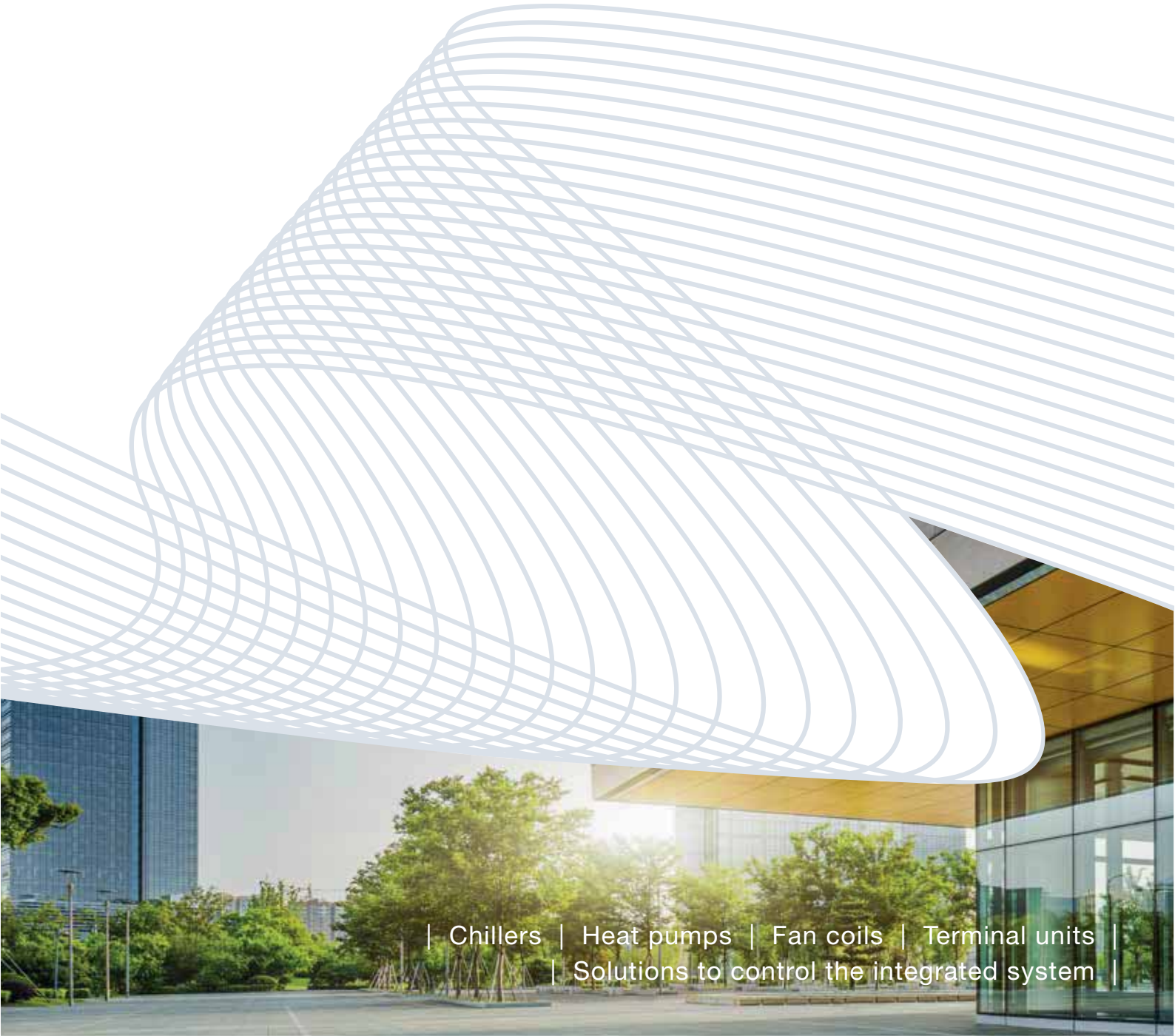
RHOSS

NIBE GROUP MEMBER

APPLIED SYSTEMS

Product Catalogue 2020



NIBE

A global organisation with companies and a presence worldwide

NIBE Group is a global organisation that contributes to a smaller carbon footprint and better utilisation of energy. In its three business areas – Climate Solutions, Element and Stoves – we develop, manufacture and market a wide range of eco-friendly, energy-efficient solutions for indoor climate comfort in all types of property, plus components and solutions for intelligent heating and control in industry and infrastructure.

From its beginning in Markaryd, in the province Småland ***more than 60 years ago, NIBE has grown into an international company with more than 15,000 employees and a presence worldwide.*** From the very start, the company was driven by a strong culture of entrepreneurship and a passion for responsible business operation. Its success factors are long-term investments in sustainable product development and strategic acquisitions. Combined, these factors have brought about strong, targeted growth, which generated sales of just over SEK 20 billion (EUR 2 billion).


RHOSS
Be the change
you want to see
in the world
NIBE GROUP MEMBER

RHOSS

NIBE GROUP MEMBER

Our focus on world-class solutions in sustainable energy contributes to the global goal to reduce emissions of greenhouse gases into the atmosphere.

Our entire value chain, from vision to end customers, must be based on the principles of sustainability in our business principles.

We are responsible not only for the financial results of our operations but also for their social and environmental impact.

NIBE's responsibility forms the Group's framework for sustainability efforts in four different areas:

IN BUSINESS

FOR THE ENVIRONMENT

RESPONSIBILITY FOR EMPLOYEES

LOCAL SOCIAL RESPONSIBILITY


To our sons,
for a more
sustainable future

CHILLERS - HEAT PUMPS

Air cooled - axial fans
PAGE 23

Inverter scroll compressors
4 kW – 131 kW

R32
ELECTA ECO
4÷15,5 kW
Web code: EE001
PAGE 24

R410A
MidiPACK-I
18,8÷30,4 kW
Web code: CYI02
PAGE 28

R410A
MidiPACK-I
37,4÷71 kW
Web code: CYI12
PAGE 34

R410A
EasyPACK-I
67,1÷130,4 kW
Web code: EAI01
PAGE 40

Hermetic scroll compressors
6 kW

R410A
Mini-Y NF
5,6÷11,3 kW
Web code: MYN01
PAGE 26

R410A
Compact-Y MD
32,3÷63,7 kW
Web code: CY011
PAGE 36

R410A
POKER
28,8÷115,2 kW
Web code: PK001
PAGE 38

R410A
Compact-Y NF
15,5÷26,6 kW
Web code: CYP01
PAGE 30

R410A
Compact-Y SM
15,7÷29,5 kW
Web code: CY001
PAGE 32

R410A
Y-Pack FREECOOLING
170÷361 kW
Web code: YKF11
PAGE 60

Semi-hermetic screw compressors
317 kW

R134a
FullPOWER HE-A
317÷1325 kW
Web code: FPE11
PAGE 78

R134a
FullPOWER SE
319÷1271 kW
Web code: FP011
PAGE 82

Oil-free centrifugal compressors
267 kW

Air-cooled Centrifugal fans
PAGE 97

Inverter scroll compressors
16 kW – 160 kW

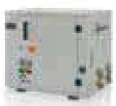
R410A
Compact-ID
16,4÷27,5 kW
Web code: CID01
PAGE 98

Hermetic scroll compressors

R410A
Y-Pack C-PF
32,3÷160,2 kW
Web code: YKC11
PAGE 100

Water cooled - Condenserless units
PAGE 105

Water cooled Hermetic scroll compressors
5 kW



R410A
Comby-Flow
5,3÷11,9 kW
Web code: CF001
PAGE 106

R410A
Y-Flow
15,5÷41,7 kW
Web code: YF011
PAGE 108

R410A
Y-Flow
41,2÷448,8 kW
Web code 245-2185: YF021 - Web code 4180÷4450: YF031
PAGE 110

Condenserless units Hermetic scroll compressors
13 kW

R410A
Y-Flow E
13,7÷36,9 kW
Web code: YFC11
PAGE 122

R410A
Y-Flow E
39,8÷320,9 kW
Web code 245-2185: YFC21 - Web code 4180-4360: YFC31
PAGE 124

510 kW — 1307 kW

Inverter screw compressors

R134a

FullPOWER VFD (1+i)
518÷1307,4 kW
Web code: FPV21
PAGE 76

R134a

FullPOWER VFD
510÷1001,5 kW
Web code: FPV11
PAGE 74

— 917 kW

R410A

EasyPACK
63,7÷144,4 kW
Web code: EAS01
PAGE 42

R410A

WinPACK HE-A
91,6÷345 kW
Web code: WKE11
PAGE 46

R410A

WinPACK SE
97,6÷328,6 kW
Web code: WK011
PAGE 50

R410A

WinPACK-R HE-A
221,4÷372 kW
Web code: WKE21
PAGE 56

R410A

WinPACK-R SE
214,2÷345,7 kW
Web code: WK021
PAGE 58

R410A

WinPOWER HE-A
337,3÷916,8 kW
Web code: WPE11
PAGE 62

R410A

WinPOWER SE
335÷861,8 kW
Web code: WP011
PAGE 68

— 1600 kW

R134a

Z-Power SE
1404,4÷1.609,7 kW
Web code: ZP001
PAGE 86

R134a

Z-Power FREECOOLING
469÷1.216 kW
Web code: ZPF01
PAGE 88

— 949 kW

R134a

TurboPOWER
267,0÷1101 kW
Web code: TP011
PAGE 92

HFO 1234ze

TurboPOWER ECO
323,2÷948,6 kW
Web code: TP014
PAGE 94

— 1628 kW

Inverter screw compressors

new

R513A

FullFLOW VFD (1+i)
389,5÷1701,1 kW
Web code: FFE03
PAGE 114

new

HFO 1234ze

FullFLOW ECO VFD (1+i)
285,6÷1217,2 kW
Web code: FFE04
PAGE 116

Semi-hermetic screw compressors

R134a

Z-Flow HE
203,3÷1.627,6 kW
Web code: ZFE01
PAGE 118

— 1425 kW

Condenserless units
Semi-hermetic screw compressors

R134a

Z-Flow E
171,9÷1.424,8 kW
Web code: ZFC01
PAGE 126

ISO 9001 BUREAU VERITAS Certification

ONLY COOLING HEAT PUMP POLYVALENT SYSTEMS

EXP - Polyvalent systems

Air cooled - Axial fans

PAGE 129

Compressori ermetici scroll — 18 kW

R410A
Compact-Y EXP SM
17,7÷29,1 kW
Web code: CYX11
PAGE 130

R410A
Compact-Y EXP MD
33,8÷61,6 kW
Web code: CYX21
PAGE 132

new
R454B
WinPACK ECO EXP
135,7÷333,6 kW
Web code: WKX15
PAGE 136

Compressori semiermetici a vite — 530 kW

R134a
Z-Power EXP
530,3÷695,1 kW
Web code: ZPX01
PAGE 142

Water cooled

PAGE 129

Compressori ermetici scroll — 5 kW ● ● ● ● ● ● ● ● ● ● ● ● 438 kW

R410A
Comby-Flow EXP
5,5÷12,2 kW
Web code: CFX01
PAGE 144

R410A
Y-Flow EXP
44,2÷437,8 kW
Web code 245-2185: YFX21 - Web code 4180÷4450: YFX31
PAGE 146

Condensing units

PAGE 151

16 kW ● ● ● ● ● 163 kW

R410A
16,4÷31,5 kW
Web code: CUY01
PAGE 152

R410A
34,5÷162,6 kW
Web code: CUY11
PAGE 153

FAN COILS

PAGE 163 - CONTROLS PAGE 199

	WALL MOUNTING INSTALLATION	FLOOR, CEILING, RECESSED WALL OR FALSE CEILING INSTALLATION
Inverter Brushless motor	**IDROWALL-I** 2,0÷3,5 kW Web code: IDR01 PAGE 196	**BRIO-I SLIM** 1,0÷4,0 kW Web code: BRIS1 PAGE 166 **YARDY-I EV3** 1,9÷8,6 kW Web code: YARI3 PAGE 174 air suite
Standard motor		**YARDY EV3** 1,1÷8,5 kW Web code: YARV3 PAGE 176 air suite

Inverter scroll compressors

new

R410A

Y-Pack EXP
80,7÷332,9 kW
Web code: YKX11
PAGE 138

R410A

WinPOWER EXP
361,2÷648,1 kW
Web code: WPX01
PAGE 140

R410A

EasyPACK-I EXP
64,4÷133,2 kW
Web code: EAX01
PAGE 134

System accessories

Remote condensers

new

R410A

23÷218 kW
Web code Mod. 115÷240: CRYA1
Mod. 245÷2185: CRYA2
PAGE 156

Pumping units and water tanks

300÷2500 l
Web code: GPA01
PAGE 160

PAGE 155

DUCTED INSTALLATION

YARDY-ID2
2,4÷6,4 kW
Web code: YAID2
PAGE 186
air'suite

YARDY-DUCT2
2,0÷5,8 kW
Web code: YADC2
PAGE 188
air'suite

YARDY-HP
7,2÷20,5 kW
Web code: YAHP1
PAGE 190
air'suite

FALSE CEILING CASSETTE

DIVA-I
2,8÷10,8 kW
Web code: DIVI1
PAGE 192

DIVA
2,0÷11,1 kW
Web code: DIVA1
PAGE 194

ONLY COOLING HEAT PUMP POLYVALENT SYSTEMSI

Terminal unit
UTNA Platinum
6,4÷70 kW
Web code: UTAP1
PAGE 210

Heat recovery unit
UTNR-A Platinum
Counterflow heat recovery
400÷4.050 m³/h
Web code: UTNR3
PAGE 214

Heat recovery unit
UTNR-HE Platinum
Rotative heat recovery
310÷4.250 m³/h
Web code: UTHE3
PAGE 218

Heat recovery unit
UTNR-HP
Thermodynamic heat recovery
350÷4.500 m³/h
Web code: UTHP1
PAGE 226

Heat recovery unit
VMC-E
Counterflow heat recovery
250÷1.000 m³/h
Web code: VMC01
PAGE 228

INTEGRATED SYSTEM MANAGEMENT

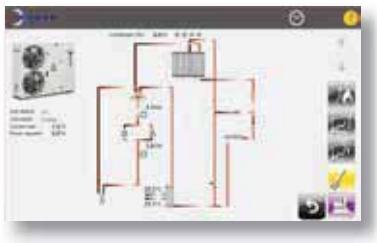
PAGE 231

SYS-TO
System Touch Manager & Web APP

CONTROL AND MONITORING VIA ETHERNET

PAGE 236

RHOSS WEB SERVER



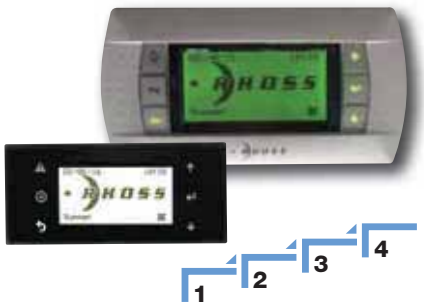
REMOTE MONITORING

PAGE 238

RHOSS MONITORING:
Mobile - Cloud - Real time

CHILLER MANAGEMENT SOFTWARE

SIR - RHOSS INTEGRATED SEQUENCER - PAGE 240

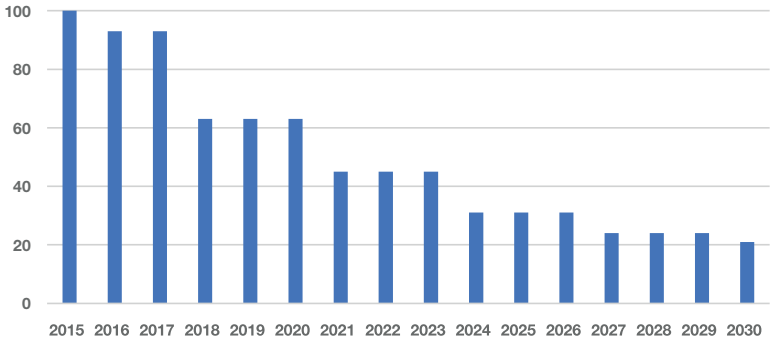


RHOSS SEQUENCER - PAGE 241

RHOSS: the conscious choice for an ecological future

EFFICIENCY, TECHNOLOGY and ECOLOGY: the three key words for a sustainable future.

Rhoss has always been careful to create comfort, and invests and researches new solutions to be applied to equipment dedicated to the HVAC world: efficiency and technology are firm points in the development of new products in order to make them more and more compatible with the environment which we live in.
The progressive elimination of fluorinated refrigerants (HFCs), established by the new EU regulation, provides for a gradual reduction of the quantities placed on the market, expressed as the equivalent in tons of CO2. This should lead to a reduction of HFC consumption of 79% by 2030.



Volume di riferimento (100%) corrispondente alla media annuale della quantità totale di CO_2 equivalente immessa all'interno dell'UE nel periodo dal 2009 al 2012.

The application of this legislation will lead to the introduction and increasingly massive use of new low-GWP (Global Warming Potential) gases, consistent with the evolution of technology.
In fact, in the world market of refrigerants, depending on the technology used, there are many solutions that allow for a reduction in GWP, with respect to the gas traditionally used in the HVAC sector.

The following table indicates some examples of refrigerant gases and related GWP.

Refrigerante	GWP (UNI EN 378-1 2017)
R407C	1774
R134a	1450
R410A	2088
R513A	631
R1233zd	4,5
R1234ze	7
R32/R452 B	675
R454 B	466

Rhoss has long started this process of harmonisation with the new “green” gases, testing and experimenting with new solutions, without precluding any possibility.
Furthermore, all the ranges in the catalogue for which Rhoss provides solutions with low GWP refrigerant are distinguished by a specific mark.
The gradual phase-down of high GWP refrigerants is also accompanied by the demand for increasingly efficient and low-consumption products as required by the European Ecodesign Directive. This provides the specifications for an environmentally friendly design of all energy-using products and through Regulations 813/2013 and 2016/2281 imposed minimum seasonal winter (SCOP) and summer (SEER) efficiency requirements for the introduction of chillers and heat pumps in the European market.
The product performance tables, therefore, indicate the SEER and SCOP indexes, in line with the requirements of the directive.

Our certifications, in 360 degrees

ISO 9001:2015

ISO 9001:2015 Certification

RHOSS Spa provides quality goods designed for environmental comfort, making them available and accessible thanks to the advanced technological and organisational level achieved, and, above all, to the committed, reliable and dedicated approach that RHOSS personnel take to their job every day. The organisation and operations of the business are based on a Quality Management System. The Quality System currently implemented with the new ISO 9001-2015 version is based on rules and practices that are established and agreed on with the entire organisation.

ISO 14001:2015

ISO 14001:2015 Certification

RHOSS Spa supplies quality goods designed for environmental comfort. With the same commitment, it pays attention to environmental issues, considering correct management and efficient control of its environmental aspects of prime importance, engaging in Environmental Protection and in full compliance with the standards in force and with specific requirements. For this reason, Management has decided to implement an environmental certification system, based on the requirements of the international standard UNI EN ISO 14001, applying it to all the activities carried out within the company and especially to its production activities.

EUROVENT certification for CHILLERS, HEAT PUMPS (CCP-HP) AND FAN-COILS (FCU)

Rhoss participates in the Eurovent certification programmes for chillers, heat pumps and fan coils. The performance of Rhoss products is therefore guaranteed by tests performed by an accredited third party certification company.

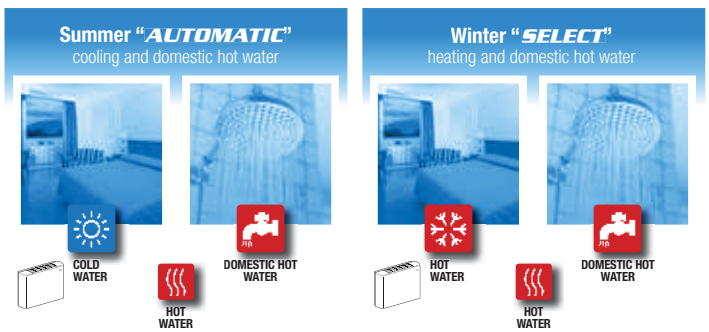
EUROVENT certification for AIR HANDLING UNITS (AHU)

Rhoss participates in the Eurovent certification programme for the Air handling units with the ADV and NEXTAIR range according to the EN 13053 standard; certification of mechanical characteristics according to EN1886; and the energy classification of the machines.

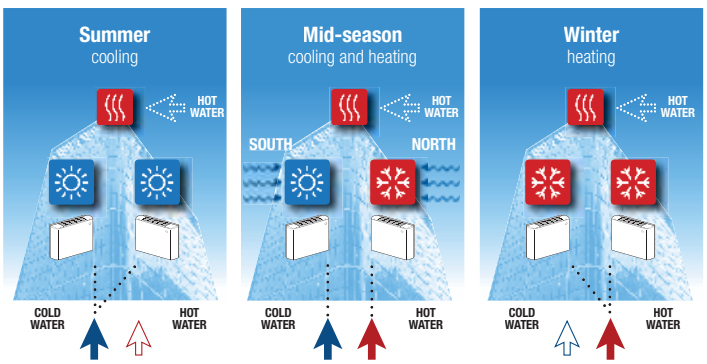
LEED certification - Leadership in Energy & Environmental Design

Rhoss participates in the certification protocol of LEED buildings. The international system is based on the entire building life cycle from design and construction to management and maintenance.

2 2-pipe systems
AUTOMATIC or **SELECT** modes



4 4 or 6-pipe systems **
AUTOMATIC mode throughout the year 6



Innovation is in our DNA

EXP SYSTEMS
EXcellence in Polyvalent Technology

The assurance of a quality product is obtained by means of thorough tests in the R&D Lab, one of the largest testing labs in Europe.

Every Rhoss unit is subjected to rigorous operating tests before being launched on the market, simulating the most extreme operating conditions.

EXP Systems is the multi-purpose ecological system designed by RHOSS to satisfy cold and hot water demands simultaneously or independently with a single unit. It is designed for use in 2, 4 and 6-pipe systems, at any time of year.
This flexibility allows it to be used in several types of construction, thereby allowing any subsequent change in the intended use.

An entire range with air and water cooled from 5 to 700 kW with TER* index up to 8.33.

* TER Total Efficiency Ratio in total heat recovery mode AUTOMATIC 2.
** 6-pipe systems achievable with the WinPOWER EXP range.

Polyvalent systems
the evolution of energy savings

Download the complete document:

http://www.rhoss.com/download

VPF solution by RHOSS: the new plant engineering breakthrough

Cooling systems with VPF (Variable Primary Flow), ideal for medium to large cooling capacities, are an interesting alternative to more conventional constant flow systems.
In fact, the solutions designed by Rhoss offer benefits like reduced pumping unit energy consumption with consequent cost savings, as well as reliability and simplified system control.
Using these systems contributes significantly to achieving more LEED building certification credits.

Variable flow systems

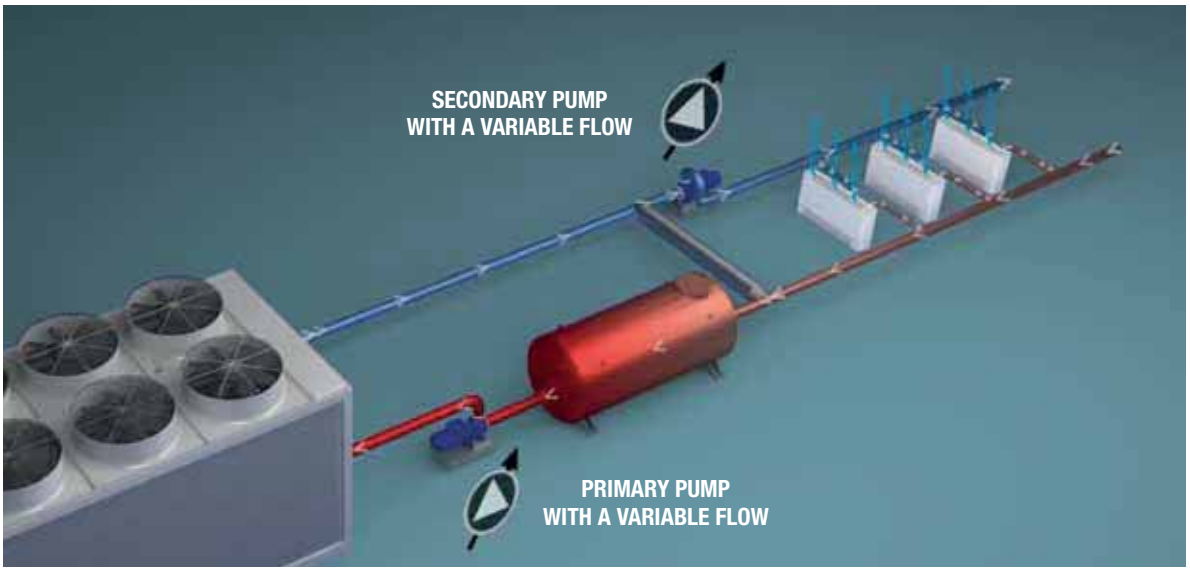
The Rhoss VPF solution can be summarised as follows:
The primary circuit pump or double pump is inverter-controlled to regulate the flow and thereby reduce pumping power [P= f (Q^3)].
The customer provides the inverter pump/pumps to control the secondary one. In this case, Rhoss can control them and, therefore, there will be no limitations in their use.
VPF testing in the Rhoss R&D Lab, regardless of the solution, has shown that the amount of water is important to stabilise operation and reduce how often the cooling unit turns ON/OFF. A primary side external tank (TANK) is recommended, connected to the unit, with a minimum volume of 5 l/kW or less if the Tank&Pump inside the unit is used.
The probe for measuring the ΔP (information required to adjust the inverter pumps) is provided and positioned by the user in the hydraulic circuit.
Using 2-way "V2" valves for the terminals and a minimum number of 3-way "V3" valves is recommended to ensure a 20% minimum flow when the terminals are closed.

VPF solution by RHOSS
the new plant engineering frontier

Download the complete document:
http://www.rhoss.com/download

Download the video:
http://www.rhoss.com/download

Rhoss VPF Solution (Variable Primary Flow)

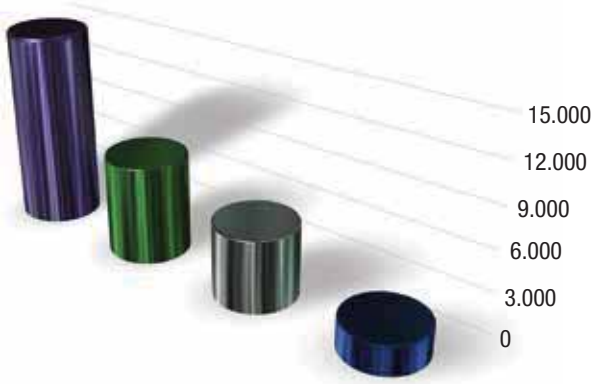


VPF RHOSS - The most efficient solution for variable flow systems

Comparison of the Rhoss VPF system and other pumping systems, when the load required changes.
Annual savings are very high in terms of energy and costs, in the Mediterranean area as well as in Central European cities, which are applicable to 100 kW cooling units installed in systems running 24/7 (hospitals, hotels, etc.).
The table indicates another important fact: the equivalent area of the photovoltaic system required to produce the electrical kW/h saved by the Rhoss system. This index shows how effective the proposed solution is.

	Annual energy consumed for pumping	Rhoss system savings	Surface area of photovoltaic system required to achieve the same savings as with the Rhoss system
	[kW/h]	[kW/h]	[m²]
Primary constant flow and constant secondary	14.903	86%	81
Primary constant flow and variable secondary	7.472	71%	34
Conventional VPF system	5.442	60%	21
Rhoss VPF system	2.166		

* Example of comparative results for 100 kW cooling unit installed in the plant with a variable load operating 24 hours a day (hospitals, hotels, etc.) in the northern Italy and central Europe climatic area.



Advantages of the RHOSS VPF solution:

1 **A stable, functional solution for system adjustment**

2 **Energetically advantageous solution with real pumping energy savings**

3 **Safe solution for the chiller**

4 **Validated solution even with multiple chillers connected in parallel**

RHOSS: worldwide solutions for energy efficiency

In commercial and residential buildings, often, the predominant part of consumption is represented by the energy required for summer and winter air conditioning and for the necessary air renewal and treatment.

The designer's role is all the more crucial when facing the energy challenges of the coming years and the research presented here is primarily an incentive to a systemic and comprehensive approach to the design of HVAC systems (Heating Ventilation and Air Conditioning).

The efficiency route

But how can the maximum possible reduction in fuel consumption and emissions, already in the design phase, be assessed?
A large building is a complex "body" consisting of a large number of elements and subsystems that interact with each other and with the external environment and that influence each other's performance. Using simplified simulation models that neglect these dynamic interactions are likely to lead to assessments that are often far from the actual energy performance.
This guide shows a few examples of the many results obtained from a major survey conducted by RHOSS in collaboration with researchers from the "Department of Energy of the POLYTECHNIC OF TURIN" and with the invaluable advice of Engineer Michele Vio (AiCARR past-president) for the identification of possible HVAC plant solutions aimed at achieving the best energy performance.


MILAN


LONDON


DUBAI


BARCELONA


MOSCOW


BERLIN


PARIS

Compared plant solutions

8 different types of plant were compared for each building: 4 primary air, 3 all-air VAV and 1 with a ceiling radiant system. The decisive factors between the different types of systems are the RH setting in the environment via the UTA cold coil, the flow of fresh air (fixed or variable with the presence of people), the project temperature of the fan-coils and its variability during the season and the possible presence of a Free-Cooling system assisted by direct adiabatic cooling (DAC). In addition, for each plant solution, 6 different technologies have been considered for the heat recovery from the exhaust air and 8 different technologies for the generators.

Step1

Step2

Step3

Step4

Step5

Step6
Solution

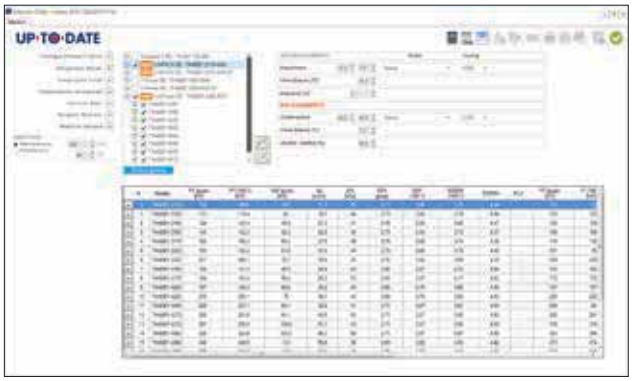
UP·TO·DATE

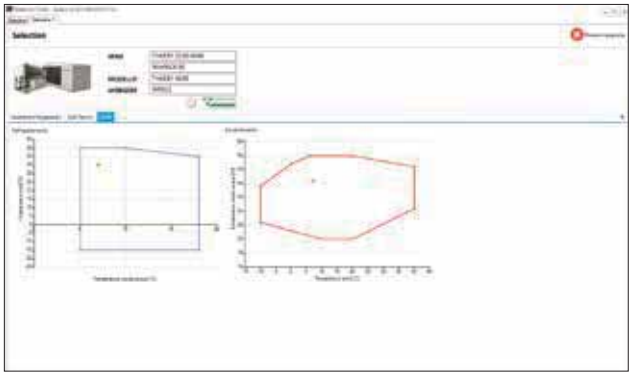
Readily available Rhoss solutions

UpToDate is the ideal tool for selecting the Rhoss product range and verify the technical data of each model. The integrated calculation engine requires the verification of feasibility of the proposed solution, the selection and technical dimensioning of the catalogue models.
A unique and fast way to always find the ideal solution for any application together with the high technology proposed by Rhoss products.

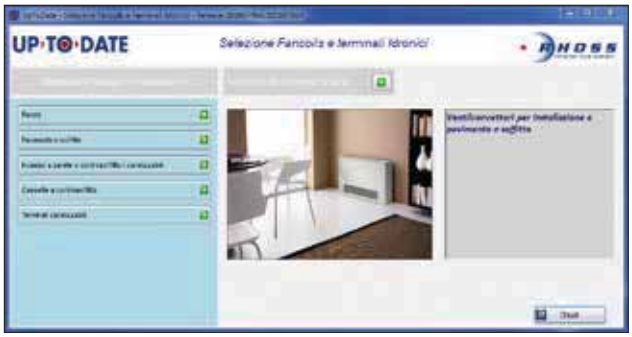
- Comprehensive instruments for choosing Rhoss products suitable for your needs.
- Fast search of Rhoss products.
- Always updated on the latest news.
- Detailed technical reports in 7 languages.
- Chiller sorter also available on tablets and smartphones as a WEB application.

CHILLER selection





Fan-coil and hydronic terminal selection




UP TO DATE
Dati Calcolati
Serie
Y-Power HE-A
Gamma
THAETY 4370-6660
Modello
THAETY 4370 DS ASP1
THAETY 4400 DS ASP1
THAETY 4440 DS ASP1
THAETY 5470 DS ASP1
100 elementi per pagina
1 - 8 di 8 elementi
Dettagli
Opzioni ed accessori montati a bordo
Accessori forniti separatamente
Stampa
Salva la selezione tecnica
Chiudi

Electa-ECO - THAITI 106÷116

Mini-Y NF - THAEY 105-111 NF

MidiPACK-I - TCAITY-THAITY 120÷130

Compact-Y NF Plus - THAETY 115-127 NF

Compact-Y SM - THAEY 122-130

MidiPACK-I - TCAITY-THAITY 138÷262

Compact-Y MD - TCAEY-THAEY 233-265

POKER - THAETY 234 H.T.

EASYPACK-I - TCAIY-THAIY 270-2130

EasyPACK - TCAEY-THAEY 269-2146

WinPACK HE-A - TCAEY-THAEY 2110-4340

WinPACK SE - TCAEY-THAEY 2110-4340

WinPACK-R HE-A - TCAETY-TCAEQY 4235-4370

WinPACK-R SE - TCAEBY-TCAESY 4225-4345

Y-Pack FREECOOLING - TFAEY-TGAEY 4160-4320

WinPOWER HE-A - TCAEY 4385-8920 / THAEY 4385-6700

WinPOWER SE - TCAEY 4360-8860 / THAEY 4360-6670

FullPOWER VFD - TCAITZ-TCAIQZ 2565-21005

FullPOWER VFD (1+i) - TCAITZ-TCAIQZ 2560-21310

FullPOWER HE-A - TCAVTZ-TCAVQZ 2345-21335

FullPOWER SE - TCAVBZ-TCAVSZ 2335-21275

Z-Power SE - TCAVZ 21400-21600

Z-Power FREECOOLING - TFAVBZ - TFAVIZ - TFAVSZ 2420-21100

Z-POWER HT & HTDC - TCAVBZ 2370-21290 HT / TCAVBZ 2370-21290 HTDC

TurboPOWER - TCATBZ-TCATTZ-TCATQZ 1300-31100

TurboPOWER ECO - TCATTE-TCATQE 1330-3950

CHILLERS - HEAT PUMPS

Air cooled - Axial fans

Web code: EE001

Electa-ECO

THAITI 106÷116

new

Cooling capacity: 4-13 kW - Heating capacity: 6-15.5 kW

INVERTER

Touch-screen control panel as standard

Electa-ECO THAITI 106-108

Electa-ECO THAITI 110-114-116

- Low GWP R32 refrigerant
- Energy class A+++ and A++
- Temperature of the produced water up to 60°C
- Domestic hot water production from –25°C to +45°C outdoor air
- Plant control system integrated in the heat pump
- Touch-screen control panel as standard
- APP for managing the unit via smartphone (iOS and Android)

Packaged reversible air-cooled heat pumps with axial fans.
Range with hermetic rotary DC Inverter compressors and R32 refrigerant gas.

Construction features

- Compressor: hermetic, twin rotary DC Inverter with steam injection, complete with thermal protection and casing heater
- Expansion valve: electronic.
- Water side heat exchanger: adequately insulated stainless steel plates, complete with antifreeze heater.
- Air side heat exchanger: finned coil with copper pipes and aluminium-manganese fins with Golden Fin anti-corrosion treatment in epoxy resin and hydrophilic treatment.
- Fan: axial type impeller with DC brushless motors, equipped with internal thermal protection, accident protection grilles and proportional electronic device for continuous fan rotation speed regulation.
- Structure: made of galvanised and painted steel plate RAL9002, complete with condensate drain pan and unit base antifreeze heater.
- Control: microprocessor electronic control with touch-screen control panel with remote control option, for integrated management of the heat pump and the heating system, according to the various requirements relating to the use of the energy sources.
  - 3-way diverter valve management for production of domestic hot water.
  - Rapid heating function for domestic hot water.
  - Anti-legionella cycle function, with activation timer.
  - Auxiliary or supplementary heat source management.
  - Operation in silent mode with timer.
  - Weekly and daily time bands.
  - Holiday mode and antifreeze function.
  - Power consumption limiting function.
  - 2-way on/off valve management for shutting off a part of the system, in heating or cooling mode.
  - Management through room thermostat, as an alternative to the touch-screen panel.
  - Unit activation from external contact (remote ON/OFF)
- Unit complete with:
  - Outdoor temperature probe for set-point compensation.
  - Remote ambient air temperature probe, for managing the unit according to the ambient set-point.
  - Water temperature probe for domestic hot water tank.
  - Water temperature probe for auxiliary or supplementary heat source.
  - Connection cable for touch-screen.
- RS485 interface for serial communication with other devices (Modbus RTU protocol).
- iOS and Android APP for managing the unit via smartphone and tablet.

Version

- T - High efficiency.

Models

- THAITI: heat pump unit.

PUMP set up

- Pump unit complete with: EC circulator, automatic air vent valve, safety valve, flow switch, expansion tank, water filter.

Separately supplied accessories

- 3-way valve for the management of domestic hot water, managed by regulation
- Additional electrical resistance, managed by regulation.
- Rubber anti-vibration mounts.

	THAITI MODEL		106 M	108 M	110 M	114 M	116 M	116 T
❶	Heating capacity	kW	6	7,5	10	14	15,5	15,5
❶	Absorbed power	kW	1,58	2,0	2,7	4,18	4,7	4,7
❶	C.O.P.		3,8	3,75	3,7	3,35	3,3	3,3
❷	Heating capacity	kW	6	7,5	10	14	15,5	15,5
❷	Absorbed power	kW	1,2	1,63	2,17	3,22	3,6	3,6
❷	C.O.P.		5	4,6	4,61	4,35	4,31	4,3
❸	Cooling capacity	kW	4	5	7,8	12	13	13
❸	Absorbed power	kW	1,29	1,61	2,48	4,14	4,91	4,73
❸	E.E.R.		3,1	3,1	3,15	2,9	2,65	2,75
❹	Sound pressure	dB(A)	38	39	43	44	46	46
❸	Available circulator head	kPa	69	66	77	50	42	42
	Electrical supply	V-ph-Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	400-3+N-50
	DIMENSIONS AND WEIGHT		**106 M**	**108 M**	**110 M**	**114 M**	**116 M**	**116 T**
	L - Width	mm	1150	1150	1200	1200	1200	1200
	H - Height	mm	758	758	878	878	878	878
	P - Depth	mm	345	345	460	460	460	460
❺	Weight	kg	109	109	166	166	166	166

Data at the following conditions:

❶ Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C.

❷ Air: 7°C D.B. - 6°C W.B. - Water: 30/35°C.

❸ Air: 35° D.B. - Water: 12/7°C.

❹ In open field (Q = 2) at 5 m from the unit.

❺ Weight refers to the most complete setup.

Performance according to EN 14511

	SEASONAL ENERGY PERFORMANCE		106 M	108 M	110 M	114 M	116 M	116 T
	THAITI MODEL SEASONAL PERFORMANCE IN HEATING MODE - Low temperature application 35°C							
③	Pdesignh (EN 14825)	kW	5	6	9	11	13	13
③	SCOP (EN 14825)		4,7	4,65	4,48	4,28	4,18	4,18
④	η_s	%	185	183	176	168	164	164
④	Energy class		A+++	A+++	A+++	A+++	A++	A++
	THAITI MODEL SEASONAL PERFORMANCE IN HEATING MODE - Medium temperature application 55°C							
③	Pdesignh (EN 14825)	kW	6	7	8	11	13	13
③	SCOP (EN 14825)		3,23	3,25	3,23	3,2	3,2	3,2
④	η_s	%	126	127	126	125	125	125
④	Energy class		A++	A++	A++	A++	A++	A++

③ In Average climatic conditions.

④ Seasonal energy efficiency: heating in Average climate (EU Regulations No.811/2013 and No.813/2013)

Web code: **MYN01**

Mini-Y NF

THAEY 105-111 NF

Cooling capacity: 5.6÷11.3 kW - Heating capacity: 5.7÷11.8 kW

- **Compact units and Plug&Play**
- **Hot water up to –15°C outdoor air**

Packaged reversible air-cooled heat pumps with axial fans.
Range with hermetic scroll compressors and R410A refrigerant gas.

Construction features

- Compressor: hermetic, rotary scroll type, complete with thermal protection.
- Water side heat exchanger: adequately insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch.
- Air side heat exchanger: featuring finned coil with copper pipes and aluminium fins with hydrophilic treatment and complete with protective mesh.
- Fan: external rotor axial type electric fans equipped with internal thermal protection, accident protection grilles and proportional electronic device for continuous fan rotation speed regulation.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: made of galvanised and painted steel plate, complete with condensate drain pan and unit base antifreeze heater.

Models

- THAEY: heat pump unit.

PUMP set up

- Pump unit complete with: circulator, membrane expansion tank, manual air vent valve, safety valve.

TANK&PUMP set up

- Pump unit complete with: inertial buffer tank, circulator, membrane expansion tank, manual air vent valve, automatic air vent valve, safety valve.

Factory fitted accessories

- Soft-start device (for models with 230V power supply).
- Compressor casing heater.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Low water set-point temperature.

Separately supplied accessories

- 3-way valve for the production of domestic hot water.
- Additional electrical resistance for heat pump, managed by regulation.
- Outdoor air temperature probe for set-point compensation.
- Rubber anti-vibration mounts.
- Water filter.
- Antifreeze heater on the tank.
- Remote keypad with display.
- Clock board.
- Interfaces for serial communication with other devices.
- Serial converter (RS485/USB).
- Rhoss supervisors for unit monitoring and remote management.

	THAEY NF MODEL		105	107	109	111
❶	Heating capacity	kW	5,71	7,33	9,3	11,35/11,8
❶	Absorbed power	kW	2,19	2,84	3,5	4,65/5,65
❶	C.O.P.		2,61	2,58	2,66	2,44/2,09
❷	Heating capacity	kW	5,9	7,7	9,4	11,9/12,3
❷	Absorbed power	kW	1,68	2,07	2,63	3,30/3,30
❷	C.O.P.		3,52	3,72	3,58	3,61/3,73
❸	Heating capacity	kW	3,8	4,6	6,1	7,3/7,3
❸	Absorbed power	kW	1,65	2,13	2,69	3,35/3,38
❸	C.O.P.		2,3	2,16	2,27	2,18/2,16
❹	Cooling capacity	kW	5,6	7	9	10,9/11,3
❹	E.E.R.		2,71	2,58	2,64	2,62/2,61
❺	Sound pressure	dB(A)	46	47	47	47
	Scroll/step compressor	no.	1/1	1/1	1/1	1/1
	Buffer tank water content	l	19	19	30	30
❹	Available circulator head	kPa	55	55	85	75
	Electrical supply	V-ph-Hz	230-1-50	230-1-50 / 400-3+N-50	230-1-50 / 400-3+N-50	230-1-50 / 400-3+N-50
	DIMENSIONS AND WEIGHT		**105**	**107**	**109**	**111**
	L - Width	mm	990	990	990	990
	H - PUMP height	mm	905	905	1085	1085
	H - TANK&PUMP height	mm	905	905	1295	1295
	P - Depth	mm	380	380	380	380
❻	Weight	kg	141	143	167	176

Data at the following conditions:

❶ Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C.

❷ Air: 7°C D.B. - 6°C W.B. - Water: 30/35°C.

❸ Air: -7°C D.B. - Water: 30/35°C.

❹ Air: 35° D.B. - Water: 12/7°C.

❺ In open field (Q = 2) at 5 m from the unit.

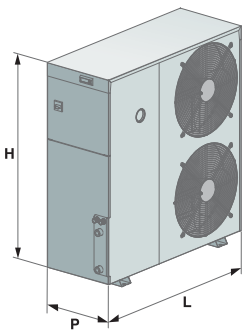
❻ Weight refers to the most complete setup.

Performance according to EN 14511

	SEASONAL ENERGY PERFORMANCE		105	107	109	111
	THAEY NF MODEL SEASONAL PERFORMANCE IN HEATING MODE					
③	Pdesignh (EN 14825)	kW	6	7	9	11
③	SCOP (EN 14825)		3,2	3,31	3,2	3,3
④	η_s	%	125	129	125	129
④	Energy class		A+	A+	A+	A+

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)



MidiPACK-I

TCAITY-THAITY 120÷130

new

Cooling capacity: 18,8÷29,3 kW - Heating capacity: 20÷30,4 kW

INVERTER

ErP READY 2021 APPLIES TO EUROPEAN DIRECTIVE FOR ENERGY RELATED PRODUCTS

- Hot water up to –15°C outdoor air
- Temperature of the produced water up to 60°C
- Version with pump or with pump and storage tank
- Integrated MASTER/SLAVE control

Water chillers and packaged reversible air-cooled heat pumps with axial fans. Range with scroll hermetic compressors, DC Inverter and R410A refrigerant gas.

Construction features

- Compressor: scroll type, rotary, hermetic with Inverter actuation, complete with thermal protection and casing heater.
- Water side heat exchanger: adequately insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch.
- Air side heat exchanger: featuring finned coil with copper pipes and aluminium fins for TCAITY with hydrophilic treatment for THAITY, complete with protection grilles.
- Fan: external rotor axial type electric fans equipped with internal thermal protection, accident protection grilles and proportional electronic device for continuous fan rotation speed regulation.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: made of galvanised and painted steel plate, complete with condensate drain pan and unit base antifreeze heater for THAITY.
- The unit is also complete with:
  - outdoor air temperature probe for set-point compensation;
  - electronic expansion valve;
  - display of cooling circuit high and low pressure;
  - Master/Slave control up to 4 units in parallel;
  - clock board.

Version

T - High efficiency.

Models

TCAITY: unit designed for cooling only.
THAITY: heat pump unit.

PUMP set up

- Pump unit complete with: EC circulator with 3 speed selector or continuous speed regulation or electric pump, membrane expansion tank, manual air vent valve, safety valve and pressure gauge.

TANK&PUMP set up

- Pump unit complete with: inertial buffer tank, circulator or electric circulation pump, membrane expansion tank, manual air vent valve, safety valve, and pressure gauge.

Factory fitted accessories

- Forced Download. Compressor partialisation or switch-off to limit power and current consumption (digital input).
- –10°C condensing control with fans with EC motor.
- Silenced set up.
- Antifreeze heater on the tank.
- Circulator/electric pump antifreeze heater.
- Pre-painted copper/coils or copper/copper coils.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.

Separately supplied accessories

- 3-way valve for the production of domestic hot water, managed by regulation.
- Additional electrical resistance for heat pump, managed by regulation.
- Remotely controllable outdoor air temperature probe for set-point compensation.
- Water filter.
- Rubber anti-vibration mounts.
- Remote keypad with display.
- Interfaces for serial communication with other devices.
- RS485/USB serial converter.
- Rhoss supervisors for unit monitoring and remote management.

	TCAITY MODEL		120	125	130
❶	Cooling capacity	kW	18,8	25,2	29,3
❶	Absorbed power	kW	6,53	8,72	10,17
❶	E.E.R.		2,88	2,89	2,88
	THAITY MODEL		**120**	**125**	**130**
❷	Heating capacity	kW	20	25,6	30,4
❷	Absorbed power	kW	6,15	7,83	9,5
❷	C.O.P. NOM		3,25	3,27	3,2
❸	Heating capacity	kW	21,1	26,1	30,7
❸	Absorbed power	kW	5,2	6,41	7,62
❸	C.O.P.		4,06	4,07	4,03
❹	Heating capacity	kW	14,8	18,1	21,3
❹	Absorbed power	kW	4,92	6,51	7,61
❹	C.O.P.		3,01	2,78	2,8
❶	Cooling capacity	kW	18,5	24,1	28,3
❶	E.E.R.		2,7	2,75	2,71
	TCAITY-THAITY MODEL		**120**	**125**	**130**
❺	Sound pressure	dB(A)	47	50	51
❶	P0 circulator available head	kPa	77	80	67
	Buffer tank water content	l	110	110	110
	Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50
	DIMENSIONS AND WEIGHT		**120**	**125**	**130**
	L - PUMP width	**mm**	**1522**	**1522**	**1522**
	L - TANK&PUMP width	mm	1625	1625	1625
	H - PUMP height	mm	1280	1280	1280
	H - TANK&PUMP height	mm	1590	1590	1590
	P - PUMP Depth	mm	600	600	600
	P - TANK&PUMP Depth	mm	600	600	600
❻	PUMP Weight	kg	245	265	275
❻	TANK&PUMP Weight	kg	445	465	475

Data at the following conditions:

❶ Air: 35° D.B. - Water: 12/7°C.

❷ Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C.

❸ Air: 7°C D.B. - 6°C W.B. - Water: 30/35°C.

❹ Air: -7°C D.B. - Water: 30/35°C.

❺ In open field (Q = 2) at 5 m from the unit.

❻ Weight refers to the most complete setup.

Performance according to EN 14511. P0 setup.

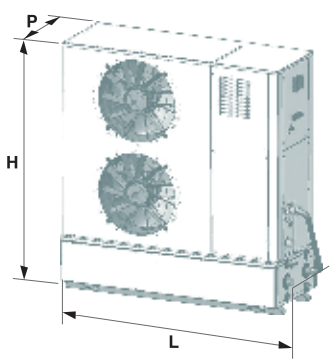
	SEASONAL ENERGY PERFORMANCE		120	125	130
	TCAITY MODEL SEASONAL PERFORMANCE IN COOLING MODE				
①	**Pdesignc (EN 14825)**		18,8	25,2	29,3
①	SEER (EN 14825)		4,31	4,33	4,29
②	$\eta_{s,c}$	%	169	170	169
	THAITY MODEL SEASONAL PERFORMANCE IN HEATING MODE				
③	**Pdesignh (EN 14825)**		21	**26**	**30**
③	SCOP (EN 14825)		4,18	3,63	3,88
④	η_s	%	164	142	152
④	Energy class		A++	A+	A++

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)



TANK&PUMP

Web code: **CYP01**

Compact-Y NF Plus

THAETY 115-127 NF

Cooling capacity: 15.5÷26.6 kW - Heating capacity: 16.6÷30.4 kW

- **Hot water up to –15°C outdoor air**
- **Temperature of the produced water up to 60°C**
- **Plug&Play unit with integrated hydraulic module**
- **Included evaporating/ condensing control**

Packaged reversible air-cooled heat pumps with axial fans.
Range with hermetic scroll compressors and R410A refrigerant gas.

Construction features

- Compressor: hermetic, rotary scroll compressor, complete with thermal protection and casing heater for mod. 127.
- Water side heat exchanger: adequately insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch.
- Air side heat exchanger: featuring finned coil with copper pipes and aluminium fins with hydrophilic treatment and complete with protection grille.
- Fan: external rotor axial type electric fans equipped with internal thermal protection, accident protection grilles and proportional electronic device for continuous fan rotation speed regulation.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: made of galvanised and painted steel plate, complete with condensate drain pan and unit base antifreeze heater.

Version

- T - High efficiency/temperature version.

Models

- THAETY: heat pump unit.

PUMP set up

- Pump unit complete with: circulator or electric circulation pump, membrane expansion tank, manual air vent valve, safety valve and pressure gauge.

TANK&PUMP set up

- Pump unit complete with: inertial buffer tank, circulator or electric circulation pump, membrane expansion tank, manual air vent valve, automatic air vent valve, safety valve, and pressure gauge.

Factory fitted accessories

- Soft-start device.
- Silenced set up.
- Antifreeze heater on the tank.
- Compressor casing heater (mod. 115÷124).
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Low water set-point temperature.

Separately supplied accessories

- 3-way valve for the production of domestic hot water, managed by regulation.
- Additional electrical resistance for heat pump, managed by regulation.
- Outdoor air temperature probe for set-point compensation.
- Rubber anti-vibration mounts.
- Water filter.
- Remote keypad with display.
- Clock board.
- Interfaces for serial communication with other devices.
- Serial converter (RS485/USB).
- Rhoss supervisors for unit monitoring and remote management.

	THAETY NF MODEL		115	117	122	124	127
❶	Heating capacity	kW	16,6	17,7	23,4	25,9	30,4
❶	Absorbed power	kW	5,72	6,32	8,18	9,08	10,03
❶	C.O.P.		2,9	2,8	2,86	2,85	3,03
❷	Heating capacity	kW	18	19	24,8	27,8	32,3
❷	Absorbed power	kW	4,33	4,53	5,9	6,59	7,58
❷	C.O.P.		4,16	4,19	4,2	4,22	4,26
❸	Heating capacity	kW	11,7	12	15,7	17,9	20,8
❸	C.O.P.		2,77	2,77	2,8	2,77	2,84
❹	Cooling capacity	kW	15,5	17,6	22,5	23,9	26,6
❹	Absorbed power	kW	5,81	6,62	8,14	9,45	10,11
❹	E.E.R.		2,67	2,66	2,75	2,53	2,63
❺	Sound pressure	dB(A)	50	50	52	52	53
❺	Silenced setup sound pressure	dB(A)	46	46	49	49	50
	Scroll/step compressor	no.	1/1	1/1	1/1	1/1	1/1
	Buffer tank water content	l	35	35	45	45	45
❹	P0 circulator/P1 electric pump nominal available head	kPa	75/147	64/136	66/131	69/130	63/116
	Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
	DIMENSIONS AND WEIGHT		**115**	**117**	**122**	**124**	**127**
	L - PUMP width	mm	1230	1230	1230	1230	1535
	L - TANK&PUMP width	mm	1522	1522	1522	1522	1822
	H - Height	mm	1090	1090	1280	1280	1510
	P - Depth	mm	580	580	600	600	695
❻	Weight	kg	215	225	278	288	320

Data at the following conditions:

❶ Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C.

❷ Air: 7°C D.B. - 6°C W.B. - Water: 30/35°C.

❸ Air: -7°C D.B. - Water: 30/35°C.

❹ Air: 35° D.B. - Water: 12/7°C.

❺ In open field (Q = 2) at 5 m from the unit.

❻ Weight refers to the most complete setup.

Performance according to EN 14511. Setup with circulator.

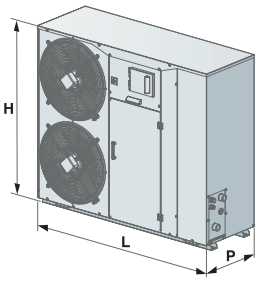
Important note:

- With circulator (P0/ASP0 setup) the units are not suitable for radiant cooling operation.
- Permissible heat exchanger thermal gradient ΔT = 4-8°C.

	SEASONAL ENERGY PERFORMANCE		115	117	122	124	127
	THAETY NF MODEL SEASONAL PERFORMANCE IN HEATING MODE						
③	Pdesignh (EN 14825)	kW	18	18	24	27	32
③	SCOP (EN 14825)		3,62	3,74	3,72	3,74	3,68
④	η_s	%	142	146	146	146	144
④	Energy class		A+	A+	A+	A+	A+

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)



Web code: **CY001**

Compact-Y SM

THAEY 122-130

Cooling capacity: 22.7÷29 kW - Heating capacity: 23.5÷34 kW

- **Plug&Play unit with integrated hydraulic module**

Packaged reversible air-cooled heat pumps with axial fans. Range with hermetic scroll compressors and R410A refrigerant gas.

Construction features

- Compressor: hermetic, rotary scroll compressor, complete with thermal protection and casing heater for mod. 127÷130.
- Water side heat exchanger: adequately insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch.
- Air side heat exchanger: finned coil with copper pipes and aluminium fins, complete with protection grilles.
- Fan: external rotor axial type electric fans equipped with internal thermal protection and accident protection grilles.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: in galvanised and painted steel plate, complete with condensate drain pan.

Models

- THAEY: heat pump unit.

PUMP set up

- Pump unit complete with: circulator or electric circulation pump, membrane expansion tank, manual air vent valve, safety valve and pressure gauge.

TANK & PUMP set up

- Pump unit complete with: inertial buffer tank, circulator or electric circulation pump, membrane expansion tank, manual air vent valve, automatic air vent valve, safety valve, and pressure gauge.

Factory fitted accessories

- Soft-start device.
- Silenced set up.
- –10°C condensing control.
- Antifreeze heater on the buffer tank.
- Compressor casing heater (mod. 122).
- Unit base antifreeze heater for operation in heat pump mode at low outdoor air temperatures.
- Digital input for double set-point
- 4-20 mA analogue signal for shifting set-point.
- Low water set-point temperature.
- Pre-painted copper/coils or copper/copper coils.

Separately supplied accessories

- Rubber anti-vibration mounts.
- –10°C condensing control.
- Water filter.
- 3-way valve for the production of domestic hot water.
- Outdoor air temperature probe for set-point compensation.
- Additional electrical resistance for heat pump, managed by regulation.
- Remote keypad with display.
- Clock board.
- Interfaces for serial communication with other devices.
- Serial converter (RS485/USB).
- Rhoss supervisors for unit monitoring and remote management.

	THAEY MODEL		122	127	130
❶	Heating capacity	kW	23,5	30,3	34
❶	Absorbed power	kW	7,94	10,16	11,25
❶	C.O.P.		2,96	3,02	3,02
❷	Heating capacity	kW	24	30,9	34,5
❷	C.O.P.		3,75	3,80	3,72
❸	Cooling capacity	kW	22,7	26,7	29
❸	Absorbed power	kW	7,99	10,23	11,84
❸	E.E.R.		2,84	2,64	2,45
❹	Sound pressure	dB(A)	52	53	53
❹	Silenced setup sound pressure	dB(A)	49	50	50
	Scroll/step compressor	no.	1/1	1/1	1/1
	Circuits	no.	1	1	1
	Buffer tank water content	l	45	45	45
❸	Circulator/standard electric pump nominal available head	kPa	64/131	61/116	57/112
	Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50
	DIMENSIONS AND WEIGHT		**122**	**127**	**130**
	L - PUMP width	mm	1230	1535	1535
	W - TANK & PUMP width	mm	1522	1822	1822
	H - Height	mm	1280	1510	1510
	P - Depth	mm	600	695	695
❺	THAEY weight	kg	278	320	380

Data at the following conditions:

❶ Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C.

❷ Air: 7°C D.B. - 6°C W.B. - Water: 30/35°C.

❸ Air: 35°C - Water: 12/7°C.

❹ In open field (Q = 2) at 5 m from the unit.

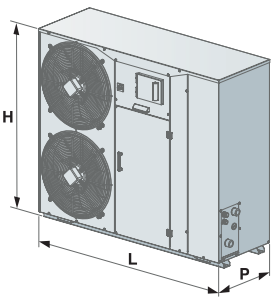
❺ Weight refers to the most complete setup.

Performance according to EN 14511. Setup with electric pump.

	SEASONAL ENERGY PERFORMANCE		122	127	130
	THAEY MODEL SEASONAL PERFORMANCE IN HEATING MODE				
③	Pdesignh (EN 14825)	kW	24	32	36
③	SCOP (EN 14825)		3,21	3,26	3,2
④	η_S	%	125	127	125
④	Energy class		A+	A+	A+

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)



MidiPACK-I

TCAITY-THAITY 138÷262

new

Cooling capacity: 37,4÷62,6 kW - Heating capacity: 40,2÷71 kW

INVERTER

ErP READY 2021 APPLIES TO EUROPEAN DIRECTIVE FOR ENERGY RELATED PRODUCTS

- Hot water up to –15°C outdoor air
- Temperature of the produced water up to 60°C
- Plug&Play unit with integrated hydraulic module
- Optional EC fans and inverter-based circulation pump
- Multi-purpose for systems with 2 pipes + DHW (with optional RC100)
- Integrated MASTER/ SLAVE control

Water chillers and packaged reversible air-cooled heat pumps with axial fans.
Range with scroll hermetic compressors, DC Inverter and R410A refrigerant gas.

Construction features

- Compressor: scroll type, rotary, hermetic with Inverter actuation, complete with thermal protection and casing heater.
- Water side heat exchanger: adequately insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch.
- Air side heat exchanger: finned coil with copper pipes and aluminium fins, complete with protection grilles.
- Fan: external rotor axial type electric fans equipped with internal thermal protection, accident protection grilles and proportional electronic device for continuous fan rotation speed regulation.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: made of galvanised and painted steel plate
- The unit is also complete with:
  - outdoor air temperature probe for set-point compensation;
  - display of cooling circuit high and low pressure;
  - electronic expansion valve;
  - Master/Slave control up to 4 units in parallel;
  - clock board.

Version

T - High efficiency.

Models

TCAITY: unit designed for cooling only.
THAITY: heat pump unit.

PUMP set up

Pump unit with single or double electric pump, including an automatic actuation pump in standby, complete with expansion tank, air vent valves, safety valve and water side pressure gauge. The pumps are available in low or high pressure head versions, and with INVERTER operation.

TANK&PUMP set up

- Pump unit complete with inertial buffer tank and single or double electric pump, including an automatic actuation pump in standby, complete with expansion tank, air vent valves, safety valve and water side pressure gauge. The pumps are available in low or high pressure head versions, and with INVERTER operation.

Factory fitted accessories

- Pre-painted copper/aluminium coils with hydrophilic treatment or copper/copper.
- Desuperheater.
- 100% heat recovery unit.
- 3-way diverter valve for the production of domestic hot water, managed by regulation.
- –10°C condensing control with fans with EC motor.
- Base antifreeze heater
- Antifreeze heater for buffer tank and electric pumps
- Forced Download. Compressor partialisation or switch-off to limit power and current consumption (digital input).
- Refrigerant leak detector
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Energy parameters measurement.
- Silenced set up.
- Cooling circuit high and low pressure gauges.

Separately supplied accessories

- 3-way valve for the production of domestic hot water, managed by regulation.
- Remotely controllable outdoor air temperature probe for set-point compensation.
- Additional electrical resistance for heat pump, managed by regulation.
- Rubber anti-vibration mounts.
- Water filter.
- Thermostat with display.
- Remote keypad with display.
- Interfaces for serial communication with other devices.
- Serial converter (RS485/USB).
- Rhoss supervisors for unit monitoring and remote management.

	TCAITY MODEL		138	146	154	262
❶	Cooling capacity	kW	37,4	47,7	55,1	62,6
❶	Absorbed power	kW	13,6	16,1	18,4	22,8
❶	E.E.R.		2,76	2,97	2,99	2,75
	THAITY MODEL		**138**	**146**	**154**	**262**
❷	Heating capacity	kW	40,2	52,1	58,7	71
❷	Absorbed power	kW	12,5	16,2	18,2	22,2
❷	C.O.P.		3,21	3,22	3,23	3,2
❸	Heating capacity	kW	40,2	54,2	60,4	74
❸	Absorbed power	kW	10,3	14,3	15,9	20,2
❸	C.O.P.		3,91	3,8	3,81	3,67
❹	Heating capacity	kW	28,3	38,6	42,3	51
❹	Absorbed power	kW	9,7	13,4	14,9	19,5
❹	C.O.P.		2,92	2,89	2,83	2,62
❶	Cooling capacity	kW	36,7	46,1	54	61,4
❶	E.E.R.		2,69	2,9	2,92	2,7
	TCAITY-THAITY MODEL		**138**	**146**	**154**	**262**
❺	Sound pressure	dB(A)	54	55	55	57
	Scroll compressor	no.	1-inverter	1-inverter	1-inverter	1-inverter + 1
	Circuits	no.	1	1	1	1
	Buffer tank water content (TANK&PUMP)	l	80	150	150	150
❶	Basic head pump nominal available head (TCAITY)	kPa	124	98	107	111
	Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
	DIMENSIONS AND WEIGHT		**138**	**146**	**154**	**262**
	L - Width	**mm**	**1660**	**2315**	**2315**	**2315**
	H - Height	mm	1570	1570	1570	1570
	P - Depth	mm	1000	1000	1000	1000
❻	TCAITY weight	kg	540	635	695	825
❻	THAITY weight	kg	550	655	725	845

Data at the following conditions:

❶ Air: 35° D.B. - Water: 12/7°C.

❷ Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C.

❸ Air: 7°C D.B. - 6°C W.B. - Water: 30/35°C.

❹ Air: -7°C D.B. - Water: 30/35°C.

❺ In open field (Q = 2) at 5 m from the unit.

❻ Weight refers to the most complete setup.

Performance according to EN 14511.

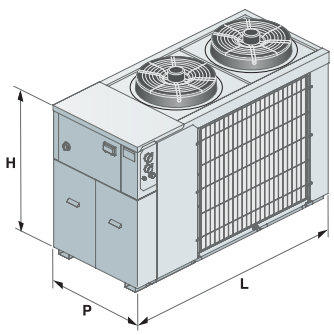
	SEASONAL ENERGY PERFORMANCE		138	146	154	262
	TCAITY MODEL SEASONAL PERFORMANCE IN COOLING MODE					
①	**Pdesignc (EN 14825)**			**47,7**	**55,1**	**62,6**
①	SEER (EN 14825)		4,33	4,31	4,27	4,31
②	$\eta_{s,c}$	%	170	169	168	169
	THAITY MODEL SEASONAL PERFORMANCE IN HEATING MODE					
③	**Pdesignh (EN 14825)**			**54**	**60**	**75**
③	SCOP (EN 14825)		3,9	3,85	3,84	4,19
④	η_s	%	153	151	150	165
④	Energy class		A++	A++	A++	A++

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)



Web code: **CY011**

Compact-Y MD

TCAEY-THAEY 233-265

Cooling capacity: 32.3÷63.7 kW - Heating capacity: 37.8÷68.3 kW

- **3 capacity steps (mod. 245÷265)**
- **HT65 version for 65°C water production (°)**

(°) Refer to the specific documentation to check available models and accessories.

Water chillers and packaged reversible air-cooled heat pumps with axial fans.
Range with hermetic scroll compressors and R410A refrigerant gas.

Construction features

- Compressor: hermetic, rotary scroll type, complete with thermal protection and casing heater. 3 capacity steps with high efficiency at partial loads for models 245÷265.
- Water side heat exchanger: adequately insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch.
- Air side heat exchanger: finned coil with copper pipes and aluminium fins, complete with protection grilles.
- Fan: external rotor helical type electric fan equipped with internal thermal protection, accident protection grilles and proportional electronic device for continuous fan speed regulation.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: made of galvanised and painted sheet steel.

Models

- TCAEY: unit designed for cooling only.
- THAEY: heat pump unit.

Factory fitted accessories

PUMP with single or double electric pump (mod. 245÷265) including an automatic pump in standby, complete with expansion tank, air vent valves, safety valve and water side pressure gauge. The electric pumps are available in the low or high pressure head versions.

- TANK&PUMP with inertial buffer tank and single or double electric pump (mod. 245÷265) including an automatic pump in standby, complete with expansion tank, air vent valves, safety valve and water side pressure gauge. The electric pumps are available in the low or high pressure head versions.
- Soft-start device.
- Silenced set up.
- 15% desuperheater.
- 100% heat recovery unit.
- Cooling circuit high and low pressure gauges (mod. 245-265).
- Antifreeze heater for buffer tank and electric pumps (mod. 245-265).
- Digital input for double set-point
- 4-20 mA analogue signal for shifting set-point.
- Low water set-point temperature.
- Pre-painted copper/coils or copper/copper coils.

Separately supplied accessories

- Outdoor air temperature probe for set-point compensation.
- Additional electrical resistance for heat pump, managed by regulation.
- Rubber anti-vibration mounts.
- Water filter.
- Remote keypad with display.
- Clock board.
- Interfaces for serial communication with other devices.
- Serial converter (RS485/USB).
- Rhoss supervisors for unit monitoring and remote management.

	TCAEY MODEL		233	238	245	250	260	265
❶	Cooling capacity	kW	32,3	38,5	44	51	58,9	63,7
❶	Absorbed power	kW	12,47	13,05	17,67	19,92	22,4	24,31
❶	E.E.R.		2,59	2,95	2,50	2,55	2,63	2,62
	THAEY MODEL							
❷	Heating capacity	kW	37,8	42,1	48,1	56,2	62,6	68,3
❷	Absorbed power	kW	12,54	13,19	16,82	18,97	20,86	23,71
❷	C.O.P.		3,01	3,19	2,86	2,96	3	2,88
❶	Cooling capacity		32,3	38,5	42,3	50,3	57,8	61,6
❶	E.E.R.		2,59	2,95	2,49	2,68	2,64	2,54
	TCAEY-THAEY MODEL		**233**	**238**	**245**	**250**	**260**	**265**
❸	Sound pressure	dB(A)	54	54	56	56	57	57
❸	Silenced setup sound pressure	dB(A)	51	51	53	53	54	54
	Scroll/step compressor	no.	2/2	2/2	2/3	2/3	2/3	2/3
	Circuits	no.	1	1	1	1	1	1
	Buffer tank water content (TANK&PUMP)	l	80	150	150	150	150	150
❶	Available nominal head of standard electric pump	kPa	106	87	113	103	88	75
	Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
	DIMENSIONS AND WEIGHT		**233**	**238**	**245**	**250**	**260**	**265**
	L - Width	mm	1660	2315	2315	2315	2315	2315
	H - Height	mm	1570	1570	1570	1570	1570	1570
	P - Depth	mm	1000	1000	1000	1000	1000	1000
❹	TCAEY weight	kg	465	625	725	750	775	820
❹	THAEY weight	kg	475	645	745	770	795	840

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C.

❷ Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C.

❸ In open field (Q = 2) at 5 m from the unit.

❹ Weight refers to the most complete setup.

Performance according to EN 14511

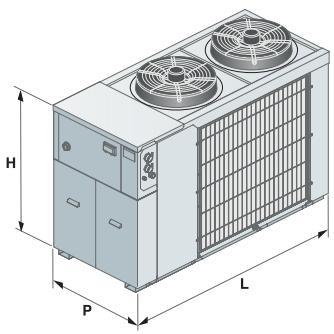
	SEASONAL ENERGY PERFORMANCE		233	238	245	250	260	265
	TCAEY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
①	Pdesignc (EN 14825)	kW	32,3	38,5	43,9	51	58,8	63,7
①	SEER (EN 14825)		3,9	3,96	4	4,09	4,06	4,04
②	$\eta_{s,c}$	%	153	155	157	160	159	159
	THAEY MODEL SEASONAL PERFORMANCE IN HEATING MODE							
③	Pdesignh (EN 14825)	kW	36	41	49	56	62	70
③	SCOP (EN 14825)		3,72	3,72	3,61	3,58	3,56	3,66
④	η_s	%	146	146	141	140	140	144
④	Energy class		A+	A+	A+	A+	A+	A+

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)



Web code: **PK001**

POKER

THAETY 234 H.T.

Cooling capacity: 28.8÷115.2 kW - Heating capacity: 33.8÷135.2 kW

- **Modular range: up to 4 units may be combined**
- **Total system redundancy with multiple modules installed**
- **Cascade management including DHW with multiple modules installed**
- **Hot water production from -20°C to 40°C outdoor air**
- **Temperature of the produced water up to 60°C**

Modular reversible heat pumps for high temperature water production, air cooled with axial fans.
Range with hermetic scroll compressors and R410A refrigerant gas.

Construction features

- Compressors: hermetic scroll type rotary compressors with steam injection, thermal protection and casing heater.
- Water side heat exchanger: adequately insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch.
- Air side heat exchanger: finned coil heat exchanger, with copper pipes and aluminium fins with hydrophilic treatment.
- Fan: external rotor helical type electric fan and permanent magnet motor (EC brushless) for electronic speed control, equipped with internal thermal protection and accident protection grilles.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: suitably sound-proofed, galvanised and painted steel plate, complete with antifreeze heater on the condensate drain pan.
- The unit is also complete with:
  - outdoor air temperature probe for set-point compensation;
  - display of cooling circuit high and low pressure;
  - clock board.

Version

T - High efficiency/temperature version.

Set ups

- PUMP P1 - Unit complete with: electric circulation pump and manual air vent valve.
- PUMP P1 V3V - Unit complete with: electric circulation pump, manual air vent valve, 3-way diverter valve for the production of domestic hot water.
- PUMP P1 DS - Unit complete with: electric circulation pump to the main heat exchanger, manual air vent valve and desuperheater complete with antifreeze heater.

Separately sold kits are MANDATORY

- Remote keypad with back-lit LCD display, which can be wall-mounted or installed on the machine.
- Side buffer panels.

Separately sold kits are MANDATORY

when multiple modules are installed in parallel

- Connection hoses between modules.
- Panels and telephone cables for module connection.

Factory fitted accessories

- Forced Download. Compressor partialisation or switch-off to limit power and current consumption (digital input). When multiple modules are connected in parallel, a KCSC accessory must be purchased in order to enable this signal.
- Set up with oversized head pump.
- Soft-Start device.
- Unit with copper/pre-painted aluminium or copper/copper condensation coils.
- Flow switch and hot wire heaters protecting pump and piping down to -20°C outdoor air.
- Silenced set up (muffled compressors).
- Cooling circuit high and low pressure gauges.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.

Separately supplied accessories

- Digital input and output concentrator (KCSC).
- Rubber anti-vibration mounts.
- Water filter.
- Right-hand connection kit.
- 3-way diverter valve to manage the production of domestic hot water complete with protective casing and hoses for machine connection. For downstream installation of the group of machines. Not compatible with PUMP V3V set up.
- Additional electrical resistance for heat pump managed by regulation.
- Interfaces for serial communication with other devices.
- Serial converter (RS485/USB).
- Rhoss supervisors for unit monitoring and remote management.

THAETY H.T. MODEL			234		
		1 module	2 modules	3 modules	4 modules
❶ Heating capacity	kW	33,8	67,6	101,4	135,2
❶ Absorbed power	kW	9,85	19,71	29,56	39,42
❶ C.O.P.		3,42	3,42	3,42	3,42
❷ Heating capacity	kW	23,49	46,98	70,47	93,96
❷ Absorbed power	kW	9,83	19,66	29,48	39,31
❷ C.O.P.		2,39	2,39	2,39	2,39
❸ Heating capacity	kW	33,9	67,88	101,82	135,76
❸ Absorbed power	kW	8,11	16,24	24,36	32,48
❸ C.O.P.		4,18	4,18	4,18	4,18
❹ Cooling capacity	kW	28,8	57,6	86,4	115,2
❹ E.E.R.		2,93	2,93	2,93	2,93
❺ Sound pressure	dB(A)	43	46	47	48
❺ Silenced setup sound pressure	dB(A)	41	44	45	46
Scroll/step compressor	no.	2/2	4/4	6/6	8/8
❹ Electric pump nominal available head	kPa	137	137	137	137
Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50
DIMENSIONS AND WEIGHT		**1 module**	**2 modules**	**3 modules**	**4 modules**
L - Width	mm	1297	2541	3785	5029
H - Height	mm	2152	2152	2152	2152
P - Depth	mm	1224	1224	1224	1224
❻ Weight	kg		510 (with single module)		

Data at the following conditions:

❶ Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C.

❷ Air: -7°C D.B. - Water: 40/45°C.

❸ Air: 7°C D.B. - 6°C W.B. - Water: 30/35°C.

❹ Air: 35° D.B. - Water: 12/7°C.

❺ In open field (Q = 2) at 10 m from the unit.

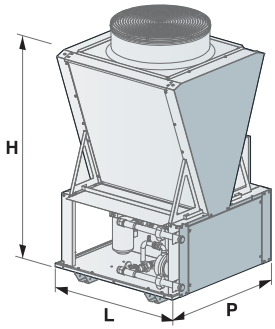
❻ Weight refers to P1 DS setup.

Performance according to EN 14511

SEASONAL ENERGY PERFORMANCE			234		
		1 module	2 modules	3 modules	4 modules
THAETY H.T. MODEL SEASONAL PERFORMANCE IN HEATING MODE					
③ Pdesignh (EN 14825)	kW	32	65	98	131
③ SCOP (EN 14825)		3,94	4,00	4,07	4,12
④ η_S	%	155	157	160	165
④ Energy class		A++	A++	-	-

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)



Web code: EAI01

EASYPACK-I

TCAIY-THAIY 270-2130

Cooling capacity: 67.1÷130.4 kW - Heating capacity: 71.2÷134.6 kW

INVERTER

ErP READY 2021 APPLIES TO EUROPEAN DIRECTIVE FOR ENERGY RELATED PRODUCTS

- Chillers and heat pumps with inverter compressors
- Precise and efficient power modulation
- Plug&Play unit with integrated hydronic module and heat recovery
- Integrated MASTER/ SLAVE control

THAITY 2130 with coil protection metal filters accessory

TCAITY 2100 with coil protection metal filters accessory

Water chillers and packaged reversible air-cooled heat pumps with axial fans. Range with scroll hermetic compressors, DC Inverter and R410A refrigerant.

Construction features

- Compressor: scroll type, rotary, hermetic and with Inverter actuation (1+i) complete with thermal protection and casing heater.
- Continuous regulation with high efficiency at partial loads.

Water side heat exchanger: with stainless steel plates, complete with closed cell polyurethane foam rubber insulation and water flow differential pressure switch.

- Air side heat exchanger: featuring micro-channels or finned coil with copper pipes and aluminium fins depending on models/sizes.
- Fan: external rotor axial type electric fans with internal thermal protection, accident protection grilles. The electric fans, based on the sizes, are EC fans or fitted with a proportional electronic device for continuous regulation of the rotation speed.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: load-bearing structure made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - fan and compressor circuit breaker switches;
  - electronic expansion valve;
  - display of cooling circuit high and low pressure;
  - Master/Slave control up to 4 units in parallel;
  - clock board.

Versions

- T - High efficiency version with oversized condensing section (TCAITY-THAITY).
- Q - Super-silenced version complete with compressor technical compartment soundproofing, reduced speed fans and oversized condensing section (TCAIQY-THAIQY).

Models

- TCAITY: high efficiency unit designed for cooling only.
- TCAIQY: super silenced unit designed for cooling only.
- THAITY: heat pump unit.
- THAIQY: super silenced heat pump unit.

Factory fitted accessories

- PUMP with single or double electric pump, one of which automatic in standby. The electric pumps are available in the low or high head versions.
- TANK&PUMP with 230 - 440 litre integrated buffer tank (depending on the sizes) and single or double electric pump, complete with expansion tank, air vent valves, safety valve and water side pressure gauge.
- VPF control.
- Inverter pump control for unit start-up.
- Desuperheater.
- 100% heat recovery unit
- Condensing control with fans with EC motor (standard in sizes 270-2100).
- Condensing control with over-pressure fans (T version only)
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Forced limit of power consumption.
- Forced noise limit.
- Energy parameter measuring device.
- Optimised energy efficiency.
- Soft starter.
- Technical compressor compartment soundproofing.
- Compressor soundproof enclosures.
- Cooling circuit outlet and inlet valves.
- Refrigerant leak detector.
- Cooling circuit high and low pressure gauges.
- Double safety valves.
- Metal filters or coil protection nets.
- Microchannel coils with E-coating treatment, copper/ copper or pre-painted copper/aluminium depending on the versions.
- Control of min/max power supply voltage.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Evaporator antifreeze heater, electrical panel, buffer tank, electric pumps and heat exchangers for heat recovery, if applicable.
- Interfaces for serial communication with other devices.
- Rubber anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Thermostat with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

	TCAITY-TCAIQY MODEL		270	280	290	2100	2115	2130
❶	Nominal cooling capacity	kW	69,8	82,6	90,3	97,9	117	130,4
❶	Nominal cooling capacity	kW	67,8	80,8	87,7	93,4	111,4	125,5
❶	E.E.R.		3,16	3,17	3,15	3,02	3,10	3,14
❶	E.E.R.		3,01	3,06	3,00	2,84	2,90	3,01
❶	Absorbed power	kW	22,09	26,06	28,67	32,42	37,74	41,53
❶	Absorbed power	kW	22,52	26,41	29,23	32,89	38,41	41,69
	THAITY-THAIQY MODEL		**270**	**280**	**290**	**2100**	**2115**	**2130**
❷	Nominal heating capacity	kW	73,4	85,4	92,5	100,6	121,5	134,6
❷	Nominal heating capacity	kW	71,2	83,4	90,4	98,7	117,4	130,6
❷	C.O.P.		3,37	3,34	3,36	3,34	3,37	3,32
❷	C.O.P.		3,31	3,33	3,32	3,30	3,34	3,36
❶	Nominal cooling capacity	kW	67,1	79,3	86,8	93,5	112,6	126,5
❶	Nominal cooling capacity	kW	65	77,9	84,7	90,3	108,6	123,5
❷	Absorbed power	kW	21,78	25,57	27,53	30,12	36,05	40,54
❷	Absorbed power	kW	21,51	25,05	27,23	29,91	35,15	38,87
	TCAIY-THAIY MODEL		**270**	**280**	**290**	**2100**	**2115**	**2130**
❸	TCAITY-THAITY sound pressure	dB(A)	52	53	53	53	55	56
❸	TCAIQY-THAIQY sound pressure	dB(A)	45	46	46	46	49	50
❹	TCAITY-THAITY sound power	dB(A)	84	85	85	85	87	88
❹	TCAIQY-THAIQY sound power	dB(A)	77	77,5	77,5	77,5	81	82
	Scroll/step compressor		no. 1+i / continuous regulation	1+i / continuous regulation	1+i / continuous regulation	1+i / continuous regulation	1+i / continuous regulation	1+i / continuous regulation
	Circuits	no.	1	1	1	1	2	2
	Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
	DIMENSIONS AND WEIGHT		**270**	**280**	**290**	**2100**	**2115**	**2130**
	L - Width	mm	3250	3250	3250	3250	3450	3450
	H - Height	mm	1540	1540	1540	1540	2000	2000
	P - Depth	mm	1210	1210	1210	1210	1520	1520
❺	TCAITY weight	kg	765	790	795	800	1125	1145
❺	THAITY weight	kg	880	915	920	925	1325	1345

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C

❷ Air: 7°C, D.B. - 6°C W.B.- Water: 40/45°C.

