



## **WATER COOLING** TEMPERATURE CONTROL UNIT **TCU**



### **DESCRIPTION**

Designed to stabilize the temperature in a second stage of the samples in analyzer systems.

A temperature control unit (TCU) systems are pre-designed available in standard sizes from 3 to 10 tons (others capacities available).

### **APPLICATIONS**

- Stabilization temperature samples in Analyzers Systems.
- Grab Sampling systems.

### **FEATURES**

- Condenser water stainless steel heat exchanger
- Thermostatic valve for regulating the pressure of condensation water
- Self-contained with all necessary controls, pumping and refrigeration systems.
- Local display provides quick operational snapshot.





### SPECIFICATIONS

MODEL	UNITS	WTCU 3TT	WTCU 5TT	WTCU 8TT	WTCU 10TT
Nominal Cooling Capacity*	W	10.900	20.100	29.000	35.800
Ambient temperature limit	°C (°F)		+15/ +4	5 (+59/+113)	
Range fluid temperature adjustat	olec (°F)		+8 / +25	5 (+ 46 / 77)	
Type of fluid	-			Water	
Temperature accuracy	°C (°F)	+/- 2 (+/- 3,6)			
Refrigerant	HFC	R134A		R410A	
POWER SUPPLY					
Operating voltage	V ph Hz		400V (+/-	- 10%) 3ph 50Hz	
Secondary operating voltage	V			24 Vac	
Digital thermostat	-			TX200	
COMPRESSOR					
Type of compressor	-			Scroll	
Quantity - Refrigerant circuits	nr			1/1	
Max absorbed power	kW	4,6	6,6	10,1	13,3
Max absorbed current	Α	7,5	12,5	17,3	23,0
CONDENSER					
Type of Condenser	-	stainless steel plates			
Quantity	nr			1	
Minimum refrigeration flow	l/min	32/50	50/80	80/150	110/150
Cooling water temperature	°C (°F)		2	25 (77)	
Cooling water pressure	Bar (psi)	3 (43,51)			
Cooling fluid	-		,	Water	
Storage tank capacity	L (gal)	60 (15,85)	150 (39,63)	220 (58,1)	2)
Water connections IN/OUT	inch	3/4"	1″	2"	
Empty weight (indicative)***	Kg (lbs)	200 (441)	300 (661)		0 (1146)
Width	mm	680 (26,77)	750 (29,53)	850 (33,47	
Depth	mm	800 (31,5)	1.360 (53,54)	1.760 (69,3	
Height	mm	1.230 (48,43)	1.340 (52,76)	1.480 (58,2	7)
Sound pressure level**	dB(A)	60	67	70	
IP Protection	IP			55	

### OPTIONS

### **H - SPECIAL HYDRAULIC PERFORMANCE**

Type of Pump-quantity	- Centrifugal -1					
Flow rate required	I/min (GPH)	114,0 (30,12) 189,0 (49,93) 303,0 (80,05) 379,0 (100,13)				
Pressure at required flow	Bar (psi)	3,0 (43,5)				
<b>N</b> - OPERATING VOLTAGE	V ph Hz	460 V (+/-10%) 3ph 60Hz				
QE-IP PROTECTION	IP	55				
HR - Heater	KE -BTU/h	5 -17000 10 - 34000				
<b>BGC-</b> Temperature precision	+/- 1°C (+/- 1,8 °F)	)				
<b>655 6 11 11 11 11</b>			( 4 405)			

OM - Outdoor aplication until ambient temperature of -10°C (-14°F)

TPR - Tropicalized version until ambient temperature of +55°C (+131°F)

INX - Housing in AISI 304 Stainless Steel

<sup>\*</sup> Referred to following conditions: temperature IN/OUT 20/15°C (68/59 °F) water, condenser water temperature 25°C (77°F). Nominal Cooling power referred to the unit without pump.

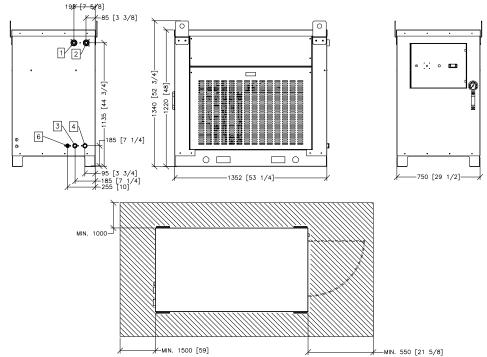
<sup>\*\*</sup> Referred to axial fan models at free conditions, hemispheric field at a distance 1 meter (3.3 ft) from chiller, 1,5 meters (4.92 ft) from ground, norm UNI ISO 3746.

<sup>\*\*\*</sup> Weights include pallet and pack (if present), with refrigerant charge and empty tank.





# WTCU 5T DIMENSIONS \*\*STORY OF THE PROPERTY O

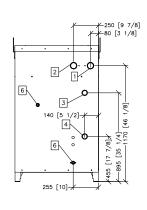


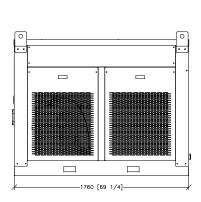


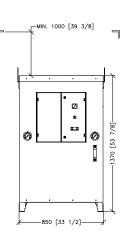


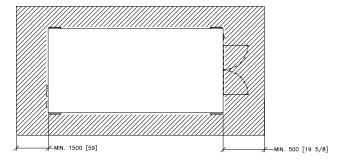
### DIMENSIONS

### WTCU 8T & WTCU 10T









Units: mm [Inches in brackets]

Due to manufacturing reason's dimmensions are aproximated. Minor changes are allowed Due to continuous improvements, Manvia reserves the right to change the design and specifications without notice

### CONNECTIONS

ID	CONNECTION
1	CONDENSER CIRCUIT OUT
2	CONDENSERE CIRCUIT IN
3	EVAPORATOR CIRCUIT OUT
4	EVAPORATOR CIRCUIT IN
5	AUTOMATIC FILLING
6	DRAIN

Connections size in specifications





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