 4 VA.
Auxiliary microswitch contact rating: 0,8 A (230 V) - 1,3 A (24 V).
Operating time: 50 s.
Max. ambient temperature: 55°C.
Protection class: IP 43.



Code	Supply voltage V		
646002	230 (±20%)	1	10
646004	24 (±10%)	1	10



6470 [tech. broch. 01015](#)

Two-way ball zone valve.
Max. working pressure: 10 bar.
Max. Δp: 10 bar.
Temperature range: -5-110°C.
New O-Ring seal.

Code		Kv (m³/h)		
647040	1/2"	17,00	1	10
647050	3/4"	17,27	1	10
647060	1"	36,58	1	5
647070	1 1/4"	36,00	1	5



6480 [tech. broch. 01015](#)

Three-way ball zone valve.
3/4" F by-pass connection.
Max. working pressure: 10 bar.
Max. Δp: 10 bar.
Temperature range: -5-110°C.
New O-Ring seal.

Code		Kv (m³/h) straight	Kv (m³/h) by-pass		
648040	1/2"	14,10	2,45	1	10
648050	3/4"	14,43	2,50	1	10
648060	1"	33,52	3,60	1	5
648070	1 1/4"	36,00	3,80	1	5



6489 [tech. broch. 01015](#)

Three-way ball zone valve with by-pass tee.
Max. working pressure: 10 bar.
Max. Δp: 10 bar.
Temperature range: -5-110°C.
Tee complete with nozzle U6.
Adjustable outlet centre distance from 49 to 63 mm.
New O-Ring seal.

Code		Kv (m³/h) straight	Kv (m³/h) by-pass		
648950	3/4"	14,43	1,20	1	10



6490 [tech. broch. 01015](#)

Balanced by-pass tee.
For ball zone valves 6480 series.
Max. working pressure: 10 bar.
Temperature range: -5-110°C.
New O-Ring seal.

Code		Kv (m³/h) tee + valve in by-pass		
649040	1/2" without nozzle	2,20	1	10
649044	1/2" U4	0,78	1	10
649046	1/2" U6	1,16	1	10
649048	1/2" U8	1,40	1	10
649050	3/4" without nozzle	2,25	1	10
649054	3/4" U4	0,87	1	10
649056	3/4" U6	1,20	1	10
649058	3/4" U8	1,50	1	10
649060	1" without nozzle	3,25	1	5
649064	1" U4	1,90	1	5
649066	1" U6	2,50	1	5
649068	1" U8	3,25	1	5
649070	1 1/4" without nozzle	3,40	1	5



6480 [tech. broch. 01015](#)

Pair of off-centre fittings for connecting zone valves unit 6480, 633 series and respective by-pass tee 6490, 635 series to any dual manifold with outlet centre distance between 50 and 70 mm.

Code			
648005	3/4"	1	-
648006	1"	1	-

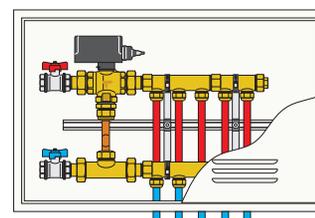


6480 [tech. broch. 01015](#)

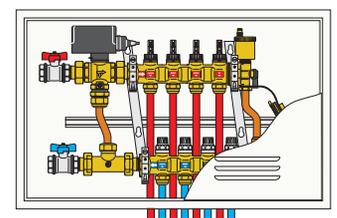
Off-centre kit connecting to the zone valves unit 6480, 633 series and respective by-pass tee 6490, 635 series, for installation in manifold box 659 and 661 series and connection to distribution manifolds 349, 350, 592 and 668...S1 series.
Max. working pressure: 10 bar.
Temperature range: -5-110°C.

Code			
648018		1	10

Assembly of the kit code 648018 with zone valve 6480 series



Assembly of the kit code 648018 to manifold 668...S1 series with zone valve 6480 series



MOTORISED BALL ZONE VALVES FOR AIR-CONDITIONING SYSTEMS



6452 tech. broch. 01199

Motorised two-way ball zone valve, for air-conditioning systems. With manual opening lever. **With insulation.** Max. working pressure: 10 bar. Max. Δp: 10 bar. Temperature range: -10–110°C.

With auxiliary microswitch. Supply: 230 V (ac) o 24 V (ac). Power consumption: 6 VA. Auxiliary microswitch contact rating: 6 (2) A (230 V). Ambient temperature range: -10–55°C. Protection class: IP 65. Operating time: 50 s (90° rotation). Length of supply cable: 80 cm.



Code	Supply voltage V	Kv (m³/h)		
645242	1/2"	230	17,00	1 –
645252	3/4"	230	17,27	1 –
645262	1"	230	36,58	1 –
645272	1 1/4"	230	39,50	1 –
645244	1/2"	24	17,00	1 –
645254	3/4"	24	17,27	1 –
645264	1"	24	36,58	1 –
645274	1 1/4"	24	39,50	1 –



6453 tech. broch. 01199

Motorised three-way ball zone valve, for air-conditioning systems. With manual opening lever. **With insulation.** Max. working pressure: 10 bar. Max. Δp: 10 bar. Temperature range: -10–110°C.

With auxiliary microswitch. Supply: 230 V (ac) o 24 V (ac). Power consumption: 6 VA. Auxiliary microswitch contact rating: 6 (2) A (230 V). Ambient temperature range: -10–55°C. Protection class: IP 65. Operating time: 50 s (90° rotation). Length of supply cable: 80 cm.



Code	Supply voltage V	Kv (m³/h) straight	Kv (m³/h) by-pass		
645342	1/2"	230	14,10	2,45	1 –
645352	3/4"	230	14,43	2,50	1 –
645362	1"	230	33,52	3,60	1 –
645372	1 1/4"	230	36,00	3,80	1 –
645344	1/2"	24	14,10	2,45	1 –
645354	3/4"	24	14,43	2,50	1 –
645364	1"	24	33,52	3,60	1 –
645374	1 1/4"	24	36,00	3,80	1 –



6459 tech. broch. 01199

By-pass tee. For motorised ball zone valves 6453 series. **With insulation.** Max. working pressure: 10 bar. Max. Δp: 10 bar. Temperature range: -10–110°C.

Code	tee + valve in by-pass	Kv (m³/h)		
645940	1/2" without nozzle	2,20	1	–
645950	3/4" without nozzle	2,25	1	–
645960	1" without nozzle	3,25	1	–
645970	1 1/4" without nozzle	3,40	1	–



6450 tech. broch. 01199

Spare actuator for motorised ball zone valves 6452 and 6453 series. Supply: 230 V (ac) or 24 V (ac).



Code	Supply voltage V		
645002	230	1	10
645004	24	1	10



6459 tech. broch. 01199

Shell insulation for motorised ball zone valves 6453 series with by-pass tee 6459 and 6490 series. Fitted for manifolds 356... IS series.

Code		
645901	1/2" - 3/4"	1 –
645900	1" - 1 1/4"	1 –

MOTORIZED BALL ZONE VALVES WITH 3-CONTACT CONTROL

6442

tech. broch. 01131



Motorised two-way ball zone valve.
Max. working pressure: 10 bar.
Max. Δp: 10 bar.
Temperature range: -5–110°C.

Equipped with actuator with 3-contact control. With auxiliary microswitch.

Supply: 230 V (ac) or 24 V (ac).
Power consumption: 4 VA.
Auxiliary microswitch contact rating: 0,8 A (230 V).
Ambient temperature range: 0–55°C.
Protection class: IP 44 (vertical stem), IP 40 (horizontal stem).
Operating time: 40 s (90° rotation).
Length of supply cable: 100 cm.



Code	Supply voltage V	Kv (m³/h)		
644242	1/2"	230 11,1	1	10
644252	3/4"	230 11,1	1	10
644262	1"	230 11,1	1	10
644244	1/2"	24 11,1	1	10
644254	3/4"	24 11,1	1	10
644264	1"	24 11,1	1	10

6444

tech. broch. 01131



Motorised three-way ball zone valve with by-pass tee.
Max. working pressure: 10 bar.
Max. Δp: 10 bar.
Temperature range: -5–110°C.

Tee complete with nozzle U6. Adjustable outlet centre distance from 49 to 63 mm.

Equipped with actuator with 3-contact control. With auxiliary microswitch.

Supply: 230 V (ac) or 24 V (ac).
Power consumption: 4 VA.
Auxiliary microswitch contact rating: 0,8 A (230 V).
Ambient temperature range: 0–55°C.
Protection class: IP 44 (vertical stem), IP 40 (horizontal stem).
Operating time: 40 s (90° rotation).
Length of supply cable: 100 cm.



Code	Supply voltage V	Kv (m³/h) straight	Kv (m³/h) by-pass		
644442	1/2"	230 10,3	1,2	1	5
644452	3/4"	230 10,3	1,2	1	5
644462	1"	230 10,3	1,2	1	5
644444	1/2"	24 10,3	1,2	1	5
644454	3/4"	24 10,3	1,2	1	5
644464	1"	24 10,3	1,2	1	5

6443.. 3BY

tech. broch. 01131



Motorised three-way ball zone valve, by-pass version.
Max. working pressure: 10 bar.
Max. Δp: 10 bar.
Temperature range: -5–110°C.

Equipped with actuator with 3-contact control. With auxiliary microswitch.

Supply: 230 V (ac) or 24 V (ac).
Power consumption: 4 VA.
Auxiliary microswitch contact rating: 0,8 A (230 V).
Ambient temperature range: 0–55°C.
Protection class: IP 44 (vertical stem), IP 40 (horizontal stem).
Operating time: 40 s (90° rotation).
Length of supply cable: 100 cm.



Code	Supply voltage V	Kv (m³/h) straight	Kv (m³/h) by-pass		
644342 3BY	1/2"	230 10,3	1,8	1	5
644352 3BY	3/4"	230 10,3	1,8	1	5
644362 3BY	1"	230 10,3	1,8	1	5
644344 3BY	1/2"	24 10,3	1,8	1	5
644354 3BY	3/4"	24 10,3	1,8	1	5
644364 3BY	1"	24 10,3	1,8	1	5

6440

tech. broch. 01131

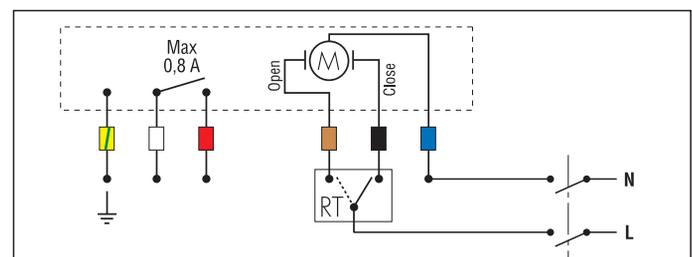


3-contact control spare actuator for motorised ball zone valves 6442, 6443 and 6444 series.
Operating time 40 s.
Supply: 230 V (ac) or 24 V (ac).



Code	Supply voltage V		
644002	230	1	10
644004	24	1	10

Wiring diagram for valves 6442 - 6443 - 6444 series



THERMO-ELECTRIC PISTON ZONE VALVES



632  [tech. broch. 01039](#)
Two-way piston zone valve.
Max. working pressure: 10 bar.
Max. Δp: 1 bar.
Temperature range: -5–110°C.

Code		Kv (m ³ /h)		
632400	1/2"	5,10	1	5
632500	3/4"	6,27	1	5
632600	1"	6,38	1	5



630  [tech. broch. 01039](#)
Thermo-electric actuator.
For zone valves 632 and 633 series.
Normally closed.
Supply: 230 V (ac) or 24 V (ac).
Power consumption: - starting 11 W.
- operating 4 W.
Max. ambient temperature: 55°C.
Protection class:
IP 44 (vertical stem),
IP 42 (horizontal stem).

Code	Supply voltage V		
630002	230	1	10
630004	24	1	10



633  [tech. broch. 01039](#)
Three-way piston zone valve.
3/4" F by-pass connection.
Max. working pressure: 10 bar.
Max. Δp: 1 bar.
Temperature range: -5–110°C.

Code		Kv (m ³ /h) straight	Kv (m ³ /h) by-pass		
633400	1/2"	4,99	4,33	1	5
633500	3/4"	6,19	4,91	1	5
633600	1"	6,45	5,30	1	5



630  [tech. broch. 01039](#)
Thermo-electric actuator.
For zone valves 632 and 633 series.
Normally closed.
Supply: 230 V (ac) or 24 V (ac).
With auxiliary microswitch.
Power consumption: - starting 11 W.
- operating 4 W.
Auxiliary microswitch contact rating:
6 (3) A (230 V).
Max. ambient temperature: 55°C.
Protection class:
IP 44 (vertical stem),
IP 42 (horizontal stem).

Code	Supply voltage V		
630012	230	1	10
630014	24	1	10



635  [tech. broch. 01039](#)
Balanced by-pass tee.
For zone valves 633 series.
Max. working pressure: 10 bar.
Max. Δp: 1 bar.
Temperature range: -5–110°C.

Code			Kv (m ³ /h) tee + valve in by-pass		
635440	1/2"	U4	0,96	1	5
635460	1/2"	U6	1,32	1	5
635480	1/2"	U8	1,73	1	5
635540	3/4"	U4	0,98	1	5
635560	3/4"	U6	1,36	1	5
635580	3/4"	U8	1,79	1	5
635640	1"	U4	1,02	1	5
635660	1"	U6	1,43	1	5
635680	1"	U8	1,88	1	5



630  [tech. broch. 01039](#)
Thermo-electric actuator.
For zone valves 632 and 633 series.
Normally closed.
Supply: 230 V (ac) or 24 V (ac).
With manual actuator.
Power consumption: - starting 11 W.
- operating 4 W.
Max. ambient temperature: 55°C.
Protection class: IP 20.

Code	Supply voltage V		
630102	230	1	10
630104	24	1	10



630  [tech. broch. 01039](#)
Thermo-electric actuator.
For zone valves 632 and 633 series.
Normally closed.
Supply: 230 V (ac) or 24 V (ac).
With manual actuator and auxiliary microswitch.
Power consumption: - starting 11 W.
- operating 4 W.
Auxiliary microswitch contact rating:
6 (3) A (230 V).
Max. ambient temperature: 55°C.
Protection class: IP 20.

Code	Supply voltage V		
630112	230	1	10
630114	24	1	10

THERMO-ELECTRIC ZONE VALVES



676  [tech. broch. 01072](#)
 Two-way zone valve.
 Fitted for thermo-electric actuators 6563, 6561, 6562 and 6564 series.
 Max. working pressure: 10 bar.
 Max. Δp: 1,2 bar.
 Temperature range: 0–95°C.

Code		Kv (m³/h)		
676040	1/2"	3,7	1	10
676050	3/4"	3,7	1	10
676060	1"	3,7	1	10



677  [tech. broch. 01072](#)
 Three-way zone valve.
 Fitted for thermo-electric actuators 6563, 6561, 6562 and 6564 series.
 Max. working pressure: 10 bar.
 Max. Δp: 1,2 bar.
 Temperature range: 0–95°C.

Code		Kv (m³/h) straight	Kv (m³/h) by-pass		
677040	1/2"	3,7	1,0	1	10
677050	3/4"	3,7	1,0	1	10
677060	1"	3,7	1,0	1	10



678  [tech. broch. 01072](#)
 Three-way zone valve with by-pass tee.
 Fitted for thermo-electric actuators 6563, 6561, 6562 and 6564 series.
 Max. working pressure: 10 bar.
 Max. Δp: 1,2 bar.
 Temperature range: 0–95°C.
 Tee complete with nozzle U6.
Adjustable outlet centre distance from 49 to 63 mm.

Code		Kv (m³/h) straight	Kv (m³/h) by-pass		
678040	1/2"	3,7	1,0	1	10
678050	3/4"	3,7	1,0	1	10
678060	1"	3,7	1,0	1	10



6563  [tech. broch. 01142](#)
 Thermo-electric actuator.
 With manual opening and position indicator.
 For valves 676, 677 and 678 series. Normally closed.
 Supply: 230 V (ac) or 24 V (ac)/(dc).
 Power consumption: 3 W.
 Starting current: ≤ 1 A.
 Ambient temperature range: 0–50°C.
 Protection class: IP 40.
 Cable length: 80 cm.

Code	Supply voltage V		
656302	230	1	10
656304	24	1	10



6563  [tech. broch. 01142](#)
 Thermo-electric actuator.
 With manual opening and position indicator.
 For valves 676, 677 and 678 series. Normally closed.
With auxiliary microswitch.
 Supply: 230 V (ac) or 24 V (ac)/(dc).
 Power consumption: 3 W.
 Starting current: ≤ 1 A.
 Auxiliary microswitch contact rating: 0,8 A (230 V).
 Ambient temperature range: 0–50°C.
 Protection class: IP 40.
 Cable length: 80 cm.

Code	Supply voltage V		
656312	230	1	10
656314	24	1	10



6561  [tech. broch. 01042](#)
 Thermo-electric actuator.
 For valves 676, 677 and 678 series. Normally closed.
 Supply: 230 V (ac) or 24 V (ac)/(dc).
 Power consumption: 3 W.
 Starting current: ≤ 1 A.
 Ambient temperature range: 0–50°C.
 Protection class: IP 44 (vertical stem).
 Cable length: 80 cm.

Code	Supply voltage V		
656102	230	1	10
656104	24	1	10



6561  [tech. broch. 01042](#)
 Thermo-electric actuator.
 For valves 676, 677 and 678 series. Normally closed.
With auxiliary microswitch.
 Supply: 230 V (ac) or 24 V (ac)/(dc).
 Auxiliary microswitch contact rating: 0,8 A (230 V).
 Power consumption: 3 W.
 Starting current: ≤ 1 A.
 Ambient temperature range: 0–50°C.
 Protection class: IP 44 (vertical stem).
 Cable length: 80 cm.

Code	Supply voltage V		
656112	230	1	10
656114	24	1	10

THERMO-ELECTRIC ZONE VALVES



6562

[tech. broch. 01198](#)

Thermo-electric actuator.
With opening position indicator.
Quick-coupling installation, with a clip adapter.
For valves 676, 677 and 678 series.
Normally closed.
Supply: 230 V (ac) or 24 V (ac)/(dc).
Power consumption: 3 W.
Starting current: ≤ 1 A.
Ambient temperature range: 0–50°C.
Protection class: IP 54.
Cable length: 80 cm.



Code	Supply voltage V		
656202	230	1	10
656204	24	1	10



6562

[tech. broch. 01198](#)

Thermo-electric actuator.
With opening position indicator.
Quick-coupling installation, with a clip adapter.
For valves 676, 677 and 678 series.
Normally closed.
With auxiliary microswitch.
Supply: 230 V (ac) or 24 V (ac)/(dc).
Auxiliary microswitch contact rating: 0,8 A (230 V).
Power consumption: 3 W.
Starting current: ≤ 1 A.
Ambient temperature range: 0–50°C.
Protection class: IP 54.
Cable length: 80 cm.



Code	Supply voltage V		
656212	230	1	10
656214	24	1	10



6564

[tech. broch. 01198](#)

Thermo-electric actuator
with low power consumption.
With opening position indicator.
Quick-coupling installation, with a clip adapter.
For valves 676, 677 and 678 series.
Normally closed.
Supply: 230 V (ac) or 24 V (ac)/(dc).
Power consumption: 3 W.
Starting current: ≤ 250 mA (230 V).
Ambient temperature range: 0–50°C.
Protection class: IP 54.
Cable length: 80 cm.



Code	Supply voltage V		
656402	230	1	10
656404	24	1	10



6564

[tech. broch. 01198](#)

Thermo-electric actuator
with low power consumption.
With opening position indicator.
Quick-coupling installation, with a clip adapter.
For valves 676, 677 and 678 series.
Normally closed.
With auxiliary microswitch.
Supply: 230 V (ac) or 24 V (ac)/(dc).
Auxiliary microswitch contact rating: 0,8 A (230 V).
Power consumption: 3 W.
Starting current: ≤ 250 mA (230 V).
Ambient temperature range: 0–50°C.
Protection class: IP 54.
Cable length: 80 cm.



Code	Supply voltage V		
656412	230	1	10
656414	24	1	10

MOTORISED ZONE VALVES



**642
Zone™**

[tech. broch. 01115](#)

Motorised two-way zone valve.
Normally closed.
With auxiliary microswitch.
Supply: 230 V (ac).
Power consumption: 6,5 W; 7 VA.
Auxiliary microswitch contact rating:
0,8 A (230 V).
Opening time: 70–75 s.
Closing time: 5–7 s.
Protection class: IP 20.
Max. ambient temperature: 40°C.
Max. working pressure: 16 bar.
Temperature range: 0–90°C.
Cable length: 95 cm.



Code		Kv (m³/h)	Max. Δp (bar)		
642042	1/2"	2,5	2,10	1	10
642052	3/4"	4,5	1,50	1	10
642062	1"	6	1,00	1	10



**643
Zone™**

[tech. broch. 01115](#)

Motorised three-way zone valve.
Normally closed.
With auxiliary microswitch.
Supply: 230 V (ac).
Power consumption: 6,5 W; 7 VA.
Auxiliary microswitch contact rating:
0,8 A (230 V).
Opening time: 70–75 s.
Closing time: 5–7 s.
Protection class: IP 20.
Max. ambient temperature: 40°C.
Max. working pressure: 16 bar.
Temperature range: 0–90°C.
Cable length: 95 cm.



Code		Kv (m³/h)	Δp max (bar)		
643042	1/2"	2,5	2,10	1	10
643052	3/4"	4,5	1,50	1	10
643062	1"	6	1,00	1	10



641

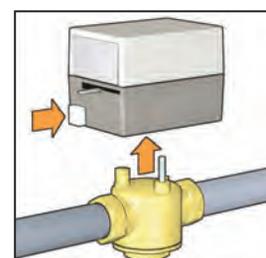
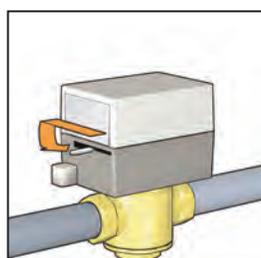
[tech. broch. 01115](#)

Spare actuator for motorised zone valves
642 and 643 series.
Supply: 230 V (ac).



Code		
641002	1	–

Removable actuator



MOTORIZED BALL VALVES

Operating time 10 s



6442

tech. broch. 01131

Motorised two-way ball valve.
Max. working pressure: 10 bar.
Max. Δp: 10 bar.
Temperature range: -5–110°C.

Equipped with actuator with 3-contact control.

With auxiliary microswitch.

Supply: 230 V (ac) or 24 V (ac).

Power consumption: 8 VA.

Auxiliary microswitch contact rating:

0,8 A (230 V).

Ambient temperature range: 0–55°C.

Protection class: IP 44 (vertical stem).

IP 40 (horizontal stem).

Operating time: 10 s (rotation 90°).

Cable length: 100 cm.



Code		Supply voltage V	Kv (m ³ /h)		
644246	1/2"	230	11,1	1	10
644256	3/4"	230	11,1	1	10
644248	1/2"	24	11,1	1	10
644258	3/4"	24	11,1	1	10



6440

tech. broch. 01132

3-contact control spare actuator for motorised ball zone valves 6442 and 6443 series.

Operating time 10 s.

Supply: 230 V (ac) or 24 V (ac).



Code	Supply voltage V		
644012	230	1	10
644014	24	1	10



6443

tech. broch. 01132

Motorised three-way diverter valve.
Max. working pressure: 10 bar.
Max. Δp: 10 bar.
Temperature range: -5–110°C.

Equipped with actuator with 3-contact control.

With auxiliary microswitch.

Supply: 230 V (ac) or 24 V (ac).

Power consumption: 8 VA.

Auxiliary microswitch contact rating:

0,8 A (230 V).

Ambient temperature range: 0–55°C.

Protection class: IP 44 (vertical stem).

IP 40 (horizontal stem).

Operating time: 10 s (rotation 90°).

Cable length: 100 cm.



Code		Supply voltage V	Kv (m ³ /h)		
644346	1/2"	230	3,9	1	5
644356	3/4"	230	3,9	1	5
644357	3/4"	230	8,6	1	5
644366	1"	230	9,0	1	5
644348	1/2"	24	3,9	1	5
644358	3/4"	24	3,9	1	5
644359	3/4"	24	8,6	1	5
644368	1"	24	9,0	1	5

MOTORISED BALL DIVERTER VALVES

Operating time 40 s



6443

Motorised three-way diverter valve.
Max. working pressure: 10 bar.
Max. Δp: 10 bar.
Temperature range: -5–110°C.

Equipped with actuator with 3-contact control. With auxiliary microswitch.

Supply: 230 V (ac) or 24 V (ac).
Power consumption: 4 VA.
Auxiliary microswitch contact rating: 0,8 A (230 V).
Ambient temperature range: 0–55°C.
Protection class: IP 44 (vertical stem).
IP 40 (horizontal stem).

Operating time: 40 s (90° rotation).
Cable length: 100 cm.



Code	Supply voltage V	Kv (m³/h)		
644342	1/2" 230	3,9	1	5
644352	3/4" 230	3,9	1	5
644344	1/2" 24	3,9	1	5
644354	3/4" 24	3,9	1	5



6443

Motorised three-way diverter valve.
Max. working pressure: 10 bar.
Max. Δp: 10 bar.
Temperature range: -5–110°C.

Equipped with actuator with 3-contact control. With auxiliary microswitch.

Supply: 230 V (ac) or 24 V (ac).
Power consumption: 4 VA.
Auxiliary microswitch contact rating: 0,8 A (230 V).
Ambient temperature range: 0–55°C.
Protection class: IP 44 (vertical stem).
IP 40 (horizontal stem).

Operating time: 40 s (90° rotation).
Cable length: 100 cm.



Code	Supply voltage V	Kv (m³/h)		
644353	3/4" 230	8,6	1	5
644362	1" 230	9,0	1	5
644355	3/4" 24	8,6	1	5
644364	1" 24	9,0	1	5



6440

3-contact control spare actuator for motorised ball zone valves 6442, 6443 and 6444 series.

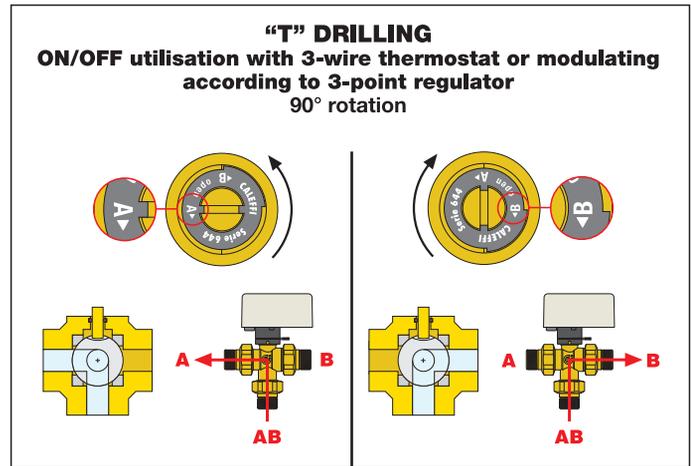
Operating time 40 s.

Supply: 230 V (ac) or 24 V (ac).

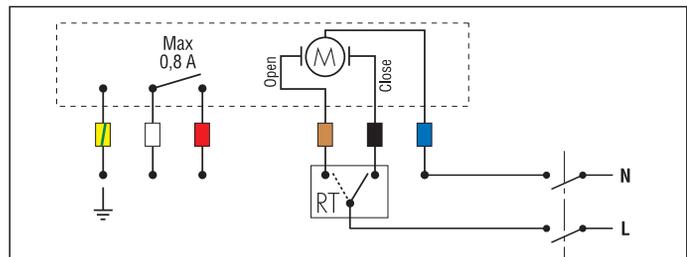


Code	Supply voltage V		
644002	230	1	10
644004	24	1	10

Ball diverter valve 6443 series



Wiring diagram for valves 6443 series



MOTORIZED VALVES FOR CENTRAL HEATING SYSTEMS



638  [tech. broch. 01196](#)

Motorised two-way ball valve.
With auxiliary microswitch.
 Supply: 230 V (ac) or 24 V (ac).
 Max. working pressure: 16 bar.
 Max. Δp: 10 bar.
 Temperature range: -10–110°C.
 Ambient temperature range: -10–55°C.
 Power consumption: 6 VA.
 Auxiliary microswitch contact rating:
 6 (2) A - 230 V (ac).
 Protection class: IP 65.
 Operating time: 50 s (90° rotation).



Code	Actuator torque (N-m)	Supply voltage V	Kv (m³/h)		
638052	3/4"	15	230	17	1 –
638062	1"	15	230	36,5	1 –
638072	1 1/4"	15	230	48	1 –
638082	1 1/2"	15	230	77	1 –
638092	2"	15	230	140	1 –
638054	3/4"	15	24	17	1 –
638064	1"	15	24	36,5	1 –
638074	1 1/4"	15	24	48	1 –
638084	1 1/2"	15	24	77	1 –
638094	2"	15	24	140	1 –



638  [tech. broch. 01196](#)

Motorised three-way ball valve.
With auxiliary microswitch.
 Supply: 230 V (ac) or 24 V (ac).
 Max. working pressure: 16 bar.
 Max. Δp: 10 bar.
 Temperature range: -10–110°C.
 Ambient temperature range: -10–55°C.
 Power consumption: 6 VA.
 Auxiliary microswitch contact rating:
 6 (2) A - 230 V (ac).
 Protection class: IP 65.
 Operating time: 50 s (90° rotation - "T" drilling).



With "T" drilling.
 Reduced bore.

Code	Actuator torque (N-m)	Supply voltage V	Kv (m³/h)		
638153	3/4"	15	230	9,5	1 –
638163	1"	15	230	12,9	1 –
638173	1 1/4"	15	230	24,7	1 –
638183	1 1/2"	15	230	47	1 –
638193	2"	15	230	50	1 –
638155	3/4"	15	24	9,5	1 –
638165	1"	15	24	12,9	1 –
638175	1 1/4"	15	24	24,7	1 –
638185	1 1/2"	15	24	47	1 –
638195	2"	15	24	50	1 –



638  [tech. broch. 01196](#)

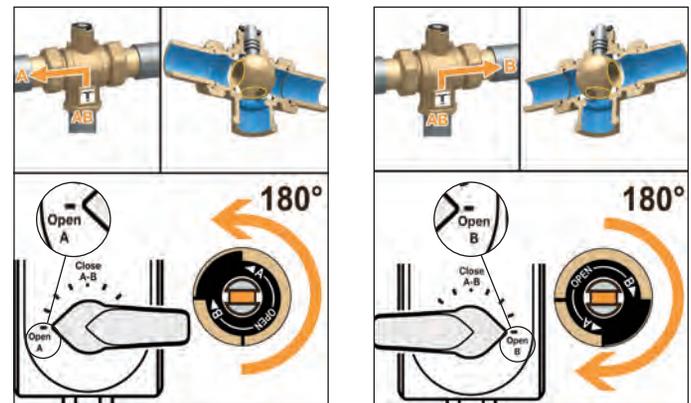
Motorised three-way ball valve.
With auxiliary microswitch.
 Supply: 230 V (ac) or 24 V (ac).
 Max. working pressure: 16 bar.
 Max. Δp: 10 bar.
 Temperature range: -10–110°C.
 Ambient temperature range: -10–55°C.
 Power consumption: 6 VA.
 Auxiliary microswitch contact rating:
 6 (2) A - 230 V (ac).
 Protection class: IP 65.
 Operating time: 100 s (180° rotation - "L" drilling).



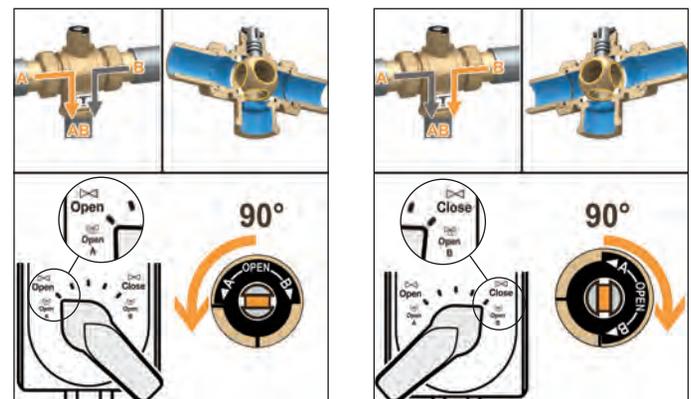
With "L" drilling.
 Reduced bore.

Code	Actuator torque (N-m)	Supply voltage V	Kv (m³/h)		
638053	3/4"	15	230	9,9	1 –
638063	1"	15	230	13,4	1 –
638073	1 1/4"	15	230	22,8	1 –
638083	1 1/2"	15	230	44	1 –
638093	2"	15	230	50	1 –
638055	3/4"	15	24	9,9	1 –
638065	1"	15	24	13,4	1 –
638075	1 1/4"	15	24	22,8	1 –
638085	1 1/2"	15	24	44	1 –
638095	2"	15	24	50	1 –

Operating diagram of valves 638 series - "L" drilling



Operating diagram of valves 638 series - "T" drilling



MOTORIZED VALVES FOR CENTRAL HEATING SYSTEMS

NEW



Insulation kit for heating and air conditioning systems. Medium temperature range: -10–110°C. For motorised two-way ball valves 638 series.

Code	Use		
CBN638052	3/4"	1	–
CBN638062	1"	1	–
CBN638072	1 1/4"	1	–
CBN638082	1 1/2"-2"	1	–

NEW



Insulation kit for heating and air conditioning systems. Medium temperature range: -10–110°C. For motorised two-way ball valves 638 series.

Code	Use		
CBN638053	3/4" with "L" drilling	1	–
CBN638063	1" with "L" drilling	1	–
CBN638073	1 1/4" with "L" drilling	1	–
CBN638083	1 1/2"-2" with "L" drilling	1	–
CBN638153	3/4" with "T" drilling	1	–
CBN638163	1" with "T" drilling	1	–
CBN638173	1 1/4" with "T" drilling	1	–
CBN638183	1 1/2"-2" with "T" drilling	1	–



636

Motorised three-way piston valve with manual opening. Full bore. **With auxiliary microswitch.** Supply: 230 V (ac) or 24 V (ac). Max. working pressure: 16 bar. Max. working temperature: 110°C. Auxiliary microswitch contact rating: 3 A (230 V). Protection class: IP 44. Operating time: 90 s. **It converts into a two-way valve by blanking off the central third way.**

Code	Max. Δp bar	Supply voltage V	Kv (m³/h)		
636073	1 1/4"	1,2	230	14	1 –
636083	1 1/2"	1	230	19	1 –
636093	2"	0,9	230	25	1 –
636075	1 1/4"	1,2	24	14	1 –
636085	1 1/2"	1	24	19	1 –
636095	2"	0,9	24	25	1 –

CE

Spare actuators for motorised three-way piston valves 636 series.

Code	Supply voltage V		
R69084	230	1	–
R69085	24	1	–



637

Motorised two-way ball valve with manual opening. Full bore. **With auxiliary microswitch.** Supply: 230 V (ac) or 24 V (ac). Max. working pressure (static): 2 1/2": 40 bar; 3": 25 bar; 4": 16 bar. Max. Δp: 6 bar. Temperature range: -10–95°C. Max. ambient temperature: 55°C. Power consumption: 10,5 VA. Auxiliary microswitch contact rating: 16 (6) A - 250 V (ac) - double switch. Protection class: IP 65. Operating time: 180 s (90° rotation).

CE

Code	Actuator torque (N·m)	Supply voltage V	Kv (m³/h)		
637202	2 1/2"	120	230	170	1 –
637302	3"	120	230	253	1 –
637402	4"	120	230	450	1 –
637204	2 1/2"	120	24	170	1 –
637304	3"	120	24	253	1 –
637404	4"	120	24	450	1 –



637

Motorised two-way ball valve with manual opening. Full bore. Flanged connections PN 16. To be coupled with flat counterflanges EN 1092-1. **With auxiliary microswitch.** Supply: 230 V (ac) or 24 V (ac). Max. working pressure (static): DN 65: 40 bar; DN 80: 25 bar; DN 100: 16 bar. Max. Δp: 6 bar. Temperature range: -10–95°C. Max. ambient temperature: 55°C. Power consumption: 10,5 VA. Auxiliary microswitch contact rating: 16 (6) A - 250 V (ac) - double switch. Protection class: IP 65. Operating time: 180 s (90° rotation).

CE

Code	Actuator torque (N·m)	Supply voltage V	Kv (m³/h)		
637212	DN 65	120	230	170	1 –
637312	DN 80	120	230	253	1 –
637412	DN 100	120	230	450	1 –
637214	DN 65	120	24	170	1 –
637314	DN 80	120	24	253	1 –
637414	DN 100	120	24	450	1 –

CE

Spare actuators for motorised two-way ball valves 637 series.

Code	Supply voltage V		
637022	230	1	–
637024	24	1	–

SINGLE DISTRIBUTION MANIFOLDS

349

Modular single distribution manifold.
 Max. working pressure: 10 bar.
 Temperature range: -10–110°C.
 Outlet centre distance: 35 mm.



Code	Connections	Outlet No.	Outlets		
349020	3/4"	x 2	23 p.1,5 M	5	50
349030	3/4"	x 3	23 p.1,5 M	5	50
349040	3/4"	x 4	23 p.1,5 M	5	50
349050	3/4"	x 5	23 p.1,5 M	5	50

354

Modular single distribution manifold with shut-off valves.
CR dezincification resistant alloy body.
 Max. working pressure: 10 bar.
 Temperature range: 5–100°C.
 Outlet centre distance: 35 mm.



Code	Connections	Outlet No.	Outlets		
354052	3/4"	x 2	23 p.1,5 M	5	20
354053	3/4"	x 3	23 p.1,5 M	5	20
354054	3/4"	x 4	23 p.1,5 M	5	20
354055	3/4"	x 5	23 p.1,5 M	5	20

350

Modular single distribution manifold.
 Max. working pressure: 10 bar.
 Temperature range: -10–110°C.
 Outlet centre distance: 50 mm for 3/4" and 1".
 Outlet centre distance: 60 mm for 1 1/4".
 PTFE seal on coupling.



Code	Connections	Outlet No.	Outlets		
350520	3/4"	x 2	23 p.1,5 M	2	–
350530	3/4"	x 3	23 p.1,5 M	2	–
350540	3/4"	x 4	23 p.1,5 M	2	–
350620	1"	x 2	23 p.1,5 M	2	–
350630	1"	x 3	23 p.1,5 M	2	–
350640	1"	x 4	23 p.1,5 M	2	–
350720*	1 1/4"	x 2	23 p.1,5 M	2	–
350730*	1 1/4"	x 3	23 p.1,5 M	2	–
350740*	1 1/4"	x 4	23 p.1,5 M	2	–

* Without PTFE seal on coupling

351

Blind single distribution manifold.
 For heating and air conditioning systems.
 Max. working pressure: 10 bar.
 Temperature range: -10–110°C.
 Outlet centre distance: 50 mm.



Code	Connections	Outlet No.	Outlets		
351520	3/4"	x 2	23 p.1,5 M	2	–
351530	3/4"	x 3	23 p.1,5 M	2	–
351540	3/4"	x 4	23 p.1,5 M	2	–
351620	1"	x 2	23 p.1,5 M	2	–
351630	1"	x 3	23 p.1,5 M	2	–
351640	1"	x 4	23 p.1,5 M	2	–

DUAL DISTRIBUTION MANIFOLDS AND FITTINGS

356

tech. broch. 01014



Cast monoblock dual distribution manifold. For heating and air conditioning systems. Max. working pressure: 10 bar. Temperature range: -10–110°C. Main centre distance: 60 mm. Outlet centre distance: 40 mm.

Code	Connections	Outlet No.	Outlets		
356502	3/4"	2+2	23 p.1,5 M	1	5
356504	3/4"	4+4	23 p.1,5 M	1	5
356506	3/4"	6+6	23 p.1,5 M	1	5
356508	3/4"	8+8	23 p.1,5 M	1	5
356510	3/4"	10+10	23 p.1,5 M	1	5
356604	1"	4+4	23 p.1,5 M	1	5
356606	1"	6+6	23 p.1,5 M	1	5
356608	1"	8+8	23 p.1,5 M	1	5
356610	1"	10+10	23 p.1,5 M	1	5
356612	1"	12+12	23 p.1,5 M	1	–

356

tech. broch. 01014



Cast monoblock dual distribution manifold. For heating and air conditioning systems.

With insulation.

Max. working pressure: 10 bar. Temperature range: 0–100°C. Main centre distance: 60 mm. Outlet centre distance: 40 mm.

Code	Connections	Outlet No.	Outlets		
356604 IS	1"	4+4	23 p.1,5 M	1	10
356606 IS	1"	6+6	23 p.1,5 M	1	10
356608 IS	1"	8+8	23 p.1,5 M	1	5
356610 IS	1"	10+10	23 p.1,5 M	1	5

357

tech. broch. 01014



Single sided cast monoblock dual distribution manifold. For heating and air conditioning systems. Max. working pressure: 10 bar. Temperature range: -10–110°C. Main centre distance: 60 mm. Outlet centre distance: 40 mm.

Code	Connections	Outlet No.	Outlets		
357502	3/4"	2+2	23 p.1,5 M	1	10
357503	3/4"	3+3	23 p.1,5 M	1	10
357504	3/4"	4+4	23 p.1,5 M	1	5
357505	3/4"	5+5	23 p.1,5 M	1	–
357506	3/4"	6+6	23 p.1,5 M	1	–

356

tech. broch. 01014



Differential by-pass for dual distribution manifolds 356 and 357 series. 3/8" connection for automatic air vent. Fixed differential by-pass setting: 20 kPa (2000 mm w.g.). Max. working pressure: 10 bar. Temperature range: -10–110°C.

Code	Connections	Outlets		
356050	3/4" M	23 p.1,5 M	1	20

3640

End fitting. For distribution manifolds 356 and 357 series.



Code	Connections	Outlets		
364050	3/4" M x 23 p.1,5 M	23 p.1,5 M	2	–
364060	1" M x 23 p.1,5 M	23 p.1,5 M	2	–

3641

Plug. For distribution manifolds 356 and 357 series.



Code	Connections	Outlets	Price		
364150	3/4" M	23 p.1,5 M	3,54	2	–
364160	1" M	23 p.1,5 M	5,23	2	–

3642

End fitting for air vent connection. For distribution manifolds 356 and 357 series.



Code	Connections	Outlets	Price		
364253	3/4" M x 3/8" F	23 p.1,5 M	–	2	–
364254	3/4" M x 1/2" F	23 p.1,5 M	–	2	–
364263	1" M x 3/8" F	23 p.1,5 M	–	2	–

SINGLE DISTRIBUTION MANIFOLDS

349



Modular single distribution manifold.
Max. working pressure: 10 bar.
Temperature range: -10–110°C.
Outlet centre distance: 35 mm.
Outlet male connections.

Code	Connections	Outlet No.	Outlets		
349130	3/4" x 3	x 3	1/2" M	5	50
349140	3/4" x 4	x 4	1/2" M	5	50
349150	3/4" x 5	x 5	1/2" M	5	50

349



Modular single distribution manifold.
Max. working pressure: 10 bar.
Temperature range: -10–110°C.
Outlet centre distance: 35 mm.
Outlet male connections.
With flat seat.
For press-fittings.

Code	Connections	Outlet No.	Outlets		
349230	3/4" x 3	x 3	1/2" M - Ø 13	5	50
349240	3/4" x 4	x 4	1/2" M - Ø 13	5	50
349250	3/4" x 5	x 5	1/2" M - Ø 13	5	50

349



Modular single distribution manifold.
Max. working pressure: 10 bar.
Temperature range: -10–110°C.
Outlet centre distance: 35 mm.
Outlet female connections.

Code	Connections	Outlet No.	Outlets		
349330	3/4" x 3	x 3	1/2" F	5	50
349340	3/4" x 4	x 4	1/2" F	5	50
349350	3/4" x 5	x 5	1/2" F	5	50

354



Modular single distribution manifold with shut-off valves.
CR dezincification resistant alloy body.
Max. working pressure: 10 bar.
Temperature range: 5–100°C.
Outlet centre distance: 35 mm.
Outlet male connections.
With flat seat.
For press-fittings.



Code	Connections	Outlet No.	Outlets		
354252	3/4" x 2	x 2	1/2" M - Ø 13	2	30
354253	3/4" x 3	x 3	1/2" M - Ø 13	2	20
354254	3/4" x 4	x 4	1/2" M - Ø 13	2	10
354255	3/4" x 5	x 5	1/2" M - Ø 13	2	10

592



Modular single distribution manifold.
Max. working pressure: 10 bar.
Temperature range: -10–110°C.
PTFE seal on coupling.
Outlet male connections.

Code	Connections	Outlet No.	Outlets	Outlet centre distance		
592525	3/4" x 2	x 2	1/2" M	50	2	–
592535	3/4" x 3	x 3	1/2" M	50	2	–
592545	3/4" x 4	x 4	1/2" M	50	2	–
592625	1" x 2	x 2	1/2" M	50	2	–
592635	1" x 3	x 3	1/2" M	50	2	–
592645	1" x 4	x 4	1/2" M	50	2	–
592626	1" x 2	x 2	1/2" M	60	2	–
592636	1" x 3	x 3	1/2" M	60	2	–
592646	1" x 4	x 4	1/2" M	60	2	–
592726*	1 1/4" x 2	x 2	1/2" M	60	2	–
592736*	1 1/4" x 3	x 3	1/2" M	60	2	–
592746*	1 1/4" x 4	x 4	1/2" M	60	2	–
592622	1" x 2	x 2	3/4" M	60	2	–
592632	1" x 3	x 3	3/4" M	60	2	–

* Without PTFE on coupling

592



Modular single distribution manifold.
Max. working pressure: 10 bar.
Temperature range: -10–110°C.
PTFE seal on coupling.
Outlet female connections.

Code	Connections	Outlet No.	Outlets	Outlet centre distance		
592527	3/4" x 2	x 2	1/2" F	50	2	–
592537	3/4" x 3	x 3	1/2" F	50	2	–
592547	3/4" x 4	x 4	1/2" F	50	2	–
592627	1" x 2	x 2	1/2" F	50	2	–
592637	1" x 3	x 3	1/2" F	50	2	–
592647	1" x 4	x 4	1/2" F	50	2	–
592628	1" x 2	x 2	1/2" F	60	2	–
592638	1" x 3	x 3	1/2" F	60	2	–
592648	1" x 4	x 4	1/2" F	60	2	–
592728*	1 1/4" x 2	x 2	1/2" F	60	2	–
592738*	1 1/4" x 3	x 3	1/2" F	60	2	–
592748*	1 1/4" x 4	x 4	1/2" F	60	2	–

* Without PTFE on coupling

SINGLE DISTRIBUTION MANIFOLDS

SINGLE DISTRIBUTION MANIFOLDS FOR AIR CONDITIONING SYSTEMS



598

Blind single distribution manifold. For heating and air conditioning systems. Max. working pressure: 10 bar. Temperature range: -10–110°C. Outlet centre distance: 50 mm. **Outlet male connections.**

Code	Connections	Outlet No.	Outlets		
598521	3/4"	x 2	1/2" M	2	–
598531	3/4"	x 3	1/2" M	2	–
598541	3/4"	x 4	1/2" M	2	–
598621	1"	x 2	1/2" M	2	–
598631	1"	x 3	1/2" M	2	–
598641	1"	x 4	1/2" M	2	–



598

Blind single distribution manifold. For heating and air conditioning systems. Max. working pressure: 10 bar. Temperature range: -10–110°C. Outlet centre distance: 50 mm. **Outlet female connections.**

Code	Connections	Outlet No.	Outlets		
598522	3/4"	x 2	1/2" F	2	–
598532	3/4"	x 3	1/2" F	2	–
598542	3/4"	x 4	1/2" F	2	–
598622	1"	x 2	1/2" F	2	–
598632	1"	x 3	1/2" F	2	–
598642	1"	x 4	1/2" F	2	–

650

tech. broch. 01067

Modular single distribution manifold. For air conditioning systems.

With insulation.

Max. working pressure: 10 bar. Temperature range: -40–95°C. Outlet centre distance: 60 mm.



Code	Connections	Outlet No.	Outlets		
650722	1 1/4"	x 2	3/4" M	37,40	2 –
650732	1 1/4"	x 3	3/4" M	50,20	2 –
650742	1 1/4"	x 4	3/4" M	65,20	2 –

615

Super-bright glue, to seal the insulation of manifolds 650 series, deaerators 551 DISCAL® series and separator-manifold 559 SEPCOLL series. Content: 125 g.



Code		
615500	1	–

DISTRIBUTION MANIFOLDS WITH SHUT-OFF AND PRE-REGULATING VALVES

662

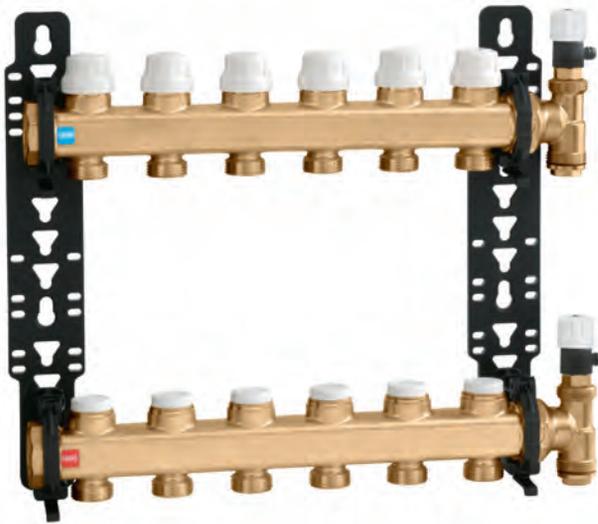
tech. broch. 01180

Distribution manifold group.
 Max. working pressure: 10 bar.
 Temperature range: 5–100°C.
 Outlet centre distance: 50 mm.

Consisting of:

- return manifold complete with shut-off valves fitted for thermo-electric actuator;
- flow manifold complete with lockshield valves for flow rate pre-regulation;
- end fittings consisting of double radial end fitting, manual air vent and plugs.
- polymer mounting brackets with adjustable centre distance for use with box 659 series or for direct wall fixing.

Code	Connections	Outlet No.	Outlets		
6626B5	1" x 2	3/4" M	1	–	–
6626C5	1" x 3	3/4" M	1	–	–
6626D5	1" x 4	3/4" M	1	–	–
6626E5	1" x 5	3/4" M	1	–	–
6626F5	1" x 6	3/4" M	1	–	–
6626G5	1" x 7	3/4" M	1	–	–
6626H5	1" x 8	3/4" M	1	–	–
6626I5	1" x 9	3/4" M	1	–	–
6626L5	1" x 10	3/4" M	1	–	–
6626M5	1" x 11	3/4" M	1	–	–
6626N5	1" x 12	3/4" M	1	–	–
6626O5	1" x 13	3/4" M	1	–	–

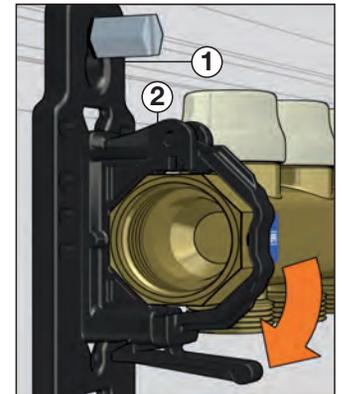
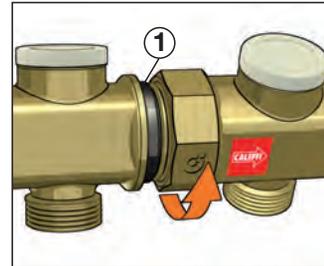


Modular manifolds

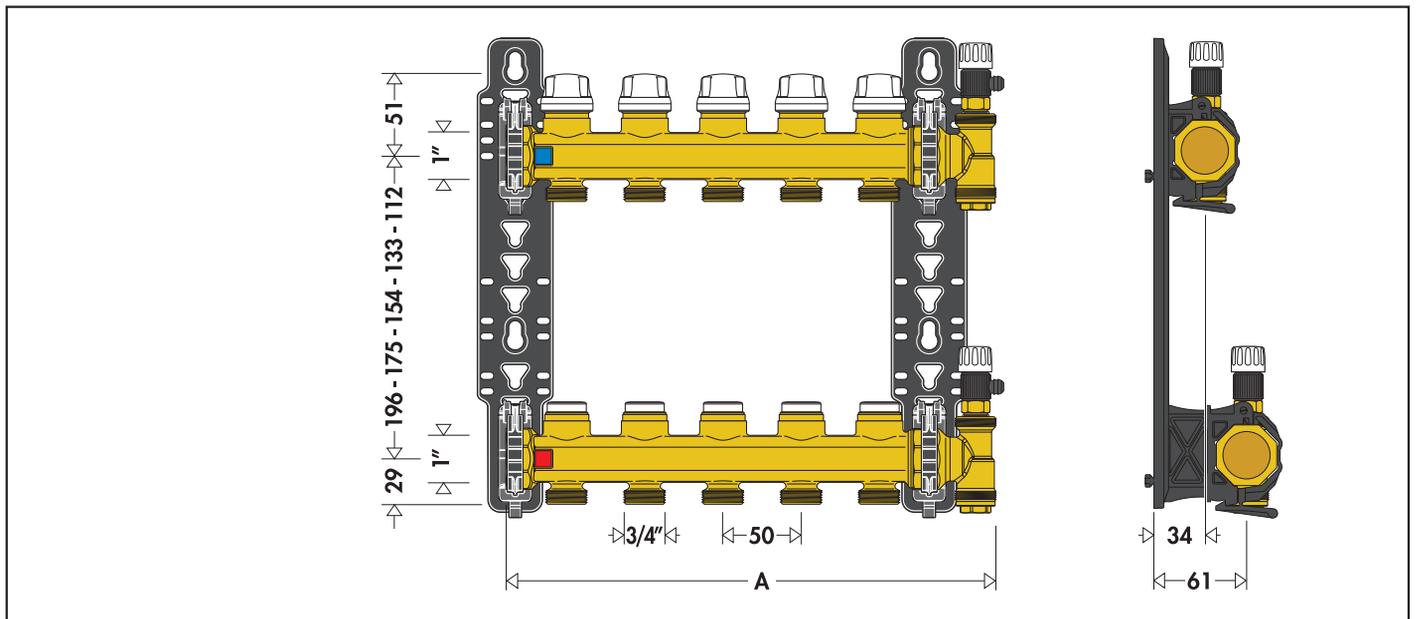
These manifolds are modular thanks to the threaded connections with O-Ring seal (1). The threading is designed to create a perfect hydraulic seal and to correctly align the relevant respective outlets when the components are screwed on and fully tightened.

Bracket and manifold mounting

Manifolds are easily mounted onto the brackets (1) using the modular supports (2) supplied, without any other mounting accessories.



Dimensions of distribution manifold group 662 series



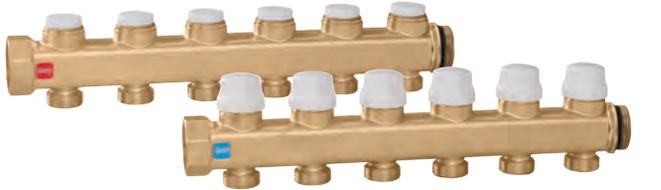
Outlet No.	2	3	4	5	6	7	8	9	10	11	12	13
Total L	165	215	265	315	365	425	475	525	575	625	675	735

DISTRIBUTION MANIFOLDS WITH SHUT-OFF AND PRE-REGULATING VALVES

662

tech. broch. 01180

Pair of manifolds equipped with shut-off and lockshield valves for flow rate pre-regulation. Max. working pressure: 10 bar. Temperature range: 5–100°C. Outlet centre distance: 50 mm.



Code	Connections	Outlet No.	Outlets		
662625	1"	x 2	3/4" M	1	–
662635	1"	x 3	3/4" M	1	–
662645	1"	x 4	3/4" M	1	–
662655	1"	x 5	3/4" M	1	–
662665	1"	x 6	3/4" M	1	–

6620

tech. broch. 01180

Return manifold equipped with shut-off valves, fitted for thermo-electric actuator. Max. working pressure: 10 bar. Temperature range: 5–100°C. Outlet centre distance: 50 mm.



Code	Connections	Outlet No.	Outlets		
662025	1"	x 2	3/4" M	2	–
662035	1"	x 3	3/4" M	2	–
662045	1"	x 4	3/4" M	2	–
662055	1"	x 5	3/4" M	2	–
662065	1"	x 6	3/4" M	2	–

6621

tech. broch. 01180

Flow manifold equipped with lockshield valves for flow rate pre-regulation. Max. working pressure: 10 bar. Temperature range: 5–100°C. Outlet centre distance: 50 mm.



Code	Connections	Outlet No.	Outlets		
662125	1"	x 2	3/4" M	2	–
662135	1"	x 3	3/4" M	2	–
662145	1"	x 4	3/4" M	2	–
662155	1"	x 5	3/4" M	2	–
662165	1"	x 6	3/4" M	2	–



5996

tech. broch. 01180

End fitting consisting of double radial end fitting, manual air vent and plug. Max. working pressure: 10 bar. Temperature range: 5–100°C.

Code	Connections		
599662	1" F	1	25



662

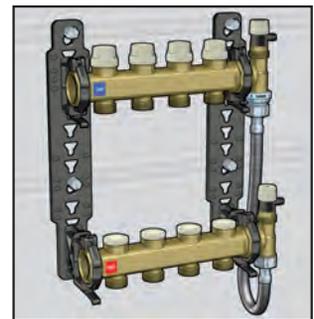
tech. broch. 01180

Fixed setting differential by-pass kit 20 kPa (2000 mm w.g.), with flexible hose. For distribution manifolds 662 series. Max. working pressure: 10 bar. Temperature range: 0–100°C.

Code	Connections		
662000	3/4" F nut x 3/4" F	1	5

Connection example of differential by-pass code 662000 with manifold 662 series

This special by-pass kit consists of a flexible hose which makes installation easier and allows the manifold to be adapted to suit the brackets, according to the actual positions of the system flow and return piping.



658

tech. broch. 01180

Polymer mounting brackets with adjustable centre distance, for distribution manifolds 662 series. With screws and wall anchors. To be used with boxes code 659..5 (depth 80–120 mm) or directly wall mounted.



Code		
658401	1	5



Pair of plastic supports for brackets code 658401.

Code		
F66144	1	–

658

tech. broch. 01180

Polymer mounting brackets with adjustable centre distance, for distribution manifolds 662 series. With screws and wall anchors. To be used with boxes code 659.4 (depth 110–140 mm) or directly wall mounted.



Code		
658400	1	5

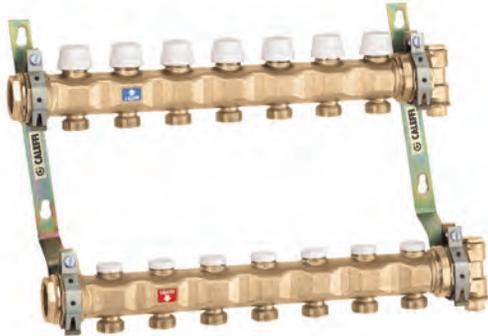
DISTRIBUTION MANIFOLDS WITH SHUT-OFF AND PRE-REGULATING VALVES

663

tech. broch. 01065

Pre-assembled distribution manifold.
 Max. working pressure: 10 bar.
 Temperature range: 5–100°C.
 Outlet centre distance: 50 mm.

- Consisting of:
- 1 return distribution manifold complete with shut-off valves fitted for thermo-electric actuator;
 - 1 flow distribution manifold complete with lockshield valves for flow rate pre-regulation;
 - 2 mounting brackets code 658100;
 - 2 reduction fittings 1 1/4" M x 1" F code 364276;
 - 2 double radial end fittings code 599473 with plugs.



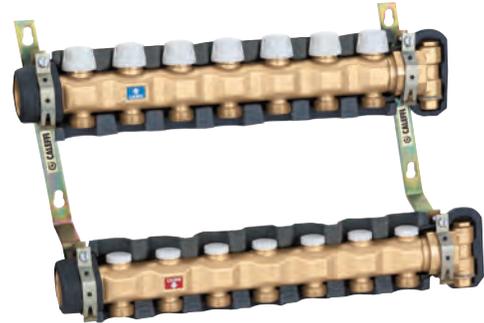
Code	Connections	Outlet No.	Outlets		
6637C5	1 1/4" x 3	3/4" M	3/4" M	1	–
6637D5	1 1/4" x 4	3/4" M	3/4" M	1	–
6637E5	1 1/4" x 5	3/4" M	3/4" M	1	–
6637F5	1 1/4" x 6	3/4" M	3/4" M	1	–
6637G5	1 1/4" x 7	3/4" M	3/4" M	1	–
6637H5	1 1/4" x 8	3/4" M	3/4" M	1	–
6637I5	1 1/4" x 9	3/4" M	3/4" M	1	–
6637L5	1 1/4" x 10	3/4" M	3/4" M	1	–
6637M5	1 1/4" x 11	3/4" M	3/4" M	1	–
6637N5	1 1/4" x 12	3/4" M	3/4" M	1	–
6637O5	1 1/4" x 13	3/4" M	3/4" M	1	–

663

tech. broch. 01065

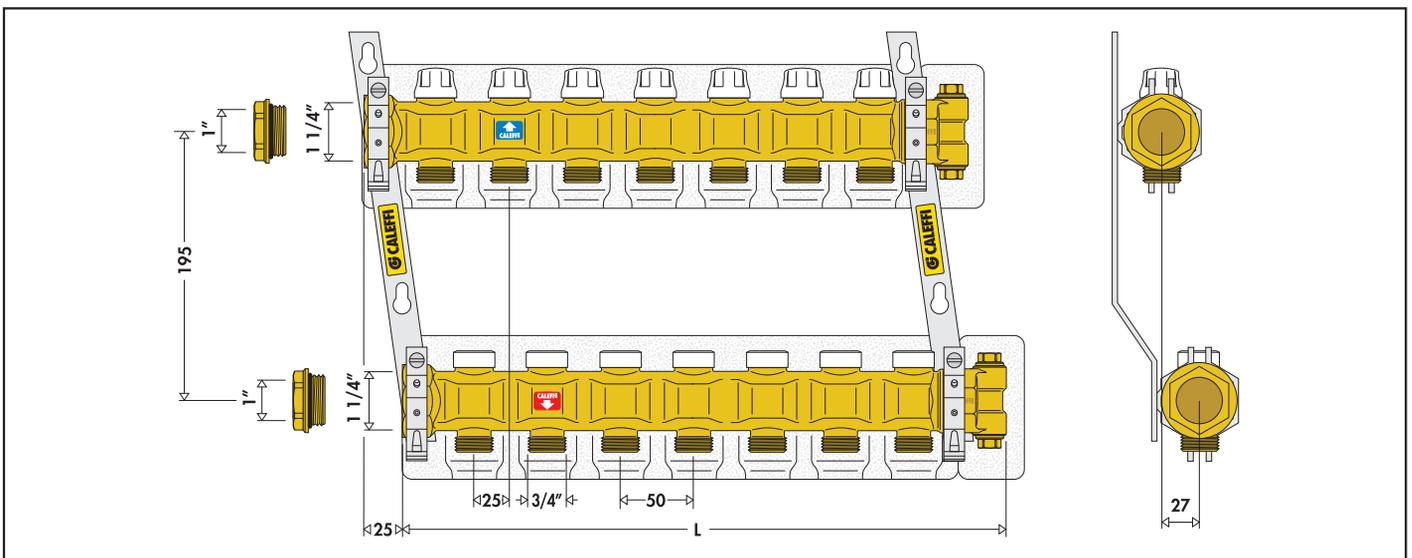
Pre-assembled distribution manifold for air conditioning systems.
With insulation.
 Max. working pressure: 10 bar.
 Temperature range: 5–100°C.
 Outlet centre distance: 50 mm.

- Consisting of:
- 1 return distribution manifold complete with shut-off valves fitted for thermo-electric actuator;
 - 1 flow distribution manifold complete with lockshield valve for flow rate pre-regulation;
 - 2 mounting brackets code 658100;
 - 2 reduction fittings 1 1/4" M x 1" F code 364276;
 - 2 double radial end fittings code 599473 with plugs.



Code	Connections	Outlet No.	Outlets		
6637C5 IS	1 1/4" x 3	3/4" M	3/4" M	1	–
6637D5 IS	1 1/4" x 4	3/4" M	3/4" M	1	–
6637E5 IS	1 1/4" x 5	3/4" M	3/4" M	1	–
6637F5 IS	1 1/4" x 6	3/4" M	3/4" M	1	–
6637G5 IS	1 1/4" x 7	3/4" M	3/4" M	1	–
6637H5 IS	1 1/4" x 8	3/4" M	3/4" M	1	–
6637I5 IS	1 1/4" x 9	3/4" M	3/4" M	1	–
6637L5 IS	1 1/4" x 10	3/4" M	3/4" M	1	–
6637M5 IS	1 1/4" x 11	3/4" M	3/4" M	1	–
6637N5 IS	1 1/4" x 12	3/4" M	3/4" M	1	–
6637O5 IS	1 1/4" x 13	3/4" M	3/4" M	1	–

Dimensions of pre-assembled distribution manifold 663 series



Outlet No.	3	4	5	6	7	8	9	10	11	12	13
Total L	220	270	320	370	420	470	550	600	650	700	750

DISTRIBUTION MANIFOLDS WITH SHUT-OFF AND PRE-REGULATING VALVES

663

tech. broch. 01065

Pair of distribution manifolds equipped with shut-off and lockshield valves for flow rate pre-regulation.
Max. working pressure: 10 bar.
Temperature range: 5–100°C.
Outlet centre distance: 50 mm.



Code	Connections	Outlet No.	Outlets		
663735	1 1/4" x 3	3/4" M	3/4" M	1	–
663745	1 1/4" x 4	3/4" M	3/4" M	1	–
663755	1 1/4" x 5	3/4" M	3/4" M	1	–
663765	1 1/4" x 6	3/4" M	3/4" M	1	–
663775	1 1/4" x 7	3/4" M	3/4" M	1	–
663785	1 1/4" x 8	3/4" M	3/4" M	1	–

6630

tech. broch. 01065

Return distribution manifold equipped with shut-off valves, fitted for thermo-electric actuator.
Max. working pressure: 10 bar.
Temperature range: 5–100°C.
Outlet centre distance: 50 mm.



Code	Connections	Outlet No.	Outlets		
663030	1 1/4" x 3	3/4" M	3/4" M	2	–
663040	1 1/4" x 4	3/4" M	3/4" M	2	–
663050	1 1/4" x 5	3/4" M	3/4" M	2	–
663060	1 1/4" x 6	3/4" M	3/4" M	2	–
663070	1 1/4" x 7	3/4" M	3/4" M	2	–
663080	1 1/4" x 8	3/4" M	3/4" M	2	–

6631

tech. broch. 01065

Flow distribution manifold equipped with lockshield valve for flow rate pre-regulation.
Max. working pressure: 10 bar.
Temperature range: 5–100°C.
Outlet centre distance: 50 mm.



Code	Connections	Outlet No.	Outlets		
663130	1 1/4" x 3	3/4" M	3/4" M	2	–
663140	1 1/4" x 4	3/4" M	3/4" M	2	–
663150	1 1/4" x 5	3/4" M	3/4" M	2	–
663160	1 1/4" x 6	3/4" M	3/4" M	2	–
663170	1 1/4" x 7	3/4" M	3/4" M	2	–
663180	1 1/4" x 8	3/4" M	3/4" M	2	–

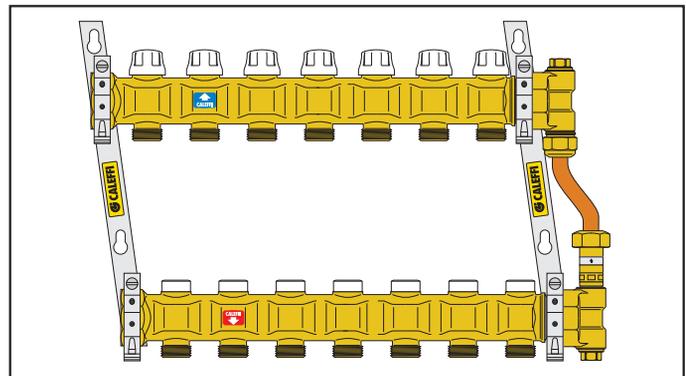
663

Off-centre by-pass assembly with fixed setting 20 kPa (2000 mm w.g.).
For pre-assembled distribution manifolds 663 series.
Max. working pressure: 10 bar.
Temperature range: -10–110°C.



Code	Connections		
663000	1/2" M x 3/8" M	1	20

Connection example of differential by-pass code 663000 with pre-assembled distribution manifold 663 series



391

Pair of ball valves.
Female - male connections with union.
With temperature gauge, scale: 0–80°C, Ø 40 mm.
Max. working pressure: 10 bar.
Max. working temperature: 100°C.



Code	Connections		
391167	1" x 1 1/4"	1	–
391177	1 1/4" x 1 1/4"	1	–

391

Pair of ball valves.
Female - male connections with union.
With temperature gauge connection.
Max. working pressure: 10 bar.
Max. working temperature: 100°C.



Code	Connections		
391067	1" x 1 1/4"	1	–
391077	1 1/4" x 1 1/4"	1	–

THERMO-ELECTRIC ACTUATORS



6563

tech. broch. 01142

Thermo-electric actuator. With manual opening and position indicator. For distribution manifolds 662 and 663 series. Normally closed. Supply: 230 V (ac) or 24 V (ac)/(dc). Power consumption: 3 W. Starting current: ≤ 1 A. Ambient temperature range: 0–50°C. Protection class: IP 40. Cable length: 80 cm.



Code	Supply voltage V		
656302	230	1	10
656304	24	1	10



6563

tech. broch. 01142

Thermo-electric actuator. With manual opening and position indicator. For distribution manifolds 662 and 663 series. Normally closed. **With auxiliary microswitch.** Supply: 230 V (ac) or 24 V (ac)/(dc). Power consumption: 3 W. Starting current: ≤ 1 A. Auxiliary microswitch contact rating: 0,8 A (230 V). Ambient temperature range: 0–50°C. Protection class: IP 40. Cable length: 80 cm.



Code	Supply voltage V		
656312	230	1	10
656314	24	1	10



6561

tech. broch. 01042

Thermo-electric actuator. For distribution manifolds 662 and 663 series. Normally closed. Supply: 230 V (ac) or 24 V (ac)/(dc). Power consumption: 3 W. Starting current: ≤ 1 A. Ambient temperature range: 0–50°C. Protection class: IP 44 (vertical stem). Cable length: 80 cm.



Code	Supply voltage V		
656102	230	1	10
656104	24	1	10



6561

tech. broch. 01042

Thermo-electric actuator. For distribution manifolds 662 and 663 series. Normally closed. **With auxiliary microswitch.** Supply: 230 V (ac) or 24 V (ac)/(dc). Auxiliary microswitch contact rating: 0,8 A (230 V). Power consumption: 3 W. Starting current: ≤ 1 A. Ambient temperature range: 0–50°C. Protection class: IP 44 (vertical stem). Cable length: 80 cm.



Code	Supply voltage V		
656112	230	1	10
656114	24	1	10



6562

tech. broch. 01198

Thermo-electric actuator. With opening position indicator. **Quick-coupling installation, with a clip adapter.** For distribution manifolds 662 and 663 series. Normally closed. Supply: 230 V (ac) or 24 V (ac)/(dc). Power consumption: 3 W. Starting current: ≤ 1 A. Ambient temperature range: 0–50°C. Protection class: IP 54. Cable length: 80 cm.



Code	Supply voltage V		
656202	230	1	10
656204	24	1	10



6562

tech. broch. 01198

Thermo-electric actuator. With opening position indicator. **Quick-coupling installation, with a clip adapter.** For distribution manifolds 662 and 663 series. Normally closed. **With auxiliary microswitch.** Supply: 230 V (ac) or 24 V (ac)/(dc). Auxiliary microswitch contact rating: 0,8 A (230 V). Power consumption: 3 W. Starting current: ≤ 1 A. Ambient temperature range: 0–50°C. Protection class: IP 54. Cable length: 80 cm.



Code	Supply voltage V		
656212	230	1	10
656214	24	1	10



6564

tech. broch. 01198

Thermo-electric actuator with low power consumption. With opening position indicator. **Quick-coupling installation, with a clip adapter.** For distribution manifolds 662 and 663 series. Normally closed. Supply: 230 V (ac) or 24 V (ac)/(dc). Power consumption: 3 W. Starting current: ≤ 250 mA (230 V). Ambient temperature range: 0–50°C. Protection class: IP 54. Cable length: 80 cm.



Code	Supply voltage V		
656402	230	1	10
656404	24	1	10



6564

tech. broch. 01198

Thermo-electric actuator with low power consumption. With opening position indicator. **Quick-coupling installation, with a clip adapter.** For distribution manifolds 662 and 663 series. Normally closed. **With auxiliary microswitch.** Supply: 230 V (ac) or 24 V (ac)/(dc). Auxiliary microswitch contact rating: 0,8 A (230 V). Power consumption: 3 W. Starting current: ≤ 250 mA (230 V). Ambient temperature range: 0–50°C. Protection class: IP 54. Cable length: 80 cm.



Code	Supply voltage V		
656412	230	1	10
656414	24	1	10



385

Shut-off ball cock, for distribution manifold outlets. Max. working pressure: 10 bar. Max. working temperature: 100°C. With handle.

Code			
385000	23 p.1,5 M x F nut	10	-



383

Female-female fitting.

Code			
383240	23 p.1,5 F x 1/2" F	10	-



385

Shut-off ball cock, for distribution manifold outlets. Max. working pressure: 10 bar. Max. working temperature: 100°C. Without handle.

Code			
385010	23 p.1,5 M x F nut	15	150



384

Male fitting to nut and olive coupling.

Code			
384030	3/8" M x 23 p.1,5 M	10	-
384040	1/2" M x 23 p.1,5 M	10	-
384050	3/4" M x 23 p.1,5 M	10	-



386

Screw plug with nut for distribution manifold outlets.

Code			
386000	23 p.1,5	10	-



384

Male fitting to nut and olive coupling. Chrome plated.

Code			
384031	3/8" M x 23 p.1,5 M	10	-
384041	1/2" M x 23 p.1,5 M	10	-



383

Female fitting to nut and olive coupling.

Code			
383030	3/8" F x 23 p.1,5 M	10	-
383040	1/2" F x 23 p.1,5 M	10	-
383050	3/4" F x 23 p.1,5 M	10	-
383140	23 p.1,5 F x 1/2" M	10	-
383150	23 p.1,5 F x 3/4" M	10	-
383151	23 p.1,5 F x 3/4" M chrome plated	10	-



382

Fitting with 23 p.1,5 captive nut. Chrome plated. Max. working pressure: 10 bar. Max. working temperature: 100°C.

Code			
382000	23 p.1,5 M x nut 23 p.1,5 F	10	-



383

Connection fitting with O-Ring seal for use with 679, 680 and 681 series for Ø 20 pipes.

Code			
383550	3/4" M x 23 p.1,5	10	100



392

Temperature gauge fitting.
For distribution manifolds 592 and 350 series.
Temperature gauge 0–80°C, Ø 40 mm.

Code				
392600	1" F x M	with PTFE seal	1	–
392700	1 1/4" F x M	without PTFE seal	1	–



657

Temperature gauge fitting.
Temperature gauge 0–80°C, Ø 40 mm.

Code				
657400	1/2" M x 1/2" F		5	–



657

Temperature gauge fitting.
For distribution manifold outlets.
Temperature gauge 0–80°C, Ø 40 mm.

Code				
657050	3/4" M x 3/4" F nut		1	12



669

[tech. broch. 01144](#)

Self cleaning flow meter.
Flow rate scale: 1–4 l/min.
Double reading scale.
Max. working pressure: 6 bar.
Max. working temperature: 80°C.
Accuracy: ±10%.

Code				
669050	3/4" M x 3/4" F nut		1	10



688

[tech. broch. 01144](#)

Temperature gauge with pocket.
Scale 0–80°C.
Ø 40 mm.

Code				
688002	1/4"		2	–



3642

Reduction fitting.

Code				
364276	1" F x 1 1/4" M		2	–



5991

End fitting.
For distribution manifolds 349, 350, 592, 650 and 663 series.

Code				
599153	3/4" F x 3/8" F		2	–
599154	3/4" F x 1/2" F		2	–
599163	1" F x 3/8" F		2	–
599164	1" F x 1/2" F		2	–
599173	1 1/4" F x 3/8" F		2	–
599174	1 1/4" F x 1/2" F		2	–



5993

Plug.
For distribution manifolds 349, 350, 592, 650 and 663 series.

Code				
599350	3/4" F		2	10
599360	1" F		2	10
599370	1 1/4" F		2	10



5994

Double radial end fitting.
For distribution manifolds 349, 350, 592, 650 and 663 series.

Code				
599453	3/4" F x 1/2" F x 3/8" F		2	–
599454	3/4" F x 1/2" F x 1/2" F		2	–
599463	1" F x 1/2" F x 3/8" F		2	–
599464	1" F x 1/2" F x 1/2" F		2	–
599473	1 1/4" F x 1/2" F x 3/8" F		2	–
599474	1 1/4" F x 1/2" F x 1/2" F		2	–



5995

Single radial end fitting.
For distribution manifolds 349, 350, 592, 650 and 663 series.

Code				
599553	3/4" F x 3/8" F		2	–
599563	1" F x 3/8" F		2	–
599573	1 1/4" F x 3/8" F		2	–



586

Female blind end plug.

Code			
586300	3/8" F	10	-
586400	1/2" F	10	-
586600	1" F	10	-



585

Stiffener for copper pipe with wall thickness 0,75 and 1 mm.

Code	Thickness (mm)		
585010	Ø 10 0,75	100	-
585012	Ø 12 0,75	100	-
585014	Ø 14 0,75	100	-
585015	Ø 15 0,75	100	-
585016	Ø 16 0,75	100	-
585018	Ø 18 0,75	100	-
585110	Ø 10 1	100	-
585112	Ø 12 1	100	-
585114	Ø 14 1	100	-
585115	Ø 15 1	100	-
585116	Ø 16 1	100	-
585118	Ø 18 1	100	-



583

Female compression fitting for outlets.

Code			
583034	3/8" F x 1/2" M - Ø 16	10	-
583045	1/2" F x 3/4" M - Ø 18	10	-
583064	1" F x 1/2" M - Ø 16	10	-
583065	1" F x 3/4" M - Ø 18	10	-



386

Screw plug with nut for distribution manifold outlets.

Code			
386500	3/4"	10	-



584

Male compression fitting for outlets.

Code			
584053	3/4" M x 3/8" M - Ø 12	10	-
584054	3/4" M x 1/2" M - Ø 16	10	-
584055	3/4" M x 3/4" M - Ø 18	10	-
584065	1" M x 3/4" M - Ø 18	10	-

FITTINGS



679
DARCAL

Fitting for multilayer plastic pipe for continuous high temperature use.
Max. working pressure: 10 bar.
Temperature range: 0–95°C.

For a correct use, adjust the multilayer pipe diameter before installation using the Caleffi calibrator 679 series (see page 60).

Code			
679114	23 p.1,5 - Ø 14x2	10	100
679124	23 p.1,5 - Ø 16x2	10	100
679125	23 p.1,5 - Ø 16x2,25	10	100
679144	23 p.1,5 - Ø 18x2	10	100



680
DARCAL

Self-adjustable diameter fitting for single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range:
5–80°C (PE-X)
5–75°C (Multilayer marked 95°C).

Code		\varnothing_{inside}	$\varnothing_{outside}$		
680000	23 p.1,5	7,5– 8	12–14	10	100
680002	23 p.1,5	9 – 9,5	14–16	10	100
680001	23 p.1,5	9,5–10	12–14	10	100
680006	23 p.1,5	9,5–10	14–16	10	100
680015	23 p.1,5	10,5–11	14–16	10	100
680017	23 p.1,5	10,5–11	16–18	10	100
680024	23 p.1,5	11,5–12	14–16	10	100
680026	23 p.1,5	11,5–12	16–18	10	100
680035	23 p.1,5	12,5–13	16–18	10	100
680044	23 p.1,5	13,5–14	16–18	10	100



680
DARCAL

Self-adjustable diameter fitting for single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range:
5–80°C (PE-X)
5–75°C (Multilayer marked 95°C).

Code		\varnothing_{inside}	$\varnothing_{outside}$		
680055	23 p.1,5	14,5–15	18–20	10	100
680064	23 p.1,5	15,5–16	18–20	10	100



446

Pre-assembled compression fitting, for annealed copper, hard copper, brass, mild steel and stainless steel pipes.
With O-Ring seal.
Max. working pressure: 10 bar.
Temperature range: -25–120°C.

Code			
446010	23 p.1,5 - Ø 10	100	–
446012	23 p.1,5 - Ø 12	100	–
446014	23 p.1,5 - Ø 14	100	–
446015	23 p.1,5 - Ø 15	100	–
446016	23 p.1,5 - Ø 16	100	–



347

Compression fitting for annealed copper, hard copper, brass, mild steel and stainless steel pipes.
With O-Ring seal.
Max. working pressure: 10 bar.
Temperature range: -25–120°C.

Code			
347010	23 p.1,5 - Ø 10	100	–
347012	23 p.1,5 - Ø 12	100	–
347014	23 p.1,5 - Ø 14	100	–
347015	23 p.1,5 - Ø 15	100	–
347016	23 p.1,5 - Ø 16	100	–



444

Compression fitting, for PE coated copper pipes, “Q-tec” KME and “TUBOTECH” series.
With O-Ring seal.
Max. working pressure: 10 bar.
Temperature range: 0–95°C.

“Q-tec” and “TUBOTECH” pipes must be cut and prepared using the specific tool indicated by the manufactures.

Code			
444014	23 p.1,5 - Ø 14	10	100
444016	23 p.1,5 - Ø 16	10	100



444

Compression fitting, for “VIEGA” multilayer pipes.
With O-Ring seal.
Max. working pressure: 10 bar.
Temperature range: 0–95°C.

“VIEGA” pipes must be calibrated using the specific tool indicated by the manufactures.

Code			
444024	23 p.1,5 - Ø 16x2,2	10	100

FITTINGS



679

DARCAL

Fitting for multilayer pipes with continuous high temperature use.
Max. working pressure: 10 bar.
Temperature range: 0–95°C.

For a correct use, adjust the multilayer pipe diameter before installation using the Caleffi calibrator 679 series (see page 60).

Code				
679514	3/4"	Ø 14x2	10	100
679524	3/4"	Ø 16x2	10	100
679525	3/4"	Ø 16x2,25	10	100
679544	3/4"	Ø 18x2	10	100
679564	3/4"	Ø 20x2	10	100
679565	3/4"	Ø 20x2,25	10	100
679566	3/4"	Ø 20x2,5	10	100



680

DARCAL

Self-adjustable diameter fitting for single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range:
5–80°C (PE-X)
5–75°C (Multilayer marked 95°C).

Code		Ø _{inside}	Ø _{outside}		
680507	3/4"	7,5– 8	10,5–12	10	100
680502	3/4"	7,5– 8	12 –14	10	100
680503	3/4"	8,5– 9	12 –14	10	100
680500	3/4"	9 – 9,5	14 –16	10	100
680501	3/4"	9,5–10	12 –14	10	100
680506	3/4"	9,5–10	14 –16	10	100
680515	3/4"	10,5–11	14 –16	10	100
680517	3/4"	10,5–11	16 –18	10	100
680524	3/4"	11,5–12	14 –16	10	100
680526	3/4"	11,5–12	16 –18	10	100
680535	3/4"	12,5–13	16 –18	10	100
680537	3/4"	12,5–13	18 –20	10	100
680544	3/4"	13,5–14	16 –18	10	100
680546	3/4"	13,5–14	18 –20	10	100
680555	3/4"	14,5–15	18 –20	10	100
680556	3/4"	15 –15,5	18 –20	10	100
680564	3/4"	15,5–16	18 –20	10	100
680505	3/4"	17	22,5	10	100



680

DARCAL

Self-adjustable diameter fitting for plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–80°C.

Code		Ø _{inside}	Ø _{outside}		
680687	1"	17,5	25	10	100
680605	1"	19,5	25	10	100



347

Compression fitting for annealed copper, hard copper, brass, mild steel and stainless steel pipes. With O-Ring seal.
Max. working pressure: 10 bar.
Temperature range: -25–120°C.

Code				
347510	3/4"	Ø 10	100	–
347512	3/4"	Ø 12	100	–
347514	3/4"	Ø 14	100	–
347515	3/4"	Ø 15	100	–
347516	3/4"	Ø 16	100	–
347518	3/4"	Ø 18	10	–



591

Fitting for plastic pipes.

Code		Ø _{inside}	Ø _{outside}		
591401	1/2"	8	13	10	–
591402	1/2"	10	12	10	–
591405	1/2"	10	15	10	–
591414	1/2"	11,6	16	10	–
591424	1/2"	12	16	10	–
591433	1/2"	13	16	10	–
591565	3/4"	16	21	10	–
591566	3/4"	16	22	10	–

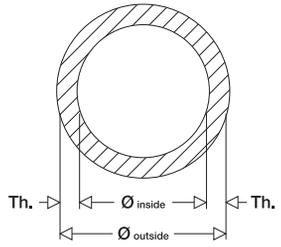


5812

Nut and olive or single groove seal in PTFE.
For copper pipe.

Code				
581230	3/8"	+ single groove Ø 10	10	250
581232	3/8"	+ olive Ø 12	10	250
581236	3/8"	+ single groove Ø 6	10	250
581238	3/8"	+ single groove Ø 8	10	250
581240	1/2"	+ single groove Ø 10	10	250
581242	1/2"	+ single groove Ø 12	10	250
581244	1/2"	+ single groove Ø 14	10	250
581245	1/2"	+ single groove Ø 15	10	250
581246	1/2"	+ olive Ø 16	10	250
581254	3/4"	+ single groove Ø 14	10	250
581256	3/4"	+ single groove Ø 16	10	250
581258	3/4"	+ olive Ø 18	10	250

Example: 680 series fitting selection



Known both the outside and inside diameters (ex.: 17 mm and 13 mm);
or known the outside diameter (ex.: Ø_o 17 mm) and the thickness (ex.: th. 2 mm) and considering that:

$$\text{Ø}_{\text{outside}} - 2 \cdot \text{th.} = \text{Ø}_{\text{inside}}$$

$$17 - 2 \cdot 2 = 13 \text{ mm}$$

Look within the table for the code matching both diameters:

Code		Ø _{inside}	Ø _{outside}
680035	23 p.1,5	12,5–13	16–18

FITTINGS



444

Compression fitting, for PE coated copper pipes, "Q-tec" KME and "TUBOTECH" series. With O-Ring seal. Max. working pressure: 10 bar. Temperature range: 0-95°C.

"Q-tec" and "TUBOTECH" pipes must be cut and calibrated using the specific tool indicated by the manufacturer.

Code			
444514	3/4" - Ø 14	10	100
444516	3/4" - Ø 16	10	100
444520	3/4" - Ø 20	10	100



444

Compression fitting, for multilayer "VIEGA" pipes. With O-Ring seal. Max. working pressure: 10 bar. Temperature range: 0-95°C.

"VIEGA" pipes must be calibrated using the specific tool indicated by the manufacturer.

Code			
444524	3/4" - Ø 16x2,2	10	100
444546	3/4" - Ø 20x2,8	10	100

FITTINGS FOR POLYETHYLENE PIPES (PE-X)



933

Elbow fitting with plastic wall mounting case.

Code			
933000	1/2" F x 23 p.1,5	5	-



933

Elbow fitting with plastic wall mounting case with 10 mm collar.

Code			
933001	1/2" F x 23 p.1,5	5	-
933501	3/4" F x 3/4"	1	10



R96006

Plastic case plug for elbow fitting 933 series.

Code			
R96006		5	100



930

Male elbow fitting with wall connection. Fitted for coupling with fittings 347, 438 and 680 series for water use.

Code			
930418	1/2" F x 23 p.1,5 M	5	-



936

Extension for connection between elbow fitting 933 series and radiator valve. Annealed copper, chrome plated. With shaped rubber seal. Length: 200 mm (useful 188 mm).

Code			
936400	1/2" x Ø 16	1	50

FITTINGS FOR POLYETHYLENE PIPES (PE-X)
Fitted for coupling with 680 and 679 series



940
Male fitting.

Code			
940300	3/8" M x 23 p.1,5	50	-
940400	1/2" M x 23 p.1,5	50	-
940450	1/2" M x 3/4"	50	-
940500	3/4" M x 23 p.1,5	50	-
940550	3/4" M x 3/4" (use 942550)	50	-
940560	3/4" M x 1" (use 942560)	50	-
940650	1" M x 3/4" (use 942560)	50	-



944
Male elbow fitting.

Code			
944400	1/2" M x 23 p.1,5	50	-
944550	3/4" M x 3/4" (use 943550)	50	-



945
Female elbow fitting.

Code			
945400	1/2" F x 23 p.1,5	50	-
945550	3/4" F x 3/4"	50	-



941
Female fitting.

Code			
941300	3/8" F x 23 p.1,5	50	-
941400	1/2" F x 23 p.1,5	50	-
941450	1/2" F x 3/4"	50	-
941500	3/4" F x 23 p.1,5	50	-
941550	3/4" F x 3/4"	50	-
941560	3/4" F x 1"	50	-



946
Tee piece.

Code			
946000	23 p.1,5 x 23 p.1,5 x 23 p.1,5	50	-
946500	3/4" x 3/4" x 3/4"	25	-



942
Sleeve.

Code			
942000	23 p.1,5 x 23 p.1,5	50	-
942550	3/4" x 3/4"	50	-
942560	3/4" x 1"	50	-



947
Side male tee piece.

Code			
947400	1/2" M x 23 p.1,5 x 23 p.1,5	50	-
947500	3/4" M x 3/4" x 3/4" (use 946500)	50	-



943
Elbow fitting.

Code			
943000	23 p.1,5 x 23 p.1,5	50	-
943550	3/4" x 3/4"	50	-



948
Central male tee piece.

Code			
948400	23 p.1,5 x 1/2" M x 23 p.1,5	50	-
948500	3/4" x 3/4" M x 3/4" (use 946500)	50	-

THREE-PIECE UNION FITTINGS

for gas and hydrocarbons - EN 549 standard

for hydraulic and domestic water systems - EN 681.1 standard

Fittings highlighted in yellow are supplied with two O-Rings: yellow to be used for gas and fluid hydrocarbons - black to be used for hydraulic systems.

To be used for gas systems with power output up to 35 kW, according to UNI 7129-2008 standard only.



588

Three-piece straight union fitting. PN 16.



Code

588030	3/8" F x M with union	1	50
588040	1/2" F x M with union	1	50
588050	3/4" F x M with union	1	25
588060	1" F x M with union	1	20
588070	1 1/4" F x M with union	1	10
588080	1 1/2" F x M with union	1	-
588090	2" F x M with union	1	-



5881

Three-piece elbow union fitting. PN 16.



Code

588130	3/8" F x M with union	1	50
588140	1/2" F x M with union	1	25
588150	3/4" F x M with union	1	25
588160	1" F x M with union	1	15
588170	1 1/4" F x M with union	1	10



588

Three-piece straight union fitting. Chrome plated. PN 16.



Code

588031	3/8" F x M with union	1	50
588041	1/2" F x M with union	1	50
588051	3/4" F x M with union	1	25
588061	1" F x M with union	1	20
588071	1 1/4" F x M with union	1	10
588081	1 1/2" F x M with union	1	-
588091	2" F x M with union	1	-



5881

Three-piece elbow union fitting. Chrome plated. PN 16.

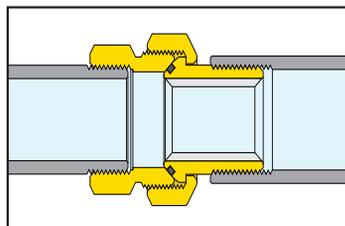


Code

588131	3/8" F x M with union	1	50
588141	1/2" F x M with union	1	25
588151	3/4" F x M with union	1	25
588161	1" F x M with union	1	15
588171	1 1/4" F x M with union	1	10

O-Ring seal

The hydraulic tightness between the two fitting components is a tapered type with O-Ring. This allows to screw the fitting up smoothly with a full safety warranty.



UNIONS



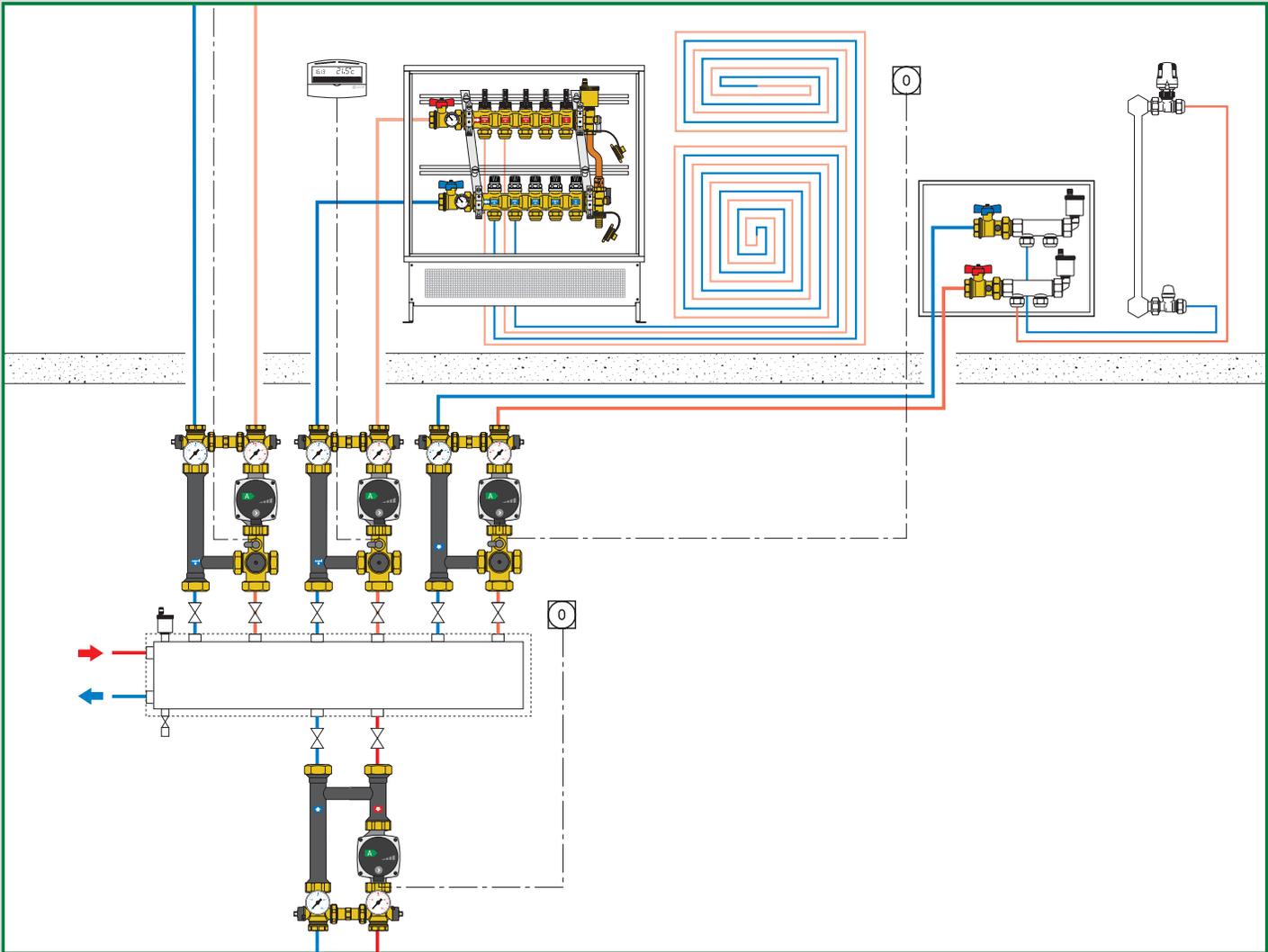
Flat seat union with gasket.