❸ In open field (Q = 2) at 10 m from the unit on the coil side.

❹ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❺ Weight referred to the unit without load and not accessorised.

■ TCAIQY-THAIQY super-silenced versions.

Performance according to EN 14511.

	SEASONAL ENERGY PERFORMANCE		270	280	290	2100	2115	2130
	TCAITY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
①	Pdesignc (EN 14825)	kW	69,8	82,6	90,3	97,9	117	130,4
①	SEER (EN 14825)		4,45	4,55	4,53	4,49	4,19	4,17
②	$\eta_{s,c}$	%	175	179	178	176	165	164
	TCAIQY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
①	Pdesignc (EN 14825)	kW	67,8	80,8	87,7	93,4	111,4	125,5
①	SEER (EN 14825)		4,36	4,45	4,39	4,33	4	4,04
②	$\eta_{s,c}$	%	172	175	173	170	157	159
	THAITY MODEL SEASONAL ENERGY PERFORMANCE IN HEATING MODE							
③	Pdesignh (EN 14825)	kW	71	78	85	92	121	126
③	SCOP (EN 14825)		4,09	4,18	4,16	4,16	3,99	4,03
④	η_s	%	161	164	164	163	156	158
④	Energy class		-	-	-	-	-	-
	THAIQY MODEL SEASONAL ENERGY PERFORMANCE IN HEATING MODE							
③	Pdesignh (EN 14825)	kW	64	77	83	91	111	133
③	SCOP (EN 14825)		3,99	4,08	4,04	4,06	3,88	3,96
④	η_s	%	156	160	159	159	152	155
④	Energy class		A++	-	-	-	-	-

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)

EasyPACK

TCAEY-THAEY 269-2146

Cooling capacity: 63.7÷144.4 kW - Heating capacity: 70.3÷151.7 kW

TCAETY 289 with coil protection metal filters accessory

- **Complete and flexible range of accessories and set-ups**
- **Multi-purpose for systems with 2 pipes+DHW (with optional RC100)**
- **Integrated MASTER/ SLAVE control**
- **HT65 version for 65°C water production (°)**

(°) Refer to the specific documentation to check available models and accessories.

Water chillers and packaged reversible air-cooled heat pumps with axial fans. Range with scroll hermetic compressors and R410A refrigerant.

Construction features

- Compressor: scroll type, rotary, hermetic complete with thermal protection and casing heater.
- 3 capacity steps with high efficiency at partial loads.

Water side heat exchanger: with stainless steel plates, complete with closed cell polyurethane foam rubber insulation and water flow differential pressure switch.

- Air side heat exchanger: featuring micro-channels or finned coil with copper pipes and aluminium fins depending on models/sizes.
- Fan: external rotor axial type electric fans with internal thermal protection, accident protection grilles.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: load-bearing structure made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - fan and compressor circuit breaker switches;
  - display of cooling circuit high and low pressure;
  - Master/Slave control up to 4 units in parallel;
  - clock board.

Versions

- B - Standard version (TCAEBY).
- T - High efficiency version with oversized condensing section (TCAETY-THAETY).
- S - Silenced version complete with compressor compartment soundproofing, reduced speed fans, and oversized condensing section (TCAESY-THAESY).
- Q - Super-silenced version complete with compressor technical compartment soundproofing, super-reduced speed fans and oversized condensing section (TCAEQY-THAEQY).

Models

- TCAEBY: standard unit designed for cooling only.
- TCAETY: high efficiency unit designed for cooling only.
- TCAESY: silenced unit designed for cooling only.
- TCAEQY: super silenced unit designed for cooling only.
- THAETY: heat pump unit.
- THAESY: silenced heat pump unit.
- THAEQY: super silenced heat pump unit.

Factory fitted accessories

- Shell and tube evaporator.
- PUMP with single or double electric pump, one of which automatic in standby. The electric pumps are available in the low or high head versions.
- TANK&PUMP with 230 to 440 litre integrated buffer tank (depending on models) and single or double electric pump, complete with expansion tank, air vent valves, safety valve, and water side pressure gauge.
- VPF control.
- Inverter pump control for unit start-up.
- Desuperheater.
- 100% heat recovery unit
- Electronic expansion valve.
- -10°C condensing control (standard in S-Q versions).
- –15°C condensing control with fans with EC motor.
- Condensing control with over-pressure fans (B-T version only)
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Forced limit of power consumption.
- Forced noise limit.
- Energy parameter measuring device.
- Optimised energy efficiency.
- Soft starter.
- Technical compartment soundproofing.
- Compressor soundproof enclosures.
- Cooling circuit outlet and inlet valves.
- Refrigerant leak detector.
- Cooling circuit high and low pressure gauges.
- Double safety valves.

TCAEBY 269

- Metal filters or coil protection nets.
- Copper/copper or copper/pre-painted aluminium coils.
- Control of min/max power supply voltage.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Evaporator antifreeze heater, electrical panel, buffer tank, electric pumps and heat exchangers for heat recovery, if applicable.
- Buffer tank integrative heaters.
- Low temperature water production.
- Interfaces for serial communication with other devices.
- Rubber anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Thermostat with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

EasyPACK

TCAEY-THAEY 269-2146

			269	279	289	296	2112	2125	2146
	TCAEBY MODEL								
❶	Nominal cooling capacity	kW	65,6	72,1	77,6	86,5	105,5	-	-
❶	E.E.R.		2,74	2,81	2,81	2,62	2,79	-	-
❶	Absorbed power	kW	23,94	25,66	27,62	33,02	37,81	-	-
	TCAETY-TCAESY-TCAEQY MODEL		**269**	**279**	**289**	**296**	**2112**	**2125**	**2146**
❶	Nominal cooling capacity	kW	69,2	79,1	90,1	96,1	112	125,5	144,4
❶	Nominal cooling capacity	kW	67,7	76,7	87,6	92,1	108	122	138,9
❶	Nominal cooling capacity	kW	64,7	71,2	84,6	89,6	101,1	116,5	131
❶	E.E.R.		3,12	3,18	3,12	3,11	3,1	3,12	3,12
❶	E.E.R.		2,92	3,05	2,95	2,92	2,94	2,99	2,94
❶	E.E.R.		2,82	2,72	2,8	2,72	2,53	2,72	2,59
❶	Absorbed power	kW	22,18	24,87	28,88	30,9	36,13	40,22	46,28
❶	Absorbed power	kW	23,18	25,15	29,69	31,54	36,73	40,8	47,24
❶	Absorbed power	kW	22,94	26,18	30,21	32,94	39,96	42,83	50,58
	THAETY-THAESY-THAEQY MODEL		**269**	**279**	**289**	**296**	**2112**	**2125**	**2146**
❷	Nominal heating capacity	kW	73,4	82,4	92,4	100,5	118,5	133,1	151,7
❷	Nominal heating capacity	kW	70,8	80,4	90,4	98	115	129,1	147,6
❷	Nominal heating capacity	kW	70,3	77,3	88,4	95,4	111	125,5	143,6
❷	C.O.P.		3,35	3,36	3,31	3,28	3,31	3,25	3,23
❷	C.O.P.		3,32	3,36	3,31	3,29	3,3	3,27	3,27
❷	C.O.P.		3,31	3,3	3,27	3,26	3,21	3,23	3,22
❶	Nominal cooling capacity	kW	67,2	76,7	86,6	93,6	107,5	121,5	139,4
❶	Nominal cooling capacity	kW	66,2	74,7	85,7	89,6	104,6	119	136,9
❶	Nominal cooling capacity	kW	63,7	69,7	82,7	86,6	99,1	112,1	128,5
❷	Absorbed power	kW	21,91	24,52	27,92	30,64	35,8	40,95	46,97
❷	Absorbed power	kW	21,33	23,93	27,31	29,79	34,85	39,48	45,14
❷	Absorbed power	kW	21,24	23,42	27,03	29,26	34,58	38,85	44,6
	TCAEY-THAEY MODEL		**269**	**279**	**289**	**296**	**2112**	**2125**	**2146**
❸	TCAEBY sound pressure	dB(A)	50	50	50	50	52	-	-
❸	TCAETY-THAETY sound pressure	dB(A)	50	51	51	51	53	54	54
❸	TCAESY-THAESY sound pressure	dB(A)	46	47	47	47	49	50	50
❸	TCAEQY-THAEQY sound pressure	dB(A)	42	42	43	43	46	47	47
❹	TCAEBY sound power	dB(A)	82	82	82	82	84	-	-
❹	TCAETY-THAETY sound power	dB(A)	82	83	83	83	85	86	86
❹	TCAESY-THAESY sound power	dB(A)	78	79	79	79	81	82	82
❹	TCAEQY-THAEQY sound power	dB(A)	74	74	75	75	78	79	79
	Scroll/step compressor	no.	2/3	2/3	2/3	2/3	2/3	2/3	2/3
	Circuits	no.	1	1	1	1	1	1	1
	Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
	DIMENSIONS AND WEIGHT		**269**	**279**	**289**	**296**	**2112**	**2125**	**269**
	W - Width of version B	mm	2650	2650	2650	2650	3250	-	-
	W - Width of version T - S - Q	mm	3250	3250	3250	3250	3450	3450	3450
	H - Height of version B	mm	1700	1700	1700	1700	1700	-	-
	H - Height of version T - S	mm	1700	1700	1700	1700	2000	2000	2000
	H - Height of version Q	mm	1520	1520	1520	1520	2000	2000	2000
	D - Depth of version B	mm	1210	1210	1210	1210	1210	-	-
	D - Depth of version T - S - Q	mm	1210	1210	1210	1210	1520	1520	1520
❺	TCAEBY weight	kg	755	760	795	800	980	-	-
❺	TCAETY weight	kg	850	865	870	905	1160	1195	1255
❺	THAETY weight	kg	915	930	935	980	1240	1280	1355

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C

❷ Air: 7°C, D.B. - 6°C W.B.- Water: 40/45°C.

❸ In open field (Q = 2) at 10 m from the unit.

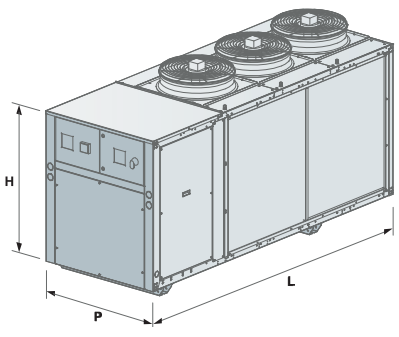
❹ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❺ Weight referred to the unit without load and not accessorised.

TCAESY-THAESY silenced versions.

TCAEQY-THAEQY super-silenced versions.

Performance according to EN 14511.



	SEASONAL ENERGY PERFORMANCE		269	279	289	296	2112	2125	2146
	TCAEBY MODEL SEASONAL PERFORMANCE IN COOLING MODE								
①	Pdesignc (EN 14825)	kW	65,6	72,1	77,6	86,5	105,5	-	-
①	SEER (EN 14825)		4,11	3,95	3,96	3,92	4,11	-	-
②	$\eta_{s,c}$	%	161	155	156	154	161	-	-
	TCAETY MODEL SEASONAL PERFORMANCE IN COOLING MODE								
①	Pdesignc (EN 14825)	kW	69,2	79,1	90,1	96,1	112	125,5	144,4
①	SEER (EN 14825)		4,29	4,22	4,3	4,32	4,29	4,26	4,27
②	$\eta_{s,c}$	%	169	166	169	170	169	167	168
	TCAESY MODEL SEASONAL PERFORMANCE IN COOLING MODE								
①	Pdesignc (EN 14825)	kW	67,7	76,7	87,6	92,1	108	122	138,9
①	SEER (EN 14825)		4,21	4,22	4,24	4,24	4,25	4,28	4,25
②	$\eta_{s,c}$	%	165	166	167	166	167	168	167
	TCAEQY MODEL SEASONAL PERFORMANCE IN COOLING MODE								
①	Pdesignc (EN 14825)	kW	64,7	71,2	84,6	89,6	101,1	116,5	131
①	SEER (EN 14825)		4,17	4,07	4,19	4,12	4,04	4,05	3,99
②	$\eta_{s,c}$	%	164	160	164	162	159	159	157
	THAETY MODEL SEASONAL ENERGY PERFORMANCE IN HEATING MODE								
③	Pdesignh (EN 14825)	kW	66	74	84	91	108	121	138
③	SCOP (EN 14825)		3,99	3,97	3,91	3,9	4,03	3,89	3,87
④	η_S	%	157	156	153	153	158	153	152
④	Energy class		A++	-	-	-	-	-	-
	THAESY MODEL SEASONAL ENERGY PERFORMANCE IN HEATING MODE								
③	Pdesignh (EN 14825)	kW	64	73	82	89	104	117	134
③	SCOP (EN 14825)		3,97	3,99	3,92	3,92	4,02	3,96	3,93
④	η_S	%	156	157	154	154	158	155	154
④	Energy class		A++	-	-	-	-	-	-
	THAEQY MODEL SEASONAL ENERGY PERFORMANCE IN HEATING MODE								
③	Pdesignh (EN 14825)	kW	64	70	80	86	100	114	130
③	SCOP (EN 14825)		3,99	3,97	3,91	3,91	3,93	3,92	3,88
④	η_S	%	157	156	154	154	154	154	152
④	Energy class		A++	A++	-	-	-	-	-

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)

WinPACK HE-A

TCAEY-THAEY 2110-4340

Cooling capacity: 91.6÷345 kW - Heating capacity: 110.5÷357 kW

THAETY 4270 with coil protection nets accessory

- **High energy efficiency chillers and heat pumps**
- **Standard electronic expansion valve**
- **Multi-purpose for systems with 2 pipes + DHW (with optional RC100)**
- **Integrated MASTER/ SLAVE control**

Water chillers and packaged reversible air-cooled heat pumps with axial fans. Range with scroll hermetic compressors and R410A refrigerant.

Construction features

- Compressor: scroll type, rotary, hermetic complete with thermal protection and casing heater.
- 2, 3 or 4 capacity steps with high efficiency at partial loads.

Water side heat exchanger: with stainless steel plates, complete with closed cell polyurethane foam rubber insulation and water flow differential pressure switch.

- Air side heat exchanger: featuring micro-channels or finned coil with copper pipes and aluminium fins depending on models/sizes.
- Fan: external rotor axial type electric fans with internal thermal protection, accident protection grilles.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: load-bearing structure made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - fan and compressor circuit breaker switches;
  - display of cooling circuit high and low pressure;
  - electronic expansion valve;
  - Master/Slave control up to 4 units in parallel;
  - clock board.

Versions

- T - High efficiency version with oversized condensing section (TCAETY-THAETY).
- Q - Super-silenced version complete with soundproofing compressor technical compartment, super-reduced speed fans and oversized condensing section (TCAEQY-THAEQY).

Models

- TCAETY: high efficiency unit designed for cooling only.
- TCAEQY: super silenced unit designed for cooling only.
- THAETY: heat pump unit.
- THAEQY: super silenced heat pump unit.

Factory fitted accessories

- Shell and tube evaporator.
- PUMP with single or double electric pump, one of which automatic in standby. The electric pumps are available in the low or high head versions.
- TANK&PUMP with integrated buffer tank from 300 to 700 litres (depending on models) and single or double electric pump, complete with expansion tank, air vent valves, safety valve, and water side pressure gauge.
- VPF control.
- Inverter pump control for unit start-up.
- Desuperheater.
- 100% heat recovery unit.
- –10°C condensing control.
- –15°C condensing control with fans with EC motor (standard in Q versions).
- Condensing control with over-pressure fans.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Forced limit of power consumption.
- Forced noise limit.
- Energy parameter measuring device.
- Optimised energy efficiency.
- Soft starter.
- Soundproofed compressor box or technical compartment soundproofing.
- Compressor soundproof enclosures.
- Cooling circuit outlet and inlet valves.
- Refrigerant leak detector.
- Cooling circuit high and low pressure gauges.
- Double safety valves.

TCAEQY 2150
with Tank&Pump

- Metal filters or coil protection nets.
- Micro-channel coils with E-coating treatment.
- Copper/copper or copper/pre-painted aluminium coils.
- Control of min/max power supply voltage.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Evaporator antifreeze heater, electrical panel, buffer tank, electric pumps and heat exchangers for heat recovery, if applicable.
- Buffer tank integrative heaters.
- Low temperature water production.
- Interfaces for serial communication with other devices.
- Anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Thermostat with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

WinPACK HE-A

TCAEY-THAEY 2110-4340

	TCAETY-TCAEQY MODEL		2110	2120	2140	2150	2170	2200	2220	4240	4270	4310	4340
❶	Nominal cooling capacity	kW	110,5	121,5	138,4	156,4	175,4	200,3	223,2	241,3	276,3	309,1	345,1
❶	Nominal cooling capacity	kW	100,6	108,6	126,5	140,5	155,5	181,4	199,4	218,4	251,4	280,2	318,2
❶	E.E.R.		3,13	3,1	3,13	3,11	3,1	3,11	3,1	3,1	3,1	3,1	3,1
❶	E.E.R.		2,73	2,6	2,69	2,65	2,6	2,64	2,61	2,56	2,68	2,62	2,63
❶	Absorbed power	kW	35,3	39,2	44,2	50,3	56,6	64,4	72	77,8	88,8	99,7	111,3
❶	Absorbed power	kW	36,8	41,8	47	53	59,8	68,7	76,4	85	93,8	106,9	121
	THAETY-THAEQY MODEL		**2110**	**2120**	**2140**	**2150**	**2170**	**2200**	**2220**	**4240**	**4270**	**4310**	**4340**
❷	Nominal heating capacity	kW	114,5	124,5	141,6	161,6	181,7	204,8	233,9	249,8	282,8	321	357
❷	Nominal heating capacity	kW	110,5	118,5	136,5	153,6	171,6	194,7	221,8	236,7	266,7	301	341,9
❷	C.O.P.		3,22	3,22	3,21	3,22	3,23	3,22	3,21	3,2	3,2	3,2	3,2
❷	C.O.P.		3,28	3,29	3,27	3,26	3,26	3,23	3,26	3,12	3,11	2,95	3,08
❶	Nominal cooling capacity	kW	101,6	112,6	126,5	145,4	161,4	186,3	209,3	231,3	263,3	301,1	334,1
❶	Nominal cooling capacity	kW	91,6	100,6	118,6	130,6	144,5	169,5	187,4	206,5	238,4	270,3	302,3
❷	Absorbed power	kW	35,6	38,7	44,1	50,2	56,3	63,6	72,9	78,1	88,4	100,3	111,6
❷	Absorbed power	kW	33,7	36	41,7	47,1	52,6	60,3	68	75,9	85,8	102	111
	TCAETY-TCAEQY-THAETY-THAEQY MODEL		**2110**	**2120**	**2140**	**2150**	**2170**	**2200**	**2220**	**4240**	**4270**	**4310**	**4340**
❸	TCAETY sound pressure	dB(A)	55	56	57	57	58	59	59	58	60	60	62
❸	THAETY sound pressure	dB(A)	53	54	55	55	56	57	57	58	60	60	62
❸	TCAEQY-THAEQY sound pressure	dB(A)	47	47	48	48	49	50	50	51	53	53	54
❹	TCAETY sound power	dB(A)	87	88	89	89	90	91	91	90	92	92	94
❹	THAETY sound power	dB(A)	85	86	87	87	88	89	89	90	92	92	94
❹	TCAEQY-THAEQY sound power	dB(A)	79	79	80	80	81	82	82	83	85	85	86
	Scroll/step compressor	no.	2/3	2/3	2/2	2/3	2/2	2/3	2/2	4/4	4/4	4/4	4/4
	Circuits	no.	1	1	1	1	1	1	1	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**2110**	**2120**	**2140**	**2150**	**2170**	**2200**	**2220**	**4240**	**4270**	**4310**	**4340**
	L - Width	mm	3600	3600	3600	3600	4550	4550	4550	4800	4800	5300	5300
	H - Height	mm	2440	2440	2440	2440	2440	2440	2440	2030	2030	2030	2030
	P - Depth	mm	1350	1350	1350	1350	1350	1350	1350	2090	2090	2090	2090
❺	TCAETY weight	kg	1090	1100	1110	1130	1280	1300	1320	2290	2390	2520	2640
❺	TCAEQY weight	kg	1250	1260	1270	1290	1440	1460	1480	2420	2520	2650	2770
❺	THAETY weight	kg	1380	1410	1420	1500	1670	1690	1780	2470	2570	2720	2840
❺	THAEQY weight	kg	1420	1450	1460	1540	1710	1730	1820	2600	2700	2850	2970

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C.

❷ Air: 7°C, D.B. 6°C W.B.- Water: 40/45°C.

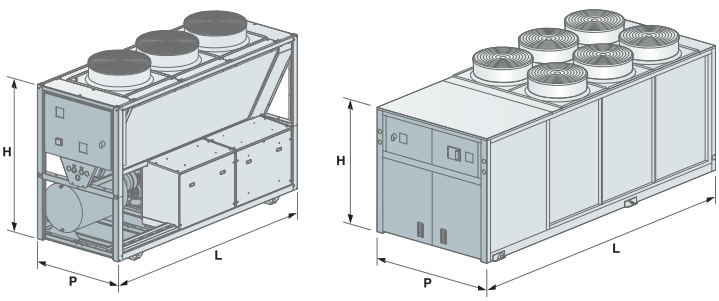
❸ In open field (Q = 2) at 10 m from the unit.

❹ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❺ Weight referred to the unit without load and not accessorised.

TCAEQY-THAEQY super-silenced versions.

Performance according to EN 14511.



	SEASONAL ENERGY PERFORMANCE		2110	2120	2140	2150	2170	2200	2220	4240	4270	4310	4340
	TCAETY MODEL SEASONAL PERFORMANCE IN COOLING MODE												
①	Pdesignc (EN 14825)	kW	110,5	121,5	138,4	156,3	175,3	200,2	223,1	241,3	276,2	309,1	345
①	SEER (EN 14825)		4,21	4,26	4,1	4,22	4,27	4,21	4,24	4,29	4,3	4,29	4,3
②	$\eta_{s,c}$	%	165	167	161	166	168	165	167	169	169	168	169
	TCAEQY MODEL SEASONAL PERFORMANCE IN COOLING MODE												
①	Pdesignc (EN 14825)	kW	100,6	108,6	126,5	140,5	155,4	181,3	199,3	218,4	251,4	280,2	318,2
①	SEER (EN 14825)		4,13	3,99	4,01	4,07	3,95	4,08	4	4,09	4,17	4,17	4,13
②	$\eta_{s,c}$	%	162	157	157	160	155	160	157	160	164	164	162
	THAETY MODEL SEASONAL PERFORMANCE IN HEATING MODE												
③	Pdesignh (EN 14825)	kW	96	104	118	135	150	173	201	211	242	273	302
③	SCOP (EN 14825)		3,53	3,51	3,75	3,49	3,76	3,39	3,57	3,64	3,62	3,64	3,63
④	η_s	%	138	138	147	137	148	133	140	142	142	143	142
	THAEQY MODEL SEASONAL PERFORMANCE IN HEATING MODE												
③	Pdesignh (EN 14825)	kW	91	98	113	127	141	165	190	199	227	254	288
③	SCOP (EN 14825)		3,62	3,61	3,84	3,59	3,87	3,53	3,65	3,56	3,54	3,37	3,52
④	η_s	%	142	141	151	141	152	138	143	139	139	132	138

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)

Web code: **WK011**

WinPACK SE

TCAEY-THAEY 2110-4340

Cooling capacity: 97.6÷328.6 kW - Heating capacity: 109.5÷354.6 kW

TCAESY 2200
with Tank&Pump

- **High performance range with extended operating limits**
- **Wide range of accessories**
- **Compact version B for replacement markets**
- **Multi-purpose for systems with 2 pipes + DHW (with optional RC100)**
- **Integrated MASTER/ SLAVE control**

Water chillers and packaged reversible air-cooled heat pumps with axial fans. Range with scroll hermetic compressors and R410A refrigerant.

Construction features

- Compressor: scroll type, rotary, hermetic complete with thermal protection and casing heater.
- 2, 3 or 4 capacity steps with high efficiency at partial loads.

Water side heat exchanger: with stainless steel plates, complete with closed cell polyurethane foam rubber insulation and water flow differential pressure switch.

- Air side heat exchanger: featuring micro-channels or finned coil with copper pipes and aluminium fins depending on models/sizes.
- Fan: external rotor axial type electric fans with internal thermal protection, accident protection grilles.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: load-bearing structure made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - fan and compressor circuit breaker switches;
  - display of cooling circuit high and low pressure;
  - Master/Slave control up to 4 units in parallel;
  - clock board.

Versions

- B -Standard version (TCAEBY-THAEBY).
- S - Silenced version complete with compressor technical compartment soundproofing, reduced speed fans (TCAESY-THAESY).

Models

- TCAEBY: standard unit designed for cooling only.
- TCAESY: silenced unit designed for cooling only.
- THAEBY: heat pump unit.
- THAESY: silenced heat pump unit

Factory fitted accessories

- Shell and tube evaporator.
- PUMP with single or double electric pump, one of which automatic in standby. The electric pumps are available in the low or high head versions.
- TANK&PUMP with integrated buffer tank from 300 to 700 litres (depending on models) and single or double electric pump, complete with expansion tank, air vent valves, safety valve, and water side pressure gauge.
- VPF control.
- Inverter pump control for unit start-up.
- Desuperheater.
- 100% heat recovery unit.
- Electronic expansion valve.
- –10°C condensing control (standard in S versions).
- –15°C condensing control with fans with EC motor.
- Condensing control with over-pressure fans.

THAEBY 4310 with coil
protection nets accessory

- Power factor correction capacitors (cosϕ > 0.94).
- Forced limit of power consumption.
- Forced noise limit.
- Energy parameter measuring device.
- Optimised energy efficiency.
- Soft starter.
- Soundproofed compressor box or technical compartment soundproofing.
- Compressor soundproof enclosures.
- Cooling circuit outlet and inlet valves.
- Refrigerant leak detector.
- Cooling circuit high and low pressure gauges.
- Double safety valves.
- Metal filters or coil protection nets.
- Micro-channel coils with E-coating treatment.
- Copper/copper or copper/pre-painted aluminium coils.
- Control of min/max power supply voltage.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Evaporator antifreeze heater, electrical panel, buffer tank, electric pumps and heat exchangers for heat recovery, if applicable.
- Buffer tank integrative heaters.
- Low temperature water production.
- Interfaces for serial communication with other devices.
- Anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Thermostat with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

WinPACK SE

TCAEY-THAEY 2110-4340

	TCAEBY-TCAESY MODEL		2110	2120	2140	2150	2170	2200	2220
❶	Nominal cooling capacity	kW	106,5	114,4	127,4	147,3	165,2	188,1	212,1
❶	Nominal cooling capacity	kW	102,5	110,4	122,4	142,3	159,2	183,2	205,1
❶	E.E.R.		2,81	2,79	2,8	2,81	2,81	2,8	2,8
❶	E.E.R.		2,72	2,67	2,65	2,71	2,7	2,66	2,7
❶	Absorbed power	kW	37,9	41	45,5	52,4	58,8	67,2	75,8
❶	Absorbed power	kW	37,7	41,3	46,2	52,5	59	68,9	76
	THAEBY-THAESY MODEL		**2110**	**2120**	**2140**	**2150**	**2170**	**2200**	**2220**
❷	Nominal heating capacity	kW	112,6	123,7	139,7	158,8	176,9	198	229,1
❷	Nominal heating capacity	kW	109,5	121,7	135,7	155,8	173,9	195,9	226
❷	C.O.P.		3,05	3,08	3,08	3,04	3,06	3,07	3,07
❷	C.O.P.		3,1	3,13	3,1	3,13	3,1	3,09	3,13
❶	Nominal cooling capacity	kW	99,5	110,4	123,4	142,3	159,3	182,2	206,1
❶	Nominal cooling capacity	kW	97,6	106,5	117,5	136,4	152,3	175,3	199,2
❷	Absorbed power	kW	36,9	40,2	45,4	52,2	57,8	64,5	74,6
❷	Absorbed power	kW	35,3	38,9	43,8	49,8	56,1	63,4	72,2
	TCAEBY-TCAESY-THAEBY-THAESY MODEL		**2110**	**2120**	**2140**	**2150**	**2170**	**2200**	**2220**
❸	TCAEBY sound pressure	dB(A)	55	56	56	57	58	58	59
❸	THAEBY sound pressure	dB(A)	53	54	54	55	56	56	57
❸	TCAESY sound pressure	dB(A)	49	50	50	51	52	52	53
❸	THAESY sound pressure	dB(A)	49	50	50	51	52	52	53
❹	TCAEBY sound power	dB(A)	87	88	88	89	90	90	91
❹	THAEBY sound power	dB(A)	85	86	86	87	88	88	89
❹	TCAESY sound power	dB(A)	81	82	82	83	84	84	85
❹	THAESY sound power	dB(A)	81	82	82	83	84	84	85
	Scroll/step compressor	no.	2/3	2/3	2/2	2/3	2/2	2/3	2/2
	Circuits	no.	1	1	1	1	1	1	1
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**2110**	**2120**	**2140**	**2150**	**2170**	**2200**	**2220**
	W - TCAEBY-TCAESY width	mm	2650	2650	2650	3600	3600	3600	4550
	W - THAEBY-THAESY width	mm	2650	2650	2650	3600	3600	3600	4550
	H - TCAEBY-TCAESY height	mm	2440	2440	2440	2440	2440	2440	2440
	H - THAEBY-THAESY height	mm	2440	2440	2440	2440	2440	2440	2440
	D - TCAEBY-TCAESY depth	mm	1350	1350	1350	1350	1350	1350	1350
	D - THAEBY-THAESY depth	mm	1350	1350	1350	1350	1350	1350	1350
❺	TCAEBY weight	kg	990	1000	1010	1160	1180	1180	1340
❺	TCAESY weight	kg	1110	1120	1130	1280	1300	1300	1460
❺	THAEBY weight	kg	1250	1310	1320	1470	1480	1565	1730
❺	THAESY weight	kg	1250	1310	1320	1470	1480	1565	1730

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C.

❷ Air: 7°C, D.B. 6°C W.B.- Water: 40/45°C.

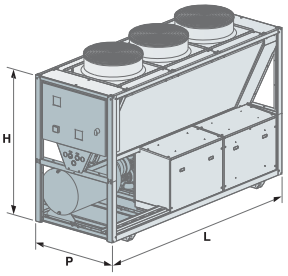
❸ In open field (Q = 2) at 10 m from the unit.

❹ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❺ Weight referred to the unit without load and not accessorised.

TCAESY-THAESY silenced versions.

Performance according to EN 14511.



	SEASONAL ENERGY PERFORMANCE		2110	2120	2140	2150	2170	2200	2220
	TCAEBY MODEL SEASONAL PERFORMANCE IN COOLING MODE								
①	Pdesignc (EN 14825)	kW	106,5	114,4	127,3	147,2	165,2	188,1	212
①	SEER (EN 14825)		3,85	3,87	3,89	3,84	3,91	4	3,89
②	$\eta_{s,c}$	%	151	152	153	150	153	157	153
	TCAESY MODEL SEASONAL PERFORMANCE IN COOLING MODE								
①	Pdesignc (EN 14825)	kW	102,5	110,4	122,4	142,3	159,2	183,2	205,1
①	SEER (EN 14825)		3,92	3,94	3,93	3,96	3,95	4	3,96
②	$\eta_{s,c}$	%	154	155	154	155	155	157	155
	THAEBY MODEL SEASONAL PERFORMANCE IN HEATING MODE								
③	Pdesignh (EN 14825)	kW	95	104	119	134	149	170	200
③	SCOP (EN 14825)		3,38	3,4	3,67	3,36	3,63	3,34	3,53
④	η_s	%	132	133	144	131	142	131	138
	THAESY MODEL SEASONAL PERFORMANCE IN HEATING MODE								
③	Pdesignh (EN 14825)	kW	92	102	115	131	146	167	197
③	SCOP (EN 14825)		3,47	3,49	3,71	3,5	3,72	3,39	3,62
④	η_s	%	136	136	145	137	146	133	142

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)

WinPACK SE

TCAEY-THAEY 2110-4340

	TCAEBY-TCAESY MODEL		4150	4170	4200	4220	4240	4270	4310	4340
❶	Nominal cooling capacity	kW	146,3	166,4	189,2	213,2	229,2	256	299,9	328,7
❶	Nominal cooling capacity	kW	142,3	161,4	182,3	207,2	224,2	250	291	319,7
❶	E.E.R.		2,99	2,9	2,83	2,92	2,8	2,8	2,81	2,76
❶	E.E.R.		2,93	2,82	2,67	2,82	2,68	2,66	2,68	2,61
❶	Absorbed power	kW	48,9	57,4	66,9	73	81,9	91,4	106,7	119,1
❶	Absorbed power	kW	48,6	57,2	68,3	73,5	83,7	94	108,6	122,5
	THAEBY-THAESY MODEL		**4150**	**4170**	**4200**	**4220**	**4240**	**4270**	**4310**	**4340**
❷	Nominal heating capacity	kW	152,7	172,6	197,8	225,9	249	281,3	319,3	354,6
❷	Nominal heating capacity	kW	147,7	167,6	192,8	219,9	245	278,3	315,2	345,5
❷	C.O.P.		3,09	3,14	3,04	3,04	3,03	3,01	3,01	2,98
❷	C.O.P.		3,1	3,12	3,09	3,09	3,09	3,05	3,07	3,03
❶	Nominal cooling capacity	kW	141,3	163,4	186,2	209,1	227,1	253,9	295,9	324,7
❶	Nominal cooling capacity	kW	136,4	156,4	180,3	200,2	220,2	248	286,1	313,8
❷	Absorbed power	kW	49,4	55	65,1	74,3	82,2	93,5	106,1	119
❷	Absorbed power	kW	47,6	53,7	62,4	71,2	79,3	91,2	102,7	114
	TCAEBY-TCAESY-THAEBY-THAESY MODEL		**4150**	**4170**	**4200**	**4220**	**4240**	**4270**	**4310**	**4340**
❸	TCAEBY sound pressure	dB(A)	57	57	57	58	60	60	60	61
❸	THAEBY sound pressure	dB(A)	54	54	56	56	58	60	60	61
❸	TCAESY sound pressure	dB(A)	51	51	51	52	54	54	56	57
❸	THAESY sound pressure	dB(A)	50	50	52	52	54	55	56	57
❹	TCAEBY sound power	dB(A)	89	89	89	90	92	92	92	93
❹	THAEBY sound power	dB(A)	86	86	88	88	90	92	92	93
❹	TCAESY sound power	dB(A)	83	83	83	84	86	86	88	89
❹	THAESY sound power	dB(A)	82	82	84	84	86	87	88	89
	Scroll/step compressor	no.	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4
	Circuits	no.	2	2	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**4150**	**4170**	**4200**	**4220**	**4240**	**4270**	**4310**	**4340**
	W - TCAEBY-TCAESY width	mm	3600	3600	3600	4550	4550	4550	4800	4800
	W - THAEBY-THAESY width	mm	3450	3450	3700	3700	4800	4800	4800	4800
	H - TCAEBY-TCAESY height	mm	2440	2440	2440	2440	2440	2440	2030	2030
	H - THAEBY-THAESY height	mm	2000	2000	2030	2030	2030	2030	2030	2030
	D - TCAEBY-TCAESY depth	mm	1350	1350	1350	1350	1350	1350	2090	2090
	D - THAEBY-THAESY depth	mm	1520	1520	2090	2090	2090	2090	2090	2090
❺	TCAEBY weight	kg	1165	1185	1190	1335	1670	1690	2400	2410
❺	TCAESY weight	kg	1300	1320	1325	1470	1830	1850	2440	2450
❺	THAEBY weight	kg	1450	1525	1725	1800	2375	2460	2580	2595
❺	THAESY weight	kg	1475	1550	1765	1840	2415	2500	2620	2635

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C.

❷ Air: 7°C, D.B. 6°C W.B.- Water: 40/45°C.

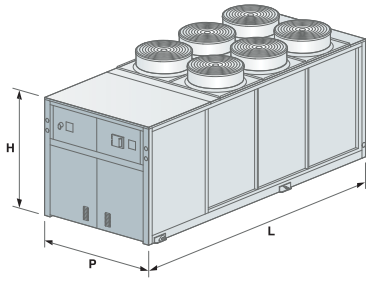
❸ In open field (Q = 2) at 10 m from the unit.

❹ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❺ Weight referred to the unit without load and not accessorised.

TCAESY-THAESY silenced versions.

Performance according to EN 14511.



	SEASONAL ENERGY PERFORMANCE		4150	4170	4200	4220	4240	4270	4310	4340
	TCAEBY MODEL SEASONAL PERFORMANCE IN COOLING MODE									
①	Pdesignc (EN 14825)	kW	146,3	166,4	189,2	213,1	229,2	256	299,9	328,6
①	SEER (EN 14825)		4,05	4,09	4,09	4,12	4,04	4,1	4,02	4,03
②	$\eta_{s,c}$	%	159	161	161	162	159	161	158	158
	TCAESY MODEL SEASONAL PERFORMANCE IN COOLING MODE									
①	Pdesignc (EN 14825)	kW	142,3	161,4	182,3	207,2	224,2	250	291	319,7
①	SEER (EN 14825)		4,15	4,15	4,03	4,16	4,06	4,07	4,07	4,03
②	$\eta_{s,c}$	%	163	163	158	163	159	160	160	158
	THAEBY MODEL SEASONAL PERFORMANCE IN HEATING MODE									
③	Pdesignh (EN 14825)	kW	129	145	168	192	211	240	271	301
③	SCOP (EN 14825)		3,41	3,47	3,33	3,33	3,35	3,34	3,35	3,32
④	η_s	%	133	136	130	130	131	130	131	130
	THAESY MODEL SEASONAL PERFORMANCE IN HEATING MODE									
③	Pdesignh (EN 14825)	kW	125	140	164	187	207	238	267	292
③	SCOP (EN 14825)		3,42	3,46	3,4	3,4	3,44	3,39	3,41	3,37
④	η_s	%	134	135	133	133	135	133	133	132

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)

Web code: **WKE21**

WinPACK-R HE-A

TCAETY-TCAEQY 4235-4370

Cooling capacity: 221.4-372 kW

TCAETY 4290 with Tank&Pump and BCI, RPB, RPE, FI10 accessories

- **High energy efficiency compact chillers**
- **Standard electronic expansion valve**
- **Integrated MASTER/ SLAVE control**

Packaged air-cooled water chillers with axial fans. Range with scroll hermetic compressors and R410A refrigerant.

Construction features

- Compressor: scroll type, rotary, hermetic complete with thermal protection and casing heater.
- 4 capacity steps with high efficiency at partial loads.

Water side heat exchanger: with stainless steel plates, complete with closed cell polyurethane foam rubber insulation and water flow differential pressure switch.

- Air side heat exchanger: with micro-channels.
- Fan: external rotor axial type electric fans with internal thermal protection, accident protection grilles.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: load-bearing structure made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - fan and compressor circuit breaker switches;
  - display of cooling circuit high and low pressure;
  - electronic expansion valve;
  - Master/Slave control up to 4 units in parallel;
  - clock board.

Versions

- T - High efficiency version with oversized condensing section.
- Q - Super-silenced version complete with compressor technical compartment soundproofing, super-reduced speed fans and oversized condensing section.

Models

- TCAETY: high efficiency unit designed for cooling only.
- TCAEQY: super silenced unit designed for cooling only.

Factory fitted accessories

- Shell and tube evaporator.
- PUMP with single or double electric pump, one of which automatic in standby. The electric pumps are available in the low or high head versions.
- TANK&PUMP with 700 - 1000 litre integrated buffer tank (depending on models) and single or double electric pump, complete with expansion tank, air vent valves, safety valve and water side pressure gauge.
- VPF control.
- Inverter pump control for unit start-up.
- Desuperheater.
- 100% heat recovery unit.
- –10°C condensing control.
- –15°C condensing control with fans with EC motor (standard in Q versions).
- Condensing control with over-pressure fans.
- Power factor correction capacitors ($\cos\varphi > 0.94$).
- Forced limit of power consumption.
- Forced noise limit.
- Energy parameter measuring device.
- Optimised energy efficiency.
- Soft starter.
- Soundproofed compressor box.
- Compressor soundproof enclosures.
- Cooling circuit outlet and inlet valves.
- Refrigerant leak detector.
- Cooling circuit high and low pressure gauges.
- Double safety valves.
- Coil protection nets.
- Micro-channel coils with E-coating treatment.
- Control of min/max power supply voltage.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Evaporator antifreeze heater, electrical panel, buffer tank, electric pumps and heat exchangers for heat recovery, if applicable.
- Low temperature water production.
- Interfaces for serial communication with other devices.
- Anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Thermostat with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

	TCAETY-TCAEQY MODEL		4235	4260	4290	4330	4370
❶	Nominal cooling capacity	kW	235,3	261,3	292,2	334,0	372,0
❶	Nominal cooling capacity	kW	221,4	243,4	269,4	312,1	343,1
❶	E.E.R.		3,27	3,2	3,12	3,19	3,15
❶	E.E.R.		3,12	2,88	2,68	2,89	2,75
❶	Absorbed power	kW	72,0	81,7	93,7	104,7	118,1
❶	Absorbed power	kW	71,0	84,5	100,5	108,0	124,8
	TCAETY-TCAEQY MODEL		**4235**	**4260**	**4290**	**4330**	**4370**
❷	TCAETY sound pressure	dB(A)	59	60	61	62	63
❷	TCAEQY sound pressure	dB(A)	50	51	52	53	54
❸	TCAETY sound power	dB(A)	91	92	93	94	95
❸	TCAEQY sound power	dB(A)	82	83	84	85	86
	Scroll/step compressor	no.	4/4	4/4	4/4	4/4	4/4
	Circuits	no.	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**4235**	**4260**	**4290**	**4330**	**4371**
	L - Width	mm	3650	3650	3650	4750	4750
	H - Height	mm	2450	2450	2450	2450	2450
	P - Depth	mm	2260	2260	2260	2260	2260
❹	TCAETY weight	kg	1620	1820	1985	2265	2310
❹	TCAEQY weight	kg	1895	2095	2260	2540	2585

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C.

❷ In open field (Q = 2) at 10 m from the unit.

❸ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❹ Weight referred to the unit without load and not accessorised.

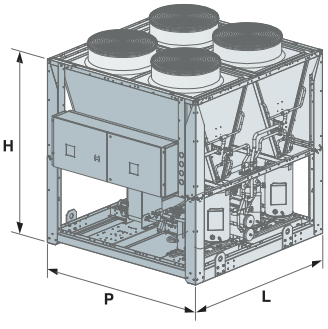
TCAEQY super-silenced versions.

Performance according to EN 14511.

	SEASONAL ENERGY PERFORMANCE		4235	4260	4290	4330	4370
	TCAETY MODEL SEASONAL PERFORMANCE IN COOLING MODE						
①	Pdesignc (EN 14825)	kW	235,3	261,3	292,2	334,0	372,0
①	SEER (EN 14825)		4,34	4,34	4,31	4,43	4,40
②	ηs,c	%	170	170	170	174	173
	TCAEQY MODEL SEASONAL PERFORMANCE IN COOLING MODE						
①	Pdesignc (EN 14825)	kW	221,4	243,4	269,4	312,1	343,1
①	SEER (EN 14825)		4,29	4,24	4,22	4,30	4,30
②	ηs,c	%	169	167	166	169	169

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)



Web code: **WK021**

WinPACK-R SE

TCAEBY-TCAESY 4225-4345

Cooling capacity: 214.2÷345.7 kW

TCAESY 4245 with Tank&Pump and PTL, RPE accessories

- **Compact chillers also for replacement markets**
- **High performance range with extended operating limits**
- **Simplified installation thanks to pumping unit accessories**
- **Integrated MASTER/ SLAVE control**

Packaged air-cooled water chillers with axial fans. Range with scroll hermetic compressors and R410A refrigerant.

Construction features

- Compressor: scroll type, rotary, hermetic complete with thermal protection and casing heater.
- 4 capacity steps with high efficiency at partial loads.

Water side heat exchanger: with stainless steel plates, complete with closed cell polyurethane foam rubber insulation and water flow differential pressure switch.

- Air side heat exchanger: with micro-channels.
- Fan: external rotor axial type electric fans with internal thermal protection, accident protection grilles.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: load-bearing structure made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - fan and compressor circuit breaker switches;
  - display of cooling circuit high and low pressure;
  - Master/Slave control up to 4 units in parallel;
  - clock board.

Versions

- B - Standard version.
- S - Silenced version complete with compressor technical compartment soundproofing and reduced speed fans.

Models

- TCAEBY: standard unit designed for cooling only.
- TCAESY: silenced unit designed for cooling only.

Factory fitted accessories

- Shell and tube evaporator.
- PUMP with single or double electric pump, one of which automatic in standby. The electric pumps are available in the low or high head versions.
- TANK&PUMP with 500 - 700 litre integrated buffer tank (depending on models) and single or double electric pump, complete with expansion tank, air vent valves, safety valve and water side pressure gauge.
- VPF control.
- Inverter pump control for unit start-up.
- Desuperheater.
- 100% heat recovery unit.
- Electronic expansion valve.
- –10°C condensing control (standard in S versions).
- –15°C condensing control with fans with EC motor.
- Condensing control with over-pressure fans.
- Power factor correction capacitors ($\cos\varphi > 0.94$).
- Forced limit of power consumption.
- Forced noise limit.
- Energy parameter measuring device.
- Optimised energy efficiency.
- Soft starter.
- Soundproofed compressor box.
- Compressor soundproof enclosures.
- Cooling circuit outlet and inlet valves.
- Refrigerant leak detector.
- Cooling circuit high and low pressure gauges.
- Double safety valves.
- Coil protection nets.
- Micro-channel coils with E-coating treatment.
- Control of min/max power supply voltage.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Evaporator antifreeze heater, electrical panel, buffer tank, electric pumps and heat exchangers for heat recovery, if applicable.
- Low temperature water production.
- Interfaces for serial communication with other devices.
- Anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Thermostat with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

	TCAEBY-TCAESY MODEL		4225	4245	4265	4315	4345
❶	Nominal cooling capacity	kW	220,2	241,2	264	313,9	345,7
❶	Nominal cooling capacity	kW	214,2	234,2	252,1	305	333,8
❶	E.E.R.		3,00	2,81	2,61	2,88	2,81
❶	E.E.R.		2,90	2,67	2,4	2,76	2,66
❶	Absorbed power	kW	73,4	85,8	101,1	108,9	123,0
❶	Absorbed power	kW	73,9	87,7	105,0	110,5	125,5
	TCAEBY-TCAESY MODEL		**4225**	**4245**	**4265**	**4315**	**4345**
❷	Sound pressure	dB(A)	58	59	60	61	62
❷	Sound pressure	dB(A)	52	53	54	56	57
❸	Sound power	dB(A)	90	91	92	93	94
❸	Sound power	dB(A)	84	85	86	88	89
	Scroll/step compressor	no.	4/4	4/4	4/4	4/4	4/4
	Circuits	no.	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**4225**	**4245**	**4265**	**4315**	**4345**
	L - Width	mm	2550	2550	2550	3650	3650
	H - Height	mm	2450	2450	2450	2450	2450
	P - Depth	mm	2260	2260	2260	2260	2260
❹	TCAEBY weight	kg	1300	1500	1650	1985	2000
❹	TCAESY weight	kg	1460	1660	1810	2215	2230

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C.

❷ In open field (Q = 2) at 10 m from the unit.

❸ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❹ Weight referred to the unit without load and not accessorised.

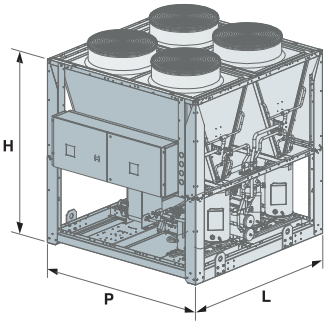
TCAESY silenced versions

Performance according to EN 14511.

	SEASONAL ENERGY PERFORMANCE		4225	4245	4265	4315	4345
	TCAEBY MODEL SEASONAL PERFORMANCE IN COOLING MODE						
①	Pdesignc (EN 14825)	kW	220,2	241,2	264,0	313,9	345,7
①	SEER (EN 14825)		4,17	4,16	4,14	4,18	4,16
②	ηs,c	%	164	163	163	164	163
	TCAESY MODEL SEASONAL PERFORMANCE IN COOLING MODE						
①	Pdesignc (EN 14825)	kW	214,2	234,2	252,1	305,0	333,8
①	SEER (EN 14825)		4,15	4,13	4,12	4,15	4,14
②	ηs,c	%	163	162	162	163	163

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)



Y-Pack FREECOOLING

TFAEY-TGAEY 4160-4320

Cooling capacity: 170÷361 kW

TFAETY 4230 with coil protection nets accessory

- **NO GLYCOL version available**
- **Plug&Play Range**
- **Software to estimate energy savings**

Packaged air cooled water chillers in Freecooling mode (TFAEY) and Freecooling NO-GLYCOL mode (TGAEY) with axial fans. Range with scroll hermetic compressors and R410A refrigerant.

Construction features

- Compressor: scroll type, rotary, hermetic complete with thermal protection and casing heater.
- 4 capacity steps with high efficiency at partial loads.
- Water side heat exchanger (evaporator): with stainless steel plates, complete with closed cell polyurethane foam rubber insulation and water flow differential pressure switch (TFAEY) or flow switch (TGAEY).
- Heat exchanger (water-water) in Freecooling NO-GLYCOL: with stainless steel plates, complete with closed cell polyurethane foam rubber insulation and water flow differential pressure switch.
- Air side heat exchanger (condenser): featuring finned coil with copper pipes and aluminium fins.
- Fan: external rotor axial type electric fans equipped with internal thermal protection, accident protection grilles and proportional electronic device for continuous fan rotation speed regulation.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: load-bearing structure made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - fan and compressor circuit breaker switches;
  - clock board;
  - water side 3-way modulating valve.

Versions

- T - High efficiency version (TFAETY-TGAETY).
- S - Silenced version complete with compressor technical compartment soundproofing and reduced speed fans (TFAESY - TGAESY).

Models

- TFAETY: high efficiency unit in Freecooling mode.
- TFAESY: silenced unit in Freecooling mode.
- TGAETY: high efficiency unit in NO-GLYCOL Freecooling mode.
- TGAESY: silenced unit in NO-GLYCOL Freecooling mode.

Factory fitted accessories

- PUMP with single or double electric pump, including an automatic actuation pump in standby complete with safety valve. The electric pumps are available in the low or high head versions.
- Electronic expansion valve.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Soft starter.
- Cooling circuit high and low pressure gauges.
- Metal filters or coil protection nets.
- Copper/copper or copper/pre-painted aluminium coils.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Evaporator antifreeze heater, electric pumps if applicable.
- Interfaces for serial communication with other devices.
- Anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Rhoss supervisors for unit monitoring and remote management.

	TFAETY-TFAESY MODEL		4160	4180	4200	4230	4260	4290	4320
	FREE-COOLING OFF								
❶	Nominal cooling capacity	kW	178	202	224	251	286	326	361
❶	Nominal cooling capacity	kW	170	197	215	240	274	312	344
❶	E.E.R.		3,31	3,41	3,27	3,20	3,34	3,20	3,09
❶	E.E.R.		3,21	3,32	3,11	3,11	3,22	3,09	2,92
❶	Absorbed power	kW	53,8	59,3	68,4	78,5	85,6	102,0	117,0
❶	Absorbed power	kW	53,0	59,3	69,2	77,2	85,2	100,9	117,9
	FREE-COOLING ON 100%								
❷	Nominal cooling capacity	kW	178	202	224	251	286	326	361
❷	Nominal cooling capacity	kW	170	197	215	240	274	312	344
❷	E.E.R.		21,3	24,4	26,9	20,5	22,8	19,5	21,5
❷	E.E.R.		33,0	37,8	41,4	31,7	35,2	30,0	32,9
❷	Absorbed power	kW	8	8	8	12	12	16	16
❷	Absorbed power	kW	5	5	5	7,5	7,5	10	10
❷	Total Free-cooling Temperature	°C	0,3	1	0,4	0,7	0,9	0,4	–0,8
❷	Total Free-cooling Temperature	°C	–1,3	–0,8	–1,5	–1,3	–1,1	–1,6	–3,0
	TFAETY-TFAESY MODEL		**4160**	**4180**	**4200**	**4230**	**4260**	**4290**	**4320**
❸	Sound pressure	dB(A)	60	63	63	65	65	66	66
❸	Sound pressure	dB(A)	55	56	56	58	59	60	60
❹	Sound power	dB(A)	89	91	91	93	93	94	94
❹	Sound power	dB(A)	85	86	86	88	89	90	90
	Scroll/step compressor	no.	4/4	4/4	4/4	4/4	4/4	4/4	4/4
	Circuits	no.	2	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
	DIMENSIONS AND WEIGHT		**4160**	**4180**	**4200**	**4230**	**4260**	**4290**	**4320**
	L - Width	mm	4.800	4.800	4.800	4.800	5.300	5.300	5.300
	H - Height	mm	2.030	2.030	2.030	2.030	2.030	2.030	2.030
	P - Depth	mm	2.090	2.090	2.090	2.090	2.090	2.090	2.090
❺	TFAETY-TFAESY Weight	kg	2.370	2.820	2.920	3.020	3.230	3.380	3.430
❺	TGAETY-TGAESY Weight	kg	2.470	2.970	3.070	3.170	3.280	3.430	3.480

Data at the following conditions:

❶ Air: 30°C - Water: 15/10°C - Ethylene glycol 30%.

❷ Water: 15/10°C – Ethylene glycol 30%.

❸ In open field (Q = 2) at 10 m from the unit on the coil side.

❹ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❺ Weight referred to the accessorised unit without load.

TFAESY silenced version.

	SEASONAL ENERGY PERFORMANCE		4160	4180	4200	4230	4260	4290	4320
	TFAETY MODEL SEASONAL PERFORMANCE IN COOLING MODE								
⑤	PdesignR	kW	158,2	179,4	198,9	222,8	254	289,5	320,5
⑤	SEPR		5,1	5,14	5,11	5,06	5,13	5,11	5,09
	TFAESY MODEL SEASONAL PERFORMANCE IN COOLING MODE								
⑤	PdesignR	kW	151,2	175,1	191	213,1	243,5	277,1	305,5
⑤	SEPR		5,1	5,09	5,08	5,04	5,1	5,08	5,05
	TGAETY MODEL SEASONAL PERFORMANCE IN COOLING MODE								
⑤	PdesignR	kW	155,3	178,4	197,4	220,6	250,9	286,9	317,1
⑤	SEPR		4,83	4,87	4,9	4,78	4,84	4,77	4,64
	TGAESY MODEL SEASONAL PERFORMANCE IN COOLING MODE								
⑤	PdesignR	kW	148,5	171,6	188,9	211,1	240,7	274,2	300,9
⑤	SEPR		4,81	4,81	4,83	4,74	4,8	4,71	4,57

⑤ Application for high temperature (7°C) process chiller (EU Regulation 2016/2281)

Web code: **WPE11**

WinPOWER HE-A

TCAEY 4385-8920 / THAEY 4385-6700

Cooling capacity: 337.3÷916.8 kW - Heating capacity: 368.8÷698.9 kW

TCAETY 6700
with BCI accessory

- **High energy efficiency chillers**
- **Extended operating limits**
- **Up to 6 capacity steps**
- **Multi-purpose for systems with 2 pipes + DHW (with optional RC100)**
- **Integrated MASTER/ SLAVE control**

* Refer to the Rhoss website to learn which heat pump models can avail of the incentives.

Air cooled water chillers and reversible heat pumps with axial fans.
Range with scroll hermetic compressors and R410A refrigerant.

Construction features

- Compressor: scroll type, rotary, hermetic complete with thermal protection and casing heater.
- Up to 6 capacity steps with high efficiency at partial loads.
- Water side heat exchanger: with stainless steel plates, complete with closed cell polyurethane foam rubber insulation, water flow differential pressure switch and Victaulic fittings.
- Air side heat exchanger: featuring micro-channels (TCAEY) or finned coil with copper pipes and aluminium fins (THAEY).
- Fan: external rotor axial type electric fans with internal thermal protection, accident protection grilles.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: load-bearing structure made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - compressor and fan circuit breaker switches,
  - display of cooling circuit high and low pressure,
  - electronic expansion valve.
  - clock board.
  - Master/Slave control up to 4 units in parallel.

Versions

- T - High efficiency version with oversized condensing section (TCAETY - THAETY).
- Q - Super-silenced version complete with compressor technical compartment soundproofing, super-reduced speed fans and oversized condensing section (TCAEQY-THAEQY).

Models

- TCAETY: high efficiency unit designed for cooling only.
- TCAEQY: super silenced unit designed for cooling only.
- THAETY: high efficiency heat pump unit.
- THAEQY: super silenced heat pump unit.

TCAEQY 8920

THAETY 4460
with BFI accessory

Factory fitted accessories

- Shell and tube evaporator.
- PUMP with single or double electric pump, one of which automatic in standby. The electric pumps are available in the low or high head versions.
- TANK&PUMP with 700 or 1000 litre integrated buffer tank (depending on size) and single or double electric pump, complete with expansion tank, air vent valves, safety valve and water side pressure gauge.
- VPF control.
- Inverter pump control for unit start-up.
- Desuperheater.
- 100% heat recovery unit.
- –10°C condensing control.
- –15°C condensing control with fans with EC motor (standard in Q versions).
- Condensing control with over-pressure fans.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Forced limit of power consumption.
- Forced noise limit.
- Energy parameter measuring device.
- Optimised energy efficiency.
- Soft starter.
- Soundproofed compressor box or Compressor box and soundproofed cooling circuit (THAEY).
- Compressor soundproof enclosures.
- Cooling circuit outlet and inlet valves.
- Refrigerant leak detector.
- Cooling circuit high and low pressure gauges.
- Double safety valves
- Metal filters (THAEY) or coil protection nets.
- Micro-channel coils with E-coating treatment (TCAEY).
- Copper/copper or copper/pre-painted aluminium coils (THAEY).
- Control of min/max power supply voltage.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Evaporator antifreeze heater, electrical panel, buffer tank, electric pumps and heat exchangers for heat recovery, if applicable.
- Low temperature water production.
- Interfaces for serial communication with other devices.
- Anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Thermostat with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

WinPOWER HE-A

TCAEY 4385-8920 / THAEY 4385-6700

	TCAETY-TCAEQY MODEL		4385	4415	4460	5525	6570	6625
❶	Nominal cooling capacity	kW	385	414	460,8	524,5	569,5	623,1
❶	Nominal cooling capacity	kW	355,2	381,1	420,1	469,9	510,8	558,6
❶	E.E.R.		3,24	3,16	3,13	3,19	3,17	3,1
❶	E.E.R.		2,87	2,71	2,64	2,71	2,63	2,47
❶	Absorbed power	kW	118,9	131,1	147,3	164,5	179,7	201
❶	Absorbed power	kW	123,8	140,7	159,2	173,4	194,3	226,2
	TCAETY-TCAEQY MODEL		**4385**	**4415**	**4460**	**5525**	**6570**	**6625**
❸	TCAETY sound pressure	dB(A)	62,5	63,5	64,5	64,5	64,5	64,5
❸	TCAEQY sound pressure	dB(A)	53,5	53,5	54,5	54,5	54,5	54,5
❹	TCAETY sound power	dB(A)	95	96	97	97	97	97
❹	TCAEQY sound power	dB(A)	86	86	87	87	87	87
	Scroll/step compressor	no.	4/4	4/4	4/4	5/5	6/6	6/6
	Circuits	no.	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**4385**	**4415**	**4460**	**5525**	**6570**	**6625**
	L - Width	mm	4840	4840	4840	5940	5940	5940
	H - Height	mm	2450	2450	2450	2450	2450	2450
	P - Depth	mm	2260	2260	2260	2260	2260	2260
❺	TCAETY weight	kg	2440	2460	2510	2980	3200	3210
❺	TCAEQY weight	kg	2715	2735	2785	3300	3565	3575

	THAETY-THAEQY MODEL		4385	4415	4460	5525	6570	6625
❷	Nominal heating capacity	kW	386,9	425	464,2	520,4	571,5	626,8
❷	Nominal heating capacity	kW	368,8	404,9	441	493,2	535,3	598,6
❷	C.O.P.		3,2	3,2	3,2	3,2	3,2	3,2
❷	C.O.P.		3,24	3,22	3,22	3,2	3,2	3,21
❶	Nominal cooling capacity		359,2	399	439,9	498,7	538,6	584,4
❶	Nominal cooling capacity		337,3	367,2	401,1	453	483,9	520,8
❶	E.E.R.		2,97	2,96	2,95	3,02	2,95	2,9
❶	E.E.R.		2,66	2,55	2,49	2,6	2,47	2,29
❷	Absorbed power	kW	121	132,9	145,1	162,7	178,6	195,9
❷	Absorbed power	kW	113,9	125,8	137	154,2	167,3	186,5
	THAETY-THAEQY MODEL		**4385**	**4415**	**4460**	**5525**	**6570**	**6625**
❸	THAETY sound pressure	dB(A)	62,5	63,5	64,5	64,5	64,5	64,5
❸	THAEQY sound pressure	dB(A)	53,5	53,5	54,5	54,5	54,5	54,5
❹	THAETY sound power	dB(A)	95	96	97	97	97	97
❹	THAEQY sound power	dB(A)	86	86	87	87	87	87
	Scroll/step compressor	no.	4/4	4/4	4/4	5/5	6/6	6/6
	Circuits	no.	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**4385**	**4415**	**4460**	**5525**	**6570**	**6625**
	L - Width	mm	4840	4840	4840	5940	5940	5940
	H - Height	mm	2450	2450	2450	2450	2450	2450
	P - Depth	mm	2260	2260	2260	2260	2260	2260
❺	THAETY weight	kg	3030	3200	3250	3830	4040	4070
❺	THAEQY weight	kg	3395	3565	3615	4310	4520	4550

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C.

❷ Air: 7°C, D.B. 6°C W.B.- Water: 40/45°C.

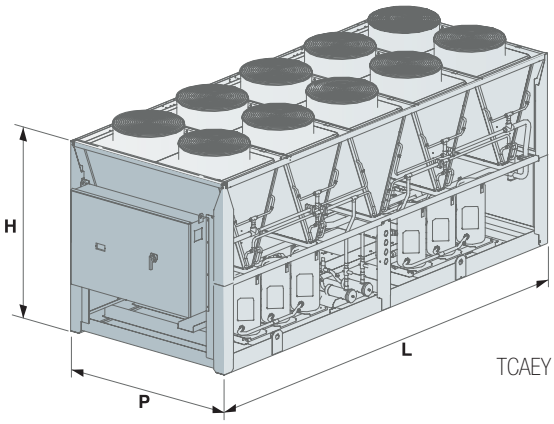
❸ In open field (Q = 2) at 10 m from the unit.

❹ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❺ Weight referred to the unit without load and not accessorised.

TCAEQY super-silenced versions.

Performance according to EN 14511.



TCAEY

	SEASONAL ENERGY PERFORMANCE		4385	4415	4460	5525	6570	6625
	TCAETY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
①	Pdesignc (EN 14825)	kW	384,9	413,8	460,7	524,3	569,3	622,9
①	SEER (EN 14825)		4,44	4,43	4,4	4,49	4,44	4,42
②	$\eta_{s,c}$	%	175	174	173	176	174	174
	TCAEQY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
①	Pdesignc (EN 14825)	kW	355,1	381	419,9	469,7	510,7	558,4
①	SEER (EN 14825)		4,31	4,19	4,23	4,24	4,19	4,23
②	$\eta_{s,c}$	%	169	165	166	167	165	166
	THAETY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
①	Pdesignc (EN 14825)	kW	-	-	439,8	498,5	538,4	584,2
①	SEER (EN 14825)		-	-	4,18	4,22	4,17	4,19
②	$\eta_{s,c}$	%	-	-	164	166	164	165
	THAEQY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
①	Pdesignc (EN 14825)	kW	-	-	401	452,8	483,8	520,6
①	SEER (EN 14825)		-	-	4,18	4,21	4,17	4,2
②	$\eta_{s,c}$	%	-	-	164	165	164	165
	THAETY MODEL SEASONAL PERFORMANCE IN HEATING MODE							
③	Pdesignh (EN 14825)	kW	354	388	-	-	-	-
③	SCOP (EN 14825)		3,61	3,64	-	-	-	-
④	η_{s}	%	141	143	-	-	-	-
	THAEQY MODEL SEASONAL PERFORMANCE IN HEATING MODE							
③	Pdesignh (EN 14825)	kW	337	370	-	-	-	-
③	SCOP (EN 14825)		3,71	3,71	-	-	-	-
④	η_{s}	%	145	145	-	-	-	-

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)

WinPOWER HE-A

TCAEY 4385-8920 / THAEY 4385-6700

	TCAETY-TCAEQY MODEL		6665	6700	7760	8820	8870	8920
❶	Nominal cooling capacity	kW	665,3	695,2	758,3	819,9	870	916,8
❶	Nominal cooling capacity	kW	604,7	632,6	694,7	753,3	791,5	827,3
❶	E.E.R.		3,16	3,13	3,14	3,15	3,14	3,13
❶	E.E.R.		2,7	2,65	2,67	2,67	2,64	2,6
❶	Absorbed power	kW	210,6	222,2	241,5	260,3	277,1	293
❶	Absorbed power	kW	224	238,8	260,2	282,2	299,9	318,2
	TCAETY-TCAEQY MODEL		**6665**	**6700**	**7760**	**8820**	**8870**	**8920**
❸	TCAETY sound pressure	dB(A)	65,5	65,5	65,5	65,5	66	67
❸	TCAEQY sound pressure	dB(A)	55,5	56,5	57	57	58	59
❹	TCAETY sound power	dB(A)	98	98	98	98	99	100
❹	TCAEQY sound power	dB(A)	88	89	90	90	91	92
	Scroll/step compressor	no.	6/6	6/6	7/6	8/6	8/6	8/6
	Circuits	no.	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**6665**	**6700**	**7760**	**8820**	**8870**	**8920**
	L - Width	mm	7100	7100	8250	9350	9350	9350
	H - Height	mm	2450	2450	2450	2450	2450	2450
	P - Depth	mm	2260	2260	2260	2260	2260	2260
❺	TCAETY weight	kg	3715	3740	4250	4650	4750	4770
❺	TCAEQY weight	kg	4080	4105	4655	5105	5205	5225

	THAETY-THAEQY MODEL		6665	6700
❷	Nominal heating capacity	kW	662,6	698,9
❷	Nominal heating capacity	kW	631,4	661,6
❷	C.O.P.		3,21	3,22
❷	C.O.P.		3,25	3,23
❶	Nominal cooling capacity		633,5	660,3
❶	Nominal cooling capacity		578,9	601,7
❶	E.E.R.		3,02	2,97
❶	E.E.R.		2,54	2,51
❷	Absorbed power	kW	206,5	217,1
❷	Absorbed power	kW	194,3	204,9
	THAETY-THAEQY MODEL		**6665**	**6700**
❸	THAETY sound pressure	dB(A)	65,5	65,5
❸	THAEQY sound pressure	dB(A)	55,5	56,5
❹	THAETY sound power	dB(A)	98	98
❹	THAEQY sound power	dB(A)	88	89
	Scroll/step compressor	no.	6/6	6/6
	Circuits	no.	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**6665**	**6700**
	L - Width	mm	7100	7100
	H - Height	mm	2450	2450
	P - Depth	mm	2260	2260
❺	THAETY weight	kg	4680	4710
❺	THAEQY weight	kg	5210	5240

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C.

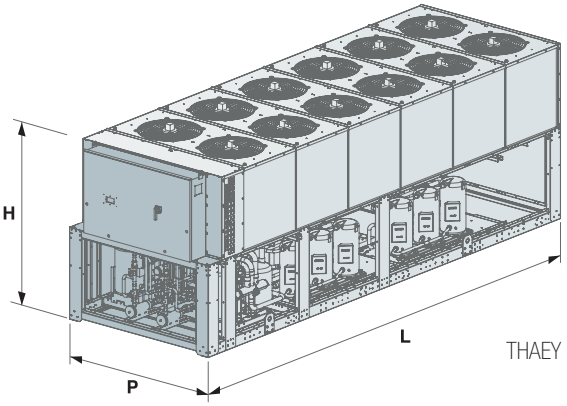
❷ Air: 7°C, D.B. 6°C W.B.- Water: 40/45°C.

❸ In open field (Q = 2) at 10 m from the unit.

❹ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❺ Weight referred to the unit without load and not accessorised.

TCAEQY super-silenced versions.



THAEY

	SEASONAL ENERGY PERFORMANCE		6665	6700	7760	8820	8870	8920
	TCAETY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
①	Pdesignc (EN 14825)	kW	665,2	695,1	758,3	819,9	870	916,7
①	SEER (EN 14825)		4,4	4,31	4,51	4,51	4,48	4,42
②	$\eta_{s,c}$	%	173	169	178	178	176	174
	TCAEQY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
①	Pdesignc (EN 14825)	kW	604,6	632,5	694,6	753,3	791,4	827,3
①	SEER (EN 14825)		4,23	4,22	4,26	4,24	4,2	4,15
②	$\eta_{s,c}$	%	166	166	167	167	165	163
	THAETY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
①	Pdesignc (EN 14825)	kW	633,4	660,2	-	-	-	-
①	SEER (EN 14825)		4,19	4,16	-	-	-	-
②	$\eta_{s,c}$	%	165	163	-	-	-	-
	THAEQY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
①	Pdesignc (EN 14825)	kW	578,7	601,6	-	-	-	-
①	SEER (EN 14825)		4,16	4,2	-	-	-	-
②	$\eta_{s,c}$	%	163	165	-	-	-	-

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)

Web code: **WP011**

WinPOWER SE

TCAEY 4360-8860 / THAEY 4360-6670

Cooling capacity: 335÷861.8 kW - Heating capacity: 358.1÷671.5 kW

THAESY 6590
with BFI accessory

- **Version B compact and high-performance for replacement markets**
- **Up to 6 capacity steps**
- **Simplified installation thanks to pumping unit accessories**
- **Multi-purpose for systems with 2 pipes + DHW (with optional RC100)**
- **Integrated MASTER/ SLAVE control**

* Refer to the Rhoss website to learn which heat pump models can avail of the incentives.

Air cooled water chillers and reversible heat pumps with axial fans.
Range with scroll hermetic compressors and R410A refrigerant.

Construction features

- Compressor: scroll type, rotary, hermetic complete with thermal protection and casing heater.
- up to 6 capacity steps with high efficiency at partial loads.
- Water side heat exchanger: with stainless steel plates, complete with closed cell polyurethane foam rubber insulation, water flow differential pressure switch and Victaulic fittings.
- Air side heat exchanger: featuring micro-channels (TCAEY) or finned coil with copper pipes and aluminium fins (THAEY).
- Fan: external rotor axial type electric fans with internal thermal protection, accident protection grilles.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: load-bearing structure made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - compressor and fan circuit breaker switches,
  - display of cooling circuit high and low pressure,
  - electronic expansion valve.
  - clock board.
  - Master/Slave control up to 4 units in parallel

Versions

- B -Standard version (TCAEBY-THAEBY).
- S - Silenced version complete with compressor technical compartment soundproofing and reduced speed fans (TCAESY - THAESY).

Models

- TCAEBY: unit intended for cooling only.
- TCAESY: silenced unit designed for cooling only.
- THAEBY: heat pump unit.
- THAESY: silenced heat pump unit.

TCAESY 8860

THAESY 6590
with BFI accessory

Factory fitted accessories

- Shell and tube evaporator.
- PUMP with single or double electric pump, one of which automatic in standby. The electric pumps are available in the low or high head versions.
- TANK&PUMP with 700 or 1000 litre integrated buffer tank (depending on size) and single or double electric pump, complete with expansion tank, air vent valves, safety valve and water side pressure gauge.
- VPF control.
- Inverter pump control for unit start-up.
- Desuperheater.
- 100% heat recovery unit.
- -10°C condensing control (standard with S versions)
- –15°C condensing control with fans with EC motor.
- Condensing control with over-pressure fans.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Forced limit of power consumption.
- Forced noise limit.
- Energy parameter measuring device.
- Optimised energy efficiency.
- Soft starter.
- Soundproofed compressor box or Compressor box and soundproofed cooling circuit (THAEY).
- Compressor soundproof enclosures.
- Cooling circuit outlet and inlet valves.
- Refrigerant leak detector.
- Cooling circuit high and low pressure gauges.
- Double safety valves.
- Metal filters (THAEY) or coil protection nets.
- Micro-channel coils with E-coating treatment (for TCAEY).
- Copper/copper or copper/pre-painted aluminium coils (for THAEY).
- Control of min/max power supply voltage.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Evaporator antifreeze heater, electrical panel, buffer tank, electric pumps and heat exchangers for heat recovery, if applicable.
- Low temperature water production.
- Interfaces for serial communication with other devices.
- Anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Thermostat with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

WinPOWER SE

TCAEY 4360-8860 / THAEY 4360-6670

	TCAEBY-TCAESY MODEL		4360	4390	4435	5500	6540	6590
❶	Nominal cooling capacity	kW	359,8	389,6	434,6	496,3	538,9	587,9
❶	Nominal cooling capacity	kW	350,9	374,7	416,7	478,4	517,1	560,1
❶	E.E.R.		2,9	2,84	2,81	2,96	2,9	2,77
❶	E.E.R.		2,76	2,62	2,6	2,77	2,68	2,52
❶	Absorbed power	kW	124,1	137,2	154,7	167,7	185,9	212,3
❶	Absorbed power	kW	127,2	143,1	160,3	172,8	193	222,3
	TCAEBY-TCAESY MODEL		**4360**	**4390**	**4435**	**5500**	**6540**	**6590**
❸	Sound pressure	dB(A)	62	63	64	64	64	64
❸	Sound pressure	dB(A)	57	58	59	59	59	59
❹	Sound power	dB(A)	94	95	96	96	96	96
❹	Sound power	dB(A)	89	90	91	91	91	91
	Scroll/step compressor	no.	4/4	4/4	4/4	5/5	6/6	6/6
	Circuits	no.	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**4360**	**4390**	**4435**	**5500**	**6540**	**6590**
	L - Width	mm	3740	3740	3740	4840	4840	4840
	H - Height	mm	2450	2450	2450	2450	2450	2450
	P - Depth	mm	2260	2260	2260	2260	2260	2260
❺	TCAEBY weight	kg	2130	2140	2200	2670	2860	2890
❺	TCAESY weight	kg	2360	2370	2430	2940	3165	3195

	THAEBY-THAESY MODEL		4360	4390	4435	5500	6540	6590
❷	Nominal heating capacity	kW	374,2	398,4	437,4	487,7	530	592,1
❷	Nominal heating capacity	kW	358,1	386,3	424,3	473,6	518,9	575
❷	C.O.P.		3,01	2,94	3,03	2,98	2,93	2,97
❷	C.O.P.		3,01	2,94	3,02	2,99	2,95	2,96
❶	Nominal cooling capacity	kW	346,9	368,7	410,7	465,4	509,1	553,2
❶	Nominal cooling capacity	kW	335	355,9	389,9	444,6	486,4	532,4
❶	E.E.R.		2,8	2,67	2,64	2,78	2,71	2,6
❶	E.E.R.		2,64	2,49	2,42	2,55	2,51	2,41
❷	Absorbed power	kW	124,4	135,6	144,4	163,7	180,9	199,4
❷	Absorbed power	kW	119	131,4	140,5	158,4	175,9	194,3
	THAEBY-THAESY MODEL		**4360**	**4390**	**4435**	**5500**	**6540**	**6590**
❸	Sound pressure	dB(A)	62	63	64	64	64	64
❸	Sound pressure	dB(A)	57	58	59	59	59	59
❹	Sound power	dB(A)	94	95	96	96	96	96
❹	Sound power	dB(A)	89	90	91	91	91	91
	Scroll/step compressor	no.	4/4	4/4	4/4	5/5	6/6	6/6
	Circuits	no.	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**4360**	**4390**	**4435**	**5500**	**6540**	**6590**
	L - Width	mm	3740	3740	3740	4840	4840	4840
	H - Height	mm	2450	2450	2450	2450	2450	2450
	P - Depth	mm	2260	2260	2260	2260	2260	2260
❺	THAEBY weight	kg	2700	2710	2780	3400	3580	3640
❺	THAESY weight	kg	2900	2910	2980	3710	3910	3970

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C.

❷ Air: 7°C, D.B. 6°C W.B.- Water: 40/45°C.

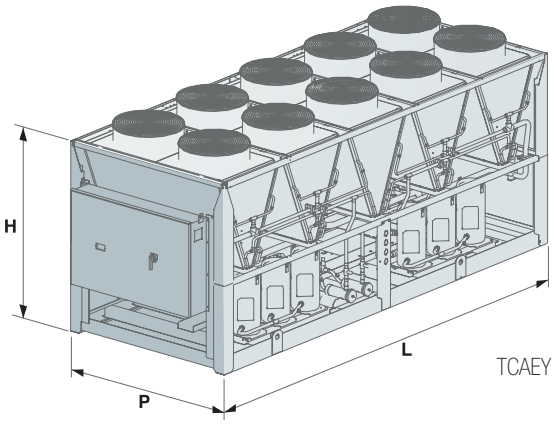
❸ In open field (Q = 2) at 10 m from the unit.

❹ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❺ Weight referred to the unit without load and not accessorised.

TCAESY - THAESY silenced versions

Performance according to EN 14511.



TCAEY

	SEASONAL ENERGY PERFORMANCE		4360	4390	4435	5500	6540	6590
	TCAEBY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
①	Pdesignc (EN 14825)	kW	359,7	389,5	434,4	496,1	538,7	587,7
①	SEER (EN 14825)		4,18	4,17	4,21	4,25	4,2	4,18
②	$\eta_{s,c}$	%	164	164	165	167	165	164
	TCAESY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
①	Pdesignc (EN 14825)	kW	350,8	374,6	416,6	478,2	517	560
①	SEER (EN 14825)		4,27	4,16	4,16	4,37	4,27	4,19
②	$\eta_{s,c}$	%	168	163	164	172	168	165
	THAEBY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
①	Pdesignc (EN 14825)	kW	-	-	410,6	465,3	509	553
①	SEER (EN 14825)		-	-	4,21	4,12	4,13	4,17
②	$\eta_{s,c}$	%	-	-	166	162	162	164
	THAESY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
①	Pdesignc (EN 14825)	kW	-	-	-	444,4	486,2	532,2
①	SEER (EN 14825)		-	-	-	4,12	4,11	4,17
②	$\eta_{s,c}$	%	-	-	-	162	161	164
	THAEBY MODEL SEASONAL PERFORMANCE IN HEATING MODE							
③	Pdesignh (EN 14825)	kW	343	367	-	-	-	-
③	SCOP (EN 14825)		3,44	3,38	-	-	-	-
④	η_{s}	%	135	132	-	-	-	-
	THAESY MODEL SEASONAL PERFORMANCE IN HEATING MODE							
③	Pdesignh (EN 14825)	kW	328	355	391	-	-	-
③	SCOP (EN 14825)		3,45	3,39	3,46	-	-	-
④	η_{s}	%	135	132	136	-	-	-

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)

WinPOWER SE

TCAEY 4360-8860 / THAEY 4360-6670

	TCAEBY-TCAESY MODEL		6635	6670	7730	8790	8830	8860
❶	Nominal cooling capacity	kW	637,7	666,5	732,4	784	827,1	861,8
❶	Nominal cooling capacity	kW	611,9	637,8	705,6	752,3	790,4	825,1
❶	E.E.R.		2,93	2,9	2,93	2,84	2,81	2,8
❶	E.E.R.		2,74	2,72	2,76	2,63	2,61	2,6
❶	Absorbed power	kW	217,7	229,9	250	276,1	294,4	307,8
❶	Absorbed power	kW	223,4	234,5	255,7	286,1	302,9	317,4
	TCAEBY-TCAESY MODEL		**6635**	**6670**	**7730**	**8790**	**8830**	**8860**
❸	Sound pressure	dB(A)	64,5	64,5	64,5	64,5	65	66
❸	Sound pressure	dB(A)	59,5	60	60	60	60,5	61,5
❹	Sound power	dB(A)	97	97	97	97	98	99
❹	Sound power	dB(A)	92	92,5	92,5	92,5	93	94
	Scroll/step compressor	no.	6/6	6/6	7/6	8/6	8/6	8/6
	Circuits	no.	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**6635**	**6670**	**7730**	**8790**	**8830**	**8860**
	L - Width	mm	5940	5940	7150	7150	7150	7150
	H - Height	mm	2450	2450	2450	2450	2450	2450
	P - Depth	mm	2260	2260	2260	2260	2260	2260
❺	TCAEBY weight	kg	3205	3230	3870	4020	4100	4120
❺	TCAESY weight	kg	3510	3535	4210	4410	4490	4510

	THAEBY-THAESY MODEL		6635	6670
❷	Nominal heating capacity	kW	638,3	671,5
❷	Nominal heating capacity	kW	616,1	648,4
❷	C.O.P.		3,04	3
❷	C.O.P.		3,03	3
❶	Nominal cooling capacity	kW	600,9	631,7
❶	Nominal cooling capacity	kW	576,1	603,9
❶	E.E.R.		2,76	2,75
❶	E.E.R.		2,6	2,58
❷	Absorbed power	kW	210	223,9
❷	Absorbed power	kW	203,4	216,2
	THAEBY-THAESY MODEL		**6635**	**6670**
❸	Sound pressure	dB(A)	64,5	64,5
❸	Sound pressure	dB(A)	59,5	60
❹	Sound power	dB(A)	97	97
❹	Sound power	dB(A)	92	92,5
	Scroll/step compressor	no.	6/6	6/6
	Circuits	no.	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**6635**	**6670**
	L - Width	mm	5940	5940
	H - Height	mm	2450	2450
	P - Depth	mm	2260	2260
❺	THAEBY weight	kg	4080	4120
❺	THAESY weight	kg	4490	4530

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C.

