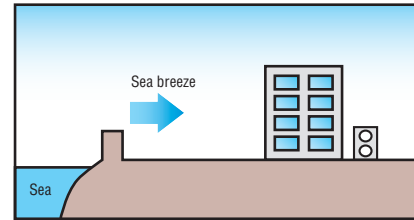




# Corrosion Protection Treatment series 4~60HP (11.2kW~168.0kW)

Corrosion Protection Treatment series are available with special coating applied for not only sheet metals but also small parts in order to prevent salt corrosion caused by sea breeze in area along coast line (Within approximately 500m from coast line).



Model No.	Nominal Cooling Capacity
FDCS112KXEN6	11.2kW
FDCS112KXES6	11.2kW
FDCS140KXEN6	14.0kW
FDCS140KXES6	14.0kW
FDCS155KXEN6	15.5kW
FDCS155KXES6	15.5kW
FDCS224KXE6G	22.4kW
FDCS280KXE6G	28.0kW
FDCS335KXE6G	33.5kW

Model No.	Nominal Cooling Capacity
FDCS280KXZE1	28.0kW
FDCS335KXZE1	33.5kW
FDCS400KXZE1	40.0kW
FDCS450KXZE1	45.0kW
FDCS475KXZE1	47.5kW
FDCS504KXZE1	50.4kW
FDCS560KXZE1	56.0kW

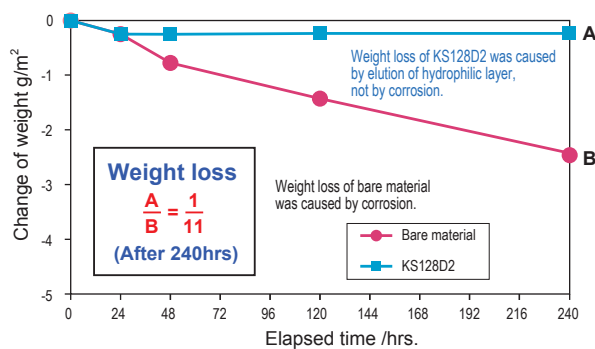
- Combination systems: 22~60HP (61.5kW~168.0kW) are the same as that of the standard KXZ series shown on previous pages.
- Specifications and Dimensions are the same as that of the standard KXZ series shown on previous pages.
- Non-CE Marking models.



## Corrosion resistance performance of high anticorrosion fin

### Comparison of weight loss by corrosion

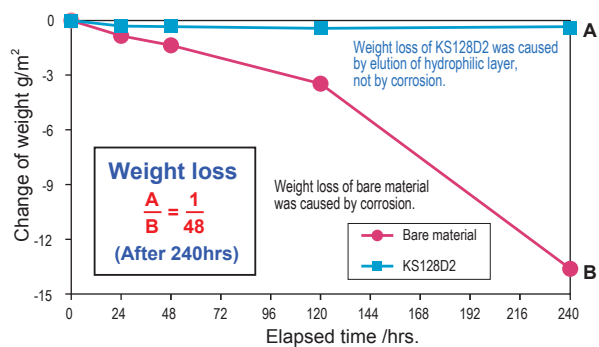
#### Neutral salt water spray test



#### <Test conditions>

JIS Z2371  
NaCl concentration : 50g/L  
pH : 6.5~7.2  
temperature : 35°C

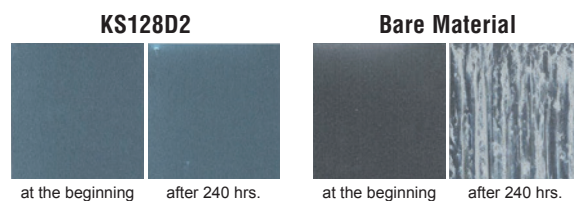
#### Acetic acid salt water spray test



#### <Test conditions>

JIS Z2371  
NaCl concentration : 50g/L  
pH : 3.1~3.3 (adjusted with acetic acid)  
temperature : 35°C

### Appearance comparison before and after acetic acid salt water spray test



For outside sheet metals, Cation electrodeposition coating is used for undercoat plus polyester powder coating or acrylic baked coating for top coat and corrosion protection is applied for heat exchanger, welded parts, fan guard, fin guard and other major parts.

