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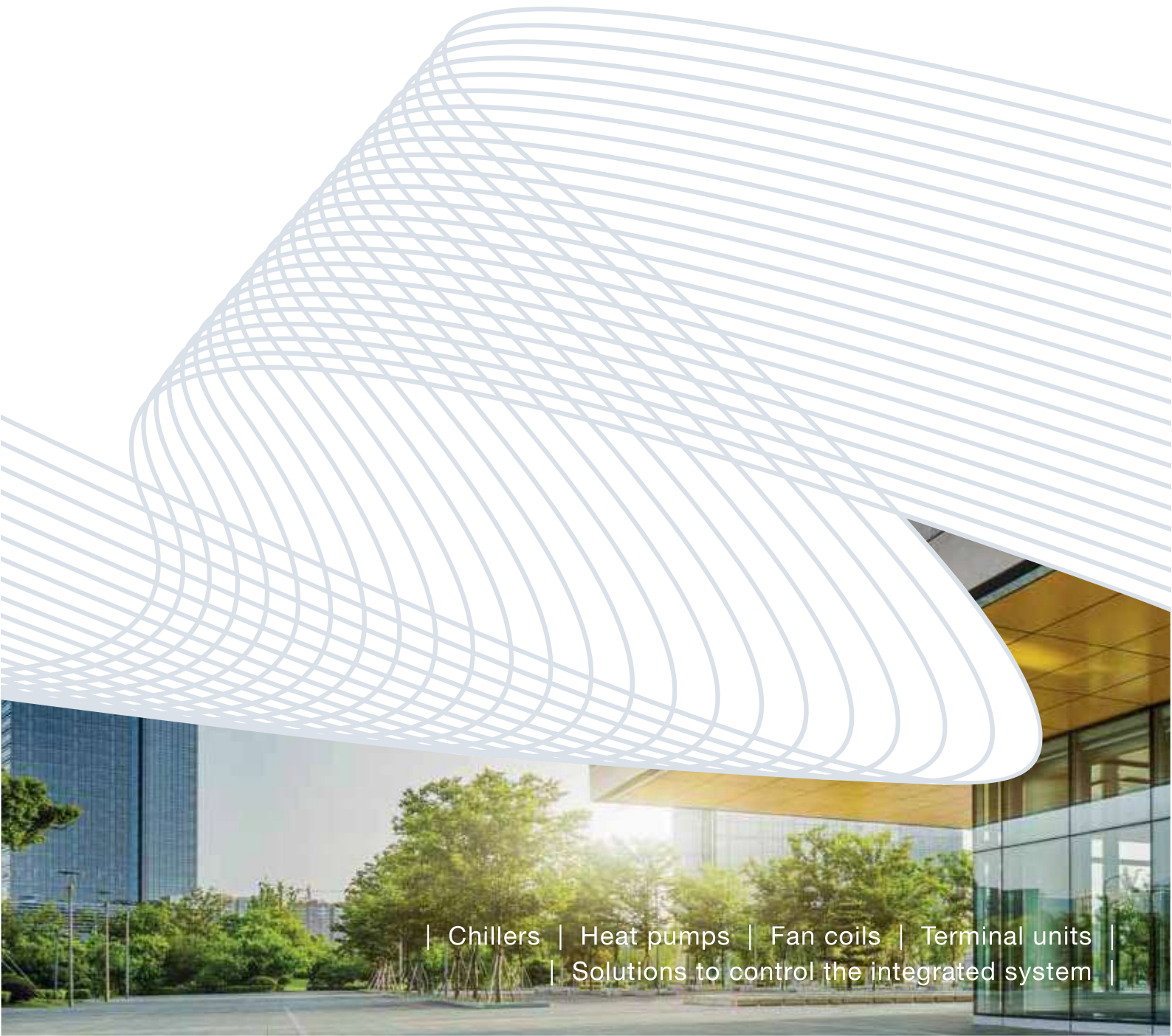
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# APPLIED SYSTEMS

*Product Catalogue 2020*



| Chillers | Heat pumps | Fan coils | Terminal units |  
| Solutions to control the integrated system |



# **CHILLERS - HEAT PUMPS**

Water cooled - Condenserless

# Comby-Flow

## THHEY 105-112

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



### • Extremely compact and silent units

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

#### Construction features

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

#### Models

- THHEY: heat pump unit.

#### STANDARD set up

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

#### PUMP set up

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

#### Factory fitted accessories

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

#### Separately supplied accessories

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



THEY MODEL		105	107	109	112
① Heating capacity	kW	6,58	8,1	10,9	14
① Absorbed power	kW	2,08	2,8	3,35	4,5
① C.O.P.		3,16	2,89	3,03	3,1
② Heating capacity	kW	7,5	9,7	12,7	15
② Absorbed power	kW	1,6	2,1	2,72	3,33
② C.O.P.		4,68	4,61	4,67	4,51
③ Heating capacity (geothermal)	kW	5,4	7,3	9,4	11,3
③ Absorbed power (geothermal)	kW	1,5	2,15	2,78	3,34
③ C.O.P. (geothermal)		3,62	3,39	3,38	3,39
④ Cooling capacity	kW	5,3	6,8	9,2	11,9
④ Absorbed power	kW	1,60	2,19	2,79	3,67
④ E.E.R.		3,31	3,11	3,3	3,24
⑤ 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
④ Available circulator head	kPa	47	55	82	77
Electrical supply	V-ph-Hz	230-1-50	230-1-50 / 400-3+N-50	230-1-50 / 400-3+N-50	230-1-50 / 400-3+N-50
DIMENSIONS AND WEIGHT		105	107	109	112
L - Width	mm	585	585	660	660
H - STANDARD height - PUMP	mm	535	535	535	535
H - STANDARD height - PUMP + KA	mm	855	855	855	855
P - Depth	mm	386	386	420	420
⑥ Weight	kg	78	83	94	97
KA Weight	kg	28	28	33	33

Data at the following conditions:

- ① Hot water: 40/45°C - Evaporator water: 10/7°C.
- ② Hot water: 30/35°C - Evaporator water: 10/7°C.
- ③ Hot water: 30/35°C - Evaporator water: 0/-3°C, 30% glycol.
- ④ Chilled water: 12/7°C - Condenser water: 30/35°C.
- ⑤ In open field (Q = 2) at 1 m from the unit.
- ⑥ Weight refers to the most complete setup.

Performance according to EN 14511. Standard Setup

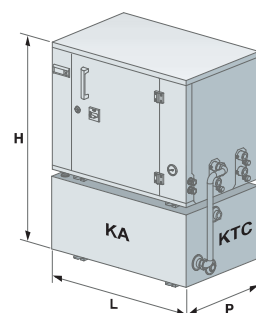
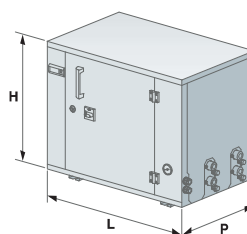
KA = buffer tank.

KTC = connecting pipe.

