



sartorius intec

A Minebea Group Company

The hygienic model with easy-clean design Freefall Metal Detection System Vistus® with EC separator



Benefits

EC separator

- Optimized for the food industry: the easy-clean design allows for tool-free disassembly and quick cleaning.

Freefall Metal Detection System Vistus®

- Maximum detection sensitivity
- True In-Process Validation
- Quality pipes suitable for food products
- Efficient separation systems
- Minimal installation height
- Easy installation and operation



The innovative Freefall Metal Detection System Vistus®, in combination with the EC separator, ensures reliable detection of metal foreign bodies in a hygienic environment.

Perfected for maximum safety



The Freefall System Vistus® offers maximum detection performance for your production lines. All **metal foreign bodies, including ferrous and non-ferrous metals and even non-magnetic stainless steels**, are consistently detected and separated from the production line.



With Vistus® you have the option to create a specially adapted metal detection system to suit your exact requirements, resulting in optimal detection effects for **dusty, free-flowing products and loose granules** at all times.



Maximum reliability: the **True In-Process Validation** option verifies the exceptional detection sensitivity of Vistus® in the centre of the pipe, i.e. the centre of your product flow.



When combined with the **EC separator**, Vistus® is a reliable solution for food industry hygiene requirements. The easy-clean design allows for tool-free disassembly and quick cleaning.

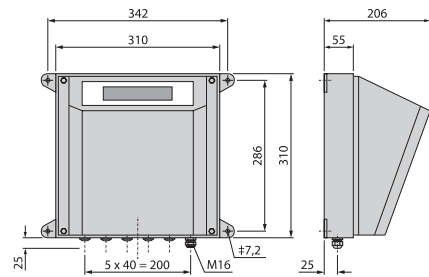
Freefall Metal Detection System Vistus® with EC separator

The EC separator is used to configure your Freefall System Vistus® specifically for food industry hygiene requirements. The easy-clean design ensures cleaning is hassle-free, resulting in better hygiene.

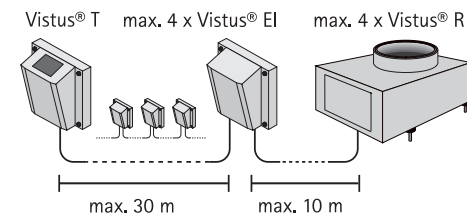
By choosing a combination of search coil, pipe and optional True In-Process Validation you can customise your metal detection system to meet your specific needs.

Control unit

Vistus® E remote terminal
Scale drawing

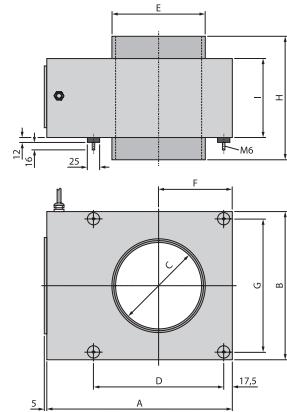


One control unit is suitable for connecting up to four search coils.



Search coil options

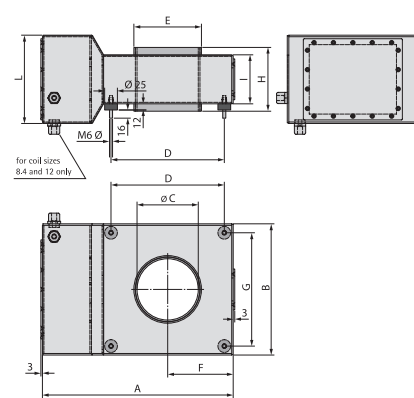
Vistus® R search coil
Scale drawing



Coil dimensions

Vistus® R	A	B	C	D	E	F	G	H	I	kg
2,8	289	195	28	160	39,5	97,5	160	175	125	12
5,9			59		70,5			185		10,7
8,4			84		97,5			195		9,2
12			120		132,5			205		7,7
17,2	393	300	172	256	187,5	150	265	250	160	16,5
21,6			216		232,5			260		14,6
26,9	523	430	269	359	288	215	395	310	200	28
34,1			341		363			320		30

Vistus® RMFZ search coil
Scale drawing



Coil dimensions

Vistus® RMFZ	A	B	C	D	E	F	G	H	I	L	kg
8,4	337	212	84	177	97,5	106	177	88	68	173	9,5
12	374	257	120	222	132,5	129	222	125	96	173	13
17,2	427	322	172	287	187,5	161	287	180	138	173	19,5
21,6	473	380	216	345	232,5	190	345	225	173	173	25
26,9	538	445	269	410	288	223	410	280	215	215	36
34,1	627	534	341	499	363	267	499	355	273	273	55

Pipe quality options

Various materials are available for the freefall pipe of the metal detector:

PP – standard polypropylene pipe: Suitable for detection of foreign bodies in products that do not generate static electricity. Universal solution for products that are not susceptible to electrical discharge. Outer graphite coating for static discharge.

