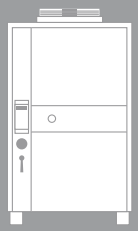
REFCOOL
REFRIGERATION LTD

YOUR SOLUTION

NATURAL REFRIGERANT R290



COOLING SYSTEMS

e3
ECOLOGY - ECONOMY - EFFICIENCY

About

REFCOOL
REFRIGERATION LTD

Leader in the process cooling market for 30 years, CTA, French manufacturer,leverages its experience in research and design of products adapted to developments and enquiries of industrial markets. Created in 1987, our company is committed in your side in a perpetual quest for performance and energy efficiency.

Since the early 2000s we have created the e3 label, ecology-efficiency-environment, internationaly recognized by our peers and which aims to create products around these 3 values which are at the heart of our DNA. In perpetual evolution, our solutions are already in line with the demanding expectations of EcoDesign 2018 (Erp 2015/1095).

Our know-how and our competences are found in our «R290 natural refrigerant» product line which is perfectly adapted to the control of temperatures and to the respect of environment. Listening to the most demanding industrial needs and committed to a responsible societal environmental policy for more than 10 years, we have developped high technology systems allowing the cooling of fluids from +20°C to -30°C.

Today strong from our experience, our professional team and our French and international technical network, we are a local player driven by a policy oriented towards the satisfaction of our customers.

CTA 30 YEARS
dedicated to air treatment & cooling process

e3
ECOLOGY - ECONOMY - EFFICIENCY

Market demands	CTA's responses
Safety	DNV certification
Energy efficiency	Optimisation in the choice of components
100% environmentally-friendly	Machines with natural refrigerant

References

REFCOOL
REFRIGERATION LTD

Pharmaceutical industry

- Roche Diagnostic Mannheim | Germany
- Regional Hospital St. Pölten | Autria
- Danish Technological Institute | Denmark

Mass retailing

- Metro | Italiy
- Carrefour Galati | Roumania
- Waitrose | England

Food industry

- Nestlé | France
- Del Monte Foods | England
- The Coca Cola Company | Brasil

Energy Transport

- Metro Copenhagen | Denmark
- Mekanotjänst Järvsö AB | Sweden
- E.ON Kernkraft GmbH | Germany

Cold stores

- John Lewis Birmingham | England
- Marathon Logistic Kostrzyn | Poland
- Carrefour Mega Mall | Roumania

Propane solutions
As an evidence

Fully natural

Propane is a linear alkane of formula C3H8. It is obtained by natural and fractional distillation of the pure gas and the liquid petroleum gases.

At ambient temperature and pressure, it is odorless, colorless but very easy to liquidate. It is mostly used as fuel for vehicles, domestic installations and more recently plebiscite as a natural fluid of future in the trades of refrigeration.

Totally ecological

Propane has one of the lowest GWP (global warming potential).

With a value equal to 3, it is 500 times less polluting than a HFC standard fluid (R407c/R410a).

Terribly efficient

With an EER of more than +12% compared to a comparable unit in R410a, Propane solutions are part of a responsible and energy efficient ecological approach allowing an optimized return on investment in many industrial areas.

Intransigeant on safety

CTA group is fully engaged in a substainable quality/safety process allowing to be in advance on all legislations.

This is characterized by our project «Zero Leaks» offering to the users an extreme level of safety and ensuring a good use efficiency.

Certainly, YOUR SOLUTION

Quality, performance and security

Atex Components

Our natural and future solutions are equipped with some ATEX components guaranteeing the highest safety in all conditions of use.

"Zero Leak" design

In-depth studies and revisited production processes allow us to ensure no leakage on all our R290 units. An additional commitment of CTA to safety.

Isolated electrical box

The specific construction of our electrical panels, outside the units, and meeting the higher safety standards, helps to prevent all risks of flammability in case of refrigerant leakage.

EcoDesign EU 2015/1095 READY

The performance of each of our products complies with the European Directive "EcoDesign" - EU 2015/1095.

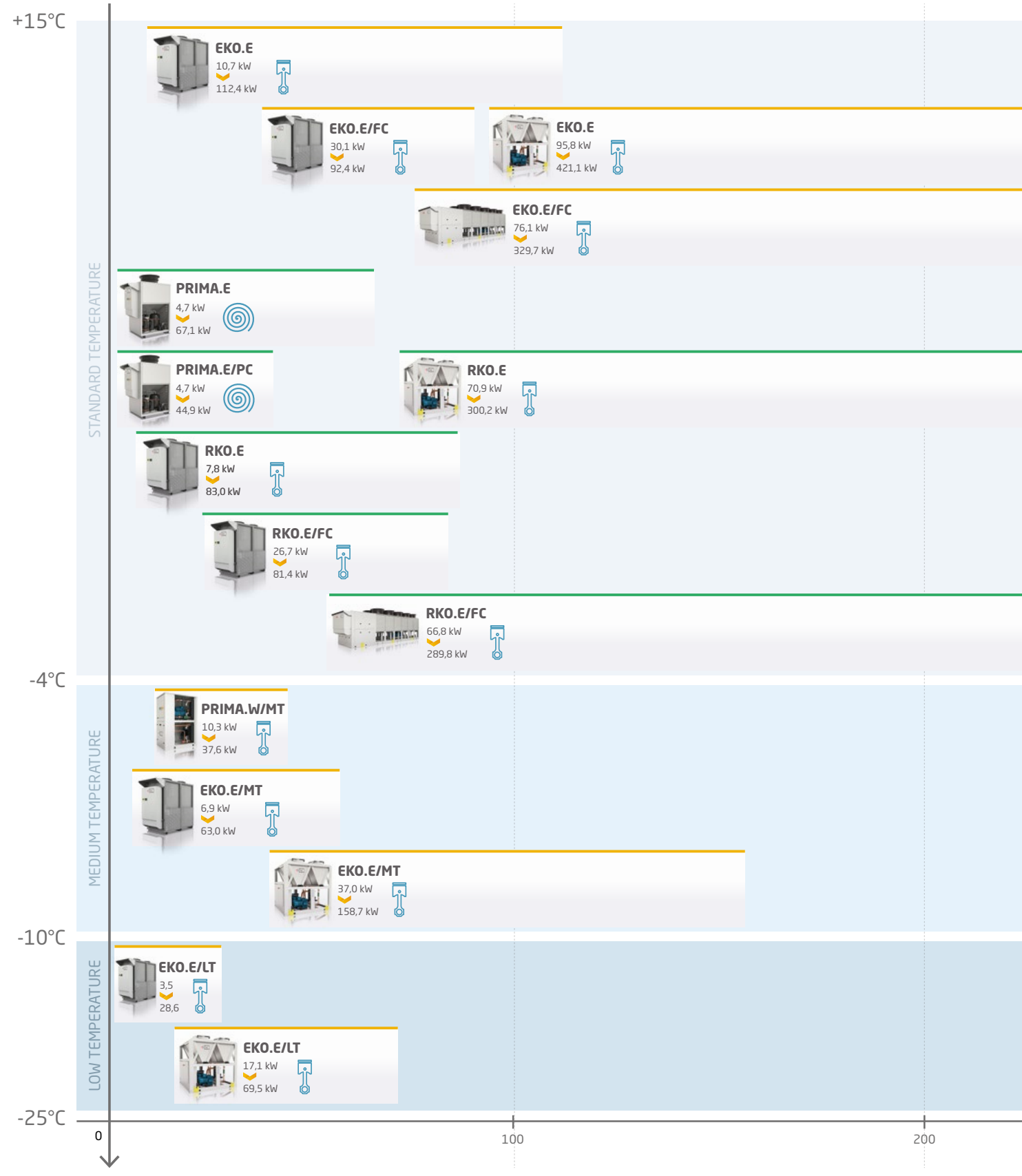
We are committed

to your safety

Commited for the safety of your installations, CTA is pleased to introduce our new software helping you to calculate the maximum allowing charge of refrigerant according to the installation parameters in conformance with the EN378:2016 directive.

Accumulated to our knowledge and our processses, we assume the total safety of your installations.

Overview
of our Propane solutions



Comfort
Process

E Axial fans
W Water Cooled
FC Free Cooling

PC Heat pump
MT Medium Temperature
LT Low Temperature

Semi Hermetic Reciprocating compressors
Screw compressor
Scroll compressor

EKO.E
338,0 kW
1290,1 kW

RKO.E
251,9 kW
969,2 kW

300 400 1300

POWER IN kW

Cooling capacity expressed for the following conditions:

STANDARD TEMPERATURE FOR PROCESS APPLICATIONS: Condenser air 25°C - Fluid IN/OUT 20/15°C

STANDARD TEMPERATURE FOR COMFORT APPLICATIONS: Condenser air 35 °C, Fluid IN/OUT 12/7°C

MEDIUM TEMPERATURE: Condenser air 30°C, Fluid IN/OUT-4/-8°C

LOW TEMPERATURE: Condenser air 30°C, Fluid IN/OUT -20/-25°C

TABLE OF CONTENTS

REFCOOL
REFRIGERATION LTD

Standard temperatures

Water supply from +15°C to -4°C

PRIMA.E	4,7 kW	›	67,1 kW	14
PRIMA.E/PC	4,7 kW	›	44,9 kW	16
RKO.E	7,8 kW	›	83,0 kW	18
RKO.E	70,9 kW	›	300,2 kW	20
RKO.E	251,9 kW	›	969,2 kW	22
RKO.E/FC	26,7 kW	›	81,4 kW	24
RKO.E/FC	66,8 kW	›	289,8 kW	26
EKO.E	10,7 kW	›	112,4 kW	28
EKO.E	95,8 kW	›	421,1 kW	30
RKO.E	338,0 kW	›	1290,1 kW	32
RKO.E/FC	30,1 kW	›	92,4 kW	34
RKO.E/FC	76,1 kW	›	329,7 kW	36

PRIMA.E

Air cooled water chillers

4,7 kW › 67,1 kW

REFCOOL REFRIGERATION LTD

Solution

B - Base
I - Integrated

Version

ST - Standard
LN - Low noise

Equipment

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

Frame

Base metal frame made of galvanized steel with epoxy coated paint of great thickness allowing maximum resistance and durability all time long including in the most sensitive and agressive environment.

Heat Exchanger and Hydraulic circuit

High efficiency brazed plate heat exchanger in stainless steel AISI 316, complete with water differential pressure switch.
Shell covered with closed-cell neoprene anti-condensate material.
In integrated version, the hydraulic circuit includes a water pressure gauge, safety valve, centrifugal pump suitable for glycol solutions up to 20%, manual air venting valve and water tank.

Compressor

Hermetic Scroll compressors from Copeland/Emerson brand with very high efficiency and reliability allowing a very optimized electrical consumption.

Condenser and fans

The latest generation fan used on CTA water chillers with limited rotational speed allows optimized safety
thanks to its accident protection grid.
Its aerodynamic profile and blades profiles, while reducing noise levels.
Micro-channel condenser of the most efficient Cu / Al technology allows a reduced refrigerant charge.

Safety and frigorific circuit

Certified ATEX components and plenty safety devices on standard (pressure switchs, HP/LP, filters, oil controler) and to ensure the highest safety level, this unit is equipped with a special gas detector including alarms levels and controllers reporting.

Regulation and electrical panel

On-board pCO Carel regulators for the control and regulation of all water chiller functions.

Electrical external cabinet to IEC 204-1 / EN60204-1 complete standards includes protection and safety devices. Complete insulation and external position of the unit ensures a high level safety even in the leak of refrigerant gas.

