

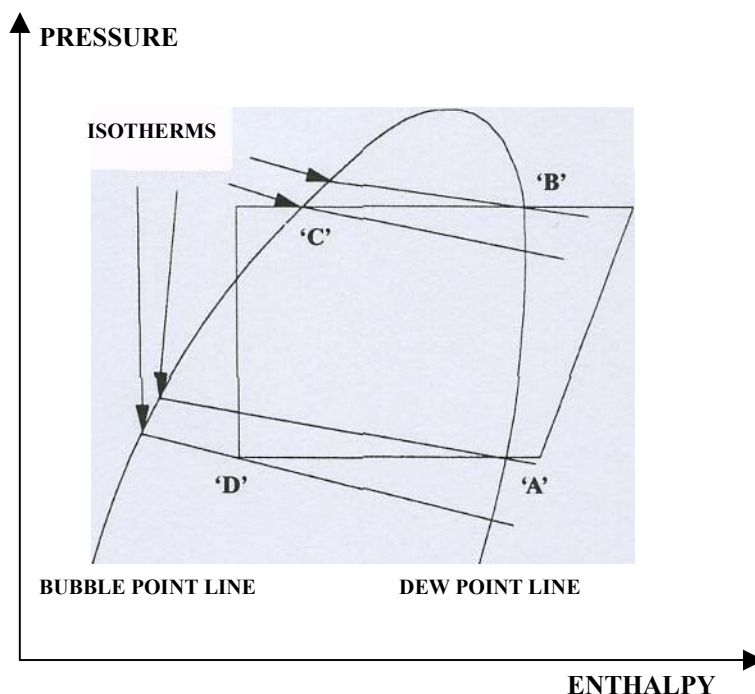
Arcton

402A

THERMODYNAMIC PROPERTY DATA
SI UNITS

SYSTEM PERFORMANCE WITH NON-AZEOTROPIC REFRIGERANT BLENDS

- With a non-azeotropic refrigerant blend the composition of the vapour changes in the evaporator and the condenser.
- Evaporator inlet and outlet temperatures are different.
- Condenser inlet and outlet temperatures are different.
- At all other points in the system the fluid behaves as normal.
- System design path.
 - Select evaporator outlet (Dew point 'A') against the desired cold space temperature.
 - Condenser inlet and outlet temperatures 'B' & 'C' should be sufficient to reject heat.
 - Liquid enthalpy at expansion device and table 3 can be used to get evaporator inlet temperature 'D'.
 - Refrigerant effect is enthalpy change 'D' to 'A' as normal.



Pressure-Enthalpy Diagram for non-azeotropic Refrigerant Blends

ARCTON 402A

Saturated Liquid and Saturated Vapour Properties

Arcton 402A - Saturated Liquid and Saturated Vapour Properties

Table 1 Sheet 1

Pressure bara	Dew Point °C	Bubble Point °C	Density		Enthalpy		Entropy	
			Liquid kg/m ³	Vapour kg/m ³	Liquid kJ/kg	Vapour kJ/kg	Liquid kJ/kg.K	Vapour kJ/kg.K
0.70	-55.75	-56.51	1463.98	4.029	36.89	231.869	0.742	1.641
0.80	-53.12	-53.86	1455.76	4.562	39.536	233.417	0.754	1.637
0.90	-50.75	-51.46	1448.25	5.091	41.952	234.817	0.765	1.634
1.00	-48.57	-49.26	1441.34	5.616	44.183	236.098	0.775	1.631
1.10	-46.56	-47.23	1434.91	6.138	46.261	237.28	0.785	1.629
1.20	-44.69	-45.35	1428.88	6.657	48.208	238.378	0.793	1.627
1.30	-42.94	-43.58	1423.2	7.174	50.045	239.405	0.801	1.625
1.40	-41.29	-41.92	1417.83	7.689	51.785	240.37	0.809	1.623
1.50	-39.73	-40.35	1412.72	8.201	53.441	241.28	0.816	1.622
1.60	-38.25	-38.85	1407.84	8.713	55.022	242.142	0.823	1.621
1.70	-36.84	-37.43	1403.17	9.223	56.536	242.962	0.829	1.619
1.80	-35.49	-36.08	1398.68	9.731	57.99	243.743	0.835	1.618
1.90	-34.2	-34.78	1394.37	10.238	59.39	244.489	0.841	1.617
2.00	-32.97	-33.53	1390.2	10.745	60.74	245.203	0.847	1.616
2.10	-31.78	-32.34	1386.18	11.25	62.045	245.889	0.852	1.615
2.20	-30.63	-31.18	1382.28	11.755	63.309	246.548	0.858	1.614
2.30	-29.52	-30.07	1378.51	12.258	64.535	247.183	0.863	1.613
2.40	-28.45	-28.99	1374.84	12.761	65.726	247.795	0.868	1.613
2.50	-27.41	-27.94	1371.27	13.264	66.884	248.386	0.872	1.612
2.60	-26.41	-26.93	1367.79	13.766	68.012	248.958	0.877	1.611
2.70	-25.43	-25.95	1364.4	14.267	69.111	249.511	0.882	1.611
2.80	-24.48	-25	1361.09	14.769	70.183	250.047	0.886	1.61
2.90	-23.56	-24.07	1357.86	15.269	71.231	250.568	0.89	1.609
3.00	-22.66	-23.16	1354.7	15.77	72.255	251.073	0.894	1.609
3.20	-20.93	-21.42	1348.58	16.77	74.238	252.042	0.902	1.608
3.40	-19.28	-19.76	1342.7	17.77	76.143	252.96	0.91	1.607
3.60	-17.7	-18.18	1337.03	18.77	77.976	253.833	0.917	1.606
3.80	-16.19	-16.66	1331.56	19.769	79.745	254.665	0.924	1.605
4.00	-14.74	-15.2	1326.26	20.769	81.456	255.458	0.93	1.604
4.20	-13.34	-13.8	1321.12	21.769	83.113	256.218	0.937	1.604
4.40	-11.99	-12.44	1316.13	22.77	84.721	256.945	0.943	1.603
4.60	-10.69	-11.13	1311.28	23.771	86.284	257.644	0.949	1.603
4.80	-9.43	-9.87	1306.55	24.774	87.806	258.316	0.955	1.602
5.00	-8.21	-8.64	1301.93	25.777	89.288	258.962	0.96	1.601
5.20	-7.02	-7.45	1297.43	26.782	90.735	259.585	0.966	1.601
5.40	-5.87	-6.3	1293.02	27.789	92.148	260.186	0.971	1.6
5.60	-4.75	-5.18	1288.7	28.797	93.529	260.767	0.976	1.6
5.80	-3.66	-4.08	1284.47	29.806	94.881	261.328	0.981	1.599

