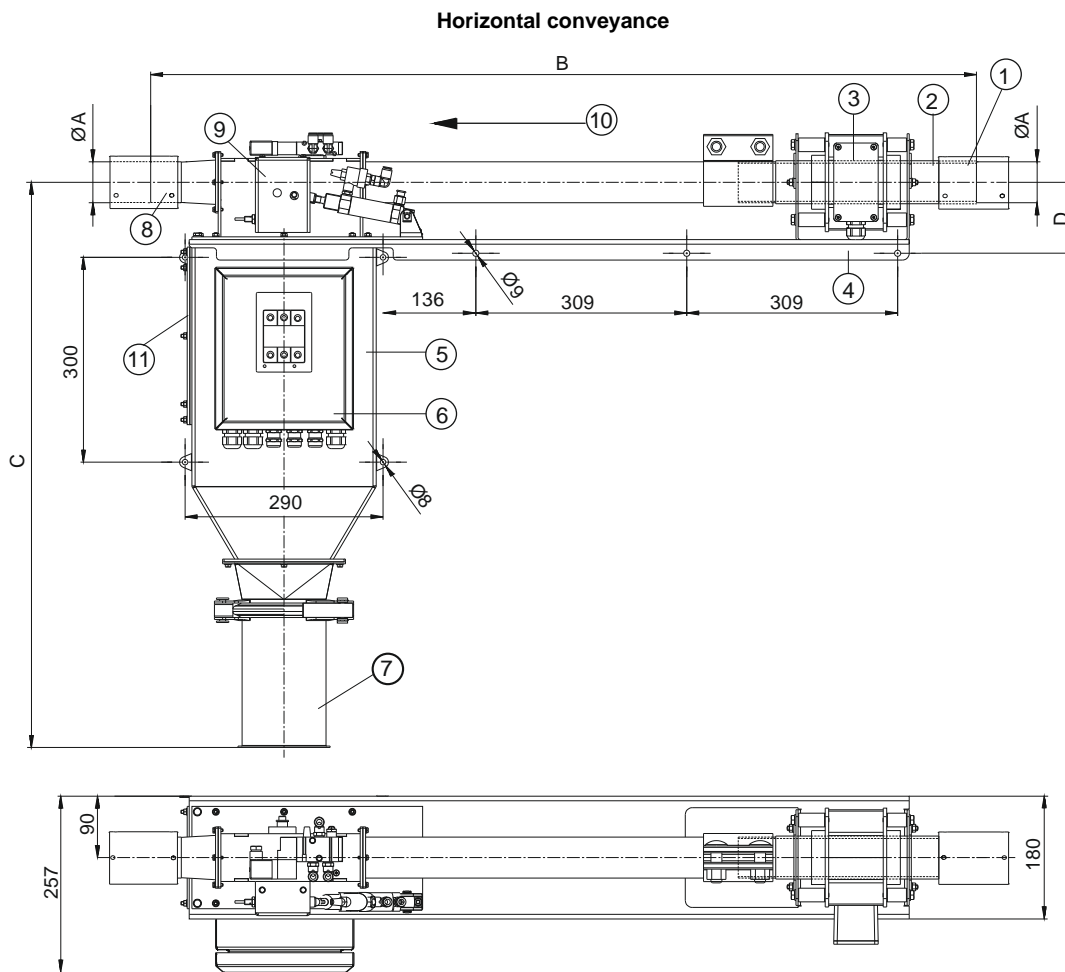


# Metal separator Metro SC 45 / 50 / 60 / 65

## ■ Dimensions



- |                  |  |
|------------------|--|
| 1 Inlet          | 7 Reject outlet (120 mm „System Jacob“)                              |
| 2 Scanning pipe  | 8 Material outlet (customized for nominal Motan width)               |
| 3 Detection coil | 9 Separation unit  |
| 4 Mounting frame | 10 Conveying direction horizontal                                    |
| 5 Container      | 11 Cover plate (to set up machinery and conveying direction on site) |
| 6 Control unit   |  |

