



Warm-up and Condensate Load Tables

Warm-up Load in Pounds of Steam per 100 ft of Steam Main (based on a start-up timer of 1 hour)

Ambient Temperature 70°F. Based on Sch. 40 Pipe to 250 psi, Sch. 80 Above 250 Except Sch. 120 5" and Larger Above 800 psi.

Steam Pressure (psi g)	2"	2-½"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	0 °F Correction Factor*
0	6.2	9.7	12.8	18.2	24.6	31.9	48	68	90	107	140	176	207	208	1.50
5	6.9	11.0	14.4	20.4	27.7	35.9	48	77	101	120	157	198	233	324	1.44
10	7.5	11.8	15.5	22.0	29.9	38.8	58	83	109	130	169	213	251	350	1.41
20	8.4	13.4	17.5	24.9	38.8	44	66	93	124	146	191	241	284	396	1.37
40	9.9	15.8	20.6	29.3	39.7	52	78	110	145	172	225	284	334	465	1.32
60	11.0	17.5	22.9	32.6	44	57	86	122	162	192	250	316	372	518	1.29
80	12.0	19.0	24.9	35.3	48	62	93	132	175	208	271	342	403	561	1.27
100	12.8	20.3	26.6	37.8	51	67	100	142	188	222	290	366	431	600	1.26
125	13.7	21.7	28.4	40	55	71	107	152	200	238	310	391	461	642	1.25
150	14.5	23.0	30.0	43	58	75	113	160	212	251	328	414	487	679	1.24
175	15.3	24.2	31.7	45	61	79	119	169	224	265	347	437	514	716	1.23
200	16.0	25.3	33.1	47	64	83	125	177	234	277	362	456	537	748	1.22
250	17.2	27.3	35.8	51	69	89	134	191	252	299	390	492	579	807	1.21
300	25.0	38.3	51	75	104	143	217	322	443	531	682	854	1045	1182	1.20
400	27.8	43	57	83	116	159	241	358	493	590	759	971	1163	1650	1.18
500	30.2	46	62	91	126	173	262	389	535	642	825	1033	1263	1793	1.17
600	32.7	50	67	98	136	187	284	421	579	694	893	1118	1367	1939	1.16
800	38	58	77	113	203	274	455	670	943	1133	1445	1835	2227	3227	1.156
1000	42	72	86	126	227	305	508	748	1052	1264	1613	2048	2485	3601	1.147
1200	47	72	96	140	253	340	566	833	1172	1407	1796	2280	2768	4010	1.140
1400	52	79	106	155	280	376	627	922	1298	1558	1988	2525	3064	4440	1.135
1600	57	87	117	171	309	415	692	1018	1432	1720	2195	2787	3383	4901	1.130
1750	62	94	126	184	333	448	746	1098	1545	1855	2367	3006	3648	5286	1.128
1800	63	97	129	189	341	459	765	1126	1584	1902	2427	3082	3741	5420	1.127

Condensate Load in Pounds per Hour per 100 ft. of Insulated Steam Main

Ambient Temperature 70°F — Insulation 80% Efficient. Load Due to Radiation and Convection for Saturated Steam

Steam Pressure (psi g)	2"	2-½"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	0 °F Correction Factor*
10	6	7	9	11	13	16	20	24	29	32	36	39	44	53	1.58
40	8	9	11	14	17	20	26	32	38	42	48	51	57	68	1.50
60	10	12	14	18	24	27	33	41	49	54	62	67	74	89	1.45
100	12	15	18	22	28	33	41	51	61	67	77	83	93	111	1.41
125	13	16	20	24	30	36	45	56	66	73	84	90	101	121	1.36
175	16	19	23	26	33	38	53	66	78	86	98	107	119	142	1.38
250	18	22	27	34	42	50	62	77	92	101	116	126	140	168	1.36
300	20	25	30	37	46	54	68	85	101	111	126	138	154	184	1.33
400	23	28	34	43	53	63	80	99	118	130	148	162	180	216	1.32
500	27	33	39	49	61	73	91	114	135	148	170	185	206	246	1.32
600	30	37	44	55	68	82	103	128	152	167	191	208	232	277	1.31
800	36	44	53	69	85	101	131	164	194	214	244	274	305	365	1.30
1000	43	52	63	82	101	120	156	195	231	254	290	326	363	435	1.27
1200	51	62	75	97	119	142	185	230	274	301	343	386	430	515	1.26
1400	60	73	89	114	141	168	219	273	324	356	407	457	509	610	1.25
1600	70	85	103	132	163	195	253	315	375	412	470	528	588	704	1.22
1750	77	93	113	145	179	213	278	346	411	452	516	580	645	773	1.22
1800	79	96	117	150	185	221	288	358	425	467	534	600	667	800	1.21

*For outdoor temperature of 0 °F, multiply load value in table for each main size by correction factor shown.