

2021 ASHRAE Handbook - Fundamentals (SI)																
SALTA, ARGENTINA (WMO: 870470)																
Lat:24.8444S		Long:65.4758W		Elev:1221		StdP: 87.49			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	-1.0	0.8	-6.8	2.5	12.2	-4.5	3.0	9.8	7.5	19.3	6.6	18.7	0.6	270	0.362	
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	10.2	33.1	18.6	31.8	18.8	30.1	18.8	22.2	28.3	21.7	27.4	21.1	26.5	4.6	50	
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		
20.6	17.8	24.5	20.1	17.2	24.0	19.6	16.6	23.5	72.2	28.3	69.8	27.7	67.6	26.6	27.1	
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
7.4	6.3	5.4	DB	-4.0	36.5	1.9	0.9	-5.4	37.2	-6.5	37.7	-7.5	38.2	-8.9	38.9	
			WB	-4.4	24.0	1.8	1.1	-5.7	24.9	-6.7	25.5	-7.8	26.2	-9.1	27.0	
Monthly Climatic Design Conditions																
			Annual	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Temperatures, Degree-Days and Degree-Hours	DBAvg	17.5	22.1	21.3	20.0	17.4	14.1	12.0	11.5	13.7	16.1	19.4	20.8	21.9		
	DBStd	5.02	2.28	2.50	2.43	3.13	3.30	3.46	3.88	4.26	4.27	3.54	3.16	2.68		
	HDD10.0	76	0	0	0	1	6	19	29	14	6	1	0	0		
	HDD18.3	901	2	5	12	52	134	191	213	154	91	29	13	4		
	CDD10.0	2812	374	317	309	224	133	79	76	127	188	293	323	369		
	CDD18.3	597	118	89	63	25	3	1	1	9	23	63	86	116		
	CDH23.3	5279	807	514	293	136	49	47	85	291	451	772	880	954		
	CDH26.7	1698	234	126	48	16	7	9	22	101	167	310	326	333		
Wind		WSAvg	2.1	2.0	1.9	1.8	1.8	1.7	1.8	2.0	2.2	2.4	2.6	2.5	2.2	
Precipitation	PrecAvg	741	186	152	115	37	8	3	3	3	5	26	59	140		
	PrecMax	1214	374	347	254	185	34	21	29	30	35	101	242	316		
	PrecMin	438	55	48	32	1	0	0	0	0	0	0	0	32		
	PrecStd	139	70	69	57	32	8	4	5	5	7	23	41	57		
	Monthly Design Dry Bulb and Mean Coincident Wet Bulb Temperatures	0.4%	DB	32.5	31.6	29.9	28.2	27.4	27.9	29.8	32.9	34.2	35.2	34.9	34.0	
MCWB			21.4	21.7	21.7	19.6	16.3	13.4	13.8	14.3	16.5	18.0	19.1	20.3		
2%		DB	30.7	29.8	28.0	26.3	24.5	24.2	25.6	29.5	31.0	32.7	32.2	31.9		
		MCWB	20.9	21.4	20.8	19.2	16.7	13.8	13.9	14.6	15.9	18.0	19.3	20.1		
5%		DB	29.2	28.1	26.3	24.9	22.4	21.8	22.8	26.8	28.4	30.2	30.1	30.1		
		MCWB	20.6	20.8	20.1	18.8	16.0	13.8	13.0	14.3	15.6	17.7	18.3	19.7		
10%		DB	27.8	26.7	24.9	23.1	20.2	19.2	19.9	23.8	25.9	27.8	28.2	28.3		
		MCWB	20.3	20.3	19.5	17.9	15.1	12.6	12.1	13.4	14.7	17.2	17.8	19.5		
Monthly Design Wet Bulb and Mean Coincident Dry Bulb Temperatures	0.4%	WB	23.0	23.1	22.7	21.5	19.4	16.7	16.4	17.6	19.0	20.9	22.1	22.4		
		MCDB	29.7	29.2	27.8	26.1	23.6	22.7	24.5	27.1	28.9	30.0	30.8	29.6		
	2%	WB	22.1	22.2	21.6	20.5	17.9	15.6	15.1	16.1	17.7	19.6	20.7	21.6		
		MCDB	28.0	27.7	26.2	24.4	21.8	21.0	22.3	25.6	27.3	27.7	28.1	28.2		
	5%	WB	21.4	21.5	20.8	19.6	16.7	14.6	13.9	14.9	16.5	18.8	19.8	21.0		
		MCDB	27.0	26.5	24.9	23.1	20.8	19.4	20.6	24.8	25.6	27.1	26.3	27.3		
	10%	WB	20.8	20.8	20.2	18.7	15.7	13.5	12.7	13.7	15.4	17.9	19.1	20.3		
		MCDB	26.0	25.2	23.7	22.1	19.7	18.1	18.7	22.4	23.7	25.6	25.6	26.0		

Mean Daily Temperature Range		MDBR	10.2	9.4	8.8	9.9	10.9	14.0	15.8	16.7	15.7	13.6	12.4	11.3
	5% DB	MCDBR	13.1	12.1	11.7	12.9	15.0	18.9	21.3	22.7	20.7	18.9	16.4	14.9
		MCWBR	4.8	4.9	5.4	6.1	7.4	9.5	10.1	9.6	8.1	6.8	5.6	4.9
	5% WB	MCDBR	11.3	10.9	10.2	10.6	13.1	15.5	18.1	20.0	17.0	15.1	13.4	12.3
		MCWBR	4.6	4.7	4.9	5.3	6.7	8.1	8.9	8.7	8.1	6.8	5.6	4.9
Clear Sky Solar Irradiance	taub		0.416	0.413	0.398	0.355	0.311	0.284	0.283	0.320	0.384	0.430	0.402	0.417
	taud		2.347	2.354	2.384	2.459	2.522	2.579	2.555	2.425	2.250	2.180	2.307	2.319
	Ebn at noon		930	917	902	898	902	912	925	920	900	891	936	930
	Edn at noon		135	131	121	103	88	79	84	104	136	154	139	139
All-Sky Solar Radiation	RadAvg		6.22	5.78	5.20	4.65	4.02	3.86	4.24	5.14	6.09	6.50	6.82	6.43
	RadStd		0.45	0.43	0.28	0.25	0.26	0.19	0.16	0.24	0.27	0.33	0.41	0.38
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	N/A	N/A	N/A	N/A	N/A	N/A	+44			
	Regional (0 neighbors)	N/A	N/A	N/A	N/A	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