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

REFCOOL
REFRIGERATION LTD

PRIMA.E
Air cooled water chillers

4,7 kW › 67,1 kW

PRIMA.E		004	006	008	009	011	013	016	019	022	026	032	022 d	026 d	032 d	037 d	043 d	054 d	064 d
VERSION																			
Cooling capacity (1)	kW	4,7	6,2	7,8	9,2	11,3	13,2	16,5	19,8	22,5	28,1	33,5	22,6	26,4	33,1	38,7	44,9	56,3	67,1
Saved CO2 equivalent Ton (*)	Ton	1.230	1.720	2.160	2.540	3.120	3.640	4.570	5.480	6.200	7.780	9.270	6.235	7.280	9.290	10.890	12.630	15.800	18.850
Total compressors power input (1)	kW	1,4	2,1	2,5	2,9	3,7	4,2	5,2	5,9	7,2	8,9	10,6	7,3	8,3	10,4	11,9	14,3	17,8	21,2
EER - Energy Efficiency Ratio	-	2,46	2,16	2,37	2,56	2,60	2,52	2,63	2,83	2,72	2,82	2,83	2,69	2,80	2,82	2,78	2,69	2,76	2,76
Water flow (1)	m3/h	0,8	1,1	1,3	1,6	1,9	2,3	2,8	3,4	3,9	4,8	5,8	3,9	4,5	5,7	6,7	7,7	9,7	11,5
External pressure @ Pn (1) - Integrated Ver.	kPa	16	16	14	13	13	12	12	16	15	13	12	15	13	12	15	15	13	12
Total air flow	m3/h	2.900	3.650	3.650	4.900	4.900	5.300	5.300	8.600	8.600	8.250	11.500	8.600	8.250	11.500	17.200	23.000	24.750	31.000
Sound pressure (2) - ST Version	dB(A)	66	67	67	68	68	69	69	68	68	68	70	69	69	70	70	70	71	71
Sound pressure (2) - LN Version	dB(A)	62	63	63	64	64	65	65	64	64	64	66	65	65	66	66	66	67	67
Compressors type	-	Hermetic scroll																	
Compressors quantity	n°	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2
Indipendent gas circuit	n°	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Fans type	-	Axial																	
Fans quantity	n°	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	3
Fans power input	kW	0,2	0,5	0,5	0,4	0,4	0,7	0,7	0,6	0,6	0,6	0,8	0,6	0,6	0,8	1,2	1,6	1,8	2,4
Power supply	V/ph/Hz+T	400/3/50 + 230/1/50 (for gas detector)																	
INTEGRATED SOLUTION																			
Pump type	-	Centrifugal																	
Pump power input	kW	0,37	0,37	0,37	0,37	0,37	0,37	0,37	0,55	0,55	0,55	0,55	0,55	0,55	0,55	0,90	0,90	0,90	0,90
Water tank content	L	30	30	30	30	30	30	30	60	60	60	60	60	60	60	160	160	160	160
DESUPERHEATER (DS Equipment)																			
Heat capacity (3)	kW	-	-	-	2,1	2,6	3,0	3,8	4,5	5,1	6,4	7,7	5,2	6,0	7,6	8,9	10,3	12,9	15,3
Water flow	m3/h	-	-	-	0,4	0,4	0,5	0,7	0,8	0,9	1,1	1,3	0,9	1,0	1,3	1,5	1,8	2,2	2,6
Pressure drop	kPa	-	-	-	28	30	35	32	36	31	29	35	36	38	32	34	30	33	37
TOTAL HEAT RECOVERY (HR Equipment)																			
Heat capacity (3)	kW	-	-	-	11,1	13,8	16,0	20,0	23,7	27,3	34,1	40,7	27,5	31,9	40,1	46,7	54,6	68,2	81,3
Water flow	m3/h	-	-	-	1,9	2,4	2,7	3,4	4,1	4,7	5,9	7,0	4,7	5,5	6,9	8,0	9,4	11,7	14,0
Pressure drop	kPa	-	-	-	38	41	47	43	49	42	39	47	49	51	43	46	41	45	50
DIMENSIONS AND WEIGHT - Base Solution																			
Lenght (L)	mm	1.230	1.230	1.230	1.380	1.380	1.380	1.380	1.680	1.680	1.680	1.680	1.680	1.680	1.680	2.330	2.330	3.030	3.030
Depth (P)	mm	650	650	650	800	800	800	800	990	990	990	990	990	990	990	990	990	990	990
Height (H)	mm	1.320	1.320	1.320	1.785	1.785	1.785	1.785	2.055	2.055	2.055	2.075	2.055	2.055	2.075	2.155	2.155	2.155	2.155
Shipping weight	Kg	185	190	205	250	255	265	270	480	490	495	510	560	570	585	750	760	980	1.010
DIMENSIONS AND WEIGHT - Integrated Solution																			
Lenght (L)	mm	1.230	1.230	1.230	1.380	1.380	1.380	1.380	1.680	1.680	1.680	1.680	1.680	1.680	1.680	2.330	2.330	3.030	3.030
Depth (P)	mm	650	650	650	800	800	800	800	990	990	990	990	990	990	990	990	990	990	990
Height (H)	mm	1.320	1.320	1.320	1.785	1.785	1.785	1.785	2.055	2.055	2.055	2.075	2.055	2.055	2.075	2.155	2.155	2.155	2.155
Shipping weight	Kg	240	250	270	325	330	350	360	640	650	655	660	730	740	760	975	990	1.270	1.310

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 a 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).

PRIMA.E/PC

Air cooled water chillers

4,7 kW › 44,9 kW

REFCOOL REFRIGERATION LTD

Solution

B - Base
I - Integrated

Version

ST - Standard
LN - Low noise

Equipment

AS - Standard equipment

FROID/CHAUD

Heating capacity 4,8 - 45,5 kW

Frame

FRAME

Base metal frame made of galvanized steel with epoxy coated paint of great thickness allowing maximum resistance and durability all time long including in the most sensitive and agressive environment.

Heat Exchanger and Hydraulic circuit

BRAZED PLATE

High efficiency brazed plate heat exchanger in stainless steel AISI 316, complete with water differential pressure switch.
Shell covered with closed-cell neoprene anti-condensate material.
In integrated version, the hydraulic circuit includes a water pressure gauge, safety valve, centrifugal pump suitable for glycol solutions up to 20%, manual air venting valve and water tank.

Compressor

SCROLL COMPRESSOR

Hermetic Scroll compressors from Copeland/Emerson brand with very high efficiency and reliability allowing a very optimized electrical consumption.

Condenser and fans

AXIAL FANS

The latest generation fan used on CTA water chillers with limited rotational speed allows optimized safety
thanks to its accident protection grid.
Its aerodynamic profile and blades profiles, while reducing noise levels.
Micro-channel condenser of the most efficient Cu / Al technology allows a reduced refrigerant charge.

Safety and frigorific circuit

FRIGORIFIC CIRCUIT

Certified ATEX components and plenty safety devices on standard (pressure switchs, HP/LP, filters, oil controler) and to ensure the highest safety level, this unit is equipped with a special gas detector including alarms levels and controllers reporting.

Regulation and electrical panel

ELECTRICAL PANEL

On-board pCO Carel regulators for the control and regulation of all water chiller functions.

Electrical external cabinet to IEC 204-1 / EN60204-1 complete standards includes protection and safety devices. Complete insulation and external position of the unit ensures a high level safety even in the leak of refrigerant gas.

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

REFCOOL
REFRIGERATION LTD

PRIMA.E/PC
Air cooled water chillers

4,7 kW › 44,9 kW

PRIMA.E/PC		004	006	008	009	011	013	016	019	022	026	032	022 d	026 d	032 d	037 d	043 d
VERSION																	
Cooling capacity (1)	kW	4,7	6,2	7,8	9,2	11,3	13,2	16,5	19,8	22,5	28,1	33,5	22,6	26,4	33,1	38,7	44,9
Saved CO2 equivalent Ton (*)	Ton	1.230	1.720	2.160	2.540	3.120	3.640	4.570	5.480	6.200	7.780	9.270	6.235	7.280	9.290	10.890	12.630
Total compressors power input (1)	kW	1,4	2,1	2,5	2,9	3,7	4,2	5,2	5,9	7,2	8,9	10,6	7,3	8,3	10,4	11,9	14,3
EER - Energy Efficiency Ratio	-	2,46	2,16	2,37	2,56	2,60	2,52	2,63	2,83	2,72	2,82	2,83	2,69	2,80	2,82	2,78	2,69
Water flow (1)	m3/h	0,8	1,1	1,3	1,6	1,9	2,3	2,8	3,4	3,9	4,8	5,8	3,9	4,5	5,7	6,7	7,7
External pressure @ Pn (1) - Integrated Ver.	kPa	16	16	14	13	13	12	12	16	15	13	12	15	13	12	15	15
Total air flow	m3/h	2.900	3.650	3.650	4.900	4.900	5.300	5.300	8.600	8.600	8.250	11.500	8.600	8.250	11.500	17.200	23.000
Sound pressure (2) - ST Version	dB(A)	66	67	67	68	68	69	69	68	68	68	70	69	69	70	70	70
Sound pressure (2) - LN Version	dB(A)	62	63	63	64	64	65	65	64	64	64	66	65	65	66	66	66
Heating capacity (3)	kW	4,8	6,3	7,8	9,5	11,4	13,5	16,6	20,1	22,7	28,5	34,1	22,9	26,6	33,5	39,5	45,5
Total compressors power input (3)	kW	1,4	2,1	2,5	3,1	3,7	4,3	5,3	6,1	7,3	9,2	10,9	7,5	8,5	10,7	12,3	14,7
COP - Coefficient Of Performance	-	3,02	2,48	2,62	2,74	2,78	2,69	2,76	3,02	2,88	2,92	2,91	2,82	2,93	2,92	2,91	2,80
Compressors type	-	Hermetic scroll															
Compressors quantity	n°	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2
Indipendent gas circuit	n°	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Fans type	-	Axial															
Fans quantity	n°	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2
Fans power input	kW	0,2	0,5	0,5	0,4	0,4	0,7	0,7	0,6	0,6	0,6	0,8	0,6	0,6	0,8	1,2	1,6
Power supply	V/ph/Hz+T	400/3/50 + 230/1/50 (for gas detector)															
INTEGRATED SOLUTION																	
Pump type	-	Centrifugal															
Pump power input	kW	0,37	0,37	0,37	0,37	0,37	0,37	0,37	0,55	0,55	0,55	0,55	0,55	0,55	0,55	0,90	0,90
Water tank content	L	30	30	30	30	30	30	30	60	60	60	60	60	60	60	160	160
DIMENSIONS AND WEIGHT - Base Solution																	
Lenght (L)	mm	1.230	1.230	1.230	1.380	1.380	1.380	1.380	1.680	1.680	1.680	1.680	1.680	1.680	1.680	2.330	2.330
Depth (P)	mm	650	650	650	800	800	800	800	990	990	990	990	990	990	990	990	990
Height (H)	mm	1.320	1.320	1.320	1.785	1.785	1.785	1.785	2.055	2.055	2.055	2.075	2.055	2.055	2.075	2.155	2.155
Shipping weight	Kg	205	210	225	275	280	290	300	530	540	545	560	620	630	645	825	840
DIMENSIONS AND WEIGHT - Integrated Solution																	
Lenght (L)	mm	1.230	1.230	1.230	1.380	1.380	1.380	1.380	1.680	1.680	1.680	1.680	1.680	1.680	1.680	2.330	2.330
Depth (P)	mm	650	650	650	800	800	800	800	990	990	990	990	990	990	990	990	990
Height (H)	mm	1.320	1.320	1.320	1.785	1.785	1.785	1.785	2.055	2.055	2.055	2.075	2.055	2.055	2.075	2.155	2.155
Shipping weight	Kg	265	275	300	360	365	385	400	700	715	720	730	800	815	840	1.070	1.090

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) Evaporator air 7°C H.R. 85% - Condenser water IN/OUT 40/45°C
(*) CO2 equivalent tonnes saved to the Environment compared to the choice of a 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).

RKO.E

Air cooled water chillers

7,8 kW › 83,0 kW

REFCOOL REFRIGERATION LTD

Solution

B - Base
I - Integrated

Version

ST - Standard
LN - Low noise

Equipment

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

Frame

FRAME

Base metal frame made of galvanized steel with epoxy coated paint of great thickness allowing maximum resistance and durability all time long including in the most sensitive and agressive environment.

Compressor

SEMIHERMETIC COMPRESSOR

Semi-hermetic reciprocating compressors from Frascold brand with very high efficiency and long substainability.

Safety and frigorific circuit

FRIGORIFIC CIRCUIT

Certified ATEX components and plenty safety devices on standard (pressure switchs, HP/LP, filters, oil controler) and to ensure the highest safety level, this unit is equipped with a special gas detector including alarms levels and controllers reporting.

Heat Exchanger and Hydraulic circuit

BRAZED PLATE

High efficiency brazed plate heat exchanger in stainless steel AISI 316, complete with water differential pressure switch.
Shell covered with closed-cell neoprene anti-condensate material.
In integrated version, the hydraulic circuit includes a water pressure gauge, safety valve, centrifugal pump suitable for glycol solutions up to 20%, manual air venting valve and water tank.

Condenser and fans

AXIAL FANS

The latest generation fan used on CTA water chillers with limited rotational speed allows optimized safety
thanks to its accident protection grid.
Its aerodynamic profile and blades profiles, while reducing noise levels.
Micro-channel condenser of the most efficient Cu / Al technology allows a reduced refrigerant charge.

Regulation and electrical panel

ELECTRICAL PANEL

On-board pCO Carel regulators for the control and regulation of all water chiller functions.

Electrical external cabinet to IEC 204-1 / EN60204-1 complete standards includes protection and safety devices. Complete insulation and external position of the unit ensures a high level safety even in the leak of refrigerant gas.

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

REFCOOL
REFRIGERATION LTD

RKO.E
Air cooled water chillers

7,8 kW › 83,0 kW

RKO.E		21 S	31 S	51 S	81 S	121 S	151 S	201 S	251 S	301 S	351 S	401 S
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	-	Semihermetic reciprocating										
Compressors quantity	n°	1	1	1	1	1	1	1	1	1	1	1
Indipendent 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 a 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).

RKO.E

Air cooled water chillers

70,9 kW › 300,2 kW

REFCOOL REFRIGERATION LTD

Solution

B - Base
I - Integrated

Version

ST - Standard
LN - Low noise

Equipment

AS - Standard equipment
DS - Desuperheater

Frame

Base metal frame made of galvanized steel with epoxy coated paint of great thickness allowing maximum resistance and durability all time long including in the most sensitive and agressive environment.

Heat Exchanger and Hydraulic circuit

High efficiency brazed plate heat exchanger in stainless steel AISI 316, complete with water differential pressure switch.
Shell covered with closed-cell neoprene anti-condensate material.
In integrated version, the hydraulic circuit includes a water pressure gauge, safety valve, centrifugal pump suitable for glycol solutions up to 20%, manual air venting valve and water tank.

Compressor

Semi-hermetic reciprocating compressors from Frascold brand with very high efficiency and long substainability.

Condenser and fans

The latest generation fan used on CTA water chillers with limited rotational speed allows optimized safety
thanks to its accident protection grid.
Its aerodynamic profile and blades profiles, while reducing noise levels.
Micro-channel condenser of the most efficient Cu / Al technology allows a reduced refrigerant charge.

Safety and frigorific circuit

Certified ATEX components and plenty safety devices on standard (pressure switchs, HP/LP, filters, oil controler) and to ensure the highest safety level, this unit is equipped with a special gas detector including alarms levels and controllers reporting.

Regulation and electrical panel

On-board pCO Carel regulators for the control and regulation of all water chiller functions.

Electrical external cabinet to IEC 204-1 / EN60204-1 complete standards includes protection and safety devices. Complete insulation and external position of the unit ensures a high level safety even in the leak of refrigerant gas.

