RACA PLUS ENERGY
AIR CONDENSED COMPACT PROCESS CHILLERS

R410A

Conformity UE 2016/2281

TECHNICAL SPECIFICATIONS

Outdoor unit for the production of chilled water with hermetic rotary Scroll compressors, ozone-friendly refrigerant R410A.

Structure
Structure specifically designed for outdoor installation. Frame in hot-galvanised shaped sheet steel with a suitable thickness. All parts polyester-powder painted to assure total weather resistance.

Compressors
Hermetic scroll compressors in tandem layout complete with oil sump heater, electronic overheating protection with centralised manual reset and a two-pole electric motor.

Evaporator
The heat exchangers are insulated with a closed-cell condensation proof lining in neoprene. A thermostatically controlled electric heater prevents ice from forming inside the evaporator when the unit is not working. When the unit is working, it is protected by a differential pressure switch mounted on the water side. The unit can work with antifreeze mixtures at exchanger outlet temperatures as low as -10°C. The hydronic group includes the differential pressure switch.

Electronic expansion valve as standard
The electronic expansion valve brings significant benefits, especially with variable loads and different outside climate conditions. Application of the valve on this unit is a result of specific design decisions regarding the refrigerant circuit configuration and optimisation of operation across a range of different operating conditions. The electronic expansion valve is standard on all high efficiency (CA chiller type)

Condenser
Micro channel aluminium coils with E-Coating protection
This new range of chillers uses aluminium micro-channel condensing coils in all the units, ensuring extremely high efficiency. This means less refrigerant is needed compared to traditional copper/alluminium coils, ensuring the lowest possible ratio between refrigerant volume and cooling capacity delivered, making this product range unique in its reference market, at the same time extending product life due to the E-coating Treatment to a better resistance to corrosion by atmospheric agents and sea areas.

Fan section
Axial electric fans (*), protected to IP 54, with external rotor and plastic coated aluminium blades. Housed in aerodynamic hoods complete with safety grille. 6 - pole electric motor with built in overload protection. Ventilation control system disabling the fan section of inactive circuits.
Fans diameter: 450mm, 800mm, 910mm according to different sizes and versions.
Condensation control of fan rotation speed regulation.
(*) Chiller with centrifugal fan available on request.

Electrical panel_Electronic controller
Electronic Controller W3000 complete with keypad features an easy-to-use interface and a complete LCD display, allowing to consult and intervene on the unit by means of a menu up to three languages (Italian and English as standard, a further language can be chosen within French, Spanish, German, Russian and Swedish)

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CHILLER CONFIGURATION

HYDRONIC VERSION

The hydronic unit incorporates all the main water circuit components.
All sizes are in fact available in the configuration with one or two high/low pressure pumps, as well as with storage tank.

FT	Chiller built only with evaporator _ NO tank, NO pump
FT-1P	Chiller built with evaporator + pump suction from external tank
FT-2P	Chiller built with evaporator + 2 pumps suction from external tank (n° 1 in stand by with automatic change over)
1P	Chiller built with tank and pump inside.
2P	Chiller built tank and 2 pumps inside.

CHILLER RACA PLUS ENERGY	RPE552B-1P-M002-M101	STANDARD

REFRIGERANT SECTION		
Refrigerant	R-410A	Type
NOMINAL CONDITIONS		
Capacity rating	**200,0**	kW
Outlet water temperature	**15,0**	°C
Ambient temperature	**25,0**	°C
Absorption power	47,3	kW
SEPR index (Regulation EU N. 2016/2281)	5,04	SEPR
CUSTOMER CONDITIONS REQUIRED		
Capacity rating	**176,0**	kW
Outlet water temperature	**15**	°C
Ambient temperature	**35**	°C
Absorption power	56,0	kW
SYSTEM DATA		
Sound pressure in 10 mt free field	57	dB(A)
Capacity control steps	2 STEPS	No.
Process fluid temperature range	-10 ÷ +20*	°C ÷ °C
Ambient temperature range	-8 ÷ +46	°C ÷ °C
Cooling circuits	1	No.
Water circuits	1	No.
COMPRESSORS SECTION		
Compressor	Hermetic-scroll	Type
Compressors number	2	No.
CONDENSATOR SECTION		
Airflow In - Out	Horiz/Vert	Direction
Nominal air flow	42120	m3/h
EVAPORATOR SECTION		
Evaporator type	brazed plate	Type
Evaporators number	1	No.
Nominal flow rate of process fluid	34,4	m3/h
Pressure drop	101	kPa
FANS SECTION		
Fans type	Axial	Type
Air flow rate	42120	m3/h
Fan number	2	No.
HYDRAULIC SECTION		
Hydronic system type	1P	Type
Tank capacity	200	l
Number of pumps	1	No.
Pump capacity	34,4	m3/h
Pump pressure	3,00	bar
ELECTRO-ELECTRONIC SECTION		
Control system	Electronic card	Type
Power supply	440-460-480/3/60	V/Ph/Hz
Auxiliary power	230-24Vac	V/Ph/Hz
Total power input	71,2	kW
Total nominal current	//	A
Maximum starting current	//	A
STRUCTURE		
Dimensions AxBxH	3360x1195x1980	mm
Free space - electrical cabinet side	1000	mm
Free space - opposite side of electrical cabinet	1000	mm
Free space - evaporator side	1000	mm
Free space - opposite side of evaporator	1000	mm
Color	7035	RAL
Weight	1350	kg
Fluid delivery to plants	2-1/2"	ø
Fluid return from plants	2-1/2"	ø

