

# TX-W

High efficiency water cooled chiller, with oil-free centrifugal compressor, from 246 to 4191 kW



- ✓ Countless combinations
- ✓ Wide cooling capacity range
- ✓ Flexible configuration
- ✓ Unrivalled efficiency

“ Logic will get you from A to B.  
Imagination will take  
you everywhere.”



Albert Einstein  
(Internationally renowned physicist, 1879-1955)



## SoftSTART



### 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.



### Silent operation

Centrifugal oil-free are the most silent compressors available on the market; water source chillers with this technology feature extremely reduced vibration, with considerable advantages in any application.



### 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 Climaveneta to improve the already brilliant technical features of oil-free centrifugal chillers and conceive:

# TX-W

## The solution beyond the limits of logic

Drawing on over 10 years of experience in units with oil-free centrifugal compressors, Climaveneta has overcome the limits of traditional design and created a product that stands out as the right solution for any project and application requirements.

### ✓ Countless design combinations

to satisfy any specific project and application needs.

### ✓ Dedicated operating range

for the installation in low or high condensing temperature applications.

### ✓ Wide cooling capacity range

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

### ✓ Bespoke selection software

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

### ✓ Flexible configuration

with the horizontal or diagonal layout of the exchangers.

### ✓ Brilliant full load and seasonal efficiencies

EER exceeding 6,5 and ESEER over 10,2 (gross values).

# TX-W

# No compromise

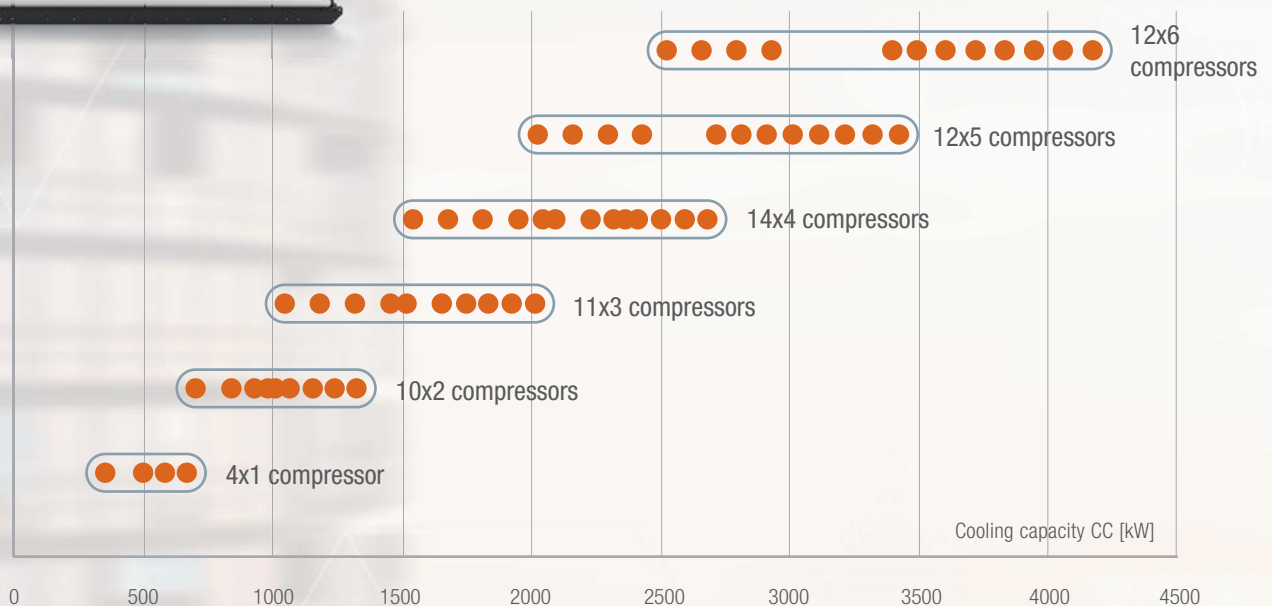
## Countless design combinations

TX-W 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 TX-W 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

TX-W 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

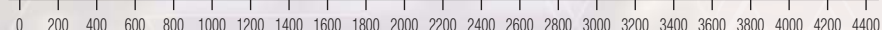
to all comfort, process and IT Cooling applications where utmost reliability and unbeatable performance are the key drivers.



