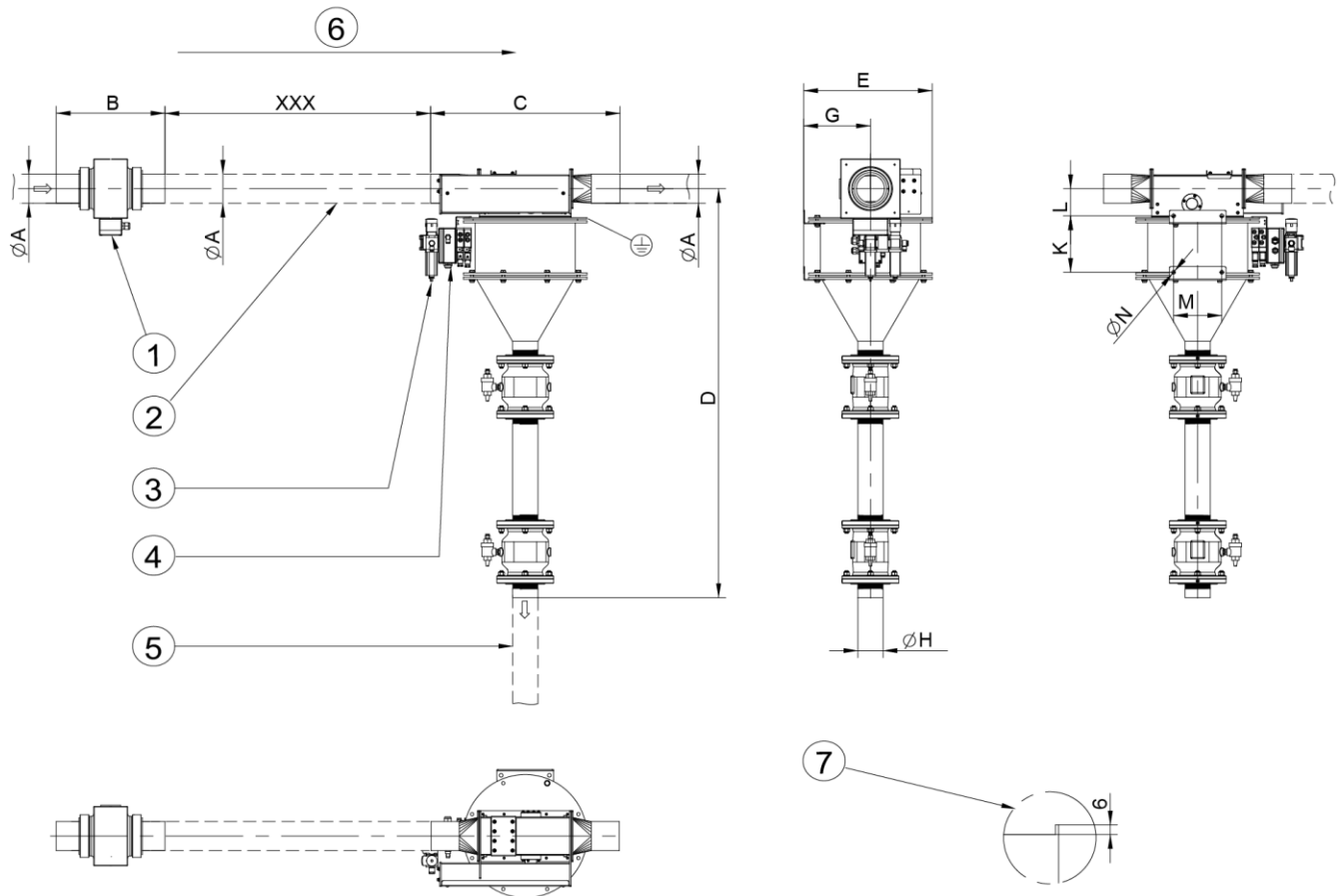


Dimensions



XXX: Distance [m] = conveying speed [m/s] x 0.05 [s]; (use multiplier 0.07 [s] from pipe diameter size 3)

