

# ADDITIVE MANUFACTURING

*The perfect solution for metal powders in 3D printing*



**HOSOKAWA ALPINE**

Process technologies for tomorrow.

# 3D PRINTING WITH TOP-QUALITY METAL POWDERS

*Rely on the specialists for your metal powders*

With its classifiers for powder manufacture, which have already proved their worth a hundred times over in successful use, Hosokawa Alpine develops unique technologies for the widest array of industries. The machines, designed for extremely precise classification and simplest cleaning, have now been specifically adapted to the requirements of metal powder production.

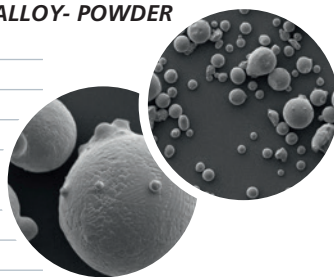
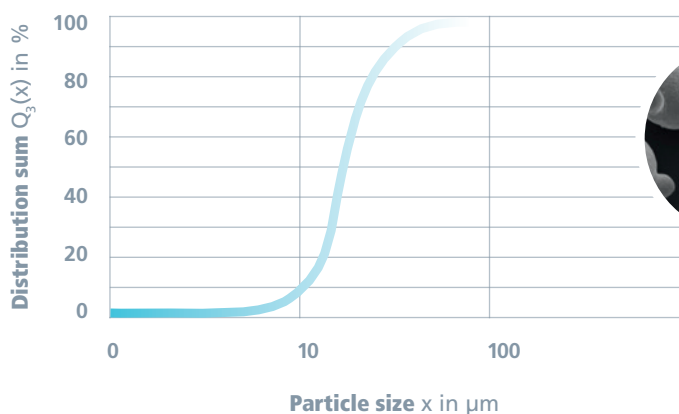
## **PERFECT METAL POWDERS CALL FOR OPTIMUM CLASSIFICATION**

Conventional sieving machines remove the coarse particles that accumulate during atomisation of the metal powder in a pre-sieving step. This technology, however, soon encounters its limits when very fine separation cuts, inert gas operation or more frequent product changes are required. An optimum solution is now available: an air classifying system with a Hosokawa Alpine Turboplex ATP classifier.

- The tried-and-trusted Hosokawa Alpine Turboplex ATP provides flexible separation cuts in the range of 5 to 120  $\mu\text{m}$
- Available in many different machine scales, matching the atomizer output rate
- Inert gas operation with argon or nitrogen

*Outstanding performance in all tasks  
of top size adjustment and fines removal.*

## **PARTICLE SIZE DISTRIBUTION OF A CLASSIFIED TITANIUM-/ALLOY- POWDER**



## **TYPICAL REQUIREMENTS**

- psd 10–45  $\mu\text{m}$  / 45–100  $\mu\text{m}$  / 5–120  $\mu\text{m}$  / 5–30  $\mu\text{m}$





