

**Reversible heat pump, total heat recovery, water source
5,10-34,8 kW**



The PRANA DHW2 water-cooled heat pumps are reversible units for all year round operation in any operating mode: single cycle (air conditioning, heating, domestic hot water) as well as combined cycle in total heat recovery (domestic hot water together with cooling). Energy efficiency is highest during the summer cycle, when, thanks to the full recovery of the heat, the production of hot water is free. During the combined use, the DHW exchanger uses the temperature of the discharge gases to get inside the accumulation sanitary water as high as 65° C. The advanced electronic regulation developed by Climaveneta ensures the highest operational flexibility, fast working condition a significant increase in the overall COP, which go hand in hand with electricity and space reduction. Advantages, combined with the possibility of completely eliminating the traditional boiler, making heat pumps PRANA DHW2 the ideal solution for energy saving applications in residential, hotel and small sector.

Features

Structure and base in hot-dip galvanised steel with epoxy powder paint finish.
Case panels are insulated within low noise material for further improvement of silence
Rubber vibration damper.
Hermetic scroll type compressors, equipped with the crankcase heater and thermal protection
High efficiency and low pressure drop stainless steel AISI 316 plate exchangers (at the domestic hot water side). It is positioned next after the compressor and it ensures the domestic hot water production. The unit has full or partial recovery system, with the constant optimization of efficiency through logic advanced adjusting controller
High efficiency and low pressure drop stainless steel AISI 316 plate exchangers (plant side) meet the supply of both hot or cold water for the facility, regardless of the domestic hot water
High efficiency and low pressure drop stainless steel (AISI 316) source side plate exchanger
Soft starter for 230V/1/50Hz units (ms)
Phase sequence control relay for three phase models
The water circuit comes complete with:

- Circulator for the 0011+0061 models and centrifugal for the 0071+0121 models, plant side
- Circulator for the 0011+0091 models and centrifugal pump for the 0101+0121 models, hot water side
- Modulating valve to reduce water consumption (source side).
- Safety valve
- Expansion tank
- Manual filling assembly
- Drain valve on both the plant and the source circuits.
- Pressure gauge
- Air vent valve
- Differential pressure switch on source side and system side

Accessory

- Wired room terminal with backlit display, and with temperature and umidity probe
- Extension module for system configuration
- Electric heater of integration for the heating system
- Electric heater for hot water cylinder, of integration and for anti-legionellosis
- Cascade management kit
- Serial card RS485 for ModBus
- Buffer tank 35,100,200 liters
- 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

Controls

NADISYSTEM

Electronic control Nadisystem provides great application flexibility. The remote keyboard kit wired and outdoor air temperature sensors allow dynamic control of delivery temperature water, optimizing comfort in the room and increasing the energy efficiency. The electronic board allows you to manage:

- Wired remote control, backlit display and with remote temperature and humidity probe
- outdoor temperature sensor for water plant side modular set point compensation
- a zone of direct heating for radiator, floor heating or fan coil
- a zone with mix valve for floor heating
- Electrical heating element 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 pump in cascade (with N-CM component)
- several solutions through appropriate configurations of the controller and use of dedicated extension modules (accessorie), up to 5 zone