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

REFCOOL
REFRIGERATION LTD

RKO.E
Air cooled water chillers

70,9 kW › 300,2 kW

RKO.E		302 S	402 S	502 S	602 S	702 S	802 S	1002 S	1102 S	1202 S	1402 S	1502 S	1602 S
ST VERSION													
Cooling capacity (1)	kW	70,9	78,8	100,4	114,5	141,1	166,6	195,8	218,6	243,5	268,9	288,7	300,2
Saved CO2 equivalent Ton (*)	Ton	20400	21290	40800	44350	60320	70960	78060	81600	83380	106440	111760	117080
Total compressors power input (1)	kW	21,3	24,8	29,7	35,6	43,3	50,6	63,1	70,8	81,4	86,1	94,0	98,6
Water flow (1)	m3/h	12,2	13,5	17,3	19,7	24,3	28,7	33,7	37,6	41,9	46,2	49,6	51,6
External pressure @ Pn (1)	bar	1,0	1,6	1,2	1,1	1,5	1,4	1,2	1,3	1,3	1,8	1,7	1,6
Total air flow	m3/h	28500	28500	40000	40000	48000	58500	80000	92000	92000	114000	114000	114000
Sound pressure (2)	dB(A)	74	74	76	76	76	78	78	80	81	81	81	82
LN VERSION													
Cooling capacity (1)	kW	68,4	76,0	96,9	110,5	136,2	160,8	189,0	210,9	235,0	259,5	278,6	289,7
Saved CO2 equivalent Ton (*)	Ton	20400	21290	40800	44350	60320	70960	78060	81600	83380	106440	111760	117080
Total compressors power input (1)	kW	21,8	25,3	30,3	36,3	44,1	51,6	64,3	72,2	83,0	87,9	95,9	100,5
Water flow (1)	m3/h	11,8	13,1	16,7	19,0	23,4	27,7	32,5	36,3	40,4	44,6	47,9	49,8
External pressure @ Pn (1)	bar	1,1	1,7	1,3	1,2	1,6	1,5	1,3	1,4	1,4	1,9	1,8	1,7
Total air flow	m3/h	2v4510	24510	34400	34400	41280	50310	68800	79120	79120	98040	98040	98040
Sound pressure (2)	dB(A)	71	71	73	73	73	75	75	77	78	78	78	79
Compressors type	-	Semihermetic reciprocating											
Compressors quantity	n°	2	2	2	2	2	2	2	2	2	2	2	2
Indipendent gas circuit	n°	2	2	2	2	2	2	2	2	2	2	2	2
Fans type	-	Axial											
Fans quantity	n°	3	3	4	4	4	3	4	5	5	6	6	6
Fans power input	kW	2,6	2,6	3,4	3,4	3,4	6,0	8,0	10,0	10,0	12,0	12,0	12,0
Power supply	V/ph/Hz + T	400/3/50 + 230/1/50 (for gas detector)											
Maximum absorbed current (with pump)	A	64,7	79,8	83,4	97,8	119,2	138,8	170,8	204,4	226,4	238,3	248,3	254,3
Starting current (with pump)	A	153,0	179,9	249,5	277,8	304,2	350,8	416,8	482,4	581,4	683,3	724,3	727,3
INTEGRATED SOLUTION													
Pump type	-	Centrifugal											
Pump power input	kW	1,1	1,5	1,5	1,5	2,2	2,2	2,2	3,0	3,0	4,0	4,0	4,0
Water tank content	L	290	290	460	460	500	500	500	500	500	500	500	500
DESUPERHEATER (DS Equipment)													
Heat capacity (3)	kW	18,9	21,0	26,8	30,6	37,7	44,5	52,3	58,4	65,1	71,9	77,2	80,3
Water flow	m3/h	3,3	3,6	4,6	5,3	6,5	7,7	9,0	10,0	11,2	12,4	13,2	13,8
Pressure drop	kPa	33	35	29	31	30	26	28	33	32	34	38	27
DIMENSIONS AND WEIGHT - Base Solution													
Lenght (L)	mm	3030	3030	3970	3970	4250	4250	5450	5450	5450	5250	5250	5250
Depth (P)	mm	990	990	990	990	1150	1150	1500	1500	1500	2000	2000	2000
Height (H)	mm	2155	2155	2215	2215	2135	2250	2300	2300	2300	2250	2250	2250
Shipping weight	Kg	1200	1250	1800	1900	2000	2050	2300	2350	2400	2700	2750	2800
DIMENSIONS AND WEIGHT - Integrated Solution													
Lenght (L)	mm	3030	3030	3970	3970	5050	5050	5450	5450	5450	5250	5250	5250
Depth (P)	mm	990	990	990	990	1150	1150	1500	1500	1500	2000	2000	2000
Height (H)	mm	2155	2155	2215	2215	2135	2250	2300	2300	2300	2250	2250	2250
Shipping weight	Kg	1260	1310	1890	1990	2200	2250	2400	2460	2510	2820	2870	2920

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 a 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).

RKO.E

Air cooled water chillers

251,9 kW › 969,2 kW

REFCOOL REFRIGERATION LTD

Solution

B - Base

Version

ST - Standard

LN - Low noise

Equipment

AS - Standard equipment

Frame

Base metal frame made of galvanized steel with epoxy coated paint of great thickness allowing maximum resistance and durability all time long including in the most sensitive and agressive environment.

Compressor

Semi-hermetic screw compressors from Frascold brand with very high efficiency and long substainability.

Safety and frigorific circuit

Certified ATEX components and plenty safety devices on standard (pressure switchs, HP/LP, filters, oil controler) and to ensure the highest safety level, this unit is equipped with a special gas detector including alarms levels and controllers reporting.

Heat Exchange

High efficiency brazed plate heat exchanger in stainless steel AISI 316, complete with water differential pressure switch.
Shell covered with closed-cell neoprene anti-condensate material.

Condenser and fans

The latest generation fan used on CTA water chillers with limited rotational speed allows optimized safety
thanks to its accident protection grid.
Its aerodynamic profile and blades profiles, while reducing noise levels.
Micro-channel condenser of the most efficient Cu / Al technology allows a reduced refrigerant charge.

Regulation and electrical panel

On-board pCO Carel regulators for the control and regulation of all water chiller functions.

Electrical external cabinet to IEC 204-1 / EN60204-1 complete standards includes protection and safety devices. Complete insulation and external position of the unit ensures a high level safety even in the leak of refrigerant gas.

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

REFCOOL
REFRIGERATION LTD

RKO.E
Air cooled water chillers

251,9 kW › 969,2 kW

RKO.E		1402 V	1602 V	1802 V	2002 V	2202 V	2402 V	2502 V	2802 V	3903 V	4203 V
ST VERSION											
Cooling capacity (1)	kW	251,9	323,6	351,8	418,2	455,3	504,3	542,1	646,3	778,3	969,2
Saved CO2 equivalent Ton (*)	Ton	85800	100100	114400	143000	157300	171600	185900	200200	271700	300300
Total compressors power input (1)	kW	98,4	107,0	126,1	138,1	149,2	153,8	171,4	202,1	250,3	303,2
Water flow (1)	m3/h	43,3	55,7	60,5	71,9	78,3	86,7	93,2	111,2	133,9	166,7
Evaporator pressure drop (1)	kPa	31,0	37,0	35,6	27,1	26,5	27,7	27,2	35,3	30,0	35,3
Total air flow	m3/h	80000	120000	120000	160000	160000	200000	200000	240000	280000	360000
Sound pressure (2)	dB(A)	83	83	85	85	85	87	88	90	90	92
LN VERSION											
Cooling capacity (1)	kW	243,1	312,2	339,5	403,5	439,4	486,6	523,1	623,7	751,1	935,3
Saved CO2 equivalent Ton (*)	Ton	85800	100100	114400	143000	157300	171600	185900	200200	271700	300300
Total compressors power input (1)	kW	100,3	109,1	128,6	140,9	152,2	156,9	174,8	206,2	255,3	309,3
Water flow (1)	m3/h	41,8	53,7	58,4	69,4	75,6	83,7	90,0	107,3	129,2	160,9
Evaporator pressure drop (1)	kPa	29,7	35,7	34,3	25,8	25,2	26,4	25,9	34	28,7	34
Total air flow	m3/h	68800	103200	103200	137600	137600	172000	172000	206400	240800	309600
Sound pressure (2)	dB(A)	80	80	82	82	82	84	85	87	87	89
Compressors type	-	Semihermetic screw									
Compressors quantity	n°	2	2	2	2	2	2	2	2	3	3
Indipendent gas circuit	n°	2	2	2	2	2	2	2	2	3	3
Fans type	-	Axial									
Fans quantity	n°	4	6	6	8	8	10	10	12	14	18
Fans power input	kW	8	12	12	16	16	20,0	20,0	24,0	28,0	36,0
Power supply	V/ph/Hz + T	400/3/50 + 230/1/50 (for gas detector)									
Maximum absorbed current (with pump)	A	278,4	322,3	352,3	392,5	542,5	590,5	640,5	722,6	907,7	1083,7
Starting current (with pump)	A	448,4	550,3	615,3	618,5	749,5	812,5	907,5	971,6	1156,7	1332,7
DIMENSIONS AND WEIGHT - Base Solution											
Lenght (L)	mm	2615	3490	3490	4810	4810	6060	6060	7200	8500	11000
Depth (P)	mm	2400	2438	2438	2400	2400	2438	2438	2400	2400	2400
Height (H)	mm	2600	2590	2590	2600	2600	2590	2590	2600	2600	2600
Shipping weight	Kg	2900	3350	4200	4620	4950	5700	6100	6450	7200	7960

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 a unit with similar cooling capacity and HFC refrigerant

RKO.E/FC

Water chillers with free-cooling system

26,7 kW › 81,4 kW

REFCOOL REFRIGERATION LTD

Solution

B - Base
I - Integrated

Version

ST - Standard
LN - Low noise

Equipment

AS - Standard equipment
DS - Desuperheater

FC FREE COOLING

Free-cooling Capacity 17,5 - 56,1 kW

Frame

FRAME

Base metal frame made of galvanized steel with epoxy coated paint of great thickness allowing maximum resistance and durability all time long including in the most sensitive and agressive environment.

Heat Exchanger and Hydraulic circuit

BRAZED PLATE

High efficiency brazed plate heat exchanger in stainless steel AISI 316, complete with water differential pressure switch.
Shell covered with closed-cell neoprene anti-condensate material.
In integrated version, the hydraulic circuit includes a water pressure gauge, safety valve, centrifugal pump suitable for glycol solutions up to 20%, manual air venting valve and water tank.

Compressor

SEMIHERMETIC COMPRESSOR

Semi-hermetic reciprocating compressors from Frascold brand with very high efficiency and long substainability.

Condenser and fans

AXIAL FANS

The latest generation fan used on CTA water chillers with limited rotational speed allows optimized safety
thanks to its accident protection grid.
Its aerodynamic profile and blades profiles, while reducing noise levels.
Micro-channel condenser of the most efficient Cu / Al technology allows a reduced refrigerant charge.

Safety and frigorific circuit

FRIGORIFIC CIRCUIT

Certified ATEX components and plenty safety devices on standard (pressure switchs, HP/LP, filters, oil controler) and to ensure the highest safety level, this unit is equipped with a special gas detector including alarms levels and controllers reporting.

Regulation and electrical panel

ELECTRICAL PANEL

On-board pCO Carel regulators for the control and regulation of all water chiller functions.

Electrical external cabinet to IEC 204-1 / EN60204-1 complete standards includes protection and safety devices. Complete insulation and external position of the unit ensures a high level safety even in the leak of refrigerant gas.

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

REFCOOL
REFRIGERATION LTD

RKO.E/FC

Water chillers with free-cooling system

26,7 kW › 81,4 kW

RKO.E/FC		121 S	151 S	201 S	251 S	301 S	351 S	401 S
ST VERSION								
Cooling capacity (1)	kW	26,7	32,2	39,9	47,3	55,2	70,4	81,4
Saved CO2 equivalent Ton (*)	Ton	8870	9760	17740	21290	23060	31930	35480
Total compressors power input (1)	kW	9,6	11,6	12,0	15,3	18,0	21,3	26,4
Water flow (1)	m3/h	5,0	6,1	7,5	8,9	10,4	13,3	15,4
External pressure @ Pn (1)	bar	2,2	2,0	1,9	1,6	1,9	1,6	1,5
Total air flow	m3/h	10000	10000	16000	16000	20000	28500	28500
Sound pressure (2)	dB(A)	67	71	71	71	72	72	72
Free Cooling cooling capacity (3)	kW	18,0	20,0	33,5	35,6	41,8	59,0	59,0
LN VERSION								
Cooling capacity (1)	kW	25,7	31,1	38,5	45,6	53,3	67,9	78,5
Saved CO2 equivalent Ton (*)	Ton	8870	9760	17740	21290	23060	31930	35480
Total compressors power input (1)	kW	10,1	12,2	12,6	16,1	18,9	22,4	27,7
Water flow (1)	m3/h	4,9	5,9	7,3	8,6	10,1	12,8	14,9
External pressure @ Pn (1)	bar	2,3	2,1	2,0	1,7	2,0	1,7	1,6
Total air flow	m3/h	8700	8700	13920	13920	17400	24795	24795
Sound pressure (2)	dB(A)	64	68	68	68	69	69	69
Free Cooling cooling capacity (3)	kW	17,1	19,0	31,8	33,8	39,7	56,1	56,1
Compressors type	-	Semihermetic reciprocating						
Compressors quantity	n°	1	1	1	1	1	1	1
Indipendent gas circuit	n°	1	1	1	1	1	1	1
Fans type	-	Axial						
Fans quantity	n°	1	1	2	2	2	3	3
Fans power input	kW	0,99	0,99	1,12	1,12	1,72	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	26,4	35,9	42,6	40,2	53,4	65,2	72,2
Starting current (with pump)	A	106,8	124,2	142,7	206,3	233,4	250,2	284,2
INTEGRATED SOLUTION								
Pump type	-	Centrifugal						
Pump power input	kW	1,5	1,5	1,5	1,5	2,2	2,2	3
Water tank content	L	60	60	160	160	290	290	290
DESUPERHEATER (DS Equipment)								
Heat capacity (3)	kW	7,4	9,1	10,3	12,5	15,5	18,1	21,4
Water flow	m3/h	1,3	1,6	1,8	2,2	2,7	3,1	3,7
Pressure drop	kPa	33	29	29	31	30	33	29
DIMENSIONS AND WEIGHT - Base Solution								
Lenght (L)	mm	1700	1700	2600	2600	2600	3400	3400
Depth (P)	mm	990	990	1350	1350	1350	1350	1350
Height (H)	mm	2075	2075	1840	1840	1840	1840	1840
Shipping weight	Kg	350	370	480	520	550	640	710
DIMENSIONS AND WEIGHT - Integrated Solution								
Lenght (L)	mm	1700	1700	3400	3400	3400	4200	4200
Depth (P)	mm	990	990	1350	1350	1350	1350	1350
Height (H)	mm	2075	2075	1840	1840	1840	1840	1840
Shipping weight	Kg	420	440	670	690	710	790	810

(2) Sound pressure measured at 1 m in open field conditions
(3) Ambient air 3°C - Water inlet 15°C - Ethylene glycol 30%
(4) Water IN/OUT 40/45°C - Evaporator water IN/OUT 12/7°C - Ethylene glycol 30%
(*) CO2 equivalent tonnes saved to the Environment compared to the choice of a 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).

