

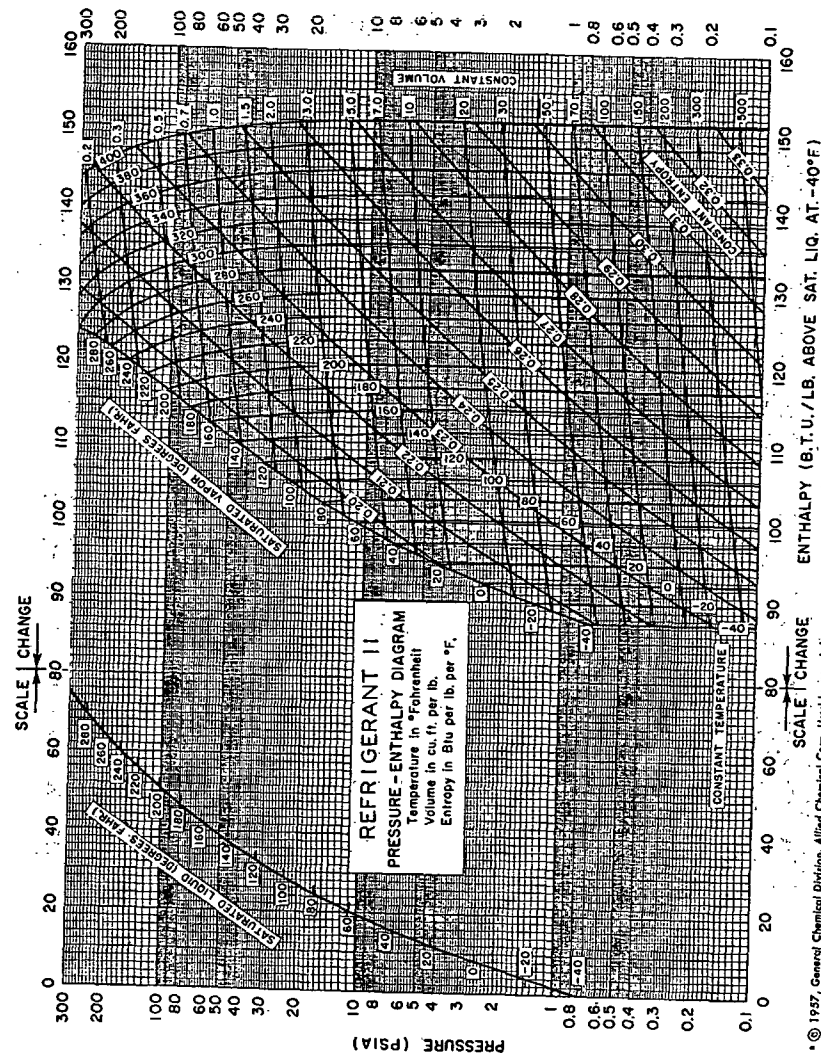


Fig. 1 Pressure-Enthalpy Diagram for Refrigerant 11

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Refrigerant Tables and Charts

Table 1 Refrigerant 11 (Trichloromonofluoromethane) Properties of Liquid and Saturated Vapor*

