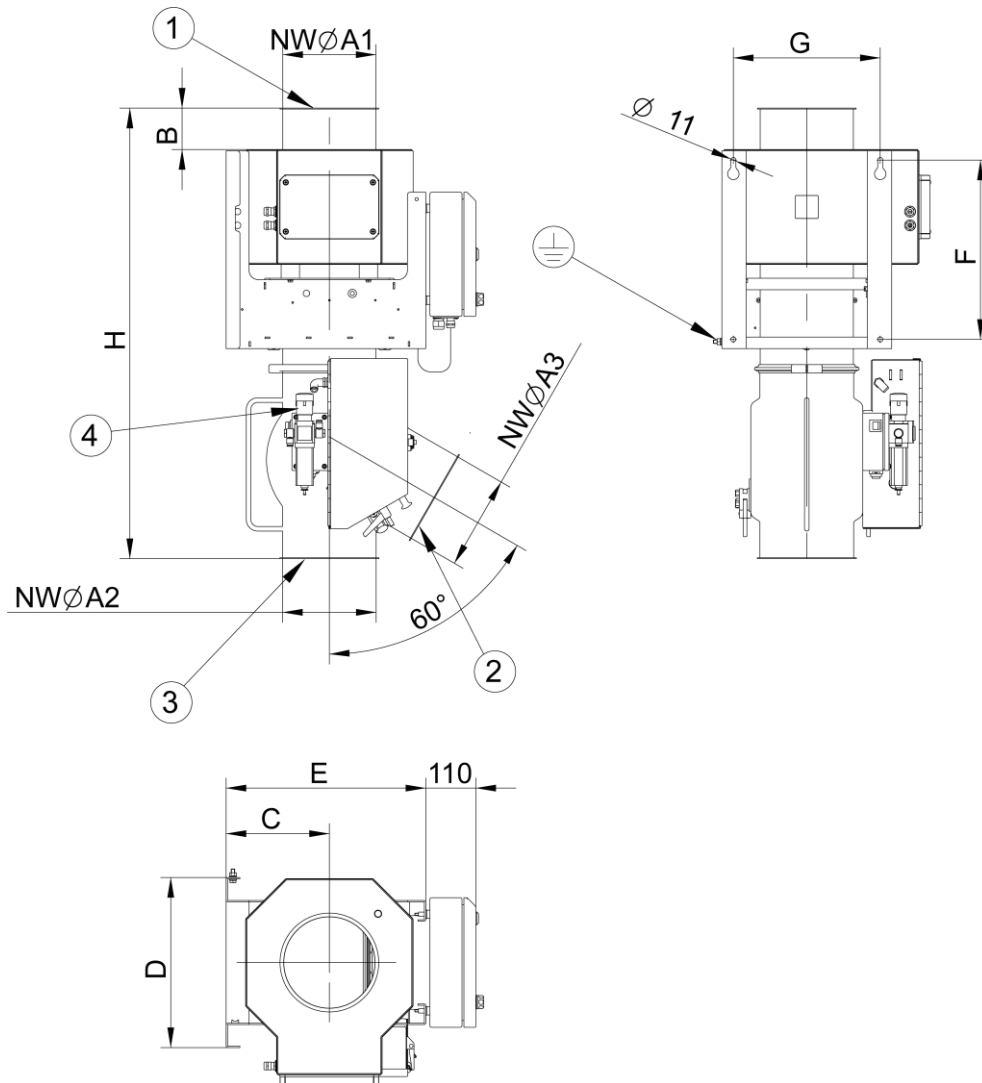


Dimensions NWØ50 – NWØ200



- 1 Goods infeed: Jacob system $\geq$ NW 80
 Smooth pipe socket < NW 80
- 2 Rejects outlet: Jacob system
- 3 Goods outlet: Jacob system
- 4 Compressed air connection including advanced system monitoring for compressed air and separator flap

$\varnothing$ A1	$\varnothing$ A2 / A3	B	C	D	E	F	G	H	Weight [kg]*
50	100	50	190	280	350	220	230	610	40
60	100	50	190	280	350	220	230	610	40
80	100	42	190	280	350	220	230	600	40
100	100	73	190	280	350	220	230	680	40
120	120	80	190	280	350	220	230	700	48
150	150	80	190	360	385	290	300	825	65
200	200	90	225	370	435	380	320	980	95

All dimensions in [mm]

* Weight without packaging, including standard equipment

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".

