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SKOPJE- AIRPORT, Macedonia, the former Yugoslav Republic of

WMO#: **135860**

Lat: **41.97N** Long: **21.65E** Elev: **239** StdP: **98.49** Time Zone: **1.00 (EUW)** 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	-12.1	-8.8	-14.9	1.1	-10.2	-11.9	1.4	-7.3	9.7	3.6	8.3	3.2	0.5	60	(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	14.9	36.0	20.5	34.1	20.2	32.4	19.7	22.0	32.3	21.2	31.1	20.6	30.1	2.4	240	(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)	18.9	14.1	24.8	18.0	13.3	24.1	17.2	12.7	23.8	65.1	32.4	62.5	31.3	60.2	30.2	764	(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)	8.8	7.6	6.2	25.1	-15.2	39.0	4.4	2.2	-18.4	40.5	-21.0	41.8	-23.4	43.0	-26.6	44.6	(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		12.7	0.4	3.4	7.8	12.3	17.2	21.4	23.9	24.0	19.1	13.5	6.8	1.6	(5)
(6)		Sd			4.55	4.28	4.33	3.31	3.15	3.21	2.88	2.71	3.15	3.93	4.34	4.88	(6)
(7)		HDD10.0		985	297	187	92	16	1	0	0	0	0	14	115	263	(7)
(8)		HDD18.3		2601	555	419	327	181	59	9	1	2	27	154	347	519	(8)
(9)		CDD10.0		1958	0	2	24	86	224	342	432	433	273	122	18	2	(9)
(10)		CDD18.3		532	0	0	0	1	24	102	174	177	51	4	0	0	(10)
(11)		CDH23.3		6412	0	0	5	29	357	1199	2072	2064	616	69	2	0	(11)
(12)		CDH26.7		2911	0	0	0	2	96	508	1039	1036	217	12	0	0	(12)
(13)	Precipitation	PrecAvg		507	34	37	36	40	62	46	34	31	41	44	56	46	(13)
(14)		PrecMax		772	92	80	119	75	125	125	92	67	120	126	189	145	(14)
(15)		PrecMin		294	7	3	4	14	6	4	6	3	5	1	3	2	(15)
(16)		PrecSD		124.7	20.5	20.5	27.4	17.3	32.6	30.3	26.9	19.5	35.8	36.5	46.0	30.8	(16)
(17)	Monthly Design Dry Bulb and Mean Coincident Wet Bulb Temperatures	0.4%	DB		13.1	18.1	23.9	26.1	31.7	36.1	39.2	38.0	34.1	28.1	21.4	16.1	(17)
(18)			MCWB		9.2	10.7	13.8	15.4	18.5	21.0	20.8	20.7	19.4	17.5	14.8	11.8	(18)
(19)		2%	DB		10.2	15.0	20.8	23.9	29.1	33.4	36.1	36.0	31.4	25.1	17.8	12.0	(19)
(20)			MCWB		7.7	9.4	12.3	14.3	18.3	20.4	20.6	20.3	18.6	16.7	13.4	9.9	(20)
(21)		5%	DB		8.1	12.3	18.2	22.0	27.1	31.8	34.1	34.1	29.1	22.9	15.4	9.9	(21)
(22)			MCWB		6.2	8.0	11.0	13.3	17.6	19.8	20.4	20.1	18.0	15.8	12.0	8.5	(22)
(23)		10%	DB		6.2	10.1	15.8	20.0	25.0	29.8	32.1	32.2	26.9	20.8	13.2	7.9	(23)
(24)			MCWB		4.7	6.8	9.8	12.7	16.8	19.4	19.8	19.7	17.2	15.1	10.7	6.5	(24)
(25)	Monthly Design Wet Bulb and Mean Coincident Dry Bulb Temperatures	0.4%	WB		10.1	11.2	14.4	16.7	20.4	22.6	23.0	22.9	20.6	18.8	15.6	12.6	(25)
(26)			MCDB		12.2	16.6	22.0	24.0	28.0	32.4	33.7	33.5	29.4	25.4	19.3	15.6	(26)
(27)		2%	WB		8.0	9.8	12.7	15.1	19.2	21.5	22.0	21.7	19.6	17.5	14.0	10.2	(27)
(28)			MCDB		9.7	14.2	19.3	21.7	27.0	30.9	32.6	32.0	28.5	23.3	16.9	11.6	(28)
(29)		5%	WB		6.3	8.6	11.5	14.1	18.2	20.6	21.2	21.1	18.7	16.4	12.5	8.6	(29)
(30)			MCDB		7.7	12.0	17.3	20.5	25.5	29.6	31.4	31.0	27.0	21.5	15.3	9.9	(30)
(31)		10%	WB		4.9	7.1	10.1	13.1	17.2	19.7	20.5	20.3	17.8	15.4	11.0	6.5	(31)
(32)			MCDB		6.0	9.6	15.2	18.6	24.0	28.2	30.1	30.0	25.2	19.8	13.2	7.5	(32)
(33)	Mean Daily Temperature Range		MDBR		7.9	10.3	11.9	12.8	13.5	14.2	14.9	15.2	13.9	12.0	9.3	6.8	(33)
(34)		5% DB	MCDBR		10.2	14.3	17.2	17.0	17.2	17.3	18.4	18.4	17.8	15.7	12.4	9.0	(34)
(35)			MCWBR		7.6	9.4	9.7	8.9	8.1	6.8	6.5	6.6	7.5	8.2	8.1	6.7	(35)
(36)		5% WB	MCDBR		9.1	13.2	15.5	14.8	15.7	15.8	16.1	15.7	15.4	13.5	10.9	8.2	(36)
(37)			MCWBR		6.9	9.0	9.1	8.2	8.0	6.8	6.3	6.2	6.9	7.5	7.2	6.3	(37)
(38)	Clear Sky Solar Irradiance	taub			0.342	0.353	0.377	0.386	0.372	0.392	0.403	0.415	0.376	0.361	0.358	0.349	(38)
(39)		taud			2.389	2.322	2.291	2.259	2.316	2.265	2.244	2.227	2.401	2.471	2.461	2.421	(39)
(40)		Ebn,noon			791	842	864	882	902	881	866	844	856	828	770	748	(40)
(41)		Edh,noon			82	101	118	130	126	133	135	133	104	87	77	74	(41)

Nomenclature: See separate page