

# TCWH2-Q0 Size 6

Industrial water chillers

## COOLING CAPACITY

82800 - 92200 - 113200 - 131200 - 150400 W



### EVAPORATOR

With brazed stainless-steel plates and temperature sensor for protection against freezing.

### AIR CONDENSER

Finned high-efficiency copper tube condensing coil, complete with safety grille.

### AXIAL FAN

Axial fan, complete with thermal cut-out and safety grille. Speed regulator.

### LIQUID CIRCUIT

Liquid circuit composed entirely of non-ferrous material in contact with the liquid to prevent contamination. Stainless-steel centrifugal pump with 3 bar available head. Stainless-steel storage tank complete with drain valve, electrical level and visual level indicator, protective flow switch, 0-10 bar pressure gauge, regulation sensor.

### ELECTRICAL PANEL

With main disconnect switch, relay motor protection, phase sequence relays. Glass electrical protection window and aluminium frame.

### MANAGEMENT AND CONTROL

The TX400 control unit manages the operation of the chiller and provides complete operator alarm diagnostics. An on-off contact allows the machine to be switched on remotely. Illuminated control selector. Dual remote ON-OFF. Ethernet and RS485 connection. Possibility of remote display for machine regulation.

### PAINT/COATING

Standard colour: RAL 7035 textured.

### STRUCTURE

In powder-coated steel sheet, RAL 7035 textured finish. Easily removed panels Chiller for outdoor installation.

### COMPRESSOR

Hermetic scroll compressor (connected in tandem for I3 and M4 models), cooled by the refrigerant, complete with thermal cut-out and casing heating element for heating the oil. Stepped cooling power regulation, 2 steps on model TCWH2, 4 steps on models TCW I3-M4-O1-Q0.

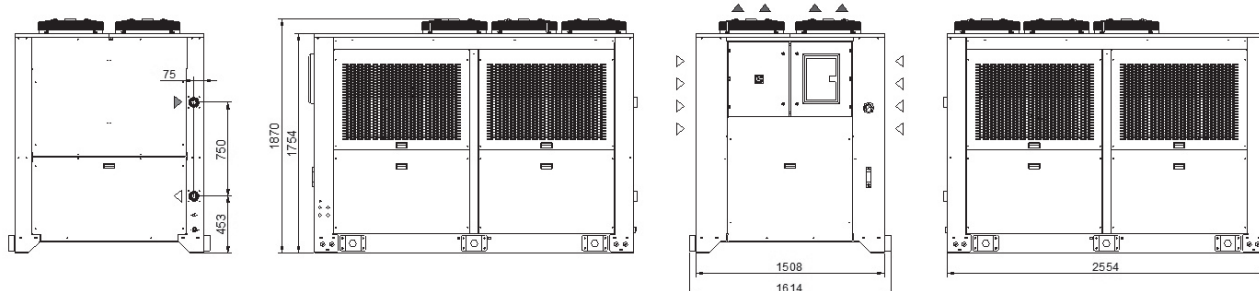
### REFRIGERATION CIRCUIT

Complete with charging port, safety valve, liquid receiver, drier filter, liquid inspection port, solenoid valve, thermostatic valve, high- and low-pressure pressure switch, R410A refrigerant.

### MAIN ACCESSORIES (ref. page 189)

- BA - Mechanical bypass valve protecting the pump
- HR - Fluid heating element
- FP - Polyurethane air filter
- RU - Castors
- TD - Differential fluid temperature management (two sensors)
- LS - Liquid circuit for laser application
- HIGH-pressure pump version "H" - 5 bar, version "R" - 7 bar.
- Non-standard paint/coating
- Satin AISI 304 stainless steel framework
- Temperature Precision +/- 1 K