246

4191

kW

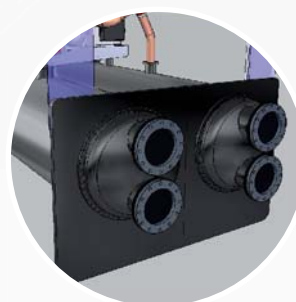


# The best solution for any project

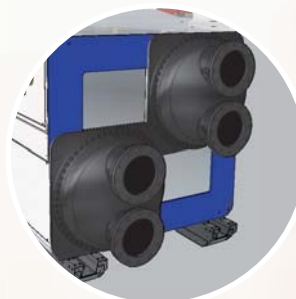
## Flexible configuration

In TX-W 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

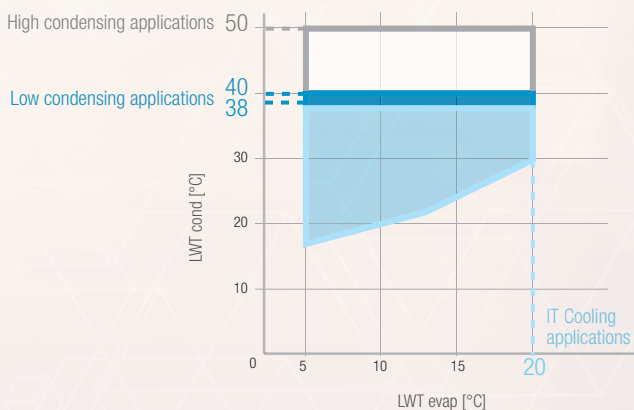


Heat exchangers with cross alignment

## Dedicated operating range

TX-W 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 TX-W the most suitable solution for the needs of IT cooling systems and for industrial processes.



# ELCA STUDIO

Thanks to the exclusive ELCA STUDIO software, TX-W 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 6,5 \*
- ✓ with seasonal efficiency ESEER values greater than 10,2 \* (IPLV up to 11,4)

\* gross values, @ 12/7 and 30/35°C

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

**IPLV up to 11,4**

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 TX-W 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

COP  
+26%

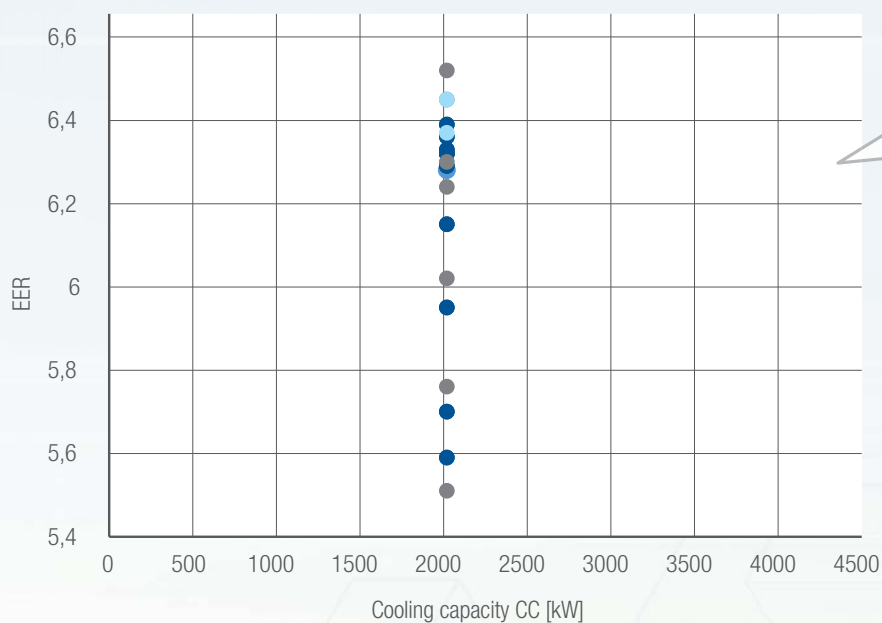
ASHRAE  
90.1  
compliant

IPLV  
+36%

# Your targeted product selection

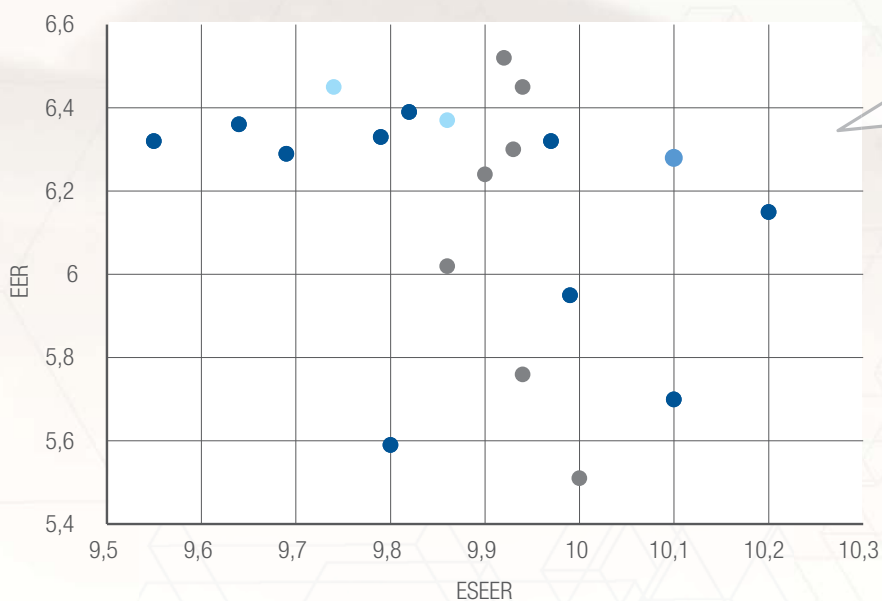
Each project is different: some require top efficiency at full load while others the best initial investment, or an unrivaled seasonal performance.