## ■ Technical data

Type	Metro SC 45	Metro SC 50	Metro SC 60	Metro SC 65
<b>Inlet and outlet pipe diameter ØA</b>	50 x 4.6	50 x 4.6	60 x 2.1	70 x 1.8
<b>Effective ID of inlet pipe</b>	40.8	40.8	55.8	66.4
<b>Motan customized Inlet and outlet</b>	45 x 1.5	50 x 1.5	60 x 1.5	65 x 1.5
<b>B</b>	1196	1196	1210	1266
<b>C</b>	823	823	828	831
<b>D</b>	105	105	110	113
<b>Maximum scanning sensitivity<sup>1)</sup> Ø Fe-ball:</b>				
at V < 20 m/sec	0.4	0.4	0.5	0.5
at V ≥ 20 m/sec	0.5	0.5	0.7	0.7
<b>Weight [kg]</b>	26.5	26.5	26.5	27.5

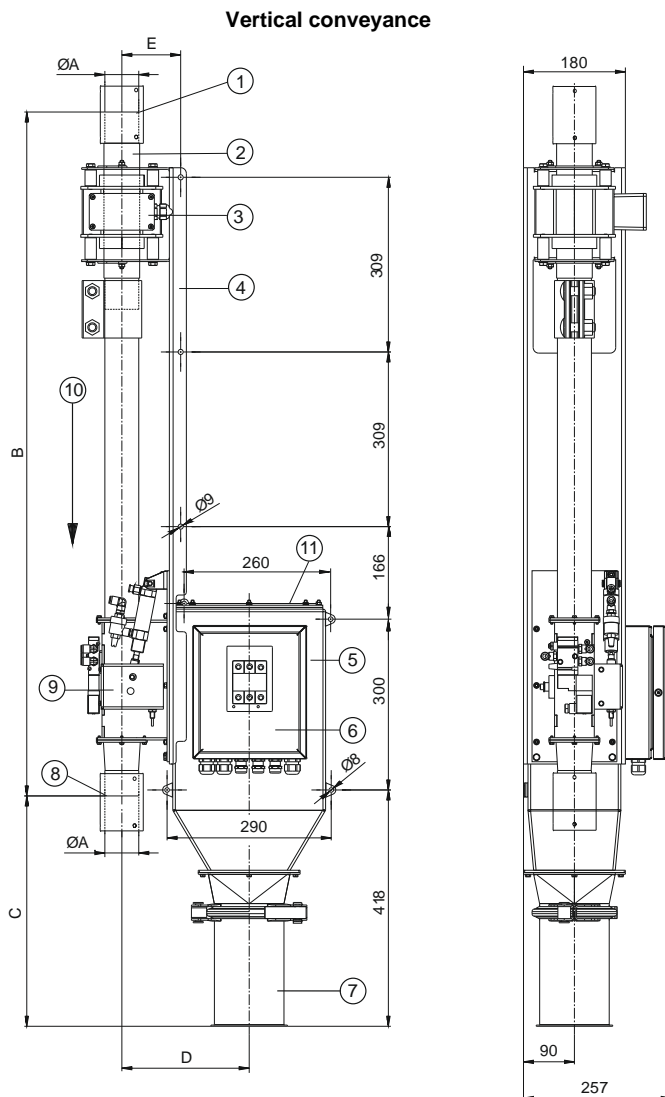
Annotation:

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.

# Metal separator Metro SC 45 / 50 / 60 / 65

## ■ Dimensions



- 1 Inlet
- 2 Scanning pipe
- 3 Detection coil
- 4 Mounting frame
- 5 Container
- 6 Control unit
- 7 Reject outlet (120 mm „System Jacob“)
- 8 Material outlet (customized for nominal Motan width)
- 9 Separation unit
- 10 Vertical conveying direction, material flow from top to bottom
- 11 Cover plate (to set up machinery and conveying direction on site)

## ■ Technical data

Type	Metro SC 45	Metro SC 50	Metro SC 60	Metro SC 65
<b>Inlet and outlet pipe diameter ØA</b>	50 x 4.6	50 x 4.6	60 x 2.1	70 x 1.8
<b>Effective ID of inlet pipe</b>	40.8	40.8	55.8	66.4
<b>Motan customized Inlet and outlet)</b>	45 x 1.5	50 x 1.5	60 x 1.5	65 x 1.5
<b>B</b>	1196	1196	1210	1266
<b>C</b>	407.5	407.5	407.5	375.5
<b>D</b>	220	220	225	228
<b>E</b>	105	105	110	113
<b>Maximum scanning sensitivity<sup>1)</sup> Ø Fe-ball:</b>				
at V < 20 m/sec	0.4	0.4	0.5	0.5
at V ≥ 20 m/sec	0.5	0.5	0.7	0.7
<b>Weight [kg]</b>	26.5	26.5	26.5	27.5

Annotation:

