

STOETTEN, GERMANY

Latitude = 48.67 N

Longitude = 9.87 E

Period of Record = 1973 to 1996

WMO No. 108360

Elevation = 2418 feet

Average Pressure = 27.46 inches Hg

Design Criteria Data

	Design Value	Mean Coincident (Average) Values			
		Wet Bulb Temperature (°F)	Humidity Ratio (gr/lb)	Wind Speed (mph)	Prevailing Direction (NSEW)
Dry Bulb Temperature (T)	(°F)				
Median of Extreme Highs	84	65	73	6.6	W
0.4% Occurrence	79	64	73	7.2	E
1.0% Occurrence	76	63	72	7.3	E
2.0% Occurrence	73	61	71	7.6	E
Mean Daily Range	11	-	-	-	-
97.5% Occurrence	18	18	13	9.9	E
99.0% Occurrence	14	13	10	11.8	E
99.6% Occurrence	9	9	8	10.7	E
Median of Extreme Lows	7	7	7	11.7	E
	Design Value	Mean Coincident (Average) Values			
		Dry Bulb Temperature (°F)	Humidity Ratio (gr/lb)	Wind Speed (mph)	Prevailing Direction (NSEW)
Wet Bulb Temperature (T_{wb})	(°F)				
Median of Extreme Highs	69	78	97	7.0	W
0.4% Occurrence	66	76	86	6.7	E
1.0% Occurrence	64	73	82	7.2	W
2.0% Occurrence	63	71	79	7.5	W
	Design Value	Mean Coincident (Average) Values			
		Dry Bulb Temperature (°F)	Vapor Pressure (in. Hg)	Wind Speed (mph)	Prevailing Direction (NSEW)
Humidity Ratio (HR)	(gr/lb)				
Median of Extreme Highs	101	72	0.62	5.2	WNW
0.4% Occurrence	92	70	0.57	7.1	W
1.0% Occurrence	86	68	0.53	7.3	W
2.0% Occurrence	82	66	0.51	7.5	W
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		0	30	0	23

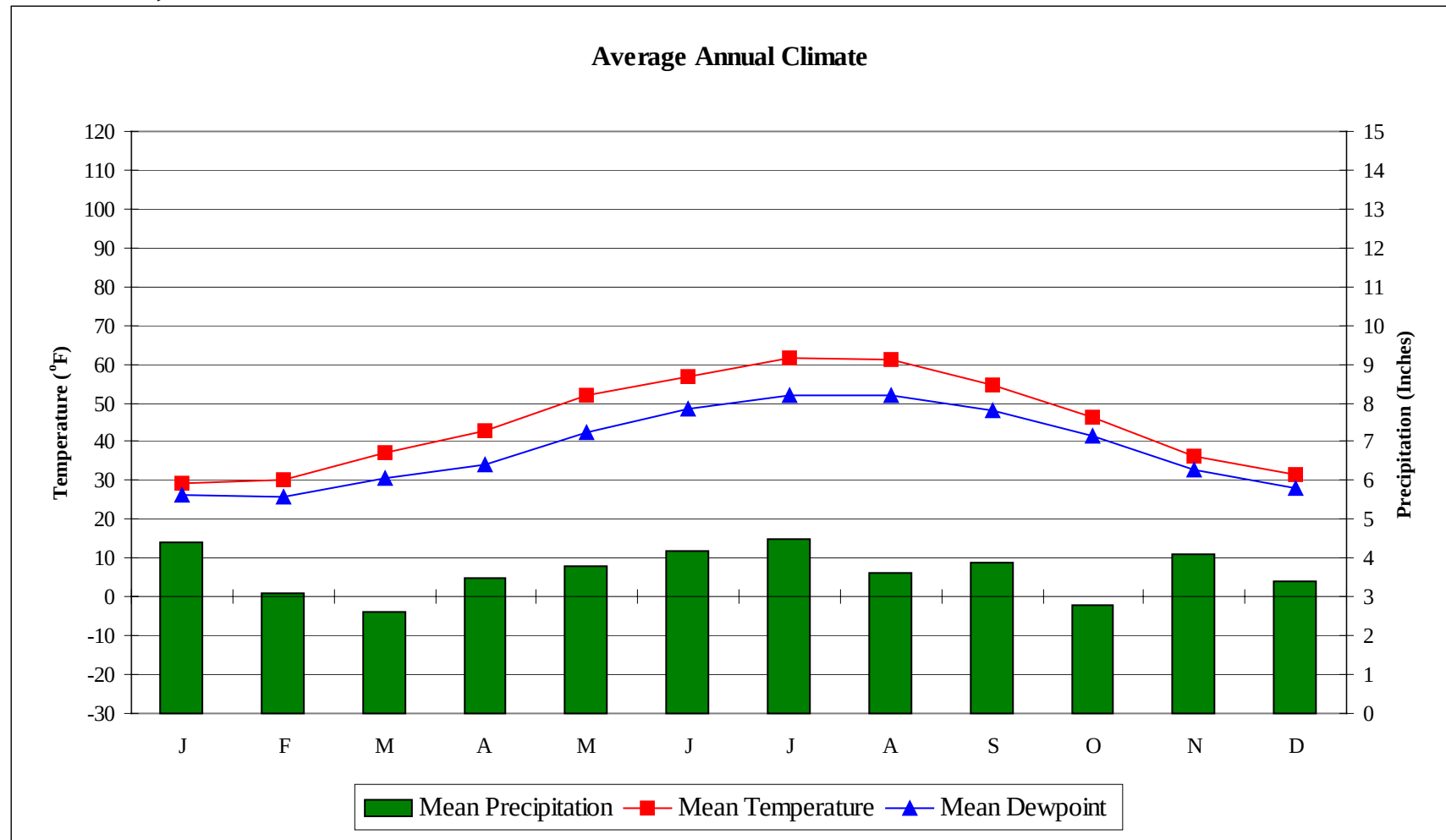
Other Site Data

Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
5	N/A	N/A	0.0 + 0.0
Ground Water Temperature (°F) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
47.6	N/A	N/A	44

*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.