TX-W 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



For the same CC, a wide range of choices: 3-4-5-6 compressor units with **EER from 5,51 up to 6,52**

- 3 compressor units
- 4 compressor units
- 5 compressor units
- 6 compressor units

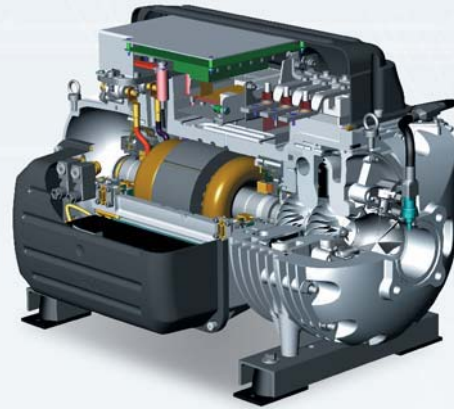


The 3-4-5-6 compressor units with the same CC, features full load EER between 5,51 and 6,52, and seasonal efficiencies **ESEER from 9,55 up to 10,20**

- 3 compressor units
- 4 compressor units
- 5 compressor units
- 6 compressor units

# Technological choices

## Centrifugal oil-free compressor



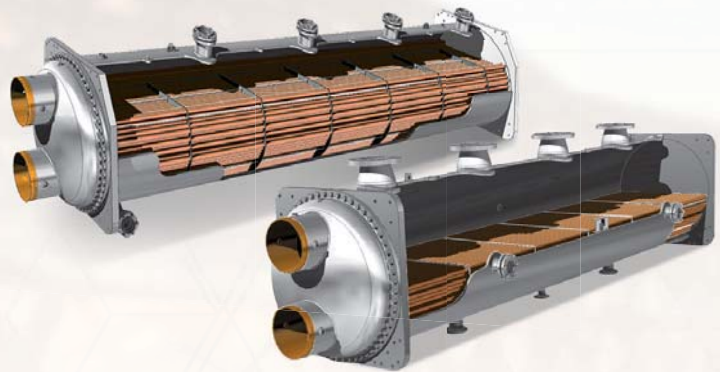
### The expertise makes the difference

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 Climaveneta 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.



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



## Acoustic enclosure

The already minimal noise emissions of TX-W 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

TX-W 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.



Immediate cooling start-up

Accelerated cooling ramp-up

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

## 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).

## 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%.



GREEN EFFICIENCY

## HFO refrigerant

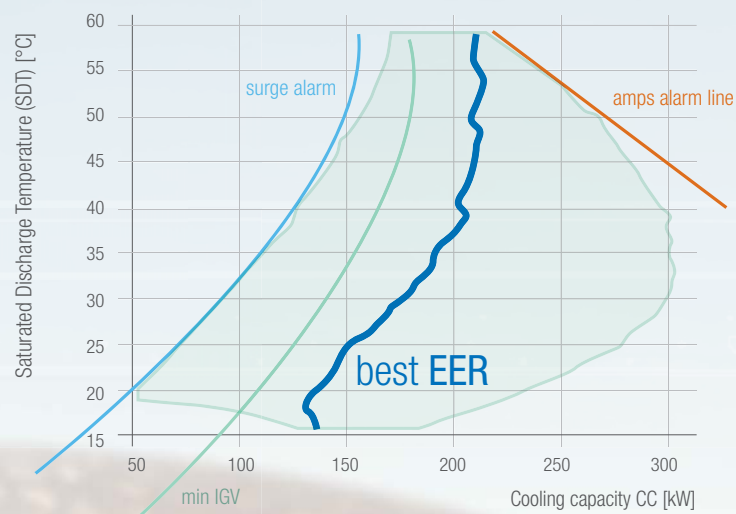
In line with the most severe environmental regulations, TX-W is also available with the new green HFO 1234ze refrigerant. A solution that complies with the highest efficiency targets required by the most prestigious projects, whilst offering an eco-friendly alternative to HFCs.

