



Opteon™ XP30

Refrigerant

Thermodynamic Properties of Opteon™ XP30 (R-514A) Engineering (I/P) Units

Physical Properties

Molecular Weight	139.6 lb/lb-mole
Boiling Point at One Atmosphere	84.4 °F
Critical Temperature	352.5 °F
Critical Pressure	510.5 psia
Critical Density	29.51 lb/ft ³
Critical Volume	0.0339 ft ³ /lb
Ozone Depletion Potential	0
Global Warming Potential (AR5)	2
ASHRAE Standard 34 Safety Rating	B1

Units and Factors

t = temperature in °F
 P = pressure in lb/in² absolute (psia)
 v_f = volume of saturated liquid in ft³/lb
 v_g = volume of saturated vapor in ft³/lb
 V = volume of superheated vapor in ft³/lb
 $d_f = 1/v_f$ = density of saturated liquid in lb/ft³
 $d_g = 1/v_g$ = density of saturated vapor in lb/ft³
 h_f = enthalpy of saturated liquid in Btu/lb
 h_{fg} = enthalpy of vaporization in Btu/lb
 h_g = enthalpy of saturated vapor in Btu/lb
 H = enthalpy of superheated vapor in Btu/lb
 s_f = entropy of saturated liquid in Btu/(lb) (°R)
 s_g = entropy of saturated vapor in Btu/(lb) (°R)
 S = entropy of superheated vapor in Btu/(lb) (°R)

One atmosphere = 14.696 psia
 Reference point for enthalpy and entropy:
 $h_f = 0.0$ Btu/lb at -40 °F
 $s_f = 0.0$ Btu/lb-°R at -40 °F

This information is based on NIST Standard Database 23, Version 9.1 (Lemmon, E.W.; Huber, M.L.; McLinden, M.O.; REFPROP Reference Fluid Thermodynamic and Transport Properties - National Institute of Standards and Technology, 2013) using Chemours interaction parameters.

Opteon™ XP30 (R-514A)
Saturation Properties - Temperature Table

Temp °F	Pressure [psia]		Volume [ft³/lb]		Density [lb/ft³]		Enthalpy [Btu/lb]			Entropy [Btu/lb-°R]		Temp °F
	Liquid P _f	Vapor P _g	Liquid V _f	Vapor V _g	Liquid d _f	Vapor d _g	Liquid H _f	Latent H _{fg}	Vapor H _g	Liquid S _f	Vapor S _g	
-120	0.011	0.012	0.010523	2255.5409	95.0	0.000	-19.0	98.6	79.6	-0.050	0.240	-120
-119	0.012	0.012	0.010529	2131.4241	95.0	0.000	-18.8	98.5	79.8	-0.049	0.239	-119
-118	0.013	0.013	0.010535	2014.9088	94.9	0.000	-18.5	98.4	79.9	-0.049	0.239	-118
-117	0.014	0.014	0.010540	1905.4859	94.9	0.001	-18.3	98.4	80.1	-0.048	0.239	-117
-116	0.014	0.015	0.010546	1802.6831	94.8	0.001	-18.1	98.3	80.2	-0.047	0.238	-116
-115	0.015	0.016	0.010552	1706.0620	94.8	0.001	-17.8	98.2	80.4	-0.047	0.238	-115
-114	0.016	0.016	0.010558	1615.3265	94.7	0.001	-17.6	98.1	80.5	-0.046	0.237	-114
-113	0.017	0.017	0.010563	1529.7663	94.7	0.001	-17.4	98.1	80.7	-0.045	0.237	-113
-112	0.018	0.018	0.010569	1449.3623	94.6	0.001	-17.2	98.0	80.8	-0.045	0.237	-112
-111	0.019	0.020	0.010575	1373.6775	94.6	0.001	-16.9	97.9	81.0	-0.044	0.236	-111
-110	0.020	0.021	0.010581	1302.4081	94.5	0.001	-16.7	97.8	81.1	-0.043	0.236	-110
-109	0.021	0.022	0.010587	1235.2716	94.5	0.001	-16.5	97.7	81.3	-0.043	0.236	-109
-108	0.023	0.023	0.010593	1172.0320	94.4	0.001	-16.2	97.7	81.4	-0.042	0.235	-108
-107	0.024	0.024	0.010598	1112.3638	94.4	0.001	-16.0	97.6	81.6	-0.042	0.235	-107
-106	0.025	0.026	0.010604	1056.1196	94.3	0.001	-15.8	97.5	81.7	-0.041	0.234	-106
-105	0.027	0.027	0.010610	1003.0601	94.2	0.001	-15.5	97.4	81.9	-0.040	0.234	-105
-104	0.028	0.029	0.010616	952.9872	94.2	0.001	-15.3	97.3	82.0	-0.040	0.234	-104
-103	0.030	0.030	0.010622	905.7161	94.1	0.001	-15.1	97.3	82.2	-0.039	0.233	-103
-102	0.031	0.032	0.010628	861.0745	94.1	0.001	-14.9	97.2	82.3	-0.038	0.233	-102
-101	0.033	0.034	0.010634	818.9015	94.0	0.001	-14.6	97.1	82.5	-0.038	0.233	-101
-100	0.035	0.035	0.010640	779.0471	94.0	0.001	-14.4	97.0	82.6	-0.037	0.232	-100
-99	0.037	0.037	0.010647	741.3708	93.9	0.001	-14.2	96.9	82.8	-0.036	0.232	-99
-98	0.039	0.039	0.010653	705.7417	93.9	0.001	-13.9	96.9	82.9	-0.036	0.232	-98
-97	0.041	0.041	0.010659	672.0372	93.8	0.001	-13.7	96.8	83.1	-0.035	0.231	-97
-96	0.043	0.044	0.010665	640.1429	93.8	0.002	-13.5	96.7	83.3	-0.034	0.231	-96
-95	0.045	0.046	0.010671	609.9516	93.7	0.002	-13.2	96.6	83.4	-0.034	0.231	-95
-94	0.047	0.048	0.010677	581.3631	93.7	0.002	-13.0	96.6	83.6	-0.033	0.231	-94
-93	0.050	0.051	0.010684	554.2864	93.6	0.002	-12.8	96.5	83.7	-0.032	0.230	-93
-92	0.053	0.053	0.010690	528.6251	93.5	0.002	-12.5	96.4	83.9	-0.032	0.230	-92
-91	0.055	0.056	0.010696	504.3054	93.5	0.002	-12.3	96.3	84.0	-0.031	0.230	-91
-90	0.058	0.059	0.010703	481.2505	93.4	0.002	-12.1	96.2	84.2	-0.031	0.229	-90
-89	0.061	0.062	0.010709	459.3789	93.4	0.002	-11.8	96.2	84.3	-0.030	0.229	-89
-88	0.064	0.065	0.010715	438.6319	93.3	0.002	-11.6	96.1	84.5	-0.029	0.229	-88
-87	0.067	0.068	0.010722	418.9430	93.3	0.002	-11.3	96.0	84.6	-0.029	0.229	-87
-86	0.070	0.067	0.010728	428.8518	93.2	0.002	-11.1	95.9	84.8	-0.028	0.229	-86
-85	0.074	0.075	0.010735	382.5045	93.2	0.003	-10.9	95.8	85.0	-0.027	0.228	-85
-84	0.078	0.079	0.010741	365.6463	93.1	0.003	-10.6	95.8	85.1	-0.027	0.228	-84
-83	0.081	0.083	0.010748	349.6286	93.0	0.003	-10.4	95.7	85.3	-0.026	0.228	-83
-82	0.085	0.087	0.010754	334.4104	93.0	0.003	-10.2	95.6	85.4	-0.026	0.227	-82
-81	0.089	0.091	0.010761	319.9319	92.9	0.003	-9.9	95.5	85.6	-0.025	0.227	-81
-80	0.094	0.095	0.010767	306.1746	92.9	0.003	-9.7	95.4	85.7	-0.024	0.227	-80
-79	0.098	0.100	0.010774	293.0757	92.8	0.003	-9.5	95.4	85.9	-0.024	0.227	-79
-78	0.103	0.104	0.010780	280.6251	92.8	0.004	-9.2	95.3	86.1	-0.023	0.226	-78
-77	0.107	0.109	0.010787	268.7604	92.7	0.004	-9.0	95.2	86.2	-0.022	0.226	-77
-76	0.112	0.114	0.010794	257.4800	92.6	0.004	-8.7	95.1	86.4	-0.022	0.226	-76
-75	0.118	0.120	0.010800	246.7208	92.6	0.004	-8.5	95.0	86.5	-0.021	0.226	-75
-74	0.123	0.125	0.010807	236.4798	92.5	0.004	-8.3	95.0	86.7	-0.021	0.225	-74
-73	0.129	0.131	0.010814	226.7217	92.5	0.004	-8.0	94.9	86.9	-0.020	0.225	-73
-72	0.135	0.137	0.010821	217.4212	92.4	0.005	-7.8	94.8	87.0	-0.019	0.225	-72
-71	0.141	0.143	0.010828	208.5543	92.4	0.005	-7.5	94.7	87.2	-0.019	0.225	-71
-70	0.147	0.149	0.010834	200.0987	92.3	0.005	-7.3	94.6	87.3	-0.018	0.225	-70
-69	0.154	0.156	0.010841	192.0331	92.2	0.005	-7.1	94.6	87.5	-0.017	0.224	-69
-68	0.160	0.163	0.010848	184.3374	92.2	0.005	-6.8	94.5	87.7	-0.017	0.224	-68
-67	0.167	0.170	0.010855	176.9928	92.1	0.006	-6.6	94.4	87.8	-0.016	0.224	-67
-66	0.175	0.178	0.010862	169.9814	92.1	0.006	-6.3	94.3	88.0	-0.016	0.224	-66
-65	0.182	0.185	0.010869	163.2864	92.0	0.006	-6.1	94.2	88.1	-0.015	0.224	-65

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Saturation Properties - Temperature Table

Temp °F	Pressure [psia]		Volume [ft ³ /lb]		Density [lb/ft ³]		Enthalpy [Btu/lb]			Entropy [Btu/lb-°R]		Temp °F
	Liquid P _f	Vapor P _g	Liquid V _f	Vapor V _g	Liquid d _f	Vapor d _g	Liquid H _f	Latent H _{fg}	Vapor H _g	Liquid S _f	Vapor S _g	
-64	0.190	0.194	0.010876	156.8919	91.9	0.006	-5.9	94.2	88.3	-0.014	0.223	-64
-63	0.198	0.202	0.010883	150.7827	91.9	0.007	-5.6	94.1	88.5	-0.014	0.223	-63
-62	0.207	0.210	0.010890	144.9447	91.8	0.007	-5.4	94.0	88.6	-0.013	0.223	-62
-61	0.216	0.219	0.010897	139.3643	91.8	0.007	-5.1	93.9	88.8	-0.013	0.223	-61
-60	0.225	0.229	0.010904	134.0290	91.7	0.007	-4.9	93.8	88.9	-0.012	0.223	-60
-59	0.234	0.238	0.010911	128.9266	91.6	0.008	-4.7	93.8	89.1	-0.011	0.222	-59
-58	0.244	0.248	0.010919	124.0458	91.6	0.008	-4.4	93.7	89.3	-0.011	0.222	-58
-57	0.254	0.259	0.010926	119.3756	91.5	0.008	-4.2	93.6	89.4	-0.010	0.222	-57
-56	0.265	0.269	0.010933	114.9060	91.5	0.009	-3.9	93.5	89.6	-0.010	0.222	-56
-55	0.276	0.281	0.010940	110.6272	91.4	0.009	-3.7	93.4	89.8	-0.009	0.222	-55
-54	0.287	0.292	0.010947	106.5301	91.3	0.009	-3.4	93.4	89.9	-0.008	0.222	-54
-53	0.298	0.304	0.010955	102.6058	91.3	0.010	-3.2	93.3	90.1	-0.008	0.221	-53
-52	0.311	0.316	0.010962	98.8460	91.2	0.010	-2.9	93.2	90.2	-0.007	0.221	-52
-51	0.323	0.329	0.010969	95.2429	91.2	0.010	-2.7	93.1	90.4	-0.007	0.221	-51
-50	0.336	0.342	0.010977	91.7889	91.1	0.011	-2.5	93.0	90.6	-0.006	0.221	-50
-49	0.349	0.356	0.010984	88.4765	91.0	0.011	-2.2	93.0	90.7	-0.005	0.221	-49
-48	0.363	0.357	0.010992	88.2820	91.0	0.011	-2.0	92.9	90.9	-0.005	0.221	-48
-47	0.377	0.372	0.010999	85.1025	90.9	0.012	-1.7	92.8	91.1	-0.004	0.221	-47
-46	0.392	0.386	0.011007	82.0559	90.9	0.012	-1.5	92.7	91.2	-0.004	0.221	-46
-45	0.407	0.402	0.011014	79.1358	90.8	0.013	-1.2	92.6	91.4	-0.003	0.221	-45
-44	0.423	0.417	0.011022	76.3364	90.7	0.013	-1.0	92.6	91.6	-0.002	0.220	-44
-43	0.439	0.433	0.011029	73.6520	90.7	0.014	-0.7	92.5	91.7	-0.002	0.220	-43
-42	0.456	0.450	0.011037	71.0762	90.6	0.014	-0.5	92.4	91.9	-0.001	0.220	-42
-41	0.473	0.467	0.011045	68.6074	90.5	0.015	-0.2	92.3	92.1	-0.001	0.220	-41
-40	0.491	0.485	0.011052	66.2372	90.5	0.015	0.0	92.2	92.2	0.000	0.220	-40
-39	0.509	0.504	0.011060	63.9608	90.4	0.016	0.2	92.1	92.4	0.001	0.220	-39
-38	0.528	0.523	0.011068	61.7785	90.4	0.016	0.5	92.1	92.6	0.001	0.220	-38
-37	0.548	0.542	0.011075	59.6815	90.3	0.017	0.7	92.0	92.7	0.002	0.220	-37
-36	0.568	0.562	0.011083	57.6675	90.2	0.017	1.0	91.9	92.9	0.002	0.219	-36
-35	0.589	0.583	0.011091	55.7326	90.2	0.018	1.2	91.8	93.1	0.003	0.219	-35
-34	0.610	0.605	0.011099	53.8735	90.1	0.019	1.5	91.7	93.2	0.004	0.219	-34
-33	0.632	0.627	0.011107	52.0869	90.0	0.019	1.7	91.7	93.4	0.004	0.219	-33
-32	0.655	0.650	0.011115	50.3694	90.0	0.020	2.0	91.6	93.6	0.005	0.219	-32
-31	0.679	0.673	0.011123	48.7181	89.9	0.021	2.2	91.5	93.7	0.005	0.219	-31
-30	0.703	0.697	0.011131	47.1296	89.8	0.021	2.5	91.4	93.9	0.006	0.219	-30
-29	0.728	0.722	0.011139	45.6022	89.8	0.022	2.7	91.3	94.1	0.006	0.219	-29
-28	0.753	0.748	0.011147	44.1327	89.7	0.023	3.0	91.2	94.2	0.007	0.218	-28
-27	0.780	0.775	0.011155	42.7184	89.6	0.023	3.2	91.2	94.4	0.008	0.218	-27
-26	0.807	0.802	0.011163	41.3573	89.6	0.024	3.5	91.1	94.6	0.008	0.218	-26
-25	0.835	0.830	0.011171	40.0468	89.5	0.025	3.7	91.0	94.7	0.009	0.218	-25
-24	0.864	0.859	0.011179	38.7851	89.5	0.026	4.0	90.9	94.9	0.009	0.218	-24
-23	0.893	0.888	0.011187	37.5699	89.4	0.027	4.2	90.8	95.1	0.010	0.218	-23
-22	0.924	0.919	0.011196	36.3993	89.3	0.027	4.5	90.8	95.2	0.010	0.218	-22
-21	0.955	0.950	0.011204	35.2715	89.3	0.028	4.7	90.7	95.4	0.011	0.218	-21
-20	0.987	0.983	0.011212	34.1846	89.2	0.029	5.0	90.6	95.6	0.012	0.218	-20
-19	1.021	1.016	0.011221	33.1371	89.1	0.030	5.2	90.5	95.8	0.012	0.218	-19
-18	1.055	1.050	0.011229	32.1274	89.1	0.031	5.5	90.4	95.9	0.013	0.218	-18
-17	1.090	1.085	0.011237	31.1537	89.0	0.032	5.8	90.3	96.1	0.013	0.217	-17
-16	1.126	1.121	0.011246	30.2148	88.9	0.033	6.0	90.3	96.3	0.014	0.217	-16
-15	1.163	1.158	0.011254	29.3091	88.9	0.034	6.3	90.2	96.4	0.014	0.217	-15
-14	1.201	1.196	0.011263	28.4353	88.8	0.035	6.5	90.1	96.6	0.015	0.217	-14
-13	1.240	1.235	0.011271	27.5921	88.7	0.036	6.8	90.0	96.8	0.016	0.217	-13
-12	1.280	1.275	0.011280	26.7784	88.7	0.037	7.0	89.9	96.9	0.016	0.217	-12
-11	1.321	1.317	0.011288	25.9929	88.6	0.038	7.3	89.8	97.1	0.017	0.217	-11
-10	1.363	1.359	0.011297	25.2345	88.5	0.040	7.5	89.8	97.3	0.017	0.217	-10
-9	1.407	1.403	0.011306	24.5022	88.5	0.041	7.8	89.7	97.5	0.018	0.217	-9

