NRG 0282H-0804H

Reversible air/water heat pump

Cooling capacity 52,5 ÷ 212,0 kW – Heating capacity 56,6 ÷ 214,4 kW

- **High efficiency also at partial loads**
- **Low refrigerant charge**
- **Compact dimensions**

DESCRIPTION

Reversible outdoor heat pumps for the production of chilled/heated water designed to satisfy the needs of residential and commercial buildings, or for industrial applications.
The base, the structure and the panels are made of galvanized steel treated with polyester paint RAL 9003.

VERSIONS

° Standard
A High efficiency
E Silenced high efficiency
L Standard silenced

FEATURES

Operating field

Working at full load up to -15°C outside air temperature in winter, and up to 48 °C in summer. Hot water production up to 60°C (for more details refer to the technical documentation).

Units mono or dual-circuit

The units are mono or dual-circuit, to ensure maximum efficiency both at full load and at partial load.

Refrigerant HFC R32

The environmental impact of the units is reduced considerably owing to the last generation R32 refrigerant.
Combining a reduced refrigerant load with a low global warming potential (GWP), these units boast low equivalent CO_2 values.

■ *The leak detector is supplied as per standard.*

Use refrigerant fluid R32, whose classification according to ISO 817 is A2L (non-toxic, odourless and slightly flammable refrigerant).

New condensing Coils

The whole range uses copper - aluminium condensation coils with reduced diameter rows, allowing a lower quantity of gas to be used compared to traditional coils.

Electronic expansion valve

The possibility to use electronic expansion valve, offers significant benefits, especially when the chiller is working with partial loads, increasing the energy seasonal efficiency of the unit.

Option integrated hydronic kit

An optional, integrated hydronic kit containing the main hydraulic components, to obtain a solution that allows you to save money and to facilitate installation.
It is available in different configurations with storage tank or with fixed or variable pumps also inverter.

■ *VARIABLE FLOW RATE: Correctly adjust the speed of the inverter-controlled pumps according to the load demand of the system, in order to reduce power consumption.*

CONTROL PCO^5

Microprocessor adjustment, with keyboard and LCD display,for easy access on the unit is a menu available in several languages.

— The presence of a programmable timer allows functioning time periods and a possible second set-point to be set.
— The temperature control takes place with the integral proportional logic, based on the water output temperature.
— **Swing HP and LP controls:** available for all models with inverter fan or with DCPX. By continuously modulating the fans, they streamline operation of the unit at any work point both in cooling and heating mode. This results in enhanced energy efficiency of the unit at partial loads.
— **Night mode:** only in the **non-silenced versions with the fan to be, inverter or phase-cut or with the DCPX accessory**, a silenced operation profile can be set, which is useful, for example, at night for greater acoustic comfort, but always ensures performance even at peak load hours.

INTEGRATED SOLUTION

The **"integrated solution" concept has been implemented in the system architecture**, consisting in an integrated and streamlined control of compressors and electronic valve.
This solution allowed a variety of new features to be introduced, such as:

— **Low Superheat Control**: Progressive superheating reduction in conditions of stability. This allows to increase energy performance: both in modulation and in full load conditions;
— **DLT control**: Control of electronic valve at discharge temperature in certain operating conditions. This is demonstrated in an enhanced reliability of the control and a considerable expansion of the machine's operating range, especially in heating mode.

ACCESSORIES

AER485P1: RS-485 interface for supervising systems with MODBUS protocol. 1 accessory is provided for each unit control board.
AERBACP: Ethernet communication interface for Bacnet/IP, Modbus TCP/IP, SNMP protocols. 1 accessory is provided for each unit control board.
AERLINK: Aerlink is a WiFi gateway with an RS485 serial port that allows a wide range of Aermec products (heat pumps/chillers/system controllers) equipped with this interface to connect easily and securely to a Wi-Fi network. It works both as an access point (AP access point) and as a client (WiFi Station), it can be connected to a single generator or system centraliser, allowing anyone to easily integrate them into any network. Thanks to the AerApp and AerPlants apps, which can be used on Android and iOS platforms, the remote management of the air conditioning systems developed by Aermec becomes intuitive and simple.
AERNET: The device allows the control, the management and the remote monitoring of a Chiller with a PC, smartphone or tablet using Cloud connection. AERNET works as Master while every unit connected is configured as Slave (max. 6 control boards). Also, with a simple click is possible to save a log file with all the connected unit datas in the personal terminal for post analysis.
MULTICHILLER-EVO: Control, switch-on and switch-off system of the single chillers where multiple units are installed in parallel (max. no. 9), always ensuring constant flow rate to the evaporators.
PGD1: Allows you to control the unit at a distance.
SGD: Electronic expansion that enables connecting to the photovoltaic system and heat pumps to accumulate heat in the DHW tank or in the heating system during the photovoltaic production phase and release it at times when heating demand is highest.
PR4: Remote panel with LCD display and touch keyboard that allows carrying out the basic controls, the programming of time ranges and the signalling of the alarms of a single unit.

The accessory PR4 should only be combined with the RS485 communication interface when the serial port is occupied by another device.

DCPX: Device for condensation temperature control, with continuous speed modulation of fans by using a pressure transducer.
GP: Anti-intrusion grid.
VT: Anti-vibration supports.

FACTORY FITTED ACCESSORIES

DRE: Electronic device for peak current reduction.
RIF: Power factor correction. Connected in parallel to the motor allowing about 10% reduction of input current.
T6: Double safety valve with exchange cock, both on the high and low pressure branches.