STOETTEN, GERMANY

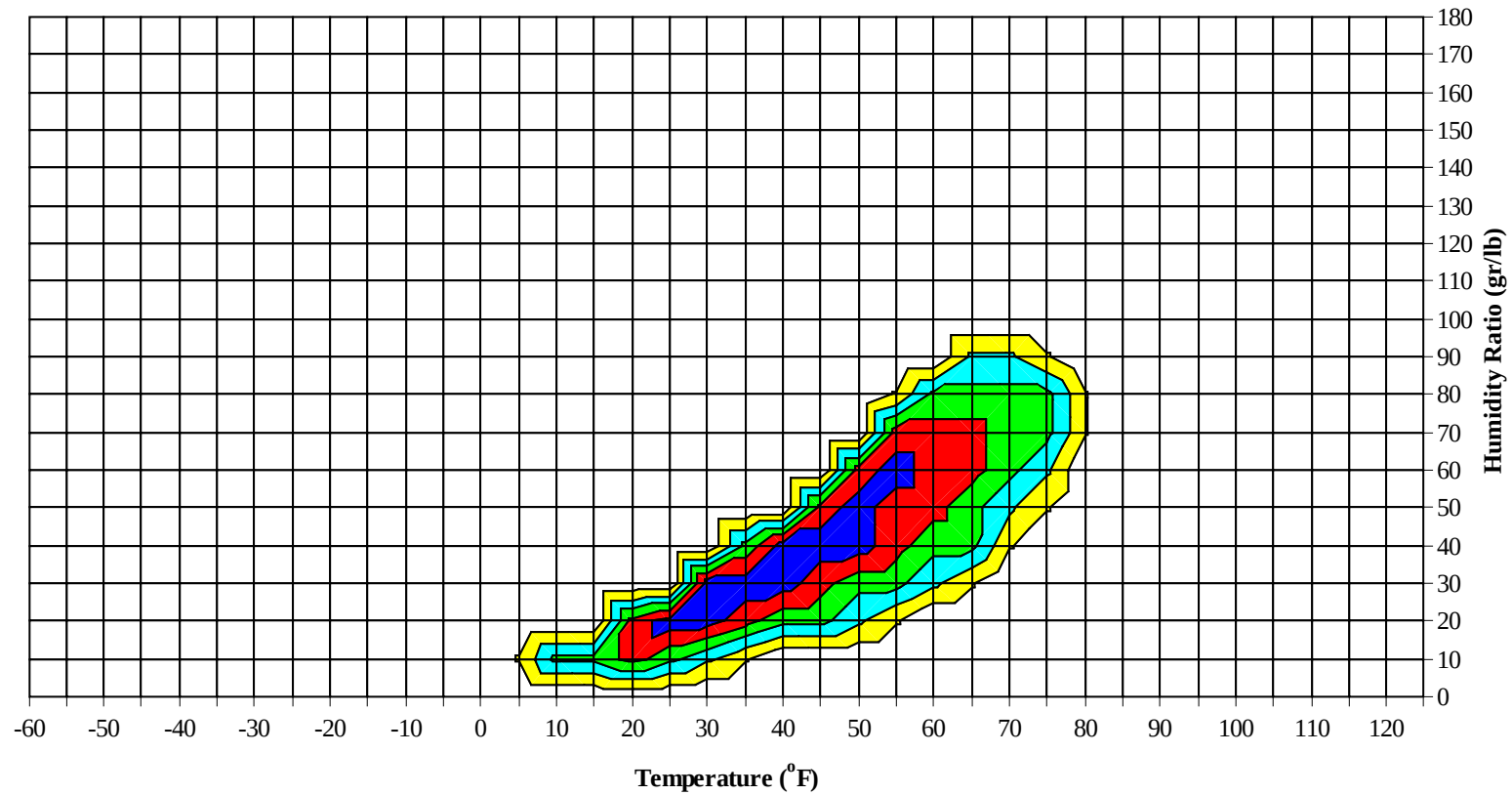
WMO No. 108360



STOETTEN, GERMANY

WMO No. 108360

Long Term Psychrometric Summary

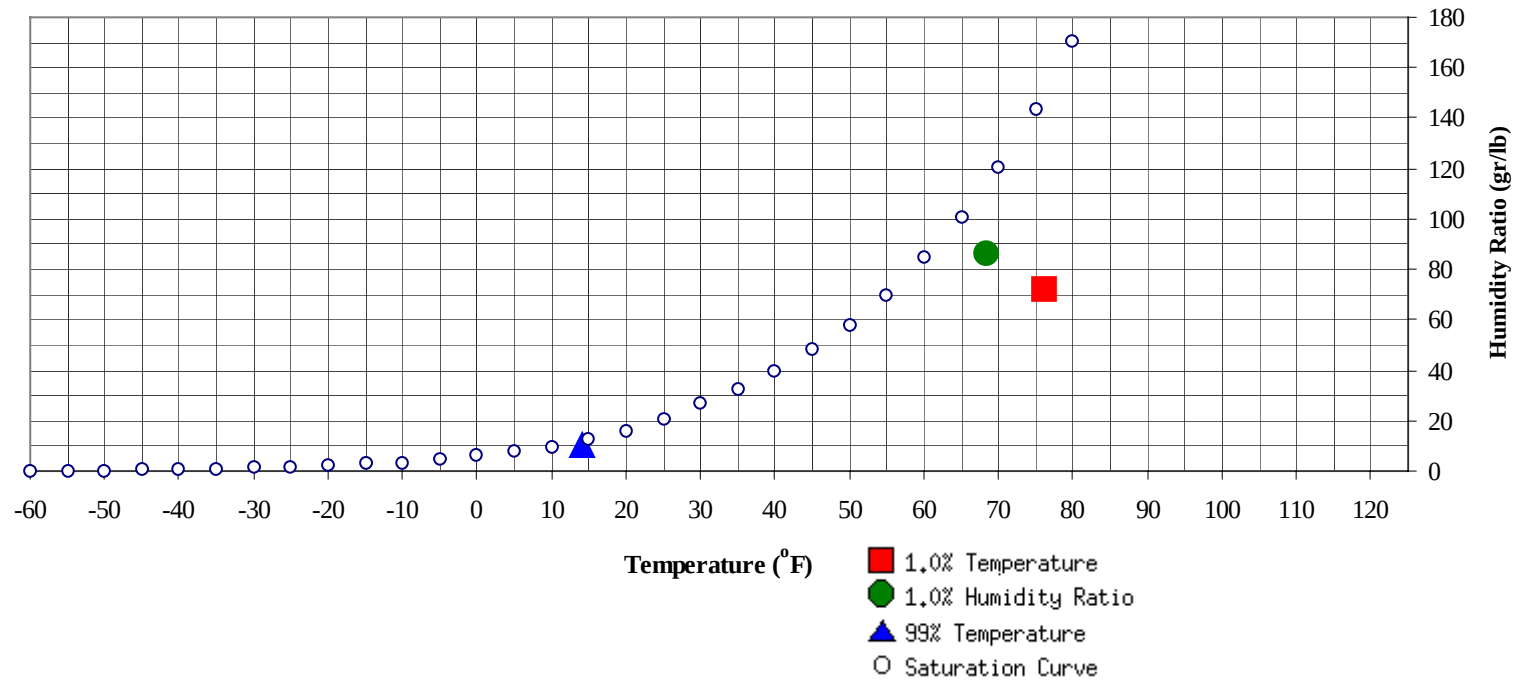


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

STOETTEN, GERMANY

WMO No. 108360

Psychrometric Summary of Peak Design Values



	(°F)	MCHR	Enthalpy	1.0% Humidity Ratio	(gr/lb)	MCDB	MCWB	MC Dewpt	Enthalpy
		(gr/lb)	(btu/lb)			(°F)	(°F)	(°F)	(btu/lb)
99% Dry Bulb	14	10.5	5.0	Ratio	86.1	68.3	63.2	60.6	29.8

