

mitsubishi electric
HYDRONICS & IT COOLING SYSTEMS S.p.A.

IT COOLING

CHILLERS

TR-W-Z

**HIGH EFFICIENCY WATER
COOLED CHILLER, WITH OIL-FREE
CENTRIFUGAL COMPRESSOR,
FROM 246 TO 4549 KW**



**“LOGIC WILL GET YOU FROM A TO B.
IMAGINATION WILL TAKE
YOU EVERYWHERE.”**

Albert Einstein
Internationally
renowned physicist
(1879-1955)





NEGLIGIBLE INRUSH CURRENT

The start up in-rush current of water source chillers with oil-free centrifugal compressors is only 2 Amps! This provides for a more favourable selection of the line power systems.

COOLING DEPENDABILITY AND EXTENDED LIFETIME

Designed for continuous operation, TR-W-Z meets the needs of the uninterruptible industry. Devoted devices and functions maximize the unit's uptime even in case of emergency circumstances.

UNRIVALED EFFICIENCY

Water source chillers with centrifugal oil-free compressors show competitive full load and outstanding partial load efficiency, enabling them to reach and exceed any values of efficiency established by HVAC's most common protocols.

**ONLY IMAGINATION COULD LEAD TO IMPROVE
THE ALREADY BRILLIANT TECHNICAL FEATURES OF OIL-FREE
CENTRIFUGAL CHILLERS AND CONCEIVE:**

TR-W-Z

THE SOLUTION BEYOND THE LIMITS OF TRADITIONAL DESIGN

Drawing on over 10 years of experience in units with oil-free centrifugal compressors, TR-W-Z overcomes the limits of traditional design and presents itself as the right solution for any project and application requirements.

✓ **Countless design combinations**

to satisfy any specific project and application needs.

✓ **Wide cooling capacity range**

thanks to a coverage never seen before, from 246 kW to up to more than 4 MW.

✓ **Flexible configuration**

with the horizontal or diagonal layout of the exchangers.

✓ **Dedicated operating range**

for the installation in low or high condensing temperature applications.

✓ **Bespoke selection software**

developed for the selection of the most competitive product, without sacrificing any demands.

✓ **Brilliant full load and seasonal efficiencies**

EER exceeding 6,6 and ESEER over 10,2 (gross values).

TR-W-Z

NO COMPROMISE. THE BEST SOLUTION FOR ANY PROJECT

COUNTLESS DESIGN COMBINATIONS

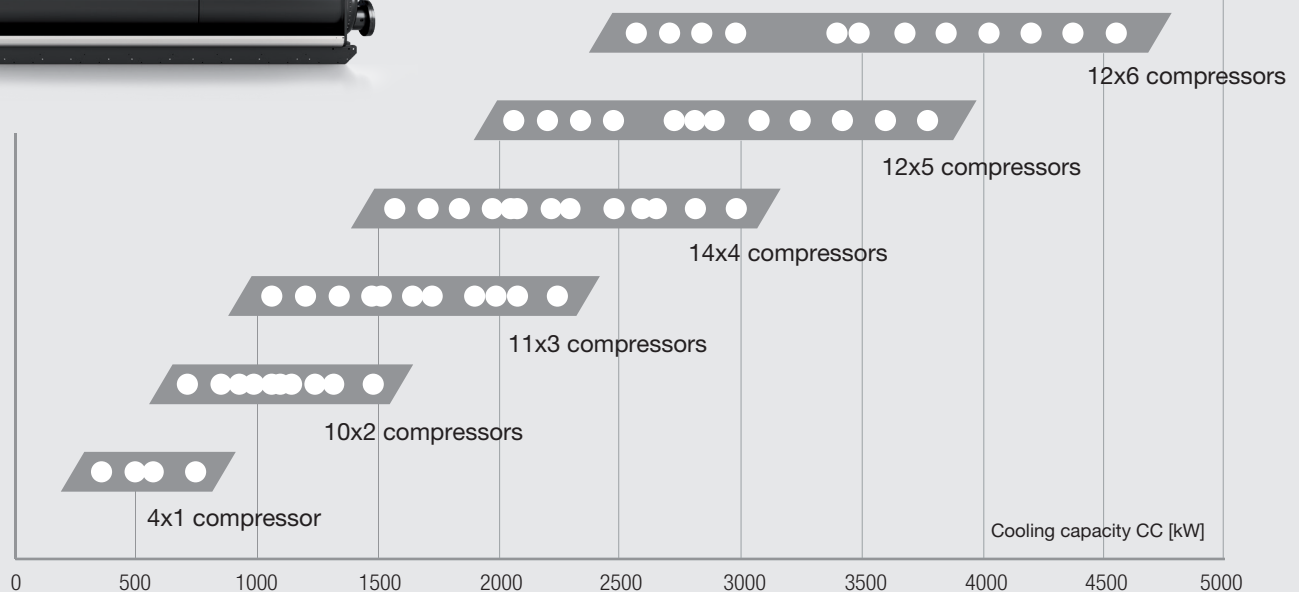
TR-W-Z is designed to host from 1 to 6 centrifugal oil-free compressors, also allowing to combine different sizes of compressors. Each set of compressors matches one of the 6 new couples of heat exchangers (flooded evaporator and shell and tube condenser) created exclusively for TR-W-Z

with the goal of reaching unequaled heat exchange performance.

The result is a range of 63 possible combinations, able to meet any specific project and application needs.



63 SIZES

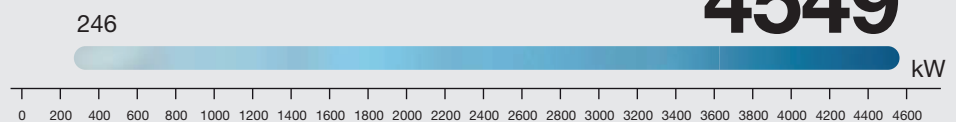


Data referred to the following working conditions: Evap. 12/7°C - Cond. 30/35°C (EN14511) - Max compr. Speed.

WIDEST RANGE OF COOLING CAPACITY

**TR-W-Z comes with a coverage never seen before:
from 246 kW to more than 4 MW.**

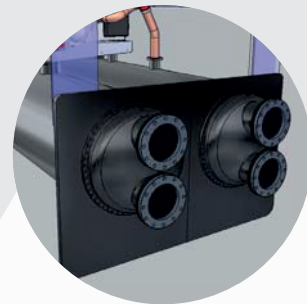
Whatever the demand for cooling capacity, this unit is the answer to all comfort, process and IT Cooling applications where utmost reliability and unbeatable performance are the key drivers.



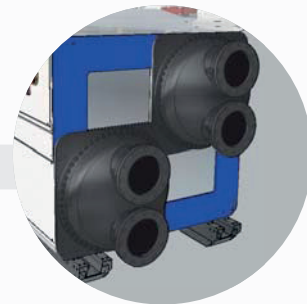
FLEXIBLE CONFIGURATION

In TR-W-Z you can choose between horizontal or diagonal layout of the heat exchangers, with dimensions that favor the overall compact size in height or in width.

The water connections of both heat exchangers can be deployed either on the right or left side, to fit the most diverse HVAC system requirements.



