



## KX6 refrigerant piping

### Installation of Interconnecting Pipework

Mitsubishi KX6 equipment is manufactured to the highest standards of quality and reliability. It is imperative the method of installation and the materials used are also to high standards, to ensure trouble free operation and long term reliability.

The interconnecting pipework must be installed by a competent and trained engineer. Refrigeration quality copper tube must be used, soft copper coils or half-hard straight lengths. The refrigeration quality tube must be soft drawn seamless high grade copper pipe. The copper tube must be selected taking into account the higher operating pressures of R410A refrigerant, and that high pressures will occur throughout the system because of the reverse cycle operation. All pipework material used should be EN12735 European standard.

The supplied branch pipe kits, must be used to make connections to indoor units, and the supplied manifold kits must be used to make connections between outdoor units (where applicable); it is not permitted to use standard fittings such as elbows, tees etc. The branch pipes shall be installed in accordance with the manufacturer's instructions, allowing unrestricted flow of refrigerant, and in accordance with European standard E378:2000. All brazed joints shall be made with dry nitrogen purge to ensure the prevention of oxidation to the internal surface of the copper pipes.

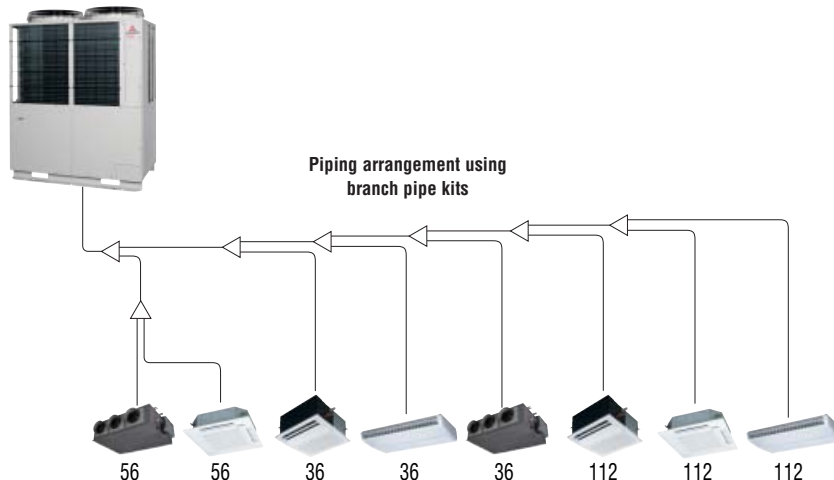
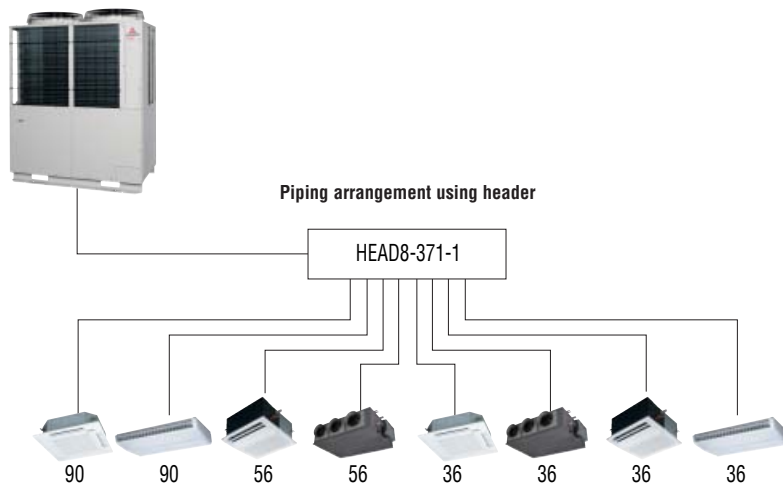
The ingress of moisture, dirt and any other contaminants to the interior of the copper pipes, and air conditioning units, must be prevented during the installation procedure. After the installation of pipework, prior to the

connection of the outdoor units, and sealing of insulation joints, the pipework must be pressure tested for leakage, using dry nitrogen.

### Additional Refrigerant

Additional R410A refrigerant only shall be used, and must be charged by weight only, using electronic scales. The amount of additional refrigerant must be accurately calculated from the manufacturer's data, based on the length and diameter of each section of the liquid refrigerant pipework of the system.

