



Pressure-Temperature Chart

°F	°C						404A		407A		407C		407F	
		22	32	134a	600a	290	Bubble	Dew	Bubble	Dew	Bubble	Dew	Bubble	Dew
-40.0	-40.0	0.6	11.0	14.8	21.5	1.4	4.9	4.3	3.9	2.0	2.7	4.6	4.9	0.5
-35.0	-37.2	2.6	14.4	12.5	20.2	3.4	7.5	6.8	6.4	1.0	5.1	0.9	7.5	1.9
-30.0	-34.4	4.9	18.2	9.8	18.8	5.7	10.3	9.6	9.2	3.3	7.7	1.6	10.4	4.2
-25.0	-31.7	7.4	22.3	6.9	17.2	8.1	13.4	12.7	12.2	5.7	10.6	3.9	13.6	6.8
-20.0	-28.9	10.2	26.8	3.7	15.4	10.7	16.8	16.0	15.6	8.5	13.7	6.5	17.1	9.7
-15.0	-26.1	13.2	31.7	0.1	13.5	13.6	20.5	19.7	19.2	11.5	17.2	9.3	20.9	12.9
-10.0	-23.3	16.5	37.1	1.9	11.4	16.7	24.6	23.6	23.2	14.9	20.9	12.3	25.1	16.4
-5.0	-20.6	20.1	42.9	4.1	9.0	20.1	28.9	27.9	27.5	18.5	25.0	15.7	29.6	20.2
0.0	-17.8	24.0	49.2	6.5	6.4	23.7	33.7	32.6	32.2	22.5	29.5	19.4	34.5	24.4
5.0	-15.0	28.3	56.1	9.1	3.6	27.6	38.8	37.7	37.3	26.9	34.3	23.5	39.8	28.9
10.0	-12.2	32.8	63.5	11.9	0.6	31.8	44.3	43.1	42.8	31.6	39.5	27.9	45.6	33.9
15.0	-9.4	37.8	71.4	15.0	1.4	36.3	50.2	49.0	48.7	36.7	45.2	32.7	51.8	39.3
20.0	-6.7	43.1	80.0	18.4	3.2	41.1	56.6	55.3	55.1	42.3	51.2	37.9	58.5	45.1
25.0	-3.9	48.8	89.2	22.1	5.1	46.3	63.4	62.1	62.0	48.3	57.7	43.5	65.6	51.4
30.0	-1.1	55.0	99.1	26.1	7.2	51.8	70.7	69.3	69.3	54.8	64.7	49.6	73.3	58.2
35.0	1.7	61.5	109.7	30.4	9.4	57.7	78.6	77.1	77.2	61.8	72.2	56.1	81.5	65.5
40.0	4.4	68.6	121.0	35.0	11.9	63.9	86.9	85.4	85.6	69.4	80.2	63.2	90.3	73.4
45.0	7.2	76.1	133.0	40.0	14.5	70.6	95.8	94.2	94.6	77.4	88.8	70.7	99.7	81.8
50.0	10.0	84.1	145.8	45.4	17.3	77.6	105.3	103.6	104.2	86.1	97.9	78.8	109.7	90.8
55.0	12.8	92.6	159.5	51.2	20.3	85.1	115.3	113.6	114.4	95.3	107.6	87.5	120.4	100.5
60.0	15.6	101.6	174.0	57.4	23.5	93.0	126.0	124.2	125.2	105.2	117.9	96.8	131.7	110.8
65.0	18.3	111.2	189.5	64.0	27.0	101.4	137.3	135.5	136.7	115.7	128.9	106.7	143.7	121.8
70.0	21.1	121.4	205.8	71.1	30.6	110.2	149.3	147.4	148.8	127.0	140.5	117.3	156.4	133.5
75.0	23.9	132.2	223.2	78.7	34.5	119.5	162.0	160.1	161.7	138.9	152.8	128.5	169.9	146.0
80.0	26.7	143.6	241.5	86.7	38.7	129.3	175.4	173.4	175.3	151.6	165.8	140.5	184.1	159.2
85.0	29.4	155.7	260.9	95.2	43.1	139.7	189.5	187.5	189.7	165.1	179.6	153.2	199.1	173.3
90.0	32.2	168.4	281.3	104.3	47.8	150.5	204.5	202.4	204.8	179.3	194.1	166.7	215.0	188.1
95.0	35.0	181.8	302.9	114.0	52.7	161.9	220.2	218.1	220.8	194.4	209.4	181.0	231.7	203.9
100.0	37.8	195.9	325.7	124.2	57.9	173.9	236.8	234.6	237.6	210.4	225.5	196.1	249.3	220.6
105.0	40.6	210.8	349.6	135.0	63.5	186.5	254.2	252.1	255.3	227.4	242.4	212.1	267.8	238.3
110.0	43.3	226.4	374.9	146.4	69.3	199.6	272.5	270.4	273.9	245.2	260.3	229.0	287.2	256.9
115.0	46.1	242.8	401.4	158.4	75.5	213.4	291.8	289.6	293.5	264.1	279.0	246.9	307.6	276.6
120.0	48.9	260.0	429.3	171.2	81.9	227.8	312.1	309.9	314.0	284.0	298.6	265.8	329.0	297.4
125.0	51.7	278.0	458.7	184.6	88.8	242.9	333.3	331.2	335.4	305.0	319.2	285.7	351.5	319.3
130.0	54.4	296.9	489.5	198.7	95.9	258.7	355.6	353.5	357.9	327.1	340.7	306.6	375.0	342.4
135.0	57.2	316.7	521.8	213.6	103.5	275.1	379.1	377.0	381.5	350.5	363.3	328.8	399.7	366.8
140.0	60.0	337.4	555.8	229.2	111.4	292.3	403.7	401.7	406.2	375.1	386.9	352.1	425.4	392.4
145.0	62.8	359.0	591.4	245.7	119.6	310.2	429.6	427.7	431.9	401.0	411.7	376.6	452.4	419.5
150.0	65.6	381.7	628.8	262.9	128.3	328.9	456.8	455.1	458.9	428.3	437.5	402.5	480.6	448.0

