

	Low-Pressure Refrigerant <30 psig at 104°F condensing temperature		Medium Pressure Refrigerant 30 to 155 psig at 104°F condensing temperature								
ASHRAE Class	B1	A1	A1	A1	A1		A1	A3	A2L	A2L	ASHRAE Class
GWP (AR4)	77	1-4.5	10,900	609	1585		1430	3	<1	6	GWP (AR4)
	HCFC	HFO	CFC	HCFC	HCFC R-409A		HFC	Hydrocarbon-Isobutane	HFO	HFO	
°F	R-123	R-1233zd	R-12	R-124	Bubble* Liquid	Dew* Vapor	R-134a	R-600a	R-1234yf	R-1234ze	°F
-40°	*	28.3	11.0	22.1	6.7	14.8	14.8	21.6	11.5	19.1	-40°
-35°	*	28.0	8.4	20.9	3.5	12.5	12.5	20.4	8.9	17.4	-35°
-30°	*	27.6	5.5	19.4	0.0	9.9	9.8	18.9	6.0	15.4	-30°
-25°	*	27.2	2.4	17.8	1.9	7.0	6.9	17.4	2.8	13.3	-25°
-20°	27.8	26.7	0.5	16.0	4.0	3.8	3.1	15.6	0.4	10.9	-20°
-15°	27.4	26.1	2.4	14.0	6.3	2.0	0.1	13.7	2.3	8.2	-15°
-10°	26.9	25.5	4.5	11.8	8.8	1.8	1.9	11.5	4.4	5.3	-10°
-5°	26.4	24.7	6.7	9.3	11.6	4.0	4.1	9.2	6.7	2.0	-5°
0°	25.9	23.9	9.1	6.6	14.6	6.3	6.5	6.6	9.1	0.8	0°
5°	25.2	23.0	11.7	3.6	17.8	8.8	9.1	3.8	12.0	2.7	5°
10°	24.5	22.0	14.6	0.3	21.3	11.6	11.9	0.7	14.9	4.8	10°
15°	23.8	20.8	17.7	1.6	25.1	14.7	15.0	1.3	18.1	7.2	15°
20°	22.8	19.5	21.0	3.6	29.2	18.0	18.4	3.1	21.6	9.7	20°
25°	21.8	18.1	24.6	5.7	33.6	21.6	22.1	5.0	25.4	12.5	25°
30°	20.7	16.5	28.4	8.0	38.4	25.5	26.1	7.1	29.4	15.4	30°
35°	19.5	14.7	32.5	10.5	43.4	29.7	30.4	9.4	33.8	18.7	35°
40°	18.1	12.8	36.9	13.2	48.9	34.2	35.0	11.8	38.4	22.2	40°
45°	16.6	10.7	41.6	16.1	54.7	39.1	40.1	14.4	43.4	26.0	45°
50°	14.9	8.3	46.6	19.3	60.9	44.3	45.4	17.2	48.8	30.0	50°
55°	13.0	5.8	51.9	22.7	67.5	49.9	51.2	20.2	54.5	34.4	55°
60°	11.2	3.0	57.6	26.3	74.5	55.9	57.4	23.5	60.6	39.1	60°
65°	8.9	0.0	63.7	30.2	81.9	62.3	64.0	26.9	67.0	44.1	65°
70°	6.5	1.6	70.1	34.4	89.8	69.2	71.1	30.6	73.9	49.5	70°
75°	4.1	3.4	76.8	38.9	98.2	76.5	78.7	34.5	81.3	55.2	75°
80°	1.2	5.3	84.0	43.7	107	84.2	86.7	38.6	89.0	61.3	80°
85°	0.9	7.3	91.6	48.8	116	92.5	95.2	43.0	97.2	67.8	85°
90°	2.5	9.5	99.6	54.3	126	101	104	47.7	106	74.8	90°
95°	4.3	11.9	108	60.1	137	111	114	52.7	115	82.1	95°
100°	6.1	14.4	117	66.2	148	120	124	57.9	125	89.9	100°
104°	7.7	16.6	124	71.4	157	129	133	62.3	133	96.5	104°
105°	8.1	17.1	126	72.7	159	131	135	63.4	135	98.2	105°
110°	10.3	20.0	136	79.6	171	142	146	69.3	146	107	110°
115°	12.6	23.1	146	86.9	184	153	158	75.4	157	116	115°
120°	15.1	26.5	157	94.6	197	166	171	81.9	169	126	120°
125°	17.8	30.0	169	103	211	179	185	88.7	182	136	125°
130°	20.6	33.8	181	111	226	192	199	95.8	195	147	130°
135°	23.6	37.8	193	120	241	207	214	103	209	158	135°
140°	26.8	42.0	206	130	257	222	229	111	223	171	140°
145°	30.2	46.5	220	140	274	237	246	120	239	183	145°
150°	33.9	51.3	234	150	291	254	263	128	255	196	150°

*Numbers in blue are in inches of mercury (in Hg).

