

# KXZR2 HEAT RECOVERY SYSTEM

The new KXZR2 features a tiered design and a completely new shape. Thanks to the 3-pipe system, a single outdoor unit can simultaneously heat or cool several indoor units.

## SIMULTANEOUS HEATING AND COOLING

- Heat recovery.
- An extensive range of applications.
- Flexibility of the design.
- Improved cooling capacity at low temperature.
- Ease of maintenance.

## NEW DESIGN AND ENHANCED COMPONENTS

- Rounded shape.
- Next-generation compressor that reduces friction between components.
- New inverter control.
- High-efficiency heat pump.
- Optimised pipeline shape.



# KXZR2

## Heat recovery

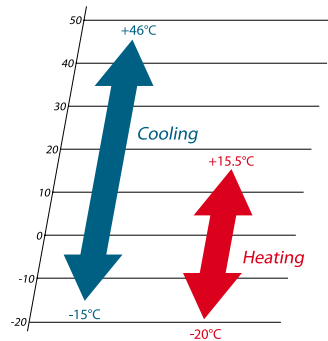
### CONNECT UP TO 44 INDOOR UNITS/200% CAPACITY

- FDC 224 KXZRE2 22.4 kW
- FDC 280 KXZRE2 28.0 kW
- FDC 335 KXZRE2 33.5 kW

8~12HP  
(22.4~33.5 kW)



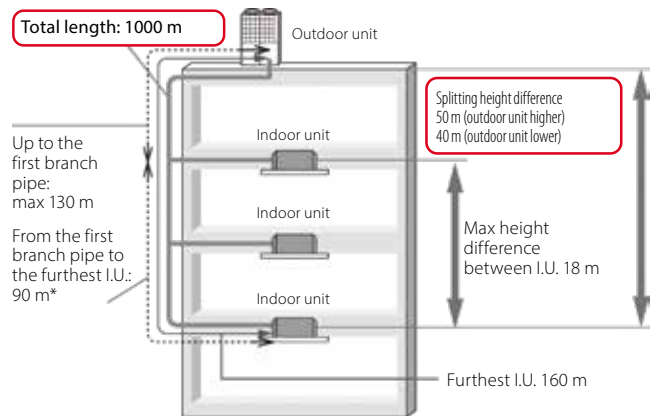
### OPERATING RANGE



### CHARACTERISTICS

- Maximum energy efficiency COP 4.25 e EER 3.89 [8 HP]
- Only DC Inverter compressors
- High split: up to 1000 m in total and with a maximum distance between the O.U. and the furthest I.U. of 160 m
- Up to 85 Pa prevalence on fans

### INSTALLATION DIAGRAM



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

Models		FDC 224 KXZRE2	FDC 280 KXZRE2	FDC 335 KXZRE2
Nominal Cool. capacity	kW	22.40	28.00	33.50
Cool. power consumption	kW	5.76	7.39	9.65
Seasonal energy efficiency index in Cool.	SEER <sup>1</sup>	6.21	6.36	7.15
Rated energy efficiency coefficient in Cool.	EER <sup>2</sup>	3.89	3.79	3.47
Nominal Heat. capacity	kW	22.40	28.00	33.50
Heat. power consumption	kW	5.27	6.86	8.44
Seasonal energy efficiency index in Heat.	SCOP <sup>1</sup>	4.06	4.02	4.43
Rated energy efficiency coefficient in Heat.	COP <sup>2</sup>	4.25	4.08	3.97
Power		Three-phase 380-415V 50Hz		
Rated current in Cool.	A	10.10	12.20	15.80
Rated current in Heat.	A	9.10	11.30	13.80
Sound pressure level	dB(A)	56	55	63
Sound power level	dB(A)	75	75	82
External dimensions (HxLxD)	mm	1697 x 1350 x 720		
Exterior appearance (Munsell colour)		Bianco stucco (4.2Y7.5/1.1) e Argento scuro (0.5Y4.3/0.1) equivalente		
Net weight	kg	305		
Refrigerant circuit/Compressor type and qty.		GTCS150NC47BF x 1		
Motor	kW	3.41 x 1	4.80 x 1	6.54 x 1
Starting method		Direct. in line		
Indoor System Units	Number of connectable I.U.	1-29	1-37	1-44
	Total connectable capacity*	112-448	140-560	168-670
Crankcase heater	W	33 x 1		
Refrigerant circuit/Heat exchanger		Pipes finned with Blue fin treatment and grooved internally		
Refrigerant control		Electronic expansion valve		
Refrigerant/GWP <sup>3</sup>		R410A / 2088		
Quantity	kg	11.5		
Tons of CO2 equivalent		24.01		
Refrigerant oil	l	2.35 (M-MA32R)		
Defrost control		Micro-computerised		
Air treatment/Fan type and quantity		Axial fan x 2		
Motor	W	386 x 2		
Starting method		Direct		
Air flow (Standard)	m <sup>3</sup> /h	13500		17640
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")	ø22.22 (7/8") - ø25.4 (1")
Intake gas line	mm (inch)	ø15.88 (5/8")	ø19.05 (3/4")	
Joining method		Gas side: brazing / Liquid side: flare		
Condensate drain		Drain holes: ø20 x 10 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. EU Regulation No.206/2012 - N.2281/2016 - Value measured according to harmonised standard EN14825. 3. Value measured according to harmonised standard EN14511. 4. 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 CO<sub>2</sub> 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.

