

HEAT LOSS CALCULATING SHEET

AMERICAN FOUNDRY & FURNACE CO.

BLOOMINGTON - ILLINOIS

LOCATION
BUILDING

ARCHITECT

DEALER

FIGURED BY

DATE

CHECKED BY

DWG. No.

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CHART A					
TEMPERATURE			RISE CHART		
1	2	3	4	5	6
INSIDE TEMP.	BASEMENT		EXPOSED WALLS ABOVE DGMT.	EXPOSED FLOORS	EXPOSED CEILING
	WALL	FLOOR			

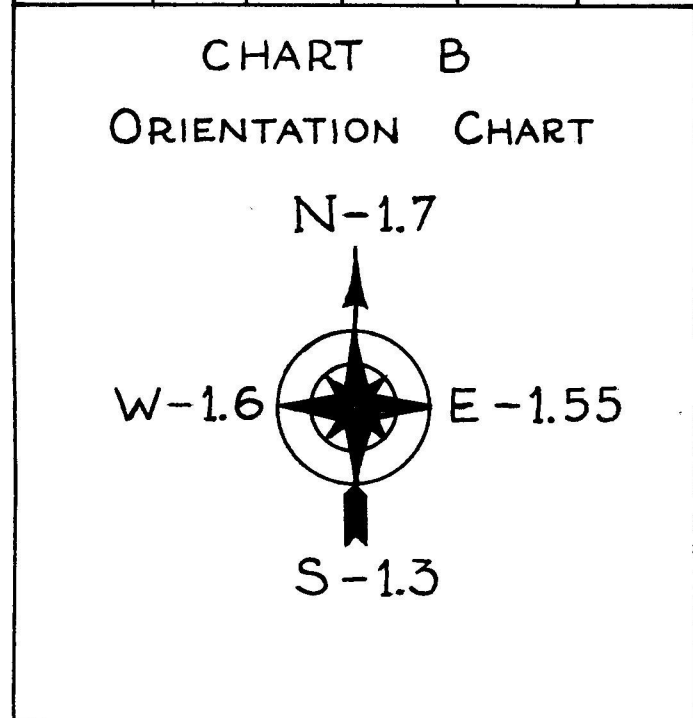


CHART C

GRAVITY ☐ FORCED AIR ☐

REGISTER TEMPERATURE 175° 200°

EQUIPMENT USED

HEATER No.

BLOWER No.

STATIC PRESSURE

CHART D				
BUILDING WALL FACTORS				
1	2	3	4	5
No.	CONSTRUCTION	A.S.H.V.E. COEFF.	70° TEMP. RISE	80° TEMP. RISE
SIDED FRAME WALL				
1	PLASTER ON METAL LATH-NO INSULATION	.260	18	21
2	1/2" RIGID INSULATION	.190	13	15
3	1" RIGID INSULATION	.150	11	12
4	ONE SIDE FACED WITH ALUMINUM FOIL	.200	14	16
5	1/2" FLEXIBLE INSULATION	.150	11	12
6	ROCK WOOL FILL-3 3/8" THICK	.072	5	6
7				
STUCCO FRAME WALL				
8	PLASTER ON METAL LATH-NO INSULATION	.310	22	25
9	1/2" RIGID INSULATION	.220	15	18
10	1" RIGID INSULATION	.160	11	13
11	ROCK WOOL FILL-3 3/8" THICK	.076	5	6
12				
BRICK VENEER FRAME WALL				
13	PLASTER ON METAL LATH-NO INSULATION	.280	20	22
14	1/2" RIGID INSULATION	.200	14	16
15	1" RIGID INSULATION	.150	11	12
16	ONE SIDE FACED WITH ALUMINUM FOIL	.210	15	17
17	1/2" FLEXIBLE INSULATION	.160	11	13
18	ROCK WOOL FILL-3 3/8" THICK	.074	5	6
19				
8" BRICK WALL				
20	PLAIN WALLS-NO FINISH	.500	36	40
21	PLASTER ON WALLS	.460	32	38
22	PLASTER ON METAL LATH-FURRED	.320	22	26
23	1/2" RIGID INSULATION	.220	15	18
24	1" RIGID INSULATION	.160	11	13
25	ROCK WOOL FILL-3 3/8" THICK	.120	8	10
26				
12" BRICK WALL				
27	PLAIN WALLS-NO FINISH	.360	25	29
28	PLASTER ON WALLS	.340	24	27
29	PLASTER ON METAL LATH-FURRED	.250	18	20
30	1/2" RIGID INSULATION	.190	13	15
31	1" RIGID INSULATION	.140	10	11
32	ROCK WOOL FILL-3 3/8" THICK	.110	8	9
33				
34				

