



INDUSTRIAL VACUUM SOLUTIONS FOR FOUNDRIES





FILLING THE CRUCIBLES

After the first phase of metal casting, crucibles are filled and subsequently moved within the factory.

Used to contain metal castings, crucibles need to be thoroughly cleaned to remove residues and slag that can compromise the quality of the next casting.

The materials inside the crucibles reach very high temperatures with peaks of 400°. Air temperature also remains high inside.



PREPARING THE MOULDS

During the preparation of molds for metal casting, small powder residues can form inside them.

If not properly removed, these residues can affect the quality of the final good by producing scrap.



MOULD BREAKAGE

The breaking of the molds, also known as destaffing, whether manual or mechanized, can take place on the floor or on an automatic belt.

All this leads to a great dispersion of dust, which spills out in different parts of the department.

Often the destaffing phase takes place in dedicated booths that discharge the soils onto a conveyor belt placed in a tunnel several meters deep, make their collection difficult.



SANDBLASTING

The sandblasting process allows the raw part coming out of the moulds to become a clean and polished part.

This process takes place in sandblasting cabins of varying sizes depending on the volume of the parts to be treated.

Sandblasting is carried out using specific, abrasive materia.



CUTTING AND REFINING

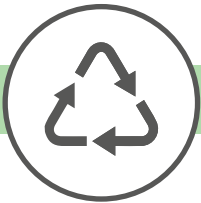
The final machining of the parts is carried out using numerically controlled machines, commonly called CNC machines.

With a large number of CNC machines, large amounts of swarf are created during cutting and finishing, making it impractical to dispose of and clean swarf from each individual machine, and also interrupting production cycles.

SOLUTIONS

DHV DELFIN SPECIFIC SOLUTIONS

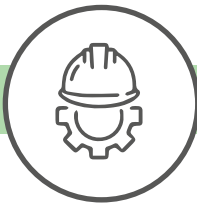
The DHV product range is designed to meet any difficult challenge. The range meets the needs of heavy industries in tackling the problem of large amounts of dust, spillages and residues, which constantly undermine their production efficiency.



Material recovery and raw material savings



Reduced maintenance costs and time



Healthier and safer working environment



Reduction of downtime



Finished product quality

HIGH TEMPERATURE SOLUTIONS

The DHV range of vacuum cleaners meets all requirements. For work in contact with incandescent dust and materials at very high temperatures, they are equipped with special filters, special separators, and special collection accessories allowing safe and efficient suction of hot materials.



DUST REMOVAL FROM THE MOULDS

A vacuum system (mobile or centralized) combined with the right accessories, allows the mould to be cleaned of any residue that could undermine successful processing. Thanks to the cleaning system, some customers have estimated a 30% reduction in waste and a considerable saving in materials, time, and energy.



CLEAN-UP AND RECOVERY OF SAND

The solution to this problem is to suck up the foundry sands on the ground or under the belts with a vacuum cleaner from the DHV line, and then feed them back into the process, discharging them into the elevator which takes them back to the silos where they are regenerated. In the case of underground tunnels, given the limited space available, a centralized cleaning system is required to easily recover spillages and leaks.



VACUUMING OF ABRASIVE MATERIALS

Removing sand or other abrasive materials from inside the cabins and workpieces without a suitable vacuum cleaner becomes a complex job. On large booths, a centralized system is installed with a number of vacuum cleaners near the booth. As abrasive material is very expensive, a screening process is required to remove the waste and the spent abrasive in order to reuse it. Delfin provides a complete vacuum solution that can solve any problem.



VACUUMING OF SWarf

The automatic suction system of the DHV range takes the swarf from each machine continuously and transfers it to a single collection point for unloading into skips or trucks, reducing the time needed for manual removal. If the swarf is long, it is first chopped with special machines.



Delfin is a global leader in the manufacturing of industrial vacuum equipment, ranging from portable vacuums for industrial cleaning, to central vacuum systems and engineered solutions, to pneumatic conveying systems. Our mission is to create value by designing innovative solutions that improve efficiency, safety, and productivity. Our aim is to use our expertise to help our customers to achieve their goals.



Delfin Srl • Strada della Merla 49/A • 10036 Settimo T.se (To) Italy
Tel +39 011 800 55 00
delfin@delfinvacuums.it • delfinvacuums.com