



HighNo 4.0

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In coaxial powder feed nozzles, the powder is injected into the melt pool through a conical annular gap. The conical powder feed produces a precise, stable, and homogeneous powder gas jet. To optimally cover different laser power classes, the nozzle is available in four variants. The nozzle geometry is specifically tailored to the required laser focus and powder focus diameter.

- Plug-and-play solution for industry
- On-site conversion in a very short time (replacement in less than 2 minutes)
- Reproducible nozzle tip replacement (nozzle tip module qualification possible)
- High wear resistance thanks to special coatings

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- Indirectly cooled nozzle tip
- Different gap dimensions for high variability
- for low laser power and fine structures
- Optimized for applications with small laser focus diameters and very narrow coating tracks (down to the submillimeter range).
- *Maximum precision with high powder efficiency*
- *Five different nozzle tips available, to customize the process*

Technical specifications:

- up to 8 kW laser power
(These specifications depend on the radiation source and application used.)
- Weight is max. 1 kg
- Powder particle size 20 - 50 µm, 50 – 100 µm (recommended)
- Powder gas jet focus:
Ø 0.7 mm at 3 g/min
- Possible track widths range from 0.5 to 3 mm.
- The maximum powder mass flow rate is... up to 100 g/min
- direct water cooling 1-3 l/min at 18 – 20 °C
- Maximum powder efficiency up to 95% with track widths of 1.0 mm when using a Grain fraction of 20 – 50 µm