ACCESSORIES COMPATIBILITY

Model	Ver	0282	0302	0332	0352	0502	0552	0554	0602	0604	0652	0654	0682	0702	0704	0752	0754	0802	0804
AER485P1	°,A					•	•	•	•	•	•	•	•	•	•	•	•	•	•
	E,L	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
AERBACP	°,A					•	•	•	•	•	•	•	•	•	•	•	•	•	•
	E,L	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
AERLINK	°,A					•	•	•	•	•	•	•	•	•	•	•	•	•	•
	E,L	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
AERNET	°,A					•	•	•	•	•	•	•	•	•	•	•	•	•	•
	E,L	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MULTICHILLER-EVO	°,A					•	•	•	•	•	•	•	•	•	•	•	•	•	•
	E,L	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
PGD1	°,A					•	•	•	•	•	•	•	•	•	•	•	•	•	•
	E,L	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
SGD	E,L	•	•	•															

Remote panel

Model	Ver	0282	0302	0332	0352	0502	0552	0554	0602	0604	0652	0654	0682	0702	0704	0752	0754	0802	0804
PR4	°,A					•	•	•	•	•	•	•	•	•	•	•	•	•	•
	E,L	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

The accessory PR4 should only be combined with the RS485 communication interface when the serial port is occupied by another device.

Antivibration

Ver	0282	0302	0332	0352	0502	0552	0554	0602	0604	0652	0654	0682	0702	0704	0752	0754	0802	0804
Integrated hydronic kit: 00																		
°	-	-	-	-	VT11	VT11	VT11	VT11	VT11	VT11	VT11	VT22	VT22	VT22	VT22	VT22	VT22	VT22
A	-	-	-	-	VT11	VT11	VT11	VT11	VT11	VT11	VT22	VT22	VT22	VT22	VT22	VT22	VT22	VT22
E	VT17	VT13	VT13	VT13	VT11	VT11	VT11	VT11	VT11	VT11	VT22	VT22	VT22	VT22	VT22	VT22	VT22	VT22
L	VT17	VT17	VT13	VT13	VT11	VT11	VT11	VT11	VT11	VT11	VT11	VT22	VT22	VT22	VT22	VT22	VT22	VT22
Integrated hydronic kit: 01, 02, 03, 04, 05, 06, 07, 08, K1, K2, K3, K4, W1, W2, W3, W4																		
°	-	-	-	-	VT11	VT11	VT11	VT11	VT11	VT11	VT11	VT22	VT22	VT22	VT22	VT22	VT22	VT22
A	-	-	-	-	VT11	VT11	VT11	VT11	VT11	VT11	VT22	VT22	VT22	VT22	VT22	VT22	VT22	VT22
E	VT13	VT13	VT13	VT13	VT11	VT11	VT11	VT11	VT11	VT11	VT22	VT22	VT22	VT22	VT22	VT22	VT22	VT22
L	VT13	VT13	VT13	VT13	VT11	VT11	VT11	VT11	VT11	VT11	VT11	VT22	VT22	VT22	VT22	VT22	VT22	VT22
Integrated hydronic kit: I1, I2, I3, I4, P1, P2, P3, P4																		
°	-	-	-	-	VT11	VT11	VT11	VT11	VT11	VT11	VT11	VT22	VT22	VT22	VT22	VT22	VT22	VT22
A	-	-	-	-	VT11	VT11	VT11	VT11	VT11	VT11	VT22	VT22	VT22	VT22	VT22	VT22	VT22	VT22
E	VT17	VT13	VT13	VT13	VT11	VT11	VT11	VT11	VT11	VT11	VT22	VT22	VT22	VT22	VT22	VT22	VT22	VT22
L	VT17	VT17	VT13	VT13	VT11	VT11	VT11	VT11	VT11	VT11	VT11	VT22	VT22	VT22	VT22	VT22	VT22	VT22

Condensation control temperature

Ver	0282	0302	0332	0352	0502	0552	0554	0602	0604
°, A	-	-	-	-	DCPX146	DCPX146	DCPX146	DCPX146	DCPX146
E, L	DCPX145	DCPX145	DCPX145	DCPX145	As standard	As standard	As standard	As standard	As standard

The accessory cannot be fitted on the configurations indicated with -

Ver	0652	0654	0682	0702	0704	0752	0754	0802	0804
°	DCPX146	DCPX146	DCPX147	DCPX147	DCPX147	DCPX147	DCPX147	DCPX147	DCPX147
A	DCPX146	DCPX147	DCPX147	DCPX147	DCPX147	DCPX147	DCPX147	DCPX147	DCPX147
E, L	As standard	As standard	As standard	As standard	As standard	As standard	As standard	As standard	As standard

Anti-intrusion grid

Ver	0282	0302	0332	0352	0502	0552	0554	0602	0604
°, A	-	-	-	-	GP2 x 2 (1)	GP2 x 2 (1)	GP2 x 2 (1)	GP2 x 2 (1)	GP2 x 2 (1)
E	GP3	GP4	GP4	GP4	GP2 x 2 (1)	GP2 x 2 (1)	GP2 x 2 (1)	GP2 x 2 (1)	GP2 x 2 (1)
L	GP3	GP3	GP4	GP4	GP2 x 2 (1)	GP2 x 2 (1)	GP2 x 2 (1)	GP2 x 2 (1)	GP2 x 2 (1)

(1) x _ indicates the quantity to buy
The accessory cannot be fitted on the configurations indicated with -

Ver	0652	0654	0682	0702	0704	0752	0754	0802	0804
°, L	GP2 x 2 (1)	GP2 x 2 (1)	GP2 x 3 (1)	GP2 x 3 (1)	GP2 x 3 (1)	GP2 x 3 (1)	GP2 x 3 (1)	GP2 x 3 (1)	GP2 x 3 (1)
A, E	GP2 x 2 (1)	GP2 x 3 (1)	GP2 x 3 (1)	GP2 x 3 (1)	GP2 x 3 (1)	GP2 x 3 (1)	GP2 x 3 (1)	GP2 x 3 (1)	GP2 x 3 (1)

(1) x _ indicates the quantity to buy

Device for peak current reduction

Ver	0282	0302	0332	0352	0502	0552	0554	0602	0604
°, A	-	-	DRENRG332N	-	DRENRG502	DRENRG552	DRENRG554	DRENRG602	DRENRG604
E, L	DRENRG282	DRENRG302	DRENRG332N	DRENRG352	DRENRG502	DRENRG552	DRENRG554	DRENRG602	DRENRG604

