# KXZR 3-PIPE

## Heat recovery

### CONNECT UP TO 44 INDOOR UNITS/200% CAPACITY

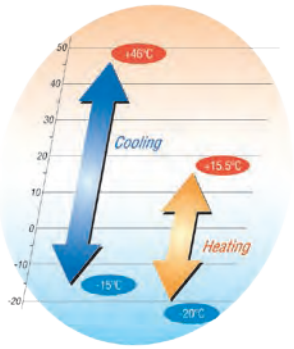
FDC 224 KXZRE1 22.4 kW
FDC 280 KXZRE1 28.0 kW
FDC 335 KXZRE1 33.5 kW

### CHARACTERISTICS

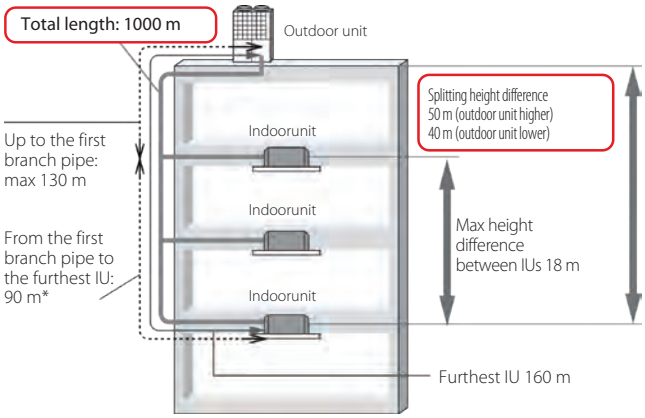
- Maximum energy efficiency COP 4.85
- The units use a Multi-port DC Inverter compressor with concentrated electric winding
- High split: up to 1000 m in total and with a maximum distance between the OU and the furthest IU of 160 m

### 8~12HP (22.4~33.5 kW)


### OPERATING RANGE




### INSTALLATION DIAGRAM




* With difference of length between the farthest indoor unit and the nearest one from the first branch pipe < 40 m.

| Models | | FDC224KXZRE1 | FDC280KXZRE1 | FDC335KXZRE1 |
|---|---|---|---|---|
| Nominal Cool. capacity | kW | 22.40 | 28.00 | 33.50 |
| Cool. power consumption | kW | 5.15 | 7.38 | 9.64 |
| Seasonal energy efficiency index in Cool. | SEER[1] | 6.27 | 6.11 | 7.00 |
| Rated energy efficiency coefficient in Cool. | EER[2] | 4.35 | 3.79 | 3.47 |
| Nominal Heat. capacity | kW | 22.40 | 28.00 | 33.50 |
| Heat. power consumption | kW | 4.62 | 6.19 | 8.12 |
| Seasonal energy efficiency index in Heat. | SCOP[1] | 4.06 | 4.02 | 4.84 |
| Rated energy efficiency coefficient in Heat. | COP[2] | 4.85 | 4.52 | 4.12 |
| Power | | Three-phase 380-415V 50Hz | | |
| Rated current in Cool. | A | 9.00 | 12.20 | 15.80 |
| Rated current in Heat. | A | 8.00 | 10.30 | 13.30 |
| Sound pressure level | dB(A) | 55 | 55 | 61 |
| Sound power level | dB(A) | 75 | 76 | 77 |
| External dimensions (HxLxD) | mm | 1690x1350x720 | | |
| Exterior appearance (Munsell colour) | | Stucco white (4.2Y7.5 / 1.1) equivalent | | |
| Net weight | kg | 289 | 289 | 289 |
| Refrigerant circuit/Compressor type and qty. | | GTC5150NC47LF | | |
| Motor | kW | 3.41x1 | 4.80x1 | 6.54x1 |
| Starting method | | Direct, in line | | |
| Indoor System Units | Number of connectable IU | from 1 to 29 | from 1 to 37 | from 1 to 44 |
| | Total connectable capacity* | 112 - 448 | 140 - 560 | 167 - 670 |
| Crankcase heater | W | 33x1 | | |
| Refrigerant circuit/Heat exchanger | | Pipes finned and grooved internally | | |
| Refrigerant control | | Electronic expansion valve | | |
| Refrigerant/GWP[3] | | R410A/2088 | | |
| Quantity | kg | 11.50 | 11.50 | 11.50 |
| Tons of CO2 equivalent | | 24.01 | 24.01 | 24.01 |
| Refrigerant oil | l | 2.35 (M-MA32R) | | |
| Defrost control | | Computerised | | |
| Air treatment/Fan type and quantity | | Axial fan x 2 | | |
| Motor | W | 386x2 | | |
| Starting method | | Direct | | |
| Air flow (Standard) | m³h | 13200 | | 16800 |
| Shock and vibration absorption | | Rubber vibration absorber (for compressor) | | |
| Safety devices | | Compressor overheating protection/overcurrent/power transistor overheating protection/abnormal high pressure protection | | |
| Diameter refrigerant pipes | | | | |
| Liquid side | mm (inch) | ø9.52 (3/8") | | ø12.7 (1/2") |
| Delivery gas line | mm (inch) | ø19.05 (3/4") | ø22.22 (7/8") | ø25.4 (1") (ø22.22 7/8") |
| Intake gas line | mm (inch) | ø15.88 (5/8") | ø19.05 (3/4") | |
| Joining method | | Gas side brazing / Liquid side flare | | |
| Condensate drain | | Drain ø20 x 6 pcs., ø45 x 3 pcs. | | |
| Piping insulation | | Necessary (on both sides, liquid and gas) | | |
| Accessories | | - | - | - |

