PURITEC
We Believe.

VERTICAL AND HORIZONTAL WET SCRUBBER SYSTEM

How a Chemical Scrubber Works?

An exhaust fan drawn out the polluted gas stream and pulled through corrosion resistant ductwork and into the wet scrubber vessel, where it contact with the packing media with large wetted surface area.

The polluted gas stream is chemically absorbed into the liquid scrubbing solution through mass transfer. The clean air stream then passes through a mist eliminator, which separates entrained mist droplets from the air stream through inertial impaction and mechanical impingement. The clean air stream is then released into atmosphere.

Vertical Counter-current Fume Scrubbers

This series of random packed-bed towers offer maximum scrubbing efficiencies due to the counter-current flow pattern. Counter-current refers to the direction of the contaminated airstream in relation to the fluid that scrubs it. Please check with us for applications with smaller flowrates. Other configurations are available for smaller flowrates.

Horizontal Cross-flow Scrubber

Our series of horizontal scrubbers are ideal when height restriction is an issue. The rooftop is an ideal spot for these compact scrubbers if headroom is insufficient. The cross-flow configuration ensures the scrubber height is kept to a minimum yet achieving the scrubbing efficiency needed.

Please check with us for applications with smaller flowrates. Other configurations are available for smaller flowrates.

PURITEC

"A leading Environmental Enginering Company dedicated to provide innovative pollution control solutions for tomorrow."

Key features of Chemical Scrubbers

- Robust FRP construction for maximum structural strength and corrosion resistance
- In-house design & fabrication leading to better quality control, lead time and lower costs all of which are passed to our customers
- Chemical resistant vertical centrifugal pump
- Full cone non-clogging nozzles
- Removable spray headers
- Chemical resistant uPVC and CPVC Schedule 80 pipings and valves
- Manual and automated operation options for each system
- Lower pressure drop, which translate to cost savings
- UV resistance for outdoor applications
- Small footprint for easy space management
- Strategically designed components (removal manholes & viewports) helps to ease maintenance
- Full factory test including hydrostatic and Barcol hardness before delivery
- High scrubbing efficiency up to 99.9%
- Option for P.E. endorsement available for peace of mind

Scheduled Maintenance

Proper and timely maintenance is crucial for trouble free functioning of any scrubber. We strongly recommend that you follow the maintenance schedule suggested hereunder in order to obtain optimal performance.

It is good practice (and in some cases regulatory requirement) to maintain a log of all maintenance work carried out on the scrubber.

No	Tasks to Perform	Monthly	6 Months	1 Year
1	Clean scrubber's exterior	√		
2	Check the sprayer's nozzle in the scrubber chamber		√	
3	Check pump (pump maintenance)			√
4	Check piping			√
5	Clean / Replace demisters			√
6	Clean / Replace packings			√
7	pH transmitter check	√		
8	Conductivity transmitter check	√		
9	Flow indicting transmitter check	√		
10	Differential pressure indicator check	√		
11	Leak sensor check	√		
12	Level switch check	√		
13	**Pressure indicator check**	√		

NEA Submission

Pollution Control Department (PCD) of the National Environment Agency (NEA) controls toxic and environmentally hazardous chemicals under The Environmental Protection and Management Act (EPMA) and The Environmental Protection and Management (Hazardous Substances) Regulations.

After a proposed development has been granted planning approval, a developer can proceed to submit building plans to the Building Control Division (BCD) of the Public Works Department for approval. Under the current procedure on building plan approval, the developer is also required to submit building plans to technical departments including PCD for clearance on technical requirements. PCD checks the building plans of the development for compliance with technical requirements on environmental health, drainage, sewerage and pollution control.

After the completion of a development, PCD inspects it to ensure compliance with technical requirements before granting clearance to BCA for the issue of Temporary Occupation Permit (TOP)/Certificate of Statutory Completion (CSC) to the completed development.

Industries are required to apply for written permission, licence and permits from PCD before they can start operations.

Common Contaminants Treated

Acid:
- Hydrobromic acid
- Acetic acid
- Hydrochloric acid
- Chromic acid
- Hydrofluoric acid
- Perchloric acid
- Nitric acid
- Phosphoric acid
- Sulphuric acid

Alkaline:
- Sadium hydroxide
- Potassium hydroxide

Halogen:
- Bromine
- Chlorine
- Fluorime

Oxides:
- Sulphur oxides (SOx)
- Nitrogen oxides (NOx)
- Ethylene oxide

Others:
- Ammonia
- Hydrogen cyanide

Industries Served

Electrical & Electronic:
- Semiconductor manufacturing
- Solar Technology
- Electroplating

Utility & Essentials:
- Food industry
- Wastewater treatment plant

Medical:
- Pharmaceutical
- Clean room

Others:
- Chemical industry
- • Institutions & research labs

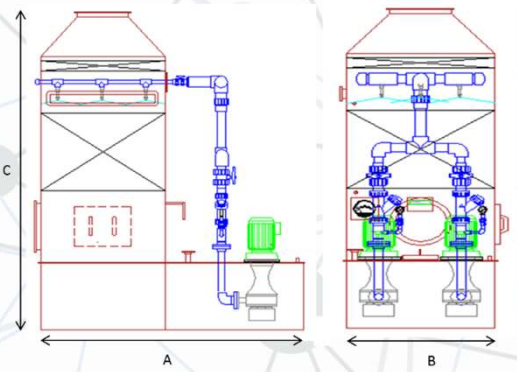
Comprehensive air pollution control

IDENTIFY & DETERMINE the contaminants to be treated:

- APPLY & DESIGN the desirable and economical treatment systems.
- FABRICATE & INTEGRATE the equipment / systems.
- INSTALL, TEST & COMMISSION the systems.
- PERFORMANCE test.