Temp F	Pressure		Volume	Density	Enthalpy**	Entropy**	Temp F	Pressure		Volume	Density	Enthalpy**	Entropy**				
	psia	psig	Vapor v _g	Liquid v _f	Vapor h _g	Liquid h _f		psia	psig	Vapor v _g	Liquid v _f	Vapor h _g	Liquid h _f				
-40	0.7387	28.43*	44.25	101.25	0.00	87.53	0.0000	0.2066	80	16.31	1.61	2.494	91.88	24.48	102.86	0.0313	0.1956
-38	0.7011	28.31*	41.51	101.10	0.40	87.77	0.0009	0.2081	81	16.52	1.63	2.440	91.80	24.69	102.48	0.0317	0.1956
-36	0.6666	28.20*	38.97	100.96	0.79	88.01	0.0019	0.2097	82	16.94	2.25	2.406	91.71	24.91	102.61	0.0321	0.1955
-34	0.6353	28.08*	36.60	100.81	1.19	88.25	0.0029	0.2113	83	17.57	2.92	2.364	91.63	25.19	102.73	0.0325	0.1955
-32	0.6074	27.95*	34.41	100.66	1.59	88.49	0.0038	0.2129	84	17.60	2.91	2.328	91.54	25.53	102.85	0.0329	0.1955
-30	1.0330	27.82*	32.36	100.52	1.99	88.74	0.0047	0.2146	85	17.94	3.24	2.282	91.46	25.94	102.97	0.0333	0.1954
-28	1.1023	27.69*	30.47	100.37	2.38	88.98	0.0056	0.2163	86	18.28	3.58	2.242	91.38	26.38	103.10	0.0337	0.1954
-26	1.1754	27.53*	28.70	100.22	2.78	89.22	0.0065	0.2180	87	18.63	3.93	2.203	91.29	26.82	103.22	0.0340	0.1954
-24	1.2523	27.37*	27.05	100.07	3.18	89.47	0.0074	0.2197	88	18.97	4.28	2.155	91.21	27.18	103.34	0.0344	0.1953
-22	1.334	27.20*	25.51	99.92	3.58	89.71	0.0084	0.2213	89	19.38	4.63	2.128	91.12	27.59	103.47	0.0348	0.1953
-20	1.419	27.03*	24.08	99.78	3.98	89.95	0.0093	0.2228	90	19.69	4.99	2.091	91.04	28.01	103.59	0.0352	0.1953
-18	1.509	26.85*	22.74	99.63	4.38	90.20	0.0102	0.2245	91	20.03	5.36	2.056	90.96	28.43	103.71	0.0356	0.1952
-16	1.604	26.65*	21.48	99.48	4.77	90.44	0.0111	0.2262	92	20.43	5.73	2.021	90.87	27.85	103.83	0.0360	0.1952
-14	1.704	26.45*	20.28	99.33	5.17	90.69	0.0120	0.2279	93	20.81	6.11	1.987	90.79	27.35	103.96	0.0364	0.1952
-12	1.809	26.24*	19.22	99.18	5.57	90.93	0.0129	0.2296	94	21.19	6.49	1.953	90.70	26.85	104.08	0.0368	0.1951
-10	1.918	26.01*	18.23	99.03	5.98	91.18	0.0138	0.2313	95	21.58	6.88	1.920	90.62	27.47	104.20	0.0372	0.1951
-8	2.034	25.78*	17.23	98.88	6.38	91.43	0.0147	0.2330	96	21.97	7.27	1.888	90.53	27.89	104.32	0.0376	0.1951
-6	2.155	25.53*	16.33	98.72	6.77	91.67	0.0155	0.2347	97	22.37	7.67	1.856	90.45	28.10	104.44	0.0379	0.1951
-4	2.281	25.27*	15.43	98.57	7.15	91.92	0.0164	0.2364	98	22.77	8.08	1.825	90.36	28.52	104.56	0.0383	0.1950
-2	2.415	25.00*	14.69	98.42	7.59	92.17	0.0173	0.2381	99	23.18	8.49	1.795	90.28	28.93	104.69	0.0387	0.1950
0	2.554	24.72*	13.95	98.27	7.99	92.42	0.0182	0.2398	100	23.60	8.90	1.765	90.19	29.35	104.81	0.0391	0.1950
2	2.699	24.42*	13.25	98.11	8.39	92.67	0.0191	0.2415	101	24.02	9.32	1.737	90.11	29.76	104.93	0.0395	0.1950
4	2.851	24.11*	12.59	97.95	8.79	92.91	0.0200	0.2432	102	24.45	9.75	1.708	90.02	30.17	105.05	0.0399	0.1949
6	3.011	23.79*	11.97	97.81	9.19	93.16	0.0209	0.2450	103	24.88	10.18	1.680	89.94	30.58	105.18	0.0403	0.1949
8	3.178	23.45*	11.38	97.65	9.60	93.40	0.0217	0.2468	104	25.32	10.63	1.653	89.85	30.99	105.30	0.0407	0.1949
10	3.352	23.10*	10.83	97.50	10.00	93.64	0.0225	0.2486	105	25.76	11.08	1.626	89.77	31.40	105.43	0.0411	0.1949
12	3.533	22.73*	10.32	97.35	10.41	93.89	0.0234	0.2504	106	26.21	11.53	1.600	89.68	31.81	105.56	0.0415	0.1949
14	3.723	22.34*	9.826	97.20	10.81	94.15	0.0243	0.2522	107	26.67	11.97	1.574	89.59	32.22	105.68	0.0419	0.1948
16	3.921	21.94*	9.362	97.04	11.24	94.40	0.0251	0.2540	108	27.14	12.41	1.548	89.50	32.63	105.81	0.0423	0.1948
18	4.127	21.52*	8.935	96.88	11.63	94.64	0.0259	0.2558	109	27.60	12.81	1.524	89.42	33.04	105.91	0.0427	0.1948
20	4.342	21.08*	8.521	96.72	12.03	94.89	0.0268	0.2576	110	28.08	13.23	1.500	89.34	33.45	106.03	0.0431	0.1947