Code

R59787	3/4" F x 1/2" M
R59788	1" F x 3/4" M
R59789	1 1/4" F x 1" M
R59485	1 1/2" F x 1 1/4" M
R59581	2" F x 1 1/2" M
R59487	2 1/2" F x 2" M

RADIANT PANEL SYSTEM CONTROL

This diagram is just an indication



Distribution units for SEPCOLL

Temperature regulators

Outside compensated temperature regulating units

Modulating temperature regulating units

Set point thermostatic regulating units

Ice detection and control system

Distribution manifolds for radiant panel systems

DIRECT SUPPLY UNIT

THERMOSTATIC REGULATING UNIT



165  **tech. broch. 01237**
 Direct supply unit for heating systems.
With pre-formed insulation.
 Max. working pressure: 10 bar.
 Max. working temperature: 100°C.
 Supply: 230 V - 50/60 Hz.
 System side connection: 1" F.
 Boiler side connection: 1 1/2" M.
Centre distance:
125 mm fitted for SEPCOLL.



166  **tech. broch. 01238**
 Thermostatic regulating unit for heating systems.
With pre-formed insulation.
 Max. working pressure: 10 bar.
 Max. working temperature: 100°C.
 Supply: 230 V - 50/60 Hz.
 System side connection: 1" F.
 Boiler side connection: 1 1/2" M.
Centre distance:
125 mm fitted for SEPCOLL.



RH to LH convertible

RH to LH convertible

Code	Connection	Pump		
165600A2L	1" F	ALPHA2 L 25-60	1	–
165601UPM	1" F	UPML 25-95	1	–

Code	Connection	Pump	Temperature adjustment range		
166600A2L	1" F	ALPHA2 L 25-60	25–50°C	1	–
166601UPM	1" F	UPML 25-95	25–50°C	1	–
166605A2L	1" F	ALPHA2 L 25-60	40–70°C	1	–

NEW



165  **tech. broch. 01255**
 Direct supply unit for heating and air conditioning systems.
With pre-formed insulation.
 Max. working pressure: 10 bar.
 Primary inlet temperature range: 5–100°C.
 Supply: 230 V - 50/60 Hz.
 System side connection: 1" F.
 Boiler side connection: 1 1/2" M.
Centre distance:
125 mm fitted for SEPCOLL.



NEW



166
 Thermostatic mixing valve.
 Max. working pressure: 10 bar.
 Connections:
 1 1/2" M x 1 1/4" M x 1 1/2" F with captive nut.

Code	Temperature adjustment range		
166001	25÷50°C	1	–
166005	40÷70°C	1	–

Upward flow - flow on RH side
 Downward flow - flow on LH side

Spare parts for regulating units
 165, 166 and 167 series.

Code	Connection	Pump		
165640WYP	1" F	YONOS PARA 25/6	1	–

Upward flow - flow on LH side
 Downward flow - flow on RH side

Code	Connection	Pump		
165650WYP	1" F	YONOS PARA 25/6	1	–

Code	
R19087	UPS 25-80 pump
R79782	ALPHA2 L 25-60 pump
R19441	YONOS PARA 25-6 pump
F19486	UPML 25-95 pump
F19101/R	flow temperature gauge
F19101/BL	return temperature gauge
R12090	spare spanner for 165 series

MOTORISED REGULATING UNITS



167

tech. broch. 01239

Motorised regulating unit for heating systems.
With pre-formed insulation.
 Regulation with sector three-way valve and 3-point actuator.
 With auxiliary microswitch.
 Can be connected to digital regulators code 161000 and 1520 series.
 Max. working pressure: 10 bar.
 Max. working temperature: 100°C.
 Supply: 230 V - 50/60 Hz.
 Operating time: 50 s (90° rotation).
 System side connection: 1" F.
 Boiler side connection: 1 1/2" M.
Centre distance: 125 mm fitted for SEPCOLL.



Upward flow - flow on RH side
 Downward flow - flow on LH side

Code	Connection	Pump		
167600A2L	1" F	ALPHA2 L 25-60	1	-
167601UPM	1" F	UPML 25-95	1	-

Upward flow - flow on LH side
 Downward flow - flow on RH side

Code	Connection	Pump		
167610A2L	1" F	ALPHA2 L 25-60	1	-
167611UPM	1" F	UPML 25-95	1	-



167

tech. broch. 01254

Motorised regulating unit for heating and air conditioning systems.
Con coibentazione.
 Regulation with sector three-way valve and 3-point actuator.
 With auxiliary microswitch.
 Can be connected to digital regulators code 161000 and 1520 series.
 Max. working pressure: 10 bar.
 Primary inlet temperature range: 5-100°C.
 Supply: 230 V - 50/60 Hz.
 Operating time: 50 s (90° rotation).
 System side connection: 1" F.
 Boiler side connection: 1 1/2" M.
Centre distance: 125 mm fitted for SEPCOLL.



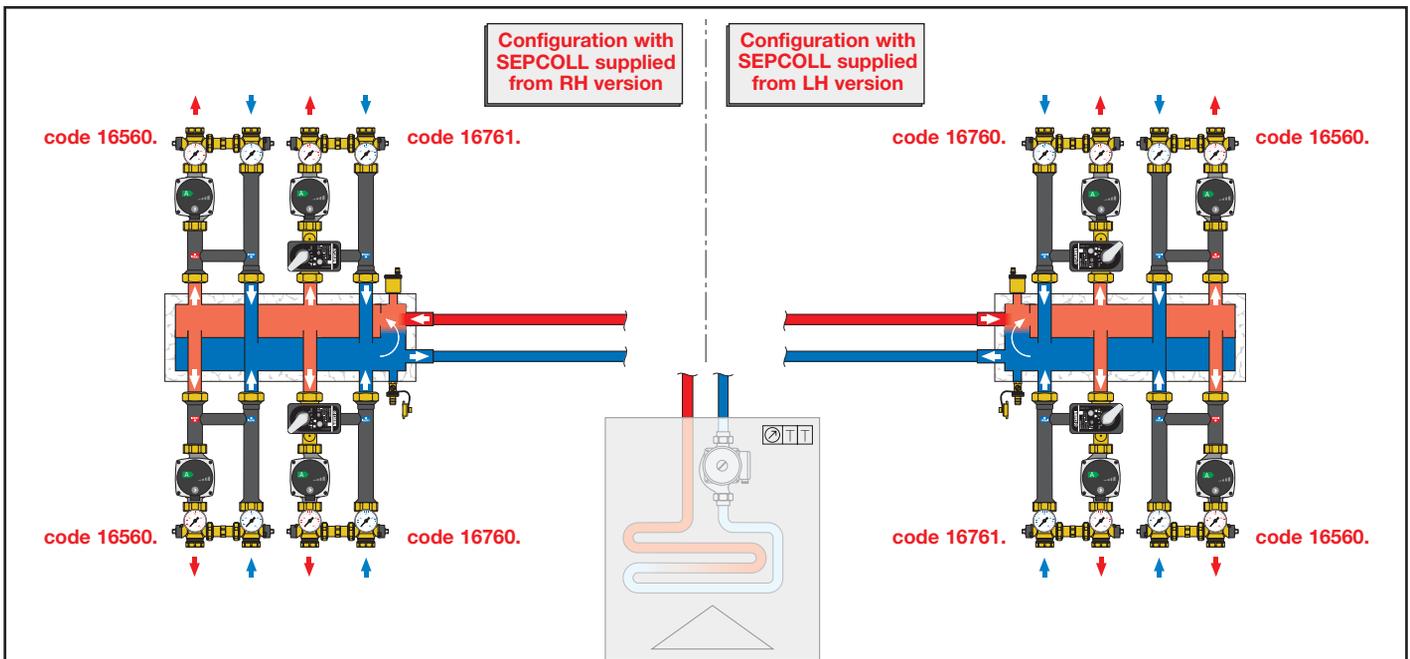
Upward flow - flow on RH side
 Downward flow - flow on LH side

Code	Connection	Pump		
167640WYP	1" F	YONOS PARA 25/6	1	-

Upward flow - flow on LH side
 Downward flow - flow on RH side

Code	Connection	Pump		
167650WYP	1" F	YONOS PARA 25/6	1	-

Application diagrams of regulating unit 165 series and motorised regulating unit 167 series



SPARE PARTS AND ACCESSORIES FOR UNITS 165 - 166 - 167 SERIES

NEW



167
Sector three-way valve (equipcentage/linear regulation) and 3-pointt actuator.
Right-hand version.
Max. working pressure: 10 bar.
Max. working temperature: 100°C.

Code			
167032	1 1/2" M x 1 1/4" M x 1 1/2" F captive nut	1	-

NEW



165
Pair of eccentric tailpieces.
Centre distance: 105-145 mm.

Code			
165006	1 1/2" F captive nut x 1" F	1	-

NEW



167
Sector three-way valve (equipcentage/linear regulation) and 3-pointt actuator.
Left-hand version.
Max. working pressure: 10 bar.
Max. working temperature: 100°C.

Code			
167042	1 1/2" M x 1 1/4" M x 1 1/2" F captive nut	1	-



165
Safety thermostat kit for units 165, 166 and 167 series.
Grado di protezione: IP 65.

Code			
165004		1	-

NEW

Spare actuator for regulating units 167 series.

Code			
167012	right-hand version	1	-
167022	left-hand version	1	-

NEW



165
Sensor holder extension for units 165, 166 and 167 series.

Code			
165003	1" M x 1" F	1	-



165
Mounting bracket in stainless steel for units 165, 166 and 167 series.

Code			
165001		1	-



165
Female union with captive nut complete with gasket for units 165, 166 and 167 series.

Code			
165002	1 1/2" F x 1" F	1	-

NEW



519
Differential by-pass valve for units 165, 166 and 167 series.
Max. working pressure: 10 bar.
Max. working temperature: 100°C.

Code	Setting range m w.g.		
519006	0,2÷3	1	-



165
Hydraulic separator kit for units 165, 166 and 167 series.

Code			
165010	1 1/2" F x 1" F	1	-

TEMPERATURE REGULATORS



161

tech. broch. 01122

Digital temperature controller for heating and **cooling** complete with flow/return probes and contact probes holder. Control temperature range: 7–78°C. Supply: 230 V - 50/60 Hz. Protection class: IP 40. Probe connections: 1/8" M. Probe cable length: 1 m.



1520

Digital temperature controller for heating and **cooling**. Complete with flow probe, outside probe and max. relative humidity probe. Supply: 230 V - 50/60 Hz. Power consumption: 5,5 VA. Protection class: IP 40.



161000		1	–
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For RH% control accessories see page 204

152021	1 channel	1	–
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For spare parts and controller accessories see page 204



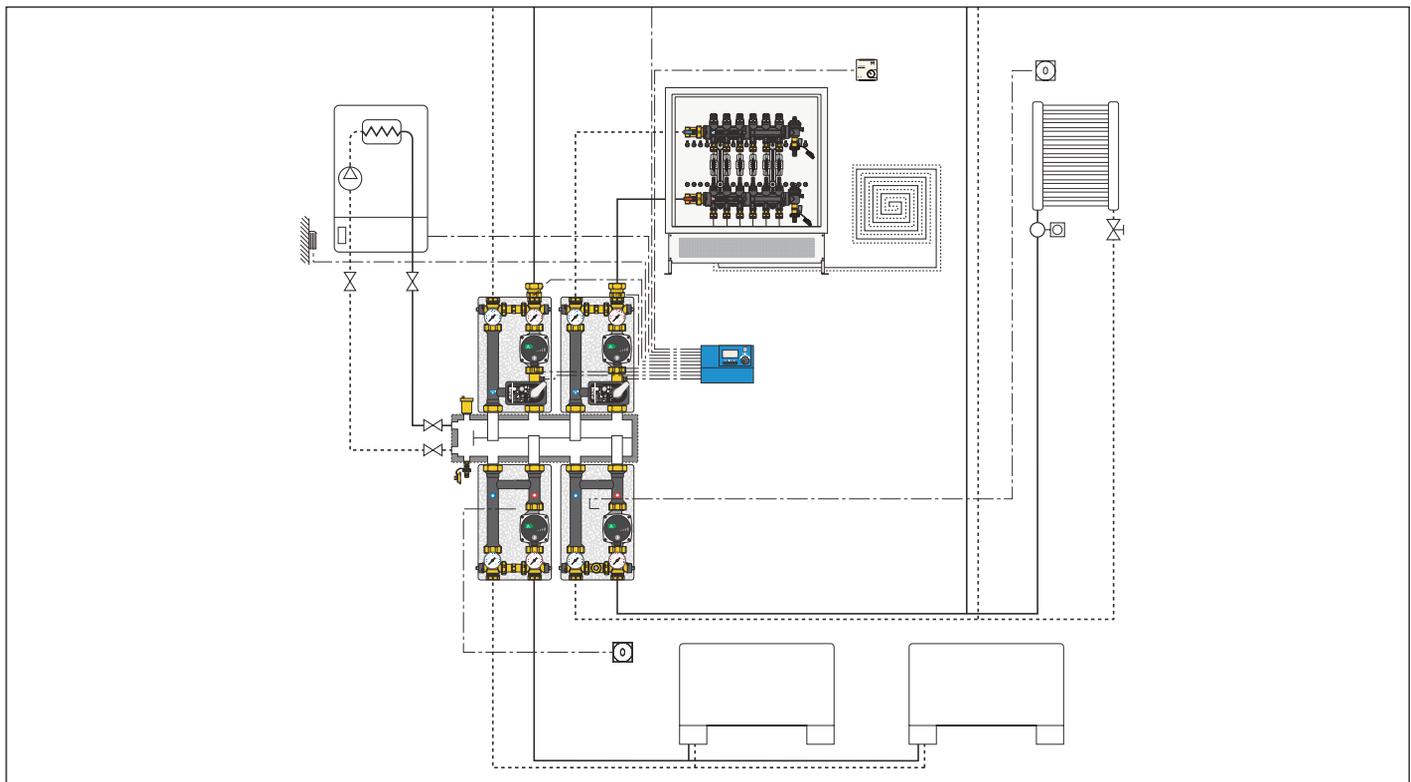
1520

Digital temperature controller complete with flow contact probe and outside probe. Adjustment range: 20–90°C. Supply: 230 V - 50/60 Hz. Protection class: IP 40.



152001	1 channel	1	–
152002	2 channels	1	–
152003	3 channels	1	–

Application diagram of regulator 1520 series



OUTSIDE COMPENSATED TEMPERATURE REGULATING UNIT



174

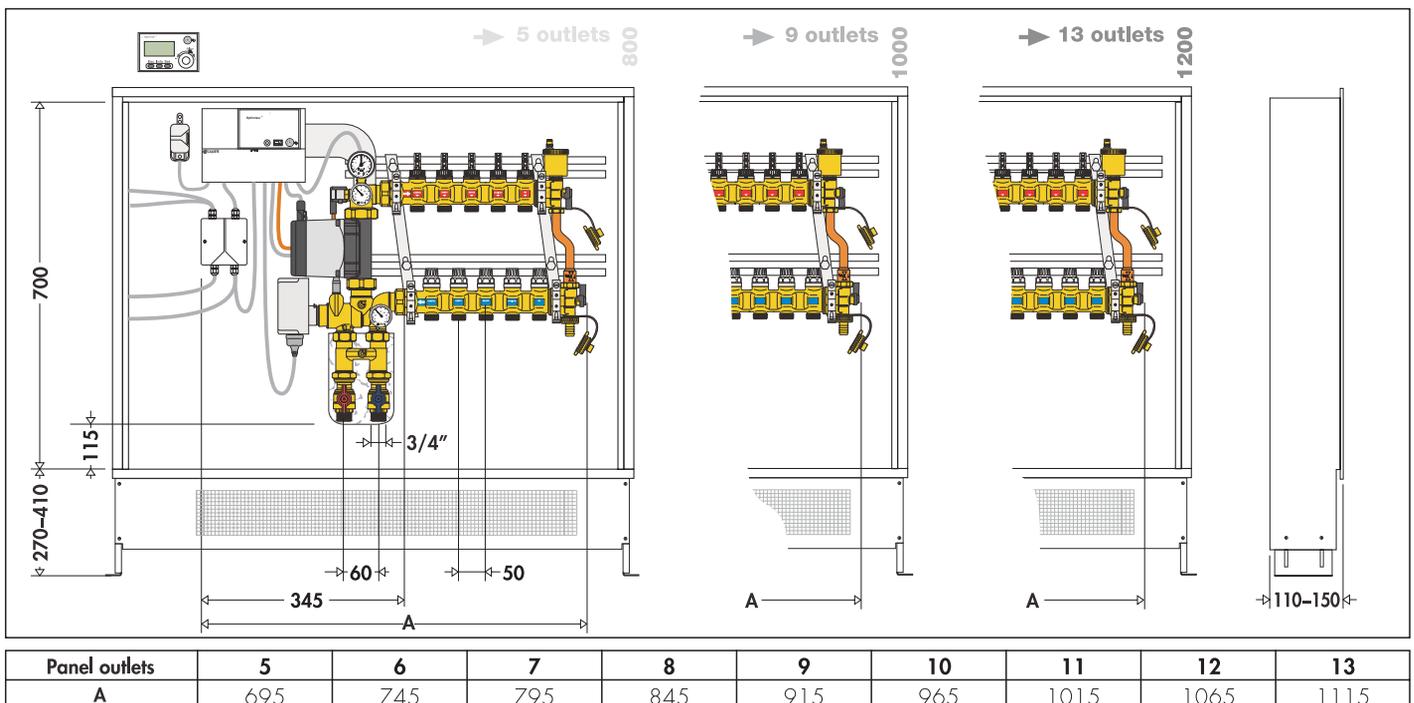
tech. broch. 01157

- Outside compensated temperature regulating unit. Pre-assembled in inspection wall box. Equipped with:
- outside compensated temperature regulating unit, remote control and room probe thermostat,
 - panel manifolds with built-in flow meters and shut-off valves and differential by-pass kit,
 - primary circuit by-pass kit,
 - safety thermostat,
 - primary circuit shut-off valves,
 - high-efficiency pump, ALPHA2 L 25-60,
 - inspection wall box, with floor supports.
- Max. working pressure: 10 bar.
Temperature adjustment range: 20–90°C.
Supply: 230 V - 50 Hz.



Code	Connections	Outlet No.	Outlets		
1745E1A2L	3/4" M	x 5	3/4" M	1	–
1745F1A2L	3/4" M	x 6	3/4" M	1	–
1745G1A2L	3/4" M	x 7	3/4" M	1	–
1745H1A2L	3/4" M	x 8	3/4" M	1	–
1745I1A2L	3/4" M	x 9	3/4" M	1	–
1745L1A2L	3/4" M	x 10	3/4" M	1	–
1745M1A2L	3/4" M	x 11	3/4" M	1	–
1745N1A2L	3/4" M	x 12	3/4" M	1	–
1745O1A2L	3/4" M	x 13	3/4" M	1	–

Dimensions of temperature regulating unit 174 series



OUTSIDE COMPENSATED TEMPERATURE REGULATING UNIT FOR HEATING AND COOLING



174

tech. broch. 01167

Outside compensated temperature regulating unit. Pre-assembled in inspection wall box. Equipped with:

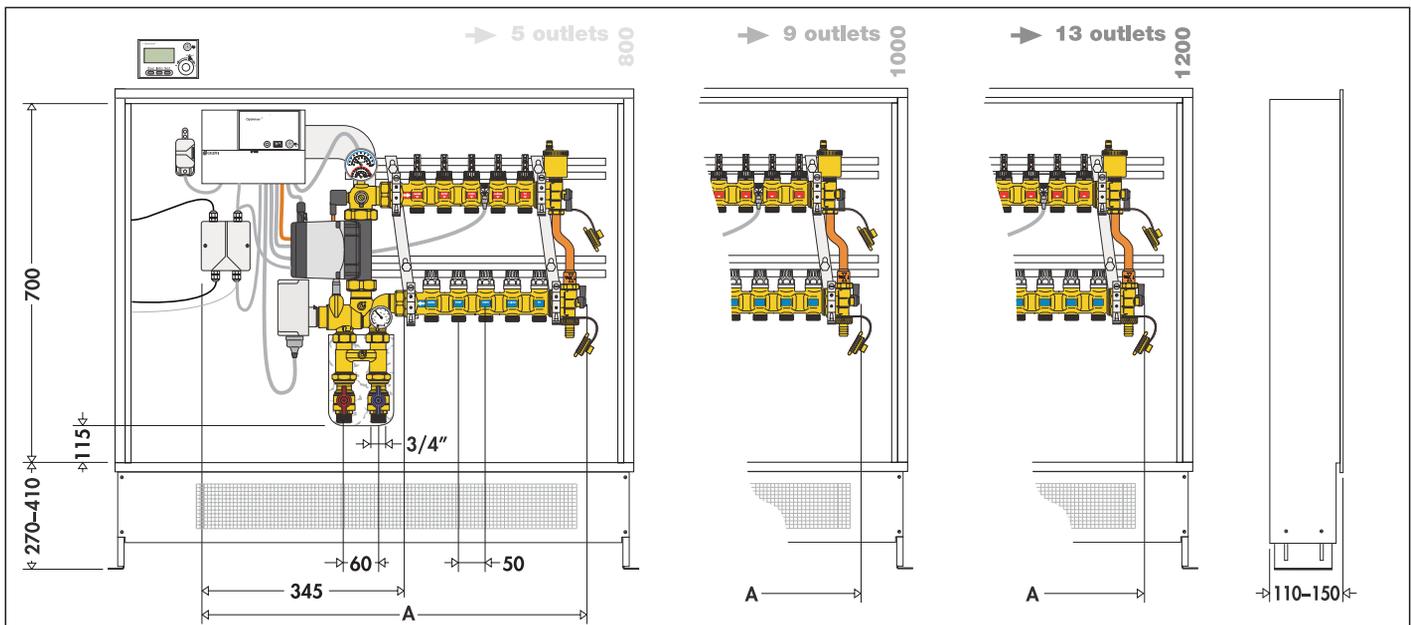
- outside compensated temperature regulating unit for heating and **cooling**, remote control and room probe thermostat,
- panel manifolds with built-in flow meters and shut-off valves and differential by-pass kit,
- primary circuit by-pass kit,
- safety thermostat,
- primary circuit shut-off valves,
- high-efficiency pump, ALPHA2 L 25-60,
- inspection wall box, with floor supports.

Max. working pressure: 10 bar.
Temperature adjustment range: 2-90°C.
Supply: 230 V - 50 Hz.



Code	Connections	Outlet No.	Outlets		
1745E2A2L	3/4" M	x 5	3/4" M	1	-
1745F2A2L	3/4" M	x 6	3/4" M	1	-
1745G2A2L	3/4" M	x 7	3/4" M	1	-
1745H2A2L	3/4" M	x 8	3/4" M	1	-
1745I 2A2L	3/4" M	x 9	3/4" M	1	-
1745L 2A2L	3/4" M	x 10	3/4" M	1	-
1745M2A2L	3/4" M	x 11	3/4" M	1	-
1745N2A2L	3/4" M	x 12	3/4" M	1	-
1745O2A2L	3/4" M	x 13	3/4" M	1	-

Dimensions of temperature regulating unit for heating and **cooling** 174 series



Panel outlets	5	6	7	8	9	10	11	12	13
A	695	745	795	845	915	965	1015	1065	1115

OUTSIDE COMPENSATED TEMPERATURE REGULATING UNIT WITH MEDIUM DISTRIBUTION KIT FOR PRIMARY CIRCUIT



174

tech. broch. 01158

Outside compensated temperature regulating unit. Pre-assembled in inspection wall box. Equipped with:

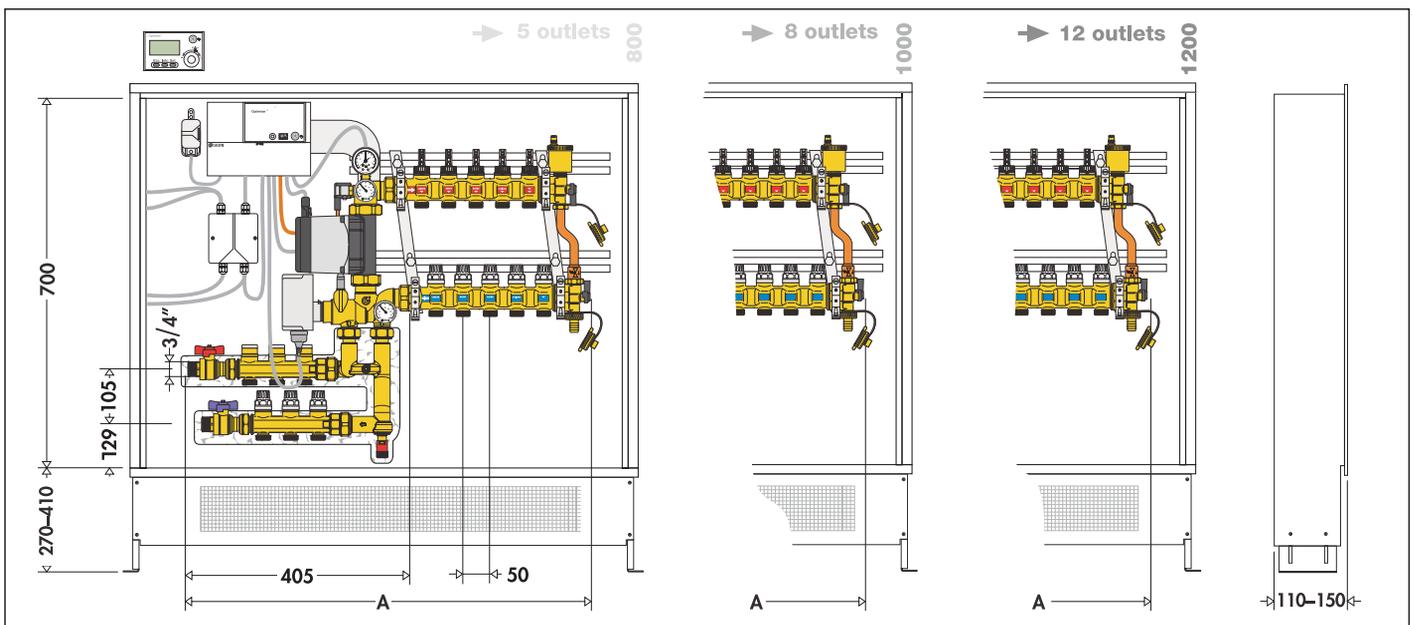
- outside compensated temperature regulating unit, remote control and room probe thermostat,
- medium distribution kit with built-in lockshields and shut-off valves for primary circuit,
- panel manifolds with built-in flow meters and shut-off valves and differential by-pass kit,
- primary circuit by-pass kit,
- safety thermostat,
- primary circuit shut-off valves,
- high-efficiency pump, ALPHA2 L 25-60,
- inspection wall box, with floor supports.

Max. working pressure: 10 bar.
Temperature adjustment range: 20–90°C.
Supply: 230 V - 50 Hz.



Code	Connections	Outlet No. to panels	Outlet No. to radiators		
1745E1A2L 003	3/4" M	5 x 3/4" M	3 x 3/4" M	1	–
1745F1A2L 003	3/4" M	6 x 3/4" M	3 x 3/4" M	1	–
1745G1A2L 003	3/4" M	7 x 3/4" M	3 x 3/4" M	1	–
1745H1A2L 003	3/4" M	8 x 3/4" M	3 x 3/4" M	1	–
1745 I1A2L 003	3/4" M	9 x 3/4" M	3 x 3/4" M	1	–
1745L1A2L 003	3/4" M	10 x 3/4" M	3 x 3/4" M	1	–
1745M1A2L 003	3/4" M	11 x 3/4" M	3 x 3/4" M	1	–
1745N1A2L 003	3/4" M	12 x 3/4" M	3 x 3/4" M	1	–

Dimensions of temperature regulating unit with medium distribution kit for primary circuit 174 series



	5 outlets	6 outlets	7 outlets	8 outlets	9 outlets	10 outlets	11 outlets	12 outlets
Radiator outlets	3	3	3	3	3	3	3	3
Panel outlets	5	6	7	8	9	10	11	12
A	755	805	855	905	975	1025	1075	1125

OUTSIDE COMPENSATED TEMPERATURE REGULATING UNIT FOR HEATING AND COOLING WITH MEDIUM DISTRIBUTION KIT FOR PRIMARY CIRCUIT



174

tech. broch. 01168

Outside compensated temperature regulating unit. Pre-assembled in inspection wall box. Equipped with:

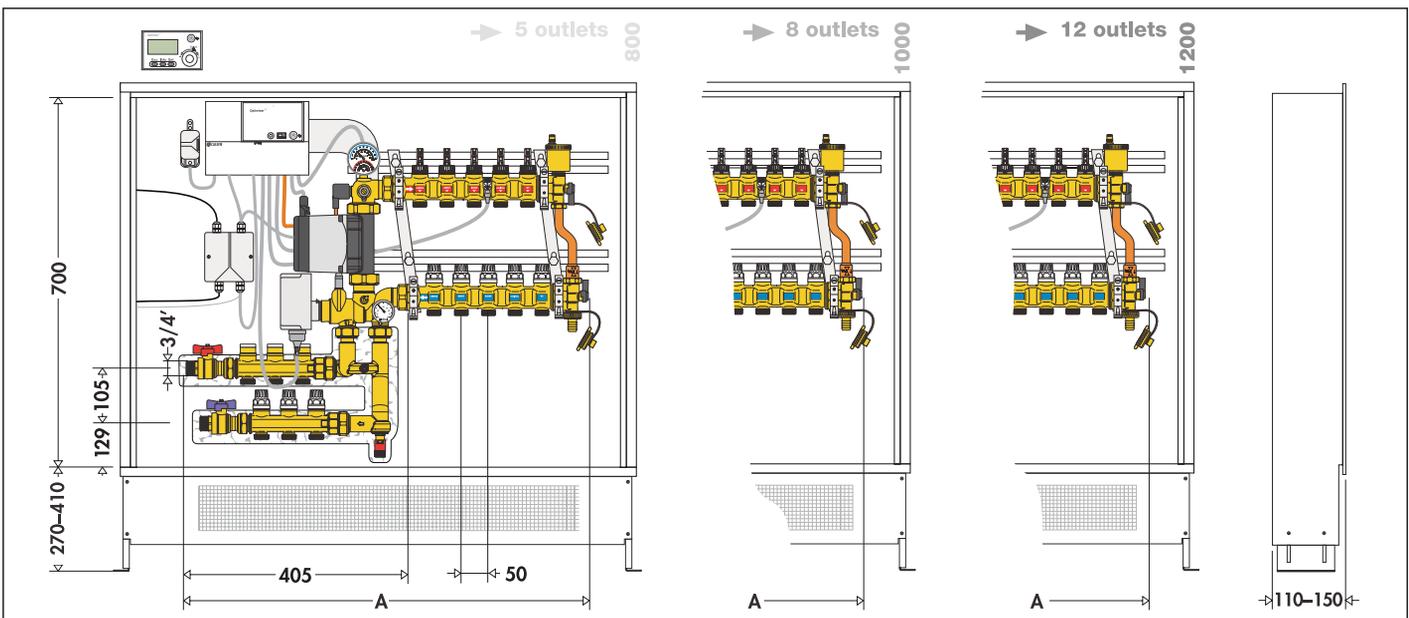
- outside compensated temperature regulating unit for heating and **cooling**, remote control and room probe thermostat,
- medium distribution kit with built-in lockshields and shut-off valves for primary circuit,
- panel manifolds with built-in flow meters and shut-off valves and differential by-pass kit,
- primary circuit by-pass kit,
- safety thermostat,
- primary circuit shut-off valves,
- high-efficiency pump, ALPHA2 L 25-60,
- inspection wall box, with floor supports.

Max. working pressure: 10 bar.
Temperature adjustment range: 2–90°C.
Supply: 230 V - 50 Hz.



Code	Connections	Outlet No. to panels	Outlet No. to radiators		
1745E2A2L 003	3/4" M	5 x 3/4" M	3 x 3/4" M	1	–
1745F2A2L 003	3/4" M	6 x 3/4" M	3 x 3/4" M	1	–
1745G2A2L 003	3/4" M	7 x 3/4" M	3 x 3/4" M	1	–
1745H2A2L 003	3/4" M	8 x 3/4" M	3 x 3/4" M	1	–
1745 I2A2L 003	3/4" M	9 x 3/4" M	3 x 3/4" M	1	–
1745L2A2L 003	3/4" M	10 x 3/4" M	3 x 3/4" M	1	–
1745M2A2L 003	3/4" M	11 x 3/4" M	3 x 3/4" M	1	–
1745N2A2L 003	3/4" M	12 x 3/4" M	3 x 3/4" M	1	–

Dimensions of temperature regulating unit for heating and **cooling** with medium distribution kit for primary circuit 174 series



	3	3	3	3	3	3	3	3
Radiator outlets	3	3	3	3	3	3	3	3
Panel outlets	5	6	7	8	9	10	11	12
A	755	805	855	905	975	1025	1075	1125

MODULATING TEMPERATURE REGULATING UNIT WITH DIGITAL REGULATOR



171

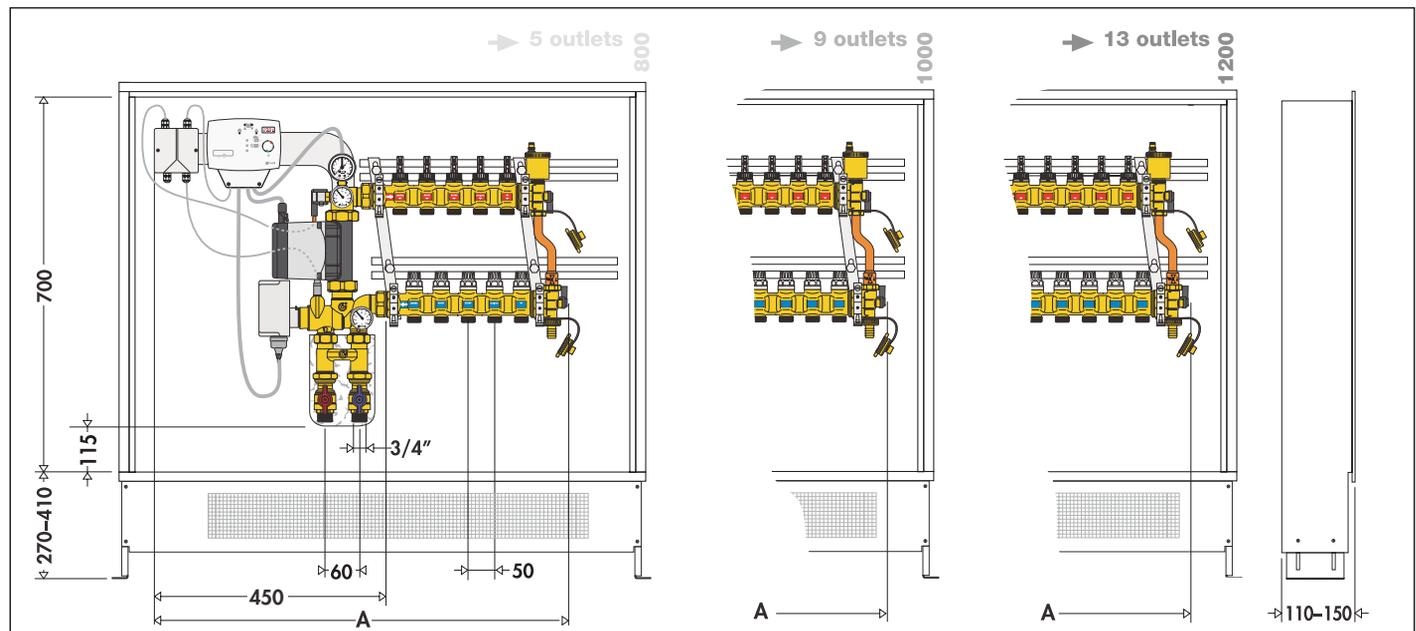
tech. broch. 01151

- Modulating temperature regulating unit. Pre-assembled in inspection wall box. Equipped with:
- temperature regulating unit with compensated set point digital regulator,
 - panel manifolds with built-in flow meters and shut-off valves and differential by-pass kit,
 - primary circuit by-pass kit,
 - safety thermostat,
 - primary circuit shut-off valves,
 - high-efficiency pump, ALPHA2 L 25-60,
 - inspection wall box, with floor supports.
- Max. working pressure: 10 bar.
Temperature adjustment range: 20–78°C.
Supply: 230 V - 50 Hz.



Code	Connections	Outlet No.	Outlets		
1715C1A2L	3/4" M	x 3	3/4" M	1	–
1715D1A2L	3/4" M	x 4	3/4" M	1	–
1715E1A2L	3/4" M	x 5	3/4" M	1	–
1715F1A2L	3/4" M	x 6	3/4" M	1	–
1715G1A2L	3/4" M	x 7	3/4" M	1	–
1715H1A2L	3/4" M	x 8	3/4" M	1	–
1715I1A2L	3/4" M	x 9	3/4" M	1	–
1715L1A2L	3/4" M	x 10	3/4" M	1	–
1715M1A2L	3/4" M	x 11	3/4" M	1	–
1715N1A2L	3/4" M	x 12	3/4" M	1	–
1715O1A2L	3/4" M	x 13	3/4" M	1	–

Dimensions of modulating temperature regulating unit with digital regulator 171 series



Panel outlets	3	4	5	6	7	8	9	10	11	12	13
A	700	750	800	850	900	950	1020	1070	1120	1170	1220

MODULATING TEMPERATURE REGULATING UNIT WITH DIGITAL REGULATOR FOR HEATING AND COOLING



171

tech. broch. 01152

Modulating temperature regulating unit. Pre-assembled in inspection wall box. Equipped with:

- temperature regulating unit with digital regulator for heating and cooling,
- panel manifolds with built-in flow meters and shut-off valves and differential by-pass kit,
- primary circuit by-pass kit,
- safety thermostat,
- primary circuit shut-off valves,
- high-efficiency pump, ALPHA2 L 25-60,
- inspection wall box, with floor supports.

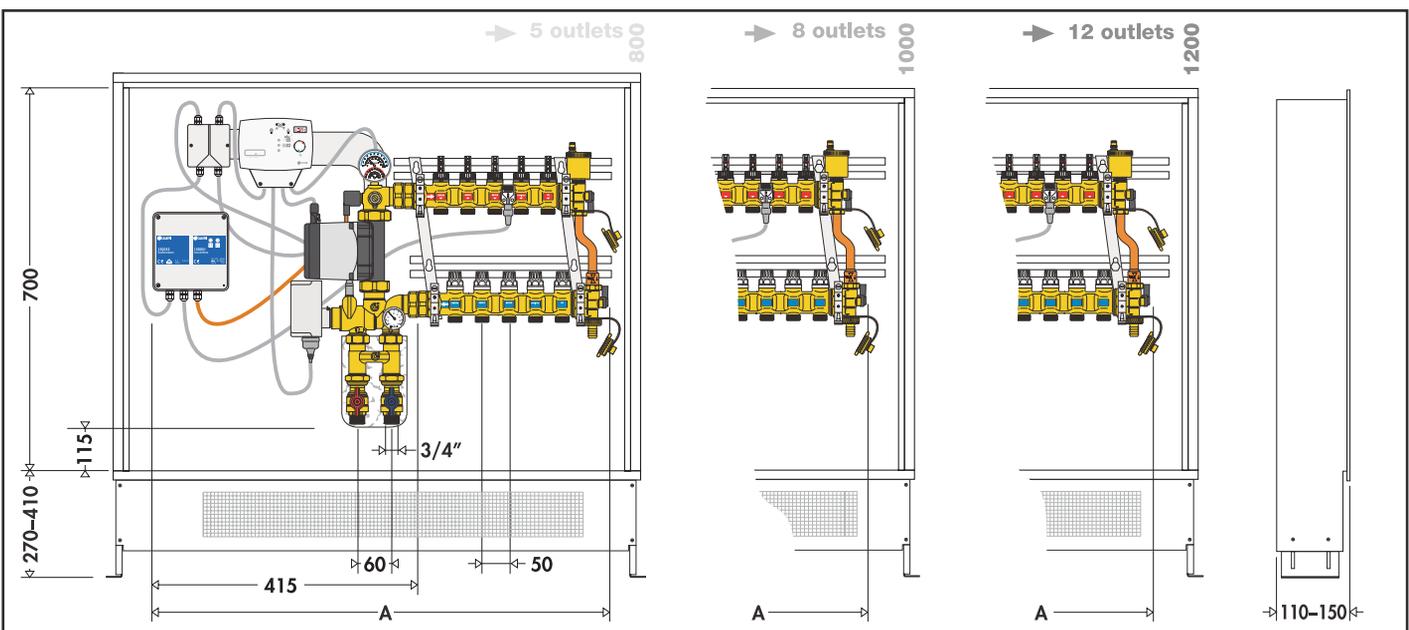
Max. working pressure: 10 bar.
Temperature adjustment range: 7-78°C.
Supply: 230 V - 50 Hz.



Available on request with regulator for heating/cooling "Remote switch"

Code	Connections	Outlet No.	Outlets		
1715C2A2L	3/4" M	x 3	3/4" M	1	-
1715D2A2L	3/4" M	x 4	3/4" M	1	-
1715E2A2L	3/4" M	x 5	3/4" M	1	-
1715F2A2L	3/4" M	x 6	3/4" M	1	-
1715G2A2L	3/4" M	x 7	3/4" M	1	-
1715H2A2L	3/4" M	x 8	3/4" M	1	-
1715I2A2L	3/4" M	x 9	3/4" M	1	-
1715L2A2L	3/4" M	x 10	3/4" M	1	-
1715M2A2L	3/4" M	x 11	3/4" M	1	-
1715N2A2L	3/4" M	x 12	3/4" M	1	-

Dimensions of modulating temperature regulating unit with digital regulator for heating and cooling 171 series



Panel outlets	3	4	5	6	7	8	9	10	11	12
A	665	715	765	815	865	915	985	1035	1085	1135

MODULATING TEMPERATURE REGULATING UNIT WITH DIGITAL REGULATOR AND MEDIUM DISTRIBUTION KIT FOR PRIMARY CIRCUIT



171

tech. broch. 01153

Modulating temperature regulating unit. Pre-assembled in inspection wall box. Equipped with:

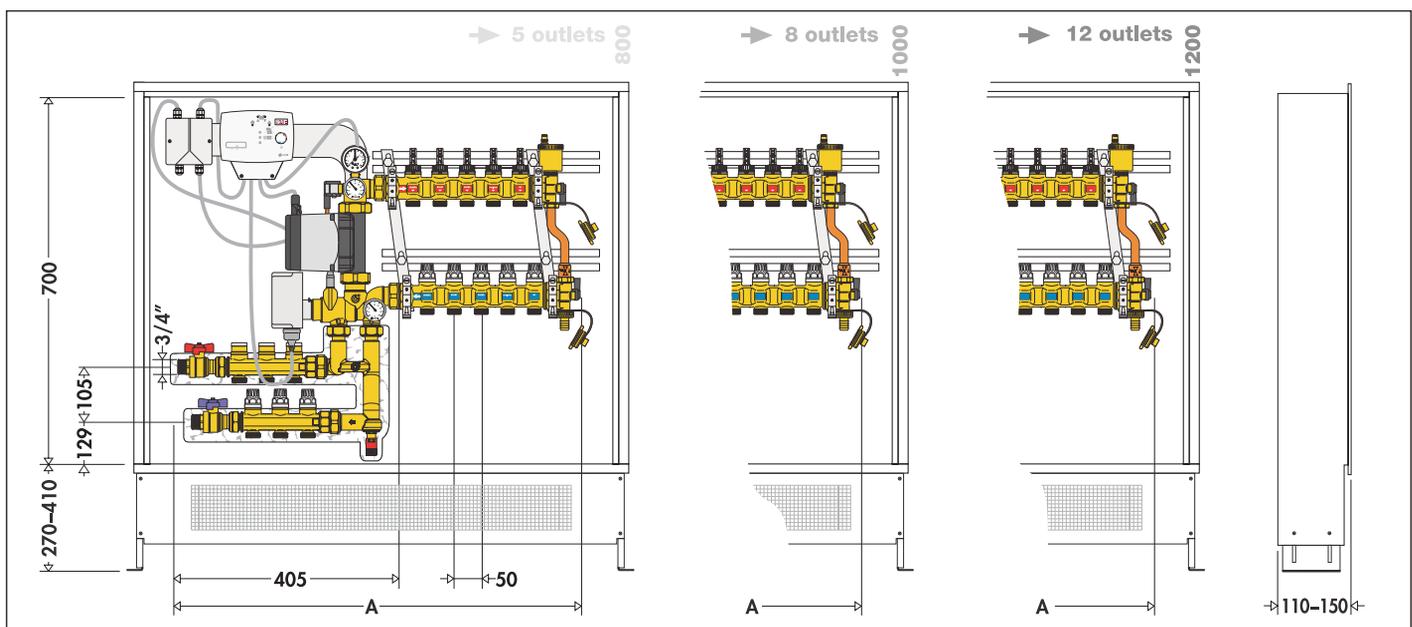
- temperature regulating unit with compensated set point digital regulator,
- medium distribution kit with built-in lockshields and shut-off valves for primary circuit,
- panel manifolds with built-in flow meters and shut-off valves and differential by-pass kit,
- primary circuit by-pass kit,
- safety thermostat,
- primary circuit shut-off valves,
- high-efficiency pump, ALPHA2 L 25-60,
- inspection wall box, with floor supports.

Max. working pressure: 10 bar.
Temperature adjustment range: 20–78°C.
Supply: 230 V - 50 Hz.



Code	Connections	Outlet No. to panels	Outlet No. to radiators		
1715E 1A2L 003	3/4" M	5 x 3/4" M	3 x 3/4" M	1	–
1715F 1A2L 003	3/4" M	6 x 3/4" M	3 x 3/4" M	1	–
1715G 1A2L 003	3/4" M	7 x 3/4" M	3 x 3/4" M	1	–
1715H 1A2L 003	3/4" M	8 x 3/4" M	3 x 3/4" M	1	–
1715 I 1A2L 003	3/4" M	9 x 3/4" M	3 x 3/4" M	1	–
1715 L 1A2L 003	3/4" M	10 x 3/4" M	3 x 3/4" M	1	–
1715M 1A2L 003	3/4" M	11 x 3/4" M	3 x 3/4" M	1	–
1715N 1A2L 003	3/4" M	12 x 3/4" M	3 x 3/4" M	1	–

Dimensions of modulating temperature regulating unit with digital regulator and medium distribution kit for primary circuit 171 series



	5 outlets	6 outlets	7 outlets	8 outlets	9 outlets	10 outlets	11 outlets	12 outlets
Radiator outlets	3	3	3	3	3	3	3	3
Panel outlets	5	6	7	8	9	10	11	12
A	755	805	855	905	975	1025	1075	1125

MODULATING TEMPERATURE REGULATING UNIT WITH DIGITAL REGULATOR FOR HEATING AND COOLING AND MEDIUM DISTRIBUTION KIT FOR PRIMARY CIRCUIT



171

tech. broch. 01154

Modulating temperature regulating unit. Pre-assembled in inspection wall box. Equipped with:

- temperature regulating unit with digital regulator for heating and cooling,
- medium distribution kit with built-in lockshields and shut-off valves for primary circuit,
- panel manifolds with built-in flow meters and shut-off valves and differential by-pass kit,
- primary circuit by-pass kit,
- safety thermostat,
- primary circuit shut-off valves,
- high-efficiency pump, ALPHA2 L 25-60,
- inspection wall box, with floor supports.

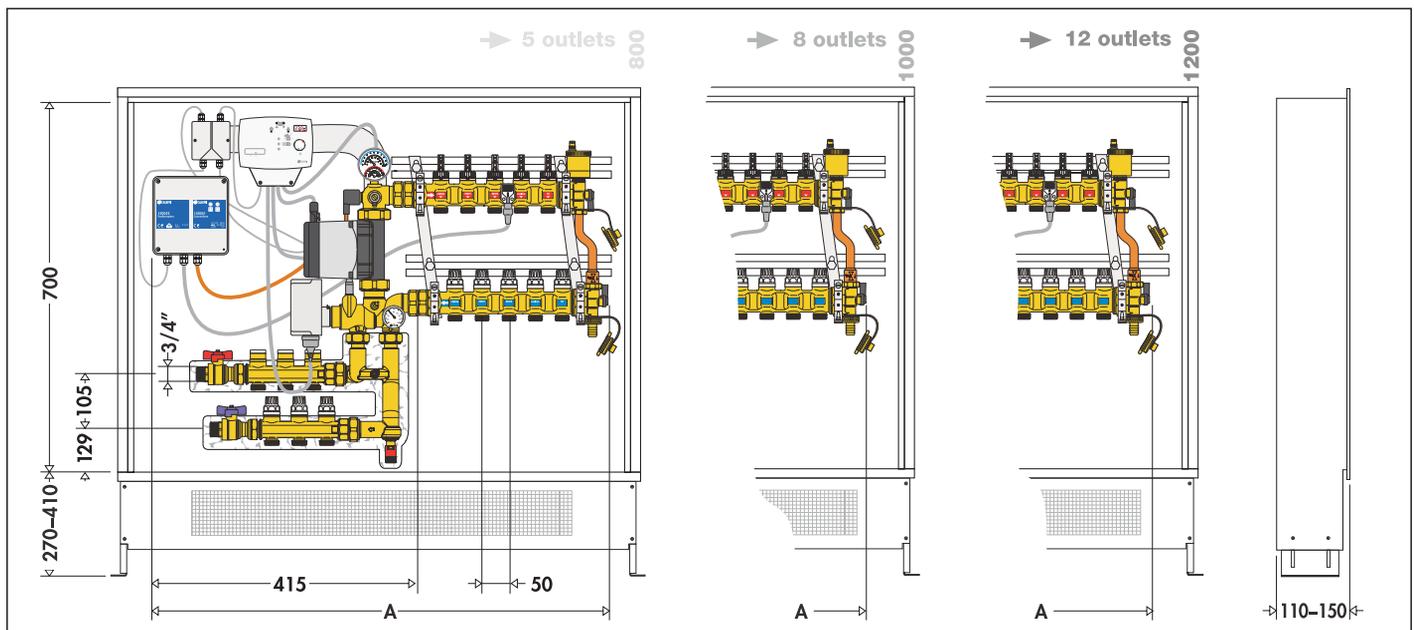
Max. working pressure: 10 bar.
Temperature adjustment range: 7–78°C.
Supply: 230 V - 50 Hz.



Available on request with regulator for heating/cooling "Remote switch"

Code	Connections	Outlet No. to panels	Outlet No. to radiators		
1715E2A2L 003	3/4" M	5 x 3/4" M	3 x 3/4" M	1	–
1715F2A2L 003	3/4" M	6 x 3/4" M	3 x 3/4" M	1	–
1715G2A2L 003	3/4" M	7 x 3/4" M	3 x 3/4" M	1	–
1715H2A2L 003	3/4" M	8 x 3/4" M	3 x 3/4" M	1	–
1715 I2A2L 003	3/4" M	9 x 3/4" M	3 x 3/4" M	1	–
1715L2A2L 003	3/4" M	10 x 3/4" M	3 x 3/4" M	1	–
1715M2A2L 003	3/4" M	11 x 3/4" M	3 x 3/4" M	1	–
1715N2A2L 003	3/4" M	12 x 3/4" M	3 x 3/4" M	1	–

Dimensions of modulating temperature regulating unit with digital regulator for heating and cooling and medium distribution kit for primary circuit 171 series



Radiator panel	3	3	3	3	3	3	3	3
Panel outlets	5	6	7	8	9	10	11	12
A	765	815	865	915	985	1035	1085	1135

SET POINT THERMOSTATIC REGULATING UNIT

172

tech. broch. 01155

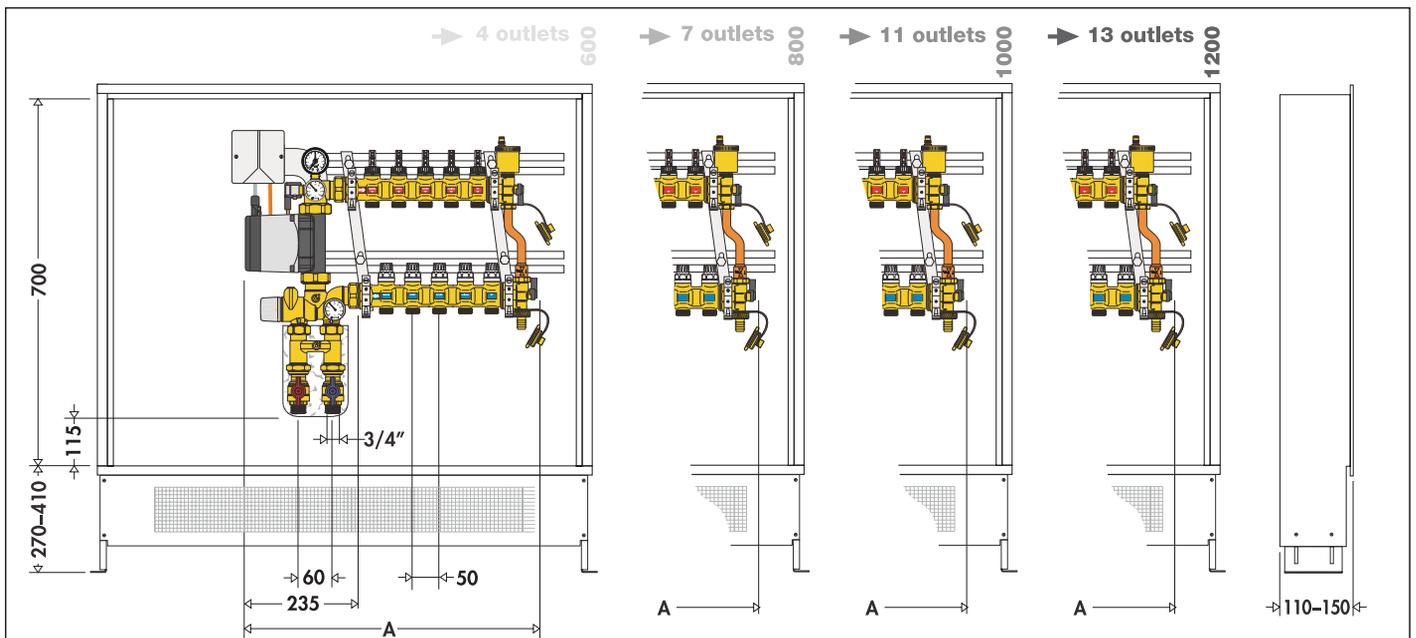


Set point regulating unit.
 Pre-assembled in inspection wall box. Equipped with:
 - set point thermostatic regulating unit,
 - panel manifolds with built-in flow meters and shut-off valves and differential by-pass kit,
 - primary circuit by-pass kit,
 - primary circuit shut-off valves,
 - safety thermostat,
 - high-efficiency pump, ALPHA2 L 25-60,
 - inspection wall box, with floor supports.
 Max. working pressure: 10 bar.
 Adjustment temperature range: 25–55°C.
 Supply: 230 V - 50 Hz.



Code	Connections	Outlet No.	Outlets		
1725C 1A2L	3/4" M	x 3	3/4" M	1	–
1725D 1A2L	3/4" M	x 4	3/4" M	1	–
1725E 1A2L	3/4" M	x 5	3/4" M	1	–
1725F 1A2L	3/4" M	x 6	3/4" M	1	–
1725G 1A2L	3/4" M	x 7	3/4" M	1	–
1725H 1A2L	3/4" M	x 8	3/4" M	1	–
1725I 1A2L	3/4" M	x 9	3/4" M	1	–
1725L 1A2L	3/4" M	x 10	3/4" M	1	–
1725M 1A2L	3/4" M	x 11	3/4" M	1	–
1725N 1A2L	3/4" M	x 12	3/4" M	1	–
1725O 1A2L	3/4" M	x 13	3/4" M	1	–

Dimensions of set point thermostatic regulating unit 172 series



Panel outlets	3	4	5	6	7	8	9	10	11	12	13
A	475	525	575	625	675	725	795	845	895	945	995

SET POINT THERMOSTATIC REGULATING UNIT WITH MEDIUM DISTRIBUTION KIT FOR PRIMARY CIRCUIT

172

tech. broch. 01156



Set point regulating unit.
Pre-assembled in inspection wall box. Equipped with:

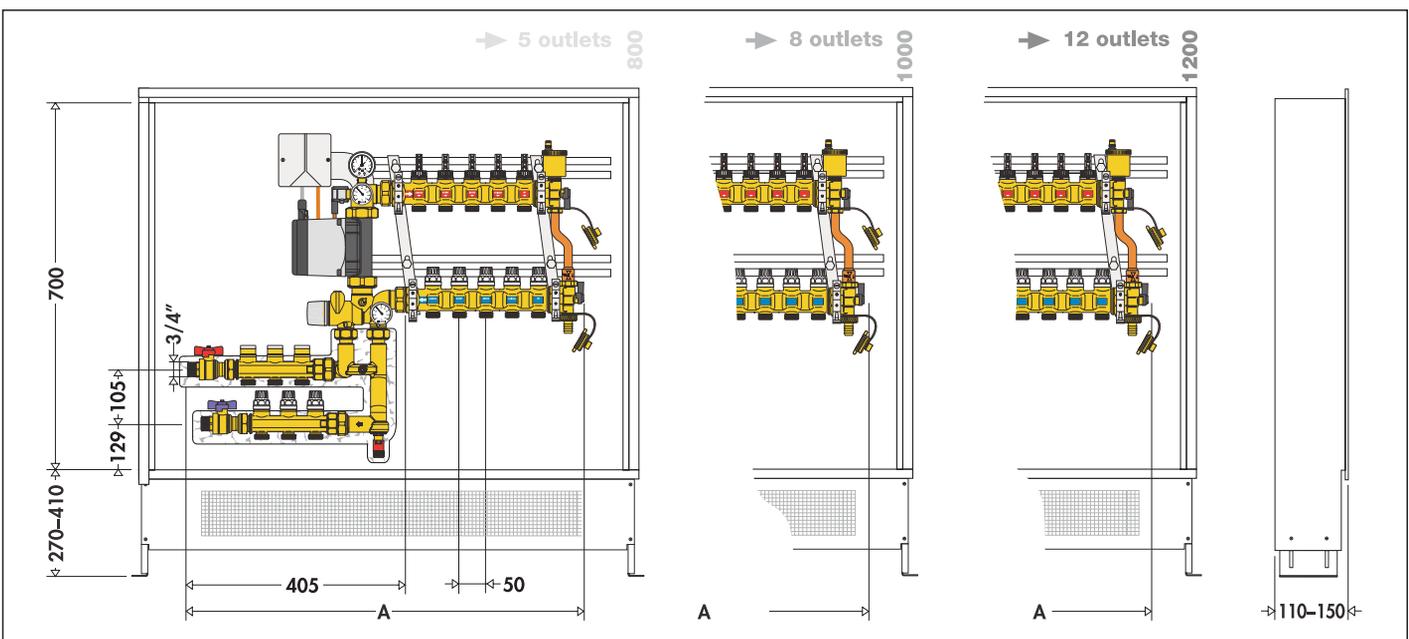
- set point thermostatic regulating unit,
- medium distribution kit with built-in lockshields and shut-off valves for primary circuit,
- panel manifolds with built-in flow meters and shut-off valves and differential by-pass kit,
- primary circuit by-pass kit
- primary circuit shut-off valves,
- safety thermostat,
- high-efficiency pump, ALPHA2 L 25-60,
- inspection wall box, with floor supports.

Max. working pressure: 10 bar.
Adjustment temperature range: 25–55°C.
Supply: 230 V - 50 Hz.



Code	Connections	Outlet No. to panels	Outlet No. to radiators		
1725C1A2L 003	3/4" M	3 x 3/4" M	3 x 3/4" M	1	–
1725D1A2L 003	3/4" M	4 x 3/4" M	3 x 3/4" M	1	–
1725E1A2L 003	3/4" M	5 x 3/4" M	3 x 3/4" M	1	–
1725F1A2L 003	3/4" M	6 x 3/4" M	3 x 3/4" M	1	–
1725G1A2L 003	3/4" M	7 x 3/4" M	3 x 3/4" M	1	–
1725H1A2L 003	3/4" M	8 x 3/4" M	3 x 3/4" M	1	–
1725I1A2L 003	3/4" M	9 x 3/4" M	3 x 3/4" M	1	–
1725L1A2L 003	3/4" M	10 x 3/4" M	3 x 3/4" M	1	–
1725M1A2L 003	3/4" M	11 x 3/4" M	3 x 3/4" M	1	–
1725N1A2L 003	3/4" M	12 x 3/4" M	3 x 3/4" M	1	–

Dimensions of set point thermostatic regulating unit with medium distribution kit for primary circuit 172 series

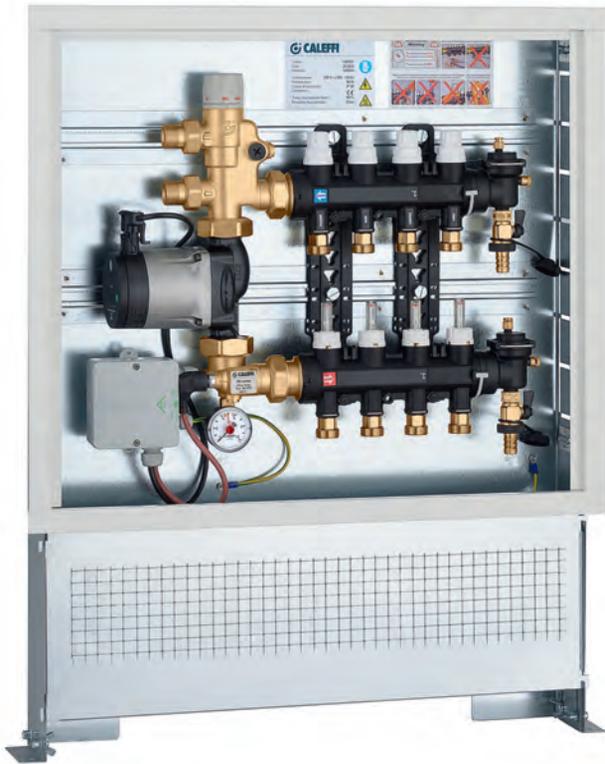


Radiator outlets	3	3	3	3	3	3	3	3	3	3	3
Panel outlets	3	4	5	6	7	8	9	10	11	12	12
A	655	705	755	805	855	905	975	1025	1075	1075	1125

SET POINT THERMOSTATIC REGULATING UNIT

182

tech. broch. 01190

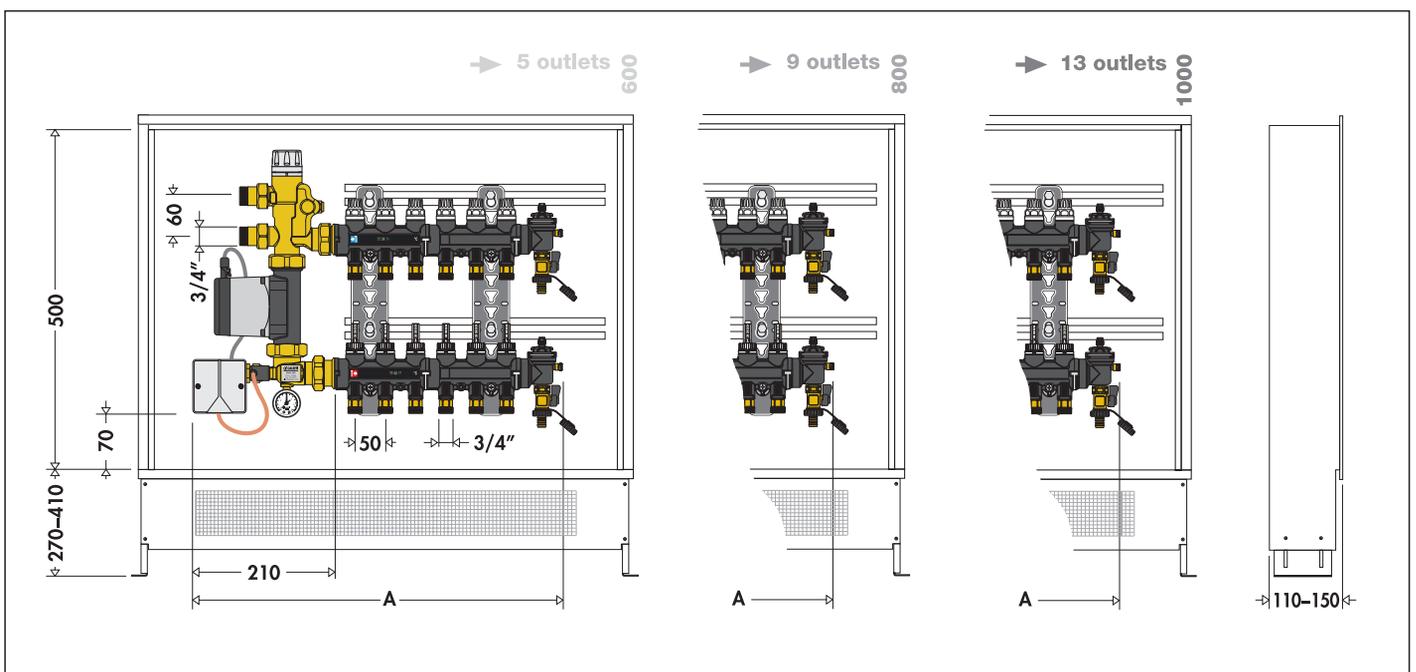


Set point regulating unit.
 Pre-assembled in inspection wall box. Equipped with:
 - set point thermostatic regulating unit,
 - distribution manifolds in composite with built-in flow meters and shut-off valves,
 - safety thermostat,
 - high-efficiency pump, ALPHA2 L 25-60,
 - inspection wall box, with floor supports.
 Max. working pressure: 6 bar.
 Adjustment temperature range: 25–55°C.
 Supply: 230 V - 50 Hz.



Code	Connections	Outlet No.	Outlets		
1825C 1A2L	3/4" M	x 3	3/4" M	1	–
1825D 1A2L	3/4" M	x 4	3/4" M	1	–
1825E 1A2L	3/4" M	x 5	3/4" M	1	–
1825F 1A2L	3/4" M	x 6	3/4" M	1	–
1825G 1A2L	3/4" M	x 7	3/4" M	1	–
1825H 1A2L	3/4" M	x 8	3/4" M	1	–
1825I 1A2L	3/4" M	x 9	3/4" M	1	–
1825L 1A2L	3/4" M	x 10	3/4" M	1	–
1825M 1A2L	3/4" M	x 11	3/4" M	1	–
1825N 1A2L	3/4" M	x 12	3/4" M	1	–
1825O 1A2L	3/4" M	x 13	3/4" M	1	–

Dimensions of set point thermostatic regulating unit 182 series



Panel outlets	3	4	5	6	7	8	9	10	11	12	13
A	435	485	535	585	635	685	735	785	835	885	935

SET POINT THERMOSTATIC REGULATING UNIT WITH MEDIUM DISTRIBUTION KIT FOR PRIMARY CIRCUIT

182

tech. broch. 01192



Set point regulating unit. Pre-assembled in inspection wall box. Equipped with:

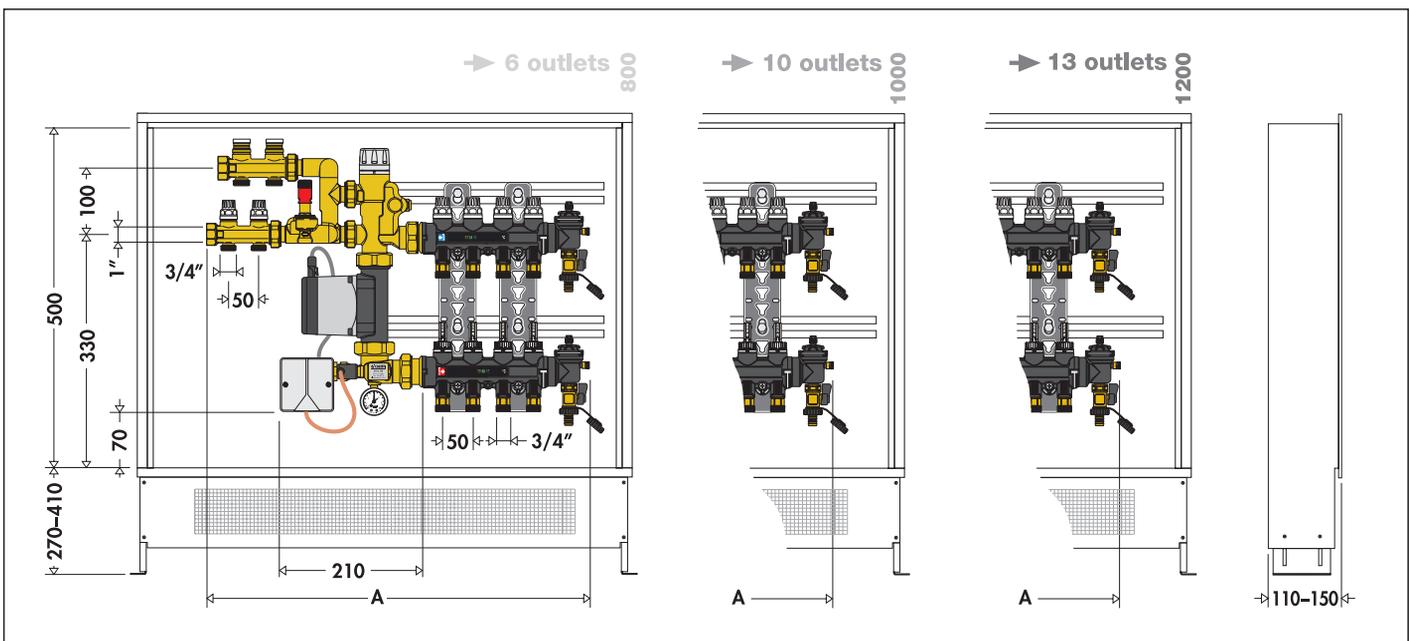
- set point thermostatic regulating unit,
- medium distribution kit with built-in lockshields and shut-off valves for primary circuit,
- distribution manifolds in composite with built-in flow meters and shut-off valves,
- primary circuit by-pass kit,
- safety thermostat,
- high-efficiency pump, ALPHA2 L 25-60,
- inspection wall box, with floor supports.

Max. working pressure: 6 bar.
Adjustment temperature range: 25–55°C.
Supply: 230 V - 50 Hz.



Code	Connections	Outlet No. to panels	Outlet No. to radiators		
1826C1A2L 002	1" F	3 x 3/4" M	2 x 3/4" M	1	–
1826D1A2L 002	1" F	4 x 3/4" M	2 x 3/4" M	1	–
1826E 1A2L 002	1" F	5 x 3/4" M	2 x 3/4" M	1	–
1826F 1A2L 002	1" F	6 x 3/4" M	2 x 3/4" M	1	–
1826G1A2L 002	1" F	7 x 3/4" M	2 x 3/4" M	1	–
1826H1A2L 002	1" F	8 x 3/4" M	2 x 3/4" M	1	–
1826I 1A2L 002	1" F	9 x 3/4" M	2 x 3/4" M	1	–
1826L 1A2L 002	1" F	10 x 3/4" M	2 x 3/4" M	1	–
1826M1A2L 002	1" F	11 x 3/4" M	2 x 3/4" M	1	–
1826N1A2L 002	1" F	12 x 3/4" M	2 x 3/4" M	1	–
1826O1A2L 002	1" F	13 x 3/4" M	2 x 3/4" M	1	–

Dimensions of set point thermostatic regulating unit with medium distribution kit for primary circuit 182 series



Radiator outlets	2	2	2	2	2	2	2	2	2	2	2	2
Panel outlets	3	4	5	6	7	8	9	10	11	12	13	
A	565	615	665	715	765	815	865	915	965	1015	1065	

SET POINT THERMOSTATIC REGULATING UNIT

182

 **tech. broch. 01190**

Pre-assembled set point thermostatic regulating unit.
 Equipped with:
 - set point thermostatic regulating unit,
 - distribution manifolds in composite with built-in flow meters and shut-off valves,
 - safety thermostat,
 - high efficiency pump, ALPHA2 L 25-60.
 Max. working pressure: 6 bar.
 Adjustment temperature range: 25–55°C.
 Supply: 230 V - 50 Hz.



Code	Connections	Outlet No.	Outlets		
1825C5A2L	3/4" M	x 3	3/4" M	1	–
1825D5A2L	3/4" M	x 4	3/4" M	1	–
1825E 5A2L	3/4" M	x 5	3/4" M	1	–
1825F 5A2L	3/4" M	x 6	3/4" M	1	–
1825G5A2L	3/4" M	x 7	3/4" M	1	–
1825H5A2L	3/4" M	x 8	3/4" M	1	–
1825I 5A2L	3/4" M	x 9	3/4" M	1	–
1825L 5A2L	3/4" M	x 10	3/4" M	1	–
1825M5A2L	3/4" M	x 11	3/4" M	1	–
1825N5A2L	3/4" M	x 12	3/4" M	1	–
1825O5A2L	3/4" M	x 13	3/4" M	1	–

182

 **tech. broch. 01192**

Pre-assembled set point regulating unit.
 Equipped with:
 - thermostatic set point regulating unit,
 - medium distribution kit with built-in lockshields and shut-off valves for primary circuit,
 - distribution manifolds in composite with built-in flow meters and shut-off valves,
 - primary circuit by-pass kit,
 - safety thermostat,
 - high-efficiency pump, ALPHA2 L 25-60.
 Max. working pressure: 6 bar.
 Adjustment temperature range: 25–55°C.
 Supply: 230 V - 50 Hz.



Code	Connections	Outlet No. to panels	Outlet No. to radiators		
1826C5A2L 002	1" F	3 x 3/4" M	2 x 3/4" M	1	–
1826D5A2L 002	1" F	4 x 3/4" M	2 x 3/4" M	1	–
1826E 5A2L 002	1" F	5 x 3/4" M	2 x 3/4" M	1	–
1826F 5A2L 002	1" F	6 x 3/4" M	2 x 3/4" M	1	–
1826G5A2L 002	1" F	7 x 3/4" M	2 x 3/4" M	1	–
1826H5A2L 002	1" F	8 x 3/4" M	2 x 3/4" M	1	–
1826I 5A2L 002	1" F	9 x 3/4" M	2 x 3/4" M	1	–
1826L 5A2L 002	1" F	10 x 3/4" M	2 x 3/4" M	1	–
1826M5A2L 002	1" F	11 x 3/4" M	2 x 3/4" M	1	–
1826N5A2L 002	1" F	12 x 3/4" M	2 x 3/4" M	1	–
1826O5A2L 002	1" F	13 x 3/4" M	2 x 3/4" M	1	–

661

Box for manifolds 662, 671 and 668...S1 series and regulating units 182 series.
 Closure with a push-fit clamp.
 In painted sheet steel.
 With supports for installation on floor.
 Adjustable depth from 110 to 150 mm.
 Adjustable height from 270 a 410 mm.



Code	(h x b x p)		
661045	500 x 400 x 110–150	1	–
661065	500 x 600 x 110–150	1	–
661085	500 x 800 x 110–150	1	–
661105	500 x 1000 x 110–150	1	–
661125	500 x 1200 x 110–150	1	–

For choice of box see on page 108 - 109

ACCESSORIES FOR REGULATING UNITS



738

Digital room chrono-thermostat.
4 operating programmes with ON/OFF spark advance.
 Weekly programmable clock.
 Fitted for phone programmer.
 Three temperature levels + anti-freeze.
 30-minute minimum programme.
 ON/OFF function with adjustable differential from 0,2 to 2°C or proportional.
 Adjustable temperature with 0,1°C steps.
 1 changeover switch output contact: 8 (2) A.
 Protection class: IP 30.



Code			
738207	battery supply	1	-
738227	supply 230 V	1	-



150

[tech. broch. 01120](#)

Accessories for regulating unit to connect more manifolds or for regulator code 161000.



Code			
150050	humidity probe	1	-
150051	converter	1	-
150052	transformer	1	-



622

[tech. broch. 01088](#)

Additional safety thermostat, for radiant panel systems.
 Temperature adjustment range: 5-55°C.
 Factory setting: 50°C.
 Protection class: IP 40.



Code			
622001		1	10



151

Room thermostat with automatic switch over heating/cooling, for regulator code 152021 and for regulating unit 174 series.
 For circular recessed box Ø 68 mm, depth 35/50 mm.



Code			
151003		1	-



182

Differential by-pass kit with fixed setting 25 kPa (2.500 mm w.g.) complete with flexible hose.
 For regulating units 182 series and manifolds 670 and 671 series.
 Max. working pressure: 10 bar.
 Temperature range: 0-100°C.

Code			
182000	3/4"	1	5

SPARE PARTS FOR REGULATING UNITS

174 series

Code	
150032	digital regulator for heating
150033	digital regulator for heating and cooling
150034	remote control for heating and cooling with mounting base
150036	remote control for heating with mounting base
150035	interface for heating and cooling
150004	outside probe
150006	flow or return probe
R19093	safety thermostat
F19223	mixing valve group with actuator support
F19155	actuator for mixing valve
R19087	pump UPS 25-80
R79782	pump ALPHA2 L 25-60 (suitable for UPS 25-60 pump replacement)
F39344	temperture gauge 0-80°C

171 series

Code	
F19095	digital regulator
F69264	flow or return probe
R19093	safety thermostat
F19223	mixing valve group with actuator support
F19155	actuator for mixing valve
R19087	pump UPS 25-80
R79782	pump ALPHA2 L 25-60 (suitable for UPS 25-60 pump replacement)
F39344	temperture gauge 0-80°C

172 - 182 series

Code	
R19093	safety thermostat
F19153	thermostatic mixing valve group x 172 series
F19267	thermostatic mixing valve group x 182 series
R19087	pump UPS 25-80
R79782	pump ALPHA2 L 25-60 (suitable for UPS 25-60 pump replacement)
F39344	temperature gauge 0-80°C
R19219	electronic board

ICE DETECTION AND CONTROL SYSTEM



605

Digital temperature and humidity control unit for detecting ice/snow.
Supply: 230 V - 50 Hz.
Output contact rating: 6 A (230 V).
To connect up to 2 probes.



Code

605100



1

-



605

Temperature and relative humidity probe for open outdoor areas, with cable.

Code

605110

cavo 6 m



1

-

605120

cavo 20 m

1

-



605

Temperature and relative humidity probe for gutters, flat roofs and dish aerials, with cable.
Cable length: 6 m.

Code

605031



1

-



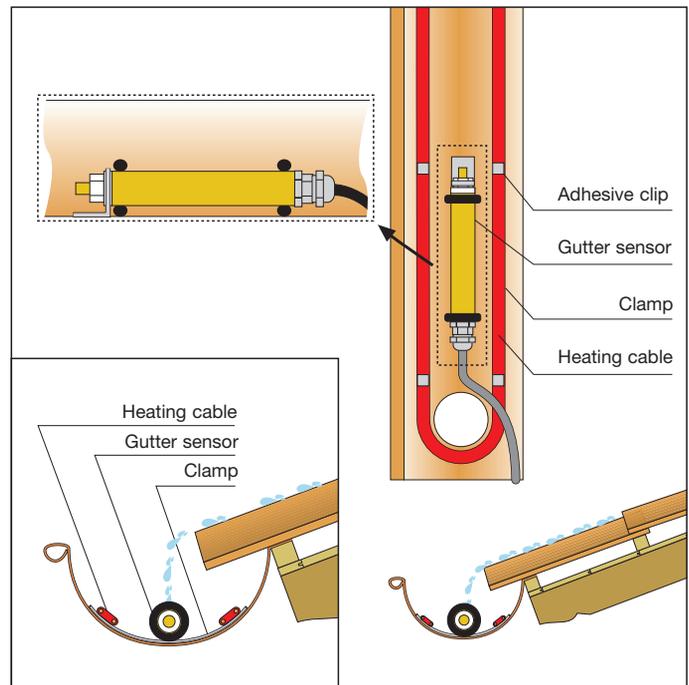
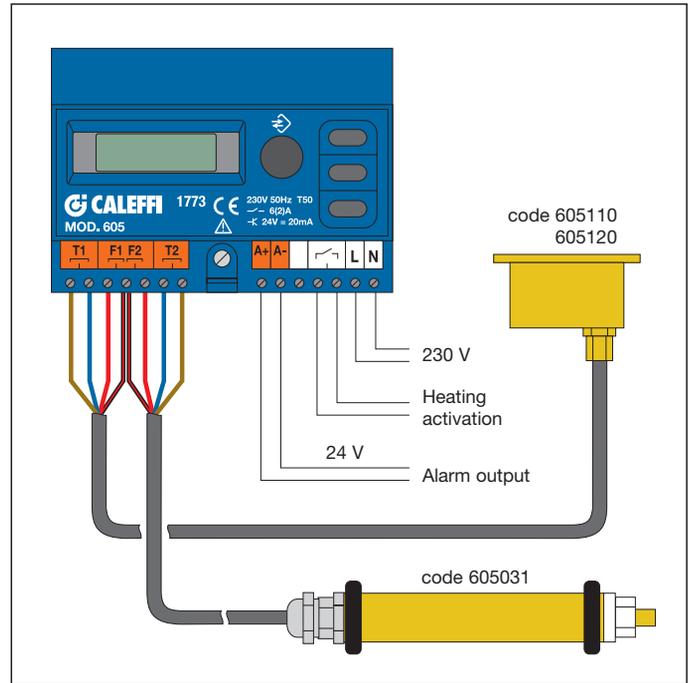
150

Outside probe.

Code

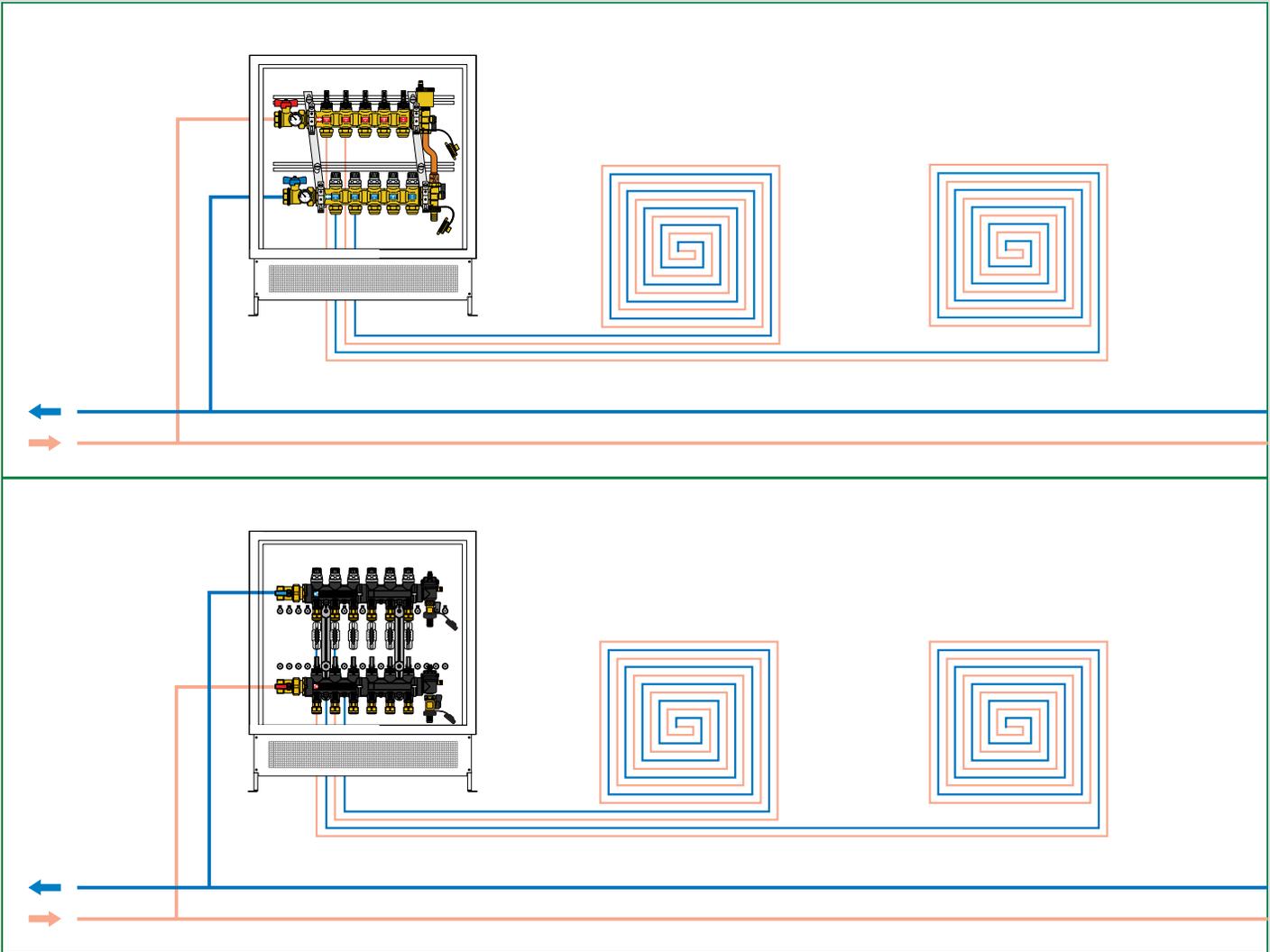
150004

Application diagram of control unit for detecting ice/snow



DISTRIBUTION MANIFOLDS FOR RADIANT PANEL SYSTEMS

This diagram is just an indication



- Composit distribution manifolds
- Brass distribution manifolds for radiant panel systems
- Boxes for distribution manifolds
- Thermo-electric actuators
- Control bar

COMPOSITE DISTRIBUTION MANIFOLDS



670

tech. broch. 01126

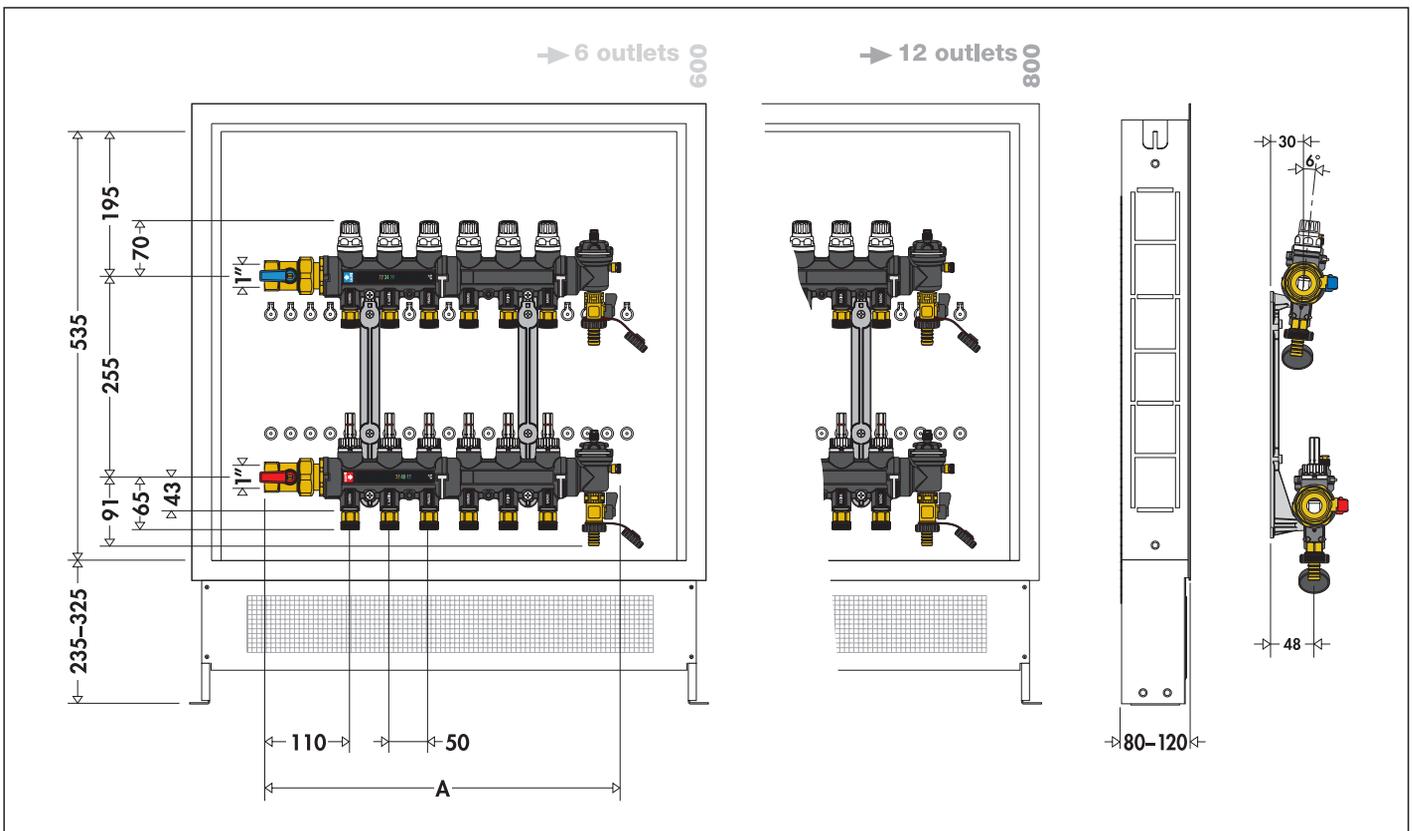
Pre-assembled distribution manifold.
Max. working pressure: 6 bar.
Temperature range: 5–60°C.

Equipped with:

- technopolymer flow manifold with built-in flow meters and flow rate balancing valves;
- technopolymer return manifold with built-in shut-off valves fitted for thermo-electric actuator;
- technopolymer end fittings with automatic air vent with hygroscopic cap, discharge valve and fill/drain cock;
- pair of ball shut-off valves;
- LCD thermometers on flow and return manifolds;
- adhesive labels indicating the rooms;
- pair of mounting brackets for box installation;
- box with adjustable height and depth;
- coupling adapter with clip code 675850, for manifold outlets (in package);
- template for cutting pipe code 675002 (in package).

Code	Connections	Outlet No.	Outlets		
6706C1	1" F x 3	3/4" M	1	–	
6706D1	1" F x 4	3/4" M	1	–	
6706E1	1" F x 5	3/4" M	1	–	
6706F1	1" F x 6	3/4" M	1	–	
6706G1	1" F x 7	3/4" M	1	–	
6706H1	1" F x 8	3/4" M	1	–	
6706I1	1" F x 9	3/4" M	1	–	
6706L1	1" F x 10	3/4" M	1	–	
6706M1	1" F x 11	3/4" M	1	–	
6706N1	1" F x 12	3/4" M	1	–	

Dimensions of manifolds 670 series



Panel outlets	3	4	5	6	7	8	9	10	11	12
A	300	350	400	450	500	550	600	650	700	750

COMPOSITE DISTRIBUTION MANIFOLDS

NEW



675

tech. broch. 01126

Technopolymer end fitting with automatic air vent with hygroscopic cap, discharge valve, fill/drain cock. Max. working pressure: 6 bar. Temperature range: 5–60°C.

Code			
675800	1 1/4"	1	20



675

tech. broch. 01126

Push-fit thermometer for panel piping. For pipes with outer diameter from 15 to 18 mm. Thermometer scale: 5–50°C. Thermometer fluid: alcohol. Thermo-conductive paste supplied in package.

Code			
675900		10	100



675

tech. broch. 01126

Coupling adapter with clip.

Code			
675850	3/4" Ø 18 mm	1	40



675

tech. broch. 01126

Cutting pipe template.

Code			
675002		10	-



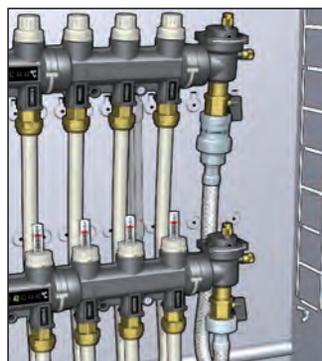
182

Differential by-pass kit with fixed setting 25 kPa (2.500 mm w.g.) complete with flexible hose. For regulating units 182 series and manifolds 670 and 671 series. Max. working pressure: 10 bar. Temperature range: 0–100°C.

Code			
182000	3/4"	1	5

Differential by-pass kit

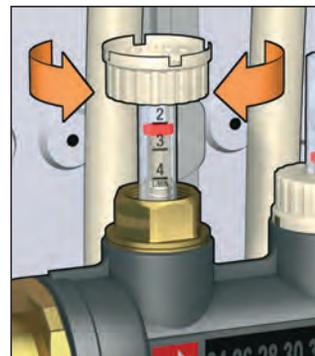
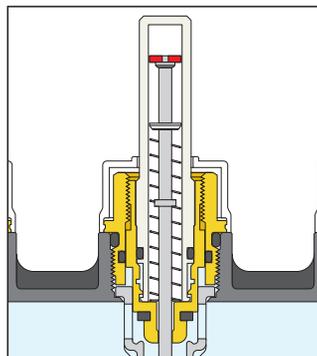
In radiant panel systems, the medium distribution circuits can be totally or partially shut off by closing the thermo-electric valves applied on the manifolds. The differential by-pass kit, installed between the flow and the return manifold, keep the pressure of the manifold circuit balanced when the flow rate varies. When the fixed setting valve is reached (2500 mm w.g.), the obturator gradually opens and the flow rate is by-passed from the flow to the return.



Flow manifold

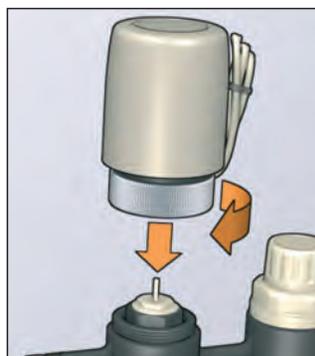
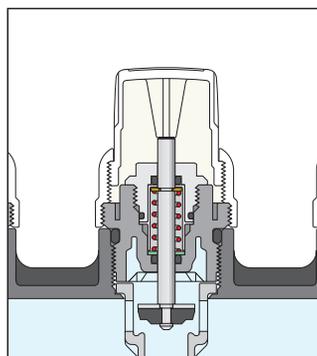
The flow manifold is equipped with built-in flow meters and flow rate balancing valves.

Using the balancing valve with the special tapered obturator, the flow rate to the single circuits can be adjusted accurately as required, with the setting being read on the single flow meter with a scale of 1–4 l/min.



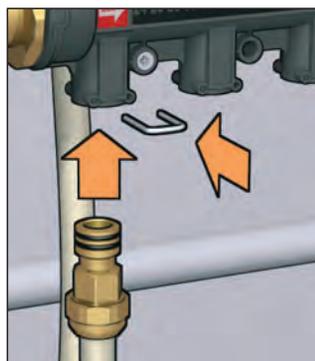
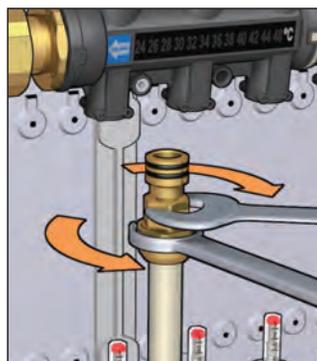
Return manifold

The return manifold is equipped with built-in shut-off valves. Using the shut-off valve with a manual knob, the flow rate to the single circuits can be reduced so much as to shut off the circuit completely. The valves are fitted to accommodate thermo-electric actuator in order to automate their action upon receiving a signal from room thermostat.



Panel circuit outlets

The outlet connections of the single panel circuits are designed to use a special coupling adapter that can be removed with a fixing clip. The brass adapter has a double O-ring seal and a hexagon on its surface. The pipe fitting is connected straight onto the threaded side. With this particular connection system, the fitting with the adapter can be tightened onto the piping outside the box and then coupled on the manifold body later, making the plumbing installation simpler and more practical.



COMPOSITE DISTRIBUTION MANIFOLDS

671

Pre-assembled distribution manifold.
 Max. working pressure: 6 bar.
 Temperature range: 5–60°C.

