



TABLA DE PRESIÓN VS TEMPERATURA DE REFRIGERANTES QUIMOBÁSICOS®

°F	°C	134a R-134a		MP39 R-401A		MP66 R-401B		409A R-409A		22 R-22	124 R-124	Performax LT® R-407F	
		Burbuja	Rocio	Burbuja	Rocio	Burbuja	Rocio	Burbuja	Rocio			Burbuja	Rocio
-40	-40.0	14.8	8.1	13.2	6.5	11.8	5.7	13.6	0.6	22.1	4.9	0.5	
-35	-37.2	12.5	5.1	10.7	3.3	9.1	2.4	11.1	2.6	20.9	7.5	1.9	
-30	-34.4	9.8	1.7	7.9	0.2	6.1	0.6	8.4	4.9	19.4	10.4	4.2	
-25	-31.7	6.9	1.0	4.8	2.1	2.8	2.6	5.4	7.4	17.8	13.6	6.8	
-20	-28.9	3.7	3.0	1.4	4.3	0.5	4.7	2.0	10.2	16.0	17.1	9.7	
-15	-26.1	0.1	5.2	1.2	6.6	2.5	7.1	0.8	13.2	14.0	20.9	12.9	
-10	-23.3	1.9	7.7	3.3	9.2	4.7	9.6	2.8	16.5	11.8	25.1	16.4	
-5	-20.6	4.1	10.3	5.5	12.0	7.1	12.4	5.0	20.1	9.3	29.6	20.2	
0	-17.8	6.5	13.2	8.0	15.1	9.7	15.5	7.5	24.0	6.6	34.5	24.4	
5	-15.0	9.1	16.3	10.7	18.4	12.6	18.7	10.1	28.3	3.6	39.8	28.9	
10	-12.2	11.9	19.7	13.7	22.0	15.8	22.3	13.0	32.8	0.3	45.6	33.9	
15	-9.4	15.0	23.4	16.9	25.9	19.2	26.1	16.1	37.8	1.6	51.8	39.3	
20	-6.7	18.4	27.4	20.4	30.1	23.0	30.3	19.5	43.1	3.6	58.5	45.1	
25	-3.9	22.1	31.7	24.2	34.6	27.0	34.7	23.2	48.8	5.7	65.6	51.4	
30	-1.1	26.1	36.4	28.3	39.5	31.4	39.5	27.1	55.0	8.0	73.3	58.2	
35	1.7	30.4	41.3	32.8	44.8	36.1	44.6	31.4	61.5	10.5	81.5	65.5	
40	4.4	35.0	46.6	37.6	50.4	41.1	50.1	36.1	68.6	13.2	90.3	73.4	
45	7.2	40.1	52.4	42.7	56.4	46.6	56.0	41.0	76.1	16.1	99.7	81.8	
50	10.0	45.4	58.5	48.2	62.8	52.4	62.2	46.3	84.1	19.3	109.7	90.8	
55	12.8	51.2	65.0	54.1	69.6	58.7	68.9	52.0	92.6	22.7	120.4	100.5	
60	15.6	57.4	71.9	60.4	76.9	65.4	75.9	58.1	101.6	26.3	131.7	110.8	
65	18.3	64.0	79.3	67.2	84.7	72.5	83.4	64.7	11.2	30.2	143.7	121.8	
70	21.1	71.1	87.1	74.4	92.9	80.1	91.4	71.6	121.4	34.4	156.4	133.5	
75	23.9	78.7	95.4	82.1	101.6	88.2	99.8	79.0	132.2	38.9	169.9	146.0	
80	26.7	86.7	104.2	90.2	110.9	96.8	108.7	86.9	143.6	43.7	184.1	159.2	
85	29.4	95.2	113.6	98.9	120.7	106.0	118.1	95.2	155.7	48.8	199.1	173.3	
90	32.2	104.3	123.4	108.1	131.0	115.6	128.0	104.1	168.4	54.3	215.0	188.1	
95	35.0	113.9	133.8	117.9	141.9	125.9	138.4	113.4	181.8	60.1	231.7	203.9	
100	37.8	124.2	144.8	128.2	153.4	136.8	149.4	123.4	195.9	66.2	249.3	220.6	
105	40.6	135.0	156.4	139.1	165.5	148.2	161.0	133.8	210.8	72.7	267.8	238.3	
110	43.3	146.4	168.5	150.6	178.3	160.4	173.1	144.9	226.4	79.6	287.2	256.9	
115	46.1	158.4	181.3	162.8	191.6	173.1	185.9	156.6	242.8	86.9	307.6	276.6	
120	48.9	171.2	194.7	175.6	205.7	186.6	199.2	168.9	260.0	94.6	329.0	297.4	
125	51.7	184.6	208.8	189.0	220.4	200.7	213.2	181.8	278.0	102.8	351.5	319.3	
130	54.4	198.7	223.6	203.2	235.9	215.6	227.8	195.5	296.9	111.3	375.0	342.0	
135	57.2	213.6	239.1	218.1	252.0	231.2	243.1	209.8	316.7	120.4	399.7	366.8	
140	60.0	229.2	255.3	233.8	268.9	247.6	259.1	224.8	337.4	129.9	425.4	392.4	
145	62.8	245.7	272.2	250.2	286.6	264.8	275.7	240.5	359.0	139.9	452.4	419.5	
150	65.6	262.9	289.8	267.4	305.0	282.8	293.1	257.0	381.7	150.4	480.6	448.0	