APPLICATION HYDRONIC TERMINAL

WWR DHW2			0011ms	0025ms	0031ms	0041ms	0025t	0031t
Power supply		V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50	400/3/50
COOLING ONLY (GROSS VALUE)								
Cooling capacity	(1)	kW	5,10	7,70	8,90	11,0	7,70	8,80
Total power input	(1)	kW	1,30	2,00	2,40	2,90	2,00	2,30
EER	(1)	kW/kW	3,92	3,85	3,71	3,79	3,85	3,83
ESEER	(1)	kW/kW						
COOLING ONLY (EN14511 VALUE)								
Cooling capacity	(1)(2)	kW	5,11	7,71	8,93	11,0	7,71	8,83
EER	(1)(2)	kW/kW	3,54	3,59	3,28	3,44	3,59	3,37
ESEER	(1)(2)	kW/kW	-	-	-	-	-	-
HEATING ONLY (GROSS VALUE)								
Total heating capacity	(3)	kW	6,00	9,20	10,6	13,1	9,10	10,5
Total power input	(3)	kW	1,70	2,60	3,10	3,70	2,50	3,00
COP	(3)	kW/kW	3,53	3,54	3,42	3,54	3,64	3,50
HEATING ONLY (EN14511 VALUE)								
Total heating capacity	(2)(3)	kW	5,99	9,19	10,6	13,1	9,09	10,5
COP	(2)(3)	kW/kW	3,25	3,32	3,08	3,24	3,41	3,14
COOLING WITH TOTAL HEAT RECOVERY								
Cooling capacity	(4)	kW	4,39	6,73	7,71	9,67	6,72	7,70
Total power input	(4)	kW	1,68	2,57	3,11	3,64	2,56	3,02
Recovery heat exchanger capacity	(4)	kW	5,97	9,14	10,6	13,1	9,13	10,5
TOTAL RECOVERY ONLY								
Total heating capacity	(3)	kW	6,00	9,20	10,6	13,1	9,10	10,5
Total power input	(3)	kW	1,70	2,60	3,10	3,70	2,50	3,00
ENERGY EFFICIENCY								
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)								
Ambient refrigeration								
Prated,c	(11)	kW	-	-	-	-	-	-
SEER	(11)(12)		-	-	-	-	-	-
Performance ηs	(11)(13)	%	-	-	-	-	-	-
SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)								
PDesign	(5)	kW	7,19	10,9	12,5	15,5	10,8	12,4
SCOP	(5)(14)		4,02	4,12	3,72	3,71	4,23	3,81
Performance ηs	(5)(15)	%	153	157	141	140	161	144
Seasonal efficiency class	(5)		A++	A++	A+	A+	A++	A+
EXCHANGERS								
HEAT EXCHANGER USER SIDE IN REFRIGERATION								
Water flow	(1)	l/s	0,24	0,37	0,43	0,53	0,37	0,42
Available unit's head	(1)	kPa	62,4	65,9	96,5	93,9	65,9	96,9
HEAT EXCHANGER USER SIDE IN HEATING								
Water flow	(3)	l/s	0,29	0,44	0,51	0,63	0,44	0,51
Available unit's head	(3)	kPa	58,7	58,9	87,7	84,3	59,4	88,2
HEAT EXCHANGER SOURCE SIDE IN REFRIGERATION								
Water flow	(1)	l/s	0,30	0,46	0,54	0,66	0,46	0,53
Pressure drop	(1)	kPa	10,4	19,1	25,8	27,1	19,1	24,9
HEAT EXCHANGER SOURCE SIDE IN HEATING								
Water flow	(3)	l/s	0,35	0,54	0,61	0,76	0,54	0,61
Pressure drop	(3)	kPa	13,8	26,0	33,8	36,3	25,9	33,8
HEAT EXCHANGER RECOVERY USER SIDE IN REFRIGERATION								
Water flow	(4)	l/s	0,29	0,44	0,51	0,63	0,44	0,51
Pressure drop	(4)	kPa	9,36	17,5	23,6	24,8	17,4	23,2
HEAT EXCHANGER RECOVERY USER SIDE IN HEATING								
Water flow	(4)	l/s	0,28	0,46	0,51	0,65	0,43	0,50
Pressure drop	(4)	kPa	8,81	18,7	23,6	25,9	16,7	22,2
REFRIGERANT CIRCUIT								
Compressors nr.		N°	1	1	1	1	1	1
No. Circuits		N°	1	1	1	1	1	1
Refrigerant charge		kg	1,00	1,05	1,05	1,20	1,05	1,05
NOISE LEVEL								
Sound power level in cooling	(6)(7)	dB(A)	52	53	53	58	53	53
Sound power level in heating	(6)(8)	dB(A)	52	53	53	58	53	53
Sound Pressure	(9)	dB(A)	37	38	38	43	38	38
SIZE AND WEIGHT								
A	(10)	mm	845	845	845	845	845	845
B	(10)	mm	680	680	680	680	680	680
H	(10)	mm	1105	1105	1105	1105	1105	1105
Operating weight	(10)	kg	205	210	215	230	210	215

