



Refrigerant
R290 | GWP=3



Semi-hermetic
piston
compressor



Axial fan



Brazed plate
heat exchanger

Solution

- B - Base
- I - Integrated

Version

- ST - Standard
- LN - Low noise

Equipment

- AS - Standard equipment
- DS - Desuperheater
- HR - Total heat recovery

Cooling Capacity 7,8 - 83,0 kW

Housing	Base and panels made of painted galvanised steel; panels mounted on aluminium profiles to ensure total weathering resistance. Panels are internally lined to reduce the noise level (LN Accessories only).
Compressor	Reciprocating SEMIHERMETIC type, fixed on anti-vibration system and complete with pressure lubrication system; oil crankcase heater, integral electronic protection and inlet plus outlet valves; capacity control head (from model 251), flexible joints on suction and discharge. The compressor is mechanically optimized for use with Hydrocarbons and built in according to Directive ATEX 94/9/EC for the safety requirements: Zone 2, Gas group IIB. Some components are ATEX certified.
Fan	Low speed, axial-flow fans fitted with accident-prevention protective grille; directly coupled motor with built-in thermal cutout and IP 54 protection degree; aerodynamic housing and wing profile blades increase efficiency and decrease noise level.
Air heat exchanger	Finned coil made with copper pipes and aluminium fins offering a high exchange surface area.
Water heat exchanger	Plate-type made of AISI 316 steel complete with water differential pressure switch. Shell covered with closed-cell neoprene anti-condensate material.
Electrical board	Switchboard to standards IEC 204-1/EN60204-1, complete with contactor and protection for compressor and fans. Main isolator and door interlock safety device. The cabinet is externally hung on one side of the unit.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	Filter drier, sight glass and liquid moisture, solenoid valve, shut-off valve on the liquid line, electronic expansion valve, safety pressure high / low switch, oil-pump differential pressure switch (from size 251). Some components are ATEX certified.
Additional safety device	To ensure high-safety-level the unit is equipped with a special gas detector for flammable gases, including two alarm levels and microprocessor control with LED status indicator.
Water circuit	(Integrated): Water pressure gauge, safety valve, centrifugal pump suitable for glycol solutions up to 20%, manual air venting valve, water tank.

ACCESSORIES

- Spring vibration isolation
- Rubber vibration isolation
- Modulating fan speed condensing control
- Part-winding soft start
- Wall mounted remote control panel
- Max and min voltage relay
- Refrigerant gauges (standard)
- Electromechanical flow switch
- Additional stand-by water pump

RKO.E	21 S	31 S	51 S	81 S	121 S	151 S	201 S	251 S	301 S	351 S	401 S
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ST VERSION												
Cooling capacity (1)	kW	7,8	12,1	16,2	22,8	28,6	35,1	39,9	48,5	59,9	70,3	83,0
Saved CO2 equivalent Ton (*)	Ton	2130	4080	4790	6740	8870	9760	9760	14190	19510	20400	21290
Total compressors power input (1)	kW	2,4	4,3	5,2	7,2	9,1	10,9	12,2	15,3	16,9	21,5	26,2
Water flow (1)	m3/h	1,3	2,1	2,8	3,9	4,9	6,0	6,9	8,3	10,3	12,1	14,3
External pressure @ Pn (1)	bar	1,6	1,4	1,2	2,1	1,9	1,7	1,3	1,4	1,2	1,0	1,5
Total air flow	m3/h	3650	5200	6000	8600	11000	15500	22000	22000	31500	31500	29000
Sound pressure (2)	dB(A)	69	69	70	67	67	71	71	71	72	72	72

