



sartorius intec

A Minebea Group Company

The proven standard model

Freefall Metal Detection System Vistus® with ST separator



Benefits

ST separator

- Dust-proof design for minimal product loss and increased efficiency

Freefall Metal Detection System Vistus®

- Maximum detection sensitivity
- True In-Process Validation
- Quality pipes certified to food standards
- Efficient separation systems
- Minimal installation height
- Easy installation and operation



The innovative Freefall Metal Detection System Vistus®, in combination with the ST separator, provides reliable, dust-proof detection of metal foreign bodies in the product flow.

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.



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.



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.



When combined with the **dust-proof standard model of the ST separator**, Vistus® targets fine-grained and dusty products to minimise their appearance on the production line. This reduces product losses and in turn increases efficiency.

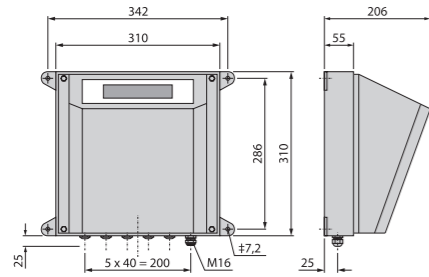
Freefall Metal Detection System Vistus® with ST separator

The ST separator is used to configure your Freefall System Vistus® for applications involving fine-grained and dusty products. The additional seal on the internal flap reduces product losses and therefore increases efficiency.

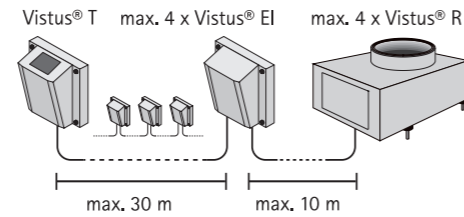
By choosing a combination of search coil, pipe and optional True In-Process Validation you can customise your metal detection system to meet your specific needs.

Control unit

Vistus® E remote terminal
Scale drawing

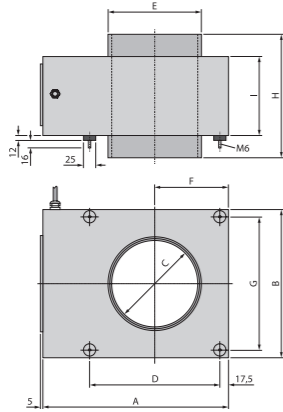


One control unit is suitable for connecting up to four search coils



Search coil options

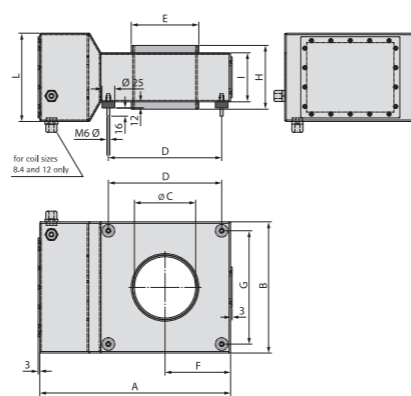
Vistus® R search coil
Scale drawing



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.

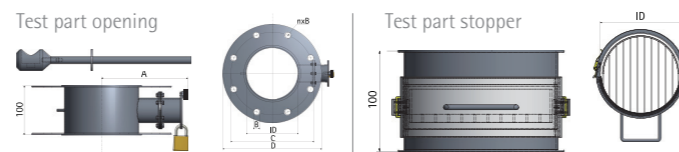
ESD: meets food safety requirements thanks to health clearance as per EU regulations (nos 10/2011 and 1935/2004). The ESD pipe continually neutralises static charging.

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

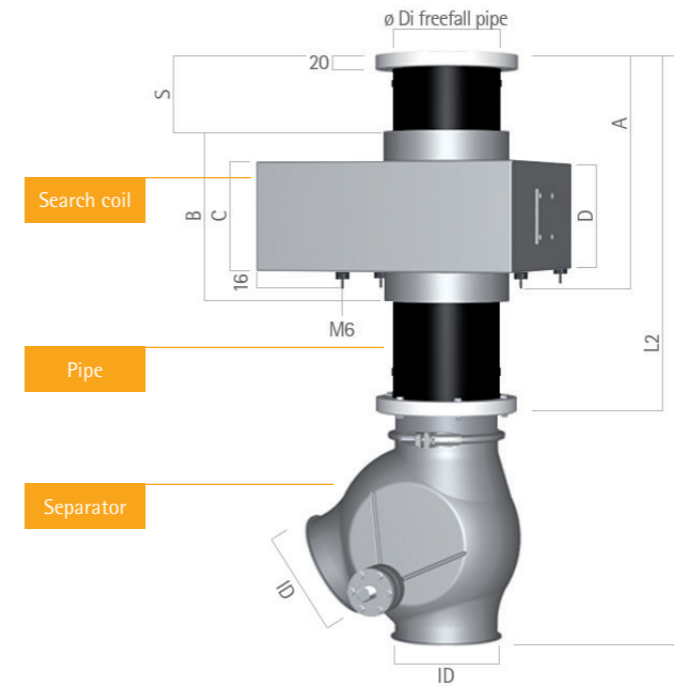


ID	A	B	C	D	n
100	139	18	180	220	8
150	166	18	240	285	8
200	192,5	22	295	340	8
250	218	22	350	395	12
300	243,5	22	400	445	12

Ask us about our suitable test part range.

