

TCO31-41 Minichiller HP

Industrial oil chillers

COOLING CAPACITY

3000/3450 - 3900/4450 W



AXIAL FAN

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

HYDRAULIC CIRCUIT

Hydraulic circuit with gear pump without tank, with maximum available pressure 20 bar, 0-25 bar pressure gauge, regulation temperature sensor. Hydraulic safety with safety low- and high-pressure pressure switch.

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 hydraulic 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.

MAIN ACCESSORIES (ref. page 189)

- 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
- FL - Customer flow switch
- Non-standard paint/coating
- Satin AISI 304 stainless steel framework

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, expansion valve, high- and low-pressure safety pressure switch, thermostatic valve. R134a refrigerant.

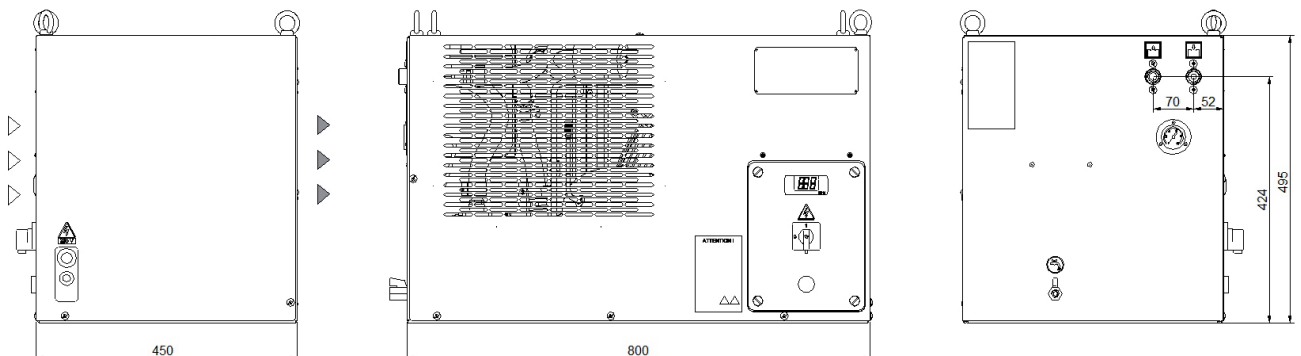
EVAPORATOR

Brazed stainless-steel plate model.

AIR CONDENSER

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

Dimensions



Model		TCO31		TCO41	
		50Hz	60Hz	50Hz	60Hz
Rated Cooling Capacity*	W	3000	3450	3900	4450
Ambient temperature operating limits	°C	+15 - +45			
Settable oil temperature range	°C	+25 - +40			
Fluid type		ISO VG 32			
Temperature precision	K	+/-2			
Refrigerant gas	HFC	R134a			
Power supply					
Supply voltage	V ph Hz	230V (+/-10%) 1ph 50/60Hz			
Secondary supply voltage	V AC	230			
Digital thermostat		TX110			
Compressor					
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
Axial Fan					
Fan type		Axial			
Quantity	no.	1		1	
Air flow rate	m ³ /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
Standard Pump					
Pump type		Gear pump			
Quantity	no.	1			
Nominal fluid flow rate	l/min	10		10	
Nominal available head	bar	20		20	
Max. power draw	kW	0.55		0.55	
Max. current draw	A	4.0	4.2	4.0	4.2
IN/OUT liquid connections	inch	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			
<p>* Data relating to operation under the following conditions: intake/outlet temperature 40/30°C, ISO VG 32 oil, 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, without storage tank and axial fans.</p> <p>**** The electrical data refer to cos φ = 0.8.</p>					

Correction factors for calculating the cooling power												
Oil outlet temperature	Fo	°C	20	25	30	35						
		factor	0.82	0.92	1	1.05						
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
Oil type	Ft	type	ISO VG 10		ISO VG 22		ISO VG 32		ISO VG 46		ISO VG 68	
		factor	1.15		1.1		1		0.9		0.82	
Cooling power = Nominal cooling power x Fo x Fa x Ft												