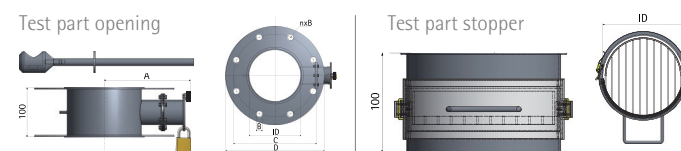
ESD: Meets food safety requirements thanks to health clearance as per EU regulations (nos 10/2011 and 1935/2004). The ESD pipe continually neutralises static charging.

Ceramic: For applications with product temperatures up to 150°C (available upon request).

Pipe material	Product temp. $\vartheta < 70^{\circ}\text{C}$		Product temp. $\vartheta > 70^{\circ}\text{C}$		Illustration
	electrostatic charging	abrasive	electrostatic charging	abrasive	
PP graphite-coated	●				
ESD	●		●		
Ceramic	●	●	●	●	

True In-Process Validation

Scale drawing

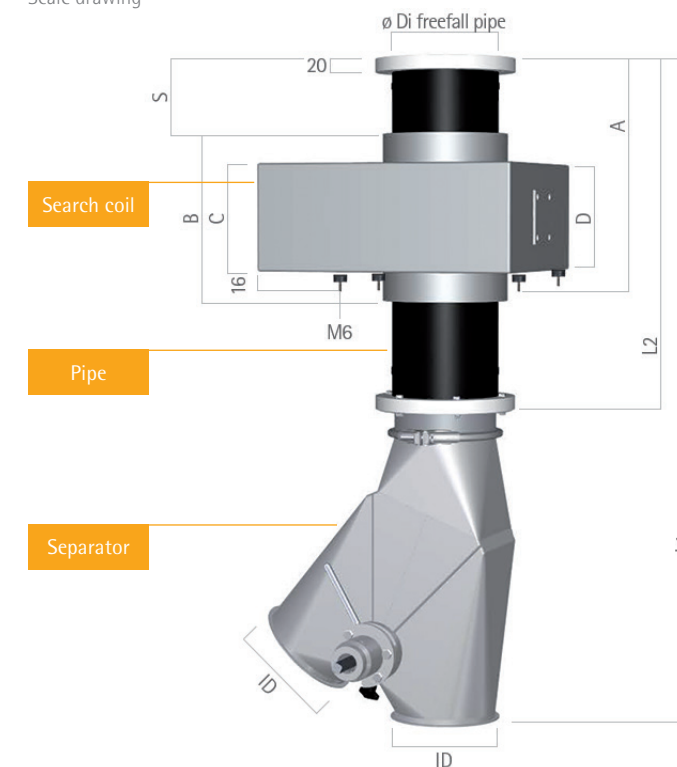


ID	A	B	C	D	n
100	139	18	180	220	8
150	166	18	240	285	8
200	192,5	22	295	340	8
250	218	22	350	395	12
300	243,5	22	400	445	12

Ask us about our suitable test part range.

Complete Vistus® system with EC separator

Scale drawing



Standard version for Vistus® with EC separator

Metal detector opening	12	17,2	21,6
-EC	10	15	20
ID	100	150	200
Di PP	96,8	152,2	190,2
Di ESD	97,4	141,8	177,2
T PP	6,6	3,9	4,9
T ESD	6,3	9,1	11,4
L1	854	995	1348
L2	432	525	767
A	308	355	395
B	240	250	260
C	125	160	160
D	125	160	160
S	96	138	173

The standard freefall system is suitable for product temperatures up to +70°C in ambient temperatures up to +55°C. The air cooling option may be required with higher temperatures. We are happy to help you integrate the system into your process. Our project team will create a custom frame for installation in your production line if required. Alternatively, you can select one of the versions listed here with larger pipe cross-sections or without a separator.

All dimensions are in mm.

Standard version with reduced metal-free zone for Vistus® with EC separator

Metal detector opening	12	17,2	21,6
-EC	10	15	20
ID	100	150	200
Di PP	96,8	152,2	190,2
Di ESD	97,4	141,8	177,2
T PP	6,6	3,9	4,9
T ESD	6,3	9,1	11,4
L1	765	897	1318
L2	343	427	737
A	199	281	349
B	125	180	225
C	96	138	173
D	173	173	173
S	77	110	138

Version with shielding and/or air cooling for Vistus® with EC separator

Metal detector opening	17,2	21,6	26,9
-EC	10	15	20
ID	100	150	200
Di PP	96,8	152,2	190,2
Di ESD	97,4	141,8	177,2
T PP	6,6	3,9	4,9
T ESD	6,3	9,1	11,4
L1	947	1218	1464
L2	525	748	883
A	355	395	482
B	250	260	310
C	160	160	200
D	160	160	200
S	138	173	215