# KXZR2

## Heat recovery

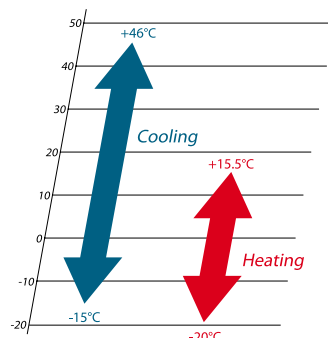
### CONNECT UP TO 71 INDOOR UNITS/160% CAPACITY (200% PER LE FDC 400~450)

FDC 400 KXZRE2	40.0 kW	FDC 560 KXZRE2	56.0 kW
FDC 450 KXZRE2	45.0 kW	FDC 615 KXZRE2	61.5 kW
FDC 475 KXZRE2	47.5 kW	FDC 670 KXZRE2	67.0 kW
FDC 500 KXZRE2	50.0 kW		

14~24HP  
(40.0~67.0 kW)



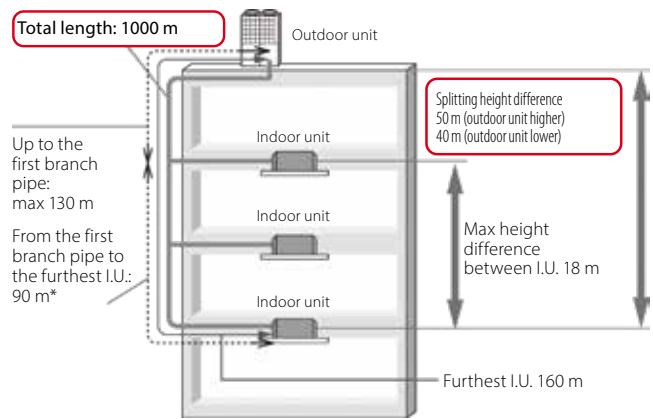
### OPERATING RANGE



### CHARACTERISTICS

- Maximum energy efficiency COP 4.10 e EER 3.46 [14 HP]
- Only DC Inverter compressors
- High split: up to 1000 m in total and with a maximum distance between the O.U. and the furthest I.U. of 160 m
- Up to 85 Pa prevalence on fans