Números en negro - psig

Números en azul - pulgadas de mercurio (vacío)

°F	°C	407C R-407C		408A R-408A		404A R-404A		HP81 R-402B		AZ 50° R-507A		HP80 R-402A		AZ 20° R-410A		422D R-422D	
		Burbuja	Rocio	Burbuja	Rocio	Burbuja	Rocio	Burbuja	Rocio	Burbuja	Rocio	Burbuja	Rocio	Burbuja	Rocio	Burbuja	Rocio
-40	-40.0	2.9	4.5	4.2	3.8	5.2	4.6	5.7	3.8	5.7	7.6	5.8	10.8	2.4	2.3		
-35	-37.2	5.2	0.7	6.7	6.3	7.8	7.1	8.3	6.2	8.4	10.5	8.5	14.2	4.6	0.8		
-30	-34.4	7.9	1.7	9.4	9.0	10.7	9.9	11.2	8.9	11.3	13.6	11.4	17.8	7.1	3.0		
-25	-31.7	10.7	4.0	12.4	11.9	13.8	13.0	14.4	11.9	14.5	17.0	14.7	21.9	9.9	5.4		
-20	-28.9	13.9	6.5	15.6	15.1	17.2	16.3	17.8	15.2	18.0	20.7	18.2	26.3	12.9	8.1		
-15	-26.1	17.3	9.3	19.2	18.6	20.9	20.0	21.5	18.7	21.8	24.7	22.1	31.1	16.2	11.0		
-10	-23.3	21.1	12.4	23.0	22.4	25.0	24.0	25.6	22.6	26.0	29.1	26.3	36.4	19.8	14.3		
-5	-20.6	25.2	15.8	27.2	26.6	29.4	28.3	30.0	26.8	30.5	33.9	30.9	42.1	23.7	17.8		
0	-17.8	29.6	19.5	31.7	31.1	34.1	33.0	34.8	31.4	35.3	39.0	35.9	48.3	27.9	21.7		
5	-15.0	34.4	23.6	36.6	36.0	39.3	38.1	40.0	36.4	40.6	44.5	41.3	55.0	32.5	25.8		
10	-12.2	39.6	28.0	41.9	41.2	44.8	43.6	45.5	41.7	46.2	50.5	47.0	62.2	37.5	30.4		
15	-9.4	45.2	32.7	47.6	46.8	50.8	49.5	51.5	47.5	52.3	56.9	53.3	69.9	42.8	35.3		
20	-6.7	51.3	37.9	53.7	52.9	57.2	55.8	57.9	53.6	58.9	63.7	60.0	78.3	48.5	40.7		
25	-3.9	57.8	43.6	60.2	59.4	64.0	62.6	64.7	60.3	65.9	71.1	67.1	87.2	54.7	46.4		
30	-1.1	64.7	49.6	67.2	66.4	71.4	69.9	72.0	67.4	73.4	78.9	74.8	96.8	61.3	52.6		
35	1.7	72.2	56.2	74.7	73.8	79.2	77.7	79.9	75.0	81.4	87.3	83.0	107.1	68.4	59.3		
40	4.4	80.2	63.2	82.7	81.8	87.6	86.0	88.2	83.1	89.9	96.2	91.7	118.1	75.9	66.4		
45	7.2	88.7	70.7	91.2	90.2	96.5	94.8	97.1	91.8	99.0	105.6	101.1	129.8	84.0	74.0		
50	10.0	97.8	78.8	100.3	99.2	106.0	104.2	106.5	101.0	108.7	115.7	111.0	142.2	92.6	82.2		