The accessory cannot be fitted on the configurations indicated with -
A grey background indicates the accessory must be assembled in the factory

Ver	0652	0654	0682	0702	0704	0752	0754	0802	0804
°, A, E, L	DRENRG652	DRENRG654N	DRENRG682	DRENRG702	DRENRG704	DRENRG752	DRENRG754	DRENRG802	DRENRG804

A grey background indicates the accessory must be assembled in the factory

Power factor correction

Ver	0282	0302	0332	0352	0502	0552	0554	0602	0604
°, A	-	-	RIFNRG332N	-	RIFNRG502	RIFNRG552	RIFNRG554	RIFNRG602	RIFNRG604
E, L	RIFNRG282	RIFNRG302	RIFNRG332N	RIFNRG352	RIFNRG502	RIFNRG552	RIFNRG554	RIFNRG602	RIFNRG604

The accessory cannot be fitted on the configurations indicated with -
A grey background indicates the accessory must be assembled in the factory

Ver	0652	0654	0682	0702	0704	0752	0754	0802	0804
°, A, E, L	RIFNRG652	RIFNRG654N	RIFNRG682	RIFNRG702	RIFNRG704	RIFNRG752	RIFNRG754	RIFNRG802	RIFNRG804

A grey background indicates the accessory must be assembled in the factory

Double safety valves

Ver	0282	0302	0332	0352	0502	0552	0554	0602	0604	0652	0654	0682	0702	0704	0752	0754	0802	0804
°, A, E, L	T6NRG1	T6NRG1	T6NRG1	T6NRG1	T6NRG1	T6NRG1	T6NRG2	T6NRG1	T6NRG2	T6NRG1	T6NRG2	T6NRG1	T6NRG1	T6NRG2	T6NRG1	T6NRG2	T6NRG1	T6NRG2

A grey background indicates the accessory must be assembled in the factory

CONFIGURATOR

Field		Description
1,2,3		**NRG**
4,5,6,7		**Size** 0282, 0302, 0332, 0352, 0502, 0552, 0554, 0602, 0604, 0652, 0654, 0682, 0702, 0704, 0752, 0754, 0802, 0804
8		**Operating field**
	X	Electronic thermostatic expansion valve (1)
	Z	Low temperature electronic thermostatic valve (2)
9		**Model**
	H	Heat pump
10		**Heat recovery**
	D	With desuperheater (3)
	°	Without heat recovery
11		**Version**
	°	Standard
	A	High efficiency
	E	Silenced high efficiency (4)
	L	Standard silenced (4)
12		**Coils**
	R	Copper pipes-copper fins
	S	Copper pipes-Tinned copper fins
	V	Copper pieps-Coated aluminium fins
	°	Copper-aluminium
13		**Fans**
	J	Inverter
	°	Standard
14		**Power supply**
	°	400V ~ 3N 50Hz with magnet circuit breakers
15,16		**Integrated hydronic kit**
	00	Without hydronic kit

Field	Description
	Kit with storage tank and pump/s
01	Storage tank with low head pump
02	Storage tank with low head pump + stand-by pump
03	Storage tank with high head pump
04	Storage tank with high head pump + stand-by pump
	Kit with pump/s and storage tank with holes for heaters
05	Storage tank with holes for heaters and single low head pump (5)
06	Storage tank with holes for heaters and pump low head + stand-by pump (5)
07	Storage tank with holes for heaters and single high head pump (5)
08	Storage tank with holes for heaters and pump high head + stand-by pump (5)
	Double loop
09	Double loop
	Kit with pump/s
P1	Single pump low head
P2	Pump low head + stand-by pump
P3	Single pump high head
P4	Pump high head + stand-by pump
	Kit with inverter pump/s to fixed speed
I1	Single low head pump + fixed speed inverter
I2	Single low head pump with fixed speed inverter + stand-by pump
I3	Single high head pump + fixed speed inverter
I4	Single high head pump with fixed speed inverter + stand-by pump
	Kit with storage tank and inverter pump/s to fixed speed
K1	Single low head pump + storage tank + fixed speed inverter
K2	Storage tank and low head pump with fixed speed inverter + stand-by pump
K3	Single high head pump + storage tank + fixed speed inverter
K4	Storage tank and low head pump with fixed speed inverter + stand-by pump
	Kit with storage tank and variable speed inverter pump/s
W1	Single low head pump + Storage tank + variable speed inverter (6)

Field	Description
W2	Double low head pump + Storage tank + variable speed inverter (6)
W3	Single high head pump + Storage tank + variable speed inverter (6)
W4	Double high head pump + Storage tank + variable speed inverter (6)

(1) Water produced from 4 °C ÷ 20 °C
(2) Water produced from 18 °C to -10 °C. The option is not compatible with hydronic kits W1-W2-W3-W4. Not available with desuperheater.
(3) The desuperheater must be intercepted in heating mode. In cooling mode, a water temperature no lower than 35°C must always be guaranteed on the heat exchanger inlet.
(4) The size 0282-0302-0332-0352 are only available in the silenced versions "HL/HE"
(5) Storage tanks with holes for supplementary heaters (not provided) are sent from the factory with plastic protection caps. Before loading the system, if the installation of one or all resistances is not expected, all plastic caps must be replaced with the special caps, commonly commercially available.
(6) Not available with Low temperature electronic thermostatic valve "Z"

