

DuPont™ ISCEON® 9 Series

REFRIGERANTS

Pressure-Temperature Guide – ENG

Superheat – Saturated Vapor Pressures

Typical PH Diagram Superheat–Reference Point



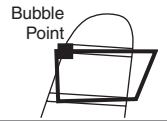
Dew Point — Saturated Vapor (psig)

Temp. °F	ISCEON® MO29 R-422D	ISCEON® 39TC® R-423A	ISCEON® MO49 R-413A	ISCEON® MO59 R-417A	ISCEON® MO79 R-422A	ISCEON® MO89	Temp °C
-40	2.3	16.5"	13.3"	7.5"	3.1	9.2	-40
-38	0.8	15.7"	12.3"	6.2"	4.1	10.4	-39
-36	0.4	14.9"	11.3"	4.9"	5.1	11.7	-38
-34	1.2	14.0"	10.2"	3.5"	6.1	13.0	-37
-32	2.1	13.1"	9.1"	2.0"	7.2	14.3	-36
-30	3.0	12.1"	7.9"	0.5"	8.3	15.7	-34
-28	3.9	11.1"	6.6"	0.6	9.5	17.2	-33
-26	4.9	10.1"	5.3"	1.4	10.7	18.7	-32
-24	5.9	9.0"	4.0"	2.2	11.9	20.3	-31
-22	7.0	7.8"	2.6"	3.1	13.2	21.9	-30
-20	8.1	6.6"	1.1"	4.1	14.6	23.5	-29
-18	9.2	5.4"	0.2	5.0	16.0	25.3	-28
-16	10.4	4.0"	1.0	6.0	17.4	27.1	-27
-14	11.7	2.7"	1.8	7.1	18.9	28.9	-26
-12	12.9	1.3"	2.6	8.2	20.5	30.8	-24
-10	14.3	0.1	3.5	9.3	22.1	32.8	-23
-8	15.6	0.8	4.4	10.4	23.7	34.8	-22
-6	17.1	1.6	5.4	11.7	25.4	36.9	-21
-4	18.5	2.4	6.4	12.9	27.2	39.1	-20
-2	20.1	3.3	7.4	14.2	29.1	41.4	-19
0	21.7	4.2	8.5	15.6	30.9	43.7	-18
2	23.3	5.1	9.6	17.0	32.9	46.0	-17
4	25.0	6.0	10.7	18.4	34.9	48.5	-16
6	26.7	7.0	11.9	19.9	37.0	51.0	-14
8	28.5	8.0	13.1	21.4	39.1	53.6	-13
10	30.4	9.0	14.4	23.0	41.4	56.3	-12
12	32.3	10.1	15.7	24.7	43.6	59.1	-11
14	34.3	11.3	17.1	26.4	46.0	61.9	-10
16	36.4	12.4	18.5	28.2	48.4	64.8	-9
18	38.5	13.6	19.9	30.0	50.9	67.8	-8
20	40.7	14.9	21.4	31.9	53.5	70.9	-7
22	42.9	16.2	23.0	33.8	56.1	74.1	-6
24	45.2	17.5	24.6	35.8	58.8	77.3	-4
26	47.6	18.9	26.2	37.9	61.6	80.6	-3
28	50.1	20.3	28.0	40.0	64.5	84.1	-2
30	52.6	21.7	29.7	42.2	67.5	87.6	-1
32	55.2	23.3	31.5	44.4	70.5	91.2	0
34	57.9	24.8	33.4	46.8	73.6	94.9	1
36	60.6	26.4	35.4	49.2	76.8	98.7	2
38	63.5	28.1	37.3	51.6	80.1	102.7	3
40	66.4	29.8	39.4	54.2	83.5	106.7	4
42	69.4	31.6	41.5	56.8	87.0	110.8	6
44	72.5	33.4	43.7	59.5	90.5	115.0	7
46	75.6	35.2	45.9	62.2	94.2	119.3	8
48	78.9	37.2	48.2	65.1	97.9	123.7	9
50	82.2	39.1	50.6	68.0	101.8	128.2	10

