



VACUUM SOLUTIONS FOR

# Pharmaceutical industry

**DELFIN**  
FOR A DUST-FREE WORLD



**D E L F I N**  
FOR A DUST-FREE WORLD

# PHARMACEUTICAL INDUSTRY

## HEALTH, SAFETY AND PRODUCTIVITY

The production process in the pharmaceutical sector involves high standards of hygiene, safety and productivity to ensure a safe, compliant and effective end product.

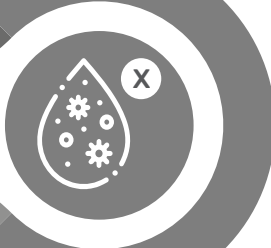
ENSURING SECURITY OF OPERATORS



PRODUCTION EFFICIENCY



AVOID CONTAMINATION



ENSURE CONTAINMENT OF ACTIVE SUBSTANCES AND INGREDIENTS



ENSURE THE QUALITY OF THE FINISHED PRODUCT



MAINTAIN HIGHEST LEVEL OF HYGIENE IN THE WORK ENVIRONMENT



Based on these priorities, Delfin offers an innovative range of pharmaceutical-specific solutions that includes dust containment systems with varying degree of dangerousness (API and HPAPI) and different levels of operator exposure risk (OEB1 to OEB5).

# FEATURES

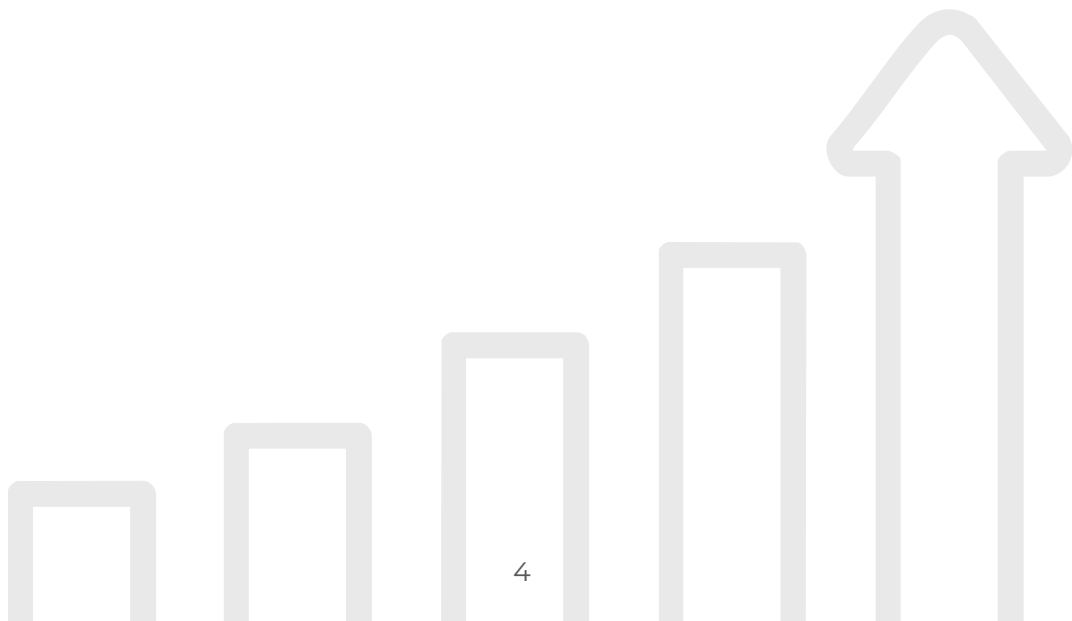
offered by Delfin

# BENEFITS

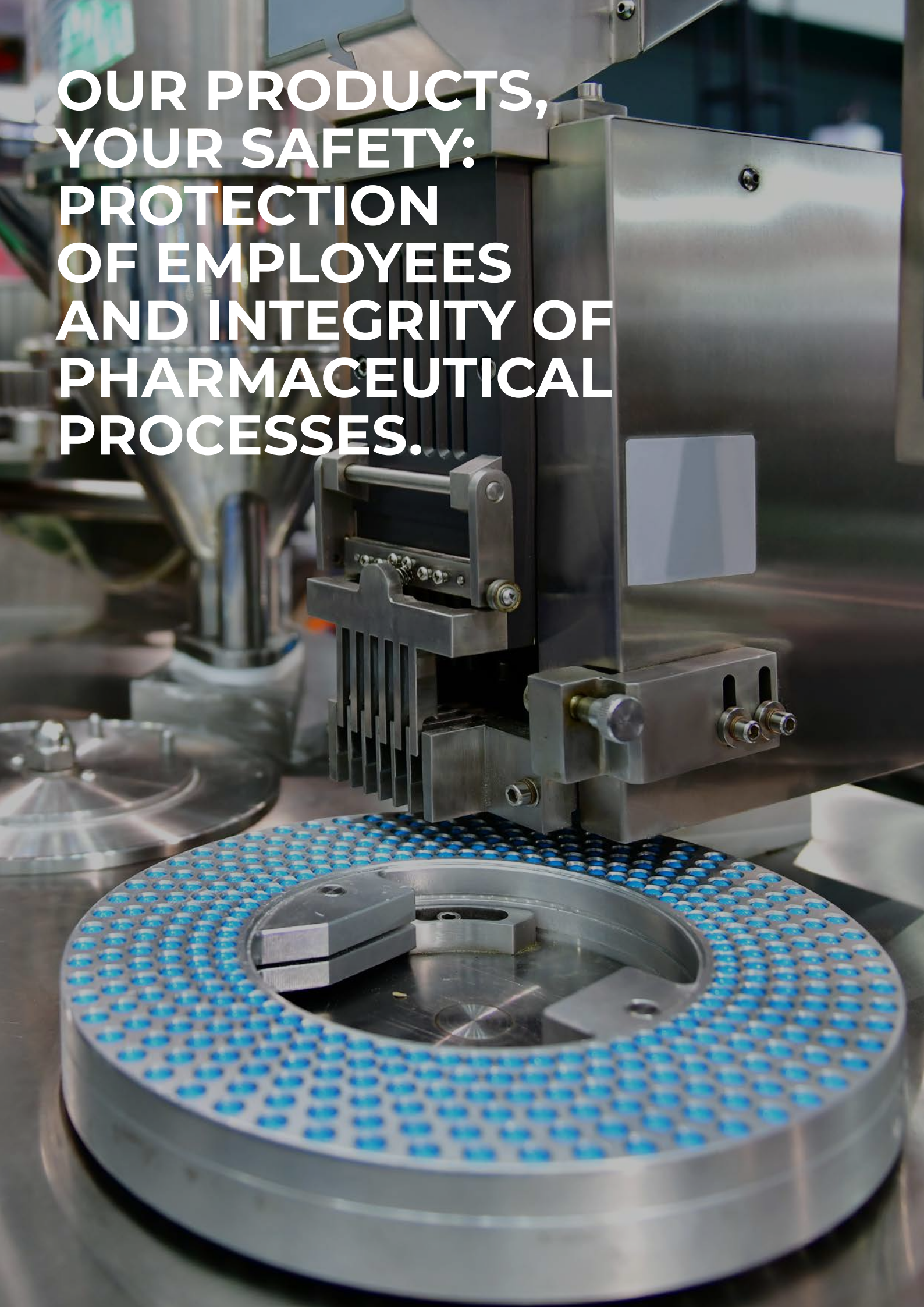
for companies

- 01.** Wide range of products diversified for toxic powders.
- 02.** Dust containment range (H14/HEPA filtration + BIBO + OEB and cyclones).
- 03.** Product customization
- 04.** Mobile Solutions Range (Cleanroom)
- 05.** Modular solutions (high efficiency cyclone and canister)
- 06.** TP> integration to the production process
- 07.** Certifications and Miscellaneous (ATEX, HEPA, ULPA, IECEx)

- 01.** Maintaining high standards of hygiene and cleanliness
- 02.** Operator safety and work environment
- 03.** Setting of machine air flow rate and waste reduction during production process steps (materials saving)
- 04.** Preserve the environment from dust even when ejected from vacuum cleaners, not contamination at all (protection up to ISO 4)
- 05.** Avoiding noise and thermal emissions in environments
- 06.** Process time optimization (conveying and dosing powders according to the needs of the production process)
- 07.** Compliance and regulatory compliance + safety



**OUR PRODUCTS,  
YOUR SAFETY:  
PROTECTION  
OF EMPLOYEES  
AND INTEGRITY OF  
PHARMACEUTICAL  
PROCESSES.**



# A FULL RANGE OF SOLUTIONS

*Delfin offers the pharmaceutical industry a wide range of mobile and stationary industrial vacuum cleaners and several pneumatic conveying solutions that seamlessly integrate with the production process, from the storage of raw materials to the packaging process of the finished product.*



1



## **SOLUTIONS FOR LOGISTICS AND RAW MATERIAL STORAGE AREAS**

Compact models for dust and liquid suction with large collection capacity and central solutions with fixed piping for storage and production areas.

**P 08-10**

2



## **SOLUTIONS FOR PRE-PRODUCTION AREAS**

Dust collectors with suction arm to avoid powder scattering in the environment and operator exposure.

**P 11-12**

3



## **A. SOLUTIONS FOR PRODUCTION AREAS**

Integrated solutions for automation of raw materials loading or finished products conveying.

## **B. SOLUTIONS FOR DUST CONTAINMENT**

Integrated solutions for dust control in production areas.

**P 13-24**

4



## **SOLUTIONS FOR CLEANROOM & WHITEROOM**

Autoclavable models for dust or liquid suction with ULPA filters. Suitable for cleanroom, ISO4 or higher

**P 25-26**

5



## **SOLUTIONS FOR PACKAGING LINES**

Integrated solutions for the removal of packaging scraps and trimmings (cardboard, plastic film, etc.).

**P 27-29**

6



## **SOLUTION FOR PNEUMATIC CONVEYORS**

Solutions that perfectly integrate the production process, from raw material storage to packaging lines.