PERFORMANCE SPECIFICATIONS

NRG H°

Size		0282	0302	0332	0352	0502	0552	0554	0602	0604	0652	0654	0682	0702	0704	0752	0754	0802	0804
Cooling performance 12 °C / 7 °C (1)																			
Cooling capacity	kW	-	-	-	-	93,7	103,4	114,4	117,5	127,3	127,8	141,4	156,4	175,2	169,8	196,0	190,4	215,2	209,1
Input power	kW	-	-	-	-	34,7	39,1	37,8	43,0	43,9	48,9	50,8	51,6	59,6	58,0	69,0	66,0	79,1	74,5
Cooling total input current	A	-	-	-	-	62,0	66,0	60,0	73,0	80,0	82,0	91,0	87,0	97,0	109,0	111,0	117,0	126,0	126,0
EER	W/W	-	-	-	-	2,70	2,65	3,03	2,73	2,90	2,61	2,78	3,03	2,94	2,93	2,84	2,89	2,72	2,81
Water flow rate system side	l/h	-	-	-	-	16141	17808	19683	20225	21912	22017	24335	26922	30168	29239	33727	32773	37044	35991
Pressure drop system side	kPa	-	-	-	-	31	38	20	34	24	40	25	48	60	36	60	40	72	49
Heating performance 40 °C / 45 °C (2)																			
Heating capacity	kW	-	-	-	-	99,6	108,8	118,2	125,6	132,1	137,6	146,9	162,6	183,1	176,7	203,0	195,8	222,4	214,4
Input power	kW	-	-	-	-	31,5	34,4	35,9	38,0	40,7	42,2	45,2	50,3	57,4	54,5	62,7	59,0	69,8	64,1
Heating total input current	A	-	-	-	-	59,0	62,0	59,0	68,0	79,0	75,0	88,0	87,0	96,0	109,0	105,0	112,0	117,0	116,0
COP	W/W	-	-	-	-	3,16	3,17	3,30	3,31	3,24	3,26	3,25	3,23	3,19	3,24	3,24	3,32	3,19	3,35
Water flow rate system side	l/h	-	-	-	-	17265	18855	20522	21779	22925	23855	25482	28203	31767	30659	35221	33974	38576	37206
Pressure drop system side	kPa	-	-	-	-	36	43	22	40	27	48	28	54	67	41	67	45	80	53

(1) Data EN 14511:2022; Heat exchanger water (services side) 12°C / 7°C; outside air 35°C
(2) Data EN 14511:2022; System side water heat exchanger 40 °C / 45 °C; Outside air 7 °C d.b. / 6 °C w.b.

NRG HL

Size		0282	0302	0332	0352	0502	0552	0554	0602	0604	0652	0654	0682	0702	0704	0752	0754	0802	0804
Cooling performance 12 °C / 7 °C (1)																			
Cooling capacity	kW	52,5	60,5	69,3	80,7	91,0	100,0	110,8	113,2	122,9	122,4	135,2	152,6	170,4	165,0	189,1	184,2	205,8	202,2
Input power	kW	20,2	23,0	25,4	30,1	35,2	39,6	38,4	44,3	45,0	50,9	53,2	52,2	61,2	59,1	71,5	67,9	82,7	77,3
Cooling total input current	A	33,0	42,0	47,0	57,0	60,0	65,0	59,0	72,0	79,0	82,0	92,0	84,0	95,0	107,0	111,0	116,0	128,0	126,0
EER	W/W	2,60	2,63	2,73	2,68	2,59	2,53	2,88	2,55	2,73	2,40	2,54	2,92	2,79	2,79	2,64	2,71	2,49	2,62
Water flow rate system side	l/h	9048	10428	11932	13896	15671	17215	19059	19485	21152	21086	23262	26277	29331	28417	32540	31692	35428	34793
Pressure drop system side	kPa	30	41	31	43	30	36	19	32	23	37	23	46	56	34	56	37	66	45
Heating performance 40 °C / 45 °C (2)																			
Heating capacity	kW	56,6	65,4	74,6	87,5	99,6	108,8	118,2	125,6	132,1	137,6	146,9	162,6	183,1	176,7	203,0	195,8	222,4	214,4
Input power	kW	17,4	20,2	22,3	26,5	31,5	34,4	35,9	38,0	40,7	42,2	45,2	50,3	57,4	54,5	62,7	59,0	69,8	64,1
Heating total input current	A	29,0	40,0	44,0	54,0	59,0	62,0	59,0	68,0	79,0	75,0	88,0	87,0	96,0	109,0	105,0	112,0	117,0	116,0
COP	W/W	3,26	3,24	3,35	3,30	3,16	3,17	3,30	3,31	3,24	3,26	3,25	3,23	3,19	3,24	3,24	3,32	3,19	3,35
Water flow rate system side	l/h	9816	11328	12928	15158	17265	18855	20522	21779	22925	23855	25482	28203	31767	30659	35221	33974	38576	37206
Pressure drop system side	kPa	37	48	38	51	36	43	22	40	27	48	28	54	67	41	67	45	80	53

(1) Data EN 14511:2022; Heat exchanger water (services side) 12°C / 7°C; outside air 35°C
(2) Data EN 14511:2022; System side water heat exchanger 40 °C / 45 °C; Outside air 7 °C d.b. / 6 °C w.b.

