TCW56-A0 Size 2

Industrial water chillers

COOLING CAPACITY | **6000 - 8100 - 9200 - 10900 W**

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

COMPRESSOR
Hermetic scroll compressor, cooled by the refrigerant, complete with thermal cut-out.

REFRIGERATION CIRCUIT
Complete with charging port, liquid receiver, drier filter, thermostatic valve, high- and low-pressure pressure switch, R134a 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.

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, 0-10 bar pressure gauge, protective flow switch, regulation sensor.

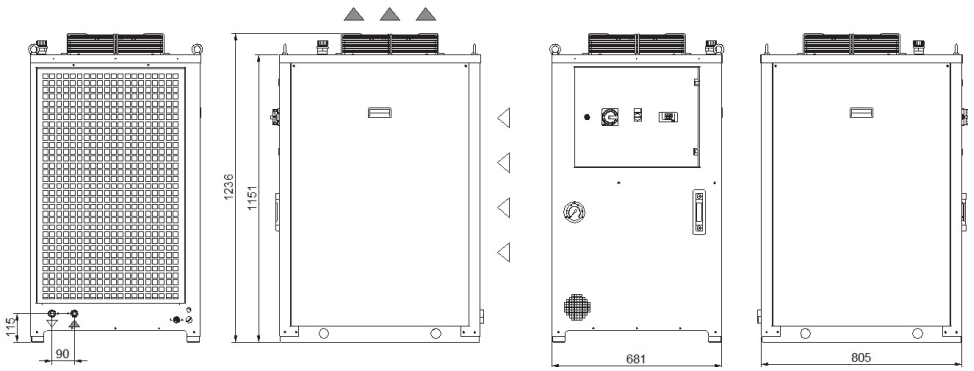
ELECTRICAL PANEL
With main disconnect switch, relay motor protection, phase sequence relays.

MANAGEMENT AND CONTROL
The TX200 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. 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
HR - Fluid heating element
LTA - Operation at low ambient temperatures
FP - Polyurethane air filter
RU - Castors
TD - Differential fluid temperature management (two sensors)
BGC - Hot gas bypass for +/- 1 K temperature precision
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

Dimensions



Model		TCW56	TCW70	TCW91	TCWA0
Rated Cooling Capacity*	W	6000	8100	9200	10900
Ambient temperature operating limits	°C	+15 - +45			
Settable fluid temperature range	°C	+8 - +25			
Fluid type		Water			
Temperature precision	K	+/-2			
Refrigerant gas	HFC	R134a			
Power supply					
Supply voltage	V ph Hz	400V (+/-10%) 3ph 50Hz			
Secondary supply voltage	V	230-24 V AC			
Digital thermostat		TX200			
Compressor					
Compressor type		Scroll			
Quantity - Number of circuits	no.	1 - 1			
Max. power draw	kW	3.7	3.9	4.4	4.6
Max. current draw	A	5.4	6.7	7.2	7.5
Axial Fan					
Fan type		Axial			
Quantity	no.	1	1	1	1
Air flow rate	m_3/h	2800	2800	2800	2800
Max. power draw	W	130	130	130	130
Max. current draw	A	0.6	0.6	0.6	0.6
Centrifugal Fan (optional)					
Fan type		Centrifugal			
Quantity	no.	1	1	1	1
Air flow rate	m_3/h	2800	2800	2800	2800
Available head	Pa	250		230	
Max. power draw	kW	0.6	0.6	0.6	0.6
Max. current draw	A	2.3	2.3	2.3	2.3
Standard Pump					
Pump type		Centrifugal			
Quantity	no.	1	1	1	1
Nominal/max fluid flow rate	l/min	17.0 - 50.0	23.0 - 50.0	26.0 - 50.0	32.0 - 50.0
Nominal available head	bar	3.0	2.8	2.5	2.3
Max. power draw	kW	0.7	0.7	0.7	0.7
Max. current draw	A	1.5	1.5	1.5	1.5
High-Pressure Pump (optional)					
Pump type		Centrifugal			
Quantity	no.	1	1	1	1
Nominal available head	bar	4.8	4.5	4.3	4.1
Max. power draw	kW	1.1	1.1	1.1	1.1
Max. current draw	A	2.2	2.2	2.2	2.2
Storage tank capacity	l	60			
IN/OUT liquid connections	inch	3/4"			
Net weight (approximate)***	kg	160	170	190	200
Width	mm	681			
Depth	mm	805			
Height	mm	1236			
Sound pressure level**	dB(A)	60	60	60	60
IP rating	IP	44			

* 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

TCWA2-A9 Size 3

Industrial water chillers

COOLING CAPACITY | **12300 - 16400 - 17800 - 20700 W**

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.