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

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

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



## Y-Flow

### TCHEY-THHEY 115-240

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



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

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

#### Construction features

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

#### Models

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

#### Factory fitted accessories

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

#### Separately supplied accessories

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



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

Data at the following conditions:

- ❶ Chilled water: 12/7°C - Condenser water: 30/35°C.
- ❷ Hot water: 40/45°C - Evaporator water: 10/7°C.
- ❸ Hot water: 30/35°C - Evaporator water: 10/7°C.
- ❹ Hot water: 30/35°C - Evaporator water: 0/-3°C, 30% glycol.
- ❺ In open field (Q = 2) at 1 m from the unit, with silenced setup.
- ❻ Weight refers to the most complete setup.

Performance according to EN 14511.

<b>SEASONAL ENERGY PERFORMANCE</b>		<b>115</b>	<b>118</b>	<b>122</b>	<b>125</b>	<b>230</b>	<b>240</b>
<b>TCHEY MODEL SEASONAL PERFORMANCE IN COOLING MODE</b>							
❶ P <sub>designc</sub> (EN 14825)	kW	15,5	18,4	22,7	26,3	30,5	41,7
❶ SEER (EN 14825)		5,35	5,58	5,57	5,72	6,08	5,82
❷ $\eta_{s,c}$	%	206	215	215	221	235	225
<b>THEY MODEL SEASONAL PERFORMANCE IN HEATING MODE</b>							
❸ P <sub>designh</sub> (EN 14825)	kW	23	27	33	38	48	59
❸ SCOP (EN 14825)		6,09	6,43	6,44	6,54	6,59	6,73
❹ $\eta_s$	%	236	249	249	254	256	261
❹ Energy class		A+++	A+++	A+++	A+++	A+++	A+++

- ❶ Low temperature application (7°C)
- ❷ Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)
- ❸ In Average climatic conditions; low temperature application (35°C)
- ❹ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)



## Y-Flow

### TCHEY-THHEY 245-4450

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



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

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

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



TCHEY 2100

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

#### Construction features

- Compressor: hermetic rotary scroll complete with thermal protection and crankcase heater.
- Primary side (user) heat exchanger: adequately insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch.
- Disposal unit side (well/mains/geothermal probes) heat exchanger: adequately insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch (for THHEY).
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - compressor circuit breaker switches;
  - display of cooling circuit high and low pressure;
  - Master/Slave control up to 4 units in parallel;
  - clock board;
  - 0-10V analogue signal for condensing/evaporating control performed by external device.

#### Versions

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

#### Models

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

#### Factory fitted accessories

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



THEY 4260

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

#### Separately supplied accessories

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



# Y-Flow

## TCHEY-THHEY 245-4450

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

Data at the following conditions:

- ① Chilled water: 12/7°C. - Condenser water: 30/35°C.
- ② Hot water: 40/45°C. - Evaporator water: 10/7°C.
- ③ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.
- ④ Width referring to the unit with standard setup or supplied with "recovery" or "desuperheater" accessories.
- ⑤ Width referring to the PUMP setup, up to a maximum of 2 pumps in mod. 245-2185 (2 user side or disposal unit side pumps or 1 user side pump + 1 disposal unit side pump) and up to a maximum of 4 pumps in mod. 4180-4450 (2 pumps on user side and 2 pumps on disposal unit side).
- ⑥ Empty weight  
Performance according to EN 14511.

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

- ① Low temperature application (7°C)
- ② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)
- ③ In Average climatic conditions, low temperature application (35°C)
- ④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)

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

Data at the following conditions:

- ❶ Chilled water: 12/7°C. - Condenser water: 30/35°C.
- ❷ Hot water: 40/45°C. - Evaporator water: 10/7°C.
- ❸ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.
- ❹ Width referring to the unit with standard setup or supplied with "recovery" or "desuperheater" accessories.
- ❺ Width referring to the PUMP setup, up to a maximum of 2 pumps in mod. 245-2185 (2 user side or disposal unit side pumps or 1 user side pump + 1 disposal unit side pump) and up to a maximum of 4 pumps in mod. 4180-4450 (2 pumps on user side and 2 pumps on disposal unit side).
- ❻ Empty weight  
Performance according to EN 14511.

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

- ❶ Low temperature application (7°C)
- ❷ Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)
- ❸ In Average climatic conditions, low temperature application (35°C)
- ❹ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)

## FullFLOW VFD (1+i)

### TCHITL 1390÷21700

new

Cooling capacity: 389.5-1701.1 kW

# INVERTER

**ErP**  
 READY  
 2021

 APPLIES TO  
 EUROPEAN  
 DIRECTIVE  
 FOR ENERGY  
 RELATED  
 PRODUCTS

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


 TCHITL 21000 with  
 TOBT accessory

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

#### Construction features

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

#### Versions

- T - High efficiency version

#### Models

- TCHITL: unit designed for cooling only.

#### Factory fitted accessories

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

#### Separately supplied accessories

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



# FullFLOW ECO VFD (1+i)

## TCHITE 1280÷21220

new

Cooling capacity: 285.6-1217.2 kW

# INVERTER

**ErP**  
 READY  
 2021

 APPLIES TO  
 EUROPEAN  
 DIRECTIVE  
 FOR ENERGY  
 RELATED  
 PRODUCTS

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


 TCHITE 21000 with  
 TOBT accessory

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

### Construction features

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

### Versions

- T - High efficiency version

### Models

- TCHITE: unit designed for cooling only.

### Factory fitted accessories

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

### Separately supplied accessories

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



## Z-Flow HE

### TCHVZ 1201-31631

Cooling capacity: 203.3÷1,627.6 kW



TCHVBZ 31631 HE

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

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

#### Construction features

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

#### Versions

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

#### Models

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

#### Factory fitted accessories

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

#### Separately supplied accessories

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



TCHVBZ-TCHVIZ MODEL		1201	1231	1281	1311	1351	1421	1481	1531	1611	
①	Nominal cooling capacity	kW	203.3	230.2	282.1	308.0	352.8	416.4	478.2	533.0	605.9
①	E.E.R.		4.95	4.96	4.97	4.96	4.95	4.93	4.94	4.94	4.95
①	Absorbed power	kW	41.07	46.41	56.76	62.1	71.27	84.46	96.8	107.89	122.4
②	Sound power	dB(A)	94	94	97	97	97	97	97	98	98
②	Sound power	dB(A)	92	92	95	95	95	95	95	96	96
	Screw/step compressor	no.	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3
	Circuits	no.	1	1	1	1	1	1	1	1	1
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
TCHVBZ DIMENSIONS AND WEIGHTS			1201	1231	1281	1311	1351	1421	1481	1531	1611
	L - Width	mm	3.470	3.450	3.450	3.450	3.500	3.500	3.480	3.490	3.500
	H - Height	mm	1.580	1.580	1.580	1.580	1.660	1.660	1.660	1.760	1.760
	P - Depth	mm	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
③	TCHVBZ Weight	kg	1.343	1.369	1.715	1.733	1.885	2.374	2.413	2.652	2.697
③	TCHVIZ Weight	kg	1.598	1.624	1.970	1.988	2.140	2.629	2.668	2.917	2.952

Data at the following conditions:

- ① Chilled water: 7/12°C. - Condenser inlet water: 30/35°C.
  - ② Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.
  - ③ Empty weight.
  - TCHVIZ soundproofed version.
- Performance according to EN 14511.