NRG HA

Size		0282	0302	0332	0352	0502	0552	0554	0602	0604	0652	0654	0682	0702	0704	0752	0754	0802	0804
Cooling performance 12 °C / 7 °C (1)																			
Cooling capacity	kW	-	-	-	-	96,4	106,6	115,8	122,0	128,8	133,3	146,8	160,1	178,0	170,7	199,5	191,8	219,8	212,0
Input power	kW	-	-	-	-	32,6	36,6	37,2	39,7	43,3	45,5	48,6	49,8	57,4	56,7	66,3	64,4	75,9	72,5
Cooling total input current	A	-	-	-	-	60,0	64,0	60,0	70,0	80,0	78,0	90,0	85,0	94,0	108,0	108,0	116,0	123,0	124,0
EER	W/W	-	-	-	-	2,95	2,91	3,11	3,07	2,97	2,93	3,02	3,21	3,10	3,01	3,01	2,98	2,90	2,93
Water flow rate system side	l/h	-	-	-	-	16583	18342	19918	21002	22155	22958	25273	27557	30631	29392	34336	33010	37829	36487
Pressure drop system side	kPa	-	-	-	-	23	28	17	29	21	35	28	40	49	33	54	39	66	48
Heating performance 40 °C / 45 °C (2)																			
Heating capacity	kW	-	-	-	-	103,0	113,7	119,7	126,6	133,9	138,9	155,5	162,3	181,1	175,3	200,6	195,0	219,9	213,7
Input power	kW	-	-	-	-	31,0	33,8	35,6	37,4	40,4	41,5	47,0	49,1	55,3	53,3	60,9	57,8	67,5	62,7
Heating total input current	A	-	-	-	-	59,0	61,0	58,0	68,0	79,0	75,0	91,0	86,0	93,0	107,0	103,0	110,0	114,0	114,0
COP	W/W	-	-	-	-	3,32	3,36	3,36	3,39	3,31	3,35	3,31	3,30	3,27	3,29	3,29	3,37	3,26	3,41
Water flow rate system side	l/h	-	-	-	-	17866	19723	20784	21964	23234	24088	26976	28153	31410	30409	34811	33832	38148	37079
Pressure drop system side	kPa	-	-	-	-	27	32	19	32	23	39	31	42	52	35	57	41	68	49

(1) Data EN 14511:2022; Heat exchanger water (services side) 12°C / 7°C; outside air 35°C
(2) Data EN 14511:2022; System side water heat exchanger 40 °C / 45 °C; Outside air 7 °C d.b. / 6 °C w.b.

NRG HE

Size		0282	0302	0332	0352	0502	0552	0554	0602	0604	0652	0654	0682	0702	0704	0752	0754	0802	0804
Cooling performance 12 °C / 7 °C (1)																			
Cooling capacity	kW	55,1	61,1	71,0	82,7	93,8	103,3	111,9	118,0	124,0	128,3	144,2	154,7	173,0	166,6	192,6	186,2	210,5	202,8
Input power	kW	19,3	22,3	24,4	28,6	33,0	37,4	38,2	40,8	44,9	46,7	48,9	50,9	58,9	57,3	68,8	65,7	79,3	75,4
Cooling total input current	A	32,0	42,0	47,0	56,0	58,0	62,0	60,0	69,0	80,0	78,0	87,0	82,0	93,0	106,0	109,0	114,0	125,0	123,0
EER	W/W	2,85	2,75	2,91	2,89	2,84	2,76	2,93	2,89	2,76	2,75	2,95	3,04	2,94	2,91	2,80	2,83	2,65	2,69
Water flow rate system side	l/h	9484	10522	12223	14246	16136	17773	19250	20314	21332	22097	24814	26647	29783	28680	33149	32040	36227	34901
Pressure drop system side	kPa	20	24	24	33	22	26	16	27	19	32	26	38	47	31	51	36	60	44
Heating performance 40 °C / 45 °C (2)																			
Heating capacity	kW	58,8	65,4	76,6	88,8	103,0	113,7	119,7	126,6	133,9	138,9	155,5	162,3	181,1	175,3	200,6	195,0	219,9	213,7
Input power	kW	17,2	19,7	22,5	26,5	31,0	33,8	35,6	37,4	40,4	41,5	47,0	49,1	55,3	53,3	60,9	57,8	67,5	62,7
Heating total input current	A	30,0	39,0	45,0	54,0	59,0	61,0	58,0	68,0	79,0	75,0	91,0	86,0	93,0	107,0	103,0	110,0	114,0	114,0
COP	W/W	3,42	3,32	3,40	3,35	3,32	3,36	3,36	3,39	3,31	3,35	3,31	3,30	3,27	3,29	3,29	3,37	3,26	3,41
Water flow rate system side	l/h	10207	11335	13280	15399	17866	19723	20784	21964	23234	24088	26976	28153	31410	30409	34811	33832	38148	37079
Pressure drop system side	kPa	23	28	29	39	27	32	19	32	23	39	31	42	52	35	57	41	68	49

(1) Data EN 14511:2022; Heat exchanger water (services side) 12°C / 7°C; outside air 35°C
(2) Data EN 14511:2022; System side water heat exchanger 40 °C / 45 °C; Outside air 7 °C d.b. / 6 °C w.b.

ENERGY DATA - STANDARD/INVERTER FANS

Size			0282	0302	0332	0352	0502	0552	0554	0602	0604	0652	0654	0682	0702	0704	0752	0754	0802	0804
Fans: °																				
Cooling capacity with low leaving water temp (UE n° 2016/2281)																				
SEER	°	W/W	-	-	-	-	3,92	3,84	3,97	4,00	3,83	3,94	3,88	4,17	4,06	3,87	3,95	3,92	3,82	3,80
	A	W/W	-	-	-	-	4,21	4,14	4,07	4,34	4,01	4,24	4,10	4,40	4,32	4,14	4,31	4,17	4,12	4,04
	E	W/W	4,40	4,32	4,37	4,33	4,26	4,13	4,03	4,29	3,97	4,10	4,06	4,36	4,21	4,10	4,20	4,13	4,07	4,00
	L	W/W	4,14	4,03	4,22	4,07	3,98	3,89	3,94	4,01	3,80	3,89	3,84	4,12	4,00	3,84	3,91	3,88	3,77	3,77
ηsc	°	%	-	-	-	-	154%	151%	156%	157%	150%	155%	152%	164%	160%	152%	155%	154%	150%	149%
	A	%	-	-	-	-	165%	163%	160%	171%	157%	167%	161%	173%	170%	162%	169%	164%	162%	159%
	E	%	173%	170%	172%	170%	167%	162%	158%	169%	156%	161%	160%	172%	166%	161%	165%	162%	160%	157%
	L	%	163%	158%	166%	160%	156%	153%	155%	157%	149%	153%	151%	162%	157%	150%	153%	152%	148%	148%

