

# TCW08-19 Minichiller

Industrial water chillers

## COOLING CAPACITY

900-1100 - 1600-1900 - 2200-2550 W



### AXIAL FAN

Axial fan, complete with electrical protection and safety grille.

### LIQUID CIRCUIT

Liquid circuit composed entirely of non-ferrous material in contact with the liquid to prevent contamination. Standard liquid circuit with open reservoir and pump, protective flow switch, pressure gauge, regulation sensor. Peripheral electric pump with 4.5 bar available head. Plastic storage tank complete with drain valve and visual level indicator.

### ELECTRICAL PANEL

With main breaker, fused motor protection with LED visual fault indicator, voltage presence light.

### MANAGEMENT AND CONTROL

The TX110 control unit manages the chiller's operation, providing warnings including high/low temperature alarms and a general serious fault alarm, with the display indicating if this refers to the refrigeration or liquid circuit. An on-off contact allows the machine to be switched on remotely. Control disconnect switch for switching on the machine.

### PAINT/COATING

Standard colour: RAL 7035 textured.

### STRUCTURE

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

### COMPRESSOR

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

### REFRIGERATION CIRCUIT

Complete with charging port, drier filter, expansion valve, high- and low-pressure safety pressure switch, R134a refrigerant.

### EVAPORATOR

Brazed stainless-steel plate model.

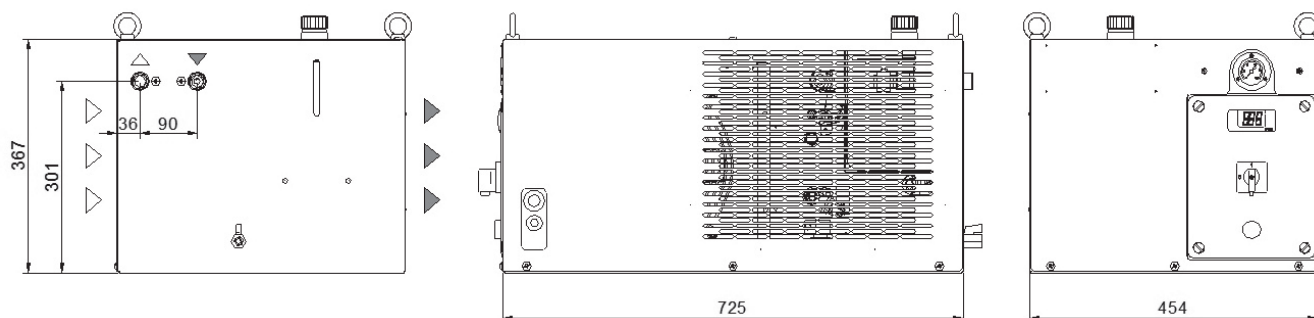
### AIR CONDENSER

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

### MAIN ACCESSORIES (ref. page 189)

- BA - Mechanical bypass valve protecting the pump
- BM - Manual bypass valve protecting the pump
- LE - Level indicator
- 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
- Satin AISI 304 stainless steel framework