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

- ① Low temperature application (7°C)
- ② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

TCHVBZ-TCHVIZ MODEL			2411	2431	2461	2511	2561	2601	2631	2681	2711
①	Nominal cooling capacity	kW	405.5	433.6	460.4	512.7	563.3	596.9	626.6	674.8	712.5
①	E.E.R.		4.95	4.96	4.95	4.97	4.97	4.96	4.95	4.98	4.94
①	Absorbed power	kW	81.92	87.42	93.01	103.16	113.34	120.34	126.59	135.5	144.23
②	Sound power	dB(A)	97	97	97	99	99	99	99	99	99
②	Sound power	dB(A)	95	95	95	97	97	97	97	97	97
	Screw/step compressor	no.	2/6	2/6	2/6	2/6	2/6	2/6	2/6	2/6	2/6
	Circuits	no.	2	2	2	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
TCHVBZ DIMENSIONS AND WEIGHTS			2411	2431	2461	2511	2561	2601	2631	2681	2711
	L - Width	mm	3.780	3.830	3.850	4.040	4.040	4.040	4.040	4.040	4.040
	H - Height	mm	1.770	1.770	1.770	1.930	1.930	1.930	1.930	1.930	1.930
	P - Depth	mm	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300
③	TCHVBZ Weight	kg	2.386	2.413	2.458	2.953	3.297	3.320	3.337	3.404	3.447
③	TCHVIZ Weight	kg	2.816	2.843	2.888	3.383	3.727	3.750	3.767	3.834	3.877

Data at the following conditions:

- ① Chilled water: 7/12°C. - Condenser inlet water: 30/35°C.
  - ② Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.
  - ③ Empty weight.
  - TCHVIZ soundproofed version.
- Performance according to EN 14511.

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

- ① Low temperature application (7°C)
- ② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)



# Z-Flow HE

## TCHVZ 1201-31631

TCHVBZ-TCHVIZ MODEL		2781	2841	2901	2961	21031	21111	21181	21261
① Nominal cooling capacity	kW	774.9	835.2	898.0	954.5	1026.1	1105.5	1176.7	1253.1
① E.E.R.		4.94	4.92	4.95	4.94	4.98	5.06	5.08	5.08
① Absorbed power	kW	156.86	169.76	181.41	193.22	206.04	218.48	231.63	246.67
② Sound power	dB(A)	99	99	99	99	99	99	99	99
② Sound power	dB(A)	97	97	97	97	97	97	97	97
Screw/step compressor	no.	2/6	2/6	2/6	2/6	2/6	2/6	2/6	2/6
Circuits	no.	2	2	2	2	2	2	2	2
Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
TCHVBZ DIMENSIONS AND WEIGHTS		2781	2841	2901	2961	21031	21111	21181	21261
L - Width	mm	4.120	4.000	4.000	4.000	4.000	4.000	4.000	4.000
H - Height	mm	1.930	1.830	1.930	1.930	1.950	1.950	1.950	1.950
P - Depth	mm	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300
③ TCHVBZ Weight	kg	3.920	4.406	4.636	4.669	4.779	4.870	4.908	4.934
③ TCHVIZ Weight	kg	4.350	4.836	5.066	5.099	5.209	5.300	5.338	5.364

Data at the following conditions:

- ① Chilled water: 7/12°C. - Condenser inlet water: 30/35°C.
  - ② Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.
  - ③ Empty weight.
  - TCHVIZ soundproofed version.
- Performance according to EN 14511.

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

- ① Low temperature application (7°C)
- ② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

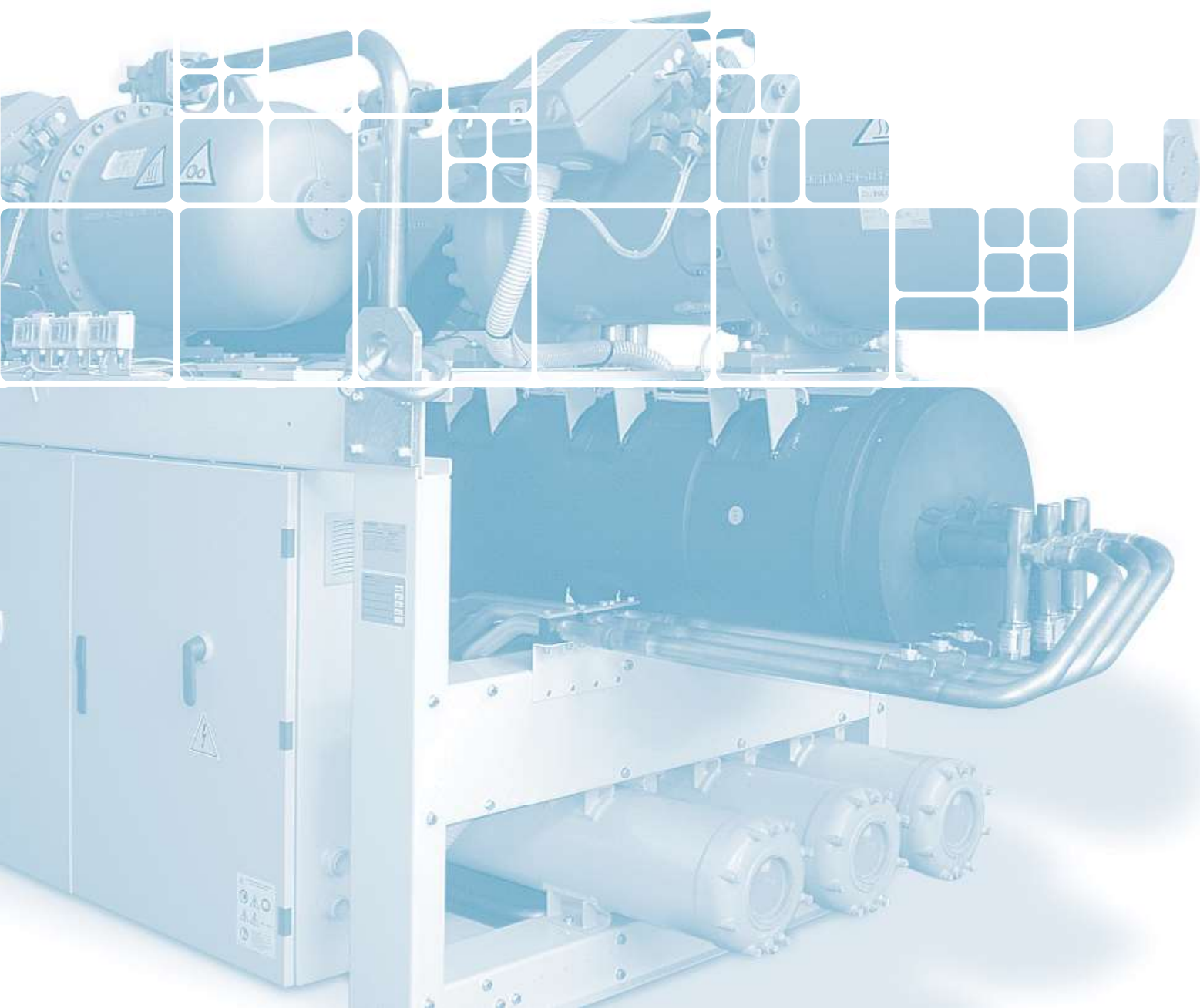
TCHVBZ-TCHVIZ MODEL		31301	31351	31401	31461	31521	31591	31631
① Nominal cooling capacity	kW	1303.6	1351.2	1400.8	1457.3	1517.8	1576.2	1627.6
① E.E.R.		5.09	5.04	5.0	4.98	4.98	4.99	4.97
① Absorbed power	kW	256.11	268.1	280.16	292.63	304.78	315.87	327.48
② Sound power	dB(A)	101	101	101	102	102	102	102
② Sound power	dB(A)	99	99	99	100	100	100	100
Screw/step compressor	no.	3/9	3/9	3/9	3/9	3/9	3/9	3/9
Circuits	no.	3	3	3	3	3	3	3
Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
TCHVBZ DIMENSIONS AND WEIGHTS		31301	31351	31401	31461	31521	31591	31631
L - Width	mm	4.940	4.940	4.940	4.940	4.940	4.940	4.940
H - Height	mm	2.180	2.180	2.180	2.180	2.220	2.220	2.220
P - Depth	mm	1.790	1.790	1.790	1.790	1.790	1.790	1.790
③ TCHVBZ Weight	kg	6.795	6.827	6.852	6.891	6.980	7.068	7.157
③ TCHVIZ Weight	kg	7.395	7.427	7.452	7.491	7.580	7.668	7.757