Notes:

- 1 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger water (in/out) 30°C/35°C.
 - 2 Values in compliance with EN14511-3:2013.
 - 3 Plant (side) heating exchanger water (in/out) 40°C/45°C; Source (side) heat exchanger water (in/out) 10°C/7°C
 - 4 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Plant (auxiliary side) heat exchanger recovery water (in/out) 45°C/50°C.
 - 5 Seasonal space heating energy efficiency class LOW TEMPERATURE in AVERAGE climate conditions [REGULATION (EU) N. 813/2013]
 - 6 Sound power on the basis of measurements made in compliance with ISO 9614.
 - 7 Sound power level in cooling, indoors.
 - 8 Sound power level in heating, indoors.
 - 9 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.
 - 10 Unit in standard configuration/execution, without optional accessories.
 - 11 Seasonal energy efficiency of the cooling environment [REGULATION (EU) N. 2016/2281]
 - 12 Seasonal space heating energy index
 - 13 Seasonal energy efficiency of the space cooling
 - 14 Seasonal performance coefficient
 - 15 Seasonal space heating energy efficiency
- The units highlighted in this publication contain HFC R407C [GWP₁₀₀ 1774] fluorinated greenhouse gases.

APPLICATION HYDRONIC TERMINAL

WWR DHW2			0041t	0061t	0071t	0091t	0101t	0121t
Power supply		V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
COOLING ONLY (GROSS VALUE)								
Cooling capacity	(1)	kW	10,9	16,1	21,7	24,6	28,0	34,8
Total power input	(1)	kW	2,80	4,00	5,40	5,90	7,00	8,90
EER	(1)	kW/kW	3,89	4,03	4,02	4,17	4,00	3,91
ESEER	(1)	kW/kW						
COOLING ONLY (EN14511 VALUE)								
Cooling capacity	(1)(2)	kW	10,9	16,1	21,8	24,7	28,2	35,1
EER	(1)(2)	kW/kW	3,52	3,76	3,63	3,82	3,63	3,63
ESEER	(1)(2)	kW/kW	-	-	-	-	-	-
HEATING ONLY (GROSS VALUE)								
Total heating capacity	(3)	kW	13,0	19,0	25,5	28,7	32,9	40,7
Total power input	(3)	kW	3,50	5,00	6,80	7,40	8,80	11,2
COP	(3)	kW/kW	3,71	3,80	3,75	3,88	3,74	3,63
HEATING ONLY (EN14511 VALUE)								
Total heating capacity	(2)(3)	kW	13,0	19,0	25,4	28,6	32,7	40,5
COP	(2)(3)	kW/kW	3,38	3,55	3,38	3,54	3,39	3,36
COOLING WITH TOTAL HEAT RECOVERY								
Cooling capacity	(4)	kW	9,65	14,2	19,1	21,7	24,6	30,2
Total power input	(4)	kW	3,57	5,00	6,85	7,44	8,83	11,2
Recovery heat exchanger capacity	(4)	kW	13,0	18,9	25,6	28,7	32,9	40,7
TOTAL RECOVERY ONLY								
Total heating capacity	(3)	kW	13,0	19,0	25,5	28,7	32,9	40,7
Total power input	(3)	kW	3,50	5,00	6,80	7,40	8,80	11,2
ENERGY EFFICIENCY								
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)								
Ambient refrigeration								
Prated,c	(11)	kW	-	-	-	-	-	-
SEER	(11)(12)		-	-	-	-	-	-
Performance ηs	(11)(13)	%	-	-	-	-	-	-
SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)								
PDesign	(5)	kW	15,2	22,6	30,3	34,0	38,9	48,7
SCOP	(5)(14)		4,05	4,31	4,05	4,19	4,04	4,07
Performance ηs	(5)(15)	%	154	164	154	159	154	155
Seasonal efficiency class	(5)		A++	A++	A++	A++	A++	A++
EXCHANGERS								
HEAT EXCHANGER USER SIDE IN REFRIGERATION								
Water flow	(1)	l/s	0,52	0,77	1,04	1,18	1,34	1,66
Available unit's head	(1)	kPa	94,3	87,6	149	143	180	169
HEAT EXCHANGER USER SIDE IN HEATING								
Water flow	(3)	l/s	0,63	0,92	1,23	1,38	1,59	1,97
Available unit's head	(3)	kPa	84,8	76,2	124	119	161	145
HEAT EXCHANGER SOURCE SIDE IN REFRIGERATION								
Water flow	(1)	l/s	0,65	0,96	1,29	1,45	1,66	2,08
Pressure drop	(1)	kPa	26,3	28,6	41,3	33,9	44,1	45,6
HEAT EXCHANGER SOURCE SIDE IN HEATING								
Water flow	(3)	l/s	0,77	1,14	1,52	1,73	1,96	2,41
Pressure drop	(3)	kPa	37,1	40,6	57,6	48,2	61,3	61,2
HEAT EXCHANGER RECOVERY USER SIDE IN REFRIGERATION								
Water flow	(4)	l/s	0,63	0,91	1,24	1,39	1,59	1,96
Pressure drop	(4)	kPa	24,4	26,1	37,9	31,0	40,2	40,7
HEAT EXCHANGER RECOVERY USER SIDE IN HEATING								
Water flow	(4)	l/s	0,62	0,90	1,20	1,35	1,55	1,91
Pressure drop	(4)	kPa	23,6	25,2	35,9	29,5	38,2	38,4
REFRIGERANT CIRCUIT								
Compressors nr.		N°	1	1	1	1	1	1
No. Circuits		N°	1	1	1	1	1	1
Refrigerant charge		kg	1,20	1,80	2,00	2,20	2,60	3,00
NOISE LEVEL								
Sound power level in cooling	(6)(7)	dB(A)	58	59	66	66	70	70
Sound power level in heating	(6)(8)	dB(A)	58	59	66	66	70	70
Sound Pressure	(9)	dB(A)	43	44	51	51	55	55
SIZE AND WEIGHT								
A	(10)	mm	845	845	845	845	845	845
B	(10)	mm	680	680	680	680	680	680
H	(10)	mm	1105	1105	1105	1105	1105	1105
Operating weight	(10)	kg	230	245	270	280	290	315