Black figures – psig Blue figures – inches mercury vacuum

°F	°C	408A		410A		421A		422B+		422D		434A		438A	
		Bubble	Dew	Bubble	Dew	Bubble	Dew	Bubble	Dew	Bubble	Dew	Bubble	Dew	Bubble	Dew
-40.0	-40.0	3.5	3.1	10.8	10.7	0.5	6.1	0.9	5.5	2.4	2.4	3.9	1.7	1.7	5.2
-35.0	-37.2	5.8	5.4	14.1	14.0	2.5	2.6	3.0	1.9	4.6	0.8	6.3	4.0	3.9	1.5
-30.0	-34.4	8.5	8.0	17.8	17.7	4.8	0.7	5.3	1.0	7.1	3.0	9.0	6.5	6.4	1.2
-25.0	-31.7	11.3	10.9	21.9	21.8	7.4	2.8	7.9	3.2	9.9	5.4	12.0	9.3	9.1	3.5
-20.0	-28.9	14.5	14.0	26.3	26.2	10.1	5.2	10.7	5.7	12.9	8.1	15.3	12.3	12.0	5.9
-15.0	-26.1	17.9	17.4	31.2	31.0	13.2	7.8	13.8	8.3	16.2	11.0	18.8	15.7	15.3	8.6
-10.0	-23.3	21.7	21.1	36.5	36.3	16.5	10.7	17.1	11.3	19.8	14.3	22.7	19.3	18.8	11.6
-5.0	-20.6	25.7	25.1	42.2	42.0	20.1	13.9	20.7	14.5	23.7	17.8	26.9	23.3	22.7	14.9
0.0	-17.8	30.1	29.5	48.4	48.2	24.0	17.3	24.7	18.0	27.9	21.6	31.4	27.6	26.8	18.5
5.0	-15.0	34.9	34.2	55.2	54.9	28.2	21.1	29.0	21.9	32.5	25.8	36.3	32.3	31.4	22.4
10.0	-12.2	40.0	39.3	62.4	62.2	32.8	25.2	33.6	26.1	37.5	30.4	41.6	37.4	36.3	26.6
15.0	-9.4	45.5	44.8	70.2	70.0	37.8	29.7	38.6	30.6	42.8	35.3	47.3	42.9	41.6	31.2
20.0	-6.7	51.5	50.6	78.7	78.4	43.1	34.6	43.9	35.5	48.5	40.7	53.4	48.8	47.2	36.2
25.0	-3.9	57.8	57.0	87.7	87.4	48.9	39.8	49.7	40.8	54.7	46.4	60.0	55.1	53.4	41.6
30.0	-1.1	64.6	63.7	97.4	97.0	55.0	45.5	55.9	46.6	61.3	52.6	67.1	61.9	59.9	47.5
35.0	1.7	71.9	71.0	107.7	107.3	61.6	51.6	62.5	52.7	68.4	59.3	74.6	69.2	67.0	53.7
40.0	4.4	79.7	78.7	118.8	118.4	68.7	58.1	69.6	59.4	75.9	66.4	82.6	77.0	74.5	60.5
45.0	7.2	88.0	87.0	130.6	130.1	76.3	65.2	77.2	66.5	84.0	74.0	91.2	85.4	82.5	67.7
50.0	10.0	96.8	95.7	143.2	142.6	84.3	72.7	85.3	74.1	92.6	82.2	100.4	94.3	91.1	75.5
55.0	12.8	106.2	105.1	156.5	156.0	92.9	80.7	93.9	82.2	101.7	90.9	110.1	103.8	100.2	83.8
