

TBS 580

Evaporative Cooler



Overview

Powrmatic have brought the TBS 580 evaporative cooler to the HVAC market. This evaporative cooler delivers cool, 100% fresh air, at much lower costs than refrigerated cooling methods. Evaporative cooling is fast becoming the only viable option for cooling large areas. A TBS system can typically use less energy than refrigerated cooling systems. Doors and windows can be left open, with absolutely no loss of cooling efficiency. Constant natural flow of 100% fresh air is drawn into the building and then expelled, odours, germs and airborne contaminants are removed and not recirculated around the building.

Evaporative cooling for a range of applications, from industrial warehouses to commercial facilities. Using evaporation to cool the air within a building, water soaked pads absorb the warm air, which evaporates and lowers the air temperature. This air is then forced by a fan into the building either at roof height, or ducted to the required height.

Benefits

- Provides 100% Fresh Air (not recirculated Air)
- Simple to maintain and operate
- Low Environmental Impact
- Uses only water and electricity
- No chemical refrigerants
- Low Carbon Emissions
- Low Running Costs
- Regular Air Changes within a building
- Used with Powrmatic Powrvent extract systems to create input/extract system

Features

- Ease of Install
- Single Phase Power Supply
- Roof or Wall Mounted
- Retrofittable to existing buildings
- Multi-Unit Install controllable from a single control panel
- Controls and Accessories available
- Easily Maintainable
- For use in multiple applications (Industrial, Commercial and Residential)
- Works in conjunction with Powrmatic Natural Vent Extract Products
- IPX4 Rated



Cooler Discharge Air Temperature Chart

		Ambient Relative Humidity %								
		10	20	30	40	50	60	70	80	90
Ambient Dry Bulb Temperature °C	10	2.3	3.2	4.2	5.1	6.0	6.8	7.6	8.4	9.2
	15	5.6	6.8	8.0	9.1	10.2	11.2	12.2	13.2	14.1
	20	8.8	10.3	11.7	13.1	14.4	15.6	16.8	18.0	19.0
	25	11.9	13.7	15.4	17.0	18.6	20.0	21.3	22.6	23.8
	30	14.8	17.1	19.1	21.0	22.8	24.4	25.9	27.4	28.7
	35	17.8	20.4	22.8	25.0	27.0	28.8	30.5	32.1	33.6
	40	20.7	23.8	26.6	29.0	31.3	33.3	35.2	36.9	38.5
	45	23.5	27.1	30.3	33.1	35.5	37.8	39.8	41.7	43.4
	50	26.3	30.5	34.1	37.1	39.9	42.3	44.5	46.5	48.3

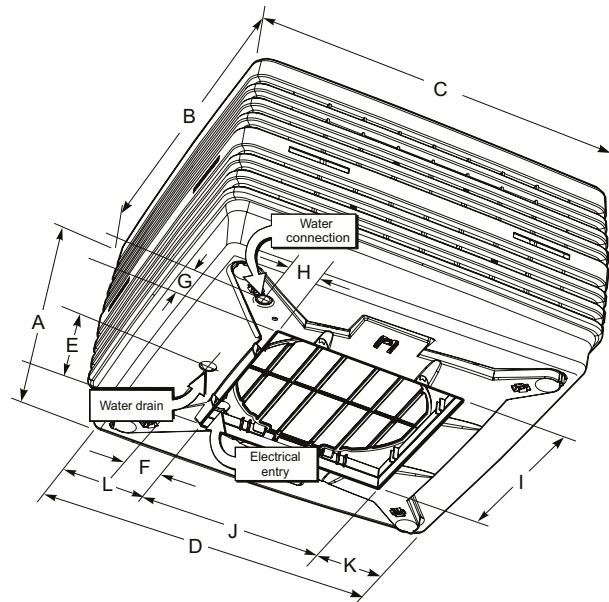
Note: This chart represents approximate air temperatures based on cooling performance at sea level.
- Contact Powrmatic for more information.

Technical Performance

Specification		TBS 580
Cooling Capacity	kW	16.8
Power Consumption	W Max	1220
	Current Max (amp)	6.0
Power Supply	V/ph/Hz	220-240 / 1 / 50
Controller	Type	Digital
Fan	Type	Axial
	Dia (mm)	541
Motor	Type	PSC
	Speed Max (rpm)	1360
	Output W (max)	950
	Overload & Fuse	Auto reset & 'one shot' fuse
	Enclosure	IP24
Pump	Type	Centrifugal
	Motor	Synchronous
	Rating W (input)	25
	Flow rate (L/min)	21
	V/ph/Hz	230 / 1 / 50
	Overload	Auto reset
Cooling Pad Chillcel	Enclosure rating	IPX4
	Size (mm)	800 x 526 (H) x 90 (4 pads)
Water	Pad area (m ²)	1.79
	Tank Capacity (L)	23
	Inlet (mm / inches)	12.7 / ½ male BSP
Packing / Shipping	Drain (mm / inches)	40 / 1 ½ male BSP
	Dimensions	1150 x 1150 x 902 (H)
	Volume (m ³)	1.19
	Weight (kg)	68
Connecting Duct (raw edged)	Operating (kg)	91
	Length x Width (mm)	550 x 550

Dimensions

Dims	mm
A	835
B	1150
C	1150
D	1080
E	275
F	95
G	82
H	82
I	555
J	555
K	249
L	279



Certified Air Delivery

Model	Industry STD Rating m ³ /h @ 80Pa	Motor W	Certified Air Delivery (m ³ /h) (static pressure Pa)					
			Pa	0	40	80	120	160
TBS 580	10010	950	Certified Air Delivery m ³ /h	11410	10800	10010	9070	7960