**P 30**



# 1 SOLUTIONS FOR CLEANING THE LOGISTICS AND STORAGE AREAS OF RAW MATERIALS

*Compact models for dust and liquid suction with large collection capacity and central solutions with fixed piping for storage and production areas.*

## MODELS

802 WXP · MTL 451 1/2D · DM2 1/2D



LOGISTICS AREAS

# INDUSTRIAL VACUUM SYSTEM FOR LIQUIDS

## 802 WXP

Ideal in case of disposal of large quantities of liquids AISI 304 stainless steel container, double single-phase by-pass motor and practical immersion pump for container emptying.

### BENEFITS:

- Safe removal of large quantities of liquids
- Suction and discharge of liquids even simultaneously
- PPL pre-filters for pump and motor protection



TECHNICAL DATA	802 WXP
Voltage/Power	230V - 50Hz 1~/ 2,3 kW
Continuous waterlift	2500 mmH <sup>2</sup> O
Max air flow	360 m <sup>3</sup> /h
Filter	Polypropylene bag 300µm
Capacity	80 lt
Noise level	76 dB (A)
Dimensions/Weight	56x67x107h cm / 50kg

# INDUSTRIAL VACUUM CLEANERS FOR REMOVING LARGE QUANTITIES OF DUST AND SOLIDS

## MTL451 1/2D / DM2 1/2D

Thanks to Brushless single-phase motors, it is possible to continuously suck up small and large quantities of powder in ATEX Z22 certified areas. Class M antistatic primary filter together with H filter (standard) allow even the finest dust to be filtered out, preventing it from being re-introduced into the environment posing danger to the operator.

### BENEFITS:

- Mobile and compact machine
- Continuous suction possible thanks to brushless motors
- Maintenance-free brushless motor



### OPTIONAL



ATEX CERTIFICATION  
BY AN ACCREDITED THIRD PARTY



STAINLESS STEEL CHAMBER



BAG  
Collection bags for complete  
container with depressor kit

TECHNICAL DATA	MTL451 1/2D	DM2 1/2D
Atex zone / Category	1/2D	1/2D
Voltage/Power	230V - 50Hz 1~/1,1 kW	230V - 50Hz 1~/2,2 kW
Continuous waterlift	2250 mmH <sup>2</sup> O	2250 mmH <sup>2</sup> O
Max air flow	215 m <sup>3</sup> /h	430 m <sup>3</sup> /h
Filter	Star - Polyester ANT M	Star - Polyester ANT M
Capacity	45 lt	100 lt
Filter cleaning system	Dustop	Manual
Noise level	74 dB (A)	76 dB (A)
Dimensions/Weight	58x70x147h cm / 57kg	77x66x168h cm / 87kg



# 2

## SOLUTIONS FOR PRE-PRODUCTION AREAS

*Dust collectors with suction arm to avoid powder scattering in the environment and operator exposure.*

**| MODELS**  
ZEFIRO EV AP

# INDUSTRIAL DUST COLLECTORS

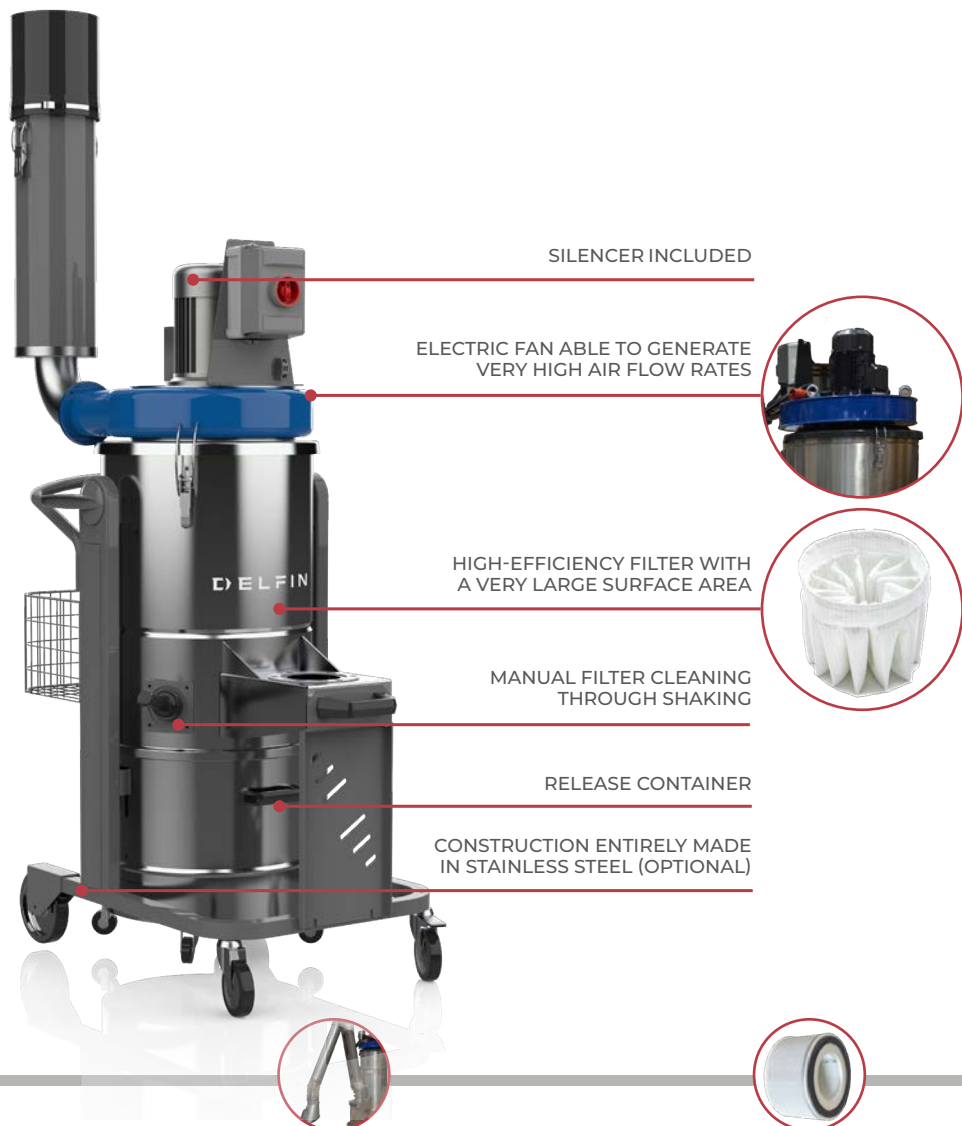
## ZFR EV AP

Trolley dust collectors feature a very high air flow rate, which is necessary to vacuum powder at the source and prevent it from being dispersed in the environment.

They are also a perfect solution for localized suction directly on board of process machinery. Their function is to avoid dust dispersion in the production environment, preventing even the finest powder from escaping into the surroundings.

### BENEFITS:

- It allows the vacuuming of fine powder suspended in the work environment, ensuring the safety of operators and preventing the dust from spreading into the surroundings
- Can be used with extraction arm or direct connection on product machinery



SILENCER INCLUDED

ELECTRIC FAN ABLE TO GENERATE VERY HIGH AIR FLOW RATES

HIGH-EFFICIENCY FILTER WITH A VERY LARGE SURFACE AREA

MANUAL FILTER CLEANING THROUGH SHAKING

RELEASE CONTAINER

CONSTRUCTION ENTIRELY MADE IN STAINLESS STEEL (OPTIONAL)

### OPTIONAL



ATEX  
Vacuum unit certified  
for use in Atex Zone 22



STAINLESS STEEL  
SUCTION ARM



SAFETY H FILTER  
for suction of toxic,  
carcinogenic, pathogenic powder

TECHNICAL DATA	ZFR EV AP 420 K07	ZFR EV AP 560 K4
Voltage / Power	400 - 50 3~ / 1,15 kW	400 - 50 3~ / 4 kW
Max waterlift	180 mmH <sup>2</sup> O	370 mmH <sup>2</sup> O
Max air flow	1000 m <sup>3</sup> /h	3500 m <sup>3</sup> /h
Filter	Polyester star - L	Polyester star- ANT M
Capacity	45 lt	100 lt
Dimensions	58x93x180h cm	78x132x219h cm



# 3<sup>a</sup>

## SOLUTIONS FOR PRODUCTION AREAS

*Integrated solutions on the production lines to eliminate dust and reduce maintenance.*