1. EU Delegated Regulation No.626/2011 on the labelling indicating the energy consumption of air conditioners. 2. Value measured according to harmonised standard EN14511. 3. Refrigerant leakage contributes to climate change. When released into the atmosphere, refrigerants with a lower global warming potential (GWP) contribute less to global warming than those with a higher GWP. This appliance contains a refrigerant with a GWP of 2088. If 1 kg of this refrigerant fluid were released into the atmosphere, therefore, the impact on global warming would be 2088 times higher than 1 kg of CO2, over a period of 100 years. Under no circumstances should the user try to intervene on the refrigerant circuit or disassemble the product. Always contact qualified personnel if necessary.

# KXZR 3-PIPE

## Heat pump - modular outdoor units

### CONNECTS UP TO 71 INDOOR UNITS/160% CAPACITY (200% FOR FDC 400~450)

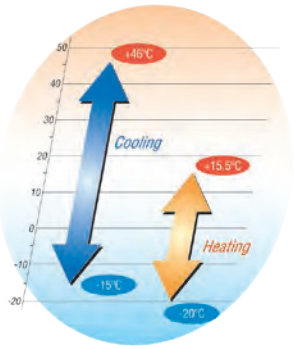
FDC 400 KXZRE1 40.0 kW
FDC 450 KXZRE1 45.0 kW
FDC 475 KXZRE1 47.5 kW
FDC 500 KXZRE1 50.0 kW
FDC 560 KXZRE1 56.0 kW
FDC 615 KXZRE1 61.5 kW
FDC 670 KXZRE1 67.0 kW

### CHARACTERISTICS

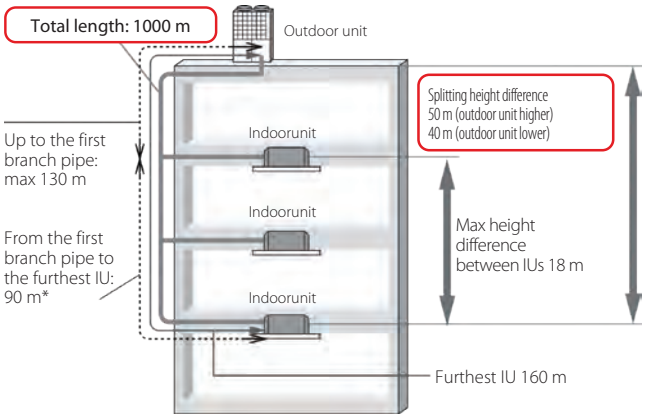
- Maximum energy efficiency COP 4.11
- The units use a Multi-port DC Inverter compressor with concentrated electric winding
- High split: up to 1000 m in total and with a maximum distance between the OU and the furthest IU of 160 m

### 14~24HP (40.0~67.0 kW)


### OPERATING RANGE




### INSTALLATION DIAGRAM




* With difference of length between the farthest indoor unit and the nearest one from the first branch pipe < 40 m.

