NEMO HP: Water / water reversible heat pumps
for indoor installation, equipped with scroll compressor and plate heat exchangers
Cooling Capacity: **5,5 ÷ 25,0 kW**
Heating Capacity: **6,4 ÷ 29,3 kW**

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

nemo hp

rcgroupairconditioning

R410A PLATE

MAIN FEATURES
- Reversible heat pump.
- 13 models available, for a wide selection opportunity..
- Average step of 2,5kW.
- EER up to 4,44.
- COP up to 4,18.
- ESEER up to 4,80.
- Scroll compressor.
- R410A Refrigerant charge.
- Single refrigerant circuit.
- Plate type heat exchangers.
- 3-speed circulation pump.
- Suitable for indoor installation.

MAIN BENEFITS
- Availability of partial heat recovery system.
- Easily of maintenance.
- Reduced noise emission
- Eurovent Certification.

COMPLETENESS OF EQUIPMENT AND OPTIONAL
The units are standardly equipped with 3-speed water pump.
On request is possible to install the system for the domestic hot water production and a chilled water tank.

INDOOR INSTALLATION
The machines are designed for indoor installation.

WORKING LIMITS IN COOLING MODE
Evaporator chilled water outlet temperature: -10÷20°C
Condenser outlet water temperature: 20÷60°C

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1 9 6 3 2 0 1 3
fifty cool years

MAIN COMPONENTS

FRAMEWORK

- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002
- Insulation of the internal framework.

COMPRESSOR

- Orbiting spiral (SCROLL) hermetic compressors with spiral profile optimized for R410A refrigerant.
- ON / OFF capacity control (0 / 100%).
- Crankcase heater.
- Electric motor thermal protection via internal winding temperature sensors.
- Rubber supports.
- Electric motor:
  - Version M: single-phase electric motor with direct on line starting.
  - Version T: 2-pole 3-phase electric motor with direct on line starting.
- Phase sequence electronic relay.

PLANT SIDE HEAT EXCHANGER

- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Differential water pressure switch for water flow control.
- 3-speed circulation pump.

EXHAUSTION SIDE HEAT EXCHANGER

- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel.
- Anticondensate insulation made of polyurethane.
- Temperature sensor on water outlet.
- 0÷10V proportional signal to manage the condensing/evaporating control system of the 2-way motorized valve.

REFRIGERANT CIRCUIT

- Reversing valve for refrigeration cycle inversion.
- Electronic expansion valve. The valve allows high performance and system efficiency thanks to a timely and accurate response to changes in temperature and pressure.
  The expansion valve is equipped with energy reserve to allow the closure of the valve in the event of lack of power supply.
- Service valves on liquid line and gas discharge.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure.
- High pressure safety switch with manual reset.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R410A refrigerant charge.

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for indoor installation complete with:

- Main switch.
- Magnetothermic switch or fuses for compressor.
- Contactor for compressor.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Summer / Winter working mode selector.
- Power supply:
  - M: 230/3/50
  - T: 400/3/50+N.

CONTROL SYSTEM

- Microprocessor control. The system includes:
  - Display for the visualization of the alarm codes, set values and temperature values.
  - Dynamic set point.
  - Compressor running hour meter.
  - Contact for general alarm remotization.
  - “Low Temperature” set for operation with chilled water production up to -10°C.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS

- The heat exchangers’ threaded hydraulic connections correspond to ISO 228/1 – G M

OPTIONAL ACCESSORIES

NEMO HP MODEL	M 06 P1 J3	M 08 P1 J3	M 10 P1 J3	M 13 P1 J3	T 06 P1 J3	T 08 P1 J3	T 10 P1 J3	T 13 P1 J3	T 15 P1 J3	T 17 P1 J3	T 20 P1 J3	T 25 P1 J3	T 30 P1 J3
1002 - Condensing control with 2 way valve	●	●	●	●	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●	●	●
610 - Noise deading cup on compressor	●	●	●	●	●	●	●	●	●	●	●	●	●
764 - Water tank	●	●	●	●	●	●	●	●	●	●	●	●	●
117 - Low water temperature set	●	●	●	●	●	●	●	●	●	●	●	●	●
920 - Remote control kit	●	●	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