- | | | | |
|---|----------------------------|---|--|
| 1 | Detector | 5 | Rejects outlet |
| 2 | Pipe, provided by customer | 6 | Conveying direction |
| 3 | Pneumatics | 7 | Jacob system (with $\varnothing A$: 100 and 120 mm) |
| 4 | Monitoring | | |

	$\varnothing A$	B	C	D	D 180 °C	E	G	H	H 180 °C	K	L	M	$\varnothing N$	Weight [kg]*
Size 1	38, 45, 50, 55, 60, 65	270	340	1286	1086	350	175	60	120	187	90	160	11.5	$\varnothing 38-60$: 70 $\varnothing 65$: 75
Size 2	70, 76, 80, 89	310	430	1410	1100	350	175	89	120	187	98	160	11.5	75
Size 3	100 **, 120 **	280	669	1115	900	453	235	89	120	200	96	170	13	$\varnothing 100$: 100 $\varnothing 120$: 140

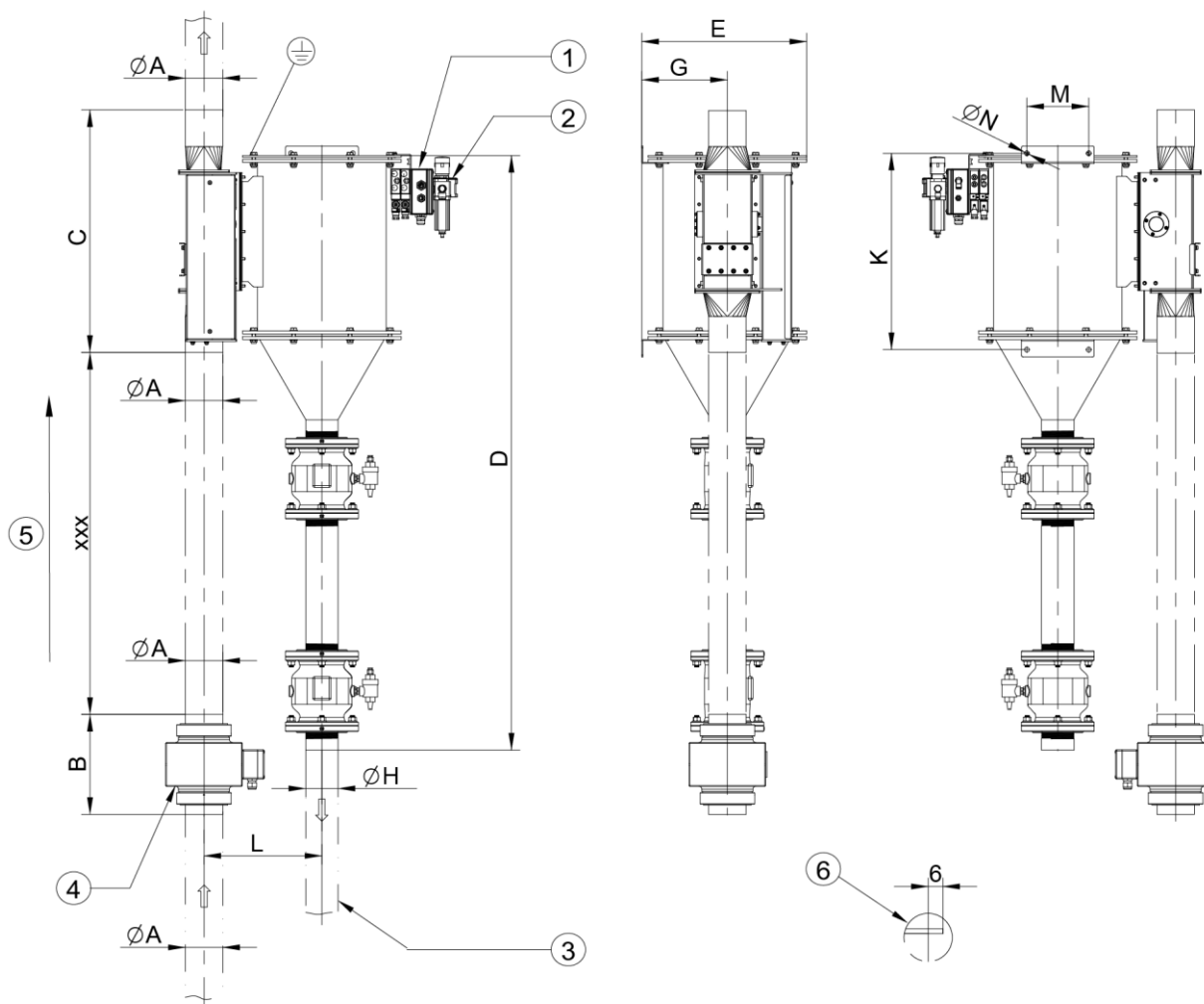
All dimensions in [mm]