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	Liquid P _f	Vapor P _g	Liquid V _f	Vapor V _g	Liquid d _f	Vapor d _g	Liquid H _f	Latent H _{fg}	Vapor H _g	Liquid S _f	Vapor S _g	
-8	1.451	1.447	0.011314	23.7950	88.4	0.042	8.0	89.6	97.6	0.018	0.217	-8
-7	1.497	1.493	0.011323	23.1118	88.3	0.043	8.3	89.5	97.8	0.019	0.217	-7
-6	1.544	1.540	0.011332	22.4517	88.2	0.045	8.6	89.4	98.0	0.020	0.217	-6
-5	1.592	1.588	0.011341	21.8139	88.2	0.046	8.8	89.3	98.1	0.020	0.217	-5
-4	1.641	1.638	0.011349	21.1974	88.1	0.047	9.1	89.2	98.3	0.021	0.217	-4
-3	1.692	1.688	0.011358	20.6015	88.0	0.049	9.3	89.2	98.5	0.021	0.217	-3
-2	1.744	1.740	0.011367	20.0254	88.0	0.050	9.6	89.1	98.7	0.022	0.216	-2
-1	1.797	1.794	0.011376	19.4683	87.9	0.051	9.8	89.0	98.8	0.022	0.216	-1
0	1.852	1.848	0.011385	18.9296	87.8	0.053	10.1	88.9	99.0	0.023	0.216	0
1	1.908	1.904	0.011394	18.4084	87.8	0.054	10.4	88.8	99.2	0.024	0.216	1
2	1.965	1.962	0.011403	17.9042	87.7	0.056	10.6	88.7	99.3	0.024	0.216	2
3	2.024	2.021	0.011412	17.4164	87.6	0.057	10.9	88.7	99.5	0.025	0.216	3
4	2.084	2.081	0.011421	16.9443	87.6	0.059	11.1	88.6	99.7	0.025	0.216	4
5	2.146	2.143	0.011431	16.4873	87.5	0.061	11.4	88.5	99.9	0.026	0.216	5
6	2.209	2.206	0.011440	16.0449	87.4	0.062	11.6	88.4	100.0	0.026	0.216	6
7	2.274	2.271	0.011449	15.6166	87.3	0.064	11.9	88.3	100.2	0.027	0.216	7
8	2.340	2.337	0.011458	15.2018	87.3	0.066	12.2	88.2	100.4	0.027	0.216	8
9	2.408	2.405	0.011467	14.8001	87.2	0.068	12.4	88.1	100.6	0.028	0.216	9
10	2.478	2.475	0.011477	14.4109	87.1	0.069	12.7	88.1	100.7	0.029	0.216	10
11	2.549	2.546	0.011486	14.0339	87.1	0.071	12.9	88.0	100.9	0.029	0.216	11
12	2.622	2.619	0.011496	13.6686	87.0	0.073	13.2	87.9	101.1	0.030	0.216	12
13	2.696	2.694	0.011505	13.3146	86.9	0.075	13.5	87.8	101.3	0.030	0.216	13
14	2.773	2.770	0.011515	12.9714	86.8	0.077	13.7	87.7	101.4	0.031	0.216	14
15	2.851	2.849	0.011524	12.6388	86.8	0.079	14.0	87.6	101.6	0.031	0.216	15
16	2.931	2.929	0.011534	12.3162	86.7	0.081	14.2	87.5	101.8	0.032	0.216	16
17	3.012	3.010	0.011543	12.0035	86.6	0.083	14.5	87.4	102.0	0.032	0.216	17
18	3.096	3.094	0.011553	11.7002	86.6	0.085	14.8	87.4	102.1	0.033	0.216	18
19	3.182	3.180	0.011563	11.4060	86.5	0.088	15.0	87.3	102.3	0.033	0.216	19
20	3.269	3.267	0.011572	11.1206	86.4	0.090	15.3	87.2	102.5	0.034	0.216	20
21	3.358	3.356	0.011582	10.8437	86.3	0.092	15.6	87.1	102.7	0.035	0.216	21
22	3.450	3.448	0.011592	10.5750	86.3	0.095	15.8	87.0	102.8	0.035	0.216	22
23	3.543	3.541	0.011602	10.3143	86.2	0.097	16.1	86.9	103.0	0.036	0.216	23
24	3.639	3.637	0.011612	10.0611	86.1	0.099	16.3	86.8	103.2	0.036	0.216	24
25	3.736	3.734	0.011622	9.8154	86.0	0.102	16.6	86.7	103.4	0.037	0.216	25
26	3.836	3.834	0.011632	9.5768	86.0	0.104	16.9	86.7	103.5	0.037	0.216	26
27	3.938	3.936	0.011642	9.3452	85.9	0.107	17.1	86.6	103.7	0.038	0.216	27
28	4.042	4.040	0.011652	9.1202	85.8	0.110	17.4	86.5	103.9	0.038	0.216	28
29	4.148	4.147	0.011662	8.9017	85.8	0.112	17.7	86.4	104.1	0.039	0.216	29
30	4.257	4.255	0.011672	8.6894	85.7	0.115	17.9	86.3	104.2	0.039	0.216	30
31	4.367	4.366	0.011682	8.4832	85.6	0.118	18.2	86.2	104.4	0.040	0.216	31
32	4.481	4.479	0.011692	8.2828	85.5	0.121	18.5	86.1	104.6	0.041	0.216	32
33	4.596	4.595	0.011703	8.0880	85.5	0.124	18.7	86.0	104.8	0.041	0.216	33
34	4.714	4.713	0.011713	7.8987	85.4	0.127	19.0	85.9	104.9	0.042	0.216	34
35	4.835	4.834	0.011723	7.7148	85.3	0.130	19.3	85.8	105.1	0.042	0.216	35
36	4.957	4.957	0.011734	7.5359	85.2	0.133	19.5	85.8	105.3	0.043	0.216	36
37	5.083	5.082	0.011744	7.3620	85.1	0.136	19.8	85.7	105.5	0.043	0.216	37
38	5.211	5.210	0.011755	7.1929	85.1	0.139	20.1	85.6	105.6	0.044	0.216	38
39	5.342	5.341	0.011765	7.0284	85.0	0.142	20.3	85.5	105.8	0.044	0.216	39
40	5.475	5.474	0.011776	6.8684	84.9	0.146	20.6	85.4	106.0	0.045	0.216	40
41	5.611	5.610	0.011786	6.7128	84.8	0.149	20.9	85.3	106.2	0.045	0.216	41
42	5.750	5.749	0.011797	6.5614	84.8	0.152	21.1	85.2	106.4	0.046	0.216	42
43	5.891	5.890	0.011808	6.4141	84.7	0.156	21.4	85.1	106.5	0.046	0.216	43
44	6.035	6.035	0.011818	6.2707	84.6	0.159	21.7	85.0	106.7	0.047	0.216	44
45	6.182	6.182	0.011829	6.1312	84.5	0.163	21.9	84.9	106.9	0.048	0.216	45
46	6.332	6.332	0.011840	5.9954	84.5	0.167	22.2	84.8	107.1	0.048	0.216	46
47	6.485	6.485	0.011851	5.8632	84.4	0.171	22.5	84.8	107.2	0.049	0.216	47

Opteon™ XP30 (R-514A)
Saturation Properties - Temperature Table

Temp °F	Pressure [psia]		Volume [ft ³ /lb]		Density [lb/ft ³]		Enthalpy [Btu/lb]			Entropy [Btu/lb-°R]		Temp °F
	Liquid P _f	Vapor P _g	Liquid V _f	Vapor V _g	Liquid d _f	Vapor d _g	Liquid H _f	Latent H _{fg}	Vapor H _g	Liquid S _f	Vapor S _g	
48	6.641	6.641	0.011862	5.7345	84.3	0.174	22.8	84.7	107.4	0.049	0.216	48
49	6.800	6.800	0.011873	5.6092	84.2	0.178	23.0	84.6	107.6	0.050	0.216	49
50	6.962	6.962	0.011884	5.4872	84.1	0.182	23.3	84.5	107.8	0.050	0.216	50
51	7.127	7.127	0.011895	5.3683	84.1	0.186	23.6	84.4	107.9	0.051	0.216	51
52	7.295	7.295	0.011906	5.2526	84.0	0.190	23.8	84.3	108.1	0.051	0.216	52
53	7.466	7.466	0.011917	5.1398	83.9	0.195	24.1	84.2	108.3	0.052	0.216	53
54	7.641	7.641	0.011929	5.0299	83.8	0.199	24.4	84.1	108.5	0.052	0.216	54
55	7.819	7.819	0.011940	4.9229	83.8	0.203	24.7	84.0	108.7	0.053	0.216	55
56	8.000	8.000	0.011951	4.8186	83.7	0.208	24.9	83.9	108.8	0.053	0.216	56
57	8.185	8.184	0.011963	4.7169	83.6	0.212	25.2	83.8	109.0	0.054	0.216	57
58	8.372	8.372	0.011974	4.6179	83.5	0.217	25.5	83.7	109.2	0.054	0.216	58
59	8.564	8.564	0.011986	4.5213	83.4	0.221	25.7	83.6	109.4	0.055	0.216	59
60	8.759	8.759	0.011997	4.4271	83.4	0.226	26.0	83.5	109.6	0.055	0.216	60
61	8.957	8.957	0.012009	4.3353	83.3	0.231	26.3	83.4	109.7	0.056	0.216	61
62	9.159	9.159	0.012020	4.2458	83.2	0.236	26.6	83.3	109.9	0.057	0.216	62
63	9.365	9.365	0.012032	4.1585	83.1	0.240	26.8	83.3	110.1	0.057	0.216	63
64	9.574	9.574	0.012044	4.0734	83.0	0.245	27.1	83.2	110.3	0.058	0.216	64
65	9.787	9.787	0.012056	3.9904	82.9	0.251	27.4	83.1	110.4	0.058	0.216	65
66	10.004	10.004	0.012068	3.9094	82.9	0.256	27.7	83.0	110.6	0.059	0.216	66
67	10.224	10.224	0.012079	3.8303	82.8	0.261	27.9	82.9	110.8	0.059	0.216	67
68	10.449	10.449	0.012091	3.7532	82.7	0.266	28.2	82.8	111.0	0.060	0.217	68
69	10.677	10.677	0.012103	3.6780	82.6	0.272	28.5	82.7	111.2	0.060	0.217	69
70	10.910	10.910	0.012116	3.6046	82.5	0.277	28.8	82.6	111.3	0.061	0.217	70
71	11.146	11.146	0.012128	3.5329	82.5	0.283	29.0	82.5	111.5	0.061	0.217	71
72	11.386	11.386	0.012140	3.4630	82.4	0.289	29.3	82.4	111.7	0.062	0.217	72
73	11.631	11.631	0.012152	3.3947	82.3	0.295	29.6	82.3	111.9	0.062	0.217	73
74	11.880	11.880	0.012164	3.3281	82.2	0.300	29.9	82.2	112.1	0.063	0.217	74
75	12.133	12.132	0.012177	3.2630	82.1	0.306	30.2	82.1	112.2	0.063	0.217	75
76	12.390	12.390	0.012189	3.1994	82.0	0.313	30.4	82.0	112.4	0.064	0.217	76
77	12.651	12.651	0.012202	3.1374	82.0	0.319	30.7	81.9	112.6	0.064	0.217	77
78	12.917	12.917	0.012214	3.0768	81.9	0.325	31.0	81.8	112.8	0.065	0.217	78
79	13.187	13.187	0.012227	3.0176	81.8	0.331	31.3	81.7	113.0	0.065	0.217	79
80	13.462	13.462	0.012240	2.9598	81.7	0.338	31.5	81.6	113.1	0.066	0.217	80
81	13.741	13.741	0.012252	2.9033	81.6	0.344	31.8	81.5	113.3	0.066	0.217	81
82	14.025	14.025	0.012265	2.8481	81.5	0.351	32.1	81.4	113.5	0.067	0.217	82
83	14.314	14.313	0.012278	2.7941	81.4	0.358	32.4	81.3	113.7	0.067	0.217	83
84	14.607	14.606	0.012291	2.7415	81.4	0.365	32.7	81.2	113.8	0.068	0.217	84
85	14.905	14.904	0.012304	2.6900	81.3	0.372	32.9	81.1	114.0	0.068	0.217	85
86	15.207	15.207	0.012317	2.6396	81.2	0.379	33.2	81.0	114.2	0.069	0.217	86
87	15.515	15.514	0.012330	2.5904	81.1	0.386	33.5	80.9	114.4	0.069	0.217	87
88	15.827	15.826	0.012343	2.5423	81.0	0.393	33.8	80.8	114.6	0.070	0.217	88
89	16.144	16.144	0.012356	2.4953	80.9	0.401	34.1	80.7	114.7	0.071	0.218	89
90	16.467	16.466	0.012369	2.4494	80.8	0.408	34.4	80.6	114.9	0.071	0.218	90
91	16.794	16.793	0.012383	2.4044	80.8	0.416	34.6	80.5	115.1	0.072	0.218	91
92	17.127	17.126	0.012396	2.3605	80.7	0.424	34.9	80.4	115.3	0.072	0.218	92
93	17.464	17.463	0.012410	2.3175	80.6	0.432	35.2	80.3	115.5	0.073	0.218	93
94	17.807	17.806	0.012423	2.2754	80.5	0.439	35.5	80.2	115.6	0.073	0.218	94
95	18.155	18.154	0.012437	2.2343	80.4	0.448	35.8	80.0	115.8	0.074	0.218	95
96	18.509	18.507	0.012451	2.1941	80.3	0.456	36.1	79.9	116.0	0.074	0.218	96
97	18.868	18.866	0.012464	2.1547	80.2	0.464	36.3	79.8	116.2	0.075	0.218	97
98	19.232	19.230	0.012478	2.1162	80.1	0.473	36.6	79.7	116.4	0.075	0.218	98
99	19.602	19.600	0.012492	2.0786	80.1	0.481	36.9	79.6	116.5	0.076	0.218	99
100	19.977	19.975	0.012506	2.0417	80.0	0.490	37.2	79.5	116.7	0.076	0.218	100
101	20.358	20.356	0.012520	2.0056	79.9	0.499	37.5	79.4	116.9	0.077	0.218	101
102	20.745	20.743	0.012534	1.9703	79.8	0.508	37.8	79.3	117.1	0.077	0.218	102
103	21.137	21.135	0.012548	1.9357	79.7	0.517	38.1	79.2	117.3	0.078	0.218	103

Opteon™ XP30 (R-514A)
Saturation Properties - Temperature Table

Temp °F	Pressure [psia]		Volume [ft ³ /lb]		Density [lb/ft ³]		Enthalpy [Btu/lb]			Entropy [Btu/lb-°R]		Temp °F
	Liquid P _f	Vapor P _g	Liquid V _f	Vapor V _g	Liquid d _f	Vapor d _g	Liquid H _f	Latent H _{fg}	Vapor H _g	Liquid S _f	Vapor S _g	
104	21.536	21.533	0.012563	1.9019	79.6	0.526	38.3	79.1	117.4	0.078	0.218	104
105	21.940	21.937	0.012577	1.8688	79.5	0.535	38.6	79.0	117.6	0.079	0.219	105
106	22.350	22.347	0.012591	1.8364	79.4	0.545	38.9	78.9	117.8	0.079	0.219	106
107	22.766	22.763	0.012606	1.8046	79.3	0.554	39.2	78.8	118.0	0.080	0.219	107
108	23.187	23.185	0.012620	1.7735	79.2	0.564	39.5	78.7	118.2	0.080	0.219	108
109	23.616	23.613	0.012635	1.7431	79.1	0.574	39.8	78.5	118.3	0.081	0.219	109
110	24.050	24.047	0.012650	1.7133	79.1	0.584	40.1	78.4	118.5	0.081	0.219	110
111	24.490	24.487	0.012664	1.6841	79.0	0.594	40.4	78.3	118.7	0.082	0.219	111
112	24.937	24.933	0.012679	1.6555	78.9	0.604	40.7	78.2	118.9	0.082	0.219	112
113	25.390	25.386	0.012694	1.6275	78.8	0.614	40.9	78.1	119.0	0.083	0.219	113
114	25.849	25.846	0.012709	1.6000	78.7	0.625	41.2	78.0	119.2	0.083	0.219	114
115	26.315	26.311	0.012724	1.5732	78.6	0.636	41.5	77.9	119.4	0.084	0.219	115
116	26.788	26.784	0.012739	1.5468	78.5	0.646	41.8	77.8	119.6	0.084	0.219	116
117	27.267	27.262	0.012755	1.5210	78.4	0.657	42.1	77.7	119.8	0.085	0.219	117
118	27.752	27.748	0.012770	1.4957	78.3	0.669	42.4	77.5	119.9	0.085	0.219	118
119	28.245	28.240	0.012785	1.4709	78.2	0.680	42.7	77.4	120.1	0.086	0.220	119
120	28.744	28.739	0.012801	1.4466	78.1	0.691	43.0	77.3	120.3	0.086	0.220	120
121	29.250	29.244	0.012816	1.4228	78.0	0.703	43.3	77.2	120.5	0.087	0.220	121
122	29.762	29.757	0.012832	1.3995	77.9	0.715	43.6	77.1	120.7	0.087	0.220	122
123	30.282	30.277	0.012848	1.3766	77.8	0.726	43.9	77.0	120.8	0.088	0.220	123
124	30.809	30.803	0.012864	1.3542	77.7	0.738	44.2	76.9	121.0	0.088	0.220	124
125	31.343	31.337	0.012880	1.3322	77.6	0.751	44.4	76.7	121.2	0.089	0.220	125
126	31.884	31.878	0.012896	1.3106	77.5	0.763	44.7	76.6	121.4	0.089	0.220	126
127	32.432	32.426	0.012912	1.2895	77.4	0.776	45.0	76.5	121.5	0.090	0.220	127
128	32.988	32.981	0.012928	1.2687	77.4	0.788	45.3	76.4	121.7	0.090	0.220	128
129	33.550	33.543	0.012944	1.2484	77.3	0.801	45.6	76.3	121.9	0.091	0.220	129
130	34.121	34.114	0.012961	1.2285	77.2	0.814	45.9	76.2	122.1	0.091	0.220	130
131	34.698	34.691	0.012977	1.2089	77.1	0.827	46.2	76.0	122.3	0.092	0.221	131
132	35.284	35.276	0.012994	1.1897	77.0	0.841	46.5	75.9	122.4	0.092	0.221	132
133	35.877	35.869	0.013010	1.1709	76.9	0.854	46.8	75.8	122.6	0.093	0.221	133
134	36.477	36.469	0.013027	1.1524	76.8	0.868	47.1	75.7	122.8	0.093	0.221	134
135	37.085	37.077	0.013044	1.1343	76.7	0.882	47.4	75.6	123.0	0.094	0.221	135
136	37.702	37.693	0.013061	1.1165	76.6	0.896	47.7	75.4	123.1	0.094	0.221	136
137	38.325	38.316	0.013078	1.0991	76.5	0.910	48.0	75.3	123.3	0.095	0.221	137
138	38.957	38.948	0.013095	1.0819	76.4	0.924	48.3	75.2	123.5	0.095	0.221	138
139	39.597	39.588	0.013112	1.0651	76.3	0.939	48.6	75.1	123.7	0.096	0.221	139
140	40.245	40.235	0.013130	1.0487	76.2	0.954	48.9	75.0	123.9	0.096	0.221	140
141	40.901	40.891	0.013147	1.0325	76.1	0.969	49.2	74.8	124.0	0.097	0.221	141
142	41.566	41.555	0.013165	1.0166	76.0	0.984	49.5	74.7	124.2	0.097	0.221	142
143	42.238	42.227	0.013183	1.0010	75.9	0.999	49.8	74.6	124.4	0.098	0.222	143
144	42.919	42.908	0.013200	0.9857	75.8	1.015	50.1	74.5	124.6	0.098	0.222	144
145	43.609	43.597	0.013218	0.9707	75.7	1.030	50.4	74.3	124.7	0.099	0.222	145
146	44.307	44.295	0.013236	0.9559	75.6	1.046	50.7	74.2	124.9	0.099	0.222	146
147	45.013	45.001	0.013254	0.9414	75.4	1.062	51.0	74.1	125.1	0.100	0.222	147
148	45.728	45.715	0.013273	0.9272	75.3	1.079	51.3	74.0	125.3	0.100	0.222	148
149	46.452	46.439	0.013291	0.9132	75.2	1.095	51.6	73.8	125.4	0.101	0.222	149
150	47.184	47.171	0.013309	0.8995	75.1	1.112	51.9	73.7	125.6	0.101	0.222	150
151	47.926	47.912	0.013328	0.8860	75.0	1.129	52.2	73.6	125.8	0.102	0.222	151
152	48.676	48.662	0.013347	0.8728	74.9	1.146	52.5	73.4	126.0	0.102	0.222	152
153	49.435	49.421	0.013365	0.8598	74.8	1.163	52.8	73.3	126.1	0.103	0.222	153
154	50.204	50.189	0.013384	0.8470	74.7	1.181	53.1	73.2	126.3	0.103	0.222	154
155	50.981	50.966	0.013403	0.8345	74.6	1.198	53.4	73.0	126.5	0.104	0.223	155
156	51.768	51.752	0.013422	0.8221	74.5	1.216	53.8	72.9	126.7	0.104	0.223	156
157	52.563	52.547	0.013442	0.8100	74.4	1.235	54.1	72.8	126.8	0.105	0.223	157
158	53.369	53.352	0.013461	0.7981	74.3	1.253	54.4	72.7	127.0	0.105	0.223	158
159	54.183	54.166	0.013481	0.7864	74.2	1.272	54.7	72.5	127.2	0.106	0.223	159

