

TCO08÷19 Minichiller

Industrial oil chillers

COOLING CAPACITY

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



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, R134a refrigerant.

EVAPORATOR

Brazed stainless-steel plate model.

AIR CONDENSER

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

AXIAL FAN

Axial fan, complete with electrical protection 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.

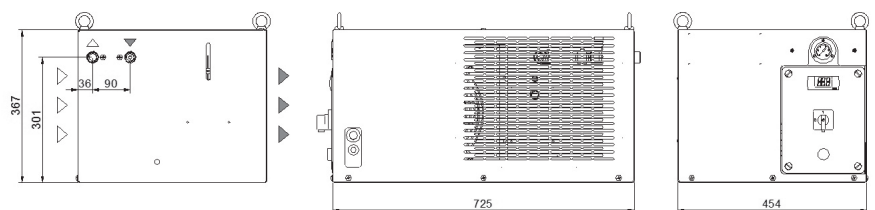
PAINT/COATING

Standard colour: RAL 7035 textured.

MAIN OPTIONS

- 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

DIMENSIONS



| Model | | TCO08 | | TCO12 | | TCO19 | |
|--------------------------------------|---------|---------------------------|------|-------|------|-------|------|
| | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz |
| Rated Cooling Capacity* | W | 900 | 1100 | 1600 | 1900 | 2200 | 2550 |
| 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 | 0.5 | 0.6 | 0.7 | 1.1 | 1.0 | 1.15 |
| Max. current draw | A | 2.8 | 3.1 | 4.1 | 4.3 | 6.0 | 6.5 |
| Axial Fan | | | | | | | |
| 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 |
| Standard Pump | | | | | | | |
| Pump type | | Gear pump | | | | | |
| Quantity | no. | 1 | | 1 | | 1 | |
| Nominal fluid flow rate | l/min | 10 | | 10 | | 10 | |
| Nominal available head | bar | 20 | | 20 | | 20 | |
| Max. power draw | kW | 0.55 | | 0.55 | | 0.55 | |
| Max. current draw | A | 4.0 | 4.2 | 4.0 | 4.2 | 4.0 | 4.2 |
| Storage tank capacity (optional) | l | 10 | | | | | |
| IN/OUT liquid connections | inch | 1/2" | | | | | |
| Net weight (approximate)*** | kg | 59 | | 61 | | 63 | |
| Width - Depth - Height | mm | 725 - 454 - 367 | | | | | |
| Sound pressure level** | dB(A) | 56 | | 56 | | 56 | |
| IP rating | IP | 44 | | | | | |

* 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.

** 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, without storage tank and axial fans.

The electrical data refer to $\cos \phi = 0.8$.

| 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 | | | | | | | | | | | | |