Preventing corrosion by salt damage or sulfurous acid gas has made service life of this series longer while its exterior appearance has been greatly improved.

Durability of this series for anticorrosion is about two times that of standard outdoor units under the same conditions.

## Additional treatment from the standard series

		Micro	KXZ
Exterior panel		undercoat: Cation electrodeposition coating topcoat: polyester powder coating or acrylic baked coating	undercoat: Cation electrodeposition coating topcoat: acrylic baked coating
Base plate		undercoat: Cation electrodeposition coating topcoat: polyester powder coating or acrylic baked coating	undercoat: Cation electrodeposition coating topcoat: acrylic baked coating
Drain pan		_____	undercoat: Cation electrodeposition coating topcoat: acrylic baked coating
Fan motor		application of anticorrosion compound	application of anticorrosion compound
Fan motor base		4~6HP _____	application of anticorrosion compound
		8~12HP application of anticorrosion compound	
Heat exchanger	Fin	Precoated Aluminum Blue Fins in high anticorrosion specification	Precoated Aluminum Blue Fins in high anticorrosion specification
	pipe	application of anticorrosion compound	application of anticorrosion compound
	Side plate	application of anticorrosion compound	application of anticorrosion compound
Compressor		application of anticorrosion compound	application of anticorrosion compound
Accumulator		application of anticorrosion compound	application of anticorrosion compound
Receiver		application of anticorrosion compound	application of anticorrosion compound
Control box		4~6HP _____	galvanized steel sheet + undercoat: Cation electrodeposition coating + topcoat: acrylic baked finish
		8~12HP application of anticorrosion compound	
Baffle plate		4~6HP _____	_____
		8~12HP application of anticorrosion compound	
Service valve bracket		4~6HP _____	galvanized steel sheet + undercoat: Cation electrodeposition coating + topcoat: acrylic baking finish
		8~12HP application of anticorrosion compound	
Screw for exterior panel		zinc coating + chromate treatment + fluorine coating	zinc coating + chromate treatment + fluorine coating
Screw tap for inside of exterior panel		zinc coating + chromate treatment + fluorine coating	zinc coating + chromate treatment + fluorine coating

Corrosion protection treatment complies with regulation of The Japan Refrigeration and Air Conditioning Industry Association (JRA9002)

## Caution

Even if the outdoor unit is protected with the anti-salt damage treatment, it cannot be perfectly free from rusting.

The following points should be kept in mind during installation and maintenance of the outdoor units.

### Installation

- (1) When installing the outdoor unit close to the coastal area, provide a windbreak to protect it from direct sea breeze and salt water splash.
- (2) Select a well-drained place to install.
- (3) If any scratch or damages occurred on the outdoor unit during installation, repair it carefully.

