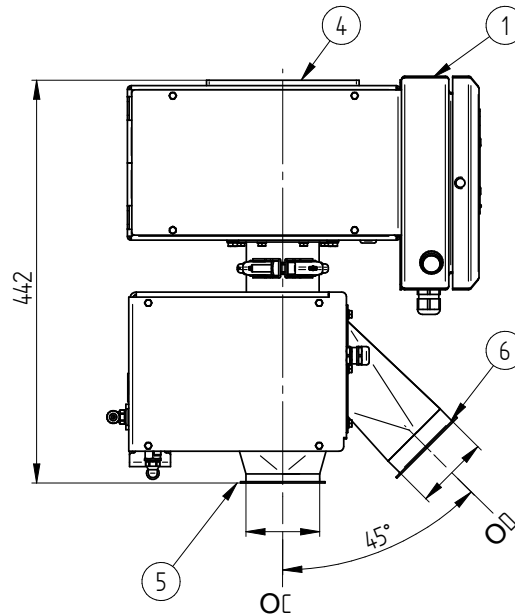
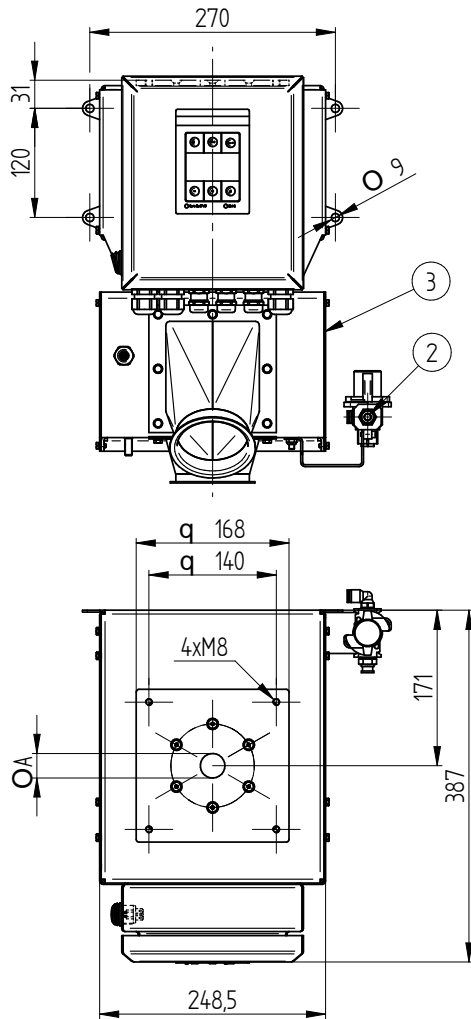


# RAPID VARIO-FS 30-PP – 250-PP metal separator

## ■ Dimensions RAPID VARIO-FS 30-PP – 70-PP



- 1 PRIMUS+ Control Unit
- 2 Compressed-air connection
- 3 Separation unit swivels up to 360°
- 4 Inlet flange plate
- 5 Material outlet (Jacob pipe system)
- 6 Reject outlet (Jacob pipe system)

All dimensions in mm

## ■ Technical data

Type <sup>4)</sup>			Maximum sensitivity <sup>1)</sup>			Typical throughput <sup>2)</sup>	Inlet flange plate, effective ID of inlet pipe ØA	Inlet, nominal width ØB	Material outlet, nominal width ØC	Reject outlet, nominal width ØD	Weight [kg] <sup>3)</sup>
RAPID	NW	CU	Ø Fe	Ø V2A	Ø NonFe						
VARIO-FS	30 *)	-PP	0.3	0.6	0.4	400 l/h	27,2	/	78	78	26
VARIO-FS	50 *)	-PP	0.4	0.7	0.5	2000 l/h	44,0	/	78	78	26
VARIO-FS	70 *)	-PP	0.5	0.9	0.6	5000 l/h	67,8	/	78	78	26

Annotation:

All dimensions in mm

\*) Possible Fast Lane versions, options and accessories.

<sup>1)</sup> The stated detection sensitivity (ferrous ball Ø in mm) applies for nonconductive products at the standard operation frequency and refers to the centre of the detection aperture (most disadvantageous position). Products that show intrinsic conductivity due to moisture content, electrolytes or other conductive contents may reduce the sensitivity as well as variations of product temperature, environmental effects (mechanical shocks and vibrations, electromagnetic pollution) or the set product angle. The detectable size of metal particles depends on their nature, shape and position while passing the metal detector.