RKO.E/FC

Water chillers with free-cooling system

66,8 kW › 289,8 kW

REFCOOL
REFRIGERATION LTD

Solution
B - Base
I - Integrated

Version
ST - Standard
LN - Low noise

Equipment
AS - Standard equipment
DS - Desuperheater

FC FREE COOLING

Free-cooling Capacity 51,1 - 220,0 kW

Frame

FRAME

Base metal frame made of galvanized steel with epoxy coated paint of great thickness allowing maximum resistance and durability all time long including in the most sensitive and agressive environment.

Compressor

SEMIHERMETIC COMPRESSOR

Semi-hermetic reciprocating compressors from Frascold brand with very high efficiency and long substainability.

Safety and frigorific circuit

FRIGORIFIC CIRCUIT

Certified ATEX components and plenty safety devices on standard (pressure switchs, HP/LP, filters, oil controler) and to ensure the highest safety level, this unit is equipped with a special gas detector including alarms levels and controllers reporting.

Heat Exchanger and Hydraulic circuit

BRAZED PLATE

High efficiency brazed plate heat exchanger in stainless steel AISI 316, complete with water differential pressure switch.
Shell covered with closed-cell neoprene anti-condensate material.
In integrated version, the hydraulic circuit includes a water pressure gauge, safety valve, centrifugal pump suitable for glycol solutions up to 20%, manual air venting valve and water tank.

Condenser and fans

AXIAL FANS

The latest generation fan used on CTA water chillers with limited rotational speed allows optimized safety
thanks to its accident protection grid.
Its aerodynamic profile and blades profiles, while reducing noise levels.
Micro-channel condenser of the most efficient Cu / Al technology allows a reduced refrigerant charge.

Regulation and electrical panel

ELECTRICAL PANEL

On-board pCO Carel regulators for the control and regulation of all water chiller functions.

Electrical external cabinet to IEC 204-1 / EN60204-1 complete standards includes protection and safety devices. Complete insulation and external position of the unit ensures a high level safety even in the leak of refrigerant gas.

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

REFCOOL
REFRIGERATION LTD

RKO.E/FC

Water chillers with free-cooling system

66,8 kW › 289,8 kW

RKO.E/FC		302 S	402 S	502 S	602 S	702 S	802 S	1002 S	1202 S	1402 S	1602 S
ST VERSION											
Cooling capacity (1)	kW	66,8	76,7	93,5	115,5	138,6	159,6	185,9	237,3	254,1	289,8
Saved CO2 equivalent Ton (*)	Ton	35480	39030	42580	53220	60320	63860	74510	106440	111760	117080
Total compressors power input (1)	kW	22,5	25,0	31,0	34,7	43,5	53,8	65,6	81,9	89,6	99,9
Water flow (1)	m3/h	12,6	14,5	17,7	21,9	26,2	30,2	35,2	44,9	48,1	54,8
External pressure @ Pn (1)	bar	1,5	1,3	1,4	2,1	1,7	1,4	1,3	2,0	1,7	1,4
Total air flow	m3/h	22000	28500	28500	42000	51000	51000	57000	84000	84000	102000
Sound pressure (2)	dB(A)	74	74	76	76	76	78	78	81	81	82
Free Cooling cooling capacity (3)	kW	51,1	60,4	61,0	92,0	109,0	113,0	122,0	188,0	192,0	220,0
LN VERSION											
Cooling capacity (1)	kW	64,4	74,0	90,2	111,5	133,7	154,0	179,3	229,0	245,2	279,7
Saved CO2 equivalent Ton (*)	Ton	35480	39030	42580	53220	60320	63860	74510	106440	111760	117080
Total compressors power input (1)	kW	23,6	26,3	32,6	36,5	45,6	56,5	68,9	86,0	94,1	104,9
Water flow (1)	m3/h	12,2	14,0	17,1	21,1	25,3	29,1	33,9	43,3	46,4	52,9
External pressure @ Pn (1)	bar	1,6	1,4	1,5	2,2	1,8	1,5	1,4	2,1	1,8	1,5
Total air flow	m3/h	19140	24795	24795	36540	44370	44370	49590	73080	73080	88740
Sound pressure (2)	dB(A)	71	71	73	73	73	75	75	78	78	79
Free Cooling cooling capacity (3)	kW	48,5	57,4	58,0	87,4	103,6	107,4	115,9	178,6	182,4	209,0
Compressors type	-	Semihermetic reciprocating									
Compressors quantity	n°	2	2	2	2	2	2	2	2	2	2
Indipendent gas circuit	n°	2	2	2	2	2	2	2	2	2	2
Fans type	-	Axial									
Fans quantity	n°	3	3	3	4	3	3	6	8	8	6
Fans power input	kW	1,68	2,58	2,58	3,44	6,0	6,0	5,16	6,88	6,88	12,00
Power supply	V/ph/Hz + T	400/3/50 + 230/1/50 (for gas detector)									
Maximum absorbed current (with pump)	A	64,7	79,8	83,4	97,8	119,2	138,8	170,8	226,4	238,3	254,3
Starting current (with pump)	A	153,0	179,9	249,5	277,8	304,2	350,8	416,8	581,4	683,3	727,3
INTEGRATED SOLUTION											
Pump type	-	Centrifugal									
Pump power input	kW	1,5	1,5	2,2	2,2	3,0	3,0	3,0	4,0	4,0	4,0
Water tank content	L	290	290	460	460	500	500	500	500	500	500
DESUPERHEATER (DS Equipment)											
Heat capacity (3)	kW	18,3	20,3	25,9	29,5	36,4	43,0	50,5	62,8	69,4	77,4
Water flow	m3/h	3,1	3,5	4,5	5,1	6,3	7,4	8,7	10,8	11,9	13,3
Pressure drop	kPa	33	35	29	31	30	26	28	32	34	27
DIMENSIONS AND WEIGHT - Base Solution											
Lenght (L)	mm	3400	3400	3400	4200	4200	4600	4600	5400	5400	5400
Depth (P)	mm	1350	1350	1350	1500	1500	2300	2300	2300	2300	2300
Height (H)	mm	1840	1840	1840	2135	2135	2230	2230	2135	2135	2135
Shipping weight	Kg	975	1020	1150	1700	1800	2150	2250	3100	3200	3300
DIMENSIONS AND WEIGHT - Integrated Solution											
Lenght (L)	mm	4200	4200	4200	5000	5000	4600	4600	5400	5400	5400
Depth (P)	mm	1500	1500	1500	1500	1500	2300	2300	2300	2300	2300
Height (H)	mm	1840	1840	1840	2135	2135	2230	2230	2135	2135	2135
Shipping weight	Kg	1125	1170	1300	1800	1900	2400	2500	3300	3400	3500

Note :
(1) Condenser air 35°C - Evaporator water IN/OUT 12/7°C - Ethylene glycol 30%
(2) Sound pressure measured at 1 m in open field conditions
(3) Ambient air 3°C - Water inlet 15°C - Ethylene glycol 30%
(4) Water IN/OUT 40/45°C - Evaporator water IN/OUT 12/7°C - Ethylene glycol 30%
(*) CO2 equivalent tonnes saved to the Environment compared to the choice of a 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).

EKO.E

Air cooled water chillers

10,7 kW › 112,4 kW

REFCOOL REFRIGERATION LTD

Solution

B - Base
I - Integrated

Version

ST - Standard
LN - Low noise

Equipment

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

Frame

Base metal frame made of galvanized steel with epoxy coated paint of great thickness allowing maximum resistance and durability all time long including in the most sensitive and agressive environment.

Compressor

Semi-hermetic reciprocating compressors from Frascold brand with very high efficiency and long substainability.

Safety and frigorific circuit

Certified ATEX components and plenty safety devices on standard (pressure switchs, HP/LP, filters, oil controler) and to ensure the highest safety level, this unit is equipped with a special gas detector including alarms levels and controllers reporting.

Heat Exchanger and Hydraulic circuit

High efficiency brazed plate heat exchanger in stainless steel AISI 316, complete with water differential pressure switch.
Shell covered with closed-cell neoprene anti-condensate material.
In integrated version, the hydraulic circuit includes a water pressure gauge, safety valve, centrifugal pump suitable for glycol solutions up to 20%, manual air venting valve and water tank.

Condenser and fans

The latest generation fan used on CTA water chillers with limited rotational speed allows optimized safety
thanks to its accident protection grid.
Its aerodynamic profile and blades profiles, while reducing noise levels.
Micro-channel condenser of the most efficient Cu / Al technology allows a reduced refrigerant charge.

Regulation and electrical panel

On-board pCO Carel regulators for the control and regulation of all water chiller functions.

Electrical external cabinet to IEC 204-1 / EN60204-1 complete standards includes protection and safety devices. Complete insulation and external position of the unit ensures a high level safety even in the leak of refrigerant gas.

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
- Automatic by-pass valve
- Oversized pump water (5 Bars)
- Open expansion tank
- Closed expansion tank with automatic filling valve

REFCOOL
REFRIGERATION LTD

EKO.E
Air cooled water chillers

10,7 kW › 112,4 kW

EKO.E		21 S	31 S	51 S	81 S	121 S	151 S	201 S	251 S	301 S	351 S	401 S
ST VERSION												
Cooling capacity (1)	kW	10,7	16,2	22,0	30,6	38,3	47,5	53,1	64,6	80,8	95,3	112,4
Saved CO2 equivalent Ton (*)	Ton	2130	4080	4790	6740	8870	9760	9760	14190	19510	20400	21290
Total compressors power input (1)	kW	2,2	4,4	5,4	7,6	9,0	10,9	12,3	15,3	16,9	21,8	26,4
Water flow (1)	m3/h	1,8	2,8	3,8	5,3	6,6	8,2	9,1	11,1	13,9	16,4	19,3
External pressure @ Pn (1)	bar	3,3	2,9	2,7	3,4	3,2	3,0	2,9	2,9	3,4	3	2,9
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	10,4	15,6	21,2	29,5	37,0	45,9	51,3	62,4	78,0	92,0	108,5
Saved CO2 equivalent Ton (*)	Ton	2130	4080	4790	6740	8870	9760	9760	14190	19510	20400	21290
Total compressors power input (1)	kW	2,3	4,5	5,5	7,7	9,2	11,1	12,6	15,6	17,2	22,3	26,9
Water flow (1)	m3/h	1,8	2,7	3,7	5,1	6,4	7,9	8,8	10,7	13,4	15,8	18,7
External pressure @ Pn (1)	bar	3,4	3,0	2,8	3,5	3,3	3,1	3,0	3,0	3,5	3,1	3,0
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	-	Semihermetic reciprocating										
Compressors quantity	n°	1	1	1	1	1	1	1	1	1	1	1
Indipendent 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	9,1	14,7	17,1	24,8	26,4	35,9	42,6	40,2	53,4	65,2	72,2
Starting current (with pump)	A	38,7	54,9	66,3	91,2	106,8	124,2	142,7	206,3	233,4	250,2	284,2
INTEGRATED SOLUTION												
Pump type	-	Centrifugal										
Pump power input	kW	0,75	0,75	0,75	1,1	1,1	1,1	1,3	1,5	2,2	3,0	3,0
Water tank content	L	30	30	30	60	60	60	160	160	290	290	290
DESUPERHEATER (DS Equipment)												
Heat capacity (3)	kW	2,7	4,1	5,5	7,7	9,6	11,9	13,3	16,2	20,3	23,9	28,2
Water flow	m3/h	0,5	0,7	0,9	1,3	1,7	2,1	2,3	2,8	3,5	4,1	4,9
Pressure drop	kPa	37	40	30	32	35	31	31	33	32	35	31
TOTAL HEAT RECOVERY (HR Equipment)												
Heat capacity (3)	kW	12,9	20,6	27,4	38,2	47,3	58,4	65,4	79,9	97,4	117,0	138,7
Water flow	m3/h	2,2	3,5	4,7	6,6	8,1	10,0	11,2	13,7	16,7	20,1	23,9
Pressure drop	kPa	34	37	28	31	35	31	31	36	33	38	35
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 25°C - Evaporator water IN/OUT 20/15°C
(2) Sound pressure measured at 1 m in open field conditions
(3) Water IN/OUT 40/45°C - Evaporator water IN/OUT 20/15°C
(*) CO2 equivalent tonnes saved to the Environment compared to the choice of a 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).

EKO.E

Air cooled water chillers

95,8 kW › 421,1 kW

REFCOOL REFRIGERATION LTD

Solution

B - Base
I - Integrated

Version

ST - Standard
LN - Low noise

Equipment

AS - Standard equipment
DS - Desuperheater

Frame

Base metal frame made of galvanized steel with epoxy coated paint of great thickness allowing maximum resistance and durability all time long including in the most sensitive and agressive environment.

Heat Exchanger and Hydraulic circuit

High efficiency brazed plate heat exchanger in stainless steel AISI 316, complete with water differential pressure switch.
Shell covered with closed-cell neoprene anti-condensate material.
In integrated version, the hydraulic circuit includes a water pressure gauge, safety valve, centrifugal pump suitable for glycol solutions up to 20%, manual air venting valve and water tank.

Compressor

Semi-hermetic reciprocating compressors from Frascold brand with very high efficiency and long substainability.

Condenser and fans

The latest generation fan used on CTA water chillers with limited rotational speed allows optimized safety
thanks to its accident protection grid.
Its aerodynamic profile and blades profiles, while reducing noise levels.
Micro-channel condenser of the most efficient Cu / Al technology allows a reduced refrigerant charge.

