

Single and Two Stage Heat Pumps										
Unit Size	Liquid Line Size	Suction Line Size	Outdoor Unit ABOVE or BELOW Indoor Unit							
			Equivalent Length in Feet							
			0-15	16-25	26-50	51-80	81-100	101-125	126-150	
			Maximum Vertical Separation / Capacity Multiplier							
1.5 Ton	1/4"	1/2"	15 / 1	25 / 0.99	50 / 0.98	75 / 0.97	60 / 0.94	40 / 0.93	20 / 0.91	
	5/16"	1/2"	15 / 1	25 / 0.99	50 / 0.98	80 / 0.97	100 / 0.94	110 / 0.93	115 / 0.91	
	3/8"	1/2"	15 / 1	25 / 1	50 / 0.99	80 / 0.97	100 / 0.97	115 / 0.96	115 / 0.95	
	1/4"	5/8"	15 / 1	25 / 1	50 / 0.99	75 / 0.99	60 / 0.98	40 / 0.98	20 / 0.98	
	5/16"	5/8"	15 / 1	25 / 1	50 / 0.99	80 / 0.99	100 / 0.98	110 / 0.98	115 / 0.98	
	3/8"	5/8"	15 / 1	25 / 1	50 / 1	80 / 0.99	100 / 0.99	115 / 0.99	115 / 0.98	
	1/4"	3/4"	15 / 1	25 / 1	50 / 1	75 / 0.99	60 / 0.99	40 / 0.99	20 / 0.99	
	5/16"	3/4"	15 / 1	25 / 1	50 / 1	80 / 0.99	100 / 0.99	110 / 0.99	115 / 0.99	
	3/8"	3/4"	15 / 1	25 / 1	50 / 1	80 / 0.99	100 / 0.99	115 / 0.99	115 / 0.98	
	1/4"	5/8"	15 / 1	25 / 0.99	50 / 0.99	40 / 0.98	15 / 0.97	0 / 0.96	0 / 0.95	
2 Ton	5/16"	5/8"	15 / 1	25 / 0.99	50 / 0.99	80 / 0.98	100 / 0.97	95 / 0.96	85 / 0.95	
	3/8"	5/8"	15 / 1	25 / 1	50 / 0.99	80 / 0.98	100 / 0.97	100 / 0.96	95 / 0.95	
	1/4"	3/4"	15 / 1	25 / 1	50 / 0.99	40 / 0.99	15 / 0.99	0 / 0.99	0 / 0.98	
	5/16"	3/4"	15 / 1	25 / 1	50 / 0.99	80 / 0.99	100 / 0.99	95 / 0.99	85 / 0.98	
	3/8"	3/4"	15 / 1	25 / 1	50 / 1	80 / 0.99	100 / 0.99	100 / 0.99	95 / 0.98	
	1/4"	5/8"	15 / 1	25 / 0.99	50 / 0.98	0 / 0.97	0 / 0.96	0 / 0.94	0 / 0.93	
2.5 Ton	5/16"	5/8"	15 / 1	25 / 0.99	50 / 0.98	80 / 0.97	85 / 0.96	75 / 0.94	60 / 0.93	
	3/8"	5/8"	15 / 1	25 / 0.99	50 / 0.98	80 / 0.97	95 / 0.96	90 / 0.94	85 / 0.93	
	1/4"	3/4"	15 / 1	25 / 1	50 / 0.99	0 / 0.99	0 / 0.98	0 / 0.98	0 / 0.97	
	5/16"	3/4"	15 / 1	25 / 1	50 / 0.99	80 / 0.99	85 / 0.98	75 / 0.98	60 / 0.97	
	3/8"	3/4"	15 / 1	25 / 1	50 / 0.99	80 / 0.99	95 / 0.98	90 / 0.98	85 / 0.97	
	5/16"	5/8"	15 / 1	25 / 0.99	50 / 0.97	75 / 0.95	65 / 0.94	45 / 0.92	30 / 0.9	
3 Ton	5/16"	3/4"	15 / 1	25 / 1	50 / 0.99	75 / 0.98	65 / 0.98	45 / 0.97	30 / 0.96	
	3/8"	5/8"	15 / 1	25 / 0.99	50 / 0.97	80 / 0.95	85 / 0.94	80 / 0.92	75 / 0.9	
	3/8"	3/4"	15 / 1	25 / 1	50 / 0.99	80 / 0.98	85 / 0.98	80 / 0.97	75 / 0.96	
	3/8"	7/8"	15 / 1	25 / 1	50 / 1	80 / 0.99	85 / 0.99	80 / 0.99	75 / 0.98	
	1/2"	3/4"	15 / 1	25 / 1	50 / 0.99	80 / 0.98	100 / 0.98	125 / 0.97	130 / 0.96	
	1/2"	7/8"	15 / 1	25 / 1	50 / 0.99	80 / 0.99	100 / 0.99	125 / 0.99	130 / 0.99	
3.5 Ton	3/8"	3/4"	15 / 1	25 / 0.99	50 / 0.98	80 / 0.97	80 / 0.97	70 / 0.96	65 / 0.95	
	3/8"	7/8"	15 / 1	25 / 1	50 / 0.99	80 / 0.99	80 / 0.99	70 / 0.98	65 / 0.98	
	1/2"	3/4"	15 / 1	25 / 0.99	50 / 0.98	80 / 0.97	100 / 0.97	125 / 0.96	125 / 0.94	
	1/2"	7/8"	15 / 1	25 / 0.99	50 / 0.98	80 / 0.97	100 / 0.97	125 / 0.96	125 / 0.94	
4 Ton	3/8"	3/4"	15 / 1	25 / 0.99	50 / 0.98	75 / 0.97	70 / 0.96	60 / 0.95	50 / 0.94	
	3/8"	7/8"	15 / 1	25 / 1	50 / 0.99	75 / 0.99	70 / 0.98	60 / 0.98	50 / 0.97	
	1/2"	3/4"	15 / 1	25 / 0.99	50 / 0.98	80 / 0.97	100 / 0.96	125 / 0.95	125 / 0.94	
	1/2"	7/8"	15 / 1	25 / 1	50 / 0.99	80 / 0.99	100 / 0.98	125 / 0.98	125 / 0.97	
5 Ton	3/8"	3/4"	15 / 1	25 / 0.99	50 / 0.97	65 / 0.95	45 / 0.94	30 / 0.92	15 / 0.9	
	3/8"	7/8"	15 / 1	25 / 0.99	50 / 0.99	65 / 0.98	45 / 0.97	30 / 0.96	15 / 0.96	
	1/2"	3/4"	15 / 0.99	25 / 0.99	50 / 0.97	80 / 0.95	100 / 0.94	120 / 0.92	115 / 0.9	
	1/2"	7/8"	15 / 1	25 / 0.99	50 / 0.99	80 / 0.98	100 / 0.97	120 / 0.96	115 / 0.96	