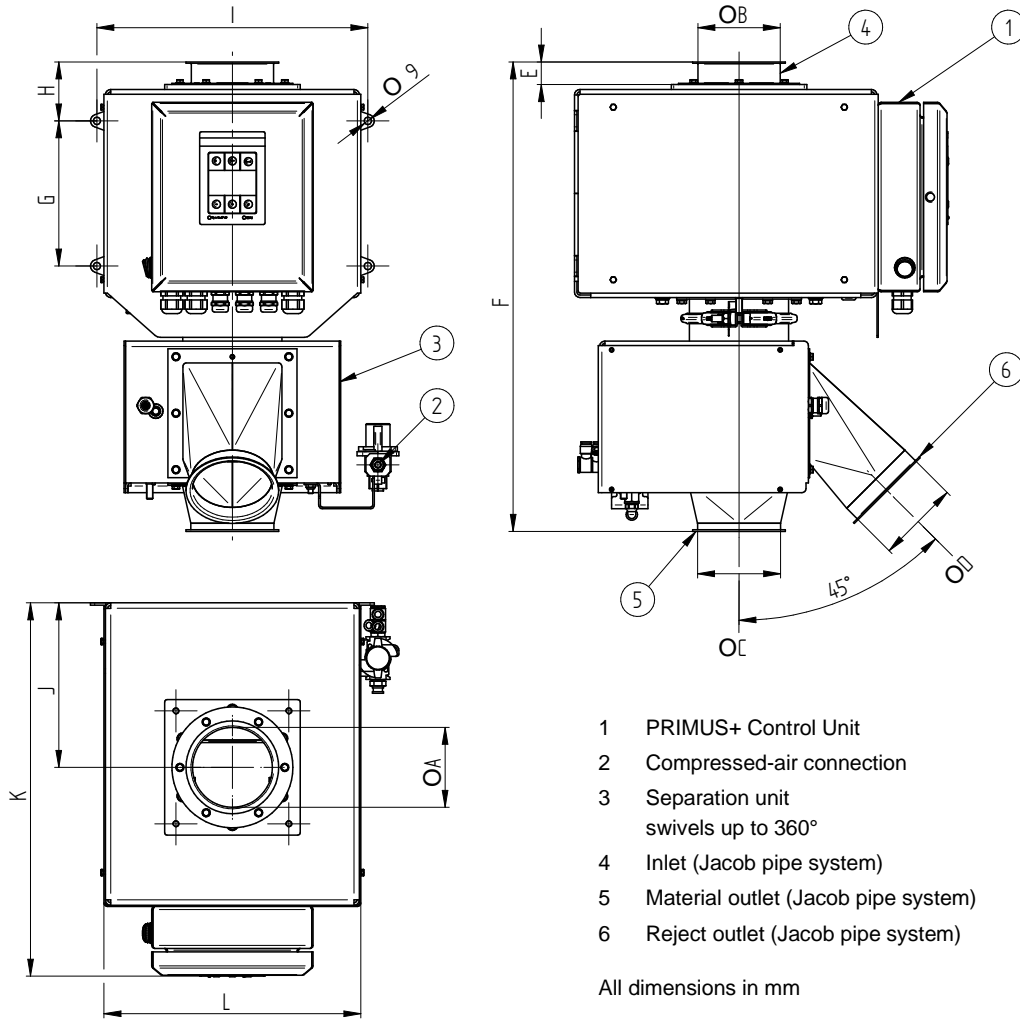
<sup>2)</sup> The stated throughput rate is based on well pourable granules. The shape of the particles and thus the flow characteristic of the bulk material determine the throughput rate which can vary. Upstream installed magnet separators may also reduce the throughput rate due to reduction of the cross section.

<sup>3)</sup> Guide valu3e, the actual weight may be different depending on options and configuration.

<sup>4)</sup> Example for Type-Naming: RAPID VARIO-FS 30-PP.