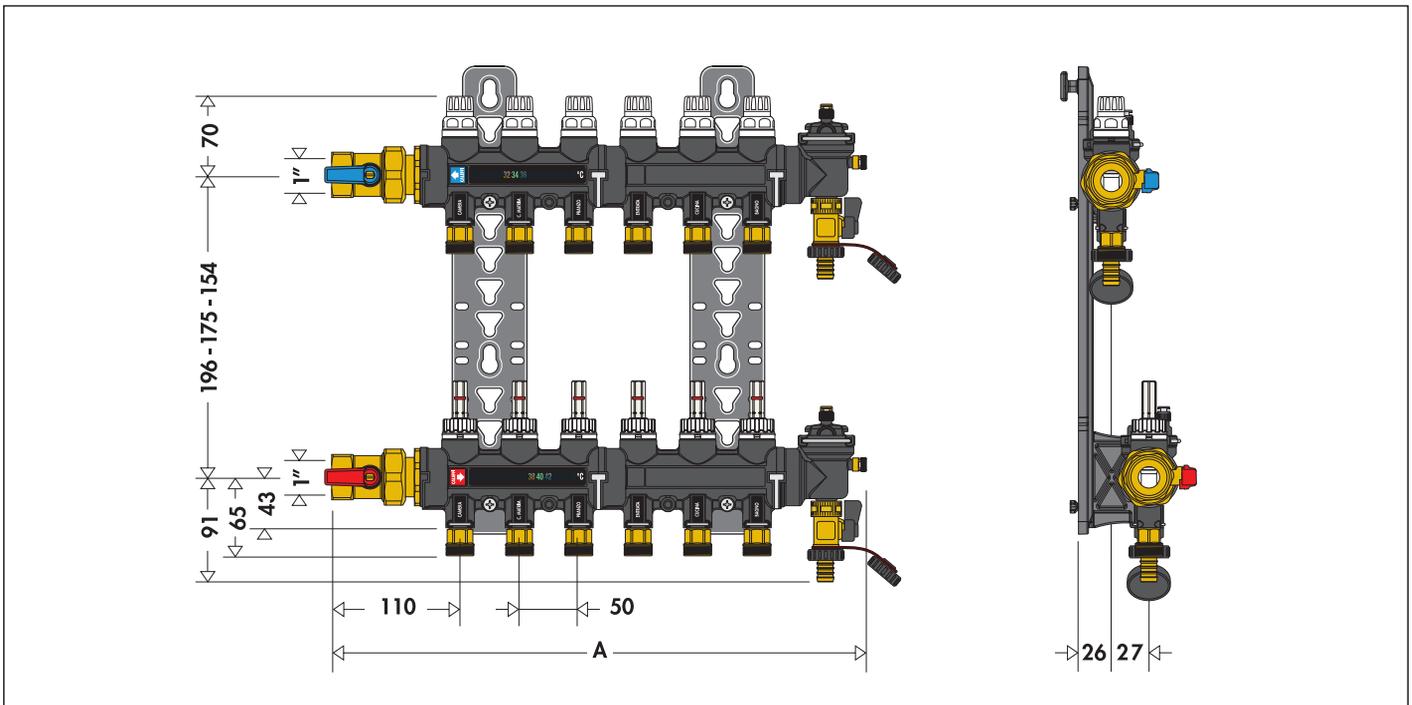
Equipped with:

- technopolymer flow manifold with built-in flow meters and flow rate balancing valves;
- technopolymer return manifold with built-in shut-off valves fitted for thermo-electric actuator;
- technopolymer end fittings with automatic air vent with hygroscopic cap, discharge valve and fill/drain cock;
- pair of ball shut-off valves;
- LCD thermometers on flow and return manifolds;
- adhesive labels indicating the rooms;
- pair of mounting brackets for box or wall mounting;
- coupling adapter with clip code 675850, for manifold outlets (in package);
- template for cutting pipe code 675002 (in package).



Code	Connections	Outlet No.	Outlets		
6716C1	1" F x 3	3/4" M	1	–	
6716D1	1" F x 4	3/4" M	1	–	
6716E1	1" F x 5	3/4" M	1	–	
6716F1	1" F x 6	3/4" M	1	–	
6716G1	1" F x 7	3/4" M	1	–	
6716H1	1" F x 8	3/4" M	1	–	
6716I1	1" F x 9	3/4" M	1	–	
6716L1	1" F x 10	3/4" M	1	–	
6716M1	1" F x 11	3/4" M	1	–	
6716N1	1" F x 12	3/4" M	1	–	
6716O1	1" F x 13	3/4" M	1	–	
6716P1	1" F x 14	3/4" M	1	–	

Dimensions of manifolds 671 series



Panel outlets	3	4	5	6	7	8	9	10	11	12	13	14
A	300	350	400	450	500	550	600	650	700	750	800	850

BOXES FOR DISTRIBUTION MANIFOLDS

675

Box with adjustable depth and height, equipped with mounting brackets for manifolds 671 series.

Closure with a push-fit clamp.
Adjustable depth: 80 to 120 mm.
Adjustable height: 235 to 325 mm.



(h x b x p)

675060	550 x 600 x 80-120	1	-
675080	550 x 800 x 80-120	1	-

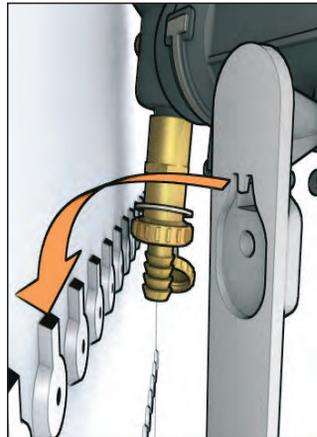
Bracketing

Manifolds have holes to secure them on brackets to allow housing them in boxes.

The manifolds are reversible, so that they can be positioned with the entry from the right or left.

The return manifold, located at the top, is installed at an angle on purpose in order to make it easier for the panel circuit pipes to pass through, up to 20 mm in diameter.

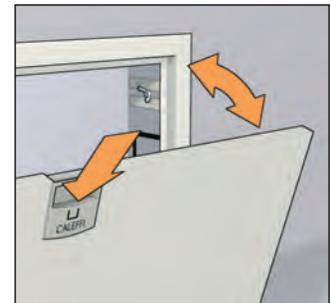
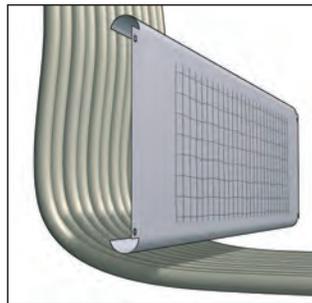
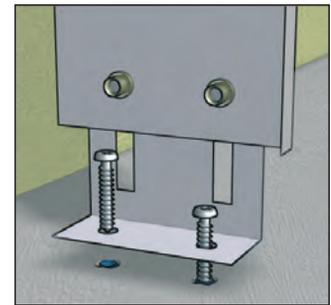
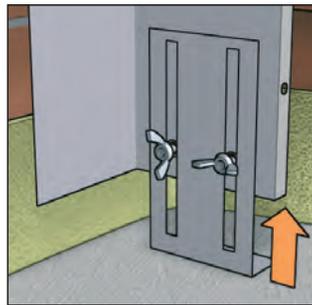
The manifolds can thus be bracketed in a box just 80 mm deep, allowing the installation in thin walls.



Box

Manifolds are supplied bracketed in a recess-mounting plate box with an adjustable depth from 80 to 120 mm. The box, specifically designed to be used with radiant panel systems, is equipped with floor supports that are adjustable in height from 235 to 325 mm, the height being chosen according to the thickness of the slab. With these supports, the pipe passageway is clear of obstruction; a double curtain wall then enables the plastering to be done directly and the correct fitting of frame and cover. The back wall of the box has grooves and holes to secure the manifold brackets; the side and top walls have holes for the main pipes to pass through.

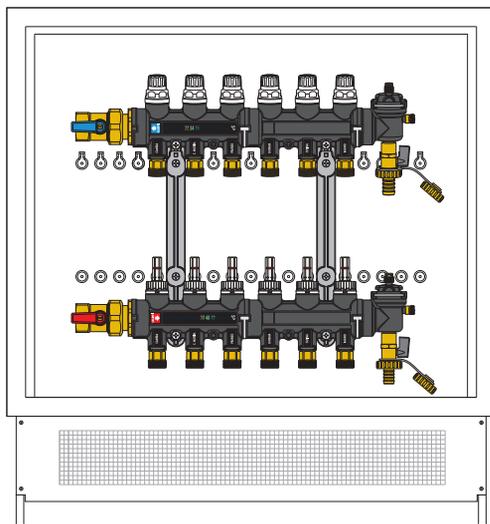
The cover is opened and closed using a special handle with a push-fit clamp, without using any keys or tools.



Choice of box size, 675 series according to the number of outlets

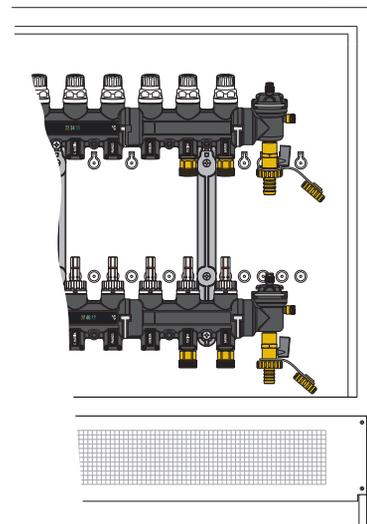
For max. outlet No. 7+7

600



For max. outlet No. 12+12

800



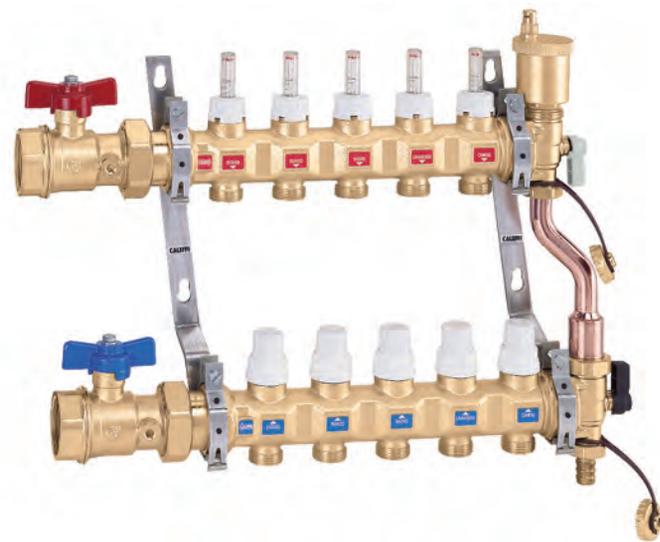
BRASS DISTRIBUTION MANIFOLDS FOR RADIANT PANEL SYSTEMS

668...S1

tech. broch. 01144

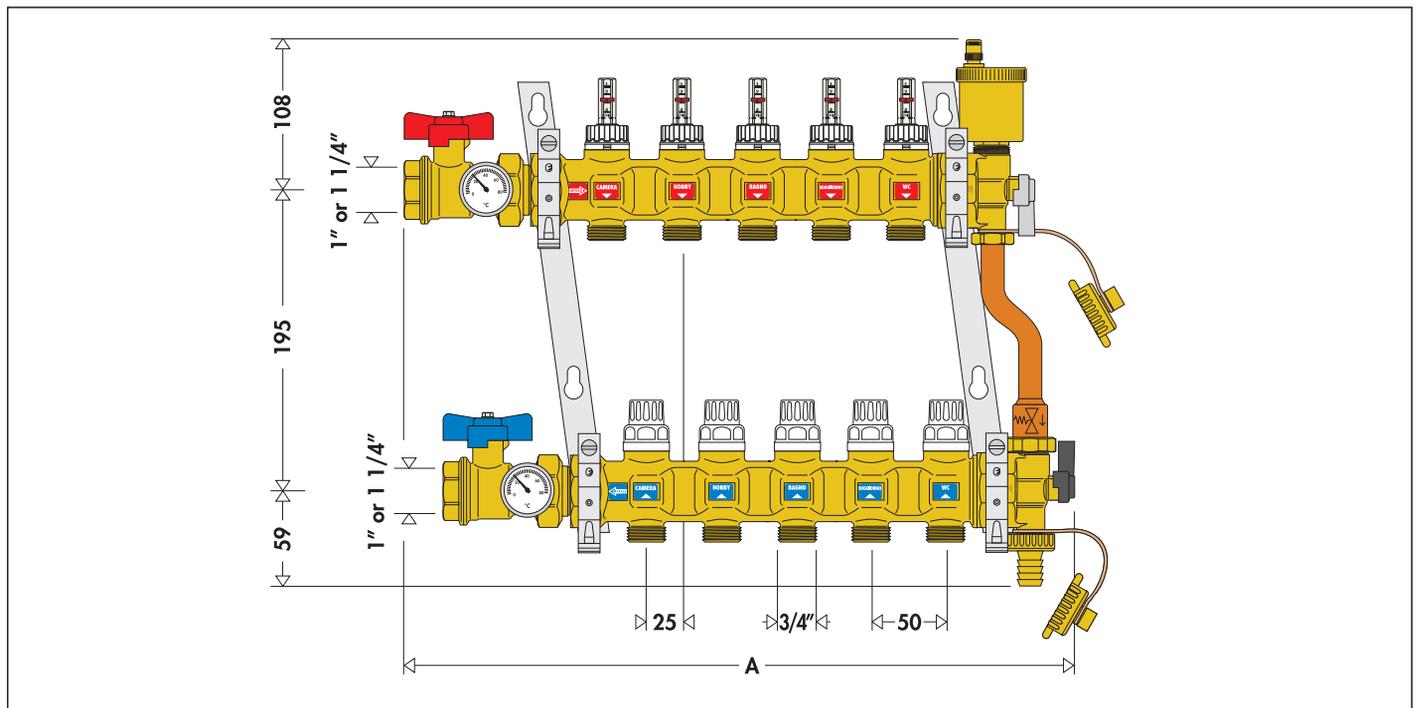
Pre-assembled distribution manifold.
Max. working pressure: 10 bar.
Temperature range: 0–80°C.

- Equipped with:
- flow manifold with built-in flow meters and flow rate balancing valves;
 - return manifold with built-in shut-off valves fitted for thermo-electric actuator;
 - end fittings with multi-position ball valve, automatic air vent and fill/drain hose connection;
 - off-centre by-pass kit with fixed setting and with connecting pipe;
 - ball shut-off valves;
 - mounting brackets for box or wall mounting.



Code	Connections	Outlet No.	Outlets		
6686C5S1	1" F	x 3	3/4" M	1	–
6686D5S1	1" F	x 4	3/4" M	1	–
6686E5S1	1" F	x 5	3/4" M	1	–
6686F5S1	1" F	x 6	3/4" M	1	–
6686G5S1	1" F	x 7	3/4" M	1	–
6686H5S1	1" F	x 8	3/4" M	1	–
6686I5S1	1" F	x 9	3/4" M	1	–
6686L5S1	1" F	x 10	3/4" M	1	–
6686M5S1	1" F	x 11	3/4" M	1	–
6686N5S1	1" F	x 12	3/4" M	1	–
6686O5S1	1" F	x 13	3/4" M	1	–
6686P5S1	1" F	x 14	3/4" M	1	–
6687C5S1	1 1/4" F	x 3	3/4" M	1	–
6687D5S1	1 1/4" F	x 4	3/4" M	1	–
6687E5S1	1 1/4" F	x 5	3/4" M	1	–
6687F5S1	1 1/4" F	x 6	3/4" M	1	–
6687G5S1	1 1/4" F	x 7	3/4" M	1	–
6687H5S1	1 1/4" F	x 8	3/4" M	1	–
6687I5S1	1 1/4" F	x 9	3/4" M	1	–
6687L5S1	1 1/4" F	x 10	3/4" M	1	–
6687M5S1	1 1/4" F	x 11	3/4" M	1	–
6687N5S1	1 1/4" F	x 12	3/4" M	1	–
6687O5S1	1 1/4" F	x 13	3/4" M	1	–
6687P5S1	1 1/4" F	x 14	3/4" M	1	–

Dimensions of pre-assembled manifolds 668...S1 series



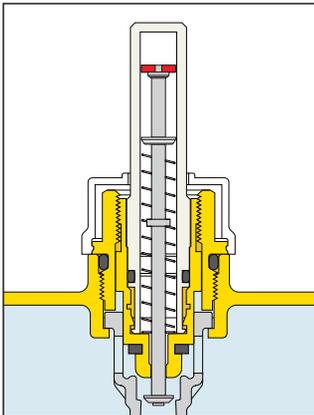
Panel outlets	3	4	5	6	7	8	9	10	11	12	13	14
A	380	430	480	530	580	630	700	750	800	850	900	950

BRASS DISTRIBUTION MANIFOLDS FOR RADIANT PANEL SYSTEMS

Flow manifold

The flow manifold is equipped with flow meters and built-in flow rate balancing valves.

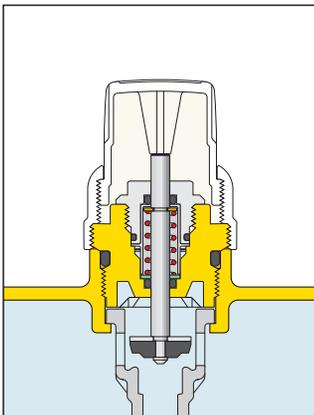
Acting on the regulating valve with the special cone-shaped obturator, the flow rate to the single circuits can be accurately adjusted to the required value, just by reading the value on the single flow meter with a scale of 1–5 l/min.



Return manifold

The return manifold is equipped with manual shut-off valves, in order to cut off the flow to the individual circuits.

They can also be fitted with a thermo-electric actuator that, when used with a room thermostat, maintains the ambient temperature at the set values despite any thermal load variation.



End fittings with multi-position valves

The ball valves in the end fittings can be positioned to perform different functions.

- 1) Filling the circuits.
Filling via the flow manifold and draining via the return manifold: both valves are in the open position.
- 2) Closing the connection to the fill and drain valves.
Both valves are in the closed position. The automatic air vent on the flow manifold is always connected and cannot be shut-off.
- 3) Normal operation.
The valve of the return manifold is in the position of connection with the by-pass and the valve of the flow manifold is in the open position.

1. Fill/drain



2. Closing



3. Operation with by-pass



Differential by-pass kit

In radiant panel systems, the medium distribution circuits can be totally or partially shut off by closing the thermo-electric valves in the manifolds. The differential by-pass kit for manifolds performs the function of keeping the flow and return pressure of the manifold circuit balanced when the flow rate varies.

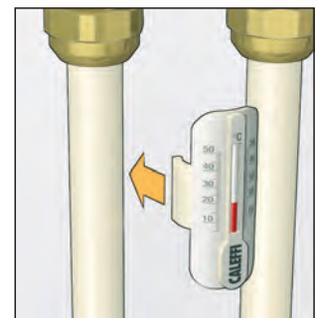
When the fixed setting valve is reached (2500 mm w.g.), the obturator gradually opens and the flow rate is by-passed from the flow to the return.



Thermometers for loop piping

As an accessory, a special alcohol thermometer with a 5–50°C scale is available. It is equipped with a push-fit plastic body, for the single loop piping, with an outside diameter from 15 to 18 mm.

This thermometer, installed on the return line, measures the actual temperature of the medium returning from the circuit making it possible to check the state of the single panel's heat transfer accurately.



BOXES FOR DISTRIBUTION MANIFOLDS

659

 **tech. broch. 01144**



Inspection wall box for distribution manifolds 349, 350, 592, 662, 663, 671 and 668...S1 series.
Wall or floor installation (with 660 series).
Closure with a push-fit clamp.
In painted sheet steel.
Adjustable depth from 110 to 140 mm.

Code	(h x w x d)		
659044	500 x 400 x 110-140	1	-
659064	500 x 600 x 110-140	1	-
659084	500 x 800 x 110-140	1	-
659104	500 x 1000 x 110-140	1	-
659124	500 x 1200 x 110-140	1	-

659

 **tech. broch. 01144**



Inspection wall box for distribution manifolds 349, 350, 592, 662 and 671 series.
Complete with specific support for manifold brackets.
Closure with a push-fit clamp.
In painted sheet steel.
Adjustable depth from 80 to 120 mm.

Code	(h x w x d)		
659045	500 x 400 x 80-120	1	-
659065	500 x 600 x 80-120	1	-
659085	500 x 800 x 80-120	1	-
659105	500 x 1000 x 80-120	1	-

660

 **tech. broch. 01144**



Floor installation kit for box 659 series.
Consisting of:
- 2 supports height cm. 20,
- 2 side panels,
- 1 pipe-bending bar.

Code			
660040	for 659044	1	-
660060	for 659064	1	-
660080	for 659084	1	-
660100	for 659104	1	-
660120	for 659124	1	-

661

 **tech. broch. 01144**



Box for manifolds 662, 671 and 668...S1 series and regulating units 182 series.
With supports for installation on floor.
Closure with a push-fit clamp.
In painted sheet steel.
Adjustable depth from 110 to 150 mm.
Adjustable height from 270 a 410 mm.

Code	(h x w x d)		
661045	500 x 400 x 110-150	1	-
661065	500 x 600 x 110-150	1	-
661085	500 x 800 x 110-150	1	-
661105	500 x 1000 x 110-150	1	-
661125	500 x 1200 x 110-150	1	-

Choice of box size, 659 or 661 series according to the number of outlets

For max. outlet No. 17+17

With AUTOFLOW® for max. outlet No. 15+15

For max. outlet No. 14+14

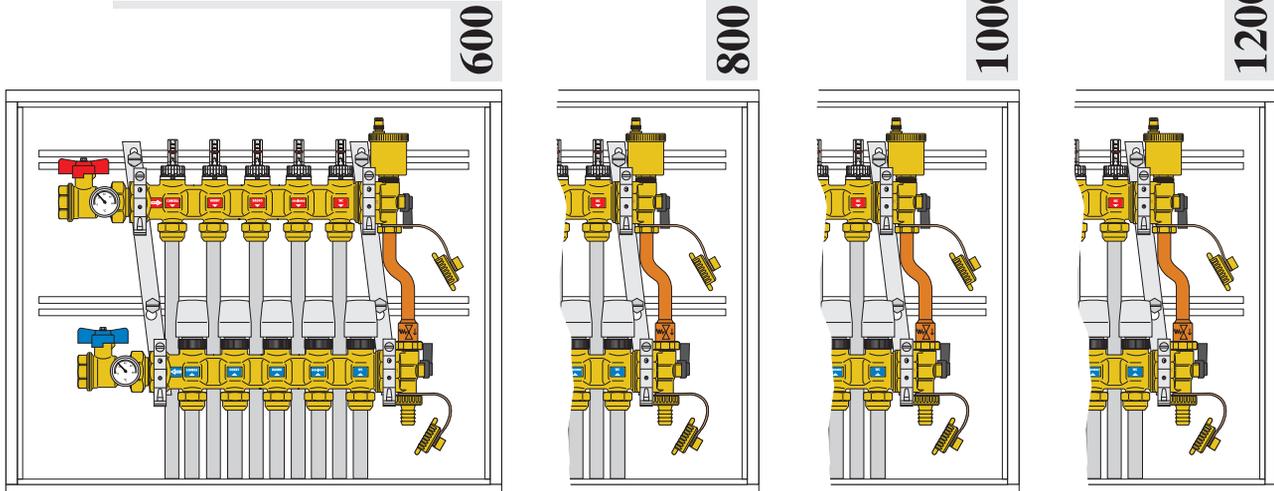
With AUTOFLOW® for max. outlet No. 11+11

For max. outlet No. 10+10

With AUTOFLOW® for max. outlet No. 7+7

For max. outlet No. 6+6

With AUTOFLOW® for max. outlet No. 4+4



DISTRIBUTION MANIFOLDS AND ACCESSORIES FOR RADIANT PANEL SYSTEMS

666...S1

tech. broch. 01144

Return manifold, with built-in shut-off valves fitted for thermo-electric actuator.

Max. working pressure: 10 bar.
Temperature range: 0–80°C.
Outlet centre distance: 50 mm.



Code	Connections	Outlet No.	Outlets		
666735S1	1 1/4" F x 3	3	3/4" M	2	12
666745S1	1 1/4" F x 4	4	3/4" M	2	12
666755S1	1 1/4" F x 5	5	3/4" M	2	12
666765S1	1 1/4" F x 6	6	3/4" M	2	-
666775S1	1 1/4" F x 7	7	3/4" M	2	-
666785S1	1 1/4" F x 8	8	3/4" M	2	-

667...S1

tech. broch. 01144

Flow manifold, with built-in flow meters and flow rate balancing valves.

Max. working pressure: 10 bar.
Temperature range: 0–80°C.
Outlet centre distance: 50 mm.



Code	Connections	Outlet No.	Outlets		
667735S1	1 1/4" F x 3	3	3/4" M	2	12
667745S1	1 1/4" F x 4	4	3/4" M	2	12
667755S1	1 1/4" F x 5	5	3/4" M	2	12
667765S1	1 1/4" F x 6	6	3/4" M	2	-
667775S1	1 1/4" F x 7	7	3/4" M	2	-
667785S1	1 1/4" F x 8	8	3/4" M	2	-

668...S1

tech. broch. 01144

Pair of manifolds, with built-in flow meters and flow rate balancing valves and shut-off valves.

Max. working pressure: 10 bar.
Temperature range: 0–80°C.
Outlet centre distance: 50 mm.



Code	Connections	Outlet No.	Outlets		
668735S1	1 1/4" F x 3	3	3/4" M	1	6
668745S1	1 1/4" F x 4	4	3/4" M	1	6
668755S1	1 1/4" F x 5	5	3/4" M	1	5
668765S1	1 1/4" F x 6	6	3/4" M	1	3
668775S1	1 1/4" F x 7	7	3/4" M	1	3
668785S1	1 1/4" F x 8	8	3/4" M	1	3

668...S1

tech. broch. 01144

Off-centre by-pass assembly with fixed setting 25 kPa (2.500 mm w.g.), complete with pipe for manifold connection.

For manifolds 668...S1 series.
Max. working pressure: 10 bar.
Temperature range: 0–100°C.



Code	Connections		
668000S1	1" nut x 3/4" nut	1	10

680

tech. broch. 01144

DARCAL

Self-adjustable diameter fitting for single and multilayer plastic pipes.

Max. working pressure: 10 bar.
Temperature range:
5–80°C (PE-X)
5–75°C (Multilayer marked 95°C).
PATENT.



Code	Øinside	Øoutside		
680507	3/4"	7,5– 8	10	100
680502	3/4"	7,5– 8	12	-14
680503	3/4"	8,5– 9	12	-14
680500	3/4"	9 – 9,5	14	-16
680501	3/4"	9,5–10	12	-14
680506	3/4"	9,5–10	14	-16
680515	3/4"	10,5–11	14	-16
680517	3/4"	10,5–11	16	-18
680524	3/4"	11,5–12	14	-16
680526	3/4"	11,5–12	16	-18
680535	3/4"	12,5–13	16	-18
680537	3/4"	12,5–13	18	-20
680544	3/4"	13,5–14	16	-18
680546	3/4"	13,5–14	18	-20
680555	3/4"	14,5–15	18	-20
680556	3/4"	15 –15,5	18	-20
680564	3/4"	15,5–16	18	-20
680505	3/4"	17	22,5	100

347...S1

tech. broch. 01144

Compression fitting for annealed copper, hard copper, brass, mild steel and stainless steel pipes. With O-Ring seal. Specific to be used with manifolds 668...S1 series.

Max. working pressure: 10 bar.
Temperature range: -25–120°C.



Code	Connections		
347512S1	3/4" - Ø 12	1	50
347514S1	3/4" - Ø 14	1	50

ACCESSORIES FOR DISTRIBUTION MANIFOLDS

391...S1  **tech. broch. 01144**

Pair of ball shut-off valves.
Female - male connections with union with O-Ring seal.
With temperature gauge, scale 0–80°C, Ø 40 mm.
Max. working pressure: 10 bar.
Temperature range: 0–100°C.



Code			
391167S1	1" x 1 1/4"	1	5
391177S1	1 1/4" x 1 1/4"	1	5

391...S1  **tech. broch. 01144**

Pair of ball shut-off valves.
Female - male connections with union with O-Ring seal.
With temperature gauge connection.
Max. working pressure: 10 bar.
Temperature range: 0–100°C.



Code			
391067S1	1" x 1 1/4"	1	–
391077S1	1 1/4" x 1 1/4"	1	–

5996  **tech. broch. 01144**

Flow end fitting complete with double radial end fitting with two-position ball valve, automatic air vent and fill/drain hose connection.
Max. working pressure: 10 bar.
Max. discharge pressure: 2,5 bar.
Temperature range: 0–100°C.



Code			
599674	1 1/4"	1	10

5996  **tech. broch. 01144**

Return end fitting complete with double radial end fitting with three-position ball valve, by-pass connection with plug and fill/drain hose connection.
Max. working pressure: 10 bar.
Temperature range: 0–100°C.



Code			
599675	1 1/4"	1	10

3642..S1  **tech. broch. 01144**

Reduction fitting.



Code			
364276S1	1" F x 1 1/4" M	2	10

5020  **tech. broch. 01144**

Automatic air vent with hygroscopic plug.
In hot-stamped brass.
For manifolds end fittings 668...S1 series.
Max. working pressure: 10 bar.
Max. discharge pressure: 2,5 bar.
Max. working temperature: 110°C.



Code			
502043	1/2" M	10	100

675  **tech. broch. 01144**

Push-fit thermometer for panel piping.
For pipes with outer diameter from 15 to 18 mm.
Thermometer scale: 5–50°C.
Thermometer fluid: alcohol.
Thermo-conductive paste supplied in package.



Code			
675900		10	100

386  **tech. broch. 01144**

Screw plug with nut, for manifold outlets.



Code			
386500	3/4"	10	–

658  **tech. broch. 01144**

Pair of brackets for use with boxes, 659 and 661 series or directly on the wall.
With screws and plugs.



Code			
658100		1	20

DISTRIBUTION MANIFOLDS FOR RADIANT PANEL SYSTEMS

664

tech. broch. 01260

Pre-assembled distribution manifold.
 Max. working pressure: 6 bar.
 Temperature range: 5–60°C.
 Outlet centre distance: 50 mm.

- Equipped with:
- return manifold with built-in shut-off valves fitted for thermo-electric actuator;
 - flow manifold complete with flow meters with 0–5 l/m scale and flow rate balancing valves;
 - end fittings with automatic air vent and drain cock;
 - polymer mounting brackets with adjustable centre distance for use with box 659 series or for direct wall mounting.

Code	Connections	Outlet No.	Outlets		
6646B1	1" x 2	2	3/4" M	1	–
6646C1	1" x 3	3	3/4" M	1	–
6646D1	1" x 4	4	3/4" M	1	–
6646E1	1" x 5	5	3/4" M	1	–
6646F1	1" x 6	6	3/4" M	1	–
6646G1	1" x 7	7	3/4" M	1	–
6646H1	1" x 8	8	3/4" M	1	–
6646I1	1" x 9	9	3/4" M	1	–
6646L1	1" x 10	10	3/4" M	1	–
6646M1	1" x 11	11	3/4" M	1	–
6646N1	1" x 12	12	3/4" M	1	–
6646O1	1" x 13	13	3/4" M	1	–



391

Pair of ball shut-off valves with O-Ring seal.
 Max. working pressure: 10 bar.
 Temperature range: 5–100°C.

Code	Connections	Outlet No.	Outlets		
391066	1"	2	3/4" M	1	–

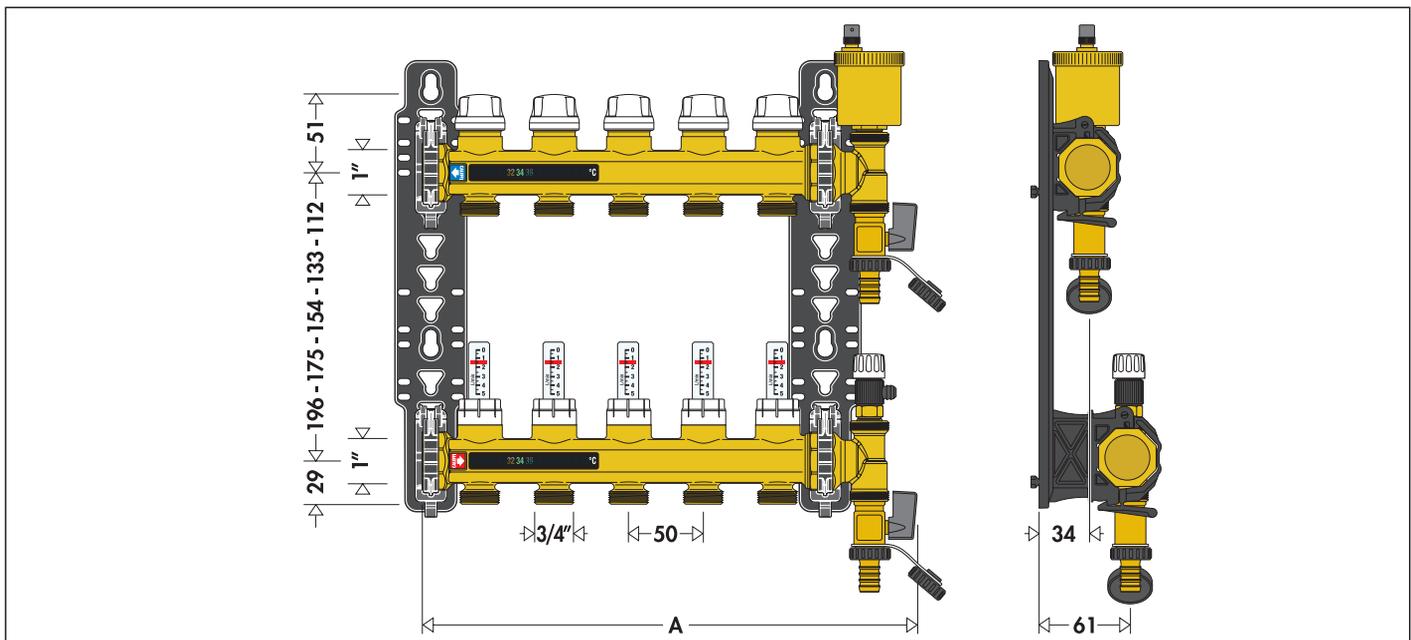


662

Off-centre by-pass assembly with fixed setting 25 kPa (2.500 mm w.g.).
 Max. working pressure: 10 bar.
 Temperature range: -10–110°C.

Code	Connections	Outlet No.	Outlets		
662010	1"	2	3/4" M	1	10

Dimensions of pre-assembled distribution manifold 664 series with flow meters



Panel outlet	2	3	4	5	6	7	8	9	10	11	12	13
A	180	230	280	330	380	440	490	540	590	640	690	750

DISTRIBUTION MANIFOLDS FOR RADIANT PANEL SYSTEMS

662

Pre-assembled distribution manifold.
 Max. working pressure: 10 bar.
 Temperature range: 5–80°C.
 Outlet centre distance: 50 mm.

- Equipped with:
- return manifold with built-in shut-off valves fitted for thermo-electric actuator;
 - flow manifold with micrometric preregulating valves;
 - end fittings with automatic air vent and drain cock;
 - polymer mounting brackets with adjustable centre distance for use with box 659 series or for direct wall mounting.



Code	Connections	Outlet No.	Outlets		
6626B6	1"	x 2	3/4" M	1	-
6626C6	1"	x 3	3/4" M	1	-
6626D6	1"	x 4	3/4" M	1	-
6626E6	1"	x 5	3/4" M	1	-
6626F6	1"	x 6	3/4" M	1	-
6626G6	1"	x 7	3/4" M	1	-
6626H6	1"	x 8	3/4" M	1	-
6626I6	1"	x 9	3/4" M	1	-
6626L6	1"	x 10	3/4" M	1	-
6626M6	1"	x 11	3/4" M	1	-
6626N6	1"	x 12	3/4" M	1	-
6626O6	1"	x 13	3/4" M	1	-

391

Pair of ball shut-off valves with O-Ring seal.
 Max. working pressure: 10 bar.
 Temperature range: 5–100°C.



Code	Connections		
391066	1"	1	-

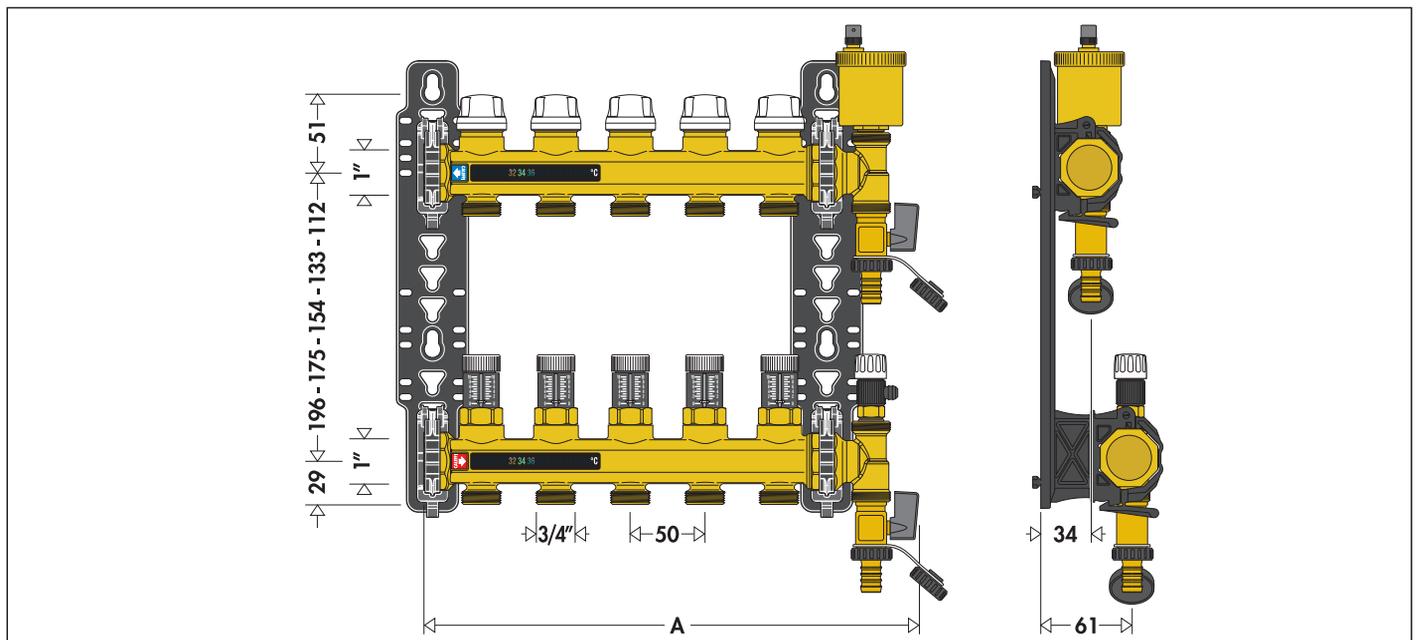
662

Off-centre by-pass assembly with fixed setting 25 kPa (2.500 mm w.g.).
 Max. working pressure: 10 bar.
 Temperature range: -10–110°C.



Code	Connections		
662010		1	10

Dimensions of pre-assembles distribution manifolds 662 series with micrometric valves



Panel outlets	2	3	4	5	6	7	8	9	10	11	12	13
A	180	230	280	330	380	440	490	540	590	640	690	750

THERMO-ELECTRIC ACTUATORS



6563

tech. broch. 01142

Thermo-electric actuator.
With manual opening and position indicator.
For distribution manifolds 670, 671, 668...S1 and 662..6 series. Normally closed.
With auxiliary microswitch.
Supply: 230 V (ac) or 24 V (ac)/(dc).
Auxiliary microswitch contact rating: 0,8 A (230 V).
Power consumption: 3 W.
Starting current: ≤ 1 A.
Ambient temperature range: 0–50°C.
Protection class: IP 40.
Cable length: 80 cm.



Code	Supply voltage V			
656312	230		1	10
656314	24		1	10
656302	230	without auxiliary microswitch	1	10
656304	24	without auxiliary microswitch	1	10



6562

tech. broch. 01198

Thermo-electric actuator.
With opening position indicator.
Quick-coupling installation, with a clip adapter.
For distribution manifolds 670, 671, 668...S1 and 662..6 series. Normally closed.
With auxiliary microswitch.
Supply: 230 V (ac) or 24 V (ac)/(dc).
Auxiliary microswitch contact rating: 0,8 A (230 V).
Power consumption: 3 W.
Starting current: ≤ 1 A.
Ambient temperature range: 0–50°C.
Protection class: IP 54.
Cable length: 80 cm.



Code	Supply voltage V			
656212	230		1	10
656214	24		1	10
656202	230	without auxiliary microswitch	1	10
656204	24	without auxiliary microswitch	1	10



6561

tech. broch. 01042

Thermo-electric actuator.
For distribution manifolds 670, 671, 668...S1 and 662..6 series. Normally closed.
With auxiliary microswitch.
Supply: 230 V (ac) or 24 V (ac)/(dc).
Auxiliary microswitch contact rating: 0,8 A (230 V).
Power consumption: 3 W.
Starting current: ≤ 1 A.
Max. ambient temperature: 50°C.
Protection class: IP 44 (vertical stem).
Cable length: 80 cm.



Code	Supply voltage V			
656112	230		1	10
656114	24		1	10
656102	230	without auxiliary microswitch	1	10
656104	24	without auxiliary microswitch	1	10



6564

tech. broch. 01198

Thermo-electric actuator with low power consumption.
With opening position indicator.
Quick-coupling installation, with a clip adapter.
For distribution manifolds 670, 671, 668...S1 and 662..6 series. Normally closed.
With auxiliary microswitch.
Supply: 230 V (ac) or 24 V (ac)/(dc).
Auxiliary microswitch contact rating: 0,8 A (230 V).
Power consumption: 3 W.
Starting current: ≤ 250 mA (230 V).
Ambient temperature range: 0–50°C.
Protection class: IP 54.
Cable length: 80 cm.



Code	Supply voltage V			
656412	230		1	10
656414	24		1	10
656402	230	without auxiliary microswitch	1	10
656404	24	without auxiliary microswitch	1	10

6205

tech. broch. 01186

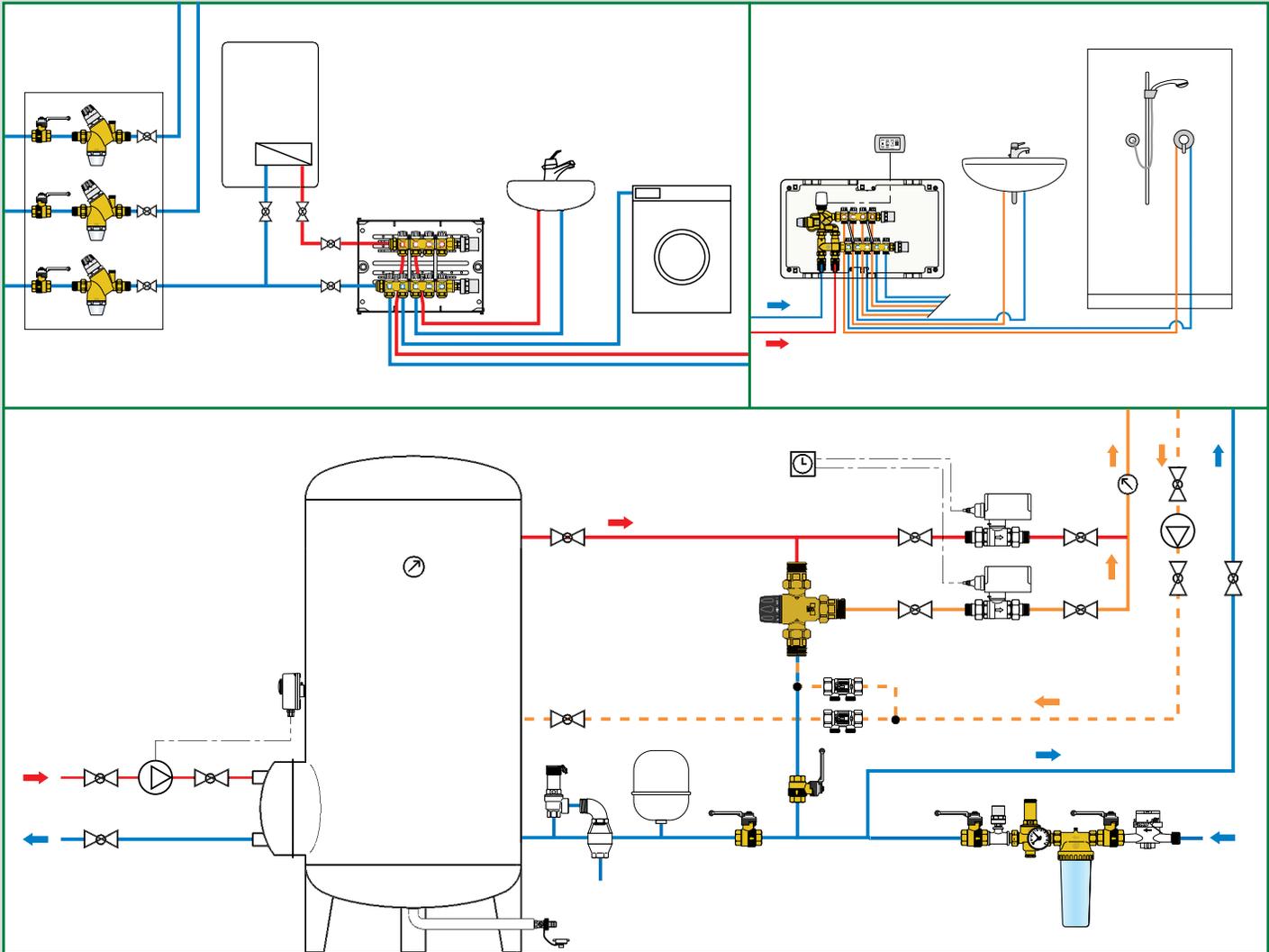
Control bar.
Supply: 230 V - 50/60 Hz.
Power consumption: 5,5 VA max (8 outputs).
Changeover contacts: 10 A.
Protection class: IP 30 (with rubber cable clamps).
Output command for pump.
Input for SUMMER - WINTER.
Input for timer.



620542	4 canali	1	–
620582	8 canali	1	–

COMPONENTS FOR DOMESTIC WATER SYSTEMS

This diagram is just an indication



6

- Pressure reducing valves
- Pressure reducing and stabilising valves
- Strainers cartridges and housing
- Water hammer arresters, ANTISHOCK
- Ball valves with built-in check valve, BALLSTOP
- Electronic mixing valve with programmable thermal disinfection, LEGIOMIX®
- Unit for temperature control and thermal disinfection, LEGIOFLOW®
- Anti-scald device / Timer for valve operation
- Thermostatic mixing valves
- Tempering valves
- Hydraulic safety groups for hot water storage heaters
- Welded expansion vessel for hot water storage
- Flow limiter
- Pre-assembled domestic water distribution manifolds
- Anti-freeze safety device

PRE-ADJUSTABLE PRESSURE REDUCING VALVES

5350

tech. broch. 01085

Pressure reducing valve with self-contained replaceable cartridge. CR dezincification resistant alloy body. With pressure regulating scale for manual pressure adjustment. Male union connections. Max. upstream pressure: 25 bar. Downstream setting pressure range: 1-6 bar. Max. working temperature: 40°C. Certified to EN 1567.



With pressure gauge 0-10 bar

Code			
535041	1/2"	1	5
535051	3/4"	1	5
535061	1"	1	5
535075	1 1/4" with 1" reduced cartridge	1	5

With 1/4" F pressure gauge connection

Code			
535040	1/2"	1	5
535050	3/4"	1	5
535060	1"	1	5
535074	1 1/4" with 1" reduced cartridge	1	5

5350

tech. broch. 01085

Pressure reducing valve with self-contained replaceable cartridge. CR dezincification resistant alloy body. With pressure regulating scale for manual pressure adjustment. Male union connections. Max. upstream pressure: 25 bar. Downstream setting pressure range: 1-6 bar. Max. working temperature: 40°C. Certified to EN 1567.



With pressure gauge 0-10 bar

Code			
535071	1 1/4"	1	4
535081	1 1/2"	1	4
535091	2"	1	4

With 1/4" F pressure gauge connection

Code			
535070	1 1/4"	1	4
535080	1 1/2"	1	4
535090	2"	1	4

5350

Pressure reducing valve with self-contained replaceable cartridge. CR dezincification resistant alloy body. With pressure regulating scale for manual pressure adjustment. Ø 22 mm with compression ends. Max. upstream pressure: 25 bar. Downstream setting pressure range: 1-6 bar. Max. working temperature: 40°C.



With 1/4" F pressure gauge connection

Code			
535022	Ø 22	1	10

5351

tech. broch. 01085

Pressure reducing valve with self-contained replaceable cartridge. Brass body. With pressure regulating scale for manual pressure adjustment. Stainless steel strainer cartridge with transparent housing. Male union connections. Max. upstream pressure: 25 bar. Downstream setting pressure range: 1-6 bar. Max. working temperature: 40°C. Strainer mesh size Ø: 0,28 mm. Certified to EN 1567. With replacement strainer key to service strainer and cartridge.



With stainless steel pressure gauge 0-10 bar

Code			
535141	1/2"	1	5
535151	3/4"	1	5
535161	1"	1	5

With 1/4" F pressure gauge connection

Code			
535141	1/2"	1	5
535151	3/4"	1	5
535161	1"	1	5

5350

Spare cartridge and key to service strainer and cartridge. For pressure reducing valves 5350 and 5351 series.



Code			
535004	1/2" - 3/4"	1	8
535006	1"	1	8
535017	1 1/4" (535074 - 535075)	1	-
535007	1 1/4" - 1 1/2" - 2"	1	-
R52484	key to service strainer and cartridge	1	-

PRESSURE REDUCING VALVES

5360

tech. broch. 01026



Pressure reducing valve with replaceable cartridge. CR dezincification resistant alloy body. Male union connections. Max. upstream pressure: 25 bar. Downstream setting pressure range: 0,5–6 bar. On request 6–10 bar. Max. working temperature: 80°C. Certified to EN 1567.



With pressure gauge 0–10 bar

Code			
536041	1/2"	1	5
536051	3/4"	1	5
536061	1"	1	5
536071	1 1/4"	1	4
536081	1 1/2" without DVGW - SVGW certifications	1	4

With 1/4" F pressure gauge connection

Code			
536040	1/2"	1	5
536050	3/4"	1	5
536060	1"	1	5
536070	1 1/4"	1	4
536080	1 1/2" without DVGW - SVGW certifications	1	4

5362

tech. broch. 01026



Pressure reducing valve with replaceable cartridge. CR dezincification resistant alloy body. Female connections. Max. upstream pressure: 25 bar. Downstream setting pressure range: 0,5–6 bar. Max. working temperature: 80°C.



With pressure gauge 0–10 bar

Code			
536241	1/2"	1	5
536251	3/4"	1	5
536261	1"	1	5

With 1/4" F pressure gauge connection

Code			
536240	1/2"	1	5
536250	3/4"	1	5
536260	1"	1	5

537

Soldering union connections.



Code			
537015	1/2" x Ø 15	1	–
537022	3/4" x Ø 22	1	–
537028	1" x Ø 28	1	–
537035	1 1/4" x Ø 35	1	–

5365

tech. broch. 01026



Pressure reducing valve with replaceable cartridge. Bronze body. Male union connections. Max. upstream pressure: 25 bar. Downstream setting pressure range: 0,5–6 bar. On request 6–10 bar. Max. working temperature: 80°C. Pressure gauge upstream: 0–25 bar. Pressure gauge downstream: 0–10 bar. Certified to EN 1567.



With double pressure gauge in glycerine bath

Code			
536581	1 1/2"	1	–
536591	2"	1	–

With 1/4" F double pressure gauge connection

Code			
536580	1 1/2"	1	–
536590	2"	1	–

5366

tech. broch. 01026



Pressure reducing valve with replaceable cartridge. Bronze body. Flanged connections, PN 16. To be coupled with flat counterflanges EN 1092-1. Max. upstream pressure: 16 bar. Downstream setting pressure range: 0,5–6 bar. On request 6–10 bar. Max. working temperature: 80°C. Pressure gauge upstream: 0–25 bar. Pressure gauge downstream: 0–10 bar.



With double pressure gauge in glycerine bath

Code			
536660	DN 65	1	–

5360

Spare cartridge for pressure reducing valves 5360, 5362, 5365 and 5366 series.



Code			
536004	1/2"	1	–
536005	3/4" - 1"	1	–
536007	1 1/4" - 1 1/2" (5360)	1	–
536008	1 1/2" (5365) - 2" - DN 65	1	–

PRESSURE REDUCING AND STABILISING VALVES

539



Pressure reducing valve.
CR dezincification resistant alloy body.
 Supplied with two female - male fittings.
 Max. upstream pressure: 25 bar.
 Downstream setting pressure range: 1-6 bar.
 Max. working temperature: 80°C.
 With 1/4" F double pressure gauge connections.
Certified to EN 1567.



Code			
539250	3/4"	1	20

576



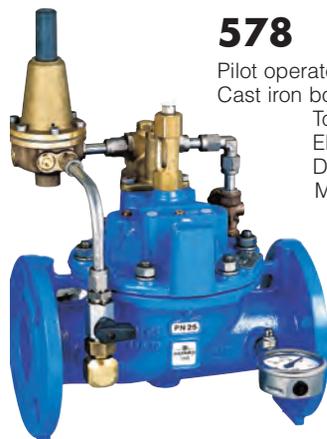
Pressure reducing valve.
 Cast iron body, PN 16. Flanged connections.
 To be coupled with flat counterflanges EN 1092-1:
 DN 80-DN 150, PN 16; DN 200, PN 10.
 Max. upstream pressure: 16 bar.
 Downstream setting pressure range: 1,5-6 bar.
 On request 6-12 bar.
 Supplied with double pressure gauge: 0-16 bar.

tech. broch. 01183

* For combination with Y-strainer 579 series see page 155.

Code			
576080	DN 80	1	-
576100	DN 100	1	-
576120	DN 125	1	-
576150	DN 150	1	-
576200	DN 200	1	-

578



Pilot operated pressure reducing valves.
 Cast iron body, PN 25. Flanged connections.
 To be coupled with flat counterflanges EN 1092-1:
 DN 65-DN 150, PN 16; DN 200-DN 300, PN 10.
 Max. upstream pressure: 25 bar.
 Downstream setting pressure range: 1-20 bar.
 With pressure gauges.

Code			
578060	DN 65	1	-
578080	DN 80	1	-
578100	DN 100	1	-
578120	DN 125	1	-
578150	DN 150	1	-
578200	DN 200	1	-
578250	DN 250	1	-
578300	DN 300	1	-

INCLINED PRESSURE REDUCING VALVES FOR HIGH TEMPERATURE

NEW



5330..H

tech. broch. 01252

Inclined pressure reducing valve.
 For high temperature.
 Replaceable cartridge and strainer.
 Brass body. Chrome plated.
 Max. upstream pressure: 16 bar.
 Downstream setting pressure range: 1-5,5 bar.
 Max. working temperature: 80°C.



Code			
533041H	1/2"	1	20
533051H	3/4"	1	20

NEW



5332..H

tech. broch. 01252

Inclined pressure reducing valve.
 For high temperature.
 Replaceable cartridge and strainer.
 Brass body. Chrome plated.
 Max. upstream pressure: 16 bar.
 Downstream setting pressure range: 1-5,5 bar.
 Max. working temperature: 80°C.
 With pressure gauge: 0-10 bar.



Code			
533241H	1/2"	1	20
533251H	3/4"	1	20

NEW



5334..H

tech. broch. 01252

Inclined pressure reducing valve.
 For high temperature.
 Replaceable cartridge and strainer.
 Brass body. Chrome plated.
 Max. upstream pressure: 16 bar.
 Downstream setting pressure range: 1-5,5 bar.
 Max. working temperature: 80°C.
 With 1/4" F pressure gauge connection.



Code			
533441H	1/2"	1	20
533451H	3/4"	1	20
533461H	1"	1	25

INCLINED PRESSURE REDUCING VALVES FOR HIGH TEMPERATURE

NEW



5331..H  [tech. broch. 01252](#)
 Inclined pressure reducing valve for safety group.
 For high temperature.
 Replaceable cartridge and strainer.
 CR dezincification resistant alloy body.
 Max. upstream pressure: 16 bar.
 Downstream setting pressure range: 1-5,5 bar.
 Max. working temperature: 80°C.



Code			
533159H	3/4" M x nut 3/4" F	1	25



5336..H  [tech. broch. 01252](#)
 Inclined pressure reducing valve with compression ends.
 For high temperature.
 Replaceable cartridge and strainer.
 CR dezincification resistant alloy body.
 Chrome plated.
 Max. upstream pressure: 16 bar.
 Downstream setting pressure range: 1-5,5 bar.
 Max. working temperature: 80°C.



Code			
533641H	Ø 15	1	25
533651H	Ø 22	1	25



5332..H  [tech. broch. 01252](#)
 Inclined pressure reducing valve.
 For high temperature.
 Replaceable cartridge and strainer.
 CR dezincification resistant alloy body.
 Chrome plated.
 Max. upstream pressure: 16 bar.
 Downstream setting pressure range: 1-5,5 bar.
 Max. working temperature: 80°C.
 With pressure gauge: 0-10 bar.



Code			
533241H LTC	1/2"	1	20
533251H LTC	3/4"	1	20
533261H LTC	1"	1	20



5337..H  [tech. broch. 01252](#)
 Inclined pressure reducing valve with compression ends.
 For high temperature.
 Replaceable cartridge and strainer.
 CR dezincification resistant alloy body.
 Chrome plated.
 Max. upstream pressure: 16 bar.
 Downstream setting pressure range: 1-5,5 bar.
 Max. working temperature: 80°C.
 With 1/4" F pressure gauge connection.



Code			
533741H	Ø 15	1	20
533751H	Ø 22	1	20
533761H	Ø 28	1	20



5334..H  [tech. broch. 01252](#)
 Inclined pressure reducing valve.
 For high temperature.
 Replaceable cartridge and strainer.
 CR dezincification resistant alloy body.
 Chrome plated.
 Max. upstream pressure: 16 bar.
 Downstream setting pressure range: 1-5,5 bar.
 Max. working temperature: 80°C.
 With 1/4" F pressure gauge connection.



Code			
533441H LTC	1/2"	1	20
533451H LTC	3/4"	1	20
533461H LTC	1"	1	20



5338..H  [tech. broch. 01252](#)
 Inclined pressure reducing valve with compression ends.
 For high temperature.
 Replaceable cartridge and strainer.
 CR dezincification resistant alloy body.
 Chrome plated.
 Max. upstream pressure: 16 bar.
 Downstream setting pressure range: 1-5,5 bar.
 Max. working temperature: 80°C.
 With pressure gauge: 0-10 bar.



Code			
533841H	Ø 15	1	20
533851H	Ø 22	1	20
533861H	Ø 28	1	20

INCLINED PRESSURE REDUCING VALVES FOR HIGH TEMPERATURE

NEW



5335..H

Inclined pressure reducing valve. Replaceable cartridge and strainer. **CR** dezincification resistant alloy body. Max. inlet pressure: 2000 kPa. Downstream setting pressure range: 100–600 kPa. Max. working temperature: 80°C. With 1/4" F pressure gauge connection.



Code

533545H AUS	1/2"	1	25
533555H AUS	3/4"	1	25
533565H AUS	1"	1	10

INCLINED PRESSURE REDUCING VALVES

5335



Inclined pressure reducing valve. Replaceable cartridge and strainer. **CR** dezincification resistant alloy body. Max. upstream pressure: 1600 kPa. Downstream setting pressure range: 100–600 kPa. Max. working temperature: 40°C. With 1/4" F pressure gauge connection.



Code

533545 AUS	1/2"	1	25
533555 AUS	3/4"	1	25

NEW



5335..H

Three-way inclined pressure reducing valve. Replaceable cartridge and strainer. **CR** dezincification resistant alloy body. Interchangeable outlet, with plug. Max. inlet pressure: 2000 kPa. Downstream setting pressure range: 100–600 kPa. Max. working temperature: 80°C.



Code

533550H AUS	3/4"	1	30
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5335



Three-way inclined pressure reducing valve. Replaceable cartridge and strainer. **CR** dezincification resistant alloy body. Interchangeable outlet, with plug. Max. upstream pressure: 1600 kPa. Downstream setting pressure range: 100–600 kPa. Max. working temperature: 40°C.



Code

533550 AUS	3/4"	1	30
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NEW



5335..H

Two-way inclined pressure reducing valve. Replaceable cartridge and strainer. **CR** dezincification resistant alloy body. Interchangeable outlet, with plug. Max. inlet pressure: 2000 kPa. Downstream setting pressure: 500 kPa. Max. working temperature: 80°C.



Code

533551H AUS	3/4"	1	30
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5339



Inclined pressure reducing valve with compression ends and built-in safety relief valve.

Pressure reducing valve. **CR** dezincification resistant alloy body. Replaceable cartridge and strainer. Max. upstream pressure: 1600 kPa. Downstream setting pressure range: 100–600 kPa. Max. working temperature: 40°C.

Safety relief valve. With stainless steel seat. **CR** dezincification resistant alloy body.



Code

533944	Ø 15	1	25
533954	Ø 22	1	25

INCLINED PRESSURE REDUCING VALVES



5330

tech. broch. 01024

Inclined pressure reducing valve. Replaceable cartridge and strainer. Brass body. Chrome plated. Max. upstream pressure: 16 bar. Downstream setting pressure range: 1-6 bar. Max. working temperature: 40°C.



Code			
533041	1/2"	1	20
533051	3/4"	1	20



5336

tech. broch. 01024

Inclined pressure reducing valve with compression ends. Replaceable cartridge and strainer. CR dezincification resistant alloy body. Chrome plated. Max. upstream pressure: 16 bar. Downstream setting pressure range: 1-6 bar. Max. working temperature: 40°C.



Code			
533641	Ø 15	1	25
533651	Ø 22	1	25



5331

tech. broch. 01024

Inclined pressure reducing valve for safety group. Replaceable cartridge and strainer. Brass body. Chrome plated. Max. upstream pressure: 16 bar. Downstream setting pressure range: 1-6 bar. Max. working temperature: 40°C.



Code			
533151	3/4" M x nut 3/4" F	1	25



5337

tech. broch. 01024

Inclined pressure reducing valve with compression ends. Replaceable cartridge and strainer. CR dezincification resistant alloy body. Chrome plated. Max. upstream pressure: 16 bar. Downstream setting pressure range: 1-6 bar. Max. working temperature: 40°C. With 1/4" F pressure gauge connection.



Code			
533741	Ø 15	1	20
533751	Ø 22	1	20



5332

tech. broch. 01024

Inclined pressure reducing valve. Replaceable cartridge and strainer. Brass body. Chrome plated. Max. upstream pressure: 16 bar. Downstream setting pressure range: 1-6 bar. Max. working temperature: 40°C. With pressure gauge: 0-10 bar.



Code			
533241	1/2"	1	20
533251	3/4"	1	20



5338

tech. broch. 01024

Inclined pressure reducing valve with compression ends. Replaceable cartridge and strainer. CR dezincification resistant alloy body. Chrome plated. Max. upstream pressure: 16 bar. Downstream setting pressure range: 1-6 bar. Max. working temperature: 60°C. With pressure gauge: 0-10 bar.



Code			
533841	Ø 15	1	20
533851	Ø 22	1	20



5334

tech. broch. 01024

Inclined pressure reducing valve. Replaceable cartridge and strainer. Brass body. Chrome plated. Max. upstream pressure: 16 bar. Downstream setting pressure range: 1-6 bar. Max. working temperature: 40°C. With 1/4" F pressure gauge connection.



Code			
533441	1/2"	1	20
533451	3/4"	1	20



5330

Spare cartridge. For inclined pressure reducing valves 5330, 5331, 5332, 5334, 5335, 5336, 5337, 5338 and 5339 series.

Code			
533000		1	100



5370

tech. broch. 01028

Housing for strainer cartridges of standard nominal size 10".
Brass body, transparent plastic housing.
Max. working pressure: 16 bar.
Temperature range: 5–40°C.

Code

537050	3/4"	1	–
537060	1"	1	–



5370

tech. broch. 01028

Strainer cartridges for housing 5370 series.
Standard nominal size 10".
Temperature range: 5–40°C.
Max. Δp: 3 bar.
Characteristics:
537004 - nylon washable mesh - 60 μm,
537005 - stainless steel mesh - 50 μm.

Code

537004		1	–
537005		1	–



3037 ROBOCHECK-1

15 mm single check valve with compression ends.
CR dezincification resistant alloy body.
Chrome plated.
Max. working pressure: 10 bar.
Max. working temperature: 90°C.

Code

303715	Ø 15	10	100
---------------	------	----	-----



3038 ROBOCHECK-2

15 mm controllable double check valve with compression ends.
CR dezincification resistant alloy body.
Chrome plated.
Max. working pressure: 10 bar.
Max. working temperature: 90°C.

Code

303815	Ø 15	10	100
---------------	------	----	-----

WATER HAMMER ARRESTERS



525 ANTISHOCK

tech. broch. 01020

Water hammer arrester.
Brass body. Chrome plated.
Max. working pressure: 10 bar.
Max. working temperature: 90°C.
PTFE seal on thread.

Code

525040	1/2"	1	25
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525 ANTISHOCK

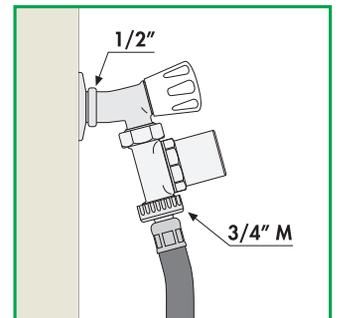
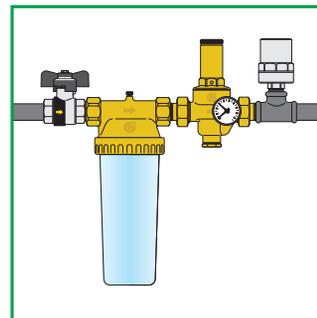
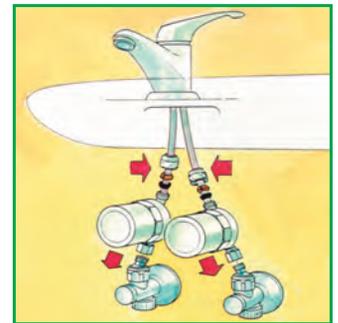
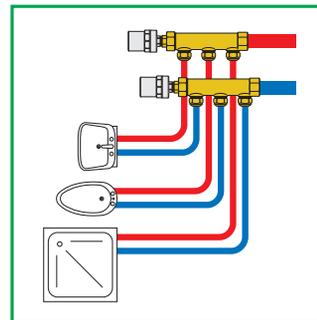
tech. broch. 01020

Water hammer arrester for fitting under sinks, wash-hand basins and washing machine (3/4").
Brass body. Chrome plated.
Max. working pressure: 10 bar.
Max. working temperature: 90°C.

Code

525130	3/8" F nut x 3/8" M	1	25
525150	3/4" F nut x 3/4" M	1	25

Installation diagrams of water hammer arrester 525 series



BALL VALVE WITH BUILT-IN CHECK VALVE



3230 BALLSTOP tech. broch. 01021

Ball valve with built-in check valve.
Brass body.
Female connections.
Butterfly handle.
Max. working pressure: 16 bar.
Temperature range: 5–90°C.



Code			
323040	1/2"	10	–
323050	3/4"	10	–
323060	1"	4	–



333 BALLSTOP tech. broch. 01021

Ball valve with built-in check valve.
Brass body.
Female - nut connection.
Drilled tamper-proof safety nut.
Butterfly handle.
Max. working pressure: 16 bar.
Temperature range: 5–90°C.



Code			
333400	1/2" F x nut 3/4" F	10	–
333500	3/4" F x nut 3/4" F	10	–



3230 BALLSTOP tech. broch. 01021

Ball valve with built-in check valve.
Brass body.
Female connections.
Lever handle.
Max. working pressure: 16 bar.
Temperature range: 5–90°C.



Code			
323070	1 1/4"	4	–
323080	1 1/2"	2	–
323090	2"	1	–



334 BALLSTOP tech. broch. 01021

Ball valve with built-in check valve.
Brass body.
Male - nut connection.
Drilled tamper-proof safety nut.
Butterfly handle.
Max. working pressure: 16 bar.
Temperature range: 5–90°C.



Code			
334400	1/2" M x nut 3/4" F	10	–
334500	3/4" M x nut 3/4" F	10	–

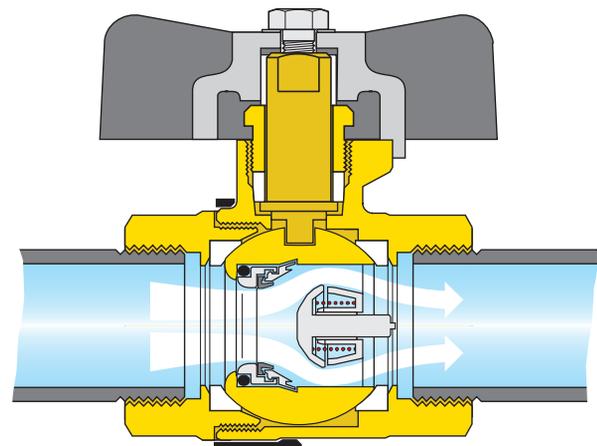


332 BALLSTOP tech. broch. 01021

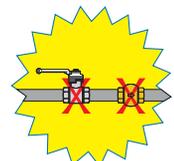
Ball valve with built-in check valve.
Brass body.
Male - female connections.
Butterfly handle.
Max. working pressure: 16 bar.
Temperature range: 5–90°C.



Code			
332400	1/2" M x 1/2" F	10	–



BALLSTOP
TWO VALVES
IN ONE



ELECTRONIC MIXING VALVE WITH PROGRAMMABLE THERMAL DISINFECTION

Sizing software is available on www.caleffi.com

6000 LEGIOMIX®

Electronic mixing valve with programmable thermal disinfection and check on disinfection. Male threaded connections with union.

Consisting of:

- **three-way ball valve,**
- **actuator,**
- **regulator,**
- **flow temperature probe,**
- **return temperature probe.**

With auxiliary microswitches for disinfection management and other devices.

Fitted for a monitoring and remote control connection.

Supply: 230 V - 50/60 Hz - (6,5+6) VA.

Adjustment temperature range: 20–85°C.

Disinfection temperature range: 40–85°C.

Max. working pressure: 10 bar.

Max. inlet temperature: 100°C.

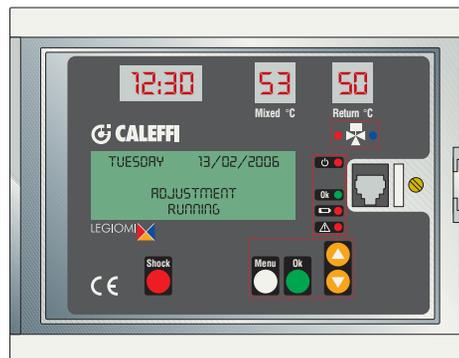
Protection class: IP 65 (actuator).

tech. broch. 01086

Function

This particular series of electronic mixing valves is equipped with a special regulator **that controls a set of programs for circuit thermal disinfection**. In addition it enables checking the temperature and time for thermal disinfection are actually reached and undertaking the appropriate corrective action.

All the parameters are updated every day and logged, recording the temperatures by time.



Spare parts for electronic mixing valve with programmable thermal disinfection 6000 series with threaded connections, **previous chrome plated version.**

Code		Kv (m³/h)		
600051	3/4"	8,4	1	–
600061	1"	10,6	1	–
600071	1 1/4"	21,2	1	–
600081	1 1/2"	32,5	1	–
600091	2"	41,0	1	–

Spare parts for mixing valve, **yellow version.**

Consisting of:

- **three-way ball valve,**
- **actuator,**
- **flow temperature probe.**

Code	
600251	for code 600051
600261	for code 600061
600271	for code 600071
600281	for code 600081
600291	for code 600091

Code

F69482	actuator 230 V (ac) for 600050–600090 - grey colour
R69489	three-way valve with tailpiece/nut for 600050
R69490	three-way valve with tailpiece/nut for 600060
F69708	three-way valve with tailpiece/nut for 600082 and 600092
F69591	recirculation probe for check on disinfection
F69531	contact probe holder for recirculation loop
F69433	regulator with check on disinfection
R19101	temperature gauge

Spare parts for electronic mixing valve with programmable thermal disinfection 6000 series with threaded connections, **yellow version.**

Code

645112	actuator 230 V (ac) for 600051–600091
F69798	body valve without unions and probe holder for code 600051
F69799	body valve without unions and probe holder for code 600061
F69801	body valve without unions and probe holder for code 600071
F69803	body valve without unions and probe holder for code 600081/91
F69807	flow probe for 3/4"-1"-1 1/4"
F69804	flow probe for 1 1/2"-2"
F69591	recirculation probe for check on disinfection
F69531	contact probe holder for recirculation loop
F69433	regulator with check on disinfection
R19101	temperature gauge

ELECTRONIC MIXING VALVE WITH PROGRAMMABLE THERMAL DISINFECTION

Sizing software is available on www.caleffi.com

6000 LEGIOMIX®

tech. broch. 01086

Electronic mixing valve with programmable thermal disinfection and check on disinfection. Flanged connections. Consisting of:

- three-way ball valve,
- actuator,
- regulator,
- flow temperature probe,
- return temperature probe.

With auxiliary microswitches for disinfection management and other devices.

Fitted for a monitoring and remote control connection.

Supply: 230 V - 50/60 Hz - (6,5+10,5) VA.

Adjustment temperature range: 20–85°C.

Disinfection temperature range: 40–85°C.

To be coupled with flat counterflanges EN 1092-1, PN 16.

Max. working pressure: 10 bar.

Max. inlet temperature: 100°C.

Protection class: IP 65 (actuator).



Code		Kv (m³/h)		
600006	DN 65	90,0	1	-
600008	DN 80	120,0	1	-

Spare parts for electronic mixing valve with programmable thermal disinfection 6000 series with flanged connections.

Code

F69381	flow or return temperature probe
F69393	three-way valve with flanged connections for 600006
F69394	three-way valve with flanged connections for 600008
F69395	actuator 230 V (ac) for 600006 and 600008
F69433*	regulator with check on disinfection
F69591	recirculation probe for check on disinfection
F69531	contact probe holder for recirculation loop

* To be used to replace the previous version

6001 LEGIOMIX® interface

tech. broch. 01086

LEGIOMIX® interface for local or remote transmission and management of the electronic mixing valve 6000 series. Complete with:

- RS232 interface-computer connection cable,
- LEGIOMIX® interface connection cable with telephone connector,
- USB/serial adaptor,
- transmission and management software.

Supply: 230 V - 50 Hz - 5 VA.

Dimensions: 165 x 120 x 40 mm.



Code

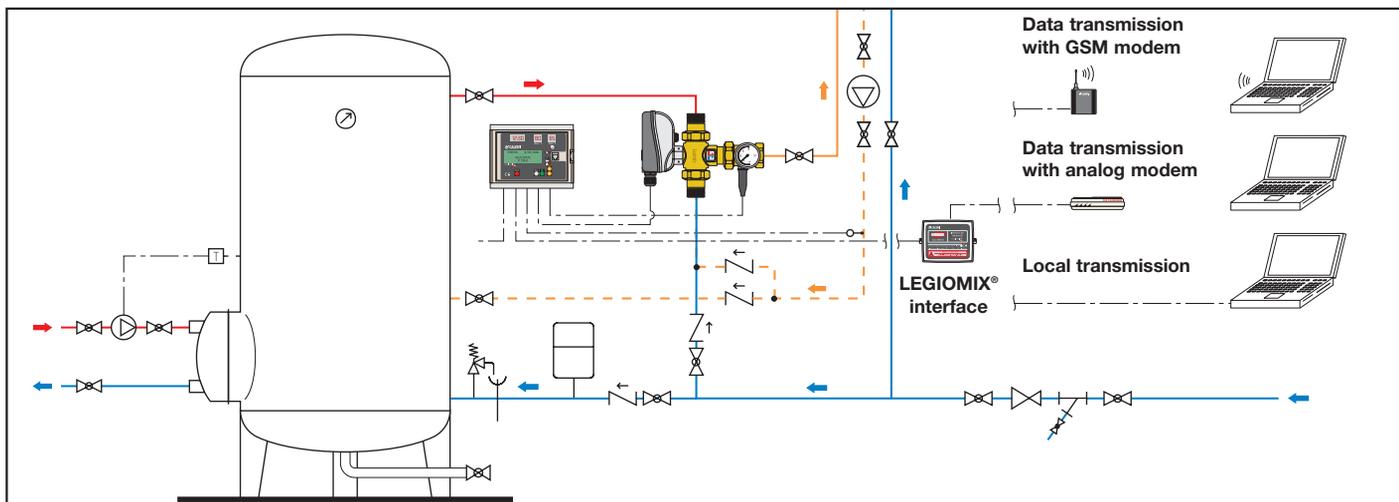
600100		1	-
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7558 Accessories

Code

755845	analog modem
755846	GSM digital modem
755855/N	bus cable (FROR 450/750 - 2x1 mm²) - reel 100 m

Application diagram of electronic mixing valve 6000 series



UNIT FOR TEMPERATURE CONTROL AND THERMAL DISINFECTION

6005 LEGIOFLOW®

tech. broch. 01160

Multi-function compact unit for temperature control, thermal disinfection and distribution for domestic water system. Consisting of:
 - anti-scald thermostatic mixing valve,
 - automatic flushing valve for thermal disinfection with thermo-electric actuator,
 - shut-off ball valve with built-in strainers and check valves,
 - cold water circuit outlet kit.

Inlet connections: 3/4" M.
 Outlet connections: 3/4" M with union.



Mixing valve
 CR dezincification resistant alloy body.
 Max. working pressure: 10 bar.
 Adjustment temperature range: 30–50°C.
 Factory setting: 43°C.
 Max. inlet temperature at primary circuit: 85°C.
 Performance to standards NF 079 doc. 8, EN 1111 and EN 1287.

Thermo-electric actuator
 Normally closed.
 Supply: 230 V (ac).
 Power consumption: 3 W.
 Protection class: IP 44.
 Cable length: 80 cm.



With thermo-electric actuator

Code	Connections	Kv (m³/h) mixing valve	Kv (m³/h) flushing valve		
600500	3/4"	1,75	1,80	1	6

Without thermo-electric actuator

Code	Connections	Kv (m³/h) mixing valve	Kv (m³/h) flushing valve		
600501	3/4"	1,75	1,80	1	6



Version without cold water circuit outlet kit.
 For applications with push button or photo-cell activated user taps.



With thermo-electric actuator

Code	Connections	Kv (m³/h) mixing valve	Kv (m³/h) flushing valve		
600502	3/4"	1,75	1,80	1	6

Without thermo-electric actuator

Code	Connections	Kv (m³/h) mixing valve	Kv (m³/h) flushing valve		
600503	3/4"	1,75	1,80	1	6

6005 LEGIOFLOW®

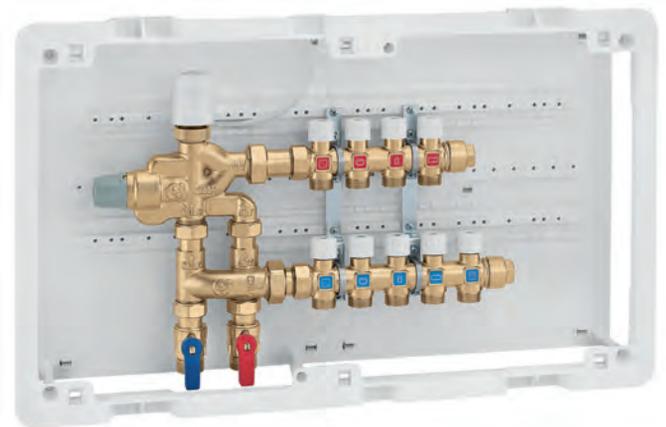
tech. broch. 01160

Multi-function compact unit for temperature control, thermal disinfection and distribution for domestic water system. Consisting of:
 - anti-scald thermostatic mixing valve,
 - automatic flushing valve for thermal disinfection with thermo-electric actuator,
 - shut-off ball valve with built-in strainers and check valves,
 - cold water circuit outlet kit,
 - distribution manifolds with built-in shut-off valves,
 - box code 362056 (560x330x80 mm).

Mixing valve
 CR dezincification resistant alloy body.
 Max. working pressure: 10 bar.
 Adjustment temperature range: 30–50°C.
 Factory set: 43°C.
 Max. inlet temperature at primary circuit: 85°C.
 Performance to standards NF 079 doc. 8, EN 1111 and EN 1287.

Thermo-electric actuator
 Normally closed.
 Supply: 230 V (ac).
 Power consumption: 3 W.
 Protection class: IP 44.
 Cable length: 80 cm.

Distribution manifolds
 CR dezincification resistant alloy body.
 Max. working pressure: 10 bar.
 Working temperature range: 5–100°C.
 Outlet centre distance: 35 mm.



With thermo-electric actuator

Code	Connections	Outlets No. cold hot	Outlets		
600530	3/4"	3 2	23 p.1,5 M	1	–
600540	3/4"	4 3	23 p.1,5 M	1	–
600550	3/4"	5 4	23 p.1,5 M	1	–

Without thermo-electric actuator

Code	Connections	Outlets No. cold hot	Outlets		
600531	3/4"	3 2	23 p.1,5 M	1	–
600541	3/4"	4 3	23 p.1,5 M	1	–
600551	3/4"	5 4	23 p.1,5 M	1	–

UNIT FOR TEMPERATURE CONTROL AND THERMAL DISINFECTION

Legionella-danger of scalding

As shown in the diagram provided, temperatures of more than 50°C can cause scalds very quickly. For example, at 55°C, partial burning will occur in approximately 30 seconds, while at 60°C partial burning will occur in approximately 5 seconds. On average, these times can be halved for children and elderly people. Therefore, it is necessary to use a thermostatic mixing valve able to:

- reduce the temperature at the point of use to a value lower than that of the storage and make it suitable for domestic use.
- maintain the temperature constant despite any variation of the incoming pressure and temperature.
- prevent the water temperature at the outlet from reaching values above 50°C.
- have an anti-scald safety function in case of failure of the cold water supply.

Exposure time required to cause partial burns

Temperature	Adults	Childrens 0-5 years
70°C	1 s	--
65°C	2 s	0,5 s
60°C	5 s	1 s
55°C	30 s	10 s
50°C	5 min	2,5 min

Thermal disinfection

To be more certain that there is no growth of Legionella, all sections of the network must be subjected to thermal disinfection. Even in the section downstream of the mixing valve, as far as the user tap, it must be possible to flush the system at temperatures exceeding 60°C. This means by-passing the thermostatic mixing valve, which is set at lower values, and activating another valve that allows the taps to be fed directly with the hot water arriving from the distribution network.

Function

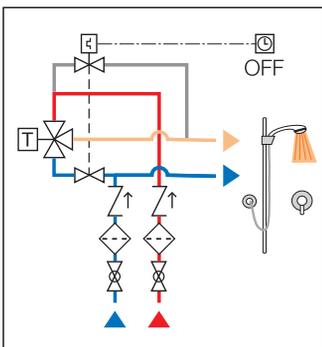
The multi-function unit is used in domestic water systems to control the hot and cold water delivered to user taps, serving a bathroom or a dwelling. A high-performance adjustable thermostatic mixing valve keeps the hot water temperature at the desired level and protects the user from the danger of scalding.

A flushing valve is used for the circuit thermal disinfection all the way to the tap, in compliance with anti-Legionella regulations.

Hydraulic diagram

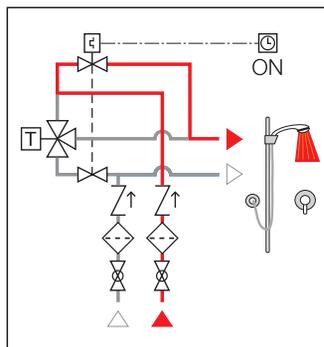
With mixing

- Flushing valve closed
- Cold water valve open



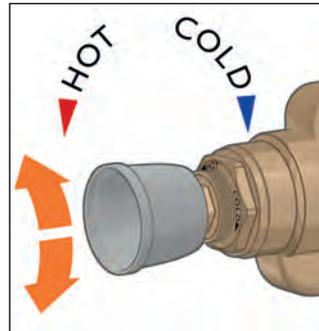
With thermal disinfection

- Flushing valve open
- Cold water valve closed

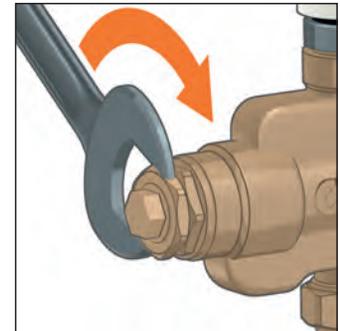


Temperature adjustment

Temperature adjustment



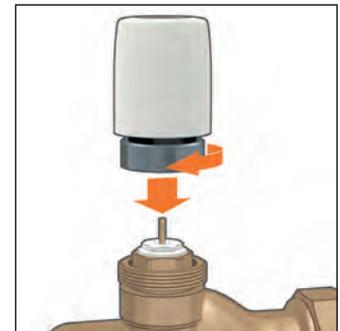
Adjustment locking using the locking nut



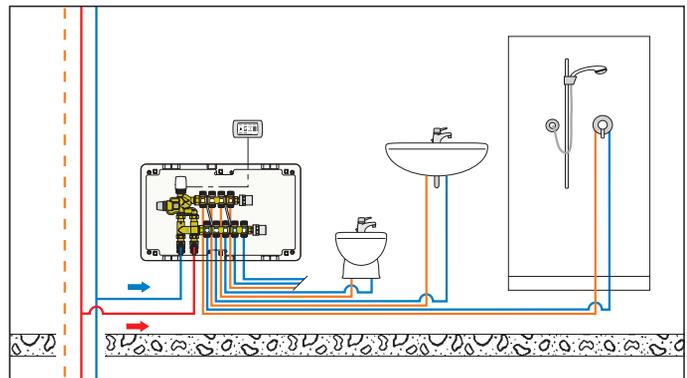
Manual opening



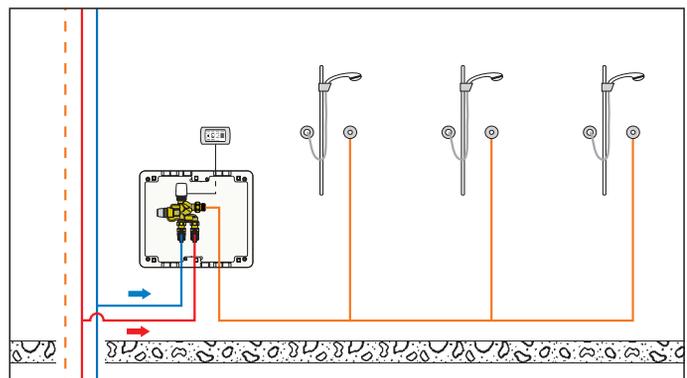
Thermo-electric actuator



Application diagram multi-function unit code 600550



Application diagram multi-function unit code 600502



ANTI-SCALD DEVICE TIMER FOR VALVE OPERATION



6001

tech. broch. 01086

Anti-scald device for domestic hot water use. Brass body. Chrome plated. Setting temperature: 48°C (±1°C).



Code

600140 1/2"



1 10

Function

The purpose of the anti-scald device is to cut off the flow of water if its temperature reaches the setting value. Designed to be used in domestic hot water systems with electronic mixing valves with programmable thermal disinfection. Installed directly at the point of use, it prevents the hot water from scalding the user during the thermal disinfection period (T>50°C).

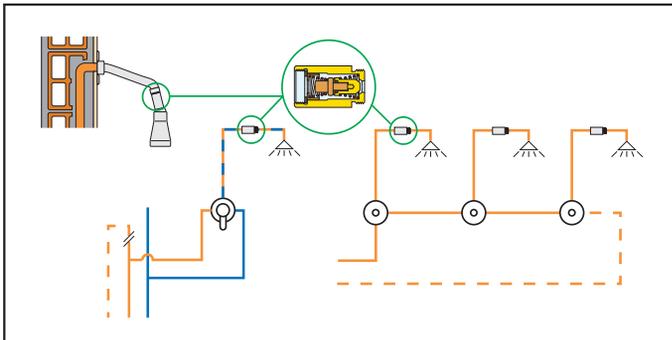
Operating principle

Open

Closed



Application diagram of safety device 6001 series



6002

Timer with programmable key, settings from 1 to 12 minutes. To operate the valves used to carry out thermal disinfection of circuit sections, up to the taps. Supply: 230 V (ac).

Code

600200



1 -

THERMOSTATIC REGULATOR



116

tech. broch. 01139

Thermostatic regulator for domestic hot water recirculation loops. CR dezincification resistant alloy body. Max. working pressure: 10 bar. Max. working temperature: 100°C. Max. Δp: 1 bar. Adjustment temperature range: 35–65°C. Factory setting: 55°C. Accuracy: ±2°C.

Code

116040 1/2"



1 -

116050 3/4"

1 -

116

tech. broch. 01139



Thermo-electric actuator for 116 series. Normally closed ON/OFF. Supply: 230 V (ac) or 24 V (ac/dc). Power consumption: 1,8 W. Ambient temperature range: 0–60°C. Protection class: IP 54. Operating time: 150–200 s. Cable length: 1 m.



Code

Supply voltage
V

116002 230



1 -

116004 24

1 -

118

tech. broch. 01139



Key for cartridge adjustment for 116 and 118 series.

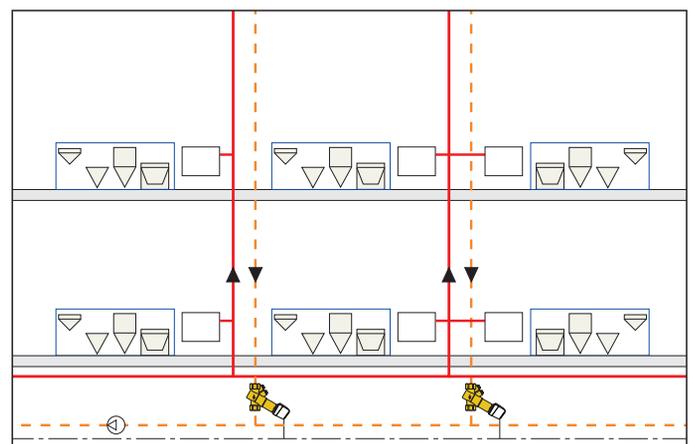
Code

118000



1 -

Application diagram of thermostatic regulator 116 series



THERMOSTATIC MIXING VALVES FOR SMALL APPLICATIONS



520  [tech. broch. 01064](#)
Adjustable thermostatic mixing valve.
Brass body. Chrome plated.
Max. working pressure: 10 bar.
Max. inlet temperature: 90°C.



Code	Temperature adjustment	Kv (m³/h)		
520430	1/2" 30-48°C	1,30	1	50
520440	1/2" 40-60°C	1,30	1	50
520530	3/4" 30-48°C	1,80	1	50
520540	3/4" 40-60°C	1,80	1	50
520630	1" 30-48°C	2,75	1	10
520640	1" 40-60°C	2,75	1	10



522  [tech. broch. 01064](#)
Adjustable thermostatic mixing valve.
For hot water storage heaters.
Brass body. Chrome plated.
Max. working pressure: 10 bar.
Max. inlet temperature: 90°C.

Code	Temperature adjustment	Kv (m³/h)		
522430	1/2" 30-48°C	1,30	1	15
522440	1/2" 40-60°C	1,30	1	15



521  [tech. broch. 01050](#)
Adjustable **anti-scale** thermostatic mixing valve.
CR dezincification resistant alloy body.
Chrome plated.
Max. working pressure: 14 bar.
Max. inlet temperature: 85°C.
Certified to EN 1287.



Code	Temperature adjustment	Kv (m³/h)		
521400	1/2" 30-65°C	2,6	1	10
521500	3/4" 30-65°C	2,6	1	10



521  [tech. broch. 01050](#)
Adjustable **anti-scale** thermostatic mixing valve with check valves.
CR dezincification resistant alloy body.
Chrome plated.
Max. working pressure: 14 bar.
Max. inlet temperature: 85°C.
Certified to EN 1287.



Code	Temperature adjustment	Kv (m³/h)		
521503	3/4" 30-65°C	2,6	1	10



521  [tech. broch. 01050](#)
Adjustable **anti-scale** thermostatic mixing valve with check valves, strainers at the inlets and compression ends.
CR dezincification resistant alloy body.
Chrome plated.
Max. working pressure: 14 bar.
Max. inlet temperature: 85°C.
Certified to EN 1287.



Code	Temperature adjustment	Kv (m³/h)		
521115	Ø 15 30-65°C	2,6	1	10
521122	Ø 22 30-65°C	2,6	1	10

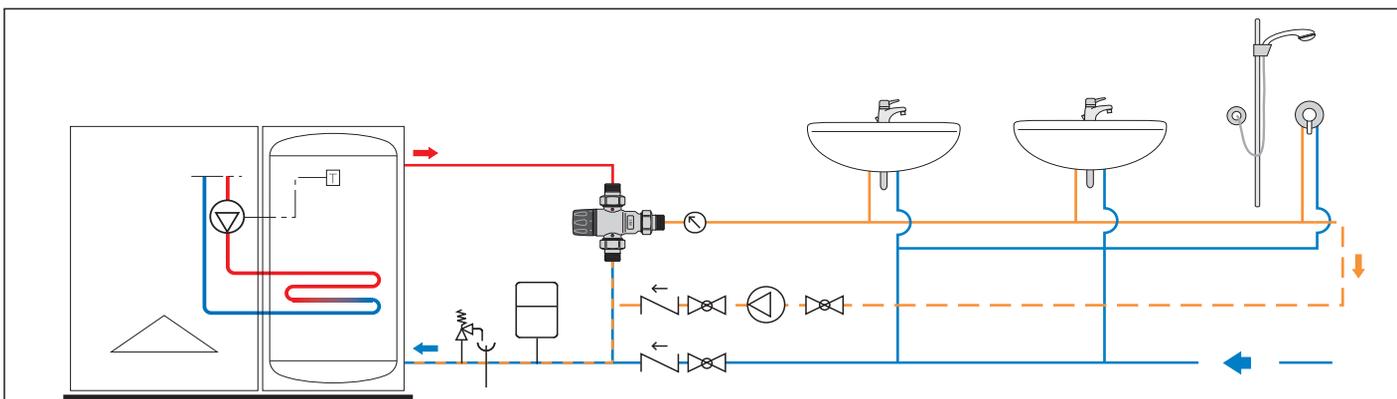


5219  [tech. broch. 01194](#)
Tempering valve adjustable with knob.
For temperature control at the point of distribution.
With thermal shut-off function.
CR dezincification resistant alloy body.
Chrome plated.
Max. working pressure: 10 bar.
Max. inlet temperature: 90°C.



Code	Temperature adjustment	Kv (m³/h)		
521934	1/2" 35-65°C	1,5	1	10
521935	3/4" 35-65°C	1,7	1	10
521936	1" 35-65°C	3,0	1	5

Application diagram of thermostatic mixing valve 521 series



TEMPERING VALVE FOR INSTALLATION AT THE POINT OF DISTRIBUTION

Sizing software is available on www.caleffi.com



5218

tech. broch. 01193

Tempering valve adjustable with knob, with check valves and strainers.

Specific to control the temperature at the point of distribution.

With thermal shut-off function.

CR dezincification resistant alloy body. Chrome plated.

Max. working pressure: 10 bar.

Max. inlet temperature: 90°C.

Certified to EN 15092.



Code	Temperature adjustment	Kv (m ³ /h)		
521814	1/2"	45-65°C	1,5	1 10
521815	3/4"	45-65°C	1,7	1 10
521816	1"	45-65°C	3,0	1 5

European certification

European standard EN 15092 "Inline hot water supply tempering valves. - Tests and requirements" specifies the performance characteristics for tempering valves installed at the point of distribution in domestic water systems made in accordance with the recent European standards EN 806-1/2/3/4/5.

The 5218 series tempering valves are certified as compliant with these standards by the certification agency Buildcert and DTC (UK).

Legionella-point of distribution

According to the most recent legislation and standards, in order to prevent the growth of the dangerous Legionella bacterium in centralised systems producing domestic hot water with storage, the hot water must be stored at a temperature of at least 60°C. At this temperature it is certain that the growth of the bacteria will be totally eliminated.

