CASE STUDY

APPLICATION:
COLLECTION OF DUST RESIDUES FROM FINAL CLEANING OPERATIONS OF 3D-PRINTED PARTS.

CUSTOMER:
MANUFACTURER OF DEPOWDERING STATIONS FOR 3D PRINTED PARTS POST-PROCESSING

BENEFITS:
IMPROVE THE QUALITY OF 3D-PRINTED PARTS

DEPURECO
INDUSTRIAL VACUUMS

Example of a depowdering station

3D-printed parts do not come out from the machine ready to be used, but they always need some kind of post processing (e.g. depowdering, grinding, cleaning) and most of the time it has to be done manually.

Proper post-production of components is essential to improve their final quality, ensuring high functionality, aesthetics, and precision.

Post-processing operations carry significant risks due to the generation of particles much finer than the original printed powder. When reactive materials such as aluminum or titanium are involved, the risk of ignition or explosion becomes a critical safety concern as well.

Our customer specializes in depowdering stations for 3D printed parts post processing, designed for manually cleaning printed parts inside sealed cabinets. These systems allow operators to safely and efficiently remove residual powder and refine surfaces. We supplied industrial vacuums seamlessly integrated into these cleaning stations to efficiently collect reactive or non-reactive dust generated during depowdering and cleaning operations.

Industrial vacuum integrated into the depowdering station

HOW DO DEPOWDERING STATIONS WORK?

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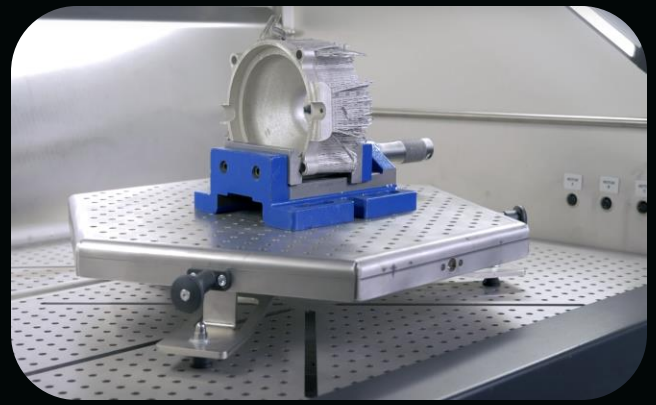

The inside of the cleaning chamber

Depowdering stations are designed to safely handle, clean and improve the quality of printed parts, while minimizing environmental hazards and protecting operators from inhaling hazardous fine dust particles.

The operator **works without direct contact with the particles** by inserting their arms, protected by appropriate personal protective equipment (PPE), into the machine's sealed work chamber.

All cleaning operations occur within this enclosed environment, **ensuring maximum safety.**

Before the machine can be opened, an **automatic cleaning cycle** removes any residual dust, ensuring the workspace remains safe.

Designed for efficiency and reliability, these stations are an essential tool for maintaining a **clean, safe, and precise** additive manufacturing workflow.

Post-processing operations

WHY INTEGRATE AN INDUSTRIAL VACUUM INTO A CLEANING STATION?

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Depowdering stations must be **equipped with advanced filtration and dust extraction systems** that maintain a controlled, airtight environment.

Our industrial vacuums can be **seamlessly integrated into the back of the machine,** offering easy access for maintenance. The vacuum system continuously extracts dust generated during post-processing, keeping the work area clean and ensuring proper filtration.