### INSTALLATION DIAGRAM



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

Models		FDC 400 KXZRE2	FDC 450 KXZRE2	FDC 475 KXZRE2	FDC 500 KXZRE2	FDC 560 KXZRE2	FDC 615 KXZRE2	FDC 670 KXZRE2
Nominal Cool. capacity	kW	40.00	45.00	47.50	50.00	56.00	61.50	67.00
Cool. power consumption	kW	11.56	14.47	14.84	15.20	19.31	21.35	25.57
Seasonal energy efficiency index in Cool.	SEER <sup>1</sup>	6.78	6.29	6.60	7.01	6.26	6.05	5.88
Rated energy efficiency coefficient in Cool.	EER <sup>2</sup>	3.46	3.11	3.20	3.29	2.90	2.88	2.62
Nominal Heat. capacity	kW	40.00	45.00	47.50	50.00	56.00	61.50	63.00
Heat. power consumption	kW	9.76	11.39	11.67	12.69	14.93	16.14	17.45
Seasonal energy efficiency index in Heat.	SCOP <sup>1</sup>	4.39	4.33	4.27	4.39	4.29	4.34	4.50
Rated energy efficiency coefficient in Heat.	COP <sup>2</sup>	4.10	3.95	4.07	3.94	3.75	3.81	3.61
Power		Three-phase 380~415V 50Hz						
Rated current in Cool.	A	18.50	23.10	24.00	24.60	31.20	34.50	41.30
Rated current in Heat.	A	15.90	18.60	18.90	20.50	24.10	26.10	28.20
Sound pressure level	dB(A)	61	61	61	61	64	65	65
Sound power level	dB(A)	81	81	81	81	84	84	84
External dimensions (HxLxD)	mm	2052 x 1350 x 720						
Exterior appearance (Munsell colour)		Bianco stucco (4.2Y7.5/1.1) e Argento scuro (0.5Y4.3/0.1) equivalente						
Net weight	kg	372			420			
Refrigerant circuit/Compressor type and qty.		GUC5185ND47B x 1			GTC5150NC47BF x 2			
Motor	kW	7.92 x 1	9.73 x 1	4.53 x 2	4.84 x 2	5.79 x 2	7.05 x 2	9.87 x 2
Starting method		Direct. in line						
Indoor System Units	Number of connectable I.U.	1-53	1-60	1-50	1-53	1-59	2-65	2-71
	Total connectable capacity*	200-800	225-900	238-760	250-800	280-896	308-984	335-1072
Crankcase heater	W	40 x 1						
Refrigerant circuit/Heat exchanger		Pipes finned with Blue fin treatment and grooved internally						
Refrigerant control		Electronic expansion valve						
Refrigerant/GWP <sup>3</sup>		R410A / 2088						
Quantity	kg	11.5						
Tons of CO2 equivalent		24.01						
Refrigerant oil	l	3.3 (M-MA32R)			4.4 (M-MA32R)			
Defrost control		Micro -computerised						
Air treatment/Fan type and quantity		Axial fan x 2						
Motor	W	386 x 2						
Starting method		Direct						
Air flow (Standard)	m <sup>3</sup> /h	18240			18000			
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 holes: ø20 x 10 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. EU Regulation No.206/2012-NL 2281/2016 - Value measured according to harmonised standard EN14825. 3. Value measured according to harmonised standard EN14511. 4. 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 CO<sub>2</sub> 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.

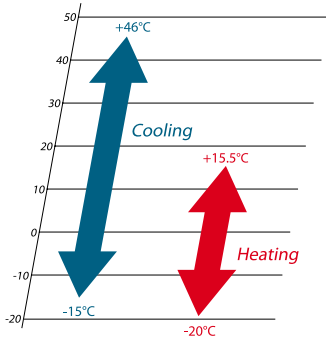
# KXZR2

## Heat pump - modular outdoor units

**CONNECT UP TO 78 INDOOR UNITS (FDC 735) AND UP TO 80 INDOOR UNITS (FDC 800~1120) TO 160% CAPACITY (FDC 735~950) AND UP TO 130% CAPACITY (FDC 1000~1120)**

FDC 735 KXZRE2 (FDC 335+FDC 400)	73.5 kW
FDC 800 KXZRE2 (FDC 400+FDC 400)	80.0 kW
FDC 850 KXZRE2 (FDC 400+FDC 450)	85.0 kW
FDC 900 KXZRE2 (FDC 450+FDC 450)	90.0 kW
FDC 950 KXZRE2 (FDC 475+FDC 750)	95.0 kW
FDC 1000 KXZRE2 (FDC 500+FDC 500)	100.0 kW
FDC 1060 KXZRE2 (FDC 500+FDC 560)	106.0 kW
FDC 1120 KXZRE2 (FDC 560+FDC 560)	112.0 kW