❷ Air: 7°C, D.B. 6°C W.B.- Water: 40/45°C.

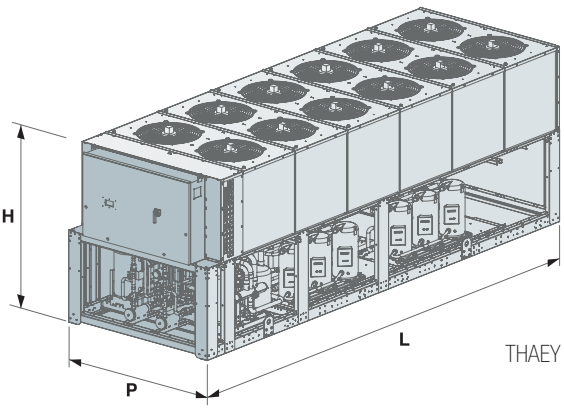
❸ In open field (Q = 2) at 10 m from the unit.

❹ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❺ Weight referred to the unit without load and not accessorised.

TCAESY - THAESY silenced versions

Performance according to EN 14511.



THAEY

	SEASONAL ENERGY PERFORMANCE		6635	6670	7730	8790	8830	8860
	TCAEBY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
①	Pdesignc (EN 14825)	kW	637,5	666,3	732,3	783,9	827	861,7
①	SEER (EN 14825)		4,23	4,19	4,26	4,17	4,15	4,11
②	$\eta_{s,c}$	%	166	164	167	164	163	162
	TCAESY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
①	Pdesignc (EN 14825)	kW	611,7	637,6	705,6	752,2	790,4	825,1
①	SEER (EN 14825)		4,33	4,2	4,23	4,15	4,12	4,12
②	$\eta_{s,c}$	%	170	165	166	163	162	162
	THAEBY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
①	Pdesignc (EN 14825)	kW	600,7	631,5	-	-	-	-
①	SEER (EN 14825)		4,19	4,17	-	-	-	-
②	$\eta_{s,c}$	%	165	164	-	-	-	-
	THAESY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
①	Pdesignc (EN 14825)	kW	575,9	603,7	-	-	-	-
①	SEER (EN 14825)		4,17	4,18	-	-	-	-
②	$\eta_{s,c}$	%	164	164	-	-	-	-

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)

FullPOWER VFD

TCAITZ-TCAIQZ 2565-21005

Cooling capacity: 510÷1001.5 kW

INVERTER

ErP READY 2021 APPLIES TO EUROPEAN DIRECTIVE FOR ENERGY RELATED PRODUCTS

- **Variable Vi screw compressor suitable for all applications**
- **Continuous power regulation from 12.5 to 100%**
- **High efficiency levels**
- **Wide range of accessories**
- **Integrated MASTER/ SLAVE control**

TCAITZ 2565
with BCI60 accessory

Packaged air-cooled water chillers with axial fans.
Range with semi-hermetic screw compressors with variable Vi, inverter regulation and R134a refrigerant gas.

Construction features

- Compressor: high energy efficiency semi-hermetic screw compressor with variable Vi intrinsic compression ratio, star-delta limited start, inverter rotation regulation, complete with integral protection, casing heater, oil level sensor and refrigerant gas outlet piping shut-off valve.
- Water side heat exchanger: dry expansion shell and tube exchanger with counterflow heat exchange, complete with closed cell polyurethane foam rubber insulation, water flow differential pressure switch and Victaulic fittings.
- Air side heat exchanger: with micro-channels.
- Fan: external rotor axial type electric fans equipped with internal thermal protection, accident protection grilles and proportional electronic device for continuous fan rotation speed regulation.
- Control: microprocessor electronic control.
- Structure: made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - Display of cooling circuit high/low pressure;
  - Electronic expansion valve;
  - Clock board;
  - Master/Slave control up to 4 units in parallel.

Versions

- T - High efficiency version with oversized condensing section (TCAITZ).
- Q - Super-silenced version complete with compressor technical compartment soundproofing, super-reduced speed fans and oversized condensing section (TCAIQZ).

Models

- TCAITZ: high efficiency unit designed for cooling only.
- TCAIQZ: super silenced unit designed for cooling only.

Factory fitted accessories

- PUMP with single or double electric pump, one of which automatic in standby. The electric pumps are available in the low or high head versions.
- VPF control.
- Inverter pump control for unit start-up.
- Desuperheater.
- 100% heat recovery unit.
- -15°C condensing control with fans with EC motor (standard with Q versions).
- Condensing control with over-pressure fans.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Compressor circuit breaker switches.
- Electro-mechanical flow switch.
- EMC anti-disturbance filters.
- Forced limit of power consumption.
- Forced noise limit.
- Energy parameter measuring device.
- Optimised energy efficiency.
- Soundproofed compressor box.
- Cooling circuit intake valves.
- Refrigerant leak detector.
- Cooling circuit high and low pressure gauges.
- Double safety valves.
- Coil protection nets.
- Micro-channel coils with E-coating treatment.
- Control of min/max power supply voltage.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Evaporator antifreeze heater, electrical panel, electric pumps and heat exchangers for heat recovery if applicable.
- Interfaces for serial communication with other devices.
- Anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Thermostat with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

	TCAITZ-TCAIQZ MODEL		2565	2615	2685	2775	2845	2945	21005
❶	Nominal cooling capacity	kW	562,4	610,9	680,5	772,5	844,9	943	1001,5
❶	Nominal cooling capacity	kW	510	555,4	633	717,9	791,5	859,7	934,2
❶	E.E.R.		3,11	3,15	3,13	3,13	3,11	3,13	3,11
❶	E.E.R.		2,77	2,85	2,79	2,86	2,78	2,83	2,79
❶	Absorbed power	kW	180,8	193,9	217,4	246,8	271,7	301,3	322
❶	Absorbed power	kW	184,1	194,9	226,9	251	284,7	303,8	334,8
	TCAITZ-TCAIQZ MODEL		**2565**	**2615**	**2685**	**2775**	**2845**	**2945**	**21005**
❷	Sound pressure	dB(A)	69,5	70	70	71	71	72	72
❷	Sound pressure	dB(A)	59,5	60	60	61	62	62	63
❸	Sound power	dB(A)	102	103	103	104	104	105	105
❸	Sound power	dB(A)	92	93	93	94	95	95	96
	Screw/step compressor	no.	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION
	Circuits	no.	2	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**2565**	**2615**	**2685**	**2775**	**2845**	**2945**	**21005**
	L - Width	mm	6090	7250	7250	8350	8350	10550	10550
	H - Height	mm	2450	2450	2450	2450	2450	2450	2450
	P - Depth	mm	2260	2260	2260	2260	2260	2260	2260
❹	TCAITZ weight	kg	4220	4650	4750	5070	5190	5850	5960
❹	TCAIQZ weight	kg	4600	5050	5150	5470	5590	6250	6360

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C.

❷ In open field (Q = 2) at 10 m from the unit.

❸ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❹ Weight referred to the unit without load and not accessorised.

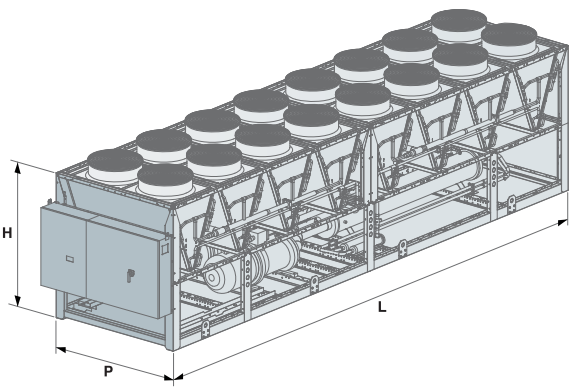
TCAIQZ super-silenced versions.

Performance according to EN 14511.

	SEASONAL ENERGY PERFORMANCE		2565	2615	2685	2775	2845	2945	21005
	TCAITZ MODEL SEASONAL PERFORMANCE IN COOLING MODE								
①	Pdesignc (EN 14825)	kW	562,4	610,9	680,5	772,5	844,9	943	1001,5
①	SEER (EN 14825)		5,1	5,12	5	5,08	4,98	5,12	5,02
②	$\eta_{s,c}$	%	201	202	197	200	196	202	198
	TCAIQZ MODEL SEASONAL PERFORMANCE IN COOLING MODE								
①	Pdesignc (EN 14825)	kW	510	555,4	633	717,9	791,5	859,7	934,2
①	SEER (EN 14825)		4,73	4,92	4,88	4,89	4,85	4,93	4,9
②	$\eta_{s,c}$	%	186	194	192	192	191	194	193

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)



FullPOWER VFD (1+i)

TCAITZ-TCAIQZ 2560-21310

Cooling capacity: 518÷1307.4 kW

INVERTER

ErP READY 2021 APPLIES TO EUROPEAN DIRECTIVE FOR ENERGY RELATED PRODUCTS

- **Continuous power regulation from 12.5 to 100%**
- **High efficiency levels**
- **Wide range of accessories**
- **Integrated MASTER/ SLAVE control**

TCAITZ 2560
with BCI60 accessory

Air cooled water chillers with axial fans. Range with stepless semi-hermetic screw compressors and variable Vi with inverter regulation and R134a refrigerant gas.

Construction features

- Compressor: high energy efficiency semi-hermetic screw driven by fixed speed motor with linear capacity control and variable Vi regulated by inverter (12.5-100%), limited inrush start, complete with integral protection, casing heater, oil level sensor and shut-off valve on refrigerant gas outlet piping.
- Water side heat exchanger: dry expansion shell and tube exchanger with counterflow heat exchange, complete with closed cell polyurethane foam rubber insulation, water flow differential pressure switch and Victaulic fittings.
- Air side heat exchanger: with micro-channels.
- Fan: external rotor axial type electric fans equipped with internal thermal protection, accident protection grilles and proportional electronic device for continuous fan rotation speed regulation.
- Control: microprocessor electronic control.
- Structure: made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - Display of cooling circuit high/low pressure;
  - Electronic expansion valve;
  - Clock board;
  - Master/Slave control up to 4 units in parallel.

Versions

- T - High efficiency version with oversized condensing section (TCAITZ).
- Q - Super-silenced version complete with compressor technical compartment soundproofing, super-reduced speed fans and oversized condensing section (TCAIQZ).

Models

- TCAITZ: high efficiency unit designed for cooling only.
- TCAIQZ: super silenced unit designed for cooling only.

Factory fitted accessories

- PUMP with single or double electric pump, one of which automatic in standby. The electric pumps are available in the low or high head versions.
- VPF control.
- Inverter pump control for unit start-up.
- Desuperheater.
- 100% heat recovery unit.
- -15°C condensing control with fans with EC motor (standard with Q versions).
- Condensing control with over-pressure fans.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Compressor circuit breaker switches.
- Electro-mechanical flow switch.
- EMC anti-disturbance filters.
- Forced limit of power consumption.
- Forced noise limit.
- Energy parameter measuring device.
- Optimised energy efficiency.
- Soft starter
- Soundproofed compressor box.
- Cooling circuit intake valves.
- Refrigerant leak detector.
- Cooling circuit high and low pressure gauges.
- Double safety valves.
- Coil protection nets.
- Micro-channel coils with E-coating treatment.
- Control of min/max power supply voltage.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Evaporator antifreeze heater, electrical panel, electric pumps and heat exchangers for heat recovery if applicable.
- Interfaces for serial communication with other devices.
- Anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Thermostat with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

	TCAITZ-TCAIQZ MODEL		2560	2600	2670	2710	2770	2860	2930	2980	21080	21160	21310
❶	Nominal cooling capacity	kW	561,4	602,2	671,6	712,3	766,5	861,7	933,1	978,8	1079,8	1156,8	1307,4
❶	Nominal cooling capacity	kW	517,9	553,5	633,9	670,7	707	804,2	869,5	909,4	1009,5	1067,6	1192,4
❶	E.E.R.		3,11	3,17	3,15	3,13	3,19	3,15	3,23	3,20	3,16	3,16	3,17
❶	E.E.R.		2,74	2,86	2,79	2,76	2,85	2,80	2,84	2,83	2,82	2,81	2,81
❶	Absorbed power	kW	180,5	189,9	213,2	227,6	240,3	273,6	288,9	305,9	341,7	366,1	412,4
❶	Absorbed power	kW	189,0	193,5	227,2	243,0	248,1	287,2	306,2	321,3	357,9	379,9	424,3
	TCAITZ-TCAIQZ MODEL		**2560**	**2600**	**2670**	**2710**	**2770**	**2860**	**2930**	**2980**	**21080**	**21160**	**21310**
❷	Sound pressure	dB(A)	68,5	69	69	69	70	70	71	71	71	71	72
❷	Sound pressure	dB(A)	58,5	59	59	59	60	61	61	61	62	62	63
❸	Sound power	dB(A)	101	102	102	102	103	103	104	104	104	104	105
❸	Sound power	dB(A)	91	92	92	92	93	94	94	94	95	95	96
	Screw/step compressor	no.	1+i / CONTINUOUS REGULATION										
	Circuits	no.	2	2	2	2	2	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**2560**	**2600**	**2670**	**2710**	**2770**	**2860**	**2930**	**2980**	**21080**	**21160**	**21310**
	L - Width	mm	6090	7250	7250	7250	8350	8350	9400	10550	10550	10550	11750
	H - Height	mm	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450
	P - Depth	mm	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260
❹	TCAITZ weight	kg	4390	4770	4840	4850	5690	5790	6250	6500	6610	6970	7330
❹	TCAIQZ weight	kg	4770	5170	5240	5250	6090	6190	6650	6900	7010	7370	7730

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C.

❷ In open field (Q = 2) at 10 m from the unit.

❸ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❹ Weight referred to the unit without load and not accessorised.

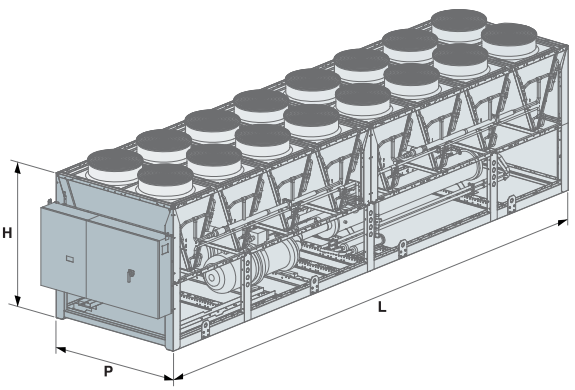
TCAIQZ super-silenced versions.

Performance according to EN 14511.

	SEASONAL ENERGY PERFORMANCE		2560	2600	2670	2710	2770	2860	2930	2980	21080	21160	21310
	TCAITZ MODEL SEASONAL PERFORMANCE IN COOLING MODE												
①	Pdesignc (EN 14825)	kW	561,4	602,2	671,6	712,3	766,5	861,7	933,1	978,8	1079,8	1156,8	1307,4
①	SEER (EN 14825)		4,81	4,84	4,81	4,8	4,82	4,8	4,84	4,85	4,84	4,8	4,81
②	$\eta_{s,c}$	%	189	191	189	189	190	189	190	191	191	189	189
	TCAIQZ MODEL SEASONAL PERFORMANCE IN COOLING MODE												
①	Pdesignc (EN 14825)	kW	517,9	553,5	633,9	670,7	707	804,2	869,5	909,4	1009,5	1067,6	1192,4
①	SEER (EN 14825)		4,68	4,74	4,73	4,72	4,74	4,72	4,71	4,76	4,74	4,72	4,74
②	$\eta_{s,c}$	%	184	187	186	186	187	186	186	187	187	186	187

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)



Web code: **FPE11**

FullPOWER HE-A

TCAVTZ-TCAVQZ 2345-21335

Cooling capacity: 317÷1325 kW

TCAVQZ 2715

TCAVTZ 2425
with FIAP and BCI accessory

- **High energy efficiency chillers**
- **Extended operating limits**
- **Linear capacity control (25-100%)**
- **Wide range of accessories**
- **Integrated MASTER/ SLAVE control**

Air cooled water chillers with axial fans.
Range with semi-hermetic screw compressors and R134a refrigerant gas.

Construction features

- Compressor: high energy efficiency semi-hermetic screw compressor with linear capacity control (25-100%). Star-delta limited start and complete with integral protection, casing heater and refrigerant gas outlet piping shut-off valve.
- Water side heat exchanger: dry expansion shell and tube exchanger with counterflow heat exchange, complete with closed cell polyurethane foam rubber insulation, water flow differential pressure switch and Victaulic fittings.
- Air side heat exchanger: with micro-channels.
- Fan: external rotor axial type electric fans with internal thermal protection, accident protection grilles.
- Control: microprocessor electronic control.
- Structure: made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - Display of cooling circuit high/low pressure;
  - Electronic expansion valve;
  - Clock board;
  - Master/Slave control up to 4 units in parallel.

Versions

- T - High efficiency version with oversized condensing section (TCAVTZ).
- Q - Super-silenced version complete with soundproof compressor technical compartment, super-reduced speed fans and oversized condensing section (TCAVQZ).

Models

- TCAVTZ: high efficiency unit designed for cooling only.
- TCAVQZ: super silenced unit designed for cooling only.

Factory fitted accessories

- PUMP with single or double electric pump, one of which automatic in standby. The electric pumps are available in the low or high head versions.
- VPF control.
- Inverter pump control for unit start-up.
- Desuperheater.
- 100% heat recovery unit.
- –10°C condensing control.
- –15°C condensing control with fans with EC motor (standard in Q versions).
- Condensing control with over-pressure fans.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Compressor circuit breaker switches.
- Electro-mechanical flow switch.
- Oil level sensor.
- Forced limit of power consumption.
- Forced noise limit.

TCAVTZ 2585
with BCI accessory and P1 pump unit

- Energy parameter measuring device.
- Optimised energy efficiency.
- Soft starter.
- Soundproofed compressor box.
- Cooling circuit intake valves.
- Refrigerant leak detector.
- Cooling circuit high and low pressure gauges.
- Double safety valves.
- Coil protection nets.
- Micro-channel coils with E-coating treatment.
- Control of min/max power supply voltage.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Evaporator antifreeze heater, electrical panel, electric pumps and heat exchangers for heat recovery if applicable.
- Low temperature water production.
- Interfaces for serial communication with other devices.
- Anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Thermostat with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

FullPOWER HE-A

TCAVTZ-TCAVQZ 2345-21335

	TCAVTZ-TCAVQZ MODEL		2345	2385	2425	2475	2525	2585	2655	2715
❶	Nominal cooling capacity	kW	339,9	379,6	423,7	474,3	524,8	577,3	655,8	712,2
❶	Nominal cooling capacity	kW	317,1	352,8	389	452,4	481,2	525,9	601,2	659,6
❶	E.E.R.		3,24	3,23	3,2	3,23	3,2	3,18	3,23	3,21
❶	E.E.R.		3,02	2,96	2,88	2,97	2,87	2,75	2,81	2,76
❶	Absorbed power	kW	104,9	117,5	132,4	146,8	164	181,5	203	221,9
❶	Absorbed power	kW	105	119,2	135,1	152,3	167,7	191,2	214	239
	TCAVTZ-TCAVQZ MODEL		**2345**	**2385**	**2425**	**2475**	**2525**	**2585**	**2655**	**2715**
❷	Sound pressure	dB(A)	65,5	65,5	65,5	65,5	65,5	66,5	66,5	66,5
❷	Sound pressure	dB(A)	55,5	55,5	55,5	55,5	55,5	56,5	56,5	56,5
❸	Sound power	dB(A)	98	98	98	98	98	99	99	99
❸	Sound power	dB(A)	88	88	88	88	88	89	89	89
	Screw/step compressor	no.	2/ CONTINUOUS LINEAR REGULATION (25-100%)							
	Circuits	no.	2	2	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**2345**	**2385**	**2425**	**2475**	**2525**	**2585**	**2655**	**2715**
	L - Width	mm	4840	4840	4840	5990	5990	5990	7150	7150
	H - Height	mm	2450	2450	2450	2450	2450	2450	2450	2450
	P - Depth	mm	2260	2260	2260	2260	2260	2260	2260	2260
❹	TCAVTZ weight	kg	3040	3045	3070	3415	4170	4200	4690	4720
❹	TCAVQZ weight	kg	3315	3320	3345	3690	4550	4580	5090	5120

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C.

❷ In open field (Q = 2) at 10 m from the unit.

❸ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❹ Weight referred to the unit without load and not accessorised.

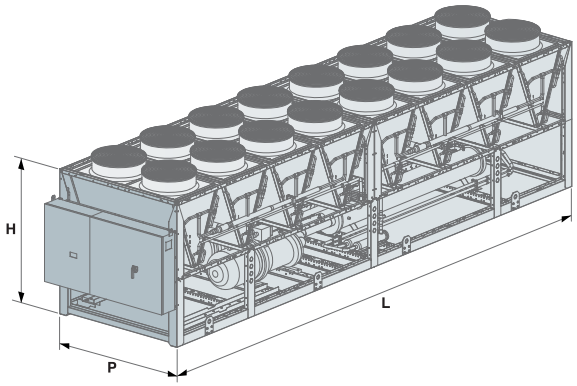
TCAVQZ super-silenced versions.

Performance according to EN 14511.

	SEASONAL ENERGY PERFORMANCE		2345	2385	2425	2475	2525	2585	2655	2715
	TCAVTZ MODEL SEASONAL PERFORMANCE IN COOLING MODE									
①	Pdesignc (EN 14825)	kW	339,8	379,4	423,6	474,1	524,7	577,2	655,6	712
①	SEER (EN 14825)		4,38	4,36	4,36	4,34	4,37	4,36	4,39	4,41
②	$\eta_{s,c}$	%	172	171	171	170	172	171	173	173
	TCAVQZ MODEL SEASONAL PERFORMANCE IN COOLING MODE									
①	Pdesignc (EN 14825)	kW	317	352,7	388,9	452,3	481	525,7	601,1	659,5
①	SEER (EN 14825)		4,31	4,26	4,24	4,26	4,24	4,21	4,25	4,18
②	$\eta_{s,c}$	%	169	167	167	167	167	166	167	164

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)



	TCAVTZ-TCAVQZ MODEL		2765	2815	2885	2955	21025	21105	21175	21335
❶	Nominal cooling capacity	kW	760,7	813,3	879,7	955,9	1020,5	1100,8	1167,3	1324,6
❶	Nominal cooling capacity	kW	711,2	749,9	795,4	868,6	924,3	1000,7	1055,4	1229,7
❶	E.E.R.		3,19	3,24	3,19	3,27	3,22	3,2	3,17	3,21
❶	E.E.R.		2,75	2,86	2,73	2,83	2,74	2,77	2,71	2,76
❶	Absorbed power	kW	238,5	251	275,8	292,3	316,9	344	368,2	412,6
❶	Absorbed power	kW	258,6	262,2	291,4	306,9	337,3	361,3	389,4	445,5
	TCAVTZ-TCAVQZ MODEL		**2765**	**2815**	**2885**	**2955**	**21025**	**21105**	**21175**	**21335**
❷	Sound pressure	dB(A)	67	67	68	68	68	69	69	69
❷	Sound pressure	dB(A)	57	58	59	59	59	59	60	60
❸	Sound power	dB(A)	100	100	101	101	101	102	102	102
❸	Sound power	dB(A)	90	91	92	92	92	92	93	93
	Screw/step compressor	no.	2/ CONTINUOUS LINEAR REGULATION (25-100%)							
	Circuits	no.	2	2	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**2765**	**2815**	**2885**	**2955**	**21025**	**21105**	**21175**	**21335**
	L - Width	mm	7150	8250	8250	9350	9350	10450	10450	11550
	H - Height	mm	2450	2450	2450	2450	2450	2450	2450	2450
	P - Depth	mm	2260	2260	2260	2260	2260	2260	2260	2260
❹	TCAVTZ weight	kg	4740	5565	5995	6520	6585	6950	6970	7355
❹	TCAVQZ weight	kg	5140	5965	6395	6920	6985	7350	7370	7755

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C.

❷ In open field (Q = 2) at 10 m from the unit.

❸ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❹ Weight referred to the unit without load and not accessorised.

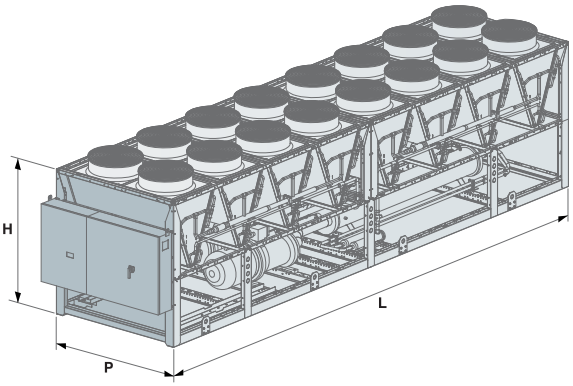
TCAVQZ super-silenced versions.

Performance according to EN 14511.

	SEASONAL ENERGY PERFORMANCE		2765	2815	2885	2955	21025	21105	21175	21335
	TCAVTZ MODEL SEASONAL PERFORMANCE IN COOLING MODE									
①	Pdesignc (EN 14825)	kW	760,6	813,1	879,4	955,6	1020,2	1100,4	1167,1	1324,3
①	SEER (EN 14825)		4,37	4,41	4,33	4,43	4,41	4,43	4,42	4,37
②	$\eta_{s,c}$	%	172	173	170	174	173	174	174	172
	TCAVQZ MODEL SEASONAL PERFORMANCE IN COOLING MODE									
①	Pdesignc (EN 14825)	kW	711	749,6	795,2	868,3	924	1000,4	1055	1229,4
①	SEER (EN 14825)		4,19	4,25	4,27	4,27	4,21	4,19	4,17	4,16
②	$\eta_{s,c}$	%	164	167	168	168	165	165	164	164

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)



Web code: **FP011**

FullPOWER SE

TCAVBZ-TCAVSZ 2335-21275

Cooling capacity: 319÷1271 kW

TCAVSZ 2865

TCAVBZ 2515
with FIAP and BCI accessory

- **Efficient range in R134a**
- **Operation up to 50°C outdoor air**
- **Linear capacity control (25-100%)**
- **Wide range of accessories**
- **Integrated MASTER/ SLAVE control**

Air cooled water chillers with axial fans.
Range with semi-hermetic screw compressors and R134a refrigerant gas.

Construction features

- Compressor: high energy efficiency semi-hermetic screw compressor with linear capacity control (25-100%). Star-delta limited start and complete with integral protection, casing heater and refrigerant gas outlet piping shut-off valve.
- Water side heat exchanger: dry expansion shell and tube exchanger with counterflow heat exchange, complete with closed cell polyurethane foam rubber insulation, water flow differential pressure switch and Victaulic fittings.
- Air side heat exchanger: with micro-channels.
- Fan: external rotor axial type electric fans with internal thermal protection, accident protection grilles.
- Control: microprocessor electronic control.
- Structure: made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - Display of cooling circuit high/low pressure;
  - Electronic expansion valve;
  - Clock board;
  - Master/Slave control up to 4 units in parallel.

Versions

- B - Standard version (TCAVBZ).
- S - Silenced version complete with compressor technical compartment soundproofing and reduced speed fans (TCAVSZ).

Models

- TCAVBZ: unit designed for cooling only.
- TCAVSZ: silenced unit intended for cooling only.

Factory fitted accessories

- PUMP with single or double electric pump, one of which automatic in standby. The electric pumps are available in the low or high head versions.
- VPF control.
- Inverter pump control for unit start-up.
- Desuperheater.
- 100% heat recovery unit.
- –10°C condensing control (standard in S versions).
- –15°C condensing control with fans with EC motor.
- Condensing control with over-pressure fans.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Compressor circuit breaker switches.
- Electro-mechanical flow switch.
- Oil level sensor.
- Forced limit of power consumption.
- Forced noise limit.
- Energy parameter measuring device.
- Optimised energy efficiency.
- Soft starter.
- Soundproofed compressor box.

TCAVBZ 21275
with MCHXE accessory

- Cooling circuit intake valves.
- Refrigerant leak detector.
- Cooling circuit high and low pressure gauges.
- Double safety valves.
- Coil protection nets.
- Micro-channel coils with E-coating treatment.
- Control of min/max power supply voltage.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Evaporator antifreeze heater, electrical panel, electric pumps and heat exchangers for heat recovery if applicable.
- Low temperature water production.
- Interfaces for serial communication with other devices.
- Anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Thermostat with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

FullPOWER SE

TCAVBZ-TCAVSZ 2335-21275

	TCAVBZ-TCAVSZ MODEL		2335	2365	2405	2465	2515	2565	2645	2705
❶	Nominal cooling capacity	kW	328,8	364,5	400,4	460	512,8	559,6	641,3	701,6
❶	Nominal cooling capacity	kW	318,9	353,6	388,5	450,1	494	536,8	618,5	679,7
❶	E.E.R.		3,01	2,9	2,85	3,01	2,91	2,85	2,94	2,91
❶	E.E.R.		2,92	2,8	2,77	2,91	2,76	2,72	2,8	2,74
❶	Absorbed power	kW	109,2	125,7	140,5	152,8	176,2	196,4	218,1	241,1
❶	Absorbed power	kW	109,2	126,3	140,3	154,7	179	197,4	220,9	248,1
	TCAVBZ-TCAVSZ MODEL		**2335**	**2365**	**2405**	**2465**	**2515**	**2565**	**2645**	**2705**
❷	Sound pressure	dB(A)	65	65	66	66	66	66	66,5	66,5
❷	Sound pressure	dB(A)	59	59	60	60	60	60	60,5	60,5
❸	Sound power	dB(A)	97	97	98	98	98	98	99	99
❸	Sound power	dB(A)	91	91	92	92	92	92	93	93
	Screw/step compressor	no.	2/ CONTINUOUS LINEAR REGULATION (25-100%)							
	Circuits	no.	2	2	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**2335**	**2365**	**2405**	**2465**	**2515**	**2565**	**2645**	**2705**
	L - Width	mm	3740	3740	3740	4840	4840	4840	5990	5990
	H - Height	mm	2450	2450	2450	2450	2450	2450	2450	2450
	P - Depth	mm	2260	2260	2260	2260	2260	2260	2260	2260
❹	TCAVBZ weight	kg	2700	2710	2730	3140	3700	3910	4230	4260
❹	TCAVSZ weight	kg	2930	2940	2960	3370	4010	4220	4540	4570

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C.

❷ In open field (Q = 2) at 10 m from the unit.

❸ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❹ Weight referred to the unit without load and not accessorised.

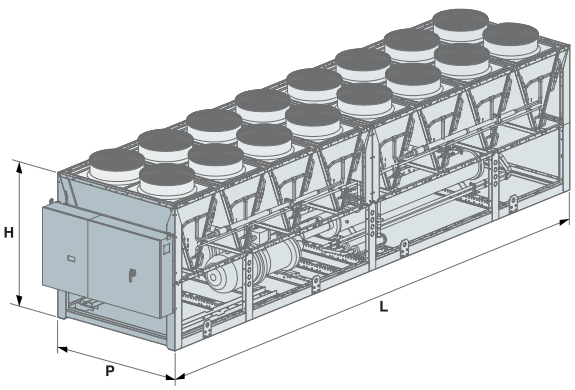
TCAVSZ silenced versions

Performance according to EN 14511.

	SEASONAL ENERGY PERFORMANCE		2335	2365	2405	2465	2515	2565	2645	2705
	TCAVBZ MODEL SEASONAL PERFORMANCE IN COOLING MODE									
①	Pdesignc (EN 14825)	kW	328,7	364,4	400,3	459,9	512,7	559,5	641,1	701,4
①	SEER (EN 14825)		4,23	4,2	4,18	4,23	4,25	4,18	4,25	4,27
②	$\eta_{s,c}$	%	166	165	164	166	167	164	167	168
	TCAVSZ MODEL SEASONAL PERFORMANCE IN COOLING MODE									
①	Pdesignc (EN 14825)	kW	318,8	353,5	388,4	450	493,9	536,7	618,4	679,5
①	SEER (EN 14825)		4,23	4,21	4,18	4,19	4,21	4,2	4,21	4,18
②	$\eta_{s,c}$	%	166	165	164	164	165	165	165	164

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)



	TCAVBZ-TCAVSZ MODEL		2755	2805	2865	2935	2995	21075	21115	21275
❶	Nominal cooling capacity	kW	751,1	797,5	857,9	930,2	985,7	1072,1	1110,7	1271
❶	Nominal cooling capacity	kW	731,3	777,6	822,2	896,6	948	1033,4	1069,1	1236,4
❶	E.E.R.		2,89	3	2,9	2,98	2,92	3,06	2,94	3,06
❶	E.E.R.		2,71	2,9	2,73	2,85	2,76	2,94	2,78	2,9
❶	Absorbed power	kW	259,9	265,8	295,8	312,1	337,6	350,4	377,8	415,4
❶	Absorbed power	kW	269,9	268,1	301,2	314,6	343,5	351,5	384,6	426,3
	TCAVBZ-TCAVSZ MODEL		**2755**	**2805**	**2865**	**2935**	**2995**	**21075**	**21115**	**21275**
❷	Sound pressure	dB(A)	67,5	67,5	68	68	68	69	69	69
❷	Sound pressure	dB(A)	61,5	61,5	62	62	62	63	63	63
❸	Sound power	dB(A)	100	100	101	101	101	102	102	102
❸	Sound power	dB(A)	94	94	95	95	95	96	96	96
	Screw/step compressor	no.	2/ CONTINUOUS LINEAR REGULATION (25-100%)							
	Circuits	no.	2	2	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**2755**	**2805**	**2865**	**2935**	**2995**	**21075**	**21115**	**21275**
	L - Width	mm	5990	7150	7150	8250	8250	9350	9350	10450
	H - Height	mm	2450	2450	2450	2450	2450	2450	2450	2450
	P - Depth	mm	2260	2260	2260	2260	2260	2260	2260	2260
❹	TCAVBZ weight	kg	4290	5280	5700	6070	6130	6620	6640	7000
❹	TCAVSZ weight	kg	4600	5590	6010	6380	6440	6930	6950	7310

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C.

❷ In open field (Q = 2) at 10 m from the unit.

❸ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❹ Weight referred to the unit without load and not accessorised.

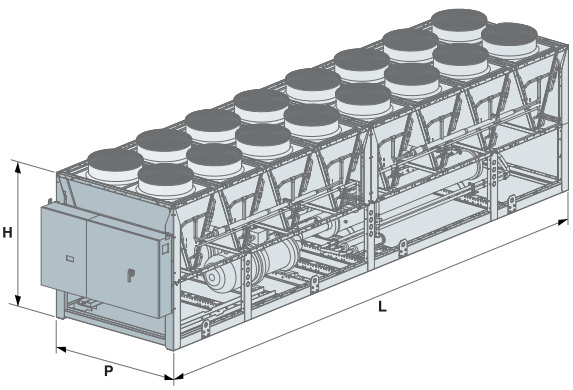
TCAVSZ silenced versions

Performance according to EN 14511.

	SEASONAL ENERGY PERFORMANCE		2755	2805	2865	2935	2995	21075	21115	21275
	TCAVBZ MODEL SEASONAL PERFORMANCE IN COOLING MODE									
①	Pdesignc (EN 14825)	kW	750,9	797,2	857,6	930	985,5	1071,8	1110,4	1270,7
①	SEER (EN 14825)		4,24	4,22	4,21	4,24	4,21	4,24	4,23	4,24
②	$\eta_{s,c}$	%	167	166	165	167	165	166	166	166
	TCAVSZ MODEL SEASONAL PERFORMANCE IN COOLING MODE									
①	Pdesignc (EN 14825)	kW	731,1	777,4	822	896,3	947,8	1033,1	1068,8	1236,1
①	SEER (EN 14825)		4,18	4,24	4,22	4,17	4,18	4,19	4,2	4,17
②	$\eta_{s,c}$	%	164	167	166	164	164	165	165	164

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)



Web code: **ZP001**

Z-Power SE

TCAVZ 21400-21600

Cooling capacity: 1404.4÷1,609.7 kW

TCAVSZ 21600 with DS accessory and pump unit

- **Installation flexibility up to 1,600 kW**
- **Standard electronic expansion valve**
- **Integrated MASTER/ SLAVE control**

Air cooled water chillers with axial fans.
Range with semi-hermetic screw compressors and R134a refrigerant gas.

Construction features

- Compressor: high energy efficiency semi-hermetic screw compressor, with star-delta limited start and complete with integral protection, casing heater and refrigerant gas outlet piping shut-off valve.
- Electronic expansion valve: as standard on all models.
- Water side heat exchanger: dry expansion shell and tube exchanger with counterflow heat exchange, complete with closed cell polyurethane foam rubber insulation, water flow differential pressure switch and Victaulic fittings.
- Air side heat exchanger: finned coil with copper pipes and aluminium fins.
- Fan: external rotor axial type electric fans equipped with internal thermal protection, accident protection grilles and proportional electronic device for continuous fan rotation speed regulation (S version only).
- Control: microprocessor electronic control.
- Structure: made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - display of cooling circuit high/low pressure;
  - Master/Slave control up to 4 units in parallel;
  - clock board.

Versions

- B - Standard version (TCAVBZ).
- S - Silenced version with reduced speed fans and soundproofing lining of the compressors (TCAVSZ).
- I - Soundproofed version with soundproofing lining of the compressors (TCAVIZ).

Models

- TCAVBZ: unit designed for cooling only.
- TCAVSZ: silenced unit intended for cooling only.
- TCAVIZ: soundproofed unit designed for cooling only.

Factory fitted accessories

- VPF control.
- Inverter pump control for unit start-up.
- Desuperheater.
- 100% heat recovery unit.
- Thermostat with display for heat recovery unit/ desuperheater.
- -10°C condensing control (standard with S version).
- –15°C condensing control with fans with EC motor.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Fan and compressor circuit breaker switches.
- Forced limit of power consumption.
- Soft starter.
- Inlet compressor shut-off valves.
- Low and high pressure gauges for each cooling circuit.
- Bottom compartment protection nets.
- Coil protection nets.
- Linear compressor capacity control (25-100 %).
- Evaporator antifreeze heater and heat recovery exchangers if applicable.
- Digital input for double set-point.
- Compressor oil level sensor.
- Control of min/max power supply voltage.
- 4-20 mA analogue signal for shifting set-point.
- Low temperature water production.
- Pre-painted copper/aluminium or copper/copper coils.
- Interfaces for serial communication with other devices.
- Spring anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

	TCAVBZ-TCAVSZ-TCAVIZ MODEL		21400	21500	21600
❶	Nominal cooling capacity	kW	1404,4	1497,6	1609,7
❶	Nominal cooling capacity	kW	1347,9	1441,7	1542,3
❶	E.E.R.		3,1	3,1	3,1
❶	E.E.R.		2,87	2,84	2,76
❶	Absorbed power	kW	453,03	483,10	519,26
❶	Absorbed power	kW	469,65	507,64	558,80
	TCAVBZ-TCAVSZ MODEL		**21400**	**21500**	**21600**
❷	Sound pressure	dB(A)	70	71	71
❷	Sound pressure	dB(A)	64	65	65
❸	Sound power	dB(A)	103	104	104
❸	Sound power	dB(A)	97	98	98
	Screw/step compressor	no.	2/6	2/6	2/6
	Circuits	no.	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**21400**	**21500**	**21600**
	L - Width	mm	10.980	12.980	12.980
	H - Height	mm	2.430	2.430	2.430
	P - Depth	mm	2.260	2.260	2.260
❹	TCAVBZ weight	kg	9310	10220	10460
❹	TCAVIZ-TCAVSZ Weight	kg	9660	10540	10780

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C.

❷ In open field (Q = 2) at 10 m from the unit.

❸ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❹ Weight without load refers to the unit accessorised with RPE - KRP.

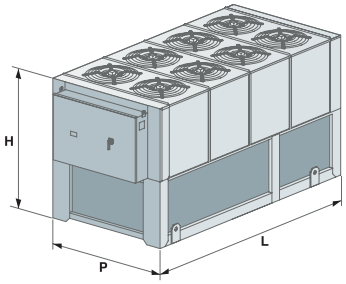
TCAVSZ silenced versions.

Performance according to EN 14511.

	SEASONAL ENERGY PERFORMANCE		21400	21500	21600
	TCAVBZ-TCAVIZ MODEL SEASONAL PERFORMANCE IN COOLING MODE				
①	Pdesignc (EN 14825)	kW	1404,2	1497,2	1609,3
①	SEER (EN 14825)		4,11	4,16	4,15
②	$\eta_{s,c}$	%	161	163	163
	TCAVSZ MODEL SEASONAL PERFORMANCE IN COOLING MODE				
①	Pdesignc (EN 14825)	kW	1347,6	1441,3	1541,9
①	SEER (EN 14825)		4,12	4,15	4,12
②	$\eta_{s,c}$	%	162	163	162

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)



Web code: **ZPF01**

Z-Power FREECOOLING

TFAVBZ - TFAVIZ - TFAVSZ 2420-21100

Cooling capacity: 469÷1,216 kW

TFAVBZ 2500
with FMB accessory

- **High efficiency**
- **Standard electronic expansion valve**
- **Extended operation limits**

Air cooled water chillers in Freecooling mode with axial fans. Range with semi-hermetic screw compressors and R134a refrigerant gas.

Construction features

- Compressor: high energy efficiency semi-hermetic screw compressor, with star-delta limited start and complete with integral protection, casing heater and refrigerant gas outlet piping shut-off valve.
- 2 circuits/ 6 capacity steps.
- Water side heat exchanger: counterflow dry expansion shell and tube type, complete with: differential pressure switch, air vent valve, water drain cock, closed cell polyurethane foam rubber insulation with protection film against UVA rays. Victaulic connections.
- Air side heat exchanger: consisting of coil made of copper pipes and aluminium fins divided into two sections: one dedicated to the condensation of the refrigerant gas and one dedicated to cooling the water in free-cooling mode.
- 3-way modulating valve to divert the water flow from the system towards the free-cooling coil or directly towards the evaporator.
- Fan: external rotor axial type electric fans, equipped with internal thermal protection, accident protection grilles and a proportional electronic device for pressurised and continuous fan rotation speed regulation up to an outdoor air temperature of -15°C.
- Control: electronic microprocessor control prepared for the connection with the main BMS available on the market (MODBUS RTU, LON, BacNet).
- Structure: load-bearing structure made of galvanised and painted steel plate with polyester powder coating. The unit is also complete with:
  - display of cooling circuit high and low pressure;
  - clock board

Versions

- B - High efficiency standard version (TFAVBZ).
- I -Soundproofed version with soundproofing lining on the compressor compartment (TFAVIZ).
- S - Silenced version with soundproofing lining on the compressor compartment and reduced speed fans (TFAVSZ).

Models

- TFAVBZ: high efficiency base unit in Freecooling mode.
- TFAVIZ: soundproofed unit in Freecooling mode.
- TFAVSZ: silenced unit in Freecooling mode.

Factory fitted accessories

- –20°C condensing control with fans with EC motor.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Compressor and fan circuit breaker switches.
- Forced limit of power consumption.
- Inlet compressor shut-off valves.
- Low and high pressure gauges for each cooling circuit.
- Bottom compartment protection nets.
- Coil protection nets.
- Coil protection metal filter.
- Compressors with linear capacity control (25-100 %).
- Evaporator antifreeze heater.
- Digital input for double set-point.
- Low water temperature.
- Double high pressure safety valve with exchange valve.
- Stainless steel cooling circuit.
- Electrical panel heater.
- Soft starter.
- Compressor oil level sensor.
- Control of min/max power supply voltage.
- 4-20 mA analogue signal for shifting set-point.
- Pre-painted copper/coils or copper/copper coils.
- Interfaces for serial communication with other devices.
- Spring anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Rhoss supervisors for unit monitoring and remote management.

	TFAVBZ - TFAVIZ - TFAVSZ MODEL		2420	2450	2500	2560	2660	2750
	FREE-COOLING OFF							
❶	Nominal cooling capacity	kW	481	512	574	636	756	825
❶	Nominal cooling capacity	kW	469	499	555	618	737	811
❶	E.E.R.		3,79	3,79	3,7	3,72	3,74	3,77
❶	E.E.R.		3,78	3,78	3,6	3,68	3,76	3,75
❶	Absorbed power	kW	127	135	155	171	202	219
❶	Absorbed power	kW	124	132	154	168	196	216
	FREE-COOLING ON 100%							
❷	Nominal cooling capacity	kW	481	512	574	636	756	825
❷	Nominal cooling capacity	kW	469	499	555	618	737	811
❷	E.E.R.		24,05	25,6	28,7	26,5	23,63	25,78
❷	E.E.R.		37,50	39,89	44,43	41,19	36,84	40,57
❷	Absorbed power	kW	20	20	20	24	32	32
❷	Absorbed power	kW	12,5	12,5	12,5	15	20	20
❷	Total Free-cooling Temperature	°C	2,4	1,8	1,1	1,8	2,3	1,9
❷	Total Free-cooling Temperature	°C	1,2	0,5	0	0,8	1,1	0,5
	TFAVBZ - TFAVSZ MODEL		**2420**	**2450**	**2500**	**2560**	**2660**	**2750**
❸	Sound pressure	dB(A)	65	65	65	66	68	68
❸	Sound pressure	dB(A)	60	60	60	60	62	62
❹	Sound power	dB(A)	98	98	98	99	101	101
❹	Sound power	dB(A)	92	92	92	93	95	95
	Scroll/step compressor	no.	2/6	2/6	2/6	2/6	2/6	2/6
	Circuits	no.	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**2420**	**2450**	**2500**	**2560**	**2660**	**2750**
	L - Width	mm	6130	6130	6130	7160	10080	10080
	H - Height	mm	2580	2580	2580	2580	2580	2580
	P - Depth	mm	2260	2260	2260	2260	2260	2260

Data at the following conditions:

❶ Air: 30°C - Water: 15/10°C - Ethylene glycol 30%.

❷ Water: 15/10°C – Ethylene glycol 30%.

❸ In open field (Q = 2) at 10 m from the unit on the coil side.

❹ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

TFAVSZ silenced version.

	SEASONAL ENERGY PERFORMANCE		2420	2450	2500	2560	2660	2750
	TFAVBZ - TFAVIZ MODEL SEASONAL PERFORMANCE IN COOLING MODE							
⑤	PdesignR	kW	419,8	447,6	501,5	554,3	658,9	745,2
⑤	SEPR		5,59	5,59	5,57	5,57	5,6	5,61
	TFAVSZ MODEL SEASONAL PERFORMANCE IN COOLING MODE							
⑤	PdesignR	kW	408,8	435,9	484,8	538,7	641,9	731,1
⑤	SEPR		5,64	5,64	5,62	5,65	5,63	5,63

⑤ Application for high temperature (7°C) process chiller (EU Regulation 2016/2281)

Z-Power FREECOOLING

TFAVBZ - TFAVIZ - TFAVSZ 2420-21100

TFAVBZ - TFAVIZ - TFAVSZ MODEL		2800	2850	2920	2990	21050	21100
FREE-COOLING OFF							
❶ Nominal cooling capacity	kW	885	944	1019	1093	1155	1216
❶ Nominal cooling capacity	kW	867	922	1000	1071	1129	1186
❶ E.E.R.		3,71	3,66	3,69	3,72	3,68	3,64
❶ E.E.R.		3,66	3,57	3,68	3,69	3,61	3,55
❶ Absorbed power	kW	238,5	258	276	294	314	334
❶ Absorbed power	kW	237	258	272	290	313	334
FREE-COOLING ON 100%							
❷ Nominal cooling capacity	kW	885	944	1019	1093	1155	1216
❷ Nominal cooling capacity	kW	867	922	1000	1071	1129	1186
❷ E.E.R.		27,66	29,5	25,48	27,33	28,88	30,4
❷ E.E.R.		43,36	46,12	39,99	42,84	45,15	47,44
❷ Absorbed power	kW	32	32	40	40	40	40
❷ Absorbed power	kW	20	20	25	25	25	25
❷ Total Free-cooling Temperature	°C	1,2	0,6	1,1	1,6	1,1	0,5
❷ Total Free-cooling Temperature	°C	0	-0,7	0	0,3	-0,5	-1
TFAVBZ - TFAVSZ MODEL		**2800**	**2850**	**2920**	**2990**	**21050**	**21100**
❸ Sound pressure	dB(A)	68	68	69	69	69	69
❸ Sound pressure	dB(A)	62	62	63	63	63	63
❹ Sound power	dB(A)	101	101	102	102	102	102
❹ Sound power	dB(A)	95	95	96	96	96	96
Scroll/step compressor	no.	2/6	2/6	2/6	2/6	2/6	2/6
Circuits	no.	2	2	2	2	2	2
Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
DIMENSIONS AND WEIGHT		**2800**	**2850**	**2920**	**2990**	**21050**	**21100**
L - Width	mm	10080	10080	12080	12080	12080	12080
H - Height	mm	2580	2580	2580	2580	2580	2580
P - Depth	mm	2260	2260	2260	2260	2260	2260

Data at the following conditions:

❶ Air: 30°C - Water: 15/10°C - Ethylene glycol 30%.

❷ Water: 15/10°C – Ethylene glycol 30%.

❸ In open field (Q = 2) at 10 m from the unit on the coil side.

❹ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

TFAVSZ silenced version.

SEASONAL ENERGY PERFORMANCE		2800	2850	2920	2990	21050	21100
TFAVBZ - TFAVIZ MODEL SEASONAL PERFORMANCE IN COOLING MODE							
⑤ PdesignR	kW	796,8	847	917,5	983,2	1038,8	1092,7
⑤ SEPR		5,56	5,54	5,6	5,61	5,61	5,58
TFAVSZ MODEL SEASONAL PERFORMANCE IN COOLING MODE							
⑤ PdesignR	kW	779	825,5	898,2	961,1	1013,1	1063,4
⑤ SEPR		5,61	5,6	5,65	5,63	5,68	5,6

⑤ Application for high temperature (7°C) process chiller (EU Regulation 2016/2281)

TurboPOWER

TCATBZ-TCATTZ-TCATQZ 1300-31100

Cooling capacity: 267.0÷1101 kW

TCATTZ 31100 with FIAP accessory

TCATBZ 1400 with PTL-RPE-FIAP accessories

- **Efficient, quiet and low start-up current oil-free compressor**
- **High energy efficiency chillers.**
- **Wide range of accessories**
- **Integrated MASTER/SLAVE control**

Air cooled water chillers with axial fans.
Range with oil-free centrifugal compressors and R134a refrigerant gas.

Construction features

- Compressor: high energy efficiency, oil free, centrifugal compressor with limited start, equipped with magnetic levitation bearings and complete with integral protection and intake and delivery shut-off valves.
- Water side heat exchanger: flooded type shell and tube, complete with closed cell polyurethane foam rubber insulation, water flow differential pressure switch and Victaulic fittings.
- Air side heat exchanger: with micro-channels.
- Fan: external rotor axial type electric fans with internal thermal protection, accident protection grilles. Version B is equipped with a proportional electronic device for continuous fan rotation speed regulation, while versions T-Q are equipped with EC motor fans.
- Control: microprocessor electronic control.
- Structure: made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - Display of cooling circuit high/low pressure;
  - Electronic expansion valve;
  - Double safety valve;
  - Clock board;
  - Master/Slave control up to 4 units in parallel.

Versions

- B - Basic version, efficiency class A, soundproofed technical compressor compartment (TCATBZ).
- T - High-efficiency version, above class A, soundproofed technical compressor compartment (TCATTZ).
- Q - Super silenced version, efficiency class A, super-soundproofed technical compartment, reduced speed fans (TCATQZ).

Models

- TCATBZ: standard unit designed for cooling only.
- TCATTZ: high efficiency unit designed for cooling only.
- TCATQZ: super silenced unit designed for cooling only.

Factory fitted accessories

- PUMP with single or double electric pump, one of which automatic in standby. The electric pumps are available in the low or high head versions.
- VPF control.
- Inverter pump control for unit start-up.
- -15°C condensing control with fans with EC motor (standard in T-Q versions).
- Condensing control with over-pressure fans.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Compressor circuit breaker switches.
- Electro-mechanical flow switch.
- Forced limit of power consumption.
- Forced noise limit.
- Energy parameter measuring device.
- Soundproofed compressor box.
- Refrigerant leak detector.
- Cooling circuit high and low pressure gauges.
- Coil protection nets.
- Micro-channel coils with E-coating treatment.
- Control of min/max power supply voltage.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Evaporator antifreeze heater, electrical panel, electric pumps, if applicable.
- Interfaces for serial communication with other devices.
- Anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

	TCATBZ-TCATTZ-TCATQZ MODEL		1300	1400	2500	2590	2680	2760	2820	2880	3990	31100
❶	TCATBZ nominal cooling capacity	kW	284,9	376,6	489,2	577,8	675,1	749,2	808,9	874,4	982,2	1089,1
❶	TCATTZ nominal cooling capacity	kW	298,8	402,3	498,1	593,6	685	760	820,8	882,3	993,1	1101
❶	TCATQZ nominal cooling capacity	kW	267,1	369,7	463,4	541,2	639,5	721,5	792,1	871,6	970,4	ND
❶	E.E.R. TCATBZ		3,2	3,18	3,26	3,22	3,2	3,2	3,22	3,14	3,25	3,22
❶	E.E.R. TCATTZ		3,46	3,42	3,46	3,48	3,37	3,52	3,5	3,33	3,47	3,45
❶	E.E.R. TCATQZ		3,22	3,32	3,25	3,28	3,21	3,24	3,36	3,31	3,27	ND
❶	TCATBZ absorbed power	kW	89	118,4	150,1	179,4	211	234,1	251,2	278,5	302,2	338,2
❶	TCATTZ absorbed power	kW	86,4	117,6	144	170,6	203,3	215,9	234,5	265	286,2	319,1
❶	TCATQZ absorbed power	kW	83	111,4	142,6	165	199,2	222,7	235,7	263,3	296,8	ND
	TCATBZ-TCATTZ-TCATQZ MODEL		**1300**	**1400**	**2500**	**2590**	**2680**	**2760**	**2820**	**2880**	**3990**	**31100**
❷	TCATBZ sound pressure	dB(A)	60	62	62,5	62,5	63	64	64	64	64	65
❷	TCATTZ sound pressure	dB(A)	60	62	62,5	62,5	63	64	64	64	64	65
❷	TCATQZ sound pressure	dB(A)	55	56	56,5	57	58	58	58	59	59	ND
❸	TCATBZ sound power	dB(A)	92	94	95	95	96	97	97	97	97	98
❸	TCATTZ sound power	dB(A)	92	94	95	95	96	97	97	97	97	98
❸	TCATQZ sound power	dB(A)	87	88	89	90	91	91	91	92	92	ND
	Compressor/steps	no.	1/ CONTINUOUS REGULATION	1/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	3/ CONTINUOUS REGULATION	3/ CONTINUOUS REGULATION
	Circuits	no.	1	1	1	1	1	1	1	1	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**1300**	**1400**	**2500**	**2590**	**2680**	**2760**	**2820**	**2880**	**3990**	**31100**
	W - Width of version B	mm	3840	4940	6090	7250	8350	9450	9450	10550	11650	12810
	W - Width of version T	mm	3840	4940	6090	7250	8350	9450	10550	11650	11650	12810
	W - Width of version Q	mm	3840	4940	6090	7250	8350	9450	10550	11650	12810	ND
	H - Height	mm	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450
	P - Depth	mm	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260
❹	TCATBZ weight	kg	2390	2740	3490	3950	4350	4800	4910	5210	6040	6560
❹	TCATTZ weight	kg	2410	2760	3470	3980	4320	4840	5140	5440	6000	6520
❹	TCATQZ weight	kg	2390	2730	3500	3960	4350	4800	5160	5460	6500	ND

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C

❷ In open field (Q = 2) at 10 m from the unit on the coil side.

❸ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❹ Weight referred to the unit without load and not accessorised.

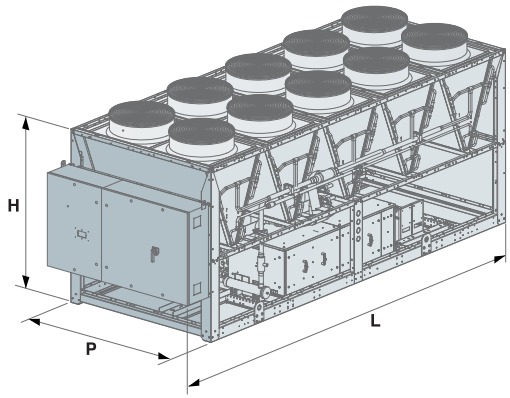
TCATQZ super silenced versions

Performance according to EN 14511.

	SEASONAL ENERGY PERFORMANCE		1300	1400	2500	2590	2680	2760	2820	2880	3990	31100
	TCATBZ MODEL SEASONAL PERFORMANCE IN COOLING MODE											
①	Pdesignc (EN 14825)	kW	283,8	375,2	487,3	575,6	672,2	746,4	805,7	870,8	978,3	1085,1
①	SEER (EN 14825)		5,14	5,02	5,16	5,13	5,13	5,2	5,13	5,07	5,21	5,19
②	$\eta_{s,c}$	%	202	198	203	202	202	205	202	200	205	205
	TCATTZ MODEL SEASONAL PERFORMANCE IN COOLING MODE											
①	Pdesignc (EN 14825)	kW	297,5	400,6	496,3	591,2	682,1	757,2	817,6	878,7	989,2	1097
①	SEER (EN 14825)		5,46	5,56	5,64	5,68	5,66	5,76	5,8	5,77	5,82	5,78
②	$\eta_{s,c}$	%	215	219	222	224	223	228	229	228	230	228
	TCATQZ MODEL SEASONAL PERFORMANCE IN COOLING MODE											
①	Pdesignc (EN 14825)	kW	266,1	368,5	461,7	539,3	637	719	789,1	868,1	966,8	-
①	SEER (EN 14825)		5,47	5,57	5,69	5,66	5,66	5,76	5,82	5,81	5,86	-
②	$\eta_{s,c}$	%	216	220	224	224	223	227	230	229	231	-

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)



TurboPOWER ECO

TCATTE-TCATQE 1330-3950

Cooling capacity: 323.2÷948.6 kW

HFO 1234ze

TCATTE 3950 with FIAP accessory

TCATTE 1330 with PTL-RPE-FIAP accessories

- **High energy efficiency chillers**
- **Efficient, quiet and low start-up current oil-free compressor**
- **HFO R1234ze ecological gas**
- **Integrated MASTER/SLAVE control**

Air cooled water chillers with axial fans.
Range with oil-free centrifugal compressors and R1234ze refrigerant gas.

Construction features

- Compressor: high energy efficiency, oil free, centrifugal compressor with limited start, equipped with magnetic levitation bearings and complete with integral protection and intake and delivery shut-off valves. The compressor was specifically designed for R1234ze gas with zero environmental impact.
- Water side heat exchanger: spray flooded type shell and tube exchanger, complete with closed cell polyurethane foam rubber insulation, water flow differential pressure switch and Victaulic fittings.
- Air side heat exchanger: with micro-channels.
- Fan: external rotor helical type EC motor electric fans with internal thermal protection and accident protection grilles.
- Control: microprocessor electronic control.
- Structure: made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - Display of cooling circuit high/low pressure;
  - Electronic expansion valve;
  - Double safety valve;
  - Leak detector;
  - Clock board;
  - Master/Slave control up to 4 units in parallel.

Versions

- T - High-efficiency version, above class A, soundproofed technical compressor compartment (TCATTE).
- Q - Super silenced version, efficiency class A, super-soundproofed technical compartment, reduced speed fans (TCATQE).

Models

- TCATTE: high efficiency unit designed for cooling only.
- TCATQE: super silenced unit designed for cooling only.

Factory fitted accessories

- PUMP with single or double electric pump, one of which automatic in standby. The electric pumps are available in the low or high head versions.
- VPF control.
- Inverter pump control for unit start-up.
- Condensing control with over-pressure fans.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Compressor circuit breaker switches.
- Electro-mechanical flow switch.
- Forced limit of power consumption.
- Forced noise limit.
- Energy parameter measuring device.
- Soundproofed compressor box.
- Cooling circuit high and low pressure gauges.
- Coil protection nets.
- Micro-channel coils with E-coating treatment.
- Control of min/max power supply voltage.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Evaporator antifreeze heater, electrical panel, electric pumps, if applicable.
- Interfaces for serial communication with other devices.
- Anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

	TCATTE-TCATQE MODEL		1330	2400	2470	2550	2660	3790	3950
❶	Nominal cooling capacity	kW	334,2	399,1	470	548,9	660,5	792,1	948,6
❶	Nominal cooling capacity	kW	323,2	386,1	450,1	536,9	639,7	767,3	916,9
❶	E.E.R.		3,45	3,44	3,5	3,45	3,4	3,49	3,46
❶	E.E.R.		3,45	3,39	3,46	3,37	3,38	3,45	3,43
❶	Absorbed power	kW	96,9	116	134,3	159,1	194,3	227	274,2
❶	Absorbed power	kW	93,7	113,9	130,1	159,3	189,3	222,4	267,3
	TCATTE-TCATQE MODEL		**1330**	**2400**	**2470**	**2550**	**2660**	**3790**	**3950**
❸	TCATTE sound pressure	dB(A)	62	62,5	62,5	63	64	64	65
❸	TCATQE sound pressure	dB(A)	56	56,5	57	58	58	59	60
❹	TCATTE sound power	dB(A)	94	95	95	96	97	97	98
❹	TCATQE sound power	dB(A)	88	89	90	91	91	92	93
	Compressor/steps	no.	1/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	3/ CONTINUOUS REGULATION	3/ CONTINUOUS REGULATION
	Circuits	no.	1	1	1	1	1	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**1330**	**2400**	**2470**	**2550**	**2660**	**3790**	**3950**
	L - Width	mm	4940	6090	7250	8350	9450	11650	12810
	H - Height	mm	2450	2450	2450	2450	2450	2450	2450
	P - Depth	mm	2260	2260	2260	2260	2260	2260	2260
❺	TCATTE weight	kg	2770	3410	3960	4270	4880	6280	6840
❺	TCATQE weight	kg	2790	3440	3990	4300	4910	6310	6880

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C

❸ In open field (Q = 2) at 10 m from the unit on the coil side.

❹ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❺ Weight referred to the unit without load and not accessorised.

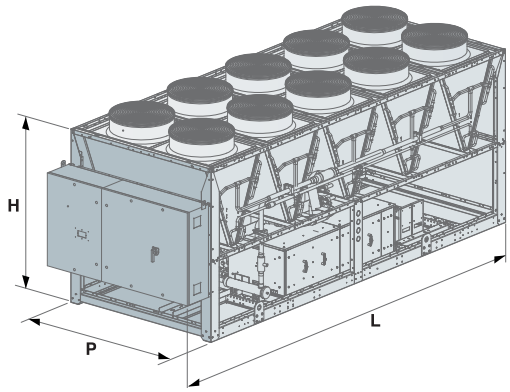
TCATQE super silenced versions

Performance according to EN 14511.

	SEASONAL ENERGY PERFORMANCE		1330	2400	2470	2550	2660	3790	3950
	TCATTE MODEL SEASONAL PERFORMANCE IN COOLING MODE								
①	Pdesignc (EN 14825)	kW	333,3	398,1	468,9	547,7	658	789,2	945,2
①	SEER (EN 14825)		5,61	5,63	5,66	5,68	5,66	5,85	5,84
②	$\eta_{s,c}$	%	221	222	223	224	223	231	230
	TCATQE MODEL SEASONAL PERFORMANCE IN COOLING MODE								
①	Pdesignc (EN 14825)	kW	322,5	385,2	449,1	535,8	637,4	764,6	913,7
①	SEER (EN 14825)		5,62	5,66	5,74	5,7	5,72	5,9	5,83
②	$\eta_{s,c}$	%	222	223	227	225	226	233	230

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)



Compact-ID - TCCITY-THCITY 117-128

Y-Pack C-PF - TCCETY-THCETY 233÷2160

CHILLERS - HEAT PUMPS

Air cooled - Centrifugal fans

Compact-ID

TCCITY-THCITY 117-128

Cooling capacity: 16.4÷27.5 kW - Heating capacity: 17.7-28.5 kW

INVERTER

ErP READY 2021 APPLIES TO EUROPEAN DIRECTIVE FOR ENERGY RELATED PRODUCTS

- **PLENUM-FANS with low consumption EC motor**
- **Vertically or horizontally ducted delivery.**
- **Hot water up to –20°C outdoor air**
- **Temperature of the produced water up to 60°C**
- **Integrated MASTER/ SLAVE control**
- **Inertial buffer tank**

Water chillers and packaged reversible heat pumps with air cooled and Plenum-Fans with EC motor. Range with scroll hermetic compressors, DC Inverter and R410A refrigerant gas.

- Compressor: scroll type, rotary, hermetic with Inverter actuation, complete with thermal protection and casing heater.
- Water side heat exchanger: adequately insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch.
- Air side heat exchanger: featuring a finned coil with copper pipes and aluminium fins for TCCITY and with hydrophilic treatment for THCITY, complete with protection grilles.
- Fan: Plenum electric fan with directly coupled, low consumption EC motor fitted with internal thermal protection and accident protection grilles. Removable fan unit section for on-site positioning.
- Vertical condensing air delivery, horizontal outlet easily transformed on-site.
- Proportional electronic device for continuous fan rotation speed regulation up to an outdoor air temperature of -15°C in chiller mode and up to an outdoor air temperature of 40°C in heat pump mode.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: made of galvanised and painted steel plate, complete with condensate drain pan and unit base antifreeze heater for THCITY.
- The unit is also complete with:

- outdoor air temperature probe for set-point compensation;
- electronic expansion valve;
- display of cooling circuit high and low pressure;
- Master/Slave control up to 4 units in parallel;
- clock board.

Version

T - High efficiency.

Models

TCCITY: unit designed for cooling only.
THCITY: heat pump unit.

PUMP set up

- Pump unit complete with: EC circulator with 3 speed selector or continuous speed regulation or electric pump, membrane expansion tank, manual air vent valve, safety valve and pressure gauge.

TANK&PUMP set up

- Pump unit complete with: inertial buffer tank, circulator or electric circulation pump, membrane expansion tank, manual air vent valve, safety valve, and pressure gauge.

Factory fitted accessories

- Forced Download. Compressor partialisation or switch-off to limit power and current consumption (digital input).
- Antifreeze heater on the tank.
- Circulator/electric pump antifreeze heater.
- Pre-painted copper/coils or copper/copper coils.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.

Separately supplied accessories

- 3-way valve for the production of domestic hot water, managed by regulation.
- Additional electrical resistance for heat pump, managed by regulation.
- Remotely controllable outdoor air temperature probe for set-point compensation.
- Delivery anti-vibration fitting.
- Suction duct fitting.
- Water filter.
- Rubber anti-vibration mounts.
- Remote keypad with display.
- Interfaces for serial communication with other devices.
- RS485/USB serial converter.
- Rhoss supervisors for unit monitoring and remote management.

	TCCITY MODEL		117	124	128
❶	MIN/NOM/MAX cooling capacity	kW	16,4	24,3	27,5
❶	NOM absorbed power	kW	5,24	8,15	9,01
❶	E.E.R. NOM		3,13	2,98	3,05
	THCITY MODEL		**117**	**124**	**128**
❷	MIN/NOM/MAX heating capacity	kW	17,7	24,3	28,5
❷	NOM absorbed power	kW	5,33	7,48	8,88
❷	C.O.P. NOM		3,32	3,25	3,21
❸	MIN/NOM/MAX heating capacity	kW	18,8	25,0	29,1
❸	NOM absorbed power	kW	4,59	6,1	7,28
❸	C.O.P. NOM		4,1	4,1	4
❹	MIN/NOM/MAX heating capacity	kW	12,3	18,1	22,9
❹	NOM absorbed power	kW	4,14	6,65	7,46
❹	C.O.P. NOM		2,97	2,72	3,07
❶	MIN/NOM/MAX cooling capacity		16,2	23,8	27
❶	E.E.R. NOM		2,98	2,84	2,91
	TCCITY - THCITY MODEL		**117**	**124**	**128**
❺	Fan delivery sound pressure	dB(A)	53	53	56
❺	Machine body sound pressure	dB(A)	42	42	45
	Fan nominal air flow	m3/h	7600	7600	8640
	Fan available static pressure	Pa	80	80	80
❶	P0 circulator available head	kPa	89	89	76
	Buffer tank water content	l	110	110	110
	Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50
	DIMENSIONS AND WEIGHT		**117**	**124**	**128**
	L - PUMP width	mm	1522	1522	1522
	L - TANK&PUMP width	mm	1625	1625	1625
	H - PUMP height	mm	1280	1280	1280
	H - TANK&PUMP height	mm	1590	1590	1590
	P - PUMP Depth	mm	815	815	815
	P - TANK&PUMP Depth	mm	815	815	815
❻	PUMP Weight	kg	275	285	295
❻	TANK&PUMP Weight	kg	445	455	465

Data at the following conditions:

❶ Air: 35° D.B. - Water: 12/7°C.

❷ Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C.

❸ Air: 7°C D.B. - 6°C W.B. - Water: 30/35°C.

❹ Air: -7°C D.B. - Water: 30/35°C.

❺ In open field (Q = 2) at 5 m from the unit and ducted fan.

❻ Weight refers to the most complete setup.

Performance according to EN 14511. P0/P10 setup.

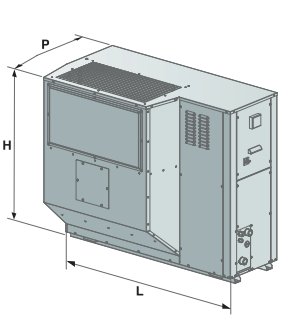
	SEASONAL ENERGY PERFORMANCE		117	124	128
	TCCITY MODEL SEASONAL PERFORMANCE IN COOLING MODE				
①	Pdesignc (EN 14825)	kW	16,4	24,3	27,5
①	SEER (EN 14825)		4,54	4,52	4,59
②	$\eta_{s,c}$	%	179	178	181
	THCITY MODEL SEASONAL PERFORMANCE IN HEATING MODE				
③	Pdesignh (EN 14825)	kW	19	28	35
③	SCOP (EN 14825)		4,14	3,53	3,69
④	η_s	%	162	138	145
④	Energy class		A++	A+	A+

① Low temperature application (7°C)

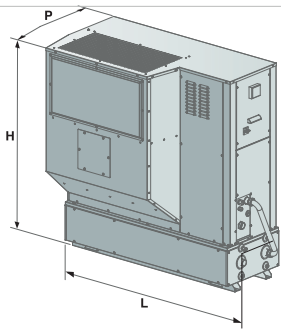
② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)



PUMP



TANK&PUMP

Web code: YKC11

Y-Pack C-PF

TCCETY-THCETY 233÷2160

Cooling capacity: 32.3÷160.2 kW - Heating capacity: 37.7÷175.6 kW

TCCETY 2130

THCETY 270

- High energy efficiency range
- "Plug-Fan" type centrifugal fans with EC motor (brushless)
- 3 capacity steps
- Multi-purpose for systems with 2 pipes+DHW (with optional RC100)
- Integrated MASTER/SLAVE control

High efficiency air cooled water chillers and packaged reversible heat pumps with plug-fan type centrifugal fans with EC motors.
Range with scroll hermetic compressors and R410A refrigerant.

Construction features

- Compressor: scroll type, rotary, hermetic complete with thermal protection and casing heater.
- 2 or 3 capacity steps depending on the models, to obtain excellent load modulation along with high energy efficiency at partial loads.

Water side heat exchanger: with stainless steel plates, complete with closed cell polyurethane foam rubber insulation and water flow differential pressure switch.

- Air side heat exchanger: featuring finned coil with copper pipes and aluminium fins.
- Plug-Fan type centrifugal electric fans with EC motors, equipped with internal thermal protection arranged in single row with horizontal outlet.
  Horizontal outlet of the evaporation condensing air opposite side to finned coil or vertical outlet can be easily transformed on site.
- Proportional electronic device for continuous fan rotation speed regulation up to an outdoor air temperature of –15°C in chiller mode and up to an outdoor air temperature of 40°C in heat pump mode.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Load-bearing structure and panelling made of painted and galvanised sheet steel (RAL 9018); galvanised sheet steel base
- The unit is also complete with:
  - fan and compressor circuit breaker switches;
  - display of cooling circuit high and low pressure;
  - Master/Slave control up to 4 units in parallel;
  - clock board.

Versions

- T - High efficiency version (TCCETY-THCETY).

Models

- TCCETY: unit for cooling only.
- THCETY: reversible heat pump unit.

Factory fitted accessories

- PUMP with single or double electric pump, including an automatic actuation pump in standby, complete with expansion tank, safety valve and water side pressure gauge.
  The electric pumps are available in the low or high head versions.
- TANK&PUMP with integrated buffer tank and single or double electric pump, complete with expansion tank, air vent valves, safety valve and water side pressure gauge.
- VPF control.
- Desuperheater.
- 100% heat recovery unit.
- Low temperature water production.
- Electronic expansion valve.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Forced limit of power consumption.
- Forced noise limit.
- Energy parameter measuring device.
- Soft starter.
- Compressor soundproofing.
- Cooling circuit outlet and inlet valves.
- Refrigerant leak detector.
- Cooling circuit high and low pressure gauges.
- Double safety valves.
- Copper/copper or copper/pre-painted aluminium coils.
- Control of min/max power supply voltage.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Evaporator antifreeze heater, buffer tank, pumps and heat exchangers for heat recovery if applicable.
- Interfaces for serial communication with other devices.
- Anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Thermostat with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

	TCCETY MODEL		233	238	245	250	260	265	270
❶	Nominal cooling capacity	kW	32,3	38,5	43,9	51,0	58,9	63,7	69,9
❶	E.E.R.		2,61	2,77	2,7	2,73	2,67	2,60	2,83
❶	Absorbed power	kW	12,38	13,9	16,26	18,55	21,98	24,5	24,53
	THCETY MODEL		**233**	**238**	**245**	**250**	**260**	**265**	**270**
❷	Nominal heating capacity	kW	37,7	42,1	48,1	56,2	62,5	68,3	79,4
❷	C.O.P.		3	3	3,01	2,96	2,97	2,86	3,23
❷	Absorbed power in winter mode	kW	12,57	14,03	15,98	18,8	20,9	23,72	24,36
❶	Nominal cooling capacity	kW	32,3	38,5	42,3	50,3	57,8	61,6	69,1
❸	Sound power	dB(A)	82	82	83	85	85	85	85
	Scroll/step compressor	no.	2/2	2/2	2/3	2/3	2/3	2/3	2/3
	Circuits	no.	1	1	1	1	1	1	1
	Fan nominal air flow	m³/h	13000	13000	13000	26000	26000	26000	26000
	Fan maximum available static pressure	Pa	250	250	250	250	250	250	250
	Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
	DIMENSIONS		**233**	**238**	**245**	**250**	**260**	**265**	**270**
	L - Width	mm	2650	2650	2650	2650	2650	2650	3650
	H - Height	mm	1920	1920	1920	1920	1920	1920	1920
	P - Depth	mm	870	870	870	870	870	870	1100

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C and ESP: 250 Pa.

❷ Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C and ESP: 250 Pa.

❸ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

Performance according to EN 14511.

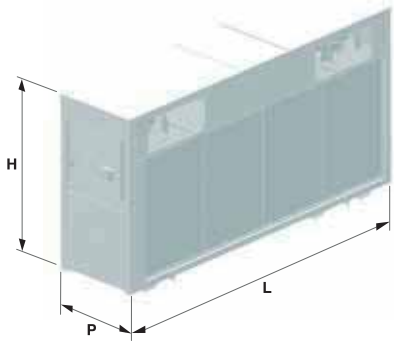
	SEASONAL ENERGY PERFORMANCE		233	238	245	250	260	265	270
	TCCETY MODEL SEASONAL PERFORMANCE IN COOLING MODE								
①	Pdesignc (EN 14825)	kW	32,3	38,5	43,9	51	58,9	63,7	69,9
①	SEER (EN 14825)		4,43	4,36	4,4	4,35	4,37	4,42	4,42
②	$\eta_{s,c}$	%	174	171	173	171	172	174	174
	THCETY MODEL SEASONAL PERFORMANCE IN HEATING MODE								
③	Pdesignh (EN 14825)	kW	31	35	41	48	52	59	66
③	SCOP (EN 14825)		3,52	3,27	3,86	3,52	3,46	3,57	3,7
④	η_s	%	138	128	151	138	136	140	145
④	Energy class		A+	A+	A++	A+	A+	A+	A+

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)



Y-Pack C-PF

TCCETY-THCETY 233÷2160

	TCCETY MODEL		280	290	2100	2115	2130	2145	2160
❶	Nominal cooling capacity	kW	79,1	87,5	100,6	113,9	125,3	142,3	160,2
❶	E.E.R.		2,89	2,81	2,71	2,90	2,87	2,86	2,86
❶	Absorbed power	kW	27.37	31,03	36,72	38,28	43,66	49,07	55,43
	THCETY MODEL		**280**	**290**	**2100**	**2115**	**2130**	**2145**	**2160**
❷	Nominal heating capacity	kW	86,3	96,4	111,5	122,5	139,6	157,6	175,6
❷	C.O.P.		3,36	3,18	3,16	3,21	3,30	3,21	3,20
❷	Absorbed power in winter mode	kW	25,53	30,31	34,95	37,69	42,3	48,49	54,2
❶	Nominal cooling capacity	kW	77,4	84,9	98,9	110,6	123,4	140,8	159,3
❸	Sound power	dB(A)	85	86	88	88	88	89	89
	Scroll/step compressor	no.	2/2	2/3	2/3	2/3	2/2	2/3	2/2
	Circuits	no.	1	1	1	1	1	1	1
	Fan nominal air flow	m³/h	26000	27000	39000	39000	39000	52000	52000
	Fan maximum available static pressure	Pa	250	250	250	250	250	250	250
	Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
	DIMENSIONS		**280**	**290**	**2100**	**2115**	**2130**	**2145**	**2160**
	L - Width	mm	3650	3650	3650	4450	4450	4450	4450
	H - Height	mm	1920	1920	1920	2320	2320	2320	2320
	P - Depth	mm	1100	1100	1100	1100	1100	1100	1100

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C and ESP: 250 Pa.

❷ Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C and ESP: 250 Pa.

❸ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

Performance according to EN 14511.