Standard state: At 0 C, Liquid Enthalpy = 100kJ/kg, Liquid Entropy = 1 kJ/kg.K

Arcton 402A - Saturated Liquid and Saturated Vapour Properties

Table 1 Sheet 2

Pressure bara	Dew Point °C	Bubble Point °C	Density		Enthalpy		Entropy	
			Liquid kg/m ³	Vapour kg/m ³	Liquid kJ/kg	Vapour kJ/kg	Liquid kJ/kg.K	Vapour kJ/kg.K
6.00	-2.6	-3.02	1280.32	30.818	96.205	261.871	0.986	1.599
6.20	-1.57	-1.98	1276.25	31.831	97.503	262.397	0.991	1.599
6.40	-0.56	-0.97	1272.25	32.846	98.777	262.907	0.996	1.598
6.60	0.43	0.02	1268.31	33.864	100.027	263.401	1	1.598
6.80	1.39	0.99	1264.44	34.883	101.255	263.881	1.005	1.597
7.00	2.34	1.93	1260.63	35.905	102.462	264.347	1.009	1.597
7.20	3.26	2.86	1256.88	36.929	103.649	264.799	1.013	1.597
7.40	4.16	3.77	1253.18	37.956	104.817	265.239	1.017	1.596
7.60	5.05	4.65	1249.53	38.985	105.967	265.666	1.022	1.596
7.80	5.92	5.53	1245.93	40.017	107.101	266.082	1.026	1.596
8.00	6.77	6.38	1242.37	41.051	108.217	266.487	1.03	1.595
8.20	7.61	7.22	1238.86	42.089	109.318	266.882	1.033	1.595
8.40	8.43	8.04	1235.39	43.129	110.404	267.266	1.037	1.595
8.60	9.24	8.85	1231.96	44.172	111.476	267.64	1.041	1.595
8.80	10.03	9.64	1228.57	45.218	112.534	268.005	1.045	1.594
9.00	10.81	10.43	1225.21	46.267	113.579	268.36	1.048	1.594
9.20	11.58	11.19	1221.89	47.319	114.611	268.707	1.052	1.594
9.40	12.33	11.95	1218.6	48.374	115.631	269.045	1.056	1.593
9.60	13.08	12.69	1215.34	49.433	116.64	269.375	1.059	1.593
9.80	13.81	13.43	1212.11	50.495	117.637	269.697	1.063	1.593
10.00	14.53	14.15	1208.91	51.56	118.623	270.011	1.066	1.593
10.50	16.28	15.91	1201.03	54.239	121.044	270.765	1.074	1.592
11.00	17.98	17.6	1193.29	56.94	123.405	271.475	1.082	1.591
11.50	19.61	19.24	1185.7	59.664	125.712	272.145	1.09	1.591
12.00	21.2	20.83	1178.22	62.413	127.969	272.777	1.098	1.59
12.50	22.74	22.37	1170.85	65.188	130.179	273.373	1.105	1.589
13.00	24.23	23.86	1163.58	67.989	132.347	273.935	1.112	1.589
13.50	25.68	25.32	1156.4	70.818	134.476	274.466	1.119	1.588
14.00	27.09	26.73	1149.29	73.675	136.568	274.967	1.126	1.587
14.50	28.47	28.11	1142.24	76.562	138.625	275.439	1.133	1.587
15.00	29.81	29.45	1135.26	79.48	140.652	275.883	1.14	1.586
15.50	31.12	30.76	1128.32	82.43	142.649	276.301	1.146	1.586

Standard state: At 0 C, Liquid Enthalpy = 100kJ/kg, Liquid Entropy = 1 kJ/kg.K

Arceton 402A - Saturated Liquid and Saturated Vapour Properties

Table 1 Sheet 3

Pressure bara	Dew Point °C	Bubble Point °C	Density		Enthalpy		Entropy	
			Liquid kg/m ³	Vapour kg/m ³	Liquid kJ/kg	Vapour kJ/kg	Liquid kJ/kg.K	Vapour kJ/kg.K
16.00	32.4	32.03	1121.42	85.412	144.619	276.693	1.152	1.585
16.50	33.64	33.28	1114.56	88.429	146.563	277.061	1.159	1.584
17.00	34.86	34.51	1107.72	91.481	148.484	277.405	1.165	1.583
17.50	36.06	35.7	1100.9	94.57	150.382	277.726	1.171	1.583
18.00	37.23	36.87	1094.1	97.697	152.261	278.025	1.177	1.582
18.50	38.37	38.02	1087.29	100.863	154.12	278.302	1.182	1.581
19.00	39.5	39.14	1080.49	104.071	155.961	278.558	1.188	1.581
19.50	40.6	40.25	1073.67	107.321	157.786	278.793	1.194	1.58
20.00	41.68	41.33	1066.84	110.615	159.596	279.007	1.2	1.579
20.50	42.74	42.39	1059.98	113.954	161.392	279.201	1.205	1.578
21.00	43.79	43.43	1053.09	117.342	163.176	279.376	1.211	1.577
21.50	44.81	44.46	1046.15	120.779	164.947	279.531	1.216	1.577
22.00	45.82	45.47	1039.17	124.268	166.708	279.666	1.221	1.576
22.50	46.81	46.46	1032.12	127.81	168.459	279.782	1.227	1.575
23.00	47.78	47.44	1025.01	131.408	170.202	279.879	1.232	1.574
23.50	48.74	48.4	1017.81	135.065	171.937	279.956	1.237	1.573
24.00	49.69	49.34	1010.52	138.783	173.665	280.014	1.243	1.572
24.50	50.62	50.28	1003.12	142.564	175.388	280.053	1.248	1.571
25.00	51.53	51.19	995.6	146.413	177.105	280.073	1.253	1.57
25.50	52.43	52.1	987.94	150.331	178.82	280.073	1.258	1.569
26.00	53.32	52.99	980.12	154.323	180.531	280.052	1.263	1.568
26.50	54.2	53.87	972.12	158.392	182.241	280.012	1.268	1.567
27.00	55.07	54.74	963.9	162.542	183.95	279.952	1.273	1.566
27.50	55.92	55.6	955.45	166.777	185.66	279.87	1.278	1.565
28.00	56.76	56.44	946.73	171.103	187.371	279.767	1.283	1.564
28.50	57.59	57.28	937.68	175.525	189.085	279.643	1.288	1.562
29.00	58.41	58.1	928.25	180.048	190.803	279.495	1.293	1.561
29.50	59.22	58.91	918.36	184.678	192.526	279.325	1.298	1.56
30.00	60.02	59.72	907.94	189.423	194.255	279.13	1.303	1.558

Standard state: At 0 C, Liquid Enthalpy = 100kJ/kg, Liquid Entropy = 1 kJ/kg.K

ARCTON 402A

Superheated Vapour Properties

Arcton 402A - Superheated Vapour Properties

Temp °C	1 bara Dew Point -48.57°C			1.5 bara Dew Point -39.73°C			2 bara Dew Point -32.97°C		
	Density kg/m³	Enthalpy kJ/kg	Entropy kJ/kg.K	Density kg/m³	Enthalpy kJ/kg	Entropy kJ/kg.K	Density kg/m³	Enthalpy kJ/kg	Entropy kJ/kg.K
-48	5.6	236.479	1.633						
-46	5.547	237.818	1.639						
-44	5.494	239.164	1.645						
-42	5.442	240.518	1.651						
-40	5.392	241.879	1.657						
-38	5.342	243.247	1.662	8.133	242.472	1.627			
-36	5.294	244.622	1.668	8.056	243.858	1.633			
-34	5.246	246.004	1.674	7.981	245.25	1.639			
-32	5.199	247.393	1.68	7.907	246.65	1.645	10.695	245.886	1.619
-30	5.153	248.79	1.686	7.834	248.056	1.65	10.592	247.303	1.625
-28	5.108	250.194	1.691	7.763	249.47	1.656	10.492	248.727	1.631
-26	5.064	251.605	1.697	7.693	250.89	1.662	10.394	250.157	1.636
-24	5.02	253.024	1.703	7.625	252.318	1.668	10.298	251.595	1.642
-22	4.977	254.449	1.708	7.558	253.752	1.673	10.204	253.039	1.648
-20	4.936	255.882	1.714	7.492	255.194	1.679	10.112	254.49	1.654
-18	4.894	257.323	1.72	7.427	256.643	1.685	10.022	255.948	1.659
-16	4.854	258.77	1.725	7.363	258.099	1.691	9.933	257.413	1.665
-14	4.814	260.225	1.731	7.301	259.562	1.696	9.846	258.885	1.671
-12	4.775	261.687	1.737	7.24	261.032	1.702	9.761	260.364	1.677
-10	4.736	263.156	1.742	7.18	262.509	1.707	9.677	261.849	1.682
-8	4.699	264.633	1.748	7.121	263.994	1.713	9.595	263.342	1.688
-6	4.661	266.117	1.753	7.063	265.485	1.719	9.514	264.842	1.694
-4	4.625	267.608	1.759	7.005	266.984	1.724	9.435	266.348	1.699
-2	4.589	269.106	1.765	6.949	268.49	1.73	9.357	267.862	1.705
0	4.553	270.612	1.77	6.894	270.003	1.735	9.281	269.383	1.71
2	4.518	272.125	1.776	6.84	271.523	1.741	9.206	270.91	1.716
4	4.484	273.646	1.781	6.787	273.05	1.746	9.132	272.445	1.721
6	4.45	275.173	1.787	6.734	274.585	1.752	9.06	273.987	1.727
8	4.417	276.708	1.792	6.682	276.127	1.758	8.988	275.535	1.733
10	4.384	278.251	1.798	6.632	277.675	1.763	8.918	277.091	1.738
12	4.352	279.801	1.803	6.582	279.232	1.768	8.849	278.654	1.744
14	4.32	281.358	1.808	6.532	280.795	1.774	8.781	280.224	1.749
16	4.289	282.922	1.814	6.484	282.366	1.779	8.715	281.802	1.755
18	4.258	284.494	1.819	6.436	283.944	1.785	8.649	283.386	1.76
20	4.228	286.073	1.825	6.389	285.529	1.79	8.585	284.977	1.765
22	4.198	287.659	1.83	6.343	287.121	1.796	8.521	286.576	1.771
24	4.168	289.253	1.835	6.298	288.721	1.801	8.458	288.182	1.776
26	4.139	290.854	1.841	6.253	290.328	1.806	8.397	289.795	1.782
28	4.111	292.463	1.846	6.209	291.942	1.812	8.336	291.415	1.787
30	4.082	294.078	1.852	6.165	293.563	1.817	8.277	293.042	1.792
32	4.055	295.702	1.857	6.122	295.192	1.823	8.218	294.676	1.798
34	4.027	297.332	1.862	6.08	296.828	1.828	8.16	296.318	1.803
36	4	298.97	1.868	6.038	298.471	1.833	8.103	297.967	1.809
38	3.973	300.616	1.873	5.997	300.122	1.839	8.046	299.622	1.814
40	3.947	302.268	1.878	5.957	301.78	1.844	7.991	301.286	1.819
42	3.921	303.928	1.883	5.917	303.445	1.849	7.936	302.956	1.825
44	3.895	305.596	1.889	5.877	305.117	1.854	7.883	304.634	1.83
46	3.87	307.271	1.894	5.838	306.797	1.86	7.83	306.319	1.835
48	3.845	308.953	1.899	5.8	308.484	1.865	7.777	308.011	1.84
50	3.821	310.642	1.904	5.762	310.178	1.87	7.726	309.71	1.846
52	3.796	312.34	1.91	5.725	311.88	1.876	7.675	311.417	1.851
54	3.772	314.044	1.915	5.688	313.589	1.881	7.625	313.13	1.856
56	3.749	315.756	1.92	5.652	315.306	1.886	7.575	314.851	1.861
58	3.725	317.475	1.925	5.616	317.029	1.891	7.526	316.58	1.867
60	3.702	319.202	1.931	5.581	318.76	1.896	7.478	318.315	1.872
62	3.679	320.936	1.936	5.546	320.499	1.902	7.431	320.058	1.877