Size			0282	0302	0332	0352	0502	0552	0554	0602	0604	0652	0654	0682	0702	0704	0752	0754	0802	0804
Fans: J																				
Cooling capacity with low leaving water temp (UE n° 2016/2281)																				
SEER	°	W/W	-	-	-	-	4,04	3,96	4,10	4,12	3,96	4,06	4,00	4,30	4,19	3,99	4,07	4,04	3,94	3,91
	A	W/W	-	-	-	-	4,33	4,26	4,20	4,47	4,13	4,37	4,23	4,54	4,45	4,26	4,43	4,29	4,25	4,17
	E	W/W	4,45	4,36	4,41	4,37	4,38	4,25	4,16	4,42	4,09	4,22	4,19	4,49	4,34	4,22	4,33	4,25	4,20	4,13
	L	W/W	4,18	4,07	4,26	4,10	4,10	4,01	4,06	4,12	3,92	4,01	3,96	4,25	4,13	3,95	4,03	4,00	3,89	3,88
ηsc	°	%	-	-	-	-	159%	155%	161%	162%	155%	159%	157%	169%	164%	157%	160%	158%	155%	154%
	A	%	-	-	-	-	170%	168%	165%	176%	162%	172%	166%	178%	175%	167%	174%	169%	167%	164%
	E	%	175%	171%	174%	172%	172%	167%	163%	174%	161%	166%	164%	177%	171%	166%	170%	167%	165%	162%
	L	%	164%	160%	167%	161%	161%	157%	159%	162%	154%	157%	155%	167%	162%	155%	158%	157%	153%	152%

ENERGY DATA - STANDARD/INVERTER FANS (35°C)

Size			0282	0302	0332	0352	0502	0552	0554	0602	0604	0652	0654	0682	0702	0704	0752	0754	0802	0804
Fans: J																				
Performance in average ambient conditions (average) - 35 °C (1)																				
Pdesignh	°	kW	-	-	-	-	88	97	103	109	115	119	128	141	159	154	178	171	193	188
	A	kW	-	-	-	-	91	101	105	110	117	121	136	141	158	153	176	170	191	187
	E	kW	52	58	68	78	91	101	105	110	117	121	136	141	158	153	176	170	191	187
	L	kW	50	58	66	77	88	97	103	109	115	119	128	141	159	154	178	171	193	188
SCOP	°	W/W	-	-	-	-	3,61	3,66	3,53	3,66	3,49	3,71	3,49	3,57	3,68	3,42	3,65	3,52	3,52	3,56
	A	W/W	-	-	-	-	3,70	3,80	3,60	3,80	3,59	3,81	3,59	3,70	3,76	3,53	3,77	3,63	3,67	3,64
	E	W/W	4,10	4,04	4,06	3,99	3,70	3,80	3,60	3,80	3,59	3,81	3,59	3,70	3,76	3,53	3,77	3,63	3,67	3,64
	L	W/W	3,95	3,90	3,91	3,91	3,61	3,66	3,53	3,66	3,49	3,71	3,49	3,57	3,68	3,42	3,65	3,52	3,52	3,56
ηsh	°	%	-	-	-	-	141%	143%	138%	143%	137%	146%	136%	140%	144%	134%	143%	138%	138%	139%
	A	%	-	-	-	-	145%	149%	141%	149%	141%	149%	141%	145%	147%	138%	148%	142%	144%	143%
	E	%	161%	159%	159%	157%	145%	149%	141%	149%	141%	149%	141%	145%	147%	138%	148%	142%	144%	143%
	L	%	155%	153%	153%	153%	141%	143%	138%	143%	137%	146%	136%	140%	144%	134%	143%	138%	138%	139%
Efficiency energy class	°,A		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	E,L		A+	A+	A+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(1) Efficiencies for low temperature applications (35 °C)

Size			0282	0302	0332	0352	0502	0552	0554	0602	0604	0652	0654	0682	0702	0704	0752	0754	0802	0804
Fans: °																				
Performance in average ambient conditions (average) - 35 °C (1)																				
Pdesignh	°	kW	-	-	-	-	88	97	103	109	115	119	128	141	159	154	178	171	193	188
	A	kW	-	-	-	-	91	101	105	110	117	121	136	141	158	153	176	170	191	187
	E	kW	52	58	68	78	91	101	105	110	117	121	136	141	158	153	176	170	191	187
	L	kW	50	58	66	77	88	97	103	109	115	119	128	141	159	154	178	171	193	188
SCOP	°	W/W	-	-	-	-	3,50	3,55	3,36	3,55	3,33	3,61	3,32	3,47	3,57	3,23	3,54	3,32	3,41	3,36
	A	W/W	-	-	-	-	3,59	3,69	3,43	3,69	3,42	3,70	3,38	3,59	3,65	3,33	3,66	3,42	3,56	3,44
	E	W/W	4,06	4,00	4,02	3,91	3,59	3,69	3,43	3,69	3,42	3,70	3,38	3,59	3,65	3,33	3,66	3,42	3,56	3,44
	L	W/W	3,91	3,86	3,87	3,83	3,50	3,55	3,36	3,55	3,33	3,61	3,32	3,47	3,57	3,23	3,54	3,32	3,41	3,36
ηsh	°	%	-	-	-	-	135%	139%	131%	139%	130%	141%	130%	135%	139%	126%	139%	130%	134%	131%
	A	%	-	-	-	-	141%	145%	134%	145%	134%	145%	132%	141%	143%	130%	143%	134%	140%	134%
	E	%	159%	157%	158%	154%	141%	145%	134%	145%	134%	145%	132%	141%	143%	130%	143%	134%	140%	134%
	L	%	153%	151%	152%	150%	135%	139%	131%	139%	130%	141%	130%	135%	139%	126%	139%	130%	134%	131%
Efficiency energy class	°,A		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	E,L		A+	A+	A+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(1) Efficiencies for low temperature applications (35 °C)

ENERGY DATA - STANDARD/INVERTER FANS (55°C)