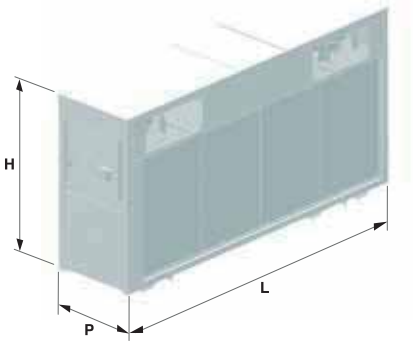
	SEASONAL ENERGY PERFORMANCE		280	290	2100	2115	2130	2145	2160
	TCCETY MODEL SEASONAL PERFORMANCE IN COOLING MODE								
①	Pdesignc (EN 14825)	kW	79,1	87,5	100,6	113,9	125,3	142,3	160,2
①	SEER (EN 14825)		4,4	4,38	4,37	4,41	4,35	4,4	4,34
②	$\eta_{s,c}$	%	173	172	172	173	171	173	171
	THCETY MODEL SEASONAL PERFORMANCE IN HEATING MODE								
③	Pdesignh (EN 14825)	kW	71	80	93	102	117	132	147
③	SCOP (EN 14825)		4,12	3,66	3,58	3,67	4,05	3,63	3,93
④	η_s	%	162	143	140	144	159	142	154
④	Energy class		-	-	-	-	-	-	-

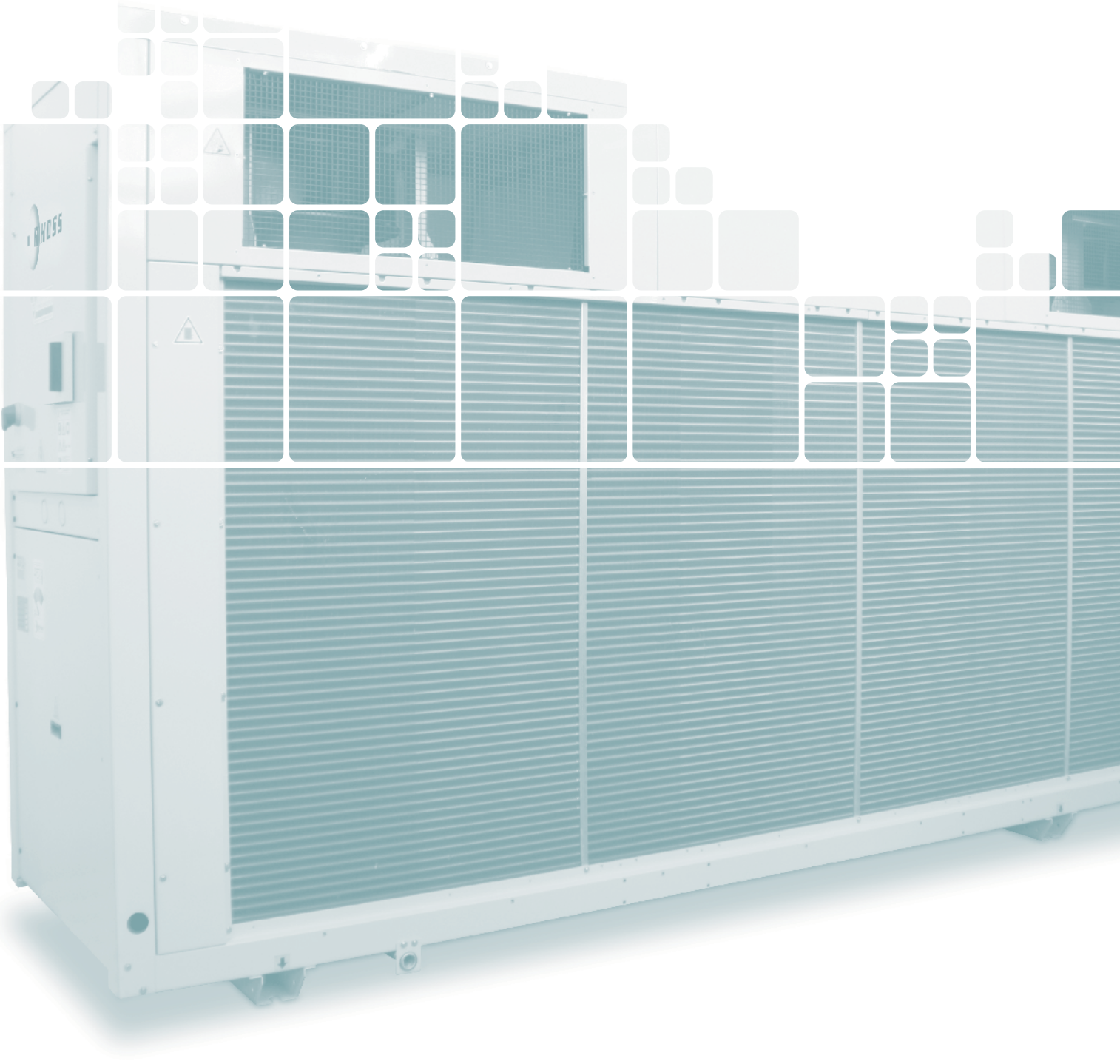
① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)





Comby-Flow - THHEY 105-112

Y-Flow - TCHEY-THHEY 115-240

Y-Flow - TCHEY-THHEY 245-4450

FullFLOW VFD (1+i) - TCHITL 1390÷21700

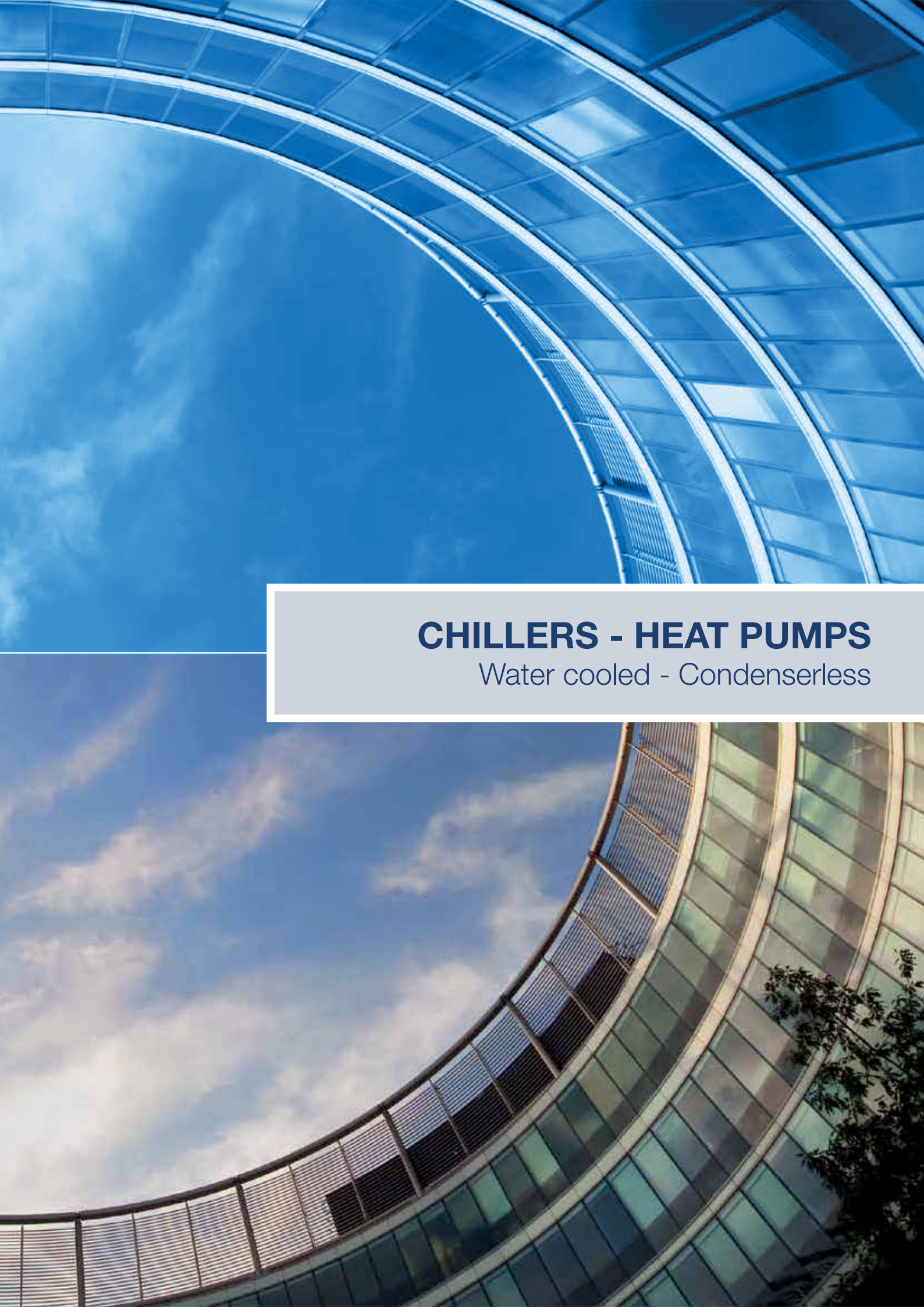
FullFLOW ECO VFD (1+i) - TCHITE 1280÷21220

Z-Flow HE - TCHVZ 1201-31631

Y-Flow E - TCEEY 115-240

Y-Flow E - TCEEBY 245-4360

Z-Flow E - TCEVZ 1200-31630



CHILLERS - HEAT PUMPS

Water cooled - Condenserless

Web code: **CF001**

Comby-Flow

THHEY 105-112

Cooling capacity: 5.3÷11.9 kW - Heating capacity: 6.6÷13.7 kW

- **Extremely compact and silent units**

Water cooled, reversible, packaged heat pumps on cooling circuit. Range with hermetic scroll compressors and R410A refrigerant gas.

Construction features

- Compressor: hermetic, rotary scroll type, complete with thermal protection.
- Primary side (user) heat exchanger: adequately insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch.
- Well or mains side (disposal) heat exchanger: with suitably insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: made of galvanised and painted steel plate with polyester powder coating, complete with soundproofed compressor.

Models

- THHEY: heat pump unit.

STANDARD set up

- Without electric circulation pump.
  Primary side (user): membrane expansion tank, safety valve, water drain valve, manual air vent valve, and pressure gauge.

PUMP set up

- With electric circulation pump.
  Primary side (user): pump unit complete with electric circulation pump, membrane expansion tank, safety valve, water drain valve, manual air vent valve and pressure gauge.

Factory fitted accessories

- Pressure switch valve and bypass solenoid valve (only THHEY).
- Low temperature water production.
- Digital input for double set-point
- 4-20mA analogue signal for shifting set-point.

Separately supplied accessories

- Buffer tank.
- Buffer tank connection pipes.
- Water filter.
- Rubber anti-vibration mounts.
- Antifreeze heater on the buffer tank.
- Low pressure switch.
- 3-way valve for the production of domestic hot water.
- Outdoor air temperature probe for set-point compensation.
- Additional electrical resistance for heat pump, managed by regulation.
- Remote keypad with display.
- Clock board.
- Interfaces for serial communication with other devices.
- Serial converter (RS485/USB).
- Rhoss supervisors for unit monitoring and remote management.

	THHEY MODEL		105	107	109	112
❶	Heating capacity	kW	6,58	8,1	10,9	14
❶	Absorbed power	kW	2,08	2,8	3,35	4,5
❶	C.O.P.		3,16	2,89	3,03	3,1
❷	Heating capacity	kW	7,5	9,7	12,7	15
❷	Absorbed power	kW	1,6	2,1	2,72	3,33
❷	C.O.P.		4,68	4,61	4,67	4,51
❸	Heating capacity (geothermal)	kW	5,4	7,3	9,4	11,3
❸	Absorbed power (geothermal)	kW	1,5	2,15	2,78	3,34
❸	C.O.P. (geothermal)		3,62	3,39	3,38	3,39
❹	Cooling capacity	kW	5,3	6,8	9,2	11,9
❹	Absorbed power	kW	1,60	2,19	2,79	3,67
❹	E.E.R.		3,31	3,11	3,3	3,24
❺	Sound pressure	dB(A)	49	51	51	53
	Scroll/step compressor	no.	1/1	1/1	1/1	1/1
	KA buffer tank water content	l	20	20	30	30
❹	Available circulator head	kPa	47	55	82	77
	Electrical supply	V-ph-Hz	230-1-50	230-1-50 / 400-3+N-50	230-1-50 / 400-3+N-50	230-1-50 / 400-3+N-50
	DIMENSIONS AND WEIGHT		**105**	**107**	**109**	**112**
	L - Width	mm	585	585	660	660
	H - STANDARD height - PUMP	mm	535	535	535	535
	H - STANDARD height - PUMP + KA	mm	855	855	855	855
	P - Depth	mm	386	386	420	420
❻	Weight	kg	78	83	94	97
	KA Weight	kg	28	28	33	33

Data at the following conditions:

❶ Hot water: 40/45°C - Evaporator water: 10/7°C.

❷ Hot water: 30/35°C - Evaporator water: 10/7°C.

❸ Hot water: 30/35°C - Evaporator water: 0/–3°C, 30% glycol.

❹ Chilled water: 12/7°C - Condenser water: 30/35°C.

❺ In open field (Q = 2) at 1 m from the unit.

❻ Weight refers to the most complete setup.

Performance according to EN 14511. Standard Setup

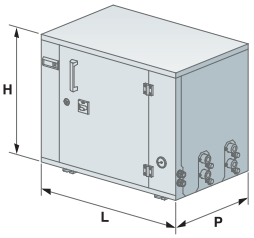
KA = buffer tank.

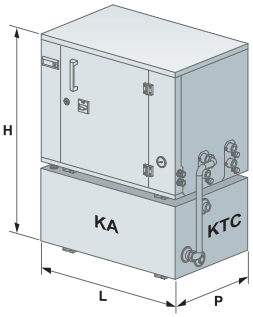
KTC = connecting pipe.

	SEASONAL ENERGY PERFORMANCE		105	107	109	112
	THHEY MODEL SEASONAL PERFORMANCE IN HEATING MODE					
③	Pdesignh (EN 14825)	kW	9	12	16	19
③	SCOP (EN 14825)		5,38	5,56	5,54	5,18
④	η_s	%	207	214	214	199
④	Energy class		A+++	A+++	A+++	A+++

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)





Web code: **YF011**

Y-Flow

TCHEY-THHEY 115-240

Cooling capacity: 15.5÷41.7 kW - Heating capacity: 17.4÷45.1 kW

- **Applications with well water, water mains or geothermal probes**
- **Plug&Play Unit with upward hydraulic connections**

Reversible packaged heat pumps and water chillers on the cooling circuit with water-cooling. Range with hermetic scroll compressors and R410A refrigerant gas.

Construction features

- Compressor: hermetic rotary scroll complete with thermal protection and crankcase heater.
- Primary side (user) heat exchanger: adequately insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch.
- Disposal unit side (well/mains/geothermal probes) heat exchanger: adequately insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch (for THHEY).
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: made of galvanised and painted steel plate with polyester powder coating, internally covered with soundproof panelling.

Models

- TCHEY: unit designed for cooling only.
- THHEY: heat pump unit.

Factory fitted accessories

- PUMP:
  - Primary side (user): pump unit complete with electric circulation pump with standard or oversized head, membrane expansion tank, safety valve, water fill/drain valve, manual air vent valve and pressure gauge.
  - Disposal side (geothermal probes/dry cooler): pump unit complete with phase cutting electric pump, water fill/drain valve and manual air vent valve.
- Silenced set up.
- Pressure switch valve with water flow lock solenoid.
- Pressure switch valve with water flow lock solenoid and bypass solenoid valve.
- Water circuit heat pump (for TCHEY only).
- Soft-start device.
- Low temperature water production.
- Digital input for double set-point.
- 4-20mA analogue signal for shifting set-point.

Separately supplied accessories

- 3-way valve for the production of domestic hot water.
- Additional electrical resistance for heat pump, managed by regulation.
- Outdoor air temperature probe for set-point compensation.
- Free-cooling kit.
- Water filter.
- Rubber anti-vibration mounts.
- Remote keypad with display.
- Clock board.
- Interfaces for serial communication with other devices.
- Serial converter (RS485/USB).
- Rhoss supervisors for unit monitoring and remote management.

	TCHEY MODEL		115	118	122	125	230	240
❶	Cooling capacity	kW	15,5	18,4	22,7	26,3	30,5	41,7
❶	Absorbed power	kW	3,27	3,49	4,5	5,01	6,64	8,07
❶	E.E.R.		4,74	5,27	5,04	5,25	4,59	5,17
	THHEY MODEL		**115**	**118**	**122**	**125**	**230**	**240**
❷	Heating capacity	kW	17,4	20,2	25,1	28,9	35,9	45,1
❷	Absorbed power	kW	3,95	4,41	5,59	6,3	8,05	10,11
❷	C.O.P.		4,4	4,58	4,49	4,59	4,46	4,46
❸	Heating capacity	kW	18,6	21,5	26,6	30,7	38,5	47,9
❸	Absorbed power	kW	3,29	3,55	4,45	5,04	6,63	8,09
❸	C.O.P.		5,66	6,05	5,97	6,09	5,81	5,92
❹	Heating capacity (geothermal)	kW	13,4	15,3	18,6	21,7	27,7	33,8
❹	C.O.P. (geothermal)		4,12	4,21	4,37	4,49	4,23	4,3
❶	Cooling capacity	kW	13,9	16,3	20	23,1	27,3	35,9
❶	E.E.R.		3,81	4,13	4,15	4,19	3,79	4,09
	TCHEY - THHEY MODEL		**115**	**118**	**122**	**125**	**230**	**240**
❺	Sound pressure	dB(A)	42	42	46	47	48	52
	Scroll/step compressor	no.	1/1	1/1	1/1	1/1	2/2	2/2
	Circuits	no.	1	1	1	1	1	1
❶	Std system side electric pump available head	kPa	88	81	73	113	105	115
	Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
	DIMENSIONS AND WEIGHT		**115**	**118**	**122**	**125**	**230**	**240**
	L - Width	mm	700	700	700	700	700	700
	H - STANDARD height - PUMP	mm	1140	1140	1140	1140	1140	1140
	P - Depth	mm	560	560	780	780	780	780
❻	Weight	kg	193	193	230	254	278	298

Data at the following conditions:

❶ Chilled water: 12/7°C - Condenser water: 30/35°C.

❷ Hot water: 40/45°C - Evaporator water: 10/7°C.

❸ Hot water: 30/35°C - Evaporator water: 10/7°C.

❹ Hot water: 30/35°C - Evaporator water: 0/–3°C, 30% glycol.

❺ In open field (Q = 2) at 1 m from the unit, with silenced setup.

❻ Weight refers to the most complete setup.

Performance according to EN 14511.

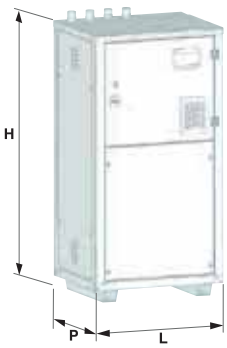
	SEASONAL ENERGY PERFORMANCE		115	118	122	125	230	240
	TCHEY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
①	Pdesignc (EN 14825)	kW	15,5	18,4	22,7	26,3	30,5	41,7
①	SEER (EN 14825)		5,35	5,58	5,57	5,72	6,08	5,82
②	$\eta_{s,c}$	%	206	215	215	221	235	225
	THHEY MODEL SEASONAL PERFORMANCE IN HEATING MODE							
③	Pdesignh (EN 14825)	kW	23	27	33	38	48	59
③	SCOP (EN 14825)		6,09	6,43	6,44	6,54	6,59	6,73
④	η_s	%	236	249	249	254	256	261
④	Energy class		A+++	A+++	A+++	A+++	A+++	A+++

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)



Web code 245-2185: **YF021**
Web code 4180÷4450: **YF031**

Y-Flow

TCHEY-THHEY 245-4450

Cooling capacity: 41.2÷448.8 kW - Heating capacity: 50.23÷515.49 kW

TCHEY 2100

- **Applications with well water, water mains or geothermal probes**
- **Integrated MASTER/ SLAVE control**
- **HT65 version for 65°C water production (°)**

(°) Refer to the specific documentation to check available models and accessories.

➔ The units can be equipped with up to a maximum of 2 electric pumps in mod. 245÷2185 and 4 electric pumps in mod. 4180÷4450. The PUMP set up is not included when there is a recovery unit or desuperheater.

Reversible packaged heat pumps and water chillers on the cooling circuit with water-cooling. Range with hermetic scroll compressors and R410A refrigerant gas.

Construction features

- Compressor: hermetic rotary scroll complete with thermal protection and crankcase heater.
- Primary side (user) heat exchanger: adequately insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch.
- Disposal unit side (well/mains/geothermal probes) heat exchanger: adequately insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch (for THHEY).
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:

- compressor circuit breaker switches;
- display of cooling circuit high and low pressure;
- Master/Slave control up to 4 units in parallel;
- clock board;
- 0-10V analogue signal for condensing/evaporating control performed by external device.

Versions

- LT - Hot water production up to 52°C.
- HT - Hot water production up to 55°C.

Models

- TCHEY: unit designed for cooling only.
- THHEY: heat pump unit.

Factory fitted accessories

- PUMP primary side (user): with single or double electric pump, including an automatic pump in standby, complete with expansion tank, safety valve, water fill/drain valve, air vent valve and pressure gauge. The electric pumps are available in the low or high pressure head versions. ➔
- PUMP disposal side (geothermal probes/dry cooler): with single or double electric pump regulated via inverter including an automatic actuation pump in standby. ➔
- Desuperheater. ➔
- 100% heat recovery unit (mod. 245-4360). ➔
- Water circuit heat pump (for TCHEY only).
- VPF control.
- Inverter pump control for unit start-up.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Soft-starter.
- Energy parameter measuring device.
- Cooling circuit outlet and inlet valves.
- Refrigerant leak detector.
- Forced limit of power consumption.
- Electronic expansion valve (standard for mod. 4410-4450).

THHEY 4260

- Cooling circuit high and low pressure gauges.
- Double safety valves.
- Silenced set up.
- Control of min/max power supply voltage.
- Low temperature water production.
- Digital input for double set-point.
- 4-20mA analogue signal for shifting set-point.
- Interfaces for serial communication with other devices.
- Rubber anti-vibration mounts.

Separately supplied accessories

- 3-way modulating condensing control valve.
- 2-way modulating condensing control valve.
- Outdoor air temperature probe for set-point compensation.
- Free-cooling kit (mod. 245÷2185).
- Water filter.
- Remote keypad with display.
- Thermostat with display.
- Serial converter (RS485/USB).
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

Y-Flow

TCHEY-THHEY 245-4450

	TCHEY MODEL		245	250	260	270	275	290	2100	2115	2130	2145	2165	2185
❶	Cooling capacity	kW	45	53	60,3	68,9	75,5	89,6	102,6	116,8	130,5	145,1	164,9	184
❶	Absorbed power	kW	9,85	11,42	13,19	15,01	16,52	19,27	22,55	25,55	29	31,82	37,06	42,01
❶	E.E.R.		4,57	4,64	4,57	4,59	4,57	4,65	4,55	4,56	4,5	4,56	4,45	4,38
	THHEY MODEL		**245**	**250**	**260**	**270**	**275**	**290**	**2100**	**2115**	**2130**	**2145**	**2165**	**2185**
❷	Heating capacity	kW	50,2	59,1	67,9	75,7	84,1	102,4	117	133,9	147,9	163,4	186,9	209,7
❷	Absorbed power	kW	12,24	14	15,98	17,73	19,93	24,04	27,86	31,58	35,47	39,56	45,92	52,29
❷	C.O.P.		4,1	4,22	4,25	4,27	4,22	4,26	4,2	4,24	4,17	4,13	4,07	4,01
❶	Cooling capacity	kW	41,2	48,5	55,2	63	69,1	81,9	95,7	109,1	120,7	134,3	152,2	169,9
❶	E.E.R.		4,32	4,38	4,36	4,31	4,31	4,31	4,35	4,35	4,3	4,29	4,08	4,02
	TCHEY - THHEY MODEL		**245**	**250**	**260**	**270**	**275**	**290**	**2100**	**2115**	**2130**	**2145**	**2165**	**2185**
❸	Sound power	dB(A)	67	67	68	68	69	70	71	72	73	74	74	75
	Scroll/step compressor	no.	2/2	2/2	2/2	2/2	2/3	2/2	2/3	2/3	2/3	2/2	2/3	2/2
	Circuits	no.	1	1	1	1	1	1	1	1	1	1	1	1
	Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
	DIMENSIONS AND WEIGHT		**245**	**250**	**260**	**270**	**275**	**290**	**2100**	**2115**	**2130**	**2145**	**2165**	**2185**
❹	L - Width	mm	1020	1020	1020	1020	1020	1020	1270	1270	1270	1270	1270	1270
❺	L - Width	mm	1250	1250	1250	1250	1250	1250	1500	1500	1500	1500	1500	1500
	H - Height	mm	1470	1470	1470	1470	1470	1470	1620	1620	1620	1620	1620	1620
	P - Depth	mm	870	870	870	870	870	870	870	870	870	870	870	870
❻	Weight TCHEY LT	kg	395	405	410	425	435	450	695	710	730	755	770	775
❻	Weight TCHEY HT	kg	425	430	440	460	470	480	740	770	800	825	850	855
❻	Weight THHEY LT	kg	405	415	425	440	450	460	700	720	750	755	790	800
❻	Weight THHEY HT	kg	435	445	455	470	480	495	755	790	820	845	870	880

Data at the following conditions:

❶ Chilled water: 12/7°C. - Condenser water: 30/35°C.

❷ Hot water: 40/45°C. - Evaporator water: 10/7°C.

❸ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❹ Width referring to the unit with standard setup or supplied with "recovery" or "desuperheater" accessories.

❺ Width referring to the PUMP setup, up to a maximum of 2 pumps in mod. 245-2185 (2 user side or disposal unit side pumps or 1 user side pump + 1 disposal unit side pump) and up to a maximum of 4 pumps in mod. 4180-4450 (2 pumps on user side and 2 pumps on disposal unit side).

❻ Empty weight

Performance according to EN 14511.

	SEASONAL ENERGY PERFORMANCE		245	250	260	270	275	290	2100	2115	2130	2145	2165	2185
	TCHEY MODEL SEASONAL PERFORMANCE IN COOLING MODE													
①	Pdesignc (EN 14825)	kW	45,1	53,1	60,4	69	75,6	89,8	102,7	117	130,7	145,3	165,1	184,1
①	SEER (EN 14825)		5,68	5,82	5,91	5,83	6	5,85	5,81	5,97	5,91	5,88	5,97	5,72
②	$\eta_{s,c}$	%	219	225	229	225	232	226	224	231	228	227	231	221
	THHEY MODEL SEASONAL PERFORMANCE IN COOLING MODE													
①	Pdesignc (EN 14825)	kW	-	-	-	-	-	-	-	-	-	-	-	-
①	SEER (EN 14825)		-	-	-	-	-	-	-	-	-	-	-	-
②	$\eta_{s,c}$	%	-	-	-	-	-	-	-	-	-	-	-	-
	THHEY MODEL SEASONAL PERFORMANCE IN HEATING MODE													
③	Pdesignh (EN 14825)	kW	61	71	81	91	101	122	140	159	174	196	224	250
③	SCOP (EN 14825)		6,49	6,54	6,43	6,4	6,69	6,32	6,07	6,35	6,13	6,05	6,13	5,85
④	η_s	%	252	253	249	248	259	245	235	246	237	234	237	226
④	Energy class		A+++	-	-	-	-	-	-	-	-	-	-	-

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)

	TCHEY MODEL		4180	4205	4235	4260	4290	4330	4360	4410	4450
❶	Cooling capacity	kW	180,6	206,5	232,2	259,8	287,2	325,6	362,8	407,1	448,8
❶	Absorbed power	kW	37,78	43,2	48,58	54,58	60,46	69,72	79,39	90,87	103,17
❶	E.E.R.		4,78	4,78	4,78	4,76	4,75	4,67	4,57	4,48	4,35
	THHEY MODEL		**4180**	**4205**	**4235**	**4260**	**4290**	**4330**	**4360**	**4410**	**4450**
❷	Heating capacity	kW	202,2	231	259,2	292,3	323,9	369,3	414	464,4	515,5
❷	Absorbed power	kW	45,95	53,35	60,85	68,45	75,85	87,93	99,52	116,98	127,92
❷	C.O.P.		4,4	4,33	4,26	4,27	4,27	4,2	4,16	3,97	4,03
❶	Cooling capacity	kW	160,4	183,5	206,5	231,4	255,2	292,7	330,1	373,9	412,9
❶	E.E.R.		4,42	4,29	4,22	4,19	4,16	4,14	4,16	4,1	4,03
	TCHEY - THHEY MODEL		**4180**	**4205**	**4235**	**4260**	**4290**	**4330**	**4360**	**4410**	**4450**
❸	Sound power	dB(A)	77	77	78	79	80	81	82	83	84
	Scroll/step compressor	no.	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4
	Circuits	no.	2	2	2	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**4180**	**4205**	**4235**	**4260**	**4290**	**4330**	**4360**	**4410**	**4450**
❹	L - Width	mm	2600	2600	2600	2600	2600	2600	2600	2600	2600
❺	L - Width	mm	3734	3734	3734	3734	3734	3734	3734	3734	3734
	H - Height	mm	1860	1860	1860	1860	1860	1860	1860	1860	1860
	P - Depth	mm	870	870	870	870	870	870	870	870	870
❻	Weight TCHEY LT	kg	1350	1410	1440	1460	1500	1530	1570	1720	1750
❻	Weight TCHEY HT	kg	1440	1470	1510	1540	1600	1650	1680	1750	1790
❻	Weight THHEY LT	kg	1380	1440	1470	1500	1530	1560	1600	1750	1780
❻	Weight THHEY HT	kg	1470	1500	1550	1570	1630	1680	1720	1790	1820

Data at the following conditions:

❶ Chilled water: 12/7°C. - Condenser water: 30/35°C.

❷ Hot water: 40/45°C. - Evaporator water: 10/7°C.

❸ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❹ Width referring to the unit with standard setup or supplied with "recovery" or "desuperheater" accessories.

❺ Width referring to the PUMP setup, up to a maximum of 2 pumps in mod. 245-2185 (2 user side or disposal unit side pumps or 1 user side pump + 1 disposal unit side pump) and up to a maximum of 4 pumps in mod. 4180-4450 (2 pumps on user side and 2 pumps on disposal unit side).

❻ Empty weight

Performance according to EN 14511.

	SEASONAL ENERGY PERFORMANCE		4180	4205	4235	4260	4290	4330	4360	4410	4450
	TCHEY MODEL SEASONAL PERFORMANCE IN COOLING MODE										
①	Pdesignc (EN 14825)	kW	180,8	206,8	232,5	260,1	287,4	325,9	363	407,3	449
①	SEER (EN 14825)		5,75	5,93	6,11	6,12	6,1	6,03	5,93	6,02	5,92
②	$\eta_{s,c}$	%	222	229	236	237	236	233	229	233	229
	THHEY MODEL SEASONAL PERFORMANCE IN COOLING MODE										
①	Pdesignc (EN 14825)	kW	-	-	-	-	255,3	293	330,4	374	413,1
①	SEER (EN 14825)		-	-	-	-	5,82	5,79	5,88	5,51	5,91
②	$\eta_{s,c}$	%	-	-	-	-	225	224	227	213	228
	THHEY MODEL SEASONAL PERFORMANCE IN HEATING MODE										
③	Pdesignh (EN 14825)	kW	262	302	340	383	-	-	-	-	-
③	SCOP (EN 14825)		6,87	6,63	6,49	6,47	-	-	-	-	-
④	η_s	%	267	257	251	251	-	-	-	-	-
④	Energy class		-	-	-	-	-	-	-	-	-

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)

Web code: FFE03

FullFLOW VFD (1+i)

TCHITL 1390÷21700

new

Cooling capacity: 389.5-1701.1 kW

INVERTER

ErP READY 2021 APPLIES TO EUROPEAN DIRECTIVE FOR ENERGY RELATED PRODUCTS

TCHITL 21000 with TOBT accessory

- Non-flammable reduced GWP gas
- High efficiency levels
- Continuous power regulation
- Various soundproofing options
- Touch interface (optional)
- Free-Cooling management
- Integrated MASTER/SLAVE control

Water-cooled water chillers. Range with semi-hermetic screw compressors with variable Vi, inverter regulation and R513A refrigerant gas.

Construction features

- Compressor: high energy efficiency semi-hermetic screw driven by fixed speed motor with linear capacity control and/or variable Vi regulated by inverter (25%-100% single-compressor sizes, 12.5-100% bi-compressor sizes), limited start, complete with integral protection, casing heater, oil level sensor and shut-off valves on delivery and intake piping.
- Water side heat exchanger (evaporator): low refrigerant charge spray flooded type shell and tube exchanger, complete with closed cell polyurethane foam rubber insulation, water flow differential pressure switch and Victaulic fittings.
- Water side heat exchanger (condenser): tube and shell complete with safety valve, service valve on the high-pressure refrigerant gas circuit, and a water flow differential pressure switch and Victaulic fittings.
- Control: microprocessor electronic control.
- Structure: made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - clock board;
  - electronic expansion valve;
  - display of cooling circuit high/low pressure;
  - Master/Slave control up to 4 units in parallel;
  - 0-10V analogue signal for condensing control from external device.

Versions

- T - High efficiency version

Models

- TCHITL: unit designed for cooling only.

Factory fitted accessories

- VPF control.
- Free-Cooling management
- Dry-Cooler management
- 100% heat recovery unit.
- Set up for heat pump operation.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Circuit breaker switches.
- Forced limit of power consumption.
- Soft starter.
- Electro-mechanical flow switch.
- EMC anti-disturbance filters.
- Energy parameter measuring device.
- Compressor soundproof enclosures.
- Full acoustic casing.
- Refrigerant leak detector.
- Double safety valves.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Evaporator antifreeze heater.
- Control of min/max power supply voltage.
- Interfaces for serial communication with other devices.
- Colour touch user keypad (fitted on the machine or remotely) with 7" display.
- Anti-vibration mounts.
- Protective packaging

Separately supplied accessories

- Remote keypad with display.
- Outdoor air temperature probe for set-point compensation
- Thermostat with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

	TCHITL MODEL		1390	1490	1600	2720	2810	2900	21000	21110	21260	21360	21520	21700
❶	Nominal cooling capacity	kW	389,5	486,5	610,4	727,4	816,3	920,3	1001,3	1117,2	1260,2	1361,1	1524,2	1701,1
❶	E.E.R.		5,18	5,16	5,11	5,5	5,41	5,5	5,45	5,32	5,36	5,4	5,57	5,55
❶	Absorbed power	kW	75,2	94,3	119,5	132,3	150,9	167,3	183,7	210,0	235,1	252,1	273,6	306,5
❷	Sound power	dB(A)	97	99	101	98	98	100	100	102	103	103	102	103
❷	Sound power with enclosure accessory	dB(A)	93	95	97	94	94	96	96	98	99	99	98	99
	Screw/step compressor	no.	1/ CONTINUOUS REGULATION	1/ CONTINUOUS REGULATION	1/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION
	Circuits	no.	1	1	1	2	2	2	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**1390**	**1490**	**1600**	**2720**	**2810**	**2900**	**21000**	**21110**	**21260**	**21360**	**21520**	**21700**
	L - Width	mm	3859	3859	3859	3990	3990	3990	4329	4407	4407	4407	4501	4586
	H - Height	mm	1830	1830	1830	2040	2040	2040	2040	2040	2080	2080	2090	2090
	P - Depth	mm	1531	1531	1591	1676	1676	1676	1676	1814	1844	1844	1979	2024
❸	TCHITL weight	kg	2460	2530	2605	4700	4830	4915	5385	5600	6325	6455	7765	8115

Data at the following conditions:

❶ Chilled water: 7/12°C. - Condenser inlet water: 30/35°C.

❷ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❸ Empty weight.

Performance according to EN 14511.

	SEASONAL ENERGY PERFORMANCE		1390	1490	1600	2720	2810	2900	21000	21110	21260	21360	21520	21700
	TCHITL MODEL SEASONAL PERFORMANCE IN COOLING MODE													
①	Pdesignc (EN 14825)	kW	389,5	486,5	610,4	727,4	816,3	920,3	1001,3	1117,2	1260,2	1361,1	1524,2	1701,1
①	SEER (EN 14825)		7,75	7,68	7,66	7,57	7,69	7,68	7,48	7,4	7,38	7,35	7,5	7,46
②	$\eta_{s,c}$	%	302	299	298	295	300	299	291	288	287	286	292	290

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

Web code: FFE04

FullFLOW ECO VFD (1+i)

TCHITE 1280÷21220

new

Cooling capacity: 285.6-1217.2 kW

INVERTER

ErP READY 2021 APPLIES TO EUROPEAN DIRECTIVE FOR ENERGY RELATED PRODUCTS

- HFO R1234ze ecological gas
- High efficiency levels
- Continuous power regulation
- Various soundproofing options
- Touch interface (optional)
- Free-Cooling management
- Integrated MASTER/SLAVE control

TCHITE 21000 with TOBT accessory

Water-cooled water chillers. Range with semi-hermetic screw compressors with variable Vi, inverter regulation and R1234ze refrigerant gas.

Construction features

- Compressor: high energy efficiency semi-hermetic screw driven by fixed speed motor with linear capacity control and/or variable Vi regulated by inverter (25-100% single-compressor sizes, 12.5-100% bi-compressor sizes), limited start, complete with integral protection, casing heater, oil level sensor and shut-off valves on delivery and intake piping.
- Water side heat exchanger (evaporator): low refrigerant charge spray flooded type shell and tube exchanger, complete with closed cell polyurethane foam rubber insulation, water flow differential pressure switch and Victaulic fittings.
- Water side heat exchanger (condenser): tube and shell complete with safety valve, service valve on the high-pressure refrigerant gas circuit, and a water flow differential pressure switch and Victaulic fittings.
- Control: microprocessor electronic control.
- Structure: made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - clock board;
  - electronic expansion valve;
  - display of cooling circuit high/low pressure;
  - Master/Slave control up to 4 units in parallel;
  - 0-10V analogue signal for condensing control from external device.

Versions

- T - High efficiency version

Models

- TCHITE: unit designed for cooling only.

Factory fitted accessories

- VPF control.
- Free-Cooling management
- Dry-Cooler management
- 100% heat recovery unit.
- Set up for heat pump operation.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Circuit breaker switches.
- Forced limit of power consumption.
- Soft starter.
- Electro-mechanical flow switch.
- EMC anti-disturbance filters.
- Energy parameter measuring device.
- Compressor soundproof enclosures.
- Full acoustic casing.
- Refrigerant leak detector.
- Double safety valves.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Evaporator antifreeze heater.
- Control of min/max power supply voltage.
- Interfaces for serial communication with other devices.
- Colour touch user keypad (fitted on the machine or remotely) with 7" display.
- Anti-vibration mounts.
- Protective packaging

Separately supplied accessories

- Remote keypad with display.
- Outdoor air temperature probe for set-point compensation.
- Thermostat with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

	TCHITE MODEL		1280	1340	1430	2520	2580	2650	2710	2800	2890	2970	21090	21220
❶	Nominal cooling capacity	kW	285,6	346,6	434,5	524,4	584,4	648,4	719,4	800,4	897,3	974,3	1091,2	1217,2
❶	E.E.R.		5,2	5,19	5,05	5,47	5,44	5,43	5,5	5,33	5,32	5,39	5,54	5,54
❶	Absorbed power	kW	54,9	66,8	86	95,9	107,4	119,4	130,8	150,2	168,7	180,8	197	219,7
❷	Sound power	dB(A)	97	99	101	98	98	100	100	102	103	103	102	103
❷	Sound power with enclosure accessory	dB(A)	93	95	97	94	94	96	96	98	99	99	98	99
	Screw/step compressor	no.	1/ CONTINUOUS REGULATION	1/ CONTINUOUS REGULATION	1/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION
	Circuits	no.	1	1	1	2	2	2	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**1280**	**1340**	**1430**	**2520**	**2580**	**2650**	**2710**	**2800**	**2890**	**2970**	**21090**	**21220**
	L - Width	mm	3859	3859	3859	4008	4008	3990	4329	4407	4407	4407	4501	4586
	H - Height	mm	1830	1830	1830	1910	1910	2040	2040	2040	2040	2040	2080	2080
	P - Depth	mm	1531	1531	1591	1676	1676	1676	1676	1814	1844	1844	1964	2009
❸	TCHITE weight	kg	2335	2440	2535	4095	4190	4735	5205	5355	5620	5765	6790	7135

Data at the following conditions:

❶ Chilled water: 7/12°C. - Condenser inlet water: 30/35°C.

❷ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❸ Empty weight.

Performance according to EN 14511.

	SEASONAL ENERGY PERFORMANCE													
	TCHITE MODEL SEASONAL PERFORMANCE IN COOLING MODE													
①	Pdesignc (EN 14825)	kW	285,6	346,6	434,5	524,4	584,4	648,4	719,4	800,4	897,3	974,3	1091,2	1217,2
①	SEER (EN 14825)		7,64	7,62	7,58	7,42	7,56	7,63	7,37	7,41	7,24	7,25	7,33	7,31
②	$\eta_{s,c}$	%	298	297	295	289	295	297	287	288	282	282	285	285

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

Web code: **ZFE01**

Z-Flow HE

TCHVZ 1201-31631

Cooling capacity: 203.3÷1,627.6 kW

TCHVBZ 31631 HE

- **33 sizes up to more than 1,600 kW**
- **Wide range of standard equipment**
- **Integrated MASTER/ SLAVE control**

Water-cooled water chillers. Range with semi-hermetic screw compressors and R134a refrigerant gas.

Construction features

- Compressor: high energy efficiency semi-hermetic screw compressor, with star-delta or part-winding start up (depending on models) and complete with integral protection, casing heater and refrigerant gas outlet piping shut-off valve.
- Electronic expansion valve: as standard on all models.
- Water side heat exchanger (evaporator): dry expansion shell and tube exchanger with counterflow heat exchange, complete with closed cell polyurethane foam rubber insulation, water flow differential pressure switch and Victaulic fittings.
- Water side heat exchanger (condenser): tube and shell complete with safety valve, and service valve on the high-pressure refrigerant gas circuit.
- Control: microprocessor electronic control.
- Structure: made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - clock board;
  - display of cooling circuit high/low pressure;
  - Master/Slave control up to 4 units in parallel;
  - 0-10V analogue signal for condensing control from external device.

Versions

- B - Standard version (TCHVBZ).
- I - Soundproofed version with soundproofing compressor lining (TCHVIZ).

Models

- TCHVBZ: unit designed for cooling only.
- TCHVIZ: soundproofed unit designed for cooling only.

Factory fitted accessories

- VPF control.
- Desuperheater.
- 100% heat recovery unit.
- Thermostat with display for heat recovery unit/ desuperheater.
- Set up for heat pump operation.
- Condenser Victaulic fittings.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Circuit breaker switches.
- Forced limit of power consumption.
- Soft starter.
- Inlet compressor shut-off valves
- Linear capacity control compressors (50-100 % for each compressor).
- Evaporator antifreeze heater.
- Digital input for double set-point
- Compressor oil level sensor.
- Control of min/max power supply voltage.
- 4-20 mA analogue signal for shifting set-point.
- Interfaces for serial communication with other devices.
- Spring anti-vibration mounts.
- Rubber anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

	TCHVBZ-TCHVIZ MODEL		1201	1231	1281	1311	1351	1421	1481	1531	1611
❶	Nominal cooling capacity	kW	203.3	230.2	282.1	308.0	352.8	416.4	478.2	533.0	605.9
❶	E.E.R.		4.95	4.96	4.97	4.96	4.95	4.93	4.94	4.94	4.95
❶	Absorbed power	kW	41.07	46.41	56.76	62.1	71.27	84.46	96.8	107.89	122.4
❷	Sound power	dB(A)	94	94	97	97	97	97	97	98	98
❷	Sound power	dB(A)	92	92	95	95	95	95	95	96	96
	Screw/step compressor	no.	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3
	Circuits	no.	1	1	1	1	1	1	1	1	1
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	TCHVBZ DIMENSIONS AND WEIGHTS		**1201**	**1231**	**1281**	**1311**	**1351**	**1421**	**1481**	**1531**	**1611**
	L - Width	mm	3.470	3.450	3.450	3.450	3.500	3.500	3.480	3.490	3.500
	H - Height	mm	1.580	1.580	1.580	1.580	1.660	1.660	1.660	1.760	1.760
	P - Depth	mm	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
❸	TCHVBZ Weight	kg	1.343	1.369	1.715	1.733	1.885	2.374	2.413	2.652	2.697
❸	TCHVIZ Weight	kg	1.598	1.624	1.970	1.988	2.140	2.629	2.668	2.917	2.952

Data at the following conditions:

❶ Chilled water: 7/12°C. - Condenser inlet water: 30/35°C.

❷ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❸ Empty weight.

■ TCHVIZ soundproofed version.

Performance according to EN 14511.

	SEASONAL ENERGY PERFORMANCE		1201	1231	1281	1311	1351	1421	1481	1531	1611
	TCHVBZ-TCHVIZ MODEL SEASONAL PERFORMANCE IN COOLING MODE										
①	Pdesignc (EN 14825)	kW	203,3	230,2	282,1	308	352,8	416,4	478,2	533	605,9
①	SEER (EN 14825)		5,83	5,71	5,75	5,69	5,85	6,05	5,92	5,89	5,9
②	$\eta_{s,c}$	%	225	220	222	220	226	234	229	227	228

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

	TCHVBZ-TCHVIZ MODEL		2411	2431	2461	2511	2561	2601	2631	2681	2711
❶	Nominal cooling capacity	kW	405.5	433.6	460.4	512.7	563.3	596.9	626.6	674.8	712.5
❶	E.E.R.		4.95	4.96	4.95	4.97	4.97	4.96	4.95	4.98	4.94
❶	Absorbed power	kW	81.92	87.42	93.01	103.16	113.34	120.34	126.59	135.5	144.23
❷	Sound power	dB(A)	97	97	97	99	99	99	99	99	99
❷	Sound power	dB(A)	95	95	95	97	97	97	97	97	97
	Screw/step compressor	no.	2/6	2/6	2/6	2/6	2/6	2/6	2/6	2/6	2/6
	Circuits	no.	2	2	2	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	TCHVBZ DIMENSIONS AND WEIGHTS		**2411**	**2431**	**2461**	**2511**	**2561**	**2601**	**2631**	**2681**	**2711**
	L - Width	mm	3.780	3.830	3.850	4.040	4.040	4.040	4.040	4.040	4.040
	H - Height	mm	1.770	1.770	1.770	1.930	1.930	1.930	1.930	1.930	1.930
	P - Depth	mm	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300
❸	TCHVBZ Weight	kg	2.386	2.413	2.458	2.953	3.297	3.320	3.337	3.404	3.447
❸	TCHVIZ Weight	kg	2.816	2.843	2.888	3.383	3.727	3.750	3.767	3.834	3.877

Data at the following conditions:

❶ Chilled water: 7/12°C. - Condenser inlet water: 30/35°C.

❷ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❸ Empty weight.

■ TCHVIZ soundproofed version.

Performance according to EN 14511.

	SEASONAL ENERGY PERFORMANCE		2411	2431	2461	2511	2561	2601	2631	2681	2711
	TCHVBZ-TCHVIZ MODEL SEASONAL PERFORMANCE IN COOLING MODE										
①	Pdesignc (EN 14825)	kW	405,5	433,6	460,4	512,7	563,3	596,9	626,6	674,8	712,5
①	SEER (EN 14825)		6,03	6,03	6,03	6,13	5,89	6,01	5,96	6,01	5,95
②	$\eta_{s,c}$	%	233	233	233	237	228	233	230	233	230

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

Z-Flow HE

TCHVZ 1201-31631

	TCHVBZ-TCHVIZ MODEL		2781	2841	2901	2961	21031	21111	21181	21261
❶	Nominal cooling capacity	kW	774.9	835.2	898.0	954.5	1026.1	1105.5	1176.7	1253.1
❶	E.E.R.		4.94	4.92	4.95	4.94	4.98	5.06	5.08	5.08
❶	Absorbed power	kW	156.86	169.76	181.41	193.22	206.04	218.48	231.63	246.67
❷	Sound power	dB(A)	99	99	99	99	99	99	99	99
❷	Sound power	dB(A)	97	97	97	97	97	97	97	97
	Screw/step compressor	no.	2/6	2/6	2/6	2/6	2/6	2/6	2/6	2/6
	Circuits	no.	2	2	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	TCHVBZ DIMENSIONS AND WEIGHTS		**2781**	**2841**	**2901**	**2961**	**21031**	**21111**	**21181**	**21261**
	L - Width	mm	4.120	4.000	4.000	4.000	4.000	4.000	4.000	4.000
	H - Height	mm	1.930	1.830	1.930	1.930	1.950	1.950	1.950	1.950
	P - Depth	mm	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300
❸	TCHVBZ Weight	kg	3.920	4.406	4.636	4.669	4.779	4.870	4908	4.934
❸	TCHVIZ Weight	kg	4.350	4.836	5.066	5.099	5.209	5.300	5.338	5.364

Data at the following conditions:

❶ Chilled water: 7/12°C. - Condenser inlet water: 30/35°C.

❷ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❸ Empty weight.

TCHVIZ soundproofed version.

Performance according to EN 14511.

	SEASONAL ENERGY PERFORMANCE		2781	2841	2901	2961	21031	21111	21181	21261
	TCHVBZ-TCHVIZ MODEL SEASONAL PERFORMANCE IN COOLING MODE									
①	Pdesignc (EN 14825)	kW	774,9	835,2	898	954,5	1026,1	1105,5	1176,7	1253,1
①	SEER (EN 14825)		5,92	5,89	5,88	5,98	5,9	5,95	5,95	6,01
②	$\eta_{s,c}$	%	229	228	227	231	228	230	230	233

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

	TCHVBZ-TCHVIZ MODEL		31301	31351	31401	31461	31521	31591	31631
❶	Nominal cooling capacity	kW	1303.6	1351.2	1400.8	1457.3	1517,8	1576,2	1627,6
❶	E.E.R.		5.09	5.04	5.0	4.98	4,98	4,99	4,97
❶	Absorbed power	kW	256.11	268.1	280.16	292.63	304,78	315,87	327,48
❷	Sound power	dB(A)	101	101	101	102	102	102	102
❷	Sound power	dB(A)	99	99	99	100	100	100	100
	Screw/step compressor	no.	3/9	3/9	3/9	3/9	3/9	3/9	3/9
	Circuits	no.	3	3	3	3	3	3	3
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	TCHVBZ DIMENSIONS AND WEIGHTS		**31301**	**31351**	**31401**	**31461**	**31521**	**31591**	**31631**
	L - Width	mm	4.940	4.940	4.940	4.940	4.940	4.940	4.940
	H - Height	mm	2.180	2.180	2.180	2.180	2.220	2.220	2.220
	P - Depth	mm	1.790	1.790	1.790	1.790	1.790	1.790	1.790
❸	TCHVBZ Weight	kg	6.795	6.827	6.852	6.891	6.980	7.068	7.157
❸	TCHVIZ Weight	kg	7.395	7.427	7.452	7.491	7.580	7.668	7.757

Data at the following conditions:

❶ Chilled water: 7/12°C. - Condenser inlet water: 30/35°C.

❷ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❸ Empty weight.

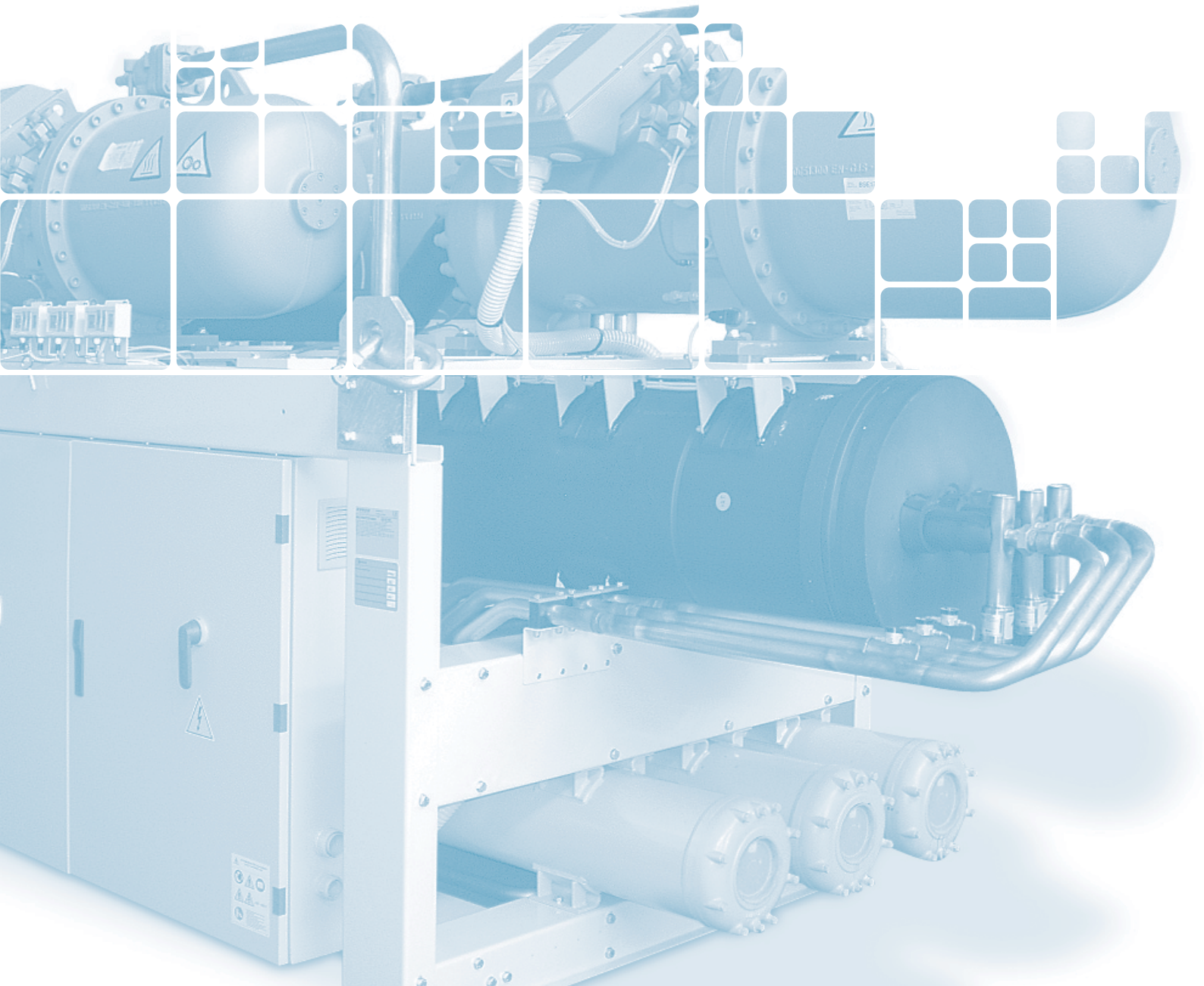
TCHVIZ soundproofed version.

Performance according to EN 14511.

	SEASONAL ENERGY PERFORMANCE		31301	31351	31401	31461	31521	31591	31631
	TCHVBZ-TCHVIZ MODEL SEASONAL PERFORMANCE IN COOLING MODE								
①	Pdesignc (EN 14825)	kW	1303,6	1351,2	1400,8	1457,3	1517,8	1576,2	1627,6
①	SEER (EN 14825)		6,19	6,12	6,17	6,15	6,39	6,35	6,34
②	$\eta_{s,c}$	%	240	237	239	238	247	246	246

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)



Web code: **YFC11**

Y-Flow E

TCEEY 115-240

Cooling capacity: 13.7÷36.9 kW

- **Efficient condenserless unit in R410A**

Cooling only condenserless units. Range with hermetic scroll compressors and R410A refrigerant gas.

Construction features

- Compressor: hermetic rotary scroll complete with thermal protection and crankcase heater.
- Water side heat exchanger: adequately insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch.
- Control: microprocessor electronic control, with Adaptive Function Plus logic.
- Structure: in galvanised and painted steel plate coated with polyester powder, internally lined with soundproof panelling.

Models

TCEEY: unit designed for cooling only.

Factory fitted accessories

- PUMP - Primary side (user): pump unit complete with electric circulation pump, membrane expansion tank, safety valve, water fill/drain valve, manual air vent valve, and pressure gauge.
  The electric pumps are available with low or high head.
- Soft start device.
- Silenced set up with double panelling in the compressor compartment.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.

Separately supplied accessories

- Outdoor air temperature probe for set-point compensation.
- Water filter.
- Rubber anti-vibration mounts.
- Remote keypad with LCD display.
- Clock board.
- Interfaces for serial communication with other devices.
- Serial converter (RS485/USB).

R410A

	TCEEY MODEL		115	118	122	125	230	240
❶	Nominal cooling capacity	kW	13,7	16,4	20,1	23,3	26,8	36,9
❶	EER		3,26	4,0	3,65	3,76	3,12	3,69
❶	Absorbed power (*)	kW	4,2	4,1	5,5	6,2	8,6	10
❶	Available head of standard electric pump	kPa	89	80	73	114	107	113
❶	Available head of high head pump	kPa	164	146	163	152	129	135
❷	Sound power	dB(A)	58	58	62	63	64	67
❷	Silenced setup sound power	dB(A)	53	53	57	58	59	62
	Scroll/ step compressors	no.	1 / 1	1 / 1	1 / 1	1 / 1	2 / 2	2 / 2
	Circuits	no.	1	1	1	1	1	1
	Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
	DIMENSIONS AND WEIGHT		**115**	**118**	**122**	**125**	**230**	**240**
	L - Width	mm	700	700	700	700	700	700
	H - Height	mm	1140	1140	1140	1140	1140	1140
	P - Depth	mm	560	560	780	780	780	780
❸	Weight	kg	166	166	191	214	234	251

Data at the following conditions:

❶ Chilled water: 12/7°C - Condensing temperature: 50°C (dew point)

❷ Sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN ISO 9614

❸ Weight refers to the most complete setup

(*) Unit without electric pumps.

Web code 245-2185: **YFC21**
Web code 4180-4360: **YFC31**

Y-Flow E

TCEEBY 245-4360

Cooling capacity: 39.8÷320.9 kW

- **Integrated MASTER/ SLAVE control**

Cooling only condenserless units to couple with remote condensers. Range with hermetic scroll compressors and R410A refrigerant gas.

Construction features

- Compressor: hermetic rotary scroll complete with thermal protection and crankcase heater.
- Water side heat exchanger: adequately insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch.
- Control: microprocessor electronic control, with Adaptive Function Plus logic.
- Structure: made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:

- compressor circuit breaker switches;
- display of cooling circuit high and low pressure;
- Master/Slave control up to 4 units in parallel;
- clock board;
- 0-10V analogue signal for condensing control from external device.

Models

- TCEEBY: unit designed for cooling only.

Factory fitted accessories

- PUMP primary side (user): pump unit complete with single or double electric circulation pump, membrane expansion tank, safety valve, water fill/drain valve, manual air vent valve and pressure gauge. The electric pumps are available with low or high head.
- VPF control.
- Inverter pump control for unit start-up.
- Power factor correction capacitors ($\cos\phi > 0.94$)
- Cooling circuit high and low pressure gauges.
- Power factor correction capacitors.
- Soft start device.
- Forced limit of power consumption.
- Energy parameter measuring device.
- Control of min/max power supply voltage.
- Double safety valves.
- Silenced set up.
- Interfaces for serial communication with other devices.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Rubber anti-vibration mounts (or spring-operated for models 4180-4360) supplied unassembled.

Separately supplied accessories

- Outdoor air temperature probe for set-point compensation.
- Water filter.
- Rubber anti-vibration mounts.
- Clock board.
- Remote keypad with display.
- Serial converter (RS485/USB).

R410A

	TCEEBY MODEL		245	250	260	270	275	290	2100	2115	2130	2145	2165	2185
❶	Nominal cooling capacity	kW	39,8	47,3	53,6	61,3	67,9	80,6	91,7	103,4	115	128,2	145,7	162,3
❶	EER		3,29	3,38	3,3	3,76	3,39	3,49	3,38	3,34	3,29	3,34	3,26	3,19
❶	Absorbed power (*)	kW	12,1	14	16,2	18,2	20	23,1	27,1	31	35	38,4	44,7	50,8
❶	Available head of standard electric pump	kPa	116	108	134	94	84	86	117	119	133	117	119	106
❶	Available head of high head pump	kPa	182	187	171	185	177	180	169	178	190	176	177	172
❷	Sound power	dB(A)	67	67	68	68	69	70	71	72	73	74	74	75
❷	Silenced setup sound power	dB(A)	63	63	64	64	65	66	67	68	69	70	70	71
	Scroll/ step compressors	no.	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2
	Circuits	no.	1	1	1	1	1	1	1	1	1	1	1	1
	Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
	DIMENSIONS AND WEIGHT		**245**	**250**	**260**	**270**	**275**	**290**	**2100**	**2115**	**2130**	**2145**	**2165**	**2185**
	L - Width	mm	1020	1020	1020	1020	1020	1020	1270	1270	1270	1270	1270	1270
	W - Width (PUMP setup)	mm	1250	1250	1250	1250	1250	1250	1500	1500	1500	1500	1500	1500
	H - Height	mm	1470	1470	1470	1470	1470	1470	1620	1620	1620	1620	1620	1620
	P - Depth	mm	870	870	870	870	870	870	870	870	870	870	870	870

	TCEEBY MODEL		4180	4205	4235	4260	4290	4330	4360
❶	Nominal cooling capacity	kW	161,2	182,9	205	229,4	253,8	287,4	320,9
❶	EER		3,53	3,5	3,48	3,49	3,5	3,42	3,36
❶	Absorbed power (*)	kW	45,7	52,3	58,9	65,8	72,6	84	95,5
❶	Available head of standard electric pump	kPa	140	132	114	117	111	136	168
❶	Available head of high head pump	kPa	195	200	196	240	273	241	257
❷	Sound power	dB(A)	77	77	78	79	80	81	82
❷	Silenced setup sound power	dB(A)	75	75	76	77	78	79	80
	Scroll/ step compressors	no.	4 / 4	4 / 4	4 / 4	4 / 4	4 / 4	4 / 4	4 / 4
	Circuits	no.	2	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**4180**	**4205**	**4235**	**4260**	**4290**	**4330**	**4360**
	L - Width	mm	2600	2600	2600	2600	2600	2600	2600
	W - Width (PUMP setup)	mm	3734	3734	3734	3734	3734	3734	3734
	H - Height	mm	1860	1860	1860	1860	1860	1860	1860
	P - Depth	mm	870	870	870	870	870	870	870

Data at the following conditions:

❶ Chilled water: 12/7°C - Condensing temperature: 50°C (dew point)

❷ Sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN ISO 9614

(*) Unit without electric pumps.

	Recommended combinations with CCAMY condensers for TCEEBY models 4180-4360							
	TCEEBY MODEL	**4180**	**4205**	**4235**	**4260**	**4290**	**4330**	**4360**
	CCAMY MODEL	**CCAMY 290**	**CCAMY 2110**	**CCAMY 2115**	**CCAMY 2130**	**CCAMY 2145**	**CCAMY 2165**	**CCAMY 2185**
		CCAMY 290	**CCAMY 2110**	**CCAMY 2115**	**CCAMY 2130**	**CCAMY 2145**	**CCAMY 2165**	**CCAMY 2185**

	SEASONAL ENERGY PERFORMANCE		4180	4205	4235	4260	4290	4330	4360
	TCEEBY + CCAMBY MODEL SEASONAL PERFORMANCE IN COOLING MODE								
①	Pdesignc (EN 14825)	kW	160,6	182,2	204,2	228,5	252,9	286,3	319,7
①	SEER (EN 14825)		4,19	4,22	4,24	4,25	4,26	4,27	4,22
②	$\eta_{s,c}$	%	165	166	167	167	167	168	166
	TCEEBY + CCAMSY MODEL SEASONAL PERFORMANCE IN COOLING MODE								
①	Pdesignc (EN 14825)	kW	160,6	182,2	204,2	228,5	252,9	286,3	319,7
①	SEER (EN 14825)		4,18	4,21	4,23	4,22	4,24	4,24	4,2
②	$\eta_{s,c}$	%	164	165	166	166	167	167	165
	TCEEBY + CCAMQY MODEL SEASONAL PERFORMANCE IN COOLING MODE								
①	Pdesignc (EN 14825)	kW	160,6	182,2	204,2	228,5	252,9	286,3	319,7
①	SEER (EN 14825)		4,14	4,18	4,19	4,2	4,23	4,22	4,19
②	$\eta_{s,c}$	%	163	164	165	165	166	166	165

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

Web code: **ZFC01**

Z-Flow E

TCEVZ 1200-31630

Cooling capacity: 171.9÷1,424.8 kW

TCEVBZ 2630

- **Efficient condenserless unit in R134a**
- **33 sizes in standard and soundproofed versions**
- **Wide range of standard equipment**
- **Integrated MASTER/ SLAVE control**

Cooling only condenserless units. Range with semi-hermetic screw compressors and R134a refrigerant gas.

Construction features

- Compressor: high energy efficiency semi-hermetic screw compressor, with star-delta or part-winding start up (depending on models) and complete with integral protection, casing heater and refrigerant gas outlet piping shut-off valve.
- Electronic expansion valve: as standard on all models.
- Water side heat exchanger (evaporator): dry expansion shell and tube exchanger with counterflow heat exchange, complete with closed cell polyurethane foam rubber insulation, water flow differential pressure switch and Victaulic fittings.
- Control: microprocessor electronic control.
- Structure: made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - clock board;
  - display of cooling circuit high/low pressure;
  - Master/Slave control up to 4 units in parallel.

Versions

- B -Standard version (TCEVBZ).
- I -Soundproofed version with soundproofing compressor lining (TCEVIZ).

Models

- TCEVBZ: unit designed for cooling only.
- TCEVIZ: soundproofed unit designed for cooling only.

Factory fitted accessories

- VPF control.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Circuit breaker switches.
- Forced limit of power consumption.
- Soft starter.
- Inlet compressor shut-off valves
- Linear capacity control compressors (50-100 % for each compressor).
- Evaporator antifreeze heater.
- Digital input for double set-point.
- Compressor oil level sensor.
- Control of min/max power supply voltage.
- 4-20 mA analogue signal for shifting set-point.
- Interfaces for serial communication with other devices.
- Spring anti-vibration mounts.
- Rubber anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

	TCEVBZ-TCEVIZ MODEL		1200	1230	1280	1310	1350	1410	1460	1530	1590
❶	Nominal cooling capacity	kW	171,9	190,8	238,1	260,4	300,6	346,2	399,7	446,4	508,9
❶	E.E.R.		3,4	3,28	3,3	3,3	3,41	3,3	3,3	3,3	3,4
❶	Absorbed power	kW	50,5	58,1	72,2	79,0	88,1	104,0	122,2	135,3	149,7
❷	Sound power	dB(A)	94	94	97	97	97	97	97	98	98
❷	Sound power	dB(A)	92	92	95	95	95	95	95	96	96
	Screw/step compressor	no.	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3
	Circuits	no.	1	1	1	1	1	1	1	1	1
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	TCEVBZ DIMENSIONS AND WEIGHTS		**1200**	**1230**	**1280**	**1310**	**1350**	**1410**	**1460**	**1530**	**1590**
	L - Width	mm	3.470	3.450	3.450	3.450	3.500	3.500	3.480	3.490	3.500
	H - Height	mm	1.580	1.580	1.580	1.580	1.660	1.660	1.660	1.760	1.760
	P - Depth	mm	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
❸	TCEVBZ Weight	kg	1.078	1.093	1.410	1.414	1.557	2.032	2.038	2.252	2.281
❸	TCEVIZ Weight	kg	1.333	1.348	1.665	1.669	1.812	2.287	2.293	2.507	2.536

	TCEVBZ-TCEVIZ MODEL		2400	2420	2440	2510	2560	2600	2630	2680	2710
❶	Nominal cooling capacity	kW	335,8	356,6	372,1	431,9	473,4	506,4	529,3	581,4	614,1
❶	E.E.R.		3,33	3,29	3,22	3,31	3,28	3,34	3,34	3,46	3,48
❶	Absorbed power	kW	100,7	108,3	115,7	130,6	144,4	151,5	158,4	168,0	176,6
❷	Sound power	dB(A)	97	97	97	99	99	99	99	99	99
❷	Sound power	dB(A)	95	95	95	97	97	97	97	97	97
	Screw/step compressor	no.	2/6	2/6	2/6	2/6	2/6	2/6	2/6	2/6	2/6
	Circuits	no.	2	2	2	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	TCEVBZ DIMENSIONS AND WEIGHTS		**2400**	**2420**	**2440**	**2510**	**2560**	**2600**	**2630**	**2680**	**2710**
	L - Width	mm	3.780	3.830	3.850	4.040	4.040	4.040	4.040	4.040	4.040
	H - Height	mm	1.420	1.420	1.420	1.610	1.610	1.610	1.610	1.610	1.610
	P - Depth	mm	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300
❸	TCEVBZ Weight	kg	1.797	1.811	1.819	2.311	2.629	2.637	2.638	2.698	2.733
❸	TCEVIZ Weight	kg	2.227	2.241	2.249	2.741	3.059	3.067	3.068	3.128	3.163

	TCEVBZ-TCEVIZ MODEL		2750	2790	2880	2930	21030	21110	21180	21260
❶	Nominal cooling capacity	kW	647,8	681,6	753,9	801,4	896,1	959,4	1.027,8	1.101,5
❶	E.E.R.		3,37	3,28	3,33	3,28	3,47	3,54	3,6	3,68
❶	Absorbed power	kW	192,1	207,6	226,5	244,4	257,9	271,0	285,5	299,4
❷	Sound power	dB(A)	99	99	99	99	99	99	99	99
❷	Sound power	dB(A)	97	97	97	97	97	97	97	97
	Screw/step compressor	no.	2/6	2/6	2/6	2/6	2/6	2/6	2/6	2/6
	Circuits	no.	2	2	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	TCEVBZ DIMENSIONS AND WEIGHTS		**2750**	**2790**	**2880**	**2930**	**21030**	**21110**	**21180**	**21260**
	L - Width	mm	4.120	4.000	4.000	4.000	4.000	4.000	4.000	4.000
	H - Height	mm	1.610	1.480	1.560	1.560	1.600	1.600	1.600	1.600
	P - Depth	mm	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300
❸	TCEVBZ Weight	kg	3.176	3.631	3.844	3.859	3.936	3.993	4.024	4.044
❸	TCEVIZ Weight	kg	3.606	4.061	4.272	4.289	4.366	4.423	4.454	4.474

	TCEVBZ-TCEVIZ MODEL		31300	31350	31390	31460	31520	31590	31630
❶	Nominal cooling capacity	kW	1.129,6	1.178,3	1.227,0	1.287,5	1.340,1	1.388,5	1.424,8
❶	E.E.R.		3,6	3,55	3,51	3,51	3,52	3,53	3,51
❶	Absorbed power	kW	314,1	331,8	349,5	367,1	380,4	393,4	406,4
❷	Sound power	dB(A)	101	101	101	102	102	102	102
❷	Sound power	dB(A)	99	99	99	100	100	100	100
	Screw/step compressor	no.	3/9	3/9	3/9	3/9	3/9	3/9	3/9
	Circuits	no.	3	3	3	3	3	3	3
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	TCEVBZ DIMENSIONS AND WEIGHTS		**31300**	**31350**	**31390**	**31460**	**31520**	**31590**	**31630**
	L - Width	mm	4.940	4.940	4.940	4.940	4.940	4.940	4.940
	H - Height	mm	1.580	1.580	1.580	1.580	1.620	1.620	1.620
	P - Depth	mm	2.100	2.100	2.100	2.100	2.100	2.100	2.100
❸	TCEVBZ Weight	kg	5.555	5.570	5.585	5.600	5.678	5.710	5.790
❸	TCEVIZ Weight	kg	6.155	6.170	6.185	6.200	6.278	6.310	6.390

Data at the following conditions:

❶ Chilled water: 12/7°C - Condensing temperature: 50°C (dew point).

❷ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❸ Weight without load refers to fully accessorised unit.

TCEVIZ soundproofed version.

Compact-Y EXP SM - TXAEY 117-130

Compact-Y EXP MD - TXAEY 133-265

EasyPACK-I EXP - TXAIY 270÷2130

WinPACK ECO EXP - TXAEU 4140÷4330

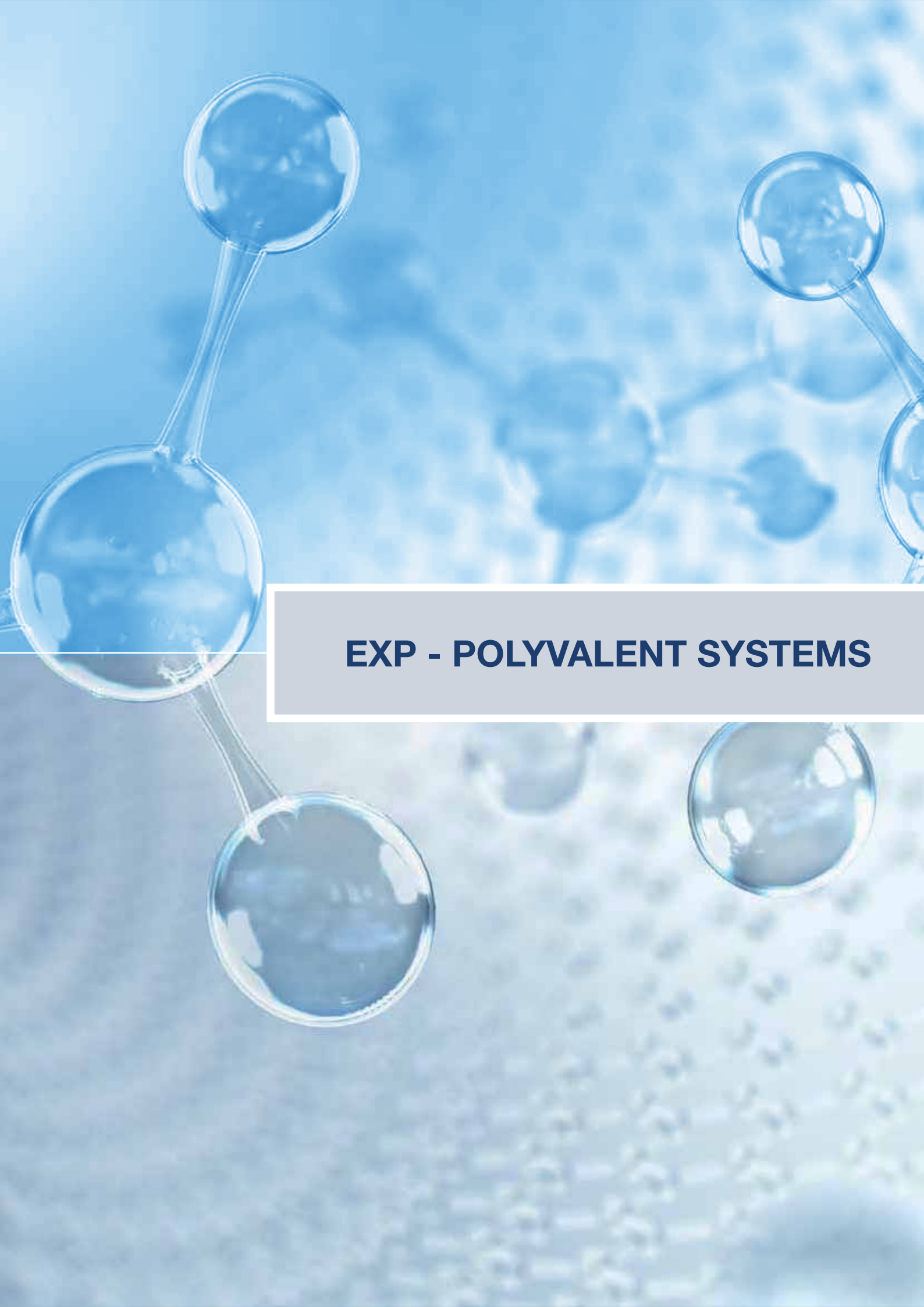
Y-Pack EXP - TXAEY 280-4320

WinPOWER EXP - TXAEY 4400-6660

Z-Power EXP - TXAVZ 2550-2700

Comby-Flow EXP - TXHEY 105-112

Y-Flow EXP - TXHEY 245-4450



EXP - POLYVALENT SYSTEMS

Web code: **CYX11**

Compact-Y EXP SM

TXAEY 117-130

Cooling capacity: 17.7÷29.1 kW - Heating capacity: 17.6÷34 kW

EXPsystems - Air cooled multi-purpose ecological system with axial fans.
Range with hermetic scroll compressors and R410A refrigerant gas.

Construction features
- Compressor: scroll type, rotary, hermetic complete with thermal protection and casing heater.
- Main and secondary heat exchangers: suitably insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch.
- Air side heat exchanger: featuring finned coil with copper pipes and aluminium fins, complete with protection grille.
- Fan: external rotor axial type electric fans equipped with internal thermal protection, accident protection grilles and proportional electronic device for continuous fan rotation speed regulation.
- Control: microprocessor electronic control with AdaptiveFunction logic.
- Structure: in galvanised and painted steel plate, complete with condensate drain pan.

Models
- TXAEY: EXPsystems unit.

PUMP set up
- Pump unit for primary circuit complete with: circulator or electric circulation pump, membrane expansion tank, manual air vent valve and safety valve, and pressure gauge.

Factory fitted accessories
- Silenced set up.
- Unit base antifreeze heater for operation in heat pump mode at low outdoor air temperatures.
- Digital input for double set-point
- 4-20 mA analogue signal for shifting set-point.
- Pre-painted copper/coils or copper/copper coils.

Separately supplied accessories
- Rubber anti-vibration mounts.
- Water filter.
- Remote keypad with display.
- Clock board.
- Interfaces for serial communication with other devices.
- Serial converter (RS485/USB).
- Rhoss supervisors for unit monitoring and remote management.

R410A

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

	TXAEY MODEL		117	124	130
❶	Nominal cooling capacity (AUTOMATIC 1)	kW	17,7	24	29,1
❹	Recovery heating capacity (AUTOMATIC 2)	kW	20,5	29,9	36,8
❷	Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	17,6	25,7	34
❸	Heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	18,3	26,8	35,4
❶	Absorbed power (AUTOMATIC 1)	kW	6,6	9,4	11,8
❹	Absorbed power (AUTOMATIC 2)	kW	4,6	7	9,4
❷	Absorbed power (SELECT 1-2 AUTOMATIC 3)	kW	6,2	9,1	11,3
❹	T.E.R. (AUTOMATIC 2)		7,98	7,7	6,93
❺	Sound pressure	dB(A)	50	52	53
❺	Silenced setup sound pressure	dB(A)	46	49	50
	Scroll/step compressor	no.	1/1	1/1	1/1
	Circuits	no.	1	1	1
❶	Available head of standard electric pump	kPa	130	131	112
	Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50
	DIMENSIONS AND WEIGHT		**117**	**124**	**130**
	L - Width	mm	1522	1522	1822
	H - Height	mm	1090	1280	1510
	P - Depth	mm	580	600	695
	TXAEY weight	kg	220	280	370

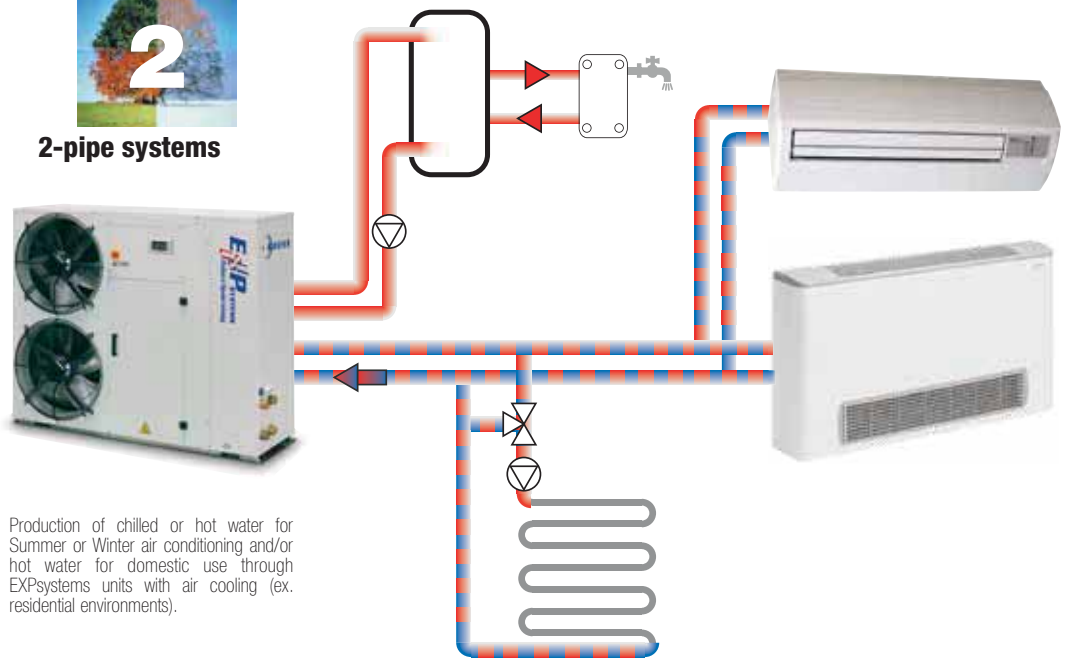
Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C.
❷ Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C.
❸ Air: 7°C D.B. - 6°C W.B. - Water: 30/35°C.
❹ Evaporator water: 12/7°C. 40/45°C recovery water.
❺ In open field (Q = 2) at 5 m from the unit.
Performance according to EN 14511. Setup with electric pump.
T.E.R.: Total efficiency ratio

	SEASONAL ENERGY PERFORMANCE		117	124	130
	TXAEY MODEL SEASONAL PERFORMANCE IN HEATING MODE				
③	**Pdesignh (EN 14825)**				
③	SCOP (EN 14825)		3,23	3,24	3,28
④	ηs	%	126	127	128
④	Energy class		A+	A+	A+

③ In Average climatic conditions, low temperature application (35°C)
④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)

2-pipe systems



Production of chilled or hot water for Summer or Winter air conditioning and/or hot water for domestic use through EXPsystems units with air cooling (ex. residential environments).

Web code: **CYX21**

Compact-Y EXP MD

TXAEY 133-265

Cooling capacity: 33.8÷61.6 kW - Heating capacity: 39.4÷68.3 kW

EXPsystems - Air cooled multi-purpose ecological system with axial fans.
Range with hermetic scroll compressors and R410A refrigerant gas.

Construction features

- Compressor: scroll type, rotary, hermetic complete with thermal protection and casing heater.
- Main and secondary heat exchangers: suitably insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch.
- Air side heat exchanger: featuring finned coil with copper pipes and aluminium fins, complete with protection grille.
- Fan: external rotor axial type electric fans equipped with internal thermal protection, accident protection grilles and proportional electronic device for continuous fan rotation speed regulation.
- Control: microprocessor electronic control with AdaptiveFunction logic.
- Structure: made of galvanised and painted steel plate.
- The unit is also complete with:
  - display of cooling circuit high and low pressure;
  - clock board.

Models

- TXAEY: EXPsystems base unit.

Factory fitted accessories

- PUMP (only for main circuit) with single or double electric pump, including an automatic pump in standby (mod. 245÷265) complete with expansion tank, air vent valves, safety valve and water side pressure gauge.
  The electric pumps are available in the low or high pressure head versions.
- TANK&PUMP (only for main circuit) with inertial buffer tank and single or double electric pump, including an automatic pump in standby (mod. 245÷265), complete with expansion tank, air vent valves, safety valve and water side pressure gauge.
  The electric pumps are available in the low or high pressure head versions.
- Silenced set up.
- Cooling circuit high and low pressure gauges.
- Antifreeze heater for buffer tank and electric pumps.
- Digital input for double set-point
- 4-20mA analogue signal for shifting set-point.
- Pre-painted copper/coils or copper/copper coils.

Separately supplied accessories

- Rubber anti-vibration mounts.
- Water filter.
- Remote keypad with display.
- Interfaces for serial communication with other devices.
- Serial converter (RS485/USB).
- Rhoss supervisors for unit monitoring and remote management.