## MODELS

DBF · DBFV · PHARMA 20.18  
PHARMA 40.40 · PHARMA 40.30



TABLET  
PRESSES



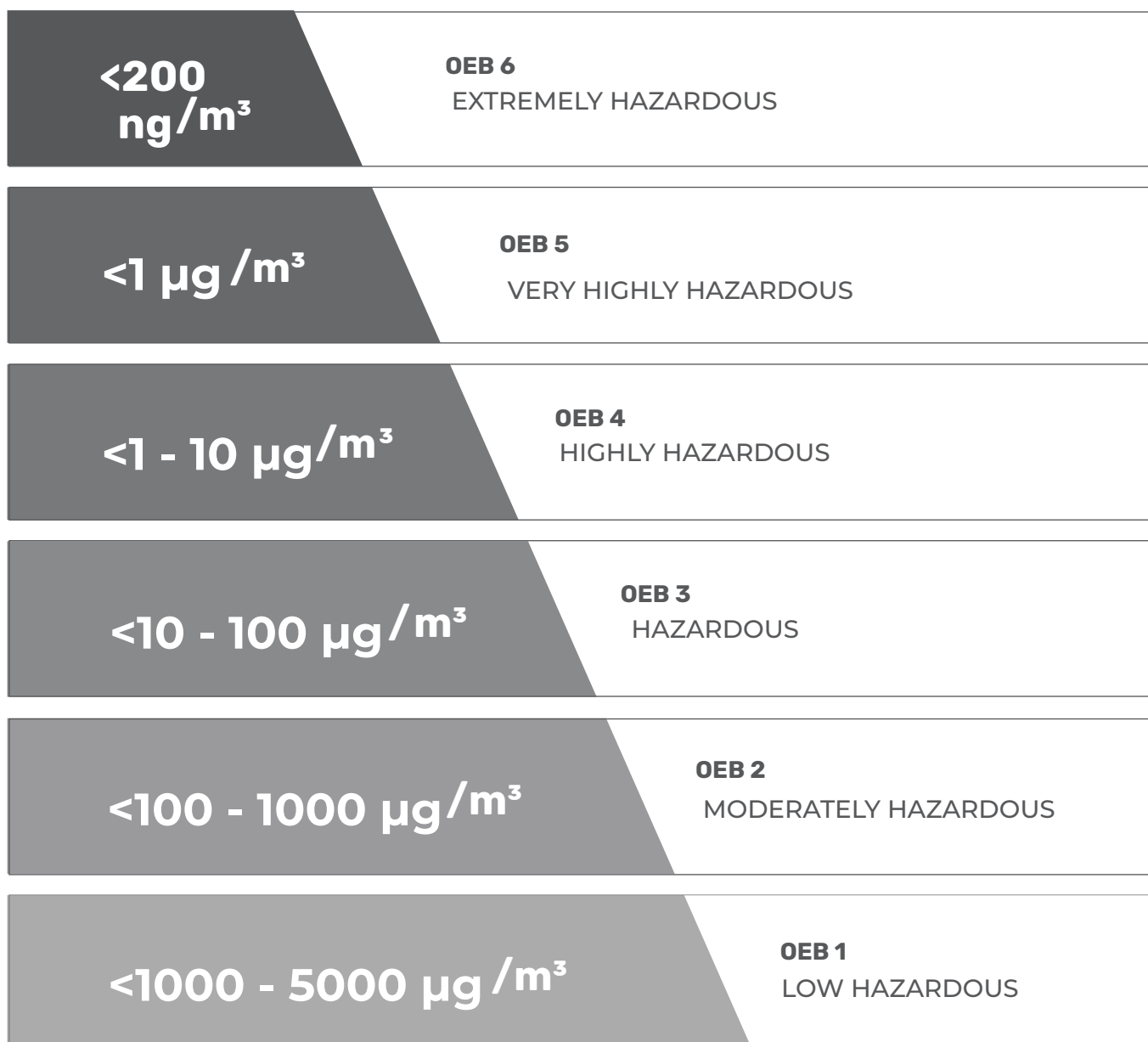
TABLETTING  
MACHINES



BLISTER  
MACHINES

# OEB CONTAINMENT GUIDE

In the pharmaceutical industry, the **Occupational Exposure Band (OEB)** classification defines occupational exposure limits to APIs based on their toxicity. The **OEB 1-6** scheme establishes the necessary containment requirements: from basic PPE to enclosed systems and isolators. It is a key tool for designing safe plants and protecting employees.



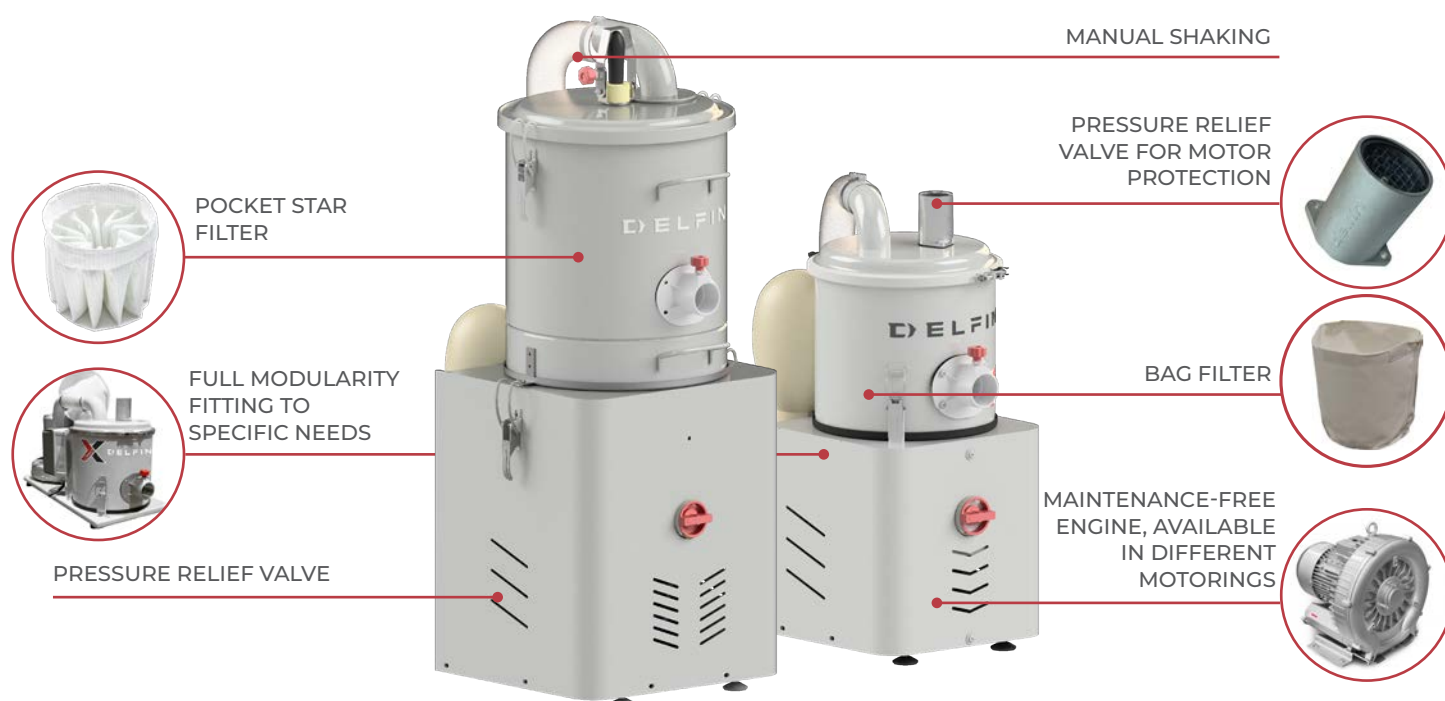
# VACUUM CLEANERS FOR DIRECT DUST EXTRACTION FROM PROCESS MACHINERY

## DBF RANGE - DBFV

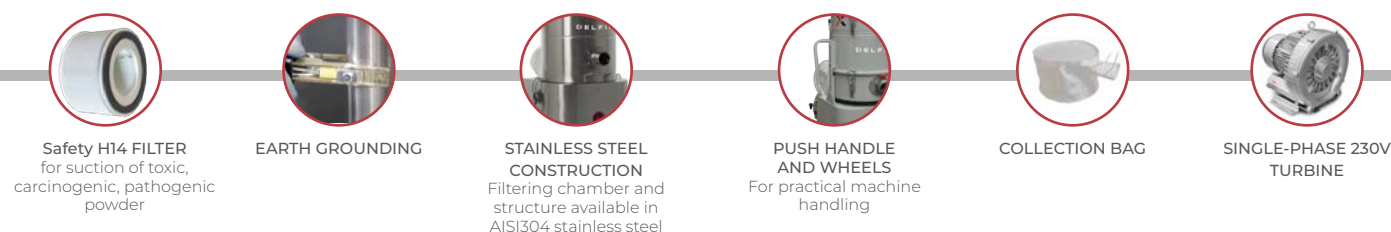
The fixed vacuum bases on the machine are the ideal solution for removing powder and small scraps directly at the source during production cycles. Compact and available in vertical or horizontal construction, they are easy to install and integrate into existing or highly automated production lines.

### BENEFITS:

- Continuous suction in order to avoid machine downtime and to maintain high productivity standards
- No powder releasing into the working environment
- Ergonomic and easy to use for thorough cleaning of the working area
- Minimal space requirements, modular construction



### OPTIONAL



TECHNICAL DATA	DBFV 05	DBFV 10	DBFV 20	DBFV 30
Voltage/Power	400V - 50Hz 3~/ 0,37 kW	400V - 50Hz 3~/ 1,35 kW	400V - 50Hz 3~/ 2,5 kW	400V - 50Hz 3~/ 2,5 kW
Continuous waterlift	1500 - 1200 mmH <sup>2</sup> O	2000 - 1400 mmH <sup>2</sup> O	3000 - 2200 mmH <sup>2</sup> O	2600 - 1900 mmH <sup>2</sup> O
Max air flow	100 m <sup>3</sup> /h	150 m <sup>3</sup> /h	270 m <sup>3</sup> /h	318 m <sup>3</sup> /h
Filter	Polyester bag - M PTFE	Polyester bag - M PTFE	Polyester star - ANT M	Polyester star - ANT M
Capacity	15 lt	15 lt	25 lt	25 lt
Dimensions/Weight	52x33x74h cm / 30kg	52x33x74h cm / 35kg	54x55x103h cm / 45kg	54x55x103h cm / 60kg