Data at the following conditions:

- ① Chilled water: 7/12°C. - Condenser inlet water: 30/35°C.
  - ② Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.
  - ③ Empty weight.
  - TCHVIZ soundproofed version.
- Performance according to EN 14511.

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

- ① Low temperature application (7°C)
- ② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)



## Y-Flow E

### TCEEY 115-240

Cooling capacity: 13.7 ÷ 36.9 kW



- **Efficient condenserless unit in R410A**

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

**Construction features**

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

**Models**

TCEEY: unit designed for cooling only.

**Factory fitted accessories**

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

**Separately supplied accessories**

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



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

Data at the following conditions:

- ❶ Chilled water: 12/7°C - Condensing temperature: 50°C (dew point)
- ❷ Sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN ISO 9614
- ❸ Weight refers to the most complete setup

(\*) Unit without electric pumps.

## Y-Flow E

### TCEEBY 245-4360

Cooling capacity: 39.8÷320.9 kW



#### • Integrated MASTER/ SLAVE control

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

#### Construction features

- Compressor: hermetic rotary scroll complete with thermal protection and crankcase heater.
- Water side heat exchanger: adequately insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch.
- Control: microprocessor electronic control, with Adaptive Function Plus logic.
- Structure: made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - compressor circuit breaker switches;
  - display of cooling circuit high and low pressure;
  - Master/Slave control up to 4 units in parallel;
  - clock board;
  - 0-10V analogue signal for condensing control from external device.

#### Models

- TCEEBY: unit designed for cooling only.

#### Factory fitted accessories

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

#### Separately supplied accessories

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



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

TCEEBY MODEL			4180	4205	4235	4260	4290	4330	4360
①	Nominal cooling capacity	kW	161,2	182,9	205	229,4	253,8	287,4	320,9
①	EER		3,53	3,5	3,48	3,49	3,5	3,42	3,36
①	Absorbed power (*)	kW	45,7	52,3	58,9	65,8	72,6	84	95,5
①	Available head of standard electric pump	kPa	140	132	114	117	111	136	168
①	Available head of high head pump	kPa	195	200	196	240	273	241	257
②	Sound power	dB(A)	77	77	78	79	80	81	82
②	Silenced setup sound power	dB(A)	75	75	76	77	78	79	80
	Scroll/ step compressors	no.	4 / 4	4 / 4	4 / 4	4 / 4	4 / 4	4 / 4	4 / 4
	Circuits	no.	2	2	2	2	2	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
DIMENSIONS AND WEIGHT			4180	4205	4235	4260	4290	4330	4360
	L - Width	mm	2600	2600	2600	2600	2600	2600	2600
	W - Width (PUMP setup)	mm	3734	3734	3734	3734	3734	3734	3734
	H - Height	mm	1860	1860	1860	1860	1860	1860	1860
	P - Depth	mm	870	870	870	870	870	870	870

Data at the following conditions:

- ① Chilled water: 12/7°C - Condensing temperature: 50°C (dew point)
- ② Sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN ISO 9614 (\*) Unit without electric pumps.

**Recommended combinations with CCAMY condensers for TCEEBY models 4180-4360**

TCEEBY MODEL	4180	4205	4235	4260	4290	4330	4360
CCAMY MODEL	CCAMY 290	CCAMY 2110	CCAMY 2115	CCAMY 2130	CCAMY 2145	CCAMY 2165	CCAMY 2185
	CCAMY 290	CCAMY 2110	CCAMY 2115	CCAMY 2130	CCAMY 2145	CCAMY 2165	CCAMY 2185

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

- ① Low temperature application (7°C)
- ② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

## Z-Flow E

### TCEVZ 1200-31630

Cooling capacity: 171.9÷1,424.8 kW



TCEVBZ 2630

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

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

#### Construction features

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

#### Versions

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

#### Models

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

#### Factory fitted accessories

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

#### Separately supplied accessories

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



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

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

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

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

Data at the following conditions:

- ❶ Chilled water: 12/7°C - Condensing temperature: 50°C (dew point).
- ❷ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.
- ❸ Weight without load refers to fully accessorised unit.
- TCEVIZ soundproofed version.



The image is a composite of two photographs. The top photograph shows a high-angle view of a modern office interior with blue walls and two long, horizontal light fixtures. The bottom photograph shows a white leather sofa in a bright, modern office space with large windows overlooking a city skyline, including the Empire State Building.

## **MANAGEMENT SYSTEMS, CONTROL AND MONITORING**

Touch interface with Web APP for remote control and monitoring.