In this type of system, it often happens that the temperature at the storage outlet is unstable and highly variable. This occurs because of multiple operating conditions, in terms of pressure and heat exchange with the primary energy source and the drawn flow rate. Also, in combination with solar systems, the storage temperature can reach very high levels.

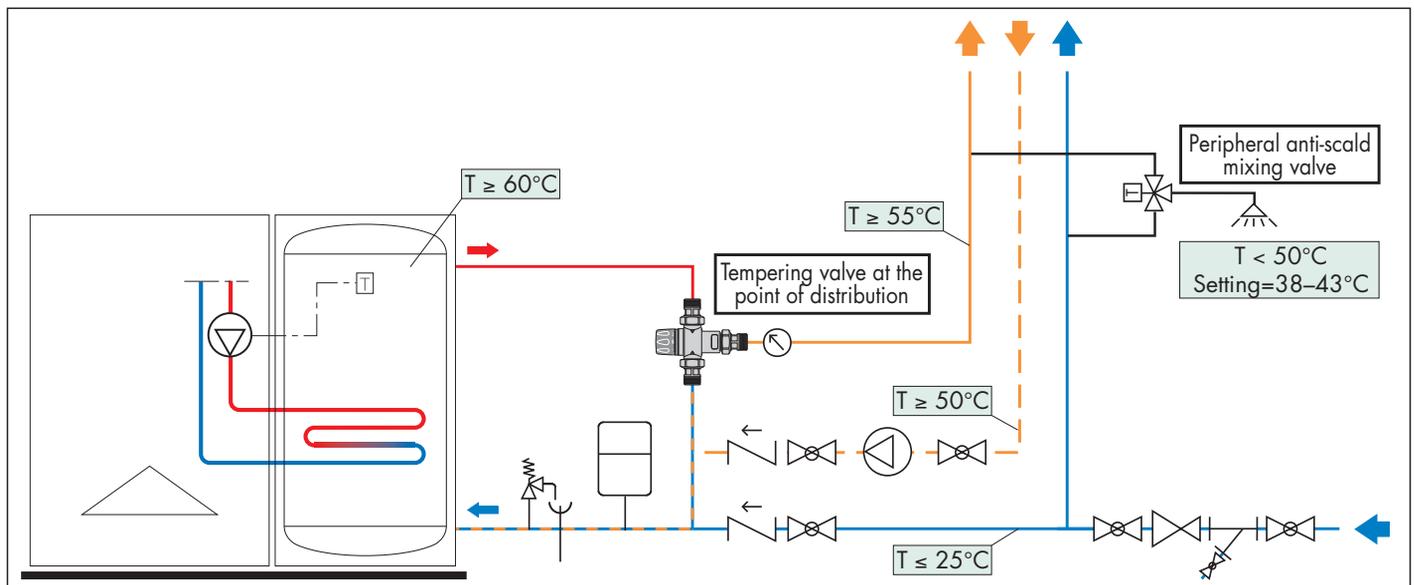
Therefore, the distribution system temperature is not controlled and it is not kept at values able to ensure an efficient energy saving as well as the thermal disinfection of the system itself. Furthermore, the optimum operating conditions required to guarantee anti-scald safety at peripheral thermostatic mixing valves are not ensured.

In centralised systems, it often occurs that the hot and cold water networks are of different origin and at different pressures. In the event of a cold water supply failure at the inlet, it is important to avoid sudden, unexpected increases in the temperature of the distributed hot water.

General rules:

- Storage T ≥ 60°C
- Distribution T ≥ 55°C
- Distribution return T ≥ 50°C
- (Drawn water T ≤ 50°C)
- Cold water T ≤ 25°C

Application diagram of thermostatic mixing valve 5218 series



ANTI-SCALD THERMOSTATIC MIXING VALVES

Sizing software is available on www.caleffi.com

5213

tech. broch. 01092



Adjustable thermostatic mixing valve with check valves and strainers at the inlets. Enhanced thermal performance device with anti-scald safety function.

CR dezincification resistant alloy body. Chrome plated.
Max. working pressure: 10 bar.
Max. inlet temperature: 85°C.
Certified to NHS D08, BS 7942, EN 1111 and EN 1287.



Code	Temperature adjustment	Kv (m³/h)		
521303	3/4"	30-50°C	1,7	1 10

5217

tech. broch. 01145



Thermostatic mixing valve, adjustable with knob, with check valves and strainers at the inlets. Enhanced thermal performance device with anti-scald safety function.

CR dezincification resistant alloy body. Chrome plated.
Max. working pressure: 10 bar.
Max. inlet temperature: 85°C.
Certified to NF 079 Doc. 8.



Code	Temperature adjustment	Kv (m³/h)		
521714	1/2"	30-50°C	1,50	1 10
521713	3/4"	30-50°C	1,85	1 10

5213

tech. broch. 01092



Adjustable thermostatic mixing valve with check valves, strainers and compression ends. Enhanced thermal performance device with anti-scald safety function.

CR dezincification resistant alloy body. Chrome plated.
Max. working pressure: 10 bar.
Max. inlet temperature: 85°C.
Certified to NHS D08, BS 7942, EN 1111 and EN 1287.



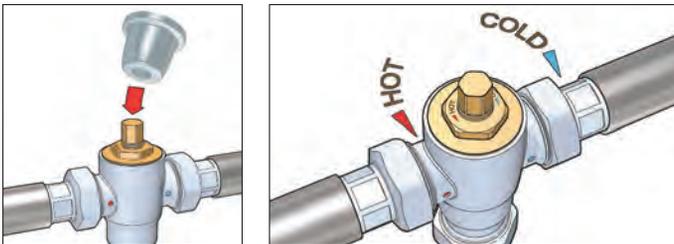
Code	Temperature adjustment	Kv (m³/h)		
521315	Ø 15	30-50°C	1,5	1 10
521322	Ø 22	30-50°C	1,7	1 10



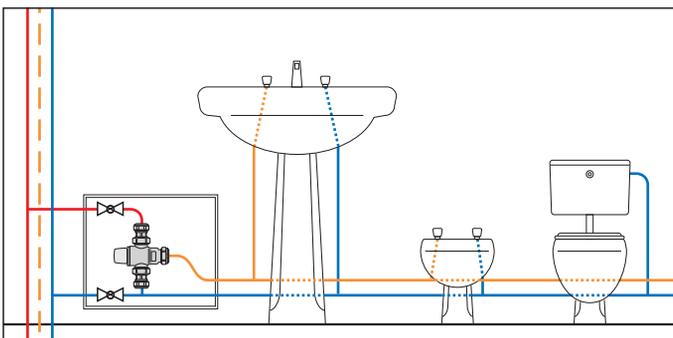
Pre-formed shell insulation for 1/2" and 3/4" thermostatic mixing valves 5213, 5217, 5218 and 5219 series.

Code		
CBN521814	1	-
CBN521815	1	-

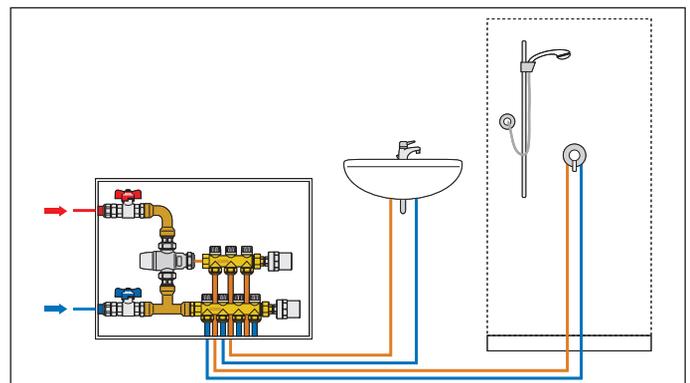
Adjustment temperature of mixing valve 5213 series



Application diagram of mixing valve 5213 series



Application diagram of mixing valve 5213 series with distribution group



ANTI-SCALD TEMPERING AND THERMOSTATIC MIXING VALVES



5213

Adjustable anti-scald tempering valve with check valves and strainers at the inlets.
CR dezincification resistant alloy body. Chrome plated.
 Male union connections.
 Max. working pressure: 1400 kPa.
 Max. inlet temperature: 85°C.
Certified to AS 4032.2, NHS D08, BS 7942, EN 1111 and EN 1287.



Code	Temperature adjustment	Kv (m³/h)		
521312 AUS	DN 15 30–50°C	1,5	1	10
521319 AUS	DN 20 30–50°C	1,7	1	10



5213

Adjustable thermostatic mixing valve with check valves and strainers. Enhanced thermal performance device with anti-scald safety function.
CR dezincification resistant alloy body. Chrome plated.
 Male union connections.
 Max. working pressure: 1400 kPa.
 Max. inlet temperature: 85°C.
Certified to AS 4032.1, NHS D08, BS 7942, EN 1111 and EN 1287.



Code	Temperature adjustment	Kv (m³/h)		
521312TM AUS	DN 15 30–50°C	1,5	1	10
521319TM AUS	DN 20 30–50°C	1,7	1	10

NEW

5213

Adjustable thermostatic mixing valve with isolating valves, check valves and strainers at the inlets. Enhanced thermal performance device with anti-scald safety function.
CR dezincification resistant alloy body. Chrome plated.
 Max. working pressure: 1400 kPa.
 Max. inlet temperature: 85°C.
Certified to AS 4032.1.



Code	Temperature adjustment	Kv (m³/h)		
521312TMX AUS	1/2" 30–50°C	1,3	1	10
521319TMX AUS	3/4" 30–50°C	1,4	1	10

THERMOSTATIC MIXING VALVES FOR MEDIUM-LARGE APPLICATIONS



5231

tech. broch. 01256

Adjustable thermostatic mixing valve, for centralised systems.
CR dezincification resistant alloy body. Antiscale inner regulator in technopolymer.
 Max. working pressure: 14 bar.
 Max. inlet temperature: 90°C.



Code	Temperature adjustment	Kv (m³/h)		
523150	3/4" 35–65°C	4,5	1	–
523160	1" 35–65°C	5,5	1	–
523170	1 1/4" 35–65°C	7,6	1	–
523180	1 1/2" 35–65°C	11,0	1	–
523190	2" 35–65°C	13,3	1	–



5231

tech. broch. 01256

Adjustable thermostatic mixing valve, for centralised systems.
With check valves and compression ends.
CR dezincification resistant alloy body. Antiscale inner regulator in technopolymer.
 Max. working pressure: 14 bar.
 Max. inlet temperature: 90°C.



Code	Temperature adjustment	Kv (m³/h)		
523162	Ø 28" 35–65°C	7,6	1	–

THERMOSTATIC MIXING VALVES FOR MEDIUM-LARGE APPLICATIONS

Sizing software is available on www.caleffi.com



5230 tech. broch. 01080

Adjustable thermostatic mixing valve, with replaceable cartridge, for centralised systems.
Brass body.
Max. working pressure: 14 bar.
Max. inlet temperature: 85°C.



Code	Temperature adjustment	Kv (m³/h)		
523040	1/2"	30-65°C 4,0	1	-
523050	3/4"	30-65°C 4,5	1	-
523060	1"	30-65°C 6,9	1	-
523070	1 1/4"	30-65°C 9,1	1	-
523080	1 1/2"	36-60°C 14,5	1	-
523090	2"	36-60°C 19,0	1	-



5230 tech. broch. 01080

Adjustable thermostatic mixing valve, with replaceable cartridge, for centralised systems.
With check valves and compression ends.
Brass body.
Max. working pressure: 14 bar.
Max. inlet temperature: 85°C.



Code	Temperature adjustment	Kv (m³/h)		
523052	Ø 22	30-65°C 4,5	1	-
523062	Ø 28	30-65°C 6,9	1	-



5230 tech. broch. 01080

Adjustable thermostatic mixing valve, with replaceable cartridge, for centralised systems.
With check valves.
Brass body.
Max. working pressure: 14 bar.
Max. inlet temperature: 85°C.



Code	Temperature adjustment	Kv (m³/h)		
523043	1/2"	30-65°C 4,0	1	-
523053	3/4"	30-65°C 4,5	1	-
523063	1"	30-65°C 6,9	1	-
523073	1 1/4"	30-65°C 9,1	1	-

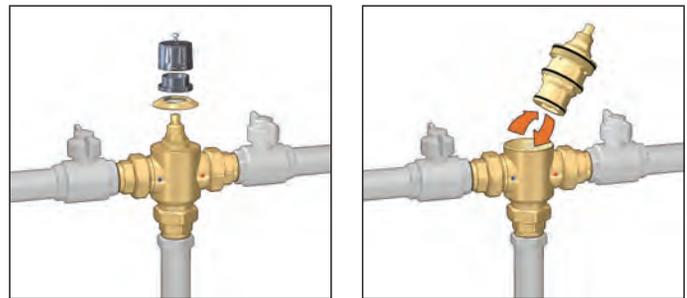


5230 tech. broch. 01080

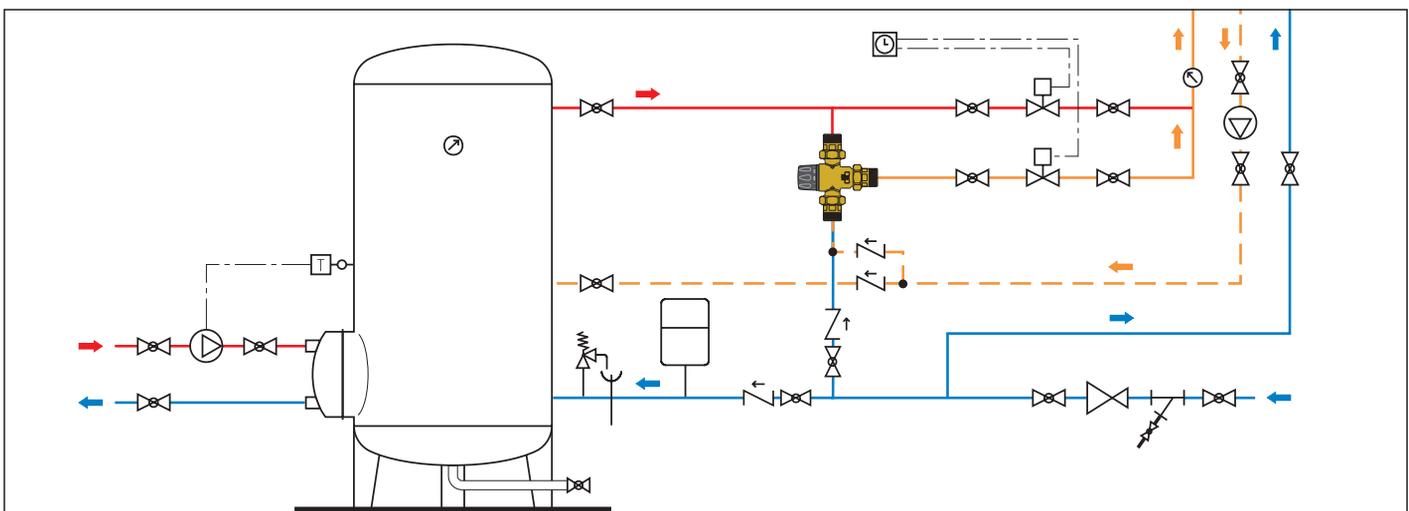
Spare cartridge for thermostatic mixing valves 5230 series.

Code			
523005	for 1/2" - 3/4" - Ø 22	1	-
523006	for 1" - 1 1/4" - Ø 28	1	-
523008	for 1 1/2" - 2"	1	-

Cartridge replacement of mixing valve 5230 series



Application diagram of mixing valve 5230 series



THERMOSTATIC MIXING VALVE FOR MEDIUM-LARGE APPLICATIONS



524

Adjustable thermostatic mixing valve for centralised systems. With recirculation connection. Male threaded connections. Brass body. Max. working pressure: 10 bar. Max. inlet temperature: 90°C.

524

Adjustable thermostatic mixing valve. Bronze body, PN 10. Flanged connections. Equipped with flat counterflanges EN 1092-1, PN 10. Recirculation pipe connections. Factory setting: 48°C. Max. working pressure: 10 bar. Max. inlet temperature: 90°C.

Code	Body DN	Temperature adjustment	Kv (m³/h)		
524400*	15	1 1/8"	30-65°C	1,4	1 -
524500	20	1 1/4"	30-65°C	2,5	1 -
524600	25	1 1/2"	30-65°C	4,0	1 -
524700	32	2"	30-65°C	7,7	1 -
524800	40	2 1/4"	36-60°C	11,5	1 -
524900	50	2 3/4"	36-60°C	15,0	1 -

* Without recirculation connection



524

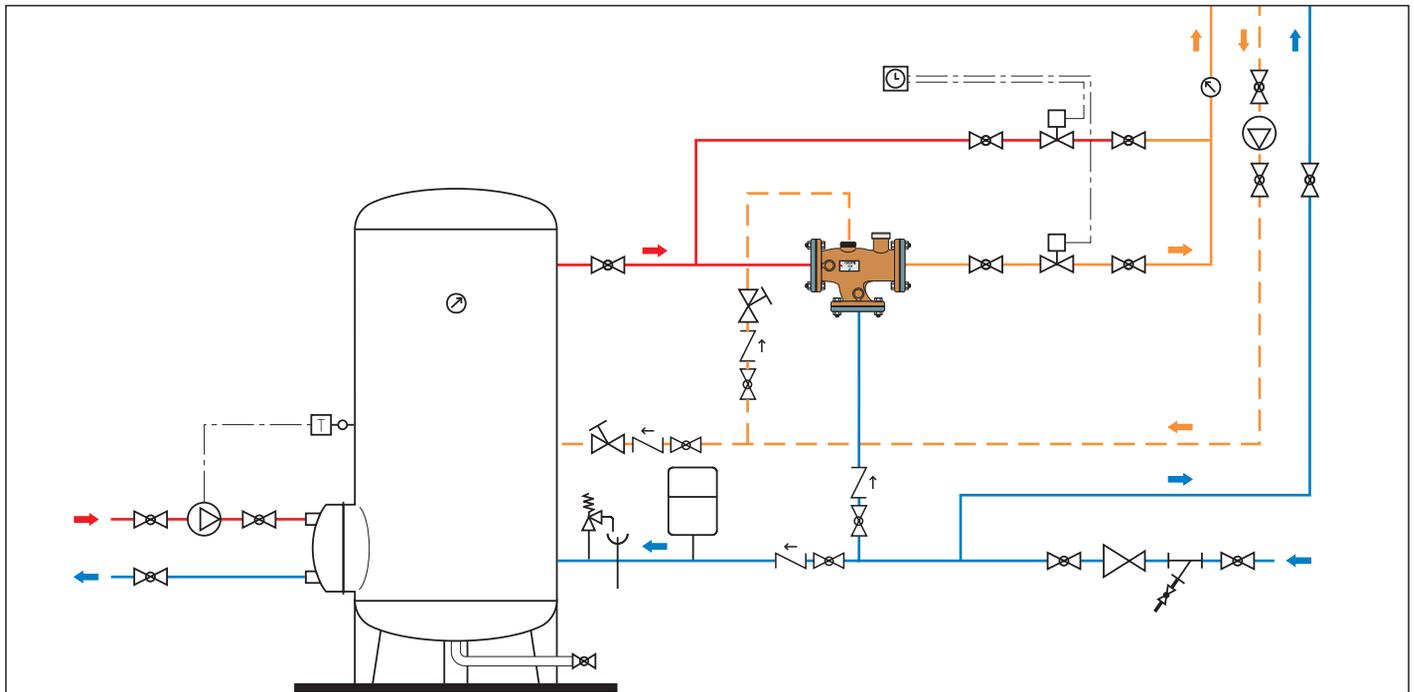
Connection kit for mixing valves with threaded connections, 524 series. Complete with:
 - 2 female unions with check valves, strainers and seals;
 - 1 female union with seal.

Code			
524004	1/2" for 524400	1	-
524005	3/4" for 524500	1	-
524006	1" for 524600	1	-
524007	1 1/4" for 524700	1	-
524008	1 1/2" for 524800	1	-
524009	2" for 524900	1	-



Code	Temperature adjustment	Kv (m³/h)		
524060	DN 65 36-53°C (±2°C)	32,0	1	-
524080	DN 80 36-53°C (±2°C)	43,0	1	-

Application diagram of mixing valve 524 series



HYDRAULIC SAFETY GROUPS FOR HOT WATER STORAGE HEATERS



5261 tech. broch. 01019

Hydraulic safety group for hot water storage heaters, with shut-off valve and controllable check valve.
With stainless steel seat.
 Brass body. Chrome plated.
 Max. working pressure: 10 bar.
 Max. working temperature: 120°C.
 Setting: 7 bar.
 Max. power rating: 1/2": 4 kW,
 3/4": 10 kW.
Certified to EN 1487.



Code			
526142	1/2"	1	30
526152	3/4"	1	30



5261 tech. broch. 01019

Hydraulic safety group for hot water storage heaters, with shut-off valve and controllable check valve.
 For horizontal installation.
 Brass body. Chrome plated.
 Max. working pressure: 10 bar.
 Max. working temperature: 120°C.
 Setting: 7 bar.
 Max. power rating: 3/4" - 10 kW,
 1" - 18 kW.
Certified to EN 1487.



Code			
526151	3/4"	1	10



5261 tech. broch. 01019

Hydraulic safety group for hot water storage heaters, with shut-off valve and controllable check valve.
 Brass body. Chrome plated.
 Max. working pressure: 10 bar.
 Max. working temperature: 120°C.
 Setting: 7 bar.
 Max. power rating: 1/2": 4 kW,
 3/4": 10 kW.
Certified to EN 1487.



Code			
526140	1/2"	1	30
526150	3/4"	1	30



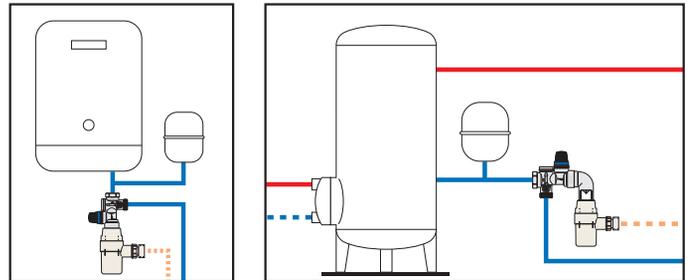
319 tech. broch. 01019

Plastic discharge tundish for safety groups 5261 series.



Code			
319601	1"	1	25

Application diagram of safety group 5261 series



5261 tech. broch. 01019

Hydraulic safety group for hot water storage heaters, with shut-off valve and controllable check valve.
 For horizontal installation.
With stainless steel seat.
 Brass body. Chrome plated.
 Max. working pressure: 10 bar.
 Max. working temperature: 120°C.
 Setting: 7 bar.
 Max. power rating: 3/4" - 10 kW,
 1" - 18 kW.
Certified to EN 1487.



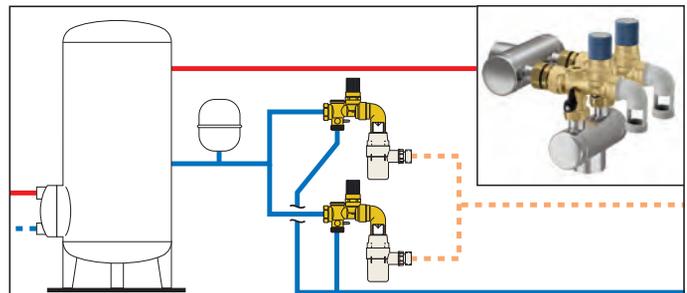
Code			
526153	3/4"	1	10
526163	1" yellow brass body	1	10



6509
 Connection kit for unit code 526163.

Kod			
650972	1"	1	25

Application diagram of kit code 650972 with unit code 526163





309

tech. broch. 01130

Temperature and pressure relief valve.
CR dezincification resistant alloy body.
For domestic water system, to protect the hot water storage.
 Setting temperature: 90°C.
 Discharge rating: 1/2" - 3/4" x Ø 15: 10 kW.
 3/4" x Ø 22: 25 kW.
 Settings: 3 - 4 - 6 - 7 - 10 bar.
Settings certified to EN 1490: 4 - 7 - 10 bar.



Code	Probe length (mm)				
309430	1/2" M x Ø 15	3 bar	100	1	20
309440	1/2" M x Ø 15	4 bar	100	1	20
309460	1/2" M x Ø 15	6 bar	100	1	20
309470	1/2" M x Ø 15	7 bar	100	1	20
309400	1/2" M x Ø 15	10 bar	100	1	20
309542	3/4" M x Ø 15	4 bar	100	1	20
309530	3/4" M x Ø 22	3 bar	100	1	20
309560	3/4" M x Ø 22	6 bar	100	1	20
309570	3/4" M x Ø 22	7 bar	100	1	20
309500	3/4" M x Ø 22	10 bar	100	1	20
309435	1/2" M x Ø 15	3 bar	200	1	20
309445	1/2" M x Ø 15	4 bar	200	1	20
309465	1/2" M x Ø 15	6 bar	200	1	20
309475	1/2" M x Ø 15	7 bar	200	1	20
309405	1/2" M x Ø 15	10 bar	200	1	20
309547	3/4" M x Ø 15	4 bar	200	1	20
309535	3/4" M x Ø 22	3 bar	200	1	20
309565	3/4" M x Ø 22	6 bar	200	1	20
309575	3/4" M x Ø 22	7 bar	200	1	20
309505	3/4" M x Ø 22	10 bar	200	1	20

NEW



309

Temperature and pressure relief valve.
CR dezincification resistant alloy body.
For domestic water system, to protect the hot water storage.
 Set temperature: 95°C.
 Discharge rating: 25 kW.
 Setting: 6 bar.
For systems with nominal pressure of 400 kPa.



Code	Probe length (mm)				
309563	3/4" M x Ø 22	100	1	20	



5557

tech. broch. 01079

Welded expansion vessel, for hot water systems, EC certification.
 Bladder membrane.
 Max. working pressure: 10 bar.
 System working temperature range: -10-100°C.
 Membrane working temperature range: -10-100°C.
 Conformity to EN 13831 standard.



Code	Litres	Conn.	Precharge (bar)		
555702	2	1/2"	2,5	4	-
555705	5	3/4"	2,5	1	-
555708	8	3/4"	2,5	1	-

For bigger capacity see page 220



534

Flow limiter.
 Brass body.
 Chrome plated.
 1/2" connection.
 Max. working pressure: 12 bar.
 Max. working temperature: 80°C.
 Pressure range: 1-10 bar.

• Key to code

- flow direction M → F = 1
- flow direction F → M = 2

Code	Accuracy (%)		
534•02	2 l/min olive green ±30	1	25
534•04	4 l/min grey ±15	1	25
534•05	5 l/min yellow ±15	1	25
534•06	6 l/min black ±10	1	25
534•08	8 l/min white ±10	1	25
534•10	10 l/min light blue ±10	1	25
534•12	12 l/min red ±10	1	25
534•16	16 l/min blue ±10	1	25
534•18	18 l/min purple ±10	1	25

PRE-ASSEMBLED DISTRIBUTION MANIFOLDS

360

Domestic water distribution manifolds pre-assembled in inspection wall box.

CR dezincification resistant alloy body.

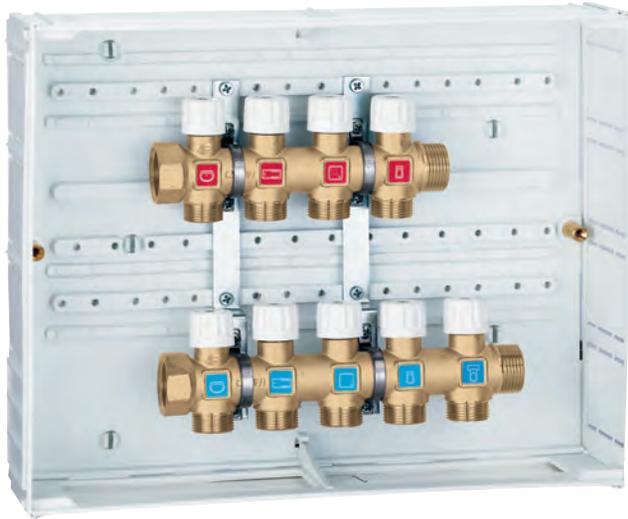
Max. working pressure: 10 bar.

Temperature range: 5–100°C.

Outlet centre distance: 35 mm.

Consisting of:

- pair of manifolds 354 series;
- pair of stainless steel mounting brackets, code 360210;
- inspection wall box code 360032 (320 x 250 x 90), with cover.



Code	Connections	Outlets No.		Outlets	
		cold	hot		
360043	3/4"	4	3	23 p.1,5 M	1 -
360054	3/4"	5	4	23 p.1,5 M	1 -



354

Modular single distribution manifold with shut-off valve.

CR dezincification resistant alloy body.

Max. working pressure: 10 bar.

Temperature range: 5–100°C.

Outlet centre distance: 35 mm.



Code	Connections	Outlets No.	Outlets	
354052	3/4"	x 2	23 p.1,5 M	5 20
354053	3/4"	x 3	23 p.1,5 M	5 20
354054	3/4"	x 4	23 p.1,5 M	5 20
354055	3/4"	x 5	23 p.1,5 M	5 20



360

Pair of stainless steel mounting brackets for modular single distribution manifolds 354 series. For inspection box 360 and 362 series.

Code	
360210	1 10



3642

End fitting.

For distribution manifolds 360 series.

Code	
364254	3/4" M x 1/2" F 2 -



3641

Plug.

For distribution manifolds 360 series.

Code	
364150	3/4" M 2 -



5991

End fitting.

For distribution manifolds 360 series.

Code	
599154	3/4" F x 1/2" F 2 -



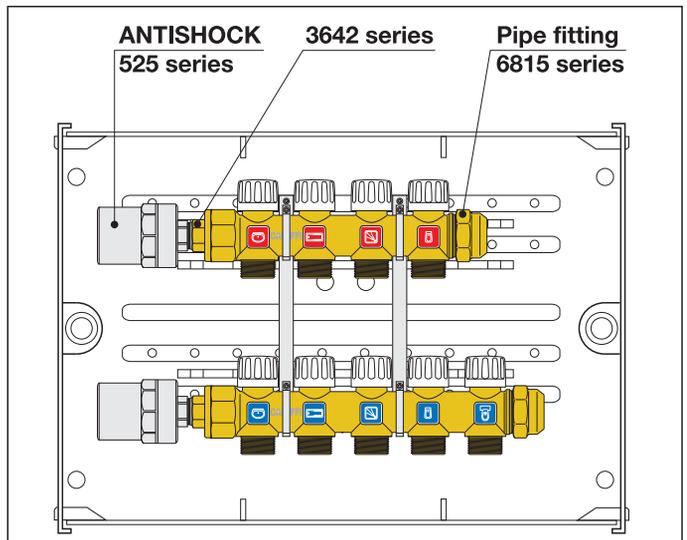
5993

Plug.

For distribution manifolds 360 series.

Code	
599350	3/4" F 2 10

Example of distribution composition



ANTI-FREEZE SAFETY DEVICE

603
ICECAL®

tech. broch. 01181



Garden tap, ball type, **with anti-freeze safety device.**
Brass body. Chrome plated.
Stainless steel lever and fixing nut.
Hose connection for Ø 15 mm pipe.
Max. working pressure: 10 bar.
Ambient temperature range: -30–90°C.
Opening temperature: 3°C.
Closing temperature: 4°C.

Code

603450 1/2" M x 3/4" M with hose connection



1 10



Anti-freeze group spare part, chrome plated for code 603450.

Code

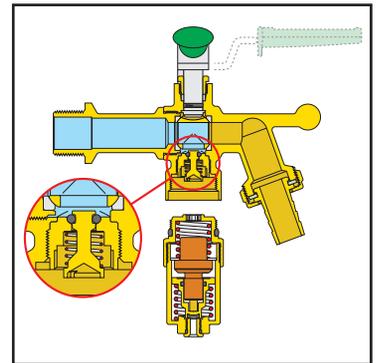
F89046/C



1 -

Anti-freeze safety device replacement

The anti-freeze safety device is preassembled and can be replaced in case of necessity. A specific internal valve automatically shuts the water off during the replacement operation.

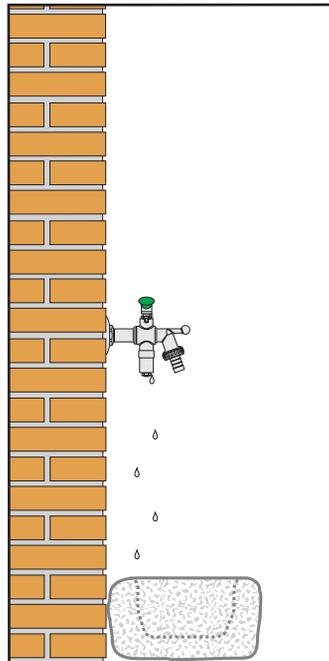


Function

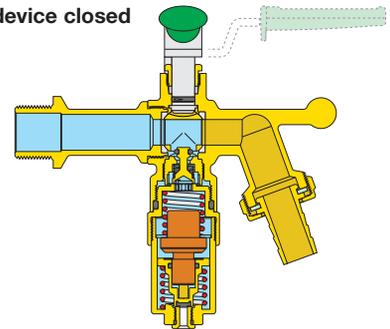
The anti-freeze safety device prevents ice build-up in domestic water circuits, avoiding possible damage to pipes in hydraulic and irrigation systems.

When the minimum intervention temperature is reached, it automatically opens so that a minimum quantity of water may flow toward the drain, enabling a small continuous inflow of water; this prevents the circuit from freezing.

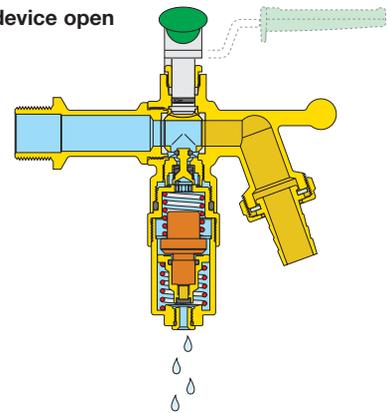
A particular product has been developed by combining the anti-freeze safety device with a garden tap ball type, specifically constructed for these installations. The valve is fitted with ball with blow-out proof design, O-ring seal and packing gland; the control lever and fixing nut are made of stainless steel, for total resistance against corrosion in different climatic conditions.



Anti-freeze safety device closed

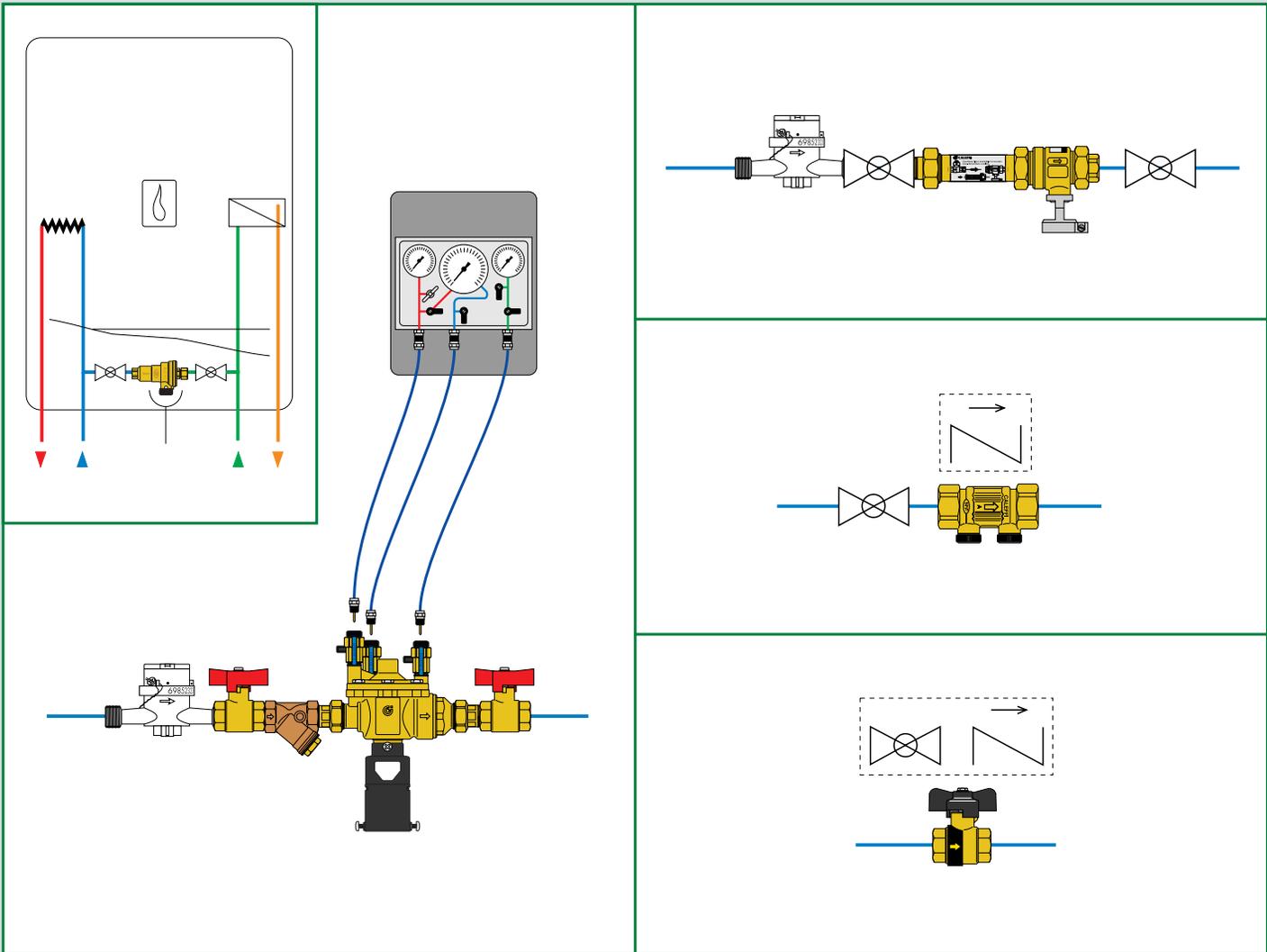


Anti-freeze safety device open



BACKFLOW PREVENTION DEVICES

This diagram is just an indication



Backflow preventer

Pre-assembled group with backflow preventer, Y-strainers and shut-off valves

Y-strainers and test kit for backflow preventers

Spare parts for backflow preventers

Ball valves with built-in check valves, BALLSTOP

Anti-pollution check valves

BACKFLOW PREVENTERS

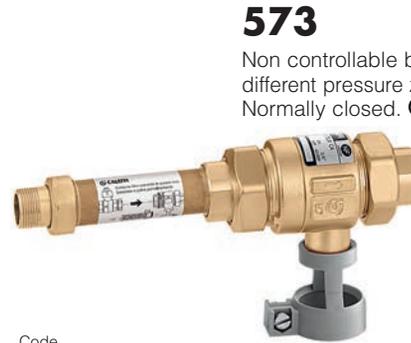


572

Non controllable backflow preventer with different pressure zones for wall mounted boilers.
CAb type. Brass body. PN 10.
 Ø 6 copper pipe connections.
 Max. working temperature: 40°C.
To standard EN 14367.



Code			
572106		1	50



573

Non controllable backflow preventer with different pressure zones, with removable strainer. Normally closed. **CR** dezincification resistant alloy body. PN 10. Male-female union connections.
 Max. working temperature: 65°C.

Code			
573402	1/2"	1	-
573502	3/4"	1	-



573

tech. broch. 01008

Non controllable backflow preventer with different pressure zones. **CAa type.** **CR** dezincification resistant alloy body. PN 10. Female union connections.
 Max. working temperature: 65°C.
To standard EN 14367.



Code			
573400	1/2"	1	10
573500	3/4"	1	10



573

Non controllable backflow preventer with different pressure zones. Normally closed. Brass body. PN 10. Female union connections.
 Max. working temperature: 65°C.

Code			
573404	1/2"	1	20
573504	3/4"	1	20



573

Non controllable backflow preventer with different pressure zones. Normally closed. Brass body. PN 10. Female union connections. With threaded outlet.
 Max. working temperature: 65°C.

Code			
573405	1/2"	1	20
573505	3/4"	1	20



574

tech. broch. 01022

Controllable, reduced pressure zone backflow preventer. **BA type.** **CR** dezincification resistant alloy body. PN 10. Male union connections.
 Max. working temperature: 65°C.
 Discharge opening differential pressure to: 14 kPa.
To standard EN 12729.
Upstream of the backflow preventer is mandatory to install a strainer 577 series.



Code			
574004	1/2"	1	10



574

tech. broch. 01022

Controllable, reduced pressure zone backflow preventer. **BA type.** **CR** dezincification resistant alloy body. PN 10. Male union connections.
 Max. working temperature: 65°C.
 Discharge opening differential pressure to: 14 kPa.
To standard EN 12729.
Upstream of the backflow preventer is mandatory to install a strainer 577



Code			
574040	1/2"	1	-
574050	3/4"	1	-

BACKFLOW PREVENTERS

574

tech. broch. 01022

Controllable, reduced pressure zone backflow preventer. **BA type.** CR dezincification resistant alloy body. PN 10. Male union connections. Max. working temperature: 65°C. Discharge opening differential pressure to: 14 kPa. **To standard EN 12729.** **Upstream of the backflow preventer is mandatory to install a strainer 577 series.**



Code			
574005	3/4"	1	-
574006	1"	1	-

574

tech. broch. 01022

Controllable, reduced pressure zone backflow preventer. **BA type.** Bronze body. PN 10. Male union connections. Max. working temperature: 65°C. Discharge opening differential pressure to: 14 kPa. **To standard EN 12729.** **Upstream of the backflow preventer is mandatory to install a strainer 577 series.**



Code			
574800	1 1/2"	1	-
574900	2"	1	-

574

tech. broch. 01022

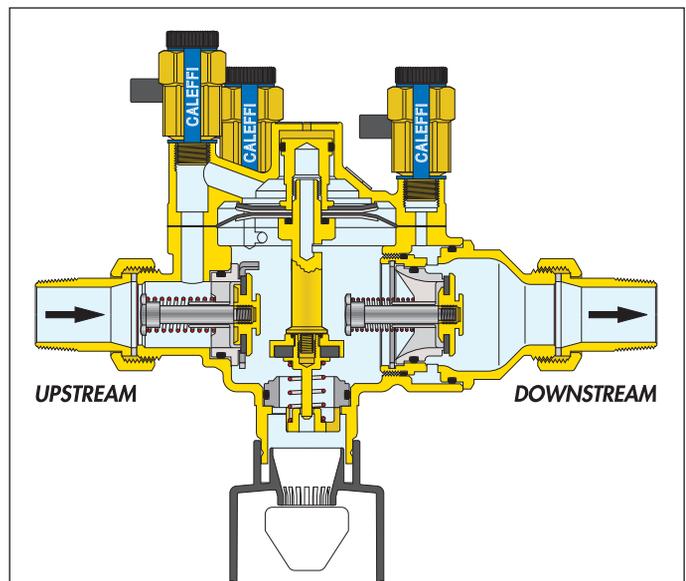
Controllable, reduced pressure zone backflow preventer. **BA type.** CR dezincification resistant alloy body. PN 10. Male union connections. Max. working temperature: 65°C. Discharge opening differential pressure to: 14 kPa. **To standard EN 12729.** **Upstream of the backflow preventer is mandatory to install a strainer 577 series.**



Code			
574600	1"	1	-
574700	1 1/4"	1	-

Operating principle

The controllable reduced pressure zone backflow preventer consisting of: a body with an inspection cover, an upstream check valve, a downstream check valve, a discharge device. The two check valves divide three different zones, each of which at a different pressure: an upstream or inlet zone; an intermediate zone, also known as the reduced pressure zone; a downstream or outlet zone. Each of these has a test port for measuring pressure. A discharge device, is located in the lower part of the intermediate zone. The obturator of the discharge device is connected via the valve stem to the diaphragm. This mobile unit is pushed upwards by the spring. The diaphragm marks the limit of the top chamber, which is connected to the upstream zone by the channel.



BACKFLOW PREVENTERS

575

tech. broch. 01022

Controllable, reduced pressure zone backflow preventer. **BA type.** Bronze body. PN 10. Flanged connections PN 16. To be coupled with flat counterflanges EN 1092-1. Max. working temperature: 65°C. Discharge opening differential pressure to: 14 kPa. **To standard EN 12729.** **Upstream of the backflow preventer is mandatory to install a strainer 579 series.**



Code				
575005	DN 50	1	–	
575006	DN 65	1	–	
575008	DN 80	1	–	
575010	DN 100	1	–	

570

tech. broch. 01022

Pre-assembled group consisting of: backflow preventer 575 series; Y-strainer 579 series for backflow preventers; manual shut-off valves. PN 10. Flanged connections PN 16. To be coupled with flat counterflanges EN 1092-1. Max. working temperature: 65°C.



Code				
570050	DN 50	1	–	
570060	DN 65	1	–	
570080	DN 80	1	–	
570100	DN 100	1	–	

570

tech. broch. 01022

Pre-assembled group consisting of: backflow preventer 574 series; Y-strainer 577 series for backflow preventers; manual shut-off valves. PN 10. Female connections. Max. working temperature: 65°C.



Code				
570004	1/2"	1	–	
570005	3/4"	1	–	
570006	1"	1	–	
570007	1 1/4"	1	–	
570008	1 1/2"	1	–	
570009	2"	1	–	

575

Controllable, reduced pressure zone backflow preventer. **BA type.** Cast iron body, with epoxy coating. PN 10. Flanged connections. To be coupled with flat counterflanges EN 1092-1. Max. working temperature: 60°C. Discharge opening differential pressure to: 14 kPa. **To standard EN 12729.** **Upstream of the backflow preventer is mandatory to install a strainer 579 series.**



Code				
575150	DN 150	1	–	
575200	DN 200	1	–	
575250	DN 250	1	–	

BACKFLOW PREVENTERS

570

tech. broch. 01022

Pre-assembled group consisting of:
backflow preventer 575 series;
Y-strainer 579 series for backflow preventers;
manual shut-off valves.
PN 10.
Flanged connections PN 16.
To be coupled with flat counterflanges EN 1092-1.
Max. working temperature: 60°C.



Code			
570150	DN 150	1	-
570200	DN 200	1	-
570250	DN 250	1	-

Y-STRAINERS AND TEST KIT FOR BACKFLOW PREVENTERS

577



Y-strainer,
for backflow preventers 573 and 574 series.
Bronze body,
1/2"-2": PN 16,
2 1/2" - 3": PN 10.
Female connections.
Temperature range: -20-110°C.
Max. percentage of glycol: 30%.
Strainer in stainless steel stretched plate.

Code		Mesh size Ø (mm)		
577004	1/2"	0,40	1	-
577005	3/4"	0,40	1	-
577006	1"	0,40	1	-
577007	1 1/4"	0,47	1	-
577008	1 1/2"	0,47	1	-
577009	2"	0,53	1	-
577020	2 1/2"	0,53	1	-
577030	3"	0,53	1	-

579



Y-strainer, for backflow preventer 575 series
and for pressure reducing valve 576 series.
Cast iron body, with epoxy coating.
Flanged connections PN 16.
To be coupled with flat counterflanges
EN 1092-1.
Max. working pressure: 16 bar.
Max. working temperature: 65°C.
Stainless steel mesh.
With drain cock.

Code		Mesh size Ø (mm)		
579050	DN 50	0,87	1	-
579060	DN 65	0,87	1	-
579080	DN 80	1,55	1	-
579100	DN 100	1,55	1	-
579120	DN 125	1,55	1	-
579150	DN 150	1,55 *	1	-
579200	DN 200	1,55 *	1	-
579250	DN 250	1,55 *	1	-

* Rhomboidal reinforcing mesh

5750

tech. broch. 01022



Backflow preventer test kit
consisting of:
- upstream pressure gauge
- downstream pressure gauge
- differential pressure gauge
- flexible hoses and connectors.

Code			
575000		1	-

SPARE PARTS FOR BACKFLOW PREVENTERS



Discharge device for backflow preventers 574 and 575 series.

Code			
59978	1/2" (574004)	1	-
59471	1/2" (574040) - 3/4" - 1" (574006)	1	-
59457	1" (574600) - 1 1/4"	1	-
59461	1 1/2" - 2" - DN 50	1	-



Discharge device for backflow preventer 575 series.

Code			
59625	DN 65 (575006)	1	-
59629	DN 80 (575008) - DN 100 (575010)	1	-



Discharge valve seat for backflow preventers 574 and 575 series.

Code			
59472	1/2" (574040) - 3/4" - 1" (574006)	1	-
59458	1" (574600) - 1 1/4"	1	-
59462	1 1/2" - 2" - DN 50 - DN 65	1	-



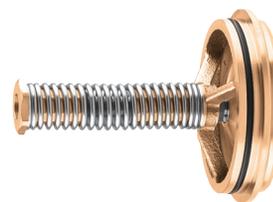
Discharge valve seat for backflow preventer 575 series.

Code			
59630	DN 80 (575008) - DN 100 (575010)	1	-



Upstream check valve for backflow preventers 574 and 575 series.

Code			
59977	1/2" (574004)	1	-
59973	1/2" (574040) - 3/4" (574050)	1	-
59469	3/4" (574005) - 1" (574006)	1	-
59455	1" (574600) - 1 1/4"	1	-
59459	1 1/2" - 2" - DN 50	1	-



Upstream check valve for backflow preventer 575 series.

Code			
59627	DN 65 (575006)	1	-
59631	DN 80 (575008) - DN 100 (575010)	1	-



Downstream check valve for backflow preventers 574 and 575 series.

Code			
59979	1/2" (574004)	1	-
59470	1/2" (574040) - 3/4" - 1" (574006)	1	-
59456	1" (574600) - 1 1/4"	1	-
59460	1 1/2" - 2" - DN 50	1	-



Downstream check valve for backflow preventer 575 series.

Code			
59628	DN 65 (575006)	1	-
59632	DN 80 (575008) - DN 100 (575010)	1	-

BALL VALVE WITH BUILT-IN CHECK VALVE



3230 BALLSTOP tech. broch. 01021

Ball valve with built-in check valve.
Brass body.
Female connections.
Butterfly handle.
Max. working pressure: 16 bar.
Temperature range: 5–90°C.



Code

323040	1/2"	10	–
323050	3/4"	10	–
323060	1"	4	–



333 BALLSTOP tech. broch. 01021

Ball valve with built-in check valve.
Brass body.
Female - nut connection.
Drilled tamper-proof safety nut.
Butterfly handle.
Max. working pressure: 16 bar.
Temperature range: 5–90°C.



Code

333400	1/2" F x nut 3/4" F	10	–
333500	3/4" F x nut 3/4" F	10	–



3230 BALLSTOP tech. broch. 01021

Ball valve with built-in check valve.
Brass body.
Female connections.
Lever handle.
Max. working pressure: 16 bar.
Temperature range: 5–90°C.



Code

323070	1 1/4"	4	–
323080	1 1/2"	2	–
323090	2"	1	–



334 BALLSTOP tech. broch. 01021

Ball valve with built-in check valve.
Brass body.
Male - nut connection.
Drilled tamper-proof safety nut.
Butterfly handle.
Max. working pressure: 16 bar.
Temperature range: 5–90°C.



Code

334400	1/2" M x nut 3/4" F	10	–
334500	3/4" M x nut 3/4" F	10	–



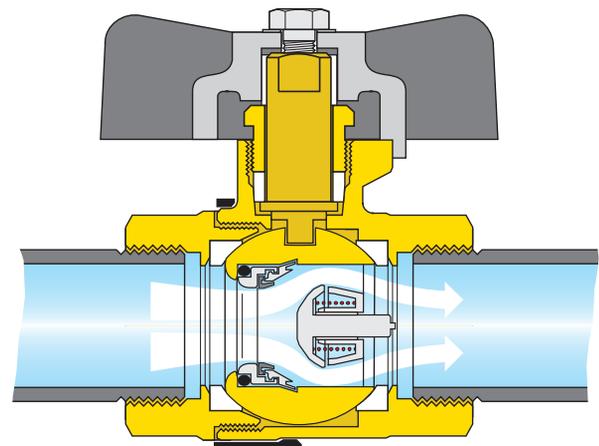
332 BALLSTOP tech. broch. 01021

Ball valve with built-in check valve.
Brass body.
Male - female connections.
Butterfly handle.
Max. working pressure: 16 bar.
Temperature range: 5–90°C.

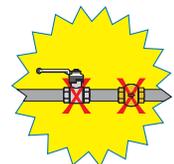


Code

332400	1/2" M x 1/2" F	10	–
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BALLSTOP
TWO VALVES
IN ONE



ANTI-POLLUTION CHECK VALVES



3045 tech. broch. 01005
 Check valve. **EA type**. Controllable.
 Brass body.
 Female connections.
 Max. working pressure: 10 bar.
 Max. working temperature: 90°C.
To standard EN 13959.



Code			
304540	1/2"	10	100
304550	3/4"	10	50
304560	1"	5	25
304570	1 1/4"	5	25
304580	1 1/2"	2	20
304590	2"	1	10



3047 tech. broch. 01005
 Check valve. **EB type**.
 Non controllable. Brass body.
 Female connections.
 Max. working pressure: 10 bar.
 Max. working temperature: 90°C.



Code			
304740	1/2"	10	100
304750	3/4"	10	50
304760	1"	5	25



3046
 Compact check valve. **EA type**.
 Controllable. Brass body.
 Nut - male connections.
 Max. working pressure: 10 bar.
 Max. working temperature: 90°C.
To standard EN 13959.



Code	Inside check device DN	Connections		
304601	15	3/4" F x 3/4" M	10	100

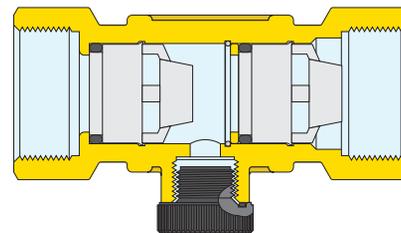


3048 tech. broch. 01005
 Double check valve.
 Controllable. Brass body.
 Female connections.
 Max. working pressure: 10 bar.
 Max. working temperature: 90°C.



Code			
304840	1/2"	1	50
304850	3/4"	1	50

Double check valve 3048 series



This double check valve can be used according to local regulations, instead of the backflow preventer when a low pressure valve, at the inlet from the public network, is present. The watertightness of the check valve, furthermore, can be verified by using the pressure test port on the valve body.



3046 tech. broch. 01005
 Check valve. **EA type**.
 Controllable. Brass body.
 Nut - male connections.
 Max. working pressure: 10 bar.
 Max. working temperature: 90°C.
To standard EN 13959.



Code	Inside check device DN	Connections		
304640	15	3/4" F x 3/4" M	10	100
304650	20	1" F x 1" M	10	50
304660*	25	1 1/4" F x 1 1/4" M	5	25
304670*	32	1 1/2" F x 1 1/2" M	4	20
304680*	40	2" F x 2" M	2	10

* Without NF certification



3046
 Check valve. **EA type**.
 Controllable. Brass body.
 Nut - male connections.
 Max. working pressure: 10 bar.
 Max. working temperature: 90°C.
To standard EN 13959.



Code	Inside check device DN	Connections		
304644	15	3/4" F x 3/4" M	1	50
304654	20	1" F x 1" M	1	50



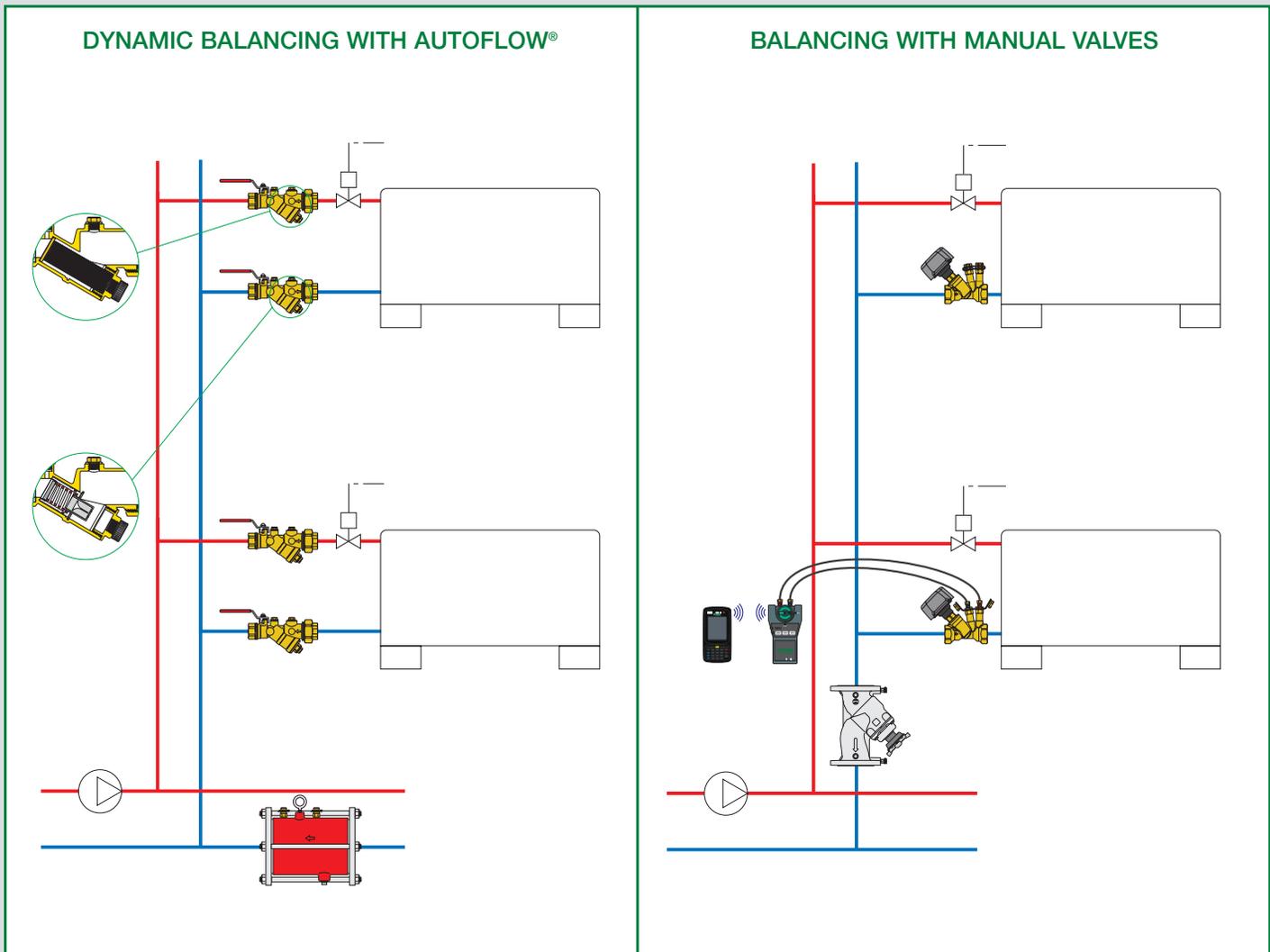
3041 tech. broch. 01005
 Ball valve with built-in certified check valve. Controllable.
 Brass body.
 Nut - male connections.
 Max. working pressure: 10 bar.
 Max. working temperature: 90°C.



Code	Inside check device DN	Connections		
304140	15	3/4" F x 3/4" M	5	25

BALANCING DEVICES

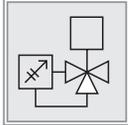
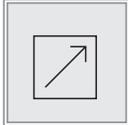
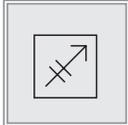
This diagram is just an indication



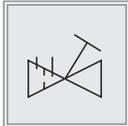
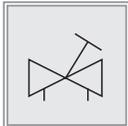
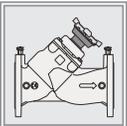
- Pressure independent control valve (PICV)
- Automatic flow rate regulators
- Strainers
- Automatic flow rate regulator with stainless steel cartridge - flanged version
- Flow rate regulator with adjustable cartridge
- Balancing valve with flow meter
- Balancing valves
- Counterflanges
- Differential pressure regulating valve (DPRV)
- Electronic flow rate and differential pressure measuring station

BALANCING DEVICES

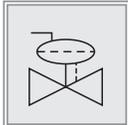
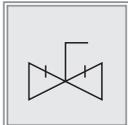
Devices for dynamic balancing

- Pressure independent control valve (PICV)	145 series		
- Automatic flow rate regulator, with fixed flow rate	127-121-126-120-125-103 series		
- Automatic flow rate regulator, with adjustable flow rate	118 series		

Devices for static balancing

- Balancing valve with flow meter	132 series		
- Manual balancing valve, with Venturi device	130 series		
- Manual balancing valve, with variable orifice	130 series		

Devices for differential pressure regulation

- Differential pressure regulating valve	140 series		
- Shut-off and pre-regulation valve	142 series		
- Differential by-pass valve	519 series		

PRESSURE INDEPENDENT CONTROL VALVE (PICV)

NEW

145

tech. broch. 01262



Pressure independent control valve (PICV).
CR dezincification resistant alloy.
 Flow rate regulator in polymer with membrane in EPDM.
 Graduated scale indicator.
 Max. working pressure: 16 bar.
 Temperature range: -20–120°C.
 Max. percentage of glycol: 50%.
 Nominal Δp range: 25–400 kPa.
 Flow rates: 0,08–0,40 m³/h,
 0,08–0,80 m³/h,
 0,12–1,20 m³/h.

Fitted for connection of pressure ports.
 Male union connections.
Fitted for 145 series actuator and 656. series thermo-electric actuator.

Code	DN	Conn.	Flow rate range (m ³ /h)		
145430 H40	15	3/8"	0,08–0,40	1	10
145430 H80	15	3/8"	0,08–0,80	1	10
145440 H40	15	1/2"	0,08–0,40	1	10
145440 H80	15	1/2"	0,08–0,80	1	10
145550 H40	20	3/4"	0,08–0,40	1	10
145550 H80	20	3/4"	0,08–0,80	1	10
145550 1H2	20	3/4"	0,12–1,20	1	10
145552 H40	20	3/4" Euroconus	0,08–0,40	1	10
145552 H80	20	3/4" Euroconus	0,08–0,80	1	10
145552 1H2	20	3/4" Euroconus	0,12–1,20	1	10
145560 H40	20	1"	0,08–0,40	1	10
145560 H80	20	1"	0,08–0,80	1	10
145560 1H2	20	1"	0,12–1,20	1	10

145



Proportional linear actuator for control valve 145 series.
 Supply: 24 V (ac/dc).
 Control signal: 0–10 V.
 Ambient temperature range: 0–50°C.
 Protection class: IP 43.
 Connection: M 30 p.1.5.

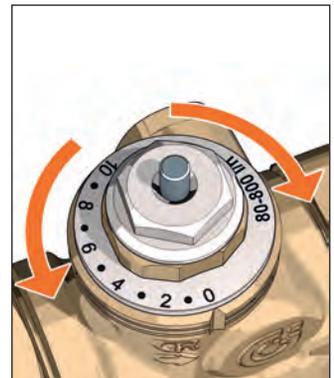
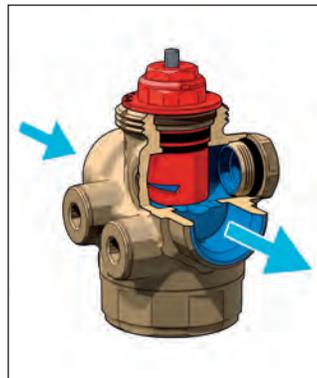
Code	Tension V	Control		
145014	24	0–10 V	1	–

Operating principle

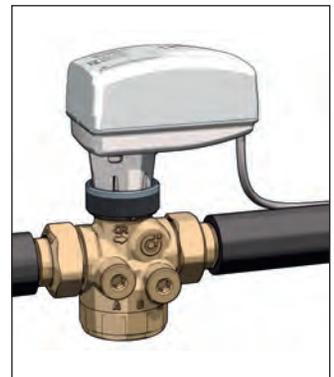
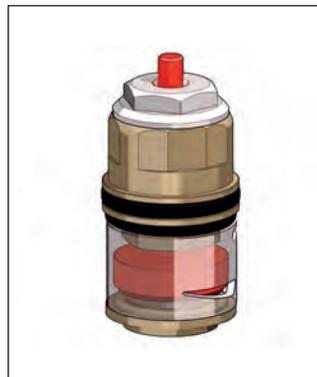
The pressure independent control valve (PICV) is a device consisting of:
 - an automatic flow rate regulator, adjustable to the desired value using a control mechanism on a shaped obturator, with graduated scale position indicator.
 - a motorized control valve, with linear regulation characteristic. An external regulator activates the control valve by adjusting the valve control obturator in accordance with the thermal load to be controlled.

The device keeps at the desired value the flow rate determined by the opening degree of the modulating control valve, despite any change of differential pressure of the circuit to which is fitted.

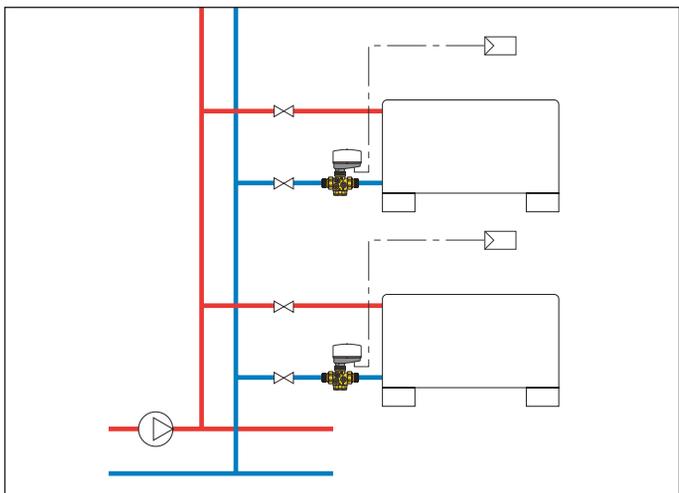
Automatic flow rate regulator



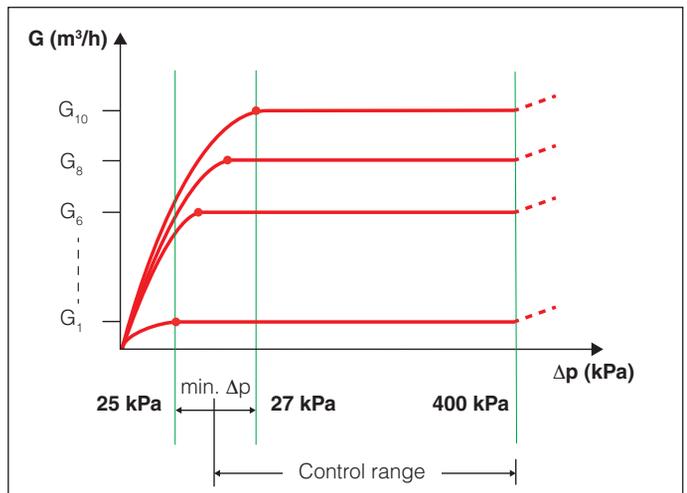
Motorized control valve



Application diagram of control valve 145 series



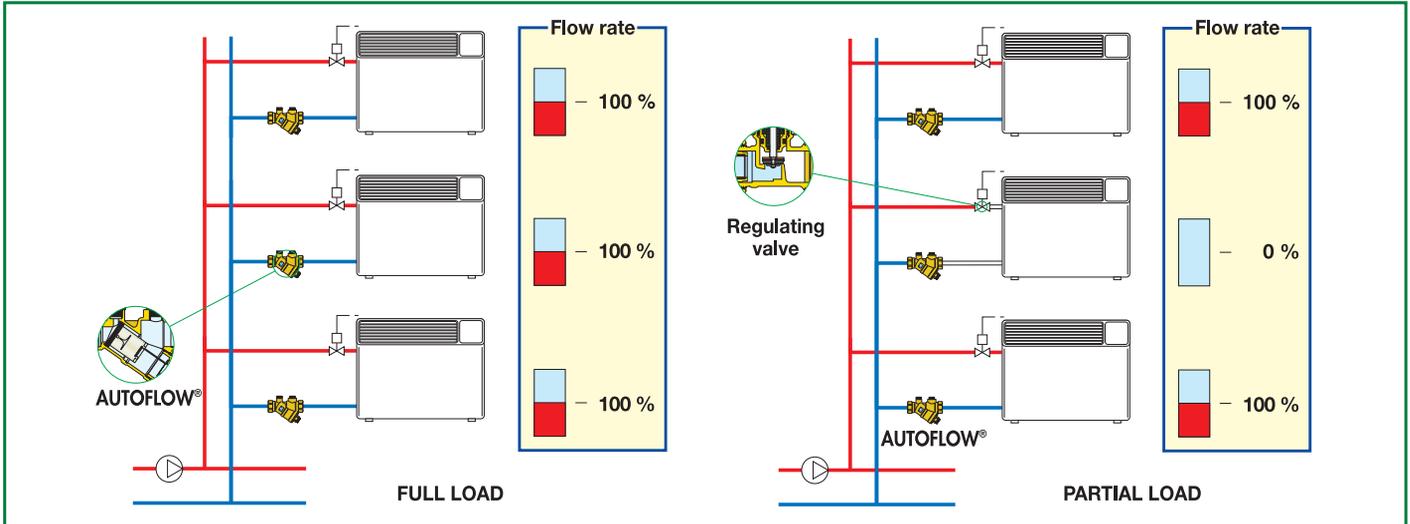
Operating principle diagram



DYNAMIC BALANCING - AUTOFLOW® DEVICES

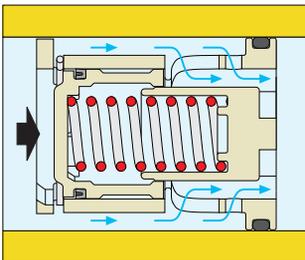
Circuit balanced with AUTOFLOW®

The AUTOFLOW® devices balance the hydraulic circuit automatically, ensuring that each terminal emitter receives the design flow rate. Even in the case of partial circuit closure by means of the regulating valves, the flow rates in the open circuits **remain constant at the nominal value**. The system always guarantees the greatest comfort and the highest energy savings.

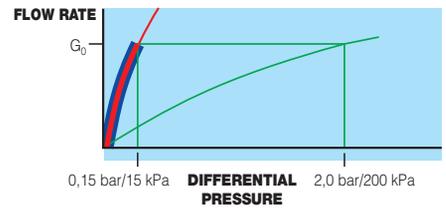
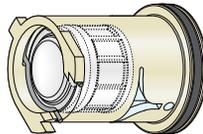


Operation

Below the control range

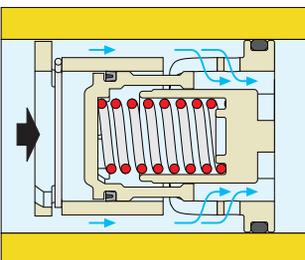


In this case, the regulating piston remains in equilibrium without compressing the spring and gives the medium the maximum free flow area. In practice, the piston acts as a fixed regulator and thus the flow rate through the AUTOFLOW® depends solely on the differential pressure.

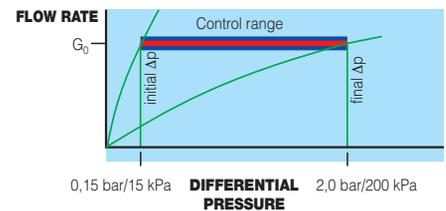
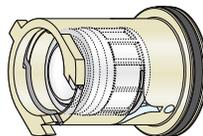


$KV_{0,01} = 0,258 \cdot G_0 \cdot \Delta p$ range 15–200 kPa where $G_0 =$ nominal flow rate

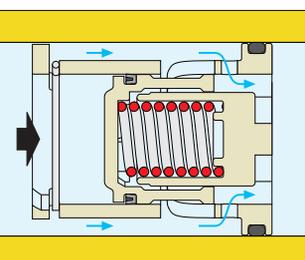
Within the control range



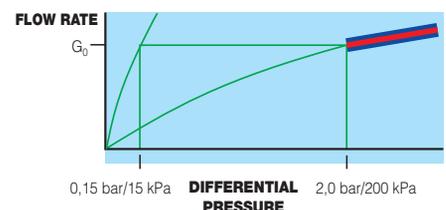
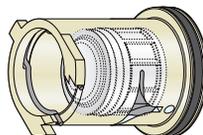
If the differential pressure is contained within the control range, the piston compresses the spring and gives the medium a free flow area to permit regular flow at the nominal rate for which the l'AUTOFLOW® is set up.



Above the control range



In this case, the piston fully compresses the spring and only leaves the fixed geometry aperture for the medium to pass through. As in the first case above, the piston acts as a fixed regulator. The flow rate through the AUTOFLOW® thus depends solely on the differential pressure.



$KV_{0,01} = 0,070 \cdot G_0 \cdot \Delta p$ range 15–200 kPa where $G_0 =$ nominal flow rate

COMPACT AUTOMATIC FLOW RATE REGULATOR WITH HIGH RESISTANCE POLYMER CARTRIDGE



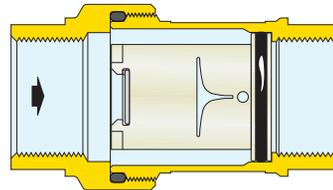
127 AUTOFLOW®

tech. broch. 01166

Compact automatic flow rate regulator.
 Brass body.
 AUTOFLOW® cartridge:
 1/2"–11/4" in high resistance polymer,
 1 1/2" - 2" in high resistance polymer and stainless steel.
 Max. working pressure: 16 bar.
 Temperature range: 0–100°C.
 Max. percentage of glycol: 50%.
 Δp range: 15–200 kPa.
 Flow rates: 0,085–11,0 m³/h.
 Accuracy: ±10%.

Code

127141 ●●●	1/2"	1	–
127151 ●●●	3/4"	1	–
127161 ●●●	1"	1	–
127171 ●●●	1 1/4"	1	–
127181 ●●●	1 1/2"	1	–
127191 ●●●	2"	1	–



Code	Min. working Δp (kPa)	Δp range (kPa)	Flow rates (m³/h)
127141 ●●●	15	15–200	0,085; 0,12; 0,15; 0,2; 0,25; 0,3; 0,35; 0,4; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2
127151 ●●●	15	15–200	0,085; 0,12; 0,15; 0,2; 0,25; 0,3; 0,35; 0,4; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6
127161 ●●●	15	15–200	0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 4,75; 5,0
127171 ●●●	15	15–200	0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 4,75; 5,0
127181 ●●●	15	15–200	4,5; 4,75; 5,0; 5,5; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0
127191 ●●●	15	15–200	4,5; 4,75; 5,0; 5,5; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0

Minimum differential pressure required

Equal to the minimum working Δp of the AUTOFLOW® cartridge (15 kPa).

Spare AUTOFLOW® polymer cartridge complete with metal tag and metal chain for fixing to the body of the AUTOFLOW® device. For 127 series.



For 1/2" and 3/4" bodies

Code	Flow rate (m³/h)
02M08 XXG	0,085
02M12 XXG	0,12
02M15 XXG	0,15
02M20 XXG	0,20
02M25 XXG	0,25
02M30 XXG	0,30
02M35 XXG	0,35
02M40 XXG	0,40
02M50 XXG	0,50
02M60 XXG	0,60
02M70 XXG	0,70
02M80 XXG	0,80
02M90 XXG	0,90
021M0 XXG	1,00
021M2 XXG	1,20
021M4 XXG	1,40
021M6 XXG	1,60



For 1" and 1 1/4" bodies, with adapter

Code	Flow rate (m³/h)
02M50 XXH	0,50
02M60 XXH	0,60
02M70 XXH	0,70
02M80 XXH	0,80
02M90 XXH	0,90
021M0 XXH	1,00
021M2 XXH	1,20
021M4 XXH	1,40
021M6 XXH	1,60



For 1" and 1 1/4" bodies

Code	Flow rate (m³/h)
041M8 XXH	1,80
042M0 XXH	2,00
042M2 XXH	2,25
042M5 XXH	2,50
042M7 XXH	2,75
043M0 XXH	3,00
043M2 XXH	3,25
043M5 XXH	3,50
043M7 XXH	3,75
044M0 XXH	4,00
044M2 XXH	4,25
044M5 XXH	4,50
044M7 XXH	4,75
045M0 XXH	5,00



For 1 1/2" and 2" bodies, with adapter

Code	Flow rate (m³/h)
044M5 XXI	4,50
044M7 XXI	4,75
045M0 XXI	5,00



For 1 1/2" and 2" bodies

Code	Flow rate (m³/h)
055M5 XXI	5,50
056M0 XXI	6,00
056M5 XXI	6,50
057M0 XXI	7,00
057M5 XXI	7,50
058M0 XXI	8,00
058M5 XXI	8,50
059M0 XXI	9,00
059M5 XXI	9,50
0510M XXI	10,0
0511M XXI	11,0

AUTOMATIC FLOW RATE REGULATOR WITH HIGH RESISTANCE POLYMER CARTRIDGE AND BALL VALVE

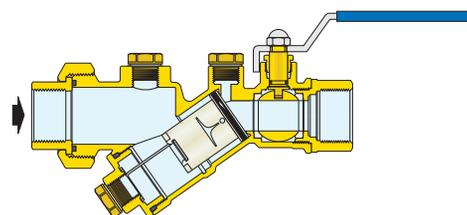


tech. broch. 01141

121 AUTOFLOW®

Combination of automatic flow rate regulator and ball valve.
CR dezincification resistant alloy body.
 AUTOFLOW® cartridge:
 1/2"–1 1/4" in high resistance polymer,
 1 1/2" - 2" in high resistance polymer and stainless steel.
 Max. working pressure: 25 bar.
 Temperature range: -20–100°C.
 Max. percentage of glycol: 50%.
 Δp range: 15–200 kPa.
 Flow rates: 0,12–11,0 m³/h.
 Accuracy: $\pm 10\%$.

Fitted for connection of pressure ports and drain valve.



Code	Size	Flow rate (m ³ /h)	Accuracy
121141 ...	1/2"	1	–
121151 ...	3/4"	1	–
121161 ...	1"	1	–
121171 ...	1 1/4"	1	–
121181 ...	1 1/2"	1	–
121191 ...	2"	1	–

Code	Kv (m ³ /h)	Min. working Δp (kPa)	Δp range (kPa)	Flow rates (m ³ /h)
121141 ...	6,90	15	15–200	0,12; 0,15; 0,2; 0,25; 0,3; 0,35; 0,4; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2
121151 ...	7,73	15	15–200	0,12; 0,15; 0,2; 0,25; 0,3; 0,35; 0,4; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6
121161 ...	18,00	15	15–200	0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 4,75; 5,0
121171 ...	18,50	15	15–200	0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 4,75; 5,0
121181 ...	47,24	15	15–200	5,5; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0
121191 ...	48,89	15	15–200	5,5; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0

Minimum differential pressure required

This is given by the sum of two values:

1. the minimum working Δp of the AUTOFLOW® cartridge;
2. the Δp required for the nominal flow rate to pass through the valve body. This value can be determined on the basis of the values of Kv shown above referring to the valve body.

Spare AUTOFLOW® polymer cartridge complete with metal tag and metal chain for fixing to the body of the AUTOFLOW® device. For 121 and 126 series.

NOTE: When ordering, give the full code of the AUTOFLOW® device into which the cartridge is to be fitted (code shown on the metal plate supplied with every AUTOFLOW® unit).



For 1/2" and 3/4" bodies

Code	Flow rate (m ³ /h)
02M12 XXX	0,12
02M15 XXX	0,15
02M20 XXX	0,20
02M25 XXX	0,25
02M30 XXX	0,30
02M35 XXX	0,35
02M40 XXX	0,40
02M50 XXX	0,50
02M60 XXX	0,60
02M70 XXX	0,70
02M80 XXX	0,80
02M90 XXX	0,90
021M0 XXX	1,00
021M2 XXX	1,20
021M4 XXX	1,40
021M6 XXX	1,60



For 1" and 1 1/4" bodies, with adapter

Code	Flow rate (m ³ /h)
02M50 XXF	0,50
02M60 XXF	0,60
02M70 XXF	0,70
02M80 XXF	0,80
02M90 XXF	0,90
021M0 XXF	1,00
021M2 XXF	1,20
021M4 XXF	1,40
021M6 XXF	1,60



For 1" and 1 1/4" bodies, with adapter

Code	Flow rate (m ³ /h)
02M50 XXC	0,50
02M60 XXC	0,60
02M70 XXC	0,70
02M80 XXC	0,80
02M90 XXC	0,90
021M0 XXC	1,00
021M2 XXC	1,20
021M4 XXC	1,40
021M6 XXC	1,60



For 1" and 1 1/4" bodies

Code	Flow rate (m ³ /h)
041M8 XXC	1,80
042M0 XXC	2,00
042M2 XXC	2,25
042M5 XXC	2,50
042M7 XXC	2,75
043M0 XXC	3,00
043M2 XXC	3,25
043M5 XXC	3,50
043M7 XXC	3,75
044M0 XXC	4,00
044M2 XXC	4,25
044M5 XXC	4,50
044M7 XXC	4,75
045M0 XXC	5,00



For 1 1/2" and 2" bodies

Code	Flow rate (m ³ /h)
055M5 XXD	5,50
056M0 XXD	6,00
056M5 XXD	6,50
057M0 XXD	7,00
057M5 XXD	7,50
058M0 XXD	8,00
058M5 XXD	8,50
059M0 XXD	9,00
059M5 XXD	9,50
0510M XXD	10,0
0511M XXD	11,0

AUTOMATIC FLOW RATE REGULATOR WITH HIGH RESISTANCE POLYMER CARTRIDGE

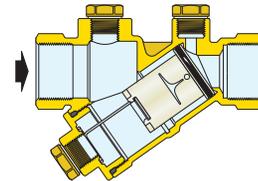


126 AUTOFLOW®

tech. broch. 01141

Automatic flow rate regulator.
CR dezincification resistant alloy body.
 AUTOFLOW® cartridge:
 1/2"–11/4" in high resistance polymer,
 1 1/2" - 2" in high resistance polymer and stainless steel.
 Max. working pressure: 25 bar.
 Temperature range: -20–100°C.
 Max. percentage of glycol: 50%.
 Δp range: 15–200 kPa.
 Flow rates: 0,12–11,0 m³/h.
 Accuracy: $\pm 10\%$.

Fitted for connection of pressure ports and drain valve.



Code	Size	Box Qty	Carton Qty
126141 ●●●	1/2"	1	–
126151 ●●●	3/4"	1	–
126161 ●●●	1"	1	–
126171 ●●●	1 1/4"	1	–
126181 ●●●	1 1/2"	1	–
126191 ●●●	2"	1	–

Code	Kv (m ³ /h)	Min. working Δp (kPa)	Δp range (kPa)	Flow rates (m ³ /h)
126141 ●●●	6,69	15	15–200	0,12; 0,15; 0,2; 0,25; 0,3; 0,35; 0,4; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2
126151 ●●●	7,58	15	15–200	0,12; 0,15; 0,2; 0,25; 0,3; 0,35; 0,4; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6
126161 ●●●	14,00	15	15–200	0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 4,75; 5,00
126171 ●●●	14,50	15	15–200	0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 4,75; 5,00
126181 ●●●	34,72	15	15–200	5,5; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0
126191 ●●●	37,38	15	15–200	5,5; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0

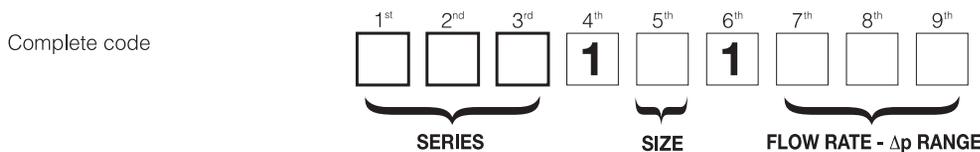
Minimum differential pressure required

This is given by the sum of two values:

- the minimum working Δp of the AUTOFLOW® cartridge;
- the Δp required for the nominal flow rate to pass through the valve body. This value can be determined on the basis of the values of Kv shown above referring to the valve body.

Method of coding AUTOFLOW® 121 - 126 - 127 series

For correct identification of the device, fill in the form indicating: series No., size, flow rate and Δp range.



SERIES

1st 2nd 3rd The first three digits indicate the series

121	AUTOFLOW® regulator and ball valve
126	AUTOFLOW® regulator
127	AUTOFLOW® compact regulator

SIZE

5th The fifth digit indicates the size

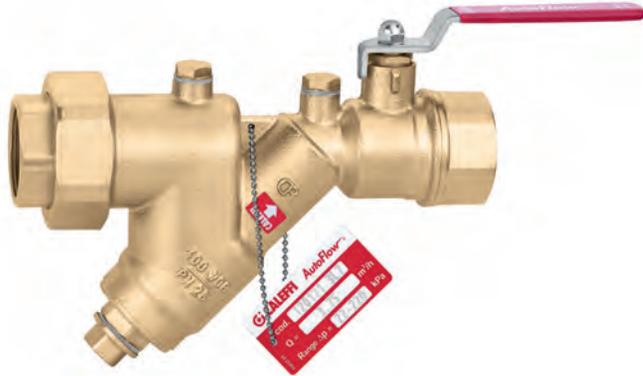
Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Digit	4	5	6	7	8	9

FLOW RATE - Δp RANGE

7th 8th 9th The last three digits indicate the available flow rate

Δp range 15–200 kPa											
m ³ /h	digit	m ³ /h	digit	m ³ /h	digit	m ³ /h	digit	m ³ /h	digit	m ³ /h	digit
0,085	M08	0,40	M40	1,20	1M2	2,75	2M7	4,50	4M5	7,50	7M5
0,12	M12	0,50	M50	1,40	1M4	3,00	3M0	4,75	4M7	8,00	8M0
0,15	M15	0,60	M60	1,60	1M6	3,25	3M2	5,00	5M0	8,50	8M5
0,20	M20	0,70	M70	1,80	1M8	3,50	3M5	5,50	5M5	9,00	9M0
0,25	M25	0,80	M80	2,00	2M0	3,75	3M7	6,00	6M0	9,50	9M5
0,30	M30	0,90	M90	2,25	2M2	4,00	4M0	6,50	6M5	10,0	10M
0,35	M35	1,00	1M0	2,50	2M5	4,25	4M2	7,00	7M0	11,0	11M

AUTOMATIC FLOW RATE REGULATOR WITH STAINLESS STEEL CARTRIDGE AND BALL VALVE

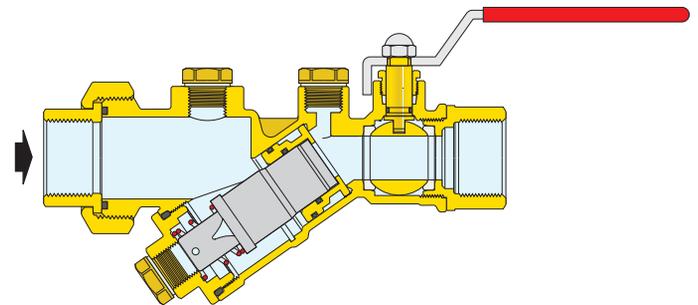


120 AUTOFLOW®

tech. broch. 01041

Combination of automatic flow rate regulator and ball valve.
CR dezincification resistant alloy body.
 Stainless steel AUTOFLOW® cartridge.
 Max. working pressure: 25 bar.
 Temperature range: 0–110°C.
 Max. percentage of glycol: 50%.
 Δp range: 7–100 kPa; 22–220 kPa; 35–410 kPa.
 Flow rates: 0,12–15,5 m³/h.
 Accuracy: $\pm 5\%$.

Fitted for connection of pressure ports and drain valve.



Code			
120141 ...	1/2"	1	–
120151 ...	3/4"	1	–
120161 ...	1"	1	–
120171 ...	1 1/4"	1	–
120181 ...	1 1/2"	1	–
120191 ...	2"	1	–

Code	Kv (m ³ /h)	Min. working Δp (kPa)	Δp range (kPa)	Flow rates (m ³ /h)
120141 ...	6,90	7	7–100	0,45; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0
120151 ...	7,73	7	7–100	0,45; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0
120161 ...	17,04	7	7–100	0,7; 0,8; 0,9; 1,0

Code	Kv (m ³ /h)	Min. working Δp (kPa)	Δp range (kPa)	Flow rates (m ³ /h)
120141 ...	6,90	22	22–220	0,12; 0,15; 0,2; 0,25; 0,3; 0,35; 0,4; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8
120151 ...	7,73	22	22–220	0,12; 0,15; 0,2; 0,25; 0,3; 0,35; 0,4; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8
120161 ...	17,04	22	22–220	0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25
120171 ...	17,74	22	22–220	0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25
120181 ...	47,24	22	22–220	2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 5,0; 5,5; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0
120191 ...	48,89	22	22–220	2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 5,0; 5,5; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0

Code	Kv (m ³ /h)	Min. working Δp (kPa)	Δp range (kPa)	Flow rates (m ³ /h)
120141 ...	6,90	35	35–410	0,25; 0,35; 0,45; 0,55; 0,7; 0,9; 1,1; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75
120151 ...	7,73	35	35–410	0,25; 0,35; 0,45; 0,55; 0,7; 0,9; 1,1; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75
120161 ...	17,04	35	35–410	1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 5,0; 5,5; 6,0
120171 ...	17,74	35	35–410	1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 5,0; 5,5; 6,0
120181 ...	47,24	35	35–410	3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 5,5; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0; 12,0; 13,0; 14,5; 15,5
120191 ...	48,89	35	35–410	3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 5,5; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0; 12,0; 13,0; 14,5; 15,5

... For code completion see method of coding on page 170

Minimum differential pressure required

This is given by the sum of two values:

1. the minimum working Δp of the AUTOFLOW® cartridge;
2. the Δp required for the nominal flow rate to pass through the valve body. This value can be determined on the basis of the values of Kv shown above referring to the valve body.

AUTOMATIC FLOW RATE REGULATOR WITH STAINLESS STEEL CARTRIDGE



125 AUTOFLOW®

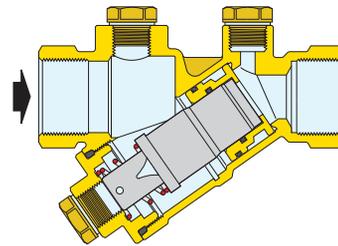
tech. broch. 01041

Automatic flow rate regulator.
CR dezincification resistant alloy body.
 Stainless steel AUTOFLOW® cartridge.
 Max. working pressure: 25 bar.
 Temperature range: -20–110°C.
 Max. percentage of glycol: 50%.
 Δp range: 7–100 kPa; 22–220 kPa; 35–410 kPa.
 Flow rates: 0,12–22,5 m³/h.
 Accuracy: ±5%.

Fitted for connection of pressure ports and drain valve.

Code

Code	Size	Box	Carton
125141 ●●●	1/2"	1	–
125151 ●●●	3/4"	1	–
125161 ●●●	1"	1	–
125171 ●●●	1 1/4"	1	–
125181 ●●●	1 1/2"	1	–
125191 ●●●	2"	1	–
125101 ●●●	2 1/2"	1	–



Code	Kv (m³/h)	Min. working Δp (kPa)	Δp range (kPa)	Flow rates (m³/h)
125141 ●●●	6,69	7	7–100	0,45; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0
125151 ●●●	7,58	7	7–100	0,45; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0
125161 ●●●	13,42	7	7–100	0,7; 0,8; 0,9; 1,0

Code	Kv (m³/h)	Min. working Δp (kPa)	Δp range (kPa)	Flow rates (m³/h)
125141 ●●●	6,69	22	22–220	0,12; 0,15; 0,2; 0,25; 0,3; 0,35; 0,4; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8
125151 ●●●	7,58	22	22–220	0,12; 0,15; 0,2; 0,25; 0,3; 0,35; 0,4; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8
125161 ●●●	13,42	22	22–220	0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25
125171 ●●●	13,26	22	22–220	0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25
125181 ●●●	34,72	22	22–220	2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 5,0; 5,5; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0
125191 ●●●	37,38	22	22–220	2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 5,0; 5,5; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0
125101 ●●●	75,82	22	22–220	8,5; 9,0; 9,5; 10,0; 11,0; 12,0; 13,5; 14,5; 15,5; 16,5; 17,0; 18,0; 19,5; 20,5; 21,5; 22,5

Code	Kv (m³/h)	Min. working Δp (kPa)	Δp range (kPa)	Flow rates (m³/h)
125141 ●●●	6,69	35	35–410	0,25; 0,35; 0,45; 0,55; 0,7; 0,9; 1,1; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75
125151 ●●●	7,58	35	35–410	0,25; 0,35; 0,45; 0,55; 0,7; 0,9; 1,1; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75
125161 ●●●	13,42	35	35–410	2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 5,0; 5,5; 6,0
125171 ●●●	13,26	35	35–410	2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 5,0; 5,5; 6,0
125181 ●●●	34,72	35	35–410	3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 5,5; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0; 12,0; 13,0; 14,5; 15,5
125191 ●●●	37,38	35	35–410	3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 5,5; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0; 12,0; 13,0; 14,5; 15,5
125101 ●●●	75,82	35	35–410	6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 11,0; 18,0; 19,0; 20,0; 21,0; 22,0

●●● For code completion see method of coding on page 170

Minimum differential pressure required

This is given by the sum of two values:

1. the minimum working Δp of the AUTOFLOW® cartridge;
2. the Δp required for the nominal flow rate to pass through the valve body. This value can be determined on the basis of the values of Kv shown above referring to the valve body.

STRAINERS



120 STRAINER

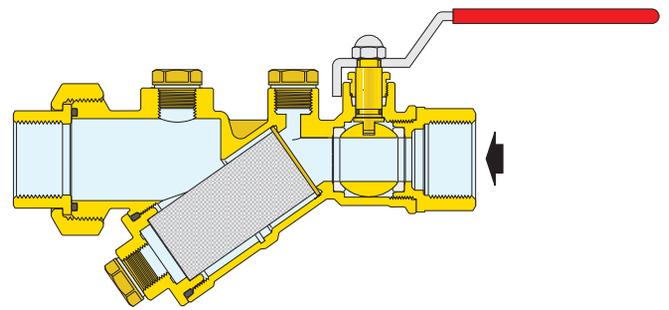
tech. broch. 01041

Combination of Y-strainer and ball valve.
 CR dezincification resistant alloy body.
 Stainless steel strainer cartridge.
 Max. working pressure: 25 bar.
 Temperature range: 0–110°C.
 Max. percentage of glycol: 50%.
 Strainer mesh size Ø: 1/2"–1 1/4": 0,87 mm; 1 1/2" and 2": 0,73 mm.

Fitted for connection of pressure ports and drain valve.



Code		Kv (m³/h)		
120141 000	1/2"	6,87	1	–
120151 000	3/4"	7,25	1	–
120161 000	1"	16,65	1	–
120171 000	1 1/4"	17,23	1	–
120181 000	1 1/2"	39,13	1	–
120191 000	2"	39,69	1	–



Pressure drop

- The indicated Kv value refers to the valve complete with strainer.



125 STRAINER

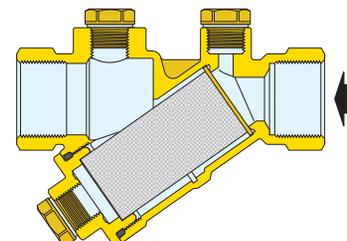
tech. broch. 01041

Y-strainer.
 CR dezincification resistant alloy body.
 Stainless steel strainer cartridge.
 Max. working pressure: 25 bar.
 Temperature range: -20–110°C.
 Max. percentage of glycol: 50%.
 Strainer mesh size Ø: 1/2"–1 1/4": 0,87 mm; 1 1/2"–2 1/2": 0,73 mm.

Fitted for connection of pressure ports and drain valve.



Code		Kv (m³/h)		
125141 000	1/2"	6,88	1	–
125151 000	3/4"	7,05	1	–
125161 000	1"	14,10	1	–
125171 000	1 1/4"	14,94	1	–
125181 000	1 1/2"	32,27	1	–
125191 000	2"	36,21	1	–
125101 000	2 1/2"	68,25	1	–



Pressure drop

- The indicated Kv value refers to the valve complete with strainer.

STAINLESS STEEL CARTRIDGES



Spare AUTOFLOW® cartridge complete with metal tag and metal chain for fixing to the body of the AUTOFLOW® device.
Available in different models depending on the flow rate.
The different colours identify the available models.

