



Modular Unpacking and Sieving Station  
for EOS Polymer Systems



# Modular Unpacking and Sieving Station for FORMIGA P 1 Systems and EOS P 3 Systems

The modular unpacking and sieving station combines the tasks *unpack*, *sieve* and *used powder conveying* that are downstream from the Additive Manufacturing process into an optimised system. Both system series FORMIGA P 1 and EOS P 3 are supported and customised adapters ensure the exact fit of the respective exchangeable frame. As a result, one unpacking and sieving station is all that is needed for heterogeneous FORMIGA P 1 and EOS P 3 machine outfits. This leads to significant savings in both the space and investments needed for manufacturing.

## Mode of operation

The exchangeable frame is inserted and locked correctly and its platform is raised electrically at the push of a button. The exchangeable frame unit is thus easily accessible and the components can be ergonomically separated from the used powder. Loose powder is fed into the integrated sieving module through a perforated plate. In the Powder Bin product variant, the sieved material falls into a barrel-shaped container on a trolley while in the Multibox product variant, the sieved powder is transported to a closed Multibox\* by means of a powder pump.

## Product variant Multibox

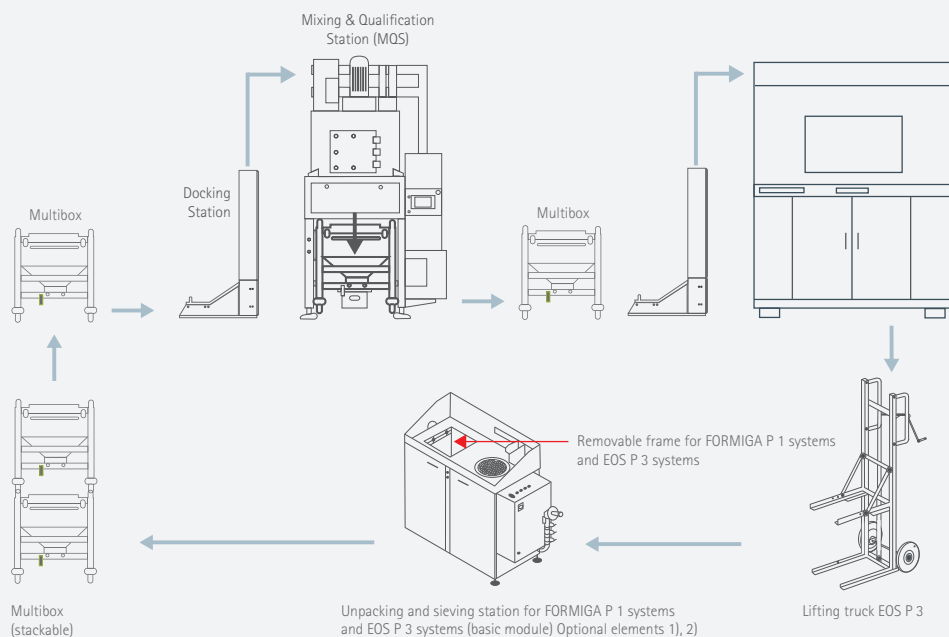
This variant has been designed for users seeking to integrate a professional material management system into their manufacturing. Open pouring processes can be eliminated and a completely closed powder cycle is established through the use of IPCM P plus components

including the Multibox. This rules out the possibility of material contamination and a the effort of lifting heavy powder containers. The used powder in the Multibox is normally returned to the Mixing & Qualification Station (MQS) where new and used powder is mixed, homogenised and conditioned. By means of Multiboxes the conditioned powder is then transported to the respective laser sintering system and fed to it automatically by a Docking Station as required.

The Multibox variant of the modular unpacking and sieving station comprises:

- Basic module of the unpacking and sieving station for FORMIGA P 1 systems and EOS P 3 systems
- Adapter for FORMIGA P 1 or EOS P 3 exchangeable frame
- Optional: dust cover<sup>1)</sup>
- Optional: further adapter for FORMIGA P 1 or EOS P 3 exchangeable frame<sup>2)</sup>

## Product variant Multibox



\* Multibox not included in the scope of delivery. This product is an integral part of the material management solution IPCM P plus. A Multibox is a mobile, stackable material container with a capacity of 230 litres (see schematic diagram and/or IPCM P plus Flyer).

### Product variant Powder Bin

This variant is aimed at users who can forego the convenience of a Multibox or who have already integrated an existing material handling solution into their manufacturing environment. The Powder Bin acts as a collecting container and means of transport for used powder. The unpacking and sieving procedure is identical to that described for the Multibox variant. In this case, the powder is usually refreshed using the IPCM P Powder Conveying System or customised mixing units.

The Powder Bin variant of the modular unpacking and sieving station comprises:

- Basic module of the unpacking and sieving station for FORMIGA P 1 systems and EOS P 3 systems
- Mobile material container Powder Bin
- Adapter for FORMIGA P 1 or EOS P 3 exchangeable frame
- Optional: dust cover<sup>1)</sup>
- Optional: further adapter for FORMIGA P 1 or EOS P 3 exchangeable frame<sup>2)</sup>

### Optional elements

The following elements are available for both variants as optional extras:

- **Dust cover<sup>1)</sup>:** The modular unpacking and sieving station can be fitted with a dust cover to which a vacuum cleaner or in-house extraction

system can be connected. A dustproof collar allows dust-reduced manual accessibility when the cover is closed. Two large windows offer a good view of the workspace and let light in.