Standard state: At 0 C, Liquid Enthalpy = 100kJ/kg, Liquid Entropy = 1 kJ/kg.K

Arcton 402A - Superheated Vapour Properties

Table 2 Sheet 2

Temp °C	2.5 bara Dew Point -27.41°C			3 bara Dew Point -22.66°C			3.5 bara Dew Point -18.48°C		
	Density kg/m³	Enthalpy kJ/kg	Entropy kJ/kg.K	Density kg/m³	Enthalpy kJ/kg	Entropy kJ/kg.K	Density kg/m³	Enthalpy kJ/kg	Entropy kJ/kg.K
-26	13.173	249.405	1.616						
-24	13.047	250.853	1.622						
-22	12.923	252.308	1.628	15.719	251.558	1.611			
-20	12.802	253.769	1.634	15.566	253.031	1.617			
-18	12.683	255.237	1.639	15.416	254.509	1.622	18.226	253.762	1.608
-16	12.567	256.712	1.645	15.27	255.994	1.628	18.046	255.259	1.614
-14	12.453	258.193	1.651	15.126	257.486	1.634	17.871	256.761	1.62
-12	12.342	259.681	1.657	14.986	258.983	1.64	17.699	258.27	1.625
-10	12.232	261.176	1.662	14.849	260.488	1.646	17.531	259.784	1.631
-8	12.125	262.677	1.668	14.714	261.999	1.651	17.367	261.305	1.637
-6	12.02	264.186	1.674	14.583	263.516	1.657	17.206	262.833	1.643
-4	11.917	265.701	1.679	14.453	265.04	1.663	17.049	264.366	1.648
-2	11.816	267.223	1.685	14.327	266.571	1.668	16.894	265.906	1.654
0	11.716	268.751	1.69	14.203	268.108	1.674	16.743	267.452	1.66
2	11.619	270.287	1.696	14.081	269.652	1.68	16.596	269.005	1.665
4	11.523	271.829	1.702	13.962	271.203	1.685	16.451	270.565	1.671
6	11.429	273.379	1.707	13.844	272.76	1.691	16.308	272.13	1.677
8	11.337	274.935	1.713	13.729	274.324	1.696	16.169	273.703	1.682
10	11.246	276.498	1.718	13.616	275.895	1.702	16.032	275.282	1.688
12	11.157	278.068	1.724	13.506	277.473	1.708	15.898	276.867	1.693
14	11.069	279.645	1.729	13.397	279.057	1.713	15.767	278.46	1.699
16	10.983	281.229	1.735	13.29	280.648	1.719	15.638	280.058	1.705
18	10.898	282.82	1.74	13.185	282.246	1.724	15.511	281.664	1.71
20	10.815	284.418	1.746	13.081	283.851	1.73	15.386	283.276	1.716
22	10.733	286.023	1.751	12.98	285.463	1.735	15.264	284.895	1.721
24	10.652	287.636	1.757	12.88	287.082	1.741	15.144	286.521	1.727
26	10.573	289.255	1.762	12.782	288.708	1.746	15.026	288.153	1.732
28	10.495	290.881	1.768	12.686	290.34	1.751	14.91	289.792	1.738
30	10.418	292.514	1.773	12.591	291.98	1.757	14.796	291.438	1.743
32	10.342	294.154	1.778	12.497	293.626	1.762	14.683	293.091	1.748
34	10.268	295.802	1.784	12.405	295.28	1.768	14.573	294.751	1.754
36	10.195	297.456	1.789	12.315	296.94	1.773	14.465	296.418	1.759
38	10.122	299.118	1.795	12.226	298.607	1.778	14.358	298.091	1.765
40	10.051	300.787	1.8	12.138	300.282	1.784	14.253	299.771	1.77
42	9.981	302.462	1.805	12.052	301.963	1.789	14.15	301.459	1.775
44	9.912	304.145	1.811	11.967	303.652	1.795	14.048	303.153	1.781
46	9.844	305.835	1.816	11.884	305.347	1.8	13.948	304.854	1.786
48	9.777	307.533	1.821	11.801	307.05	1.805	13.85	306.562	1.791
50	9.711	309.237	1.826	11.72	308.76	1.81	13.753	308.277	1.797
52	9.646	310.949	1.832	11.64	310.476	1.816	13.657	309.999	1.802
54	9.582	312.667	1.837	11.561	312.2	1.821	13.563	311.728	1.807
56	9.519	314.393	1.842	11.484	313.931	1.826	13.47	313.465	1.813
58	9.457	316.126	1.847	11.407	315.669	1.832	13.379	315.208	1.818
60	9.395	317.867	1.853	11.332	317.414	1.837	13.289	316.958	1.823
62	9.334	319.614	1.858	11.257	319.167	1.842	13.2	318.715	1.829
64	9.275	321.369	1.863	11.184	320.926	1.847	13.113	320.479	1.834
66	9.215	323.131	1.868	11.112	322.693	1.853	13.027	322.251	1.839
68	9.157	324.901	1.874	11.041	324.468	1.858	12.942	324.03	1.844
70	9.1	326.679	1.879	10.97	326.25	1.863	12.858	325.817	1.849
72	9.043	328.463	1.884	10.901	328.039	1.868	12.776	327.611	1.855
74	8.987	330.255	1.889	10.832	329.835	1.873	12.694	329.412	1.86
76	8.932	332.055	1.894	10.765	331.639	1.879	12.614	331.221	1.865
78	8.877	333.861	1.899	10.698	333.45	1.884	12.535	333.036	1.87
80	8.824	335.675	1.905	10.633	335.268	1.889	12.457	334.858	1.875
82	8.771	337.495	1.91	10.568	337.093	1.894	12.38	336.688	1.881
84	8.718	339.324	1.915	10.504	338.925	1.899	12.304	338.524	1.886

