refrigerant: CO_2

saturation values							***superheat ($T - T_s$)***			
							50 K		**100 K**	
T	**p_s**	**v_g**	**h_f**	**h_g**	**s_f**	**s_g**	**h**	**s**	**h**	**s**
(°C)	(bar)	(m^3/kg)	(kJ/kg)		(kJ/(kg K))		(kJ/kg)	(kJ/(kg K))	(kJ/kg)	(kJ/(kg K))
-50	6.8234	0.0558	-19.96	319.77	-0.0863	1.4362	365.1	1.620	409.9	1.770
-45	8.3184	0.0460	-10.03	321.23	-0.0428	1.4091	367.81	1.594	413.26	1.744
-40	10.0450	0.0383	0.00	322.42	0.0000	1.3829	370.35	1.569	416.53	1.720
-35	12.0242	0.0320	10.15	323.33	0.0423	1.3574	372.75	1.546	419.70	1.696
-30	14.2776	0.0270	20.43	323.92	0.0842	1.3323	375.00	1.524	422.77	1.674
-28	15.2607	0.0252	24.60	324.06	0.1009	1.3224	375.85	1.515	423.97	1.666
-26	16.2926	0.0236	28.78	324.14	0.1175	1.3125	376.68	1.507	425.15	1.657
-24	17.3749	0.0220	33.00	324.15	0.1341	1.3026	377.48	1.498	426.31	1.649
-22	18.5089	0.0206	37.26	324.11	0.1506	1.2928	378.25	1.490	427.45	1.641
-20	19.6963	0.0193	41.55	323.99	0.1672	1.2829	378.99	1.482	428.58	1.633
-18	20.9384	0.0181	45.87	323.80	0.1837	1.2730	379.70	1.474	429.68	1.626
-16	22.2370	0.0170	50.24	323.53	0.2003	1.2631	380.39	1.466	430.77	1.618
-14	23.5935	0.0159	54.65	323.19	0.2169	1.2531	381.04	1.458	431.83	1.610
-12	25.0095	0.0150	59.11	322.76	0.2334	1.2430	381.66	1.450	432.88	1.603
-10	26.4868	0.0140	63.62	322.23	0.2501	1.2328	382.25	1.443	433.90	1.596
-8	28.0269	0.0132	68.18	321.61	0.2668	1.2226	382.81	1.435	434.91	1.589
-6	29.6316	0.0124	72.81	320.89	0.2835	1.2121	383.34	1.428	435.89	1.582
-4	31.3027	0.0116	77.50	320.05	0.3003	1.2015	383.83	1.420	436.85	1.575
-2	33.0420	0.0109	82.26	319.09	0.3173	1.1907	384.29	1.413	437.79	1.568
0	34.8514	0.0102	87.10	317.99	0.3344	1.1797	384.71	1.405	438.71	1.561
2	36.7329	0.0096	92.02	316.75	0.3516	1.1683	385.10	1.398	439.61	1.554
4	38.6884	0.0090	97.05	315.35	0.3690	1.1567	385.45	1.391	440.49	1.548
6	40.7202	0.0084	102.18	313.77	0.3866	1.1446	385.77	1.384	441.34	1.541
8	42.8306	0.0079	107.43	311.99	0.4045	1.1321	386.05	1.377	442.17	1.535
10	45.0218	0.0074	112.83	309.98	0.4228	1.1190	386.29	1.369	442.97	1.528
12	47.2966	0.0069	118.38	307.72	0.4414	1.1053	386.49	1.362	443.76	1.522
14	49.6577	0.0064	124.13	305.15	0.4605	1.0909	386.65	1.355	444.51	1.516
16	52.1080	0.0060	130.11	302.22	0.4802	1.0754	386.77	1.348	445.25	1.509
18	54.6511	0.0056	136.36	298.86	0.5006	1.0588	386.85	1.341	445.95	1.503
20	57.2905	0.0051	142.97	294.96	0.5221	1.0406	386.88	1.334	446.64	1.497
22	60.0308	0.0047	150.02	290.36	0.5449	1.0203	386.87	1.327	447.29	1.491
24	62.8773	0.0043	157.71	284.80	0.5695	0.9972	386.81	1.320	447.91	1.485
26	65.8368	0.0039	166.36	277.80	0.5971	0.9697	386.70	1.313	448.51	1.478
28	68.9182	0.0035	176.72	268.30	0.6301	0.9342	386.53	1.305	449.07	1.472
30	72.1369	0.0029	191.65	252.23	0.6778	0.8776	386.30	1.298	449.58	1.466
30.98	73.7730	0.0021	219.34	219.34	0.7680	0.7680	386.15	1.294	449.82	1.463

based on data from NIST: ***www.nist.gov***