Note: All earthing points must fall within the same earthing potential. Potential differences are not permitted.

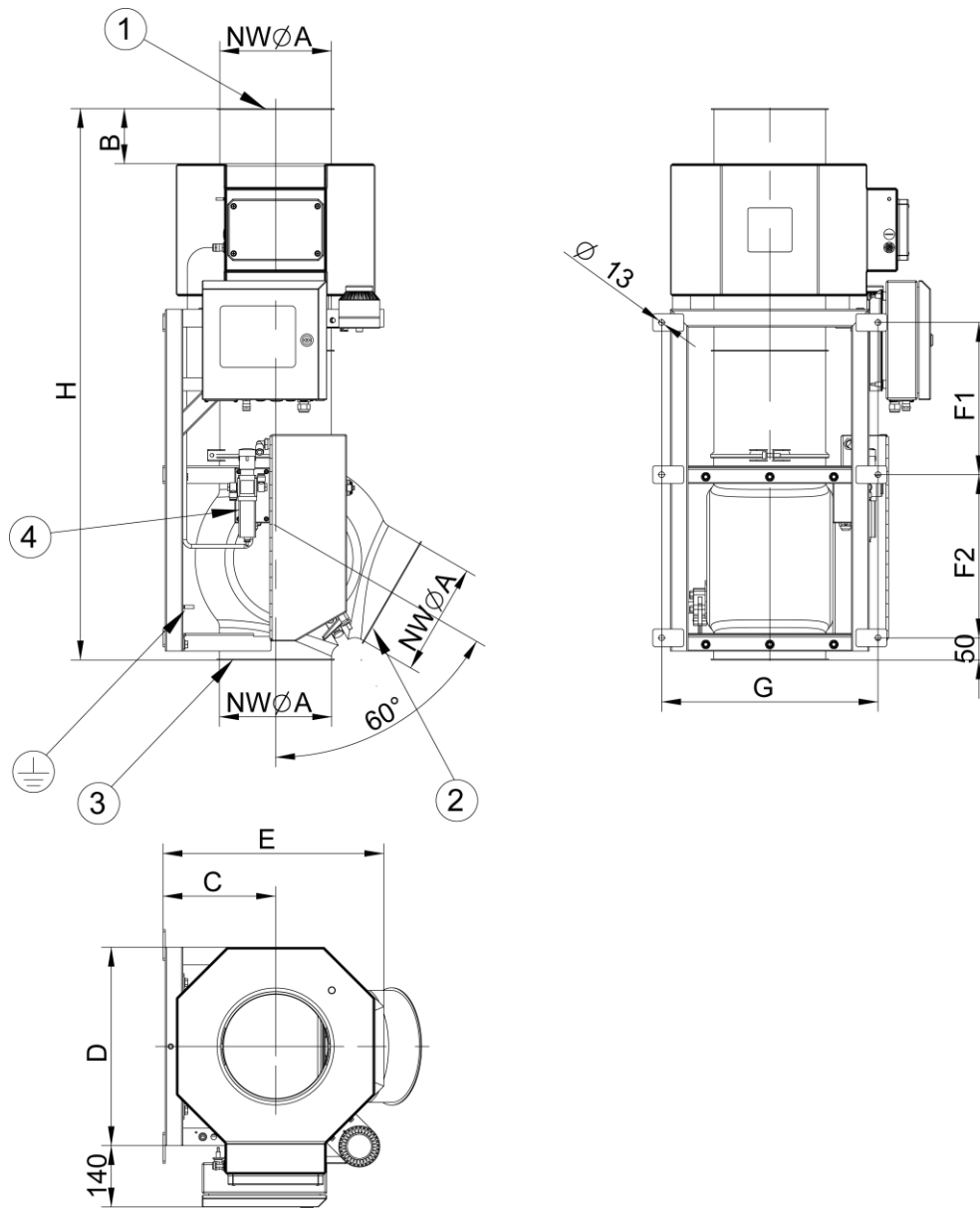
Version 001-01

Mesutronic GmbH

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Dimensions NWØ250 – NWØ300



- 1 Goods infeed: Jacob system
2 Rejects outlet: Jacob system
3 Goods outlet: Jacob system

- 4 Compressed air connection including advanced system monitoring for compressed air and separator flap

Ø A	B	C	D	E	F1	F2	G	H	Weight [kg]*
250	125	255	450	500	345	370	490	1250	180
300	150	310	550	585	495	495	610	1600	210

All dimensions in [mm]

* Weight without packaging, including standard equipment

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".

