

APPLIED SYSTEMS

Product Catalogue



| CHILLERS | HEAT PUMPS | FAN COILS | TERMINAL UNITS |
| SOLUTIONS TO CONTROL THE INTEGRATED SYSTEM |



experience
environment
innovation
design
technology
brand
efficiency
green building
ethics
mission

CREATING COMFORT FOR YOU

“Being a united industrial group of companies operating in an international market in strong partnership with its customers.

With a team of motivated people, we find and create the “solution” for every heating and cooling requirement through innovative integrated systems.

Our objective is to create perfect comfort that guarantees wellbeing to the person in his habitat whilst respecting the environment”.

Established as one of the most valued groups in the sector, acquiring a strong and recognisable image of technological leadership, investing in constant research and development, adopting the most innovative technological solutions, are our mission.

Our strategy is to create value through growth and international expansion, especially in emerging markets, diversifying and specializing the offer also through the acquisition of new skills and external production companies.

Our objective is to respond to new market needs dynamically and flexibly by orienting the range towards advanced and competitive products, integrated systems and services to higher efficiency and low environmental impact, pursuing an optimal relationship between macroclimate and microclimate.

Inverter scroll compressors

4 kW

58 kW

new

516 kW

**ELECTA**

3,8÷12,6 kW

Web code: EL001

PAGE 20

**Compact-I**

16,4÷27,6 kW

Web code: CYI01

PAGE 26

**Compact-I MD**

34,3÷58,3 kW

Web code: CYI11

PAGE 32

Hermetic scroll compressors

6 kW

**Mini-Y**

5,6÷11,3 kW

Web code: MY001

PAGE 22

**Mini-Y NF**

5,6÷11,3 kW

Web code: MYN01

PAGE 24

**Compact-Y MD**

33,8÷63,7 kW

Web code: CY011

PAGE 34

**POKER**

28,8÷115,2 kW

Web code: PK001

PAGE 36

**Compact-Y NF**

15,5÷26,6 kW

Web code: CYP01

PAGE 28

**Compact-Y SM**

15,7÷29,5 kW

Web code: CY001

PAGE 30

**Y-Pack FREECOOLING**

170÷361 kW

Web code: YKF11

PAGE 46

Semi-hermetic screw compressors

260 kW

**Z-Power HE**

315,4÷1.277,7 kW

Web code: ZPE01

PAGE 56

**Z-Power SE**

259,1÷1.600 kW

Web code: ZP001

PAGE 60

Oil-free centrifugal compressors

324 kW

**T-Power**

323,7÷1.359,9 kW

Web code TCATBZ: TP001 - Web code TCATTZ: TPE01 - Web code TCATQZ: TPQ01

PAGE 72

Hermetic scroll compressors

5 kW

160 kW

**Mini-Y C**

4,9÷10,6 kW

Web code: MYC01

PAGE 78

**Compact-Y C**

13,3÷26,6 kW

Web code: CYC01

PAGE 80

**Y-Pack C-PF**

32,3÷160,2 kW

Web code: YKC01

PAGE 82

Hermetic scroll compressors
Water cooled

5 kW

449 kW

**Comby-Flow**

5,5÷12,2 kW

Web code: CF001

PAGE 86

**Y-Flow**

15,5÷41,7 kW

Web code: YF011

PAGE 88

**Y-Flow**

41,2÷448,8 kW

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

PAGE 92

Semi-hermetic screw compressors

199 kW

**Z-Flow HE**

203,3÷1.627,6 kW

Web code: ZFE01

PAGE 94

**Z-Flow SE**

198,8÷1.624,5 kW

Web code: ZF001

PAGE 94

16 kW

161 kW



16,1÷161 kW

Web code 118÷270: IN001 - Web code 279÷2189: IN011

PAGE 104

903
kW

Inverter screw compressors



Z-Power VFD

516÷903 kW

Web code: ZPV01

PAGE 66

new

917
kW



EasyPACK

65,5÷144,5 kW

Web code: EAS01

PAGE 38



Y-Pack SE Y-Pack HE

66,6÷160,2 kW

Web code: YK001 - YKE01

PAGE 38

new



WinPACK HE-A

91,6÷345 kW

Web code: WKE11

PAGE 40



WinPACK SE

97,6÷328,6 kW

Web code: WK011

PAGE 42



Y-Power HE-A

342,7÷665,1 kW

Web code: YPE01

PAGE 48



Y-Power SE

333,7÷634 kW

Web code: YPO01

PAGE 50

new



WinPOWER HE-A

632,5÷916,8 kW

Web code: WPE11

PAGE 52



WinPOWER SE

638,2÷861,8 kW

Web code: WPO11

PAGE 54



Z-Power FREECOOLING

469÷1.216 kW

Web code: ZPF01

PAGE 68



Z-Power HP

382,6÷677,6 kW

Web code: ZPP01

PAGE 70

1600
kW

1360
kW

Hermetic scroll compressors Condenserless units



Y-Flow E

13,7÷36,9 kW

Web code: YFC11

PAGE 90



Y-Flow E

39,8÷320,9 kW

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

PAGE 98



Z-Flow E

171,9÷1.424,8 kW

Web code: ZFC01

PAGE 100

1628
kW



ONLY COOLING



HEAT PUMP



POLYVALENT SYSTEMS

EXP - Polyvalent systems	Air cooled - Axial fans	PAGE 108	Hermetic scroll compressors		18 kW									
			 Compact-Y EXP SM 17,7÷29,1 kW Web code: CYX11 PAGE 114	 Compact-Y EXP MD 33,8÷61,6 kW Web code: CYX21 PAGE 116	 Y-Pack EXP 81÷334 kW Web code: YKX11 PAGE 118									
	Semi-hermetic screw compressors		408 kW											
	 Z-Power EXP 408÷698 kW Web code: ZPX01 PAGE 122													
Water cooled		PAGE 108	Hermetic scroll compressors		5 kW									
			 Comby-Flow EXP 5,5÷12,2 kW Web code: CFX01 PAGE 124	 Y-Flow EXP 47÷378,7 kW Web code 245÷2185: YFX21 - Web code 4180÷4360: YFX31 PAGE 126	379 kW									
Semi-hermetic screw compressors		434 kW												
 Z-Flow EXP 434÷782 kW Web code: ZFX01 PAGE 128														
Condensing units	PAGE 136	PAGE 136	 16,4÷31,5 kW Web code: CUY01 PAGE 136		 34,5÷162,6 kW Web code: CUY11 PAGE 137									
			 GEO-Flow DHW 6,7÷29,7 kW Web code: GF001 PAGE 132											
Heat pumps with recovery - Water cooled	PAGE 132	PAGE 132	6 kW		31 kW									
			 GEO-Flow DHW 6,7÷29,7 kW Web code: GF001 PAGE 132											
FAN COILS	PAGE 168 - CONTROLS PAGE 190	Inverter Brushless motor	WALL MOUNTING INSTALLATION			FLOOR, CEILING, RECESSED WALL OR FALSE CEILING INSTALLATION								
			 IDROWALL-I 2,0÷3,5 kW Web code: IDRO1 PAGE 168	 YARDY-I EV3 1,9÷8,9 kW Web code: YARI3 PAGE 170										
		Standard motor	 YARDV EV3 1,1÷8,8 kW Web code: YARV3 PAGE 172											

650
kW

new

**WinPOWER EXP**

362÷650 kW

Web code: WPX01

PAGE 120

698
kW782
kW

System accessories

Remote condensers

Cooling towers

Pumping units and water tanks

PAGE 140



23÷218 kW

Web code Mod. 115÷240: CRYA1

Mod. 245÷2185: CRYA2

PAGE 138



47÷2790 kW

Web code: TEA01

PAGE 142



300÷2500 l

Web code: GPA01

PAGE 144



200÷425 l

Web code: GPH01

PAGE 146

DUCTED INSTALLATION

FALSE CEILING CASSETTE

**YARDY-ID2**

2,4÷6,4 kW

Web code: YAI02

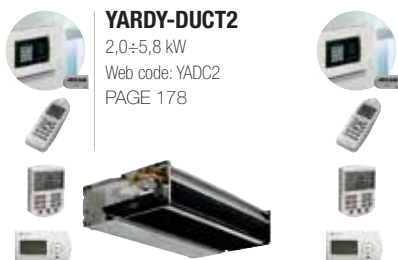
PAGE 172

**YARDY-DUCT2**

2,0÷5,8 kW

Web code: YADC2

PAGE 178

**YARDY-HP**

7,2÷20,5 kW

Web code: YAHP1

PAGE 180

**DIVA-I**

2,8÷10,8 kW

Web code: DIVI1

PAGE 182

**DIVA**

2,0÷11,1 kW

Web code: DIVA1

PAGE 184

**VTNC**

2,9÷7,8 kW

Web code: VTNC1

PAGE 186



ONLY COOLING



HEAT PUMP

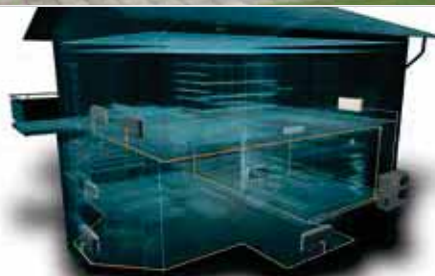


POLYVALENT SYSTEMS

CONTROLS FOR HEAT-PUMP SYSTEMS



RHOSS TOUCH MANAGER



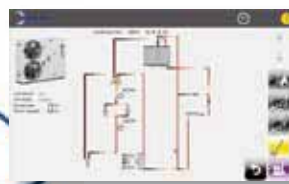
iDRHOSS



RHOSS MONITORING: Mobile - Cloud - Real time



RHOSS WEB SERVER

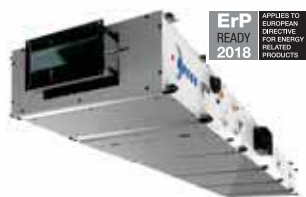


RHOSS SEQUENCER



RHOSS SUPERVISOR





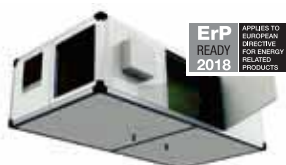
ErP
READY
2018

APPLIES TO
EUROPEAN
DIRECTIVE
FOR ENERGY
RELATED
PRODUCTS

new

Terminal unit **UTNA Platinum**

6,4÷70 kW
Web code: UTAP1
PAGE 192



ErP
READY
2018

APPLIES TO
EUROPEAN
DIRECTIVE
FOR ENERGY
RELATED
PRODUCTS

new

Heat recovery unit **UTNR-A Platinum**

Counterflow heat recovery
400÷4.050 m³/h
Web code: UTNR3
PAGE 196



Heat recovery unit **UTNR-A e UTNR-P**

Crossed flow heat recovery
300÷5.320 m³/h
Web code: UTNR1
PAGE 200



new

ErP
READY
2018

APPLIES TO
EUROPEAN
DIRECTIVE
FOR ENERGY
RELATED
PRODUCTS

Heat recovery unit **UTNR-HE Platinum**

Rotative heat recovery
310÷4.250 m³/h
Web code: UTHE3
PAGE 204



Heat recovery unit **UTNR-HE**

Rotative heat recovery
310÷5.300 m³/h
Web code: UTHE2
PAGE 208



Heat recovery unit **UTNR-HP**

Thermodynamic heat recovery
350÷4.500 m³/h
Web code: UTHP1
PAGE 216



ErP
READY
2018

APPLIES TO
EUROPEAN
DIRECTIVE
FOR ENERGY
RELATED
PRODUCTS

Heat recovery unit **VMC-E**

Counterflow heat recovery
150÷1.000 m³/h
Web code: VMC01
PAGE 218



ErP
READY
2018

APPLIES TO
EUROPEAN
DIRECTIVE
FOR ENERGY
RELATED
PRODUCTS

Heat recovery unit **UTNR Micro**

Counterflow heat recovery
150÷500 m³/h
Web code: UTMS1
PAGE 220



ErP
READY
2018

APPLIES TO
EUROPEAN
DIRECTIVE
FOR ENERGY
RELATED
PRODUCTS

Heat recovery unit/ dehumidifier **UTNRD Micro**

Counterflow heat recovery
300/150÷500/250 m³/h
Web code: UTRD1
PAGE 222

Create ideal comfort seeking excellence.

Rhoss is the group company specialised in the design and manufacture of products and systems for air conditioning and air handling.

Founded in 1968, it immediately established a leading position in the sector of steel boilers for domestic heating.

In 1971 it entered the air conditioning world to all effects with the production of fan coils, followed by chillers.

For more than 40 years, Rhoss has been a guarantee for innovation, quality and top level service. This is what makes us an ideal partner for HVAC systems.

Rhoss growth and development is an evolution that combines investments and projects in order to make **the company a point of reference also for international markets.**

Our renewal has followed developments in markets and customer needs, in particular offering highly efficient products and systems that are in line with the requirements of the most modern Green Buildings.

Innovation is in our DNA

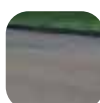
Rhoss has always proven to be an innovative spirit throughout its history.

Today, it confirms its propensity towards continuous technological evolution with

R&D Lab: a futuristic testing and inspection station of over 1000 m², among the largest in Europe, which allows new products, radiant systems and special units with capacities up to **1500 kW** to be tested in the harshest operating conditions and perform operating simulations to effectively respond to customer requirements.

R&D Lab, approved to test liquid chillers and heat pumps, can verify the performance of the products according to European regulations.

Furthermore, with R&D Lab, research projects are promoted and developed in collaboration with the scientific community and universities both nationally and internationally.





Rhoss: certified quality.



www.eurovent-certification.com
www.certiflash.com

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, according to the
regulations: EN 14511 - EN 9614 - EN 1397.



www.eurovent-certification.com
www.certiflash.com

EUROVENT certification for AIR HANDLING
UNITS (AHU)

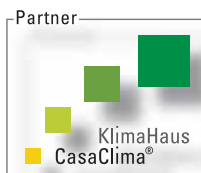
Rhoss participates in the Eurovent certification programme
for the Air handling units with the ADV range according to EN
13053 and EN1886.





LEED - 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.



Rhoss partner CasaClima - KlimaHaus

Rhoss participates in the Casa Clima programme. A protocol that guarantees buildings with high living comfort in respect of reduced energy and management costs, thereby contributing significantly to environmental protection.



Create ideal comfort while respecting nature.

Rhoss offers solutions that promote sustainable construction in terms of energy efficiency, in line with the requirements of the most important certification in the Green-Building field, especially LEED certification. These are products or systems that were designed with technology that makes it concretely possible to reduce the energy needs of the HVAC system. The Rhoss solutions that excel in sustainability can be easily recognised by the Green Line mark, which represents Rhoss respect for the environment.



Efficiency as a starting point

Efficiency, a word that encompasses the state of the art development of a company. It has many aspects ranging from the design of the units to provide comfort, innovations to increase energy savings, development of solutions to improve integration with systems.



The new design philosophy of chillers integrates with new market trends and with the choice of components designed to meet the ultimate energy standards. Integration with innovative central air handling units, where the maximum attention is paid to heat recovery and heat regulation, combines well with the new systems in which the technological content and functionality of a complete system are increasingly important requirements. The Rhoss system is enhanced with a wide range of terminals that include performance, attention to consumption and thorough attention to detail that fulfil the needs of the more demanding customers. It is complete and provides value to the offer, a whole range of systems for monitoring, managing and supervising the units, to improve the overall efficiency of the system and the interaction with the environment where the equipment find a natural position. The standard of cooling units aims at class A and to always guarantee high efficiency at partial loads to meet and exceed the new targets of the ESEER, SCOP and SEER indices. The new features introduced, thanks to research and development in the R&D Lab, Rhoss' flagship, allow another step forward to be made toward obtaining efficiency increments.



Offer condensing heat recovery systems in chillers, with an increased index of the actual effect, can reach extremes in EXP multi-purpose heat pumps, in which the production of hot and cold fluids is managed in a contemporary or independent way and applied indifferently in 4 or 2-pipe systems with domestic hot water production. EXP Systems allows you to set up a complete air conditioning system thereby achieving a double result with a single unit and a single expense, the energy delivered by the compressor, guaranteeing high performance in terms of energy efficiency.





ADAPTIVE FUNCTION PLUS

PREDICTIVE TECHNOLOGY

Adaptive Function Plus is an innovative predictive control software, patented exclusively by Rhoss*, created from the collaboration with the Technical Physics and Computer Engineering Departments of the University of Padua.

The new logic allows the cooling unit to take on the information from the system concerning its load and inertia, elaborate it and optimise the work parameters to reduce energy consumption.

"THE ENERGY REQUIRED, ONLY WHEN REQUIRED"

In air conditioning systems, the chillers only operate at full load for a small number of hours while they work at partial load for most of the year.

Adaptive Function Plus acts on the set-point value, increasing machine efficiency and reducing energy consumption compared to chillers and heat pumps with conventional control logic.

The energy consumption saving reaches 36% in the winter and 18% in the summer!

RELIABILITY WITH LOW WATER CONTENT

The ability of the controller to estimate the inertia and the dynamics of the systems allows the units equipped with Adaptive Function Plus to work even in systems with low water content of up to 2 l/kW.

REDUCTION OF CONSUMPTION AND RESPECT FOR THE ENVIRONMENT

With Adaptive Function Plus the energy saving of the building-unit system is improved thanks to its energy saving capacity.

The value of the building therefore increases, while the emission of pollutant substances into the environment is reduced.



THE SEASONAL EFFICIENCY INDEX PLUS

The University of Padua has developed the seasonal efficiency index ESEER+, which takes the adaptation of the chiller set-points to different partial load conditions into account. This, therefore, characterises the seasonal behaviour of the chiller with Adaptive Function Plus compared to the more traditional ESEER index. The ESEER+ index can therefore be used for a quick evaluation of seasonal energy consumption of units with Adaptive Function Plus, instead of more complex analyses conducted on the plant-system which are usually difficult to complete.



Rhoss chillers with Adaptive Function Plus technology are recognised by the unmistakable brand.

* E.P.O. 07425350.1 - 07425349.3 - 08157531.8

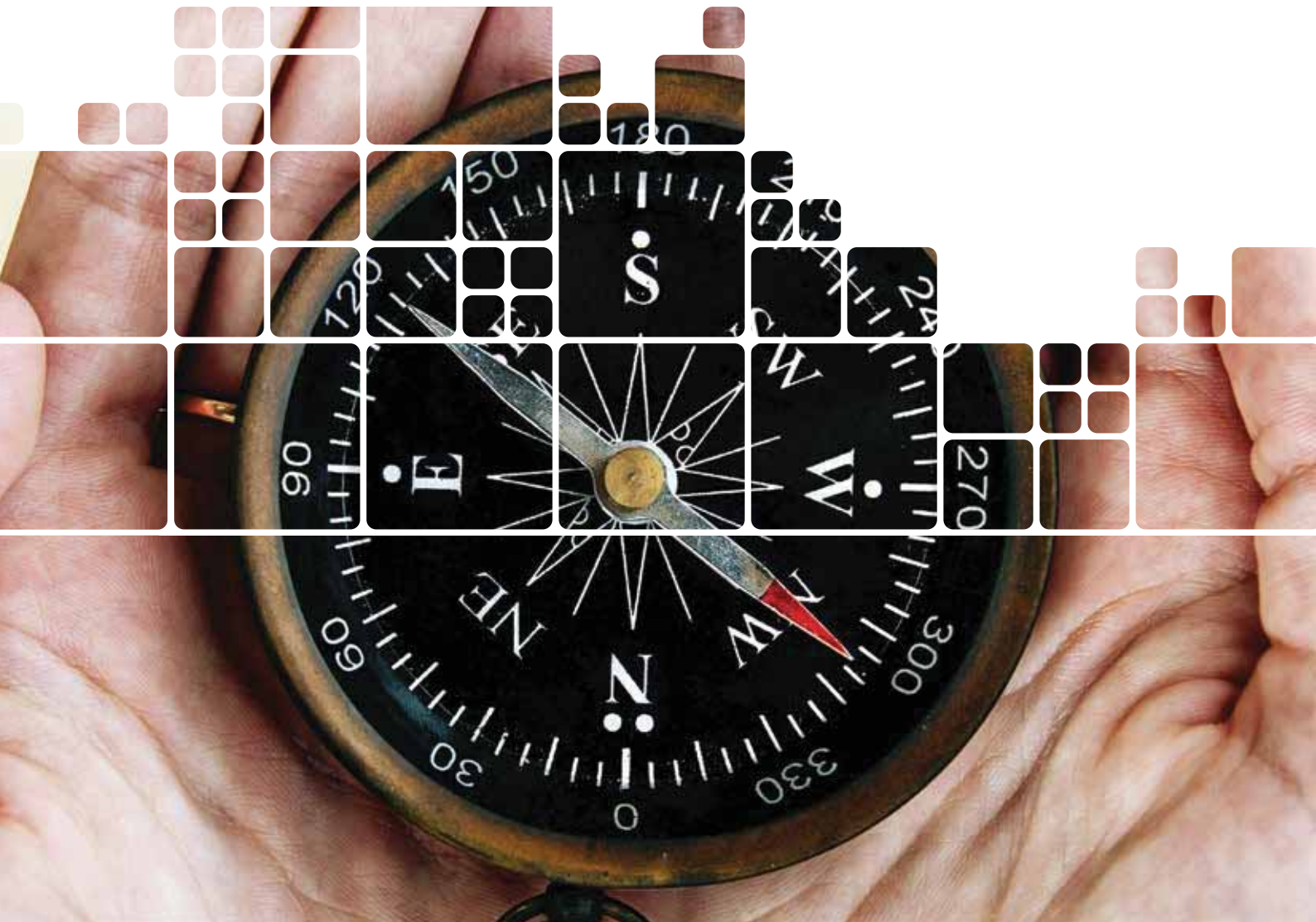
Rhoss services: customised solutions for your business.

"RHOSS SERVICE" is the service par excellence that Rhoss offers its clients in order to add value to the HVAC systems

Rhoss can create service programmes and instruments that makes it possible for us to always serve you better.

What are the most significant added value aspects for a HVAC system user?

1. obtaining constant performance without problems or concerns
2. optimising equipment operation
3. minimising energy consumption
4. keeping maintenance costs low
5. eliminating operational losses
6. limiting downtimes
7. foreseeable cost management
8. compliance with local governmental and environmental regulations





CONTRACTS - WARRANTY EXTENSION

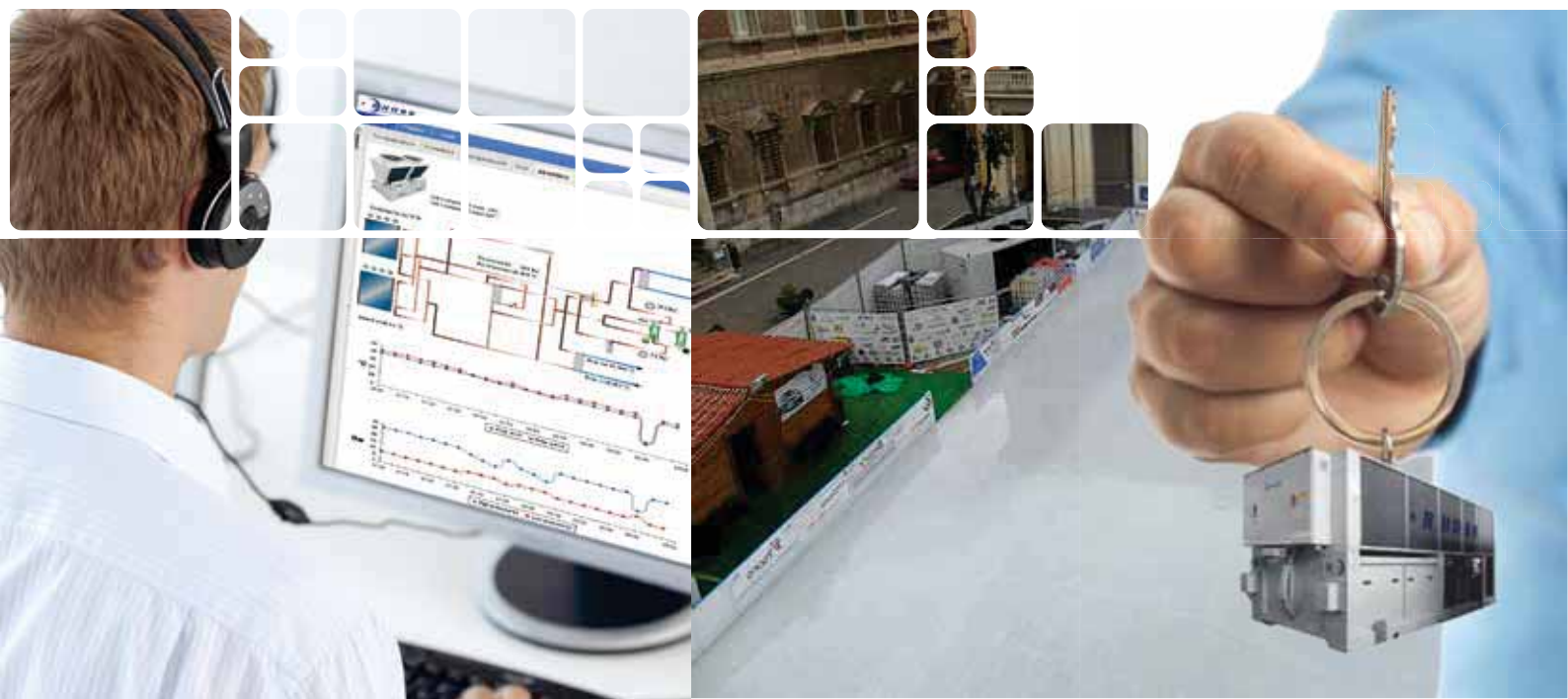
- Extended warranties are possible for all Rhoss units, which include labour and replacement of parts that are defective during the preselected extension period.
- The scheduled maintenance contracts (Basic, Program, Full Service and Global) are designed to offer operative efficiency, extend the useful life of your system and help reduce operational costs.

MACHINE FOR TEMPORARY USE - RENTING

- Rhoss Service also means medium and long term renting of air conditioning and heating equipment.
- Rhoss Service offers a wide range of versatile machines that can satisfy all cooling needs with an "all inclusive" formula. The supply foresees a turn-key rental, quick and timely coverage of any risk connected to maintenance and operating costs.
- The main field of use are ice rinks (specific machines for working at low temperatures) and machines for the wine sector.

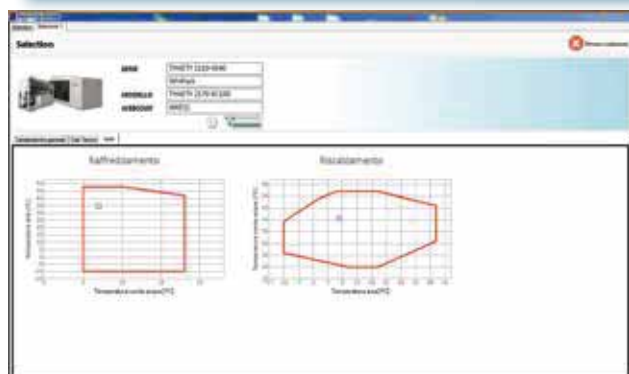
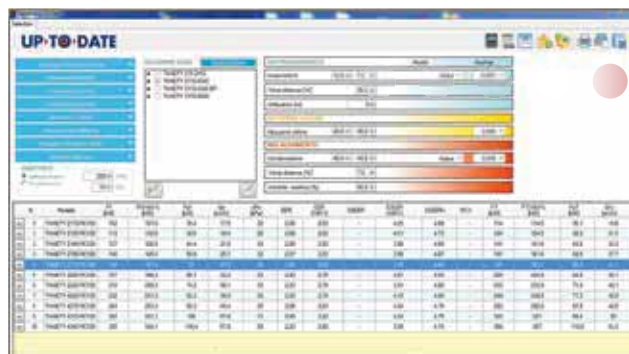
EXTRAORDINARY MAINTENANCE - UNIT RE-ASSEMBLY

- Increasingly often, architectural barriers and structural constraints make it impossible to replace units in areas that are difficult to reach due to weights and dimensions that do not conform with the available spaces. Rhoss Service has a team of specialised technicians who are able to perform on site disassembly and reassembly operations for the machine to be positioned.
- The Rhoss Service team can take on any request for assistance and organise the following rapidly: technical inspection, drafting of a estimate for the repairs, decisive action following approval, a warranty of 12 months on the intervention performed and the comprehensive warranty restarting for a further 6 months from when the intervention is completed.



- ## CHILLER selection

TECHNICAL REPORT





Fan-coil and hydronic terminal selection



TECHNICAL REPORT



UP-TO-DATE FANCOILS SELECTION

Utente: Mario Bianchi (Studio Tecnico)

Riferimento: Condominio - Lato Est - 1° piano

Data: 04/05/2015

Modello: 04/05/2015

Release: 04/05/2015

DATI SELEZIONE

Webcode: YANV2 Portata aria [m³/h]: 453

Serie: YANV2 D12 Pressione statica [Pa]: 0

Versione: MVT Altitudo [m slm]: 0

Taglia: 30 Numero di reagenti batteria principale: 3

Velocità: Max. Temperatura di impostazione: 27.2-33.0

Funzionamento Raffreddamento

Potenza frigorifera [kW]: 2.25

Potenza frigorifera sensibile [kW]: 2.12

Disincrostazione [g/h]: 600

Arta Ingresso Uscita

T85 [°C]: 27.0 13.5

T80 [°C]: 15.5 13.5

U.R. [%]: 47.0 93.0

Portata [m³/h]: 453

Portata di carico [m³/h]: 8.4

Temperatura [°C]: 7.0 30.0

Temperatura [°C]: 12.0 43.2

Funzionamento Riscaldamento

Potenza Termica totale [kW]: 3.35

Arta Ingresso Uscita

T85 [°C]: 25.0 43.5

T80 [°C]: 13.5 27.1

U.R. [%]: 93.0 12.0

Portata [m³/h]: 453

Portata di carico [m³/h]: 8.4

Temperatura [°C]: 30.0 7.0

Temperatura [°C]: 43.2 12.0

Diagramma Parametrico

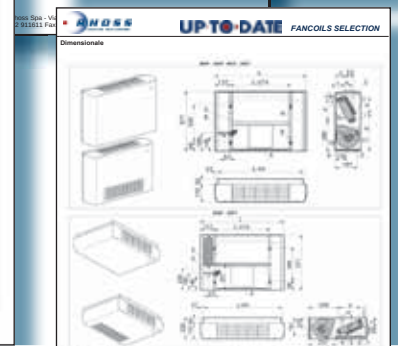
Schema di funzionamento

UP-TO-DATE logo

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Tel. +39 0342 911441 Fax +39 0342 911000 e-mail: rhoos@rhoos.com www.rhoos.com

Pagina 1 di 2



ELECTA - THAITY 105÷116

Low consumption Mini-Y - TCAEY 105÷111

Low consumption Mini-Y NF - THAEY 105÷111 NF

Low consumption Compact-I - TCAITY-THAITY 117÷128

Low consumption Compact-Y NF Plus - THAEY 115÷127 NF

Low consumption Compact-Y SM - TCAEY-THAEY 115÷130

Low consumption compact-I MD - TCAITY-THAITY 236÷260

Low consumption Compact-Y MD - TCAEY-THAEY 133÷265

Low consumption POKER - THAEY 234 H.T.

Low consumption EasyPACK - TCAEY-THAEY 269÷2146

Low consumption Y-Pack SE and Y-Pack HE - TCAEY-THAEY 270÷2160

Low consumption WinPACK HE-A - TCAEY-THAEY 2110÷4340

Low consumption WinPACK SE - TCAEY-THAEY 2110÷4340

FREECOOLING Y-Pack - TFAEY-TGAEY 4160÷4320

Low consumption Y-Power HE-A - TCAEY-THAEY 4370÷6660

Low consumption Y-Power SE - TCAEY-THAEY 4350÷6640

Low consumption WinPOWER HE-A - TCAEY 6700÷8920

Low consumption WinPOWER SE - TCAEY 6670÷8860

Z-Power HE - TCAVZ 2330÷2700

Z-Power HE - TCAVZ 2770÷21290

Z-Power SE - TCAVZ 1270÷1390

Z-Power SE - TCAVZ 2331÷2701

Z-Power SE - TCAVZ 2710÷21600

Z-Power VFD - TCAIZ 2520÷2900

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

Z-Power HP - THAVZ 2400÷2680

T-Power - TCATBZ 1361-41401 / TCATTZ 1321-41371 / TCATQZ 1361-41361



CHILLERS - HEAT PUMPS

Air cooled - Axial fans

ELECTA**THAITY 105÷116**

Cooling capacity: 3.8÷12.6 kW - Heating capacity: 6.2÷15.2 kW



- Operation up to **-20°C outdoor air**
- Temperature of the produced water up to **60°C**
- Plant control system integrated in the heat pump

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

Construction features

- Compressor: hermetic, rotary brushless DC compressor, complete with thermal protection and activated by Inverter.
- Expansion valve: electronic.
- Water side heat exchanger: Adequately insulated, stainless steel plates.
- Air side heat exchanger: finned coil with copper pipes and aluminium fins.
- Fan: axial fan rotor with DC brushless motors, equipped with internal thermal protection, protection grilles and proportional electronic device for continuous fan rotation speed regulation.
- Control: microprocessor electronic control. Enables integrated control of the heat pump and the heating system, according to the various requirements of use of the energy sources and terminal units.
- RS485 interface for serial communication with other devices (Modbus RTU protocol).
- Outdoor temperature probe for set-point compensation.
- Structure: made of galvanised and painted sheet steel, complete with condensation drain pan and unit base antifreeze heater.

Models

- THAITY: heat pump unit.

PUMP set up

- Pump unit complete with: circulator, manual air bleed valve, safety valve and pressure gauge.

Separately supplied accessories

- 3-way valve for the production of domestic hot water, managed by regulation.
- Rubber anti-vibration mountings.
- Water filter.
- Outdoor air temperature probe with remote control option.
- Chronothermostat and user terminal (KCTR accessory).
- Rhss supervisors for unit monitoring and remote management.



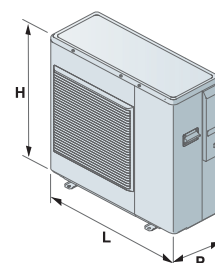
KCTR - Chronothermostat accessory to be installed inside the home to manage the temperature and operating hours, ensuring maximum comfort and minimum power consumption. It also allows you to activate the main states and modes of operation of the heat pump and set the main displays of the machine on board control.



THAITY MODEL		105	110	116
Radiant systems				
❶ Heating capacity MIN/NOM/MAX	kW	2,0/6,5/7,1	1,7/9,9/9,9	9,4/16,0/18,5
❶ NOM Absorbed power	kW	1,49	2,15	3,81
❶ C.O.P. NOM		4,34	4,58	4,2
(§) Energy class		A++	A++	A++
❷ MIN/NOM/MAX heating capacity	kW	2,4/4,7/5,3	5,1/6,5/9,0	6,5/10,6/12,8
❷ NOM Absorbed power	kW	1,72	2,41	3,8
❷ C.O.P. NOM		2,7	2,7	2,8
❸ MIN/NOM/MAX cooling capacity	kW	2,0/5,2/5,2	4,7/7,3/9,0	3,3/16,1/16,2
❸ E.E.R. NOM		4,02	3,61	3,91
Fan coil systems				
❹ MIN/NOM/MAX heating capacity	kW	1,8/6,2/6,4	1,9/9,8/9,8	8,8/15,2/16,7
❹ NOM Absorbed power	kW	1,98	2,83	4,47
❹ C.O.P. NOM		3,12	3,44	3,4
❺ MIN/NOM/MAX cooling capacity	kW	1,6/3,8/3,8	2,4/5,5/7,7	2,1/12,6/12,9
❺ E.E.R. NOM		2,98	2,91	3
● E.S.E.E.R.		4	3,35	3,9
❻ Sound power	dB(A)	60	62	63
❼ Sound pressure	dB(A)	35	37	38
❽ Available head pressure of the circulating pump	kPa	85	55	90
Power supply	V-ph-Hz	230-1-50	230-1-50	230-1-50
DIMENSIONS AND WEIGHTS				
L - Width	mm	898	850	1000
H - Height	mm	675	882	1418
P - Depth	mm	300	330	330
❾ Weight	kg	52	77	118

Data at the following conditions:

- ❶ Air: 7°C D.B. - 6°C W.B. - Water: 30/35°C.
- ❷ Air: -7°C D.B. - Water: 30/35°C.
- ❸ Air: 35°C D.B. - Water: 23/18°C.
- ❹ Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C.
- ❺ Air: 35°C D.B. - Water: 12/7°C.
- ❻ Sound power level in dB(A) based on measurements carried out in accordance with regulations UNI EN ISO 9614
- ❼ In open field (Q = 2) at 5 m from the unit.
- ❽ Weight refers to most complete set up.
- ESEER = (European seasonal EER) - Average European seasonal efficiency.
Performance according to EN 14511:2013
- (§) In average climatic conditions according to EU Regulation N° 811/2013



Low consumption Mini-Y

TCAEY 105÷111

Cooling capacity: 5.6÷11.3 kW



• Compact and Plug&Play units

Packaged air-cooled water chillers 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 plate heat exchanger, complete with antifreeze heater and water flow differential pressure switch.
- Air side heat exchanger: with finned coil, copper pipes and aluminium fins or coil with aluminium micro-channel pipes, complete with protection grille.
- Fan: electric axial fans with external rotor, equipped with internal thermal protection and protection grilles.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: made of galvanised and painted sheet steel.

Models

- TCAEY: unit designed for cooling only.

Factory fitted accessories

- **Compressor crankcase heater.**
- Soft-start device (for models with 230 V power supply).
- Condensation control -10°C .
- Low pressure switch.
- Digital input for double set-point.
- 4-20 mA analogue input for shifting set-point.
- Water low set-point temperature.

Accessories supplied separately

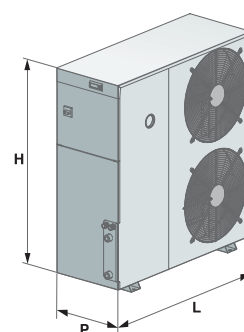
- Outdoor air temperature probe for set-point compensation.
- Rubber anti-vibration mountings.
- -10°C condensing control.
- Water filter.
- Low pressure switch.
- Antifreeze heater on the buffer tank.
- Remote keyboard with display.
- Clock board.
- Interfaces for serial communication with other devices.
- Serial converter (RS485/USB).
- Rhoss supervisors for unit monitoring and remote management.



TCAEY MODEL		105	107	109	111
Fan coil systems					
❶ Nominal cooling capacity	kW	5,6	7,0	9,0	11,0 / 11,3
❶ Absorbed power	kW	2,07	2,72	3,4	4,20 / 4,33
❶ E.E.R.		2,7	2,57	2,65	2,62 / 2,61
● E.S.E.E.R.		3,06	2,69	3,07	3,02
★ ESEER+		3,50	3,07	3,50	3,42 / 3,49
Radiant systems					
❷ Cooling capacity	kW	7,6	9,4	12,4	15,4 / 15,7
❷ Absorbed power	kW	2,18	2,70	3,56	4,44 / 4,54
❷ E.E.R.		3,48	3,48	3,48	3,47 / 3,46
❸ Sound pressure	dB(A)	46	47	47	47
Scroll/step compressor	no.	1/1	1/1	1/1	1/1
Circuits	no.	1	1	1	1
Water buffer tank content	l	19	19	30	30
❶ Pump available static pressure	kPa	55 / 85	55 / 86	84	75
Electric power 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
SIZES AND WEIGHTS		105	107	109	111
W - Width	mm	990	990	990	990
H - PUMP height	mm	905	905	1.085	1.085
H - TANK & PUMP height	mm	905	905	1.295	1.295
D - Depth	mm	380	380	380	380
❹ Weight	kg	131	133	157	166

Details under the following conditions:

- ❶ Air: 35°C - Water: 12/7°C.
 - ❷ Air: 35°C - Water: 23/18°C.
 - ❸ 5 m from the unit in free field (Q = 2).
 - ❹ The weight refers to the unit in its most complete form.
 - ESEER (European Seasonal EER) - Average European seasonal efficiency.
 - ★ ESEER with Adaptive Function Plus software. ESERR+ is not Eurovent certified.
- Performance according to EN 14511:2013



Low consumption Mini-Y NF

THAEY 105÷111 NF

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



- Compact and Plug&Play units
- Working limits 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 plate heat exchanger, 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, complete with protection grille.
- Fan: axial electric fans with external rotor, equipped with internal thermal protection and protection grilles and a proportional electronic device for continuous fan rotation speed regulation.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: made of galvanised and painted sheet steel, complete with condensation drain pan and unit base antifreeze heater.

Models

- THAEY: heat pump unit.

PUMP set up

- Pump unit complete with: circulation pump, membrane expansion tank, manual air bleed valve, and safety valve.

TANK&PUMP set up

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

Factory fitted accessories

- Soft-start device (for models with 230V power supply).
- Compressor crankcase heater.
- Digital input for double set-point.
- 4-20 mA analogue input for shifting set-point.
- Water low set-point temperature.

Accessories supplied loose

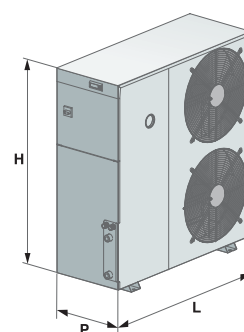
- 3-way valve for the production of domestic hot water.
- Additional electric heater for heat pump, managed by regulation.
- Outdoor air temperature probe for set-point compensation.
- Rubber anti-vibration mountings.
- Water filter.
- Antifreeze on the buffer tank.
- Remote keyboard with display.
- 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
Radiant systems					
① Heating capacity	kW	5,9	7,7	9,4	11,9/12,3
① Absorbed power	kW	1,68	2,07	2,63	3,30/3,30
① C.O.P.		3,52	3,72	3,58	3,61/3,73
(S) Energy class		A	A+	A	A+
② Heating capacity	kW	4,1	5,3	5,8	7,3/7,3
② Absorbed power	kW	1,66	2,03	2,69	3,35/3,38
② C.O.P.		2,47	2,61	2,16	2,18/2,16
③ Cooling capacity	kW	7,6	9	12,3	14,7/15
③ E.E.R.		3,58	3,21	3,45	3,15/3,21
Fan coil systems					
④ Heating capacity	kW	5,71	7,33	9,3	11,35/11,8
④ Absorbed power	kW	2,19	2,84	3,5	4,65/5,65
④ C.O.P.		2,61	2,58	2,66	2,44/2,09
⑤ Cooling capacity	kW	5,6	7	9	10,9/11,3
⑤ E.E.R.		2,71	2,58	2,64	2,60/2,61
● E.S.E.E.R.		3,06	2,69	3,07	3,02/3,06
⊕ E.S.E.E.R.+		3,5	3,07	3,5	3,42/3,49
⑥ 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
⑤ Available head pressure of the circulating pump	kPa	55	55	85	75
Power 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 WEIGHTS		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
⑦ Weight	kg	141	143	167	176

Data at the following conditions:

- ① Air: 7°C D.B. - 6°C W.B. - Water: 30/35°C.
 - ② Air: -7°C D.B. - Water: 30/35°C.
 - ③ Air: 35°C - Water: 23/18°C.
 - ④ Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C.
 - ⑤ Air: 35°C D.B. - Water: 12/7°C.
 - ⑥ In open field (Q = 2) at 5 m from the unit.
 - ⑦ Weight refers to most complete set up.
 - ESEER = (European seasonal EER) - Average European seasonal efficiency.
 - ⊕ ESEER with Adaptive Function Plus software. ESEER+ is not Eurovent certified.
- Performance according to EN 14511:2013
- (S) In average climatic conditions according to EU Regulation N° 811/2013



Low consumption Compact-I

TCAITY-THAITY 117÷128

Cooling capacity: 16.4÷27.6 kW - Heating capacity: 17.7÷28.5 kW



- Operation up to -20°C outdoor air
- Production of hot water up to 60°C
- Excellent energy efficiency values

Packaged reversible air-cooled heat pumps and water chillers with axial fans.

Range with hermetic scroll DC Inverter compressors and R410A refrigerant gas.

Construction features

- Compressor: scroll type, rotary, hermetic with Inverter actuation, complete with thermal protection and crankcase heater.
- Electronic expansion valve.
- Water side heat exchanger: adequately insulated stainless steel plate heat exchanger, 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 grille. Supplied outdoor air temperature probe for set-point compensation.
- Fan: axial electric fans with external rotor, equipped with internal thermal protection and protection grilles and a proportional electronic device for continuous fan rotation speed regulation.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: made of galvanised and painted sheet steel, complete with condensation drain pan and unit base antifreeze heater for THAITY.

Version

- T - High efficiency

Models

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

PUMP set-up

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

Factory fitted accessories

- Forced Download. Compressor partialisation or switch-off to limit the consumed current and power (digital input).
- -15°C condensation control with fans with EC motor.
- Silenced set up.
- Circulator/electric pump antifreeze heater.
- Copper/pre-painted aluminium or copper/copper coils.
- Digital input for double set-point.
- 4-20 mA analogue input for shifting set-point.

Accessories supplied separately

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



TCAITY-THAITY MODEL		117	124	128
Radiant systems				
① MIN/NOM/MAX heating capacity	kW	7,2/18,8/19,8	10,4/25,0/27,4	11,0/29,1/31,1
① NOM Absorbed power	kW	4,59	6,09	7,09
① C.O.P. NOM		4,1	4,1	4,1
(§) Energy class THAITY		A++	A++	A++
② MIN/NOM/MAX heating capacity	kW	4,2/12,9/13,8	8,1/21,0/23,1	8,1/23,1/24,8
② NOM Absorbed power	kW	4,69	5,86	6,75
② C.O.P. NOM		2,75	3,58	3,42
③ MIN/NOM/MAX TCAITY cooling capacity	kW	11,4/20,6/21,7	15,1/28,4/30,2	16,3/32,6/33,9
③ E.E.R. TCAITY NOM		4,11	4,08	4,10
Fan coil systems				
④ MIN/NOM/MAX heating capacity	kW	6,6/17,7/18,8	9,7/24,3/26,7	10,4/28,5/30,6
④ NOM Absorbed power	kW	5,33	7,45	8,68
④ C.O.P. NOM		3,32	3,26	3,28
⑤ MIN/NOM/MAX TCAITY cooling capacity	kW	8,7/16,4/17,3	12,6/24,3/25,9	13,4/27,6/28,7
⑤ E.E.R. TCAITY NOM		3,14	2,98	3,12
● E.S.E.E.R. TCAITY		5,25	4,85	4,79
⊕ E.S.E.E.R.+		5,99	5,47	5,37
⑥ Sound pressure	dB(A)	46	48	49
⑥ Silenced set up sound pressure	dB(A)	44	46	47
⑥ Available head pressure of the circulating pump PO	kPa	89	89	76
Power supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50
DIMENSIONS AND WEIGHTS				
L - Width	mm	1522	1522	1522
H - Height	mm	1280	1280	1280
P - Depth	mm	600	600	600
⑧ Weight	kg	245	255	265

Data at the following conditions:

- ① Air: 7°C D.B. - 6°C W.B. - Water: 30/35°C.
 - ② Air: -7°C D.B. - Water: 30/35°C.
 - ③ Air: 35°C D.B. - Water: 23/18°C.
 - ④ Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C.
 - ⑤ Air: 35°C D.B. - Water: 12/7°C.
 - ⑥ In open field (Q = 2) at 5 m from the unit.
 - ⑧ Weight refers to most complete set up.
 - ESEER = (European seasonal EER) - Average European seasonal efficiency.
 - ⊕ ESEER with Adaptive Function Plus software. ESEER+ is not Eurovent certified.
- Performance according to EN 14511:2013 Set up PO/PIO.
- (§) In average climatic conditions according to EU Regulation N° 811/2013

Low consumption Compact-Y NF Plus

THAETY 115÷127 NF

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



- Operation up to -15°C outdoor air
- Temperature of the produced water up to 60°C
- Plug&Play unit with built-in hydraulic module
- Included evaporation/condensation 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 crankcase electric heater for mod. 127.
- Water side heat exchanger: adequately insulated stainless steel braze-welded plate heat exchanger, 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, complete with protection grille.
- Fan: axial electric fans with external rotor, equipped with internal thermal protection and protection grilles and a proportional electronic device for continuous fan rotation speed regulation.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: made of galvanised and painted sheet steel, complete with condensation 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: circulation pump, membrane expansion tank, manual air bleed valve, and safety valve.

TANK&PUMP set up

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

Factory fitted accessories

- Soft-start device.
- Silenced set up.
- Antifreeze heater on the buffer tank.
- Compressor crankcase heater (mod. 115÷124).
- Digital input for double set-point.
- 4-20 mA analogue input for shifting set-point.
- Water low set-point temperature.

Separately supplied accessories

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



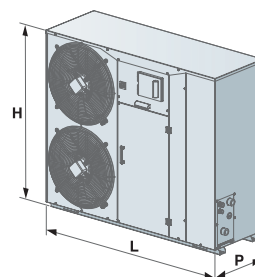
THAETY NF MODEL		115	117	122	124	127
Radiant systems						
❶ Heating capacity	kW	18	19	24,7	27,8	32,2
❶ Absorbed power	kW	4,35	4,59	5,95	6,67	7,61
❶ C.O.P.		4,14	4,14	4,15	4,17	4,23
(S) Energy class		A+	A+	A+	A+	A+
❷ Heating capacity	kW	11,7	12	15,7	17,9	20,8
❷ C.O.P.		2,74	2,76	2,76	2,75	2,82
❸ Cooling capacity	kW	23,3	27,1	34,6	37,8	40,4
❸ Absorbed power (set up with P1 electric pump)	kW	6,02	6,93	8,87	9,67	10,57
❸ E.E.R. (set up with P1 electric pump)		3,87	3,91	3,9	3,91	3,82
Fan coil systems						
❹ Heating capacity	kW	16,6	17,7	23,4	25,9	30,4
❹ Absorbed power	kW	5,68	6,3	8,21	9,06	10,13
❹ C.O.P.		2,92	2,81	2,85	2,86	3
❺ Cooling capacity	kW	15,5	17,6	22,5	23,9	26,6
❺ Absorbed power	kW	5,78	6,64	8,06	9,52	10,23
❺ E.E.R.		2,68	2,65	2,79	2,51	2,6
● E.S.E.E.R.		3,15	3,11	3,44	3,09	3,18
⊕ E.S.E.E.R.+		3,49	3,42	3,82	3,41	3,5
❻ Sound pressure	dB(A)	50	50	52	52	53
❻ Silenced set up 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
❽ PO circulating pump/P1 electric pump nominal available head pressure	kPa	75/147	64/136	66/131	69/130	63/116
Power supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
Circulating pump absorbed power (PO-ASPO set up)	kW	0,45	0,45	0,45	0,45	0,45
Electric pump absorbed power (P1-ASP1 set up)	kW	0,57	0,57	0,57	0,57	0,73
DIMENSIONS AND WEIGHTS						
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
❼ Weight	kg	215	225	278	288	320

Data at the following conditions:

- ❶ Air: 7°C D.B. - 6°C W.B. - Water: 30/35°C.
 - ❷ Air: -7°C D.B. - Water: 30/35°C.
 - ❸ Air: 35°C D.B. - Water: 23/18°C.
 - ❹ Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C.
 - ❺ Air: 35°C D.B. - Water: 12/7°C.
 - ❻ In open field (Q = 2) at 5 m from the unit.
 - ❼ Weight refers to most complete set up.
 - ESEER = (European seasonal EER) - Average European seasonal efficiency.
 - ⊕ ESEER with Adaptive Function Plus software. ESEER+ is not Eurovent certified.
- Performance according to EN 14511:2013. Set up with circulating pump.
- (S) In average climatic conditions according to EU Regulation N° 811/2013

Note:

- With circulating pump (PO/ASPO set up) the units are not suitable for radiant cooling operation.
- Permissible exchanger thermal gradient $\Delta T = 4 \div 8^\circ\text{C}$.



Low consumption Compact-Y SM

TCAEY-THAEY 115÷130

Cooling capacity: 15.7÷29.5 kW - Heating capacity: 16.5÷34 kW



- **ESEER with Adaptive Function Plus up to 3.8**

Packaged reversible air-cooled heat pumps and water chillers and 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 plate heat exchanger, complete with antifreeze heater and water flow differential pressure switch.
- Finned coil air side heat exchanger with copper pipes and aluminium fins, complete with protection grilles.
- Fan: electric axial fans with external rotor, equipped with internal thermal protection and protection grilles.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: made of galvanised and painted sheet steel, complete with condensation drain pan.

Models

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

PUMP set up

- Pump unit complete with: circulation pump, membrane expansion tank, manual air bleed valve, and safety valve.

TANK&PUMP set-up

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

Factory fitted accessories

- Soft-start device.
- Silenced version.
- Condensation control -10°C .
- Antifreeze heater on the buffer tank.
- Compressor crankcase heater (mod. 115÷124).
- Unit base antifreeze electric heater for operation in heat pump mode at low outdoor air temperatures.
- Digital input for double set-point.
- 4-20 mA analogue input for shifting set-point.
- Water low set-point temperature.
- Copper/pre-painted aluminium 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.
- RS485/USB serial converter.
- Rhoss supervisors for unit monitoring and remote management.



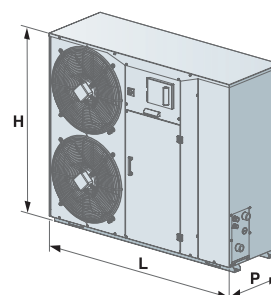
TCAEY-THAEY MODEL		115	117	122	124	127	130
Fan coil systems							
❶ TCAEY cooling capacity	kW	15,7	17,7	23,1	24,7	27,3	29,5
❶ TCAEY absorbed power	kW	5,69	6,63	8,25	9,32	10,54	12,04
❶ E.E.R. TCAEY		2,76	2,67	2,8	2,65	2,59	2,45
● E.S.E.E.R. TCAEY		3,05	3,03	3,33	2,98	3,07	2,81
★ ESEER+		3,49	3,42	3,82	3,41	3,5	3,2
❷ Heating capacity	kW	16,5	17,5	23,5	25,7	30,3	34
❷ Absorbed power	kW	5,64	6,23	7,94	9,05	10,16	11,25
❷ C.O.P.		2,92	2,82	2,96	2,84	2,98	3,02
Radiant systems							
❸ TCAEY cooling capacity	kW	21,3	24,1	31,2	33,3	37	39,5
❸ E.E.R. TCAEY		3,49	3,33	3,5	3,32	3,29	3,01
❹ Heating capacity	kW	16,7	17,9	24	26,4	30,9	34,5
❹ C.O.P.		3,67	3,62	3,75	3,68	3,75	3,77
(S) Energy class THAEY	A	A	A+	A+	A+	A+	A+
❺ Sound pressure	dB(A)	50	50	52	52	53	53
❺ Silenced set up sound pressure	dB(A)	46	46	49	49	50	50
Scroll/step compressor	no.	1/1	1/1	1/1	1/1	1/1	1/1
Circuits	no.	1	1	1	1	1	1
Buffer tank water content	l	35	35	45	45	45	45
❶ Circulating pump/standard electric pump nominal available head pressure	kPa	74/147	63/130	64/131	66/125	61/117	57/110
Power 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 WEIGHTS		115	117	122	124	127	130
L - PUMP Width	mm	1230	1230	1230	1230	1535	1535
L - TANK & PUMP Width	mm	1522	1522	1522	1522	1822	1822
H - Height	mm	1090	1090	1280	1280	1510	1510
P - Depth	mm	580	580	600	600	695	695
❻ TCAEY Weight	kg	210	220	270	280	310	370
❻ THAEY Weight	kg	215	225	278	288	320	380

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: 35°C D.B. - Water: 23/18°C.
- ❹ Air: 7°C D.B. - 6°C W.B. - Water: 30/35°C.
- ❺ In open field (Q = 2) at 5 m from the unit.
- ❻ Weight refers to most complete set up.
- ESEER = (European seasonal EER) - Average European seasonal efficiency.
- ★ ESEER with Adaptive Function Plus software. ESEER+ is not Eurovent certified.

Performance according to EN 14511:2013 Set up with electric pump.

- (S) In average climatic conditions according to EU Regulation N° 811/2013



Low consumption compact-I MD

TCAITY-THAITY 236÷260

Cooling capacity: 34.3÷58.3 kW - Heating capacity: 39.9÷68.9 kW



new



- Operation up to -15°C outdoor air
- Hot water production up to 60°C
- Plug&Play unit with built-in hydraulic module
- Optional EC fans and inverter-based circulation pump
- Multipurpose for systems with 2 pipes + DHW (with optional RC100)

Packaged reversible air-cooled heat pumps and water chillers and axial fans.

Range with scroll hermetic compressors DC Inverter and R410A refrigerant gas.

Construction features

- Compressor: scroll hermetic type rotary compressors with thermal protection and casing heater.
- Water side heat exchanger: adequately insulated stainless steel plate heat exchanger, complete with antifreeze heater and water flow differential pressure switch.
- Finned coil air side heat exchanger with copper pipes and aluminium fins, complete with protection grilles. Supplied outdoor air temperature probe for set-point compensation.
- Fan: electric axial fans with external rotor, equipped with internal thermal protection, 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 complete with:
 - display of cooling circuit high/low pressure,
 - electronic expansion valve.
 - 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 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 versions, and with INVERTER operation

TANK&PUMP set-up

- Pump unit with inertial buffer tank and single or double electric pump, one in automatic 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 versions, and with INVERTER operation

Factory fitted accessories

- Pre-painted copper/aluminium coils with hydrophilic or copper/copper treatment.
- Desuperheater.
- 100% Heat recovery unit
- 3-way diverter valve for the production of domestic hot water, managed by regulation.
- -15°C condensing control with fans with EC motor.
- Base antifreeze heater
- Buffer tank and electric pump antifreeze heater
- Forced Download. Compressor partialisation or switch-off to limit the consumed current and power (digital input).
- Refrigerant leak detector
- Digital input for double set-point.
- 4-20 mA analogue input for shifting set-point.
- Energy parameters measuring device.
- Silenced set up.
- Refrigerant circuit high and low pressure gauges.

Separately supplied accessories

- 3-way valve for the production of domestic hot water, managed by regulation.
- Outdoor air temperature probe for set-point compensation.
- Additional electric heater for heat pump, managed by regulation.
- Rubber anti-vibration mountings.
- Water filter.
- Thermostat with display.
- Remote keyboard with display.
- Interfaces for serial communication with other devices.
- RS485/USB serial converter.
- Rhoss supervisors for unit monitoring and remote management.



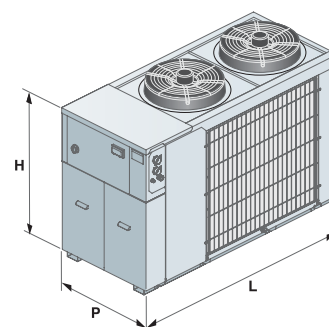
TCAITY-THAITY MODEL		236	245	250	260
Radiant systems					
❶ MIN/NOM/MAX heating capacity	kW	9,7/38,8/40,5	12/50,6/53	13,9/54,1/56,4	16,3/69,3/72,6
❶ NOM Absorbed power	kW	10,3	13,1	13,9	18
❶ C.O.P. NOM		3,78	3,85	3,9	3,84
(S) Energy class		A++	A++	A++	A++
❷ MIN/NOM/MAX heating capacity	kW	8,3/28,4/29,2	10,9/38,3/39,4	11,4/38,6/39,7	14,9/52,5/54,1
❷ NOM Absorbed power	kW	11,5	14,9	14,7	20,4
❷ C.O.P. NOM		2,46	2,57	2,62	2,57
❸ MIN/NOM/MAX cooling capacity	kW	13,6/41,2/42,8	18,4/55,4/57,5	20/60,4/62,8	24,3/75/78
❸ E.E.R. NOM		3,27	3,58	3,72	3,67
Fan coil systems					
❹ MIN/NOM/MAX heating capacity	kW	8,9/39,9/41,2	10,4/50,5/52,3	13/56,5/58,2	14,1/68,9/71,3
❹ NOM Absorbed power	kW	12,4	15,3	17,5	21,5
❹ C.O.P. NOM		3,22	3,3	3,23	3,2
❺ MIN/NOM/MAX cooling capacity	kW	11/34,3/35,2	14,7/45,7/46,9	16/50/51,3	18,2/58,3/59,9
❺ E.E.R. NOM		2,56	2,96	2,96	2,71
● E.S.E.E.R.		4,61	4,19	4,23	4,48
⚙ E.S.E.E.R.+		5,07	4,69	5,00	4,93
❻ Sound pressure	dB(A)	54	56	56	57
❻ Silenced set up sound pressure	dB(A)	51	53	53	54
Scroll inverter compressor	no.	2	2	2	2
Circuits	no.	1	1	1	1
Buffer tank water content (TANK&PUMP)	l	80	150	150	150
❶ Available head: standard nominal pump head	kPa	129	101	114	111
Power supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
DIMENSIONS AND WEIGHTS					
L - Width	mm	1660	2660	2660	2660
H - Height	mm	1570	1570	1570	1570
P - Depth	mm	1000	1000	1000	1000
❸ TCAITY weight	kg	497	697	712	740
❸ THAITY weight	kg	507	717	732	760

Data at the following conditions:

- ❶ Air: 7°C D.B. - 6°C W.B. - Water: 30/35°C.
- ❷ Air: -7°C D.B. - Water: 30/35°C.
- ❸ Air: 35°C D.B. - Water: 23/18°C.
- ❹ Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C.
- ❺ Air: 35°C D.B. - Water: 12/7°C.
- ❻ In open field (Q = 2) at 5 m from the unit.
- ❼ Weight refers to most complete set up.
- ESEER = (European seasonal EER) - Average European seasonal efficiency.
- ⚙ ESEER with Adaptive Function Plus software. ESEER+ is not Eurovent certified.

Performance according to EN 14511:2013

(S) In average climatic conditions according to EU Regulation N° 811/2013



Low consumption Compact-Y MD

TCAEY-THAEY 133÷265

Cooling capacity: 33.8÷63.7 kW - Heating capacity: 39.4÷68.3 kW



- 3 capacity steps (mod. 245÷265)
- ESEER with Adaptive Function Plus up to 5
- Version HT65 for water production 65°C (°)

Packaged reversible air-cooled heat pumps and water chillers and 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. 3 capacity steps with high efficiency at partial loads for models 245-265.
- Water side heat exchanger: adequately insulated stainless steel plate heat exchanger, complete with antifreeze heater and water flow differential pressure switch.
- Finned coil air side heat exchanger with copper pipes and aluminium fins, complete with protection grilles.
- Fan: electric axial fan with external rotor, equipped with internal thermal protection, protection grilles and for models 245÷265 a 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 bleed 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 storage tank and single or double electric pump (mod. 245÷265) including an automatic pump in standby, complete with expansion tank, air bleed 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 version.
- Desuperheater 15%.
- Heat recovery unit 100%.
- Refrigerant circuit high and low pressure gauges (mod. 245÷265).
- Antifreeze electric heater for buffer tank and pumps (mod. 245÷265).
- Digital input for double set-point.
- 4-20 mA analogue input for shifting set-point.
- Water low set-point temperature.
- Copper/pre-painted aluminium or copper/copper coils.

Accessories supplied loose

- 3-way valve for the production of domestic hot water, managed by regulation (mod. 133).
- Outdoor air temperature probe for set-point compensation.
- Additional electric heater for heat pump, managed by regulation.
- Rubber anti-vibration mountings.
- Water filter.
- Remote keyboard with display.
- Clock board.
- Interfaces for serial communication with other devices.
- Serial converter (RS485/USB).
- Rhoss supervisors for unit monitoring and remote management.

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



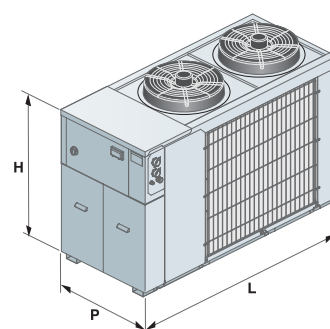
TCAEY-THAEY MODEL		133	233	238	245	250	260	265
❶ TCAEY cooling capacity	kW	33,8	32,3	38,5	44	51	58,9	63,7
❶ TCAEY absorbed power	kW	13,47	12,47	13,05	17,67	19,92	22,4	24,31
❶ E.E.R. TCAEY		2,51	2,59	2,95	2,49	2,56	2,63	2,62
● E.S.E.E.R. TCAEY		2,78	2,87	3,54	3,78	4,22	4,29	4,03
⊕ ESEER+		3,19	4,11	4,12	4,38	4,98	5,04	4,72
❷ Heating capacity	kW	39,4	37,8	42,1	48,1	56,2	62,6	68,3
❷ Absorbed power	kW	13,58	12,54	13,19	16,82	18,97	20,86	23,71
❷ C.O.P.		2,9	3,01	3,19	2,86	2,96	3	2,88
(S) Energy class THAEY		A	A+	A+	A+	A+	A+	A+
❸ Sound pressure	dB(A)	54	54	54	56	56	57	57
❸ Silenced set up sound pressure	dB(A)	51	51	51	53	53	54	54
Scroll/step compressor	no.	1/1	2/2	2/2	2/3	2/3	2/3	2/3
Circuits	no.	1	1	1	1	1	1	1
Buffer tank water content (TANK&PUMP)	l	80	80	150	150	150	150	150
❶ Standard electric pump nominal available head pressure	kPa	102	106	87	113	103	88	75
Power 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 WEIGHTS		133	233	238	245	250	260	265
L - Width	mm	1660	1660	2260	2260	2260	2260	2260
H - Height	mm	1570	1570	1570	1570	1570	1570	1570
P - Depth	mm	1000	1000	1000	1000	1000	1000	1000
❹ TCAEY Weight	kg	450	465	625	725	750	775	820
❹ THAEY Weight	kg	460	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 most complete set up.
- ESEER = (European seasonal EER) - Average European seasonal efficiency.
- ⊕ ESEER with Adaptive Function Plus software. ESEER+ is not Eurovent certified.

Performance according to EN 14511:2013

(S) In average climatic conditions according to EU Regulation N° 811/2013



Low consumption 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 in case of several 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 plate heat exchanger, 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. Supplied outdoor air temperature probe for set-point compensation.
- Fan: axial electric fan with external rotor and permanent magnet motor (EC brushless) for electronic speed control, equipped with internal thermal protection and protective grilles.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: made of galvanised and painted sheet steel, complete with condensation drain pan.

Version

T - High efficiency/temperature version.

Set up

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

MANDATORY loose supplied kits

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

MANDATORY loose supplied kits

in case of several modules 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 the consumed current and power (digital input). When several modules are connected in parallel, a KCSC accessory must be purchased in order to enable this signal.

- Set up with increased head pressure pump.
- Soft-Start Device.
- Unit with pre-painted copper/aluminium or copper/copper condensation coils.
- Flow switch and hot wire heaters protecting heat pump and piping down to -20°C outdoor air.
- Silenced set up (ear muff to compressors).
- Cooling circuit high and low pressure gauges.
- Digital input for double set-point.
- 4-20 mA analogue input for shifting set-point.

Separately supplied accessories

- Digital input and output concentrator (KCSC).
- Rubber anti-vibration mountings.
- 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 machine unit. Not compatible with PUMP V3V set up.
- Additional electrical resistance for heat pump, managed by regulation.
- Interfaces for serial communication with other devices.
- RS485/USB serial converter.
- Rhoss supervisors for unit monitoring and remote management.