Complete system: Vistus® with ST separator

Scale drawing



Version with reduced metal-free zone for Vistus® with ST separator

Metal detector opening	12	17,2	21,6	26,9	34,1
ID	100	150	200	250	300
Di PP	96,8	152,2	190,2	237,8	299,6
Di ESD	97,4	141,8	177,2	221,6	279,2
T PP	6,6	3,9	4,9	6,1	7,7
T ESD	6,3	9,1	11,4	14,2	17,9
L1	575	767	1183	1395	1689
L2	343	427	737	883	1060
A	199	281	349	432	544
B	125	180	225	280	355
C	96	138	173	215	273
D	173	173	173	215	215
S	77	110	138	172	218

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

Metal detector opening	17,2	21,6	26,9	34,1	34,1
ID	100	150	200	250	300
Di PP	96,8	152,2	190,2	237,8	299,6
Di ESD	97,4	141,8	177,2	221,6	279,2
T PP	6,6	3,9	4,9	6,1	7,7
T ESD	6,3	9,1	11,4	14,2	17,9
L1	649	1058	1310	1553	1689
L2	417	718	864	1041	1060
A	281	349	432	544	544
B	180	225	280	355	355
C	138	173	215	273	273
D	173	173	215	215	215
S	110	138	172	218	218

Standard version for Vistus® with ST separator

Metal detector opening	12	17,2	21,6	26,9	34,1
ID	100	150	200	250	300
Di PP	96,8	152,2	190,2	237,8	299,6
Di ESD	97,4	141,8	177,2	221,6	279,2
T PP	6,6	3,9	4,9	6,1	7,7
T ESD	6,3	9,1	11,4	14,2	17,9
L1	664	865	1213	1414	1688
L2	432	525	767	902	1059
A	308	355	395	482	545
B	240	250	260	310	320
C	125	160	160	200	200
D	125	160	160	200	200
S	96	138	173	215	273

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 shielding and/or air cooling for Vistus® with ST separator

Metal detector opening	17,2	21,6	26,9	34,1	34,1
ID	100	150	200	250	300
Di PP	96,8	152,2	190,2	237,8	299,6
Di ESD	97,4	141,8	177,2	221,6	279,2
T PP	6,6	3,9	4,9	6,1	7,7
T ESD	6,3	9,1	11,4	14,2	17,9
L1	757	1088	1329	1552	1688
L2	525	748	883	1040	1059
A	355	395	482	545	545
B	250	260	310	120	320
C	160	160	200	200	200
D	160	160	200	200	200
S	138	173	215	273	273

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

Metal detector opening	12	17,2	21,6	26,9	34,1
ID	100	150	200	250	300
Di PP	90,0	141,8	177,2	230,6	290,6
Di ESD	97,4	141,8	177,2	221,6	279,2
T PP	10,0	9,1	11,4	9,7	12,2
T ESD	6,3	9,1	11,4	14,2	17,9
L1	714	874	1306	1516	1799
L2	482	534	860	1004	1170
A	308	355	395	482	545
B	240	250	260	310	320
C	125	160	160	200	200
D	125	160	160	200	200
S	96	138	173	215	273

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

Metal detector opening	12	17,2	21,6	26,9	34,1
ID	100	150	200	250	300
Di PP Di ESD	90,0 97,4	141,8 141,8	177,2 177,2	230,6 221,6	290,6 279,2
T PP T ESD	10,0 6,3	9,1 9,1	11,4 11,4	9,7 14,2	12,2 17,9
L1	639	840	1275	1497	1800
L2	407	500	829	985	1171
A	199	281	349	432	544
B	125	180	225	280	355
C	125	160	160	200	200
D	125	160	160	200	200
S	77	110	138	172	218

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

Metal detector opening	17,2	21,6	26,9	34,1
ID	100	150	200	250
Di PP Di ESD	90,0 97,4	141,8 141,8	177,2 177,2	230,6 221,6
T PP T ESD	10,0 6,3	9,1 9,1	11,4 11,4	9,7 14,2
L1	757	1178	1428	1660
L2	525	838	982	1148
A	355	395	482	545
B	250	260	310	320
C	160	160	200	200
D	160	160	200	200
S	138	173	215	273

Technical data for Vistus® with ST 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, field bus 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
Publication No: AA-2014-e15101
Order No: 9498 710 00141
Date 12/2015

Sartorius Mechatronics C&T GmbH & Co. KG
Am Gut Wolf 11
52070 Aachen, Germany
Telefon +49.241.1827.0
Fax +49.241.1827.213
sales.ac@sartorius-intec.com
www.sartorius-intec.com