Note: All earthing points must fall within the same earthing potential. Potential differences are not permitted.

Product description

The **QUICKTRON RH EX** has been designed in accordance with the applicable explosion protection directives for use in areas with a risk of explosion with dust and/or gas atmospheres. The system facilitates safe and reliable metal separation in free-fall applications.

The device has been designed in accordance with the respective zone classification in the product contact area (inside) and the surrounding area (outside). In doing so, the required device categories for dust, e.g. Zone 20 (1D), Zone 21 (2D), or Zone 22 (3D) as well as, depending on the application, for gas, e.g. Zone 2 (3G), have been taken into account.

The following information applies to the European ATEX version. Country-specific versions and approvals, e.g. in accordance with IECEx or NEC/CEC, must be coordinated with MESUTRONIC.

Areas of application

The QUICKTRON RH EX is suitable for **food** and **non-food** applications.

Food	For free-fall applications in the food industry, e.g. powders such as flour, milk powder, ground spices, oat flakes, semolina and grains
Non-food	For applications in the plastics, recycling and wood industries, e.g. granulate, ground materials and powders, as well as in other industrial sectors with comparable products and requirements
Hygienic requirement	Suitable for stringent requirements

Bulk material classification

Product shape	Powders, ground bulk materials, grains, granulate, ground materials
Grain size	max. ≤10 mm - <i>Different specifications on request</i>
Properties of the bulk material	Dry, product-specific effects can be compensated for - <i>Different specifications on request</i>
Flowability	Good, medium
Type of material flow	Unpressurised free-fall conveying
Ignition energy of the product	> 3 mJ
Maximum media temperature	+ 60°C
Weight of the impact partner	max. 850 g

Typical throughput

NWØ [mm]	50	60	80	100	120	150	200	250	300
DL [l/h]*	6,600	9,500	16,900	26,500	38,200	59,700	106,200	165,900	238,900

* The throughput capacity (DL) was determined on the basis of free-flowing granulate at a pipe filling level of 30 % and a free-fall height of 0.5 m. The data refer to continuous conveying. Deviations occur depending on the particle shape and flow properties.

Ambient conditions

Free-fall height	Up to 500 mm above top edge of device – <i>Different specifications on request</i>
Installation type	Vertical installation
Ambient temperature	-5°C to +40°C
Storage / transport conditions	-10°C to +60°C
Relative humidity	0% to 95% (without condensation)
Dust deposits	> 5 mm not permitted

Equipment & specifications

Electronics version	AMD 05: Zone 21 (2D) Zone 22 (3D) Zone 2 (3G) <i>only on request</i> AMD 07: Zone 21 (2D) Zone 22 (3D)
Operator interface	AMD 05: Graphic display with membrane keypad, keypad - <i>Zone 2 (3G) non-standard version</i> AMD 07: 5.7" Touch display
Operating unit - Assembly type	Integrated – <i>optional</i> : separated (min. 2m)
Detector coil	Stainless steel (AISI 304)
Protection class of overall device	IP 65
Parts in contact with the product	Stainless steel (AISI 304), sandblasted Separation flap: Stainless steel (AISI 316L) Sensing tube material: PE-EL (polyethylene, electrically conductive) Flap seal: Black EPDM-EL (ethylene propylene diene rubber)
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
Advanced system monitoring	Compressed air and separation mechanism – Zone 21 (2D) Zone 22 (3D) - <i>Exception: Compressed air monitoring, gas EX Zone 2 (3G)</i>
Device connection	Goods infeed: Jacob system ≥ NW 80, smooth pipe socket < NW 80 Goods and rejects outlet: Jacob system - <i>Different specifications on request</i> -

Detection accuracy

NWØ	FE Ø	Non-FE Ø	AISI 304 Ø
50	0.40	0.40	0.60
60	0.40	0.50	0.80
80	0.50	0.50	0.80
100	0.60	0.60	1.00
120	0.70	0.80	1.20
150	0.80	0.80	1.20
200	1.00	1.00	1.50
250	1.50	1.75	1.75
300	1.75	2.25	2.00

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.

