

**Mitsubishi Heavy Industries, Ltd. (MHI), are unswervingly dedicated to facing the challenges of the future.**

MHI are dedicated to supporting global sustainability by offering the most energy-efficient air-conditioning systems. Through our in-depth research and development we are able to incorporate new technologies within our units to maximise their energy efficiency and significantly reduce carbon emissions.

## Environmental Impact

MHI recognises the increasing importance of reducing carbon emissions as this is becoming a priority when selecting air and water distribution systems. Furthermore new technologies are constantly being developed to help meet heating and cooling requirements as well as environmental objectives.

The future of our planet rests in the sustained evolution of humankind while caring, with love and responsibility, for all life forms that inhabit it. Therefore MHI will continue to develop new technologies and products and will remain competitive in the market to achieve a sustainable future.

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**ISO9001**  
Our Air Conditioning & Refrigeration Systems Headquarters is an ISO9001 approved factory for residential air conditioners and commercial-use air conditioners (including heat pumps).



BIWAJIMA PLANT  
Mitsubishi Heavy Industries, Ltd.  
Air-conditioning & Refrigeration Systems Headquarters  
Certified ISO 9001  
Certificate number : JQA-0709



MITSUBISHI HEAVY INDUSTRIES-  
MAHAJAK AIR CONDITIONERS CO., LTD.  
Certified ISO 9001  
Certificate Number : 04100 1998 0813



MITSUBISHI HEAVY INDUSTRIES-  
MAHAJAK AIR CONDITIONERS CO., LTD.  
Certified ISO 14001  
Certificate Number : 04104 1998 0813 ES

MOVE THE WORLD FORWARD  **MITSUBISHI  
HEAVY  
INDUSTRIES  
GROUP**

# VRF inverter multi-system Air-Conditioners

## KXZ2

### High Performance Air-Conditioning



 **MITSUBISHI HEAVY INDUSTRIES  
THERMAL SYSTEMS**

# KXZ2

## KXZ Heat Pump System

Heat pump systems operate with 2 inter-connecting pipes and are commonly referred to as ‘2-pipe systems’. These systems provide either a heating or cooling operation to all indoor units at the same time and are suitable for a wide range of applications from an apartment or villa to an entire multi - story building, especially when there are significant open plan areas to be controlled.

The KXZ2 range starts from a cooling capacity of 10 HP (28.0 kW) and expands up to 20 HP (56.0 kW) using a single outdoor unit. Our KXZ2 units can also be used as a modular system (twin or triple) providing up to 60 HP (168.0 kW) of cooling capacity.

# PRODUCT LINE-UP

There are multiple combinations of the KXZ Heat pump, KXZ cooling only series to suit a huge range and variety of applications.

| KXZA2     | CKXZA2       | KXZA2/CKXZA2   |
|-----------|--------------|--|
| Heat Pump | Cooling only | Heat Pump/Cooling only<br>[Corrosion Protection Treatment] |
| 10 - 60HP | 10 - 60HP    | 10 - 60HP  |

KXZ VRF series delivers high cooling/heating performance for all commercial, leisure, retail and office applications.

|                           |  |
|---------------------------|--|
| High Efficiency & Comfort | <ul style="list-style-type: none"><li>High energy efficiency with advanced technology</li><li>Energy saving control by VTCC (Variable Temperature &amp; Capacity Control)</li><li>Individual, centralised and customised comfort control</li></ul> |
| Easy & Customized Control | <ul style="list-style-type: none"><li>Individual advanced control by wired and wireless remote controller.</li><li>Various options for BMS &amp; Centralised control</li></ul>   |
| Design Flexibility        | <ul style="list-style-type: none"><li>Various types of indoor unit suiting all applications.</li><li>Long piping length and wide limitation of piping.</li><li>Easy selection and design software</li></ul>  |
| Good Serviceability       | <ul style="list-style-type: none"><li>Easy access for maintenance</li><li>Engineering and monitoring tool available</li></ul>  |

## Product Line Up



|                 |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|-----------------|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| KXZA2 Heat Pump | HP                                      | 10 | 12 | 14 | 16 | 17 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 34 |
|                 | Maximum No. of Connectable Indoor Units | 24 | 29 | 34 | 39 | 41 | 43 | 48 | 53 | 58 | 63 | 69 | 73 | 78 | 80 |
|                 | HP                                      | 36 | 38 | 40 | 42 | 44 | 46 | 48 | 50 | 52 | 54 | 56 | 58 | 60 |    |
|                 | Maximum No. of Connectable Indoor Units | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |    |



|                                    |   |    |    |    |    |    |    |    |
|------------------------------------|---|----|----|----|----|----|----|----|
| KXZA2 Heat Pump Hi-COP Combination | HP                                      | 20 | 30 | 32 | 34 | 36 | 38 | 40 |
|                                    | Maximum No. of Connectable Indoor Units | 48 | 73 | 78 | 80 | 80 | 80 | 80 |



|                     |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|---------------------|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| CKXZA2 Cooling Only | HP                                      | 10 | 12 | 14 | 16 | 17 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 34 |
|                     | Maximum No. of Connectable Indoor Units | 24 | 29 | 34 | 39 | 41 | 43 | 48 | 53 | 58 | 63 | 69 | 73 | 78 | 80 |
|                     | HP                                      | 36 | 38 | 40 | 42 | 44 | 46 | 48 | 50 | 52 | 54 | 56 | 58 | 60 |    |
|                     | Maximum No. of Connectable Indoor Units | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |    |



|  |   |    |    |    |    |    |    |    |
|--|---|----|----|----|----|----|----|----|
| CKXZA2 Cooling Only Hi-COP Combination | HP                                      | 20 | 30 | 32 | 34 | 36 | 38 | 40 |
|  | Maximum No. of Connectable Indoor Units | 48 | 73 | 78 | 80 | 80 | 80 | 80 |

\* Corrosion Protection Treatment models has the same line up.



By combining 3 outdoor units 60HP can be achieved.

# DESIGN FLEXIBILITY & EFFICIENCY

Our KXZA2 series provide high performance and excellent energy savings across the range and is achieved by our heat exchangers increased capacity and the employment of high efficiency DC motors of our indoor units.

## Excellent Energy Savings

| Outdoor unit (KXZA2)     | FDC280KXZA2 | FDC335KXZA2 | FDC400KXZA2 | FDC450KXZA2 | FDC475KXZA2 | FDC500KXZA2 | FDC560KXZA2 |
|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| EER / COP (Outdoor unit) | 3.86/4.25   | 3.73/4.15   | 3.64/4.40   | 3.22/4.00   | 3.40/4.08   | 3.57/4.13   | 3.20/3.90   |

| Outdoor unit (KXZA2)<br>Cooling only | FDC280CKXZA2 | FDC335CKXZA2 | FDC400CKXZA2 | FDC450CKXZA2 | FDC475CKXZA2 | FDC500CKXZA2 | FDC560CKXZA2 |
|--------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| EER (Outdoor unit)                   | 3.86         | 3.73         | 3.64         | 3.22         | 3.40         | 3.57         | 3.20         |

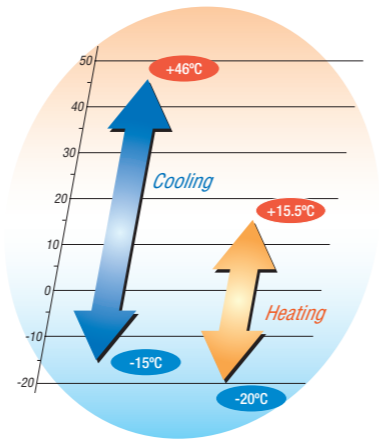
## Indoor Unit Capacity Connection

Increased indoor units capacity connection due to increased outdoor unit receiver size. Indoor units can be connected to the KXZA2 series, with a range of 17 types of exposed or concealed indoor units over several capacities. The tables show the maximum capacity connection range for each model:

| Heat Pump Models |         |                     | Cooling only Models       |         |                     |
|------------------|---------|---------------------|---------------------------|---------|---------------------|
|                  | HP      | Capacity Connection |                           | HP      | Capacity Connection |
| KXZA2            | 10 - 60 | 130%                | KXZA2 Cooling only        | 10 - 60 | 130%                |
| KXZA2 Hi-COP     | 20 - 40 | 130%                | KXZA2 Hi-COP Cooling only | 20 - 40 | 130%                |

## Wide Range of Operation

Our KXZA2 series enable a heating range operation down to -20°C and a cooling range up to 46°C.