1.0% Dry Bulb	(°F)	MCHR	MCWB	Enthalpy
		(gr/lb)	(°F)	(btu/lb)
	76	71.8	62.9	29.5

STOETTEN, GERMANY

WMO No. 108360

Dry-Bulb Temperature Hours For An Average Year (Sheet 1 of 5)

Period of Record = 1973 to 1996

Temperature Range (°F)	January					February					March				
	Hour Group (LST)			Total Obs	M C W B (°F)	Hour Group (LST)			Total Obs	M C W B (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00			01 To 08	09 To 16	17 To 00			01 To 08	09 To 16	17 To 00		
90 / 94															
85 / 89															
80 / 84															
75 / 79															
70 / 74															
65 / 69												1	0	1	51.8
60 / 64							0	0	0	49.2	0	3	2	5	50.0
55 / 59		0	0	0	48.6		2	1	3	46.4	1	9	7	17	47.7
50 / 54	1	1	1	3	44.5	1	4	2	8	44.0	5	20	14	39	45.0
45 / 49	7	8	8	24	42.6	5	13	9	27	41.2	19	35	36	90	42.1
40 / 44	15	24	20	60	38.8	16	21	23	60	38.4	36	41	47	124	38.6
35 / 39	40	41	43	124	35.2	39	39	43	121	34.9	53	48	49	151	34.8
30 / 34	56	60	59	175	30.7	50	47	50	146	30.6	68	54	57	179	30.4
25 / 29	58	57	52	167	26.4	43	49	45	137	26.1	38	27	26	92	25.9
20 / 24	34	28	34	96	21.6	27	25	25	76	21.2	16	6	8	30	21.2
15 / 19	20	14	15	49	16.9	23	18	20	61	16.5	7	3	2	13	16.5
10 / 14	12	8	9	29	11.7	14	5	5	24	11.6	2	1	0	3	12.1
5 / 9	3	3	3	10	6.4	4	2	2	8	6.5	0	0	0	0	5.5
0 / 4	1	2	1	4	1.8	2	0	0	2	2.8	0			0	4.0
-5 / -1	1	1	1	3	-2.9										
-10 / -6	0	0	0	0	-5.6										

Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary and the ventilation and infiltration load pages in this manual.

STOETTEN, GERMANY

WMO No. 108360

Dry-Bulb Temperature Hours For An Average Year (Sheet 2 of 5)

Period of Record = 1973 to 1996

Temperature Range (°F)	April					May					June				
	Hour Group (LST)			Total Obs	M C W B (°F)	Hour Group (LST)			Total Obs	M C W B (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00			01 To 08	09 To 16	17 To 00			01 To 08	09 To 16	17 To 00		
90 / 94															
85 / 89															
80 / 84															
75 / 79							2	1	3	61.4		1	1	2	64.4
70 / 74		1	0	1	52.7		8	6	14	57.9		9	6	15	62.8
65 / 69		5	3	8	51.6						1	26	19	46	60.7
60 / 64						1	21	15	37	55.3	6	34	27	68	58.4
55 / 59	1	14	9	24	49.7	5	41	33	79	53.0	27	46	43	116	55.7
50 / 54	6	26	21	54	47.5	27	51	50	129	50.6	57	51	49	157	52.7
45 / 49	15	35	33	83	45.0	62	54	57	174	47.6	68	43	54	165	49.2
40 / 44	36	43	43	122	42.1	71	39	48	157	44.1	59	26	34	118	45.5
35 / 39	45	38	43	126	38.9	48	23	25	95	40.4	20	4	7	31	41.8
30 / 34	57	41	48	146	35.0	24	8	11	43	36.0	2	0	0	2	37.4
25 / 29	58	30	33	121	31.0	9	2	2	13	32.0	0	0		0	21.3
20 / 24	19	6	6	31	26.8	1	0		1	27.6					
15 / 19	2	1	1	4	21.7										
10 / 14	0			0	19.0										
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															

Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary and the ventilation and infiltration load pages in this manual.

STOETTEN, GERMANY

WMO No. 108360

Dry-Bulb Temperature Hours For An Average Year (Sheet 3 of 5)

Period of Record = 1973 to 1996

Temperature Range (°F)	July					August					September				
	Hour Group (LST)			Total Obs	M C W B (°F)	Hour Group (LST)			Total Obs	M C W B (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00			01 To 08	09 To 16	17 To 00			01 To 08	09 To 16	17 To 00		
90 / 94		0	0	0	65.5										
85 / 89		1	1	2	67.1		1	1	2	65.7					
80 / 84	0	7	5	11	64.7		6	3	9	64.6		0	0	0	64.1
75 / 79	1	22	16	38	63.2	0	21	13	34	62.8		5	1	6	62.1
70 / 74	6	41	34	82	61.5	5	40	30	76	61.0	0	16	7	23	60.6
65 / 69	21	46	42	109	59.4	20	45	42	107	59.1	4	25	17	47	58.4
60 / 64	57	53	55	165	56.9	50	57	64	171	56.7	16	43	36	95	56.2
55 / 59	73	45	50	167	53.8	86	46	53	184	54.0	45	55	56	156	53.1
50 / 54	59	26	36	121	50.1	56	27	32	115	49.9	68	55	62	185	49.4
45 / 49	28	8	10	46	46.3	26	6	9	41	45.9	70	31	45	146	45.4
40 / 44	2	0	0	2	42.7	4	0	1	5	42.3	29	8	15	52	41.5
35 / 39	0	0		0							8	1	1	10	37.4
30 / 34	0	0		0	21.5						0		0	0	34.0
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															

Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary and the ventilation and infiltration load pages in this manual.

