

COBURG, GERMANY

Latitude = 50.28 N

Longitude = 10.98 E

Period of Record = 1973 to 1996

WMO No. 106710

Elevation = 1106 feet

Average Pressure = 28.82 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	90	68	69	5.0	S
0.4% Occurrence	86	66	68	5.4	E
1.0% Occurrence	82	64	66	5.2	E
2.0% Occurrence	79	63	64	5.2	E
Mean Daily Range	14	-	-	-	-
97.5% Occurrence	20	19	13	3.7	ENE
99.0% Occurrence	14	13	9	3.2	E
99.6% Occurrence	9	9	8	2.3	ENE
Median of Extreme Lows	3	3	6	1.3	ENE
	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	71	84	94	5.3	S
0.4% Occurrence	68	80	85	4.7	S
1.0% Occurrence	66	77	80	4.9	E
2.0% Occurrence	65	76	77	4.8	E
	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	74	0.65	4.7	ENE
0.4% Occurrence	94	71	0.61	3.9	W
1.0% Occurrence	88	71	0.57	4.0	ENE
2.0% Occurrence	84	69	0.55	4.3	E
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		3	165	2	81

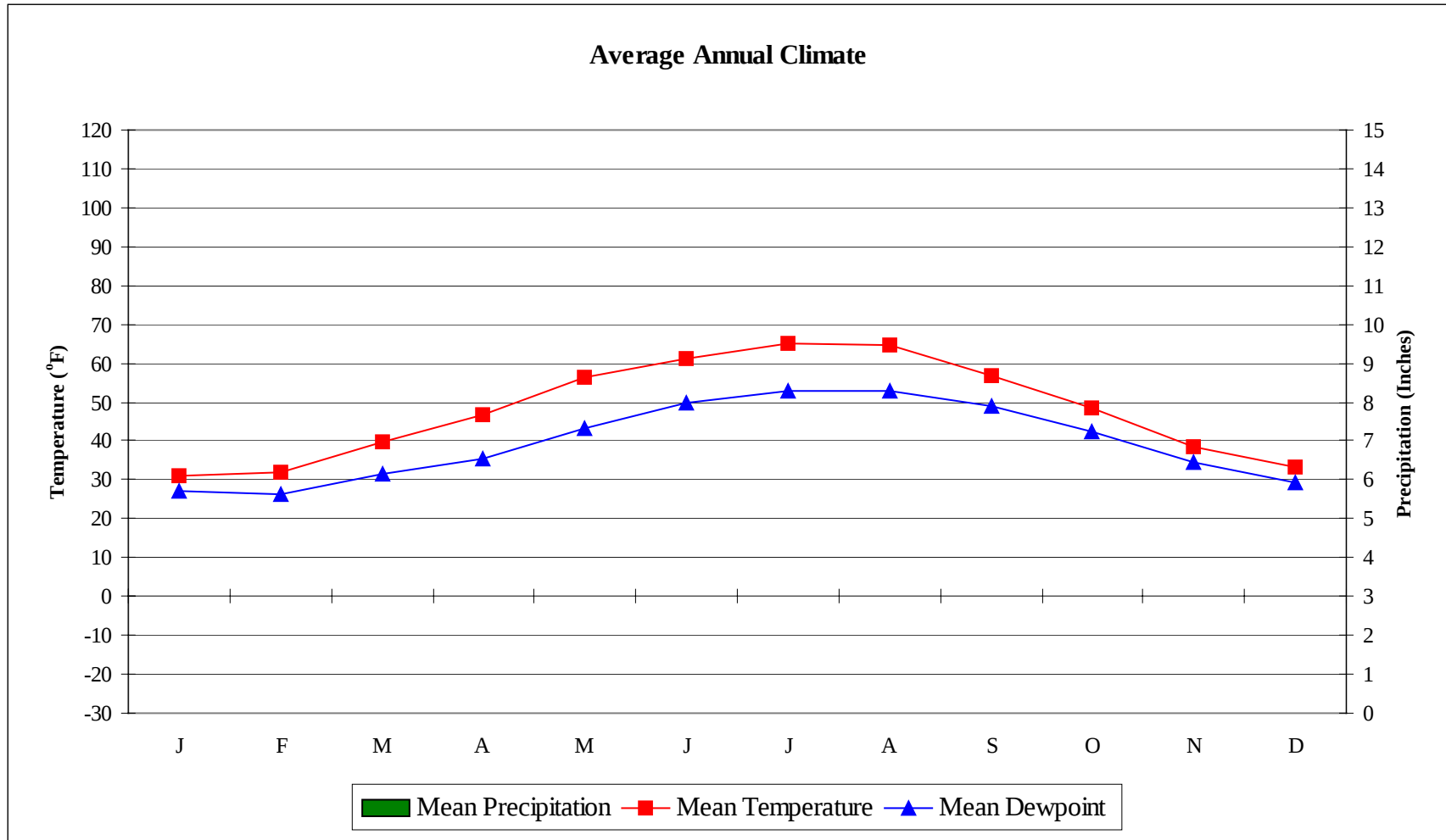
Other Site Data

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
6	N/A	N/A	0.0 + 0.1
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 (#)
50.1	N/A	N/A	47