KXZA2 (10HP to 60HP)

## Long Pipe Runs 10-60HP

The piping length of our KXZA2 systems have been extended with a maximum height difference between indoor units of up to 30m enabling installation of indoor units on an extra three floors. Also, the furthest unit can be installed up to 160m from outdoor unit.

A total piping length of 1000m can be used with our KXZA2 systems (10-60HP) allowing flexibility and solutions for numerous applications.

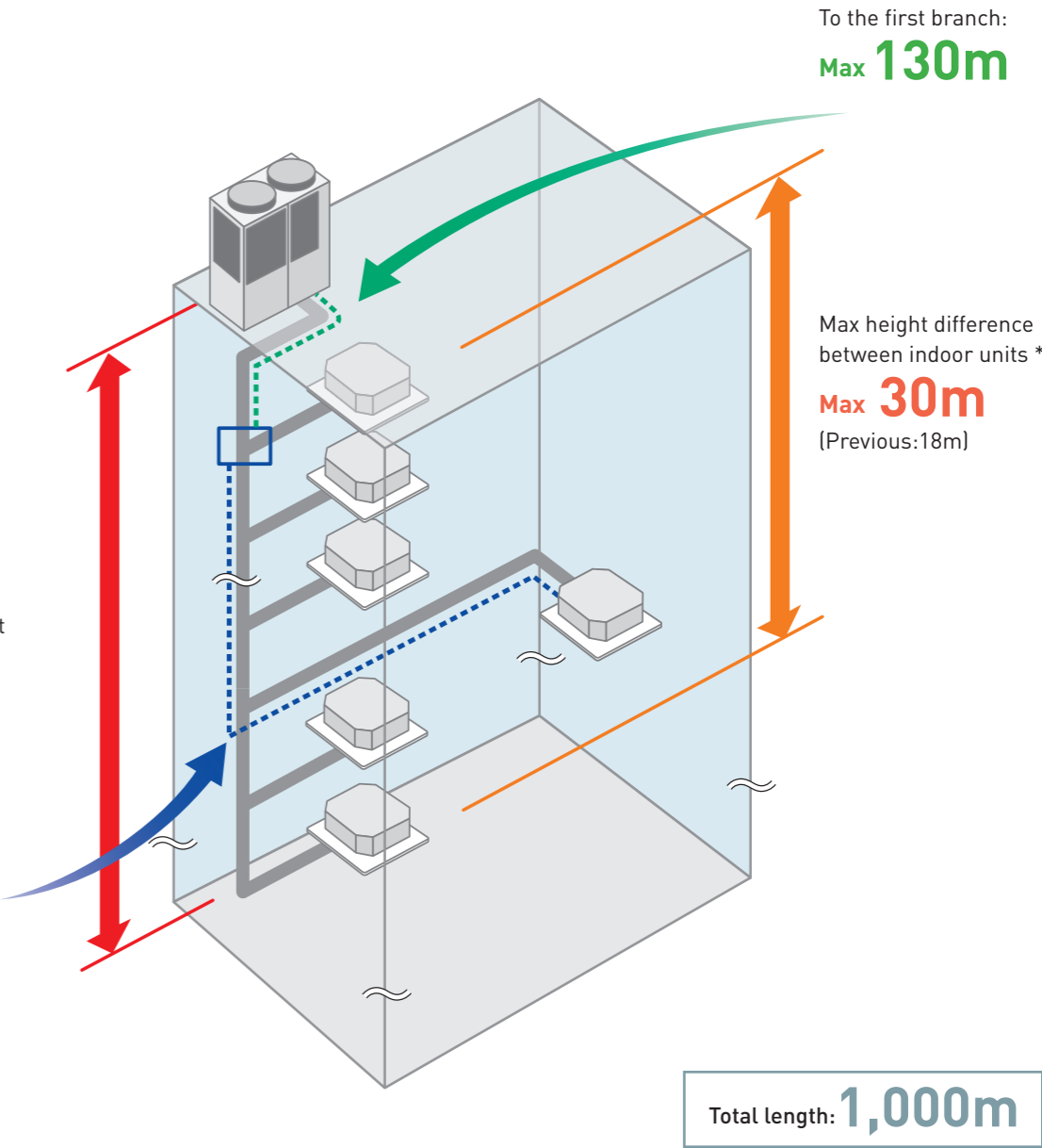
Furthest indoor unit:  
Actual length  
**160m**  
Equivalent length  
**185m**

To the first branch:  
**Max 130m**

Max height difference  
between indoor units \*2:  
**Max 30m**  
(Previous:18m)

From the first  
branch to the furthest  
indoor unit \*1  
**Max 90m**  
(Previous:70m)

Piping length after  
the first branch  
**Max 90m**



\*1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)  
\*2 It is necessary to change the setting corresponding to each height difference installation. The range of use is also different.

# KXZ-VRF REDESIGNED

## Energy Saving Technologies

### Via Variable Temperature and Capacity Control

VTCC adjusts the target pressure of the refrigerant cycle in the outdoor unit automatically according to the demand of the indoor units in partial load conditions. These smooth adjustments ensure optimal usage of the indoor units as well as maximised energy savings. Ultimately this also increases comfort for the user.

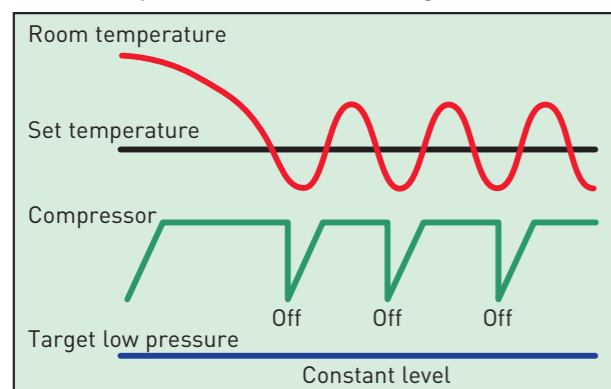


\*34% energy savings are based on comparison with a KXZ standard model with VTCC vs. a KXZ standard model both under partial load condition.

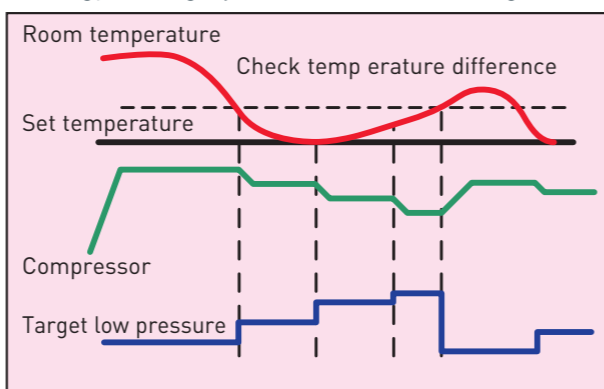
# VTCC

- The VTCC is a unique energy saving function designed by MHI.
- It is a feature for all our KXZ ranges which provides up to 34%\* energy savings in both cooling and heating mode.
- VTCC is a function specifically designed to maximise energy savings in partial load conditions throughout all seasons.
- 34% energy saving - based on comparison with a KXZ standard model with VTCC vs. a KXZ standard model both under partial load condition.

