

2021 ASHRAE Handbook - Fundamentals (SI)																		
MENDOZA, ARGENTINA (WMO: 874180)																		
Lat:32.8439S			Long:68.7964W			Elev:704			StdP: 93.15			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	-0.3	1.0	-11.0	1.6	13.9	-8.3	2.0	13.0	8.4	13.9	7.1	12.8	0.6	270	0.388			
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	12.1	35.9	19.8	34.2	19.7	33.0	19.3	22.8	31.3	21.9	30.6	21.1	29.5	3.7	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				
20.2	16.2	27.3	19.1	15.1	26.5	18.1	14.2	25.7	71.4	31.5	67.8	30.3	64.7	29.8	27.3			
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			
7.8	6.5	5.6	DB	-3.2	39.5	1.5	1.6	-4.3	40.6	-5.2	41.5	-6.1	42.4	-7.2	43.5			
			WB	-4.2	24.5	1.3	1.2	-5.1	25.3	-5.8	26.0	-6.6	26.7	-7.5	27.5			
Monthly Climatic Design Conditions																		
			Annual	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Temperatures, Degree-Days and Degree-Hours	DBAvg	17.6	25.9	24.2	21.5	16.9	12.8	9.4	8.8	11.4	14.6	18.7	22.2	24.9				
	DBStd	6.78	2.80	3.27	3.23	3.41	3.14	2.78	3.03	3.64	3.78	3.67	3.48	3.20				
	HDD10.0	144	0	0	0	2	11	41	58	26	7	1	0	0				
	HDD18.3	1198	1	2	10	65	172	267	295	216	119	39	9	2				
	CDD10.0	2919	494	399	357	209	97	24	21	69	147	272	367	463				
	CDD18.3	932	236	168	109	23	1	0	0	2	8	52	127	207				
	CDH23.3	9951	2671	1728	947	203	16	6	3	52	146	561	1298	2322				
	CDH26.7	4241	1289	766	326	36	1	1	0	12	31	177	519	1084				
Wind		WSAvg	2.0	2.5	2.3	1.9	1.6	1.3	1.4	1.5	1.8	2.2	2.5	2.7	2.7			
Precipitation	PrecAvg	202	41	36	31	13	7	4	6	6	10	11	17	29				
	PrecMax	413	139	142	148	88	38	31	43	32	36	79	78	190				
	PrecMin	68	0	0	0	0	0	0	0	0	0	0	0	0				
	PrecStd	81	35	38	31	18	10	7	8	7	11	15	19	29				
Monthly Design Dry Bulb and Mean Coincident Wet Bulb Temperatures	0.4%	DB	38.1	36.9	33.9	29.9	25.1	23.5	22.7	28.2	30.0	33.4	35.5	37.6				
		MCWB	20.0	20.6	20.4	18.7	15.9	11.6	11.1	13.0	15.5	17.2	17.9	19.7				
	2%	DB	36.0	34.4	31.9	27.5	23.0	19.1	19.2	24.1	26.9	30.7	33.2	35.2				
		MCWB	20.3	20.4	19.8	17.0	14.7	10.7	10.1	12.3	13.7	16.6	18.0	19.4				
	5%	DB	34.2	32.9	30.1	25.9	21.1	17.3	17.5	21.3	24.9	28.4	31.7	33.9				
		MCWB	20.3	20.0	19.0	16.5	13.8	10.0	9.5	11.3	13.0	15.4	17.5	19.0				
	10%	DB	32.8	31.2	28.2	23.9	19.2	15.9	15.8	19.1	22.8	26.4	29.9	32.1				
		MCWB	19.8	19.7	18.6	15.7	12.8	9.4	8.6	10.2	12.4	14.6	16.7	18.7				
Monthly Design Wet Bulb and Mean Coincident Dry Bulb Temperatures	0.4%	WB	24.9	24.2	22.7	20.1	17.4	13.2	12.9	14.8	16.8	19.6	21.2	23.2				
		MCDB	32.0	32.0	30.4	26.0	22.5	19.5	19.5	25.3	26.4	29.8	31.4	32.5				
	2%	WB	22.8	22.8	21.4	18.5	15.7	11.9	11.2	13.0	15.1	18.0	19.8	21.8				
		MCDB	31.7	30.4	28.5	24.9	21.1	17.1	17.7	22.4	24.4	27.9	29.5	31.5				
	5%	WB	21.8	21.7	20.3	17.5	14.6	10.9	10.0	11.8	13.9	16.6	18.8	20.8				
		MCDB	30.9	29.6	27.3	23.8	19.6	16.2	16.4	20.3	23.0	25.8	28.9	30.2				
	10%	WB	20.9	20.8	19.5	16.5	13.5	9.8	9.0	10.6	12.8	15.5	17.7	19.8				
		MCDB	29.8	28.6	26.6	22.5	18.2	14.8	14.9	18.3	21.3	24.6	27.5	29.1				

Mean Daily Temperature Range		MDBR	12.1	11.7	11.2	11.1	10.8	11.8	12.4	12.8	12.6	12.3	12.4	12.4
	5% DB	MCDBR	14.5	14.5	14.1	14.3	14.1	14.5	15.4	16.7	16.8	15.6	15.4	14.8
		MCWBR	5.2	5.3	5.5	6.4	7.1	7.8	8.1	8.0	7.5	6.5	6.2	5.6
	5% WB	MCDBR	12.1	11.9	11.9	12.1	12.2	12.9	14.2	15.5	14.8	13.6	13.0	12.5
		MCWBR	5.6	5.4	5.4	6.1	6.7	7.4	8.0	7.9	7.5	6.5	6.2	5.6
Clear Sky Solar Irradiance	taub		0.403	0.393	0.370	0.361	0.317	0.295	0.290	0.316	0.355	0.368	0.378	0.397
	taud		2.331	2.365	2.426	2.409	2.494	2.556	2.526	2.444	2.331	2.322	2.319	2.308
	Ebn at noon		936	925	911	861	855	856	878	897	909	938	953	945
	Edn at noon		135	126	111	101	82	72	78	95	120	130	136	139
All-Sky Solar Radiation	RadAvg		7.86	6.95	5.80	4.40	3.13	2.74	2.98	3.88	5.13	6.52	7.73	8.25
	RadStd		0.45	0.42	0.35	0.41	0.36	0.23	0.23	0.32	0.41	0.55	0.47	0.45
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	-2.02	+0.52	N/A	N/A	N/A	N/A	N/A	N/A	+63			
Regional (0 neighbors)	N/A	N/A	N/A	+0.53	N/A	N/A	N/A	N/A	N/A	N/A	+137	+93		

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