NOTE: When ordering, give the full code of the AUTOFLOW® device into which the cartridge is to be fitted (code shown on the metal plate supplied with every AUTOFLOW® device).

Δp range 7–100 kPa

Code	Flow rate (m³/h)	For 1" new bodies with new cartridge.
03S45 XXX	0,45	
03S50 XXX	0,50	
03S60 XXX	0,60	
03S70 XXX	0,70	
03S80 XXX	0,80	
03S90 XXX	0,90	
031S0 XXX	1,00	

Code	Flow rate (m³/h)	For 1" - 1 1/4" new bodies with new cartridge.
04S70 XXF	0,70	
04S80 XXF	0,80	
04S90 XXF	0,90	
041S0 XXF	1,00	

Δp range 22–220 kPa

Code	Flow rate (m³/h)	For 1" - 1 1/4" new bodies with new cartridge.
03L12 XXX	0,12	
03L15 XXX	0,15	
03L20 XXX	0,20	
03L25 XXX	0,25	
03L30 XXX	0,30	
03L35 XXX	0,35	
03L40 XXX	0,40	
03L50 XXX	0,50	
03L60 XXX	0,60	
03L70 XXX	0,70	
03L80 XXX	0,80	
03L90 XXX	0,90	
031L0 XXX	1,00	
031L2 XXX	1,20	
031L4 XXX	1,40	
031L6 XXX	1,60	
031L8 XXX	1,80	

Code	Flow rate (m³/h)	For 1" - 1 1/4" new bodies with new cartridge.
04L70 XXF	0,70	
04L80 XXF	0,80	
04L90 XXF	0,90	
041L0 XXF	1,00	
041L2 XXF	1,20	
041L4 XXF	1,40	
041L6 XXF	1,60	
041L8 XXF	1,80	
042L0 XXF	2,00	
042L2 XXF	2,25	
042L5 XXF	2,50	
042L7 XXF	2,75	
043L0 XXF	3,00	
043L2 XXF	3,25	
043L5 XXF	3,50	
043L7 XXF	3,75	
044L0 XXF	4,00	
044L2 XXF	4,25	

For 2 1/2" new bodies with new cartridge.

069L0 XXF	9,00
069L5 XXF	9,50
0610L XXF	10,00
0611L XXF	11,00
0612L XXF	12,00
0613L XXF	13,00
0614L XXF	14,00
0615L XXF	15,00
0616L XXF	16,00
0617L XXF	17,00
0618L XXF	18,00
0619L XXF	19,50
0620L XXF	20,50
0621L XXF	21,50
0622L XXF	22,50

Code	Flow rate (m³/h)	For 1" - 1 1/4" new bodies with new cartridge.
052L7 XXX	2,75	
053L0 XXX	3,00	
053L2 XXX	3,25	
053L5 XXX	3,50	
053L7 XXX	3,75	
054L0 XXX	4,00	
054L2 XXX	4,25	
054L5 XXX	4,50	
055L0 XXX	5,00	
055L5 XXX	5,50	
056L0 XXX	6,00	
056L5 XXX	6,50	
057L0 XXX	7,00	
057L5 XXX	7,50	
058L0 XXX	8,00	
058L5 XXX	8,50	
059L0 XXX	9,00	
059L5 XXX	9,50	
0510L XXX	10,00	
0510L XXX	10,00	
0511L XXX	11,00	

Δp range 35–410 kPa

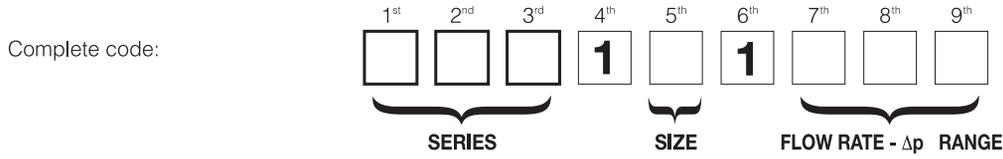
Code	Flow rate (m³/h)	For 1" - 1 1/4" new bodies with new cartridge.
03H25 XXX	0,25	
03H35 XXX	0,35	
03H45 XXX	0,45	
03H55 XXX	0,55	
03H70 XXX	0,70	
03H90 XXX	0,90	
031H1 XXX	1,10	
031H4 XXX	1,40	
031H6 XXX	1,60	
031H8 XXX	1,80	
032H0 XXX	2,00	
032H2 XXX	2,25	
032H5 XXX	2,50	
032H7 XXX	2,75	
043H0 XXX	3,00	
043H2 XXX	3,25	
043H5 XXX	3,50	
043H7 XXX	3,75	
044H0 XXX	4,00	
044H2 XXX	4,25	
044H5 XXX	4,50	
045H0 XXX	5,00	
045H5 XXX	5,50	
046H0 XXX	6,00	
056H5 XXX	6,50	
057H0 XXX	7,00	
057H5 XXX	7,50	
058H0 XXX	8,00	
058H5 XXX	8,50	
059H0 XXX	9,00	
059H5 XXX	9,50	
0510H XXX	10,00	
0511H XXX	11,00	
0512H XXX	12,00	
0513H XXX	13,00	
0514H XXX	14,50	
0515H XXX	15,50	

For 2 1/2" new bodies with new cartridge.

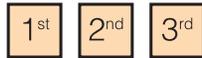
0618H XXF	18,00
0619H XXF	19,00
0620H XXF	20,00
0621H XXF	21,00
0622H XXF	22,00

Method of coding AUTOFLOW® 120 - 125 series

For correct identification of the device, fill in the form indicating: series No., size, flow rate and Δp range.



SERIES



The first three digits indicate the series

120	AUTOFLOW® regulator and ball valve
125	AUTOFLOW® regulator

SIZE



The fifth digit indicates the size

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
Digit	4	5	6	7	8	9	0

FLOW RATE - Δp RANGE



The last three digits indicate the available flow rates

Δp range 7-100 kPa							
m³/h	digit	m³/h	digit	m³/h	digit	m³/h	digit
0,45	S45	0,60	S60	0,80	S80	1,00	1S0
0,50	S50	0,70	S70	0,90	S90		

Δp range 22-220 kPa											
m³/h	digit	m³/h	digit	m³/h	digit	m³/h	digit	m³/h	digit	m³/h	digit
0,12	L12	0,70	L70	2,25	2L2	4,50	4L5	9,00	9L0	17,0	17L
0,15	L15	0,80	L80	2,50	2L5	5,00	5L0	9,50	9L5	18,0	18L
0,20	L20	0,90	L90	2,75	2L7	5,50	5L5	10,0	10L	19,5	19L
0,25	L25	1,00	1L0	3,00	3L0	6,00	6L0	11,0	11L	20,5	20L
0,30	L30	1,20	1L2	3,25	3L2	6,50	6L5	12,0	12L	21,5	21L
0,35	L35	1,40	1L4	3,50	3L5	7,00	7L0	13,5	13L	22,5	22L
0,40	L40	1,60	1L6	3,75	3L7	7,50	7L5	14,5	14L		
0,50	L50	1,80	1L8	4,00	4L0	8,00	8L0	15,5	15L		
0,60	L60	2,00	2L0	4,25	4L2	8,50	8L5	16,5	16L		

Δp range 35-410 kPa											
m³/h	digit	m³/h	digit	m³/h	digit	m³/h	digit	m³/h	digit	m³/h	digit
0,25	H25	1,60	1H6	3,50	3H5	6,50	6H5	11,0	11H	21,0	21H
0,35	H35	1,80	1H8	3,75	3H7	7,00	7H0	12,0	12H	22,0	22H
0,45	H45	2,00	2H0	4,00	4H0	7,50	7H5	13,0	13H		
0,55	H55	2,25	2H2	4,25	4H2	8,00	8H0	14,5	14H		
0,70	H70	2,50	2H5	4,50	4H5	8,50	8H5	15,5	15H		
0,90	H90	2,75	2H7	5,00	5H0	9,00	9H0	18,0	18H		
1,10	1H1	3,00	3H0	5,50	5H5	9,50	9H5	19,0	19H		
1,40	1H4	3,25	3H2	6,00	6H0	10,0	10H	20,0	20H		

AUTOMATIC FLOW REGULATOR WITH STAINLESS STEEL CARTRIDGE

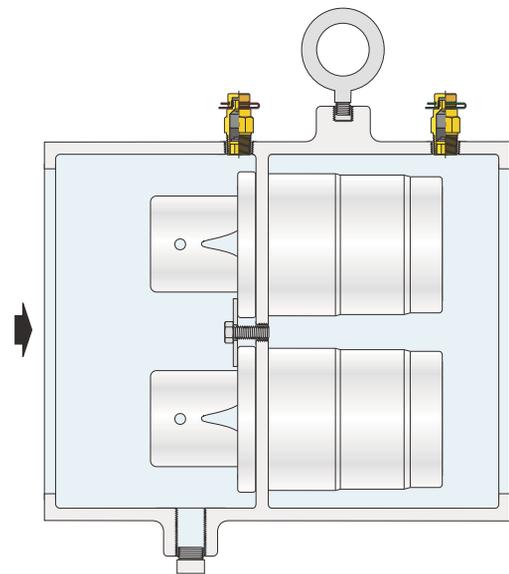


**103
AUTOFLOW®**

tech. broch. 01041

Automatic flow rate regulator, flanged version.
 Cast iron body.
 Stainless steel AUTOFLOW® cartridge.
 Max. working pressure: 16 bar.
 Temperature range: -20-110°C.
 Max. percentage of glycol: 50%.
 Range Δp: 22-220 kPa; 35-410 kPa.
 Flow rates: 6,5-3850 m³/h.
 Accuracy: ±5%.

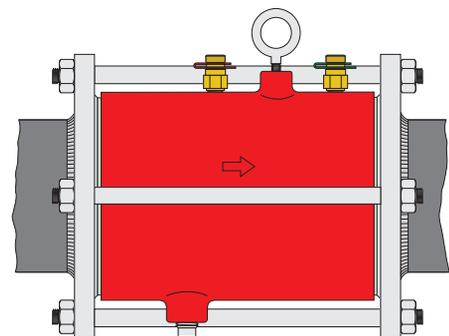
Supplied with flat counterflanges EN 1092-1 PN 16, rods, gasket and quick-fit pressure test ports.



Code	DN	Min. working Δp (kPa)	Flow rates (m³/h)	Δp range (kPa)		
103111 ...	65	22	9 - 22,5	22-220	1	-
103113 ...	65	35	6,5- 24,5	35-410	1	-
103121 ...	80	22	18 - 22,5	22-220	1	-
103123 ...	80	35	18 - 22,5	35-410	1	-
103131 ...	100	22	18 - 22,5	22-220	1	-
103133 ...	100	35	18 - 22,5	35-410	1	-
103141 ...	125 *	22	16,5- 61	22-220	1	-
103143 ...	125 *	35	18 - 45	35-410	1	-
103151 ...	150	22	16,5-122,5	22-220	1	-
103153 ...	150	35	18 -155	35-410	1	-
103161 ...	200	22	32 -215	22-220	1	-
103163 ...	200	35	36 -270	35-410	1	-
103171 ...	250	22	64 -338	22-220	1	-
103173 ...	250	35	72 -425	35-410	1	-
103181 ...	300	22	95 -460	22-220	1	-
103183 ...	300	35	115 -580	35-410	1	-
103191 ...	350	22	160 -580	22-220	1	-
103193 ...	350	35	190 -730	35-410	1	-

- ... For code completion see method of coding in the following pages.
- Flow rates available with ~ 1 m³/h increments.
- Available on request with sizes from DN 400 to DN 800, with flow rates up to 3850 m³/h.

* Available on request with 4" ANSI flanges

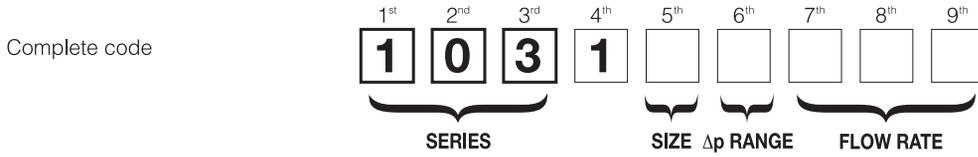


Minimum differential pressure required

This is equal to the min. working Δp of the AUTOFLOW® cartridge (22 or 35 kPa).

Method of coding AUTOFLOW® 103 series

For correct identification of the device, fill in the form indicating: size, Δp range and flow rate.



SIZE 5th The fifth digit indicates the size

DN	65	80	100	125	150	200	250	300	350
Digit	1	2	3	4	5	6	7	8	9

Δp RANGE 6th The sixth digit indicates differential pressure range (Δp range)

kPa	22–220	35–410
Digit	1	3

FLOW RATE 7th 8th 9th The last three digits indicate the flow rate values (See tables below and on the following page)

Coding tables of flow rates available with Δp range 22–220 kPa for sizes from DN 65 to DN 100

(For flow rates with Δp range 35–410 kPa, available on request, this indication has to be defined when ordering)

DN 65	COMPLETE CODE	
	Flow rate code	Flow rate (m³/h)
103111	009	9
103111	010	10
103111	011	11
103111	012	12
103111	013	13,5
103111	014	14,5
103111	015	15,5
103111	016	16,5
103111	017	17
103111	018	18
103111	019	19,5
103111	020	20,5
103111	021	21,5
103111	022	22,5

DN 80	COMPLETE CODE	
	Flow rate code	Flow rate (m³/h)
103121	018	18
103121	019	19,5
103121	020	20,5
103121	021	21,5
103121	022	22,5

DN 100	COMPLETE CODE	
	Flow rate code	Flow rate (m³/h)
103131	018	18
103131	019	19,5
103131	020	20,5
103131	021	21,5
103131	022	22,5

Coding tables of flow rates available with Δp range 22–220 kPa for sizes DN 125 and DN 150

(For flow rates with sizes greater than DN 150, available on request, this indication has to be defined when ordering)

(For flow rates with Δp range 35–410 kPa, available on request, this indication has to be defined when ordering)

DN 125*	COMPLETE CODE	
	Flow rate code	Flow rate (m ³ /h)
103141	016	16,5
103141	017	17
103141	018	18
103141	019	19,5
103141	020	20,5
103141	021	21,5
103141	022	22,5
103141	024	24
103141	025	25,5
103141	027	27
103141	028	28,5
103141	029	29,5
103141	030	30,5
103141	032	32
103141	033	33,5
103141	034	34,5
103141	035	35
103141	036	36
103141	037	37,5
103141	038	38,5
103141	039	39,5
103141	041	41,5
103141	042	42
103141	043	43
103141	044	44,5
103141	046	46
103141	047	47,5
103141	049	49
103141	050	50
103141	051	51
103141	052	52
103141	053	53,5
103141	054	54,5
103141	055	55,5
103141	059	59
103141	060	60
103141	061	61

DN 150	COMPLETE CODE	
	Flow rate code	Flow rate (m ³ /h)
103151	016	16,5
103151	017	17
103151	018	18
103151	019	19,5
103151	020	20,5
103151	021	21,5
103151	022	22,5
103151	024	24
103151	025	25,5
103151	027	27
103151	028	28,5
103151	029	29,5
103151	030	30,5
103151	032	32
103151	033	33,5
103151	034	34,5
103151	035	35
103151	036	36
103151	037	37,5
103151	038	38,5
103151	039	39,5
103151	041	41,5
103151	042	42
103151	043	43
103151	044	44,5
103151	046	46
103151	047	47,5
103151	049	49
103151	050	50
103151	051	51
103151	052	52
103151	053	53,5
103151	054	54,5
103151	055	55,5
103151	057	57
103151	058	58
103151	059	59
103151	060	60
103151	061	61
103151	062	62,5
103151	063	63,5
103151	064	64,5
103151	066	66
103151	067	67
103151	068	68
103151	069	69

DN 150	COMPLETE CODE	
	Flow rate code	Flow rate (m ³ /h)
103151	070	70,5
103151	071	71,5
103151	072	72,5
103151	074	74
103151	075	75
103151	076	76
103151	077	77
103151	078	78,5
103151	079	79,5
103151	080	80,5
103151	082	82
103151	083	83
103151	084	84
103151	085	85
103151	086	86
103151	087	87,5
103151	088	88,5
103151	089	89,5
103151	091	91
103151	092	92
103151	093	93
103151	094	94
103151	095	95,5
103151	096	96,5
103151	097	97,5
103151	099	99
103151	100	100
103151	101	101
103151	102	102
103151	103	103
103151	104	104,5
103151	105	105,5
103151	106	106,5
103151	108	108
103151	109	109
103151	110	110
103151	111	111
103151	112	112,5
103151	113	113,5
103151	114	114,5
103151	116	116
103151	117	117
103151	118	118
103151	119	119
103151	120	120,5
103151	121	121,5
103151	122	122,5

* Available on request with 4" ANSI flanges

AUTOMATIC FLOW RATE REGULATOR WITH ADJUSTABLE CARTRIDGE



Code			
118141 ...	1/2"	1	-
118151 ...	3/4"	1	-
118161 ...	1"	1	-
118171 ...	1 1/4"	1	-



118 **tech. broch. 01138**
Key for cartridge adjustment.

Code			
118000		1	-

118

tech. broch. 01138

Automatic flow rate regulator with external adjustment cartridge.
CR dezincification resistant alloy body.
 Polymer adjustable cartridge with HNBR diaphragm.
 Max. working pressure: 25 bar.
 Temperature range: 0–100°C.
 Max. percentage of glycol: 50%.
 Δp range: 17–210 kPa; 17–400 kPa; 30–400 kPa; 35–400 kPa.
 Flow rates: 0,10–5,80 m³/h.
 Accuracy: $\pm 5\%$.

Suitable for connection of pressure ports.

Flow rate adjustment

With this type of cartridges, the flow rate can be regulated to the desired value from outside, without the necessity of shutting the valve off.

By using the special key, act on the adjustment mechanism and read the desired position on the graduated reference scale.

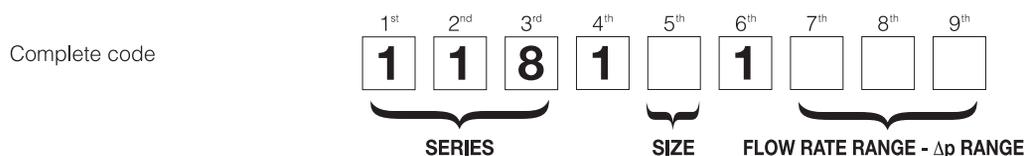
A double gauge, with a scale from 1 to 5 and decimal division from 1 to 9, allows exact flow rate adjustments.

Depending on the range of pressure and flow rate, cartridges are available in various colours to permit easy identification. The same colours are on the outside, on the adjuster screw and on the protection cover.



Method of coding for automatic flow rate regulator 118 series

For correct identification of the device, fill in the form indicating: series No., size, flow rate range and Δp range.



SIZE

5th

The fifth digit indicates the size

Size	1/2"	3/4"	1"	1 1/4"
Digit	4	5	6	7

FLOW RATE RANGE
 Δp RANGE

7th 8th 9th

The last three digits indicate the available flow rate range and Δp range, with the corresponding cartridges. Every cartridge is marked by a specific colour.

Body size	Cartridge size	Δp range (kPa)	Flow rate range (m ³ /h)	Cartridge colour	Cartridge code digit
1/2" - 3/4"	DN 20	17–210	0,10–0,40	Black	1YB
	DN 20	17–210	0,15–0,60	Green	1YG
	DN 20	35–400	0,14–0,60	Black	1GB
	DN 20	35–400	0,24–0,90	Green	1GG
	DN 20	30–400	0,40–1,30	Red	1YR
1" - 1 1/4"	DN 40	17–400	0,54–5,80	Green	2YG



Spare cartridge

Code
F131YB
F131YG
F131GB
F131GG
F131YR
F142YG

BALANCING VALVE WITH FLOW METER



132

tech. broch. 01149

Balancing valve with flow meter.
Direct reading of flow rate.
Brass valve body and flow meter.
Ball valve for flow rate adjustment.
Graduated scale flow meter with magnetic movement flow rate indicator.

With insulation.

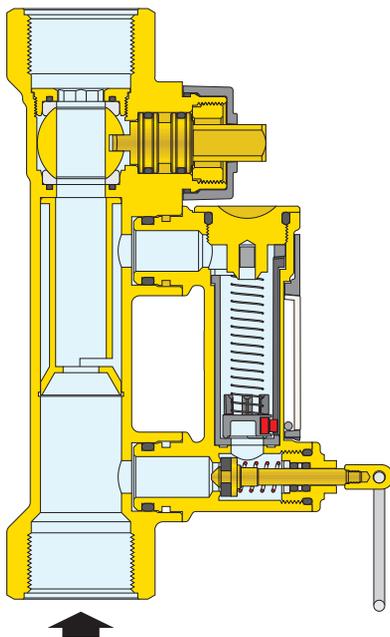
Max. working pressure: 10 bar.
Temperature range: -10–110°C.
Max. percentage of glycol: 50%.



Code	Flow rate range (l/min)		
132402	1/2" 2– 7	1	5
132512	3/4" 5– 13	1	5
132522	3/4" 7– 28	1	5
132602	1" 10– 40	1	5
132702	1 1/4" 20– 70	1	5
132802	1 1/2" 30–120	1	5
132902	2" 50–200	1	5

Construction details

In the valves 132 series the flow rate value is displayed directly by a flow meter housed in a by-pass circuit on the valve body, automatically shut-off during normal functioning.

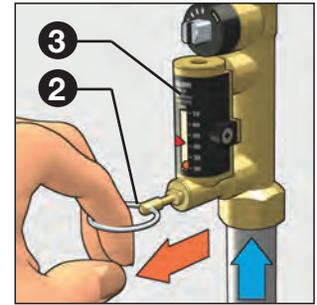
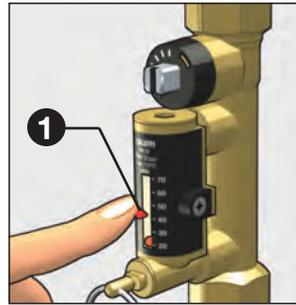


The use of a flow meter greatly simplifies the process of system balancing, since the flow rate can be measured and controlled at any time and there is no need for differential pressure gauges or reference charts.

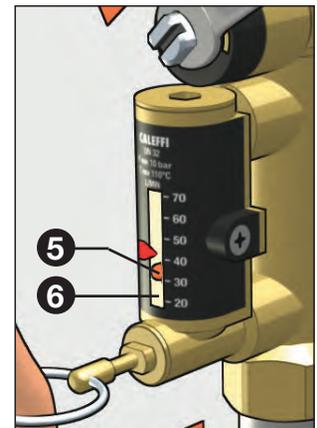
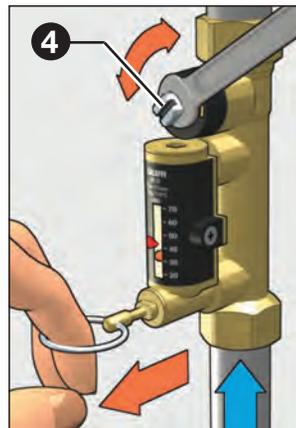
Flow rate adjustment

The flow rate is adjusted by carrying out the following operations:

1. With the aid of the indicator (1), mark the reference flow rate at which the valve has to be set.
2. Use the ring (2) to open the obturator that shuts off the flow of medium in the flow meter (3) under normal operating conditions.



3. Keeping the obturator open, apply a wrench on the control stem of the valve (4) to adjust the flow rate. It is indicated by a metal ball (5) that runs inside a transparent guide (6) marked by a graduated scale in l/min.

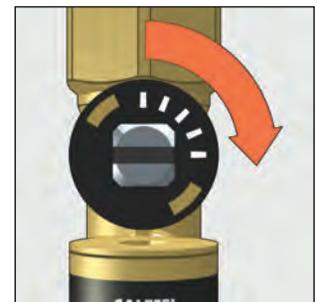
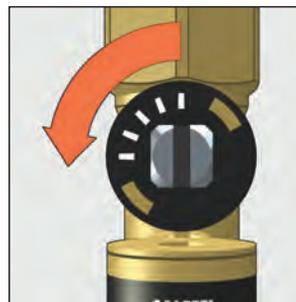


4. After completing the balancing, release the ring (2) of the flow meter obturator that, thanks to an internal spring, will automatically go back into the closed position.
5. After completing the balancing, the indicator (1) can be used to keep in memory the selected setting in case of future inspections.

Complete opening and closing of the valve

Complete opening of the valve

Complete closing of the valve



BALANCING VALVES

NEW



130

tech. broch. 01251

Balancing valve for hydraulic systems. Flow rate measurement with Venturi device. CR dezincification resistant alloy body, stainless steel obturator. Complete with pressure ports. Max. working pressure: 16 bar. Temperature range: -20–120°C. Max. percentage of glycol: 50%.

Code

130400	1/2"	1	5
130500	3/4"	1	5
130600	1"	1	5
130700	1 1/4"	1	5
130800	1 1/2"	1	5
130900	2"	1	5



NEW



130

tech. broch. 01251

Balancing valve for hydraulic systems. Grey cast iron body, PPS polymer obturator. Complete with pressure ports. Max. working pressure: 16 bar. Temperature range: DN 65–DN 150: -10–140°C DN 200–DN 300: -10–120°C. Max. percentage of glycol: 50%. Flanged connections PN 16. To be coupled with flat counterflanges EN 1092-2.

Code

130060	DN 65	1	–
130080	DN 80	1	–
130100	DN 100	1	–
130120	DN 125	1	–
130150	DN 150	1	–
130200	DN 200	1	–
130250	DN 250	1	–
130300	DN 300	1	–



NEW



Pre-formed insulation for balancing valves with threaded connections 130 series. For heating and air conditioning system.

Code

CBN130400	1/2"	1	–
CBN130500	3/4"	1	–
CBN130600	1"	1	–
CBN130700	1 1/4"	1	–
CBN130800	1 1/2"	1	–
CBN130900	2"	1	–



617

Slip-on flat counterflanges for welding, EN 1092-1, PN 16. Complete with bolts and gaskets.

Code

617060	DN 65	4 holes	1	–
617080	DN 80		1	–
617100	DN 100		1	–
617120	DN 125		1	–
617150	DN 150		1	–
617200	DN 200		1	–
617250	DN 250		1	–
617300	DN 300		1	–



DIFFERENTIAL PRESSURE REGULATING VALVE (DPRV)

NEW



140

tech. broch. 01250

Differential pressure regulating valve (DPRV).
CR dezincification resistant alloy body.
 Complete with capillary pipe for connection to the valve on the flow pipe.
With insulation.
 Max. working pressure: 16 bar.
 Temperature range: -10–120°C.
 Max. percentage of glycol: 50%.
 Length of capillary pipe Ø 3 mm: 1,5 m.



Code	Differential pressure adjustable set (mbar)		
140340	1/2"	50–300	1 5
140440	1/2"	250–600	1 5
140350	3/4"	50–300	1 5
140450	3/4"	250–600	1 5
140360	1"	50–300	1 5
140460	1"	250–600	1 5



140

Differential pressure regulating valve (DPRV).
 Cast iron body.
 Max. working pressure: 16 bar.
 Temperature range: -10–120°C.
 Max. percentage of glycol: 50%.



Code	Differential pressure adjustable set (mbar)		
140506	DN 65	200–800	1 –
140606	DN 65	800–1600	1 –
140508	DN 80	200–800	1 –
140608	DN 80	800–1600	1 –
140510	DN 100	200–800	1 –
140610	DN 100	800–1600	1 –
140512	DN 125	200–800	1 –
140515	DN 150	200–800	1 –



140

tech. broch. 01250

Differential pressure regulating valve (DPRV).
CR dezincification resistant alloy body.
 Complete with capillary pipe for connection to the valve on the flow pipe.
With insulation.
 Max. working pressure: 10 bar.
 Temperature range: -10–120°C.
 Max. percentage of glycol: 50%.
 Length of capillary pipe Ø 3 mm: 1,5 m.



Code	Differential pressure adjustable set (mbar)		
140370	1 1/4"	50–300	1 –
140470	1 1/4"	250–600	1 –
140380	1 1/2"	50–300	1 –
140480	1 1/2"	250–600	1 –
140392	2"	50–300 without insulation	1 –
140492	2"	250–600 without insulation	1 –



142

tech. broch. 01250

Shut-off and pre-regulation valve.
CR dezincification resistant alloy body.
 Complete with pressure test ports for connection of capillary pipe.
With insulation.
 Max. working pressure: 16 bar.
 Temperature range: -10–120°C.
 Max. percentage of glycol: 50%.

Code			
142140	1/2"		1 5
142150	3/4"		1 5
142160	1"		1 5
142240	1/2"	without insulation	1 5
142250	3/4"	without insulation	1 5
142260	1"	without insulation	1 5



142

tech. broch. 01250

Shut-off and pre-regulation valve.
CR dezincification resistant alloy body.
 Complete with pressure test ports for connection of capillary pipe.
With insulation.
 Max. working pressure: 16 bar.
 Temperature range: -10–120°C.
 Max. percentage of glycol: 50%.

Code			
142170	1 1/4"		1 –
142180	1 1/2"		1 –
142270	1 1/4"	without insulation	1 –
142280	1 1/2"	without insulation	1 –
142290	2"	without insulation	1 –



538

Manual shut-off cock.
 Brass body.
 Seals in non-asbestos fibre.
 Max. working pressure: 16 bar.
 Temperature range: -10–120°C.

Code			
538203	1/4"		1 –



519

tech. broch. 01007

Differential by-pass valve, adjustable with graduated scale. Max. working pressure: 10 bar. Temperature range: 0–110°C. Max. percentage of glycol: 30%.



Code	Setting range m w.g.		
519500	3/4"	1–6	1 50
519504	3/4"	10–40	1 50
519700	1 1/4"	1–6	1 10



100

tech. broch. 01041

Pair of fast-plug pressure/temperature test ports. Their special construction allows rapid and accurate measurements while ensuring leaktightness.

Can be used for:

- checking the working range of AUTOFLOW®;
- checking the clog degree of strainers;
- checking the heat output of the terminals.

Cap cover facing available in:

- - **Red** for upstream pressure test port.
- - **Green** for downstream pressure test port.



Brass body. EPDM seals. Max. working pressure: 30 bar. Temperature range: -5–130°C.

Code	Setting range m w.g.		
100000	1/4"	1	100

NEW

130

tech. broch. 01251

Electronic flow rate and differential pressure measuring station. Supplied complete with shut-off and connection fittings. Can be used for measuring the flow rate of balancing valves 130 series and of the flow metering device 683 series. Suitable for Δp measurement of automatic flow rate regulators. Electric supply from battery.

Bluetooth® transmission between Δp measuring station and remote control unit.

Versions complete with remote control unit Windows Mobile® or with Android® application for Smartphone and Tablet. Measurement range: 0–1000 kPa. Static Pmax: 1000 kPa.



Code	Setting range m w.g.		
130006	complete with remote control unit	1	–
130005	without remote control unit, with Android® application	1	–



100

tech. broch. 01041

Pair of fittings with fast-plug syringe for connection of pressure ports to measuring instruments.

1/4" female threaded connection. Max. working pressure: 10 bar. Max. working temperature: 110°C.

Code	Setting range m w.g.		
100010	1/4"	1	–



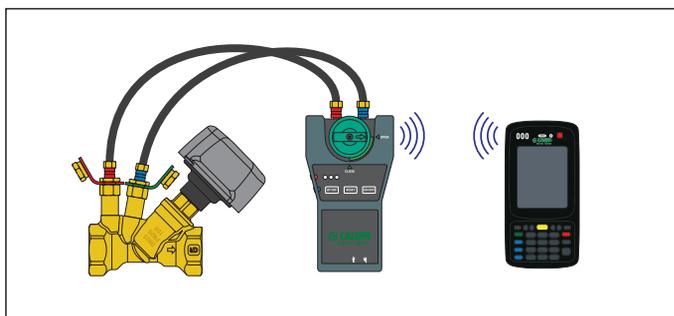
538

tech. broch. 01041

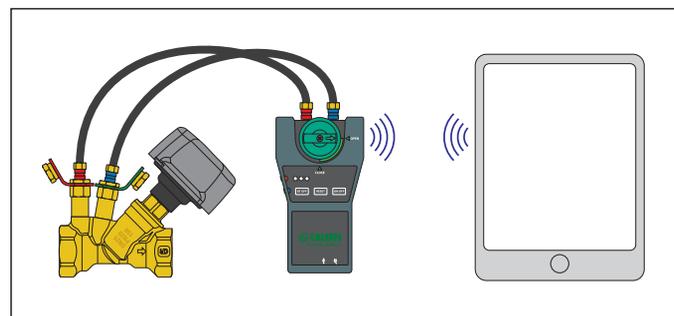
Drain cock with hose connection. Max. working pressure: 10 bar. Max. working temperature: 110°C.

Code	Setting range m w.g.		
538201	1/4"	1	–
538400	1/2" with cap	1	100

Transmission via Bluetooth to the terminal with Windows Mobile®



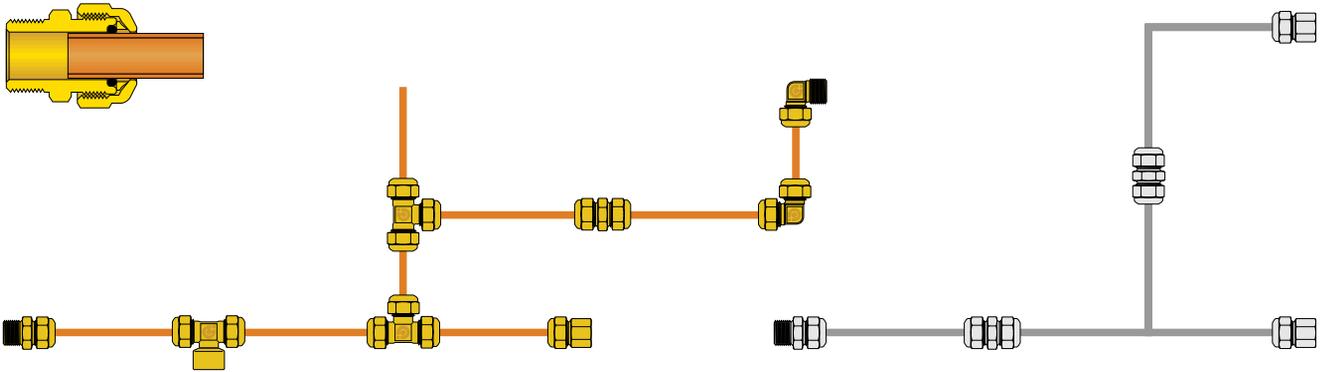
Transmission via Bluetooth® to Smartphone/Tablet with Android® application



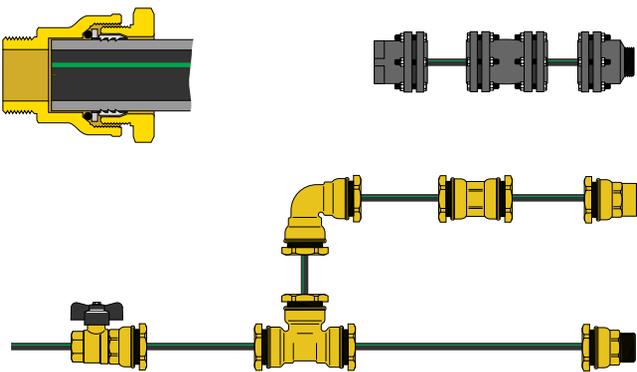
FITTINGS

This diagram is just an indication

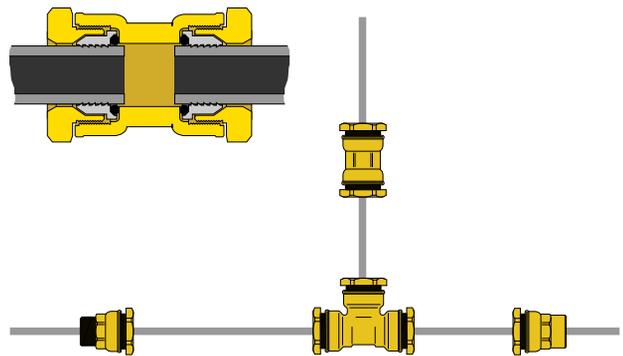
MECHANICAL FITTINGS WITH O-RING SEAL



DECA-FITTINGS FOR POLYETHYLENE PIPES



DECA-FITTINGS FOR STEEL PIPES



- Mechanical fittings with O-Ring seal
- DECA-fittings for polyethylene pipes
- Dezincification resistant alloy fittings for polyethylene pipes
- DECA-fittings for steel pipes

MECHANICAL FITTINGS WITH O-RING SEAL

according to EN 1254-2 and EN 1254-4 standards

0 for gas and fluid hydrocarbons - EN 549 standard

0 for hydraulic and domestic water systems - EN 681.1 standard

Fittings highlighted in yellow are supplied with two O-Rings: yellow to be used for gas and fluid hydrocarbons - black to be used for hydraulic systems



900

Female fitting. For annealed copper, hard copper, brass, mild steel and stainless steel. Double O-Ring. According to EN 1254-4 standard.
For gas and fluid hydrocarbons: yellow O-Ring according to EN 549 standard. Temperature range: -20–100°C.
For hydraulic and domestic water systems: black O-Ring according to EN 681.1 standard. Max. working pressure: 16 bar. Temperature range: -25–120°C.



904

Male fitting. For annealed copper, hard copper, brass, mild steel and stainless steel. Double O-Ring. According to EN 1254-4 standard.
For gas and fluid hydrocarbons: yellow O-Ring according to EN 549 standard. Temperature range: -20–100°C.
For hydraulic and domestic water systems: black O-Ring according to EN 681.1 standard. Max. working pressure: 16 bar. Temperature range: -25–120°C.

Code			
900308	3/8" F - Ø 8	50	–
900310	3/8" F - Ø 10	50	–
900312	3/8" F - Ø 12	50	–
900314	3/8" F - Ø 14	50	–
900410	1/2" F - Ø 10	50	–
900412	1/2" F - Ø 12	50	–
900414	1/2" F - Ø 14	50	–
900415	1/2" F - Ø 15	50	–
900416	1/2" F - Ø 16	50	–
900418	1/2" F - Ø 18	25	–
900516	3/4" F - Ø 16	50	–
900518	3/4" F - Ø 18	25	–
900522	3/4" F - Ø 22	25	–
900622	1" F - Ø 22	25	–
900628*	1" F - Ø 28	25	–

Code			
904308	3/8" M - Ø 8	50	–
904310	3/8" M - Ø 10	50	–
904312	3/8" M - Ø 12	50	–
904314	3/8" M - Ø 14	50	–
904410	1/2" M - Ø 10	50	–
904412	1/2" M - Ø 12	50	–
904414	1/2" M - Ø 14	50	–
904415	1/2" M - Ø 15	50	–
904416	1/2" M - Ø 16	50	–
904418	1/2" M - Ø 18	25	–
904514	3/4" M - Ø 14	50	–
904516	3/4" M - Ø 16	50	–
904518	3/4" M - Ø 18	25	–
904522	3/4" M - Ø 22	25	–
904618	1" M - Ø 18	25	–
904622	1" M - Ø 22	25	–
904628 *	1" M - Ø 28	10	–

* To be used only with water and non-dangerous glycol solutions

* To be used only with water and non-dangerous glycol solutions



903

Coupling sleeve. For annealed copper, hard copper, brass, mild steel and stainless steel. According to EN 1254-2 standard.
For hydraulic and domestic water systems: black O-Ring according to EN 681.1 standard. Max. working pressure: 16 bar. Temperature range: -25–120°C.



9050

Elbow fitting. For annealed copper, hard copper, brass, mild steel and stainless steel. According to EN 1254-2 standard.
For hydraulic and domestic water systems: black O-Ring according to EN 681.1 standard. Max. working pressure: 16 bar. Temperature range: -25–120°C.

Code			
903008	Ø 8	50	–
903010	Ø 10	50	–
903012	Ø 12	50	–
903014	Ø 14	50	–
903015	Ø 15	50	–
903016	Ø 16	50	–
903018	Ø 18	25	–
903022	Ø 22	25	–

Code			
905010	Ø 10	25	–
905012	Ø 12	25	–
905014	Ø 14	25	–
905015	Ø 15	25	–
905016	Ø 16	25	–
905018	Ø 18	25	–
905022	Ø 22	25	–

MECHANICAL FITTINGS WITH O-RING SEAL

9057



Male elbow fitting. For annealed copper, hard copper, brass, mild steel and stainless steel. Double O-Ring. According to EN 1254-4 standard.
For gas and fluid hydrocarbons: yellow O-Ring according to EN 549 standard. Temperature range: -20-100°C.
For hydraulic and domestic water systems: black O-Ring according to EN 681.1 standard. Max. working pressure: 16 bar. Temperature range: -25-120°C.

Code



905730	3/8" M - Ø 10	25	-
905732	3/8" M - Ø 12	25	-
905740	1/2" M - Ø 10	25	-
905742	1/2" M - Ø 12	25	-
905744	1/2" M - Ø 14	25	-
905745	1/2" M - Ø 15	25	-
905746	1/2" M - Ø 16	25	-
905748	1/2" M - Ø 18	25	-
905756	3/4" M - Ø 16	25	-
905758	3/4" M - Ø 18	25	-
905752	3/4" M - Ø 22	25	-

9060



Tee fitting. For annealed copper, hard copper, brass, mild steel and stainless steel. According to EN 1254-2 standard.
For hydraulic and domestic water systems: black O-Ring according to EN 681.1 standard. Max. working pressure: 16 bar. Temperature range: -25-120°C.

Code



906010	Ø 10	25	-
906012	Ø 12	25	-
906014	Ø 14	25	-
906015	Ø 15	25	-
906016	Ø 16	25	-
906018	Ø 18	25	-
906022	Ø 22	20	-

9058



Female elbow fitting. For annealed copper, hard copper, brass, mild steel and stainless steel. Double O-Ring. According to EN 1254-4 standard.
For gas and fluid hydrocarbons: yellow O-Ring according to EN 549 standard. Temperature range: -20-100°C.
For hydraulic and domestic water systems: black O-Ring according to EN 681.1 standard. Max. working pressure: 16 bar. Temperature range: -25-120°C.

Code



905830	3/8" F - Ø 10	25	-
905832	3/8" F - Ø 12	25	-
905840	1/2" F - Ø 10	25	-
905842	1/2" F - Ø 12	25	-
905844	1/2" F - Ø 14	25	-
905845	1/2" F - Ø 15	25	-
905846	1/2" F - Ø 16	25	-
905848	1/2" F - Ø 18	25	-
905856	3/4" F - Ø 16	25	-
905858	3/4" F - Ø 18	25	-
905852	3/4" F - Ø 22	25	-

9067



Male tee fitting. For annealed copper, hard copper, brass, mild steel and stainless steel. According to EN 1254-4 standard.
For hydraulic and domestic water systems: black O-Ring according to EN 681.1 standard. Max. working pressure: 16 bar. Temperature range: -25-120°C.

Code



906740	1/2" M - Ø 10	25	-
906742	1/2" M - Ø 12	25	-
906744	1/2" M - Ø 14	25	-
906745	1/2" M - Ø 15	25	-
906746	1/2" M - Ø 16	25	-
906758	3/4" M - Ø 18	25	-
906752	3/4" M - Ø 22	20	-

MECHANICAL FITTINGS WITH O-RING SEAL

9068

Female tee fitting. For annealed copper, hard copper, brass, mild steel and stainless steel. According to EN 1254-4 standard.

For hydraulic and domestic water systems: black O-Ring according to EN 681.1 standard. Max. working pressure: 16 bar. Temperature range: -25–120°C.



Code

Code	Size	Box	Carton
906830	3/8" F - Ø 10	25	-
906832	3/8" F - Ø 12	25	-
906840	1/2" F - Ø 10	25	-
906842	1/2" F - Ø 12	25	-
906844	1/2" F - Ø 14	25	-
906845	1/2" F - Ø 15	25	-
906846	1/2" F - Ø 16	25	-
906858	3/4" F - Ø 18	25	-
906852	3/4" F - Ø 22	20	-

910



Female fitting. Chrome plated. For annealed copper, hard copper, brass, mild steel and stainless steel. According to EN 1254-4 standard.

For hydraulic and domestic water systems: black O-Ring according to EN 681.1 standard. Max. working pressure: 16 bar. Temperature range: -25–120°C.

Code

Code	Size	Box	Carton
910310	3/8" F - Ø 10	50	-
910312	3/8" F - Ø 12	50	-
910314	3/8" F - Ø 14	50	-
910410	1/2" F - Ø 10	50	-
910412	1/2" F - Ø 12	50	-
910414	1/2" F - Ø 14	50	-
910415	1/2" F - Ø 15	50	-

914



Male fitting. Chrome plated. For annealed copper, hard copper, brass, mild steel and stainless steel. According to EN 1254-4 standard.

For hydraulic and domestic water systems: black O-Ring according to EN 681.1 standard. Max. working pressure: 16 bar. Temperature range: -25–120°C.

Code

Code	Size	Box	Carton
914310	3/8" M - Ø 10	50	-
914312	3/8" M - Ø 12	50	-
914314	3/8" M - Ø 14	50	-
914410	1/2" M - Ø 10	50	-
914412	1/2" M - Ø 12	50	-
914414	1/2" M - Ø 14	50	-
914415	1/2" M - Ø 15	50	-

930



Elbow fitting with wall connection. For annealed copper, hard copper, brass, mild steel and stainless steel. According to EN 1254-4 standard.

With double O-Ring. **For gas and fluid hydrocarbons:** yellow O-Ring according to EN 549 standard. Temperature range: -20–100°C.

For hydraulic and domestic water systems: black O-Ring according to EN 681.1 standard. Max. working pressure: 16 bar. Temperature range: -25–120°C.

Code

Code	Size	Box	Carton
930412	1/2" F - Ø 12	25	-
930414	1/2" F - Ø 14	25	-
930416	1/2" F - Ø 16	25	-

913



Coupling sleeve. Chrome plated. For annealed copper, hard copper, brass, mild steel and stainless steel. According to EN 1254-2 standard.

For hydraulic and domestic water systems: black O-Ring according to EN 681.1 standard. Max. working pressure: 16 bar. Temperature range: -25–120°C.

Code

Code	Size	Box	Carton
913010	Ø 10	50	-
913012	Ø 12	50	-
913014	Ø 14	50	-

Mechanical fittings with O-Ring seal are not suitable for use with fuel added with RME (Rape Methyl Ester).

DECA-FITTINGS FOR POLYETHYLENE PIPES



860

tech. broch. 01037

Female fitting.
In brass.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40°C.



861

tech. broch. 01037

Male fitting.
In brass.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40°C.



Code

Code	Size	Material	Box	Carton
860420	Ø 20 x 1/2"	F	12	60
860421	Ø 21 x 1/2"	F	12	60
860525	Ø 25 x 3/4"	F	10	50
860527	Ø 27 x 3/4"	F	10	50
860625	Ø 25 x 1"	F	10	60
860632	Ø 32 x 1"	F	10	50
860634	Ø 34 x 1"	F	10	50
860740	Ø 40 x 1 1/4"	F	10	50
860850	Ø 50 x 1 1/2"	F	5	25
860963	Ø 63 x 2"	F	8	-

Code

Code	Size	Material	Box	Carton
861420	Ø 20 x 1/2"	M	12	60
861421	Ø 21 x 1/2"	M	12	60
861525	Ø 25 x 3/4"	M	10	50
861527	Ø 27 x 3/4"	M	10	50
861625	Ø 25 x 1"	M	10	60
861632	Ø 32 x 1"	M	10	50
861634	Ø 34 x 1"	M	10	50
861740	Ø 40 x 1 1/4"	M	10	50
861850	Ø 50 x 1 1/2"	M	5	25
861963	Ø 63 x 2"	M	8	-



860

tech. broch. 01037

Female fitting.
In cast iron.
Stainless steel rods.
For polyethylene pipes.
Max. working pressure: 10 bar.
Max. working temperature: 40°C.



861

tech. broch. 01037

Male fitting.
In cast iron.
Stainless steel rods.
For polyethylene pipes.
Max. working pressure: 10 bar.
Max. working temperature: 40°C.

Code

Code	Size	Material	Box	Carton
860075	Ø 75 x 2 1/2"	F	1	-
860090	Ø 90 x 3"	F	1	-
860110	Ø 110 x 4"	F	1	-

Code

Code	Size	Material	Box	Carton
861075	Ø 75 x 2 1/2"	M	1	-
861090	Ø 90 x 3"	M	1	-
861110	Ø 110 x 4"	M	1	-



875

tech. broch. 01037

Reduced female fitting.
In brass.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40°C.



876

tech. broch. 01037

Female fitting with union.
In brass.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40°C.



Code

Code	Size	Material	Box	Carton
875425	Ø 25 x 1/2"	F	10	50
875532	Ø 32 x 3/4"	F	10	50
875640	Ø 40 x 1"	F	10	50

Code

Code	Size	Material	Box	Carton
876520	Ø 20 x 3/4"	F	15	75
876525	Ø 25 x 3/4"	F	12	60
876625	Ø 25 x 1"	F	12	60
876632	Ø 32 x 1"	F	10	50

DECA-FITTINGS FOR POLYETHYLENE PIPES



862 tech. broch. 01037
 Reduced male fitting.
 In brass.
 For polyethylene pipes.
 Max. working pressure: 16 bar.
 Max. working temperature: 40°C.



Code			
862320	Ø 20 x 3/8" M	12	60
862425	Ø 25 x 1/2" M	10	50
862532	Ø 32 x 3/4" M	10	50
862640	Ø 40 x 1" M	10	50
862750	Ø 50 x 1 1/4" M	5	25
862863	Ø 63 x 1 1/2" M	8	-



863 tech. broch. 01037
 Sleeve fitting.
 In cast iron.
 Stainless steel rods.
 For polyethylene pipes.
 Max. working pressure: 10 bar.
 Max. working temperature: 40°C.

Code			
863075	Ø 75	1	-
863090	Ø 90	1	-
863110	Ø 110	1	-
863125	Ø 125	1	-



888 tech. broch. 01037
 Flanged fitting,
 PN 10 UNI 2277 series.
 In cast iron.
 Stainless steel rods.
 For polyethylene pipes.
 Max. working pressure: 10 bar.
 Max. working temperature: 40°C.

Code			
888075	Ø 75 x DN 65	1	-
888090	Ø 90 x DN 80	1	-
888110	Ø 110 x DN 100	1	-
888125	Ø 125 x DN 100	1	-



864 tech. broch. 01037
 Tee fitting.
 In brass.
 For polyethylene pipes.
 Max. working pressure: 16 bar.
 Max. working temperature: 40°C.



Code			
864020	Ø 20	10	50
864021	Ø 21	10	50
864025	Ø 25	10	50
864027	Ø 27	5	25
864032	Ø 32	5	25
864034	Ø 34	4	20
864040	Ø 40	5	-
864050	Ø 50	5	-
864063	Ø 63	5	-



863 tech. broch. 01037
 Sleeve fitting.
 In brass.
 For polyethylene pipes.
 Max. working pressure: 16 bar.
 Max. working temperature: 40°C.



Code			
863020	Ø 20	15	75
863021	Ø 21	15	75
863025	Ø 25	12	60
863027	Ø 27	10	50
863032	Ø 32	10	50
863034	Ø 34	5	25
863040	Ø 40	5	25
863050	Ø 50	5	25
863063	Ø 63	6	-



865 tech. broch. 01037
 Reduced male-female tee fitting.
 In brass.
 For polyethylene pipes.
 Max. working pressure: 16 bar.
 Max. working temperature: 40°C.



Code			
865420	Ø 20 x 1/2" M x 3/8" F	10	50
865525	Ø 25 x 3/4" M x 1/2" F	10	50
865632	Ø 32 x 1" M x 3/4" F	5	25
865740	Ø 40 x 1 1/4" M x 1" F	5	-
865850	Ø 50 x 1 1/2" M x 1 1/4" F	5	-
865963	Ø 63 x 2" M x 1 1/2" F	5	-

DECA-FITTINGS FOR POLYETHYLENE PIPES



866  [tech. broch. 01037](#)
 Elbow fitting.
 In brass.
 For polyethylene pipes.
 Max. working pressure: 16 bar.
 Max. working temperature: 40°C.



Code			
866020	Ø 20	10	50
866025	Ø 25	10	50
866032	Ø 32	5	25
866040	Ø 40	4	20
866050	Ø 50	3	15
866063	Ø 63	5	–



869  [tech. broch. 01037](#)
 Female elbow fitting
 with wall connections.
 In brass.
 For polyethylene pipes.
 Max. working pressure: 16 bar.
 Max. working temperature: 40°C.



Code			
869420	Ø 20 x 1/2" F	5	25
869425	Ø 25 x 1/2" F	4	20
869525	Ø 25 x 3/4" F	4	20



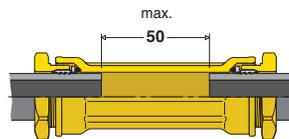
867  [tech. broch. 01037](#)
 Male elbow fitting.
 In brass.
 For polyethylene pipes.
 Max. working pressure: 16 bar.
 Max. working temperature: 40°C.



Code			
867420	Ø 20 x 1/2" M	10	50
867525	Ø 25 x 3/4" M	10	50
867632	Ø 32 x 1" M	10	50
867740	Ø 40 x 1 1/4" M	4	20
867850	Ø 50 x 1 1/2" M	4	20
867963	Ø 63 x 2" M	5	–



870  [tech. broch. 01037](#)
 Long sleeve fitting.
 Can be used for pipe repairs.
 In brass.
 For polyethylene pipes.



Allows pipe repairs
 with a maximum distance of 50 mm
 between pipe ends.
 Max. working pressure: 16 bar.
 Max. working temperature: 40°C.



Code			
870025	Ø 25	10	50
870032	Ø 32	5	25
870040	Ø 40	4	20
870050	Ø 50	3	15



868  [tech. broch. 01037](#)
 Female elbow fitting.
 In brass.
 For polyethylene pipes.
 Max. working pressure: 16 bar.
 Max. working temperature: 40°C.



Code			
868420	Ø 20 x 1/2" F	10	50
868525	Ø 25 x 3/4" F	10	50
868632	Ø 32 x 1" F	10	50
868740	Ø 40 x 1 1/4" F	4	20
868850	Ø 50 x 1 1/2" F	4	20
868963	Ø 63 x 2" F	5	–



871  [tech. broch. 01037](#)
 Fitting with ball valve.
 In brass.
 For polyethylene pipes.
 Max. working pressure: 16 bar.
 Max. working temperature: 40°C.

Code			
871425	Ø 25 x 1/2" F	10	50
871525	Ø 25 x 3/4" F	5	25
871532	Ø 32 x 3/4" F	5	25

DEZINCIFICATION RESISTANT ALLOY FITTINGS FOR POLYETHYLENE PIPES



960

Female fitting.
In **CR** dezincification resistant alloy.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40°C.



Code

960420 SAV	Ø 20 x 1/2"	F	12	60
960525 SAV	Ø 25 x 3/4"	F	10	50
960625 SAV	Ø 25 x 1"	F	10	60
960632 SAV	Ø 32 x 1"	F	10	50
960740 SAV	Ø 40 x 1 1/4"	F	6	30
960850 SAV	Ø 50 x 1 1/2"	F	5	20
960963 SAV	Ø 63 x 2"	F	8	-



962

Reduced male fitting.
In **CR** dezincification resistant alloy.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40°C.



Code

962532 SAV	Ø 32 x 3/4"	M	10	50
962640 SAV	Ø 40 x 1"	M	6	30



975

Reduced female fitting.
In **CR** dezincification resistant alloy.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40°C.



Code

975532 SAV	Ø 32 x 3/4"	F	10	50
975640 SAV	Ø 40 x 1"	F	6	30
975732 SAV	Ø 32 x 1 1/4"	F	6	30
975750 SAV	Ø 50 x 1 1/4"	F	5	20



963

Sleeve fitting.
In **CR** dezincification resistant alloy.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40°C.



Code

963020 SAV	Ø 20	15	75
963025 SAV	Ø 25	12	60
963032 SAV	Ø 32	10	50
963040 SAV	Ø 40	5	20
963050 SAV	Ø 50	6	-
963063 SAV	Ø 63	5	-



961

Male fitting.
In **CR** dezincification resistant alloy.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40°C.



Code

961420 SAV	Ø 20 x 1/2"	M	12	60
961520 SAV	Ø 20 x 3/4"	M	12	60
961525 SAV	Ø 25 x 3/4"	M	10	50
961625 SAV	Ø 25 x 1"	M	10	60
961632 SAV	Ø 32 x 1"	M	10	50
961732 SAV	Ø 32 x 1 1/4"	M	10	50
961740 SAV	Ø 40 x 1 1/4"	M	6	30
961840 SAV	Ø 40 x 1 1/2"	M	6	30
961850 SAV	Ø 50 x 1 1/2"	M	5	20
961950 SAV	Ø 50 x 2"	M	5	20
961963 SAV	Ø 63 x 2"	M	8	-



964

Tee fitting.
In **CR** dezincification resistant alloy.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40°C.



Code

964020 SAV	Ø 20	10	50
963025 SAV	Ø 25	10	50
963032 SAV	Ø 32	5	25
963040 SAV	Ø 40	5	-
963050 SAV	Ø 50	5	-

DEZINCIFICATION RESISTANT ALLOY FITTINGS FOR POLYETHYLENE PIPES



966

Elbow fitting.
In **CR** dezincification resistant alloy.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40°C.



Code				
966025 SAV	Ø 25		10	50
966032 SAV	Ø 32		5	25
966040 SAV	Ø 40		3	15

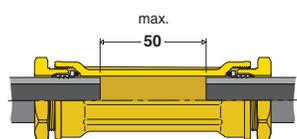


970

Long sleeve fitting.
In **CR** dezincification resistant alloy.
For polyethylene pipes.

Allows pipe repairs with a maximum distance of 50 mm between pipe ends.

Max. working pressure: 16 bar.
Max. working temperature: 40°C.



Code				
970032 SAV	Ø 32		5	25
970040 SAV	Ø 40		5	–
970050 SAV	Ø 50		4	–



967

Male elbow fitting.
In **CR** dezincification resistant alloy.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40°C.



Code				
967632 SAV	Ø 32 x 1" M		10	50



986

Reduction kit.



Code				
986032 SAV	from Ø 32 to Ø 25		12	60
986043 SAV	from Ø 40 to Ø 32		10	50
986053 SAV	from Ø 50 to Ø 32		6	30
986054 SAV	from Ø 50 to Ø 40		6	30



968

Female elbow fitting.
In **CR** dezincification resistant alloy.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40°C.



Code				
968632 SAV	Ø 32 x 1" F		10	50
968740 SAV	Ø 40 x 1 1/4" F		4	20



980

Kit.

Code				
980025 SAV	Ø 25		100	–
980032 SAV	Ø 32		100	–
980040 SAV	Ø 40		50	–
980050 SAV	Ø 50		50	–
980063 SAV	Ø 63		50	–

DECA-FITTINGS FOR STEEL PIPES

Steel series

For steel pipes with nominal outer diameters for gas threading.
Stainless steel pipe clenching ring.



890

Female fitting.
In brass.
For steel pipe.
Max. working pressure: 16 bar.
Max. working temperature: 40°C.

Code

890421	Ø 21 x 1/2" F	12	60
890527	Ø 27 x 3/4" F	10	50
890634	Ø 34 x 1" F	10	50



891

Male fitting.
In brass.
For steel pipe.
Max. working pressure: 16 bar.
Max. working temperature: 40°C.

Code

891421	Ø 21 x 1/2" M	12	60
891527	Ø 27 x 3/4" M	10	50
891634	Ø 34 x 1" M	10	50

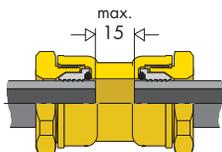


893

Sleeve fitting.
In brass.
For steel pipe.
Without internal stop to be used as joint repair sleeve.

Can be used for pipe repair with a maximum distance of 15 mm between pipe ends.

Max. working pressure: 16 bar.
Max. working temperature: 40°C.



Code

893021	Ø 21	15	75
893027	Ø 27	10	50
893034	Ø 34	5	25



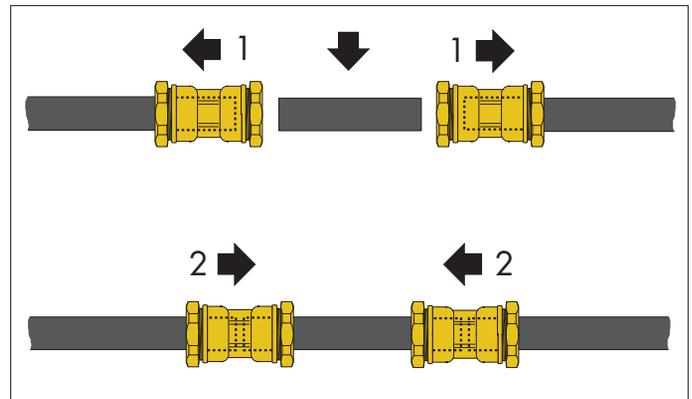
894

Tee fitting.
In brass.
For steel pipe.
Max. working pressure: 16 bar.
Max. working temperature: 40°C.

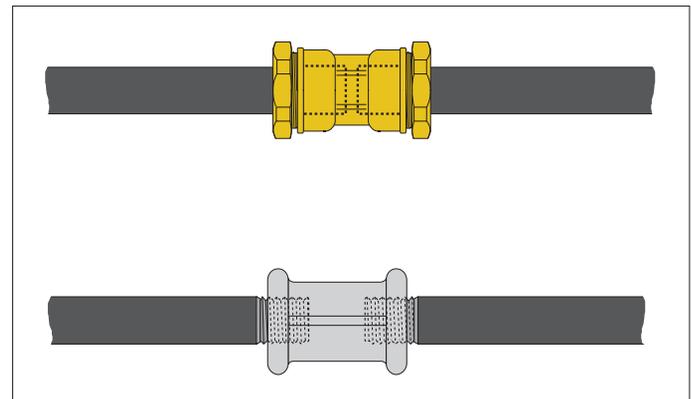
Code

894021	Ø 21	10	50
894027	Ø 27	5	25
894034	Ø 34	4	20

Example of use on steel pipes



Example of repair with the insertion of a supplementary sleeve.



In order to avoid corrosion, which is typical when traditional threaded sleeves are used (see diagram in grey colour), the application of the **Steel** series fittings (see diagram in yellow colour) allows piping to keep the complete galvanisation.

The traditional sleeve in fact does not cover the entire threaded part which is therefore subjected to high corrosion since it features no galvanisation and is weakened on the diameter.

ACCESSORIES AND SPARE PARTS FOR DECA-FITTINGS



886
Reduction kit.



Code			
886022	from Ø 25 to Ø 20	1	–
886032	from Ø 32 to Ø 25	1	–
886043	from Ø 40 to Ø 32	1	–
886054	from Ø 50 to Ø 40	1	–
886065	from Ø 63 to Ø 50	1	–



887
Pipe stiffener.



PN 10 series

Code			
887120	20 x 2	10	–
887223	25 x 2,3	10	–
887330	32 x 3	10	–
887437	40 x 3,7	5	–
887546	50 x 4,6	5	–
887658	63 x 5,8	5	–

For REHAU pipes

Code			
887128	20 x 2,8	10	–
887235	25 x 3,5	10	–

S 5 PN 4 series

Code			
887130	20 x 3	10	–
887230	25 x 3	10	–
887330	32 x 3	10	–
887437	40 x 3,7	5	–
887546	50 x 4,6	5	–
887658	63 x 5,8	5	–

S 8 PN 2,5–4 series

Code			
887430	40 x 3	5	–
887530	50 x 3	5	–
887636	63 x 3,6	5	–



877
Pipe clenching ring.

Code			
877020	Ø 20 brass	1	–
877021	Ø 21 brass	1	–
877121	Ø 21 stainless steel	1	–
877025	Ø 25 brass	1	–
877027	Ø 27 brass	1	–
877127	Ø 27 stainless steel	1	–
877032	Ø 32 brass	1	–
877034	Ø 34 brass	1	–
877134	Ø 34 stainless steel	1	–
877040	Ø 40 brass	1	–
877050	Ø 50 brass	1	–
877063	Ø 63 brass	1	–



878
Brass washer.

Code			
878020	Ø 20	1	–
878021	Ø 21	1	–
878025	Ø 25	1	–
878027	Ø 27	1	–
878032	Ø 32	1	–
878034	Ø 34	1	–
878040	Ø 40	1	–
878050	Ø 50	1	–
878063	Ø 63	1	–

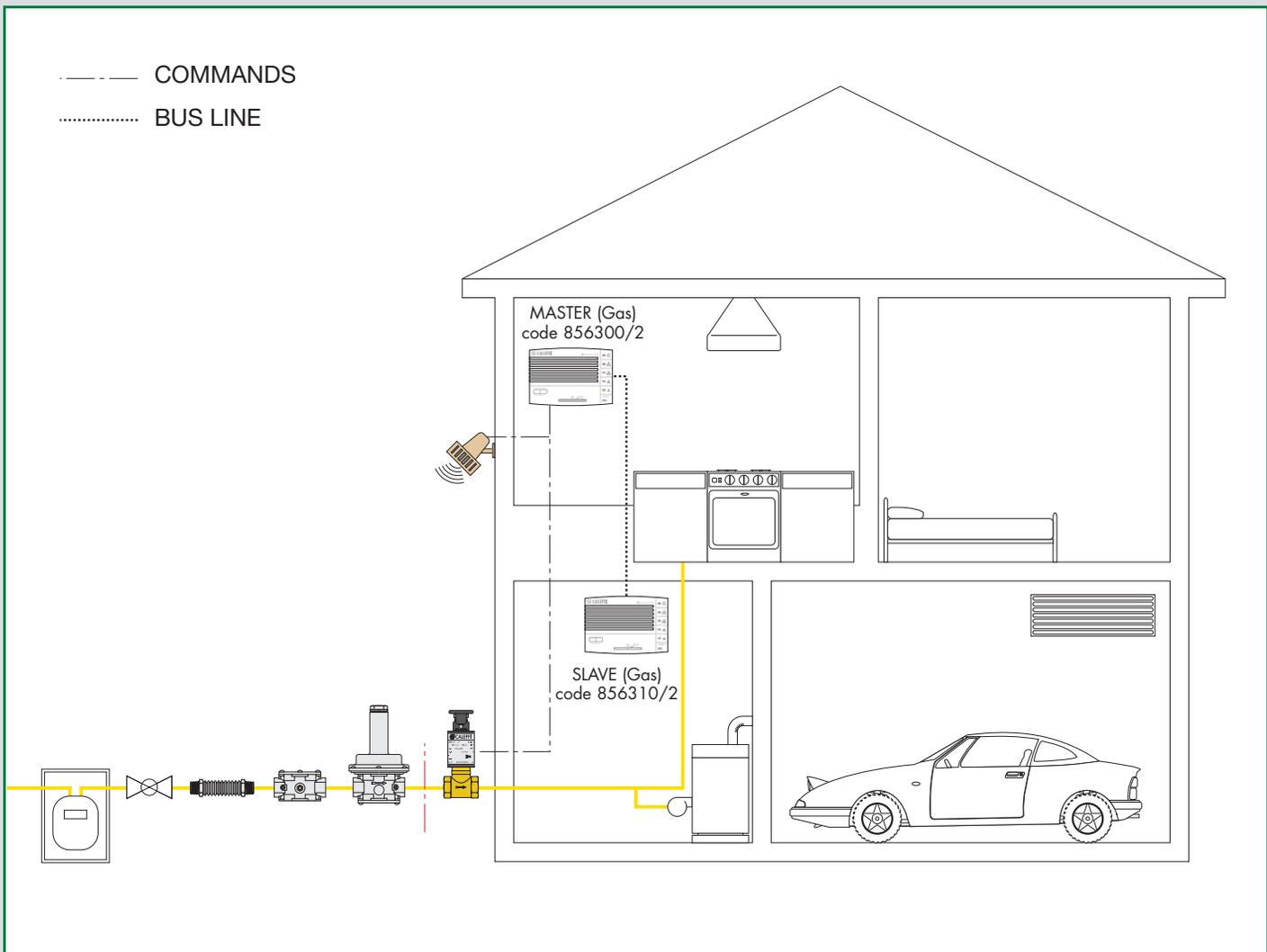


879
O-Ring.

Code			
879020	Ø 20	1	–
879021	Ø 21	1	–
879025	Ø 25	1	–
879027	Ø 27	1	–
879032	Ø 32	1	–
879034	Ø 34	1	–
879040	Ø 40	1	–
879050	Ø 50	1	–
879063	Ø 63	1	–

GAS SAFETY

This diagram is just an indication



- Gas filters
- Gas pressure filter regulators
- Gas pressure regulators
- Antivibration extensible joints for gas systems
- Pressure gauge for gas
- Solenoid valves for gas
- Gas detectors



847

Compact gas filter.
Max. pressure: 2 bar.
Filtration: $\varnothing \geq 50 \mu\text{m}$.
Filtration class: G 2 (to EN 779).



Code



847004	1/2"	11,40	1	-
847005	3/4"	11,40	1	-



848

Gas filter.
Max. pressure: 2 bar.
Upstream pressure ports according to UNI 8978.
Filtration: $\varnothing \geq 50 \mu\text{m}$.
Filtration class: G 2 (to EN 779).



Code



848004	1/2"	24,70	1	-
848005	3/4"	24,70	1	-
848006	1"	24,70	1	-
848007	1 1/4"	39,50	1	-
848008	1 1/2"	39,50	1	-
848009	2"	52,65	1	-



848

Gas filter.
Body PN 16.
Flanged connection.
To be coupled with flat counterflanges EN 1092-1.
Max. pressure: 2 bar.
Upstream pressure ports according to UNI 8978.
Filtration: $\varnothing \geq 50 \mu\text{m}$.
Filtration class: G 2 (to EN 779).



Code



848060	DN 65		1	-
848080	DN 80		1	-
848100	DN 100		1	-



850

Gas pressure closing filter regulator, double diaphragm.
Threaded connections.
Max. inlet pressure: 500 mbar.
Temperature range: -15-60°C.
Pressure ports to UNI 8978.
Regulation and closing at null flow according to UNI EN 88.
Filtration: $\varnothing \geq 50 \mu\text{m}$.
Filtration class: G 2 (to EN 779).
Conformity to Directive ATEX (II 2G - II 2D).



Code Adjustment (mbar)



850004	1/2"	18-40	155,10	1	-
850005	3/4"	18-40	155,10	1	-
850006	1"	18-40	155,10	1	-
850007	1 1/4"	13-23	126,40	1	-
850008	1 1/2"	13-23	126,40	1	-
850009	2"	13-23	209,40	1	-



850

Gas pressure closing filter regulator, double diaphragm.
Body PN 16.
Flanged connection. To be coupled with flat counterflanges EN 1092-1.
Max. inlet pressure: 500 mbar.
Temperature range: -15-60°C.
Pressure ports to UNI 8978.
Regulation and closing at null flow according to UNI EN 88.
Filtration: $\varnothing \geq 50 \mu\text{m}$.
Filtration class: G 2 (to EN 779).
Conformity to Directive ATEX (II 2G - II 2D).



Code Adjustment (mbar)



850060	DN 65	13-27		1	-
850080	DN 80	13-27		1	-
850100	DN 100	15-27		1	-



852

Gas pressure closing regulator, double diaphragm. Threaded connections. Max. inlet pressure: 500 mbar. Temperature range: -15–60°C. Pressure ports to UNI 8978. Regulation and closing at null flow according to UNI EN 88. Conformity to Directive ATEX (II 2G - II 2D).



Code	Adjustment (mbar)		
852004	1/2"	18–40	1 –
852005	3/4"	18–40	1 –
852006	1"	18–40	1 –
852007	1 1/4"	13–23	1 –
852008	1 1/2"	13–23	1 –
852009	2"	13–23	1 –



852

Gas pressure closing regulator, double diaphragm. Body PN 16. Flanged connection. To be coupled with flat counterflanges EN 1092-1. Max. inlet pressure: 500 mbar. Temperature range: -15–60°C. Pressure ports to UNI 8978. Regulation and closing at null flow according to UNI EN 88. Conformity to Directive ATEX (II 2G - II 2D).



Code	Adjustment (mbar)		
852060	DN 65	13–27	1 –
852080	DN 80	13–27	1 –
852100	DN 100	15–27	1 –



841

Extendible stainless steel joint according to UNI 11353-10, for gas systems in domestic applications (max. 35 kW). Max. working pressure PS: 0,5 bar. Fixed male connection: AISI 303. Flexible: AISI 316L. Captive female connection: AISI 303.

Code	Min./max. L		
841414	1/2" 90/130	3	–
841514	3/4" 90/130	3	–
841614	1" 90/130	3	–
841420	1/2" 120/210	3	–
841520	3/4" 120/210	3	–
841620	1" 120/210	3	–
841440	1/2" 240/410	3	–
841540	3/4" 240/410	3	–
841640	1" 240/410	3	–



842

Antivibration joint for gas systems. According to UNI EN 676 standard. Max. working pressure PS: 0,5 bar.

Threaded version: body AISI 316L, fixed male connection: FE 37.

Flanged version: body AISI 321, free flanged connections: ASTM A 105 - PN 10. To be coupled with flat counterflanges EN 1092-1 (PN 10 - PN 16).

Code	L (mm)		
842004	1/2" 145	3	–
842005	3/4" 150	3	–
842006	1" 165	3	–
842007	1 1/4" 180	1	–
842008	1 1/2" 210	1	–
842009	2" 230	1	–
842060	DN 65 175	1	–
842080	DN 80 175	1	–
842100	DN 100 195	1	–



8460

Tap for gas pressure gauge, with opening button. Female connections.

Code		
846002	1/4"	1 –
846003	3/8"	1 –



8461

Pressure gauge for gas. Diaphragm precision sensitive element. Bottom connection. Accuracy: UNI 1,6.

Code	mbar	Ø		
846101	1/4" 0–60	60	1	–
846102	1/4" 0–100	60	1	–
846103	3/8" 0–60	80	1	–
846104	3/8" 0–100	80	1	–

SOLENOID VALVES FOR GAS - NORMALLY OPEN - MANUAL RESET



8540

Solenoid valve for gas, normally open, with manual reset. Max. pressure: 500 mbar. Protection class: IP 65. Conformity to Directive ATEX (II 3G - II 3D).



Code	Electric supply		
854024	1/2" 230 V (ac)	1	–
854025	3/4" 230 V (ac)	1	–
854044	1/2" 24 V (ac)	1	–
854045	3/4" 24 V (ac)	1	–

Spare coil, complete with connector.

Code	Electric supply	Use		
854012	230 V (ac)	1/2" - 3/4"	1	–
854014	24 V (ac)	1/2" - 3/4"	1	–



839

Solenoid valve for gas, normally open, with manual reset. Max. pressure: 500 mbar. Protection class: IP 65. Conformity to Directive ATEX (II 3G - II 3D).



Code	Electric supply		
839005	3/4" 230 V (ac)	1	–
839006	1" 230 V (ac)	1	–
839007	1 1/4" 230 V (ac)	1	–
839008	1 1/2" 230 V (ac)	1	–
839009	2" 230 V (ac)	1	–
839105	3/4" 24 V (ac)	1	–
839106	1" 24 V (ac)	1	–
839107	1 1/4" 24 V (ac)	1	–
839108	1 1/2" 24 V (ac)	1	–
839109	2" 24 V (ac)	1	–
839205	3/4" 12 V (dc)	1	–
839206	1" 12 V (dc)	1	–
839207	1 1/4" 12 V (dc)	1	–
839208	1 1/2" 12 V (dc)	1	–
839209	2" 12 V (dc)	1	–



8540

Solenoid valve for gas, normally open, with manual reset. Max. pressure: 500 mbar. Protection class: IP 65. Conformity to Directive ATEX (II 3G - II 3D).



Code	Electric supply		
854026	1" 230 V (ac)	1	–
854046	1" 24 V (ac)	1	–

Spare coil, complete with connector.

Code	Electric supply	Use		
854002	230 V (ac)	1"	1	–
854004	24 V (ac)	1"	1	–



839

Solenoid valve for gas, normally open, with manual reset. Body PN 16. Max. pressure: 500 mbar. Protection class: IP 65. Conformity to Directive ATEX (II 3G - II 3D).

Flanged connections PN 16. To be coupled with flat counterflanges EN 1092-1.



Code	Electric supply		
839060	DN 65 230 V (ac)	1	–
839080	DN 80 230 V (ac)	1	–
839100	DN 100 230 V (ac)	1	–
839160	DN 65 24 V (ac)	1	–
839180	DN 80 24 V (ac)	1	–
839190	DN 100 24 V (ac)	1	–

Spare coil, complete with connector.

Code	Electric supply	Use		
839A05	230 V (ac)	3/4"-DN 100	1	–
839B05	24 V (ac)	3/4"-DN 100	1	–
839C05	12 V (dc)	3/4"-DN 100	1	–

SOLENOID VALVES FOR GAS - NORMALLY CLOSED - MANUAL RESET



8541

Solenoid valve for gas, normally closed, with manual reset.
 Max. pressure: 500 mbar.
 Class A - Group 2.
 Protection class: IP 65.
 Standards: EN 161 - Directive ATEX (II 3G - II 3D).



Code	Electric supply			
854124	1/2"	230 V (ac)	1	-
854125	3/4"	230 V (ac)	1	-
854126	1"	230 V (ac)	1	-
854144	1/2"	24 V (ac)	1	-
854145	3/4"	24 V (ac)	1	-
854146	1"	24 V (ac)	1	-

Spare coil, complete with connector.

Code	Electric supply	Use		
854102	230 V (ac)	1/2"-1"	1	-
854104	24 V (ac)	1/2"-1"	1	-



837

Solenoid valve for gas, normally closed, with manual reset.
 Body PN 16.
 Max. pressure: 500 mbar.
 Class A - Group 2.
 Protection class: IP 65.
 Standards: EN 161 - Directive ATEX (II 3G - II 3D).



Code	Electric supply			
837060	DN 65	230 V (ac)	1	-
837080	DN 80	230 V (ac)	1	-
837100	DN 100	230 V (ac)	1	-
837160	DN 65	24 V (ac)	1	-
837180	DN 80	24 V (ac)	1	-
837190	DN 100	24 V (ac)	1	-

Spare coil, complete with connector.

Code	Electric supply	Use		
837A60	230 V (ac)	DN 65-DN 100	1	-
837B60	24 V (ac)	DN 65-DN 100	1	-



837

Solenoid valve for gas, normally closed, with manual reset.
 Max. pressure: 500 mbar.
 Class A - Group 2.
 Protection class: IP 65.
 Standards: EN 161 - Directive ATEX (II 3G - II 3D).



Code	Electric supply			
837005	3/4"	230 V (ac)	1	-
837006	1"	230 V (ac)	1	-
837007	1 1/4"	230 V (ac)	1	-
837008	1 1/2"	230 V (ac)	1	-
837009	2"	230 V (ac)	1	-
837105	3/4"	24 V (ac)	1	-
837106	1"	24 V (ac)	1	-
837107	1 1/4"	24 V (ac)	1	-
837108	1 1/2"	24 V (ac)	1	-
837109	2"	24 V (ac)	1	-
837205	3/4"	12 V (dc)	1	-
837206	1"	12 V (dc)	1	-
837207	1 1/4"	12 V (dc)	1	-
837208	1 1/2"	12 V (dc)	1	-
837209	2"	12 V (dc)	1	-

Spare coil, complete with connector.

Code	Electric supply	Use		
837A05	230 V (ac)	3/4"-2"	1	-
837B05	24 V (ac)	3/4"-2"	1	-
837C05	12 V (dc)	3/4"-2"	1	-

SOLENOID VALVES FOR GAS - NORMALLY CLOSED



838

Solenoid valve for gas, normally closed.
 Max. pressure: 360 mbar.
 Class A - Group 2.
 Protection class: IP 65.
 Standards: EN 161 - Directive ATEX (II 3G - II 3D).



Code	Electric supply			
838004	1/2"	230 V (ac)	1	-
838005	3/4"	230 V (ac)	1	-
838006	1"	230 V (ac)	1	-
838007	1 1/4"	230 V (ac)	1	-
838008	1 1/2"	230 V (ac)	1	-
838009	2"	230 V (ac)	1	-
838104	1/2"	24 V (ac)	1	-
838105	3/4"	24 V (ac)	1	-
838106	1"	24 V (ac)	1	-
838107	1 1/4"	24 V (ac)	1	-
838108	1 1/2"	24 V (ac)	1	-
838109	2"	24 V (ac)	1	-

Spare coil, complete with connector.

Code	Electric supply	Use		
838A04	230 V (ac)	1/2" - 3/4" (round version)	1	-
838A14	230 V (ac)	1/2" - 3/4" (square version)	1	-
838A06	230 V (ac)	1" (round version)	1	-
838A07	230 V (ac)	1 1/4" ÷ 2" (round version)	1	-
838B04	24 V (ac)	1/2" - 3/4" (round version)	1	-
838B14	24 V (ac)	1/2" - 3/4" (square version)	1	-
838B06	24 V (ac)	1" (round version)	1	-
838B07	24 V (ac)	1 1/4" ÷ 2" (round version)	1	-



838

Solenoid valve for gas, normally closed.
 Body PN 16.
 Max. pressure: 200 mbar.
 Class A - Group 2.
 Protection class: IP 65.
 Standards: EN 161 - Directive ATEX (II 3G - II 3D).



Flanged connections PN 16.
 To be coupled with flat counterflanges EN 1092-1.

Code	Electric supply			
838060	DN 65	230 V (ac)	1	-
838080	DN 80	230 V (ac)	1	-
838100	DN 100	230 V (ac)	1	-

Spare coil, complete with connector.

Code	Electric supply	Use		
838A60	230 V (ac)	DN 65 - DN 80	1	-
838A00	230 V (ac)	DN 100	1	-

ROTATING SIREN - BLINKER



8561

Rotating siren.
 230 V (ac) - 112 dB/1 m.



Code		
856102	1	-



8562

Electronic intermittence blinker.
 230 V (ac) - Lamp power: 40 W.



Code		
856202	1	-

GAS DETECTORS



8563

Gas detector, with built-in sensor and relay outlet. With BUS connection, for auxiliary remote sensor. For solenoid valves 8540, 8541, 837, 838 and 839 series. Supply: 230 V (ac). Outlet contact: 8 (2) A. Protection class: IP 42.



Code

856300	for methane gas	1	-
856302	for LPG	1	-



855

Gas detector, with built-in sensor and relay outlet. Without BUS connection. With solenoid valve. Normally open. Supply: 230 V (ac). Protection class: IP 42.



Code

855400	1/2"	for methane gas	1	-
855500	3/4"	for methane gas	1	-
855410	1/2"	for LPG	1	-
855510	3/4"	for LPG	1	-



8563

Auxiliary remote sensor for gas detector 8563 series. Supply: 230 V (ac). Protection class: IP 42.



Code

856310	for methane gas	1	-
856312	for LPG	1	-



8565

Gas detector, with built-in sensor and relay outlet. Without BUS connection. Supply: 230 V (ac). Outlet contact: 8 (2) A. Protection class: IP 42.



Code

856500	for methane gas	1	-
856502	for LPG	1	-



8565

Gas detector, with built-in sensor and relay outlet. Without BUS connection. Supply: 230 V (ac). Protection class: IP 42.

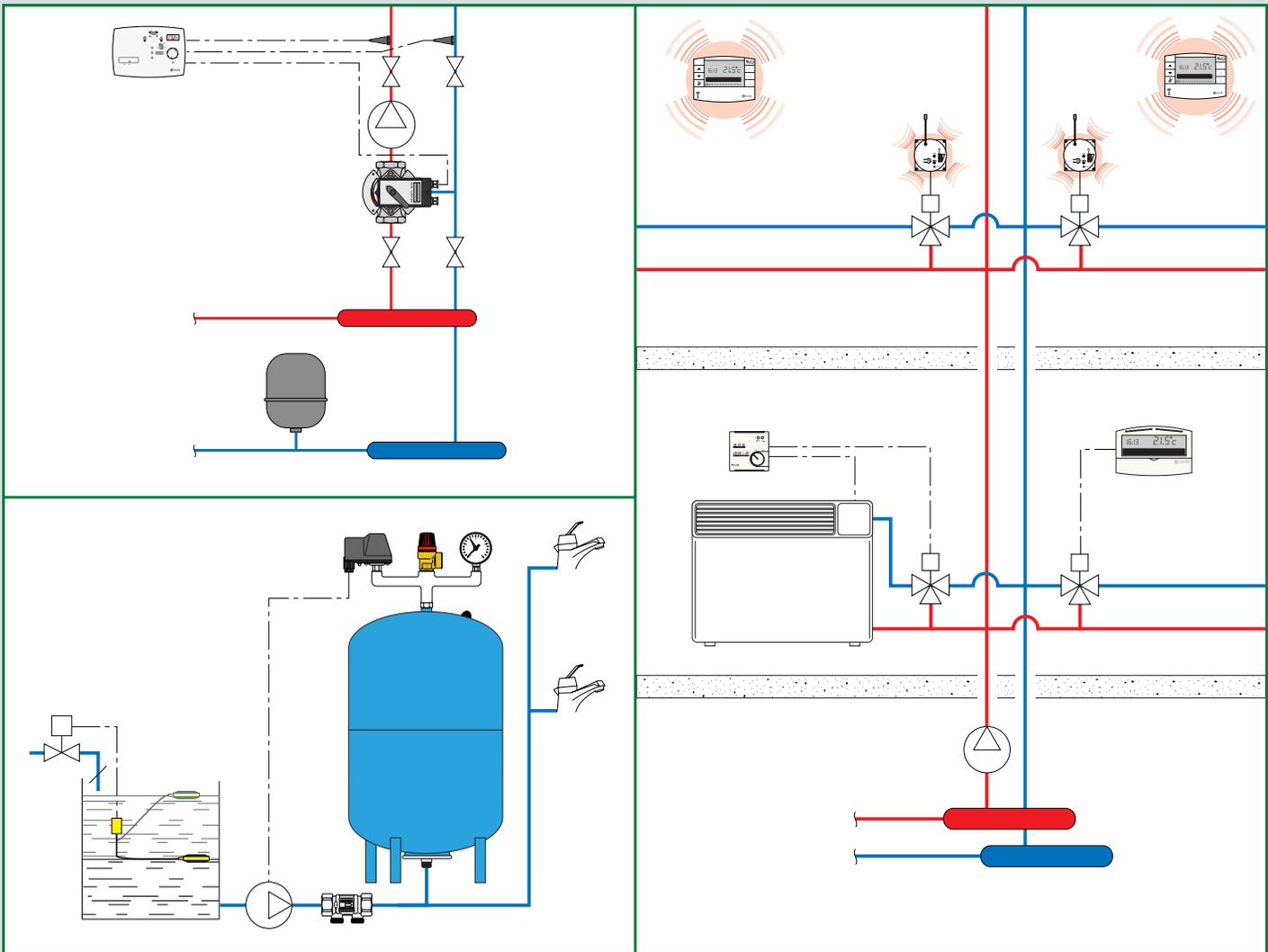


Code

856501	for CO	1	-
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EXPANSION VESSELS, MIXING VALVES, CHRONO-THERMOSTATS

This diagram is just an indication



- Expansion vessels
- Shut-off cocks for expansion vessels
- Pressure switch and float switch
- Pickling gel and deoxidising powder for welding
- Mixing valves
- Actuators
- Counterflanges
- Temperature regulators
- Chrono-thermostats and phone programmers
- Thermostats - Hour meter - Timer
- Radio wave temperature control systems

**EXPANSION VESSELS
FOR HEATING SYSTEMS**

**EXPANSION VESSELS
FOR HOT WATER SYSTEMS**

NEW



556

tech. broch. 01079

Welded expansion vessel, for heating systems, EC certification. Diaphragm membrane. Max. working pressure: 6 bar. System working temperature range: -10÷120°C. Membrane working temperature range: -10÷70°C. Max. percentage of glycol: 50%. Conformity to EN 13831 standard.



Code	Litres	Conn.	Precharge (bar)		
556008	8	3/4"	1,5	1	–
556012	12	3/4"	1,5	1	–
556018	18	3/4"	1,5	1	–
556025	25	3/4"	1,5	1	–



5557

tech. broch. 01079

Welded expansion vessel, for hot water systems, EC certification. Bladder membrane. Max. working pressure: 10 bar. System working temperature range: -10÷100°C. Membrane working temperature range: -10÷100°C. Conformity to EN 13831 standard.



Code	Litres	Conn.	Precharge (bar)		
555702	2	1/2"	2,5	4	–
555705	5	3/4"	2,5	1	–
555708	8	3/4"	2,5	1	–



556

tech. broch. 01079

Welded expansion vessel, for heating systems, EC certification. Diaphragm membrane. Max. working pressure: 6 bar. System working temperature range: -10÷120°C. Membrane working temperature range: -10÷70°C. Max. percentage of glycol: 50%. Conformity to EN 13831 standard.



Code	Litres	Conn.	Precharge (bar)		
556035	35	3/4"	1,5	1	–
556050	50	3/4"	1,5	1	–
556080	80	1"	1,5	1	–
556100	100	1"	1,5	1	–
556140	140	1"	1,5	1	–
556200	200	1"	1,5	1	–
556250	250	1"	1,5	1	–



568

tech. broch. 01079

Welded expansion vessel, for hot water systems, EC certification. Bladder membrane. Max. working pressure: 10 bar. System working temperature range: -10÷70°C. Membrane working temperature range: -10÷70°C. Conformity to EN 13831 standard.



Code	Litres	Conn.	Precharge (bar)		
568008	8	3/4"	2,5	1	–
568012	12	3/4"	2,5	1	–
568018	18	3/4"	2,5	1	–
568025	25	3/4"	2,5	1	–
568033*	33	3/4"	2,5	1	–

* Complete with brackets for wall mounting



556

tech. broch. 01079

Welded expansion vessel, for heating systems, EC certification. Diaphragm membrane. Max. working pressure: 6 bar. System working temperature range: -10÷120°C. Membrane working temperature range: -10÷70°C. Max. percentage of glycol: 50%. Conformity to EN 13831 standard.



Code	Litres	Conn.	Precharge (bar)		
556300	300	1"	1,5	1	–
556400	400	1"	1,5	1	–
556500	500	1"	1,5	1	–
556600	600	1"	1,5	1	–



568

tech. broch. 01079

Welded expansion vessel, for hot water systems, EC certification. Bladder membrane (sostituibile per volumi da 60 a 500 l). Max. working pressure: 10 bar. System working temperature range: -10÷70°C. Membrane working temperature range: -10÷70°C. Conformity to EN 13831 standard.



Code	Litres	Conn.	Precharge (bar)		
568050	50	1"	2,5	1	–
568060	60	1"	2,5	1	–
568080	80	1"	2,5	1	–
568100	100	1"	2,5	1	–
568200	200	1 1/4"	2,5	1	–
568300	300	1 1/4"	2,5	1	–
568400	400	1 1/4"	2,5	1	–
568500	500	1 1/4"	2,5	1	–

SHUT-OFF COCKS FOR EXPANSION VESSELS



558

Automatic shut-off cock, for expansion vessels.
Max. working pressure: 10 bar.
Max. working temperature: 110°C.

Code			
558500	3/4"	1	50



558

Automatic shut-off cock, for expansion vessel, with drain cock.
Max. working pressure: 6 bar.
Max. working temperature: 85°C.

Code			
558510	3/4"	1	50

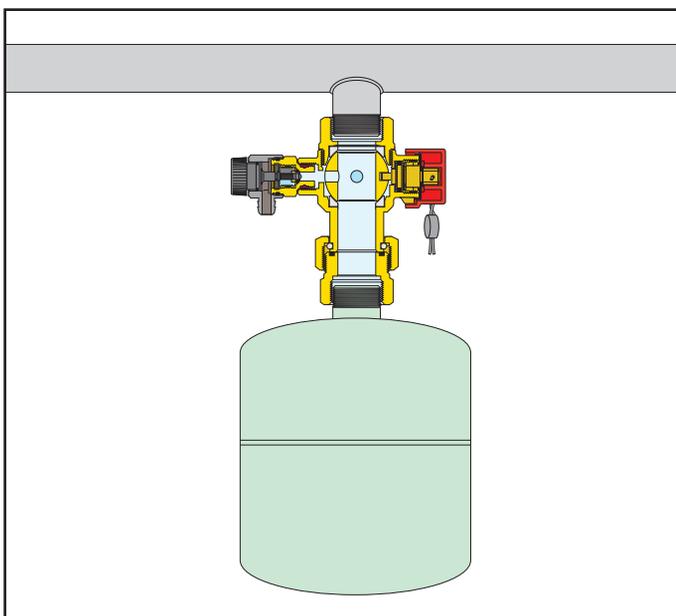


5580

Ball shut-off valve, for expansion vessels, with drain cock.
Max. working pressure: 6 bar.
Max. working temperature: 85°C.

Code			
558050	3/4"	1	20
558060	1"	1	20
558070	1 1/4"	1	20

Application diagram of shut-off valve 5580 series



PRESSURE SWITCH AND FLOAT SWITCH



625

Pressure switch for boosting sets.
Up to 500 V three-pole - 16 A.
Max. working pressure: 15 bar.
Ambient temperature range: -10–55°C.
Medium temperature range: 0–110°C.
1/4" female connection.
Protection class: IP 44.



Code	Adjustment range		
625005	1– 5 bar	1	10
625010	3–12 bar	1	10



613

Float switch, 250 V - 10 A.
Heavy duty approved.



Code	Cable length		
613030	3 m	1	5
613050	5 m	1	5

PICKLING GEL AND DEOXIDISING POWDER FOR WELDING



6150

ECOGEL.
Non-irritating pickling GEL to weld copper with tin.
With brush.

Code	Quantity		
615000	110 g	60	–
615010	1 kg	1	–



6151

Pickling GEL to weld copper with tin.
With brush.
Quantity of GEL 100 g.

Code			
615100		100	–



6152

Deoxidising powder for heavy welding of copper, bronze, brass, iron and steel.
Quantity of POWDER 100 g.

Code			
615200		40	–

MIXING VALVES



610  **tech. broch. 01169**
 Three-way butterfly mixing valve.
 Threaded connections.
 Max. working pressure: 6 bar.
 Temperature range: 2–110°C.
Heavy series.

Code		Kv (m³/h)		
610005	3/4"	7,5	1	–
610006	1"	11,9	1	–
610007	1 1/4"	16,8	1	–
610008	1 1/2"	30	1	–
610009	2"	45	1	–
610020	2 1/2"	72	1	–



610  **tech. broch. 01169**
 Three-way butterfly mixing valve.
 Body PN 6.
 Flanged connections.
 To be coupled with flat counterflanges EN 1092-1.
 Max. working pressure: 6 bar.
 Temperature range: 2–110°C.
Heavy series.

Code		Kv (m³/h)		
610050	DN 50 (2")	45	1	–
610060	DN 65 (2 1/2")	72	1	–
610080	DN 80 (3")	140	1	–
610100	DN 100 (4")	183	1	–
610120	DN 125 (5")	340	1	–



611  **tech. broch. 01169**
 Four-way butterfly mixing valve.
 Threaded connections.
 Max. working pressure: 6 bar.
 Temperature range: 2–110°C.
Heavy series.

Code		Kv (m³/h)		
611005	3/4"	7,8	1	–
611006	1"	12,3	1	–
611007	1 1/4"	18,5	1	–
611008	1 1/2"	30	1	–
611009	2"	53	1	–
611020	2 1/2"	80	1	–



611  **tech. broch. 01169**
 Four-way butterfly mixing valve.
 Body PN 6.
 Flanged connections.
 To be coupled with flat counterflanges EN 1092-1.
 Max. working pressure: 6 bar.
 Temperature range: 2–110°C.
Heavy series.

Code		Kv (m³/h)		
611050	DN 50 (2")	53	1	–
611060	DN 65 (2 1/2")	80	1	–
611080	DN 80 (3")	140	1	–
611100	DN 100 (4")	230	1	–
611120	DN 125 (5")	410	1	–



612  **tech. broch. 01169**
 Three-way sector mixing valve.
 Threaded connections.
 Max. working pressure: 6 bar.
 Temperature range: 2–110°C.
Heavy series.