# CX4 The evolution in the world of controls

## 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

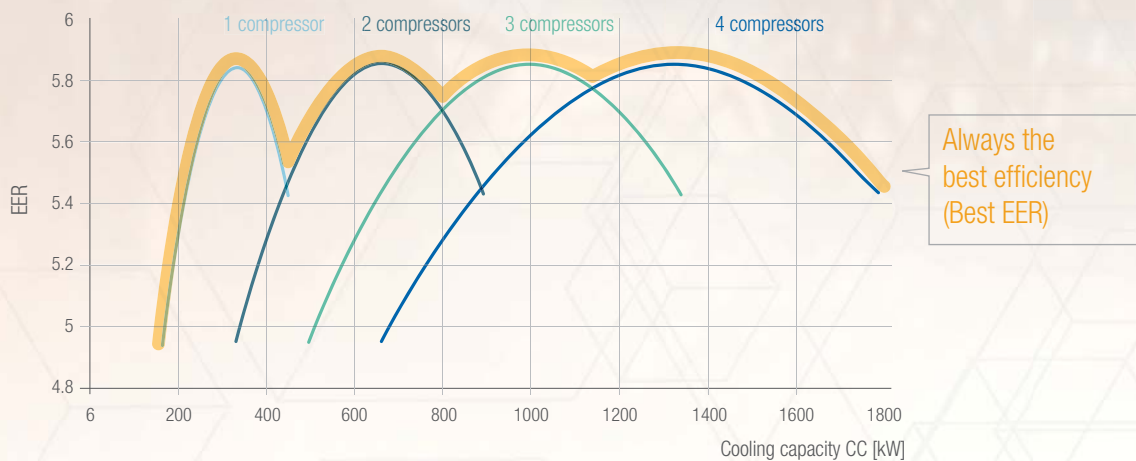
compressors are always - during start-up, in operation, in response to the thermoregulator and during shutdown - in a full safety work area (away from the limits of the "surge" and "amps").



## 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.



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

## 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 TX-W.

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.



# TX-W

## 1A00-6D00

High efficiency water cooled chiller, with oil-free centrifugal compressors. 246-4191 kW



TX-W			1A00	1B00	1B1A	1B2A	1B3A	1C00	1C1A	1C1B
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
<b>PERFORMANCE</b>										
<b>COOLING ONLY (GROSS VALUE)</b>										
Cooling capacity range	(1) kW		246÷352	343÷490	589÷841	830÷1185	1084÷1549	407÷582	651÷930	749÷1070
EER (up to)	(1) kW/kW		6,23	6,30	6,24	6,07	6,26	6,44	6,33	6,35
ESEER (up to)	(1) kW/kW		9,70	9,49	9,91	9,55	9,86	9,91	10,00	9,99
<b>COOLING ONLY (EN14511 VALUE)</b>										
Cooling capacity	(1)(2) kW		246	367	586	827	1157	464	649	746
EER	(1)(2) kW/kW		6,05	6,06	6,07	5,93	6,02	6,14	6,16	6,18
ESEER	(1)(2) kW/kW		8,77	8,46	8,83	8,66	8,69	8,90	8,86	8,87
Cooling energy class			A	A	A	A	A	A	A	A
<b>COMPRESSORS</b>										
Compressors nr.	N°		1	1	2	3	4	1	2	2
No. Circuits	N°		1	1	1	1	1	1	1	1
<b>NOISE LEVEL</b>										
Noise Pressure	(3) dB(A)		75	76	78	79	79	77	78	79
Sound power level in cooling	(4)(5) dB(A)		93	94	97	98	99	95	97	98
<b>SIZE AND WEIGHT</b>										
A	(6)(7) mm		2990	2990	3090	3640	4640	2990	3090	3090
B	(6)(7) mm		950	950	1700	1700	1700	950	1700	1700
H	(6)(7) mm		1990	1990	2240	2260	2260	1990	2240	2240
Operating weight	(6)(7) kg		3060	3220	5160	7240	9200	3320	5270	5400

#### Notes:

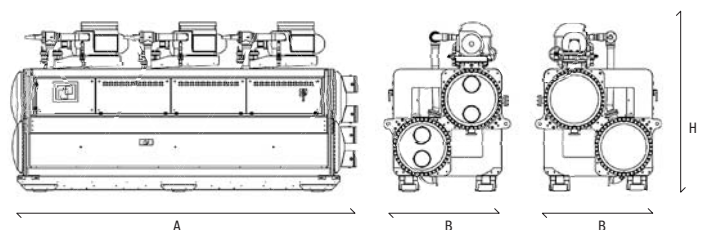
- Plant (side) cooling exchanger water (in/out) = 12°C/7°C; Source (side) heat exchanger water (in/out) = 30°C/35°C.
- Values in compliance with EN14511-3:2011.
- Average sound pressure level at 1m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
- Sound power on the basis of measurements made in compliance with ISO 9614.
- Sound power level in cooling, indoors.
- Unit in standard configuration/execution, without optional accessories.
- Lay-out with diagonal exchangers in units with 1, 2, 3 and 4 compressors; lay-out with horizontal exchangers in units with 5 and 6 compressors.

#### Certified data in EUROVENT

Data referred to a unit working with R134a refrigerant.