Normal operation (in the cooling mode)



Energy saving operation (in the cooling mode)



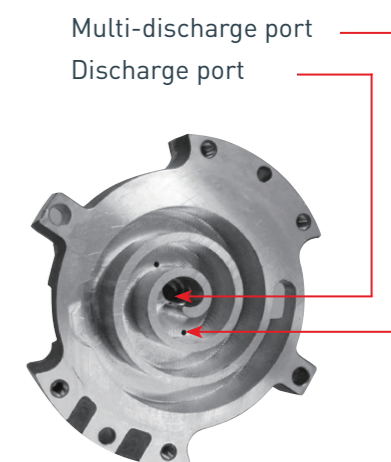
Advances in technologies ensure our KXZ series are efficient, energy saving and reliable.

## Improved Scroll Compressor

The enhanced KXZ multiport compressor includes two additional discharge ports. This optimises the pressure control within the compressor.

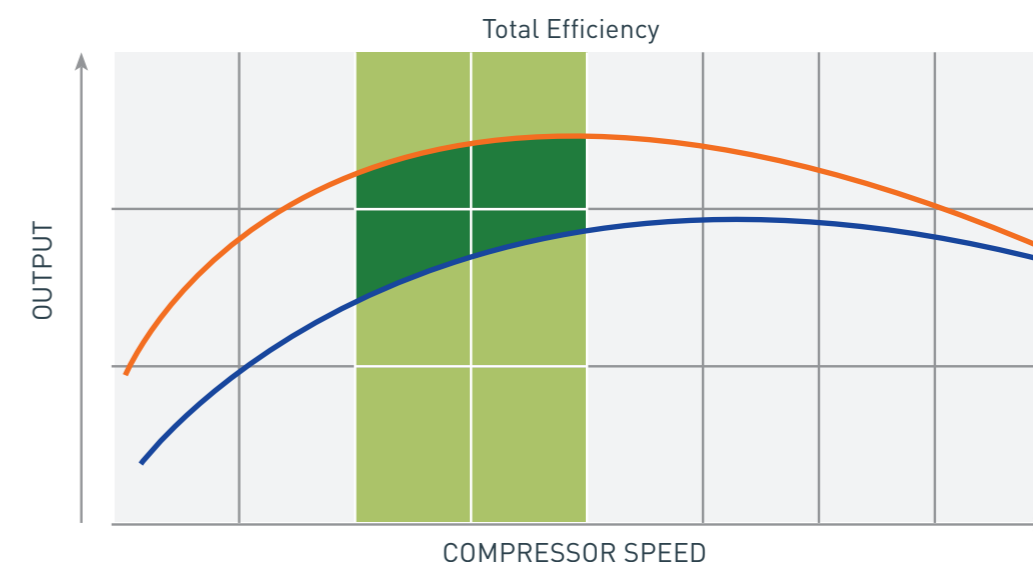
The combination of the new multi discharge compressor and the new concentrated winding motor increases the energy efficiency of the compressor in partial load conditions.

This scroll compressor has proven to be extremely reliable and uses the latest compressor technology.



### Concentrated winding motor achieves

“High Output” and “Total Efficiency Improvement”



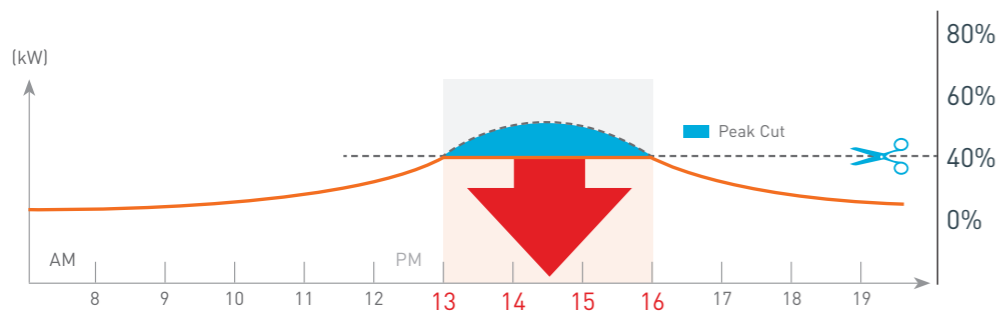
- NEW Concentrated Winding Motor
- Conventional Distributed Winding Motor
- Improved Seasonal Efficiency Rating

## Continuous Heating Capacity Control (CHCC)

Our CHCC defrosting control allows our KXZA2 system to achieve greater capacities than that of our previous model (KXZ) in low ambient temperature conditions. CHCC controls the target pressure automatically before the capacity drops, which increases the period of heating operation and reduces the systems defrosting time.

# Peak Cut Control

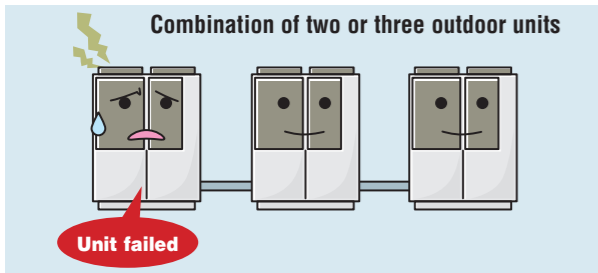
The peak cut function can easily be set on the controller. This function makes the control of the capacity easier and allow a better energy management over the long term. Four steps of capacity control are available with 80%, 60%, 40%, 0% (off). Schedule can be set up to 4 operations/day.



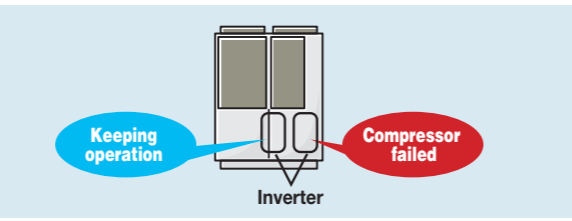
# Reliability

## Back-up Operation

In the event that one unit has a failure, the system will continue to operate with the remaining units.



For single outdoor units with 2 compressors, if one compressor fails then the system will continue to operate using the second compressor.