### Maintenance

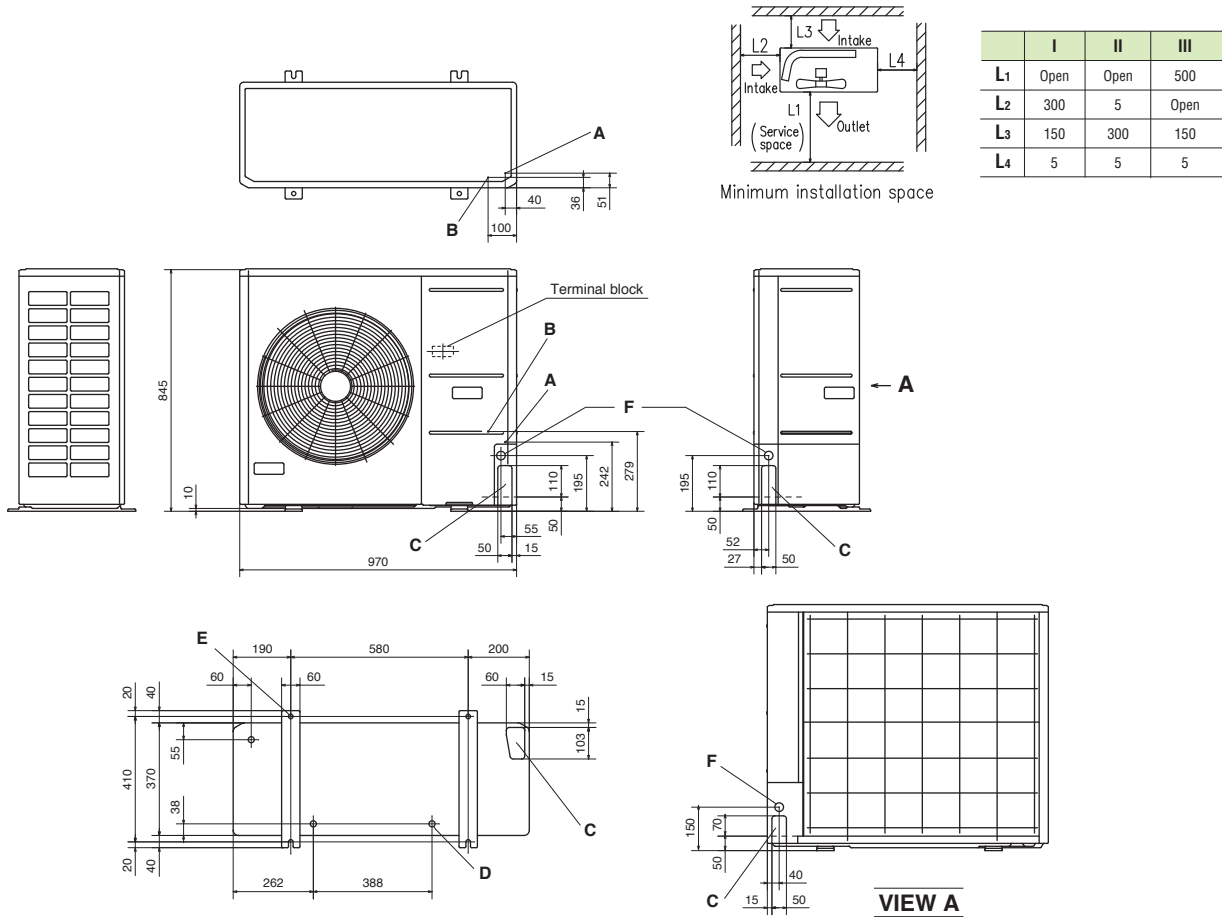
- (1) Clean salt grains on the outdoor unit with fresh water periodically.
- (2) Apply rust preventive at regular intervals for maintenance depending on the conditions at the installation place (consulting with the withstanding capacity).
- (3) Confirm reset of screw tap after maintenance, if missing it may cause corrosion occurred from the hole of screw tap.
- (4) During prolonged non operation periods, protect the unit with covering.



# Dimensions

All measurements in mm.

FDCS112KXEN6, FDCS112KXES6, FDCS140KXEN6, FDCS140KXES6, FDCS155KXEN6, FDCS155KXES6



Mark	Content	
A	Service valve connection (gas side)	ø15.88 (5/8") (Flare)
B	Service valve connection (liquid side)	ø9.52 (3/8") (Flare)
C	Pipe/cable draw-out hole	4 places
D	Drain discharge hole	ø20 x 3 places
E	Anchor bolt hole	M10 x 4 places
F	Cable draw-out hole	ø30 x 3 places

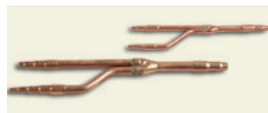
Notes:

- (1) It must not be surrounded by walls on the four sides.
- (2) The unit must be fixed with anchor bolts. An anchor bolt must not protrude more than 15mm.
- (3) Where the unit is subject to strong winds, lay it in such a direction that the blower outlet faces perpendicularly to the dominant wind direction.
- (4) Leave 1m or more space above the unit.
- (5) A wall in front of the blower outlet must not exceed the units height.
- (6) The model name label is attached on the lower right corner of the front panel.