Heat exchangers with horizontal alignment

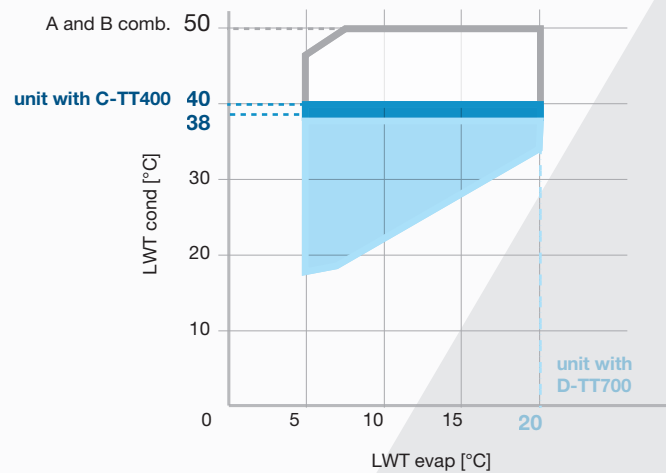


Heat exchangers with cross alignment

DEDICATED OPERATING RANGE

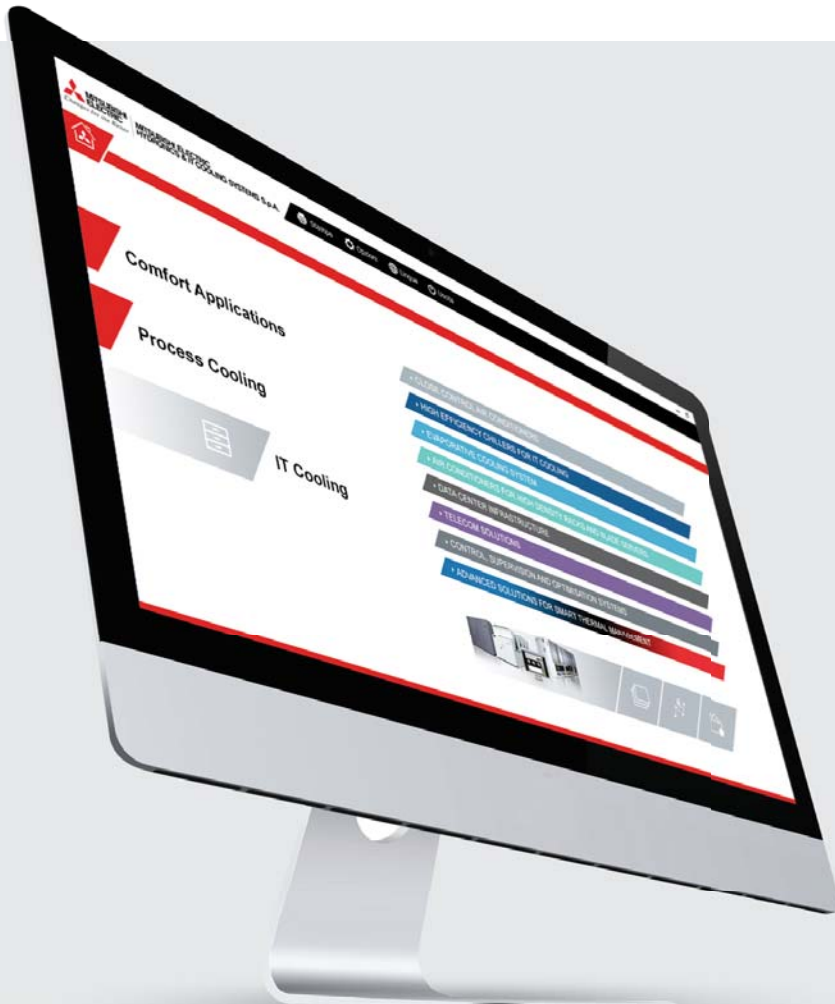
TR-W-Z features several combinations of compressors to be installed both in applications working with a low condensing temperature (cooling towers, surface water) and in systems at the highest temperature involving the use of dry coolers.

Evaporator leaving water temperature up to 20°C makes the TR-W-Z the most suitable solution for the needs of IT cooling systems and for industrial processes.



ELCAWORLD

Your targeted product selection



Thanks to the exclusive ELCA STUDIO software, TR-W-Z can be selected according to the specific customer requirements.

Whatever the cooling capacity requested, the software proposes several design alternatives:

- ✓ with a different number and type of compressor (i.e.: units with different initial investment value, different dimensions and different noise levels)
- ✓ with different capacities (from 100% meant as the maximum speed of the compressors down to 70%)
- ✓ with full load efficiency EER values greater than 6,6 *
- ✓ with seasonal efficiency ESEER values greater than 10,2 * (IPLV up to 11,2)

* gross values, @ 12/7 and 30/35°C

Whatever the value of cooling capacity, a choice of several proposals is available.

IPLV up to 11,2

The AHRAE 90.1-2013 regulation, which is usually close to the LEED protocol, establishes the minimum levels of efficiency (at full and seasonal loads) of chillers installed within the building.

The TR-W-Z efficiency levels are so high to meet and overcome all the requirements set by the law, delivering better results (values in accordance with the 'path B', valid from January 2015):

- COP Full Load Efficiency up to 26% higher than ASHRAE 90.1-2013
- IPLV Seasonal Efficiency up to 36% higher than ASHRAE 90.1-2013

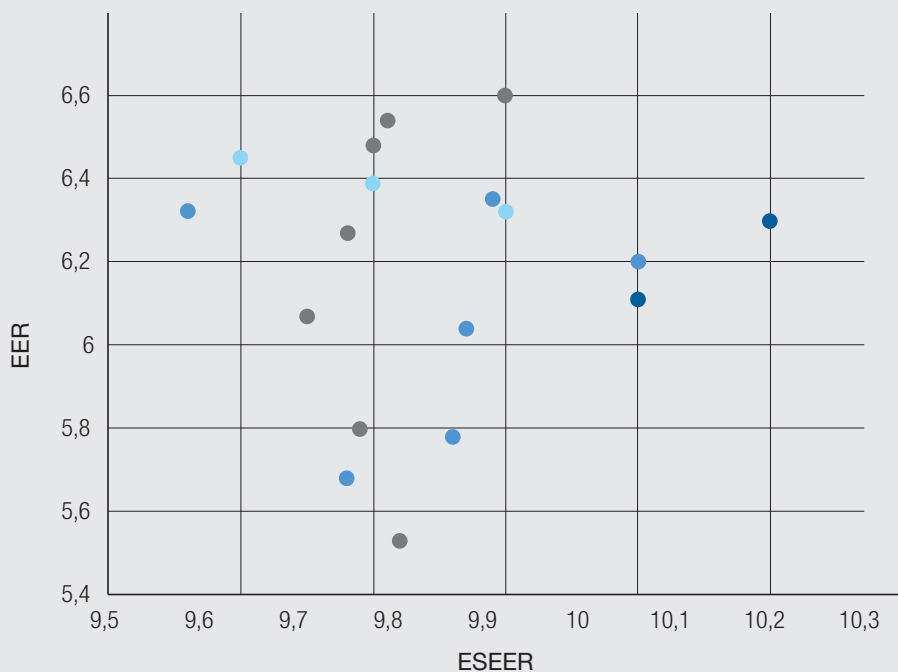
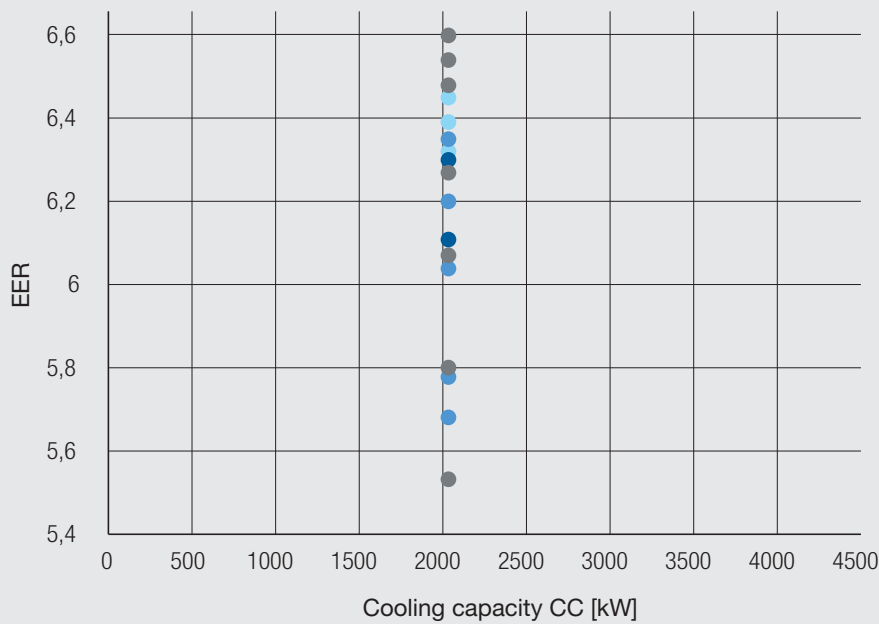
ASHRAE
90.1
compliant

COP
+26%

IPLV
+36%

Each project is different: some require top efficiency at full load while others the best initial investment, or an unrivaled seasonal performance.

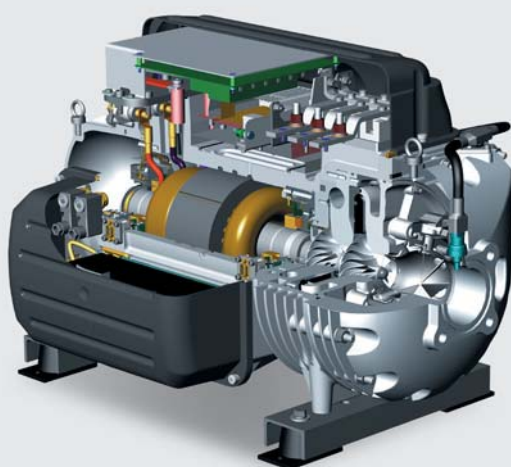
TR-W-Z is designed to cater to any needs: among the countless combinations it is always possible to find the most competitive product, without sacrificing any demands.



TECHNOLOGICAL CHOICES

Negligible inrush current, quiet operation, unrivalled efficiency and extreme flexibility comes out from a definite choice: only cutting-edge technologies.

Centrifugal oil-free compressor



The expertise makes the difference

These top level technology compressors bring enormous benefits in terms of efficiency, adjustments, vibrations and weight. Magnetic levitation eliminates the need for lubricant, its delicate management and its heat exchange loss.