# PRIORITY OPERATION MODE RULE

## The KXZ has four operation modes:

### 1 First Indoor Unit Operation Mode

The first indoor unit to operate will set the operation mode

### 2 Last Indoor Unit Operation Mode

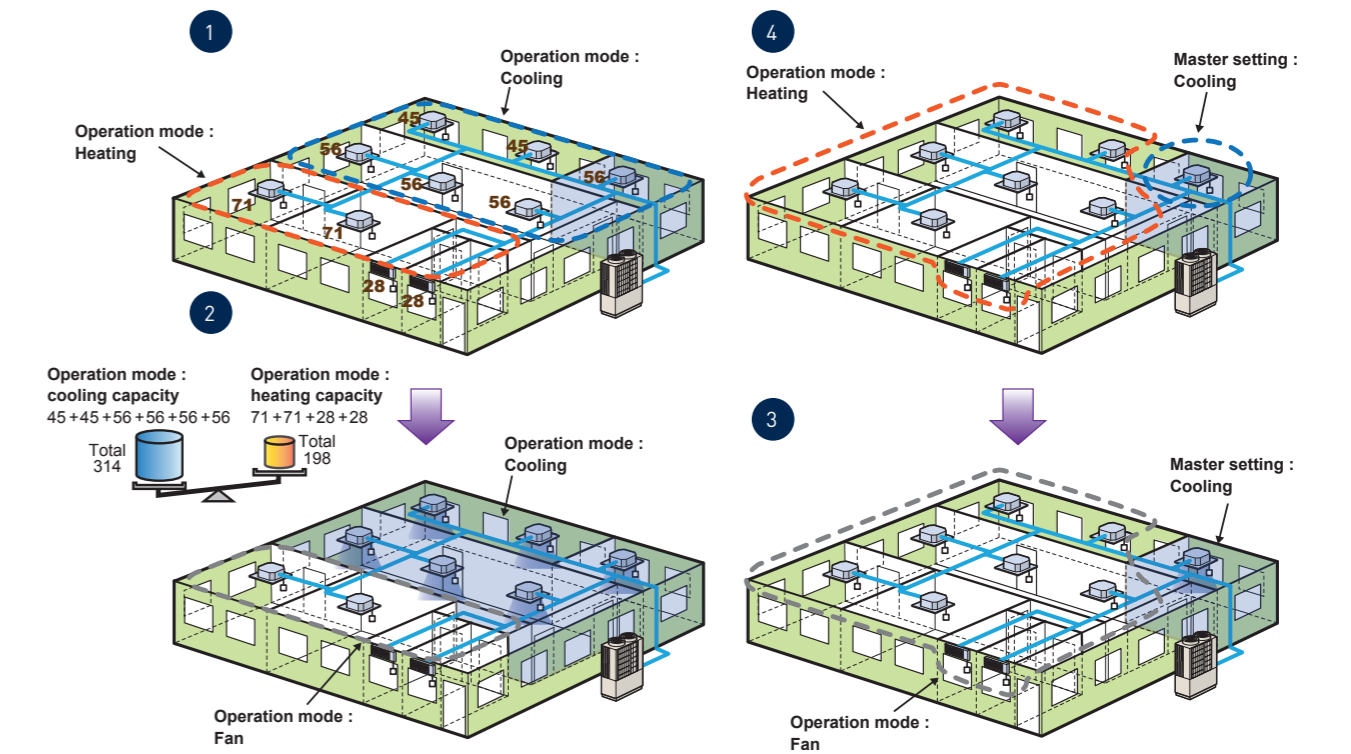
The last indoor unit to operate will set the operation mode

### 3 Majority Operation Mode

The mode selected by the majority of indoor units in operation (whichever has the greatest capacity between the cooling or heating mode request). Indoor units with a different operation mode will automatically switch to fan mode.

### 4 Master Operation Mode

This is the mode selected by the nominated master indoor unit. Indoor units with a different operation mode will automatically switch to fan mode.



# Emergency STOP Function

- KXZ units have control for emergency stop via an external input, i.e. an alarm can be connected to the PCB (Printed Circuit Board).
- The external input can also be used to connect to the leak detection system (as per BREEAM requirements).



Specifications

KXZA2 Standard series

| Item                               |                   |         | Model | FDC280KXZA2            | FDC335KXZA2 | FDC400KXZA2   | FDC450KXZA2 | FDC475KXZA2 | FDC500KXZA2 | FDC560KXZA2 |
|------------------------------------|-------------------|---------|-------|------------------------|-------------|---------------|-------------|-------------|-------------|-------------|
| Nominal horse power                |                   |         |       | 10HP                   | 12HP        | 14HP          | 16HP        | 17HP        | 18HP        | 20HP        |
| Power source                       |                   |         |       | 3 Phase 380-415V, 50Hz |             |               |             |             |             |             |
| Starting current                   |                   |         | A     | 5                      |             |               |             | 8           |             |             |
| Max current                        |                   |         | A     | 20.1                   |             | 32.0          |             | 40.2        |             |             |
| Nominal capacity                   | Cooling           |         | kW    | 28.0                   | 33.5        | 40.0          | 45.0        | 47.5        | 50.0        | 56.0        |
|                                    | Heating           |         |       | 31.5                   | 37.5        | 45.0          | 50.0        | 53.0        | 56.0        | 63.0        |
| Electrical characteristics         | Power consumption | Cooling | kW    | 7.25                   | 8.98        | 10.98         | 13.98       | 13.97       | 14.01       | 17.50       |
|                                    |                   | Heating |       |                        | 7.41        | 9.03          | 10.23       | 12.50       | 12.99       | 13.56       |
| Exterior dimensions                | HxWxD             |         | mm    | 1697x1350x720          |             | 2052x1350x720 |             |             |             |             |
| Net weight                         |                   |         | kg    | 284                    |             | 328           |             | 374         |             |             |
| Sound pressure level               | Cooling/Heating   |         | dB[A] | 56/57                  | 63/62       | 60/62         | 61/62       | 61/61       | 61/62       | 63/64       |
| Capacity connection                |                   |         | %     | 50-130                 |             |               |             |             |             |             |
| Number of connectable indoor units |                   |         |       | 24                     | 29          | 34            | 39          | 41          | 43          | 48          |

| Item                               |                   |         | Model                  | FDC615KXZA2   | FDC670KXZA2 | FDC735KXZA2 | FDC800KXZA2   | FDC850KXZA2 | FDC900KXZA2 | FDC950KXZA2 |       |
|------------------------------------|-------------------|---------|------------------------|---------------|-------------|-------------|---------------|-------------|-------------|-------------|-------|
| Nominal horse power                |                   |         |                        | 22HP          | 24HP        | 26HP        | 28HP          | 30HP        | 32HP        | 34HP        |       |
| Power source                       |                   |         | 3 Phase 380-415V, 50Hz |               |             |             |               |             |             |             |       |
| Starting current                   |                   |         | A                      | 10            |             |             |               |             |             | 16          |       |
| Max current                        |                   |         | A                      | 40.2          |             | 52.1        | 64.0          |             |             | 80.4        |       |
| Nominal capacity                   | Cooling           |         |                        | kW            | 61.5        | 67.0        | 73.5          | 80.0        | 85.0        | 90.0        | 95.0  |
|                                    | Heating           |         |                        |               | 69.0        | 75.0        | 82.5          | 90.0        | 95.0        | 100.0       | 106.0 |
| Electrical characteristics         | Power consumption | Cooling | kW                     | 16.24         | 17.96       | 19.96       | 21.96         | 24.96       | 27.95       | 27.94       |       |
|                                    |                   | Heating |                        | 16.44         | 18.06       | 19.26       | 20.45         | 22.73       | 25.00       | 25.98       |       |
| Exterior dimensions                |                   | HxWxD   | mm                     | 1697x2700x720 |             |             | 2052x2700x720 |             |             |             |       |
| Net weight                         |                   |         |                        | kg            | 567         |             | 611           | 655         |             | 747         |       |
| Capacity connection                |                   |         | %                      | 50-130        |             |             |               |             |             |             |       |
| Number of connectable indoor units |                   |         |                        | 53            | 58          | 63          | 69            | 73          | 78          | 80          |       |