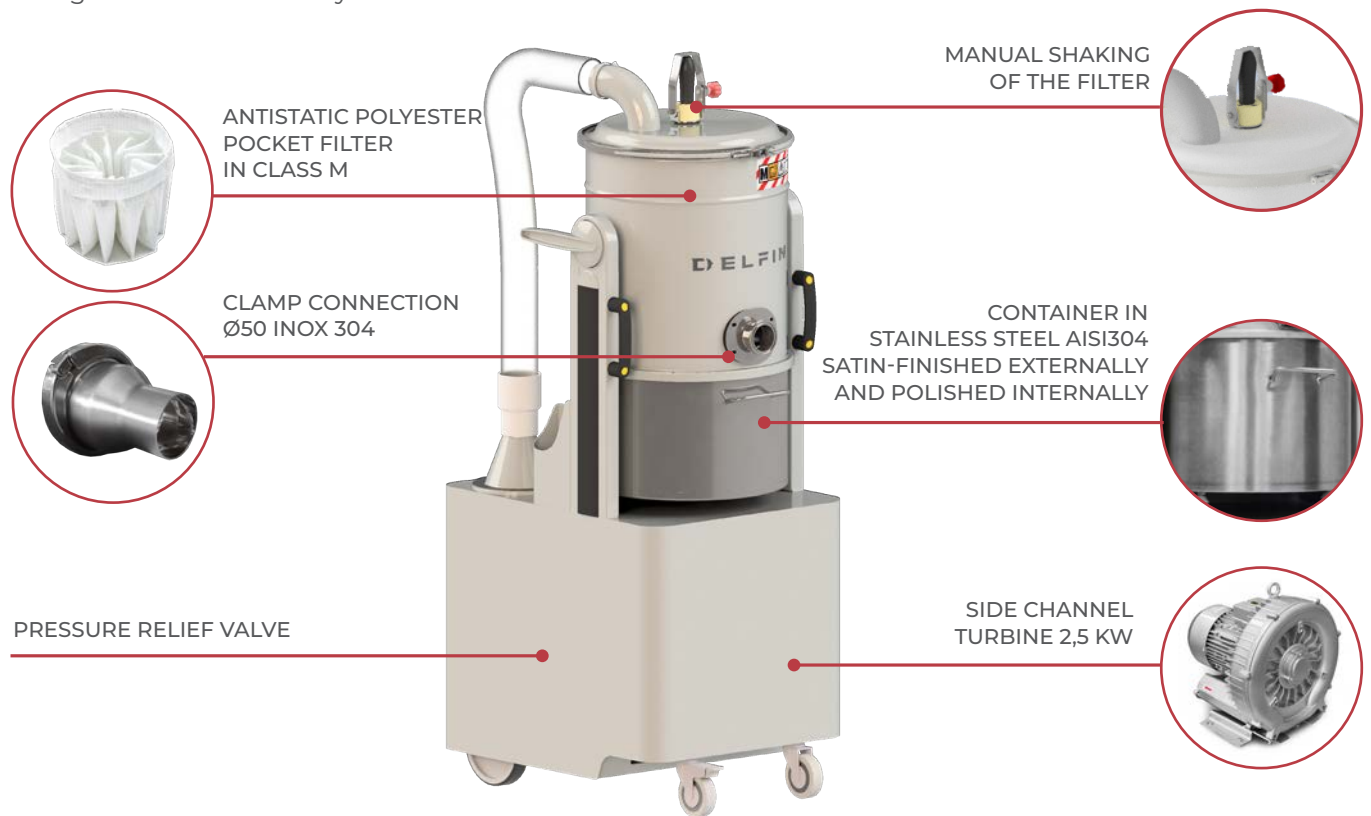
# VACUUM CLEANERS FOR DIRECT POWDER SUCTION FROM PROCESS MACHINERY AND FOR GENERAL CLEANING

## PHARMA 20.18

Extremely silent, compact and handy vacuum unit for direct suction of powdered active ingredients up to 0EB3 (API) on process machinery. Also fit for general cleaning and machinery maintenance.

### BENEFITS:

- Continuous suction in order to avoid machine downtime and to maintain high productivity standards
- Thanks to its extremely silent operation, it reduce noise level within the production area
- High filtration efficiency



### OPTIONAL



**STAINLESS STEEL CONSTRUCTION**  
Filtering chamber and structure available in AISI304 stainless steel



**Safety HEPA FILTER**  
for suction of toxic, carcinogenic, pathogenic dust



**SAFE BAG SYSTEM**  
Secure bagging system



**ARTICULATED ARM**  
for localised dust extraction



**FDA FILTER**  
FDA-certified antistatic filter



**ATEX**  
Unit certified for use Atex Zone 22

TECHNICAL DATA	PHARMA 20.18
Voltage/Power	400V - 50Hz 3~ / 2,5 kW
Continuous waterlift	3000 - 2200 mmH <sup>2</sup> O
Max air flow	270 m <sup>3</sup> /h
Filter	Antistatic Polyester M
Capacity	22 lt
Dimensions/Weight	70x51x135h cm / 75kg

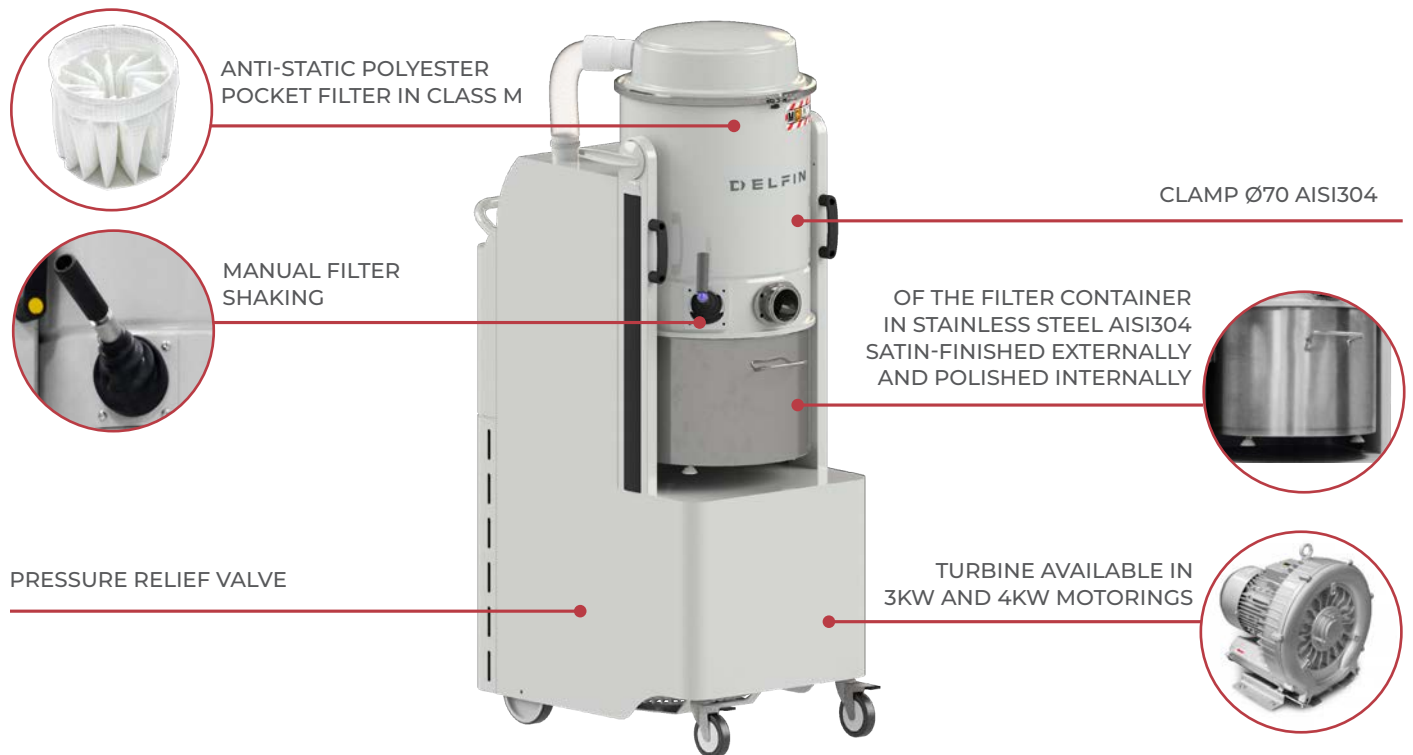
# VACUUM CLEANERS FOR DIRECT POWDER SUCTION FROM PROCESS MACHINERY AND FOR GENERAL CLEANING

## PHARMA 40.40 - 40.30

Compact, noiseless and flexible industrial vacuum unit for direct suction of powdered active ingredients up to OEB3 (API).

### BENEFITS:

- Continuous suction in order to avoid machine downtime and to maintain high productivity standards
- Thanks to its extreme silent operation, it does not reduce noise level within the production area
- High filtration efficiency



### OPTIONAL



**INVERTER**  
ABB Inverter IP66 kW4 Z22 for air flow and air speed modification



**TABLE TOP**  
For filter replacement with BIBO system



**STAINLESS STEEL CONSTRUCTION**  
Filter chamber and structure available in AISI304 stainless steel. Internal mirror polishing available



**SAFE BAG SYSTEM**  
Secure bagging system



**SENSORS**  
Magnehelic and Photohelic for filter clogging control



**FILTRATION**  
FDA-certified antistatic filter | H14 absolute filter in upstream | H14 absolute filter with BIBO system and painted steel housing

TECHNICAL DATA	PHARMA 40.40	PHARMA 40.30
Voltage/Power	400V - 50Hz 3~ / 4,6 kW	400V - 50Hz 3~ / 3,45 kW
Continuous waterlift	3200 mmH <sup>2</sup> O	3200 mmH <sup>2</sup> O
Max air flow	420 m <sup>3</sup> /h	318 m <sup>3</sup> /h
Filter	Antistatic Polyester Class M	Antistatic Polyester Class M
Capacity	42 lt	42 lt
Dimensions/Weight	89x57x160h cm / 120kg	89x57x160h cm / 120kg



# 3<sup>b</sup> SOLUTIONS FOR DUST CONTAINMENT

*Process-integrated models suitable for OEB environments with guaranteed operator safety.*

