

FIRE DUCT.
FIRE INSIDE OR OUTSIDE DUCT
TO BS 476 PART 24 AND ISO 6944

FLAMEBAR BW11 FIRE DUCT – UP TO 2 HOURS STABILITY AND INTEGRITY WITH VARIABLE INSULATION RATING AS BELOW.



Firespray International Limited

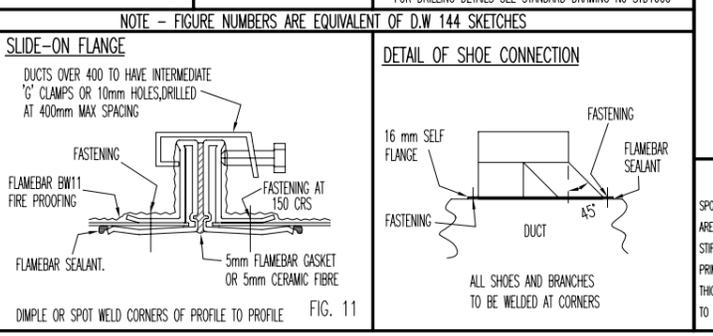
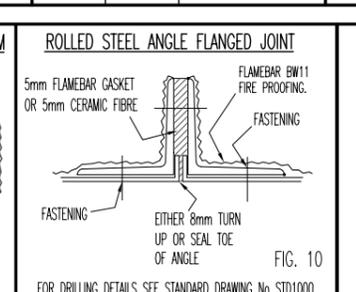
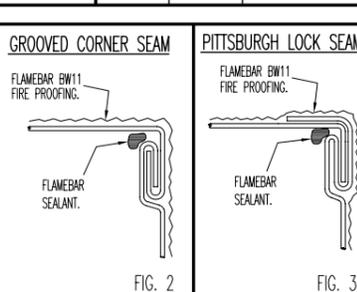
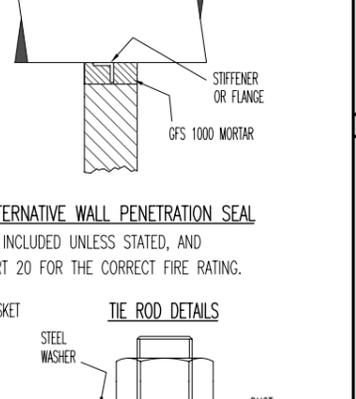
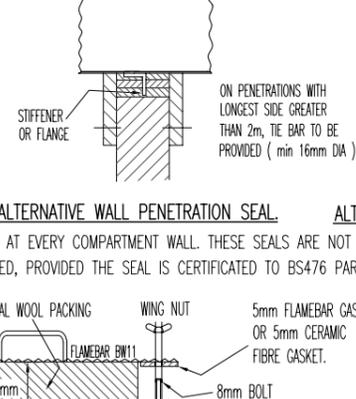
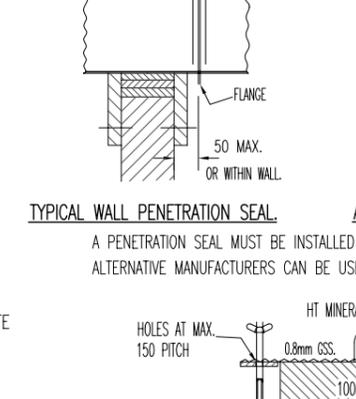
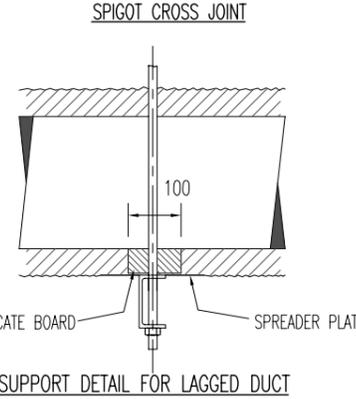
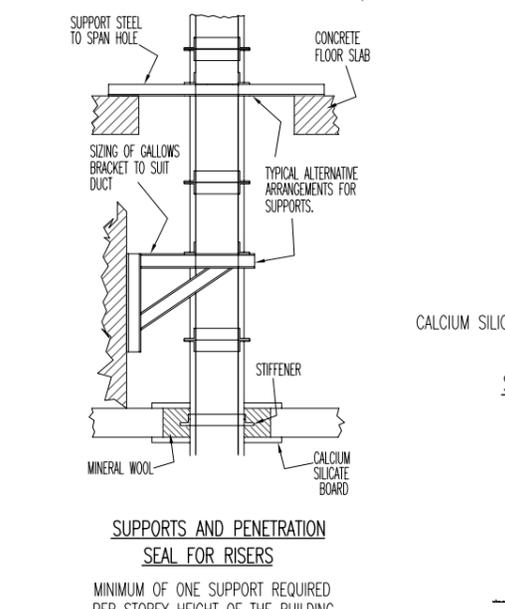
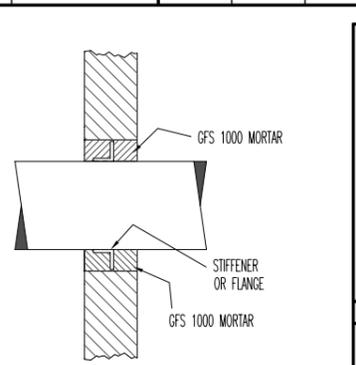
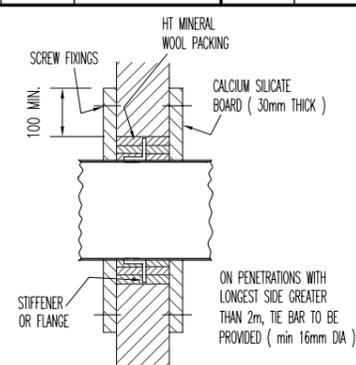
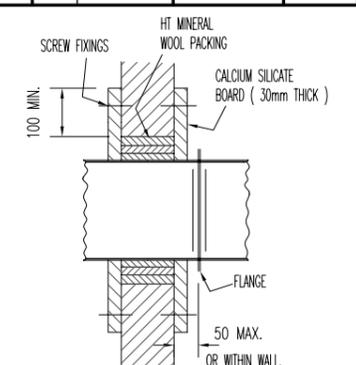
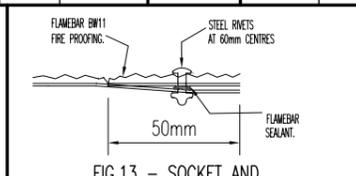
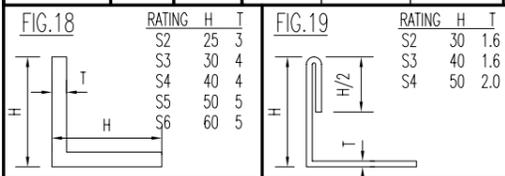
HANGER SIZING BASED ON:
60 min 15N/mm²
120 min 10N/mm²
240 min 6N/mm²