Soft start, integrated in the compressors, lowers the inrush current to only 2 Amps, making the selection of power line systems more favourable.

Thorough knowledge is necessary to harness such a concentration of technology and here is where RC brand really makes the difference thanks to its 10 years of experience in magnetic levitation compressor units and thousands of projects all over the world.

Innovative exchanger couples

Minimal approaches for maximum results

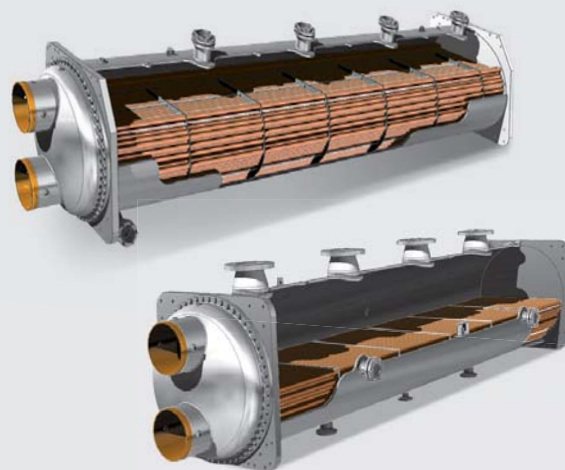
The excellent performance of oil-free centrifugal compressors are enhanced by matching them with 6 totally new heat exchanger couples (flooded evaporator and shell and tube condenser) designed to ensure the most minimal approach between the refrigerant phase changing and the water.

This allows the enhancement of the cooling capacity and the reduction of the compression work, with immediate benefit to overall efficiency.

The flooded evaporator is designed to ensure a perfect and uniform evaporation of refrigerant, without devoting any surface to the overheating (inside the shell, the boiling refrigerant finds a great amount of free room to eliminate even the minimum liquid entrainment). Generous size connections are selected, to minimize any penalization due to pressure drops.



The complete flooding of all the pipes is guaranteed, even during partialization, by the control algorithms on the expansion valve.

Even the condenser is designed for the minimum pressure drops, both in the water and refrigerant sides. The space is so well thought out that even inclined connections have been made to limit the length of the refrigerant discharge pipes.



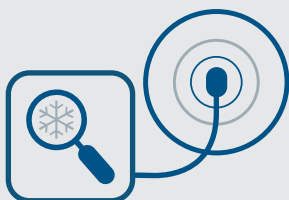
Acoustic enclosure

The already minimal noise emissions of TR-W-Z units can be further reduced by choosing the option "acoustic enclosure", available in two variants:

 Standard -14 dB(A)  Integral -18 dB(A)



Gas detector device



TR-W-Z can be equipped with a gas detector to signal the presence of refrigerant in a closed environment. The detector has a double-threshold and can deactivate the compressors and disconnect the exchangers.

Fast restart

In some applications it is crucial to ensure the rapid restoration of cooling capacity after an interruption in power supply (black -out). The fast restart option allows for the restart of the compressors within 26" seconds after power is restored and the rapid re-entry into full operation (e.g.: unit mod. 2D00 comes back to provide 1300 kW in just 6 minutes after voltage dip).



Immediate cooling start-up

Accelerated cooling ramp-up

1300 kW are delivered within 6' after a voltage dip.

THDi and Power Factor



The careful design of electrical and electronic components and the use of specific solutions, such as compressor line reactors (std) and power factor correction capacitors (opt), reduce the THDi (Total Harmonic Distortion of current) and increase the unit's Power Factor. To fit even the most demanding requirements, modular active harmonic filters can be added to cut the THDi down to values below 5%.

HFO refrigerant

In line with the most severe environmental regulations, TR-W-Z is also available with the new green HFO 1234ze refrigerant. A solution that complies with the highest efficiency targets required by the most prestigious projects, whilst offering an eco-friendly alternative to HFCs.

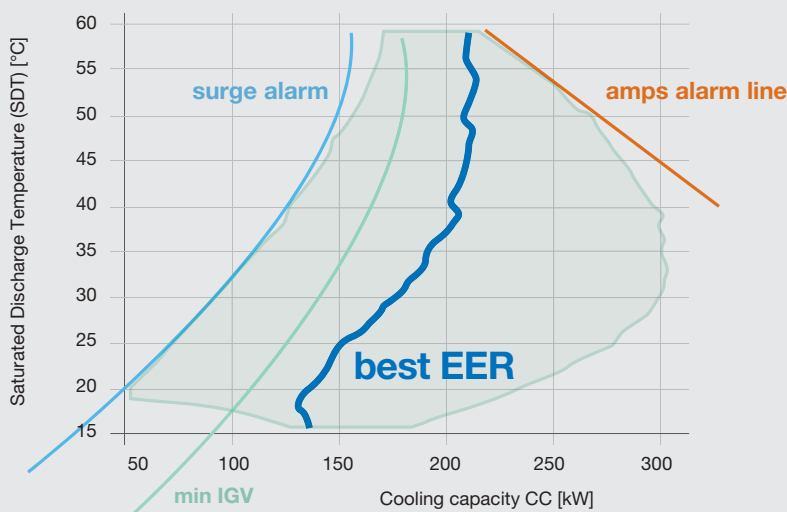


CX4

The evolution in the world of controls

TR-W-Z can count on the brand-new CX4 controller with exclusive hardware and software optimally designed to master the magnetic levitation technology.

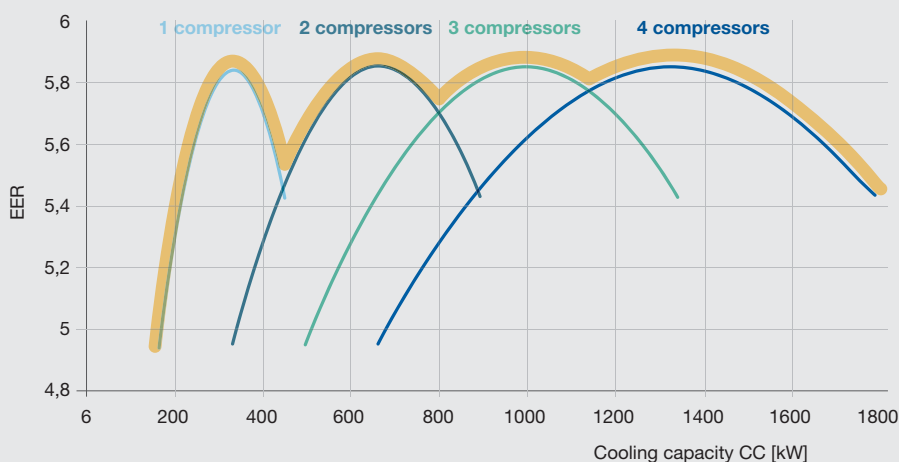
TOTAL RELIABILITY



The brand-new logic, created for CX4, optimally manages the correct compression ratio, the rotation speed, the position of IGV (Inlet Guide Vane) and the opening of the by-pass valve.

All this to ensure that the compressors are always - during start-up, in operation, in response to the thermoregulator and during shutdown - in a full safety work area (away from the limits of the "surge" and "amps").

SMART COMPRESSORS' MANAGEMENT



CX4 constantly monitors the compressor: the cooling capacity required by the thermoregulator is achieved by making the compressor work only in the envelope's area with the highest efficiency (curve "best EER").

In units with multiple compressors, CX4 employs the exclusive 'jumping staging' logic, enabling, during partialization, only the most efficient combination of compressors.

Always the best efficiency (Best EER)

CUSTOMIZED TOUCH SCREEN INTERFACE

CX4 comes with a highly personalized interface: a large color 13" touch screen, with interactive pages whose graphics have been created exclusively for TR-W-Z.

The home page shows the immediate labor status of the units and of its main operating parameters, whereas every available function is accurately described by dedicated tooltip.



Specific detail screens allow:

- ✓ Deepening of the variables related to compressors, heat exchangers, the cooling circuit and water pumps.
- ✓ Dynamic view of the unit's operating point within the specified operating limits.

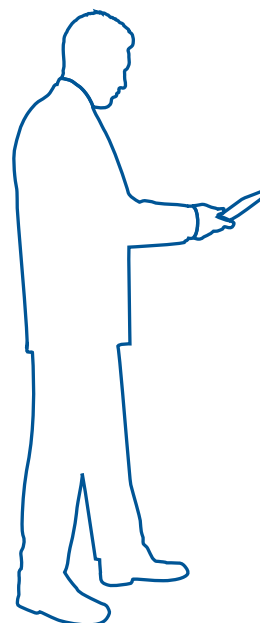


The interface allows for easy unit intervention (the safe access to data is ensured by three different password levels), and the graphic display of the monitored values. A dedicated section for the trouble shooting is also available.



