

Safe separation for applications involving flying sparks, explosive, sticky, damp, or flammable dusts.



WET DUST SEPARATION

SAFE SEPARATION IN APPLICATIONS INVOLVING FLYING SPARKS, EXPLOSIVE, STICKY, DAMP, OR FLAMMABLE DUSTS.

The constant increase in high-performance industrial production methods leads to a steady rise in the pollution of the ambient air. Wet scrubbers are employed during industrial manufacturing processes in which emissions are released, which are difficult or virtually impossible to filter using dry filtration. Examples of such emissions are flammable and explosive dusts, steel dusts, aluminum, magnesium and titanium dusts and chips, as well as rubber, leather and plastic fines, fibres, fluff and sticky dust such as in the automotive industry, medical technology, foundries or plastic processing plants. The wet scrubbers from Camfil APC bind these dusts, safely separate them while ensuring optimum air quality in your production facility.

Wet scrubbers use water as a filter medium and are based on the physical working principle of inertia. All products of the wet scrubber series from Camfil APC feature an optimised flow design. Due to the separation of the polluted water/air mixture using centrifugal force, they provide the highest degree of separation when used in critical processes with mid to high levels of dust pollution. These include, for example, the separation of sticky dusts and fibres, processes involving highly flammable pollution and flying sparks, the separation of explosive dusts, mixed processes with dry and wet processing cycles, and the separation of mixed emissions of dust, gases, aerosols, fumes, and smoke.



CAMFIL APC - EXPERIENCED & SUCCESSFUL WITH EFFICIENT WET SCRUBBING TECHNOLOGY



Example illustrations

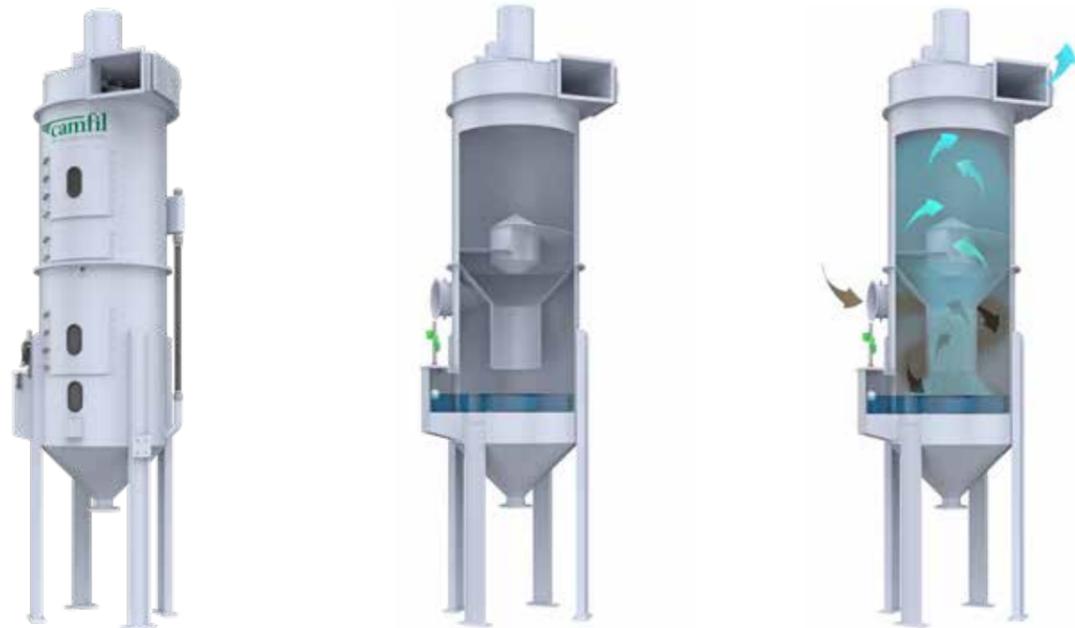
	VORTEX	VORTEX DUAL	VENTURI
Applications / Pollutants			
Flammable and explosive dusts	✓	✓	✓
Steel dusts	✓	✓	✓
Aluminium, magnesium and titanium dusts	✓	✓	✓
Aluminium, magnesium and titanium chips	✓		
Rubber, leather and plastic fines	✓	✓	
Fibres, fluff and textile dusts	✓		
Sticky powder			✓
Greasy vapours			✓
Operating volumetric flow (m³/h)	1,200 - 60,000	1,200 - 7,200	3,600 - 40,000
Dust load	medium	medium	high
Dimensions and weight	depending on the customer's operating method and modular sludge discharge system		

VORTEX FOR FIBRES, FLUFF, AND STICKY SUBSTANCES

The Handte Vortex wet scrubber is designed for medium dust loads and works according to the Vortex principle. The polluted exhaust air is tangentially introduced and creates a vortex sink on the surface of the scrubbing water. This generates an intensive water vortex through which the polluted exhaust air is led. Intensive mixing causes the pollutants to bond to the scrubbing water. In the downstream demister unit, the exhaust air is guided with the polluted scrubbing water through the separator spiral into a circular, helical stream pattern. The exhaust air and the polluted scrubbing water are separated through centrifugal forces. The purified exhaust air is moved and discharged by the downstream ventilator positioned on the clean gas side. The separated pollutants are fully or partially isolated in the collecting area of the scrubbing water through sedimentation processes. They can be disposed of using various discharge systems.