Standard state: At 0 C, Liquid Enthalpy = 100kJ/kg, Liquid Entropy = 1 kJ/kg.K

Arcton 402A - Superheated Vapour Properties

Temp °C	4 bara Dew Point -14.74°C			4.5 bara Dew Point -11.34°C			5 bara Dew Point -8.21°C		
	Density kg/m³	Enthalpy kJ/kg	Entropy kJ/kg.K	Density kg/m³	Enthalpy kJ/kg	Entropy kJ/kg.K	Density kg/m³	Enthalpy kJ/kg	Entropy kJ/kg.K
-14	20.691	256.018	1.607						
-12	20.485	257.538	1.612						
-10	20.283	259.064	1.618	23.112	258.326	1.607			
-8	20.087	260.596	1.624	22.879	259.869	1.613	25.749	259.124	1.602
-6	19.894	262.134	1.63	22.652	261.418	1.618	25.484	260.686	1.608
-4	19.706	263.678	1.636	22.43	262.973	1.624	25.225	262.253	1.614
-2	19.522	265.227	1.641	22.213	264.534	1.63	24.973	263.825	1.62
0	19.342	266.784	1.647	22.001	266.101	1.636	24.726	265.402	1.625
2	19.165	268.346	1.653	21.794	267.673	1.641	24.486	266.986	1.631
4	18.993	269.914	1.658	21.592	269.251	1.647	24.251	268.574	1.637
6	18.824	271.489	1.664	21.394	270.836	1.653	24.021	270.169	1.643
8	18.658	273.07	1.67	21.2	272.426	1.659	23.797	271.769	1.648
10	18.496	274.658	1.675	21.01	274.023	1.664	23.577	273.376	1.654
12	18.337	276.252	1.681	20.824	275.625	1.67	23.363	274.988	1.66
14	18.181	277.852	1.687	20.642	277.234	1.675	23.152	276.606	1.665
16	18.028	279.459	1.692	20.464	278.85	1.681	22.947	278.23	1.671
18	17.878	281.072	1.698	20.289	280.471	1.687	22.745	279.86	1.677
20	17.731	282.692	1.703	20.117	282.099	1.692	22.548	281.496	1.682
22	17.586	284.318	1.709	19.949	283.733	1.698	22.354	283.139	1.688
24	17.445	285.951	1.714	19.784	285.374	1.703	22.165	284.787	1.693
26	17.305	287.591	1.72	19.623	287.021	1.709	21.979	286.442	1.699
28	17.169	289.237	1.725	19.464	288.674	1.714	21.797	288.103	1.704
30	17.034	290.89	1.731	19.308	290.334	1.72	21.618	289.771	1.71
32	16.902	292.55	1.736	19.155	292.001	1.725	21.443	291.445	1.715
34	16.773	294.216	1.742	19.005	293.674	1.731	21.271	293.125	1.721
36	16.645	295.889	1.747	18.857	295.354	1.736	21.102	294.812	1.726
38	16.52	297.569	1.753	18.712	297.04	1.742	20.936	296.505	1.732
40	16.396	299.255	1.758	18.569	298.733	1.747	20.773	298.204	1.737
42	16.275	300.949	1.763	18.429	300.433	1.753	20.613	299.911	1.743
44	16.156	302.649	1.769	18.291	302.139	1.758	20.456	301.623	1.748
46	16.039	304.356	1.774	18.156	303.852	1.763	20.301	303.342	1.754
48	15.923	306.07	1.779	18.023	305.572	1.769	20.149	305.068	1.759
50	15.81	307.79	1.785	17.892	307.298	1.774	20	306.801	1.764
52	15.698	309.518	1.79	17.763	309.031	1.779	19.853	308.54	1.77
54	15.588	311.252	1.795	17.636	310.771	1.785	19.709	310.286	1.775
56	15.479	312.994	1.801	17.511	312.518	1.79	19.567	312.038	1.78
58	15.373	314.742	1.806	17.388	314.272	1.795	19.427	313.798	1.786
60	15.267	316.497	1.811	17.267	316.033	1.801	19.289	315.564	1.791
62	15.164	318.26	1.817	17.148	317.8	1.806	19.154	317.336	1.796
64	15.062	320.029	1.822	17.031	319.574	1.811	19.021	319.116	1.802
66	14.961	321.805	1.827	16.915	321.356	1.817	18.89	320.902	1.807
68	14.862	323.59	1.832	16.802	323.146	1.822	18.761	322.698	1.812
70	14.765	325.382	1.838	16.69	324.942	1.827	18.633	324.5	1.818
72	14.668	327.18	1.843	16.579	326.746	1.832	18.508	326.309	1.823
74	14.574	328.986	1.848	16.47	328.557	1.838	18.385	328.124	1.828
76	14.48	330.799	1.853	16.363	330.374	1.843	18.263	329.947	1.833
78	14.388	332.619	1.858	16.257	332.199	1.848	18.144	331.776	1.838
80	14.297	334.446	1.864	16.153	334.03	1.853	18.025	333.612	1.844
82	14.207	336.28	1.869	16.05	335.869	1.858	17.909	335.455	1.849
84	14.119	338.121	1.874	15.949	337.714	1.864	17.795	337.305	1.854
86	14.031	339.969	1.879	15.849	339.567	1.869	17.681	339.162	1.859
88	13.945	341.824	1.884	15.75	341.426	1.874	17.57	341.026	1.864
90	13.86	343.686	1.889	15.653	343.293	1.879	17.46	342.897	1.87
92	13.776	345.555	1.895	15.557	345.166	1.884	17.352	344.775	1.875
94	13.694	347.432	1.9	15.462	347.047	1.889	17.245	346.66	1.88
96	13.612	349.316	1.905	15.369	348.935	1.894	17.139	348.551	1.885

