AM solutions
3D post processing technology

F1 – Fully automated, high-precision sieving and mixing in a closed loop

Powder handling

Polymers

Features & benefits

- **Fully automatic powder processing:** Efficient and cost-efficient sieving and mixing of virgin and used powder
- **Consistent powder quality:** Highest dosing accuracy of ±2 % and ultrasonic sieve for stable production processes and consistent part quality
- **High performance:** Processing of up to 40 kg/h of powder for EOS polymer printers using PA12 (PA2200)
- **Maximum work safety:** Protection of employees from powder contact and ensuring clean processes thanks to a closed-loop powder system

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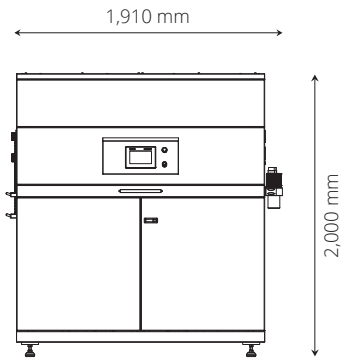
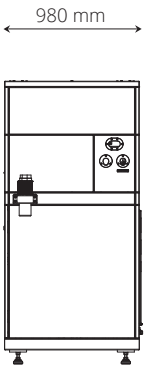
Description

The F1 powder handling system is an innovative, fully automated solution for sieving and mixing virgin and used powder in a closed loop, ensuring maximum quality and the highest level of process and operator safety in polymer 3D printing. A 245 µm ultrasonic sieve reliably removes contaminants and agglomerates. At the same time, the F1 ensures a high dosing accuracy of ±2 % and allows for flexible mixing ratios. With a throughput of up to 40 kg/h, it can be seamlessly integrated into existing process chains and supports various container formats, making it ideal for EOS polymer printers using PA12 (PA2200). When combined with the D1 unpacking station, used powder is immediately reusable, resulting in more sustainable and cost-effective production.

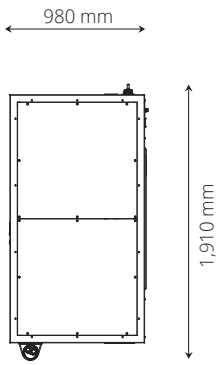
Equipment layout



Front view



Side view



Top view

Equipment specifications

Technical data
Mixing capacity: 40 kg/h
Ultrasonic sieve: 245 µm standard
Material: PA12 (PA2200)
Drive power: 3 kW
Noise level: ≤ 75 dB(A)

Installation conditions
Supply voltage: 230 V, 50 Hz (US: 2x 110 V)
Control voltage: 24 V DC
Compressed air connection: R 1/2“, male connector, 6 bar
Transport: Forklift, pallet truck
Machine empty weight: ≈ 793 kg

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