* Weight without packaging (the weight may vary depending on the material version)

** with Jacob system

Note: The area around the metal detector, the metal-free zone (MFZ), must be free of any metallic components. Detailed information can be found in the operating instructions under the chapter "Assembly guidelines".

Dimensions – Vertical version (UP)



XXX: Distance [m] = conveying speed [m/s] x 0.05 [s]; (use multiplier 0.07 [s] from pipe diameter size 3)

- | | |
|-------------------|--|
| 1. Monitoring | 4. Detector |
| 2. Pneumatics | 5. Conveying direction |
| 3. Rejects outlet | 6. Jacob system (with Ø A: 100 and 120 mm) |

	Ø A	B	C	D	D 180 °C	E	G	H	H 180 °C	K	L	M	Ø N	Weight [kg]*
Size 1	38, 45, 50, 55, 60, 65	270	340	1500	1308	350	175	60	120	473	246	160	11.5	Ø38-60: 70 Ø65: 75
Size 2	70, 76, 80, 89	310	430	1620	1308	350	175	89	120	473	250	160	11.5	75
Size 3	100 **, 120 **	280	669	1630	1414	453	235	89	120	538	324	170	13	Ø100: 100 Ø120: 140

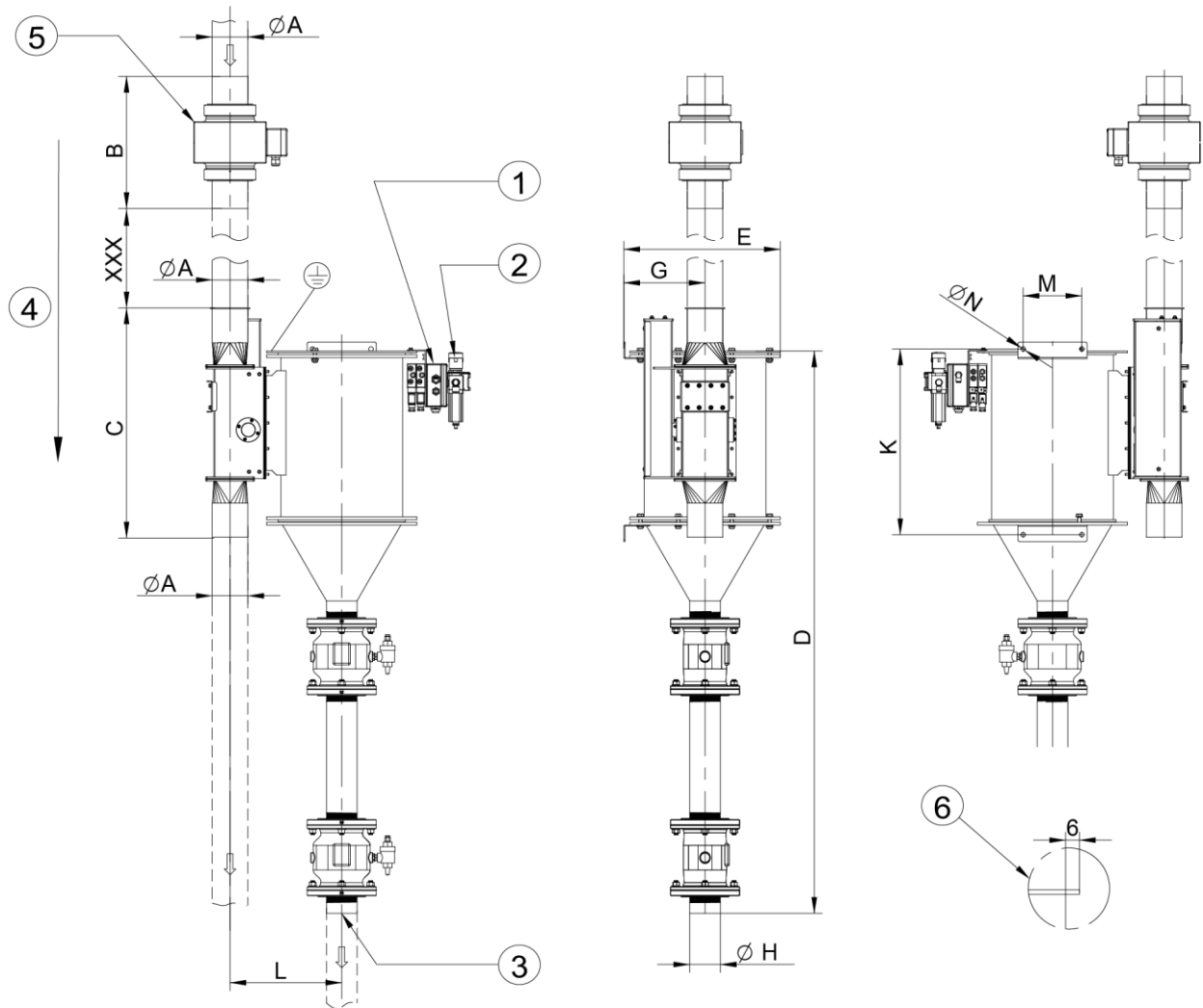
All dimensions in [mm]