## MODELS

PHARMA 40.40 DC  
CST.DC-001 · SEP.DC



TABLET  
PRESSES



TABLETING  
MACHINES



BLISTER  
MACHINES

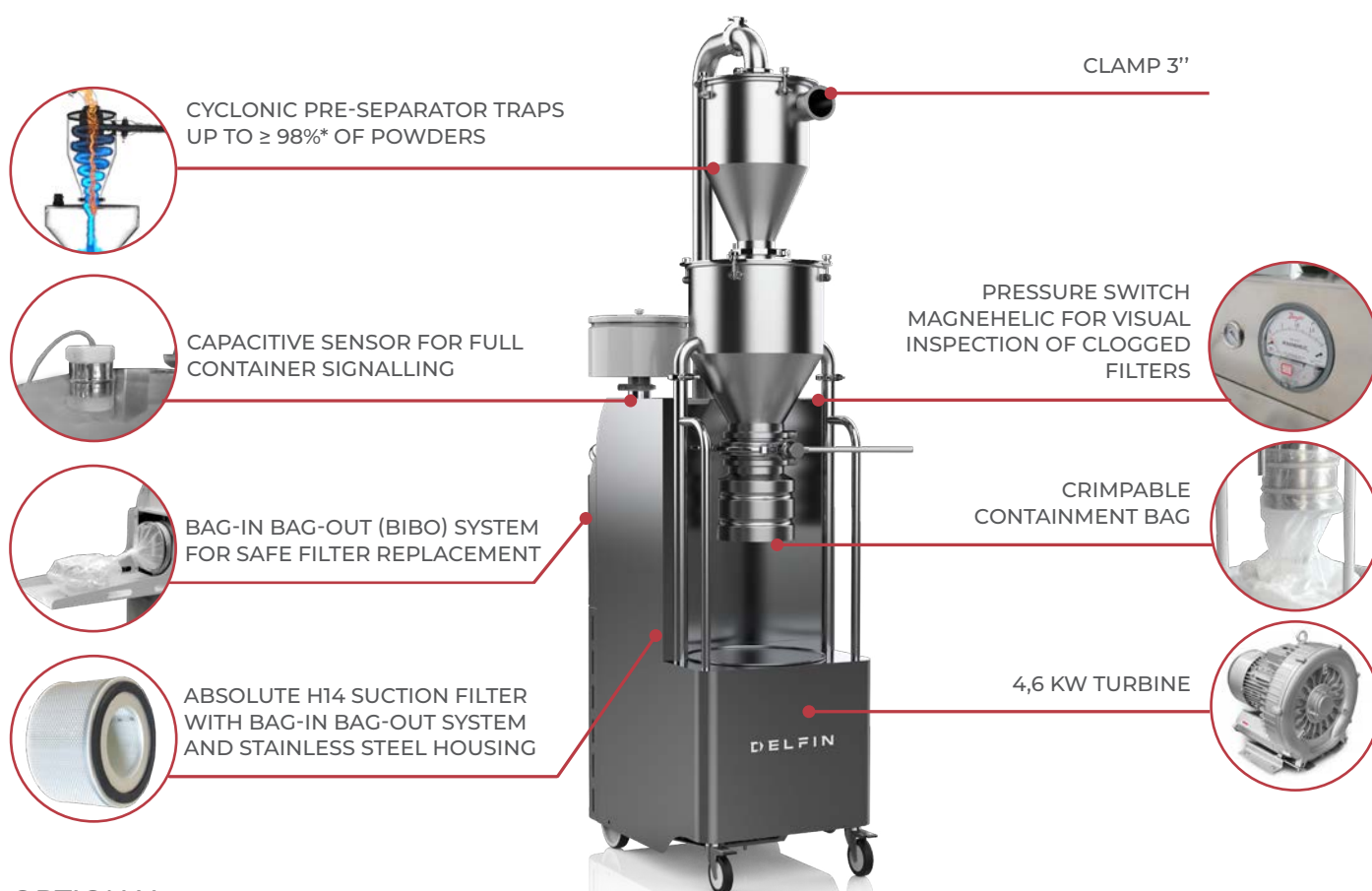
# SAFE CONTAINMENT OF HAZARDOUS POWDERS

## PHARMA 40.40 DC

Compact, noiseless and flexible industrial vacuum cleaner equipped with a bag collecting system, particularly suitable for connection to tablet pressing machines, shrink wrapping machines, blister machines. Perfect for direct suction of HPAPI powders up to OEB4 and OEB5. Construction material coming in contact with powder in AISI 316 stainless steel.

### BENEFITS:

- Maximum powders filtration complying with OEB4-5 levels, ensuring total operator protection
- Ultra-compact system to fit into confined spaces
- No powder build-up for easy maintenance and cleaning
- Continuous extraction even in discharge step in order to avoid machine downtime during product disposal and to maintain high production standards
- Suitable for suction of St 1 and St 2-class dust.



### OPTIONAL



**INVERTER**  
ABB Inverter IP66 kW4 Z22 for air flow and air speed modification



**WASH IN PLACE**  
For cleaning the pre-separator and hopper



**SEPARATE VACUUM UNIT**  
Possible location of the turbine in the technical compartment. Available Atex Z22



**CRIMPING TOOL, END CAPS, SPARE BAGS**  
Supplied separately



**PHOTOHELIC**  
For differential clogging or filter breakage control and signal sending to external systems. Available Atex 2GD



**SAFETY FILTER**  
F9 O H4  
For toxic, carcinogenic, pathogenic powder

TECHNICAL DATA	PHARMA 40.40 DC
Voltage/Power	400V - 50Hz 3~/ 4,6 kW
Continuous waterlift	3200- 23 00 mmH <sup>2</sup> O
Max air flow	420 m <sub>3</sub> /h
Filter - Filter surface	H14 - 20.500 cm <sub>2</sub>
Capacity	30 lt
Discharge	Butterfly ø150 AISI316 / Butterfly ø150 AISI316
Dimensions/Weight	95x56x232h cm / 160kg

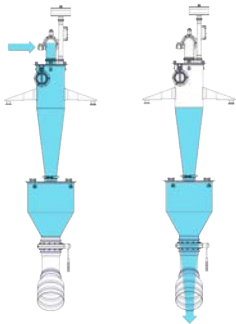
# SAFETY ALWAYS COMES FIRST



## 01

### SAFE REPLACEMENT OF HEPA14 FILTER

THE BAG IN - BAG OUT SYSTEM ALLOWS H14 FILTERS TO BE REPLACED, PREVENTING DISPERSION INTO THE ENVIRONMENT AND ANY CONTACT BETWEEN POWDER AND THE OPERATOR. THE BAG, CONTAINING THE EXHAUSTED FILTER INSIDE, CAN BE DISPOSED OF SAFELY BY THE OPERATOR.



## 02

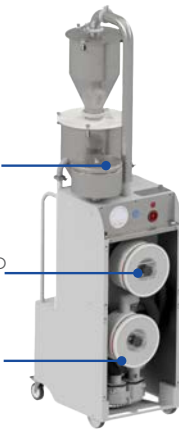
### WASH-IN-PLACE DUST CLEANING AND DEACTIVATION SYSTEM

THE CYCLONIC PRE-SEPARATOR AND COLLECTION HOPPER CAN BE EASILY CLEANED VIA A CONVENIENT WASH IN PLACE SYSTEM, WHICH USES WATER, BY MEANS OF VALVES, TO INERT ANY HARMFUL RESIDUAL POWDER LEFT INSIDE THE UNIT.

OPT.  
ABSOLUTE H14  
FILTER

OPT.  
F9 FILTER IN AIR  
SUPPLY WITH BIBO  
SYSTEM

STANDARD  
ABSOLUTE H14  
FILTER WITH BIBO  
SYSTEM



## 03

### ABSOLUTE FILTRATION

FINE DUST PASSING THROUGH THE CYCLONIC PRE-SEPARATOR IS RETAINED BY PROGRESSIVE EFFICIENCY FILTERS, WHICH PROVIDE TOTAL CONTAINMENT CAPACITY TO THE SYSTEM, PROTECTING THE ENVIRONMENT AND OPERATORS.



## 04

### SECURE COLLECTION IN CRIMPABLE CONTAINMENT BAGS

THE POWDERS, ONCE DISCHARGED FROM THE HOPPER, ARE COLLECTED IN CONTAINMENT BAGS THAT CAN BE CRIMPED THANKS TO THE GRIPPER AND THE HIGH-TIGHT SEALS.



## 05

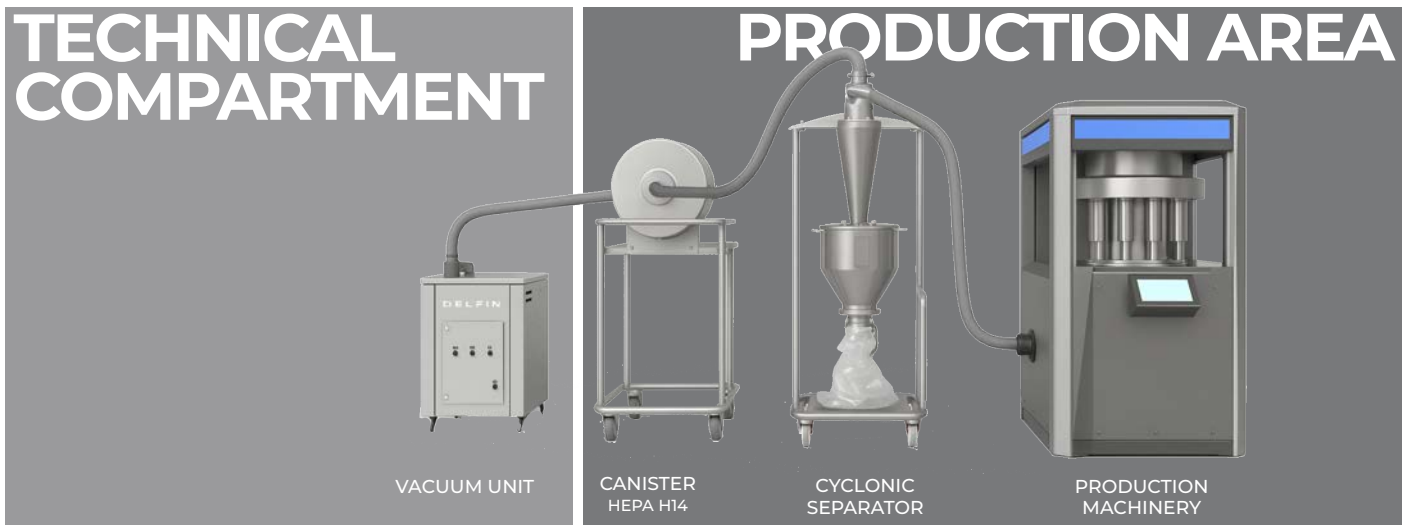
### REAL-TIME VACUUM MONITORING

THE SENSORS MONITOR THE FILTER CLOGGING LEVEL SENDING A SIGNAL BACK TO THE MACHINE PLC. A LEVEL SENSOR SIGNALS WHEN THE CONTAINER IS FULL.