Opteon™ XP30 (R-514A)
Saturation Properties - Temperature Table

Temp °F	Pressure [psia]		Volume [ft ³ /lb]		Density [lb/ft ³]		Enthalpy [Btu/lb]			Entropy [Btu/lb-°R]		Temp °F
	Liquid P _f	Vapor P _g	Liquid V _f	Vapor V _g	Liquid d _f	Vapor d _g	Liquid H _f	Latent H _{fg}	Vapor H _g	Liquid S _f	Vapor S _g	
160	55.007	54.990	0.013500	0.7749	74.1	1.290	55.0	72.4	127.4	0.106	0.223	160
161	55.841	55.823	0.013520	0.7636	74.0	1.310	55.3	72.3	127.5	0.107	0.223	161
162	56.684	56.666	0.013540	0.7525	73.9	1.329	55.6	72.1	127.7	0.107	0.223	162
163	57.537	57.518	0.013560	0.7416	73.7	1.348	55.9	72.0	127.9	0.108	0.223	163
164	58.400	58.381	0.013580	0.7309	73.6	1.368	56.2	71.8	128.1	0.108	0.223	164
165	59.273	59.253	0.013600	0.7204	73.5	1.388	56.5	71.7	128.2	0.109	0.223	165
166	60.155	60.135	0.013621	0.7100	73.4	1.408	56.8	71.6	128.4	0.109	0.224	166
167	61.047	61.027	0.013642	0.6998	73.3	1.429	57.1	71.4	128.6	0.110	0.224	167
168	61.950	61.929	0.013662	0.6898	73.2	1.450	57.5	71.3	128.8	0.110	0.224	168
169	62.863	62.841	0.013683	0.6800	73.1	1.471	57.8	71.2	128.9	0.111	0.224	169
170	63.786	63.764	0.013704	0.6703	73.0	1.492	58.1	71.0	129.1	0.111	0.224	170
171	64.719	64.696	0.013725	0.6608	72.9	1.513	58.4	70.9	129.3	0.112	0.224	171
172	65.663	65.640	0.013747	0.6514	72.7	1.535	58.7	70.7	129.4	0.112	0.224	172
173	66.617	66.593	0.013768	0.6422	72.6	1.557	59.0	70.6	129.6	0.113	0.224	173
174	67.581	67.557	0.013790	0.6331	72.5	1.579	59.3	70.5	129.8	0.113	0.224	174
175	68.557	68.532	0.013811	0.6242	72.4	1.602	59.6	70.3	130.0	0.114	0.224	175
176	69.543	69.517	0.013833	0.6155	72.3	1.625	60.0	70.2	130.1	0.114	0.224	176
177	70.539	70.513	0.013855	0.6069	72.2	1.648	60.3	70.0	130.3	0.115	0.225	177
178	71.547	71.520	0.013878	0.5984	72.1	1.671	60.6	69.9	130.5	0.115	0.225	178
179	72.565	72.538	0.013900	0.5900	71.9	1.695	60.9	69.7	130.6	0.116	0.225	179
180	73.594	73.567	0.013922	0.5818	71.8	1.719	61.2	69.6	130.8	0.116	0.225	180
181	74.635	74.607	0.013945	0.5738	71.7	1.743	61.5	69.4	131.0	0.116	0.225	181
182	75.686	75.658	0.013968	0.5658	71.6	1.767	61.9	69.3	131.1	0.117	0.225	182
183	76.749	76.720	0.013991	0.5580	71.5	1.792	62.2	69.1	131.3	0.117	0.225	183
184	77.823	77.793	0.014014	0.5503	71.4	1.817	62.5	69.0	131.5	0.118	0.225	184
185	78.909	78.878	0.014038	0.5428	71.2	1.842	62.8	68.8	131.7	0.118	0.225	185
186	80.006	79.975	0.014061	0.5353	71.1	1.868	63.1	68.7	131.8	0.119	0.225	186
187	81.114	81.082	0.014085	0.5280	71.0	1.894	63.5	68.5	132.0	0.119	0.225	187
188	82.234	82.202	0.014109	0.5208	70.9	1.920	63.8	68.4	132.2	0.120	0.226	188
189	83.366	83.333	0.014133	0.5137	70.8	1.947	64.1	68.2	132.3	0.120	0.226	189
190	84.510	84.476	0.014157	0.5067	70.6	1.974	64.4	68.1	132.5	0.121	0.226	190
191	85.665	85.631	0.014182	0.4998	70.5	2.001	64.7	67.9	132.7	0.121	0.226	191
192	86.832	86.797	0.014207	0.4930	70.4	2.028	65.1	67.8	132.8	0.122	0.226	192
193	88.012	87.976	0.014231	0.4864	70.3	2.056	65.4	67.6	133.0	0.122	0.226	193
194	89.203	89.167	0.014257	0.4798	70.1	2.084	65.7	67.4	133.2	0.123	0.226	194
195	90.407	90.370	0.014282	0.4733	70.0	2.113	66.0	67.3	133.3	0.123	0.226	195
196	91.623	91.585	0.014307	0.4670	69.9	2.141	66.4	67.1	133.5	0.124	0.226	196
197	92.851	92.813	0.014333	0.4607	69.8	2.171	66.7	67.0	133.7	0.124	0.226	197
198	94.092	94.053	0.014359	0.4545	69.6	2.200	67.0	66.8	133.8	0.125	0.226	198
199	95.345	95.305	0.014385	0.4485	69.5	2.230	67.3	66.6	134.0	0.125	0.227	199
200	96.611	96.570	0.014411	0.4425	69.4	2.260	67.7	66.5	134.1	0.126	0.227	200
201	97.889	97.848	0.014438	0.4366	69.3	2.291	68.0	66.3	134.3	0.126	0.227	201
202	99.181	99.139	0.014465	0.4308	69.1	2.321	68.3	66.2	134.5	0.127	0.227	202
203	100.485	100.442	0.014492	0.4251	69.0	2.353	68.6	66.0	134.6	0.127	0.227	203
204	101.802	101.758	0.014519	0.4194	68.9	2.384	69.0	65.8	134.8	0.128	0.227	204
205	103.132	103.088	0.014546	0.4139	68.7	2.416	69.3	65.7	135.0	0.128	0.227	205
206	104.475	104.430	0.014574	0.4084	68.6	2.449	69.6	65.5	135.1	0.129	0.227	206
207	105.831	105.785	0.014602	0.4030	68.5	2.481	70.0	65.3	135.3	0.129	0.227	207
208	107.201	107.154	0.014630	0.3977	68.4	2.514	70.3	65.1	135.4	0.130	0.227	208
209	108.584	108.536	0.014658	0.3925	68.2	2.548	70.6	65.0	135.6	0.130	0.227	209
210	109.980	109.932	0.014687	0.3873	68.1	2.582	71.0	64.8	135.8	0.131	0.228	210
211	111.390	111.341	0.014716	0.3822	68.0	2.616	71.3	64.6	135.9	0.131	0.228	211
212	112.814	112.764	0.014745	0.3772	67.8	2.651	71.6	64.5	136.1	0.132	0.228	212
213	114.251	114.200	0.014775	0.3723	67.7	2.686	72.0	64.3	136.2	0.132	0.228	213
214	115.702	115.651	0.014804	0.3674	67.5	2.722	72.3	64.1	136.4	0.133	0.228	214
215	117.167	117.115	0.014834	0.3627	67.4	2.757	72.6	63.9	136.6	0.133	0.228	215

Opteon™ XP30 (R-514A)
Saturation Properties - Temperature Table

Temp °F	Pressure [psia]		Volume [ft ³ /lb]		Density [lb/ft ³]		Enthalpy [Btu/lb]			Entropy [Btu/lb-°R]		Temp °F
	Liquid P _f	Vapor P _g	Liquid V _f	Vapor V _g	Liquid d _f	Vapor d _g	Liquid H _f	Latent H _{fg}	Vapor H _g	Liquid S _f	Vapor S _g	
216	118.646	118.593	0.014865	0.3579	67.3	2.794	73.0	63.7	136.7	0.134	0.228	216
217	120.139	120.085	0.014895	0.3533	67.1	2.831	73.3	63.6	136.9	0.134	0.228	217
218	121.646	121.591	0.014926	0.3487	67.0	2.868	73.7	63.4	137.0	0.135	0.228	218
219	123.167	123.111	0.014957	0.3442	66.9	2.906	74.0	63.2	137.2	0.135	0.228	219
220	124.703	124.646	0.014989	0.3397	66.7	2.944	74.3	63.0	137.3	0.136	0.228	220
221	126.253	126.195	0.015020	0.3353	66.6	2.982	74.7	62.8	137.5	0.136	0.228	221
222	127.818	127.759	0.015052	0.3310	66.4	3.021	75.0	62.6	137.7	0.137	0.229	222
223	129.397	129.337	0.015085	0.3267	66.3	3.061	75.4	62.5	137.8	0.137	0.229	223
224	130.991	130.930	0.015117	0.3225	66.1	3.101	75.7	62.3	138.0	0.138	0.229	224
225	132.600	132.538	0.015150	0.3183	66.0	3.141	76.0	62.1	138.1	0.138	0.229	225
226	134.223	134.160	0.015184	0.3142	65.9	3.182	76.4	61.9	138.3	0.139	0.229	226
227	135.862	135.798	0.015217	0.3102	65.7	3.224	76.7	61.7	138.4	0.139	0.229	227
228	137.515	137.450	0.015251	0.3062	65.6	3.266	77.1	61.5	138.6	0.140	0.229	228
229	139.184	139.118	0.015286	0.3023	65.4	3.308	77.4	61.3	138.7	0.140	0.229	229
230	140.868	140.801	0.015320	0.2984	65.3	3.351	77.8	61.1	138.9	0.141	0.229	230
231	142.567	142.499	0.015355	0.2946	65.1	3.395	78.1	60.9	139.0	0.141	0.229	231
232	144.282	144.213	0.015391	0.2908	65.0	3.439	78.5	60.7	139.2	0.142	0.229	232
233	146.012	145.942	0.015427	0.2871	64.8	3.484	78.8	60.5	139.3	0.142	0.229	233
234	147.758	147.687	0.015463	0.2834	64.7	3.529	79.2	60.3	139.5	0.143	0.230	234
235	149.519	149.447	0.015500	0.2798	64.5	3.575	79.5	60.1	139.6	0.143	0.230	235
236	151.297	151.223	0.015537	0.2762	64.4	3.621	79.9	59.9	139.8	0.144	0.230	236
237	153.090	153.016	0.015574	0.2727	64.2	3.668	80.2	59.7	139.9	0.144	0.230	237
238	154.899	154.824	0.015612	0.2692	64.1	3.715	80.6	59.5	140.1	0.145	0.230	238
239	156.725	156.648	0.015650	0.2657	63.9	3.763	80.9	59.3	140.2	0.145	0.230	239
240	158.566	158.489	0.015689	0.2623	63.7	3.812	81.3	59.1	140.4	0.146	0.230	240
241	160.424	160.345	0.015728	0.2590	63.6	3.861	81.6	58.9	140.5	0.146	0.230	241
242	162.299	162.218	0.015767	0.2557	63.4	3.911	82.0	58.6	140.6	0.147	0.230	242
243	164.190	164.108	0.015807	0.2524	63.3	3.961	82.4	58.4	140.8	0.147	0.230	243
244	166.097	166.014	0.015848	0.2492	63.1	4.013	82.7	58.2	140.9	0.148	0.230	244
245	168.021	167.937	0.015889	0.2460	62.9	4.064	83.1	58.0	141.1	0.148	0.230	245
246	169.962	169.877	0.015930	0.2429	62.8	4.117	83.4	57.8	141.2	0.149	0.231	246
247	171.920	171.833	0.015972	0.2398	62.6	4.170	83.8	57.6	141.4	0.149	0.231	247
248	173.895	173.807	0.016014	0.2367	62.4	4.224	84.2	57.3	141.5	0.150	0.231	248
249	175.887	175.798	0.016057	0.2337	62.3	4.279	84.5	57.1	141.6	0.150	0.231	249
250	177.896	177.806	0.016101	0.2307	62.1	4.334	84.9	56.9	141.8	0.151	0.231	250
251	179.923	179.831	0.016145	0.2278	61.9	4.390	85.3	56.6	141.9	0.151	0.231	251
252	181.967	181.873	0.016189	0.2249	61.8	4.447	85.6	56.4	142.0	0.152	0.231	252
253	184.028	183.933	0.016234	0.2220	61.6	4.504	86.0	56.2	142.2	0.152	0.231	253
254	186.107	186.011	0.016280	0.2192	61.4	4.562	86.4	56.0	142.3	0.153	0.231	254
255	188.204	188.107	0.016326	0.2164	61.3	4.621	86.7	55.7	142.4	0.153	0.231	255
256	190.319	190.220	0.016373	0.2136	61.1	4.681	87.1	55.5	142.6	0.154	0.231	256
257	192.452	192.351	0.016421	0.2109	60.9	4.742	87.5	55.2	142.7	0.154	0.231	257
258	194.603	194.501	0.016469	0.2082	60.7	4.803	87.8	55.0	142.8	0.155	0.231	258
259	196.772	196.668	0.016517	0.2055	60.5	4.866	88.2	54.7	143.0	0.155	0.231	259
260	198.959	198.854	0.016567	0.2029	60.4	4.929	88.6	54.5	143.1	0.156	0.231	260
261	201.165	201.058	0.016617	0.2003	60.2	4.993	89.0	54.3	143.2	0.156	0.232	261
262	203.389	203.281	0.016667	0.1977	60.0	5.058	89.3	54.0	143.3	0.157	0.232	262
263	205.632	205.522	0.016719	0.1952	59.8	5.124	89.7	53.7	143.5	0.157	0.232	263
264	207.894	207.782	0.016771	0.1927	59.6	5.190	90.1	53.5	143.6	0.158	0.232	264
265	210.175	210.061	0.016823	0.1902	59.4	5.258	90.5	53.2	143.7	0.158	0.232	265
266	212.474	212.359	0.016877	0.1877	59.3	5.327	90.9	53.0	143.8	0.159	0.232	266
267	214.793	214.676	0.016931	0.1853	59.1	5.397	91.3	52.7	144.0	0.159	0.232	267
268	217.131	217.013	0.016986	0.1829	58.9	5.467	91.6	52.4	144.1	0.160	0.232	268
269	219.489	219.368	0.017042	0.1805	58.7	5.539	92.0	52.2	144.2	0.160	0.232	269
270	221.866	221.743	0.017099	0.1782	58.5	5.612	92.4	51.9	144.3	0.161	0.232	270
271	224.262	224.138	0.017156	0.1759	58.3	5.686	92.8	51.6	144.4	0.161	0.232	271

Opteon™ XP30 (R-514A)
Saturation Properties - Temperature Table

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	Liquid P _f	Vapor P _g	Liquid V _f	Vapor V _g	Liquid d _f	Vapor d _g	Liquid H _f	Latent H _{fg}	Vapor H _g	Liquid S _f	Vapor S _g	
272	226.679	226.553	0.017214	0.1736	58.1	5.761	93.2	51.4	144.6	0.162	0.232	272
273	229.115	228.987	0.017273	0.1713	57.9	5.837	93.6	51.1	144.7	0.162	0.232	273
274	231.571	231.441	0.017333	0.1691	57.7	5.914	94.0	50.8	144.8	0.163	0.232	274
275	234.048	233.916	0.017394	0.1669	57.5	5.993	94.4	50.5	144.9	0.164	0.232	275
276	236.545	236.410	0.017456	0.1647	57.3	6.072	94.8	50.2	145.0	0.164	0.232	276
277	239.062	238.925	0.017518	0.1625	57.1	6.153	95.2	49.9	145.1	0.165	0.232	277
278	241.600	241.461	0.017582	0.1604	56.9	6.236	95.6	49.7	145.2	0.165	0.232	278
279	244.159	244.017	0.017646	0.1582	56.7	6.319	96.0	49.4	145.3	0.166	0.232	279
280	246.738	246.594	0.017712	0.1561	56.5	6.404	96.4	49.1	145.4	0.166	0.233	280
281	249.339	249.193	0.017778	0.1541	56.2	6.490	96.8	48.8	145.5	0.167	0.233	281
282	251.960	251.812	0.017846	0.1520	56.0	6.578	97.2	48.5	145.6	0.167	0.233	282
283	254.603	254.452	0.017914	0.1500	55.8	6.667	97.6	48.2	145.7	0.168	0.233	283
284	257.268	257.114	0.017984	0.1480	55.6	6.758	98.0	47.8	145.8	0.168	0.233	284
285	259.954	259.798	0.018055	0.1460	55.4	6.850	98.4	47.5	145.9	0.169	0.233	285
286	262.662	262.503	0.018126	0.1440	55.2	6.944	98.8	47.2	146.0	0.169	0.233	286
287	265.392	265.230	0.018199	0.1421	54.9	7.040	99.2	46.9	146.1	0.170	0.233	287
288	268.145	267.980	0.018273	0.1401	54.7	7.137	99.6	46.6	146.2	0.170	0.233	288
289	270.919	270.751	0.018348	0.1382	54.5	7.236	100.1	46.2	146.3	0.171	0.233	289
290	273.717	273.545	0.018425	0.1363	54.3	7.336	100.5	45.9	146.4	0.172	0.233	290
291	276.537	276.362	0.018502	0.1344	54.0	7.439	100.9	45.6	146.5	0.172	0.233	291
292	279.380	279.202	0.018581	0.1326	53.8	7.543	101.3	45.2	146.6	0.173	0.233	292
293	282.246	282.064	0.018661	0.1307	53.6	7.649	101.7	44.9	146.6	0.173	0.233	293
294	285.136	284.950	0.018743	0.1289	53.4	7.758	102.2	44.5	146.7	0.174	0.233	294
295	288.049	287.860	0.018826	0.1271	53.1	7.868	102.6	44.2	146.8	0.174	0.233	295
296	290.986	290.793	0.018910	0.1253	52.9	7.981	103.0	43.8	146.9	0.175	0.233	296
297	293.947	293.750	0.018995	0.1235	52.6	8.096	103.4	43.5	146.9	0.175	0.233	297
298	296.932	296.731	0.019082	0.1218	52.4	8.213	103.9	43.1	147.0	0.176	0.233	298
299	299.942	299.736	0.019171	0.1200	52.2	8.332	104.3	42.8	147.1	0.177	0.233	299
300	302.977	302.766	0.019260	0.1183	51.9	8.454	104.8	42.4	147.1	0.177	0.233	300
301	306.037	305.821	0.019352	0.1166	51.7	8.579	105.2	42.0	147.2	0.178	0.233	301
302	309.122	308.901	0.019445	0.1149	51.4	8.706	105.6	41.6	147.3	0.178	0.233	302
303	312.233	312.006	0.019539	0.1132	51.2	8.836	106.1	41.2	147.3	0.179	0.233	303
304	315.370	315.138	0.019636	0.1115	50.9	8.969	106.5	40.8	147.4	0.179	0.233	304
305	318.533	318.295	0.019733	0.1098	50.7	9.106	107.0	40.5	147.4	0.180	0.233	305
306	321.723	321.478	0.019833	0.1082	50.4	9.245	107.4	40.0	147.5	0.181	0.233	306
307	324.940	324.688	0.019935	0.1065	50.2	9.387	107.9	39.6	147.5	0.181	0.233	307
308	328.184	327.926	0.020038	0.1049	49.9	9.533	108.3	39.2	147.5	0.182	0.233	308
309	331.456	331.190	0.020143	0.1033	49.6	9.682	108.8	38.8	147.6	0.182	0.233	309
310	334.756	334.482	0.020250	0.1017	49.4	9.835	109.2	38.4	147.6	0.183	0.233	310
311	338.084	337.803	0.020360	0.1001	49.1	9.993	109.7	37.9	147.6	0.183	0.233	311
312	341.442	341.151	0.020471	0.0985	48.8	10.154	110.2	37.5	147.7	0.184	0.233	312
313	344.829	344.529	0.020584	0.0969	48.6	10.319	110.6	37.1	147.7	0.185	0.233	313
314	348.245	347.936	0.020700	0.0953	48.3	10.489	111.1	36.6	147.7	0.185	0.232	314
315	351.693	351.373	0.020819	0.0938	48.0	10.664	111.6	36.1	147.7	0.186	0.232	315
316	355.171	354.841	0.020939	0.0922	47.8	10.843	112.0	35.7	147.7	0.186	0.232	316
317	358.680	358.339	0.021063	0.0907	47.5	11.028	112.5	35.2	147.7	0.187	0.232	317
318	362.222	361.868	0.021189	0.0891	47.2	11.218	113.0	34.7	147.7	0.188	0.232	318
319	365.796	365.430	0.021318	0.0876	46.9	11.414	113.5	34.2	147.7	0.188	0.232	319
320	369.404	369.024	0.021449	0.0861	46.6	11.616	114.0	33.7	147.7	0.189	0.232	320
321	373.046	372.651	0.021584	0.0846	46.3	11.825	114.5	33.2	147.7	0.189	0.232	321
322	376.722	376.312	0.021723	0.0831	46.0	12.040	114.9	32.7	147.6	0.190	0.232	322
323	380.434	380.008	0.021864	0.0815	45.7	12.263	115.4	32.1	147.6	0.191	0.232	323
324	384.182	383.739	0.022010	0.0800	45.4	12.493	115.9	31.6	147.5	0.191	0.232	324
325	387.967	387.507	0.022159	0.0785	45.1	12.732	116.5	31.0	147.5	0.192	0.231	325
326	391.791	391.311	0.022312	0.0771	44.8	12.979	117.0	30.5	147.4	0.192	0.231	326
327	395.653	395.154	0.022470	0.0756	44.5	13.235	117.5	29.9	147.4	0.193	0.231	327