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

COBURG, GERMANY

WMO No. 106710

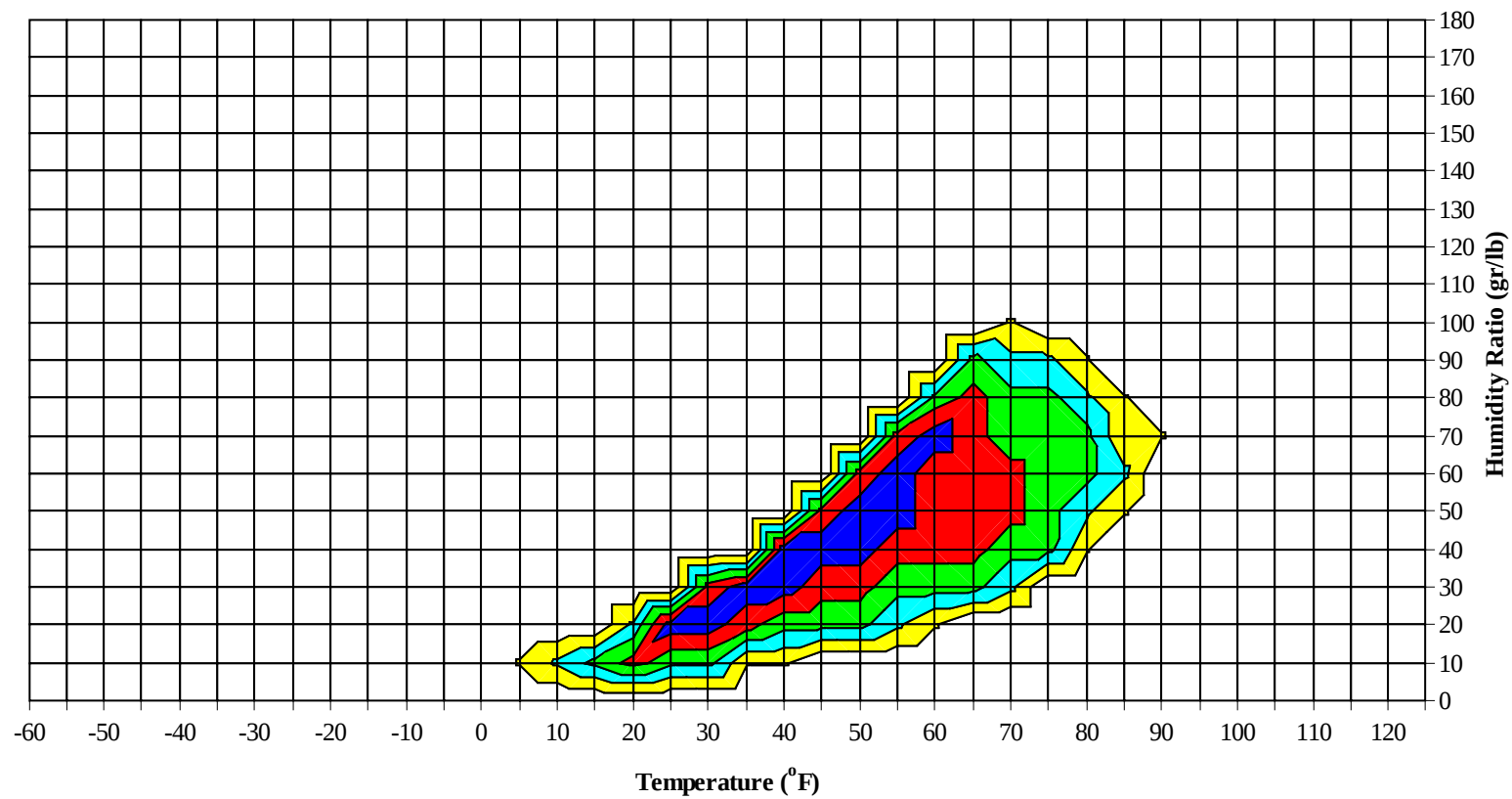


No Precipitation Data Available

COBURG, GERMANY

WMO No. 106710

Long Term Psychrometric Summary

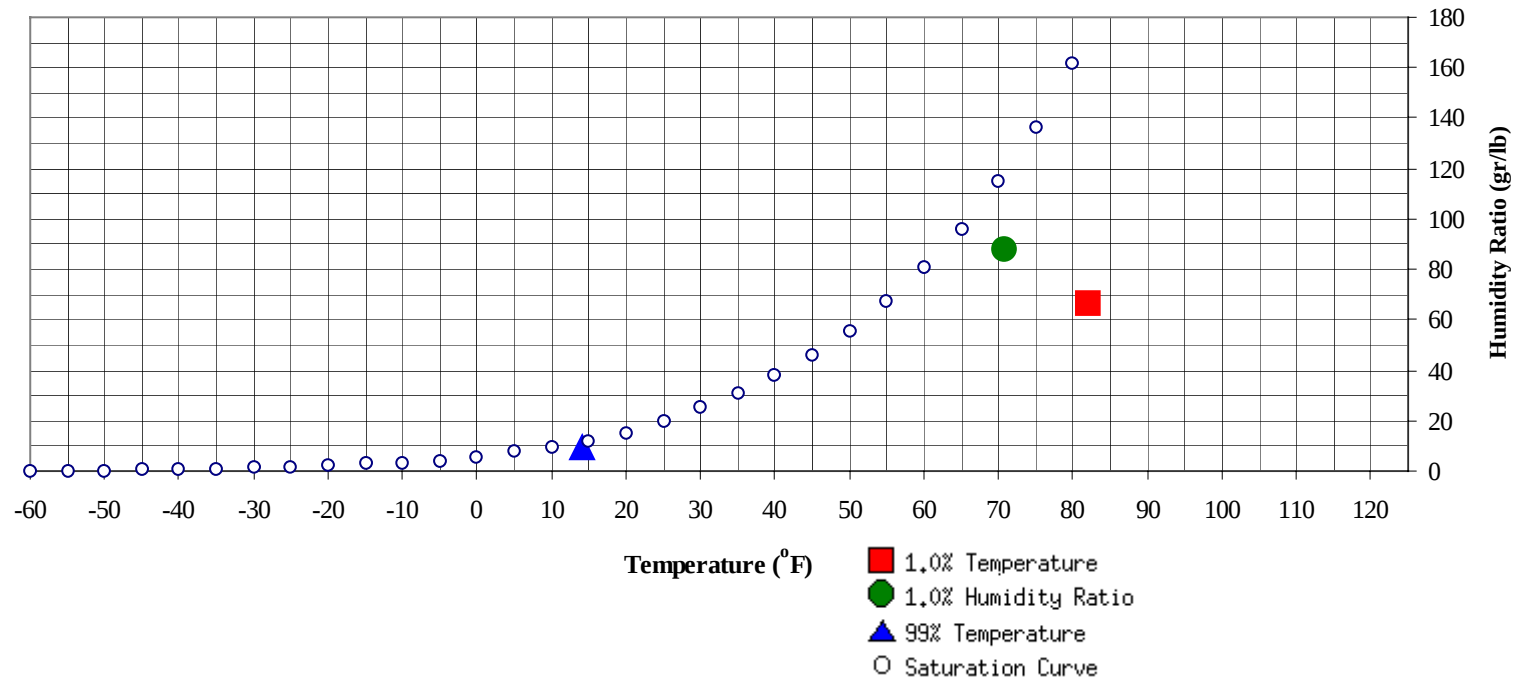


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

COBURG, GERMANY

WMO No. 106710

Psychrometric Summary of Peak Design Values



	(°F)	MCHR (gr/lb)	Enthalpy (btu/lb)	1.0% Humidity Ratio	(gr/lb)	MCDB (°F)	MCWB (°F)	MC Dewpt (°F)	Enthalpy (btu/lb)
99% Dry Bulb	14	9.4	4.8		88.2	70.7	65.3	62.6	30.7