# RAPID VARIO-FS 30-PP – 250-PP metal separator

## ■ Dimensions RAPID VARIO-FS 100-PP – 150-PP



- 1 PRIMUS+ Control Unit
- 2 Compressed-air connection
- 3 Separation unit  
swivels up to 360°
- 4 Inlet (Jacob pipe system)
- 5 Material outlet (Jacob pipe system)
- 6 Reject outlet (Jacob pipe system)

All dimensions in mm

## ■ Technical data

Type <sup>4)</sup>			Maximum sensitivity <sup>1)</sup>			Typical throughput <sup>2)</sup>	Inlet flange plate, effective ID of inlet pipe ØA	Inlet, nominal width ØB	Material outlet, nominal width ØC	Reject outlet, nominal width ØD	Weight [kg] <sup>3)</sup>
RAPID	NW	CU	Ø Fe	Ø V2A	Ø NonFe						
VARIO-FS	100 *)	-PP	0.7	1.3	0.8	12000 l/h	99	99	99	99	37
VARIO-FS	120 *)	-PP	0.8	1.3	1.0	16000 l/h	119	119	119	99	37
VARIO-FS	150 *)	-PP	1.2	1.8	1.5	25000 l/h	149	149	149	149	45

Type <sup>4)</sup>			E	F	G	H	I	J	K	L
RAPID	NW	CU								
VARIO-FS	100 *)	-PP	28	582	180	73	336	204	462	318,5
VARIO-FS	120 *)	-PP	28	582	180	73	336	204	462	318,5
VARIO-FS	150 *)	-PP	36	686	215	81	400	190	462	373,5

Annotation:

All dimensions in mm

\*) Possible Fast Lane versions, options and accessories.

<sup>1)</sup> The stated detection sensitivity (ferrous ball Ø in mm) applies for nonconductive products at the standard operation frequency and refers to the centre of the detection aperture (most disadvantageous position). Products that show intrinsic conductivity due to moisture content, electrolytes or other conductive contents may reduce the sensitivity as well as variations of product temperature, environmental effects (mechanical shocks and vibrations, electromagnetic pollution) or the set product angle. The detectable size of metal particles depends on their nature, shape and position while passing the metal detector.

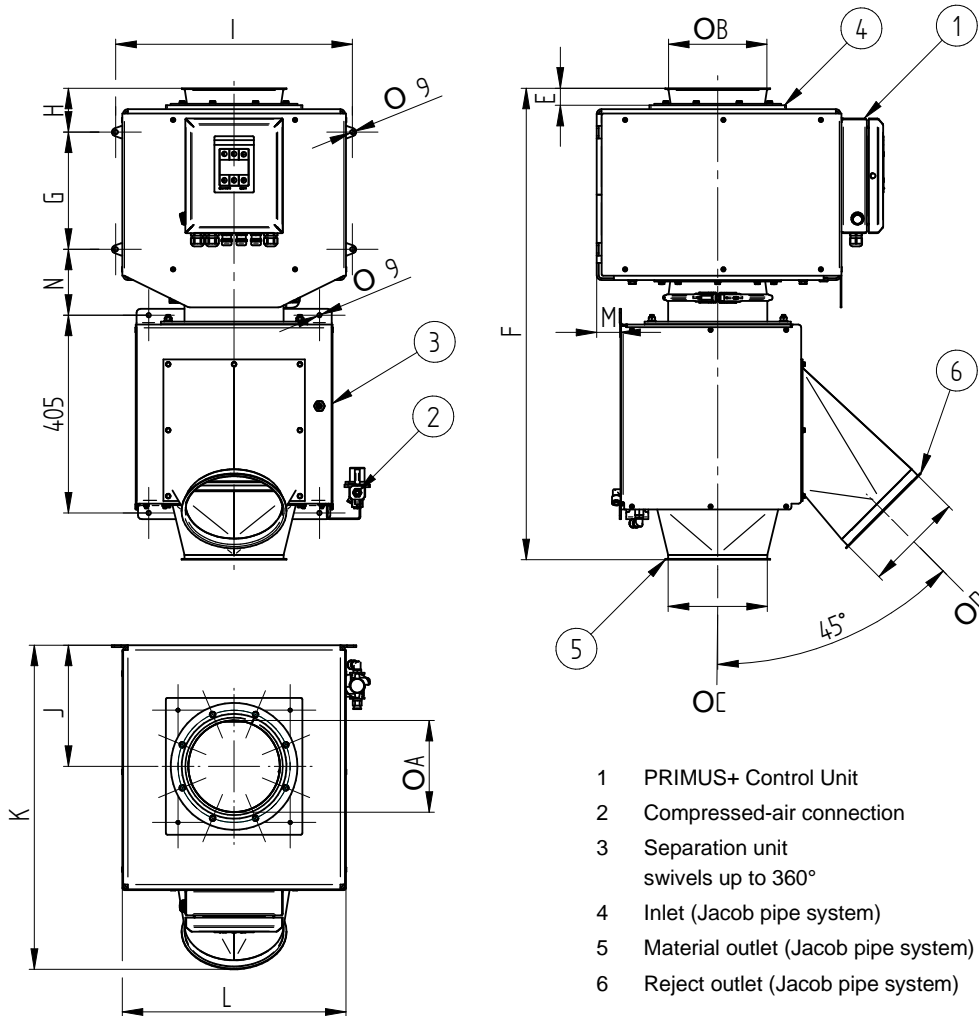
<sup>2)</sup> The stated throughput rate is based on well pourable granules. The shape of the particles and thus the flow characteristic of the bulk material determine the throughput rate which can vary. Upstream installed magnet separators may also reduce the throughput rate due to reduction of the cross section.