	TXAEY MODEL		133	245	250	260	265
❶	Nominal cooling capacity (AUTOMATIC 1)	kW	33,8	42,4	50,3	57,9	61,6
❸	Recovery heating capacity (AUTOMATIC 2)	kW	44,5	54,7	65,3	72,2	81,5
❷	Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	39,4	48,1	56,2	62,5	68,3
❶	Absorbed power (AUTOMATIC 1)	kW	13,5	17	18,8	21,9	24,4
❸	Absorbed power (AUTOMATIC 2)	kW	11,8	13,9	15,8	17,5	19,4
❷	Absorbed power (SELECT 1-2 AUTOMATIC 3)	kW	13,6	16,8	18,9	20,9	23,7
❸	T.E.R. (AUTOMATIC 2)		6,57	6,88	7,26	7,28	7,42
❹	Sound pressure	dB(A)	54	56	56	57	57
❹	Silenced setup sound pressure	dB(A)	51	53	53	54	54
	Scroll/step compressor	no.	1/1	2/1	2/1	2/1	2/1
	Circuits	no.	1	1	1	1	1
	Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
	DIMENSIONS AND WEIGHT		**133**	**245**	**250**	**260**	**265**
	L - Width	mm	1660	2315	2315	2315	2315
	H - Height	mm	1570	1570	1570	1570	1570
	P - Depth	mm	1000	1000	1000	1000	1000
	TXAEY weight	kg	470	735	775	795	825

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C.

❷ Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C.

❸ Evaporator water: 12/7°C. 40/45°C recovery water.

❹ In open field (Q = 2) at 5 m from the unit.

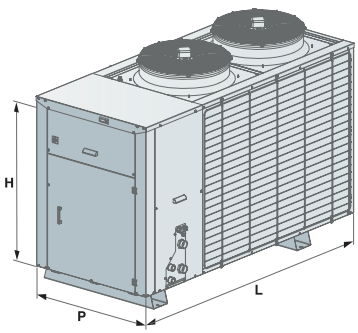
Performance according to EN 14511.

T.E.R.: Total efficiency ratio

	SEASONAL ENERGY PERFORMANCE		133	245	250	260	265
	TXAEY MODEL SEASONAL PERFORMANCE IN HEATING MODE						
③	Pdesignh (EN 14825)	kW	39	48	56	62	68
③	SCOP (EN 14825)		3,28	3,72	3,74	3,79	3,73
④	η_s	%	128	146	147	149	146
④	Energy class		A+	A+	A+	A+	A+

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)



Web code: **EAX01**

EasyPACK-I EXP

TXAIY 270÷2130

Cooling capacity: 64,4÷125,9 kW - Heating capacity: 71÷133,2 kW

INVERTER

- **Multi-purpose units with inverter compressors**
- **TER up to 7,62**
- **Extended operating limits**
- **Units for systems with 2, 4 and 6 pipes**
- **Integrated MASTER/ SLAVE control**

TXAITY 2130 with coil protection metal filters accessory

TXAITY 2100 with coil protection metal filters accessory

EXPsystems - Air cooled multi-purpose ecological system with axial fans.
Range with scroll hermetic compressors, DC Inverter and R410A refrigerant.

Construction features

- Compressor: scroll type, rotary, hermetic and with Inverter actuation (1+i) complete with thermal protection and casing heater.
- Continuous regulation with high efficiency at partial loads.
- Main and secondary heat exchangers: crossed flow stainless steel plate exchangers, complete with antifreeze heater, closed cell polyurethane foam rubber insulation and water flow differential pressure switch.
- Air side heat exchanger: finned coil with copper pipes and aluminium fins.
- Fan: external rotor axial type electric fans with internal thermal protection, accident protection grilles. The electric fans, based on the sizes, are EC fans or fitted with a proportional electronic device for continuous regulation of the rotation speed.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: load-bearing structure made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - fan and compressor circuit breaker switches;
  - electronic expansion valve;
  - display of cooling circuit high and low pressure;
  - Master/Slave control up to 4 units in parallel;
  - clock board.

Versions

- T - High efficiency version.
- Q - Super-silenced version complete with compressor technical compartment soundproofing, reduced speed fans.

Modelli

- TXAITY: EXPsystems unit.
- TXAIQY: super silenced EXPsystems unit.

Factory fitted accessories

- PUMP with single or double electric pump, one of which automatic in standby. The electric pumps are available in the low or high head versions.
- TANK&PUMP with 230 - 440 litre integrated buffer tank (depending on the sizes) and single or double electric pump, complete with expansion tank, air vent valves, safety valve and water side pressure gauge.
- VPF control.
- Desuperheater.
- Condensing control with fans with EC motor (standard in sizes 270-2100).
- Condensing control with over-pressure fans (T version only)
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Forced limit of power consumption.
- Forced noise limit.
- Energy parameter measuring device.
- Optimised energy efficiency.
- Soft starter.
- Technical compressor compartment soundproofing.
- Compressor soundproof enclosures.
- Cooling circuit outlet and inlet valves.
- Refrigerant leak detector.
- Cooling circuit high and low pressure gauges.
- Double safety valves.
- Metal filters or coil protection nets.
- Microchannel coils with E-coating treatment, copper/copper or pre-painted copper/aluminium depending on the versions.
- Control of min/max power supply voltage.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Evaporator antifreeze heater, electrical panel, buffer tank, electric pumps and heat exchangers for heat recovery, if applicable.
- Interfaces for serial communication with other devices.
- Rubber anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Thermostat with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

	TXAITY MODEL		270	280	290	2100	2115	2130
❶	Nominal cooling capacity (AUTOMATIC 1)	kW	66,6	78,8	86,2	93	112,3	125,9
❸	Recovery heating capacity (AUTOMATIC 2)	kW	88,4	109,1	112,4	124,3	148,4	164,6
❷	Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	72,8	85,1	92,2	100,2	120,3	133,2
❶	Absorbed power (AUTOMATIC 1)	kW	22,2	26,53	29,02	32,52	37,81	42,11
❸	Absorbed power (AUTOMATIC 2)	kW	20,9	23	26,5	29,5	35,1	38,4
❷	Absorbed power (SELECT 1-2 AUTOMATIC 3)	kW	21,89	25,63	27,52	30,09	36,23	41,11
	E.E.R. (AUTOMATIC 1)		3	2,97	2,97	2,86	2,97	2,99
	T.E.R. (AUTOMATIC 2)		7,53	7,43	7,52	7,47	7,49	7,62
	C.O.P. (SELECT 1-2 AUTOMATIC 3)		3,33	3,32	3,35	3,33	3,32	3,24
❹	Sound pressure	dB(A)	52	53	53	53	56	56
❺	Sound power	dB(A)	84	85	85	85	88	88
	TXAIQY MODEL		**270**	**280**	**290**	**2100**	**2115**	**2130**
❶	Nominal cooling capacity (AUTOMATIC 1)	kW	64,4	77,2	83,7	89,4	107,9	122,2
❸	Recovery heating capacity (AUTOMATIC 2)	kW	88,4	109,1	112,4	124,3	148,4	164,6
❷	Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	71	83,2	90,3	98,4	117,2	130,5
❶	Absorbed power (AUTOMATIC 1)	kW	22,92	27,18	29,68	33,48	38,54	42,88
❸	Absorbed power (AUTOMATIC 2)	kW	20,9	23	26,5	29,5	35,1	38,4
❷	Absorbed power (SELECT 1-2 AUTOMATIC 3)	kW	21,52	25,14	27,28	29,82	36,06	40,78
	E.E.R. (AUTOMATIC 1)		2,81	2,84	2,82	2,67	2,8	2,85
	T.E.R. (AUTOMATIC 2)		7,53	7,43	7,52	7,47	7,49	7,62
	C.O.P. (SELECT 1-2 AUTOMATIC 3)		3,3	3,31	3,31	3,3	3,25	3,2
❹	Sound pressure	dB(A)	45	46	46	46	50	50
❺	Sound power	dB(A)	77	77,5	77,5	77,5	82	82
	MODEL		**270**	**280**	**290**	**2100**	**2115**	**2130**
	Scroll/step compressor		no.1+i / continuous regulation1+i / continuous regulation1+i / continuous regulation1+i / continuous regulation1+i / continuous regulation1+i / continuous regulation					
	Circuits	no.	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
	DIMENSIONS							
	L - Width	mm	3250	3250	3250	3250	3450	3450
	H - Height	mm	1540	1540	1540	1540	2000	2000
	P - Depth	mm	1210	1210	1210	1210	1520	1520
❻	TXAITY weight	kg	1060	1085	1095	1105	1435	1455
❻	TXAIQY weight	kg	1095	1120	1130	1140	1485	1505

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C.

❷ Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C.

❸ Evaporator water: 12/7°C. Recovery output water 45°C - Nominal flow rate.

❹ In open field (Q = 2) at 10 m from the unit.

❺ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❻ Weight referred to the unit without load and not accessorised.

Performance according to EN 14511.

T.E.R.: Total efficiency ratio

	SEASONAL ENERGY PERFORMANCE		270	280	290	2100	2115	2130
	TXAITY MODEL SEASONAL PERFORMANCE IN HEATING MODE							
③	Pdesignh (EN 14825)	kW	70	82	89	94	116	129
③	SCOP (EN 14825)		3,93	3,96	3,98	3,99	4,01	3,91
④	ηs	%	154	155	156	157	157	153
	④Energy class							
	TXAIQY MODEL SEASONAL PERFORMANCE IN HEATING MODE							
③	Pdesignh (EN 14825)	kW	68	78	84	92	109	122
③	ΣCOP (EN 14825)		4	4,03	4,01	3,93	3,9	3,84
④	ηs	%	157	158	157	154	153	151
④	Energy class							

WinPACK ECO EXP

TXAEU 4140÷4330

Cooling capacity: 135.7-333.6 kW - Heating capacity: 144.3-351.4 kW

- **Multi-purpose units with TER up to 7.85**
- **R454B refrigerant gas**
- **Integrated MASTER/ SLAVE control**

EXPsystems - Air cooled multi-purpose ecological system with axial fans.
Range with scroll hermetic compressors and R454B refrigerant gas.

Construction features

- Compressor: scroll type, rotary, hermetic complete with thermal protection and casing heater.
- 4 capacity steps with high efficiency at partial loads.
- Main and secondary heat exchangers: crossed flow stainless steel plate exchangers, complete with antifreeze heater, closed cell polyurethane foam rubber insulation and water flow differential pressure switch.
- Air side heat exchanger: finned coil with copper pipes and aluminium fins.
- Fan: external rotor axial type electric fans equipped with internal thermal protection and accident protection grilles. The electric fans are fitted with a proportional electronic device for continuous regulation of the rotation speed.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - compressor and fan circuit breaker switches;
  - electronic expansion valve;
  - display of cooling circuit high/low pressure;
  - master/slave control up to 4 units in parallel;
  - clock board.

Versions

- T - High efficiency version.
- Q - Super silenced version complete with compressor technical compartment soundproofing and reduced speed fans.

Models

- TXAETU: EXPsystems unit.
- TXAEQU: super silenced EXPsystems unit.

Factory fitted accessories

- PUMP with single or double electric pump, one of which automatic in standby. The electric pumps are available in the low or high head versions.
- TANK&PUMP with 440 - 700 litre integrated buffer tank (depending on the sizes) and single or double electric pump, complete with expansion tank, air vent valves, safety valve and water side pressure gauge.
- VPF control.
- Inverter pump control for unit start-up.
- Condensing control with fans with EC motor.
- Condensing control with over-pressure fans (T version only)
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Forced limit of power consumption.
- Forced noise limit.
- Energy parameter measuring device.
- Optimised energy efficiency.
- Soft starter.
- Technical compressor compartment soundproofing.
- Compressor soundproof enclosures.
- Cooling circuit outlet and inlet valves.
- Refrigerant leak detector.
- Double safety valves.
- Metal filters or coil protection nets.
- Copper/copper or copper/pre-painted aluminium coils.
- Control of min/max power supply voltage.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Electrical panel resistance, buffer tank, electric pumps, if present.
- Interfaces for serial communication with other devices.
- Anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

	TXAETU MODEL		4140	4160	4190	4210	4230	4260	4300	4330
❶	Nominal cooling capacity (AUTOMATIC 1)	kW	141,7	157,7	189,7	213,6	232,9	263,7	298,6	333,6
❸	Recovery heating capacity (AUTOMATIC 2)	kW	183,3	204,4	244,4	275,4	301,4	339,5	385,5	430,5
❷	Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	147,3	163,3	197,3	224,3	244,3	271,3	313,4	351,4
❶	Absorbed power (AUTOMATIC 1)	kW	47,9	54,4	63,4	74,2	82,9	90,9	103	117,5
❸	Absorbed power (AUTOMATIC 2)	kW	41,9	47,3	55,6	63,1	69,8	77,2	88,6	99,2
❷	Absorbed power (SELECT 1-2 AUTOMATIC 3)	kW	45	50,4	61,1	68,6	75,2	84,3	96,1	109,8
	E.E.R. (AUTOMATIC 1)		2,96	2,9	2,99	2,88	2,81	2,9	2,9	2,84
	T.E.R. (AUTOMATIC 2)		7,8	7,68	7,85	7,78	7,69	7,84	7,76	7,73
	C.O.P. (SELECT 1-2 AUTOMATIC 3)		3,27	3,24	3,23	3,27	3,25	3,22	3,26	3,2
❹	Sound pressure	dB(A)	54	55	57	57	58	60	61	62
❺	Sound power	dB(A)	86	87	89	89	90	92	93	94
	TXAEQU MODEL		**4140**	**4160**	**4190**	**4210**	**4230**	**4260**	**4300**	**4330**
❶	Nominal cooling capacity (AUTOMATIC 1)	kW	135,7	149,7	181,7	202,7	219,7	255,7	287,7	323,6
❸	Recovery heating capacity (AUTOMATIC 2)	kW	183,3	204,4	244,4	275,4	301,4	339,5	385,5	430,5
❷	Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	144,3	159,4	194,3	219,3	238,3	268,3	308,4	347,4
❶	Absorbed power (AUTOMATIC 1)	kW	51	56,9	64	75,9	85,5	89,4	102	112,8
❸	Absorbed power (AUTOMATIC 2)	kW	41,9	47,3	55,6	63,1	69,8	77,2	88,6	99,2
❷	Absorbed power (SELECT 1-2 AUTOMATIC 3)	kW	44,3	49,3	58,9	66,5	73,5	81,3	92,9	105,3
	E.E.R. (AUTOMATIC 1)		2,66	2,63	2,84	2,67	2,57	2,86	2,82	2,87
	T.E.R. (AUTOMATIC 2)		7,8	7,68	7,85	7,78	7,69	7,84	7,76	7,73
	C.O.P. (SELECT 1-2 AUTOMATIC 3)		3,26	3,23	3,3	3,3	3,24	3,3	3,32	3,3
❹	Sound pressure	dB(A)	48	49	51	51	52	54	55	56
❺	Sound power	dB(A)	80	81	83	83	84	86	87	88
	MODEL		**4140**	**4160**	**4190**	**4210**	**4230**	**4260**	**4300**	**4330**
	Scroll/step compressor	no.	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4
	Circuits	no.	2	2	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS									
	L - Width	mm	3450	3450	4800	4800	4800	4800	5300	5300
	H - Height	mm	2000	2000	2030	2030	2030	2030	2030	2030
	P - Depth	mm	1520	1520	2090	2090	2090	2090	2090	2090
❻	TXAETU weight	kg	1670	1685	2405	2550	2610	2750	3030	3250
❻	TXAEQU weight	kg	1735	1750	2495	2640	2700	2840	3120	3340

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C.

❷ Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C.

❸ Evaporator water: 12/7°C. 40/45°C recovery water.

❹ In open field (Q = 2) at 10 m from the unit.

❺ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❻ Weight referred to the unit without load and not accessorised.

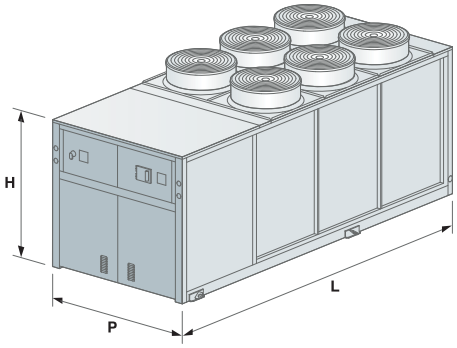
Performance according to EN 14511.

T.E.R.: Total efficiency ratio

	SEASONAL ENERGY PERFORMANCE		4140	4160	4190	4210	4230	4260	4300	4330
	TXAITY MODEL SEASONAL PERFORMANCE IN HEATING MODE									
③	Pdesignh (EN 14825)	kW	127	142	171	194	212	236	275	309
③	SCOP (EN 14825)		3,67	3,64	3,62	3,65	3,62	3,59	3,62	3,52
④	ηs	%	144	143	142	143	142	140	142	138
	TXAIQY MODEL SEASONAL PERFORMANCE IN HEATING MODE									
③	Pdesignh (EN 14825)	kW	124	139	168	190	207	234	270	305
③	SCOP (EN 14825)		3,67	3,65	3,73	3,72	3,64	3,72	3,71	3,66
④	ηs	%	144	143	146	146	143	146	146	143

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)



Web code: **YKX11**

Y-Pack EXP

TXAEY 280-4320

Cooling capacity: 80.7-332.9 kW - Heating capacity: 84.3÷354.3 kW

TXAESY 4320 with coil protection nets accessory

• T.E.R. (°) up to 8.18

(°) T.E.R. Total Efficiency Ratio in total heat recovery mode AUTOMATIC 2.

EXPsystems - Air cooled multi-purpose ecological system with axial fans.
Range with hermetic scroll compressors and R410A refrigerant gas.

Construction features

- Compressor: scroll type, rotary, hermetic complete with thermal protection and casing heater.
- Main and secondary heat exchangers: crossed flow stainless steel plate exchangers, complete with antifreeze heater, closed cell polyurethane foam rubber insulation and water flow differential pressure switch.
- Air side heat exchanger: finned coil with copper pipes and aluminium fins.
- Fan: electric helical fans with EC motor with continuous regulation of rotation speed, equipped with internal thermal protection and complete with accident protection grilles.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - fan and compressor circuit breaker switches;
  - clock board;
  - electronic expansion valve;
  - display of cooling circuit high/low pressure.

Versions

- • T - High efficiency version with fans with EC motor.
- S - Silenced version complete with compressor technical compartment soundproofing, reduced speed fans with EC motor.

Models

- TXAETY: EXPsystems unit.
- TXAESY: silenced EXPsystems unit.

Factory fitted accessories

- PUMP (for main and secondary circuit) with single or double electric pump, including an automatic pump in standby. The electric pumps are available in the low or high head versions.
- TANK&PUMP (for main circuit only) with integrated buffer tank and single or double electric pump, complete with expansion tank, air vent valves, safety valve and water side pressure gauge.
- Inverter pump control for unit start-up.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Soft starter forced limit of power consumption.
- Cooling circuit high and low pressure gauges.
- Metal filters or coil protection nets.
- Copper/copper or copper/pre-painted aluminium coils.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Buffer tank antifreeze resistors and electric pumps if present.
- Interfaces for serial communication with other devices.
- Anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

	TXAETY MODEL		280	2100	2130	4160	4200	4260	4320
❶	Nominal cooling capacity (AUTOMATIC 1)	kW	83,7	107,6	134,6	162,5	206,2	263,1	332,9
❸	Recovery heating capacity (AUTOMATIC 2)	kW	108,3	140,4	174,5	215,6	272,9	347	441,3
❷	Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	86,3	111,4	139,5	171,6	227,9	282	354,3
❶	Absorbed power (AUTOMATIC 1)	kW	27	35,2	43,8	56,6	72,6	93,9	118,5
❸	Absorbed power (AUTOMATIC 2)	kW	23,9	32,6	39,8	52,1	66,1	82,4	107,8
❷	Absorbed power (SELECT 1-2 AUTOMATIC 3)	kW	25,6	33,9	42,9	55,2	73,9	91,9	116,5
	E.E.R. (AUTOMATIC 1)		3,1	3,06	3,07	2,87	2,84	2,8	2,81
	T.E.R. (AUTOMATIC 2)		8,09	7,64	7,79	7,30	7,28	7,44	7,21
	C.O.P. (SELECT 1-2 AUTOMATIC 3)		3,37	3,29	3,25	3,11	3,08	3,07	3,04
❹	Sound pressure	dB(A)	52	52	53	54	59	61	61
❺	Sound power	dB(A)	84	84	85	86	91	93	93
	TXAESY MODEL		**280**	**2100**	**2130**	**4160**	**4200**	**4260**	**4320**
❶	Nominal cooling capacity (AUTOMATIC 1)	kW	80,7	103,7	129,6	156,5	199,3	254,1	316
❸	Recovery heating capacity (AUTOMATIC 2)	kW	108,3	140,4	174,5	215,6	272,9	347	441,3
❷	Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	84,3	108,4	136,4	167,6	221,8	275	345,2
❶	Absorbed power (AUTOMATIC 1)	kW	27,3	35,6	44,3	57,2	73,6	94,9	119,3
❸	Absorbed power (AUTOMATIC 2)	kW	23,9	32,6	39,8	52,1	66,1	82,4	106,5
❷	Absorbed power (SELECT 1-2 AUTOMATIC 3)	kW	24,6	32,5	41,1	52,9	71,1	88,5	111,8
	E.E.R. (AUTOMATIC 1)		2,96	2,92	2,93	2,74	2,71	2,68	2,65
	C.O.P. (SELECT 1-2 AUTOMATIC 3)		3,43	3,34	3,32	3,17	3,12	3,11	3,09
❹	Sound pressure	dB(A)	49	49	50	51	54	57	57
❺	Sound power	dB(A)	81	81	82	83	86	89	89
	MODEL		**280**	**2100**	**2130**	**4160**	**4200**	**4260**	**4320**
	Scroll/step compressor	no.	2/2	2/2	2/2	4/4	4/4	4/4	4/4
	Circuits	no.	2	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
	DIMENSIONS		**280**	**2100**	**2130**	**4160**	**4200**	**4260**	**4320**
	L - Width	mm	2600	2600	3700	3700	4800	4800	4800
	H - Height	mm	2000	2000	2000	2000	2030	2030	2030
	P - Depth	mm	2090	2090	2090	2090	2090	2090	2090

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C.

❷ Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C.

❸ Evaporator water: 12/7°C. Recovery output water 45°C - Nominal flow rate.

❹ In open field (Q = 2) at 10 m from the unit.

❺ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

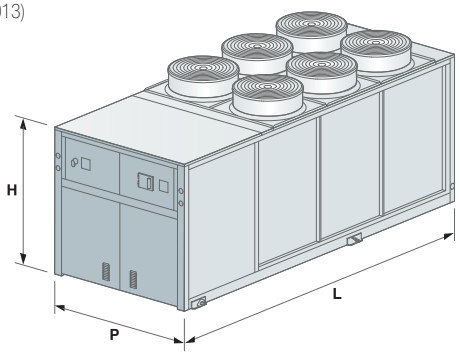
Performance according to EN 14511.

T.E.R.: Total efficiency ratio

	SEASONAL ENERGY PERFORMANCE		280	2100	2130	4160	4200	4260	4320
	TXAETY MODEL SEASONAL PERFORMANCE IN HEATING MODE								
③	Pdesignh (EN 14825)	kW	77	98	124	153	201	252	314
③	SCOP (EN 14825)		3,99	3,85	3,81	3,46	3,41	3,37	3,36
④	η_S	%	157	151	149	136	133	132	131
	TXAESY MODEL SEASONAL PERFORMANCE IN HEATING MODE								
③	Pdesignh (EN 14825)	kW	75	95	121	148	196	246	305
③	SCOP (EN 14825)		4,1	3,92	3,91	3,52	3,48	3,44	3,43
④	η_S	%	161	154	153	138	136	135	134

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)



Web code: **WPX01**

WinPOWER EXP

TXAEY 4400-6660

Cooling capacity: 361.2-648.1 kW - Heating capacity: 405÷706.2 kW

TXAESY 6580 with STE accessory and RPB coil protection nets accessory

Multi-purpose units in class A with TER up to 7.9

- **Extended operating limits**
- **Units for systems with 2, 4 and 6 pipes**

EXPsystems - Air cooled multi-purpose ecological system with axial fans.
Range with hermetic scroll compressors and R410A refrigerant gas.

Construction features

- Compressor: scroll type, rotary, hermetic complete with thermal protection and casing heater.
- Up to 6 capacity steps with high efficiency at partial loads.
- Main and secondary heat exchangers: crossed flow stainless steel plate exchangers, complete with antifreeze heater, closed cell polyurethane foam rubber insulation and water flow differential pressure switch.
- Air side heat exchanger: finned coil with copper pipes and aluminium fins.
- Fan: external rotor axial type electric fans, equipped with internal thermal protection, accident protection grilles and a proportional electronic device for continuous fan rotation speed regulation (T version; fans with an EC motor are standard in the Q version)
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: load-bearing structure made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - fan and compressor circuit breaker switches, heat exchanger antifreeze heater;
  - display of cooling circuit high and low pressure;
  - electronic expansion valve;
  - clock board.

Versions

- T - High efficiency version.
- Q - Super silenced version complete with compressor technical compartment soundproofing, fans with EC motor at super reduced speed.

Models

- TXAETY: EXPsystems unit.
- TXAEQY: super silenced EXPsystems unit.

Factory fitted accessories

- Tube and shell main and secondary heat exchangers.
- PUMP with single or double electric pump, one of which automatic in standby. The electric pumps are available in the main and secondary/recovery heat exchanger low or high head set-ups.
- TANK&PUMP with 700-1000 litre integrated buffer tank (depending on models) and single or double electric pump, complete with expansion tank, air vent valves, safety valve and water side pressure gauge.
- Inverter pump control for unit start-up.
- Desuperheater.
- -15°C condensing control with fans with EC motor (standard with Q versions).
- Condensing control with over-pressure fans (T version only).
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Forced limit of power consumption.
- Forced noise limit.
- Energy parameter measuring device.
- Optimised energy efficiency.
- Soft starter.
- Compressor box and soundproofed cooling circuit.
- Compressor soundproof enclosures.
- Cooling circuit outlet and inlet valves.
- Refrigerant leak detector.
- Cooling circuit high and low pressure gauges.
- Double safety valves.
- Coil protection nets or metal filters.
- Bottom compartment protection nets.
- Pre-painted copper/aluminium or copper/copper coils.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Electrical panel antifreeze heater, buffer tank, electric pumps and desuperheater, if applicable.
- Interfaces for serial communication with other devices.
- Spring anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Thermostat with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

	TXAETY MODEL		4400	4440	6520	6580	6660
❶	Nominal cooling capacity (AUTOMATIC 1)	kW	397	434,8	525,4	577,4	648,1
❸	Recovery heating capacity (AUTOMATIC 2)	kW	516,1	568,4	686,8	760,9	847,2
❷	Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	426,1	470,4	569,8	629,9	706,2
❶	Absorbed power (AUTOMATIC 1)	kW	131,9	145	176,4	198,5	218,3
❸	Absorbed power (AUTOMATIC 2)	kW	117,7	130	158,8	180,9	196,6
❷	Absorbed power (SELECT 1-2 AUTOMATIC 3)	kW	131,2	144,3	177	195,1	217,3
	E.E.R. (AUTOMATIC 1)		3,01	3	2,98	2,91	2,97
	T.E.R. (AUTOMATIC 2)		7,79	7,77	7,67	7,43	7,64
	C.O.P. (SELECT 1-2 AUTOMATIC 3)		3,25	3,26	3,22	3,23	3,25
❹	Sound pressure	dB(A)	76	76,5	76,5	76,5	76,5
❺	Sound power	dB(A)	96	97	97	97	98
	TXAEQY MODEL		**4400**	**4440**	**6520**	**6580**	**6660**
❶	Nominal cooling capacity (AUTOMATIC 1)	kW	361,2	390,1	474,8	515,8	580,5
❸	Recovery heating capacity (AUTOMATIC 2)	kW	516,1	568,4	686,8	760,9	847,2
❷	Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	405	445,2	547,6	598,7	669,9
❶	Absorbed power (AUTOMATIC 1)	kW	141,7	159,3	192,3	222,4	236
❸	Absorbed power (AUTOMATIC 2)	kW	117,7	130	158,8	180,9	196,6
❷	Absorbed power (SELECT 1-2 AUTOMATIC 3)	kW	125	137,5	168,5	184,8	206,2
	E.E.R. (AUTOMATIC 1)		2,55	2,45	2,47	2,32	2,46
	C.O.P. (SELECT 1-2 AUTOMATIC 3)		3,24	3,24	3,25	3,24	3,25
❹	Sound pressure	dB(A)	53,5	54,5	54,5	54,5	56,5
❺	Sound power	dB(A)	86	87	87	87	89
	MODEL		**4400**	**4440**	**6520**	**6580**	**6660**
	Scroll/step compressor	no.	4/4	4/4	6/6	6/6	6/6
	Circuits	no.	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS		**4400**	**4440**	**6520**	**6580**	**6660**
	L - Width	mm	4840	4840	5940	5940	6840
	H - Height	mm	2450	2450	2450	2450	2450
	P - Depth	mm	2260	2260	2260	2260	2260
❻	TXAETY weight	kg	3650	3760	4480	4580	5250
❻	TXAEQY weight	kg	4340	4360	5270	5370	6070

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C.

❷ Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C.

❸ Evaporator water: 12/7°C. Recovery output water 45°C - Nominal flow rate.

❹ In open field (Q = 2) at 10 m from the unit.

❺ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❻ Weight refers to the unit without load.

Performance according to EN 14511.

T.E.R.: Total efficiency ratio

	SEASONAL ENERGY PERFORMANCE		4400	4440	6520	6580	6660
	TXAETY MODEL SEASONAL PERFORMANCE IN COOLING MODE						
①	Pdesignc (EN 14825)	kW	-	434,7	525,3	577,2	647,9
①	SEER (EN 14825)		-	4,13	4,25	4,23	4,26
②	$\eta_{s,c}$	%	-	162	167	166	167
	TXAEQY MODEL SEASONAL PERFORMANCE IN COOLING MODE						
①	Pdesignc (EN 14825)	kW	-	-	474,7	515,7	580,4
①	SEER (EN 14825)		-	-	4,25	4,2	4,24
②	$\eta_{s,c}$	%	-	-	167	165	167
	TXAETY MODEL SEASONAL PERFORMANCE IN HEATING MODE						
③	Pdesignh (EN 14825)	kW	361	-	-	-	-
③	SCOP (EN 14825)		3,63	-	-	-	-
④	η_s	%	142	-	-	-	-
	TXAEQY MODEL SEASONAL PERFORMANCE IN HEATING MODE						
③	Pdesignh (EN 14825)	kW	344	382	-	-	-
③	SCOP (EN 14825)		3,64	3,65	-	-	-
④	η_s	%	142	143	-	-	-

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)

Web code: **ZPX01**

Z-Power EXP

TXAVZ 2550-2700

Cooling capacity: 530.3÷695.1 kW - Heating capacity: 548÷709.9 kW

TXAVSZ 2550

TXAVSZ 2700

• T.E.R. (°) up to 8.33

EXPsystems - Air cooled multi-purpose ecological system with axial fans.
Range with semi-hermetic screw compressors and R134a refrigerant gas.

Construction features

- Compressor: high energy efficiency semi-hermetic screw compressor, with star-delta limited start and complete with integral protection, casing heater, refrigerant gas intake and delivery piping shut-off valve and compressor oil level sensor.
- Main and secondary heat exchangers: dry expansion shell and tube with counterflow heat exchange, complete with antifreeze heater, closed cell polyurethane foam rubber insulation, water flow differential pressure switch and Victaulic fittings.
- Air side heat exchanger: finned coil with copper pipes and aluminium fins.
- Fan: external rotor axial type electric fans, equipped with internal thermal protection, accident protection grilles and a proportional electronic device for continuous fan rotation speed regulation.
- Control: microprocessor electronic control.
- Structure: made of galvanised and painted steel plate with polyester powder coating
- The unit is also complete with:
  - display of cooling circuit high/low pressure;
  - clock board;
  - electronic expansion valve.

Versions

- B - Standard version (TXAVBZ).
- S - Silenced version with reduced speed fans and soundproofing lining of the compressors (TXAVSZ).
- I -Soundproofed version with soundproofing compressor lining (TXAVSZ).

Models

- TXAVBZ: standard EXPsystems unit.
- TXAVSZ: silenced EXPsystems unit.
- TXAVIZ: soundproofed EXPsystems unit.

Factory fitted accessories

- -15°C condensing control with fans with EC motor.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Fan and compressor circuit breaker switches.
- Forced limit of power consumption.
- Coil protection nets.
- Bottom compartment protection nets.
- Digital input for double set-point
- Low and high pressure gauges for each cooling circuit.
- Electrical panel heater.
- Control of min/max power supply voltage.
- 4-20 mA analogue signal for shifting set-point.
- Pre-painted copper/aluminium or copper/copper coils.
- Interfaces for serial communication with other devices.
- Spring anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

(°) T.E.R. Total Efficiency Ratio in total heat recovery mode AUTOMATIC 2.

	TXAVBZ MODEL		2550	2610	2700
❶	Nominal cooling capacity (AUTOMATIC 1)	kW	552	615	695,1
❸	Recovery heating capacity (AUTOMATIC 2)	kW	712,2	788,1	890,9
❷	Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	571,2	627,1	709,9
❶	Absorbed power (AUTOMATIC 1)	kW	182,2	200,4	227,2
❸	Absorbed power (AUTOMATIC 2)	kW	159	172.8	193,8
❷	Absorbed power (SELECT 1-2 AUTOMATIC 3)	kW	180,8	196,6	224
	E.E.R. (AUTOMATIC 1)		3,03	3,07	3,06
	T.E.R. (AUTOMATIC 2)		7,97	8,14	8,21
	C.O.P. (SELECT 1-2 AUTOMATIC 3)		3,16	3,19	3,17
❹	Sound pressure	dB(A)	65	66	67
❻	Sound power	dB(A)	98	99	99
	TXAVSZ MODEL		**2550**	**2610**	**2700**
❶	Nominal cooling capacity (AUTOMATIC 1)	kW	530,3	590,1	667,4
❸	Recovery heating capacity (AUTOMATIC 2)	kW	712,2	788,1	890,9
❷	Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	548	601,9	681,7
❶	Absorbed power (AUTOMATIC 1)	kW	181	199,4	225,5
❸	Absorbed power (AUTOMATIC 2)	kW	159	172,8	193,8
❷	Absorbed power (SELECT 1-2 AUTOMATIC 3)	kW	179,7	195,5	222,1
	E.E.R. (AUTOMATIC 1)		2,93	2,96	2,96
	C.O.P. (SELECT 1-2 AUTOMATIC 3)		3,05	3,08	3,07
❹	Sound pressure	dB(A)	59	60	61
❺	Sound power	dB(A)	92	93	93
	MODEL		**2550**	**2610**	**2700**
	Screw/step compressor	no.	2/6	2/6	2/6
	Circuits	no.	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50
	TXAVBZ-TXAVSZ DIMENSIONS AND WEIGHT		**2550**	**2610**	**2700**
	L - Width	mm	6130	6980	7980
	H - Height	mm	2430	2430	2430
	P - Depth	mm	2260	2260	2260
❻	TXAVBZ weight	kg	6360	7460	8380

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C.

❷ Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C.

❸ Evaporator water: 12/7°C. Recovery output water 45°C - Nominal flow rate.

❹ In open field (Q = 2) at 10 m from the unit.

❺ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❻ Empty weight.

Performance according to EN 14511.

T.E.R.: Total efficiency ratio

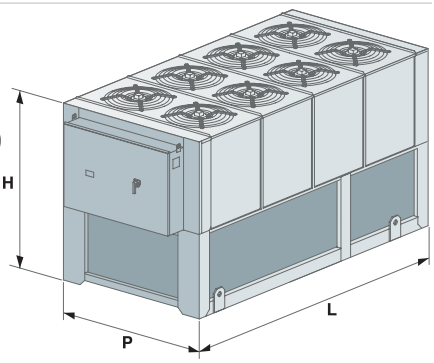
	SEASONAL ENERGY PERFORMANCE		2550	2610	2700
	TXAVBZ-TXAVIZ MODEL SEASONAL PERFORMANCE IN COOLING MODE				
①	Pdesignc (EN 14825)	kW	551,9	614,8	695
①	SEER (EN 14825)		4,2	4,23	4,15
②	$\eta_{s,c}$	%	165	166	163
	TXAVSZ MODEL SEASONAL PERFORMANCE IN COOLING MODE				
①	Pdesignc (EN 14825)	kW	530,2	589,9	667,2
①	SEER (EN 14825)		4,13	4,14	4,13
②	$\eta_{s,c}$	%	162	163	162

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)



Web code: **CFX01**

Comby-Flow EXP

TXHEY 105-112

Cooling capacity: 5.5÷12.2 kW - Heating capacity: 6.4÷13.7 kW

- **Extremely compact multi-purpose units**

EXPsystems - Polyvalent ecological water-cooled system.
Range with hermetic scroll compressors and R410A refrigerant gas.

Construction features

- Compressor: hermetic, rotary scroll type, complete with thermal protection.
- Primary side (user) and secondary side (recovery) heat exchanger and disposal unit: suitably insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch.
- Control: microprocessor electronic control, iDRHOSS compatible with AdaptiveFunction logic.
- Condensing control: pressure switch valve and bypass solenoid valve.
- Structure: made of galvanised and painted steel plate with polyester powder coating, complete with soundproofed compressor.

Models

- TXHEY: EXPsystems unit.

PUMP set up

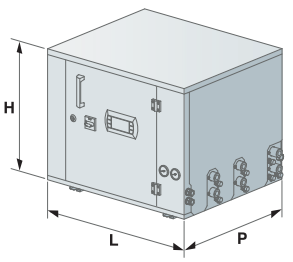
- Primary side (user): pump unit complete with electric circulation pump, membrane expansion tank, safety valve, water drain valve, manual air vent valve and pressure gauge.
- Well/tower side (disposal unit): drain valve and vent valve. Internal valve for primary side system supply (user) from external network (disposal unit side: well or tower).
- Secondary side (recovery): pump unit complete with electric circulation pump, membrane expansion tank, safety valve, water fill and drain valve, manual air vent valve and pressure gauge.

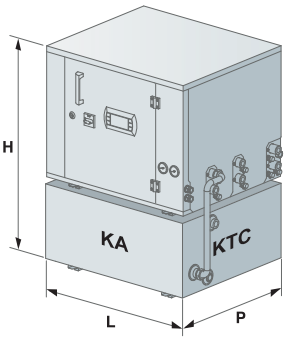
Factory fitted accessories

- Digital input for double set-point
- 4-20mA analogue signal for shifting set-point.

Separately supplied accessories

- Buffer tank.
- Buffer tank connection pipes.
- Water filter.
- Rubber anti-vibration mounts.
- Antifreeze heater on the buffer tank.
- Remote keypad with display.
- Clock board.
- Interfaces for serial communication with other devices.
- Serial converter (RS485/USB).
- Rhoss supervisors for unit monitoring and remote management.





	TXHEY MODEL		105	107	109	112
❶	Nominal cooling capacity (AUTOMATIC 1)	kW	5,5	6,9	9,5	12,2
❷	Recovery heating capacity (AUTOMATIC 2)	kW	6,7	8,6	11,2	14,4
❸	Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	6,4	8,1	10,6	13,7
❶	Absorbed power (AUTOMATIC 1)	kW	1,74	2,27	2,99	3,82
❷	Absorbed power (AUTOMATIC 2)	kW	2	2,8	3,4	4,6
❸	Absorbed power (SELECT 1-2 AUTOMATIC 3)	kW	2,2	3,1	3,8	4,7
❷	T.E.R. (AUTOMATIC 2)		5,79	5,28	5,53	5,26
❷	Recovery heating capacity (AUTOMATIC 2)	kW	8,7	10,7	14,7	18,8
❹	Heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	7,3	9,5	12,4	14,7
❺	Sound pressure	dB(A)	49	51	51	53
	Scroll/step compressor	no.	1/1	1/1	1/1	1/1
	Circuits	no.	1	1	1	1
	KA buffer tank water content	l	20	20	30	30
❶	Available nominal head of pump on main heat exchanger	kPa	47	54,7	82,2	78,2
❷	Available nominal head on secondary recovery heat exchanger	kPa	32,4	42,4	72,1	66,7
	Electrical supply	V-ph-Hz	230-1-50	230-1-50 / 400-3+N-50	230-1-50 / 400-3+N-50	230-1-50 / 400-3+N-50
	DIMENSIONS AND WEIGHT		**105**	**107**	**109**	**112**
	L - Width	mm	585	585	660	660
	H - TXHEY P height	mm	535	535	535	535
	H - TXHEY P + KA height	mm	855	855	855	855
	P - Depth	mm	520	520	560	560
	TXHEY Weight	kg	112	118	122	130
	KA Weight	kg	38	38	43	43

Data at the following conditions:

❶ Chilled water: 12/7°C - Condenser water: 30/35°C

❷ Chilled water: 12/7°C - Recovery water: 40/45°C.

❸ Hot water: 40/45°C. Evaporator water: 10/7°C.

❹ Hot water: 30/35°C. Evaporator water: 10/7°C.

❺ In open field (Q = 2) at 1 m from the unit.

Performance according to EN 14511.

T.E.R.: Total efficiency ratio

KA = buffer tank.

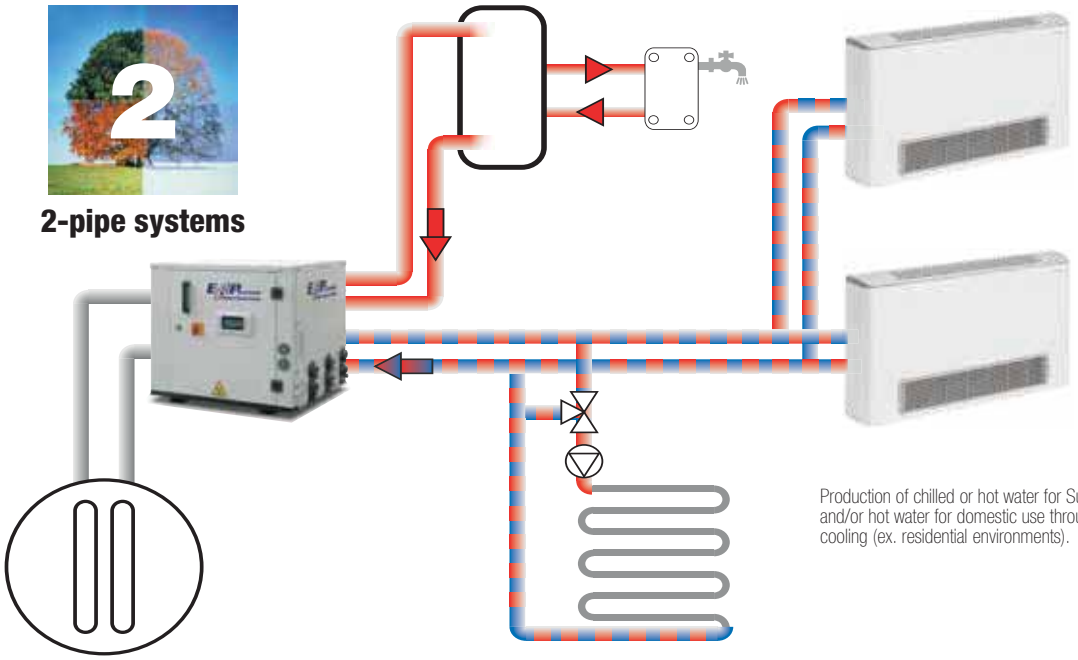
KTC = connecting pipe.

	SEASONAL ENERGY PERFORMANCE		105	107	109	112
	TXHEY MODEL SEASONAL PERFORMANCE IN HEATING MODE					
③	**Pdesignh (EN 14825)**					
③	SCOP (EN 14825)		4,56	5,08	4,97	4,77
④	ηs	%	174	195	191	183
	Energy class		A++	A+++	A+++	A+++

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)

2-pipe systems



Production of chilled or hot water for Summer or Winter air conditioning and/or hot water for domestic use through EXPsystems units with water cooling (ex. residential environments).

Web code 245-2185: **YFX21**
Web code 4180÷4450: **YFX31**

Y-Flow EXP

TXHEY 245-4450

Cooling capacity: 44.2-437.8 kW - Heating capacity: 50.7÷518.9 kW

• T.E.R. (°) up to 7.8

EXPsystems - Polyvalent ecological water-cooled system.
Range with hermetic scroll compressors and R410A refrigerant gas.

Construction features

- Compressor: scroll type, rotary, hermetic complete with thermal protection and casing heater.
- Primary side (user), secondary side (recovery) heat exchangers and disposal unit: crossed flow stainless steel plate exchangers, complete with antifreeze heater, closed cell polyurethane foam rubber insulation and water flow differential pressure switch.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - compressor circuit breaker switches,
  - electronic expansion valve,
  - display of cooling circuit high and low pressure,
  - clock board,
  - outdoor temperature probe for set-point compensation,
  - 0-10V analogue signal for condensing/evaporating control performed by external device.

Versions

- B - Standard version.

Models

- TXHEBY: EXPsystems unit.

Factory fitted accessories

- Cooling circuit high and low pressure gauges.
- Forced limit of power consumption.
- Soft starter.
- Silenced set up.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Interfaces for serial communication with other devices.
- Anti-vibration mounts.

Separately supplied accessories

- 3-way modulating condensing control valve.
- 2-way modulating condensing control valve.
- Water filter.
- Remote keypad with display.
- Thermostat with display.
- Serial converter (RS485/USB).
- RHOSS supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

(°) T.E.R. Total Efficiency Ratio in total heat recovery mode AUTOMATIC 2.

	TXHEBY MODEL		245	250	260	270	290	2115	2130	2145	2165	2185
❶	Nominal cooling capacity (AUTOMATIC 1)	kW	47	55,6	62,7	71,8	92,8	123,8	137,5	153,9	173,3	193,2
❷	Nominal cooling capacity (AUTOMATIC 1)	kW	44,2	52	59,2	67,6	88	114,6	128	142,4	161,7	180,6
❸	Recovery heating capacity (AUTOMATIC 2)	kW	50,8	59,9	68,9	76,6	103,5	135,4	149,4	165,4	188,5	212
❹	Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	49,3	58,1	66,9	74,3	100,6	131,8	145,5	160,9	183,5	206,4
❶	Total absorbed power (AUTOMATIC 1)	kW	8,5	9,8	11,3	13	16,9	21,5	24,7	26,7	31,8	36,3
❷	Total absorbed power (AUTOMATIC 1)	kW	9,9	11,4	13,1	14,9	19,1	25,5	28,8	31,7	36,8	41,9
❸	Total absorbed power (AUTOMATIC 2)	kW	12,2	14	16,1	17,8	24	31,6	35,4	39,5	46	52,3
❹	Total absorbed power (SELECT 1-2 AUTOMATIC 3)	kW	12,1	13,9	15,9	17,6	23,7	31,4	35,14	39,1	45,6	52,1
❶	E.E.R. (AUTOMATIC 1)		5,51	5,69	5,55	5,51	5,48	5,75	5,57	5,76	5,44	5,32
❷	E.E.R. (AUTOMATIC 1)		4,49	4,57	4,52	4,54	4,61	4,5	4,45	4,5	4,4	4,32
❹	C.O.P. (SELECT 1-2 AUTOMATIC 3)		4,07	4,19	4,2	4,21	4,25	4,2	4,14	4,11	4,02	3,96
❸	T.E.R. (AUTOMATIC 2)		7,32	7,55	7,57	7,62	7,63	7,59	7,45	7,39	7,21	7,12
	TXHEBY MODEL		**245**	**250**	**260**	**270**	**290**	**2115**	**2130**	**2145**	**2165**	**2185**
❺	Sound power	dB(A)	67	67	68	68	70	72	73	74	74	75
	Scroll/step compressor	no.	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2
	Circuits	no.	1	1	1	1	1	1	1	1	1	1
	Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
	DIMENSIONS AND WEIGHT		**245**	**250**	**260**	**270**	**290**	**2115**	**2130**	**2145**	**2165**	**2185**
	L - Width	mm	1020	1020	1020	1020	1020	1270	1270	1270	1270	1270
	H - Height	mm	1470	1470	1470	1470	1470	1620	1620	1620	1620	1620
	P - Depth	mm	870	870	870	870	870	870	870	870	870	870
❻	Weight	kg	510	525	540	565	595	920	960	995	1035	1045

Data at the following conditions:

❶ Chilled water (user): 12/7°C - Condenser water (disposal unit-source): 14/30°C. (Gross value)

❷ Chilled water (user): 12/7°C - Condenser water (disposal unit-source): 30/35°C

❸ Chilled water (user): 12/7°C - Condenser water (recovery unit): 40/45°C.

❹ Evaporator water (source): 10/7°C - . Hot water (user): 40/45°C.

❺ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❻ Empty weight

Performance according to EN 14511.

T.E.R.: Total efficiency ratio

	TXHEBY MODEL SEASONAL PERFORMANCE IN HEATING MODE											
③	**Pdesignh (EN 14825)**	**kW**	**59**	**69**	**80**	**89**	**119**	**156**	**173**	**191**	**218**	**245**
③	SCOP (EN 14825)		5,89	6,09	6,21	6,1	6	6,42	6,31	6,3	6,08	5,87
④	η_s	%	228	236	240	236	232	249	244	244	235	227
	Energy class		A+++	A+++	-	-	-	-	-	-	-	-

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)

Y-Flow EXP

TXHEY 245-4450

	TXHEBY MODEL		4180	4205	4235	4260	4290	4330	4360	4410	4450
❶	Nominal cooling capacity (AUTOMATIC 1)	kW	188,5	214,7	241,2	270,2	302,7	341,1	379,9	420,9	462,6
❷	Nominal cooling capacity (AUTOMATIC 1)	kW	176,4	201,7	226,7	253,6	280,2	317,9	354	397,1	437,8
❸	Recovery heating capacity (AUTOMATIC 2)	kW	203,2	232,2	260,6	293,8	327,1	372,5	418,8	469,3	520,2
❹	Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	198,8	227,5	255,4	288	320	367	412,6	459,3	509,7
❶	Total absorbed power (AUTOMATIC 1)	kW	32,2	37,2	41,9	46,6	50,4	59,1	67,2	78,9	90,4
❷	Total absorbed power (AUTOMATIC 1)	kW	37,4	42,9	48,2	54,1	60,2	69,3	79,1	90,5	102,8
❸	Total absorbed power (AUTOMATIC 2)	kW	44,2	51,5	58,8	66,1	73,7	85,4	96,9	110,5	124,7
❹	Total absorbed power (SELECT 1-2 AUTOMATIC 3)	kW	43,9	51,1	58,4	65,6	72,9	84,6	95,9	109,4	123,1
❶	E.E.R. (AUTOMATIC 1)		5,85	5,77	5,76	5,8	6,01	5,77	5,65	5,33	5,12
❷	E.E.R. (AUTOMATIC 1)		4,72	4,71	4,71	4,69	4,66	4,59	4,48	4,39	4,26
❹	C.O.P. (SELECT 1-2 AUTOMATIC 3)		4,52	4,45	4,37	4,39	4,39	4,34	4,3	4,2	4,14
❸	T.E.R. (AUTOMATIC 2)		8,2	8,03	7,87	7,89	7,87	7,73	7,64	7,49	7,34
	TXHEBY MODEL		**4180**	**4205**	**4235**	**4260**	**4290**	**4330**	**4360**	**4410**	**4450**
❺	Sound power	dB(A)	77	77	78	79	80	81	82	83	84
	Scroll/step compressor	no.	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4
	Circuits	no.	2	2	2	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT		**4180**	**4205**	**4235**	**4260**	**4290**	**4330**	**4360**	**4410**	**4450**
	L - Width	mm	2600	2600	2600	2600	2600	2600	2600	2600	2600
	H - Height	mm	1860	1860	1860	1860	1860	1860	1860	1860	1860
	P - Depth	mm	870	870	870	870	870	870	870	870	870
❻	Weight	kg	1690	1730	1780	1820	1890	1960	2000	2070	2100

Data at the following conditions:

❶ Chilled water (user): 12/7°C - Condenser water (disposal unit-source): 14/30°C. (Gross value)

❷ Chilled water (user): 12/7°C - Condenser water (disposal unit-source): 30/35°C

❸ Chilled water (user): 12/7°C - Condenser water (recovery unit): 40/45°C.

❹ Evaporator water (source): 10/7°C - . Hot water (user): 40/45°C.

❺ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❻ Empty weight

Performance according to EN 14511.

T.E.R.: Total efficiency ratio

	SEASONAL ENERGY PERFORMANCE		4180	4205	4235	4260	4290	4330	4360	4410	4450
	TXHEBY MODEL SEASONAL PERFORMANCE IN COOLING MODE										
①	**Pdesignc (EN 14825)**	**kW**	**-**	**-**	**-**	**-**	**-**	**317,9**	**353,9**	**397**	**437,8**
①	SEER (EN 14825)		-	-	-	-	-	5,96	5,83	5,66	5,95
②	$\eta_{s,c}$	%	-	-	-	-	-	230	225	218	230
	TXHEBY MODEL SEASONAL PERFORMANCE IN HEATING MODE										
③	**Pdesignh (EN 14825)**	**kW**	**234**	**267**	**300**	**340**	**379**	**-**	**-**	**-**	**-**
③	SCOP (EN 14825)		6,72	6,62	6,5	6,56	6,65	-	-	-	-
④	η_S	%	261	257	252	255	258	-	-	-	-

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)


RHOSS
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EXP SYSTEMS
Excellence in Polyvalent technology
EXP SYSTEMS
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Condensing units - MCAEBY 115-130

Condensing units - MCAEBY 233-2160

CONDENSING UNITS

Web code: **CUY01**

Condensing units

MCAEBY 115-130

Cooling capacity: 16.4÷31.5 kW

Air cooled condensing units with axial fans. Range with hermetic compressors and R410A refrigerant gas.

Construction features

- Compressor: Scroll hermetic complete with thermal protection and crankcase heater.
- Air side heat exchanger: featuring finned coil with copper pipes and aluminium fins, complete with protective mesh.
- Fan: external rotor axial type electric fans with internal thermal protection and accident protection grilles and proportional electronic device for pressurised and continuous fan rotation speed regulation up to an outdoor air temperature of –10°C.
- Control: microprocessor electronic control.
- Structure: made of galvanised and painted steel plate

Models

- MCAEBY: unit designed for cooling only.

Factory fitted accessories

- Silenced set up.

Separately supplied accessories

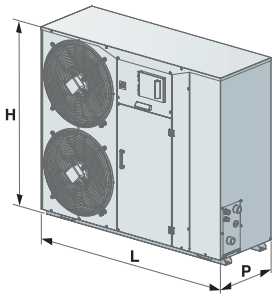
- Rubber anti-vibration mounts.
- RS485 Interface for serial communication with other devices.
- Serial converter (RS485/USB).

	MCAEBY MODEL		115	117	122	124	127	130
❶	Nominal cooling capacity	kW	16,4	18,5	24,7	26,5	29	31,5
❶	Absorbed power	kW	5,5	6,3	7,9	9	9,8	11
	MCAEBY MODEL		**115**	**117**	**122**	**124**	**127**	**130**
❸	Sound pressure	dB(A)	50	50	52	52	53	53
	Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
	DIMENSIONS AND WEIGHT		**115**	**117**	**122**	**124**	**127**	**130**
	L - Width	mm	1230	1230	1230	1230	1535	1535
	H - Height	mm	1090	1090	1280	1280	1510	1510
	P - Depth	mm	580	580	600	600	695	695
	MCAEBY Weight	kg	140	150	200	225	270	300

Data at the following conditions:

❶ Air: 35°C - Saturated intake gas: 5°C.

❸ In open field (Q = 2) at 5 m from the unit.



Condensing units

MCAEBY 233-2160

Cooling capacity: 34.5÷162.6 kW

Air cooled condensing units with axial fans. Range with hermetic scroll compressors and R410A refrigerant gas.

Construction features

- Compressor: hermetic, rotary scroll type, complete with thermal protection and crankcase heater.
- Air side heat exchanger: finned coil with copper pipes and aluminium fins.
- Fan: external rotor axial type electric fans, equipped with internal thermal protection, proportional electronic device for continuous fan rotation speed regulation and accident protection grilles.
- Control: microprocessor electronic control.
- Structure: in hot galvanised and painted sheet steel, with polyurethane powder coating.

- The unit is also complete with:
  - compressor and fan circuit breaker switches,
  - pre-loaded with R410A gas.

Models

- MCAEBY: unit designed for cooling only.

Factory fitted accessories

- Silenced set up
- Coil protection metal filters.
- Cooling circuit high and low pressure gauges.
- Liquid receiver.
- Pre-painted copper/aluminium or copper/copper coils.
- Rubber anti-vibration mounts.

Separately supplied accessories

- Thermostatic valve kit.
- Interfaces for serial communication with other devices.
- Serial converter (RS485/USB).

	MCAEBY MODEL		233	238	245	250	260	265
❶	Nominal cooling capacity	kW	34,5	41,2	46,7	54,3	62,5	67,7
❶	Absorbed power	kW	12,5	14,7	17,6	19,9	22,4	24,3
	MCAEBY MODEL		**233**	**238**	**245**	**250**	**260**	**265**
❸	Sound pressure	dB(A)	46,5	47	48	48	49	49
	Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
	DIMENSIONS AND WEIGHT		**233**	**238**	**245**	**250**	**260**	**265**
	L - Width	mm	1710	2315	2315	2315	2315	2315
	H - Height	mm	1570	1570	1570	1570	1570	1570
	P - Depth	mm	1000	1000	1000	1000	1000	1000
	MCAEBY Weight	kg	400	546	536	570	586	624

	MCAEBY MODEL		280	290	2100	2115	2130	2145	2160
❶	Nominal cooling capacity	kW	79,1	87,1	101	116,2	126,5	145,6	162,6
❶	Absorbed power	kW	28,4	32,9	36,2	41,2	46,2	52,9	60,2
	MCAEBY MODEL		**280**	**290**	**2100**	**2115**	**2130**	**2145**	**2160**
❸	Sound pressure	dB(A)	50	52	52	58	58	58	59
	Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
	DIMENSIONS AND WEIGHT		**280**	**290**	**2100**	**2115**	**2130**	**2145**	**2160**
	L - Width	mm	2650	3150	3150	3150	3150	3150	3450
	H - Height	mm	1700	1700	1700	1730	1730	1730	1700
	P - Depth	mm	1210	1210	1210	1210	1210	1210	1210
	MCAEBY Weight	kg	880	935	950	998	998	1052	1108

Data at the following conditions:

❶ Air: 35°C - Saturated intake gas: 5°C.

❸ In open field (Q = 2) at 10 m from the unit.

Remote condensers - CCAMY 115-2185

Pumping units - AS 0300-2500

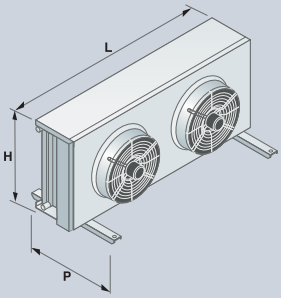
SYSTEM ACCESSORIES

Web code Mod. 115÷240: **CRYA1**
Mod. 245÷2185: **CRYA2**

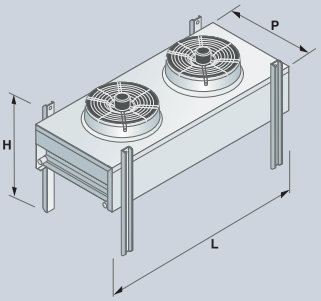
Remote condensers
CCAMY 115-2185

new

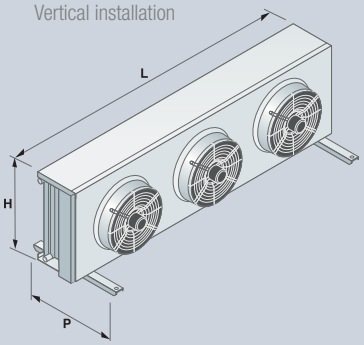
Vertical installation



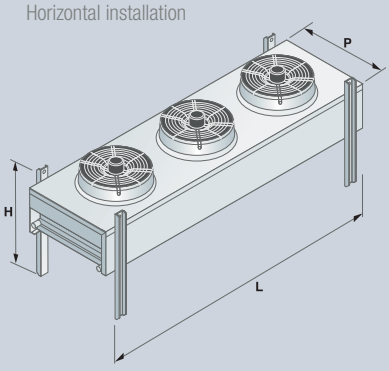
Horizontal installation



Vertical installation



Horizontal installation



Remote air condensers with axial fans for direct expansion units operating with R410A refrigerant gas.

Construction features

- Heat exchanger: with high efficiency finned coil with copper pipes mechanically expanded on aluminium fins.
  The cooling unit connection fittings require brazing. Design pressure 40 barg. Each heat exchanger is tested against leaks with dry air and supplied preloaded with nitrogen.
- Fans: of axial type with external rotor with fans equipped with innovative polymer blades and integrated thermal protection to provide protection against thermal overload. IP54 protection rating, in compliance with DIN 40050. The fan motors are also standard supplied with phase cutting speed control.
- Structure: pre-painted galvanised steel plate with epoxy finish (RAL 9002).
  The coil structure is made of Aluminium alloy (AlMg3), for protection against vibration and thermal expansion.
  The condensers are supplied with support bracket kit for vertical installation with horizontal air flow (CCAMY V) or horizontal with vertical air flow (CCAMY H).
  The support brackets are made of galvanised steel

Electrical panel complete with:
- electrical wiring suited for 400V-3ph-50Hz power supply voltage;
- electrical supply junction box with disconnecting switch where the general power supply voltage of the remote condenser can be connected;
- self-extinguishing plastic casing (IP55) containing the fan rotation speed continuous control device, via a phase cut device,
- pressure probe,
- fan electrical wiring,

contact for external signal of fan thermal intervention, remote on/off contact.

Versions

- The CCAMY range remote condensers are available in 3 construction options that meet the different system requirements regarding ambient noise emission containment:
  - Basic “B” version (except mod.115)
  - Version “S” Silenced
  - Version “Q” Super-silenced

R410A

	CCAMBY MODEL				122	125	230	240
	VERSION B "Basic"							
❶	Nominal heating capacity	kW			27	30	41	51
❷	Sound pressure	dB(A)			46	49	51	51
	Cooling circuits	no.			1	1	1	1
	Fans	no.			1	1	1	2
	Fan nominal air flow	m³/h			6036	6986	11000	12780
	Rotation speed	rpm			1110	1360	1330	1110
❶	Absorbed power	kW			0,49	0,69	1,25	0,98
	Electrical supply	V-ph-Hz			400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT							
	H horizontal installation							
	L - Width	mm			1115	1115	1261	2015
	H - Height	mm			846	846	1171	846
	P - Depth	mm			868	868	1100	868
	V vertical installation							
	L - Width	mm			1115	1115	1261	2015
	H - Height	mm			828	828	1034	828
	P - Depth	mm			470	470	750	470
	Weight *	Kg			54	54	83	92

	CCAMSY MODEL		115	118	122	125	230	240
	VERSION S "Silenced"							
❶	Nominal heating capacity	kW	19,5	22	28,5	31	39,5	47
❷	Sound pressure	dB(A)	37	39	32	40	42	43
	Cooling circuits	no.	1	1	1	1	1	1
	Fans	no.	1	1	2	2	2	2
	Fan nominal air flow	m³/h	4629	4394	7527	8536	9258	14510
	Rotation speed	rpm	920	920	680	785	920	690
❶	Absorbed power	kW	0,26	0,26	0,3	0,38	0,52	0,8
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT							
	H horizontal installation							
	L - Width	mm	1115	1115	2015	2015	2015	2261
	H - Height	mm	846	846	846	846	846	1171
	P - Depth	mm	868	868	868	868	868	1100
	V vertical installation							
	L - Width	mm	1115	1115	2015	2015	2015	2261
	H - Height	mm	828	828	828	828	828	1034
	P - Depth	mm	470	470	470	470	470	750
	Weight *	Kg	49	54	83	92	92	121

	CCAMQY MODEL		115	118	122	125	230	240
	VERSION Q "Super-silenced"							
❶	Nominal heating capacity	kW	19	21,5	26	32	36,5	49
❷	Sound pressure	dB(A)	36	31	31	32	40	34
	Cooling circuits	no.	1	1	1	1	1	1
	Fans	no.	1	1	1	2	2	2
	Fan nominal air flow	m³/h	3779	5537	4993	7060	8016	10500
	Rotation speed	rpm	785	650	650	680	785	650
❶	Absorbed power	kW	0,19	0,24	0,24	0,3	0,38	0,47
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT							
	H horizontal installation							
	L - Width	mm	1115	1261	1261	2015	2015	2261
	H - Height	mm	846	1171	1171	846	846	1171
	P - Depth	mm	868	1100	1100	868	868	1100
	V vertical installation							
	L - Width	mm	1115	1261	1261	2015	2015	2261
	H - Height	mm	828	1034	1034	828	828	1034
	P - Depth	mm	470	750	750	470	470	750
	Weight *	Kg	54	78	85	94	101	135

Data at the following conditions:

❶ Outdoor air temperature 35°C D.B., condensation temperature 50°C, desuperheating 25°K. Maximum speed

❷ In open field (Q = 2) at 10 m from the unit.

* Empty weight

	Sound pressure level correction for distances other than 10m									
	Distance	**(m)**	**2**	**3**	**4**	**5**	**7**	**10**	**15**	**20**
	Correction	dB(A)	11	8,5	7	5	2,5	0	-3	-5,5

Remote condensers

CCAMY 115-2185

	CCAMBY MODEL		245	250	260	270	275	290
	VERSION B "Basic"							
❶	Nominal heating capacity	kW	57	68	79	80	89,5	109
❷	Sound pressure	dB(A)	52	54	54	54	54	56
	Cooling circuits	no.	1	1	1	1	1	1
	Fans	no.	2	3	2	2	2	4
	Fan nominal air flow	m³/h	9258	23280	22000	22000	21070	29400
	Rotation speed	rpm	920	1360	1330	1330	1330	1360
❶	Absorbed power	kW	0,52	2,07	2,5	2,5	2,5	2,76
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT							
	H horizontal installation							
	L - Width	mm	2015	2915	2261	2261	2261	3815
	H - Height	mm	846	846	1171	1171	1171	846
	P - Depth	mm	868	868	1100	1100	1100	868
	V vertical installation							
	L - Width	mm	2015	2915	2261	2261	2261	3261
	H - Height	mm	828	828	1034	1034	1034	828
	P - Depth	mm	470	470	750	750	750	470
	Weight *	Kg	101	136	169	169	169	237

	CCAMSY MODEL		245	250	260	270	275	290
	VERSION S "Silenced"							
❶	Nominal heating capacity	kW	54	69	77	85	99,5	106,5
❷	Sound pressure	dB(A)	48	48	49	50	50	51
	Cooling circuits	no.	1	1	1	1	1	1
	Fans	no.	2	2	2	3	3	3
	Fan nominal air flow	m³/h	18020	16920	17030	27030	25380	27070
	Rotation speed	rpm	890	890	1070	890	890	1070
❶	Absorbed power	kW	1,2	1,2	1,68	1,8	1,8	2,52
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT							
	H horizontal installation							
	L - Width	mm	2261	2261	2261	3261	3261	3261
	H - Height	mm	1171	1171	1171	1171	1171	1171
	P - Depth	mm	1100	1100	1100	1100	1100	1100
	V vertical installation							
	L - Width	mm	2261	2261	2261	3261	3261	3261
	H - Height	mm	1034	1034	1034	1034	1034	1034
	P - Depth	mm	750	750	750	750	750	750
	Weight *	Kg	121	136	149	193	237	257

	CCAMQY MODEL		245	250	260	270	275	290
	VERSION Q "Super-silenced"							
❶	Nominal heating capacity	kW	55	64	74,5	84	92	113
❷	Sound pressure	dB(A)	35	44	45	45	44	45
	Cooling circuits	no.	1	1	1	1	1	1
	Fans	no.	4	3	3	3	3	4
	Fan nominal air flow	m³/h	15050	13180	21760	20060	18660	26740
	Rotation speed	rpm	680	920	690	690	690	690
❶	Absorbed power	kW	0,6	0,78	1,2	1,2	1,2	1,6
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT							
	H horizontal installation							
	L - Width	mm	3815	2915	3261	3261	3261	4261
	H - Height	mm	846	846	1171	1171	1171	1171
	P - Depth	mm	868	868	1100	1100	1100	1100
	V vertical installation							
	L - Width	mm	3815	2915	3261	3261	3261	4261
	H - Height	mm	828	828	1034	1034	1034	1034
	P - Depth	mm	470	470	750	750	750	750
	Weight *	Kg	140	149	192	210	216	274

Data at the following conditions:

❶ Outdoor air temperature 35°C D.B., condensation temperature 50°C, desuperheating 25°K. Maximum speed

❷ In open field (Q = 2) at 10 m from the unit.

* Empty weight

	CCAMBY MODEL		2100	2115	2130	2145	2165	2185
	VERSION B "Basic"							
❶	Nominal heating capacity	kW	123,5	135	159	174,5	201	222
❷	Sound pressure	dB(A)	56	56	57	57	58	58
	Cooling circuits	no.	1	1	1	1	1	1
	Fans	no.	3	3	4	4	5	5
	Fan nominal air flow	m³/h	33000	31600	44090	42140	54990	52670
	Rotation speed	rpm	1330	1330	1330	1330	1330	1330
❶	Absorbed power	kW	3,75	3,75	5	5	6,25	6,25
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT							
	H horizontal installation							
	L - Width	mm	3261	3261	4261	4261	5261	5261
	H - Height	mm	1171	1171	1171	1171	1171	1171
	P - Depth	mm	1100	1100	1100	1100	1100	1100
	V vertical installation							
	L - Width	mm	3261	3261	4261	4261	5261	5261
	H - Height	mm	1034	1034	1034	1034	1034	1034
	P - Depth	mm	750	750	750	750	750	750
	Weight *	Kg	257	257	310	327	421	451

	CCAMSY MODEL		2100	2115	2130	2145	2165	2185
	VERSION S "Silenced"							
❶	Nominal heating capacity	kW	130,5	135	160	172,5	191	223,5
❷	Sound pressure	dB(A)	51	51	52	53	53	53
	Cooling circuits	no.	1	1	1	1	1	1
	Fans	no.	4	4	4	5	5	6
	Fan nominal air flow	m³/h	33840	33840	34070	45120	42590	51100
	Rotation speed	rpm	890	890	1070	1070	1070	1070
❶	Absorbed power	kW	2,4	2,4	3,36	4,2	4,2	5,04
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT							
	H horizontal installation							
	L - Width	mm	4261	4261	4261	5261	5261	6261
	H - Height	mm	1171	1171	1171	1171	1171	1171
	P - Depth	mm	1100	1100	1100	1100	1100	1100
	V vertical installation							
	L - Width	mm	4261	4261	4261	5261	5261	6261
	H - Height	mm	1034	1034	1034	1034	1034	1034
	P - Depth	mm	750	750	750	750	750	750
	Weight *	Kg	302	327	335	421	451	488

	CCAMQY MODEL		2100	2115	2130	2145	2165	2185
	VERSION Q "Super-silenced"							
❶	Nominal heating capacity	kW	125	139	157	181	203	212,5
❷	Sound pressure	dB(A)	45	45	46	50	50	50
	Cooling circuits	no.	1	1	1	1	1	1
	Fans	no.	4	5	5	5	6	6
	Fan nominal air flow	m³/h	24880	33430	31100	39920	50760	47900
	Rotation speed	rpm	690	690	690	890	890	890
❶	Absorbed power	kW	1,6	2	2	3	3,6	3,6
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHT							
	H horizontal installation							
	L - Width	mm	4261	5261	5261	5261	6261	6261
	H - Height	mm	1171	1171	1171	1171	1171	1171
	P - Depth	mm	1100	1100	1100	1100	1100	1100
	V vertical installation							
	L - Width	mm	4261	5261	5261	5261	6261	6261
	H - Height	mm	1034	1034	1034	1034	1034	1034
	P - Depth	mm	750	750	750	750	750	750
	Weight *	Kg	274	383	383	421	443	450

Data at the following conditions:

❶ Outdoor air temperature 35°C D.B., condensation temperature 50°C, desuperheating 25°K. Maximum speed

❷ In open field (Q = 2) at 10 m from the unit.

* Empty weight

Web code: **GPA01**

Pumping units
AS 0300-2500

- **300 to 2,500 L buffer tank.**
- **Multiple combinations user side electric pumps**
- **Connection to system on delivery or on return**

Pumping units with buffer tank.

Construction features
- Buffer tank: in carbon steel with a capacity of 300, 500, 750, 1,000, 1,500, or 2,500 litres.
- Hydraulic components: single or double centrifugal type electric pump, inlet and delivery ball shut-off valve of each electric pump, automatic replenishment cock, manual replenishment cock, safety valve, automatic air vent valve, tank water drain cock, membrane expansion tank, non-return valve (with double pump only), pressure gauge.
- The water circuit is insulated with closed cell expanded polyurethane of adequate thickness.
- Structure: galvanised and painted steel plate supporting structure.
- Control: electromechanical

Versions
- AS - Standard version with two connections.

Models
- AS 0300 UP or DUP 1÷5: pump unit equipped with single user pump (UP) or double user pump (DUP).
- AS 0500 UP or DUP 1÷5: pump unit equipped with single user pump (UP) or double user pump (DUP).
- AS 0750 UP or DUP 6÷10: pump unit equipped with single user pump (UP) or double user pump (DUP).
- AS 1000 UP or DUP 6÷10: pump unit equipped with single user pump (UP) or double user pump (DUP).
- AS 1500 UP or DUP 6÷14: pump unit equipped with single user pump (UP) or double user pump (DUP).
- AS 2500 UP or DUP 6÷14: pump unit equipped with single user pump (UP) or double user pump (DUP).

Factory fitted accessories
- Tank antifreeze electrical resistance complete with activator.

Separately supplied accessories
- Victaulic fittings.

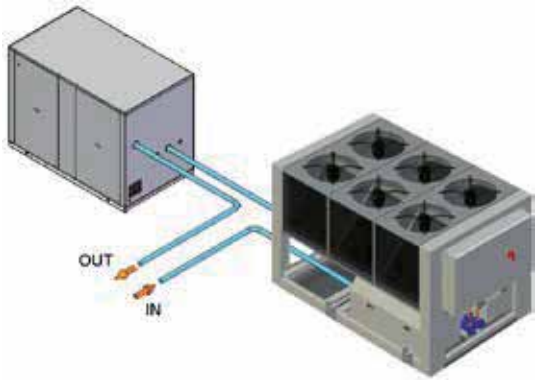
MODEL		AS 0300	AS 0500	AS 0750	AS 1000	AS 1500	AS 2500
Tank capacity	l	300	500	750	1000	1500	2500
Electric pump model		1-2-3-4-5	1-2-3-4-5	6-7-8-9-10	6-7-8-9-10	6-7-8-9-10-11-12-13-14	6-7-8-9-10-11-12-13-14
Expansion tank capacity	l	25	25	25	25	3X25	3X25
Expansion tank pre-load	bar	1,5	1,5	1,5	1,5	1,5	1,5
Safety valve calibration	bar	3	3	3	3	3	3
Maximum operating pressure	bar	3	3	3	3	3	3
Electrical resistance (optional)	W	1300	1300	1300	1300	1.300X2	1.300X2
Hydraulic connections (female)	Ø (Gas)	21/2"	21/2"	3"	3"	4"	4"
Minimum liquid temperature	°C	-10	-10	-10	-10	-10	-10
Electrical supply	V-pH-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
DIMENSIONS AND WEIGHT		**AS 0300**	**AS 0500**	**AS 0750**	**AS 1000**	**AS 1500**	**AS 2500**
L - Width	mm	1504	1504	2044	2044	2260	2260
H - Height	mm	1265	1265	1510	1510	1782	1782
P - Depth	mm	1120	1120	1200	1200	1900	1900
Weight (*)	kg	194	215	377	400	660	712
Weight (**)	kg	231	253	501	528	878	930

(*) Empty weight with 1 pump

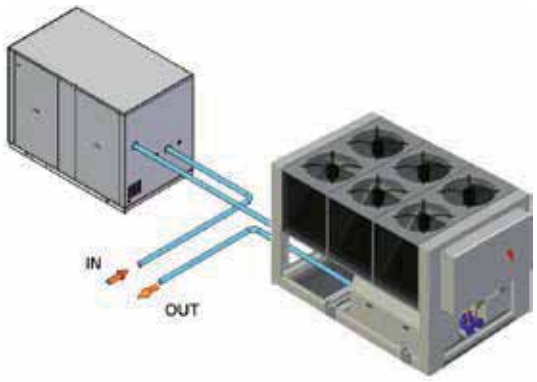
(**) Empty weight with 2 pumps

TANK	PUMP	Electrical supply	Maximum absorbed power	Flow rate	Available head	Flow rate	Available head	Flow rate	Available head
Capacity (l)	Model	V-pH-Hz	kW	m³/h	m.c.a.	m³/h	m.c.a.	m³/h	m.c.a.
300 or 500	1	400-3-50	1,1	12	15,5	15	13,5	18	11,1
300 or 500	2	400-3-50	1,5	12	19	15	17	18	14,7
300 or 500	3	400-3-50	1,5	21	12,4	24	10,8	30	7,5
300 or 500	4	400-3-50	2,2	21	18,2	24	16,6	30	13,3
300 or 500	5	400-3-50	3	21	20,4	24	18,8	30	15,6
750 or 1,000	6	400-3-50	3	36	18,5	42	16,5	48	14
750 or 1,000	7	400-3-50	5,5	42	27	48	25	60	20
750 or 1,000	8	400-3-50	5,5	60	20	72	17	84	12,5
750 or 1,000	9	400-3-50	7,5	72	22	84	18,5	96	14,5
750 or 1,000	10	400-3-50	11	72	31	84	27,5	96	24
1,500 or 2,500	11	400-3-50	15	72	38,5	84	35	96	31
1,500 or 2,500	12	400-3-50	15	108	29	120	27	138	24,5
1,500 or 2,500	13	400-3-50	18,5	108	34	120	32	138	29,5
1,500 or 2,500	14	400-3-50	22	108	40	120	38,5	138	36

Diagram with AS pump unit on delivery



Schema con gruppo di pompaggio AS sul ritorno



Fan coils with EC motor - BRIO-I SLIM

Fan coils with EC motor - YARDY-I EV3

Fan coils - YARDY EV3

Ducted fan coils with EC motor - YARDY-ID2

Ducted fan coils - YARDY-DUCT2

Ductable terminals - YARDY-HP

Cassette fan coils with EC motor - DIVA-I

Cassette fan coils - DIVA

Wall mounted fan coils with EC motor - IDROWALL-I

FAN COILS

BRIO-I Slim

BRIO-I Slim is simple and memorable for its design, silence, comfort, low consumption and user experience.
A product designed from the future.

Slim

With its slim and exclusive design and simple and essential shape, BRIO-I Slim furnishes the environment with a touch of discreet elegance.

Unparalleled silence

Barely audible when operating at low speed and efficient when required, with continuous modulation at skilfully controlled speed, BRIO-I Slim can provide the right day and night comfort without ever being heard.

Low consumption

The EC electronic motor compresses consumption to extremely low values and enables constant performance control with advanced logic based on actual room requirements, without any waste.

Multi-shapes

Flexible versions with a cabinet and recessed, wall-supported formwork or false ceiling installation, BRIO-I Slim structures any architectural requirement.

With touch control

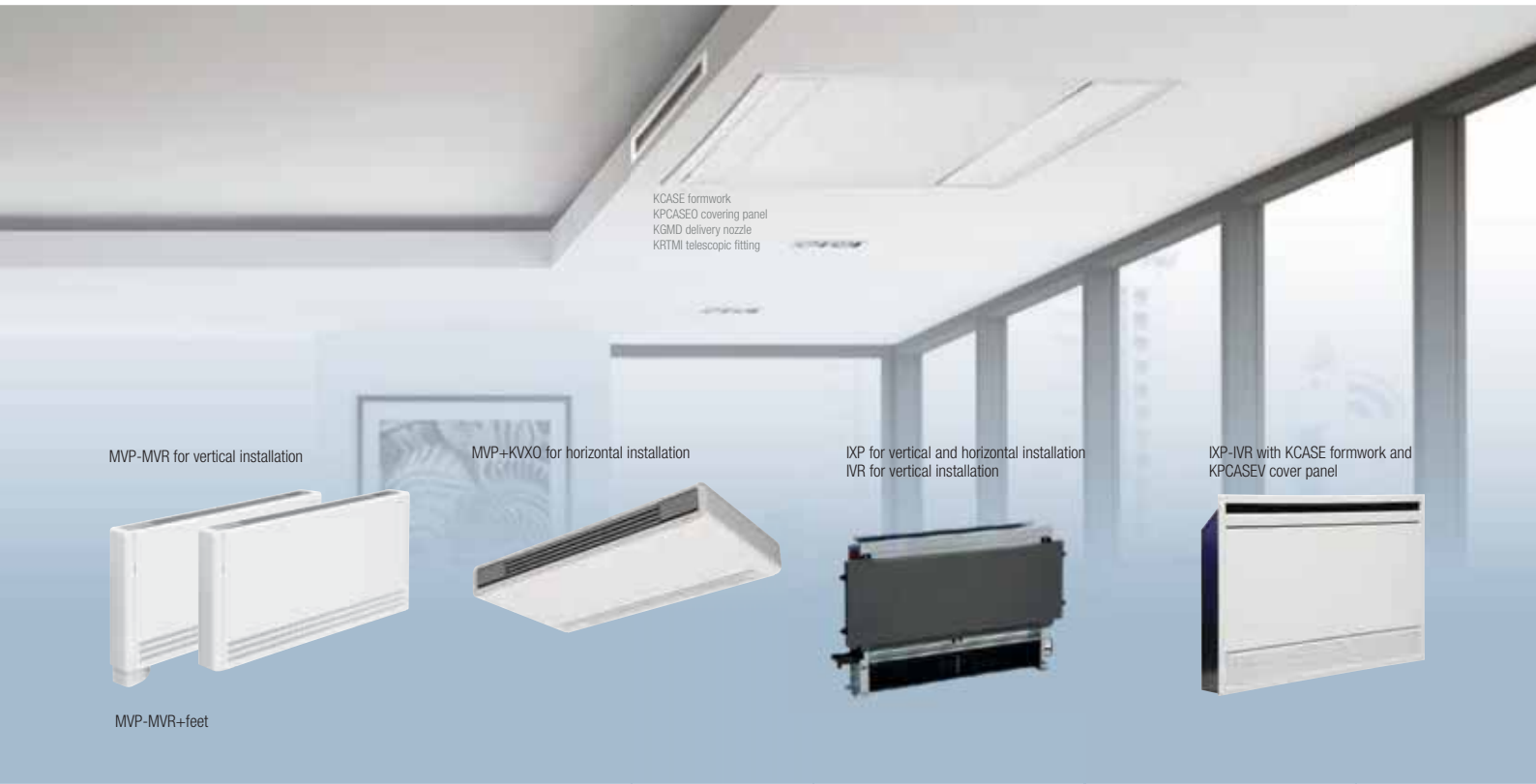
The intuitive touch control makes the control unit extremely easy to use: the wall-mounted control panel responds immediately to the commands with a simple touch.