LN VERSION												
Cooling capacity (1)	kW	7,5	11,7	15,6	22,0	27,6	33,9	38,5	46,8	57,8	67,8	80,1
Saved CO2 equivalent Ton (*)	Ton	2130	4080	4790	6740	8870	9760	9760	14190	19510	20400	21290
Total compressors power input (1)	kW	2,4	4,4	5,3	7,4	9,3	11,2	12,5	15,6	17,2	22,0	26,7
Water flow (1)	m3/h	1,3	2,0	2,7	3,8	4,7	5,8	6,6	8,0	9,9	11,7	13,8
External pressure @ Pn (1)	bar	1,7	1,5	1,3	2,2	2,0	1,8	1,4	1,5	1,3	1,1	1,6
Total air flow	m3/h	3140	4470	5160	7400	9460	13330	18920	18920	27090	27090	24940
Sound pressure (2)	dB(A)	66	66	67	64	64	68	68	68	69	69	69

Compressors type	-	Semihmermetic reciprocating										
Compressors quantity	n°	1	1	1	1	1	1	1	1	1	1	1
Independent gas circuit	n°	1	1	1	1	1	1	1	1	1	1	1

Fans type	-	Axial										
Fans quantity	n°	1	1	1	1	1	1	2	2	3	3	3
Fans power input	kW	0,2	0,27	0,55	0,56	0,86	2,0	1,72	1,72	2,58	2,58	2,58

Power supply	V/ph/Hz + T	400/3/50 + 230/1/50 (for gas detector)										
Maximum absorbed current (with pump)	A	8,2	13,8	16,2	23,9	25,5	35,0	41,0	42,8	51,5	61,3	69,0
Starting current (with pump)	A	37,8	54,0	65,4	90,3	105,9	123,3	141,1	208,9	231,5	246,3	281,0

INTEGRATED SOLUTION												
Pump type	-	Centrifugal										
Pump power input	kW	0,37	0,37	0,37	0,75	0,75	0,75	0,55	0,9	0,9	1,1	1,5
Water tank content	L	30	30	30	60	60	60	160	160	290	290	290

DESUPERHEATER (DS Equipment)												
Heat capacity (3)	kW	2,1	3,2	4,3	6,1	7,6	9,4	10,7	13,0	16,0	18,8	22,2
Water flow	m3/h	0,4	0,6	0,7	1,0	1,3	1,6	1,8	2,2	2,8	3,2	3,8
Pressure drop	kPa	35	38	27	30	33	29	29	31	30	33	29

TOTAL HEAT RECOVERY (HR Equipment)												
Heat capacity (3)	kW	10,4	16,8	22,0	30,9	38,8	47,4	53,6	65,6	79,0	94,5	112,3
Water flow	m3/h	1,8	2,9	3,8	5,3	6,7	8,1	9,2	11,3	13,6	16,3	19,3
Pressure drop	kPa	32	35	26	29	33	29	29	34	31	36	33

DIMENSIONS AND WEIGHT - Base Solution												
Lenght (L)	mm	1230	1380	1380	1680	1680	1680	2330	2330	3030	3030	3030
Depth (P)	mm	650	800	800	990	990	990	990	990	990	990	990
Height (H)	mm	1320	1785	1785	2055	2055	2075	2155	2155	2155	2155	2155
Shipping weight	Kg	190	280	300	520	550	560	830	850	1010	1120	1140

DIMENSIONS AND WEIGHT - Integrated Solution												
Lenght (L)	mm	1230	1380	1380	1680	1680	1680	2330	2330	3030	3030	3030
Depth (P)	mm	650	800	800	990	990	990	990	990	990	990	990
Height (H)	mm	1320	1785	1785	2055	2055	2075	2155	2155	2155	2155	2155
Shipping weight	Kg	200	290	310	540	570	580	870	890	1070	1180	1200

Note:

- (1) Condenser air 35°C - Evaporator water IN/OUT 12/7°C
 - (2) Sound pressure measured at 1 m in open field conditions
 - (3) Water IN/OUT 40/45°C - Evaporator water IN/OUT 12/7°C
 - (*) CO2 equivalent tonnes saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant
- Data relating to the pumps are referred to the "Integrated Solution"
- THE DECLARED COOLING CAPACITY ARE NOT TAKING INTO ACCOUNT THE PUMP MOTOR POWER INPUT (WHERE PROVIDED).