THIS DOCUMENT IS STRICTLY
CONFIDENTIAL & MUST NOT BE
DISCLOSED OR COPIED TO ANY THIRD
PARTY WITHOUT THE EXPRESS
PERMISSION IN WRITING OF
FIRESPRAY INTERNATIONAL LTD

RECTANGULAR DUCTWORK SPECIFICATION BASED ON D.W 144. HIGH VELOCITY UP TO 2500 Pa POSITIVE PRESSURE

STABILITY, INTEGRITY, AND INSULATION RATING

LONGEST SIDE	GAUGE	STD FLANGE STRAIGHTS LENGTH	STIFFENING NON-STANDARD			CROSS JOINTS		FLANGE FIXING TO DUCT		LONGITUDINAL JOINTS		RADIUS BENDS		120 min STABILITY AND INTEGRITY 15 min INSULATION FIRE OUTSIDE 4 min INSULATION FIRE INSIDE		120 min STABILITY AND INTEGRITY 60 min INSULATION FIRE OUTSIDE 30 min INSULATION FIRE INSIDE		120 min STABILITY AND INTEGRITY 90 min INSULATION FIRE OUTSIDE 45 min INSULATION FIRE INSIDE		120 min STABILITY AND INTEGRITY 120 min INSULATION FIRE OUTSIDE 60 min INSULATION FIRE INSIDE		120 min STABILITY AND INTEGRITY 120 min INSULATION FIRE OUTSIDE 90 min INSULATION FIRE INSIDE		120 min STABILITY AND INTEGRITY 120 min INSULATION FIRE OUTSIDE 120 min INSULATION FIRE INSIDE								
			MAXIMUM SPACING	FIXING	ANGLE SECTION	RATING	TYPICAL FLANGE SIZE	RIVET OR SPOTWELD @ 150 CRS MAX	R.A.S. FIG 2 OR PITTSBURGH LOCK. FIG 3	CORNER	SHEET	THROAT RADIUS	No. OF SPLITTERS	MAXIMUM SIZE	HANGER SIZE mm	BEARER MEMBER		HANGER SIZE mm	BEARER MEMBER		HANGER SIZE mm	BEARER MEMBER		HANGER SIZE mm	BEARER MEMBER		HANGER SIZE mm	BEARER MEMBER				
																Z cm ³	SIZE		Z cm ³	SIZE		Z cm ³	SIZE		Z cm ³	SIZE						
UP TO 400	0.6	1260 or 1510	NIL	NIL	NIL	MIN A1	20 mm SLIDE ON FLANGE FIG.11 OR SLIP JOINT FIG.13	RIVET OR SPOTWELD @ 150 CRS MAX	R.A.S. FIG 2 OR PITTSBURGH LOCK. FIG 3	NIL	NONE	150	NONE	400 x 200	8	0.44	40 x 20 x 1.5 mm SLOTTED CHANNEL	8	0.49	40 x 20 x 1.5 mm SLOTTED CHANNEL	8	0.83	40 x 20 x 1.5 mm SLOTTED CHANNEL	8	1.02	40 x 20 x 1.5 mm SLOTTED CHANNEL	8	2.27	40 x 40 x 2.5 mm SLOTTED CHANNEL	8	2.33	40 x 40 x 2.5 mm SLOTTED CHANNEL
401 UP TO 600	0.8	1260 or 1510	1260 CRS	SPOTWELD, RIVET, OR HUCKBOLT @ 150 CRS	RATING S2	MIN J2	20 mm SLIDE ON FLANGE FIG.11	RIVET OR SPOTWELD @ 150 CRS MAX	R.A.S. FIG 2 OR PITTSBURGH LOCK. FIG 3	NIL	1	150	1	600 x 300	8	0.93	40 x 40 x 1.5 mm SLOTTED CHANNEL	8	1.01	40 x 40 x 1.5 mm SLOTTED CHANNEL	8	1.62	40 x 40 x 1.5 mm SLOTTED CHANNEL	8	1.85	40 x 40 x 1.5 mm SLOTTED CHANNEL	8	4.15	40 x 60 x 2.5 mm SLOTTED CHANNEL	8	4.16	40 x 60 x 2.5 mm SLOTTED CHANNEL