da mod. 152 a 802
from mod. 152 till 802

da mod. 614 a 1214
from mod. 614 till 1214

da mod. 1314 a 1614
from mod. 1314 till 1614

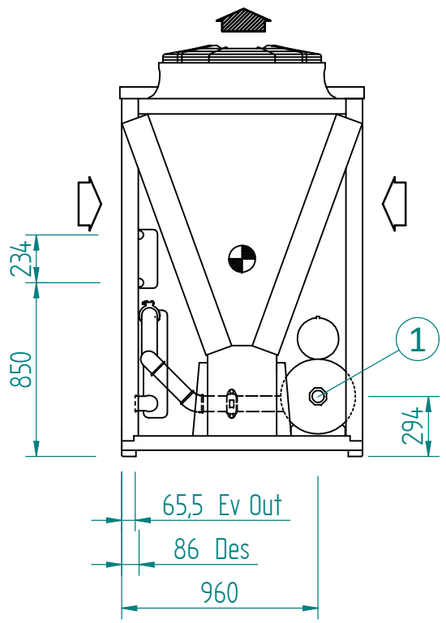
Strumento di controllo con visualizzazione LCD
Control device with LCD display

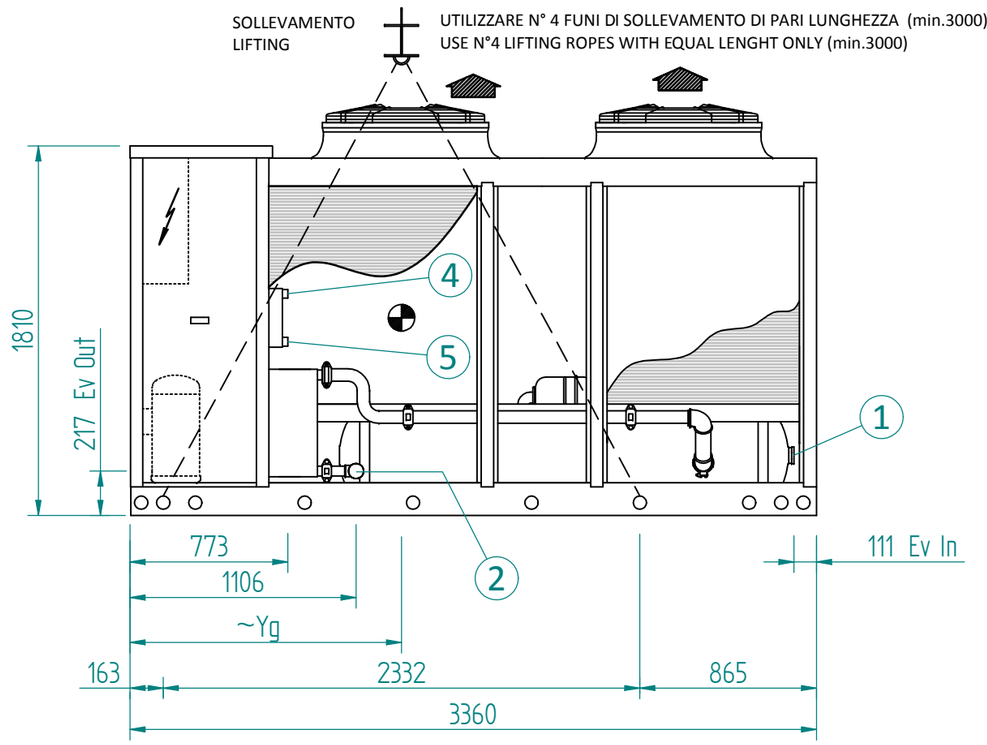
* Temperature +20°C only with ambient temperature max. +40°C

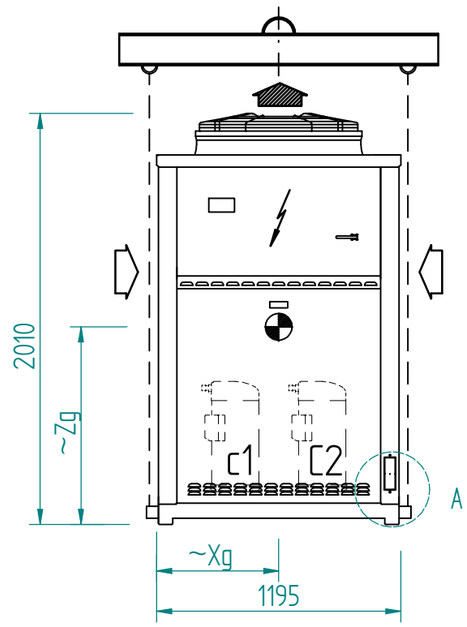
REMARKS

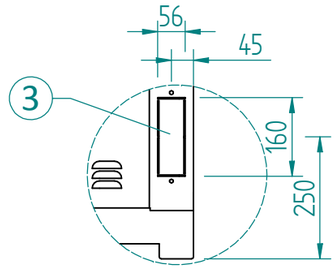
- M002 _ Pressure reducer on tank filling point
- M101 _ Automatic by-pass between process delivery line and process return line