Notes:

- 1 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger water (in/out) 30°C/35°C.
 - 2 Values in compliance with EN14511-3:2013.
 - 3 Plant (side) heating exchanger water (in/out) 40°C/45°C; Source (side) heat exchanger water (in/out) 10°C/7°C
 - 4 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Plant (auxiliary side) heat exchanger recovery water (in/out) 45°C/50°C.
 - 5 Seasonal space heating energy efficiency class LOW TEMPERATURE in AVERAGE climate conditions [REGULATION (EU) N. 813/2013]
 - 6 Sound power on the basis of measurements made in compliance with ISO 9614.
 - 7 Sound power level in cooling, indoors.
 - 8 Sound power level in heating, indoors.
 - 9 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.
 - 10 Unit in standard configuration/execution, without optional accessories.
 - 11 Seasonal energy efficiency of the cooling environment [REGULATION (EU) N. 2016/2281]
 - 12 Seasonal space heating energy index
 - 13 Seasonal energy efficiency of the space cooling
 - 14 Seasonal performance coefficient
 - 15 Seasonal space heating energy efficiency
- The units highlighted in this publication contain HFC R407C [GWP₁₀₀ 1774] fluorinated greenhouse gases.

APPLICATION FLOOR HEATING

WWR DHW2			0011ms	0025ms	0031ms	0041ms	0025t	0031t
Power supply		V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50	400/3/50
COOLING ONLY (GROSS VALUE)								
Cooling capacity	(1)	kW	7,26	11,0	12,6	15,4	11,0	12,5
Total power input	(1)	kW	1,29	1,96	2,37	2,89	1,96	2,27
EER	(1)	kW/kW	5,63	5,61	5,32	5,33	5,61	5,51
ESEER	(1)	kW/kW						
COOLING ONLY (EN14511 VALUE)								
Cooling capacity	(1)(2)	kW	7,27	11,0	12,6	15,4	11,0	12,5
EER	(1)(2)	kW/kW	5,03	5,11	4,61	4,72	5,11	4,75
ESEER	(1)(2)	kW/kW	-	-	-	-	-	-
HEATING ONLY (GROSS VALUE)								
Total heating capacity	(3)	kW	6,35	9,64	11,1	13,7	9,50	11,0
Total power input	(3)	kW	1,33	2,03	2,43	2,91	1,94	2,35
COP	(3)	kW/kW	4,77	4,75	4,57	4,71	4,90	4,68
HEATING ONLY (EN14511 VALUE)								
Total heating capacity	(2)(3)	kW	6,34	9,63	11,1	13,7	9,49	11,0
COP	(2)(3)	kW/kW	4,26	4,34	3,96	4,16	4,46	4,04
COOLING WITH TOTAL HEAT RECOVERY								
Cooling capacity	(4)	kW	6,42	9,77	11,0	13,8	9,70	11,1
Total power input	(4)	kW	1,68	2,51	3,05	3,66	2,51	2,97
Recovery heat exchanger capacity	(4)	kW	8,00	12,1	13,9	17,2	12,1	13,9
TOTAL RECOVERY ONLY								
Total heating capacity	(3)	kW	6,35	9,64	11,1	13,7	9,50	11,0
Total power input	(3)	kW	1,33	2,03	2,43	2,91	1,94	2,35
ENERGY EFFICIENCY								
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)								
Ambient refrigeration								
Prated,c	(11)	kW	-	-	-	-	-	-
SEER	(11)(12)		-	-	-	-	-	-
Performance ηs	(11)(13)	%	-	-	-	-	-	-
SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)								
PDesign	(5)	kW	7,19	10,9	12,5	15,5	10,8	12,4
SCOP	(5)(14)		4,02	4,12	3,72	3,71	4,23	3,81
Performance ηs	(5)(15)	%	153	157	141	140	161	144
Seasonal efficiency class	(5)		A++	A++	A+	A+	A++	A+
EXCHANGERS								
HEAT EXCHANGER USER SIDE IN REFRIGERATION								
Water flow	(1)	l/s	0,35	0,53	0,60	0,74	0,53	0,60
Available unit's head	(1)	kPa	53,2	50,2	77,1	73,1	50,1	77,6
HEAT EXCHANGER USER SIDE IN HEATING								
Water flow	(3)	l/s	0,31	0,46	0,53	0,66	0,46	0,53
Available unit's head	(3)	kPa	57,3	56,9	85,4	81,7	57,6	86,1
HEAT EXCHANGER SOURCE SIDE IN REFRIGERATION								
Water flow	(1)	l/s	0,41	0,62	0,71	0,87	0,62	0,70
Pressure drop	(1)	kPa	18,7	34,0	45,4	47,0	34,1	44,3
HEAT EXCHANGER SOURCE SIDE IN HEATING								
Water flow	(3)	l/s	0,41	0,62	0,70	0,87	0,61	0,70
Pressure drop	(3)	kPa	18,6	34,0	44,1	47,1	33,5	43,7
HEAT EXCHANGER RECOVERY USER SIDE IN REFRIGERATION								
Water flow	(4)	l/s	0,39	0,59	0,67	0,83	0,58	0,67
Pressure drop	(4)	kPa	16,8	30,8	40,5	42,9	30,4	40,1
HEAT EXCHANGER RECOVERY USER SIDE IN HEATING								
Water flow	(4)	l/s	0,28	0,46	0,51	0,65	0,43	0,50
Pressure drop	(4)	kPa	8,81	18,7	23,6	25,9	16,7	22,2
REFRIGERANT CIRCUIT								
Compressors nr.		N°	1	1	1	1	1	1
No. Circuits		N°	1	1	1	1	1	1
Refrigerant charge		kg	1,00	1,05	1,05	1,20	1,05	1,05
NOISE LEVEL								
Sound power level in cooling	(6)(7)	dB(A)	52	53	53	58	53	53
Sound power level in heating	(6)(8)	dB(A)	52	53	53	58	53	53
Sound Pressure	(9)	dB(A)	37	38	38	43	38	38
SIZE AND WEIGHT								
A	(10)	mm	845	845	845	845	845	845
B	(10)	mm	680	680	680	680	680	680
H	(10)	mm	1105	1105	1105	1105	1105	1105
Operating weight	(10)	kg	205	210	215	230	210	215