STOETTEN, GERMANY

WMO No. 108360

Dry-Bulb Temperature Hours For An Average Year (Sheet 4 of 5)

Period of Record = 1973 to 1996

Temperature Range (°F)	October					November					December				
	Hour Group (LST)			Total Obs	M C W B (°F)	Hour Group (LST)			Total Obs	M C W B (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00			01 To 08	09 To 16	17 To 00			01 To 08	09 To 16	17 To 00		
90 / 94															
85 / 89															
80 / 84															
75 / 79		0		0	59.0										
70 / 74		2	0	2	57.7										
65 / 69	1	7	2	10	57.2										
60 / 64	3	16	9	28	54.5		1	0	1	51.0		0		0	46.0
55 / 59	15	29	26	70	52.2	1	4	1	6	48.9	0	2	0	2	46.0
50 / 54	45	50	49	144	49.2	8	17	10	36	46.2	4	4	3	12	45.1
45 / 49	61	59	61	181	45.0	26	32	28	85	43.7	13	15	14	42	42.5
40 / 44	51	44	48	143	40.4	35	40	45	121	40.2	25	28	29	82	39.4
35 / 39	44	31	39	114	36.4	54	48	51	153	36.1	38	40	38	117	35.4
30 / 34	24	9	12	45	31.8	59	54	59	172	31.3	58	59	58	175	31.0
25 / 29	4	2	1	7	27.0	32	28	30	90	26.3	56	57	58	171	26.4
20 / 24	0	0		0	24.0	15	11	13	38	21.5	30	24	29	83	21.7
15 / 19						7	3	5	15	17.3	14	11	13	38	17.0
10 / 14						1	1	0	2	12.8	6	4	3	14	12.0
5 / 9						0			0	9.0	2	2	2	6	6.6
0 / 4											1	1	0	2	2.4
-5 / -1												0		0	-2.0
-10 / -6															

Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary and the ventilation and infiltration load pages in this manual.

STOETTEN, GERMANY

WMO No. 108360

Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

Period of Record = 1973 to 1996

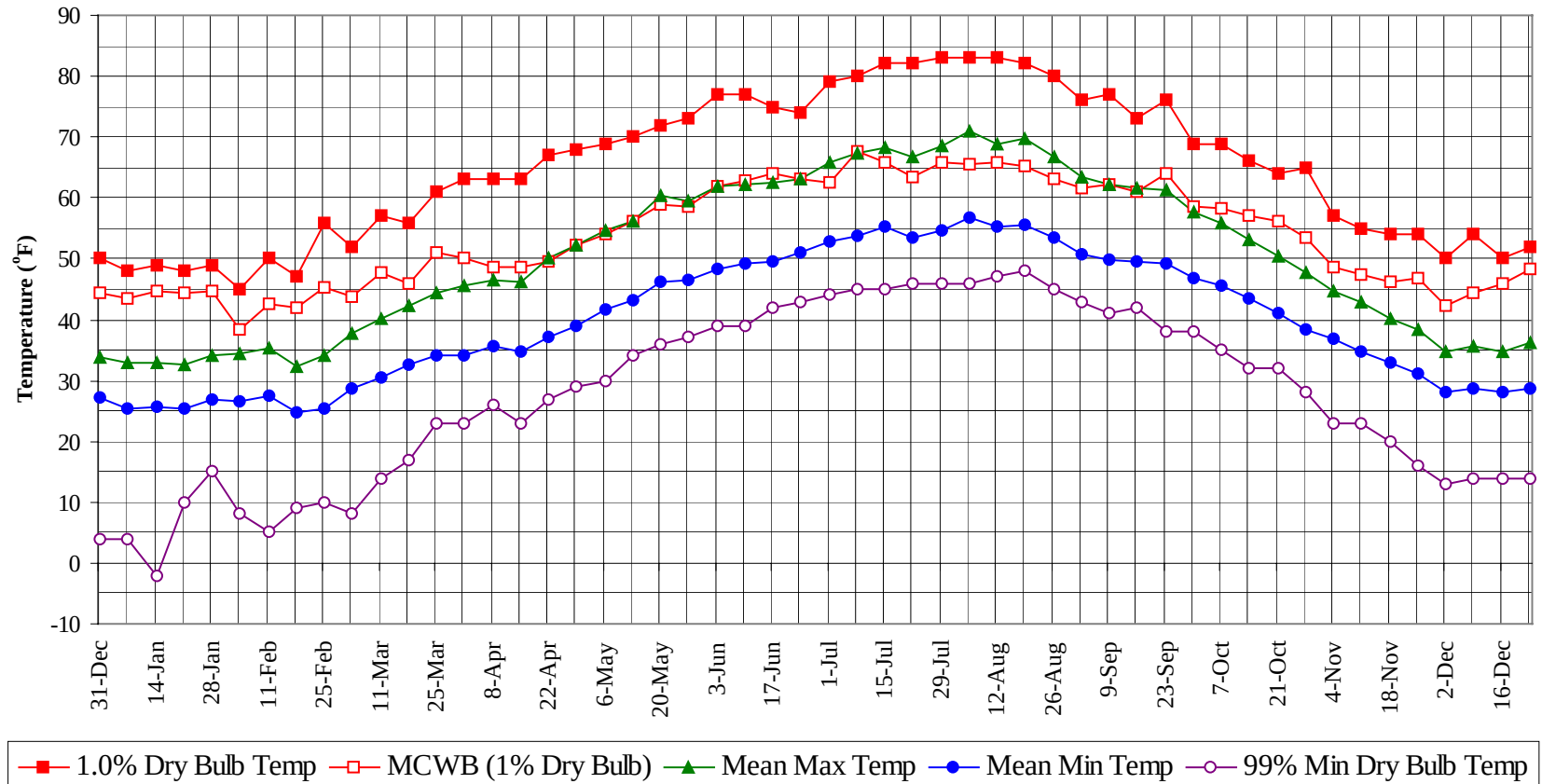
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
90 / 94		0	0	0	65.5
85 / 89		3	1	4	66.4
80 / 84	0	14	9	23	64.7
75 / 79	2	58	36	97	62.9
70 / 74	13	135	98	246	60.8
65 / 69	54	182	150	386	58.3
60 / 64	160	273	252	684	55.7
55 / 59	312	320	316	948	52.4
50 / 54	392	342	355	1089	48.4
45 / 49	419	312	349	1081	44.1
40 / 44	328	273	299	900	39.7
35 / 39	357	297	322	977	35.4
30 / 34	382	313	327	1022	30.9
25 / 29	253	224	217	694	26.3
20 / 24	125	94	107	325	21.5
15 / 19	74	48	54	176	16.8
10 / 14	34	19	18	72	11.8
5 / 9	11	7	8	25	6.5
0 / 4	4	3	1	8	2.3
-5 / -1	1	1	1	3	-2.9
-10 / -6	0	0	0	0	-5.6
</					

Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary and the ventilation and infiltration load pages in this manual.