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, 0-10 bar pressure gauge, differential pressure switch protecting the water flow, regulation sensor.

ELECTRICAL PANEL
With main disconnect switch, relay motor protection, phase sequence relays.

MANAGEMENT AND CONTROL
The TX200 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. 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

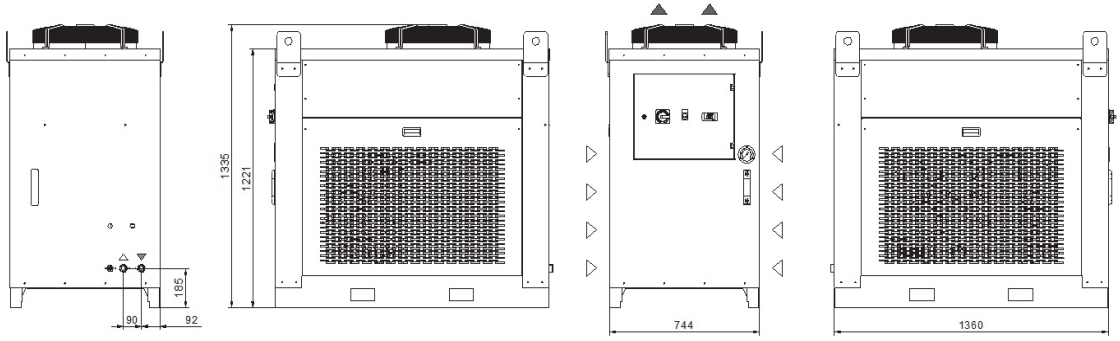
COMPRESSOR
Hermetic scroll compressor, cooled by the refrigerant, complete with thermal cut-out.

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.

MAIN ACCESSORIES (ref. page 189)
BA - Mechanical bypass valve protecting the pump
HR - Fluid heating element
LTA - Operation at low ambient temperatures
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		TCWA2	TCWA4	TCWA7	TCWA9
Rated Cooling Capacity*	W	12300	16400	17800	20700
Ambient temperature operating limits	°C	+15 - +45			
Settable fluid temperature range	°C	+8 - +25			
Fluid type		Water			
Temperature precision	K	+/-2			
Refrigerant gas	HFC	R410A			
Power supply					
Supply voltage	V ph Hz	400V (+/-10%) 3ph 50Hz			
Secondary supply voltage	V	24 V AC			
Digital thermostat		TX200			
Compressor					
Compressor type		Scroll			
Quantity - Number of circuits	no.	1 - 1			
Max. power draw	kW	4.7	6.4	6.6	7.4
Max. current draw	A	9.8	12.1	12.5	14.8
Axial Fan					
Fan type		Axial			
Quantity	no.	1	1	1	1
Air flow rate	m3/h	5700	5700	5700	5700
Max. power draw	kW	0.7	0.7	0.7	0.7
Max. current draw	A	1.4	1.4	1.4	1.4
Centrifugal Fan (optional)					
Fan type		Centrifugal			
Quantity	no.	1	1	1	1
Air flow rate	m3/h	5700	5700	5700	5700
Available head	Pa	250	250	220	220
Max. power draw	kW	1.5	1.5	1.5	1.5
Max. current draw	A	3.0	3.0	3.0	3.0
Standard Pump					
Pump type		Centrifugal			
Quantity	no.	1	1	1	1
Nominal/max fluid flow rate	l/min	35.0 - 80.0	46.0 - 80.0	50.0 - 80.0	58.0 - 80.0
Nominal available head	bar	2.9	2.7	2.6	2.5
Max. power draw	kW	0.9	0.9	0.9	0.9
Max. current draw	A	1.7	1.7	1.7	1.7
High Pressure Pump					
Pump type		Centrifugal			
Quantity	no.	1	1	1	1
Nominal available head	bar	5.3	5.1	4.9	4.7
Max. power draw	kW	1.7	1.7	1.7	1.7
Max. current draw	A	3.0	3.0	3.0	3.0
Storage tank capacity	l	150			
IN/OUT liquid connections	inch	1"			
Net weight (approximate)***	kg	260	275	300	315
Width	mm	744			
Depth	mm	1360			
Height	mm	1335			
Sound pressure level**	dB(A)	67	67	67	67
IP rating	IP	44			

* 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

TCWB2-C8 Size 4

Industrial water chillers

COOLING CAPACITY | **23000 - 28300 - 32800 - 37600 W**

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

COMPRESSOR
Hermetic scroll compressor, cooled by the refrigerant, complete with thermal cut-out. 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.

