ULT Airtower

Welding fume extraction systems at its best

air quality

The Airtower revolutionizes welding fume extraction technology.

Plug and play
Source capturing of welding fumes is neither practical nor efficient when welding on large and complex parts. In contrast to classic production hall extraction systems, the Airtower does not require any any ducting. Simply put it where you need it, connect it to the power supply and compressed air, then it's ready to go.

Layered ventilation
Contaminated indoor air is extracted at the top of the device, filtered and reintroduced back into the room at ground level draft-free. The layered ventilation principle is considered the ideal recirculation method as it takes advantage of the heat generated during welding. It provides fresh air to the shop floor and minimizes heating costs by reducing the amount of required outside air.

How it works
Stage 1: The air passes through a multi-stage cyclone pre-cleaner for spark arresting and coarse particle separation. It is then purified by filter cartridges during the first filter stage. Triggered by a differential pressure signal, these cartridges are cleaned automatically by a compressed air pulse to ensure trouble-free, continuous operation of the system. Separated dust and coarse particles are collected in a drawer, making it easy to remove and empty.

Stage 2: The second filter stage features a class F9 security filter.

Stage 3: Class G4 filters in the air outlet grilles support the equal distribution of the recirculated air and protect the device from an ingress of dust when not in use. Clean air is introduced into the shop through the 270 degree outlets – draft-free

Design
The control system is integrated into the device. A control console with text display on the front panel ensures ease of operation.

Installation
The Airtower is delivered on a "plug and play" basis and can be repositioned as needed at any time thanks to its forklift slots and lifting eyes.

- **Layered ventilation using the recirculation model**
- **Significant heating significant heating savings costs**
- **Low-noise operation**
- **270° draft-free, filtered clean air in the breathing zone**
- **Redistribution of heat from hall ceiling to the working area**

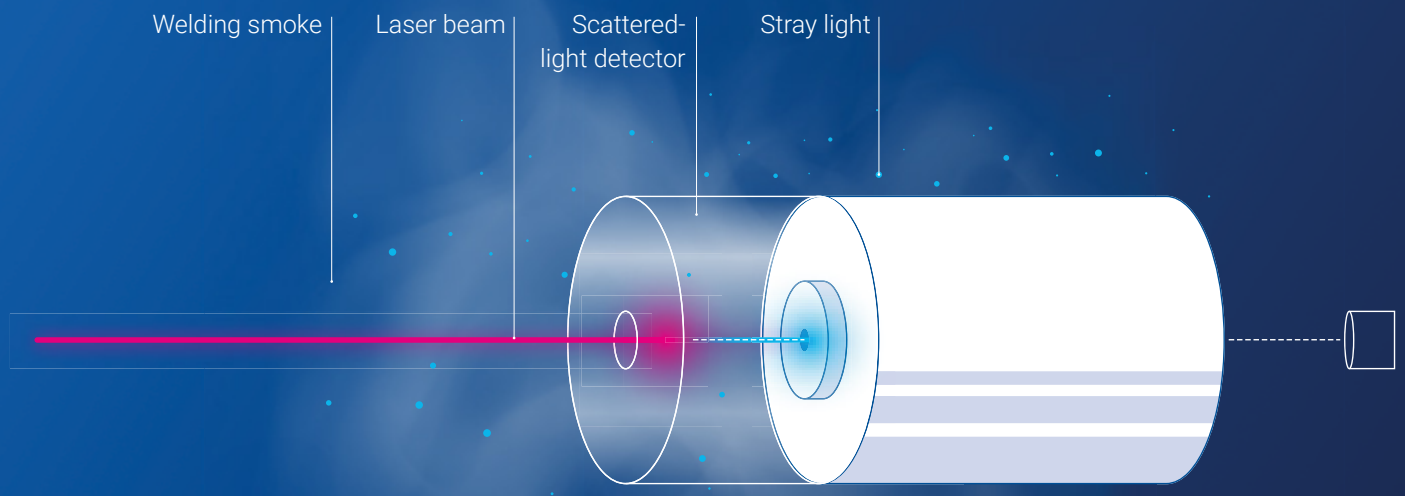
The NOVUS Particle Sensor

Dust and particulate loading – Wherever welding work is done, unwanted byproducts such as smoke and ultrafine dust particles enter the air.