22	4.565	20.62*	8.124	96.55	12.43	95.11	0.0277	0.2594	111	28.58	13.66	1.476	89.25	33.86	106.15	0.0435	0.1947
24	4.800	20.15*	7.743	96.37	12.83	95.34	0.0285	0.2612	112	29.09	14.09	1.453	89.16	34.27	106.27	0.0439	0.1947
26	5.048	19.67*	7.377	96.19	13.23	95.57	0.0293	0.2630	113	29.61	14.53	1.430	89.07	34.68	106.39	0.0443	0.1947
28	5.309	19.19*	7.025	96.01	13.63	95.80	0.0302	0.2648	114	30.14	15.00	1.408	88.99	35.09	106.51	0.0447	0.1947
30	5.584	18.69*	6.687	95.83	14.03	96.04	0.0310	0.2666	115	30.68	15.48	1.386	88.91	35.50	106.63	0.0451	0.1947
32	5.874	18.17*	6.362	95.65	14.43	96.28	0.0319	0.2684	116	31.23	15.97	1.364	88.83	35.91	106.75	0.0455	0.1946
34	6.179	17.64*	6.050	95.47	14.83	96.52	0.0328	0.2702	117	31.79	16.46	1.342	88.75	36.32	106.87	0.0459	0.1946
36	6.499	17.10*	5.750	95.29	15.23	96.76	0.0337	0.2720	118	32.36	16.95	1.322	88.67	36.73	106.99	0.0463	0.1946
38	6.834	16.55*	5.462	95.11	15.63	96.99	0.0346	0.2738	119	32.94	17.45	1.302	88.59	37.14	107.10	0.0467	0.1946
40	7.184	16.00*	5.187	94.93	16.03	97.23	0.0355	0.2756	120	33.53	17.95	1.282	88.51	37.55	107.22	0.0471	0.1946
42	7.549	15.44*	4.925	94.75	16.43	97.47	0.0364	0.2774	121	34.13	18.45	1.262	88.43	37.96	107.34	0.0475	0.1945
44	7.929	14.87*	4.675	94.57	16.83	97.71	0.0373	0.2792	122	34.74	18.95	1.242	88.35	38.37	107.46	0.0479	0.1945
46	8.324	14.29*	4.436	94.39	17.23	97.95	0.0382	0.2810	123	35.36	19.45	1.222	88.27	38.78	107.58	0.0483	0.1945
48	8.734	13.70*	4.207	94.21	17.63	98.19	0.0391	0.2828	124	35.99	19.95	1.202	88.19	39.19	107.70	0.0487	0.1945
50	9.159	13.11*	3.987	94.03	18.03	98.43	0.0400	0.2846	125	36.63	20.45	1.182	88.11	39.60	107.82	0.0491	0.1945
52	9.600	12.52*	3.777	93.85	18.43	98.67	0.0409	0.2864	126	37.28	20.95	1.162	88.03	39.99	107.94	0.0495	0.1945
54	10.057	11.93*	3.577	93.67	18.83	98.91	0.0418	0.2882	127	37.94	21.45	1.142	87.95	40.39	108.06	0.0499	0.1945
56	10.530	11.34*	3.387	93.49	19.23	99.15	0.0427	0.2900	128	38.61	21.95	1.122	87.87	40.79	108.18	0.0503	0.1945
58	11.019	10.75*	3.207	93.31	19.63	99.39	0.0436	0.2918	129	39.29	22.45	1.102	87.79	41.19	108.30	0.0507	0.1945
60	11.524	10.16*	3.037	93.13	20.03	99.63	0.0445	0.2936	130	40.00	22.95	1.082	87.71	41.59	108.42	0.0511	0.1945
62	12.045	9.57*	2.877	92.95	20.43	99.87	0.0454	0.2954	131	40.72	23.45	1.062	87.63	41.99	108.54	0.0515	0.1945
64	12.589	8.97*	2.727	92.77	20.83	100.11	0.0463	0.2972	132	41.45	23.95	1.042	87.55	42.39	108.66	0.0519	0.1945
66	13.154	8.37*	2.587	92.59	21.23	100.35	0.0472	0.2990	133	42.18	24.45	1.022	87.47	42.79	108.78	0.0523	0.1945
68	13.740	7.77*	2.457	92.41	21.63	100.59	0.0481	0.3008	134	42.92	24.95	1.002	87.39	43.19	108.90	0.0527	0.1945
70	14.347	7.17*	2.337	92.23	22.03	100.83	0.0490	0.3026	135	43.67	25.45	0.982	87.31	43.59	109.02	0.0531	0.1945
72	14.974	6.57*	2.227	92.05	22.43	101.07	0.0499	0.3044	136	44.43	25.95	0.962	87.23	43.99	109.14	0.0535	0.1945
74	15.621	5.97*	2.127	91.87	22.83	101.31	0.0508	0.3062	137	45.20	26.45	0.942	87.15	44.39	109.26	0.0539	0.1945
76	16.288	5.37*	2.037	91.69	23.23	101.55	0.0517	0.3080	138	45.98	26.95	0.922	87.07	44.79	109.38	0.0543	0.1945
78	16.974	4.77*	1.957	91.51	23.63	101.79	0.0526	0.3098	139	46.77	27.45	0.902	86.99	45.19	109.50	0.0547	0.1945
80	17.679	4.17*	1.887	91.33	24.03	102.03	0.0535	0.3116	140	47.58	27.95	0.882	86.91	45.59	109.62	0.0551	0.1945
82	18.402	3.57*	1.827	91.15	24.43	102.27	0.0544	0.3134	141	48.40	28.45	0.862	86.83	45.99	109.74	0.0555	0.1945
84	19.143	2.97*	1.777	90.97	24.83	102.51	0.0553	0.3152	142	49.23	28.95	0.842	86.75	46.39	109.86	0.0559	0.1945
86	19.902	2.37*	1.727	90.79	25.23	102.75	0.0562	0.3170	143	50.07	29.45	0.822	86.67	46.79	109.98		