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	82	66.6	64.5	30.1

COBURG, GERMANY

WMO No. 106710

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		
95 / 99															
90 / 94															
85 / 89															
80 / 84															
75 / 79															
70 / 74												1	0	1	54.1
65 / 69												1	1	3	51.0
60 / 64							0		0	50.3		5	4	9	50.6
55 / 59	0	0	0	0	50.6		1	1	3	48.3		12	10	23	48.0
50 / 54	3	2	3	7	47.5	0	4	4	8	44.7	5	26	21	52	45.6
45 / 49	8	10	8	26	44.2	4	13	12	29	42.2	17	45	39	101	42.3
40 / 44	21	28	28	77	40.0	10	27	26	62	38.7	31	53	49	132	38.4
35 / 39	38	52	45	136	35.3	38	54	54	146	34.8	64	61	63	188	34.7
30 / 34	72	77	82	231	30.9	63	63	62	189	30.4	78	33	43	155	30.3
25 / 29	44	39	43	125	25.6	42	35	34	112	25.2	36	8	13	57	25.6
20 / 24	23	17	16	56	20.9	27	15	16	58	20.6	12	1	3	16	20.8
15 / 19	18	11	14	44	16.3	18	6	10	34	16.3	4	1	1	6	16.5
10 / 14	11	6	5	22	11.3	11	3	5	20	11.4	1	1	0	2	11.8
5 / 9	6	4	4	13	6.5	7	1	0	8	6.9	0	0	0	0	7.8
0 / 4	3	2	1	6	1.5	3	1		3	1.7	0	0		0	1.4
-5 / -1	1	0		1	-2.9	0			0	-2.0					
-10 / -6	0	0		0	-6.0										

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.

COBURG, GERMANY

WMO No. 106710

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		
95 / 99															
90 / 94													0	0	69.2
85 / 89												4	3	7	66.5
80 / 84		0		0	55.0		3	3	6	61.2		11	10	21	64.4
75 / 79		2	1	3	56.1		14	8	22	58.9		24	20	44	61.9
70 / 74		5	6	11	55.0	0	27	19	46	56.9	2	34	28	64	59.9
65 / 69		12	10	22	52.4	1	32	27	60	55.1	8	36	36	80	58.1
60 / 64	1	22	18	41	50.0	8	45	41	94	52.7	32	50	44	126	55.8
55 / 59	5	30	29	64	47.5	36	52	55	142	50.8	61	49	54	165	52.9
50 / 54	15	44	40	99	45.2	65	45	51	161	47.9	79	28	36	143	49.5
45 / 49	41	49	45	134	42.3	71	23	31	125	44.3	46	5	8	59	45.9
40 / 44	53	41	45	139	38.9	38	7	11	56	40.2	11	0	0	11	41.9
35 / 39	69	29	36	134	35.3	22	1	3	26	36.3	1			1	37.2
30 / 34	43	5	10	58	30.9	7	0	0	7	31.6					
25 / 29	12	1	0	13	26.3	0			0	28.0					
20 / 24	1			1	21.9										
15 / 19	0			0	17.0										
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.

COBURG, GERMANY

WMO No. 106710

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		
95 / 99		0		0	71.8		1	0	1	69.4					
90 / 94		3	2	4	67.4		1	2	3	68.2					
85 / 89		10	7	17	65.9		6	4	10	66.3		0	0	0	64.8
80 / 84		22	18	39	64.3		21	16	37	64.6		3	2	5	63.5
75 / 79	0	34	27	60	62.8		35	29	64	62.5		11	5	16	62.9
70 / 74	6	43	37	86	61.3	2	47	43	92	60.6		21	11	32	60.3
65 / 69	22	42	48	112	59.5	13	44	46	103	59.6	0	32	18	50	58.1
60 / 64	58	50	52	160	57.5	64	49	55	168	57.8	9	53	47	110	55.9
55 / 59	77	36	39	152	54.2	75	33	37	145	54.5	42	62	63	167	53.0
50 / 54	62	10	16	87	50.7	61	9	12	82	50.6	75	42	61	178	49.9
45 / 49	19		2	20	46.2	27	1	4	31	46.4	73	15	25	112	45.9
40 / 44	5			5	42.2	6		0	6	42.2	29	1	5	36	41.8
35 / 39	0			0	38.0	1			1	37.9	8	0	0	8	37.4
30 / 34											2		4	6	31.2
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.

COBURG, GERMANY

WMO No. 106710

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		
95 / 99															
90 / 94															
85 / 89															
80 / 84		0		0	61.0										
75 / 79		1	0	1	60.8										
70 / 74		4	1	5	59.2										
65 / 69		9	4	13	57.2										
60 / 64	0	21	12	33	54.9	0	0	0	0	53.0					
55 / 59	8	44	36	87	52.2	1	3	1	6	51.2		1	0	1	51.5
50 / 54	49	58	59	167	49.0	8	20	14	42	48.5	4	3	4	11	48.1
45 / 49	55	62	61	177	44.5	23	37	33	93	44.0	15	19	15	48	44.8
40 / 44	57	32	45	135	40.4	44	56	59	159	40.1	19	30	27	75	40.3
35 / 39	44	14	23	81	36.5	65	62	63	189	35.7	46	59	52	157	35.4
30 / 34	27	4	6	36	31.5	57	42	47	146	31.1	80	77	87	244	31.0
25 / 29	8	1	0	9	27.2	27	16	15	58	26.0	42	35	35	113	25.7
20 / 24	0			0	24.0	11	3	6	21	21.2	19	12	15	45	20.8
15 / 19						3	1	1	5	17.2	12	7	8	27	16.1
10 / 14						1	0	0	1	12.3	9	3	4	16	11.5
5 / 9						0			0	9.0	1	1	1	4	6.9
0 / 4											1	1		2	1.4
-5 / -1											0	0		0	-2.0
-10 / -6												0		0	-8.0

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.