#### 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)



TX-W		1C3B	1D00	1D1A	1D1B	1D1C	1D2C	1D3C	1D4C
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
<b>PERFORMANCE</b>									
<b>COOLING ONLY (GROSS VALUE)</b>									
Cooling capacity range	(1) kW	1436÷2051	468÷669	711÷1015	809÷1155	871÷1244	1290÷1843	1696÷2423	2118÷3025
EER (up to)	(1) kW/kW	6,36	6,25	6,26	6,27	6,34	6,39	6,44	6,58
ESEER (up to)	(1) kW/kW	9,80	9,41	9,88	9,86	10,10	10,10	10,00	10,30
<b>COOLING ONLY (EN14511 VALUE)</b>									
Cooling capacity	(1)(2) kW	-	667	758	864	1077	1285	-	-
EER	(1)(2) kW/kW	-	5,97	5,97	6,04	6,04	6,20	-	-
ESEER	(1)(2) kW/kW	-	8,10	8,55	8,68	8,67	8,86	-	-
Cooling energy class		-	A	A	A	A	A	-	-
<b>COMPRESSORS</b>									
Compressors nr.	N°	4	1	2	2	2	3	4	5
No. Circuits	N°	1	1	1	1	1	1	1	1
<b>NOISE LEVEL</b>									
Noise Pressure	(3) dB(A)	80	78	79	79	80	80	81	81
Sound power level in cooling	(4)(5) dB(A)	100	96	98	98	99	100	101	102
<b>SIZE AND WEIGHT</b>									
A	(6)(7) mm	4710	2990	3090	3090	3090	4640	4710	5700
B	(6)(7) mm	1930	950	1700	1700	1700	1700	1930	2250
H	(6)(7) mm	2400	1990	2240	2240	2240	2260	2400	2400
Operating weight	(6)(7) kg	11030	3410	5370	5390	5480	9090	11380	15330

TX-W		1D5C	2A00	2B00	2B1A	2B2A	2B3A	2C00	2C1A
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
<b>PERFORMANCE</b>									
<b>COOLING ONLY (GROSS VALUE)</b>									
Cooling capacity range	(1) kW	2535÷3621	491÷702	687÷981	925÷1321	1179÷1684	1424÷2034	811÷1159	1065÷1521
EER (up to)	(1) kW/kW	6,65	6,18	6,28	6,12	6,30	6,34	6,42	6,43
ESEER (up to)	(1) kW/kW	10,20	9,98	9,90	9,51	9,74	10,00	10,20	10,10
<b>COOLING ONLY (EN14511 VALUE)</b>									
Cooling capacity	(1)(2) kW	-	526	685	987	1257	-	925	1135
EER	(1)(2) kW/kW	-	5,94	6,10	5,90	6,03	-	6,09	6,17
ESEER	(1)(2) kW/kW	-	8,82	8,80	8,61	8,51	-	8,95	8,72
Cooling energy class		-	A	A	A	A	-	A	A
<b>COMPRESSORS</b>									
Compressors nr.	N°	6	2	2	3	4	5	2	3
No. Circuits	N°	1	1	1	1	1	1	1	1
<b>NOISE LEVEL</b>									
Noise Pressure	(3) dB(A)	82	78	78	79	80	79	79	79
Sound power level in cooling	(4)(5) dB(A)	103	96	97	98	100	100	98	99
<b>SIZE AND WEIGHT</b>									
A	(6)(7) mm	6750	2990	3090	3640	4710	5700	3090	4640
B	(6)(7) mm	2300	950	1700	1700	1930	2250	1700	1700
H	(6)(7) mm	2450	1990	2240	2260	2400	2400	2240	2260
Operating weight	(6)(7) kg	20580	3850	5320	7410	10700	13850	5390	8770

TX-W		2C1B	2D00	2D1B	2D1C	2D2B	2D2C	2D3C	2D4C
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
<b>PERFORMANCE</b>									
<b>COOLING ONLY (GROSS VALUE)</b>									
Cooling capacity range	(1) kW	1161÷1658	930÷1329	1287÷1838	1352÷1932	1629÷2327	1760÷2514	2190÷3128	2615÷3735
EER (up to)	(1) kW/kW	6,44	6,30	6,35	6,39	6,34	6,40	6,53	6,63
ESEER (up to)	(1) kW/kW	10,00	10,10	9,88	10,00	9,81	9,99	10,20	10,10
<b>COOLING ONLY (EN14511 VALUE)</b>									
Cooling capacity	(1)(2) kW	1237	993	1464	-	-	-	-	-
EER	(1)(2) kW/kW	6,20	5,88	6,09	-	-	-	-	-
ESEER	(1)(2) kW/kW	8,78	8,82	8,39	-	-	-	-	-
Cooling energy class		A	A	A	-	-	-	-	-
<b>COMPRESSORS</b>									
Compressors nr.	N°	3	2	3	3	4	4	5	6
No. Circuits	N°	1	1	1	1	1	1	1	1
<b>NOISE LEVEL</b>									
Noise Pressure	(3) dB(A)	79	80	80	80	81	82	81	82
Sound power level in cooling	(4)(5) dB(A)	99	99	100	100	101	102	102	103
<b>SIZE AND WEIGHT</b>									
A	(6)(7) mm	4640	3090	4640	4640	4710	4710	5700	6750
B	(6)(7) mm	1700	1700	1700	1700	1930	1930	2250	2300
H	(6)(7) mm	2260	2240	2260	2260	2400	2400	2400	2450
Operating weight	(6)(7) kg	8990	5460	9090	9170	11310	11520	15420	20750