Opteon™ XP30 (R-514A)
Saturation Properties - Temperature Table

Temp °F	Pressure [psia]		Volume [ft ³ /lb]		Density [lb/ft ³]		Enthalpy [Btu/lb]			Entropy [Btu/lb-°R]		Temp °F
	Liquid P _f	Vapor P _g	Liquid V _f	Vapor V _g	Liquid d _f	Vapor d _g	Liquid H _f	Latent H _{fg}	Vapor H _g	Liquid S _f	Vapor S _g	
328	399.555	399.035	0.022633	0.0741	44.2	13.501	118.0	29.3	147.3	0.194	0.231	328
329	403.498	402.956	0.022800	0.0726	43.9	13.777	118.5	28.7	147.2	0.194	0.231	329
330	407.483	406.918	0.022973	0.0711	43.5	14.064	119.1	28.0	147.1	0.195	0.231	330
331	411.511	410.922	0.023152	0.0696	43.2	14.363	119.6	27.4	147.0	0.196	0.230	331
332	415.583	414.969	0.023337	0.0681	42.8	14.675	120.2	26.7	146.9	0.196	0.230	332
333	419.701	419.061	0.023529	0.0667	42.5	15.000	120.7	26.1	146.8	0.197	0.230	333
334	423.866	423.198	0.023728	0.0652	42.1	15.339	121.3	25.4	146.6	0.198	0.230	334
335	428.078	427.383	0.023936	0.0637	41.8	15.694	121.8	24.6	146.5	0.198	0.229	335
336	432.339	431.617	0.024152	0.0622	41.4	16.065	122.4	23.9	146.3	0.199	0.229	336
337	436.651	435.900	0.024378	0.0608	41.0	16.454	123.0	23.1	146.1	0.200	0.229	337
338	441.014	440.236	0.024615	0.0593	40.6	16.861	123.6	22.3	145.9	0.201	0.229	338
339	445.431	444.626	0.024864	0.0578	40.2	17.288	124.2	21.5	145.7	0.201	0.228	339
340	449.901	449.070	0.025127	0.0564	39.8	17.737	124.8	20.7	145.5	0.202	0.228	340
341	454.421	453.572	0.025405	0.0549	39.4	18.210	125.5	19.8	145.3	0.203	0.228	341
342	459.007	458.133	0.025701	0.0535	38.9	18.708	126.1	18.9	145.0	0.204	0.227	342
343	463.644	462.755	0.026017	0.0520	38.4	19.234	126.8	17.9	144.7	0.204	0.227	343
344	468.339	467.440	0.026359	0.0505	37.9	19.792	127.5	16.9	144.4	0.205	0.226	344
345	473.092	472.189	0.026729	0.0491	37.4	20.385	128.2	15.8	144.0	0.206	0.226	345
346	477.901	477.006	0.027135	0.0476	36.9	21.020	129.0	14.7	143.7	0.207	0.225	346
347	482.769	481.891	0.027587	0.0461	36.2	21.704	129.8	13.5	143.3	0.208	0.225	347
348	487.692	486.849	0.028098	0.0445	35.6	22.449	130.6	12.2	142.8	0.209	0.224	348
349	492.670	491.881	0.028691	0.0430	34.9	23.276	131.6	10.7	142.3	0.210	0.223	349
350	497.699	496.992	0.029408	0.0413	34.0	24.221	132.6	9.0	141.6	0.211	0.223	350
351	502.771	502.190	0.030338	0.0394	33.0	25.363	133.8	7.0	140.8	0.213	0.222	351
352	507.862	507.500	0.031788	0.0371	31.5	26.968	135.4	4.1	139.6	0.215	0.220	352

Opteon™ XP30 (R-514A)
Superheated Vapor - Constant Pressure Tables

V = volume in ft³/lb

H = enthalpy in Btu/lb

S = entropy in [Btu/lb·°R]

Saturation Properties in Light Green

ABSOLUTE PRESSURE, psia													
Temp °F	9			10			11			12			Temp °F
	61.21			65.98			70.38			74.48			
	V	H	S	V	H	S	V	H	S	V	H	S	
	4.3160	177.3	0.415	4.3160	177.3	0.415	4.3160	177.3	0.415	4.3160	177.3	0.415	
65	4.3506	178.1	0.416										65
70	4.3964	179.1	0.418	3.9440	179.0	0.416							70
75	4.4421	180.1	0.420	3.9854	180.0	0.418	3.6117	179.9	0.417	3.3004	179.8	0.415	75
80	4.4877	181.1	0.422	4.0266	181.0	0.420	3.6495	180.9	0.419	3.3352	180.8	0.417	80
85	4.5332	182.1	0.424	4.0679	182.0	0.422	3.6872	181.9	0.420	3.3699	181.8	0.419	85
90	4.5786	183.1	0.425	4.1090	183.0	0.424	3.7248	182.9	0.422	3.4046	182.8	0.421	90
95	4.6240	184.1	0.427	4.1501	184.0	0.426	3.7623	183.9	0.424	3.4392	183.8	0.423	95
100	4.6693	185.1	0.429	4.1911	185.0	0.427	3.7998	184.9	0.426	3.4738	184.9	0.425	100
105	4.7145	186.1	0.431	4.2320	186.0	0.429	3.8372	186.0	0.428	3.5083	185.9	0.426	105
110	4.7596	187.1	0.433	4.2729	187.1	0.431	3.8746	187.0	0.430	3.5427	186.9	0.428	110
115	4.8047	188.1	0.434	4.3137	188.1	0.433	3.9119	188.0	0.431	3.5771	187.9	0.430	115
120	4.8497	189.2	0.436	4.3544	189.1	0.435	3.9491	189.0	0.433	3.6114	189.0	0.432	120
125	4.8947	190.2	0.438	4.3951	190.2	0.436	3.9863	190.1	0.435	3.6456	190.0	0.434	125
130	4.9395	191.3	0.440	4.4356	191.2	0.438	4.0234	191.1	0.437	3.6798	191.1	0.435	130
135	4.9843	192.3	0.442	4.4762	192.2	0.440	4.0604	192.2	0.439	3.7139	192.1	0.437	135
140	5.0291	193.4	0.443	4.5166	193.3	0.442	4.0974	193.2	0.440	3.7480	193.2	0.439	140
145	5.0738	194.4	0.445	4.5571	194.3	0.443	4.1343	194.3	0.442	3.7820	194.2	0.441	145
150	5.1184	195.5	0.447	4.5974	195.4	0.445	4.1712	195.3	0.444	3.8159	195.3	0.442	150
155	5.1630	196.5	0.449	4.6377	196.5	0.447	4.2080	196.4	0.446	3.8498	196.4	0.444	155
160	5.2075	197.6	0.450	4.6780	197.5	0.449	4.2447	197.5	0.447	3.8836	197.4	0.446	160
165	5.2519	198.7	0.452	4.7182	198.6	0.450	4.2814	198.6	0.449	3.9174	198.5	0.448	165
170	5.2964	199.7	0.454	4.7583	199.7	0.452	4.3181	199.6	0.451	3.9512	199.6	0.449	170
175	5.3407	200.8	0.455	4.7984	200.8	0.454	4.3547	200.7	0.452	3.9849	200.7	0.451	175
180	5.3851	201.9	0.457	4.8385	201.9	0.456	4.3912	201.8	0.454	4.0185	201.8	0.453	180
185	5.4293	203.0	0.459	4.8785	202.9	0.457	4.4278	202.9	0.456	4.0521	202.8	0.455	185
190	5.4736	204.1	0.461	4.9184	204.0	0.459	4.4642	204.0	0.458	4.0857	203.9	0.456	190
195	5.5178	205.2	0.462	4.9584	205.1	0.461	4.5007	205.1	0.459	4.1192	205.0	0.458	195
200	5.5619	206.3	0.464	4.9983	206.2	0.462	4.5371	206.2	0.461	4.1527	206.1	0.460	200
205	5.6060	207.4	0.466	5.0381	207.4	0.464	4.5734	207.3	0.463	4.1862	207.3	0.461	205
210	5.6501	208.5	0.467	5.0779	208.5	0.466	4.6097	208.4	0.464	4.2196	208.4	0.463	210

Opteon™ XP30 (R-514A)
Superheated Vapor - Constant Pressure Tables

V = volume in ft³/lb

H = enthalpy in Btu/lb

S = entropy in [Btu/lb-°R]

Saturation Properties in Light Green

ABSOLUTE PRESSURE, psia													
Temp °F	13			14			14.696			15			Temp °F
	78.31			81.91			84.30			85.32			
	V	H	S	V	H	S	V	H	S	V	H	S	
	3.0583	180.4	0.415	3.0583	180.4	0.415	3.0583	180.4	0.415	3.0583	180.4	0.415	
80	3.0692	180.7	0.416										80
85	3.1015	181.7	0.418	2.8714	181.7	0.417	2.7297	181.6	0.416				85
90	3.1337	182.8	0.420	2.9014	182.7	0.419	2.7585	182.6	0.418	2.7002	182.6	0.418	90
95	3.1658	183.8	0.422	2.9314	183.7	0.420	2.7872	183.6	0.420	2.7283	183.6	0.419	95
100	3.1979	184.8	0.423	2.9614	184.7	0.422	2.8158	184.7	0.422	2.7564	184.6	0.421	100
105	3.2299	185.8	0.425	2.9913	185.7	0.424	2.8444	185.7	0.423	2.7845	185.7	0.423	105
110	3.2618	186.8	0.427	3.0211	186.8	0.426	2.8729	186.7	0.425	2.8125	186.7	0.425	110
115	3.2937	187.9	0.429	3.0509	187.8	0.428	2.9014	187.8	0.427	2.8404	187.7	0.427	115
120	3.3256	188.9	0.431	3.0806	188.8	0.430	2.9298	188.8	0.429	2.8683	188.8	0.428	120
125	3.3573	190.0	0.432	3.1102	189.9	0.431	2.9581	189.8	0.431	2.8961	189.8	0.430	125
130	3.3890	191.0	0.434	3.1398	190.9	0.433	2.9864	190.9	0.432	2.9238	190.9	0.432	130
135	3.4207	192.0	0.436	3.1694	192.0	0.435	3.0146	191.9	0.434	2.9515	191.9	0.434	135
140	3.4523	193.1	0.438	3.1988	193.0	0.437	3.0428	193.0	0.436	2.9792	193.0	0.436	140
145	3.4838	194.2	0.440	3.2283	194.1	0.438	3.0709	194.1	0.438	3.0068	194.0	0.437	145
150	3.5153	195.2	0.441	3.2576	195.2	0.440	3.0990	195.1	0.439	3.0343	195.1	0.439	150
155	3.5467	196.3	0.443	3.2870	196.2	0.442	3.1270	196.2	0.441	3.0618	196.2	0.441	155
160	3.5781	197.4	0.445	3.3162	197.3	0.444	3.1550	197.3	0.443	3.0892	197.3	0.443	160
165	3.6094	198.4	0.446	3.3454	198.4	0.445	3.1829	198.3	0.445	3.1166	198.3	0.444	165
170	3.6407	199.5	0.448	3.3746	199.5	0.447	3.2108	199.4	0.446	3.1440	199.4	0.446	170
175	3.6720	200.6	0.450	3.4037	200.6	0.449	3.2386	200.5	0.448	3.1713	200.5	0.448	175
180	3.7031	201.7	0.452	3.4328	201.6	0.451	3.2664	201.6	0.450	3.1985	201.6	0.449	180
185	3.7343	202.8	0.453	3.4618	202.7	0.452	3.2941	202.7	0.452	3.2257	202.7	0.451	185
190	3.7654	203.9	0.455	3.4908	203.8	0.454	3.3218	203.8	0.453	3.2529	203.8	0.453	190
195	3.7965	205.0	0.457	3.5198	204.9	0.456	3.3495	204.9	0.455	3.2800	204.9	0.455	195
200	3.8275	206.1	0.458	3.5487	206.1	0.457	3.3771	206.0	0.457	3.3071	206.0	0.456	200
205	3.8585	207.2	0.460	3.5776	207.2	0.459	3.4046	207.1	0.458	3.3341	207.1	0.458	205
210	3.8894	208.3	0.462	3.6064	208.3	0.461	3.4322	208.2	0.460	3.3611	208.2	0.460	210
215	3.9203	209.4	0.463	3.6352	209.4	0.462	3.4597	209.4	0.462	3.3881	209.4	0.461	215
220	3.9512	210.6	0.465	3.6640	210.5	0.464	3.4872	210.5	0.463	3.4150	210.5	0.463	220
225	3.9820	211.7	0.467	3.6927	211.6	0.466	3.5146	211.6	0.465	3.4420	211.6	0.465	225

Opteon™ XP30 (R-514A)
Superheated Vapor - Constant Pressure Tables

V = volume in ft³/lb

H = enthalpy in Btu/lb

S = entropy in [Btu/lb-°R]

Saturation Properties in Light Green

ABSOLUTE PRESSURE, psia													
Temp °F	16			17			18			19			Temp °F
	88.55			91.62			94.56			97.37			
	V	H	S	V	H	S	V	H	S	V	H	S	
	2.5164	182.2	0.416	2.5164	182.2	0.416	2.5164	182.2	0.416	2.5164	182.2	0.416	
90	2.5241	182.5	0.417										90
95	2.5506	183.6	0.418	2.3938	183.5	0.417	2.2544	183.4	0.417				95
100	2.5771	184.6	0.420	2.4188	184.5	0.419	2.2782	184.4	0.418	2.1523	184.4	0.417	100
105	2.6035	185.6	0.422	2.4438	185.5	0.421	2.3019	185.5	0.420	2.1749	185.4	0.419	105
110	2.6299	186.6	0.424	2.4688	186.6	0.423	2.3256	186.5	0.422	2.1974	186.4	0.421	110
115	2.6562	187.7	0.426	2.4937	187.6	0.425	2.3492	187.5	0.424	2.2199	187.5	0.423	115
120	2.6825	188.7	0.427	2.5185	188.6	0.427	2.3728	188.6	0.426	2.2424	188.5	0.425	120
125	2.7087	189.8	0.429	2.5433	189.7	0.428	2.3963	189.6	0.427	2.2648	189.6	0.427	125
130	2.7348	190.8	0.431	2.5680	190.7	0.430	2.4198	190.7	0.429	2.2871	190.6	0.428	130
135	2.7609	191.9	0.433	2.5927	191.8	0.432	2.4432	191.7	0.431	2.3094	191.7	0.430	135
140	2.7870	192.9	0.435	2.6173	192.9	0.434	2.4666	192.8	0.433	2.3316	192.7	0.432	140
145	2.8129	194.0	0.436	2.6419	193.9	0.435	2.4899	193.9	0.435	2.3538	193.8	0.434	145
150	2.8389	195.0	0.438	2.6664	195.0	0.437	2.5131	194.9	0.436	2.3760	194.9	0.435	150
155	2.8648	196.1	0.440	2.6909	196.1	0.439	2.5364	196.0	0.438	2.3981	195.9	0.437	155
160	2.8906	197.2	0.442	2.7153	197.1	0.441	2.5595	197.1	0.440	2.4201	197.0	0.439	160
165	2.9164	198.3	0.443	2.7397	198.2	0.442	2.5826	198.2	0.442	2.4421	198.1	0.441	165
170	2.9421	199.4	0.445	2.7640	199.3	0.444	2.6057	199.3	0.443	2.4640	199.2	0.442	170
175	2.9678	200.4	0.447	2.7883	200.4	0.446	2.6287	200.3	0.445	2.4860	200.3	0.444	175
180	2.9935	201.5	0.449	2.8126	201.5	0.448	2.6517	201.4	0.447	2.5078	201.4	0.446	180
185	3.0191	202.6	0.450	2.8367	202.6	0.449	2.6747	202.5	0.448	2.5296	202.5	0.448	185
190	3.0446	203.7	0.452	2.8609	203.7	0.451	2.6976	203.6	0.450	2.5514	203.6	0.449	190
195	3.0702	204.8	0.454	2.8850	204.8	0.453	2.7204	204.7	0.452	2.5731	204.7	0.451	195
200	3.0956	206.0	0.455	2.9091	205.9	0.454	2.7432	205.9	0.454	2.5948	205.8	0.453	200
205	3.1211	207.1	0.457	2.9331	207.0	0.456	2.7660	207.0	0.455	2.6165	206.9	0.454	205
210	3.1465	208.2	0.459	2.9571	208.1	0.458	2.7888	208.1	0.457	2.6381	208.0	0.456	210
215	3.1719	209.3	0.460	2.9811	209.3	0.459	2.8115	209.2	0.459	2.6597	209.2	0.458	215
220	3.1972	210.4	0.462	3.0050	210.4	0.461	2.8342	210.3	0.460	2.6813	210.3	0.459	220
225	3.2225	211.6	0.464	3.0289	211.5	0.463	2.8568	211.5	0.462	2.7028	211.4	0.461	225
230	3.2478	212.7	0.465	3.0528	212.7	0.464	2.8794	212.6	0.464	2.7243	212.6	0.463	230
235	3.2730	213.8	0.467	3.0766	213.8	0.466	2.9020	213.7	0.465	2.7457	213.7	0.464	235

Opteon™ XP30 (R-514A)
Superheated Vapor - Constant Pressure Tables

V = volume in ft³/lb

H = enthalpy in Btu/lb

S = entropy in [Btu/lb-°R]