## Dimensions



Model		TCW08		TCW12		TCW19	
		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
<b>Rated Cooling Capacity*</b>	W	900	1100	1600	1900	2200	2550
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					
<b>Power supply</b>							
Supply voltage	V ph Hz	230V (+/-10%) 1ph 50/60Hz					
Secondary supply voltage	V	230					
Digital thermostat		TX110					
<b>Compressor</b>							
Compressor type		Reciprocating					
Quantity - Number of circuits	no.	1 - 1					
Max. power draw	kW	0.5	0.6	0.7	1.1	1	1.15
Max. current draw	A	2.8	3.1	4.1	4.3	6	6.5
<b>Axial Fan</b>							
Fan type		Axial					
Quantity	no.	1		1		1	
Air flow rate	m³/h	1000		1000		1000	
Max. power draw	W	150	190	150	190	150	190
Max. current draw	A	0.66	0.85	0.66	0.85	0.66	0.85
<b>Standard Pump</b>							
Pump type		Peripheral					
Quantity	no.	1		1		1	
Nominal/max fluid flow rate	l/min	3.0 - 20.0		5.0 - 20.0		6.5 - 20.0	
Nominal available head	bar	5.4	7.6	5.2	6.7	4.6	6
Available power draw	kW	0.75	0.75	0.75	0.75	0.75	0.75
Max. current draw	A	2.8	3.7	2.8	3.7	2.8	3.7
<b>High-Pressure Pump (optional)</b>							
Pump type		Peripheral					
Quantity	no.	1		1		1	
Nominal available head	bar	6.5	8.4	6	7.9	5.8	7.6
Max. power draw	kW	1.29	1.29	1.29	1.29	1.29	1.29
Max. current draw	A	5	6	5	6	5	6
Storage tank capacity	l	10					
IN/OUT liquid connections	mm	1/2"					
Net weight (approximate)***	kg	52		54		55	
Width	mm	725					
Depth	mm	454					
Height	mm	367					
Sound pressure level**	dB(A)	56		56		56	
IP rating	IP	44					
<p>* 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.</p> <p>** Sound pressure level at 50Hz, 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.</p> <p>*** Weight includes pallets and packaging (where provided for), with refrigerant charge, storage tank empty, axial fans.</p> <p>**** The electrical data refer to cos φ = 0.8.</p>							

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														

# TCW31-41 Minichiller HP

Industrial water chillers

## COOLING CAPACITY

3000-3450 - 3900-4450 W



### AXIAL FAN

Axial fan, complete with electrical thermal protection and safety grille.

### LIQUID CIRCUIT

Liquid circuit composed entirely of non-ferrous material in contact with the liquid to prevent contamination. Standard liquid circuit with open reservoir and pump, protective flow switch, pressure gauge, regulation sensor. Peripheral electric pump with 4.5 bar available head. Plastic storage tank complete with drain valve and visual level indicator.

### ELECTRICAL PANEL

With main breaker, fused motor protection with LED visual fault indicator, voltage presence light.

### MANAGEMENT AND CONTROL

The TX110 control unit manages the chiller's operation, providing warnings including high/low temperature alarms and a general serious fault alarm, with the display indicating if this refers to the refrigeration or liquid circuit. An on-off contact allows the machine to be switched on remotely. Control disconnect switch for switching on the machine.

### PAINT/COATING

Standard colour: RAL 7035 textured.

### STRUCTURE

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

### COMPRESSOR

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

### REFRIGERATION CIRCUIT

Complete with charging port, drier filter, expansion valve, high- and low-pressure safety pressure switch, thermostatic valve. R134a refrigerant.

### EVAPORATOR

Brazed stainless-steel plate model.

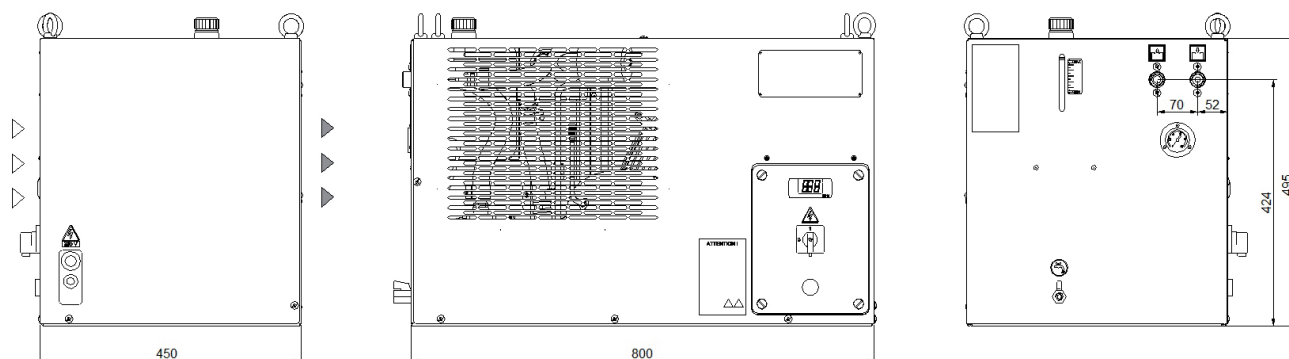
### AIR CONDENSER

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

### MAIN ACCESSORIES (ref. page 189)

- BA - Mechanical bypass valve protecting the pump
- BM - Manual bypass valve protecting the pump
- LE - Electrical level indicator
- 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
- HIGH-pressure pump
- Non-standard paint/coating
- Satin AISI 304 stainless steel framework

