1. Suggested Restrictor Tube Data for Domestic and Commercial Applications.

   The suggestions below, using a minimum of 36" heat exchange and 0. subcooling are made to aid in the initial selection of restrictor in system design:

R404A, R12 & R134a Low Temperature			
Compressor Capacity BTU/Hr.	Condenser Type	Normal Evaporating Temperature	
		-10. to 5. F (-23.3. to -15.C)	5. to 20.F (-15. to -6.7.C)
200 - 300	Static (Fan)	16' - .026	10' - .026
300 - 400	Static (Fan)	12' - .026	12' - .031
400 - 700	Static Fan	12' - .031 10' - .031	12' - .036 10' - .036
700 - 1100	Static Fan	12' - .036 10' - .036	
1100 - 1300	Static Fan	10' - .036 8' - .036	
1300 - 1700	Static Fan	12' - .042 10' - .042	
1700 - 2000	Static Fan	12' - .049 10' - .042	
2000 - 3000	Fan	10' - .054	15' - .059
3000 - 4000	Fan	10' - .059	12' - .064
4000 - 4500	Fan	12' - .064	12' - .070
4500 - 5000	Fan	10' - .070	12' - .080
5000 - 7000	Fan	(2pcs.) 10' - .059	(2pcs.) 12' - .064
7000 - 9000	Fan	(2pcs.) 10' - .064	(2pcs.) 10' - .070
9000 - 12,000	Fan	(2pcs.) 10' - .070	(2pcs.) 12' - .080
12,000 - 15,000	Fan	(3pcs.) 10' - .070	(3pcs.) 12' - .080

R404A, R12 & R134a Medium & High Temperature				
Compressor Capacity BTU/Hr.	Condenser Type	Normal Evaporating Temperature		
		5. to 20.F (-15. to -6.7.C)	20. to 35.F (-6.7. to 1.7.C)	35. to 50.F (1.7. to 10.C)
1400 - 1600	Fan	12' - .036	8' - .036	8' - .042
1600 - 1800	Fan	10' - .036	12' - .042	
1800 - 2500	Fan	12' - .042	12' - .049	8' - .049
2500 - 3500	Fan	10' - .042	10' - .049	
3500 - 4000	Fan	12' - .049	10' - .054	
4000 - 5000	Fan	10' - .054	10' - .059	
5000 - 6000	Fan	12' - .059	12' - .064	
6000 - 7000	Fan	10' - .059	10' - .064	12' - .070
7000 - 10,000	Fan	12' - .070 (2) 12' - .054	12' - .080 (2) 10' - .059	
10,000 - 13,000	Fan	(2) 12' - .059	(2) 10' - .064	
13,000 - 16,000	Fan	(2) 12' - .070	(2) 10' - .080	
16,000 - 25,000	Fan	(2) 12' - .080	(2) 10' - .085	
25,000 - 40,000	Fan	(4) 10' - .070	(4) 12' - .080	
40,000 - 60,000	Fan	(5) 10' - .070	(5) 12' - .080	

2. Suggested Restrictor Tube Data for Air Conditioning (R22) Applications.

The suggested capillary size is based on a condensing temperature of 130ºF, with 115ºF liquid entering the capillary, 65ºF gas entering the compressor, and evaporator refrigerating effect of 68 BTU/#.

<u>Example No. 1</u> (see table below)

Select the capillary required for a Tecumseh compressor AH5540E rated 40,000 BTU/Hr. assuming a 3/8" O.D. the coil. The maximum load per circuit is 7000 BTU/Hr. or 40,000 / 7000 or six circuits. The load per circuit then becomes 40,000 / 6 or 6700 BTU per circuit.

(a) For each circuit the capillary would be 35" x .049 or 65" x .054.

(b) As an option two capillaries could be used to distribute into six circuits in the coil. The load per capillary becomes 40,000 / 2 or 20,000 BTU/Hr. The capillary is 40" x .080 or 58" x .085.

Example No. 2

Select the capillary required for a Tecumseh compressor AG5561E rated 61,000 BTU/Hr. assuming a 3/8" O.D. tube coil, the maximum load per circuit is 7000 BTU/Hr. or 61,000 /7,000 or 8.71 circuits (use 10.) The loading per circuit becomes 6100 BTU/Hr. Use 40" x .049 or 75" x .054 if the intention is to feed each circuit with a separate cap tube. Fewer number of cap tubes are optional, of course.

Assuming a ½" O.D. tube coil, the maximum load per circuit is 14,000 BTU/Hr. or 61,000 / 14,000 or 4.4 circuits (use 5.) The loading per circuit becomes 12,200 BTU/Hr. Use 40" x .064 or 68" x .070 if the intention is to feed each circuit with a separate cap tube. Fewer number of cap tubes are optional, of course.

R22 Air Conditioning					
Compressor Capacity BTU/Hr.	No. of Cap. Tubes	Capillary Size		Coil Circuits	
		Short	Long	Tube	½" Tube
4500	1	36" x .042	80" x .049	1	
5000	1	25" x .042	64" x .049	1	
5500	1	20" x .042	52" x .049	1	
6000	1	40" x .049	75" x .054	1	
6500	1	35" x .049	65" x .054	1	
7000	1	28" x .049	52" x .054		
8000	1	36" x .054	65" x .059	2	1
9000	1	28" x .054	48" x .059	2	1
10,000	1	36" x .059	64" x .064	2	1
11,000	1	28" x .059	50" x .064	2	1
12,000	1	40" x .064	68" x .070	2	1
13,000	1	32" x .064	56" x .070	2	1
14,000	1	44" x .070	70" x .075	2	1
15,000	1	36" x .070	56" x .075	3	2
16,000	1	30" x .070	48" x .075	3	2
17,000	1	38" x .075	65" x .080	3	2
18,000	1	35" x .075	55" x .080	3	2
19,000	1	28" x .075	48" x .080	3	2
20,000	1	40" x .080	58" x .085	3	2