Saturation Properties in Light Green

		ABSOLUTE PRESSURE, psia													
Temp °F	20			21			22			23			Temp °F		
	100.06			102.66			105.15			107.56					
	V	H	S	V	H	S	V	H	S	V	H	S			
	2.0393	184.3	0.417	2.0393	184.3	0.417	2.0393	184.3	0.417	2.0393	184.3	0.417			
105	2.0606	185.3	0.419	1.9572	185.3	0.418							105		
110	2.0821	186.4	0.420	1.9777	186.3	0.420	1.8829	186.2	0.419	1.7962	186.2	0.418	110		
115	2.1036	187.4	0.422	1.9983	187.3	0.421	1.9026	187.3	0.421	1.8152	187.2	0.420	115		
120	2.1250	188.4	0.424	2.0188	188.4	0.423	1.9222	188.3	0.422	1.8341	188.2	0.422	120		
125	2.1464	189.5	0.426	2.0392	189.4	0.425	1.9418	189.4	0.424	1.8529	189.3	0.424	125		
130	2.1677	190.6	0.428	2.0596	190.5	0.427	1.9614	190.4	0.426	1.8717	190.4	0.425	130		
135	2.1890	191.6	0.429	2.0800	191.5	0.429	1.9809	191.5	0.428	1.8905	191.4	0.427	135		
140	2.2102	192.7	0.431	2.1003	192.6	0.430	2.0004	192.5	0.430	1.9092	192.5	0.429	140		
145	2.2314	193.7	0.433	2.1206	193.7	0.432	2.0198	193.6	0.431	1.9278	193.6	0.431	145		
150	2.2525	194.8	0.435	2.1408	194.8	0.434	2.0392	194.7	0.433	1.9465	194.6	0.432	150		
155	2.2736	195.9	0.436	2.1609	195.8	0.436	2.0585	195.8	0.435	1.9650	195.7	0.434	155		
160	2.2946	197.0	0.438	2.1811	196.9	0.437	2.0778	196.9	0.437	1.9836	196.8	0.436	160		
165	2.3156	198.1	0.440	2.2011	198.0	0.439	2.0971	197.9	0.438	2.0020	197.9	0.438	165		
170	2.3365	199.1	0.442	2.2212	199.1	0.441	2.1163	199.0	0.440	2.0205	199.0	0.439	170		
175	2.3574	200.2	0.443	2.2411	200.2	0.443	2.1354	200.1	0.442	2.0389	200.1	0.441	175		
180	2.3783	201.3	0.445	2.2611	201.3	0.444	2.1545	201.2	0.444	2.0572	201.2	0.443	180		
185	2.3991	202.4	0.447	2.2810	202.4	0.446	2.1736	202.3	0.445	2.0755	202.3	0.445	185		
190	2.4199	203.5	0.449	2.3008	203.5	0.448	2.1926	203.4	0.447	2.0938	203.4	0.446	190		
195	2.4406	204.6	0.450	2.3206	204.6	0.449	2.2116	204.5	0.449	2.1120	204.5	0.448	195		
200	2.4613	205.8	0.452	2.3404	205.7	0.451	2.2305	205.7	0.450	2.1302	205.6	0.450	200		
205	2.4819	206.9	0.454	2.3602	206.8	0.453	2.2495	206.8	0.452	2.1484	206.7	0.451	205		
210	2.5025	208.0	0.455	2.3799	207.9	0.455	2.2683	207.9	0.454	2.1665	207.9	0.453	210		
215	2.5231	209.1	0.457	2.3995	209.1	0.456	2.2872	209.0	0.455	2.1846	209.0	0.455	215		
220	2.5437	210.2	0.459	2.4192	210.2	0.458	2.3060	210.2	0.457	2.2026	210.1	0.456	220		
225	2.5642	211.4	0.460	2.4388	211.3	0.460	2.3247	211.3	0.459	2.2206	211.2	0.458	225		
230	2.5847	212.5	0.462	2.4583	212.5	0.461	2.3435	212.4	0.460	2.2386	212.4	0.460	230		
235	2.6051	213.7	0.464	2.4779	213.6	0.463	2.3622	213.6	0.462	2.2565	213.5	0.461	235		
240	2.6255	214.8	0.465	2.4974	214.8	0.464	2.3809	214.7	0.464	2.2745	214.7	0.463	240		
245	2.6459	216.0	0.467	2.5168	215.9	0.466	2.3995	215.9	0.465	2.2924	215.8	0.465	245		
250	2.6663	217.1	0.468	2.5363	217.1	0.468	2.4181	217.0	0.467	2.3102	217.0	0.466	250		

Opteon™ XP30 (R-514A)
Superheated Vapor - Constant Pressure Tables

V = volume in ft³/lb

H = enthalpy in Btu/lb

S = entropy in [Btu/lb-°R]

Saturation Properties in Light Green

ABSOLUTE PRESSURE, psia													
Temp °F	24			25			26			27			Temp °F
	109.89			112.15			114.33			116.45			
	V	H	S	V	H	S	V	H	S	V	H	S	
	1.7164	186.1	0.417	1.7164	186.1	0.417	1.7164	186.1	0.417	1.7164	186.1	0.417	
110	1.7168	186.1	0.417										110
115	1.7351	187.1	0.419	1.6613	187.1	0.419	1.5933	187.0	0.418				115
120	1.7532	188.2	0.421	1.6789	188.1	0.420	1.6102	188.1	0.420	1.5466	188.0	0.419	120
125	1.7714	189.2	0.423	1.6964	189.2	0.422	1.6271	189.1	0.422	1.5630	189.0	0.421	125
130	1.7895	190.3	0.425	1.7138	190.2	0.424	1.6440	190.2	0.423	1.5793	190.1	0.423	130
135	1.8075	191.4	0.426	1.7312	191.3	0.426	1.6608	191.2	0.425	1.5956	191.2	0.425	135
140	1.8255	192.4	0.428	1.7486	192.4	0.428	1.6776	192.3	0.427	1.6118	192.2	0.426	140
145	1.8435	193.5	0.430	1.7659	193.4	0.429	1.6943	193.4	0.429	1.6280	193.3	0.428	145
150	1.8614	194.6	0.432	1.7832	194.5	0.431	1.7110	194.5	0.431	1.6441	194.4	0.430	150
155	1.8793	195.7	0.434	1.8004	195.6	0.433	1.7276	195.5	0.432	1.6602	195.5	0.432	155
160	1.8971	196.7	0.435	1.8176	196.7	0.435	1.7442	196.6	0.434	1.6762	196.6	0.433	160
165	1.9149	197.8	0.437	1.8348	197.8	0.436	1.7608	197.7	0.436	1.6923	197.7	0.435	165
170	1.9327	198.9	0.439	1.8519	198.9	0.438	1.7773	198.8	0.438	1.7082	198.8	0.437	170
175	1.9504	200.0	0.441	1.8689	200.0	0.440	1.7938	199.9	0.439	1.7241	199.9	0.439	175
180	1.9680	201.1	0.442	1.8860	201.1	0.442	1.8102	201.0	0.441	1.7400	201.0	0.440	180
185	1.9856	202.2	0.444	1.9029	202.2	0.443	1.8266	202.1	0.443	1.7559	202.1	0.442	185
190	2.0032	203.3	0.446	1.9199	203.3	0.445	1.8429	203.2	0.444	1.7717	203.2	0.444	190
195	2.0207	204.4	0.447	1.9368	204.4	0.447	1.8592	204.3	0.446	1.7874	204.3	0.446	195
200	2.0382	205.6	0.449	1.9536	205.5	0.448	1.8755	205.5	0.448	1.8031	205.4	0.447	200
205	2.0557	206.7	0.451	1.9704	206.6	0.450	1.8917	206.6	0.450	1.8188	206.5	0.449	205
210	2.0731	207.8	0.452	1.9872	207.8	0.452	1.9079	207.7	0.451	1.8345	207.7	0.451	210
215	2.0905	208.9	0.454	2.0040	208.9	0.454	1.9241	208.8	0.453	1.8501	208.8	0.452	215
220	2.1079	210.1	0.456	2.0207	210.0	0.455	1.9402	210.0	0.455	1.8657	209.9	0.454	220
225	2.1252	211.2	0.457	2.0374	211.2	0.457	1.9563	211.1	0.456	1.8812	211.1	0.456	225
230	2.1425	212.3	0.459	2.0540	212.3	0.459	1.9723	212.3	0.458	1.8967	212.2	0.457	230
235	2.1597	213.5	0.461	2.0706	213.4	0.460	1.9884	213.4	0.460	1.9122	213.4	0.459	235
240	2.1769	214.6	0.462	2.0872	214.6	0.462	2.0044	214.5	0.461	1.9277	214.5	0.461	240
245	2.1941	215.8	0.464	2.1038	215.7	0.463	2.0203	215.7	0.463	1.9431	215.7	0.462	245
250	2.2113	216.9	0.466	2.1203	216.9	0.465	2.0363	216.9	0.465	1.9585	216.8	0.464	250
255	2.2284	218.1	0.467	2.1368	218.1	0.467	2.0522	218.0	0.466	1.9739	218.0	0.466	255

Opteon™ XP30 (R-514A)
Superheated Vapor - Constant Pressure Tables

V = volume in ft³/lb

H = enthalpy in Btu/lb

S = entropy in [Btu/lb-°R]

Saturation Properties in Light Green

ABSOLUTE PRESSURE, psia													
Temp °F	28			29			30			31			Temp °F
	118.51			120.52			122.47			124.37			
	V	H	S	V	H	S	V	H	S	V	H	S	
	1.4829	187.6	0.418	1.4829	187.6	0.418	1.4829	187.6	0.418	1.4829	187.6	0.418	
120	1.4876	187.9	0.419										120
125	1.5034	189.0	0.420	1.4480	188.9	0.420	1.3962	188.9	0.419	1.3478	188.8	0.419	125
130	1.5192	190.0	0.422	1.4633	190.0	0.422	1.4111	189.9	0.421	1.3622	189.9	0.420	130
135	1.5350	191.1	0.424	1.4786	191.0	0.423	1.4259	191.0	0.423	1.3766	190.9	0.422	135
140	1.5507	192.2	0.426	1.4938	192.1	0.425	1.4407	192.1	0.425	1.3910	192.0	0.424	140
145	1.5664	193.3	0.428	1.5090	193.2	0.427	1.4554	193.1	0.426	1.4054	193.1	0.426	145
150	1.5820	194.3	0.429	1.5241	194.3	0.429	1.4702	194.2	0.428	1.4196	194.2	0.428	150
155	1.5976	195.4	0.431	1.5393	195.4	0.431	1.4848	195.3	0.430	1.4339	195.2	0.429	155
160	1.6131	196.5	0.433	1.5543	196.5	0.432	1.4995	196.4	0.432	1.4481	196.3	0.431	160
165	1.6286	197.6	0.435	1.5694	197.5	0.434	1.5141	197.5	0.433	1.4623	197.4	0.433	165
170	1.6441	198.7	0.436	1.5844	198.6	0.436	1.5286	198.6	0.435	1.4764	198.5	0.435	170
175	1.6595	199.8	0.438	1.5993	199.7	0.438	1.5431	199.7	0.437	1.4905	199.6	0.436	175
180	1.6749	200.9	0.440	1.6142	200.8	0.439	1.5576	200.8	0.439	1.5046	200.7	0.438	180
185	1.6902	202.0	0.442	1.6291	202.0	0.441	1.5720	201.9	0.440	1.5186	201.9	0.440	185
190	1.7055	203.1	0.443	1.6439	203.1	0.443	1.5864	203.0	0.442	1.5326	203.0	0.442	190
195	1.7208	204.2	0.445	1.6587	204.2	0.444	1.6007	204.1	0.444	1.5465	204.1	0.443	195
200	1.7360	205.4	0.447	1.6734	205.3	0.446	1.6150	205.3	0.446	1.5604	205.2	0.445	200
205	1.7511	206.5	0.448	1.6881	206.4	0.448	1.6293	206.4	0.447	1.5742	206.3	0.447	205
210	1.7663	207.6	0.450	1.7028	207.6	0.450	1.6435	207.5	0.449	1.5881	207.5	0.448	210
215	1.7814	208.7	0.452	1.7174	208.7	0.451	1.6577	208.7	0.451	1.6019	208.6	0.450	215
220	1.7965	209.9	0.453	1.7320	209.8	0.453	1.6719	209.8	0.452	1.6156	209.7	0.452	220
225	1.8115	211.0	0.455	1.7466	211.0	0.455	1.6860	210.9	0.454	1.6293	210.9	0.454	225
230	1.8265	212.2	0.457	1.7611	212.1	0.456	1.7001	212.1	0.456	1.6430	212.0	0.455	230
235	1.8415	213.3	0.458	1.7756	213.3	0.458	1.7142	213.2	0.457	1.6567	213.2	0.457	235
240	1.8564	214.5	0.460	1.7901	214.4	0.460	1.7282	214.4	0.459	1.6703	214.3	0.458	240
245	1.8714	215.6	0.462	1.8046	215.6	0.461	1.7422	215.5	0.461	1.6839	215.5	0.460	245
250	1.8862	216.8	0.463	1.8190	216.7	0.463	1.7562	216.7	0.462	1.6975	216.7	0.462	250
255	1.9011	217.9	0.465	1.8334	217.9	0.464	1.7701	217.9	0.464	1.7110	217.8	0.463	255
260	1.9159	219.1	0.467	1.8477	219.1	0.466	1.7841	219.0	0.466	1.7245	219.0	0.465	260
265	1.9307	220.3	0.468	1.8621	220.2	0.468	1.7980	220.2	0.467	1.7380	220.2	0.467	265

Opteon™ XP30 (R-514A)
Superheated Vapor - Constant Pressure Tables

V = volume in ft³/lb

H = enthalpy in Btu/lb

S = entropy in [Btu/lb-°R]

Saturation Properties in Light Green

ABSOLUTE PRESSURE, psia													
Temp °F	32			33			34			35			Temp °F
	126.22			128.03			129.80			131.53			
	V	H	S	V	H	S	V	H	S	V	H	S	
	1.3058	189.0	0.419	1.3058	189.0	0.419	1.3058	189.0	0.419	1.3058	189.0	0.419	
130	1.3164	189.8	0.420	1.2734	189.7	0.419	1.2329	189.7	0.419				130
135	1.3304	190.9	0.422	1.2870	190.8	0.421	1.2462	190.7	0.421	1.2077	190.7	0.420	135
140	1.3444	191.9	0.424	1.3007	191.9	0.423	1.2595	191.8	0.423	1.2206	191.8	0.422	140
145	1.3584	193.0	0.425	1.3142	193.0	0.425	1.2727	192.9	0.424	1.2335	192.8	0.424	145
150	1.3723	194.1	0.427	1.3278	194.0	0.427	1.2859	194.0	0.426	1.2464	193.9	0.426	150
155	1.3862	195.2	0.429	1.3413	195.1	0.428	1.2991	195.1	0.428	1.2592	195.0	0.427	155
160	1.4000	196.3	0.431	1.3548	196.2	0.430	1.3122	196.2	0.430	1.2720	196.1	0.429	160
165	1.4138	197.4	0.432	1.3682	197.3	0.432	1.3253	197.3	0.431	1.2848	197.2	0.431	165
170	1.4275	198.5	0.434	1.3816	198.4	0.434	1.3383	198.4	0.433	1.2975	198.3	0.433	170
175	1.4412	199.6	0.436	1.3949	199.5	0.435	1.3513	199.5	0.435	1.3102	199.4	0.434	175
180	1.4549	200.7	0.438	1.4082	200.6	0.437	1.3643	200.6	0.437	1.3229	200.5	0.436	180
185	1.4685	201.8	0.439	1.4215	201.7	0.439	1.3772	201.7	0.438	1.3355	201.6	0.438	185
190	1.4821	202.9	0.441	1.4347	202.9	0.441	1.3901	202.8	0.440	1.3480	202.8	0.440	190
195	1.4957	204.0	0.443	1.4479	204.0	0.442	1.4029	203.9	0.442	1.3605	203.9	0.441	195
200	1.5092	205.2	0.445	1.4610	205.1	0.444	1.4157	205.1	0.444	1.3730	205.0	0.443	200
205	1.5226	206.3	0.446	1.4742	206.2	0.446	1.4285	206.2	0.445	1.3855	206.1	0.445	205
210	1.5361	207.4	0.448	1.4872	207.4	0.447	1.4413	207.3	0.447	1.3979	207.3	0.447	210
215	1.5495	208.6	0.450	1.5003	208.5	0.449	1.4540	208.5	0.449	1.4103	208.4	0.448	215
220	1.5628	209.7	0.451	1.5133	209.6	0.451	1.4666	209.6	0.450	1.4226	209.6	0.450	220
225	1.5762	210.8	0.453	1.5263	210.8	0.453	1.4793	210.7	0.452	1.4349	210.7	0.452	225
230	1.5895	212.0	0.455	1.5392	211.9	0.454	1.4919	211.9	0.454	1.4472	211.8	0.453	230
235	1.6028	213.1	0.456	1.5521	213.1	0.456	1.5044	213.0	0.455	1.4595	213.0	0.455	235
240	1.6160	214.3	0.458	1.5650	214.2	0.458	1.5170	214.2	0.457	1.4717	214.2	0.457	240
245	1.6292	215.4	0.460	1.5778	215.4	0.459	1.5295	215.4	0.459	1.4839	215.3	0.458	245
250	1.6424	216.6	0.461	1.5906	216.6	0.461	1.5420	216.5	0.460	1.4960	216.5	0.460	250
255	1.6555	217.8	0.463	1.6034	217.7	0.462	1.5544	217.7	0.462	1.5082	217.7	0.462	255
260	1.6687	218.9	0.465	1.6162	218.9	0.464	1.5668	218.9	0.464	1.5203	218.8	0.463	260
265	1.6818	220.1	0.466	1.6289	220.1	0.466	1.5792	220.0	0.465	1.5323	220.0	0.465	265
270	1.6948	221.3	0.468	1.6417	221.3	0.467	1.5916	221.2	0.467	1.5444	221.2	0.466	270
275	1.7079	222.5	0.469	1.6543	222.4	0.469	1.6039	222.4	0.468	1.5564	222.4	0.468	275

Opteon™ XP30 (R-514A)
Superheated Vapor - Constant Pressure Tables

V = volume in ft³/lb

H = enthalpy in Btu/lb

S = entropy in [Btu/lb-°R]

Saturation Properties in Light Green

		ABSOLUTE PRESSURE, psia												
Temp °F	36			37			38			39			Temp °F	
	133.22			134.87			136.49			138.08				
	V	H	S	V	H	S	V	H	S	V	H	S		
	1.1668	190.2	0.419	1.1668	190.2	0.419	1.1668	190.2	0.419	1.1668	190.2	0.419		
135	1.1713	190.6	0.420	1.1369	190.6	0.419							135	
140	1.1839	191.7	0.422	1.1492	191.6	0.421	1.1163	191.6	0.421	1.0851	191.5	0.420	140	
145	1.1965	192.8	0.423	1.1615	192.7	0.423	1.1283	192.7	0.422	1.0969	192.6	0.422	145	
150	1.2091	193.9	0.425	1.1738	193.8	0.425	1.1403	193.7	0.424	1.1086	193.7	0.424	150	
155	1.2216	195.0	0.427	1.1860	194.9	0.427	1.1523	194.8	0.426	1.1203	194.8	0.426	155	
160	1.2341	196.0	0.429	1.1982	196.0	0.428	1.1642	195.9	0.428	1.1320	195.9	0.427	160	
165	1.2466	197.1	0.431	1.2104	197.1	0.430	1.1761	197.0	0.430	1.1436	197.0	0.429	165	
170	1.2590	198.3	0.432	1.2225	198.2	0.432	1.1880	198.1	0.431	1.1552	198.1	0.431	170	
175	1.2714	199.4	0.434	1.2346	199.3	0.434	1.1998	199.2	0.433	1.1668	199.2	0.433	175	
180	1.2837	200.5	0.436	1.2467	200.4	0.435	1.2116	200.4	0.435	1.1783	200.3	0.434	180	
185	1.2960	201.6	0.438	1.2587	201.5	0.437	1.2233	201.5	0.437	1.1898	201.4	0.436	185	
190	1.3083	202.7	0.439	1.2707	202.7	0.439	1.2350	202.6	0.438	1.2012	202.6	0.438	190	
195	1.3205	203.8	0.441	1.2826	203.8	0.441	1.2467	203.7	0.440	1.2127	203.7	0.440	195	
200	1.3327	205.0	0.443	1.2945	204.9	0.442	1.2583	204.9	0.442	1.2240	204.8	0.441	200	
205	1.3448	206.1	0.444	1.3064	206.0	0.444	1.2699	206.0	0.444	1.2354	205.9	0.443	205	
210	1.3569	207.2	0.446	1.3182	207.2	0.446	1.2815	207.1	0.445	1.2467	207.1	0.445	210	
215	1.3690	208.4	0.448	1.3300	208.3	0.447	1.2930	208.3	0.447	1.2579	208.2	0.446	215	
220	1.3811	209.5	0.449	1.3418	209.5	0.449	1.3045	209.4	0.449	1.2692	209.4	0.448	220	
225	1.3931	210.7	0.451	1.3535	210.6	0.451	1.3160	210.6	0.450	1.2804	210.5	0.450	225	
230	1.4051	211.8	0.453	1.3652	211.8	0.452	1.3274	211.7	0.452	1.2915	211.7	0.452	230	
235	1.4170	213.0	0.454	1.3768	212.9	0.454	1.3388	212.9	0.454	1.3027	212.8	0.453	235	
240	1.4289	214.1	0.456	1.3885	214.1	0.456	1.3501	214.0	0.455	1.3138	214.0	0.455	240	
245	1.4408	215.3	0.458	1.4001	215.2	0.457	1.3615	215.2	0.457	1.3248	215.1	0.457	245	
250	1.4527	216.4	0.459	1.4116	216.4	0.459	1.3728	216.4	0.459	1.3359	216.3	0.458	250	
255	1.4645	217.6	0.461	1.4232	217.6	0.461	1.3840	217.5	0.460	1.3469	217.5	0.460	255	
260	1.4763	218.8	0.463	1.4347	218.7	0.462	1.3953	218.7	0.462	1.3579	218.7	0.461	260	
265	1.4881	220.0	0.464	1.4462	219.9	0.464	1.4065	219.9	0.463	1.3688	219.8	0.463	265	
270	1.4998	221.1	0.466	1.4576	221.1	0.466	1.4177	221.1	0.465	1.3798	221.0	0.465	270	
275	1.5115	222.3	0.468	1.4691	222.3	0.467	1.4288	222.2	0.467	1.3907	222.2	0.466	275	
280	1.5232	223.5	0.469	1.4805	223.5	0.469	1.4400	223.4	0.468	1.4016	223.4	0.468	280	