## Refrigerant piping

Outdoor unit (HP)		4	5	6
Gas pipe	Furthest indoor unit =<70m	ø15.88		
Liquid pipe		ø9.52		

Branch pipes



DIS-22-1G  
DIS-180-1G

Header pipe

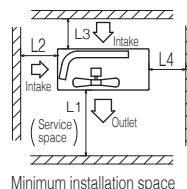
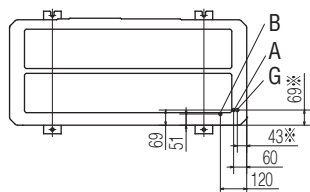


HEAD4-22-1G  
HEAD6-180-1G

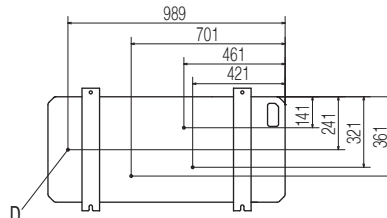
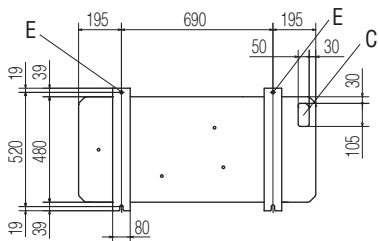
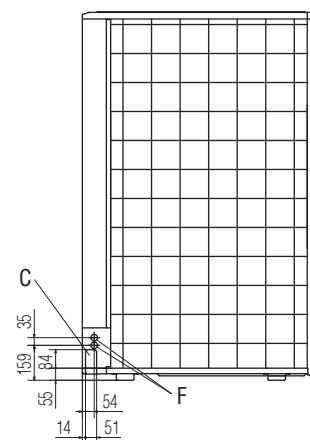
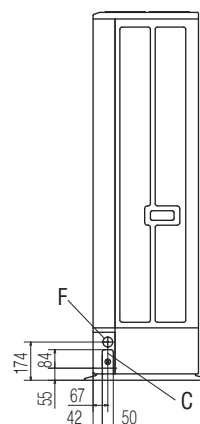
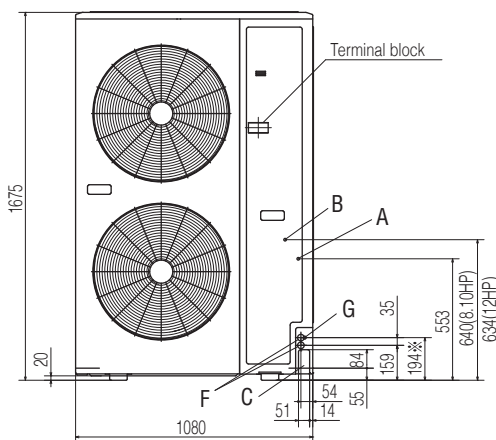
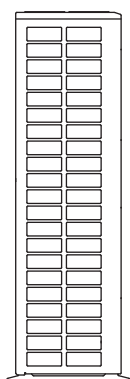
# Dimensions

All measurements in mm.

FDCS224KXE6G, FDCS280KXE6G, FDCS335KXE6G



	I	II	II
L1	Open	Open	1500
L2	300	5	Open
L3	300	300	300
L4	5	5	5



Mark	Content	224	280	335
A	Service valve connection of the attached connecting pipe (gas side)	ø19.05 (3/4") (Flare)	ø19.05 (3/4") (Flare)	ø19.05 (3/4") (Flare)
B	Service valve connection (liquid side)	ø9.52 (3/8") (Flare)	ø9.52 (3/8") (Flare)	ø12.7 (1/2") (Flare)
C	Pipe/cable draw-out hole	4places	4places	4places
D	Drain discharge hole	ø20 × 4places	ø20 × 4places	ø20 × 4places
E	Anchor bolt hole	M10 × 4places	M10 × 4places	M10 × 4places
F	Cable draw-out hole	ø30 × 2places (front) ø45 (side) ø30 × 2places (back)	ø30 × 2places (front) ø45 (side) ø30 × 2places (back)	ø30 × 2places (front) ø45 (side) ø30 × 2places (back)
G	Connecting position of the local pipe. (gas side)	ø19.05 (3/4")(Brazing)	ø22.22 (7/8")(Brazing)	ø25.4 (1")(Brazing)

Notes:

- (1) It must not be surrounded by walls on the four sides.
- (2) The unit must be fixed with anchor bolts. An anchor bolt must not protrude more than 15mm.
- (3) Where the unit is subject to strong winds, the blower outlet should face perpendicularly to the dominant wind direction.
- (4) Leave a 1m or more space above the unit.
- (5) A wall in front of the blower outlet must not exceed the unit's height.
- (6) The model name label is attached on the lower right corner of the front.
- (7) Connect the Service valve with local pipe by using the pipe of the attachment.(Gas side only)
- (8) Mark ※ shows the connecting position of the local pipe.(Gas side only)

## Refrigerant piping

Outdoor unit (HP)		8	10	12
Gas pipe	Furthest indoor unit =<90m	ø19.05	ø22.22	ø25.4(ø22.22)
Liquid pipe		ø9.52		ø12.7
Gas pipe	90m	ø22.22	ø25.4(ø22.22)	
Liquid pipe	=<Furthest indoor unit	ø12.7		

Branch pipes



DIS-22-1G  
DIS-180-1G



DIS-371-1G

Header pipe

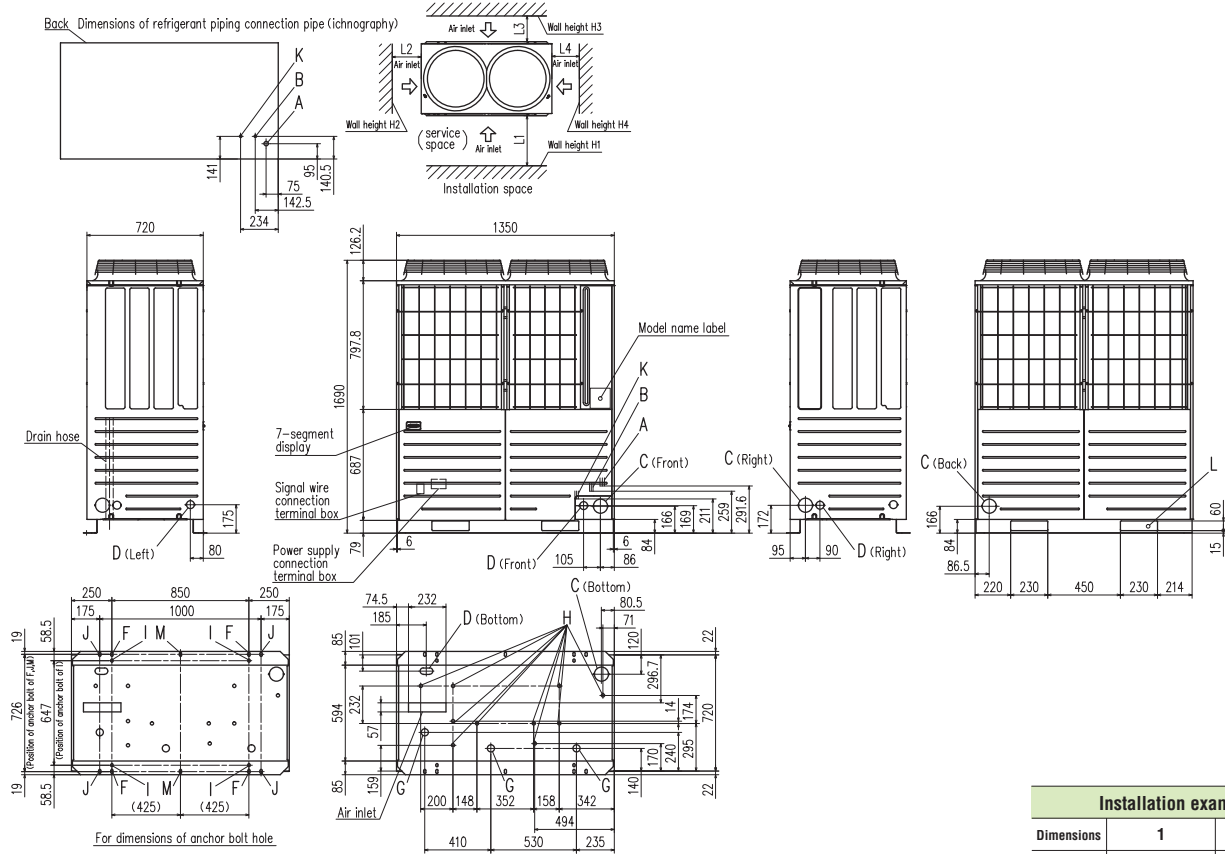


HEAD4-22-1G  
HEAD6-180-1G  
HEAD8-371-2

# Dimensions

All measurements in mm.