# TX-W

1A00-6D00

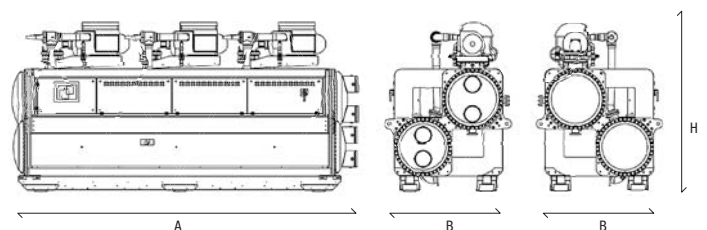


TX-W			3A00	3B00	3B1A	3B2A	3B3A	3C00	3C1A	3C1B
Power supply		V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>PERFORMANCE</b>										
<b>COOLING ONLY (GROSS VALUE)</b>										
Cooling capacity range	(1)	kW	734÷1049	1020÷1457	1274÷1820	1519÷2170	1774÷2534	1226÷1752	1471÷2102	1567÷2239
EER (up to)	(1)	kW/kW	6,05	6,14	6,32	6,37	6,43	6,48	6,42	6,44
ESEER (up to)	(1)	kW/kW	9,64	9,59	9,66	9,97	9,94	10,20	10,10	10,00
<b>COOLING ONLY (EN14511 VALUE)</b>										
Cooling capacity	(1)(2)	kW	732	1091	1359	-	-	1310	-	-
EER	(1)(2)	kW/kW	5,91	5,92	6,06	-	-	6,23	-	-
ESEER	(1)(2)	kW/kW	8,75	8,68	8,50	-	-	8,92	-	-
Cooling energy class			A	A	A	-	-	A	-	-
<b>COMPRESSORS</b>										
Compressors nr.		N°	3	3	4	5	6	3	4	4
No. Circuits		N°	1	1	1	1	1	1	1	1
<b>NOISE LEVEL</b>										
Noise Pressure	(3)	dB(A)	79	80	80	80	80	80	81	81
Sound power level in cooling	(4)(5)	dB(A)	98	99	100	101	101	100	101	101
<b>SIZE AND WEIGHT</b>										
A	(6)(7)	mm	3640	3640	4710	5700	6750	4640	4710	4710
B	(6)(7)	mm	1700	1700	1930	2250	2300	1700	1930	1930
H	(6)(7)	mm	2260	2260	2400	2400	2450	2260	2400	2400
Operating weight	(6)(7)	kg	7170	7520	10770	14050	18670	8990	11030	11260

TX-W			3C2B	3D00	3D1A	3D1C	3D2C	3D3C	4B00	4B1A
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
<b>PERFORMANCE</b>										
<b>COOLING ONLY (GROSS VALUE)</b>										
Cooling capacity range	(1)	kW	1911÷2730	1416÷2023	1662÷2374	1824÷2605	2261÷3230	2694÷3849	1370÷1957	1614÷2306
EER (up to)	(1)	kW/kW	6,52	6,36	6,33	6,37	6,50	6,62	6,34	6,40
ESEER (up to)	(1)	kW/kW	10,10	10,10	9,79	9,91	10,20	10,20	9,69	9,89
<b>COOLING ONLY (EN14511 VALUE)</b>										
Cooling capacity	(1)(2)	kW	-	-	-	-	-	-	1462	-
EER	(1)(2)	kW/kW	-	-	-	-	-	-	6,09	-
ESEER	(1)(2)	kW/kW	-	-	-	-	-	-	8,57	-
Cooling energy class			-	-	-	-	-	-	A	-
<b>COMPRESSORS</b>										
Compressors nr.		N°	5	3	4	4	5	6	4	5
No. Circuits		N°	1	1	1	1	1	1	1	1
<b>NOISE LEVEL</b>										
Noise Pressure	(3)	dB(A)	81	81	81	82	82	82	80	80
Sound power level in cooling	(4)(5)	dB(A)	102	101	101	102	103	103	100	101
<b>SIZE AND WEIGHT</b>										
A	(6)(7)	mm	5700	4640	4710	4710	5700	6750	4710	5700
B	(6)(7)	mm	2250	1700	1930	1930	2250	2300	1930	2250
H	(6)(7)	mm	2400	2260	2400	2400	2400	2450	2400	2400
Operating weight	(6)(7)	kg	14910	9310	11310	11650	15500	21010	10940	14300

