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INERT SOLUTIONS FOR REACTIVE METAL POWDERS

Inert EX technology allows for safe vacuuming of potentially explosive powders directly into an inert liquid (oil orother solution, depending on the type of powder). This eliminates the risk of an explosion inside the machine byremoving one of the explosion factors, even in presence of sources of ignition.

INERT CANISTER

A PPL filter retains the vacuumed powder in the inert bath while three other fibre filters retain the mist generated from the acuuming. The system consists of a series of modular elements that ensure ease of use in assembly, disassembly and powders disposal, without the use of tools.

Our solutions are dust ignition proof certified by notified testing labs as compliant with regulations for prevention of explosion and handling explosive powders. Both inner design and external structure, are marked according to the most update international explosion proof standards.

RANGE

TECHNICAL DATA	ZFR EV AP Z22 K2 INERT	DG 50 INERT	MTL451 ATEX 22 INERT	SEP.EX-001
Power Voltage	3.5 HP 460 V - 60Hz 3 ~	6.2 HP 460 V - 60Hz 3 ~	1.5 HP 115 V - 60Hz 1~	-
Max air flow	765.2 CFM	294.3 CFM	211.9 CFM	-
Max waterlift	14.2 inH2O	104.3 inH2O	90.1 inH2O	-
Primary filter	Droplet separator	Star - Polyester ANT M	Star	Star - Polyester ANT L
Canister	Stainless steel AISI 304	Stainless steel AISI 304	Stainless steel AISI 304	Stainless steel AISI 304
Dust capacity Oil capacity	6.6 gal 13.7 gal	3 gal 7 gal	1.4 gal 2.8 gal	3 gal 7 gal
Dimensions	30.7 x 33.4 x 96.8 in	26 x 46 x 57 in	23 x 25 x 53 in	19.6 x 23.6 x 44 in

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VACUUM SOLUTIONSFOR 3D PRINTING

3D PRINTING - EVOLVING TECHNOLOGIES

In traditional machine tool production, the standard process is usually subtractive (subtraction of material through milling, drilling, grinding, and so on). Today, a new technology has integrated and partly replaced traditional subtractive production: 3D Printing Additive Manufacturing is a process that enables to create a finished part by aggregating raw materials, including polymers, metals and other powders.

Powder Bed Fusion technology (PBF)

Selective Laser Sintering (SLS) and **Selective Laser Melting (SLM)** technologies require dedicated solutions of powder collection to guarantee safety and efficiency during the production process, cleaning and maintenance of 3D printers, and qualityof the finished product.

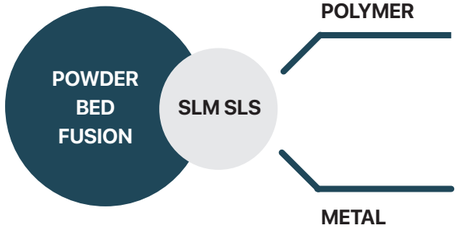
Regardless of the materials, which can be eitherhazardous and highly explosive metal powders suchas aluminium or titanium, chrome-nickel, stainlesssteel, inconel, or polymeric plastic powders, or inertpowders such as stone, ceramic or concrete, Delfinhas designed over the years dedicated systems andsolutions with several advantages and benefits whenit comes to handle such powders.

ADDITIONAL BENEFITS OF DELFIN VACUUM SOLUTIONS

Maintenance of the 3D Printer and removal of residual powders from the building chamber

Deep cleaning of finished products

Cleaning of production environment



WHY USE DELFIN INDUSTRIAL VACUUMS

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SOLUTIONS FOR NON REACTIVE POWDER (POLYMER AND METALS)

Delfin industrial vacuums enable the recovery of polymer powders, reduce maintenance costs, guarantee efficiency of the 3D printer and quality of the finished parts. Moreover, Delfin dust collectors are the ideal solution for extraction at the source on 3D additive machinery.

MTL 300 BL C2D2

SAFETY
Designed and certified for operating in areas with the presence of combustible powders, according to the risk category and type of substance.

DURABILITY
• Brushless motor ensure long life time (over to 10,000 hours) and totally maintenance-free.
• 100% steel construction.

FILTRATION
• The vacuums includes certified antistatic class M (series) and (optional) HEPA filters. This guarantees the release of clean air into the environment.

RANGE

TECHNICAL DATA	MTL 300 BL C2D2	ZFR EV AP 560	451 BL C2D2
Power	1.5 HP	6.4 HP	1.5 HP
Voltage	115 V- 60 Hz 1~	460 V - 60 Hz 3~	115 V - 60 1~
Max air flow	121.8 CFM	1059.4 CFM	121.8 CFM
Max waterlift	90.6 inH2O	15.7 inH2O	90.6 inH2O
Filter surface	4.5 ft2	54 ft2 2	2 ft2
Collection capacity Container	3 gal Integrated	26 gal Detachable	11.9 gal Detachable
Dimensions	18 x 17 x 31 in	31 x 33 x 98 in	23 x 25 x 51 in

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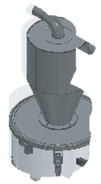
ADDITIONAL SOLUTIONS AND ACCESSORIES

SEPARATORS

Prevention of the risk of mixing different materials, thanks to a dedicated collection unit for each type of powder.
Easy handling, recovery or disposal of the collected powders.
Primary filter protection and improvement of suction performance and motor life over time.



ESD.SEP-0467 ESD.SEP-0509

CHROME, STAINLESS STEEL, INCONEL, COPPER

• Reduces the amount of powder reaching the vacuum and increases the life time of filter and motor

•Avoids cross contamination when vacuuming different powders

ES.EX-001

ALUMINUM, TITANIUM

• Inertization of reactive metal powders
• Easy disposal of material

ACCESSORIES

BRUSH

RUBBER LANCE

CONICAL RUBBER NOZZLE

CONICAL RUBBER TIP NOOZLE

SCRAPING NOZZLE

FLAT NOZZLE

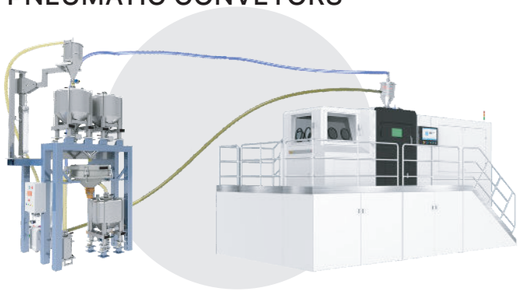
CONICAL 90° RUBBER TIP NOZZLE

EXTRACTION ARM FOR AIRBORNE DUST

FLOOR WAND AND FLOOR CLEANING NOZZLE

CONDUCTIVE POLYURETHANE AND PVC HOSES

PNEUMATIC CONVEYORS



Among the RANGES OF SOLUTIONS DESIGNED by Delfin are the pneumatic conveying systems, that allow the loading of powders on 3D printers. We offerpneumatic conveyors powered by both electricalsupply and compressed air supply, in ATEX and/or inert atmosphere. Customized solutions can also be engineered for integration on 3D printers, including inert gas solutions for reactive metal powders

• AUTOMATIC LOADING OF PRINTER
• MATERIAL OR RECOVERY
• AUTOMATIC TRANSFER AND RECOVERY
• CUSTOMIZED SYSTEMS FOR LARGE CAPACITIES WITHDOSING UNITS

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