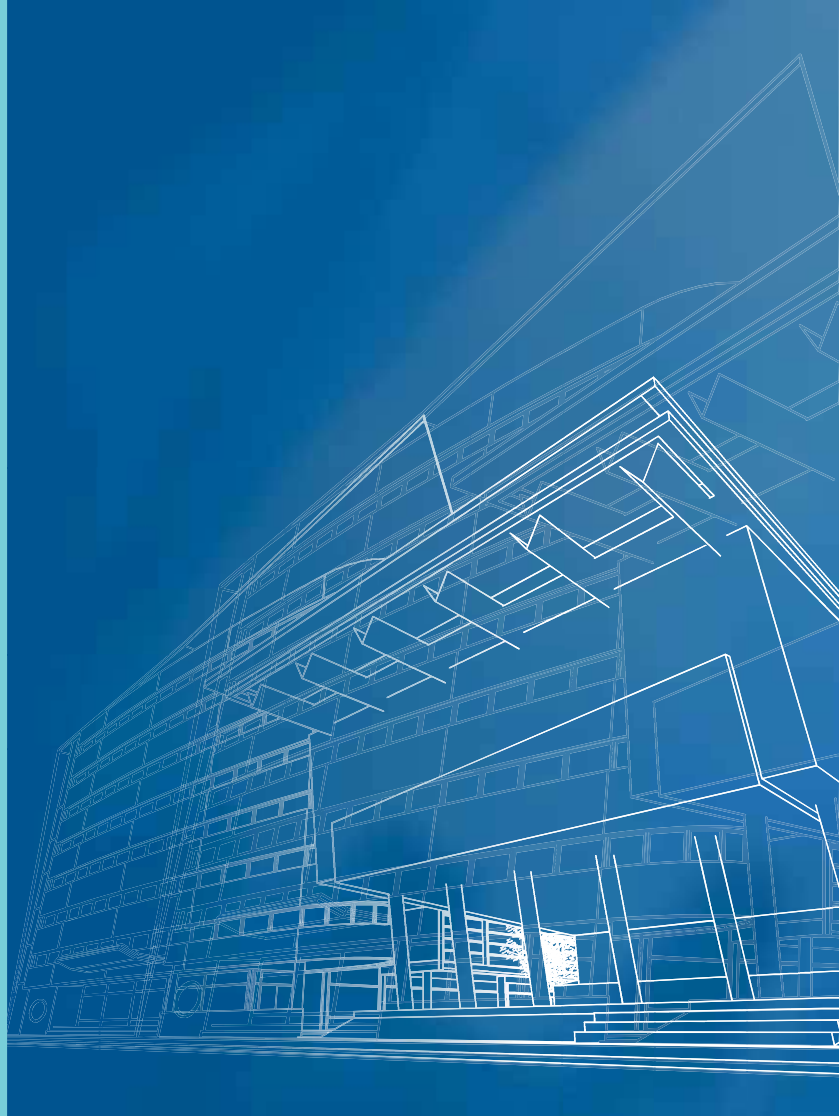
# SYS-TO System Touch Manager & Web APP

The entire system  
at your fingertips

System Touch Manager offers a simple and effective interface to control and program the climate of the individual rooms of a building, manage the main system components and the environment terminals from a single point.

The system offers a series of energy saving functions for the management of generators, the production of domestic hot water, the distribution network and the terminal units such as, management with time bands that allows 10 summer/winter bands to be programmed at 2 temperature levels.

It is also possible to manage via the local network and remote monitoring via the web.



## The solution

SYS-TO is an integrated management system that manages the system's main components via an electronic System Manager regulator.

User interaction with the management program is very easy; it can be managed with a simple and user-friendly touch screen display or interface.

SYS-TO enables centralised management of up to maximum 64 areas made up of fan coils with relative temperature control. It is also possible to manage a cooling unit-chiller, a RHOSS multi-purpose heat pump with integrated boiler- and up to 5 VMC units, heat recovery units or air handling units.

Solution for residential, small and medium tertiary, trade and services applications:

- Villas – residences
- Hotels – restaurants – B&B
- Offices – professional offices
- Medical offices – clinics
- Shops – gyms – multi-purpose centres



# System Touch Manager & Web APP



<sup>1</sup> Free Cloud service upon activation  
<sup>2</sup> Option of BMS, Modbus RTU, Modbus TCP/IP, Bacnet IP, Bacnet MS/TP supported protocols

## Functions

System manager, which is available in a small or medium version, enables you to:

- control the temperature detected in the various areas
- adjust the area set-point and limit the change
- limit user interaction with the area control
- control the fan coil with time bands (stop or start with two comfort levels)
- adjust the temperature of the water sent to the radiant panels in heating mode, with a mixing valve and climate compensation
- adjust the water temperature in the system side tank with 2 levels, comfort and economy, with climate compensation
- adjust the water temperature in the DHW tank
- manage the DHW side diverter valve
- communicate the set-point to the primary generator
- select the summer/winter operating mode manually, by date, outdoor temperature or digital input
- select the most convenient heat generator between the heat pump and boiler
- manage an integrative heat source - electrical resistance - or auxiliary - boiler, system side or DHW side
- manage the DHW recirculation pump and anti-legionella sanitisation
- manage the area pumps, based on the start status or effective call in the single areas
- start the VMC/primary air units
- send an email alarm in real time



System management solutions for small and medium tertiary, trade and services applications.

Touch interface with Web APP for remote control and monitoring.

# SYS-TO System Touch Manager & Web APP

The entire system  
at your fingertips

## System management

SYS-TO allows for integrated management of the following components in 2-pipe systems and 2-pipe systems with domestic hot water (DHW) production:

### Generators

- Rhoss heat pump/chiller or multi-purpose system
- Inertial buffer tank temperature probes on the system side
- Technical tank temperature probes for DHW production
- Integrative heat source - electrical resistance - or auxiliary - boiler.
- Diverter valve for DHW
- Outdoor air temperature probe for climatic compensation or seasonal switching

### Distribution network

- Area circulation pumps, for primary or primary/secondary circuit, direct or mixed, at low temperature (up to 5)

### System terminals

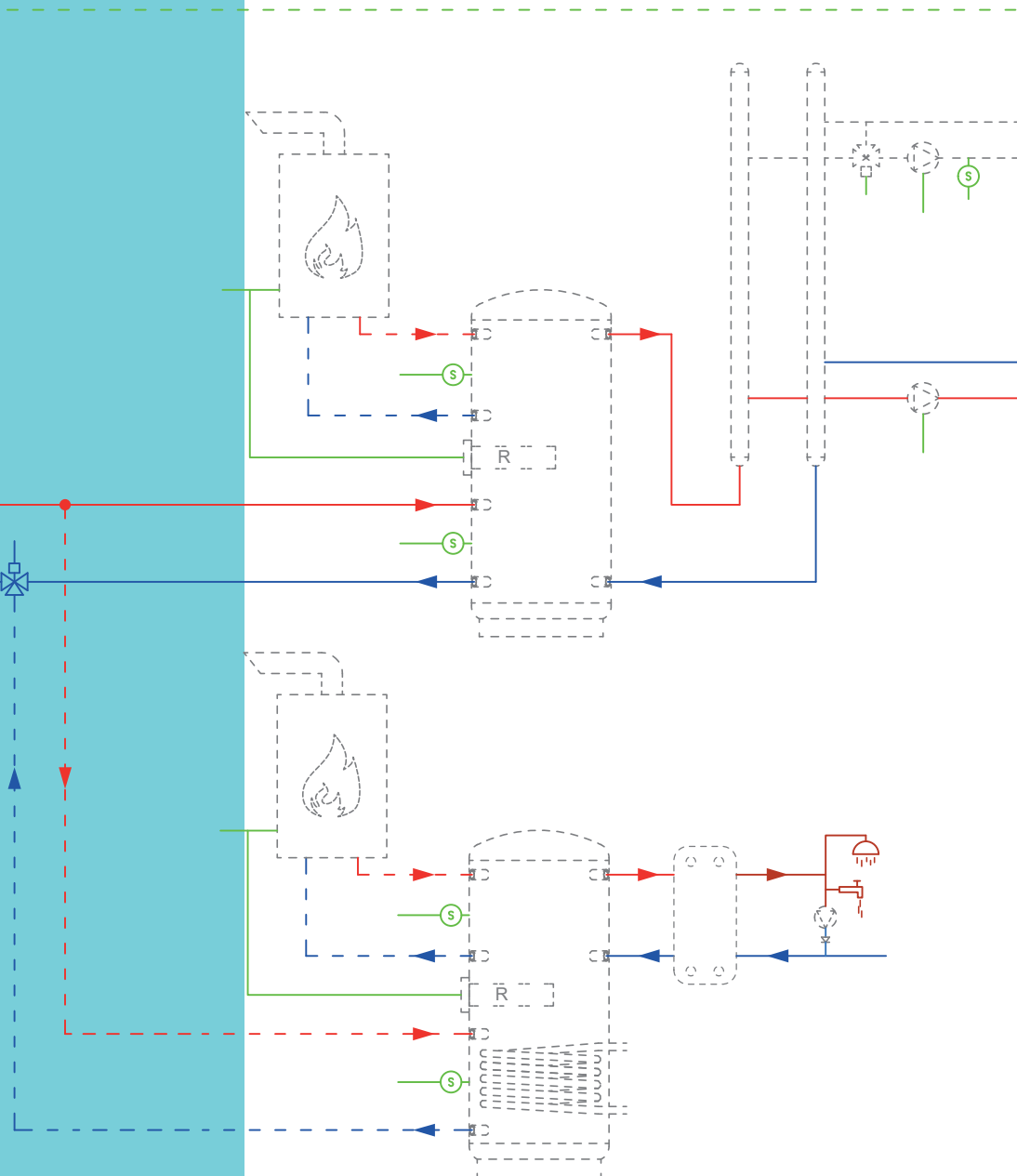
- Control up to 64 fan coils or terminals with on-board regulation in serial connection, possibility of activating other devices in parallel with the fan coil (radiant panels in heating mode or radiators)
- Fresh air consent for VMC, Heat recovery units and Air handling units (up to 5)

