

2021 ASHRAE Handbook - Fundamentals (SI)																
RESISTENCIA, ARGENTINA (WMO: 871550)																
Lat:27.4389S		Long:59.0461W		Elev:52		StdP: 100.70		Time zone:-3.00 (W03)			Period:94-19		WBAN:99999			
Annual Heating, Humidification, and Ventilation Design Conditions																
Coldest Month	Heating DB		Humidification DP/MCDB and HR						Coldest month WS/MCDB				MCWS/PCWD to 99.6% DB		WSF	
			99.6%			99%			0.4%		1%					
	99.6%	99%	DP	HR	MCDB	DP	HR	MCDB	WS	MCDB	WS	MCDB	MCWS	PCWD		
7	2.0	3.9	-1.2	3.4	8.7	0.2	3.9	9.5	9.6	20.5	8.7	19.7	1.3	230	0.369	
Annual Cooling, Dehumidification, and Enthalpy Design Conditions																
Hottest Month	Hottest Month DB Range	Cooling DB/MCWB							Evaporation WB/MCDB						MCWS/PCWD to 0.4% DB	
		0.4%		1%		2%			0.4%		1%		2%			
		DB	MCWB	DB	MCWB	DB	MCWB	WB	MCDB	WB	MCDB	WB	MCDB	MCWS	PCWD	
1	11.5	37.2	24.2	36.0	24.5	34.8	24.4	27.2	32.7	26.6	32.0	26.1	31.5	4.9	20	
Dehumidification DP/MCDB and HR									Enthalpy/MCDB						Extreme Max WB	
0.4%			1%			2%			0.4%		1%		2%			
DP	HR	MCDB	DP	HR	MCDB	DP	HR	MCDB	Enth	MCDB	Enth	MCDB	Enth	MCDB		
25.9	21.4	30.2	25.1	20.4	29.5	24.7	19.8	29.2	86.7	32.7	83.8	32.3	81.3	31.6	35.2	
Extreme Annual Design Conditions																
Extreme Annual WS				Extreme Annual Temperature				n-Year Return Period Values of Extreme Temperature								
				Mean		Standard deviation		n=5 years		n=10 years		n=20 years		n=50 years		
1%	2.5%	5%		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	
8.9	7.5	6.7	DB	-1.4	39.9	1.5	1.6	-2.5	41.1	-3.4	42.0	-4.2	42.9	-5.3	44.0	
			WB	-1.7	28.9	1.6	1.5	-2.8	30.0	-3.8	30.9	-4.6	31.8	-5.8	32.9	
Monthly Climatic Design Conditions																
			Annual	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Temperatures, Degree-Days and Degree-Hours	DBAvg	21.6	27.2	26.5	24.8	21.8	18.1	16.1	15.6	17.4	19.4	22.3	23.8	26.0		
	DBStd	5.75	2.52	2.88	3.06	3.87	4.41	5.01	5.45	5.58	5.01	3.97	3.22	2.89		
	HDD10.0	19	0	0	0	0	1	5	9	4	1	0	0	0		
	HDD18.3	446	0	0	1	12	61	103	124	89	46	8	2	0		
	CDD10.0	4237	534	461	459	353	251	189	182	233	282	383	413	497		
	CDD18.3	1622	276	228	201	116	53	37	38	59	77	133	165	239		
	CDH23.3	16246	3161	2418	1886	908	347	204	284	618	798	1272	1701	2650		
	CDH26.7	7321	1605	1151	822	335	94	46	86	264	349	553	732	1284		
Wind		WSAvg	3.0	2.8	2.8	2.6	2.7	2.6	2.8	3.0	3.4	3.7	3.6	3.2	3.0	
Precipitation	PrecAvg	1351	165	149	164	168	83	58	38	45	59	122	154	141		
	PrecMax	2218	441	474	485	529	248	267	132	152	215	337	612	320		
	PrecMin	733	35	13	12	31	2	3	0	0	0	23	20	11		
	PrecStd	298	89	85	108	126	64	52	28	33	44	62	98	81		
Monthly Design Dry Bulb and Mean Coincident Wet Bulb Temperatures	0.4%	DB	38.2	38.2	37.1	34.2	32.0	30.1	31.0	35.0	37.2	38.4	37.4	38.1		
		MCWB	24.6	24.7	23.8	24.7	23.5	22.0	20.6	21.0	21.8	24.1	24.6	23.8		
	2%	DB	36.8	36.2	34.9	32.5	29.2	28.0	29.1	32.2	34.0	34.9	34.2	36.1		
		MCWB	24.6	24.9	24.8	24.3	22.6	21.7	20.6	20.9	21.6	24.1	23.9	24.9		
	5%	DB	35.2	34.5	33.0	30.7	27.0	25.9	27.0	29.9	30.8	32.1	32.7	34.6		
		MCWB	24.7	24.9	24.4	23.5	21.6	20.8	20.0	20.4	20.9	23.1	23.3	24.5		
	10%	DB	33.8	32.8	31.1	28.2	25.0	23.3	23.9	26.8	27.9	29.5	30.9	32.9		
		MCWB	24.5	24.5	23.7	22.4	20.7	19.8	18.8	19.3	19.9	21.8	22.5	24.0		
	Monthly Design Wet Bulb and Mean Coincident Dry Bulb Temperatures	0.4%	WB	28.1	28.0	27.2	26.6	24.9	23.5	22.7	23.4	24.5	26.6	27.3	27.7	
			MCDB	33.8	33.3	32.6	31.4	29.3	27.8	28.3	31.0	32.3	33.1	32.6	33.8	
		2%	WB	27.1	26.9	26.3	25.5	23.6	22.4	21.6	22.1	23.2	25.2	25.8	26.7	
			MCDB	32.6	31.9	31.6	30.2	27.6	26.4	27.0	29.7	30.4	32.2	31.5	32.4	
5%		WB	26.4	26.2	25.6	24.6	22.5	21.4	20.4	20.9	22.1	24.1	24.8	26.1		
		MCDB	31.8	31.3	30.7	29.0	25.9	24.9	25.3	27.9	28.6	31.0	30.3	31.7		
10%		WB	25.8	25.5	24.8	23.5	21.5	20.4	19.3	19.7	20.9	23.0	23.8	25.4		
		MCDB	31.0	30.6	29.2	27.0	24.3	23.2	23.5	26.1	26.4	28.0	28.7	30.5		