KIPLink The keyboard in your pocket

KIPLink allows direct access to the CX4 controller: even possible without traditional interface, thanks to the wi-fi technology, the unit can be operated directly from any mobile device (tablet, smartphone, PC) that displays the same touch interface screens.



TR-W-Z

1A00-6D00

High efficiency water cooled chiller, with oil-free centrifugal compressors. 246-4549 kW



| TR-W-Z | | 1A00 | 1B00 | 1B1A | 1B2A | 1B3A | 1C00 | 1C1A | 1C1B | 1C3B |
|--|--------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 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 |
| PERFORMANCE | | | | | | | | | | |
| COOLING ONLY (GROSS VALUE) | | | | | | | | | | |
| Cooling capacity | (1) kW | 357 | 494 | 850 | 1201 | 1566 | 572 | 927 | 1063 | 2054 |
| Total power input | (1) kW | 68,4 | 90,1 | 160 | 234 | 294 | 99,2 | 168 | 189 | 365 |
| EER | (1) kW/kW | 5,21 | 5,49 | 5,33 | 5,13 | 5,33 | 5,77 | 5,52 | 5,61 | 5,63 |
| COOLING ONLY (EN14511 VALUE) | | | | | | | | | | |
| Cooling capacity | (1)(2) kW | 355 | 493 | 847 | 1197 | 1560 | 570 | 924 | 1059 | 2045 |
| EER | (1)(2) kW/kW | 5,01 | 5,27 | 5,09 | 4,95 | 5,09 | 5,55 | 5,29 | 5,37 | 5,36 |
| Cooling energy class | | A | A | A | A | A | A | A | A | - |
| SEPR HT | (3)(4) | 11,77 | 11,60 | 11,67 | 11,45 | 11,66 | 11,59 | 11,81 | 11,68 | - |
| COOLING ONLY | | | | | | | | | | |
| 16°C/10°C | | | | | | | | | | |
| Cooling capacity | (5) kW | 376 | 517 | 894 | 1271 | 1646 | 614 | 988 | 1130 | 2165 |
| Total power input | (5) kW | 66,5 | 85,1 | 153 | 228 | 283 | 97,4 | 164 | 182 | 345 |
| EER | (5) kW/kW | 5,66 | 6,08 | 5,83 | 5,58 | 5,82 | 6,30 | 6,03 | 6,20 | 6,27 |
| 23°C/15°C | | | | | | | | | | |
| Cooling capacity | (6) kW | 387 | 521 | 911 | 1316 | 1676 | 658 | 1045 | 1182 | 2220 |
| Total power input | (6) kW | 58,5 | 70,8 | 131 | 201 | 243 | 89,0 | 147 | 160 | 292 |
| EER | (6) kW/kW | 6,62 | 7,36 | 6,95 | 6,56 | 6,89 | 7,40 | 7,09 | 7,40 | 7,60 |
| EXCHANGERS | | | | | | | | | | |
| HEAT EXCHANGER USER SIDE IN REFRIGERATION | | | | | | | | | | |
| Water flow | (1) l/s | 17,05 | 23,64 | 40,65 | 57,45 | 74,90 | 27,36 | 44,33 | 50,85 | 98,24 |
| Pressure drop | (1)(2) kPa | 40,2 | 40,0 | 54,6 | 45,3 | 64,0 | 37,3 | 53,2 | 53,3 | 75,0 |
| HEAT EXCHANGER SOURCE SIDE IN REFRIGERATION | | | | | | | | | | |
| Water flow | (1) l/s | 20,25 | 27,86 | 48,12 | 68,38 | 88,63 | 32,02 | 52,19 | 59,73 | 115,33 |
| Pressure drop | (1)(2) kPa | 39,0 | 38,9 | 45,9 | 43,6 | 50,9 | 37,2 | 43,8 | 43,0 | 50,0 |
| REFRIGERANT CIRCUIT | | | | | | | | | | |
| Compressors nr. | N° | 1 | 1 | 2 | 3 | 4 | 1 | 2 | 2 | 4 |
| No. Circuits | N° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Refrigerant charge | kg | 160 | 175 | 315 | 580 | 690 | 185 | 330 | 340 | 940 |
| NOISE LEVEL | | | | | | | | | | |
| Sound Pressure | (7) dB(A) | 75 | 76 | 76 | 78 | 78 | 77 | 77 | 77 | 79 |
| Sound power level in cooling | (8)(9) dB(A) | 93 | 94 | 95 | 97 | 98 | 95 | 96 | 96 | 99 |
| SIZE AND WEIGHT | | | | | | | | | | |
| A | (10) mm | 2910 | 2910 | 3050 | 3710 | 4690 | 2910 | 3050 | 3050 | 4720 |
| B | (10) mm | 1000 | 1000 | 1620 | 1710 | 1890 | 1000 | 1620 | 1620 | 1890 |
| H | (10) mm | 1950 | 1950 | 2190 | 2260 | 2400 | 1950 | 2190 | 2190 | 2400 |
| Operating weight | (10) kg | 2690 | 2800 | 5200 | 7590 | 9320 | 2880 | 5280 | 5410 | 11010 |

1 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger water (in/out) 30°C/35°C.

2 Values in compliance with EN14511-3:2013.

3 Seasonal space heating energy index

4 Seasonal energy efficiency of high temperature process cooling [REGULATION (EU) N. 2016/2281]

5 User side heat exchanger water temperature (in/out) 15°C/10°C; source side heat exchanger water temperature (in/out) 30°C/35°C.

6 User side heat exchanger water temperature (in/out) 23°C/15°C; source side heat exchanger water temperature (in/out) 30°C/35°C.

7 Average sound pressure level at 1m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.

8 Sound power on the basis of measurements made in compliance with ISO 9614.

9 Sound power level in cooling, indoors.

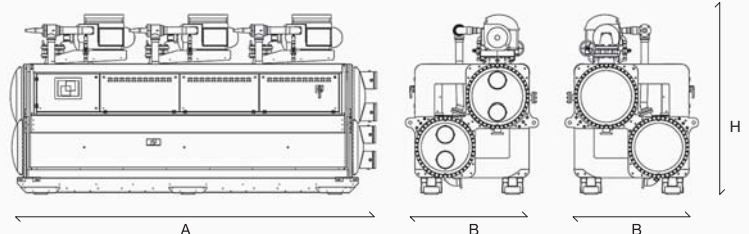
10 Unit in standard configuration/execution, without optional accessories.

The units highlighted in this publication contain HFC R134a [GWP₁₀₀ 1430] fluorinated greenhouse gases.

Certified data in EUROVENT

Accessories:

- ▶ Integral acoustic enclosure (type base or plus)
- ▶ VPF (Variable Primary Flow) system
- ▶ Set-up for remote connectivity with ModBus/Echelon protocol cards
- ▶ Several devices for condensation control
- ▶ Fast restart
- ▶ Filters kit for conformity to EN 61000-6-3 (residential environments)