Opteon™ XP30 (R-514A)
Superheated Vapor - Constant Pressure Tables

V = volume in ft³/lb

H = enthalpy in Btu/lb

S = entropy in [Btu/lb-°R]

Saturation Properties in Light Green

ABSOLUTE PRESSURE, psia													
Temp °F	40			41			42			43			Temp °F
	139.64			141.16			142.66			144.13			
	V	H	S	V	H	S	V	H	S	V	H	S	
	1.0546	191.4	0.420	1.0546	191.4	0.420	1.0546	191.4	0.420	1.0546	191.4	0.420	
140	1.0554	191.4	0.420										140
145	1.0669	192.5	0.422	1.0385	192.5	0.421	1.0114	192.4	0.421	0.9855	192.4	0.420	145
150	1.0784	193.6	0.423	1.0497	193.6	0.423	1.0224	193.5	0.423	0.9963	193.4	0.422	150
155	1.0899	194.7	0.425	1.0610	194.7	0.425	1.0334	194.6	0.424	1.0071	194.5	0.424	155
160	1.1013	195.8	0.427	1.0722	195.8	0.427	1.0444	195.7	0.426	1.0179	195.6	0.426	160
165	1.1127	196.9	0.429	1.0833	196.9	0.428	1.0553	196.8	0.428	1.0286	196.7	0.428	165
170	1.1241	198.0	0.431	1.0945	198.0	0.430	1.0662	197.9	0.430	1.0393	197.9	0.429	170
175	1.1354	199.1	0.432	1.1055	199.1	0.432	1.0771	199.0	0.431	1.0500	199.0	0.431	175
180	1.1467	200.3	0.434	1.1166	200.2	0.434	1.0879	200.1	0.433	1.0606	200.1	0.433	180
185	1.1579	201.4	0.436	1.1276	201.3	0.435	1.0987	201.3	0.435	1.0712	201.2	0.435	185
190	1.1691	202.5	0.437	1.1386	202.4	0.437	1.1095	202.4	0.437	1.0817	202.3	0.436	190
195	1.1803	203.6	0.439	1.1495	203.6	0.439	1.1202	203.5	0.438	1.0922	203.5	0.438	195
200	1.1914	204.8	0.441	1.1604	204.7	0.441	1.1308	204.7	0.440	1.1027	204.6	0.440	200
205	1.2025	205.9	0.443	1.1713	205.8	0.442	1.1415	205.8	0.442	1.1131	205.7	0.441	205
210	1.2136	207.0	0.444	1.1821	207.0	0.444	1.1521	206.9	0.444	1.1235	206.9	0.443	210
215	1.2246	208.2	0.446	1.1929	208.1	0.446	1.1627	208.1	0.445	1.1339	208.0	0.445	215
220	1.2356	209.3	0.448	1.2036	209.3	0.447	1.1732	209.2	0.447	1.1442	209.2	0.447	220
225	1.2465	210.5	0.449	1.2144	210.4	0.449	1.1837	210.4	0.449	1.1545	210.3	0.448	225
230	1.2575	211.6	0.451	1.2250	211.6	0.451	1.1942	211.5	0.450	1.1647	211.5	0.450	230
235	1.2683	212.8	0.453	1.2357	212.7	0.452	1.2046	212.7	0.452	1.1750	212.6	0.452	235
240	1.2792	213.9	0.454	1.2463	213.9	0.454	1.2150	213.9	0.454	1.1851	213.8	0.453	240
245	1.2900	215.1	0.456	1.2569	215.1	0.456	1.2254	215.0	0.455	1.1953	215.0	0.455	245
250	1.3008	216.3	0.458	1.2675	216.2	0.457	1.2357	216.2	0.457	1.2054	216.1	0.457	250
255	1.3116	217.4	0.459	1.2780	217.4	0.459	1.2460	217.4	0.459	1.2156	217.3	0.458	255
260	1.3223	218.6	0.461	1.2885	218.6	0.461	1.2563	218.5	0.460	1.2256	218.5	0.460	260
265	1.3331	219.8	0.463	1.2990	219.8	0.462	1.2666	219.7	0.462	1.2357	219.7	0.462	265
270	1.3437	221.0	0.464	1.3095	220.9	0.464	1.2768	220.9	0.464	1.2457	220.9	0.463	270
275	1.3544	222.2	0.466	1.3199	222.1	0.466	1.2870	222.1	0.465	1.2557	222.0	0.465	275
280	1.3650	223.4	0.468	1.3303	223.3	0.467	1.2972	223.3	0.467	1.2657	223.2	0.466	280
285	1.3757	224.5	0.469	1.3407	224.5	0.469	1.3074	224.5	0.468	1.2756	224.4	0.468	285

Opteon™ XP30 (R-514A)
Superheated Vapor - Constant Pressure Tables

V = volume in ft³/lb

H = enthalpy in Btu/lb

S = entropy in [Btu/lb-°R]

Saturation Properties in Light Green

ABSOLUTE PRESSURE, psia													
Temp °F	44			45			46			47			Temp °F
	145.58			147.00			148.39			149.77			
	V	H	S	V	H	S	V	H	S	V	H	S	
	0.9621	192.4	0.420	0.9621	192.4	0.420	0.9621	192.4	0.420	0.9621	192.4	0.420	
150	0.9715	193.4	0.422	0.9477	193.3	0.421	0.9249	193.3	0.421	0.9031	193.2	0.421	150
155	0.9820	194.5	0.424	0.9581	194.4	0.423	0.9351	194.4	0.423	0.9131	194.3	0.422	155
160	0.9926	195.6	0.425	0.9684	195.5	0.425	0.9453	195.5	0.425	0.9231	195.4	0.424	160
165	1.0031	196.7	0.427	0.9788	196.6	0.427	0.9554	196.6	0.426	0.9331	196.5	0.426	165
170	1.0136	197.8	0.429	0.9890	197.7	0.429	0.9655	197.7	0.428	0.9430	197.6	0.428	170
175	1.0241	198.9	0.431	0.9993	198.9	0.430	0.9756	198.8	0.430	0.9529	198.7	0.430	175
180	1.0345	200.0	0.432	1.0095	200.0	0.432	0.9857	199.9	0.432	0.9628	199.9	0.431	180
185	1.0449	201.2	0.434	1.0197	201.1	0.434	0.9957	201.1	0.433	0.9726	201.0	0.433	185
190	1.0552	202.3	0.436	1.0299	202.2	0.436	1.0056	202.2	0.435	0.9824	202.1	0.435	190
195	1.0655	203.4	0.438	1.0400	203.4	0.437	1.0156	203.3	0.437	0.9922	203.3	0.437	195
200	1.0758	204.6	0.439	1.0501	204.5	0.439	1.0255	204.5	0.439	1.0019	204.4	0.438	200
205	1.0860	205.7	0.441	1.0601	205.6	0.441	1.0353	205.6	0.440	1.0116	205.5	0.440	205
210	1.0962	206.8	0.443	1.0701	206.8	0.442	1.0451	206.7	0.442	1.0212	206.7	0.442	210
215	1.1063	208.0	0.445	1.0801	207.9	0.444	1.0549	207.9	0.444	1.0308	207.8	0.443	215
220	1.1165	209.1	0.446	1.0900	209.1	0.446	1.0647	209.0	0.445	1.0404	209.0	0.445	220
225	1.1266	210.3	0.448	1.0999	210.2	0.448	1.0744	210.2	0.447	1.0499	210.1	0.447	225
230	1.1366	211.4	0.450	1.1098	211.4	0.449	1.0841	211.3	0.449	1.0595	211.3	0.448	230
235	1.1466	212.6	0.451	1.1196	212.6	0.451	1.0937	212.5	0.451	1.0689	212.5	0.450	235
240	1.1566	213.8	0.453	1.1294	213.7	0.453	1.1033	213.7	0.452	1.0784	213.6	0.452	240
245	1.1666	214.9	0.455	1.1392	214.9	0.454	1.1129	214.8	0.454	1.0878	214.8	0.454	245
250	1.1765	216.1	0.456	1.1489	216.1	0.456	1.1225	216.0	0.456	1.0972	216.0	0.455	250
255	1.1864	217.3	0.458	1.1586	217.2	0.458	1.1320	217.2	0.457	1.1065	217.1	0.457	255
260	1.1963	218.5	0.460	1.1683	218.4	0.459	1.1415	218.4	0.459	1.1159	218.3	0.458	260
265	1.2062	219.6	0.461	1.1780	219.6	0.461	1.1510	219.6	0.460	1.1252	219.5	0.460	265
270	1.2160	220.8	0.463	1.1876	220.8	0.462	1.1604	220.7	0.462	1.1344	220.7	0.462	270
275	1.2258	222.0	0.464	1.1972	222.0	0.464	1.1699	221.9	0.464	1.1437	221.9	0.463	275
280	1.2356	223.2	0.466	1.2068	223.2	0.466	1.1793	223.1	0.465	1.1529	223.1	0.465	280
285	1.2453	224.4	0.468	1.2164	224.4	0.467	1.1886	224.3	0.467	1.1621	224.3	0.467	285
290	1.2551	225.6	0.469	1.2259	225.6	0.469	1.1980	225.5	0.469	1.1713	225.5	0.468	290
295	1.2648	226.8	0.471	1.2354	226.8	0.470	1.2073	226.7	0.470	1.1804	226.7	0.470	295

Opteon™ XP30 (R-514A)
Superheated Vapor - Constant Pressure Tables

V = volume in ft³/lb

H = enthalpy in Btu/lb

S = entropy in [Btu/lb-°R]

Saturation Properties in Light Green

ABSOLUTE PRESSURE, psia													
Temp °F	48			49			50			51			Temp °F
	151.12			152.45			153.76			155.04			
	V	H	S	V	H	S	V	H	S	V	H	S	
	0.8844	193.4	0.421	0.8844	193.4	0.421	0.8844	193.4	0.421	0.8844	193.4	0.421	
155	0.8921	194.2	0.422	0.8719	194.2	0.422	0.8525	194.1	0.421	0.8525	194.1	0.421	155
160	0.9019	195.4	0.424	0.8815	195.3	0.423	0.8620	195.2	0.423	0.8432	195.2	0.423	160
165	0.9117	196.5	0.426	0.8912	196.4	0.425	0.8715	196.3	0.425	0.8525	196.3	0.425	165
170	0.9215	197.6	0.427	0.9008	197.5	0.427	0.8809	197.5	0.427	0.8618	197.4	0.426	170
175	0.9312	198.7	0.429	0.9103	198.6	0.429	0.8903	198.6	0.428	0.8711	198.5	0.428	175
180	0.9409	199.8	0.431	0.9199	199.8	0.431	0.8997	199.7	0.430	0.8803	199.7	0.430	180
185	0.9506	200.9	0.433	0.9294	200.9	0.432	0.9090	200.8	0.432	0.8895	200.8	0.432	185
190	0.9602	202.1	0.434	0.9388	202.0	0.434	0.9183	202.0	0.434	0.8987	201.9	0.433	190
195	0.9698	203.2	0.436	0.9483	203.2	0.436	0.9276	203.1	0.435	0.9078	203.1	0.435	195
200	0.9793	204.3	0.438	0.9577	204.3	0.438	0.9369	204.2	0.437	0.9169	204.2	0.437	200
205	0.9888	205.5	0.440	0.9670	205.4	0.439	0.9461	205.4	0.439	0.9259	205.3	0.439	205
210	0.9983	206.6	0.441	0.9763	206.6	0.441	0.9552	206.5	0.441	0.9349	206.5	0.440	210
215	1.0077	207.8	0.443	0.9856	207.7	0.443	0.9643	207.7	0.442	0.9439	207.6	0.442	215
220	1.0172	208.9	0.445	0.9949	208.9	0.444	0.9734	208.8	0.444	0.9529	208.8	0.444	220
225	1.0265	210.1	0.446	1.0041	210.0	0.446	0.9825	210.0	0.446	0.9618	210.0	0.445	225
230	1.0359	211.3	0.448	1.0132	211.2	0.448	0.9915	211.2	0.447	0.9706	211.1	0.447	230
235	1.0452	212.4	0.450	1.0224	212.4	0.449	1.0005	212.3	0.449	0.9795	212.3	0.449	235
240	1.0545	213.6	0.451	1.0315	213.5	0.451	1.0095	213.5	0.451	0.9883	213.4	0.450	240
245	1.0637	214.8	0.453	1.0406	214.7	0.453	1.0184	214.7	0.452	0.9971	214.6	0.452	245
250	1.0729	215.9	0.455	1.0497	215.9	0.454	1.0273	215.8	0.454	1.0058	215.8	0.454	250
255	1.0821	217.1	0.456	1.0587	217.1	0.456	1.0362	217.0	0.456	1.0146	217.0	0.455	255
260	1.0913	218.3	0.458	1.0677	218.2	0.458	1.0450	218.2	0.457	1.0233	218.2	0.457	260
265	1.1004	219.5	0.460	1.0767	219.4	0.459	1.0539	219.4	0.459	1.0319	219.3	0.459	265
270	1.1095	220.7	0.461	1.0856	220.6	0.461	1.0626	220.6	0.461	1.0406	220.5	0.460	270
275	1.1186	221.8	0.463	1.0945	221.8	0.463	1.0714	221.8	0.462	1.0492	221.7	0.462	275
280	1.1277	223.0	0.465	1.1034	223.0	0.464	1.0801	223.0	0.464	1.0578	222.9	0.464	280
285	1.1367	224.2	0.466	1.1123	224.2	0.466	1.0889	224.2	0.466	1.0664	224.1	0.465	285
290	1.1457	225.4	0.468	1.1211	225.4	0.468	1.0976	225.4	0.467	1.0749	225.3	0.467	290
295	1.1547	226.6	0.469	1.1300	226.6	0.469	1.1062	226.6	0.469	1.0834	226.5	0.468	295
300	1.1636	227.9	0.471	1.1388	227.8	0.471	1.1149	227.8	0.470	1.0919	227.7	0.470	300

Opteon™ XP30 (R-514A)
Superheated Vapor - Constant Pressure Tables

V = volume in ft³/lb

H = enthalpy in Btu/lb

S = entropy in [Btu/lb-°R]

Saturation Properties in Light Green

ABSOLUTE PRESSURE, psia													
Temp °F	52			53			54			55			Temp °F
	156.31			157.56			158.80			160.01			
	V	H	S	V	H	S	V	H	S	V	H	S	
	0.8183	194.3	0.421	0.8183	194.3	0.421	0.8183	194.3	0.421	0.8183	194.3	0.421	
160	0.8251	195.1	0.422	0.8077	195.1	0.422	0.7909	195.0	0.422				160
165	0.8343	196.2	0.424	0.8167	196.2	0.424	0.7998	196.1	0.424	0.7835	196.1	0.423	165
170	0.8434	197.3	0.426	0.8257	197.3	0.426	0.8087	197.2	0.425	0.7923	197.2	0.425	170
175	0.8526	198.5	0.428	0.8347	198.4	0.427	0.8176	198.4	0.427	0.8010	198.3	0.427	175
180	0.8616	199.6	0.430	0.8437	199.5	0.429	0.8264	199.5	0.429	0.8097	199.4	0.429	180
185	0.8707	200.7	0.431	0.8526	200.7	0.431	0.8352	200.6	0.431	0.8184	200.6	0.430	185
190	0.8797	201.9	0.433	0.8615	201.8	0.433	0.8439	201.8	0.432	0.8270	201.7	0.432	190
195	0.8887	203.0	0.435	0.8703	202.9	0.434	0.8526	202.9	0.434	0.8356	202.8	0.434	195
200	0.8976	204.1	0.437	0.8791	204.1	0.436	0.8613	204.0	0.436	0.8441	204.0	0.436	200
205	0.9065	205.3	0.438	0.8879	205.2	0.438	0.8700	205.2	0.438	0.8526	205.1	0.437	205
210	0.9154	206.4	0.440	0.8966	206.4	0.440	0.8786	206.3	0.439	0.8611	206.3	0.439	210
215	0.9243	207.6	0.442	0.9053	207.5	0.441	0.8871	207.5	0.441	0.8696	207.4	0.441	215
220	0.9331	208.7	0.443	0.9140	208.7	0.443	0.8957	208.6	0.443	0.8780	208.6	0.442	220
225	0.9418	209.9	0.445	0.9227	209.9	0.445	0.9042	209.8	0.444	0.8864	209.8	0.444	225
230	0.9506	211.1	0.447	0.9313	211.0	0.446	0.9126	211.0	0.446	0.8947	210.9	0.446	230
235	0.9593	212.2	0.448	0.9398	212.2	0.448	0.9211	212.1	0.448	0.9030	212.1	0.448	235
240	0.9680	213.4	0.450	0.9484	213.4	0.450	0.9295	213.3	0.450	0.9113	213.3	0.449	240
245	0.9766	214.6	0.452	0.9569	214.5	0.452	0.9379	214.5	0.451	0.9195	214.4	0.451	245
250	0.9852	215.8	0.454	0.9653	215.7	0.453	0.9462	215.7	0.453	0.9278	215.6	0.453	250
255	0.9938	216.9	0.455	0.9738	216.9	0.455	0.9545	216.8	0.455	0.9359	216.8	0.454	255
260	1.0023	218.1	0.457	0.9822	218.1	0.457	0.9628	218.0	0.456	0.9441	218.0	0.456	260
265	1.0109	219.3	0.458	0.9906	219.3	0.458	0.9711	219.2	0.458	0.9522	219.2	0.458	265
270	1.0194	220.5	0.460	0.9990	220.5	0.460	0.9793	220.4	0.459	0.9603	220.4	0.459	270
275	1.0278	221.7	0.462	1.0073	221.7	0.461	0.9875	221.6	0.461	0.9684	221.6	0.461	275
280	1.0363	222.9	0.463	1.0156	222.8	0.463	0.9957	222.8	0.463	0.9765	222.8	0.462	280
285	1.0447	224.1	0.465	1.0239	224.0	0.465	1.0038	224.0	0.464	0.9845	224.0	0.464	285
290	1.0531	225.3	0.467	1.0322	225.3	0.466	1.0120	225.2	0.466	0.9925	225.2	0.466	290
295	1.0615	226.5	0.468	1.0404	226.5	0.468	1.0201	226.4	0.468	1.0005	226.4	0.467	295
300	1.0698	227.7	0.470	1.0486	227.7	0.469	1.0282	227.6	0.469	1.0084	227.6	0.469	300
305	1.0782	228.9	0.471	1.0568	228.9	0.471	1.0362	228.9	0.471	1.0164	228.8	0.470	305

