

TOULOUSE BLAGNAC, France

WMO#: 076300

Lat: 43.629N

Long: 1.364E

Elev: 499

StdP: 14.43

Time Zone: 1.00 (EUC)

Period: 90-14

WBAN: 99999

Annual Heating and Humidification Design Conditions

Coldest Month	Heating DB		Humidification DP/MCDB and HR						Coldest month WS/MCDB				MCWS/PCWD to 99.6% DB	
			99.6%			99%			0.4%		1%			
	99.6%	99%	DP	HR	MCDB	DP	HR	MCDB	WS	MCDB	WS	MCDB	MCWS	PCWD
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
1	25.2	28.1	19.2	14.7	30.9	22.5	17.2	32.1	26.9	50.0	23.8	48.9	5.3	280

(1)

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
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
8	19.9	91.7	69.2	88.2	68.4	85.3	67.5	72.1	85.1	70.7	83.2	69.3	81.3	8.5	140

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	

(2)

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
68.1	105.1	77.5	66.5	99.4	76.1	65.2	95.0	74.7	36.1	85.3	34.8	83.6	33.7	81.3	84.4

(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		
(n)	(o)	(p)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)		
(4) 23.9	20.9	18.6	DB	21.4	97.3	3.6	3.6	18.8	99.9	16.6	102.0	14.6	104.0	12.0	106.6	(4)
(5)			WB	20.7	74.8	3.9	2.4	17.8	76.6	15.5	78.0	13.3	79.4	10.4	81.1	(5)

Monthly Climatic Design Conditions

		Annual (d)	Jan (e)	Feb (f)	Mar (g)	Apr (h)	May (i)	Jun (j)	Jul (k)	Aug (l)	Sep (m)	Oct (n)	Nov (o)	Dec (p)
(6) Temperatures, Degree-Days and Degree-Hours	DBAvg	57.0	42.9	44.5	50.1	54.0	61.2	67.8	71.9	72.4	66.2	59.2	49.2	43.6
	DBStd	12.23	6.48	6.75	5.89	5.57	5.87	6.12	5.55	5.78	5.62	6.69	6.67	7.17
	HDD50	814	230	170	71	23	3	0	0	0	0	10	92	215
	HDD65	3638	684	573	461	331	144	40	9	8	51	199	475	663
	CDD50	3371	11	17	76	143	351	534	678	694	487	296	68	16
	CDD65	719	0	0	0	1	27	124	222	237	88	20	0	0
	CDH74	6331	0	0	3	31	267	1106	2052	2130	668	74	0	0
(13)	CDH80	2251	0	0	0	2	52	358	801	866	165	7	0	0
(14) Wind	WSAvg	8.6	8.1	9.3	9.6	9.7	9.0	8.6	8.3	7.8	7.8	8.4	8.2	8.2
(15) Precipitation	PrecAvg	25.80	2.20	2.20	2.30	2.50	2.90	2.30	1.60	1.90	1.90	2.00	1.90	2.20
	PrecMax	35.70	4.00	3.40	4.30	4.40	7.10	5.20	7.30	4.20	5.30	5.30	5.00	6.20
	PrecMin	15.90	0.40	0.40	0.60	0.50	0.90	0.30	0.20	0.60	0.10	0.40	0.20	0.60
	PrecStd	5.10	0.90	0.90	1.00	1.20	1.50	1.30	1.60	1.20	1.50	1.60	1.10	1.40
(19) Monthly Design Dry Bulb and Mean Coincident Wet Bulb Temperatures	0.4%	DB	60.3	64.5	73.0	78.5	85.5	92.6	95.4	98.8	88.6	80.2	67.8	60.7
		MCWB	53.8	53.9	56.1	61.6	65.5	70.0	67.9	69.8	67.2	65.4	59.5	55.0
	2%	DB	56.9	59.7	67.5	72.6	80.5	87.5	91.3	92.9	84.5	75.6	64.4	57.6
		MCWB	52.1	51.7	55.1	57.9	63.5	68.1	68.9	69.6	65.6	64.2	57.7	53.1
	5%	DB	54.8	57.0	63.6	68.6	76.7	84.2	88.0	88.3	81.1	72.3	61.4	55.5
		MCWB	50.8	50.5	53.0	56.3	62.5	67.1	68.1	69.2	65.1	62.5	56.3	51.6
	10%	DB	52.5	54.3	60.4	64.8	73.0	80.7	84.6	84.5	77.7	69.5	59.0	53.4
		MCWB	49.1	49.3	51.9	54.7	60.5	65.6	67.4	67.9	64.1	61.8	54.8	50.3
(27) Monthly Design Wet Bulb and Mean Coincident Dry Bulb Temperatures	0.4%	WB	55.2	55.0	58.6	62.3	68.4	72.8	73.3	74.6	71.0	67.4	60.8	55.8
		MCDB	58.4	60.8	67.6	74.9	81.4	87.1	87.5	87.9	83.0	75.7	66.1	59.3
	2%	WB	52.8	53.1	56.0	59.6	65.6	70.4	71.7	72.5	69.1	65.7	58.8	54.0
		MCDB	56.2	57.9	64.3	69.9	76.8	83.3	85.0	85.2	79.0	72.0	63.1	56.9
	5%	WB	51.3	51.6	54.3	57.6	63.6	68.5	70.2	71.0	67.5	64.4	57.0	52.2
		MCDB	54.3	55.9	61.7	66.3	73.6	80.6	83.1	83.1	76.5	70.2	60.8	55.1
	10%	WB	49.5	50.0	52.7	55.7	61.7	66.9	68.8	69.5	65.8	62.8	55.3	50.5
		MCDB	52.2	53.5	59.0	63.0	70.5	78.0	80.9	81.4	74.5	68.2	58.5	53.1
(35) Mean Daily Temperature Range	5% DB	MDBR	12.3	14.2	16.6	16.9	17.6	18.6	19.6	19.9	18.9	15.5	12.6	11.8
		MCDBR	14.8	18.2	23.6	24.1	24.8	25.0	26.3	26.7	24.4	18.9	15.9	13.4
		MCWBR	10.5	11.5	13.0	12.2	11.4	9.7	8.8	9.0	9.6	9.3	10.1	9.8
	5% WB	MCDBR	12.7	15.6	19.1	20.3	21.0	21.6	21.7	22.0	19.7	15.2	13.2	12.1
		MCWBR	9.5	10.6	11.3	11.2	10.8	9.5	8.4	9.0	8.7	8.2	9.0	9.3
(40) Clear-Sky Solar Irradiance	taub		0.321	0.336	0.375	0.398	0.407	0.418	0.410	0.410	0.379	0.365	0.339	0.319
	taud		2.475	2.412	2.310	2.249	2.281	2.284	2.306	2.317	2.388	2.432	2.460	2.479
	Ebn,noon		257	271	273	274	275	271	272	268	268	257	246	245
	Edh,noon		23	29	36	42	41	41	40	38	33	28	23	21
(44) All-Sky Solar Radiation	RadAvg		462	748	1169	1455	1681	1899	1879	1672	1356	902	523	418
	RadStd		40	79	110	167	122	138	128	112	68	89	56	48

Nomenclature:

See separate page