Size			0282	0302	0332	0352	0502	0552	0602	0652	0682	0702	0752	0802
Fans: J														
Performance in average ambient conditions (average) - 55 °C (1)														
Pdesignh	°	kW	-	-	-	-	88	98	109	120	139	155	178	-
	A	kW	-	-	-	-	91	103	110	122	139	154	175	187
	E	kW	52	58	68	78	91	103	110	122	139	154	175	187
	L	kW	50	57	65	77	88	98	109	120	139	155	178	-
SCOP	°	W/W	-	-	-	-	2,92	3,02	3,02	3,09	2,93	2,93	2,93	-
	A	W/W	-	-	-	-	2,99	3,13	3,12	3,13	3,02	2,98	3,01	2,92
	E	W/W	3,16	3,12	3,14	3,12	2,99	3,13	3,12	3,13	3,02	2,98	3,01	2,92
	L	W/W	3,08	3,06	3,06	3,07	2,92	3,02	3,02	3,09	2,93	2,93	2,93	-
ηsh	°	%	-	-	-	-	114%	118%	118%	120%	114%	114%	114%	-
	A	%	-	-	-	-	117%	122%	122%	122%	118%	116%	117%	114%
	E	%	123%	122%	123%	122%	117%	122%	122%	122%	118%	116%	117%	114%
	L	%	120%	119%	119%	120%	114%	118%	118%	120%	114%	114%	114%	-
Efficiency energy class	°,A		-	-	-	-	-	-	-	-	-	-	-	-
	E,L		A++	A++	A++	-	-	-	-	-	-	-	-	-

(1) Efficiencies for average temperature applications (55 °C)

Size			0282	0302	0332	0352	0502	0552	0602	0652	0682	0702	0752	0802
Fans: °														
Performance in average ambient conditions (average) - 55 °C (1)														
Pdesignh	°	kW	-	-	-	-	88	98	109	120	139	155	178	-
	A	kW	-	-	-	-	91	103	110	122	139	154	175	187
	E	kW	52	58	68	78	91	103	110	122	139	154	175	187
	L	kW	50	57	65	77	88	98	109	120	139	155	178	-
SCOP	°	W/W	-	-	-	-	2,84	2,94	2,93	3,00	2,84	2,84	2,84	-
	A	W/W	-	-	-	-	2,91	3,05	3,03	3,04	2,93	2,89	2,92	2,84
	E	W/W	3,13	3,10	3,11	3,06	2,91	3,05	3,03	3,04	2,93	2,89	2,92	2,84
	L	W/W	3,05	3,03	3,03	3,01	2,84	2,94	2,93	3,00	2,84	2,84	2,84	-
ηsh	°	%	-	-	-	-	111%	115%	114%	117%	111%	111%	111%	-
	A	%	-	-	-	-	113%	119%	118%	119%	114%	113%	114%	110%
	E	%	122%	121%	122%	119%	113%	119%	118%	119%	114%	113%	114%	110%
	L	%	119%	118%	118%	117%	111%	115%	114%	117%	111%	111%	111%	-
Efficiency energy class	°,A		-	-	-	-	-	-	-	-	-	-	-	-
	E,L		A++	A++	A++	-	-	-	-	-	-	-	-	-

(1) Efficiencies for average temperature applications (55 °C)

ELECTRIC DATA

Size			0282	0302	0332	0352	0502	0552	0554	0602	0604	0652	0654	0682	0702	0704	0752	0754	0802	0804
Electric data																				
Maximum current (FLA)	°	A	-	-	-	-	73,5	79,1	80,5	88,3	97,2	97,4	113,5	111,5	122,6	132,7	139,4	144,0	156,1	155,3
	A	A	-	-	-	-	73,5	79,1	80,5	88,3	97,2	97,4	116,4	111,5	122,6	132,7	139,4	144,0	156,1	155,3
	E	A	41,6	49,9	59,5	67,6	73,5	79,1	80,5	88,3	97,2	97,4	116,4	111,5	122,6	132,7	139,4	144,0	156,1	155,3
	L	A	40,2	49,9	58,1	67,6	73,5	79,1	80,5	88,3	97,2	97,4	113,5	111,5	122,6	132,7	139,4	144,0	156,1	155,3
Peak current (LRA)	°	A	-	-	-	-	276,8	282,5	200,8	329,5	221,3	338,6	268,5	396,5	407,7	287,7	601,7	347,4	618,4	358,7
	A	A	-	-	-	-	276,8	282,5	200,8	329,5	221,3	338,6	271,4	396,5	407,7	287,7	601,7	347,4	618,4	358,7
	E	A	161,9	174,0	214,4	222,6	276,8	282,5	200,8	329,5	221,3	338,6	271,4	396,5	407,7	287,7	601,7	347,4	618,4	358,7
	L	A	160,5	174,0	213,0	222,6	276,8	282,5	200,8	329,5	221,3	338,6	268,5	396,5	407,7	287,7	601,7	347,4	618,4	358,7

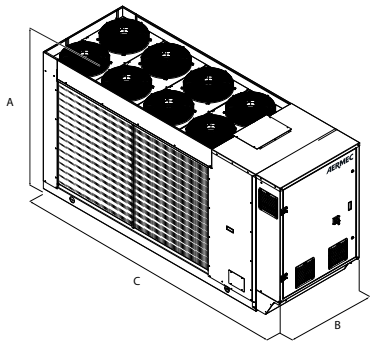
Data calculated without hydronic kit and accessories.

