



THERMAL LOAD CALCULATOR

This tab configures direct and reverse pipe branches and calculates the thermal loads carried by the branch's supply(S), return(R), and terminal unit (T) pipe sections.

X=1,2,3,... indicates position of a branch terminal in the direction of the supply water flow.

Follow these steps to calculate the section loads of each branch:

1. In columns C and D enter all the terminal names and loads related to the piping system from the module "DESIGN DATA".
 2. Enter the branch names and the return pipe types (R- reverse, D- direct)
 3. In column H sequence the branch's terminal tags from column B in the direction of the supply water flow
- Use the loads calculated in columns J, K, and L in the tab "Pipe Sizing" for sizing the sections
- If the system has more than three branches use another copy of this module.

Terminal unit characteristics			
Tag	Name	Load, Btu/h	Check box
1	R/C-1	30,800	+
2	R/C-2	38,654	+
3	R/C-3	26,398	+
4	R/C-4	22,397	+
5	R/C-5	30,509	+
6	R/C-6	8,459	+
7	R/C-7	23,191	+
8	R/C-8	18,537	+
9	R/C-9	48,027	+
10	SHU-101	35,952	+
11	SHU-102,103,104,105	18,739	+
12	SHU-106	38,358	+
13	SHU-107,108,109	22,856	+
14	SHU-110,111	39,284	+
15	SHU-114,115,116	36,577	+
16	SHU-117,118	8,134	+
17	SHU-119	25,928	+
18	SHU-120	13,650	+
19	FC-1	24,001	+
20	FC-2	24,001	+
21	UH-1, HC-1	173,635	#N/A
22	UH-2	10,072	#N/A
23	UH-3	7,872	#N/A
24	HC-1	145,760	#N/A
25			#N/A
26			#N/A
27			#N/A
28			#N/A
29			#N/A
30			#N/A
31			#N/A

Branch name	Space heating units	Return type	R		
X	Terminal tag	Terminal name	T Btu/h	S Btu/h	R Btu/h
1	20	FC-2	24,001	287,480	24,001
2	14	SHU-110,111	39,284	263,480	63,285
3	18	SHU-120	13,650	224,195	76,935
4	17	SHU-119	25,928	210,546	102,862
5	13	SHU-107,108,109	22,856	184,618	125,719
6	16	SHU-117,118	8,134	161,762	133,853
7	12	SHU-106	38,358	153,627	172,211
8	11	SHU-102,103,104,105	18,739	115,269	190,950
9	19	FC-1	24,001	96,531	214,951
10	15	SHU-114,115,116	36,577	72,530	251,528
11	10	SHU-101	35,952	35,952	287,480
12		0	0	0	0
13		0	0	0	0
14		0	0	0	0
15		0	0	0	0
16		0	0	0	0
17		0	0	0	0
18		0	0	0	0
19		0	0	0	0
20		0	0	0	0
21		0	0	0	0
22		0	0	0	0
23		0	0	0	0
24		0	0	0	0
25		0	0	0	0
26		0	0	0	0
27		0	0	0	0
28		0	0	0	0
29		0	0	0	0
30		0	0	0	0