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VLADIVOSTOK, Russian Federation

WMO#: **319600**

Lat: **43.12N** Long: **131.93E** Elev: **183** StdP: **99.15** Time Zone: **11.00 (ASV)** 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	-25.2	-22.8	-31.1	0.2	-23.9	-28.9	0.3	-21.3	14.4	-13.0	13.0	-13.5	2.0	0	(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)	8	7.8	28.2	21.3	26.8	20.6	24.9	19.8	23.2	26.3	22.2	24.6	21.2	23.5	3.7	220	(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)	22.2	17.2	24.4	21.2	16.2	23.4	20.3	15.3	22.4	70.1	26.4	66.2	24.5	62.7	23.2	833	(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)	13.1	11.2	9.8	27.5	-28.4	31.7	4.3	2.0	-31.5	33.1	-34.0	34.3	-36.4	35.5	-39.5	37.0	(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		5.2	-13.1	-9.1	-1.8	6.0	11.1	15.4	19.3	20.9	16.0	8.6	-1.6	-10.1	(5)
(6)		Sd			4.75	4.94	4.50	3.35	3.17	3.25	2.89	2.50	3.06	4.17	5.49	5.06	(6)
(7)		HDD10.0		2816	715	534	366	128	24	1	0	0	1	75	348	624	(7)
(8)		HDD18.3		4948	973	768	624	370	224	99	23	6	81	301	598	882	(8)
(9)		CDD10.0		1072	0	0	0	8	59	162	289	338	182	33	1	0	(9)
(10)		CDD18.3		161	0	0	0	0	0	10	53	86	12	0	0	0	(10)
(11)		CDH23.3		744	0	0	0	2	12	89	247	341	53	1	0	0	(11)
(12)		CDH26.7		153	0	0	0	1	1	18	59	69	6	0	0	0	(12)
(13)	Precipitation	PrecAvg		795	12	18	25	49	74	94	136	148	117	67	29	18	(13)
(14)		PrecMax		1261	64	66	93	150	187	280	403	287	352	235	133	80	(14)
(15)		PrecMin		452	0	0	0	6	4	9	20	4	6	1	0	1	(15)
(16)		PrecSD		202.3	13.9	16.3	18.7	32.5	48.0	60.4	83.3	69.3	81.1	47.0	32.0	19.7	(16)
(17)	Monthly Design Dry Bulb and Mean Coincident Wet Bulb Temperatures	0.4%	DB		1.8	5.8	11.3	21.8	25.0	29.0	31.0	30.9	27.1	21.1	14.0	5.0	(17)
(18)			MCWB		-0.6	1.3	4.7	11.3	14.4	20.1	23.0	22.9	19.1	14.6	9.5	3.2	(18)
(19)		2%	DB		-0.9	2.2	8.2	17.6	21.9	25.9	28.2	28.4	24.9	18.6	11.0	2.9	(19)
(20)			MCWB		-2.7	-0.5	2.7	9.3	13.4	18.1	21.7	21.7	18.2	13.1	7.3	0.9	(20)
(21)		5%	DB		-2.8	0.6	6.1	14.2	19.5	23.2	26.1	26.9	22.9	16.8	8.7	0.5	(21)
(22)			MCWB		-4.4	-1.6	1.6	7.3	12.1	17.2	20.8	21.1	17.5	12.4	5.8	-1.4	(22)
(23)		10%	DB		-4.9	-1.1	4.2	11.9	17.2	21.0	24.0	25.1	21.1	15.2	6.4	-1.7	(23)
(24)			MCWB		-6.8	-2.9	0.6	6.0	11.1	16.4	20.4	20.7	16.6	11.7	3.9	-3.5	(24)
(25)	Monthly Design Wet Bulb and Mean Coincident Dry Bulb Temperatures	0.4%	WB		0.1	1.9	5.6	12.2	16.2	21.8	24.4	24.7	21.6	16.2	10.7	4.1	(25)
(26)			MCDB		1.2	3.7	9.5	20.0	22.3	26.6	28.4	28.1	24.2	18.4	12.6	4.7	(26)
(27)		2%	WB		-2.4	0.1	3.6	10.0	14.5	19.6	23.1	23.5	20.0	15.2	8.3	1.3	(27)
(28)			MCDB		-1.1	1.6	6.5	16.3	19.9	23.9	26.9	26.4	22.5	17.0	10.1	2.3	(28)
(29)		5%	WB		-4.3	-1.3	2.4	8.3	13.2	18.3	21.8	22.6	18.8	13.9	6.1	-1.1	(29)
(30)			MCDB		-2.7	0.3	5.0	12.8	17.6	22.0	24.6	24.9	21.3	15.9	8.2	0.3	(30)
(31)		10%	WB		-6.8	-2.9	1.2	6.7	12.1	17.0	20.8	21.7	17.9	12.5	4.1	-3.5	(31)
(32)			MCDB		-4.9	-1.0	3.6	10.4	15.7	20.1	23.3	23.7	20.1	14.5	6.1	-1.6	(32)
(33)	Mean Daily Temperature Range		MDBR		11.0	11.3	9.6	10.2	10.4	9.0	7.8	7.8	10.0	10.6	9.7	10.2	(33)
(34)		5% DB	MCDBR		13.8	13.9	11.8	15.5	15.7	14.2	12.1	11.1	13.1	13.3	13.5	12.7	(34)
(35)			MCWBR		12.0	11.2	7.7	8.6	8.3	7.9	6.5	5.7	7.5	8.7	10.4	11.1	(35)
(36)		5% WB	MCDBR		12.6	12.1	11.0	14.7	13.3	12.7	10.5	8.6	10.0	10.4	12.5	11.5	(36)
(37)			MCWBR		11.7	10.2	7.8	8.6	7.9	7.5	6.2	5.0	6.3	8.0	10.5	10.7	(37)
(38)	Clear Sky Solar Irradiance	taub			0.348	0.365	0.424	0.475	0.490	0.460	0.430	0.400	0.379	0.380	0.356	0.362	(38)
(39)		taud			2.263	2.211	2.040	1.929	1.900	2.050	2.227	2.347	2.403	2.346	2.360	2.281	(39)
(40)		Ebn,noon			759	813	803	792	791	818	840	855	848	791	749	702	(40)
(41)		Edh,noon			89	111	149	180	191	165	137	117	103	96	81	82	(41)

Nomenclature: See separate page