Radiant heating

The radiant function creates a pleasant sense of well-being through heat distributed from the front panel, which heats during winter operation.

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

Wall mounted SLIM-Touch panel



KCASE formwork
KPCASEO covering panel
KGMD delivery nozzle
KRTMI telescopic fitting

MVP-MVR for vertical installation

MVP-MVR+feet

MVP+KVXO for horizontal installation

IXP for vertical and horizontal installation
IVR for vertical installation

IXP-IVR with KCASE formwork and KPCASEV cover panel

Web code: **BRIS1**

Web code accessories: **ACFCS**

Fan coils with EC motor

BRIO-I SLIM

Cooling capacity: 1.0÷4.0 kW - Heating capacity: 1.1÷4.6 kW

INVERTER

- Exclusive design with thin profile
- Silent operation
- Excellent room comfort with continuous regulation of the fan speed
- Low consumption with standard EC motor
- Versions with cabinet and recessed with front radiant function
- Touch control

TOUCH CONTROL

Panel SLIM-Touch wall installation and on board.

Floor and ceiling fan coil units with cabinet for recessed wall or false ceiling installation

Construction features

- Heat exchanger: finned coil with Eurokonus ¾" connections on the left; connections on the right with accessory supplied separately.
- Tangential fan with constant speed adjustment EC electronic motor and low-consumption micro-fans in the version with radiant function.
- Cabinet version structure: covering cabinet consisting of a painted sheet metal central panel and sides made of ABS polymer (or painted sheet metal for 4T units - 4-pipe systems), RAL9003 colour with matt finish, upper delivery grille in silver grey painted aluminium. Complete unit with vertical condensate drain pan and an additional one with a natural drain, a regenerable filter and fixing brackets.
- Recessed version structure: in galvanised sheet steel, complete with a vertical condensate drain pan and an additional horizontal one with a natural drain, a regenerable filter and fixing brackets.

Versions

- MVP - Vertical unit with cabinet for wall mounting installation or with feet on the ground; ceiling installation with accessory supplied separately (KVXO)
- IXP - Recessed horizontal/vertical unit for wall or false ceiling installation.
- MVR - Vertical only unit with cabinet and front radiant function, for wall mounting installation or with feet on the ground.
- IVR - Vertical only recessed unit with front radiant function, for wall formwork installation.

Construction set-ups

Type of unit

2T - Single main coil.
4T - Double main coil and additional (MVP and IXP versions only).

ACCESSORIES

→ Cable for water connections on the right side.
→ Eurokonus / Gas connection straight fitting.
→❖ 2 -way ON/OFF electrovalves for 2 and 4-pipe systems.
→❖ 3 -way ON/OFF electrovalves for 2 and 4-pipe systems.
→ UVC device for air sterilisation.
→ Condensate drain pan for horizontal installation.
→ Back in view.
→ Aesthetic and floor support feet.
→ Formwork for recessed installation (only 2-pipe systems)
→ Wall aesthetic panel for formwork, colour matt white RAL 9003.
→ Ceiling aesthetic panel for formwork, colour matt white RAL 9003.
→ Straight or 90° inlet fitting.
→ 90° delivery fitting, insulated.
→ Telescopic delivery fitting, insulated.
→ Wall inlet grille made of aluminium, with straight profile.
→ Wall mounted delivery nozzle made of aluminium, with a double row of adjustable fins.
→ Ceiling inlet grille made of aluminium, with curved profile.
→ Ceiling delivery nozzle made of aluminium, with curved profile.

CONTROLS

STANDARD controls

For on board installation

→ Electronic board in combination with 3-speed thermostats
→ Electronic board in combination with thermostats with 0-10V analogue output

For wall mounting installation

→ Panel with room thermostat, summer/winter switch, speed switch and ON/OFF valve control.
→ Electronic panel with automatic summer/winter switching for 2-pipe systems.

ADVANCED controls

→ Slim-touch wall mounted control panel, with RS485 Modbus RTU interface.

For installation on machine

→❖ Touch control on board and electronic control with continuous speed modulation.
→❖ Touch control on board and 4-speed electronic control, only for 2-pipe systems.
→❖ Electronic control with continuous speed modulation only when combined with a KPST panel, with master/slave control up to 31 controls.
→❖ RS485 Modbus RTU serial interface

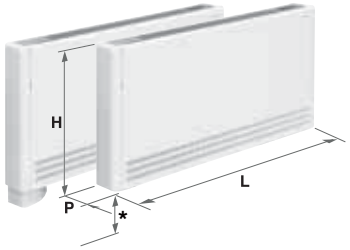
Key: ❖ Factory fitted
→ Supplied separately

BRIO-I SLIM - MVP-MVR-IXP-IVR				10	20	25	30	40
❶ Total cooling capacity [EN1397]	MAX	kW	E	0,98	1,81	2,87	3,31	3,94
	MED	kW	E	0,75	1,35	2,16	2,43	2,9
	MIN	kW	E	0,38	0,73	1,14	1,27	1,46
❷ Heating capacity (45°C) [EN1397]	MAX	kW	E	1,13	2,03	3,19	3,75	4,46
	MED	kW	E	0,81	1,48	2,32	2,75	3,11
	MIN	kW	E	0,57	0,75	0,92	1,48	1,79
❸ Heating capacity (50°C)	MAX	kW	E	1,39	2,46	3,89	4,51	5,43
	MED	kW	E	1,0	1,75	2,78	3,23	3,73
	MIN	kW	E	0,7	0,84	1,04	1,56	1,87
❹ Heating capacity (70°C) [EN1397]	MAX	kW		2,27	4,08	6,41	7,54	9,17
	MED	kW		1,63	2,98	4,67	5,52	6,42
	MIN	kW		1,16	1,54	1,84	2,97	3,7
❸ Heating capacity only radiant function (50°C) MVR-IVR version		kW		0,32	0,38	0,46	0,55	0,66
❹ Heating capacity only radiant function (70°C) MVR-IVR version		kW		0,54	0,67	0,78	0,92	1,08
❺ Heating capacity of additional coil (65°C) [EN1397]	MAX	kW	E	0,67	1,21	1,76	2,3	2,84
	MED	kW	E	0,56	0,97	1,27	1,81	2,3
	MIN	kW	E	0,33	0,69	0,95	1,31	1,45
❹ Heating capacity of additional coil (70°C) [EN1397]	MAX	kW	E	0,78	1,44	2,18	2,77	3,34
	MED	kW	E	0,64	1,16	1,56	2,2	2,72
	MIN	kW	E	0,37	0,81	1,13	1,59	1,72
Air flow speed	MAX	m³/h		162	320	461	576	648
	MED	m³/h		113	252	367	453	494
	MIN	m³/h		55	155	248	370	426
Sound power	MAX	dB(A)	E	50	51	52	54	54
	MED	dB(A)	E	42	43	45	46	46
	MIN	dB(A)	E	32	33	34	35	35
❻ Sound pressure	MAX	dB(A)		41	42	43	45	45
	MED	dB(A)		33	34	36	37	37
	MIN	dB(A)		23	24	25	26	26
Absorbed power	MAX	W	E	11	19	20	28	35
	MED	W	E	9	10	13	15	17
	MIN	W	E	7	7	7	8	8
Electrical supply		V-ph-Hz		230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
DIMENSIONS AND WEIGHT				**10**	**20**	**25**	**30**	**40**
W - Width MVP-MVR		mm		723	923	1123	1323	1523
W - Width IXP-IVR		mm		525	725	925	1125	1325
H - Height MVP-MVR - 2T		mm		579	579	579	579	579
H - Height IXP-IVR - 2T		mm		590	590	590	590	590
H - Height MVP - 4T		mm		639	639	639	639	639
H - Height IXP - 4T		mm		650	650	650	650	650
Feet height /minimum height from floor		mm		80	80	80	80	80
D - MVP-MVR depth		mm		149	149	149	149	149
D - IXP-IVR depth		mm		126	126	126	126	126
Weight MVP-MVR - 2T / MVP- 4T		kg		17 / 18	20 / 21	23 / 25	26 / 28	29 / 32
Weight IXP-IVR - 2T / IXP - 4T		kg		9 / 10	12 / 13	15 / 17	18 / 20	21 / 24
WxHxD - KCASE - 2T formwork		mm		715x725x142	915x725x142	1115x725x142	1315x725x142	1515x725x142

Data at the following conditions:

❶ Air: 27°C D.B.; 19°C W.B. - Water: 7/12°C.
❷ Air: 20°C - Water: 45/40°C.
❸ Air: 20°C - Water: 50°C, flow rate as in cooling.
❹ Air: 20°C - Water: 70/60°C.
❺ Air: 20°C - Water: 65/55°C.
❻ For room volume equal to 100 m³ and reverberation time = 0.5 sec.
E Eurovent certified performance.

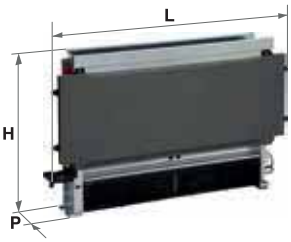
MVP-MVR for vertical installation



MVP-MVR+feet * distance from the ground

MVP+KVXO for horizontal installation

IXP for vertical and horizontal installation
IVR for vertical installation



IXP-IVR with KCASE formwork and KPCASEV cover panel

Web code: **BRIS1**

Web code accessories: **ACFCS**

Fan coils with EC motor

COVER for BRIO-I Slim

Cooling capacity: 1.0÷4.0 kW - Heating capacity: 1.1÷4.6 kW

INVERTER

- **Concealed fan coil installation**
- **Wall-flush aesthetic cover panel in white RAL 9003**
- **Recessed wall or false ceiling installation**
- **Compact size, only 14 cm thick, also with radiant function.**

Installation solutions with formwork and covering panels on the wall or on the ceiling

Brio-I SLIM - Versions
- IXP - Recessed horizontal/vertical unit for wall or false ceiling installation.
- IVR - Vertical only recessed unit with front radiant function, for wall formwork installation.

Models
Brio-I SLIM: 10, 20, 25, 30, 40

Construction set-ups
Type of unit
2T - Single main coil.

ACCESSORIES for Brio COVER
- ➔ Formwork for recessed installation (only 2-pipe systems)
- ➔ Wall aesthetic panel for formwork, colour matt white RAL 9003.
- ➔ Ceiling aesthetic panel for formwork, colour matt white RAL 9003.
- ➔ Telescopic delivery fitting, insulated.
- ➔ Wall mounted delivery nozzle made of aluminium, with a double row of adjustable fins.

CONTROLS for Brio COVER

STANDARD controls

For on board installation
- ➔ Electronic board in combination with 3-speed thermostats
- ➔ Electronic board in combination with thermostats with 0-10V analogue output

For wall mounting installation
- ➔ Panel with room thermostat, summer/winter switch, speed switch and ON/OFF valve control.
- ➔ Electronic panel with automatic summer/winter switching for 2-pipe systems.

ADVANCED controls
- ➔ Slim-touch wall mounted control panel, with RS485 Modbus RTU interface.

For installation on machine
- ➔❖ Electronic control with continuous speed modulation only when combined with a wall mounted slim-touch panel, with master/slave control up to 31 controls.
- ➔❖ RS485 Modbus RTU serial interface

Key:
❖ Factory fitted
➔ Supplied separately

TOUCH CONTROL

SLIM-Touch panel wall-mounted.

BRIO-I SLIM - IXP-IVR				**10**	**20**	**25**	**30**	**40**
❶ Total cooling capacity [EN1397]	MAX	kW	E	0,98	1,81	2,87	3,31	3,94
	MED	kW	E	0,75	1,35	2,16	2,43	2,9
	MIN	kW	E	0,38	0,73	1,14	1,27	1,46
❷ Heating capacity (45°C) [EN1397]	MAX	kW	E	1,13	2,03	3,19	3,75	4,46
	MED	kW	E	0,81	1,48	2,32	2,75	3,11
	MIN	kW	E	0,57	0,75	0,92	1,48	1,79
❸ Heating capacity (50°C)	MAX	kW	E	1,39	2,46	3,89	4,51	5,43
	MED	kW	E	1,0	1,75	2,78	3,23	3,73
	MIN	kW	E	0,7	0,84	1,04	1,56	1,87
❹ Heating capacity (70°C) [EN1397]	MAX	kW		2,27	4,08	6,41	7,54	9,17
	MED	kW		1,63	2,98	4,67	5,52	6,42
	MIN	kW		1,16	1,54	1,84	2,97	3,7
❸ Heating capacity only radiant function (50°C) MVR-IVR version		kW		0,32	0,38	0,46	0,55	0,66
❹ Heating capacity only radiant function (70°C) MVR-IVR version		kW		0,54	0,67	0,78	0,92	1,08
Air flow speed	MAX	m³/h		162	320	461	576	648
	MED	m³/h		113	252	367	453	494
	MIN	m³/h		55	155	248	370	426
Sound power	MAX	dB(A)	E	50	51	52	54	54
	MED	dB(A)	E	42	43	45	46	46
	MIN	dB(A)	E	32	33	34	35	35
❻ Sound pressure	MAX	dB(A)		41	42	43	45	45
	MED	dB(A)		33	34	36	37	37
	MIN	dB(A)		23	24	25	26	26
Absorbed power	MAX	W	E	11	19	20	28	35
	MED	W	E	9	10	13	15	17
	MIN	W	E	7	7	7	8	8
Electrical supply		V-ph-Hz		230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
DIMENSIONS AND WEIGHT				**10**	**20**	**25**	**30**	**40**
W - Width IXP-IVR - 2T		mm		525	725	925	1125	1325
H - Height IXP-IVR - 2T		mm		590	590	590	590	590
D - Depth IXP-IVR- 2T		mm		126	126	126	126	126
Weight IXP-IVR - 2T		kg		9	12	15	18	21
COVER for BRIO-I Slim - 2T				**10**	**20**	**25**	**30**	**40**
KCASE - 2T formwork	WxHxD	mm		715x725x142	915x725x142	1115x725x142	1315x725x142	1515x725x142
KCASE - 2T formwork	Weight	kg		5	6	7	8	9
KPCASEV - KPCASEO - 2T panel	WxHxD	mm		775x755x10	975x755x10	1175x755x10	1375x755x10	1575x755x10
KPCASEV - KPCASEO - 2T panel	Weight	kg		3	3,5	4	4,5	5
KGMD - 2T delivery nozzle	WxHxD	mm		335x130x6	535x130x6	735x130x6	935x130x6	1135x130x6

Data at the following conditions:
❶ Air: 27°C D.B.; 19°C W.B. - Water: 7/12°C.
❷ Air: 20°C - Water: 45/40°C.
❸ Air: 20°C - Water: 50°C, flow rate as in cooling.
❹ Air: 20°C - Water: 70/60°C.
❻ For room volume equal to 100 m³ and reverberation time = 0.5 sec.
E Eurovent certified performance.
For the selection with Air'Suite filter, refer to the UP-TO-DATE selection Software.

KCASE formwork and KPVCASE cover panelV

KCASE formwork
KPXCASE covering panel
KGMD delivery nozzle
KRDM and KRTM fittings

MXP for horizontal installation

MXT for horizontal installation

MVP-MXP for vertical installation

MVP-MXP+feet

MVT-MXT for vertical installation

IXP-IVR with KCASE formwork and KPCASEV cover panel

YARDY

Sensational silence

Also suitable for relaxation and rest areas, Yardy fan coils are designed to provide unparalleled acoustic comfort: the careful aeraulic design makes them barely audible when operating.

Floor, ceiling, recessed wall or false ceiling installation.

YARDY-I EV3 Brushless Inverter motor.

YARDY EV3 Traditional motor.

A range that is designed with the aim of improving the quality of the internal environment, through climate control, sound levels and air quality (IAQ) with innovative solutions, such as the Air'Suite® biocide filter.

New Air'Suite® filters

The Air'Suite ® biocide filter is a new exclusive wide-spectrum filtration system capable of breaking down microbiological contamination, without installing additional components. Air'Suite® filters the room air, making it healthy and clean, and breaks down microbiological agents, such as bacteria, mould and viruses, reaching a new IAQ standard (Indoor Air Quality) for indoor comfort.

The new touch control

LIT-Touch is the new control platform for fan coils, completely renewed to improve the user's experience. The new touch panel, with its unique and innovative design, adapts to any furnishing requirement thanks to the two colour options: glossy black or pearl white.

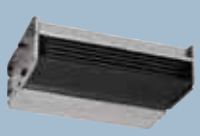
Full savings with EC motors

The ranges are available in versions with an AC motor and EC brushless motor, which reduces consumption to over 50% compared to a traditional motor.

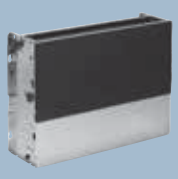
Total flexibility

Yardy fan coils solve every comfort requirement thanks to the several versions, with exposed, built-in and ductable furniture, to the full advantage of installation flexibility, in every destination and type of system.

IXP for horizontal installation



IVP-IXP for vertical installation



IVF for vertical installation

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

Air'Suite filter

- Inactivation of bioburden
- Minimum energy impact
- No additional maintenance
- Immediate retrofitting on existing systems
- Disposal without the risk of contamination

A new way to handle the air that we breathe every day indoors.
A new concept of biocidal filtration that allows for the removal of microbiological contamination without requiring additional solutions to be installed or existing systems to be modified.
The Air'Suite® filter is the result of the studies, expertise and know-how gained over the years by Rhoss spa and Labiotest srl, in their respective professional fields and underlined by an agreement entered into by the two companies for the exclusive distribution of the new Air'Suite® filters for HVAC applications.

Healthy environment

Living in a clean environment is a concept closely linked to breathing "clean air".
On average, each person inhales air 16,000 times a day, so breathing in a healthy environment allows for healthy living. But what does clean air mean? Healthy?
It means guaranteeing adequate thermo-hygrometric conditions, but mainly the absence of conditions that directly or indirectly affect our mental and physical state, such as odours and pathogens. In other words, a high standard of IAQ (Indoor Air Quality).
Today, indoors, this need is threatened by the intensification of external pollution (promiscuity of production areas, vehicle traffic, etc.) and increased air recirculation in environments where energy saving is strategic and/or where there is no easy availability of primary air.

VEHICLE TRAFFIC

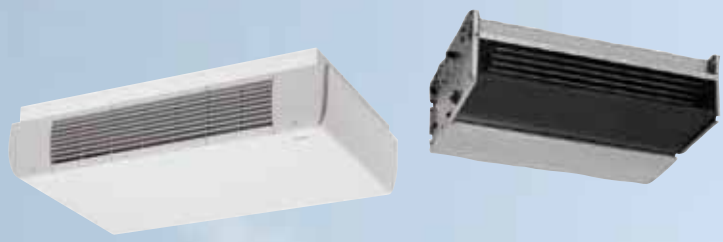
PRODUCTION FACILITIES

BIOLOGICAL CONTAMINANTS

UNPLEASANT ODOURS

Biocidal filtration

air'suite® by Labiotest



Biocidal filtration

Biocidal filtration refers to a combination of granular filtration (conventional) and inactivation of the bioburden (innovative) on the same amount of air which passes through the same filtration medium.
This process has been achieved by using a new, appropriately functionalised bio-polymer, characterised by:

- wide availability in nature;
- biocompatibility;
- non-toxicity;
- intrinsic infection preventing properties.

Fields of application

There are no limits of application, however, fields and contexts that are particularly sensitive to indoor air quality, in which the new line of Air'Suite® filters finds its natural application are:

- Hospitals, clinics and nursing homes;
- Offices, meeting rooms and conference rooms;
- Waiting rooms, outpatient clinics;
- Restaurants, cafés, bars;
- Hot baths, spas;
- Swimming pools, gyms;
- Schools and kindergartens, etc.

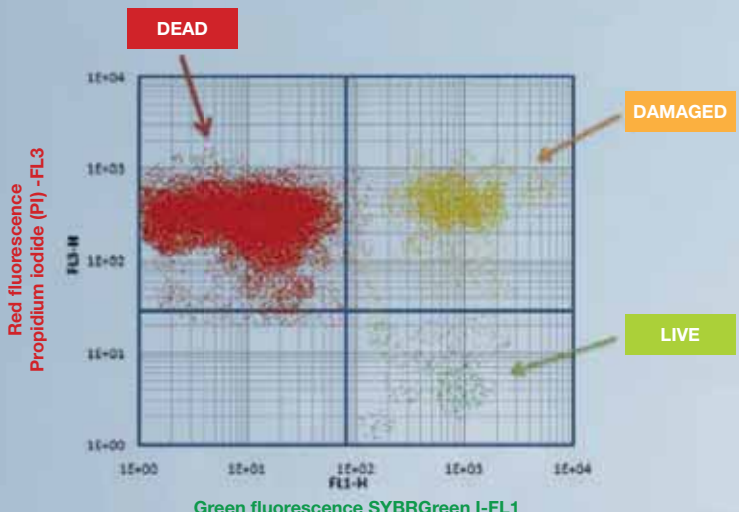
Research, development and certifications

The Air'Suite® filters were tested with new, state-of-the-art techniques that measure the actual biocide capacity on the filter surface and that do not make use of cultures but count each organism/cell and its integrity or ability to reproduce.
The bacteria removal efficiency was then measured through a study protocol with IRSA-CNR certified flow cytometry techniques on a sample of the contaminated filter.
The resulting efficiencies exceed 50% of “instant” removal and 100% within 30 hours after contamination.

Available types of filters

The flat Air’Suite® is a filter with filtering grade G2, pursuant to EN 779:2012 ISO Coarse 40% pursuant to EN ISO16890; it is available as an accessory for Yardy, Yardy-I, YardyDuct, Yardy-ID, and Yardy HP range versions with a cabinet, recessed and ductable (MVP-MXP-IVP-IVF-IXP-CXP).
Air’Suite® is supplied as an accessory already fitted in the unit or separately. In this case, the standard filter must simply be replaced.
Alternatively, duct installations are provided with a frame and filter that can be removed in any direction.

-> For the selection of fan coils with an Air’Suite® filter and their relative performance, refer to the selection software UP TO DATE.



Biological removal efficiency of Air'Suite Filter

Web code: **YARI3**
Web code accessories: **ACMEC**
Web code controls: **ACREG**

Fan coils with EC motor

YARDY-I EV3

Cooling capacity: 1.9÷8.4 kW - Heating capacity: 2.5÷11.8 kW

INVERTER

air'suite

- New white RAL 9003 for versions with cabinet
- New touch controls
- Air'Suite biocide filter for healthier and cleaner air in indoor environments
- Enhanced performance with 4-row coil
- Consumption reduced by 50% with EC motor
- Continuous fan speed regulation

TOUCH CONTROL

Panel LIT-Touch wall installation and on board.

LIT-Touch remote control and wall mounting receiver.

Floor and ceiling fan coil units with cabinet for recessed wall or false ceiling installation

Construction features

- Heat exchanger: with finned coil with left side connections reversible to the right.
- Centrifugal fan with an inverter controlled electronic brushless motor and continuous speed adjustment.
- Cabinet version structure: covering cabinet in pre-painted sheet steel, RAL9003, complete with a regenerable filter, ABS polymer grilles and a natural condensate drain pan.
- Recessed version structure: in galvanised sheet steel, complete with a natural condensate drain pan and regenerable filter.

Versions

- MVP - Vertical unit with cabinet equipped with lower air inlet and upper delivery for wall mounting installation or with feet on the ground.
- MVT - Vertical unit with cabinet equipped with front air inlet and upper delivery for floor installation.
- MXP - Horizontal/vertical unit with cabinet, equipped with lower air inlet and upper delivery, for ceiling installation, wall mounted or with feet on the ground.
- MXT - Horizontal/vertical unit with cabinet, equipped with front air inlet and upper delivery, for ceiling or floor installation.
- IVP - Recessed vertical unit equipped with lower air inlet and upper delivery for wall mounting installation.
- IVF - Recessed vertical unit equipped with lower air inlet and front delivery for wall mounting installation.
- IXP - Horizontal/vertical unit equipped with lower air inlet and upper delivery for false ceiling or recessed wall installation.

Construction set-ups

Type of unit

2T - Single main coil.
4T - Double main coil and additional.

ACCESSORIES

➔♦ Additional water heating coil for 4-pipe systems.
➔♦ Electrical resistance.
➔♦ 2 -way ON/OFF electrovalves for 2 and 4-pipe systems.
➔♦ 3 -way ON/OFF electrovalves for 2 and 4-pipe systems.
➔♦ 4-way ON/OFF electrovalves for 4-pipe systems with single main coil.
➔♦ Auxiliary condensate drain pan.
➔♦ Air'Suite biocide filter.
♦ Electrical box for connection terminal block.
♦ Air inlet flange: Ø10cm or Ø12cm.
➔ Manual damper.
➔ Motorised damper.
➔ Back in view.
➔ Rear closing panel.
➔ Rear closing panel with grille and filter.
➔ Support feet with pipe cover.
➔ Flanged frame for duct connection.
➔ Frame with Air'Suite biocide filter (G2) that can be extracted in any direction.
➔ Delivery straight fitting.
➔ 90° delivery and inlet fitting.
➔ Telescopic outlet/inlet fitting.
➔ Inlet grille with filter.
➔ Delivery grille.
➔ Formwork for recessed wall or false ceiling installation.
➔ Aesthetic panel for wall mounted formwork, with air delivery and return grille.
➔ Aesthetic panel for formwork, with air inlet grille.
➔ Delivery nozzle made of aluminium, with a double row of adjustable fins.
➔ Anti-vibration fitting for delivery/inlet duct connection.
➔ Intake/outlet plenum with round nozzles.

CONTROLS

STANDARD controls

For wall mounting installation

➔ Electronic panel with display and RS485 serial interface, semi-recessed in wall.

Advanced LIT-TOUCH controls

☒ Flush LIT-Touch control panel in glossy black or pearl white for wall mounting installation.
➔ Wall mounted LIT-Touch remote control and receiver with air temperature probe and operation LED.
➔♦ LIT-Touch control with air temperature probe for on board installation.

For on board **installation**

➔♦ LIT-Touch electronic control for 2-pipe systems, with 2 pipes with electrical resistance or 4 pipes, complete with a minimum water temperature probe, ON/OFF valve control and integrated master/slave function up to a total of 15 units.
➔♦ Additional board with 2 digital outputs that can be configured.
➔♦ On board air temperature probe.
➔♦ RS485 serial board for serial communication with other devices (Modbus RTU protocol).

Key: ♦ Factory fitted
➔ Supplied separately

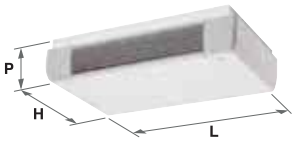
YARDY-I EV3 MVP-MVT-MXP-MXT-IVP-IVF-IXP				20	24	30	34	45	48	60	74	80	88
❶ Total cooling capacity [EN1397]	MAX	kW	E	1,86	2,24	2,97	3,37	4,11	4,6	6,28	7,33	7,94	8,4
	MED	kW	E	1,44	1,68	2,33	2,75	3,05	3,49	4,6	5,24	5,87	6,32
	MIN	kW	E	0,75	0,8	1,08	1,34	1,53	1,73	1,78	2,1	2,1	2,25
❷ Heating capacity (45°C) [EN1397]	MAX	kW	E	2,1	2,18	3,27	3,41	4,47	4,65	7,13	7,41	9,67	10,07
	MED	kW	E	1,48	1,57	2,52	2,6	3,13	3,27	5,12	5,31	7,15	7,43
	MIN	kW	E	0,77	0,81	1,2	1,26	1,5	1,57	1,88	1,94	2,63	2,74
❸ Heating capacity (50°C)	MAX	kW	E	2,47	2,6	3,87	4,07	5,3	5,54	8,38	8,81	11,29	11,77
	MED	kW	E	1,77	1,88	2,99	3,14	3,74	3,93	6,07	6,37	8,39	8,75
	MIN	kW	E	0,92	0,97	1,42	1,52	1,81	1,9	2,25	2,36	3,07	3,22
❹ Heating capacity (70°C) [EN1397]	MAX	kW		4,2	4,36	6,56	6,85	8,96	9,31	14,28	14,86	19,35	20,14
	MED	kW		2,98	3,14	5,06	5,26	6,28	6,56	10,3	10,77	14,35	14,91
	MIN	kW		1,56	1,64	2,44	2,56	3,06	3,19	3,87	3,98	5,37	5,6
❺ Heating capacity of additional coil (65°C) [EN1397]	MAX	kW	E	1,95	2,08	2,94	2,8	3,36	3,2	5,64	5,37	6,5	6,17
	MED	kW	E	1,66	1,6	2,34	2,22	2,84	2,7	4,67	4,45	5,39	5,14
	MIN	kW	E	0,87	0,83	1,3	1,23	1,53	1,46	2,17	2,06	2,51	2,4
❹ Heating capacity of additional coil (70°C) [EN1397]	MAX	kW	E	2,21	2,36	3,33	3,17	3,83	3,64	6,38	6,08	7,37	6,98
	MED	kW	E	1,92	1,84	2,65	2,52	3,3	3,15	5,3	5,04	6,12	5,83
	MIN	kW	E	1,01	0,96	1,48	1,41	1,79	1,7	2,5	2,38	2,9	2,76
Air flow speed	MAX	m³/h		331	331	523	523	645	645	1235	1235	1503	1458
	MED	m³/h		230	230	400	400	450	450	780	780	965	965
	MIN	m³/h		97	97	167	167	198	198	256	256	300	300
Sound power	MAX	dB(A)	E	48	48	50	50	51	51	62	62	66	66
	MED	dB(A)	E	40	40	43	43	42	42	50	50	56	56
	MIN	dB(A)	E	29	29	29	29	29	29	30	30	32	32
❻ Sound pressure	MAX	dB(A)		39	39	41	41	42	42	53	53	57	57
	MED	dB(A)		31	31	34	34	33	33	41	41	47	47
	MIN	dB(A)		20	20	20	20	20	20	21	21	23	23
Absorbed power	MAX	W	E	23	25	26	28	39	42	89	95	136	146
	MED	W	E	13	14	15	16	14	15	28	30	52	56
	MIN	W	E	6	6	6	6	7	8	7	7	9	10
Electrical supply		V-ph-Hz		230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
DIMENSIONS AND WEIGHT				**20**	**24**	**30**	**34**	**45**	**48**	**60**	**74**	**80**	**88**
L - MXP-MXT-MVP-MVT width		mm		800	800	1000	1000	1200	1200	1500	1500	1500	1500
L - IVP-IXP-IVF width		mm		550	550	750	750	950	950	1250	1250	1250	1250
H - MXP-MXT-MVP-MVT height		mm		570	570	570	570	570	570	570	570	570	570
H - IVP-IXP-IVF height		mm		545	545	545	545	545	545	545	545	545	545
MVP-MVT-MXP-MXT Feet height		mm		100	100	100	100	100	100	100	100	100	100
P - MXP-MXT-MVP-MVT Depth		mm		220	220	220	220	220	220	220	220	220	220
P - IVP-IXP-IVF Depth		mm		212	212	212	212	212	212	212	212	212	212
MXP-MXT-MVP-MVT Weight		kg		20	20,5	21	22	28	29	35	36	37	38
IVP-IXP-IVF Weight		kg		16,5	17	20,5	21,5	25,5	27	34,5	35,5	36,5	37,5

For the selection with Air'Suite filter, refer to the UP-TO-DATE selection Software.

Data at the following conditions:

❶ Air: 27°C D.B.; 19°C W.B. - Water: 7/12°C.
❷ Air: 20°C - Water: 45/40°C.
❸ Air: 20°C - Water: 50°C, flow rate as in cooling.
❹ Air: 20°C - Water: 70/60°C.
❺ Air: 20°C - Water: 65/55°C.
❻ For room volume equal to 100 m³ and reverberation time = 0.5 sec.
E Eurovent certified performance.
Performance refers to the motor's input signal: 10V - 6V - 1V at MAX - MED - MIN speed.
YARDY-I EV3 24 - 34 - 48 - 74 - 88 with oversized 4-row coil.

MXP for horizontal installation

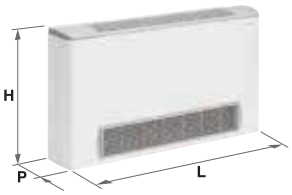


MXT for horizontal installation

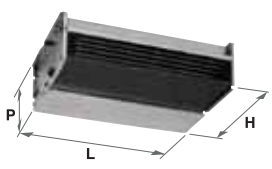
MVP-MXP for vertical installation

MVP-MXP+feet

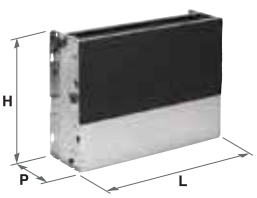
MVT-MXT for vertical installation



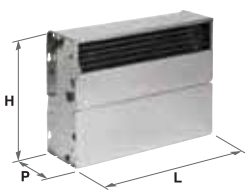
IXP for horizontal installation



IVP-IXP for vertical installation



IVF for vertical installation



Web code: **YARV3**
Web code accessories: **ACMEC**
Web code controls: **ACREG**

Fan coils
YARDY EV3

Cooling capacity: 1.1-8.3 kW - Heating capacity: 1.6-11.7 kW

air'suite

- New white RAL 9003 for versions with cabinet
- New touch controls
- Air'Suite biocide filter for healthier and cleaner air in indoor environments
- Enhanced performance with 4-row coil
- 6-speed fan
- Pre-fitted accessories and controls

TOUCH CONTROL

Panel LIT-Touch wall installation and on board.

LIT-Touch remote control and wall mounting receiver.

Floor and ceiling fan coil units with cabinet for recessed wall or false ceiling installation

Construction features
- Heat exchanger: with finned coil with left side connections reversible to the right.
- Centrifugal fan: 6 speeds, 3 of which are connected to the terminal block.
- Cabinet version structure: covering cabinet in pre-painted sheet steel, RAL9003, complete with regenerable filter, ABS polymer grilles and natural condensate drain pan.
- Recessed version structure: in galvanised sheet steel, complete with a natural condensate drain pan and regenerable filter.

Versions
- MVP - Vertical unit with cabinet equipped with lower air inlet and upper delivery for wall mounting installation or with feet on the ground.
- MVT - Vertical unit with cabinet equipped with front air inlet and upper delivery for floor installation.
- MXP - Horizontal/vertical unit with cabinet, equipped with lower air inlet and upper delivery, for ceiling installation, wall mounted or with feet on the ground.
- MXT - Horizontal/vertical unit with cabinet, equipped with front air inlet and upper delivery, for ceiling or floor installation.
- IVP - Recessed vertical unit equipped with lower air inlet and upper delivery for wall mounting installation.
- IVF - Recessed vertical unit equipped with lower air inlet and front delivery for wall mounting installation.
- IXP - Horizontal/vertical unit equipped with lower air inlet and upper delivery for false ceiling or recessed wall installation.

Construction set-ups
Type of unit
2T - Single main coil.
4T - Double main coil and additional.

ACCESSORIES
- ➔❖ Additional water heating coil for 4-pipe systems.
- ➔❖ Electrical resistance.
- ➔❖2 -way ON/OFF electrovalves for 2 and 4-pipe systems.
- ➔❖3 -way ON/OFF electrovalves for 2 and 4-pipe systems.
- ➔❖4-way ON/OFF electrovalves for 4-pipe systems with a single main coil.
- ➔❖Auxiliary condensate drain pan.
- ➔❖Air'Suite biocide filter.
- ❖ Electrical box for connection terminal block.
- ❖ Air inlet flange: Ø10cm or Ø12cm.
- ➔ Manual damper.
- ➔ Motorised damper.
- ➔ Back in view.
- ➔ Rear closing panel.
- ➔ Rear closing panel with grille and filter.
- ➔ Support feet with pipe cover.
- ➔ Flanged frame for duct connection.
- ➔ Frame with Air'Suite biocide filter (G2) that can be extracted in any direction.
- ➔ Delivery straight fitting.
- ➔ 90° delivery and inlet fitting.
- ➔ Telescopic outlet/inlet fitting.
- ➔ Inlet grille with filter.
- ➔ Delivery grille.
- ➔ Formwork for recessed wall or false ceiling installation.
- ➔ Aesthetic panel for wall mounted formwork, with air delivery and return grille for wall mounting installation.

YARDY EV3 MVP-MVT-MXP-MXT-IVP-IVF-IXP		15	20	24	25	30	34	40	45	48	55	58	60	74	80	88
L - MXP-MXT-MVP-MVT width	mm	700	800	800	1000	1000	1000	1200	1200	1200	1500	1500	1500	1500	1500	1500
L - IVP-IXP-IVF width	mm	450	550	550	750	750	750	950	950	950	1250	1250	1250	1250	1250	1250
H - MXP-MXT-MVP-MVT height	mm	570	570	570	570	570	570	570	570	570	570	570	570	570	570	570
H - IVP-IXP-IVF height	mm	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545
MVP-MVT-MXP-MXT Feet height	mm	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
P - MXP-MXT-MVP-MVT Depth	mm	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220
P - IVP-IXP-IVF Depth	mm	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212
MXP-MXT-MVP-MVT Weight	kg	16	20	20,5	20	21	22	27	28	29	35	35	35	36	37	38
IVP-IXP-IVF Weight	kg	14,5	16,5	17	20,5	20,5	21,5	24	25,5	27	34,5	34,5	34,5	35,5	36,5	37,5

- ➔ Aesthetic panel for formwork, with air inlet grille for wall mounting or ceiling installation.
- ➔ Delivery nozzle made of aluminium, with a double row of adjustable fins.
- ➔ Anti-vibration fitting for delivery/inlet duct connection.
- ➔ Intake/outlet plenum with round nozzles.

CONTROLS

STANDARD controls

For wall mounting installation

- ➔ Panel with speed and summer/winter switch.
- ➔ Panel with room thermostat, summer/winter switch, speed switch, ON/OFF valve control and electrical resistance.
- ➔ Minimum temperature thermostat (for installation on machine).
- ➔ Electronic panel with automatic summer/winter switching for 2-pipe systems.
- ➔ Electronic panel with automatic summer/winter switching and automatic speed adjustment for 2-pipe systems with electrical resistance or 4-pipe systems.
- ➔ Electronic panel with display and RS485 serial interface, semi-recessed in wall.

For on board installation (MVP and MVT versions)

- ➔❖Panel with speed switch.
- ➔❖Panel with room thermostat, summer/winter switch and speed switch.
- ➔❖Minimum temperature thermostat.
- ➔❖Panel with room thermostat, summer/winter switch, speed switch, ON/OFF valve control and electrical resistance.
- ➔❖Electronic panel with automatic summer/winter switching for 2-pipe systems.
- ➔❖Electronic panel with automatic summer/winter switching and automatic speed adjustment for 2-pipe systems with electrical resistance or 4-pipe systems.
- ➔ Interface board to control up to 4 fan coils.

Advanced LIT-TOUCH controls

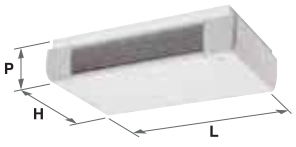
- ➔ Flush LIT-Touch control panel in glossy black or pearl white for wall mounting installation.
- ➔ Wall mounted LIT-Touch remote control and receiver with air temperature probe and operation LED.
- ➔❖ LIT-Touch control with air temperature probe for on board installation.

For on board installation

- ➔❖ LIT-Touch electronic control for 2-pipe systems, with 2 pipes with electrical resistance or 4 pipes, complete with minimum water temperature probe, ON/OFF valve control and integrated master/slave function up to a total of 15 units.
- ➔❖ Additional board with 2 digital outputs that can be configured.
- ➔❖ On board air temperature probe.
- ➔❖ RS485 serial board for serial communication with other devices (Modbus RTU protocol).

Key: ❖ Factory fitted
➔ Supplied separately

MXP for horizontal installation

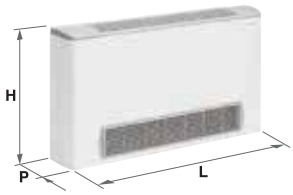


MXT for horizontal installation

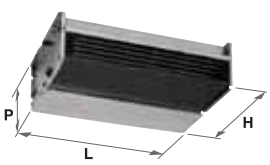
MVP-MXP for vertical installation

MVP-MXP+feet

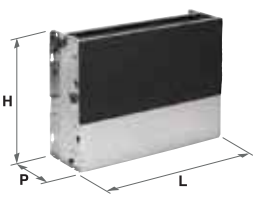
MVT-MXT for vertical installation



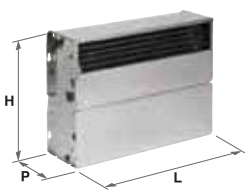
IXP for horizontal installation



IVP-IXP for vertical installation



IVF for vertical installation



Fan coils YARDY EV3

YARDY EV3 MVP-MVT-MXP-MXT-IVP-IVF-IXP			15		20		24		25		30		34		40		45		48		55		58		60		74		80		88	
❶ Total cooling capacity [EN1397]	VI	kW	1,1		1,98		2,2	•E	2,5	•E	3,21		3,28	•E	3,72		4,26	•E	4,76	•E	5,38	•E	5,9	•E	6,53	•E	6,99	•E	7,82	•E	8,25	•E
	V	kW	1,04	•E	1,76	•E	2,1		2,24		2,8	•E	3,05		3,36	•E	3,84		4,46		4,86		5,24		6,09		6,48		7,52		7,93	
	IV	kW	0,96		1,54		1,87	•E	2,02	•E	2,57		2,81	•E	2,84		3,31	•E	3,57	•E	4,4	•E	4,76	•E	5,42	•E	6,01		7,12		7,39	•E
	III	kW	0,89	•E	1,37	•E	1,68		1,69		2,46	•E	2,55		2,63	•E	2,99		3,35		3,9		4,23		5,26		5,68	•E	6,77	•E	7,32	
	II	kW	0,76		1,18		1,45	•E	1,62	•E	2,07		2,25	•E	2,47		2,81		3,11		3,34	•E	3,57	•E	4,4		5,05		6,31		6,83	
	I	kW	0,64	•E	1,13	•E	1,35		1,38		1,78	•E	1,98		2,06	•E	2,49	•E	2,85	•E	2,69		3,03		4,22	•E	4,63	•E	6,24	•E	6,49	•E
❷ Heating capacity (45°C) [EN1397]	VI	kW	1,38		2,26		2,36	•E	2,97	•E	3,59		3,77	•E	4,37		4,68	•E	4,89	•E	6,13	•E	7,18	•E	7,53	•E	7,89	•E	8,71	•E	10,04	•E
	V	kW	1,21	•E	1,97	•E	2,04		2,68		3,29	•E	3,45		3,79	•E	4,27		4,45		5,46		6,74		7,04		7,37		8,25		9,61	
	IV	kW	1,08		1,62		1,73	•E	2,3	•E	2,85		2,98	•E	3,22		3,47	•E	3,64	•E	4,89	•E	5,93	•E	6,2	•E	6,48		8,16		9,12	•E
	III	kW	1,06	•E	1,47	•E	1,52		1,94		2,66	•E	2,79		2,98	•E	3,21		3,34		4,13		5,81		6,02		6,29	•E	7,8	•E	9	
	II	kW	0,92		1,26		1,44	•E	1,85	•E	2,26		2,35	•E	2,77		2,81		2,93		3,57	•E	5,12	•E	5,29		5,49		7,12		8,22	
	I	kW	0,7	•E	1,24	•E	1,27		1,57		2,02	•E	2,2		2,52	•E	2,59	•E	2,69	•E	2,94		4,6		4,71	•E	4,91	•E	7,05	•E	8,15	•E
❸ Heating capacity (50°C)	VI	kW	1,59		2,65		2,78	•E	3,47	•E	4,21		4,42	•E	5,11		5,51	•E	5,79	•E	7,17	•E	8,34	•E	8,78	•E	9,22	•E	10,19	•E	11,68	•E
	V	kW	1,4	•E	2,31	•E	2,43		3,14		3,85	•E	4,04		4,45	•E	5,03		5,28		6,39		7,81		8,22		8,63		9,67		11,17	
	IV	kW	1,25		1,91		2,06	•E	2,71	•E	3,36		3,53	•E	3,79		4,11	•E	4,32	•E	5,74	•E	6,89	•E	7,25	•E	7,61		9,55		10,62	•E
	III	kW	1,23	•E	1,74	•E	1,83		2,28		3,14	•E	3,3		3,5	•E	3,79		3,98		4,87		6,69		7,04		7,39	•E	9,13	•E	10,49	
	II	kW	1,07		1,49		1,72	•E	2,18	•E	2,67		2,8	•E	3,26		3,35		3,52		4,22	•E	5,85	•E	6,16		6,47		8,35		9,6	
	I	kW	0,82	•E	1,46	•E	1,53		1,84		2,37	•E	2,59		2,93	•E	3,08	•E	3,23	•E	3,47		5,24		5,52	•E	5,8	•E	8,27	•E	9,49	•E
❹ Heating capacity (70°C) [EN1397]	VI	kW	2,74		4,52		4,71	•	5,94	•	7,17		7,54	•	8,75		9,34	•	9,77	•	12,25	•	14,33	•	15,02	•	15,74	•	17,38	•	20,04	•
	V	kW	2,4	•	3,93	•	4,08		5,37		6,58	•	6,88		7,59	•	8,53		8,88		10,9		13,46		14,05		14,72		16,47		19,16	
	IV	kW	2,13		3,23		3,45	•	4,61	•	5,71		5,97	•	6,46		6,93	•	7,27	•	9,78	•	11,84	•	12,38	•	12,93		16,31		18,22	•
	III	kW	2,11	•	2,95	•	3,06		3,88		5,32	•	5,61		5,96	•	6,4		6,69		8,26		11,61		12,02		12,58	•	15,6	•	17,99	
	II	kW	1,84		2,54		2,89	•	3,71	•	4,53		4,76	•	5,57		5,63		5,89		7,17	•	10,25	•	10,56		11,06		14,24		16,44	
	I	kW	1,4	•	2,5	•	2,57		3,15		4,06	•	4,44		5,05	•	5,19	•	5,42	•	5,97		9,27		9,45	•	9,95	•	14,1	•	16,29	•
❺ Heating capacity of additional coil (65°C) [EN1397]	VI	kW	1,37		2,09		1,78	•E	2,7	•E	3,2		3,05	•E	3,68		3,5	•E	3,34	•E	5,46	•E	5,13	•E	5,7	•E	5,45	•E	6,51	•E	6,27	•E
	V	kW	1,14	•E	1,92	•E	1,69		2,61		2,69	•E	2,56		2,94	•E	3,38		3,22		5,15		5		5,56		5,28		6,46		6,2	
	IV	kW	1,19		1,81		1,46	•E	2,28	•E	2,61		2,48	•E	2,9		2,96	•E	2,82	•E	4,6	•E	4,68	•E	5,21	•E	4,96		6,36		6,07	•E
	III	kW	0,96	•E	1,51	•E	1,33		2		2,28	•E	2,17		2,81	•E	2,79		2,65		4,27		4,34		4,91		4,62	•E	5,9	•E	5,92	
	II	kW	0,96		1,4		1,2	•E	1,84	•E	2,15		2,04	•E	2,76		2,74		2,6		3,58	•E	3,72	•E	4,71		3,96		5,7		5,75	
	I	kW	0,79	•E	1,29	•E	1,16		1,69		1,93	•E	1,83		2,62	•E	2,21	•E	2,15	•E	3,16		3,25		4,22	•E	3,53	•E	5,3	•E	5,28	•E
❹ Heating capacity of additional coil (70°C) [EN1397]	VI	kW	1,49		2,37		2,01	•E	3,06	•E	3,62		3,45	•E	4,18		3,98	•E	3,79	•E	6,2	•E	5,81	•E	6,45	•E	6,15	•E	7,36	•E	7,08	•E
	V	kW	1,33	•E	2,2	•E	1,93		2,95		3,04	•E	2,9		3,46	•E	3,84		3,66		5,83		5,66		6,29		5,98		7,31		7,01	
	IV	kW	1,29		2,09		1,7	•E	2,59	•E	2,95		2,8	•E	3,36		3,46	•E	3,27	•E	5,22	•E	5,3	•E	5,9	•E	5,61		7,2		6,86	•E
	III	kW	1,12	•E	1,75	•E	1,56		2,27		2,58	•E	2,46		3,33	•E	3,25		3,07		4,84		4,92		5,57		5,23	•E	6,69	•E	6,7	
	II	kW	1,04		1,63		1,4	•E	2,12	•E	2,43		2,31	•E	3,26		3,2		3,02		4,16	•E	4,25	•E	5,34		4,48		6,46		6,51	
	I	kW	0,91	•E	1,5	•E	1,34		1,92		2,19	•E	2,06		3,07	•E	2,59	•E	2,53	•E	3,63		3,73		4,78	•E	3,99	•E	6,02	•E	5,98	•E
Air flow speed	VI	m³/h	229		339		339	•	484	•	547		547	•	676		681	•	681	•	1077	•	1077	•	1235	•	1235	•	1480	•	1480	•
	V	m³/h	209	•	288	•	288		405		483	•	483		587	•	627		627		916		916		1109		1109		1388		1388	
	IV	m³/h	183		238		238	•	339	•	434		434	•	472		474	•	474	•	802	•	802	•	948	•	948		1220		1220	•
	III	m³/h	163	•	207	•	207		281		383	•	383		419	•	431		431		662		662		882		882	•	1171	•	1171	
	II	m³/h	138		177		177	•	252	•	329		321	•	390		392		392		537	•	537	•	757		757		1031		1031	
	I	m³/h	100	•	155	•	155		217		281	•	281		365	•	338	•	338	•	420		420		672	•	672	•	994	•	994	•
Sound power	VI	dB(A)	46		48		48	•E	48	•E	50		50	•E	51		52	•E	52	•E	58	•E	58	•E	62	•E	62	•E	66	•E	66	•E
	V	dB(A)	43	•E	44	•E	44		42		46	•E	47		48	•E	50		50		56		56		60		60		65		65	
	IV	dB(A)	40		41		40	•E	38	•E	43		43	•E	43		43	•E	43	•E	52	•E	54	•E	56	•E	56		62		62	•E
	III	dB(A)	37	•E	38	•E	35		33		40	•E	40		40	•E	41		41		47		47		54		54	•E	61	•E	61	
	II	dB(A)	32		34		32	•E	30	•E	36		36	•E	38		38		38		41	•E	41	•E	50		50		59		59	
	I	dB(A)	29	•E	30	•E	31		26		35	•E	34		35	•E	35	•E	35	•E	36		36		48	•E	48	•E	57	•E	57	•E
❻ Sound pressure	VI	dB(A)	37		39		39	•	39	•	41		41	•	42		43	•	43	•	49	•	49	•	53	•	53	•	57	•	57	•
	V	dB(A)	34	•	35	•	35		33		37	•	38		39	•	41		41		47		47		51		51		56		56	
	IV	dB(A)	31		32		31	•	29	•	34		34	•	34		34	•	34	•	43	•	45	•	47	•	47		53		53	•
	III	dB(A)	28	•	29	•	26		24		31	•	31		31	•	32		32		38		38		45		45	•	52	•	52	
	II	dB(A)	23		25		23	•	21	•	27		27	•	29		29		29		32	•	32	•	41		41		50		50	
	I	dB(A)	20	•	21	•	22		17		26	•	25		26	•	26	•	26	•	27		27		39	•	39	•	48	•	48	•
Absorbed power	VI	W	40		40		41	•E	45	•E	60		65	•E	72		70	•E	76	•E	115	•E	145	•E	161	•E	172	•E	184	•E	197	•E
	V	W	39	•E	36	•E	32		34		54	•E	58		58	•E	61		66		95		122		130		133		173		185	
	IV	W	31		25		25	•E	26	•E	36		39	•E	42		41	•E	44	•E	81	•E	102	•E	117	•E	125		142		152	•E
	III	W	28	•E	23	•E	21		22		31	•E	33		34	•E	36		39		66		83		109		117	•E	133	•E	142	
	II	W	23		17		16	•E	17	•E	27		27	•E	33		31		33		51	•E	64	•E	95		102		124		133	
	I	W	17	•E	15	•E	14		16		25	•E	25		28	•E	28	•E	30	•E	41		44		92	•E	98	•E	116	•E	124	•E
Electrical supply		V-ph-Hz	230-1-50																													

Data at the following conditions:

❶ Air: 27°C D.B.; 19°C W.B. - Water: 7/12°C.

❷ Air: 20°C - Water: 45/40°C.

❸ Air: 20°C - Water: 50°C, flow rate as in cooling.

❹ Air: 20°C - Water: 70/60°C.

❺ Air: 20°C - Water: 65/55°C.

❻ For room volume equal to 100 m³ and reverberation time = 0.5 sec.

• Wired speed in terminal block.

E Eurovent certified performance.
Yardy EV3 24 - 34 - 48 - 74 - 88 with oversized 4-row coil.

For the selection with Air'Suite filter, refer to the UP-TO-DATE selection Software.

COVER

Installation solutions with formwork and covering panels on the wall or on the ceiling. A simple and elegant way to hide the visible fan coil, eliminate clutter and free the wall.

New concealed solutions

COVER allows for the recessed installation of the YARDY, YARDY-I and Brio-I Slim fan coils and covering with flush aesthetic finishing panels, in matt white RAL 9003.
The wall solution includes wall-mounted formwork and a covering panel consisting of a frame, a grille with fixed inlet fins and an air outlet opening with an adjustable 180° flap.
The formwork requires the necessary technical space for easy installation of the fan coil and comes complete with an internal grille, which prevents access to the technical compartment, for total safety of use.

New Air'Suite® filters

The Air'Suite® biocide filter, which is available for Yardy with a COVER, is a new exclusive wide-spectrum filtration system capable of breaking down microbiological contamination, without installing additional components.
Air'Suite® filters the room air, making it healthy and clean, and breaks down microbiological agents, such as bacteria, mould and viruses, reaching a new IAQ standard (Indoor Air Quality) for indoor comfort.

COVER for Yardy is available in 3 sizes for 2 and 4-pipe systems; COVER for Brio-I Slim is available in 5 sizes for 2-pipe systems, also with a front radial effect.

Web code: **YARV3** - **YARI3**
Web code accessories: **ACMEC**
Web code controls: **ACREG**

Fan coils
COVER for YARDY

Cooling capacity: 1.8÷4.8 kW - Heating capacity: 2.3÷5.8 kW

INVERTER

airsuite

- **Concealed fan coil installation**
- **Wall-flush aesthetic cover panel in white RAL 9003**
- **Recessed wall or false ceiling installation**

TOUCH CONTROL

Wall mounted LIT-Touch panel.

LIT-Touch remote control and wall mounting receiver.

Installation solutions with formwork and covering panels on the wall or on the ceiling

Yardy EV3 and Yardy-I EV3 - Versions
- IVP - Recessed vertical unit equipped with lower air inlet and upper delivery for wall mounting installation.
- IXP - Horizontal/vertical unit equipped with lower air inlet and upper delivery for false ceiling or recessed wall installation.

Yardy-ID2 and YardyDUCT2 - Version
- CXP - Ducted recessed unit for horizontal or vertical installation (with lower return and upper delivery).

Models
Yardy-I EV3: 20, 24, 30, 34, 45, 48
Yardy EV3: 20, 24, 25, 30, 34, 40, 45, 48
Yardy-ID2: 40, 48
YardyDUCT2: 40, 48

Construction set-ups
Type of unit
2T - Single main coil.
4T - Double main coil and additional.

ACCESSORIES for Yardy COVER
- ➔ Formwork for recessed wall or false ceiling installation
- ➔ Aesthetic panel for wall mounted formwork, colour matt white RAL 9003, with air delivery and return grille for wall mounting installation (IVP and IXP version only).
- ➔ Aesthetic panel for formwork, colour matt white RAL 9003, with air inlet grille for wall mounting or ceiling installation
- ➔ Delivery nozzle made of aluminium, with a double row of adjustable fins

CONTROLS for Yardy COVER

STANDARD controls
For wall mounting installation
- ➔ Panel with speed and summer/winter switch.
- ➔ Panel with room thermostat, summer/winter switch, speed switch, ON/OFF valve control and electrical resistance.
- ➔ Minimum temperature thermostat (for installation on machine).
- ➔ Electronic panel with automatic summer/winter switching for 2-pipe systems.
- ➔ Electronic panel with automatic summer/winter switching and automatic speed adjustment for 2-pipe systems with electrical resistance or 4-pipe systems.
- ➔ Electronic panel with display and RS485 serial interface, semi-recessed in wall.

Advanced LIT-TOUCH controls
- ➔ Flush LIT-Touch control panel in glossy black or pearl white for wall mounting installation.
- ➔ Wall mounted LIT-Touch remote control and receiver with air temperature probe and operation LED.

For on board installation
- ➔❖ LIT-Touch electronic control for 2-pipe systems, with 2 pipes with electrical resistance or 4 pipes, complete with minimum water temperature probe, ON/OFF valve control and integrated master/slave function up to a total of 15 units.
- ➔❖ Additional board with 2 digital outputs that can be configured.
- ➔❖ On board air temperature probe.
- ➔❖ RS485 serial board for serial communication with other devices (Modbus RTU protocol).

YARDY-I EV3 IVP-IXP				20	24	30	34	45	48
❶ Total cooling capacity [EN1397]	MAX	kW	E	1,86	2,24	2,97	3,37	4,11	4,6
	MED	kW	E	1,44	1,68	2,33	2,75	3,05	3,49
	MIN	kW	E	0,75	0,8	1,08	1,34	1,53	1,73
❷ Heating capacity (45°C) [EN1397]	MAX	kW	E	2,1	2,18	3,27	3,41	4,47	4,65
	MED	kW	E	1,48	1,57	2,52	2,6	3,13	3,27
	MIN	kW	E	0,77	0,81	1,2	1,26	1,5	1,57
❸ Heating capacity (50°C)	MAX	kW	E	2,47	2,6	3,87	4,07	5,3	5,54
	MED	kW	E	1,77	1,88	2,99	3,14	3,74	3,93
	MIN	kW	E	0,92	0,97	1,42	1,52	1,81	1,9
❹ Heating capacity (70°C) [EN1397]	MAX	kW		4,2	4,36	6,56	6,85	8,96	9,31
	MED	kW		2,98	3,14	5,06	5,26	6,28	6,56
	MIN	kW		1,56	1,64	2,44	2,56	3,06	3,19
❺ Heating capacity of additional coil (65°C) [EN1397]	MAX	kW	E	1,95	2,08	2,94	2,8	3,36	3,2
	MED	kW	E	1,66	1,6	2,34	2,22	2,84	2,7
	MIN	kW	E	0,87	0,83	1,3	1,23	1,53	1,46
❹ Heating capacity of additional coil (70°C) [EN1397]	MAX	kW	E	2,21	2,36	3,33	3,17	3,83	3,64
	MED	kW	E	1,92	1,84	2,65	2,52	3,3	3,15
	MIN	kW	E	1,01	0,96	1,48	1,41	1,79	1,7
Air flow speed	MAX	m³/h		331	331	523	523	645	645
	MED	m³/h		230	230	400	400	450	450
	MIN	m³/h		97	97	167	167	198	198
Sound power	MAX	dB(A)	E	48	48	50	50	51	51
	MED	dB(A)	E	40	40	43	43	42	42
	MIN	dB(A)	E	29	29	29	29	29	29
❻ Sound pressure	MAX	dB(A)		39	39	41	41	42	42
	MED	dB(A)		31	31	34	34	33	33
	MIN	dB(A)		20	20	20	20	20	20
Absorbed power	MAX	W	E	23	25	26	28	39	42
	MED	W	E	13	14	15	16	14	15
	MIN	W	E	6	6	6	6	7	8
Electrical supply		V-ph-Hz		230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
DIMENSIONS AND WEIGHT				**20**	**24**	**30**	**34**	45	48
L - IVP-IXP Width		mm		550	550	750	750	950	950
H - IVP-IXP Height		mm		545	545	545	545	545	545
P - IVP-IXP Depth		mm		212	212	212	212	212	212
IVP-IXP Weight		kg		16,5	17	20,5	21,5	25,5	27
COVER for Yardy-I				**20**	**24**	**30**	**34**	45	48
KCASE formwork	WxHxD	mm		920x790x225	920x790x225	1125x790x225	1125x790x225	1325x790x225	1325x790x225
KCASE formwork	Weight	kg		13	13	15	15	17	17
KPVCASE - KPXCASE panel	WxHxD	mm		975x820x10	975x820x10	1175x820x10	1175x820x10	1375x820x10	1375x820x10
KPVCASE - KPXCASE panel	Weight	kg		9	9	10	10	11	11
KGMD delivery nozzle	WxHxD	mm		555x205x6	555x205x6	755x205x6	755x205x6	955x205x6	955x205x6

Data at the following conditions:

❶ Air: 27°C D.B.; 19°C W.B. - Water: 7/12°C.
❷ Air: 20°C - Water: 45/40°C.
❸ Air: 20°C - Water: 50°C, flow rate as in cooling.
❹ Air: 20°C - Water: 70/60°C.
❺ Air: 20°C - Water: 65/55°C.
❻ For room volume equal to 100 m³ and reverberation time = 0.5 sec.
E Eurovent certified performance.
Performance refers to the motor's input signal: 10V - 6V - 1V at MAX - MED - MIN speed.
YARDY-I EV3 24 - 34 - 48 - 74 - 88 with oversized 4-row coil.

For the selection with Air'Suite filter, refer to the UP-TO-DATE selection Software.

KCASE formwork and KPVCASE cover panel

Fan coils

COVER for YARDY

YARDY EV3 IVP-IXP			20		24		25		30		34		40		45		48	
❶ Total cooling capacity [EN1397]	VI	kW	1,98		2,2	•E	2,5	•E	3,21		3,28	•E	3,72		4,26	•E	4,76	•E
	V	kW	1,76	•E	2,1		2,24		2,8	•E	3,05		3,36	•E	3,84		4,46	
	IV	kW	1,54		1,87	•E	2,02	•E	2,57		2,81	•E	2,84		3,31	•E	3,57	•E
	III	kW	1,37	•E	1,68		1,69		2,46	•E	2,55		2,63	•E	2,99		3,35	
	II	kW	1,18		1,45	•E	1,62	•E	2,07		2,25	•E	2,47		2,81		3,11	
	I	kW	1,13	•E	1,35		1,38		1,78	•E	1,98		2,06	•E	2,49	•E	2,85	•E
❷ Heating capacity (45°C) [EN1397]	VI	kW	2,26		2,36	•E	2,97	•E	3,59		3,77	•E	4,37		4,68	•E	4,89	•E
	V	kW	1,97	•E	2,04		2,68		3,29	•E	3,45		3,79	•E	4,27		4,45	
	IV	kW	1,62		1,73	•E	2,3	•E	2,85		2,98	•E	3,22		3,47	•E	3,64	•E
	III	kW	1,47	•E	1,52		1,94		2,66	•E	2,79		2,98	•E	3,21		3,34	
	II	kW	1,26		1,44	•E	1,85	•E	2,26		2,35	•E	2,77		2,81		2,93	
	I	kW	1,24	•E	1,27		1,57		2,02	•E	2,2		2,52	•E	2,59	•E	2,69	•E
❸ Heating capacity (50°C)	VI	kW	2,65		2,78	•E	3,47	•E	4,21		4,42	•E	5,11		5,51	•E	5,79	•E
	V	kW	2,31	•E	2,43		3,14		3,85	•E	4,04		4,45	•E	5,03		5,28	
	IV	kW	1,91		2,06	•E	2,71	•E	3,36		3,53	•E	3,79		4,11	•E	4,32	•E
	III	kW	1,74	•E	1,83		2,28		3,14	•E	3,3		3,5	•E	3,79		3,98	
	II	kW	1,49		1,72	•E	2,18	•E	2,67		2,8	•E	3,26		3,35		3,52	
	I	kW	1,46	•E	1,53		1,84		2,37	•E	2,59		2,93	•E	3,08	•E	3,23	•E
❹ Heating capacity (70°C) [EN1397]	VI	kW	4,52		4,71	•	5,94	•	7,17		7,54	•	8,75		9,34	•	9,77	•
	V	kW	3,93	•	4,08		5,37		6,58	•	6,88		7,59	•	8,53		8,88	
	IV	kW	3,23		3,45	•	4,61	•	5,71		5,97	•	6,46		6,93	•	7,27	•
	III	kW	2,95	•	3,06		3,88		5,32	•	5,61		5,96	•	6,4		6,69	
	II	kW	2,54		2,89	•	3,71	•	4,53		4,76	•	5,57		5,63		5,89	
	I	kW	2,5	•	2,57		3,15		4,06	•	4,44		5,05	•	5,19	•	5,42	•
❺ Heating capacity of additional coil (65°C) [EN1397]	VI	kW	2,09		1,78	•E	2,7	•E	3,2		3,05	•E	3,68		3,5	•E	3,34	•E
	V	kW	1,92	•E	1,69		2,61		2,69	•E	2,56		2,94	•E	3,38		3,22	
	IV	kW	1,81		1,46	•E	2,28	•E	2,61		2,48	•E	2,9		2,96	•E	2,82	•E
	III	kW	1,51	•E	1,33		2		2,28	•E	2,17		2,81	•E	2,79		2,65	
	II	kW	1,4		1,2	•E	1,84	•E	2,15		2,04	•E	2,76		2,74		2,6	
	I	kW	1,29	•E	1,16		1,69		1,93	•E	1,83		2,62	•E	2,21	•E	2,15	•E
❹ Heating capacity of additional coil (70°C) [EN1397]	VI	kW	2,37		2,01	•E	3,06	•E	3,62		3,45	•E	4,18		3,98	•E	3,79	•E
	V	kW	2,2	•E	1,93		2,95		3,04	•E	2,9		3,46	•E	3,84		3,66	
	IV	kW	2,09		1,7	•E	2,59	•E	2,95		2,8	•E	3,36		3,46	•E	3,27	•E
	III	kW	1,75	•E	1,56		2,27		2,58	•E	2,46		3,33	•E	3,25		3,07	
	II	kW	1,63		1,4	•E	2,12	•E	2,43		2,31	•E	3,26		3,2		3,02	
	I	kW	1,5	•E	1,34		1,92		2,19	•E	2,06		3,07	•E	2,59	•E	2,53	•E
Air flow speed	VI	m³/h	339		339	•	484	•	547		547	•	676		681	•	681	•
	V	m³/h	288	•	288		405		483	•	483		587	•	627		627	
	IV	m³/h	238		238	•	339	•	434		434	•	472		474	•	474	•
	III	m³/h	207	•	207		281		383	•	383		419	•	431		431	
	II	m³/h	177		177	•	252	•	329		321	•	390		392		392	
	I	m³/h	155	•	155		217		281	•	281		365	•	338	•	338	•
Sound power	VI	dB(A)	48		48	•E	48	•E	50		50	•E	51		52	•E	52	•E
	V	dB(A)	44	•E	44		42		46	•E	47		48	•E	50		50	
	IV	dB(A)	41		40	•E	38	•E	43		43	•E	43		43	•E	43	•E
	III	dB(A)	38	•E	35		33		40	•E	40		40	•E	41		41	
	II	dB(A)	34		32	•E	30	•E	36		36	•E	38		38		38	
	I	dB(A)	30	•E	31		26		35	•E	34		35	•E	35	•E	35	•E
❻ Sound pressure	VI	dB(A)	39		39	•	39	•	41		41	•	42		43	•	43	•
	V	dB(A)	35	•	35		33		37	•	38		39	•	41		41	
	IV	dB(A)	32		31	•	29	•	34		34	•	34		34	•	34	•
	III	dB(A)	29	•	26		24		31	•	31		31	•	32		32	
	II	dB(A)	25		23	•	21	•	27		27	•	29		29		29	
	I	dB(A)	21	•	22		17		26	•	25		26	•	26	•	26	•
Absorbed power	VI	W	40		41	•E	45	•E	60		65	•E	72		70	•E	76	•E
	V	W	36	•E	32		34		54	•E	58		58	•E	61		66	
	IV	W	25		25	•E	26	•E	36		39	•E	42		41	•E	44	•E
	III	W	23	•E	21		22		31	•E	33		34	•E	36		39	
	II	W	17		16	•E	17	•E	27		27	•E	33		31		33	
	I	W	15	•E	14		16		25	•E	25		28	•E	28	•E	30	•E
Electrical supply		V-ph-Hz	230-1-50		230-1-50		230-1-50		230-1-50		230-1-50		230-1-50		230-1-50		230-1-50	

Data at the following conditions:

❶ Air: 27°C D.B.; 19°C W.B. - Water: 7/12°C.

❷ Air: 20°C - Water: 45/40°C.

❸ Air: 20°C - Water: 50°C, flow rate as in cooling.

❹ Air: 20°C - Water: 70/60°C.

❺ Air: 20°C - Water: 65/55°C.

❻ For room volume equal to 100 m³ and reverberation time = 0.5 sec.

• Wired speed in terminal block.

E Eurovent certified performance.

Yardy EV3 24 - 34 - 48 - 74 - 88 with oversized 4-row coil.

For the selection with Air'Suite filter, refer to the UP-TO-DATE selection Software.

KCASE formwork and KPVCASE cover panel

INVERTER

YARDY EV3 IVP-IXP			20	24	25	30	34	40	45	48
L - IVP-IXP Width		mm	550	550	750	750	750	950	950	950
H - IVP-IXP Height		mm	545	545	545	545	545	545	545	545
P - IVP-IXP Depth		mm	212	212	212	212	212	212	212	212
IVP-IXP Weight		kg	16,5	17	20,5	20,5	21,5	24	25,5	27
COVER for Yardy			**20**	**24**	**25**	**30**	**34**	**40**	**45**	**48**
KCASE formwork	WxHxD	mm	920x790x225	920x790x225	1125x790x225	1125x790x225	1125x790x225	1325x790x225	1325x790x225	1325x790x225
KCASE formwork	Weight	kg	13	13	15	15	15	17	17	17
KPVCASE - KPXCASE panel	WxHxD	mm	975x820x10	975x820x10	1175x820x10	1175x820x10	1175x820x10	1375x820x10	1375x820x10	1375x820x10
KPVCASE - KPXCASE panel	Weight	kg	9	9	10	10	10	11	11	11
KGMD delivery nozzle	WxHxD	mm	555x205x6	555x205x6	755x205x6	755x205x6	755x205x6	955x205x6	955x205x6	955x205x6

Web code: **YAID2**
Web code accessories: **ACMEC**
Web code controls: **ACREG**

Ducted fan coils with EC motor

YARDY-ID2

Cooling capacity: 3.0÷6.3 kW - Heating capacity: 3.9÷8.7 kW

INVERTER

air'suite

- Air'Suite biocide filter for healthier and cleaner air in indoor environments
- New touch controls
- Enhanced performance with 4-row coil
- Consumption reduced by 50% with EC motor
- Continuous fan speed regulation
- Horizontal and vertical installation

TOUCH CONTROL

Panel LIT-Touch wall-mounted.

LIT-Touch remote control and wall mounting receiver.

Ducted fan coils for recessed horizontal or vertical installation.

Construction features

- Heat exchanger: with finned coil with left side connections reversible to the right.
- Centrifugal fan: with an inverter controlled electronic brushless motor and continuous speed adjustment.
- Structure: made of galvanised sheet steel complete with a natural condensate drain pan and regenerable filter.

Versions

- CXP - Recessed unit for horizontal or vertical installation (with lower return and upper delivery).

Construction set-ups

Type of unit

2T - Single main coil
4T - Double main coil and additional

ACCESSORIES

➔❖ Additional water heating coil for 4-pipe systems.
➔❖ Electrical resistance.
➔❖ 2 -way ON/OFF electrovalves for 2 and 4-pipe systems.
➔❖ 3 -way ON/OFF electrovalves for 2 and 4-pipe systems.
➔❖ 4-way ON/OFF electrovalves for 4-pipe systems with single main coil.
➔❖ Auxiliary condensate drain pan.
➔❖ Air'Suite biocide filter.
❖ Electrical box for connection terminal block.
❖ Air inlet flange: Ø10cm or Ø12cm.
➔ Flanged frame for connection to intake or delivery duct.
➔ Frame with Air'Suite biocide filter (G2) that can be extracted in any direction.
➔ Delivery straight fitting.
➔ 90° delivery and inlet fitting.
➔ Telescopic outlet/inlet fitting.
➔ Inlet grille with filter.
➔ Delivery grille.
➔ Formwork for recessed wall or false ceiling installation.
➔ Aesthetic panel for formwork, with air inlet grille for wall mounting or ceiling installation.
➔ Delivery nozzle made of aluminium, with a double row of adjustable fins.
➔ Anti-vibration fitting for delivery/inlet duct connection.
➔ Intake/outlet plenum with round nozzles.

CONTROLS

STANDARD controls

For wall mounting installation

➔ Electronic panel with display and RS485 serial interface, semi-recessed in wall.

Advanced LIT-TOUCH controls

➔ Flush LIT-Touch control panel in glossy black or pearl white for wall mounting installation.
➔ Wall mounted LIT-Touch remote control and receiver with air temperature probe and operation LED.

For on board installation

➔❖ LIT-Touch electronic control for 2-pipe systems, with 2 pipes with electrical resistance or 4 pipes, complete with minimum water temperature probe, ON/OFF valve control and integrated master/slave function up to a total of 15 units.
➔❖ Additional board with 2 digital outputs that can be configured.
➔❖ On board air temperature probe.
➔❖ RS485 serial board for serial communication with other devices (Modbus RTU protocol).

Key: ❖ Factory fitted
➔ Supplied separately

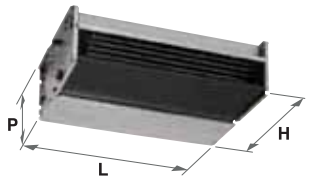
YARDY-ID2 CXP			40	48	60	74	80	88
❶ Total cooling capacity [EN1397]	MAX	kW	3,01 E	3,28 E	4,12 E	4,58 E	5,88 E	6,26 E
	MED	kW	2,7 E	2,95 E	3,5 E	4,42 E	5,32 E	5,7 E
	MIN	kW	1,19 E	1,28 E	1,58 E	1,72 E	2,03 E	2,29 E
❷ Heating capacity (45°C) [EN1397]	MAX	kW	3,29 E	3,35 E	4,73 E	4,77 E	7,37 E	7,48 E
	MED	kW	2,93 E	2,97 E	4,53 E	4,48 E	6,6 E	6,71 E
	MIN	kW	1,16 E	1,18 E	1,58 E	1,6 E	2,5 E	2,51 E
❸ Heating capacity (50°C)	MAX	kW	3,86 E	3,94 E	5,52 E	5,63 E	8,55 E	8,72 E
	MED	kW	3,44 E	3,51 E	5,23 E	5,33 E	7,69 E	7,84 E
	MIN	kW	1,39 E	1,42 E	1,9 E	1,94 E	2,92 E	2,98 E
❹ Heating capacity (70°C) [EN1397]	MAX	kW	6,55	6,66	9,44	9,62	14,71	14,93
	MED	kW	5,84	5,92	9,04	9,1	13,21	13,42
	MIN	kW	2,35	2,39	3,24	3,27	5,1	5,13
❺ Heating capacity of additional coil (65°C) [EN1397]	MAX	kW	2,75 E	2,63 E	4,17 E	4,32 E	5,7 E	5,42 E
	MED	kW	2,51 E	2,41 E	4 E	3,7 E	5,1 E	5,02 E
	MIN	kW	1,28 E	1,22 E	1,91 E	1,91 E	2,42 E	2,3 E
❹ Heating capacity of additional coil (70°C) [EN1397]	MAX	kW	3,19 E	3,03 E	4,71 E	4,89 E	6,46 E	6,14 E
	MED	kW	2,92 E	2,78 E	4,51 E	4,18 E	5,78 E	5,69 E
	MIN	kW	1,48 E	1,41 E	2,21 E	2,2 E	2,79 E	2,65 E
Available static Air flow rate / Pressure	MAX	m³/h / Pa	469 / 64 E	469 / 64 E	737 / 56 E	737 / 56 E	1010 / 65 E	949 / 64 E
	MED	m³/h / Pa	410 / 50 E	410 / 50 E	691 / 50 E	691 / 50 E	866 / 50 E	831 / 50 E
	MIN	m³/h / Pa	150 / 8 E	150 / 8 E	214 / 6 E	214 / 6 E	232 / 7 E	284 / 7 E
❻ Delivery sound power	MAX	dB(A)	56 E	56 E	57 E	57 E	58 E	58 E
	MED	dB(A)	52 E	52 E	56 E	56 E	57 E	57 E
	MIN	dB(A)	30 E	30 E	30 E	30 E	30 E	30 E
❼ Delivery sound pressure	MAX	dB(A)	47	47	48	48	49	49
	MED	dB(A)	43	43	47	47	48	48
	MIN	dB(A)	21	21	21	21	21	21
Absorbed power	MAX	W	69 E	72 E	100 E	105 E	140 E	140 E
	MED	W	60 E	63 E	80 E	84 E	100 E	100 E
	MIN	W	8 E	8 E	8 E	8 E	13 E	13 E
Electrical supply		V-ph-Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
DIMENSIONS AND WEIGHT			**40**	**48**	**60**	**74**	**80**	**88**
L - Width		mm	950	950	1250	1250	1250	1250
H - Height		mm	545	545	545	545	545	545
P - Depth		mm	212	212	212	212	212	212
Weight		kg	25,5	26,5	34,5	35,5	36,5	37,5
COVER for Yardy-ID2 CXP			**40**	**48**				
KCASE formwork	WxHxD	mm	1325x790x225	1325x790x225				
KCASE formwork	Weight	kg	17	17				
KPXCASE Panel	WxHxD	mm	1375x820x10	1375x820x10				
KPXCASE Panel	Weight	kg	11	11				
KGMD delivery nozzle	WxHxD	mm	955x205x6	955x205x6				

Data at the following conditions:

❶ Air: 27°C D.B.; 19°C W.B. - Water: 7/12°C.
❷ Air: 20°C - Water: 45/40°C.
❸ Air: 20°C - Water: 50°C, flow rate as in cooling.
❹ Air: 20°C - Water: 70/60°C.
❺ Air: 20°C - Water: 65/55°C.
❻ According to EN16583
❼ For room volume equal to 100 m³ and reverberation time = 0.5 sec.
E Eurovent certified performance.
Performance refers to the motor's input signal: 10V - 7V - 2V at MAX - MED - MIN speed.
Yardy ID2 48 - 74 - 88 with oversized 4-row coil.

For the selection with Air'Suite filter, refer to the UP-TO-DATE selection Software.

YARDY-ID2 for horizontal and vertical installation



Web code: **YADC2**
Web code accessories: **ACMEC**
Web code controls: **ACREG**

Ducted fan coils
YARDY-DUCT2

Cooling capacity: 1.9÷5.7 kW - Heating capacity: 2.4÷7.2 kW

TOUCH CONTROL

Panel LIT-Touch wall-mounted.

LIT-Touch remote control and wall mounting receiver.

air'suite

- Air'Suite biocide filter for healthier and cleaner air in indoor environments
- New touch controls
- Enhanced performance with 4-row coil
- 6-speed ductable version
- Horizontal and vertical installation
- Pre-fitted accessories and controls

Ducted fan coils for recessed horizontal or vertical installation.

Construction features
- Heat exchanger: with finned coil with left side connections reversible to the right.
- Centrifugal fan: 6 speeds connected to the terminal block.
- Structure: made of galvanised sheet steel complete with a natural condensate drain pan and regenerable filter.

Versions
- CXP - Recessed unit for horizontal or vertical installation (with lower return and upper delivery).

Construction set-ups

Type of unit
2T - Single main coil.
4T - Double main coil and additional.

ACCESSORIES
→◆ Additional water heating coil for 4-pipe systems.
→◆ Electrical resistance.
→◆ 2-way ON/OFF electrovalves for 2 and 4-pipe systems.
→◆ 3-way ON/OFF electrovalves for 2 and 4-pipe systems.
→◆ 4-way ON/OFF electrovalves for 4-pipe systems with single main coil.
→◆ Auxiliary condensate drain pan.
→◆ Air'Suite biocide filter.
◆ Electrical box for connection terminal block.
◆ Air inlet flange: Ø10cm or Ø12cm.
→ Flanged frame for connection to intake or delivery duct.
→ Frame with Air'Suite biocide filter (G2) that can be extracted in any direction.
→ Delivery straight fitting.
→ 90° delivery and inlet fitting.
→ Telescopic outlet/inlet fitting.
→ Inlet grille with filter.
→ Delivery grille.
→ Formwork for recessed wall or false ceiling installation.
→ Aesthetic panel for formwork, with air inlet grille for wall mounting or ceiling installation.
→ Delivery nozzle made of aluminium, with a double row of adjustable fins.
→ Anti-vibration fitting for delivery/inlet duct connection.
→ Intake/outlet plenum with round nozzles.