Applications

Flammable and explosive dusts, steel dusts, rubber, leather and plastic fines, fibres, fluff and textile dusts.



BENEFITS

- ✓ A system for damage prevention rather than just reduction - safest solution for flammable and explosive dusts
- ✓ For mid-sized particle diameters
- ✓ High degree of separation
- ✓ No filter elements required
- ✓ High availability, continuous operation
- ✓ Stable operating state
- ✓ Space saving design / minimal space requirement
- ✓ Low-maintenance
- ✓ Dust-free maintenance and repair

VORTEX DUAL EFFICIENT WET SCRUBBING TECHNOLOGY

The Vortex Dual is also designed for medium dust loads and combines the working principle of the Vortex wet scrubber with the disintegration principle. Here again, the polluted exhaust air is tangentially introduced and creates a vortex sink on the surface of the scrubbing water. This generates an intensive water vortex through which the polluted exhaust air is led. Intensive mixing causes the pollutants to bond to the scrubbing water. In addition, in the second cleaning stage, the high speeds and constant direction changes of the disintegration wheel cause the ultrafine pollutants to bind in the scrubbing water. In the downstream demister unit, the polluted scrubbing water is dispersed onto the outer wall and separated through the high circumferential speeds of the disintegration wheel. Higher separation efficiency is achieved through this functional principle. The purified exhaust air is moved and discharged by the centrally positioned ventilator. The separated pollutants are fully or partially isolated in the collection area of the scrubbing water through sedimentation processes. They can be disposed of using various discharge systems.

Applications

Flammable and explosive dusts, steel dusts, aluminium, magnesium and titanium dusts, rubber, leather and plastic fines.



BENEFITS

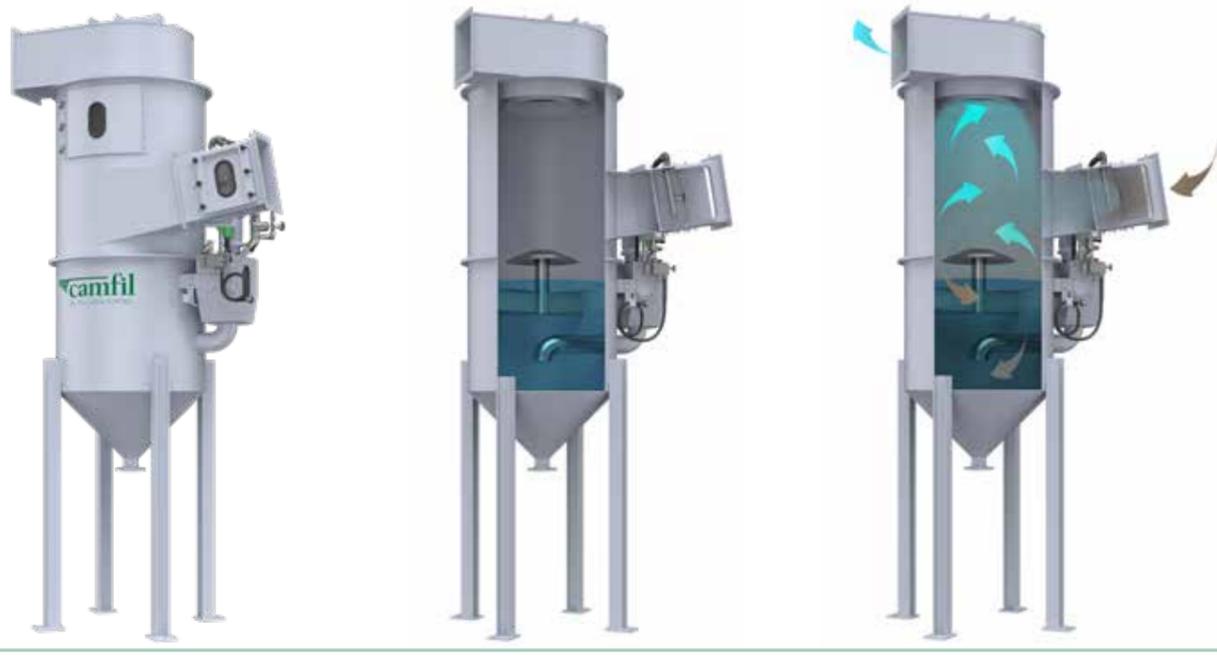
- ✓ Unique disintegration principle
- ✓ For medium and fine particle diameters
- ✓ High degree of separation
- ✓ No filter elements required
- ✓ Low height, minimal space requirement
- ✓ Low-maintenance
- ✓ Dust-free maintenance and repair