High-Pressure Refrigerant 155 to 340 psig at 104°F condensing temperature														Very-High Pressure over 340 psig at 104°F condensing temperature	ASHRAE Class
ASHRAE Class	A1	A2L	A1		A1		A1		A2L		A3		A1	A1	
GWP (AR4)	1810	675	3920		1770		2729		466		<5		2088	1 (base)	GWP (AR4)
°F	HCFC R-22	HFC R-32	HFC R-404A		HFC R-407C		HFC R-422D		HFC/HFO R-454B		Hydrocarbon R-441A		HFC R-410A	CO ₂ R-744	°F
			Bubble Liquid	Dew Vapor	Bubble Liquid	Dew Vapor	Bubble Liquid	Dew Vapor	Bubble Liquid	Dew Vapor	Bubble Liquid	Dew Vapor			
-40°	0.6	11.0	4.9	4.3	2.7	4.6	2.4	2.3	9.5	8.3	0.9	18.1	11	132	-40°
-35°	2.6	14.4	7.5	6.8	5.1	0.9	4.6	0.8	12.7	11.4	2.7	16.2	14	147	-35°
-30°	4.9	18.1	10.3	9.6	7.7	1.6	7.1	3.0	16.2	14.8	4.7	14.3	18	163	-30°
-25°	7.4	22.3	13.4	12.7	10.6	3.9	9.9	5.4	20.0	18.5	6.8	12.0	22	181	-25°
-20°	10.2	26.8	16.8	16.0	13.7	6.5	12.9	8.1	24.3	22.5	9.1	9.5	26	200	-20°
-15°	13.2	31.7	20.5	19.7	17.2	9.3	16.2	11.0	28.9	26.9	11.6	6.7	31	221	-15°
-10°	16.5	37.1	24.6	23.6	20.9	12.3	19.8	14.3	33.9	31.7	14.3	3.7	36	243	-10°
-5°	20.1	42.9	28.9	27.9	25.0	15.7	23.7	17.8	39.3	37.0	17.1	0.2	42	266	-5°
0°	24.0	49.2	33.7	32.6	29.5	19.4	27.9	21.7	45.2	42.6	20.3	1.7	48	291	0°
5°	28.3	56.0	38.8	37.7	34.3	23.5	32.5	25.8	51.6	48.8	23.6	3.7	55	318	5°
10°	32.8	63.4	44.3	43.1	39.5	27.9	37.5	30.4	58.5	55.4	27.2	5.8	62	346	10°
15°	37.8	71.4	50.2	49.0	45.2	32.7	42.8	35.3	65.9	62.5	31.0	8.2	70	376	15°
20°	43.1	80.0	56.6	55.3	51.2	37.9	48.5	40.7	73.9	70.2	35.0	10.8	78	407	20°
25°	48.8	89.2	63.4	62.2	57.7	43.5	54.7	46.4	82.5	78.5	39.4	13.6	87	441	25°
30°	55.0	99.1	70.7	69.3	64.7	49.6	61.3	52.6	91.6	87.3	44.0	16.6	97	476	30°
35°	61.5	109.7	78.6	77.1	72.2	56.1	68.4	59.3	101.5	96.8	48.8	19.9	107	513	35°
40°	68.6	121.0	86.9	85.4	80.2	63.2	75.9	66.4	112.0	107.0	54.0	23.4	118	553	40°
45°	76.1	133.0	96.8	94.2	88.8	70.7	84.0	74.0	123.1	117.8	59.5	27.2	130	595	45°
50°	84.1	145.8	105	104	97.9	78.8	92.6	82.2	135.0	129.3	65.3	31.3	143	638	50°
55°	92.6	159.5	115	114	108	87.5	102	90.9	147.7	141.6	71.4	35.6	156	684	55°
60°	102	174.0	126	124	118	96.8	111	100	161.1	154.6	77.9	40.4	170	733	60°
65°	111	189.5	137	136	129	107	122	110	175.4	168.5	84.7	45.3	185	784	65°
70°	121	205.8	159	147	141	117	133	121	190.5	183.1	91.9	50.7	201	838	70°
75°	132	223.2	162	160	153	129	144	132	206.5	198.7	99.5	56.4	218	895	75°
80°	144	241.5	175	173	166	141	156	144	223.4	215.2	107.4	62.5	238	955	80°
85°	156	260.9	190	188	180	153	169	156	241.2	232.6	115.8	68.9	255	1018	85°
90°	168	281.3	205	202	194	167	183	170	260.0	251.0	124.5	75.8	275	*	90°
95°	182	302.9	220	218	209	181	197	184	279.9	270.4	133.6	83.0	296	*	95°
100°	196	325.7	237	235	226	196	212	198	300.8	290.9	143.2	90.7	318	*	100°
104°	208	344.8	251	249	239	209	225	211	318.3	308.0	151.2	97.2	336	*	104°
105°	211	349.6	254	252	242	212	228	214	322.8	312.5	153.2	98.8	341	*	105°
110°	226	374.9	273	270	260	229	245	231	345.9	335.2	163.7	107.5	365	*	110°
115°	243	401.4	292	290	279	247	262	248	370.2	359.1	174.6	116.5	391	*	115°
120°	260	429.3	312	310	299	266	281	266	395.7	384.3	186.0	126.1	418	*	120°
125°	278	458.7	333	331	319	286	300	286	422.4	410.8	197.9	136.2	447	*	125°
130°	297	489.5	356	354	341	307	320	306	450.5	438.7	210.3	146.8	477	*	130°
135°	317	521.8	379	377	363	329	341	327	479.9	468.0	223.1	158.0	508	*	135°
140°	337	555.8	404	402	387	352	364	350	510.7	498.9	236.5	169.7	541	*	140°
145°	359	591.4	430	428	412	377	387	373	543.0	531.3	250.4	182.1	576	*	145°
150°	382	628.8	456.8	455	438	403	411	398	576.8	565.4	264.9	195.0	613	*	150°

*Numbers in blue are in inches of mercury (in Hg).