## Dimensions



Model		TCWH2	TCWI3	TCWM4	TCWO1	TCWQ0
<b>Rated Cooling Capacity*</b>	W	82800	92200	113200	131200	150400
Ambient temperature operating limits	°C	-10 - +45				
Settable fluid temperature range	°C	+8 - +25				
Fluid type		Water				
Temperature precision	K	+/-2				
Refrigerant gas	HFC	R410A				
<b>Power supply</b>						
Supply voltage	V ph Hz	400V (+/-10%) 3ph 50Hz				
Secondary supply voltage	V	24 V AC				
Digital thermostat		TX400				
<b>Compressor</b>						
Compressor type		Scroll				
Quantity - Number of circuits	no.	2 - 2	4 - 2		4 - 4	
Max. power draw	kW	29.6	33.4	40.2	46.4	53.2
Max. current draw	A	50.6	59.6	69.0	75.2	92.0
<b>Axial Fan</b>						
Fan type		Axial				
Quantity	no.	6	6	6	6	6
Air flow rate	m <sup>3</sup> /h	34000	34000	34000	34000	34000
Max. power draw	kW	4.2	4.2	4.2	4.2	4.2
Max. current draw	A	8.4	8.4	8.4	8.4	8.4
<b>Centrifugal Fan (optional)</b>						
Fan type		Centrifugal				
Quantity	no.	6	6	6	6	6
Air flow rate	m <sup>3</sup> /h	34000	34000	34000	34000	34000
Available head	Pa	260	260	260	230	230
Max. power draw	kW	9.0	9.0	9.0	9.0	9.0
Max. current draw	A	18.0	18.0	18.0	18.0	18.0
<b>Standard Pump</b>						
Pump type		Centrifugal				
Quantity	no.	1	1	1	1	1
Nominal/max fluid flow rate	l/min	230.0 - 400.0	260.0 - 400.0	320.0 - 400.0	370.0 - 800.0	430.0 - 800.0
Nominal available head	bar	3.0	2.9	2.6	2.9	2.7
Max. power draw	kW	3.0	3.0	3.0	4.0	4.0
Max. current draw	A	6.2	6.2	6.2	8.0	8.0
<b>High-Pressure Pump (optional)</b>						
Pump type		Centrifugal				
Quantity	no.	1	1	1	1	1
Nominal available head	bar	4.8	4.7	4.4	5.5	5.4
Max. power draw	kW	5.5	5.5	5.5	9.0	9.0
Max. current draw	A	11.0	11.0	11.0	16.0	16.0
Storage tank capacity	l	500				
IN/OUT liquid connections	inch	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"
Net weight (approximate)***	kg	1500	1650	1650	1800	1800
Width	mm	1508				
Depth	mm	2554				
Height	mm	1870				
Sound pressure level**	dB(A)	75	75	75	75	75
IP rating	IP	54				
* Data relating to operation under the following conditions: intake/outlet temperature 20/15°C, water without glycol, ambient temperature 32°C. Cooling power refers to the evaporator unit.						
** Sound pressure level, measured in a free hemispherical field at a distance of 1 m from the machine and 1.5 metres from the ground, per ISO 3746.						
*** Weight includes pallets and packaging (where provided for), with refrigerant charge, storage tank empty, axial fans.						
**** The electrical data refer to cos φ = 0.8.						

Correction factors for calculating the cooling power													
<b>Water outlet temperature</b>	<b>Fw</b>	°C					<b>8</b>	<b>10</b>	<b>15</b>	<b>20</b>	<b>25</b>		
		factor					0.86	0.92	1	1.05	1.12		
<b>Ambient Temperature</b>	<b>Fa</b>	°C					<b>15</b>	<b>20</b>	<b>25</b>	<b>32</b>	<b>35</b>	<b>40</b>	<b>45</b>
		factor					1.16	1.1	1.05	1	0.97	0.91	0.84
<b>Percentage glycol by weight</b>	<b>Fg</b>	%	<b>0</b>	<b>10</b>	<b>15</b>	<b>20</b>	<b>25</b>	<b>30</b>	<b>35</b>	<b>40</b>			
		factor	1	0.99	0.98	0.97	0.96	0.94	0.92	0.89			
Cooling power = Nominal cooling power x Fw x Fa x Fg													