Opteon™ XP30 (R-514A)
Superheated Vapor - Constant Pressure Tables

V = volume in ft³/lb

H = enthalpy in Btu/lb

S = entropy in [Btu/lb-°R]

Saturation Properties in Light Green

		ABSOLUTE PRESSURE, psia													
		60			65			70			75				
Temp °F	165.85			171.32			176.49			181.38			Temp °F		
	V	H	S	V	H	S	V	H	S	V	H	S			
	Saturation Properties			Saturation Properties			Saturation Properties			Saturation Properties					
	0.7116	196.0	0.422	0.7116	196.0	0.422	0.7116	196.0	0.422	0.7116	196.0	0.422			
170	0.7184	196.9	0.423										170		
175	0.7265	198.0	0.425	0.6634	197.7	0.424							175		
180	0.7346	199.2	0.427	0.6710	198.9	0.426	0.6163	198.6	0.424				180		
185	0.7427	200.3	0.429	0.6786	200.0	0.427	0.6235	199.7	0.426	0.5757	199.5	0.425	185		
190	0.7508	201.4	0.431	0.6862	201.2	0.429	0.6307	200.9	0.428	0.5826	200.6	0.426	190		
195	0.7588	202.6	0.432	0.6937	202.3	0.431	0.6378	202.0	0.430	0.5893	201.8	0.428	195		
200	0.7668	203.7	0.434	0.7012	203.5	0.433	0.6449	203.2	0.431	0.5961	202.9	0.430	200		
205	0.7747	204.9	0.436	0.7087	204.6	0.434	0.6520	204.4	0.433	0.6028	204.1	0.432	205		
210	0.7826	206.0	0.438	0.7161	205.8	0.436	0.6590	205.5	0.435	0.6095	205.3	0.433	210		
215	0.7905	207.2	0.439	0.7235	206.9	0.438	0.6660	206.7	0.437	0.6161	206.4	0.435	215		
220	0.7984	208.4	0.441	0.7309	208.1	0.440	0.6730	207.9	0.438	0.6228	207.6	0.437	220		
225	0.8062	209.5	0.443	0.7382	209.3	0.441	0.6799	209.0	0.440	0.6293	208.8	0.439	225		
230	0.8139	210.7	0.444	0.7455	210.5	0.443	0.6868	210.2	0.442	0.6359	210.0	0.440	230		
235	0.8217	211.9	0.446	0.7528	211.6	0.445	0.6937	211.4	0.443	0.6424	211.2	0.442	235		
240	0.8294	213.0	0.448	0.7600	212.8	0.446	0.7005	212.6	0.445	0.6489	212.3	0.444	240		
245	0.8371	214.2	0.449	0.7672	214.0	0.448	0.7073	213.8	0.447	0.6553	213.5	0.446	245		
250	0.8447	215.4	0.451	0.7744	215.2	0.450	0.7141	215.0	0.448	0.6617	214.7	0.447	250		
255	0.8523	216.6	0.453	0.7816	216.4	0.451	0.7208	216.2	0.450	0.6681	215.9	0.449	255		
260	0.8599	217.8	0.454	0.7887	217.6	0.453	0.7275	217.3	0.452	0.6745	217.1	0.451	260		
265	0.8675	219.0	0.456	0.7957	218.8	0.455	0.7342	218.6	0.453	0.6808	218.3	0.452	265		
270	0.8750	220.2	0.458	0.8028	220.0	0.456	0.7408	219.8	0.455	0.6871	219.5	0.454	270		
275	0.8825	221.4	0.459	0.8098	221.2	0.458	0.7475	221.0	0.457	0.6934	220.8	0.456	275		
280	0.8900	222.6	0.461	0.8168	222.4	0.460	0.7540	222.2	0.458	0.6996	222.0	0.457	280		
285	0.8975	223.8	0.463	0.8238	223.6	0.461	0.7606	223.4	0.460	0.7058	223.2	0.459	285		
290	0.9049	225.0	0.464	0.8308	224.8	0.463	0.7671	224.6	0.462	0.7120	224.4	0.460	290		
295	0.9123	226.2	0.466	0.8377	226.0	0.465	0.7737	225.8	0.463	0.7181	225.6	0.462	295		
300	0.9197	227.4	0.467	0.8446	227.2	0.466	0.7802	227.0	0.465	0.7243	226.9	0.464	300		
305	0.9271	228.6	0.469	0.8515	228.5	0.468	0.7866	228.3	0.467	0.7304	228.1	0.465	305		
310	0.9344	229.9	0.471	0.8583	229.7	0.469	0.7931	229.5	0.468	0.7365	229.3	0.467	310		
315	0.9417	231.1	0.472	0.8652	230.9	0.471	0.7995	230.7	0.470	0.7425	230.5	0.469	315		

Opteon™ XP30 (R-514A)
Superheated Vapor - Constant Pressure Tables

V = volume in ft³/lb

H = enthalpy in Btu/lb

S = entropy in [Btu/lb-°R]

Saturation Properties in Light Green

ABSOLUTE PRESSURE, psia													
Temp °F	80			85			90			95			Temp °F
	186.02			190.46			194.69			198.76			
	V	H	S	V	H	S	V	H	S	V	H	S	
	0.5352	199.4	0.424	0.5352	199.4	0.424	0.5352	199.4	0.424	0.5352	199.4	0.424	
190	0.5403	200.3	0.425										190
195	0.5468	201.5	0.427	0.5092	201.2	0.426	0.4757	200.9	0.425				195
200	0.5533	202.6	0.429	0.5154	202.4	0.428	0.4816	202.1	0.426	0.4514	201.8	0.425	200
205	0.5597	203.8	0.431	0.5215	203.5	0.429	0.4876	203.3	0.428	0.4571	203.0	0.427	205
210	0.5661	205.0	0.432	0.5277	204.7	0.431	0.4934	204.5	0.430	0.4628	204.2	0.429	210
215	0.5724	206.2	0.434	0.5337	205.9	0.433	0.4993	205.6	0.432	0.4684	205.4	0.431	215
220	0.5787	207.3	0.436	0.5398	207.1	0.435	0.5051	206.8	0.434	0.4740	206.6	0.432	220
225	0.5850	208.5	0.438	0.5458	208.3	0.436	0.5109	208.0	0.435	0.4796	207.8	0.434	225
230	0.5912	209.7	0.439	0.5518	209.5	0.438	0.5167	209.2	0.437	0.4852	209.0	0.436	230
235	0.5975	210.9	0.441	0.5577	210.7	0.440	0.5224	210.4	0.439	0.4907	210.2	0.438	235
240	0.6036	212.1	0.443	0.5636	211.9	0.442	0.5280	211.6	0.440	0.4961	211.4	0.439	240
245	0.6098	213.3	0.444	0.5695	213.1	0.443	0.5337	212.8	0.442	0.5016	212.6	0.441	245
250	0.6159	214.5	0.446	0.5754	214.3	0.445	0.5393	214.0	0.444	0.5070	213.8	0.443	250
255	0.6220	215.7	0.448	0.5812	215.5	0.447	0.5449	215.2	0.446	0.5124	215.0	0.445	255
260	0.6280	216.9	0.449	0.5870	216.7	0.448	0.5504	216.5	0.447	0.5177	216.2	0.446	260
265	0.6340	218.1	0.451	0.5927	217.9	0.450	0.5559	217.7	0.449	0.5230	217.5	0.448	265
270	0.6400	219.3	0.453	0.5984	219.1	0.452	0.5614	218.9	0.451	0.5283	218.7	0.450	270
275	0.6460	220.5	0.454	0.6041	220.3	0.453	0.5669	220.1	0.452	0.5335	219.9	0.451	275
280	0.6519	221.8	0.456	0.6098	221.6	0.455	0.5723	221.3	0.454	0.5387	221.1	0.453	280
285	0.6578	223.0	0.458	0.6154	222.8	0.457	0.5777	222.6	0.456	0.5439	222.4	0.455	285
290	0.6637	224.2	0.459	0.6210	224.0	0.458	0.5831	223.8	0.457	0.5491	223.6	0.456	290
295	0.6695	225.4	0.461	0.6266	225.2	0.460	0.5884	225.0	0.459	0.5542	224.8	0.458	295
300	0.6754	226.7	0.463	0.6321	226.5	0.462	0.5937	226.3	0.461	0.5593	226.1	0.460	300
305	0.6812	227.9	0.464	0.6377	227.7	0.463	0.5990	227.5	0.462	0.5644	227.3	0.461	305
310	0.6869	229.1	0.466	0.6432	228.9	0.465	0.6043	228.8	0.464	0.5694	228.6	0.463	310
315	0.6927	230.4	0.467	0.6487	230.2	0.466	0.6095	230.0	0.465	0.5745	229.8	0.464	315
320	0.6984	231.6	0.469	0.6541	231.4	0.468	0.6147	231.2	0.467	0.5795	231.1	0.466	320
325	0.7041	232.8	0.471	0.6596	232.7	0.470	0.6199	232.5	0.469	0.5844	232.3	0.468	325
330	0.7098	234.1	0.472	0.6650	233.9	0.471	0.6251	233.7	0.470	0.5894	233.6	0.469	330
335	0.7155	235.3	0.474	0.6704	235.2	0.473	0.6303	235.0	0.472	0.5943	234.8	0.471	335

Opteon™ XP30 (R-514A)
Superheated Vapor - Constant Pressure Tables

V = volume in ft³/lb

H = enthalpy in Btu/lb

S = entropy in [Btu/lb-°R]

Saturation Properties in Light Green

ABSOLUTE PRESSURE, psia													
Temp °F	100			110			120			130			Temp °F
	202.66			210.05			216.94			223.42			
	V	H	S	V	H	S	V	H	S	V	H	S	
	0.4270	202.2	0.425	0.4270	202.2	0.425	0.4270	202.2	0.425	0.4270	202.2	0.425	
205	0.4296	202.7	0.426										205
210	0.4351	203.9	0.428										210
215	0.4405	205.1	0.430	0.3922	204.5	0.428							215
220	0.4460	206.3	0.431	0.3973	205.8	0.430	0.3565	205.2	0.428				220
225	0.4514	207.5	0.433	0.4024	207.0	0.431	0.3614	206.4	0.429	0.3264	205.8	0.428	225
230	0.4567	208.7	0.435	0.4075	208.2	0.433	0.3662	207.6	0.431	0.3310	207.1	0.430	230
235	0.4621	209.9	0.437	0.4125	209.4	0.435	0.3710	208.9	0.433	0.3356	208.3	0.431	235
240	0.4674	211.1	0.438	0.4175	210.6	0.437	0.3757	210.1	0.435	0.3402	209.6	0.433	240
245	0.4726	212.3	0.440	0.4225	211.8	0.438	0.3804	211.3	0.437	0.3447	210.8	0.435	245
250	0.4778	213.6	0.442	0.4274	213.1	0.440	0.3851	212.6	0.438	0.3492	212.1	0.437	250
255	0.4830	214.8	0.444	0.4322	214.3	0.442	0.3897	213.8	0.440	0.3536	213.3	0.438	255
260	0.4882	216.0	0.445	0.4371	215.5	0.444	0.3943	215.0	0.442	0.3580	214.6	0.440	260
265	0.4933	217.2	0.447	0.4419	216.8	0.445	0.3989	216.3	0.443	0.3623	215.8	0.442	265
270	0.4984	218.5	0.449	0.4467	218.0	0.447	0.4034	217.5	0.445	0.3666	217.1	0.444	270
275	0.5034	219.7	0.450	0.4514	219.2	0.449	0.4079	218.8	0.447	0.3709	218.3	0.445	275
280	0.5085	220.9	0.452	0.4561	220.5	0.450	0.4123	220.0	0.449	0.3752	219.6	0.447	280
285	0.5135	222.2	0.454	0.4608	221.7	0.452	0.4168	221.3	0.450	0.3794	220.8	0.449	285
290	0.5184	223.4	0.455	0.4654	223.0	0.454	0.4211	222.5	0.452	0.3835	222.1	0.450	290
295	0.5234	224.6	0.457	0.4701	224.2	0.455	0.4255	223.8	0.454	0.3877	223.4	0.452	295
300	0.5283	225.9	0.459	0.4746	225.5	0.457	0.4298	225.1	0.455	0.3918	224.6	0.454	300
305	0.5332	227.1	0.460	0.4792	226.7	0.459	0.4341	226.3	0.457	0.3959	225.9	0.455	305
310	0.5380	228.4	0.462	0.4837	228.0	0.460	0.4384	227.6	0.459	0.3999	227.2	0.457	310
315	0.5429	229.6	0.464	0.4882	229.2	0.462	0.4426	228.8	0.460	0.4039	228.4	0.459	315
320	0.5477	230.9	0.465	0.4927	230.5	0.463	0.4469	230.1	0.462	0.4079	229.7	0.460	320
325	0.5525	232.1	0.467	0.4972	231.8	0.465	0.4510	231.4	0.463	0.4119	231.0	0.462	325
330	0.5572	233.4	0.468	0.5016	233.0	0.467	0.4552	232.7	0.465	0.4158	232.3	0.464	330
335	0.5620	234.6	0.470	0.5060	234.3	0.468	0.4594	233.9	0.467	0.4198	233.6	0.465	335
340	0.5667	235.9	0.472	0.5104	235.6	0.470	0.4635	235.2	0.468	0.4237	234.8	0.467	340
345	0.5714	237.2	0.473	0.5148	236.8	0.471	0.4676	236.5	0.470	0.4275	236.1	0.468	345
350	0.5761	238.4	0.475	0.5192	238.1	0.473	0.4716	237.8	0.472	0.4314	237.4	0.470	350

Opteon™ XP30 (R-514A)
Superheated Vapor - Constant Pressure Tables

V = volume in ft³/lb

H = enthalpy in Btu/lb

S = entropy in [Btu/lb-°R]

Saturation Properties in Light Green

ABSOLUTE PRESSURE, psia													
Temp °F	140			150			160			170			Temp °F
	229.53			235.31			240.81			246.06			
	V	H	S	V	H	S	V	H	S	V	H	S	
	0.3002	206.4	0.428	0.3002	206.4	0.428	0.3002	206.4	0.428	0.3002	206.4	0.428	
230	0.3006	206.5	0.428										230
235	0.3051	207.8	0.430										235
240	0.3095	209.0	0.431	0.2827	208.4	0.430							240
245	0.3138	210.3	0.433	0.2869	209.7	0.432	0.2631	209.1	0.430				245
250	0.3182	211.5	0.435	0.2911	211.0	0.433	0.2672	210.4	0.432	0.2459	209.8	0.430	250
255	0.3224	212.8	0.437	0.2952	212.2	0.435	0.2712	211.7	0.434	0.2499	211.1	0.432	255
260	0.3267	214.0	0.439	0.2993	213.5	0.437	0.2752	213.0	0.435	0.2538	212.4	0.434	260
265	0.3308	215.3	0.440	0.3034	214.8	0.439	0.2792	214.3	0.437	0.2577	213.7	0.436	265
270	0.3350	216.6	0.442	0.3074	216.1	0.441	0.2831	215.6	0.439	0.2615	215.0	0.438	270
275	0.3391	217.8	0.444	0.3114	217.3	0.442	0.2870	216.8	0.441	0.2653	216.3	0.439	275
280	0.3432	219.1	0.445	0.3153	218.6	0.444	0.2908	218.1	0.443	0.2690	217.6	0.441	280
285	0.3472	220.4	0.447	0.3192	219.9	0.446	0.2946	219.4	0.444	0.2727	218.9	0.443	285
290	0.3512	221.7	0.449	0.3230	221.2	0.447	0.2983	220.7	0.446	0.2763	220.2	0.445	290
295	0.3552	222.9	0.451	0.3269	222.5	0.449	0.3020	222.0	0.448	0.2799	221.5	0.446	295
300	0.3591	224.2	0.452	0.3306	223.8	0.451	0.3056	223.3	0.449	0.2835	222.8	0.448	300
305	0.3630	225.5	0.454	0.3344	225.1	0.453	0.3093	224.6	0.451	0.2870	224.2	0.450	305
310	0.3669	226.8	0.456	0.3381	226.3	0.454	0.3129	225.9	0.453	0.2905	225.5	0.452	310
315	0.3707	228.0	0.457	0.3418	227.6	0.456	0.3164	227.2	0.455	0.2939	226.8	0.453	315
320	0.3745	229.3	0.459	0.3454	228.9	0.458	0.3199	228.5	0.456	0.2973	228.1	0.455	320
325	0.3783	230.6	0.461	0.3491	230.2	0.459	0.3234	229.8	0.458	0.3007	229.4	0.457	325
330	0.3820	231.9	0.462	0.3527	231.5	0.461	0.3269	231.1	0.460	0.3041	230.7	0.458	330
335	0.3858	233.2	0.464	0.3562	232.8	0.462	0.3303	232.4	0.461	0.3074	232.0	0.460	335
340	0.3895	234.5	0.465	0.3598	234.1	0.464	0.3337	233.7	0.463	0.3107	233.3	0.462	340
345	0.3931	235.8	0.467	0.3633	235.4	0.466	0.3371	235.0	0.464	0.3139	234.6	0.463	345
350	0.3968	237.1	0.469	0.3668	236.7	0.467	0.3404	236.3	0.466	0.3172	236.0	0.465	350

Opteon™ XP30 (R-514A)
Superheated Vapor - Constant Pressure Tables

V = volume in ft³/lb

H = enthalpy in Btu/lb

S = entropy in [Btu/lb·°R]

Saturation Properties in Light Green

ABSOLUTE PRESSURE, psia													
Temp °F	180			190			200			210			Temp °F
	251.08			255.90			260.52			264.97			
	V	H	S	V	H	S	V	H	S	V	H	S	
	0.2276	209.5	0.429	0.2276	209.5	0.429	0.2276	209.5	0.429	0.2276	209.5	0.429	
255	0.2306	210.5	0.431										255
260	0.2345	211.8	0.433	0.2171	211.2	0.431							260
265	0.2383	213.2	0.434	0.2209	212.6	0.433	0.2049	211.9	0.432	0.1903	211.3	0.430	265
270	0.2421	214.5	0.436	0.2246	213.9	0.435	0.2086	213.3	0.433	0.1940	212.7	0.432	270
275	0.2458	215.8	0.438	0.2283	215.2	0.437	0.2123	214.6	0.435	0.1976	214.0	0.434	275
280	0.2495	217.1	0.440	0.2319	216.6	0.438	0.2159	216.0	0.437	0.2012	215.4	0.436	280
285	0.2531	218.4	0.442	0.2354	217.9	0.440	0.2194	217.3	0.439	0.2047	216.8	0.438	285
290	0.2567	219.7	0.443	0.2390	219.2	0.442	0.2229	218.7	0.441	0.2082	218.1	0.440	290
295	0.2602	221.1	0.445	0.2424	220.5	0.444	0.2263	220.0	0.443	0.2116	219.5	0.441	295
300	0.2637	222.4	0.447	0.2458	221.9	0.446	0.2297	221.4	0.444	0.2149	220.8	0.443	300
305	0.2671	223.7	0.449	0.2492	223.2	0.447	0.2330	222.7	0.446	0.2182	222.2	0.445	305
310	0.2705	225.0	0.450	0.2525	224.5	0.449	0.2362	224.1	0.448	0.2214	223.6	0.447	310
315	0.2739	226.3	0.452	0.2558	225.9	0.451	0.2395	225.4	0.450	0.2246	224.9	0.448	315
320	0.2772	227.6	0.454	0.2590	227.2	0.452	0.2426	226.7	0.451	0.2277	226.3	0.450	320
325	0.2805	229.0	0.455	0.2623	228.5	0.454	0.2458	228.1	0.453	0.2308	227.6	0.452	325
330	0.2837	230.3	0.457	0.2654	229.9	0.456	0.2489	229.4	0.455	0.2339	229.0	0.454	330
335	0.2869	231.6	0.459	0.2686	231.2	0.458	0.2520	230.8	0.456	0.2369	230.3	0.455	335
340	0.2901	232.9	0.460	0.2717	232.5	0.459	0.2550	232.1	0.458	0.2398	231.7	0.457	340
345	0.2933	234.3	0.462	0.2747	233.9	0.461	0.2580	233.4	0.460	0.2428	233.0	0.459	345
350	0.2964	235.6	0.464	0.2778	235.2	0.463	0.2610	234.8	0.461	0.2457	234.4	0.460	350
355													355
360													360
365													365
370													370
375													375
380	0.3147	243.5	0.473	0.2955	243.2	0.472	0.2782	242.9	0.471	0.2625	242.5	0.470	380
385	0.3176	244.9	0.475	0.2983	244.5	0.474	0.2809	244.2	0.473	0.2652	243.8	0.472	385
390	0.3206	246.2	0.477	0.3012	245.9	0.475	0.2837	245.5	0.474	0.2679	245.2	0.473	390
395	0.3235	247.5	0.478	0.3040	247.2	0.477	0.2864	246.9	0.476	0.2705	246.6	0.475	395
400	0.3264	248.9	0.480	0.3068	248.6	0.479	0.2892	248.2	0.478	0.2732	247.9	0.477	400

