

NEMO: Packaged water cooled liquid chillers for indoor installation,
equipped with scroll compressor and plate heat exchangers
Cooling Capacity: 6 ÷ 31 kW



NEMO

rcgroupairconditioning



MAIN FEATURES

- Water cooled liquid chiller.
- 13 models available, for a wide selection opportunity.
- Average step of 2,5kW.
- EER up to 4,42
- ESEER up to 4,75.
- Scroll compressor.
- R410A Refrigerant charge.
- Single refrigerant circuit.
- Plate type heat exchangers.
- Suitable for indoor installation.

MAIN BENEFITS

- High EER and ESEER.
- Availability of partial heat recovery system.
- Small dimensions for an easy installation.
- Reduced noise emission
- Easily of maintenance.
- 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: $-10 \pm 20^{\circ}\text{C}$
Condenser outlet water temperature: $20 \pm 60^{\circ}\text{C}$

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.

EVAPORATOR

- 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.

CONDENSER

- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel.
- 0÷10V proportional signal to manage the condensing control system of the 2-way motorized valve.

REFRIGERANT CIRCUIT

- Thermostatic expansion valve.
- 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.
- 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.

OPTIONAL ACCESSORIES

NEMO 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 - Partial heat recovery	•	•	•	•	•	•	•	•	•	•	•	•	•
610 - Noise deadening cup on compressor	•	•	•	•	•	•	•	•	•	•	•	•	•
764 - Water tank	•	•	•	•	•	•	•	•	•	•	•	•	•
117 - Low water temperature set	•	•	•	•	•	•	•	•	•	•	•	•	•
920 - Remote control kit	•	•	•	•	•	•	•	•	•	•	•	•	•
923 - RC-Com MBUS/JBUS Serial board	•	•	•	•	•	•	•	•	•	•	•	•	•
962 - Kit modem GSM	•	•	•	•	•	•	•	•	•	•	•	•	•
957 - Plantwatch without modem	•	•	•	•	•	•	•	•	•	•	•	•	•
930 - Remote graphic terminal kit	•	•	•	•	•	•	•	•	•	•	•	•	•

• available accessory; - not available accessory

TECHNICAL DATA NEMO

NEMO SIZE		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	
STANDARD	Cooling capacity (1)	kW	5,7	7,4	11,1	14,1	5,7	7,3	10,4	13,3
	Unit power input	kW	1,6	2,0	2,7	3,4	1,6	2,0	2,6	3,3
	Evaporator water flow rate	m³/h	1,0	1,3	1,9	2,4	1,0	1,3	1,8	2,3
	Evaporator pressure drop	kPa	35	33	37	40	35	32	36	40
	Condenser water flow rate	m³/h	1,2	1,6	2,3	3,0	1,2	1,6	2,2	2,8
	Condenser pressure drop	kPa	54	49	53	58	53	48	53	57
	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	15,6	20,1	24,2	34,7	7,1	8,9	10,5	12,9
	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	3,62	3,65	4,11	4,18	3,61	3,70	3,99	4,06
	ESEER		3,68	3,77	4,22	4,30	3,85	3,99	4,28	4,35
	Sound power level [Lw] (2)	dB(A)	56,2	56,2	58,2	58,2	56,2	56,2	58,2	58,2
	Average sound pressure level [Lpm] (3)	dB(A)	42,0	42,0	44,0	44,0	42,0	42,0	44,0	44,0
	Net weight	kg	88,7	91,4	101,5	106,3	88,7	91,4	101,5	106,3
	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 (4)									
	Heating capacity	kW	0,9	1,2	1,7	2,2	0,9	1,1	1,6	2,1
	Water tank - volume	l	40	40	40	40	40	40	40	40

NEMO SIZE		T 15 P1 J3	T 17 P1 J3	T 20 P1 J3	T 25 P1 J3	T 30 P1 J3	
STANDARD	Cooling capacity (1)	kW	15,1	17,4	20,1	24,8	30,5
	Unit power input	kW	3,8	4,4	5,0	6,1	6,9
	Evaporator water flow rate	m³/h	2,6	3,0	3,5	4,3	5,2
	Evaporator pressure drop	kPa	37	43	40	40	44
	Condenser water flow rate	m³/h	3,2	3,7	4,3	5,3	6,4
	Condenser pressure drop	kPa	53	61	55	53	49
	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	14,5	17,9	17,9	24,2	25,2
	Unit starting current (LRA)	A	66,0	77,0	103,0	113,0	120,0
	EER (1)	kW/kW	4,00	3,93	4,06	4,06	4,42
	ESEER		4,26	4,15	4,34	4,33	4,75
	Sound power level [Lw] (2)	dB(A)	61,2	65,2	62,2	64,2	64,2
	Average sound pressure level [Lpm] (3)	dB(A)	47,0	51,0	48,0	50,0	50,0
	Net weight	kg	114,5	116,0	118,5	141,7	147,4
	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"
OPT	Partial heat recovery (4)						
	Heating capacity	kW	2,4	2,7	3,1	3,9	4,8
	Water tank - volume	l	40	40	40	40	40

1. Referred to chilled water temperature 12/7°C – 0% glycol solution; water temperature to the condenser 30/35°C – 0% glycol solution. Fouling factor of the exchangers 0,043 m²K/kW.
2. Sound power level [Lw] according to ISO EN 9614 - 2
3. Average sound pressure level [Lp_m] 1m far according to ISO EN 3744.
4. Referred to chilled water temperature 12/7°C – 0% glycol solution; water temperature to the condenser 30/35°C – 0% glycol solution; water temperature heat recovery 40/45°C – 0% glycol solution. Fouling factor of the exchangers 0,043 m²K/kW.

DIMENSIONS (mm)