## MODULAR SOLUTIONS

Modular solutions allow the vacuum unit to be positioned outside the production area. The pre-separators thanks to their compact dimensions allow space saving. The absence of powder accumulation points ensures cleanliness, efficiency and easy maintenance.

These models can be supplied with a separate suction unit.



## VACUUM UNITS CV RANGE

### BENEFITS:

- Its positioning in the outside the production area optimises space and reduces heat and noise in the production room
- Maintenance-free motor

INTERCONNECTION WITH FACTORY  
ERP AND PARAMETER CONTROL



## INVERTER/VDF

FREQUENCY ADJUSTMENT AND  
VACUUM PARAMETERS

 Option: Atex certification

TECHNICAL DATA	CV115-001	VPU46B	VPU63B	VPU86B
Voltage	400V - 50Hz 3~	400V - 50Hz 3~	400V - 50Hz 3~	400V - 50Hz 3~
Power	3,45 kW	4,6 kW	6,3 kW	8,6 kW
Continuous waterlift	3200/2700 mmH <sup>2</sup> O	3200/2600 mmH <sup>2</sup> O	3600/3200 mmH <sup>2</sup> O	3200/2900 mmH <sup>2</sup> O
Max air flow	318 m <sub>3</sub> /h	420 m <sub>3</sub> /h	530 m <sub>3</sub> /h	700 m <sub>3</sub> /h
IN/OUT	60 mm	60 mm	70 mm	70 mm
Dimensions	64,2x65,8x143h cm	64,2x65,8x143h cm	64,2x65,8x143h cm	64,2x65,8x143h cm

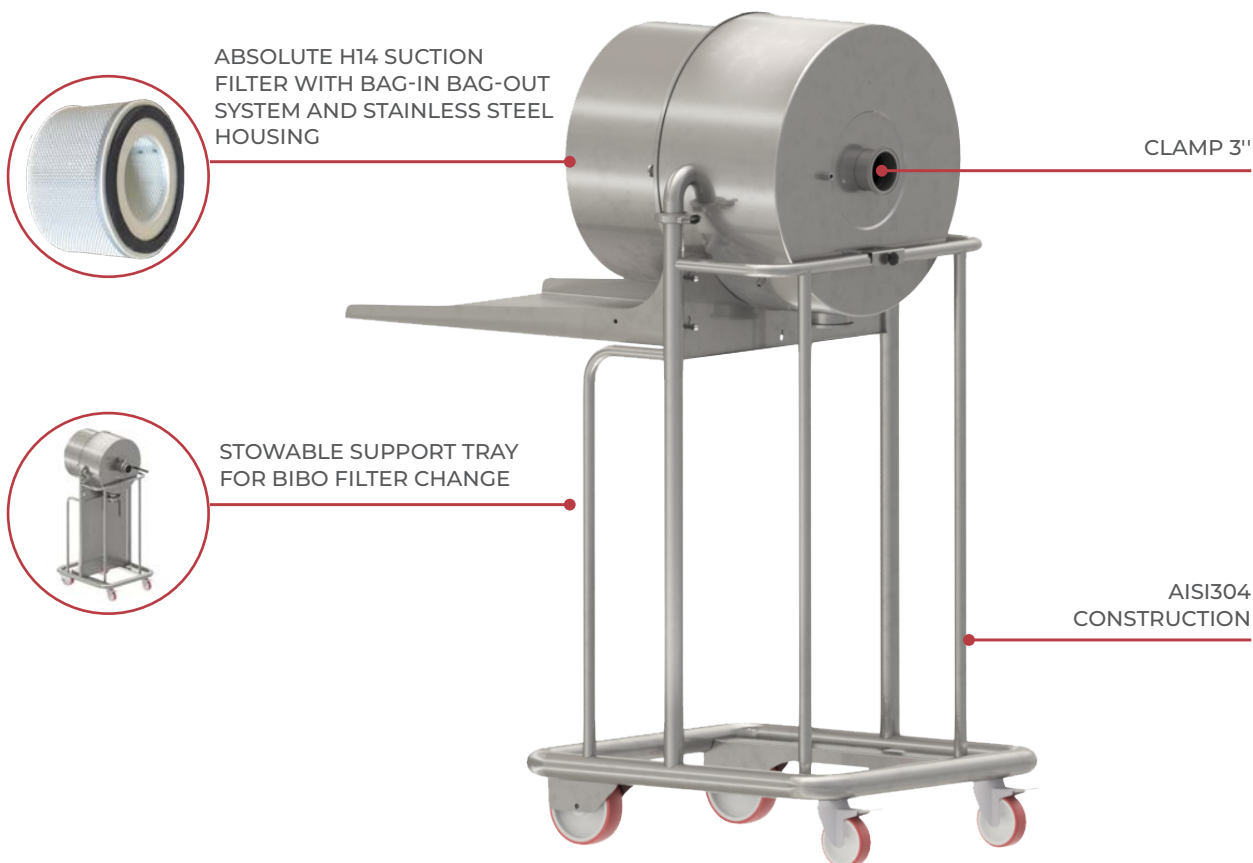
# CANISTER

CST.DC-001

These models can be supplied with a separate suction unit.

**BENEFITS:**

- 99.995% retention of micro-dust (down to 0.18µm)
- Ultra-compact system for use in confined spaces
- No powder build-up for easy maintenance and cleaning



**OPTIONAL**



CRIMPING TOOL, END CAPS  
Supplied separately

WIRING DIAGRAM IN PRODUCTION



TECHNICAL DATA	CANISTER
Max waterlift	2700 mmH <sub>2</sub> O
Max air flow	1000 m <sub>3</sub> /h
Dimensions/Weight	70x75x155h cm / 60kg

# CYCLONIC SEPARATOR

SEP.DC-001 / SEP.DC-002

Cyclone pre-separator in polished AISI 316 stainless steel, with cyclone dust separation maximum efficiency up to 98%. Safe powder collection system in containment bags. Suitable for turbines with a capacity up to 750m<sup>3</sup>/h.

## BENEFITS:

- Reduction of primary filter clogging for a longer filter life
- Ultra-compact system for use in confined spaces
- No powder build-up for easy maintenance and cleaning
- Maximum filtration efficiency for almost total powder recovery



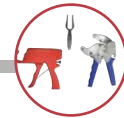
## OPTIONAL



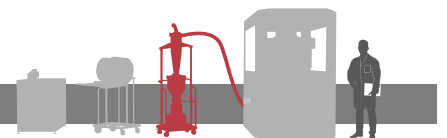
**WASH IN PLACE**  
For cleaning the pre-separator  
and hopper



**CONTAINMENT BAGS**  
KIT.1780.0000 | 5 containment  
bags and 6 rings - spare parts kit



**CRIMPING TOOL, END CAPS,  
SPARE BAGS**  
Supplied separately



## WIRING DIAGRAM IN PRODUCTION

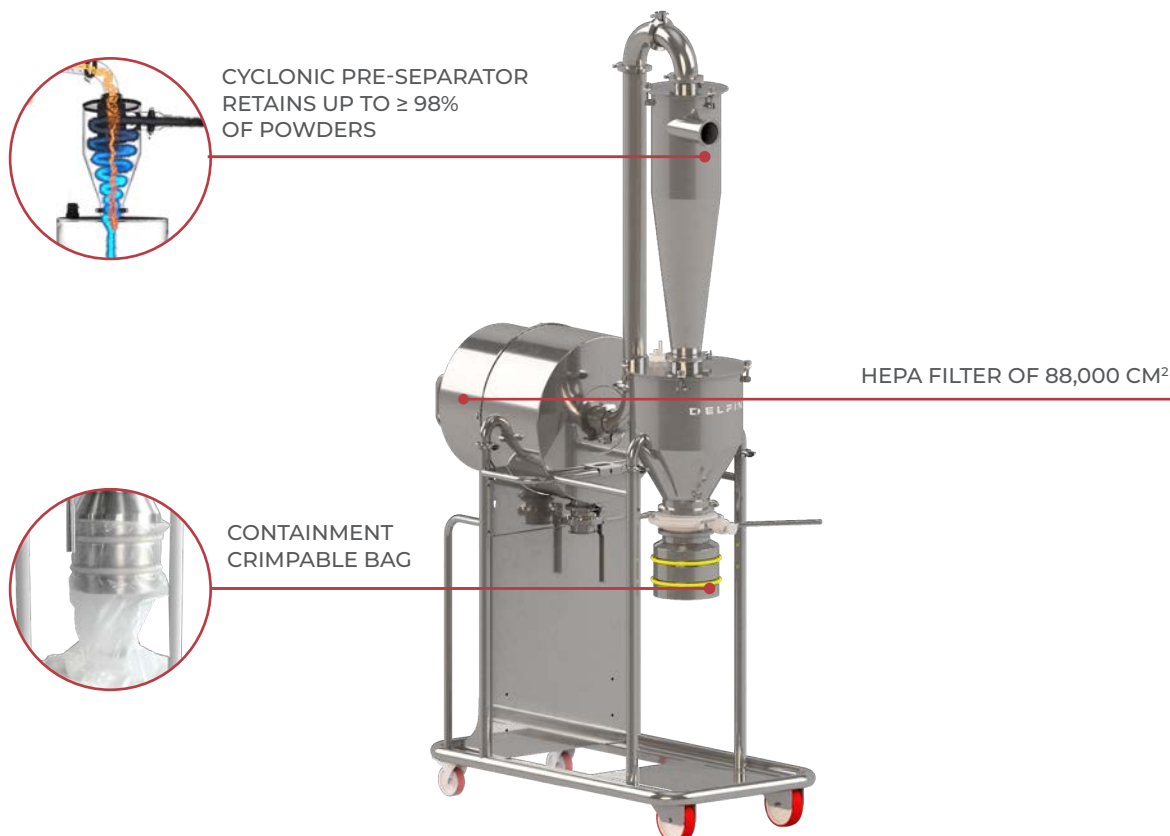
TECHNICAL DATA	SEP.DC-001	SEP.DC-002
Max waterlift	2700 mmH <sub>2</sub> O	2700 mmH <sub>2</sub> O
Max air flow	1000 m <sub>3</sub> /h	1000 m <sub>3</sub> /h
Capacity	30 lt	40 lt
Dimensions/Weight	72x70x240h cm / 65kg	72x70x172h cm / 55kg
Collection system	Containment bag	Container

