

TruPrint Series

Industrial part
and powder
management

Powder
handling in
shielding gas



High productivity and profitability

Due to work done parallel to production

Cleanliness and safety in production

Thanks to a closed powder circuit

Great flexibility

Due to modular design and standard interfaces

Short throughput times even with large powder volumes

Because of automation and high performance

Industrial production: parallelization of part and powder process

The external part and powder management enables set up and powder removal of one or multiple TruPrint machines, and results in increased productivity and profitability. Standard interfaces and a modular design guarantee maximum flexibility. The central components include the unpacking or depowdering station, sieving station and powder silo. These components can be enhanced individually and optimally support the industrial factory. They can serve the TruPrint 3000 as well as the TruPrint 5000. Use of these delivers a closed powder circuit and allows powder, build and part processes to run parallel to production.

Components for several TruPrint machines usable



Depowdering station

External depowdering of complex build jobs – optionally in shielding gas

With the help of our depowdering station with hydraulic lifting and manual rotary and turning axis, you can safely depowder components outside the machine. This means that you benefit not only from high machine availability, but also from a high degree of cleanliness of the printed parts, even with complex geometries, thanks to vibration support. The operator involvement is low. As an additional option, we also offer depowdering in shielding gas, including control and monitoring of the residual oxygen concentration.

Unpacking station

External powder removal of the build parts and high operator safety

The unpacking station allows the insertion of new powder into the circuit and build parts can be separated from the powder bed while avoiding contact with the powder. Using the integrated interchangeable cylinder principle of TruPrint machines, the build cylinder can be set up with a new substrate plate and is transported easily to the unpacking station after the building process. Even complex build parts can be cleaned quickly using suction nozzles optimized for their requirements. The rotatable working area and the electrical lift drive ensure ergonomic handling.

Sieving station with vacuum conveyor

Highly productive, automated sieving process for powder preparation – optionally sieving in shielding gas

The sieving station with ultrasonic cleaning is specifically designed for industrial processing. The high degree of automation enables unattended operation. This makes it possible to achieve a very high sieve throughput with a consistently high powder quality. With the integrated vacuum conveyor, powder from any desired container can be sieved and, using the weighing function, be put into the desired containers. The vacuum conveyor can be quickly attached to both the sieving station and to a powder silo. For customers with increased requirements in powder management, sieving is optional possible in shielding gas - with argon or nitrogen less than 1 %, 3 % or 5 % measurable oxygen. With the sieving station you monitor the shielding gas flow during the sieving, depowdering, cooling and storage process. In shielding gas you achieve a constant powder quality so that you can easily reuse the powder.

Powder silo

Save storage, transport and refilling of powder – optionally store in shielding gas

In a powder silo, large quantities of powder are safely and efficiently stored in a standard container. The volumes can be individually adapted (30l, 80l, 130l, 180l). The clamps are easily removed for fast cleaning. The powder silo can also be easily transported with an electric lift truck. Powder store in shielding gas is also possible as an option. This allows you to control and check the inert gas flow during storage. Up to three silos can be monitored in parallel by means of a test protocol. The option can be easily retrofitted.

Further information on these and further components plus technical details can be found at www.trumpf.com/s/additivemanufacturing