* Weight without packaging (the weight may vary depending on the material version)

** with Jacob system

Note: The area around the metal detector, the metal-free zone (MFZ), must be free of any metallic components. Detailed information can be found in the operating instructions under the chapter "Assembly guidelines".

Dimensions – Vertical version (DOWN)



XXX: Distance [m] = conveying speed [m/s] x 0.05 [s]; (use multiplier 0.07 [s] from pipe diameter size 3)

- | | |
|-------------------|---|
| 1. Monitoring | 4. Conveying direction |
| 2. Pneumatics | 5. Detector |
| 3. Rejects outlet | 6. Jacob system (with $\varnothing A$: 100 and 120 mm) |

	$\varnothing A$	B	C	D	D 180 °C	E	G	H	H 180 °C	K	L	M	$\varnothing N$	Weight [kg]*
Size 1	38, 45, 50, 55, 60, 65	270	340	1500	1308	350	175	60	120	473	246	160	11.5	$\varnothing 38-60$: 70 $\varnothing 65$: 75
Size 2	70, 76, 80, 89	310	430	1620	1308	350	175	89	120	473	250	160	11.5	75
Size 3	100 **, 120 **	280	669	1630	1414	453	235	89	120	538	324	170	13	$\varnothing 100$: 100 $\varnothing 120$: 140

All dimensions in [mm]

* Weight without packaging (the weight may vary depending on the material version)

** with Jacob system

Note: The area around the metal detector, the metal-free zone (MFZ), must be free of any metallic components. Detailed information can be found in the operating instructions under the chapter "Assembly guidelines".

Product description

The P-TRON GM PCR-C is a compact metal separator for the **batch and continuous pressure conveying of bulk materials**. It can be flexibly integrated into **horizontal and vertical conveying lines**, reliably detects and removes all types of metal, and precisely separates them via a high-speed diverter.

Suitable for product temperatures up to **140 °C**. For temperatures up to **180 °C**, technical consultation with MESUTRONIC is required.

The integrated **two pinch valves** ensure that the **conveying pressure remains stable during operation** whilst also enabling a safe ejection process in the event of metal contamination. This keeps the material flow constant and effectively prevents disruptions to plant operation.

Areas of application

The P-TRON GM PCR-C is suitable for applications in the **non-food** sector.