60.0	15.6	116.1	115.0	170.7	170.1	102.0	89.4	103.0	90.9	111.4	100.2	120.4	113.9	109.8	92.7
65.0	18.3	126.7	125.5	185.8	185.1	111.7	98.5	112.7	100.1	121.7	110.1	131.3	124.6	120.1	102.2
70.0	21.1	137.8	136.6	201.8	201.1	122.0	108.3	123.0	110.0	132.6	120.7	142.9	135.9	131.0	112.3
75.0	23.9	149.6	148.3	218.7	217.9	132.9	118.7	133.9	120.4	144.1	131.8	155.1	148.0	142.5	123.0
80.0	26.7	162.1	160.8	236.5	235.8	144.4	129.8	145.4	131.5	156.3	143.7	168.0	160.7	154.7	134.4
85.0	29.4	175.3	173.9	255.4	254.6	156.6	141.5	157.5	143.3	169.2	156.2	181.7	174.2	167.6	146.5
90.0	32.2	189.2	187.7	275.4	274.5	169.5	153.9	170.4	155.8	182.8	169.5	196.1	188.5	181.2	159.3
95.0	35.0	203.8	202.3	296.4	295.5	183.1	167.1	183.9	169.0	197.1	183.6	211.3	203.5	195.5	172.9
100.0	37.8	219.2	217.6	318.5	317.6	197.4	181.0	198.2	182.9	212.2	198.4	227.3	219.4	210.6	187.3
105.0	40.6	235.3	233.8	341.9	340.9	212.4	195.7	213.2	197.7	228.0	214.0	244.1	236.1	226.5	202.5
110.0	43.3	252.3	250.7	366.4	365.4	228.3	211.2	229.0	213.2	244.7	230.5	261.8	253.7	243.1	218.5
115.0	46.1	270.2	268.6	392.3	391.2	244.9	227.6	245.7	229.6	262.3	247.9	280.4	272.2	260.7	235.4
120.0	48.9	288.9	287.2	419.4	418.3	262.4	244.9	263.1	246.9	280.7	266.3	299.9	291.7	279.1	253.3
125.0	51.7	308.6	306.9	447.9	446.8	280.8	263.1	281.4	265.1	300.0	285.5	320.4	312.3	298.3	272.2
130.0	54.4	329.2	327.4	477.9	476.8	300.1	282.2	300.6	284.2	320.2	305.8	341.9	333.8	318.5	292.0
135.0	57.2	350.7	349.0	509.4	508.3	320.3	302.4	320.7	304.4	341.5	327.2	364.4	356.5	339.7	312.9
140.0	60.0	373.3	371.5	542.5	541.4	341.5	323.6	341.8	325.6	363.7	349.6	388.1	380.4	361.9	335.0
145.0	62.8	397.0	395.2	577.3	576.3	363.6	346.0	363.9	347.9	387.0	373.3	412.9	405.5	385.0	358.2
150.0	65.6	421.7	419.9	613.9	613.0	386.9	369.5	387.1	371.3	411.4	398.2	438.9	432.0	409.2	382.6

