

Indutherm Powder Atomisation Plants



The Powder Atomisation Plants **AU 500 - AU 12000** for fast and economic small-scale powder production



Ag925 powder
in average $\sim 25\mu\text{m}$ (closed couple atomisation)


INDUTHERM
Erwärmungsanlagen GmbH

www.indutherm.de

 **EPMA**
New Member 2014

From Research to Serial Production

The new powder atomisation plants (Indutherm AU series) have been developed in the framework of a ZIM project* in collaboration with the University of Bremen. An initial prototype was built at the University of Bremen in summer 2013 and soon thereafter the test production was started. Since early 2014 a nearly complete plant may be inspected at Indutherm.

For fast small-scale metal powder production

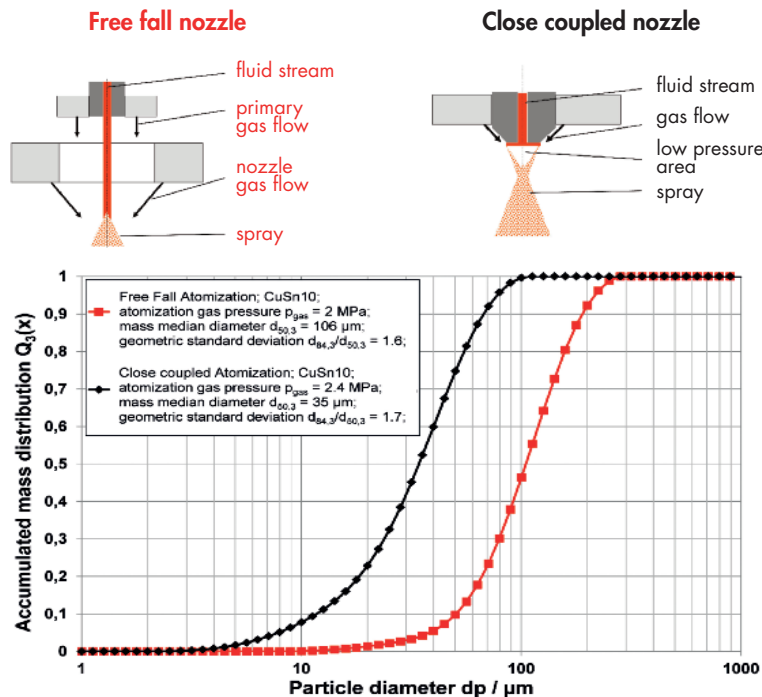
The Indutherm atomisation plants have been particularly designed for the flexible and economic production of small-scale metal powder batches. Traditional large-scale production plants cannot provide this economic advantage. Frequently changing alloys in production require high cleaning efforts to avoid cross contamination. Particularly in R&D or precious metal powder applications small amounts of various kinds of powder are frequently required, often also new types of alloy powder not available on the market. Especially fast developing applications like SLM and MIM require more and more specialised metal powder.

Powder particle size for every request

The Indutherm Atomiser is generally suitable for gas atomisation of a wide spectrum of alloys; such as for example those based on Cu, Au, Ag, Sn, Fe, Co, Ni, Pd... The inductive heating takes place in graphite crucibles, depending on the alloy additionally with ceramic insert crucibles, up to atomisation temperatures of about 2000° C. The closed chamber machine offers the possibility of oxidation-free processing by protective gas features. The modular availability of different atomisation nozzles and the optional use of hot spray gas allow a wide range of specific metal powder characteristics and particle sizes. It is also characterised by an increased powder quality as a result of flow optimisation in the spray chamber (avoidance of satellites).



Easy change of alloy and atomisation nozzle for powder production in a wide range of particle sizes



Particular advantages of the Indutherm atomiser:

- very simple handling via LCD-Display and neatly arranged control panel
- flexible and economic production of small scale / high value metal powder batches, which is not feasible on existing, larger plants
- alloy- and atomisation nozzle change with low cleaning and time efforts
- high powder yield over a particularly wide particle size range via flexible, modular usage of different atomisation nozzles and hot gas atomisation
- particularly high process stability due to optimized nozzle systems

	AU 500	AU 1000	AU 3000	AU 12000
Crucible volume in ccm	245-386	1.500	3.400	12.000
Crucible volume in kg Au 18ct	3,6-5,7	22,0	51,0	180,0
Generator power in kW (400 V)	10	22	30	40

INDUTHERM
Erwärmungsanlagen GmbH

75045 Walzbachtal · Brettener Str. 32 · Germany
Tel. +49 7203 9218-0 · Fax +49 7203 9218-70
info@indutherm.de · www.indutherm.de