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SMOLENSK, Russian Federation

WMO#: **267810**

Lat: **54.75N** Long: **32.07E** Elev: **239** StdP: **98.49** Time Zone: **4.00 (RUS)** Period: **86-10** 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)	1	-22.7	-19.5	-25.3	0.4	-22.6	-22.1	0.5	-19.0	9.4	0.0	8.6	-0.3	1.8	70	(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)	
(2)	7	9.0	27.7	19.9	25.8	19.0	24.2	18.1	20.8	25.9	19.8	24.6	18.9	23.1	2.5	150	(2)

	Dehumidification DP/MCDB and HR									Enthalpy/MCDB						Hours 8 to 4 & 12.8/20.6	
	0.4%			1%			2%			0.4%		1%		2%			
	DP	HR	MCDB	DP	HR	MCDB	DP	HR	MCDB	Enth	MCDB	Enth	MCDB	Enth	MCDB		
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	
(3)	19.0	14.2	23.4	18.0	13.3	22.3	17.1	12.6	21.2	61.1	25.9	57.6	24.7	54.5	23.1	770	(3)

Extreme Annual Design Conditions

	Extreme Annual WS			Extreme Max WB	Extreme Annual DB				n-Year Return Period Values of Extreme DB								
					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	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	
(4)	7.3	6.3	5.4	24.3	-25.5	30.2	3.4	2.3	-27.9	31.9	-29.9	33.3	-31.8	34.6	-34.3	36.3	(4)

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)	
(5)	Temperatures, Degree-Days and Degree-Hours	Tavg		5.6	-6.2	-5.9	-1.2	6.5	12.3	16.0	18.0	16.4	11.0	5.4	-0.8	-5.3	(5)
(6)		Sd			6.54	6.12	4.54	4.71	4.28	3.48	3.18	3.33	3.66	4.10	5.07	5.79	(6)
(7)		HDD10.0		2425	502	446	347	126	25	1	0	0	31	151	323	474	(7)
(8)		HDD18.3		4732	760	679	605	354	192	87	46	79	222	401	573	733	(8)
(9)		CDD10.0		812	0	0	0	21	96	181	248	198	60	8	0	0	(9)
(10)		CDD18.3		77	0	0	0	0	4	17	35	19	1	0	0	0	(10)
(11)		CDH23.3		562	0	0	0	1	37	108	252	154	11	0	0	0	(11)
(12)		CDH26.7		111	0	0	0	0	4	11	55	40	1	0	0	0	(12)
(13)	Precipitation	PrecAvg		701	43	35	44	44	49	82	96	73	67	53	59	57	(13)
(14)		PrecMax		812	87	87	86	79	91	123	191	184	110	111	109	81	(14)
(15)		PrecMin		506	8	5	5	8	22	12	34	18	12	11	29	21	(15)
(16)		PrecSD		86.8	21.0	20.0	21.3	20.2	22.1	31.7	46.1	37.0	29.3	27.2	22.6	16.1	(16)
(17)	Monthly Design Dry Bulb and Mean Coincident Wet Bulb Temperatures	0.4%	DB		4.9	5.7	12.8	22.2	27.0	28.1	30.9	31.4	24.9	18.7	10.4	7.3	(17)
(18)			MCWB		4.0	3.8	7.1	12.6	19.0	20.0	21.2	20.6	17.9	13.4	9.2	6.5	(18)
(19)		2%	DB		2.8	3.6	8.6	19.3	23.8	26.2	28.1	26.6	21.2	14.6	8.1	4.6	(19)
(20)			MCWB		1.9	2.5	4.7	11.4	16.3	19.5	20.2	19.2	15.8	11.9	7.2	4.2	(20)
(21)		5%	DB		1.8	2.2	6.2	16.6	21.8	24.4	26.0	24.7	18.7	12.6	6.8	2.5	(21)
(22)			MCWB		1.1	1.3	3.5	10.2	14.6	18.4	19.4	18.3	14.4	10.6	6.2	2.0	(22)
(23)		10%	DB		0.9	1.2	4.4	14.4	19.8	22.5	24.3	22.6	16.7	11.1	5.4	1.2	(23)
(24)			MCWB		0.3	0.5	2.5	9.0	13.7	17.3	18.5	17.2	13.4	9.6	4.9	0.7	(24)
(25)	Monthly Design Wet Bulb and Mean Coincident Dry Bulb Temperatures	0.4%	WB		4.4	4.2	7.5	13.5	19.7	21.2	22.6	21.6	18.5	14.4	9.6	6.8	(25)
(26)			MCDB		4.9	5.1	11.3	19.9	26.0	26.1	28.6	27.7	22.8	16.3	10.3	7.3	(26)
(27)		2%	WB		2.1	2.8	5.5	12.0	17.3	20.1	21.1	20.2	16.3	12.4	7.5	4.2	(27)
(28)			MCDB		2.5	3.5	7.8	17.9	22.3	24.8	26.2	25.8	19.9	14.3	7.9	4.7	(28)
(29)		5%	WB		1.2	1.5	4.0	10.9	15.8	19.1	20.0	19.1	15.0	11.0	6.2	2.1	(29)
(30)			MCDB		1.7	2.0	5.7	15.8	20.1	23.5	24.8	23.3	17.9	12.4	6.7	2.4	(30)
(31)		10%	WB		0.4	0.6	2.7	9.6	14.3	18.0	19.1	17.9	13.8	9.8	5.0	0.8	(31)
(32)			MCDB		0.9	1.1	4.2	13.7	18.4	21.7	23.3	21.6	16.1	10.9	5.4	1.1	(32)
(33)	Mean Daily Temperature Range		MDBR		4.6	5.5	6.3	8.4	9.5	8.7	9.0	9.0	8.1	6.2	4.1	4.4	(33)
(34)		5% DB	MCDBR		3.5	4.2	8.3	11.8	12.4	11.1	11.8	12.1	11.5	9.0	4.9	4.2	(34)
(35)			MCWBR		3.5	3.9	5.5	5.8	5.9	5.4	5.3	5.7	6.4	6.0	4.3	4.0	(35)
(36)		5% WB	MCDBR		3.4	4.0	7.1	10.8	10.7	10.0	10.4	10.8	9.8	7.5	4.4	4.2	(36)
(37)			MCWBR		3.6	4.0	5.1	5.5	5.8	5.3	5.4	5.5	5.9	5.5	4.2	4.2	(37)
(38)	Clear Sky Solar Irradiance	taub			0.364	0.350	0.370	0.371	0.320	0.330	0.368	0.374	0.363	0.326	0.317	0.328	(38)
(39)		taud			2.255	2.215	2.151	2.242	2.411	2.411	2.322	2.314	2.385	2.489	2.485	2.384	(39)
(40)		Ebn,noon			541	710	786	850	924	916	870	839	798	754	631	522	(40)
(41)		Edh,noon			61	86	115	120	107	109	117	111	91	65	48	44	(41)

Nomenclature: See separate page