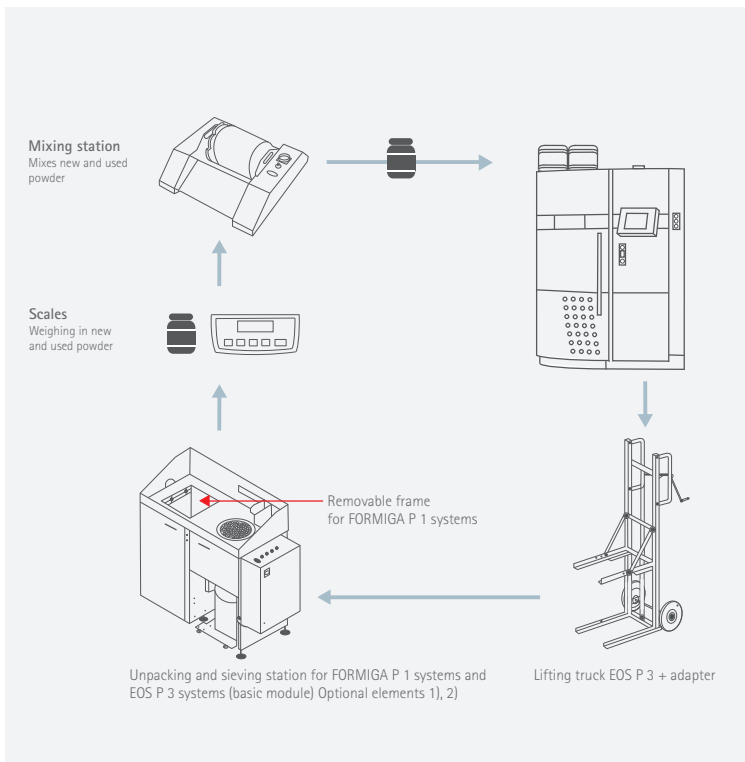
- **Adapter for FORMIGA P 1 or EOS P 3 exchangeable frame<sup>2)</sup>:**

The modular unpacking and sieving station can be modified to hold exchangeable frames in various sizes. Customers who operate only one of the system series need only one adapter. Customers with both system series require a further adapter. Modification by means of adapters is a simple procedure taking only a few minutes.

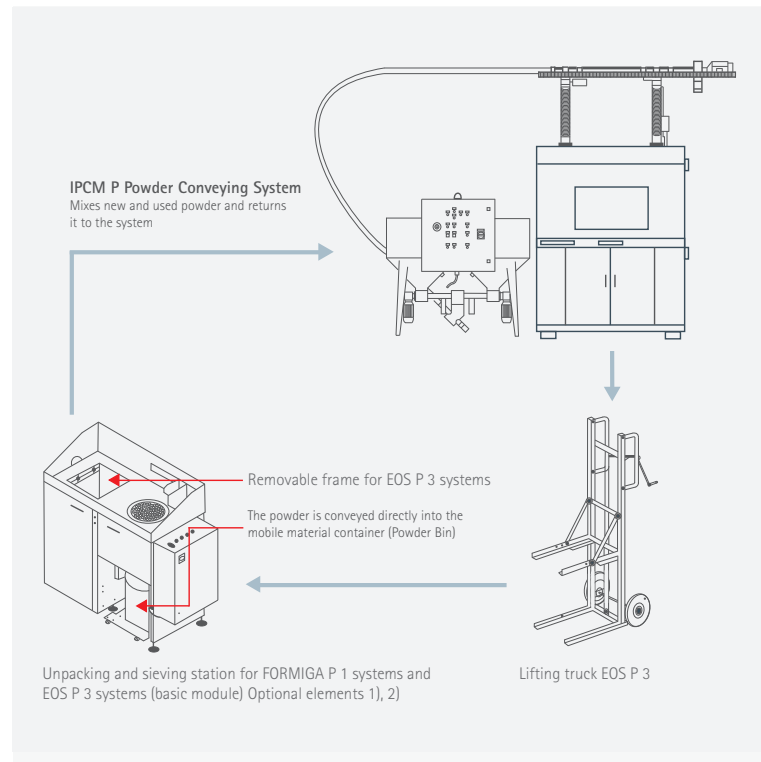
- **ATEX or UL design:** The modular unpacking and sieving station can be ordered in ATEX design (for all markets outside the USA) or in UL design (for the American market).

The modular unpacking and sieving station is a further step towards the flexible use and industrialisation of EOS peripheral devices. It is integrated into the EOS material management system, IPCM P plus, to establish a seamless powder processing chain. Since it can be used for both FORMIGA P 1 and EOS P 3 systems, the modular unpacking and sieving station is particularly useful to customers seeking to expand their manufacturing environment in future: the additional investment is thus only limited to additional systems, the existing peripheral devices can still be used.

### Product variant Powder Bin FORMIGA P 1 systems



### Product variant Powder Bin EOS P 3 systems



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