<sup>3)</sup> Guide value, the actual weight may be different depending on options and configuration.

<sup>4)</sup> Example for Type-Naming: RAPID VARIO-FS 100-PP.

# RAPID VARIO-FS 30-PP – 250-PP metal separator

## ■ Dimensions RAPID VARIO-FS 200-PP – 250-PP



- 1 PRIMUS+ Control Unit
- 2 Compressed-air connection
- 3 Separation unit swivels up to 360°
- 4 Inlet (Jacob pipe system)
- 5 Material outlet (Jacob pipe system)
- 6 Reject outlet (Jacob pipe system)

All dimensions in mm

## ■ Technical data

Type <sup>4)</sup>			Maximum sensitivity <sup>1)</sup>			Typical throughput <sup>2)</sup>	Inlet flange plate, effective ID of inlet pipe ØA	Inlet, nominal width ØB	Material outlet, nominal width ØC	Reject outlet, nominal width ØD	Weight [kg] <sup>3)</sup>
RAPID	NW	CU	∅ Fe	∅ V2A	∅ NonFe						
VARIO-FS	200	-PP	1.5	2.0	2.0	44000 l/h	188.0	199	199	199	105
VARIO-FS	250	-PP	2.0	2.5	2.5	69000 l/h	234.0	249	249	199	125

Type <sup>4)</sup>			E	F	G	H	I	J	K	L	M	N
RAPID	NW	CU										
VARIO-FS	200	-PP	35	966	240	90	485	248	664	458,5	47	135
VARIO-FS	250	-PP	48	1294	320	106	565	258	674	538,5	57	148

Annotation:

All dimensions in mm

<sup>1)</sup> The stated detection sensitivity (ferrous ball Ø in mm) applies for nonconductive products at the standard operation frequency and refers to the centre of the detection aperture (most disadvantageous position). Products that show intrinsic conductivity due to moisture content, electrolytes or other conductive contents may reduce the sensitivity as well as variations of product temperature, environmental effects (mechanical shocks and vibrations, electromagnetic pollution) or the set product angle. The detectable size of metal particles depends on their nature, shape and position while passing the metal detector.

<sup>2)</sup> The stated throughput rate is based on well pourable granules. The shape of the particles and thus the flow characteristic of the bulk material determine the throughput rate which can vary. Upstream installed magnet separators may also reduce the throughput rate due to reduction of the cross section.

<sup>3)</sup> Guide value, the actual weight may be different depending on options and configuration.

<sup>4)</sup> Example for Type-Naming: RAPID VARIO-FS 200-PP

# RAPID VARIO-FS 30-PP – 250-PP metal separator

## ■ Conditions of use

- Use:** For inspecting free falling bulk materials in the plastics industry and similar applications in other industries as well as applications with low hygienic requirements.
- Bulk material classification:**
- **Grain shape:** Powder, Granulates, Flakes
  - **Max. grain size:** Ball shape  $\varnothing < 8$  mm,
  - **Pourability:** Good, medium, poor
  - **Attributes:** Dry, damp, not abrasive, product effects (material conductivity) can be compensated
  - **Material flow:** Free fall, falling height max 500 mm above top edge (No back draft of material), depressurized
  - **Bulk material temperature:** Maximum +80 °C
  - **Ambient conditions:** -10 °C to +50 °C, 25 % to 85 % rH, no condensation
  - **Storage and shipping conditions:** -10 °C to +50 °C, 25 % to 85 % rH, no condensation