Maximum Equivalent Line Length may not exceed 250'

Maximum Actual Line Length may not exceed 200'

Light Grey shaded areas are considered long line and may require accessories as recommended in Long Line Set Guide

DO NOT use suction line traps in the suction riser as this adds additional unwanted pressure drop in the system.

Single and Two Stage Heat Pumps										
Unit Size	Liquid Line Size	Suction Line Size	Outdoor Unit ABOVE or BELOW Indoor Unit							
			Equivalent Length in Meters							
			0-5	5.5-8	8.5-15	15.5-24	24.5-30	30.5-38	38.5-46	
			Maximum Vertical Separation / Capacity Multiplier							
1.5 Ton	1/4"	1/2"	5 / 1	8 / 0.99	15 / 0.98	23 / 0.97	18 / 0.94	12 / 0.93	6 / 0.91	
	5/16"	1/2"	5 / 1	8 / 0.99	15 / 0.98	24 / 0.97	30 / 0.94	34 / 0.93	35 / 0.91	
	3/8"	1/2"	5 / 1	8 / 1	15 / 0.99	24 / 0.97	30 / 0.97	35 / 0.96	35 / 0.95	
	1/4"	5/8"	5 / 1	8 / 1	15 / 0.99	23 / 0.99	18 / 0.98	12 / 0.98	6 / 0.98	
	5/16"	5/8"	5 / 1	8 / 1	15 / 0.99	24 / 0.99	30 / 0.98	34 / 0.98	35 / 0.98	
	3/8"	5/8"	5 / 1	8 / 1	15 / 1	24 / 0.99	30 / 0.99	35 / 0.99	35 / 0.98	
	1/4"	3/4"	5 / 1	8 / 1	15 / 1	23 / 0.99	18 / 0.99	12 / 0.99	6 / 0.99	
	5/16"	3/4"	5 / 1	8 / 1	15 / 1	24 / 0.99	30 / 0.99	34 / 0.99	35 / 0.99	
	3/8"	3/4"	5 / 1	8 / 1	15 / 1	24 / 0.99	30 / 0.99	35 / 0.99	35 / 0.98	
	1/4"	5/8"	5 / 1	8 / 0.99	15 / 0.99	12 / 0.98	5 / 0.97	0 / 0.96	0 / 0.95	
2 Ton	5/16"	5/8"	5 / 1	8 / 0.99	15 / 0.99	24 / 0.98	30 / 0.97	29 / 0.96	26 / 0.95	
	3/8"	5/8"	5 / 1	8 / 1	15 / 0.99	24 / 0.98	30 / 0.97	30 / 0.96	29 / 0.95	
	1/4"	3/4"	5 / 1	8 / 1	15 / 0.99	12 / 0.99	5 / 0.99	0 / 0.99	0 / 0.98	
	5/16"	3/4"	5 / 1	8 / 1	15 / 0.99	24 / 0.99	30 / 0.99	29 / 0.99	26 / 0.98	
	3/8"	3/4"	5 / 1	8 / 1	15 / 1	24 / 0.99	30 / 0.99	30 / 0.99	29 / 0.98	
	1/4"	5/8"	5 / 1	8 / 0.99	15 / 0.98	0 / 0.97	0 / 0.96	0 / 0.94	0 / 0.93	
2.5 Ton	5/16"	5/8"	5 / 1	8 / 0.99	15 / 0.98	24 / 0.97	26 / 0.96	23 / 0.94	18 / 0.93	
	3/8"	5/8"	5 / 1	8 / 0.99	15 / 0.98	24 / 0.97	29 / 0.96	27 / 0.94	26 / 0.93	