CONTROLS

STANDARD controls
For wall mounting installation
→ Panel with speed and summer/winter switch.
→ Panel with room thermostat, summer/winter switch, speed switch, ON/OFF valve control and electrical resistance.
→ Minimum temperature thermostat (for installation on machine).
→ Electronic panel with automatic summer/winter switching for 2-pipe systems.
→ Electronic panel with automatic summer/winter switching and automatic speed adjustment for 2-pipe systems with electrical resistance or 4-pipe systems.
→ Interface board to control up to 4 fan coils (for on board installation).
→ Electronic panel with display and RS485 serial interface, semi-recessed in wall.

Advanced LIT-TOUCH controls
→ Flush LIT-Touch control panel in glossy black or pearl white for wall mounting installation.
→ Wall mounted LIT-Touch remote control and receiver with air temperature probe and operation LED.

For on board installation
→◆ LIT-Touch electronic control for 2-pipe systems, with 2 pipes with electrical resistance or 4 pipes, complete with a minimum water temperature probe, ON/OFF valve control and integrated master/slave function up to a total of 15 units.
→◆ Additional board with 2 digital outputs that can be configured.
→◆ On board air temperature probe.
→◆ RS485 serial board for serial communication with other devices (Modbus RTU protocol).

Key: ◆ Factory fitted
→ Supplied separately
* Previous name

YARDY-DUCT2 CXP				40	48	60	74	80	88
❶ Total cooling capacity [EN1397]	VI	kW		1,9 E	2,22 E	3,47 E	4,43 E	4,83 E	5,69 E
	V	kW		1,76 E	2,06 E	3,33	4,26	4,61	5,53
	IV	kW		1,5	1,69	3,18 E	4 E	4,38 E	5,42 E
	III	kW		1,35 E	1,57 E	3,01	3,78	4,17	5,2
	II	kW		1,24	1,44	2,65 E	3,41 E	3,91 E	4,94 E
	I	kW		1,07	1,25	2,42	3,14	3,86	4,8
❷ Heating capacity (45°C) [EN1397]	VI	kW		2,1 E	2,15 E	4,11 E	4,18 E	5,77 E	6,12 E
	V	kW		1,9 E	1,97 E	3,92	3,98	5,62	5,8
	IV	kW		1,53	1,59	3,69 E	3,75 E	5,51 E	5,74 E
	III	kW		1,4 E	1,46 E	3,49	3,54	5,3	5,45
	II	kW		1,27	1,33	3,21 E	3,26 E	4,78 E	5,1 E
	I	kW		1,11	1,16	2,94	2,98	4,61	5,06
❸ Heating capacity (50°C)	VI	kW		2,44 E	2,53 E	4,74 E	4,98 E	6,68 E	7,16 E
	V	kW		2,21 E	2,32 E	4,52	4,75	6,51	6,84
	IV	kW		1,8	1,89	4,29 E	4,5 E	6,37 E	6,76 E
	III	kW		1,65 E	1,73 E	4,05	4,25	6,13	6,44
	II	kW		1,5	1,58	3,7 E	3,89 E	5,53 E	6,04 E
	I	kW		1,3	1,37	3,39	3,56	5,35	5,99
❹ Heating capacity (70°C) [EN1397]	VI	kW		4,18	4,3	8,21	8,5	11,48	12,21
	V	kW		3,78	3,94	7,84	8,1	11,2	11,63
	IV	kW		3,07	3,2	7,44	7,67	10,98	11,52
	III	kW		2,82	2,93	7,04	7,24	10,56	10,98
	II	kW		2,56	2,67	6,48	6,65	9,52	10,32
	I	kW		2,22	2,31	5,95	6,08	9,2	10,26
❺ Heating capacity of additional coil (65°C) [EN1397]	VI	kW		1,97 E	1,87 E	3,78 E	3,6 E	4,64 E	4,42 E
	V	kW		1,84 E	1,75 E	3,75	3,58	4,45	4,24
	IV	kW		1,7	1,61	3,62 E	3,42 E	4,36 E	4,15 E
	III	kW		1,5 E	1,43 E	3,52	3,36	4,25	4,05
	II	kW		1,41	1,34	3,42 E	3,22 E	4,16 E	3,95 E
	I	kW		1,27	1,21	3,32	3,15	4,04	3,85
❹ Heating capacity of additional coil (70°C) [EN1397]	VI	kW		2,29 E	2,18 E	4,27 E	4,07 E	5,24 E	4,99 E
	V	kW		2,14 E	2,04 E	4,24	4,04	5,03	4,79
	IV	kW		1,97	1,87	4,09 E	3,9 E	4,93 E	4,69 E
	III	kW		1,75 E	1,66 E	3,99	3,8	4,81	4,58
	II	kW		1,63	1,55	3,88 E	3,7 E	4,7 E	4,47 E
	I	kW		1,47	1,4	3,8	3,61	4,57	4,35
Available static Air flow rate / Pressure	VI	m³/h		275 / 56 E	275 / 56 E	620 / 66 E	620 / 66 E	912 / 62 E	862 / 62 E
	V	m³/h		250 / 50 E	250 / 50 E	587 / 59	587 / 59	858 / 54	828 / 54
	IV	m³/h		198 / 33	198 / 33	539 / 50 E	539 / 50 E	820 / 50 E	800 / 50 E
	III	m³/h		180 / 19 E	180 / 28 E	504 / 44	504 / 44	772 / 45	759 / 45
	II	m³/h		163 / 16	163 / 24	445 / 34 E	445 / 34 E	715 / 39 E	708 / 39 E
	I	m³/h		140 / 9	140 / 18	402 / 28	402 / 28	685 / 35	680 / 35
❻ Delivery sound power	VI	dB(A)		50 E	50 E	56 E	56 E	57 E	57 E
	V	dB(A)		48 E	48 E	55	55	55	55
	IV	dB(A)		43	43	54 E	54 E	54 E	54 E
	III	dB(A)		42 E	42 E	51	52	53	53
	II	dB(A)		38	38	50 E	50 E	51 E	51 E
	I	dB(A)		37	37	48	46	50	50
❼ Delivery sound pressure	VI	dB(A)		41	41	47	47	48	48
	V	dB(A)		39	39	46	46	46	46
	IV	dB(A)		34	34	45	45	45	45
	III	dB(A)		33	33	42	43	44	44
	II	dB(A)		29	29	41	41	42	42
	I	dB(A)		28	28	39	37	41	41
Absorbed power	VI	W		68 E	71 E	128 E	135 E	154 E	154 E
	V	W		60 E	63 E	120	126	134	134
	IV	W		41	43	91 E	95 E	127 E	127 E
	III	W		36 E	38 E	88	93	109	109
	II	W		32	34	84 E	89 E	105 E	105 E
	I	W		27	28	77	80	91	91
Electrical supply		V-ph-Hz		230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
DIMENSIONS AND WEIGHT				**40**	**48**	**60**	**74**	**80**	**88**
L - Width		mm		950	950	1250	1250	1250	1250
H - Height		mm		545	545	545	545	545	545
P - Depth		mm		212	212	212	212	212	212
Weight		kg		25,5	27	34,5	35,5	36,5	37,5
COVER for Yardy - DUCT CXP				**40**	**48**				
KCASE formwork	WxHxD	mm		1325x790x225	1325x790x225				
KCASE formwork	Weight	kg		17	17				
KPXCASE Panel	WxHxD	mm		1375x820x10	1375x820x10				
KPXCASE Panel	Weight	kg		11	11				
KGMD delivery nozzle	WxHxD	mm		955x205x6	955x205x0,6				

Data at the following conditions:
❶ Air: 27°C D.B.; 19°C W.B. - Water: 7/12°C.
❷ Air: 20°C - Water: 45/40°C.
❸ Air: 20°C - Water: 50°C, flow rate as in cooling.
❹ Air: 20°C - Water: 70/60°C.
❺ Air: 20°C - Water: 65/55°C.
❻ According to EN16583
❼ For room volume equal to 100 m³ and reverberation time = 0.5 sec.
E Eurovent certified performance.
YARDY-DUCT2 48 - 74 - 88 with oversized 4-row coil.

For the selection with Air'Suite filter, refer to the UP-TO-DATE selection Software.

Web code: **YAHP1**
Web code accessories: **ACMEC**
Web code controls: **ACREG**

Ductable terminals
YARDY-HP

Cooling capacity: 7.2÷19.8 kW - Heating capacity: 9.9÷29.6 kW

air'suite

- **Air'Suite biocide filter for healthier and cleaner air in indoor environments**
- **New touch controls**
- **Horizontal and vertical installation**
- **Pan removable from below for cleaning**
- **Hydraulic and electric connections on the same side.**
- **Set up with 3, 4, 5-row coil**

TOUCH CONTROL

Panel LIT-Touch wall-mounted.

LIT-Touch remote control and wall mounting receiver.

Ductable terminals for recessed horizontal or vertical installation.

Construction features
- Structure: self-supporting, in galvanised sheet steel for horizontal installation in a false ceiling or vertical recessed wall installation, complete with a natural condensate drain pan, flanges to fit to the inlet/delivery duct. Pan is removable from below. Filter supplied separately from the unit.
- Finned coil heat exchanger, removable from below, with connections on the left, reversible to the right directly on site.
- Electrical connection box: on the left, on the same side as the hydraulic connections, reversible to the right directly on site.
- Double intake centrifugal fan with directly coupled 3-speed motor. Fan unit is removable from below.

Versions
- CXP - Recessed unit for horizontal or vertical installation (with lower return to upper delivery).

Number of rows
- 3 Rows - Unit with 3-row coil; for recessed horizontal/vertical installation.
- 4 Rows - Unit with 4-row coil; for recessed horizontal/vertical installation.
- 5 Rows - Unit with 5-row coil (only models 250, 300); for recessed horizontal/vertical installation.

Construction set-ups

Type of unit
2T - Single main coil
4T - Double main coil and additional

ACCESSORIES
- ➔♦ Additional water heating coil (1 row) for [4T-KBAA] 4-pipe systems - only for 3R units with a 3-row coil.
- ➔ External plenum with additional water heating coil for 4-pipe systems [PBAB].
- ➔♦ 2-way ON/OFF electrovalves for 2 and 4-pipe systems.
- ➔♦ 3-way ON/OFF electrovalves for 2 and 4-pipe systems.
- ➔♦ Auxiliary condensate drain pan.
- ➔ Frame with filter that can be extracted in any direction (G1 or G3).
- ➔ Frame with Air'Suite biocide filter (G2) that can be extracted in any direction.
- ➔ Straight delivery and inlet fitting.
- ➔ 90° delivery and inlet fitting.
- ➔ Flange for duct connection.
- ➔ Anti-vibration fitting for connection to the inlet/delivery duct.
- ➔ Panel with round nozzles to be connected to the delivery/inlet fittings.

CONTROLS

STANDARD controls
For wall mounting installation
- ➔ Panel with speed and summer/winter switch.
- ➔ Panel with room thermostat, summer/winter switch, speed switch, ON/OFF valve control and electrical resistance.
- ➔ Electronic panel with automatic summer/winter switching for 2-pipe systems.
- ➔ Electronic panel with automatic summer/winter switching and automatic speed adjustment for 2-pipe systems with electrical resistance or 4-pipe systems.
- ➔ Air probe with remote control option.
- ➔ Interface board to control up to 4 fan coils (models 100-150-200 only, for on board installation).

Advanced LIT-TOUCH controls
- ➔ Flush LIT-Touch control panel in glossy black or pearl white for wall mounting installation.
- ➔ Wall mounted LIT-Touch remote control and receiver with air temperature probe and operation LED.

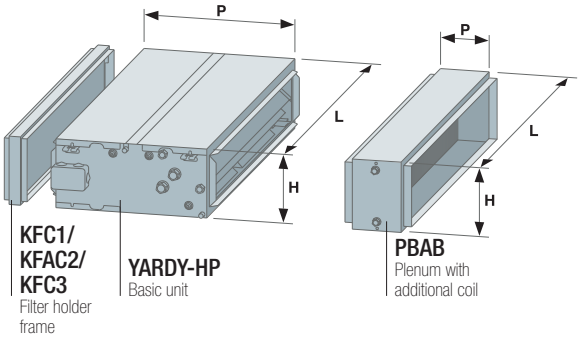
For on board installation
- ➔♦ LIT-Touch electronic control for 2-pipe systems, with 2 pipes with electrical resistance or 4 pipes, complete with minimum water temperature probe, ON/OFF valve control and integrated master/slave function up to a total of 15 units.
- ➔♦ Additional board with 2 digital outputs that can be configured.
- ➔♦ On board air temperature probe.
- ➔♦ RS485 serial board for serial communication with other devices (Modbus RTU protocol).

Key: ♦ Factory fitted
➔ Supplied separately

YARDY HP CXP				100	150	200	250	300
❶ Total cooling capacity [EN1397]	3R MAX		kW	6,96	8,13	9,75	12,85	14,42
	3R MED		kW	6,45	6,49	7,19	9,32	11,15
	3R MIN		kW	5,33	6,19	6,43	6,87	9,82
❷ Heating capacity (45°C) [EN1397]	3R MAX		kW	8,38	10,23	12,58	17,03	19,51
	3R MED		kW	7,61	7,85	8,99	11,62	14,71
	3R MIN		kW	6,08	7,34	7,77	8,09	12,49
❸ Heating capacity (50°C)	3R MAX		kW	9,85	12,09	14,85	20,13	23,11
	3R MED		kW	9	9	10,41	13,64	17,01
	3R MIN		kW	7,27	8,53	9,11	9,64	14,6
❶ Total cooling capacity [EN1397]	4R MAX		kW	8,22	9,28	11,04	15,88	18
	4R MED		kW	7,53	8,09	8,95	11,79	14,31
	4R MIN		kW	6,31	7,61	8,14	8,36	12,52
❷ Heating capacity (45°C) [EN1397]	4R MAX		kW	9,32	10,93	13,34	19,59	22,62
	4R MED		kW	8,35	9,09	10,33	13,9	17,73
	4R MIN		kW	6,83	8,39	9,1	9,27	14,85
❸ Heating capacity (50°C)	4R MAX		kW	11,01	12,88	15,73	23,36	27,12
	4R MED		kW	9,93	10,58	12,11	16,55	20,9
	4R MIN		kW	8,18	9,87	10,79	11,15	17,67
❶ Total cooling capacity [EN1397]	5R MAX		kW	-	-	-	18,04	19,75
	5R MED		kW	-	-	-	12,78	16,32
	5R MIN		kW	-	-	-	8,91	14,04
❷ Heating capacity (45°C) [EN1397]	5R MAX		kW	-	-	-	21,83	24,62
	5R MED		kW	-	-	-	14,42	18,69
	5R MIN		kW	-	-	-	9,37	16,19
❸ Heating capacity (50°C)	5R MAX		kW	-	-	-	26,23	29,62
	5R MED		kW	-	-	-	17,26	22,23
	5R MIN		kW	-	-	-	11,47	19,24
❺ Heating capacity of additional coil (65°C) [EN1397]	4T -KBAA MAX		kW	6,11	6,23	8,63	9,88	10,76
❹ Heating capacity of additional coil (70°C) [EN1397]	4T -KBAA MAX		kW	6,89	7,03	9,73	11,12	12,11
❺ Heating capacity of additional coil (65°C) [EN1397]	PBAB MAX		kW	11,61	12,74	14,87	20,72	22,77
❹ Heating capacity of additional coil (70°C) [EN1397]	PBAB MAX		kW	13,1	14,39	16,78	23,36	25,67
❻ Air flow rate/Speed static pressure (3R)	MAX		m³/h / Pa	1.552 / 60	1.840 / 62	2.339 / 60	3.312 / 60	3.875 / 59
	MED		m³/h / Pa	1.370 / 50	1.620 / 50	1.717 / 50	2.189 / 50	3.075 / 50
	MIN		m³/h / Pa	1.013 / 35	1.432 / 35	1.414 / 35	1.329 / 35	2.415 / 35
❼ Delivery sound power (3R)	MAX		dB(A)	61	62	62	63	68
	MED		dB(A)	59	61	60	59	64
	MIN		dB(A)	56	59	57	55	61
❽ Speed sound pressure (3R)	MAX		dB(A)	47	48	48	49	54
	MED		dB(A)	45	47	46	45	50
	MIN		dB(A)	42	45	43	41	47
Nominal spd absorbed power MAX	3R		W	200	245	380	680	800
	4R		W	190	230	330	670	750
	5R		W	-	-	-	660	750
Maximum absorbed power (0 Pa)	3R		W	280	300	500	850	900
Electrical supply			V-ph-Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
DIMENSIONS AND WEIGHT				**100**	**150**	**200**	**250**	**300**
L - Width			mm	1295	1295	1295	1295	1295
H - Height			mm	250	250	285	335	335
P - YARDY HP Depth			mm	555	555	670	720	720
P - PBAB Depth			mm	200	200	200	200	200
YARDY HP Weight			kg	38	38	46	57	57

Data at the following conditions:

❶ Air: 27°C D.B.; 19°C W.B. - Water: 7/12°C.
❷ Air: 20°C - Water: 45/40°C.
❸ Air: 20°C - Water: 50°C, flow rate as in cooling.
❹ Air: 20°C - Water: 70/60°C.
❺ Air: 20°C - Water: 65/55°C.
❻ 3-row coil (3R) without filter.
❼ With G3 filter at the conditions specified in point 6 according to EN16583
❽ At 2 m from the air outflow point with directionality factor 2 and G3 filter.



Web code: **DIVI1**

Web code controls: **ACREG**

Cassette fan coils with EC motor

DIVA-I

Cooling capacity: 2.7-10.7 kW - Heating capacity: 3.4-12.7 kW

INVERTER

- Consumption reduced by 50% with EC motor
- Set-ups for 2 or 4-pipe installations or 2 pipe installations with electrical resistance
- ABS or metal ceiling panelling with Coanda effect
- New touch controls
- 2 or 3-way, ON/OFF electrovalves and pre-mounted controls on board

TOUCH CONTROL

Panel LIT-Touch wall-mounted.

LIT-Touch remote control and on board or wall mounting receiver.

Cassette-type fan coil units

Construction features

- Fan coils: cassette-type for installation in false ceilings, with air return and delivery directly in the room.
- Heat exchanger: finned coil.
- Radial fan;
- Inverter brushless EC motor.
- Structure: self-supporting, in galvanised sheet steel complete with an additional condensate drain pan and pump to lift the condensate (maximum head 650 mm).
- PLP buffer ceiling (accessory): in ABS polymer (RAL 9003) with manually adjustable delivery fins, return grille and regenerable filter.

Construction set-ups

Type of unit

2T - Single main coil
4T - Double main coil and additional
RE - Single main coil and supplementary electrical resistance.

ACCESSORIES

- PLP- ABS ceiling panelling (RAL 9003).
- PLM - Metal ceiling panelling (RAL 9003) flush with false ceiling with Coanda effect.

→♦ 3-way ON/OFF electrovalve for 2 and 4-pipe systems.

→♦ 2-way ON/OFF electrovalves for 2 and 4-pipe systems.

- Primary air duct fitting.
- Circular connector for air distribution at a distance from the unit.
- Primary air kit.

CONTROLS

STANDARD controls

For wall mounting installation

→ Electronic panel with display and RS485 serial interface, semi-recessed in wall.

Advanced LIT-TOUCH controls

→ Flush LIT-Touch control panel in glossy black or pearl white for wall mounting installation.

→ LIT-Touch remote control and receiver for ceiling panelling or wall mounting installation, with air temperature probe and operation LED.

For on board installation

→♦ LIT-Touch electronic control for 2-pipe systems, with 2 pipes with electrical resistance or 4 pipes, complete with minimum water temperature probe, ON/OFF valve control and integrated master/slave function up to a total of 15 units.

→ Additional board with 2 digital outputs that can be configured.

→ On board air temperature probe.

→ RS485 serial board for serial communication with other devices (Modbus RTU protocol).

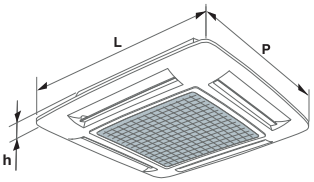
Key: ♦ Factory fitted
→ Supplied separately

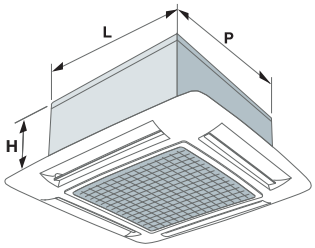
PLM - Metal ceiling panelling with Coanda effect.

DIVA-I 2T - DIVA-I RE				30	40	50	60	110
❶ Total cooling capacity [EN1397]	MAX	kW	E	2,73	4,3	4,96	6,3	10,69
	MED	kW	E	2,16	3,04	3,85	5,13	7,69
	MIN	kW	E	1,84	2,24	2,55	4,2	5,28
❷ Heating capacity (45°C) [EN1397]	MAX	kW	E	2,87	4,36	5,15	6,7	10,56
	MED	kW	E	2,22	2,98	3,85	5,3	7,34
	MIN	kW	E	1,86	2,13	2,46	4,27	4,9
❸ Heating capacity (50°C)	MAX	kW	E	3,44	5,24	6,2	8,01	12,7
	MED	kW	E	2,67	3,58	4,63	6,35	8,83
	MIN	kW	E	2,22	2,55	2,96	5,11	5,89
❹ Heating capacity (70°C) [EN1397]	MAX	kW		5,81	8,81	10,47	13,5	21,34
	MED	kW		4,5	5,99	7,77	10,68	14,75
	MIN	kW		3,75	4,29	4,96	8,57	9,81
RE electrical resistance	230-1-50 V	kW		-	1,5	2,5	2,5	3
Air flow speed	MAX	m³/h		535	710	880	1165	1770
	MED	m³/h		380	445	610	870	1130
	MIN	m³/h		310	310	360	630	710
Sound power	MAX	dB(A)	E	47	54	60	48	57
	MED	dB(A)	E	39	43	50	39	47
	MIN	dB(A)	E	33	33	37	33	34
❻ Sp. sound pressure	MAX	dB(A)		38	45	51	39	48
	MED	dB(A)		30	34	41	30	38
	MIN	dB(A)		24	24	28	24	25
Absorbed power	MAX	W	E	16	31	62	33	108
	MED	W	E	8	11	21	17	32
	MIN	W	E	5	5	7	10	10
Electrical supply		V-ph-Hz		230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
DIMENSIONS AND WEIGHT				**30**	**40**	**50**	**60**	**110**
Box - Dimensions WxHxD		mm		575 x 275 x 575	575 x 275 x 575	575 x 275 x 575	820 x 303 x 820	820 x 303 x 820
PLP Ceiling panelling - Dimensions WxHxD		mm		670x 67x 670	670x 67x 670	670x 67x 670	965 x 85 x 965	965 x 85 x 965
Box - Weight		kg		22	24	24	36	39
PLP Ceiling panelling - Weight		kg		3	3	3	6	6

DIVA-I 4T				30	40	50	60	110
❶ Total cooling capacity [EN1397]	MAX	kW	E	2,75	3,9	4,47	6,48	9,76
	MED	kW	E	2,17	2,8	3,51	5,26	7,14
	MIN	kW	E	1,85	2,09	2,37	4,29	4,97
❺ Heating capacity of additional coil (65°C) [EN1397]	MAX	kW	E	3,18	2,91	3,29	8,24	8,33
	MED	kW	E	2,51	2,2	2,66	6,65	6,27
	MIN	kW	E	2,14	1,74	1,92	5,41	4,58
❹ Heating capacity of additional coil (70°C) [EN1397]	MAX	kW	E	3,64	3,38	3,85	9,39	9,62
	MED	kW	E	2,86	2,54	3,08	7,56	7,19
	MIN	kW		2,44	1,99	2,21	6,15	5,23
Air flow speed	MAX	m³/h		535	710	880	1165	1770
	MED	m³/h		380	445	610	870	1130
	MIN	m³/h		310	310	360	630	710
Sound power	MAX	dB(A)	E	47	54	60	48	57
	MED	dB(A)	E	39	43	50	39	47
	MIN	dB(A)	E	33	33	37	33	34
❻ Sp. sound pressure	MAX	dB(A)		38	45	51	39	48
	MED	dB(A)		30	34	41	30	38
	MIN	dB(A)		24	24	28	24	25
Absorbed power	MAX	W	E	16	31	62	33	108
	MED	W	E	8	11	21	17	32
	MIN	W	E	5	5	7	10	10
Electrical supply		V-ph-Hz		230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
DIMENSIONS AND WEIGHT				**30**	**40**	**50**	**60**	**110**
Box - Dimensions WxHxD		mm		575 x 275 x 575	575 x 275 x 575	575 x 275 x 575	820 x 303 x 820	820 x 303 x 820
PLP Ceiling panelling - Dimensions WxHxD		mm		670x 67x 670	670x 67x 670	670x 67x 670	965 x 85 x 965	965 x 85 x 965
Box - Weight		kg		22	24	24	36	39
PLP Ceiling panelling - Weight		kg		3	3	3	6	6

Data at the following conditions:
❶ Air: 27°C D.B.; 19°C W.B. - Water: 7/12°C.
❷ Air: 20°C - Water: 45/40°C.
❸ Air: 20°C - Water: 50°C, flow rate as in cooling.
❹ Air: 20°C - Water: 70/60°C.
❺ Air: 20°C - Water: 65/55°C.
❻ For room volume equal to 100 m³ and reverberation time = 0.5 sec.
E Eurovent certified performance.
Performance refers to the motor's input signal: 10V - 5V - 1V at MAX - MED - MIN speed.





Web code: **DIVA1**

Web code controls: **ACREG**

Cassette fan coils

DIVA

Cooling capacity: 1.9÷10.9 kW - Heating capacity: 2.6÷14.0 kW

- **Set-ups for 2 or 4-pipe installations or 2 pipe installations with electrical resistance**
- **ABS or metal ceiling panelling with Coanda effect.**
- **New touch controls**
- **2 or 3-way, ON/OFF electrovalves and pre-mounted controls on board**

TOUCH CONTROL

Panel LIT-Touch wall-mounted.

LIT-Touch remote control and on board or wall mounting receiver.

Cassette-type fan coil units

Construction features

- Fan coils: cassette-type for installation in false ceilings, with air return and delivery directly in the room.
- Heat exchanger: finned coil.
- Radial fan.
- 6-speed motor, 3 of which are connected in a terminal block.
- Structure: self-supporting, in galvanised sheet steel complete with an additional condensate drain pan and pump to lift the condensate (maximum head 650 mm).
- PLP buffer ceiling (accessory): in ABS polymer (RAL 9003) with manually adjustable delivery fins, return grille and regenerable filter.

Construction set-ups

Type of unit

2T - Single main coil
4T - Double main coil and additional
RE - Single main coil and supplementary electrical resistance.

ACCESSORIES

- PLP-ABS ceiling panelling (RAL 9003).
- PLM - Metal ceiling panelling (RAL 9003) flush with false ceiling with Coanda effect.

➔♦ 3-way ON/OFF electrovalve for 2 and 4-pipe systems.

➔♦2-way ON/OFF electrovalves for 2 and 4-pipe systems.

- Primary air duct fitting.
- Circular connector for air distribution at a distance from the unit.
- Primary air kit.

CONTROLS

STANDARD controls

For wall mounting installation

➔ Panel with speed and summer/winter switch.
➔ Panel with room thermostat, summer/winter switch, speed switch, ON/OFF valve control and electrical resistance.
➔ Electronic panel with automatic summer/winter switching for 2-pipe systems.
➔ Electronic panel with automatic summer/winter switching and automatic speed adjustment for 2-pipe systems with electrical resistance or 4-pipe systems.
➔ Electronic panel with display and RS485 serial interface, semi-recessed in wall.
➔ Interface board to control up to 4 fan coils.

Advanced LIT-TOUCH controls

➔ Flush LIT-Touch control panel in glossy black or pearl white for wall mounting installation.
➔ LIT-Touch remote control and receiver for ceiling panelling or wall mounting installation, with air temperature probe and operation LED.

For on board installation

➔♦ LIT-Touch electronic control for 2-pipe systems, with 2 pipes with electrical resistance or 4 pipes, complete with minimum water temperature probe, ON/OFF valve control and integrated master/slave function up to a total of 15 units.
➔ Additional board with 2 digital outputs that can be configured.
➔ On board air temperature probe.
➔ RS485 serial board for serial communication with other devices (Modbus RTU protocol).

Key: ♦ Factory fitted
➔ Supplied separately

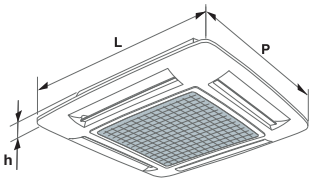
PLM - Metal ceiling panelling with Coanda effect.

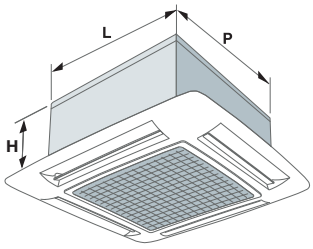
	DIVA 2T - DIVA RE				20	30	40	50	60	90	110
❶	Total cooling capacity [EN1397]	MAX	kW	E	1,92	2,64	4,26	4,93	6,08	9,39	10,93
		MED	kW	E	1,6	2,31	3,3	3,82	4,86	6,72	8,36
		MIN	kW	E	1,25	1,82	2,23	2,91	4,18	5,27	5,27
❷	Heating capacity (45°C) [EN1397]	MAX	kW	E	2,24	2,8	4,37	5,15	6,5	9,23	11,77
		MED	kW	E	1,8	2,42	3,28	3,85	5,03	6,4	8,56
		MIN	kW	E	1,39	1,86	2,13	2,85	4,27	4,92	5,12
❸	Heating capacity (50°C)	MAX	kW	E	2,64	3,35	5,23	6,17	7,77	10,7	14
		MED	kW	E	2,12	2,9	3,93	4,63	6,03	7,34	10,3
		MIN	kW	E	1,62	2,22	2,56	3,43	5,12	5,61	6,13
❹	Heating capacity (70°C) [EN1397]	MAX	kW		4,13	5,32	8,58	10,29	12,08	15,55	22,63
		MED	kW		2,8	4,37	6,32	7,69	9,29	9,98	17,21
		MIN	kW		2,03	3,24	4,13	5,48	7,19	7,23	9,74
	RE electrical resistance	230-1-50 V	kW		-	1,5	2,5	2,5	3	3	3
	Air flow speed	MAX	m³/h		610	520	710	880	1140	1500	1820
		MED	m³/h		420	420	500	610	820	970	1280
		MIN	m³/h		310	310	320	430	630	710	710
	Sound power	MAX	dB(A)	E	49	45	53	59	48	53	58
		MED	dB(A)	E	40	40	45	49	40	40	48
		MIN	dB(A)	E	33	33	33	41	33	34	34
❻	Sp. sound pressure	MAX	dB(A)		40	36	44	50	39	44	49
		MED	dB(A)		31	31	36	40	31	31	39
		MIN	dB(A)		24	24	24	32	24	25	25
	Absorbed power	MAX	W	E	57	44	68	90	77	120	170
		MED	W	E	32	32	44	57	48	63	95
		MIN	W	E	25	25	25	32	33	42	42
	Electrical supply		V-ph-Hz		230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
	DIMENSIONS AND WEIGHT				20	30	40	50	60	90	110
	Box - Dimensions WxHxD		mm			575 x 275 x 575				820 x 303 x 820	
	PLP Ceiling panelling - Dimensions WxHxD		mm			670x 67x 670				965 x 85 x 965	
	Box - Weight		kg		22	22	24	24	36	39	39
	PLP Ceiling panelling - Weight		kg		3	3	3	3	6	6	6

	DIVA 4T				20	30	32	40	42	50	60	80	90	92	110
❶	Total cooling capacity [EN1397]	MAX	kW	E	2,27	2,66	3,27	3,86	3,72	4,44	6,26	7,59	8,65	8,72	10,03
		MED	kW	E	1,93	2,33	2,61	3,02	2,96	3,47	4,98	5,6	6,27	6,84	7,75
		MIN	kW	E	1,49	1,83	1,83	2,07	2,33	2,69	4,11	4,48	4,95	4,48	4,95
❺	Heating capacity of additional coil (65°C) [EN1397]	MAX	kW	E	2,66	3,04	3,86	2,91	4,19	3,29	8,02	9,66	7,5	11,16	8,58
		MED	kW	E	2,23	2,66	3,04	2,4	3,33	2,66	6,33	7,15	5,63	8,81	6,79
		MIN	kW	E	1,73	2,14	2,14	1,74	2,61	2,14	5,21	5,69	4,59	5,69	4,59
❹	Heating capacity of additional coil (70°C) [EN1397]	MAX	kW	E	3,09	3,5	4,47	3,42	5,04	3,88	9,18	11,12	8,68	12,87	9,97
		MED	kW	E	2,57	3,05	3,5	2,75	4,03	3,12	7,24	8,16	6,48	10,08	7,5
		MIN	kW	E	1,99	2,46	2,46	2,01	3,13	2,49	5,94	6,49	5,27	6,49	5,27
	Air flow speed	MAX	m³/h		610	520	710	710	880	880	1140	1500	1500	1820	1820
		MED	m³/h		420	420	500	500	610	610	820	970	970	1280	1280
		MIN	m³/h		310	310	320	320	430	430	630	710	710	710	710
	Sound power	MAX	dB(A)	E	49	45	53	53	59	59	48	53	53	58	58
		MED	dB(A)	E	40	40	45	45	49	49	40	40	40	48	48
		MIN	dB(A)	E	33	33	33	33	41	41	33	34	34	34	34
❻	Sp. sound pressure	MAX	dB(A)		40	36	44	44	50	50	39	44	44	49	49
		MED	dB(A)		31	31	36	36	40	40	31	31	31	39	39
		MIN	dB(A)		24	24	24	24	32	32	24	25	25	25	25
	Absorbed power	MAX	W	E	57	44	68	68	90	90	77	120	120	170	170
		MED	W	E	32	32	44	44	57	57	48	63	63	95	95
		MIN	W	E	25	25	25	25	32	32	33	42	42	42	42
	Electrical supply		V-ph-Hz		230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
	DIMENSIONS AND WEIGHT				**20**	**30**	**32**	**40**	**42**	**50**	**60**	**80**	**90**	**92**	**110**
	Box - Dimensions WxHxD		mm				575 x 275 x 575					820 x 303 x 820			
	PLP Ceiling panelling - Dimensions WxHxD		mm				670x 67x 670					965 x 85 x 965			
	Box - Weight		kg		24	24	24	24	24	24	39	39	39	39	39
	PLP Ceiling panelling - Weight		kg		3	3	3	3	3	3	6	6	6	6	6

Data at the following conditions:

❶ Air: 27°C D.B.; 19°C W.B. - Water: 7/12°C.
❷ Air: 20°C - Water: 45/40°C.
❸ Air: 20°C - Water: 50°C, flow rate as in cooling.
❹ Air: 20°C - Water: 70/60°C.
❺ Air: 20°C - Water: 65/55°C.
❻ For room volume equal to 100 m³ and reverberation time = 0.5 sec.
E Eurovent certified performance.





Web code: **IDR01**

Wall mounted fan coils with EC motor

IDROWALL-I

Cooling capacity: 2.0÷3.5 kW - Heating capacity: 3.0÷5.1 kW

INVERTER

- **Consumption reduced by 50% compared to the traditional motor**
- **3-way valve on board**
- **Integrated master/ slave function and serial interface**
- **Remote control included**

Wall mounted fan coils.

Construction features

- Heat exchanger: finned coil.
- Fan: tangential with Inverter Brushless EC motor with continuous speed adjustment.
- Baffle: motorised with different positions.
- Structure: made of heat-resistant ABS polymer, RAL 9003 colour, complete with a regenerable polypropylene filter, adjustable fins and a natural condensate drain pan.
- Unit equipped with a 3-way ON/OFF valve and resident RS485 serial interface.
- Control: microprocessor electronic control. Adjustment functions: full auto, cool, dry, fan, autofan, heat. Comfort functions: orienting, swing, timer, sleep, hot start, memory.
  Remote control supplied as standard.

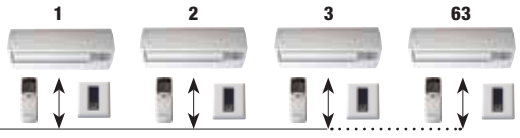
Separately supplied accessories

- KV2V - 2-way ON/OFF valve accessory. Assembled on board by the installer.
- K2TF - Accessory for electrovalve use externally to the unit. Assembled by the installer.
- KVAM - Wall mounted recessed box.

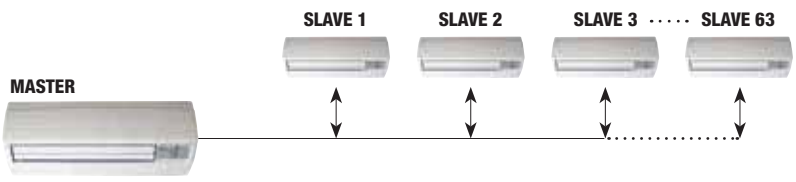
Controls supplied separately

- KWPI - Electronic panel for wall mounting installation.
- KWPCI - Centralised electronic panel for wall mounting installation Power supply V230-1-50.

KWPCI centralised panel



CENTRALISED MANAGEMENT OF UP TO 63 UNITS DISTANCE UP TO 1200 m



MASTER/SLAVE MANAGEMENT OF UP TO 64 UNITS FOR A TOTAL DISTANCE OF 1200 m

Remote control
•
Flush panel KWPI

IDROWALL-I				21	31	41
❶ Total cooling capacity [EN1397]	MAX	kW	E	1,99	2,95	3,5
	MED	kW	E	1,63	2,14	2,45
	MIN	kW	E	1,32	1,89	1,89
❷ Heating capacity (45°C) [EN1397]	MAX	kW	E	2,68	4,2	4,45
	MED	kW	E	2,02	3,04	3,63
	MIN	kW	E	1,45	2,61	2,61
❸ Heating capacity (50°C)	MAX	kW	E	3,05	4,78	5,14
	MED	kW	E	2,34	3,46	4,11
	MIN	kW	E	1,72	2,98	2,98
❹ Heating capacity (70°C) [EN1397]	MAX	kW		5,53	8,49	9
	MED	kW		4,2	6,23	7,37
	MIN	kW		3,02	5,36	5,36
Air flow speed	MAX	m³/h		556	722	814
	MED	m³/h		413	473	581
	MIN	m³/h		295	396	396
❺ Sound power	MAX	dB(A)	E	52	55	59
	MED	dB(A)	E	43	46	51
	MIN	dB(A)	E	34	42	42
Sound pressure	MAX	dB(A)		43	46	50
	MED	dB(A)		34	37	42
	MIN	dB(A)		25	33	33
Absorbed power	MAX	W	E	22	27	38
	MED	W	E	14	15	19
	MIN	W	E	11	12	12
Electrical supply		V-ph-Hz		230-1-50	230-1-50	230-1-50
DIMENSIONS AND WEIGHT				21	31	41
L - Width		mm		795	990	990
H - Height		mm		290	290	290
P - Depth		mm		230	230	230
Weight		kg		9,3	11,6	11,6

Data at the following conditions:

❶ Air: 27°C D.B.; 19°C W.B. - Water: 7/12°C.

❷ Air: 20°C - Water: 45/40°C.

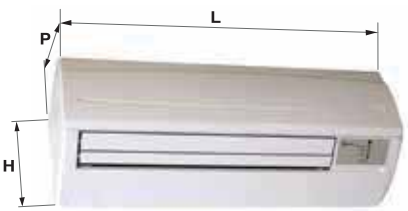
❸ Air: 20°C - Water: 50°C, flow rate as in cooling.

❹ Air: 20°C - Water: 70/60°C.

❺ For room volume equal to 100 m³ and reverberation time = 0.5 sec.

E Eurovent certificate performance.

Remote control
●
Centralised panel
●
Flush panel



SLIM-TOUCH Controls

LIT-TOUCH Controls

STANDARD Controls

CONTROLS for fan coil units

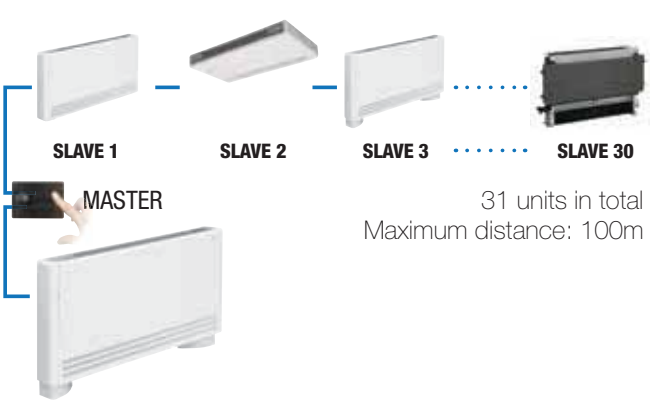
Electronic controls
for Brio-I Slim fan coils

SLIM-Touch Controls

Ideal climate with a simple touch

The electronic control with touch interface can provide the right climate at any time of the day, particularly during the night as there is a super-minimum speed to guarantee the level of acoustic comfort, which is appropriate for resting.

The elegant and slim touch interface is available for wall mounting installation or on board unit mounting.



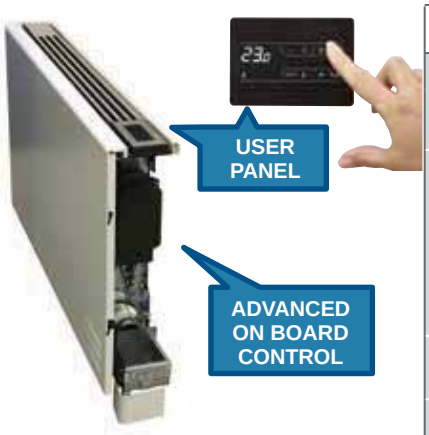
31 units in total
Maximum distance: 100m

Master/slave function


23.0
AUTO

CONTROLS for fan coils

ADVANCED SLIM-TOUCH CONTROLS



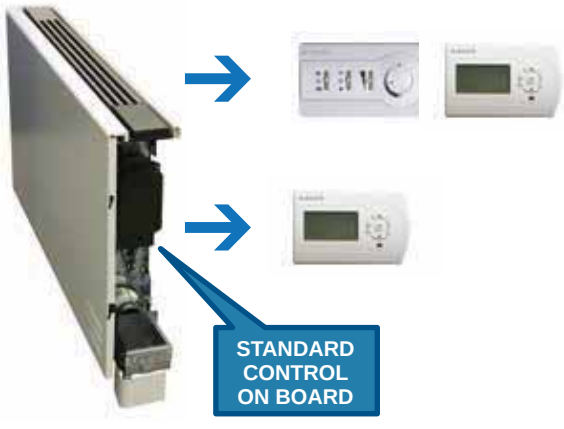
RANGE				BRIO-I SLIM			
PANEL				CONTROL	CONTROL	PANEL	/
USER				ON BOARD **B**	ON BOARD **B**	WALL-MOUNTED **KPST**	/
TYPE							**No user panel**
Speed				4 speeds	continuous modulation	continuous modulation	continuous modulation
Master/ Slave Function				/	/	◆ MASTER	◆ SLAVE
RANGE	**ON BOARD CONTROL ADDITIONAL COMPONENTS**		**Supply**				
BRIO-I SLIM	ADVANCED CONTROL	Electronic control for 2-pipe systems	Factory fitted		**CS.F/B**	**CS.M/B**	**CS.M/P + KPST**	**CS.M/P**
			Supplied separately		**KCS.F/B**	**KCS.M/B**	**KCS.M/P + KPST**	**KCS.M/P**
		Electronic control for 4-pipe systems	Factory fitted		/	**CS.M/B**	**CS.M/P + KPST**	**CS.M/P**
			Supplied separately		/	**KCS.M/B**	**KCS.M/P + KPST**	**KCS.M/P**
	ADDITIONAL COMPONENTS	Air temperature probe installed on the unit	Factory fitted		**AS STANDARD**		/	
			Supplied separately		**AS STANDARD**		/	
		RS485 Modbus RTU serial board	Factory fitted		/	**SS**	**AS STANDARD**	/ (1)
			Supplied separately		/	**KI485**	**AS STANDARD**	/ (1)

Air temperature probe on the wall-mounted control panel or installed on the unit; water temperature probe always installed.
Controls installed on the right side of the unit; the KDX accessory is required for installations on the top left side.
(1) For third-party BMS connection with KCS.M/P control, it is possible to use the RS485 serial board without a user panel.

For the unit to operate, it is compulsory to use a combined control that is standard or advanced.

STANDARD CONTROLS

BRIO-I SLIM	STANDARD CONTROLS	Board installed on board for 3-speed thermostats, for 2-pipe and 4-pipe systems	Supplied separately		**KBS.3**
		Board installed on board for thermostats with 0-10V analogue output for 2-pipe systems	Supplied separately		**KBS.0**



Regulation functions

Room temperature setting, fan speed (AUTO, NIGHT, MIN, MAX) and (OFF/Summer/Winter/Auto/Fan) operating mode.

- Type of system: 2-pipe, 2-pipe with integrated radiant function with heating, 4-pipe
- Manual or automatic summer/winter switching

Comfort functions

- HOT START heating function with water temperature output
- TOO COOL cooling function with water temperature output
- Automatic speed adjustment with continuous modulation or 4-speed control
- Operating mode storage
- Automatic brightness reduction
- Keyboard lock

Advanced functions

- Winter radiant function with fan off
- Digital input can be set as remote ON/OFF
- Digital output for Summer/Winter call (potential-free contact)

Master/Slave Function

- Centralised management of multiple fan coils through a single master unit with SLIM -Touch KPST panel.

Dimensions 110x78x17.5mm Wall mounting installation

Slim-Touch KPST panel
with room temperature probe and integrated RS485 interface.

31 units in total
Maximum distance: 100m

Serial interface

- RS485 Modbus RTU serial interface, standard on KPST panel or as an accessory for KCS.M/B control; serial routing from the same control.
- RS485/BACnet gateway for communication from MODBUS RTU to BACNET IP; up to 64 fan coils with RS485 interface.
- RS485/FTT10-LonWorks gateway for communication from MODBUS RTU to LonWorks; up to 64 fan coils with RS485 interface.

Electronic controls
for Yardy fan coils and Diva boxes

LIT-Touch Controls
New user experience

LIT Touch is the new Rhoss control platform for Yardy fan coils and Diva boxes, completely renewed and created with the aim of improving the user experience.

Touch interface

The true core of the platform is the new panel LIT-Touch panel for wall-mounted installation in view, with capacitive touch technology and LED display.
With a very intuitive interface it adapts to every furnishing requirement thanks to the two colour options: glossy black or pearl white.
The platform also includes the IR receiver with a room temperature probe for wall mounting and remote control, for ceiling or false ceiling units.

Intuitive control

The control allows the desired temperature in the room to be managed together with the fan speed, the winter-summer changeover or automatic season setting, and the display of the room temperature.
A number of integrated functions are required for room control - such as the master control of multiple slave units - digital inputs and outputs such as window contact, hot/cold call, alarm signal and optional serial interface.

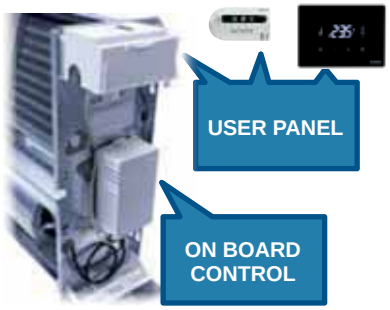
Master/slave function

15 units in total
Maximum distance: 100m

CONTROLS for fan coils

YARDY-I EV3 / YARDY EV3 cased	YARDY-I EV3 / YARDY EV3 concealed	YARDY-ID2 / YARDY-DUCT2 ducted	YARDY-HP	DIVA-I / DIVA
				
INVERTER	INVERTER	INVERTER		INVERTER

LIT-TOUCH ADVANCED CONTROLS



RANGE	YARDY	YARDY | DIVA	YARDY | DIVA	YARDY | DIVA
PANEL	CONTROL	PANEL	REMOTE CONTROL	/
USER	ON BOARD **B**	WALL-MOUNTED **KPLTW or KPLTB**	REMOTE **KTLT + KRLT**(1)	/
TYPE				**No user panel**
Master/Slave Function	◆ MASTER	◆ MASTER	◆ MASTER	◆ SLAVE

RANGE		ON BOARD CONTROL ADDITIONAL COMPONENTS	Supply		YARDY | DIVA	YARDY | DIVA	YARDY | DIVA	YARDY | DIVA
YARDY	CONTROL	Electronic control for systems: - 2-pipe - 2-pipe with electrical resistance - 4-pipe	Factory fitted		**CF/B**	**CF/P + KPLTB / KPLTW**	**CF/P + KTLT + KRLT**	**CF/P**
			Supplied separately		**KCF/B**	**KCF/P + KPLTB / KPLTW**	**KCF/P + KTLT + KRLT**	**KCF/P**
	ADDITIONAL COMPONENTS	Air temperature probe installed on the unit(2)	Factory fitted		**AS STANDARD**	**STA1 | STA3**		
			Supplied separately		**AS STANDARD**	**KSTA1 | KSTA3**		
		Board with 2 digital outputs that can be configured(3)	Factory fitted		**DO2**			
			Supplied separately		**KDO2**			
		RS485 Modbus RTU serial board	Factory fitted		**SS**			**/** (4)
			Supplied separately		**KIF485**			**/** (4)
DIVA	CONTROL	Electronic control for systems: - 2-pipe - 2-pipe with electrical resistance - 4-pipe	Factory fitted		/	**CF/P + KPLTB / KPLTW**	**CF/P + KTLT + KRLT**(1)	**CF/P**
			Supplied separately		/	**KCF/P + KPLTB / KPLTW**	**KCF/P + KTLT + KRLT**(1)	**KCF/P**
	ADDITIONAL COMPONENTS	Air temperature probe installed on the unit	Factory fitted		/	**AS STANDARD**		
		Board with 2 digital outputs that can be configured(3)	Supplied separately		/	**KDO2**		
		RS485 Modbus RTU serial board	Supplied separately		/	**KIF485**		**/** (4)

Air temperature probe on the wall-mounted control panel, receiver or installed on the unit; water temperature probe always installed.

(1) Infrared receivers for remote control: KRLT for wall mounting installation; KRLTI for DIVA-type box installation with PLP ceiling panelling, KRLTM for installation on DIVA-type boxes with PLM ceiling panelling.

(2) (K)STA1 Air temperature probe installed on the unit as an alternative to the temperature probe on the KPLT panel or KRLT receiver, 0.6 m long; probe (K)STA3, 3 m long, is available for the YardyHP range for duct installation.

(3) 2 digital outputs: ON/OFF, Summer/Winter mode, which can also be configured as a unit alarm.

(4) For third-party BMS connection with KCF/P control, it is possible to use the RS485 serial board without a user panel.

Regulation functions

Room temperature setting, fan speed (AUTO, MIN, MED, MAX) and (OFF/Summer/Winter/Auto/Fan) operating mode.

- Type of system: 2-pipe, 2-pipe with integrative electrical resistance, 2-pipe with radiator or radiant panel in heating and 4-pipe.
- Manual or automatic or digital input summer/winter switching.

Comfort functions

- HOT START heating function with water temperature output.
- TOO COOL cooling function with water temperature output in 2-pipe systems.
- Automatic regulation of modulating speed for fan coils with EC motor and 3 speeds for fan coils with AC motor.
- Operating mode storage.
- Automatic brightness reduction.
- Keyboard lock.

Advanced functions

- Set-point regulation or delta set-point limitation (+/-3°C can be modified), compared to a reference value.
- Limited operation for hotel rooms.
- Thermostat ventilation or continuous ventilation (can be enabled).
- Thermostat control of a radiator or radiant panel with winter operation for 2-pipe systems.
- Up to 3 digital inputs, which can be configured as remote ON/OFF, remote summer/winter, economy, window contact, general alarm (control input).
- Additional board with 2 digital outputs: ON/OFF, summer/winter mode (potential-free contacts that can also be configured as a unit alarm).

Master/Slave Function

- Centralised management of multiple slave units via a single Master unit equipped with a control panel or receiver.
  --> In the case of master/slave management, it is possible to use an air temperature probe on the master unit or the temperature probe of every slave unit, if provided.

Dimensions 120x86x17mm
Wall mounting installation

Lit-Touch KPLT Panel
with room temperature probe.

KRLT Receiver
with room temperature probe.

Dimensions 95x58x30mm
Wall mounting installation

KTLT Remote control

Serial interface

- RS485 Modbus RTU serial interface and serial routing from every type of control.
- RS485/BACnet gateway for communication from MODBUS RTU to BACNET IP; up to 64 fan coils with RS485 interface.
- RS485/FTT10-LonWorks gateway for communication from MODBUS RTU to LonWorks; up to 64 fan coils with KRS485 interface.

Web code: **ACREG**

CONTROLS for fan coil units

COMPATIBLE FAN COILS:

YARDY-I EV3 / YARDY EV3 cased	YARDY-I EV3 / YARDY EV3 concealed	YARDY-ID2 / YARDY-DUCT2 ducted	YARDY-HP	DIVA-I / DIVA
				
INVERTER	INVERTER	INVERTER		INVERTER

STANDARD CONTROLS

STANDARD FAN COIL (*)	INSTALLATION:	3-speed ON/OFF switch	0-10 Vdc Minimum fan analogue	Room thermostat	Thermostat output	Air sensor with remote control option	Summer/winter switch	3-way ON/OFF valve control	2-way ON/OFF valve control	Electric heater control	Continuous ventilation/ thermostat	2-pipe systems	4-pipe systems	Weekly time bands	Control interface for 4 fan coil units	Serial interface
 KC C	➔ **KC** - ❖ **C** on board	◆														
 KTA TATM	➔ **KTA** - ❖ **TATM** on board	◆		◆	◆		◆									
 KCV2 	➔ **KCV2** receiver	◆			◆		◆								◆	
KTCV2 	➔ **KTCV2** wall mounted ➔ **KBTCV2** - ❖ **TCV2** on board	◆		◆	◆ ACCESSORY	◆	◆	◆	◆	◆	◆	◆	◆		◆	
KTCVA 	➔ **KTCVA** wall mounted ➔ **KBTCVA** - ❖ **TCVA** on board	◆		◆	◆	◆	◆ AUTOMATIC	◆			◆	◆			◆	
KTCVR 	➔ **KTCVR** wall mounted ➔ **KBTCVR** - ❖ **TCVR** on board	AUTOMATIC SPEED MINIMUM SPEED ◆		REGULATION ±5°C ◆	◆	◆	◆ AUTOMATIC	◆	◆ ONLY FOR 4-PIPE-SYSTEMS	◆		◆	◆		◆	
STANDARD FAN COIL	➔ **KTVD** semi-recessed in wall	MANUAL/ AUTOMATIC SPEED ◆		◆	TIMED ◆ (A)		AUTOMATIC ◆ (B)	◆	◆	◆	◆	◆	◆	◆	◆	
	➔ **KTVDM** semi-recessed in wall	MANUAL/ AUTOMATIC SPEED ◆		◆	TIMED ◆ (A)		AUTOMATIC ◆ (B)	◆	◆	◆	◆	◆	◆	◆	◆	◆
	➔ **KTVDI** semi-recessed in wall	MANUAL/ AUTOMATIC SPEED ◆	◆	◆	TIMED ◆ (A)		AUTOMATIC ◆ (B)	◆	◆	◆	◆	◆	◆	◆		
INVERTER FAN COIL	➔ **KTVDIM** semi-recessed in wall	MANUAL/ AUTOMATIC SPEED ◆	◆	◆	TIMED ◆ (A)		AUTOMATIC ◆ (B)	◆	◆	◆	◆	◆	◆	◆		◆

(A) Fan or minimum thermostat with KSO probe (accessory) start delay.
(B) Manual summer/winter switch or by contact or automatic with KSO probe (accessory).
❖ Factory mounted ➔ supplied loose

(*) Per utilizzo di controlli standard KCV2, KTCV2, KTCVA, KTCVR su ventilconvettori Inverter è disponibile il convertitore analogico digitale KADC.

TERMINAL UNITS

Terminal unit

UTNA Platinum 013÷120

Cooling capacity: 6.4÷70 kW - Heating capacity: 4.9÷78 kW

- **Compliant with ErP 2018 NRVU**
- **BRUSHLESS EC fan**
- **F7 high efficiency filters**

Modular ductable air handling terminal units.

Construction features

- Terminal air handling unit: with modules for horizontal or vertical installation (013-050) with or without ducting.
- Structure with double wall sandwich type freestanding panelling, 30mm-thick with closed cell polyurethane foam insulation with high soundproofing and thermal insulation capacity.
- Routine machine maintenance from the bottom (for the horizontal version with installation in false ceiling or hanging from ceiling) or frontally (for the vertical version) with removable panels.
- BA coil module (horizontal) / BAV coil module (vertical up to size 050) complete with: G4 standard filter, optional fine F7 filter. All filters are supplied complete with differential pressure switch to signal filter clogging condition in compliance with European regulation no. 1253/2014.
  Finned coil heat exchanger, with copper pipes and 2 rows of aluminium fins for heating or reheating only and 4-6 rows for cooling and/or heating with right or left connections to be selected with order. Condensate drain pan in aluminium both for horizontal BA4R and BA6R versions and vertical BAV4R and BAV6R versions.
- SV fan module complete with EC Brushless centrifugal plenum fan with single intake directly coupled to electric motor. Static and dynamic balancing of the entire assembly, built in accordance with standard DIN ISO 1940. G6.3 balancing grade. Standard control of the rotation speed via special 0-10V analogue input. Electrical connection panel fitted as standard complete with disconnect switch, protection fuses and connecting terminal block.

Accessory modules

- PMA - Intake/outlet plenum with pre-cut side outlets.
- SIL - Plenum with absorbent cartridge silencer to be placed on delivery or intake.
- MUV-PRV - Plenum with steam humidifier and external electric generator.
- BE - Additional electrical coil for connection to channel.

Factory fitted accessories

- SG - Optional polypropylene drop separator at low load losses.
- TAG - Optional antifreeze thermostat.

Separately supplied accessories

- KSG - Polypropylene drop separator at low load losses (only for BA).
- KTAG - Antifreeze thermostat (only for BA).
- KSER - Kit in combination with PMA consisting of: damper with aluminium blades and frame, fitted with seal gasket, certified class 2 according to En 1751 for fresh air (max 30%) or recirculated air and a fastening panel to PMA module. The damper is sized for treating up to 100% of the UTNA air capacity and may be positioned at the front, top or bottom of the PMA.
- KMS - Manual control for KSER damper.
- KB2R - Separately supplied additional reheat coil.

	UTNAP MODEL			013	025	035	050	070	090	120
❷	Coil thermal power Only hot	BA 2R/BAV 2R	kW	4,9	8,4	11,7	16,8	25,1	32,8	39,1
❶	Cooling capacity	BA/BAV 4R	kW	6,4	11,1	14,6	21,3	31,9	45,2	53,6
❷	Heating capacity	BA/BAV 4R	kW	7,6	13,6	18,4	26,5	39,7	52,3	64,4
❶	Cooling capacity	BA/BAV 6R	kW	8,1	14,9	20,2	27,5	41,2	56,8	68,9
❷	Heating capacity	BA/BAV 6R	kW	9,1	16,6	22,8	32,2	48,3	62,1	78,2
❸	Heater power	230V-1ph-50Hz	kW	3	-	-	-	-	-	-
	BE electric	400V-3ph-50Hz	kW	-	6	9	13	17	24	24
❹	Air flow rate	NOM	m³/h	1300	2500	3500	5000	7500	9000	12000
		MIN	m³/h	800	1100	1500	2100	3100	5000	5000
		MAX	m³/h	2100	3700	4800	6700	10500	14400	15500
❹	Useful static head.	NOM	Pa	300	300	300	300	300	300	300
❺	Irradiated sound power		dB(A)	47	50	54	54	56	55	59
❺	Intake sound power		dB(A)	64	65	69	68	71	70	74
❺	Delivery sound power		dB(A)	70	71	75	75	78	77	80
❹	SFP Int (Erp 2018<230)		W/m³/s	80	121	137	128	143	101	146
	Filtration grade EN779			G4/F7	G4/F7	G4/F7	G4/F7	G4/F7	G4/F7	G4/F7
	PRV Maximum steam production		Kg/h	3	5	5	8	10	15	18
	Electrical supply		V-ph-Hz	230-1-50	230-1-50	230-1-50	230-1-50	400-3-50	400-3-50	400-3-50
	DIMENSIONS AND WEIGHTS			**013**	**025**	**035**	**050**	**070**	**090**	**120**
	L - Width		mm	945	1245	1545	1645	1645	2045	2045
	H - Height		mm	387	387	387	504	687	837	837
	PMA - Depth		mm	480	480	480	596	780	931	931
	BA - Depth		mm	750	750	750	750	750	750	750
	BAV - Height		mm	812	812	862	962	-	-	-
❻	UTNA Weight		kg	53	60	67	88	94	132	142

Data at the following conditions:

❶ Air T in 26°C D.B.; 18.6°C W.B. (50% R.H.); water T in 7°C with Δt 5°C; nominal air flow.

❷ Air T in 20°C D.B.; 13.7°C W.B. (50% R.H.); water T in 40°C with Δt 5°C; nominal air flow.

❸ Air T in 20°C D.B.; 13.7°C W.B. (50% R.H.); nominal air flow.

❹ Air T in 20°C D.B.; 13.7°C W.B. (50% R.H.); nominal air flow; 4-row coil BA/BAV 4R; clean type F7 filter.

❺ Of SV only with work point at nominal air flow; and total head calculated in configuration: 4-row coil BA/BAV 4R; clean type F7 filter; available static 300 Pa. In accordance with EN ISO 11546-2.

❻ SV Weight

Controls

- KPTZ - Rotating potentiometer for wall mounting installation, dedicated to manual fan speed control. The speed of delivery and return fans is calibrated with a single potentiometer.
- KTVDIM - Electronic control panel with display, for semi-recessed wall installation, including ON/OFF button, MODE, 3 Speeds+AUTO, SETPOINT change; auxiliary contacts to control ON/OFF valve in 2-pipe and 4-pipe systems; summer/winter switching; manual/automatic/ from contact; continuous/thermostat ventilation; configurable digital inputs (SCR, ECO, SIC, ALARM), weekly time bands management., complete with RS485 resident serial interface (Modbus RTU protocol).
- KRCA1 - Electronic control panel with display, for semi-recessed wall installation, including ON/OFF button, MODE, 2 Speeds, SETPOINT change; summer/winter switching with button or remote digital input; continuous ventilation, weekly time bands management room probe; 3 analogue outputs to control modulating fan, 1 or 2 modulating valves in 2-pipe or 4-pipe systems, modulating damper; 1 auxiliary contact to control on/off electrical resistance (1 stage) in 2-pipe systems + electrical resistance; 2 configurable digital inputs and 2 configurable analogue inputs. Compete with RS485 resident serial interface (Modbus RTU protocol).
- KPAU - Humidistat panel for PRV steam producer control.

Terminal unit

UTNA Platinum 013÷120

Cooling capacity: 6.4÷70 kW - Heating capacity: 4.9÷78 kW

Full Controls

- KRFCS - Electrical panel complete with: DDC programmable microprocessor regulator. BMS interfacing Integrated as standard with Modbus RTU protocol, main disconnecting switch, relay to control various users, terminal blocks for quick connection of all machine components, auxiliary circuit supply with suitable transformer 230/12-24V.

USER PANELS (for KRFCS)

- KHMIG -Interface terminal with black monochrome graphic display with LED backlighting.
- KHMIR - Interface terminal complete with integrated room temperature probe with black monochrome graphic display with LED backlighting.
- KCW - White decorative plate for control panel.
- KCB - Black decorative plate for control panel.
- KWMS - Wall mounting installation support for control panel.

Valves and actuators

- KV3V - PN40 Mixer/diverter 3-way regulation ball valves, female threaded hydraulic connections.
- KV2V - PN40 2-way regulation ball valves, female threaded hydraulic connections.
- KVMM - Actuator for ball regulation valves with modulating control 0/10 Vdc 24 Vac power supply.
- KV0M - Actuator for 230V On/Off valves.
- KDMA-S - Actuator for modulating damper 0-10V 24V with spring return.
- KDMA - Actuator for modulating damper 0-10V 24V without spring return.
- KDOA - Actuator for ON/OFF damper with spring return.

All the probes, actuators and valves on the Full Control section are also available.

Full Control regulation

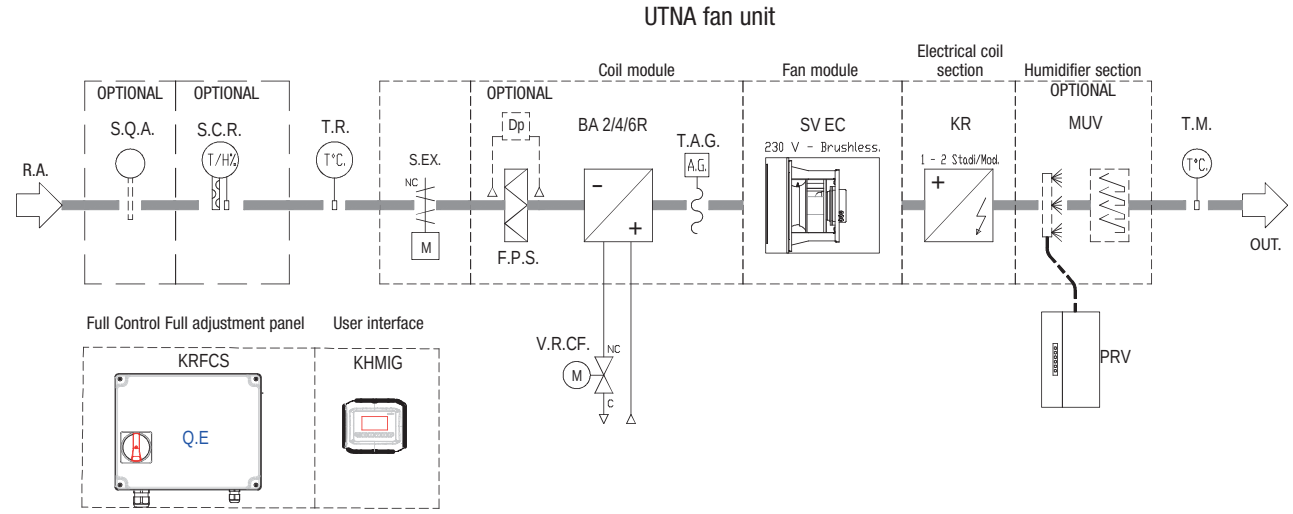
The Full Control kit allows integrated management of all the functions in the UTNAP, guaranteeing total control of room comfort in a simple and complete manner:

- **Simple installation: all components are designed for on site maximum simplicity and flexibility of installation and supplied separately to not hinder handling and the installation of the units in a false ceiling and in confined spaces. The electrical panel can also be installed remotely. Pre-assembled and pre-wired at the factory on request.**
- **Easy to use: intuitive and user friendly functions and menus.**
- **Weekly time schedule.**
- **Easy start-up: pre-calibrated regulators, pre-set and tested at the factory, specifically developed to manage all functions of the chosen configuration, avoiding any complication.**
- **Easily and immediately interfaced: controller comes standard with a USB port, RS 485 for dialogue via Modbus RTU and Canbus port to develop local networks.**

The following functions are present according to the selected machine composition:

- S.Q.R. - Duct or ambient air quality sensor to manage the fan speed or automatic modulation of the dampers.
- S.C.R. - Combined temperature and humidity return air or environment probe to manage air units with humidification and/or dehumidification functions.
- T.R. - Air return temperature probe.
- S.EX. - Shut-off damper.
- F.P.S. - Standard pleated filter.
- DP - Differential clogging filters pressure switch.
- BA - Hot/cold water coil.
- V.R.CF. - Hot-cold coil adjustment valve.
- T.A.G. - Antifreeze thermostat.
- SV EC - Brushless EC ventilated section.
- SV - 3-speed ventilated section.
- B.E. - Electrical coil.
- PV - Steam producer.
- T.M. - Supply temperature probe.
- KRFCS - Full Control power and regulation electrical panel.
- KHMIG - Control panel with graphic display.

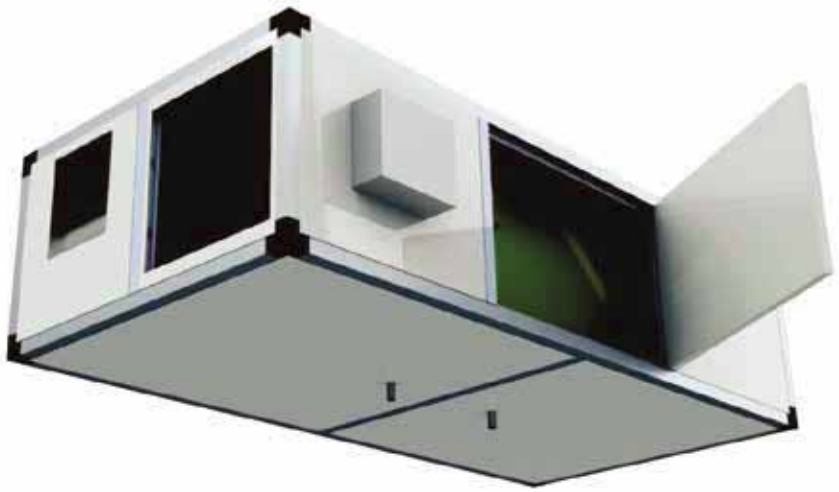
UTNA SV EC


UTNA fan unit
OPTIONAL
OPTIONAL
S.Q.A.
S.C.R.
T.R.
R.A.
S.EX.
NC
M
OPTIONAL
Dp
F.P.S.
Coil module
BA 2/4/6R
T.A.G.
A.G.
Fan module
SV EC
230 V - Brushless
Electrical coil section
KR
1 - 2 Stadi/Mod.
Humidifier section
OPTIONAL
MUV
T.M.
OUT.
PRV
V.R.CF.
NC
C
Full Control Full adjustment panel
KRFCS
Q.E
User interface
KHMIG

Heat recovery unit

UTNR-A Platinum 040÷500

Air flow rate: 400÷4,050 m³/h



- Complying with ErP 2018 NRVU
- Very high efficiency heat recovery Eurovent Certificate
- Multi-speed or Brushless EC fans
- F7 and M5 high efficiency filters
- Double sandwich wall with high insulation capacity
- Full control kit

Fresh air terminal unit with counterflow opposing flow static heat recovery.

Construction features

- Recovery unit: very high yield static type with aluminium plates with counterflow with close step. Side extraction of exchange pack (except for size 40 which is extracted from the bottom).
- Fans: fresh air inlet and forward blade double intake centrifugal expulsion type with a continuously adjustable directly coupled electric motor; optionally, EC Brushless technology high efficiency electric motors. Fan unit installed on anti-vibration mountings to prevent the transmission of vibration to the structure. The EC fans can be factory set for operation with constant flow (specification to be provided in order)
- Structure: frame made with extruded aluminium profile with preloaded nylon joints. Sandwich buffer panels, 23 mm thick, made with galvanised sheet steel on the inside and pre-painted on the outside with thermal and acoustic insulation made of injected polyurethane, with a density of 45 kg/m^3.
- Filtering section: filtration sections made of compact cell filters with low pressure drop polypropylene media, removable from the side, with F7 efficiency class in fresh flow and M5 in expulsion flow.
- Factory-installed dirty filter differential pressure switches
- Condensate drain pan made of galvanised sheet steel with condensate drain connection from the bottom.
- Integrated free cooling or thawing by-pass system. Thanks to the presence of a motorised damper next to the heat recovery, a bypass system can be created to manage freecooling or thawing depending on thermohygrometric needs or conventions

Versions

- UTNR-A/O PLATINUM - Recovery unit with opposing flow heat exchanger, installed horizontally and with standard multi-speed fans
- UTNRE-A/O PLATINUM - Recovery unit with opposing flow heat exchanger, installed horizontally and with Brushless EC fans that reduce power consumption for ventilation at equal performance.

Available orientation

- 01 - Right-hand connections
- 02 - Left-hand connections

The selected orientation must be specified to process the job order.

Installation

- EXT- Outdoor installation including rain cover, 80 mm-high base and an outdoor electrical box

Factory fitted accessories

- BER - Reheating electrical resistance installed inside, complete with filament-type safety thermostats and control relays to contain pressure drops. 230/1/50 single-phase electrical supply for model 040. 400/3/50 three-phase for models 075÷500.
- BA - Internal hot water reheating coil.
- BAATG - Antifreeze thermostat installed downstream of the water reheating coil.
- BP - Bypass control for free-cooling (suitable for PCU and KPCUE) including damper actuator and 2 NTC probes on board the machine.
- ERF7-F7 efficiency return filter

Separately supplied accessories

- KSBFR - Section containing hot/cold water coil to reheat or recool, placed outside the machine in front of the inlet. Includes stainless steel condensate drain pan with drain connection from the bottom.
- KSBFR + ATG - Hot/cold water coil section with mounted antifreeze thermostat.
- KSRE - Regulation damper set up for servo-control, consisting of a galvanised sheet steel frame with adjustable fins.
- KSSC - Duct silencer with a rectangular base made of glass wool covered with a protective film of glass fibre and micro-stretched sheet steel.
- KRMS - Section with 3 dampers for air mixing and recirculating (only for horizontal installation).
- KSPC - Panel with round fittings.

	UTNR-A PLATINUM MODEL		40	75	100	150	200	320	400	500
	Type of Unit					Non-residential- Bidirectional				
	Outdoor air filters					F7				
	Return air filters					M5				
	Bypass					Motorisable side bypass damper				
	TECHNICAL SPECIFICATIONS									
	Nominal air flow	m³/h	400	750	1000	1500	2050	3200	3800	4700
	STANDARD FANS									
❶	Nominal available static pressure	Pa	160	120	130	160	120	180	n.d.	n.d.
❷	Specific fan power (SFP)	W/(m³/s)	740	934	1105	1102	1078	1054	n.d.	n.d.
❸	Sound pressure level	dB(A)	59	60	63	63	63	69	n.d.	n.d.
	Speed N°/Regulation Type		4	3	3	3	3	3	n.d.	n.d.
	Electrical supply	V-ph-Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	n.d.	n.d.
	BRUSHLESS EC FANS									
❶	Nominal available static pressure	Pa	160	120	130	160	120	180	200	200
❶	Max available static pressure	Pa	340	210	520	500	540	375	940	760
❷	Specific fan power (SFP)	W/(m³/s)	705	742	1059	1048	898	1040	949	935
❸	Sound pressure level	dB(A)	60	61	62	64	62	68	70	73
	Speed N°/Regulation Type		0-10 V							
	Electrical supply	V-ph-Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
	COUNTERFLOW HEAT RECOVERY									
❹	Winter Efficiency	%	83,6	82,9	81,6	83,3	83,7	86,8	84,1	84,2
❺	Summer Efficiency	%	75,5	75,9	74,5	75,1	75,6	78,0	75,0	75,1
❻	Efficiency Regulation EC 1253/2014	%	75,9	76,4	75,0	75,6	76,0	76,3	75,5	75,6
	DIMENSIONS AND WEIGHTS		**40**	**75**	**100**	**150**	**200**	**320**	**400**	**500**
	Length/Height/Depth UTNR-A PLATINUM	mm	1480/380/800	1940/480/990	1940/480/990	2200/550/1000	2200/550/1400	2500/680/1400	2500/680/1400	2500/680/1700
	Weight UTNR-A/P O	kg	90	140	150	170	200	240	250	280

Data at the following conditions:

❶ Values referred to the nominal air flow considering the pressure drops of the heat recovery and the F7 filter

❷ Values referred to the nominal air flow and Nominal available static pressure

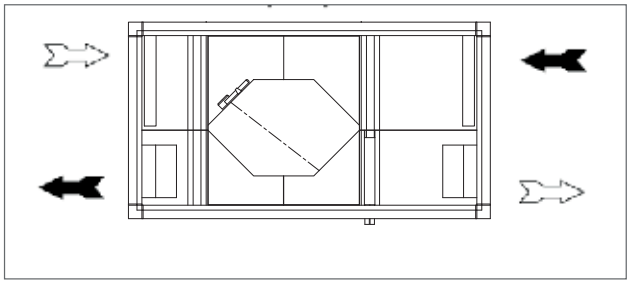
❸ Sound pressure level referring to 1 m from the machine inlet in free field

❹ Outdoor air T: -5°C, 80% RH ; Ambient air T: 20°C, 50% RH.

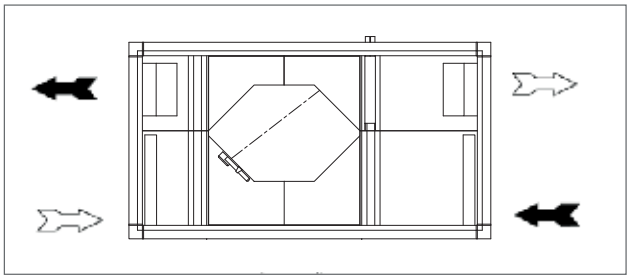
❺ Outdoor air T: 32°C, 50% RH ; Amb. air T: 26°C, 50% RH.

❻ Dry nominal conditions, measured according to En 308 in balanced flows. Outdoor air 5°C D.B.; Ambient air 25°C D.B.

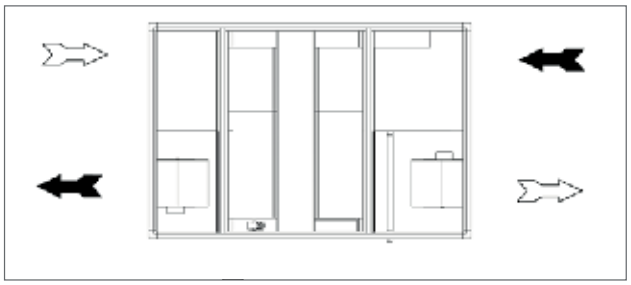
ORIENTATION TYPE 01 (MOD.40)



ORIENTATION TYPE 02 (MOD.40)

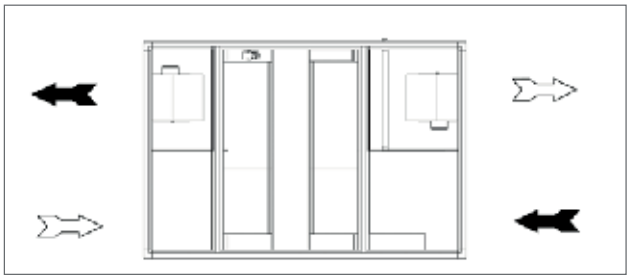


ORIENTATION TYPE 01



Expelled air
Fresh air

ORIENTATION TYPE 02



Expelled air
Fresh air

The illustrated guidelines concerning the machine seen from above

Heat recovery unit

UTNR-A Platinum 040÷500

Air flow rate: 400÷4,050 m³/h

Controls

- KCV2 - Speed selector for wall mounting installation, to select from 3 speeds: Off/heating/cooling switch; 3-speed switch; 230V power supply.
- PCU-KPCUE - Control panel for wall mounting installation, allows the winter/summer room temperature to be controlled, gives consent to activate or exclude the water coil or the electrical resistance. Selects the operating speed of the fan from minimum, medium, maximum (excluding model 40 which only offers one speed) or by 0/10 V regulation (KPCUE for EC fans) and controls the free-cooling function.
- KPTZ - Rotating potentiometer for wall mounting installation, dedicated to manual fan speed control. The speed of delivery and return fans is calibrated with a single potentiometer (only for the EC Brushless fan version).

Full Controls

- KRFCS - Electrical panel complete with: DDC programmable microprocessor regulator. BMS interfacing Integrated as standard with Modbus RTU protocol, main disconnecting switch, relay to control various users, terminal blocks for quick connection of all machine components, auxiliary circuit supply with suitable transformer 230/12-24V.

USER PANELS (for KRFCS)

- KHMIG -Interface terminal with black monochrome graphic display with LED backlighting.
- KHMIR - Interface terminal complete with integrated room temperature probe with black monochrome graphic display with LED backlighting.
- KTOUCH - Black and white touch screen control panel.
- KCOLOR - Colour touch screen control panel.
- KCW - White decorative plate for control panel.
- KCB - Black decorative plate for control panel.
- KWMS - Wall mounting installation support for control panel.

Valves and actuators

- KV3V - PN40 Mixer/diverter 3-way regulation ball valves, female threaded hydraulic connections.
- KV2V - PN40 2-way regulation ball valves, female threaded hydraulic connections.
- KVMM - Actuator for ball regulation valves with modulating control 0/10 Vdc 24 Vac power supply.
- KVOM - Actuator for 230V On/Off valves.
- KDMA-S - Actuator for modulating damper 0-10V 24V with spring return.
- KDMA - Actuator for modulating damper 0-10V 24V without spring return.
- KDOA - Actuator for ON/OFF damper with spring return.

All the probes, actuators and valves on the Full Control section are also available.