| TR-W-Z | | | 1D00 | 1D1A | 1D1B | 1D1C | 1D2C | 1D3C | 1D4C | 1D5C | 2A00 |
|--|--------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 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 |
| PERFORMANCE | | | | | | | | | | | |
| COOLING ONLY (GROSS VALUE) | | | | | | | | | | | |
| Cooling capacity | (1) | kW | 744 | 1098 | 1235 | 1315 | 1901 | 2475 | 3076 | 3677 | 713 |
| Total power input | (1) | kW | 122 | 190 | 213 | 223 | 321 | 421 | 517 | 611 | 138 |
| EER | (1) | kW/kW | 6,12 | 5,77 | 5,81 | 5,91 | 5,91 | 5,87 | 5,95 | 6,02 | 5,19 |
| COOLING ONLY (EN14511 VALUE) | | | | | | | | | | | |
| Cooling capacity | (1)(2) | kW | 742 | 1093 | 1230 | 1310 | 1893 | 2463 | 3060 | 3659 | 711 |
| EER | (1)(2) | kW/kW | 5,82 | 5,48 | 5,52 | 5,62 | 5,61 | 5,57 | 5,60 | 5,67 | 4,97 |
| Cooling energy class | | | A | A | A | A | A | - | - | - | A |
| SEPR HT | (3)(4) | | 11,70 | 11,68 | 11,61 | 11,59 | 12,04 | - | - | - | 11,62 |
| COOLING ONLY | | | | | | | | | | | |
| 16°C/10°C | | | | | | | | | | | |
| Cooling capacity | (5) | kW | 792 | 1169 | 1309 | 1405 | 2027 | 2640 | 3269 | 3899 | 753 |
| Total power input | (5) | kW | 117 | 184 | 203 | 216 | 312 | 410 | 499 | 587 | 134 |
| EER | (5) | kW/kW | 6,77 | 6,35 | 6,45 | 6,49 | 6,51 | 6,45 | 6,55 | 6,64 | 5,62 |
| 23°C/15°C | | | | | | | | | | | |
| Cooling capacity | (6) | kW | 803 | 1194 | 1330 | 1464 | 2116 | 2772 | 3413 | 4054 | 776 |
| Total power input | (6) | kW | 98,3 | 158 | 170 | 190 | 274 | 363 | 437 | 510 | 118 |
| EER | (6) | kW/kW | 8,17 | 7,58 | 7,83 | 7,72 | 7,73 | 7,65 | 7,81 | 7,94 | 6,56 |
| EXCHANGERS | | | | | | | | | | | |
| HEAT EXCHANGER USER SIDE IN REFRIGERATION | | | | | | | | | | | |
| Water flow | (1) | l/s | 35,60 | 52,50 | 59,08 | 62,90 | 90,92 | 118,35 | 147,10 | 175,86 | 34,12 |
| Pressure drop | (1)(2) | kPa | 49,3 | 61,8 | 63,3 | 61,5 | 67,5 | 79,9 | 92,5 | 84,2 | 44,5 |
| HEAT EXCHANGER SOURCE SIDE IN REFRIGERATION | | | | | | | | | | | |
| Water flow | (1) | l/s | 41,31 | 61,42 | 69,05 | 73,35 | 106,01 | 138,13 | 171,36 | 204,55 | 40,55 |
| Pressure drop | (1)(2) | kPa | 48,7 | 51,3 | 51,3 | 49,5 | 56,8 | 51,9 | 60,9 | 70,5 | 47,9 |
| REFRIGERANT CIRCUIT | | | | | | | | | | | |
| Compressors nr. | | N° | 1 | 2 | 2 | 2 | 3 | 4 | 5 | 6 | 2 |
| No. Circuits | | N° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Refrigerant charge | | kg | 190 | 340 | 350 | 360 | 685 | 975 | 1205 | 1510 | 230 |
| NOISE LEVEL | | | | | | | | | | | |
| Sound Pressure | (7) | dB(A) | 78 | 78 | 78 | 78 | 79 | 79 | 79 | 80 | 76 |
| Sound power level in cooling | (8)(9) | dB(A) | 96 | 97 | 97 | 97 | 99 | 99 | 100 | 101 | 95 |
| SIZE AND WEIGHT | | | | | | | | | | | |
| A | (10) | mm | 2910 | 3050 | 3050 | 3050 | 4690 | 4720 | 5700 | 6610 | 2910 |
| B | (10) | mm | 1000 | 1620 | 1620 | 1620 | 1660 | 1890 | 2350 | 2400 | 1560 |
| H | (10) | mm | 1950 | 2190 | 2190 | 2190 | 2260 | 2400 | 2400 | 2450 | 2190 |
| Operating weight | (10) | kg | 2950 | 5350 | 5340 | 5420 | 8810 | 11410 | 15330 | 20580 | 4070 |

| TR-W-Z | | | 2B00 | 2B1A | 2B2A | 2B3A | 2C00 | 2C1A | 2C1B | 2D00 | 2D1B |
|--|--------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 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 |
| PERFORMANCE | | | | | | | | | | | |
| COOLING ONLY (GROSS VALUE) | | | | | | | | | | | |
| Cooling capacity | (1) | kW | 987 | 1341 | 1702 | 2063 | 1141 | 1506 | 1642 | 1485 | 1988 |
| Total power input | (1) | kW | 181 | 257 | 314 | 378 | 199 | 265 | 286 | 244 | 331 |
| EER | (1) | kW/kW | 5,45 | 5,22 | 5,41 | 5,46 | 5,73 | 5,67 | 5,74 | 6,08 | 6,01 |
| COOLING ONLY (EN14511 VALUE) | | | | | | | | | | | |
| Cooling capacity | (1)(2) | kW | 983 | 1337 | 1694 | 2052 | 1137 | 1500 | 1635 | 1478 | 1979 |
| EER | (1)(2) | kW/kW | 5,21 | 5,03 | 5,15 | 5,16 | 5,49 | 5,41 | 5,47 | 5,75 | 5,66 |
| Cooling energy class | | | A | A | A | - | A | A | A | A | A |
| SEPR HT | (3)(4) | | 11,60 | 11,34 | 11,56 | - | 11,42 | 11,68 | 11,69 | 11,69 | 11,67 |
| COOLING ONLY | | | | | | | | | | | |
| 16°C/10°C | | | | | | | | | | | |
| Cooling capacity | (5) | kW | 1034 | 1414 | 1784 | 2157 | 1224 | 1606 | 1747 | 1584 | 2102 |
| Total power input | (5) | kW | 172 | 247 | 300 | 359 | 196 | 259 | 276 | 236 | 315 |
| EER | (5) | kW/kW | 6,03 | 5,71 | 5,94 | 6,00 | 6,26 | 6,20 | 6,33 | 6,71 | 6,68 |
| 23°C/15°C | | | | | | | | | | | |
| Cooling capacity | (6) | kW | 1045 | 1453 | 1806 | 2172 | 1315 | 1700 | 1836 | 1613 | 2118 |
| Total power input | (6) | kW | 143 | 214 | 254 | 301 | 179 | 232 | 244 | 200 | 261 |
| EER | (6) | kW/kW | 7,29 | 6,79 | 7,11 | 7,21 | 7,33 | 7,31 | 7,53 | 8,08 | 8,11 |
| EXCHANGERS | | | | | | | | | | | |
| HEAT EXCHANGER USER SIDE IN REFRIGERATION | | | | | | | | | | | |
| Water flow | (1) | l/s | 47,20 | 64,12 | 81,39 | 98,67 | 54,56 | 72,00 | 78,54 | 71,00 | 95,06 |
| Pressure drop | (1)(2) | kPa | 54,6 | 43,2 | 75,5 | 92,1 | 52,1 | 63,2 | 62,4 | 67,9 | 77,3 |
| HEAT EXCHANGER SOURCE SIDE IN REFRIGERATION | | | | | | | | | | | |
| Water flow | (1) | l/s | 55,69 | 76,13 | 96,10 | 116,35 | 63,90 | 84,44 | 91,96 | 82,48 | 110,61 |
| Pressure drop | (1)(2) | kPa | 44,6 | 42,1 | 51,5 | 59,6 | 41,8 | 50,8 | 49,3 | 56,4 | 61,8 |
| REFRIGERANT CIRCUIT | | | | | | | | | | | |
| Compressors nr. | | N° | 2 | 3 | 4 | 5 | 2 | 3 | 3 | 2 | 3 |
| No. Circuits | | N° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Refrigerant charge | | kg | 330 | 610 | 900 | 1090 | 350 | 650 | 670 | 370 | 685 |
| NOISE LEVEL | | | | | | | | | | | |
| Sound Pressure | (7) | dB(A) | 77 | 78 | 78 | 78 | 78 | 78 | 78 | 79 | 79 |
| Sound power level in cooling | (8)(9) | dB(A) | 96 | 97 | 98 | 99 | 97 | 98 | 98 | 98 | 99 |
| SIZE AND WEIGHT | | | | | | | | | | | |
| A | (10) | mm | 3050 | 3710 | 4720 | 5700 | 3050 | 4690 | 4690 | 3050 | 4690 |
| B | (10) | mm | 1620 | 1710 | 1890 | 2350 | 1620 | 1660 | 1660 | 1620 | 1660 |
| H | (10) | mm | 2190 | 2260 | 2400 | 2400 | 2190 | 2260 | 2260 | 2190 | 2260 |
| Operating weight | (10) | kg | 5340 | 7750 | 10610 | 13850 | 5330 | 8470 | 8700 | 5310 | 8810 |



