

2021 ASHRAE Handbook - Fundamentals (SI)																		
LA QUIACA, ARGENTINA (WMO: 870070)																		
Lat:22.1033S			Long:65.6008W			Elev:3459			StdP: 66.11			Time zone:-3.00 (W03)			Period:05-19		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	-6.7	-5.3	-32.5	0.3	4.1	-30.2	0.4	5.9	15.4	12.7	14.7	12.8	0.4	140	0.503			
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			
12	12.2	23.5	8.8	22.6	8.7	21.7	8.4	12.5	19.0	11.8	18.0	11.2	17.3	2.5	320			
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				
10.4	12.1	13.8	9.8	11.6	13.4	9.2	11.2	13.0	47.4	19.1	45.2	17.9	43.4	17.5	17.6			
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			
9.3	7.3	6.6	DB	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
			WB	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
Monthly Climatic Design Conditions																		
			Annual	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Temperatures, Degree-Days and Degree-Hours	DBAvg	11.3	14.0	14.1	14.1	12.3	8.1	6.4	5.5	8.0	10.9	13.0	14.2	14.9				
	DBStd	3.81	1.95	1.93	1.82	2.13	2.05	1.93	2.03	1.87	2.13	2.00	1.79	1.69				
	HDD10.0	404	0	1	0	5	64	110	141	67	14	2	0	0				
	HDD18.3	2579	134	118	132	180	316	359	398	322	223	166	123	107				
	CDD10.0	867	124	116	127	75	6	1	0	4	41	94	127	152				
	CDD18.3	0	0	0	0	0	0	0	0	0	0	0	0	0				
	CDH23.3	36	2	2	3	1	0	0	0	0	1	4	13	10				
	CDH26.7	1	0	0	0	0	0	0	0	0	0	0	1	0				
Wind		WSAvg	1.9	1.9	2.0	1.8	1.6	1.6	1.4	1.9	1.8	2.3	2.2	2.2	2.0			
Precipitation	PrecAvg	319	88	67	44	7	1	0	0	0	3	18	24	73				
	PrecMax	500	219	143	87	34	14	16	0	6	28	81	78	157				
	PrecMin	173	0	16	0	0	0	0	0	0	0	0	0	10				
	PrecStd	84	47	30	23	8	3	2	0	1	6	18	19	36				
Monthly Design Dry Bulb and Mean Coincident Wet Bulb Temperatures	0.4%	DB	23.5	23.3	23.7	22.6	19.7	19.2	18.7	21.0	23.0	23.7	25.3	24.5				
		MCWB	9.4	10.1	9.5	7.9	6.2	5.2	5.0	5.9	8.7	7.7	7.7	9.3				
	2%	DB	22.0	21.6	22.2	21.2	18.4	17.6	17.3	19.4	21.1	22.5	23.2	23.1				
		MCWB	9.4	9.9	9.2	7.2	4.8	4.6	3.7	4.5	6.1	7.5	8.0	9.6				
	5%	DB	20.4	20.2	20.9	20.2	17.2	16.5	15.9	18.1	19.8	21.2	21.9	21.8				
		MCWB	9.5	9.7	9.2	6.8	4.0	3.5	2.9	4.1	5.4	7.0	7.8	9.6				
	10%	DB	18.9	18.9	19.5	19.0	16.1	15.2	14.4	16.8	18.4	20.0	20.5	20.4				
		MCWB	9.4	9.7	9.2	6.5	3.6	3.0	2.2	3.4	5.1	6.7	7.7	9.5				
Monthly Design Wet Bulb and Mean Coincident Dry Bulb Temperatures	0.4%	WB	13.0	12.5	13.3	11.2	8.5	8.0	7.3	7.6	11.3	11.9	12.6	13.3				
		MCDB	18.2	18.8	20.0	18.5	16.5	15.2	17.0	16.3	19.8	19.2	19.6	20.8				
	2%	WB	11.8	11.8	11.7	10.2	6.8	6.2	5.1	6.2	9.1	10.8	11.4	12.3				
		MCDB	16.6	17.7	18.1	16.5	14.9	16.6	15.2	16.5	16.8	18.2	18.1	19.4				
	5%	WB	11.1	11.2	11.0	9.6	5.7	4.5	3.5	5.2	7.9	9.9	10.5	11.5				
		MCDB	16.5	16.6	17.2	15.5	14.1	14.3	14.2	15.4	14.9	16.7	16.9	18.1				
	10%	WB	10.5	10.7	10.3	8.7	4.5	3.1	2.4	4.0	6.7	9.1	9.7	10.8				
		MCDB	16.0	15.8	16.2	14.7	13.0	14.2	13.7	14.7	13.8	15.4	16.0	17.0				

Mean Daily Temperature Range		MDBR	10.2	9.9	11.4	14.1	16.7	18.9	18.8	19.0	16.3	15.1	13.9	12.2
	5% DB	MCDBR	12.1	11.7	13.1	15.2	17.8	19.9	20.7	20.7	17.7	16.4	15.3	13.9
		MCWBR	3.5	3.2	4.3	6.3	8.7	10.6	11.5	11.2	8.3	7.2	5.2	4.4
	5% WB	MCDBR	10.2	10.0	11.6	12.2	15.9	19.4	19.6	19.6	15.0	13.8	13.2	12.2
		MCWBR	3.6	3.2	4.4	4.9	8.8	11.9	11.7	11.3	8.3	7.2	5.2	4.4
Clear Sky Solar Irradiance	taub		0.314	0.309	0.296	0.267	0.225	0.204	0.206	0.235	0.282	0.320	0.312	0.322
	taud		2.451	2.477	2.520	2.589	2.636	2.684	2.669	2.538	2.399	2.312	2.380	2.391
	Ebn at noon		1030	1022	1010	1002	1014	1022	1028	1023	1008	998	1025	1022
	Edn at noon		122	116	106	91	79	72	76	94	118	135	130	129
All-Sky Solar Radiation	RadAvg		6.95	6.69	6.58	6.10	5.38	4.94	5.21	6.13	7.08	7.68	8.04	7.48
	RadStd		0.35	0.40	0.32	0.19	0.14	0.13	0.16	0.23	0.21	0.29	0.27	0.35
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	N/A			
Regional (0 neighbors)		N/A	N/A	N/A	+0.56	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