REV2021









DETTAGLIO A

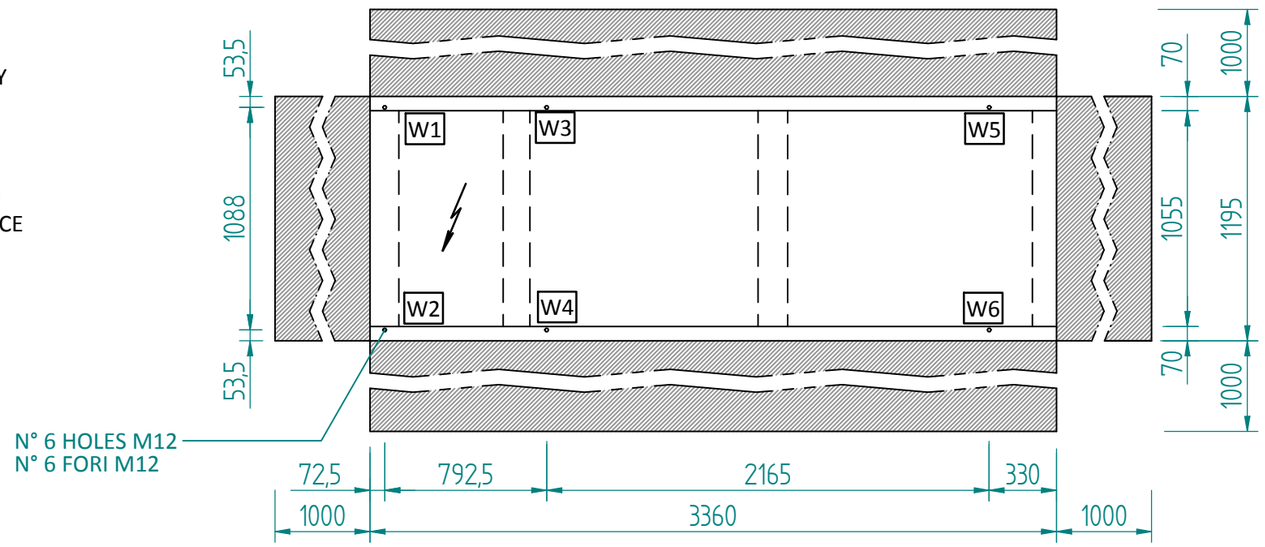
- ENTRATA ARIA
- AIR INLET

- USCITA ARIA
- AIR OUTLET

- BARICENTRO
- CENTER OF GRAVITY

SPAZI DI RISPETTO
MINIMUM CLEARANCE

BASE D'APPOGGIO
SUPPORTING BASAMENT



1	ENTRATA ACQUA EVAPORATORE EVAPORATOR WATER INLET	EN10226 Rp2½ EN10226 Rp2½
2	USCITA ACQUA EVAPORATORE EVAPORATOR WATER OUTLET	EN10226 Rp2½ EN10226 Rp2½
3	INGRESSO LINEA ELETTRICA POWER INLET	

SOLO PER VERSIONI RPE/D
ONLY VERSION RPE/D

4	ENTRATA ACQUA DESURRISCALDATORE DESUPERHEATER WATER INLET	EN10226 R1¼ EN10226 R1¼
5	USCITA ACQUA DESURRISCALDATORE DESUPERHEATER WATER OUTLET	EN10226 R1¼ EN10226 R1¼

DIAMETRO FORI SOLLEVAMENTO Ø65
LIFTING HOLE Ø65

DISTRIBUZIONE PESI BATTERIE Al/Al WEIGHT DISTRIBUTION COILS Al/Al [kg]							
VERSION	W1	W2	W3	W4	W5	W6	TOT.
0552 B	231	221	242	232	272	262	1460

BARICENTRO [mm] CENTER OF GRAVITY		
Xg	Yg	Zg
610	1210	880

PESO DI TRASPORTO SHIPPING WEIGHT [kg]
TOT. Al/Al
1230

00	Emissione	20/04/2016	S.El Nahas
REV. N°		DATE	DRAWN

DESCRIPTION: **DIMENSIONAL DRAWING**
RPE 552B-1P

DRAWING N° **D1G1266002-00** REV. N°
SUBSTITUTES N° -

DRAWN S.El Nahas | DATE 20/04/2016 | AUDITED S. El Nahas

SCALE 1:30 A3

SHEET 1 OF 1

FRIGOSYSTEM COREMA