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FAIRBANKS INTL ARPT, AK, USA

WMO#: **702610**

Lat: **64.82N** Long: **147.86W** Elev: **138** StdP: **99.68** Time Zone: **-9.00 (NAK)** Period: **86-10** WBAN: **26411**

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	-42.0	-39.1	-38.3	0.1	-34.3	-36.6	0.1	-33.1	8.7	-13.0	7.3	-13.2	0.3	10	(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	10.4	27.4	16.1	25.7	15.5	23.8	14.8	17.3	25.0	16.4	23.5	15.6	22.0	2.9	180	(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)	14.7	10.6	18.5	13.7	9.9	18.0	12.8	9.3	17.4	49.0	25.0	46.3	23.3	44.0	22.1	677	(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)	7.7	6.7	5.5	22.4	-42.7	30.4	3.2	2.0	-45.0	31.8	-46.9	33.0	-48.7	34.1	-51.0	35.6	(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		-2.1	-22.5	-17.8	-11.6	1.0	10.0	16.1	17.2	13.8	7.5	-4.0	-16.2	-20.1	(5)
(6)		Sd			9.90	8.85	7.30	6.04	4.21	3.09	2.85	3.33	4.43	6.42	7.84	7.91	(6)
(7)		HDD10.0		5032	1008	778	671	271	51	1	0	5	96	433	785	934	(7)
(8)		HDD18.3		7509	1267	1011	929	520	258	81	54	146	326	691	1035	1193	(8)
(9)		CDD10.0		604	0	0	0	1	52	184	224	123	19	1	0	0	(9)
(10)		CDD18.3		40	0	0	0	0	1	14	20	6	0	0	0	0	(10)
(11)		CDH23.3		474	0	0	0	0	19	177	216	61	0	0	0	0	(11)
(12)		CDH26.7		82	0	0	0	0	1	33	37	11	0	0	0	0	(12)
(13)	Precipitation	PrecAvg		349	22	22	16	15	22	32	42	51	38	32	32	25	(13)
(14)		PrecMax		647	59	60	53	40	59	56	110	157	96	86	84	79	(14)
(15)		PrecMin		189	2	3	3	2	3	5	6	12	4	3	4	4	(15)
(16)		PrecSD		114.5	16.5	19.8	15.3	11.6	15.6	12.0	27.5	35.3	28.6	27.7	24.5	19.9	(16)
(17)	Monthly Design Dry Bulb and Mean Coincident Wet Bulb Temperatures	0.4%	DB		2.6	2.5	8.1	18.7	26.0	29.8	29.9	27.9	21.3	13.6	2.2	1.4	(17)
(18)			MCWB		0.1	-0.2	2.4	9.4	13.2	16.4	17.0	17.9	12.6	8.0	0.5	-0.3	(18)
(19)		2%	DB		-2.6	0.0	5.0	15.1	22.7	27.3	27.5	25.0	18.7	9.3	0.4	-3.0	(19)
(20)			MCWB		-3.5	-1.4	0.6	6.9	11.8	15.3	16.4	16.4	11.4	5.3	-0.4	-3.9	(20)
(21)		5%	DB		-5.7	-2.9	2.3	12.5	20.6	25.4	25.9	22.4	16.8	6.6	-2.1	-6.3	(21)
(22)			MCWB		-6.3	-4.2	-1.0	5.4	11.1	14.8	16.0	14.9	10.6	3.8	-2.9	-6.8	(22)
(23)		10%	DB		-8.9	-5.9	-0.5	10.2	18.3	23.3	24.0	20.1	14.5	3.9	-5.4	-9.1	(23)
(24)			MCWB		-9.4	-6.7	-2.9	4.2	9.8	14.1	15.4	14.0	9.6	1.9	-6.0	-9.5	(24)
(25)	Monthly Design Wet Bulb and Mean Coincident Dry Bulb Temperatures	0.4%	WB		0.6	0.7	2.7	9.6	14.1	17.7	18.5	19.0	13.3	8.7	1.1	0.0	(25)
(26)			MCDB		2.9	1.9	7.5	18.2	22.2	27.0	25.9	26.3	19.2	12.6	2.3	1.2	(26)
(27)		2%	WB		-3.1	-1.5	0.8	7.3	12.7	16.5	17.4	17.1	11.9	5.7	-0.4	-3.7	(27)
(28)			MCDB		-2.2	0.3	4.1	14.4	21.0	25.0	25.1	23.3	16.9	8.9	0.4	-2.9	(28)
(29)		5%	WB		-5.7	-4.1	-0.8	5.7	11.6	15.5	16.7	15.8	11.1	3.8	-2.8	-6.6	(29)
(30)			MCDB		-5.1	-2.9	2.2	12.0	19.4	23.2	23.9	20.8	15.4	6.5	-2.0	-6.1	(30)
(31)		10%	WB		-8.5	-6.4	-2.9	4.3	10.4	14.7	15.9	14.6	10.2	1.9	-6.0	-9.4	(31)
(32)			MCDB		-8.0	-5.6	-0.5	9.8	17.4	21.9	22.6	19.0	13.9	3.8	-5.4	-9.0	(32)
(33)	Mean Daily Temperature Range		MDBR		8.4	11.0	14.1	12.2	11.7	11.1	10.4	9.7	9.8	7.6	7.8	8.4	(33)
(34)		5% DB	MCDBR		9.7	11.7	15.5	15.0	14.8	14.6	14.0	13.4	13.5	10.1	8.3	11.0	(34)
(35)			MCWBR		8.8	10.1	11.5	8.2	6.7	5.8	5.7	6.1	7.1	6.5	7.4	10.2	(35)
(36)		5% WB	MCDBR		9.7	11.4	14.7	14.2	13.3	12.5	12.1	11.7	11.5	9.8	8.2	10.9	(36)
(37)			MCWBR		8.8	9.9	10.9	7.9	6.1	5.4	5.3	5.7	6.3	6.4	7.2	10.1	(37)
(38)	Clear Sky Solar Irradiance	taub			0.223	0.260	0.258	0.278	0.289	0.304	0.313	0.313	0.284	0.273	0.257	0.225	(38)
(39)		taud			2.395	2.563	2.498	2.413	2.453	2.430	2.434	2.476	2.575	2.569	2.584	2.612	(39)
(40)		Ebn,noon			374	707	860	908	925	913	893	858	821	668	355	129	(40)
(41)		Edh,noon			16	40	64	88	93	98	95	83	60	39	15	4	(41)

Nomenclature: See separate page