GENERAL TECHNICAL DATA

Size			0282	0302	0332	0352	0502	0552	0554	0602	0604	0652	0654	0682	0702	0704	0752	0754	0802	0804
Compressor																				
Type	°,A,E,L	type	Scroll																	
Compressor regulation	°,A,E,L	Type	On-Off																	
Number	°,A,E,L	no.	2	2	2	2	2	2	4	2	4	2	4	2	2	4	2	4	2	4
Circuits	°,A,E,L	no.	1	1	1	1	1	1	2	1	2	1	2	1	1	2	1	2	1	2
Refrigerant	°,A,E,L	type	R32																	
Refrigerant load circuit 1 (1)	°	kg	-	-	-	-	9,5	9,5	6,8	12,2	7,1	12,2	7,1	17,7	17,7	8,1	17,7	9,0	17,7	9,0
	A	kg	-	-	-	-	12,8	13,3	7,4	13,3	7,7	13,3	8,7	18,2	18,2	8,3	18,4	10,0	18,4	9,5
	E	kg	6,8	8,3	11,2	11,1	12,8	13,3	7,4	13,3	7,7	13,3	8,7	18,2	18,2	8,3	18,4	10,0	18,4	9,5
	L	kg	6,5	6,8	7,4	7,4	9,5	9,5	6,8	12,2	7,1	12,2	7,1	17,7	17,7	8,1	17,7	9,0	17,7	9,0
Refrigerant load circuit 2 (1)	°,L	kg	-	-	-	-	-	-	6,8	-	7,1	-	7,1	-	-	8,1	-	9,0	-	9,0
	A,E	kg	-	-	-	-	-	-	7,4	-	7,7	-	8,7	-	-	8,3	-	10,0	-	9,5
Potential global heating	°,A,E,L	GWP	675kgCO_2eq																	
System side heat exchanger																				
Type	°,A,E,L	type	Brazed plate																	
Number	°,A,E,L	no.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Fan																				
Type	°,A,E,L	type	Axial																	
Number	°	no.	-	-	-	-	2	2	2	2	2	2	2	3	3	3	3	3	3	3
	A	no.	-	-	-	-	2	2	2	2	2	2	3	3	3	3	3	3	3	3
	E	no.	6	6	8	8	2	2	2	2	2	2	3	3	3	3	3	3	3	3
	L	no.	4	6	6	8	2	2	2	2	2	2	2	3	3	3	3	3	3	3
Air flow rate	°	m^3/h	-	-	-	-	42831	42819	40170	41067	40170	41067	38299	62024	62022	60681	62022	60681	62022	60681
	A	m^3/h	-	-	-	-	41097	41097	38299	39483	38299	39483	60681	59734	59721	57995	59721	57995	59721	57995
	E	m^3/h	21224	21224	28177	25805	31035	31035	28870	29848	28870	29848	45978	45211	45211	43804	45211	43804	45211	43804
	L	m^3/h	15552	21229	22716	28186	32592	32592	30388	31000	30388	31000	28869	47029	47029	45980	47029	45980	47029	45980
Sound data calculated in cooling mode (2)																				
Sound power level	°	dB(A)	-	-	-	-	87,2	87,5	86,5	87,7	87,1	87,9	87,1	89,4	89,5	88,8	90,0	90,1	90,1	90,0
	A	dB(A)	-	-	-	-	87,2	87,5	86,5	87,7	87,1	87,9	88,8	89,4	89,5	88,8	90,0	90,1	90,1	90,0
	E	dB(A)	73,6	74,1	74,9	75,1	82,8	83,5	76,6	83,9	77,3	84,3	78,4	85,5	85,6	78,6	86,7	84,6	87,3	86,2
	L	dB(A)	73,0	74,1	74,5	75,1	82,8	83,5	76,6	83,9	77,3	84,3	77,7	85,5	85,6	78,6	86,7	84,6	87,3	86,2
Sound data calculated in heating mode (2)																				
Sound power level	°	dB(A)	-	-	-	-	87,2	87,5	86,5	87,7	87,1	87,9	87,1	89,4	89,5	88,8	90,0	90,1	90,1	90,0
	A	dB(A)	-	-	-	-	87,2	87,5	86,5	87,7	87,1	87,9	88,8	89,4	89,5	88,8	90,0	90,1	90,1	90,0
	E	dB(A)	73,6	74,1	74,9	75,1	87,2	87,5	86,5	87,7	87,1	87,9	88,8	89,4	89,5	88,8	90,0	90,1	90,1	90,0
	L	dB(A)	73,0	74,1	74,5	75,1	87,2	87,5	86,5	87,7	87,1	87,9	87,1	89,4	89,5	88,8	90,0	90,1	90,1	90,0

(1) The load indicated in the table is an estimated and preliminary value. The final value of the refrigerant load is indicated on the unit's technical label. For further information contact the office.
(2) Sound power calculated on the basis of measurements made in accordance with UNI EN ISO 9614-2, as required for Eurovent certification. Sound pressure (cold functioning) measured in free field, 10m away from the unit external surface (in compliance with UNI EN ISO 3744).

DIMENSIONS



Size			0282	0302	0332	0352	0502	0552	0554	0602	0604	0652	0654	0682	0702	0704	0752	0754	0802	0804
Dimensions and weights																				
A	°	mm	-	-	-	-	1907	1907	1907	1907	1907	1907	1907	1900	1900	1900	1900	1900	1900	1900
	A	mm	-	-	-	-	1907	1907	1907	1907	1907	1907	1900	1900	1900	1900	1900	1900	1900	1900
	E	mm	1652	1658	1658	1658	1907	1907	1907	1907	1907	1907	1900	1900	1900	1900	1900	1900	1900	1900
	L	mm	1652	1652	1658	1658	1907	1907	1907	1907	1907	1907	1907	1900	1900	1900	1900	1900	1900	1900
B	°,A	mm	-	-	-	-	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100
	E,L	mm	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100
C	°	mm	-	-	-	-	3567	3567	3567	3567	3567	3567	3567	4368	4368	4368	4368	4368	4368	4368
	A	mm	-	-	-	-	3567	3567	3567	3567	3567	3567	4368	4368	4368	4368	4368	4368	4368	4368
	E	mm	2818	3317	3317	3317	3567	3567	3567	3567	3567	3567	4368	4368	4368	4368	4368	4368	4368	4368
	L	mm	2818	2818	3317	3317	3567	3567	3567	3567	3567	3567	3567	4368	4368	4368	4368	4368	4368	4368

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