PCU Panel

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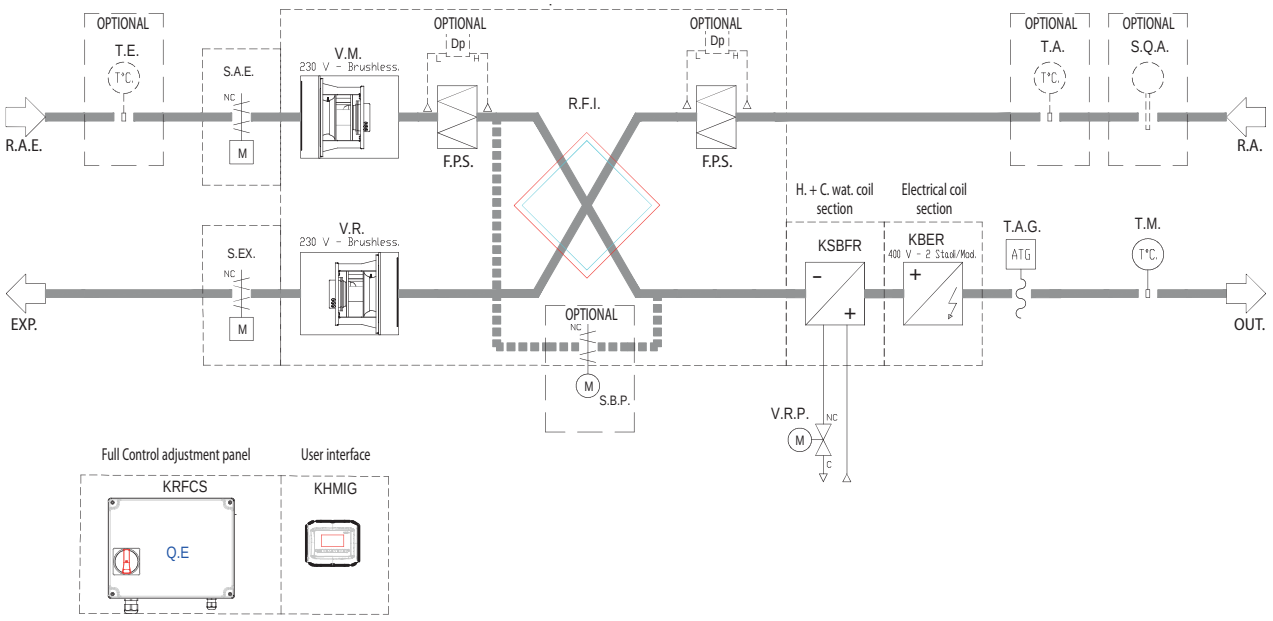
KPCUE Panel

UTNRE-A Platinum



Full Control regulation

The Full Control kit allows integrated management of all the functions in the UTNRA-P, guaranteeing total control of room comfort in a simple and complete manner:

- **Simple installation: all components are designed for on site maximum simplicity and flexibility of installation and supplied separately to not hinder handling and the installation of the units in a false ceiling and in confined spaces. The electrical panel can also be installed remotely.**
  Pre-assembled and pre-wired at the factory on request.
- **Easy to use: intuitive and user friendly functions and menus.**
- **Weekly time schedule.**
- **Easy start-up: pre-calibrated regulators, pre-set and tested at the factory, specifically developed to manage all functions of the chosen configuration, avoiding any complication.**
- **Easily and immediately interfaced: controller comes standard with a USB port, RS 485 for dialogue via Modbus RTU and Canbus port to develop local networks.**

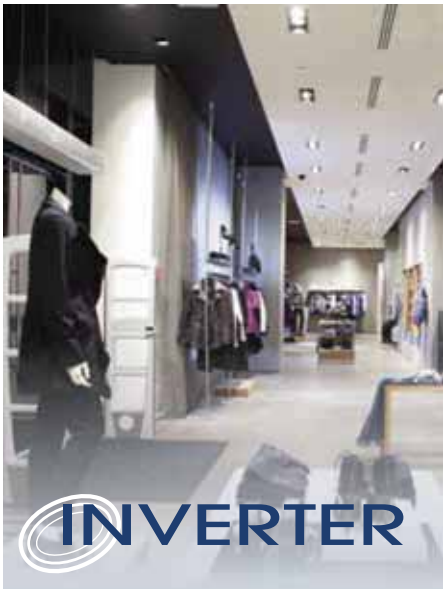
The following are present according to the composition of the selected machine and accessories:

- T.E. - Outdoor air temperature probe.
- S.A.E. - Outdoor air damper.
- V.M. - Supply fan.
- F.P.S. - Standard pleated filter.
- Dp - Differential clogging filters pressure switch.
- KSBFR - Hot-cold additional coil module.
- V.R.P - Mixed coil adjustment valve.
- BCR - Integrated hot water coil.
- V.R.C - Hot coil adjustment valve.
- BER - Integrated electrical coil.
- T.A.G. - Antifreeze thermostat.
- T.M. - Supply temperature probe.
- S.Q.A. - Environmental air quality probe.
- T.A. - Environmental air temperature probe.
- V.R. - Return fan.
- S.EX. - Shut-off damper.
- KRFCS - Full Control power and regulation electrical panel.
- KHMIG - Control panel with graphic display.

Heat recovery unit

UTNR-HE Platinum 040÷400

Air flow rate: 310÷4,250 m³/h



- **Compliant with ErP 2018 NRVU**
- **Very high efficiency heat recovery Eurovent Certificate**
- **Multi-speed or Brushless EC fans**
- **F7 and M5 high efficiency filters**
- **Double sandwich wall with high insulation capacity**
- **Full control kit**

Fresh air terminal unit with enthalpy rotary heat recovery.

Construction features

- Recovery unit: high yield rotary type made of aluminium with hygroscopic surface. Electric induction motor with belt and pulley transmission. Recovery unit-motor assembly easily removed from the side for periodic maintenance.
- Fans: fresh air inlet and forward blade double intake centrifugal expulsion type with a continuously adjustable directly coupled electric motor; optionally, EC Brushless technology high efficiency electric motors. Fan unit installed on anti-vibration mountings to prevent the transmission of vibration to the structure. The EC fans can be factory set for operation with constant flow (specification to be provided in order)
- Structure: frame made with extruded aluminium profile with preloaded nylon joints. Sandwich buffer panels, 23 mm thick, with galvanised sheet steel on the inside and pre-painted on the outside with thermal and acoustic insulation made of injected polyurethane, with a density of 45 kg/m³. Integrated free cooling or thawing by-pass system. Thanks to the presence of a motorised damper on the heat recovery side, a bypass system can be created to manage the freecooling or thawing depending on requirements or mm thermohygrometric conventions, with galvanised sheet steel on the inside and pre-painted on the outside with thermal-acoustic insulation made of injected polyurethane, with a density of 45 kg/m3 offering very high thermal and acoustic insulation.
- Filtering section: filtration sections made of compact cell filters with low pressure drop polypropylene media, removable from the side, with F7 efficiency class in fresh flow and M5 in expulsion flow.
- Factory-installed dirty filter differential pressure switches
- Terminal block: already part of the machine to facilitate the electrical connections, fan controls and rotary recovery.

Versions

- UTNR-HE/O PLATINUM - Recovery unit with rotary heat exchanger, installed horizontally and with standard multi-speed fans
- UTNRE-A/O PLATINUM - Recovery unit with rotary heat exchanger, installed horizontally and with Brushless EC fans that reduce the power consumption for ventilation at equal performance.

Available orientation

- 01 - Right-hand connections
- 02 - Left-hand connections

The selected orientation must be specified to process the job order.

Installation

- EXT- Outdoor installation

Factory fitted accessories

- ERF7-F7 efficiency return filter
- BP-Bypass control for free-cooling including: NC relay on board the panel (suitable for PCU and KPCUE) and 2 NTC probes on board the machine

Separately supplied accessories

- KBER - Reheating electrical resistance installed outside in a duct dedicated module, complete with filament-type safety thermostats and control relays to contain pressure drops.
  230/1/50 single-phase electrical supply for model 040 and 075. 400/3/50 three-phase for 100÷400 models.
- KSBFR - Section containing hot/cold water coil to reheat or recool, placed outside the machine in front of the inlet. Includes stainless steel condensate drain pan with drain connection from the bottom.
- KSBFR + ATG - Hot/cold water coil section with mounted antifreeze thermostat
- KSRE - Regulation damper preset for servo-control, consisting of a galvanised sheet steel frame with adjustable fins.
- KSSC - Duct silencer with a rectangular base made of glass wool covered with a protective film of glass fibre and micro-stretched sheet steel.
- KRMS - Section with 3 dampers for air mixing and recirculating (only for horizontal installation).
- KSPC - Panel with round fittings.

	UTNR-HE PLATINUM MODEL		40	75	100	150	200	320	400
	Type of Unit				Non-residential- Bidirectional				
	Outdoor air filters				F7				
	Return air filters				M5				
	Bypass				Motorisable side bypass damper				
	TECHNICAL SPECIFICATIONS								
	Nominal air flow	m³/h	310	640	1000	1650	2400	3200	3800
	STANDARD FANS								
❶	Nominal available static pressure	Pa	230	130	190	160	300	180	n.d.
❷	Specific fan power (SFP)	W/(m³/s)	1409	1443	1580	1036	806	1226	n.d.
❸	Sound pressure level	dB(A)	59	60	62	62	63	66	n.d.
	Speed N°/Regulation Type		4	3	3	3	3	3	n.d.
	Electrical supply	V-ph-Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	
	BRUSHLESS EC FANS								
❶	Nominal available static pressure	Pa	230	130	190	160	300	180	100
❶	Max available static pressure	Pa	430	280	560	600	480	460	230
❷	Specific fan power (SFP)	W/(m³/s)	1045	1263	1102	842	617	869	1029
❸	Sound pressure level	dB(A)	60	61	61	63	62	65	66
	Speed N°/Regulation Type		0-10 V						
	Electrical supply	V-ph-Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
	COUNTERFLOW HEAT RECOVERY								
❹	Winter efficiency temp/enthalpy	%	79/74	74/69	73/58	74/60	75/62	74/60	73,5/59
❺	Summer efficiency temp/enthalpy	%	79/69	74/65	73/59	75/60	81/65	75/59,5	73/59
❻	Efficiency Regulation EC 1253/2014	%	74,2	74	73	73	73,7	74,3	73
	DIMENSIONS AND WEIGHTS		**40**	**75**	**100**	**150**	**200**	**320**	**400**
	Length/Height/Depth UTNR-A PLATINUM	mm	1075/480/800	1075/480/800	1205/550/1000	1400/550/1000	1720/680/1290	2000/680/1400	2000/680/1400
	Weight	kg	70	75	105	140	180	230	250

Data at the following conditions:

❶ Values referred to the nominal air flow considering the pressure drops of the heat recovery and the F7 filter

❷ Values referred to the nominal air flow and Nominal available static pressure

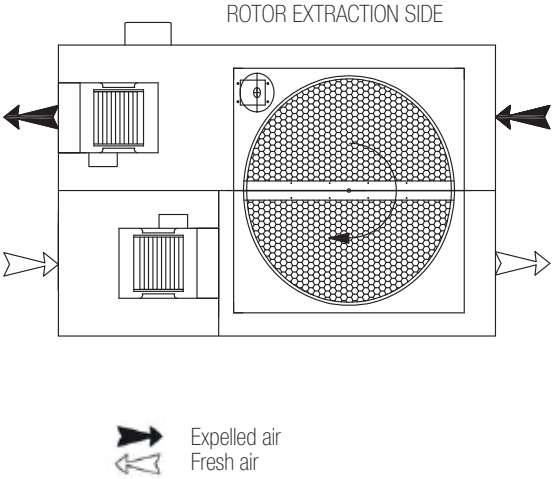
❸ Sound pressure level referring to 1 m from the machine inlet in free field

❹ Outdoor air T: -5°C, 80% RH ; Ambient air T: 20°C, 50% RH.

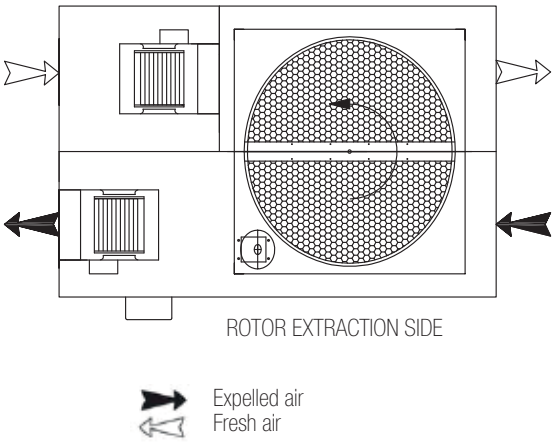
❺ Outdoor air T: 32°C, 50% RH ; Amb. air T: 26°C, 50% RH.

❻ Dry nominal conditions, measured according to En 308 in balanced flows. Outdoor air 5°C D.B.; Ambient air 25°C D.B.

ORIENTATION TYPE 01



ORIENTATION TYPE 02



Heat recovery unit

UTNR-HE Platinum 040÷400

Air flow rate: 310÷4,250 m³/h

PCU Panel
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KPCUE Panel

Controls

- KCV2-Speed selector for wall mounting installation, to select from 3 speeds (excluding model 40): Off/heating/cooling switch; 3-speed switch; 230V power supply.
- PCU-KPCUE - Control panel for wall mounting installation, allows the winter/summer room temperature to be controlled, gives consent to activate or exclude the water coil or the electrical resistance. Selects the operating speed of the fan from minimum, medium, maximum (excluding model 40 which only offers one speed) or by 0/10 V regulation (KPCUE for EC fans) and controls the free-cooling function.
- KPTZ - Rotating potentiometer for wall mounting installation, dedicated to manual fan speed control. The speed of delivery and return fans is calibrated with a single potentiometer (only for the EC Brushless fan version).

Full Controls

- KRFCS - Electrical panel complete with: DDC programmable microprocessor regulator. BMS interfacing Integrated as standard with Modbus RTU protocol, main disconnecting switch, relay to control various users, terminal blocks for quick connection of all machine components, auxiliary circuit supply with suitable transformer 230/12-24V.

Optional first start-up

User panels (for KRFCS)

- KHMIG -Interface terminal with black monochrome graphic display with LED backlighting.
- KHMIR - Interface terminal complete with integrated room temperature probe with black monochrome graphic display with LED backlighting.
- KCW - White decorative plate for control panel.
- KCB - Black decorative plate for control panel.
- KWMS - Wall mounting installation support for control panel.

Valves and actuators

- KV3V - PN40 Mixer/diverter 3-way regulation ball valves, female threaded hydraulic connections.
- KV2V - PN40 2-way regulation ball valves, female threaded hydraulic connections.
- KVMM - Actuator for ball regulation valves with modulating control 0/10 Vdc 24 Vac power supply.
- KV0M - Actuator for 230V On/Off valves.
- KDMA-S - Actuator for modulating damper 0-10V 24V with spring return.
- KDMA - Actuator for modulating damper 0-10V 24V without spring return.
- KDOA - Actuator for ON/OFF damper with spring return.

All the probes, actuators and valves on the Full Control section are also available.

Full Control regulation

The Full Control kit allows integrated management of all the functions in the UTNRHE, guaranteeing total control of room comfort in a simple and complete manner:

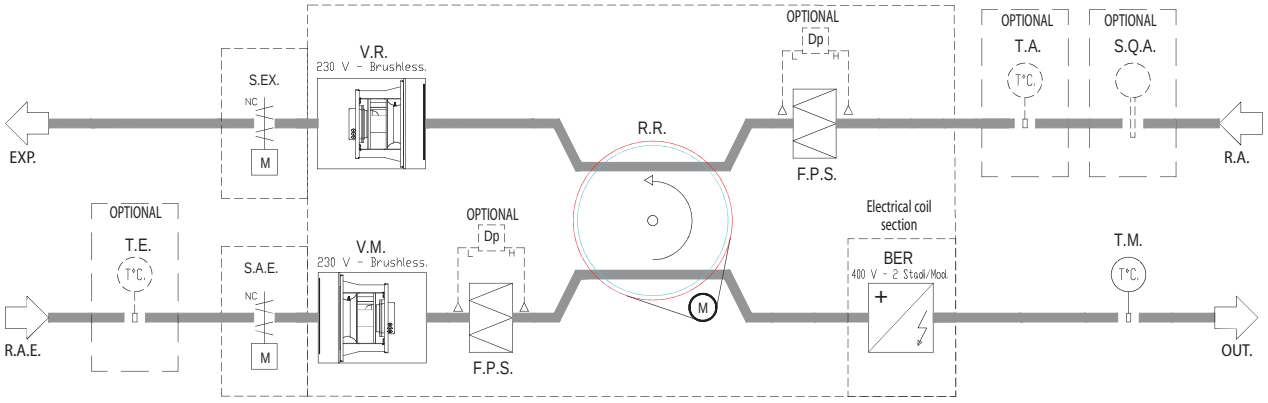
- **Simple installation: all components are designed for on site maximum simplicity and flexibility of installation and supplied separately to not hinder handling and the installation of the units in a false ceiling and in confined spaces. The electrical panel can also be installed remotely. Pre-assembled and pre-wired at the factory on request.**
- **Easy to use: intuitive and user friendly functions and menus.**
- **Weekly time schedule.**
- **Easy start-up: pre-calibrated regulators, pre-set and tested at the factory, specifically developed to manage all functions of the chosen configuration, avoiding any complication.**
- **Easily and immediately interfaced: controller comes standard with a USB port, RS 485 for dialogue via Modbus RTU and Canbus port to develop local networks.**

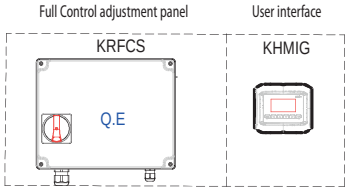
The following are present according to the composition of the selected machine and accessories:

- T.E. - Outdoor air temperature probe.
- S.A.E. - Outdoor air damper.
- V.M. - Supply fan.
- F.P.S. - Standard pleated filter.
- Dp - Differential clogging filters pressure switch.
- KSBFR - Hot-cold additional coil module.
- V.R.P - Mixed coil adjustment valve.
- BCR - Integrated hot water coil.
- V.R.C - Hot coil adjustment valve.
- BER - Integrated electrical coil.
- T.A.G. - Antifreeze thermostat.
- T.M. - Supply air thermostat.
- S.Q.A. - Environmental air quality probe.
- T.A. - Air return or ambient temperature probe.
- V.R. - Return fan.
- S.EX. - Shut-off damper.
- KRFCS - Full Control power and regulation electrical panel.
- KHMIG - Control panel with graphic display.

UTNR-HE Platinum version E brushless

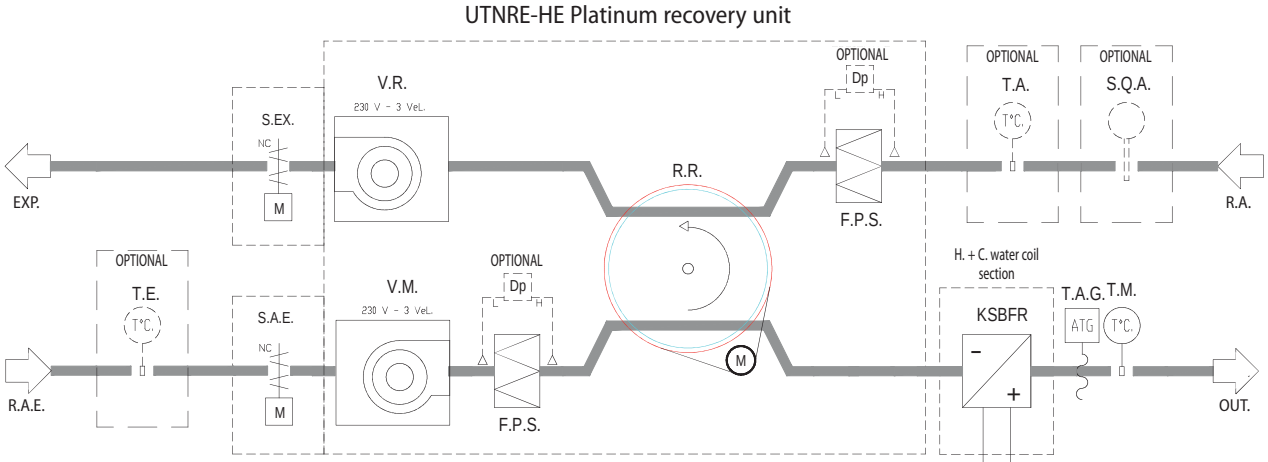
UTNRE-HE Platinum recovery unit

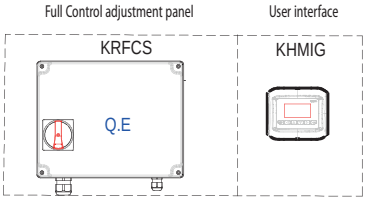




UTNR-HE Platinum

UTNRE-HE Platinum recovery unit





Controls
FULL CONTROL

The Full Control adjustment system aims to meet all the adjustment requirements of our units in the UTNA - UTNV - UTNR A/P and HE comfort range starting from the most basic up to fully-equipped units.

MAIN CONTROL LOGIC SETTINGS

Temperature adjustment at a supply fixed point (primary air)
The Tm fixed point probe controls the supply temperature using the modulating actuator of the control valve.

"Sliding" adjustment of the supply temperature according to the ambient set-point (all air)
The supply set-point is calibrated according to the difference between the room temperature and set-point, with the authority set. This function allows the performance of a control loop with a high degree of difficulty to be improved, thereby reducing the delay with which the ambient/return probe indicates the interference that occurs in the supply and is used as a base when the ambient temperature is to be set.

Result
The supply air temperature varies according to the difference between the actual ambient temperature and that prescribed.

Benefits for the end user
The ambient temperature control is faster and more accurate, and the gap on the ambient set-point is smaller than that achieved with separate ambient/return temperature control.

Antifreeze protection function
The TAG antifreeze thermostat protects the coil from frost (in case of intervention) when the outdoor air damper closes and the unit stops

Filter clogging monitoring
The cleanliness and healthiness of the filters is constantly monitored by the differential pressure switch as required by the relevant EU regulation

2-pipe systems
In case of the mixed coil, the season must be selected from the control panel or the remote selector.
The E/I selector also lets you exclude antifreeze protection while the coil is powered by cold water.

4-pipe systems
The hot and cold valve control is in automatic sequence, with central dead band to prevent instability.

Supply summer temperature compensation in relation to the outdoor one

Adjusting the ambient/return humidity
The humidity probe on the return controls the humidity. During winter, it modulates the delivery of the steam humidifier. During the summer period it acts on the actuator of the control valve of the cold coil, thereby modulating the performance.

Temperature free-cooling
This type of function is ONLY possible if you have selected a unit with heat recovery and it is set to achieve maximum savings.
Energy will be saved in systems with internal foreign heat production in cooling mode since the typical outdoor temperatures of the winter or intermediate seasons (approx. 10 to 20°C), the ambient temperature controller controls the outdoor air dampers and expulsion on opening and recirculation on closing, thereby eliminating the added heat with a corresponding percentage of outdoor air.
The function must be activated on start-up.

UNIT		UTNA/UTNV		UTNR A-P-HE	
FUNCTION		**AP**	**TA**	**AP**	**TA**
CONFIGURATIONS / FUNCTIONS	2-pipe single coil (Hot, Cold, Mixed)	●	●	●	●
	4-pipe second coil (Hot, Mixed)	●	●	●	●
	Fan control 1, 2 or 3V	●	●	●	●
	Fan control control (operated manually from the control panel or from the external input/potentiometer or according to the pressure/IAQ/Humidity probes)	●	●	●	●
	On/off damper control (operated electro-mechanically when the machine is switched on and the optional antifreeze thermostat, in case of alarm)	●	●	●	●
	Mixture chamber module damper control (potentiometer/from controller)	**n/a**	●	**n/a**	**n/a**
	Separate control for double vent.	**n/a**	**n/a**	●	●
	Recovery unit bypass command (for free-cooling control)	**n/a**	**n/a**	●	●
	Recovery unit antifreeze control	**n/a**	**n/a**	●	●
	On/off dehumidifier command	●	●	●	●
	Modulating dehumidifier command	●	●	●	●
	Coil on/off command Electric (ONLY 2-pipe versions alternative to the second hot coil for UTNA and UTNR)	●	●	●	●
	Coil modul. command Electric (ONLY 2-pipe versions alternative to the second hot coil for UTNA and UTNR)	**OPT**	**OPT**	**OPT**	**OPT**
PROBES	Antifreeze Thermostat	●	●	●	●
	Supply temperature probe	●	●	●	●
	Ambient/Return temperature probe and combined return/ambient temperature + humidity probe	●	●	●	●
	Ambient/Return Humidity Probe	●	●	●	●
I/O OPT.	IAQ input probe* (Modulating damper control or fan speed)	●	●	●	●
	Channel const. pressure probe input (Speed modulation of the fans on VAV systems with separate zone dampers or pressurised control)**	●	●	●	●
	Outdoor air temperature probe outlet (for supply set-point compensation, recovery/free-cooling bypass)	●	●	●	●
	Dp filter pressure switch input	**n/a**	●	**n/a**	●
	Remote temperature recalibration potentiometer input and remote damper positioning	●	●	●	●
	Input Remote E/I selection input (ONLY 2 pipes)	●	●	●	●
	Remote On/Off input	●	●	●	●
	Economy input (from external timer, micro window, badge reader, etc.)	●	●	●	●
	Ext. alarm input (general alarm, fire protection etc) for emergency stop	●	●	●	●
	Alarm repeat output (Relay)	**n/a**	**n/a**	**n/a**	**n/a**
	Thawing input from heat pump	●	●	**n/a**	**n/a**
	E/I switching output for heat pump	●	●	●	●
	Pump control 1 (auxiliary, not power, for the pump or generator to service the coil/circuit 1)	●	●	●	●
	Pump control 2 (auxiliary, not power, for the pump or generator to service the coil/circuit 2)	●	●	●	●
ADDITIONAL FUNCTIONS	Modbus serial communication	●	●	●	●
	Weekly time schedule	●	●	●	●
	Holiday schedule	●	●	●	●

** only with the Brushless EC fan
n/a: not available
OPT: option

Controls
FULL CONTROL

Separately supplied accessories
- KSEZM - Single-phase main disconnecting switch on the front of the electrical panel interrupts the power supply before allowing the door to be opened. It can be blocked with a padlock.
  Separately supplied accessories
- KSEZT - Three-phase main disconnecting switch on the front of the electrical panel interrupts the power supply before allowing the door to be opened. It can be blocked with a padlock.
- KPD - Differential air pressure switch (20-300Pa) to indicate the alarm when the point of intervention set to detect a dirty filter or air flow is reached.
- KTAG - Antifreeze thermostat (with brackets).
- KPOTS - Remote potentiometer for damper calibration.
- KLS - Damper manual command lever

Probes
- KATS - Ambient air NTC temperature probe (in the diagrams: TA).
- KDTS - NTC temperature probe from the channel (in the diagrams: TM/TR/TX).
- KOTS - Outdoor air NTC temperature probe (in the diagrams: TE).
- KDHS - Active humidity probe from channel with 0/10Vdc signal (in the diagrams: TUR/TUM).
- KATHS - Ambient temperature/humidity probe (in the diagrams: TUA).
- KDTHS - Channel temperature/humidity probe (in the diagrams: UR/UM).
- KAVOCS - Ambient IAQ VOC probe (in the diagrams: IAQ).
- KDVOCS - Channel IAQ VOC probe (in the diagrams: IAQ).
- KAIAQS - Ambient IAQ VOC+CO2 probe.
- KDIAQS - Channel IAQ VOC/CO2 probe.
- KDAPS - Air pressure probe.

Mixing/diverter 3-way ball PN40 VALVE. With body and shaft in brass and chrome plated brass ball. Sealed with an EPDM ring, female THREADED hydraulic connections
- KV3V15-x_x - 3-WAY threaded VALVE. DN15 kv from 1.6 to 6.3 depending on the sizes.
- KV3V20-6_3 - 3-WAY threaded VALVE DN20 kv 6.3.
- KV3V25-10 - 3-WAY threaded VALVE DN25 kv 10.
- KV3V20-6_3 - 3-WAY threaded VALVE DN32 kv 16.
- KV3V40-25 - 3-WAY threaded VALVE DN40 kv 25.
- KV3V50-xx - 3-WAY threaded VALVE DN50 kv 40 or 63 depending on the sizes.

Adjustment 2-way ball PN40 VALVES. With body and shaft in brass and chrome plated brass ball. Sealed with an EPDM ring, female THREADED hydraulic connections.
- KV2V15-x_x - 2-WAY threaded VALVE. DN15 kv from 1.6 to 6.3 depending on the sizes.
- KV2V20-6_3 - 2-WAY threaded VALVE DN20 kv 6.3.
- KV2V25-10 - 2-WAY threaded VALVE DN25 kv 10.
- KV2V32-16 - 2-WAY threaded VALVE DN32 kv 16.
- KV2V40-25 - 2-WAY threaded VALVE DN40 kv 25.
- KV2V50-40 - 2-WAY threaded VALVE DN50 kv 40.

Actuators for regulation BALL valves with 0/10Vdc 24Vac power supply modulating control
- KVMM25 - ACTUATOR V.DN MAX25 24V 0-10Vdc.
- KVMM50 - ACTUATOR V.DN MAX50 24V 0-10Vdc.

On/Off valve actuators, 230V TO OPERATE WITH 2-position control FAN-COIL THERMOSTATS
- KV0M25 - ACTUATOR V. DN MAX 25 230V On/Off SPDT.
- KV0M025 - ACTUATOR V. DN MAX 25 230V On/Off SPRING RET. SPST.
- KV0M050 - ACTUATOR V. DN MAX 50 230V On/Off SPRING RET. SPST.

ACTUATORS FOR MODULATING DAMPERS 0-10V 24V
- KDMAxS - ROT. DAMP. ACTUATOR 2/7/18Nm modulating with 24V spring return
- KDMAx b - ROT. DAMP. ACTUATOR 5/10/15Nm modulating without 24V spring return

ACTUATORS FOR ON-OFF 24V DAMPERS
- KD0AxS - ROT. DAMP. ACTUATOR 2/7/18 Nm on/off with 24V spring return

BASIC CONTROLS

User panels
With these accessories you can easily manage all active control functions by means of symbols and clear icons and intuitive including:
change the set-point, manage summer/winter seasonal switching, manage the ON/OFF power, manage the ventilation mode, display the temperature, humidity and all the values measured by the connected probes, set a weekly program schedule or a timer for prolonged absences (holiday mode), view alarms, reset alarms and manually position any motorised dampers in modulating control.
The features described above are common to all the following control panels
All Panel controls are used for box recessed installation (BTicino 506 type).
You can customise the terminal to integrate it aesthetically in environments with the KCW or KCB plates according to the price list or the several Bticino series “Living” and “Light” plaques.

- KHMIG - Vgraph control panel. Interface terminal with black monochrome graphic display with LED backlighting.
- KHMIR - Control panel with ambient temperature probe (Vroom).
  In addition to the functions of the previous control panel implemented a temperature probe in the panel.
- KCW - White decorative plate for control panel.
- KCB - Black decorative plate for control panel.
- KWMS - Wall mounting installation support for control panel.

KHMIG and KHMIR

KCW

Electrical panel in a resin case, with IP55 protection, compliant with IEC EN 60204-1, complete with:

- DDC programmable microprocessor controller that can manage up to 40 I/O with Rhoss software and configuration specifically designed to make sure the optimal automatic control of all functions can be managed on the machine, via continuous comparisons made between the set values and the temperature and humidity conditions detected by the sensors. The adjustment, optimised with proportional-type algorithms plus integral (PI), assures accurate and safe operation of the air handling unit.
  The controller is equipped with a Real Time Clock to set the date, time and time program, with a backup battery to keep the saved data even in case of a prolonged power cut (up to 2 days). Interfaced with BMS Integrated as standard with Modbus RTU protocol.
- Main disconnecting switch.
- Fuse holder to protect single phase fan motors with power up to 1.6 kW with isolating function for phase and neutral on opening (*).
- Motor protection fuses for the motor of a rotary recovery, the 230/12V transformer and the 24V auxiliary circuit.
- Relay to control various utilities.
- Spring terminal blocks with removable connectors for quick connection of all components on the machine.
- Electrical supply 1F+N 230V 50Hz.
- Auxiliary power supply with a converter transformer 230/12-24V.
  (*) An external panel with specific protection and drive devices must be added required for higher power and three-phase loads .
- KRFCS - Full Control power and regulation electrical panel for UTNB-UTNA-UTNR-UTNV Single-phase Max Pow. 2x1.6 kW.

- KDTR - Usable with all UTNA-V-R with 1 coil.
  Simple and reliable controller to be installed in the supply duct, in the same case which already holds the temperature probe and is designed to handle simple air handling units operating at a supply fixed point. Operating range 0-50°C:
- KPOTR - Remote potentiometer for damper recalibration (in combination with KDTR).

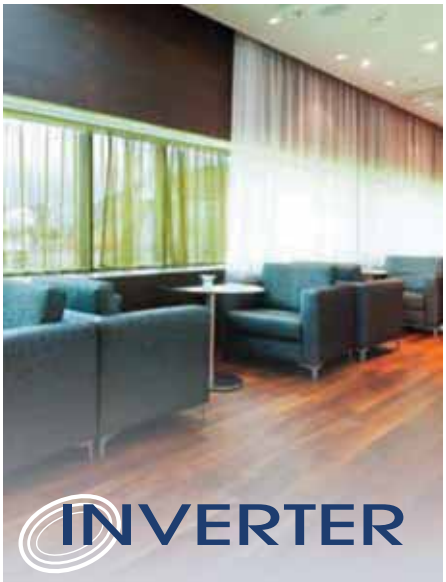
AMBIENT regulators for wall mounting with software application, display, ambient sensor, RS485 serial board and clock with control of up to 9 I/O.

- KRCA1 - Ambient regulator with integrated temperature probe to control the following functions:
  - 2 modulating coils, antifreeze, 1 modulating damper, 1 on/off resistance
  - modulating coils, antifreeze, 1 modulating fan, 1 on/off resistance
  - 2 modulating coils, antifreeze, 1 modulating resistance, 1 on/off fan
  - 2 modulating coils, antifreeze, 1 modulating fan, recovery bypass
- KRCA2 - Ambient regulator with integrated temperature probe to control the following functions:
  - 2 modulating coils, antifreeze, 1 on/off fan, 1 aux. on/off control
  - 2 modulating coils, antifreeze, 1 on/off fan, recovery bypass, 1 aux. on/off control
  - 2 modulating coils, antifreeze, 1 on/off resistance, recovery bypass, 1 aux. on/off control

Heat recovery unit

UTNR-HP 035÷450

Air flow rate: 350÷4,500 m³/h



- **Combined crossed flow and active thermodynamic heat recovery**
- **Standard air filter with G4 efficiency**
- **Integrated electronics**

Fresh air terminal units with two-stage heat recovery unit.

Construction features

- Recovery unit:
  - First stage of the crossed flow air-air static heat recovery with aluminium heat exchanger plates; lower condensate drain pan along the entire heat treatment area.
  - Second stage of the active thermodynamic heat recovery unit with heat pump cooling circuit (with R410A gas) consisting of hermetic compressor (rotary or scroll type depending on the size of the machine), evaporating and condensing coils with copper pipes and continuous aluminium fins, electronic expansion valve, liquid separator and receiver, 4-way valve for cycle inversion, high and low pressure switches, Freon filter and liquid indicator.
- Fans: fresh air inlet and double intake centrifugal expulsion type with a directly coupled electric motor. Fan unit installed on anti-vibration mountings to prevent the transmission of vibration.
- Structure and panels: frame made with extruded aluminium profile, Anticorodal 63 alloy, with preloaded nylon angular joints. Sandwich buffer panels, 23 mm thick, made internally with galvanised sheet steel and externally with galvanised pre-painted sheet steel (RAL 9002), with thermal and acoustic insulation made of injected polyurethane, with a density of 45 kg/m³.
- Filtering section: consisting of two class G4 filters (one on the fresh air intake and one on the ambient inlet), both can be removed from the bottom and side.
- Electrical panel: with integrated regulation and power; NTC temperature probes on both the delivery and return air circuits; micro-processor electronic control for automatic room temperature management, winter/summer switch and thawing cycles; remote control of panel up to 20 m from the unit,

Versions

Available orientation:

- UTNR-HP 01, 02 – Heat recovery unit with crossed flow and active thermodynamic double heat exchanger with 01 or 02 orientation (right connection side) or 01s or 02s (left connection side).
  The selected orientation must be specified to process the job order.

Installation

- EXT - Protective roof for outdoor installation.

Factory fitted accessories

- BER - Internally installed filament type reheating electrical resistance, complete with safety thermostats and control relays. 230/1/50 single-phase for models 035÷150. 400/3/50 three-phase for models 230÷450.
- BEP - Internally installed filament type reheating electrical coil, complete with safety thermostats and control relays. 230/1/50 single-phase for models 035÷150. 400/3/50 three-phase for models 230÷450.
- PF - Differential pressure switch installed on the inlet filter to indicate a dirty filter.
- ATG - Antifreeze thermostat installed downstream of the water coil.
- EG4PF - G4 outdoor air filter with differential pressure switch.
- ERG4PF - G4 outdoor air filter and G4 return air with differential pressure switch.
- EF7 - F7 outdoor air filter.
- ERF7 - F7 outdoor and return air filter.
- EG7PF - F7 outdoor air filter with differential pressure switch.
- ERF7PF - F7 outdoor and return air filter with differential pressure switch.

Separately supplied accessories

- KSBFR - Section containing hot/cold water coil for reheat or recool, placed outside the machine in front of the inlet. Includes a stainless steel condensate drain pan with drain connection from the bottom.
- KSBFR + ATG - Hot/cold water coil section with mounted antifreeze thermostat.
- KV2V ON/OFF - 2 way valve kit with On/Off servo-control.
- KV3V ON/OFF - 3 way valve kit with On/Off servo-control.
- KSRE230 - Regulation damper consisting of a galvanised sheet steel frame with adjustable fins, equipped with 230V ON/OFF servo-control.
- KSME230R - Regulation damper consisting of a galvanised sheet steel frame with adjustable fins, equipped with 230V ON/OFF servo-control with spring return.
- KSSC - Duct silencer with wool baffles covered with glass fibre and micro-stretched sheet steel.
- KRMS - 3-damper section for operation with outdoor air at low temperature up to -20°C, with modulating servo-controls.

Controls supplied separately

- KTUP - Additional user terminal, with remote control up to 50 m, for wall mounting.
- KSCMB - Modbus serial board.

R410A

	UTNR-HP MODEL		35	60	100	150	230	320	450
	Nominal air flow	m³/h	350	600	1000	1500	2300	3200	4500
	Available delivery static pressure	Pa	165	170	195	155	155	185	175
	Available return static pressure	Pa	140	100	140	95	95	115	110
❶	Sound pressure level	db (A)	59/47/52	64/50/55	62/49/54	67/54/57	65/51/59	68/54/59	70/56/59
	Max available delivery static pressure - Version E Brushless	Pa	270	285	295	290	365	265	270
	Max available return static pressure - Version E Brushless	Pa	245	215	240	230	305	195	205
	FUNCTIONAL LIMITS		**35**	**60**	**100**	**150**	**230**	**320**	**450**
❷	Standard configuration winter limit operating conditions	°C / %			MIN -10°C OUT & MIN 19°C 50% IN				
❷	Winter limit operating conditions with KRMS accessory	°C / %			MIN -20°C OUT & MIN 19°C 50% IN				
	Summer limit operating conditions	°C / %			MAX 38°C 50% OUT & MAX 27°C IN				
	Flow rate variation field	%			-10 ÷ +10				
	ELECTRICAL SPECIFICATIONS		**35**	**60**	**100**	**150**	**230**	**320**	**450**
	Electrical supply	V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50	400/3/50	400/3/50
	Max. absorption	A	5,3	9	13,2	20,2	10	15,4	16,4
❸	**PERFORMANCE IN HEATING MODE**		**35**	**60**	**100**	**150**	**230**	**320**	**450**
	Static recovery efficiency	%	62	51	50	50	50	50	50
	Active recovery	W	1740	2960	5010	7690	11090	16300	17300
	Total power	W	3580	5790	9410	14390	21190	30260	36010
	Treated air temperature	°C	24	23	22	22	22	22	18
❹	Overall COP	W/W	10,9	9,6	9,22	8,64	8,9	9,9	12,6
❺	**PERFORMANCE IN COOLING MODE**		**35**	**60**	**100**	**150**	**230**	**320**	**450**
	Static recovery efficiency	%	56	50	50	50	50	50	49
	Active recovery	W	1810	2860	4890	7270	10580	15310	16990
	Total power	W	2210	3450	5840	8720	12830	18390	21440
	Treated air temperature	°C	19	20	20	20	20	20	21
❹	Overall EER	W/W	4,2	3,9	4,2	3,9	3,9	4,1	5,01
	DIMENSIONS AND WEIGHTS								
	Length/Height/Depth	mm	1540/370/1240	1540/370/1240	1840/410/1440	1840/500/1440	2040/550/1690	2040/650/1690	2240/710/1890
	Weight	Kg	122	125	185	228	267	281	329

Data at the following conditions:

❶ Sound pressure level assessed at 1 m from: permanent ducted socket/intake socket/compressor compartment. Generally, the operating noise level differs from the indicated values depending on the operating conditions, reflected noise and peripheral noise.

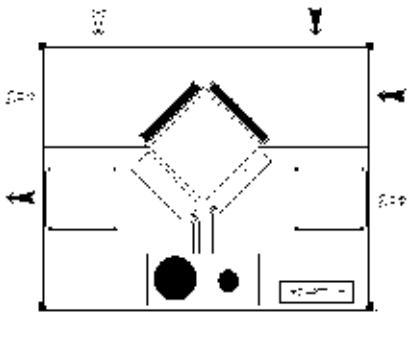
❷ Referred to the nominal flow rate.

❸ Outdoor air -5°C RH 80%; ambient air 20°C RH 50%.

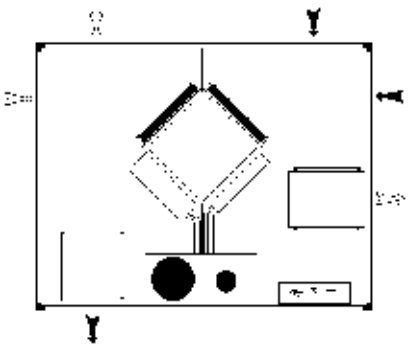
❹ Excluding power consumption for ventilation.

❺ Outdoor air 32°C RH 50%; ambient air 26°C RH 50%.

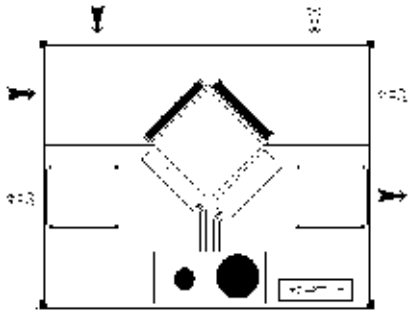
ORIENTATION TYPE 01



ORIENTATION TYPE 02

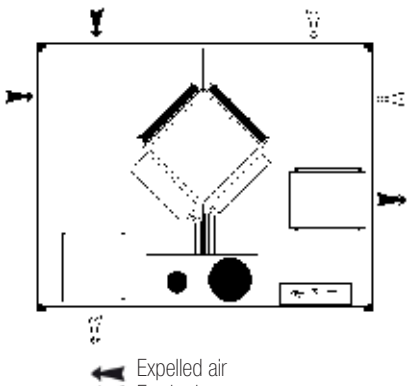


ORIENTATION TYPE 1S



Expelled air
Fresh air

ORIENTATION TYPE 2S



Expelled air
Fresh air

The illustrated guidelines concerning the machine seen from above

Web code: **VMC01**

Heat recovery unit

VMC-E 025÷130

Air flow rate: 250÷1.300 m³/h

- **Extremely compact**
- **High efficiency recovery**
- **Very silent**
- **Brushless DC fans**

Fresh air terminal unit with counterflow static heat recovery.

Construction features

- Galvanised sheet steel self-bearing structure, insulated internally and externally.
- Recovery unit: thanks to a high yield static type heat exchanger with counterflows consisting of flat layers of special paper that allow total heat exchange, thereby recovering both sensitive and latent heat. The air flows are kept separate by relevant sealing. Maintenance is easily performed on the heat exchanger and filters thanks to side extraction.
- By-pass motorised system of the recovery unit actuated automatically by the electronic control
- Air filtration in F9 efficiency class (with G3 pre-filter) on the fresh air and G3 filter on return air.
- Integrated dirty filter signal pressure switches.
- Fans: fresh air inlet and centrifugal expulsion with BRUSHLESS EC motors that allow higher efficiency to be achieved in comparison to traditional motors with energy savings of up to 60%. 10-speed management option.
- Ducting connections with plastic round fittings.
- Incorporated electrical panel with electronic board to control the free-cooling and fan functions.

Controls

- KPST- Touch screen remote control panel
- KQSW- CO2 wall sensor for fan regulation
- KUSW- Wall humidity sensor for fan regulation

	VMC MODEL		025	035	050	080	100	130
	Nominal air flow	m³/h	250	350	500	750	1000	1300
	Nominal available static pressure	Pa	90	140	110	140	140	140
	Total nominal absorbed power	W	80	130	150	320	390	500
	Total maximum absorbed current	A	0,5	0,6	0,6	1,4	2,1	2,7
	Int S.F.P.	W/m³/s	812	670	547	865	881	873
❶	Sound pressure	dB(A)	34	37	39	42	43	44
	Electrical supply	V-ph-Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
	Speed number		10	10	10	10	10	10
	HEAT RECOVERY		**025**	**035**	**050**	**080**	**100**	**130**
❷	Winter efficiency (temp/enthalpy)	%	73/65	74/65	76/67	76/65	76/62	74/59
❸	Summer efficiency (temp/enthalpy)	%	73/62	74/62	76/63	76/63	76/60	74/58
❹	Dry thermal efficiency	%	73	74	76	76	76	74
	DIMENSIONS AND WEIGHTS		**025**	**035**	**050**	**080**	**100**	**130**
	Length/Depth/Height	mm	815/650/270	815/855/270	895/955/270	1185/1200/390	1200/1290/390	1200/1290/390
	Weight	Kg	30	37	43	71	83	83

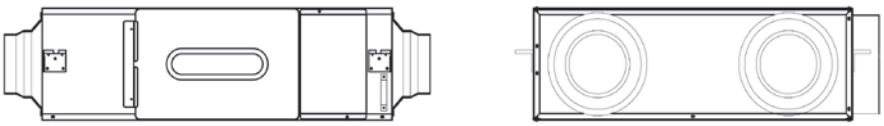
Data at the following conditions:

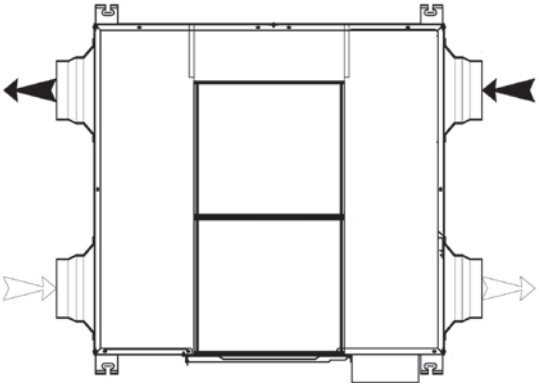
❶ Sound pressure level assessed at 1 m, with all 4 air nozzles ducted, on the machine inspection side and under nominal operating conditions

❷ Nominal winter conditions: outdoor air: –5°C; 80% TH. Ambient air: 20°C; 50% RH.

❸ Nominal summer conditions: outdoor air: 32°C; 50% TH. Ambient air: 26°C; 50% RH.

❹ According to EU Regulation 1253/2014





SYSTO - System Touch Manager

Rhoss Web Server

Rhoss Monitoring

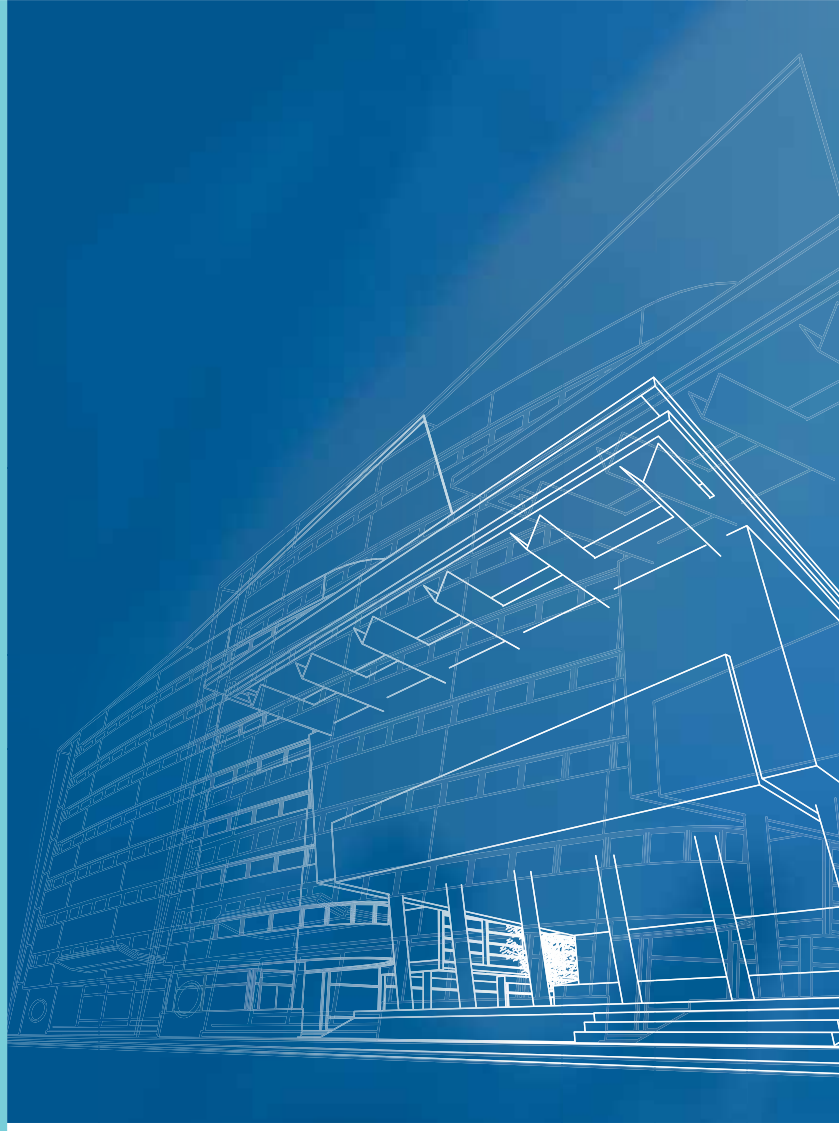
SIR - RHOSS Integrated Sequencer

RHOSS SEQUENCER

MANAGEMENT SYSTEMS, CONTROL AND MONITORING

Touch interface with Web APP for remote control and monitoring.

SYS-TO
System Touch Manager & Web APP
The entire system at your fingertips



System Touch Manager offers a simple and effective interface to control and program the climate of the individual rooms of a building, manage the main system components and the environment terminals from a single point.

The system offers a series of energy saving functions for the management of generators, the production of domestic hot water, the distribution network and the terminal units such as, management with time bands that allows 10 summer/winter bands to be programmed at 2 temperature levels.
It is also possible to manage via the local network and remote monitoring via the web.

The solution
SYS-TO is an integrated management system that manages the system's main components via an electronic System Manager regulator.
User interaction with the management program is very easy; it can be managed with a simple and user-friendly touch screen display or interface.
SYS-TO enables centralised management of up to maximum 64 areas made up of fan coils with relative temperature control. It is also possible to manage a cooling unit-chiller, a RHOSS multi-purpose heat pump with integrated boiler- and up to 5 VMC units, heat recovery units or air handling units.

Solution for residential, small and medium tertiary, trade and services applications:

- Villas – residences
- Hotels – restaurants – B&B
- Offices – professional offices
- Medical offices – clinics
- Shops – gyms – multi-purpose centres

System Touch Manager & Web APP

[1] Free Cloud service upon activation
[2] Option of BMS, Modbus RTU, Modbus TCP/IP, Bacnet IP, Bacnet MS/TP supported protocols

Functions

System manager, which is available in a small or medium version, enables you to:

- control the temperature detected in the various areas
- adjust the area set-point and limit the change
- limit user interaction with the area control
- control the fan coil with time bands (stop or start with two comfort levels)
- adjust the temperature of the water sent to the radiant panels in heating mode, with a mixing valve and climate compensation
- adjust the water temperature in the system side tank with 2 levels, comfort and economy, with climate compensation
- adjust the water temperature in the DHW tank
- manage the DHW side diverter valve
- communicate the set-point to the primary generator
- select the summer/winter operating mode manually, by date, outdoor temperature or digital input
- select the most convenient heat generator between the heat pump and boiler
- manage an integrative heat source - electrical resistance - or auxiliary - boiler, system side or DHW side
- manage the DHW recirculation pump and anti-legionella sanitisation
- manage the area pumps, based on the start status or effective call in the single areas
- start the VMC/primary air units
- send an email alarm in real time

System management solutions for small and medium tertiary, trade and services applications.
Touch interface with Web APP for remote control and monitoring.

SYS-TO System Touch Manager & Web APP

The entire system at your fingertips

System management
SYS-TO allows for integrated management of the following components in 2-pipe systems and 2-pipe systems with domestic hot water (DHW) production:
Generators

- Rhoss heat pump/chiller or multi-purpose system
- Inertial buffer tank temperature probes on the system side
- Technical tank temperature probes for DHW production
- Integrative heat source - electrical resistance - or auxiliary - boiler.
- Diverter valve for DHW
- Outdoor air temperature probe for climatic compensation or seasonal switching

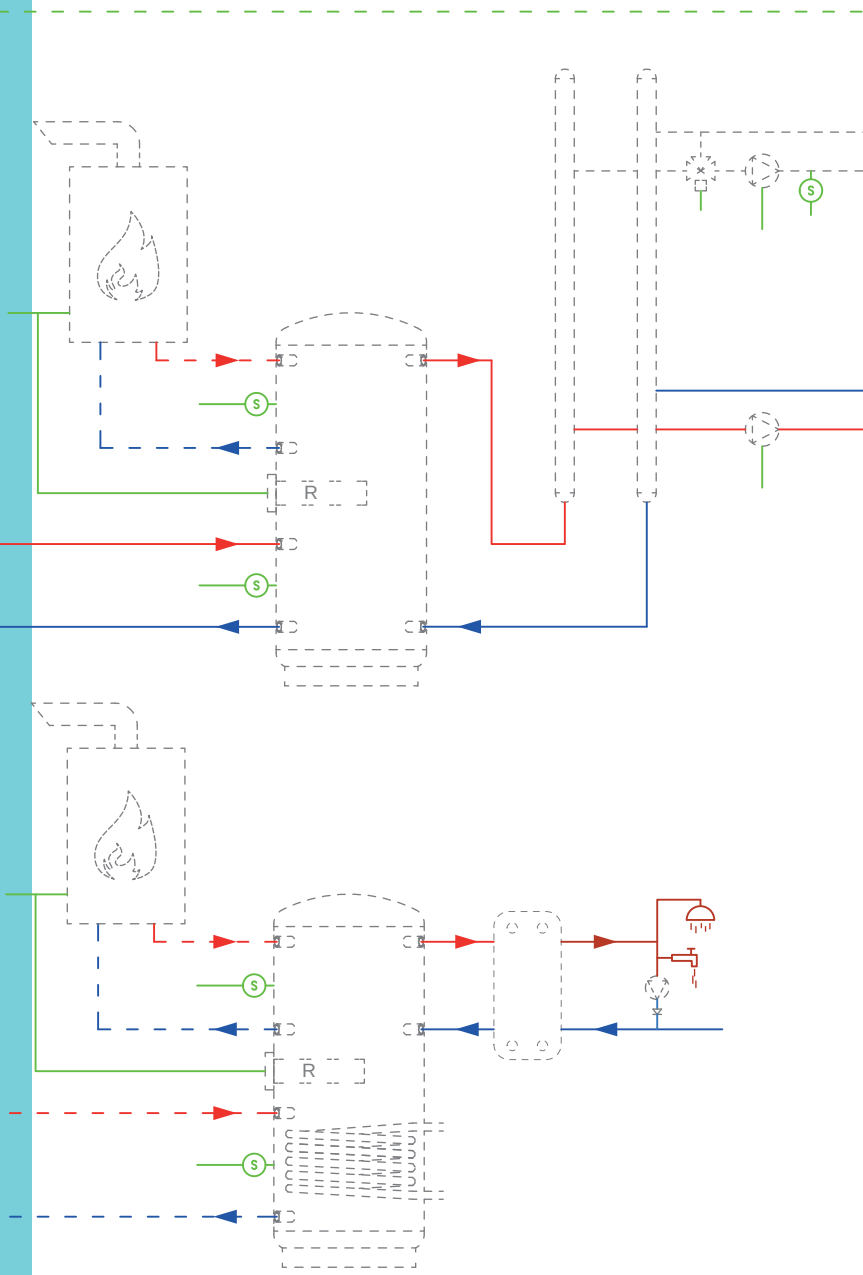
Distribution network

- Area circulation pumps, for primary or primary/secondary circuit, direct or mixed, at low temperature (up to 5)

System terminals

- Control up to 64 fan coils or terminals with on-board regulation in serial connection, possibility of activating other devices in parallel with the fan coil (radiant panels in heating mode or radiators)
- Fresh air consent for VMC, Heat recovery units and Air handling units (up to 5)

SYS-TO in 4-pipe systems allows system terminals and area pumps to be managed.



Compatible units
Fan coils: Idrowall (with dedicated serial cable), Brio-I Slim with advanced SLIM Touch regulation, Yardy and Diva via advanced LIT-Touch regulation, via bus.
Rhoss chillers, heat pumps and multi-purpose units, via bus.
VMC unit, heat recovery units with KRCA1 regulator, ADV Next Air and CTA ADVR air handling units via bus or digital input.

User interfaces and remote control via WEB

SYS-TO consists of a regulator (System Manager) to control room terminals (connected in serial mode) and to manage components in the field (through digital inputs and outputs) and from a user interface (HMI) available in various types.

The simplest interface consists of a semi-graphical LCD integrated in the regulator, to which a remote keypad with a backlit semi-graphical LCD display can be added.

The top of the range is the Touch Panel consisting of a resistive touch screen with a 7" TFT 16:9 -64 K colour recessed display installed on a support or wall-mounted, with a clean and innovative design and a lively and intuitive interface, complete with an Ethernet interface and USB port.

The Touch Panel is available with the Web APP option for remote control and monitoring through any Web browser with HTML5 support.

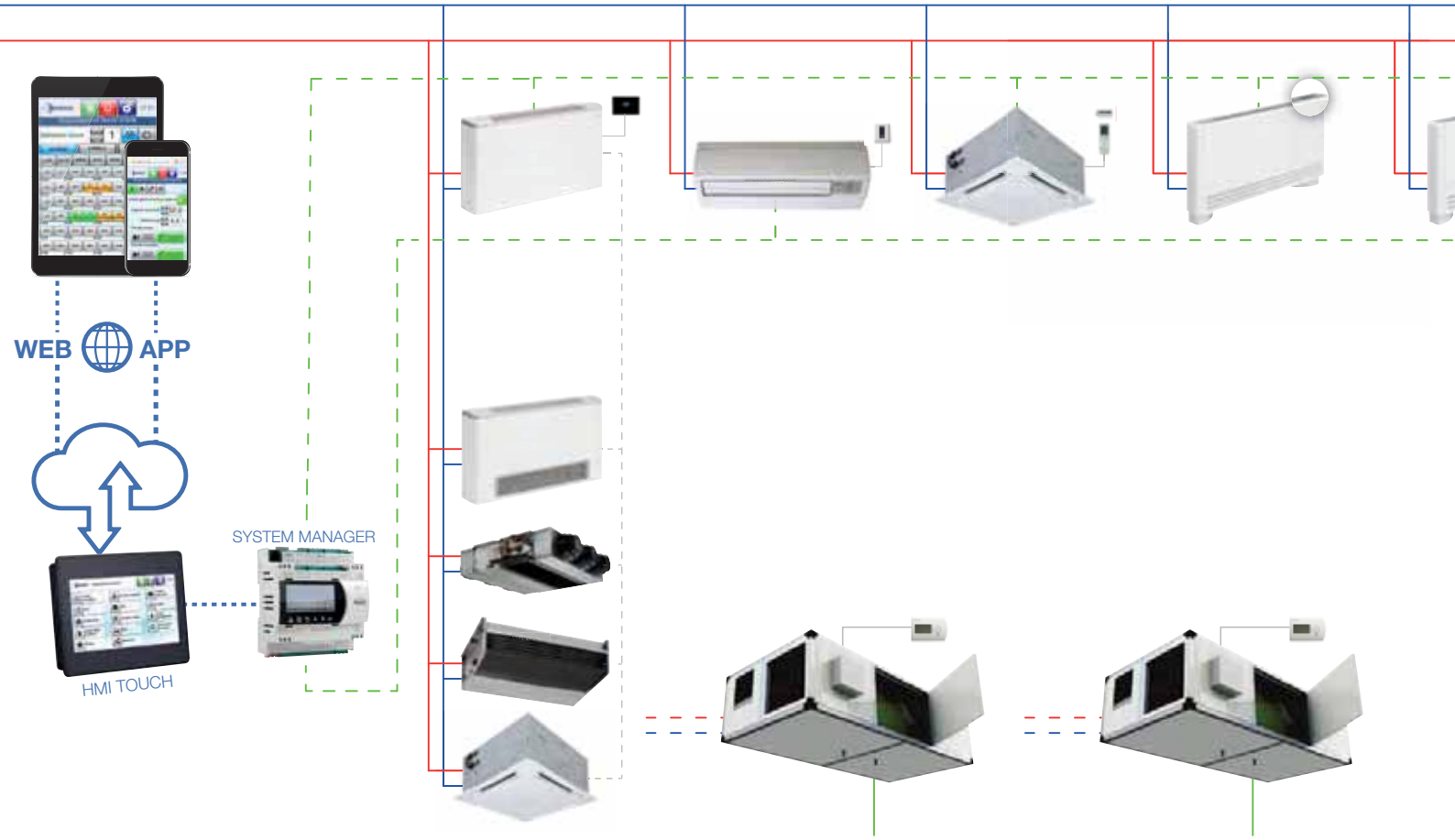
Solution with:	Integrated semi-graphical interface	Remotable semi-graphical interface	Touch colour interface	Touch colour interface and Web APP
Web APP				
HMI				
System Manager		 o 	 o 	 o 

Serial network with simplified routing

An RS485 ModBus RTU serial interface is required on each connected device for connection via bus. Configuring serial addresses is extremely easy; it does not require additional devices but can be made directly from the control keypad of each fan coil.

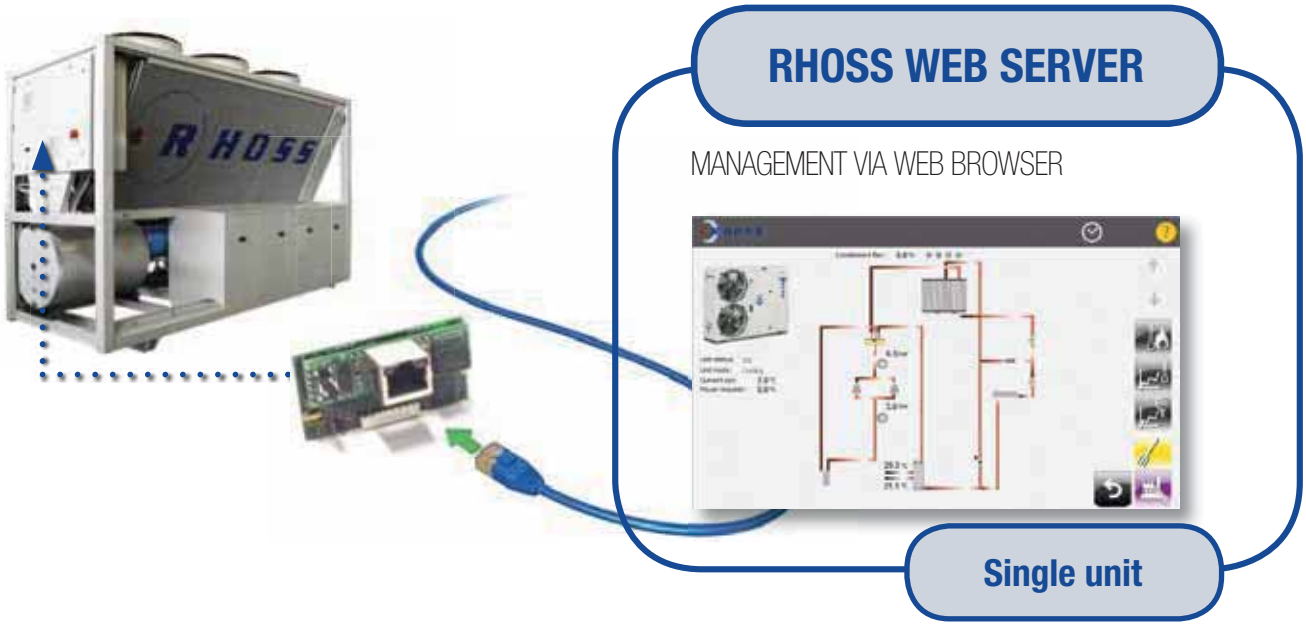
Master/slave management

It is possible to connect multiple slave units with the same ambient set-point for each Master fan coil equipped with a control or receiver.



Control and monitoring via ETHERNET

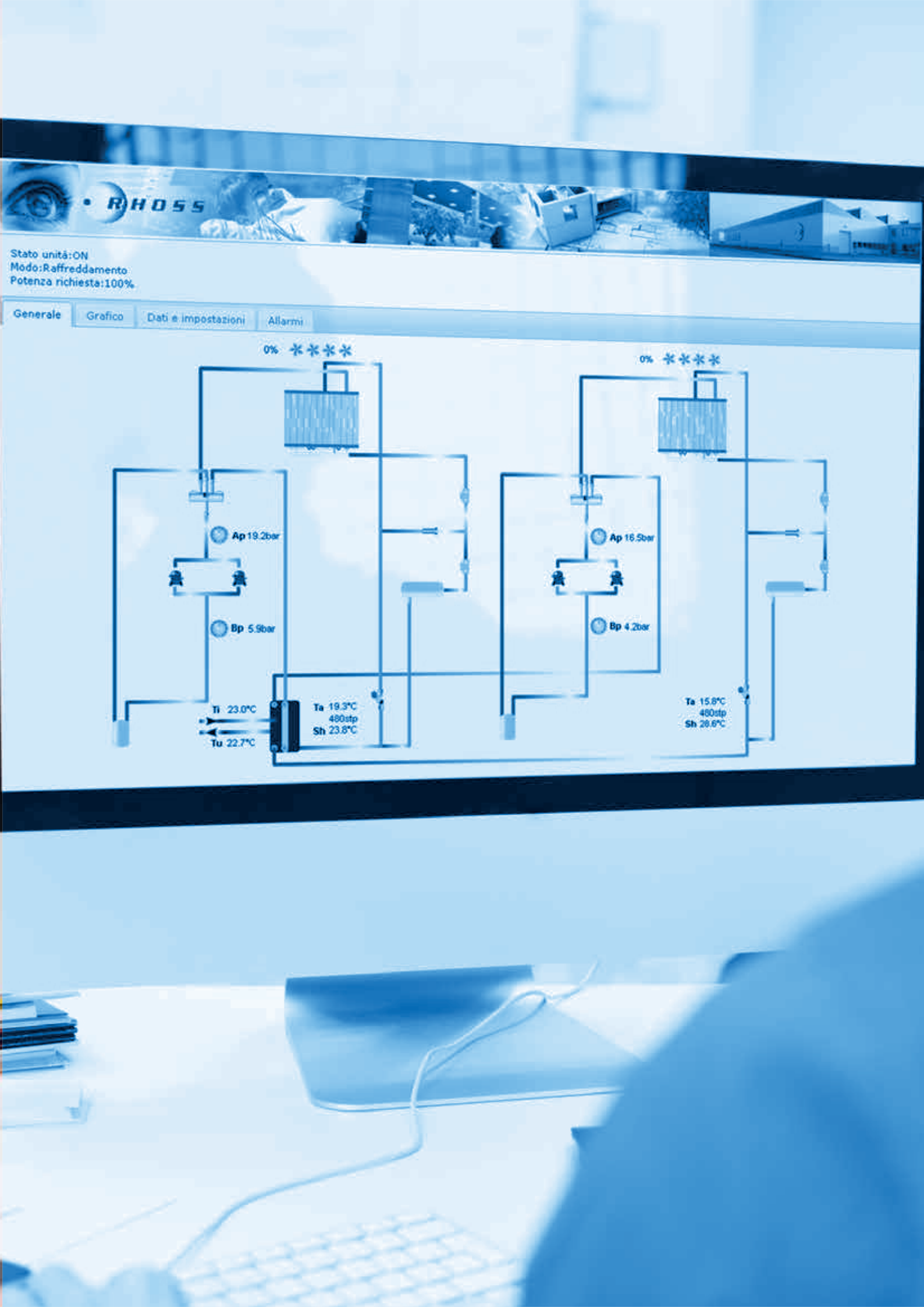
RHOSS WEB SERVER



- **Managing a single cooling unit via ETHERNET**
- **Web page with unit status and detailed tabs with:**
  - **synoptic of the main components**
  - **graphic trend of the main variables**
  - **possibility of modifying the main parameters (on/off, mode, set-point)**
  - **status and alarms reset**
- **Installation of the ethernet interface inside the unit's electrical panel**

WEB SERVER MAIN FEATURES	MAIN COMPONENTS
Web page with unit status and detailed tabs displaying: - synoptic diagram of the main components - main variable trend graph - option to edit main parameters (on/off, mode, set) - alarm status and reset	KWEBU1: Web Server board for Ethernet with user graphic interface

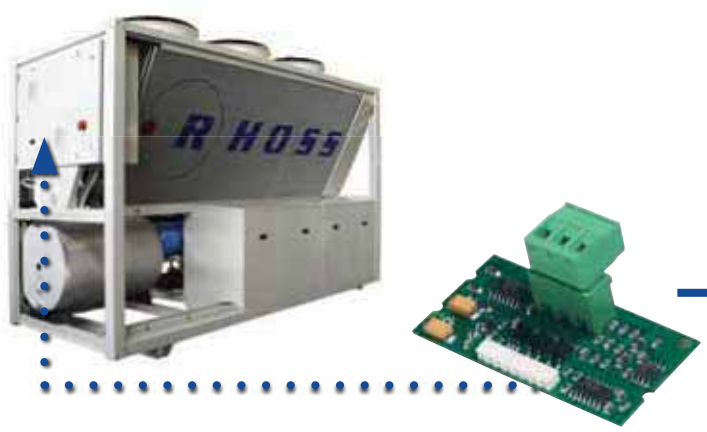
RHOSS COOLING UNIT + Web Server for Ethernet + User graphical interface


RHOSS
Stato unità:ON
Modo:Raffreddamento
Potenza richiesta:100%
Generale
Grafico
Dati e impostazioni
Allarmi
0%
Ap 19.2bar
Bp 5.9bar
Ti 23.0°C
Tu 22.7°C
Ta 19.3°C
480stp
Sh 23.8°C
0%
Ap 16.5bar
Bp 4.2bar
Ta 15.8°C
480stp
Sh 28.6°C

Remote monitoring

RHOSS MONITORING: Mobile - Cloud - Real time

- **Remote control of cooling units and air handling units**
- **3 different solutions for remote monitoring**
- **Connection via mobile phone or smartphone**
- **Web interface with Cloud service**
- **Status display in real time**
- **Data logger function**
- **Alarm and malfunctioning alerts**
- **Installation of the DIN bar on the device inside the unit's electrical panel**



RHOSS COOLING UNIT + SERIAL INTERFACE

MONITORING	MAIN FEATURES	CONTROL DEVICE	INTERNET CLOUD SERVICE	SIM CARD
MOBILE for residential and small-size service sector applications	**In**put/output management via mobile phone and editing by **SMS**. Alarm and malfunctioning alerts. Reading up to 8 values.	KMMC - Remote Mobile/Cloud control device with slot for SIM CARD	Not provided (only SMS management available)	Responsibility of the user or by subscription (not required if local Internet connection is used)
CLOUD for residential and service sector	**Management of the main parameters and editing via internet interface or via APPS IOS and ANDROID**. Alarm, malfunctioning display **with hourly frequency and** trend logs. Reading up to 8 values.		Internet Cloud service by subscription (minimum length 1 year) **Obligatory**	
REAL TIME for the service and industrial sector	**Management of the parameters and editing via internet interface or via APPS IOS and ANDROID.** Real time alarm, malfunctioni**ng display and** trend logs. Reading up to 100 values.	KMRT - Real Time control device with slot for SIM CARD		

CONTROL DEVICE + SIM card

MOBILE

MANAGEMENT VIA SMS

CLOUD

REAL TIME

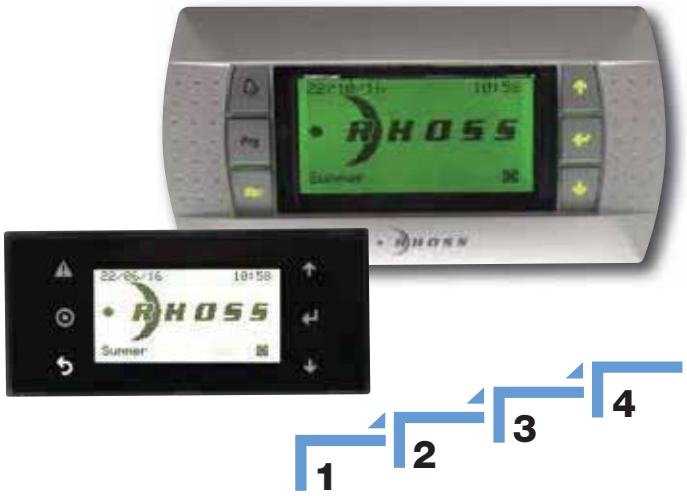
MANAGEMENT WITH INTERNET CLOUD SERVICE VIA WEB BROWSER OR WITH iOS AND ANDROID APPS

CONTROL DEVICE	Serial interface on Rhoss unit	Remotely manageable inputs/outputs	Monitorable Rhoss units		Readings
 KMMC - Remote control device for Rhoss Monitoring Mobile or Cloud, installation on DIN bar (4 modules) within the unit's electric panel, slot for SIM CARD, status and inputs/outputs signalling LED, antenna with 3m cable, protection degree IP40, GSM dual band module 900-1800 MHz, Buffer battery (1 hour approximately); serial ports; Power supply not included.	RS485 Serial interface (accessory KRS485 or SS)	• 2 relay outputs configurable and activated via SMS • 2 digital inputs for external alarms • 1 configurable analogue input (0-10 V, 0-20 mA, 4-20 mA)	1	• cooling unit • air handling units	up to 8 readings
 KMRT- Remote control device Rhoss Monitoring Real Time, installation on DIN bar (6 modules) within the unit's electric panel, slot for SIM CARD, 3 status signalling LEDs, antenna with 3m cable, protection degree IP40, GSM/GPRS Modem, serial ports; Watchdog hardware, Real Time Clock; Power supply not included. NOTE: the KMRT device is fitted with additional Ethernet interface for using local Internet connection (without SIM CARD).	• RS485 serial interface (accessory KRS485 or SS) • Ethernet Interface (accessory KBE) [only if Ethernet is available on site]	Not available	5	• cooling unit • air handling unit	up to a total of 100 readings

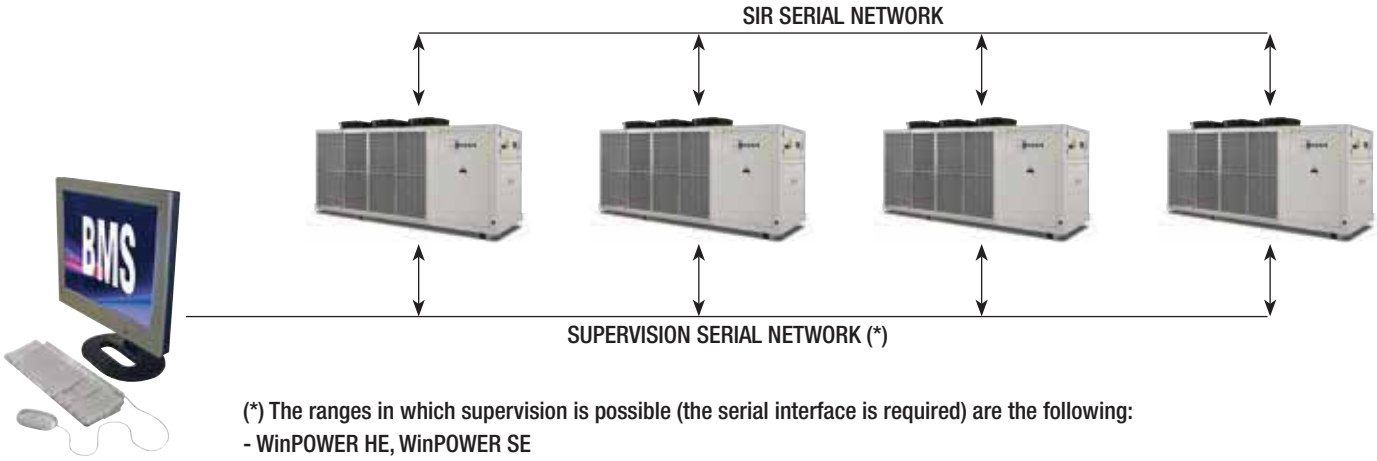
Chiller management software

SIR - RHOSS INTEGRATED SEQUENCER

- **MASTER/SLAVE management of up to 4 parallel plumbing chillers**
- **Summer/winter mode for heat pump units**
- **System set-point management**
- **Control of all operating parameters**



- The SIR integrated Sequencer makes it possible to manage up to 4 parallel plumbing chillers in medium/large HVAC systems.
- The optimisation of operating times and the insertion of the individual units is controlled by logics integrated in their management software, guaranteeing reliability over time.
- The software at the heart of the system was designed and tested by the Rhoss R&D structure and is able to acquire and manage the main variables of the connected water chillers.
- Depending on the product range, the units of the group can interface with the main BMS on the market, for them to be monitored, to guarantee full control of each type of system (verify the option in the product documentation).



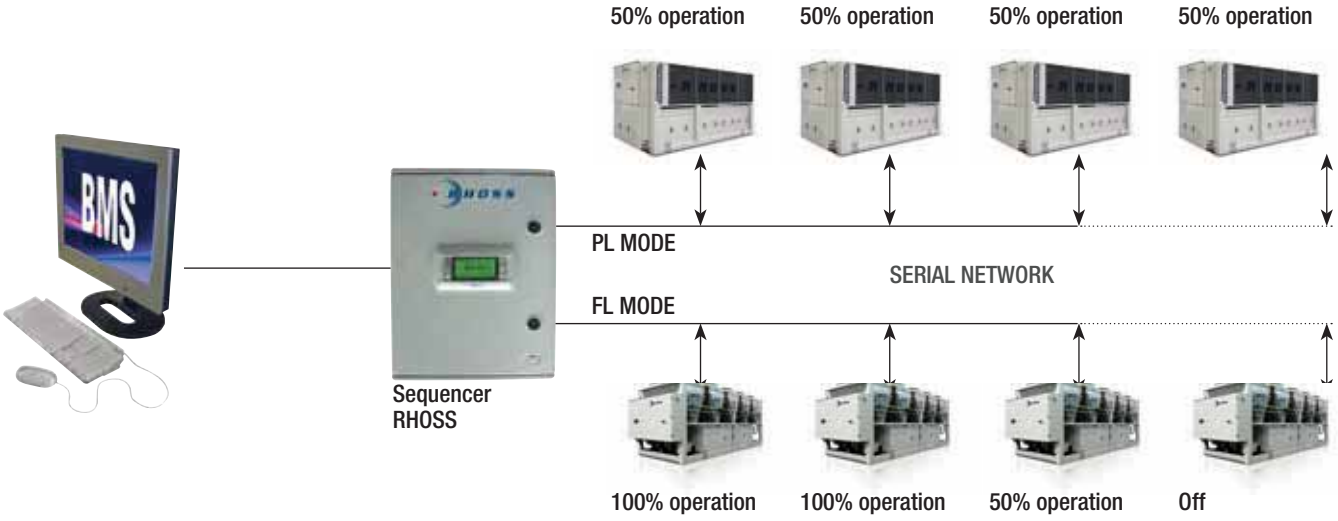
(*) The ranges in which supervision is possible (the serial interface is required) are the following:
- WinPOWER HE, WinPOWER SE
- Z-Power
- Z-Flow HE, Z-Flow E
- FullPOWER HE, FullPOWER SE, FullPOWER VFD, FullPOWER VFD (1+i)
- TurboPOWER

Water Chiller management software

RHOSS SEQUENCER

- **Control of up to 10 parallel plumbing chillers**
- **Summer/winter mode for heat pump units**
- **System set-point management**
- **Control of all operating parameters**
- **Alarm display**

- The Rhoss Multichiller Sequencer makes it possible to manage up to 10 parallel plumbing chillers in medium/ large HVAC systems.
- The optimisation of operating times and the insertion of the individual units is controlled by logics that focus on energy efficiency, guaranteeing reliability over time.
- The management mode of the units can be selected from between FL-Full Load Unit Manager (specific for screw compressor chillers) and PL-Part Load Unit Manager (specific for water chillers with scroll compressors).
- A dedicated sequencer is available for EXP multi-purpose units that can handle all the specific functions of the technology.
- The software at the heart of the system was designed and tested by the Rhoss R&D structure and is able to acquire and manage the main variables of the connected water chillers. The sequencer also interfaces with the main BMS available on the market, guaranteeing complete control in all system types. Integrated solutions for system management



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K17049EN ed.1 - 01.20

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