601 UP TO 800	0.8	1260 or 1510	1000 CRS	SPOTWELD, RIVET, OR HUCKBOLT @ 150 CRS	RATING S3	MIN J3	30 mm SLIDE ON FLANGE FIG.11	RIVET OR SPOTWELD @ 150 CRS MAX	R.A.S. FIG 2 OR PITTSBURGH LOCK. FIG 3	GROOVED SEAM OR WELD.	1	150	1	800 x 400	8	1.35	40 x 40 x 1.5 mm SLOTTED CHANNEL	8	1.45	40 x 40 x 1.5 mm SLOTTED CHANNEL	8	2.47	40 x 40 x 2.5 mm SLOTTED CHANNEL	8	2.77	40 x 40 x 2.5 mm SLOTTED CHANNEL	8	5.76	40 x 60 x 2.5 mm SLOTTED CHANNEL	8	5.76	40 x 60 x 2.5 mm SLOTTED CHANNEL
801 UP TO 1000	0.8	1260 or 1510	800 CRS	SPOTWELD, RIVET, OR HUCKBOLT @ 150 CRS	RATING S4	MIN J4	40 mm SLIDE ON FLANGE FIG.11	RIVET OR SPOTWELD @ 150 CRS MAX	R.A.S. FIG 2 OR PITTSBURGH LOCK. FIG 3	GROOVED SEAM OR WELD.	2	150	2	1000 x 500	8	2.15	40 x 40 x 2.5 mm SLOTTED CHANNEL	8	2.28	40 x 40 x 2.5 mm SLOTTED CHANNEL	8	3.41	40 x 40 x 2.5 mm SLOTTED CHANNEL	8	4.08	40 x 60 x 2.5 mm SLOTTED CHANNEL	8	8.15	40 x 80 x 2.5 mm SLOTTED CHANNEL	10	8.11	40 x 80 x 2.5 mm SLOTTED CHANNEL
1001 UP TO 1500	1.0	1260 or 1510	625 CRS	SPOTWELD, RIVET, OR HUCKBOLT @ 150 CRS	RATING S5	MIN J5	40 mm SLIDE ON FLANGE FIG.11 WITH TIE ROD	RIVET OR SPOTWELD @ 150 CRS MAX	R.A.S. FIG 2 OR PITTSBURGH LOCK. FIG 3	GROOVED SEAM OR WELD.	2	150	2	1500 x 750	10	5.00	40 x 60 x 2.5 mm SLOTTED CHANNEL	10	5.18	40 x 60 x 2.5 mm SLOTTED CHANNEL	10	7.97	40 x 80 x 2.5 mm SLOTTED CHANNEL	10	8.53	40 x 80 x 2.5 mm SLOTTED CHANNEL	12	16.84	76 x 38 CHANNEL	12	16.37	76 x 38 CHANNEL
1501 UP TO 2000	1.2	1260 or 1510	625 CRS	SPOTWELD, RIVET, OR HUCKBOLT @ 150 CRS	RATING S5	MIN J5	40 mm SLIDE ON FLANGE FIG.11 WITH TIE ROD	RIVET OR SPOTWELD @ 150 CRS MAX	R.A.S. FIG 2 OR PITTSBURGH LOCK. FIG 3	GROOVED SEAM OR WELD.	3	150	3	2000 x 1000	12	11.18	76 x 38 CHANNEL	12	12.15	76 x 38 CHANNEL	12	14.58	76 x 38 CHANNEL	12	15.33	76 x 38 CHANNEL	16	29.61	102 x 51 CHANNEL	16	28.70	102 x 51 CHANNEL
2001 UP TO 2500	1.2	1235 or 1485	500 CRS	SPOTWELD, RIVET, OR HUCKBOLT @ 150 CRS	RATING S6	MIN J6	50 x 50 R.S.A WITH TIE ROD	RIVET, OR HUCKBOLT @ 150 CRS MAX	R.A.S. FIG 2 OR PITTSBURGH LOCK. FIG 3	GROOVED SEAM OR WELD.	3	150	3	2500 x 1250	16	23.14	102 x 51 CHANNEL	16	23.45	102 x 51 CHANNEL	16	28.23	102 x 51 CHANNEL	16	29.17	102 x 51 CHANNEL	16	51.87	127 x 64 CHANNEL	20	50.01	127 x 64 CHANNEL
														2500 x 2500	16	25.28	102 x 51 CHANNEL	16	25.69	102 x 51 CHANNEL	16	31.86	102 x 51 CHANNEL	20	33.10	102 x 51 CHANNEL	20	59.99	127 x 64 CHANNEL	20	57.77	127 x 64 CHANNEL