Code		Kv (m³/h)		
612005	3/4"	7,2	1	–
612006	1"	11,9	1	–
612007	1 1/4"	16,5	1	–
612008	1 1/2"	30	1	–
612009	2"	42	1	–
612020	2 1/2"	62	1	–



612  **tech. broch. 01169**
 Three-way sector mixing valve.
 Body PN 6.
 Flanged connections.
 To be coupled with flat counterflanges EN 1092-1.
 Max. working pressure: 6 bar.
 Temperature range: 2–110°C.
Heavy series.

Code		Kv (m³/h)		
612050	DN 50 (2")	42	1	–
612060	DN 65 (2 1/2")	62	1	–
612080	DN 80 (3")	123	1	–
612100	DN 100 (4")	172	1	–
612120	DN 125 (5")	340	1	–

ACTUATORS

COUNTERFLANGES



6370 tech. broch. 01169
 Actuator for mixing valves from 3/4" to 1 1/2".
 With auxiliary microswitch.
 Supply: 230 V o 24 V - 50 Hz.
 Power consumption: 3 VA.
 Auxiliary microswitch contact rating: 10 (2) A - 250 V (ac).
 Protection class: IP 42.
 Operating time: 60 s.
 With adapter.



Code	Supply voltage V	Actuator torque (N-m)		
637002	230	15	1	-
637004	24	15	1	-

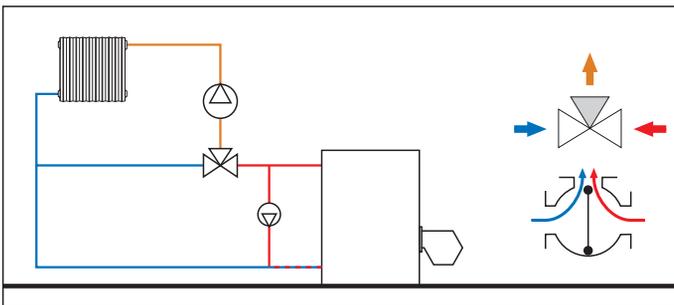


6370 tech. broch. 01169
 Actuator for mixing valves from 2" to 5".
 With auxiliary microswitch.
 Supply: 230 V o 24 V - 50 Hz.
 Power consumption: 4,5 VA.
 Auxiliary microswitch contact rating: 16 (4) A - 250 V (ac).
 Protection class: IP 42.
 Operating time: 180 s.
 With adapter.

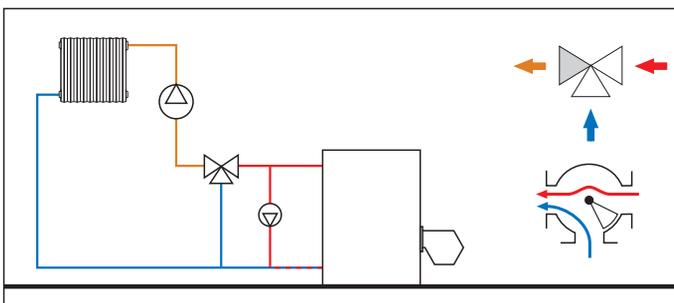


Code	Supply voltage V	Actuator torque (N-m)		
637012	230	35	1	-
637014	24	35	1	-

Installation example of 3-way butterfly valve 610 series with mixing function



Installation example of 3-way sector valve 612 series with mixing function



616
 Flat counterflange slip-on, for welding EN 1092-1, PN 6. Complete with bolts and gaskets.

Code			
616030	DN 32 (1 1/4")	1	-
616040	DN 40 (1 1/2")	1	-
616050	DN 50 (2")	1	-
616060	DN 65 (2 1/2")	1	-
616080	DN 80 (3")	1	-
616100	DN 100 (4")	1	-
616120	DN 125 (5")	1	-



617
 Flat counterflange slip-on, for welding EN 1092-1, PN 16. Complete with bolts and gaskets.

Code			
617030	DN 32 (1 1/4")	1	-
617040	DN 40 (1 1/2")	1	-
617050	DN 50 (2")	1	-
617060	DN 65 (2 1/2") 4 fori	1	-
617080	DN 80 (3")	1	-
617100	DN 100 (4")	1	-
617120	DN 125 (5")	1	-
617150	DN 150 (6")	1	-
617200	DN 200	1	-
617250	DN 250	1	-
617300	DN 300	1	-

TEMPERATURE REGULATORS



161 tech. broch. 01122

Digital temperature regulator for heating and cooling. Equipped with flow/return probes and contact probes holder. Control temperature range: 7–78°C. Supply: 230 V - 50 Hz. Protection class: IP 40. Probes connections: 1/8" M. Probes cable length: 1 m.



Code

161000



1

–

For RH% control accessories see on page 89

Spare part for regulator code 161000.

Code

F69264 flow/return temperature probe 1/8" M

Accessory for regulator code 161000.

Code

F69531 contact probe holder + thermo-conductive paste



1520

Digital temperature regulator complete with flow contact probe and outside probe. Adjustment range: 20–90°C. Supply: 230 V - 50 Hz. Protection class: IP 40.



Code

152001 1 channel



1

–

152002 2 channels

1

–

152003 3 channels

1

–



1520

Digital temperature regulator for heating and cooling. Equipped with flow probe, outside probe and max. relative humidity probe. Supply: 230 V - 50 Hz. Power consumption: 5,5 VA. Protection class: IP 40.



Code

152021 1 channel



1

–



151

Room thermostat with automatic switch over heating/cooling, for regulator code 152021 and for regulating units 174 series. For circular recessed box Ø 68 mm, depth 35/50 mm.



Code

151003



1

–

150

Spare parts for temperature regulator 1520 series.

Code

150050 max. relative humidity probe

150009 flow/return contact probe

150006 immersion probe

150029 pocket for probe code 150006

Code

150034 remote control for heating/cooling with mounting base

150036 remote control for heating with mounting base

150035 interface for heating/cooling



151

Room probe thermostat. For regulating unit 152, 174 series for heating and cooling and for regulator 1520 series.



Code

151000



1

–

CHRONO-THERMOSTAT AND PHONE PROGRAMMERS



618

Digital chrono-thermostat, with battery supply. Daily or weekly programmable clock. 2 temperature levels + anti-freeze. Fitted for phone programmer. Minimum time program 30 min. Output contact: 8 (2) A. Protection class: IP 30.



Code			
618101	daily	1	-
618107	weekly	1	-



739

Digital chrono-thermostat, with battery supply. Weekly programmable clock. Fitted for phone programmer. Quick programming. Output contact: 5 (2) A. Protection class: IP 30.



Code			
739107	135 x 90 x 28 mm	1	-



738

Digital room chrono-thermostat. **4 operating programmes with ON/OFF spark advance.** Weekly programmable clock. Fitted for phone programmer. Three temperature levels + anti-freeze. 30-minute minimum programme. ON/OFF function with adjustable differential from 0,2 to 2°C or proportional. Adjustable temperature with 0,1°C steps. 1 changeover switch output contact: 8 (2) A. Protection class: IP 30.



Code			
738207	battery supply	1	-
738227	electric supply 230 V	1	-
738217	built-in GSM module - supply 230 V	1	-



739

PSTN phone programmer. For 738, 739 and 740 series. To be installed with fixed telephone line. Supply: 230 V (ac).



Code			
739000		1	-



739

Phone programmer with GSM module, complete with room temperature probe. For 738, 739 and 740 series. Supply: 12 V (ac/dc).



Code			
739001	with inside probe	1	-
739002	with outside probe	1	-

THERMOSTATS - HOUR METER - TIMER



620

Room thermostat with changeover switch 10 (2,5) A - 230 V - 50 Hz.

620000: without warning lamp.

620100: with warning lamp.

620110: with warning lamp ON/OFF switch.

620120: with warning lamp and SUMMER - WINTER switch.

Protection class: IP 30.



Code		
620000	1	50
620100	1	50
620110	1	50
620120	1	50



619

Electronic room thermostat. With warning lamp and SUMMER - WINTER switch. Supply voltage: 230 V (ac). Output contact: 8 (2) A. Protection class: IP 30.



Code		
619110	1	10



619

Electronic room thermostat. For fan-coil. Supply voltage: 230 V (ac). Output contact: 5 (2) A. Protection class: IP 30.



Code		
619120	1	10



620

Digital room thermostat with display, with battery supply. With changeover contact 5 (3) A. With indication of electric contact. Adjustment range: 5-35°C. Protection class: IP 30.



Code		
620200	1	10



620

Digital room thermostat with display. With changeover contact 5 (3) A. ON/OFF function with adjustable differential from 0,2 to 2°C or proportional. 2 temperature levels + anti-freeze. SUMMER - WINTER switch. Adjustable temperature with 0,1°C steps. Protection class: IP 30.



Code			
620300	battery supply	1	10
620302	electric supply 230 V	1	10



620

Digital room thermostat with display. **For public buildings.** With changeover contact 5 (3) A. Supply voltage: 230 V (ac). ON/OFF function with adjustable differential from 0,2 to 2°C or proportional. 2 temperature levels + anti-freeze. Adjustable temperature with 0,1°C steps. Protection class: IP 30.

Unaccessible commands, for installation technicians only:
 - temperature set adjustment
 - SUMMER - WINTER
 - ON/OFF
 - adjustment settings.



Code		
620400	1	10



6205

tech. broch. 01186

Control bar. Supply: 230 V - 50-60 Hz. Power consumption: max. 5,5 VA (8 outputs). Changeover contacts: 10 A. Protection class: IP 30 (with rubber cable clamps). Output command for pump. Input for SUMMER - WINTER. Input for timer.



Code			
620542	4 channels	1	-
620582	8 channels	1	-



627

5 digit hour meter, 230 V / 24 V - 50 Hz - 1,5 W.



Code	Supply voltage V		
627002	230	1	100
627004	24	1	100



628

Timer with display. 15-minute minimum ON/OFF cycle. Maximum number of interventions: 96 (daily) - 672 (weekly). 16 (2) A / 250 V. IP 40. 230 V (ac) - 50-60 Hz. Diverting relay.



Code			
628001	daily	1	-
628007	weekly	1	-

RADIO WAVE TEMPERATURE CONTROL SYSTEMS



740

tech. broch. 01118

Digital chrono-thermostat with radio transmitter - 868 MHz. Weekly programmable clock. Fitted for phone programmer. Supply: 2 x 1,5 V alkaline penlight. ON/OFF function with adjustable differential from 0,2 to 2°C or proportional. Max. range 120 m in free air. 2 temperature levels + anti-freeze. Adjustable temperature with 0,1°C steps. Protection class: IP 30.



Code		
740000	1	-



740

tech. broch. 01118

Control bar. Supply: 230 V - 50-60 Hz. Power consumption: max. 5,5 VA (8 outputs + 1). Contact rating: 8 (2) A. Protection class: IP 52 (with rubber cable clamps).



Code		
740204	4 channels	1 -
740206	6 channels	1 -
740208	8 channels	1 -

NEW



740

Table support for chrono-thermostat code 740000.

Code		
740108	1	-



740

tech. broch. 01118

Electronic room thermostat with radio transmitter - 868 MHz. Supply: 2 x 1,5 V alkaline penlight. ON/OFF function with adjustable differential from 0,2 to 2°C or proportional. Max. range 120 m in free air. SUMMER - WINTER control. Adjustable temperature with 0,1°C steps. Protection class: IP 30.



Code		
740201	1	-



740

tech. broch. 01118

Radio frequency chrono-thermostat + wall-mounting receiver. 1 channel - 868 MHz. Receiver supply: 230 V - 50-60 Hz. Contact rating: 5 (2) A / 250 V. Protection class: IP 30.



Code		
740102	1	-



741

tech. broch. 01118

Electronic actuator with radio receiver - 868 MHz. For convertible radiator or thermostatic valves. It can be combined with systems 740 series. Supply: 2 x 1,5 V alkaline penlight. Protection class: IP 30.



Code		
741000	1	-



740

tech. broch. 01118

Wall-mounting receiver. 1 or 2 channels - 868 MHz. Supply: 230 V - 50-60 Hz. Contact rating: 5 (2) A / 250 V. Protection class: IP 30.



Code		
740100	1 channel	1 -
740104	2 channels	1 -



741

Tamper-proof protection kit for actuator 741 series.

Code		
741019	1	10



740

tech. broch. 01118

Wall-mounting receiver. 8 channels - 868 MHz. Supply: 16-18 V (via control bar). Power consumption: 1 VA. 8+1 bus output for pump activation. Protection class: IP 30.



Code		
740202	1	-



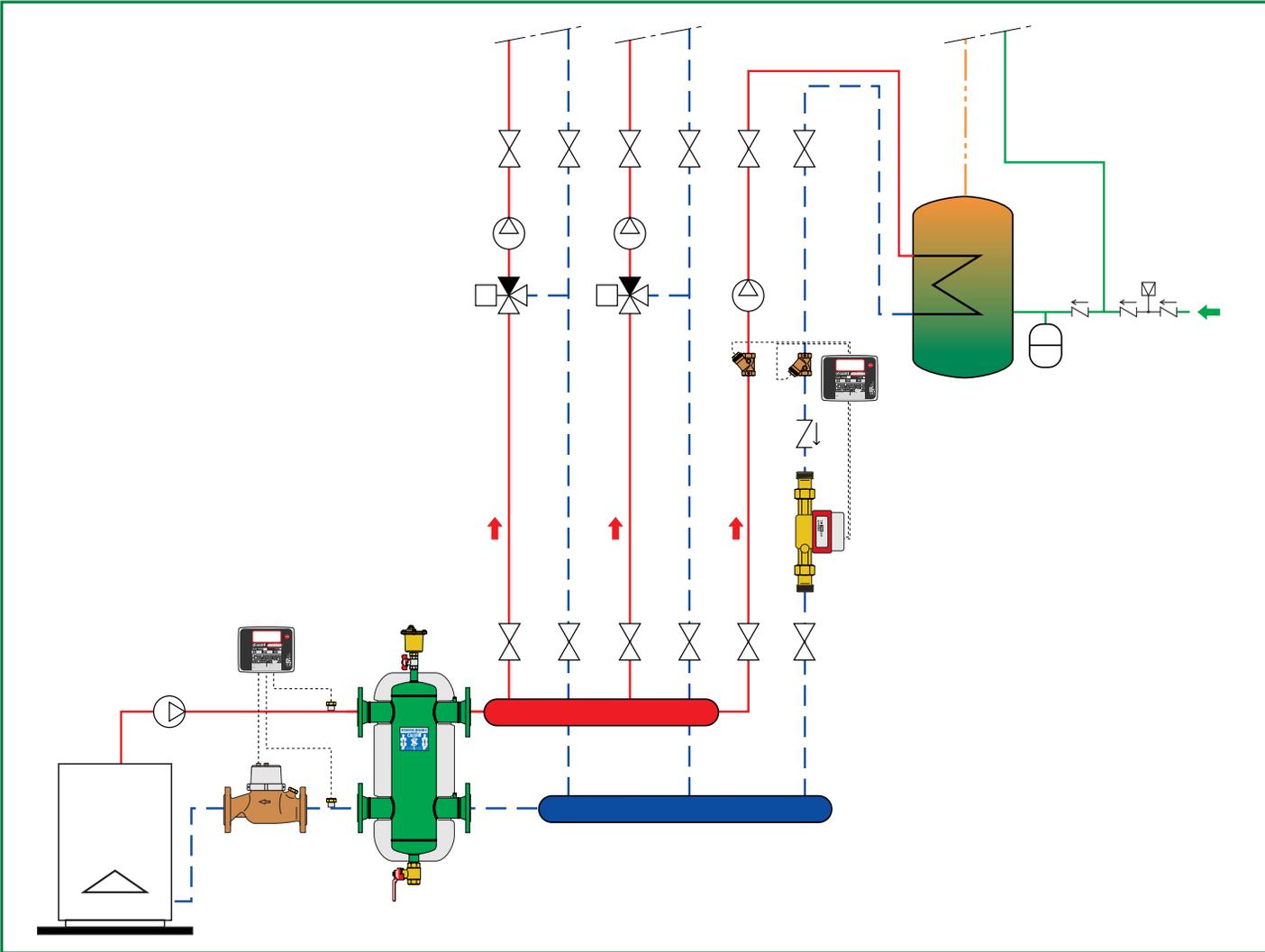
741

12 seal tamper-proof label set for actuator 741 series.

Code		
741008	1	-

HEAT SYSTEMS

This diagram is just an indication



- Direct heat meters
- Heat cost allocators
- User modules
- SATK series wall-mounted heat interface units

DIRECT HEAT METERS

DIRECT HEAT METER 7554 SERIES, CONTECA

 tech. broch. 01111

- Individual and central heating systems metering
- Local - centralised readout
- Bus cable communication
- MID compliant



ULTRASONIC DIRECT HEAT METER 7557 SERIES, CONTECA ULTRA

 tech. broch. 01208

- Individual and central heating systems metering
- Local - centralised readout
- Bus cable communication
- MID compliant



DATALOGGER 7550 SERIES, CONTECA TOUCH

 tech. broch. 01204

- Centralised acquisition of heat and domestic water consumptions via Bus cable
- Touch screen
- GSM Modem
- Max No. of heat meters: 250



DIRECT HEAT METER 7555 SERIES, CONTECA

 tech. broch. 01220

- Individual and central heating system metering
- Local - centralised readout
- M-Bus communication
- MID compliant





DATALOGGER 7550 SERIES, CONTECA TOUCH

 tech. broch. 01220

- Centralised acquisition of heat and domestic water consumptions via M-Bus
- Touch screen
- GSM Modem
- Max No. of heat meters: 250





DIRECT HEAT METER FOR SOLAR SYSTEMS 75525 SERIES, CONTECA

 tech. broch. 01146

- Solar systems metering
- Local - centralised readout
- Bus cable communication





DIRECT HEAT METERS AND HEAT COST ALLOCATORS

COMPACT ULTRASONIC DIRECT HEAT METER CAL1918 SERIES SENSONICAL ULTRA

 tech. broch. 01213

- Individual users
- Local - centralised readout
- MID compliant



DOMESTIC WATER CONSUMPTION MULTIPLE ACQUIRER 7556 SERIES, AQUAPRO

 tech. broch. 01201

- Acquisition of domestic water consumption
- Local - centralised readout
- Bus cable communication
- Max 8 domestic water meters per acquisition module



DOMESTIC WATER CONSUMPTION DATALOGGER 7550 SERIES, AQUAPRO

 tech. broch. 01201

- Centralised acquisition of domestic water consumptions via Bus cable
- Centralised readout
- GSM modem
- Max No. of AQUAPRO acquirers: 250



HEAT COST ALLOCATORS 7200 SERIES - MONITOR 2.0

 tech. broch. 01218

- Indirect heat metering for buildings with vertical distribution of heat
- Two temperature probes
- Two-way wireless transmission - 868 MHz
- Readouts by means of the USB/radio device and software SW7200



USER MODULES

UNIVERSAL USER MODULE 7000 SERIES, PLURIMOD

 [tech. broch. 01203](#)

- Universal positioning recess mounting box
- PLURIMOD module with 2-way/3-way zone valve
- Fitted for AUTOFLOW®
- CONTECA heat meter
- Predisposition for fitting 3 water meters



UNIVERSAL USER MODULE 7001 SERIES, PLURIMOD CLIMA

 [tech. broch. 01210](#)

- Universal positioning recess mounting box
- PLURIMOD module with 2-way/3-way zone valve
- Fitted for AUTOFLOW®
- CONTECA heat meter
- Predisposition for fitting 3 water meters
- Improved thermal insulation suitable for cooling systems



UNIVERSAL USER MODULE 7000 SERIES, PLURIMOD DUPLEX

 [tech. broch. 01113](#)

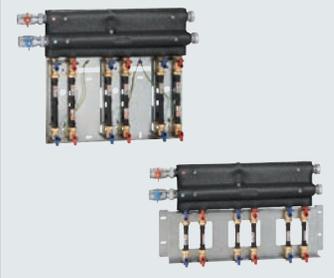
- Universal positioning recess mounting box
- PLURIMOD module with 2-way/3-way zone valve
- Fitted for AUTOFLOW®
- CONTECA heat meter
- Predisposition for fitting 6 water meters



MULTI-USER PREASSEMBLED UNITS FOR PLURIMOD 7000 SERIES PLURIMOD VAN

 [tech. broch. 01113](#)

- Fitted for 3 complete dwellings
- For both heating/cooling circuit and DHW/DCW



3-WAY USER MODULE 796 SERIES

 [tech. broch. 01101](#)

- Recess mounting box
- 3-way zone valve
- Balancing TEE
- Fitted for CONTECA heat meter
- Predisposition for fitting 2 water meters



USER MODULES

2-WAY USER MODULE 799 - 7992 SERIES

 [tech. broch. 01103](#)

- Recess mounting box
- 2-way zone valve
- AUTOFLOW® fitted on 799 series
- Fitted for CONTECA heat meter
- Predisposition for fitting 2 water meters



2-WAY USER MODULE 7900 SERIES

 [tech. broch. 01113](#)

- Recess mounting box
- Modular double user module with either 2-way or 3-way zone valves
- Modular user module suitable for 4-pipe systems with either 2-way or 3-way zone valves
- Fitted for CONTECA heat meters
- Predisposition for fitting 4 water meters



DIRECT SUPPLY UNITS

 [tech. broch. 01215](#)

- Direct supply units
- Thermostatic and motorised regulation unit
- High efficiency pump
- Fitted for CONTECA heat meter
- With thermal insulation



WALL-MOUNTED DIRECT HIU - INSTANTANEOUS DOMESTIC HOT WATER PRODUCTION - SATK20 SERIES

SATK20103HE LOW temperature HIU

Main characteristics:

Heating (set point regulation)

Modulating valve
Thermal safety valve
Flow temperature probe
Safety thermostat
High efficiency pump with safety by-pass

DHW production

Brazed heat exchanger
DHW temperature probe
Modulating valve on the primary circuit of the heat exchanger
Flow meter for DHW priority over heating

Electronic regulator

 tech. broch. 01209



SATK20203HE MEDIUM temperature HIU

Main characteristics:

Heating (set point regulation)

Modulating valve
Flow temperature probe
High efficiency pump with safety by-pass

DHW production

Brazed heat exchanger
DHW temperature probe
Modulating valve on the primary circuit of the heat exchanger
Flow meter for DHW priority over heating

Electronic regulator

 tech. broch. 01209



SATK20303 HIGH temperature HIU

Main characteristics:

Heating (ON/OFF regulation)

2-way zone valve

DHW production

Brazed heat exchanger
DHW temperature probe
Modulating valve on the primary circuit of the heat exchanger
Flow meter for DHW priority over heating

Electronic regulator

 tech. broch. 01209



WALL-MOUNTED INDIRECT HIU - INSTANTANEOUS DOMESTIC HOT WATER PRODUCTION - SATK30 SERIES

SATK30103HE

Wall-mounted indirect HIU Instantaneous DHW production

Main characteristics:

Heating (set point regulation)

Brazed heat exchanger (P_{nom} 15 kW);
Two-way modulating valve on the primary circuit of the heat exchanger
Safety relief valve set at 3 bar
DHW temperature probe
Safety thermostat
Expansion vessel 7 l
High efficiency pump with safety by-pass
Filling unit
Pressure switch

DHW production

Braze-welded heat exchanger **40 kW**
DHW temperature probe
Modulating valve on the primary circuit of the heat exchanger
Flow meter for DHW priority over heating

Electronic regulator

 tech. broch. 01209



SATK30105HE

Wall-mounted indirect HIU Instantaneous DHW production

Main characteristics:

Heating (set point regulation)

Brazed heat exchanger (P_{nom} 15 kW);
Two-way modulating valve on the primary circuit of the heat exchanger
Safety relief valve set at 3 bar
DHW temperature probe
Safety thermostat
Expansion vessel 7 l
High efficiency pump with safety by-pass
Filling unit
Pressure switch

Produzione ACS

Braze-welded heat exchanger **65 kW**
DHW temperature probe
Modulating valve on the primary circuit of the heat exchanger
Flow meter for DHW priority over heating

Electronic regulator

 tech. broch. 01301



WALL-MOUNTED INDIRECT HIU - DHW PRODUCTION IN STORAGE CYLINDER - SATK40 SERIES

SATK40103HE

 [tech. broch. 01216](#)

**Wall-mounted indirect HIU
DHW production in storage cylinder**

Main characteristics:

Heating (set point regulation)

Brazed heat exchanger (P_{nom} 15 kW);

Two-way modulating valve on the primary circuit of the heat exchanger

Safety relief valve set at 3 bar

DHW temperature probe

Safety thermostat

Expansion vessel 7 l

High efficiency pump with safety by-pass

Filling unit

Pressure gauge



WALL-MOUNTED DIRECT HIU - INSTANTANEOUS DOMESTIC HOT WATER PRODUCTION - SATK12 SERIES - SATK15 SERIES

SATK12313

**Wall-mounted direct HIU
DHW production - mechanical version**

Main characteristics:

Differential diverting valve for DHW priority over heating

Brazed heat exchanger

Fastening bracket



SATK15303 DPCV

 [tech. broch. 01214](#)

**Wall-mounted direct HIU
Modulating DHW production - mechanical version**

Main characteristics:

Differential diverting valve for DHW priority over heating

Modulating regulation for DHW production

Brazed heat exchanger

Differential pressure control valve (30 kPa)

Fastening bracket



SATK15313 ABC

 [tech. broch. 01219](#)

**Wall-mounted direct HIU
Modulating DHW production - mechanical version - All connections on the bottom**

Main characteristics:

Differential diverting valve for DHW priority over heating

Modulating regulation for DHW production

Brazed heat exchanger

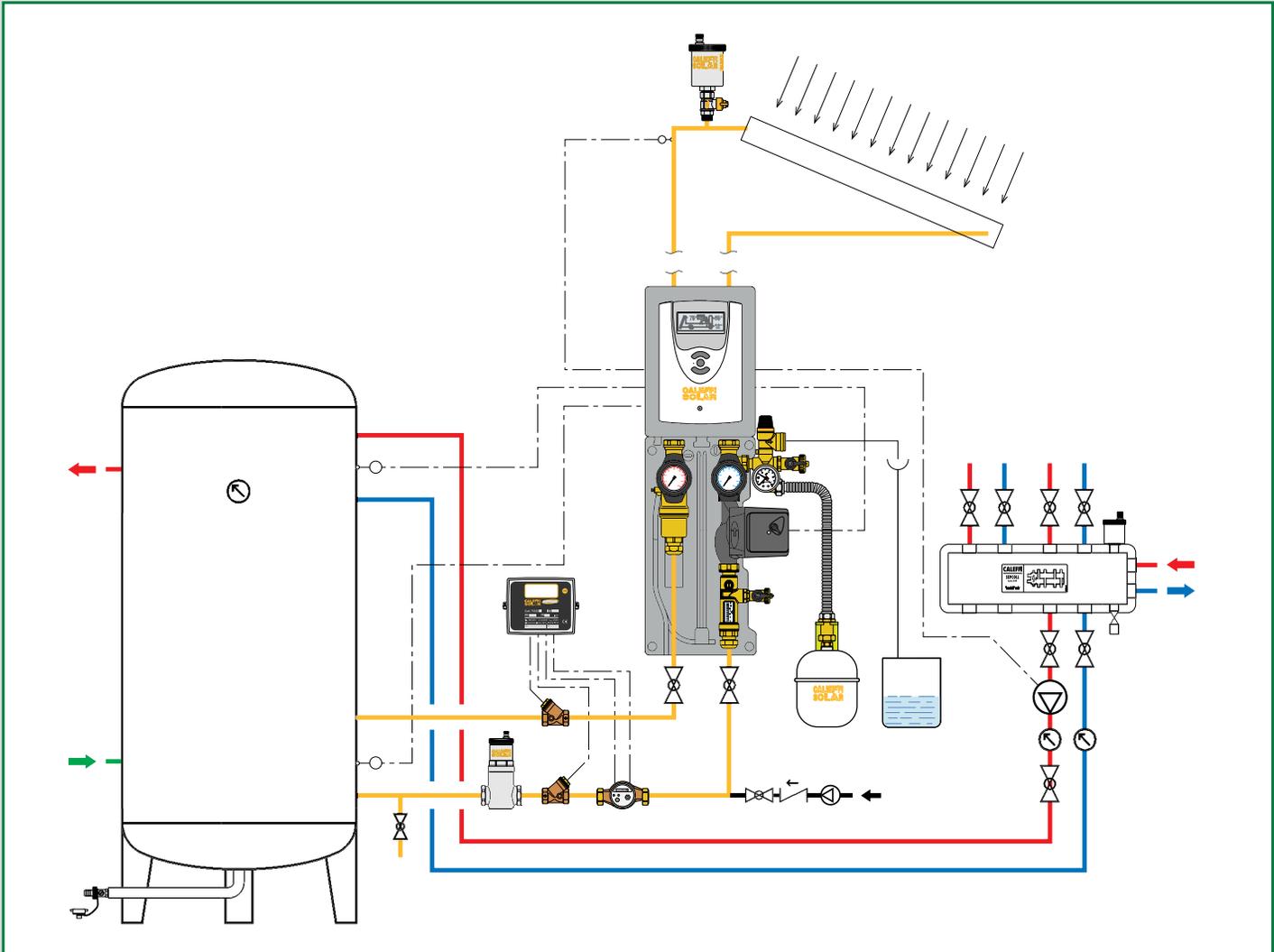
Differential pressure control valve (30 kPa)

Fastening bracket



COMPONENTS FOR SOLAR THERMAL SYSTEMS

This diagram is just an indication



- Safety relief valve - Automatic air vents
- Deaerators, DISCAL® - Manual air separator
- Pump stations
- Ball valve - Three piece union fitting
- Mechanical fittings with O-Ring seal
- Digital regulator
- Differential regulators and thermostat
- Heat meter CONTECA
- Balancing valve with flow meter
- Temperature and pressure relief valve
- Motorised ball diverter valve
- Anti-freeze safety device
- Thermostatic mixing valves
- Solar storage-to-boiler connection kit

CALEFFI SOLAR

The CALEFFI SOLAR product range has been specifically developed for use in solar thermal systems, where high temperatures can normally be reached and where, depending on the kind of system, there can be glycol. Materials and performance of the components must necessarily take into account these particular operating conditions.

SAFETY RELIEF VALVE - AUTOMATIC AIR VENTS

253

 tech. broch. 01089



Safety relief valve for solar thermal systems. Brass body. Chrome plated. Female connections. PN 10. **Temperature range: -30-160°C.** **Max. percentage of glycol: 50%.** Oversized discharge outlet. Discharge rating: 1/2" - 50 kW; 3/4" - 100 kW. TÜV certified to TRD 721 - SV 100 § 7.7. Settings: 2,5 - 3 - 4 - 6 - 8 - 10 bar.



Code

Code	Connections	Pressure	Green Box	Yellow Box
253042	1/2" F x 3/4" F	2,5 bar	1	50
253043	1/2" F x 3/4" F	3 bar	1	50
253044	1/2" F x 3/4" F	4 bar	1	50
253046	1/2" F x 3/4" F	6 bar	1	50
253048	1/2" F x 3/4" F	8 bar	1	50
253040	1/2" F x 3/4" F	10 bar	1	50
253052	3/4" F x 1" F	2,5 bar	1	25
253053	3/4" F x 1" F	3 bar	1	25
253054	3/4" F x 1" F	4 bar	1	25
253056	3/4" F x 1" F	6 bar	1	25
253058	3/4" F x 1" F	8 bar	1	25
253050	3/4" F x 1" F	10 bar	1	25

250

 depl. 01133



Consisting of:
- Automatic air vent for solar thermal systems. Brass body. Chrome plated. Max. working pressure: 10 bar. Max. discharge pressure: 5 bar. **Temperature range: -30-180°C.** **Max. percentage of glycol: 50%.**
- Shut-off cock complete with seal. Brass body. Chrome plated. Max. working pressure: 10 bar. **Temperature range: -30-200°C.** **Max. percentage of glycol: 50%.**



Code

Code	Connections	Pressure	Green Box	Yellow Box
250031	3/8" M	without cock	1	25
250131	3/8" M		1	25
250041	1/2" M	without cock	1	25

250

Consisting of:



- Automatic air vent for solar thermal systems. Brass body. Chrome plated. Max. working pressure: 10 bar. Max. discharge pressure: 2,5 bar. **Temperature range: -30-180°C.** **Max. percentage of glycol: 50%.**
- Shut-off cock complete with seal. Brass body. Chrome plated. Max. working pressure: 10 bar. **Temperature range: -30-200°C.** **Max. percentage of glycol: 50%.**

Code

Code	Connections	Pressure	Green Box	Yellow Box
250831	3/8" M	without cock	1	50
250931	3/8" M		1	50

251

DISCALAIR®

 tech. broch. 01135



High-performance automatic air vent for solar thermal systems. Brass body. Chrome plated. Female connections. Max. working pressure: 10 bar. Max. discharge pressure: 10 bar. **Temperature range: -30-160°C.** **Max. percentage of glycol: 50%.**

Code

Code	Connections	Pressure	Green Box	Yellow Box
251004	1/2" F		1	10

250

 tech. broch. 01133



Shut-off cock complete with seal. Brass body. Chrome plated. Max. working pressure: 10 bar. **Temperature range: -30-200°C.** **Max. percentage of glycol: 50%.**

Code

Code	Connections	Pressure	Green Box	Yellow Box
250300	3/8" M x 3/8" F	- butterfly handle	1	10
250400	1/2" M x 1/2" F	- lever handle	1	10

The automatic air vent must be shut off after the system has been filled.



DEAERATORS - MANUAL AIR SEPARATOR



251 DISCAL®

tech. broch. 01134

Deaerator for solar thermal systems.
Brass body. Chrome plated.
Female connections.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range: -30-160°C.
Max. percentage of glycol: 50%.

Code			
251003	3/4" F	1	10



251 DISCAL®

tech. broch. 01134

Deaerator for solar thermal systems.
Brass body. Chrome plated.
Female connections.
With drain.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range: -30-160°C.
Max. percentage of glycol: 50%.

Code			
251006	1" F	1	-
251007	1 1/4" F	1	-



251 DISCAL®

tech. broch. 01134

Deaerator for vertical pipes,
for solar thermal systems.
Brass body. Chrome plated.
Female connections.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range: -30-160°C.
Max. percentage of glycol: 50%.

Code			
251905	3/4" F	1	-
251906	1" F	1	-



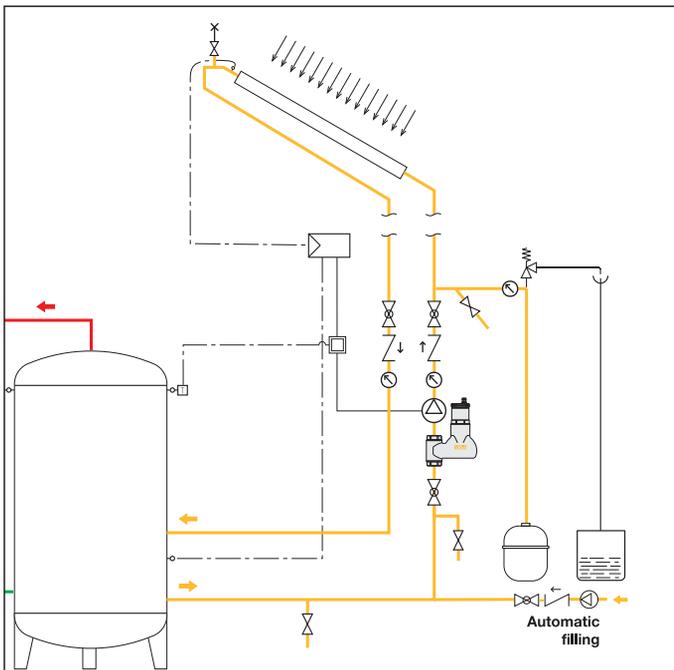
251

tech. broch. 01197

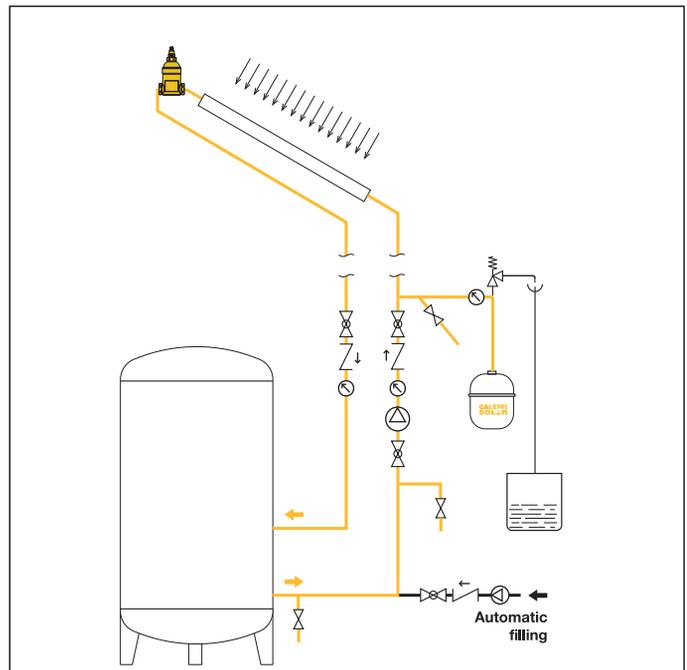
Manual air separator
for solar thermal systems.
Brass body.
Female connections.
Max. working pressure: 10 bar.
Temperature range: -30-200°C.
Max. percentage of glycol: 50%.

Code			
251093	3/4" F	1	10

Application diagram of DISCAL® 251 series for vertical pipes



Application diagram 251 series



PUMP STATIONS

NEW

278

Pump station for solar thermal systems, return connection.
Electric supply: 230 V (ac).
Max. working pressure: 10 bar.

Safety relief valve temperature range: -30-160°C.

Safety relief valve setting: 6 bar (for other setting, see 253 series using the adapter code F21224).

Flow meter temperature range: -10-110°C.

Max. percentage of glycol: 50%.

Consisting of:

- Solar circulation pump;
- safety relief valve for solar thermal systems 253 series;
- fill/drain cock;
- instrument holder fitting with pressure gauge;
- flow meter;
- return temperature gauge;
- shut-off valve with check valve;
- 2 hose connections;
- pre-formed shell **insulation**.



NEW

278

Pump station for solar thermal systems, return connection.
Electric supply: 230 V (ac).
Max. working pressure: 10 bar.

Safety relief valve temperature range: -30-160°C.

Safety relief valve setting: 6 bar (for other setting, see 253 series using the adapter code F21224).

Flow meter temperature range: -10-110°C.

Max. percentage of glycol: 50%.

Consisting of:

- Solar circulation pump;
- safety relief valve for solar thermal systems 253 series;
- fill/drain cock;
- instrument holder fitting with pressure gauge;
- flow meter;
- return temperature gauge;
- shut-off valve with check valve;
- 2 hose connections;
- pre-formed shell **insulation**.

Fitted for fitting with digital regulator DeltaSol® C+.



Code	Flow meter scale (l/min)	Pump		
278050	3/4" F 1-13	UPS 15-65	1	-
278052	3/4" F 8-30	UPS 15-80	1	-

Code	Flow meter scale (l/min)	Pump		
278750	3/4" F 1-13	UPS 15-65	1	-
278752	3/4" F 8-30	UPS 15-80	1	-

PUMP STATIONS

NEW

279

Pump station for solar thermal systems, flow and return connection.
 Electric supply: 230 V (ac).
 Max. working pressure: 10 bar.
Safety relief valve temperature range: -30-160°C.
 Safety relief valve setting: 6 bar (for other setting, see 253 series using the adapter code F21224).
Flow meter temperature range: -10-110°C.
Max. percentage of glycol: 50%.

- Consisting of:
- Solar circulation pump;
 - safety relief valve for solar thermal systems 253 series;
 - 2 fill/drain cocks;
 - instrument holder fitting with pressure gauge;
 - flow meter;
 - deaerator device;
 - flow temperature gauge;
 - return temperature gauge;
 - 2 shut-off valves with check valves;
 - 2 hose connections;
 - pre-formed shell **insulation**.

Fitted for fitting with digital regulator DeltaSol® C+.



NEW

278

Digital regulator DeltaSol® C+.
 Electric supply: 230 V (ac).
 Complete with pre-formed shell **insulation** for coupling with pump stations 278 and 279 series.
 Complete with 3 Pt1000 probes, with fourth probe as optional.
 Functions: differential temperature regulator with supplementary and optional functions.
 Inputs: for 4 Pt1000 probes.
 Outputs: 2 semiconductor relays.



Code

278001



1

-

255

Pump station for solar thermal systems, flow and return connection.
 Electric supply: 230 V (ac).
 Max. working pressure: 10 bar.
Safety relief valve temperature range: -30-160°C.
 Safety relief valve setting: 6 bar (for other setting see 253 series).
Max. flow meter temperature: 120°C.
Max. percentage of glycol: 50%.

- Consisting of:
- Grundfos Solar 25-120 circulation pump;
 - safety relief valve for solar thermal systems 253 series;
 - 2 fill/drain cocks with hose connections;
 - instrument holder fitting with pressure gauge;
 - flow regulator with flow meter;
 - deaerator device;
 - flow temperature gauge;
 - return temperature gauge;
 - 2 shut-off valves with check valves;
 - pre-formed shell **insulation**.



Code	Flow meter scale (l/min)	Pump		
279050	3/4" F 1-13	UPS 15-65	1	-
279052	3/4" F 8-30	UPS 15-80	1	-

Code	Flow meter scale (l/min)		
255266	1" F 5-40	1	-

ACCESSORIES FOR PUMP STATIONS



259

tech. broch. 01246

Welded expansion vessel only for primary circuit of solar thermal systems, EC certification. Bladder membrane. Max. working pressure: 10 bar. System working temperature range: -10–120°C. Membrane working temperature range: -10–70°C. Max. percentage of glycol: 50%. Conformity to EN 13831 standard.

Code	Litres	Conn.	Precharge (bar)		
259008	8	3/4"	2,5	1	–
259012	12	3/4"	2,5	1	–
259018	18	3/4"	2,5	1	–
259025	25	3/4"	2,5	1	–
259033	33	3/4"	2,5	1	–



255

tech. broch. 01136

Expansion vessel connection kit. Consisting of:
 - stainless steel flexible hose (L=610 mm);
 - automatic shut-off cock;
 - wall mounting bracket (for vessels up to 24 litres).
 Max. working pressure: 10 bar.
Shut-off cock max. working temperature: 110°C.
Max. percentage of glycol: 50%.

Code			
255007	3/4"	1	–



259

tech. broch. 01246

Welded expansion vessel only for primary circuit of solar thermal systems, EC certification. Diaphragm membrane. Max. working pressure: 10 bar. System working temperature range: -10–120°C. Membrane working temperature range: -10–70°C. Max. percentage of glycol: 50%. Conformity to EN 13831 standard.

Code	Litres	Conn.	Precharge (bar)		
259050	50	3/4"	2,5	1	–
259080	80	1"	2,5	1	–



255

System filling pump for pump stations 279, 278 and 255 series.

Code			
255010		1	–



Adapter for pump stations 278 and 279 series. To be used for the installation of the 1/2" safety relief valve 253 series.

Code			
F21224			

BALL VALVE - THREE-PIECE UNION FITTING



240

tech. broch. 01185

Ball valve for solar thermal systems. **Body and ball in stainless steel AISI 316.** PN 63. Female connections. Handle in stainless steel AISI 304. **Temperature range: -30–200°C.** **Max. percentage of glycol: 50%.**

Code			
240400	1/2"	1	5
240500	3/4"	1	5
240600	1"	1	5



588

Three-piece straight union fitting for solar thermal systems. Max. working pressure: 16 bar. **Temperature range: -30–160°C.** **Max. percentage of glycol: 50%.** Black nickel plated nut.

Code			
588052	3/4" F x M with union	1	25
588062	1" F x M with union	1	20

MECHANICAL FITTINGS WITH O-RING SEAL



2540

Female fitting, mechanical O-Ring seal for solar thermal systems. For annealed copper, hard copper, brass, mild and stainless steel pipes. Max. working pressure: 16 bar. **Temperature range: -30-160°C.** **Max. percentage of glycol: 50%.** Black nickel plated nut.

Code			
254055	3/4" F - Ø 15	1	25
254058	3/4" F - Ø 18	1	25
254052	3/4" F - Ø 22	1	25
254062	1" F - Ø 22	1	25
254068	1" F - Ø 28	1	10



2546

Tee fitting, mechanical O-Ring seal for solar thermal systems. For annealed copper, hard copper, brass, mild and stainless steel pipes. Max. working pressure: 16 bar. **Temperature range: -30-160°C.** **Max. percentage of glycol: 50%.** Black nickel plated nut.

Code			
254602	Ø 22	1	20



2543

Coupling sleeve, mechanical O-Ring seal for solar thermal systems. For annealed copper, hard copper, brass, mild and stainless steel pipes. Max. working pressure: 16 bar. **Temperature range: -30-160°C.** **Max. percentage of glycol: 50%.** Black nickel plated nut.

Code			
254305	Ø 15	1	25
254308	Ø 18	1	25
254302	Ø 22	1	25



2547

Male elbow fitting, mechanical O-Ring seal for solar thermal systems. For annealed copper, hard copper, brass, mild and stainless steel pipes. Max. working pressure: 16 bar. **Temperature range: -30-160°C.** **Max. percentage of glycol: 50%.** Black nickel plated nut.

Code			
254755	3/4" M - Ø 15	1	25
254758	3/4" M - Ø 18	1	25
254752	3/4" M - Ø 22	1	25



2544

Male fitting, mechanical O-Ring seal for solar thermal systems. For annealed copper, hard copper, brass, mild and stainless steel pipes. Max. working pressure: 16 bar. **Temperature range: -30-160°C.** **Max. percentage of glycol: 50%.** Black nickel plated nut.

Code			
254455	3/4" M - Ø 15	1	25
254458	3/4" M - Ø 18	1	25
254452	3/4" M - Ø 22	1	25
254465	1" M - Ø 15	1	25
254462	1" M - Ø 22	1	25



2548

Female elbow fitting, mechanical O-Ring seal for solar thermal systems. For annealed copper, hard copper, brass, mild and stainless steel pipes. Max. working pressure: 16 bar. **Temperature range: -30-160°C.** **Max. percentage of glycol: 50%.** Black nickel plated nut.

Code			
254855	3/4" F - Ø 15	1	25
254858	3/4" F - Ø 18	1	25
254852	3/4" F - Ø 22	1	25



2545

Elbow coupling sleeve, mechanical O-Ring seal for solar thermal systems. For annealed copper, hard copper, brass, mild and stainless steel pipes. Max. working pressure: 16 bar. **Temperature range: -30-160°C.** **Max. percentage of glycol: 50%.** Black nickel plated nut.

Code			
254505	Ø 15	1	25
254508	Ø 18	1	25
254502	Ø 22	1	25



2540

Plug for Ø 22 copper pipe.

Code			
254002	Ø 22	1	25

DIGITAL REGULATOR

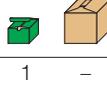
257 SOLCAL® 1

Digital regulator for solar thermal systems. Complete with wall mounting basis for plug-in electrical connection. Complete with three probes type Pt1000. Double relays output. Supply: 230 V ±6% - 50 Hz. Power consumption: 4 VA. Max. contact rating: 250 V (ac) - 8 (2) A. Protection class: IP 40.



Code

257041

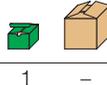


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Spare parts for regulator 257 series.

Code

257005 Pt1000 probe with grey cable

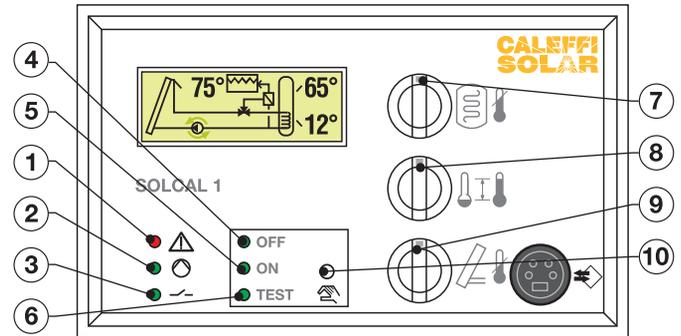


1

257006 Pt1000 probe with red cable

1

Characteristic components



- 1) LED 1: function error or probe fault (red)
- 2) LED 2: Solar circuit pump ON
- 3) LED 3: second relays output active
- 4) LED 4: OFF regulator non active
- 5) LED 5: ON regulator active
- 6) LED 6: active relays test
- 7) Storage temperature control setting at level 1, at level 2 depending on programme (see system)
- 8) ΔT min. and max. control
- 9) Min. temperature control for solar panel activation and min. working time
- 10) Operation button

Regulation programs

The regulator allows to manage 11 regulation programs, depending on the possible system configurations. They can be used for systems with single or double storage, swimming-pools, heating or domestic water systems, etc..

257



Pocket for Pt1000 probe. In steel. Length: 100 mm.

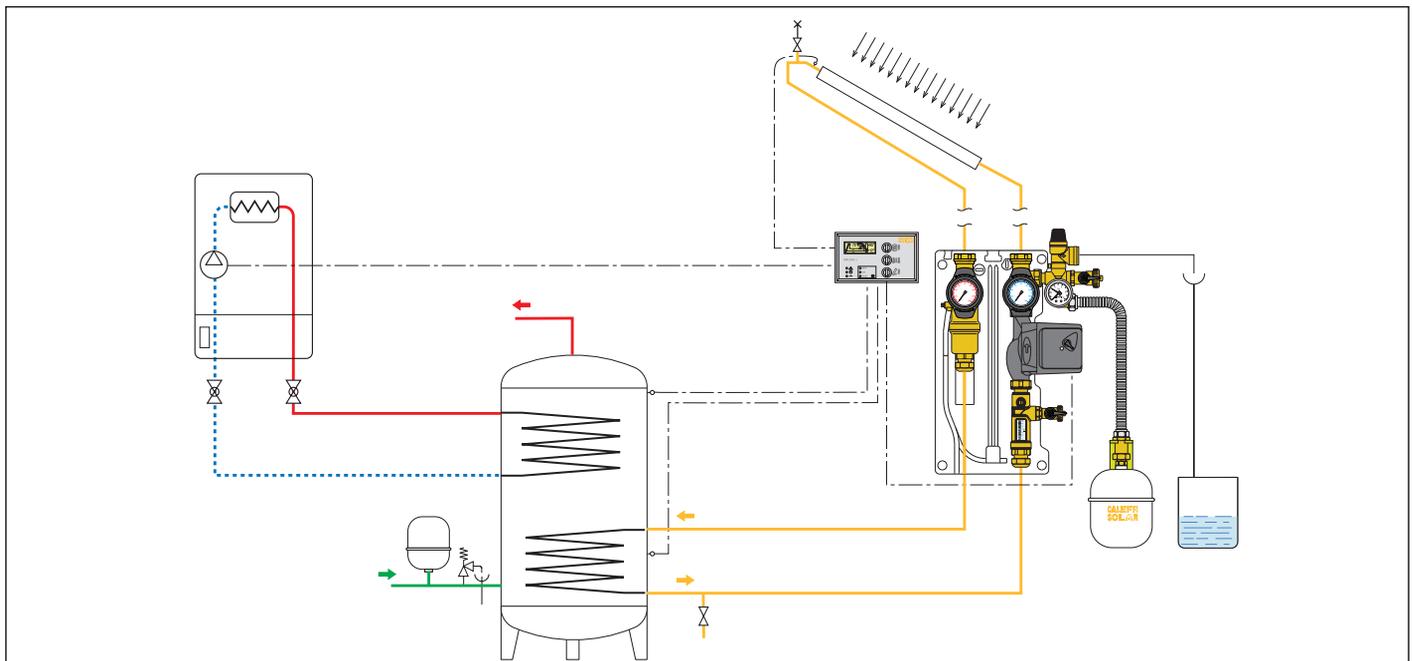
Code

257004 1/2"



1

Application diagram of regulator 257 series



DIFFERENTIAL REGULATORS AND THERMOSTAT



257  **tech. broch. 01143**
 Differential temperature regulator for solar thermal systems, with relays output. Complete with contact probe and immersion probe with pocket.
 Box protection class: IP 65.
 Supply: 230 V ±6% - 50 Hz.
 Nominal power consumption: 1,45 VA.
 Contact rating on switch-over: 6 A (230 V).
 ΔT adjustment range: 2–20 K.
 Hysteresis: 2 K (±1 K).



Code			
257010		1	–



257  **tech. broch. 01143**
 Box complete with DIN bar, for regulator or thermostat 257 series.
 Protection class: IP 65.

Code	(h x b x p)		
257001	200 x 122 x 112	1	–



257  **tech. broch. 01143**
 Double box complete with DIN bar, for regulator and thermostat 257 series.
 Protection class: IP 65.

Code	(h x b x p)		
257003	200 x 160 x 112	1	–



257  **tech. broch. 01143**
 Differential temperature regulator for solar thermal systems, with relays output.
 Box protection class: IP 65.
 Supply: 230 V ±6% - 50 Hz.
 Nominal power consumption: 1,45 VA.
 Contact rating on switch-over: 6 A (230 V).
 ΔT adjustment range: 2–20 K.
 Hysteresis: 2 K (±1 K).



Code			
257000		1	–



150  **tech. broch. 01143**
 Contact probe for regulator or thermostat 257 series and for regulator 1520 series (flow or return).
 Cable length: 2 m.

Code			
150009		1	–



150  **tech. broch. 01143**
 Immersion probe for regulator or thermostat 257 series and for regulator 1520 series.
 Cable length: 2 m.

Code			
150006		1	–



257  **tech. broch. 01143**
 Thermostat for solar thermal systems, with relays output. For thermal integration control and diverter valves.
 Box protection class: IP 65.
 Supply: 230 V ±6% - 50 Hz.
 Nominal power consumption: 1,45 VA.
 Contact rating on switch-over: 6 A (230 V).
 Adjustment temperature range: 20–90°C.
 Hysteresis: 1 K.



Code			
257002		1	–



150  **tech. broch. 01143**
 Pocket for immersion probe code 150006.

Code			
150029	1/4" M	1	–

HEAT METER

75525 CONTECA

tech. broch. 01146

Direct heat metering with local LCD reading or centralised reading with controller code 755010 or interface code 755055, for solar thermal systems.

Max. working pressure: 10 bar.

Temperature range: 5–120°C.

Max. percentage of glycol: 50%.

The CONTECA module is supplied complete with:

- pair of temperature probes with immersion pockets,
- Y pockets for immersion probes,
- water meter, with pulse output (max. temperature 120°C),
- electronic integrator with LCD.

Supply 24 V (ac) 50 Hz - 1 W.

Fitted for transmission in RS485 Bus mode.

Conformity to EN 1434-1.



Code	Conn.	Meas. type	Q _{nom} m ³ /h		
755254	1/2"	single jet	1,5	1	–
755255	3/4"	single jet	2,5	1	–
755256	1"	single jet	3,5	1	–
755257	1 1/4"	multi jet	6	1	–
755258	1 1/2"	multi jet	10	1	–
755259	2"	multi jet	15	1	–

BALANCING VALVE WITH FLOW METER

258

tech. broch. 01148

Balancing valve with flow meter, for solar thermal systems.

Direct reading of flow rate.

Brass valve body and flow meter.

Chrome plated.

Ball valve for flow rate adjustment.

Graduated scale flow meter with magnetic movement flow rate indicator.

With insulation.

Max. working pressure: 10 bar.

Temperature range: -30–130°C.

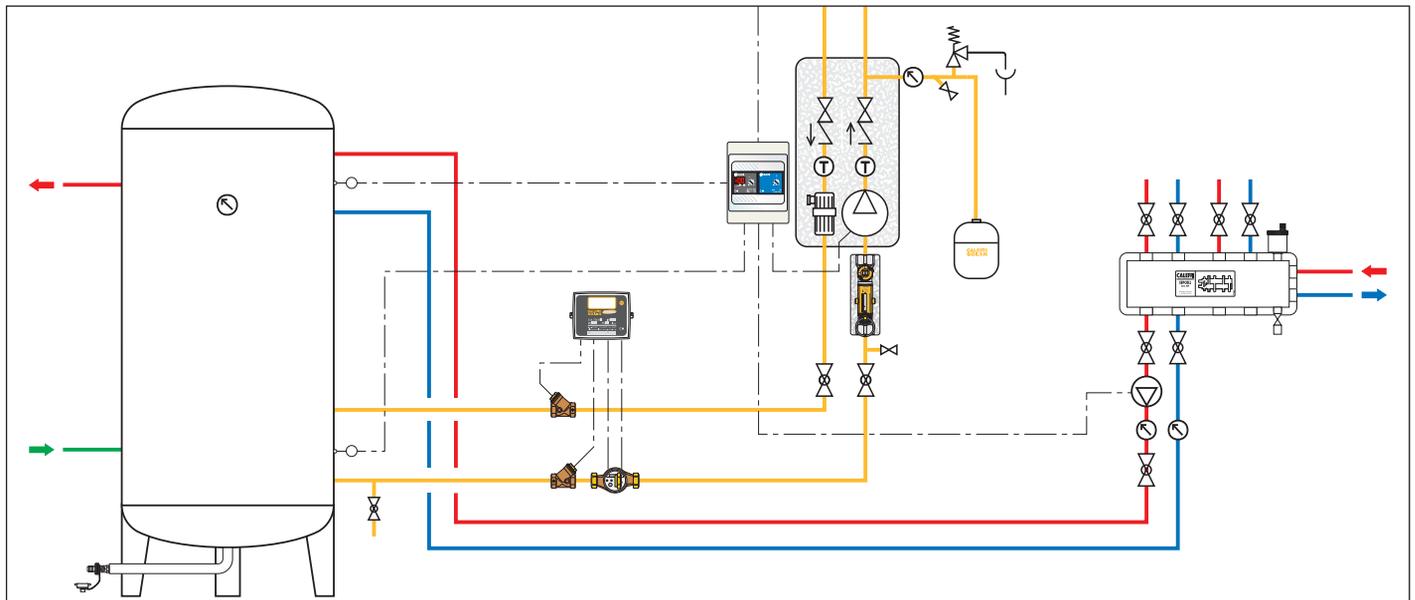
Max. percentage of glycol: 50%.

PATENT PENDING.



Code	Flow rate range (l/min)		
258503	3/4" 2–7	1	5
258533	3/4" 3–10	1	5
258523	3/4" 7–28	1	5
258603	1" 10–40	1	5

Application diagram of heat meter 75525 series and balancing valve 258 series



TEMPERATURE AND PRESSURE RELIEF VALVE



309  **tech. broch. 01147**

Temperature and pressure relief valve.
For solar thermal systems, to protect the hot water storage.
CR dezincification resistant alloy body. Chrome plated.
 Setting temperature: 90°C.
 Discharge rating:
 1/2" x Ø 15: 10 kW.
 3/4" x Ø 22: 25 kW.
 Settings: 6 - 7 - 10 bar.
Settings certified to EN 1490: 7 - 10 bar.



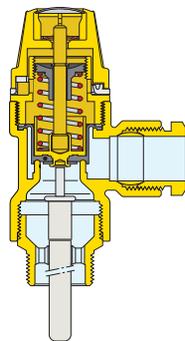
Code					
309461	1/2" M x Ø 15	6 bar		1	20
309471	1/2" M x Ø 15	7 bar		1	20
309401	1/2" M x Ø 15	10 bar		1	20
309561	3/4" M x Ø 22	6 bar		1	20
309571	3/4" M x Ø 22	7 bar		1	20
309501	3/4" M x Ø 22	10 bar		1	20

Function

The temperature and pressure relief valve controls and limits the temperature and pressure of the hot water contained in a solar domestic water storage heater and prevents it to reach temperatures over 100°C, with the formation of steam.

On reaching the settings, the valve discharges a sufficient amount of water into the atmosphere so that the temperature and pressure return within the system's operating limits.

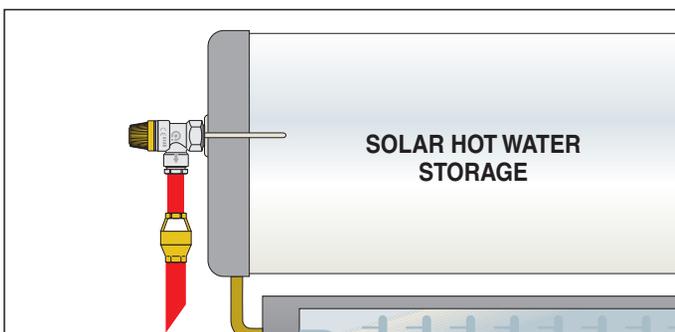
As the temperature and pressure decrease, the opposite action occurs with the valve subsequently reclosing within the set tolerances.



Product certification in accordance with European Standard EN 1490
 European Standard EN 1490: 2000, entitled "Building valves - Combined temperature and pressure relief valves - Tests and requirements", describes the constructional and performance specifications that TP relief valves must have.

Caleffi 309 series TP relief valves for solar systems are certified by Buildcert (UK) to comply with the requirements of the European Standard EN 1490.

Application diagram of valve 309 series on a solar hot water storage



MOTORISED BALL DIVERTER VALVE



6443  **tech. broch. 01132**

Motorised three-way ball diverter valve.
 Max. working pressure: 10 bar.
 Max. Δp: 10 bar.
 Temperature range: -5-110°C.

Complete with actuator with 3-contact control. With auxiliary microswitch.
 Supply: 230 V (ac) or 24 V (ac).
 Power consumption: 8 VA.
 Auxiliary microswitch contact rating: 0,8 A (230 V).
 Ambient temperature range: 0-55°C.
 Protection class: IP 44 (vertical stem).
 IP 40 (horizontal stem).
Operating time: 10 s (90° rotation).
 Cable length: 100 cm.



Code		Supply voltage V	Kv (m³/h)		
644346	1/2"	230	3,9	1	5
644356	3/4"	230	3,9	1	5
644357	3/4"	230	8,6	1	5
644366	1"	230	9	1	5
644348	1/2"	24	3,9	1	5
644358	3/4"	24	3,9	1	5
644359	3/4"	24	8,6	1	5
644368	1"	24	9	1	5

ANTI-FREEZE SAFETY DEVICE



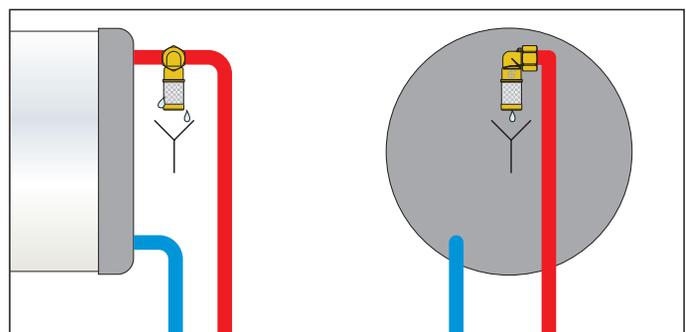
603
ICEGAL®

Anti-freeze safety device.
For solar thermal systems, to protect the hot water storage.
CR dezincification resistant alloy body.
 Max. working pressure: 10 bar.
 Ambient temperature range: -30-90°C.
 Opening temperature: 3°C.
 Closing temperature: 4°C.



Code			
603040	1/2" F with nut	1	50

Application diagram of device 603 series on a domestic water circuit



THERMOSTATIC MIXING VALVES

Sizing software is available on www.caleffi.com



2521  **tech. broch. 01127**
 Adjustable thermostatic mixing valve for solar thermal systems.
CR dezincification resistant alloy body. Chrome plated.
 Male union connections.
 Max. working pressure: 14 bar.
Max. inlet temperature: 100°C.



Code	Temperature adjustment	Kv (m³/h)		
252140	1/2"	30-65°C 2,6	1	10
252150	3/4"	30-65°C 2,6	1	10

NEW



2521  **tech. broch. 01257**
 Thermostatic mixing valve for centralised solar thermal systems.
CR dezincification resistant alloy body.
 Male union connections.
 Antiscale inner regulator in technopolymer.
 Max. working pressure: 14 bar.
Max. inlet temperature: 100°C.



Code	Temperature adjustment	Kv (m³/h)		
252151	3/4"	35-65°C 4,5	1	10
252160	1"	35-65°C 5,5	1	-
252170	1 1/4"	35-65°C 7,6	1	-
252180	1 1/2"	35-65°C 11,0	1	-
252190	2"	35-65°C 13,3	1	-

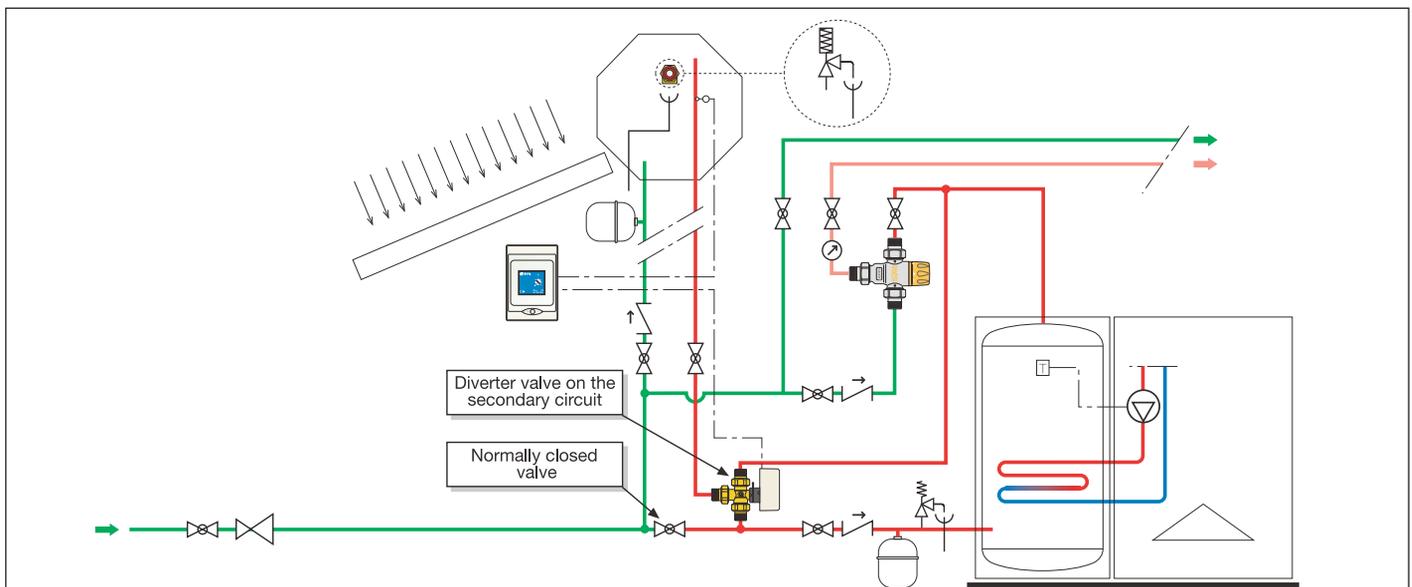


2521  **tech. broch. 01127**
 Adjustable thermostatic mixing valve, **with check valves**, for solar thermal systems.
CR dezincification resistant alloy body. Chrome plated.
 Male union connections.
 Max. working pressure: 14 bar.
Max. inlet temperature: 100°C.



Code	Temperature adjustment	Kv (m³/h)		
252153	3/4"	30-65°C 2,6	1	10

Application diagram of thermostatic mixing valve 2521 series



THERMOSTATIC MIXING VALVES

Sizing software is available on www.caleffi.com



2523 tech. broch. 01129

Thermostatic mixing valve with interchangeable cartridge for solar thermal systems.
 Brass body.
 Male union connections.
 Max. working pressure: 14 bar.
Max. inlet temperature: 110°C.



Code	Temperature adjustment	Kv (m³/h)		
252340	1/2"	30-65°C	4,0	1 10
252350	3/4"	30-65°C	4,5	1 10
252360	1"	30-65°C	6,9	1 -
252370	1 1/4"	30-65°C	9,1	1 -
252380	1 1/2"	35-65°C	14,5	1 -
252390	2"	35-65°C	19,0	1 -



2523
 Spare cartridge.
 For thermostatic mixing valves 2523 series.

Code	Temperature adjustment	Kv (m³/h)		
252305	1/2" - 3/4"		1	-



2523
 Spare cartridge.
 For thermostatic mixing valves 2523 series.

Code	Temperature adjustment	Kv (m³/h)		
252306	1" - 1 1/4"		1	-
252308	1 1/2" - 2"		1	-

ANTI-SCALD TEMPERING AND THERMOSTATIC MIXING VALVES

2527 tech. broch. 01165

Adjustable anti-scald thermostatic mixing valve, **with check valves and strainers**, for solar thermal systems.
 High thermal performance device **with anti-scald safety function.**
CR dezincification resistant alloy body.
 Chrome plated.
 Male union connections.
 Performance to standards NF 079 doc. 8, EN 15092, EN 1111, EN 1287.
 Max. working pressure: 10 bar.
Max. inlet temperature: 100°C.



Code	Temperature adjustment	Kv (m³/h)		
252714	1/2"	35-55°C	1,5	1 10
252713	3/4"	35-55°C	1,7	1 10

2522
 Adjustable thermostatic mixing valve with check valves and strainers, for solar thermal systems.
 Enhanced thermal performance device **with anti-scald safety function.**
CR dezincification resistant alloy body.
 Chrome plated.
 Male union connections.
 Max. working pressure: 1400 kPa.
Max. inlet temperature: 100°C.
Certified to AS 4032.1.



Code	Temperature adjustment	Kv (m³/h)		
252212TM AUS	DN 15	30-50°C	1,5	1 10
252219TM AUS	DN 20	30-50°C	1,7	1 10
252225TM AUS	DN 25	30-50°C	3,0	1 10

2522
 High performance adjustable anti-scald tempering valve **with check valves and strainers** at the inlets.
 Suitable for solar and instantaneous hot water systems.
CR dezincification resistant alloy body.
 Chrome plated.
 Male union connections.
 Max. working pressure: 1400 kPa.
Max. inlet temperature: 100°C.
Certified to AS 4032.2.



Code	Temperature adjustment	Kv (m³/h)		
252212HP AUS	DN 15	35-55°C	1,5	1 10
252219HP AUS	DN 20	35-55°C	1,7	1 10

SOLAR STORAGE-TO-BOILER CONNECTION KIT

264 SOLARNOCAL

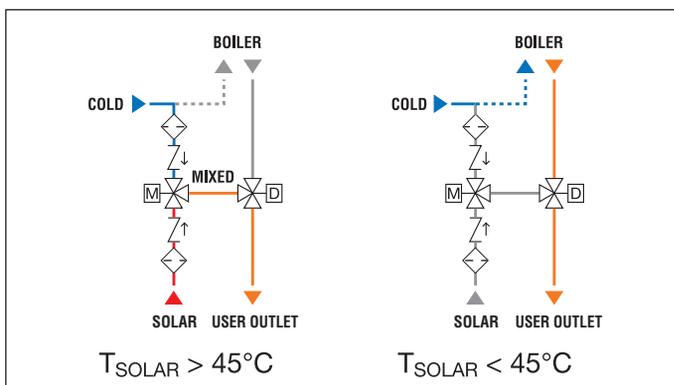
tech. broch. 01163



Function

A thermostatic anti-scald mixing valve, at the kit inlet, controls the temperature of the water coming from the solar hot water storage. The thermostat, by means of the probe positioned on the hot water flow from the solar hot water storage, controls the diverter valve at the kit outlet. Depending on the temperature setting, the valve diverts the water towards the user circuit or activates the boiler circuit, **without thermal integration**.

Hydraulic diagrams



Solar storage-to-boiler connection kit, **without thermal integration**. Consisting of:

- thermostatic anti-scald mixing valve, adjustable with knob, for solar thermal systems. Complete with strainers and check valves at the inlets;
- diverter valve with three-contact actuator, with auxiliary microswitch;
- thermostat with probe for solar thermal system, for operating diverter valve. Display showing temperature.
- pre-formed **shell protective cover**.

Diverter-to-mixing valve coupling with adjustable position of the inlet and outlet connections.

Mixing valve

CR dezincification resistant alloy body.
Max. working pressure: 10 bar.
Adjustment temperature range: 35–55°C.
Max. inlet temperature: 100°C.

Diverter valve

Brass body.
Max. working pressure: 10 bar.
Temperature range: -5–110°C.

Actuator

Three-contact type.
Supply: 230 V (ac).
Power consumption: 8 VA.
Auxiliary microswitch contact rating: 0,8 A (230 V).
Ambient temperature range: 0–55°C.
Protection class: IP 44 (vertical stem).
IP 40 (horizontal stem).

Operating time: 10 s.
Cable length: 1 m.

Thermostat with probe

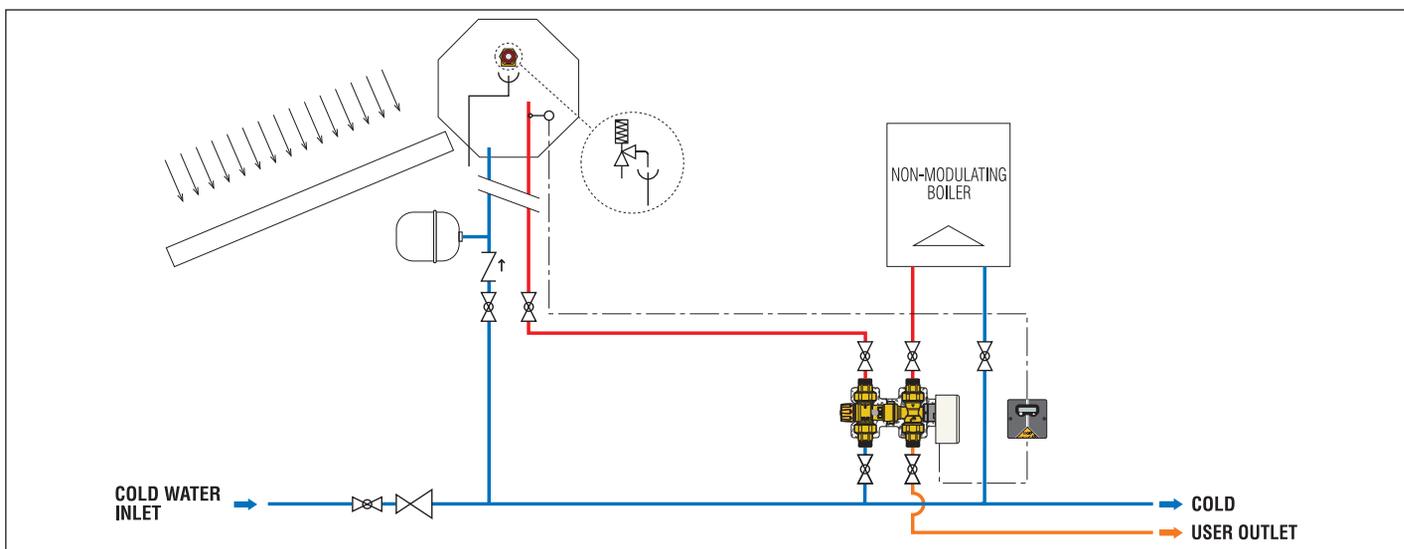
Supply: 230 V (ac).
Adjustable temperature range: 25–50°C.
Factory setting: 45°C.
Box protection class: IP 54.

Code			
264352	3/4"	1	-

Spare parts for connection kit 264 and 265 series.

Code	
F29399	actuator
F29488	Ø 6 mm probe
257004	stainless steel pocket for Pt1000 probe

Application diagram of SOLARNOCAL kit 264 series



SOLAR STORAGE-TO-BOILER CONNECTION KIT

265 SOLARINCAL

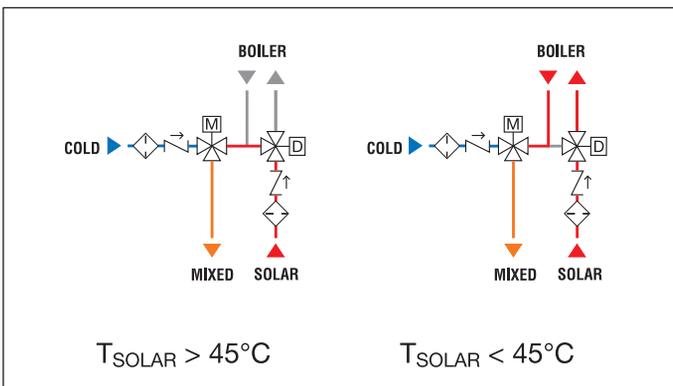
tech. broch. 01163



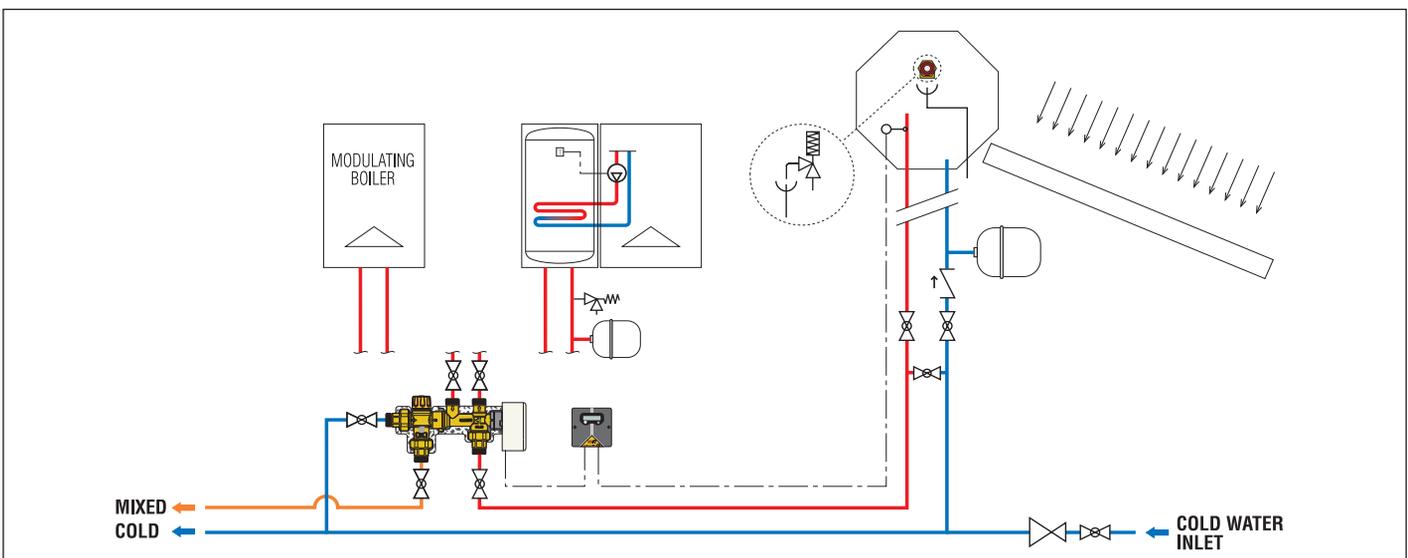
Function

The thermostat, by means of the probe positioned on the hot water flow from the solar hot water storage, controls the diverter valve at the kit inlet. Depending on the temperature setting, the valve diverts the water towards the user circuit or the boiler circuit, **with thermal integration**. A thermostatic anti-scald mixing valve, at the kit outlet, constantly controls the temperature of the water sent to the user.

Hydraulic diagrams



Application diagram of SOLARINCAL kit 265 series



Solar storage-to-boiler connection kit, **with thermal integration**. Consisting of:

- thermostatic anti-scald mixing valve, adjustable with knob, for solar thermal systems. Complete with strainers and check valves at the inlets;
- diverter valve with three-contact actuator, with auxiliary microswitch;
- thermostat with probe for solar thermal system, for operating diverter valve. Display showing temperature.
- pre-formed **shell protective cover**.

Diverter-to-mixing valve coupling with adjustable position of the inlet and outlet connections.

Mixing valve

For technical details see 264 series.

Diverter valve

For technical details see 264 series.

Actuator

For technical details see 264 series.

Thermostat with probe

For technical details see 264 series.

Code

265352	3/4"	1	-
F29384	mixing valve spare for 262 and 265 series	1	-

265



Thermostat with display showing storage temperature. For devices 264 and 265 series. Supply: 230 V (ac). Adjustable temperature range: 25-50°C. Factory setting: 45°C. Box protection class: IP 54.



Code

265001		1	-
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Accessories for connection kit 264 and 265 series.

Code

264359	kit 264 series without thermostat and probe
265359	kit 265 series without thermostat and probe
F29525	box with switching 3 contact relay
F29466	Ø 6 mm contact probe
F29467	pocket for Ø 15 mm probe

SOLAR STORAGE-TO-BOILER THERMOSTATIC CONNECTION KIT

262
SOLARINCAL-T

tech. broch. 01164



Function

A thermostatic diverter valve, at the kit inlet, receives hot water coming from the solar water storage. Depending on the temperature setting, the valve diverts the water automatically and in a proportional manner towards the user circuit or the boiler with storage circuit, with thermal integration. The valve modulates the flow rates to optimise the energy contained in the solar storage and reduces boiler operation times to a minimum. A thermostatic anti-scald mixing valve, at the kit outlet, constantly controls and limits the temperature of the water sent to the user.

Solar storage-to-boiler connection kit, with thermal integration. Consisting of:

- thermostatic anti-scald mixing valve, adjustable with knob, for solar thermal systems. Complete with strainers and check valves at the inlets.
- thermostatic diverter valve;
- pre-formed shell protective cover.

Diverter-to-mixing valve coupling with adjustable position of the inlet and outlet connections.

Mixing valve

CR dezincification resistant alloy body. Max. working pressure: 10 bar. Adjustment temperature range: 35–55°C.

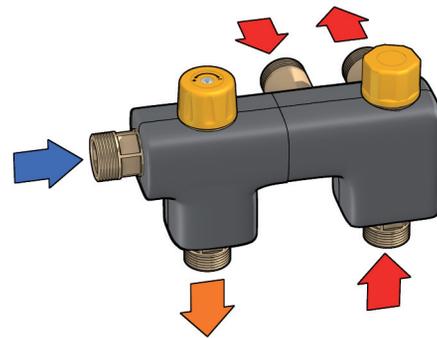
Max. inlet temperature: 100°C.

Performance to standards NF 079 doc. 8, EN 15092, EN 1111, EN 1287.

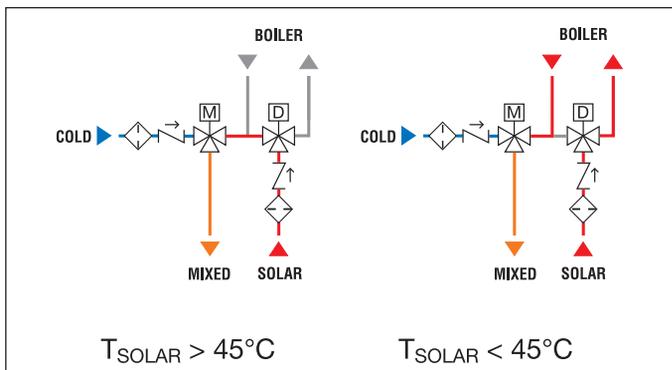
Diverter valve

Brass body. Max. working pressure: 10 bar. Factory setting: 45°C.

Max. inlet temperature: 100°C.



Hydraulic diagrams

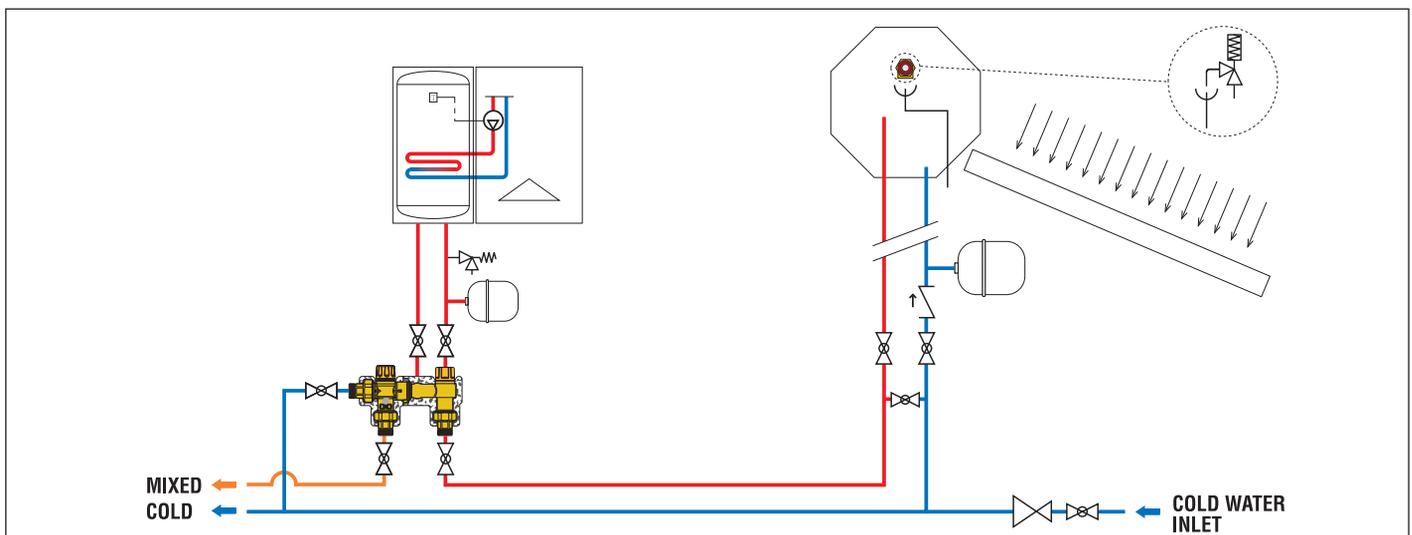


Code

262350	3/4"	1	—
F29384	mixing valve spare for 262 and 265 series	1	—



Application diagram of SOLARINCAL-T kit 262 series



SOLAR STORAGE-TO-BOILER THERMOSTATIC CONNECTION KIT

263
SOLARINCAL-T PLUS

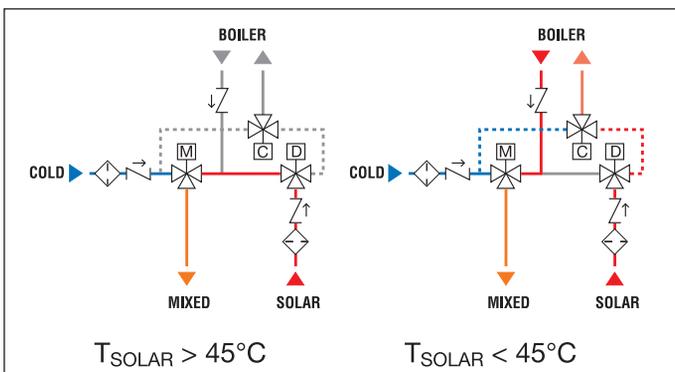
tech. broch. 01164



Function

A thermostatic diverter valve, at the kit inlet, receives hot water coming from the solar water storage. Depending on the temperature setting, the valve diverts the water automatically and proportionally towards the user circuit or the **instantaneous boiler circuit, with thermal integration**. The valve modulates the flow rates to optimise the energy contained in the solar storage and reduces boiler operation times to a minimum. A specific thermostatic control device limits the boiler inlet temperature to prevent it being switched on and off too often, which leads to hunting and irregular operation. A thermostatic anti-scald mixing valve, at the kit outlet, constantly controls the temperature of the water sent to the user.

Hydraulic diagrams



Solar storage-to-boiler connection kit, **with thermal integration**.

Consisting of:

- thermostatic anti-scald mixing valve, adjustable with knob, for solar thermal systems. Complete with strainers and check valves at the inlets;
- thermostatic diverter valve;
- thermostatic control device;
- pre-formed **shell protective cover**.

Mixing valve

CR dezincification resistant alloy body.

Max. working pressure: 10 bar.

Adjustment temperature range: 35–55°C.

Max. inlet temperature: 100°C.

Performance to standards NF 079 doc. 8, EN 15092, EN 1111, EN 1287.

Diverter valve

CR dezincification resistant alloy body.

Max. working pressure: 10 bar.

Factory setting: 45°C.

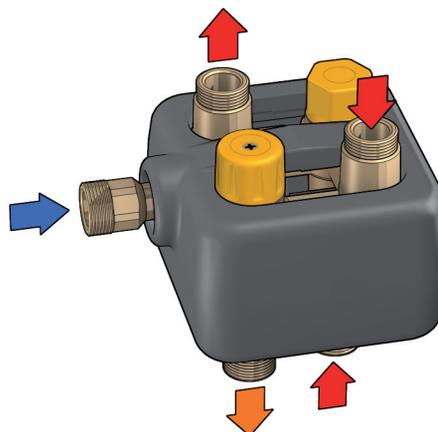
Max. inlet temperature: 100°C.

Control device

CR dezincification resistant alloy body.

Factory setting: 30°C.

Max. inlet temperature: 85°C.



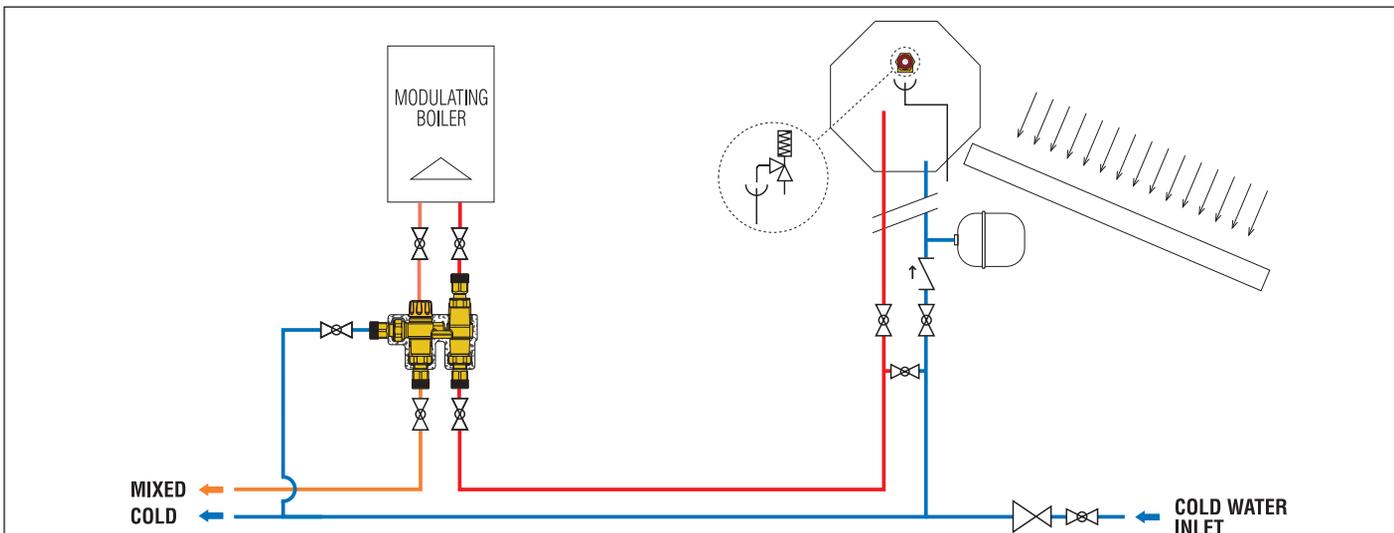
Code

263350 3/4"



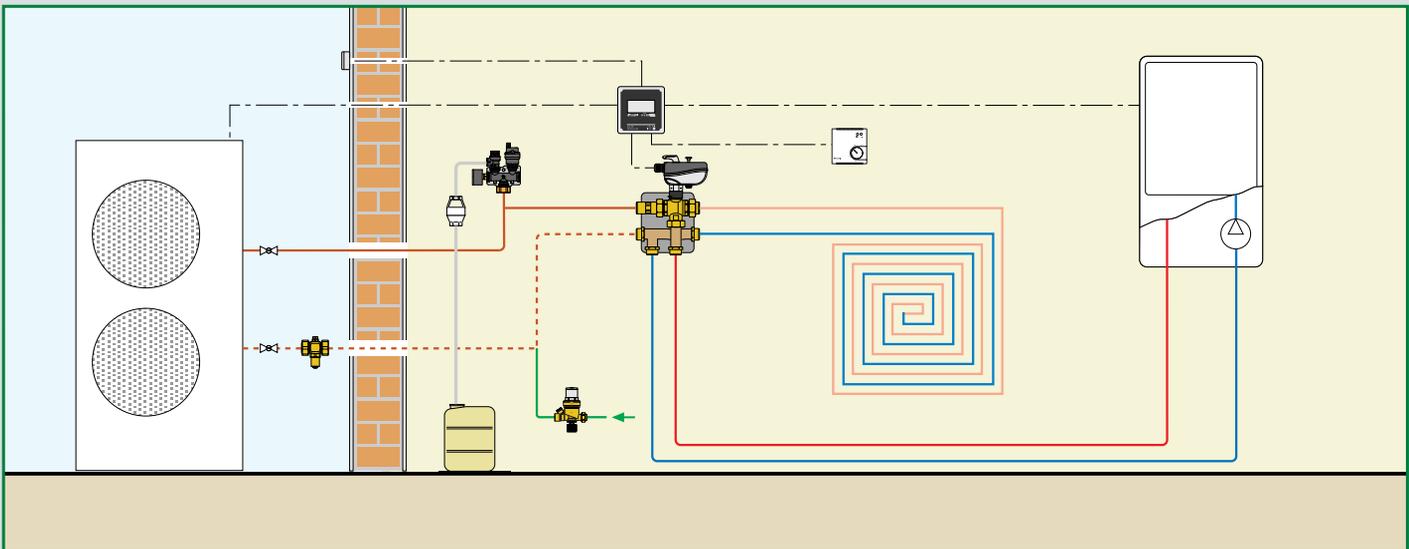
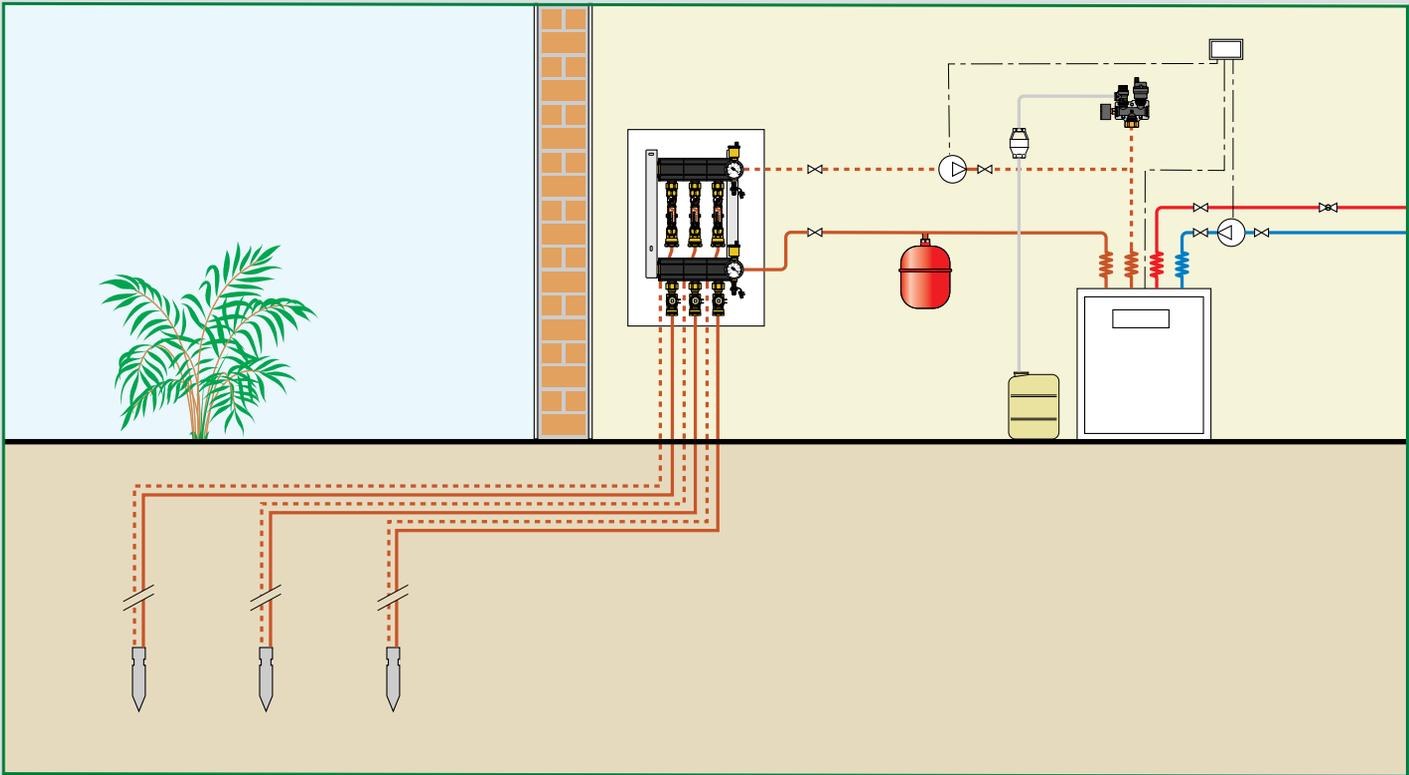
1

Application diagram of SOLARINCAL-T Plus kit 263 series



COMPONENTS FOR HEAT PUMP SYSTEMS

This diagram is just an indication



- Integration unit, HYBRICAL®
- Anti-freeze protection
- Preassembled geothermal manifold
- Modular geothermal manifold
- Shut-off and balancing devices

INTEGRATION UNIT

106  tech. broch. 01233

HYBRICAL®

Heat pump-boiler integration unit.

