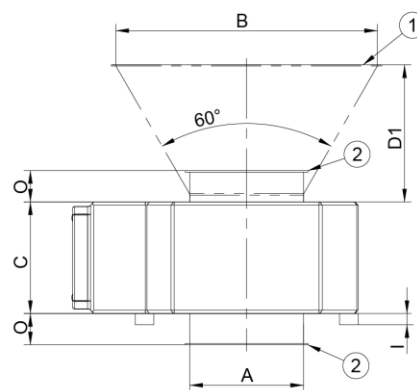
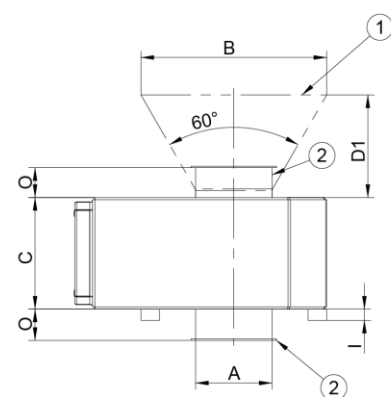
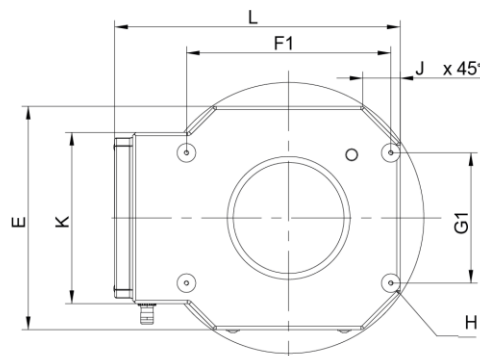
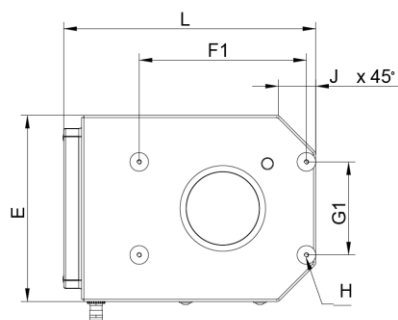


Dimensions – Vertical version



DN 80 – DN 120

DN 150 – DN 250

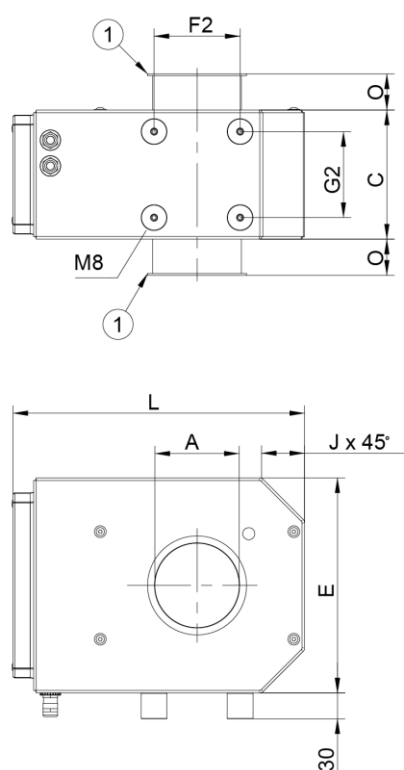
- 1 HO version: With welded-on funnel
2 Pipe connection: Jacob system

ØA	ØB	C	D	E	F	G	H	I	J	K	L	N	Weight [kg]*
80	200	150	114	230	175	115	M6	15	45	230	289	42	20
100	250	150	138	250	225	125	M6	15	50	250	339	42	25
120	250	150	120	250	225	125	M6	15	50	250	339	42	28
150	350	150	184	300	275	175	M6	15	50	230	384	42	30
175	350	150	162	300	275	175	M6	15	50	230	384	42	35
200	350	150	141	365	310	170	M8	30	88	230	451	42	38
250	350	200	97	450	400	200	M8	30	115	230	534	80	55

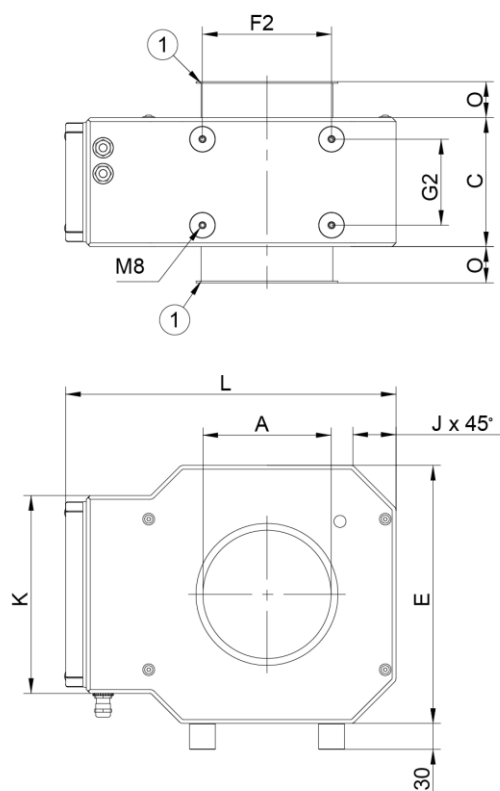
All dimensions in [mm]