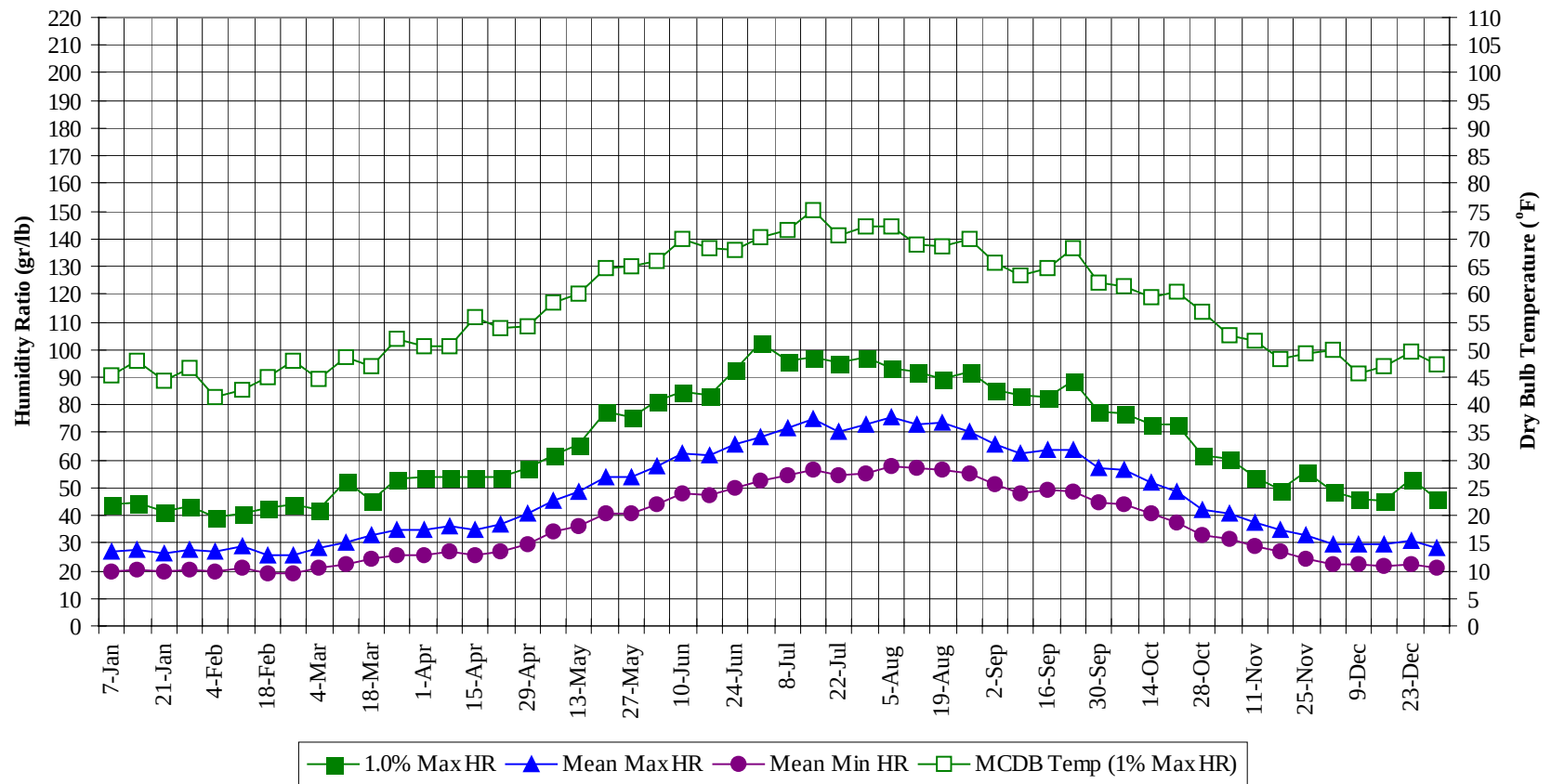
STOETTEN, GERMANY

WMO No. 108360

Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary

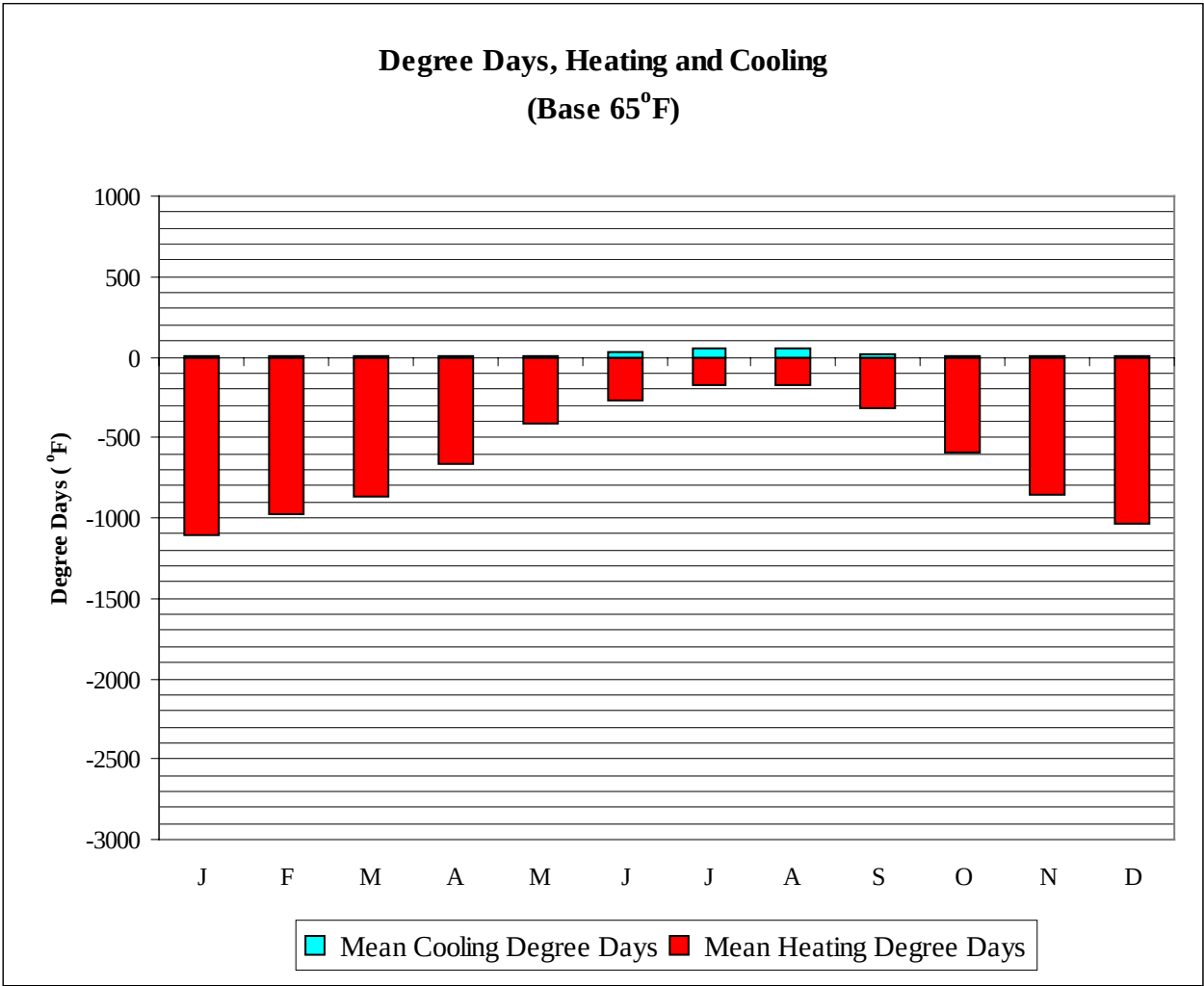


STOETTEN, GERMANY

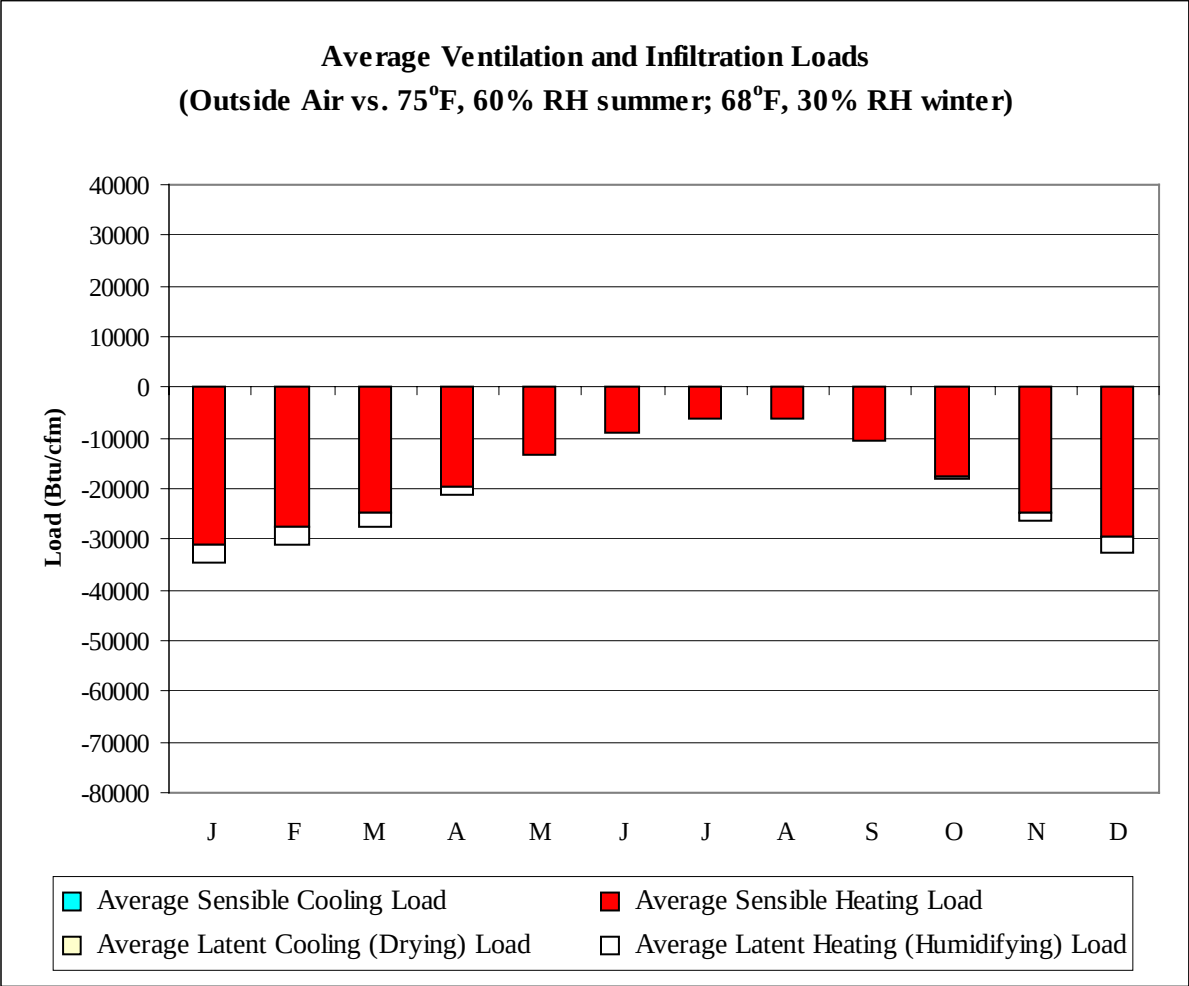
WMO No. 108360

Long Term Dry Bulb Temperature and Humidity Summary

Week Ending	1.0% Temp (°F)	MCWB @ 1% Temp (°F)	Mean Max Temp (°F)	Mean Min Temp (°F)	99% Temp (°F)	1.0% HR (gr/lb)	MCDB @ 1% HR (°F)	Mean Max HR (gr/lb)	Mean Min HR (gr/lb)
7-Jan	48.0	43.4	32.8	25.2	4.0	44.1	45.3	27.0	19.4
14-Jan	49.0	44.6	32.8	25.5	-2.0	44.8	47.9	27.3	20.4
21-Jan	48.0	44.3	32.5	25.4	10.0	41.3	44.2	26.1	19.7
28-Jan	49.0	44.6	34.0	26.8	15.0	43.4	46.5	27.9	20.7
4-Feb	45.0	38.2	34.4	26.4	8.0	39.2	41.3	27.0	20.0
11-Feb	50.0	42.6	35.4	27.4	5.0	40.6	42.7	28.7	21.2
18-Feb	47.0	41.9	32.3	24.7	9.0	42.7	44.9	25.5	19.0
25-Feb	56.0	45.3	34.0	25.4	10.0	44.1	48.1	25.5	19.2
4-Mar	52.0	43.9	37.8	28.5	8.0	42.0	44.5	28.1	20.8
11-Mar	57.0	47.6	40.2	30.4	14.0	52.5	48.8	30.3	22.4
18-Mar	56.0	46.0	42.4	32.5	17.0	45.5	47.1	32.8	24.3
25-Mar	61.0	51.1	44.4	34.0	23.0	53.2	51.8	34.7	25.5
1-Apr	63.0	50.1	45.6	34.2	23.0	53.9	50.6	35.1	25.7
