

MCP-12S-APT, Air Purification Tower

Compact cartridge filter with pulse cleaning



The MCP-12S-APT Air Purification Tower is a compact cartridge filter for decentralized indoor air purification.

Dirty air enters the unit at floor level into the efficient filtration compartment, clean air is blown back into the workplace through 60 individually adjustable nozzles at high speed on top of the unit.

The unit is delivered as three pre-wired components requiring several mechanical installations. With a built in fan it requires only power and compressed air supply to be connected to complete the installation.

Inside the unit are 12 patented Uni-Clean filter cartridges. The filter cartridges are cleaned automatically by an energy efficient compressed air reverse pulse system. Cleaning is activated by an integral electronic controller. The filter is made out 2 mm galvanized sheet metal parts.

The MCP-12S-APT is easy to maintain thanks to the following features:

- Front access allows easy inspection and service of the cleaning valves, compressed air tank and filter cartridges,
- Ergonomic and easy maintenance of the unit, due to location of controller and electrical cabinet,
- Simple emptying of the dust bin.



| Components of the main item number | Description |
|------------------------------------|--|
| Outlet / Outblow | The outlet is placed on top of the filter and equipped with 60 nozzles for high speed air flows. The outlet and the nozzles are individually adjustable for local conditions. |
| Dual-Silencer | The fan is completely build in a special dual silencer, which decreases the noise level from fan motor and airflow. |
| Fan | F63-R355 (10,0 kW) from Combifab F-series for 50 Hz |
| Filter Cartridges | SC178: polyester material with nanofiber (80% cellulose, 20% polyester), suitable for fine dust and welding fumes. |
| Inlet | The inlets are covered and placed on both sides of the unit. Positions of inlets can be changed depending on needs. Inlets have a backpressure flap, which closes when the filter is shut down for dust-free cleaning. |
| Dust bin | Dust bins are always equipped with wheels for easy maintenance. The following size is available: - 50 l / 13 gal. with wheels |
| Easy installation | The filter is delivered as three pre-wired components. Simply assemble the three components, connect to power and compressed air supply to complete installation. |

MCP-12S-APT Variants / Technical Data

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EU-Versions, 50 Hz

| Version | Filter Material | Dust bin | Fan size | Frequency inverter | Main Item number |
|---------|-----------------|----------|--------------------------------|--------------------|------------------|
| LOW | SC178 | 50 l | F63-R355 (10,0 kW) 400 V | No | 73002325 |
| LOW | SC178 | 50 l | F63-R355 (10,0 kW) 400 V | Yes | 73001823 |
| HIGH | SC178 | 50 l | F63-R355 (10,0 kW) 400 V | No | 73002326 |
| HIGH | SC178 | 50 l | F63-R355 (10,0 kW) 400 V | Yes | 73001824 |

Technical data

| specification | standard |
|-----------------------------|---|
| Number of filter cartridges | 12 |
| Total filter area | 158 m ² / 1700 ft ² |
| Max. air flow* | 10000 m ³ /h / 5900 cfm |
| Nozzles | 60 |
| Max. air flow per nozzle | 167 m ³ /h / 98 cfm |
| Nozzle Area | 0,0027 m ² / 0.029 ft ² |
| Nozzle Speed | 17 m/s / 3300 FPM |
| Throw length | 35 m / 115 ft |
| Inlet area | 0,24 m ² / 2.58 ft ² |
| Inlet speed | 11 m/s / 2165 FPM |
| Pulse Cleaning | Clean & dry compressed air, 5 bar / 72,5 psi, 24V DC |

| specification | standard |
|---|---|
| Compressed air consumption** | 16.5 NI/cleaning puls 0.6 cfm/cleaning puls 50 NI/min at 20 s interval 1.6 cfm/min at 20 s interval 165 NI/min at after cleaning 5.9 cfm/min at after cleaning |
| Controller | 85 – 265 V AC / 50 – 60 Hz |
| Noise level*** | 72 dB(A) |
| Temperature | -20°C to 70 °C -4°F to 158°F |
| Weight for HIGH version Weight for LOW version | 950 kg / 2095 lbs 900 kg / 1985 LBS |
| Placement | Indoor |

