TCW3E-4A Size 8

Industrial water chillers

COOLING CAPACITY | **355000 - 400000 W**

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

COMPRESSOR
Hermetic scroll compressor, connected in tandem, cooled by the refrigerant, complete with thermal cut-out and casing heating element for heating the oil. Stepped cooling power regulation, 8 steps on all models.

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.

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. Storage tank, closed expansion vessel with pressure reducer and automatic filling system, complete with drain valve, 0-10 bar pressure gauge. Circuit protection consists of a flow switch, minimum pressure switch (normally disabled, operation to be assessed during the initial installation phase), maximum pressure switch, tank max. pressure safety valve, regulation sensor.

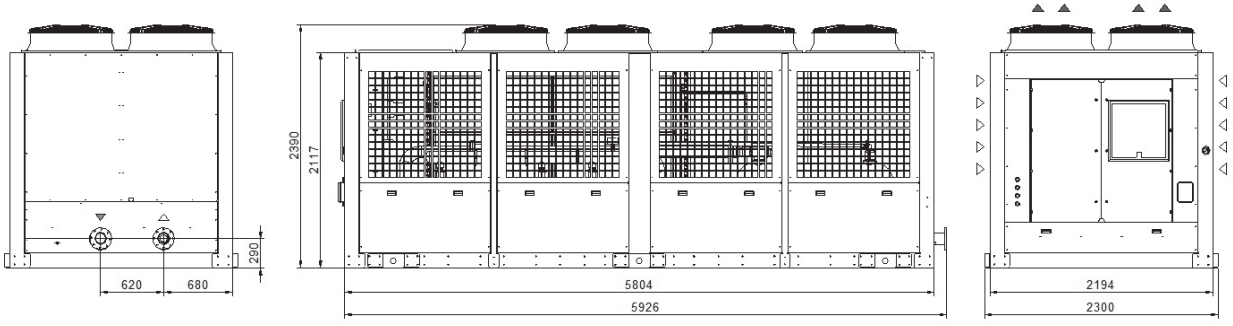
ELECTRICAL PANEL
With main disconnect switch, relay motor protection, phase sequence relays. Glass electrical protection window and aluminium frame.

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.

MAIN ACCESSORIES (ref. page 189)
BA - Mechanical bypass valve protecting the pump
BM - Manual mechanical bypass valve protecting the pump
HR - Fluid heating element
AV - Vibration damper supports
FP - Polyurethane air filters
TD - Differential fluid temperature management (two sensors)
- 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		TCW3E	TCW4A
Rated Cooling Capacity*	W	355000	400000
Ambient temperature operating limits	°C	-10 - +45	
Settable fluid temperature range	°C	+8 - +25	
Fluid type		Water	
Temperature precision	K	+/-2.5	
Refrigerant gas	HFC	R410A	
Power supply			
Supply voltage	V ph Hz	400V (+/-10%) 3ph 50Hz	
Secondary supply voltage	V	24 V AC	
Digital thermostat		TX400	
Compressor			
Compressor type		Scroll	
Quantity - Number of circuits	no.	8 - 4	8 - 4
Max. power draw	kW	12.0	13.6
Max. current draw	A	20.5	24.0
Capacity steps	NR x %	8x12.5%	
Axial Fan			
Fan type		Axial	
Quantity	no.	8	8
Air flow rate	m_3/h	115000	115000
Max. power draw	kW	12.0	12.0
Max. current draw	A	23.4	23.4
Centrifugal Fan (optional)			
Fan type		Centrifugal	
Quantity	no.	8	8
Air flow rate	m_3/h	115000	115000
Available head	Pa	250	250
Max. power draw	kW	29.0	29.0
Max. current draw	A	48.0	48.0
Standard Pump			
Pump type		Centrifugal	
Quantity	no.	1	1
Nominal/max fluid flow rate	l/min	1010	1150
Nominal available head	bar	4.5	4.2
Max. power draw	kW	11.0	11.0
Max. current draw	A	20.0	20.0
High-Pressure Pump (optional)			
Pump type		Centrifugal	
Quantity	no.	1	1
Nominal available head	bar	6.5	6.2
Max. power draw	kW	22.0	22.0
Max. current draw	A	40.0	40.0
Storage tank capacity	l	800	
Expansion vessel capacity	l	18	
IN/OUT liquid connections	inch	DN 100	DN 100
Net weight (approximate)***	kg	3700	3800
Width	mm	2194	
Depth	mm	5804	
Height	mm	2390	
Sound pressure level**	dB(A)	79	79
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

Water outlet temperature	**Fw**	°C					**8**	**10**	**15**	**20**	**25**		
		factor					0.86	0.92	1	1.05	1.12		
Ambient Temperature	**Fa**	°C					**15**	**20**	**25**	**32**	**35**	**40**	**45**
		factor					1.16	1.1	1.05	1	0.97	0.91	0.84
Percentage glycol by weight	**Fg**	%	**0**	**10**	**15**	**20**	**25**	**30**	**35**	**40**			
		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