"Denotes inches of mercury ("Hg)

Subcooling – Saturated Liquid Pressures

Typical PH Diagram Subcooling–Reference Point



Bubble Point — Saturated Liquid (psig)

Temp. °F	ISCEON® MO29 R-422D	ISCEON® 39TC® R-423A	ISCEON® MO49 R-413A	ISCEON® MO59 R-417A	ISCEON® MO79 R-422A	ISCEON® MO89	Temp °C
50	92.6	40.4	58.2	78.1	107.3	134.0	10
52	96.1	42.5	60.7	81.3	111.3	138.7	11
54	99.8	44.6	63.4	84.5	115.4	143.5	12
56	103.6	46.8	66.0	87.9	119.7	148.4	13
58	107.4	49.0	68.8	91.3	124.0	153.4	14
60	111.4	51.4	71.6	94.8	128.4	158.5	16
62	115.4	53.7	74.5	98.4	132.9	163.8	17
64	119.6	56.2	77.5	102.1	137.5	169.1	18
66	123.8	58.7	80.5	105.8	142.3	174.6	19
68	128.1	61.2	83.7	109.7	147.1	180.2	20
70	132.6	63.9	86.9	113.6	152.1	185.9	21
72	137.1	66.6	90.2	117.7	157.2	191.7	22
74	141.7	69.4	93.5	121.8	162.3	197.7	23
76	146.5	72.2	96.9	126.0	167.6	203.8	24
78	151.3	75.1	100.5	130.4	173.1	210.0	26
80	156.3	78.1	104.1	134.8	178.6	216.4	27
82	161.4	81.2	107.8	139.3	184.2	222.9	28
84	166.5	84.4	111.6	144.0	190.0	229.5	29
86	171.8	87.6	115.4	148.7	195.9	236.3	30
88	177.2	90.9	119.4	153.5	201.9	243.2	31
90	182.8	94.3	123.4	158.5	208.1	250.2	32
92	188.4	97.7	127.6	163.5	214.4	257.4	33
94	194.2	101.3	131.8	168.7	220.8	264.8	34
96	200.0	104.9	136.1	173.9	227.4	272.3	36
98	206.0	108.6	140.5	179.3	234.0	279.9	37
100	212.2	112.4	145.0	184.8	240.9	287.7	38
102	218.4	116.3	149.7	190.4	247.8	295.6	39
104	224.8	120.2	154.4	196.1	254.9	303.8	40
106	231.3	124.3	159.2	202.0	262.2	312.0	41
108	237.9	128.4	164.1	207.9	269.6	320.5	42
110	244.7	132.7	169.1	214.0	277.1	329.1	43
112	251.6	137.0	174.3	220.2	284.8	337.9	44
114	258.7	141.5	179.5	226.6	292.6	346.8	46
116	265.9	146.0	184.9	233.0	300.6	355.9	47
118	273.2	150.6	190.3	239.6	308.8	365.3	48
120	280.7	155.3	195.9	246.3	317.1	374.7	49
122	288.3	160.2	201.6	253.2	325.6	384.4	50
124	296.0	165.1	207.4	260.2	334.2	394.3	51
126	304.0	170.1	213.3	267.3	343.1	404.4	52
128	312.0	175.2	219.3	274.6	352.0	414.7	53
130	320.2	180.5	225.5	282.0	361.2	425.2	54
132	328.6	185.8	231.8	289.5	370.5	435.9	56
134	337.1	191.3	238.2	297.2	380.1	446.8	57
136	345.8	196.9	244.7	305.0	389.8	458.0	58
138	354.7	202.5	251.4	313.0	399.6	469.4	59
140	363.7	208.3	258.1	321.1	409.7	481.0	60
142	372.9	214.2	265.1	329.4	420.0		61
144	382.3	220.3	272.1	337.8	430.5		62
146	391.8	226.4	279.3	346.4	441.2		63
148	401.5	232.7	286.6	355.2	452.1		64
150	411.4	239.1	294.1	364.1	463.2		66

For Further Information: (800) 235-7882

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