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CHONGJIN, Korea, Democratic People's Republic of

WMO#: **470080**

Lat: **41.78N** Long: **129.82E** Elev: **43** StdP: **100.81** Time Zone: **9.00 (JPN)** 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	-12.8	-11.0	-24.9	0.4	-8.5	-22.2	0.5	-8.4	9.8	-7.4	8.4	-8.3	2.3	320	(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	5.0	27.5	22.4	26.1	21.9	25.0	21.4	24.0	26.1	23.1	25.0	22.2	24.2	1.4	140	(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)	23.2	18.1	25.3	22.4	17.2	24.6	21.5	16.3	23.8	72.4	26.2	69.1	24.9	65.7	24.3	902	(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)	7.4	5.8	4.5	27.9	-15.7	30.9	2.5	1.7	-17.4	32.2	-18.9	33.2	-20.3	34.1	-22.1	35.4	(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	8.6	-5.1	-3.1	1.5	7.5	12.2	16.5	20.3	21.9	17.7	11.6	3.6	-2.1	(5)
(6)			Sd		3.22	3.21	3.12	3.26	3.13	3.03	2.84	2.13	2.51	3.19	3.96	3.41	(6)
(7)			HDD10.0	1787	467	367	264	88	14	0	0	0	0	21	192	374	(7)
(8)			HDD18.3	3771	725	600	522	324	193	72	12	1	41	209	441	632	(8)
(9)			CDD10.0	1279	0	0	0	14	81	194	319	368	231	71	1	0	(9)
(10)			CDD18.3	221	0	0	0	0	1	16	72	111	22	0	0	0	(10)
(11)			CDH23.3	709	0	0	0	1	9	61	238	361	39	0	0	0	(11)
(12)			CDH26.7	81	0	0	0	0	2	7	29	40	3	0	0	0	(12)
(13)	Precipitation		PrecAvg	642	11	11	15	30	51	87	126	158	80	33	22	18	(13)
(14)			PrecMax	804	44	31	42	82	121	163	210	345	152	60	67	37	(14)
(15)			PrecMin	456	1	1	4	10	22	37	56	31	13	6	4	2	(15)
(16)			PrecSD	91.1	8.8	7.5	9.0	17.4	25.1	30.8	38.6	62.7	35.6	14.0	14.6	8.6	(16)
(17)	Monthly Design Dry Bulb and Mean Coincident Wet Bulb Temperatures	0.4%	DB		4.2	7.2	12.7	20.4	24.3	27.6	29.5	29.9	26.5	20.9	14.9	8.0	(17)
(18)			MCWB		1.3	3.0	6.9	11.5	15.3	19.6	23.9	23.5	20.6	15.1	10.3	5.3	(18)
(19)		2%	DB		2.2	4.7	9.8	16.9	21.2	25.0	27.2	27.6	24.4	19.3	12.7	5.9	(19)
(20)			MCWB		-0.2	1.7	5.0	10.2	13.9	18.5	22.9	22.9	19.8	14.7	9.0	3.3	(20)
(21)		5%	DB		0.9	3.2	7.9	14.7	18.9	22.9	25.9	26.3	23.2	18.1	11.1	4.3	(21)
(22)			MCWB		-1.3	0.6	4.1	9.0	12.9	17.8	22.2	22.3	19.1	13.9	7.9	1.9	(22)
(23)		10%	DB		-0.3	1.8	6.3	12.9	17.1	21.1	24.5	25.2	22.1	16.9	9.7	3.0	(23)
(24)			MCWB		-2.2	-0.6	2.9	8.0	12.0	17.1	21.7	21.9	18.3	13.2	6.6	0.7	(24)
(25)	Monthly Design Wet Bulb and Mean Coincident Dry Bulb Temperatures	0.4%	WB		1.9	3.5	7.8	12.8	16.4	21.4	24.9	25.4	22.6	17.4	11.1	5.7	(25)
(26)			MCDB		3.7	6.1	11.9	18.4	21.8	25.3	27.3	27.7	24.9	19.2	13.8	7.7	(26)
(27)		2%	WB		0.1	2.0	5.6	11.0	14.8	19.8	23.8	24.3	21.0	15.9	9.7	3.7	(27)
(28)			MCDB		1.6	4.1	9.1	15.8	19.3	23.2	26.0	26.4	23.6	18.1	12.1	5.5	(28)
(29)		5%	WB		-1.0	0.9	4.4	9.6	13.7	18.7	23.0	23.5	19.9	14.9	8.4	2.2	(29)
(30)			MCDB		0.6	2.9	7.3	13.9	17.5	21.5	25.0	25.4	22.2	17.3	10.6	3.9	(30)
(31)		10%	WB		-2.0	-0.3	3.3	8.5	12.8	17.6	22.1	22.7	19.1	13.8	7.0	0.9	(31)
(32)			MCDB		-0.4	1.6	5.9	12.2	16.1	20.3	24.2	24.4	21.3	16.4	9.3	2.6	(32)
(33)	Mean Daily Temperature Range		MDBR		6.7	6.8	6.6	7.1	6.5	5.2	4.2	5.0	7.0	8.0	7.1	6.5	(33)
(34)		5% DB	MCDBR		7.8	7.9	8.7	10.4	10.5	8.7	6.9	7.0	7.8	8.5	8.8	8.0	(34)
(35)			MCWBR		6.7	6.3	6.2	6.0	5.4	4.5	3.9	4.0	4.9	6.3	7.1	6.8	(35)
(36)		5% WB	MCDBR		7.5	7.6	8.2	9.4	8.9	6.8	5.7	5.6	6.4	8.0	8.5	7.7	(36)
(37)			MCWBR		6.6	6.2	6.3	6.0	5.3	4.1	3.7	3.7	4.6	6.4	7.1	6.8	(37)
(38)	Clear Sky Solar Irradiance	taub			0.373	0.433	0.474	0.521	0.540	0.526	0.486	0.425	0.406	0.405	0.374	0.369	(38)
(39)		taud			2.224	2.037	1.917	1.817	1.797	1.894	2.091	2.320	2.355	2.294	2.335	2.307	(39)
(40)		Ebn,noon			741	741	759	755	753	765	794	836	826	772	741	715	(40)
(41)		Edh,noon			97	136	171	203	213	194	158	122	110	104	86	83	(41)

Nomenclature: See separate page