# INTEGRATED SYSTEMS: CANISTER WITH PRE-SEPARATOR CYCLONE AND POCKET FILTER WITH PRE-SEPARATOR CYCLONE

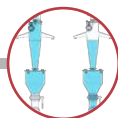
SEP.DC-009 / SEP.DC-0010

## BENEFITS:

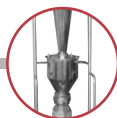
- Reduction of primary filter clogging for a longer filter life
- Ultra-compact system for use in confined spaces
- No powder build-up for easy maintenance and cleaning
- Maximum filtration efficiency for safe powder collection



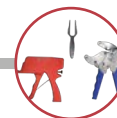
## OPTIONAL



**WASH IN PLACE**  
For cleaning the pre-separator and hopper

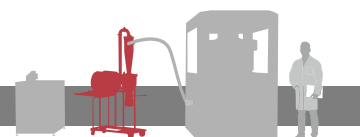


**CONTAINMENT BAGS**  
KIT.1780.0000 | 5 containment bags and 6 rings - spare parts kit



**CRIMPING TOOL, END CAPS, SPARE BAGS**  
Supplied separately

WIRING DIAGRAM IN PRODUCTION



TECHNICAL DATA	SEP.DC-009	SEP.DC-010
Max waterlift	2700 mmH <sub>2</sub> O	2700 mmH <sub>2</sub> O
Max air flow	1000 m <sub>3</sub> /h	1000 m <sub>3</sub> /h
Filter	HEPA 14	Star
Filter surface	88.000 cm <sup>2</sup>	200.000 cm <sup>2</sup>
Capacity	30 lt	30 lt
Dimensions/Weight	70x128x262h cm / 115kg	70x127x265h cm / 115kg



# 4

## SOLUTIONS FOR CLEANROOM&WHITEROOM

*Autoclavable models for dust or liquid extraction with ULPA filters. Suitable for cleanrooms, UP TO ISO4 CLASSIFICATION.*

## | MODELS

LABCONTROL RANGE LC1000 D / LC1100 WD

# CLEANING OF CLEANROOMS UP TO ISO4

## LABCONTROL RANGE LC1000 D / LC1100 WD

The typical feature of cleanrooms is the purity of the air inside, which maintains a very low content of suspended micro-particles of powder.

Delfin range of Labcontrol vacuum cleaners reduces the risk of product contamination in full compliance with industry regulations, while maintaining the highest levels of hygiene. Specific tests have certified their compatibility for use in cleanrooms up to ISO4 level (according to ISO14644).

They are autoclavable (excluding motor head), and equipped with dedicated, FDA-certified and autoclavable accessories. They are modular and ergonomic, easy to use and sanitise and provide progressive efficiency of multi-filtration.

### BENEFITS:

- Avoids contamination of finished product
- Easy to use and clean



### OPTIONAL



ULPA 15 FILTER  
For exhaust air outlet (LC1100WD)



ACCESSORY KIT  
Autoclavable Dry D40



REPLACEMENT BAGS  
Pack of 5 disposable bags

TECHNICAL DATA	LC1000 D	LC1100 WD
Applications	Powders	Powders / Liquids
Voltage/Power	230V - 50Hz 1~ / 1kW	230V - 50Hz 1~ / 1,1 kW
Max waterlift	2900 mmH <sup>2</sup> O	2500 mmH <sup>2</sup> O
Max air flow	175 m <sub>3</sub> /h	180 m <sub>3</sub> /h
Primary filter	Polyester bag - M PTFE	Polyester bag - M PTFE
ULPA 15 Filter	Included	Optional
Solids/Liquids capacity	- / 5 lt	40/25 lt
Dimensions/Weight	36x33x51h cm / 20kg	43x43x73h cm / 27kg



# 5

## SOLUTIONS FOR PACKAGING LINES

*Integrated solutions for the removal of  
packaging scraps and trimmings (cardboard,  
plastic film, etc.).*

# | MODELS

AS RANG · DG EXP/ DG75 AF



BLISTER  
MACHINES

# VACUUM CLEANERS FOR SUCTION OF STEAM AND PACKAGING WASTE AS RANGE

## AS RANGE

AS Range vacuum cleaners are designed for the suction of bulky scraps and waste from production cycles and packaging machinery, such as nylon, plastic, fabric, cardboard. The vacuumed waste is contained and compacted in a nylon bag, which filters out any powder and allows for quick and easy disposal. They can be integrated on machinery and production lines, typically at the packaging and wrapping stage.

### BENEFITS:

- Immediate removal of residual plastic and paper materials
- Suction from above to prevent filter clogging
- Collection bag for quick disposal
- Compact size and silent operation



### OPTIONAL



FILTER  
Class M polyester



GROUNDING



STAINLESS STEEL  
CONTAINER  
AISI304 stainless steel  
container



BASKET  
Gridded basket to balance  
pressure

TECHNICAL DATA	AS 10	AS 20	AS 30	AS 70
Voltage/Power	400V - 50Hz 3~/1,35 kW	400V - 50Hz 3~/ 2,5 kW	400V - 50Hz 3~/2,5 kW	400V - 50Hz 3~/ 6,3 kW
Continuous waterlift	1900 - 1800 mmH <sup>2</sup> O	2100 - 1800 mmH <sup>2</sup> O	2200 - 1900 mmH <sup>2</sup> O	3600 - 3000 mmH <sup>2</sup> O
Max air flow	150 m <sub>3</sub> /h	270 m <sub>3</sub> /h	318 m <sub>3</sub> /h	530 m <sub>3</sub> /h
Suction inlet	80 mm	80 mm	80 mm	80 mm
Filter	Nylon bag - Class L	Nylon bag - Class L	Nylon bag - Class L	Nylon bag - Class L
Diameter/Height	500 - 660 mm - mm	500 - 660 mm - mm	500 - 660 mm - mm	560 - 820 mm - mm
Capacity	130 lt	130 lt	130 lt	210 lt
Dimensions/Weight	59x55x132h cm / 60kg	59x55x132h cm / 70kg	59x55x132h cm / 75kg	63x100x130h cm /125kg

# INDUSTRIAL VACUUM CLEANERS FOR LARGE QUANTITIES OF DUST AND FOR FIXED INSTALLATION

## DG 75 AF / DG EXP

DG 75 AF and DG EXP lines allow large quantities of material to be collected, continuously and without the need for routine maintenance, even using very long hoses. The powerful three-phase turbine allows direct and integrated suction on production machinery even with fixed pipe systems.

### BENEFITS:

- Structure with easy access to the filter for maintenance operations
- Large collection capacity for a high volume of material, even at long distances
- Maximum vacuum performance guaranteed
- Very silent operation



### OPTIONAL



HEPA FILTER  
Safety suction of toxic powder



ENDLESS BAG  
Continuous bag collection system



ATEX  
Zone certification  
22/21/20

TECHNICAL DATA	DG 50 EXP	DG 75 AF
Voltage/Power	400V - 50Hz 3~/ 4,6 kW	400V - 50Hz 3~/ 8,6 kW
Continuous waterlift	3200- 2600 mmH <sup>2</sup> O	3200 mmH <sup>2</sup> O
Max air flow	420 m <sub>3</sub> /h	700 m <sub>3</sub> /h
Filter	Polyester Star - L	Polyester Star - ANT M
Capacity	100 lt	100 lt
Filter cleaning system	Manual (for star filter)	Manual (for star filter)
Noise level	72 dB (A)	76 dB (A)
Dimensions/Weight	66x118x145h cm / 137kg	66x118x175h cm / 170kg



# 6

## PNEUMATIC CONVEYING SOLUTIONS

*Conceived for powders and granules handling, ideal for the safe and continuous transportation of materials in manufacturing environments. Designed to enhance efficiency and hygiene, moreover willing to be integrated into automated processes.*