## Single outdoor unit piping examples:



Liquid pipe  
Gas pipe

# KX6 refrigerant piping

Pipe sizes applicable to European installations.

Outdoor unit (HP)		8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
Liquid pipe	Furthest indoor unit =<90m	ø9.52		ø12.7						ø15.88						ø19.05						
Gas pipe		ø19.05	ø22.22	ø28.58						ø34.92												
Liquid pipe	Furthest indoor unit =>90m	ø12.7		ø15.88						ø19.05						ø22.22						
Gas pipe		ø22.22	ø28.58								ø34.92											

mm	inch	mm	inch
ø9.52	3/8"	ø28.58	1 1/8"
ø12.7	1/2"	ø31.8	1 1/4"
ø15.88	5/8"	ø34.92	1 3/8"
ø19.05	3/4"	ø38.1	1 1/2"
ø22.22	7/8"	ø44.5	1 3/4"
ø25.4	1"	ø50.8	2"

## Branch pipes



DIS-22-1/DIS-180-1



DIS-371-1/DIS-540-2

## Header pipe

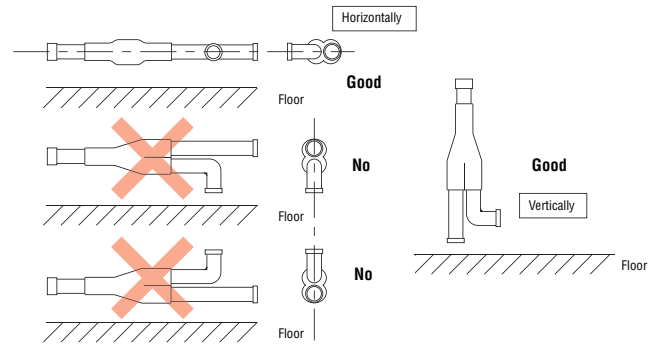


HEAD6-180-1

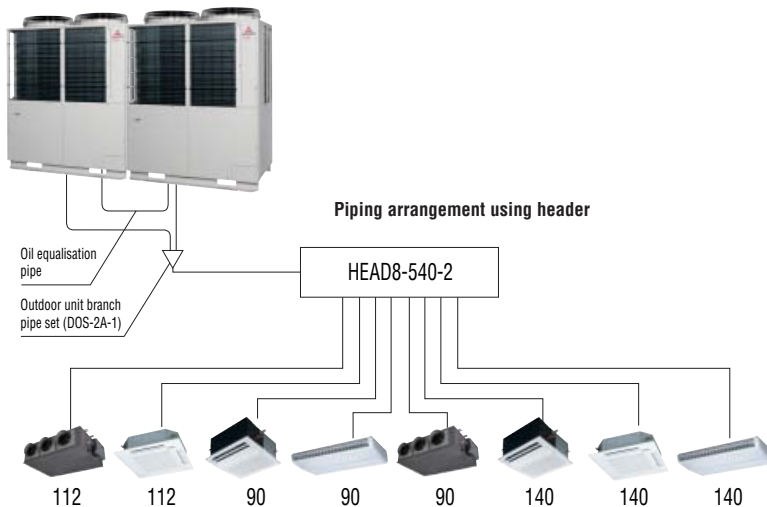
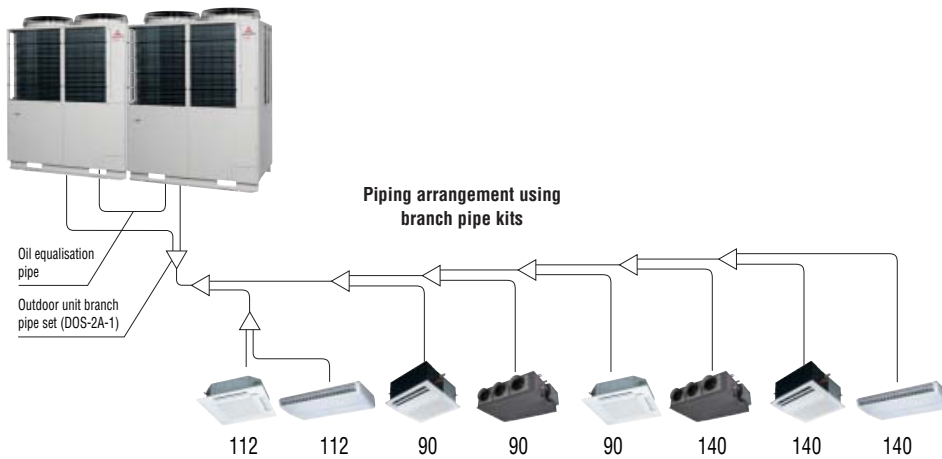
## Combination outdoor unit manifold