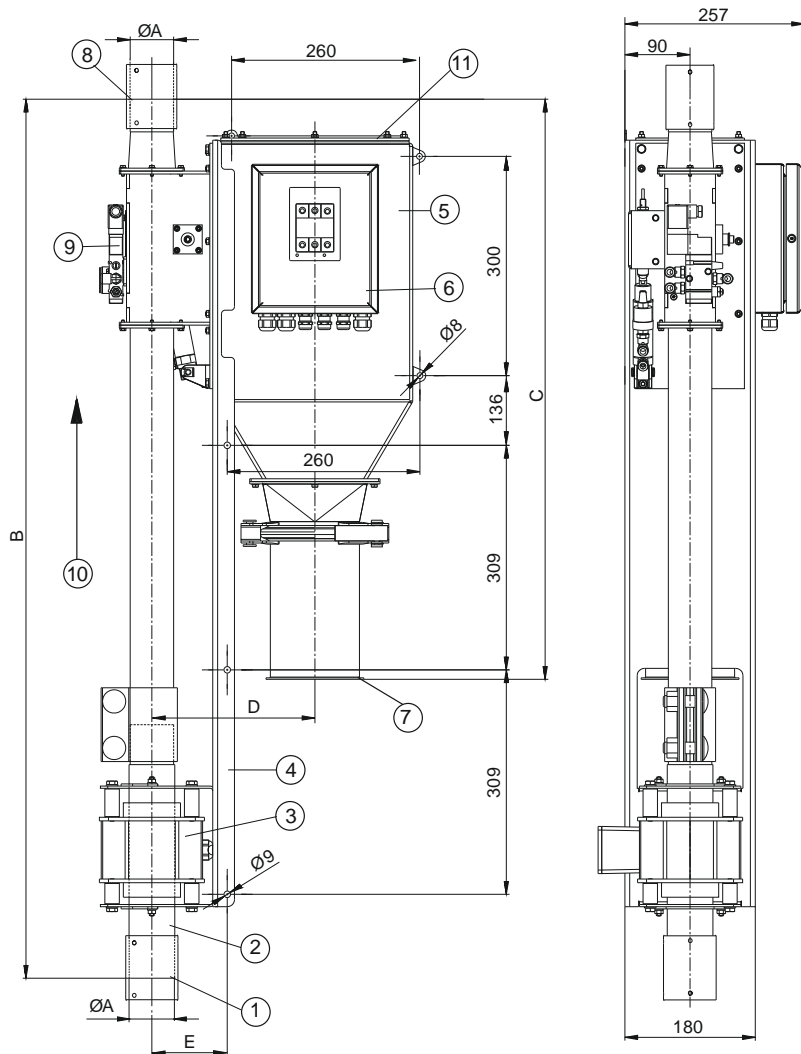
All dimensions in mm

<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.

# Metal separator Metro SC 45 / 50 / 60 / 65

## ■ Dimensions

Vertical conveyance



- 1 Inlet
- 2 Scanning pipe
- 3 Detection coil
- 4 Mounting frame
- 5 Container
- 6 Control unit
- 7 Reject outlet (120 mm „System Jacob“)
- 8 Material outlet (customized for nominal Motan width)
- 9 Separation unit
- 10 Vertical conveying direction, material flow from bottom to top
- 11 Cover plate (to set up machinery and conveying direction on site)

## ■ Technical data

Type	Metro SC 45	Metro SC 50	Metro SC 60	Metro SC 65
<b>Inlet and outlet pipe diameter ØA</b>	50 x 4.6	50 x 4.6	60 x 2.1	70 x 1.8
<b>Effective ID of inlet pipe</b>	40.8	40.8	55.8	66.4
<b>Motan customized Inlet and outlet</b>	45 x 1.5	50 x 1.5	60 x 1.5	65 x 1.5
<b>B</b>	1196	1196	1210	1266
<b>C</b>	798.5	798.5	798.5	830.5
<b>D</b>	220	220	225	228
<b>E</b>	105	105	110	113
<b>Maximum scanning sensitivity<sup>1)</sup> Ø Fe-ball:</b>				
at V < 20 m/sec	0.4	0.4	0.5	0.5
at V ≥ 20 m/sec	0.5	0.5	0.7	0.7
<b>Weight [kg]</b>	26.5	26.5	26.5	27.5

Annotation:

<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.

All dimensions in mm



# Metal separator Metro SC 45 / 50 / 60 / 65

## ■ Conditions of use

**Use:** In the plastics industry, for the inspection of granulate, regenerated material, or ground material in a discontinuous vacuum conveyor pipe, and also in other industry sectors with similar applications and with low hygienic demands.