ATOMISATION

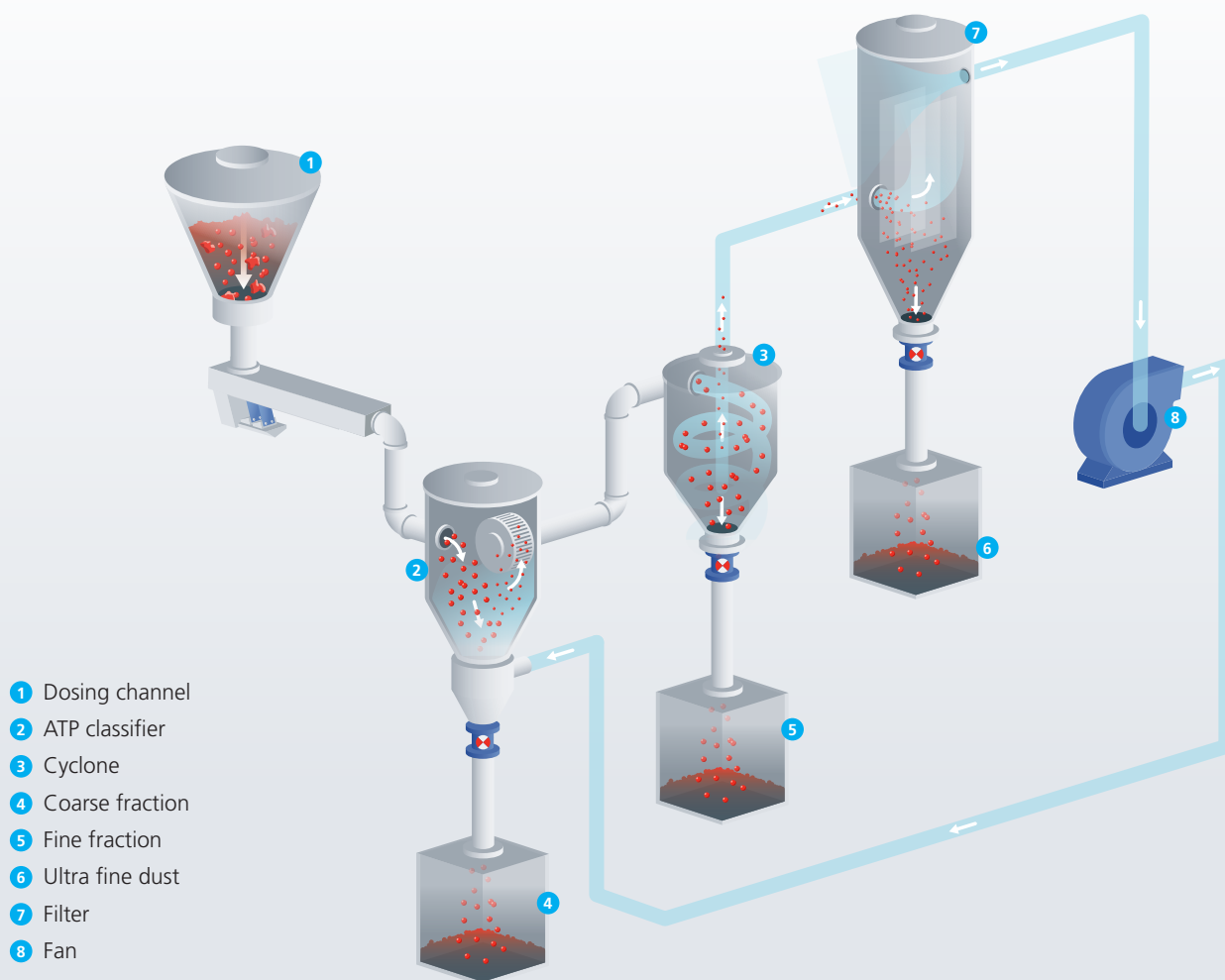
PRE-SIEVING

*Separation of coarse particles*

AIR CLASSIFICATION

*Single-stage classifying cut under inert gas atmosphere*

PRINTING



## CLOSED CIRCUIT PROCESSING PLANT – YOUR BENEFITS

*We will find the optimum solution for you!*

- Inert gas operation in circuit mode at lowest  $O_2$  concentration
- Separation cut adjustable without opening of the system
- On demand accessories: gas-tight docking solutions and sampling units
- Precise removal of fine particles
- Steep particle size distribution
- Stable powder qualities at ultrafine product grades
- Dust-tight and gas-tight versions
- Minimized cross contamination at product changes – easy clean design.

➤ *With the classifiers from Hosokawa Alpine, your metal powder will be a great success in the world of 3D printing.*