| Item                               |                   |         | Model | FDC1000KXZA2           | FDC1060KXZA2 | FDC1120KXZA2 | FDC1200KXZA2  | FDC1250KXZA2 | FDC1300KXZA2 | FDC1350KXZA2 |
|------------------------------------|-------------------|---------|-------|------------------------|--------------|--------------|---------------|--------------|--------------|--------------|
| Nominal horse power                |                   |         |       | 36HP                   | 38HP         | 40HP         | 42HP          | 44HP         | 46HP         | 48HP         |
| Power source                       |                   |         |       | 3 Phase 380-415V, 50Hz |              |              |               |              |              |              |
| Starting current                   |                   |         | A     | 16                     |              |              | 15            |              |              |              |
| Max current                        |                   |         | A     | 80.4                   |              |              | 96.0          |              |              |              |
| Nominal capacity                   | Cooling           |         | kW    | 100.0                  | 106.0        | 112.0        | 120.0         | 125.0        | 130.0        | 135.0        |
|                                    | Heating           |         |       | 112.0                  | 119.0        | 126.0        | 135.0         | 140.0        | 145.0        | 150.0        |
| Electrical characteristics         | Power consumption | Cooling | kW    | 28.02                  | 31.51        | 35.00        | 32.94         | 35.94        | 38.93        | 41.93        |
|                                    |                   | Heating |       | 27.12                  | 29.71        | 32.31        | 30.68         | 32.95        | 35.23        | 37.50        |
| Exterior dimensions                | HxWxD             |         | mm    | 2052x2700x720          |              |              | 2052x4050x720 |              |              |              |
| Net weight                         |                   |         | kg    | 747                    |              |              | 982           |              |              |              |
| Capacity connection                |                   |         | %     |                        |              |              | 50-130        |              |              |              |
| Number of connectable indoor units |                   |         |       | 80                     |              |              |               |              |              |              |

| Item                               |                   |         | Model | FDC1425KXZA2           | FDC1450KXZA2 | FDC1500KXZA2 | FDC1560KXZA2 | FDC1620KXZA2 | FDC1680KXZA2 |
|------------------------------------|-------------------|---------|-------|------------------------|--------------|--------------|--------------|--------------|--------------|
| Nominal horse power                |                   |         |       | 50HP                   | 52HP         | 54HP         | 56HP         | 58HP         | 60HP         |
| Power source                       |                   |         |       | 3 Phase 380-415V, 50Hz |              |              |              |              |              |
| Starting current                   |                   |         | A     | 24                     |              |              |              |              |              |
| Max current                        |                   |         | A     | 120.6                  |              |              |              |              |              |
| Nominal capacity                   | Cooling           |         | kW    | 142.5                  | 145.0        | 150.0        | 156.0        | 162.0        | 168.0        |
|                                    | Heating           |         |       | 159.0                  | 162.0        | 168.0        | 175.0        | 182.0        | 189.0        |
| Electrical characteristics         | Power consumption | Cooling | kW    | 41.91                  | 41.95        | 42.03        | 45.52        | 49.01        | 52.50        |
|                                    |                   | Heating |       | 38.97                  | 39.54        | 40.68        | 43.27        | 45.87        | 48.46        |
| Exterior dimensions                | HxWxD             |         | mm    | 2052x4050x720          |              |              |              |              |              |
| Net weight                         |                   |         | kg    | 1120                   |              |              |              |              |              |
| Capacity connection                |                   |         | %     | 50~130                 |              |              |              |              |              |
| Number of connectable indoor units |                   |         |       | 80                     |              |              |              |              |              |

KXZA2 Hi-cop combination

| Item                               |                   |                 | Model | FDC560KXZA2            | FDC850KXZA2 | FDC900KXZA2 | FDC950KXZA2 | FDC1000KXZA2  | FDC1060KXZA2 | FDC1120KXZA2 |
|------------------------------------|-------------------|-----------------|-------|------------------------|-------------|-------------|-------------|---------------|--------------|--------------|
| Nominal horse power                |                   |                 |       | 20HP                   | 30HP        | 32HP        | 34HP        | 36HP          | 38HP         | 40HP         |
| Power source                       |                   |                 |       | 3 Phase 380-415V, 50Hz |             |             |             |               |              |              |
| Starting current                   |                   |                 | A     | 10                     | 15          |             |             |               |              |              |
| Max current                        |                   |                 | A     | 40.2                   | 60.3        |             |             |               | 72.2         | 84.1         |
| Nominal capacity                   | Cooling           | Heating         | kW    | 56.0                   | 84.0        | 89.5        | 95.0        | 100.5         | 107.0        | 113.5        |
|                                    |                   |                 |       | 63.0                   | 94.5        | 100.5       | 106.5       | 112.5         | 120.0        | 127.5        |
| Electrical characteristics         | Power consumption | Cooling Heating | kW    | 14.51                  | 21.76       | 23.49       | 25.22       | 26.94         | 28.94        | 30.94        |
|                                    |                   |                 |       | 14.82                  | 22.23       | 23.85       | 25.47       | 27.09         | 28.29        | 29.48        |
| Exterior dimensions                | HxWxD             |                 | mm    | 1697x2700x720          |             |             |             | 2052x4050x720 |              |              |
| Net weight                         |                   |                 | kg    | 567                    | 850         |             |             |               | 894          | 938          |
| Capacity connection                |                   |                 | %     | 80-130                 |             |             |             |               |              |              |
| Number of connectable indoor units |                   |                 |       | 48                     | 73          | 78          | 80          |               |              |              |

KXZA2 Standard series Cooling only

| Item                               |                   | Model | FDC280CKXZA2           | FDC335CKXZA2 | FDC400CKXZA2 | FDC450CKXZA2 | FDC475CKXZA2  | FDC500CKXZA2 | FDC560CKXZA2 |
|------------------------------------|-------------------|-------|------------------------|--------------|--------------|--------------|---------------|--------------|--------------|
| Nominal horse power                |                   |       | 10HP                   | 12HP         | 14HP         | 16HP         | 17HP          | 18HP         | 20HP         |
| Power source                       |                   |       | 3 Phase 380-415V, 50Hz |              |              |              |               |              |              |
| Starting current                   |                   | A     | 5                      |              |              |              |               | 8            |              |
| Max current                        |                   | A     | 20.1                   |              |              | 32.0         |               | 40.2         |              |
| Nominal capacity                   |                   | kW    | 28.0                   | 33.5         | 40.0         | 45.0         | 47.5          | 50.0         | 56.0         |
| Electrical characteristics         | Power consumption | kW    | 7.25                   | 8.98         | 10.98        | 13.98        | 13.97         | 14.01        | 17.50        |
| Exterior dimensions                | HxWxD             | mm    | 1697x1350x720          |              |              |              | 2052x1350x720 |              |              |
| Net weight                         |                   | kg    | 284                    |              |              | 328          |               | 374          |              |
| Sound pressure level               | Cooling           | dB(A) | 56                     | 63           | 60           | 61           | 61            | 61           | 63           |
| Capacity connection                |                   | %     | 50~130                 |              |              |              |               |              |              |
| Number of connectable indoor units |                   |       | 24                     | 29           | 34           | 39           | 41            | 43           | 48           |

| Item                               |  | Model             | FDC615CKXZA2           | FDC670CKXZA2  | FDC735CKXZA2 | FDC800CKXZA2 | FDC850CKXZA2  | FDC900CKXZA2 | FDC950CKXZA2 |       |
|------------------------------------|--|-------------------|------------------------|---------------|--------------|--------------|---------------|--------------|--------------|-------|
| Nominal horse power                |  |                   | 22HP                   | 24HP          | 26HP         | 28HP         | 30HP          | 32HP         | 34HP         |       |
| Power source                       |  |                   | 3 Phase 380-415V, 50Hz |               |              |              |               |              |              |       |
| Starting current                   |  | A                 | 10                     |               |              |              |               |              | 16           |       |
| Max current                        |  | A                 | 40.2                   |               | 52.1         | 64.0         |               |              | 80.4         |       |
| Nominal capacity                   |  | Power consumption | kW                     | 61.5          | 67.0         | 73.5         | 80.0          | 85.0         | 90.0         | 95.0  |
| Electrical characteristics         |  |                   | kW                     | 16.24         | 17.96        | 19.96        | 21.96         | 24.96        | 27.95        | 27.94 |
| Exterior dimensions                |  | HxWxD             | mm                     | 1697x2700x720 |              |              | 2052x2700x720 |              |              |       |
| Net weight                         |  |                   | kg                     | 567           |              | 611          | 655           |              | 747          |       |
| Capacity connection                |  | %                 | 50~130                 |               |              |              |               |              |              |       |
| Number of connectable indoor units |  |                   | 53                     | 58            | 63           | 69           | 73            | 78           | 80           |       |