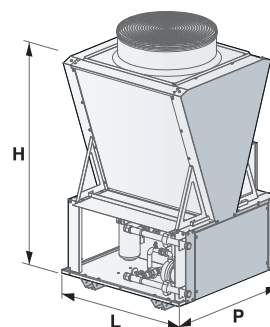
THAETY H.T.MODEL		234			
Fan coil systems		1 module	2 modules	3 modules	4 modules
❶ Heating capacity	kW	33,8	67,6	101,4	135,2
❶ Absorbed power	kW	9,85	19,71	29,56	39,42
❶ C.O.P.		3,43	3,43	3,43	3,43
(S) Energy class		A++	A++	A++	A++
❷ Heating capacity	kW	23,49	46,98	70,47	93,96
❷ Absorbed power	kW	9,83	19,66	29,48	39,31
❷ C.O.P.		2,39	2,39	2,39	2,39
❸ Cooling capacity	kW	28,8	57,6	86,4	115,2
❸ E.E.R.		2,93	2,93	2,93	2,93
● E.S.E.E.R.		4,02	4,17	4,32	4,4
★ E.S.E.E.R.+		4,5	4,71	4,86	4,97
Radiant systems		1 module	2 modules	3 modules	4 modules
❹ Heating capacity	kW	33,9	67,88	101,82	135,76
❹ Absorbed power	kW	8,11	16,24	24,36	32,48
❹ C.O.P.		4,18	4,18	4,18	4,18
❺ Cooling capacity	kW	39,2	78,4	117,6	156,8
❺ Absorbed power	kW	10,18	20,36	30,55	40,73
❺ E.E.R.		3,85	3,85	3,85	3,85
❻ Sound pressure	dB(A)	43	46	47	48
❻ Silenced set up sound pressure	dB(A)	41	44	45	46
Scroll/step compressor	no.	2/2	4/4	6/6	8/8
❸ Electric pump nominal available head pressure	kPa	137	137	137	137
Power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50
DIMENSIONS AND WEIGHTS		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
❼ Weight	kg	510 (concerning a 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: 35°C D.B. - Water: 12/7°C.
- ❹ Air: 7°C D.B. - 6°C W.B. - Water: 30/35°C.
- ❺ Air: 35°C D.B. - Water: 23/18°C.
- ❻ In open field (Q = 2) at 10 m from the unit.
- ❼ Weight refers to P1 DS set up.
- ESEER = (European seasonal EER) - Average European seasonal efficiency.
- ★ ESEER with Adaptive Function Plus software. ESEER+ is not Eurovent certified.

Performance according to EN 14511:2013

(S) In average climatic conditions according to EU Regulation N° 811/2013



Low consumption EasyPACK

TCAEY-THAEY 269÷2146

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

new



- Class A chillers and heat pumps with ESEER up to 4.31
- Complete and flexible range of accessories and setups
- Multipurpose for systems with 2 pipes + DHW (with optional RC100)
- Built-in MASTER/SLAVE control



TCAEY 289 with coil protection
metal filters

Packaged reversible air-cooled heat pumps and water chillers and axial fans. Range with hermetic Scroll 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 finned coil with copper pipes and aluminium fins
- 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 sheet steel and painted with polyester powders.
- The unit is also complete with:
 - compressor and fan thermal overload 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 a larger condensing section (TCAEY-THAEY).
- S - Silenced version complete with soundproofed compressor compartment, lower fan speed and larger coil surface (TCAESY-THAESY).
- Q - Supersilenced version complete with soundproofed compressor technical compartment, super-low fan speed and larger coil surface (TCAEQY-THAEQY).

Models

- TCAEBY: standard unit intended for cooling only.
- TCAEY: high efficiency unit designed for cooling only.
- TCAESY: silenced unit designed for cooling only.
- TCAEQY: super-silenced unit designed for cooling only.
- THAEY: 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 pump, including an automatic pump in standby. The pumps are available in the low or high pressure versions.
- TANK&PUMP with built-in storage tank from 230 to 440 litres (depending on models) and single or double electric pump, complete with expansion tank, air bleed valves, safety valve, and water side pressure gauge.
- Variable flow pump management.
- Desuperheater.
- 100% Heat recovery unit.
- Electronic expansion valve.
- -10°C condensation control (as per 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 parameters measuring device.
- Optimised energy efficiency.
- Soft starter.
- Technical compartment soundproofing.
- Compressor soundproof enclosures.
- Cooling circuit inlet and discharge valves.
- Refrigerant leak detector.
- Refrigerant circuit high and low pressure gauges.
- Double safety valves.
- Metal filters or coil protection grilles.
- Copper/copper or copper/pre-painted aluminium coils.
- Digital input for double set-point.
- 4-20 mA analogue input for shifting set-point.
- Evaporator antifreeze heater, electric panel, buffer tank, electric pumps and heat exchangers for heat recovery if present.
- Buffer tank integrative heaters
- Low temperature water production.
- Interfaces for serial communication with other devices.
- Rubber anti-vibration mounts.

Accessories supplied loose

- Remote keyboard with display.
- Thermostat with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of several water chillers.



TCAEY MODEL		269	279	289	296	2112	2125	2146
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	112,0	144,4
❶	Nominal cooling capacity	kW	67,7	76,7	87,6	92,1	108,0	138,9
❶	Nominal cooling capacity	kW	64,7	71,2	84,6	89,6	101,1	131,0
❶	E.E.R.		3,12	3,18	3,12	3,11	3,10	3,12
❶	E.E.R.		2,92	3,05	2,95	2,92	2,94	2,94
❶	E.E.R.		2,82	2,72	2,80	2,72	2,72	2,59
●	E.S.E.E.R.		4,30	4,24	4,28	4,28	4,31	4,26
✱	E.S.E.E.R.+		5,00	4,98	5,10	5,05	5,06	5,01
❶	Absorbed power	kW	22,18	24,87	28,88	30,90	36,13	46,28
❶	Absorbed power	kW	23,18	25,15	29,69	31,54	36,73	47,24
❶	Absorbed power	kW	22,94	26,18	30,21	32,94	39,96	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	151,7
❷	Nominal heating capacity	kW	70,8	80,4	90,4	98,0	115,0	147,6
❷	Nominal heating capacity	kW	70,3	77,3	88,4	95,4	111,0	143,6
❷	C.O.P.		3,35	3,36	3,31	3,28	3,31	3,25
❷	C.O.P.		3,32	3,36	3,31	3,29	3,30	3,27
❷	C.O.P.		3,31	3,30	3,27	3,26	3,21	3,22
❶	Nominal cooling capacity	kW	67,2	76,7	86,6	93,6	107,5	139,4
❶	Nominal cooling capacity	kW	66,2	74,7	85,7	89,6	104,6	136,9
❶	Nominal cooling capacity	kW	63,7	69,7	82,7	86,6	99,1	128,5
❷	Absorbed power	kW	21,91	24,52	27,92	30,64	35,80	46,97
❷	Absorbed power	kW	21,33	23,93	27,31	29,79	34,85	45,14
❷	Absorbed power	kW	21,24	23,42	27,03	29,26	34,58	44,60
TCAEY-THAEY MODEL		269	279	289	296	2112	2125	2146
❸	TCAEY sound pressure	dB(A)	50	50	50	50	52	-
❸	TCAETY-THAEY sound pressure	dB(A)	50	51	51	51	53	54
❸	TCAESY-THAESY sound pressure	dB(A)	46	47	47	47	49	50
❸	TCAEQY-THAEQY sound pressure	dB(A)	42	42	43	43	46	47
❹	TCAEY sound power	dB(A)	82	82	82	82	84	-
❹	TCAETY-THAEY sound power	dB(A)	82	83	83	83	85	86
❹	TCAESY-THAESY sound power	dB(A)	78	79	79	79	81	82
❹	TCAEQY-THAEQY sound power	dB(A)	74	74	75	75	78	79
	Scroll/step compressor	no.	2/3	2/3	2/3	2/3	2/3	2/3
	Circuits	no.	1	1	1	1	1	1
	Power 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 WEIGHTS		269	279	289	296	2112	2125	269
W - Version B width	mm	2650	2650	2650	2650	3250	-	-
W - Version T - S - Q width	mm	3250	3250	3250	3250	3450	3450	3450
H - Version B height	mm	1700	1700	1700	1700	1700	-	-
H - Version T - S height	mm	1700	1700	1700	1700	2000	2000	2000
H - Version Q height	mm	1520	1520	1520	1520	2000	2000	2000
D - Version B depth	mm	1210	1210	1210	1210	1210	-	-
D - Version T - S - Q depth	mm	1210	1210	1210	1210	1520	1520	1520
❺	TCAEY Weight	kg	755	760	795	800	980	-
❺	TCAETY Weight	kg	850	865	870	905	1160	1255
❺	THAETY weight	kg	915	930	935	980	1240	1355

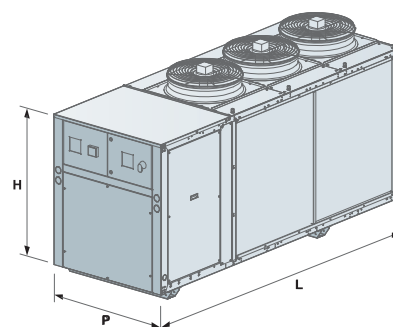
Specifications under the following conditions:

- 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 unladen unit not accessorised.
- ESEER = (European seasonal EER) - Average European seasonal efficiency.
- ✱ ESEER with Adaptive Function Plus software. ESEER+ is not Eurovent certified.

■ TCAESY-THAESY silenced versions.

■ TCAEQY-THAEQY super-silenced versions.

Performance according to EN 14511:2013



Low consumption Y-Pack SE and Y-Pack HE

TCAEY-THAEY 270÷2160

Cooling capacity: 66.6÷160.2 kW - Heating capacity: 79.4÷175.6 kW



- 3 capacity steps
- ESEER up to 4.4
- Wide range of accessories
- Version HT65 for water production 65°C (°)

Packaged reversible air-cooled heat pumps and water chillers with axial fans.

Range with hermetic Scroll compressors and R410A refrigerant.

Construction features

- Compressor: scroll type, rotary, hermetic complete with thermal protection and crankcase heater.
- 2 or 3 capacity steps depending on the models 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 finned coil with copper pipes and aluminium fins.
- Fan: electric axial fans with external rotor, equipped with internal thermal protection, protection grilles and proportional electronic device for continuous fan rotation speed regulation (TCAEBY excluded).
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: load bearing structure made of galvanised sheet steel and painted with polyester powders.
- The unit is also complete with:
 - compressor and fan thermal overload switches;
 - clock board.

Versions

- B - Standard version (TCAEBY).
- T - High efficiency version with a larger condensing section (TCAETY-THAETY).
- S - Silenced version complete with soundproofed compressor compartment, lower speed fans, and larger condensing section (TCAESY-THAESY).
- Q - Super-silenced version complete with soundproof compressor technical compartment, super-low speed fans and larger condensing section (TCAEQY).

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.

Factory fitted accessories

- PUMP with single or double electric pump, including an automatic pump in standby, complete with expansion tank, safety valve and water side pressure gauge. The pumps are available in the low or high pressure versions.
- TANK&PUMP with built-in buffer tank from 250 to 450 litres and single or double electric pump, complete with expansion tank, air bleed valves, safety valve, and water side pressure gauge.
- Desuperheater.
- 100% Heat recovery unit.
- Electronic expansion valve.
- -10°C condensing control (only TCAEBY) / -15°C.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Soft starter.
- Cooling circuit high and low pressure gauges.
- Metal filters or coil protection grilles.
- Copper/copper or copper/pre-painted aluminium coils.
- Digital input for double set-point.
- 4-20 mA analogue input for shifting set-point.
- Evaporator antifreeze resistance, buffer tank, pumps and heat exchangers for heat recovery if present.
- Low temperature water production.
- Interfaces for serial communication with other devices.
- Rubber anti-vibration mountings.

Accessories separately supplied

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



TCAEY MODEL		270	280	290	2100	2115	2130	2145	2160
❶ Nominal cooling capacity	kW	67,1	74,9	82,6	95,5	110	119,9	137,8	154,2
❶ E.E.R.		2,59	2,64	2,51	2,64	2,67	2,59	2,61	2,56
❶ Absorbed power	kW	25,91	28,37	32,91	36,17	41,2	46,29	52,8	60,23
TCAEY-TCAESY-TCAEQY MODEL		270	280	290	2100	2115	2130	2145	2160
❶ Nominal cooling capacity	kW	69,9	79,1	87,5	100,6	113,9	125,3	142,3	160,2
❶ Nominal cooling capacity	kW	69,9	79,1	87,5	100,6	107,5	118,4	135,3	150,3
❶ Nominal cooling capacity	kW	66,6	74,6	82	94,5	100,5	107,5	124,4	137,4
❶ E.E.R.		2,91	2,93	2,84	2,84	2,87	2,85	2,84	2,84
❶ E.E.R.		2,91	2,93	2,84	2,84	2,63	2,62	2,58	2,55
❶ E.E.R.		2,65	2,8	2,57	2,68	2,3	2,26	2,28	2,17
● E.S.E.E.R.		4,19	4,24	4,18	4,15	4,24	4,14	4,12	4,09
★ ESEER+		4,99	5,06	5,04	4,99	5,07	4,96	4,94	4,91
❶ Absorbed power	kW	24,02	27	30,81	35,42	39,69	43,96	50,11	56,41
❶ Absorbed power	kW	24,02	27	30,81	35,42	40,87	45,19	52,44	58,94
❶ Absorbed power	kW	25,13	26,64	31,91	35,26	43,7	47,57	54,56	63,32
THAET-THAESY MODEL		270	280	290	2100	2115	2130	2145	2160
❷ Nominal heating capacity	kW	79,4	86,3	96,4	111,5	122,5	139,6	157,6	175,6
❷ Nominal heating capacity	kW	79,4	86,3	96,4	111,5	120,5	135,5	154,6	170,6
❷ C.O.P.		3,33	3,41	3,26	3,31	3,18	3,28	3,19	3,18
❷ C.O.P.		3,33	3,41	3,26	3,31	3,19	3,28	3,22	3,18
❶ Nominal cooling capacity	kW	69,1	77,4	84,9	98,9	110,6	123,4	140,8	159,3
❶ Nominal cooling capacity	kW	69,1	77,4	84,9	98,9	106,8	118,1	135,2	149,7
❷ Absorbed power	kW	23,84	25,31	29,66	33,69	38,52	42,56	49,4	55,25
❷ Absorbed power	kW	23,84	25,31	29,66	33,69	37,77	41,31	48,01	53,65
TCAEY-THAET MODEL		270	280	290	2100	2115	2130	2145	2160
❸ TCAEY Sound pressure	dB(A)	53	53	53	55	61	61	61	62
❸ TCAEY-THAET sound pressure	dB(A)	50	51	51	52	55	55	56	56
❸ TCAESY-THAESY sound pressure	dB(A)	48	49	49	50	52	52	53	53
❸ TCAEQY sound pressure	dB(A)	46	47	47	48	49	49	50	50
❹ TCAEY Sound power	dB(A)	82	82	82	84	90	90	90	91
❹ TCAEY-THAET sound power	dB(A)	76	77	77	78	84	84	85	85
❹ TCAESY-THAESY sound power	dB(A)	74	75	75	76	81	81	82	82
❹ TCAEQY sound power	dB(A)	72	73	73	74	78	78	79	79
Scroll/step compressor	no.	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
Electric power supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-500	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
SIZES AND WEIGHTS		270	280	290	2100	2115	2130	2145	2160
W - Version B width	mm	2.650	2.650	2.650	3.150	3.150	3.150	3.150	3.450
W - Version T - S - Q width	mm	3.150	3.150	3.150	3.150	3.250	3.250	3.250	3.250
H - Version B height	mm	1.700	1.700	1.700	1.700	1.730	1.730	1.730	1.730
H - Version T - S - Q height	mm	1.520	1.520	1.520	1.520	2.000	2.000	2.000	2.000
D - Version B depth	mm	1.210	1.210	1.210	1.210	1.210	1.210	1.210	1.210
D - Version T - S - Q depth	mm	1.210	1.210	1.210	1.210	1.520	1.520	1.520	1.520
❺ TCAEY weight	kg	685	725	870	945	1.020	1.040	1.100	1.160
❺ TCAEY-TCAESY-TCAEQY weight	kg	745	765	910	980	1.130	1.195	1.225	1.290
❺ THAET-THAESY weight	kg	810	830	975	1045	1.215	1.285	1.315	1.390

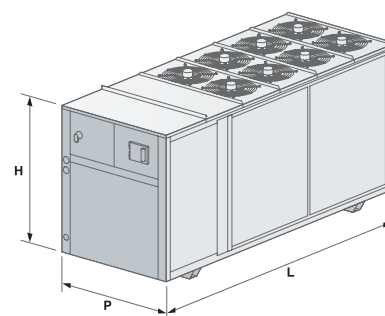
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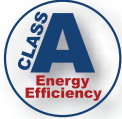
- ❶ Air: 35°C - Water: 12/7°C
- ❷ Air: 7°C, D.B. - 6°C W.B. - Water: 40/45°C.
- ❸ At 10 m from the unit in free field (Q = 2), coil side.
- ❹ Total sound power level in dB(A) on the basis of measurements taken in accordance with UNI EN-ISO 9614.
- ❺ Weight refers to the non-accessorised unit when empty.
- ESEER (European Seasonal EER) - Average European seasonal efficiency.
- ★ ESEER with Adaptive Function Plus software. ESERR+ is not Eurovent certified.

■ TCAESY-THAESY silenced versions.

■ TCAEQY super-silenced versions.

Performance according to EN 14511:2013





new



- Class A chillers and heat pumps
- ESEER up to 4.32
- Standard supplied electronic expansion valve

Low consumption WinPACK HE-A

TCAEY-THAEY 2110÷4340

Cooling capacity: 91,6÷345 kW - Heating capacity: 110,5÷357 kW



TCAEQY 2150
with Tank&Pump



THAEY 4270 with coil
protection grille accessory

Packaged reversible air cooled water chillers and heat pumps with axial fans. Range with hermetic Scroll compressors and R410A refrigerant.

Construction features

- Compressor: hermetic, rotary Scroll compressor, 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: with microchannels or finned coil with copper pipes and aluminium fins depending on the 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 sheet steel and painted with polyester powders.
- The unit is also complete with:
 - compressor and fan thermal overload switches,
 - display of cooling circuit high/low pressure, electronic expansion valve,
 - electronic expansion valve.
 - clock board.

Versions

- T - High temperature/efficiency version with larger coil surface (TCAEY-THAEY).
- Q - Supersilenced version complete with soundproofed compressor compartment, super-low fan speed and larger coil surface (TCAEQY-THAEQY).

Models

- TCAEY: high efficiency unit designed for cooling only.
- TCAEQY: supersilenced unit designed for cooling only.
- THAEY: heat pump unit.
- THAEQY: supersilenced heat pump unit.

Factory fitted accessories

- Shell and tube evaporator.
- PUMP with single or double pump, including an automatic pump in standby. The pumps are available in the low or high pressure versions.
- TANK&PUMP with built-in 300 - 700 litre buffer tank (depending on the models) and single or double pump, complete with expansion tank, air bleed valves, safety valve and water pressure gauge.
- Control of pumps with variable flow.
- Desuperheater.
- 100% Heat recovery unit
- -10°C condensing control.
- -15°C condensing control with fans with EC motor (as per standard in the 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 parameters measuring device.
- Optimised energy efficiency.
- Soft starter.
- Soundproofed compressors box or utility compartment soundproofing.
- Compressor soundproof enclosures.
- Cooling circuit inlet and discharge valves.
- Refrigerant leak detector.
- Refrigerant circuit high and low pressure gauges.
- Metal filters or coil protection grilles.
- Microchannel coils with E-coating treatment.
- Copper/copper or copper/pre-painted aluminium coils.
- Digital input for double set-point.
- 4-20 mA analogue input for shifting set-point.
- Evaporator antifreeze heater, electric panel, buffer tank, electric pumps and heat exchangers for heat recovery if present.
- Buffer tank integrative heaters.
- Low temperature water production.
- Interfaces for serial communication with other devices.
- Anti-vibration mountings.

Accessories supplied loose

- Remote keyboard with display.
- Thermostat with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of several water chillers.



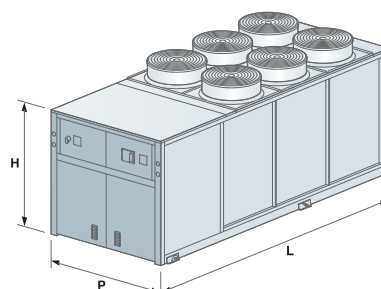
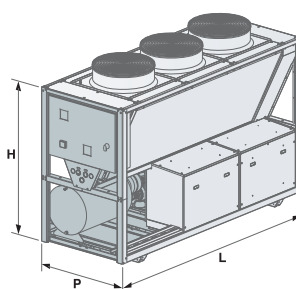
TCAETY-TCAEQY MODEL		2110	2120	2140	2150	2170	2200	2220	4240	4270	4310	4340	
❶	Nominal cooling capacity	kW	110,5	121,5	138,4	156,4	175,4	200,3	223,2	241,3	276,3	309,1	345,1
❶	Nominal cooling capacity	kW	100,6	108,6	126,5	140,5	155,5	181,4	199,4	218,4	251,4	280,2	318,2
❶	E.E.R.		3,13	3,1	3,13	3,11	3,1	3,11	3,1	3,1	3,10	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
●	E.S.E.E.R.		4,28	4,32	4,13	4,22	4,28	4,18	4,21	4,29	4,26	4,23	4,22
★	E.S.E.E.R.+		5,02	5,09	4,96	4,98	5,04	4,89	4,95	5,1	5,06	5	5,03
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
Electric power supply		V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS		2110	2120	2140	2150	2170	2200	2220	4240	4270	4310	4340	
L - Width		mm	3.600	3.600	3.600	3.600	4.550	4.550	4.550	4.800	4.800	5.300	5.300
H - Height		mm	2.440	2.440	2.440	2.440	2.440	2.440	2.440	2.030	2.030	2.030	2.030
P - Depth		mm	1.350	1.350	1.350	1.350	1.350	1.350	1.350	2.090	2.090	2.090	2.090
❺	TCAETY weight	kg	1.090	1.100	1.110	1.130	1.280	1.300	1.320	2.290	2.390	2.520	2.640
❺	TCAEQY weight	kg	1.250	1.260	1.270	1.290	1.440	1.460	1.480	2.420	2.520	2.650	2.770
❺	THAETY weight	kg	1.380	1.410	1.420	1.500	1.670	1.690	1.780	2.470	2.570	2.720	2.840
❺	THAEQY weight	kg	1.420	1.450	1.460	1.540	1.710	1.730	1.820	2.600	2.700	2.850	2.970

Details under the following conditions:

- ❶ Air: 35°C - Water: 12/7°C.
- ❷ Air: 7°C, B.S. 6°C B.U. - Water: 40/45°C.
- ❸ 10 m from the unit in free field (Q = 2).
- ❹ Total sound power level in dB(A) on the basis of measurements taken in accordance with UNI EN-ISO 9614.
- ❺ Weight refers to the non-accessorised unit when empty.
- ESEER (European Seasonal EER) - Average European seasonal efficiency.
- ★ ESEER with Adaptive Function Plus software. ESERR+ is not Eurovent certified.

■ TCAEQY-THAEQY super-silenced versions.

Performance according to EN 14511:2013



Low consumption WinPACK SE

TCAEY-THAEY 2110÷4340

Cooling capacity: 97,6÷328,6 kW - Heating capacity: 109,5÷354,6 kW

new



- High performance range with extended working limits
- Rich range of accessories
- B compact version for replacement markets.



TCAESY 2200
with Tank&Pump

Packaged reversible air-cooled water chillers and heat pumps with axial fans.

Range with hermetic Scroll compressors and R410A refrigerant.

Construction features

- Compressor: hermetic, rotary scroll compressor, complete with thermal protection and crankcase heater.
- 2, 3 or 4 capacity steps with high efficiency at partial loads.
- Water side heat exchanger: stainless steel plate exchanger, complete with closed cell polyurethane foam rubber insulation and water flow differential pressure switch.
- Air side heat exchanger: microchannel or finned coil exchanger, with copper pipes and aluminium fins according to models/sizes.
- Fan: electric axial fans with external rotor, equipped with internal thermal protection and protection grilles.
- Control: microprocessor electronic control with Adaptive Function Plus logic
- Structure: load-bearing structure in galvanised and painted sheet steel with polyester powder coating.
- The unit is also complete with:
 - compressor and fan thermal overload switches,
 - display of refrigerant circuit high/low pressure,
 - clock board.

Versions

- B - Standard version (TCAEY-THAEY).
- S - Silenced version complete with soundproofed compressor compartment, lower speed fans (TCAESY-THAEY).

Models

- TCAEY: standard unit designed for cooling only.
- TCAESY: silenced unit designed for cooling only.
- THAEY: heat pump unit.
- THAESY: silenced heat pump unit.

Factory fitted accessories

- Shell and tube evaporator.
- PUMP with single or double pump, including an automatic pump in standby. The pumps are available in the low or high pressure versions.
- TANK&PUMP with built-in 300 - 700 litre buffer tank (depending on the models) and single or double pump, complete with expansion tank, air bleed valves, safety valve and water pressure gauge.
- Control of pumps with variable flow.
- Desuperheater.
- 100% Heat recovery unit
- Electronic expansion valve.
- -10°C condensing control (as per standard in S versions).
- -15°C condensing control with fans with EC motor.
- Condensing control with over-pressure fans.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Forced limit of power consumption.
- Forced noise limit.



THAEBY 4310 with coil protection grille accessory

- Energy parameters measuring device.
- Optimised energy efficiency.
- Soft starter.
- Soundproofed compressors box or utility compartment soundproofing.
- Compressor soundproof enclosures.
- Cooling circuit inlet and discharge valves.
- Refrigerant leak detector.
- Refrigerant circuit high and low pressure gauges.
- Metal filters or coil protection grilles.
- Microchannel coils with E-coating treatment.
- Copper/copper or copper/pre-painted aluminium coils.
- Digital input for double set-point.
- 4-20 mA analogue input for shifting set-point.
- Evaporator antifreeze heater, electric panel, buffer tank, electric pumps and heat exchangers for heat recovery if present.
- Buffer tank integrative heaters.
- Low temperature water production.
- Interfaces for serial communication with other devices.
- Anti-vibration mountings.

Accessories supplied loose

- Remote keyboard with display.
- Thermostat with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of several water chillers.

Low consumption WinPACK SE

TCAEY-THAEY 2110÷4340

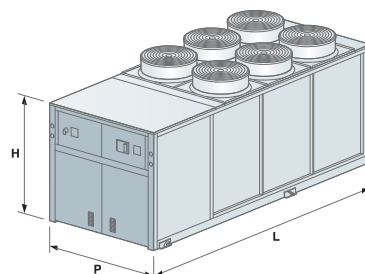
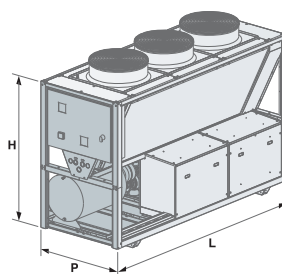
TCAEBY-TCAESY MODEL		2110	2120	2140	2150	2170	2200	2220	
❶	Nominal cooling capacity	kW	106,5	114,4	127,4	147,3	165,2	188,1	212,1
❶	Nominal cooling capacity	kW	102,5	110,4	122,4	142,3	159,2	183,2	205,1
❶	E.E.R.		2,81	2,79	2,8	2,81	2,81	2,8	2,8
❶	E.E.R.		2,72	2,67	2,65	2,71	2,7	2,66	2,7
●	E.S.E.E.R.		3,91	3,94	3,96	3,85	3,93	4	3,87
☆	E.S.E.E.R.+		4,62	4,63	4,66	4,52	4,61	4,75	4,57
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
	Electric power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS		2110	2120	2140	2150	2170	2200	2220	
	L - TCAEBY-TCAESY width	mm	2.650	2.650	2.650	3.600	3.600	3.600	4.550
	L - THAEBY-THAESY width	mm	2.650	2.650	2.650	3.600	3.600	3.600	4.550
	H - TCAEBY-TCAESY height	mm	2.440	2.440	2.440	2.440	2.440	2.440	2.440
	H - THAEBY-THAESY height	mm	2.440	2.440	2.440	2.440	2.440	2.440	2.440
	P - TCAEBY-TCAESY depth	mm	1.350	1.350	1.350	1.350	1.350	1.350	1.350
	P - THAEBY-THAESY depth	mm	1.350	1.350	1.350	1.350	1.350	1.350	1.350
❺	TCAEBY weight	kg	990	1.000	1.010	1.160	1.180	1.180	1.340
❺	TCAESY weight	kg	1.110	1.120	1.130	1.280	1.300	1.300	1.460
❺	THAEBY weight	kg	1.250	1.310	1.320	1.470	1.480	1.565	1.730
❺	THAESY weight	kg	1.250	1.310	1.320	1.470	1.480	1.565	1.730

Details under the following conditions:

- ❶ Air: 35°C - Water: 12/7°C.
- ❷ Air: 7°C, B.S. 6°C B.U. - Water: 40/45°C.
- ❸ 10 m from the unit in free field (Q = 2).
- ❹ Total sound power level in dB(A) on the basis of measurements taken in accordance with UNI EN-ISO 9614.
- ❺ Weight refers to the non-accessorised unit when empty.
- ESEER (European Seasonal EER) - Average European seasonal efficiency.
- ☆ ESEER with Adaptive Function Plus software. ESERR+ is not Eurovent certified.

■ TCAESY-THAESY silenced versions.

Performance according to EN 14511:2013

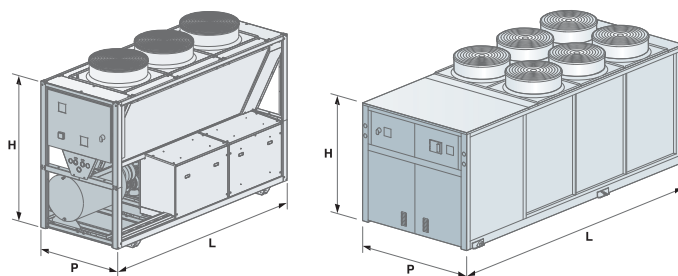


TCAEBY-TCAESY MODEL			4150	4170	4200	4220	4240	4270	4310	4340
❶	Nominal cooling capacity	kW	146,3	166,4	189,2	213,2	229,2	256	299,9	328,7
❶	Nominal cooling capacity	kW	142,3	161,4	182,3	207,2	224,2	250,0	291	319,7
❶	E.E.R.		2,99	2,9	2,83	2,92	2,8	2,8	2,81	2,76
❶	E.E.R.		2,93	2,82	2,67	2,82	2,68	2,66	2,68	2,61
●	E.S.E.E.R.		4,11	4,13	4,12	4,12	4,05	4,09	3,96	3,96
☆	E.S.E.E.R.+		4,85	4,87	4,87	4,85	4,8	4,84	4,7	4,69
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
Electric power supply		V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS			4150	4170	4200	4220	4240	4270	4310	4340
L - TCAEBY-TCAESY width		mm	3600	3600	3600	4550	4.550	4.550	4.800	4.800
L - THAEBY-THAESY width		mm	3450	3450	3700	3700	4.800	4.800	4.800	4.800
H - TCAEBY-TCAESY height		mm	2440	2440	2440	2440	2.440	2.440	2.030	2.030
H - THAEBY-THAESY height		mm	2000	2000	2030	2030	2.030	2.030	2.030	2.030
P - TCAEBY-TCAESY depth		mm	1350	1350	1350	1350	1.350	1.350	2.090	2.090
P - THAEBY-THAESY depth		mm	1520	1520	2090	2090	2.090	2.090	2.090	2.090
❺	TCAEBY weight	kg	1165	1185	1190	1335	1.670	1.690	2.400	2.410
❺	TCAESY weight	kg	1300	1320	1325	1470	1.830	1.850	2.440	2.450
❺	THAEBY weight	kg	1450	1525	1725	1800	2.375	2.460	2.580	2.595
❺	THAESY weight	kg	1475	1550	1765	1840	2.415	2.500	2.620	2.635

Details under the following conditions:

- ❶ Air: 35°C - Water: 12/7°C.
- ❷ Air: 7°C, B.S. 6°C B.U. - Water: 40/45°C.
- ❸ 10 m from the unit in free field (Q = 2).
- ❹ Total sound power level in dB(A) on the basis of measurements taken in accordance with UNI EN-ISO 9614.
- ❺ Weight refers to the non-accessorised unit when empty.
- ESEER (European Seasonal EER) - Average European seasonal efficiency.
- ☆ ESEER with Adaptive Function Plus software. ESERR+ is not Eurovent certified.
- TCAESY-THAESY silenced versions.

Performance according to EN 14511:2013



FREECOOLING Y-Pack

TFAEY-TGAEY 4160÷4320

Cooling capacity: 170÷361 kW



TFAEY 4230 with
accessory coil protection
grilles



- Availability of NO GLYCOL version
- Plug&Play range
- Software for estimate of energy saving

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

Construction features

- Compressor: scroll type, rotary, hermetic complete with thermal protection and crankcase heater.
- 4 capacity steps with high efficiency at partial loads.
- Water side heat exchanger (evaporator): stainless steel plate exchanger, complete with closed cell polyurethane foam rubber insulation and water flow differential pressure switch (TFAEY) or flow switch (TGAEY).
- Heat exchanger (water-water) in Free-cooling NO-GLYCOL mode: stainless steel plate exchanger, 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: axial electric fans with external rotor, equipped with internal thermal protection and protection grilles and a 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 sheet steel and painted with polyester powders.
- The unit is also complete with:
 - compressors and fans MCBs;
 - clock board;
 - 3-way modulating water side valve.

Versions

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

Models

- TFAEY: high efficiency unit in Freecooling mode.
- TFAESY: silenced unit in Freecooling mode.
- TGAEY: high efficiency unit in Freecooling NO-GLYCOL mode.
- TGAESY: silenced unit in Freecooling NO-GLYCOL mode.

Factory fitted accessories

- PUMP with single or double electric pump, including an automatic pump in standby complete with safety valve. The pumps are available in the low or high pressure 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 grilles.
- Copper/copper or copper/pre-painted aluminium coils.
- Digital input for double set-point.
- 4-20 mA analogue input for shifting set-point.
- Evaporator antifreeze heater, electric pumps if present.
- Interfaces for serial communication with other devices.
- Anti-vibration mountings.

Accessories separately supplied

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



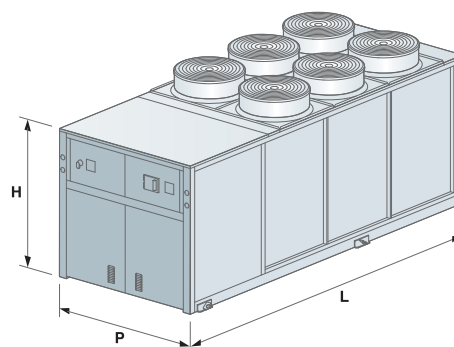
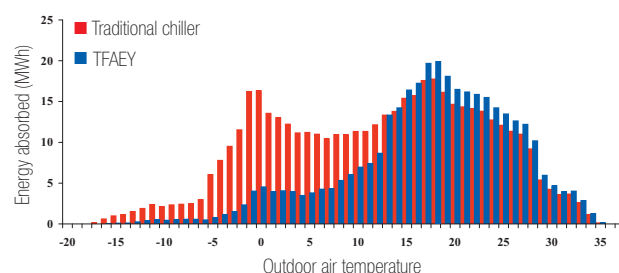
TFAETY-TFAESY MODEL		4160	4180	4200	4230	4260	4290	4320
FREE-COOLING OFF								
❶ Nominal cooling capacity	kW	178	202	224	251	286	326	361
❶ Nominal cooling capacity	kW	170	197	215	240	274	312	344
❶ E.E.R.		3,31	3,41	3,27	3,20	3,34	3,20	3,09
❶ E.E.R.		3,21	3,32	3,11	3,11	3,22	3,09	2,92
❶ Absorbed power	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 level	dB(A)	89	91	91	93	93	94	94
❹ Sound power level	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
Electric power 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
SIZES AND WEIGHTS		4160	4180	4200	4230	4260	4290	4320
W - 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
D - 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

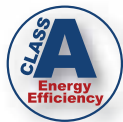
Details under the following conditions:

- ❶ Air: 30°C - Water: 15/10°C - 30% ethylene glycol.
- ❷ Water: 15/10°C - 30% ethylene glycol.
- ❸ At 10 m from the unit in free field (Q = 2), coil side.
- ❹ Total sound power level in dB(A) on the basis of measurements taken in accordance with UNI EN-ISO 9614.
- ❺ Weight refers to the accessorised unit when empty.
- TFAESY silenced version.



EXAMPLE OF OUTPUT SOFTWARE FOR THE ESTIMATION OF ENERGY SAVING





Low consumption Y-Power HE-A

TCAEY-THAEY 4370÷6660

Cooling capacity: 342.7÷665.1 kW - Heating capacity: 370.6÷686.2 kW



TCAEY 4440
with Tank&Pump
and protection
grilles

- Water chillers
CLASS A
- Up to 6 capacity
steps
- ESEER with
**Adaptive Function
Plus up to 5.21**

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

Construction features

- Compressor: hermetic, rotary Scroll compressor, complete with thermal protection and casing heater.
- 4, 5 or 6 capacity steps with high efficiency at partial loads.
- Electronic expansion valve: as standard on all models.
- Water side heat exchanger: with stainless steel plate, closed cell polyurethane foam rubber insulation, complete with water flow differential pressure switch and Victaulic connections.
- Air side heat exchanger: finned coil with copper pipes and aluminium fins.
- Fan: electric axial fans with external rotor, equipped with internal thermal protection and protection grilles (T version); fans with EC motor with continuous adjustment of the rotation speed (Q version).
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: made of galvanised and painted sheet steel, with polyester powder coating.
- The unit is also complete with:
 - display of cooling circuit high/low pressure;
 - compressor and fan thermal overload switches,
 - clock board for displaying date/time and machine time band management.

Versions

- T - High efficiency version with a larger condensing section (TCAEY-THAEY).
- Q - Super-silenced version with super-low speed fans with EC motor, high acoustic impedance and soundproofed compressor cover and a larger condensing section (TCAEQY-THAEQY).

Models

- TCAEY: unit designed for cooling only.
- TCAEQY: super-silenced unit designed for cooling only.
- THAEY: heat pump unit.
- THAEQY: super-silenced heat pump unit.

Factory fitted accessories

- Shell and tube evaporator.
- PUMP with single or double pump, including an automatic pump in standby. The pumps are available in the low or high pressure versions.
- TANK&PUMP with built-in 1,000 buffer tank and single or double electric pump, complete with expansion tank, air bleed valves, safety valve, and water side pressure gauge.
- Desuperheater.
- Heat recovery unit 100%.
- Thermostat with display for heat recover unit/desuperheater.
- Condensation control -10°C .
- Condensation control -15°C with fans with EC motor (standard in the Q version).
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Forced limit of power consumption.
- Soundproofed compressor box.
- Soft starter.
- Cooling circuit intake and flow taps
- Low and high pressure gauges for each refrigerant circuit.
- Bottom compartment protection grilles.
- Coil protection grilles.
- Evaporator antifreeze heater, buffer tank and heat exchangers for heat recovery if present.
- Digital input for double set-point.
- Control of min/max power supply voltage.
- 4-20 mA analogue input for shifting set-point.
- Low temperature water production.
- Copper/pre-painted aluminium or copper/copper coils.
- Interfaces for serial communication with other devices.
- Spring antivibration mountings.

Separately supplied accessories

- Remote keyboard with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of several water chillers.

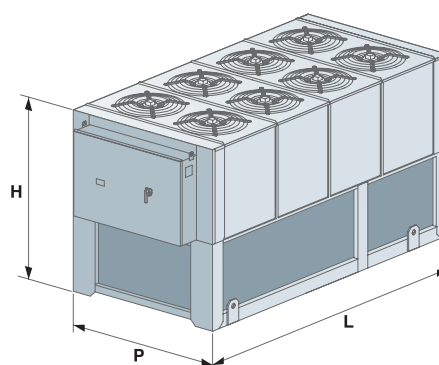


TCAETY-TCAEQY MODEL		4370	4400	4440	5470	6520	6580	6620	6660	
❶	Nominal cooling capacity	kW	376,5	398,4	446,3	479,7	524,5	587,4	630,4	665,1
❶	Nominal cooling capacity	kW	353,7	376,8	419,5	457,9	493,7	555,6	596,6	624,4
❶	E.E.R.		3,1	3,1	3,1	3,1	3,1	3,11	3,1	3,1
❶	E.E.R.		2,87	2,85	2,84	2,84	2,78	2,76	2,8	2,79
●	E.S.E.E.R.		4,26	4,27	4,21	4,37	4,34	4,36	4,34	4,24
★	ESEER+		4,95	4,98	4,89	5,04	5,12	5,21	5,10	5,00
❶	Absorbed power	kW	121,45	128,52	143,97	154,74	169,19	188,87	203,35	214,55
❶	Absorbed power	kW	123,24	132,21	147,71	161,23	177,59	201,3	213,07	223,8
THAETY-THAEQY MODEL		4370	4400	4440	5470	6520	6580	6620	6660	
❷	Nominal heating capacity	kW	386,7	411,5	461	497,4	533,6	617,8	649,9	686,2
❷	Nominal heating capacity	kW	370,6	395,4	438,8	475,3	516,5	596,7	627,7	659
❷	C.O.P.		3,2	3,2	3,2	3,2	3,2	3,2	3,2	3,2
❷	C.O.P.		2,97	3,03	2,99	2,98	3,08	3,02	3,02	2,98
❶	Nominal cooling capacity	kW	354,6	378,7	423,3	459,7	497,5	567,4	606,3	632,1
❶	Nominal cooling capacity	kW	342,7	365,8	408,5	442,9	480,6	548,6	588,5	610,3
❷	Absorbed power	kW	120,84	128,59	144,06	155,44	166,75	193,06	203,09	214,44
❷	Absorbed power	kW	124,78	130,5	146,76	159,5	167,69	197,58	207,85	221,14
TCAETY-TCAEQY-THAETY-THAEQY MODEL		4370	4400	4440	5470	6520	6580	6620	6660	
❸	Sound pressure	dB(A)	64	64	64,5	64,5	64,5	64,5	65	66
❸	Sound pressure	dB(A)	53	53	54	54	54	54	54	55
❹	Sound power level	dB(A)	96	96	97	97	97	97	98	99
❹	Sound power level	dB(A)	86	86	87	87	87	87	88	89
Scroll/step compressor		no.	4/4	4/4	4/4	5/5	6/6	6/6	6/6	6/6
Circuits		no.	2	2	2	2	2	2	2	2
Electric power supply		V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES		4370	4400	4440	5470	6520	6580	6620	6660	
W - Width		mm	4.830	4.830	4.830	5.830	5.830	6.650	6.650	
H - Height		mm	2.430	2.430	2.430	2.430	2.430	2.430	2.430	
D - Depth		mm	2.260	2.260	2.260	2.260	2.260	2.260	2.260	

Details under 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 10 m from the unit in free field (Q = 2).
 - ❹ Total sound power level in dB(A) on the basis of measurements taken in accordance with UNI EN-ISO 9614.
 - ESEER (European Seasonal EER) - Average European seasonal efficiency.
 - ★ ESEER with Adaptive Function Plus software. ESERR+ is not Eurovent certified.
 - TCAEQY-THAEQY super-silenced versions.
- Performance according to EN 14511:2013

THAEY unit under inspection at Rhoss laboratory: R&D Lab.



Low consumption Y-Power SE

TCAEY-THAEY 4350÷6640

Cooling capacity: 333.7÷634 kW - Heating capacity: 358.4÷671.1 kW



THAEY 4410 with
Tank&Pump accessory

- Compact version B for replacement markets
- Up to 6 capacity steps
- Simplified installation with Tank&Pump accessory

Packaged reversible air-cooled heat pumps and water chillers and axial fans. Range with hermetic Scroll compressors and R410A refrigerant.

Construction features

- Compressor: hermetic, rotary Scroll compressor, complete with thermal protection and casing heater.
- 4, 5 or 6 capacity steps with high efficiency at partial loads.
- Electronic expansion valve: as standard on all models.
- Water side heat exchanger: with stainless steel plate, closed cell polyurethane foam rubber insulation, complete with water flow differential pressure switch and Victaulic connections.
- Air side heat exchanger: finned coil with copper pipes and aluminium fins.
- Fan: electric axial fans with external rotor, equipped with internal thermal protection, protection grilles and proportional electronic device for continuous fan rotation speed regulation (S version only).
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: made of galvanised and painted sheet steel, with polyester powder coating.
- The unit is also complete with:
 - display of cooling circuit high/low pressure;
 - compressor and fan thermal overload switches,
 - clock board for displaying date/time and machine time band management.

Versions

- B - Standard version (TCAEY-THAEY).
- S - Silenced version with lower speed fans and soundproofed compressor cover (TCAESY-THAESY).

Models

- TCAEY: unit designed for cooling only.
- TCAESY: silenced unit designed for cooling only.
- THAEY: heat pump unit.
- THAESY: super-silenced heat pump unit.

Factory fitted accessories

- Shell and tube evaporator.
- PUMP with single or double pump, including an automatic pump in standby. The pumps are available in the low or high pressure versions.
- TANK&PUMP with built-in 1,000 buffer tank and single or double electric pump, complete with expansion tank, air bleed valves, safety valve, and water side pressure gauge.
- Desuperheater.
- Heat recovery unit 100%.
- Thermostat with display for heat recover unit/desuperheater.
- -10°C condensation control (as per standard in S version).
- -15°C condensation control with fans with EC motor.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Forced limit of power consumption.
- Soundproofed compressor box.
- Soft starter.
- Cooling circuit intake and flow taps
- Low and high pressure gauges for each refrigerant circuit.
- Bottom compartment protection grilles.
- Coil protection grilles.
- Evaporator antifreeze heater, buffer tank and heat exchangers for heat recovery if present.
- Digital input for double set-point.
- Control of min/max power supply voltage.
- 4-20 mA analogue input for shifting set-point.
- Low temperature water production.
- Copper/pre-painted aluminium or copper/copper coils.
- Interfaces for serial communication with other devices.
- Spring antivibration mountings.

Separately supplied accessories

- Remote keyboard with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of several water chillers.

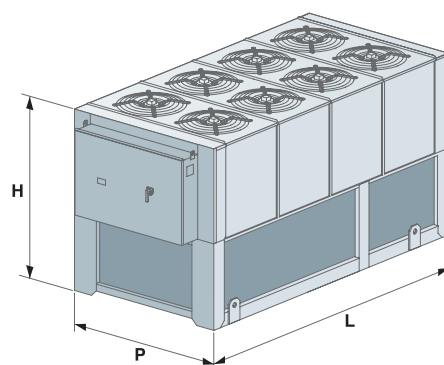


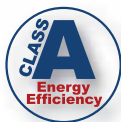
TCAEBY-TCAESY MODEL			4350	4380	4410	5450	6500	6560	6600	6640
❶	Nominal cooling capacity	kW	352,5	376,3	415,2	455,1	495,8	559,3	601,2	634
❶	Nominal cooling capacity	kW	338,6	362,4	400,3	438,3	478	539,4	578,3	611,2
❶	E.E.R.		2,79	2,77	2,75	2,79	2,75	2,77	2,77	2,78
❶	E.E.R.		2,64	2,61	2,62	2,64	2,63	2,65	2,64	2,66
●	E.S.E.E.R.		3,99	4,02	3,92	4,01	4,03	3,98	3,96	3,94
☆	ESEER+		4,62	4,65	4,62	4,67	4,68	4,63	4,60	4,57
❶	Absorbed power	kW	126,34	135,85	150,98	163,12	180,29	201,91	217,04	228,06
❶	Absorbed power	kW	128,26	138,85	152,79	166,02	181,75	203,55	219,05	229,77
THAEBY-THAESY MODEL			4350	4380	4410	5450	6500	6560	6600	6640
❷	Nominal heating capacity	kW	373,6	395,8	436,9	483,9	514,3	591,8	635,8	671,1
❷	Nominal heating capacity	kW	358,4	382,7	421,8	461,8	497,1	568,6	610,7	644,9
❷	C.O.P.		3	2,98	2,99	3,01	2,99	3,02	3,03	2,99
❷	C.O.P.		2,86	2,86	2,85	2,82	2,84	2,89	2,86	2,85
❶	Nominal cooling capacity	kW	340,6	364,4	403,3	441,3	481	543,4	584,4	615,2
❶	Nominal cooling capacity	kW	333,7	355,5	389,4	428,4	468,1	526,6	566,5	597,3
❷	Absorbed power	kW	124,53	132,82	146,12	160,76	172,01	195,96	209,87	224,45
❷	Absorbed power	kW	125,31	133,81	148	163,76	175,04	196,75	213,53	226,28
TCAEBY-TCAESY-THAEBY-THAESY MODEL			4350	4380	4410	5450	6500	6560	6600	6640
❸	Sound pressure	dB(A)	63,0	63,0	64,0	64,0	64,0	64,0	64,5	65,5
❸	Sound pressure	dB(A)	58,0	58,0	59,0	59,0	59,0	59,0	59,5	60,5
❹	Sound power level	dB(A)	95	95	96	96	96	96	97	98
❹	Sound power level	dB(A)	90	90	91	91	91	91	92	93
Scroll/step compressor		no.	4/4	4/4	4/4	5/5	6/6	6/6	6/6	6/6
Circuits		no.	2	2	2	2	2	2	2	2
Electric power supply		V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS			4350	4380	4410	5450	6500	6560	6600	6640
W - Width		mm	3.830	3.830	3.830	4.830	4.830	4.830	5.830	5.830
H - Height		mm	2.430	2.430	2.430	2.430	2.430	2.430	2.430	2.430
D - Depth		mm	2.260	2.260	2.260	2.260	2.260	2.260	2.260	2.260
❺	TCAEBY weight	kg	2.500	2.550	2.590	3.040	3.190	3.320	3.640	3.680
❺	THAEBY weight	kg	2.730	2.800	2.840	3.450	3.600	3.670	4.130	4.170

Details under 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 10 m from the unit in free field (Q = 2).
- ❹ Total sound power level in dB(A) on the basis of measurements taken in accordance with UNI EN-ISO 9614.
- ❺ Weight refers to the accessorised unit with RPE - KRP when empty.
- ESEER (European Seasonal EER) - Average European seasonal efficiency.
- ☆ ESEER with Adaptive Function Plus software. ESERR+ is not Eurovent certified.
- TCAESY-THAESY silenced versions.

Performance according to EN 14511:2013





new



- Chillers in CLASS A
- Extended operating limits
- 6 capacity steps with ESEER up to 4.4

Low consumption WinPOWER HE-A TCAEY 6700÷8920

Cooling capacity: 632.5÷916.8 kW



Air-cooled water chillers with axial fans.
Range with hermetic Scroll compressors and R410A refrigerant.

Construction features

- Compressor: hermetic, rotary scroll compressor, complete with thermal protection and crankcase heater.
- 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 connections.
- Air side heat exchanger: with microchannels.
- 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 sheet steel and painted with polyester powders.
- The unit is also complete with:
 - compressor and fan thermal overload switches;
 - display of cooling circuit high and low pressure,
 - electronic expansion valve.
 - clock board.

Versions

- T - High efficiency version with a larger condensing section (TCAEY).
- Q - Super-silenced version complete with soundproof compressor technical compartment, super-low speed fans and larger condensing section (TCAEQY).

Models

- TCAEY: 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 pump, including an automatic pump in standby. The pumps are available in the low or high pressure versions.
- TANK&PUMP with built-in 1000 litre buffer tank and single or double electric pump, complete with expansion tank, air bleed valves, safety valve, and water side pressure gauge.
- Desuperheater.
- 100% Heat recovery unit
- -10°C condensing control.
- -15°C condensing control with fans with EC motor (as per standard in the 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 parameters measuring device.
- Optimised energy efficiency.
- Soft starter.
- Soundproofed compressor box.
- Compressor soundproof enclosures.
- Cooling circuit inlet and discharge valves.
- Refrigerant leak detector.
- Refrigerant circuit high and low pressure gauges.
- Double safety valves
- Coil protection grilles.
- Microchannel coils with E-coating treatment.
- Digital input for double set-point.
- 4-20 mA analogue input for shifting set-point.
- Evaporator antifreeze heater, electric panel, buffer tank, electric pumps and heat exchangers for heat recovery if present.
- Low temperature water production.
- Interfaces for serial communication with other devices.
- Anti-vibration mountings.

Accessories supplied loose

- Remote keyboard with display.
- Thermostat with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of several water chillers.

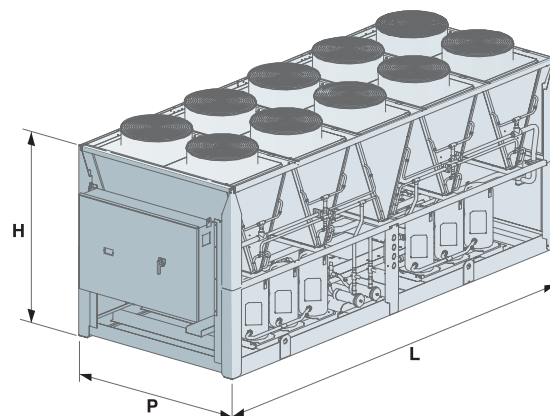


MODEL TCAETY-TCAEQY			6700	7760	8820	8870	8920
❶	Nominal cooling capacity	kW	695	758,3	819,9	870,0	916,8
❶	Nominal cooling capacity	kW	632,5	694,7	753,3	791,5	827,3
❶	E.E.R.		3,13	3,14	3,15	3,14	3,13
❶	E.E.R.		2,65	2,67	2,67	2,64	2,60
●	E.S.E.E.R.		4,27	4,40	4,40	4,37	4,32
★	E.S.E.E.R.+		4,99	5,09	5,09	5,05	5,00
❶	Absorbed power	kW	222,0	241,5	260,3	277,1	292,9
❶	Absorbed power	kW	238,7	260,2	282,1	299,8	318,2
MODEL TCAETY-TCAEQY			6700	7760	8820	8870	8920
❸	TCAETY Sound pressure	dB(A)	65,5	65,5	65,5	66,0	67,0
❸	TCAEQY Sound pressure	dB(A)	56,5	57,0	57,0	58,0	59,0
❹	TCAETY Sound power	dB(A)	98	98	98	99	100
❹	TCAEQY Sound power	dB(A)	89	90	90	91	92
	Scroll/step compressor	no.	6/6	7/6	8/6	8/6	8/6
	Circuits	no.	2	2	2	2	2
	Power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
DIMENSIONS AND WEIGHTS			6700	7760	8820	8870	8920
	L - Width	mm	7100	8250	9350	9350	9350
	H - Height	mm	2450	2450	2450	2450	2450
	P - Depth	mm	2260	2260	2260	2260	2260
❺	TCAETY Weight	kg	3700	4250	4650	4750	4770
❺	TCAEQY Weight	kg	4050	4655	5105	5205	5225

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.
- 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 unladen unit not accessorised.
- ESEER = (European seasonal EER) - Average European seasonal efficiency.
- ★ ESEER with Adaptive Function Plus software. ESEER+ is not Eurovent certified.
- TCAEQY super silenced versions.

Performance according to EN 14511:2013



Low consumption WinPOWER SE

TCAEY 6670÷8860

Cooling capacity: 638.2÷861.8 kW

new



- **Version B**
compact and
high-performance
for replacement
markets
- **6 capacity steps**
- **Simplified**
installation thanks
to pumping units
accessories



TCAEY 8830

Air-cooled water chillers with axial fans.
Range with hermetic Scroll compressors and R410A refrigerant.

Construction features

- Compressor: hermetic, rotary scroll compressor, complete with thermal protection and crankcase heater.
- 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 connections.
- Air side heat exchanger: with microchannels.
- 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 sheet steel and painted with polyester powders.
- The unit is also complete with:
 - compressor and fan thermal overload switches;
 - display of cooling circuit high and low pressure,
 - electronic expansion valve.
 - clock board.

Versions

- B - Base version (TCAEY).
- S - Silenced version complete with compressor technical compartment soundproofing and reduced speed fans (TCAESY).

Models

- TCAESY: base unit for cooling only.
- TCAESY: silenced unit designed for cooling only.

Factory fitted accessories

- Shell and tube evaporator.
- PUMP with single or double pump, including an automatic pump in standby. The pumps are available in the low or high pressure versions.
- TANK&PUMP with built-in 1000 litre buffer tank and single or double electric pump, complete with expansion tank, air bleed valves, safety valve, and water side pressure gauge.
- Desuperheater.
- 100% Heat recovery unit
- -10°C condensing control (as per standard in S versions)
- -15°C condensing control with fans with EC motor.
- Condensing control with over-pressure fans.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Forced limit of power consumption.
- Forced noise limit.
- Energy parameters measuring device.
- Optimised energy efficiency.
- Soft starter.
- Soundproofed compressor box.
- Compressor soundproof enclosures.
- Cooling circuit inlet and discharge valves.
- Refrigerant leak detector.
- Refrigerant circuit high and low pressure gauges.
- Double safety valves.
- Coil protection nets.
- Microchannel coils with E-coating treatment.
- Digital input for double set-point.
- 4-20 mA analogue input for shifting set-point.
- Evaporator antifreeze heater, electric panel, buffer tank, electric pumps and heat exchangers for heat recovery if present.
- Low temperature water production.
- Interfaces for serial communication with other devices.
- Anti-vibration mountings.

Accessories supplied loose

- Remote keyboard with display.
- Thermostat with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of several water chillers.

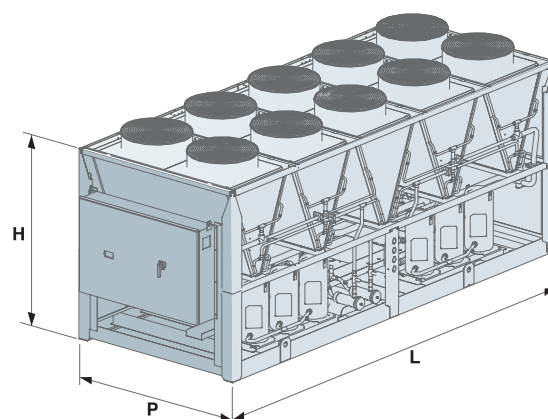


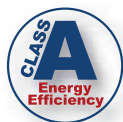
MODEL TCAEBY-TCAESY		6670	7730	8790	8830	8860
❶ Nominal cooling capacity	kW	667,0	732,4	784,0	827,1	861,8
❶ Nominal cooling capacity	kW	638,2	705,6	752,3	790,4	825,1
❶ E.E.R.		2,91	2,93	2,84	2,81	2,80
❶ E.E.R.		2,73	2,76	2,63	2,61	2,60
● E.S.E.E.R.		4,11	4,19	4,12	4,11	4,08
★ E.S.E.E.R.+		4,76	4,84	4,76	4,75	4,72
❶ Absorbed power	kW	229,2	250,0	276,1	294,3	307,8
❶ Absorbed power	kW	233,8	255,7	286,0	302,8	317,3
MODEL TCAEBY-TCAESY		6670	7730	8790	8830	8860
❸ Sound pressure	dB(A)	64,5	64,5	64,5	65,0	66,0
❸ Sound pressure	dB(A)	60,0	60,0	60,0	60,5	61,5
❹ Sound power	dB(A)	97,0	97,0	97,0	98,0	99,0
❹ Sound power	dB(A)	92,5	92,5	92,5	93,0	94,0
Scroll/step compressor	no.	6/6	7/6	8/6	8/6	8/6
Circuits	no.	2	2	2	2	2
Power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
DIMENSIONS AND WEIGHTS		6670	7730	8790	8830	8860
L - Width	mm	5940	7150	7150	7150	7150
H - Height	mm	2450	2450	2450	2450	2450
P - Depth	mm	2260	2260	2260	2260	2260
❺ TCAEBY Weight	kg	3250	3870	4020	4100	4120
❺ TCAESY Weight	kg	3550	4210	4410	4490	4510

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.
- 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 unladen unit not accessorised.
- ESEER = (European seasonal EER) - Average European seasonal efficiency.
- ★ ESEER with Adaptive Function Plus software. ESEER+ is not Eurovent certified.
- TCAESY silenced versions

Performance according to EN 14511:2013





Z-Power HE

TCAVZ 2330÷2700

Cooling capacity: 315.4÷690.7 kW



TCAVZ 2510 H.E.

TCAVZ 2460 H.E. with
Tank&Pump accessory

- Efficient range up to **CLASS A** with **EER ≥3.1**
- Working limits up to **55°C (HT unit)**
- Wide range of accessories

High energy efficiency packaged 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, complete with thermal protection, crankcase heater and refrigerant gas delivery pipe shut-off valve.
- Electronic expansion valve: as standard on all models.
- Water side heat exchanger (mod. 2330÷2460): stainless steel plate exchanger with closed cell polyurethane rubber foam insulation, complete with water flow differential pressure switch and Victaulic connections.
- Water side heat exchanger (mod. 2510÷2700): dry expansion shell and tube exchanger with counter-current heat exchange, complete with closed cell polyurethane rubber foam insulation, water flow differential pressure switch and Victaulic connections.
- Air side heat exchanger: finned coil with copper pipes and aluminium fins.
- Fan: electric axial fans with external rotor, equipped with internal thermal protection, protection grilles and proportional electronic device for continuous regulation of fan rotation speed (S version only) and fans with an EC motor with continuous regulation of the speed control (Q version only).
- Control: microprocessor electronic control.
- Structure: made of galvanised and painted sheet steel, with polyester powder coating.
- The unit is also complete with:
 - display of cooling circuit high/low pressure;
 - clock board for displaying date/time and machine time band management.

Versions

- B - High energy efficiency standard version (TCAVBZ).
- S - Silenced version with lower speed fans and soundproofed compressor cover (TCAVSZ).
- I - High energy efficiency soundproofed version with soundproofed compressor cover (TCAVIZ).
- Q - Supersilenced version with super-low speed fans with EC motor, high acoustic impedance and soundproofed compressor cover and a larger condensing section (TCAVQZ).

Models

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

Factory fitted accessories

- HT set-up for outdoor air temperature up to 55°C.
- Shell and tube evaporator (mod. 2330÷2460).
- PUMP with single or double pump, including an automatic pump in standby. The pumps are available in the low or high pressure versions.
- TANK&PUMP (mod. 2330÷2460) with built-in 1,100 buffer tank and single or double electric pump, complete with expansion tank, air bleed valves, safety valve, and water side pressure gauge.
- Desuperheater.
- Heat recovery unit 100%.
- Thermostat with display for heat recover unit/desuperheater.
- -10°C condensation control (as per standard in S version).
- -15°C condensation control with fans with EC motor (as per standard in the Q version).
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Compressor and fan thermal overload switches.
- Forced limit of power consumption.
- Inlet compressor shut-off valves.
- Low and high pressure gauges for each refrigerant circuit.
- Bottom compartment protection grilles.
- Coil protection grilles.
- Linear capacity compressor control (25-100 %).
- Evaporator antifreeze heater, buffer tank and heat exchangers for heat recovery if present.
- Digital input for double set-point.
- Compressor oil level sensor.
- Control of min/max power supply voltage.
- 4-20 mA analogue input for shifting set-point.
- Copper/pre-painted aluminium or copper/copper coils.
- Interfaces for serial communication with other devices.
- Spring antivibration mountings.

Separately supplied accessories

- Remote keyboard with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of several water chillers.

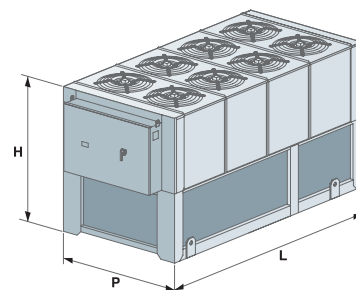


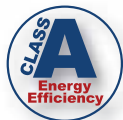
TCAVBZ-TCAVSZ-TCAVIZ-TCAVQZ MODEL			2330	2350	2370	2390	2420	2460	2510
❶	Nominal cooling capacity	kW	332,5	352,6	372,9	389,7	415,7	457,1	509,1
❶	Nominal cooling capacity	kW	324,3	343,5	361,1	378,7	406,1	442,9	494,3
❶	Nominal cooling capacity		315,4	335,4	353,3	369,2	394,2	432	482,8
❶	E.E.R.		3,12	3,11	3,11	3,10	3,11	3,11	3,11
❶	E.E.R.		3,07	3,04	3,02	2,94	3,05	3,02	2,99
❶	E.E.R.		2,93	2,93	2,9	2,82	2,92	2,9	2,87
●	E.S.E.E.R.		4	4,02	4,04	4,02	4	3,98	4
●	E.S.E.E.R.		3,93	3,94	3,95	3,95	3,95	3,92	3,85
●	E.S.E.E.R.		4,05	4,06	4,08	4,07	4,06	4,05	4,01
②	IPLV		4,20	4,22	4,24	4,22	4,20	4,22	4,24
②	IPLV		4,13	4,14	4,15	4,15	4,15	4,12	4,09
②	IPLV		4,25	4,26	4,28	4,27	4,26	4,26	4,25
❶	Absorbed power	kW	106,57	113,38	119,90	125,71	133,67	146,98	163,70
❶	Absorbed power	kW	105,64	112,99	119,57	128,81	133,15	146,66	165,32
❶	Absorbed power	kW	107,65	114,47	121,83	130,92	135	148,97	168,22
TCAVBZ-TCAVSZ-TCAVQZ MODEL			2330	2350	2370	2390	2420	2460	2510
③	Sound pressure	dB(A)	65	65	65	65	65	65	65
③	Sound pressure	dB(A)	59	59	59	59	59	59	59
③	Sound pressure	dB(A)	55	55	55	55	55	55	55
④	Sound power level	dB(A)	98	98	98	98	98	98	98
④	Sound power level	dB(A)	92	92	92	92	92	92	92
④	Sound power level	dB(A)	88	88	88	88	88	88	88
Screw/step compressor		no.	2/6	2/6	2/6	2/6	2/6	2/6	2/6
Circuits		no.	2	2	2	2	2	2	2
Electric power supply		V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS			2330	2350	2370	2390	2420	2460	2510
W - Width		mm	4.830	4.830	4.830	4.830	5.830	5.830	5.830
H - Height		mm	2.430	2.430	2.430	2.430	2.430	2.430	2.430
D - Depth		mm	2.260	2.260	2.260	2.260	2.260	2.260	2.260
⑤	TCAVBZ weight	kg	3490	3530	3570	3600	3860	4290	4950
⑤	TCAVIZ-TCAVSZ weight	kg	3810	3850	3890	3920	4180	4610	5270
⑤	TCAVQZ weight	kg	3970	4010	4050	4080	4340	4770	5430

TCAVBZ-TCAVSZ-TCAVIZ-TCAVQZ MODEL			2550	2570	2610	2640	2680	2700
❶	Nominal cooling capacity	kW	543,5	568,4	609,1	642,6	672,2	690,7
❶	Nominal cooling capacity	kW	529,6	553,3	591,3	622,6	654,8	673,8
❶	Nominal cooling capacity		514,6	537,4	574,6	607,5	636,1	653,9
❶	E.E.R.		3,13	3,12	3,10	3,11	3,11	3,11
❶	E.E.R.		3,07	3,04	3,03	2,97	3,04	3
❶	E.E.R.		2,95	2,91	2,91	2,87	2,92	2,88
●	E.S.E.E.R.		4,05	4,04	4,07	4,04	4,01	4,01
●	E.S.E.E.R.		3,85	3,8	3,85	3,89	3,92	3,9
●	E.S.E.E.R.		3,99	4	4,03	4,13	4,14	4,15
②	IPLV		4,29	4,34	4,34	4,34	4,34	4,35
②	IPLV		4,08	4,08	4,12	4,17	4,20	4,22
②	IPLV		4,27	4,30	4,31	4,34	4,35	4,37
❶	Absorbed power	kW	173,64	182,18	196,48	206,62	216,14	222,09
❶	Absorbed power	kW	172,51	182,01	195,15	209,63	215,39	224,6
❶	Absorbed power	kW	174,44	184,67	197,46	211,67	217,84	227,05
TCAVBZ-TCAVSZ-TCAVQZ MODEL			2550	2570	2610	2640	2680	2700
③	Sound pressure	dB(A)	66	66	66	66	66	66
③	Sound pressure	dB(A)	60	60	60	60	60	60
③	Sound pressure	dB(A)	56	56	56	56	56	56
④	Sound power level	dB(A)	99	99	99	99	99	99
④	Sound power level	dB(A)	93	93	93	93	93	93
④	Sound power level	dB(A)	89	89	89	89	89	89
Screw/step compressor		no.	2/6	2/6	2/6	2/6	2/6	2/6
Circuits		no.	2	2	2	2	2	2
Electric power supply		V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS			2550	2570	2610	2640	2680	2700
W - Width		mm	6.680	6.680	6.680	6.680	7.680	7.680
H - Height		mm	2.430	2.430	2.430	2.430	2.430	2.430
D - Depth		mm	2.260	2.260	2.260	2.260	2.260	2.260
⑤	TCAVBZ weight	kg	5560	5680	5720	5740	6010	6030
⑤	TCAVIZ-TCAVSZ weight	kg	5880	6000	6040	6060	6330	6350
⑤	TCAVQZ weight	kg	6088	6208	6248	6268	6538	6558

Details under the following conditions:

- ❶ Air: 35°C - Water: 12/7°C.
 - ② IPLV (Integrated Part Load Value) - ARI standard 550/590.
 - ③ 10 m from the unit in free field (Q = 2).
 - ④ Total sound power level in dB(A) on the basis of measurements taken in accordance with UNI EN-ISO 9614.
 - ⑤ Weight refers to the accessorised unit with RPE - KRP when empty.
 - ESEER (European Seasonal EER) - Average European seasonal efficiency.
 - TCAVSZ silenced versions.
 - TCAVQZ super-silenced versions.
- Performance according to EN 14511:2013





Z-Power HE

TCAVZ 2770÷21290

Cooling capacity: 721.7÷1,277.7 kW



TCAVQZ 21010 HE

- Efficiency range in CLASS A with EER>3.2 and ESEER up to 4.45
- Operation up to 55°C (HT unit)
- Standard electronic expansion valve

High energy efficiency packaged 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, complete with thermal protection, crankcase heater and refrigerant gas delivery pipe shut-off valve.
- Electronic expansion valve: as standard on all models.
- Water side heat exchanger: dry expansion shell and tube exchanger with counter-current heat exchange, complete with closed cell polyurethane rubber foam insulation, water flow differential pressure switch and Victaulic connections.
- Air side heat exchanger: finned coil with copper pipes and aluminium fins.
- Fan: electric axial fans with external rotor, equipped with internal thermal protection, protection grilles and proportional electronic device for continuous fan rotation speed regulation (S version only) and fans with an EC motor with continuous regulation of the speed control (Q version only).
- Control: microprocessor electronic control.
- Structure: made of galvanised and painted sheet steel, with polyester powder coating.
- The unit is also complete with:
 - display of cooling circuit high/low pressure;
 - clock board for displaying date/time and machine time band management.