Safety and frigorific circuit

Certified ATEX components and plenty safety devices on standard (pressure switchs, HP/LP, filters, oil controler) and to ensure the highest safety level, this unit is equipped with a special gas detector including alarms levels and controllers reporting.

Regulation and electrical panel

On-board pCO Carel regulators for the control and regulation of all water chiller functions.

Electrical external cabinet to IEC 204-1 / EN60204-1 complete standards includes protection and safety devices. Complete insulation and external position of the unit ensures a high level safety even in the leak of refrigerant gas.

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
- Automatic by-pass valve
- Oversized pump water (5 Bars)
- Open expansion tank
- Closed expansion tank with automatic filling valve

REFCOOL
REFRIGERATION LTD

EKO.E
Air cooled water chillers

95,8 kW › 421,1 kW

EKO.E		302 S	402 S	502 S	602 S	702 S	802 S	1002 S	1102 S	1202 S	1402 S	1502 S	1602 S
ST VERSION													
Cooling capacity (1)	kW	95,8	103,6	134,5	153,1	191,6	224,8	267,9	297,5	336,3	375,2	403,9	421,1
Saved CO2 equivalent Ton (*)	Ton	20400	21290	40800	44350	60320	70960	78060	81600	83380	106440	111760	117080
Total compressors power input (1)	kW	21,5	25,4	29,7	36,0	44,0	53,3	63,6	69,7	83,5	84,3	92,3	96,1
Water flow (1)	m3/h	16,5	17,8	23,1	26,3	33,0	38,7	46,1	51,2	57,8	64,5	69,4	72,4
External pressure @ Pn (1)	bar	3,0	2,9	3,0	2,9	2,8	3,0	3,0	2,9	2,7	2,6	2,5	2,4
Total air flow	m3/h	28500	28500	40000	40000	48000	58500	80000	92000	92000	114000	114000	114000
Sound pressure (2)	dB(A)	74	74	76	76	76	78	78	80	81	81	81	82
LN VERSION													
Cooling capacity (1)	kW	92,4	100,0	129,8	147,7	184,9	216,9	258,5	287,1	324,5	362,0	389,7	406,4
Saved CO2 equivalent Ton (*)	Ton	20400	21290	40800	44350	60320	70960	78060	81600	83380	106440	111760	117080
Total compressors power input (1)	kW	21,9	25,9	30,3	36,7	44,9	54,3	64,8	71,1	85,1	86,0	94,1	98,0
Water flow (1)	m3/h	15,9	17,2	22,3	25,4	31,8	37,3	44,5	49,4	55,8	62,3	67,0	69,9
External pressure @ Pn (1)	bar	3,1	3,0	3,1	3,0	2,9	3,1	3,1	3,0	2,8	2,7	2,6	2,5
Total air flow	m3/h	24510	24510	34400	34400	41280	50310	68800	79120	79120	98040	98040	98040
Sound pressure (2)	dB(A)	71	71	73	73	73	75	75	77	78	78	78	79
Compressors type	-	Semihermetic reciprocating											
Compressors quantity	n°	2	2	2	2	2	2	2	2	2	2	2	2
Indipendent gas circuit	n°	2	2	2	2	2	2	2	2	2	2	2	2
Fans type	-	Axial											
Fans quantity	n°	3	3	4	4	4	3	4	5	5	6	6	6
Fans power input	kW	2,6	2,6	3,4	3,4	3,4	6,0	8,0	10,0	10,0	12,0	12,0	12,0
Power supply	V/ph/Hz + T	400/3/50 + 230/1/50 (for gas detector)											
Maximum absorbed current (with pump)	A	68,6	83,0	88,5	102,7	122,7	144,5	180,6	212,6	234,6	244,6	248,3	260,6
Starting current (with pump)	A	156,9	183,1	254,6	282,7	307,7	356,5	426,6	490,6	589,6	689,6	724,3	733,6
INTEGRATED SOLUTION													
Pump type	-	Centrifugal											
Pump power input	kW	3,0	3,0	4,0	4,0	4,0	5,5	7,5	7,5	7,5	7,5	7,5	7,5
Water tank content	L	290	290	460	460	500	500	500	500	500	500	500	500
DESUPERHEATER (DS Equipment)													
Heat capacity (3)	kW	24,0	26,0	33,7	38,4	48,1	56,4	67,2	74,6	84,4	94,1	101,3	105,6
Water flow	m3/h	4,1	4,5	5,8	6,6	8,3	9,7	11,6	12,8	14,5	16,2	17,4	18,2
Pressure drop	kPa	30	32	26	28	27	23	25	30	29	31	35	24
DIMENSIONS AND WEIGHT - Base Solution													
Lenght (L)	mm	3030	3030	3970	3970	4250	4250	5450	5450	5450	5250	5250	5250
Depth (P)	mm	990	990	990	990	1150	1150	1500	1500	1500	2000	2000	2000
Height (H)	mm	2155	2155	2215	2215	2135	2250	2300	2300	2300	2250	2250	2250
Shipping weight	Kg	1200	1250	1800	1900	2000	2050	2300	2350	2400	2700	2750	2800
DIMENSIONS AND WEIGHT - Integrated Solution													
Lenght (L)	mm	3030	3030	3970	3970	5050	5050	5450	5450	5450	5250	5250	5250
Depth (P)	mm	990	990	990	990	1150	1150	1500	1500	1500	2000	2000	2000
Height (H)	mm	2155	2155	2215	2215	2135	2250	2300	2300	2300	2250	2250	2250
Shipping weight	Kg	1260	1310	1890	1990	2200	2250	2400	2460	2510	2820	2870	2920

Note :
(1) Condenser air 25°C - Evaporator water IN/OUT 20/15°C
(2) Sound pressure measured at 1 m in open field conditions
(3) Water IN/OUT 40/45°C - Evaporator water IN/OUT 20/15°C
(*) CO2 equivalent tonnes saved to the Environment compared to the choice of a 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).

EKO.E

Air cooled water chillers

338,0 kW › 1290,1 kW

REFCOOL REFRIGERATION LTD

Solution

B - Base

Version

ST - Standard

LN - Low noise

Equipment

AS - Standard equipment

Frame

Base metal frame made of galvanized steel with epoxy coated paint of great thickness allowing maximum resistance and durability all time long including in the most sensitive and agressive environment.

Heat Exchanger

High efficiency brazed plate heat exchanger in stainless steel AISI 316, complete with water differential pressure switch.
Shell covered with closed-cell neoprene anti-condensate material.

Compressor

Semi-hermetic screw compressors from Frascold brand with very high efficiency and long substainability.

Condenser and fans

The latest generation fan used on CTA water chillers with limited rotational speed allows optimized safety
thanks to its accident protection grid.
Its aerodynamic profile and blades profiles, while reducing noise levels.
Micro-channel condenser of the most efficient Cu / Al technology allows a reduced refrigerant charge.

Safety and frigorific circuit

Certified ATEX components and plenty safety devices on standard (pressure switchs, HP/LP, filters, oil controler) and to ensure the highest safety level, this unit is equipped with a special gas detector including alarms levels and controllers reporting.

Regulation and electrical panel

On-board pCO Carel regulators for the control and regulation of all water chiller functions.

Electrical external cabinet to IEC 204-1 / EN60204-1 complete standards includes protection and safety devices. Complete insulation and external position of the unit ensures a high level safety even in the leak of refrigerant gas.

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

REFCOOL
REFRIGERATION LTD

EKO.E
Air cooled water chillers

338,0 kW › 1290,1 kW

EKO.E		1402 V	1602 V	1802 V	2002 V	2202 V	2402 V	2502 V	2802 V	3903 V	4203 V
ST VERSION											
Cooling capacity (1)	kW	338,0	434,6	469,1	560,7	612,6	677,7	724,9	860,2	1042,6	1290,1
Saved CO2 equivalent Ton (*)	Ton	85800	100100	114400	143000	157300	171600	185900	200200	271700	300300
Total compressors power input (1)	kW	93,6	99,7	119,3	130,6	142,1	143,4	160,9	187,4	235,8	281,0
Water flow (1)	m3/h	58,1	74,7	80,7	96,4	105,4	116,6	124,7	147,9	179,3	221,9
Evaporator pressure drop (1)	kPa	47,4	56,6	54,2	41,2	40,8	42,5	41,6	53,5	52,0	53,5
Total air flow	m3/h	80000	120000	120000	160000	160000	200000	200000	240000	280000	360000
Sound pressure (2)	dB(A)	83	83	85	85	85	87	88	90	90	92
LN VERSION											
Cooling capacity (1)	kW	326,2	419,4	452,6	541,0	591,2	654,0	699,5	830,1	1006,1	1245,0
Saved CO2 equivalent Ton (*)	Ton	85800	100100	114400	143000	157300	171600	185900	200200	271700	300300
Total compressors power input (1)	kW	95,5	101,7	121,7	133,2	145,0	146,3	164,1	191,1	240,5	286,7
Water flow (1)	m3/h	56,1	72,1	77,9	93,1	101,7	112,5	120,3	142,8	173,1	214,1
Evaporator pressure drop (1)	kPa	46,1	55,3	52,9	39,9	39,5	41,2	40,3	52,2	50,7	52,2
Total air flow	m3/h	68800	103200	103200	137600	137600	172000	172000	206400	240800	309600
Sound pressure (2)	dB(A)	80	80	82	82	82	84	85	87	87	89
Compressors type	-	Semihermetic screw									
Compressors quantity	n°	2	2	2	2	2	2	2	2	3	3
Indipendent gas circuit	n°	2	2	2	2	2	2	2	2	3	3
Fans type	-	Axial									
Fans quantity	n°	4	6	6	8	8	10	10	12	14	18
Fans power input	kW	8	12	12	16	16	20,0	20,0	24,0	28,0	36,0
Power supply	V/ph/Hz + T	400/3/50 + 230/1/50 (for gas detector)									
Maximum absorbed current (with pump)	A	286,6	331,3	361,3	403,7	553,7	608,5	658,5	736,5	914,5	1104,5
Starting current (with pump)	A	456,6	559,3	624,3	629,7	760,7	830,5	925,5	985,5	1163,5	1353,5
DIMENSIONS AND WEIGHT - Base Solution											
Lenght (L)	mm	2615	3490	3490	4810	4810	6060	6060	7200	8500	11000
Depth (P)	mm	2400	2438	2438	2400	2400	2438	2438	2400	2400	2400
Height (H)	mm	2600	2590	2590	2600	2600	2590	2590	2600	2600	2600
Shipping weight	Kg	2900	3350	4200	4620	4950	5700	6100	6450	7200	7960

Note :
(1) Condenser air 25°C - Evaporator water IN/OUT 20/15°C
(2) Sound pressure measured at 1 m in open field conditions
(3) Water IN/OUT 40/45°C - Evaporator water IN/OUT 20/15°C
(*) CO2 equivalent tonnes saved to the Environment compared to the choice of a unit with similar cooling capacity and HFC refrigerant

EKO.E/FC

Water chillers with free-cooling system

30,1 kW › 92,4 kW

REFCOOL REFRIGERATION LTD

Solution

B - Base
I - Integrated

Version

ST - Standard
LN - Low noise

Equipment

AS - Standard equipment
DS - Desuperheater

FC FREE COOLING

Free-cooling Capacity 18,0 - 59,0 kW

Frame

FRAME

Base metal frame made of galvanized steel with epoxy coated paint of great thickness allowing maximum resistance and durability all time long including in the most sensitive and agressive environment.

Heat Exchanger and Hydraulic circuit

BRAZED PLATE

High efficiency brazed plate heat exchanger in stainless steel AISI 316, complete with water differential pressure switch.
Shell covered with closed-cell neoprene anti-condensate material.
In integrated version, the hydraulic circuit includes a water pressure gauge, safety valve, centrifugal pump suitable for glycol solutions up to 20%, manual air venting valve and water tank.

Compressor

SEMIHERMETIC COMPRESSOR

Semi-hermetic reciprocating compressors from Frascold brand with very high efficiency and long substainability.

Condenser and fans

AXIAL FANS

The latest generation fan used on CTA water chillers with limited rotational speed allows optimized safety
thanks to its accident protection grid.
Its aerodynamic profile and blades profiles, while reducing noise levels.
Micro-channel condenser of the most efficient Cu / Al technology allows a reduced refrigerant charge.

Safety and frigorific circuit

FRIGORIFIC CIRCUIT

Certified ATEX components and plenty safety devices on standard (pressure switchs, HP/LP, filters, oil controler) and to ensure the highest safety level, this unit is equipped with a special gas detector including alarms levels and controllers reporting.

Regulation and electrical panel

ELECTRICAL PANEL

On-board pCO Carel regulators for the control and regulation of all water chiller functions.

Electrical external cabinet to IEC 204-1 / EN60204-1 complete standards includes protection and safety devices. Complete insulation and external position of the unit ensures a high level safety even in the leak of refrigerant gas.