Black figures – psig Blue figures – inches mercury vacuum

°F	°C	448A		449A		453A		470A		470B		480A		507A
		Bubble	Dew	Bubble	Dew	Bubble	Dew	Bubble	Dew	Bubble	Dew	Bubble	Dew	
-40.0	-40.0	4.9	0.0	4.5	0.0	1.8	6.1	24.6	6.0	22.5	10.5	4.4	17.7	5.4
-35.0	-37.2	7.5	2.1	7.1	2.1	5.8	0.0	28.9	2.4	26.6	7.5	6.6	15.8	8.1
-30.0	-34.4	10.4	4.4	9.9	4.4	11.0	4.2	33.7	0.8	31.0	4.1	9.0	13.6	11.0
-25.0	-31.7	13.5	7.0	13.0	7.0	16.6	8.6	38.8	3.1	35.8	0.4	11.5	11.2	14.1
-20.0	-28.9	17.0	9.8	16.4	9.9	23.8	14.6	44.3	5.5	41.0	1.9	14.3	8.5	17.6
-15.0	-26.1	20.8	13.0	20.1	13.0	31.3	20.7	50.2	8.3	46.5	4.2	17.3	5.5	21.4
-10.0	-23.3	24.9	16.4	24.2	16.4	40.9	29.0	56.6	11.3	52.4	6.7	20.5	2.2	25.5
-5.0	-20.6	29.3	20.2	28.6	20.2	50.9	37.2	63.3	14.6	58.7	9.5	23.9	0.7	30.0
0.0	-17.8	34.2	24.3	33.4	24.3	63.4	48.2	70.6	18.3	65.5	12.6	27.6	2.7	34.8
5.0	-15.0	39.4	28.8	38.5	28.7	76.2	59.0	78.3	22.3	72.7	15.9	31.5	4.9	40.0
10.0	-12.2	45.1	33.6	44.1	33.5	92.2	73.5	86.5	26.7	80.3	19.6	35.7	7.3	45.7
15.0	-9.4	51.2	38.9	50.1	38.8	108.2	87.3	95.2	31.4	88.4	23.6	40.2	9.9	51.7
20.0	-6.7	57.8	44.6	56.6	44.4	47.2	34.0	104.5	36.6	96.9	28.0	45.0	12.8	58.3
25.0	-3.9	64.8	50.7	63.5	50.6	53.3	39.3	114.3	42.2	106.0	32.7	50.1	15.9	65.2
30.0	-1.1	72.3	57.3	70.9	57.1	59.9	44.9	124.7	48.3	115.6	37.9	55.5	19.3	72.7
35.0	1.7	80.4	64.4	78.9	64.2	67.0	51.0	135.6	54.9	125.7	43.5	61.2	23.0	80.7
40.0	4.4	89.0	72.1	87.4	71.8	74.6	57.6	147.1	62.0	136.3	49.5	67.3	26.9	89.2
45.0	7.2	98.2	80.3	96.4	80.0	82.6	64.7	159.3	69.6	147.5	56.0	73.7	31.2	98.3
50.0	10.0	108.0	89.0	106.1	88.7	91.2	72.2	172.1	77.8	159.3	63.0	80.5	35.8	108.0
55.0	12.8	118.4	98.4	116.3	98.0	100.4	80.4	185.5	86.7	171.6	70.6	87.6	40.8	118.3
60.0	15.6	129.4	108.4	127.2	107.9	110.1	89.0	199.6	96.1	184.6	78.6	95.2	46.1	129.2
65.0	18.3	141.1	119.0	138.8	118.5	120.5	98.3	214.4	106.2	198.1	87.3	103.1	51.8	140.7
70.0	21.1	153.5	130.3	151.0	129.7	131.5	108.2	229.8	117.1	212.2	96.6	111.4	57.9	153.0
75.0	23.9	166.6	142.4	163.9	141.7	143.1	118.7	246.0	128.6	227.0	106.5	120.2	64.4	165.9
80.0	26.7	180.5	155.1	177.6	154.3	155.4	129.9	262.9	140.9	242.4	117.1	129.4	71.4	179.6
85.0	29.4	195.1	168.7	192.0	167.8	168.3	141.8	280.5	154.1	258.5	128.3	139.0	78.8	194.1
90.0	32.2	210.5	183.0	207.2	182.0	181.8	155.3	298.8	168.0	275.2	140.3	149.1	86.7	209.3
95.0	35.0	226.7	198.2	223.2	197.1	196.5	167.8	317.9	182.9	292.6	153.1	159.7	95.1	225.4
100.0	37.8	243.7	214.3	240.1	213.1	211.7	182.0	337.8	198.7	310.7	166.7	170.8	104.1	242.3
105.0	40.6	261.7	231.3	257.8	229.9	227.7	197.0	358.5	215.4	329.5	181.1	182.3	113.5	260.1
110.0	43.3	280.5	249.2	276.4	247.7	244.5	212.8	379.9	233.2	348.9	196.4	194.4	123.6	278.8
115.0	46.1	300.2	268.1	295.9	266.5	262.2	229.6	402.1	252.1	369.1	212.7	206.9	134.2	298.5
120.0	48.9	320.9	288.1	316.3	286.3	280.8	247.3	425.1	272.1	389.9	229.9	220.1	145.4	319.2
125.0	51.7	342.6	309.1	337.8	307.2	300.2	265.9	448.9	293.2	411.5	248.1	233.7	157.3	340.9
130.0	54.4	365.3	331.3	360.2	329.2	320.6	285.6	473.6	315.6	433.7	267.5	247.9	169.9	363.8
135.0	57.2	389.0	354.7	383.7	352.4	341.9	306.3	498.9	339.4	456.7	287.9	262.7	183.1	387.8
140.0	60.0	413.8	379.3	408.3	376.8	364.2	328.2	525.1	364.6	480.3	309.6	278.1	197.1	413.0
145.0	62.8	439.7	405.3	433.9	402.5	387.6	351.2	552.0	391.2	504.6	332.5	294.0	211.8	439.5
150.0	65.6	466.7	432.6	460.7	429.7	411.9	375.5	579.6	419.5	529.6	356.8	310.6	227.3	467.4

Black figures – psig Blue figures – inches mercury vacuum