Standard state: At 0 C, Liquid Enthalpy = 100kJ/kg, Liquid Entropy = 1 kJ/kg.K

Arcton 402A - Superheated Vapour Properties

Temp °C	5.5 bara Dew Point -5.31°C			6 bara Dew Point -2.60°C			7 bara Dew Point 2.34°C		
	Density kg/m³	Enthalpy kJ/kg	Entropy kJ/kg.K	Density kg/m³	Enthalpy kJ/kg	Entropy kJ/kg.K	Density kg/m³	Enthalpy kJ/kg	Entropy kJ/kg.K
-4	28.097	261.514	1.604						
-2	27.806	263.098	1.61	30.718	262.354	1.601			
0	27.521	264.688	1.616	30.392	263.957	1.607			
2	27.244	266.283	1.622	30.075	265.564	1.613			
4	26.974	267.883	1.627	29.766	267.176	1.618	35.575	265.71	1.602
6	26.71	269.488	1.633	29.465	268.793	1.624	35.188	267.354	1.608
8	26.453	271.099	1.639	29.171	270.415	1.63	34.813	269.001	1.614
10	26.201	272.716	1.645	28.884	272.043	1.636	34.447	270.652	1.62
12	25.955	274.338	1.65	28.605	273.675	1.642	34.091	272.308	1.626
14	25.715	275.966	1.656	28.332	275.313	1.647	33.744	273.969	1.631
16	25.479	277.599	1.662	28.065	276.957	1.653	33.406	275.634	1.637
18	25.249	279.238	1.667	27.804	278.606	1.659	33.077	277.305	1.643
20	25.024	280.884	1.673	27.549	280.26	1.664	32.755	278.98	1.649
22	24.804	282.535	1.679	27.3	281.92	1.67	32.442	280.66	1.654
24	24.588	284.192	1.684	27.056	283.586	1.676	32.136	282.345	1.66
26	24.377	285.855	1.69	26.817	285.258	1.681	31.836	284.035	1.666
28	24.17	287.524	1.695	26.584	286.936	1.687	31.544	285.731	1.671
30	23.967	289.199	1.701	26.355	288.619	1.692	31.258	287.432	1.677
32	23.767	290.881	1.706	26.131	290.309	1.698	30.979	289.139	1.683
34	23.572	292.568	1.712	25.911	292.004	1.703	30.705	290.851	1.688
36	23.381	294.262	1.717	25.695	293.706	1.709	30.438	292.569	1.694
38	23.193	295.963	1.723	25.484	295.413	1.714	30.176	294.293	1.699
40	23.008	297.669	1.728	25.277	297.127	1.72	29.919	296.022	1.705
42	22.827	299.382	1.734	25.074	298.847	1.725	29.668	297.757	1.71
44	22.65	301.101	1.739	24.874	300.574	1.731	29.421	299.498	1.716
46	22.475	302.827	1.745	24.679	302.306	1.736	29.18	301.245	1.721
48	22.304	304.56	1.75	24.487	304.045	1.742	28.943	302.998	1.727
50	22.135	306.298	1.755	24.298	305.79	1.747	28.711	304.757	1.732
52	21.969	308.044	1.761	24.113	307.542	1.753	28.483	306.521	1.738
54	21.807	309.795	1.766	23.93	309.3	1.758	28.259	308.293	1.743
56	21.647	311.554	1.772	23.752	311.064	1.763	28.04	310.07	1.749
58	21.489	313.319	1.777	23.576	312.835	1.769	27.824	311.853	1.754
60	21.334	315.09	1.782	23.403	314.613	1.774	27.613	313.643	1.759
62	21.182	316.869	1.788	23.233	316.397	1.779	27.405	315.439	1.765
64	21.032	318.654	1.793	23.066	318.187	1.785	27.201	317.241	1.77
66	20.885	320.445	1.798	22.901	319.984	1.79	27	319.05	1.775
68	20.74	322.246	1.803	22.739	321.791	1.795	26.803	320.868	1.781
70	20.597	324.053	1.809	22.58	323.603	1.801	26.609	322.692	1.786
72	20.456	325.867	1.814	22.424	325.423	1.806	26.419	324.522	1.792
74	20.318	327.688	1.819	22.27	327.249	1.811	26.231	326.359	1.797
76	20.181	329.516	1.825	22.118	329.082	1.817	26.047	328.203	1.802
78	20.047	331.35	1.83	21.968	330.921	1.822	25.865	330.053	1.807
80	19.915	333.191	1.835	21.821	332.767	1.827	25.687	331.909	1.813
82	19.784	335.039	1.84	21.676	334.62	1.832	25.511	333.772	1.818
84	19.656	336.894	1.845	21.534	336.479	1.838	25.339	335.641	1.823
86	19.529	338.755	1.851	21.393	338.345	1.843	25.168	337.517	1.828
88	19.405	340.624	1.856	21.254	340.218	1.848	25.001	339.4	1.834
90	19.282	342.499	1.861	21.118	342.098	1.853	24.836	341.289	1.839
92	19.16	344.381	1.866	20.983	343.985	1.858	24.673	343.185	1.844
94	19.041	346.27	1.871	20.851	345.878	1.863	24.513	345.087	1.849
96	18.923	348.166	1.877	20.72	347.779	1.869	24.355	346.996	1.854
98	18.806	350.069	1.882	20.591	349.685	1.874	24.2	348.912	1.86
100	18.692	351.979	1.887	20.464	351.599	1.879	24.047	350.834	1.865
102	18.578	353.895	1.892	20.338	353.52	1.884	23.896	352.764	1.87
104	18.467	355.819	1.897	20.215	355.448	1.889	23.747	354.7	1.875
106	18.357	357.75	1.902	20.092	357.383	1.894	23.6	356.642	1.88

Standard state: At 0 C, Liquid Enthalpy = 100kJ/kg, Liquid Entropy = 1 kJ/kg.K

Arcton 402A - Superheated Vapour Properties

Temp °C	8 bara Dew Point 6.77°C			10 bara Dew Point 14.53°C			12 bara Dew Point 21.20°C		
	Density kg/m³	Enthalpy kJ/kg	Entropy kJ/kg.K	Density kg/m³	Enthalpy kJ/kg	Entropy kJ/kg.K	Density kg/m³	Enthalpy kJ/kg	Entropy kJ/kg.K
8	40.762	267.517	1.599						
10	40.301	269.197	1.605						
12	39.855	270.88	1.611						
14	39.421	272.566	1.617						
16	39	274.257	1.623	51.09	271.303	1.597			
18	38.59	275.951	1.629	50.472	273.057	1.603			
20	38.191	277.649	1.634	49.873	274.812	1.609			
22	37.802	279.352	1.64	49.294	276.569	1.615	62.077	273.508	1.592
24	37.424	281.059	1.646	48.734	278.329	1.621	61.258	275.338	1.599
26	37.055	282.77	1.652	48.19	280.09	1.627	60.469	277.167	1.605
28	36.696	284.486	1.657	47.663	281.855	1.633	59.71	278.995	1.611
30	36.345	286.207	1.663	47.151	283.622	1.639	58.978	280.823	1.617
32	36.003	287.933	1.669	46.653	285.393	1.645	58.271	282.651	1.623
34	35.668	289.663	1.674	46.17	287.167	1.65	57.588	284.48	1.629
36	35.342	291.399	1.68	45.699	288.945	1.656	56.927	286.311	1.635
38	35.022	293.14	1.686	45.241	290.726	1.662	56.287	288.143	1.641
40	34.71	294.886	1.691	44.795	292.511	1.668	55.667	289.976	1.647
42	34.405	296.638	1.697	44.361	294.301	1.673	55.066	291.812	1.653
44	34.106	298.395	1.702	43.937	296.094	1.679	54.482	293.651	1.658
46	33.813	300.157	1.708	43.524	297.892	1.685	53.914	295.492	1.664
48	33.527	301.925	1.714	43.12	299.695	1.69	53.363	297.336	1.67
50	33.247	303.699	1.719	42.726	301.502	1.696	52.826	299.183	1.676
52	32.972	305.478	1.725	42.341	303.314	1.701	52.304	301.033	1.681
54	32.702	307.263	1.73	41.965	305.13	1.707	51.796	302.887	1.687
56	32.438	309.054	1.735	41.598	306.952	1.713	51.3	304.745	1.693
58	32.18	310.851	1.741	41.238	308.779	1.718	50.817	306.606	1.698
60	31.926	312.653	1.746	40.886	310.61	1.724	50.346	308.472	1.704
62	31.676	314.462	1.752	40.542	312.447	1.729	49.886	310.342	1.71
64	31.432	316.277	1.757	40.204	314.29	1.735	49.437	312.216	1.715
66	31.192	318.098	1.763	39.874	316.137	1.74	48.999	314.095	1.721
68	30.956	319.928	1.768	39.551	317.995	1.746	48.57	315.983	1.726
70	30.724	321.764	1.773	39.234	319.858	1.751	48.151	317.876	1.732
72	30.497	323.607	1.779	38.923	321.726	1.756	47.741	319.773	1.737
74	30.274	325.455	1.784	38.618	323.6	1.762	47.341	321.676	1.743
76	30.054	327.31	1.789	38.319	325.479	1.767	46.948	323.583	1.748
78	29.838	329.171	1.795	38.026	327.364	1.773	46.565	325.495	1.754
80	29.626	331.038	1.8	37.738	329.255	1.778	46.188	327.411	1.759
82	29.418	332.912	1.805	37.456	331.151	1.783	45.82	329.334	1.765
84	29.212	334.791	1.811	37.178	333.053	1.789	45.459	331.261	1.77
86	29.01	336.677	1.816	36.906	334.961	1.794	45.105	333.193	1.775
88	28.812	338.57	1.821	36.638	336.876	1.799	44.758	335.131	1.781
90	28.616	340.469	1.826	36.376	338.796	1.805	44.418	337.074	1.786
92	28.424	342.374	1.832	36.117	340.722	1.81	44.084	339.023	1.792
94	28.235	344.286	1.837	35.863	342.654	1.815	43.756	340.977	1.797
96	28.048	346.205	1.842	35.614	344.592	1.82	43.434	342.937	1.802
98	27.865	348.129	1.847	35.368	346.536	1.826	43.118	344.901	1.808
100	27.684	350.061	1.852	35.126	348.486	1.831	42.808	346.872	1.813
102	27.506	351.999	1.858	34.889	350.442	1.836	42.503	348.849	1.818
104	27.33	353.943	1.863	34.655	352.405	1.841	42.204	350.831	1.823
106	27.157	355.894	1.868	34.425	354.374	1.847	41.909	352.819	1.829
108	26.987	357.852	1.873	34.198	356.349	1.852	41.62	354.814	1.834
110	26.819	359.817	1.878	33.975	358.331	1.857	41.335	356.814	1.839
112	26.653	361.788	1.883	33.756	360.319	1.862	41.055	358.82	1.844
114	26.49	363.766	1.888	33.539	362.314	1.867	40.78	360.832	1.85
116	26.329	365.751	1.894	33.326	364.315	1.873	40.509	362.851	1.855