SYS-TO in 4-pipe systems allows system terminals and area pumps to be managed.



## Compatible units

Fan coils: Idrowall (with dedicated serial cable), Brio-I Slim with advanced SLIM Touch regulation, Yardy and Diva via advanced LIT-Touch regulation, via bus.  
Rhoss chillers, heat pumps and multi-purpose units, via bus.  
VMC unit, heat recovery units with KRCA1 regulator, ADV Next Air and CTA ADVR air handling units via bus or digital input.



**User interfaces and remote control via WEB**

SYS-TO consists of a regulator (System Manager) to control room terminals (connected in serial mode) and to manage components in the field (through digital inputs and outputs) and from a user interface (HMI) available in various types.

The simplest interface consists of a semi-graphical LCD integrated in the regulator, to which a remote keypad with a backlit semi-graphical LCD display can be added.

The top of the range is the Touch Panel consisting of a resistive touch screen with a 7" TFT 16:9 -64 K colour recessed display installed on a support or wall-mounted, with a clean and innovative design and a lively and intuitive interface, complete with an Ethernet interface and USB port.

The Touch Panel is available with the Web APP option for remote control and monitoring through any Web browser with HTML5 support.

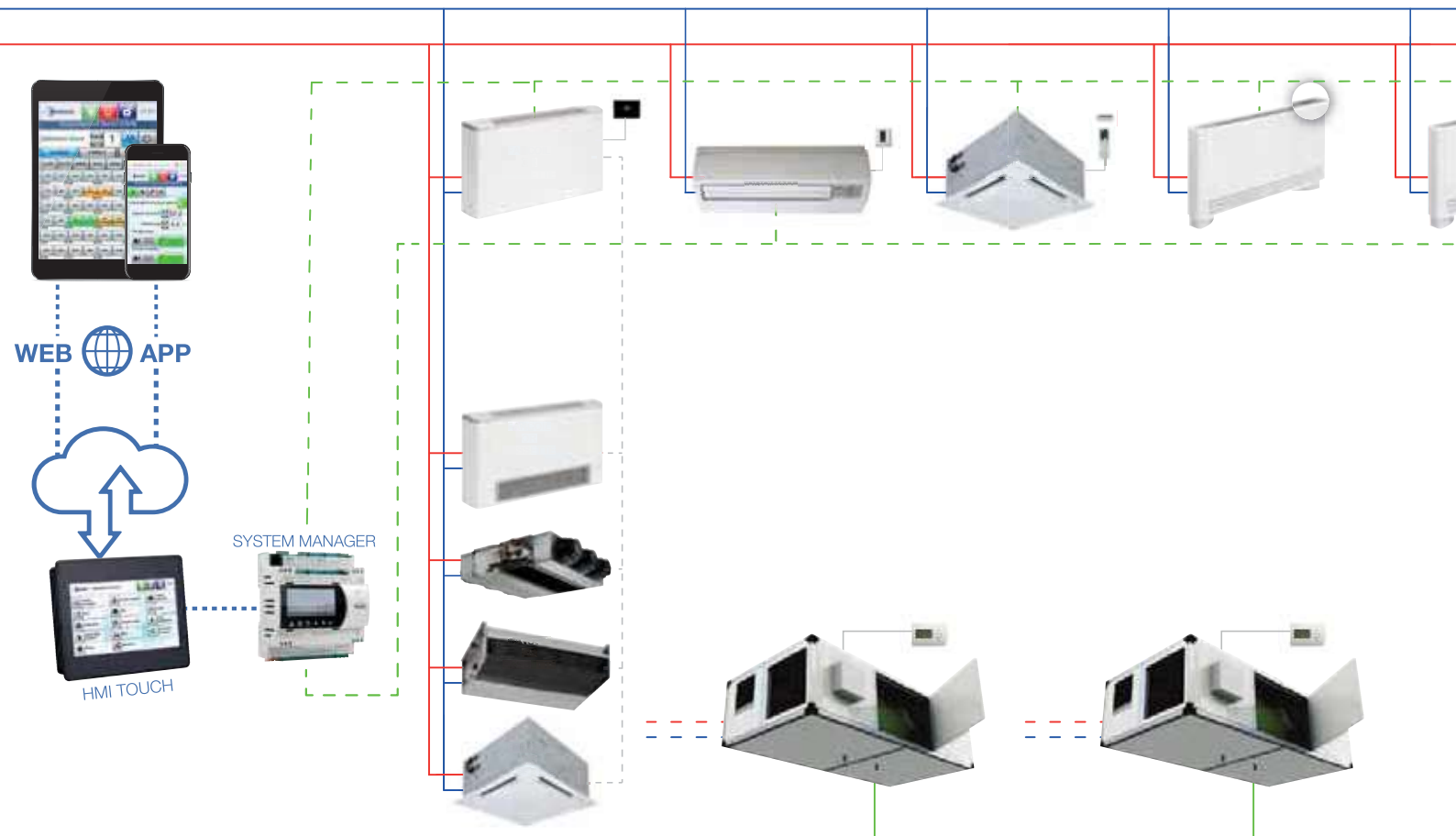
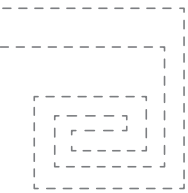
Solution with:	Integrated semi-graphical interface	Remotable semi-graphical interface	Touch colour interface	Touch colour interface and Web APP
Web APP				
HMI				
System Manager				

**Serial network with simplified routing**

An RS485 ModBus RTU serial interface is required on each connected device for connection via bus. Configuring serial addresses is extremely easy; it does not require additional devices but can be made directly from the control keypad of each fan coil.

**Master/slave management**

It is possible to connect multiple slave units with the same ambient set-point for each Master fan coil equipped with a control or receiver.