DOS-2A-1



## Combination outdoor unit piping examples:



### Outdoor unit's branching piping

Outdoor unit	Branch piping set
2 units (for 735~1360)	DOS-2A-1

### Indoor unit's first branching piping

Total capacity of indoor units	Branch piping set	Header set	
		Model	Branches
~179	DIS-22-1	HEAD4-22-1	Max 4 branches
180~370	DIS-180-1	HEAD6-180-1	Max 6 branches
371~539	DIS-371-1	HEAD8-371-1	Max 8 branches
540~	DIS-540-2	HEAD8-540-2	Max 8 branches



# KX6 electrical wiring – power supply

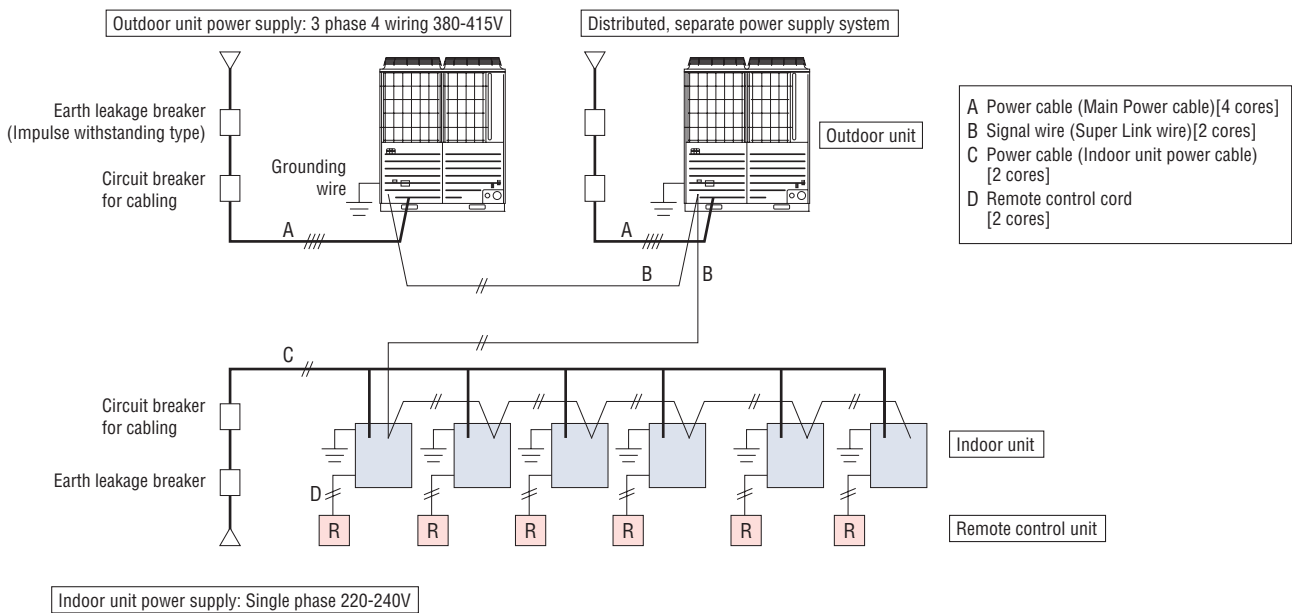
KX6 new design includes greatly simplified wiring requirements utilising a ‘polarity-free’ two wire control loop connecting the indoor units.

### Power wiring

Cables can be laid through the front, right, left or bottom of the outdoor unit casing.

Separate power supplies should be used for the outdoor unit (3/phase) and the indoor units (1/phase).

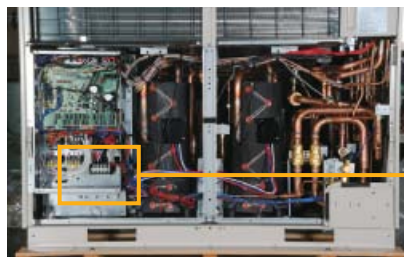
Only control wiring is connected from outdoor to indoor unit.