## 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)



## High efficiency water cooled chiller, with oil-free centrifugal compressors. 246-4191 kW

TX-W			4B2A	4C00	4C1B	4D00	4D1C	4D2C	5B00	5B1A
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
<b>PERFORMANCE</b>										
<b>COOLING ONLY (GROSS VALUE)</b>										
Cooling capacity range	(1)	kW	1869÷2670	1633÷2333	1979÷2827	1885÷2693	2334÷3334	2774÷3963	1708÷2440	1964÷2806
EER (up to)	(1)	kW/kW	6,46	6,48	6,55	6,34	6,49	6,60	6,42	6,48
ESEER (up to)	(1)	kW/kW	9,91	10,20	10,10	9,92	9,97	10,10	9,92	9,83
<b>COOLING ONLY (EN14511 VALUE)</b>										
Cooling capacity	(1)(2)	kW	-	-	-	-	-	-	-	-
EER	(1)(2)	kW/kW	-	-	-	-	-	-	-	-
ESEER	(1)(2)	kW/kW	-	-	-	-	-	-	-	-
Cooling energy class			-	-	-	-	-	-	-	-
<b>COMPRESSORS</b>										
Compressors nr.		N°	6	4	5	4	5	6	5	6
No. Circuits		N°	1	1	1	1	1	1	1	1
<b>NOISE LEVEL</b>										
Noise Pressure	(3)	dB(A)	80	81	81	82	82	82	80	81
Sound power level in cooling	(4)(5)	dB(A)	101	101	102	102	103	103	101	102
<b>SIZE AND WEIGHT</b>										
A	(6)(7)	mm	6750	4710	5700	4710	5700	6750	5700	6750
B	(6)(7)	mm	2300	1930	2250	1930	2250	2300	2250	2300
H	(6)(7)	mm	2450	2400	2400	2400	2400	2450	2400	2450
Operating weight	(6)(7)	kg	18880	11310	15000	11650	15730	21180	14550	19150

TX-W			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	
<b>PERFORMANCE</b>										
<b>COOLING ONLY (GROSS VALUE)</b>										
Cooling capacity range	(1)	kW	2045÷2922	2389÷3413	2406÷3437	2854÷4077	2060÷2943	2455÷3507	2934÷4191	
EER (up to)	(1)	kW/kW	6,58	6,65	6,47	6,59	6,50	6,67	6,58	
ESEER (up to)	(1)	kW/kW	10,30	10,20	10,10	9,99	9,89	10,40	10,00	
<b>COOLING ONLY (EN14511 VALUE)</b>										
Cooling capacity	(1)(2)	kW	-	-	-	-	-	-	-	
EER	(1)(2)	kW/kW	-	-	-	-	-	-	-	
ESEER	(1)(2)	kW/kW	-	-	-	-	-	-	-	
Cooling energy class			-	-	-	-	-	-	-	
<b>COMPRESSORS</b>										
Compressors nr.		N°	5	6	5	6	6	6	6	
No. Circuits		N°	1	1	1	1	1	1	1	
<b>NOISE LEVEL</b>										
Noise Pressure	(3)	dB(A)	81	82	82	83	81	82	83	
Sound power level in cooling	(4)(5)	dB(A)	102	103	103	104	102	103	104	
<b>SIZE AND WEIGHT</b>										
A	(6)(7)	mm	5700	6750	5700	6750	6750	6750	6750	
B	(6)(7)	mm	2250	2300	2250	2300	2300	2300	2300	
H	(6)(7)	mm	2400	2450	2400	2450	2450	2450	2450	
Operating weight	(6)(7)	kg	15180	20240	15890	21350	19400	20410	21560	

### Notes:

- Plant (side) cooling exchanger water (in/out) = 12°C/7°C; Source (side) heat exchanger water (in/out) = 30°C/35°C.
- Values in compliance with EN14511-3:2011.
- 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.
- Sound power on the basis of measurements made in compliance with ISO 9614.
- Sound power level in cooling, indoors.
- Unit in standard configuration/execution, without optional accessories.
- Layout with diagonal exchangers in units with 1, 2, 3 and 4 compressors; lay-out with horizontal exchangers in units with 5 and 6 compressors.

Certified data in EUROVENT

Data referred to a unit working with R134a refrigerant.