Notes:

- 1 Plant (side) cooling exchanger water (in/out) 23°C/18°C; Source (side) heat exchanger water (in/out) 30°C/35°C.
 - 2 Values in compliance with EN14511-3:2013.
 - 3 Plant (side) heating exchanger water (in/out) 30°C/35°C; Source (side) heat exchanger water (in/out) 10°C/7°C
 - 4 Plant (side) cooling exchanger water (in/out) 23°C/18°C; Plant (auxiliary side) heat exchanger recovery water (in/out) 45°C/50°C.
 - 5 Seasonal space heating energy efficiency class LOW TEMPERATURE in AVERAGE climate conditions [REGULATION (EU) N. 813/2013]
 - 6 Sound power on the basis of measurements made in compliance with ISO 9614.
 - 7 Sound power level in cooling, indoors.
 - 8 Sound power level in heating, indoors.
 - 9 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.
 - 10 Unit in standard configuration/execution, without optional accessories.
 - 11 Seasonal energy efficiency of the cooling environment [REGULATION (EU) N. 2016/2281]
 - 12 Seasonal space heating energy index
 - 13 Seasonal energy efficiency of the space cooling
 - 14 Seasonal performance coefficient
 - 15 Seasonal space heating energy efficiency
- The units highlighted in this publication contain HFC R407C [GWP₁₀₀ 1774] fluorinated greenhouse gases.