| Item                               |                   | Model | FDC1000CKXZA2          | FDC1060CKXZA2 | FDC1120CKXZA2 | FDC1200CKXZA2 | FDC1250CKXZA2 | FDC1300CKXZA2 | FDC1350CKXZA2 |
|------------------------------------|-------------------|-------|------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Nominal horse power                |                   |       | 36HP                   | 38HP          | 40HP          | 42HP          | 44HP          | 46HP          | 48HP          |
| Power source                       |                   |       | 3 Phase 380-415V, 50Hz |               |               |               |               |               |               |
| Starting current                   |                   | A     | 16                     |               |               | 15            |               |               |               |
| Max current                        |                   | A     | 80.4                   |               |               | 96.0          |               |               |               |
| Nominal capacity                   |                   | kW    | 100.0                  | 106.0         | 112.0         | 120.0         | 125.0         | 130.0         | 135.0         |
| Electrical characteristics         | Power consumption | kW    | 28.02                  | 31.51         | 35.00         | 32.94         | 35.94         | 38.93         | 41.93         |
| Exterior dimensions                | HxWxD             | mm    | 2052x2700x720          |               |               | 2052x4050x720 |               |               |               |
| Net weight                         |                   | kg    | 747                    |               |               | 982           |               |               |               |
| Capacity connection                |                   | %     |                        |               |               | 50~130        |               |               |               |
| Number of connectable indoor units |                   |       |                        |               |               | 80            |               |               |               |

| Item                               |                   | Model | FDC1425CKXZA2          | FDC1450CKXZA2 | FDC1500CKXZA2 | FDC1560CKXZA2 | FDC1620CKXZA2 | FDC1680CKXZA2 |
|------------------------------------|-------------------|-------|------------------------|---------------|---------------|---------------|---------------|---------------|
| Nominal horse power                |                   |       | 50HP                   | 52HP          | 54HP          | 56HP          | 58HP          | 60HP          |
| Power source                       |                   |       | 3 Phase 380-415V, 50Hz |               |               |               |               |               |
| Starting current                   |                   | A     | 24                     |               |               |               |               |               |
| Max current                        |                   | A     | 120.6                  |               |               |               |               |               |
| Nominal capacity                   |                   | kW    | 142.5                  | 145.0         | 150.0         | 156.0         | 162.0         | 168.0         |
| Electrical characteristics         | Power consumption | kW    | 41.91                  | 41.95         | 42.03         | 45.52         | 49.01         | 52.50         |
| Exterior dimensions                | HxWxD             | mm    | 2052x4050x720          |               |               |               |               |               |
| Net weight                         |                   | kg    | 1120                   |               |               |               |               |               |
| Capacity connection                |                   | %     | 50-130                 |               |               |               |               |               |
| Number of connectable indoor units |                   |       | 80                     |               |               |               |               |               |

# PRODUCT LINE UP - INDOOR UNITS

Wide variety of 17 types

● Indoor units only for R410A

| Type               |                            |       | Capacity  | 0.5HP | 0.8HP | 1HP | 1.25HP | 1.6HP | 2HP | 2.5HP | 3.2HP | 4HP | 5HP | 6HP | 8HP | 10HP |
|--------------------|----------------------------|-------|---|-------|-------|-----|--------|-------|-----|-------|-------|-----|-----|-----|-----|------|
|                    |                            |       | Model Code: kW  | 15    | 22    | 28  | 36     | 45    | 56  | 71    | 90    | 112 | 140 | 160 | 224 | 280  |
| Ceiling Cassette   | 4way                       | FDT   |    |       |       | ●   | ●      | ●     | ●   | ●     | ●     | ●   | ●   |     |     |      |
|                    | 4way Compact (600 x 600)   | FDTC  |    | ●     | ●     | ●   | ●      | ●     | ●   |       |       |     |     |     |     |      |
|                    | 2way                       | FDTW  |    |       |       | ●   |        | ●     | ●   | ●     | ●     | ●   |     |     |     |      |
|                    | 1way                       | FDTS  |    |       |       |     |        | ●     |     |       |       |     |     |     |     |      |
|                    | 1way Compact               | FDTQ  |    |       | ●     | ●   | ●      |       |     |       |       |     |     |     |     |      |
| Ducted             | High Static Pressure       | FDU   |   |       |       |     |        | ●     | ●   | ●     | ●     | ●   | ●   | ●   | ●   | ●    |
|                    | Low/Middle Static Pressure | FDUM  |  |       | ●     | ●   | ●      | ●     | ●   | ●     | ●     | ●   | ●   |     |     |      |
|                    | Low Static Pressure (thin) | FDUT  |  | ●     | ●     | ●   | ●      | ●     | ●   | ●     |       |     |     |     |     |      |
|                    | Compact & Flexible         | FDUH  |  |       | ●     | ●   | ●      |       |     |       |       |     |     |     |     |      |
| Wall Mounted       |                            | FDK   |  |       | ●     | ●   | ●      | ●     | ●   | ●     |       |     |     |     |     |      |
| Ceiling Suspended  |                            | FDE   |  |       |       |     | ●      | ●     | ●   | ●     |       | ●   | ●   |     |     |      |
| Floor Standing     | 2way                       | FDFW  |  |       |       | ●   |        | ●     | ●   |       |       |     |     |     |     |      |
|                    | with casing                | FDFL  |  |       |       |     |        |       |     | ●     |       |     |     |     |     |      |
|                    | without casing             | FDFU  |  |       |       | ●   |        | ●     | ●   | ●     |       |     |     |     |     |      |
| OA Processing unit |                            | FDU-F |  |       |       |     |        |       |     |       | ●     |     | ●   |     | ●   | ●    |

| Type   |        | Air flow M3/h   | 150 | 250 | 350 | 500 | 800 | 1000 |
|--|--------|---|-----|-----|-----|-----|-----|------|
| Fresh Air Ventilation and Heat Exchange unit | SAF    |  | ●   | ●   | ●   | ●   | ●   | ●    |
| Fresh Air DX Assembly                        | SAF-DX |  |     | ●   | ●   | ●   | ●   | ●    |

# NEW & IMPROVED

## AWARD WINNING PRODUCTS

### FDT - Standard Cassette

- Keeps maximum comfort with minimal draught
- Automatic energy saving control
- Quiet operation
- When the unit is turned off, the louvres close inwards



Fine snow white

FDT colour variation  
Blend in, or stand out.



Now available in shadow black

### FDTC - Compact & Cassette (600 x 600mm) European design & Flat panel

#### Thin Panel

FDTC thin panel fits within 10mm of the ceiling.

#### Big Louvre

Improved directionally

#### Unique Grille Design

Honeycomb grille



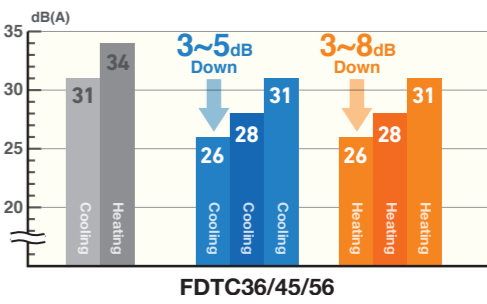
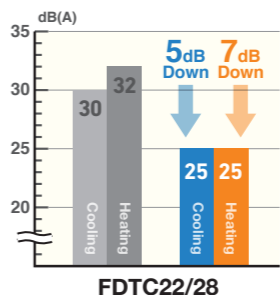
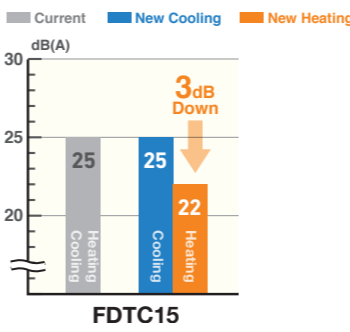
Motion Sensor (Option)



Now available in Grid type grille

## Quieter operation

Adopting a new turbo fan and improving the heat exchanger enables a reduction in noise.