8-Apr	63.0	48.6	46.6	35.6	26.0	53.9	50.6	35.9	26.8
15-Apr	63.0	48.7	46.1	34.6	23.0	53.9	55.8	34.7	25.8
22-Apr	67.0	49.5	50.2	37.0	27.0	53.9	54.0	36.5	26.8
29-Apr	68.0	52.2	52.3	38.9	29.0	57.4	54.3	40.6	29.9
6-May	69.0	54.0	54.7	41.6	30.0	61.6	58.4	45.4	34.1
13-May	70.0	56.1	56.1	43.1	34.0	65.8	60.0	48.8	36.2
20-May	72.0	58.8	60.4	46.3	36.0	77.7	64.6	54.1	40.8
27-May	73.0	58.6	59.6	46.4	37.0	75.6	65.0	54.1	41.0
3-Jun	77.0	62.0	62.0	48.3	39.0	81.2	66.1	57.7	43.8
10-Jun	77.0	62.7	62.1	49.3	39.0	84.7	69.9	62.3	47.9
17-Jun	75.0	64.1	62.4	49.6	42.0	83.3	68.4	61.8	47.5
24-Jun	74.0	63.2	63.0	50.9	43.0	92.4	67.9	65.8	50.0
1-Jul	79.0	62.4	65.9	52.7	44.0	102.2	70.4	68.5	52.5
8-Jul	80.0	67.7	67.3	53.8	45.0	95.9	71.6	71.8	54.7
15-Jul	82.0	65.9	68.2	55.3	45.0	97.3	75.1	74.6	56.8
22-Jul	82.0	63.5	66.8	53.6	46.0	95.2	70.5	70.4	54.6
29-Jul	83.0	65.7	68.6	54.8	46.0	97.3	72.4	73.1	55.2
5-Aug	83.0	65.5	71.1	56.8	46.0	93.1	72.1	75.8	58.1
12-Aug	83.0	65.8	68.9	55.4	47.0	91.7	68.8	73.0	56.9
19-Aug	82.0	65.2	69.7	55.7	48.0	89.6	68.5	73.6	56.3
26-Aug	80.0	63.2	66.7	53.5	45.0	91.7	69.9	70.5	54.9
2-Sep	76.0	61.6	63.5	50.9	43.0	85.4	65.8	65.7	51.6