TR-W-Z 1A00-6D00

High efficiency water cooled chiller, with oil-free centrifugal compressors. 246-4549 kW

| TR-W-Z | | | 2D1C | 2D2B | 2D2C | 2D3C | 2D4C | 3A00 | 3B00 | 3B1A | 3B2A |
|--|--------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 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 |
| PERFORMANCE | | | | | | | | | | | |
| COOLING ONLY (GROSS VALUE) | | | | | | | | | | | |
| Cooling capacity | (1) | kW | 2070 | 2479 | 2646 | 3249 | 3852 | 1062 | 1480 | 1839 | 2200 |
| Total power input | (1) | kW | 342 | 420 | 442 | 538 | 631 | 210 | 281 | 336 | 398 |
| EER | (1) | kW/kW | 6,05 | 5,90 | 5,99 | 6,04 | 6,11 | 5,05 | 5,27 | 5,47 | 5,52 |
| COOLING ONLY (EN14511 VALUE) | | | | | | | | | | | |
| Cooling capacity | (1)(2) | kW | 2060 | 2467 | 2633 | 3231 | 3833 | 1059 | 1476 | 1830 | 2188 |
| EER | (1)(2) | kW/kW | 5,71 | 5,58 | 5,66 | 5,67 | 5,74 | 4,87 | 5,09 | 5,20 | 5,22 |
| Cooling energy class | | | - | - | - | - | - | A | A | A | - |
| SEPR HT | (3)(4) | | - | - | - | - | - | 11,48 | 11,35 | 11,57 | - |
| COOLING ONLY | | | | | | | | | | | |
| 16°C/10°C | | | | | | | | | | | |
| Cooling capacity | (5) | kW | 2201 | 2617 | 2816 | 3444 | 4068 | 1129 | 1557 | 1925 | 2295 |
| Total power input | (5) | kW | 330 | 398 | 427 | 516 | 603 | 207 | 268 | 319 | 377 |
| EER | (5) | kW/kW | 6,68 | 6,57 | 6,59 | 6,67 | 6,75 | 5,45 | 5,82 | 6,03 | 6,10 |
| 23°C/15°C | | | | | | | | | | | |
| Cooling capacity | (6) | kW | 2256 | 2638 | 2913 | 3548 | 4178 | 1178 | 1591 | 1942 | 2302 |
| Total power input | (6) | kW | 282 | 330 | 370 | 444 | 515 | 186 | 228 | 267 | 312 |
| EER | (6) | kW/kW | 8,01 | 8,00 | 7,87 | 7,99 | 8,11 | 6,32 | 6,98 | 7,27 | 7,37 |
| EXCHANGERS | | | | | | | | | | | |
| HEAT EXCHANGER USER SIDE IN REFRIGERATION | | | | | | | | | | | |
| Water flow | (1) | l/s | 98,99 | 118,57 | 126,54 | 155,39 | 184,20 | 50,81 | 70,76 | 87,96 | 105,23 |
| Pressure drop | (1)(2) | kPa | 76,2 | 83,8 | 83,0 | 97,0 | 87,9 | 45,2 | 43,5 | 74,2 | 90,4 |
| HEAT EXCHANGER SOURCE SIDE IN REFRIGERATION | | | | | | | | | | | |
| Water flow | (1) | l/s | 115,07 | 138,28 | 147,30 | 180,64 | 213,84 | 60,62 | 83,88 | 103,71 | 123,88 |
| Pressure drop | (1)(2) | kPa | 60,1 | 57,0 | 53,4 | 63,4 | 71,1 | 43,3 | 42,9 | 50,2 | 59,7 |
| REFRIGERANT CIRCUIT | | | | | | | | | | | |
| Compressors nr. | | N° | 3 | 4 | 4 | 5 | 6 | 3 | 3 | 4 | 5 |
| No. Circuits | | N° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Refrigerant charge | | kg | 685 | 975 | 995 | 1220 | 1520 | 565 | 625 | 910 | 1105 |
| NOISE LEVEL | | | | | | | | | | | |
| Sound Pressure | (7) | dB(A) | 79 | 79 | 80 | 79 | 80 | 77 | 78 | 78 | 78 |
| Sound power level in cooling | (8)(9) | dB(A) | 99 | 99 | 100 | 100 | 101 | 96 | 97 | 98 | 99 |
| SIZE AND WEIGHT | | | | | | | | | | | |
| A | (10) | mm | 4690 | 4720 | 4720 | 5700 | 6610 | 3710 | 3710 | 4720 | 5700 |
| B | (10) | mm | 1660 | 1890 | 1890 | 2350 | 2400 | 1710 | 1710 | 1890 | 2350 |
| H | (10) | mm | 2260 | 2400 | 2400 | 2400 | 2450 | 2260 | 2260 | 2400 | 2400 |
| Operating weight | (10) | kg | 8880 | 11250 | 11450 | 15420 | 20750 | 7440 | 7370 | 10740 | 14050 |

| TR-W-Z | | | 3B3A | 3C00 | 3C1A | 3C1B | 3C2B | 3D00 | 3D1A | 3D1C | 3D2C |
|--|--------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 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 |
| PERFORMANCE | | | | | | | | | | | |
| COOLING ONLY (GROSS VALUE) | | | | | | | | | | | |
| Cooling capacity | (1) | kW | 2562 | 1721 | 2076 | 2214 | 2724 | 2240 | 2594 | 2817 | 3423 |
| Total power input | (1) | kW | 458 | 297 | 364 | 385 | 469 | 363 | 431 | 463 | 558 |
| EER | (1) | kW/kW | 5,59 | 5,80 | 5,70 | 5,76 | 5,81 | 6,17 | 6,02 | 6,09 | 6,13 |
| COOLING ONLY (EN14511 VALUE) | | | | | | | | | | | |
| Cooling capacity | (1)(2) | kW | 2549 | 1714 | 2067 | 2204 | 2711 | 2229 | 2580 | 2803 | 3404 |
| EER | (1)(2) | kW/kW | 5,28 | 5,53 | 5,42 | 5,48 | 5,49 | 5,80 | 5,67 | 5,74 | 5,73 |
| Cooling energy class | | | - | A | - | - | - | - | - | - | - |
| SEPR HT | (3)(4) | | - | 11,81 | - | - | - | - | - | - | - |
| COOLING ONLY | | | | | | | | | | | |
| 16°C/10°C | | | | | | | | | | | |
| Cooling capacity | (5) | kW | 2666 | 1844 | 2217 | 2359 | 2885 | 2377 | 2752 | 2992 | 3620 |
| Total power input | (5) | kW | 432 | 291 | 356 | 373 | 449 | 348 | 413 | 445 | 534 |
| EER | (5) | kW/kW | 6,17 | 6,34 | 6,23 | 6,33 | 6,42 | 6,84 | 6,66 | 6,72 | 6,78 |
| 23°C/15°C | | | | | | | | | | | |
| Cooling capacity | (6) | kW | 2660 | 1974 | 2355 | 2492 | 3000 | 2398 | 2782 | 3053 | 3683 |
| Total power input | (6) | kW | 356 | 265 | 321 | 332 | 389 | 290 | 347 | 378 | 451 |
| EER | (6) | kW/kW | 7,47 | 7,45 | 7,33 | 7,51 | 7,70 | 8,27 | 8,02 | 8,08 | 8,16 |
| EXCHANGERS | | | | | | | | | | | |
| HEAT EXCHANGER USER SIDE IN REFRIGERATION | | | | | | | | | | | |
| Water flow | (1) | l/s | 122,50 | 82,30 | 99,27 | 105,86 | 130,28 | 107,14 | 124,07 | 134,72 | 163,68 |
| Pressure drop | (1)(2) | kPa | 83,6 | 61,4 | 72,8 | 72,6 | 83,6 | 80,3 | 91,8 | 87,0 | 101 |
| HEAT EXCHANGER SOURCE SIDE IN REFRIGERATION | | | | | | | | | | | |
| Water flow | (1) | l/s | 143,97 | 96,22 | 116,35 | 123,90 | 152,27 | 124,21 | 144,30 | 156,47 | 189,93 |
| Pressure drop | (1)(2) | kPa | 67,2 | 50,4 | 49,1 | 47,7 | 60,1 | 66,0 | 59,4 | 57,1 | 70,1 |
| REFRIGERANT CIRCUIT | | | | | | | | | | | |
| Compressors nr. | | N° | 6 | 3 | 4 | 4 | 5 | 3 | 4 | 4 | 5 |
| No. Circuits | | N° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Refrigerant charge | | kg | 1390 | 670 | 940 | 965 | 1180 | 705 | 975 | 1015 | 1230 |
| NOISE LEVEL | | | | | | | | | | | |
| Sound Pressure | (7) | dB(A) | 79 | 78 | 79 | 79 | 79 | 79 | 80 | 80 | 80 |
| Sound power level in cooling | (8)(9) | dB(A) | 100 | 98 | 99 | 99 | 100 | 99 | 100 | 100 | 101 |
| SIZE AND WEIGHT | | | | | | | | | | | |
| A | (10) | mm | 6610 | 4690 | 4720 | 4720 | 5700 | 4690 | 4720 | 4720 | 5700 |
| B | (10) | mm | 2400 | 1660 | 1890 | 1890 | 2350 | 1660 | 1890 | 1890 | 2350 |
| H | (10) | mm | 2450 | 2260 | 2400 | 2400 | 2400 | 2260 | 2400 | 2400 | 2400 |
| Operating weight | (10) | kg | 18670 | 8700 | 11010 | 11210 | 14910 | 9010 | 11250 | 11580 | 15500 |