APPLICATION FLOOR HEATING

WWR DHW2			0041t	0061t	0071t	0091t	0101t	0121t
Power supply		V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
COOLING ONLY (GROSS VALUE)								
Cooling capacity	(1)	kW	15,4	22,5	30,2	34,4	39,0	49,8
Total power input	(1)	kW	2,82	4,10	5,47	6,11	7,28	9,24
EER	(1)	kW/kW	5,46	5,49	5,52	5,63	5,36	5,39
ESEER	(1)	kW/kW						
COOLING ONLY (EN14511 VALUE)								
Cooling capacity	(1)(2)	kW	15,4	22,5	30,3	34,5	39,2	50,0
EER	(1)(2)	kW/kW	4,83	5,00	4,82	4,99	4,76	4,85
ESEER	(1)(2)	kW/kW	-	-	-	-	-	-
HEATING ONLY (GROSS VALUE)								
Total heating capacity	(3)	kW	13,5	19,9	26,8	30,1	34,5	43,1
Total power input	(3)	kW	2,76	3,97	5,37	5,93	6,99	8,93
COP	(3)	kW/kW	4,89	5,01	4,99	5,08	4,94	4,83
HEATING ONLY (EN14511 VALUE)								
Total heating capacity	(2)(3)	kW	13,5	19,9	26,7	30,0	34,3	42,9
COP	(2)(3)	kW/kW	4,30	4,54	4,33	4,48	4,32	4,32
COOLING WITH TOTAL HEAT RECOVERY								
Cooling capacity	(4)	kW	13,8	20,0	27,2	30,8	34,9	44,1
Total power input	(4)	kW	3,62	5,10	6,88	7,60	9,12	11,5
Recovery heat exchanger capacity	(4)	kW	17,2	24,8	33,7	38,0	43,5	54,9
TOTAL RECOVERY ONLY								
Total heating capacity	(3)	kW	13,5	19,9	26,8	30,1	34,5	43,1
Total power input	(3)	kW	2,76	3,97	5,37	5,93	6,99	8,93
ENERGY EFFICIENCY								
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)								
Ambient refrigeration								
Prated,c	(11)	kW	-	-	-	-	-	-
SEER	(11)(12)		-	-	-	-	-	-
Performance ηs	(11)(13)	%	-	-	-	-	-	-
SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)								
PDesign	(5)	kW	15,2	22,6	30,3	34,0	38,9	48,7
SCOP	(5)(14)		4,05	4,31	4,05	4,19	4,04	4,07
Performance ηs	(5)(15)	%	154	164	154	159	154	155
Seasonal efficiency class	(5)		A++	A++	A++	A++	A++	A++
EXCHANGERS								
HEAT EXCHANGER USER SIDE IN REFRIGERATION								
Water flow	(1)	l/s	0,74	1,08	1,45	1,65	1,87	2,39
Available unit's head	(1)	kPa	72,9	61,7	92,4	83,3	134	107
HEAT EXCHANGER USER SIDE IN HEATING								
Water flow	(3)	l/s	0,65	0,96	1,29	1,45	1,66	2,08
Available unit's head	(3)	kPa	82,5	72,9	116	110	154	136
HEAT EXCHANGER SOURCE SIDE IN REFRIGERATION								
Water flow	(1)	l/s	0,87	1,27	1,70	1,93	2,20	2,81
Pressure drop	(1)	kPa	46,9	50,3	71,7	60,1	77,4	83,6