9-Sep	77.0	62.1	62.2	49.7	41.0	83.3	63.4	62.7	48.1
16-Sep	73.0	61.1	61.5	49.6	42.0	82.6	64.6	63.6	49.5
23-Sep	76.0	64.0	61.4	49.1	38.0	88.9	68.3	63.7	48.9
30-Sep	69.0	58.7	57.7	46.7	38.0	77.7	62.1	57.4	44.5
7-Oct	69.0	58.4	55.7	45.5	35.0	77.0	61.3	56.5	43.7
14-Oct	66.0	57.2	53.2	43.3	32.0	72.8	59.6	52.2	40.7
21-Oct	64.0	56.1	50.4	41.0	32.0	72.8	60.4	48.8	37.5
28-Oct	65.0	53.5	47.7	38.2	28.0	61.6	56.9	42.3	32.8
4-Nov	57.0	48.5	44.7	36.9	23.0	60.2	52.6	41.0	31.6
11-Nov	55.0	47.5	43.0	34.6	23.0	53.9	51.4	37.7	28.9
18-Nov	54.0	46.1	40.3	32.8	20.0	49.0	48.2	35.0	26.6
25-Nov	54.0	46.8	38.5	31.0	16.0	56.0	49.3	32.6	24.3
2-Dec	50.0	42.4	34.8	28.1	13.0	48.3	49.8	29.2	22.6
9-Dec	54.0	44.3	35.7	28.7	14.0	46.2	45.7	29.4	22.2
16-Dec	50.0	45.8	34.7	28.0	14.0	45.5	47.0	29.3	21.8
23-Dec	52.0	48.3	36.3	28.7	14.0	53.2	49.7	30.7	22.4
31-Dec	50.0	44.5	33.8	27.1	4.0	46.2	47.2	28.0	21.1



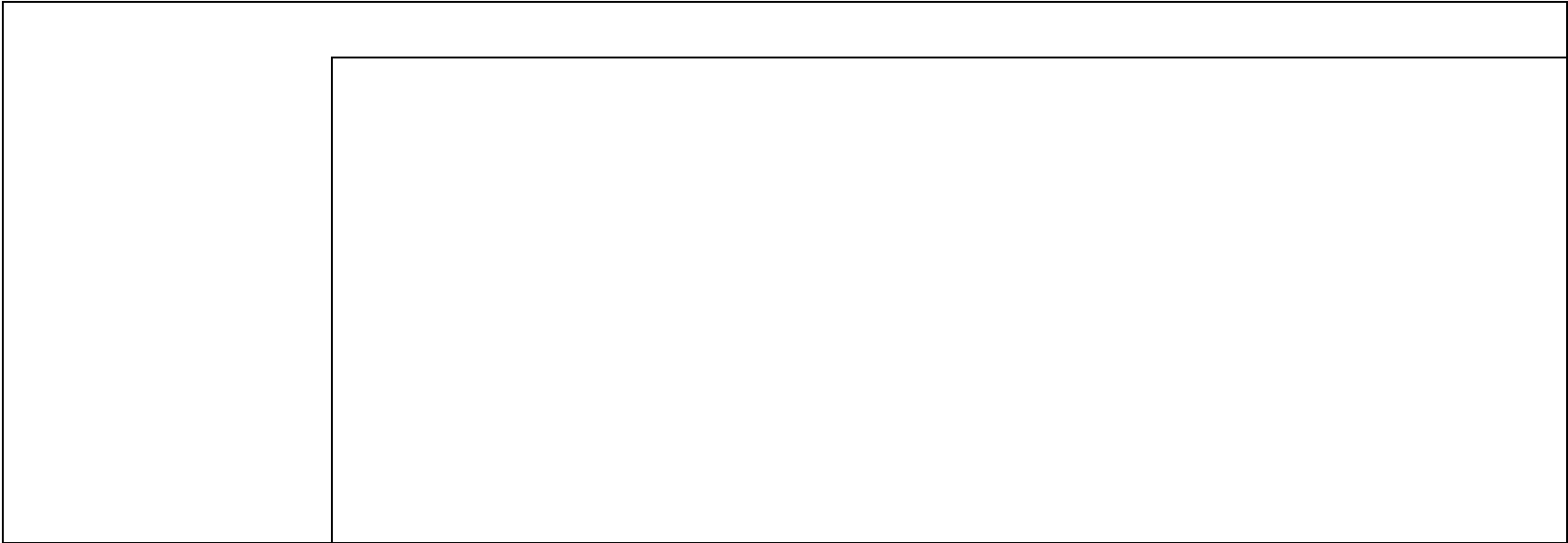
	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	1104
FEB	0	982
MAR	0	866
APR	1	669
MAY	7	418
JUN	25	269
JUL	58	173
AUG	52	171
SEP	13	322
OCT	1	587
NOV	0	860
DEC	0	1041
ANN	156	7462



