TOSHIBA Leading Innovation

VRF Replacement Technology

Designed with the refurbishment market in mind, the new generation of VRF systems allow the reuse of vertical refrigerant pipework from old R22 & R407C systems. Allowing a cost-effective solution to upgrade from any brand of old equipment to the industry's most energy-efficient VRF systems.

R22 & R407C Replacement Technology For SMMSe and SHRMi

Continuing our commitment to more environmentally friendly refrigerants our latest generation SMMSe and SHRMi VRF systems can be used to replace existing R22 and R407C air conditioning plant. R22 (HCFC) was commonly used in air conditioning production up to 2004, on 1st January 2015 R22 equipment will become non-serviceable, resulting in systems having to be replaced with more environmentally friendly refrigerants that have a lower or zero Ozone Depleting Potential (ODP).

- Available for Heat Pump and Heat Recovery systems
- Re-use existing refrigerant pipework
- Cost-effective upgrade
- Reduced installation time and expense
- ECA compliant dependent on design
- Minimal disruption
- Ideal for refurbishment projects where the main risers are no longer accessible
- Lower energy consumption with up to 60% increase in energy efficiency
- Chance to increase or decrease system capacity
- Smaller footprint compared to previous R22 models
- Can re-use existing power supply
- End of life recycling program for replaced plant

Pipe	Suction Gas					Liquid Side			Discharge Gas				Max. Piping Length to 1st Branch Joint (m) Height Difference Outdoor to Indoor	
SHRMi	7/8	1-1/8	1-3/8	1-5/8	1-7/8	1/2	3/4	7/8	3/4	7/8	1-1/8	1-3/8	Height <3 m	Height >3 <50 m
8 hp	✓	✓				✓			✓				100	85
10 hp	✓	✓				✓			✓				100	85
12 hp		✓	✓			✓			✓				100	85
14 hp		✓	✓				✓			✓			100	85
16 hp		✓	✓				✓	✓		✓			100	85
18 hp		✓	✓				✓	✓		✓			100	85
20 hp		✓	✓				✓	✓		✓			100	85
22 hp			✓	✓			✓	✓			✓		100	85
24 hp			✓	✓			✓	✓			✓		100	85
26 hp			✓	✓				✓			✓		100	85
28 hp			✓	✓				✓			✓		100	85
30 hp			✓	✓				✓			✓		100	85
32 hp			✓	✓				✓			✓		100	85
34 hp			✓	✓				✓			✓		100	85
36 hp				✓	✓			✓				✓	100	85
38 hp				✓	✓			✓				✓	100	85
40 hp				✓	✓			✓				✓	100	85
42 hp				✓	✓			✓				✓	100	85

Pipe	Suction Gas					Liquid Side			Max. Piping Length to 1st Branch Joint (m) Height Difference Outdoor to Indoor	
SMMSe	3/4	7/8	1-1/8	1-3/8	1-5/8	1/2	3/4	7/8	Standard Height <3 m	High Efficiency Height >3 <70 m
8 hp	✓					✓			90	65
10 hp		✓				✓			90	65
12 hp			✓			✓			90	65
14 hp			✓				✓		90	65
16 hp			✓				✓		90	65
18 hp			✓				✓		90	65
20 hp			✓				✓		90	65
22 hp			✓				✓		90	65
24 hp				✓			✓		90	65
26 hp				✓			✓		90	65
28 hp				✓			✓		90	65
30 hp				✓			✓		90	65
32 hp				✓			✓		90	65
34 hp				✓			✓		90	65
36 hp					✓			✓	90	65
38 hp					✓			✓	90	65
40 hp					✓			✓	90	65
42 hp					✓			✓	90	65
44 hp					✓			✓	90	65
46 hp					✓			✓	90	65
48 hp					✓			✓	90	65
50 hp					✓			✓	90	65
52 hp					✓			✓	90	65
54 hp					✓			✓	70	65
56 hp					✓			✓	70	65
58 hp					✓			✓	70	65
60 hp					✓			✓	70	65

Maximum system diversity factor connectable indoor units to outdoor is 105%
The data tables detail the main pipe sizes to the first joint. The pipes can be vertical or horizontal providing they match the data. After the first joint for main pipes all other pipework must follow the same principals/criteria as for new installations as detailed in the installation and data books.