Versions

- B - High energy efficiency standard version (TCAVBZ).
- S - Silenced version with lower speed fans and soundproofed compressor cover (TCAVSZ).
- I - High energy efficiency soundproofed version with soundproofed compressor cover (TCAVIZ).
- Q - Supersilenced version with super-low speed fans with EC motor, high acoustic impedance and soundproofed compressor cover and a larger condensing section (TCAVQZ).

Models

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

Factory fitted accessories

- HT set-up for outdoor air temperature up to 55°C.
- Desuperheater.
- Heat recovery unit 100%.
- Thermostat with display for heat recover unit/desuperheater.
- -10°C condensation control (as per standard in S version).
- -15°C condensation control with fans with EC motor (as per standard in the Q version).
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Compressor and fan thermal overload switches.
- Forced limit of power consumption.
- Soft starter.
- Inlet compressor shut-off valves.
- Low and high pressure gauges for each refrigerant circuit.
- Bottom compartment protection grilles.
- Coil protection grilles.
- Linear capacity compressor control (25-100 %).
- Evaporator antifreeze heater and heat exchangers for heat recovery if present.
- Digital input for double set-point.
- Compressor oil level sensor.
- Control of min/max power supply voltage.
- 4-20 mA analogue input for shifting set-point.
- Low temperature water production.
- Copper/pre-painted aluminium or copper/copper coils.
- Interfaces for serial communication with other devices.
- Spring antivibration mountings.

Separately supplied accessories

- Remote keyboard with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of several water chillers.

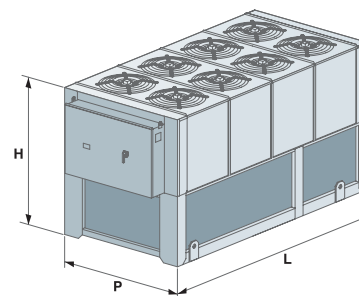


TCAVBZ-TCAVSZ-TCAVIZ-TCAVQZ MODEL			2770	2830	2890	2960	21010	21040
❶	Nominal cooling capacity	kW	762,1	828,2	884	953,9	1006,1	1033
❶	Nominal cooling capacity	kW	743,7	808,1	861,8	921,3	970,2	1000,2
❶	Nominal cooling capacity	kW	721,7	784,9	841,5	894,3	946,9	972,6
❶	E.E.R.		3,31	3,26	3,2	3,32	3,3	3,29
❶	E.E.R.		3,19	3,12	3,04	3,12	3,08	3,11
❶	E.E.R.		3,07	3,01	2,95	2,99	2,98	3,00
●	E.S.E.E.R.		4,32	4,21	4,17	4,35	4,29	4,27
●	E.S.E.E.R.		4,18	4,05	3,96	4,07	3,99	4,04
●	E.S.E.E.R.		4,41	4,34	4,26	4,38	4,34	4,38
②	IPLV		4,63	4,57	4,51	4,66	4,65	4,63
②	IPLV		4,48	4,39	4,28	4,37	4,33	4,37
②	IPLV		4,65	4,57	4,48	4,61	4,58	4,59
❶	Absorbed power	kW	230,24	254,05	276,25	287,32	304,88	313,98
❶	Absorbed power	kW	233,13	259,01	283,49	295,29	315	321,61
❶	Absorbed power	kW	235,08	260,76	285,25	299,10	317,75	324,2
TCAVBZ-TCAVSZ-TCAVQZ MODEL			2770	2830	2890	2960	21010	21040
③	Sound pressure	dB(A)	67	67	67	68	68	68
③	Sound pressure	dB(A)	61	61	61	62	62	62
③	Sound pressure	dB(A)	57	58	58	59	59	59
④	Sound power level	dB(A)	100	100	100	101	101	101
④	Sound power level	dB(A)	94	94	94	95	95	95
④	Sound power level	dB(A)	90	91	91	92	92	92
Screw/step compressor		no.	2/6	2/6	2/6	2/6	2/6	2/6
Circuits		no.	2	2	2	2	2	2
Electric power supply		V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS			2770	2830	2890	2960	21010	21040
W - Width		mm	7.680	7.680	7.680	8.980	8.980	9.980
H - Height		mm	2.430	2.430	2.430	2.430	2.430	2.430
D - Depth		mm	2.260	2.260	2.260	2.260	2.260	2.260
⑤	TCAVBZ weight	kg	6070	6690	7190	7820	7840	8350
⑤	TCAVIZ-TCAVSZ weight	kg	6390	7040	7540	8170	8190	8700
⑤	TCAVQZ weight	kg	6598	7280	7780	8410	8430	8940

TCAVBZ-TCAVSZ-TCAVIZ-TCAVQZ MODEL		21080	21130	21150	21220	21290	
❶	Nominal cooling capacity	kW	1076,7	1122,4	1148,6	1213,3	1277,7
❶	Nominal cooling capacity	kW	1048,1	1096,6	1112,8	1173,9	1235,1
❶	Nominal cooling capacity	kW	1016,9	1069,8	1079,7	1139,4	1206
❶	E.E.R.		3,32	3,18	3,38	3,35	3,32
❶	E.E.R.		3,19	3,04	3,17	3,09	3,03
❶	E.E.R.		3,05	2,94	3,04	2,97	2,93
●	E.S.E.E.R.		4,35	4,16	4,39	4,35	4,33
●	E.S.E.E.R.		4,16	3,98	4,14	3,99	3,94
●	E.S.E.E.R.		4,42	4,23	4,45	4,37	4,33
②	IPLV		4,66	4,46	4,75	4,71	4,69
②	IPLV		4,47	4,26	4,44	4,33	4,26
②	IPLV		4,65	4,45	4,69	4,61	4,56
❶	Absorbed power	kW	324,31	352,96	339,82	362,18	384,85
❶	Absorbed power	kW	328,56	360,72	351,04	379,9	407,62
❶	Absorbed power	kW	333,41	363,88	355,16	383,63	411,60
TCAVBZ-TCAVSZ-TCAVQZ MODEL		21080	21130	21150	21220	21290	
③	Sound pressure	dB(A)	69	69	69	69	69
③	Sound pressure	dB(A)	63	63	63	63	63
③	Sound pressure	dB(A)	59	59	59	60	60
④	Sound power level	dB(A)	102	102	102	102	102
④	Sound power level	dB(A)	96	96	96	96	96
④	Sound power level	dB(A)	92	92	92	93	93
Screw/step compressor		no.	2/6	2/6	2/6	2/6	
Circuits		no.	2	2	2	2	
Electric power supply		V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS		21080	21130	21150	21220	21290	
W - Width		mm	10.980	10.980	10.980	10.980	
H - Height		mm	2.430	2.430	2.430	2.430	
D - Depth		mm	2.260	2.260	2.260	2.260	
⑤	TCAVBZ weight	kg	8670	8670	8690	9020	9050
⑤	TCAVIZ-TCAVSZ weight	kg	9020	9020	9310	9370	9400
⑤	TCAVQZ weight	kg	9260	9260	9550	9610	9640

Details under the following conditions:

- ❶ Air: 35°C - Water: 12/7°C.
 - ② IPLV (Integrated Part Load Value) - ARI standard 550/590.
 - ③ 10 m from the unit in free field (Q = 2).
 - ④ Total sound power level in dB(A) on the basis of measurements taken in accordance with UNI EN-ISO 9614.
 - ⑤ Weight refers to the accessorised unit with RPE - KRP when empty.
 - ESEER (European Seasonal EER) - Average European seasonal efficiency.
 - TCAVSZ silenced versions.
 - TCAVQZ super-silenced versions.
- Performance according to EN 14511:2013



Z-Power SE

TCAVZ 1270÷1390

Cooling capacity: 259.1÷392.7 kW



TCAVBZ 1350

- **Efficiency and compact range in R134a**
- **Working limits up to 50°C**
- **Range with single compressor up to 390 kW**

Packaged 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, complete with thermal protection, crankcase heater and refrigerant gas delivery pipe shut-off valve.
- Electronic expansion valve: as standard on all models.
- Water side heat exchanger: dry expansion shell and tube exchanger, complete with closed cell polyurethane rubber foam insulation, water flow differential pressure switch and Victaulic connections.
- Air side heat exchanger: finned coil with copper pipes and aluminium fins.
- Fan: electric axial fans with external rotor, equipped with internal thermal protection, 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 sheet steel, with polyester powder coating.
- The unit is also complete with:
 - display of cooling circuit high/low pressure;
 - clock board for displaying date/time and machine time band management.

Versions

- B - Standard version (TCAVBZ).
- S - Silenced version with lower speed fans and soundproofed compressor cover (TCAVSZ).
- I - Soundproofed version with soundproofed compressor cover (TCAVIZ).

Models

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

Factory fitted accessories

- PUMP with single or double pump, including an automatic pump in standby. The pumps are available in the low or high pressure versions.
- Desuperheater.
- Heat recovery unit 100%.
- Thermostat with display for heat recovery unit/desuperheater.
- -10°C condensation control (as per standard in S version).
- -15°C condensation control with fans with EC motor.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Compressor and fan thermal overload switches.
- Forced limit of power consumption.
- Inlet compressor shut-off valves.
- Low and high pressure gauges for each refrigerant circuit.
- Bottom compartment protection grilles.
- Coil protection grilles.
- Linear capacity control compressor.
- Evaporator antifreeze heater and heat exchangers for heat recovery if present.
- Digital input for double set-point.
- Compressor oil level sensor.
- Control of min/max power supply voltage.
- 4-20 mA analogue input for shifting set-point.
- Low temperature water production.
- Copper/pre-painted aluminium or copper/copper coils.
- Interfaces for serial communication with other devices.
- Spring antivibration mountings.

Separately supplied accessories

- Remote keyboard with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of several water chillers.



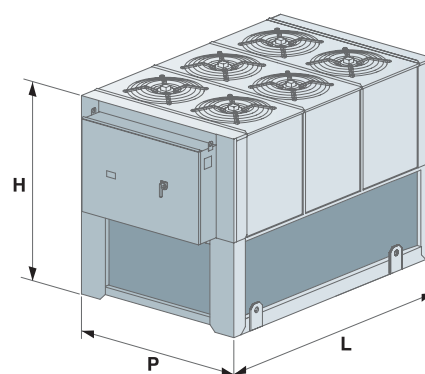
TCAVBZ-TCAVIZ-TCAVSZ MODEL		1270	1310	1350	1390
❶ Nominal cooling capacity	kW	269.1	307.9	352.9	392.7
❶ Nominal cooling capacity	kW	259.1	298.9	339.0	372.8
❶ E.E.R.		2.67	2.77	2.7	2.7
❶ E.E.R.		2.59	2.68	2.57	2.52
● E.S.E.E.R.		3.37	3.48	3.38	3.37
● E.S.E.E.R.		3.19	3.31	3.2	3.16
❶ Absorbed power	kW	100.79	111.16	130.7	145.41
❶ Absorbed power	kW	100.04	111.53	131.91	147.94
TCAVBZ-TCAVSZ MODEL		1270	1310	1350	1390
❸ Sound pressure	dB(A)	64	65	65	65
❸ Sound pressure	dB(A)	58	59	59	59
❹ Sound power level	dB(A)	97	98	98	98
❹ Sound power level	dB(A)	91	92	92	92
Electric power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS		1270	1310	1350	1390
W - Width	mm	3830	3830	3830	3830
H - Height	mm	2430	2430	2430	2430
D - Depth	mm	2260	2260	2260	2260
❺ TCAVBZ weight	kg	2850	2970	3430	3530
❺ TCAVSZ weight	kg	3010	3130	3590	3690

Details under the following conditions:

- ❶ Air: 35°C - Water: 12/7°C.
- ❸ 10 m from the unit in free field (Q = 2).
- ❹ Total sound power level in dB(A) on the basis of measurements taken in accordance with UNI EN-ISO 9614.
- ❺ Weight refers to the accessorised unit with RPE - KRP when empty.
- ESEER (European Seasonal EER) - Average European seasonal efficiency.
- TCAVSZ silenced versions.

Performance according to EN 14511:2013

TCAVZ unit under inspection at Rhoss laboratory: R&D Lab.



Z-Power SE

TCAVZ 2331÷2701

Cooling capacity: 320÷688.5 kW



TCAVSZ 2641

TCAVSZ 2391 with the
Tank&Pump accessory

- Efficiency range in R134a
- Working limits up to 50°C
- TANK&PUMP set up up to 500 kW

Packaged 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, complete with thermal protection, crankcase heater and refrigerant gas delivery pipe shut-off valve.
- Electronic expansion valve: as standard on all models.
- Water side heat exchanger (mod. 2331÷2511): stainless steel plate exchanger with closed cell polyurethane foam rubber insulation, complete with water flow differential pressure switch and Victaulic connections.
- Water side heat exchanger (mod. 2551÷2701): dry expansion shell and tube exchanger with counter-current heat exchange, complete with closed cell polyurethane rubber foam insulation, water flow differential pressure switch and Victaulic connections.
- Air side heat exchanger: finned coil with copper pipes and aluminium fins.
- Fan: electric axial fans with external rotor, equipped with internal thermal protection, 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 sheet steel, with polyester powder coating.
- The unit is also complete with:
 - display of cooling circuit high/low pressure;
 - clock board for displaying date/time and machine time band management.

Versions

- B - Standard version (TCAVBZ).
- S - Silenced version with lower speed fans and soundproofed compressor cover (TCAVSZ).
- I - Soundproofed version with soundproofed compressor cover (TCAVIZ).

Models

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

Factory fitted accessories

- Shell and tube evaporator (mod. 2331÷2511).
- PUMP with single or double pump, including an automatic pump in standby. The pumps are available in the low or high pressure versions.
- TANK&PUMP (mod. 2331÷2511) with built-in 1,000 buffer tank and single or double electric pump, complete with expansion tank, air bleed valves, safety valve, and water side pressure gauge.
- Desuperheater.
- Heat recovery unit 100%.
- Thermostat with display for heat recover unit/desuperheater.
- -10°C condensation control (as per standard in S version).
- -15°C condensation control with fans with EC motor.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Compressor and fan thermal overload switches.
- Forced limit of power consumption.
- Soft starter.
- Inlet compressor shut-off valves.
- Low and high pressure gauges for each refrigerant circuit.
- Bottom compartment protection grilles.
- Coil protection grilles.
- Linear capacity compressor control (25-100 %).
- Evaporator antifreeze heater, buffer tank and heat exchangers for heat recovery if present.
- Digital input for double set-point.
- Compressor oil level sensor.
- Control of min/max power supply voltage.
- 4-20 mA analogue input for shifting set-point.
- Low temperature water production.
- Copper/pre-painted aluminium or copper/copper coils.
- Interfaces for serial communication with other devices.
- Spring antivibration mountings.

Separately supplied accessories

- Remote keyboard with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of several water chillers.



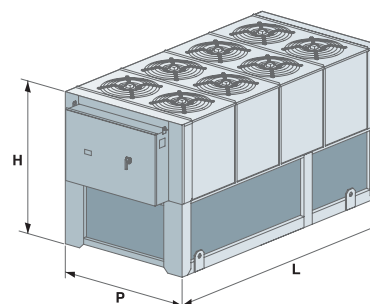
TCAVBZ-TCAVSZ-TCAVIZ MODEL		2331	2351	2371	2391	2421	2461	2511
❶ Nominal cooling capacity	kW	330,5	350	369,8	389,3	412,8	453,4	506,8
❶ Nominal cooling capacity	kW	320	338,3	358,4	372,6	400,3	438,1	485,8
❶ E.E.R.		2,92	2,93	2,9	2,9	2,91	2,9	2,9
❶ E.E.R.		2,83	2,81	2,78	2,69	2,83	2,78	2,74
● E.S.E.E.R.		3,92	3,93	3,93	3,95	3,95	3,88	3,81
● E.S.E.E.R.		3,72	3,75	3,78	3,8	3,82	3,7	3,54
❷ IPLV		4,11	4,11	4,12	4,13	4,15	4,07	3,98
❷ IPLV		3,90	3,93	3,96	3,99	4,01	3,88	3,74
❶ Absorbed power	kW	113,18	119,45	127,52	134,24	141,86	156,34	174,76
❶ Absorbed power	kW	113,07	120,39	128,92	138,51	141,45	157,59	177,3
TCAVBZ-TCAVSZ MODEL		2331	2351	2371	2391	2421	2461	2511
❸ Sound pressure	dB(A)	64	64	64	64	65	65	65
❸ Sound pressure	dB(A)	58	58	58	58	59	59	59
❹ Sound power level	dB(A)	97	97	97	97	98	98	98
❹ Sound power level	dB(A)	91	91	91	91	92	92	92
Screw/step compressor	no.	2/6	2/6	2/6	2/6	2/6	2/6	2/6
Electric power supply	V-ph-Hz	2	2	2	2	2	2	2
Circuits	no.	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS		2331	2351	2371	2391	2421	2461	2511
W - Width	mm	3.830	3.830	3.830	3.830	4.830	4.830	4.830
H - Height	mm	2.430	2.430	2.430	2.430	2.430	2.430	2.430
D - Depth	mm	2.260	2.260	2.260	2.260	2.260	2.260	2.260
❺ TCAVBZ weight	kg	3080	3100	3130	3200	3520	3950	4300
❺ TCAVIZ-TCAVSZ weight	kg	3400	3420	3450	3520	3840	4270	4620

TCAVBZ-TCAVSZ-TCAVIZ MODEL		2551	2571	2611	2641	2681	2701
❶ Nominal cooling capacity	kW	539,4	563	607,1	644,8	669,1	688,5
❶ Nominal cooling capacity	kW	523,1	545,1	583,3	615,4	649,7	669,3
❶ E.E.R.		2,93	2,9	2,9	2,9	2,88	2,86
❶ E.E.R.		2,85	2,8	2,74	2,72	2,78	2,75
● E.S.E.E.R.		3,8	3,83	3,85	3,84	3,8	3,8
● E.S.E.E.R.		3,62	3,72	3,72	3,72	3,7	3,65
❷ IPLV		4,07	4,15	4,13	4,11	4,11	4,12
❷ IPLV		3,87	3,99	3,98	3,97	3,96	3,95
❶ Absorbed power	kW	184,1	194,14	209,34	222,34	232,33	240,73
❶ Absorbed power	kW	183,54	194,68	212,88	226,25	233,71	243,38
TCAVBZ-TCAVSZ MODEL		2551	2571	2611	2641	2681	2701
❸ Sound pressure	dB(A)	65	65	65	65	66	66
❸ Sound pressure	dB(A)	59	59	59	59	60	60
❹ Sound power level	dB(A)	98	98	98	98	99	99
❹ Sound power level	dB(A)	92	92	92	92	93	93
Screw/step compressor	no.	2/6	2/6	2/6	2/6	2/6	2/6
Electric power supply	V-ph-Hz	2	2	2	2	2	2
Circuits	no.	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS		2551	2571	2611	2641	2681	2701
W - Width	mm	5.830	5.830	5.830	5.830	6.680	6.680
H - Height	mm	2.430	2.430	2.430	2.430	2.430	2.430
D - Depth	mm	2.260	2.260	2.260	2.260	2.260	2.260
❺ TCAVBZ weight	kg	4780	4800	4920	5010	5560	5580
❺ TCAVIZ-TCAVSZ weight	kg	5100	5120	5240	5330	5880	5900

Details under the following conditions:

- ❶ Air: 35°C - Water: 12/7°C.
- ❷ IPLV (Integrated Part Load Value) - ARI standard 550/590.
- ❸ 10 m from the unit in free field (Q = 2).
- ❹ Total sound power level in dB(A) on the basis of measurements taken in accordance with UNI EN-ISO 9614.
- ❺ Weight refers to the accessorised unit with RPE - KRP when empty.
- ESEER (European Seasonal EER) - Average European seasonal efficiency.
- TCAVSZ silenced versions.

Performance according to EN 14511:2013



Z-Power SE

TCAVZ 2710÷21600

Cooling capacity: 687÷1,609.7 kW



TCAVZ 21600 with the DS accessory and pump unit

- Efficiency range in R134a
- Installation flexibility up to 1,600 kW
- Standard electronic expansion valve

Packaged 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, complete with thermal protection, crankcase heater and refrigerant gas delivery pipe shut-off valve.
- Electronic expansion valve: as standard on all models.
- Water side heat exchanger: dry expansion shell and tube exchanger with counter-current heat exchange, complete with closed cell polyurethane rubber foam insulation, water flow differential pressure switch and Victaulic connections.
- Air side heat exchanger: finned coil with copper pipes and aluminium fins.
- Fan: electric axial fans with external rotor, equipped with internal thermal protection, 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 sheet steel, with polyester powder coating.
- The unit is also complete with:
 - display of cooling circuit high/low pressure;
 - clock board for displaying date/time and machine time band management.

Versions

- B - Standard version (TCAVBZ).
- S - Silenced version with lower speed fans and soundproofed compressor cover (TCAVSZ).
- I - Soundproofed version with soundproofed compressor cover (TCAVIZ).

Models

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

Factory fitted accessories

- Desuperheater.
- Heat recovery unit 100%.
- Thermostat with display for heat recover unit/desuperheater.
- -10°C condensation control (as per standard in S version).
- -15°C condensation control with fans with EC motor.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Compressor and fan thermal overload switches.
- Forced limit of power consumption.
- Soft starter.
- Inlet compressor shut-off valves.
- Low and high pressure gauges for each refrigerant circuit.
- Bottom compartment protection grilles.
- Coil protection grilles.
- Linear capacity compressor control (25-100 %).
- Evaporator antifreeze heater and heat exchangers for heat recovery if present.
- Digital input for double set-point.
- Compressor oil level sensor.
- Control of min/max power supply voltage.
- 4-20 mA analogue input for shifting set-point.
- Low temperature water production.
- Copper/pre-painted aluminium or copper/copper coils.
- Interfaces for serial communication with other devices.
- Spring antivibration mountings.

Separately supplied accessories

- Remote keyboard with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of several water chillers.



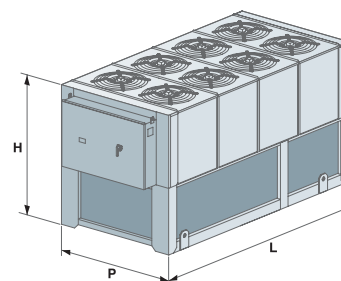
TCAVBZ-TCAVSZ-TCAVIZ MODEL		2710	2750	2810	2870	2940	2990	21020
❶ Nominal cooling capacity	kW	706,7	747,7	806,5	860,1	932,7	981,2	1011,4
❶ Nominal cooling capacity	kW	687	728,8	783,3	835	906,1	950,9	980,8
❶ E.E.R.		2,91	2,93	2,92	2,87	2,98	2,94	3
❶ E.E.R.		2,77	2,8	2,79	2,73	2,83	2,77	2,83
● E.S.E.E.R.		3,8	3,57	3,54	3,39	3,65	3,59	3,65
● E.S.E.E.R.		3,65	3,42	3,39	3,22	3,46	3,36	3,45
❷ IPLV		4,10	4,12	4,09	4,03	4,17	4,14	4,21
❷ IPLV		3,92	3,94	3,91	3,83	3,95	3,89	3,97
❶ Absorbed power	kW	242,85	255,19	276,2	299,69	312,99	333,74	337,13
❶ Absorbed power	kW	248,01	260,29	280,75	305,86	320,18	343,29	346,57
TCAVBZ-TCAVSZ MODEL		2710	2750	2810	2870	2940	2990	21020
❸ Sound pressure	dB(A)	67	67	67	70	68	68	68
❸ Sound pressure	dB(A)	61	61	61	64	62	62	62
❹ Sound power level	dB(A)	100	100	100	103	101	101	101
❹ Sound power level	dB(A)	94	94	94	97	95	95	95
Screw/step compressor	no.	2/6	2/6	2/6	2/6	2/6	2/6	2/6
Circuits	no.	2	2	2	2	2	2	2
Electric power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS		2710	2750	2810	2870	2940	2990	21020
W - Width	mm	6.680	6.680	7.680	7.680	7.680	7.680	7.680
H - Height	mm	2.430	2.430	2.430	2.430	2.430	2.430	2.430
D - Depth	mm	2.260	2.260	2.260	2.260	2.260	2.260	2.260
❺ TCAVBZ weight	kg	5590	5600	6490	6990	7020	7040	7220
❺ TCAVIZ-TCAVSZ weight	kg	5910	5920	6840	7340	7370	7390	7570

TCAVBZ-TCAVSZ-TCAVIZ MODEL		21060	21110	21180	21250	21330	21400	21500	21600
❶ Nominal cooling capacity	kW	1048,6	1104	1175,6	1249,7	1327,7	1404,4	1497,6	1609,7
❶ Nominal cooling capacity	kW	1016,9	1068,7	1138,9	1207,3	1283,5	1347,9	1441,7	1542,3
❶ E.E.R.		3,1	2,95	3,03	3,1	3,1	3,1	3,1	3,1
❶ E.E.R.		2,92	2,75	2,81	2,86	2,87	2,87	2,84	2,76
● E.S.E.E.R.		3,81	3,63	3,69	3,77	3,8	3,85	3,9	4,02
● E.S.E.E.R.		3,58	3,37	3,4	3,48	3,5	3,67	3,66	3,67
❷ IPLV		4,34	4,14	4,25	4,35	4,36	4,30	4,33	4,39
❷ IPLV		4,09	3,85	3,93	4,02	4,02	4,01	4,00	3,87
❶ Absorbed power	kW	338,26	374,24	387,99	403,13	428,29	453,03	483,10	519,26
❶ Absorbed power	kW	348,25	388,62	405,3	422,13	447,21	469,65	507,64	558,80
TCAVBZ-TCAVSZ MODEL		21060	21110	21180	21250	21330	21400	21500	21600
❸ Sound pressure	dB(A)	69	69	69	69	69	70	71	71
❸ Sound pressure	dB(A)	63	63	63	63	63	64	65	65
❹ Sound power level	dB(A)	102	102	102	102	102	103	104	104
❹ Sound power level	dB(A)	96	96	96	96	96	97	98	98
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
Electric power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS		21060	21110	21180	21250	21330	21400	21500	21600
W - Width	mm	7.680	8.980	8.980	8.980	9.980	10.980	12.980	12.980
H - Height	mm	2.430	2.430	2.430	2.430	2.430	2.430	2.430	2.430
D - Depth	mm	2.260	2.260	2.260	2.260	2.260	2.260	2.260	2.260
❺ TCAVBZ weight	kg	7383	7760	8170	8190	8820	9310	10220	10460
❺ TCAVIZ-TCAVSZ weight	kg	7733	8110	8520	8540	9170	9660	10540	10780

Details under the following conditions:

- ❶ Air: 35°C - Water: 12/7°C.
- ❷ IPLV (Integrated Part Load Value) - ARI standard 550/590.
- ❸ 10 m from the unit in free field (Q = 2).
- ❹ Total sound power level in dB(A) on the basis of measurements taken in accordance with UNI EN-ISO 9614.
- ❺ Weight refers to the accessorised unit with RPE - KRP when empty.
- ESEER (European Seasonal EER) - Average European seasonal efficiency.
- TCAVSZ silenced versions.

Performance according to EN 14511:2013



Z-Power VFD

TCAIZ 2520÷2900

Cooling capacity: 516÷903 kW



TCAIZ 2600

- Screw compressor with variable Vi suitable for all applications
- Continuous power modulation: 20-100%
- High energy efficiency EC fans (brushless)
- ESEER up to 4.9

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, crankcase heater and refrigerant gas intake and outlet pipe shut-off valve.
- Electronic expansion valve: as standard on all models.
- Water side heat exchanger: dry expansion shell and tube exchanger, complete with closed cell polyurethane rubber foam insulation, water flow differential pressure switch and Victaulic connections.
- Air side heat exchanger: finned coil with copper pipes and aluminium fins.
- Fan: electric axial fans with EC motor with continuous adjustment of the rotation speed, equipped with internal thermal protection and complete with protection grilles.
- Control: microprocessor electronic control.
- Structure: in galvanised and painted sheet steel, with polyester powder coating.
- The unit is also complete with:
 - display of cooling circuit high/low pressure;
 - compressors and fans MCBs;
 - clock board to display date/time and machine management in time slots.

Versions

- I - Soundproofed version with high acoustic impedance and soundproofed compressor cover (TCAIZ).
- S - Silenced version with lower speed fans and high acoustic impedance and soundproofed compressor cover (TCAISZ).

Models

- TCAIZ: soundproofed unit designed for cooling only.
- TCAISZ: silenced unit designed for cooling only.

Factory fitted accessories

- Low and high pressure gauges for each cooling circuit.
- Bottom compartment protection grilles.
- Coil protection nets.
- Evaporator antifreeze heater.
- Digital input for double set-point.
- Control of min/max power supply voltage.
- 4-20 mA analogue input for shifting set-point.
- Copper/pre-painted aluminium or copper/copper coils.
- Interfaces for serial communication with other devices.
- Spring anti-vibration mountings.

Separately supplied accessories

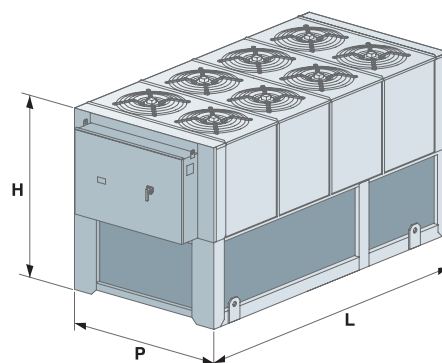
- Remote keyboard with display.



TCAIHZ MODEL		2520	2600	2670	2780	2900
❶ Nominal cooling capacity	kW	516	600	673	780	903
❶ E.E.R.		2,85	2,91	2,90	2,95	2,90
● E.S.E.E.R.		4,82	4,88	4,87	4,89	4,85
❶ Absorbed power	kW	180,9	205,9	231,7	264,2	311,8
❸ Sound pressure	dB(A)	63	64	64	65	66
❹ Sound power level	dB(A)	95	96	97	98	99
Screw/step compressor	no.	2/INFINITE	2/INFINITE	2/INFINITE	2/INFINITE	2/INFINITE
Circuits	no.	2	2	2	2	2
Electric power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES		2520	2600	2670	2780	2900
W - Width	mm	5.830	5.830	6.680	6.680	7.680
H - Height	mm	2.430	2.430	2.430	2.430	2.430
D - Depth	mm	2.260	2.260	2.260	2.260	2.260

Details under the following conditions:

- ❶ Air: 35°C - Water: 12/7°C.
- ❸ 10 m from the unit in free field (Q = 2).
- ❹ Total sound power level in dB(A) on the basis of measurements taken in accordance with UNI EN-ISO 9614.
- ESEER (European Seasonal EER) - Average European seasonal efficiency.



Z-Power FREECOOLING

TFAVBZ - TFAVIZ - TFAVSZ 2420÷21100

Cooling capacity: 469÷1.216 kW



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

Freecooling mode 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, complete with thermal protection, crankcase heater and refrigerant gas delivery pipe shut-off valve.
- 2 circuits/6 capacity steps.
- Water side heat exchanger: dry expansion counter-current tube and shell type, complete with differential pressure switch, air bleed valve, water drain cock, closed cell polyurethane rubber foam insulation with protective film against U.V.A. rays. Victaulic connections.
- Air side heat exchanger: consisting of a 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 Freecooling mode.
- 3-way modulating valve: to divert the water flow from the system towards the Freecooling coil or directly towards the evaporator.
- Fan: electric axial fans with external rotor, equipped with internal thermal protection, a protection grill and proportional electronic device for pressurised and continuous fan rotation speed regulation up to an outdoor air temperature of -15°C
- Control: electronic with microprocessor ready for connection with the main BMS commercially available (MODBUS RTU, LON, BacNet).
- Structure: load bearing structure made of galvanised sheet steel and painted with polyester powders.
 The unit is also complete with:
 - display of cooling circuit high/low pressure;
 - clock board

Versions

- B - High efficiency standard version (TFAVBZ).
- I - Soundproofed version with soundproofed compressor cover (TFAVIZ).
- S - Silenced version with soundproofed compressor cover and low speed fans (TFAVSZ).

Models

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

Factory fitted accessories

- -20°C condensation control with fans with EC motor.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Compressor and fan thermal overload switches.
- Forced limit of power consumption.
- Inlet compressor shut-off valves.
- Low and high pressure gauges for each refrigerant circuit.
- Bottom compartment protection grilles.
- Coil protection grilles.
- Coil protection metal filter.
- Linear capacity compressor control (25-100 %).
- Evaporator antifreeze resistance.
- Digital input for double set-point.
- Water low temperature.
- High pressure double safety valve with exchanger tap.
- Stainless steel cooling circuit.
- Electrical panel resistance
- Soft starter.
- Compressor oil level sensor.
- Control of min/max power supply voltage.
- 4-20 mA analogue input for shifting set-point.
- Copper/pre-painted aluminium or copper/copper coils.
- Interfaces for serial communication with other devices.
- Spring anti-vibration mounts.

Accessories separately supplied

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



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							
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
Power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
DIMENSIONS AND WEIGHTS							
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

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							
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
Power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
DIMENSIONS AND WEIGHTS							
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.
- TFAESY silenced version.

Z-Power HP

THAVZ 2400÷2680

Cooling capacity: 382.6÷677.6 kW - Heating capacity: 410.6÷702.6 kW



THAVSZ 2530

- Efficient heat pumps in R134a
- Extended operation limits
- Production of hot water up to 55°C

Packaged reversible air-cooled heat pumps 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 thermal protection, crankcase heater, refrigerant gas and delivery piping shut-off valve and compressor oil level sensor.
- Electronic expansion valve: as standard on all models.
- Water side heat exchanger: dry expansion shell and tube exchanger with counter-current heat exchange, complete with closed cell polyurethane rubber foam insulation, water flow differential pressure switch and Victaulic connections.
- Air side heat exchanger: finned coil with copper pipes and aluminium fins.
- Fan: electric axial fans with external rotor, equipped with internal thermal protection, 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 sheet steel, with polyester powder coating.
- The unit is also complete with:
 - display of cooling circuit high/low pressure;
 - clock board for displaying date/time and machine time band management.

Versions

- B - Standard version (THAVBZ).
- S - Silenced version with lower speed fans and soundproofed compressor cover (THAVSZ).
- I - Soundproofed version with soundproofed compressor cover (THAVIZ).

Models

- THAVBZ: heat pump unit.
- THAVSZ: super-silenced heat pump unit.
- THAVIZ: soundproofed heat pump unit.

Factory fitted accessories

- Desuperheater.
- Thermostat with display for desuperheater.
- -10°C condensation control (as per standard in S version).
- -15°C condensation control with fans with EC motor.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Compressor and fan thermal overload switches.
- Forced limit of power consumption.
- Inlet compressor shut-off valves.
- Low and high pressure gauges for each refrigerant circuit.
- Bottom compartment protection grilles.
- Coil protection grilles.
- Evaporator antifreeze heater and heat exchangers for heat recovery if present.
- Digital input for double set-point.
- Control of min/max power supply voltage.
- 4-20 mA analogue input for shifting set-point.
- Copper/pre-painted aluminium or copper/copper coils.
- Interfaces for serial communication with other devices.
- Spring antivibration mountings.

Separately supplied accessories

- Remote keyboard with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of several water chillers.

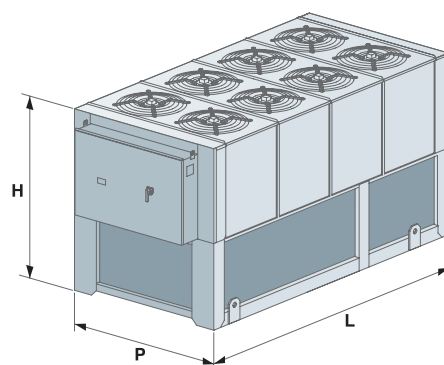


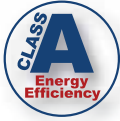
THAVBZ-THAVSZ-THAVIZ MODEL		2400	2460	2530	2600	2680	
②	Nominal heating capacity	kW	427,8	488,2	566,1	622	702,6
②	Nominal heating capacity	kW	410,6	469	542,8	596,8	674,4
②	C.O.P.		2,98	3,03	3,13	3,13	3,15
②	C.O.P.		2,88	2,93	3,02	3,02	3,04
①	Nominal cooling capacity	kW	398,5	462,1	529,3	598,2	677,6
①	Nominal cooling capacity	kW	382,6	444,3	508,6	574,3	650,8
①	E.E.R.		2,66	2,76	2,82	2,93	2,96
①	E.E.R.		2,57	2,67	2,73	2,83	2,86
②	Absorbed power	kW	143,56	161,12	180,86	198,72	223,05
②	Absorbed power	kW	142,57	160,07	179,74	197,62	221,84
①	Absorbed power	kW	149,81	167,43	187,7	204,16	228,92
①	Absorbed power	kW	148,87	166,4	186,3	202,93	227,55
THAVBZ-THAVSZ MODEL		2400	2460	2530	2600	2680	
③	Sound pressure	dB(A)	64	65	65	66	67
③	Sound pressure	dB(A)	58	59	59	60	61
④	Sound power level	dB(A)	98	98	98	99	99
④	Sound power level	dB(A)	92	92	92	93	93
Screw/step compressor		no.	2/6	2/6	2/6	2/6	2/6
Circuits		no.	2	2	2	2	2
Electric power supply		V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS		2400	2460	2530	2600	2680	
W - Width		mm	5.130	6.130	6.130	6.980	7.980
H - Height		mm	2.430	2.430	2.430	2.430	2.430
D - Depth		mm	2.260	2.260	2.260	2.260	2.260
⑤	THAVBZ weight	kg	4.315	5.350	5.740	6.320	7.210
⑤	THAVSZ-THAVIZ weight	kq	4.665	5.700	6.090	6.670	7.560

Details under the following conditions:

- ① Air: 35°C - Water: 12/7°C.
- ② Air: 7°C, D.B 6°C W.B. - Water: 40/45°C.
- ③ 10 m from the unit in free field (Q = 2).
- ④ Total sound power level in dB(A) on the basis of measurements taken in accordance with UNI EN-ISO 9614.
- ⑤ Weight refers to the accessorised unit with RPE - KRP when empty.
- ESEER (European Seasonal EER) - Average European seasonal efficiency.
- THAVSZ silenced version.

Performance according to EN 14511:2013



Web code TCATBZ: **TP001**Web code TCATTZ: **TPE01**Web code TCATQZ: **TPQ01**

- **CLASS A range with EER up to 3.86**
- **Efficient oil-Free compressor, silent and with low peak currents**
- **Flooded tube and shell evaporator**

T-Power

TCATBZ 1361-41401 / TCATTZ
1321-41371 / TCATQZ 1361-41361

Cooling capacity: 323.7 ÷ 1,359.9 kW



TCATBZ 2561

Packaged 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 suction and supply shut-off valves
- Electronic expansion valve: as standard on all models.
- Water side heat exchanger: flooded tube and shell exchanger, complete with closed cell polyurethane rubber foam insulation, water flow differential pressure switch and Victaulic connections.
- Air side heat exchanger: finned coil with copper pipes and aluminium fins.
- Fan: electric axial fans with external rotor, equipped with internal thermal protection, protection grilles and proportional electronic device for continuous fan rotation speed adjustment.
- Control: microprocessor electronic control.
- Structure: made of galvanised and painted sheet steel, with polyester powder coating.
- The unit is also complete with:
 - condensing control down to an outdoor air temperature of -10°C;
 - compressor and fan thermal overload switches;
 - high and low pressure on display for every refrigerant circuit.

Versions

- B - Standard version with class A efficiency (TCATBZ).
- T - High energy efficiency version above class A (TCATTZ).
- Q - Super-silenced version with class A efficiency (TCATQZ).

Models

- TCATBZ: unit designed for cooling only.
- TCATTZ: unit designed for cooling only.
- TCATQZ: unit designed for cooling only.

Factory fitted accessories

- PUMP with single electric pump available in the low or high pressure versions.
- EC-FAN fans with continuous regulation of the speed up to the outdoor air temperature of -15°C
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Evaporator antifreeze heater.
- Evaporator mechanical flow switch.
- Refrigerant leak detector.
- Double electrical supply.
- Interfaces for serial communication with other devices.
- Unit with pre-painted copper/aluminium or copper/copper condensation coils.
- Bottom compartment protection grilles.
- Condensing coils protection grilles.
- Spring anti-vibration mountings.

Separately supplied accessories

- Protective packaging for transport.

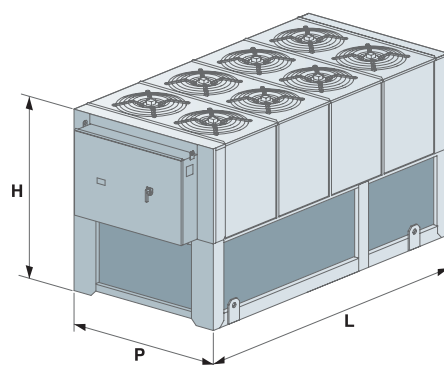


TCATBZ MODEL		1361	1411	1451	2511	2561	2601	2641	2681	2751	2811
❶ Nominal cooling capacity	kW	357,4	408,6	443,3	508,2	557,7	601,8	637,5	678	747,3	806,9
❶ E.E.R.		3,25	3,13	3,2	3,31	3,22	3,32	3,47	3,47	3,37	3,26
● E.S.E.E.R.		4,68	4,55	4,7	4,78	4,77	4,78	4,8	4,79	4,79	4,79
❶ Absorbed power	kW	109,97	130,54	138,53	153,53	173,2	181,27	183,72	195,39	221,75	247,52
❸ Sound pressure	dB(A)	66,5	66,5	66,5	68	69	69	68,5	68,5	68	68
❹ Sound power level	dB(A)	87	87	87	88	90	90	89	89	89	89
Step/compressor	no.	1/infinite	1/infinite	1/infinite	2/infinite	2/infinite	2/infinite	2/infinite	2/infinite	2/infinite	2/infinite
Circuits	no.	1	1	1	1	1	1	1	1	1	1
Electric power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES		1361	1411	1451	2511	2561	2601	2641	2681	2751	2811
W - Width	mm	4750	4750	4750	4750	5720	5720	5720	5720	6690	6690
H - Height	mm	2560	2560	2560	2560	2560	2560	2560	2560	2560	2560
D - Depth	mm	2380	2380	2380	2380	2380	2380	2380	2380	2380	2380
❺ Weight	kg	3404	3960	4150	4260	4666	5151	5231	5657	6021	6518

TCATBZ MODEL		3851	3901	3981	31081	31201	31281	41401
❶ Nominal cooling capacity	kW	846,6	889,8	981,3	1080,9	1186	1275,2	1392,6
❶ E.E.R.		3,35	3,32	3,56	3,52	3,36	3,23	3,37
● E.S.E.E.R.		4,91	4,83	4,92	4,92	4,9	4,84	4,76
❶ Absorbed power	kW	252,72	268,01	275,65	307,07	352,98	394,8	413,23
❸ Sound pressure	dB(A)	68,5	68,5	68,5	69	70	70	70
❹ Sound power level	dB(A)	90	90	90	91	92	92	92
Step/compressor	no.	3/infinite	3/infinite	3/infinite	3/infinite	3/infinite	3/infinite	4/infinite
Circuits	no.	1	1	1	1	1	1	2
Electric power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES		3851	3901	3981	31081	31201	31281	41401
W - Width	mm	7670	7670	7670	9120	10570	10570	10570
H - Height	mm	2560	2560	2560	2560	2560	2560	2560
D - Depth	mm	2380	2380	2380	2380	2380	2380	2380
❺ Weight	kg	6740	7122	7456	8604	9860	9430	10482

Details under the following conditions:

- ❶ Air: 35°C - Water: 12/7°C.
- ❸ 1 m from the unit in free field (Q = 2).
- ❹ Total sound power level in dB(A) on the basis of measurements taken in accordance with UNI EN-ISO 9614.
- ❺ Empty weight
- ESEER (European Seasonal EER) - Average European seasonal efficiency.
Performance according to EN 14511:2013



T-Power

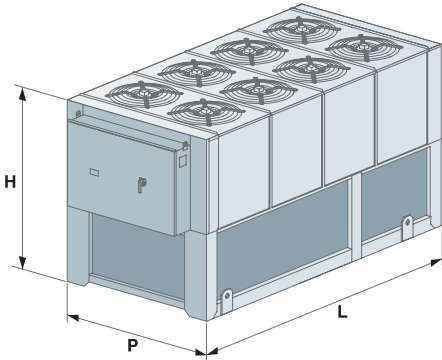
TCATBZ 1361-41401 / TCATTZ 1321-41371 / TCATQZ 1361-41361

TCATTZ MODEL		1321	1391	1431	2521	2581	2641	2721	2751
❶ Nominal cooling capacity	kW	323,7	386,6	427,3	522	581,8	643,1	721,4	751
❶ E.E.R.		3,57	3,69	3,58	3,7	3,6	3,86	3,81	3,81
● E.S.E.E.R.		5,53	5,55	5,55	5,36	5,34	5,32	5,32	5,32
❶ Absorbed power	kW	90,67	104,77	119,36	141,08	161,61	166,61	189,34	197,11
❸ Sound pressure	dB(A)	77	77	77	77	78	78	79	79
❹ Sound power level	dB(A)	97	97	97	97	99	99	100	100
Step/compressor	no.	1/infinite	1/infinite	1/infinite	2/infinite	2/infinite	2/infinite	2/infinite	2/infinite
Circuits	no.	1	1	1	1	1	1	1	1
Electric power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES		1321	1391	1431	2521	2581	2641	2721	2751
W - Width	mm	4750	4750	4750	4750	5720	5720	6690	6690
H - Height	mm	2560	2560	2560	2560	2560	2560	2560	2560
D - Depth	mm	2380	2380	2380	2380	2380	2380	2380	2380
❺ Weight	kg	3404	3960	4150	4620	5172	5870	6234	6464

TCATTZ MODEL		3801	3901	31001	31131	31241	41371
❶ Nominal cooling capacity	kW	805	893,7	987	1128,2	1231,5	1359,9
❶ E.E.R.		3,65	3,82	3,84	3,76	3,7	3,81
● E.S.E.E.R.		5,35	5,62	5,67	5,62	5,54	5,55
❶ Absorbed power	kW	220,55	233,95	257,03	300,05	332,84	356,93
❸ Sound pressure	dB(A)	80	80	81	80	80	80
❹ Sound power level	dB(A)	101	102	103	103	103	103
Step/compressor	no.	3/infinite	3/infinite	3/infinite	3/infinite	3/infinite	4/infinite
Circuits	no.	1	1	1	1	1	2
Electric power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES		3801	3901	31001	31131	31241	41371
W - Width	mm	7670	7670	9120	10570	10570	10570
H - Height	mm	2560	2560	2560	2560	2560	2560
D - Depth	mm	2380	2380	2380	2380	2380	2380
❺ Weight	kg	6840	7466	8306	9049	9440	10495

Details under the following conditions:

- ❶ Air: 35°C - Water: 12/7°C.
 - ❸ 1 m from the unit in free field (Q = 2).
 - ❹ Total sound power level in dB(A) on the basis of measurements taken in accordance with UNI EN-ISO 9614.
 - ❺ Empty weight
 - ESEER (European Seasonal EER) - Average European seasonal efficiency.
- Performance according to EN 14511:2013

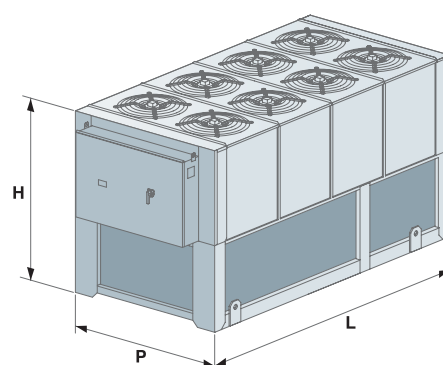


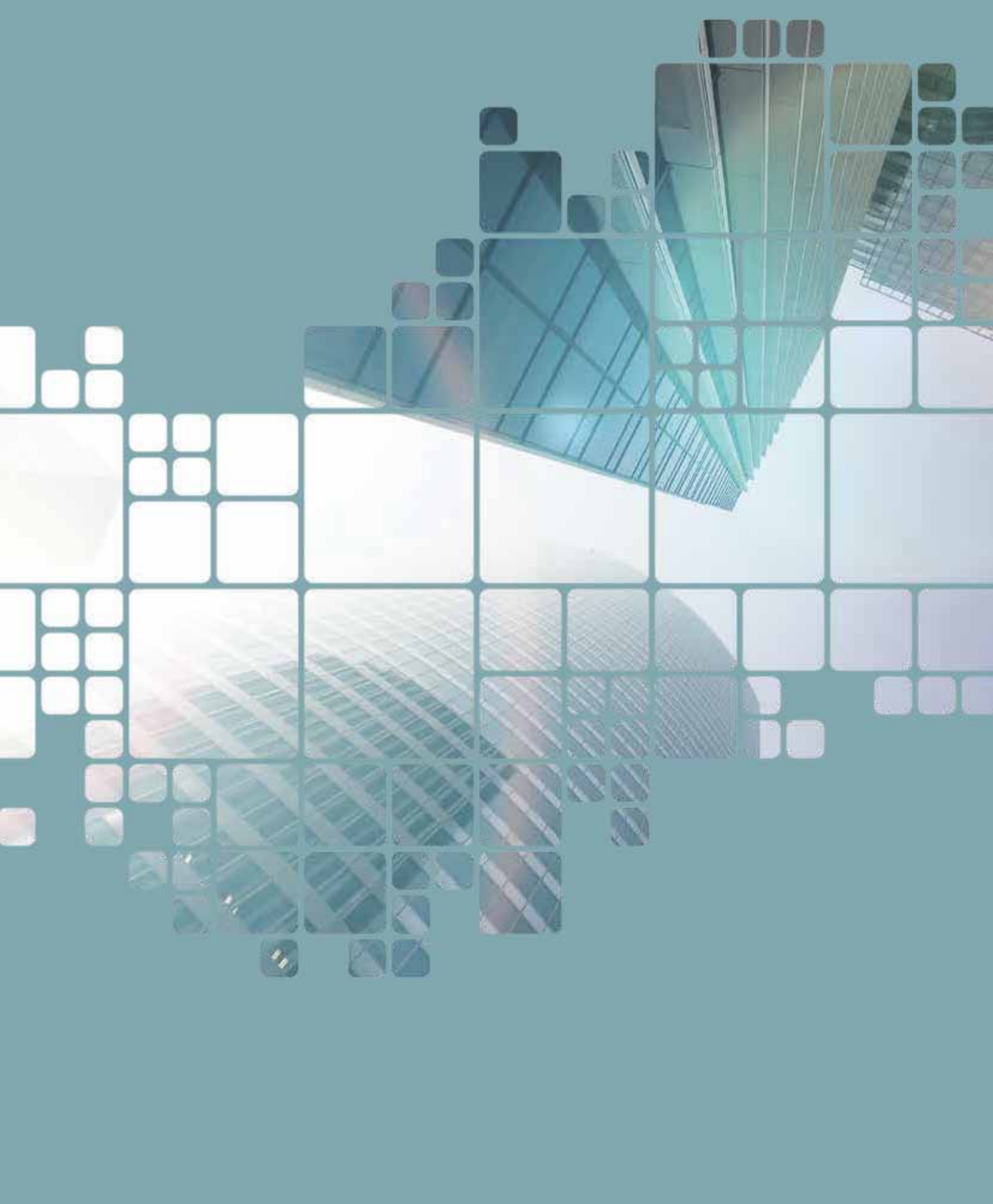
TCATQZ Model		1361	1401	1421	2471	2531	2581	2601	2721
❶ Nominal cooling capacity	kW	357,4	393,6	418,4	470,3	527,8	569,9	598,6	717,4
❶ E.E.R.		3,4	3,32	3,28	3,38	3,34	3,33	3,41	3,42
● E.S.E.E.R.		4,6	4,59	4,5	4,69	4,68	4,67	4,53	4,53
❶ Absorbed power	kW	105,12	118,55	127,56	139,14	158,02	171,14	175,54	209,77
❸ Sound pressure	dB(A)	60	60	60	62	62,5	62,5	62,5	62
❹ Sound power level	dB(A)	81	81	81	82	83	83	83	83
Step/compressor	no.	1/infinite	1/infinite	1/infinite	2/infinite	2/infinite	2/infinite	2/infinite	2/infinite
Circuits	no.	1	1	1	1	1	1	1	1
Electric power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES		1361	1401	1421	2471	2531	2581	2601	2721
W - Width	mm	4750	4750	4750	4750	5720	5720	5720	6690
H - Height	mm	2560	2560	2560	2560	2560	2560	2560	2560
D - Depth	mm	2380	2380	2380	2380	2380	2380	2380	2380
❺ Weight	kg	3428	3686	4150	4638	4782	5204	5262	6272

TCATQZ Model		3811	3871	3931	3981	31131	31211	41361
❶ Nominal cooling capacity	kW	806,8	862,9	922,4	977,1	1126,2	1208,5	1354,8
❶ E.E.R.		3,3	3,3	3,31	3,38	3,25	3,1	3,5
● E.S.E.E.R.		4,62	4,61	4,65	4,68	4,62	4,59	4,63
❶ Absorbed power	kW	244,48	261,48	278,67	289,08	346,52	389,84	387,09
❸ Sound pressure	dB(A)	62	62	63,5	63	63	63	64
❹ Sound power level	dB(A)	84	84	85	85	85	85	86
Step/compressor	no.	3/infinite	3/infinite	3/infinite	3/infinite	3/infinite	3/infinite	4/infinite
Circuits	no.	1	1	1	1	1	1	2
Electric power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES		3811	3871	3931	3981	31131	31211	41361
W - Width	mm	7670	7670	7670	9120	10570	10570	10570
H - Height	mm	2560	2560	2560	2560	2560	2560	2560
D - Depth	mm	2380	2380	2380	2380	2380	2380	2380
❺ Weight	kg	6784	7165	7510	8664	8724	9112	10558

Details under the following conditions:

- ❶ Air: 35°C - Water: 12/7°C.
 - ❸ 1 m from the unit in free field (Q = 2).
 - ❹ Total sound power level in dB(A) on the basis of measurements taken in accordance with UNI EN-ISO 9614.
 - ❺ Empty weight
 - ESEER (European Seasonal EER) - Average European seasonal efficiency.
- Performance according to EN 14511:2013





CHILLERS - HEAT PUMPS

Air cooled - Centrifugal fans

Low consumption Mini-Y C

TCCEY-THCEY 105÷111

Cooling capacity: 4.9÷10.6 kW - Heating capacity: 5÷10.8 kW



• Compact and Plug&Play units

Packaged reversible air-cooled heat pumps and water chillers with centrifugal 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 plate heat exchanger, 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: centrifugal electric fan with directly coupled motor, fitted with internal thermal protection and protection grilles.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: in galvanised and painted sheet steel, complete with condensation drain pan for THCEY.

Models

- TCCEY: unit designed for cooling only.
- THCEY: heat pump unit.

Factory fitted accessories

- Soft-start device (for models with 230V power supply).
- Condensation control -10°C .
- Low pressure switch.
- Compressor crankcase heater.
- Digital input for double set-point.
- 4-20 mA analogue input for shifting set-point.
- Water low set-point temperature.

Accessories separately supplied

- Rubber vibration dampers.
- -10°C condensation control
- Water filter.
- Low pressure switch.
- Antifreeze heater on the buffer tank.
- Inlet anti-vibration connection.
- Outlet anti-vibration connection.
- Outdoor air temperature probe for set-point compensation
- Additional electric heater for heat pump, managed by regulation.
- Remote keypad with display.
- Clock board.
- Interfaces for serial communication with other devices.
- RS485/USB serial converter.
- Rhoss supervisors for unit monitoring and remote management.



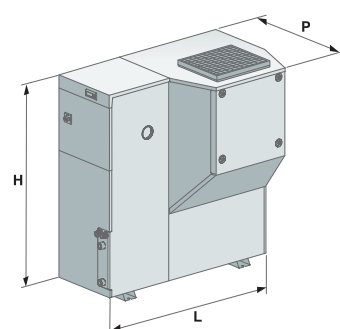
TCCEY-THCEY MODEL		105	107	109	111
❶ TCCEY Nominal cooling capacity	kW	4,9	6	8,3	10,1/10,6
❶ TCCEY absorbed power	kW	1,98	2,49	3,47	4,28/4,33
❶ E.E.R. TCCEY		2,47	2,41	2,39	2,36/2,45
● E.S.E.E.R. TCCEY		2,44	2,43	2,53	2,47/2,5
⊕ ESEER+		2,8	2,76	2,89	2,78 / 2,84
❷ Nominal heating capacity	kW	4,95	6,18	8,11	10,44/10,83
❷ Absorbed power	kW	2,02	2,43	3,51	4,11/4,4
❷ C.O.P.		2,45	2,54	2,31	2,54/2,46
(§) Energy class THCEY		A	A	A	A
❸ Sound pressure	dB(A)	47	48	50	51
Scroll/step compressor	no.	1/1	1/1	1/1	1/1
Circuits	no.	1	1	1	1
Fan nominal air flow	m³/h	2450	2400	2650	2600
Fan available static pressure	Pa	80	70	80	70
Buffer tank water content	l	19	19	30	30
❹ Available head pressure of the circulating pump	kPa	60	60	87	79
Power 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 WEIGHTS		105	107	109	111
L - Width	mm	990	990	990	990
H - PUMP Height	mm	940	940	1125	1125
H - TANK & PUMP Height	mm	940	940	1330	1330
P - Depth	mm	630	630	630	630
❹ TCCEY Weight	kg	143	145	164	178
❹ THCEY Weight	kg	153	155	174	188

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 most complete set up.
- ESEER = (European seasonal EER) - Average European seasonal efficiency.
- ⊕ ESEER with Adaptive Function Plus software. ESEER+ is not Eurovent certified.

Performance according to EN 14511:2013

- (§) In average climatic conditions according to EU Regulation N° 811/2013



Low consumption Compact-Y C

TCCEY-THCEY 114÷128

Cooling capacity: 13.3÷26.6 kW - Heating capacity: 13.7÷29.2 kW



• Vertical or horizontal air discharge

Packaged reversible air-cooled heat pumps and water chillers with centrifugal 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 plate heat exchanger, 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: centrifugal electric fans with directly coupled motor, fitted with internal thermal protection and protection grilles.
- Vertical condensation air supply.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: peraluman, complete with condensation drain pan for THCEY.

Models

- TCCEY: unit designed for cooling only.
- THCEY: heat pump unit.

Factory fitted accessories

- Horizontal flow of condensation air.
- Antifreeze heater on the buffer tank.
- Condensation control -10°C .
- Compressor crankcase heater.
- Soft-start device.
- Silenced set up.
- Digital input for double set-point.
- 4-20 mA analogue input for shifting set-point.
- Water low set-point temperature.

Accessories supplied loose

- Rubber anti-vibration mountings.
- -10°C condensing control (models 114-126).
- Water filter.
- Inlet anti-vibration connection.
- Outlet anti-vibration connection.
- 3-way valve for the production of domestic hot water, managed by regulation.
- Outdoor air temperature probe for set-point compensation.
- Additional electric heater for heat pump, managed by regulation.
- Remote keyboard with display.
- Clock board.
- Interfaces for serial communication with other devices.
- Serial converter (RS485/USB).
- Rhoss supervisors for unit monitoring and remote management.



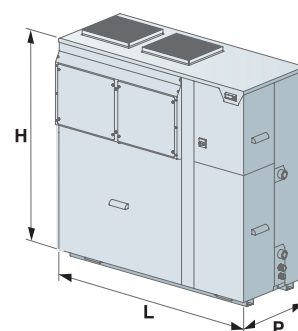
TCCEY-THCEY MODEL		114	117	121	126	128
❶ Nominal cooling capacity	kW	13,3	15,9	20,1	23,2	26,6
❶ Absorbed power	kW	4,68	5,46	7,56	8,96	10,08
❶ E.E.R.		2,84	2,91	2,66	2,59	2,64
● E.S.E.E.R.		3,1	3,09	2,97	2,81	2,84
⊕ ESEER+		3,13	3,21	3,09	3,08	3,06
❷ Nominal heating capacity	kW	13,7	17	21,6	25,6	29,2
❷ Absorbed power	kW	4,71	5,57	7,06	8,26	9,39
❷ C.O.P.		2,91	3,05	3,06	3,1	3,11
(S) Energy class THCEY		A	A+	A	A+	A
❸ Sound pressure	dB(A)	54	55	56	57	61
Scroll/step compressor	no.	1/1	1/1	1/1	1/1	1/1
Circuits	no.	1	1	1	1	1
Fan nominal air flow	m³/h	6900	6900	7500	6800	8400
Fan available static pressure	Pa	90	80	80	70	120
Buffer tank water content (T&P set up)	l	55	55	80	80	80
❶ Available head pressure of the standard electric pump	kPa	50	44	157	151	131
❶ Available head pressure of high pressure pump	kPa	179	160	-	-	-
Power 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 WEIGHTS		114	117	121	126	128
L - Width	mm	1320	1320	1710	1710	1710
H - STANDARD Height	mm	1305	1305	1305	1305	1305
H - TANK & PUMP Height	mm	1600	1600	1600	1600	1600
P - Depth	mm	558	558	643	643	643
❹ TCCEY Weight	kg	340	360	420	440	440
❹ THCEY Weight	kg	350	370	440	460	460

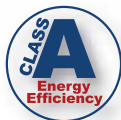
Data at the following conditions:

- ❶ Air: 35°C - Water: 12/7°C.
- ❷ Air: 7°C D.B. - 6°C W.B. - 70% RH. - Water: 40/45°C.
- ❸ In open field (Q = 2) at 5 m from the unit and ducted fans.
- ❹ Weight refers to most complete set up.
- ESEER = (European seasonal EER) - Average European seasonal efficiency.
- ⊕ ESEER with Adaptive Function Plus software. ESEER+ is not Eurovent certified.

Performance according to EN 14511:2013. Standard set up

(S) In average climatic conditions according to EU Regulation N° 811/2013





Low consumption Y-Pack C-PF

TCCETY-THCETY 233÷2160

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



TCCETY 233

THCETY 2130

- High energy efficiency range
- “Plug-Fan” type of centrifugal fans with EC motor (brushless)
- 3 capacity steps

High efficiency packaged reversible air-cooled water chillers and heat pumps with Plug-Fan centrifugal fans with EC motors.

Range with hermetic Scroll compressors and R410A refrigerant.

Construction features

- Compressor: hermetic, rotary Scroll compressor, complete with thermal protection and casing heater.
- 2 or 3 capacity steps depending on the models that allows excellent load modulation together with high energy efficiency at partial loads to be achieved.
- 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 of centrifugal electric fans with EC motors, equipped with internal thermal protection set in a single row with horizontal outlet. Horizontal condensation/evaporation air outlet opposite the finned coil or vertical can be easily transformed on site.
- Proportional electronic device for continuous fan rotation speed regulation down 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 galvanised and painted (RAL 9018) sheet steel; galvanised sheet steel base

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 pump in standby, complete with expansion tank, safety valve and water side pressure gauge. The pumps are available in the low or high pressure versions.
- TANK&PUMP with built-in buffer tank and single or double pump, complete with expansion tank, air bleed valves, safety valve and water pressure gauge.
- Desuperheater.
- 100% Heat recovery unit
- Electronic expansion valve.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Soft starter.
- Compressor soundproofing.
- Refrigerant circuit high and low pressure gauges.
- Copper/copper or copper/pre-painted aluminium coils.
- Digital input for double set-point.
- 4-20 mA analogue input for shifting set-point.
- Evaporator antifreeze resistance, buffer tank, pumps and heat exchangers for heat recovery if present.
- Interfaces for serial communication with other devices.
- Anti-vibration mountings.

Separately supplied accessories

- Remote keyboard with display.
- Clock board.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of several water chillers.