	Average Sensible Cooling Load	Average Sensible Heating Load	Average Latent Cooling Load	Average Latent Heating Load
	(Btu/cfm)	(Btu/cfm)	(Btu/cfm)	(Btu/cfm)
JAN	0	-31024	0	-3639
FEB	0	-27648	0	-3544
MAR	0	-24846	0	-2531
APR	0	-19669	0	-1435
MAY	2	-13153	0	-232
JUN	28	-9002	50	-13
JUL	165	-6300	133	0
AUG	134	-6269	40	-1
SEP	11	-10504	10	-15
OCT	0	-17600	0	-379
NOV	0	-24629	0	-1792
DEC	0	-29390	0	-3145
ANN	340	-220034	233	-16726

Average Annual Solar Radiation – Nearest Available Site
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

No Solar Radiation
Data Available

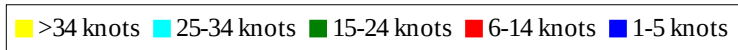
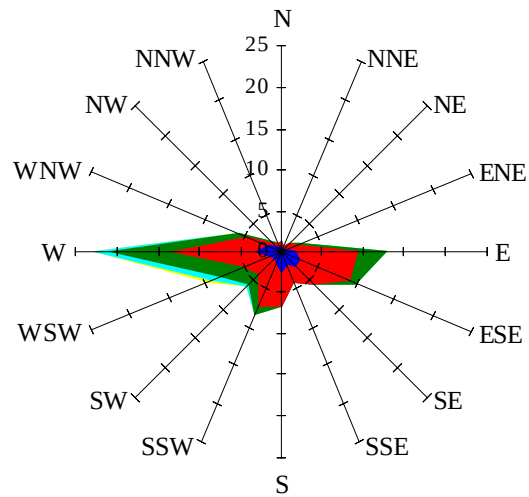


Average Annual Solar Heat and Illumination – Nearest Available Site

(Source: National Renewable Energy Laboratory, Golden CO, 1995)

Wind Summary - December, January, and February

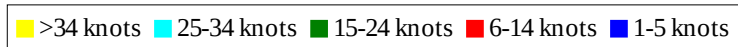
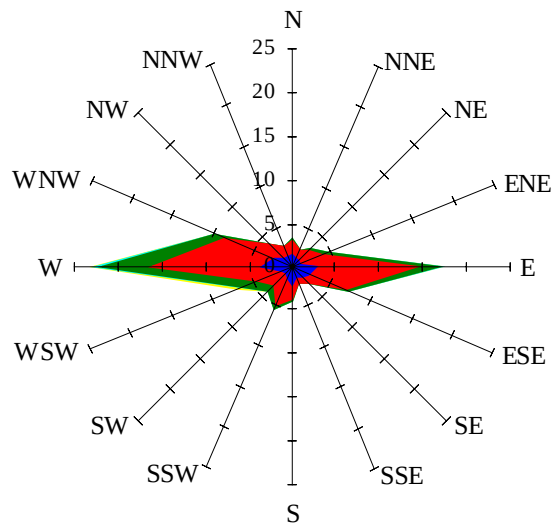
Labels of Percent Frequency on North Axis



Percent Calm = 1.83

Wind Summary - March, April, and May

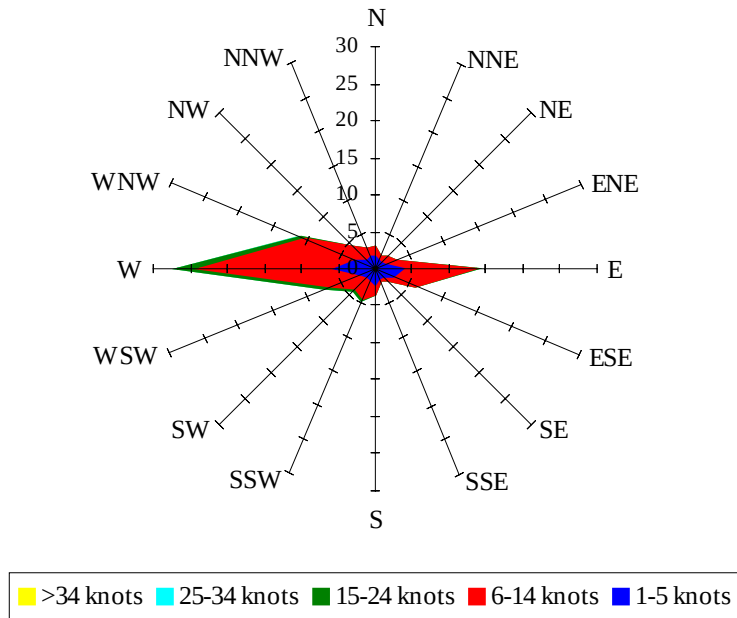
Labels of Percent Frequency on North Axis



Percent Calm = 1.21

Wind Summary - June, July, and August

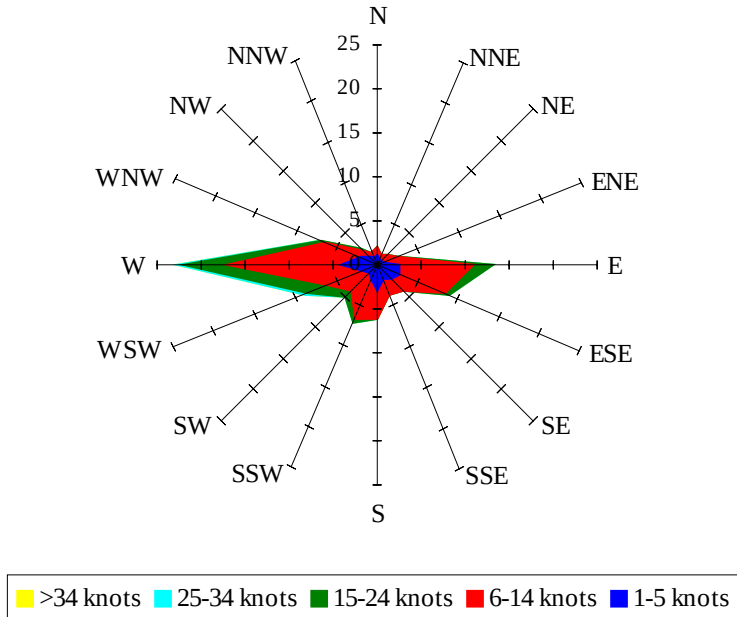
Labels of Percent Frequency on North Axis



Percent Calm = 1.10

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 1.50