TRIPACK: Multifunction chillers for indoor installation, equipped with scroll compressors and plate heat exchangers
Cooling capacity: **54,2 ÷ 251,7 kW**
Heating Capacity: **63,8 ÷ 292,8 kW**

tripack

rcgroupairconditioning

R410A PLATE

MAIN FEATURES
- Multifunction chiller.
- 7 models available, for a wide selection opportunity..
- Average step of 28kW.
- EER up to
- COP up to
- ESEER up to
- Scroll compressors.
- Single refrigerant circuit.
- R410A refrigerant charge.
- Plate type heat exchanger.
- Electronic expansion valves.
- Suitable for indoor installation.

MAIN BENEFITS
- Units equipped with two scroll compressors on refrigerant circuit to reach a high efficiency.
- Reduces noise emission
- Easily of maintenance.

ELECTRONIC EXPANSION VALVE
The electronic expansion valves are synonymous of an higher energy efficiency and stability of the system.

WORKING LIMITS IN COOLING MODE
Evaporator chilled water outlet temperature: -10÷15°C
Ambient temperature: -12÷18°C

WORKING LIMITS IN HEATING MODE
Condenser hot water outlet temperature: 30÷55°C
Ambient temperature: -10÷35°C

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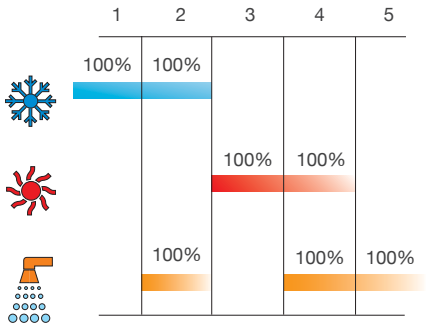
1 9 6 3 2 0 1 3
fifty**cool**years

WORKING LOGIC

TRIPACK

The TRIPACK is a water cooled, heat pump liquid chiller for the production of chilled water, hot water and hot domestic hot water (multifunction). In working condition 2, the production of chilled water and domestic hot water is simultaneous. In working condition n.4, the unit gives priority to the domestic hot water production. Only when this priority is satisfied the system starts automatically to produce hot water for heating.



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

COMPRESSORS

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

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.

EXHAUSTION SIDE HEAT EXCHANGER

- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel.
- Temperature sensor on water outlet.
- 0÷10V proportional signal to manage the 2-way motorized valve for the condensing control (summer working mode) and evaporating control (winter working mode).

TOTAL HEAT RECOVERY 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.

REFRIGERANT CIRCUIT

Components for each 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.
- Sight glass.
- Filter dryer on liquid line.
- Liquid receiver with service valve and safety valve.
- Service valves on liquid line and gas discharge.
- Safety valve on low pressure side.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure.
- High pressure safety switch with manual reset.
- Oil drainage and oil recovery systems.
- 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 with door lock safety.
- Magnetothermic switch or fuses for each compressor.
- Contactors for each load.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Summer / Winter working mode selector.
- Power supply 400/3/50.

CONTROL SYSTEM

- MP.COM microprocessor system with graphic display for control and monitor of operating and alarms status. The system includes:
  - Voltage free contact for remote general alarm.
  - Main components hour-meter.
  - Clock card for alarms date and time displaying and storing.
  - Nonvolatile “Flash” memory for data storage.
  - Menu with protection password.
  - LAN connection.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS

- The heat exchangers’ threaded hydraulic connections are available up to a diameter of 3 “ included, and correspond to ISO 228/1 – G M.
- The pipes’ threaded hydraulic connections are available up to a diameter of 3 “ included, and correspond to ISO 7/1 – R.
- The hydraulic connections with flange (FL) are not supplied with counter flange.
- The hydraulic connections with grooved end are not supplied with flexible joint (optional accessory).