# RC-EX3A CONTROLLER

## Simple use with advanced settings remote control

- Easy touch and easy view with full dot Liquid Crystal display
- Function switch

The function switch allows the user to select two preferred functions that and desired from the seven available functions shown. These functions can be used by simply pressing the button after they are set, allowing you to use your preferable functions immediately.



### 1. High Power Mode

High Power Mode achieves extra cooling / heating capacity for 15 minutes to quickly adjust the room temperature to a comfortable level.



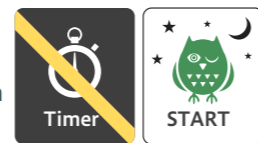
### 2. Energy Saving Mode

Temperature is set to save energy without losing comfort.



### 3. Quiet Mode

Outdoor unit starts to operate quietly by activating this mode. The time of this mode can be set in conjunction with Indoor Silent Timer.



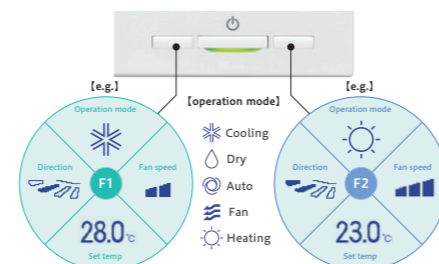
### 4. Home Leave Mode

Home leave mode maintains the room temperature at a moderate level.



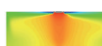
### 5. Favourite Mode

It operates based on the pre-set "operation mode", "set temperature", "fan speed" and "air flow direction".



### 6. Filter Sign

Indicates that it is time to clean the air filter.



### 7. Draft prevention ON/OFF

User can enable/disable the motion of Draft prevention panel for each air outlet for each operation mode. This function can be set while operating. \*Only FDT/FDTC series



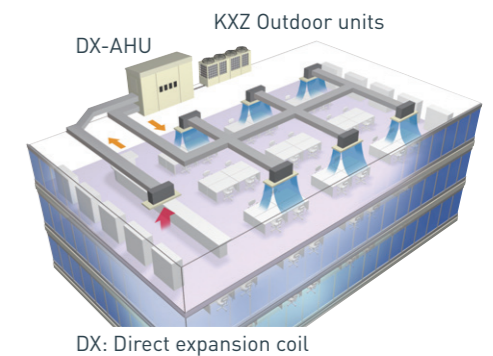
### 8. Error display

If any error occurs on the system, the "Unit protection stop" is indicated on the message display.

# EEV-KIT

## CONNECTION TO THE OTHER HVAC TECHNOLOGIES

- The EEV-KIT is a control kit for connecting the KXZ to an externally sourced AHU or FCU with its own direct expansion heat exchanger coils. (AHU : Air Handling Unit, FCU : Fan Coil Unit)
- Our EEV-KIT is composed of one EEV-Control Assembly and one EEV-Set.

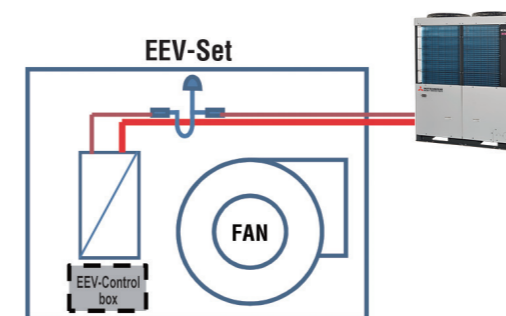


## Single Refrigerant System

A single refrigerant system is one that can have multiple outdoor units connected to one refrigerant pipework circuit. There are 2 types of EEV-KIT system that can be built into the single refrigeration system.

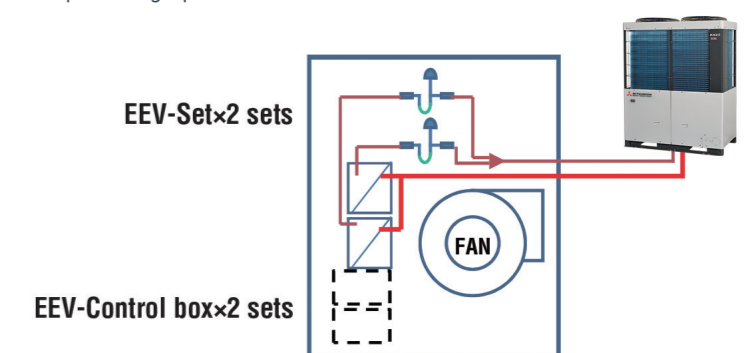
### System A: One EEV-KIT

This system has only one EEV-KIT built into one indoor unit with only one heat exchanger. This system can be applied to an indoor unit whose capacity is up to 10HP.



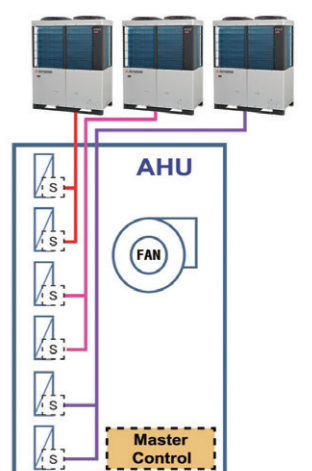
### System B - Multiple EEV-KIT's

System B is a system that has multiple EEV-KITs built into one indoor unit with multiple heat exchangers on one refrigerant circuit. This system can be applied with a KXZ/ AHU arrangement providing up to 168kW.



## Multiple Refrigerant System

A multiple refrigerant system is an AHU system with multiple independent refrigerant circuits and one master control to control the whole system.



### Advantage

- Large systems are possible [max capacity 896kW]
- External control
- Capacity step control
- Can connect to 32 units