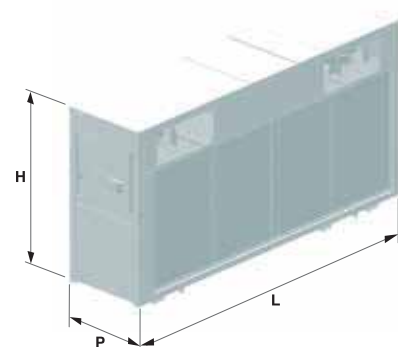


TCCEY MODEL		233	238	245	250	260	265	270
❶ Nominal cooling capacity	kW	32,3	38,5	43,9	51,0	58,9	63,7	69,9
❶ E.E.R.		2,61	2,77	2,70	2,75	2,68	2,62	2,85
❶ Absorbed power	kW	12,38	13,90	16,26	18,55	21,98	24,31	24,53
● E.S.E.E.R.		4,48	4,04	4,29	4,43	4,3	4,36	4,48
⊕ ESEER+		5,02	4,51	4,97	5,12	4,95	5,06	5,17
THCEY 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.		3,00	3,00	3,01	2,99	2,99	2,88	3,26
§ Energy class		A+	A+	A++	A+	A+	A+	A+
❷ Absorbed power in winter mode	kW	12,57	14,03	15,98	18,80	20,90	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	13.000	13.000	13.000	26.000	26.000	26.000	26.000
Maximum fan available static pressure	Pa	250	250	250	250	250	250	250
Power 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	3.650
H - Height	mm	1920	1920	1920	1920	1920	1920	1.920
P - Depth	mm	870	870	870	870	870	870	1.100

TCCEY 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.		2,90	2,82	2,74	2,93	2,89	2,90	2,89
❶ Absorbed power	kW	27,28	31,03	36,72	38,87	43,36	49,07	55,43
● E.S.E.E.R.		4,18	4,11	4,09	4,04	4,4	4,53	4,14
⊕ ESEER+		4,84	4,76	4,72	4,68	5,07	5,22	4,71
THCEY 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.		3,38	3,20	3,19	3,25	3,33	3,25	3,24
§ Energy class		-	-	-	-	-	-	-
❷ Absorbed power in winter mode	kW	25,53	30,13	34,95	37,69	41,92	48,49	54,20
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	26.000	27.000	39.000	39.000	39.000	52.000	52.000
Maximum fan available static pressure	Pa	250	250	250	250	250	250	250
Power 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	3.650	3.650	3.650	4.450	4.450	4.450	4.450
H - Height	mm	1.920	1.920	1.920	2.320	2.320	2.320	2.320
P - Depth	mm	1.100	1.100	1.100	1.100	1.100	1.100	1.100

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 RS S/C/005-2009 and UNI EN-ISO 9614
 - ESEER = (European seasonal EER) - Average European seasonal efficiency.
 - ⊕ ESEER with Adaptive Function Plus software. ESEER+ is not Eurovent certified.
 - § In average climatic conditions according to EU Regulation N° 811/2013
- Performance according to EN 14511:2013



Low Consumption Comby-Flow - TCHEY-THHEY 105÷112

Low consumption Y-Flow - TCHEY-THHEY 115÷240

Low consumption Y-Flow E - TCEEY 115÷240

Low consumption Y-Flow - TCHEY-THHEY 245÷4450

Z-Flow HE - TCHVZ 1201÷31631

Z-Flow SE - TCHVZ 1200÷31630

Low consumption Y-Flow E - TCEEY 245÷4360

Z-Flow E - TCEVZ 1200÷31630



CHILLERS - HEAT PUMPS

Water cooled - Condenserless

Low Consumption Comby-Flow

TCHEY-THHEY 105÷112

Cooling capacity: 5.5÷12.2 kW - Heating capacity: 6.6÷13.7 kW



- **ESEER with Adaptive Function Plus up to 4.5**
- **Extremely compact and silent units**

Packaged water-cooled water chillers and reversible heat pumps on the 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: suitably insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch.
- Well/aqueduct side heat exchanger (disposal unit): with suitably insulated stainless steel plate heat exchanger, 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 sheet steel with polyester powder coating, complete with soundproofed compressor.

Models

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

Factory fitted accessories

- Pressure switch valve.
- Pressure switch valve and bypass solenoid valve (only THHEY).
- Water circuit heat pump (for TCHEY only).
- Digital input for double set-point.
- 4-20mA analogue input for shifting set-point.
- Water low set-point temperature.

Accessories supplied loose

- Buffer tank.
- Buffer tank connection pipes.
- Water filter.
- Rubber anti-vibration mountings.
- 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 electric heater for heat pump, managed by regulation.
- Remote keyboard with display.
- Clock board.
- Interfaces for serial communication with other devices.
- Serial converter (RS485/USB).
- Rhoss supervisors for unit monitoring and remote management.

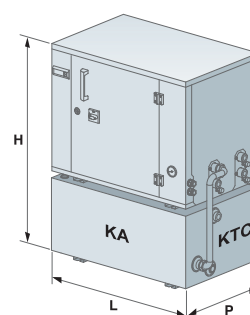
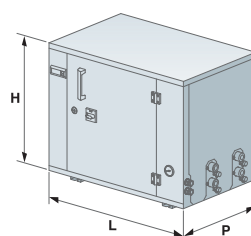


TCHEY-THHEY MODEL		105	107	109	112
Radiant systems					
❶ Heating capacity	kW	7,5	9,7	12,7	15
❶ Absorbed power	kW	1,6	2,1	2,72	3,33
❶ C.O.P.		4,68	4,61	4,67	4,51
(S) Energy class THHEY		A++	A++	A++	A++
❷ Heating capacity (geothermal)	kW	5,4	7,3	9,4	11,3
❷ Absorbed power (geothermal)	kW	1,5	2,15	2,78	3,34
❷ C.O.P. (geothermal)		3,62	3,39	3,38	3,39
❸ Cooling capacity TCHEY	kW	7,6	10,4	13,5	17,6
❸ Absorbed power TCHEY	kW	1,56	2,22	2,84	3,86
❸ E.E.R. TCHEY		4,86	4,69	4,76	4,56
Fan coil systems					
❹ Heating capacity	kW	6,58	8,1	10,63	13,71
❹ Absorbed power	kW	2,08	2,8	3,33	4,21
❹ C.O.P.		3,17	2,89	3,19	3,26
❺ Cooling capacity TCHEY	kW	5,5	6,8	9,2	12,2
❺ Absorbed power TCHEY	kW	1,69	2,19	2,79	3,74
❺ E.E.R. TCHEY		3,25	3,11	3,3	3,26
● E.S.E.E.R. TCHEY		3,43	3,65	3,91	3,87
★ E.S.E.E.R.+		4	4,25	4,46	4,34
❻ 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
❽ Available head pressure of the circulating pump	kPa	47	55	82	77
Power 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 WEIGHTS		105	107	109	112
L - Width	mm	585	585	660	660
H - STANDARD - PUMP Height	mm	535	535	535	535
H - STANDARD - PUMP + KA Height	mm	855	855	855	855
P - Depth	mm	386	386	420	420
❼ Weight	kg	78	83	94	97
KA Weight	kg	28	28	33	33

Data at the following conditions:

- ❶ Hot water: 30/35°C - Evaporator water: 10/7°C.
 - ❷ Hot water: 30/35°C - Evaporator water: 0/-3°C, 30% glycol.
 - ❸ Chilled water: 23/18°C - Condenser water: 30/35°C.
 - ❹ Hot water: 40/45°C - Evaporator water: 10/7°C.
 - ❺ Chilled water: 12/7°C - Condenser water: 30/35°C.
 - ❻ In open field (Q = 2) at 1 m from the unit.
 - ❼ Weight refers to most complete set up.
 - ESEER = (European seasonal EER) - Average European seasonal efficiency.
 - ★ ESEER with Adaptive Function Plus software. ESEER+ is not Eurovent certified.
- Performance according to EN 14511:2013. Standard set up
 KA = buffer tank.
 KTC = connecting pipe.

(S) In average climatic conditions according to EU Regulation N° 811/2013



Low consumption Y-Flow

TCHEY-THHEY 115÷240

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



- **CLASS A unit (radiant applications)**
- **Applications with ground water or city water or geothermal probes.**
- **Plug&Play unit with hydraulic connections on the top**

Packaged water-cooled water chillers and reversible heat pumps on the cooling circuit. Range with hermetic Scroll compressors and R410A refrigerant gas.

Construction features

- Compressor: hermetic, rotary Scroll compressor, complete with thermal protection and casing heater.
- Primary side (user) heat exchanger: suitably insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch.
- Drain side heat exchanger (ground/aqueduct/geothermal probes): suitably insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch (for THHEY).
- Control: electronic with compatible iDRHOSS microprocessor with Adaptive Function Plus logic.
- Structure: in galvanised sheet steel and varnished 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 increased head pressure, membrane expansion tank, safety valve, water fill/drain valve, manual air bleed 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 bleed valve.
- Silenced set up.
- Pressure switch valve with water flow blocking solenoid.
- Pressure switch valve with water flow blocking solenoid and bypass solenoid valve.
- Water circuit heat pump (for TCHEY only).
- Soft-start device.
- Water low set-point temperature.
- Digital input for double set-point.
- 4-20mA analogue input for shifting set-point.

Accessories supplied loose

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



TCHEY-THHEY MODEL		115	118	122	125	230	240
Radiant systems							
❶ THHEY heating capacity	kW	18,6	21,5	26,6	30,7	38,5	47,9
❶ Absorbed power	kW	3,29	3,55	4,45	5,04	6,63	8,09
❶ C.O.P.		5,66	6,05	5,97	6,09	5,81	5,92
(S) Energy class THHEY		A++	A++	A++	A++	A++	A++
❷ Heating capacity THHEY (geothermal)	kW	13,4	15,3	18,6	21,7	27,7	33,8
❷ C.O.P. (geothermal)		4,12	4,21	4,37	4,49	4,23	4,3
❸ Cooling capacity TCHEY	kW	22,1	25,7	31,6	36,5	43,2	58,8
❸ Absorbed power TCHEY	kW	3,46	3,71	4,83	5,45	6,99	8,78
❸ E.E.R. TCHEY		6,38	6,92	6,54	6,7	6,18	6,7
Fan coil systems							
❹ Heating capacity THHEY	kW	17,4	20,2	25,1	28,9	35,9	45,1
❹ Absorbed power	kW	3,95	4,41	5,59	6,3	8,05	10,11
❹ C.O.P.		4,4	4,58	4,49	4,59	4,46	4,46
❺ Cooling capacity TCHEY/THHEY	kW	15,5/13,9	18,4/16,3	22,7/20	26,3/23,1	30,5/27,3	41,7/35,9
❺ Absorbed power TCHEY	kW	3,27	3,49	4,5	5,01	6,64	8,07
❺ E.E.R. TCHEY		4,74	5,27	5,04	5,25	4,59	5,17
● E.S.E.E.R. TCHEY		5,52	5,96	5,9	5,97	5,18	5,81
★ E.S.E.E.R.+		6,28	6,8	6,77	6,83	6,17	6,91
❻ 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
❼ Std system side electric pump available head pressure	kPa	88	81	73	113	105	115
Power 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 WEIGHTS		115	118	122	125	230	240
L - Width	mm	700	700	700	700	700	700
H - STANDARD - PUMP Height	mm	1100	1100	1100	1100	1100	1100
P - Depth	mm	560	560	780	780	780	780
❼ Weight	kg	193	193	230	254	278	298

Data at the following conditions:

- ❶ Hot water: 30/35°C - Evaporator water: 10/7°C.
- ❷ Hot water: 30/35°C - Evaporator water: 0/-3°C, 30% glycol.
- ❸ Chilled water: 23/18°C - Condenser water: 30/35°C.
- ❹ Hot water: 40/45°C - Evaporator water: 10/7°C.
- ❺ Chilled water: 12/7°C - Condenser water: 30/35°C.
- ❻ In open field (Q = 2) at 1 m from the unit, with silenced set up.
- ❼ Weight refers to most complete set up.
- ESEER = (European seasonal EER) - Average European seasonal efficiency.
- ★ ESEER with Adaptive Function Plus software. ESEER+ is not Eurovent certified.

Performance according to EN 14511:2013.

(S) In average climatic conditions according to EU Regulation N° 811/2013



Low consumption Y-Flow E

TCEEY 115÷240

Cooling capacity: 13.7 ÷ 36.9 kW



- **Efficient condenserless units in R410a**

Cooling only condenserless units to couple with CCAMY remote condensers.

Range with hermetic Scroll compressors and R410A refrigerant gas.

Construction features

- Compressor: hermetic, rotary Scroll compressor, complete with thermal protection and casing heater.
- Water side heat exchanger: adequately insulated stainless steel plate heat exchanger, complete with antifreeze heater and water flow differential pressure switch.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: in galvanised sheet steel and varnished with polyester powder coating, internally covered with soundproof panelling.

Models

TCEEY: unit designed for cooling only.

Factory fitted accessories

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

Accessories supplied separately

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



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 pressure of standard pump	kPa	89	80	73	114	107	113
❶ Available head pressure of high pressure pump	kPa	164	146	163	152	129	135
❷ Sound power	dB(A)	58	58	62	63	64	67
❷ Silenced version sound pressure level	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
Electric power 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
SIZES AND WEIGHTS		115	118	122	125	230	240
W - Width	mm	700	700	700	700	700	700
H - Height	mm	1140	1140	1140	1140	1140	1140
D - 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 - Condensation temperature: 50°C (dew point)
- ❷ Sound power level in dB(A) based on measurements carried out in accordance with regulations UNI EN ISO 9614
- ❸ Weight refers to most complete set up

(*) Unit without electric pumps.

Important note: the units can be combined with the corresponding models of the CCAMY remote condensers

Low consumption Y-Flow

TCHEY-THHEY 245÷4450

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



THHEY 4260

TCHEY 2100

- **Class A unit (radiant applications)**
- **Applications with well water, water mains or geothermal probes**
- **Vast range of set ups and accessories**
- **Version HT65 for water production 65°C (°)**

Packaged water-cooled water chillers and reversible heat pumps on the cooling circuit. Range with hermetic Scroll compressors and R410A refrigerant gas.

Construction features

- Compressor: hermetic, rotary Scroll compressor, complete with thermal protection and casing heater.
- Primary side (user) heat exchanger: suitably insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch.
- Drain side heat exchanger (ground/aqueduct/geothermal probes): suitably 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 sheet steel, with polyester powder coating.

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 pump, including an automatic pump in standby, complete with expansion tank, safety valve, water charge/drain valve, air bleed valve, pressure gauge. The electric pumps are available in the low or high pressure head versions. →

- PUMP Disposal unit side PUMP (geothermal probes/dry cooler): with single or double electric pump regulated via inverter including one in standby and with automatic activation. →
- Desuperheater. →
- Heat recovery unit 100% (mod. 245÷4360). →
- Water circuit heat pump (for TCHEY only).
- Power factor correction capacitors.
- Soft-start device.
- Forced limit of power consumption.
- Electronic expansion valve (standard for mod. 4410-4450).
- Refrigerant circuit high and low pressure gauges.
- Silenced set up.
- Water low set-point temperature.
- Digital input for double set-point.
- 0-10V analogue input for condensation control performed by external device.
- 4-20mA analogue input for shifting set-point.
- Interfaces for serial communication with other devices.
- Rubber anti-vibration mountings.

Accessories supplied loose

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

(°) Review the specific documentation to verify the available models and accessories.

→ The units can be equipped with up to 2 pumps in mod. 245÷2185 and 4 electric pumps in mod. 4180-4450. In the presence of recovery unit or desuperheater, the PUMP configuration is not provided.



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	184,0
❶	Absorbed power	kW	9,85	11,42	13,19	15,01	16,52	19,27	22,55	25,55	29	31,82	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
●	E.S.E.E.R.		6,6	6,6	6,64	6,39	6,5	6,26	6,07	6,17	6,04	6,02	5,79
⊕	ESEER+		7,54	7,62	7,68	7,39	7,42	7,23	7,10	7,08	6,91	6,89	6,71
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	117,0	133,9	147,9	163,4	209,7
❷	C.O.P.		4,10	4,22	4,25	4,27	4,22	4,26	4,20	4,24	4,17	4,13	4,01
❶	Cooling capacity		41,2	48,5	55,2	63	69,1	81,9	95,7	109,1	120,7	134,3	169,9
❷	Absorbed power	kW	12,24	14,00	15,98	17,73	19,93	24,04	27,86	31,58	35,47	39,56	52,29
❸	Sound power level	dB(A)	67	67	68	68	69	70	71	72	73	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	2/2
	Circuits	no.	1	1	1	1	1	1	1	1	1	1	1
	Electric power 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										
SIZES AND WEIGHTS		245	250	260	270	275	290	2100	2115	2130	2145	2165	2185
❹	W - Width	mm	1.000	1.000	1.000	1.000	1.000	1.250	1.250	1.250	1.250	1.250	1.250
❺	W - Width	mm	1.250	1.250	1.250	1.250	1.250	1.500	1.500	1.500	1.500	1.500	1.500
	H - Height	mm	1.400	1.400	1.400	1.400	1.400	1.550	1.550	1.550	1.550	1.550	1.550
	D - Depth	mm	870	870	870	870	870	870	870	870	870	870	870

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
●	E.S.E.E.R.		5,82	5,95	6,11	6,1	6,09	6,01	5,87	5,64	5,28
⊕	ESEER+		6,78	7,03	7,19	7,12	7,13	7,07	6,94	6,63	6,16
THHEY MODEL		4180	4205	4235	4260	4290	4330	4360	4410	4450	
❷	Heating capacity	kW	202,2	231,0	259,2	292,3	323,9	369,3	414,0	464,4	515,5
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		160,4	183,5	206,5	231,4	255,2	292,7	330,1	373,9	412,9
❷	Absorbed power	kW	45,95	53,35	60,85	68,45	75,85	87,93	99,52	116,98	127,92
❸	Sound power level	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
Electric power 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
SIZES AND WEIGHTS		4180	4205	4235	4260	4290	4330	4360	4410	4450	
❹	W - Width	mm	2.509	2.509	2.509	2.509	2.509	2.509	2.509	2.509	2.509
❺	W - Width	mm	3.734	3.734	3.734	3.734	3.734	3.734	3.734	3.734	3.734
H - Height		mm	1.855	1.855	1.855	1.855	1.855	1.855	1.855	1.855	1.855
D - Depth		mm	870	870	870	870	870	870	870	870	870



Details under 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) on the basis of measurements taken in accordance with UNI EN-ISO 9614.
 - ❹ Width referring to the unit with standard configuration or supplied with "recovery" or "desuperheater" accessories.
Width referring to the PUMP unit, 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).
 - ESEER (European Seasonal EER) - Average European seasonal efficiency.
 - ⊕ ESEER with Adaptive Function Plus software. ESERR+ is not Eurovent certified.
- Performance according to EN 14511:2013

Z-Flow HE

TCHVZ 1201÷31631

Cooling capacity: 203.3÷1,627.6 kW



TCHVBZ 31631 HE

- Efficiency range with ESEER at 5.88
- 33 sizes up to more than 1,600 kW
- Wide range of standard equipment

Packaged 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 part-winding or star-delta limited start (depending on model) and complete with integral protection, crankcase heater and shut-off valve on the refrigerant gas flow pipe.
- Electronic expansion valve: as standard on all models.
- Water side heat exchanger (evaporator): dry expansion shell and tube exchanger with counter-current heat exchange, complete with closed cell polyurethane rubber foam insulation, water flow differential pressure switch and Victaulic connections.
- Water side heat exchanger (condenser): shell and tube complete with safety valve, and service valve on the high-pressure refrigerant circuit.
- Control: microprocessor electronic control.
- Structure: in galvanised and painted sheet steel, with polyester powder coating.
- The unit is also complete with:
 - clock board for displaying date/time and machine time band management.
 - Display of cooling circuit high/low pressure.
 - 0-10V analogue input for condensation control performed by external device.

Versions

- B - Standard version (TCHVBZ).
- I - Soundproofed version with soundproofed compressor cover (TCHVIZ).

Models

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

Factory fitted accessories

- Desuperheater.
- Heat recovery unit 100%.
- Thermostat with display for heat recover unit/desuperheater.
- Prepared for heat pump operation.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Thermal overload switches
- Forced limit of power consumption.
- Soft starter.
- Compression suction shutoff valves
- Linear capacity control compressors (50-100 % for each compressor).
- Evaporator antifreeze resistance.
- Digital input for double set-point.
- Compressor oil level sensor.
- Control of min/max power supply voltage.
- 4-20 mA analogue input for shifting set-point.
- Interfaces for serial communication with other devices.
- Spring antivibration mountings.
- Antivibration rubber mountings.

Separately supplied accessories

- Remote keyboard with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of several water 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
● E.S.E.E.R.		5.88	5.71	5.72	5.63	5.82	5.77	5.64	5.6	5.85
❶ Absorbed power	kW	41.07	46.41	56.76	62.1	71.27	84.46	96.8	107.89	122.4
❸ Sound power level	dB(A)	94	94	97	97	97	97	97	98	98
❸ Sound power level	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
Electric power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS		1201	1231	1281	1311	1351	1421	1481	1531	1611
W - Width	mm	3.460	3.460	3.440	3.440	3.450	3.450	3.450	3.450	3.450
H - Height	mm	1.460	1.460	1.460	1.460	1.640	1.640	1.640	1.740	1.740
D - Depth	mm	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
❺ TCHVBZ weight	kg	1.343	1.369	1.715	1.733	1.885	2.374	2.413	2.662	2.697
❺ TCHVIZ weight	kg	1.598	1.624	1.970	1.988	2.140	2.629	2.668	2.917	2.952

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
● E.S.E.E.R.		5.75	5.67	5.65	5.73	5.81	5.77	5.74	5.72	5.64
❶ Absorbed power	kW	81.92	87.42	93.01	103.16	113.34	120.34	126.59	135.5	144.23
❸ Sound power level	dB(A)	97	97	97	99	99	99	99	99	99
❸ Sound power level	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
Electric power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS		2411	2431	2461	2511	2561	2601	2631	2681	2711
W - Width	mm	3.880	3.880	4.000	4.070	4.070	4.070	4.070	4.070	4.070
H - Height	mm	1.840	1.840	1.840	1.960	1.960	1.960	1.960	1.960	1.960
D - Depth	mm	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300
❺ TCHVBZ weight	kg	2.386	2.413	2.458	2.953	3.297	3.320	3.337	3.404	3.447
❺ TCHVIZ weight	kg	2.816	2.843	2.888	3.383	3.727	3.750	3.767	3.834	3.877

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
● E.S.E.E.R.		5.63	5.65	5.79	5.75	5.8	5.84	5.74	5.73
❶ Absorbed power	kW	156.86	169.76	181.41	193.22	206.04	218.48	231.63	246.67
❸ Sound power level	dB(A)	99	99	99	99	99	99	99	99
❸ Sound power level	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
Electric power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS		2781	2841	2901	2961	21031	21111	21181	21261
W - Width	mm	4.120	4.000	4.000	4.000	4.000	4.000	4.000	4.000
H - Height	mm	1.840	1.840	1.910	1.910	1.950	1.950	1.950	1.950
D - Depth	mm	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300
❺ TCHVBZ weight	kg	3.920	4.406	4.636	4.669	4.779	4.870	4.908	4.934
❺ TCHVIZ weight	kg	4.350	4.836	5.066	5.099	5.209	5.300	5.438	5.364

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
● E.S.E.E.R.		5.82	5.77	5.81	5.76	5.87	5.86	5.86
❶ Absorbed power	kW	256.11	268.1	280.16	292.63	304.78	315.87	327.48
❸ Sound power level	dB(A)	101	101	101	102	102	102	102
❸ Sound power level	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
Electric power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS		31301	31351	31401	31461	31521	31591	31631
W - Width	mm	4.940	4.940	4.940	4.940	4.940	4.940	4.940
H - Height	mm	2.220	2.220	2.220	2.220	2.220	2.220	2.220
D - Depth	mm	1.700	1.700	1.700	1.700	1.700	1.700	1.700
❺ TCHVBZ weight	kg	6.795	6.827	6.852	6.891	6.980	7.068	7.157
❺ TCHVIZ weight	kg	7.395	7.427	7.452	7.491	7.580	7.668	7.757

Details under the following conditions:

- ❶ Chilled water: 7/12°C. - Condenser input water: 30/35°C.
 - ❸ Total sound power level in dB(A) on the basis of measurements taken in accordance with UNI EN-ISO 9614.
 - ❺ Unladen weight.
 - ESEER (European Seasonal EER) - Average European seasonal efficiency.
 - TCHVIZ soundproofed version.
- Performance according to EN 14511:2013

Z-Flow SE

TCHVZ 1200÷31630

Cooling capacity: 198.8÷1,624.5 kW



TCHVBZ 2710

- Efficiency range with EER >4.70
- 33 sizes up to more than 1,600 kW
- Heat pump unit set-up with water production up to 55°C

Packaged 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 part-winding or star-delta limited start (depending on model) and complete with integral protection, crankcase heater and shut-off valve on the refrigerant gas flow pipe.
- Electronic expansion valve: as standard on all models.
- Water side heat exchanger (evaporator): dry expansion shell and tube exchanger with counter-current heat exchange, complete with closed cell polyurethane rubber foam insulation, water flow differential pressure switch and Victaulic connections.
- Water side heat exchanger (condenser): shell and tube complete with safety valve, and service valve on the high-pressure refrigerant circuit.
- Control: microprocessor electronic control.
- Structure: in galvanised and painted sheet steel, with polyester powder coating.
- The unit is also complete with:
 - clock board for displaying date/time and machine time band management.
 - Display of cooling circuit high/low pressure.
 - 0-10V analogue input for condensation control performed by external device.

Versions

- B - Standard version (TCHVBZ).
- I - Soundproofed version with soundproofed compressor cover (TCHVIZ).

Models

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

Factory fitted accessories

- Desuperheater.
- Heat recovery unit 100%.
- Thermostat with display for heat recover unit/desuperheater.
- Prepared for heat pump operation.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Thermal overload switches
- Forced limit of power consumption.
- Soft starter.
- Compression suction shutoff valves
- Linear capacity control compressors (50-100 % for each compressor).
- Evaporator antifreeze resistance.
- Digital input for double set-point.
- Compressor oil level sensor.
- Control of min/max power supply voltage.
- 4-20 mA analogue input for shifting set-point.
- Interfaces for serial communication with other devices.
- Spring antivibration mountings.
- Antivibration rubber mountings.

Separately supplied accessories

- Remote keyboard with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of several water chillers.



TCHVBZ-TCHVIZ MODEL		1200	1230	1280	1310	1350	1410	1460	1530	1590
❶ Nominal cooling capacity	kW	198.8	225.4	276.2	304.6	346.1	402.7	460.5	522.7	587.1
❶ E.E.R.		4.81	4.8	4.79	4.76	4.8	4.79	4.79	4.78	4.81
● E.S.E.E.R.		5.73	5.55	5.5	5.46	5.73	5.65	5.52	5.49	5.76
❶ Absorbed power	kW	41.33	46.96	57.66	63.99	72.1	84.07	96.14	109.35	122.06
❸ Sound power level	dB(A)	94	94	97	97	97	97	97	98	98
❸ Sound power level	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
Electric power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS		1200	1230	1280	1310	1350	1410	1460	1530	1590
W - Width	mm	3.460	3.460	3.440	3.440	3.450	3.450	3.450	3.450	3.450
H - Height	mm	1.460	1.460	1.460	1.460	1.640	1.640	1.640	1.740	1.740
D - Depth	mm	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
❸ TCHVBZ weight	kg	1.333	1.359	1.695	1.713	1.865	2.354	2.393	2.642	2.687
❸ TCHVIZ weight	kg	1.588	1.614	1.950	1.968	2.120	2.609	2.648	2.897	2.942

TCHVBZ-TCHVIZ MODEL		2400	2420	2440	2510	2560	2600	2630	2680	2710
❶ Nominal cooling capacity	kW	389.9	411.5	430.3	505.3	549.0	589.6	618.9	674.1	706.8
❶ E.E.R.		4.77	4.71	4.64	4.72	4.84	4.81	4.81	4.81	4.81
● E.S.E.E.R.		5.47	5.51	5.38	5.51	5.75	5.71	5.6	5.5	5.48
❶ Absorbed power	kW	81.74	87.37	92.74	107.06	113.43	122.58	128.67	140.15	146.94
❸ Sound power level	dB(A)	97	97	97	99	99	99	99	99	99
❸ Sound power level	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
Electric power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS		2400	2420	2440	2510	2560	2600	2630	2680	2710
W - Width	mm	3.880	3.880	4.000	4.070	4.070	4.070	4.070	4.070	4.070
H - Height	mm	1.840	1.840	1.840	1.960	1.960	1.960	1.960	1.960	1.960
D - Depth	mm	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300
❸ TCHVBZ weight	kg	2.366	2.393	2.438	2.923	3.257	3.280	3.297	3.364	3.407
❸ TCHVIZ weight	kg	2.796	2.823	2.868	3.353	3.687	3.710	3.227	3.794	3.837

TCHVBZ-TCHVIZ MODEL		2750	2790	2880	2930	21030	21110	21180	21260
❶ Nominal cooling capacity	kW	738.6	783.1	876.4	924.1	1014.2	1084.5	1152.2	1204.4
❶ E.E.R.		4.75	4.7	4.83	4.72	4.77	4.81	4.83	4.78
● E.S.E.E.R.		5.46	5.49	5.8	5.59	5.69	5.78	5.68	5.62
❶ Absorbed power	kW	155.49	166.62	181.45	195.78	212.62	225.47	238.55	251.97
❸ Sound power level	dB(A)	99	99	99	99	99	99	99	99
❸ Sound power level	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
Electric power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS		2750	2790	2880	2930	21030	21110	21180	21260
W - Width	mm	4.120	4.000	4.000	4.000	4.000	4.000	4.000	4.000
H - Height	mm	1.840	1.840	1.910	1.910	1.950	1.950	1.950	1.950
D - Depth	mm	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300
❸ TCHVBZ weight	kg	3.880	4.366	4.596	4.629	4.739	4.830	4.878	4.914
❸ TCHVIZ weight	kg	4.310	4.796	5.026	5.059	5.169	5.260	5.308	5.344

TCHVBZ-TCHVIZ MODEL		31300	31350	31390	31460	31520	31590	31630
❶ Nominal cooling capacity	kW	1280.1	1327.0	1373.9	1433.9	1514.5	1576.5	1624.5
❶ E.E.R.		4.91	4.86	4.8	4.8	4.84	4.84	4.79
● E.S.E.E.R.		5.88	5.77	5.75	5.66	5.81	5.8	5.8
❶ Absorbed power	kW	260.71	273.05	286.23	298.73	312.91	325.72	339.14
❸ Sound power level	dB(A)	101	101	101	102	102	102	102
❸ Sound power level	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
Electric power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS		31300	31350	31390	31460	31520	31590	31630
W - Width	mm	4.940	4.940	4.940	4.940	4.940	4.940	4.940
H - Height	mm	2.220	2.220	2.220	2.220	2.220	2.220	2.220
D - Depth	mm	1.700	1.700	1.700	1.700	1.700	1.700	1.700
❸ TCHVBZ weight	kg	6.735	6.767	6.792	6.831	6.920	7.008	7.097
❸ TCHVIZ weight	kg	7.335	7.367	7.392	7.431	7.520	7.608	7.697

Details under the following conditions:

- ❶ Chilled water: 7/12°C. - Condenser input water: 30/35°C.
 - ❸ Total sound power level in dB(A) on the basis of measurements taken in accordance with UNI EN-ISO 9614.
 - ❸ Unladen weight.
 - ESEER (European Seasonal EER) - Average European seasonal efficiency.
 - TCHVIZ soundproofed version.
- Performance according to EN 14511:2013

Low consumption Y-Flow E

TCEEBY 245÷4360

Cooling capacity: 39.8÷320.9 kW



Cooling only condenserless units
to couple with CCAMY remote
condensers.

Range with hermetic Scroll
compressors and R410A refrigerant
gas.

Construction features

- Compressor: hermetic, rotary Scroll compressor, complete with thermal protection and casing heater.
- Water side heat exchanger: adequately insulated stainless steel plate heat exchanger, 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 sheet steel, with polyester powder coating.

Models

- TCEEBY: unit designed for cooling only.

Factory fitted accessories

- PUMP Primary side (user): pump unit complete with single or double circulation electric pump, expansion tank with membrane, safety valve, water fill/drain valve, manual air bleed valve, and pressure gauge. The pumps are available with low or high head.
- 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.
- Silenced set up.
- Interfaces for serial communication with other devices.
- Digital input for double set-point.
- 4-20 mA analogue input for shifting set-point.
- Rubber anti-vibration mountings supplied loose.

Separately supplied accessories

- Outdoor air temperature probe for set-point compensation.
- Water filter.
- Rubber anti-vibration mountings.
- Clock board.
- Remote keyboard with display.
- RS485/USB serial converter.





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	115,0	128,2	145,7	162,3
❶ EER		3,29	3,38	3,30	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	31,0	35,0	38,4	44,7	50,8
❶ Available head pressure of standard pump	kPa	116	108	134	94	84	86	117	119	133	117	119	106
❶ Available head pressure of high pressure 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 version sound pressure level	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
Electric power 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

SIZES AND WEIGHTS

W - Width	mm	1000	1000	1000	1000	1000	1000	1270	1270	1270	1270	1270	1270
W - Width (PUMP set-up)	mm	1250	1250	1250	1250	1250	1250	1500	1500	1500	1500	1500	1500
H - Height	mm	1400	1400	1400	1400	1400	1400	1550	1550	1550	1550	1550	1550
D - 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	205,0	229,4	253,8	287,4	320,9
❶ EER		3,53	3,50	3,48	3,49	3,50	3,42	3,36
❶ Absorbed power (*)	kW	45,7	52,3	58,9	65,8	72,6	84,0	95,5
❶ Available head pressure of standard pump	kPa	140	132	114	117	111	136	168
❶ Available head pressure of high pressure pump	kPa	195	200	196	240	273	241	257
❷ Sound power	dB(A)	77	77	78	79	80	81	82
❷ Silenced version sound pressure level	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
Electric power 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

SIZES AND WEIGHTS

W - Width	mm	2509	2509	2509	2509	2509	2509	2509
W - Width (PUMP set-up)	mm	3734	3734	3734	3734	3734	3734	3734
H - Height	mm	1855	1855	1855	1855	1855	1855	1855
D - Depth	mm	870	870	870	870	870	870	870

Details under the following conditions:

- ❶ Chilled water: 12/7°C - Dew point: 50°C (dew point)
- ❷ Sound power level in dB(A) on the basis of measurements taken in accordance with standard UNI EN ISO 9614
- (*) Unit without pumps.

Important note: models 245÷2185 can be combined with the corresponding models of the CCAMY remote condensers. For models 4180÷4360 refer to the table below

Recommended combinations with CCAMY condensers for models TCEEBY 4180÷4360								
TCEEBY MODEL		4180	4205	4235	4260	4290	4330	4360
CCAMY MODEL	Circuit 1	CCAMY 290	CCAMY 2110	CCAMY 2115	CCAMY 2130	CCAMY 2145	CCAMY 2165	CCAMY 2185
	Circuit 2	CCAMY 290	CCAMY 2110	CCAMY 2115	CCAMY 2130	CCAMY 2145	CCAMY 2165	CCAMY 2185

Z-Flow E

TCEVZ 1200÷31630

Cooling capacity: 171.9÷1,424.8 kW



TCEVBZ 2630

- **Efficient condenserless in R134a**
- **33 sizes in the standard and soundproofed versions**
- **Various standard equipment**

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 part-winding or star-delta limited start (depending on model) and complete with thermal protection, crankcase heater and compressor discharge shut-off valve.
- Electronic expansion valve: as standard on all models.
- Water side heat exchanger (evaporator): dry expansion shell and tube exchanger with counter-current heat exchange, complete with closed cell polyurethane rubber foam insulation, water flow differential pressure switch and Victaulic connections.
- Control: microprocessor electronic control.
- Structure: made of galvanised and painted sheet steel, with polyester powder coating.
- The unit is also complete with:
 - clock board for displaying date/time and machine time band management.

Versions

- B - Standard version (TCEVBZ).
- I - Soundproofed version with soundproofed compressor cover (TCEVIZ).

Models

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

Factory fitted accessories

- Power factor capacitors ($\cos\phi > 0.94$).
- Thermal overload switches
- Forced limit of power consumption.
- Soft starter.
- Compression suction shutoff valves
- Linear capacity control compressors (50-100 % for each compressor).
- Evaporator antifreeze resistance.
- Digital input for double set-point.
- Compressor oil level sensor.
- Control of min/max power supply voltage.
- 4-20 mA analogue input for shifting set-point.
- Interfaces for serial communication with other devices.
- Spring antivibration mountings.
- Antivibration rubber mountings.

Separately supplied accessories

- Remote keyboard with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of several water 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	3,3	3,3	3,3	3,4	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
❸ Sound power level	dB(A)	94	94	97	97	97	97	97	98	98
❸ Sound power level	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
Electric power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS		1200	1230	1280	1310	1350	1410	1460	1530	1590
W - Width	mm	3.440	3.440	3.420	3.440	3.450	3.450	3.450	3.460	3.460
H - Height	mm	1.460	1.460	1.460	1.460	1.640	1.640	1.640	1.740	1.740
D - Depth	mm	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
❺ TCEVBZ weight	kg	1.078	1.093	1.410	1.414	1.557	2.032	2.038	2.252	2.281
❺ 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.		3,3	3,3	3,2	3,3	3,3	3,3	3,3	3,5	3,5
❶ Absorbed power	kW	100,7	108,3	115,7	130,6	144,4	151,5	158,4	168,0	176,6
❸ Sound power level	dB(A)	97	97	97	99	99	99	99	99	99
❸ Sound power level	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
Electric power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS		2400	2420	2440	2510	2560	2600	2630	2680	2710
W - Width	mm	3.870	3.870	3.870	4.070	4.070	4.070	4.070	4.070	4.070
H - Height	mm	1.490	1.490	1.490	1.610	1.610	1.610	1.610	1.610	1.610
D - Depth	mm	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300
❺ TCEVBZ weight	kg	1.797	1.811	1.819	2.311	2.629	2.637	2.638	2.698	2.733
❺ 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.		3,4	3,3	3,3	3,3	3,5	3,5	3,6	3,7
❶ Absorbed power	kW	192,1	207,6	226,5	244,4	257,9	271,0	285,5	299,4
❸ Sound power level	dB(A)	99	99	99	99	99	99	99	99
❸ Sound power level	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
Electric power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS		2750	2790	2880	2930	21030	21110	21180	21260
W - Width	mm	4.120	4.000	4.000	4.000	4.000	4.000	4.000	4.000
H - Height	mm	1.490	1.490	1.560	1.560	1.600	1.600	1.600	1.600
D - Depth	mm	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300
❺ TCEVBZ weight	kg	3.176	3.631	3.844	3.859	3.936	3.993	4.024	4.044
❺ 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	3,6	3,5	3,5	3,5	3,5	3,5
❶ Absorbed power	kW	314,1	331,8	349,5	367,1	380,4	393,4	406,4
❸ Sound power level	dB(A)	101	101	101	102	102	102	102
❸ Sound power level	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
Electric power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS		31300	31350	31390	31460	31520	31590	31630
W - Width	mm	4.940	4.940	4.940	4.940	4.940	4.940	4.940
H - Height	mm	1.620	1.620	1.620	1.620	1.620	1.620	1.620
D - Depth	mm	2.000	2.000	2.000	2.000	2.000	2.000	2.000
❺ TCEVBZ weight	kg	5.555	5.570	5.585	5.600	5.678	5.710	5.790
❺ TCEVIZ weight	kg	6.155	6.170	6.185	6.200	6.278	6.310	6.390

Details under the following conditions:

- ❶ Chilled water: 12/7°C - Dew point: 50°C (dew point).
- ❸ Total sound power level in dB(A) on the basis of measurements taken in accordance with UNI EN-ISO 9614.
- ❺ Weight of fully accessorised unit when empty.
- Soundproofed version TCEVIZ.



INDUSTRIAL & PROCESS COOLING

Industrial & Process Cooling

TCAEY 118÷2189

Cooling capacity: 16.1÷161 kW



- **Efficient and flexible R410A industrial range**
- **17 sizes for unpressurised circuits**
- **Various standard equipment and wide range of accessories**

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

Construction features

- The units are made to operate on circuits not under pressure.
- Compressor: hermetic, rotary scroll compressor, complete with thermal protection (mod. 135÷2189). 2 or 3 capacity steps with high efficiency at partial loads (mod. 253÷2189).
- 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, complete with protection grille.
- Fan: axial electric fans with external rotor, equipped with internal thermal protection and protection grilles and a proportional electronic device for continuous fan rotation speed regulation.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: in galvanised and painted sheet steel, with polyester powder coating.
- The unit is also complete with:
 - compressor and fan thermal MCB switches;
 - clock board (models 279÷2189)

Models

- TCAEY: unit designed for cooling only.

Factory fitted accessories

- PUMP (models 279-2189) with single or double pump, including an automatic pump in standby, complete with air bleed valve, water side pressure gauge, level indicator and top-up from above. The pumps are available in the low or high pressure versions.
- TANK&PUMP with inertial buffer tank, complete with antifreeze heater and single or double pump, including an automatic pump in standby (for mod. 253-2189 only), air bleed valves, water side pressure gauge, level indicator and top-up from above. Depending on the models, the pumps are available in low or high pressure versions.
- NON FERROUS option (mod. 279-2189) with pump and/or water buffer tank in stainless steel, copper and/or plastic pipes for demineralised water.
- Chilled water production, down to -10°C (mod. 279-2189).
- Compressor crankcase heater (mod. 118-131).
- Soft - start device (mod. 279-2189).
- Power factor correction capacitors ($\cos\phi > 0.94$) (mod. 279-2189).
- Stainless steel metal filters for coil protection (mod. 279-2189).
- Refrigerant circuit high and low pressure gauges (mod. 279-2189).
- Pump antifreeze heaters (mod. 279-2189).
- Digital input for double set-point.
- 4-20 mA analogue input for shifting set-point.

Accessories separately supplied

- Spring vibration dampers.
- Remote keypad with display.
- Clock board (models 118÷270).
- Interfaces for serial communication with other devices.
- RS485/USB serial converter.
- Rhoss supervisors for unit monitoring and remote management.



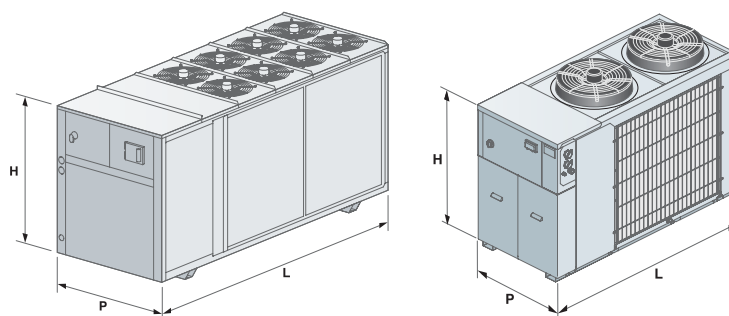
TCAEY MODEL		118	121	128	131	135	140	253	261	270
❶ Cooling capacity	kW	16,1	18,2	23,6	25,2	30	35,5	46,2	53,3	61,3
❶ E.E.R.		2,78	2,71	2,84	2,7	2,57	2,49	2,61	2,64	2,73
● E.S.E.E.R.		3,06	3,02	3,34	3	2,8	2,76	3,67	4,18	4,25
❶ Absorbed power	kW	5,79	6,72	8,31	9,33	11,67	14,26	17,7	20,19	22,45
❷ Nominal cooling capacity	kW	18,6	21,0	27,7	29,3	34,7	40,5	53,2	61,1	70,5
❸ Sound pressure	dB(A)	50	50	50,5	50,5	55	52,1	54	54	54,5
Scroll/step compressor	no.	1/1	1/1	1/1	1/1	1/1	1/1	2/3	2/3	2/3
Circuits	no.	1	1	1	1	1	1	1	1	1
Water buffer tank content	l	42	42	51	51	55	80	150	150	150
❷ Available nominal head pressure of P1 pump	kPa	420	390	336	335	271	520	480	450	425
❷ Available nominal head pressure of P2 pump	kPa	-	-	-	-	-	-	-	-	-
Electric power 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
SIZES AND WEIGHTS		118	121	128	131	135	140	253	261	270
W - Width	mm	510	510	510	510	610	1.710	2.315	2.315	2.315
H - Height	mm	1.305	1.305	1.505	1.505	1.740	1.570	1.570	1.570	1.570
D - Depth	mm	1.525	1.525	1.525	1.525	1.825	1.070	1.070	1.070	1.070
❹ Weight	kg	230	240	290	300	390	470	645	660	680

TCAEY MODEL		279	299	2109	2119	2139	2149	2169	2189
❶ Cooling capacity	kW	64,1	79,2	88	100,3	114,3	126,2	144,1	161
❶ E.E.R.		2,84	2,91	2,83	2,84	2,85	2,83	2,83	2,83
● E.S.E.E.R.		3,41	3,49	3,34	3,38	3,39	3,34	3,35	3,34
❶ Absorbed power	kW	22,57	27,22	31,1	35,32	40,11	44,59	50,92	56,89
❷ Nominal cooling capacity	kW	75,6	93,5	104,0	119,2	136,0	149,8	170,8	190,9
❸ Sound pressure	dB(A)	50	51	52	52	55	55	56	56
Scroll/step compressor	no.	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2
Circuits	no.	2	2	2	2	2	2	2	2
Water buffer tank content	l	250	250	250	250	450	450	450	450
❷ Available nominal head pressure of P1 pump	kPa	317	273	295	294	278	266	316	284
❷ Available nominal head pressure of P2 pump	kPa	415	375	379	390	371	355	443	412
Electric power 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
SIZES AND WEIGHTS		279	299	2109	2119	2139	2149	2169	2189
W - Width	mm	3.150	3.150	3.150	3.150	3.250	3.250	3.250	3.250
H - Height	mm	1.520	1.520	1.520	1.520	2.000	2.000	2.000	2.000
D - Depth	mm	1.210	1.210	1.210	1.210	1.520	1.520	1.520	1.520
❹ Weight	kg	1.070	1.080	1.200	1.320	1.550	1.620	1.655	1.685

Details under the following conditions:

- ❶ Air: 35°C - Water: 7/12°C.
- ❷ Air: 27°C - Water: 10/15°C.
- ❸ At 10 m from the unit in free field (Q = 2).
- ❹ The weight refers to the unit in its most complete form.
- ESEER (European Seasonal EER) - Average European seasonal efficiency.

Performance according to EN 14511:2013



Compact-Y EXP SM - TXAEY 117÷130

Compact-Y EXP MD - TXAEY 133÷265

Low consumption Y-Pack EXP - TXAEY 280÷4320

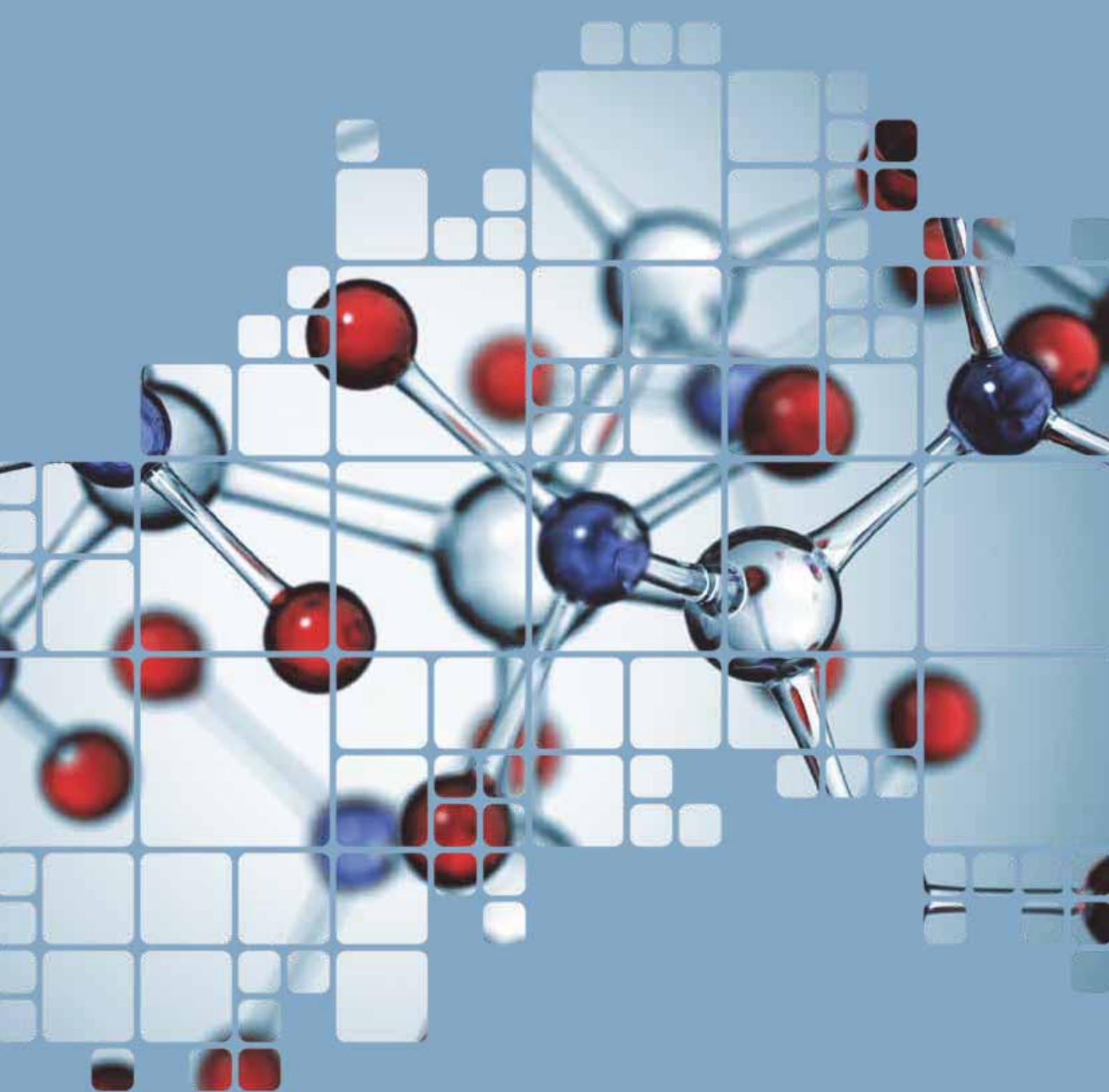
Low consumption WinPOWER EXP - TXAEY 4400÷6660

Z-Power EXP - TXAVZ 2420÷2700

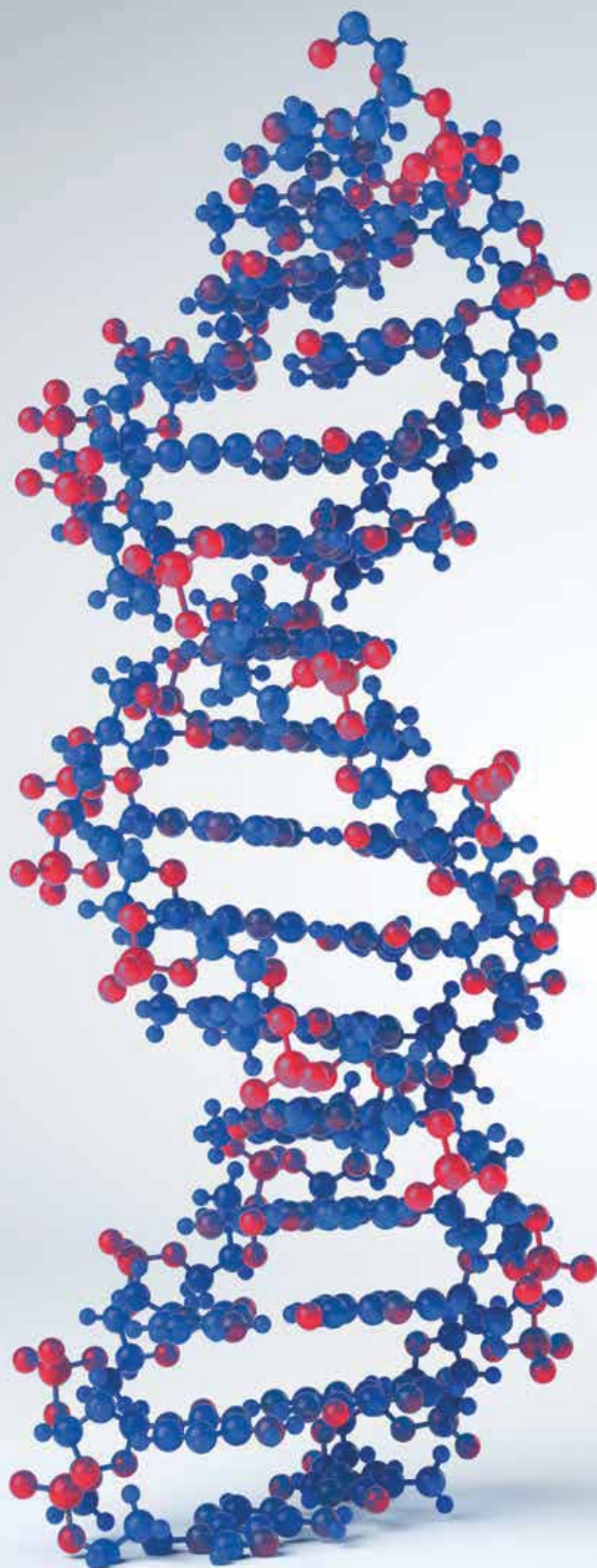
Low consumption Comby-Flow EXP - TXHEY 105÷112

Low consumption Y-Flow EXP - TXHEY 245÷4360

Z-Flow EXP - TXHVZ 2410÷2740



EXP - POLYVALENT SYSTEMS



Innovation is in our DNA



The assurance of a quality product is achieved by means of careful testing in the R&D Lab, one of the largest test laboratories in Europe.

Every Rhoss unit is subjected to strict functional testing before being placed on the market, simulating the most extreme operating conditions.

EXP Systems is the polyvalent ecological system designed by RHOSS to satisfy cold and hot water demands simultaneously or independently in 2, 4 and 6-pipe systems and any season of the year with a single unit.

A complete range with air and water condensation of 5 to 800 kW, with a TER* index up to 8.33.

The offer includes new models in class A with high efficiency ESEER at partial loads.



Over 15 years experience

Hundreds of systems built in the last 15 years with multi-purpose units in residential, commercial and office buildings, industrial complexes, hospitals, clinics and accommodation facilities in general.

Efficient technology

EXP Systems allows you to set up a complete air conditioning system with domestic hot water production, thereby achieving a double result with a single unit and a single expense, the energy delivered by the compressor, guaranteeing high performance in terms of energy efficiency.

Versatile system

EXP Systems is a fourth-generation heat pump that produces hot and cold water pump in a combined or independent way for 4 and 2-pipe systems with domestic hot water production.

Reliable unit

EXP Systems, thanks to its innovative logic management, satisfies the cooling and heating needs while minimising the stops and starts of the compressors with the consequent beneficial effect on the lifetime of all the cooling circuit components.

Flexible installation

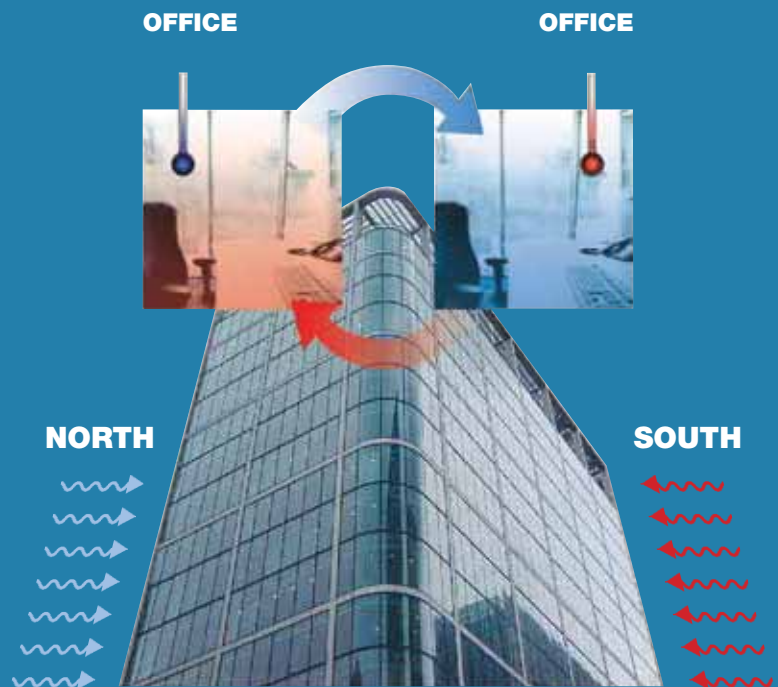
EXP Systems adapts to the different installation requirements of the system thanks to its countless configurations and accessories that make it plug&play.

Ecological solution

EXP Systems can be defined as a multi-purpose ecological unit, which is environmentally friendly as it represents the efficient evolution of the electric heat pump, in line with the strictest European directives. The high performance in heat recovery mode further increase the difference compared to traditional systems, thereby reducing the direct and indirect emissions that contribute to greenhouse gases.

* TER Total Efficiency Ratio in total heat recovery mode AUTOMATIC 2.

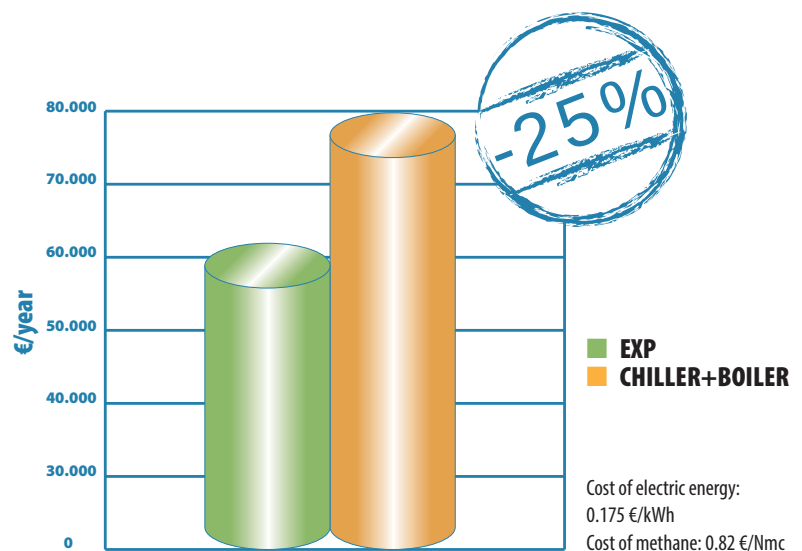
The intelligent solution for actual energy savings



EXP Systems represents the intelligent solution for air conditioning requirements in systems where the demand for heating is combined in a simultaneous or independent manner with the demand for cooling.

The units adapt well to various types of systems, thereby guaranteeing unique efficiency and versatility.

Selecting the most suitable unit for your system is simple since there are 25 air-cooled models and 27 water-cooled models to choose from with scroll and screw technology with R410A and R413A gas respectively.

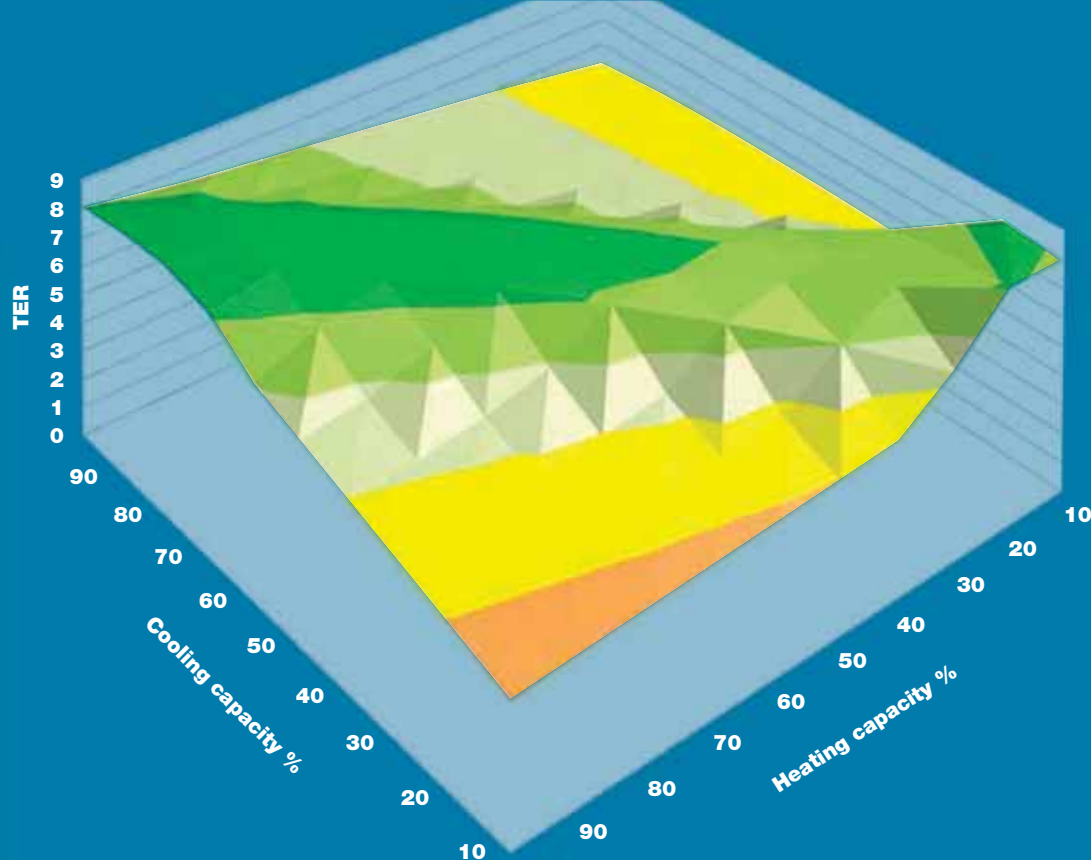


Analysis carried out on a office building located in Milan, comparing the annual consumption of a polyvalent EXP Systems TXAVBZ 2550 unit at 550 kW with those of a conventional system consisting of a water chiller for summer/winter air conditioning and a boiler for heating.



EXP Systems represents technology that guarantees the most efficient solution in combined operation with production of hot and cold water and the TER index represents the value that best distinguishes it.

The TER, ratio between the sum of the thermal and cooling over dispensed and the absorbed power, reaches maximum values when the loads are balanced.



The graph shows the progress of the TER for an EXP Systems TXAETY 6520 unit in a typical 4-pipe system according to the required load.
Reference conditions: 7°C cold water, 45°C hot water and 15°C outdoor air temperature.

The units of the Y-PACK EXP, Y-FLOW EXP and WinPOWER EXP ranges, equipped with the revolutionary AF+ (Adaptive Function Plus), which is a Rhoss patent, allow the set point to be adapted according to the load of the system for additional energy savings.

TER: Total Efficiency Ratio

Actual efficiency reading



EXP Systems units are designed to operate in 2, 4, and 6-pipe systems of the new range.

This flexibility allows it to be used in several types of construction, thereby allowing any subsequent change in the intended use.

The heart of the system is represented in the new electronic control and control logic designed by Rhoss to meet all the system requirements in 2 operating modes: *AUTOMATIC* and *SELECT*.



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

Often in residential cases, in homes with individual systems or apartment blocks with centralized systems, in hotels, nursing homes, gyms and accommodation structures in general, the air conditioning and air treatment requirements are accompanied by the need for domestic hot water production.

When the EXP Systems is configured for 2-pipe systems, it performs this task with maximum flexibility throughout the year. WinPOWER EXP units also have the option to produce hot water up to 70°C in another heat exchanger in any operation mode.



4 or 6-pipe systems ***AUTOMATIC* mode all year round**

In office buildings and the service sectors, the modern air conditioning systems increasingly require simultaneous production of hot and chilled water.

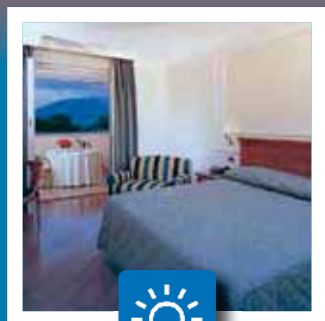
Improved thermal insulation in structures, the increase in the heat loads due to the lighting and the presence of large windows, lead to the system having to cool certain areas while having to heat others during spring and autumn. In this case, when the EXP Systems is configured for 4-pipe systems, it represents a very convenient complete solution.

WinPOWER EXP units also have the option to produce hot water up to 70°C in another heat exchanger in any operation mode in order to meet modern 6-pipe system requests.

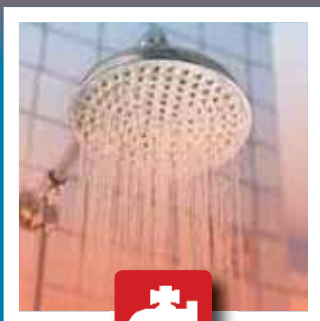
EXP Systems units for 2, 4 and 6-pipe systems



Summer “*AUTOMATIC*” cooling and domestic hot water



COLD
WATER

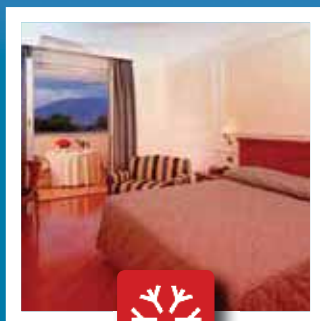


DOMESTIC HOT
WATER

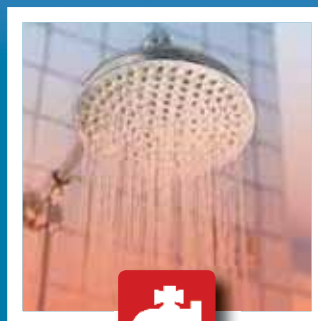


HOT
WATER

Winter “*SELECT*” heating and domestic hot water



HOT
WATER

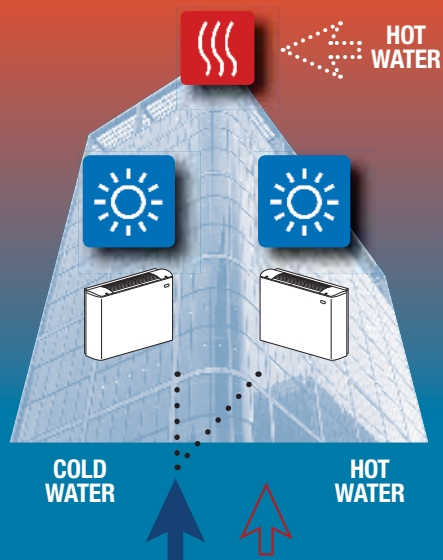


DOMESTIC HOT
WATER

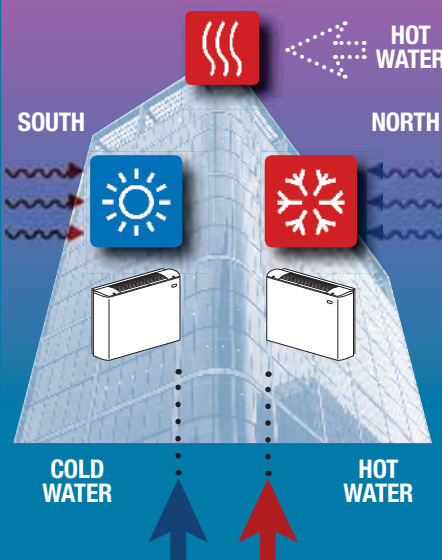


HOT
WATER

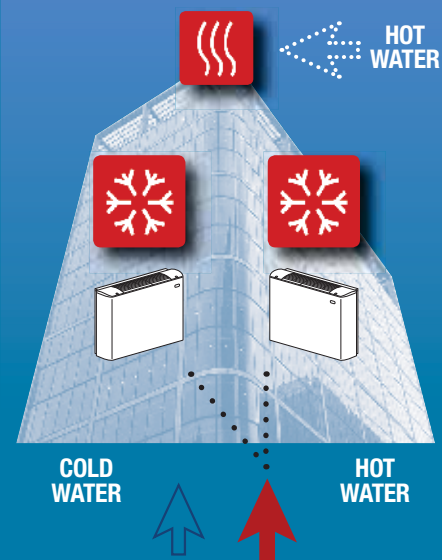
Summer cooling



Mid-season cooling and heating



Winter heating



Compact-Y EXP SM

TXAEY 117÷130

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



• T.E.R. * up to 6.72

EXPsystems - Multi-purpose ecological air-cooled system 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.
- 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: electric axial fans with external rotor, equipped with internal thermal protection, protection grilles and proportional electronic device for continuous fan rotation speed regulation.
- Control: microprocessor electronic control with AdaptiveFunction logic.
- Structure: in galvanised and painted sheet steel, complete with condensation drain pan.