COBURG, GERMANY

WMO No. 106710

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

Period of Record = 1973 to 1996

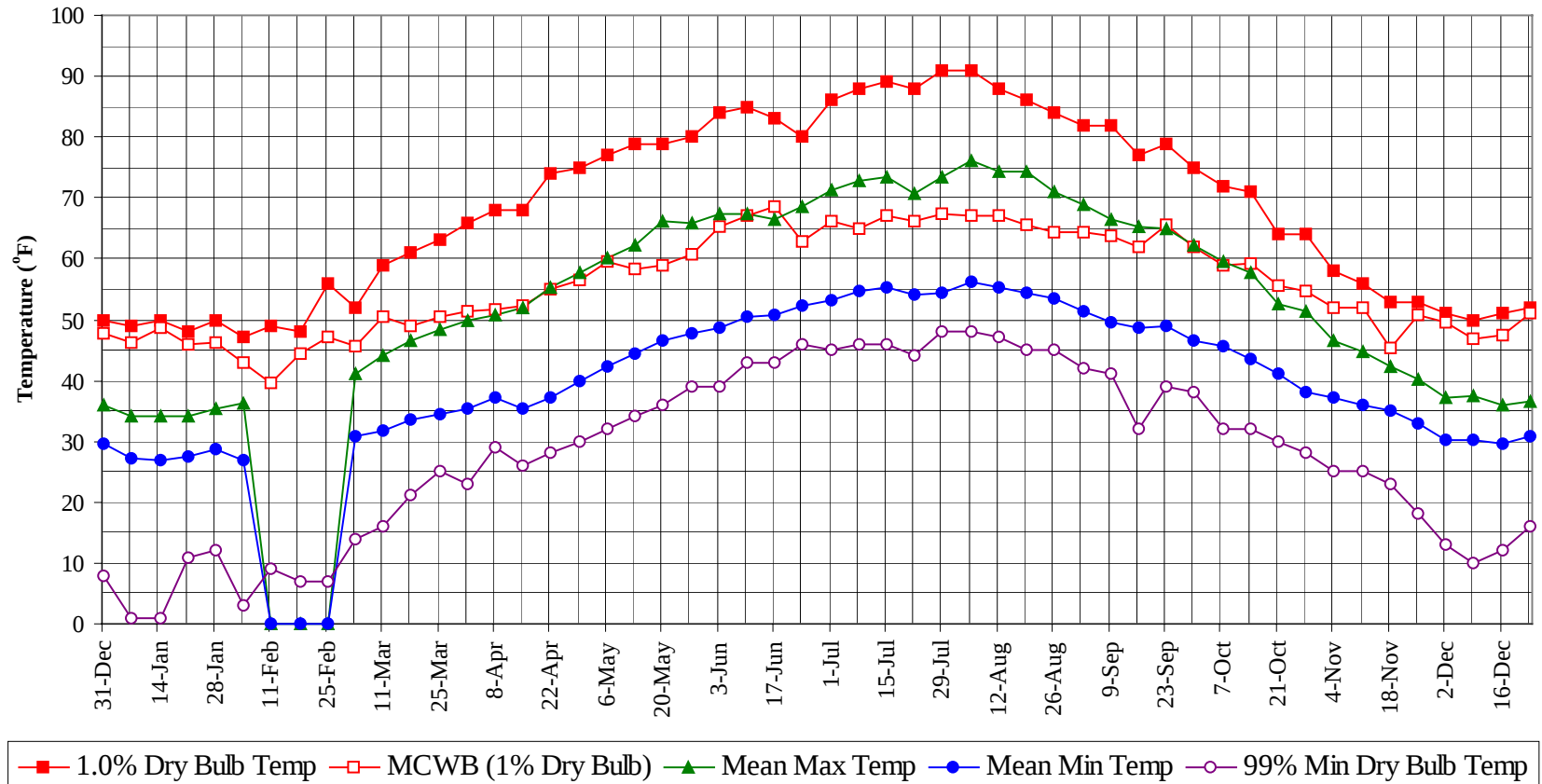
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
95 / 99		1	0	1	70.3
90 / 94		5	3	8	67.8
85 / 89		20	12	32	66.1
80 / 84		59	38	97	64.2
75 / 79	0	120	74	194	62.0
70 / 74	11	182	120	314	59.8
65 / 69	47	210	159	416	58.0
60 / 64	182	296	234	712	55.6
55 / 59	318	324	291	932	52.4
50 / 54	438	292	306	1036	48.6
45 / 49	408	277	295	979	44.1
40 / 44	324	273	325	923	39.7
35 / 39	387	331	386	1105	35.3
30 / 34	410	300	387	1098	30.8
25 / 29	201	132	162	496	25.6
20 / 24	86	49	64	198	20.8
15 / 19	52	27	40	119	16.3
10 / 14	33	12	17	62	11.4
5 / 9	14	7	6	26	6.7
0 / 4	8	3	1	12	1.5
-5 / -1	1	0		1	-2.7
-10 / -6	0	0		0	-6.2
		</			

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.