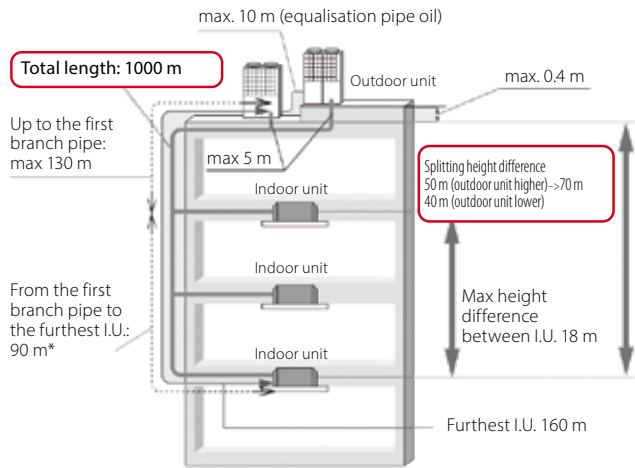
### OPERATING RANGE



### CHARACTERISTICS

- Maximum energy efficiency COP 4.10 (28HP); EER 4.47 (26HP)
- Only DC Inverter compressors
- High split: up to 1000 m in total and with a maximum distance between the O.U. and the furthest I.U. of 160 m
- Up to 85 Pa prevalence on fans

### INSTALLATION DIAGRAM



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



26HP (73.5 kW)



28~40HP (80.0~112.0 kW)

### COMBINATIONS

Models		FDC 735 KXZRE2	FDC 800 KXZRE2	FDC 850 KXZRE2	FDC 900 KXZRE2	FDC 950 KXZRE2	FDC 1000 KXZRE2	FDC 1060 KXZRE2	FDC 1120 KXZRE2
Combined units		FDC 335 KXZRE2 FDC 400 KXZRE2	FDC 400 KXZRE2 FDC 400 KXZRE2	FDC 400 KXZRE2 FDC 450 KXZRE2	FDC 450 KXZRE2 FDC 450 KXZRE2	FDC 475 KXZRE2 FDC 475 KXZRE2	FDC 500 KXZRE2 FDC 500 KXZRE2	FDC 500 KXZRE2 FDC 560 KXZRE2	FDC 560 KXZRE2 FDC 560 KXZRE2
Power		Three-phase 380-415V 50Hz							
Nominal Cool. capacity	kW	73.50	80.00	85.00	90.00	95.00	100.00	106.00	112.00
Cool. power consumption	kW	21.21	23.12	26.03	28.94	29.68	30.40	34.51	38.62
Rated energy efficiency coefficient in Cool.	EER <sup>1</sup>	3.47	3.46	3.27	3.11	3.20	3.29	3.07	2.90
Nominal Heat. capacity	kW	73.50	80.00	85.00	90.00	95.00	100.00	106.00	112.00
Heat. power consumption	kW	18.20	19.52	21.15	22.78	23.34	25.38	27.62	29.86
Rated energy efficiency coefficient in Heat.	COP <sup>1</sup>	4.04	4.10	4.02	3.95	4.07	3.94	3.84	3.75
Rated current in Cool.	A	34.30	37.00	41.60	46.30	48.00	49.10	55.80	62.40
Rated current in Heat.	A	29.70	31.90	34.60	37.20	37.70	41.00	44.60	48.30
Net weight	kg	677		744			840		
Diameter refrigerant pipes									
Liquid side	mm (inch)	ø15.88 (5/8")						ø19.05 (3/4")	
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.

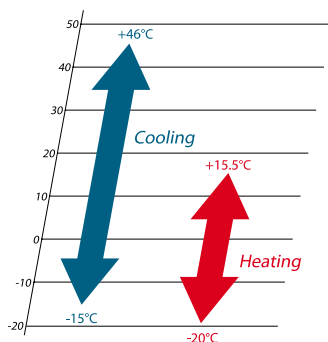
# KXZR2

## Heat pump - modular outdoor units

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

FDC 1200 KXZRE2 (FDC 400+FDC 400+FDC 400)	120.0 kW
FDC 1250 KXZRE2 (FDC 400+FDC 400+FDC 450)	125.0 kW
FDC 1300 KXZRE2 (FDC 400+FDC 450+FDC 450)	130.0 kW
FDC 1350 KXZRE2 (FDC 450+FDC 450+FDC 450)	135.0 kW
FDC 1425 KXZRE2 (FDC 475+FDC 475+FDC 475)	142.5 kW
FDC 1450 KXZRE2 (FDC 475+FDC 475+FDC 500)	145.0 kW
FDC 1500 KXZRE2 (FDC 500+FDC 500+FDC 500)	150.0 kW
FDC 1560 KXZRE2 (FDC 500+FDC 500+FDC 560)	156.0 kW
FDC 1620 KXZRE2 (FDC 500+FDC 560+FDC 560)	162.0 kW
FDC 1680 KXZRE2 (FDC 560+FDC 560+FDC 560)	168.0 kW