CHART E				
CEILING FACTORS				
1	2	3	4	5
No.	CONSTRUCTION	A.S.H.V.E. COEFF.	70° TEMP. RISE	80° TEMP. RISE
PITCHED ROOF-UNHEATED ATTIC				
35	NO CEILING-RAFTERS EXPOSED	.460	32	38
36	PLASTER ON METAL LATH-NO INSULATION	.300	21	24
37	1/2" RIGID INSULATION	.210	15	17
38	1" RIGID INSULATION	.160	11	13
39	ROCK WOOL FILL-3 3/8" THICK	.063	4	5
40				
FLAT 1" WOOD ROOF-NO CEILING				
41	NO INSULATION	.490	34	40
42	1/2" RIGID INSULATION	.280	20	22
43	1" RIGID INSULATION	.200	14	16
44				
FLAT 1" WOOD ROOF-WITH CEILING				
45	NO INSULATION	.320	22	26
46	1/2" RIGID INSULATION	.210	15	17
47	1" RIGID INSULATION	.160	11	13
48				
49				

CHART F				
FLOOR FACTORS				
1	2	3	4	5
No.	CONSTRUCTION	A.S.H.V.E. COEFF.	20° TEMP. RISE	30° TEMP. RISE
4" CONCRETE FLOOR ON GROUND				
50	BARE	.107	21	32
51	1" FLOOR ON SLEEPERS	.350	7	11
52				
4" CONCRETE FLOOR OVER CINDER FILL				
53	BARE	.660	13	20
54	1" FLOOR ON SLEEPERS	.290	6	9
DOUBLE FLOOR OVER UNHEATED SPACES				
55	NO CEILING	.460	9	14
56	CEILING BENEATH-PLASTER ON METAL LATH	.300	6	9
57	CEILING BENEATH-PLASTER ON 1/2" RIGID INS.	.210	4	6
58				
59				

CHART G				
BASEMENT WALL FACTORS				
1	2	3	4	5
No.	CONSTRUCTION	A.S.H.V.E. COEFF.	50° TEMP. RISE	60° TEMP. RISE
8" BRICK WALL				
59	NO INTERIOR FINISH	.500	25	30
60	1/2" PLASTER	.460	23	28
61				
12" BRICK WALL				
62	NO INTERIOR FINISH	.360	18	22
63	1/2" PLASTER	.340	17	20
64				
8" CINDER BLOCK				
65	NO INTERIOR FINISH	.420	21	25
66	1/2" PLASTER	.390	20	23
67				
12" CINDER BLOCK				
68	NO INTERIOR FINISH	.370	19	22
69	1/2" PLASTER	.350	18	21
70				
8" CONCRETE BLOCK				
71	NO INTERIOR FINISH	.560	28	34
72	1/2" PLASTER	.520	26	31
73				
12" CONCRETE BLOCK				
74	NO INTERIOR FINISH	.490	25	29
75	1/2" PLASTER	.460	23	28
76				
8" CONCRETE WALL				
77	NO INTERIOR FINISH	.680	34	41
78	1/2" PLASTER	.620	31	37
79				
12" CONCRETE WALL				
80	NO INTERIOR FINISH	.550	28	33
81	1/2" PLASTER	.480	24	29
82				
83				
84				
85				
86				
87				
88				
89				
90				