* Weight without packaging, including standard equipment

Dimensions – Horizontal version



DN 80 – DN 120



DN 150 – DN 250

1. Pipe connection: Jacob system

ØA	ØB	C	D	E	F	G	H	I	J	K	L	N	Weight [kg]*
80	200	150	114	230	175	115	M6	15	45	230	289	42	20
100	250	150	138	250	225	125	M6	15	50	250	339	42	25
120	250	150	120	250	225	125	M6	15	50	250	339	42	28
150	350	150	184	300	275	175	M6	15	50	230	384	42	30
175	350	150	162	300	275	175	M6	15	50	230	384	42	35
200	350	150	141	365	310	170	M8	30	88	230	451	42	38
250	350	200	97	450	400	200	M8	30	115	230	534	80	55

All dimensions in [mm]

* Weight without packaging, including standard equipment

Product description

The **METRON FL** is a highly sensitive free-fall metal detector for bulk materials. It is used for **quality control, process monitoring and to protect machines** such as mills, extruders and kneading machines. Thanks to the flexible connection options – funnel, PP pipe or welded-on funnel – the detector can be optimally integrated into existing production processes. It reliably detects all types of metal, whether loose or as inclusions in the product, and thus supports safe and efficient production.

Areas of application

The METRON FL is suitable for applications in the **food** and **industrial** sectors.

Food

Suitable for applications in the food industry.

Industrial

For applications in the plastics, chemical and recycling industries, as well as in other industrial sectors with comparable products and requirements.

Bulk material classification

Product shape	Powder, fine-grained bulk materials, granulate, flakes, etc.
Grain size max. in mm	Depending on the nominal width
Properties of the bulk material	Dry, moist, non-abrasive, possible product effect (Intrinsic conductivity of the product) can be compensated for
Flowability	Good, medium, bad
Type of material flow	- Free-fall applications - Vertical installation e.g. tubular bag application - Pneumatic conveying lines - Vertical and horizontal installation - Pump lines - Vertical and horizontal installation
Max. permissible pressure in the conveying line	Max. +/- 0.5 bar (relative pressure)

Typical throughput

NWø [mm]	80	100	120	150	175	200	250
DL [l/h]*	13.000	20.000	29.000	46.000	62.000	82.000	128.000

* The throughput capacity (DL) was determined on the basis of free-flowing granulate at a pipe filling level of 30 %; the figures refer to continuous conveying. Deviations occur depending on the particle shape and flow properties.

Ambient conditions

Installation type	Vertical and horizontal installation
Product temperature	Max. 50 °C at surface of sensing tube Max. 60 °C at coil
Ambient temperature	- 10°C to +50°C -95% rf, non-condensing
Storage / transport conditions	-10°C to + 60°C -95% rf, non-condensing
Relative humidity	0% to 95% (without condensation)

Equipment & specifications

Electronics version	AMD 05 / AMD 07
Operator interface	AMD 05: Graphic display with membrane keypad, keypad AMD 07: 5.7" Touch display
Operating unit - Assembly type	separated (2m)
Detector coil	Stainless steel 1.4301 (AISI 304)
Electronics housing	Stainless steel 1.4301 (AISI 304)
Protection class of overall device	IP 66
Parts in contact with the product	Stainless steel 1.4301 (AISI 304) Probe shaft: PE-EL (polyethylene, electrically conductive)
Device connection	Flatline – Standard: - Infeed: Jacob pipe connection 1.4301 (AISI 304) - Outlet: Jacob pipe connection 1.4301 (AISI 304)

Detection accuracy

NWØ	FE Ø	Non-FE Ø	1.4031 (AISI 304) Ø
80	0,50	0,50	0,80
100	0,60	0,60	1,00
120	0,70	0,80	1,00
150	0,80	0,80	1,20
175	1,00	1,00	1,50
200	1,20	1,50	1,75
250	1,50	2,00	1,75

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 detector and evaluation electronics

Operating instructions with spare parts list and electronic connection diagram

EU Declaration of Conformity:

- 2014/35/EU (Low Voltage Directive)
- 2014/30/EU (EMC Directive)
- 2011/65/EU (RoHS Directive)
- Delegated directive (EU) 2015/863 (extension of the RoHS Directive)

Versions

- ATEX (dust): Zone 20 | 21 | 22 (indoor), Zone 21 | 22 (outdoor)
- Increased protection class IP69K
- HO version: With welded-on funnel

Conformity

Optionally available:

- Regulation (EC) No. 1935/2004 + FDA (Food and Drug Administration)
- NRTL certification (61010-1)
- IEC certification (61010-1)
- Test piece certificate

Options

Optionally available for AMD 7.2:

- autoTEST system E (electrical)
- autoTEST system P (pneumatic)

Accessories

- Test piece (FE Ø, non-FE Ø, V2A Ø)
- mesuINSERT (test piece insertion station)
- Signal combination for error status warning
- mesuEXPORT (automatic protocol export)
- mesuREMOTE (remote maintenance kit)
- mesuLINK (networking software)
- Changeable PP (polypropylene) funnel

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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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