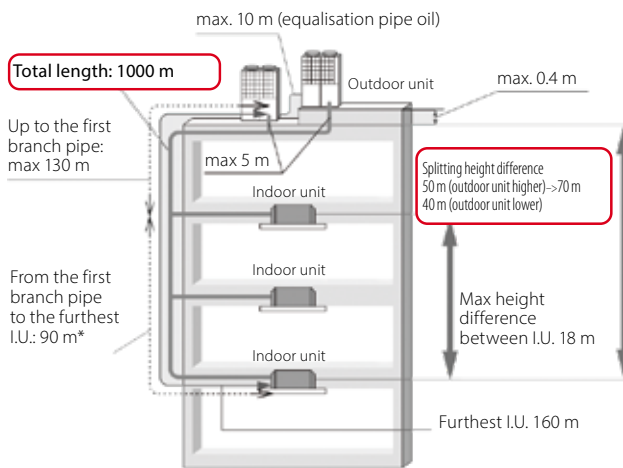
### OPERATING RANGE



### CHARACTERISTICS

- Maximum energy efficiency COP 4.10 e EER 3.46 (42HP)
- Only DC Inverter compressors
- High split: up to 1000 m in total and with a maximum distance between the O.U. and the furthest I.U. of 160 m
- Up to 85 Pa prevalence on fans

### INSTALLATION DIAGRAM



\* With difference of length between the furthest 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		FDC 1200 KXZRE2	FDC 1250 KXZRE2	FDC 1300 KXZRE2	FDC 1350 KXZRE2	FDC 1425 KXZRE2	FDC 1450 KXZRE2	FDC 1500 KXZRE2	FDC 1560 KXZRE2	FDC 1620 KXZRE2	FDC 1680 KXZRE2
Combined units		FDC 400 KXZRE2	FDC 400 KXZRE2	FDC 400 KXZRE2	FDC 450 KXZRE2	FDC 475 KXZRE2	FDC 475 KXZRE2	FDC 500 KXZRE2	FDC 500 KXZRE2	FDC 500 KXZRE2	FDC 560 KXZRE2
		FDC 400 KXZRE2	FDC 400 KXZRE2	FDC 450 KXZRE2	FDC 450 KXZRE2	FDC 475 KXZRE2	FDC 475 KXZRE2	FDC 500 KXZRE2	FDC 500 KXZRE2	FDC 560 KXZRE2	FDC 560 KXZRE2
		FDC 400 KXZRE2	FDC 450 KXZRE2	FDC 450 KXZRE2	FDC 450 KXZRE2	FDC 475 KXZRE2	FDC 500 KXZRE2	FDC 500 KXZRE2	FDC 560 KXZRE2	FDC 560 KXZRE2	FDC 560 KXZRE2
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	34.68	37.59	40.50	43.41	44.52	44.88	45.60	49.71	53.82	57.93
Rated energy efficiency coefficient in Cool.	EER <sup>1</sup>	3.46	3.33	3.21	3.11	3.20	3.23	3.29	3.14	3.01	2.90
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	30.91	32.54	34.17	35.01	36.03	38.07	40.31	42.55	44.79
Rated energy efficiency coefficient in Heat.	COP <sup>1</sup>	4.10	4.04	4.00	3.95	4.07	4.02	3.94	3.87	3.81	3.75
Rated current in Cool.	A	55.50	60.10	64.80	69.40	72.00	72.50	73.70	80.30	87.00	93.60
Rated current in Heat.	A	47.80	50.50	53.20	55.80	56.60	58.20	61.50	65.20	68.80	72.40
Net weight	kg	1116					1260				
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											

<sup>1</sup> Value measured according to harmonised standard EN14511.