* Maximum airflow for complete assembled collector

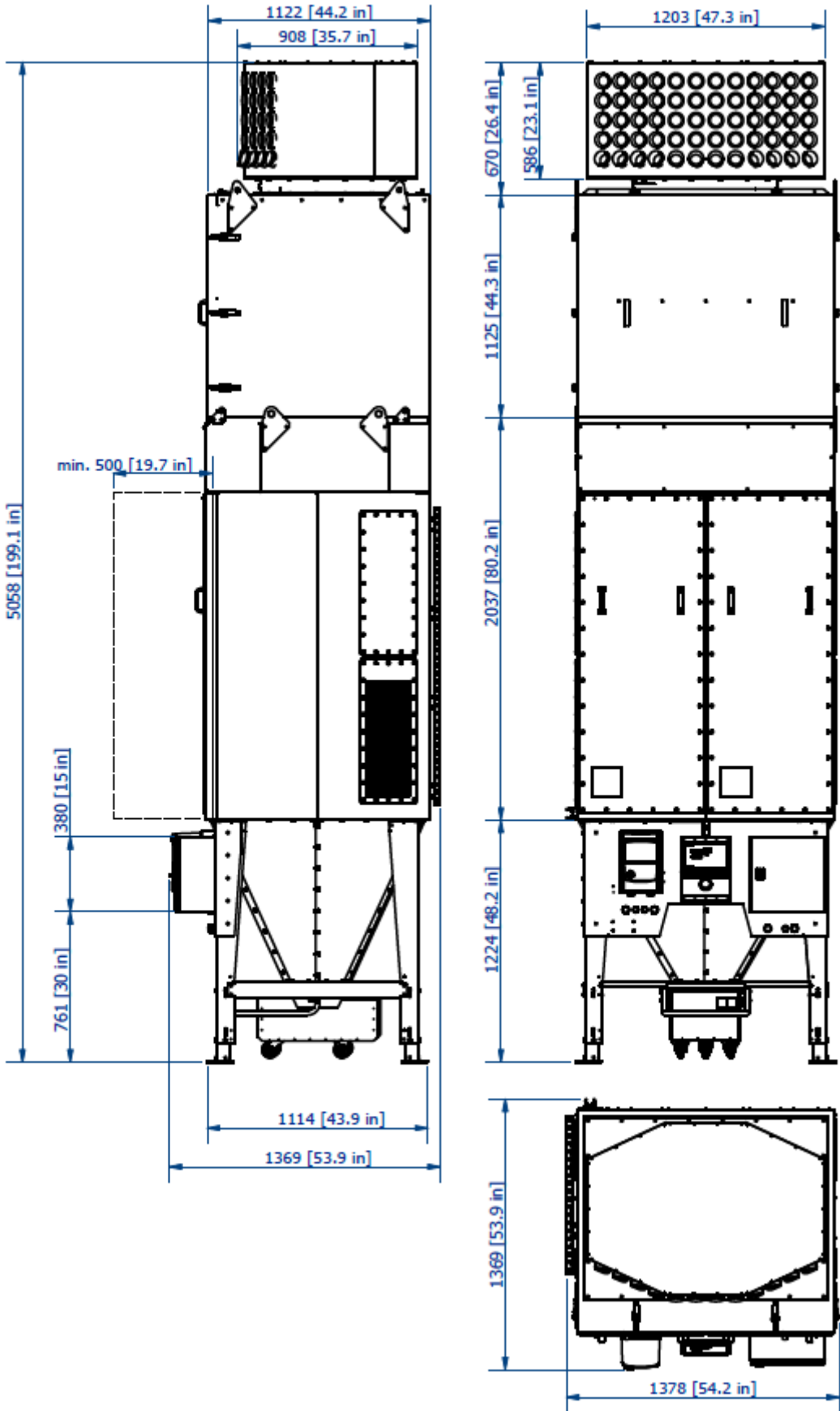
** at standard parameter settings of the controller