Opteon™ XP30 (R-514A)
Superheated Vapor - Constant Pressure Tables

V = volume in ft³/lb

H = enthalpy in Btu/lb

S = entropy in [Btu/lb·°R]

Saturation Properties in Light Green

ABSOLUTE PRESSURE, psia													
Temp °F	220			230			240			250			Temp °F
	269.27			273.41			277.42			281.31			
	V	H	S	V	H	S	V	H	S	V	H	S	
	0.1799	211.8	0.430	0.1799	211.8	0.430	0.1799	211.8	0.430	0.1799	211.8	0.430	
270	0.1805	212.0	0.431										270
275	0.1841	213.4	0.433	0.1716	212.7	0.431							275
280	0.1877	214.8	0.435	0.1752	214.2	0.433	0.1635	213.5	0.432				280
285	0.1912	216.2	0.436	0.1787	215.6	0.435	0.1671	214.9	0.434	0.1561	214.2	0.432	285
290	0.1947	217.6	0.438	0.1822	217.0	0.437	0.1706	216.3	0.436	0.1597	215.7	0.434	290
295	0.1981	218.9	0.440	0.1856	218.4	0.439	0.1740	217.7	0.438	0.1631	217.1	0.436	295
300	0.2014	220.3	0.442	0.1889	219.7	0.441	0.1773	219.2	0.439	0.1665	218.6	0.438	300
305	0.2046	221.7	0.444	0.1921	221.1	0.442	0.1805	220.6	0.441	0.1698	220.0	0.440	305
310	0.2078	223.1	0.445	0.1953	222.5	0.444	0.1837	222.0	0.443	0.1730	221.4	0.442	310
315	0.2110	224.4	0.447	0.1984	223.9	0.446	0.1868	223.4	0.445	0.1761	222.8	0.444	315
320	0.2141	225.8	0.449	0.2015	225.3	0.448	0.1899	224.8	0.447	0.1791	224.2	0.446	320
325	0.2171	227.2	0.451	0.2045	226.7	0.450	0.1929	226.2	0.449	0.1821	225.7	0.447	325
330	0.2201	228.5	0.452	0.2075	228.0	0.451	0.1959	227.6	0.450	0.1851	227.1	0.449	330
335	0.2231	229.9	0.454	0.2104	229.4	0.453	0.1988	229.0	0.452	0.1879	228.5	0.451	335
340	0.2260	231.2	0.456	0.2133	230.8	0.455	0.2016	230.3	0.454	0.1908	229.9	0.453	340
345	0.2289	232.6	0.458	0.2162	232.2	0.457	0.2044	231.7	0.456	0.1935	231.3	0.454	345
350	0.2317	234.0	0.459	0.2190	233.5	0.458	0.2072	233.1	0.457	0.1963	232.7	0.456	350
355													355
360													360
365													365
370													370
375													375
380	0.2482	242.1	0.469	0.2351	241.8	0.468	0.2230	241.4	0.467	0.2119	241.0	0.466	380
385	0.2508	243.5	0.471	0.2377	243.1	0.470	0.2256	242.8	0.469	0.2144	242.4	0.468	385
390	0.2534	244.9	0.472	0.2402	244.5	0.471	0.2281	244.1	0.471	0.2169	243.8	0.470	390
395	0.2560	246.2	0.474	0.2427	245.9	0.473	0.2306	245.5	0.472	0.2193	245.2	0.471	395
400	0.2586	247.6	0.476	0.2453	247.2	0.475	0.2330	246.9	0.474	0.2217	246.5	0.473	400
405	0.2611	248.9	0.477	0.2477	248.6	0.476	0.2354	248.3	0.475	0.2241	247.9	0.474	405
410	0.2637	250.3	0.479	0.2502	250.0	0.478	0.2379	249.7	0.477	0.2265	249.3	0.476	410
415	0.2662	251.7	0.480	0.2527	251.4	0.479	0.2402	251.0	0.479	0.2288	250.7	0.478	415

Opteon™ XP30 (R-514A)
Superheated Vapor - Constant Pressure Tables

V = volume in ft³/lb

H = enthalpy in Btu/lb

S = entropy in [Btu/lb·°R]

Saturation Properties in Light Green

ABSOLUTE PRESSURE, psia													
Temp °F	260			270			280			290			Temp °F
	285.08			288.73			292.28			295.73			
	V	H	S	V	H	S	V	H	S	V	H	S	
	0.1458	213.5	0.431	0.1458	213.5	0.431	0.1458	213.5	0.431	0.1458	213.5	0.431	
290	0.1494	215.0	0.433	0.1397	214.2	0.432							290
295	0.1529	216.5	0.435	0.1433	215.7	0.434	0.1341	215.0	0.432				295
300	0.1563	217.9	0.437	0.1468	217.2	0.436	0.1377	216.5	0.434	0.1290	215.8	0.433	300
305	0.1596	219.4	0.439	0.1501	218.7	0.438	0.1411	218.0	0.436	0.1325	217.3	0.435	305
310	0.1629	220.8	0.441	0.1534	220.2	0.440	0.1444	219.6	0.438	0.1359	218.9	0.437	310
315	0.1660	222.3	0.443	0.1566	221.7	0.442	0.1477	221.0	0.440	0.1392	220.4	0.439	315
320	0.1691	223.7	0.445	0.1597	223.1	0.443	0.1508	222.5	0.442	0.1424	221.9	0.441	320
325	0.1721	225.1	0.446	0.1627	224.6	0.445	0.1538	224.0	0.444	0.1455	223.4	0.443	325
330	0.1750	226.5	0.448	0.1656	226.0	0.447	0.1568	225.5	0.446	0.1485	224.9	0.445	330
335	0.1779	228.0	0.450	0.1685	227.5	0.449	0.1597	226.9	0.448	0.1514	226.4	0.447	335
340	0.1807	229.4	0.452	0.1713	228.9	0.451	0.1625	228.4	0.450	0.1542	227.8	0.449	340
345	0.1835	230.8	0.453	0.1740	230.3	0.452	0.1652	229.8	0.451	0.1570	229.3	0.450	345
350	0.1862	232.2	0.455	0.1767	231.7	0.454	0.1679	231.3	0.453	0.1597	230.8	0.452	350
355													355
360													360
365													365
370													370
375													375
380	0.2016	240.6	0.465	0.1921	240.2	0.465	0.1831	239.8	0.464	0.1748	239.4	0.463	380
385	0.2041	242.0	0.467	0.1945	241.6	0.466	0.1855	241.2	0.465	0.1772	240.8	0.464	385
390	0.2065	243.4	0.469	0.1969	243.0	0.468	0.1879	242.6	0.467	0.1795	242.2	0.466	390
395	0.2089	244.8	0.470	0.1992	244.4	0.469	0.1902	244.1	0.469	0.1818	243.7	0.468	395
400	0.2113	246.2	0.472	0.2016	245.8	0.471	0.1925	245.5	0.470	0.1841	245.1	0.469	400
405	0.2136	247.6	0.474	0.2039	247.2	0.473	0.1948	246.9	0.472	0.1863	246.5	0.471	405
410	0.2159	249.0	0.475	0.2061	248.6	0.474	0.1970	248.3	0.474	0.1885	247.9	0.473	410
415	0.2182	250.4	0.477	0.2084	250.0	0.476	0.1993	249.7	0.475	0.1907	249.3	0.474	415
420	0.2205	251.8	0.478	0.2106	251.4	0.478	0.2014	251.1	0.477	0.1929	250.8	0.476	420
425	0.2227	253.2	0.480	0.2128	252.8	0.479	0.2036	252.5	0.478	0.1950	252.2	0.478	425
430	0.2250	254.5	0.482	0.2150	254.2	0.481	0.2058	253.9	0.480	0.1971	253.6	0.479	430
435	0.2272	255.9	0.483	0.2172	255.6	0.482	0.2079	255.3	0.482	0.1992	255.0	0.481	435

Opteon™ XP30 (R-514A)
Superheated Vapor - Constant Pressure Tables

V = volume in ft³/lb

H = enthalpy in Btu/lb

S = entropy in [Btu/lb·°R]

Saturation Properties in Light Green

ABSOLUTE PRESSURE, psia													
Temp °F	300			320			340			360			Temp °F
	299.09			305.54			311.66			317.47			
	V	H	S	V	H	S	V	H	S	V	H	S	
	0.1199	214.7	0.431	0.1199	214.7	0.431	0.1199	214.7	0.431	0.1199	214.7	0.431	
300	0.1206	215.0	0.432										300
305	0.1243	216.6	0.434										305
310	0.1278	218.1	0.436	0.1124	216.5	0.433							310
315	0.1312	219.7	0.438	0.1161	218.2	0.435	0.1018	216.4	0.433				315
320	0.1344	221.2	0.440	0.1195	219.8	0.438	0.1056	218.2	0.435	0.0922	216.3	0.432	320
325	0.1376	222.8	0.442	0.1228	221.4	0.440	0.1092	219.9	0.437	0.0963	218.2	0.434	325
330	0.1406	224.3	0.444	0.1260	223.0	0.442	0.1126	221.6	0.439	0.1000	220.0	0.437	330
335	0.1435	225.8	0.446	0.1290	224.6	0.444	0.1158	223.2	0.441	0.1035	221.7	0.439	335
340	0.1464	227.3	0.448	0.1320	226.1	0.445	0.1189	224.8	0.443	0.1068	223.4	0.441	340
345	0.1492	228.8	0.449	0.1348	227.6	0.447	0.1218	226.4	0.445	0.1099	225.1	0.443	345
350	0.1519	230.2	0.451	0.1376	229.2	0.449	0.1246	228.0	0.447	0.1128	226.7	0.445	350
355													355
360													360
365													365
370													370
375													375
380	0.1670	239.0	0.462	0.1527	238.1	0.460	0.1399	237.2	0.458	0.1284	236.2	0.457	380
385	0.1693	240.4	0.464	0.1550	239.6	0.462	0.1423	238.7	0.460	0.1308	237.7	0.458	385
390	0.1716	241.8	0.465	0.1573	241.0	0.464	0.1445	240.2	0.462	0.1331	239.2	0.460	390
395	0.1739	243.3	0.467	0.1596	242.5	0.465	0.1468	241.6	0.464	0.1353	240.8	0.462	395
400	0.1762	244.7	0.469	0.1618	243.9	0.467	0.1490	243.1	0.465	0.1375	242.3	0.464	400
405	0.1784	246.1	0.470	0.1639	245.4	0.469	0.1511	244.6	0.467	0.1396	243.8	0.465	405
410	0.1806	247.6	0.472	0.1661	246.8	0.470	0.1532	246.0	0.469	0.1417	245.2	0.467	410
415	0.1827	249.0	0.474	0.1682	248.3	0.472	0.1553	247.5	0.470	0.1438	246.7	0.469	415
420	0.1849	250.4	0.475	0.1703	249.7	0.474	0.1574	249.0	0.472	0.1458	248.2	0.471	420
425	0.1870	251.8	0.477	0.1724	251.1	0.475	0.1594	250.4	0.474	0.1478	249.7	0.472	425
430	0.1891	253.3	0.478	0.1744	252.6	0.477	0.1614	251.9	0.475	0.1497	251.2	0.474	430
435	0.1911	254.7	0.480	0.1764	254.0	0.478	0.1633	253.3	0.477	0.1517	252.6	0.476	435
440	0.1932	256.1	0.482	0.1784	255.4	0.480	0.1653	254.8	0.479	0.1536	254.1	0.477	440
445	0.1952	257.5	0.483	0.1803	256.9	0.482	0.1672	256.2	0.480	0.1555	255.6	0.479	445

Opteon™ XP30 (R-514A)
Superheated Vapor - Constant Pressure Tables

V = volume in ft³/lb

H = enthalpy in Btu/lb

S = entropy in [Btu/lb·°R]

Saturation Properties in Light Green

ABSOLUTE PRESSURE, psia													
Temp °F	380			400			420			440			Temp °F
	323.00			328.25			333.23			337.95			
	V	H	S	V	H	S	V	H	S	V	H	S	
	0.0816	215.2	0.430	0.0816	215.2	0.430	0.0816	215.2	0.430	0.0816	215.2	0.430	
325	0.0835	216.0	0.431										325
330	0.0879	218.1	0.434	0.0756	215.7	0.430							330
335	0.0918	220.0	0.436	0.0803	217.9	0.433	0.0685	215.3	0.430				335
340	0.0954	221.8	0.439	0.0844	220.0	0.436	0.0736	217.8	0.433	0.0622	214.9	0.429	340
345	0.0987	223.6	0.441	0.0882	222.0	0.438	0.0779	220.0	0.435	0.0677	217.6	0.432	345
350	0.1019	225.4	0.443	0.0916	223.8	0.441	0.0818	222.1	0.438	0.0722	220.0	0.435	350
355													355
360													360
365													365
370													370
375													375
380	0.1180	235.2	0.455	0.1084	234.1	0.453	0.0996	232.9	0.451	0.0914	231.7	0.449	380
385	0.1204	236.7	0.457	0.1108	235.7	0.455	0.1021	234.6	0.453	0.0940	233.4	0.451	385
390	0.1227	238.3	0.459	0.1132	237.3	0.457	0.1045	236.2	0.455	0.0964	235.1	0.453	390
395	0.1249	239.8	0.460	0.1154	238.9	0.459	0.1068	237.9	0.457	0.0988	236.8	0.455	395
400	0.1271	241.4	0.462	0.1177	240.4	0.461	0.1090	239.5	0.459	0.1011	238.5	0.457	400
405	0.1292	242.9	0.464	0.1198	242.0	0.462	0.1112	241.1	0.461	0.1033	240.1	0.459	405
410	0.1313	244.4	0.466	0.1219	243.6	0.464	0.1133	242.7	0.463	0.1054	241.7	0.461	410
415	0.1334	245.9	0.467	0.1239	245.1	0.466	0.1153	244.2	0.464	0.1074	243.3	0.463	415
420	0.1354	247.4	0.469	0.1259	246.6	0.468	0.1173	245.8	0.466	0.1095	244.9	0.465	420
425	0.1373	248.9	0.471	0.1279	248.1	0.469	0.1193	247.3	0.468	0.1114	246.5	0.466	425
430	0.1393	250.4	0.472	0.1298	249.7	0.471	0.1212	248.9	0.470	0.1133	248.1	0.468	430
435	0.1412	251.9	0.474	0.1317	251.2	0.473	0.1231	250.4	0.471	0.1152	249.6	0.470	435
440	0.1431	253.4	0.476	0.1336	252.7	0.474	0.1249	251.9	0.473	0.1170	251.2	0.472	440
445	0.1449	254.9	0.477	0.1354	254.2	0.476	0.1267	253.5	0.475	0.1188	252.7	0.473	445
450	0.1467	256.4	0.479	0.1372	255.7	0.478	0.1285	255.0	0.476	0.1206	254.3	0.475	450
455	0.1485	257.8	0.481	0.1390	257.2	0.479	0.1303	256.5	0.478	0.1223	255.8	0.477	455
460	0.1503	259.3	0.482	0.1407	258.7	0.481	0.1320	258.0	0.480	0.1240	257.3	0.478	460
465	0.1521	260.8	0.484	0.1424	260.2	0.483	0.1337	259.5	0.481	0.1257	258.8	0.480	465
470	0.1538	262.3	0.486	0.1441	261.6	0.484	0.1353	261.0	0.483	0.1273	260.4	0.482	470

Opteon™ XP30 (R-514A) Superheated Vapor - Constant Pressure Tables

V = volume in ft³/lb

H = enthalpy in Btu/lb

S = entropy in [Btu/lb-°R]

Saturation Properties in Light Green

ABSOLUTE PRESSURE, psia													
Temp °F	460			480			500			520			Temp °F
	342.41			346.61			102085605426.34			200.11			
	V	H	S	V	H	S	V	H	S	V	H	S	
	0.0529	212.5	0.425	0.0529	212.5	0.425	0.0529	212.5	0.425	0.0529	212.5	0.425	
345	0.0569	214.5	0.428							0.0242	192.6	0.400	345
350	0.0626	217.5	0.432	0.0526	214.3	0.427				0.0263	196.7	0.405	350
355													355
360													360
365													365
370													370
375													375
380	0.0838	230.3	0.447	0.0766	228.9	0.445				0.0636	225.6	0.441	380
385	0.0864	232.2	0.449	0.0794	230.8	0.448				0.0666	227.8	0.443	385
390	0.0890	233.9	0.452	0.0820	232.7	0.450				0.0695	229.9	0.446	390
395	0.0914	235.7	0.454	0.0845	234.5	0.452				0.0721	231.9	0.448	395
400	0.0937	237.4	0.456	0.0869	236.3	0.454				0.0746	233.8	0.450	400
405	0.0959	239.1	0.458	0.0892	238.0	0.456				0.0770	235.7	0.453	405
410	0.0981	240.7	0.459	0.0914	239.7	0.458				0.0793	237.5	0.455	410
415	0.1002	242.4	0.461	0.0935	241.4	0.460				0.0815	239.3	0.457	415
420	0.1022	244.0	0.463	0.0955	243.1	0.462				0.0835	241.1	0.459	420
425	0.1042	245.6	0.465	0.0975	244.7	0.464				0.0856	242.8	0.461	425
430	0.1061	247.2	0.467	0.0994	246.4	0.465				0.0875	244.5	0.463	430
435	0.1080	248.8	0.469	0.1013	248.0	0.467				0.0894	246.2	0.465	435
440	0.1098	250.4	0.470	0.1031	249.6	0.469				0.0913	247.9	0.466	440
445	0.1116	252.0	0.472	0.1049	251.2	0.471				0.0930	249.5	0.468	445
450	0.1133	253.5	0.474	0.1067	252.8	0.473				0.0948	251.2	0.470	450
455	0.1150	255.1	0.476	0.1084	254.3	0.474				0.0965	252.8	0.472	455
460	0.1167	256.6	0.477	0.1100	255.9	0.476				0.0981	254.4	0.474	460
465	0.1184	258.2	0.479	0.1117	257.5	0.478				0.0998	256.0	0.475	465
470	0.1200	259.7	0.481	0.1133	259.0	0.479				0.1014	257.6	0.477	470
475	0.1216	261.2	0.482	0.1149	260.6	0.481				0.1029	259.2	0.479	475
480	0.1232	262.8	0.484	0.1164	262.1	0.483				0.1045	260.8	0.480	480
485	0.1248	264.3	0.485	0.1180	263.7	0.484				0.1060	262.4	0.482	485
490	0.1263	265.8	0.487	0.1195	265.2	0.486				0.1074	263.9	0.484	490

For more information on the Opteon™ family of refrigerants, or other refrigerants products, visit opteon.com or call (800) 235-7882.

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