## Dimensions



Model		TCW31		TCW41	
		50Hz	60Hz	50Hz	60Hz
<b>Rated Cooling Capacity*</b>	W	3000	3450	3900	4450
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			
<b>Power supply</b>					
Supply voltage	V ph Hz	230V (+/-10%) 1ph 50/60Hz			
Secondary supply voltage	V	230			
Digital thermostat		TX110			
<b>Compressor</b>					
Compressor type		Reciprocating			
Quantity - Number of circuits	no.	1 - 1			
Max. power draw	kW	1.15	1.5	1.6	1.92
Max. current draw	A	6.1	8.1	7.2	8.4
<b>Axial Fan</b>					
Compressor type		Axial			
Quantity	no.	1		1	
Air flow rate	m³/h	2300	2650	2300	2650
Max. power draw	W	180	250	180	250
Max. current draw	A	0.81	1.1	0.81	1.1
<b>Standard Pump</b>					
Pump type		Peripheral			
Quantity	no.	1		1	
Nominal/max fluid flow rate	l/min	6.5 - 20		11 - 20	
Nominal available head	bar	3.7	5.1	2.8	4.0
Available power draw	kW	0.75	0.75	0.75	0.75
Max. current draw	A	2.8	3.7	2.8	3.7
<b>High-Pressure Pump (optional)</b>					
Pump type		Peripheral			
Quantity	no.	1		1	
Nominal available head	bar	4.6	7.2	4.9	6.6
Max. power draw	kW	1.29	1.29	1.29	1.29
Max. current draw	A	5	6	5	6
Storage tank capacity	l	10			
IN/OUT liquid connections	mm	1/2"			
Net weight (approximate)***	kg	74		75	
Width	mm	800			
Depth	mm	450			
Height	mm	495			
Sound pressure level**	dB(A)	57	60	57	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 at 50Hz, 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													

# TAL24-37 Size 1

Industrial water chillers

## COOLING CAPACITY

2300-2700 - 3600-4200 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 of peripheral electric pump, plastic storage tank complete with visual level indicator, 0-10 bar pressure gauge, protective flow switch, regulation sensor.

### ELECTRICAL PANEL

With main disconnect switch, fused motor protection.

### MANAGEMENT AND CONTROL

The TX110 control unit manages the chiller's operation, providing warnings including high/low temperature alarms and a general serious fault alarm, with the display indicating if this refers to the refrigeration or liquid circuit. An on-off contact allows the machine to be switched on remotely (pump included). Control disconnect switch for switching on the machine.

### STRUCTURE

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

### COMPRESSOR

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

### REFRIGERATION CIRCUIT

Complete with charging port, drier filter, capillary, high- and low-pressure pressure switch, R134a refrigerant.

### EVAPORATOR

Brazed stainless-steel plate model.

### 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

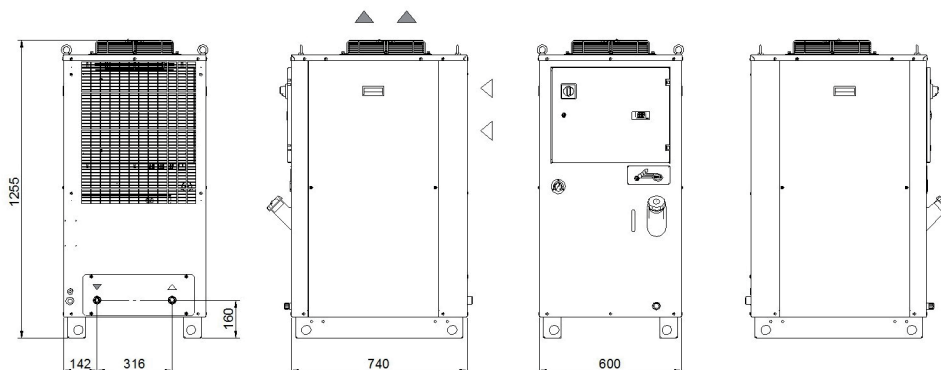
LS - Liquid circuit for laser application