| Models | | FDC400KXZRE1 | FDC450KXZRE1 | FDC475KXZRE1 | FDC500KXZRE1 | FDC560KXZRE1 | FDC615KXZRE1 | FDC670KXZRE1 |
|---|---|---|---|---|---|---|---|---|
| Nominal Cool. capacity | kW | 40.00 | 45.00 | 47.50 | 50.00 | 56.00 | 61.50 | 67.00 |
| Cool. power consumption | kW | 11.55 | 14.45 | 14.82 | 15.19 | 18.31 | 21.35 | 25.51 |
| Seasonal energy efficiency index in Cool. | SEER[1] | 6.34 | 6.04 | 6.60 | 7.01 | 6.25 | 5.79 | 5.78 |
| Rated energy efficiency coefficient in Cool. | EER[2] | 3.46 | 3.11 | 3.21 | 3.29 | 3.06 | 2.88 | 2.63 |
| Nominal Heat. capacity | kW | 40.00 | 45.00 | 47.50 | 50.00 | 56.00 | 61.50 | 63.00 |
| Heat. power consumption | kW | 9.76 | 11.38 | 11.58 | 12.17 | 14.33 | 16.15 | 17.47 |
| Seasonal energy efficiency index in Heat. | SCOP[1] | 4.22 | 4.33 | 4.27 | 4.54 | 4.29 | 4.34 | 4.66 |
| Rated energy efficiency coefficient in Heat. | COP[2] | 4.10 | 3.95 | 4.10 | 4.11 | 3.91 | 3.81 | 3.61 |
| Power | | Three-phase 380-415V 50Hz | | | | | | |
| Rated current in Cool. | A | 18.50 | 23.20 | 24.00 | 24.60 | 29.60 | 34.60 | 41.30 |
| Rated current in Heat. | A | 16.00 | 18.60 | 18.80 | 19.70 | 23.20 | 26.20 | 28.30 |
| Sound pressure level | dB(A) | 62 | 62 | 62 | 62 | 65 | 66 | 66 |
| Sound power level | dB(A) | 83 | 83 | 82 | 82 | 85 | 85 | 85 |
| External dimensions (HxLxD) | mm | 2048x1350x720 | | | | | | |
| Exterior appearance (Munsell colour) | | Stucco white (4.2Y7.5 / 1.1) equivalent | | | | | | |
| Net weight | kg | 357 | | 410 | | | | |
| Refrigerant circuit/Compressor type and qty. | | GUC5185ND47V | | GTC5150NC47LF×2 | | | | |
| Motor | kW | 7.92×1 | 9.73×1 | 4.53×2 | 4.84×2 | 5.79×2 | 7.05×2 | 9.87×2 |
| Starting method | | Direct, in line | | | | | | |
| Indoor System Units | Number of connectable IU | from 1 to 53 | from 1 to 60 | from 1 to 50 | from 1 to 53 | from 1 to 59 | from 2 to 65 | from 2 to 71 |
| | Total connectable capacity* | 200 - 800 | 225 - 900 | 238 - 760 | 250 - 800 | 280 - 896 | 308 - 984 | 335 - 1072 |
| Crankcase heater | W | 40 | | 33×2 | | | | |
| Refrigerant circuit/Heat exchanger | | Pipes finned and grooved internally | | | | | | |
| Refrigerant control | | Electronic expansion valve | | | | | | |
| Refrigerant/GWP[3] | | R410A/2088 | | | | | | |
| Quantity | kg | 11.50 | | | | | | |
| Tons of CO2 equivalent | | 24.01 | | | | | | |
| Refrigerant oil | l | 3.3 (M-MA32R) | | 4.4 (M-MA32R) | | | | |
| Defrost control | | Computerised | | | | | | |
| Air treatment/Fan type and quantity | | Axial fan x 2 | | | | | | |
| Motor | W | 386x2 | | | | | | |
| Starting method | | Direct | | | | | | |
| Air flow (Standard) | m³h | 16800 | | | | 18600 | | |
| Shock and vibration absorption | | Rubber vibration absorber (for compressor) | | | | | | |
| Safety devices | | Compressor overheating protection/overcurrent/power transistor overheating protection/abnormal high pressure protection | | | | | | |
| Diameter refrigerant pipes | | | | | | | | |
| Liquid side | mm (inch) | ø12.7 (1/2") | | | | | | |
| Delivery gas line | mm (inch) | ø25.4 (1") (ø28.58 1-1/8") | ø28.58 (1 - 1/8") | | | | | |
| Intake gas line | mm (inch) | ø22.22 (7/8") | | | | | ø25.4 (1") (ø22.22 7/8") | |
| Joining method | | Gas side brazing / Liquid side flare | | | | | | |
| Condensate drain | | Drain ø20 x 6 pcs., ø45 x 3 pcs. | | | | | | |
| Piping insulation | | Necessary (on both sides, liquid and gas) | | | | | | |
| Accessories | | - | - | - | - | - | - | - |