Our Ecobull AM in the back of the 3D post-processing machine

Easy access for maintenance

Manual filter cleaning system

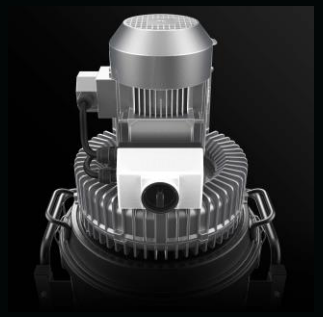
EXPLORE OUR VACUUM SOLUTIONS

VACUUM SOLUTION FOR NON-REACTIVE POWDERS

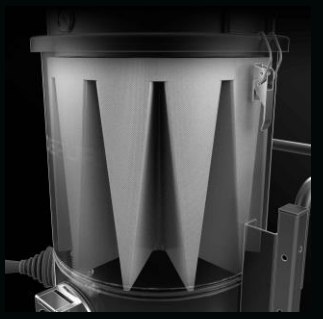
ECOBULL M

POWER: 1,8 KW
CAPACITY: 65/100 LITERS
POWDER: NON-REACTIVE

Visit our website to read the full data sheet



Side channel blower



M class star filter

65/100 liters container

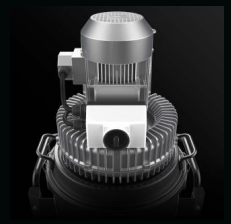
EXPLORE OUR VACUUM SOLUTIONS

INERTING VACUUM SOLUTION FOR REACTIVE POWDERS

ECOBULL M Z 2/22 ADDITIVE MANUFACTURING

POWER: 1,8 KW
CAPACITY: 100 LITERS
POWDER: REACTIVE

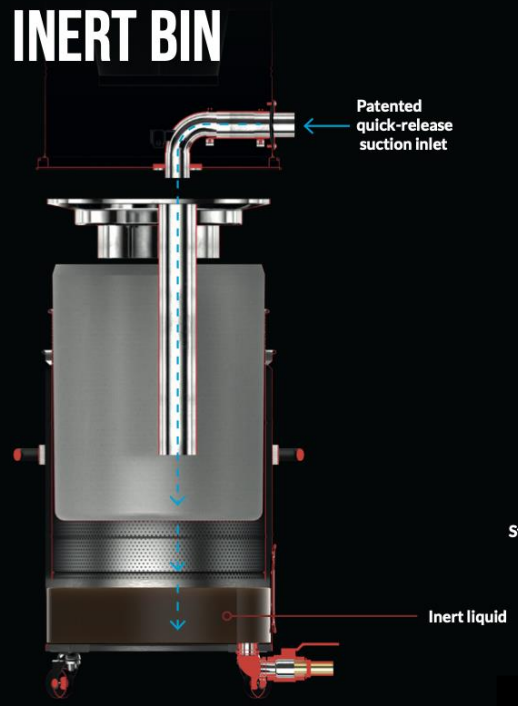
Visit our website to read the full data sheet

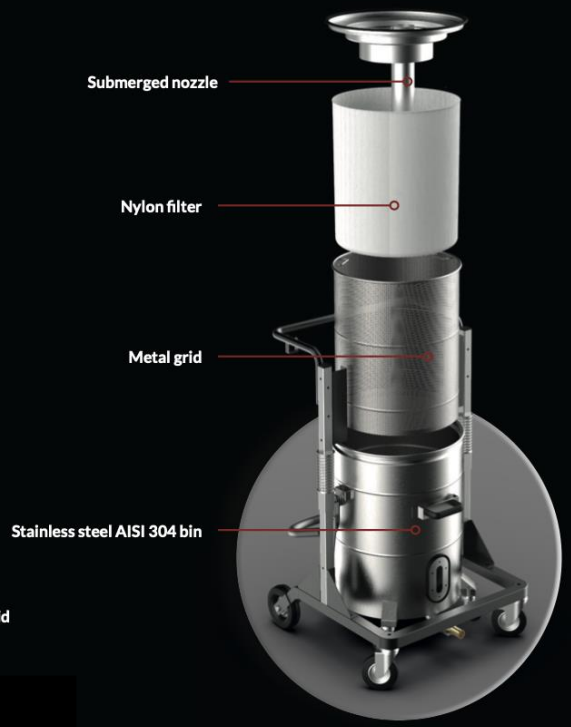


Atex certified side channe blower

Polyester cartridge H class

INERT BIN





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