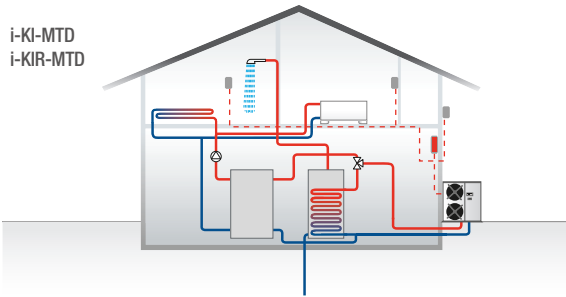


# prana i-KI-MTD / i-KIR-MTD 0075t ÷ 0151t

i-KI-MTD  
i-KIR-MTD



nadisystem

Remote keypad with  
temperature and  
humidity probe



## Versions



### i-KI-MTD

Air cooled heat pump, with axial fans and inverter driven compressor, for heating water up to 60°C and operating limit down to -20°C outdoor air temperature. Domestic hot water production.



### i-KIR-MTD

Air cooled reversible heat pump, with axial fans and inverter driven compressor, for heating water up to 60°C and operating limit down to -20°C outdoor air temperature. Domestic hot water production.

## Unit description

i-KI heating only and reversible i-KIR heat pumps provide for heating, cooling and domestic hot water production. Winter mode is always guaranteed by the Inverter technology, which ensures standard operation beyond traditional working limits, supplying hot water up to 60°C. The i-KI(R)reverse-cycle heat pumps feature high seasonal efficiency in both heating and cooling mode, using the DC inverter technology to modulate the compressor operation and deliver the exact amount of energy according to the real needs of the building. This excellent result has been achieved by carefully sizing all the components. Special attention has been paid to all heat exchange surfaces and the fans. The use of innovative condensing coils, with larger surfaces and special layout, together with new asymmetrical evaporators with better and more efficient refrigerant distribution, both in the liquid and gas phase, and high efficiency fans with DC motor are some of the important advancements featured by this product. i-KI(R) units can be coupled with traditional systems or radiant panels, always guaranteeing very high energy efficiency. Installation is strongly simplified thanks to the integrated hydronic module with inverter pump.

## Controls

Electronic control Nadisystem provides great application flexibility. The remote keyboard kit wired and outdoor air temperature sensors ensure a dynamic control of delivery water temperature, optimising comfort in the room and increasing the energy efficiency.

The electronic board allows you to manage:

- wired remote control with backlit display and remote temperature/humidity probe
- outdoor temperature probe for water plant side modular set point compensation
- a zone of direct heating for serving the radiator, floor heating or fancoil
- a zone with mix valve for floor heating
- electrical heating device for possible integration and anti-legionella cycle for cylinder
- boiler or electric heater in substitution or in addition
- the room controller can customise up to six time bands. The presence of the programmable timer allows the creation of an operating profile containing up to 6 time bands
- up to 4 heat pumps in cascade (with N-CM component)
- several solutions through appropriate configuration of the controller and use of dedicated extension modules (optional), up to 5 zones

## Features

- Wide range: Extended capacity range.
- System efficiency: The unit is designed as a system: all components are regulated using proprietary control's logic for the highest efficiency.
- High efficiency at partial loads: High seasonal efficiency in both heating and cooling modes, using DC inverter technology to modulate compressor operation and deliver the exact amount of energy according to the real needs of the building. High efficiency for low energy consumption during the operating hours.
- High efficiency components: In terms of improving performance and reducing power consumption, the electronic thermostatic valve is an important component that maximises system efficiency, such as the hydronic kit with inverter water pump (optional) and the fans with DC motor.
- Extreme operating limits: Thanks to the inverter technology, standard operation in winter mode is guaranteed beyond traditional working limits, supplying hot water up to 60°C and down to -20°external air.