**Bulk material classification:**

- **Grain shape:** Granulates, regrind, grist, flakes
- **Max. grain size:** Ball Ø < 8 mm
- **Pourability:** Good, medium
- **Attributes:** Dry, damp, not abrasive, product effects (conductivity) can potentially be compensated
- **Material flow:** Pneumatic air conveying, discontinuous vacuum conveying  
max. speed of conveyed material 20 m/sec  
Optional equipment version for continuous vacuum conveying, and continuous or discontinuous pressure conveying.
- **Max. permissible underpressure in the vacuum conveyor pipe:** -0.5 bar
- **Max. permissible overpressure in the pressure conveyor pipe:** 0.5 bar
- **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 with detection and separation unit, collecting container for reject material, and MS+ Control control unit. All the components are pre-assembled for easy installation. Inlet and material outlet connection by way of pipe couplings, reject outlet connection with Jacob pipe connection.

**Mechanical design:**

separation unit with adaptors,  
 Montage unit: stainless steel 1.4301 (AISI 304), glass bead blasted  
 Pipe adaptors: aluminium, optional stainless steel 1.4301 (AISI 304),  
 Control enclosure and collection container: sheet steel, varnished, aluminium grey (RAL 9007)  
 Scanning pipe: PE-EL  
 Parts in touch with material: Stainless steel 1.4301 (AISI 304), PE-EL, Teflon, EPDM aluminium  
 Compressed-air connection: 5-8 bar, 6/8 mm tube connection  
 Compressed-air consumption: 0.4 litre / switch operation,

**Electrical design:**

Control unit: attached  
 Operating voltage: 100-240 VAC (±10%) 50/60 Hz  
 Current consumption: approx. 300 mA / 115 V, approx. 150 mA / 230 V  
 Mains cable: 1.8 m with plug  
 Type of protection: IP 65  
 Eject duration (metal impulse): adjustable from 0.05 to 60 sec  
 Self-monitoring: detection coil and outputs  
 Scanning sensitivity: adjustable from 1% to 100%  
 Operation: see technical data sheet for control unit MS+ Control

## ■ Accessories

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Visual alarm                                       | <input type="checkbox"/> Filter control valve                                   | <input type="checkbox"/> Adaptor pieces for material conveyor pipe, stainless steel                        |
| <input type="checkbox"/> Failure indication                                 | <input type="checkbox"/> Counter (Detection counter) in a separate housing      | <input type="checkbox"/> Level indicator for reject box for waste material                                 |
| <input type="checkbox"/> Failure and metal indication                       | <input type="checkbox"/> Push button for manual rejection in a separate housing | <input type="checkbox"/> PU spiral tube DN 120 for reject outlet, length 1m with adaptor and clamping ring |
| <input type="checkbox"/> Audible alarm                                      | <input type="checkbox"/> Push button for functional test in a separate housing  |  |
| <input type="checkbox"/> Failure indication                                 | <input type="checkbox"/> Test samples   |  |
| <input type="checkbox"/> Failure and metal indication                       |   |  |
| <input type="checkbox"/> Combination alarm (visual alarm and audible alarm) |   |  |
| <input type="checkbox"/> Failure indication                                 |   |  |
| <input type="checkbox"/> Failure and metal indication                       |   |  |

## ■ Options

- |   |  |   |
|---|--|---|
| <input type="checkbox"/> Compressed-air monitor             | <input type="checkbox"/> Cable set for remote control unit: 3 m, 6 m, 10 m, 15 m | <input type="checkbox"/> US-power cable (in exchange) |
| <input type="checkbox"/> Monitor system for separation unit |  |   |

## ■ Special versions / Supplementary systems

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Special varnishes  | <input type="checkbox"/> Cycle sluice with two pivot flap valves DN 120 for continuous vacuum conveying and for continuous or discontinuous pressure conveying | <input type="checkbox"/> Model with improved wear protection in use range plastics |
| <input type="checkbox"/> Special supply voltages  |  | <input type="checkbox"/> Equipment version for higher conveyed material speeds     |
| <input type="checkbox"/> Adaptor pieces for material conveyor pipe on customer request                |  | <input type="checkbox"/> Magnet systems for pre-removal of ferrous metals          |
| <input type="checkbox"/> Design for bulk material temperatures of up to 140° C when used for plastics |  |  |