FOR 60 min INSULATION WITH FIRE OUTSIDE AND 30 min INSULATION WITH FIRE INSIDE:
25mm THICK AT 45 kg/m³ INSULATION

FOR 90 min INSULATION WITH FIRE OUTSIDE AND 45 min INSULATION WITH FIRE INSIDE:
50mm THICK AT 60 kg/m³ INSULATION

FOR 120 min INSULATION WITH FIRE OUTSIDE AND 60 min INSULATION WITH FIRE INSIDE:
50mm THICK AT 105 kg/m³ INSULATION

FOR 120 min INSULATION WITH FIRE OUTSIDE AND 90 min INSULATION WITH FIRE INSIDE:
2x40mm THICK AT 105 kg/m³ INSULATION OR 2x60mm THICK AT 60 kg/m³ INSULATION

FOR 120 min INSULATION WITH FIRE OUTSIDE AND 120 min INSULATION WITH FIRE INSIDE:
2x50mm THICK AT 105 kg/m³ INSULATION

INSULATION

DUCT WITH INSULATION RATING

PAINT

SPOT WELDS AND AREAS WHERE GALVANISING OF SHEET IS DAMAGED ARE TO HAVE ONE COAT OF GALVANODIPYNT. FLANGES AND STIFFENING FRAMED ARE TO HAVE TWO COATS OF ZINC PHOSPHATE PRIMER, UNDERCOAT TO BE RED AND TOP COAT GREY. PRIMER THICKNESS TO BE NOT LESS THAN 50 MICRONS. STIFFENERS ARE TO BE PAINTED BEFORE FIXING TO DUCT.

NOTE: LABELS TO BE FIXED TO THE INSIDE OF DUCT ONLY.
ONLY THE FOLLOWING FIXINGS MAY BE USED ON FIRE DUCT:
STAINLESS STEEL OR MONEL RIVETS WHICH DO NOT NEED PAINTING.
STEEL HEX RIVETS OR HUCKBOLTS WHICH MUST BOTH BE PAINTED AFTER FIXING.

ACCESS DOOR FOR UNINSULATED AND UP TO 50mm INSULATED DUCT

ACCESS DOOR DETAIL FOR UNINSULATED DUCT

FIG.25 - TIE ROD ASSEMBLY WITH INTERNAL AND EXTERNAL NUTS
NOTE: 1 PER DUCT PIECE

Temperatures to BS 476 pt 24 and ISO 6944

ISSUE	REVISION	DRAWN	DATE	CH'KD	DRAWN BY	ENGINEER
"L"	GENERAL REVISIONS	SPT	01.07.04	BAJ	S. TAYLOR	B. A. JAMES
"M"	GENERAL REVISIONS	SPT	09.06.05	BAJ	20th FEB 1995	SCALE NTS.
TITLE: FLAMEBAR BW11 RECTANGULAR FIRE DUCT FIRE INSIDE OR OUTSIDE (UP TO 2500 Pa)						

Firespray International Limited
Telephone +44 1279 634230
Fax +44 1279 634232

e.mail - info@firespray.eu.com
website - www.firespray.eu.com

DRG No. STD200