Mean Daily Temperature Range		MDBR	11.5	10.7	10.6	10.1	10.2	10.1	11.6	12.9	12.6	11.2	11.6	11.4
	5% DB	MCDBR	13.8	13.2	13.2	12.4	11.4	10.7	12.7	15.1	15.7	14.6	14.5	14.0
		MCWBR	4.4	4.3	4.8	5.2	5.5	5.3	5.7	6.1	6.3	6.1	5.5	4.8
	5% WB	MCDBR	10.7	10.2	10.6	10.2	9.4	9.7	11.7	13.7	13.0	12.4	10.9	10.8
		MCWBR	4.4	4.5	4.9	4.9	4.9	5.4	6.2	6.3	6.3	6.1	5.5	4.8
Clear Sky Solar Irradiance	taub		0.411	0.409	0.397	0.393	0.375	0.390	0.384	0.476	0.545	0.478	0.403	0.413
	taud		2.394	2.406	2.427	2.412	2.421	2.366	2.363	2.052	1.885	2.143	2.372	2.373
	Ebn at noon		933	918	898	850	819	776	799	753	749	845	934	934
	Edn at noon		128	123	115	106	96	96	100	150	194	159	130	131
All-Sky Solar Radiation	RadAvg		6.79	6.20	5.33	4.12	3.23	2.66	3.17	3.89	4.70	5.47	6.56	6.77
	RadStd		0.56	0.42	0.37	0.44	0.40	0.23	0.28	0.35	0.57	0.58	0.48	0.48
Historical Trends														
	DBAvg	Heating		Cooling			Degree-Days							
		99% DB	99% DP	1% DB	1% WB	1% DP	HDD10.0	HDD18.3	CDD10.0	CDD18.3				
Station Only	N/A	N/A	N/A	+0.40	N/A	N/A	N/A	N/A	N/A	N/A				
Regional (0 neighbors)	N/A	N/A	N/A	+0.43	N/A	N/A	N/A	N/A	N/A	N/A				

CDDn	Cooling degree-days base n°C, °C-day	Lat	Latitude, °	Period	Years used to calculate the design conditions
CDHn	Cooling degree-hours base n°C, °C-hour	Long	Longitude, °	Sd	Standard deviation of daily average temperature, °C
DB	Dry bulb temperature, °C	MCDB	Mean coincident dry bulb temperature, °C	StdP	Standard pressure at station elevation, kPa
DP	Dew point temperature, °C	MCDBR	Mean coincident dry bulb temp. range, °C	taub	Clear sky optical depth for beam irradiance
Ebn,noon	Clear sky beam normal and diffuse horizontal irradiances at solar noon, W/m2	MCDP	Mean coincident dew point temperature, °C	taud	Clear sky optical depth for diffuse irradiance
Edh,noon		MCWB	Mean coincident wet bulb temperature, °C	Tavg	Average temperature, °C
Elev	Elevation, m	MCWBR	Mean coincident wet bulb temp. range, °C	Time Zone	Hours ahead or behind UTC
Enth	Enthalpy, kJ/kg	MCWS	Mean coincident wind speed, m/s	WB	Wet bulb temperature, °C
HDDn	Heating degree-days base n°C, °C-day	MDBR	Mean dry bulb temp. range, °C	Hours 8/4 & 12.8/20.6	Number of hours between 8 a.m. and 4 p.m with DB between 12.8 and 20.6 °C
PCWD	Prevailing coincident wind direction, °,0 = North, 90 = East	WS	Wind speed, m/s	HR	Humidity ratio, g of moisture per kg of dry air