## Main accessories

- Integrated hydronic module with on/off pump or high efficiency inverter pump
- Wired room terminal with backlit display, and with temperature and umidity probe
- Extension module for system configuration
- Three-way valve for domestic hot water
- Electric heater for the heating system
- Electric heater for hot water cylinder and for anti-legionellosis
- Cascade management kit
- Serial card RS485 for ModBus
- Hot water cylinder 300,500 liters
- 300 liters thermal store for domestic hot water, for DOMH2O kit
- 300,500,1000 liters thermal store for domestic hot water with solar heat exchanger, for DOMH2O kit
- DOMH2O15 e DOMH2O24 kit for domestic hot water with external plate heat exchanger and pump
- Copper-Copper heat exchanger coils
- Copper-Aluminum heat exchanger coils with epoxy treatment
- Electric heater for the base and for condensate collecting tray to avoid freezing

Reversible or heating only heat pump with DC inverter compressor,  
air source, outdoor installation 15,6 - 30,5 kW



APPLICATION HYDRONIC TERMINAL

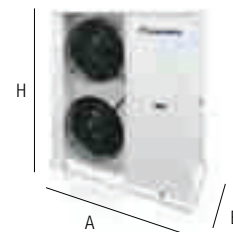
i-KIR-MTD		0075t	0091t	0095t	0101t	0121t	0135t	0151t
Power supply	V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>COOLING ONLY (GROSS VALUE)</b>								
Cooling capacity	(1) kW	15,6	19,3	22,1	24,0	26,4	28,7	30,5
Total power input	(1) kW	6,54	6,93	8,84	10,2	10,1	12,5	12,6
EER	(1) kW/kW	2,39	2,78	2,50	2,35	2,61	2,30	2,42
ESEER	(1) kW/kW	4,30	4,44	4,37	4,28	4,69	4,65	4,65
<b>COOLING ONLY (EN14511 VALUE)</b>								
Cooling capacity	(1)(2) kW	15,5	19,2	22,0	23,9	26,3	28,6	30,4
EER	(1)(2) kW/kW	2,35	2,75	2,46	2,32	2,59	2,27	2,39
ESEER	(1)(2) kW/kW	4,08	4,25	4,14	4,04	4,52	4,45	4,45
Classe EUROVENT		E	C	E	E	D	F	E
<b>HEATING ONLY (GROSS VALUE)</b>								
Total heating capacity	(3) kW	20,4	23,9	27,6	30,1	32	35,1	38,1
Total power input	(3) kW	7,33	7,06	8,9	10,1	9,33	10,7	11,5
COP	(3) kW/kW	2,78	3,39	3,1	2,98	3,43	3,28	3,31
<b>HEATING ONLY (EN14511 VALUE)</b>								
Total heating capacity	(3)(2) kW	20,5	24	27,8	30,3	32,1	35,2	38,3
COP	(3)(2) kW/kW	2,76	3,34	3,07	2,94	3,39	3,26	3,27
Classe EUROVENT		D	A	B	C	A	A	A
<b>SEASONAL EFFICIENCY IN HEATING (EN14825 VALUE)</b>								
PDesign	(4) kW	15,9	23,1	25,3	27,5	25,9	28,5	32,5
SCOP	(4)	3,61	4,14	4,08	4,00	4,17	4,16	4,36
Performance $\eta_s$ (Reg. 811/2013 UE)	(4) %	141	163	160	157	164	163	171
Seasonal efficiency class (Regulation (UE) 811/2013)	(4)	A+	A++	A++	A++	A++	A++	A++
<b>EXCHANGERS</b>								
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>								
Water flow	(1) m <sup>3</sup> /h	2,68	3,33	3,81	4,12	4,55	4,94	5,24
Pressure drop	(1) kPa	13,3	12,2	16,0	18,7	10,4	12,2	13,7
<b>HEAT EXCHANGER USER SIDE IN HEATING</b>								
Water flow	(3) m <sup>3</sup> /h	3,76	5,27	5,71	6,19	6,23	6,81	7,71
Pressure drop	(3) kPa	26,1	30,6	35,9	42,2	19,4	23,2	29,7
<b>COMPRESSORS</b>								
No. Compressors	N°	1	1	1	1	1	1	1
No. Circuits	N°	1	1	1	1	1	1	1
<b>NOISE LEVEL</b>								
Sound power level in cooling	(5)(6) dB(A)	71	72	74	75	76	77	77
Sound power level in heating	(5)(7) dB(A)	72	73	75	76	77	78	78
Noise Pressure	(8) dB(A)	55	56	58	59	60	61	61
<b>SIZE AND WEIGHT</b>								
A	(9) mm	1470	1470	1470	1470	1720	1720	1720
B	(9) mm	570	570	570	570	670	670	670
H	(9) mm	1200	1700	1700	1700	1700	1700	1700
Operating weight	(9) kg	220	285	285	285	330	330	330