CHART H					DETAILS OF										HEAT		LOSS		CALCULATION					AND				DESIGN			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28				
No.	NAME OF ROOM	DIMENSIONS			CUBIC CONTENT	GLASS		WALL		EXPOSURE	FLOOR		CEILING		B.T.U. LOSS	E. D. R.		C.F.M. REQ'D TO OVERCOME HEAT LOSS	WARM AIR				RETURN AIR								
		LENGTH	WIDTH	HEIGHT		Sq. Ft.	Factor	Sq. Ft.	Factor		Sq. Ft.	Factor	Sq. Ft.	Factor		STEAM	HOT WATER		C.F.M. TO BE DELIVERED	PIPE SIZE	PIPE AREA Sq. IN.	STACK SIZE	GRILLE SIZE	C.F.M. TO BE DELIVERED	PIPE AREA Sq. IN.	STACK SIZE	GRILLE SIZE				
		12	12	8	836	10		167	8		20	10	4	6	100				375	2-8"	20.5	10/34	10/6								
		10	10	10	1000	10		100	10		20	10	4	6	100				370	2-8"	20.5	10/34	10/6								
		12	12	8	836	11.3		200	8		20	10	4	6	100				375	2-8"	20.5	10/34	10/6								
		12	12	8	836	10		167	8		20	10	4	6	100				40	1-6"	10										
		12	12	8	836	10		167	8		20	10	4	6	100				55	1-6"	10										
		12	12	8	836	12.1		221	8		20	10	4	6	100				450	2-8"	20.5	10/34	10/6								
		10	10	10	1000	10		100	10		20	10	4	6	100				235	1-9"	10										
		12	12	8	836	11.3		200	8		20	10	4	6	100				215	1-9"	10										
		12	12	8	836	10		167	8		20	10	4	6	100				45	1-6"	10										
		5	5	5	125	10		50	5		20	10	4	6	100				65	1-6"	10										
		10	10	5	500	10		100	5		20	10	4	6	100				55	1-6"	10										
		12	12	8	836	11.3		200	8		20	10	4	6	100				595	2-10"	20.5	10/34	10/6								
		12	12	8	836	12.4		248	8		20	10	4	6	100				525	2-10"	20.5	10/34	10/6								
		12	12	8	836	10		167	8		20	10	4	6	100				150	1-6"	10										
		12	12	8	836	10		167	8		20	10	4	6	100				25	1-6"	10										
		12	12	8	836	10		167	8		20	10	4	6	100				25	1-6"	10										
		12	12	8	836	10		167	8		20	10	4	6	100				20	1-6"	10										
		12	12	8	836	10		167	8		20	10	4	6	100				145	1-7"	10										
		12	12	8	836	10.8		231	8		20	10	4	6	100				360	2-8"	20.5	10/34	10/6								
		12	12	8	836	10		167	8		20	10	4	6	100				40	1-6"	10										
		12	12	8	836	10.3		163	8		20	10	4	6	100				40	1-6"	10										
		12	12	8	836	10.3		163	8		20	10	4	6	100				235	1-9"	10										
		12	12	8	836	10.8		231	8		20	10	4	6	100				415	2-8"	20.5	10/34	10/6								
		12	12	8	836	10		167	8		20	10	4	6	100				20	1-6"	10										
		12	12	8	836	10		167	8		20	10	4	6	100				140	1-7"	10										
		12	12	8	836	10		167	8		20	10	4	6	100				75	1-6"	10										
		12	12	8	836	10		167	8		20	10	4	6	100				30	1-6"	10										
					90310											4769															
TOTALS					TOTAL HEAT LOSS OF STRUCTURE.																										
					ESTIMATED LINE LOSS @																										
					TOTAL CAPACITY OF HEATER REQUIRED.																										