

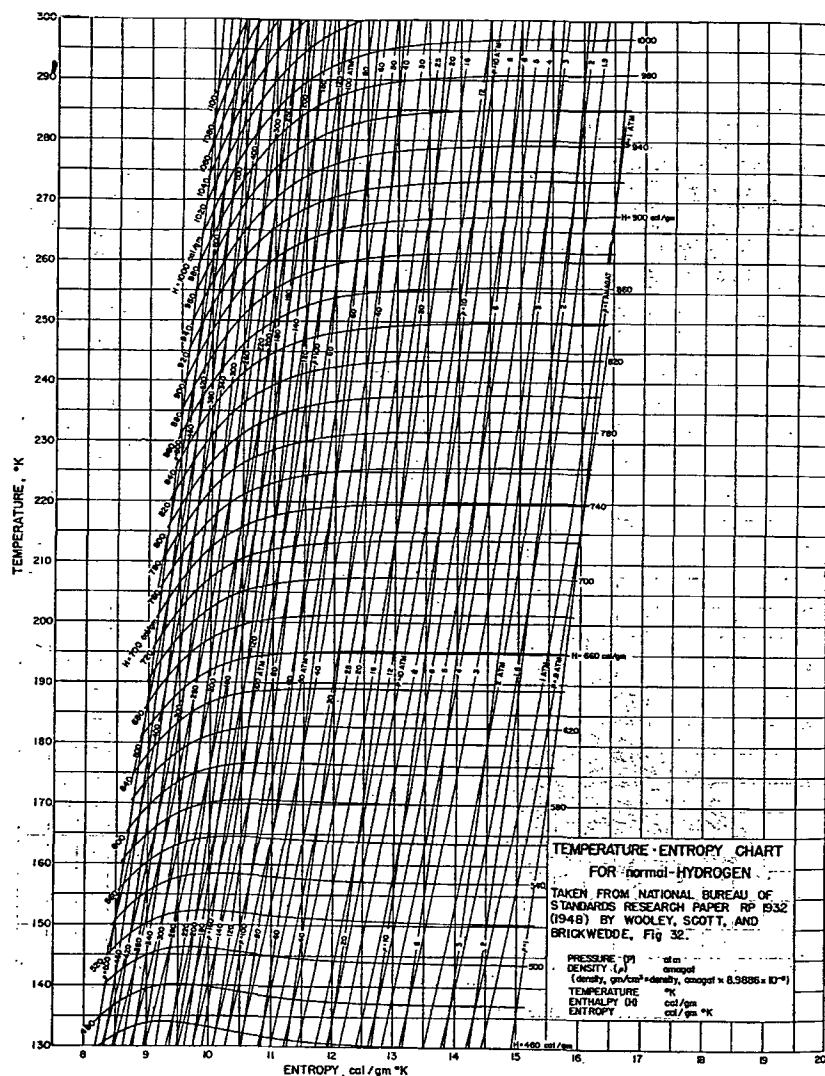


Fig. 23 Temperature-Entropy Diagram for Refrigerant 702 (Normal Hydrogen)

Table 35 Refrigerant 702 (Normal Hydrogen) Properties of Vapor*

Temp K	P = 1 atm (Sat temp = 20.39 K)			P = 2 atm (Sat temp = 22.97 K)			P = 5 atm (Sat temp = 27.29 K)			P = 10 atm (Sat temp = 31.41 K)			P = 15 atm		
	v cm ³ /g	h cal/gm	s cal/gm °K	v cm ³ /g	h cal/gm	s cal/gm °K	v cm ³ /g	h cal/gm	s cal/gm °K	v cm ³ /g	h cal/gm	s cal/gm °K	v cm ³ /g	h cal/gm	s cal/gm °K
Sat Vapor	751.1	718	29.16	398.7	729	27.16	163.7	730	24.21	70.89	691	21.02	.....	.....	.....
22	827.2	737	29.94	433.0	742	27.71	.....	.....	.....	.....	.....	.....	.....	.....	.....
24	817.5	730	29.82	424.4	737	27.62	.....	.....	.....	.....	.....	.....	.....	.....	.....
26	806	723	29.70	416.4	732	27.53	.....	.....	.....	.....	.....	.....	.....	.....	.....
28	794	716	29.58	408.4	727	27.44	.....	.....	.....	.....	.....	.....	.....	.....	.....
30	782	709	29.46	400.4	722	27.35	.....	.....	.....	.....	.....	.....	.....	.....	.....
35	750	690	29.10	380.1	707	27.01	.....	.....	.....	.....	.....	.....	.....	.....	.....
40	683	658	28.58	326	678	26.40	.....	.....	.....	.....	.....	.....	.....	.....	.....
45	612	625	28.05	271	648	25.80	.....	.....	.....	.....	.....	.....	.....	.....	.....
50	541	592	27.52	216	618	25.20	.....	.....	.....	.....	.....	.....	.....	.....	.....
60	441	513	26.54	139	541	24.21	.....	.....	.....	.....	.....	.....	.....	.....	.....
70	362	434	25.56	104	462	23.22	.....	.....	.....	.....	.....	.....	.....	.....	.....
80	302	374	24.58	84	402	22.23	.....	.....	.....	.....	.....	.....	.....	.....	.....
90	251	324	23.60	70	352	21.24	.....	.....	.....	.....	.....	.....	.....	.....	.....
100	210	284	22.62	60	312	20.25	.....	.....	.....	.....	.....	.....	.....	.....	.....
120	150	224	20.64	44	252	18.26	.....	.....	.....	.....	.....	.....	.....	.....	.....
140	100	164	18.66	30	192	16.27	.....	.....	.....	.....	.....	.....	.....	.....	.....
160	70	114	16.68	21	142	14.28	.....	.....	.....	.....	.....	.....	.....	.....	.....
180	50	84	14.70	15	102	12.29	.....	.....	.....	.....	.....	.....	.....	.....	.....
200	35	59	12.72	10	72	10.30	.....	.....	.....	.....	.....	.....	.....	.....	.....
220	25	44	10.74	7	52	8.32	.....	.....	.....	.....	.....	.....	.....	.....	.....
240	18	34	8.76	5	37	6.34	.....	.....	.....	.....	.....	.....	.....	.....	.....
260	13	25	6.78	3	27	4.36	.....	.....	.....	.....	.....	.....	.....	.....	.....
280	9	18	4.80	2	19	2.38	.....	.....	.....	.....	.....	.....	.....	.....	.....
300	6	13	2.82	1	14	0.39	.....	.....	.....	.....	.....	.....	.....	.....	.....

* From published data (National Bureau of Standards, Technical Note 120 November 1961).

Conversions for Units, to Equivalent in British System of Units:

To convert temperature in degrees Kelvin (°K) to degrees Rankine (°R), multiply (°K) by 1.8.
 To convert pressure in atmospheres (atm) to (psia), multiply (atm) by 14.696.
 To convert volume (v) in cubic centimeters per gram (cm³/g) to (cu ft/lb), multiply (cm³/g) by .016018.
 To convert density (ρ) in grams per cubic centimeter (g/cm³) to (lb/ft³), multiply (g/cm³) by 62.428.
 To convert enthalpy (h) in joules per gram (J/g) to (Btu/lb), multiply (J/g) by .42993.
 To convert entropy (s) in joules per gram °K (J/g °K) to (Btu/lb °R), multiply (J/g °K) by .23885.
 Entropy (s) in calories per gram °K (cal/gm °K) is equal to (Btu/lb °R).