Standard state: At 0 C, Liquid Enthalpy = 100kJ/kg, Liquid Entropy = 1 kJ/kg.K

Arcton 402A - Superheated Vapour Properties

Temp °C	14 bara Dew Point 27.09°C			16 bara Dew Point 32.40°C			18 bara Dew Point 27.23°C		
	Density kg/m³	Enthalpy kJ/kg	Entropy kJ/kg.K	Density kg/m³	Enthalpy kJ/kg	Entropy kJ/kg.K	Density kg/m³	Enthalpy kJ/kg	Entropy kJ/kg.K
28	73.185	275.833	1.59						
30	72.138	277.744	1.597						
32	71.136	279.649	1.603						
34	70.175	281.551	1.609	84.319	278.3	1.59			
36	69.252	283.45	1.615	83.019	280.294	1.597			
38	68.365	285.348	1.621	81.781	282.279	1.603	97.027	278.837	1.585
40	67.511	287.243	1.628	80.601	284.257	1.609	95.362	280.933	1.591
42	66.688	289.138	1.634	79.472	286.229	1.616	93.79	283.012	1.598
44	65.894	291.032	1.64	78.392	288.196	1.622	92.302	285.078	1.605
46	65.126	292.927	1.646	77.355	290.159	1.628	90.889	287.133	1.611
48	64.384	294.822	1.651	76.36	292.119	1.634	89.545	289.178	1.617
50	63.665	296.718	1.657	75.402	294.076	1.64	88.263	291.215	1.624
52	62.969	298.615	1.663	74.479	296.032	1.646	87.037	293.245	1.63
54	62.294	300.514	1.669	73.59	297.986	1.652	85.864	295.269	1.636
56	61.638	302.415	1.675	72.731	299.94	1.658	84.738	297.289	1.642
58	61.002	304.318	1.681	71.9	301.893	1.664	83.657	299.305	1.649
60	60.383	306.224	1.686	71.097	303.847	1.67	82.617	301.318	1.655
62	59.782	308.132	1.692	70.319	305.801	1.676	81.615	303.328	1.661
64	59.196	310.043	1.698	69.564	307.757	1.682	80.648	305.337	1.667
66	58.626	311.958	1.703	68.833	309.714	1.688	79.715	307.344	1.673
68	58.071	313.882	1.709	68.123	311.68	1.693	78.814	309.36	1.678
70	57.529	315.81	1.715	67.433	313.647	1.699	77.941	311.375	1.684
72	57.002	317.741	1.72	66.762	315.617	1.705	77.097	313.389	1.69
74	56.487	319.675	1.726	66.11	317.589	1.71	76.278	315.404	1.696
76	55.984	321.614	1.731	65.476	319.563	1.716	75.485	317.42	1.702
78	55.493	323.556	1.737	64.857	321.54	1.722	74.714	319.437	1.708
80	55.013	325.502	1.743	64.255	323.52	1.727	73.966	321.455	1.713
82	54.544	327.453	1.748	63.668	325.503	1.733	73.238	323.475	1.719
84	54.086	329.408	1.754	63.095	327.489	1.739	72.531	325.497	1.725
86	53.637	331.367	1.759	62.536	329.479	1.744	71.842	327.521	1.73
88	53.198	333.332	1.765	61.99	331.473	1.75	71.171	329.548	1.736
90	52.768	335.3	1.77	61.457	333.47	1.755	70.517	331.577	1.742
92	52.348	337.274	1.775	60.936	335.471	1.761	69.88	333.609	1.747
94	51.935	339.252	1.781	60.426	337.476	1.766	69.258	335.644	1.753
96	51.531	341.236	1.786	59.928	339.486	1.772	68.651	337.683	1.758
98	51.135	343.224	1.792	59.44	341.499	1.777	68.059	339.724	1.764
100	50.747	345.217	1.797	58.963	343.517	1.783	67.48	341.769	1.769
102	50.366	347.215	1.802	58.496	345.539	1.788	66.914	343.818	1.775
104	49.992	349.219	1.808	58.038	347.566	1.793	66.361	345.87	1.78
106	49.625	351.228	1.813	57.589	349.598	1.799	65.82	347.927	1.786
108	49.265	353.243	1.818	57.15	351.635	1.804	65.291	349.988	1.791
110	48.912	355.263	1.824	56.719	353.677	1.809	64.772	352.053	1.797
112	48.564	357.289	1.829	56.296	355.724	1.815	64.265	354.123	1.802
114	48.223	359.32	1.834	55.881	357.776	1.82	63.767	356.197	1.807
116	47.888	361.357	1.839	55.474	359.833	1.825	63.28	358.276	1.813
118	47.558	363.4	1.845	55.074	361.895	1.831	62.803	360.36	1.818
120	47.234	365.449	1.85	54.682	363.963	1.836	62.334	362.448	1.823
122	46.916	367.503	1.855	54.297	366.036	1.841	61.875	364.541	1.829
124	46.602	369.564	1.86	53.918	368.115	1.846	61.424	366.64	1.834
126	46.294	371.63	1.865	53.546	370.2	1.852	60.982	368.743	1.839
128	45.991	373.702	1.871	53.181	372.289	1.857	60.548	370.852	1.845
130	45.692	375.781	1.876	52.821	374.385	1.862	60.122	372.966	1.85
132	45.399	377.866	1.881	52.468	376.487	1.867	59.703	375.085	1.855
134	45.11	379.956	1.886	52.12	378.594	1.873	59.292	377.21	1.86
136	44.825	382.053	1.891	51.779	380.707	1.878	58.887	379.34	1.866