Models

- TXAEY: EXPsystems unit.

PUMP set up

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

Factory fitted accessories

- Silenced set-up.
- Unit base antifreeze electric heater for operation in heat pump mode at low outdoor air temperatures.
- Digital input for double set-point.
- 4-20 mA analogue input for shifting set-point.
- Copper/pre-painted aluminium 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.
- RS485/USB serial converter.
- Rhoss supervisors for unit monitoring and remote management.



TXAEY MODEL		117	124	130
Radiant systems				
❶ Cooling capacity (AUTOMATIC 1)	kW	23,8	32,2	38,9
❸ Recovery heating capacity (AUTOMATIC 2)	kW	27,2	39,8	48,3
❹ Heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	18,3	26,8	35,4
(S) Energy class		A+	A+	A+
Fan coil systems				
❶ Nominal cooling capacity (AUTOMATIC 1)	kW	17,7	24	29,1
❷ Recovery heating capacity (AUTOMATIC 2)	kW	20,8	30,4	37,2
❸ Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	17,6	25,7	34,0
❹ Absorbed power (AUTOMATIC 1)	kW	6,6	9,4	11,8
❷ Absorbed power (*) (AUTOMATIC 2)	kW	4,9	7,4	9,8
❸ Absorbed power (SELECT 1-2 AUTOMATIC 3)	kW	6,2	9,1	11,3
❷ T.E.R. (AUTOMATIC 2)		6,62	6,72	6,13
❸ Sound pressure	dB(A)	50	52	53
❸ Silenced set up sound pressure	dB(A)	46	49	50
Scroll/step compressor	no.	1/1	1/1	1/1
Circuits	no.	1	1	1
❹ Available head pressure of the standard electric pump	kPa	130	131	112
Power supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50
DIMENSIONS AND WEIGHTS				
L - Width	mm	1.522	1.522	1.822
H - Height	mm	1.090	1.280	1.510
P - Depth	mm	580	600	695
TXAEY weight	kg	220	280	370

Data at the following conditions:

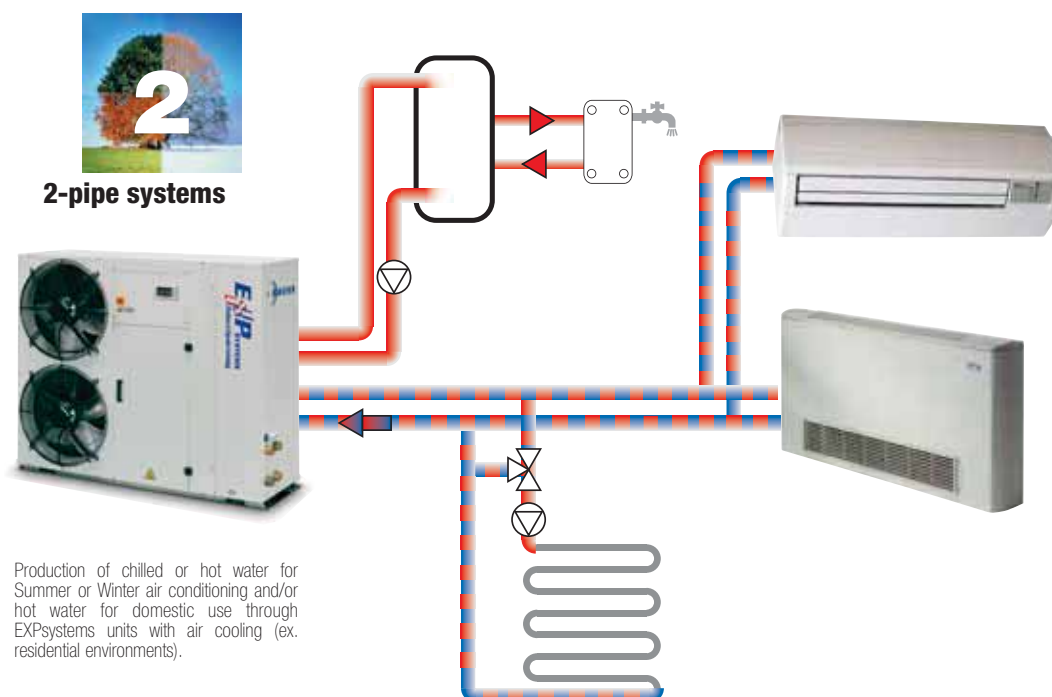
- ❶ Air: 35°C - Water: 23/18°C.
- ❷ Air: 7°C D.B. - 6°C W.B. - Water: 30/35°C.
- ❸ Evaporator water: 18/23°C. Recovery output water 45°C - Nominal flow rate.
- ❹ Air: 35°C - Water: 12/7°C.
- ❸ Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C.
- ❸ In open field (Q = 2) at 5 m from the unit.
- ❷ Evaporator water: 12/7°C. Recovery output water 45°C - Nominal flow rate.

(*) Unit without electric pump.

Performance according to EN 14511:2013 Set up with electric pump.

T.E.R.: Total efficiency ratio

(S) In average climatic conditions according to EU Regulation N° 811/2013



Compact-Y EXP MD

TXAEY 133÷265

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



• T.E.R. (°) up to 7.48

EXPsystems - Multi-purpose ecological air-cooled system 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.
- 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: electric axial fans with external rotor, equipped with internal thermal protection, 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 sheet steel.
- The unit is also complete with a clock board:

Models

- TXAEY: standard EXPsystems unit.

Factory fitted accessories

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

Separately supplied accessories

- Rubber anti-vibration mounts.
- Water filter.
- Remote keypad with display.
- Interfaces for serial communication with other devices.
- RS485/USB serial converter.
- 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
❷	Recovery heating capacity (AUTOMATIC 2)	kW	44,2	54,4	65,0	71,8	81,1
❸	Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	39,4	48,1	56,2	62,5	68,3
(S)	Energy class		A	A+	A+	A+	A+
❶	Absorbed power (AUTOMATIC 1)	kW	13,5	17,0	18,8	21,9	24,4
❷	Absorbed power (AUTOMATIC 2)	kW	11,5	13,6	15,5	17,1	19,0
❸	Absorbed power (SELECT 1-2 AUTOMATIC 3)	kW	13,6	16,8	18,9	20,9	23,7
❹	T.E.R. (AUTOMATIC 2)		6,25	6,94	7,30	7,32	7,48
❺	Sound pressure	dB(A)	54	56	56	57	57
❻	Silenced set up 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
	Power 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 WEIGHTS			245	250	260	265	
L - Width	mm		1.660	2.260	2.260	2.260	2.260
H - Height	mm		1.570	1.570	1.570	1.570	1.570
P - Depth	mm		1.000	1.000	1.000	1.000	1.000
TXAEY weight	kg		470	735	775	795	825

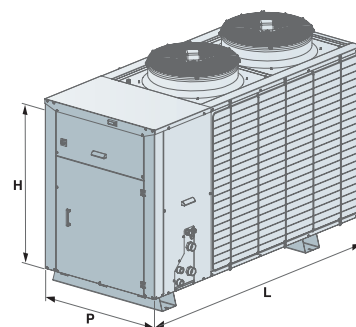
Data at the following conditions:

- 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. Recovery output water 45°C - Nominal flow rate.
- ❹ In open field (Q = 2) at 5 m from the unit.

Performance according to EN 14511:2013

T.E.R.: Total efficiency ratio

(S) In average climatic conditions according to EU Regulation N° 811/2013



Low consumption Y-Pack EXP

TXAEY 280÷4320

Cooling capacity: 81÷334 kW - Heating capacity: 84÷353 kW



TXAEY 4320 with
accessory coil protection
grilles

• T.E.R. up to 8.18

EXPsystems - Multi-purpose ecological air-cooled system 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.
- Electronic expansion valve: as standard on all models.
- Main and secondary heat exchangers: crossed-flow stainless steel plate exchangers, complete with anti-freeze 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 axial fans with EC motor with continuous adjustment of the rotation speed, equipped with internal thermal protection and complete with protection grilles.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: made of galvanised and painted sheet steel, with polyester powder coating.
- The unit is also complete with:
 - compressor and fan thermal overload switches
 - clock board for displaying date/time and machine time band management,
 - display of cooling circuit high/low pressure.

Versions

- T - High efficiency version with fans with EC motor
- S - Silenced version complete with soundproofed compressor technical compartment, lower fan speed fans with EC motor.

Models

- TXAETY: EXPsystems unit.
- TXAEY: silenced EXPsystems unit.

Factory fitted accessories

- PUMP (for main and secondary circuits) with single or double pump, including an automatic pump in standby. The pumps are available in the low or high pressure versions.
- TANK&PUMP (for main circuit only) with built-in buffer tank and single or double pump, complete with expansion tank, air bleed valves, safety valve and water side pressure gauge.
- 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 grilles.
- Copper/copper or copper/pre-painted aluminium coils.
- Digital input for double set-point.
- 4-20 mA analogue input for shifting set-point.
- Buffer tank antifreeze heaters and electric pumps if present.
- Interfaces for serial communication with other devices.
- Anti-vibration mountings.

Separately supplied accessories

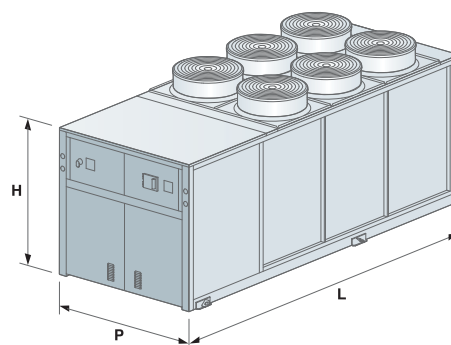
- Remote keyboard with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of several water chillers.



TXAETY MODEL		280	2100	2130	4160	4200	4260	4320
❶	Nominal cooling capacity (AUTOMATIC 1)	kW	84	108	135	163	207	334
❷	Recovery heating capacity (AUTOMATIC 2)	kW	108	140	174	215	272	440
❸	Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	86	111	139	171	227	353
❹	Absorbed power (AUTOMATIC 1)	kW	26,8	34,8	43,4	56,1	72,7	117,3
❺	Absorbed power (AUTOMATIC 2)	kW	23,6	32,2	39,3	51,5	65,2	106,5
❻	Absorbed power (SELECT 1-2 AUTOMATIC 3)	kW	25,3	33,5	42,4	54,5	73,1	116,5
	E.E.R. (AUTOMATIC 1)		3,13	3,1	3,11	2,91	2,85	2,85
	T.E.R. (AUTOMATIC 2)		8,18	7,76	7,89	7,36	7,39	7,36
	C.O.P. (SELECT 1-2 AUTOMATIC 3)		3,40	3,31	3,28	3,14	3,11	3,03
❸	Sound pressure	dB(A)	52	52	53	54	59	61
❺	Sound power level	dB(A)	84	84	85	86	91	93
TXAESY MODEL		280	2100	2130	4160	4200	4260	4320
❶	Nominal cooling capacity (AUTOMATIC 1)	kW	81	104	130	157	200	317
❷	Recovery heating capacity (AUTOMATIC 2)	kW	108	140	174	215	272	440
❸	Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	84	108	136	167	221	344
❹	Absorbed power (AUTOMATIC 1)	kW	27,0	35,2	43,9	56,6	73,7	118,8
❺	Absorbed power (AUTOMATIC 2)	kW	23,6	32,2	39,3	51,5	65,2	106,5
❻	Absorbed power (SELECT 1-2 AUTOMATIC 3)	kW	24,3	32,1	40,7	53,4	70,4	111,8
	E.E.R. (AUTOMATIC 1)		3,00	2,95	2,96	2,77	2,71	2,67
	C.O.P. (SELECT 1-2 AUTOMATIC 3)		3,46	3,36	3,34	3,13	3,14	3,1
❸	Sound pressure	dB(A)	49	49	50	51	54	57
❺	Sound power level	dB(A)	81	81	82	83	86	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
	Circuits	no.	2	2	2	2	2	2
	Electric power 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
SIZES		280	2100	2130	4160	4200	4260	4320
	W - Width	mm	2.600	2.600	3.700	3.700	4.800	4.800
	H - Height	mm	2.000	2.000	2.000	2.000	2.030	2.030
	D - Depth	mm	2.090	2.090	2.090	2.090	2.090	2.090

Details under 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 10 m from the unit in free field (Q = 2).
- ❹ Evaporator water: 12/7°C. Recovery outlet water 45°C - Nominal flow.
- ❺ Total sound power level in dB(A) on the basis of measurements taken in accordance with UNI EN-ISO 9614.



Low consumption WinPOWER EXP

TXAEY 4400÷6660

Cooling capacity: 362÷650 kW - Heating capacity: 404÷704 kW



TXAEY 6580 with
STE accessory and with
RPB coil protection grille
accessory

new



- Multi-purpose Class A units with TER up to 7.9
- Extended operating limits
- Units for 2, 4 and 6-pipe systems

EXPsystems - Multi-purpose ecological air-cooled system 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.
- up to 6 capacity steps with high efficiency at partial loads.
- Main and secondary heat exchangers: crossed-flow stainless steel plate exchangers, complete with anti-freeze 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 axial fans with external rotor, equipped with internal thermal protection, protection grilles and 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 sheet steel and painted with polyester powders.
- The unit is also complete with:
 - compressor and fan thermal overload switches, heat exchanger antifreeze heater;
 - display of cooling circuit high/low pressure, electronic expansion valve;
 - electronic expansion valve;
 - clock board.

Versions

- T - High efficiency version.
- Q - Supersilenced version complete with soundproofed compressor technical compartment, super-low fan speed fans with EC motor.

Models

- TXAEY: EXPsystems unit.
- TXAEQY: supersilenced EXPsystems unit.

Factory fitted accessories

- Main and secondary shell and tube heat exchanger.
- PUMP with single or double pump, including an automatic pump in standby. The pumps are available in the low or high pressure versions main and secondary heat exchanger side.
- TANK&PUMP with built-in 700-1000 litre buffer tank (depending on the models) and single or double pump, complete with expansion tank, air bleed valves, safety valve and water pressure gauge.
- Desuperheater.
- -15°C condensing control with fans with EC motor (as per standard in the Q versions).
- Condensing control with over-pressure fans (only T version).
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Forced limit of power consumption.
- Forced noise limit.
- Energy parameters measuring device.
- Optimised energy efficiency.
- Soft starter.
- Soundproofed compressor box.
- Compressor soundproof enclosures.
- Cooling circuit inlet and discharge valves.
- Refrigerant leak detector.
- Refrigerant circuit high and low pressure gauges.
- Double safety valves.
- Coil protection grilles or metal filters.
- Bottom compartment protection grilles.
- Copper/pre-painted aluminium or copper/copper coils.
- Digital input for double set-point.
- 4-20 mA analogue input for shifting set-point.
- Electrical panel antifreeze heater, buffer tank, electric pumps and desuperheater if present.
- Interfaces for serial communication with other devices.
- Spring anti-vibration mountings.

Separately supplied accessories

- Remote keyboard with display.
- Thermostat with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of several water chillers.



TXAETY MODEL		4400	4440	6520	6580	6660
❶ Nominal cooling capacity (AUTOMATIC 1)	kW	398	436	527	579	650
❷ Recovery heating capacity (AUTOMATIC 2)	kW	515	567	685	759	845
❸ Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	425	469	568	628	704
❹ Absorbed power (AUTOMATIC 1)	kW	131,0	144,0	175,0	197,0	216,0
❺ Absorbed power (AUTOMATIC 2)	kW	116,6	128,6	157,0	179,0	194,4
❻ Absorbed power (SELECT 1-2 AUTOMATIC 3)	kW	130,0	143,0	175,0	193,0	215,0
E.E.R. (AUTOMATIC 1)		3,04	3,03	3,01	2,94	3,01
T.E.R. (AUTOMATIC 2)		7,9	7,8	7,8	7,5	7,7
C.O.P. (SELECT 1-2 AUTOMATIC 3)		3,27	3,28	3,25	3,25	3,27
❸ Sound pressure	dB(A)	76	76,5	76,5	76,5	78
❹ Sound power	dB(A)	96	97	97	97	99
TXAEQY MODEL		4400	4440	6520	6580	6660
❶ Nominal cooling capacity (AUTOMATIC 1)	kW	362	391	476	517	582
❷ Recovery heating capacity (AUTOMATIC 2)	kW	515	567	685	759	845
❸ Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	404	444	546	597	668
❹ Absorbed power (AUTOMATIC 1)	kW	141,0	158,0	191,0	221,0	235,0
❺ Absorbed power (AUTOMATIC 2)	kW	116,6	128,6	157,0	179,0	194,4
❻ Absorbed power (SELECT 1-2 AUTOMATIC 3)	kW	124,0	136,0	167,0	183,0	204,0
E.E.R. (AUTOMATIC 1)		2,57	2,47	2,49	2,34	2,48
C.O.P. (SELECT 1-2 AUTOMATIC 3)		3,26	3,26	3,27	3,26	3,27
❸ Sound pressure	dB(A)	53	54	54	54	56
❹ 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
Power 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
❶ TXAETY Weight	kg	3650	3760	4480	4580	5250
❷ 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 In open field (Q = 2) at 10 m from the unit.
- ❹ Evaporator water: 12/7°C. Recovery output water 45°C - Nominal flow rate.
- 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 unladen unit.

Z-Power EXP

TXAVZ 2420÷2700

Cooling capacity: 408÷698 kW - Heating capacity: 413÷707 kW



TXAVSZ 2550

TXAVSZ 2700



• T.E.R. * up to 8.33

EXPsystems - Multi-purpose ecological air-cooled 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 thermal protection, crankcase resistance, refrigerant gas intake and delivery piping shut-off valve and compressor oil level sensor.
- Electronic expansion valve: as standard on all models.
- Main and secondary heat exchanger (evaporator): dry expansion shell and tube exchanger with counter-current heat exchange, complete with closed cell polyurethane rubber foam insulation, water flow differential pressure switch and Victaulic connections.
- Air side heat exchanger: finned coil with copper pipes and aluminium fins.
- Fan: axial electric fans with external rotor, equipped with internal thermal protection and protection grilles and a proportional electronic device for continuous fan rotation speed regulation.
- Control: microprocessor electronic control.
- Structure: made of galvanised and painted sheet steel with polyester powder coating
- The unit also includes:
 - display of cooling circuit high/low pressure;
 - clock board to display date/time and machine management in time slots.

Versions

- B -Standard version (TXAVBZ).
- S - Silenced version with lower speed fans and soundproofed compressor cover (TXAVSZ).
- I -Soundproofed version with soundproofed compressor cover (TXAVIZ).

Models

- TXAVBZ: standard EXPsystems unit.
- TXAVSZ: silenced EXPsystems unit.
- TXAVIZ: soundproof EXPsystems unit.

Factory fitted accessories

- -15°C condensation control with fans with EC motor.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Compressor and fan thermal overload switches.
- Forced limit of power consumption.
- Coil protection grilles.
- Bottom compartment protection grilles.
- Digital input for double set-point.
- Low and high pressure gauges for each refrigerant circuit.
- Electrical panel resistance
- Control of min/max power supply voltage.
- 4-20 mA analogue input for shifting set-point.
- Copper/pre-painted aluminium or copper/copper coils.
- Interfaces for serial communication with other devices.
- Spring antivibration mountings.

Accessories separately supplied

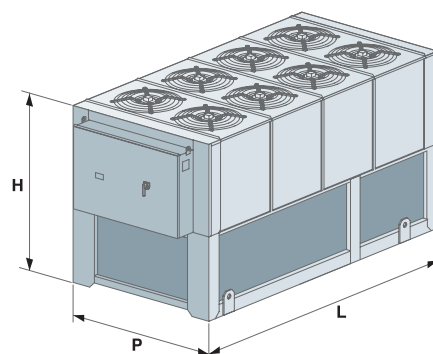
- Remote keypad with display.
- Supervisors.
- Sequencer



TXAVBZ MODEL		2420	2480	2550	2610	2700	
❶	Nominal cooling capacity (AUTOMATIC 1)	kW	425	482	555	617	698
❷	Recovery heating capacity (AUTOMATIC 2)	kW	545	622	709	786	888
❸	Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	430	490	568	625	707
❹	Absorbed power (AUTOMATIC 1)	kW	143,8	165,3	179,2	198,4	224,1
❺	Absorbed power (AUTOMATIC 2)	kW	121,0	142,0	155,8	170,7	190,9
❻	Absorbed power (SELECT 1-2 AUTOMATIC 3)	kW	141,1	158,8	177,7	194,8	220,8
E.E.R. (AUTOMATIC 1)			2,96	2,92	3,10	3,11	3,11
T.E.R. (AUTOMATIC 2)			8,03	7,79	8,13	8,24	8,33
C.O.P. (SELECT 1-2 AUTOMATIC 3)			3,05	3,09	3,20	3,21	3,20
Ⓜ	Sound pressure	dB(A)	65	65	65	66	67
Ⓜ	Sound power level	dB(A)	98	98	98	99	99
TXAVSZ MODEL		2420	2480	2550	2610	2700	
❶	Nominal cooling capacity (AUTOMATIC 1)	kW	408	463	533	592	670
❷	Recovery heating capacity (AUTOMATIC 2)	kW	545	622	709	786	888
❸	Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	413	470	545	600	679
❹	Absorbed power (AUTOMATIC 1)	kW	143,1	164,5	178,3	197,4	223,0
❺	Absorbed power (AUTOMATIC 2)	kW	121,0	142,0	155,8	170,7	190,9
❻	Absorbed power (SELECT 1-2 AUTOMATIC 3)	kW	141,1	158,0	176,8	193,8	219,7
E.E.R. (AUTOMATIC 1)			2,85	2,81	2,99	3,00	3,00
C.O.P. (SELECT 1-2 AUTOMATIC 3)			2,93	2,97	3,08	3,10	3,09
Ⓜ	Sound pressure	dB(A)	59	59	59	60	61
Ⓜ	Sound power level	dB(A)	92	92	92	93	93
MODEL		2420	2480	2550	2610	2700	
Screw/step compressor		no.	2/6	2/6	2/6	2/6	2/6
Circuits		no.	2	2	2	2	2
Electric power supply		V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
TXAVBZ-TXAVSZ DIMENSIONS AND WEIGHT		2420	2480	2550	2610	2700	
W - Width		mm	6.130	6.130	6.130	6.980	7.980
H - Height		mm	2.430	2.430	2.430	2.430	2.430
D - Depth		mm	2.260	2.260	2.260	2.260	2.260
Ⓜ	TXAVBZ weight	kg	5.530	6.300	6.360	7.460	8.380

Details under 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 10 m from the unit in free field (Q = 2).
- ❹ Evaporator water: 12/7°C. Recovery outlet water 45°C - Nominal flow.
- ❺ Empty weight.
- ❻ Total sound power level in dB(A) on the basis of measurements taken in accordance with UNI EN-ISO 9614.



Low consumption Comby-Flow EXP

TXHEY 105÷112

Cooling capacity: 5.5÷12.2 kW - Heating capacity: 6.4÷13.7 kW



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.
- Condensation control: pressure switch valve and bypass solenoid valve.
- Structure: made of galvanised and painted sheet steel with polyester powder coating, complete with soundproofed compressor.

Models

- TXHEY: EXPsystems unit.

PUMP setup

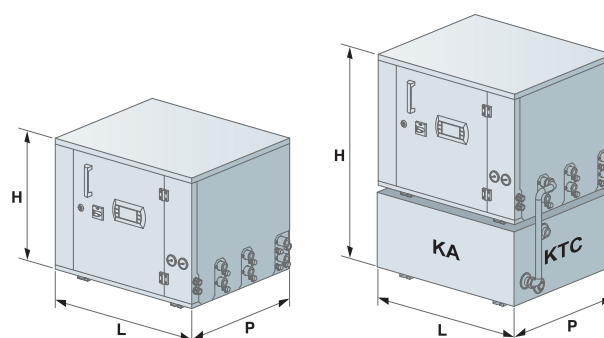
- Primary side (user): pump unit complete with circulation electric pump, membrane expansion tank, safety valve, water drain valve, manual air bleed valve and pressure gauge.
- Well/tower side (disposal unit): drain valve and bleed valve. Internal tap for primary side system supply (user) from external 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 bleed valve and pressure gauge.

Factory fitted accessories

- Digital input for double set-point.
- 4-20mA analogue input for shifting set-point.

Separately supplied accessories

- Buffer tank.
- Buffer tank connection pipes.
- Water filter.
- Rubber anti-vibration mountings.
- Antifreeze heater on the buffer tank.
- Remote keypad with display.
- Clock board.
- Interfaces for serial communication with other devices.
- RS485/USB serial converter.
- Rhoss supervisors for unit monitoring and remote management.





MODEL TXHEY		105	107	109	112
Radiant systems					
❶ Cooling capacity (AUTOMATIC 1)	kW	7,8	10,6	13,8	18
❷ Recovery heating capacity (AUTOMATIC 2)	kW	8,7	10,7	14,7	18,8
❸ Heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	7,6	9,8	12,8	15,1
(S) Energy class		A++	A++	A++	A++
Fan coil systems					
❹ Nominal cooling capacity (AUTOMATIC 1)	kW	5,5	6,9	9,5	12,2
❺ Recovery heating capacity (AUTOMATIC 2)	kW	6,7	8,7	11,3	14,5
❻ Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	6,4	8,1	10,6	13,7
❼ Absorbed power (*) (AUTOMATIC 1)	kW	1,69	2,22	2,91	3,74
❽ Absorbed power (*) (AUTOMATIC 2)	kW	2,00	2,83	3,57	4,75
❾ Absorbed power (*) (SELECT 1-2 AUTOMATIC 3)	kW	1,93	2,8	3,33	4,21
❿ T.E.R. (AUTOMATIC 2)		5,72	5,14	5,42	5,67
❼ Sound pressure	dB(A)	49	51	51	53
Scroll/step compressor	no.	1	1	1	1
Circuits	no.	1	1	1	1
KA Buffer tank water content	l	20	20	30	30
❼ Available nominal head pressure of pump on main exchanger	kPa	47,0	54,7	82,2	78,2
❽ Available nominal head pressure on secondary recovery exchanger	kPa	32,4	42,4	72,1	66,7
Power 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 WEIGHTS					
		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: 23/18°C - Condenser water: 30/35°C
- ❷ Chilled water: 23/18°C - Recovery water: 40/45°C
- ❸ Hot water: 30/35°C. Evaporator water: 10/7°C.
- ❼ Chilled water: 12/7°C - Condenser water: 30/35°C
- ❽ Chilled water: 12/7°C - Recovery water: 40/45°C.
- ❾ Hot water: 40/45°C. Evaporator water: 10/7°C.
- ❼ In open field (Q = 2) at 1 m from the unit.

(*) Unit without electric pumps.

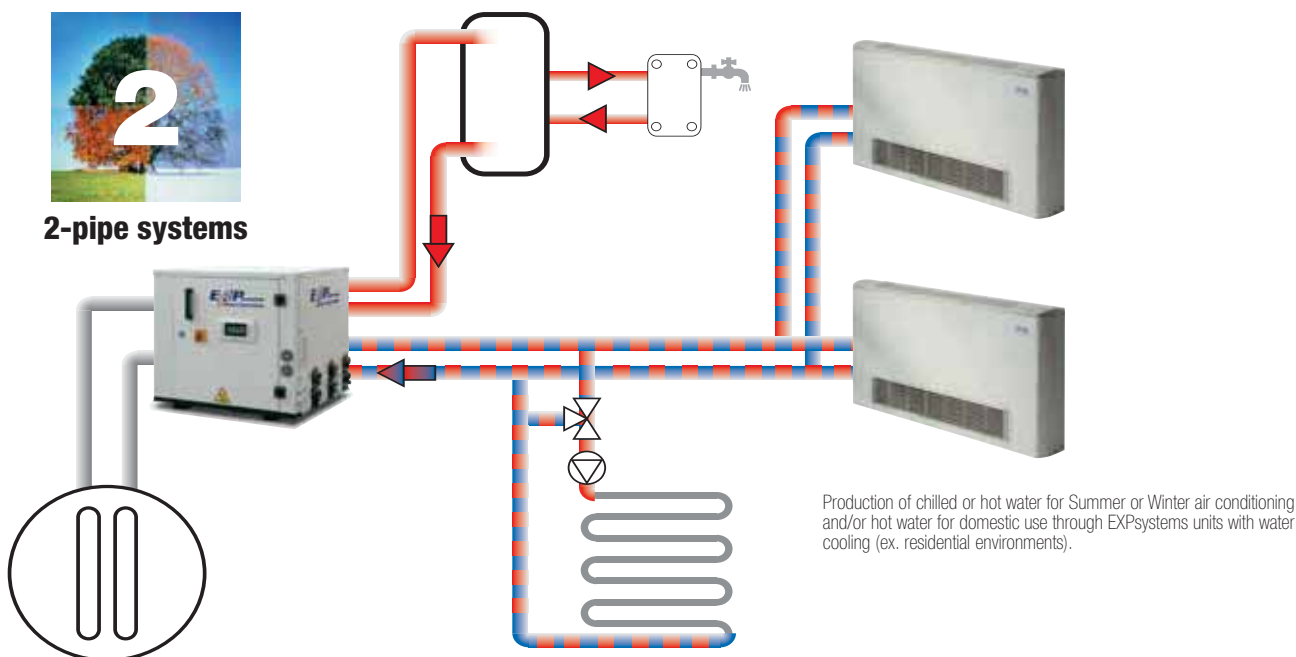
Performance according to EN 14511:2013

T.E.R.: Total efficiency ratio

KA = buffer tank.

KTC = connecting pipe.

(S) In average climatic conditions according to EU Regulation N° 811/2013



Low consumption Y-Flow EXP

TXHEY 245÷4360

Cooling capacity: 47÷378.7 kW - Heating capacity: 54.5÷449.9 kW



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 crankcase heater.
- Main (user) and secondary (recovery) side heat exchangers and disposal unit: crossed-flow stainless steel plate exchangers, complete with closed cell polyurethane foam rubber insulation and water flow differential pressure switch.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: in galvanised and painted sheet steel, with polyester powder coating.
- The unit is also complete with:
 - compressors MCB breakers,
 - electronic expansion valve,
 - cooling circuit high and low pressure display,
 - clock board,
 - outdoor temperature probe for set-point offset,
 - 0-10V analogue signal for controlling condensation/evaporation by external device.

Versions

- B -Standard version.

Models

- TXAEBY: 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 input for shifting set-point.
- Interfaces for serial communication with other devices.
- Anti-vibration mounts.

Separately supplied accessories

- Modulating 3-way valve for condensing control.
- Modulating 2-way valve for condensing control.
- Outdoor air temperature probe for set-point compensation.
- Water filter.
- Remote keyboard with display.
- RS485/USB serial converter.
- RHOS supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of several water chillers.





TXHEBY MODEL		245	250	260	270	290	2215	2130	2145	2165	2185
❶	Nominal cooling capacity (AUTOMATIC 1)	kW	47,0	55,5	63,0	71,8	93,2	121,9	136,6	151,8	192,7
❷	Recovery heating capacity (AUTOMATIC 2)	kW	39,0	46,3	53,3	59,3	80,2	104,7	115,0	127,1	161,2
❸	Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	54,5	64,0	73,6	82,0	110,5	145,0	160,2	177,2	227,1
❶	Total absorbed power (AUTOMATIC 1)	kW	8,5	9,8	11,3	13,0	16,7	22,5	25,5	28,1	36,9
❷	Total absorbed power (AUTOMATIC 2)	kW	12,0	13,7	15,7	17,4	23,4	31,1	34,9	38,9	51,4
❸	Total absorbed power (SELECT 1-2 AUTOMATIC 3)	kW	12,1	13,8	15,8	17,5	23,6	31,3	35,3	39,3	51,9
❶	E.E.R. (AUTOMATIC 1)		5,53	5,66	5,58	5,52	5,58	5,42	5,36	5,40	5,22
❷	C.O.P. (SELECT 1-2 AUTOMATIC 3)		4,50	4,64	4,66	4,69	4,68	4,63	4,54	4,51	4,38
TXHEBY MODEL		245	250	260	270	290	2215	2130	2145	2165	2185
❺	Sound power level	dB(A)	67	67	68	68	70	72	73	74	75
	Scroll/step compressor	no.	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
	Electric power 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
SIZES AND WEIGHTS		245	250	260	270	290	2215	2130	2145	2165	2185
	W - Width	mm	1000	1000	1000	1000	1250	1250	1250	1250	1250
	H - Height	mm	1400	1400	1400	1400	1550	1550	1550	1550	1550
	D - Depth	mm	870	870	870	870	870	870	870	870	870

TXHEBY MODEL		4180	4205	4235	4260	4290	4330	4360
❶	Nominal cooling capacity (AUTOMATIC 1)	kW	187,5	215,8	243,3	272,0	299,2	378,7
❷	Recovery heating capacity (AUTOMATIC 2)	kW	160,3	182,2	203,7	229,5	255,6	324,7
❸	Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	217,9	249,4	280,1	315,6	349,9	449,9
❶	Total absorbed power (AUTOMATIC 1)	kW	32,9	37,6	42,5	47,6	52,7	69,1
❷	Total absorbed power (AUTOMATIC 2)	kW	43,4	50,5	57,7	64,8	71,8	94,2
❸	Total absorbed power (SELECT 1-2 AUTOMATIC 3)	kW	43,8	51,1	58,3	65,5	72,5	95,3
❶	E.E.R. (AUTOMATIC 1)		5,70	5,74	5,72	5,71	5,68	5,48
❷	C.O.P. (SELECT 1-2 AUTOMATIC 3)		4,97	4,88	4,80	4,82	4,83	4,72
TXHEBY MODEL		4180	4205	4235	4260	4290	4330	4360
❺	Sound power level	dB(A)	77	77	78	79	80	82
	Scroll/step compressor	no.	4/4	4/4	4/4	4/4	4/4	4/4
	Circuits	no.	2	2	2	2	2	2
	Electric power 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
SIZES AND WEIGHTS		4180	4205	4235	4260	4290	4330	4360
	W - Width	mm	2509	2509	2509	2509	2509	2509
	H - Height	mm	1855	1855	1855	1855	1855	1855
	D - Depth	mm	870	870	870	870	870	870

Details under the following conditions:

- ❶ Chilled water (user): 12/7°C - Condenser water (disposal unit-source): 14/30°C.
- ❷ Chilled water (user): 12/7°C - Condenser water (recovery unit): 40/45°C.
- ❸ Evaporator water (source): 14°C - Water flow rate as in summer operation (❶). Hot water (utility): 40/45°C.
- ❺ Total sound power level in dB(A) on the basis of measurements taken in accordance with UNI EN-ISO 9614.

Z-Flow EXP

TXHVZ 2410÷2740

Cooling capacity: 434÷782 kW - Heating capacity: 482÷878 kW



TXHVZ 2740

EXPsystems - Polyvalent ecological water cooled system.
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 thermal protection, crankcase resistance, refrigerant gas intake and delivery piping shut-off valve and compressor oil level sensor.
- Electronic expansion valve: as standard on all models.
- Heat exchanger primary side (user) secondary side (recovery) and disposal unit: dry expansion shell and tube exchanger, complete with closed cell polyurethane rubber foam insulation, water flow differential pressure switch and Victaulic connections.
- Control: microprocessor electronic control.
- Structure: in galvanised and painted sheet steel, with polyester powder coating.
- The unit is also complete with:
 - display of cooling circuit high/low pressure;
 - clock board to display date/time and machine management in time slots.

Versions

- B - Standard version (TXHVBZ).
- I - Soundproofed version with soundproofed compressor cover (TXHVIZ).

Models

- TXHVBZ: standard EXPsystems unit.
- TXHVIZ: soundproof EXPsystems unit.

Factory fitted accessories

- Power factor capacitors ($\cos\phi > 0.94$).
- Soft starter
- Compressors MCBs.
- Forced limit of power consumption.
- Digital input for double set-point.
- Control of min/max power supply voltage.
- 4-20 mA analogue input for shifting set-point.
- Interfaces for serial communication with other devices.
- Spring antivibration mountings.

Separately supplied accessories

- Remote keyboard with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of several water chillers.

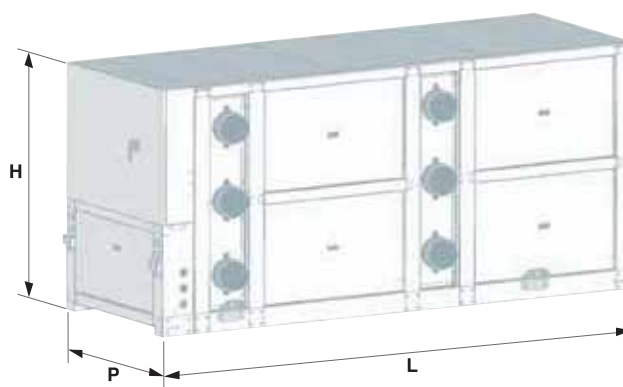


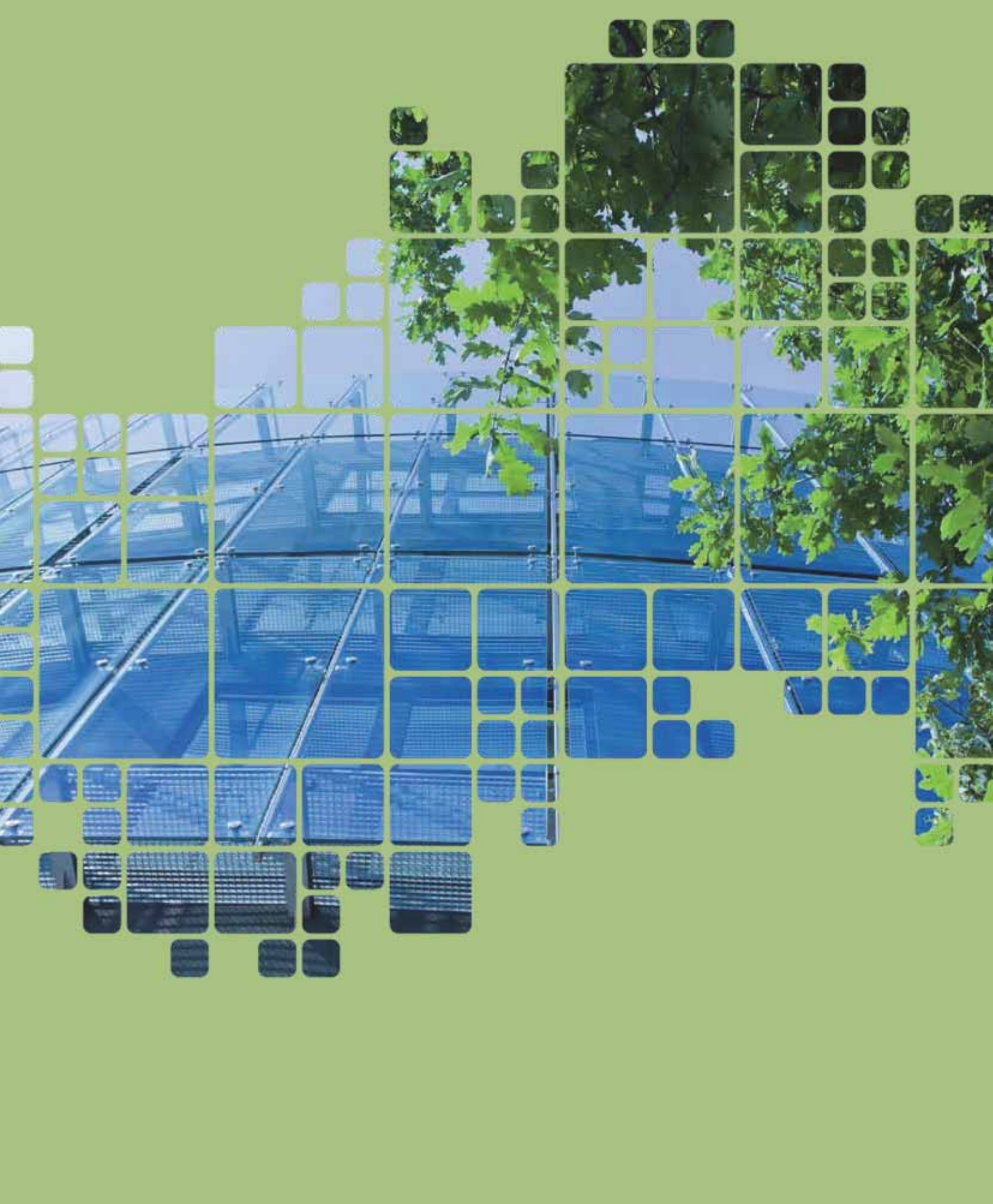


TXHVBZ - TXHVIZ MODEL		2410	2450	2500	2590	2660	2740	
❶	Nominal cooling capacity (AUTOMATIC 1)	kW	434	476	531	626	698	782
❷	Nominal cooling capacity (AUTOMATIC 1)	kW	408	450	501	592	660	738
❸	Recovery heating capacity (AUTOMATIC 2)	kW	462	512	563	663	738	838
❹	Nominal heating capacity (SELECT 1-2 AUTOMATIC 3)	kW	482	539	589	694	773	878
❶	Total absorbed power (AUTOMATIC 1)	kW	78,8	87,6	92,8	107,2	121,8	138,2
❷	Total absorbed power (AUTOMATIC 1)	kW	86,6	96,4	101,8	119,6	132,4	151,0
❸	Total absorbed power (AUTOMATIC 2)	kW	104,6	116,2	122,5	143,8	159,2	181,7
❹	Total absorbed power (SELECT 1-2 AUTOMATIC 3)	kW	105,6	119,0	123,6	144,6	160,8	184,4
❶	E.E.R. (AUTOMATIC 1)		5,51	5,43	5,72	5,84	5,73	5,66
❷	E.E.R. (AUTOMATIC 1)		4,71	4,67	4,92	4,95	4,98	4,89
❷	T.E.R.		7,86	7,85	8,22	8,25	8,30	8,25
❹	C.O.P. (SELECT 1-2 AUTOMATIC 3)		4,56	4,53	4,77	4,80	4,81	4,76
TXHVBZ MODEL		2410	2450	2500	2590	2660	2740	
❺	Sound power	dB(A)	97	97	98	99	99	99
	Screw/step compressor	no.	2/6	2/6	2/6	2/6	2/6	2/6
	Circuits	no.	2	2	2	2	2	2
	Power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
DIMENSIONS AND WEIGHTS		2410	2450	2500	2590	2660	2740	
L - Width	mm	4.480	4.480	4.480	4.480	4.480	4.480	
H - Height	mm	2.030	2.030	2.030	2.030	2.030	2.030	
P - Depth	mm	1.620	1.620	1.620	1.620	1.620	1.620	
	TXHVBZ Weight	kg	3.900	4.745	5.330	5.720	6.000	6.020
❻	TXHVIZ Weight	kg	4.020	4.865	5.450	5.840	6.120	6.140

Specifications under the following conditions:

- ❶ Chilled water (user): 12/7°C - Condenser water (disposal unit-source): 14/30°C.
- ❷ Chilled water (user): 12/7°C - Condenser water: 30/35°C.
- ❸ Chilled water (user): 12/7°C - Condenser water (recovery unit): 40/45°C.
- ❹ Evaporator water (source): 14°C - Water flow rate as in summer operation (❶). Hot water (utility): 40/45°C.
- ❺ Total sound power level in dB(A) on the basis of measurements taken in accordance with UNI EN-ISO 9614.
- ❻ Empty weight.





HEAT PUMPS EQUIPPED WITH RECOVERY

Water cooled

GEO-Flow DHW

THHEY 106÷230

Cooling capacity: 6.5÷31.5 kW - Heating capacity: 7.2÷34.8 kW



- Indoor units fitted with heat recovery exchanger.
- Advanced control logic.
- High energy efficiency.
- Upwards hydraulic connections.
- Applications with well water, water mains or geothermal probes.

Reversible geothermal water cooled heat pumps on the refrigerant circuit, with integrated domestic hot water production.

Range with hermetic Scroll compressors and R410A refrigerant gas.

Construction features

- Compressor: high efficiency hermetic, rotary scroll type, complete with thermal protection.
- Expansion valve: electronic.
- Primary side (user) heat exchanger: suitably insulated stainless steel plates, complete with water flow differential pressure switch.
- Disposal side exchanger (well/aqueduct/geothermal probes): suitably insulated with stainless steel plates, complete with differential water flow pressure switch (for geothermal applications) or flow switch (for running water applications).
- Recovery heat exchanger (domestic hot water): adequately insulated, stainless steel plates.
- Control: electronic with microprocessor able to optimally control all hydraulic parts in the plant.
- Outdoor air temperature probe for set-point compensation.
- Structure: made of galvanised and painted sheet steel with epoxy powder coating, with completely soundproofed compressor housing and fitted with anti-vibration mounts.

Models

- THHEY: heat pump unit with integrated domestic hot water production.

Available versions

THHEY – for disposable water applications

Primary side (user): pumping unit complete with low consumption circulation pump, expansion tank, safety valve, and pressure gauge.

Recovery side (DHW): pump unit complete with Inverter circulator.

Disposal side (well/aqueduct): two-way modulating valve for condensation control.

THHEY – for geothermal applications

Primary side (user): pumping unit complete with low consumption circulation pump, expansion tank, safety valve, and pressure gauge.

Recovery side (DHW): pump unit complete with Inverter circulator.

Disposal side (geothermal probes): pumping unit complete with Inverter circulator for condensation control, expansion tank, safety valve, pressure gauge.

Factory fitted accessories

- Soft-start device (for 230V models).
- Silenced set up.

Separately supplied accessories

- Freecooling kit.
- Solar kit.
- Room areas management kit.
- Remote keyboard with display.
- Interfaces for serial communication with other devices.
- RS485/USB serial converter.



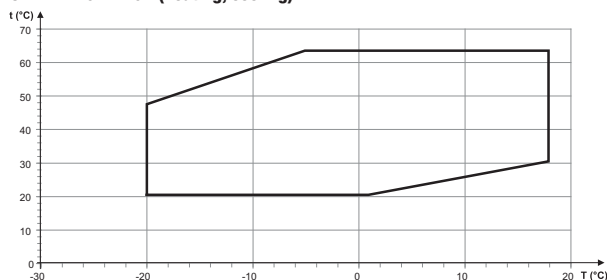
THHEY MODEL		106	108	111	114	116	220	230
Radiant systems								
❶ Heating capacity	kW	7,5	9,9	13,3	16,7	22,2	26,1	33,5
❶ Absorbed power (*)	kW	1,27	1,6	2,2	3,6	4	4,4	5,6
❶ C.O.P.		5,85	6,1	6,14	4,67	5,52	5,99	6,02
❶ Available head pressure of the system	KPa	60	56	49	37	54	46	88
❷ Heating capacity (geothermal)	kW	5,8	7,5	10,2	13,2	17,1	21	25,4
❷ Absorbed power (geothermal) (*)	kW	1,3	1,7	2,2	2,9	3,7	4,4	5,5
❷ C.O.P. (geothermal)		4,43	4,57	4,68	4,6	4,6	4,82	4,6
❷ Available head pressure of the system	KPa	65	62	58	50	67	60	111
❷ Available head pressure of probes	KPa	59	55	89	61	51	41	87
❸ DHW heating capacity	kW	5,3	7	9,4	11,9	15,7	18,6	23,7
❸ DHW available head pressure	KPa	66	62	57	55	41	52	53
❹ Cooling capacity	kW	9,5	12,5	16,6	23,6	31	32,4	41,6
❹ Absorbed power (*)	kW	1,3	1,5	2,1	2,8	7,1	4,3	5,7
❹ E.E.R.		7,39	8,19	7,84	8,4	4,38	7,61	7,35
❹ Available head pressure of the system	KPa	58	50	37	30	33	33	66
❹ Available head pressure of the probes	KPa	51	45	54	31	34	42	41
Fan coil systems								
❺ Heating capacity	kW	7,05	9,23	12,38	15,62	20,77	24,39	31,25
❺ Absorbed power (*)	kW	1,7	2,1	2,8	4,6	5,1	5,6	7,1
❺ C.O.P.		4,15	4,4	4,42	3,4	4,07	4,36	4,4
❻ Cooling capacity	kW	6,7	8,8	11,8	14,9	19,7	23,1	29,7
❻ Absorbed power (*)	kW	1,3	1,7	2,1	3,6	4	4,3	5,5
❻ E.E.R.		5,15	5,18	5,62	4,14	4,93	5,37	5,4
❼ E.S.E.E.R.		5,04	4,79	4,6	4,57	5,14	5,37	6,18
❼ Sound pressure	dB(A)	48	49	50	52	54	56	60
Scroll compressor	no.	1	1	1	1	1	2	2
Power supply	V-ph-Hz	230-1-50/400-3N-50	230-1-50/400-3N-50	230-1-50/400-3N-50	400-3N-50	400-3N-50	400-3N-50	400-3N-50
DIMENSIONS AND WEIGHTS								
L - Width	mm	620	620	620	620	620	800	800
H - Height	mm	971	971	1051	1051	1051	1000	1000
P - Depth	mm	575	650	650	650	650	875	875
❸ Weight	kg	151	158	175	200	220	270	310

Specifications under the following conditions:

- ❶ Hot water: 30/35°C, evaporator water 10/5°C.
- ❷ Hot water: 30/35°C, evaporator water 0/-3°C, 20% glycol.
- ❸ Domestic hot water: 45/50°C, evaporator water 0/-3°C, 30% glycol.
- ❹ Chilled water: 23/18°C, condenser water 30/35°C, 20% glycol.
- ❺ Hot water: 40/45°C, evaporator water 10/5°C.
- ❻ Chilled water: 12/7°C, condenser water 30/35°C.
- ❼ 1 m from the unit in free field (Q=2).
- ❸ Weight refers to most complete set up.
- ESEER (European Seasonal EER) - Average European seasonal efficiency.
- (*) Unit without circulating pumps.

Performance according to EN 14511:2013

OPERATING RANGE (heating, cooling)



t (°C) = Temperature of condenser water output.
T (°C) = Temperature of evaporator water output.





CHILLERS - HEAT PUMPS

Moto-condensing units

Moto-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 type, hermetic complete with thermal protection and crankcase heater.
- Air side heat exchanger: featuring finned coil with copper pipes and aluminium fins, complete with protection grille.
- Fan: electric axial fans with external rotor, equipped with internal thermal protection, protection grilles and proportional electronic device for pressurised and continuous fan rotation speed regulation up to an outdoor air temperature of -10°C.
- Control: electronic with microprocessor.
- Structure: made of galvanised and painted sheet steel.

Models

- MCAEBY: unit intended for cooling only.

Factory fitted accessories

- Silenced set-up.

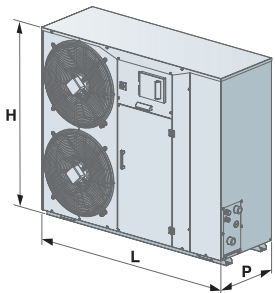
Accessories separately supplied

- Rubber vibration dampers.
- RS485 Interface for serial communication with other devices.
- RS485/USB serial converter.

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
Power 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 WEIGHTS		233	238	245	250	260	265
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

Specifications under the following conditions:

- ❶ Air: 35°C - Sucked saturated gas: 5°C.
- ❸ 5 m from the unit in free field (Q = 2).



Moto-condensing units

MCAEBY 233÷2160

Cooling capacity: 34.5÷162.6 kW



Air-cooled moto-condensing units 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.
- Air side heat exchanger: finned coil with copper pipes and aluminium fins.
- Fan: electric axial fans with external rotor, equipped with internal thermal protection, proportional electronic device for continuous fan rotation speed regulation and protection grilles.
- Control: microprocessor electronic control.
- Structure: in galvanised and painted sheet steel, with polyurethane powder coating.

- The unit is also complete with:
 - compressor and fan thermal overload switches,
 - R410A gas pre-load.

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.
- Copper/pre-painted aluminium or copper/copper coils.
- Rubber anti-vibration mountings.

Separately supplied accessories

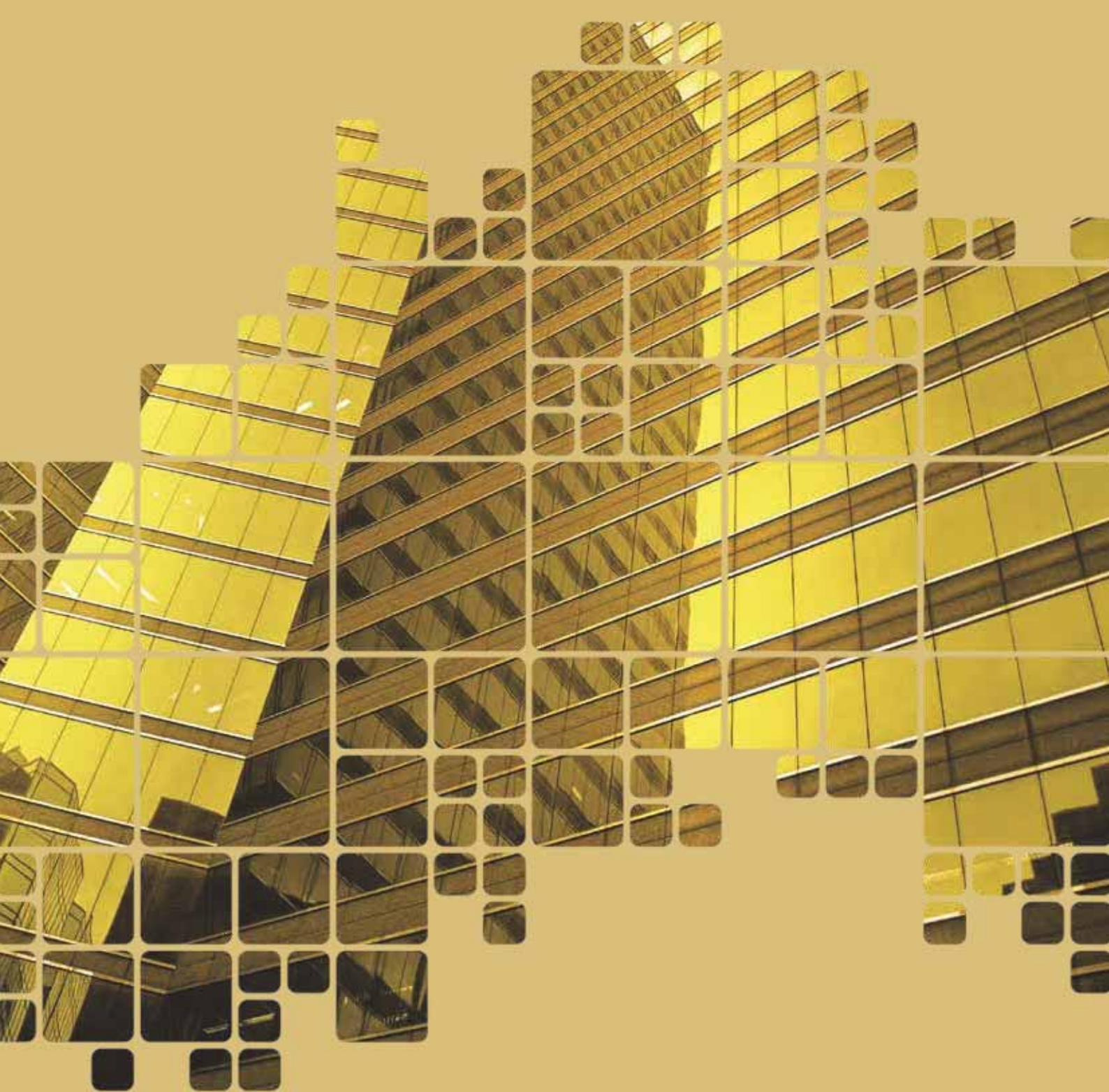
- Thermostatic valve kit.
- Interfaces for serial communication with other devices.
- RS485/USB serial converter.

MCAEBY MODEL		233	238	245	250	260	265	280
❶ Nominal cooling capacity	kW	34,5	41,2	46,7	54,3	62,5	67,7	79,1
❶ Absorbed power	kW	12,5	14,7	17,6	19,9	22,4	24,3	28,4
MCAEBY MODEL		233	238	245	250	260	265	280
❸ Sound pressure	dB(A)	46,5	47	48	48	49	49	50
Electric power 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
SIZES AND WEIGHTS		233	238	245	250	260	265	280
W - Width	mm	1710	2315	2315	2315	2315	2315	2650
H - Height	mm	1570	1570	1570	1570	1570	1570	1700
D - Depth	mm	1000	1000	1000	1000	1000	1000	1210
MCAEBY weight	kg	400	546	536	570	586	624	880

MCAEBY MODEL		290	2100	2115	2130	2145	2160
❶ Nominal cooling capacity	kW	87,1	101	116,2	126,5	145,6	162,6
❶ Absorbed power	kW	32,9	36,2	41,2	46,2	52,9	60,2
MCAEBY MODEL		290	2100	2115	2130	2145	2160
❸ Sound pressure	dB(A)	52	52	58	58	58	59
Electric power 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
SIZES AND WEIGHTS		290	2100	2115	2130	2145	2160
W - Width	mm	3150	3150	3150	3150	3150	3450
H - Height	mm	1700	1700	1730	1730	1730	1700
D - Depth	mm	1210	1210	1210	1210	1210	1210
MCAEBY weight	kg	935	950	998	998	1052	1108

Details under the following conditions:

- ❶ Air: 35°C - Sucked saturated gas: 5°C.
- ❸ 10 m from the unit in free field (Q = 2).



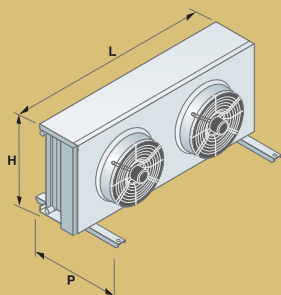
SYSTEM ACCESSORIES

Remote condensers

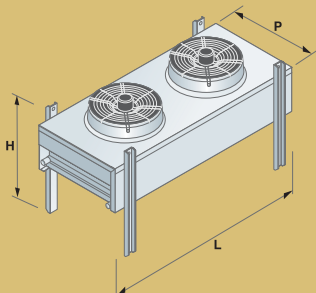
CCAMY 115÷2185



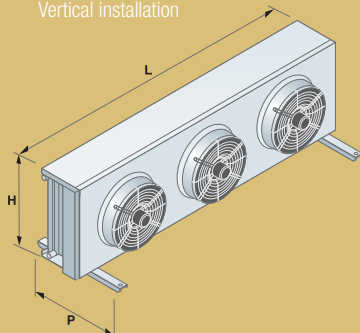
Vertical installation



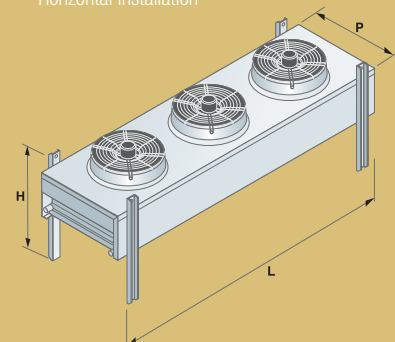
Horizontal installation



Vertical installation



Horizontal installation



Remote air condensers with axial fans for direct expansion units operating with R410A refrigerant gas. To be combined with the TCEEY condenserless units.

Construction features

- Heat exchanger: high efficiency finned coil with copper pipes mechanically expanded on aluminium fins. The cooling connections need brazing. Projected pressure 40 barg. Every exchanger is tested for leakage with dry air and preloaded with nitrogen.
- Fans: external rotor axial type with fans equipped with innovative polymer material blades and integrated thermal protection that provides protection against thermal overload. IP54 degree of protection in compliance with DIN 40050. The fan series is also complete with phase cut speed control.
- Structure: in zinc-plated steel sheet pre-varnished with epoxy finish (RAL 9002). The battery structure is in aluminium alloy (AlMg3) to protect against vibrations and thermal dilatations. The condensers are supplied with support rod kits for vertical installation with horizontal air flow (CCAMY V) or horizontal with vertical air flow (CCAMY H).

The support rods are made of zinc-plated 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:
 - Version "B" Base (except mod.115)
 - Version "S" Silenced
 - Version "Q" Supersilenced



CCAMBY MODEL		118	122	125	230	240
VERSION B "Basic"						
❶ Nominal heating capacity	kW	22,8	25,55	29,37	39,88	48,96
❷ Sound pressure	dB(A)	41	41	44	47	47
Refrigerant circuits	no.	1	1	1	1	1
Fans	no.	1	1	1	2	2
Fans nominal flow rate	m³/h	6419	6068	7019	15560	14760
Rotation speed	rpm	1180	1180	1390	1390	1390
❶ Absorbed power	kW	0,55	0,55	0,72	1,44	1,44
Electric power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50

DIMENSIONS AND WEIGHTS

Horizontal installation H						
L - Width	mm	1115	1115	1115	2015	2015
H - Height	mm	846	846	846	846	846
P - Depth	mm	868	868	868	868	868
Vertical installation V						
L - Width	mm	1115	1115	1115	2015	2015
H - Height	mm	828	828	828	828	828
P - Depth	mm	470	470	470	470	470
Weight *	Kg	49	54	54	83	92

CCAMSY MODEL		115	118	122	125	230	240
S "Silenced" Version							
❶ Nominal heating capacity	kW	18,96	20,76	29,08	33,9	36,94	48,9
❷ Sound pressure	dB(A)	36	36	36	36	39	41
Cooling circuits	no.	1	1	1	1	1	1
Fans	no.	1	1	2	2	2	3
Fan nominal air flow	m³/h	4865	4599	9224	8643	9730	15510
Rotation speed	rpm	930	930	800	800	930	930
❶ Absorbed power	kW	0,27	0,27	0,38	0,38	0,54	0,81
Power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50

DIMENSIONS AND WEIGHTS

Horizontal installation H							
L - Width	mm	1115	1115	2015	2015	2015	2915
H - Height	mm	846	846	846	846	846	846
P - Depth	mm	868	868	868	868	868	868
Vertical installation V							
L - Width	mm	1115	1115	2015	2015	2015	2915
H - Height	mm	828	828	828	828	828	828
P - Depth	mm	470	470	470	470	470	470
Weight *	Kg	49	54	83	92	92	121

CCAMQY MODEL		115	118	122	125	230	240
Q "Super-silenced" VERSION							
❶ Nominal heating capacity	kW	18,89	21,02	25,83	30,65	37,83	50
❷ Sound pressure	dB(A)	33	34	34	34	36	38
Cooling circuits	no.	1	1	1	1	1	1
Fans	no.	1	1	1	1	2	3
Fan nominal air flow	m³/h	4071	7285	6724	6262	8141	12800
Rotation speed	rpm	800	690	690	690	800	800
❶ Absorbed power	kW	0,19	0,4	0,4	0,4	0,38	0,57
Power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50

DIMENSIONS AND WEIGHTS

Horizontal installation H							
L - Width	mm	1115	1261	1261	1261	2015	2915
H - Height	mm	846	1171	1171	1171	846	846
P - Depth	mm	868	1100	1100	1100	868	868
Vertical installation V							
L - Width	mm	1115	1261	1261	1261	2015	2915
H - Height	mm	828	1034	1034	1034	828	828
P - Depth	mm	470	750	750	750	470	470
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 (dew point), desuperheating 25°K. Maximum speed

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

* Unladen 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	56,92	74	76,34	80,16	87,39	108,49
❷ Sound pressure	dB(A)	47	49	49	50	51	53
Refrigerant circuits	no.	1	1	1	1	1	1
Fans	no.	2	3	3	4	2	3
Fans nominal flow rate	m³/h	14040	22100	22130	31130	21160	33100
Rotation speed	rpm	1390	1390	1390	1390	1330	1330
❶ Absorbed power	kW	1,44	2,16	2,16	2,88	2,5	3,75
Electric power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
DIMENSIONS AND WEIGHTS							
Horizontal installation H							
L - Width	mm	2015	2915	2915	3815	2261	3261
H - Height	mm	846	846	846	846	1171	1171
P - Depth	mm	868	868	868	868	1100	1100
Vertical installation V							
L - Width	mm	2015	2915	2915	3815	2261	3261
H - Height	mm	828	828	828	828	1034	1034
P - Depth	mm	470	470	470	470	750	750
Weight *	Kg	101	136	140	174	169	237

CCAMSY MODEL		245	250	260	270	275	290
S "Silenced" Version							
❶ Nominal heating capacity	kW	53,99	69,69	74,74	92,21	95,37	106,28
❷ Sound pressure	dB(A)	46	46	46	47	49	49
Cooling circuits	no.	1	1	1	1	1	1
Fans	no.	3	3	3	4	3	3
Fan nominal air flow	m³/h	20480	19260	18210	25670	27190	25690
Rotation speed	rpm	1180	1180	1180	1180	1070	1070
❶ Absorbed power	kW	1,65	1,65	1,65	2,2	2,52	2,52
Power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
DIMENSIONS AND WEIGHTS							
Horizontal installation H							
L - Width	mm	2915	2915	2915	3815	3261	3261
H - Height	mm	846	846	846	846	1171	1171
P - Depth	mm	868	868	868	868	1100	1100
Vertical installation V							
L - Width	mm	2915	2915	2915	3815	3261	3261
H - Height	mm	828	828	828	828	1034	1034
P - Depth	mm	470	470	470	470	750	750
Weight *	Kg	121	136	149	193	237	257

CCAMQY MODEL		245	250	260	270	275	290
Q "Super-silenced" VERSION							
❶ Nominal heating capacity	kW	52,99	63,91	77,91	83,27	94,29	105
❷ Sound pressure	dB(A)	38	41	42	42	44	45
Cooling circuits	no.	1	1	1	1	1	1
Fans	no.	3	3	4	4	3	4
Fan nominal air flow	m³/h	12960	13800	19460	18400	25490	33800
Rotation speed	rpm	800	930	930	930	890	890
❶ Absorbed power	kW	0,57	0,81	1,08	1,08	1,8	2,4
Power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
DIMENSIONS AND WEIGHTS							
Horizontal installation H							
L - Width	mm	2915	2915	3815	3815	3261	4261
H - Height	mm	846	846	846	846	1171	1171
P - Depth	mm	868	868	868	868	1100	1100
Vertical installation V							
L - Width	mm	2915	2915	3815	3815	3261	4261
H - Height	mm	828	828	828	828	1034	1034
P - Depth	mm	470	470	470	470	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 (dew point), desuperheating 25°K. Maximum speed

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

* Unladen weight

CCAMBY MODEL		2100	2115	2130	2145	2165	2185
VERSION B "Basic"							
❶ Nominal heating capacity	kW	123,65	135	149	169,23	200,8	217,23
❷ Sound pressure	dB(A)	53	54	54	54	55	56
Refrigerant circuits	no.	1	1	1	1	1	1
Fans	no.	3	4	4	4	5	6
Fans nominal flow rate	m³/h	31730	44140	44240	42310	52920	66210
Rotation speed	rpm	1330	1330	1330	1330	1330	1330
❶ Absorbed power	kW	3,75	5	5	5	6,25	7,5
Electric power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
DIMENSIONS AND WEIGHTS							
Horizontal installation H							
L - Width	mm	3261	4261	4261	4261	5261	6261
H - Height	mm	1171	1171	1171	1171	1171	1171
P - Depth	mm	1100	1100	1100	1100	1100	1100
Vertical installation V							
L - Width	mm	3261	4261	4261	4261	5261	6261
H - Height	mm	1034	1034	1034	1034	1034	1034
P - Depth	mm	750	750	750	750	750	750
Weight *	Kg	257	302	310	327	421	451

CCAMSY MODEL		2100	2115	2130	2145	2165	2185
S "Silenced" Version							
❶ Nominal heating capacity	kW	130,58	135	149	173,43	190,91	212,68
❷ Sound pressure	dB(A)	50	50	50	51	52	52
Cooling circuits	no.	1	1	1	1	1	1
Fans	no.	4	4	4	5	6	6
Fan nominal air flow	m³/h	36250	34100	34250	42820	54380	51380
Rotation speed	rpm	1070	1070	1070	1070	1070	1070
❶ Absorbed power	kW	3,36	3,36	3,36	4,2	5,04	5,04
Power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
DIMENSIONS AND WEIGHTS							
Horizontal installation H							
L - Width	mm	4261	4261	4261	5261	6261	6261
H - Height	mm	1171	1171	1171	1171	1171	1171
P - Depth	mm	1100	1100	1100	1100	1100	1110
Vertical installation V							
L - Width	mm	4261	4261	4261	5261	6261	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
Q "Super-silenced" VERSION							
❶ Nominal heating capacity	kW	125	138,65	160	176	195,63	217,63
❷ Sound pressure	dB(A)	45	45	46	46	47	47
Cooling circuits	no.	1	1	1	1	1	1
Fans	no.	4	4	5	5	6	6
Fan nominal air flow	m³/h	33990	32110	40000	40130	47900	48160
Rotation speed	rpm	890	890	890	890	890	890
❶ Absorbed power	kW	2,4	2,4	3	3	3,6	3,6
Power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
DIMENSIONS AND WEIGHTS							
Horizontal installation H							
L - Width	mm	4261	4261	5261	5261	6261	6261
H - Height	mm	1171	1171	1171	1171	1171	1171
P - Depth	mm	1100	1100	1100	1100	1100	1100
Vertical installation V							
L - Width	mm	4261	4261	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	299	383	383	443	450

Data at the following conditions:

❶ Outdoor air temperature 35°C D.B., condensation temperature 50°C (dew point), desuperheating 25°K. Maximum speed

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

* Unladen weight

Cooling towers

CEHV CEHP 46÷2791



- Wide range of models up to 2,800 kW
- Silenced version with considerable noise reduction
- Compact easy to install units

Cooling towers for water chillers with water condensation.
Axial fans range.