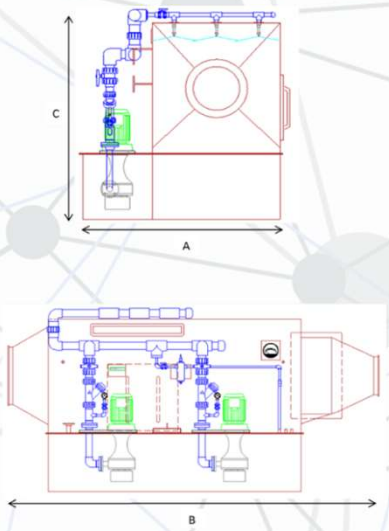
Scrubber dimension

Vertical Counter-current Fume Scrubbers



Model	Air Flowrate (CMH)	A	B	C	Approx. Operating Wt (kg)
FPE-V4	250	955	300	3,600	470
FPE-V8	500	955	300	3,640	470
FPE-V25	1,500	1,170	515	3,840	745
FPE-V33	2,000	1,250	595	3,920	875
FPE-V42	2,500	1,320	665	3,980	995
FPE-V50	3,000	1,380	730	4,040	1,120
FPE-V58	3,500	1,440	790	4,100	1,240
FPE-V67	4,000	1,490	840	4,150	1,345
FPE-V75	4,500	1,545	895	4,200	1,480
FPE-V83	5,000	1,590	940	4,240	1,585
FPE-V100	6,000	1,680	1,030	4,325	1,800
FPE-V117	7,000	1,765	1,115	4,410	2,020
FPE-V133	8,000	1,840	1,190	4,475	2,220
FPE-V150	9,000	1,910	1,260	4,545	2,420
FPE-V167	10,000	1,980	1,330	4,610	2,765
FPE-V250	15,000	2,280	1,630	4,895	3,820
FPE-V333	20,000	2,530	1,880	5,130	4,830
FPE-V417	25,000	2,750	2,100	5,340	5,840
FPE-V500	30,000	2,955	2,305	5,530	7,120
FPE-V583	35,000	3,140	2,490	5,710	8,140
FPE-V667	40,000	3,310	2,660	5,870	9,100
FPE-V750	45,000	3,470	2,820	6,020	10,100
FPE-V833	50,000	3,625	2,975	6,170	11,120
FPE-V1000	60,000	3,910	3,260	6,435	13,040
FPE-V1167	70,000	4,400	3,520	6,985	20,390
FPE-V1333	80,000	4,640	3,760	7,210	22,920
FPE-V1500	90,000	4,870	3,990	7,430	26,185
FPE-V1667	100,000	5,035	4,205	7,535	26,500
FPE-V1833	110,000	5,290	4,410	7,825	31,525
FPE-V2000	120,000	5,485	4,605	8,010	34,020
FPE-V2167	130,000	5,675	4,795	8,190	36,550
FPE-V2333	140,000	5,855	4,975	8,365	39,000
FPE-V2500	150,000	6,030	5,150	8,530	41,485

Horizontal Cross-flow Scrubber



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FPE-H4	250	950	2,410	1,265	1,400
FPE-H8	500	950	2,410	1,265	1,400
FPE-H16	1,000	1,020	2,500	1,375	1,460
FPE-H25	1,500	1,105	2,560	1,455	1,500
FPE-H33	2,000	1,175	2,620	1,525	1,550
FPE-H42	2,500	1,240	2,670	1,590	1,600
FPE-H50	3,000	1,295	2,720	1,645	1,645
FPE-H58	3,500	1,345	2,760	1,695	1,685
FPE-H67	4,000	1,395	2,800	1,745	1,725
FPE-H75	4,500	1,440	2,830	1,790	1,770
FPE-H83	5,000	1,485	2,870	1,835	1,810
FPE-H100	6,000	1,565	2,930	1,915	1,895
FPE-H117	7,000	1,635	2,990	1,985	1,980
FPE-H133	8,000	1,705	3,040	2,055	2,055
FPE-H150	9,000	1,770	3,090	2,120	2,125
FPE-H167	10,000	1,830	3,140	2,180	2,385
FPE-H250	15,000	2,095	3,350	2,445	2,810
FPE-H333	20,000	2,315	3,530	2,665	3,170
FPE-H417	25,000	2,515	3,690	2,865	3,565
FPE-H500	30,000	2,690	3,830	3,040	4,250
FPE-H583	35,000	2,855	3,960	3,205	5,005
FPE-H667	40,000	3,005	4,090	3,355	5,400
FPE-H750	45,000	3,150	4,200	3,500	5,795
FPE-H833	50,000	3,285	4,310	3,635	6,180
FPE-H1000	60,000	3,535	4,509	3,885	7,070
FPE-H1167	70,000	3,770	4,690	4,120	7,835
FPE-H1333	80,000	3,985	4,870	4,335	8,580
FPE-H1500	90,000	4,185	5,030	4,535	9,310
FPE-H1667	100,000	4,375	5,180	4,725	10,190
FPE-H1833	110,000	4,560	5,330	4,910	10,935
FPE-H2000	120,000	4,730	5,470	5,080	11,645
FPE-H2167	130,000	4,900	5,600	5,250	12,425
FPE-H2333	140,000	5,060	5,730	5,410	13,140
FPE-H2500	150,000	5,215	5,850	5,565	13,845

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