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
- Automatic by-pass valve
- Oversized pump water (5 Bars)
- Open expansion tank
- Closed expansion tank with automatic filling valve

REFCOOL
REFRIGERATION LTD

EKO.E/FC

Water chillers with free-cooling system

30,1 kW › 92,4 kW

EKO.E/FC		121 S	151 S	201 S	251 S	301 S	351 S	401 S
ST VERSION								
Cooling capacity (1)	kW	30,1	36,2	44,5	53,3	62,0	79,8	92,4
Saved CO2 equivalent Ton (*)	Ton	8870	9760	17740	21290	23060	31930	35480
Total compressors power input (1)	kW	9,7	11,8	12,3	15,7	18,3	21,3	26,9
Water flow (1)	m3/h	5,7	6,9	8,4	10,1	11,7	15,1	17,5
External pressure @ Pn (1)	bar	2,0	1,8	1,7	1,4	1,7	1,3	1,3
Total air flow	m3/h	10000	10000	16000	16000	20000	28500	28500
Sound pressure (2)	dB(A)	67	71	71	71	72	72	72
Free Cooling cooling capacity (3)	kW	18,0	20,0	33,5	35,6	41,8	59,0	59,0
LN VERSION								
Cooling capacity (1)	kW	29,1	35,0	43,0	51,5	59,8	77,0	89,2
Saved CO2 equivalent Ton (*)	Ton	8870	9760	17740	21290	23060	31930	35480
Total compressors power input (1)	kW	10,2	12,4	12,9	16,5	19,2	22,4	28,2
Water flow (1)	m3/h	5,5	6,6	8,1	9,7	11,3	14,6	16,9
External pressure @ Pn (1)	bar	2,1	1,9	1,8	1,5	1,8	1,4	1,4
Total air flow	m3/h	8700	8700	13920	13920	17400	24795	24795
Sound pressure (2)	dB(A)	64	68	68	68	69	69	69
Free Cooling cooling capacity (3)	kW	17,1	19,0	31,8	33,8	39,7	56,1	56,1
Compressors type	-	Semihermetic reciprocating						
Compressors quantity	n°	1	1	1	1	1	1	1
Indipendent gas circuit	n°	1	1	1	1	1	1	1
Fans type	-	Axial						
Fans quantity	n°	1	1	2	2	2	3	3
Fans power input	kW	0,99	0,99	1,12	1,12	1,72	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	26,4	35,9	42,6	40,2	53,4	65,2	72,2
Starting current (with pump)	A	106,8	124,2	142,7	206,3	233,4	250,2	284,2
INTEGRATED SOLUTION								
Pump type	-	Centrifugal						
Pump power input	kW	1,5	1,5	1,5	1,5	2,2	2,2	3
Water tank content	L	60	60	160	160	290	290	290
DESUPERHEATER (DS Equipment)								
Heat capacity (3)	kW	9,3	11,5	12,9	15,6	19,6	23,1	27,2
Water flow	m3/h	1,6	2,0	2,2	2,7	3,4	4,0	4,7
Pressure drop	kPa	35	31	31	33	32	35	31
DIMENSIONS AND WEIGHT - Base Solution								
Lenght (L)	mm	1700	1700	2600	2600	2600	3400	3400
Depth (P)	mm	990	990	1350	1350	1350	1350	1350
Height (H)	mm	2075	2075	1840	1840	1840	1840	1840
Shipping weight	Kg	350	370	480	520	550	640	710
DIMENSIONS AND WEIGHT - Integrated Solution								
Lenght (L)	mm	1700	1700	3400	3400	3400	4200	4200
Depth (P)	mm	990	990	1350	1350	1350	1350	1350
Height (H)	mm	2075	2075	1840	1840	1840	1840	1840
Shipping weight	Kg	420	440	670	690	710	790	810

Note :

(1) Condenser air 32°C - Evaporator water IN/OUT 15/10°C - Ethylene glycol 30%
(2) Sound pressure measured at 1 m in open field conditions
(3) Ambient air 3°C - Water inlet 15°C - Ethylene glycol 30%
(4) Water IN/OUT 40/45°C - Evaporator water IN/OUT 15/10°C - Ethylene glycol 30%
(*) CO2 equivalent tonnes saved to the Environment compared to the choice of a 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).

EKO.E/FC

Water chillers with free-cooling system

76,1 kW › 329,7 kW

REFCOOL
REFRIGERATION LTD

Solution
B - Base
I - Integrated

Version
ST - Standard
LN - Low noise

Equipment
AS - Standard equipment
DS - Desuperheater

FC FREE COOLING

Free-cooling Capacity 51,1 - 220,0 kW

Frame

FRAME

Base metal frame made of galvanized steel with epoxy coated paint of great thickness allowing maximum resistance and durability all time long including in the most sensitive and agressive environment.

Heat Exchanger and Hydraulic circuit

BRAZED PLATE

High efficiency brazed plate heat exchanger in stainless steel AISI 316, complete with water differential pressure switch.
Shell covered with closed-cell neoprene anti-condensate material.
In integrated version, the hydraulic circuit includes a water pressure gauge, safety valve, centrifugal pump suitable for glycol solutions up to 20%, manual air venting valve and water tank.

Compressor

SEMIHERMETIC COMPRESSOR

Semi-hermetic reciprocating compressors from Frascold brand with very high efficiency and long substainability.

Condenser and fans

AXIAL FANS

The latest generation fan used on CTA water chillers with limited rotational speed allows optimized safety
thanks to its accident protection grid.
Its aerodynamic profile and blades profiles, while reducing noise levels.
Micro-channel condenser of the most efficient Cu / Al technology allows a reduced refrigerant charge.

Safety and frigorific circuit

FRIGORIFIC CIRCUIT

Certified ATEX components and plenty safety devices on standard (pressure switchs, HP/LP, filters, oil controler) and to ensure the highest safety level, this unit is equipped with a special gas detector including alarms levels and controllers reporting.

Regulation and electrical panel

ELECTRICAL PANEL

On-board pCO Carel regulators for the control and regulation of all water chiller functions.

Electrical external cabinet to IEC 204-1 / EN60204-1 complete standards includes protection and safety devices. Complete insulation and external position of the unit ensures a high level safety even in the leak of refrigerant gas.

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
- Automatic by-pass valve
- Oversized pump water (5 Bars)
- Open expansion tank
- Closed expansion tank with automatic filling valve

REFCOOL
REFRIGERATION LTD

EKO.E/FC

Water chillers with free-cooling system

76,1 kW › 329,7 kW

EKO.E/FC		302 S	402 S	502 S	602 S	702 S	802 S	1002 S	1202 S	1402 S	1602 S
ST VERSION											
Cooling capacity (1)	kW	76,1	87,2	105,0	131,3	156,5	179,6	210,0	268,8	291,9	329,7
Saved CO2 equivalent Ton (*)	Ton	35480	39030	42580	53220	60320	63860	74510	106440	111760	117080
Total compressors power input (1)	kW	22,7	25,2	31,7	34,9	43,9	55,3	66,5	83,4	90,6	101,3
Water flow (1)	m3/h	14,4	16,5	19,9	24,8	29,6	34,0	39,7	50,9	55,2	62,4
External pressure @ Pn (1)	bar	1,5	1,3	1,4	2,1	1,7	1,4	1,3	2,0	1,7	1,4
Total air flow	m3/h	22000	28500	28500	42000	51000	51000	57000	84000	84000	102000
Sound pressure (2)	dB(A)	74	74	76	76	76	78	78	81	81	82
Free Cooling cooling capacity (3)	kW	51,1	60,4	61,0	92,0	109,0	113,0	122,0	188,0	192,0	220,0
LN VERSION											
Cooling capacity (1)	kW	73,5	84,1	101,3	126,7	151,0	173,3	202,7	259,4	281,7	318,2
Saved CO2 equivalent Ton (*)	Ton	35480	39030	42580	53220	60320	63860	74510	106440	111760	117080
Total compressors power input (1)	kW	23,8	26,5	33,3	36,7	46,1	58,1	69,9	87,6	95,1	106,3
Water flow (1)	m3/h	13,9	15,9	19,2	24,0	28,6	32,8	38,3	49,1	53,3	60,2
External pressure @ Pn (1)	bar	1,6	1,4	1,5	2,2	1,8	1,5	1,4	2,1	1,8	1,5
Total air flow	m3/h	19140	24795	24795	36540	44370	44370	49590	73080	73080	88740
Sound pressure (2)	dB(A)	71	71	73	73	73	75	75	78	78	79
Free Cooling cooling capacity (3)	kW	48,5	57,4	58,0	87,4	103,6	107,4	115,9	178,6	182,4	209,0
Compressors type	-	Semihermetic reciprocating									
Compressors quantity	n°	2	2	2	2	2	2	2	2	2	2
Indipendent gas circuit	n°	2	2	2	2	2	2	2	2	2	2
Fans type	-	Axial									
Fans quantity	n°	3	3	3	4	3	3	6	8	8	6
Fans power input	kW	1,68	2,58	2,58	3,44	6,0	6,0	5,16	6,88	6,88	12,00
Power supply	V/ph/Hz + T	400/3/50 + 230/1/50 (for gas detector)									
Maximum absorbed current (with pump)	A	64,7	79,8	83,4	97,8	119,2	138,8	170,8	226,4	238,3	254,3
Starting current (with pump)	A	153,0	179,9	249,5	277,8	304,2	350,8	416,8	581,4	683,3	727,3
INTEGRATED SOLUTION											
Pump type	-	Centrifugal									
Pump power input	kW	1,5	1,5	2,2	2,2	3,0	3,0	3,0	4,0	4,0	4,0
Water tank content	L	290	290	460	460	500	500	500	500	500	500
DESUPERHEATER (DS Equipment)											
Heat capacity (3)	kW	23,2	25,1	32,6	37,1	46,4	54,4	64,9	81,4	90,8	102,0
Water flow	m3/h	4,0	4,3	5,6	6,4	8,0	9,4	11,2	14,0	15,6	17,5
Pressure drop	kPa	30	32	26	28	27	23	25	29	31	24
DIMENSIONS AND WEIGHT - Base Solution											
Lenght (L)	mm	3400	3400	3400	4200	4200	4600	4600	5400	5400	5400
Depth (P)	mm	1350	1350	1350	1500	1500	2300	2300	2300	2300	2300
Height (H)	mm	1840	1840	1840	2135	2135	2230	2230	2135	2135	2135
Shipping weight	Kg	975	1020	1150	1700	1800	2150	2250	3100	3200	3300
DIMENSIONS AND WEIGHT - Integrated Solution											
Lenght (L)	mm	4200	4200	4200	5000	5000	4600	4600	5400	5400	5400
Depth (P)	mm	1500	1500	1500	1500	1500	2300	2300	2300	2300	2300
Height (H)	mm	1840	1840	1840	2135	2135	2230	2230	2135	2135	2135
Shipping weight	Kg	1125	1170	1300	1800	1900	2400	2500	3300	3400	3500

Note :
(1) Condenser air 32°C - Evaporator water IN/OUT 15/10°C - Ethylene glycol 30%
(2) Sound pressure measured at 1 m in open field conditions
(3) Ambient air 3°C - Water inlet 15°C - Ethylene glycol 30%
(4) Water IN/OUT 40/45°C - Evaporator water IN/OUT 15/10°C - Ethylene glycol 30%
(*) CO2 equivalent tonnes saved to the Environment compared to the choice of a 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).

Medium temperatures

Water supply from -4°C to - 10°C

PRIMA.W/MT	10,3 kW	›	37,6 kW	40
EKO.E/MT	6,9 kW	›	63,0 kW	42
EKO.E/MT	37,0 kW	›	158,7 kW	44

PRIMA.W/MT

Water cooled liquid chillers

10,3 kW › 37,6 kW

REFCOOL REFRIGERATION LTD

Solution
B - Base

Version
ST - Standard

Equipment
AS - Standard equipment

ErP READY 2016 - 2018

Ecodesign 2018 READY
Erp 2015/1095

Frame

Base metal frame made of galvanized steel with epoxy coated paint of great thickness allowing maximum resistance and durability all time long including in the most sensitive and agressive environment.

Heat Exchanger

High efficiency brazed plate heat exchanger in stainless steel AISI 316, complete with water differential pressure switch.
Shell covered with closed-cell neoprene anti-condensate material.

Compressor

Semi-hermetic reciprocating compressors from Frascold brand with very high efficiency and long substainability.

Water condenser

High efficiency brazed plate heat exchanger in stainless steel AISI 316, complete with water differential pressure switch.
Shell covered with closed-cell neoprene anti-condensate material.

Safety and frigorific circuit

Certified ATEX components and plenty safety devices on standard (pressure switchs, HP/LP, filters, oil controler) and to ensure the highest safety level, this unit is equipped with a special gas detector including alarms levels and controllers reporting.

Regulation and electrical panel

On-board pCO Carel regulators for the control and regulation of all water chiller functions.

Electrical external cabinet to IEC 204-1 / EN60204-1 complete standards includes protection and safety devices. Complete insulation and external position of the unit ensures a high level safety even in the leak of refrigerant gas.

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
- Automatic by-pass valve
- Oversized pump water (5 Bars)
- Open expansion tank
- Closed expansion tank with automatic filling valve

REFCOOL
REFRIGERATION LTD

PRIMA.W/MT
Water cooled liquid chillers

10,3 kW › 37,6 kW

PRIMA.W/MT		010	012	015	018	023	026	032	038
MEDIUM TEMPERATURE									
Cooling capacity (1)	kW	10,3	12,4	14,6	18,6	22,4	26,0	32,8	37,6
SEPR (3)	-	3,38	3,31	3,29	3,37	3,38	3,49	3,61	3,56
Compressors power input (1)	kW	3,7	4,6	5,3	6,6	8,0	8,9	10,9	12,5
Compressor absorbed current (1)	A	7,2	10,9	11,6	12,1	18,8	24,5	21,8	26,0
Evaporator fluid flow (1)	m3/h	2,2	2,7	3,1	4,0	4,8	5,6	7,1	8,1
Evaporator pressure drop (1)	kPa	51	35	47	45	44	44	45	50
Condenser fluid flow (1)	m3/h	2,4	2,9	3,4	4,3	5,2	6,0	7,5	8,6
Condenser pressure drop (1)	kPa	19	52	22	24	26	28	36	46
HVAC									
Cooling capacity (2)	kW	16,3	19,6	22,6	28,4	34,7	39,3	50,0	58,3
Compressors power input (2)	kW	5,2	6,4	7,4	9,1	11,1	12,5	15,2	17,5
Compressor absorbed current (1)	A	9,3	12,8	14,1	15,7	22,3	28,3	19,8	32,5
Evaporator water flow (2)	m3/h	3,5	4,2	4,9	6,1	7,5	8,4	10,8	12,5
Evaporator pressure drop (2)	kPa	46	30	41	39	39	38	41	48
Condenser fluid flow (2)	m3/h	3,7	4,5	5,2	6,5	7,9	8,9	11,2	13,0
Condenser pressure drop (2)	kPa	32	47	38	41	46	47	63	74
Power supply	V/ph/Hz + T	400/3/50 + 230/1/50 (for gas detector)							
Refrigerant	-	R290							
Number of circuits	-	1	1	1	1	1	1	1	1
Total charge of refrigerant	Kg	0,7	0,8	0,9	1,0	1,0	1,2	1,2	1,4
Compressors type	-	Semihermetic reciprocating							
Compressors quantity	n°	1	1	1	1	1	1	1	1
Capacity steps	n°	1	1	1	2	2	2	2	2
Condenser type	-	Brazed plate							
Evaporator type	-	Brazed plate							
DIMENSIONS AND WEIGHT									
Lenght (L)	mm	1.000	1.000	1.000	1.000	1.000	1.000	1.350	1.350
Depth (P)	mm	680	680	680	680	680	680	680	680
Height (H)	mm	1.450	1.450	1.450	1.450	1.450	1.450	1.450	1.450
Shipping weight	Kg	230	240	260	280	290	315	360	370

Note:

Referring conditions for Medium Temperature:
(1) Evaporator IN/OUT temperature = -4/-8°C
(1) Condenser IN/OUT temperature = 30/35°C
(1) (2) Evaporatore fluid: ethylene glycol 30%
(1) (2) Condenser fluid: ethylene glycol 20%

Referring conditions for HVAC:
(1) Evaporator IN/OUT temperature = 12/7°C
(1) Condenser IN/OUT temperature = 40/45°C
(1) (2) Evaporatore fluid: water
(1) (2) Condenser fluid: water

Referring conditions for SEPR:
(3) Evaporator IN/OUT temperature = -4/-8°C
(3) Condenser IN temperature = 30/23/16/9 °C
(3) Evaporatore fluid: ethylene glycol 30%
(3) Condenser fluid: water

EKO.E/MT

Air cooled liquid chillers

6,9 kW › 63,0 kW

REFCOOL REFRIGERATION LTD

Solution

B - Base
I - Integrated

Version

ST - Standard
LN - Low noise

Equipment

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

Frame

Base metal frame made of galvanized steel with epoxy coated paint of great thickness allowing maximum resistance and durability all time long including in the most sensitive and agressive environment.