	1/4"	3/4"	5 / 1	8 / 1	15 / 0.99	0 / 0.99	0 / 0.98	0 / 0.98	0 / 0.97	
	5/16"	3/4"	5 / 1	8 / 1	15 / 0.99	24 / 0.99	26 / 0.98	23 / 0.98	18 / 0.97	
	3/8"	3/4"	5 / 1	8 / 1	15 / 0.99	24 / 0.99	29 / 0.98	27 / 0.98	26 / 0.97	
	5/16"	5/8"	5 / 1	8 / 0.99	15 / 0.97	23 / 0.95	20 / 0.94	14 / 0.92	9 / 0.9	
3 Ton	5/16"	3/4"	5 / 1	8 / 1	15 / 0.99	23 / 0.98	20 / 0.98	14 / 0.97	9 / 0.96	
	3/8"	5/8"	5 / 1	8 / 0.99	15 / 0.97	24 / 0.95	26 / 0.94	24 / 0.92	23 / 0.9	
	3/8"	3/4"	5 / 1	8 / 1	15 / 0.99	24 / 0.98	26 / 0.98	24 / 0.97	23 / 0.96	
	3/8"	7/8"	5 / 1	8 / 1	15 / 1	24 / 0.99	26 / 0.99	24 / 0.99	23 / 0.98	
	1/2"	3/4"	5 / 1	8 / 1	15 / 0.99	23 / 0.98	30 / 0.98	38 / 0.97	40 / 0.96	
	1/2"	7/8"	5 / 1	8 / 1	15 / 0.99	23 / 0.99	30 / 0.99	38 / 0.99	40 / 0.99	
3.5 Ton	3/8"	3/4"	5 / 1	8 / 0.99	15 / 0.98	24 / 0.97	24 / 0.97	21 / 0.96	20 / 0.95	
	3/8"	7/8"	5 / 1	8 / 1	15 / 0.99	24 / 0.99	24 / 0.99	21 / 0.98	20 / 0.98	
	1/2"	3/4"	5 / 1	8 / 0.99	15 / 0.98	23 / 0.97	30 / 0.97	38 / 0.96	38 / 0.94	
	1/2"	7/8"	5 / 1	8 / 0.99	15 / 0.98	23 / 0.97	30 / 0.97	38 / 0.96	38 / 0.94	
4 Ton	3/8"	3/4"	5 / 1	8 / 0.99	15 / 0.98	23 / 0.97	21 / 0.96	18 / 0.95	15 / 0.94	
	3/8"	7/8"	5 / 1	8 / 1	15 / 0.99	23 / 0.99	21 / 0.98	18 / 0.98	15 / 0.97	
	1/2"	3/4"	5 / 1	8 / 0.99	15 / 0.98	23 / 0.97	30 / 0.96	38 / 0.95	38 / 0.94	
	1/2"	7/8"	5 / 1	8 / 1	15 / 0.99	23 / 0.99	30 / 0.98	38 / 0.98	38 / 0.97	
5 Ton	3/8"	3/4"	5 / 1	8 / 0.99	15 / 0.97	20 / 0.95	14 / 0.94	9 / 0.92	5 / 0.9	
	3/8"	7/8"	5 / 1	8 / 0.99	15 / 0.99	20 / 0.98	14 / 0.97	9 / 0.96	5 / 0.96	
	1/2"	3/4"	5 / 0.99	8 / 0.99	15 / 0.97	23 / 0.95	30 / 0.94	37 / 0.92	35 / 0.9	
	1/2"	7/8"	5 / 1	8 / 0.99	15 / 0.99	23 / 0.98	30 / 0.97	37 / 0.96	35 / 0.96	

Maximum Equivalent Line Length may not exceed 76 Meters

Maximum Actual Line Length may not exceed 61 Meters

Light Grey shaded areas are considered long line and may require accessories as recommended in Long Line Set Guide

DO NOT use suction line traps in the suction riser as this adds additional unwanted pressure drop in the system.