HEAT EXCHANGER SOURCE SIDE IN HEATING								
Water flow	(3)	l/s	0,87	1,29	1,73	1,95	2,23	2,77
Pressure drop	(3)	kPa	46,9	51,8	74,5	61,5	78,9	81,0
HEAT EXCHANGER RECOVERY USER SIDE IN REFRIGERATION								
Water flow	(4)	l/s	0,83	1,20	1,63	1,83	2,10	2,65
Pressure drop	(4)	kPa	42,9	44,8	65,8	54,1	70,3	74,2
HEAT EXCHANGER RECOVERY USER SIDE IN HEATING								
Water flow	(4)	l/s	0,62	0,90	1,20	1,35	1,55	1,91
Pressure drop	(4)	kPa	23,6	25,2	35,9	29,5	38,2	38,4
REFRIGERANT CIRCUIT								
Compressors nr.		N°	1	1	1	1	1	1
No. Circuits		N°	1	1	1	1	1	1
Refrigerant charge		kg	1,20	1,80	2,00	2,20	2,60	3,00
NOISE LEVEL								
Sound power level in cooling	(6)(7)	dB(A)	58	59	66	66	70	70
Sound power level in heating	(6)(8)	dB(A)	58	59	66	66	70	70
Sound Pressure	(9)	dB(A)	43	44	51	51	55	55
SIZE AND WEIGHT								
A	(10)	mm	845	845	845	845	845	845
B	(10)	mm	680	680	680	680	680	680
H	(10)	mm	1105	1105	1105	1105	1105	1105
Operating weight	(10)	kg	230	245	270	280	290	315

Notes:

- 1 Plant (side) cooling exchanger water (in/out) 23°C/18°C; Source (side) heat exchanger water (in/out) 30°C/35°C.
 - 2 Values in compliance with EN14511-3:2013.
 - 3 Plant (side) heating exchanger water (in/out) 30°C/35°C; Source (side) heat exchanger water (in/out) 10°C/7°C
 - 4 Plant (side) cooling exchanger water (in/out) 23°C/18°C; Plant (auxiliary side) heat exchanger recovery water (in/out) 45°C/50°C.
 - 5 Seasonal space heating energy efficiency class LOW TEMPERATURE in AVERAGE climate conditions [REGULATION (EU) N. 813/2013]
 - 6 Sound power on the basis of measurements made in compliance with ISO 9614.
 - 7 Sound power level in cooling, indoors.
 - 8 Sound power level in heating, indoors.
 - 9 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.
 - 10 Unit in standard configuration/execution, without optional accessories.
 - 11 Seasonal energy efficiency of the cooling environment [REGULATION (EU) N. 2016/2281]
 - 12 Seasonal space heating energy index
 - 13 Seasonal energy efficiency of the space cooling
 - 14 Seasonal performance coefficient
 - 15 Seasonal space heating energy efficiency
- The units highlighted in this publication contain HFC R407C [GWP₁₀₀ 1774] fluorinated greenhouse gases.

