Digital control system

Developed by Transtherm specifically for use with Air Blast Coolers and available as 1, 2, 3 and 4 stage units. Suitable for supply of 12, 24, 110 and 240v at 50/60Hz. These controllers provide a range of facilities not easily available with capillary or simple electronic fan control thermostats.

Features include:

- LED display for temperature and setting parameters.
- Rotation of lead fan to ensure even wear.
- Staged start of multiple fans to avoid heavy current draw on start up.
- Setting of run, stop and minimum time between starts for all fans.
- Optional serial board to provide 0-10v or 4-20mA signal for BMS etc.

The use of this controller provides smoother operation of the cooler and ensures that no fan will see rapid cycling – a common cause of motor failure which is not covered by warranty – thereby extending life of the fan motors and ensuring long term reliability and peace of mind for the owner. For more details please contact Transtherm.

Note: As standard, sensor is supplied on 1.5 metre cable but may be extended using 2 core cable of 1.5mm^2 minimum cross sectional area.

Variable speed control

The use of variable speed fans will be of interest where close control of water temperature or the lowest possible operating noise levels are required. As standard the cooler fan motors are suitable for variable speed control by frequency convertor, which can be supplied as part of a full Transtherm control system or as a loose item for incorporation into a panel by others.

Control panel

All control panels offered are IP55, suitable for outdoor operation and are supplied as loose items unless otherwise specified. Panels are fitted with door interlock isolator, MCB's, common run/trip lamps and 24v control. Casings are finished RAL 7032 grey. If a Transtherm digital controller is specified it will normally be fitted on the control box front panel.

AIR BLAST BOX COOLERS

Standard Specifications

TBCL — Compact packaged coolers designed for indoor installations incorporating pump, tank and sight glass.

TBCE — Packaged units suitable for either external or internal siting including control panel with digital fan controller, pump tank, sight glass, pressure gauge/temperature gauge, copper pipework, valves either side of pump and hinged access door for ease of maintenance.

Coil block — High efficiency copper coil with aluminium fins, pressure tested to 20 bar air under water.

Pumps — Non-ferrous water pumps, TBCL units 3 bar external pressure and TBCE pressure to suit customer requirements.

Fans — IP55 high efficiency axial flow fans with polypropylene or aluminium impellers.

Electrics — TBCL-T, 415v 3ph 50hz fitted with common terminal box.

TBCE, full IP55 control panel with lockable isolator, MCB's, starters, overloads and digital fan controller as standard.

Water tank — 304 stainless steel construction with lid.

Pipework — Copper pipe and non-ferrous fittings.

Casing — TBCL units are manufactured from zintec panels and TBCE coolers from anodised aluminium frame with galvanised or zintec casing panels. In both cases panels are powder coated RAL 6011 Reseda Green or BS4800 18E53 Tartan Blue. Other colours are available on request.

Optional extras
- Split coils
- Automatic mains fill
- Flow switch
- Level switch
- Air inlet filters
- Pressure switch
- Frost protection

Model	Cooling Capacity kw	Pump Capacity l/min @ 3 bar	Tank Capacity Litres	Power Supply	Dimensions Length×Width×Height	Connections BSP Male Thread	Noise Level dba @ 10m Free Field	Weight Dry/Operating kg
TBCL 10-T	10	14.3	25	415/3/50	650 × 650 × 540	3/4"	44	81/110
TBCL 20-T	20	28.7	50	415/3/50	650 × 650 × 995	1"	46	123/179
TBCE 20	20	28.7	120	415/3/50	900 × 900 × 1473	1"	44	202/329
TBCE 30	30	43.0	120	415/3/50	900 × 900 × 1443	1"	46	214/345
TBCE 45	45	64.5	120	415/3/50	900 × 900 × 1803	1 1/4"	48	248/383
TBCE 60	60	86.0	120	415/3/50	1100 × 1100 × 1983	1 1/4"	50	310/451
TBCE 80	80	115.0	170	415/3/50	1100 × 1100 × 1983	1 1/4"	56	333/531
TBCE 100	100	143.5	170	415/3/50	1250 × 1250 × 2173	1 1/2"	60	395/602
TBCE 125	125	179.2	170	415/3/50	1500 × 1250 × 2173	1 1/2"	61	444/658
TBCE 150	150	215.0	210	415/3/50	2500 × 1310 × 1895	2"	58	569/832
TBCE 175	175	251.0	210	415/3/50	2500 × 1310 × 1895	2"	59	569/832
TBCE 200	200	287.0	210	415/3/50	2500 × 1310 × 1895	2"	59	616/896

Performance based on 10°C cooling and 10°C approach.

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