Notes

i-KI-MTD / i-KIR-MTD

- Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.
- Values in compliance with EN14511-3:2013.
- Plant (side) heat exchanger water (in/out) 40°C/45°C; Source (side) heat exchanger air (in) 7°C - 87% R.H.
- Seasonal space heating energy efficiency class LOW TEMPERATURE in AVERAGE climate conditions [REGULATION (UE) N. 811/2013]
- Sound power on the basis of measurements made in compliance with ISO 9614.
- Sound power level in cooling, outdoors.
- Sound power level in heating, outdoors.
- Average sound pressure level at 1m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
- Unit in standard configuration/execution, without optional accessories.

Certified data in EUROVENT



# prana i-KI-MTD / i-KIR-MTD 0075t ÷ 0151t

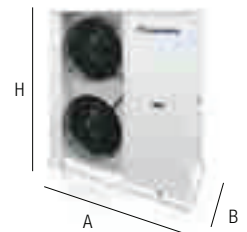
## APPLICATION FLOOR HEATING

i-KIR-MTD			0075t	0091t	0095t	0101t	0121t	0135t	0151t
Power supply		V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>COOLING ONLY (GROSS VALUE)</b>									
Cooling capacity	(1)	kW	19,4	24,4	27,7	30,4	30,5	34,4	36,4
Total power input	(1)	kW	5,92	6,14	7,52	8,91	7,73	9,15	10,1
EER	(1)	kW/kW	3,28	3,97	3,68	3,41	3,95	3,76	3,60
ESEER	(1)	kW/kW	4,30	4,44	4,38	4,28	4,69	4,63	4,65
<b>COOLING ONLY (EN14511 VALUE)</b>									
Cooling capacity	(1)(2)	kW	19,3	24,3	27,5	30,2	30,4	34,3	36,2
EER	(1)(2)	kW/kW	3,20	3,88	3,59	3,32	3,88	3,69	3,53
ESEER	(1)(2)	kW/kW	4,08	4,25	4,14	4,04	4,52	4,45	4,45
<b>HEATING ONLY (GROSS VALUE)</b>									
Total heating capacity	(3)	kW	19,7	24,5	28,1	30,9	32,2	35,5	39,2
Total power input	(3)	kW	5,44	5,89	7,21	8,25	7,84	9,12	9,71
COP	(3)	kW/kW	3,62	4,16	3,90	3,75	4,11	3,89	4,04
<b>HEATING ONLY (EN14511 VALUE)</b>									
Total heating capacity	(3)(2)	kW	19,8	24,6	28,3	31,1	32,3	35,6	39,4
COP	(3)(2)	kW/kW	3,57	4,09	3,83	3,69	4,06	3,84	3,99
<b>SEASONAL EFFICIENCY IN HEATING (EN14825 VALUE)</b>									
PDesign	(4)	kW	14,0	17,8	20,8	23,1	22,1	24,7	27,5
SCOP	(4)		3,60	4,04	4,02	3,99	4,10	4,10	4,31
Performance $\eta_s$ (Reg. 811/2013 UE)	(4)	%	141	159	158	157	161	161	170
Seasonal efficiency class (Regulation (UE) 811/2013)	(4)		A+	A++	A++	A++	A++	A++	A++
<b>EXCHANGERS</b>									
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>									
Water flow	(1)	m <sup>3</sup> /h	3,59	4,54	5,15	5,55	6,11	6,58	6,99
Pressure drop	(1)	kPa	23,8	22,7	29,2	33,9	18,7	21,7	24,4
<b>HEAT EXCHANGER USER SIDE IN HEATING</b>									
Water flow	(3)	m <sup>3</sup> /h	3,77	5,36	5,76	6,23	6,37	6,94	7,85
Pressure drop	(3)	kPa	26,2	31,6	36,5	42,7	20,3	24,1	30,9
<b>COMPRESSORS</b>									
No. Compressors		N°	1	1	1	1	1	1	1
No. Circuits		N°	1	1	1	1	1	1	1
<b>NOISE LEVEL</b>									
Sound power level in cooling	(5)(6)	dB(A)	71	72	74	75	76	77	77
Sound power level in heating	(5)(7)	dB(A)	72	73	75	76	77	78	78
Noise Pressure	(8)	dB(A)	55	56	58	59	60	61	61
<b>SIZE AND WEIGHT</b>									
A	(9)	mm	1470	1470	1470	1470	1720	1720	1720
B	(9)	mm	570	570	570	570	670	670	670
H	(9)	mm	1200	1700	1700	1700	1700	1700	1700
Operating weight	(9)	kg	220	285	285	285	330	330	330