| TR-W-Z | | | 3D3C | 4B00 | 4B1A | 4B2A | 4C00 | 4C1B | 4D00 | 4D1C | 4D2C |
|--|--------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 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 |
| PERFORMANCE | | | | | | | | | | | |
| COOLING ONLY (GROSS VALUE) | | | | | | | | | | | |
| Cooling capacity | (1) | kW | 4026 | 1978 | 2337 | 2700 | 2294 | 2806 | 2985 | 3596 | 4200 |
| Total power input | (1) | kW | 651 | 358 | 419 | 477 | 395 | 480 | 484 | 578 | 670 |
| EER | (1) | kW/kW | 6,19 | 5,53 | 5,58 | 5,65 | 5,80 | 5,85 | 6,16 | 6,22 | 6,26 |
| COOLING ONLY (EN14511 VALUE) | | | | | | | | | | | |
| Cooling capacity | (1)(2) | kW | 4006 | 1969 | 2325 | 2687 | 2284 | 2792 | 2969 | 3575 | 4178 |
| EER | (1)(2) | kW/kW | 5,81 | 5,26 | 5,28 | 5,33 | 5,52 | 5,52 | 5,78 | 5,81 | 5,86 |
| Cooling energy class | | | - | A | - | - | - | - | - | - | - |
| SEPR HT | (3)(4) | | - | 11,59 | - | - | - | - | - | - | - |
| COOLING ONLY | | | | | | | | | | | |
| 16°C/10°C | | | | | | | | | | | |
| Cooling capacity | (5) | kW | 4238 | 2066 | 2433 | 2806 | 2456 | 2985 | 3169 | 3793 | 4407 |
| Total power input | (5) | kW | 618 | 337 | 393 | 448 | 387 | 464 | 464 | 550 | 634 |
| EER | (5) | kW/kW | 6,86 | 6,13 | 6,18 | 6,27 | 6,34 | 6,43 | 6,83 | 6,89 | 6,96 |
| 23°C/15°C | | | | | | | | | | | |
| Cooling capacity | (6) | kW | 4300 | 2074 | 2431 | 2790 | 2628 | 3141 | 3198 | 3813 | 4423 |
| Total power input | (6) | kW | 519 | 279 | 323 | 366 | 353 | 410 | 388 | 457 | 524 |
| EER | (6) | kW/kW | 8,28 | 7,44 | 7,53 | 7,62 | 7,45 | 7,66 | 8,25 | 8,35 | 8,45 |
| EXCHANGERS | | | | | | | | | | | |
| HEAT EXCHANGER USER SIDE IN REFRIGERATION | | | | | | | | | | | |
| Water flow | (1) | l/s | 192,54 | 94,58 | 111,77 | 129,13 | 109,68 | 134,20 | 142,74 | 171,96 | 200,86 |
| Pressure drop | (1)(2) | kPa | 91,3 | 73,0 | 87,4 | 84,3 | 71,7 | 86,4 | 95,1 | 107 | 94,1 |
| HEAT EXCHANGER SOURCE SIDE IN REFRIGERATION | | | | | | | | | | | |
| Water flow | (1) | l/s | 223,13 | 111,34 | 131,38 | 151,51 | 128,23 | 156,71 | 165,52 | 199,16 | 232,41 |
| Pressure drop | (1)(2) | kPa | 71,0 | 49,8 | 58,2 | 68,4 | 49,0 | 60,5 | 63,9 | 66,8 | 77,0 |
| REFRIGERANT CIRCUIT | | | | | | | | | | | |
| Compressors nr. | | N° | 6 | 4 | 5 | 6 | 4 | 5 | 4 | 5 | 6 |
| No. Circuits | | N° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Refrigerant charge | | kg | 1540 | 940 | 1125 | 1405 | 975 | 1185 | 1015 | 1235 | 1550 |
| NOISE LEVEL | | | | | | | | | | | |
| Sound Pressure | (7) | dB(A) | 80 | 78 | 78 | 79 | 79 | 79 | 80 | 80 | 80 |
| Sound power level in cooling | (8)(9) | dB(A) | 101 | 98 | 99 | 100 | 99 | 100 | 100 | 101 | 101 |
| SIZE AND WEIGHT | | | | | | | | | | | |
| A | (10) | mm | 6610 | 4720 | 5700 | 6610 | 4720 | 5700 | 4720 | 5700 | 6610 |
| B | (10) | mm | 2400 | 1890 | 2350 | 2400 | 1890 | 2350 | 1890 | 2350 | 2400 |
| H | (10) | mm | 2450 | 2400 | 2400 | 2450 | 2400 | 2400 | 2400 | 2400 | 2450 |
| Operating weight | (10) | kg | 21010 | 10920 | 14300 | 18880 | 11250 | 15000 | 11580 | 15730 | 21180 |

| TR-W-Z | | | 5B00 | 5B1A | 5C00 | 5C1B | 5D00 | 5D1C | 6B00 | 6C00 | 6D00 |
|--|--------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 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 |
| PERFORMANCE | | | | | | | | | | | |
| COOLING ONLY (GROSS VALUE) | | | | | | | | | | | |
| Cooling capacity | (1) | kW | 2474 | 2837 | 2888 | 3401 | 3770 | 4374 | 2974 | 3486 | 4549 |
| Total power input | (1) | kW | 439 | 497 | 490 | 572 | 599 | 690 | 517 | 583 | 710 |
| EER | (1) | kW/kW | 5,63 | 5,70 | 5,89 | 5,94 | 6,29 | 6,34 | 5,75 | 5,97 | 6,40 |
| COOLING ONLY (EN14511 VALUE) | | | | | | | | | | | |
| Cooling capacity | (1)(2) | kW | 2461 | 2823 | 2873 | 3385 | 3747 | 4351 | 2960 | 3470 | 4525 |
| EER | (1)(2) | kW/kW | 5,33 | 5,38 | 5,57 | 5,61 | 5,86 | 5,92 | 5,42 | 5,64 | 5,97 |
| Cooling energy class | | | - | - | - | - | - | - | - | - | - |
| SEPR HT | (3)(4) | | - | - | - | - | - | - | - | - | - |
| COOLING ONLY | | | | | | | | | | | |
| 16°C/10°C | | | | | | | | | | | |
| Cooling capacity | (5) | kW | 2571 | 2943 | 3085 | 3611 | 3968 | 4577 | 3081 | 3715 | 4746 |
| Total power input | (5) | kW | 410 | 464 | 478 | 551 | 567 | 649 | 480 | 567 | 664 |
| EER | (5) | kW/kW | 6,27 | 6,34 | 6,45 | 6,55 | 6,99 | 7,05 | 6,41 | 6,56 | 7,14 |
| 23°C/15°C | | | | | | | | | | | |
| Cooling capacity | (6) | kW | 2560 | 2918 | 3280 | 3780 | 3947 | 4546 | 3046 | 3923 | 4668 |
| Total power input | (6) | kW | 333 | 376 | 430 | 483 | 463 | 528 | 387 | 504 | 532 |
| EER | (6) | kW/kW | 7,68 | 7,75 | 7,62 | 7,83 | 8,52 | 8,61 | 7,87 | 7,79 | 8,77 |
| EXCHANGERS | | | | | | | | | | | |
| HEAT EXCHANGER USER SIDE IN REFRIGERATION | | | | | | | | | | | |
| Water flow | (1) | l/s | 118,31 | 135,67 | 138,09 | 162,63 | 180,26 | 209,19 | 142,22 | 166,69 | 217,53 |
| Pressure drop | (1)(2) | kPa | 87,1 | 83,5 | 86,5 | 82,3 | 109 | 96,4 | 83,9 | 82,8 | 98,1 |
| HEAT EXCHANGER SOURCE SIDE IN REFRIGERATION | | | | | | | | | | | |
| Water flow | (1) | l/s | 138,89 | 158,99 | 161,10 | 189,49 | 208,44 | 241,69 | 166,49 | 194,09 | 250,97 |
| Pressure drop | (1)(2) | kPa | 57,5 | 68,8 | 57,2 | 65,2 | 73,2 | 75,7 | 68,3 | 63,5 | 81,6 |
| REFRIGERANT CIRCUIT | | | | | | | | | | | |
| Compressors nr. | | N° | 5 | 6 | 5 | 6 | 5 | 6 | 6 | 6 | 6 |
| No. Circuits | | N° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Refrigerant charge | | kg | 1145 | 1425 | 1195 | 1490 | 1250 | 1560 | 1440 | 1500 | 1575 |
| NOISE LEVEL | | | | | | | | | | | |
| Sound Pressure | (7) | dB(A) | 78 | 79 | 79 | 80 | 80 | 81 | 79 | 80 | 81 |
| Sound power level in cooling | (8)(9) | dB(A) | 99 | 100 | 100 | 101 | 101 | 102 | 100 | 101 | 102 |
| SIZE AND WEIGHT | | | | | | | | | | | |
| A | (10) | mm | 5700 | 6610 | 5700 | 6610 | 5700 | 6610 | 6610 | 6610 | 6610 |
| B | (10) | mm | 2350 | 2400 | 2350 | 2400 | 2350 | 2400 | 2400 | 2400 | 2400 |
| H | (10) | mm | 2400 | 2450 | 2400 | 2450 | 2400 | 2450 | 2450 | 2450 | 2450 |
| Operating weight | (10) | kg | 14550 | 19150 | 15180 | 20240 | 15890 | 21350 | 19400 | 20410 | 21560 |

“BY FAR THE BEST PROOF IS EXPERIENCE”

Sir Francis Bacon
British philosopher (1561 - 1626)



WUXI NATIONAL SUPER COMPUTING DATA CENTER

2015 - Jiangsu Province (China)

Application:
Data Center

Plant type:
Hydronic System

Installed machines:
18x High efficiency water cooled chillers

PROJECT

The Chinese Super Computing Center (Wuxi) comes from a joint investment established in 2006 by the Ministry of Science and Technology and the Wuxi Government. It is one of the most advanced high-performance computing platforms in the world.