### CAUTION

If the earth leakage breaker is exclusively for ground fault protection, then you will need to install a circuit breaker for wiring work.

KX6 outdoor unit mechanical compartment



Electrical component box

Outdoor unit power supply terminal block

# KX6 electrical wiring – control wiring

1. The control wiring is 5 Volt DC, non-polarised, two wire connection notated as 'A1' and 'B1'. This 'AB' wiring connects outdoor unit to indoor unit and indoor unit to indoor unit.

2. This wiring must be a 2-core shielded cable size 0.75mm<sup>2</sup> or 1.25mm<sup>2</sup>.

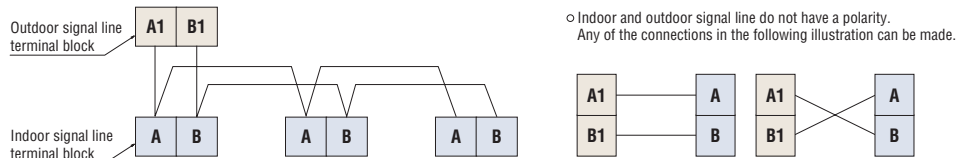
	0.75mm <sup>2</sup>	1.25mm <sup>2</sup>
~1000m	YES	YES
1000~1500m	YES	NO

3. We recommend the both ends of the shield of the cable are connected to ground (earth) at all the indoor units and outdoor units.

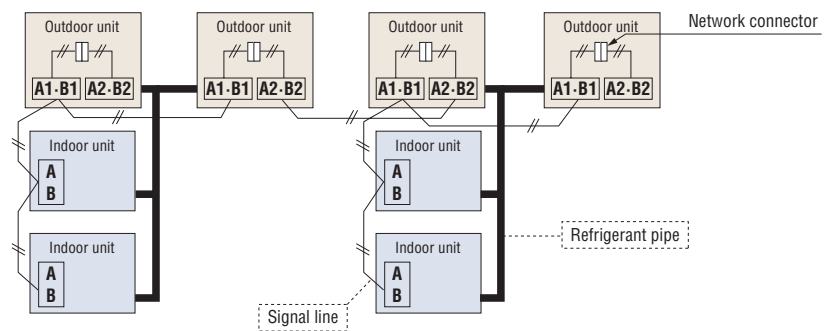
4. When plural outdoor units are used,  
 •Connect the signal cable between indoor and outdoor units and the signal cable between outdoor units belonging to the same refrigerant line to A1 and B1.  
 •Connect the signal line between outdoor units on different refrigerant lines to A2 and B2.

5. For current specification of 2-core (AB) wiring, please consult your MHI dealer.

(1) When one outdoor unit is used

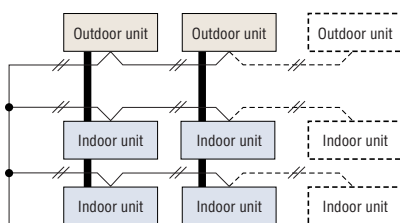


(2) When plural outdoor units are used



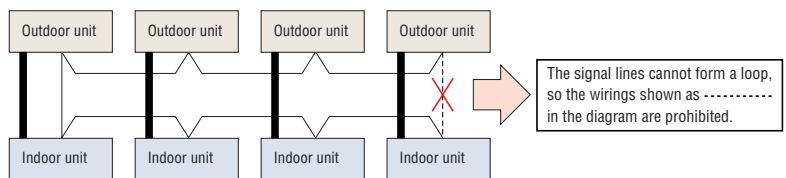
- (a) The maximum number of indoor units that can be connected in a system is 128 and it is possible to configure outdoor units and/or indoor units as an outdoor or indoor unit group connected with each other with two wires.
- (b) The signal wires can also be connected using the method shown below.

(3) The signal lines can also be connected using the method shown below.



### Important

o Loop wiring prohibited



## Remote control wiring specifications

For interconnecting wiring between the remote control and indoor units (XY wiring) use 2-core cable size 0.3mm<sup>2</sup>. The maximum length of 2-core cable is 600 metres. Where the 2-core wiring exceeds 100m, use the wire size detailed on the table opposite.

Length (m)	Wire size
100 to 200	0.5mm <sup>2</sup> x 2 core
To 300	0.75mm <sup>2</sup> x 2 core
To 400	1.25mm <sup>2</sup> x 2 core
To 600	2.0mm <sup>2</sup> x 2 core