“ By far the  
best proof  
is experience ”

**Sir Francis Bacon**  
British philosopher (1561 - 1626)





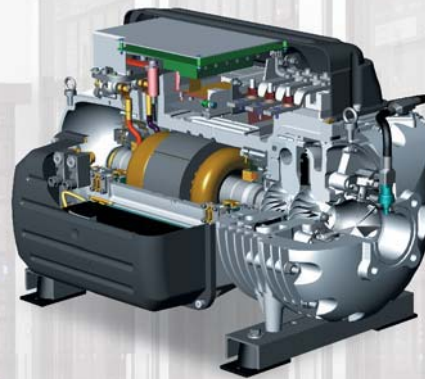
# Wuxi National Super Computing Data Center

2015- Jiangsu Province (China)

**Application:**  
Data Center

**Plant type:**  
Hydronic System

**Installed machines:**  
18x TECS-W/H 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, Climaveneta delivered 18 TECS2-W/H water-cooled chillers equipped with magnetic levitation, oil-free VFD compressors, featuring the best Seasonal Energy Efficiency Ratio (ESEER), close to 10.

The Climaveneta 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

**RTS Radio Television Suisse**  
Geneva - Switzerland

Application:  
Telecommunications

Cooling capacity:  
674 kW

Installed machines:  
1x TECS2-W HFO/HC 0712

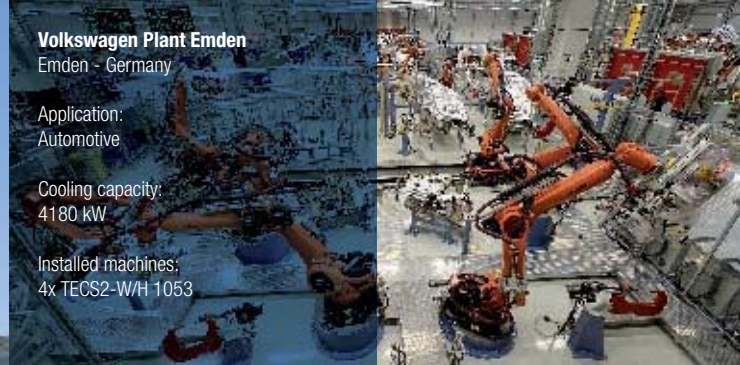


**Volkswagen Plant Emden**  
Emden - Germany

Application:  
Automotive

Cooling capacity:  
4180 kW

Installed machines:  
4x TECS2-W/H 1053



**Airbus Military Tablada**  
Sevilla - Spain

Application:  
Airports/Military

Cooling capacity:  
3531 kW

Installed machines:  
3x TECS2/SL-CA-E 1054



**Lismore Base Hospital**  
Lismore - Australia

Application:  
Hospitals

Cooling capacity:  
1235 kW

Installed machines:  
1x TX-W 1C1A,  
1x TECS2-W/HC 0612



**Alfa Romeo Museum**  
Arese - Italy

Application:  
Museums

Cooling capacity:  
2570 kW

Installed machines:  
2x TECS2-W HC 1213,  
1x NECS-W H 0512



**Singapore Sports Hub**  
Singapore

Application:  
Sport structures

Cooling capacity:  
35000 kW

Installed machines:  
8x TECS2-W/LC 1453,  
8x FOCS2-W/D/CA-E 3602,  
7x FOCS2-W/CA-E 3602, 2x ACU 41,  
2x ACU 90, 2x AXU 39, 2x AXU 80



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 coming from the unique Climaveneta experience.



**HSBC**  
 Various locations - Hong Kong

Application:  
 Financial institutes

Cooling capacity:  
 2235 kW

Installed machines:  
 3x TECS2/SL-CA-E,  
 2x TECS2/SL-CA-E 0552,  
 2x TECS2/SL-CA-E 0452



**Bloomberg London**  
 London - Great Britain

Application:  
 Mixed-use development

Cooling capacity:  
 7796 kW

Installed machines:  
 4x TECS2-W 1954

**IGBMC - Institute of Genetics and Molecular and Cellular Biology**  
 Illkirch-Graffenstaden  
 Strasbourg - France

Application:  
 Office buildings

Cooling capacity:  
 2148 kW

Installed machines:  
 3x TECS2-W/HC/H/S 0712

**Principal Place**  
**THE UN SQUARE MILE**  
 London - Great Britain

Application:  
 Mixed-use development

Cooling capacity: 9243 kW  
 Heating capacity: 478 kW

Installed machines:  
 6x TECS2-W/LC 1453,  
 1x FOCS2-W/R/CA-E 1801

**Minster Court London**  
 London - Great Britain

Application:  
 Office buildings

Cooling capacity:  
 5283 kW

Installed machines:  
 3x TEC2S-W/HC 0712,  
 3x TEC2S-W/HC 1053

**Cisco Systems Vimercate**  
 Milan - Italy

Application: Office buildings

Cooling capacity: 4505 kW  
 Heating capacity: 459 kW

Installed machines:  
 1x TECS2/SL-CA-E 0712, 2x TECS-W HC 812,  
 1x ERACS2-WQ 1702, 2x FOCS/SL-CA-E 1922,  
 1x FX-FC NG 3402, 1x ClimaPRO,  
 AC Close Control Units





A Group Company of **MITSUBISHI ELECTRIC**

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