55	12.8	107.5	87.5	109.9	108.8	116.0	114.3	116.5	110.8	119.0	126.4	121.5	155.5	101.7	90.9		
60	15.6	117.7	96.8	120.1	119.0	126.7	124.9	127.2	121.3	129.9	137.7	132.7	169.6	111.4	100.2		
65	18.3	128.7	106.7	130.9	129.8	138.1	136.2	138.4	132.3	141.4	149.7	144.5	184.5	121.7	110.1		
70	21.1	140.2	117.2	142.4	141.2	150.0	148.1	150.3	144.0	153.7	162.4	157.1	200.4	132.6	120.7		
75	23.9	152.5	128.4	154.5	153.2	162.7	160.7	162.9	156.4	166.6	175.8	170.3	217.1	144.1	131.8		
80	26.7	165.5	140.4	167.2	166.0	176.1	174.1	176.1	169.4	180.3	189.9	184.3	234.9	156.3	143.7		
85	29.4	179.2	153.1	180.7	179.4	190.3	188.2	190.1	183.2	194.7	204.8	199.1	253.7	169.2	156.2		
90	32.2	193.6	166.5	194.9	193.6	205.2	203.0	204.8	197.8	209.9	220.4	214.6	273.5	182.7	169.5		
95	35.0	208.8	180.8	209.9	208.5	220.9	218.7	220.3	213.1	225.9	236.9	231.0	294.4	197.1	183.5		
100	37.8	224.9	195.8	225.7	224.2	237.4	235.2	236.6	229.2	242.8	254.3	248.3	316.4	212.1	198.4		
105	40.6	241.8	211.8	242.2	240.8	254.8	252.6	253.7	246.2	260.5	272.5	266.4	339.6	228.0	214.0		
110	43.3	259.6	228.7	259.6	258.1	273.1	270.8	271.7	264.0	279.2	291.6	285.5	364.1	244.7	230.5		
115	46.1	278.2	246.5	277.9	276.4	292.3	290.0	290.5	282.8	298.8	311.7	305.5	389.9	262.2	247.9		
120	48.9	297.8	265.3	297.0	295.5	312.5	310.2	310.2	302.4	319.4	332.7	326.6	416.9	280.6	266.2		
125	51.7	318.3	285.2	317.1	315.6	333.7	331.4	330.9	323.0	341.1	354.8	348.6	445.4	300.0	285.5		
130	54.4	339.9	306.1	338.2	336.6	355.9	353.7	352.6	344.6	363.9	377.9	371.8	475.4	320.2	305.8		
135	57.2	362.4	328.2	360.2	358.6	379.3	377.1	375.3	367.3	387.8	402.2	396.1	506.9	341.4	327.2		
140	60.0	386.0	351.4	383.3	381.7	403.8	401.7	399.0	391.0	412.9	427.5	421.6	540.1	363.7	349.6		
145	62.8	410.7	375.9	407.5	405.9	429.6	427.6	423.8	415.9	439.3	454.1	448.4	575.1	387.0	373.3		
150	65.6	436.5	401.7	432.8	431.2	456.7	454.9	449.8	442.0	467.2	482.0	476.5	611.9	411.4	398.2		

