

## 2.4 Refrigeration Circuit

### 2.4.1 Minimum pipe sizes (up to 15m), maximum length and maximum lift.

SYSTEM MODEL	Liquid Line mm (inches)	Suction Line mm (inches)	Maximum Length (m)	Maximum Lift (m)
H-IV-7	9.5 (3/8")	15.9 (5/8")	25	10
H-IV-11	9.5 (3/8")	15.9 (5/8")	30	20
H-IV-15	9.5 (3/8")	19 (3/4")	50	20
H-DV-18	9.5 (3/8")	19 (3/4")	60	25
H-DV-22	12.7 (1/2")	25.4 (1")	60	25
H-DV-26	15.9 (5/8")	28.4 (1,1/8")	60	25

### Minimum pipe sizes (up to 30m), factory charge and additional refrigerant required.

SYSTEM MODEL	Liquid Line mm (inches)	Suction Line mm (inches)	Factory Charge (kg)	ADD REFRIGERANT >15M (g/m)
H-IV-7	9.5 (3/8")	15.9 (5/8")	2.75	30
H-IV-11	9.5 (3/8")	15.9 (5/8")	2.75	30
H-IV-15	9.5 (3/8")	19 (3/4")	4.7	30
H-DV-18	12.7 (1/2")	22.4 (7/8")	6.3	60
H-DV-22	12.7 (1/2")	25.4 (1")	6.9	60
H-DV-26	15.9 (5/8")	28.4 (1,1/8")	7.3	100

## 2.3 Refrigeration pipes

- Maximum pipe length is 60 m. Extra oil (3GS refrigeration oil) is to be added for lengths over 30 m: - 30 ml per meter over 30 m.
- Lines must be sized correctly to ensure that pressure drops within the system are minimised. Mechanics should refer to the above pipe sizing table prior to installation.
- Refrigeration grade copper tubing is the only tubing to be used. Fittings used for bends, elbow, 'P' trap, 'Y' piece, etc., must be of the wrought copper type and clean from dust, burrs, oil, etc. It is recommended that the tube is cut with a tube cutter and the entire ID is made the correct size with an expanding device after cutting. All joints in the piping must be clean and free from dust, burrs, oil, etc.
- All joints must be silver soldered with at least 10% silver content.