Additive manufacturing

Powder feeder AL-PF

WITHOUT DIRECT POWDER CONTACT

The AL-PF allows controlled feeding of all common powders for laser powder cladding and can be directly controlled by the ALPHA LASER systems ALFlak or AL-ROCK. It can also be used as a stand-alone device. The powder delivery rate is exactly controlled by the rotating speed of the disc.

A good optical control of the feeding process is guaranteed by the use of Plexiglas for the dosing unit.

AL-PF

The AL-PF consists of:

- *a basic body with the control technology*
- *an adjustable display on which the parameters such as plates rotation speed and gas quantity are set*
- *one powder pot or two powder pots (later upgrading from 1 to 2 pots also possible). With two pots, both can be used at the same time. Pot size 1.5 l, mixer is available. Groove size 0.6 × 5 mm and 0.3 × 3.5 mm*
- *gas mass flow controller for accurate control of the carrier gas quantity*
- *The possibility to control a heating pad is integrated in the AL-PF*

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The powder feeder is robust as well as insensitive to external influences and has a small maintenance requirement. The refilling of powders is very simple. With mixed powders, no powder segregation and no powder grain separation takes place.

Laser powder cladding is a generative process in which a metallic filler material is melted onto a workpiece by using laser radiation. In combination with programmable motion systems, such as robots or axis systems and modern CAD/CAM programs, more and more complex geometries and material combinations can be used.

AL-PF pots with heating pads

Technical data

	AL-PF
Display and operation	Adjustable touch display
Special function	Saving parameter sets possible
DIMENSION	
W × D × H	680 × 430 × 945 mm (max. 1625 mm)
Space requirement	730 × 520 mm
Weight	91 kg
CONNECTIONS	
Gas inlet	Ø 6 mm
Gas pressure	3-7 bar
Interface	CANOpen, Digital I/O Interface, WINLASER
Power demand	3 A
Electrical connection	230 V / 50Hz / 16 A
OPTIONS	2 pot version Mixer Heating pads (60° C)

CONTROL VALUES	
Flow rate	Speed 0-10 U/min, 0,1 steps
Carrier gas	Argon 0-10 l/min
GROOVE	**CONVEYING VOLUME**
0.3 × 3.5 mm	0.03–5 cm^3/min
0.6 × 5 mm	0.1–14 cm^3/min

V1.0

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