

Polex Environmental Engineering Pty Ltd  
ACN 121 129 842

**Polex™ PARTICULATE SCRUBBER MODEL WS4500**

**Description**

The Polex range of particulate scrubbers is designed for the filtering of hygroscopic dusts, explosive dusts and dusts from environments where moisture is present. Conventional dry-type filters often require regular maintenance in these environments. A wet scrubber system however can run continuously without blocking. They can then simply be cleaned by hosing out through the access doors.

**Operating Principle**

The polluted air first enters the scrubber through a 90° bend and is intercepted by an array of water droplets. The air is accelerated as it enters the scrubber by a venturi plate to increase the number of collisions with the water droplets. Water is recirculated from the water tank to the spray jets. Some of the particles drop out into the water tank below at this stage. The remainder of the combined air-water mixture travels through to the perforated baffle. The water that passes through here produces a dam of water which acts as another stage of filtration. Finally, the air-water mixture enters a mist eliminator to remove any moisture present in the air stream. Sludge forms in the collection tank below.

**Construction**

Fully welded Stainless steel sheetmetal construction. The standard grade of Stainless steel used is 304.2B. Depending on the dust type, Stainless steel 316.2B is used for additional corrosion protection.

**Applications**

- Food powders
- Brick dust
- Metal grinding



Scrubber		Filtration	
Model	WS4500	Type	Water spray jet
Type	Venturi	Electrical	
Capacity	4,500 m <sup>3</sup> /h @ 3,000 Pa	Motor starter	7.5 kW Star-Delta
Overall Dimensions	~1,050 x 1375 x 4,200 mm high	Pump	
Inlet Diameter	350mm	Type	Centrifugal, ss316, hard faced seal
Fan		Motor power	0.75 kW, 3 phase
Motor power	7.5 kW	Construction Details	
Motor speed	2800 rpm	Construction Material	Stainless steel 304
Full load current	13.3 A	Finish	2B