Particles which are smaller than 1 µm bear a particular risk to the health of your staff, and a challenge to the extraction units' sensor technology.

The NOVUS PLC module with particle sensor measures the amount of fine dust in the air and transmits the result to the Airtower control unit. This regulates the ventilators used to circulate the air, e.g. to reduce the extraction units' energy demand if the air pollution is low or little dust is generally being produced.

How it Works: Welding Smoke Detection (Scattered Light Detector)



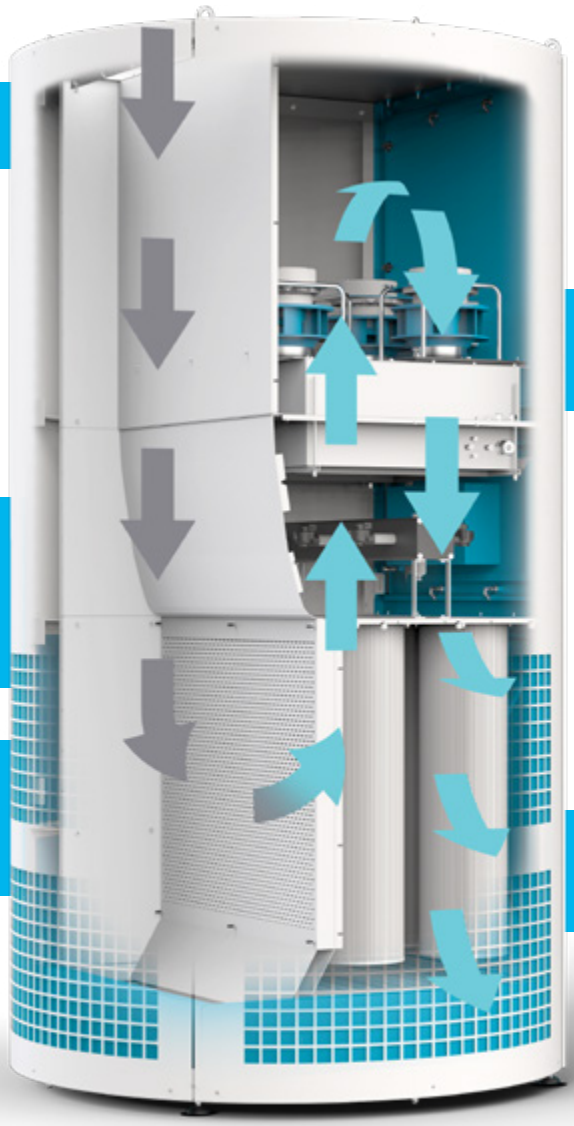
Sense. Adapt. Protect.

The air quality sensor that remotely controls the Airtower.
Constantly monitoring the concentration of particles in your shop, adjusting airflow as needed to get the job done.

The fully automated system offers many advantages – Improving the measurement of the number of fine dust particles, resulting in the extraction unit and its volumetric flow rate being regulated, produces an increase in efficiency and longer device lifetimes without losing sight of statutory requirements. The current particle concentration is displayed with LEDs, offering a better, more transparent reading of the air quality and how the extraction unit is operating.

The NOVUS model can easily be integrated into a pre-existing industrial extraction unit control system, and stands out as being extremely sturdy, long-lasting and reliable.

