



Bacchus Cellar Systems Recommended Line Sizes for R-134a

SYSTEM CAPACITY BTU/H	SUCTION LINE SIZE																	
	SUCTION TEMPERATURE																	
	Plus 40°F						Plus 30°F						Plus 20° F					
	Equivalent Lengths						Equivalent Lengths						Equivalent Lengths					
	25'	50'	75'	100'	150'	200'	25'	50'	75'	100'	150'	200'	25'	50'	75'	100'	150'	200'
1,000	3/8	3/8	3/8	3/8	3/8	1/2	3/8	3/8	3/8	3/8	1/2	1/2	3/8	1/2	1/2	1/2	1/2	5/8
3,000	3/8	1/2	1/2	1/2	5/8	5/8	1/2	1/2	1/2	5/8	5/8	5/8	1/2	5/8	5/8	7/8	7/8	7/8
4,000	1/2	1/2	5/8	5/8	5/8	5/8	1/2	1/2	5/8	5/8	5/8	7/8	5/8	5/8	7/8	7/8	7/8	7/8
6,000	1/2	5/8	5/8	5/8	7/8	7/8	1/2	5/8	5/8	7/8	7/8	7/8	5/8	5/8	7/8	7/8	7/8	7/8
9,000	5/8	5/8	7/8	7/8	7/8	7/8	5/8	7/8	7/8	7/8	7/8	7/8	5/8	7/8	7/8	7/8	7/8	1 1/8
12,000	5/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	1 1/8	1 1/8	7/8	7/8	7/8	1 1/8	1 1/8	1 1/8

SUCTION LINE SIZE													LIQUID LINE SIZE					
SUCTION TEMPERATURE													Receiver to Expansion Valve Equivalent Lengths					
Plus 10°F						0° F												
Equivalent Lengths						Equivalent Lengths												
	25'	50'	75'	100'	150'	200'	25'	50'	75'	100'	150'	200'	3/8	3/8	3/8	3/8	3/8	3/8
1,000	3/8	1/2	1/2	1/2	1/2	5/8	3/8	1/2	1/2	1/2	1/2	5/8	3/8	3/8	3/8	3/8	3/8	3/8
3,000	1/2	5/8	5/8	7/8	7/8	7/8	1/2	5/8	5/8	7/8	7/8	7/8	3/8	3/8	3/8	3/8	3/8	3/8
4,000	5/8	5/8	7/8	7/8	7/8	7/8	5/8	5/8	7/8	7/8	7/8	7/8	3/8	3/8	3/8	3/8	3/8	3/8
6,000	5/8	7/8	7/8	7/8	1 1/8	1 1/8	5/8	7/8	7/8	7/8	7/8	1 1/8	3/8	3/8	3/8	3/8	3/8	3/8
9,000	7/8	7/8	7/8	1 1/8	1 1/8	1 1/8	7/8	7/8	7/8	1 1/8	1 1/8	1 1/8	3/8	3/8	3/8	3/8	3/8	1/2
12,000	7/8	7/8	1 1/8	1 1/8	1 1/8	1 3/8	7/8	1 1/8	1 1/8	1 1/8	1 1/8	1 3/8	3/8	3/8	3/8	3/8	1/2	1/2

***NOTES:**

1. Sizes that are highlighted indicate maximum suction line sizes that should be used for risers. Riser size should not exceed horizontal size. Properly placed suction traps must also be used for adequate oil return. All sizes shown are O.D. Type L copper tubing.
2. Suction line sizes selected at pressure drop equivalent to 2 degrees F. Reduce estimate of system capacity accordingly.
3. Recommended liquid line size may increase with reverse cycle hot gas systems.
4. consult factory for for R1 34a operation at winter conditions below 0° ambient.
 Heated and insulated receiver required below 0° ambient.
 If system load drops below 40% of design, consideration to installing double suction risers should be made.