1. EU Delegated Regulation No.626/2011 on the labelling indicating the energy consumption of air conditioners. 2. Value measured according to harmonised standard EN14511. 3. Refrigerant leakage contributes to climate change. When released into the atmosphere, refrigerants with a lower global warming potential (GWP) contribute less to global warming than those with a higher GWP. This appliance contains a refrigerant with a GWP of 2088. If 1 kg of this refrigerant fluid were released into the atmosphere, therefore, the impact on global warming would be 2088 times higher than 1 kg of CO2, over a period of 100 years. Under no circumstances should the user try to intervene on the refrigerant circuit or disassemble the product. Always contact qualified personnel if necessary.



MITSUBISHI HEAVY INDUSTRIES

# KXZR 3-PIPE

## Heat pump - modular outdoor units

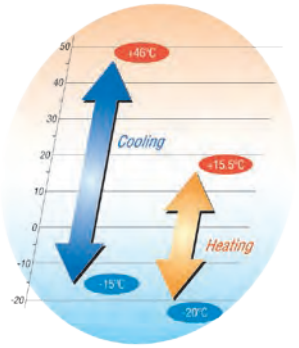
### CONNECTS UP TO 80 INDOOR UNITS AND UP TO 160% CAPACITY (FDC 735~950) AND UP TO 130% CAPACITY (FDC 1000~1120)

FDC 735 KXZRE1 (FDC335+FDC400) 73.5 kW
FDC 800 KXZRE1 (FDC400+FDC400) 80.0 kW
FDC 850 KXZRE1 (FDC400+FDC450) 85.0 kW
FDC 900 KXZRE1 (FDC450+FDC450) 90.0 kW
FDC 950 KXZRE1 (FDC475+FDC750) 95.0 kW
FDC 1000 KXZRE1 (FDC500+FDC500) 100.0 kW
FDC 1060 KXZRE1 (FDC500+FDC560) 106.0 kW
FDC 1120 KXZRE1 (FDC560+FDC560) 112.0 kW

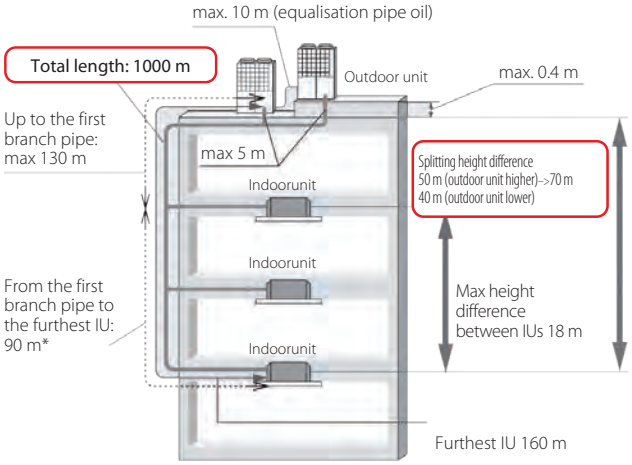
### CHARACTERISTICS

- Maximum energy efficiency COP 4.12
- The units use a Multi-port DC Inverter compressor with concentrated electric winding
- High split: up to 1000 m in total and with a maximum distance between the OU and the furthest IU of 160 m

### OPERATING RANGE




### INSTALLATION DIAGRAM




* With difference of length between the farthest indoor unit and the nearest one from the first branch pipe < 40 m (MAX 85 m) .