FDCS280KXZE1, FDCS335KXZE1



Mark	Content	280	335
A	Refrigerant gas piping connection pipe	ø22.22(Brazing)	ø25.4(Brazing)
B	Refrigerant liquid piping connection pipe	ø9.52(Flare)	ø12.7(Flare)
C	Refrigerant piping exit hole	ø88(or ø100)	
D	Power supply entry hole	ø50 (right · left · front), long hole 40 x 80 (bottom)	
F	Anchor bolt hole	M10 x 4 places	
G	Drain waste water hose hole	ø45 x 3 places	
H	Drain hole	ø20 x 10 places	
K	Refrigerant oil equalization piping connection pipe	ø9.52(Flare)	
L	Carrying in or hole for hanging	230 x 60	

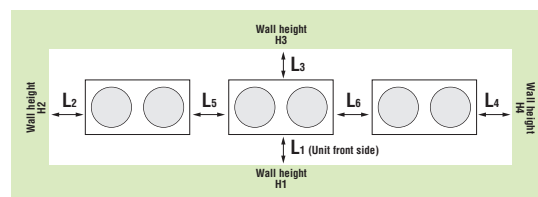
Installation example		
Dimensions	1	2
L <sub>1</sub>	500	Open
L <sub>2</sub>	10(30)	10(30)
L <sub>3</sub>	100	100
L <sub>4</sub>	10(30)	Open
H <sub>1</sub>	1500	Open
H <sub>2</sub>	No limit	No limit
H <sub>3</sub>	1000	No limit
H <sub>4</sub>	No limit	Open

() :In case it is the promised installation location that the outdoor unit is used on conditions with the ambient temperature of 43°C or more.

Installation example		
Dimensions	1	2
L <sub>1</sub>	500	Open
L <sub>2</sub>	10(30)	200
L <sub>3</sub>	100	300
L <sub>4</sub>	10(30)	Open
L <sub>5</sub>	10(30)	400
L <sub>6</sub>	10(30)	400
H <sub>1</sub>	1500	Open
H <sub>2</sub>	No limit	No limit
H <sub>3</sub>	1000	No limit
H <sub>4</sub>	No limit	Open

() :In case it is the promised installation location that the outdoor unit is used on conditions with the ambient temperature of 43°C or more.