NF - Non-ferrous liquid circuit

- HIGH-pressure pump version "H" - 5 bar, version "R" - 7 bar.

- Non-standard paint/coating

## Dimensions



Model		TAL24		TAL37	
		50Hz	60Hz	50Hz	60Hz
<b>Rated Cooling Capacity*</b>	W	2300	2700	3600	4200
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			
<b>Power supply</b>					
Supply voltage	V ph Hz	230V (+/-10%) 1ph 50/60Hz			
Secondary supply voltage	V	230 V AC			
Digital thermostat		TX110			
<b>Compressor</b>					
Compressor type		Reciprocating			
Quantity - Number of circuits	no.	1 - 1			
Nominal power draw	kW	0.84	1.04	1.16	1.5
<b>Axial Fan</b>					
Fan type		Axial			
Quantity	no.	1			
Air flow rate	m³/h	1250 - 1650		1550 - 2050	
<b>Centrifugal Fan (optional)</b>					
Fan type		Centrifugal			
Quantity	no.	1			
Air flow rate	m³/h	2100 - 2400		2100 - 2400	
Available head	Pa	250			
<b>Standard Pump</b>					
Pump type		Peripheral			
Quantity	no.	1			
Nominal/max fluid flow rate	l/min	7 - 18		10 - 18	
Nominal available head	bar	4.4	5.8	3.1	4.5
<b>High-Pressure Pump (optional)</b>					
Pump type		Peripheral			
Quantity	no.	1			
Nominal available head	bar	5.6	7.5	5	6.8
<b>Storage tank capacity</b>					
Storage tank capacity	l	50			
IN/OUT liquid connections	inch	3/4"			
Net weight (approximate)***	kg	151		153	
Width	mm	600			
Depth	mm	740			
Height	mm	1255			
Sound pressure level**	dB(A)	57	60	57	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.					
** Sound pressure level at 50Hz, 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.					
However, due to our continuous development and improvement of our products, all information is subject to change without notice.					

Correction factors for calculating the cooling power														
Water outlet temperature	Fw	°C						8	10	15	20	25		
		factor						0.69	0.77	1	1.22	1.44		
Ambient Temperature	Fa	°C						15	20	25	32	35	40	45
		factor						1.26	1.2	1.11	1	0.95	0.87	0.80
Percentage glycol by weight	Fg	%	0	10	15	20	25	30	35	40				
		factor	1	0.96	0.95	0.94	0.93	0.91	0.90	0.88				
Cooling power = Nominal cooling power x Fw x Fa x Fg														



# TAL29-93

## Size 1 Three Phase

Industrial water chillers

### COOLING CAPACITY

2900 - 3600 - 4550 - 6000 - 8100 - 9550 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 of centrifugal electric pump, plastic storage tank complete with 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 TX110 control unit manages the chiller's operation, providing warnings including high/low temperature alarms and a general serious fault alarm, with the display indicating if this refers to the refrigeration or liquid circuit. An on-off contact allows the machine to be switched on remotely (pump included). Control disconnect switch for switching on the machine.

#### STRUCTURE

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

#### COMPRESSOR

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

#### REFRIGERATION CIRCUIT

Complete with charging port, drier filter, capillary or thermostatic valve, high- and low-pressure pressure switch, R134a refrigerant.

#### EVAPORATOR

Brazed stainless-steel plate model.