## Control and monitoring via ETHERNET

### RHOSS WEB SERVER



- Managing a single cooling unit via ETHERNET
- Web page with unit status and detailed tabs with:
  - synoptic of the main components
  - graphic trend of the main variables
  - possibility of modifying the main parameters (on/off, mode, set-point)
  - status and alarms reset
- Installation of the ethernet interface inside the unit's electrical panel

WEB SERVER MAIN FEATURES	MAIN COMPONENTS
Web page with unit status and detailed tabs displaying: <ul style="list-style-type: none"> <li>- synoptic diagram of the main components</li> <li>- main variable trend graph</li> <li>- option to edit main parameters (on/off, mode, set)</li> <li>- alarm status and reset</li> </ul>	KWEBU1: Web Server board for Ethernet with user graphic interface

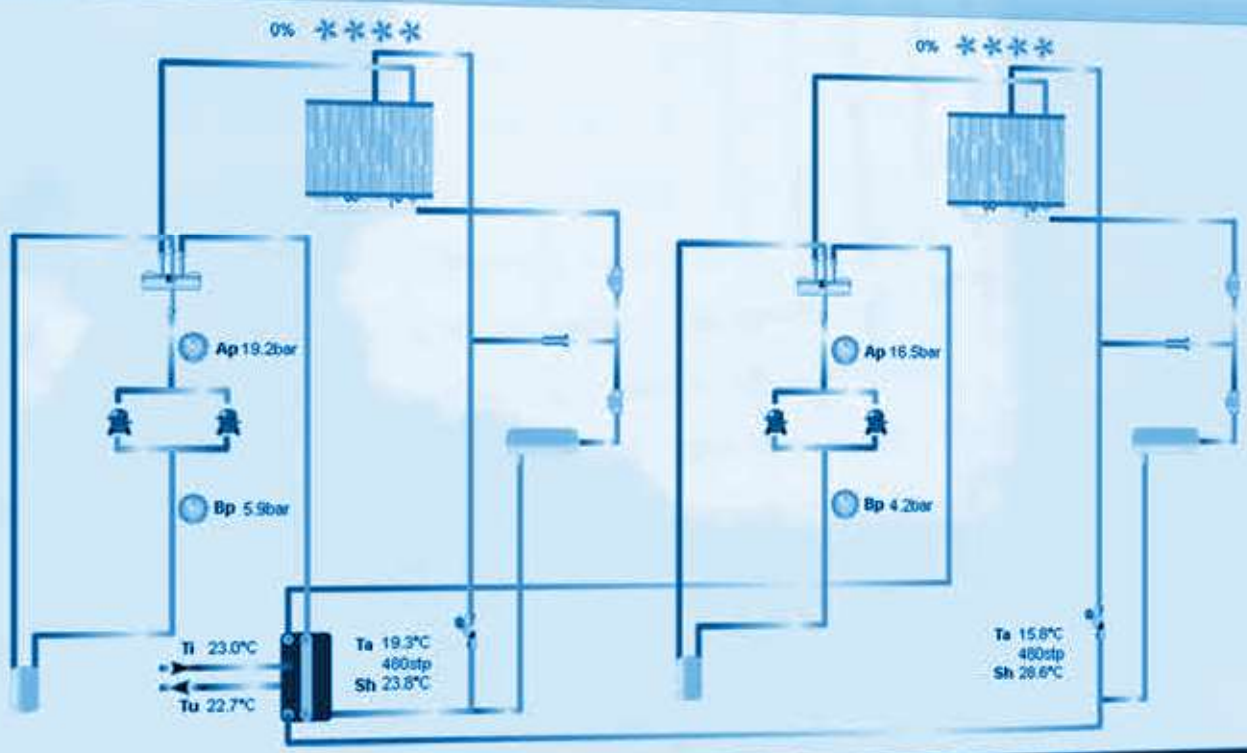
**RHOSS COOLING UNIT + Web Server for Ethernet + User graphical interface**



**RH055**

Stato unità: ON  
Modo: Raffreddamento  
Potenza richiesta: 100%

Generale Grafico Dati e impostazioni Allarmi



## Remote monitoring

RHOSS MONITORING: Mobile - Cloud - Real time

- Remote control of cooling units and air handling units
- 3 different solutions for remote monitoring
- Connection via mobile phone or smartphone
- Web interface with Cloud service
- Status display in real time
- Data logger function
- Alarm and malfunctioning alerts
- Installation of the DIN bar on the device inside the unit's electrical panel



**RHOSS COOLING UNIT +  
SERIAL INTERFACE**



MONITORING	MAIN FEATURES	CONTROL DEVICE	INTERNET CLOUD SERVICE	SIM CARD
<b>MOBILE</b> for residential and small-size service sector applications	Input/output management via mobile phone and editing by <b>SMS</b> . Alarm and malfunctioning alerts. Reading up to 8 values.		Not provided (only SMS management available)	
<b>CLOUD</b> for residential and service sector	<b>Management of the main parameters and editing via internet interface or via APPS IOS and ANDROID.</b> Alarm, malfunctioning display <b>with hourly frequency and trend logs.</b> 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)
<b>REAL TIME</b> for the service and industrial sector	<b>Management of the parameters and editing via internet interface or via APPS IOS and ANDROID.</b> Real time alarm, malfunctioning <b>display and trend logs.</b> Reading up to 100 values.	KMRT - Real Time control device with slot for SIM CARD	<b>Obligatory</b>	





**CONTROL DEVICE + SIM card**

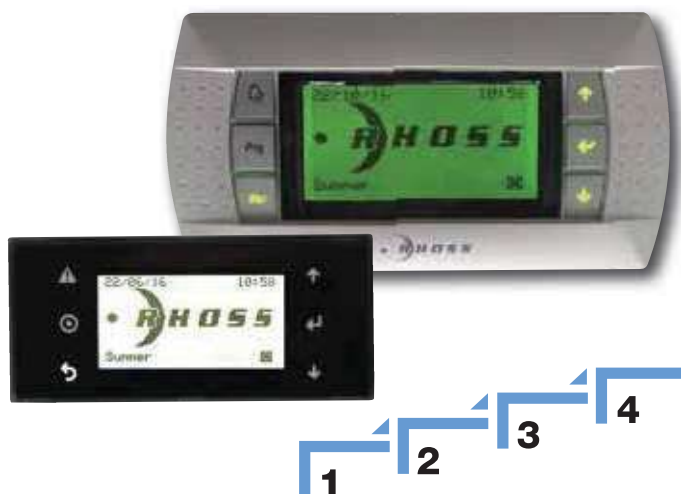


CONTROL DEVICE	Serial interface on Rhoss unit	Remotely manageable inputs/outputs	Monitorable Rhoss units	Readings
 <p>KMMC - Remote control device for Rhoss Monitoring Mobile or Cloud, installation on DIN bar (4 modules) within the unit's electric panel, slot for SIM CARD, status and inputs/outputs signalling LED, antenna with 3m cable, protection degree IP40, GSM dual band module 900-1800 MHz, Buffer battery (1 hour approximately); serial ports; Power supply not included.</p>	RS485 Serial interface (accessory KRS485 or SS)	<ul style="list-style-type: none"> <li>• 2 relay outputs configurable and activated via SMS</li> <li>• 2 digital inputs for external alarms</li> <li>• 1 configurable analogue input (0-10 V, 0-20 mA, 4-20 mA)</li> </ul>	<p><b>1</b></p> <ul style="list-style-type: none"> <li>• cooling unit</li> <li>• air handling units</li> </ul>	up to 8 readings
 <p>KMRT - Remote control device Rhoss Monitoring Real Time, installation on DIN bar (6 modules) within the unit's electric panel, slot for SIM CARD, 3 status signalling LEDs, antenna with 3m cable, protection degree IP40, GSM/GPRS Modem, serial ports; Watchdog hardware, Real Time Clock; Power supply not included. NOTE: the KMRT device is fitted with additional Ethernet interface for using local Internet connection (without SIM CARD).</p>	<ul style="list-style-type: none"> <li>• RS485 serial interface (accessory KRS485 or SS)</li> <li>• Ethernet Interface (accessory KBE) [only if Ethernet is available on site]</li> </ul>	Not available	<p><b>5</b></p> <ul style="list-style-type: none"> <li>• cooling unit</li> <li>• air handling unit</li> </ul>	up to a total of 100 readings