CHALLENGE

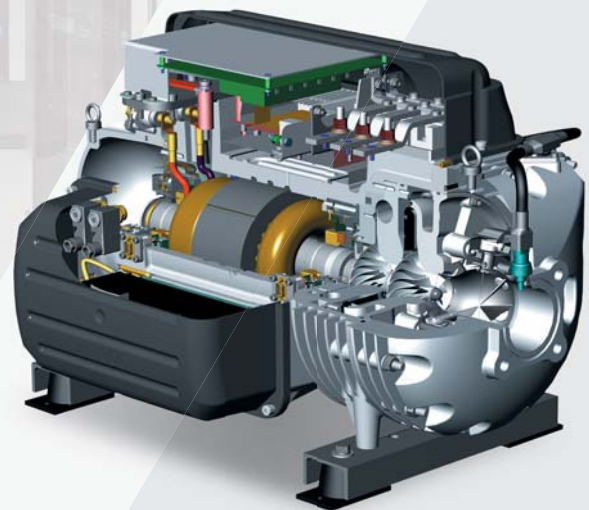
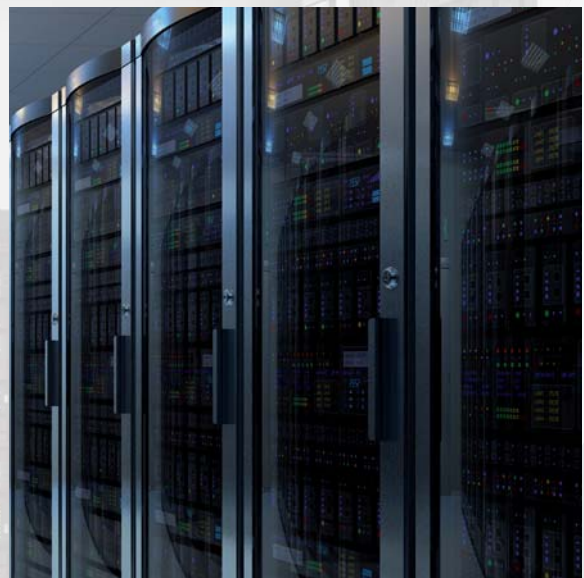
Wuxi's performance is at 100 petaFLOPS (Floating-point Operations Per Second) and ranks among the fastest worldwide and requires massive cooling at very precise conditions, with the utmost reliability.

The owner imposed extremely strict requirements for the cooling system, such as water temperature stability, water collection, adaptability to the variable primary flow system (VPF) and the unit's equipment with a proportional control valve to adjust the cooling water flow and ensure the pressure difference.

SOLUTION

To satisfy the need of 28 MW, the HVAC designer selected 18 High efficiency water-cooled chillers equipped with magnetic levitation, oil-free VFD compressors, featuring the best Seasonal Energy Efficiency Ratio (ESEER), close to 10.

The cooling system, combined with further sustainable technologies, such as free cooling and VPF, has contributed to cut the entire energy consumption of the data center by 45%.



MORE THAN 1000 PROJECTS ALL OVER THE WORLD

NATIONAL GRID

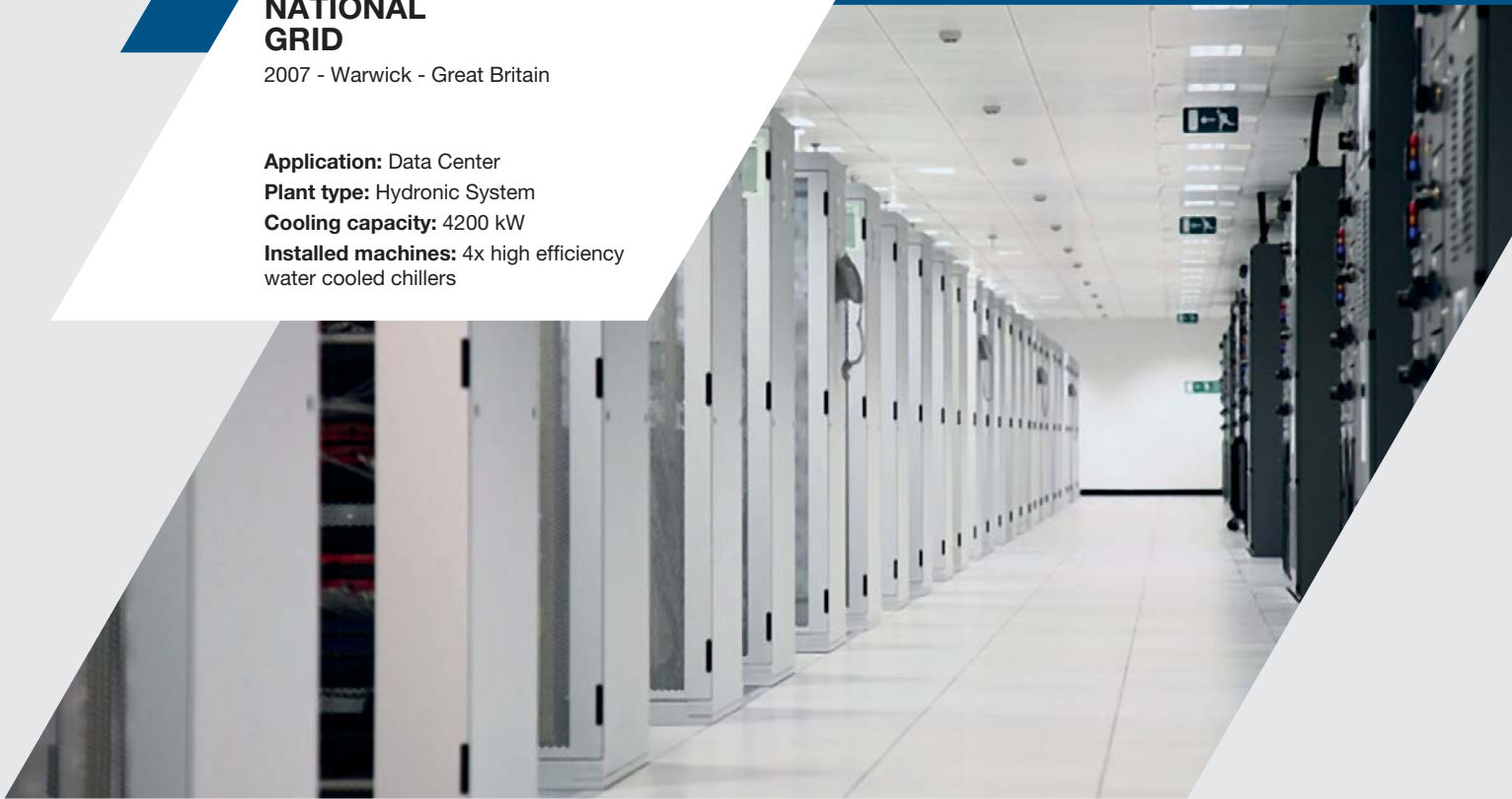
2007 - Warwick - Great Britain

Application: Data Center

Plant type: Hydronic System

Cooling capacity: 4200 kW

Installed machines: 4x high efficiency
water cooled chillers



VODAFONE MSC MILANO 3

2015-2016 - Milan - Italy

Application: Data Center

Plant type: Hydronic System

Cooling capacity: 1700 kW

Installed machines: 2x high efficiency
water cooled chillers



Every project is characterised by different usage conditions and system specifications for many different latitudes. All of them share high energy efficiency, lowest noise emissions and total reliability of the RC brand.

ASTRO HOUSE DATA CENTER

2012- Fareham - Great Britain

Application: Data Center

Plant type: Hydronic System

Cooling capacity: 1650 kW

Installed machines: 3x high efficiency low condensing water cooled chillers



IIT - INDIAN INSTITUTE OF TECHNOLOGY

2012 - Kanpur - India

Application: Data Center - School / University

Plant type: Hydronic System

Cooling capacity: 341 kW

Installed machines: 3x high efficiency high condensing water cooled chillers





for a greener tomorrow

Eco Changes is the Mitsubishi Electric Group's environmental statement, and expresses the Group's stance on environmental management. Through a wide range of businesses, we are helping contribute to the realization of a sustainable society.



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