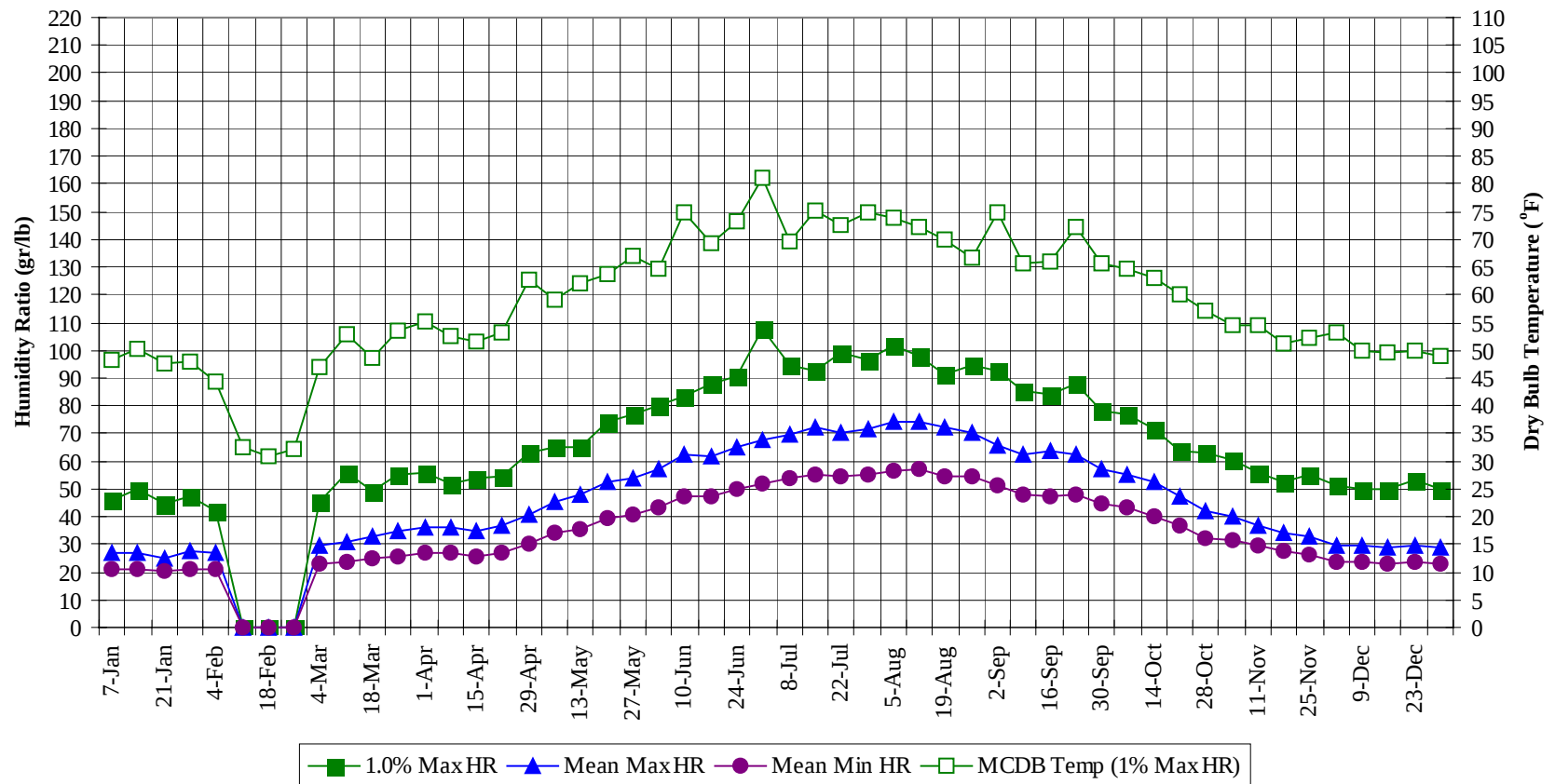
COBURG, GERMANY

WMO No. 106710

Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary



COBURG, GERMANY

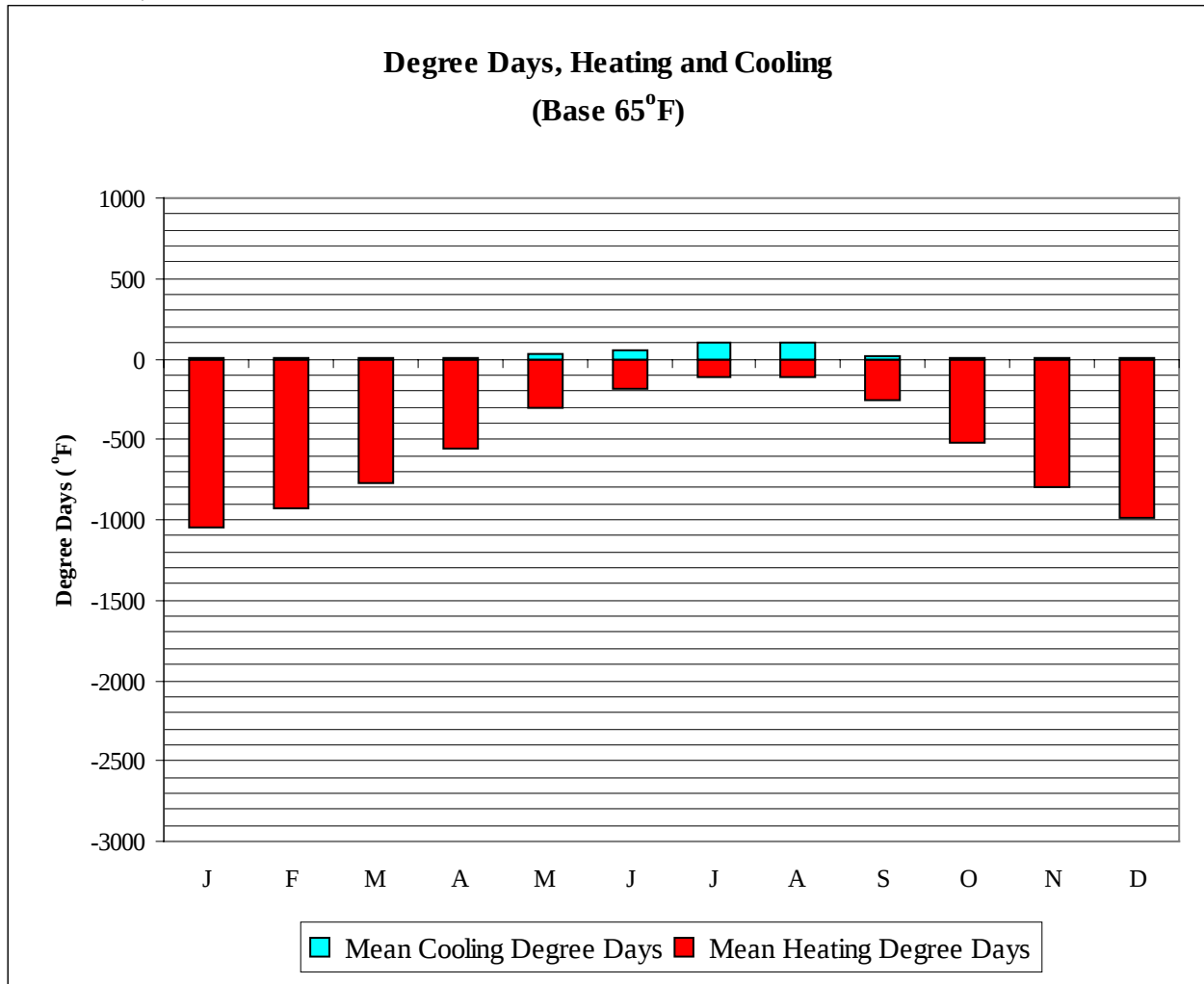
WMO No. 106710

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	49.0	46.2	34.1	27.1	1.0	46.2	48.2	27.1	20.9
14-Jan	50.0	48.6	34.1	27.0	1.0	49.7	50.2	26.8	21.1
21-Jan	48.0	46.0	34.2	27.4	11.0	44.8	47.6	25.2	20.3
28-Jan	50.0	46.3	35.5	28.9	12.0	47.6	47.8	27.7	21.3
4-Feb	47.0	42.8	36.2	27.0	3.0	42.0	44.4	26.9	21.1
11-Feb	49.0	39.5	.	.	9.0	.	32.4	.	.
18-Feb	48.0	44.5	.	.	7.0	.	31.0	.	.
25-Feb	56.0	47.1	.	.	7.0	.	32.2	.	.
4-Mar	52.0	45.6	41.1	30.7	14.0	45.5	46.9	29.4	23.1
11-Mar	59.0	50.5	44.1	31.8	16.0	56.0	53.0	30.6	23.6
18-Mar	61.0	48.9	46.4	33.5	21.0	49.0	48.5	32.6	24.7
25-Mar	63.0	50.5	48.2	34.5	25.0	55.3	53.4	34.7	25.9
1-Apr	66.0	51.4	49.9	35.4	23.0	56.0	55.1	36.2	26.8
8-Apr	68.0	51.7	50.7	37.1	29.0	51.8	52.6	35.9	27.2
15-Apr	68.0	52.3	52.1	35.3	26.0	53.9	51.5	34.9	25.4
22-Apr	74.0	55.0	55.4	37.2	28.0	54.6	53.3	37.0	26.7
29-Apr	75.0	56.5	57.8	40.0	30.0	63.0	62.7	40.9	30.0
6-May	77.0	59.4	60.1	42.4	32.0	65.1	59.1	45.6	33.9
13-May	79.0	58.4	62.2	44.3	34.0	65.1	62.2	48.2	35.4
20-May	79.0	58.9	66.2	46.6	36.0	74.2	63.8	52.6	39.7
27-May	80.0	60.6	65.7	47.7	39.0	77.0	67.1	54.0	40.4
3-Jun	84.0	65.4	67.3	48.7	39.0	79.8	64.7	57.3	43.1
10-Jun	85.0	67.2	67.5	50.5	43.0	83.3	74.9	62.2	47.3
17-Jun	83.0	68.6	66.6	50.8	43.0	88.2	69.3	62.0	47.0
