

TCU22-55

Size 1 Three Phase

Industrial chillers for contaminated or dirty fluids

COOLING CAPACITY

2200 - 3300 - 4400 - 5300 W



AXIAL FAN

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

FLUID POWER CIRCUIT

Fluid power circuit with centrifugal pump without tank, with maximum available pressure 3 bar, dual oil safety pressure switch, 0-10 bar oil pressure gauge, 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 fluid power 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 181)

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

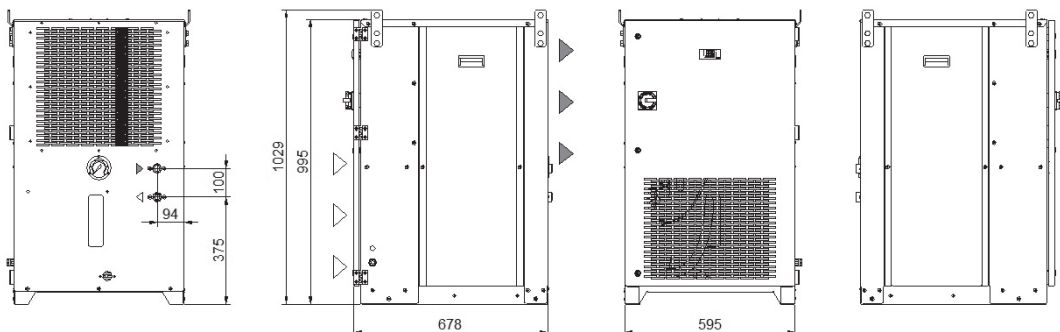
EVAPORATOR

Tube evaporator with mantle, steel heads and copper heat exchanger tubes, with anti-freezing protection.

AIR CONDENSER

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

Dimensions



Model		TCU22	TCU36	TCU44	TCU55
Rated Cooling Capacity*	W	2200	3300	4400	5300
Ambient temperature operating limits	°C	+15 - +45			
Settable oil temperature range	°C	+25 - +40			
Fluid type		Dirty fluids (oil and mineral oil emulsions)			
Maximum oil impurity size	µm	150			
Temperature precision	K	+/-2			
Refrigerant gas	HFC	R134a			
Power supply					
Supply voltage	V ph Hz	400V (+/-10%) 3ph 50Hz			
Secondary supply voltage	V	230 V AC			
Digital thermostat		TX110			
Compressor					
Compressor type		Reciprocating			
Quantity	no.	1 - 1			
Max. power draw	kW	1.5	1.72	2.32	2.61
Max. current draw	A	2.7	3.1	4.2	4.7
Axial Fan					
Fan type		Axial			
Quantity	no.	1	1	1	1
Air flow rate	m ³ /h	2300	2300	2050	2050
Max. power draw	W	180	180	180	180
Max. current draw	A	0.81	0.81	0.81	0.81
Centrifugal Fan (optional)					
Fan type		Centrifugal			
Quantity	no.	1			
Air flow rate	m ³ /h	2100 - 2400	2100 - 2400	2100 - 2400	2100 - 2400
Available head	Pa	250		230	
Max. power draw	W	145 - 205	145 - 205	145 - 205	145 - 205
Max. current draw	A	0.35 - 0.37	0.35 - 0.37	0.35 - 0.37	0.35 - 0.37
Centrifugal Pump					
Pump type		Centrifugal			
Quantity	no.	1	1	1	1
Nominal fluid flow rate	l/min	14 - 60	18 - 60	24 - 60	30 - 60
Nominal available head	bar	3.2	3.2	3.0	2.8
Max. power draw	kW	0.67	0.67	0.67	0.67
Max. current draw	A	1.6	1.6	1.6	1.6
IN/OUT liquid connections	inch	3/4"			
Net weight (approximate)***	kg	100	110	135	145
Width	mm	595			
Depth	mm	678			
Height	mm	995			
Sound pressure level**	dB(A)	57	57	57	57
IP rating	IP	44			
<p>* Data relating to operation under the following conditions: intake/outlet temperature 40/30°C, ISO VG 32 mineral oil, ambient temperature 32°C. Cooling power refers to the evaporator unit.</p> <p>** 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.</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												