Non-food	For applications in the plastics, recycling and chemical industries, e.g. granulate, ground materials and powders, as well as in other industrial sectors with comparable products and requirements.
Hygienic requirement	Not suitable for the food sector.

Bulk material classification

Product shape	Granulate, round materials
Grain size	0.5 mm to 10 mm - <i>different specifications on request</i>
Properties of the bulk material	Dry - <i>Different specifications on request</i>
Flowability	Good (not bridging)
Type of material flow	Discontinuous and continuous suction / pressure conveying
Max. conveying speed	10 m/s to 30 m/s

Ambient conditions

Installation type	Horizontal installation (Version-H): left/right right/left Vertical installation (Version-V): bottom/top top/bottom
Product temperature	Max. +140°C +180°C – <i>Coordination with Mesutronic is required</i>
Ambient temperature	-5°C to +40°C
Storage / transport conditions	-10°C to +60°C
Relative humidity	0% to 95% (without condensation)
Permissible pressure in the conveying line	Max. +/- 0.5 bar (relative pressure)

Equipment & specifications

Electronics version	AMD 05 (see technical data sheet for electronics)
Operator interface	Graphic display with membrane keypad, keypad
Operating unit - Assembly type	Separated (min. 2 m)
Installation	NWØ38 to NWØ120 without connecting pipe between detector coil and separation mechanism
Detector coil	Painted aluminium (RAL 3027)
Protection class of overall device	IP 65
Parts in contact with the product	Detector coil: Aluminium Separation system: Stainless steel AISI 304 Sensing tube material: GRP (glass fibre reinforced plastic) Sealing material: FKM Version pinch valve (140°): - NWØ38 to NWØ65 POM-C black, EPDM black - NWØ70 to NWØ120 aluminium, EPDM black Version swivel flange (180°) - NWØ38 to NWØ120 stainless steel, FKM (Viton)
Advanced system monitoring	Compressed air and discharge mechanisms
Compressed air connection	Compressed air supply: min. 6 bar - max. 10 bar Compressed air maintenance unit incl. hose with plug nipple (7.2 mm)
Noise level	Max. 95 dB (A) during switching operation
Device connection	Detector coil / separation system: - NWØ38 to NWØ89 aluminium - NWØ100 to NWØ120 galvanised steel

Detection accuracy

NW Ø	FE Ø	Non-FE Ø	AISI 304 Ø
38 – 50 (PCR-C 55)	0.5	0.5	0.8
55 – 65 (PCR-C 70)	0.6	0.6	1.0
70 – 80 (PCR-C 90)	0.6	0.6	1.0
89 – 100 (PCR-C 115)	0.7	0.64	1.0
120 (PCR-C 135)	0.7	0.8	1.2

All dimensions in [mm]

The specified sensitivities (ball Ø in mm) are based on factory settings and were determined under simulated production conditions in the centre of the passage opening. They refer to typical products according to the bulk materials classification and serve as a guide. The actual detection performance depends on the selected frequency as well as on product properties such as shape, conductivity and flow properties. An individual assessment is required for deviating product or process conditions.

Standard scope of delivery

Metal separator (metal detector, separation unit, separation mechanism, evaluation electronics, connection and connection cable)

Separation mechanism with collecting container and pinch valves

Operating instructions with spare parts list and wiring diagram

EU Declaration of Conformity:

- 2006/42/EC (Machinery Directive)
- 2014/30/EU (EMC Directive)
- 2011/65/EU (RoHS Directive)
- Delegated directive (EU) 2015/863 (extension of the RoHS Directive)

Conformity

Optionally available:

- NRTL certification (61010-1)
- IEC certification (61010-1)

Accessories

- Test button (mounted on the electronics housing)
- Signal combination for error status warning
- mesuEXPORT (automatic protocol export)
- mesuREMOTE (remote maintenance kit)
- mesuLINK (networking software)
- WLAN module

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Note:

If you require further product information that goes beyond the content of this technical data sheet and in particular concerns a specific use and the application of this product, please contact us.

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Mesutronic GmbH

✉ Hackenfeld 13 • 94259 Kirchberg im Wald • Germany
☎ +49 9927 9410 0 • sales@mesutronic.de • www.mesutronic.de