Heat Exchanger and Hydraulic circuit

High efficiency brazed plate heat exchanger in stainless steel AISI 316, complete with water differential pressure switch.
Shell covered with closed-cell neoprene anti-condensate material.
In integrated version, the hydraulic circuit includes a water pressure gauge, safety valve, centrifugal pump suitable for glycol solutions up to 20%, manual air venting valve and water tank.

Compressor

Semi-hermetic reciprocating compressors from Frascold brand with very high efficiency and long substainability.

Condenser and fans

The latest generation fan used on CTA water chillers with limited rotational speed allows optimized safety
thanks to its accident protection grid.
Its aerodynamic profile and blades profiles, while reducing noise levels.
Micro-channel condenser of the most efficient Cu / Al technology allows a reduced refrigerant charge.

Safety and frigorific circuit

Certified ATEX components and plenty safety devices on standard (pressure switchs, HP/LP, filters, oil controler) and to ensure the highest safety level, this unit is equipped with a special gas detector including alarms levels and controllers reporting.

Regulation and electrical panel

On-board pCO Carel regulators for the control and regulation of all water chiller functions.

Electrical external cabinet to IEC 204-1 / EN60204-1 complete standards includes protection and safety devices. Complete insulation and external position of the unit ensures a high level safety even in the leak of refrigerant gas.

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
- Automatic by-pass valve
- Oversized pump water (5 Bars)
- Open expansion tank
- Closed expansion tank with automatic filling valve

REFCOOL
REFRIGERATION LTD

EKO.E/MT
Air cooled liquid chillers

6,9 kW › 63,0 kW

EKO.E/MT		20 S	31 S	51 S	121 S	151 S	201 S	251 S	301 S	351 S	401 S	501 S	601 S
ST VERSION													
Cooling capacity (1)	kW	6,9	9,3	12,6	16,6	19,9	23,1	28,9	33,7	40,6	47,3	54,7	63,0
Saved CO2 equivalent Ton (*)	Ton	6260	7310	8350	13570	14620	15660	17750	29230	39670	43850	48020	52200
Total compressors power input (1)	kW	3,4	3,9	5,4	7,2	8,6	9,5	11,6	13,3	16,0	19,1	23,5	30,4
Water flow (1)	m3/h	1,5	2,0	2,7	3,6	4,3	5,0	6,2	7,2	8,7	10,2	11,8	13,6
External pressure @ Pn (1)	bar	3,0	2,8	2,6	3,2	3	2,9	2,8	3,2	3	2,5	2,6	2,8
Total air flow	m3/h	3650	5200	6000	9000	11700	11000	15000	22000	24000	31000	28500	28500
Sound pressure (2)	dB(A)	68	69	69	67	67	71	71	71	71	72	72	72
LN VERSION													
Cooling capacity (1)	kW	6,6	8,9	12,1	16,1	19,2	22,3	27,9	32,5	39,2	45,6	52,8	60,8
Saved CO2 equivalent Ton (*)	Ton	6260	7310	8350	13570	14620	15660	17750	29230	39670	43850	48020	52200
Total compressors power input (1)	kW	3,5	4,0	5,5	7,3	8,8	9,7	11,8	13,5	16,4	19,5	23,9	31,0
Water flow (1)	m3/h	1,4	1,9	2,6	3,5	4,1	4,8	6,0	7,0	8,4	9,8	11,4	13,1
External pressure @ Pn (1)	bar	3,1	2,9	2,7	3,3	3,1	3,0	2,9	3,3	3,1	2,6	2,7	2,9
Total air flow	m3/h	3140	4470	5160	7740	10060	9460	12900	18920	20640	26660	24510	24510
Sound pressure (2)	dB(A)	65	66	66	64	64	68	68	68	68	69	69	69
SEPR	-	2,58	2,74	2,96	2,78	2,70	2,70	2,74	2,36	2,34	2,30	2,31	2,28
Compressors type	-	Semihermetic reciprocating											
Compressors quantity	n°	1	1	1	1	1	1	1	1	1	1	1	1
Indipendent gas circuit	n°	1	1	1	1	1	1	1	1	1	1	1	1
Fans type	-	Axial											
Fans quantity	n°	1	1	1	1	1	1	1	2	3	3	3	3
Fans power input	kW	0,27	0,27	0,55	0,56	0,86	0,86	2,0	1,72	1,68	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	14,5	16,6	23,9	25,8	33,9	41,1	44,1	51,7	60,7	70,7	85,7	112,4
Starting current (with pump)	A	54,7	65,8	90,3	106,2	122,2	141,2	210,2	231,7	245,7	282,7	331,7	467,4
INTEGRATED SOLUTION													
Pump type	-	Centrifugal											
Pump power input	kW	0,75	0,75	0,75	1,1	1,1	1,1	1,1	1,5	1,5	1,5	2,2	3,0
Water tank content	L	30	30	30	60	60	60	60	160	290	290	290	160
DESUPERHEATER (DS Equipment)													
Heat capacity (3)	kW	1,4	1,8	2,4	4,3	5,2	6	7,5	8,8	10,6	12,3	14,2	16,4
Water flow	m3/h	0,2	0,3	0,4	0,7	0,9	1	1,3	1,5	1,8	2,1	2,4	2,8
Pressure drop	kPa	30	35	38	30	33	29	29	29	31	30	33	29
TOTAL HEAT RECOVERY (HR Equipment)													
Heat capacity (3)	kW	7,7	10,4	13,2	24	28,7	32,9	40,8	47,4	57,1	67,0	78,9	94,5
Water flow	m3/h	1,3	1,8	2,3	4,1	4,9	5,7	7	8,2	9,8	11,5	13,6	16,3
Pressure drop	kPa	28	32	35	29	33	29	29	29	34	31	36	33
DIMENSIONS AND WEIGHT - Base Solution													
Lenght (L)	mm	1240	1380	1380	1680	1680	1680	1680	2330	2980	2980	2980	2980
Depth (P)	mm	650	800	800	990	990	990	990	990	990	990	990	990
Height (H)	mm	1320	1785	1785	2075	2075	2075	2155	2175	2175	2175	2175	2175
Shipping weight	Kg	130	150	170	250	270	480	480	500	510	520	535	710
DIMENSIONS AND WEIGHT - Integrated Solution													
Lenght (L)	mm	1240	1380	1380	1680	1680	1680	1680	2330	2980	2980	2980	2980
Depth (P)	mm	650	800	800	990	990	990	990	990	990	990	990	990
Height (H)	mm	1320	1785	1785	2075	2075	2075	2155	2175	2175	2175	2175	2175
Shipping weight	Kg	160	190	210	290	320	330	330	560	570	580	600	780

Note :
(1) Condenser air 30°C - Exit evaporator fluid -8°C - Ethylene glycol 30%
(2) Sound pressure measured at 1 m in open field conditions
(3) Water IN/OUT 40/45°C - Exit evaporator fluid -8°C - Ethylene glycol 30%
(*) CO2 equivalent tonnes saved to the Environment compared to the choice of a 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).

EKO.E/MT

Air cooled liquid chillers

37,0 kW › 158,7 kW

REFCOOL
REFRIGERATION LTD

Solution

B - Base
I - Integrated

Version

ST - Standard
LN - Low noise

Equipment

AS - Standard equipment
DS - Desuperheater

Frame

Base metal frame made of galvanized steel with epoxy coated paint of great thickness allowing maximum resistance and durability all time long including in the most sensitive and agressive environment.

Heat Exchanger and Hydraulic circuit

High efficiency brazed plate heat exchanger in stainless steel AISI 316, complete with water differential pressure switch.
Shell covered with closed-cell neoprene anti-condensate material.
In integrated version, the hydraulic circuit includes a water pressure gauge, safety valve, centrifugal pump suitable for glycol solutions up to 20%, manual air venting valve and water tank.

Compressor

Semi-hermetic reciprocating compressors from Frascold brand with very high efficiency and long substainability.

Condenser and fans

The latest generation fan used on CTA water chillers with limited rotational speed allows optimized safety
thanks to its accident protection grid.
Its aerodynamic profile and blades profiles, while reducing noise levels.
Micro-channel condenser of the most efficient Cu / Al technology allows a reduced refrigerant charge.

Safety and frigorific circuit

Certified ATEX components and plenty safety devices on standard (pressure switchs, HP/LP, filters, oil controler) and to ensure the highest safety level, this unit is equipped with a special gas detector including alarms levels and controllers reporting.

Regulation and electrical panel

On-board pCO Carel regulators for the control and regulation of all water chiller functions.

Electrical external cabinet to IEC 204-1 / EN60204-1 complete standards includes protection and safety devices. Complete insulation and external position of the unit ensures a high level safety even in the leak of refrigerant gas.

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
- Automatic by-pass valve
- Oversized pump water (5 Bars)
- Open expansion tank
- Closed expansion tank with automatic filling valve

REFCOOL
REFRIGERATION LTD

EKO.E/MT
Air cooled liquid chillers

37,0 kW › 158,7 kW

EKO.E/MT		302 S	402 S	502 S	602 S	702 S	802 S	1002 S	1202 S	1402 S	1502 S	1602 S
ST VERSION												
Cooling capacity (1)	kW	37,0	46,5	56,3	65,7	74,7	90,8	107,2	127,0	139,5	148,6	158,7
Saved CO2 equivalent Ton (*)	Ton	37580	48020	52200	56380	85610	91870	125280	137810	146160	154510	162860
Total compressors power input (1)	kW	17,0	18,0	22,3	26,8	32,9	39,3	48,1	60,7	67,0	72,4	75,7
Water flow (1)	m3/h	8,0	10,0	12,1	14,1	16,1	19,5	23,0	27,3	30,0	32,0	34,1
External pressure @ Pn (1)	bar	3,1	2,6	2,6	2,8	3	2,9	2,6	2,5	3	2,9	2,8
Total air flow	m3/h	22000	28500	28500	28500	43000	40000	60000	60000	82000	82000	90000
Sound pressure (2)	dB(A)	74	74	76	76	76	78	78	80	81	81	82
LN VERSION												
Cooling capacity (1)	kW	35,7	44,9	54,3	63,4	72,1	87,7	103,4	122,5	134,6	143,4	153,1
Saved CO2 equivalent Ton (*)	Ton	37580	48020	52200	56380	85610	91870	125280	137810	146160	154510	162860
Total compressors power input (1)	kW	17,3	18,3	22,7	27,4	33,6	40,0	49,1	61,9	68,3	73,9	77,3
Water flow (1)	m3/h	16,6	20,9	25,2	29,5	33,5	40,8	48,1	57,0	62,6	66,7	71,2
External pressure @ Pn (1)	bar	3,2	2,7	2,7	2,9	3,1	3,0	2,7	2,6	3,1	3,0	2,9
Total air flow	m3/h	18920	24510	24510	24510	36980	34400	51600	51600	70520	70520	77400
Sound pressure (2)	dB(A)	71	71	73	73	73	75	75	77	78	78	79
SEPR	-	2,32	2,30	2,27	2,20	2,45	2,38	2,42	2,40	2,58	2,54	2,49
Compressors type	-	Semihermetic reciprocating										
Compressors quantity	n°	2	2	2	2	2	2	2	2	2	2	2
Indipendent gas circuit	n°	2	2	2	2	2	2	2	2	2	2	2
Fans type	-	Axial										
Fans quantity	n°	2	3	3	3	4	4	3	3	4	4	5
Fans power input	kW	1,72	2,58	2,58	2,58	3,44	3,44	6,0	6,0	8,0	8,0	10,0
Power supply	V/ph/Hz + T	400/3/50 + 230/1/50 (for gas detector)										
Maximum absorbed current (with pump)	A	65,1	81,5	84,5	100,4	124,3	138,3	170,3	220,3	236,6	246,6	256,6
Starting current (with pump)	A	153,4	181,6	250,6	280,4	309,3	350,3	416,3	575,3	681,6	722,6	729,6
INTEGRATED SOLUTION												
Pump type	-	Centrifugal										
Pump power input	kW	1,5	1,5	2,2	3,0	4,0	4,0	4,0	4,0	7,5	7,5	7,5
Water tank content	L	160	160	160	160	290	290	500	500	500	500	500
DESUPERHEATER (DS Equipment)												
Heat capacity (3)	kW	9,6	12,1	14,6	17,1	19,4	23,6	27,9	33	36,3	38,6	41,3
Water flow	m3/h	1,7	2,1	2,5	2,9	3,3	4,1	4,8	5,7	6,2	6,6	7,1
Pressure drop	kPa	37	40	28	32	35	30	30	33	32	35	30
DIMENSIONS AND WEIGHT - Base Solution												
Lenght (L)	mm	2330	2980	2980	2980	3920	3920	4200	4200	5400	5400	5400
Depth (P)	mm	990	990	990	990	990	990	1150	1150	1500	1500	1500
Height (H)	mm	2175	2175	2175	2175	2230	2230	2100	2100	2300	2300	2300
Shipping weight	Kg	810	850	970	1050	1210	1490	1800	1970	2220	2460	2740
DIMENSIONS AND WEIGHT - Integrated Solution												
Lenght (L)	mm	2330	2980	2980	2980	3920	3920	4200	4200	5400	5400	5400
Depth (P)	mm	990	990	990	990	990	990	1150	1150	1500	1500	1500
Height (H)	mm	2175	2175	2175	2175	2230	2230	2100	2100	2300	2300	2300
Shipping weight	Kg	860	900	1025	1105	1270	1550	1870	2040	2300	2550	2840

(*) CO2 equivalent tonnes saved to the environment compared to the choice of a 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).