## Notes

i-KI-MTD / i-KIR-MTD

- Plant (side) cooling exchanger water (in/out) 23°C/18°C; Source (side) heat exchanger air (in) 35°C.
- Values in compliance with EN14511-3:2013.
- Plant (side) heat exchanger water (in/out) 30°C/35°C; Source (side) heat exchanger air (in) 7°C - 87% R.H.
- Seasonal space heating energy efficiency class LOW TEMPERATURE in AVERAGE climate conditions [REGULATION (UE) N. 811/2013]
- Sound power on the basis of measurements made in compliance with ISO 9614.
- Sound power level in cooling, outdoors.
- Sound power level in heating, outdoors.
- Average sound pressure level at 1m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
- Unit in standard configuration/execution, without optional accessories.



Reversible or heating only heat pump with DC inverter compressor, air source, outdoor installation 15,6 - 30,5 kW



APPLICATION HYDRONIC TERMINAL

i-KI-MTD 0075-0151			0075t	0091t	0095t	0101t	0121t	0135t	0151t
Power supply	V/ph/Hz		400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>HEATING ONLY (GROSS VALUE)</b>									
Total heating capacity	(1)	kW	20,4	23,9	27,6	30,1	32	35,1	38,1
Total power input	(1)	kW	7,33	7,06	8,9	10,1	9,33	10,7	11,5
COP	(1)	kW/kW	2,78	3,39	3,1	2,98	3,43	3,28	3,31
<b>HEATING ONLY (EN14511 VALUE)</b>									
Total heating capacity	(1)(2)	kW	20,5	24	27,8	30,3	32,1	35,2	38,3
COP	(1)(2)	kW/kW	2,76	3,34	3,07	2,94	3,39	3,26	3,27
<b>SEASONAL EFFICIENCY IN HEATING (EN14825 VALUE)</b>									
PDesign	(3)	kW	15,9	23,1	25,3	27,5	25,9	28,5	32,5
SCOP	(3)		3,52	4,06	4,01	3,94	4,10	4,10	4,29
Performance ηs (Reg. 811/2013 UE)	(3)	%	138	160	157	155	161	161	169
Seasonal efficiency class (Regulation (UE) 811/2013)	(3)		A+	A++	A++	A++	A++	A++	A++
<b>EXCHANGERS</b>									
<b>HEAT EXCHANGER USER SIDE IN HEATING</b>									
Water flow	(1)	m³/h	3,76	5,27	5,71	6,19	6,23	6,81	7,71
Pressure drop	(1)	kPa	26,1	30,6	35,9	42,2	19,4	23,2	29,7
<b>COMPRESSORS</b>									
No. Compressors	N°		1	1	1	1	1	1	1
No. Circuits	N°		1	1	1	1	1	1	1
<b>NOISE LEVEL</b>									
Sound power level in heating	(4)(5)	dB(A)	72	73	75	76	77	78	78
Noise Pressure	(6)	dB(A)	56	57	59	60	61	62	62
<b>SIZE AND WEIGHT</b>									
A	(7)	mm	1470	1470	1470	1470	1720	1720	1720
B	(7)	mm	570	570	570	570	670	670	670
H	(7)	mm	1200	1700	1700	1700	1700	1700	1700
Operating weight	(7)	kg	220	285	285	285	330	330	330