Números en negro - psig

Números en azul - pulgadas de mercurio (vacío)

°F	°C	Solstice® N40 R-448A		Solstice® 1234yf R-1234yf	Solstice® 1234ze R-1234ze	Solstice® 1233zd R-1233zd	Enovate® R-245fa	°F	°C	123
		Burbuja	Rocio							
-40	-40	4.73	0.35	-5.7	19.07	28.28	-13.9	35	1.7	19.5
-35	-37.2	7.31	1.91	-4.4	17.36	27.96	-13.7	40	4.4	18.2
-30	-34.4	10.2	4.22	-2.9	15.44	27.59	-13.5	45	7.2	16.6
-25	-31.7	13.3	6.78	-1.4	13.29	27.16	-13.3	50	10.0	15.0
-20	-28.9	16.7	9.61	0.4	10.89	26.67	-13	55	12.8	13.2
-15	-26.1	20.4	12.7	2.3	8.22	26.10	-12.7	60	15.8	11.2
-10	-23.3	24.5	16.1	4.4	5.27	25.46	-12.4	65	18.3	9.0
-5	-20.6	28.9	19.8	6.7	2.01	24.73	-12	70	21.1	6.6
0	-17.8	33.7	23.9	9.2	0.78	23.91	-11.5	75	23.9	4.0
5	-15.0	38.9	28.3	12.0	2.72	22.99	-11	80	26.7	1.2
10	-12.2	44.5	33.1	14.9	4.85	21.95	-10.4	85	29.4	0.9
15	-9.4	50.6	38.4	18.1	7.17	20.80	-9.8	90	32.2	2.5
20	-6.7	57.1	44.0	21.6	9.70	19.50	-9.1	95	35.0	4.2
25	-3.9	64.0	50.1	25.4	12.46	18.06	-8.3	100	37.8	6.1
30	-1.1	71.5	56.7	29.4	15.45	16.47	-7.4	110	43.3	10.3
35	1.7	79.5	63.7	33.8	18.69	14.71	-6.4	120	48.9	15.1
40	4.4	88.0	71.2	38.4	22.19	12.78	-5.3	130	54.4	20.6
45	7.2	97.1	79.4	43.4	25.97	10.65	-4.1			
50	10.0	107	88.0	48.8	30.03	8.32	-2.8			
55	12.8	117	97.3	54.5	34.40	5.78	-1.3			
60	15.6	128	107	60.6	39.09	3.00	0.2			
65	18.3	140	118	67.0	44.11	0.01	2			
70	21.1	152	129	73.9	49.48	1.62	3.9			
75	23.9	165	141	81.3	55.21	3.37	5.9			
80	26.7	179	154	89.0	61.32	5.26	8.2			
85	29.4	193	167	97.2	67.83	7.30	10.6			
90	32.2	208	181	105.9	74.70	9.50	13.2			
95	35.0	224	196	115.1	82.10	11.86	16			
100	37.8	241	212	124.9	89.90	14.40	19			
105	40.6	259	229	135.1	98.16	17.12	22.3			
110	43.3	278	247	145.9	106.90	20.03	25.8			
115	46.1	297	266	157.3	116.13	23.14	29.5			
120	48.9	318	286	169.2	125.89	26.46	33.5			
125	51.7	339	306	181.8	136.18	29.99	37.8			
130	54.4	362	329	195.0	147.02	33.76	42.4			
135	57.2	386	352	208.9	158.44	37.76	47.2			
140	60.0	410	376	223.4	170.45	42.00	52.4			