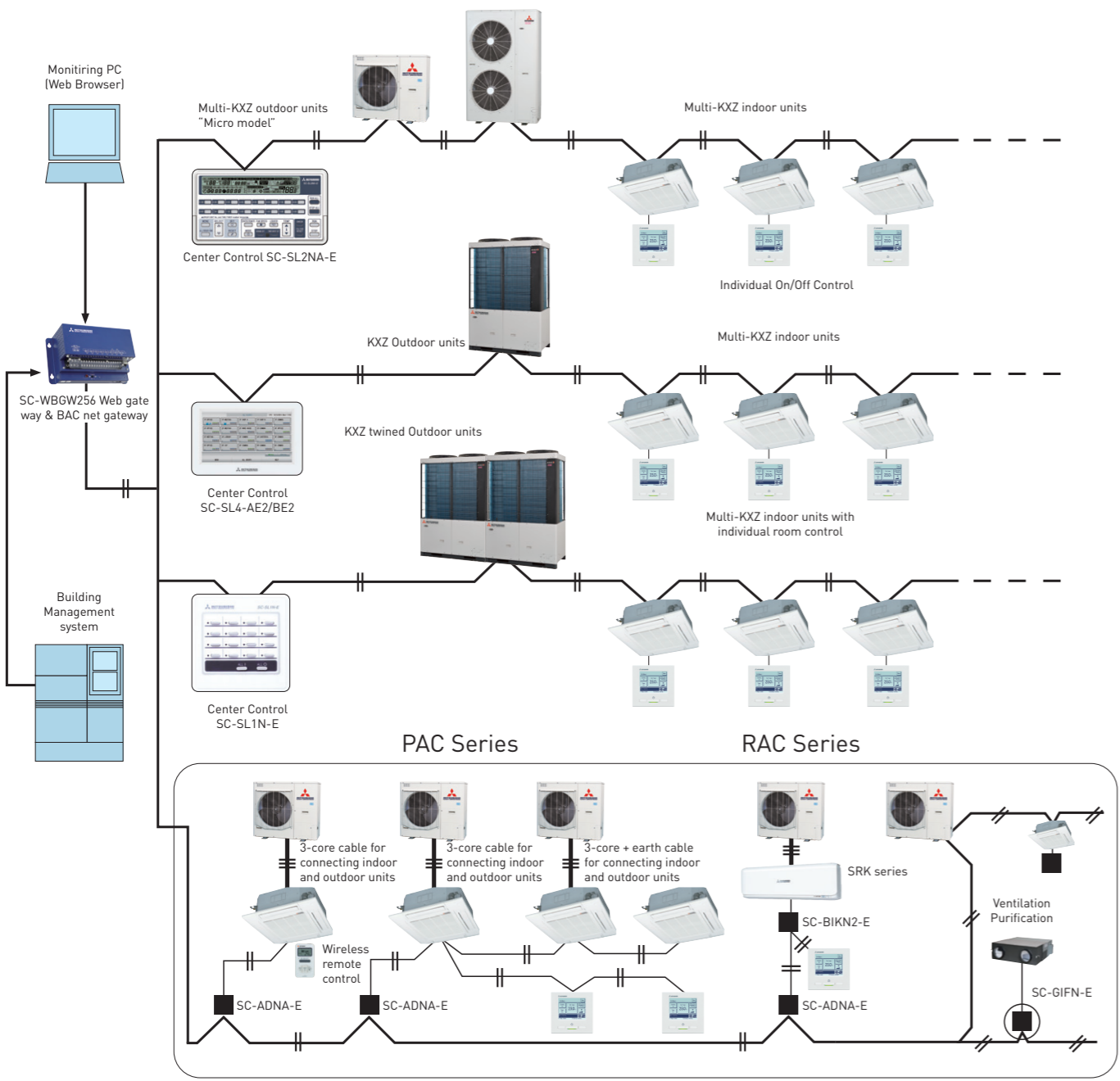
### Additional parts over a single refrigeration system

- One master control
- The slave EEV control and EEV set are the same as a single refrigeration system.

# CONTROLS NETWORK OVERVIEW

## IMPROVED CONNECTABILITY

Our company offers simplicity in installation with the highly sophisticated Superlink - II Control System



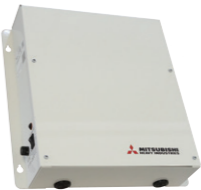
- This offers building owners and occupiers a comprehensive control and management system while providing complete commissioning and service maintenance assistance for installers and service engineers.
- The Superlink - II is an advanced high speed data transmission system which can connect up to 128 indoor units and 32 outdoor units onto one network.
- A wide range of control options are available for the Superlink - II network to suit any application large or small, as well as connection to a new or existing Building Management System (BMS).

## Building Management Systems

Our company offers a wide range of control options for the KXZ system to suit any application, large or small, as well as connection to a new or existing BMS.



SC-WBGW256  
Web & BACnet gateway



SC-LGWNB  
LonWorks BMS Gateway

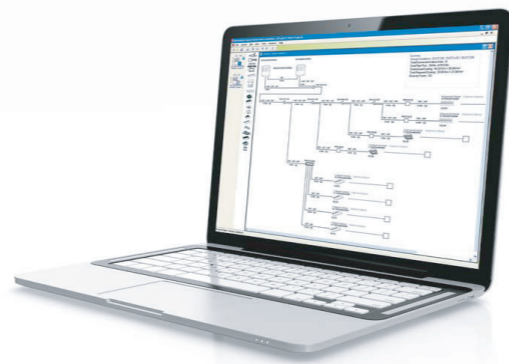
# TIME SAVING SOFTWARE

## e-solution

Use our e-solution design software tool to find the latest specifications for our KXZ VRF systems. This software helps to simplify the processes to enable engineers to select the most suitable indoor units, outdoor units, pipework, controls & calculate any additional required refrigerants.

If you're an engineer interested in using e-solution, please register and download the e-solution via <https://mhiae.com/e-solution/> and be sure to download the latest updates when available.

Please be aware that this tool was developed to cater for the design of two and three pipe systems, and specifies the appropriate models and sizes. It also generates wiring diagrams and engineering drawing to export to AutoCAD or PDF. This flexibility allows engineers to print selected design information and technical data to present to potential clients. As well as personalising the design information into their own formats and documents for future proposals.



## MACO Service App

MACO Service application is available & free to download to both IOS and Android devices.

The application covers “Mitsubishi Heavy Industries Thermal System, Ltd” Air conditioning systems: RAC, PAC & VRF.

This “MACO Service” Application enables field engineers to make:

- A quick search of the meaning of error codes that may appear when there is a malfunction in a “Mitsubishi Heavy Industries Thermal Systems, Ltd” Air conditioning system, the probable cause for the malfunction and troubleshooting guideline.
- Scan the unit's QR code and search the meaning of error codes depending on the model type.
- Additional refrigerant charge calculation for VRF.



- Technical manual, Service manual for RAC, PAC & VRF.
- Technical support Video (Part checking, Troubleshooting, Service Tools, Maintenance data analysis) for RAC, PAC & VRF.
- Spare part information for RAC, PAC & VRF.
- Currently available in English, Japanese, Chinese, Thai, Turkish, Indonesian, Vietnamese, Arabic, Cambodian & Burmese.

To download the App go to:

iPhone: <https://apps.apple.com/th/app/maco-service/id1276956648>

Android: [https://play.google.com/store/apps/details?id=com.ssd.macoservice&hl=en\\_US&gl=US](https://play.google.com/store/apps/details?id=com.ssd.macoservice&hl=en_US&gl=US)

## BIM (Building Information Modelling)

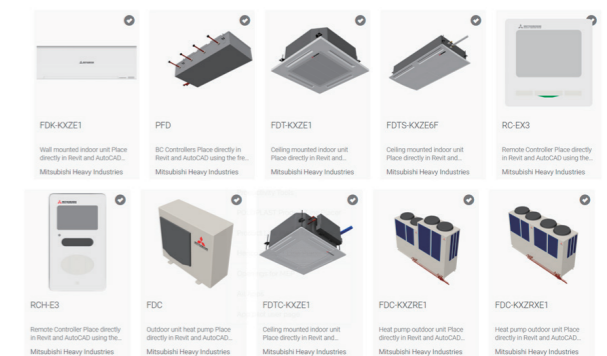
We can provide high quality Building Information Modelling (BIM) models in three formats:

1. Revit
2. 3D Cad
3. IFC (IFC provides an interoperability solution between different software applications. The format establishes international standards to import and export building objects and their properties)

How and why BIM is used

BIM enables all disciplines of a project (Architects, engineers, quantity surveyors, contractors, clients etc..) to share a common model and data representing the project they are building.

- Better design visualization
- Improves cost estimating
- BIM reduces conflicts and changes during construction
- Improves energy analysis
- Increases overall accuracy of project documentation
- Simplifies reporting and scheduling



## SL Checker II

By linking to the system Superlink - II communication network, you can force operation of the indoor and outdoor units, view the system operating details and trouble shoot system anomalies. The maximum connectable number of indoor units from the SL Checker II is 128 indoor units on one Superlink system.