Low temperatures

Water supply from -10°C to - 25°C

EKO.E/LT	3,5 kW	›	28,6 kW	48
EKO.E/LT	17,1 kW	›	69,5 kW	50

EKO.E/LT

Air cooled liquid chillers

3,5 kW › 28,6 kW

REFCOOL
REFRIGERATION LTD

Solution

B - Base
I - Integrated

Version

ST - Standard
LN - Low noise

Equipment

AS - Standard equipment

Frame

Base metal frame made of galvanized steel with epoxy coated paint of great thickness allowing maximum resistance and durability all time long including in the most sensitive and agressive environment.

Heat Exchanger and Hydraulic circuit

High efficiency brazed plate heat exchanger in stainless steel AISI 316, complete with water differential pressure switch.
Shell covered with closed-cell neoprene anti-condensate material.
In integrated version, the hydraulic circuit includes a water pressure gauge, safety valve, centrifugal pump suitable for glycol solutions up to 20%, manual air venting valve and water tank.

Compressor

Semi-hermetic reciprocating compressors from Frascold brand with very high efficiency and long substainability.

Condenser and fans

The latest generation fan used on CTA water chillers with limited rotational speed allows optimized safety
thanks to its accident protection grid.
Its aerodynamic profile and blades profiles, while reducing noise levels.
Micro-channel condenser of the most efficient Cu / Al technology allows a reduced refrigerant charge.

Safety and frigorific circuit

Certified ATEX components and plenty safety devices on standard (pressure switchs, HP/LP, filters, oil controler) and to ensure the highest safety level, this unit is equipped with a special gas detector including alarms levels and controllers reporting.

Regulation and electrical panel

On-board pCO Carel regulators for the control and regulation of all water chiller functions.

Electrical external cabinet to IEC 204-1 / EN60204-1 complete standards includes protection and safety devices. Complete insulation and external position of the unit ensures a high level safety even in the leak of refrigerant gas.

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
- Automatic by-pass valve
- Oversized pump water (5 Bars)
- Open expansion tank
- Closed expansion tank with automatic filling valve

REFCOOL
REFRIGERATION LTD

EKO.E/LT
Air cooled liquid chillers

3,5 kW › 28,6 kW

EKO.E/MT		20 S	31 S	51 S	121 S	151 S	201 S	251 S	301 S	351 S	401 S	501 S	601 S
ST VERSION													
Cooling capacity (1)	kW	3,5	4,3	6,2	7,9	9,3	10,7	13,6	15,9	18,5	21,4	25,3	28,6
Saved CO2 equivalent Ton (*)	Ton	11770	13730	15690	25490	27450	29420	33340	54910	74520	82360	90210	98050
Total compressors power input (1)	kW	2,4	2,5	3,6	4,6	5,4	6,1	7,4	8,2	10,1	12,1	14,5	18,8
Water flow (1)	m3/h	1,6	2,0	2,9	3,7	4,3	5,0	6,3	7,4	8,6	10,0	11,8	13,3
External pressure @ Pn (1)	bar	2,9	2,7	2,5	3,1	2,9	2,8	2,7	3,1	2,9	2,4	2,5	2,7
Total air flow	m3/h	3650	5200	6000	9000	11700	11000	15000	22000	24000	31000	28500	28500
Sound pressure (2)	dB(A)	68	69	69	67	67	71	71	71	71	72	72	72
LN VERSION													
Cooling capacity (1)	kW	3,4	4,1	6,0	7,6	8,9	10,3	13,1	15,3	17,8	20,7	24,5	27,6
Saved CO2 equivalent Ton (*)	Ton	11770	13730	15690	25490	27450	29420	33340	54910	74520	82360	90210	98050
Total compressors power input (1)	kW	2,4	2,6	3,7	4,7	5,6	6,2	7,5	8,4	10,3	12,3	14,8	19,1
Water flow (1)	m3/h	1,6	1,9	2,8	3,5	4,2	4,8	6,1	7,1	8,3	9,6	11,4	12,8
External pressure @ Pn (1)	bar	3,0	2,8	2,6	3,2	3,0	2,9	2,8	3,2	3,0	2,5	2,6	2,8
Total air flow	m3/h	3140	4470	5160	7740	10060	9460	12900	18920	20640	26660	24510	24510
Sound pressure (2)	dB(A)	65	66	66	64	64	68	68	68	68	69	69	69
SEPR	-	1,60	1,72	1,74	1,82	1,75	1,75	1,73	1,44	1,39	1,38	1,36	1,34
Compressors type	-	Semihermetic reciprocating											
Compressors quantity	n°	1	1	1	1	1	1	1	1	1	1	1	1
Indipendent gas circuit	n°	1	1	1	1	1	1	1	1	1	1	1	1
Fans type	-	Axial											
Fans quantity	n°	1	1	1	1	1	1	1	2	3	3	3	3
Fans power input	kW	0,27	0,27	0,55	0,56	0,86	0,86	2,0	1,72	1,68	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	14,5	16,6	23,9	25,8	33,9	41,1	44,1	51,7	60,7	70,7	85,7	112,4
Starting current (with pump)	A	54,7	65,8	90,3	106,2	122,2	141,2	210,2	231,7	245,7	282,7	331,7	467,4
INTEGRATED SOLUTION													
Pump type	-	Centrifugal											
Pump power input	kW	0,75	0,75	0,75	1,1	1,1	1,1	1,1	1,5	1,5	1,5	2,2	3,0
Water tank content	L	30	30	30	60	60	60	60	160	290	290	290	160
DIMENSIONS AND WEIGHT - Base Solution													
Lenght (L)	mm	1240	1380	1380	1680	1680	1680	1680	2330	2980	2980	2980	2980
Depth (P)	mm	650	800	800	990	990	990	990	990	990	990	990	990
Height (H)	mm	1320	1785	1785	2075	2075	2075	2155	2175	2175	2175	2175	2175
Shipping weight	Kg	130	150	170	250	270	480	480	500	510	520	535	710
DIMENSIONS AND WEIGHT - Integrated Solution													
Lenght (L)	mm	1240	1380	1380	1680	1680	1680	1680	2330	2980	2980	2980	2980
Depth (P)	mm	650	800	800	990	990	990	990	990	990	990	990	990
Height (H)	mm	1320	1785	1785	2075	2075	2075	2155	2175	2175	2175	2175	2175
Shipping weight	Kg	160	180	210	290	320	330	330	560	570	580	600	780

Note :
(1) Condenser air 30°C - Exit evaporator fluid -25°C - Ethylene glycol 50%
(2) Sound pressure measured at 1 m in open field conditions
(*) CO2 equivalent tonnes saved to the Environment compared to the choice of a 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).

EKO.E/LT

Air cooled liquid chillers

17,1 kW › 69,5 kW

REFCOOL
REFRIGERATION LTD

Solution

B - Base
I - Integrated

Version

ST - Standard
LN - Low noise

Equipment

AS - Standard equipment

Frame

Base metal frame made of galvanized steel with epoxy coated paint of great thickness allowing maximum resistance and durability all time long including in the most sensitive and agressive environment.

Heat Exchanger and Hydraulic circuit

High efficiency brazed plate heat exchanger in stainless steel AISI 316, complete with water differential pressure switch.
Shell covered with closed-cell neoprene anti-condensate material.
In integrated version, the hydraulic circuit includes a water pressure gauge, safety valve, centrifugal pump suitable for glycol solutions up to 20%, manual air venting valve and water tank.

Compressor

Semi-hermetic reciprocating compressors from Frascold brand with very high efficiency and long substainability.

Condenser and fans

The latest generation fan used on CTA water chillers with limited rotational speed allows optimized safety
thanks to its accident protection grid.
Its aerodynamic profile and blades profiles, while reducing noise levels.
Micro-channel condenser of the most efficient Cu / Al technology allows a reduced refrigerant charge.

Safety and frigorific circuit

Certified ATEX components and plenty safety devices on standard (pressure switchs, HP/LP, filters, oil controler) and to ensure the highest safety level, this unit is equipped with a special gas detector including alarms levels and controllers reporting.

Regulation and electrical panel

On-board pCO Carel regulators for the control and regulation of all water chiller functions.

Electrical external cabinet to IEC 204-1 / EN60204-1 complete standards includes protection and safety devices. Complete insulation and external position of the unit ensures a high level safety even in the leak of refrigerant gas.

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
- Automatic by-pass valve
- Oversized pump water (5 Bars)
- Open expansion tank
- Closed expansion tank with automatic filling valve

EKO.E/MT		302 S	402 S	502 S	602 S	702 S	802 S	1002 S	1202 S	1402 S	1502 S	1602 S
ST VERSION												
Cooling capacity (1)	kW	17,1	21,2	26,2	30,1	35,6	42,1	49,8	56,5	61,4	64,2	69,5
Saved CO2 equivalent Ton (*)	Ton	70600	90210	98050	105890	160800	172570	235320	258850	274540	290230	305920
Total compressors power input (1)	kW	10,6	11,7	14,3	16,3	20,4	24,6	29,6	37,2	41,7	45,1	47,5
Water flow (1)	m3/h	7,9	9,9	12,2	14,0	16,6	19,6	23,2	26,3	28,5	29,9	32,3
External pressure @ Pn (1)	bar	3,0	2,5	2,5	2,7	2,9	2,8	2,5	2,4	2,9	2,8	2,7
Total air flow	m3/h	22000	28500	28500	28500	43000	40000	60000	60000	82000	82000	90000
Sound pressure (2)	dB(A)	74	74	76	76	76	78	78	80	81	81	82
LN VERSION												
Cooling capacity (1)	kW	16,5	20,5	25,3	29,1	34,4	40,6	48,1	54,5	59,2	62,0	67,1
Saved CO2 equivalent Ton (*)	Ton	70600	90210	98050	105890	160800	172570	235320	258850	274540	290230	305920
Total compressors power input (1)	kW	10,8	11,9	14,6	16,6	20,8	25,1	30,2	38,0	42,5	46,0	48,4
Water flow (1)	m3/h	7,7	9,5	11,7	13,5	16,0	18,9	22,3	25,3	27,5	28,8	31,2
External pressure @ Pn (1)	bar	3,1	2,6	2,6	2,8	3,0	2,9	2,6	2,5	3,0	2,9	2,8
Total air flow	m3/h	18920	24510	24510	24510	36980	34400	51600	51600	70520	70520	77400
Sound pressure (2)	dB(A)	71	71	73	73	73	75	75	77	78	78	79
SEPR	-	1,42	1,38	1,35	1,34	1,48	1,44	1,51	1,48	1,45	1,58	1,50
Compressors type	-	Semihermetic reciprocating										
Compressors quantity	n°	2	2	2	2	2	2	2	2	2	2	2
Indipendent gas circuit	n°	2	2	2	2	2	2	2	2	2	2	2
Fans type	-	Axial										
Fans quantity	n°	2	3	3	3	4	4	3	3	4	4	5
Fans power input	kW	1,72	2,58	2,58	2,58	3,44	3,44	6,0	6,0	8,0	8,0	10,0
Power supply	V/ph/Hz + T	400/3/50 + 230/1/50 (for gas detector)										
Maximum absorbed current (with pump)	A	65,1	81,5	84,5	100,4	124,3	138,3	170,3	220,3	236,6	246,6	256,6
Starting current (with pump)	A	153,4	181,6	250,6	280,4	309,3	350,3	416,3	575,3	681,6	722,6	729,6
INTEGRATED SOLUTION												
Pump type	-	Centrifugal										
Pump power input	kW	1,5	1,5	2,2	3,0	4,0	4,0	4,0	4,0	7,5	7,5	7,5
Water tank content	L	160	160	160	160	290	290	500	500	500	500	500
DIMENSIONS AND WEIGHT - Base Solution												
Lenght (L)	mm	2330	2980	2980	2980	3920	3920	4200	4200	5400	5400	5400
Depth (P)	mm	990	990	990	990	990	990	1150	1150	1500	1500	1500
Height (H)	mm	2175	2175	2175	2175	2230	2230	2100	2100	2300	2300	2300
Shipping weight	Kg	810	850	970	1050	1210	1490	1800	1970	2220	2460	2740
DIMENSIONS AND WEIGHT - Integrated Solution												
Lenght (L)	mm	2330	2980	2980	2980	3920	3920	4200	4200	5400	5400	5400
Depth (P)	mm	990	990	990	990	990	990	1150	1150	1500	1500	1500
Height (H)	mm	2175	2175	2175	2175	2230	2230	2100	2100	2300	2300	2300
Shipping weight	Kg	860	900	1025	1105	1270	1550	1870	2040	2300	2550	2840

Note :
(1) Condenser air 30°C - Exit evaporator fluid -25°C - Ethylene glycol 50%
(2) Sound pressure measured at 1 m in open field conditions
(*) CO2 equivalent tonnes saved to the Environment compared to the choice of a 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).