Standard state: At 0 C, Liquid Enthalpy = 100kJ/kg, Liquid Entropy = 1 kJ/kg.K

Arcton 402A - Superheated Vapour Properties

Temp °C	20 bara			22 bara			24 bara		
	Dew Point 41.68°C			Dew Point 45.82°C			Dew Point 49.69°C		
	Density kg/m³	Enthalpy kJ/kg	Entropy kJ/kg.K	Density kg/m³	Enthalpy kJ/kg	Entropy kJ/kg.K	Density kg/m³	Enthalpy kJ/kg	Entropy kJ/kg.K
42	110.264	279.362	1.58						
44	108.153	281.573	1.587						
46	106.18	283.758	1.594	124.014	279.882	1.576			
48	104.328	285.922	1.601	121.361	282.226	1.584			
50	102.584	288.068	1.608	118.911	284.531	1.591	138.233	280.412	1.573
52	100.936	290.198	1.614	116.634	286.803	1.598	134.929	282.908	1.581
54	99.373	292.315	1.621	114.508	289.048	1.605	131.918	285.345	1.589
56	97.887	294.42	1.627	112.513	291.269	1.612	129.152	287.736	1.596
58	96.472	296.515	1.633	110.635	293.471	1.618	126.593	290.088	1.603
60	95.12	298.603	1.64	108.86	295.656	1.625	124.211	292.407	1.61
62	93.828	300.683	1.646	107.177	297.826	1.631	121.983	294.698	1.617
64	92.589	302.757	1.652	105.578	299.984	1.638	119.891	296.966	1.624
66	91.4	304.827	1.658	104.056	302.131	1.644	117.919	299.214	1.63
68	90.257	306.902	1.664	102.602	304.28	1.651	116.054	301.457	1.637
70	89.157	308.973	1.67	101.212	306.42	1.657	114.286	303.684	1.643
72	88.097	311.042	1.676	99.881	308.554	1.663	112.605	305.898	1.65
74	87.074	313.108	1.682	98.603	310.681	1.669	111.004	308.1	1.656
76	86.087	315.173	1.688	97.376	312.804	1.675	109.474	310.292	1.663
78	85.132	317.236	1.694	96.195	314.921	1.681	108.011	312.476	1.669
80	84.207	319.298	1.7	95.056	317.036	1.687	106.609	314.652	1.675
82	83.312	321.361	1.706	93.958	319.148	1.693	105.263	316.822	1.681
84	82.444	323.423	1.712	92.898	321.257	1.699	103.969	318.986	1.687
86	81.602	325.486	1.717	91.873	323.365	1.705	102.723	321.146	1.693
88	80.784	327.55	1.723	90.881	325.472	1.711	101.523	323.303	1.699
90	79.989	329.616	1.729	89.92	327.578	1.717	100.364	325.456	1.705
92	79.217	331.682	1.735	88.988	329.684	1.723	99.244	327.606	1.711
94	78.465	333.751	1.74	88.084	331.79	1.728	98.162	329.755	1.717
96	77.732	335.822	1.746	87.206	333.897	1.734	97.114	331.903	1.723
98	77.019	337.894	1.752	86.353	336.004	1.74	96.099	334.048	1.729
100	76.324	339.969	1.757	85.524	338.112	1.745	95.114	336.194	1.734
102	75.646	342.047	1.763	84.717	340.222	1.751	94.159	338.34	1.74
104	74.984	344.127	1.768	83.931	342.334	1.757	93.231	340.486	1.746
106	74.338	346.211	1.774	83.165	344.448	1.762	92.329	342.633	1.752
108	73.707	348.299	1.779	82.419	346.564	1.768	91.452	344.781	1.757
110	73.09	350.39	1.785	81.691	348.683	1.773	90.598	346.931	1.763
112	72.487	352.484	1.79	80.981	350.805	1.779	89.766	349.082	1.768
114	71.898	354.582	1.796	80.288	352.929	1.785	88.956	351.235	1.774
116	71.321	356.685	1.801	79.611	355.057	1.79	88.167	353.391	1.78
118	70.756	358.791	1.806	78.949	357.188	1.795	87.396	355.548	1.785
120	70.203	360.902	1.812	78.302	359.322	1.801	86.645	357.709	1.791
122	69.662	363.017	1.817	77.67	361.461	1.806	85.911	359.872	1.796
124	69.132	365.136	1.823	77.051	363.603	1.812	85.194	362.038	1.802
126	68.612	367.26	1.828	76.445	365.748	1.817	84.493	364.208	1.807
128	68.102	369.389	1.833	75.852	367.898	1.823	83.808	366.381	1.813
130	67.602	371.522	1.839	75.271	370.053	1.828	83.138	368.557	1.818
132	67.112	373.66	1.844	74.702	372.211	1.833	82.482	370.737	1.823
134	66.63	375.803	1.849	74.144	374.374	1.839	81.84	372.921	1.829
136	66.158	377.952	1.854	73.597	376.542	1.844	81.212	375.109	1.834
138	65.694	380.105	1.86	73.061	378.714	1.849	80.596	377.301	1.839
140	65.239	382.264	1.865	72.534	380.891	1.854	79.993	379.497	1.845
142	64.791	384.427	1.87	72.018	383.072	1.86	79.402	381.698	1.85
144	64.352	386.597	1.875	71.511	385.259	1.865	78.822	383.903	1.855
146	63.919	388.771	1.88	71.013	387.45	1.87	78.253	386.112	1.861
148	63.495	390.951	1.886	70.525	389.647	1.876	77.695	388.326	1.866
150	63.077	393.137	1.891	70.045	391.849	1.881	77.148	390.545	1.871

Standard state: At 0 C, Liquid Enthalpy = 100kJ/kg, Liquid Entropy = 1 kJ/kg.K

Arcton 402A - Superheated Vapour Properties

Temp °C	26 Dew Point 53.32°C			28 Dew Point 56.76°C			30 Dew Point 60.02°C		
	Density kg/m³	Enthalpy kJ/kg	Entropy kJ/kg.K	Density kg/m³	Enthalpy kJ/kg	Entropy kJ/kg.K	Density kg/m³	Enthalpy kJ/kg	Entropy kJ/kg.K
54	152.833	280.976	1.571						
56	148.76	283.642	1.579						
58	145.105	286.225	1.587	167.664	281.607	1.569			
60	141.787	288.743	1.595	162.71	284.459	1.578			
62	138.748	291.208	1.602	158.336	287.198	1.586	182.502	282.351	1.568
64	135.943	293.629	1.609	154.416	289.85	1.594	176.582	285.4	1.577
66	133.338	296.013	1.616	150.861	292.431	1.601	171.44	288.298	1.586
68	130.908	298.38	1.623	147.607	294.972	1.609	166.888	291.102	1.594
70	128.629	300.72	1.63	144.608	297.465	1.616	162.802	293.816	1.602
72	126.485	303.037	1.637	141.825	299.917	1.623	159.091	296.459	1.609
74	124.46	305.333	1.643	139.23	302.335	1.63	155.691	299.043	1.617
76	122.543	307.612	1.65	136.799	304.725	1.637	152.553	301.579	1.624
78	120.721	309.876	1.656	134.512	307.089	1.644	149.64	304.074	1.631
80	118.988	312.127	1.663	132.353	309.432	1.651	146.922	306.534	1.638
82	117.333	314.366	1.669	130.309	311.757	1.657	144.373	308.964	1.645
84	115.752	316.596	1.675	128.368	314.065	1.664	141.975	311.369	1.652
86	114.238	318.817	1.682	126.522	316.359	1.67	139.71	313.752	1.659
88	112.785	321.03	1.688	124.76	318.641	1.676	137.565	316.116	1.665
90	111.389	323.238	1.694	123.077	320.912	1.683	135.528	318.463	1.672
92	110.046	325.44	1.7	121.465	323.174	1.689	133.589	320.795	1.678
94	108.752	327.638	1.706	119.919	325.428	1.695	131.739	323.115	1.685
96	107.504	329.832	1.712	118.434	327.675	1.701	129.971	325.423	1.691
98	106.299	332.021	1.718	117.005	329.915	1.707	128.277	327.72	1.697
100	105.134	334.209	1.724	115.629	332.15	1.713	126.653	330.01	1.703
102	104.007	336.395	1.73	114.302	334.381	1.719	125.092	332.292	1.709
104	102.915	338.579	1.735	113.021	336.609	1.725	123.591	334.568	1.715
106	101.857	340.763	1.741	111.783	338.833	1.731	122.145	336.838	1.721
108	100.83	342.947	1.747	110.585	341.056	1.737	120.75	339.104	1.727
110	99.833	345.13	1.753	109.425	343.276	1.743	119.403	341.366	1.733
112	98.865	347.314	1.758	108.301	345.496	1.749	118.101	343.625	1.739
114	97.923	349.498	1.764	107.21	347.714	1.754	116.842	345.882	1.745
116	97.007	351.683	1.77	106.151	349.933	1.76	115.622	348.136	1.751
118	96.115	353.87	1.775	105.123	352.151	1.766	114.439	350.389	1.757
120	95.246	356.059	1.781	104.123	354.37	1.771	113.293	352.641	1.762
122	94.399	358.249	1.786	103.15	356.59	1.777	112.179	354.892	1.768
124	93.573	360.441	1.792	102.203	358.81	1.783	111.097	357.144	1.774
126	92.767	362.636	1.797	101.28	361.032	1.788	110.046	359.395	1.779
128	91.981	364.833	1.803	100.381	363.256	1.794	109.022	361.647	1.785
130	91.212	367.034	1.808	99.505	365.482	1.799	108.026	363.9	1.791
132	90.462	369.237	1.814	98.65	367.71	1.805	107.056	366.154	1.796
134	89.728	371.443	1.819	97.815	369.94	1.81	106.11	368.41	1.802
136	89.01	373.653	1.825	97	372.172	1.816	105.188	370.667	1.807
138	88.308	375.866	1.83	96.203	374.408	1.821	104.289	372.927	1.813
140	87.621	378.083	1.836	95.424	376.646	1.827	103.411	375.188	1.818
142	86.948	380.303	1.841	94.663	378.888	1.832	102.553	377.452	1.824
144	86.289	382.527	1.846	93.918	381.133	1.838	101.715	379.719	1.829
146	85.644	384.756	1.852	93.189	383.381	1.843	100.896	381.988	1.835
148	85.011	386.989	1.857	92.476	385.634	1.848	100.095	384.261	1.84
150	84.391	389.226	1.862	91.777	387.889	1.854	99.312	386.537	1.846
152	83.782	391.467	1.868	91.092	390.149	1.859	98.545	388.816	1.851
154	83.185	393.713	1.873	90.422	392.413	1.864	97.794	391.098	1.856
156	82.6	395.964	1.878	89.764	394.681	1.87	97.059	393.384	1.862
158	82.025	398.219	1.883	89.119	396.953	1.875	96.339	395.675	1.867
160	81.461	400.479	1.889	88.486	399.23	1.88	95.633	397.969	1.872
162	80.907	402.744	1.894	87.865	401.511	1.885	94.941	400.267	1.878