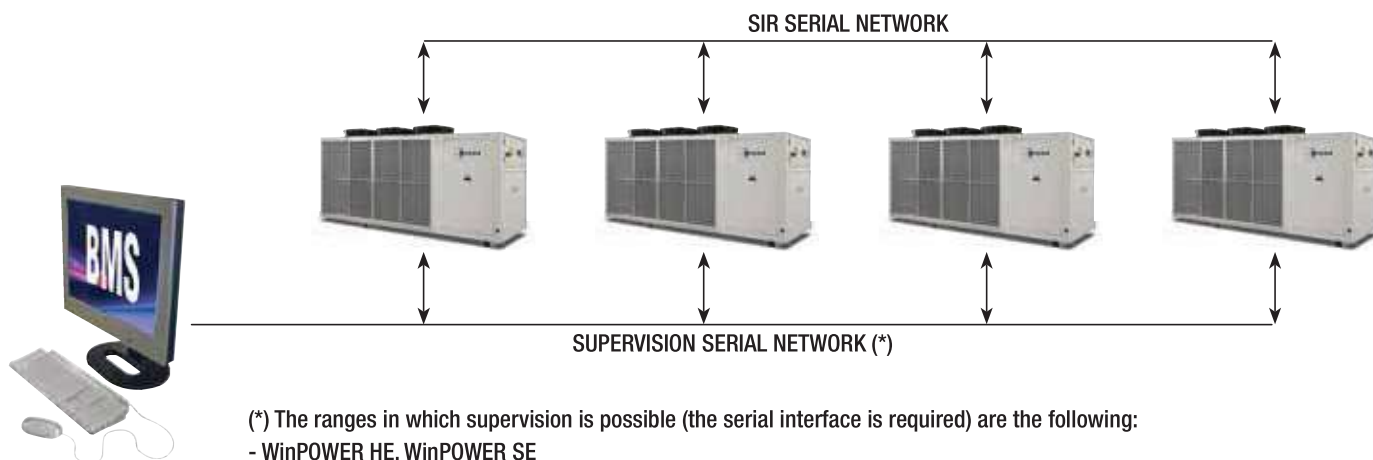
## Chiller management software

### SIR - RHOSS INTEGRATED SEQUENCER

- **MASTER/SLAVE management of up to 4 parallel plumbing chillers**
- **Summer/winter mode for heat pump units**
- **System set-point management**
- **Control of all operating parameters**



- The SIR integrated Sequencer makes it possible to manage up to 4 parallel plumbing chillers in medium/large HVAC systems.
- The optimisation of operating times and the insertion of the individual units is controlled by logics integrated in their management software, guaranteeing reliability over time.
- The software at the heart of the system was designed and tested by the Rhoss R&D structure and is able to acquire and manage the main variables of the connected water chillers.
- Depending on the product range, the units of the group can interface with the main BMS on the market, for them to be monitored, to guarantee full control of each type of system (verify the option in the product documentation).



(\*) The ranges in which supervision is possible (the serial interface is required) are the following:

- WinPOWER HE, WinPOWER SE
- Z-Power
- Z-Flow HE, Z-Flow E
- FullPOWER HE, FullPOWER SE, FullPOWER VFD, FullPOWER VFD (1+i)
- TurboPOWER

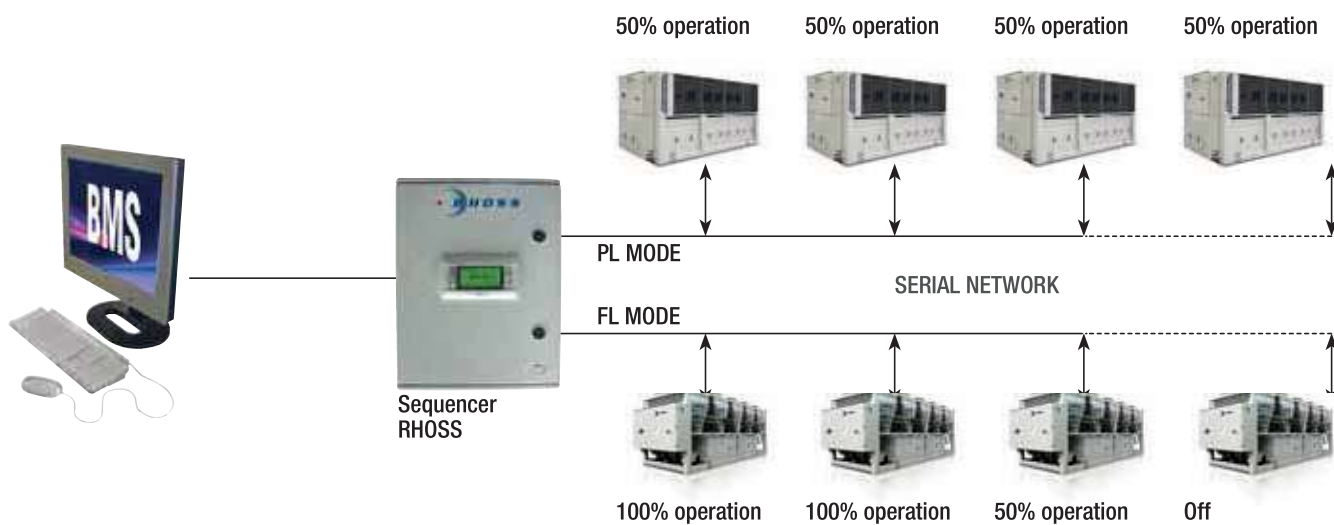
# Water Chiller management software

## RHOSS SEQUENCER

- **Control of up to 10 parallel plumbing chillers**
- **Summer/winter mode for heat pump units**
- **System set-point management**
- **Control of all operating parameters**
- **Alarm display**



- The Rhoss Multichiller Sequencer makes it possible to manage up to 10 parallel plumbing chillers in medium/ large HVAC systems.
- The optimisation of operating times and the insertion of the individual units is controlled by logics that focus on energy efficiency, guaranteeing reliability over time.
- The management mode of the units can be selected from between FL-Full Load Unit Manager (specific for screw compressor chillers) and PL-Part Load Unit Manager (specific for water chillers with scroll compressors).
- A dedicated sequencer is available for EXP multi-purpose units that can handle all the specific functions of the technology.
- The software at the heart of the system was designed and tested by the Rhoss R&D structure and is able to acquire and manage the main variables of the connected water chillers. The sequencer also interfaces with the main BMS available on the market, guaranteeing complete control in all system types. Integrated solutions for system management





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