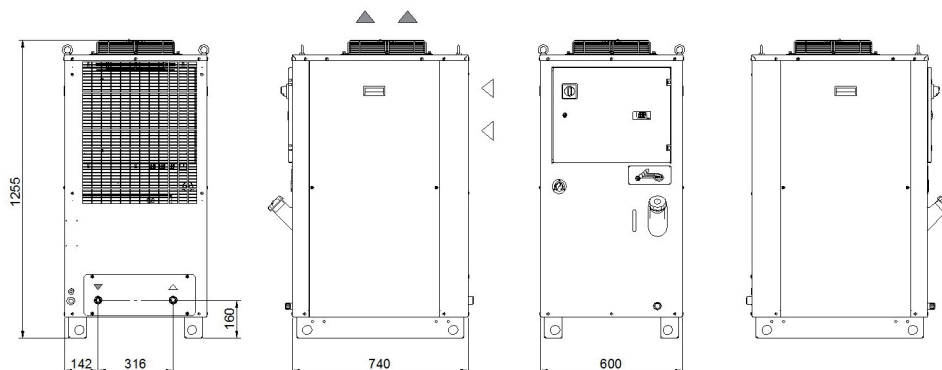
#### PAINT/COATING

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
- NF - Non-ferrous liquid circuit
- HIGH-pressure pump version "H" - 5 bar, version "R" - 7 bar.
- Non-standard paint/coating

## Dimensions



Model		TAL29	TAL37	TAL46	TAL57	TAL76	TAL93	
<b>Rated Cooling Capacity*</b>	W	2900	3600	4550	6000	8100	9550	
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						
<b>Power supply</b>								
Supply voltage	V ph Hz	400V (+/-10%) 3ph 50Hz						
Secondary supply voltage	V	230 V AC						
Digital thermostat		TX110						
<b>Compressor</b>								
Compressor type		Reciprocating					Scroll	
Quantity - Number of circuits	no.	1/1						
Nominal power draw	kW	0.78	1.16	1.42	1.82	2.42	2.21	
<b>Axial Fan</b>								
Fan type		Axial						
Quantity	no.	1						
Air flow rate	m <sup>3</sup> /h	1550	1550	1800	1800	3150	3350	
<b>Centrifugal Fan (optional)</b>								
Fan type		Centrifugal						
Quantity	no.	1						
Air flow rate	m <sup>3</sup> /h	2100 - 2400	2100 - 2400	2100 - 2400	2100 - 2400	2100 - 2400	2100 - 2400	
Available head	Pa	250						
<b>Standard Pump</b>								
Pump type		Centrifugal						
Quantity	no.	1						
Nominal/max fluid flow rate	l/min	8 - 40	10 - 40	12.5 - 40	16 - 40	21 - 70	26 - 70	
Nominal available head	bar	3	2.9	2.8	2.7	3.1	3	
<b>High-Pressure Pump (optional)</b>								
Pump type		Centrifugal						
Quantity	no.	1						
Nominal available head	bar	5.1	4.9	4.8	4.6	5.5	5.3	
Storage tank capacity	l	50						
IN/OUT liquid connections	inch	3/4"						
Net weight (approximate)***	kg	151	153	155	160	165	170	
Width	mm	600						
Depth	mm	740						
Height	mm	1255			1275			
Sound pressure level**	dB(A)	57	57	57	57	57	57	
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.  
\*\* Sound pressure level at 50Hz, 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.  
However, due to our continuous development and improvement of our products, all information is subject to change without notice.

Correction factors for calculating the cooling power													
Water outlet temperature	Fw	°C					8	10	15	20	25		
		factor					0.69	0.77	1	1.22	1.44		
Ambient Temperature	Fa	°C					15	20	25	32	35	40	45
		factor					1.26	1.2	1.11	1	0.95	0.87	0.80
Percentage glycol by weight	Fg	%	0	10	15	20	25	30	35	40			
		factor	1	0.96	0.95	0.94	0.93	0.91	0.90	0.88			
Cooling power = Nominal cooling power x Fw x Fa x Fg													