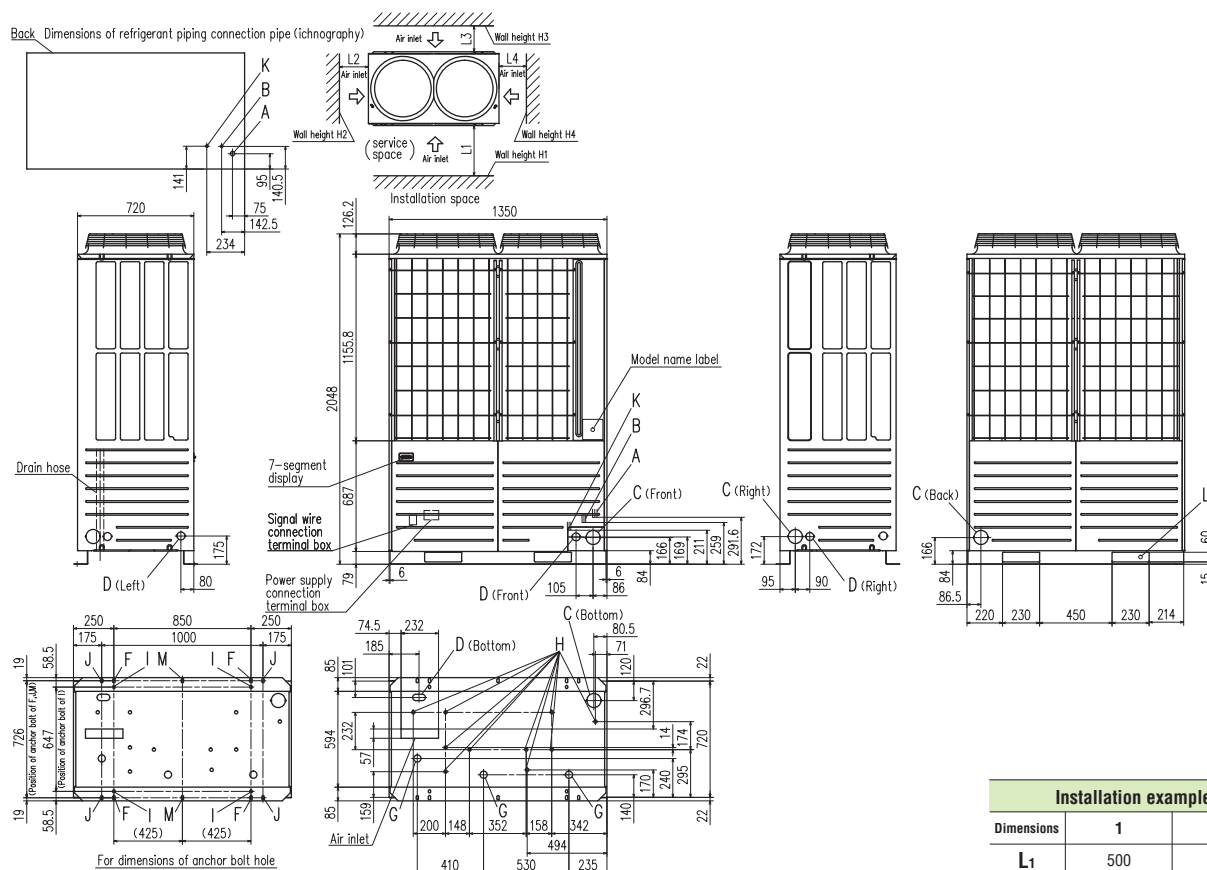
### When more than one unit is installed



# Dimensions

All measurements in mm.

FDCS400KXZE1, FDCS450KXZE1, FDCS475KXZE1, FDCS504KXZE1, FDCS560KXZE1



Mark	Content	400	450, 475, 500, 560
A	Refrigerant gas piping connection pipe	ø25.4(Brazing)	ø28.58(Brazing)
B	Refrigerant liquid piping connection pipe	ø12.7(Flare)	
C	Refrigerant piping exit hole	ø88(or ø100)	
D	Power supply entry hole	ø50 (right · left · front), long hole 40 x 80 (bottom)	
F	Anchor bolt hole	M10 x 4 places	
G	Drain waste water hose hole	ø45 x 3 places	
H	Drain hole	ø20 x 10 places	
K	Refrigerant oil equalization piping connection pipe	ø9.52(Flare)	
L	Carrying in or hole for hanging	230 x 60	

Installation example		
Dimensions	1	2
L <sub>1</sub>	500	Open
L <sub>2</sub>	10(30)	10(30)
L <sub>3</sub>	100	100
L <sub>4</sub>	10(30)	Open
H <sub>1</sub>	1500	Open
H <sub>2</sub>	No limit	No limit
H <sub>3</sub>	1000	No limit
H <sub>4</sub>	No limit	Open

() :In case it is the promised installation location that the outdoor unit is used on conditions with the ambient temperature of 43°C or more.

Installation example		
Dimensions	1	2
L <sub>1</sub>	500	Open
L <sub>2</sub>	10(30)	200
L <sub>3</sub>	100	300
L <sub>4</sub>	10(30)	Open
L <sub>5</sub>	10(30)	400
L <sub>6</sub>	10(30)	400
H <sub>1</sub>	1500	Open
H <sub>2</sub>	No limit	No limit
H <sub>3</sub>	1000	No limit
H <sub>4</sub>	No limit	Open

() :In case it is the promised installation location that the outdoor unit is used on conditions with the ambient temperature of 43°C or more.

### When more than one unit is installed

