

Forane® Refrigerant Weight in Copper Lines



Type K Tubing ¹																				
Weight (lbs) ² of Saturated Refrigerant @ 77°F per 100'																				
Tube O. D. (inches)	R-22		R-134a		R-404A		R-407A		R-407C		R-408A		R-409A		R-410A		R-427A		R-507A	
	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor
1/2	6.56	0.24	6.64	0.18	5.75	0.36	6.30	0.27	6.26	0.24	5.83	0.29	6.68	0.16	5.83	0.36	6.22	0.25	5.77	0.38
5/8	11.25	0.42	11.40	0.31	9.87	0.62	10.82	0.47	10.75	0.41	10.01	0.49	11.47	0.28	10.00	0.62	10.67	0.42	9.90	0.65
3/4	17.24	0.64	17.47	0.47	15.12	0.95	16.58	0.72	16.47	0.63	15.34	0.75	17.57	0.42	15.33	0.96	16.35	0.65	15.17	1.00
7/8	22.51	0.84	22.81	0.61	19.73	1.23	21.64	0.94	21.50	0.83	20.03	0.98	22.94	0.55	20.01	1.25	21.34	0.85	19.81	1.30
1 1/8	40.16	1.49	40.70	1.09	35.21	2.20	38.62	1.68	38.37	1.48	35.74	1.75	40.94	0.99	35.71	2.23	38.07	1.51	35.34	2.32
1 3/8	62.82	2.33	63.67	1.71	55.08	3.44	60.42	2.62	60.02	2.31	55.90	2.74	64.03	1.54	55.85	3.48	59.56	2.36	55.29	3.63
1 5/8	88.94	3.30	90.14	2.42	77.99	4.88	85.54	3.72	84.97	3.27	79.14	3.88	90.66	2.19	79.08	4.93	84.32	3.34	78.27	5.15
2 1/8	155.6	5.78	157.7	4.23	136.4	8.53	149.6	6.50	148.6	5.72	138.4	6.78	158.6	3.83	138.3	8.62	147.5	5.85	136.9	9.00
2 5/8	240.4	8.93	243.6	6.53	210.8	13.18	231.2	10.04	229.7	8.84	213.9	10.48	245.0	5.91	213.7	13.32	227.9	9.04	211.6	13.91
3 1/8	342.6	12.73	347.2	9.31	300.4	18.78	329.5	14.31	327.3	12.60	304.9	14.93	349.2	8.43	304.6	18.98	324.8	12.88	301.5	19.82
3 5/8	464.5	17.25	470.8	12.62	407.3	25.47	446.7	19.41	443.8	17.08	413.3	20.24	473.5	11.42	413.0	25.74	440.4	17.46	408.8	26.88
4 1/8	603.1	22.40	611.2	16.39	528.9	33.06	580.0	25.20	576.2	22.18	536.7	26.28	614.8	14.83	536.2	33.42	571.8	22.67	530.8	34.90

Type L Tubing ¹																				
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	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor
1/2	7.48	0.28	7.59	0.20	6.56	0.41	7.20	0.31	7.15	0.28	6.66	0.33	7.63	0.18	6.65	0.41	7.10	0.28	6.59	0.43
5/8	12.03	0.45	12.19	0.33	10.55	0.66	11.57	0.50	11.49	0.44	10.70	0.52	12.26	0.30	10.69	0.67	11.40	0.45	10.58	0.70
3/4	17.96	0.67	18.21	0.49	15.75	0.98	17.28	0.75	17.16	0.66	15.98	0.78	18.31	0.44	15.97	1.00	17.03	0.68	15.81	1.04
7/8	24.98	0.93	25.32	0.68	21.91	1.37	24.03	1.04	23.87	0.92	22.23	1.09	24.47	0.61	22.21	1.38	23.69	0.94	21.99	1.45
1 1/8	42.58	1.58	43.16	1.16	37.34	2.33	40.96	1.78	40.68	1.57	37.89	1.86	43.41	1.05	37.86	2.36	40.37	1.60	37.48	2.46
1 3/8	64.88	2.41	65.76	1.76	56.89	3.56	62.40	2.71	61.99	2.39	57.74	2.83	66.14	1.60	57.69	3.60	61.52	2.44	57.10	3.75
1 5/8	91.83	3.41	93.07	2.50	80.52	5.03	88.32	3.84	87.73	3.38	81.71	4.00	93.60	2.26	81.65	5.09	87.06	3.45	80.82	5.31
2 1/8	159.8	5.93	161.9	4.34	140.1	8.76	153.7	6.68	152.6	5.87	142.2	6.96	162.9	3.93	142.0	8.85	151.5	6.01	140.6	9.24
2 5/8	246.3	9.15	249.7	6.69	216.0	13.50	236.9	10.29	235.3	9.06	219.2	10.73	251.1	6.06	219.0	13.65	233.5	9.26	216.8	14.25
3 1/8	351.6	13.06	356.4	9.56	308.3	19.28	338.2	14.69	335.9	12.93	312.9	15.32	358.4	8.65	312.6	19.49	333.4	13.22	309.5	20.35
3 5/8	475.6	17.66	482.0	12.92	417.0	26.07	457.4	19.87	454.3	17.49	423.2	20.72	484.8	11.70	422.8	26.35	450.9	17.88	418.5	27.52
4 1/8	618.2	22.96	626.6	16.80	542.1	33.89	594.6	25.83	590.6	22.73	550.1	26.94	630.2	15.20	549.7	34.26	586.1	23.24	544.1	35.77

¹ - Tubing per ASTM - B88

² - Weight calculations based on densities obtained using the NIST REFPROP Database

(NIST Standard Reference Database 23, Version 9.0, Lemmon, E. W., Huber, M. L., and McLinden, M. O., Thermophysical Properties Division, 2010)

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