OPTIONAL ACCESSORIES - TRIPACK

TRIPACK SIZE	50 P2 J7	66 P2 J7	86 P2 J7	112 P2 J8	140 P2 J8	180 P2 J8	230 P2 J8
118 - Kit brine A	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●
783 - Heat exchangers antifreezing heater	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●
Plant heat exchangers flexible joint with adapter pipe (solder type)	-	-	●	●	●	●	●
Plant heat exchangers flexible joint with adapter for flange connection	-	-	●	●	●	●	●
Sanitary hot water heat exchangers flexible joint with adapter pipe (solder type)	-	-	●	●	●	●	●
Sanitary hot water heat exchangers flexible joint with adapter for flange connection	-	-	●	●	●	●	●
Exhaustion heat exchangers flexible joint with adapter pipe (solder type)	-	-	●	●	●	●	●
Exhaustion heat exchangers flexible joint with adapter for flange connection	-	-	●	●	●	●	●
606 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●
Line current indication	●	●	●	●	●	●	●
Line tension indication	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●

● available accessory; - not available accessory

TRILOGY ESA TECHNICAL DATA

	TRIPACK SIZE		50 P2 J7	66 P2 J7	86 P2 J7	112 P2 J8	140 P2 J8	180 P2 J8	230 P2 J8
STANDARD	**Only cooling - Cooling capacity (1)**	**kW**	**54,2**	**72,3**	**92,1**	**122,1**	**150,9**	**195,9**	**251,7**
	Unit power input	kW	9,7	12,6	16,8	22,6	28,4	36,0	48,0
	Plant side water flow rate	m³/h	9,3	12,4	15,8	21,0	25,9	33,6	43,2
	Plant side pressure drop	kPa	39,5	45,3	39,2	43,3	46,6	43,6	42,8
	Only heating - Heating capacity (2)	**kW**	**63,8**	**84,0**	**109,5**	**142,4**	**177,8**	**229,6**	**292,8**
	Unit power input	kW	14,0	18,4	23,9	31,4	39,7	50,5	63,4
	Plant side water flow rate	m³/h	11,1	14,6	19,0	27,7	30,9	39,9	50,9
	Plant side pressure drop	kPa	48,3	53,3	46,5	47,2	49,2	39,1	51,0
	Cooling + Heating (3)								
	Cooling capacity	**kW**	**42,1**	**55,1**	**73,3**	**93,9**	**117,1**	**151,7**	**194,9**
	Heating capacity	**kW**	**57,6**	**75,7**	**99,8**	**128,5**	**160,6**	**207,2**	**264,9**
	Plant side water flow rate	m³/h	7,2	9,5	12,6	16,1	20,1	26,1	33,5
	Plant side pressure drop	kPa	**24,6**	**27,1**	**25,4**	**26,3**	**28,7**	**26,7**	**25,7**
	Total reclaim water flow rate	**m³/h**	10,0	13,2	17,4	22,4	28,0	36,1	46,1
	Total reclaim pressure drop	kPa	**40,2**	**43,4**	**38,8**	**38,7**	**40,4**	**32,0**	**41,9**
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2	2
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	12	15	20	25	28	30	35
	Gas circuits	n.	1	1	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	400/3/50	400/3/50
	Max unit operating current (LRA)	A	--	--	--	--	--	--	--
	Unit starting current (LRA)	A	165	177	236	266	325	399	476
	EER (1)	kW/kW	5,59	5,74	5,48	5,40	5,31	5,44	5,24
	COP (2)	kW/kW	4,56	4,57	4,58	4,54	4,48	4,55	4,62
	Sound power level [Lw] (4)	dB(A)	76,9	76,9	76,9	81,0	81,0	81,0	81,0
	Average sound pressure level [LPm] (5)	dB(A)	61,0	61,0	61,0	64,0	64,0	64,0	64,0
	Net weight	kg	720	750	860	1100	1150	1200	1230
	Hydraulic connections								
	Plant / Sanitary hot water/ Exhaustion (ISO 7/1 - R)	Ø	2"	2"	--	--	--	--	--
	Plant / Sanitary hot water/ Exhaustion - OD (6)	Ø mm	--	--	76,1	76,1	76,1	76,1	88,9

1. Referred to chilled water temperature 12/7°C; 35°C ambient temperature.
2. Referred to hot water temperature 40/45°C;ambient air at 7°C with 90%rH
3. Referred to chilled water outlet temperature 7°C; hot water outlet temperature at 45°C.
4. Sound power level [Lw] according to ISO EN 9614 - 2.
5. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
6. Hydraulic connection with grooved end. The flexible joint is an optional accessory.

DIMENSIONS (mm)

	a	b	c
J7	1200	750	1700
J8	1800	1200	1740