TECHNICAL DATA NEMO HP

	NEMO HP		M 06 P1	M 08 P1	M 10 P1	M 13 P1	T 06 P1	T 08 P1	T 10 P1	T 13 P1
	SIZE		J3	J3	J3	J3	J3	J3	J3	J3
STANDARD	**Summer working mode - Cooling capacity (1)**	**kW**	**5,6**	**7,6**	**10,5**	**13,0**	**5,3**	**6,8**	**9,5**	**12,3**
	Unit power input	kW	1,6	2,0	2,6	3,3	1,6	2,0	2,6	3,3
	Plant exchanger water flow rate	m³/h	1,0	1,3	1,8	2,2	0,9	1,2	1,6	2,1
	Plant exchanger pressure drop	kPa	37	33	38	42	33	30	34	38
	Exhaust exchanger water flow rate	m³/h	1,2	1,6	2,1	2,8	1,1	1,5	2,0	2,6
	Exhaust exchanger pressure drop	kPa	54	48	49	59	45	45	47	53
	Winter working mode - Heating capacity (2)	**kW**	**7,6**	**9,5**	**13,1**	**17,2**	**7,2**	**9,2**	**12,7**	**16,5**
	Unit power input	kW	2,0	2,5	3,3	4,1	2,0	2,5	3,2	4,1
	Max unit operating current	A	14,8	19,1	23,0	33,0	6,7	8,5	10,0	12,3
	Plant exchanger water flow rate	m³/h	1,0	1,3	1,8	2,2	0,9	1,2	1,6	2,1
	Plant exchanger pressure drop	kPa	29	30	34	33	26	23	27	29
	Exhaust exchanger water flow rate	m³/h	1,0	1,2	1,7	2,3	0,9	1,2	1,7	2,2
	Exhaust exchanger pressure drop	kPa	31	28	32	35	27	25	28	31
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	1	1	1	1	1	1	1	1
	Capacity steps	n.	1	1	1	1	1	1	1	1
	Pumping group									
	3-speed water pump	kW	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	0,7	0,9	1,1	1,4	0,7	0,9	1,1	1,4
	Gas circuits	n.	1	1	1	1	1	1	1	1
	Power supply	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	14,8	19,1	23,0	33,0	6,7	8,5	10,0	12,3
	Unit starting current (LRA)	A	62,0	69,0	100,0	117,5	30,0	40,0	45,0	53,5
	EER (1)	kW/kW	3,47	3,77	4,05	3,93	3,36	3,40	3,68	3,77
	COP (2)	kW/kW	3,80	3,85	4,02	4,16	3,67	3,70	3,95	4,04
	ESEER		3,71	4,06	4,33	4,21	3,64	3,71	3,99	4,09
	Sound power level [Lw] (3)	dB(A)	56,2	56,2	58,2	58,2	56,2	56,2	58,2	58,2
	Average sound pressure level [Lpm] (4)	dB(A)	42,0	42,0	44,0	44,0	42,0	42,0	44,0	44,0
	Net weight	kg	90,8	93,5	103,6	108,4	90,8	93,5	103,6	108,4
	Hydraulic connections									
	Evaporator / Condenser IN/OUT - ISO228/1-G M	Ø	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
OPT	Partial heat recovery (5)									
	Heating capacity	**kW**	**0,9**	**1,1**	**1,6**	**2,1**	**0,9**	**1,1**	**1,5**	**2,0**
	Water tank - volume	l	40	40	40	40	40	40	40	40

	NEMO HP		T 15 P1	T 17 P1	T 20 P1	T 25 P1	T 30 P1
	SIZE		J3	J3	J3	J3	J3
STANDARD	**Summer working mode - Cooling capacity (1)**	**kW**	**13,9**	**16,6**	**18,6**	**23,4**	**30,0**
	Unit power input	kW	3,8	4,4	4,9	6,1	6,8
	Plant exchanger water flow rate	m³/h	2,4	2,9	3,2	4,0	5,2
	Plant exchanger pressure drop	kPa	35	40	37	40	41
	Exhaust exchanger water flow rate	m³/h	3,0	3,5	3,9	5,0	5,8
	Exhaust exchanger pressure drop	kPa	51	56	50	53	40
	Winter working mode - Heating capacity (2)	**kW**	**18,5**	**21,8**	**24,7**	**30,8**	**37,4**
	Unit power input	kW	4,6	5,5	6,1	7,5	8,9
	Max unit operating current	A	13,8	17,0	17,0	23,0	24,0
	Plant exchanger water flow rate	m³/h	2,4	2,9	3,2	4,0	5,2
	Plant exchanger pressure drop	kPa	27	32	29	30	34
	Exhaust exchanger water flow rate	m³/h	2,4	2,9	3,2	4,1	5,0
	Exhaust exchanger pressure drop	kPa	29	33	31	34	35
	Compressors		scroll	scroll	scroll	scroll	scroll
	Quantity	n.	1	1	1	1	1
	Capacity steps	n.	1	1	1	1	1
	Pumping group						
	3-speed water pump	kW	0,4	0,4	0,4	0,4	0,4
	Refrigerant		R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	1,5	1,8	1,8	2,5	3,1
	Gas circuits	n.	1	1	1	1	1
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	13,8	17,0	17,0	23,0	24,0
	Unit starting current (LRA)	A	66,0	77,0	103,0	113,0	120,0
	EER (1)	kW/kW	3,65	3,76	3,78	3,83	4,44
	COP (2)	kW/kW	4,03	4,00	4,03	4,12	4,18
	ESEER		3,94	4,02	4,09	4,10	4,80
	Sound power level [Lw] (3)	dB(A)	61,2	65,2	62,2	64,2	64,2
	Average sound pressure level [Lpm] (4)	dB(A)	47,0	51,0	48,0	50,0	50,0
	Net weight	kg	116,6	118,1	120,6	143,8	149,5
	Hydraulic connections						
	Evaporator / Condenser IN/OUT - ISO228/1-G M	Ø	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
OPT	Partial heat recovery (5)						
	Heating capacity	**kW**	**2,2**	**2,6**	**3,0**	**3,7**	**4,7**
	Water tank - volume	l	40	40	40	40	40

1. Referred to chilled water temperature 12/7°C; condenser water temperature 30/35°C according to Eurovent standard.
2. Referred to chilled water temperature 12/7°C; hot water outlet temperature 45°C according to Eurovent standard.
3. Sound power level [Lw] according to ISO EN 9614 - 2
4. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
5. Referred to chilled water temperature 12/7°C; condenser water temperature 30/35°C and recovery hot water temperature 40/45°C.

DIMENSIONS (mm)