APPLICATION FLOOR HEATING

i-KI-MTD 0075-0151			0075t	0091t	0095t	0101t	0121t	0135t	0151t
Power supply	V/ph/Hz		400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>HEATING ONLY (GROSS VALUE)</b>									
Total heating capacity	(1*)	kW	19,7	24,5	28,1	30,9	32,2	35,5	39,2
Total power input	(1*)	kW	5,44	5,89	7,21	8,25	7,84	9,12	9,71
COP	(1*)	kW/kW	3,62	4,16	3,9	3,75	4,11	3,89	4,04
<b>HEATING ONLY (EN14511 VALUE)</b>									
Total heating capacity	(1*)(2)	kW	19,8	24,6	28,3	31,1	32,3	35,6	39,4
COP	(1*)(2)	kW/kW	3,57	4,09	3,83	3,69	4,06	3,84	3,99
<b>SEASONAL EFFICIENCY IN HEATING (EN14825 VALUE)</b>									
PDesign	(3)	kW	15,9	23,1	25,3	27,5	25,9	28,5	32,5
SCOP	(3)		3,52	4,06	4,01	3,94	4,10	4,10	4,29
Performance ηs (Reg. 811/2013 UE)	(3)	%	138	160	157	155	161	161	169
Seasonal efficiency class (Regulation (UE) 811/2013)	(3)		A+	A++	A++	A++	A++	A++	A++
<b>EXCHANGERS</b>									
<b>HEAT EXCHANGER USER SIDE IN HEATING</b>									
Water flow	(1*)	m³/h	3,77	5,36	5,76	6,23	6,37	6,94	7,85
Pressure drop	(1*)	kPa	26,2	31,6	36,5	42,7	20,3	24,1	30,9
<b>COMPRESSORS</b>									
No. Compressors	N°		1	1	1	1	1	1	1
No. Circuits	N°		1	1	1	1	1	1	1
<b>NOISE LEVEL</b>									
Sound power level in heating	(4)(5)	dB(A)	72	73	75	76	77	78	78
Noise Pressure	(6)	dB(A)	56	57	59	60	61	62	62
<b>SIZE AND WEIGHT</b>									
A	(7)	mm	1470	1470	1470	1470	1720	1720	1720
B	(7)	mm	570	570	570	570	670	670	670
H	(7)	mm	1200	1700	1700	1700	1700	1700	1700
Operating weight	(7)	kg	220	285	285	285	330	330	330

Notes

i-KI-MTD / i-KIR-MTD

- Plant (side) heat exchanger water (in/out) 40°C/45°C; Source (side) heat exchanger air (in) 7°C - 87% R.H.
- 1\* Plant (side) heat exchanger water (in/out) 30°C/35°C; Source (side) heat exchanger air (in) 7°C - 87% R.H.
- 2 Values in compliance with EN14511-3:2013.
- 3 Seasonal space heating energy efficiency class LOW TEMPERATURE in AVERAGE climate conditions [REGULATION (UE) N. 811/2013]
- 4 Sound power on the basis of measurements made in compliance with ISO 9614.
- 5 Sound power level in heating, outdoors.
- 6 Average sound pressure level at 1m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
- 7 Unit in standard configuration/execution, without optional accessories.