Standard state: At 0 C, Liquid Enthalpy = 100kJ/kg, Liquid Entropy = 1 kJ/kg.K

ARCTON 402A

Evaporator Inlet Temperatures

Table 3

Table of Evaporator Inlet Temperatures

- (1) Read the enthalpy value at the expansion valve along the top of the table.
- (2) Read down the table for the evaporator operating pressure.
- (3) The value in the table is the evaporator inlet temperature in °C.
- (4) The evaporator outlet temperature is the dew point temperature at the evaporator operating pressure.

Arcton 402A - Evaporator Inlet Temperatures

Table 3 Sheet 1

Pressure bara	Enthalpy in kJ/kg									
	40	50	60	70	80	90	100	110	120	130
1.0	-53.4	-49.25	-49.22	-49.19	-49.16	-49.13	-49.1	-49.07	-49.04	-49
1.2	-53.41	-45.34	-45.32	-45.29	-45.26	-45.23	-45.2	-45.17	-45.14	-45.11
1.4	-53.42	-43.63	-41.9	-41.87	-41.85	-41.82	-41.79	-41.76	-41.73	-41.7
1.6	-53.43	-43.63	-38.84	-38.82	-38.79	-38.77	-38.74	-38.71	-38.68	-38.66
1.8	-53.43	-43.64	-36.07	-36.05	-36.03	-36	-35.97	-35.95	-35.92	-35.89
2.0	-53.44	-43.65	-35	-33.51	-33.49	-33.46	-33.44	-33.41	-33.39	-33.36
2.2	-53.45	-43.65	-34.22	-31.17	-31.14	-31.12	-31.09	-31.07	-31.04	-31.02
2.4	-53.46	-43.66	-34.23	-28.98	-28.96	-28.93	-28.91	-28.88	-28.86	-28.83
2.6	-53.46	-43.67	-34.23	-26.93	-26.91	-26.86	-26.86	-26.84	-26.81	-26.79
2.8	-53.47	-43.67	-34.24	-25.16	-24.97	-24.95	-24.93	-24.91	-24.88	-24.86
3.0	-53.48	-43.68	-34.24	-25.16	-23.15	-23.13	-23.1	-23.08	-23.06	-23.03
3.2	-53.49	-43.69	-34.25	-25.17	-21.41	-21.39	-21.37	-21.35	-21.32	-21.3
3.4	-53.5	-43.69	-34.25	-25.17	-19.76	-19.74	-19.71	-19.69	-19.67	-19.65
3.6	-53.5	-43.7	-34.26	-25.17	-18.18	-18.15	-18.13	-18.11	-18.09	-18.07
3.8	-53.51	-43.71	-34.26	-25.18	-16.66	-16.64	-16.62	-16.6	-16.58	-16.55
4.0	-53.52	-43.71	-34.27	-25.18	-16.44	-15.18	-15.16	-15.14	-15.12	-15.1
4.2	-53.53	-43.72	-34.28	-25.19	-16.45	-13.78	-13.76	-13.74	-13.72	-13.7
4.4	-53.53	-43.73	-34.28	-25.19	-16.45	-12.43	-12.41	-12.39	-12.37	-12.35
4.6	-53.54	-43.73	-34.29	-25.19	-16.45	-11.13	-11.11	-11.09	-11.07	-11.04
4.8	-53.55	-43.74	-34.29	-25.2	-16.45	-9.87	-9.85	-9.83	-9.8	-9.76
5.0	-53.56	-43.75	-34.3	-25.2	-16.45	-8.64	-8.62	-8.6	-8.58	-8.56
5.2	-53.57	-43.75	-34.3	-25.21	-16.46	-8.15	-7.44	-7.42	-7.4	-7.38
5.4	-53.57	-43.76	-34.31	-25.21	-16.46	-8.06	-6.28	-6.26	-6.24	-6.22
5.6	-53.58	-43.77	-34.31	-25.21	-16.46	-8.06	-5.16	-5.15	-5.12	-5.1

Standard state: At 0 C, Liquid Enthalpy = 100kJ/kg, Liquid Entropy = 1 kJ/kg.K

Arcton 402A - Evaporator Inlet Temperatures

Table 3 Sheet 2

Pressure bara	Enthalpy in kJ/kg							
	140	150	160	170	180	190	200	210
1.0	-48.97	-48.94	-48.9	-48.86	-48.62	-48.78	-48.74	-48.7
1.2	-45.08	-45.05	-45.01	-44.98	-44.94	-44.9	-44.86	-44.82
1.4	-41.67	-41.64	-41.61	-41.57	-41.54	-41.5	-41.46	-41.42
1.6	-38.63	-38.59	-38.56	-38.53	-36.5	-38.46	-38.42	-38.38
1.8	-35.86	-35.83	-35.8	-35.77	-35.74	-35.7	-35.67	-35.63
2.0	-33.33	-33.3	-33.27	-33.24	-33.21	-33.18	-33.14	-33.11
2.2	-30.99	-30.96	-30.93	-30.9	-30.87	-30.64	-30.8	-30.77
2.4	-28.81	-28.78	-28.75	-28.72	-28.69	-28.66	-28.63	-26.59
2.6	-26.76	-26.73	-26.71	-26.68	-26.65	-26.62	-26.58	-26.55
2.8	-24.83	-24.81	-24.78	-24.75	-24.72	-24.69	-24.66	-24.63
3.0	-23.01	-22.98	-22.96	-22.93	-22.9	-22.87	-22.84	-22.81
3.2	-21.27	-21.25	-21.22	-21.2	-21.17	-21.14	-21.11	-21.08
3.4	-19.62	-19.6	-19.57	-19.54	-19.52	-19.49	-19.46	-19.43
3.6	-18.04	-18.02	-17.99	-17.97	-17.94	-17.91	-17.88	-17.85
3.8	-16.53	-16.5	-16.48	-16.45	-16.43	-16.4	-16.37	-16.34
4.0	-15.08	-15.05	-15.03	-15	-14.97	-14.95	-14.92	-14.89
4.2	-13.68	-13.65	-13.63	-13.6	-13.58	-13.65	-13.52	-13.49
4.4	-12.33	-12.3	-12.28	-12.25	-12.23	-12.2	-12.17	-12.14
4.6	-11.02	-11	-10.98	-10.95	-10.92	-10.9	-10.87	-10.84
4.8	-9.76	-9.74	-9.71	-9.69	-9.66	-9.64	-9.61	-9.58
5.0	-8.54	-8.52	-8.49	-8.47	-8.44	-8.42	-8.39	-8.36
5.2	-7.35	-7.33	-7.31	-7.28	-7.26	-7.23	-7.21	-7.18
5.4	-6.2	-6.18	-6.16	-6.13	-6.11	-6.08	-6.06	-6.03
5.6	-5.08	-5.06	-5.04	-5.01	-4.99	-4.96	-4.94	-4.91

Standard state: At 0 C, Liquid Enthalpy = 100kJ/kg, Liquid Entropy = 1 kJ/kg.K

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