

# TBSi 580

## Evaporative Cooler



### Overview

Powrmatic have brought the TBSi 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 TBSi 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	2.2	3.2	4.2	5.1	8.9	6.8	7.6	8.4	9.2
	15	5.6	6.8	8	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	19
	25	11.8	13.7	15.4	17	18.6	20	21.3	22.6	23.8
	30	14.8	17.1	19.1	21	22.8	24.4	25.9	27.4	28.7
	35	17.7	20.4	22.8	25	27	28.8	30.5	32.1	33.6
	40	20.7	23.7	26.5	29	31.2	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	39.8	42.2	44.5	46.4	48.3

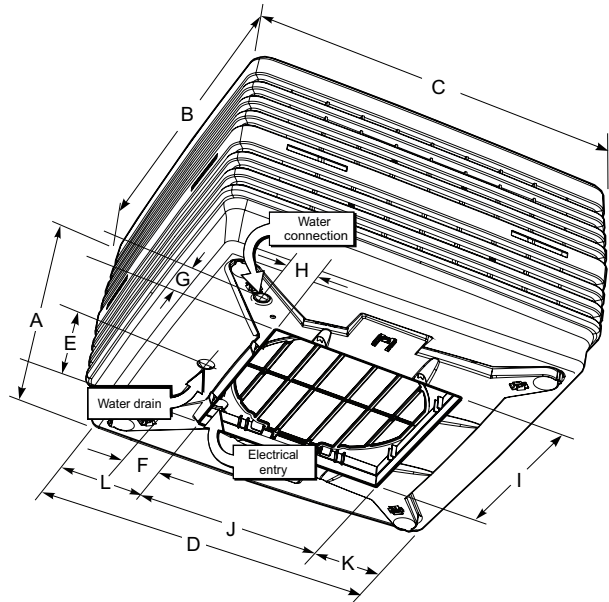
**Note:** This chart represents approximate air temperatures based on cooling performance at sea level.  
- Contact Powrmatic for more information.

# Technical Performance

Specification		TBS 580
Airflow @ 80Pa	Industry standard	10910 m3/h / 6420cfm
Cooling Capacity	kW	18.4
Power Consumption	W Max	1500
	Current Max (amp)	7
Power Supply	V/ph/Hz	220-240 / 1 / 50
Controller	Type	Digital
Fan	Type	Axial
	Dia (mm)	534
Motor	Type	Inverter
	Speed Max (rpm)	1700 VAR
	Output W (max)	950
	Overload & Fuse	Two "One shot" fuse
	Enclosure	IP24
Pump	Type	Centrifugal
	Motor	Synchronous
	Rating W (input)	0.25
	Flow rate (L/min)	21
	V/ph/Hz	230 / 1 / 50
	Overload	Thermal One Shot Fuse
	Enclosure rating	IPX4
Cooling Pad Chillcel	Size (mm)	850 x 526 (H) x 120 (4 pads)
	Pad area (m <sup>2</sup> )	1.79
Water	Tank Capacity (L)	23
	Inlet (mm / inches)	12.7 / ½ male BSP
	Drain (mm / inches)	40 / 1½ male BSP
Packing / Shipping	Dimensions	1150 x 1150 x 902(H)
	Volume (m <sup>3</sup> )	1.19
	Weight (kg)	71
	Operating (kg)	94
Connecting Duct (raw edged)	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 m3/h @ 80Pa	Motor W	Certified Air Delivery (m3/h) (static pressure Pa)								
			Pa	0	40	80	120	160	200	240	280
TBS 580i	10910	950	Certified Air Delivery m <sup>3</sup> /h	12240	11660	10910	9860	8820	7700	6160	3600