VENTURI FOR HIGHEST SEPARATION PERFORMANCE

The Handte Venturi wet scrubber is designed for high dust loads and functions according to the Venturi principle. In the upstream Venturi zone, the scrubbing water is injected into the exhaust airflow, disrupted by the increase in velocity of the air, and disintegrated into water droplets. The high velocity between the polluted exhaust air and the water droplets in the Venturi throat causes the pollutants to bind with the water droplets. The polluted exhaust air is introduced tangentially with the polluted scrubbing water to the downstream demister unit and separated by the active centrifugal forces. The purified exhaust air is moved and discharged by the downstream ventilator positioned on the clean gas side. The separated pollutants are fully or partially isolated in the collecting area of the scrubbing water through sedimentation processes. They can be disposed of using various discharge systems.

Applications

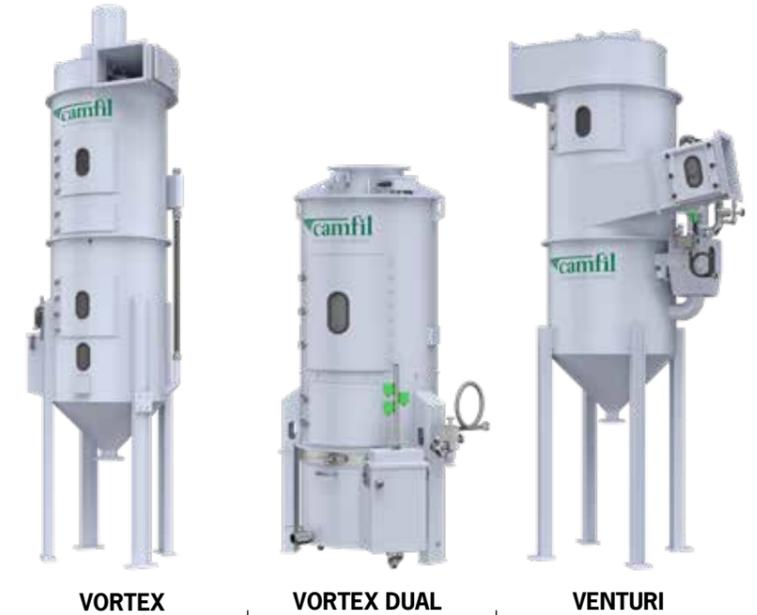
Flammable and explosive dusts, steel dusts, aluminium, magnesium and titanium dusts, sticky powder, and greasy vapours.



BENEFITS

- ✓ For medium to ultrafine particle dimensions
- ✓ Separation of up to 0.5 µm
- ✓ Optimum separation due to water injection in the Venturi zone
- ✓ No reduction in performance. The ventilator ensures efficiency.
- ✓ Resistant to contamination due to the demister unit in the water cyclone at vertical surfaces
- ✓ Unique ventilator design suitable for swirl flow
- ✓ Excellent accessibility facilitates easy maintenance

WET SCRUBBERS SELECTION OF COMPONENTS



SELECTION OF COMPONENTS			VORTEX	VORTEX DUAL	VENTURI
Water level regulation	Mechanical Float Switches (WR)		✓	✓	
	Electromagnetic Level Control (FRM)		✓	✓	✓
Sludge discharge-options	Sludge collecting vessel		✓	✓	
	Sludge collecting vessel with screen basket insert		✓	✓	
	Delog vessel		✓	✓	✓
	Hopper		✓	✓	✓
	Sludge scraper		✓	✓	✓
	Water basin				✓
	Belt filter				✓
	Electrical controls		✓	✓	✓

YOUR PARTNER FOR GLOBAL SOURCING

Camfil APC is a leading supplier of industrial exhaust air purification and part of the Camfil Group, the world market leader in air filters and air purification systems, with over 4,500 employees worldwide and more than 50 years of experience. With our comprehensive product portfolio and global service and delivery options, we offer absolute customer proximity and individual solution proposals for use in almost all production areas.



TRUST THE EXPERT!



Our engineers and employees are absolute professionals with many years of experience in the development, production and technical support of air pollution control systems of all sizes. From a simple filter system to complex turnkey solutions, from the initial design of the plant to the final completion – we are looking forward to your inquiry!



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