*** Measurement in open space in 3,28 ft (1 m) distance and 5,25 ft (1,60 m) height to the unit

MCP-12S-APT Filter Dimensions

Compact cartridge filter with pulse cleaning

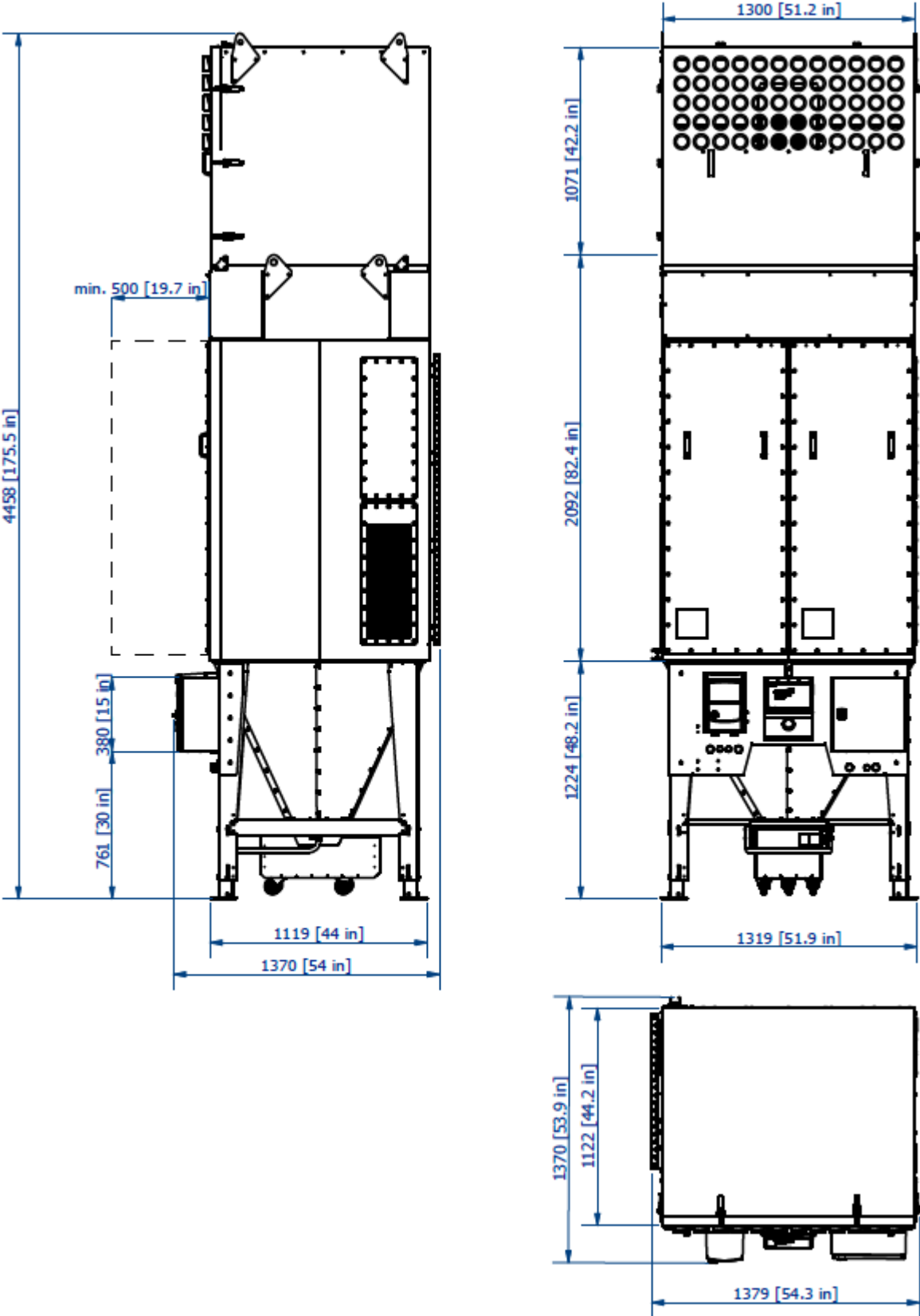
HIGH version



MCP-12S-APT Filter Dimensions



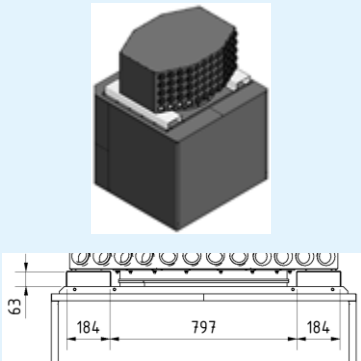
Compact cartridge filter with pulse cleaning

LOW version



MCP-12S-APT Accesories

Compact cartridge filter with pulse cleaning

| Accessory | Item Number | Illustration |
|---|-------------|---|
| <p>Duct piece for room cleaning Ø710 (28 inch) This adjustable duct piece set can be clamped with QF connection between the dual silencer and the outblow for allowing a higher outblow position. The duct length can be adjusted between 1400 mm (55 inch) and 2400 mm (94.5 inch).</p> | 7945520 |  |
| <p>Filter regulator Is used for setting the correct compressed air pressure. Separates dust, oil and water in the compressed air and protecting the valves. Should be installed in the compressed air line. Must be positioned in a frost free environment.</p> | 55999315 |  |
| <p>4 m connection cable set with CEE plug (pre-mounted) Pre-mounted CEE plug 32A with 4 m connection cable at the electrical cabinet. (Can only be ordered with a complete MCP-12S-APT).</p> | 55999328 | |
| <p>Level indicator for dust bin Capacitive level sensor for detection of full dust bin. Connected to the controller a warning will be shown when the dust bin is full.</p> | 55999316 | |
| <p>Lifting device for fork lift (Outblow and Dual Silencer) Lifting device (set, 2 pieces) for Outblow and Dual Silencer for lifting them on top of the filter. This accessory should be used if there is no crane on site or a crane without necessary height. Please take care of the given dimensions for the fork lift.</p> | 55999319 |  |