24-Jun	80.0	62.8	68.5	52.4	46.0	90.3	73.3	65.0	50.0
1-Jul	86.0	66.3	71.3	53.2	45.0	107.8	81.0	67.5	51.7
8-Jul	88.0	65.1	72.9	54.7	46.0	94.5	69.6	69.6	54.1
15-Jul	89.0	67.1	73.5	55.3	46.0	92.4	75.2	72.1	55.0
22-Jul	88.0	66.3	70.8	54.2	44.0	99.4	72.6	70.5	54.2
29-Jul	91.0	67.4	73.3	54.5	48.0	96.6	74.9	71.7	55.4
5-Aug	91.0	67.0	76.0	56.3	48.0	101.5	73.8	74.5	56.5
12-Aug	88.0	67.1	74.2	55.3	47.0	98.0	72.3	74.0	56.9
19-Aug	86.0	65.6	74.2	54.5	45.0	91.0	70.0	72.4	54.5
26-Aug	84.0	64.5	71.0	53.4	45.0	94.5	66.7	70.6	54.6
2-Sep	82.0	64.4	68.9	51.4	42.0	92.4	74.7	65.5	51.3
9-Sep	82.0	63.7	66.4	49.6	41.0	85.4	65.6	62.5	47.9
16-Sep	77.0	62.0	65.3	48.7	32.0	84.0	66.0	63.4	47.5
23-Sep	79.0	65.4	64.8	48.9	39.0	88.2	72.2	62.6	47.8
30-Sep	75.0	61.9	62.2	46.6	38.0	78.4	65.7	56.9	44.5
7-Oct	72.0	58.8	59.6	45.7	32.0	77.0	64.7	55.3	43.3
14-Oct	71.0	59.2	57.6	43.4	32.0	71.4	63.0	52.4	40.2
21-Oct	64.0	55.6	52.7	41.2	30.0	63.7	60.1	47.4	36.8
28-Oct	64.0	54.8	51.5	38.0	28.0	63.0	57.2	41.8	32.3
4-Nov	58.0	52.0	46.6	37.3	25.0	60.2	54.5	39.8	31.4
11-Nov	56.0	52.0	44.8	35.9	25.0	56.0	54.4	36.8	29.4
18-Nov	53.0	45.3	42.4	34.9	23.0	52.5	51.2	34.5	27.9
25-Nov	53.0	50.9	40.1	32.9	18.0	55.3	52.2	32.6	26.1
2-Dec	51.0	49.5	37.2	30.1	13.0	51.1	53.3	29.4	23.5
9-Dec	50.0	46.8	37.4	30.1	10.0	49.7	49.8	29.5	23.3
16-Dec	51.0	47.4	36.0	29.6	12.0	49.7	49.6	29.1	23.0
23-Dec	52.0	51.0	36.5	30.8	16.0	53.2	49.9	29.8	23.7
31-Dec	50.0	47.8	36.1	29.5	8.0	49.7	49.0	28.6	23.3