Device type	NOVUS Particle Sensor
Measurements of fine dust quantity	0,1 – 1.000 µg / m³
Output signal	0 – 10 V
Display	10-step LED display
Operating voltage	24 VDC
Ambient temperature	– 10° … + 50 °C
Power supply	24 VDC
Power consumption	3,5 W
Operating mode	Continuous operation
Operating temperature range	0 to + 50 °C
IP code	IP30
Warm-up time	1 hour
Connections (wired)	0 to 10 VDC; 30 m shielded cable



Benefits

- Significant heating cost savings
- Less than 1.5 kW power consumption per 35,300 cft / 1,000 m³ of cleaned air
- High-performance devices in four different versions
- Low operating costs thanks to fully automatic cleaning of the filter cartridges
- Installation and commissioning service
- No complex pipework or installation necessary

Optional features

- W3-approved design
- Activated carbon pads for gas treatment and odor reduction
- Indoor air quality sensor
- Variable-frequency drive
- Remote control

ULT Airtower – Technical data

Device type	FT–5.000	FT–10.000	FT–15.000	FT–20.000
Motor	5.5 kW, 380 – 480 V, 3-phase, 60 Hz	7.5 kW, 380 – 480 V, 3-phase, 60 Hz	11 kW, 380 – 480 V, 3-phase, 60 Hz	15 kW, 380 – 480 V, 3-phase, 60 Hz
Max. air flow rate	2,943 cfm / 5,000 m³/h	5,886 cfm / 10,000 m³/h	8,829 cfm / 15,000 m³/h	11,772 cfm / 20,000 m³/h
Max. neg pressure	1,800 Pa	1,800 Pa	1,800 Pa	1,800 Pa
Approx. cleaning capacity	88,300 cft / 2,500 m³	141,300 cft / 4,000 m³	176,600 cft / 5,000 m³	233,100 cft / 6,600 m³
Dust container	26.4 gal / 100 l	26.4 gal / 100 l	52.8 gal / 200 l	52.8 gal / 200 l
Noise emission	<70 dB (A)	<75 dB (A)	<70 dB (A)	<75 dB (A)
1. Filter stage – main filter				
Filter surface area	861 sf / 80 m²	1,593 sf / 148 m²	2,390 sf / 222 m²	2,390 sf / 222 m²
Number of filters	4	4	6	6
Filter material	IFA usage category "M"	IFA usage category "M"	IFA usage category "M"	IFA usage category "M"
Filtration efficiency	>99.9 %	>99.9 %	>99.9 %	>99.9 %
Filter cleaning	Jet pulse	Jet pulse	Jet pulse	Jet pulse
Compressed air connection	NW 0.3" / 7.6 mm, 4 to 6 bar	NW 0.3" / 7.6 mm, 4 to 6 bar	NW 0.3" / 7.6 mm, 4 to 6 bar	NW 0.3" / 7.6 mm, 4 to 6 bar
Hardwired	32 A	32 A	32 A	32 A
2. Filter stage – particulate filter				
Filter class (EN779)	F9	F9	F9	F9
Filter surface area	420 sf / 39 m²	420 sf / 39 m²	700 sf / 65 m²	700 sf / 65 m²
3. Filter stage – regenerative synthetic fiber pads				
Filter class (EN779)	G4	G4	G4	G4
Filter surface area	43 sf / 4 m²	65 sf / 6 m²	86 sf / 8 m²	86 sf / 8 m²
Dimensions and weight				
Width of filter unit	64" / 1,619 mm	64" / 1,619 mm	81" / 2,066 mm	81" / 2,066 mm
Depth of filter unit	66" / 1,675 mm	66" / 1,675 mm	69" / 1,756 mm	69" / 1,756 mm
Height of filter unit	114" / 2,885 mm	143" / 3,643 mm	143" / 3,643 mm	143" / 3,643 mm
Weight	2,183 lbs / 990 kg	2,822 lbs / 1,280 kg	3,263 lbs / 1,480 kg	3,505 lbs / 1,590 kg

ULT is certified according to ISO 9001:2008.

Detailed technical information can be found on device specific data sheets or on our website. All technical data is general and not binding and does not guarantee the suitability of a product for a specific application.

Made in Germany.

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