### 26~40HP (73.5~112.0 kW)


### COMBINATIONS

| Models | | FDC735KXZRE1 | FDC800KXZRE1 | FDC850KXZRE1 | FDC900KXZRE1 | FDC950KXZRE1 | FDC1000KXZRE1 | FDC1060KXZRE1 | FDC1120KXZRE1 |
|---|---|---|---|---|---|---|---|---|---|
| Combined units | | FDC335KXZRE1 | FDC400KXZRE1 | FDC400KXZRE1 | FDC450KXZRE1 | FDC475KXZRE1 | FDC500KXZRE1 | FDC500KXZRE1 | FDC560KXZRE1 |
| | | FDC400KXZRE1 | FDC400KXZRE1 | FDC450KXZRE1 | FDC450KXZRE1 | FDC475KXZRE1 | FDC500KXZRE1 | FDC560KXZRE1 | FDC560KXZRE1 |
| Power | | Three-phase 380-415V 50Hz | | | | | | | |
| Nominal Cool. capacity | kW | 73.50 | 80.00 | 85.0 | 90.0 | 95.0 | 100.0 | 106.0 | 112.0 |
| Cool. power consumption | kW | 21.20 | 23.10 | 26.00 | 28.90 | 29.60 | 30.40 | 33.50 | 36.60 |
| Rated energy efficiency coefficient in Cool. | EER[1] | 3.47 | 3.46 | 3.27 | 3.11 | 3.21 | 3.29 | 3.16 | 3.06 |
| Nominal Heat. capacity | kW | 73.5 | 80.0 | 85 | 90.0 | 95.0 | 100.0 | 106.0 | 112.0 |
| Heat. power consumption | kW | 17.90 | 19.50 | 21.1 | 22.8 | 23.2 | 24.3 | 26.5 | 28.7 |
| Rated energy efficiency coefficient in Heat. | COP[1] | 4.11 | 4.10 | 4.03 | 3.95 | 4.09 | 4.12 | 4.00 | 3.90 |
| Rated current in Cool. | A | 34.30 | 37.00 | 41.70 | 46.40 | 48.00 | 49.20 | 54.20 | 59.20 |
| Rated current in Heat. | A | 29.30 | 32.00 | 34.60 | 37.20 | 37.60 | 39.40 | 49.20 | 46.40 |
| Net weight | kg | 646 | 714 | 714 | 714 | 820 | 820 | 820 | 820 |
| Diameter refrigerant pipes | | | | | | | | | |
| Liquid side | mm (inch) | ø15.88 (5/8") | | | | | | | |
| Delivery gas line | mm (inch) | ø31.75 (1-1/4") ø34.92 (1-3/8") | | | | | ø38.1 (1-1/2") ø34.92 (1-3/8") | | |
| Intake gas line | mm (inch) | ø25.4 (1") ø28.58 (1-1/8") | ø28.58 (1-1/8") | | | | | ø31.75 (1-1/4") ø28.58 (1-1/8") | |
| Oil equalisation | mm (inch) | ø9.52 (3/8") | | | | | | | |
| Accessories | | - | | | | | | | |

1. Value measured according to harmonised standard EN14511.

# KXZR 3-PIPE

## Heat pump - modular outdoor units

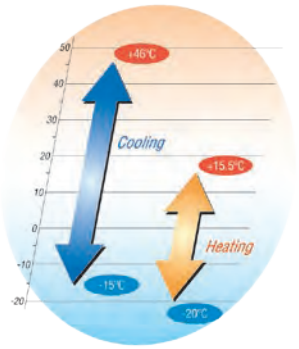
### CONNECT UP TO 80 INDOOR UNITS/130% CAPACITY

FDC 1200 KXZRE1 (FDC400+FDC400+FDC400) 120.0 kW
FDC 1250 KXZRE1 (FDC400+FDC400+FDC450) 125.0 kW
FDC 1300 KXZRE1 (FDC400+FDC450+FDC450) 130.0 kW
FDC 1350 KXZRE1 (FDC450+FDC450+FDC450) 135.0 kW
FDC 1425 KXZRE1 (FDC475+FDC475+FDC475) 142.5 kW
FDC 1450 KXZRE1 (FDC475+FDC475+FDC500) 145.0 kW
FDC 1500 KXZRE1 (FDC500+FDC500+FDC500) 150.0 kW
FDC 1560 KXZRE1 (FDC500+FDC500+FDC560) 156.0 kW
FDC 1620 KXZRE1 (FDC500+FDC560+FDC560) 162.0 kW
FDC 1680 KXZRE1 (FDC560+FDC560+FDC560) 168.0 kW

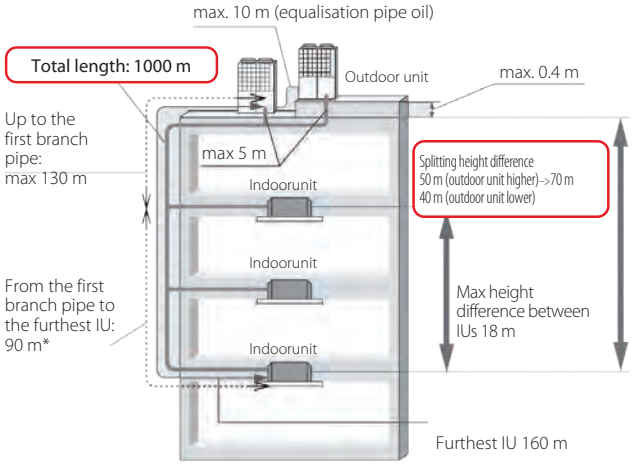
### CHARACTERISTICS

- Maximum energy efficiency COP 4.11
- The units use a Multi-port DC Inverter compressor with concentrated electric winding
- High split: up to 1000 m in total and with a maximum distance between the OU and the furthest IU of 160 m

### OPERATING RANGE




### INSTALLATION DIAGRAM




* With difference of length between the farthest indoor unit and the nearest one from the first branch pipe < 40 m (MAX 85 m).

