

2021 ASHRAE Handbook - Fundamentals (SI)

BUENOS AIRES EZEIZA, ARGENTINA (WMO: 875760)																
Lat: 34.8186S			Long: 58.5422W			Elev: 20		StdP: 101.08		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		WSF	
			99.6%			99%			0.4%		1%		to 99.6% DB			
	99.6%	99%	DP	HR	MCDB	DP	HR	MCDB	WS	MCDB	WS	MCDB	MCWS	PCWD		
7	0.0	1.7	-3.9	2.7	5.3	-2.2	3.1	5.9	10.0	12.6	9.0	12.3	1.6	270	0.442	
Annual Cooling, Dehumidification, and Enthalpy Design Conditions																
Hottest Month	Hottest Month DB Range	Cooling DB/MCWB							Evaporation WB/MCDB						MCWS/PCWD	
		0.4%		1%		2%		0.4%		1%		2%		to 0.4% DB		
		DB	MCWB	DB	MCWB	DB	MCWB	WB	MCDB	WB	MCDB	WB	MCDB	MCWS	PCWD	
1	11.6	33.9	22.5	32.3	22.1	31.1	21.7	24.7	30.4	23.9	29.4	23.1	28.3	4.5	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		
23.1	17.9	27.5	22.1	16.9	26.4	21.5	16.2	25.8	75.2	30.4	71.8	29.4	68.9	28.5	28.4	
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	Min
9.3	8.2	7.3	DB	-2.8	37.0	1.2	1.4	-3.7	38.0	-4.4	38.8	-5.0	39.6	-5.9	40.6	
			WB	-3.4	26.6	1.2	0.9	-4.3	27.2	-5.0	27.8	-5.7	28.3	-6.5	28.9	
Monthly Climatic Design Conditions																
			Annual	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Temperatures, Degree-Days and Degree-Hours	DBAvg	17.0	24.0	22.9	20.8	17.2	13.9	11.0	10.3	12.0	13.7	16.7	19.8	22.6		
	DBStd	5.92	3.13	3.24	3.38	3.60	3.84	3.66	3.92	4.23	3.68	3.40	3.64	3.49		
	HDD10.0	116	0	0	0	1	8	29	44	25	9	1	0	0		
	HDD18.3	1155	2	4	16	62	147	222	251	203	145	73	25	7		
	CDD10.0	2688	433	363	334	218	128	59	54	87	120	207	294	390		
	CDD18.3	684	177	133	91	29	8	2	2	6	6	21	70	138		
	CDH23.3	6263	1808	1211	709	175	32	3	8	51	47	168	636	1416		
	CDH26.7	2232	746	441	199	30	3	0	1	11	7	34	196	564		
Wind		WSAvg	3.5	3.7	3.5	3.2	3.1	2.9	3.1	3.3	3.5	3.9	3.8	3.8	3.7	
Precipitation	PrecAvg	978	95	103	103	89	72	47	60	56	62	103	98	96		
	PrecMax	1495	257	325	458	211	305	128	171	195	184	362	214	287		
	PrecMin	630	4	18	5	2	1	0	8	0	5	14	7	15		
	PrecStd	197	62	66	78	55	65	35	36	48	41	67	59	59		
Monthly Design Dry Bulb and Mean Coincident Wet Bulb Temperatures	0.4%	DB	36.0	34.5	32.7	30.0	26.6	23.1	24.1	28.1	27.2	30.1	33.1	35.7		
		MCWB	23.4	23.5	22.5	21.9	20.0	19.5	18.4	20.4	19.1	20.0	21.5	22.6		
	2%	DB	34.0	32.8	30.8	27.1	23.8	20.6	20.5	24.1	24.3	27.1	30.8	33.5		
		MCWB	22.6	23.2	21.9	19.9	18.4	17.0	16.3	17.7	17.0	18.7	20.5	21.7		
	5%	DB	32.3	31.1	28.9	25.2	21.8	18.8	18.2	21.1	22.2	25.0	29.0	31.8		
		MCWB	22.2	22.6	21.3	19.4	17.6	15.4	14.5	15.7	15.6	17.9	19.4	21.1		
	10%	DB	30.8	29.4	27.2	23.6	20.0	17.0	16.6	18.9	20.2	23.1	27.1	30.0		
MCWB		21.8	21.8	20.8	18.4	16.3	13.8	13.3	14.2	14.6	16.8	18.8	20.6			
Monthly Design Wet Bulb and Mean Coincident Dry Bulb Temperatures	0.4%	WB	26.1	25.7	25.0	23.3	21.1	20.4	18.8	20.7	21.2	22.3	23.3	25.1		
		MCDB	31.7	31.8	28.9	27.6	24.6	22.7	23.0	26.9	26.2	27.6	29.7	31.0		
	2%	WB	24.6	24.6	23.6	21.7	19.5	18.1	17.3	18.6	18.7	20.2	21.9	23.7		
		MCDB	31.0	30.1	27.8	25.0	22.5	20.1	19.9	23.1	22.4	24.3	28.0	29.9		
	5%	WB	23.7	23.7	22.6	20.5	18.3	16.3	15.6	16.8	17.0	19.0	20.8	22.8		
		MCDB	29.7	28.8	26.7	23.5	20.9	18.0	17.6	19.9	20.4	23.1	26.4	28.6		
	10%	WB	22.9	22.9	21.7	19.4	17.1	14.5	14.1	15.1	15.6	17.9	19.9	21.8		
		MCDB	28.4	27.4	25.7	22.5	19.4	16.2	16.0	17.9	19.0	21.9	25.1	27.4		

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	+0.28	N/A	N/A	+0.56	N/A	+0.37	N/A	N/A	N/A	N/A
Regional (0 neighbors)	+0.23	N/A	N/A	+0.60	N/A	N/A	N/A	N/A	+82	+42

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