With insulation.

- Consisting of:
- diverter valve,
 - connection kit,
 - electronic regulator,
 - outside probe.

Supply: 230 V (ac).
Max. working pressure: 10 bar.
Temperature range: -10–110°C.

Medium: water, glycol solutions.
Max. percentage of glycol: 50%.

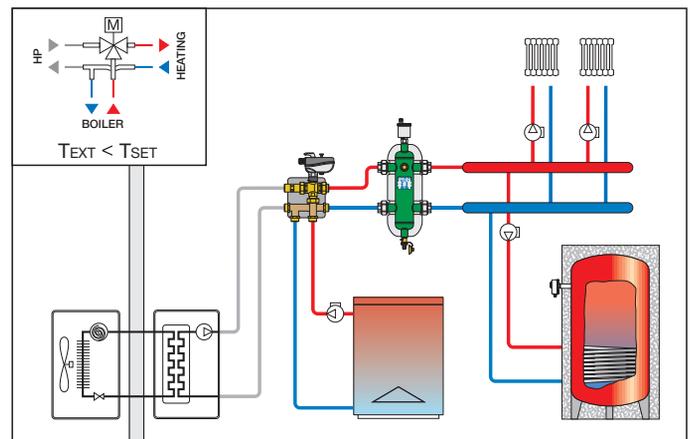
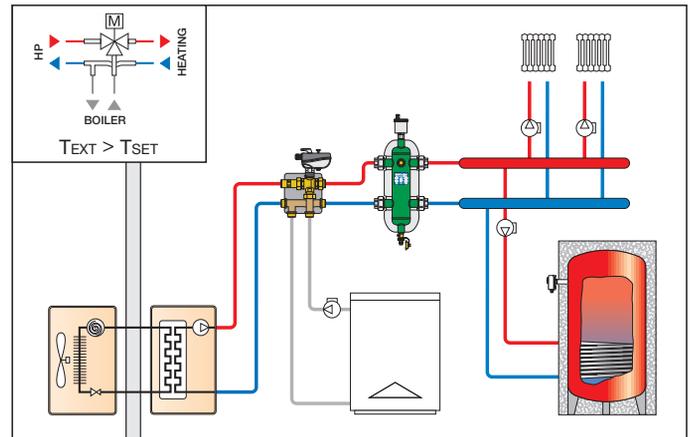


Code	Conn.		
106160	1"	1	–

Operating principle

The integration unit is composed of a diverter valve and manifold kit combined to a digital regulator equipped with outside probe.

The regulator receives the temperature signal from the outside probe and, when the minimum pre-set temperature value is reached, activates the diverter valve towards the boiler circuit. When the outside air temperature rises above the pre-set temperature value, the valve is diverted again towards the heat pump system.



106  tech. broch. 01233

HYBRICAL®

Heat pump-boiler integration unit.

With insulation.

- Consisting of:
- diverter valve,
 - electronic regulator,
 - outside probe.

Supply: 230 V (ac).
Max. working pressure: 16 bar.
Temperature range: -10–110°C.

Medium: water, glycol solutions.
Max. percentage of glycol: 50%.



Code	Conn.		
106170	1 1/4"	1	–
106180	1 1/2"	1	–
106190	2"	1	–

DIVERTER KIT

106 **HYBRICAL®**

Diverter kit for heat pump.

With insulation.

- Consisting of:
- diverter valve,
 - connection kit.

Supply: 230 V (ac).
Max. working pressure: 10 bar.
Temperature range: -10–110°C.

Medium: water, glycol solutions.
Max. percentage of glycol: 50%.

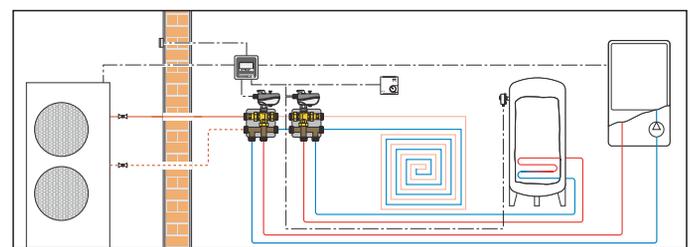


Code	Conn.		
106060	1"	1	–

Operating principle

The diverter kit allows to easily connect the 3 circuits together (2 inlets and 1 outlet) without having to overcome pipes.

The diverter valve has very low head losses, in relation to the rated flow rates normally used, and features short operating times: it allows therefore a fast system commissioning and prevents any water-hammer. The valve is coupled to an actuator fitted with microswitches that can be used to activate and deactivate devices according to the working position of the valve.



ANTI-FREEZE PROTECTION

NEW

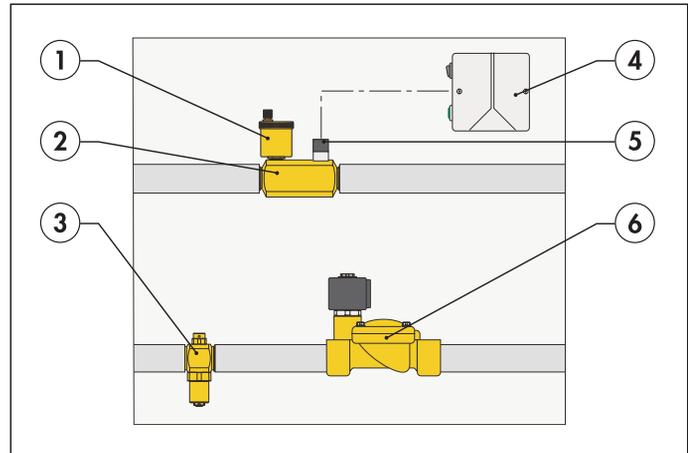
109

Anti-freeze kit.
 Max. hydraulic test pressure: 10 bar.
 Max. working pressure: 10 bar.
 Temperature range: 0–65°C.
 Ambient temperature range: -20–60°C.



Code	Conn.		
109611	1"	1	—

Characteristic components



The unit is consisting of:

- 1) Automatic air vent.
- 2) Check valve, 1" male connections.
- 3) Anti-freeze valve, 1" male connections.
- 4) Control unit.
- 5) Minimum temperature thermostat.
- 6) NC solenoid valve, 230 V - 50 Hz.

108

Anti-freeze valve. Brass body.
 Max. working pressure: 10 bar.
 Temperature range: 0–65°C.
 Ambient temperature range: -30–60°C.
 Opening temperature: 3°C.
 Closing temperature: 4°C.



Code	Conn.		
108601	1"	1	25
108701	1 1/4"	1	20
108801	1 1/2"	1	20

Operating principle

The anti-freeze protection unit code 109610 can be installed when the heat pump has an internal circulator.

The system actuates in the event of failure of electric supply to the heating system or should the heat pump malfunction.

In the event of a electric supply failure, the system separates the internal part of the system from the outside part at the level of the check valve (2) and the normally-closed solenoid valve (6).

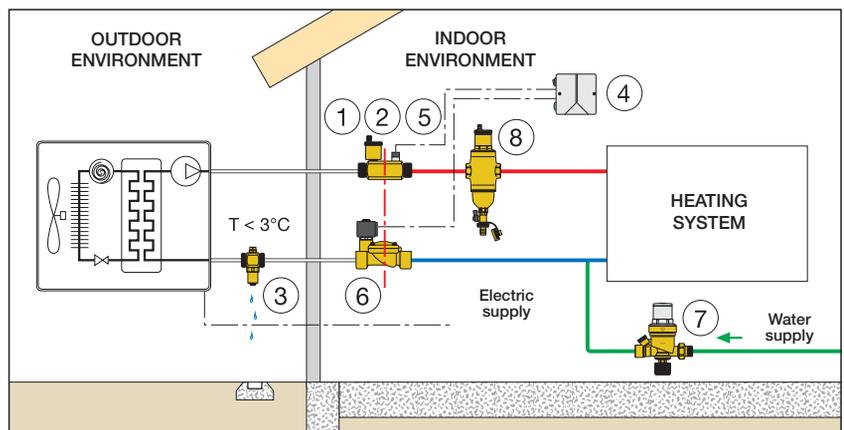
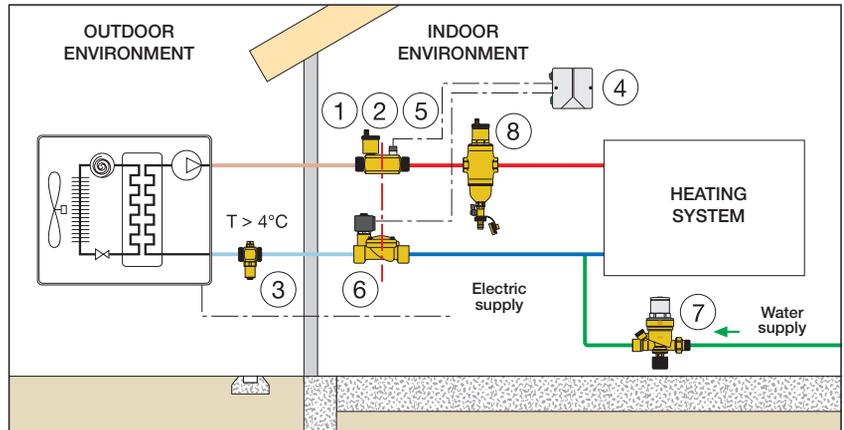
If the water temperature inside the pipes remains above 4°C, the anti-freeze valve obturator stays closed and the pipe remains in pressure.

When the water temperature in the pipes reaches 4°C, the thermostat in the anti-freeze valve (3) allows the obturator to open and drain the water in the outside part of the pipes.

When electric supply returns, the solenoid valve opens, the filling unit (7) recharges the system to the nominal pressure setting and the anti-freeze valve closes, allowing circulation in the system to restart: the air vent (1) and deaerator-dirt separator (8) remove any excess air.

In the event of a heat pump failure, with subsequent drop in the water temperature within the system (the circulation pump keeps running but there is no longer any heat exchange in the machine), the safety thermostat (5) would operate.

When the water reaches a temperature of 10°C, the thermostat (5) actuates and via the regulator (4) stops the electric supply to the solenoid valve, thereby triggering the procedure described above for electric supply failures.



INSTRUMENT HOLDER IN COMPOSITE MATERIAL

NEW

305

Instrument holder in composite material for heating systems. Equipped with air vent, safety relief valve in composite material and pressure gauge. **With insulation.** Temperature range: 5–90°C. Up to 50 kW.



Code

305663

1"



1

–

NEW

305

Instrument holder kit in composite material for heating systems. Equipped with air vent, safety relief valve in composite material, pressure gauge, automatic shut-off cock for expansion vessel and fixing bracket.



With insulation.

Temperature range: 5–90°C. Up to 50 kW.



Code

305503

3/4"



1

–

NEW

305

Instrument holder in composite material for heating systems. Equipped with air vent, brass safety relief valve and pressure gauge. **With insulation.** Temperature range: 5–90°C. Up to 50 kW.



Code

305572

3/4" 2,5 bar TÜV



1

–

305671

1" 1,8 bar

1

–

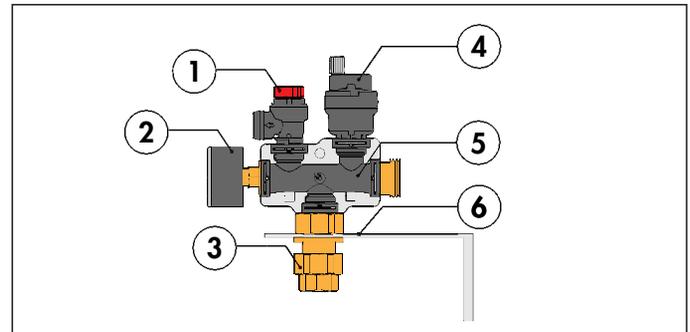
305673

1" 3 bar NF

1

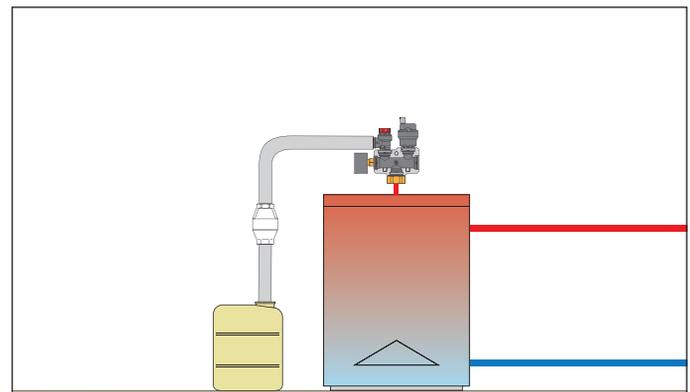
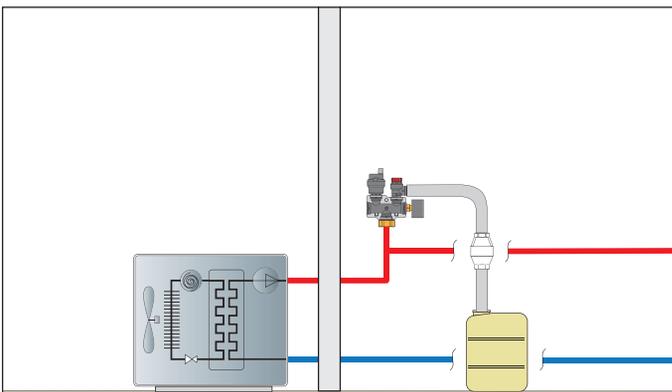
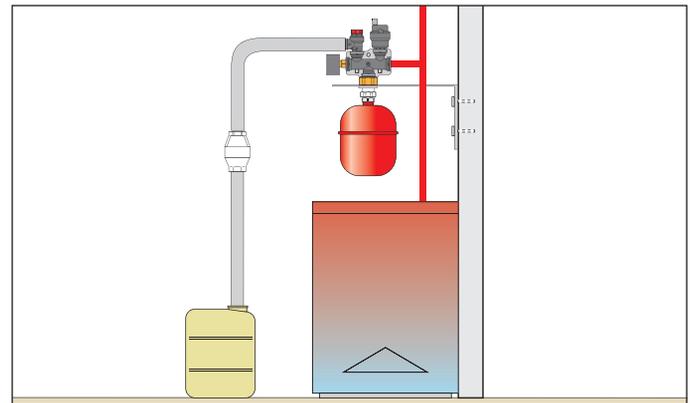
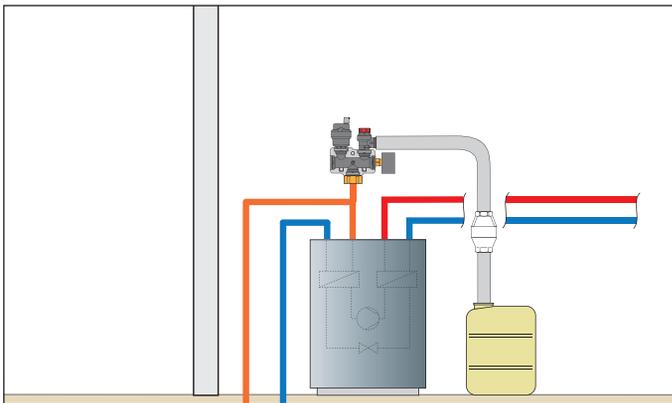
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Characteristic components



The unit is consisting of:

- 1 - Safety valve
- 2 - Pressure gauge
- 3 - Shut-off cock
- 4 - Air vent
- 5 - Polymer manifold
- 6 - Fixing bracket



MULTIFUNCTION DEVICE IN COMPOSITE WITH DIRT SEPARATOR AND STRAINER

NEW

5453

tech. broch. 01258

DIRTMAGPLUS®

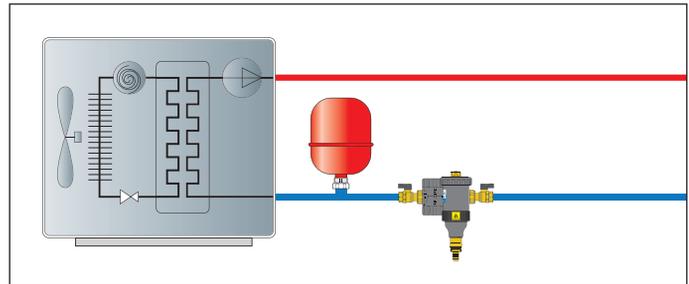


Multifunction device with dirt separator and strainer. Specific for the complete cleaning of the hydraulic circuit, to protect continuously generator and components. Composite body. Dirt separator with tecnopolimer internal element, **with magnet**. Two inspectable strainers with stainless steel mesh: 1 for initial cleaning (blue colour) already installed, 1 for maintenance (grey colour) to be bought separately. Shut-off valve with nut, brass body. **Adjustable for horizontal, vertical or 45° pipes. Female connections.** Drain cock with hose connection. Max. working pressure: 3 bar. Temperature range: 0-90°C.

PCT INTERNATIONAL APPLICATION PENDING

Code			
545375	3/4"	1	-
545376	1"	1	-

Application diagram of multifunction device 5453 series



Problems caused by impurities in hydraulic circuits

The components of a heating and air conditioning system are exposed to degradation caused by the impurities contained in the system's circuit. If the impurities in the thermal medium are not removed, they can impair operation of the units or components, such as boilers or heat exchangers, especially in the commissioning stage, already from the initial passage. This latter problem must not be underestimated because boiler manufacturers will frequently reject warranty claims if their product is not adequately protected by a strainer from the time of commissioning onwards.

Operating principle

The multifunction device is obtained by coupling a dirt separator and a cartridge strainer arranged in series. The water circulating in the system flows, in sequence, first through the dirt separator and then through the cartridge strainer.

1. Elimination of particles even of small diameters (sizes of a few hundredths of a millimetre) is handled by the dirt separator due to the effect of collision of the particles with the internal element and **gravity decantation of sludge** in the collection chamber. This result can be obtained only after some circulations of the medium and hence during operation of the system in steady-state conditions.
2. The total elimination of particles of diameters measured in tenths of a millimetre, right from **the first passage of the medium** (system commissioning), is guaranteed by the mesh strainer, which mechanically intercepts impurities carried by the thermal medium.

5453

tech. broch. 01258

DIRTMAGPLUS®



Multifunction device with dirt separator and strainer. Specific for the complete cleaning of the hydraulic circuit, to protect continuously generator and components. Composite body. Dirt separator with tecnopolimer internal element, **with magnet**. Two inspectable strainers with stainless steel mesh: 1 for initial cleaning (blue colour) already installed, 1 for maintenance (grey colour) to be bought separately. Shut-off valve with nut, brass body. **Adjustable for horizontal, vertical or 45° pipes. Ø 22 and Ø 28 with compression ends.** Drain cock with hose connection. Max. working pressure: 3 bar. Temperature range: 0-90°C.

PCT INTERNATIONAL APPLICATION PENDING

Code			
545372	Ø 22	1	-
545373	Ø 28	1	-

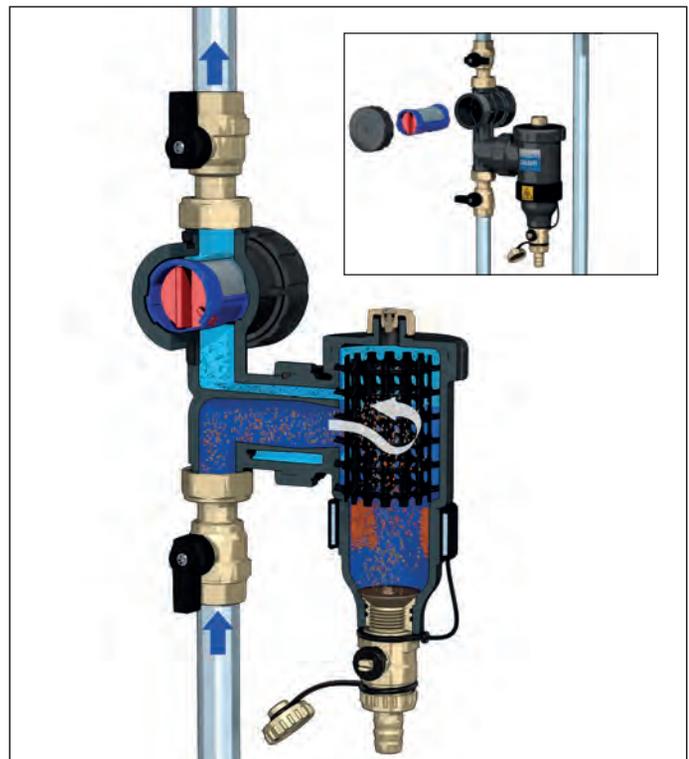
Cartridge strainer

The high-capacity strainer cartridge consists of two parts: an outer body with stainless steel mesh and a specially shaped internal element for collecting impurities. The complete collection of impurities is always optimal, whether the installation is vertical, horizontal or 45°.



Strainer accessories.

Code			
F49474/BL	first cleaning strainer (blue colour)	1	-
F49474/GR	maintenance strainer (grey colour)	1	-





The products in the CALEFFI GEO® series have been specifically designed for use in heat pump systems. In **ground source heat pumps** a mixture of water and anti-freeze fluid is generally used to protect against freezing temperatures. The components are made with high-performance materials for this type of applications.

GEO THERMAL DISTRIBUTION MANIFOLD

110

Preassembled geothermal manifold.
Complete with:

- automatic air vents;
- temperature gauges Ø 80 mm;
- fill/drain cocks;
- flow and return manifolds in polymer;
- blind end plugs with insulation;
- stainless steel wall brackets;
- set of labels for direction of flow and circuit identification;
- wall fixing anchors.

tech. broch. 01221



Max. working pressure: 6 bar.
Max. hydraulic test pressure: 10 bar.
Temperature range: -10–60°C.
Ambient temperature range: -20–60°C.
Medium: water, glycol solutions, saline solutions.
Max. percentage of glycol: 50%.
Manifold DN 50.
Max. flow rate: 7 m³/h.
End connection: 1 1/4".
Outlet connection: 42 p.2,5 TR.
Outlet centre distance: 100 mm.
Outlet connections with mechanical seal for shut-off valves 111 series, balancing valves 112 series and flow meters 113 series.

Code

1107B5	2 circuits		
1107C5	3 circuits	1	–
1107D5	4 circuits	1	–
1107E5	5 circuits	1	–
1107F5	6 circuits	1	–
1107G5	7 circuits	1	–
1107H5	8 circuits	1	–

For more than 8 outlet circuits, see the modular manifold



GEOHERMAL DISTRIBUTION MANIFOLD

110

tech. broch. 01221

Modular manifold single module in polymer.



Max. working pressure: 6 bar.
 Max. hydraulic test pressure: 10 bar.
 Working temperature range: -10–60°C.
 Ambient temperature range: -20–60°C.
 Medium: water, glycol solutions, saline solutions.
 Max. percentage of glycol: 50%.
 Manifold DN 50.
 Outlet connection: 42 p,2,5 TR.

Outlet connections with mechanical seal for shut-off valves 111 series, balancing valves 112 series and flow meters 113 series.

Code

110700



1 -

110

tech. broch. 01221

Assembly kit for modular manifolds. Complete with:

- brass end fitting with automatic air vent, fill/drain cock;
- brass blind end plug;
- pre-formed shell insulation;
- screws and bolts for tie-rods and brackets;
- set of labels for direction of flow and circuit identification;
- temperature gauge with pocket (-30–50°C);
- No. 2 seal gaskets.

Max. working pressure: 6 bar.
 System test max. pressure: 10 bar.
 Temperature range: -10–60°C.
 Ambient temperature range: -20–60°C.
 Medium: water, glycol solutions, saline solutions.
 Max. percentage of glycol: 50%.
 Connections: 1 1/4" F.

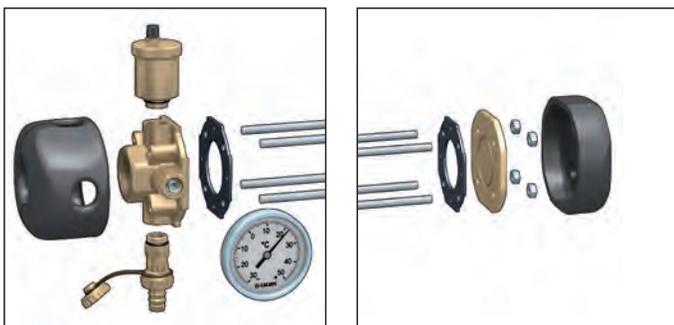


Code

110750



1 -



110

tech. broch. 01221

Stainless steel tie-rods for assembling modular manifolds. M8 threaded stainless steel bar.

Code

110012	for manifold with 2 circuits	1	-
110013	for manifold with 3 circuits	1	-
110014	for manifold with 4 circuits	1	-
110015	for manifold with 5 circuits	1	-
110016	for manifold with 6 circuits	1	-
110017	for manifold with 7 circuits	1	-
110018	for manifold with 8 circuits	1	-
110019	for manifold with 9 circuits	1	-
110020	for manifold with 10 circuits	1	-
110021	for manifold with 11 circuits	1	-
110022	for manifold with 12 circuits	1	-



1 -

110

tech. broch. 01221

Pair of stainless steel brackets to secure modular manifolds. Rapid wall coupling system. System for rapidly coupling the manifold on the brackets. With screws and plugs.



Code

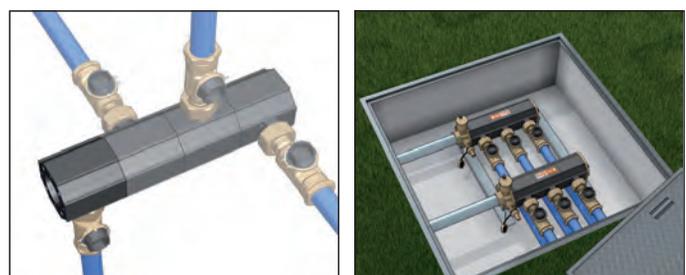
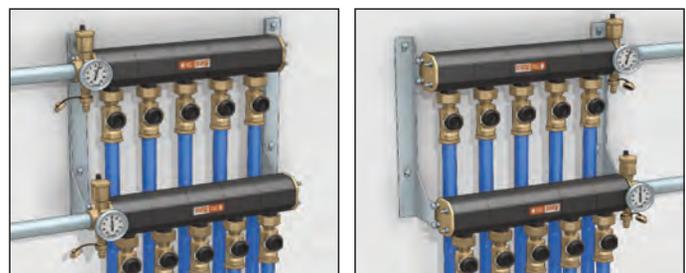
110001



1 -

Flexibility of installation

The manifold is reversible to adapt the position of the probes with respect to the heat pump. It can be installed both vertically (against the wall) and horizontally (below ground) thus allowing any probe orientation.



SHUT-OFF AND BALANCING DEVICES FOR GEOTHERMAL MANIFOLD 110 SERIES



111

tech. broch. 01234

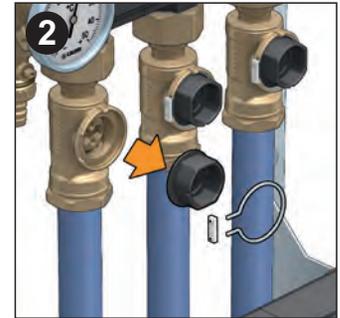
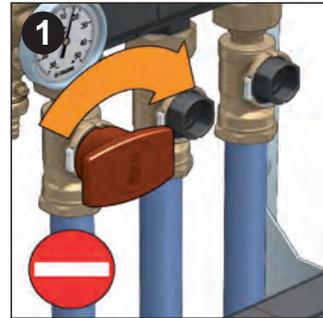
Shut-off ball valve fitted for integrated flow rate measuring sensor. Complete with fitting for polyethylene pipe. Brass body. Polymer top plug. Connection to manifold: female connection with captive nut 42 p.2,5 TR. Max. working pressure: 6 bar. Max. hydraulic test pressure: 10 bar. Temperature range: -10–40°C. Ambient temperature range: -20–60°C. Medium: water, glycol solutions, saline solutions. Max. percentage of glycol: 50%.

Code

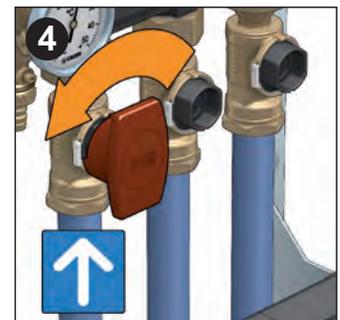
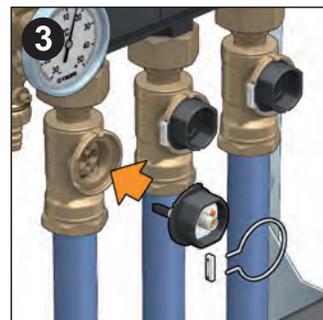
111620	42 p.2,5 TR x Ø 25	1	–
111630	42 p.2,5 TR x Ø 32	1	–
111640	42 p.2,5 TR x Ø 40	1	–



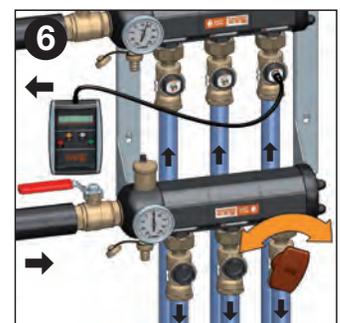
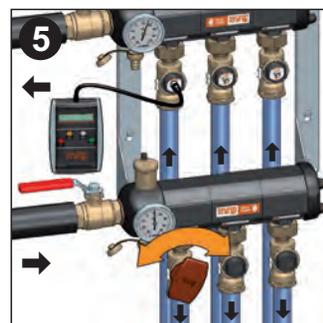
To exchange this plug with the sensor it is necessary to:
1. Close the valve using the provided knob.
2. Remove the lock and the clip and then pull out the cap.



3. Insert the measuring sensor and retain it with the clip and the lock.
4. Reopen the valve with the knob.



5. After carrying out these operations on all the outlets, it is possible to connect the electronic measurer to the sensor of the first branch and measure the corresponding flow rate. The flow rate is adjusted by regulating, with the special knob, the shut-off valve on the return manifold in correspondence with the same circuit until the instrument indicates the design setting.
6. This operation must be repeated on the following branches to obtain the desired flow rate.



During the flow rate measurement, the sensor creates no significant head losses and therefore causes no significant changes in the actual flow rate.

After balancing, disconnect the electronic measurer and put the shut-off valves back into their standard operating condition as follows:

7. Close the valve with the knob (see figure 1).
8. Remove the lock, the clip and extract the sensor (see figure 2).
9. Fit the plug back in and secure it with the seal ring and the clip (see figure 3).
10. Reopen the valve with the knob (see figure 4). Repeat the process for all the circuits.



111

tech. broch. 01234

Insulation for shut-off valves. Material: closed cell expanded PE-X. Thickness: 10 mm. Density: inner part 30 kg/m³, outer part 80 kg/m³. Thermal conductivity (DIN 52612): at 0°C: 0,038 W/(m·K); at 40°C: 0,045 W/(m·K). Coefficient of resistance to water vapour (DIN 52615): > 1.300. Temperature range: 0–100°C. Reaction to fire (DIN 4102): class B2.

Code

Use

111001	Ø 25 - Ø 32	1	–
111003	Ø 40	1	–



130

tech. broch. 01234

Flow rate electronic measuring station for connecting sensor with Vortex effect. Complete with:
- box;
- power supply unit;
- control lever;
- measuring sensor with Vortex effect;
- connecting cable;
- clip and lock.

Rechargeable battery NiMh 9 V. Complete with battery charger. Flow rate scale: l/h - l/min - GPM. Flow rate range: 300–1400 l/h. Accuracy direct reading of flow rate and sensor with Vortex effect: ±10%. Protection class: IP 44.

Code

130010		1	4
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111

tech. broch. 01234

Integrated flow rate measuring sensor with Vortex effect. Accuracy reading of flow rate: ±10%.

Code

111010		1	–
---------------	--	---	---



111

tech. broch. 01234

Control lever for shut-off valves. Polymer body.

Code

111002		1	–
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SHUT-OFF AND BALANCING DEVICES FOR GEOTHERMAL MANIFOLD 110 SERIES



112

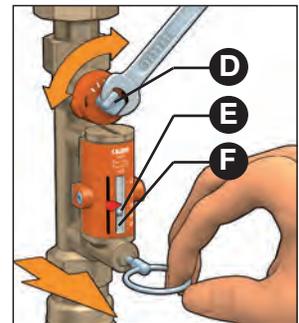
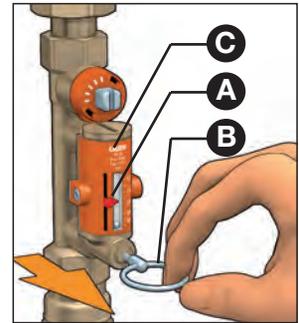
tech. broch. 01235

Balancing valve with flow meter. Complete with fitting for polyethylene pipe. Direct reading of flow rate. Ball valve for flow rate setting. Graduated scale flow meter with magnetic movement flow rate indicator. Brass valve body and flow meter. Connection to manifold: female connections with captive nut 42 p.2,5 TR. Max. working pressure: 10 bar. Temperature range: -10-40°C. Ambient temperature range: -20-60°C. Medium: water, glycol solutions, saline solutions. Max. percentage of glycol: 50%. Accuracy: ±10%.

Code		Scale (m³/h)		
112621	42 p.2,5 TR x Ø 25	0,3-1,2	1	-
112631	42 p.2,5 TR x Ø 32	0,3-1,2	1	-
112641	42 p.2,5 TR x Ø 40	0,3-1,2	1	-

Flow rate adjustment

1. With the aid of the indicator (A), mark the reference flow rate at which the valve is to be set.
2. Use the ring (B), to open the obturator that shuts off the flow of medium in the flow meter (C) under normal operating conditions.
3. Keeping the obturator open, use a wrench on the valve's control stem (D) to adjust the flow rate. It is indicated by a metal ball (E), that runs inside a transparent guide (F) next to which there is a graduated scale in m³/h.
4. After completing the balancing, release the ring (B) of the flow meter obturator which, thanks to an internal spring, will automatically go back into the closed position.



5. On completing the adjustment, the indicator (A) can be used to keep the setting memory, in case checks need to be made over time.



112

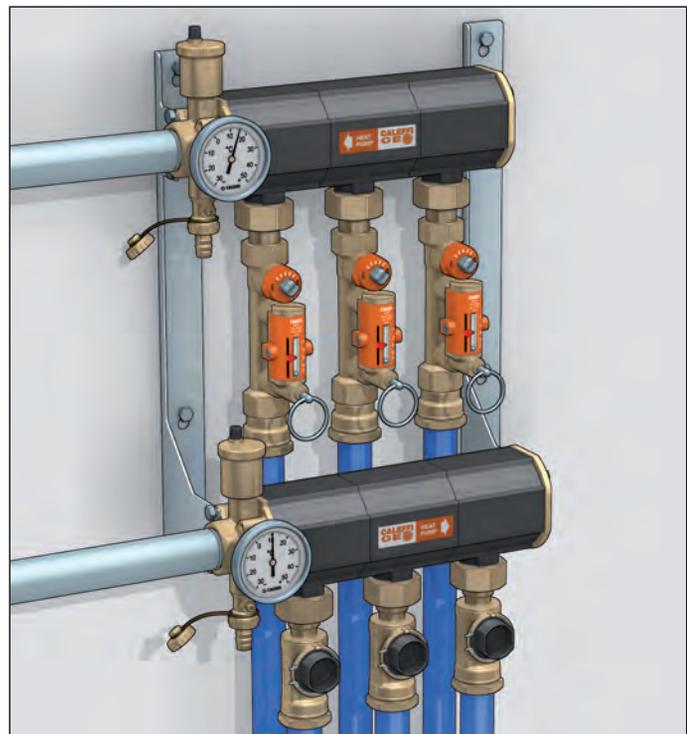
tech. broch. 01235

Insulation for balancing valves. Material: closed cell expanded PE-X. Thickness: 10 mm. Density: inner part 30 kg/m³, outer part 80 kg/m³. Thermal conductivity (DIN 52612): at 0°C: 0,038 W/(m·K); at 40°C: 0,045 W/(m·K). Coefficient of resistance to water vapour (DIN 52615): > 1.300. Working temperature range: 0-100°C. Reaction to fire (DIN 4102): class B2.

Code	Use		
112001	Ø 25 - Ø 32	1	-
112003	Ø 40	1	-

Construction details

On 112 series valves, the flow rate reading is given directly by a flow meter, obtained with a by-pass on the body of the device, which can be automatically cut off during normal operation.



112

tech. broch. 01235

Balancing valve with flow meter with ball shut-off valve and fitting for polyethylene pipe. Direct reading of flow rate and setting via upper ball valve. Graduated scale flow meter with magnetic movement flow rate indicator. Brass valve body and flow meter. Connection to manifold: female connection with captive nut 42 p.2,5 TR. Max. working pressure: 10 bar. Temperature range: -10-40°C. Ambient temperature range: -20-60°C. Medium: water, glycol solutions, saline solutions. Max. percentage of glycol: 50%. Accuracy: ±10%.

Code		Scale (m³/h)		
112622	42 p.2,5 TR x Ø 25	0,3-1,2	1	-
112632	42 p.2,5 TR x Ø 32	0,3-1,2	1	-

The use of a flow meter greatly simplifies the process of system balancing, since the flow rate can be measured and controlled at any time and there is no need for differential pressure gauges or reference charts.

SHUT-OFF AND BALANCING DEVICES FOR GEOTHERMAL MANIFOLD 110 SERIES



113

[tech. broch. 01236](#)

Float flow meter.
Complete with fitting for polyethylene pipe.
Direct reading of flow rate.
Ball valve for flow rate setting.
Brass body.
Connection to manifold:
female connection with captive nut 42 p.2,5 TR.
Max. working pressure: 10 bar.
Working temperature range: -10–40°C.
Ambient temperature range: -20–60°C.
Medium: water, glycol solutions, saline solutions.
Max. percentage of glycol: 50%.
Accuracy: ±10%.

Code	Scale (m ³ /h)		
113621	42 p.2,5 TR x Ø 25 0,3–1,2	1	–
113631	42 p.2,5 TR x Ø 32 0,3–1,2	1	–



871

Ball valve complete with fitting for polyethylene pipe.
Brass body.
Connection to manifold:
female connection with captive nut 42 p.2,5 TR.
Max. working pressure: 16 bar.
Working temperature range: -10–40°C.
Ambient temperature range: -20–60°C.
Medium: water, glycol solutions, saline solutions.
Max. percentage of glycol: 50%.
Fitted for 111 series insulation.

Code			
871025	42 p.2,5 TR x Ø 25	1	–
871032	42 p.2,5 TR x Ø 32	1	–
871040	42 p.2,5 TR x Ø 40	1	–



113

[tech. broch. 01236](#)

Insulation for float flow meter.
Material: closed cell expanded PE-X.
Thickness: 10 mm.
Density: inner part 30 kg/m³, outer part 80 kg/m³.
Thermal conductivity (DIN 52612):
at 0°C: 0,038 W/(m·K); at 40°C: 0,045 W/(m·K).
Coefficient of resistance to water vapour (DIN 52615): > 1.300.
Working temperature range: 0–100°C.
Rection to fire (DIN 4102): class B2.

Code	Use		
113001	Ø 25 - Ø 32	1	–



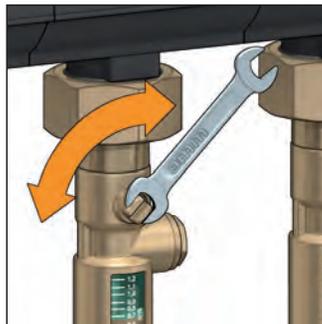
110

Union with gasket.
Max. working pressure: 16 bar.
Max. working temperature: 40°C.

Code			
110050	42 p.2,5 TR x 3/4"	1	–
110060	42 p.2,5 TR x 1"	1	–

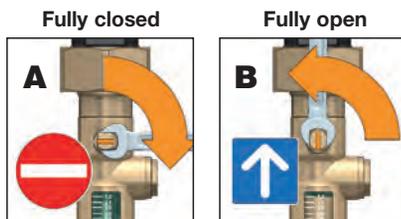
Flow rate adjustment

The flow rate in each probe is indicated by the top edge of the float and can be modified by turning a 9 mm spanner on the ball valve.



Full closing and opening of the valve

The valve can be fully opened and closed. A slot on the obturator stem indicates the status of the valve.



Correction for liquids with different densities

To have the actual flow rate when using glycol solutions at low temperature it is necessary to multiply the reading of the float flow meter by a corrective factor of:

- 0,9 for concentrations of 20-30%
- 0,8 for concentrations of 40-50%

SYSTEM COMPOSITION EXAMPLE WITH CALEFFI 110 SERIES GEOTHERMAL MANIFOLD

111 series

Ball shut-off valve



Fitted for sensor with Vortex effect for integrated flow rate measuring

DN 25	DN 32	DN 40
Code 111620	Code 111630	Code 111640

Connection to manifold
42 p.2,5 TR

Pipe connection		
Ø 25	Ø 32	Ø 40

112 series

Balancing valve with flow meter



With fitting for polyethylene pipe

DN 25	DN 32	DN 40
Code 112621	Code 112631	Code 111641

Connection to manifold
42 p.2,5 TR

Pipe connection		
Ø 25	Ø 32	Ø 40

113 series

Float flow meter



With fitting for polyethylene pipe

DN 25	DN 32
Code 113621	Code 113631

Connection to manifold
42 p.2,5 TR

Pipe connection	
Ø 25	Ø 32

871 series

Ball valve



With fitting for polyethylene pipe

DN 25	DN 32	DN 40
Code 871025	Code 871032	Code 871040

Connection to manifold
42 p.2,5 TR

Pipe connection		
Ø 25	Ø 32	Ø 40

Insulation

DN 25	DN 32	DN 40
Code 111001		Code 111003



Insulation

DN 25	DN 32	DN 40
Code 112001		Code 112003



Insulation

DN 25	DN 32
Code 112001	



Insulation

DN 25	DN 32
Code 113001	



Insulation

DN 25	DN 32
Code 111001	



Control lever

Code 111002



Flow rate measuring station

Code 111010



Flow rate electronic measuring station

Code 130010



DEVICES FOR GENERIC GEOTHERMAL MANIFOLDS

112



Balancing valve with flow meter.
 Direct reading of flow rate.
 Ball valve for flow rate setting.
 Graduated scale flow meter with magnetic movement flow rate indicator.
 Brass body valve and flow meter.
 Connection to manifold: female connection with captive nut.
 Max. working pressure: 10 bar.
 Temperature range: -10–110°C.
 Ambient temperature range: -20–60°C.
 Medium: water, glycol solutions, saline solutions.
 Max. percentage of glycol: 50%.
 Accuracy: ±10%.

Code	Scale (m ³ /h)		
112660	1" F x 1" F 0,3–1,2	1	–
112670	1 1/4" F x 1" F 0,3–1,2	1	–

861



Male fitting. In brass.
 For polyethylene pipes.
 Max. working pressure: 16 bar.
 Max. working temperature: 40°C.



tech. broch. 01037

Code			
861625	Ø 25 x 1" M	10	60
861632	Ø 32 x 1" M	10	50

862



Reduced male fitting. In brass.
 For polyethylene pipes.
 Max. working pressure: 16 bar.
 Max. working temperature: 40°C.



tech. broch. 01037

Code			
862640	Ø 40 x 1" M	10	50

942



Sleeve fitting.

Code			
942560	3/4" x 1"	50	–

871



Fitting with ball valve. In brass.
 For polyethylene pipes.
 Max. working pressure: 16 bar.
 Max. working temperature: 40°C.

tech. broch. 01037

Code			
871525	Ø 25 x 3/4" F	5	25
871532	Ø 32 x 3/4" F	5	25

SYSTEM COMPOSITION EXAMPLE WITH GENERIC GEOTHERMAL MANIFOLDS

112 series

Balancing valve with flow meter



Code	Code
112660	112670
Connection	Connection
1" F x 1" F	1 1/4" F x 1" F

Fitting for polyethylene pipe



DN 25	DN 32	DN 40
Code	Code	Code
861625	861632	862640
Balancing valve connection		
1" M		
Pipe connection		
Ø 25	Ø 32	Ø 40

Fitting for extra shut-off



Code
942560
Balancing pipe connection
1" M
Shut-off connection
3/4" M

Insulation

DN 25	DN 32	DN 40
Code	Code	
112001	112003	



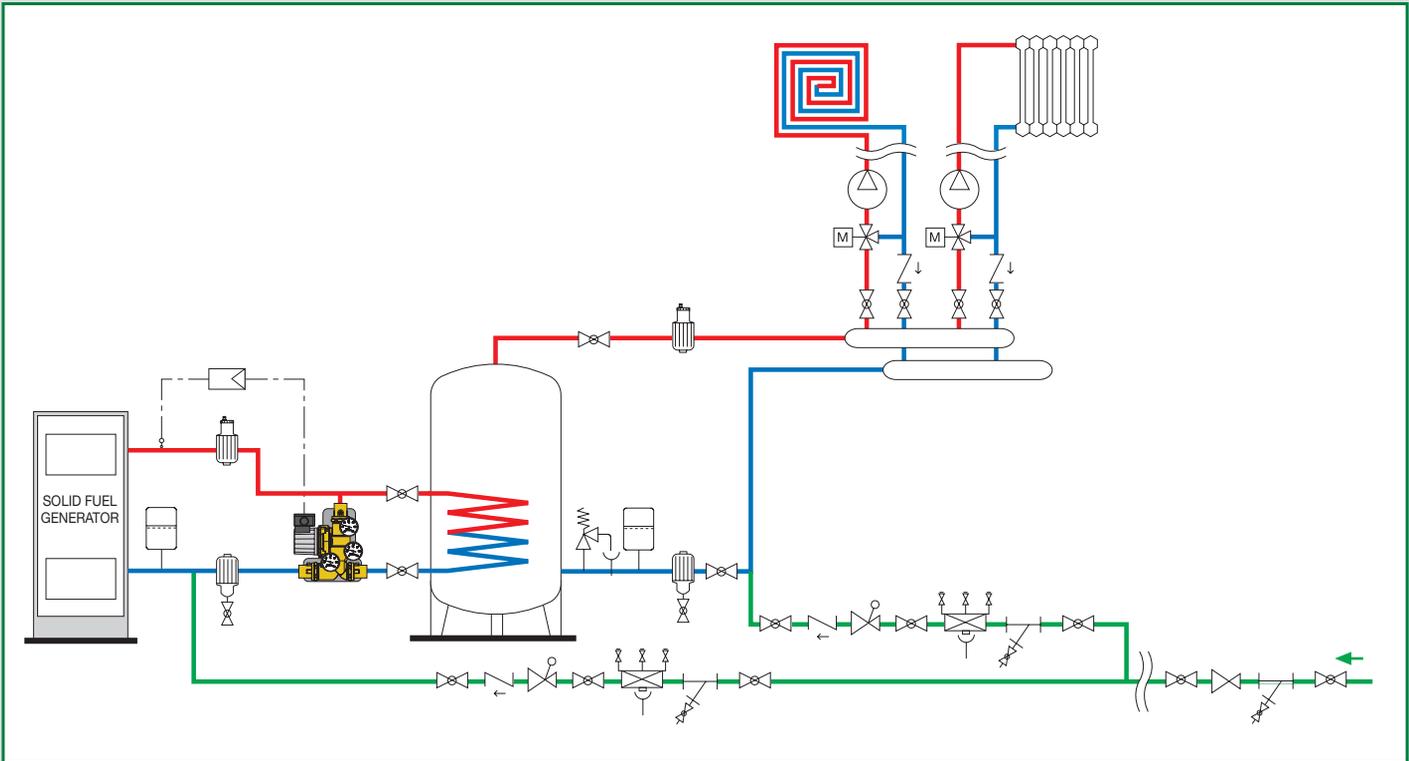
Ball valve complete with fitting for polyethylene pipe



DN 25	DN 32
Code	Code
871525	871532
Ball shut-off connection	
3/4" F	
Pipe connection	
Ø 25	Ø 32

COMPONENTS FOR BIOMASS SYSTEMS

This diagram is just an indication



Safety devices

Anti-condensation valve

Anti-condensation circulation unit

Anti-condensation recirculation and distribution unit

Connection and energy management unit (heating version)

Connection and energy management unit (heating and domestic hot water with storage version)

Connection and energy management unit (heating and instantaneous hot water version)

Digital regulator for systems with solid fuel generator

Solid fuel generato-to-gas boiler connection kit



The CALEFFI BIOMASS® product series has been created specifically to be used in circuits of systems with wood solid fuel generators, operating at high temperature with water or glycol solutions as thermal medium. The materials of the components and their performance take account of the specific system needs in terms of efficiency and safety of the generators and systems.

SAFETY DEVICES



542

tech. broch. 01001

Temperature relief valve, with fail-safe action. Manual reset for burner switch off or alarm activation.
Working pressure: $0,3 \text{ bar} \leq P \leq 10 \text{ bar}$.
Temperature range: 5–100°C.
Settings temperature: 98°C, 99°C.
Certified and calibrated to INAIL.
Discharge rating:
1 1/2" x 1 1/4" - 136 kW.
1 1/2" x 1 1/2" - 419 kW.



Code	Setting		
542870	1 1/2" M x 1 1/4" F 98°C	1	10
542880	1 1/2" M x 1 1/2" F 99°C	1	10



543

tech. broch. 01057

Temperature safety relief valve, with double safety sensor, for solid fuel generators.
Max. working pressure: 10 bar.
Temperature range: 5–110°C.
Setting temperature: 98°C (0/-4°C).
Discharge flow rate with Δp of 1 bar and $T=110^\circ\text{C}$: 3000 l/h.
Capillary length: 1300 mm.
Certified to EN 14597.



Code	Setting		
543513	3/4" F 98°C	1	10

Function

The temperature relief valve discharges the system water on reaching the setting temperature. Equipped with positive action. It can be used with non-pulverized solid fuel generators with open or closed vessel setting in accordance with current regulations.

INAIL - Ex ISPEL reference standards

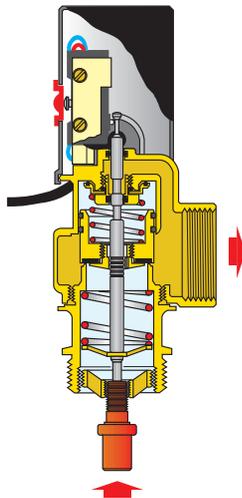
According to the provisions of Collection R Ed. 2009, concerning "central heating systems using hot water with temperatures no greater than 110°C and a maximum nominal heat output greater than 35 kW", the use of the temperature relief valve is contemplated in the following cases:

Open vessel systems

- Systems with generators stoked with non-pulverized solid fuel, in place of the consumption water heater or emergency exchanger (chap. R.3.C., point 2.1, letter i2).

Closed vessel systems

- Thermal systems with generators stoked with non-pulverized solid fuels up to a nominal heat output of 100 kW with partial cut-off in place of the residual power dissipation device (chap. R.3.C., point 3.2).



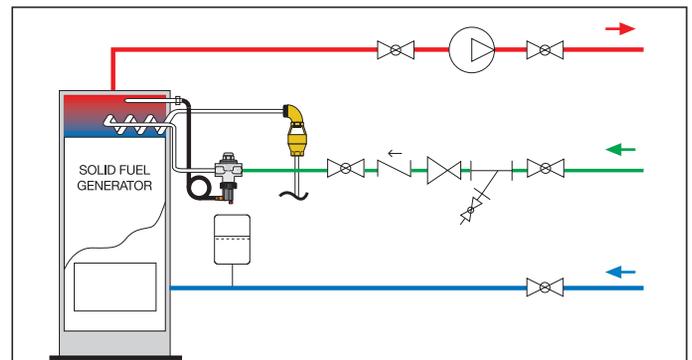
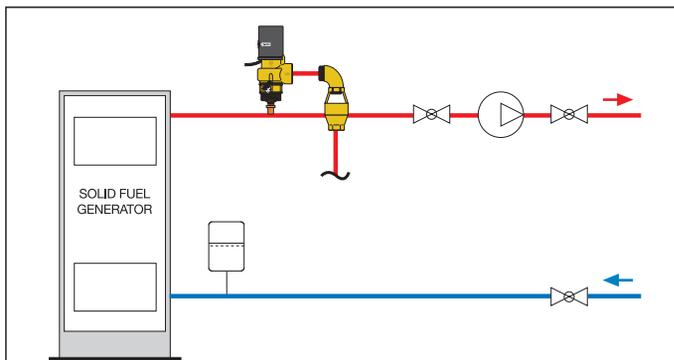
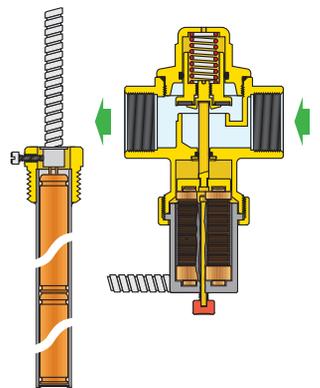
Function

The temperature safety relief valve limits the water temperature in solid fuel generators equipped with a built-in storage or emergency exchanger (for immediate cooling).

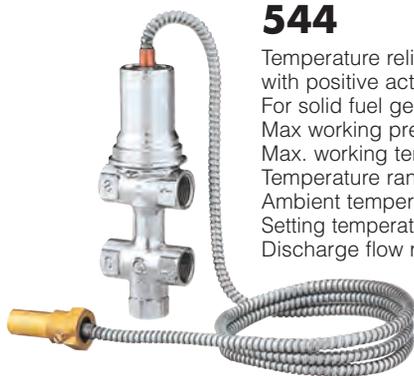
On reaching the setting temperature, the valve opens the flow of mains water through the emergency exchanger or built-in storage unit, so as to draw off the excess heat and thereby lower the temperature of the system water contained in the boiler jacket.

Reference standards

Its use is contemplated in the INAIL - Ex ISPEL standards, Collection R - ed. 2009, chapter R.3.C., point 2.1, letter i2; point 3.1, letter i; point 3.3. The valve complies with EN 14597, it can be combined with solid fuel generators with a heat output of less than 100 kW, used according to the system provisions of the standards EN 12828, UNI 10412-2 and EN 303-5.



SAFETY DEVICES



544

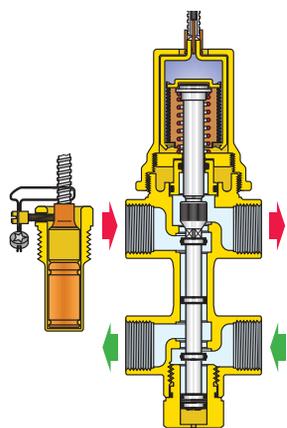
tech. broch. 01058

Temperature relief valve, with positive action with automatic filling. For solid fuel generators.
 Max. working pressure: 6 bar.
 Max. working temperature: 110°C.
 Temperature range: 5–110°C.
 Ambient temperature range: 1–50°C.
 Setting temperature: 100°C (0/-5°C).
 Discharge flow rate with Δp of 1 bar and $T=110^\circ\text{C}$: 1600 l/h.
 Capillary length: 1300 mm.

Code	Setting		
544400	1/2"	100°C	1 10

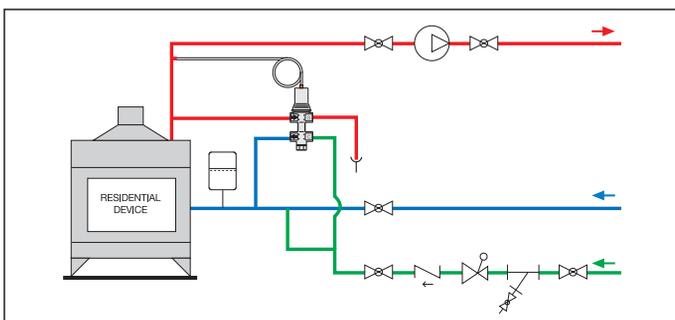
Function

On reaching the setting temperature, the temperature relief valve discharges the water of the system with a solid fuel generator. The device integrates in a single group a temperature relief valve with a positive safety remote sensor and a filling valve. The discharge of water enables limiting the system water temperature, while the filling inlet enables the replacement of the discharged flow rate.



Reference standards

Used when there is no emergency exchanger and for heat outputs < 35 kW (Italy).



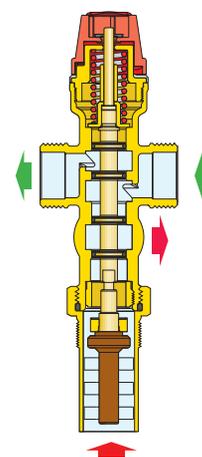
544

Temperature relief valve with automatic filling for solid fuel generators, with knob for manual discharge.
 Max. working pressure: 6 bar.
 Max. working temperature: 120°C.
 Setting temperature: 100°C (0/-5°C).
 Discharge flow rate with Δp of 1 bar and $T=110^\circ\text{C}$: 1800 l/h.

Code	Setting		
544501	3/4"	100°C	1 -

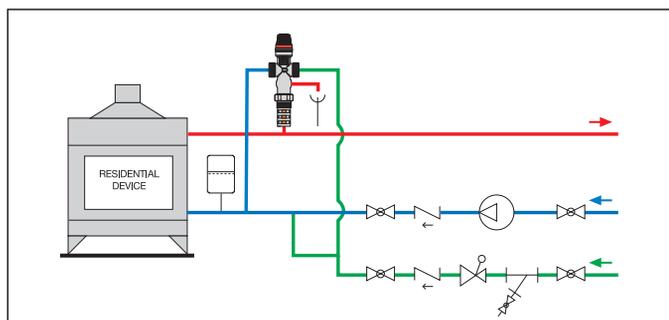
Function

The device integrates in a single group a temperature relief valve and a filling valve that operate simultaneously by means of a sensor integrated in the valve body. On reaching the setting value, the valve opens the discharge outlet to eliminate the excess heat and, at the same time, the filling inlet to replace the discharged flow rate of the system water.



Reference standards

Used when there is no emergency exchanger and for heat outputs < 35 kW (Italy).



529

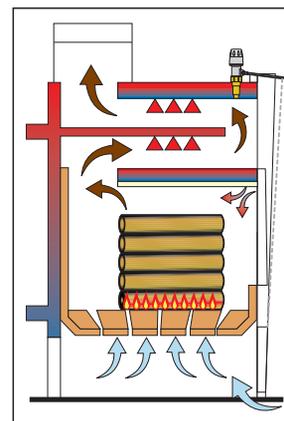
tech. broch. 01226

Draught regulating valve. Male threaded connection. Adjustment temperature range: 30–90°C.
Certified to EN 14597 standard.

Code			
529150	3/4" M ISO 7/1		1 10
529151	3/4" M ISO 7/1 long pocket		1 10

Function

The draught regulating valve, installed on the generator with the thermostatic element immersed in the medium, automatically adjusts the flow rate of the comburent air to provide a more regular and complete combustion.



ANTI-CONDENSATION VALVE



280

tech. broch. 01223

Anti-condensation valve with thermostatic control of the return temperature to solid fuel generators. Brass body. Male union connections. Max. percentage of glycol: 50%. Max. working pressure: 10 bar. Temperature range: 5–100°C. Settings: 45°C, 55°C, 60°C, 70°C. Setting accuracy: ±2°C. By-pass complete closing temperature: $T_{mix} = T_{set} + 10^\circ C = Tr.$

PCT INTERNATIONAL APPLICATION PENDING

Code	DN	Connection	Kv (m ³ /h)		
28005.	20	3/4"	3,2	1	10
28026.*	20	1"	3,2	1	10
28006.	25	1"	9	1	5
28007.	32	1 1/4"	12	1	5

* Caution: same Kv value of 3/4" valve

Valve selection

The valve selection should be made according to the Kv value (corresponding to a specific DN body size) and not only according to the threaded connections. Given the system flow rate, the corresponding head losses on the valve should be calculated by using the Kv value. The sum of the head losses on the valve and the head losses of the rest of the system should be compatible with the available head of the generator pump.

Code completion

Setting	45°C	55°C	60°C	70°C
•	4	5	6	7



Spare thermostats for anti-condensation valve.

Code	Setting	Use		
F29629	45°C	code 28005. / 28026.	1	–
F29630	55°C	code 28005. / 28026.	1	–
F29631	60°C	code 28005. / 28026.	1	–
F29632	70°C	code 28005. / 28026.	1	–
F29633*	45°C	code 28006. / 28007.	1	–
F29634*	55°C	code 28006. / 28007.	1	–
F29635*	60°C	code 28006. / 28007.	1	–
F29636*	70°C	code 28006. / 28007.	1	–

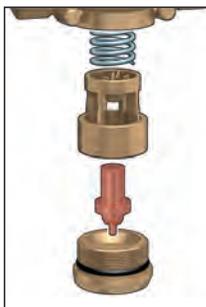
* Utilizzare anche per serie 281, 282, 2850, 2851, 2853, 2855

Thermostat replacement to modify setting

The adjustment sensor can easily be removed for maintenance or to change the set, with no need to remove the valve body from the piping.

Installation

The valve can be fitted on both sides of the generator in any position, vertical or horizontal. **Installation is recommended on the return to the generator in mixing mode;** it is also allowed on the flow from the generator in diverter mode according to the needs of system control.

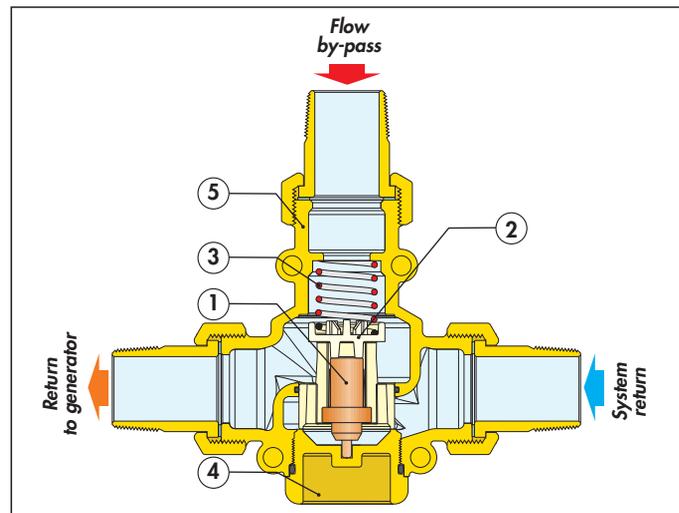
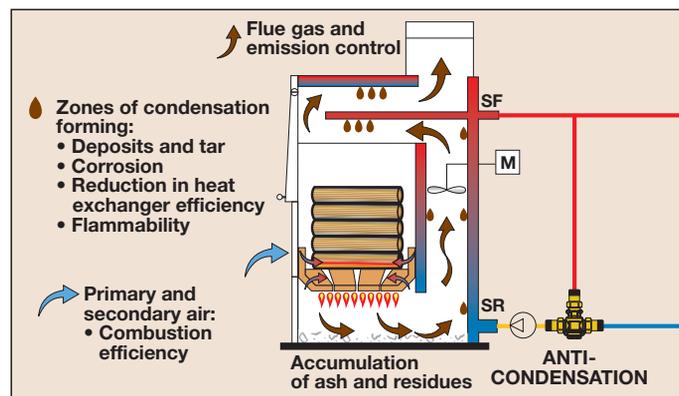


Function

The anti-condensation valve, used in heating systems with a solid fuel generator, automatically regulates at the set value the temperature of the water returning to the generator.

Keeping the boiler at a high temperature **prevents condensation of the water vapour contained in the flue gas.**

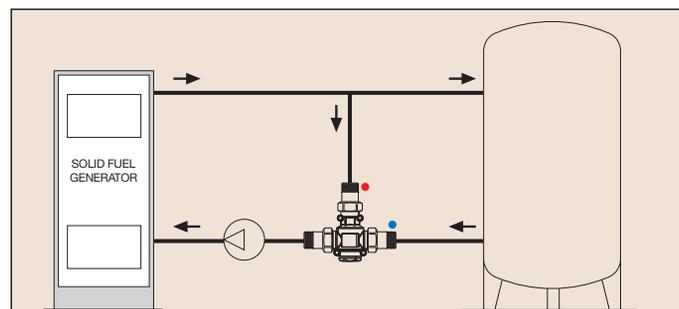
Condensation produces tarry deposits that, accumulating on the metal surfaces of the flue gas-system water exchanger, cause corrosion, reduce the thermal efficiency of the flue gas-system water exchanger and are a source of danger for the flue gas chimney as they are flammable. The anti-condensation valve gives the generator a longer life and ensures greater efficiency.



Characteristics components

- 1) Thermostatic sensor
- 2) Obturator
- 3) Spring
- 4) Plug
- 5) Valve body

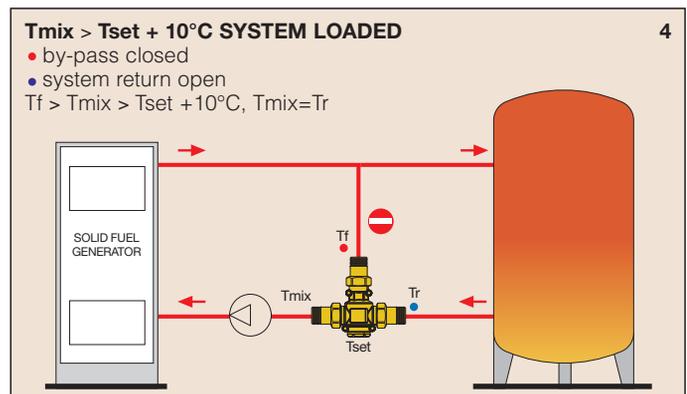
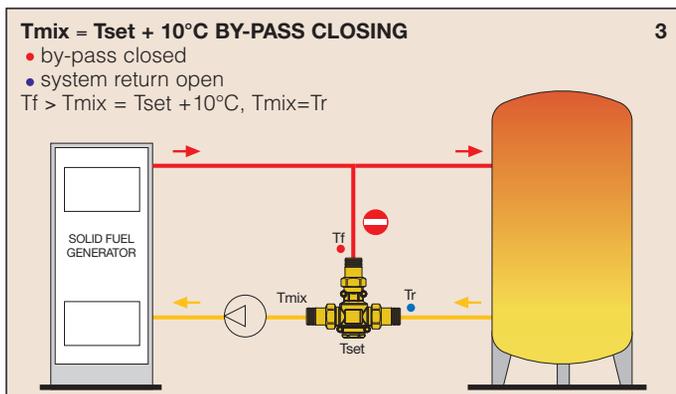
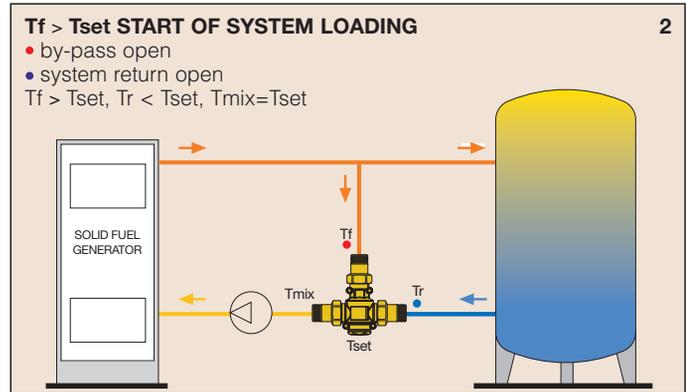
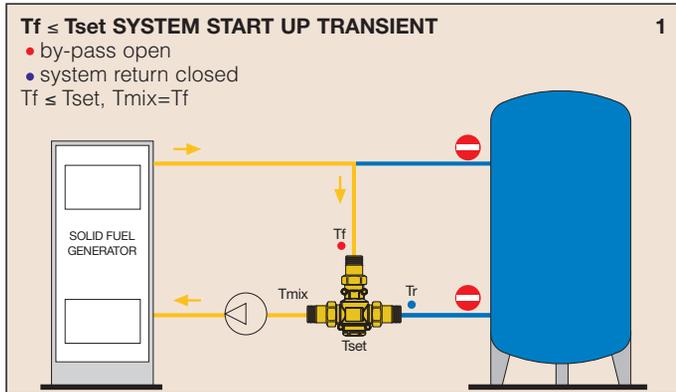
Installation in mixing mode (anti-condensation)



ANTI-CONDENSATION VALVE

Operating principle

The thermostat, completely immersed in the medium, controls the movement of an obturator that regulates the flows in by-pass and toward the system. On starting up the generator, the anti-condensation valve recirculates the flow water so as to bring the generator up to temperature as quickly as possible (1). When the flow temperature T_f exceeds the set of the anti-condensation valve T_{set} , the valve's cold port starts opening to produce the mixing T_{mix} : in this phase the system loading begins (2). When the generator return temperature T_{mix} is greater than the setting of the anti-condensation valve by approximately 10°C , the by-pass port gets closed and water returns to the generator at the same temperature of the system return (3 and 4).

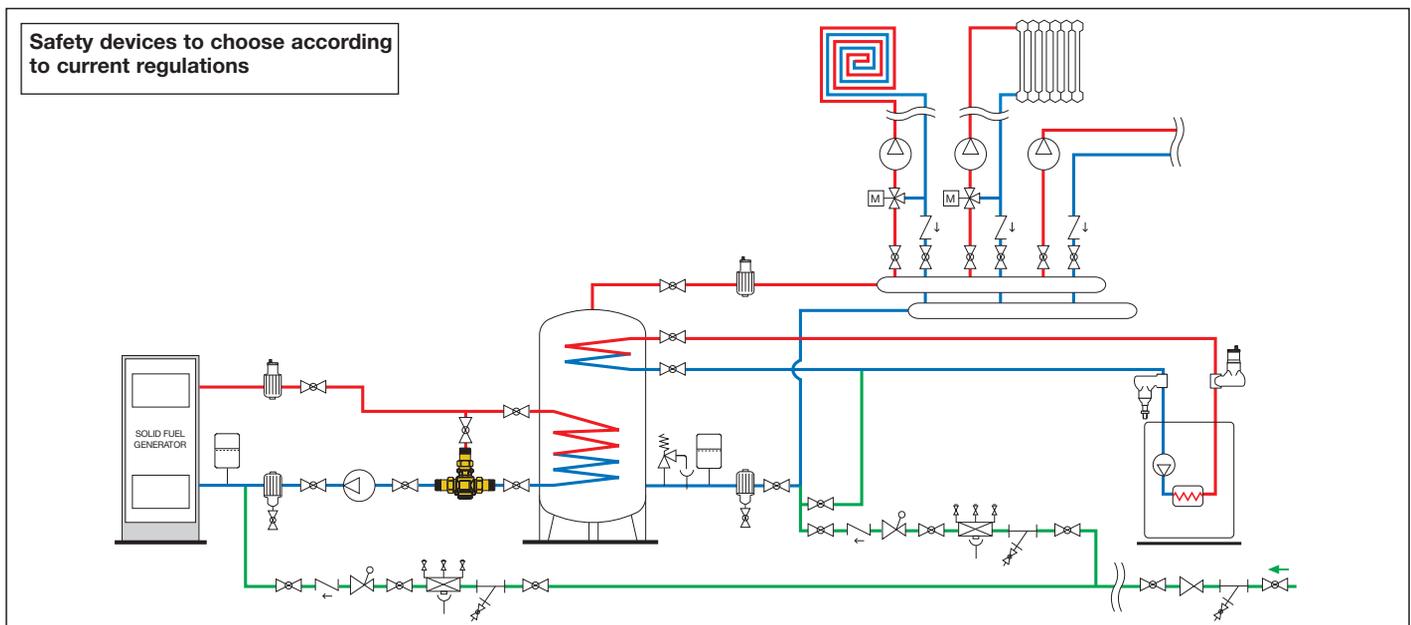


T_f = Flow temperature
 T_{set} = Anti-condensation set temperature

T_{mix} = Mixed water temperature of generator return
 T_r = System return temperature

Application diagram

System with inertial storage



ANTI-CONDENSATION CIRCULATION UNIT

282

tech. broch. 01225

Circulation unit with anti-condensation valve, with thermostatic control of the return temperature to solid fuel generators. **With insulation.**
 System circuit connections: 1" F with union.
 Generator circuit connections: 1" F.
 Medium: water, glycol solutions.
 Max. percentage of glycol: 50%.
 Temperature range: 5–100°C.
 Max. working pressure: 10 bar.
 Temperature gauge scale: 0–120°C.

Anti-condensation valve

Temperature range: 5–100°C.
 Setting temperature: 45°C, 55°C, 60°C, 70°C.
 Setting accuracy: ±2°C.
 By-pass complete closing temperature: $T_{mix} = T_{set} + 10°C = Tr$.

Pump

High-efficiency pump: ALPHA2 L 25-60, UPML 25-95.



Generator return on LH side

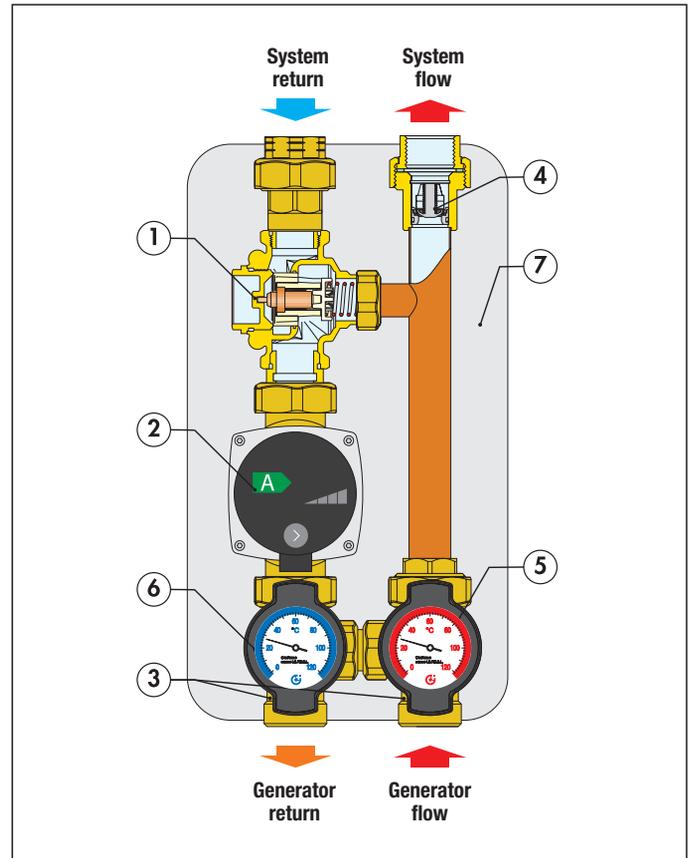
Code	Connection	Connection centre distance			
28260.A2L	1" F	90 mm	with pump ALPHA2 L 25-60	1	–
28264.UPM	1" F	90 mm	with pump UPML 25-95	1	–
28262.A2L	1" F	125 mm	with pump ALPHA2 L 25-60	1	–
28266.UPM	1" F	125 mm	with pump UPML 25-95	1	–

Generator return on RH side

Code	Connection	Connection centre distance			
28261.A2L	1" F	90 mm	with pump ALPHA2 L 25-60	1	–
28265.UPM	1" F	90 mm	with pump UPML 25-95	1	–
28263.A2L	1" F	125 mm	with pump ALPHA2 L 25-60	1	–
28267.UPM	1" F	125 mm	with pump UPML 25-95	1	–

Function

The anti-condensation circulation unit performs the function of connecting the solid fuel generator to the distribution manifold, controlling the return temperature to the generator, to avoid condensation by means of the built-in thermostatic device. The unit also enables connecting the generator to the inertial storage or directly to the user system.



Characteristics components

- 1) Anti-condensation valve
- 2) High-efficiency pump
- 3) Shut-off valves
- 4) Check valve
- 5) Flow temperature gauge
- 6) Return temperature gauge
- 7) Insulation

Code completion

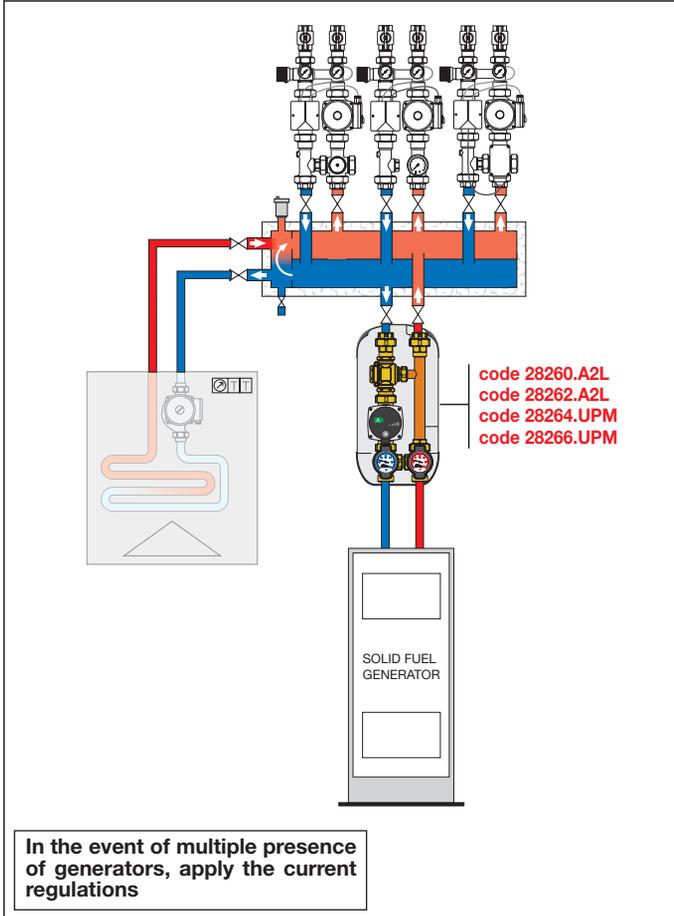
Setting	45°C	55°C	60°C	70°C
•	4	5	6	7

For spare thermostats see page 250

ANTI-CONDENSATION CIRCULATION UNIT

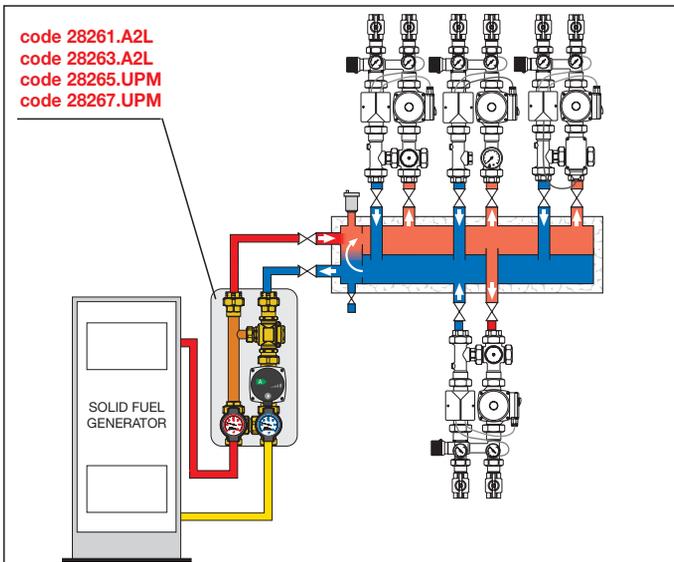
Application diagram

System with SEPCOLL, solid fuel generator combined with gas generator



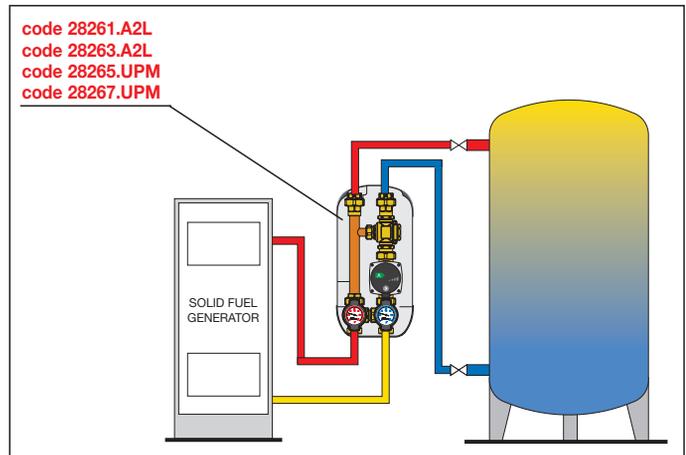
Connection to the primary side of the 559 series SEPCOLL separator/manifold.

The solid fuel generator is used as a single energy source (primary side) and is therefore connected upstream of the hydraulic separation zone of the 559 series SEPCOLL unit.



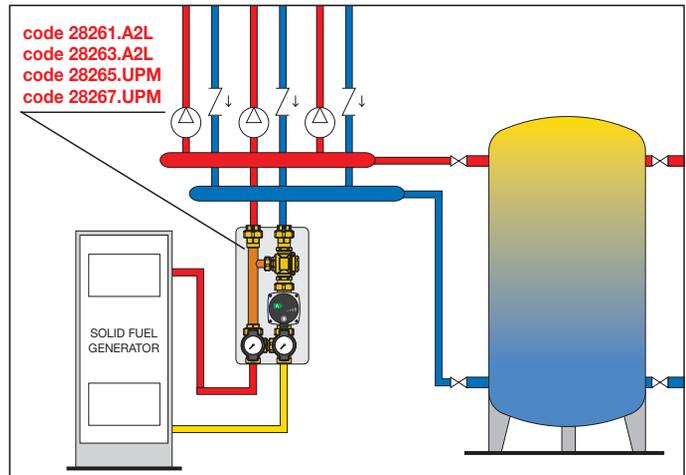
Connection to inertial storage

The unit performs the function of connection and hydraulic circulation between the solid fuel generator and the inertial storage, both in direct mode and with coil exchanger immersed in he storage.



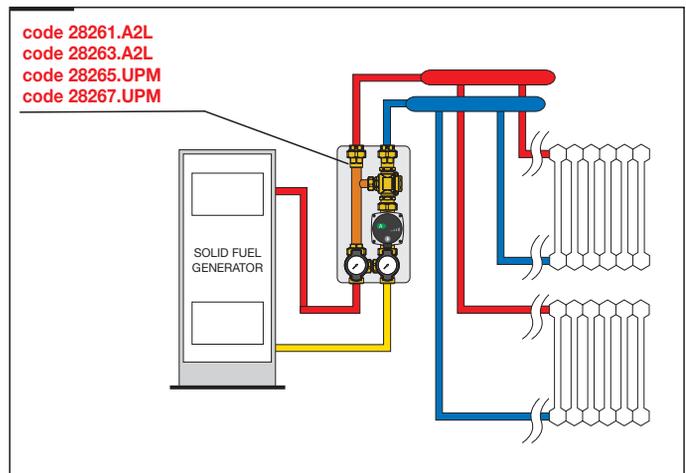
Connection to manifold with storage in parallel

The unit connects the generator to the manifold for direct supply to the secondary circuits or in parallel to the inertial storage.



Direct connection to the system.

The unit can be directly connected to the system, using the pump as a circulator for the entire system.



ANTI-CONDENSATION RECIRCULATION AND DISTRIBUTION UNIT

281

tech. broch. 01224

Anti-condensation recirculation and distribution unit, with thermostatic control of the return temperature to solid fuel generators. Brass body.

With insulation.

Female union connections.
Medium: water, glycol solutions.
Max. percentage of glycol: 50%.
Temperature range: 5–100°C.
Max. working pressure: 10 bar.
Max. recommended flow rate: 2 m³/h.
Temperature gauge scale: 0–120°C.

Anti-condensation valve

Temperature range: 5–100°C.
Settings: 45°C, 55°C, 60°C, 70°C.
Setting accuracy: ±2°C.
By-pass complete closing temperature: $T_{mix} = T_{set} + 10°C = T_r$.

Pump

Three-speed pump / High-efficiency pump:
RS 4-3 / YONOS PARA 25/6 RKC.



Code	DN	Connection		
28106.	25	1" F with pump RS 4-3	1	–
28106.WYP	25	1" F with pump YONOS PARA 25/6	1	–
28107.	25	1 1/4" F with pump RS 4-3	1	–
28107.WYP	25	1 1/4" F with pump YONOS PARA 25/6	1	–

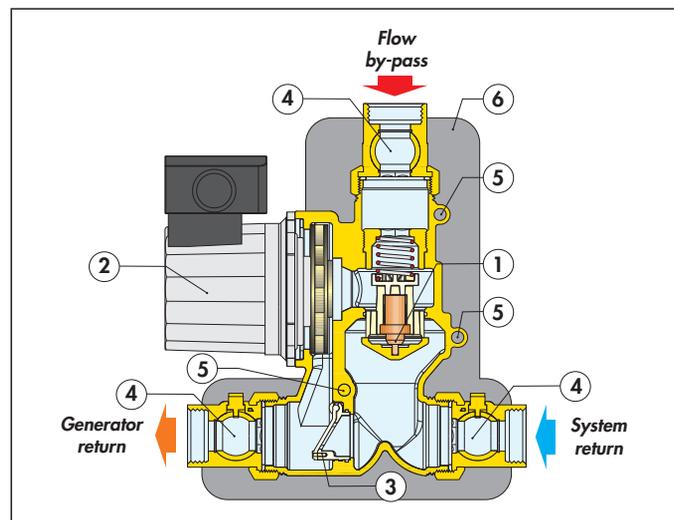
Code completion

Setting	45°C	55°C	60°C	70°C
•	4	5	6	7

For spare thermostats see page 250

Function

The anti-condensation recirculation and distribution unit enables the connection of the solid fuel generator to the user system (direct or with inertial storage). It controls the return temperature to the generator to avoid condensation, by means of the built-in thermostatic device.



Characteristics components

- 1) Anti-condensation thermostatic device
- 2) Three-speed pump / High-efficiency pump
- 3) Natural circulation clapet valve
- 4) Union with built-in ball valve
- 5) Temperature gauge housing
- 6) Insulation

Construction details

Single casting and reversibility

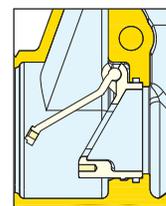
The compact brass single casting, that houses the pump and functional components, enables immediate installation of the device, either on the right or left of the solid fuel generator, respecting the flow directions as shown. The temperature gauges can be extracted from the housings and re-inserted in the same position on the back side of the unit.

Anti-condensation valve

This device incorporates a thermostatic sensor to control the temperature of the water returning to the solid fuel generator so as to prevent condensation. The sensor has been specifically realised to be removed from the valve body for maintenance or replacement if necessary.

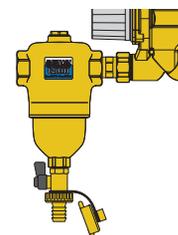
Natural circulation clapet valve

The function of this clapet device is to ensure natural circulation of the medium in the event of pump stop due to an electric supply failure. When the pump is active, the thrust of medium keeps the valve closed, forcing the water to flow through the anti-condensation thermostatic valve. If the event of pump stop, when the water within the generator is at high temperature, a natural circulation of the water begins, by-passing the anti-condensation valve, thus preventing the temperature in the generator from reaching dangerous high levels. The unit is provided with natural circulation valve locked. To activate its function, remove the locking screw.



Dirt separator

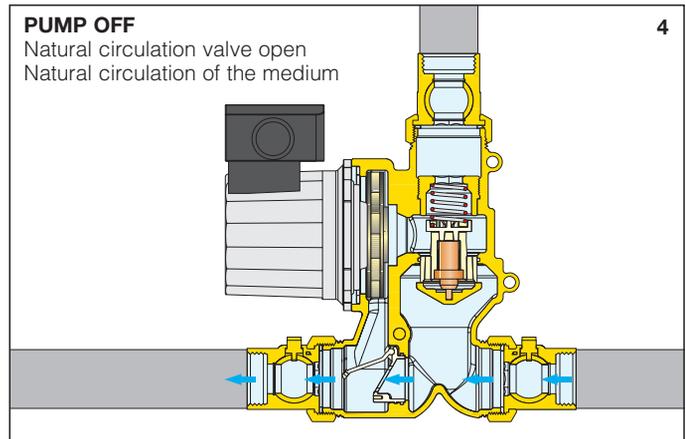
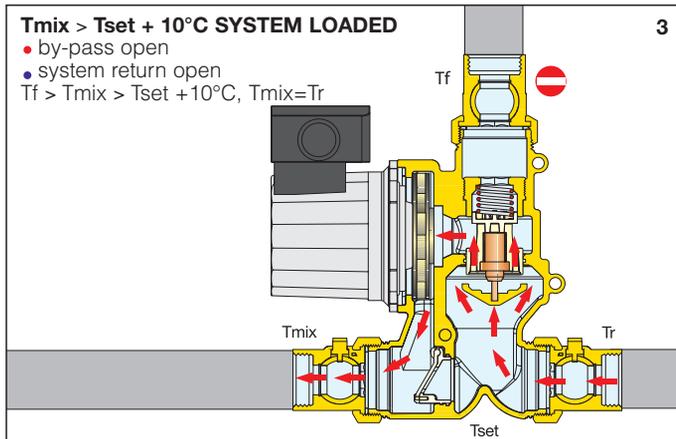
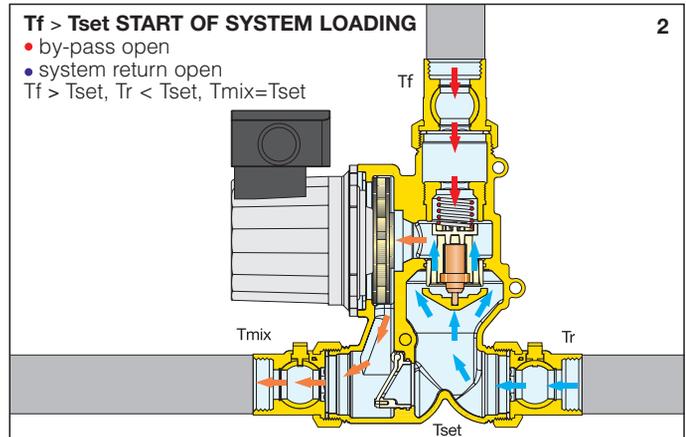
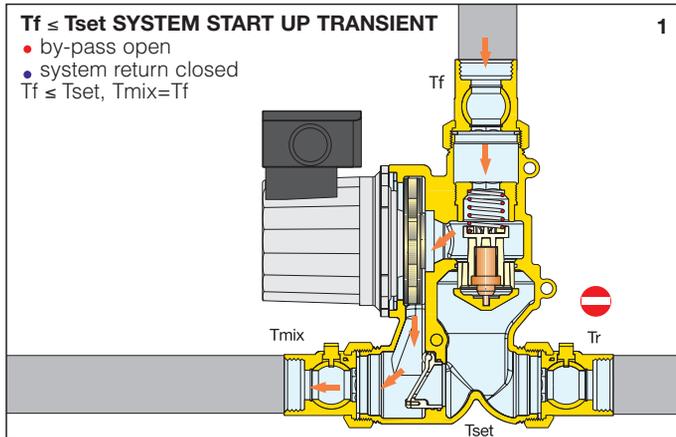
In order to carry out continuous dirt separation in the system it is available the 5462 series DIRTCAL® dirt separator as accessory.



ANTI-CONDENSATION RECIRCULATION AND DISTRIBUTION UNIT

Operating principle

The thermostat, completely immersed in the medium, controls the movement of an obturator that regulates the flows in by-pass and toward the system. On starting up the generator, the recirculation unit recirculates the flow water so as to bring the generator up to temperature as quickly as possible (1). When the flow temperature T_f exceeds the set of the anti-condensation valve T_{set} , the unit's cold port starts opening to produce the mixing T_{mix} : in this phase the system loading begins (2). When the generator return temperature T_{mix} is greater than the set of the anti-condensation valve by approximately 10°C , the by-pass port gets closed and water returns to the generator at the same temperature of the system return (3).

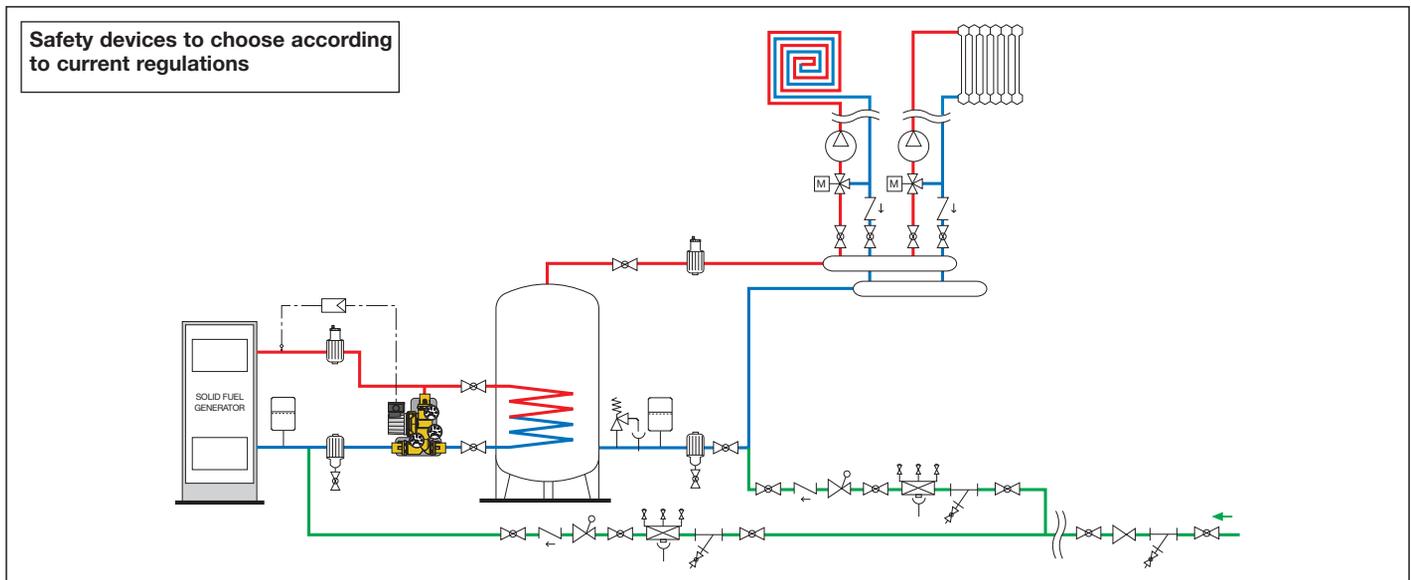


T_f = Flow temperature
 T_{set} = Anti-condensation set temperature

T_{mix} = Mixed water temperature of generator return
 T_r = System return temperature

Application diagram

System with inertial storage



CONNECTION AND ENERGY MANAGEMENT COMPACT UNIT (heating version)

NEW

2850

tech. broch. 01259

Connection and energy management compact unit
 Female threaded connections.
 Primary side connections: 1" F.
 Secondary side system connections: 1" F.
 Secondary side boiler connections: 3/4" F.
 Medium: water, glycol solutions.
 Max. percentage of glycol: 30%.
 Temperature range: 5–100°C.
 Max. working pressure: 10 bar.
 Max. heat exchanger net output: 35 kW.
 Max. recommended primary circuit flow rate: 1,7 m³/h.
 Max. recommended secondary circuit flow rate: 1,7 m³/h.
 Anti-condensation set temperature (Tset): 55°C.
 Setting accuracy: ±2°C.
 By-pass complete closing temperature: $T_{mix} = T_{set} + 10^{\circ}\text{C} = Tr$.