### 42~60HP (120.0~168.0 kW)


### COMBINATIONS

| Models | | FDC1200KXZRE1 | FDC1250KXZRE1 | FDC1300KXZRE1 | FDC1350KXZRE1 | FDC1425KXZRE1 | FDC1450KXZRE1 | FDC1500KXZRE1 | FDC1560KXZRE1 | FDC1620KXZRE1 | FDC1680KXZRE1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Combined units | | FDC400KXZRE1 | FDC400KXZRE1 | FDC400KXZRE1 | FDC450KXZRE1 | FDC475KXZRE1 | FDC475KXZRE1 | FDC500KXZRE1 | FDC500KXZRE1 | FDC500KXZRE1 | FDC560KXZRE1 |
| | | FDC400KXZRE1 | FDC400KXZRE1 | FDC450KXZRE1 | FDC450KXZRE1 | FDC475KXZRE1 | FDC475KXZRE1 | FDC500KXZRE1 | FDC500KXZRE1 | FDC560KXZRE1 | FDC560KXZRE1 |
| | | FDC400KXZRE1 | FDC450KXZRE1 | FDC450KXZRE1 | FDC450KXZRE1 | FDC475KXZRE1 | FDC500KXZRE1 | FDC500KXZRE1 | FDC560KXZRE1 | FDC560KXZRE1 | FDC560KXZRE1 |
| Power | | Three-phase 380-415V 50Hz | | | | | | | | | |
| Nominal Cool. capacity | kW | 120.00 | 125.00 | 130.00 | 135.00 | 142.50 | 145.00 | 150.00 | 156.00 | 162.00 | 168.00 |
| Cool. power consumption | kW | 34.65 | 37.55 | 40.45 | 43.55 | 44.46 | 44.83 | 45.57 | 48.69 | 51.81 | 54.93 |
| Rated energy efficiency coefficient in Cool. | EER[1] | 3.46 | 3.33 | 3.21 | 3.10 | 3.21 | 3.23 | 3.29 | 3.20 | 3.13 | 3.06 |
| Nominal Heat. capacity | kW | 120.00 | 125.00 | 130.00 | 135.00 | 142.50 | 145.00 | 150.00 | 156.00 | 162.00 | 168.00 |
| Heat. power consumption | kW | 29.28 | 30.9 | 32.52 | 34.14 | 34.74 | 35.33 | 36.51 | 38.67 | 40.83 | 42.99 |
| Rated energy efficiency coefficient in Heat. | COP[1] | 4.10 | 4.05 | 4.00 | 3.95 | 4.10 | 4.10 | 4.11 | 4.03 | 3.97 | 3.91 |
| Rated current in Cool. | A | 55.50 | 60.20 | 64.90 | 69.60 | 72.00 | 72.60 | 73.80 | 78.80 | 83.80 | 88.80 |
| Rated current in Heat. | A | 48.00 | 50.60 | 53.20 | 55.80 | 56.40 | 57.30 | 59.10 | 62.60 | 66.10 | 69.60 |
| Net weight | kg | 1071 | 1071 | 1071 | 1071 | 1230 | 1230 | 1230 | 1230 | 1230 | 1230 |
| Diameter refrigerant pipes | | | | | | | | | | | |
| Liquid side | mm (inch) | ø19.05 (3/4") | | | | | | | | | |
| Delivery gas line | mm (inch) | ø38.1 (1-1/2") ø34.92 (1-3/8") | | | | | | | | | |
| Intake gas line | mm (inch) | ø31.75 (1-1/4") ø28.58 (1-1/8") | | | | | | | | | |
| Oil equalisation | mm (inch) | ø9.52 (3/8") | | | | | | | | | |
| Accessories | | - | - | - | - | - | - | - | - | - | - |

1. Value measured according to harmonised standard EN14511.



MITSUBISHI HEAVY INDUSTRIES