COBURG, GERMANY

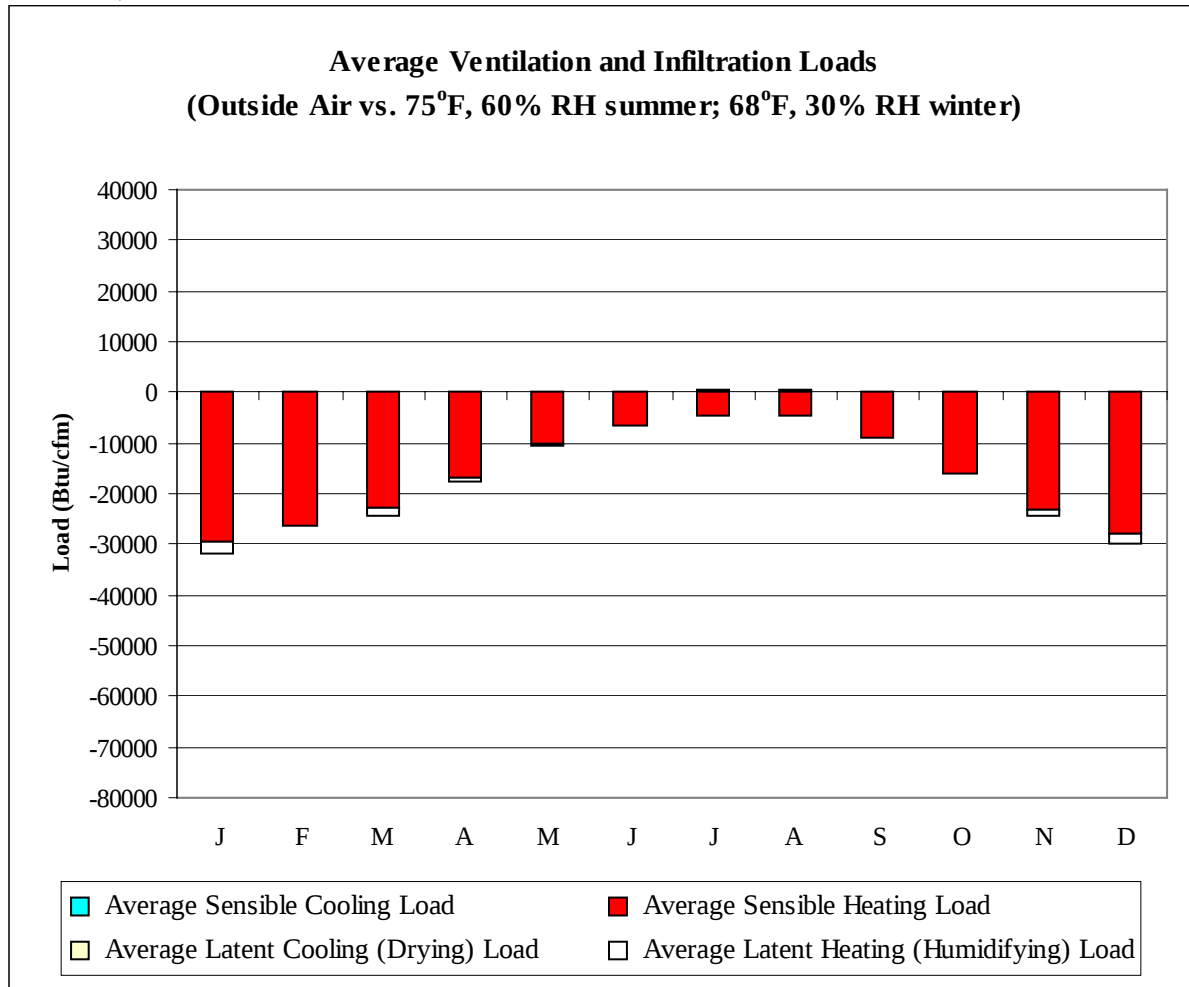
WMO No. 106710



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	1049
FEB	0	929
MAR	0	778
APR	5	557
MAY	26	306
JUN	58	181
JUL	107	112
AUG	97	114
SEP	23	258
OCT	2	519
NOV	0	802
DEC	0	985
ANN	317	6590

COBURG, GERMANY

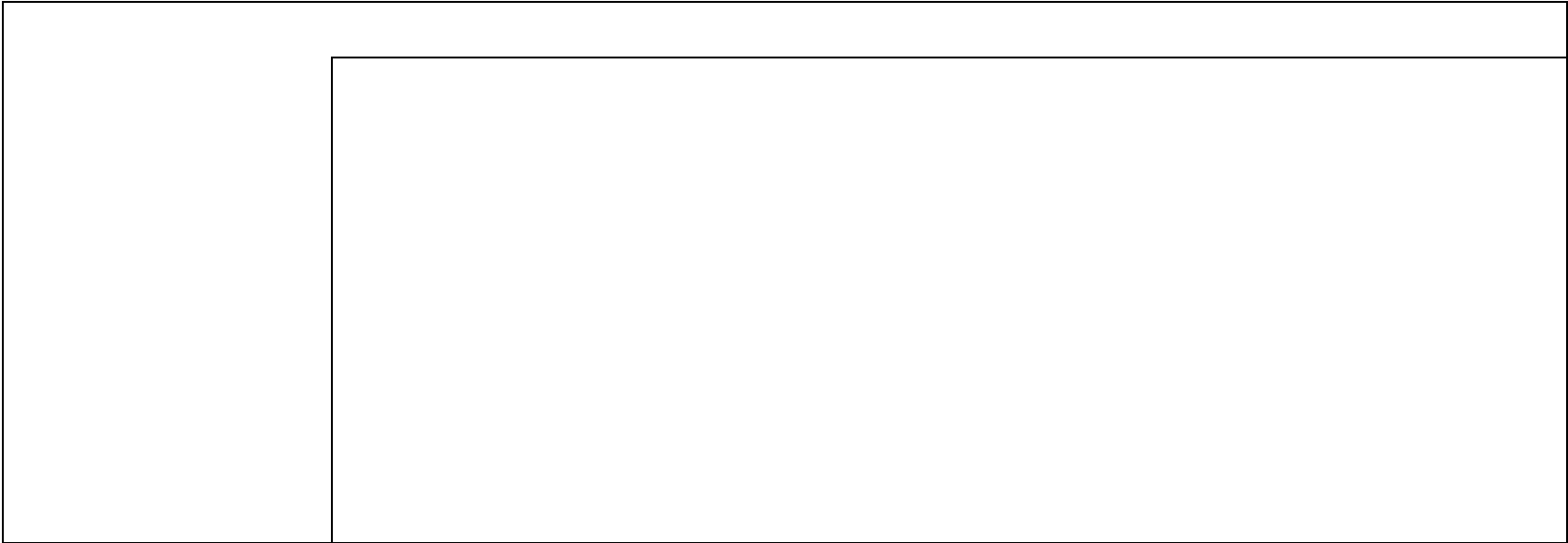
WMO No. 106710



	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	-29587	0	-2449
FEB	0	-26279	0	0
MAR	0	-22601	0	-1576
APR	4	-16849	0	-841
MAY	53	-10252	2	-161
JUN	221	-6600	77	-13
JUL	520	-4513	194	0
AUG	409	-4596	181	-1
SEP	47	-8843	23	-17
OCT	1	-15916	0	-240
NOV	0	-23135	0	-1072
DEC	0	-27962	0	-2020
ANN	1255	-197133	477	-8390