Construction features

- The fan series is also complete with phase cut speed control.
- The battery structure is in aluminium alloy (AlMg3) to protect against vibrations and thermal dilatations.
- Drop separators: made of plastic.
- Fan: direct coupling axial fan with protection grille.
- Drain pan: in polyester resin strengthened with fibreglass complete with spray protection fins, drain connections, float re-integration and overflow.
- Structure: in polyester resin strengthened with fibreglass and load-bearing with an inspection pothole for models of the CEHV range; with hot-galvanised steel sections and with lateral damping using 22mm sandwich panels in polyester resin strengthened with fibreglass and a manhole for models of the CEHP-CEHPS range.

Models

- CEHV 46÷639 Cooling towers with load-bearing polyester resin structure strengthened with fibreglass.
- CEHP 744÷2791 Cooling towers with hot-galvanised steel sections and with lateral damping using 22mm sandwich panels in polyester resin strengthened with fibreglass.
- CEHPS 744÷2791 Silenced cooling towers with hot-galvanised steel sections and with lateral damping using 22mm sandwich panels in polyester resin strengthened with fibreglass.

Factory fitted accessories CEHV Range

- Anti-freeze electrical heater on condensation drain pan complete with minimum level switch.

CEHP - CEHPS range

- Removable side wall.
- Anti-freeze electrical heater on condensation drain pan complete with minimum level switch.



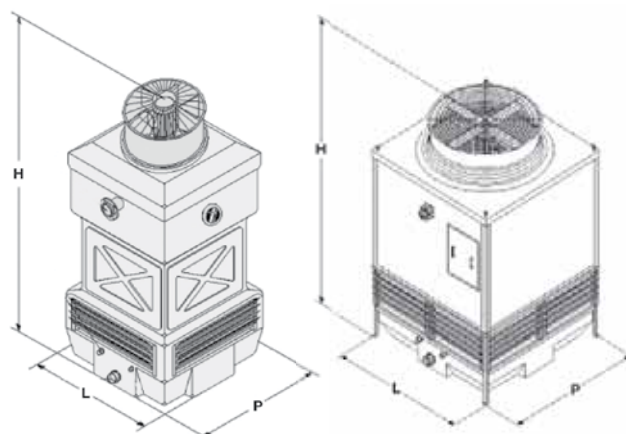
CEHV MODEL		46	87	105	139	169	203	238	337	395	477	506	599	639
❶ Nominal heating capacity consumption	kW	46,5	87,2	104,7	139,5	168,6	203,5	238,4	337,2	395,3	476,7	505,8	598,8	639,5
Installed fan electrical power	kW	0,55	0,75	0,75	1,1	1,1	1,1	1,1	2,2	2,2	4	4	4	4
Sound power level	dB(A)	74	75	75	75	75	77	77	80	80	83	83	85	85
❷ Sound pressure	dB(A)	46	47	47	47	47	49	49	52	52	55	55	57	57
Electric power supply	V-ph-Hz	220/380-3-50												
SIZES AND WEIGHTS		46	87	105	139	169	203	238	337	395	477	506	599	639
W - Width	mm	800	1000	1000	1200	1200	1400	1400	1740	1740	2100	2100	2300	2300
H - Height	mm	2110	2595	2595	2800	2800	2860	2860	3140	3140	3380	3380	3450	3450
D - Depth	mm	800	1000	1000	1200	1200	1400	1400	1740	1740	1900	1900	2100	2100
Empty weight	kg	75	85	95	155	170	195	210	380	410	500	525	555	580
Operating weight	kg	180	215	285	470	485	755	780	1380	1410	1800	1825	1955	1980

CEHP MODEL		744	826	878	971	1070	1186	1256	1395	1488	1651	1756	1948	2139	2366	2512	2791
❶ Nominal heating capacity consumption	kW	744,2	825,6	877,9	970,9	1069,8	1186	1255,8	1395,3	1488,4	1651,2	1755,8	1947,7	2139,5	2366,3	2511,6	2790,7
Installed fan electrical power	kW	4	5,5	5,5	7,5	7,5	11	11	11	2X4	2X5,5	2X5,5	2X7,5	2X7,5	2X11	2X11	2X11
Sound power level	dB(A)	90	90	92	92	94	94	95	95	93	93	95	95	97	97	98	98
❷ Sound pressure	dB(A)	62	62	64	64	66	66	67	67	65	65	67	67	69	69	70	70
Electric power supply	V-ph-Hz	380/660-3-50															
SIZES AND WEIGHTS		744	826	878	971	1070	1186	1256	1395	1488	1651	1756	1948	2139	2366	2512	2791
W - Width	mm	2025	2025	2365	2365	2875	2875	3370	3370	4080	4080	4750	4750	5770	5770	6770	6770
H - Height	mm	3650	3650	3650	3650	3650	3650	3650	3650	3650	3650	3650	3650	3950	3950	3950	3950
D - Depth	mm	2365	2365	2365	2365	2365	2365	2365	2365	2365	2365	2365	2365	2365	2365	2365	2365
Empty weight	kg	885	920	965	1000	1115	1165	1220	1270	1630	1700	1790	1860	2125	2225	2375	2475
Operating weight	kg	2485	2520	2865	2900	3815	3865	4320	4370	4680	4750	5430	5500	7325	7425	8375	8475

CEHPS MODEL		744	826	878	971	1070	1186	1256	1395	1488	1651	1756	1948	2139	2366	2512	2791
❶ Nominal heating capacity consumption	kW	744,2	825,6	877,9	970,9	1069,8	1186	1255,8	1395,3	1488,4	1651,2	1755,8	1947,7	2139,5	2366,3	2511,6	2790,7
Installed fan electrical power	kW	5,5	5,5	7,5	7,5	11	11	11	11	2X5,5	2X5,5	2X7,5	2X7,5	2X11	2X11	2X11	2X11
Sound power level	dB(A)	79	79	80	80	82	82	83	83	82	82	83	83	85	85	86	86
❷ Sound pressure	dB(A)	51	51	52	52	54	54	55	55	54	54	55	55	57	57	58	58
Electric power supply	V-ph-Hz	380/660-3-50															
SIZES AND WEIGHTS		744	826	878	971	1070	1186	1256	1395	1488	1651	1756	1948	2139	2366	2512	2791
W - Width	mm	2025	2025	2365	2365	2875	2875	3370	3370	4080	4080	4750	4750	5770	5770	6770	6770
H - Height	mm	3905	3905	3905	3905	3905	3905	3905	3905	3905	3905	3905	3905	4205	4205	4205	4205
D - Depth	mm	2365	2365	2365	2365	2365	2365	2365	2365	2365	2365	2365	2365	2365	2365	2365	2365
Empty weight	kg	885	920	965	1000	1115	1165	1220	1270	1630	1700	1790	1860	2125	2225	2375	2475
Operating weight	kg	2485	2520	2865	2900	3815	3865	4320	4370	4680	4750	5430	5500	7325	7425	8375	8475

Details under the following conditions:

- ❶ Air: 24°C W.B. - Water: 35/30° C.
- ❷ 10 m from the unit in free field (Q = 2).



Pumping units

AS 0300÷2500



- **Water buffer tank from 300 to 2,500 l**
- **Multiple combinations for pump user-side**
- **Connection to the system on the water outlet or return**

Pump groups 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 pump, inlet and outlet shut-off ball valve of each pump, automatic re-integration tap, manual re-integration tap, safety valve, automatic air bleed valve, tank water drain tap, expansion tank with membrane, no-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 sheet steel supporting structure.
- Control: electromechanical

Versions

- AS - Standard version with two connections.

Models

- AS 0300 PU or DPU 1-5: pump unit equipped with single user pump (PU) or double user pump (DPU).
- AS 0500 PU or DPU 1÷5: pump unit equipped with single user pump (PU) or double user pump (DPU).
- AS 0750 PU or DPU 6÷10: pump unit equipped with single user pump (PU) or double user pump (DPU).
- AS 1000 PU or DPU 6÷10: pump unit equipped with single user pump (PU) or double user pump (DPU).
- AS 1500 PU or DPU 6÷14: pump unit equipped with single user pump (PU) or double user pump (DPU).
- AS 2500 PU or DPU 6÷14: pump unit equipped with single user pump (PU) or double user pump (DPU).

Factory fitted accessories

- Buffer antifreeze heater complete with activator.

Separately supplied accessories

- Victaulic connections.

MODEL		AS 0300	AS 0500	AS 0750	AS 1000	AS 1500	AS 2500
Buffer capacity	l	300	500	750	1000	1500	2500
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
Pre-load expansion tank	bar	1,5	1,5	1,5	1,5	1,5	1,5
Safety valve calibration	bar	3	3	3	3	3	3
Maximum working pressure	bar	3	3	3	3	3	3
Electric heater (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
Power supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
DIMENSIONS AND WEIGHTS		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

(*) Unladen weight with 1 pump

(**) Unladen weight with 2 pumps

TANK	HEAT	Power supply	Maximum absorbed power	Flow rate	Available head pressure	Flow rate	Available head pressure	Flow rate	Available head pressure
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 assembly on outlet

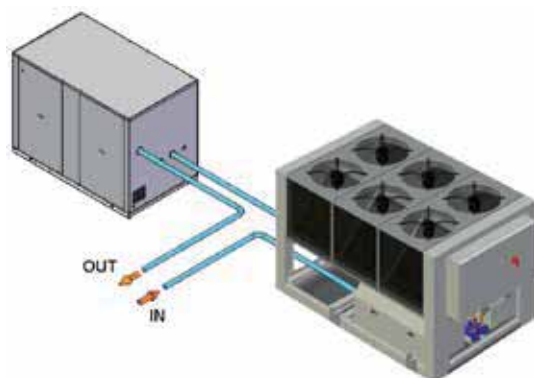
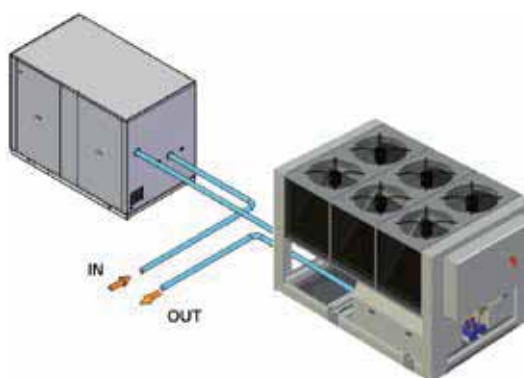


Diagram with AS pump assembly on return



Pumping units

PBHI 0200-0400



- Primary and secondary circuit
- FREECOOLING version
- Electric pump option with integrated inverter

Pump groups with buffer tank.

Construction features

- Buffer tank: in carbon-plated and pre-painted sheet steel, with a 200 or 425 litre capacity.
- Hydraulic components: primary circuit complete with single pump, secondary circuit complete with single standard head pressure pump, storage tank, expansion tank, safety valve, shut-off valves, tank water buffer/drain taps and automatic and manual air bleed valves.
- Heat exchanger: brazed plate exchanger complete with adjustable flow switch (freecooling version only).
- Control: electromechanical.
- Structure: load bearing structure made of galvanised sheet steel and painted with polyester powders. The panels can be removed in order to allow easy access to the internal components.

Versions

- B - Standard version: with single pump for primary and secondary circuit (basic static pressure).
- F - Freecooling version: equipped with indirect freecooling heat exchanger.

Models

- PBHI 0200 B: standard pumping unit.
- PBHI 0400 B: standard pumping unit.
- PBHI 0200 F: freecooling version pumping unit.
- PBHI 0400 F: freecooling version pumping unit.

Factory fitted accessories

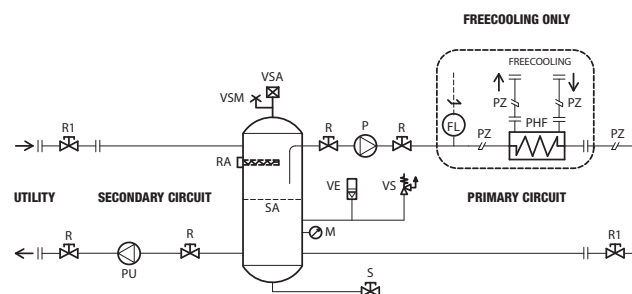
- Single secondary circuit electric pump with increased head pressure.
- Double secondary circuit pump with standard or increased head pressure, including one in standby with automatic activation.
- Single centrifugal pump with built-in inverter, able to maintain a constant pressure despite variations in system demands.
- Antifreeze heater 300 W (230V) with activator.

Accessories supplied loose

- Rubber anti-vibration mountings.
- Flexible tubes for connection to the water chiller/heat pump.

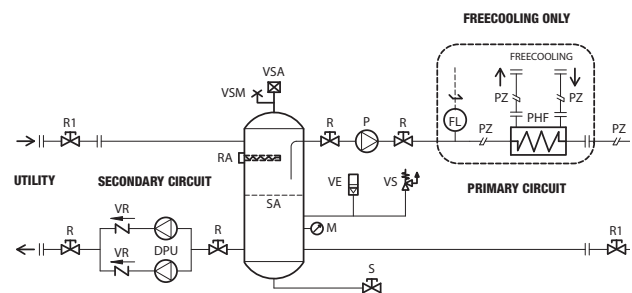
PBHI MODEL		0200	0400
Buffer capacity	l	200	425
Expansion tank capacity	l	8	12
Expansion tank calibration	kPa	150	150
Safety valve calibration	kPa	600	600
Maximum working pressure	kPa	600	600
Electric heater (optional)	W	300	300
Hydraulic connection (female)	Ø (Gas)	2" F	2 1/2" F
Sound power level	dB(A)	71	74
Electric power supply	V-ph-Hz	400-3+N-50	400-3+N-50
SIZES AND WEIGHTS		0200	0400
W - Width	mm	1.340	1.919
H - Height	mm	1.206	1.706
D - Depth	mm	861	863

PBHI water circuit with single pump on user side

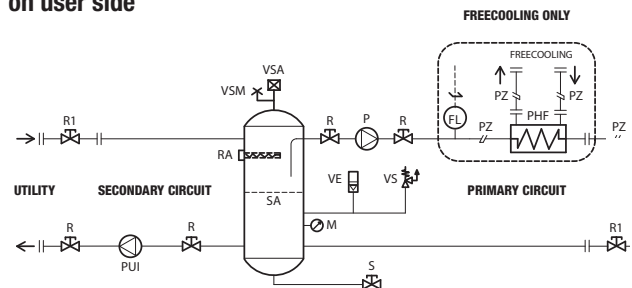


SECONDARY CIRCUIT PUMP ACCESSORIES:

PBHI water circuit with double pump on user side



PBHI water circuit with single inverter pump on user side



P - Primary circuit circulation pump.

PU - Secondary circuit circulation pump.

DPU - Double secondary circuit circulation pump (factory fitted accessory).

PUI - Secondary circuit circulation inverter pump (factory fitted accessory).

FL - Flow switch.

M - Pressure gauge.

PZ - Pits with internal diameter 6.2 mm.

PHF - Plate heat exchanger for FREECOOLING.

RA - Buffer tank antifreeze heater (factory fitted accessory).

R - Tap.

R1 - Tap to be fitted by the installer (provided).

S - Water drain/charge tap (outside the buffer tank).

SA - Buffer tank.

VE - Expansion tank calculated to contain the water from the buffer tank only (−10°C - +60°C).

VR - Non-return valve.

VS - Safety valve.

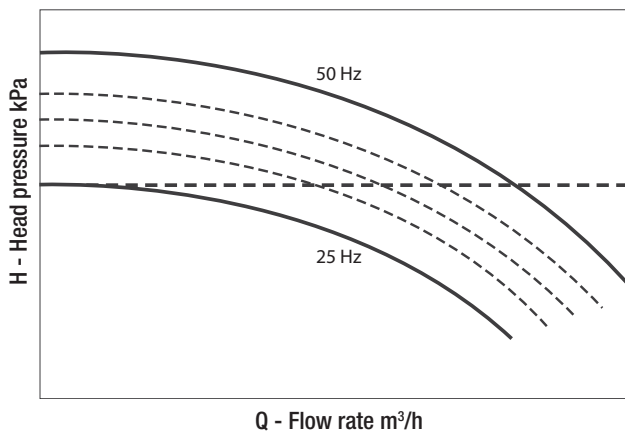
VSA - Automatic air bleed valve.

VSM - Manual air bleed valve.

II - Fittings.

PUMP WITH INVERTER

Regulation at constant pressure



Integrated system management - ADJUSTMENT FOR HEAT PUMP SYSTEMS

Integrated system management - RHOSS TOUCH MANAGER

Integrated system management - iDRHOSS

Remote monitoring - RHOSS MONITORING: Mobile - Cloud - Real time

Control and monitoring via ETHERNET - RHOSS WEB SERVER

Water Chiller management software - RHOSS SEQUENCER

“All in one” & “Touch screen” supervisor - RHOSS SUPERVISOR



**SOLUTIONS TO CONTROL THE INTEGRATED SYSTEM,
MONITOR AND SUPERVISE**

Integrated system management

ADJUSTMENT FOR HEAT PUMP SYSTEMS



RHOSS SOLUTIONS FOR RESIDENTIAL AND SMALL SERVICE INDUSTRY APPLICATIONS

Rhoss offers a wide range of installation solutions and comprehensive systems for heating, cooling and domestic hot water production.

From the simplest solution where the heat pump autonomously meets the house's heating demand, to the most advanced solutions equipped with intelligent regulation for centralised management of the entire system and to meet heating, cooling, dehumidification and domestic hot water production needs all year round.

All that with a view to addressing in the most adequate manner the various system engineering needs, either in new or existing buildings, optimising efficiency and ease of installation.

Suggested solutions:

- Heating with radiators.
- Heating/cooling with fan coil units.
- Heating with radiators and/or fan coil units and DHW production.
Possibility to cool with fan coil units.
- Heating with fan coil units and/or radiant panels and DHW production.
Possibility to cool with fan coil units.
- Heating/cooling with fan coil units and/or radiant panels and DHW production.
- Heating with heat pump or boiler.

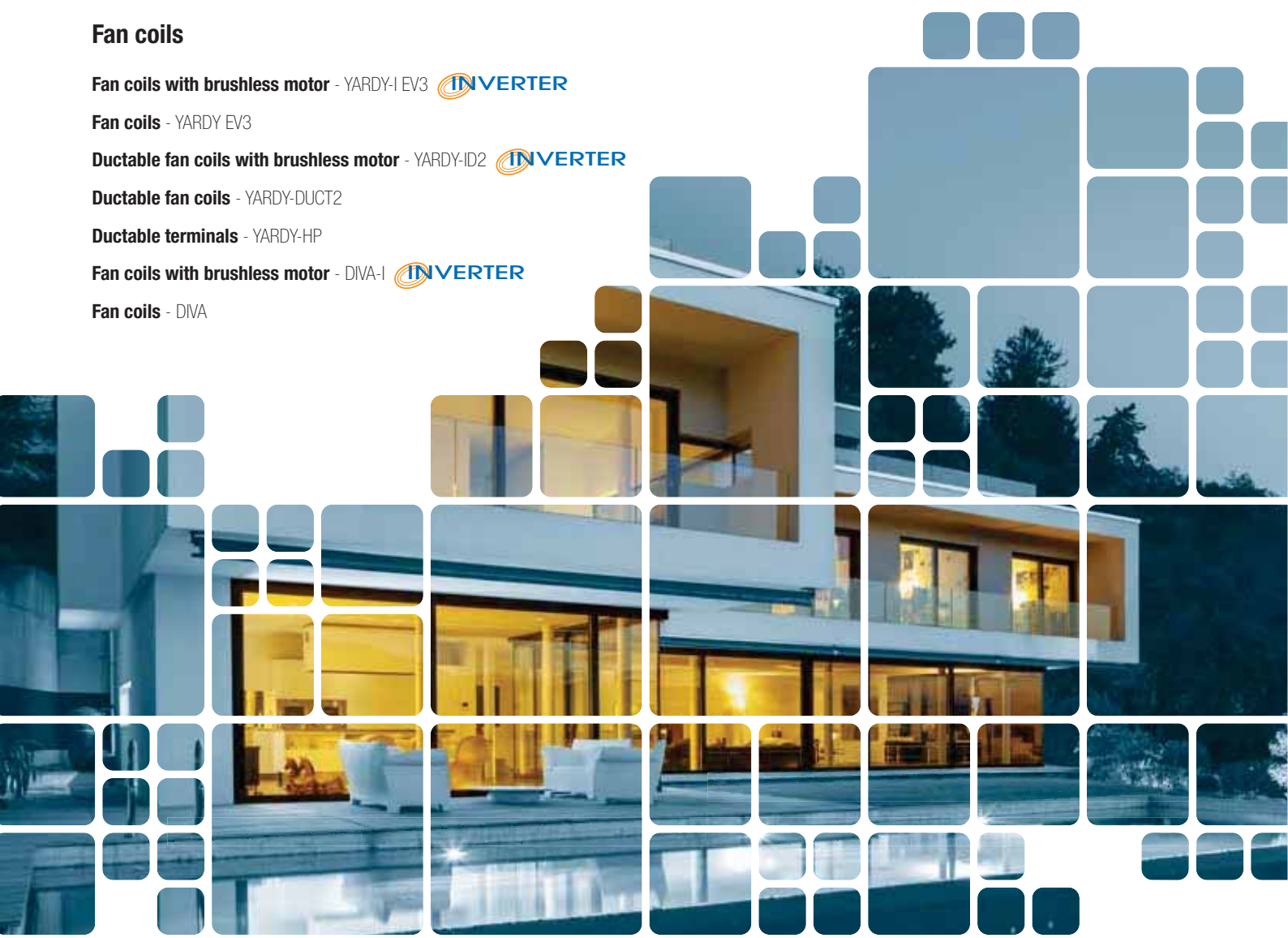
AIR
COOLEDWATER
COOLEDHIGH
TEMPERATURE
WATERMEDIUM
TEMPERATURE
WATERDOMESTIC HOT
WATER

COMPATIBLE PRODUCTS

Heat pumps

**ELECTA** - THAITY 105÷116 **Low consumption Mini-Y NF** - THAEY 105÷111 NF**Low consumption Compact-I** - THAITY 117÷128 **Low consumption Compact-Y NF Plus** - THAEY 115÷127 NF**Low consumption compact-I MD** - THAITY 236÷260 **Low consumption POKER** - THAEY 234 H.T.**Low Consumption Comby-Flow** - THHEY 105÷112**Low consumption Y-Flow** - THHEY 115÷240**Compact-Y EXP SM** - TXAEY 117÷130**Low consumption Comby-Flow EXP** - TXHEY 105÷112**GEO-Flow DHW** - THHEY 106÷230

Fan coils

Fan coils with brushless motor - YARDY-I EV3 **Fan coils** - YARDY EV3**Ductable fan coils with brushless motor** - YARDY-ID2 **Ductable fan coils** - YARDY-DUCT2**Ductable terminals** - YARDY-HP**Fan coils with brushless motor** - DIVA-I **Fan coils** - DIVA

Integrated system management

ADJUSTMENT FOR HEAT PUMP SYSTEMS

KTTZ - Temperature user terminal



KTTUZ - Temperature/humidity user terminal



KCSI - System control unit



KCSIE - Expansion control unit



KRS485 - RS485 Serial interface board



KTR - Remote keyboard



KEAP - Temperature probe



KEAP - Wall temperature probe



KFA - Water filter



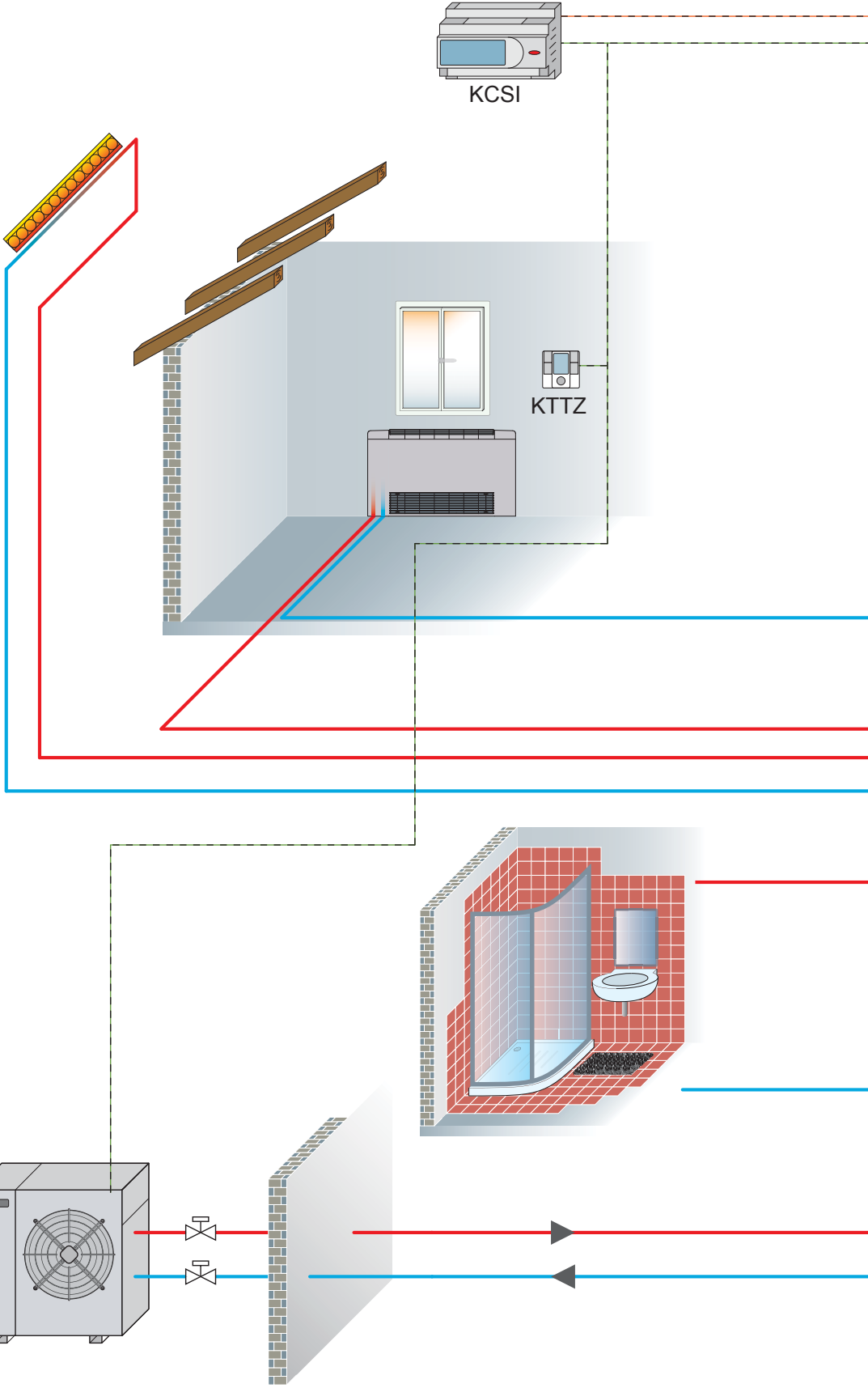
KRIT - Piping electrical heater



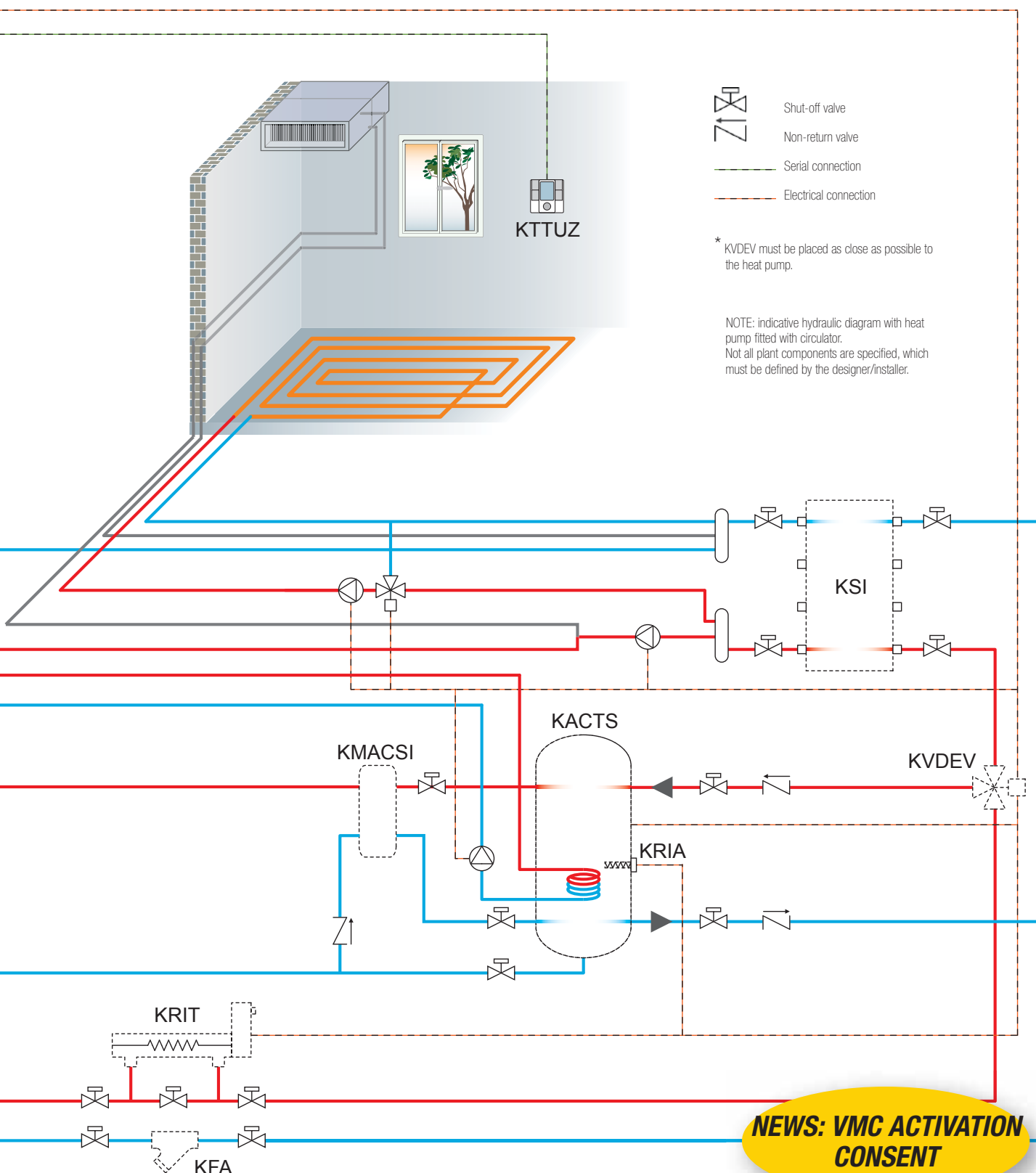
KVDEV - Diverter valve for DHW



KVS - Solenoid valve



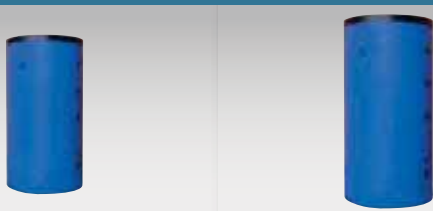
EXAMPLE OF HEATING/COOLING SOLUTION WITH FAN COIL UNITS AND/OR RADIANT PANELS AND DHW PRODUCTION



KSI - Hydraulic separator



KACT/KACTS - Technical water tank



KRIA - Tank electrical heater

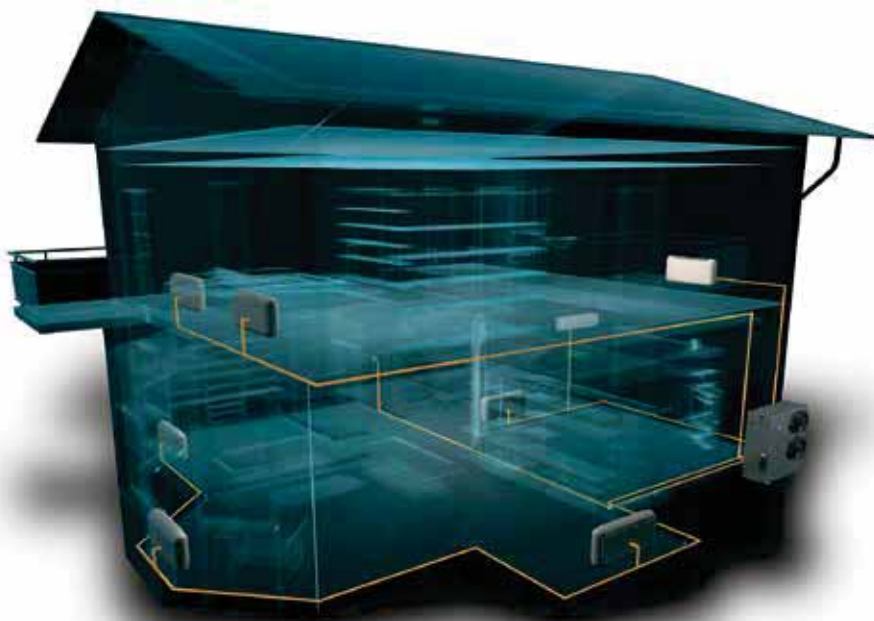


KMACSI - DHW Module



Integrated system management

RHOSS TOUCH MANAGER



- **Solution for the small and medium sized service sector**
- **Easy and intuitive control of every area of the building in a customised manner based on the occupants' needs**
- **Connection via RS485 network or Ethernet**
- **Rhoss units that may be connected**
 - **Option 1: network of chiller units only**
From 1 to 5 chiller units
 - **Option 2: network of fan coils only**
From 1 to 64 fan coils
 - **Option 3: network with fan coils and chiller unit**
1 chiller unit and from 1 to 64 fan coils
- **Pages with synoptic diagrams of the main components, graphs, option to modify main parameters, alarm display.**
- **Connectible to LAN Ethernet, compatibility with Internet Explorer via plug-in**

Touch screen



Control panel for centralised management of all the units in the system.



Controls for fan coils



Flush panel



Recessed panel

Other system components:

RECOVERY UNIT
BOILER
SYSTEM CIRCULATION PUMP



Wall mounted receiver



Remote control

Cooling unit



NETWORKED SOLUTION RS485 (MODBUS RTU PROTOCOL)



TOUCH MANAGER FUNCTIONS

MAIN FUNCTIONS

- Switching on and off the entire system (cooling unit and terminals)
- Display status and operation mode in real time
- Centralised management of the various areas and modification of the main functional parameters (set- point, operating mode, fan speed, sleep/ economy mode)
- Two pre-set comfort/economy levels, centrally settable

DAILY WEEKLY TIME SLOTS FOR GENERATORS AND AREAS

- Hourly daily time slots
- Differentiated time slot management for the various days of the week

SEASONAL SWITCHING

Management by date

ALARM STATUS

Display of any alarm condition

BOILER CONSENT

Manual or by date via digital contacts (option on demand)

RECOVERY UNIT CONSENT

Manual or by date via digital contacts (option on demand)

SYSTEM PUMP CONSENT

Manual or by date via digital contacts (option on demand)

USER INTERFACE

- Resistive touch-screen with easy-to-use graphical interface
- Display dimensions: 7.0"

TERMINAL ROUTING in RS485 network

Via KPCM panel

MANAGEABLE FAN COILS AND TERMINAL UNITS

IDRHOSS
Controls

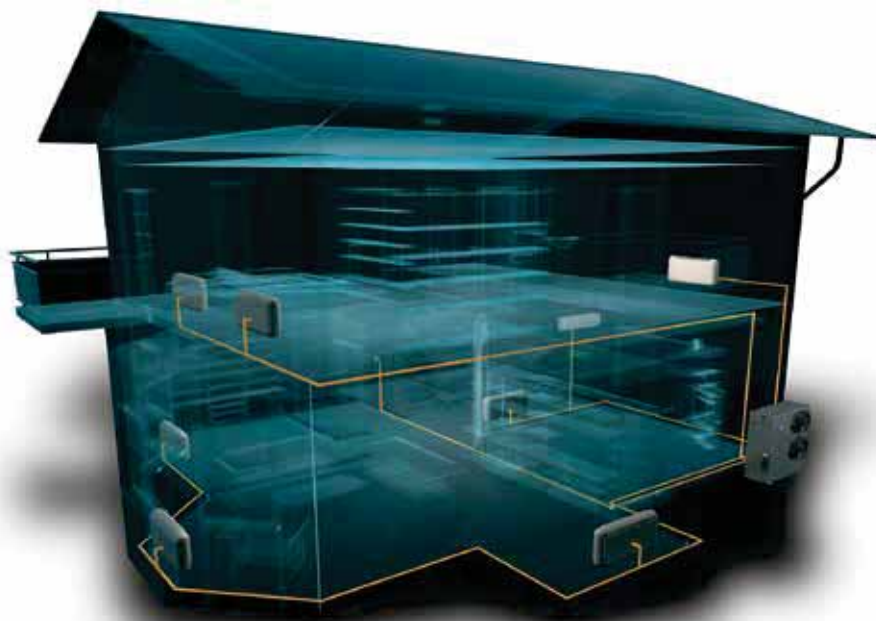
STANDARD
Controls

IDROWALL-I	YARDY-I EV3 / YARDY EV3	YARDY-ID2/YARDY-DUCT2	YARDY-HP	DIVA-I / DIVA	UTNA
					
					
					
	KTVDM - KTVDIM	KTVDM - KTVDIM	KTVDM	KTVDM - KTVDIM	KTVDM - KTVDIM

Integrated system management

iDRHOSS

HYDRONIC COMFORT SOLUTIONS



- **Solution for the small and medium-sized service industry.**
- **iDRHOSS is an advanced system for the management of hydronic air conditioning systems, developed to meet the comfort needs of any civil or residential location.**
- **iDRHOSS offers a series of functions, such as centralised management, automatic summer-winter switch and operating time slots, whilst always working towards energy saving.**



Controls for
fan coils



Flush panel



Recessed panel



Wall
mounted
receiver



Remote control

Cooling
unit



Area terminal

The control panel for centralised management of all the units in the system.



SOLUTION IN CAN-BUS NETWORK



AREA TERMINAL AND iDRHOSS SYSTEM FUNCTIONS

MAIN FUNCTIONS

- Switching on and off the entire system (cooling unit and terminals)
- Display status and operation mode in real time
- Centralised management of the various areas and modification of the main functional parameters (set- point, operating mode, fan speed, sleep/economy mode)

DAILY WEEKLY TIME SLOTS FOR GENERATORS AND AREAS

- Two switching on time bands that may be set in the day
- Differentiated time slot management for the various days of the week
- Management away from home

SEASONAL SWITCHING

- Management by date or automatic based on terminal status

ALARM STATUS

Display of any alarm condition

BOILER MANAGEMENT

- Manual or by date

USER INTERFACE

Semi-graphical back-lit display and 6-key pad
Dimensions 156x82x30 mm

TERMINAL ROUTING in CanBUS network

Via KPCM panel or dip switch on the serial Can bus board

MANAGEABLE FAN COILS AND TERMINAL UNITS

YARDY-I EV3 / YARDY EV3	YARDY-ID2/YARDY-DUCT2	YARDY-HP	DIVA-I / DIVA	UTNA
INVERTER	INVERTER		INVERTER	INVERTER

Remote monitoring

RHOSS MONITORING: Mobile - Cloud - Real time

- Remote management of cooling units, handling units and small residential systems with PDC system (*)
- 3 different solutions for remote monitoring with GSM-GPRS network
- Connection via mobile or smartphone
- Web interface with Cloud service
- Status display in real time
- Data logger function
- Alarm and malfunctioning alerts
- Installation of the device on DIN bar, within 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	Input/output management via mobile phone and editing by SMS . Alarm and malfunctioning alerts. Reading up to 8 values.		Not provided (only SMS management available)	
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.	KMMC - Remote Mobile/Cloud control device with slot for SIM CARD	Internet Cloud service by subscription (minimum length 1 year)	Responsibility of the user or by subscription (not required if local Internet connection is used)
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, malfunctioning display and trend logs. Reading up to 100 values.	KMRT - Real Time control device with slot for SIM CARD	Obligatory	

(*) to be verified at the offer stage and configuration for CTA and PDC system



**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 15÷40V dc or 11÷28V ac 50Hz.	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 • PDC system (KCSI)	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 9-36Vdc (12-24Vac +/-10%). 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 • PDC system (KCSI)	up to 100 readings

Control and monitoring via ETHERNET

RHOSS WEB SERVER

- Controlling a single cooling unit via ETHERNET
- Web page with the unit state and detail cards with:
 - synoptic of the main components
 - graph of the trend of main variables
 - possibility to modify the main parameters (on/off, mode, set)
 - alarms state and reset
- Installation of the ethernet interface within the unit's electrical panel

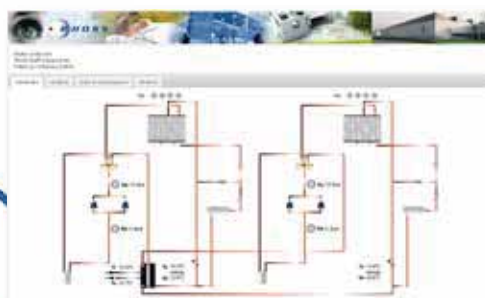


WEB SERVER MAIN FEATURES	MAIN COMPONENTS	ADDITIONAL COMPONENTS
Web page with unit status and detailed tabs displaying: - synoptic diagram of the main components - main variable trend graph - option to edit main parameters (on/off, mode, set) - alarm status and reset	1) Web Server board for Ethernet 2) User graphical interface	KCSI - System control unit to be provided only for range: - ELECTA - T-POWER



RHOSS WEB SERVER

MANAGEMENT VIA WEB BROWSER



Single unit

RHOSS COOLING UNIT + Web Server for Ethernet + User graphical interface

Water Chiller management software

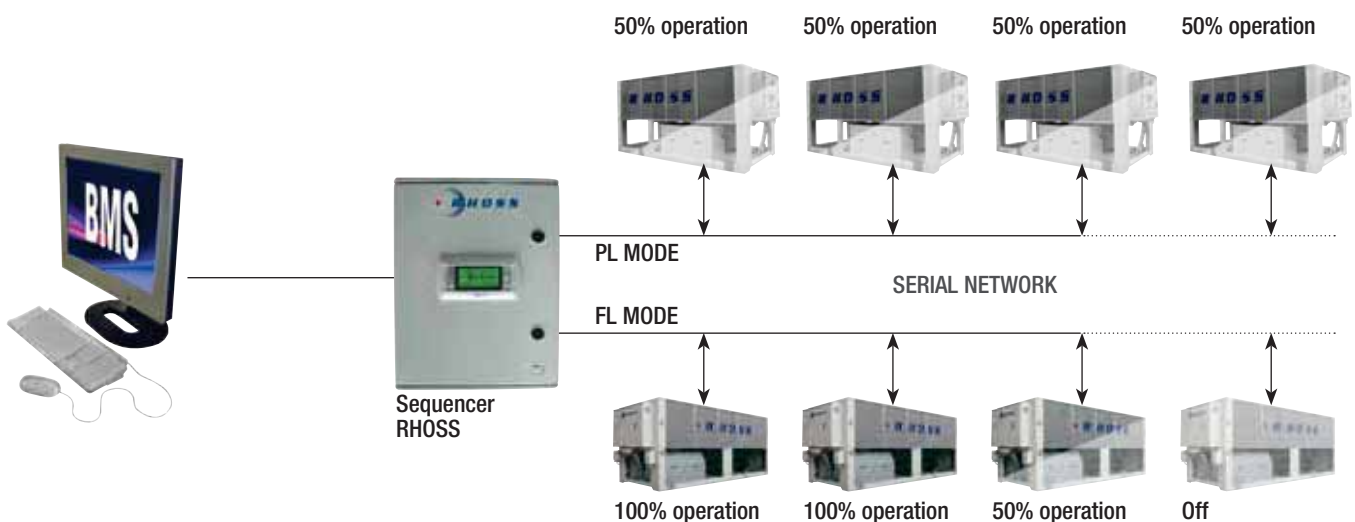
RHOSS SEQUENCER

- **Control of multiple water chillers connected in parallel**
- **Summer/winter mode for heat pump units**
- **System setpoint management**
- **Control of all operating parameters**
- **Alarm display**



- The Rhoss Multichiller Sequencer makes it possible to manage water chillers connected in parallel 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 water chillers) and PL-Part Load Unit Manager (specific for water chillers with scroll compressors).

- A dedicated sequencer is available for EXP polyvalent units which can handle all the specific technological functions.
- 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



"All in one" & "Touch screen" supervisor

RHOSS SUPERVISOR

- **Display and local control (built-in touch-screen monitor)**
- **Connection through local network (Internet Explorer)**
- **Option of remote connection via Internet**
- **Direct connection to units/network without additional components**



- The new RHOSS Supervisor is a global, simple and complete solution for plant monitoring and management.
- The product offers an interface with built-in touch-screen monitor and includes all field and remote connections to Rhoss plant devices, connected through an RS485 network.
- It allows for the operation of RHOSS chillers, heat pumps, multi-purpose units, fan coil units and terminal units to be supervised, via an easy to use Microsoft Internet Explorer interface.
- The new Supervisor makes direct control possible thanks to the built-in monitor and it can also be viewed from other connected devices in a local network (Ethernet LAN) or to remote users, who just need a simple Internet connection (the network must be suitably configured by the user to enable remote access).
- Supported languages Italian, English, German.
- The Rhoss unit networked to the Supervisor must be equipped with an RS485 board.
- On demand it is possible to supply an overview diagram with customised graphics Interface and connection to other non RHOSS devices or other supervisors in the RS485 Modbus RTU network.

The new Supervisor offers the following features:

- ✓ Data display of devices in the field (temperature, pressure, I/O status) and display/setting configuration parameters (set point, etc.) for each individual machine connected.
- ✓ System interface, data recording, reporting with trends and graphs of all variables recorded in the installation, report generation in PDF/Excel with the option of sending periodic e-mails and scheduling activities.
- ✓ Centralized device configuration (e.g. ON/OFF, operation mode change, set temperature and speed for fan coils).
- ✓ Maintenance with remote access.
- ✓ Alarm management with warnings and automatic tripping in local display, via relay or by sending e-mail, fax, SMS (with GSM modem not supplied by RHOSS).
- ✓ 7-day time switch of connected devices with the ability to configure groups of devices common to the same area (e.g. by floor).

Rhoss supervisor is available in two configurations:

- KRSE90 - RHOSS SUPERVISION (90 DEVICES)
- KRSE300 - RHOSS SUPERVISION (300 DEVICES)



FAN COILS

Fan coils with brushless motor

IDROWALL-I

Cooling capacity: 2.0÷3.5 kW - Heating capacity: 3.0÷5.4 kW



- Consumption reduced by 50% compared to the traditional motor
- On board 3-way valve
- Integrated serial interface and master/slave function

Wall mounted fan coils.

Construction features

- Heat exchanger: finned coil.
- Fan: tangential with Inverter Brushless EC motor with continuous speed adjustment.
- Deflector: motorised with different positions.
- Structure: made of heat-resistant ABS polymer, RAL 9003 colour, complete with renewable polypropylene filter, direction-adjustable fins and condensation drain pan with natural drainage.
- Unit equipped with a 3-way ON/OFF valve and resident RS485 serial interface.
- Control: microprocessor electronic control.
Regulation functions: full auto, cool, dry, fan, autofan, heat. Comfort functions: orienting, swing, timer, sleep, hot start, memory.
Remote control supplied as standard.

Accessories supplied loose

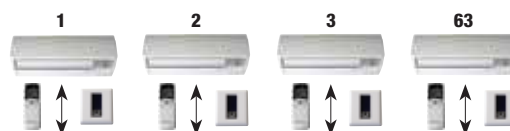
- KV2V - 2-way ON/OFF valve accessory.
The installer is responsible for on board assembly.
- K2TF - Accessory for electrovalve use out of the unit.
Assembled by the installer.
- KVAM - Wall mounted recessed box.
- KION - Ioniser.
- KUV - Ultraviolet lamp and photocatalytic filter.

Controls supplied loose

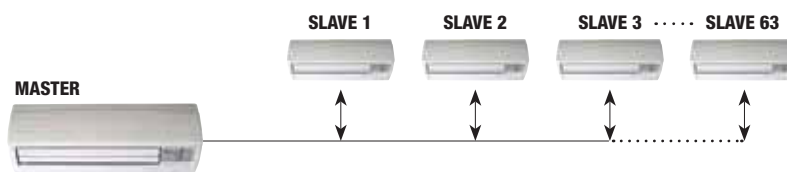
- KWPI - Electronic panel for wall mounting.
- KWPCI - Centralised electronic panel for wall mounting Power supply V230-1-50.
- KGTW-BAC- Gateway RS485/BACnet (max 64 fan coil).
- KGW-LON - Gateway RS485/FTT10-LonWorks (max 64 fan coil).



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	MAX	kW	E	2,01	2,98	3,54
	MED	kW	E	1,64	2,15	2,47
	MIN	kW	E	1,33	1,9	1,9
❶ Total cooling capacity [EN1397:2015] (S)	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 (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
❸ Heating capacity (70°C)	MAX	kW		5,11	7,92	8,86
	MAX	m³/h		556	722	814
	MED	m³/h		413	473	581
Air flow speed	MIN	m³/h		295	396	396
	MAX	dB(A)	E	52	55	59
	MED	dB(A)	E	43	46	51
Sound power	MIN	dB(A)	E	34	42	42
	MAX	dB(A)		43	46	50
	MED	dB(A)		34	37	42
❹ Sound pressure	MIN	dB(A)		25	33	33
	MAX	W	E	22	27	38
	MED	W	E	14	15	19
Absorbed power	MIN	W	E	11	12	12
	Power supply	V-ph-Hz		230-1-50	230-1-50	230-1-50
DIMENSIONS AND WEIGHTS				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:

Air: 27°C D.B.; 19°C W.B. - Water: 7/12°C.

❶ Air: 27°C D.B.; 19°C W.B. - Water: 7/12°C.
(S) Cooling capacity [EN1397:2015] = cooling capacity - absorbed power.

❷ Air: 20°C - Water: 50°C; flow rate as in cooling.

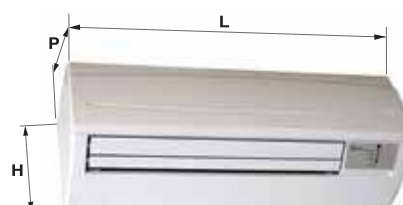
❸ Air: 20°C - Water: 70/60°C.

❹ For room volume equal to 100 m³ and reverberation time = 0.5 sec.

E Eurovent certificated performance.



Remote control
Centralized panel
Flush panel





- Enhanced performance with 4 row coils
- 50% lower consumption with respect to traditional motor
- Continuous fan speed variation
- Quieter operation
- Better room comfort

Fan coils with brushless motor

YARDY-I EV3

Cooling capacity: 1.9÷8.9 kW - Heating capacity: 2.5÷12.3 kW



Floor, or ceiling, recessed wall or false ceiling installation fan coils with cabinet.

Construction features

- Heat exchanger: finned coil with left-hand connections reversible to right.
- Centrifugal fan with an inverter controlled brushless electronic motor and continuous speed adjustment.
- Cover cabinet version structure: covering cabinet in pre-painted sheet metal complete with renewable filter, ABS polymer grilles and condensation drain pan with natural drainage.
- Recessed version structure: in galvanised sheet steel, complete with condensation drain pan with natural drainage and renewable filter.

Versions

- MVP - Vertical unit with cabinet equipped with lower air inlet and upper outlet for wall mounting or with feet on ground.
- MVT - Vertical unit with cabinet equipped with front air inlet and upper outlet for floor installation.
- MXP - Horizontal/vertical unit with cabinet, equipped with lower air inlet and upper outlet, for ceiling installation, wall-mounting or with feet on ground.
- MXT - Horizontal/vertical unit with cabinet, equipped with front air inlet and upper outlet, for ceiling or floor installation.
- IVP - Recessed vertical unit equipped with lower air inlet and upper outlet for wall installation.
- IVF - Recessed vertical unit equipped with lower air inlet and front outlet for wall installation.
- IXP - Horizontal/vertical unit equipped with lower air inlet and upper outlet for false ceiling or recessed wall installation.

Accessories

- Additional water heating coil.
- Electrical heater.
- ON/OFF 2-way valves for 2 and 4-pipe-systems.
- ON/OFF 3-way valves for 2 and 4-pipe-systems.
- Auxiliary condensation drain pan.
- Manual damper.
- Motorised damper.

- Rear panel.
- Rear closure panel.
- Rear closure panel with grille and filter.
- Support feet with pipe cover.
- Frame with filter (G2) that can be extracted in any direction.
- Outlet straight connection.
- 90° outlet and inlet connection.
- Telescopic outlet/inlet connection.
- Inlet grille with filter.
- Outlet grille.
- Cover panel with grilles (only IXP).
- Flange for connection to duct.
- Antivibration connection for connection to the inlet or outlet duct.
- Inlet/outlet plenum with circular nozzles.

STANDARD Controls

For wall installation

- Electronic panel with display and RS485 serial interface, semi-recessed in wall.

iDRHOSS CONTROLS

- Wall mounting receiver with remote control.
- Electronic panel for wall or on board mounting.
- Wall-mounted recessed electronic panel.



For installation on machine

- Master/slave electronic board, valve control module ON/OFF and electrical heater, temperature probe for hot row.
- RS485 interface for serial communication with other devices (proprietary protocol; Modbus RTU protocol).
- RS485/USB serial converter.
- Serial interface (CAN-bus - Controller Area Network) for the iDRHOSS system.
- KGTW-BAC- Gateway RS485/BACnet (max 64 fan coil).
- KGW-LON- Gateway RS485/FTT10-LonWorks (max 64 fan coil).

- Key:
- ♦ Factory fitted
 - Supplied loose





YARDY-I EV3 MVP-MVT-MXP-MXT-IVP-IVF-IXP				20	24	30	34	45	48	60	74	80	88
❶ Total cooling capacity	MAX	kW	E	1,88	2,25	3	3,4	4,15	4,64	6,37	7,41	8,4	8,89
	MED	kW	E	1,45	1,69	2,33	2,77	3,06	3,49	4,62	5,27	5,92	6,38
	MIN	kW	E	0,75	0,81	1,09	1,35	1,54	1,74	1,79	2,11	2,11	2,26
❶ Total cooling capacity [EN1397:2015] (\$)	MAX	kW	E	1,86	2,23	2,97	3,37	4,11	4,6	6,28	7,32	8,26	8,74
	MED	kW	E	1,44	1,68	2,32	2,75	3,05	3,48	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 (50°C)	MAX	kW	E	2,47	2,59	3,87	4,06	5,28	5,54	8,38	8,8	11,76	12,25
	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	0,91	0,96	1,42	1,49	1,81	1,9	2,24	2,35	3,07	3,22
❸ Heating capacity (70°C)	MAX	kW		4,07	4,22	6,38	6,8	8,66	9,15	14,01	14,79	19,41	20,51
	MED	kW		2,91	3,09	4,95	5,14	6,14	6,48	10,08	10,74	13,82	14,62
	MIN	kW		1,5	1,63	2,38	2,49	2,98	3,13	3,74	3,98	5,11	5,39
❹ Additional coil heating capacity	MAX	kW	E	2,19	2,08	3,3	3,14	3,79	3,6	6,29	5,98	7,52	7,14
	MED	kW	E	1,91	1,81	2,63	2,5	3,29	3,13	5,27	5,01	6,07	5,77
	MIN	kW	E	1	0,95	1,47	1,4	1,78	1,69	2,49	2,37	2,89	2,75
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	23	23	24	24	25	25	27	27	32	32
❹ 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)		14	14	15	15	16	16	18	18	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	23	30	50	56
	MIN	W	E	5	6	6	6	7	8	6	7	7	10
Power 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 WEIGHTS				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
Height of feet MVP-MVT-MXP-MXT		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

Data at the following conditions:

- ❶ Air: 27°C D.B.; 19°C W.B. - Water: 7/12°C.
(S) Cooling capacity [EN1397:2015] = cooling capacity - absorbed power.
- ❷ Air: 20°C - Water: 50°C, flow rate as in cooling.
- ❸ Air: 20°C - Water: 70/60°C.
- ❹ For room volume equal to 100 m³ and reverberation time = 0.5 sec.
- E Eurovent certificated performance.
- MAX, MED, MIN speed with 10 Vdc, 6 Vdc, 1 Vdc input.
- YARDY-I EV3 24 - 34 - 48 - 74 - 88 with oversized 4-row coil.

MXP for horizontal installation



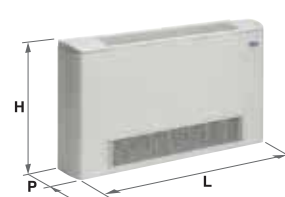
MXT for horizontal installation



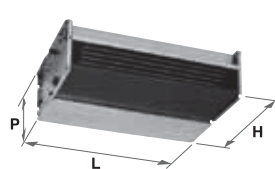
MVP-MXP for vertical installation



MVT-MXT for vertical installation



IXP for horizontal installation



IVP-IXP for vertical installation



IVF for vertical installation



Fan coils

YARDY EV3

Cooling capacity: 1.1÷8.8 kW - Heating capacity: 1.6÷12.2 kW



- Enhanced performance with 4 row coil
- Acoustic comfort
- 6 speed fan
- Installation flexibility
- Pre-fitted accessories and controls

Floor, or ceiling, recessed wall or false ceiling installation fan coils with cabinet.

Construction features

- Heat exchanger: finned coil with left-hand connections reversible to right.
- 6-speed centrifugal fan, of which 3 speeds are connected to the terminal board.
- Cover cabinet version structure: covering cabinet in pre-painted sheet metal complete with renewable filter, ABS polymer grilles and condensation drain pan with natural drainage.
- Recessed version structure: in galvanised sheet steel, complete with condensation drain pan with natural drainage and renewable filter.

Versions

- MVP - Vertical unit with cabinet equipped with lower air inlet and upper outlet for wall mounting or with feet on ground.
- MVT - Vertical unit with cabinet equipped with front air inlet and upper outlet for floor installation.
- MXP - Horizontal/vertical unit with cabinet, equipped with lower air inlet and upper outlet, for ceiling installation, wall-mounting or with feet on ground.
- MXT - Vertical unit with cabinet equipped with front air inlet and upper outlet for floor installation.
- IVP - Vertical unit with cabinet equipped with front air inlet and upper outlet for floor installation.
- IVF - Recessed vertical unit equipped with lower air inlet and front outlet for wall installation.
- IXP - Horizontal/vertical unit equipped with lower air inlet and upper outlet for false ceiling or recessed wall 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
DIMENSIONS AND WEIGHTS																
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
Height of feet MVP-MVT-MXP-MXT	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

Accessories

- ❖ Additional water heating coil.
- ❖ Electrical heater.
- ❖ ON/OFF 2-way valves for 2 and 4-pipe systems.
- ❖ ON/OFF 3-way valves for 2 and 4-pipe systems.
- ❖ Auxiliary condensation drain pan.
- Manual damper.
- Motorised damper.
- Rear panel.
- Rear closure panel.
- Rear closure panel with grille and filter.
- Support feet with pipe 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 signal and electrical heater.
- Minimum temperature thermostat (for installation on the machine).



- Electronic panel with automatic summer/winter changeover for 2-pipe systems.
- Electronic panel with automatic summer/winter changeover and automatic speed regulation for 2-pipe systems with electrical resistance or 4-pipe systems.
- Electronic panel with display and RS485 serial interface, semi-recessed in wall.

For installation on machine (MVP and MVT versions)

- ❖ Panel with speed and summer/winter 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 signal and electrical heater.
- ❖ Electronic panel with automatic summer/winter changeover for 2-pipe systems.
- ❖ Electronic panel with automatic summer/winter changeover and automatic speed regulation for 2-pipe systems with electrical resistance or 4-pipe systems.
- Interface board for controlling up to 4 fan coils.

IDRHOSS CONTROLS

- Wall mounting receiver with remote control.
- Electronic panel for wall or on board mounting.
- Wall-mounted recessed electronic panel.

For installation on machine

- ❖ Master/slave electronic board.
- ❖ Temperature probe for hot row.
- ❖ Module for ON/OFF valves and electrical heater management.
- RS485 interface for serial communication with other devices (proprietary protocol; Modbus RTU protocol).
- RS485/USB serial converter.
- Serial interface (CAN-bus - Controller Area Network) for the IDRHOSS system.
- KGTW-BAC- Gateway RS485/BACnet (max 64 fan coil).
- KGW-LON- Gateway RS485/FTT10-LonWorks (max 64 fan coil).

- Key:
- ❖ Factory fitted
 - Supplied loose

MXP for horizontal installation



MXT for horizontal installation



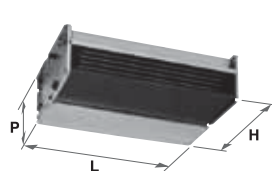
MVP-MXP for vertical installation



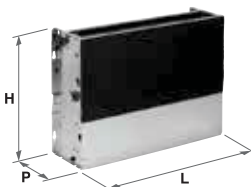
MVT-MXT for vertical installation



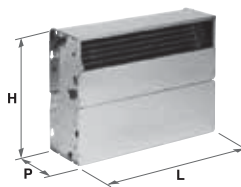
IXP for horizontal installation



IVP-IXP for vertical installation



IVF for vertical 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
①	Total cooling capacity	VI	kW 1,14	2,02	2,24•E	2,54•E	3,27	3,34 •E	3,79	4,33 •E	4,84 •E	5,49 •E	6,01 •E	6,69 •E	7,16 •E	8,32 •E	8,78 •E
		V	kW 1,07•E	1,8•E	2,13	2,27	2,85•E	3,11	3,42 •E	3,9	4,53	4,95	5,36	6,22	6,61	7,99	8,43
		IV	kW 0,99	1,56	1,89•E	2,05•E	2,61	2,85 •E	2,88	3,35 •E	3,61 •E	4,48 •E	4,85 •E	5,54 •E	6,13	7,26	7,34 •E
		III	kW 0,91•E	1,39•E	1,7	1,71	2,49•E	2,58	2,66 •E	3,03	3,39	3,97	4,31	5,37	5,8 •E	6,9 •E	7,46
		II	kW 0,78	1,2	1,47•E	1,64•E	2,1	2,28 •E	2,5	2,84	3,14	3,39 •E	3,62 •E	4,49	5,15	6,43	6,96
①	Total cooling capacity [EN1397:2015] (S)	I	kW 0,65•E	1,14•E	1,36	1,4	1,8•E	2	2,09 •E	2,52 •E	2,88 •E	2,73	3,07	4,31 •E	4,73 •E	6,36 •E	6,61 •E
		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	5,89 •E	6,53 •E	6,99 •E	8,14 •E	8,58 •E
		V	kW 1,04•E	1,77•E	2,1	2,24	2,8•E	3,05	3,36 •E	3,84	4,46	4,86	5,26	6,12	6,48	7,82	8,25
		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	7,19 •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	4,24	5,26	5,68 •E	6,77 •E	7,32
②	Heating capacity (50°C)	II	kW 0,76	1,19	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
		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	10,6 •E	12,15 •E
		V	kW 1,36•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	10,06	11,62
		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	9,56	11,05 •E
③	Heating capacity (70°C)	III	kW 1,15•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	9,14 •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	8,36	9,6
		I	kW 0,77•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
		VI	kW 2,6	4,35	4,52•	5,65•	6,91	7,37 •	8,27	9,04 •	9,57 •	11,72 •	13,85 •	14,6 •	15,56 •	19,25 •	20,41 •
		V	kW 2,42•	3,79•	3,93	5,1	6,34•	6,71	7,2 •	8,28	8,72	10,41	12,94	13,64	14,56	18,24	19,48
④	Additional coil heating capacity	IV	kW 2,24	3,13	3,33•	4,39•	5,53	5,87 •	6,13	6,72 •	7,12 •	9,35 •	11,4 •	12 •	12,77	17,31	18,43 •
		III	kW 2,04•	2,86•	2,96	3,71	5,15•	5,5	5,66 •	6,21	6,55	7,91	11,05	11,62	12,38 •	16,47 •	17,52
		II	kW 1,75	2,46	2,78•	3,54•	4,4	4,66 •	5,28	5,48	5,79	6,85 •	9,68 •	10,24	10,87	15,01	15,96
		I	kW 1,37•	2,39•	2,46	3	3,93•	4,32	4,81 •	5,04 •	5,31 •	5,64	8,61	9,13 •	9,72 •	14,82 •	15,82 •
		VI	kW 1,55	2,33	1,97•E	3,01•E	3,56	3,38 •E	4,11	3,91 •E	3,71 •E	6,08 •E	5,66 •E	6,29 •E	5,98 •E	7,46 •E	7,09 •E
⑤	Air flow speed	V	kW 1,41•E	2,16•E	1,9	2,92	2,99•E	2,84	3,4 •E	3,78	3,59	5,73	5,54	6,16	5,85	7,42	7,05
		IV	kW 1,41	2,06	1,65•E	2,55•E	2,91	2,76 •E	3,57	3,4 •E	3,23 •E	5,13 •E	5,19 •E	5,77 •E	5,48	7,34	6,97 •E
		III	kW 1,19•E	1,72•E	1,52	2,24	2,55•E	2,43	3,24 •E	3,19	3,03	4,76	4,83	5,95	5,1 •E	6,8 •E	6,56
		II	kW 1,21	1,72	1,37•E	2,06•E	2,4	2,28 •E	3,17	3,15	2,99	4,02 •E	4,15 •E	5,84	4,38	6,72	6,38
		I	kW 0,98•E	1,47•E	1,33	1,9	2,15•E	2,04	3,02 •E	2,54 •E	2,41 •E	3,58	3,68	4,68 •E	3,89 •E	6,17 •E	5,86 •E
⑥	Sound power	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
⑦	Sound pressure	I	m³/h 100•	155•	155	217	281•	281	365 •	338 •	338 •	420	420	672 •	672 •	994 •	994 •
		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	47•E	46	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	52 •E	56 •E	56	62	62 •E
		III	dB(A) 35•E	35•E	35	33	40•E	40	40 •E	41	41	47	47	54	54 •E	61 •E	61
⑧	Absorbed power	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) 26•E	30•E	31	26	34•E	32	35 •E	35 •E	36	36	48 •E	48 •E	57 •E	57 •E	57 •E
		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	38•	37	39 •	41	41	47	47	51	51	56	56
		IV	dB(A) 31	32	31•	29•	34	34 •	34	34 •	34 •	43 •	43 •	47 •	47	53	53 •
⑨	Power supply	III	dB(A) 26•	26•	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) 17•	21•	22	17	25•	23	26 •	26 •	26 •	27	27	39 •	39 •	48 •	48 •
		VI	W 38	38	41•E	45•E	60	65 •E	72	70 •E	76 •E	115 •E	124 •E	161 •E	172 •E	184 •E	197 •E
		V	W 32•E	30•E	32	34	54•E	58	58 •E	61	66	95	103	104	133	173	185
⑩	Power supply	IV	W 26	23	25•E	26•E	36	39 •E	42	41 •E	44 •E	81 •E	87 •E	117 •E	125	142	152 •E
		III	W 23•E	19•E	21	22	31•E	33	34 •E	36	39	66	71	109	117 •E	133 •E	142
		II	W 19	15	16•E	17•E	28	27 •E	33	31	33	51 •E	55 •E	95	102	124	133
		I	W 14•E	13•E	14	16	25•E	22	28 •E	28 •E	30 •E	41	44	92 •E	98 •E	116 •E	124 •E
Power supply			V-ph-Hz		230-1-50												

Data at the following conditions:

① Air: 27°C D.B.; 19°C W.B. - Water: 7/12°C.