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, 0-10 bar pressure gauge, differential pressure switch protecting the water flow, regulation sensor.

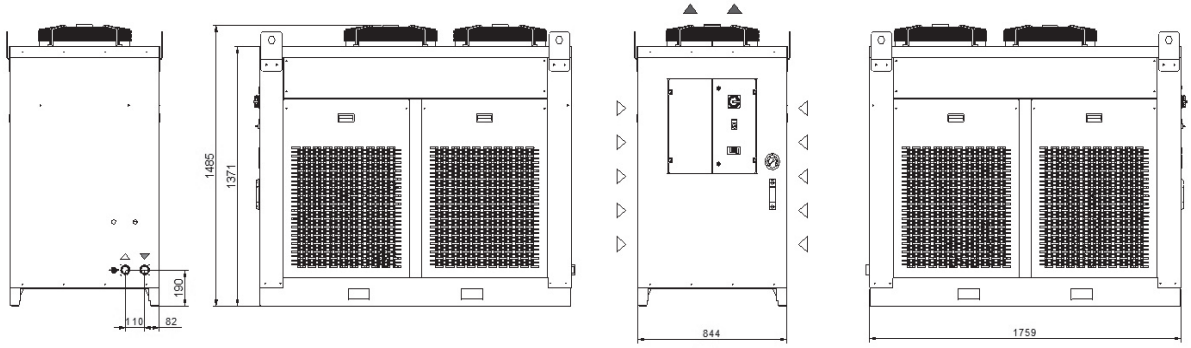
ELECTRICAL PANEL
With main disconnect switch, relay motor protection, phase sequence relays.

MANAGEMENT AND CONTROL
The TX200 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. 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
HR - Fluid heating element
LTA - Operation at low ambient temperatures
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		TCWB2	TCWB7	TCWC1	TCWC8
Rated Cooling Capacity*	W	23000	28300	32800	37600
Ambient temperature operating limits	°C	+15 - +45			
Settable fluid temperature range	°C	+8 - +25			
Fluid type		Water			
Temperature precision	K	+/-2			
Refrigerant gas	HFC	R410A			
Power supply					
Supply voltage	V ph Hz	400V (+/-10%) 3ph 50Hz			
Secondary supply voltage	V	24 V AC			
Digital thermostat		TX200			
Compressor					
Compressor type		Scroll			
Quantity - Number of circuits	no.	1 - 1			
Max. power draw	kW	8.6	10.1	11.6	13.3
Max. current draw	A	15.0	17.3	18.8	23.0
Axial Fan					
Fan type		Axial			
Quantity	no.	2	2	2	2
Air flow rate	m_3/h	10000	10000	10000	10000
Max. power draw	kW	1.4	1.4	1.4	1.4
Max. current draw	A	2.8	2.8	2.8	2.8
Centrifugal Fan (optional)					
Fan type		Centrifugal			
Quantity	no.	2	2	2	2
Air flow rate	m_3/h	10000	10000	10000	10000
Available head	Pa	250	250	220	220
Max. power draw	kW	3.0	3.0	3.0	3.0
Max. current draw	A	6.0	6.0	6.0	6.0
Standard Pump					
Pump type		Centrifugal			
Quantity	no.	1	1	1	1
Nominal/max fluid flow rate	l/min	65.0 - 150.0	80.0 - 150.0	95.0 - 150.0	110.0 - 150.0
Nominal available head	bar	3.7	3.5	3.3	3.1
Max. power draw	kW	1.7	1.7	1.7	1.7
Max. current draw	A	2.9	2.9	2.9	2.9
High Pressure Pump					
Pump type		Centrifugal			
Quantity	no.	1	1	1	1
Nominal available head	bar	5.8	5.5	5.2	5.0
Max. power draw	kW	2.6	2.6	2.6	2.6
Max. current draw	A	5.1	5.1	5.1	5.1
Storage tank capacity	l	220			
IN/OUT liquid connections	inch	1 1/2"			
Net weight (approximate)***	kg	440	460	500	520
Width	mm	844			
Depth	mm	1759			
Height	mm	1485			
Sound pressure level**	dB(A)	70	70	70	70
IP rating	IP	44			

* 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