

### EXPLOSION PROOF AND DUST IGNITION PROOF VACUUM CLEANER SYSTEMS ELECTRICALLY OPERATED CD-5 EX, CD-7 EX, CD-10 EX FULLY AUTOMATIC FILTRATION CLEANING SYSTEMS CLEANROOMCOMPATIBLE



- All Stainless Steel AISI 304 Construction (AISI 316L electropolished available).
- Cleanroom Compatible.
- In accordance with ATEX 100a, Directive 94/9/EC for Category 2 ATEX Zones 1 (Gas) and ATEX Zones 21(Dust) potentially explosive atmospheres.
- Detachable tank, recovery capacity (dry only) 60/104/160  $\ell$  (15/26/40 gallons).
- Disposable static dissipating polyliner available with depressor kit (optional).
- HEPA Filter efficiency of 99.995% @ 0.3 micron. Tested: IEST RP-CC001.3. H14 by MPPS method as per EN 1822. Or ULPA Filter efficiency of 99.999% @ 0.12 micron. Tested: IEST RP-CC001.3. Filtration efficiency of 99.9995% @ 0.18 micron. Tested: IEST RP-CC001.3. U15 by MPPS method as per EN 1822. Rated 330 ℓ/s (700 CFM). Compatible with ISO class 4 (former class 10) cleanroom conditions. -AVAILABLE

### **DESIGN APPLICATION**

- Explosion proof / dust ignition proof for dry recovery. Liquids to be recovered into a separate primary recovery tank.
- Controlled environments and hazardous locations such as:
  - Pharmaceutical plants, cleanrooms, food processing industries, packaging facilities,
    - Industries using aluminum, magnesium and other commercial alloys in the fabrication of metal products such as powder, ingot, plate, sheet, strip, ribbon, foil, rod and tubing,
  - Industries involved in the handling of carbon black, coal and coke dust.
- Interceptor Recovery Tank. Conductive dust, including magnesium, aluminum, zirconium, perchlorate powder or any other commercial alloys as well as unspent gun powder, sulphur, heat powder, anode powder or any other explosive dust are recovered into the interceptor tank and are neutralized by liquid immersion. 4 gallons (15 litres) of water or some type of neutralizing liquid is placed into the Interceptor Tank. The recovery capacity of the Interceptor Tank depends on the type of powders being recovered.

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### **AUTOMATIC FILTER SHAKER SYSTEM (AFS)**

- A Filter Shaker system for hazardous locations consisting of a double acting air cylinder operating directly onto the stainless steel filter cage located inside of the filter chamber. The system is operated by filtered, oil-free compressed air. The frequency of the shaking cycle is controlled by pneumatic (air) operated timers located outside of the filter chamber.
- Short strokes are applied to the filter cage freeing the accumulated caked on dust from the Static dissipating and conductive polyester flourocarbon treated filter and allowing them to flow out, thus ensuring continuous duty and minimizing friction loss filter performance.
- Static dissipating pre-filter for fine dusts. The pre-filter is installed first. It sits on the lip of the tank and is help in place by an elastic. Made of polyester, it is static dissipating and conductive. The Pre-Filter is washable and reusable.
- The Static dissipating and conductive polyester flourocarbon treated filter, along with the stainless steel filter cage, can be easily removed from the filter chamber and washed with lukewarm water and mild detergents.
- 1 main filter, surface area; CD-5/7 EX: 18 581 cm<sup>2</sup> (20 ft<sup>2</sup>) , CD-10 EX: 26 013 cm<sup>2</sup> (28 ft<sup>2</sup>) .
- AUTOMATIC REVERSE PULSE SYSTEM (RPS)
- A filter cleaning system for hazardous locations using compressed air and jets operating directly inside the filter cartridge. Located inside of the stainless steel filter chamber, the system is operated by filtered, oil-free compressed air. The frequency of the pulsing air is controlled by pneumatic (air) operated timers located outside of the filter chamber.
- Short bursts of air are streamed on to the filter freeing the accumulated caked on dust from the static dissipating and conductive PTFE laminated spun bond polyester filter cartridge and allowing them to flow out, thus ensuring continuous duty and minimizing friction loss filter performance.
- The static dissipating and conductive PTFE laminated spun bond polyester filter cartridge can be easily removed from the filter chamber and safely disposed.
- 1 filter cartridge, surface area; CD-5/7 EX: 92 903 cm<sup>2</sup> (100 ft<sup>2</sup>), CD-10 EX: 111 483 cm<sup>2</sup> (120 ft<sup>2</sup>).

#### AUTOMATICPURGESYSTEM(APS)

- A full immersion system for hazardous locations, consisting of a round header tank with fully integrated diaphragm valves, is built inside of the filter chamber. The system operates with filtered, oil-free compressed air. The diaphragm valves are opened in sequence by a solenoid valve controlled by pneumatic (air) operated timers located outside of the filter chamber.
- A short pulse of compressed air is injected into the top of the static dissipating and conductive PTFE laminated filter cartridges creating a stronger airflow downward moving pressure wave. This wave breaks up the accumulated dust that is caked onto the cartridges.
- The pneumatically (air) operated controls, located outside of the filter chamber, allow only one cartridge to be cleaned at any give time, thus ensuring that the vacuum cleaner operates continuously.
- CD-5/7 EX: 3 filter cartridges, surface area: 3x 27 871 cm<sup>2</sup> (30 ft<sup>2</sup>)= 83 613 cm<sup>2</sup> (90 ft<sup>2</sup>).
- CD-10 EX: 4 filter cartridges, surface area: 4x27871cm<sup>2</sup>(30ft<sup>2</sup>)=111483cm<sup>2</sup>(120ft<sup>2</sup>).

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## EXPLOSION PROOF AND DUST IGNITION PROOF CONTINUOUS DUTY MOTORS ELECTRICALLY OPERATED MODELS CDPU-5EX, CDPU-7EX, CDPU-10EX



## **EUROPEAN SPECIFICATIONS**

Models Part #	Electric Power	Volts@50HZ 3 Phase	Electric Current	VACUUM	AIRFLOW	VRV SET	SUCTION ORIFICE
CDPU-5 EX 111008B1	5.5 kW	400	12.4A	Over 2500 mm/H <sup>2</sup> O	500 m³/h	1750 mm/H <sup>2</sup> O	Ø64mm
CDPU-7 EX 111012B1	11 kW	400	22.8 A	Over 4000 mm/H <sup>2</sup> O	625 m³/h	3550 mm/H²O	Ø64mm
CDPU-10 EX 111018B1	13 kW	400	30.9 A	Over 3500 mm/H <sup>2</sup> O	1100 m <sup>3/</sup> /h	2250 mm/H <sup>2</sup> O	Ø100mm

## **OPTIONAL HEPA/ULPA FILTERS**



The upstream location of the HEPA/ULPA filter is used when it is necessary to filter contaminated particulates before they will enter into the vacuum suction port thereby avoiding any motor contamination.



The downstream location of the HEPA/ULPA filter is used when it is necessary to filter contaminated particulates at the exhaust air motor port thereby insuring cleanroom compatibilities.

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