Explosion protection

The following overview shows the available combinations of ATEX zones and equipment markings:

Dust EX

Combination	Description	Marking*
Zone 20 / 21	Zone 20 (product area, inside) Zone 21 (surrounding area, outside)	II 1 D Ex h IIIC T135°C Da II 2 D Ex tb IIIC T135°C Db IP65 **
Zone 20 / 22	Zone 20 (product area, inside) Zone 22 (surrounding area, outside)	II 1 D Ex h IIIC T135°C Da II 3 D Ex tc IIIC T135°C Dc IP65
Zone 21 / 21	Zone 21 (product area, inside) Zone 21 (surrounding area, outside)	II 2 D Ex h IIIC T135°C Db II 2 D Ex tb IIIC T135°C Db IP65 **
Zone 21 / 22	Zone 21 (product area, inside) Zone 22 (surrounding area, outside)	II 2 D Ex h IIIC T135°C Db II 3 D Ex tc IIIC T135°C Dc IP65
Zone 22 / 22	Zone 22 (product area, inside) Zone 22 (surrounding area, outside)	II 3 D Ex h IIIC T135°C Dc II 3 D Ex tc IIIC T135°C Dc IP65

Gas EX by request only

Combination	Description	Marking*
Zone 2	Zone 2	II 3 G Ex h nA IIB T4 Gc

* The marking describes the zone classification for the product contact area (inside) and the surrounding area (outside) in accordance with the ATEX Directive, as well as the device's constructive safety measures

** The maximum surface temperature can vary depending on the electronics used.

For versions designed for Zone 21 (outside), the respective marking on the rating plate is authoritative.

Technical notes:

General requirements:

- The device may only be used for its intended purpose.
- The operating manual and the specified servicing and maintenance conditions must be observed.
- Operation is only permissible within the specified Ex zones and usage conditions.
- The device is to be protected against non-permissible dust deposits, mechanical damage and direct UV radiation.
- All metallic components must be incorporated into the equipotential bonding system.
- Permissible temperature, voltage and ambient conditions.

Non-permissible applications:

- Modifications or conversions to the unit without manufacturer approval.
- Operation while bypassing or disabling safety devices.
- Operation outside the specified explosion protection, temperature or ambient conditions.
- Operation with damaged housings, components or protective devices.
- Use with non-approved products or applications.

Pneumatic components:

- Escaping exhaust air or leakages can create potentially explosive atmospheres.
- Compressed air must not be drawn from potentially explosive atmospheres.
- To prevent electrostatic charges, all metallic components must be incorporated into the equipotential bonding system.

Note: Further safety-relevant requirements as well as detailed information on operation, installation, and maintenance can be found in the associated operating manual.

Standard scope of delivery

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

Operating manual 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)
- 2014/34/EU (ATEX Directive)

Conformity

Optionally available:

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

Options

- Surface roughness RA 0.8µm to NWØ250 – in contact with the product, regardless of zone
- Pneumatic separation support – suitable for dust zones 21 and 22, no gas EX approval
- Operating unit and detector head separately (min. 2m) – EX-compatible (see Equipment & specification)
- Parts in contact with the product in stainless steel (AISI 316L) | (AISI 316Ti) - regardless of zone

Optionally available for AMD 07:

- autoTEST System E EX (electrical) – suitable for dust zones 21 and Zone 22, no gas EX-approval
- autoTEST System P EX (pneumatic) – suitable for dust zone 22, no gas EX-approval

Accessories

- Test piece (FE Ø, Non-FE Ø, AISI 304 Ø) - regardless of zone
- mesuINSERT (test piece insertion station + collection station) – regardless of zone
- Test button (mounted on the electronics housing) – outside the EX range
- Signal combination for error status warning – outside the EX range
- mesuEXPORT (automatic protocol export) – regardless of zone
- mesuREMOTE (remote maintenance kit) – regardless of zone
- mesuLINK (networking software) – regardless of zone
- Clamping rings – regardless of EX zone

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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.