## ■ Scope of delivery / Design / Connections

- Scope of delivery:** Metal separator comprising two moduls, a detection modul with the attached PRIMUS+ Control Unit and a separation modul connected by a pull ring. Inlet and outlets made according to Jacob pipe system (except NW 30, 50, 70)
- Mechanical design:**
- |                                |   |
|--------------------------------|---|
| Electronics housing:           | Sheet steel, varnished, aluminium grey (RAL 9007)   |
| Detection unit:                | Nominal width 30-70, cover plate varnished, aluminium grey (RAL 9007)<br>Nominal width 100-250 cover plate stainless steel 1.4301 (AISI 304), surface brushed |
| Separation unit complete:      | Stainless steel 1.4301 (AISI 304), bead blasted   |
| Scanning pipe:                 | PE-EL (electrical conductive to avoid false tripping)   |
| Parts in contact with product: | Stainless steel 1.4301 (AISI 304), PE-EL, Teflon, POM, SBR / NR caoutchouc  |
| Compressed air connection:     | RV-FS/30-150-PP: 5-8 bar; 6/8 mm hose connection<br>RV-FS/200-250-PP: 5-8 bar, 8/10 mm hose connection  |
| Compressed air consumption:    | RV-FS/30-120-PP: approx 0.4 l / switch operation<br>RV-FS/150-PP: approx 0.5 l / switch operation<br>RV-FS/200-250-PP: approx 1.3 l / switch operation        |
- Electrical design:**
- |                                 |  |
|---------------------------------|--|
| Nominal voltage:                | 100-240V AC,N,PE   |
| Maximal current:                | 0.4 A-0.2 A  |
| Mains cable:                    | 1.8 m with grounded plug   |
| Ingress protection:             | IP 65, (rain shelter required if operated outdoor)                     |
| Eject duration (metal impulse): | Adjustable from 0.05 to 60 s   |
| Self-monitoring system:         | Detection coil and outputs   |
| Interfaces:                     | Ethernet (TCP/IP 100 Mbit/s), (on board – without hardware connectors) |
| Scanning sensitivity:           | Adjustable from 1 % to 100 %   |
| Operation:                      | See technical data sheet for PRIMUS+ Control Unit                      |

# RAPID VARIO-FS 30-PP – 250-PP metal separator

## ■ Options

- Design for bulk material temperatures up to 140 °C (only in combination with scanning pipe made of PVDF)
- Parts in contact with product made of stainless steel, surface tempered (hardness 900 HV) (only in combination with Scanning pipe made of PVDF and not in combination with round reject mechanism and edgewise strip)
- Parts in contact with product suitable for food (only in combination with scanning pipe made of PP or PVDF \*)
- Scanning pipe \*)
  - PP (only in combination with parts in contact with product suitable for food \*)
  - PVDF \*)
  - Glass (only in combination with NW 30 to NW 200 and only in combination with chemically nickel-plated stainless steel surface in contact with product)
- UL/CSA certificate (only in combination with US-power cable \*)
- UK-power cable \*)
- US-power cable \*)
- Power cable without plug (only in combination with power disconnect device)
- Power disconnect device (only in combination with power cable without plug)
- Signal device
  - Combination alarm (visual / audible); failure and metal indication \*)
- Push button for manual rejection in a separate housing \*)
- Counter (metal separation) in a separate housing \*)
- Push button for functional test in a separate housing \*)
- Control unit - installation type:
  - remote, length 3 m \*)
  - remote, length 6 m \*)
  - remote, length 10 m \*)
  - remote, length 15 m \*)
- COMGateway.Embedded
- Connect-Bundle (hardware connectors implemented in the control unit housing for Ethernet interface) \*)
- Compressed air monitor, mechanically insertable
  - in protection class IP54 (not in combination with function monitor in IP65 or round reject mechanism) \*)
  - in protection class IP65 (not in combination with function monitor in IP54) \*)
- Function monitor, mechanically insertable
  - in protection class IP54 (not in combination with compressed air monitor in IP65 or round reject mechanism) \*)
  - in protection class IP65 (not in combination with compressed air monitor in IP54) \*)
- Filter control valve \*)
- Free fall height up to 1 m (different installation height)
- Round reject mechanism for powdery products in protection class IP65 (dust-tight version), deviating installation height, mechanically insertable (not in combination with chemically nickel-plated stainless steel surfaces in contact with product or compressed air/function monitor in IP54 and brush strip. Only in combination with NW30 to 150)
- Deflector with strip (only in combination with round reject mechanism)
- Special flap with lateral brush strip (only in combination with NW 150,200 or 250)
- Cable set for separation unit, pluggable \*)
- Top cover \*)
- Inlet connection Jacob NW 80 (only in combination with NW 30 to NW 70) \*)

## ■ Accessories

- Test samples
  - Insight.NET (visualization, data saving and remote maintenance)
- \*) Possible Fast Lane versions, options and accessories. For NW 30-150