Version with shielding and/or air cooling with reduced metal-free zone for Vistus® with EC separator

Metal detector opening	17,2	21,6	26,9
-EC	10	15	20
ID	100	150	200
Di PP	96,8	152,2	190,2
Di ESD	97,4	141,8	177,2
T PP	6,6	3,9	4,9
T ESD	6,3	9,1	11,4
L1	839	1188	1445
L2	417	718	864
A	281	349	432
B	180	225	280
C	138	173	215
D	173	173	215
S	110	138	172

Special version for category 3 (ATEX) environment condition for Vistus® with EC separator

Metal detector opening	12	17,2	21,6
-EC	10	15	20
ID	100	150	200
Di PP	90,0	141,8	177,2
Di ESD	97,4	141,8	177,2
T PP	10,0	9,1	11,4
T ESD	6,3	9,1	11,4
L1	904	1004	1441
L2	482	534	860
A	308	355	395
B	240	250	260
C	125	160	160
D	125	160	160
S	96	138	173

Ex Special version for category 3 (ATEX) environment condition with reduced metal-free zone for Vistus® with EC separator

Metal detector opening	12	17,2	21,6
-EC	10	15	20
ID	100	150	200
Di PP	90,0	141,8	177,2
Di ESD	97,4	141,8	177,2
T PP	10,0	9,1	11,4
T ESD	6,3	9,1	11,4
L1	829	970	1410
L2	407	500	829
A	199	281	349
B	125	180	225
C	125	160	160
D	125	160	160
S	77	110	138

Ex Special version for category 3 (ATEX) environment condition with air cooling and/or shielding for Vistus® with EC separator

Metal detector opening	17,2	21,6	26,9
-EC	10	15	20
ID	100	150	200
Di PP	90,0	141,8	177,2
Di ESD	97,4	141,8	177,2
T PP	10,0	9,1	11,4
T ESD	6,3	9,1	11,4
L1	947	1308	1563
L2	525	838	982
A	355	395	482
B	250	260	310
C	160	160	200
D	160	160	200
S	138	173	215

Technical data for Vistus® with EC separator

Supply pressure	4.0 bar to 10.0 bar overpressure	
Operating medium	Compressed air as per ISO 8573-1:2010 [7:4:4]	
Operating pressure	Min. 4.5 bar to max. 6.0 bar overpressure	
Air consumption - Up to ID 200 - ID 250 and ID 300	Approx. 0.3 litres per separation Approx. 0.5 litres per separation	
Solenoid valve for compressed air connection	G 1/4" internal thread for plastic tube 10 mm, connection venting aperture M5	
Compressed air tank	G 1/2" with connection for plastic tube 14 mm (included in purchase price when purchasing complete system with separator)	
Pressure relief valve	Provided free of charge to protect your system	
Recommended on-site compressed air quality	Particulate matter class 4 Water class 2 Oil class 2	(Quality classes as per PNEUROP recommendation 6611)
Drop height	Max. distance to inlet flange for starting speed $v = 0$ m/s depending on the relevant inner diameter (ID) in mm (greater drop heights require larger installation dimensions)	
Solenoid valve - Supply voltage - Activation	5/2-way valve monostable Choice of 230 V _{AC} or 115 V _{AC} 50/60 Hz or 24 V _{DC} standard or 48 V _{DC} (please specify any deviations from the standard (24 V-DC) upon order) via 'Metal' relay on evaluation electronics	
Protection class	IP65 (IP69K available upon request)	
Supply voltage	90 V to 260 V	
Explosion protection	Version approved for II 1/3D c T120° -5°C <- Ta <-+40°C	
User interface	145 mm (5.7") touchscreen Password-protected, user-specific access to dialogues that are organised and adapted by functional areas Automatic teach-in function	
Relay outputs	Total of 4 relays ---> relays 1, 3 and 4 freely programmable Relay 2 'Error': fixed assignment	
Relative air humidity	Operation: < 58% at +55°C Storage: < 30% at +70°C, 0% to 90% condensation-free	
Ambient temperature	Operation: -10°C to +55°C	
Product temperature	-30 to +55°C, up to +150°C with air cooling	
Data interfaces	TCP IP, RS232, RS422, CAN bus, fieldbus and Profibus	
Network connection	Ethernet	
Options	Ext. acknowledge button, login using fingerprint sensor, remote control, end position monitoring, USB printing and much more	

This technical data serves only as a product description and should not be interpreted as a legally binding quality guarantee.

We reserve the right to make technical modifications.
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