## MODELS

ZEFIRO EV AP



TABLET PRESSES



TABLETTING MACHINES



COATING MACHINES



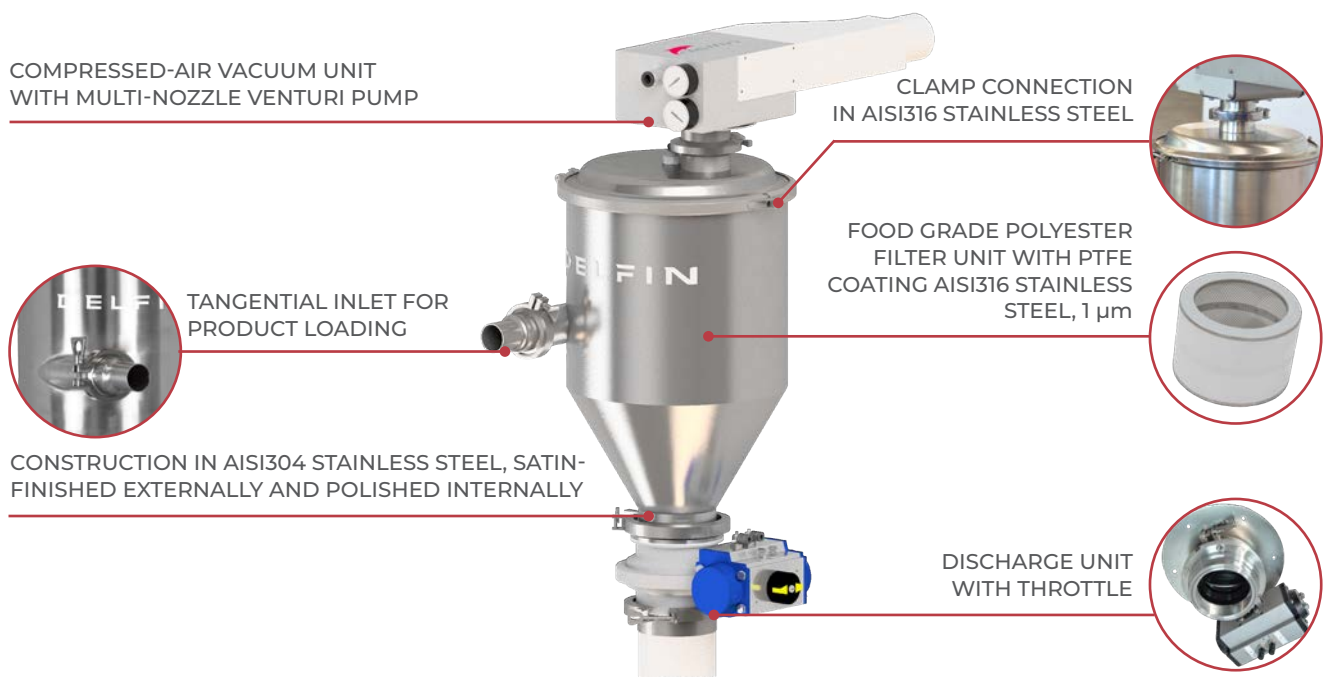
BLISTER MACHINES

# PNEUMATIC CONVEYORS

The perfect solution for loading powders into process machinery, allowing operation automation and ensuring the highest levels of safety. Powder or capsules can be loaded directly into the airtight machine and on a scheduled basis, avoiding any risk of contamination with the external environment. The system easy installation allows for improved production efficiency, replacing manual or mechanical operation with fully automated and safe handling.

## BENEFITS:

- No contamination or de-mixing of transported powders
- High level of hygiene and safety within the production department
- High flexibility of use and easy interfacing with industry process machines
- Easy sanitisation and compliance with pharmaceutical industry regulations
- Precision and quality of the final product
- Compact dimensions
- Careful check of the loading cycle



## OPTIONAL



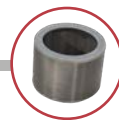
PHARMACEUTICAL  
FINISHING  
Externally polished  
structure



PNEUMATIC VIBRATOR  
Turbine-type for  
conveyor



POWER  
SUPPLY



CARTRIDGE FILTER  
In AISI 316 stainless  
steel, 10µm or  
200µm



ACCESSORIES  
Product take-up  
loading hopper/pipe



ATEX  
Atex certification for  
Zone21 and 22

TECHNICAL DATA	TECH.280P 4V	TECH280PS	CAP-FLOW.280P
Compressed air supply	6 bar	6 bar	da 3 a 6 bar
Max waterlift	620 - 750 - 780 mBar	620 - 750 - 780 mBar	260-370-490 mBar
Max air flow	85 - 110 - 130 m <sup>3</sup> /h	85 - 110 - 130 m <sup>3</sup> /h	260-370-490 m <sup>3</sup> /h
Load volume	8 lt	3,5 lt	Conveyor 8 lt Lower hopper 200lt
Product discharge	100 mm	150 mm	100 mm
Filter	Cartridge	Bag	-
Dimensions	Ø280 - 77h cm	Ø280 - 45h cm	Conveyor -Ø280 - h 770 Lower hopper -Ø560 - h 1100
Weight	18 kg	19 kg	Conveyor - 19kg Lower hopper - 55kg

# ACCESSORIES PHARMA



**DELFIN**  
FOR A DUST-FREE WORLD

# ACCESSORIES FOR PHARMACEUTICAL ENVIRONMENT CLEANING


Accessories designed for all specific vacuum cleaning needs in the pharmaceutical industry, for technical cleaning of machinery and working environments.



**CONICAL NOZZLE**  
PRECISION ACCESSORY WITH DIAGONAL END CUT ALLOWING AIR INLET FOR SMOOTH SUCTION AT ALL TIMES.




**SCRAPING NOZZLE**  
ACCESSORY FOR SCRAPING TANK BOTTOMS OR SURFACES TO BE CLEANED, EVEN IN THE CASE OF PARTICULARLY STICKY RESIDUES.



**PRECISION CONICAL NOZZLE**  
ADJUSTABLE PRECISION ACCESSORY FOR CLEANING SMALL PARTS AND TIGHT CORNERS.



**ROUND PVC BRUSH**  
ROUND BRUSH WITH BRISTLES FOR CLEANING FLAT, GROUND OR ELEVATED SURFACES. PERFECT ALSO FOR CLEANING OBJECTS.




**STAINLESS STEEL FLAT NOZZLE**  
PRECISION ATTACHMENT TO REACH EVEN THE MOST DIFFICULT PLACES. THE FINAL DIAGONAL CUT ALLOWS BETTER AND EASIER SUCTION



**STAINLESS STEEL ROUND NOZZLE**  
ANGLED NOZZLE WITH A VERY LARGE INLET DIAMETER FOR SUCTION HEAVY AND PARTICULARLY LARGE-GRAINED MATERIALS.




**BRUSH AND DOUBLE BEND FOR FLOOR CLEANING**  
FLOOR CLEANING ACCESSORY WITH COMFORTABLE DOUBLE BEND AND BRUSH WITH TWO BRISTLE STRIPS AND WHEELS INCLUDED.




**FLOW REGULATOR**  
PRACTICAL COUPLING TO CONNECT TO THE VACUUM CLEANER FOR EASY ADJUSTMENT OF THE SUCTION AIR FLOW.



**FDA-CERTIFIED AND AUTOCLAVABLE HOSES**  
FDA-APPROVED AND AUTOCLAVABLE HOSES



**ANTISTATIC HOSES**  
PIPES WITH PVC SPIRAL AND COPPER BRAIDS FOR SUCTION OF CONDUCTIVE MATERIALS



**COLOURED ACCESSORIES**  
THEY ALLOW SUCTION IN PHARMACEUTICAL FACILITIES, MAKING EASIER THE USE TRACEABILITY OF ACCESSORIES AND HELPING AVOIDING PRODUCT CROSS-CONTAMINATIONS IN DIFFERENT PRODUCTIONS OR PRODUCTION DEPARTMENTS.



**HEIGHT CLEANING ACCESSORIES**  
ACCESSORY KIT CONSISTING OF SEVERAL EXTENSIONS TO REACH THE MOST DISTANT AND HIGH SPOTS, FOR CLEANING WAREHOUSES AND PRODUCTION AREAS.



## SUCTION ARMS FOR CAPTURE AND DUST CONTROL

Delfin vacuum cleaners can be equipped with suction arms for localized suction of small amounts of airborne powder to prevent it from being dispersed into the surrounding environment.



## SCHEDULED FILTER MAINTENANCE FOR HIGH LEVELS OF SAFETY

Class H filters require mandatory annual maintenance and replacement to ensure steady H-filtration compliance. Delfin offers an extensive catalogue of replacement filters and provides its expertise to ensure that vacuum cleaners are always safe and well-performing. In addition, the DOP TEST service ensures and proves conformity of H filter mounted on a machine with a certain air flow rate.

For class M and L filters, maintenance and replacement are recommended to maintain steady and efficient performance.



## SECURE CONTAINMENT FOR EVERY SPECIFIC NEED



Collection bag.  
Delfin models: DM2 1/2D/  
MTL451 1/2D/DGEXP



Safe collection system  
Dust Containment.  
Delfin models: PHARMA  
40DC



Safe and continuous  
Endless Bag collection.  
Delfin models: DG EXP  
and DM2 EL 1/2D LP



Safe bag system (disposable  
filter bag)  
Delfin models: PHARMA  
20.18/PHARMA 40.40/DBF

## COMPLIANCE WITH GMP STANDARDS

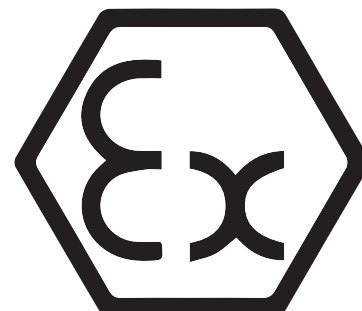
DELFIN CONTAINMENT UNITS HAVE BEEN DESIGNED TO MAKE UNIT MAINTENANCE AND CLEANING OPERATIONS SIMPLE AND SAFE, ALWAYS AIMING TO PROTECT OPERATORS.

- ✓ POSSIBLE INSTALLATION OF A VACUUM UNIT IN THE TECHNICAL COMPARTMENT AND AN ON-BOARD FILTRATION UNIT
- ✓ NO DUST BUILD-UP, ENSURING MAXIMUM HYGIENE
- ✓ MIRROR-POLISHED AISI316 STAINLESS STEEL FOR PARTS IN CONTACT WITH POWDER; ON REQUEST



## ATEX CERTIFICATION

DIFFERENT SOLUTIONS AVAILABLE FOR RISK CLASSES IN ZONES 20/21/22



## FAT DOCUMENTATION

UPON REQUEST, DELFIN CAN PROVIDE FAT (FACTORY ACCEPTANCE TESTING) DOCUMENTATION, WHICH CERTIFIES THAT THE MACHINERY AND RELATING DOCUMENTATION MEET THE REQUIREMENTS OF DESIGN, OPERATION, MAINTENANCE, STANDARDS, NATIONAL AND INTERNATIONAL GUIDELINES, PRIOR TO COMMISSIONING.



Delfin is an Italian company that started as a small family business and has grown into a global specialist in industrial dust management. For over 40 years, it has developed innovative solutions to vacuum, filter, and convey materials within industrial processes. The company combines entrepreneurial vision with strong managerial leadership, guided by a team of young managers alongside the founding family. With more than 200 employees and a presence in over 80 countries, Delfin exports 80% of its production worldwide. Its goal is to transform dust from a problem into value, helping create safer, cleaner, and more efficient industrial environments.



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