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

No Solar Radiation
Data Available

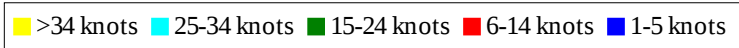
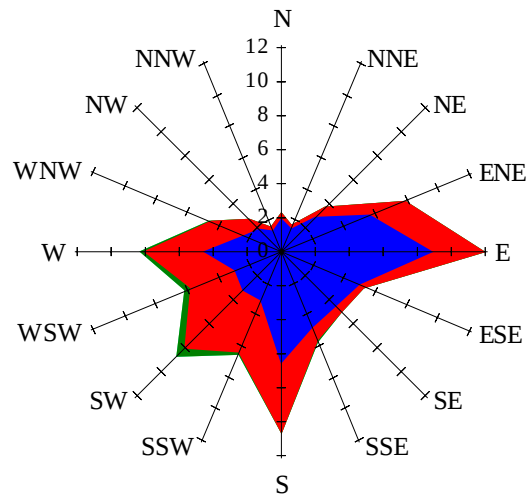


Average Annual Solar Heat and Illumination – Nearest Available Site

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

Wind Summary - December, January, and February

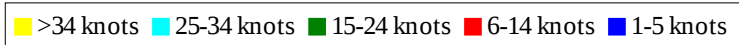
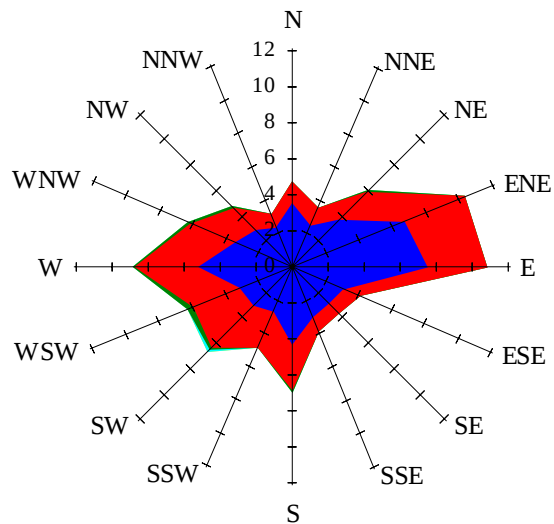
Labels of Percent Frequency on North Axis



Percent Calm = 8.78

Wind Summary - March, April, and May

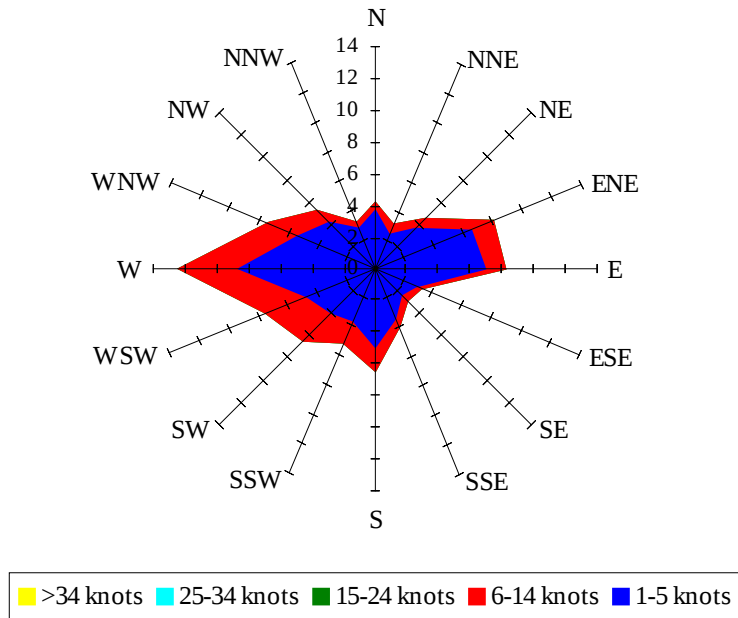
Labels of Percent Frequency on North Axis



Percent Calm = 6.69

Wind Summary - June, July, and August

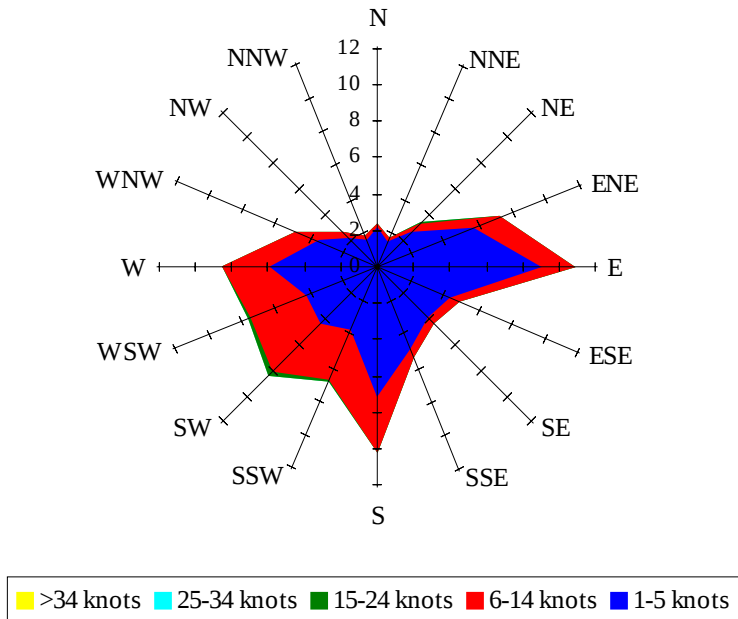
Labels of Percent Frequency on North Axis



Percent Calm = 8.78

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 10.14