② (S) Cooling capacity [EN1397:2015] = cooling capacity - absorbed power.

③ Air: 20°C - Water: 50°C.

④ Air: 20°C - Water: 70/60°C.

⑤ For room volume equal to 100 m³ and reverberation time = 0.5 sec.

⑥ Wired speed in terminal block.

E Eurovent certificated performance.

Yardy EV3 24 - 34 - 48 - 74 - 88 with oversized 4-row coil.





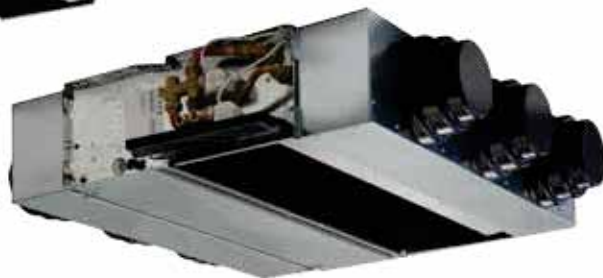
- 50% lower consumption with respect to traditional motor
- Continuous fan speed variation
- Quieter operation
- Better room comfort

Ductable fan coils with brushless motor

YARDY-ID2

Cooling capacity: 2.4÷6.4 kW - Heating capacity: 3.0÷8.7 kW

INVERTER



Ductable fan coil units for recessed horizontal or vertical installation

Construction features

- Heat exchanger: finned coil with left-hand connections reversible to right.
- Centrifugal fan with an inverter controlled brushless electronic motor and continuous speed adjustment.
- Structure: made of galvanised sheet steel complete with condensation drain pan with natural drainage and renewable filter.
- Standard or enhanced configuration setting by means of KCM electronic board digital input.

Versions

- CXP - Recessed unit for horizontal or vertical installation (with lower inlet and upper outlet).

Accessories

- Additional water heating coil.
- Electrical heater.
- Valve and balancing valve.
- ON/OFF 2-way electrovalve for 2-pipe and 4-pipe systems.
- ON/OFF 3-way electrovalve for 2-pipe and 4-pipe systems.
- Auxiliary condensation drain pan.
- Motorised damper.
- Frame with filter (G2) that can be extracted in any direction.
- Straight outlet connection.
- 90° outlet and inlet connection.
- Telescopic outlet/inlet connection.
- Inlet grille with filter.
- Outlet grille.
- Flange frame for duct connection.
- Anti-vibration connection for outlet/inlet duct connection.
- Inlet/outlet plenum with circular nozzles.

STANDARD Controls

For wall mounting installation

- Electronic panel with display and RS485 serial interface, semi-recessed in wall.



iDRHOSS CONTROLS

- Wall mounting receiver with remote control.
- Electronic panel for wall mounting installation.
- Wall-mounted recessed electronic panel.

For installation on machine

- Master/slave electronic board, valve control module ON/OFF and electrical heater, temperature probe for hot row.
- RS485 interface for serial communication with other devices (proprietary protocol; Modbus RTU protocol).
- RS485/USB serial converter.
- Serial interface (CAN-bus - Controller Area Network) for the iDRHOSS system.
- KGTW-BAC- Gateway RS485/BACnet (max 64 fan coil).
- KGW-LON- Gateway RS485/FTT10-LonWorks (max 64 fan coil).

- Key:
- Factory fitted
 - Supplied loose



YARDY-ID2 CXP			40			48			60			74			80			88		
Configuration (*)			STANDARD	ENHANCED		STANDARD	ENHANCED		STANDARD	ENHANCED		STANDARD	ENHANCED		STANDARD	ENHANCED		STANDARD	ENHANCED	
❶	Total cooling capacity	MAX	kW	2,42	3,08	E	2,65	3,35	E	3,37	4,22	E	3,9	4,68	E	4,75	6,02	E	5,1	6,4
		MED	kW	2,05	2,76	E	2,28	3,01	E	3,09	3,58	E	3,57	4,5	E	3,84	5,42	E	4,3	5,8
		MIN	kW	1,2	1,2	E	1,29	1,29	E	1,59	1,59	E	1,73	1,73	E	2,04	2,04	E	2,3	2,3
❶	Total cooling capacity [EN1397:2015] (S)	MAX	kW	2,36	3,01	E	2,59	3,28	E	3,29	4,12	E	3,82	4,58	E	4,65	5,88	E	5	6,26
		MED	kW	2,01	2,7	E	2,24	2,95	E	3,03	3,5	E	3,5	4,42	E	3,77	5,32	E	4,23	5,7
		MIN	kW	1,19	1,19	E	1,28	1,28	E	1,58	1,58	E	1,72	1,72	E	2,03	2,03	E	2,29	2,29
❷	Heating capacity (50°C)	MAX	kW	3	3,86	E	3,06	3,94	E	4,46	5,52	E	4,55	5,63	E	6,58	8,55	E	6,71	8,72
		MED	kW	2,54	3,44	E	2,59	3,51	E	4,05	5,23	E	4,13	5,33	E	5,39	7,69	E	5,5	7,84
		MIN	kW	1,39	1,39	E	1,42	1,42	E	1,9	1,9	E	1,94	1,94	E	2,92	2,92	E	2,98	2,98
❷	Heating capacity (70°C)	MAX	kW	4,94	6,35		5,08	6,53		7,52	9,24		7,68	9,57		10,87	14,11		11,26	14,54
		MED	kW	4,19	5,66		4,3	5,81		6,82	8,78		6,96	9,04		8,97	12,66		9,2	13,06
		MIN	kW	2,3	2,3		2,35	2,35		3,15	3,15		3,23	3,23		4,85	4,85		4,95	4,95
❸	Additional coil heating capacity	MAX	kW	2,59	3,12	E	2,46	2,96	E	3,94	4,61	E	3,74	4,57	E	5,04	6,32	E	4,79	6
		MED	kW	2,3	2,86	E	2,19	2,72	E	3,67	4,43	E	3,49	4,21	E	4,35	5,68	E	4,13	5,59
		MIN	kW	1,47	1,47	E	1,4	1,4	E	2,2	2,2	E	2,19	2,19	E	2,78	2,78	E	2,64	2,64
	Air flow rate / Pressure head	MAX	m³/h / Pa	350 / 70	469 / 64	E	350 / 70	469 / 64	E	573 / 61	737 / 56	E	573 / 61	737 / 56	E	767 / 76	1010 / 64	E	738 / 74	949 / 64
		MED	m³/h / Pa	291 / 50	410 / 50	E	291 / 50	410 / 50	E	512 / 50	691 / 50	E	512 / 50	691 / 50	E	606 / 50	866 / 50	E	594 / 50	831 / 50
		MIN	m³/h / Pa	150 / 8	150 / 8	E	150 / 8	150 / 8	E	214 / 6	214 / 6	E	214 / 6	214 / 6	E	284 / 7	284 / 7	E	284 / 7	284 / 7
❹	Sound power on outlet	MAX	dB(A)	51	56	E	51	56	E	55	57	E	55	57	E	57	58	E	57	58
		MED	dB(A)	48	52	E	47	52	E	52	56	E	52	56	E	56	57	E	56	57
		MIN	dB(A)	30	30	E	30	30	E	30	30	E	30	30	E	30	30	E	30	30
❺	Sound pressure on outlet	MAX	dB(A)	42	47		42	47		46	48		46	48		48	49		48	49
		MED	dB(A)	39	43		38	43		43	47		43	47		47	48		47	48
		MIN	dB(A)	21	21		21	21		21	21		21	21		21	21		21	21
	Absorbed power	MAX	W	57	69	E	60	72	E	80	100	E	84	105	E	105	140	E	105	140
		MED	W	36	60	E	38	63	E	65	80	E	68	84	E	75	100	E	75	100
		MIN	W	8	8	E	8	8	E	8	8	E	8	8	E	13	13	E	13	13
Power supply		V-ph-Hz 230-1-50			230-1-50			230-1-50			230-1-50			230-1-50			230-1-50			

Data at the following conditions:

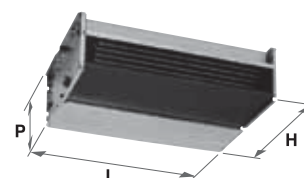
- 1 Air: 27°C D.B.; 19°C W.B. - Water: 7/12°C.
- (S) Cooling capacity [EN1397:2015] = cooling capacity - absorbed power.
- 2 Air: 20°C - Water: 50°C; flow rate as in cooling.
- 3 Air: 20°C - Water: 70/60°C.
- 4 Second Eurovent 8/12 test.
- 5 For room volume equal to 100 m³ and reverberation time = 0.5 sec.
- E Eurovent certified performance.

(*) The performance refers to the following configurations: STANDARD: 2/6,5/8 Vdc outlet at min/med/max speed; ENHANCED: 2/7/10 Vdc outlet at min/med/max speed for channels at high pressure drops.

Yardy ID2 48 - 74 - 88 with oversized 4-row coil.

YARDY-ID2 CXP		40	48	60	74	80	88
DIMENSIONS AND WEIGHTS							
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

YARDY-ID2 for horizontal and vertical installation



Ductable fan coils

YARDY-DUCT2

Cooling capacity: 2.0÷5.8 kW - Heating capacity: 2.4÷7.2 kW



- New size with 4 row coils
- Six-speed ductable version
- Vertical and horizontal installation
- Remote control

Ductable fan coil units for recessed horizontal or vertical installation

Construction features

- Heat exchanger: finned coil with left-hand connections reversible to right.
- 6-speed centrifugal fan connected to the terminal board.
- Structure: made of galvanised sheet steel complete with condensation drain pan with natural drainage and renewable filter.

Versions

- CXP - Recessed unit for horizontal or vertical installation (with lower inlet and upper outlet).

Accessories

- Additional water heating coil.
- Electrical heater.
- ON/OFF 2-way electrovalve for 2-pipe and 4-pipe systems.
- ON/OFF 3-way electrovalve for 2-pipe and 4-pipe systems.
- Auxiliary condensation drain pan.
- Motorised damper.
- Frame with filter (G2) that can be extracted in any direction.
- Straight outlet connection.
- 90° outlet and inlet connection.
- Telescopic outlet/inlet connection.
- Inlet grille with filter.
- Outlet grille.
- Flanged frame for connection to intake or delivery channel.
- Anti-vibration connection for outlet/inlet duct connection.
- Inlet/outlet plenum with circular nozzles.

STANDARD Controls

For wall installation

- Panel with speed and summer/winter switch.
- Panel with room thermostat, summer/winter switch, speed switch, ON/OFF valve signal and electric heater.
- Minimum temperature thermostat (for installation on the machine).
- Electronic panel with automatic summer/winter switch for 2-pipe-systems.
- Electronic panel with automatic summer/winter switch and automatic speed regulation for 2-pipe-systems with electric heater or 4-pipe-systems.
- Interface board for controlling up to 4 fan coil units (for on board installation)
- Electronic panel with display and RS485 serial interface, semi-recessed in wall.

IDRHOSS CONTROLS

- Wall mounting receiver with remote control.
- Electronic panel for wall mounting installation.
- Wall-mounted recessed electronic panel.



For installation on machine

- Master/slave electronic board.
- Temperature probe for hot row.
- Module for ON/OFF valves and electrical heater management.
- RS485 interface for serial communication with other devices (proprietary protocol; Modbus RTU protocol).
- RS485/USB serial converter.
- Serial interface (CAN-bus - Controller Area Network) for the IDRHOSS system.
- KGTW-BAC- Gateway RS485/BACnet (max 64 fan coil).
- KGW-LON- Gateway RS485/FTT10-LonWorks (max 64 fan coil).

- Key:
- ♦ Factory fitted
 - Supplied loose
 - * Previous name



YARDY-DUCT2 CXP			40	48	50	60	74	80	88	
❶	Total cooling capacity	VI	kW	1,97E	2,29E	2,66E	3,6E	4,56E	4,98 E	5,84 E
		V	kW	1,82E	2,12E	2,47	3,43	4,37	4,74	5,66
		IV	kW	1,54	1,73	2,32E	3,27E	4,09E	4,51 E	5,53 E
		III	kW	1,39E	1,61E	2	3,1	3,87	4,28	5,31
		II	kW	1,27	1,47	1,75E	2,73E	3,5E	4,01 E	5,04 E
		I	kW	1,1	1,28	1,34	2,49	3,22	4,04	4,89
❶	Total cooling capacity [EN1397:2015] (S)	VI	kW	1,9E	2,22E	2,57E	3,47E	4,43E	4,83 E	5,69 E
		V	kW	1,76E	2,06E	2,39	3,31	4,24	4,61	5,53
		IV	kW	1,5	1,69	2,25E	3,18E	4E	4,4 E	5,42 E
		III	kW	1,35E	1,57E	1,94	3,01	3,78	4,17	5,2
		II	kW	1,24	1,44	1,7E	2,65E	3,41E	3,91 E	4,94 E
		I	kW	1,07	1,25	1,3	2,41	3,14	3,95	4,8
❷	Heating capacity (50°C)	VI	kW	2,41E	2,53E	3,47E	4,74E	4,98E	6,84 E	7,18 E
		V	kW	2,21E	2,32E	3,21	4,52	4,75	6,51	6,84
		IV	kW	1,8	1,89	3,02E	4,29E	4,5E	6,44 E	6,76 E
		III	kW	1,65E	1,73E	2,52	4,05	4,25	6,13	6,44
		II	kW	1,5	1,58	2,21E	3,7E	3,89E	5,75 E	6,04 E
		I	kW	1,3	1,37	1,79	3,39	3,56	5,75	5,99
❸	Heating capacity (70°C)	VI	kW	3,98	4,18	5,7	7,99	8,3	11,42	11,99
		V	kW	3,65	3,83	5,28	7,63	7,91	10,87	11,43
		IV	kW	2,97	3,12	4,97	7,21	7,48	10,78	11,3
		III	kW	2,73	2,85	4,14	6,8	7,06	10,29	10,77
		II	kW	2,48	2,61	3,64	6,23	6,46	9,67	10,1
		I	kW	2,15	2,26	2,97	5,72	5,9	9,62	10
❸	Additional coil heating capacity	VI	kW	2,22E	2,11E	3,54E	4,14E	3,93E	5,09 E	4,84 E
		V	kW	2,08E	1,98E	3,34	4,12	3,91	4,9	4,66
		IV	kW	1,93	1,83	3,2E	4E	3,8E	4,8 E	4,56 E
		III	kW	1,71E	1,62E	2,81	3,9	3,71	4,7	4,47
		II	kW	1,6	1,52	2,53E	3,8E	3,61E	4,59 E	4,36 E
		I	kW	1,44	1,37	2,14	3,72	3,53	4,48	4,26
	Air flow rate/Static pressure	VI	m³/h / Pa	275 / 56E	275 / 56E	450 / 69 (VI)E	620 / 66 (VI)E	620 / 66E	912 / 62 (VI) E	862 / 62 E
		V	m³/h / Pa	250 / 50E	250 / 50E	411 / 58 (V)	587 / 59 (V)	587 / 59	858 / 54 (V)	828 / 54
		IV	m³/h / Pa	198 / 33	198 / 33	382 / 50 (IV)E	539 / 50 (IV)E	539 / 50E	820 / 50 (IV) E	800 / 50 E
		III	m³/h / Pa	180 / 28E	180 / 28E	315 / 36 (III)	504 / 44 (III)	504 / 44	772 / 45 (III)	759 / 45
		II	m³/h / Pa	163 / 24	163 / 24	270 / 26 (II)E	445 / 34 (II)E	445 / 34E	715 / 39 (II) E	708 / 39 E
		I	m³/h / Pa	140 / 18	140 / 18	210 / 19 (I)	402 / 28 (I)	402 / 28	685 / 35 (I)	680 / 35
❹	Sound power on outlet	VI		50E	50E	48E	54E	54E	57 E	57 E
		V	dB(A)	48E	48E	46	54	54	55	55
		IV	dB(A)	43	43	45E	54E	54E	54 E	54 E
		III	dB(A)	42E	42E	42	51	51	53	53
		II	dB(A)	38	40	40E	50E	50E	51 E	51 E
		I	dB(A)	37	38	38	48	48	50	50
❺	Sound pressure on outlet	VI	dB(A)	41	41	39	45	45	48	48
		V	dB(A)	39	39	37	45	45	46	46
		IV	dB(A)	34	34	36	45	45	45	45
		III	dB(A)	33	33	33	42	42	44	44
		II	dB(A)	29	31	31	41	41	42	42
		I	dB(A)	28	29	29	39	39	41	41
	Absorbed power	VI	W	68E	71E	94E	128E	134E	154 E	154 E
		V	W	60E	63E	78	120	126	134	134
		IV	W	41	43	71E	91E	95E	115 E	115 E
		III	W	36E	38E	60	88	93	109	109
		II	W	32	34	49E	84E	89E	105 E	105 E
		I	W	27	28	39	77	80	91	91
Power 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	

Data at the following conditions:

1 Air: 27°C D.B.; 19°C W.B. - Water: 7/12°C. (S) Cooling capacity - [EN1397:2015] = cooling capacity - absorbed power.

2 Air: 20°C - Water: 50°C; flow rate as in cooling.

3 Air: 20°C - Water: 70/60°C.

4 Second Eurovent 8/12 test.

5 For room volume equal to 100 m³ and reverberation time = 0.5 sec.

E= Eurovent certificated performance.

YARDY-DUCT2 48 - 74 - 88 with oversized 4-row coil.

YARDY-DUCT2 CXP			40	48	50	60	74	80	88
DIMENSIONS AND WEIGHTS									
L - Width	mm		950	950	1250	1250	1250	1250	1250
H - Height	mm		545	545	545	545	545	545	545
P - Depth	mm		212	212	212	212	212	212	212
Weight	kg		25,5	27	34,5	34,5	35,5	36,5	37,5

Ductable terminals

YARDY-HP

Cooling capacity: 7.2÷20.5 kW - Heating capacity: 9.6÷28.0 kW



- Horizontal and vertical installation
- New pan that can be cleaned and removed from the bottom
- Installation with 3, 4, 5-row coil
- Filters with different efficiency levels
- Remote control
- Product compliant with Regulation (EU) N.327/2011 implementing Directive ERP

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 natural drainage condensation pan, flanges to fit to the inlet/outlet duct. Pan is removable from below. Filter supplied separately from the unit.
- Heat exchanger: with finned coil and electrical box for terminal block with reversible left connections, which can be switched right directly on site. Coil is removable from below.
- Double inlet 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 inlet and upper outlet)

Row number

- 3 Rows - Unit with 3-row coil; recessed horizontal/vertical unit for installation.
- 4 Rows - Unit with 4-row coil; recessed horizontal/vertical unit for installation.
- 5 Rows - Unit with 5-row coil (only models 250, 300); recessed horizontal/vertical unit for installation.

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).
- ON/OFF 2-way electrovalve for 2-pipe and 4-pipe systems.
- On/OFF 3-way electrovalve for 2-pipe and 4-pipe systems.
- Auxiliary condensation drain pan.
- Frame with filter that can be extracted in any direction (efficiency rating G1/G2/G3).
- Straight outlet and inlet connection.
- 90° outlet and inlet connection.
- Flange for duct connection.
- Anti-vibration connection for connection to inlet/outlet duct.
- Panel with circular nozzles to be connected to the outlet/inlet connections.

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 signal and electric heater.
- Electronic panel with automatic summer/winter switch for 2-pipe-systems.
- Electronic panel with automatic summer/winter switch and automatic speed regulation for 2-pipe-systems with electric heater or 4-pipe-systems.
- Air sensor with remote control option.
- Interface card for controlling up to 4 fan coil units (models 100-150-200 only, for on board installation).

IDRHOSS CONTROLS

- Wall mounting receiver with remote control.
- Electronic panel for wall mounting installation.
- Wall-mounted recessed electronic panel.

For installation on machine

- Master/slave electronic board.
- Temperature probe for hot row.
- Module for ON/OFF valves and electrical heater management.
- RS485 interface for serial communication with other devices (proprietary protocol; Modbus RTU protocol).
- RS485/USB serial converter.
- Serial interface (CAN-bus - Controller Area Network) for the IDRHOSS system.
- KGTW-BAC- Gateway RS485/BACnet (max 64 fan coil).
- KGW-LON- Gateway RS485/FTT10-LonWorks (max 64 fan coil).

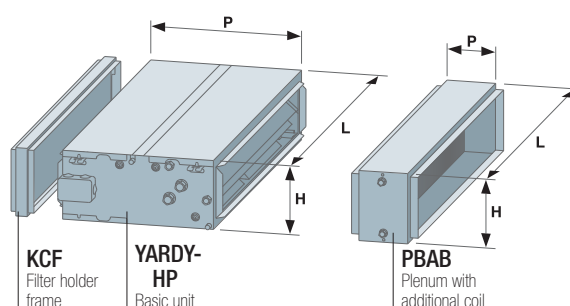
Key: ♦ Factory fitted
 → Supplied loose



YARDY HP CXP			100	150	200	250	300
❶ Total cooling capacity	3R	kW	7,16	8,37	10,13	13,55	15,25
❶ Total cooling capacity [EN1397:2015] (§)			6,96	8,13	9,75	12,87	14,45
❷ Heating capacity (50°C)	3R	kW	9,66	11,71	14,27	19,08	21,75
❶ Total cooling capacity	4R	kW	8,41	9,51	11,37	16,58	18,8
❶ Total cooling capacity [EN1397:2015] (§)			8,22	9,28	11,04	15,91	18,05
❷ Heating capacity (50°C)	4R	kW	10,86	12,67	15,36	22,28	25,63
❶ Total cooling capacity	5R	kW	-	-	-	18,7	20,5
❶ Total cooling capacity [EN1397:2015] (§)						18,04	19,75
❷ Heating capacity (50°C)	5R	kW	-	-	-	24,88	27,89
❸ Additional coil heating capacity (70°C)	4T -KBAA	kW	6,69	6,78	9,35	10,44	11,31
❸ Additional coil heating capacity (70°C)	PBAB	kW	12,9	14,14	16,4	29,73	32,77
❹ Air flow rate/Speed static pressure (3R)	MAX	m³/h / Pa	1.552 / 60	1.840 / 60	2.339 / 60	3.312 / 60	3.875 / 60
	MED	m³/h / Pa	1.369 / 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
❺ Sound power on outlet (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
❻ 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
Spd Nominal 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
Power supply	V-ph-Hz		230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
DIMENSIONS AND WEIGHTS			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.
(§) Cooling capacity [EN1397:2015] = cooling capacity - absorbed power.
- ❷ Air: 20°C - Water: 50°C, flow rate as in cooling. Maximum speed.
- ❸ Air: 20°C - Water: 70/60°C. Maximum speed.
- ❹ 3 row coil (3R) without filter.
- ❺ With G2 filter according to Eurovent 8/12 test.
- ❻ At 2 m from the air outflow point with directionality factor 2 and G3 filter.



Fan coils with brushless motor

DIVA-I

Cooling capacity: 2.8÷10.8 kW - Heating capacity: 3.4÷12.7 kW

INVERTER



- Consumption reduced by 50% compared to the traditional motor
- Set ups for 2 pipe, 4 pipe or 2 pipes with electrical heater
- ABS or metal cover
- 3-way, On/OFF electrovalves and premounted controls on board

Cassette-type fan coil units

Construction features

- Fan coils: cassette-type for installation in false ceilings, with air return and flow directly into the room.
- Finned coil heat exchanger.
- Radial fan;
- Inverter brushless EC motor.
- Structure: self-supporting galvanised sheet steel complete with additional condensation drain pan and pump to lift the condensation (maximum head pressure 650mm).
- PLP ceiling plugging cover (accessory): in ABS polymer (RAL 9003) with manually adjustable outlet fins, inlet grille and renewable filter.

System type

- 2T - Cassette for 2-pipe systems.
- 4T - Cassette for 4 pipe systems.
- RE - Cassette for 2 pipe systems with integrative electrical heater.

Separately supplied accessories

- PLP-Ceiling cover in ABS (RAL 9003).
- PLM-Metal ceiling cover (RAL 9003) flush to the false ceiling, 60x60cm models only.
- On/OFF 3-way electrovalve for 2-pipe and 4-pipe systems.
- On/OFF 2-way electrovalve for 2-pipe and 4-pipe systems.
- Primary air duct connection.
- Shank for air distribution at a distance from the unit.
- Primary air kit.

STANDARD Controls

For wall mounting installation

- Electronic panel with display and RS485 serial interface, semi-recessed in wall.

iDRHOSS controls

- Remote control and receiver.
- Electronic panel for wall mounting installation.
- Wall-mounted recessed electronic panel.

For installation on machine

- Master/slave electronic board, valve control module ON/OFF and electrical heater, temperature probe for hot row.
- RS485 interface for serial communication with other devices (proprietary protocol; Modbus RTU protocol).
- RS485/USB serial converter
- Serial interface (CAN-bus - Controller Area Network) for the iDRHOSS system.
- KGTW-BAC- Gateway RS485/BACnet (max 64 fan coil).
- KGW-LON - Gateway RS485/FTT10-LonWorks (max 64 fan coil).

- Key:
- ❖ Factory fitted
 - Supplied loose



- Recessed control panel
- Remote control with bracket for wall installation
- Wall-mounted control panel





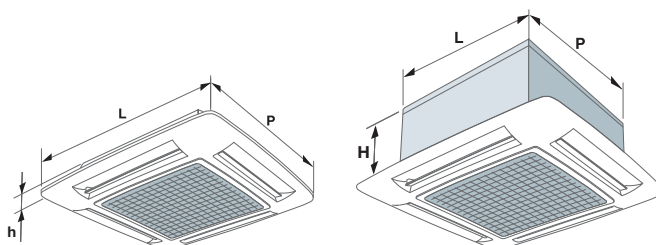
DIVA-I			DIVA-I 2T - DIVA-I RE					DIVA-I 4T				
			30	40	50	60	110	30	40	50	60	110
❶ Total cooling capacity	MAX	kW E	2,75	4,33	5,02	6,33	10,75	2,77	3,93	4,53	6,51	9,87
	MED	kW E	2,17	3,05	3,87	5,15	7,72	2,18	2,81	3,53	5,28	7,17
	MIN	kW E	1,84	2,24	2,56	4,21	5,29	1,85	2,09	2,38	4,3	4,98
Total cooling capacity [EN1397:2015] (S)	MAX	kW E	2,73	4,3	4,96	6,3	10,64	2,75	3,9	4,47	6,48	9,76
	MED	kW E	2,16	3,04	3,85	5,13	7,69	2,17	2,8	3,51	5,26	7,14
	MIN	kW E	1,84	2,24	2,55	4,2	5,28	1,85	2,09	2,37	4,29	4,97
❷ Heating capacity (50°C)	MAX	kW E	3,44	5,24	6,2	8,01	12,73	-	-	-	-	-
	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	-	-	-	-	-
❸ Heating capacity (70°C)	MAX	kW	5,82	8,81	10,42	13,54	21,37	-	-	-	-	-
	MAX	kW E	-	-	-	-	-	3,62	3,35	3,79	9,36	9,51
	MED	kW E	-	-	-	-	-	2,85	2,53	3,06	7,54	7,16
❹ Additional coil heating capacity	MIN	kW E	-	-	-	-	-	2,43	1,98	2,2	6,14	5,22
	RE electrical heater	230-1-50 V	kW	1,5	2,5	2,5	3	3	-	-	-	-
Air flow speed	MAX	m³/h	535	710	880	1165	1770	535	710	880	1165	1770
	MED	m³/h	380	445	610	870	1130	380	445	610	870	1130
	MIN	m³/h	310	310	360	630	710	310	310	360	630	710
Sound power	MAX	dB(A) E	47	54	60	48	57	47	54	60	48	57
	MED	dB(A) E	39	43	50	39	47	39	43	50	39	47
	MIN	dB(A) E	33	33	37	33	34	33	33	37	33	34
❺ Sp. sound pressure	MAX	dB(A)	38	45	51	39	48	38	45	51	39	48
	MED	dB(A)	30	34	41	30	38	30	34	41	30	38
	MIN	dB(A)	24	24	28	24	25	24	24	28	24	25
Absorbed power	MAX	W E	16	31	62	33	108	16	31	62	33	108
	MED	W E	8	11	21	17	32	8	11	21	17	32
	MIN	W E	5	5	7	10	10	5	5	7	10	10
Power 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 WEIGHTS			30	40	50	60	110	30	40	50	60	110
Cassette - Dimensions WxHxD	mm		575 x 275 x 575			820 x 303 x 820		575 x 275 x 575			820 x 303 x 820	
PLP Ceiling cover - Dimensions WxHxD	mm		670x 67x 670			965 x 85 x 965		670x 67x 670			965 x 85 x 965	
Cassette - Weight	kg		22	24	24	36	39	24	24	24	39	39
PLP Ceiling cover - Weight	kg		3	3	3	6	6	3	3	3	6	6

Data at the following conditions:

- ❶ Air: 27°C D.B.; 19°C W.B. - Water: 7/12°C.
(S) Cooling capacity [EN1397:2015] = cooling capacity - absorbed power.
- ❷ Air: 20°C - Water: 50°C, flow rate as in cooling.
- ❸ Air: 20°C - Water: 70/60°C.
- ❹ For room volume equal to 100 m³ and reverberation time = 0.5 sec.
- E Eurovent certified performance.



PLM Coandă effect metal mounting



Fan coils

DIVA

Cooling capacity: 2.0÷11.1 kW - Heating capacity: 2.6÷14.0 kW



- Set ups for 2 pipe, 4 pipe or 2 pipes with electrical heater
- ABS or metal cover
- 3-way, On/OFF electrovalves and premounted controls on board

Cassette-type fan coil units

Construction features

- Fan coils: cassette-type for installation in false ceilings, with air return and flow directly into the room.
- Finned coil heat exchanger.
- Radial fan.
- 6-speed engine 3 of which are connected in a terminal board.
- Structure: self-supporting galvanised sheet steel complete with additional condensation drain pan and pump to lift the condensation (maximum head pressure 650mm).
- PLP ceiling plugging cover (accessory): in ABS polymer (RAL 9003) with manually adjustable outlet fins, inlet grille and renewable filter.

System type

- 2T - Cassette for 2-pipe systems.
- 4T - Cassette for 4 pipe systems.
- RE - Cassette for 2 pipe systems with integrative electrical heater.

Separately supplied accessories

- PLP-Ceiling cover in ABS (RAL 9003).
- PLM-Metal ceiling cover (RAL 9003) flush to the false ceiling, 60x60cm models only.
- On/OFF 3-way electrovalve for 2-pipe and 4-pipe systems.
- On/OFF 2-way electrovalve for 2-pipe and 4-pipe systems.
- Primary air duct connection.
- Shank for air distribution at a distance from the unit.
- Primary air kit.

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 signal and electrical heater.
- Electronic panel with automatic summer/winter changeover for 2-pipe systems.
- Electronic panel with automatic summer/winter changeover and automatic speed regulation for 2-pipe systems with electric heater or 4-pipe systems.
- Electronic panel with display and RS485 serial interface, semi-recessed in wall.
- Interface board for controlling up to 4 fan coils.

iDRHOSS controls

- Remote control and receiver.
- Electronic panel for wall mounting installation.
- Wall-mounted recessed electronic panel.

For installation on machine

- Master/slave electronic board.
- Temperature probe for hot row.
- Module for ON/OFF valves and electrical heater management.
- RS485 interface for serial communication with other devices (proprietary protocol; Modbus RTU protocol).
- RS485/USB serial converter.
- Serial interface (CAN-bus - Controller Area Network) for the iDRHOSS system.
- KGTW-BAC- Gateway RS485/BACnet (max 64 fan coil).
- KGW-LON - Gateway RS485/FTT10-LonWorks (max 64 fan coil).

- Key: ♦ Factory fitted
 → Supplied loose



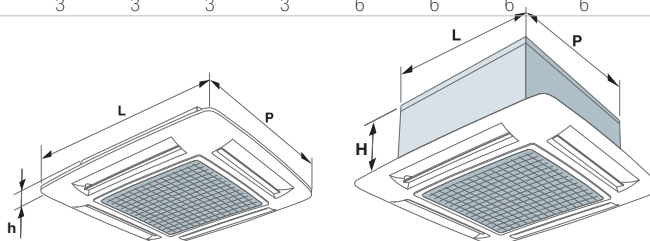
- Recessed control panel
- Remote control with bracket for wall installation
- Wall-mounted control panel

DIVA				DIVA 2T - DIVA RE						
				20	30	40	50	60	90	110
❶ Total cooling capacity	MAX	kW E		1,98	2,68	4,33	5,02	6,16	9,51	11,1
	MED	kW E		1,63	2,34	3,34	3,88	4,91	6,78	8,45
	MIN	kW E		1,27	1,84	2,25	2,94	4,21	5,31	5,31
❶ Total cooling capacity [EN1397:2015] (S)	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 (50°C)	MAX	kW E		2,64	3,35	5,23	6,17	7,77	10,71	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
❸ Heating capacity (70°C)	MAX	kW		4,56	5,68	9,25	10,63	13,14	19,76	23,68
	MAX	kW E		-	-	-	-	-	-	-
	MED	kW E		-	-	-	-	-	-	-
❹ Additional coil heating capacity	MED	kW E		-	-	-	-	-	-	-
	MIN	kW E		-	-	-	-	-	-	-
RE electrical heater	230-1-50 V	kW		-	1,5	2,5	2,5	3	3	3
	MAX	m³/h		610	520	710	880	1140	1500	1820
	MED	m³/h		420	420	500	610	820	970	1280
Air flow speed	MIN	m³/h		310	310	320	430	630	710	710
	MAX	dB(A) E		49	45	53	59	48	53	58
	MED	dB(A) E		40	40	45	49	40	40	48
Sound power	MIN	dB(A) E		33	33	33	41	33	34	34
	MAX	dB(A)		40	36	44	50	39	44	49
	MED	dB(A)		31	31	36	40	31	31	39
❹ Sp. sound pressure	MIN	dB(A)		24	24	24	32	24	25	25
	MAX	W E		57	44	68	90	77	120	170
	MED	W E		32	32	44	57	48	63	95
Absorbed power	MIN	W E		25	25	25	32	33	42	42
Power 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 WEIGHTS				20	30	40	50	60	90	110
Cassette - Dimensions WxHxD	mm			575 x 275 x 575				820 x 303 x 820		
PLP Ceiling cover - Dimensions WxHxD	mm			670x 67x 670				965 x 85 x 965		
Cassette - Weight	kg			22	22	24	24	36	39	39
PLP Ceiling cover - Weight	kg			3	3	3	3	6	6	6

DIVA				DIVA 4T											
				20	30	32	40	42	50	60	80	90	92	110	
❶ Total cooling capacity	MAX	kW	E	2,33	2,7	3,34	3,93	3,81	4,53	6,34	7,71	8,77	8,89	10,2	
	MED	kW	E	1,96	2,36	2,65	3,06	3,02	3,53	5,03	5,66	6,33	6,93	7,84	
	MIN	kW	E	1,51	1,85	1,85	2,09	2,36	2,72	4,14	4,52	4,99	4,52	4,99	
❶ Total cooling capacity [EN1397:2015] (S)	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	
❷ Heating capacity (50°C)	MAX	kW	E	-	-	-	-	-	-	-	-	-	-	-	
	MED	kW	E	-	-	-	-	-	-	-	-	-	-	-	
	MIN	kW	E	-	-	-	-	-	-	-	-	-	-	-	
❸ Heating capacity (70°C)	MAX	kW		-	-	-	-	-	-	-	-	-	-	-	
❹ Additional coil heating capacity	MAX	kW	E	3,03	3,46	4,4	3,35	4,95	3,79	9,1	11	8,56	12,7	9,8	
	MED	kW	E	2,54	3,02	3,46	2,71	3,97	3,06	7,19	8,1	6,42	9,98	7,74	
	MIN	kW	E	1,96	2,43	2,43	1,98	3,1	2,46	5,91	6,45	5,23	6,45	5,23	
RE electrical heater	230-1-50 V	kW		-	-	-	-	-	-	-	-	-	-	-	
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	
❹ 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	
Power 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	230-1-50	
DIMENSIONS AND WEIGHTS				20	30	32	40	42	50	60	80	90	92	110	
Cassette - Dimensions WxHxD		mm		575 x 275 x 575						820 x 303 x 820					
PLP Ceiling cover - Dimensions WxHxD		mm		670x 67x 670						965 x 85 x 965					
Cassette - Weight		kg		24	24	24	24	24	24	39	39	39	39	39	
PLP Ceiling cover - 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.
- (S) Cooling capacity [EN1397:2015] = cooling capacity - absorbed power.
- ❷ Air: 20°C - Water: 50°C, flow rate as in cooling.
- ❸ Air: 20°C - Water: 70/60°C.
- ❹ For room volume equal to 100 m³ and reverberation time = 0.5 sec.
- E Eurovent certificated performance.



Fan coils

VTNC

Cooling capacity: 2.9÷7.8 kW - Heating capacity: 3.9÷9.4 kW



- **Cassette for 2 and 4-pipe systems**
- **Adjustable movable fins**
- **Remote controls per standard**
- **Centralised control panel**

Cassette-type fan coil units

Construction features

- Fan coils: cassette-type for installation in false ceilings, with air return and flow directly into the room.
- Finned coil heat exchanger.
- 3 speed fan.
- Structure: load-bearing, in galvanised sheet steel, complete with condensate drain pump (up to 200 mm above the unit) and auxiliary condensation drain pan.
- Damping panel: in ABS polymer (RAL9010) with motorised flow fins adjustable in various positions, return grille and regenerable filter.
- Remote control: supplied as standard.

Versions

VTNC - Cassettes for 2-pipe systems.
VTNC/B4 - Cassettes for 4-pipe systems.

Separately supplied accessories

- On/OFF 3-way electrovalve for 2-pipe and 4-pipe systems.
- On/OFF 2-way electrovalve for 2-pipe and 4-pipe systems.
- Outlet nozzle lock.

STANDARD Controls

For wall mounting installation

- Electronic control panel for wall mounting.
- Centralised control panel for up to 64 units via serial connection, with daily and weekly time band management.
- Serial interface for connection with the control panel (proprietary protocol).

Key: → Supplied loose



Centralised control panel with daily/weekly time bands management.

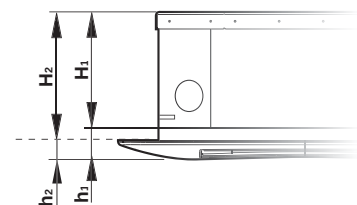
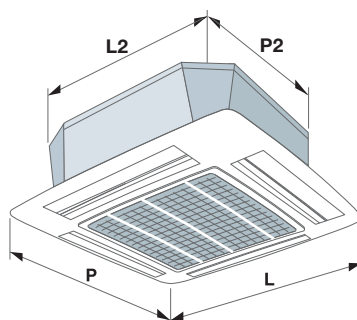




VTNC				VTNC	VTNC	VTNC	VTNC	VTNC	VTNC/B4	VTNC/B4
				26	36	46	60	85	46	85
❶ Total cooling capacity	MAX	kW	E	2,91	3,59	4,37	5,8	7,83	3,4	6,17
	MED	kW	E	2,54	3,05	3,5	4,86	6,94	2,69	5,13
	MIN	kW	E	2,17	2,69	2,96	4,04	6,04	2,34	4,59
Total cooling capacity [EN1397:2015] (S)	MAX	kW	E	2,86	3,52	4,28	5,68	7,66	3,31	6,02
	MED	kW	E	2,50	3,00	3,45	4,78	6,80	2,64	5,00
	MIN	kW	E	2,14	2,65	2,92	3,97	5,92	2,30	4,48
❷ Heating capacity (50°C)	MAX	kW	E	3,88	4,95	5,82	6,89	9,42	-	-
	MED	kW	E	3,4	4,2	4,66	5,21	8,37	-	-
	MIN	kW	E	2,98	3,73	3,97	4,1	7,77	-	-
❸ Heating capacity (70°C)	MAX	kW		6,15	8,45	9,97	11,66	16,04	-	-
❹ Additional coil heating capacity B4	MAX	kW	E	-	-	-	-	-	4,95	8,06
	MED	kW	E	-	-	-	-	-	3,91	6,7
	MIN	kW	E	-	-	-	-	-	3,3	6,5
Air flow speed	MAX	m³/h		560	690	840	1024	1460	650	1.478
	MED	m³/h		490	540	570	733	1228	570	1.163
	MIN	m³/h		380	440	470	460	1041	470	965
Sound power	MAX	dB(A)	E	54	59	63	56	64	63	61
	MED	dB(A)	E	47	52	56	51	58	56	52
	MIN	dB(A)	E	41	46	48	45	56	48	48
❶ Sp. sound pressure	MAX	dB(A)		45	50	54	47	55	54	52
	MED	dB(A)		38	43	47	42	49	47	43
	MIN	dB(A)		32	37	39	36	47	39	39
Absorbed power	MAX	W	E	50	70	90	119	170	90	153
	MED	W	E	40	50	50	80	140	50	127
	MIN	W	E	30	40	40	70	120	40	109
Power 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 WEIGHTS				26	36	46	60	85	46	85
L2/H1/H2/P2 - Width 2/Height 1-2/Depth 2		mm		575/265/285/575	575/265/285/575	575/265/285/575	840/230/245/840	840/300/315/840	575/265/285/575	575/265/285/575
L/h1/h2/P - Width/Height/Depth		mm		647/50/30/647	647/50/30/647	647/50/30/647	950/50/35/950	950/50/35/951	647/50/30/647	950/50/35/950
Weight		kg		18	18	18	29	35	18	35
Cover weight		kg		3	3	3	6	6	3	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: 50°C, flow rate as in cooling.
- ❸ Air: 20°C - Water: 70/60°C.
- ❹ For room volume equal to 100 m³ and reverberation time = 0.5 sec.
- E Eurovent certified performance.

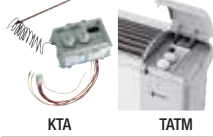


CONTROLS for fan coil units

COMPATIBLE FAN COIL CONVECTORS:

YARDY-I EV3 / YARDY EV3	YARDY-ID2/YARDY-DUCT2	YARDY-HP	DIVA-I / DIVA
 	 	 	 

STANDARD CONTROLS

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	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  KTA TATM  KCV2  KTCV2  KTCVA  KTCVR	→ KC - ❖ C on board	◆													
	→ KTA - ❖ TATM on board	◆		◆	◆		◆								
	→ KCV2 receiver	◆			◆		◆							◆	
	→ KTCV2 wall mounted → KBTCV2 - ❖ TCV2 on board	◆		◆	◆	ACCESSORY	◆	◆	◆	◆	◆	◆		◆	
	→ KTCVA wall mounted → KBTCVA - ❖ TCVA on board	◆		◆	◆		◆	◆		◆	◆			◆	
	→ KTCVR wall mounted → KBTCVR - ❖ TCVR on board	◆	AUTOMATIC SPEED / MINIMUM SPEED	REGULATION ±5°C	◆		◆	◆	◆		◆	◆		◆	
	→ KTVD semi-recessed in wall	◆	MANUAL / AUTOMATIC SPEED	◆	TUNED (A)		AUTOMATIC (B)	◆	◆	◆	◆	◆	◆	◆	
	→ KTVDM semi-recessed in wall	◆	MANUAL / AUTOMATIC SPEED	◆	TUNED (A)		AUTOMATIC (B)	◆	◆	◆	◆	◆	◆	◆	◆
	→ KTVDI semi-recessed in wall	◆	MANUAL / AUTOMATIC SPEED	◆	TUNED (A)		AUTOMATIC (B)	◆	◆	◆	◆	◆	◆		
	→ KTVDIM semi-recessed in wall	◆	MANUAL / AUTOMATIC SPEED	◆	TUNED (A)		AUTOMATIC (B)	◆	◆	◆	◆	◆	◆		◆
STANDARD FAN COIL															
INVERTER FAN COIL															

(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 fitted → Separately supplied

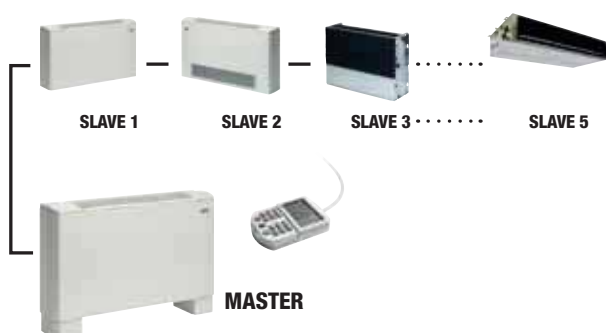
IDRHOSS CONTROLS

Additional components:

- (1) MVR (or KMVR) only if you wish to manage an ON-OFF valve.
- (2) MVR (or KMVR) mandatory to manage the electrical heater (also manages an ON-OFF valve, in addition).
- (3) MVR (or KMVR) + STI (or KSTI) mandatory to manage the 2 ON-OFF valves and the temperature probe for the additional coil.
- (4) KRS485 mandatory for Modbus RS485 communication.
- (5) Infrared receivers for remote control:
 - KRIP - For wall installation (only for YARDY type of fan coil).
 - KRI - For installation on DIVA-type cassettes with PLP cover.
 - KRIM - For installation on DIVA-type cassettes with PLM cover.
- (6) ON / OFF valve management included.

USER PANEL					
	PCM	KPCM	KICM	KTCM + KRIP/KRI/KRIM	NONE
					
Installation on fancoil	◆				No user panel in case of slave fan coil
Assembly receiver		◆			
Assembly panel			◆		
Remote control + receiver				◆ (5)	
Regulation functions	◆	◆	◆	◆	
Comfort functions	◆	◆	◆	◆	
Master/Slave function	◆ (MASTER)	◆ (MASTER)	◆ (MASTER)	◆ (MASTER)	◆ (SLAVE)
iDRHOSS CONTROLS	↓	↓	↓	↓	↓
→	CMS/PCM	CMS + KPCM	CMS + KICM	CMS + KTCM + (5)	CMS
→	KCMS/PCM	KCMS + KPCM	KCMS + KICM	KCMS + KTCM + (5)	KCMS
→	CMIPCM2	CMI2 + KPCM	CMI2 + KICM	CMI2 + KTCM + (5)	CMI2
→	KCMIPCM2	KCMI2 + KPCM	KCMI2 + KICM	KCMI2 + KTCM + (5)	KCMI2
→	CMIPCM4	CMI4 + KPCM	CMI4 + KICM	CMI4 + KTCM + (5)	CMI2
→	KCMIPCM4	KCMI4 + KPCM	KCMI4 + KICM	KCMI4 + KTCM + (5)	KCMI4

MASTER/SLAVE FUNCTION



REGULATION FUNCTIONS

Automatic management - Cooling - Dehumidification - Manual/automatic Ventilation - Heating

COMFORT FUNCTIONS

Programmed activation/deactivation - Night-time air conditioning - Winter consent - Summer consent - Operation mode saving

ADVANCED FUNCTIONS

Economy - ON/OFF remote control - SUMMER/WINTER remote control - SECURITY control - PROBE IN/PROBE OUT - CONTINUOUS VENTILATION - COMFORT CONTROL - OCCUPANCY - ALARM - MASTER/SLAVE

MASTER/SLAVE FUNCTION - 6 units

Centralised management of up to 5 SLAVE units by means of one single MASTER unit without serial interface.

Terminal unit - UTNA Platinum 013÷120

Heat recovery unit - UTNR-A Platinum 040÷500

Heat recovery unit - UTNR-A and UTNR-P 033÷530

Heat recovery unit - UTNR-HE Platinum 040÷500

Heat recovery unit - UTNR-HE 033÷530

Heat recovery unit - VMC-E 025÷100

Heat recovery unit - UTNR Micro 20÷50

Heat recovery unit/dehumidifier - UTNRD Micro 30-50



TERMINAL UNITS

Terminal unit

UTNA Platinum 013÷120

Cooling capacity: 6.4÷70 kW - Heating capacity: 4.9÷78 kW

INVERTER

new



- **Complying with ErP 2018 NRvU**
- **BRUSHLESS EC fan**
- **F7 high efficiency filters**

Modular and 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, in 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 on order. Condensate drain pan in aluminium both for horizontal BA4R and BA6R versions and vertical BAV4R and BAV6R versions.
- SV fan module complete with centrifugal plenum fan EC Brushless single suction directly coupled to electric motor. Static and dynamic balancing of the entire assembly, constructed in accordance with standard DIN ISO 1940. Degree of balancing G6.3. 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 supply or intake.
- MUV-PRV - Plenum with steam humidifier and external electric generator.
- BE - Additional electrical coil for channel connection.

Factory mounted accessories

- SG - Optional drop separator at low load losses in polypropylene.
- TAG - Optional antifreeze thermostat.

Separately supplied accessories

- KSG - Drop separator at low load losses in polypropylene (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.





MODEL UTNAP			013	025	035	050	070	090	120	
②	Coil thermal power Only hot	BA 2R/BAV 2R	kW	4,9	8,4	11,7	16,8	25,1	32,8	39,1
①	Cooling capacity	BA/BAV 4R	kW	6,4	11,1	14,6	21,3	31,9	45,2	53,6
②	Heating capacity	BA/BAV 4R	kW	7,6	13,6	18,4	26,5	39,7	52,3	64,4
①	Cooling capacity	BA/BAV 6R	kW	8,1	14,9	20,2	27,5	41,2	56,8	68,9
②	Heating capacity	BA/BAV 6R	kW	9,1	16,6	22,8	32,2	48,3	62,1	78,2
③	Heater power	230V-1ph-50Hz	kW	3	-	-	-	-	-	-
	electrical BE	400V-3ph-50Hz	kW	-	6	9	13	17	24	24
④	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
④	Useful static head.	NOM	Pa	300	300	300	300	300	300	300
⑤	Irradiated sound power		dB(A)	47	50	54	54	56	55	59
⑤	Intake sound power		dB(A)	64	65	69	68	71	70	74
⑤	Sound power on outlet		dB(A)	70	71	75	75	78	77	80
④	SFP Int (Erp 2018<230)		W/m³/s	80	121	137	128	143	101	146
	Filtration degree		G4/F7	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
	Power 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	400-3-50
DIMENSIONS AND WEIGHTS										
	L - Width		mm	945	1245	1545	1645	1645	2045	2045
	H - Height		mm	387	387	387	504	687	837	837
	PMA -SIL-MUV-SV- 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	-	-	-
⑥	UTNA Weight		kg	53	60	67	88	94	132	142

Data at the following conditions:

- ① Air T in 26°C BS; 18.6°C BU.(50% U.R.); water T in 7°C with Δt 5°C; nominal air flow.
- ② Air T in 20°C BS; 13.7°C BU.(50% U.R.); water T in 40°C with Δt 5°C; nominal air flow.
- ③ Air T in 20°C BS; 13.7°C BU.(50% U.R.); nominal air flow.
- ④ Air T in 20°C BS; 13.7°C BU.(50% U.R.); nominal air flow; 4-row coil BA/BAV 4R; clean type F7 filter.
- ⑤ 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; 300 Pa static useful. In accordance with EN ISO 11546-2.
- ⑥ SV. Weight

Controls

- KPTZ - Rotating potentiometer for wall installation, for manual fan speed control. The speed of supply 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 switchover; 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 switchover from 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 electric heater (1 stage) in 2-pipe systems + electrical heater; 2 configurable digital inputs and 2 configurable analogue inputs. Complete with RS485 resident serial interface (Modbus RTU protocol).

Terminal unit

UTNA Platinum 013÷120

Cooling capacity: 6.4÷70 kW - Heating capacity: 4.9÷78 kW



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.

Full Control Checks

- 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

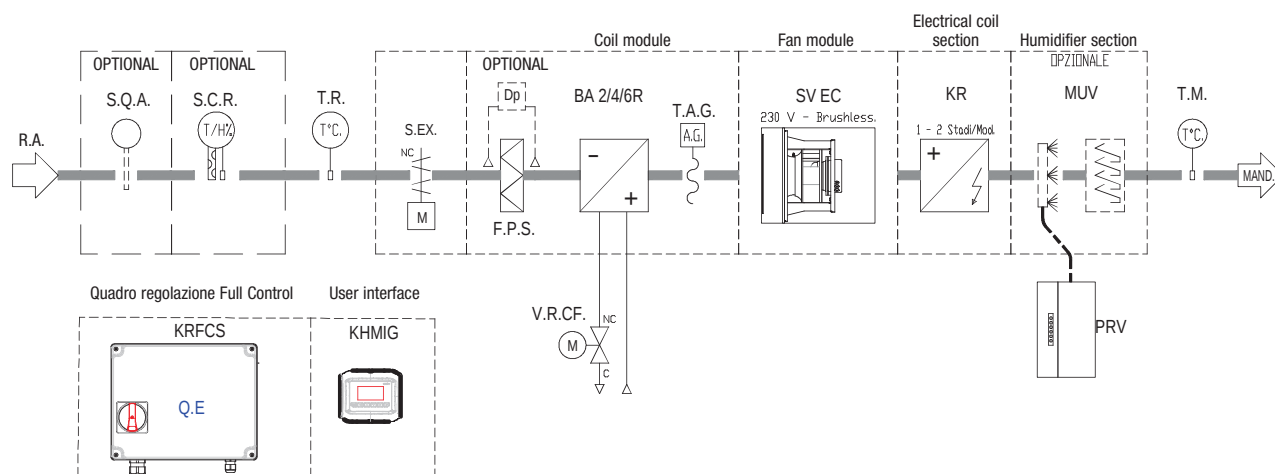
- KV3V - PN40 Mixer/diverter 3-way regulation ball valves, female threaded hydraulic connections.
- KV2V - PN40 2-way regulation ball valves, female threaded hydraulic connections.
- KVMM - Actuator for ball regulation valves with modulating control 0/10 Vdc 24 Vac power supply.
- KVOM - Actuator for On/Off 230V 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 you can find in the Full Control section are also available.



UTNA SV EC

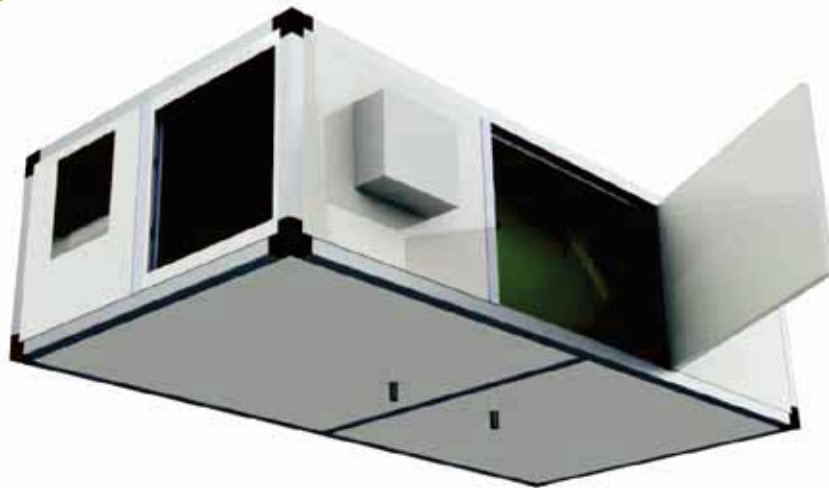
UTNA fan unit



Heat recovery unit

UTNR-A Platinum 040÷500

Air flow rate: 400÷4,050 m³/h



new



- Complying with ErP 2018 NRvU
- Eurovent certified very high efficiency heat recovery
- Multi-speed fans or Brushless EC
- F7 and M5 high efficiency filters
- Double-walled sandwich with high insulating power
- Full control kit

Fresh air terminal unit with opposing counterflow static heat recovery.

Construction features

- Recovery unit: with very high static type efficiency with counterflow aluminium plates with a close pitch. Extraction of the lateral exchange pack (except for size 40 with extraction from below).
- Fans: fresh air inlet and double intake centrifugal expulsion type with a continuously adjustable directly coupled electric motor; alternatively, Brushless EC high efficiency electric motors. Fan unit installed on anti-vibration mountings to prevent vibrations being transmitted to the structure.
- Structure: frame made with extruded aluminium profile with preloaded nylon joints. Sandwich damping panels, 20 mm thick, made internally with galvanised sheet metal and pre-painted externally with thermal and acoustic insulation in injected polyurethane with density 45 kg/m³ at very high heat and sound insulation power.
- Filtering section: filtration sections made of compact cell filters with a polypropylene mean at low pressure drop, removable from the side, in F7 efficiency class in the renewal flow and M5 in the ejection flow.
- Condensation drain pan made of galvanised sheet steel with condensation drain connection from the bottom.
- Integrated free cooling or thawing bypass system. The presence of a motorised damper at the side of the heat recovery can lead to a bypass system to control the free cooling or defrosting according to the temperature and humidity requirements or issues.

Versions

- UTNR-A/O PLATINUM - Recovery with a heat exchanger with opposite flows, horizontal installation and standard multi-speed fans
- UTNRE-A/O PLATINUM - Recovery unit with opposing flow heat exchanger, horizontal installation and Brushless EC fans that can reduce the consumed power for ventilation at equal performance.
- EXT- External installation including rain cover, base h 80 mm, outdoor electrical box

Factory fitted accessories

- BER - Reheating electrical heater installed inside, complete with filament-type safety thermostats and control relays to contain pressure drops. 230/1/50 single-phase electrical supply for models 040. 400/3/50 three-phase for models 075÷500.
- BA - Post-heating internal hot water coil.
- BAATG - Antifreeze thermostat installed downstream of the water reheating coil.
- ERF7M5PF - Differential pressure switch for dirty filters installed on standard filters (F7 outdoor air and M5 inlet).
- ERF7-Efficiency recovery filter F7
- ERF7PF-Differential pressure switch for dirty filters installed on F7 outdoor air and F7 inlet filters.

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 condensation drain pan with drain connection from the bottom.
- KSRE - Regulation damper set 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 metal.
- KRSM - Sections with 3 dampers for air mixing and recirculating (only for the horizontal installation).
- KSPC - Panel with circular fittings.





UTNR-A PLATINUM MODEL		40	75	100	150	200	320	400	500
Type of Unit		Non-residential- Bi-directional							
Outdoor air filters		F7							
Return air filters		M5							
By-pass		Motorisable lateral by-pass damper							
SPECIFICATIONS									
Nominal air flow	m³/h	400	750	1000	1.600	2.050	3.150	3.700	4.700
STANDARD FANS									
❶ Nominal available static pressure	Pa	100	100	100	100	100	100	100	n.d.
❷ Fan specific power (SFP)	W/(m³/s)	1286	921	1107	926	854	1143	1175	n.d.
❸ Sound pressure level	dB(A)	59	60	63	63	63	69	69	n.d.
Speed No./Type of Adjustment		1	3	3	3	3	3	2	n.d.
Power 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	n.d.
EC BRUSHLESS FANS									
❶ Nominal available static pressure	Pa	100	100	100	100	100	100	100	100
❶ Max available static pressure	Pa	250	375	570	535	535	270	660	335
❷ Fan specific power (SFP)	W/(m³/s)	538	863	839	794	652	880	839	1226
❸ Sound pressure level	dB(A)	60	61	62	64	62	68	68	69
Speed No./Type of Adjustment		0-10 V							
Power 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	%	81,8	86,8	85,3	81,8	82,3	80,8	81	81,1
❺ Summer efficiency	%	76,5	80	77,9	75,4	76,5	75,5	76,3	76,2
❻ Efficiency Regulation CE 1253/2014	%	77,2	83,4	81,5	77,4	77,8	73	73	73
DIMENSIONS AND WEIGHTS									
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	210	240	270

Data at the following conditions:

- ❶ Values refer 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, Nominal available static pressure
- ❸ Sound pressure level measured at 1 m in free field from the machine inlet
- ❹ Out. air T: -5°C, 80% RH; Amb. air T: 20°C, 50% RH.
- ❺ Out. air T: 32°C, 50% RH; Amb. air T: 26°C, 50% RH.
- ❻ Dry nominal conditions, measured according to EN 308 at balanced flows. Outdoor air 5°C D.B.; Ambient air 25°C D.B.

Heat recovery unit

UTNR-A Platinum 040÷500

Air flow rate: 400÷4,050 m³/h



Controls

- KVMM 3 (only for models 040) - Electronic speed controller suitable for a wall mounting installation, which allows the fan with a single-phase motor to be adjusted: ON/OFF switch and a handle for continuous speed adjustment (only for standard fan version).
- KCV3 - Speed selector for wall installation, allows you to switch the 3 speeds (excluding model 40): Off/heating/cooling switch; 3-speed switch; 230V.
- KPCU-KPCUE - Control panel for wall installation, allows the winter/summer room temperature to be controlled, activating or excluding the water coil or electric heater. Select the working speed of the fan between minimum, average and maximum (excluding model 40 for which the speed is unique) or by adjusting 0/10 V (KPCUE for EC fans) and check the free cooling function.
- KPTZ - Rotating potentiometer for wall installation, for manual fan speed control. The speed of supply and return fans is calibrated with a single potentiometer (only for EC Brushless fan version).

Full Control Checks

- 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.

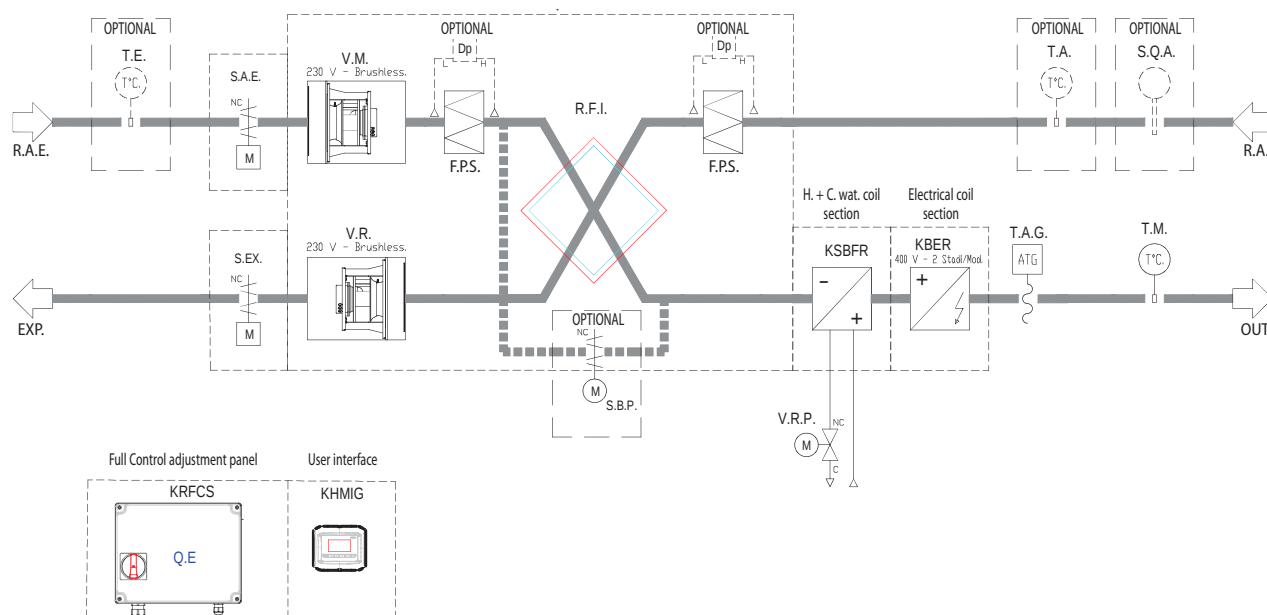
Valves and actuators

- 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 On/Off 230V 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 you can find in the Full Control section are also available.



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-A and UTNR-P 033÷530

Air flow rate: 300÷3920 m³/h



- Only for sales in non-EU markets
- Heat recovery unit with standard efficiency
- F7 high efficiency filters
- Contained sizes
- Horizontal or vertical configuration
- Full control kit

Fresh air terminal units with cross flow static heat recovery.

Construction features

- Recovery unit: high yield static type with aluminium plates (UTNR-A) or on special paper (UTNR-P) with air flows kept separate by specific sealing. The recovery unit can be removed from the lower part in the horizontal configuration.
- Fans: fresh air inlet and double intake centrifugal expulsion type (for model 033 simple intake) with a directly coupled electric motor. Fan unit installed on anti-vibration mounts to prevent vibrations being transmitted.
- Structure: load-bearing structure and side panels (can be removed completely in the horizontal configuration) in Aluzink sheet metal.
- Filtering section: consisting of two filters (one on the fresh air intake and one on the ambient inlet), both renewable acrylic class G4 with very contained pressure drops. Laterally removable filters in the horizontal configuration.
- Insulation: acoustic and thermal panel insulation with polyethylene/polyester having an average thickness of 20 mm.
- Terminal block: already present on the machine to facilitate the electrical connections.
- Condensation drain pan: made of ABS with condensation drain connection from the bottom.
- Free cooling or thawing bypass: a bypass system can be set up in the horizontal configuration for models 110÷530 to control the free cooling or thawing thanks to a suitable pre-cut.

