

# Powder Management Centre *Eco*PMC

**Function** Powder Management *Eco*PMC  
(Powder Management Centre)

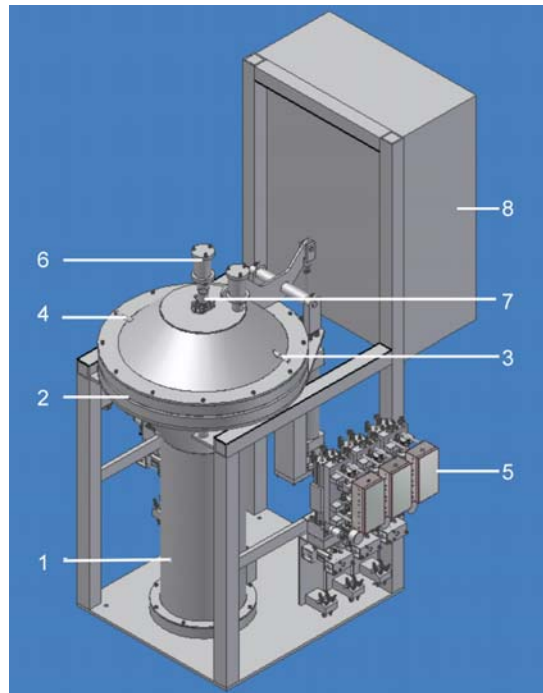
In the *Eco*PMC Powder Management Centre the powder coating is converted into a fluid that can be applied, and is also cleaned. Fresh powder and recycling powder can also be optionally added in an independent mixing ratio.

**Structure**

The powder is directly transferred from the delivery package onto the ultrasonic sieve by the *Eco*Pump Powder 3.0 metering pump. The powder is fluidised below the sieve and can now be homogeneously extracted by the application pumps. The container has a capacity of 8 - 10 kg of fluidised powder coating. Up to 2 *Eco*Pump Powder 3.0 units can be used for filling as standard, and up to 6 *Eco*Pump Powder 0.3 units can be connected for extraction purposes. The *Eco*PMC was specially developed for transporting powder coatings with a bulk density of 0.3 - 0.7 g/cm<sup>3</sup>. The *Eco*PMC requires certain adjustments depending on the type of coating that is being used. These powder-specific adaptations are made by changing the amplitude of the ultrasonic sieve, adjusting the fluidising air and defining the imbalance weights of the vibrator motor. In order to achieve optimum application, the powder coating must be fluidised homogeneously in the application container. It must be ensured that the fluid has a constant density.



*Eco*PMC Powder Management Centre



*Eco*PMC Powder Management Centre diagramme

- 1 Application container
- 2 Ultrasonic sieve
- 3 Fresh powder inlet
- 4 Recycling powder inlet (optional)
- 5 Metering pumps
- 6 Pressure compensation
- 7 Venting
- 8 Pneumatic cabinet

**Highlights**

- Coating preparation and metering in a single unit
- Ultrasound filtering in the immediate vicinity of the application equipment
- Simple, maintenance-friendly design

**Technical Data**

Max. coating quantity in container* (kg)	8 - 10
Ultrasonic sieve mesh width (µm)	80 - 120
Fluid base porosity (µm)	10
Total air consumption** (NL)	400
Connecting facilities	
Inlets	1 - 6 <i>Eco</i> Pump Powder 0.3
Outlets	1 - 2 <i>Eco</i> Pump Powder 3.0

\* With powder bulk density of (g/cm<sup>3</sup>) 0.3  
 \*\* Without optional soiling extraction



# Powder Management Centre *EcoPMC Pro*

As well as the features of the *EcoPMC*, the *EcoPMC Pro* Powder Management Centre has the following additional features:

## Highlights **Quantity balancing**

The *EcoPMC Pro* has an intermediate container as well as an application container. The fluidised powder in the intermediate container is transported to the application container, from where it is extracted. Because the powder metering and powder extraction processes are separate, precise weighing technology can be used to record the powder coating consumption per body by performing a difference calculation.

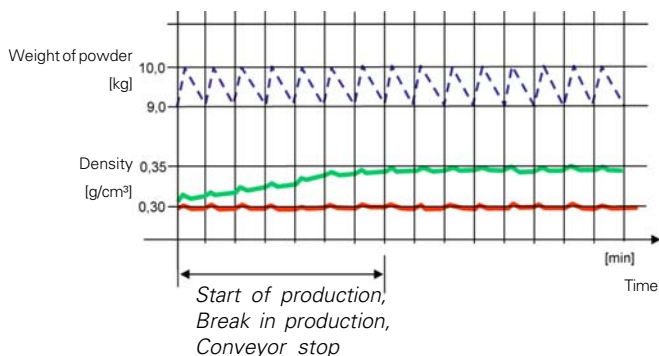
## **Soiling removal**

The ultrasonic sieve can be connected to a vacuum cleaning system for automatic cleaning.

## **Fluid density control**

The homogeneity of the powder coating/air mixture has an influence on the constant delivery capacity of the *EcoPump Powder 0.3* metering pump. The fluid density control calculates the fluid density from the height of the fluid in the container and the weight of the powder. This is kept constant by controlling the influx of fluid air. This allows coating thickness fluctuations to be minimised.

Diagramme: Blue curve: Application container weight (with removal and abrupt replenishment)  
 Fluid density control method of operation Green curve: Fluid density without fluid density control  
 Red curve: Fluid density with fluid density control



*EcoPMC Pro* Powder Management Centre in use during production

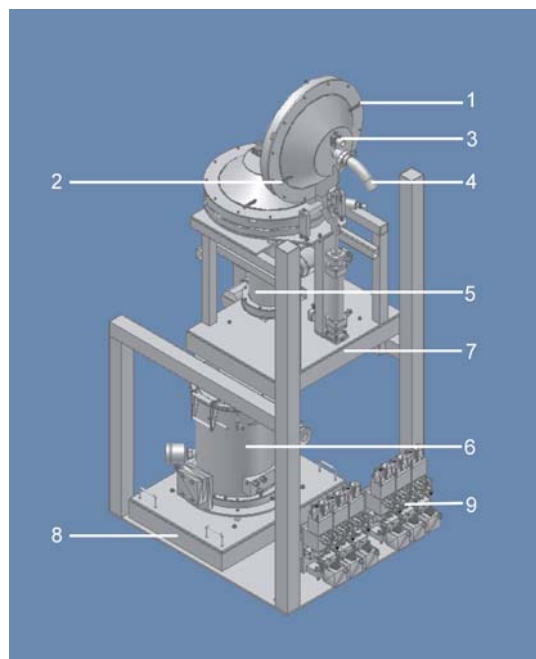


Diagramme *EcoPMC Pro* Powder Management Centre (Shown with open ultrasonic sieve cover)

- 1 Fresh coating inlet
- 2 Recycling coating inlet
- 3 Venting
- 4 Soiling removal
- 5 Intermediate container
- 6 Application container
- 7 Intermediate container scale
- 8 Application container scale
- 9 Metering pumps