ATOMISATION

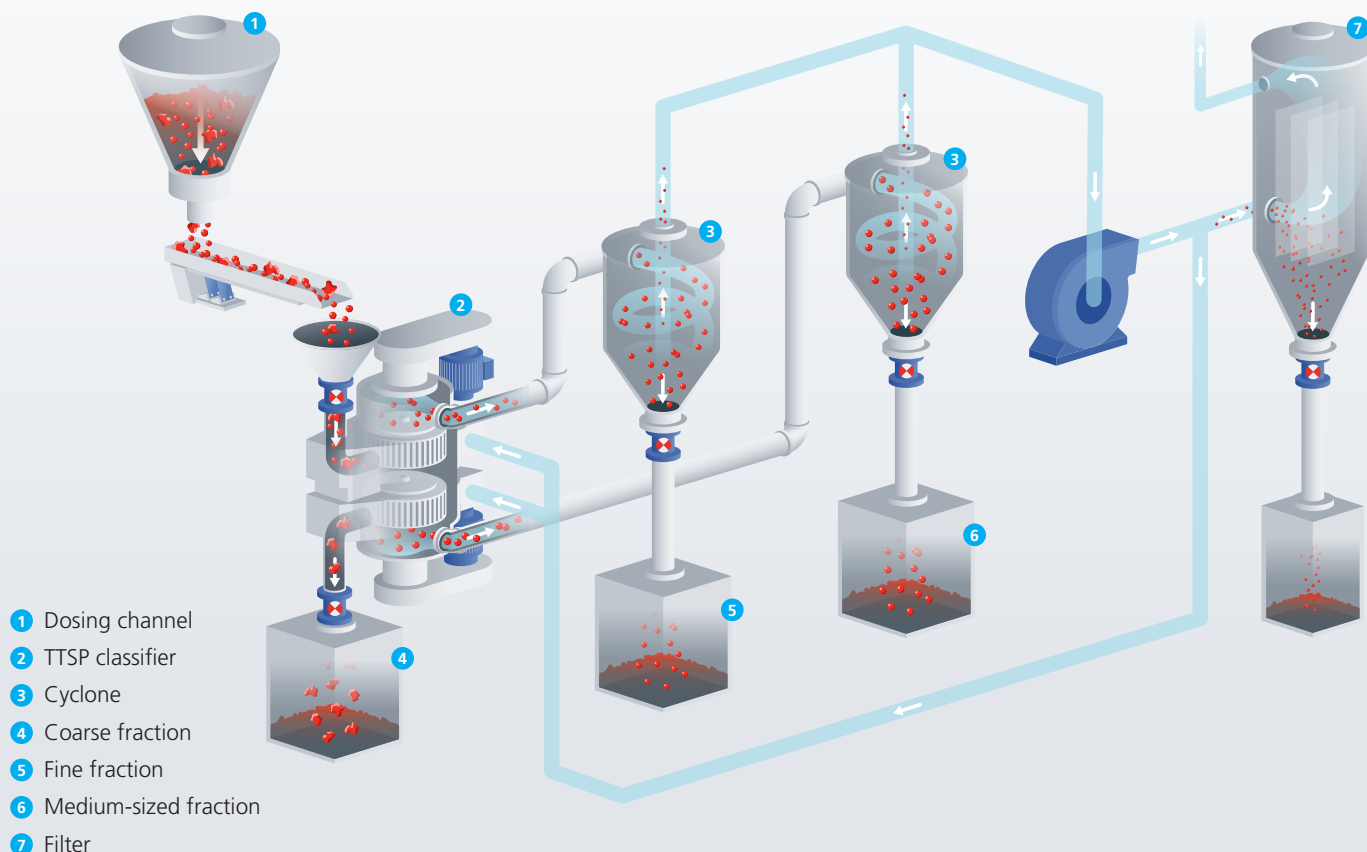
SAFETY-SIEVING

Separation of coarse particles

AIR CLASSIFICATION

Double-stage classifying cut in a machine with TTSP

PRINTING



## SINGLE-STAGE OR DOUBLE-STAGE CLASSIFICATION?

*The choice is yours!*

Whether a filterless classifying line in circulating air mode or double-stage classifying in inert gas circuit mode is involved – we will find the optimum solution for you!

### **YOU WILL AT ANY RATE BENEFIT FROM**

- Inert operation in gas circuit mode
- Continuously adjustable separation cut of approx. 5–120 µm

- Precise removal of fine particles
- Steep particle size distribution
- High yield
- Dust-tight and gas-tight versions
- Containment solutions for CMR substances

*With the classifiers from Hosokawa Alpine, your way is clear for perfect 3D prints with metal powders!*



## ADVANTAGEOUS SYNERGIES

The know-how and experience of numerous specialists are pooled in the Hosokawa Micron Group to produce perfect solutions. Experience from a variety of customer segments in mechanical process engineering ensures that you, as the manufacturer, enjoy optimum solutions for practically every product – from an individual component to an entire plant.



## INNOVATIVE TEST CENTRES

Our research and testing facilities can provide you with a wealth of machines and complete systems for the most varied plant configurations, all available on a global level. Precision, quality and innovative technologies: Do your testing with us.



## YEARS OF EXPERIENCE

Profit from our many years of experience in the provision of solutions and our mastery of sophisticated processes. Well-known customers all over the world place their trust in the technology and know-how of the Hosokawa Micron Group.



## GLOBAL SERVICE

Our service teams take care of repairs and maintenance, both on site and in our modern workshops equipped with the latest technology – smoothly, speedily and all around the world! The Hosokawa Micron Group – a partner you can rely on. Find out for yourself, you're sure to be impressed.



## RENTAL AND USED MACHINES

Whether stand-alone machines or a system in containers that is practically ready for operation: rental machines increase your flexibility. Completely overhauled used machines with the distinctive name "Alpine Originals" score high points thanks to the customary Alpine quality paired with short delivery times.



# **HOSOKAWA ALPINE**

Process technologies for tomorrow.

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***Still have any questions? We will be pleased to answer them!***



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