°F	°C	23		508B	
-120	-94.4	3.9	2.7		
-110	-78.9	2.9	8.7		
-100	-73.3	9.1	16.3		
-95	-70.6	12.8	20.7		
-90	-67.8	16.9	25.6		
-85	-65.0	21.4	31.0		
-80	-62.2	26.5	36.9		
-75	-59.4	32.0	43.4		
-70	-56.7	38.2	50.4		
-65	-53.9	44.9	58.1		
-60	-51.1	52.3	66.5		
-55	-48.3	60.3	75.5		
-50	-45.5	69.0	85.3		
-45	-42.8	78.5	95.8		
-40	-40.0	88.8	107.2		
-35	-37.2	99.9	119.3		
-30	-34.4	111.9	132.4		
-25	-31.7	124.8	146.4		
-20	-28.8	137.6	161.3		

Números en negro - psig Números en azul - pulgadas de mercurio (vacío)

Genetron® Producto	ASHRAE Número	Tipo de Refrigerante	Clase de Refrigerante	Lubricante	Densidad Líquida (lbs/ft³)**		Punto de Ebullición °F
					0 °F	80 °F	
Genetron® 22	22	Compuesto Puro	HCFC	MO	83.6	73.9	-41.6
Genetron® 23	23	Compuesto Puro	HFC	POE	72.6	-	-115.5
Genetron® 123	123	Compuesto Puro	HCFC	AB	97.9	91.1	82.1
Genetron® 124	124	Compuesto Puro	HCFC	AB	93.06	84.25	12.2
Genetron® 134a	134a	Compuesto Puro	HFC	POE	84.4	74.9	-14.9
Genetron® 141b	141b	Compuesto Puro	HCFC	-	82.2	76.82	89.6
ENOVATE®	245fa	Compuesto Puro	HFC	POE	90.4	83.3	59.5
Genetron® MP39	401A	Mezcla	HCFC	AB	83.2	74.5	-27.2
Genetron® MP66	401B	Mezcla	HCFC	AB	83.2	74.4	-30.4
Genetron® HP80	402A	Mezcla	HCFC	AB	82.6	70.9	-56.5
Genetron® HP81	402B	Mezcla	HCFC	AB	82.1	71.3	-52.9
Genetron® 404A	404A	Mezcla	HFC	POE	75.9	64.8	-51.8
Genetron® 407C	407C	Mezcla	HFC	POE	81.1	70.6	-46.9
Genetron® PERFORMAX® LT	407F	Mezcla	HFC	POE	79.9	69.2	-50.9
Genetron® 408A	408A	Mezcla	HCFC	AB	75.5	65.5	-49.8
Genetron® 409A	409A	Mezcla	HCFC	AB	84.4	74.9	-29.6
Genetron® AZ20®	410A	Mezcla Azeotrópica	HFC	POE	77.3	65.7	-60.9
Genetron® 422D	422D	Mezcla	HFC	MO	82.2	70.9	-45.7
Solstice® N40	448A	Mezcla Zeotrópica	HFC/HFO	POE	78.32	67.72	-50.7
Genetron® AZ50®	507	Azeótropo	HFC	POE	76.3	65.0	-52.8
Genetron® 508B	508B	Azeótropo	HFC/PFC	POE	72.1	-	-125.3
Solstice® yf	1234yf	Compuesto Puro	HFO	POE/PAG	76.78	67.78	-20.92
Solstice® zd	1233zd	Compuesto Puro	HFO	POE/PVE	84.96	78.58	65
Solstice® ze	1234ze	Compuesto Puro	HFO	POE	80.55	72.27	-2.11

Cuando convierta un sistema a un refrigerante nuevo, use esta fórmula para determinar la cantidad necesaria:

$$\text{Libras de refrigerante nuevo} = \frac{\text{Libras de refrigerante original} \times \text{densidad del refrigerante nuevo (a } 80^{\circ}\text{F)}}{\text{Densidad de refrigerante original (a } 80^{\circ}\text{F)}}$$

Ejemplo

Si usted usaba 1,000 libras de R-502, necesitará alrededor de 860 libras de AZ-50®, como se muestra:

$$\text{Libras de AZ-50}^{\circ} = \frac{1,000 \times 64.9}{75.5} = \frac{64,900}{75.5} = 860$$

* POE = Polioléster MO: Aceite Mineral
AB: Alquibenceno

**Divida por 7.48 para convertir a pounds/gal.



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