Regulator

Supply: 230 V - 50/60 Hz.

Pumps

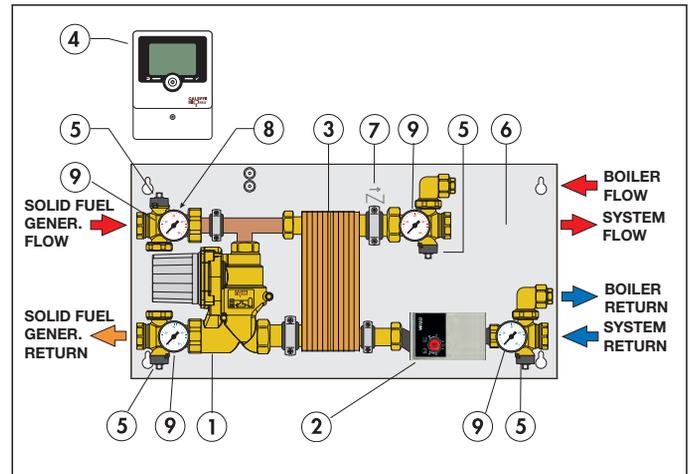
Primary circuit: 3 speed pump RS 4-3 or
 high-efficiency YONOS PARA 25/6 RKC.
 Secondary circuit: high-efficiency variable speed pump
 YONOS PARA 15/6 RKA.



Function

Main functional features:

- connection of new solid fuel generators (**both boilers and residential devices, with maximum heat output of 35 kW, both with open or closed vessel**);
- automatic operation management between the solid fuel generator and boiler;
- built-in anti-condensation system (optional) for solid fuel generator;
- compact unit with reduced overall dimensions, with easy hydraulic connection.



Characteristic components

- 1) Single casting unit with RS 4-3 or YONOS PARA 25/6 RKC pump, complete with anti-condensation valve (optional), primary side
- 2) YONOS PARA 15/6 RKA pump, secondary side (system)
- 3) Brazed plate heat exchanger
- 4) Digital regulator
- 5) Shut-off valve
- 6) Wall mounting template
- 7) Check valve
- 8) Manual air vent
- 9) Temperature gauge

Code	Conn.	Primary circulation pump		
285060HE1	1"	RS 4-3 without anti-condensation valve	1	–
285065HE1	1"	RS 4-3	1	–
285060HE2	1"	Y. P. 15/6 without anti-condensation valve	1	–
285065HE2	1"	Y. P. 15/6	1	–

Painted steel cover RAL 9010.



Code		
285010	1	–

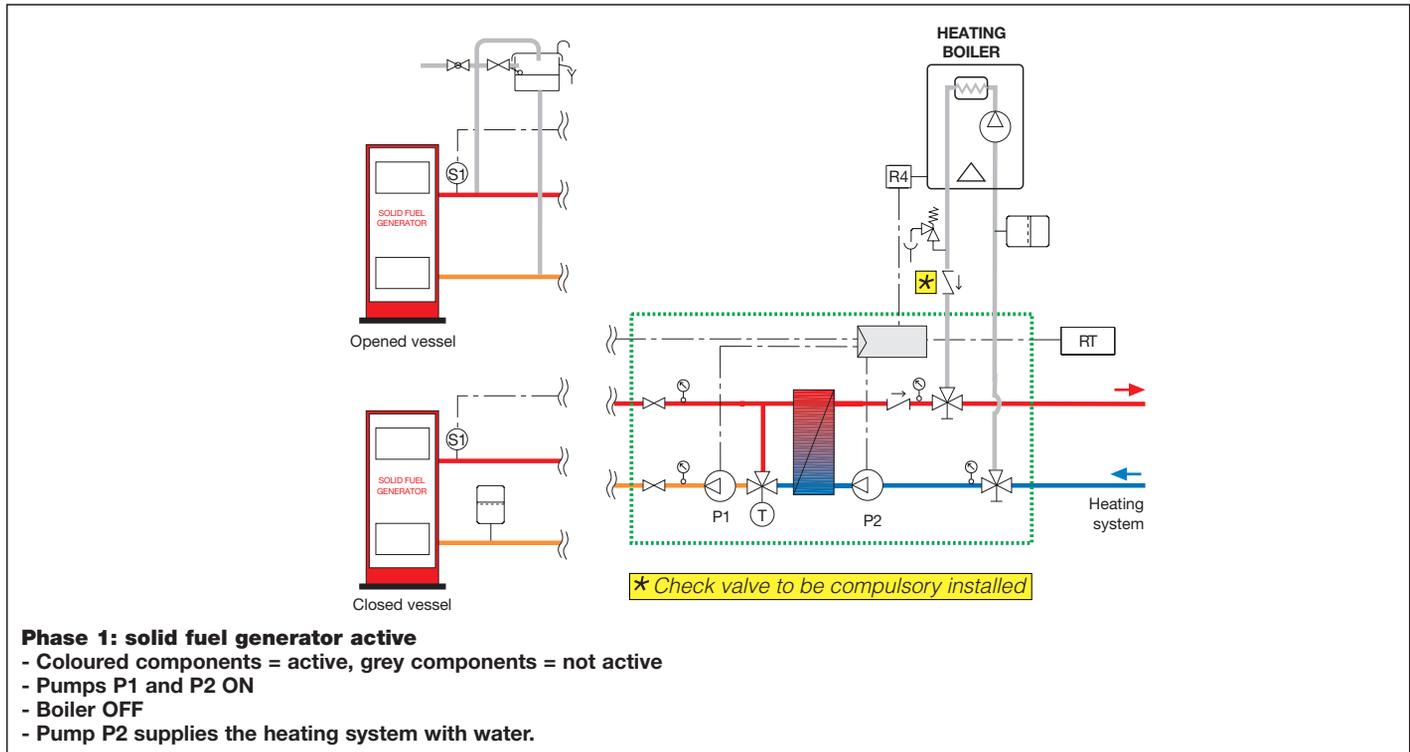
For spare thermostats see page 250

CONNECTION AND ENERGY MANAGEMENT COMPACT UNIT (heating version)

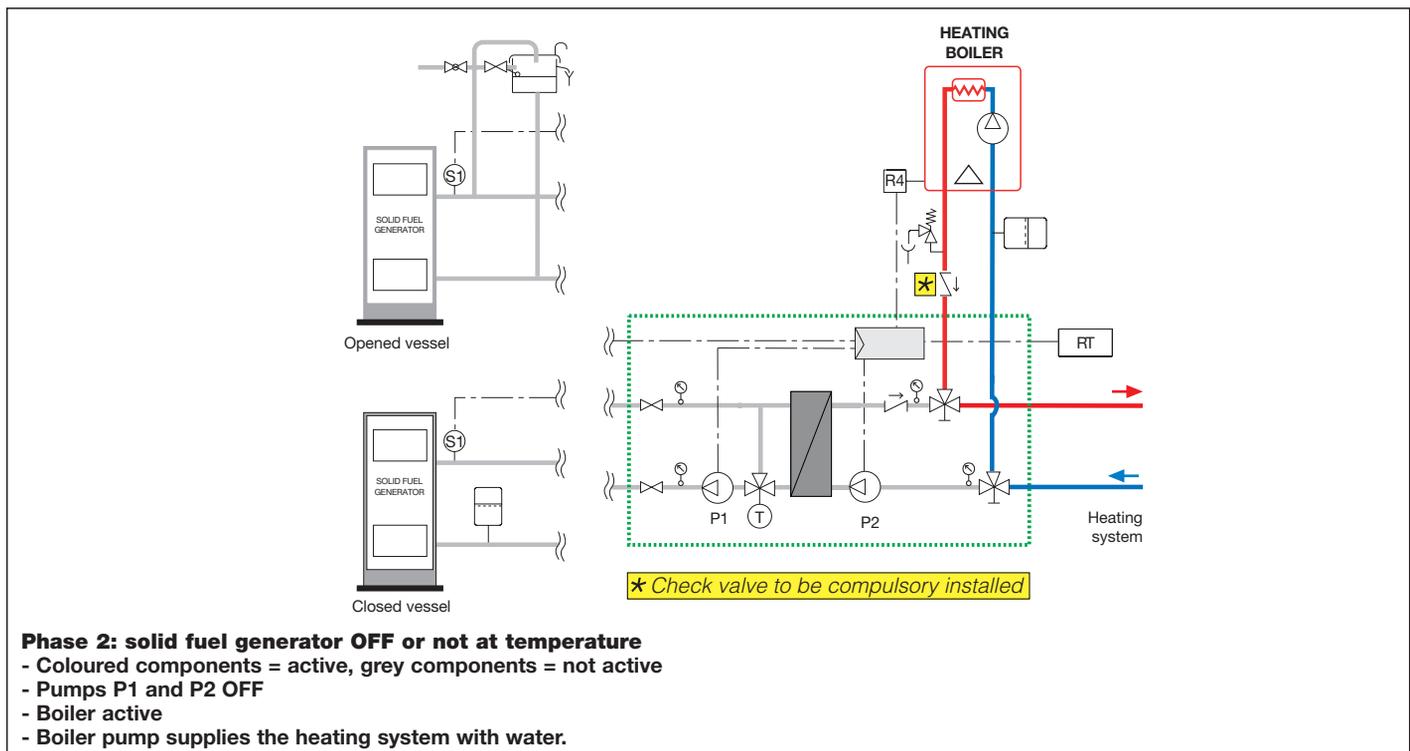
Operating conditions

The digital regulator automatically manages the unit's operation, receiving the signal from the probe on the solid fuel generator flow pipe and activating the pumps. If the solid fuel generator is not active, the boiler is activated for the heating system.

Heating with solid fuel generator



Heating with boiler



CONNECTION AND ENERGY MANAGEMENT UNIT (heating version)

2851

 **tech. broch. 01227**

Connection and energy management unit, heating version.

Male threaded connections.

Medium: water, glycol solutions.

Max. percentage of glycol: 30%.

Temperature range: 5–100°C.

Max. working pressure: 10 bar.

Max. heat exchanger net output: 35 kW.

Max. recommended primary circuit flow rate: 1,5 m³/h.

Max. recommended secondary circuit flow rate (system): 1,5 m³/h.

Anti-condensation set temperature (optional): 45°C, 55°C, 60°C, 70°C.

Setting accuracy: ±2°C.

By-pass complete closing temperature: $T_{mix} = T_{set} + 10°C = Tr$.

Regulator

Supply: 230 V - 50/60 Hz.

Pumps

High-efficiency pump:

YONOS PARA 25/6 RKA, YONOS PARA 15/6 RKA.

Diverter valve with spring return

Max. working pressure: 10 bar.

Δp max.: 1 bar.

Diverter valve actuator with spring return

Synchronous motor.

Normally closed.

Supply: 230 V - 50 Hz.

Opening time: 70–75 s.

Closing time: 5–7 s.



Code



28515.WYP	3/4" M	1	–
285150WYP	3/4" M without anti-condensation valve	1	–

• Code completion

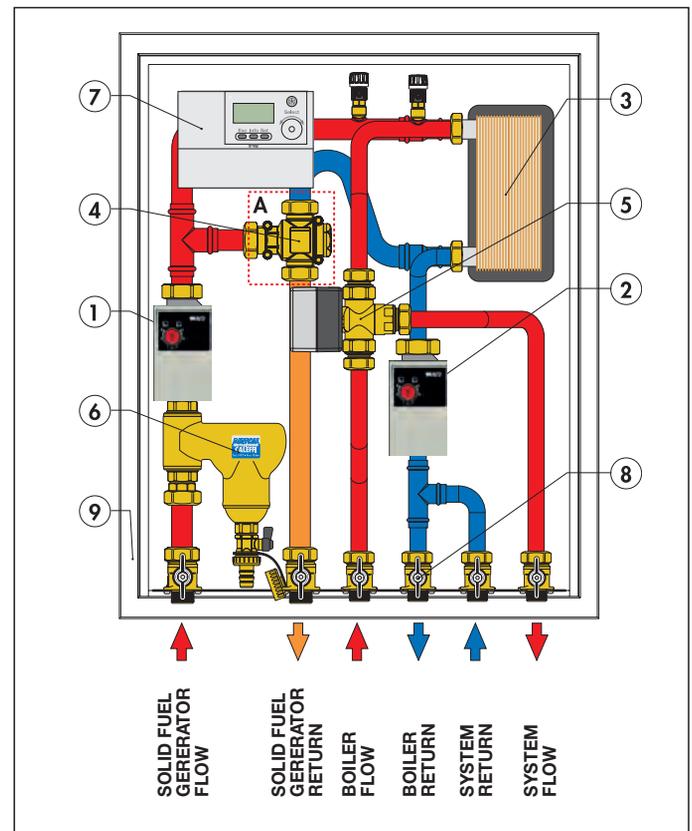
Setting	45°C	55°C	60°C	70°C	
	•	4	5	6	7

**For spare thermostats
see page 250**

Function

Main functional features:

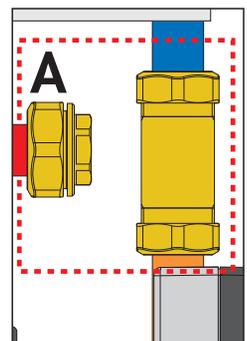
- connection of new solid fuel generators (**both boilers and residential devices, with maximum heat output of 35 kW, both with open or closed vessel**) with other closed vessel generators;
- possibility of **not adding the power outputs of the two generators as described in INAIL (Italy)**;
- automatic system management with a specific digital regulator for heating circuits and simple solar thermal system;
- built-in anti-condensation system (optional) for solid fuel generator;
- easy access to components for maintenance;
- practical installation thanks to the arrangement in a box.



Characteristic components

- 1) Wilo YONOS PARA 25/6 RKA pump on primary side for solid fuel generator
- 2) Wilo YONOS PARA 15/6 RKA pump on secondary side (system)
- 3) Brazed plate heat exchanger
- 4) Anti-condensation valve (optional)
- 5) Three-way diverter valve with spring return
- 6) Dirt separator
- 7) Digital regulator
- 8) Shut-off ball valves
- 9) Box for exposed mounting

Code 285150WYP without anti-condensation valve



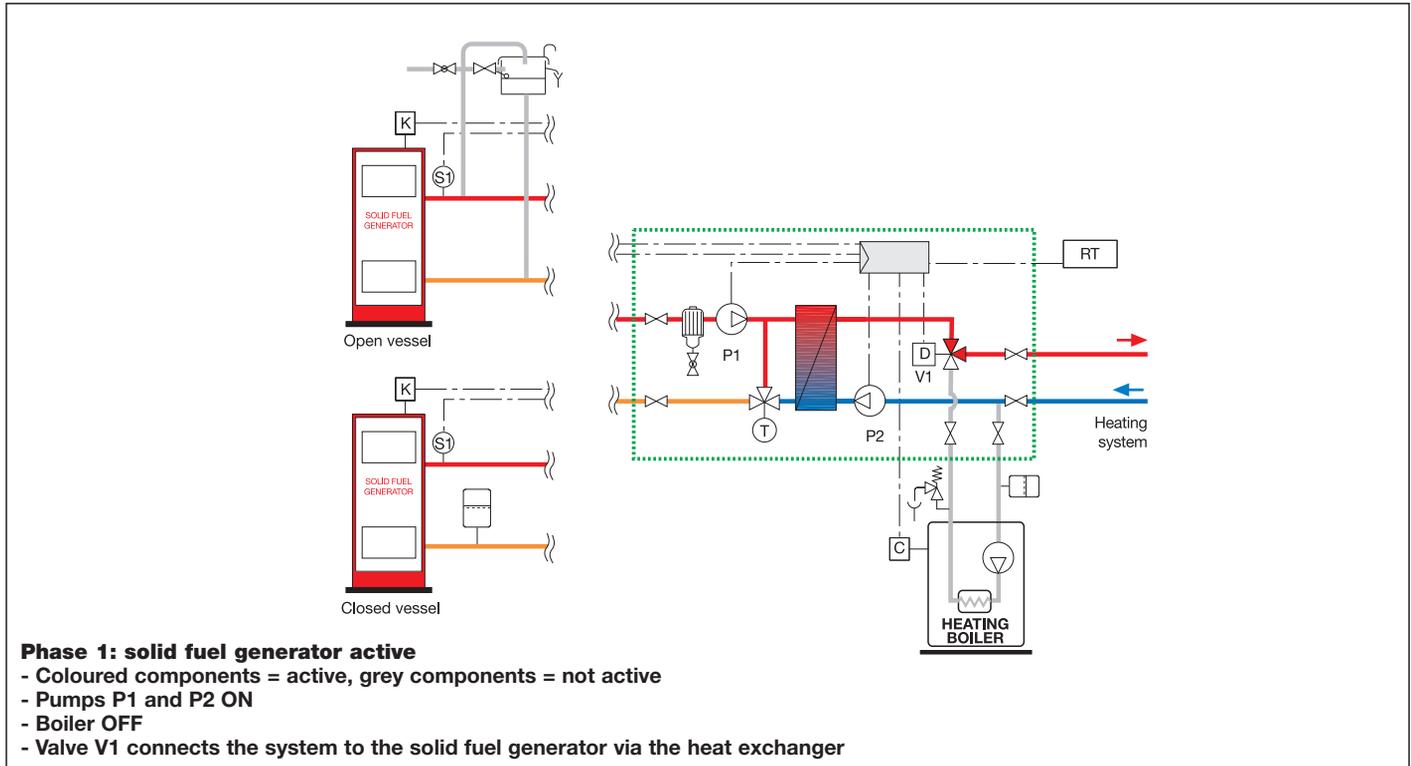
A) Code 285150WYP without anti-condensation valve

CONNECTION AND ENERGY MANAGEMENT UNIT (heating version)

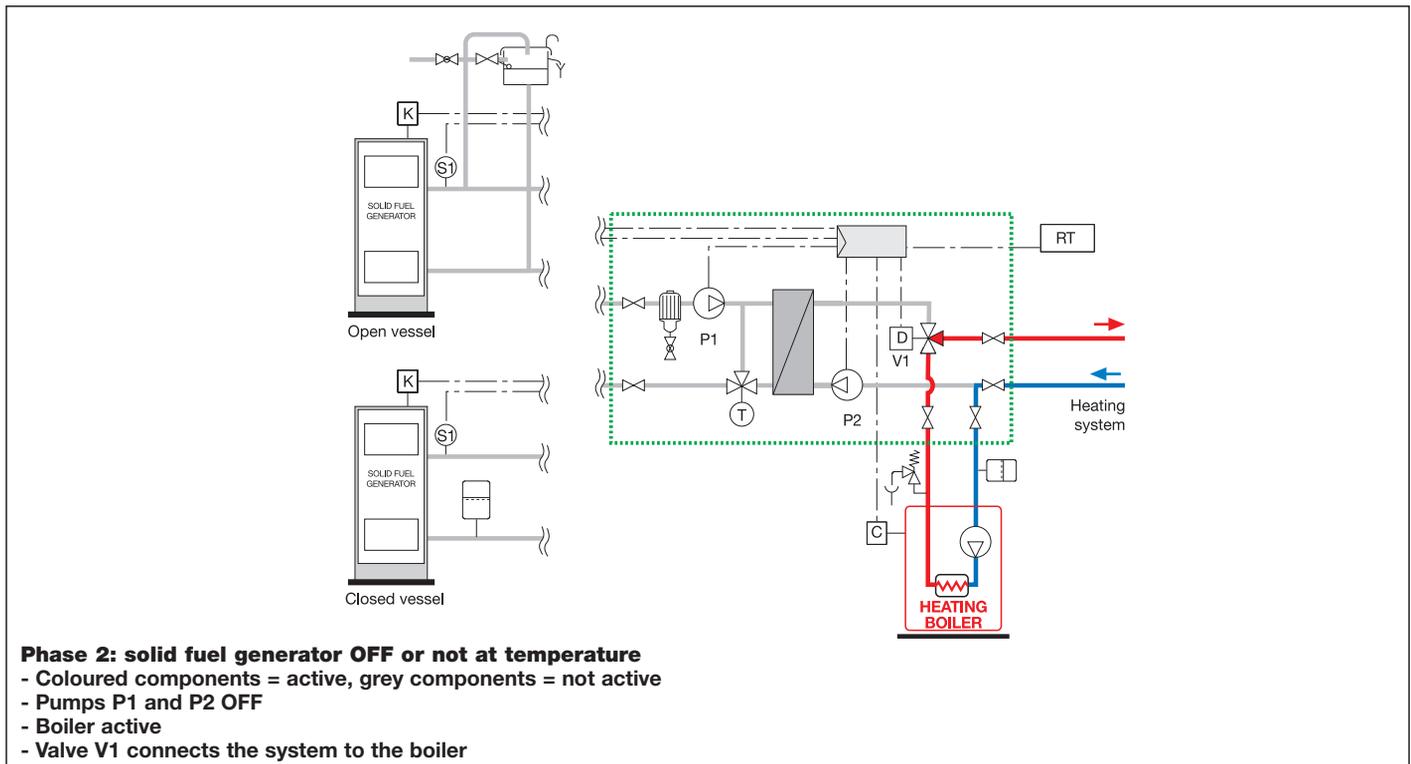
Operating conditions

The digital regulator automatically manages the unit's operation, receiving the signal from the probes and activating the pumps, the motorized valve and the generators. The heating circuit is managed according to need.

Heating with solid fuel generator



Heating with boiler



CONNECTION AND ENERGY MANAGEMENT UNIT (heating and domestic hot water with storage version)

2853

 **tech. broch. 01228**

Connection and energy management unit, heating and domestic hot water with storage version. Male threaded connections.
 Medium: water, glycol solutions.
 Max. percentage of glycol: 30%.
 Temperature range: 5–100°C.
 Max. working pressure: 10 bar.
 Max. heat exchanger net output: 35 kW.
 Max. recommended primary circuit flow rate: 1,5 m³/h.
 Max. recommended secondary circuit flow rate (system): 1,5 m³/h.
 Anti-condensation set temperature (optional): 45°C, 55°C, 60°C, 70°C.
 Setting accuracy: ±2°C.
 By-pass complete closing temperature: $T_{mix} = T_{set} + 10^\circ\text{C} = T_r$.

Regulator

Supply: 230 V - 50/60 Hz.

Pumps

High-efficiency pump:
 YONOS PARA 25/6 RKA, YONOS PARA 15/6 RKA.

Diverter valves with spring return

Max. working pressure: 10 bar.
 Δp max.: 1 bar.

Diverter valve actuator with spring return

Synchronous motor.
 Normally closed.
 Supply: 230 V - 50 Hz.
 Opening time: 70–75 s.
 Closing time: 5–7 s.



Code



28535.WYP	3/4" M	1	–
285350WYP	3/4" M without anti-condensation valve	1	–

• Code completion

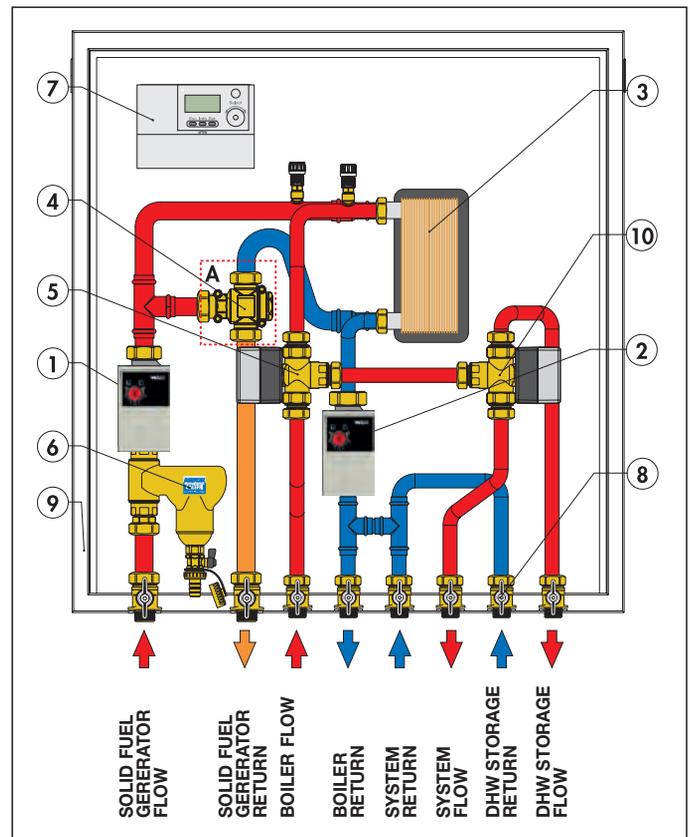
Setting	45°C	55°C	60°C	70°C
•	4	5	6	7

**For spare thermostats
see page 250**

Function

Main functional features:

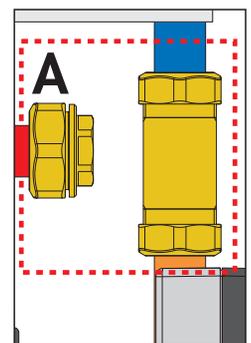
- connection of new solid fuel generators (**both boilers and residential devices, with maximum heat output of 35 kW, both with open or closed vessel**) with other closed vessel generators;
- possibility of **not adding the power outputs of the two generators as described in INAIL (Italy)**;
- automatic system management with a specific digital regulator for heating circuits, domestic water storage and simple solar thermal system;
- built-in anti-condensation system (optional) for solid fuel generator;
- easy access to components for maintenance;
- practical installation thanks to the arrangement in a box.



Characteristic components

- 1) Wilo YONOS PARA 25/6 RKA pump on primary side for solid fuel generator
- 2) Wilo YONOS PARA 15/6 RKA pump on secondary side (system)
- 3) Brazed plate heat exchanger
- 4) Anti-condensation valve (optional)
- 5) Three-way diverter valve with spring return
- 6) Dirt separator
- 7) Digital regulator
- 8) Shut-off ball valves
- 9) Box for exposed mounting
- 10) Three-way diverter valve with spring return for priority on domestic water with storage

Code 285350WYP without anti-condensation valve



A) Code 285350WYP without anti-condensation valve

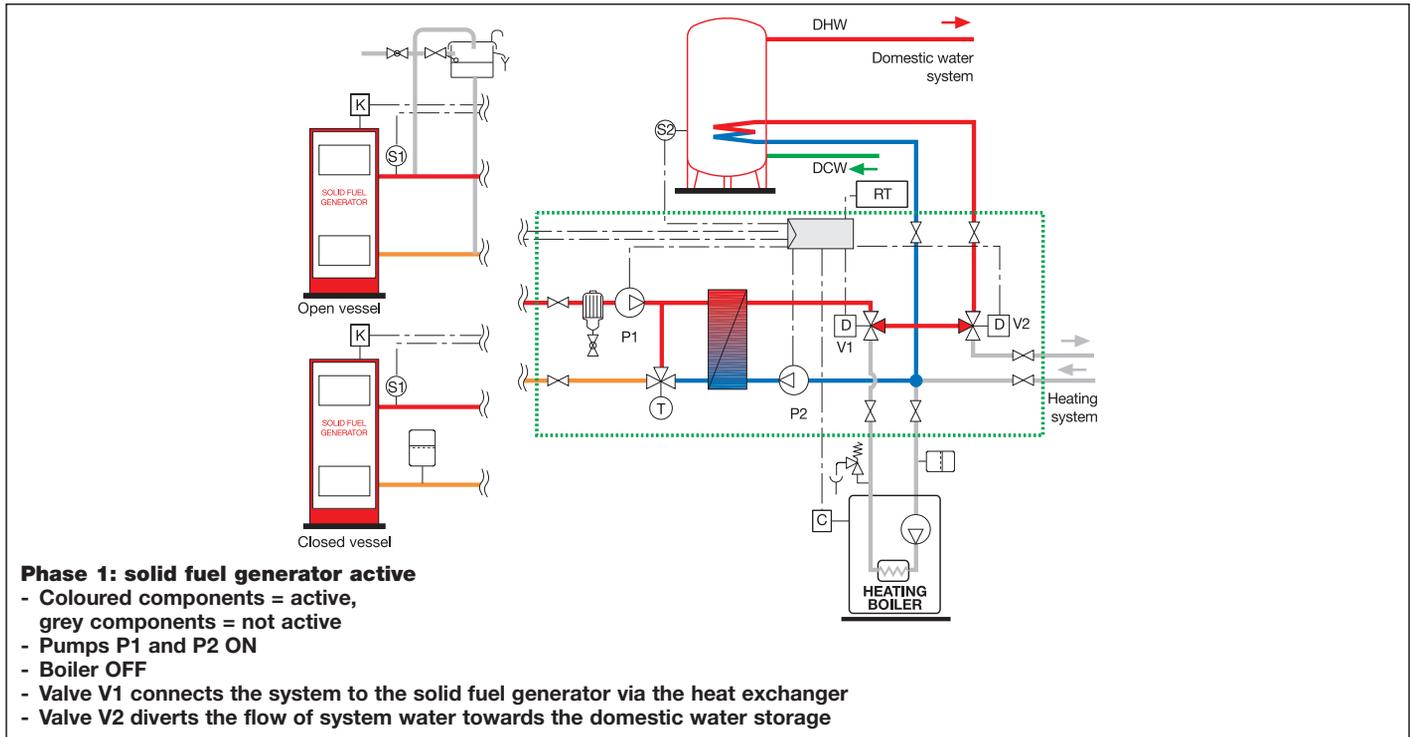
CONNECTION AND ENERGY MANAGEMENT UNIT (heating and domestic hot water with storage version)

Operating conditions

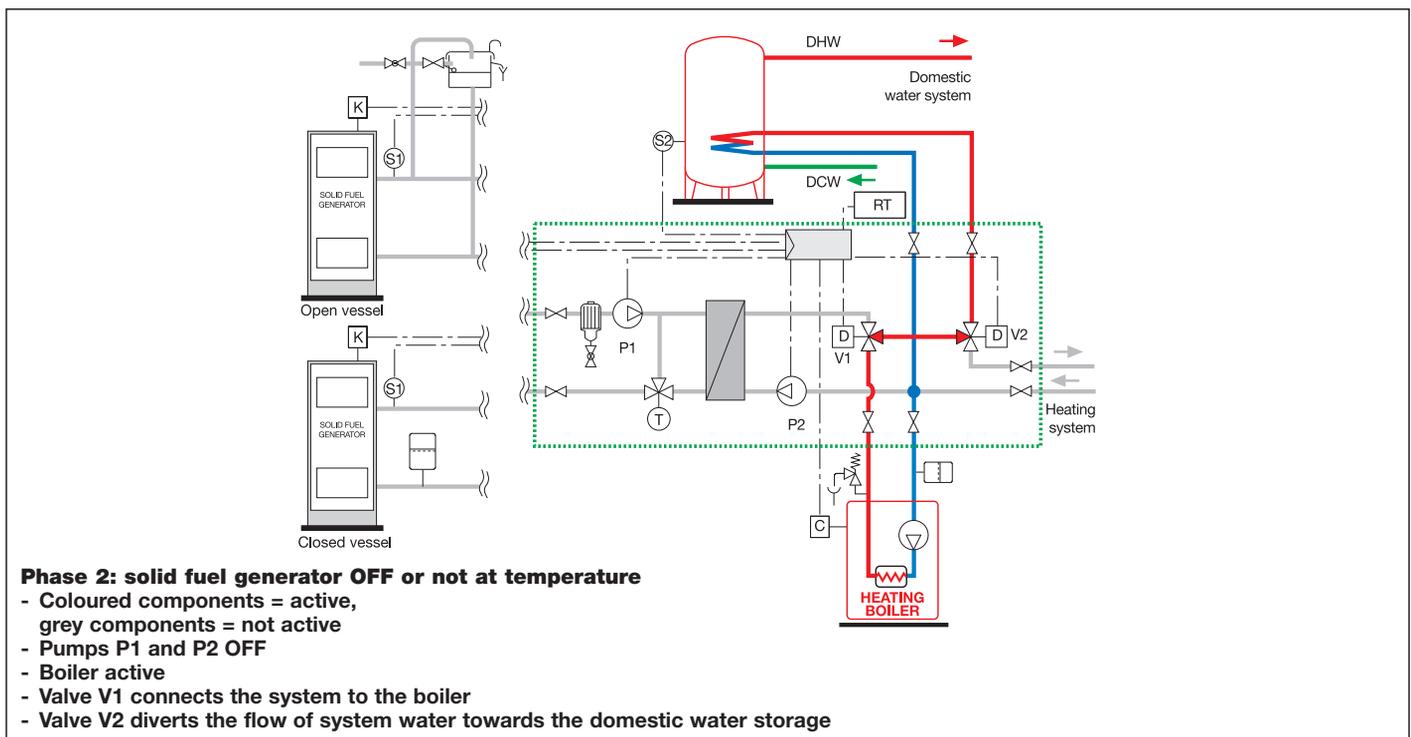
The digital regulator automatically manages the unit's operation, receiving the signal from the probes and activating the pumps, the motorized valves and the generators. The heating circuit and the preparation of domestic hot water with storage are managed according to need.

NOTE: for heating operation, please refer to the diagrams in "Connection and energy management unit, heating version" 2851 series

Domestic hot water production with solid fuel generator



Domestic hot water production with boiler



CONNECTION AND ENERGY MANAGEMENT UNIT (heating and instantaneous domestic hot water version)

2855

tech. broch. 01229

Connection and energy management unit, heating and instantaneous domestic hot water version. Male threaded connections.
 Medium: water, glycol solutions.
 Max. percentage of glycol: 30%.
 Temperature range: 5–100°C.
 Max. working pressure: 10 bar.
 Max. heat exchanger net output: 35 kW.
 Max. recommended primary circuit flow rate: 1,5 m³/h.
 Max. recommended secondary circuit flow rate (system): 1,5 m³/h.
 Max. domestic hot water heat exchanger net output: 35 kW.
 Max. domestic hot water flow rate delivery: 1,1 m³/h.
 Anti-condensation set temperatures (optional): 45°C, 55°C, 60°C, 70°C.
 Setting accuracy: ±2°C.
 By-pass complete closing temperature: $T_{mix} = T_{set} + 10^\circ C = Tr$.

Regulator

Supply: 230 V - 50/60 Hz.

Pumps

High-efficiency pump:
 YONOS PARA 25/6 RKA, YONOS PARA 15/6 RKA.

Flow switch

Contacts normally open (NO).
 Contacts close with increasing flow at: 156 l/h.
 Contacts open with decreasing flow at: 108 l/h.

Diverter valve with spring return

Max. working pressure: 10 bar.
 Δp max.: 1 bar.

Diverter valve actuator with spring return

Synchronous motor.
 Normally closed.
 Supply: 230 V - 50 Hz.
 Opening time: 70–75 s.
 Closing time: 5–7 s.

Diverter ball valve for DHW priority

Max. working pressure: 10 bar.
 Δp max.: 10 bar.

Diverter ball valve actuator for DHW priority

Synchronous motor
 Supply: 230 V (±10%) - 50/60 Hz.
 Operating time (angle of rotation 90°): 10 s.



Code



28555.WYP	3/4" M	1	–
285550WYP	3/4" M without anti-condensation valve	1	–

• Code completion

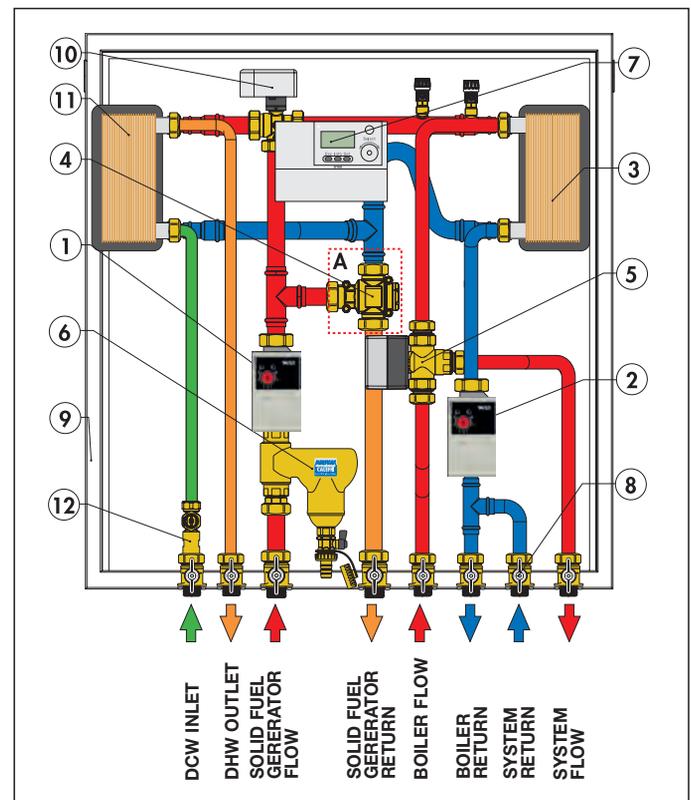
Setting	45°C	55°C	60°C	70°C
•	4	5	6	7

**For spare thermostats
see page 250**

Function

Main functional features:

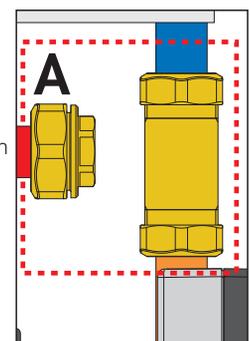
- connection of new solid fuel generators (**both boilers and residential devices, with maximum heat output of 35 kW, both with open or closed vessel**) with other closed vessel generators;
- possibility of **not adding the power outputs of the two generators as described in INAIL (Italy)**;
- automatic system management with a specific digital regulator for heating circuits, instantaneous production of domestic hot water and simple solar thermal system;
- built-in anti-condensation system (optional) for solid fuel generator;
- easy access to components for maintenance;
- practical installation thanks to the arrangement in a box.



Characteristic components

- 1) Wilo YONOS PARA 25/6 RKA pump on primary side for solid fuel generator
- 2) Wilo YONOS PARA 15/6 RKA pump on secondary side (system)
- 3) Brazed plate heat exchanger for heating
- 4) Anti-condensation valve (optional)
- 5) Three-way diverter valve with spring return
- 6) Dirt separator
- 7) Digital regulator
- 8) Shut-off ball valves
- 9) Box for exposed mounting
- 10) Three-way three point diverter ball valve for DHW priority
- 11) Brazed plate heat exchanger for DHW
- 12) Flow switch

Code 28550WYP without anti-condensation valve



A) Code 28550WYP without anti-condensation valve

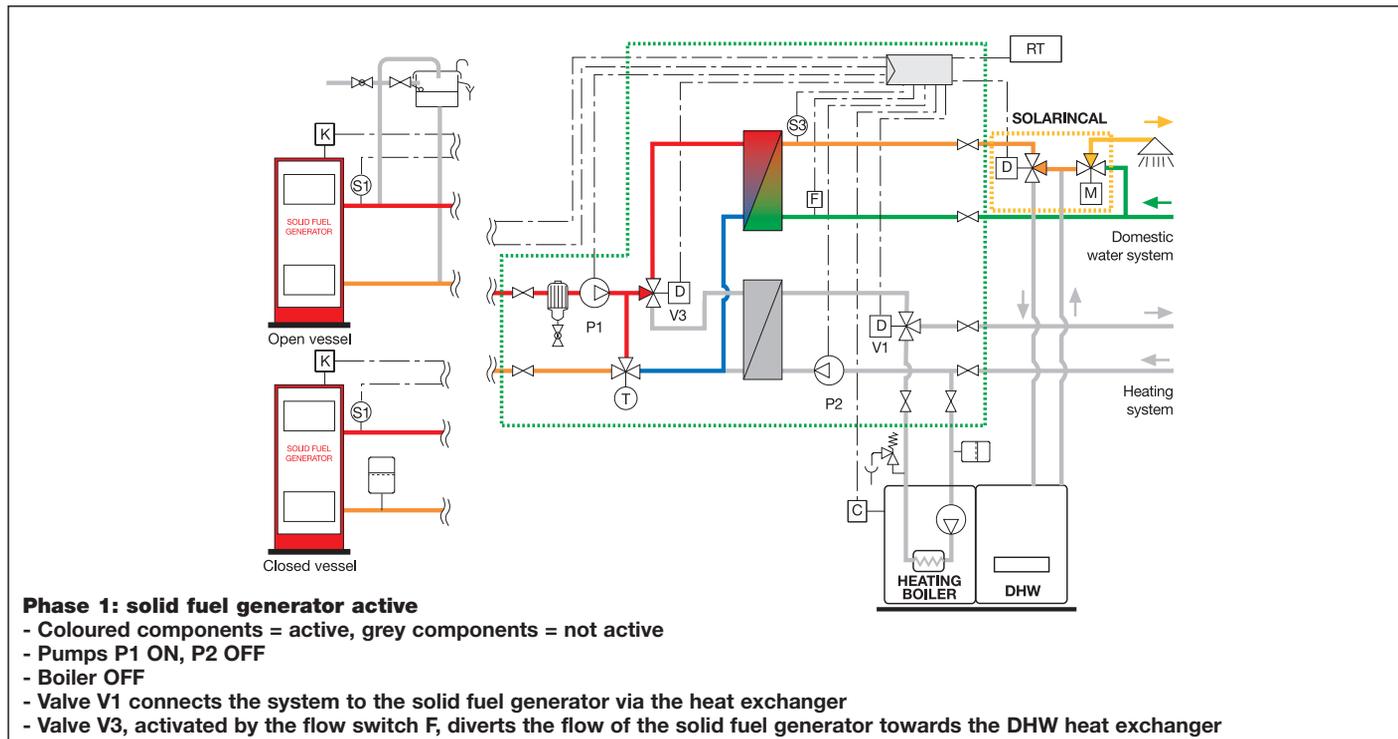
CONNECTION AND ENERGY MANAGEMENT UNIT (heating and instantaneous domestic hot water version)

Operating conditions

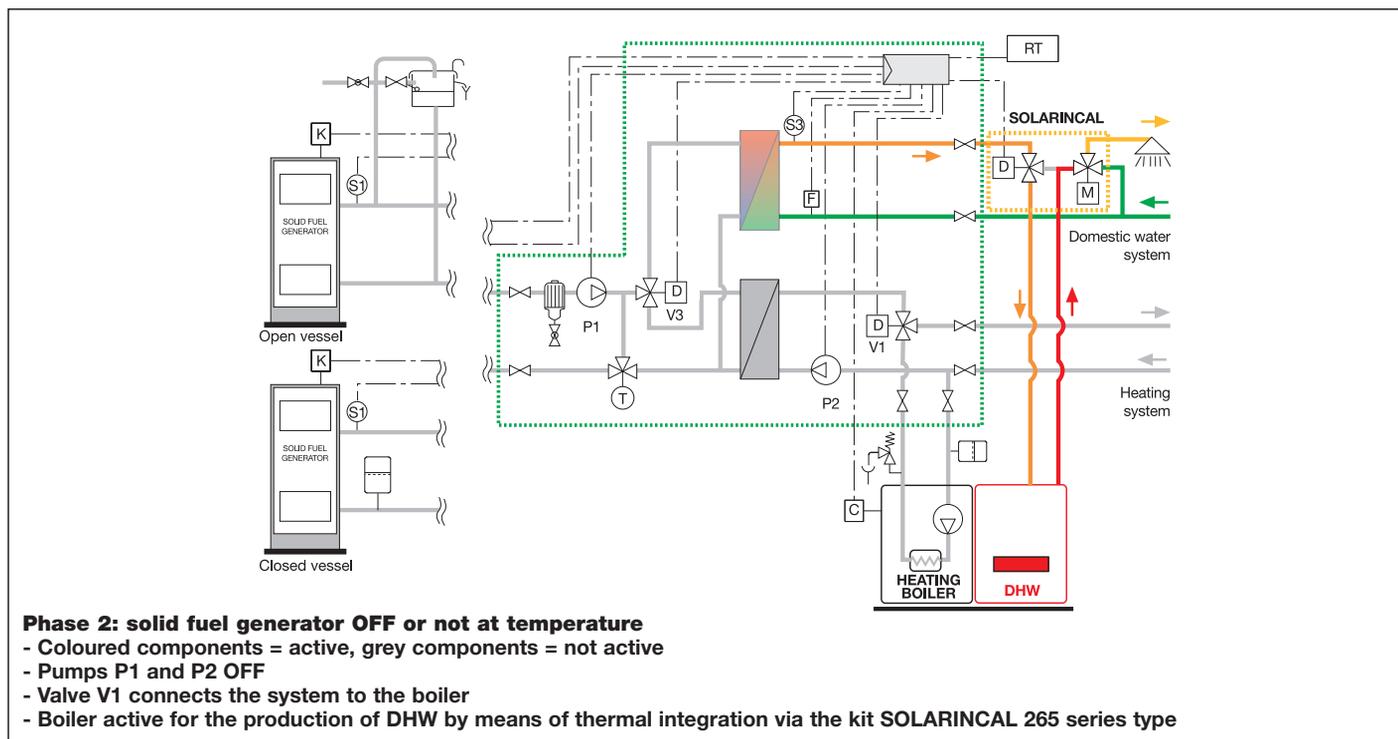
The digital regulator automatically manages the unit's operation, receiving the signal from the probes and activating the pumps, the motorized valves and the generators. The heating circuit and the instantaneous preparation of domestic hot water are managed according to need.

Note: for heating operation, please refer to the diagrams in "Connection and energy management unit, heating version" 2851 series

Domestic hot water production with solid fuel generator



Domestic hot water production with boiler



DIGITAL REGULATOR FOR SYSTEMS WITH SOLID FUEL GENERATOR



1522

Digital regulator for systems with solid fuel generator.
Supply: 230 V (ac); ±10%, 50/60 Hz.
Protection class: II.
Protection class: IP 40.
Complete with three probes.

Optional probes to choose according to the type of system.



Code

152200



1

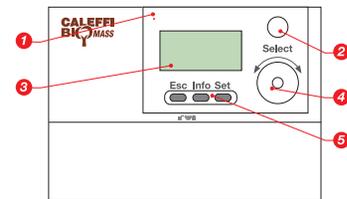
Function

The digital regulator makes it possible to combine a solid fuel generator with another type of generator already present in the heating system. The digital regulator automatically manages the two generators, receiving the signal from the probes and activating the pumps, the motorized diverter valves in the system, according to the heating circuit needs.

Depending on the type and quantity of installed probes, the regulator supports the following system solutions:

- heating;
- production of domestic hot water by means of storage or instantaneous with plate heat exchanger;
- management of inertial water storage in parallel on the heating circuit or alternatively management of an independent solar system and direct inertial water storage.

The regulator has different programs which can be customized by user to several system situations.



Description of controls

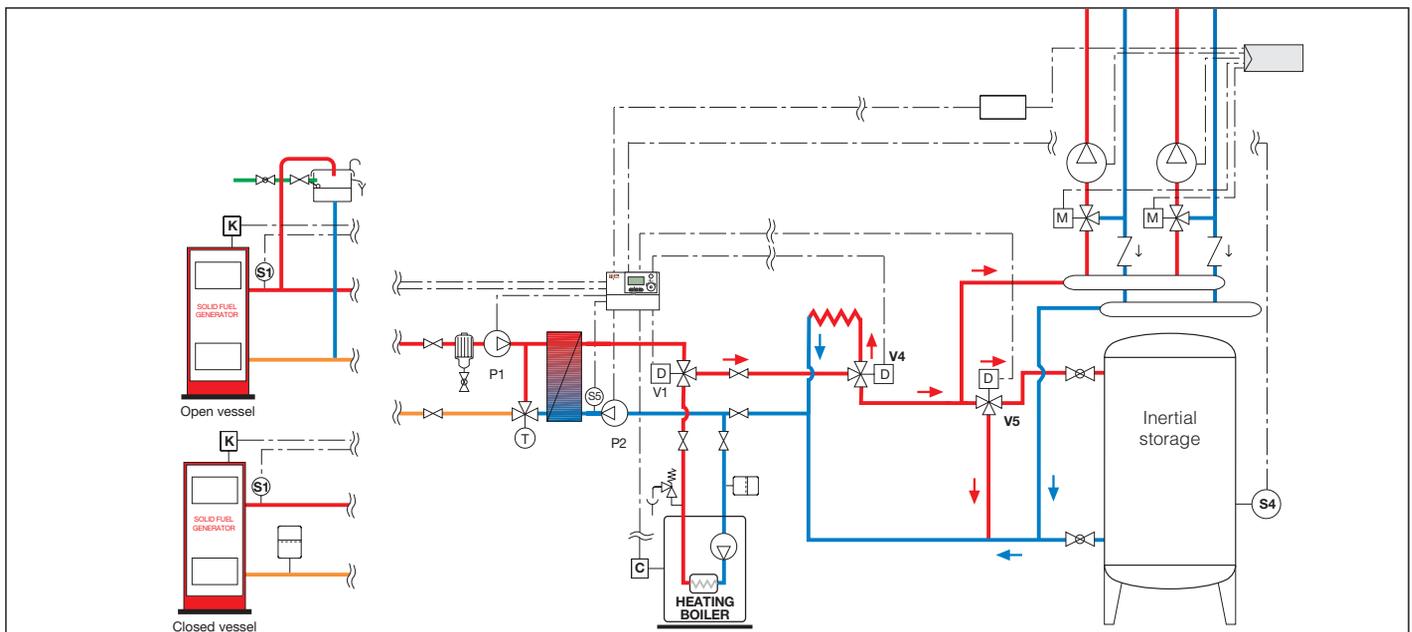
1. Functional status indicator LED.
2. Mini DIN connector on front of panel for PC connection.
3. Display: menu display.
4. Select knob: selection of menu, functions and parameter editing.
5. Function keys.

Program diagrams

The regulator allows the management of a thermal system complete with solid fuel generator, a boiler and an inertial water storage in parallel.

The phases of storage loading and unloading are automatically controlled, according to the system needs, with the consequent activation or deactivation of the boiler and the solid fuel generator.

Depending on the system type, different programs are available to design various functional configurations, both for the heating and the domestic hot water production.



SOLID FUEL GENERATOR-TO-GAS BOILER CONNECTION KIT

The integration kits make it possible to combine solid fuel generators, equipped with domestic water storage or instantaneous heat exchanger, with gas boilers. Depending on the temperature, the domestic water arriving from the solid fuel generator is sent directly to the user or diverted into the boiler for thermal integration.

265 SOLARINCAL

tech. broch. 01163



Function

The thermostat, by means of the probe positioned on the hot water flow from the storage or the DHW heat exchanger built-in inside the solid fuel generator, controls the diverter valve at the kit inlet. Depending on the temperature setting, the valve diverts the water towards the user circuit or the boiler circuit, **with thermal integration**. A thermostatic anti-scald mixing valve, at the kit outlet, constantly controls the temperature of the water sent to the user.

Code			
265352	3/4"	1	-

For technical details see page 231

Accessories for connection kit 265 series.

Code		
F29525	box with switching 3 contact relay	
F29466	Ø 15 mm probe	
F29467	pocket for Ø 15 mm probe	

262 SOLARINCAL-T

tech. broch. 01164



Function

A thermostatic diverter valve, at the kit inlet, receives the hot water coming from the storage or the DHW heat exchanger built-in inside the solid fuel generator. Depending on the temperature setting, the valve diverts the water automatically and in a proportional manner towards the user circuit or the **boiler with storage circuit, with thermal integration**. The valve modulates the flow rates to optimise the energy contained within the storage or instantly produced by the heat exchanger built-in inside the solid fuel generator and reduces boiler operation times to a minimum. A thermostatic anti-scald mixing valve, at the kit outlet, constantly controls and limits the temperature of the water sent to the user.

Code			
262350	3/4"	1	-

For technical details see page 232

263 SOLARINCAL-T PLUS

tech. broch. 01164



Function

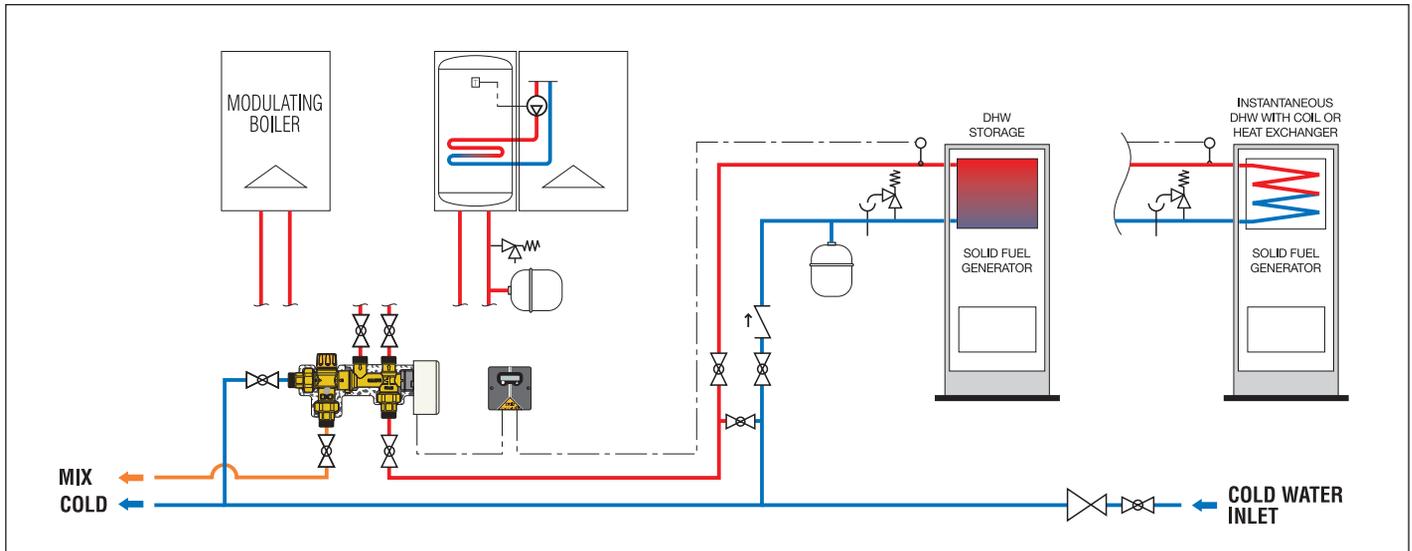
A thermostatic diverter valve, at the kit inlet, receives hot water coming from the storage or the DHW heat exchanger built-in inside the solid fuel generator. Depending on the temperature setting, the valve diverts the water automatically and proportionally towards the user circuit or the **instantaneous boiler circuit, with thermal integration**. The valve modulates the flow rates to optimise the energy contained within the storage or instantly produced by the heat exchanger built-in inside the solid fuel generator and reduces boiler operation times to a minimum. A specific thermostatic control device limits the boiler inlet temperature to prevent it being switched on and off too often, which leads to hunting and irregular operation. A thermostatic anti-scald mixing valve, at the kit outlet, constantly controls the temperature of the water sent to the user.

Code			
263350	3/4"	1	-

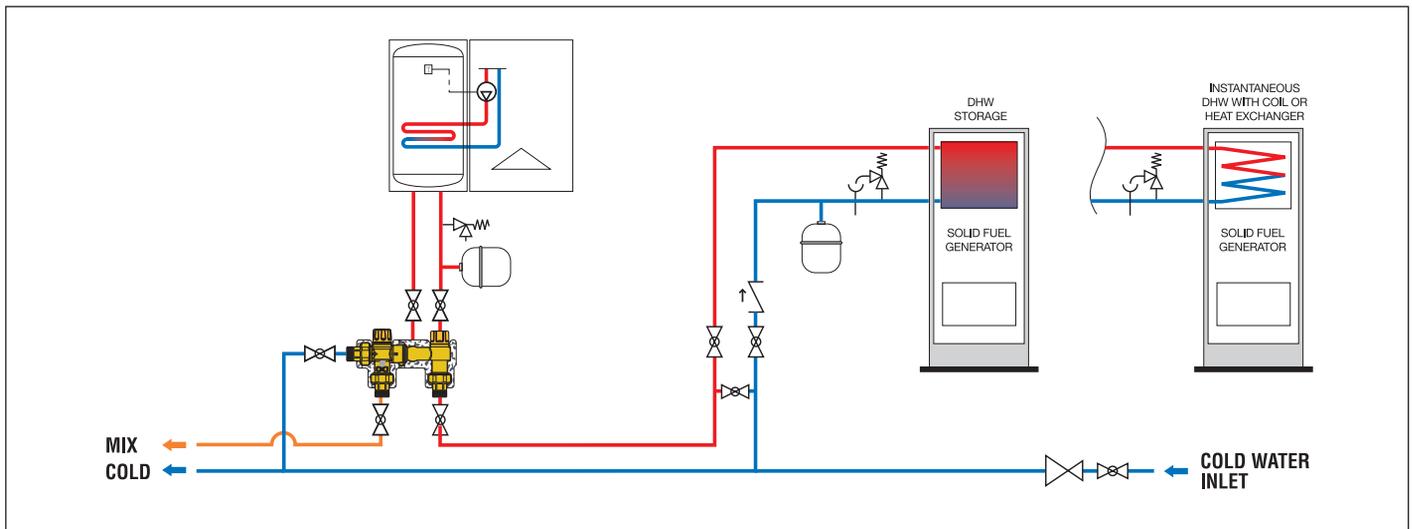
For technical details see page 233

SOLID FUEL GENERATOR-TO-GAS BOILER CONNECTION KIT

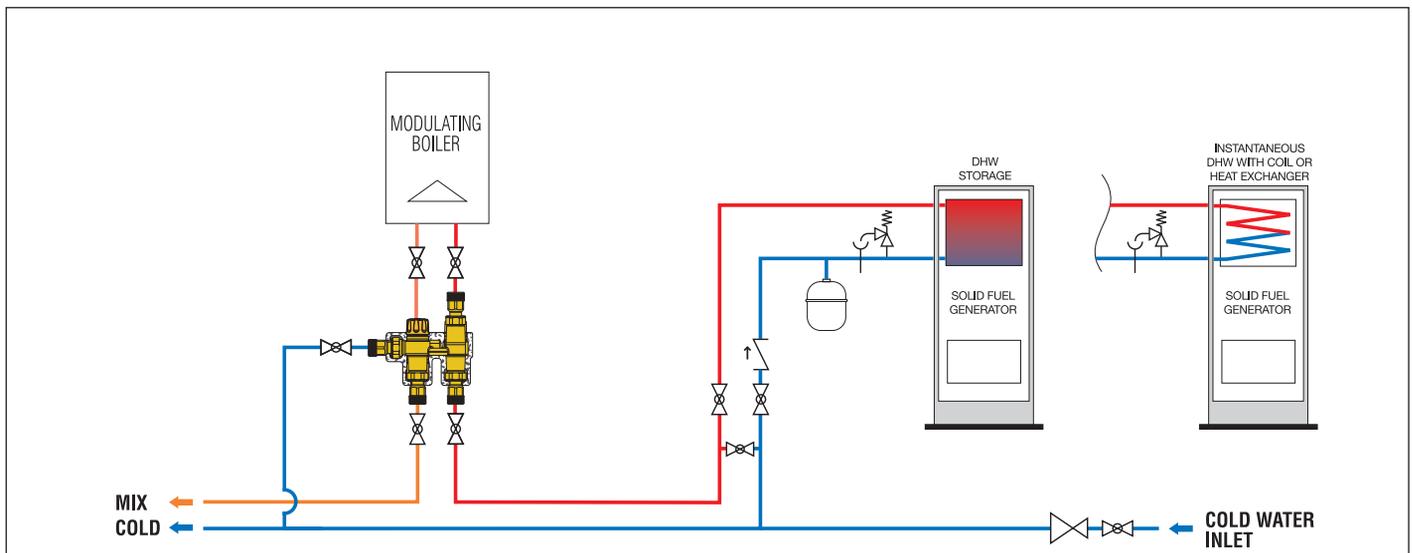
Application diagram of kit SOLARINCAL 265 series with solid fuel generator



Application diagram of kit SOLARINCAL-T 262 series with solid fuel generator

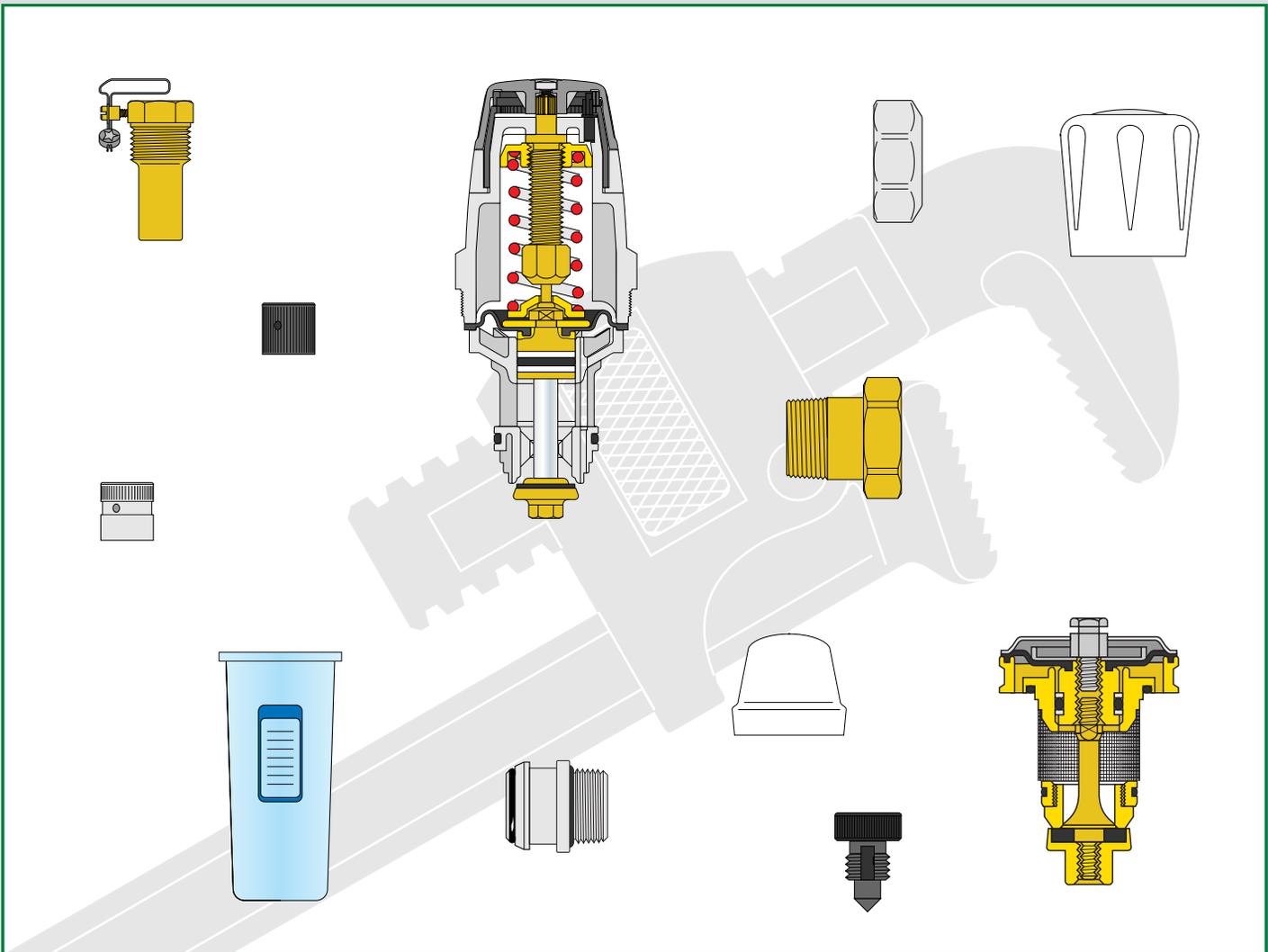


Application diagram of kit SOLARINCAL-T PLUS 263 series with solid fuel generator



SPARE PARTS

This diagram is just an indication



- Fuel shut-off valve
- Temperature safety relief valve
- Filling unit
- Air vents
- Radiator and lockshield valves
- One-pipe radiator valves
- Zone valves
- Distribution manifolds
- Manifolds for radiant panel systems
- Pressure reducing valves
- Thermostatic mixing valves
- Backflow preventers
- Fittings with O-Ring seal
- Thermostatic mixing valves for solar thermal systems

Fuel shut-off valve

page 10



Brass pocket for fuel shut-off devices. For 540 (97°C) and 541 (98°C) series.

Code

F51677	1/2"-2"
F31674	DN 65 - DN 80 - DN 100

Air vents

pages 28, 29



Cap in plastic, for 5020, 5021 and 5022 series.

Code

R56214



Cap in chrome plated brass, for 5020, 5021 and 5022 series.

Code

R59119/C

Temperature safety relief valve

page 11



Pocket for temperature safety relief valves.

Code

R59089/C



Cap for ROBOCAL valves.

Code

R56142

Filling unit

page 14



Union with gasket and strainer for filling unit codes 553040 and 553140.

Code

R59132 1/2"

Radiator and lockshield valves

pages 42, 43, 46, 47, 48, 49, 50, 54



Union with rubber seal, for 3/8" and 1/2" radiator and lockshield valves.

Code

R49176/C 3/8"

R49175/C 1/2"



Union tailpiece, nut and gasket for filling unit codes 553540 and 553640.

Code

R51131 union tailpiece

R41186 nut

R50058 gasket



Tailpiece, nut and O-Ring for 3/4" radiator and lockshield valves.

Code

R49094/C tailpiece with O-Ring

R61008/C nut

R47021 O-Ring



Components for convertible radiator valves knob.

Code

R36074	knob	3/8" - 1/2"
R46036	knob	3/4" - 1"
R36075	cap	3/8" - 1/2" - 3/4" - 1"
R36076	sleeve	3/8" - 1/2"
R46037	sleeve	3/4" - 1"



Knob for radiator.

Code

449200	
449210	for new headwork



Cap for lockshield valves.

Code

449300	
---------------	--



Adapter for installing thermostatic and thermo-electric actuator with valves 338, 339, 401, 402 and 455 series.

Code

F36077	
---------------	--



Spare headwork for convertible radiator valves.

Code

F36073	
---------------	--



Components of HIGH-STYLE convertible radiator valve knob 4001, 4003 and 4004 series.

Code

F46063/C	knob
F36075/C	cap
R36076	cannotto



Cap for lockshield valves 4001, 4003 and 4004 series.

Code

F41436/PC	
------------------	--



Pipe-covering/wall-covering shells for convertible radiator valves HIGH-STYLE 4001, 4003 and 4004 series.

Code

400001	
---------------	--



Pipe-covering/wall-covering shells for convertible radiator valves HIGH-STYLE 4003 and 4004 series with central connection.

Codice

400002	
---------------	--



Components of convertible radiator valve knob 3380 series.

Code

F36074/C	knob
F36075/C	cap
R36076	sleeve



Cap for lockshield valves 3380 series.

Code

F46003/C	
-----------------	--

One-pipe radiator valves

pages 55, 56



Tailpiece with probe for one-pipe convertible radiator valve 455 series.

Code

R49158	1/2" - Ø 11
R49159	3/4" - Ø 11
R49160	1" D - Ø 14
R49161	1" S - Ø 14



Union nut for one-pipe convertible radiator valve 455 series.

Code

R41277/C	1/2" - 3/4" - 1"
-----------------	------------------



Union complete with gasket for one-pipe radiator valve 4501 series.

Code

F49113	1/2"
49114	3/4"



Deflector for one-pipe radiator valves 348 and 455 series.

Code

R46030	for 348 series
R46042	for 455 series (previous version)



Deflector for one-pipe convertible radiator valve 455 series.

Code

R46072



Brass probe for one-pipe radiator valves 4501 and 348 series. Length 300 mm.

Code

R41036



Knob for one-pipe radiator valves 4501 series.

Code

449400



Fixing screw for knob code 449400.

Code

449500

Zone valves

pages 66, 68, 69, 72, 73



Union with gasket for zone valves 632, 633 and 635 series.

Code

R69096	1/2"
R69093	3/4"
R69237	1"



Union complete with O-Ring for zone valves 6470, 6480 and 644. series.

Codice

R69276	1/2"
R69277	3/4"
R69280	1"
R59466	1 1/4"

Distribution manifolds

page 82

Full insulation (front and back) for manifold pair 663 series.



Code Outlet No.

F69466	3
F69467	4
F69468	5
F69469	6
F69470	7
F69471	8
F69472	9
F69473	10
F69474	11
F69475	12
F69476	13

Distribution manifolds

pages 114, 116, 118, 121



Knob for manifolds
670, 671, 668...S1 and 666...S1 series.

Codice

449000



Spare headwork for manifolds
662, 671, 668...S1, 668 and 663 series.

Code

F19159 for 662 series

F69357 for 671 series

F69590 for 668...S1 series

F69122 for 668, 663 series



Spare flow meters
for manifolds 671 and 668...S1 series.

Flow meter scale
(l/min)

Code

F69358 1-4 for 671 series

F69564 1-5 for 668...S1 series



Spare micrometric regulating valve
for manifolds 662..6 and 668 series.

Code

F69793 for 662..6 series

F69184 for 668 series

Pressure reducing valves

pages 128, 129, 132, 133



Flat seat union with gasket
for pressure reducing valves
5350, 5351, 5360 and 5365 series.

Code

R59787 1/2"

R59788 3/4"

R59789 1"

R59485 1 1/4"

R59581 1 1/2"

R59487 2"



Transparent housing for strainer
cartridges 5370 series.

Code

R56155 1/2"

R56163 3/4" - 1"



Spare cartridge and key
to service strainer and cartridge.
For pressure reducing valves
5350 and 5351 series.

Code

535004 1/2" - 3/4"

535006 1"

535017 1 1/4" (535074-535075)

535007 1 1/4" - 1 1/2" - 2"

R52484 key to service strainer and cartridge



Transparent housing for strainer
for 5351 series.

Code

R56276



Strainer for 5351 series.

Code

R59767



Spare cartridge
for pressure reducing valves
5360, 5362, 5365 and 5366 series.

Code

536004 1/2"

536005 3/4" - 1"

536007 1 1/4" - 1 1/2" (5360)

536008 1 1/2" (5365) - 2" - DN 65



Spare cartridge.
For inclined pressure reducing valves
5330, 5331, 5332, 5334, 5335, 5336,
5337, 5338 and 5339 series.

Code

533000

Thermostatic mixing valves

pag. 145



Spare cartridge.
For thermostatic mixing valves
5230 series.

Code

523005	for 1/2" - 3/4" - Ø 22
523006	for 1" - 1 1/4" - Ø 28
523008	for 1 1/2" - 2"

Backflow preventers

pages 152, 153



Union with gasket.
For backflow preventers 574 series.

Code

R59482	1/2"
R59483	3/4"
R59484	1"
R59485	1 1/4"
R59486	1 1/2"
R59487	2"

Fittings with O-Ring seal

pages 180, 181, 182



Spare O-Ring.
For mechanical fittings 900, 903, 904, 9050,
9057, 9058, 9060, 9067, 9068, 930, 910,
913 and 914 series.
For hydraulic and domestic water systems.

Code

R97020	Ø 8
R97022*	Ø 10
R97021	Ø 10
R97023	Ø 12
R97024	Ø 14
R47037	Ø 15
R97025	Ø 16
R97026	Ø 18
R97027	Ø 22

* Only for fittings codes 900310, 903010, 904310, 910310, 913010 and 914310.



Spare O-Ring.
For mechanical fittings 900, 904, 9057,
9058 and 930 series.
For gas and fluid hydrocarbons.

Code

R97012	Ø 10
R97013*	Ø 10
R97014	Ø 12
R97015	Ø 14
R97016	Ø 15
R97017	Ø 16
R97018	Ø 18
R97019	Ø 22

* Only for fittings codes 900310, 904310, 905730 and 905830.



Spare clenching ring.
For mechanical fittings 900, 903, 904,
9050, 9057, 9058, 9060, 9067, 9068, 930,
910, 913 and 914.

Code

R91236	Ø 8
R91237*	Ø 10
R91238	Ø 10
R91239	Ø 12
R41423	Ø 14
R41424	Ø 15
R91240	Ø 16
R41448	Ø 18
R91235	Ø 22
R91241	Ø 28

* Only for fittings codes 900310, 903010, 904310, 910310, 913010 and 914310.

Thermostatic mixing valves for solar thermal systems

page 229

2523

Spare cartridge.
For thermostatic mixing valves 2523 series.



Code

252305	1/2" - 3/4"
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2523

Spare cartridge.
For thermostatic mixing valves 2523 series.

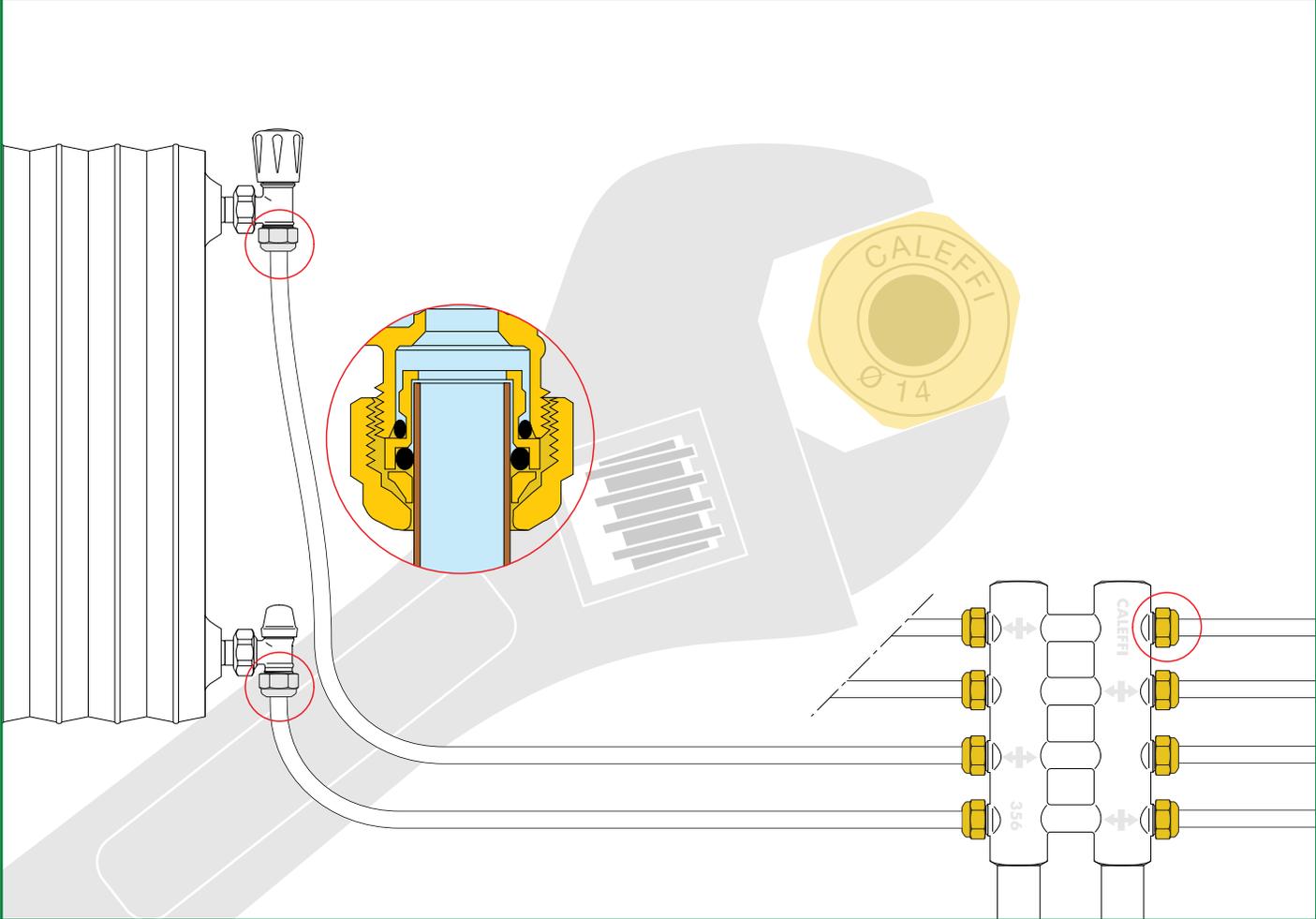


Code

252306	1" - 1 1/4"
252308	1 1/2" - 2"

FITTING COUPLING
PRODUCT DIMENSIONS are available on www.caleffi.com

This diagram is just an indication



CHROME PLATED BRASS FITTINGS

3/8" pipes connection



4383

Compression fitting, for copper pipes. With PTFE seal.

Code

438310	3/8" - Ø 12
438312	3/8" - Ø 14

23 p.1,5 pipes connection



6790 DARCAL

Fitting for multilayer plastic pipe with continuous high temperature use.

For a correct use, adjust the multilayer pipe diameter before installation using the Caleffi calibrator 679 series.

Code

679014	23 p.1,5 - Ø 14x2
679024	23 p.1,5 - Ø 16x2
679025	23 p.1,5 - Ø 16x2,25
679044	23 p.1,5 - Ø 18x2



6810 DARCAL

Self-adjustable diameter fitting for single and multilayer plastic pipes.

Code

Code		Ø _{inside}	Ø _{outside}
681000	23 p.1,5	7,5- 8	12-14
681002	23 p.1,5	9 - 9,5	14-16
681001	23 p.1,5	9,5-10	12-14
681006	23 p.1,5	9,5-10	14-16
681015	23 p.1,5	10,5-11	14-16
681017	23 p.1,5	10,5-11	16-18
681024	23 p.1,5	11,5-12	14-16
681026	23 p.1,5	11,5-12	16-18
681035	23 p.1,5	12,5-13	16-18
681044	23 p.1,5	13,5-14	16-18



4470

Pre-assembled compression fitting, for annealed copper, hard copper, brass, mild and stainless steel. With O-Ring seal.

Code

447010	23 p.1,5 - Ø 10
447012	23 p.1,5 - Ø 12
447014	23 p.1,5 - Ø 14
447015	23 p.1,5 - Ø 15
447016	23 p.1,5 - Ø 16



4370

Compression fitting, for annealed copper, hard copper, brass, mild and stainless steel. With O-Ring seal.

Code

437010	23 p.1,5 - Ø 10
437012	23 p.1,5 - Ø 12
437014	23 p.1,5 - Ø 14
437015	23 p.1,5 - Ø 15
437016	23 p.1,5 - Ø 16



4380

Compression fitting, for copper pipes. With PTFE seal.

Code

438010	23 p.1,5 - Ø 10
438012	23 p.1,5 - Ø 12
438014	23 p.1,5 - Ø 14
438015	23 p.1,5 - Ø 15
438016	23 p.1,5 - Ø 16
438018	23 p.1,5 - Ø 18 with metal olive



4450

Compression fitting, for PE coated copper pipes, "Q-tec" KME series and "TUBOTECH" series. With O-Ring seal.

"Q-tec" or "TUBOTECH" pipe must be cut and prepared using the specific tool indicated by the manufacturer.

Code

445014	23 p.1,5 - Ø 14
445016	23 p.1,5 - Ø 16



4450

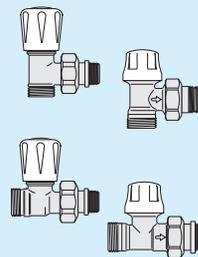
Compression fitting, for "VIEGA" multilayer pipes. With O-Ring seal.

"VIEGA" pipe must be calibrated using the specific tool indicated by the manufacturer.

Code

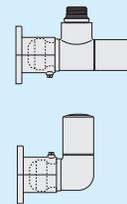
445024	23 p.1,5 - Ø 16x2,2
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23 p.1,5 M - Ø 18



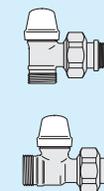
Series: 338

- 339
- 222
- 223
- 227



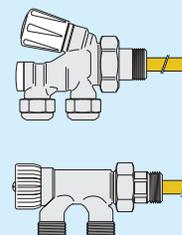
Series: 4001

- 4003
- 4004



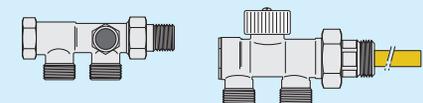
Series: 340

- 341
- 342
- 343



Series: 455

- 4501
- 348
- 452
- 328



Series: 382

CHROME PLATED BRASS FITTINGS

3/4" pipes connection

6792 DARCAL
 Fitting for multilayer plastic pipe with continuous high temperature use.



For a correct use, adjust the multilayer pipe diameter before installation using the Caleffi calibrator 679 series.

Code	
679264	3/4" - Ø 20x2
679265	3/4" - Ø 20x2,25
679266	3/4" - Ø 20x2,5

6815 DARCAL
 Self-adjustable diameter fitting for single and multilayer plastic pipes.



Code	Ø _{inside}	Ø _{outside}
681502	3/4"	7,5- 8 12-14
681500	3/4"	9 - 9,5 14-16
681501	3/4"	9,5-10 12-14
681506	3/4"	9,5-10 14-16
681515	3/4"	10,5-11 14-16
681517	3/4"	10,5-11 16-18
681524	3/4"	11,5-12 14-16
681526	3/4"	11,5-12 16-18
681535	3/4"	12,5-13 16-18
681537	3/4"	12,5-13 18-20
681546	3/4"	13,5-14 18-20
681555	3/4"	14,5-15 18-20
681556	3/4"	15 -15,5 18-20
681564	3/4"	15,5-16 18-20

4375
 Compression fitting, for copper pipes. With O-Ring seal.



Code	
437510	3/4" - Ø 10
437512	3/4" - Ø 12
437514	3/4" - Ø 14
437515	3/4" - Ø 15
437516	3/4" - Ø 16
437518	3/4" - Ø 18

4385
 Compression fitting, for copper pipes. With PTFE seal.



Code	
438512	3/4" - Ø 12
438514	3/4" - Ø 14
438515	3/4" - Ø 15
438516	3/4" - Ø 16
438518	3/4" - Ø 18

4455
 Compression fitting, for PE coated copper pipes, "Q-tec" KME series and "TUBOTECH" series. With O-Ring seal.



"Q-tec" or "TUBOTECH" pipe must be cut and prepared using the specific tool indicated by the manufacturer.

Code	
445514	3/4" - Ø 14
445516	3/4" - Ø 16
445520	3/4" - Ø 20

4455
 Compression fitting, for "VIEGA" multilayer pipes. With O-Ring seal.



"VIEGA" pipe must be calibrated using the specific tool indicated by the manufacturer.

Code	
445524	3/4" - Ø 16x2,2
445546	3/4" - Ø 20x2,8

3/4" M - Ø 18



- Series: 3010
 3011
 3012
 3013
 3014
 3015



- Codes: 338452
 339452
 340452
 342452
 343452



BRASS FITTINGS

1/2" pipes connection



5914
Fitting for plastic pipe.

Code	Øinside	Øoutside
591401	1/2" 8	13
591402	1/2" 10	12
591405	1/2" 10	15
591414	1/2" 11,6	16
591424	1/2" 12	16
591433	1/2" 13	16



58124
Nut and olive or single groove seal in PTFE, for copper pipe.

Code	
581240	1/2" + single groove Ø 10
581242	1/2" + single groove Ø 12
581244	1/2" + single groove Ø 14
581245	1/2" + single groove Ø 15
581246	1/2" + olive Ø 16

1/2" M - Ø 16



Series: 349

592

598



23 p.1,5 pipes connection



6791 *DAFCAL*
Fitting for multilayer plastic pipe with continuous high temperature use.

For a correct use, adjust the multilayer pipe diameter before installation using the Caleffi calibrator 679 series.

Code	
679114	23 p.1,5 - Ø 14x2
679124	23 p.1,5 - Ø 16x2
679125	23 p.1,5 - Ø 16x2,25
679144	23 p.1,5 - Ø 18x2



4460
Pre-assembled compression fitting, for annealed copper, hard copper, brass, mild and stainless steel. With O-Ring seal.

Code	
446010	23 p.1,5 - Ø 10
446012	23 p.1,5 - Ø 12
446014	23 p.1,5 - Ø 14
446015	23 p.1,5 - Ø 15
446016	23 p.1,5 - Ø 16



6800 *DAFCAL*
Self-adjustable diameter fitting for single and multilayer plastic pipes.

Code	Øinside	Øoutside
680000	23 p.1,5 7,5- 8	12-14
680002	23 p.1,5 9 - 9,5	14-16
680001	23 p.1,5 9,5-10	12-14
680006	23 p.1,5 9,5-10	14-16
680015	23 p.1,5 10,5-11	14-16
680017	23 p.1,5 10,5-11	16-18
680024	23 p.1,5 11,5-12	14-16
680026	23 p.1,5 11,5-12	16-18
680035	23 p.1,5 12,5-13	16-18
680044	23 p.1,5 13,5-14	16-18



3470
Compression fitting, for annealed copper, hard copper, brass, mild and stainless steel. With O-Ring seal.

Code	
347010	23 p.1,5 - Ø 10
347012	23 p.1,5 - Ø 12
347014	23 p.1,5 - Ø 14
347015	23 p.1,5 - Ø 15
347016	23 p.1,5 - Ø 16



4440
Compression fitting, for PE coated copper pipes, "Q-tec" KME series and "TUBOTECH" series. With O-Ring seal.

"Q-tec" or "TUBOTECH" pipe must be cut and prepared using the specific tool indicated by the manufacturer.

Code	
444014	23 p.1,5 - Ø 14
444016	23 p.1,5 - Ø 16



6800 *DAFCAL*
Self-adjustable diameter fitting for single and multilayer plastic pipes.

Code	Øinside	Øoutside
680055	23 p.1,5 14,5-15	18-20
680064	23 p.1,5 15,5-16	18-20



4440
Compression fitting, for "VIEGA" multilayer pipes. With O-Ring seal.

"VIEGA" pipe must be calibrated using the specific tool indicated by the manufacturer.

Code	
444024	23 p.1,5 - Ø 16x2,2

23 p.1,5 M - Ø 18



Series: 350

351

349

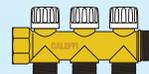


Series: 356

357

385

161



Series: 354



Series: 933 940

941 942

943 944

945 946

947 948



BRASS FITTINGS

3/4" pipes connection



6795 DARCAL

Fitting for multilayer plastic pipe with continuous high temperature use.

For a correct use, adjust the multilayer pipe diameter before installation using the Caleffi calibrator 679 series.

Code

679514	3/4"	- Ø 14 x 2
679524	3/4"	- Ø 16 x 2
679525	3/4"	- Ø 16 x 2,25
679544	3/4"	- Ø 18 x 2
679564	3/4"	- Ø 20 x 2
679565	3/4"	- Ø 20 x 2,25
679566	3/4"	- Ø 20 x 2,5



6805 DARCAL

Self-adjustable diameter fitting for single and multilayer plastic pipes.

Code

Code	Ø _{inside}	Ø _{outside}
680507	3/4"	7,5- 8 10,5-12
680502	3/4"	7,5- 8 12 -14
680503	3/4"	8,5- 9 12 -14
680500	3/4"	9 - 9,5 14 -16
680501	3/4"	9,5-10 12 -14
680506	3/4"	9,5-10 14 -16
680515	3/4"	10,5-11 14 -16
680517	3/4"	10,5-11 16 -18
680524	3/4"	11,5-12 14 -16
680526	3/4"	11,5-12 16 -18
680535	3/4"	12,5-13 16 -18
680537	3/4"	12,5-13 18 -20
680544	3/4"	13,5-14 16 -18
680546	3/4"	13,5-14 18 -20
680555	3/4"	14,5-15 18 -20
680556	3/4"	15 -15,5 18 -20
680564	3/4"	15,5-16 18 -20
680505	3/4"	17 22,5



58125

Nut and olive or single groove seal in PTFE, for copper pipe.

Code

581254	3/4"	+ single groove Ø 14
581256	3/4"	+ single groove Ø 16
581258	3/4"	+ olive Ø 18



5915

Fitting for plastic pipe.

Code

591565	3/4"	Ø 16-21
591566	3/4"	Ø 16-22



3475

Compression fitting, for annealed copper, hard copper, brass, mild and stainless steel. With O-Ring seal.

Code

347510	3/4"	- Ø 10
347512	3/4"	- Ø 12
347514	3/4"	- Ø 14
347515	3/4"	- Ø 15
347516	3/4"	- Ø 16
347518	3/4"	- Ø 18



3475..S1

Compression fitting for annealed copper, hard copper, brass, mild steel and stainless steel pipes. With O-Ring seal. Specific to be used with manifolds 668...S1 series.

Code

347512S1	3/4"	- Ø 12
347514S1	3/4"	- Ø 14



4445

Compression fitting, for PE coated copper pipes, "Q-tec" KME series and "TUBOTECH" series. With O-Ring seal.

"Q-tec" or "TUBOTECH" pipe must be cut and prepared using the specific tool indicated by the manufacturer.

Code

444514	3/4"	- Ø 14
444516	3/4"	- Ø 16
444520	3/4"	- Ø 20



4445

Compression fitting, for "VIEGA" multilayer pipes. With O-Ring seal.

"VIEGA" pipe must be calibrated using the specific tool indicated by the manufacturer.

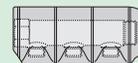
Code

444524	3/4"	- Ø 16x2,2
444546	3/4"	- Ø 20x2,8

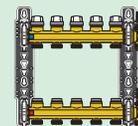
3/4" M - Ø 18



Series: 592



Series: 650



Series: 662

6620

6621

663

6630

6631

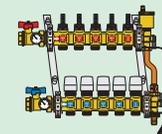
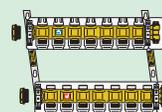
666...S1*

667...S1*

668...S1*

669

657



Series: 933

940

941

942

943

945

946



* Do not use with copper pipe fittings 347 and 5812 series

1" pipes connection



6806 DARCAL

Self-adjustable diameter fitting for single and multilayer plastic pipes.

Code

Code	Ø _{inside}	Ø _{outside}
680687	1"	17,5 25
680605	1"	19,5 25

1" M - Ø 25



Series: 941

942

QUALITY CERTIFICATES

CISQ is a member of
ICIM
www.icim.it

CERTIFICATO n. 0003/7
CERTIFICATE No.

SI CERTIFICA CHE IL SISTEMA DI GESTIONE PER LA QUALITÀ DI
WE HEREBY CERTIFY THAT THE QUALITY MANAGEMENT SYSTEM OPERATED BY

CALEFFI S.p.A.
Sede e Unità Operativa
Strada Regionale 229, 25 - 28010 Fontaneto d'Agogna (NO)
Unità Operativa
Via Maggiate, 15 - 28013 Gattico (NO)
Italia

E' CONFORME ALLA NORMA
IS IN COMPLIANCE WITH THE STANDARD

UNI EN ISO 9001:2008
PER LE SEGUENTI ATTIVITÀ:
FOR THE FOLLOWING ACTIVITIES

EA: 18
Progettazione, fabbricazione e commercializzazione per l'applicazione su impianti di riscaldamento, idrico-sanitari, solari, geotermici, biomassa, di: valvole di sicurezza, valvole e gruppi di regolazione, valvole per termosifoni, valvole per sfogo aria, valvole di bilanciamento, miscelatori termostatici, riduttori di pressione, valvole antirimpingimento, collettori di distribuzione, raccordi, valvole di intercettazione, moduli d'utenza, satelliti d'utenza.

Design, manufacturing and trading for the application on heating, domestic water, solar, geothermal and biomass systems of safety relief valves, regulating valves and units, radiator valves, air vents, balancing valves, thermostatic mixing valves, pressure reducing valves, anti-siphon valves, distribution manifolds, switches and fittings, check valves, zone box with distribution and temperature control, user modules with domestic water local production and zone temperature control.

Il presente certificato è soggetto al regolamento per la certificazione dei sistemi di gestione per la qualità delle aziende.
The use and the validity of this certificate shall satisfy the requirements of the rules for the certification of company quality management systems.

Data emissione / First issue: 11/06/1990
Emissione corrente / Current issue: 07/05/2014
Data di scadenza / Expiry date: 06/05/2017

ICIM S.p.A.
Piazza Don Enrico Maggelli, 75 - 20099 Sesto San Giovanni (MI)

ACCREDIA
CISQ

Certificate of Registration
QUALITY MANAGEMENT SYSTEM - ISO 9001:2008

This is to certify that:

Caleffi S.p.A.
S.R. 229 N. 25
Fontaneto d'Agogna (NO)
28010
Italy

Hold Certificate No: **FM 21654**
and operates a Quality Management System which complies with the requirements of ISO 9001:2008 for the following scope:

The design, manufacture and supply of safety relief valves, regulating valves and units, radiator valves, air vents, flow balancing valves, pressure reducing valves, backflow preventers, check valves, thermostatic mixing valves, filters, flow switches and fittings, zone box with distribution and temperature control, user modules with domestic water local production and zone temperature control.

For and on behalf of BSI:
Gary Fenton
Gary Fenton, Global Assurance Director

Originally registered: 28/09/1992 Latest Issue: 08/05/2012 Expiry Date: 08/05/2015

BSI, IAF, ANAB

Page: 1 of 2

This certificate was issued electronically and remains the property of BSI and is bound by the conditions of contract.
An electronic certificate can be authenticated online.
Printed copies can be validated at www.bsi-global.com/ClientDirectory or telephone +41 (4) 256017.
Information and Contact: BSI, Kitemark Court, Davy Avenue, Knowlton, Milton Keynes MK5 8PP. Tel: +44 845 080 8000
BSI Assurance UK Limited, registered in England under number 7555211 at 389 Chiswick High Road, London W6 4AL, UK.
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CERTIFICATO n. 0512A/0
CERTIFICATE No.

SI CERTIFICA CHE IL SISTEMA DI GESTIONE AMBIENTALE DI
WE HEREBY CERTIFY THAT THE ENVIRONMENTAL MANAGEMENT SYSTEM OPERATED BY

CALEFFI S.p.A.
UNITÀ OPERATIVE
OPERATIVE UNITS
Sede e Unità Operativa
Strada Regionale 229, 25 - 28010 Fontaneto d'Agogna (NO)
Unità Operativa
Via Maggiate, 15 - 28013 Gattico (NO)
Italia

E' CONFORME ALLA NORMA
IS IN COMPLIANCE WITH THE STANDARD

UNI EN ISO 14001:2004
PER LE SEGUENTI ATTIVITÀ:
FOR THE FOLLOWING ACTIVITIES

EA: 18
Progettazione e fabbricazione di componenti idrotermici, sia per applicazioni in campo civile che industriale, realizzati mediante lavorazioni meccaniche (trasferi e plasmadorno), stampaggio plastico a iniezione e assemblaggio.

Design and manufacture of hydrothermal components for civil and industrial applications, by mechanical processes (transference and multi-spindle), plastic injection molding and assembly.

Certificazione rilasciata in conformità al Regolamento Tecnico SINCERT RT-05
Il presente certificato è soggetto al regolamento per la certificazione dei sistemi di gestione ambientale delle aziende.
The use and the validity of this certificate shall satisfy the requirements of the rules for the certification of company environmental management systems.

Data emissione / First issue: 05/06/2012
Emissione corrente / Current issue: 05/05/2012
Data di scadenza / Expiry date: 04/05/2015

ICIM S.p.A.
Piazza Don Enrico Maggelli, 75 - 20099 Sesto San Giovanni (MI)

ACCREDIA
CISQ

COMUNITÀ EUROPEA

AEO

Certificato AEO	IT AEOF 12 0576
1. Titolare del Certificato AEO CALEFFI SPA Codice EORI IT04104030962	2. Autorità che rilascia il Certificato Agenzia delle Dogane Direzione centrale gestione tributi e rapporto con gli utenti - Ufficio per i regimi doganali e fiscali

Il Titolare indicato nel riquadro 1 è un
Operatore economico autorizzato
Semplificazioni doganali / Sicurezza (AEOF)

3. Data di validità del certificato: **29/05/2012**

Il Direttore dell'Ufficio
Dr. ERIC CROCE

We reserve the right to change our products and their relevant technical data, contained in this publication, at any time and without prior notice.

The products in this catalogue have been designed, manufactured and factored by Caleffi in accordance with the requirements of EN ISO 9001 standard.
Factored products, listed by series in the index, are clearly identified by the "green dot ●".

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