

# 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

**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.

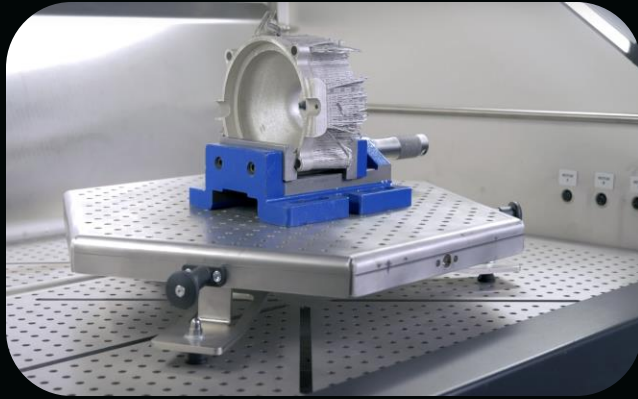
Our customer specializes in **depowdering stations for 3D printed parts post processing**, designed for manually cleaning printed parts inside sealed cabinets. These systems allow operators to safely and efficiently remove residual powder and refine surfaces. We supplied **industrial vacuums seamlessly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



Example of a depowdering station

Industrial vacuum integrated into the depowdering station

# HOW DO DEPOWDERING STATIONS WORK?



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?

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.



One of our products 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 T**

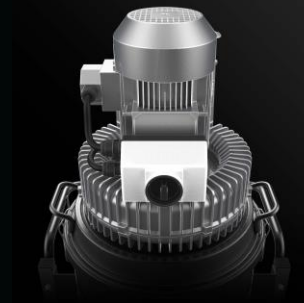
**POWER: 4.8 HP**

**CAPACITY: 26 GAL**

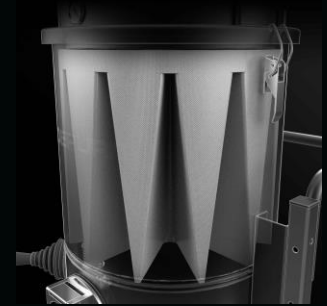
**POWDER: NON-REACTIVE**



Visit our website to read the full data sheet



Side channel blower



M class star filter



26 GAL container

# EXPLORE OUR VACUUM SOLUTIONS

INERTING VACUUM SOLUTION FOR REACTIVE POWDERS

## M 100 ADDITIVE MANUFACTURING

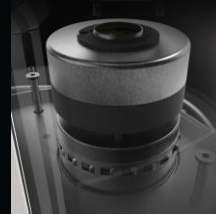
POWER: 3.3 HP

CAPACITY: 26 GAL

POWDER: REACTIVE



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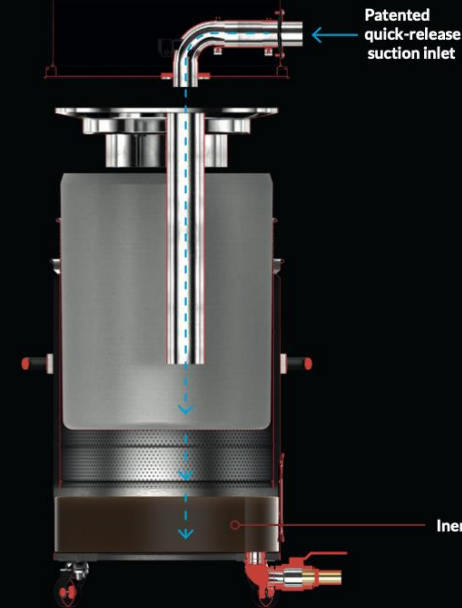


Robust brushless motor



Polyester cartridge H class

### INERT BIN

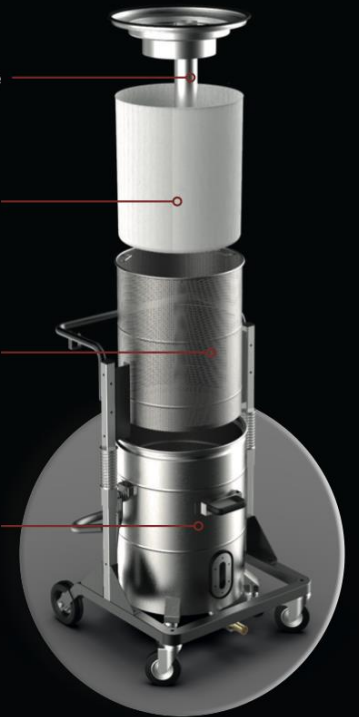


Submerged nozzle

Nylon filter

Metal grid

Stainless steel AISI 304 bin



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**[WWW.DEPURECOUSA.COM](http://WWW.DEPURECOUSA.COM)**