Versions

- UTNR-A/O - Cross flow recovery unit with an aluminium heat exchanger in the horizontal configuration (nominal efficiency up to 57%).
- UTNR-P/O - Cross flow recovery unit with a heat exchanger consisting of sheets of special paper in the horizontal configuration (nominal efficiency up to 76%).
- UTNR-A/V - Cross flow recovery unit with an aluminium heat exchanger in the VERTICAL configuration.
- UTNR-P/V - Cross flow recovery unit with a special paper heat exchanger in the VERTICAL configuration.
- UTNR-A/O - Cross flow recovery unit with an aluminium heat exchanger in the HORIZONTAL

configuration and Brushless EC fans that can reduce the consumed power for ventilation at equal performance.

- UTNR-P/O - Cross flow recovery unit with a special paper heat exchanger in the HORIZONTAL configuration and Brushless EC fans that can reduce the consumed power for ventilation at equal performance.
- UTNR-A/V - Cross flow recovery unit with an aluminium heat exchanger in the VERTICAL configuration and Brushless EC fans that can reduce the consumed power for ventilation at equal performance.
- UTNR-P/V - Cross flow recovery unit with a special paper heat exchanger in the VERTICAL configuration and Brushless EC fans that can reduce the consumed power for ventilation at equal performance.
- PTZ Kit - Potentiometer for Brushless EC fan control (match 1 piece to each fan).

Factory fitted accessories

- BER (only for UTNR-A) - Reheating electrical heater installed inside, complete with filament-type safety thermostats and control relays to contain pressure drops.
230/1/50 single-phase for models 033÷055.
400/3/50 three-phase for models 110÷530.
- BA (only for models 110÷530) - Water reheating internal coil.
- PF - Differential pressure switch installed in the inlet filter to indicate a dirty filter.
- ATG - Antifreeze thermostat installed downstream of the water reheating 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 air filter and return.
- EF7PF - F7 Outdoor air filter with differential pressure switch.
- ERF7PF - F7 Outdoor air filter and return air with differential pressure switch.
- EF9 - F9 Outdoor air filter.
- ERF9 - F9 Outdoor air filter and return.
- EF9PF - F9 Outdoor air filter with differential pressure switch.
- ERF9PF - F9 Outdoor air filter and return air with differential pressure switch.





UTNR(E)-A/UTNR(E)-P O/V MODEL		33	55	110	175	220	255	320	410	530
SPECIFICATIONS										
Nominal air flow	m ³ /h	300	620	920	1.580	1.850	2.250	2.950	3.920	5130
Head	Pa	45	55	65	70	77	80	100	100	130
① Sound pressure level	dB(A)	43	51	50	53	52	51	54	56	57,5
Installed motor power	W	2 x 90	2 x 90	2 x 147	2 x 350	2 x 350	2 x 350	2 x 550	2 x 750	2x800
Power 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	400-3-50	400-3-50
Nominal air flow - Version E Brushless	m ³ /h	300	620	920	1.580	1.850	2.250	2.950	3.920	5130
⑥ Max available static head - Version E Brushless	Pa	280	225	120	250	270	270	320	460	460
① ⑥ Sound pressure level-Version E Brushless	dB(A)	49	52	53	56	56	56	55	62	62
⑥ Max electrical consumption-Version E Brushless	W	0,26	0,33	0,49	1,27	1,27	1,76	2,00	3,38	3,38
Electrical supply-Version E Brushless	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
HEAT RECOVERY ON PAPER UTNR-P										
② Efficiency (temp/enthalpy)	%	76/62	74/60	72/56	68/55	73/65	75/67	70/62	66/56	67/57
② Recovered heating capacity	KW	2,6	5,2	7,2	12,2	16,9	21,1	25,6	30,8	36,6
HEAT RECOVERY ON ALUMINIUM UTNR-A										
② Efficiency (temp/enthalpy)	%	53	54	55	54	54	54	51	57	50
② Recovered heating capacity	KW	1,5	3,1	4,7	7,9	9,2	11,2	13,9	20,6	21,3
ACCESSORIES										
③ Heating capacity BER	KW	1,5	3	3	6	6	12	12	12	18
④ Heating capacity BCR	KW	-	-	8,2	12,2	14,4	20,3	24,2	29,9	40,6
④ Heating capacity KSBFR	KW	4,7	8,2	12	19,7	23,7	30,5	37	46,2	59,3
⑤ Total cooling capacity KSBFR	KW	2	3,5	5	8,8	11,1	14,7	17,4	20,9	26,2
DIMENSIONS AND WEIGHTS										
L/H/P - Length/Height/Depth UTNR-A/P HORIZONTAL	mm	990/290/750	990/290/750	1.140/410/860	1.300/500/860	1.380/500/960	1.650/600/1.230	1.650/600/1.230	1.750/600/1.330	1.970/700/1.400
Weight UTNR-A/P O	kg	45	49	85	130	143	166	180	197	209
L/H/P - Length/Height/Depth UTNR-A/P VERTICAL	mm	750/1080/290	750/1080/290	860/1.220/410	860/1380/500	960/1.460/500	1.230/1.730/600	1.230/1.730/600	1.330/1.830/600	1.400/2.050/700
Weight UTNR-A/P V	kg	41	45	77	118	130	150	163	178	188
L/H/P - Length/Height/Depth KSBFR	mm	430/290/395	430/290/395	500/410/450	600/500/450	700/500/480	700/600/660	700/600/660	700/600/710	700/700/710
Weight KSBFR	kg	14	14	17	21	24	29	29	34	42

Data at the following conditions:

- ① Values referred to 1.5 metres from the free field intake.
- ② Nominal winter conditions: outdoor air: -5°C; 80% UT. Ambient air: 20°C; 50% RH.
- ③ In air T = 8°C.
- ④ In air T = 8°C; In out water T = 70/60°C.
- ⑤ In air T: 30°C; 50% RH; In out water T = 7/12°C.
- ⑥ values referred to the nominal air flow at the maximum value of the adjustment signal

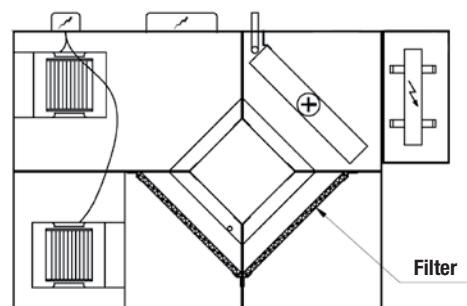
Separately supplied accessories

- KSBFR - Section containing hot/cold water coil to reheat or recool, placed outside the machine in front of the inlet. Includes a stainless steel condensation drain pan with a drain connection from the bottom (only for the horizontal installation).
- KBER (only for UTNR-P) - Filament type reheating electrical heater installed outside the unit, complete with containment plenum, safety thermostats and control relays. 230/1/50 single-phase for models 033÷055. 400/3/50 three-phase for models 110÷530.
- KSRE - Regulation damper set 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 metal.
- KRSM - Sections with 3 dampers for air mixing and recirculating (only for the horizontal installation).
- KSPC - Panel with circular fittings.

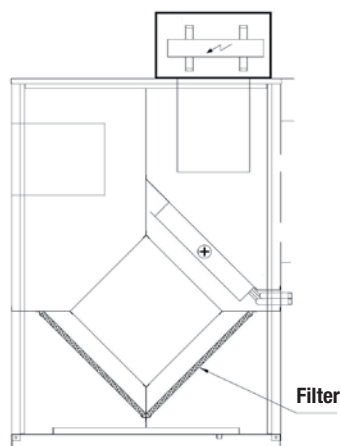
Controls supplied separately

- KVVM 15 and 30 (only for models 033÷055) - Electronic speed controller suitable for a wall mounting installation, which allows the fan with a single-phase motor to be adjusted: ON/OFF switch and a handle for continuous speed adjustment.
- KCV2 (not available for models 033 and 055) - Panel with a 3-speed switch equipped with a summer/OFF/winter switch that can connect the minimum thermostat externally.
- KTCV2 - Control and regulation panel consisting of: OFF/continuous ventilation/thermostat ventilation switch, room thermostat, summer/winter switch, speed switch (except for 033 and 055 models), auxiliary contacts for ON/OFF valve control for 2-pipe systems, 2-pipe systems with electrical resistance or 4-pipe systems, with the option of connecting the minimum thermostat externally.
- KSO - Air probe with remote control option (2 m) for KTCV2.
- KPTZ - Potentiometer for Brushless EC fan control (match 1 piece to each fan).

HORIZONTAL installation



VERTICAL installation



Heat recovery unit

UTNR-A and UTNR-P 033÷530

Air flow rate: 300÷3920 m³/h



Full Control Checks

- 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 On/Off 230V 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 you can find in the Full Control section are also available.

Full Control regulation

The Full Control kit allows integrated management of all the functions in the UTNR-A-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.

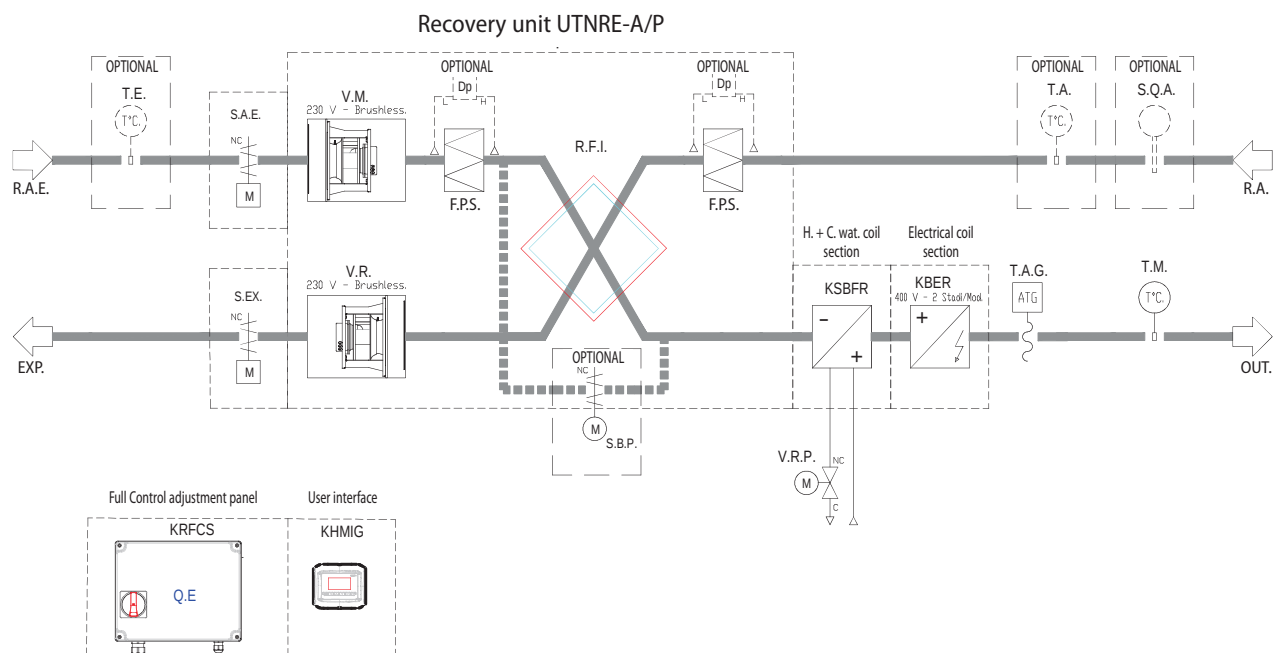
Cross flow recovery
in special paper

•
Silencer

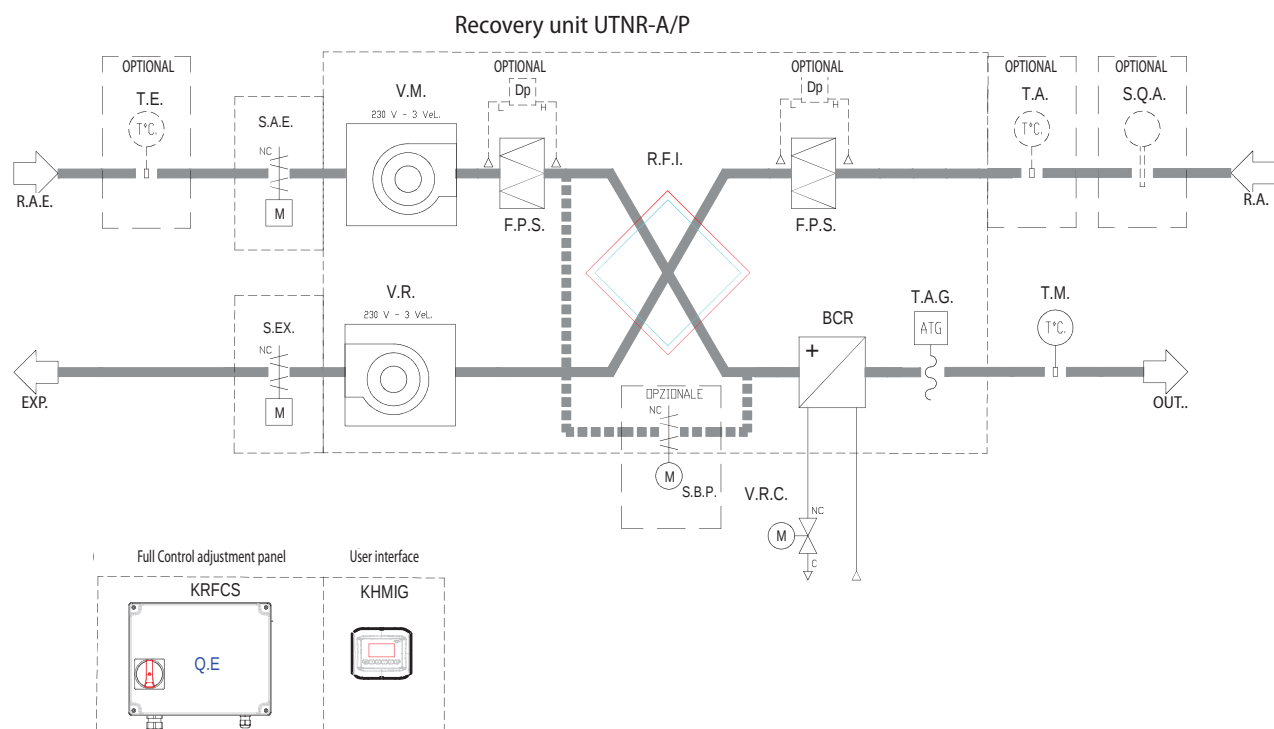




UTNR-A Version E brushless



UTNR-A



Heat recovery unit

UTNR-HE Platinum 040÷500

Air flow rate: 310÷4,250 m³/h




ErP
READY
2018

 APPLIES TO
EUROPEAN
DIRECTIVE
FOR ENERGY
RELATED
PRODUCTS

- Complying with ErP 2018 NRvU
- Eurovent certified very high efficiency heat recovery
- Multi-speed fans or Brushless EC
- F7 and M5 high efficiency filters
- Double-walled sandwich with high insulating power
- Full control kit

Fresh air terminal unit with enthalpy rotary heat recovery.

Construction features

- Recovery unit: very high yield rotary type made of aluminium with hygroscopic surface. The air flows are kept separate by specific gaskets.
- Fans: for fresh air intake and for expulsion centrifugal type, with double intake forward blades and continuously adjustable directly coupled electric motor; optional, high efficiency electric motors with EC Brushless technology. The fan unit is installed on anti-vibration mountings to prevent vibrations being transmitted to the structure.
- Structure: frame made with extruded aluminium profile, with preloaded nylon joints. Sandwich damping panels, 20 mm thick, made internally with galvanised sheet steel and externally with galvanised pre-painted sheet steel (RAL 45), with thermal and acoustic insulation made of injected polyurethane, whose density is 45 kg/m³ with high thermal and acoustic insulating power.
- Filtering section: filtering sections consisting of low pressure drop compact filters in cells with polypropylene media, laterally removable, with F7 efficiency class in the fresh intake flow and M5 class in the expulsion flow.
- Condensation drain pan: made of galvanised sheet steel with condensation drainage connection from the bottom.

Versions

- UTNR-HE/O PLATINUM - Recovery with a rotary heat exchanger, horizontal installation and standard multi-speed fans
- UTNRE-HE/O PLATINUM - Recovery unit with rotary heat exchanger, horizontal installation and Brushless EC fans that can reduce the consumed power for ventilation at equal performance.
- EXT- Outdoor installation

Factory fitted accessories

- BER - Reheating electrical heater installed inside, complete with filament-type safety thermostats and control relays to contain pressure drops.
- 230/1/50 single-phase electrical supply for models

040. 400/3/50 three-phase for models 075÷500.

- BA - Post-heating internal hot water coil.
- BAATG - Antifreeze thermostat installed downstream of the water reheating coil.
- ERF7M5PF - Differential pressure switch for dirty filters installed on standard filters (F7 outdoor air and M5 inlet).
- ERF7 - Efficiency recovery filter F7
- ERF7PF - Differential pressure switch for dirty filters installed on F7 outdoor air and F7 inlet filters.

Separately supplied accessories

- KSBFR - Section containing hot/cold water coil to reheat or recool placed outside the machine in front of the inlet. Includes a stainless steel condensation drain pan with drain connection from the bottom.
- KSRE - Regulation damper set 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 metal.
- KRSM - Sections with 3 dampers for air mixing and recirculating (only for the horizontal installation).
- KSPC - Panel with circular fittings.

Controls

- KVM 3 (only for models 040) - Electronic speed controller suitable for a wall mounting installation, which allows the fan with a single-phase motor to be adjusted: ON/OFF switch and a handle for continuous speed adjustment (only for the standard fan version).
- KCV3 - Speed selector for wall installation, allows you to switch the 3 speeds (excluding model 40): Off/heating/cooling switch; 3-speed switch; 230V
- KPCU-KPCUE - Control panel for wall installation, allows the winter/summer room temperature to be controlled, activating or excluding the water coil or electric heater. Select the working speed of the fan between minimum, average and maximum (excluding model 40 for which the speed is unique) or by adjusting 0/10 V (KPCUE for EC fans) and check the free cooling function.
- KPTZ - Rotating potentiometer for wall installation, for manual fan speed control. The speed of supply and return fans is calibrated with a single potentiometer (only for EC Brushless fan version).





UTNR-HE PLATINUM MODEL		40	75	100	150	200	320	400	
Type of Unit		Non-residential- Bi-directional							
Outdoor air filters		F7							
Return air filters		M5							
By-pass		Motorisable lateral by-pass damper							
SPECIFICATIONS									
Nominal air flow		m³/h	310	650	1150	1.900	2.320	3.600	4.250
STANDARD FANS									
❶	Nominal available static pressure	Pa	100	100	100	100	100	100	n.d.
❷	Fan specific power (SFP)	W/(m³/s)	1409	1443	1580	1036	806	1226	n.d.
❸	Sound pressure level	dB(A)	59	60	63	63	63	69	n.d.
Speed No./Type of Adjustment		1	3	3	3	3	3	3	n.d.
Power supply		V-ph-Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	
EC BRUSHLESS FANS									
❶	Nominal available static pressure	Pa	100	100	100	100	100	100	100
❶	Max available static pressure	Pa	230	180	280	600	550	260	680
❷	Fan specific power (SFP)	W/(m³/s)	1045	1263	1102	842	617	869	1029
❸	Sound pressure level	dB(A)	60	61	62	64	62	68	68
Speed No./Type of Adjustment		0-10 V							
Power 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	Temp/enthalpy winter efficiency	%	84/81	74/71	73/71	73/70	76/73	73/71	73/71
❺	Temp/enthalpy summer efficiency	%	84/78	74/69	74/69	73/69	76/72	74/69	74/69
❻	Efficiency Regulation CE 1253/2014	%	84	74	73	73	76	73	73
DIMENSIONS AND WEIGHTS									
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
Weight UTNR-A/P O		kg	90	140	150	170	200	210	240

Data at the following conditions:

- ① Values refer to the nominal air flow considering the pressure drops of the heat recovery and the F7 filter
- ② Values referred to the nominal air flow, Nominal available static pressure
- ③ Sound pressure level measured at 1 m in free field from the machine inlet
- ④ Out. air T: -5°C, 80% RH; Amb. air T: 20°C, 50% RH.
- ⑤ Out. air T: 32°C, 50% RH; Amb. air T: 26°C, 50% RH.
- ⑥ Dry nominal conditions, measured according to EN 308 at balanced flows. Outdoor air 5°C D.B.; Ambient air 25°C D.B.

Full Control Checks

- 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 On/Off 230V 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 you can find in the Full Control section are also available.

Heat recovery unit

UTNR-HE Platinum 040÷500

Air flow rate: 310÷4,250 m³/h



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:

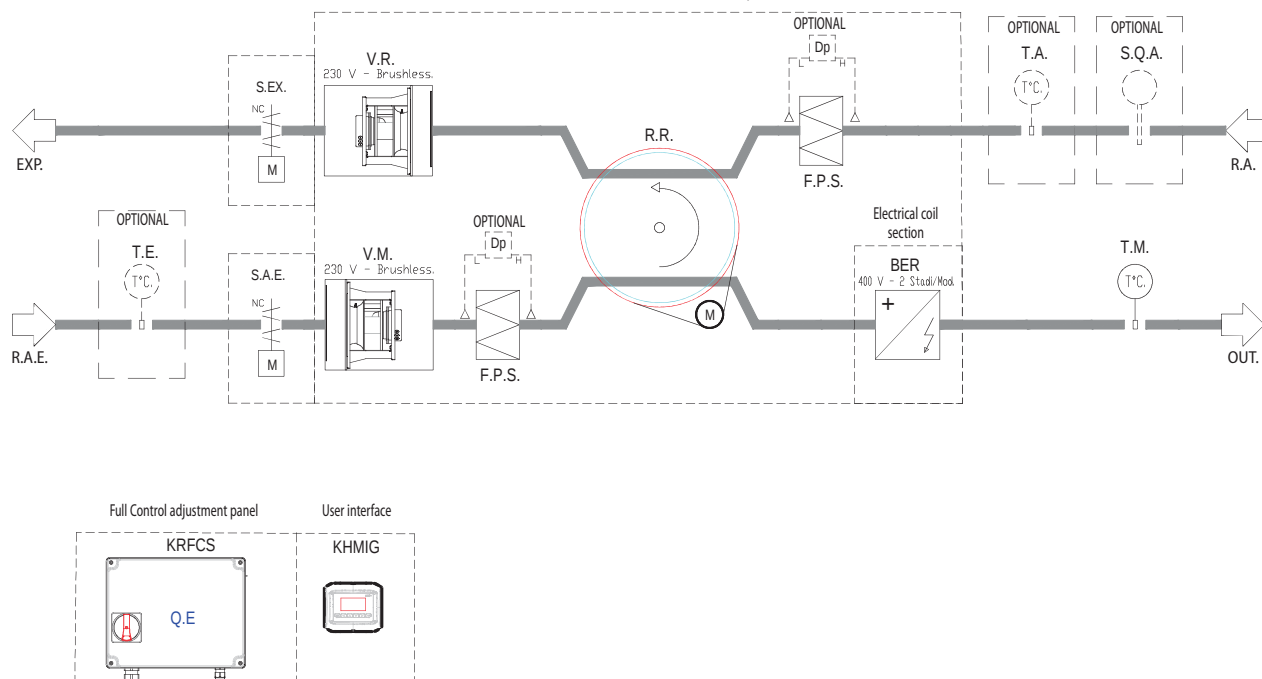
- **Simple installation: all components are designed for on site maximum simplicity and flexibility of installation and supplied separately to not hinder handling and the installation of the units in a false ceiling and in confined spaces. The electrical panel can also be installed remotely. Pre-assembled 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.

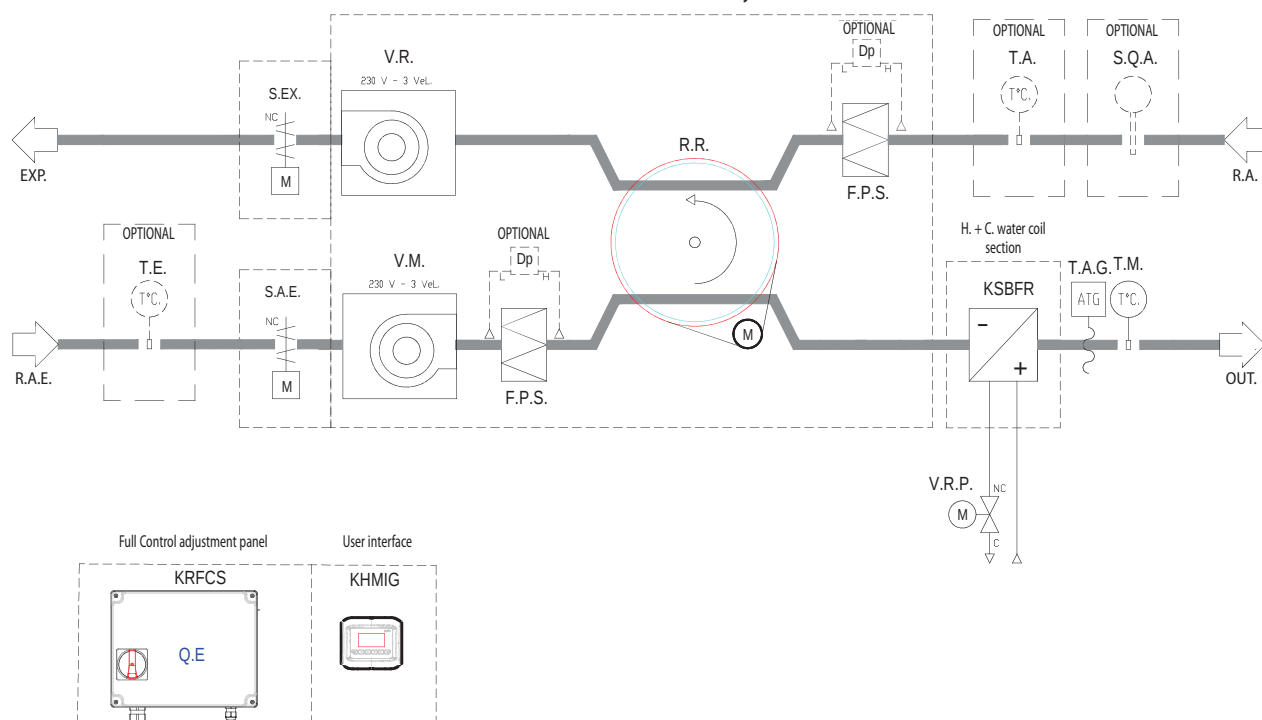
UTNR-HE Platinum version E brushless

UTNRE-HE Platinum recovery unit



UTNR-HE Platinum

UTNRE-HE Platinum recovery unit



Heat recovery unit

UTNR-HE 033÷530

Air flow rate: 310÷5300 m³/h



- Only for sales in non-EU markets
- Hygroscopic rotary heat recovery
- F7 high efficiency filters
- Full control kit

Fresh air terminal unit with 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 group easily removed from the side for periodic maintenance.
- Fans: fresh air inlet and double intake centrifugal expulsion type (for model 033 simple intake) with a directly coupled electric motor. Fan unit installed on anti-vibration mountings to prevent vibrations being transmitted.
- Structure: side panels that can be removed completely in Aluzink sheet metal.
- 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 side.
- Insulation: acoustic and thermal panel insulation with polyethylene/polyester having an average thickness of 20 mm.
- Terminal block: already present on the machine to facilitate the electrical connections, fan controls and rotary recovery.

Versions

- UTNR-HE - Heat recovery unit with aluminium rotary heat exchanger with direction 01 and 02 (nominal efficiency up to 90%).
- UTNRE-HE - Heat recovery unit with aluminium rotary heat exchanger and Brushless EC fans that can reduce the consumed power for ventilation at equal performance.

Separately supplied accessories

- KSBFR - Section containing hot/cold water coil to reheat or recool, placed outside the machine in front of the inlet. Includes a stainless steel condensation drain pan with drain connection from the bottom.
- KF7 EST - Section containing F7 class filter to be installed outside the machine.
- KSRE - Regulation damper set for servo-control, consisting of a galvanised sheet steel frame with adjustable fins.
- KRMS - Sections with three dampers for mixing and recirculating air.
- KSPC - Panel with 4 circular fittings for connection to supply or expulsion ducts.

Controls supplied separately

- KVM 15 and 30 (only for models 033÷055)
 - Electronic speed controller suitable for a wall mounting installation, which allows the fan with a single-phase motor to be adjusted: ON/OFF switch and a handle for continuous speed adjustment.
- KCV2 - Panel with a 3-speed switch equipped with a summer/OFF/winter switch and the option of connecting the minimum thermostat externally.
- KTRHE - Control and regulation panel consisting of: room thermostat, summer/ winter switch, speed switch (except for 033 and 055 models), auxiliary contacts for ON/OFF valve control for 2-pipe systems, 2-pipe systems with electrical resistance or 4-pipe systems, with the option of connecting the minimum thermostat externally.
- KSO - Air probe with remote control option (2 m) for KTCV2.
- KPTZ - Potentiometer for Brushless EC fan control (match 1 piece to each fan).

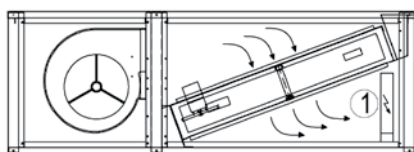
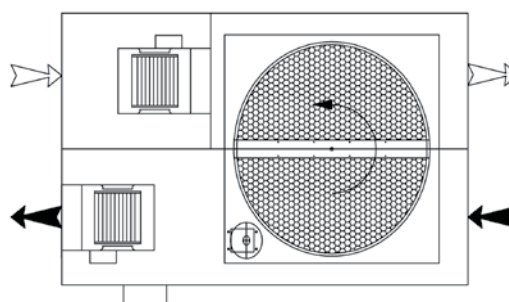
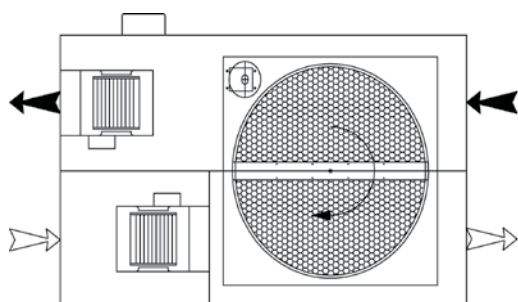




UTNR-HE MODEL		33	55	110	175	220	255	320	410	530
SPECIFICATIONS										
Nominal air flow	m³/h	310	650	1.050	1.800	2.220	2.600	3.250	4.290	5300
Head	Pa	50	65	80	130	100	110	125	130	145
① Sound pressure level	dB(A)	40	48	47	46	50	48	50	54	58
Installed motor power	W	2 x 92	2 x 90	2 x 147	2 x 350	2 x 350	2 x 350	2 x 550	2 x 750	2 x 800
Power 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	400-3-50	400-3-50
Nominal air flow - Version E Brushless	m³/h	310	650	1.050	1.800	2.220	2.600	3.250	4.290	5300
⑦ Max available static head - Version E Brushless	Pa	300	220	125	295	325	370	420	430	145
① ⑦ Sound pressure level-Version E Brushless	dB(A)	49	52	53	56	56	56	55	62	61
⑦ Max electrical consumption-Version E Brushless	W	0,26	0,33	0,49	1,27	1,27	1,76	2	3,38	3,38
Electrical supply-Version E Brushless	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
② Winter efficiency (temp/enthalpy)	%	85/82	72/69	71/68	72/69	72/69	72/69	69/67	63/63	64/62
② Winter recovered heating capacity	KW	3,5	6,3	10	17,4	21,3	25,2	30,5	38	42
③ Summer efficiency (temp/enthalpy)	%	92/73	80/69	79/69	80/69	79/69	80/69	77/68	70/66	70/66
③ Summer recovered heating capacity	KW	1,3	2,5	4	6,9	8,5	10	12,3	15,7	19,4
ACCESSORIES										
④ Heating capacity BER	KW	1,5	3	3	6	6	12	12	12	18
⑤ Heating capacity KSBFR	KW	4,5	7,9	12,3	19,7	24,8	31,5	36,4	45,4	57
⑥ Cooling capacity KSBFR	KW	2,1	3,6	5,4	9,5	12,4	16,1	18,5	22,1	27,1
DIMENSIONS AND WEIGHTS										
L/H/P - Length/Height/Depth UTNR-HE	mm	1075/425/750	1075/425/750	1205/460/860	1400/530/860	1540/560/960	1720/600/1230	1720/600/1230	1720/600/1230	1900/00/1230
Weight UTNR-HE	kg	67	71	102	139	152	178	194	207	225
L/H/P - Length/Height/Depth KSBFR	mm	430X290X395	430X290X395	500X410X450	600X500X450	700X500X480	700X600X660	700X600X660	700X600X710	700X700X710
Weight KSBFR	kg	14	14	17	21	24	29	29	34	42

Data at the following conditions:

- ① Values referred to 1.5 metres from the free field intake.
- ② Nominal winter conditions: outdoor air: -5°C; 80% UT. Ambient air: 20°C; 50% RH.
- ③ Nominal summer conditions: outdoor air: 32°C; 50% UT. Ambient air: 26°C; 50% RH.
- ④ In air T = 8°C.
- ⑤ In air T = 8°C; In out water T = 70/60°C.
- ⑥ In air T: 30°C; 50% RH; In out water T = 7/12°C.
- ⑦ values referred to the nominal air flow at the maximum value of the adjustment signal



Heat recovery unit

UTNR-HE 033÷530

Air flow rate: 310÷5300 m³/h



Full Control Checks

- 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 On/Off 230V 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 you can find in 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:

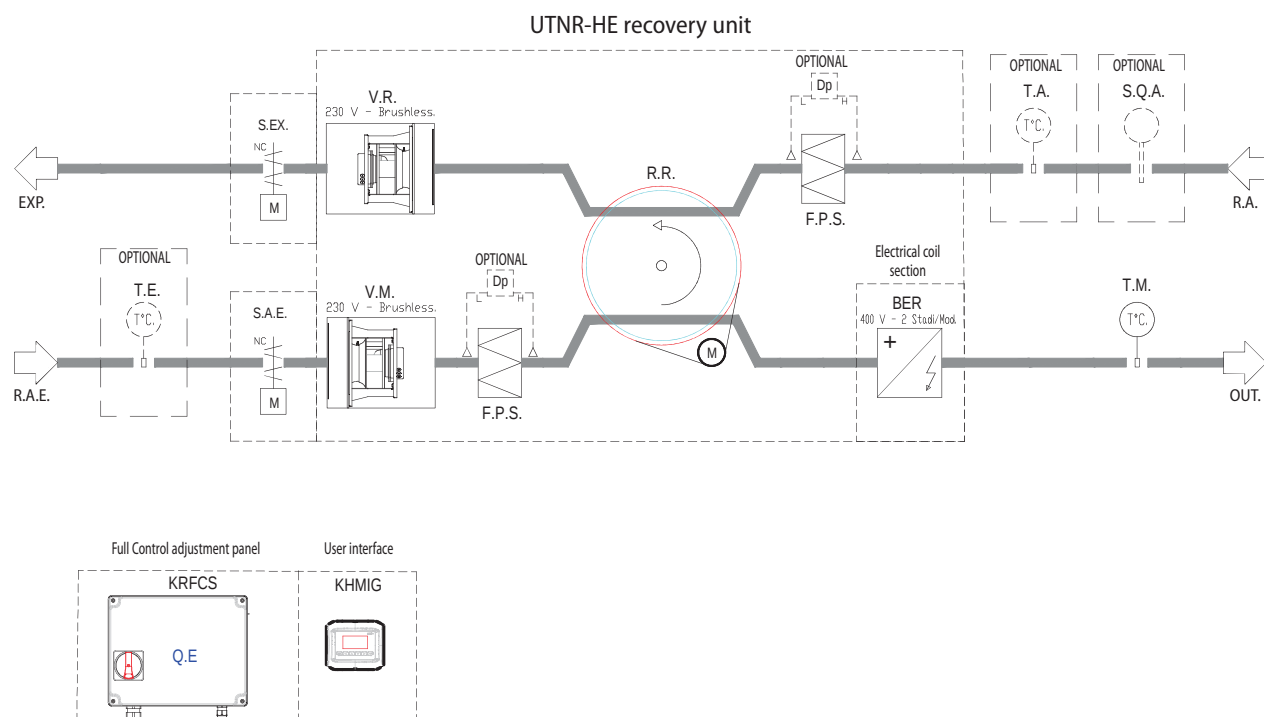
- **Simple installation: all components are designed for on site maximum simplicity and flexibility of installation and supplied separately to not hinder handling and the installation of the units in a false ceiling and in confined spaces. The electrical panel can also be installed remotely. Pre-assembled 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:

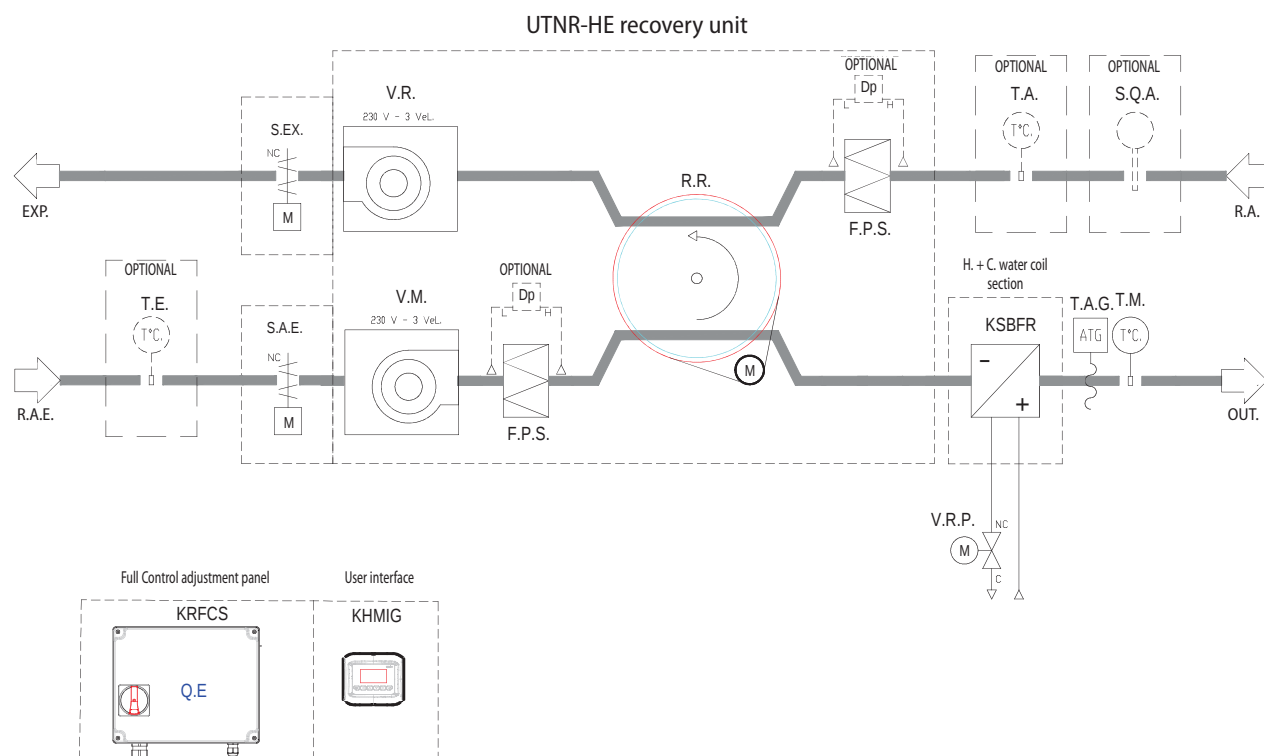
- T.E. - Outdoor air temperature probe.
- S.A.E. - Outdoor air damper.
- V.M. - Supply fan.
- F.P.S. - Standard pleated filter.
- Dp - Differential clogging filters pressure switch.
- KSBFR - Hot-cold additional coil module.
- V.R.P - Mixed coil adjustment valve.
- BCR - Integrated hot water coil.
- 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 Version E Brushless



UTNR-HE



Controls

FULL CONTROL



The Full Control adjustment system aims to meet all the adjustment requirements of our units in the UTNA - UTVN - UTVR 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

Accessories separately supplied

- KSEZM - Single-phase main disconnecting switch on the front of the electrical panel, forces to interrupt the power supply before allowing the door to be opened. It can be blocked with a padlock.
- KSEZT - Three-phase main disconnecting switch on the front of the electrical panel, forces to interrupt 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.

Seal with EPDM ring, female THREADED water fittings

- 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 modulating control BALL regulation valves

0/10Vdc 24Vac power supply

- KVMM25 - ATTUATORE V.DN MAX25 24V 0-10Vdc.
- KVMM50 - ATTUATORE V.DN MAX50 24V 0-10Vdc.

Actuators for On/Off valves, 230V TO BE CONTROLLED WITH THERMOSTATS FANCOIL 2 position control

- KVOM25 - ACTUATOR V. DN MAX 25 230V On/Off SPDT.
- KVOM25 - ACTUATOR V. DN MAX 25 230V On/Off SPRING RET. SPST.
- KVOM50 - ACTUATOR V. DN MAX 50 230V On/Off SPRING RET. SPST.

ACTUATORS FOR MODULATING DAMPERS 0-10V 24V

- KDMAxS - ACTUATOR DAMP. ROT 2/7/18Nm modulating with spring return 24V
- KDMAx b - ACTUATOR DAMP. ROT 5/10/15Nm modulating without spring return 24V

ACTUATORS FOR ON-OFF DAMPERS 24V

- KDOAxS - ACTUATOR DAMP. 2/7/18Nm on/off with spring return 24V

BASE CONTROLS

User panels

With these accessories, it is possible to easily manage all active regulation functions through clear, intuitive symbols and icons, such as: changing the set-point, managing summer/winter changeover, managing ON/OFF switching, managing fan mode, temperature and humidity display and all magnitudes measured by the connected probes, set a weekly hourly program or timer for prolonged absence (holiday mode), display alarms, reset alarms, manually position any motorised modulating control dampers.

The features described above are common to all the following control panels. All control panels are provided for box recessed installation (type BTicino 506). The terminal may be customised to integrate it aesthetically in the rooms with the KCW or KCB plates according to the price list or the wide range of 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.
- KTOUCH - Black and white monochrome touch screen control panel 320x240 pixels.
- KCOLOR - Colour touch screen control panel 320x240 pixels.
- 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



KCOLOR



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.
 - KRFCs - Full Control power and regulation electrical panel for UTNB-UTNA-UTNR-UTNV Single-phase Pow> 2x1.6 kW (ONLY auxiliary command).



- 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 by-pass
- KRCA2 - Ambient regulator with integrated temperature probe to manage 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 by-pass, 1 aux.on/off control
 - 2 modulating coils, antifreeze, 1 on/off resistance, recovery by-pass, 1 aux.on/off control



Heat recovery unit

UTNR-HP 035÷450

Air flow rate: 350÷4500 m³/h

INVERTER



- Combined cross 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 cross flow air-air static heat recovery with aluminium heat exchanger plates; lower condensation 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 unit size), 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 vibrations being transmitted.
- Structure and panels: frame made with extruded aluminium profile, Anticorodal 63 alloy, with preloaded nylon angular joints. Sandwich damping 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, whose density is 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 the side.
- Electrical panel: with integrated adjustment and power; NTC temperature probes on both the supply and return air circuits; microprocessor electronic control for automatic room temperature management, winter/summer switch and defrosting cycles; remote control panel from up to 20 m from the unit, already equipped with Modbus RTU protocol for communication with the supervision system.

Versions

- UTNR-HP 01, 03 – Cross flow and active thermodynamic heat recovery unit with double heat exchanger with 01 or 03 orientation.

Factory fitted accessories

- BER - Filament type reheating electrical heater installed internally, complete with safety thermostats and control relays. 230/1/50 single-phase for models 033÷055. 400/3/50 three-phase for models 110÷530.
- BEP - Filament type pre-heating electrical coil installed internally, complete with safety thermostats and control relays. Single-phase motor for models 033-055 and three-phase for models 110-530.
- PF - Differential pressure switch installed in 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 air filter and return.
- EF7PF - F7 Outdoor air filter with differential pressure switch.
- ERF7PF - F7 Outdoor air filter and return air with differential pressure switch.
- EF9 - F9 Outdoor air filter.
- ERF9 - F9 Outdoor air filter and return.
- EF9PF - F9 Outdoor air filter with differential pressure switch.
- ERF9PF - F9 Outdoor air filter and return air with differential pressure switch.

Separately supplied accessories

- KSBFR - Section containing hot/cold water coil to reheat or recool, placed outside the machine in front of the inlet. Includes a stainless steel condensation drain pan with drain connection from the bottom.
- KV2V ON/OFF - 2 way valve kit with On/Off servocontrol.
- KV3V ON/OFF - 3 way valve kit with On/Off servocontrol.
- KSRE - Regulation damper set for servo-control, consisting of a galvanised sheet steel frame with adjustable fins.
- KSMR 230 - Damper actuator.
- KSSC - Duct silencer with wool baffles covered with glass fibre and microstretched sheet.

Controls supplied separately

- KPTZ - Potentiometer for Brushless EC fan control.



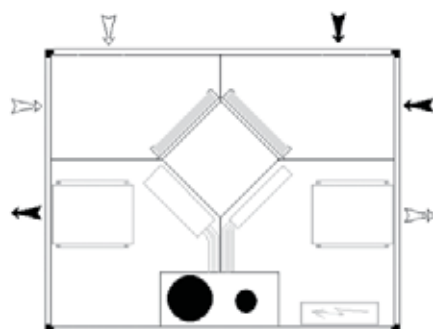


UTNR-HP MODEL		35	60	100	150	230	320	450
Nominal air flow	m ³ /h	350	600	1000	1500	2300	3200	4500
Supply available static pressure	Pa	230	250	155	155	155	185	175
Return available static pressure	Pa	200	180	100	95	95	115	110
① Sound pressure level	dB(A)	59/47/52	64/50/55	62/49/54	67/54/57	65/51/59	68/54/59	70/56/59
Max supply available static head - Version E Brushless	Pa	285	250	255	405	455	385	365
Max return available static head - Version E Brushless	Pa	255	180	200	345	395	315	300
FUNCTIONAL LIMITS		35	60	100	150	230	320	450
② Limit operating conditions	°C / %	MIN -10°C OUT & MIN 19°C 50% IN MAX 38°C 50% OUT & MAX 27°C IN						
Flow rate variation field	%	-7 ÷ +7						
ELECTRICAL DATA		35	60	100	150	230	320	450
Power 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 absorbed power	W	970	1600	2430	3710	5440	8440	9200
FANS		35	60	100	150	230	320	450
Max absorbed power	W	380	560	780	1110	1450	2940	3700
Max consumed power - Version E Brushless	W	342	540	450	840	1210	2370	3520
Max consumption	A	1,7	2,4	3,4	4,8	6,0	5,2	6,5
Protection rating	IP	44	32	55	55	55	20	20
Insulation class		B	F	F	F	F	F	F
Power 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
COMPRESSOR		35	60	100	150	230	320	450
Max absorbed power	W	590	1040	1650	2600	3990	5500	5500
Max consumption	A	2,8	4,7	7,7	12,0	7,0	10,0	10,0
Power 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
③ HEATING PERFORMANCE		35	60	100	150	230	320	450
Static recovery	W	1840	2830	4400	6700	10100	13960	18710
Static recovery efficiency	%	62	51	50	50	50	50	50
Active recovery	W	1740	2960	5010	7690	11090	16300	17300
Total capacity	W	3580	5790	9410	14390	21190	30260	36010
Treated air temperature	°C	24,4	22,6	22,1	22,4	22,0	22,4	18,5
④ Total COP	W/W	10,90	9,60	9,22	8,64	8,90	9,88	12,60
⑤ COOLING PERFORMANCE		35	60	100	150	230	320	450
Static recovery	W	400	590	950	1450	2250	3080	4450
Static recovery efficiency	%	56	50	50	50	50	50	49
Active recovery	W	1810	2860	4890	7270	10580	15310	16990
Total capacity	W	2210	3450	5840	8720	12830	18390	21440
Treated air temperature	°C	19,3	20,0	19,9	20,1	20,2	20,0	21,4
④ Total EER	W/W	4,19	3,92	4,17	3,91	3,88	4,08	5,01

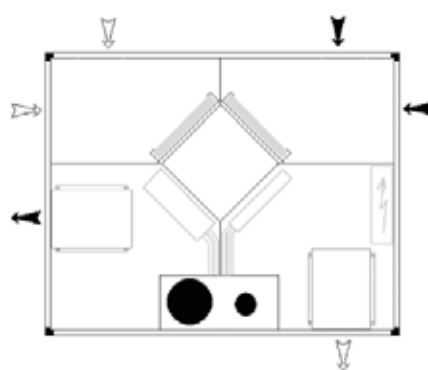
Data at the following conditions:

- ① Sound pressure level assessed at 1 m from: towards the ducted inlet/intake inlet/compressor compartment. The operating noise level generally differs from the values indicated depending on the operating conditions, the reflected noise and the surrounding noise.
- ② Referred to the nominal flow.
- ③ Outdoor air -5°C 80% RH; ambient air 20°C 50% RH.
- ④ Excluding the absorbed power for ventilation.
- ⑤ Outdoor air 32°C 50% RH; ambient air 26°C 50% RH.

ORIENTATION 01



ORIENTATION 03



Expelled air
Fresh air

Heat recovery unit

VMC-E 025÷100

Air flow rate: 250÷1,000 m³/h



- Extremely compact
- High efficiency recovery
- Very silent
- Brushless DC fans

Fresh air terminal unit with counterflow static heat recovery.

Construction features

- 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 exchanger and filters thanks to the lateral extraction.
- Fans: fresh air inlet and centrifugal expulsion with BRUSHLESS DC motors that allow higher efficiency to be achieved with respect to traditional motors with an energy saving of up to 60%.
Bypass free cooling: possibility of setting up the free-cooling in mid-season thanks to the relative automatic bypass function.

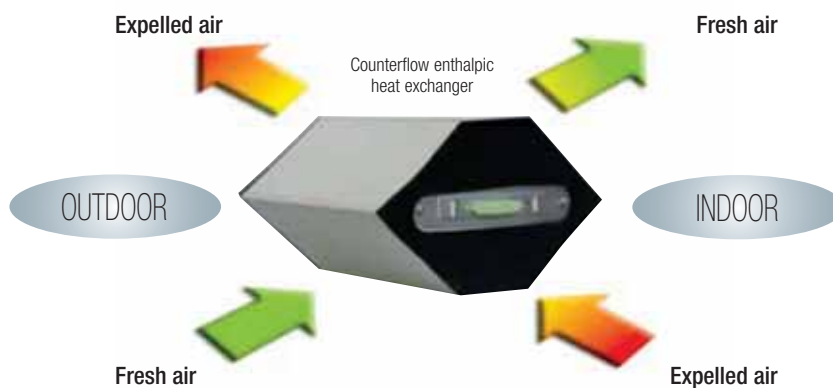
Controls

- KCVE: remote panel with ON/OFF function, speed selection and programmable weekly timer. It is suitable for wall installation on "502" electrical boxes.
- KTLICM: infrared remote control.



Remote panel

• Remote control

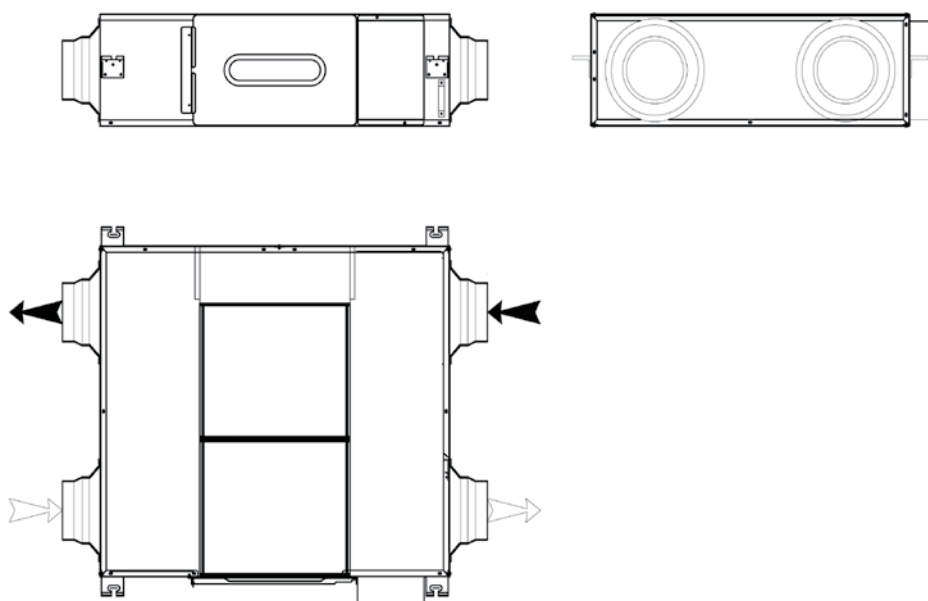




VMC MODEL			25	35	50	80	100
Air flow rate Speed	MAX (V)	m³/h	250	350	500	800	1.000
	MED (V)	m³/h	250	350	500	800	780
	MIN (V)	m³/h	160	270	360	625	650
Head Speed	MAX (V)	Pa	85	90	100	150	150
	MED (V)	Pa	65	60	60	100	100
	MIN (V)	Pa	30	30	30	40	40
Electrical consumption Speed	MAX (V)	W	90	120	135	300	310
	MED (V)	W	60	80	110	190	200
	MIN (V)	W	35	45	60	110	125
① Sound pressure expulsion. Speed	MAX (V)	dB(A)	27	31	33	38	39
	MED (V)	dB(A)	26	29	31	36	37
	MIN (V)	dB(A)	22	25	27	32	33
Power supply		V-ph-Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
② Winter efficiency (temp/enthalpy)		%	76/62	77/63	77/63	73/59	74/60
② Winter recovered heating capacity		kW	2,2	3,1	4,3	6,5	8,2
③ Summer efficiency (temp/enthalpy)		%	62/60	63/61	62,5/60	59/57	59,5/57,5
③ Summer recovered heating capacity		kW	0,8	1,2	1,7	2,5	3,2

Data at the following conditions:

- ① Values referred to 1.5 metres from the free field intake.
- ② Nominal winter conditions: outdoor air: -5°C; 80% UT. Ambient air: 20°C; 50% RH.
- ③ Nominal summer conditions: outdoor air: 32°C; 50% UT. Ambient air: 26°C; 50% RH.



Heat recovery unit

UTNR Micro 20÷50

Air flow rate: 150÷500 m³/h



- **Complying with ErP 2018 NRvu**
- **Very high efficiency heat recovery**
- **EC Brushless fans**
- **F7 high efficiency filters**
- **Horizontal and vertical version**
- **Integrated electronics**

Fresh air unit with heat recovery unit dedicated to the air without energy waste.

The unit is particularly suitable for single family units, apartments and in all cases where the nominal flow rates for fresh air is not greater than 400 m³/h.

Construction features

- Recovery unit: static heat exchanger made of cross flow counterflow polypropylene with very high efficiency (>90 %). Thanks to the material of the heat exchanger pack, very low frost start-up temperatures and operation is guaranteed up to -25°C. In winter and summer, a significant energy recovery of the fresh air introduced into the ambient is achieved.
- Free Cooling: Free cooling built into the unit with a wide air passage and damper with a motorised actuator.
- Fans: fresh and expulsion air plenum fan Brushless type with electronic motor and modulating control. Very high efficiency and low noise levels.
- Structure: self-bearing structure in hot galvanised sheet steel. Panelling is made of double-walled sandwich with internal galvanised finish and painted externally. The insulation of the panels consists of high-performance 20-mm thick insulation.
- Filtering section: consisting of class G7 high efficiency filters with very low pressure drops. All filters are easily removed for the horizontal and vertical installation.
- Electrical panel with integrated adjustment and power

Versions

- O - Version for H1 and H2 set-up horizontal installation.
- V - Version for V1 and V2 set-up vertical installation.
- 3v - Complete electrical panel complete with a board for 3 speed fan control, antifreeze and manual free-cooling control. Control via digital contacts.
- E - Electrical panel on the unit with a microprocessor and specific regulation. Modulating fan control, display of the temperature probes inside the machine, monitoring of the dirty filters and automatic control of the free-cooling with temperature probes. Large graphical interface with multi-language user menu and configuration menu. Possibility of connecting a remote keypad.

Accessories

- KBER - Pre/reheating module with electric heaters for duct installation preset with circular flanges for easier installation to the duct.
- KBCR - Pre/reheating-cooling water module for duct installation consisting of a galvanised sheet steel frame and a heat exchange coil consisting of copper pipes and aluminium fins. It is preset with circular flanges for easier installation to the duct.
- KMP1 - Support feet for floor assembly.
- KC3V - Switch for 3-speed remote control and forcing manual bypass (for 3V version).
- KTR - simplified remote control (for E version).
- KTR - Remote graphic graph-control (for E version).
- KSQA - Regulator with VOC ambient control with integrated sensor.





UTNR Micro MODEL		20	30	40	50
Type of Unit REGULATION (UE) No. 1253/2014		UVR-Two-way	UVR-Two-way	UVR-Two-way	UVR-Two-way
Air filters		F7	F7	F7	F7
fan type of actuation		Speed controller	Speed controller	Speed controller	Speed controller
SEC CLASS					
Version 3V (O)		B	B	B	B
Version E (O)		A	B	A	B
Version E+KSQA (O)		A	A	A	B
Version 3V (V)		B	B	A	B
Version E (V)		A	B	A	B
Version E+KSQA (V)		A	A	A	A
SPECIFICATIONS					
Nominal air flow vers. O	m³/h	155	302	354	450
Nominal air flow vers. V	m³/h	158	306	375	475
Available static pressure vers. O E v	Pa	100	100	100	100
❶ Nom. efficiency Recovery winter (vers O)	%	86,3	85	87,6	85,6
❶ Nom. efficiency Recovery winter (vers V)	%	86,3	85	87	84
❷ Sound pressure level (vers O)	dB(A)	40,8	41,7	42,6	47,6
❷ Sound pressure level (vers V)	dB(A)	38,6	41	38,4	44,4
Power supply	V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50
Absorbed power	W	96	170	170	340
Absorbed current	A	0,74	1,6	1,6	3,5
ACCESSORIES					
❸ Heating capacity KBER	kW	0,5	1	1	1
❸ Heating capacity KBCR	kW	0,88	1,86	2,27	2,66
❹ Sensitive cooling capacity KBCR	kW	0,52	1,01	1,1	2,4
❹ Latent cooling capacity KBCR	kW	0,40	0,62	0,85	1,46
DIMENSIONS AND WEIGHTS					
L/H/P - Length/Height/Depth UTNR-Micro O	mm	800/250/480	940/360/620	1350/280/650	1350/280/650
Weight UTNR-Micro O	Kg	33	50	56	56
L/H/P - Length/Height/Depth UTNR-Micro V	mm	625/510/430	785/590/575	785/590/735	785/590/735
Weight UTNR-Micro V	Kg	36	54	65	65
L/H/P - Length/Height/Depth KBCR.	mm	300/150/250	300/250/250	300/250/250	300/250/250

Data at the following conditions:

- ❶ Standard UNI EN 13141-7: outdoor air 7°C 72% RH; ambient air 20°C 20% RH.
- ❷ Sound pressure values at 3 m from the unit with reference to UNI EN 3741 and 3744
- ❸ Air inlet 20°C; 50% RH. Water in/out 50/40°C. Nominal air flow.
- ❹ Air inlet 25°C; 60% RH. Water in/out 7/12°C. Nominal air flow.



Heat recovery unit/dehumidifier

UTNRD Micro 30-50

Air flow rate: 300/150÷500/250 m³/h



- Very high efficiency heat recovery
- Dehumidification control
- F7 high efficiency filters
- Integrated electronics

Fresh air and dehumidification terminal units.

Construction features

- Recovery unit: very highly efficient (>90%) static type made of polypropylene with opposing air flows to treat outdoor fresh air.
- Fans: fresh and expulsion air plenum fan Brushless type with electronic motor and modulating control. Very high efficiency and low noise levels compliant with Erp 2015.
- Structure: self-bearing in hot galvanised sheet steel. Panelling is made of double-walled sandwich with internal galvanised finish and painted externally. The insulation of the panels consists of high-performance 20-mm thick insulation.
- Filtering section: consisting of two filters (one on the fresh air intake and one on the air return), both highly efficient in class F7 and one on the recirculation air in class G2 with highly contained pressure drops. All filters are easily removed from the bottom.
- Air handling section: the unit can be equipped with a refrigerant circuit for dehumidification or the integration of cooling and heating. The various configurations allow you to select the desired type of air handling between dehumidification alone or dehumidification with cooling and heating of the primary air.
- Cooling circuit: made of braze-welded copper, complete with a high efficiency compressor, dryer filter, aluminium copper exchange coils, water plate heat exchanger (DC version), solenoid valves, expansion valve, high and low pressure switch liquid receiver and thermal insulation of the pipes. Refrigerant R134a.
- Electrical panel and adjustment: on the machine with microprocessor and specific regulation. Fan control, display of the temperature sensors inside the machine, timer dirty filter control and control of the fresh and recirculation air. Large graphical interface with multi-language user menu and configuration menu. Set-up for MODBUS RTU RS 485 communication with several different supervisory systems.

Versions

- D - Version for neutral air dehumidification (isothermal). Unit for fresh ambient air through a high efficiency recovery unit; the air flow is increased by recirculating part of the ambient air, thereby allowing the cooling circuit to run and obtaining dehumidified air during the summer period (compressor on). Equipped with a hydronic reheating/cooling coil that when powered allows the cooling/heating capacity to be integrated with the radiant cooling system (connecting to the heating/cooling system is optional and does not affect the air dehumidification).
- DC - Version for dehumidification and cooling/heating integration. Unit for fresh ambient air through a high efficiency recovery unit; the air flow is increased by recirculating part of the ambient air, thereby allowing for air dehumidification and to supply an integration of the cooling/thermal capacity to the radiant cooling system. During the summer time (compressor on) the unit can operate in 2 modes:
 - Fresh+Dehumidification: the unit condenses partially in air and partially in water through the plate condenser, thereby obtaining dehumidified air;
 - Fresh+Dehumidification+Cooling integration: the unit condenses totally in water, thereby obtaining dehumidified and cooled air.
 During the winter period (compressor off) the hydronic coil is supplied with hot water from the heating system and acts like a heater fan with a recovery unit.
- W - Hydronic version for dehumidification and cold and hot integration. Unit for fresh ambient air through a high efficiency recovery unit; the air flow is increased by recirculating part of the ambient air, thereby allowing for air dehumidification and to supply an integration of the cooling/thermal capacity to the cooling/heating system (winter mode water supply 50°C, return 40°C; summer mode water supply 7°C, return 12°C). The unit does not have a cooling circuit but has a hydronic coil connected to the cooling/heating system of the building, which allows the air to be dehumidified (summer mode) and provide an integration to the cooling system in summer and the heating system in winter.



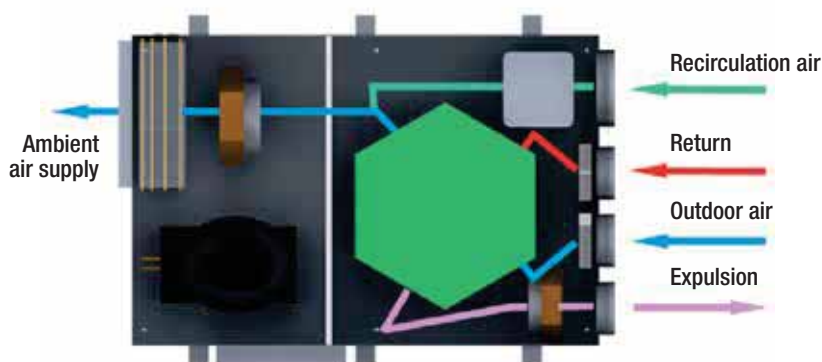
UTNRD MODEL		30	50
Type of Unit REGULATION (UE) No. 1253/2014		UVR-Two-way	UVR-Two-way
Air filters		G2+G4+F7	G2+G4+F7
fan type of actuation		Speed controller	Speed controller
SEC CLASS			
Version 3V (O)		B	A
SPECIFICATIONS			
Nominal outdoor air flow	m³/h	154	265
Total air flow	m³/h	297	520
Nominal available static pressure	Pa	100	100
❶ Nom. efficiency Recovery winter	%	85,7	86
❷ Nom. efficiency Recovery summer	%	83	84
❸ Outdoor air fan-max electrical absorption	kW	0,39	0,55
❸ Expulsion fan-max electrical absorption	kW	0,25	0,37
Electrical supply-Version E Brushless	V/ph/Hz	230/1/50	230/1/50
DIMENSIONS			
L - Width	mm	1220	1220
H - Height	mm	275	350
P - Depth	mm	820	960
VERSION D			
❶ Available dehumidification capacity (net of the enthalpy content of the outdoor air)	l/24h	22	31
❷ Hydronic coil cooling power	kW	0,4	0,54
❷ Hydronic coil heat power	kW	0,46	0,86
Refrigerant gas		R134a	R134a
❷ Compressor absorbed nominal power	kW	0,35	0,47
❸ Sound pressure level	dB(A)	41	45
VERSION DC			
❶ Available dehumidification capacity (net of the enthalpy content of the outdoor air)	l/24h	22	31
❷ Compressor cooling power	kW	1,3	1,7
❷ Hydronic coil cooling power	kW	0,4	0,54
❷ Hydronic coil heat power	kW	0,46	0,86
Refrigerant gas		R134a	R134a
❷ Compressor absorbed nominal power	kW	0,35	0,47
❸ Sound pressure level	dB(A)	41	45
VERSION W			
❶ Available dehumidification capacity (net of the enthalpy content of the outdoor air)	l/24h	31	51
❷ Hydronic Tot. coil cooling power	kW	2,03	3,32
❷ Hydronic coil sensitive cooling power	kW	1,19	1,87
❷ Hydronic coil heat power	kW	2,25	3,88
❸ Sound pressure level	dB(A)	41	45

Data at the following conditions:

- ❶ Nominal winter conditions: outdoor air: -5°C; 80% RH. Ambient air: 20°C; 50% RH.
- ❷ Nominal summer conditions: outdoor air: 30°C; 60% RH. Ambient air: 25°C; 50% RH.
- ❸ flow rate head and available head in ventilation
- ❶ Outdoor air 30°C; 60% RH. Ambient air 25°C; 50% RH. Nominal air flow
- ❷ Air inlet 25°C; 60% RH. Water in/out 16/18°C. Nominal air flow.
- ❷ Air inlet 20°C; 60% RH. Water in/out 35/30°C. Nominal air flow.
- ❷ Ambient air 25°C; 60% RH. Nominal air flow.
- ❸ Sound pressure values at 3 m from the unit in free field and at the max operating conditions.
- ❷ Ambient air 25°C; 60% RH. In/out water temp. 7°C-12°C. Nominal air flow.
- ❷ Ambient air 20°C; 60% RH. In/out water temp. 50°C-40°C. Nominal air flow.

Accessories

- KTR - Remote control panel.
- KPMC - Supply plenum with circular isolated inlets and mounting flanges.
- KSRT - Calibration and balancing damper of the air distribution network with manual control made of galvanised steel for a circular duct.
- KRPA - Automatic fresh and recirculation air flow rate regulator.
- KV2V - 2-way ON/OFF valve, actuated directly by the unit to allow the hydronic coil to be powered.
- KV3V - 3-way ON/OFF valve, actuated directly by the unit to allow the hydronic coil to be powered.





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