

X-ray inspection system Dypipe

X-ray and separation for products in pipeline applications



! Benefits

- Variety of separators available
- Easy installation and operation
- Prevents product recalls and facilitates the productivity of your production line
- Intuitive, time-saving operation
- Easy installation and integration into networks
- Special features for meat applications

The X-ray inspection system Dypipe guarantees extremely high levels of safety for pumped paste-like, viscous or liquid products. High flexibility is given by various separators, connections and mounting options.

Reliable detection for products in pipeline applications

- ① Dypipe reliably detects metal, stone, plastic, bone and glass foreign objects and reliably excludes imperfect or contaminated products.
- ① The X-ray inspection system Dypipe can be integrated into any network via SPC@Enterprise, OPC-UA, ModBus and Ethernet.
- ① Increase operating time with Dypipe: The intuitive user interface reduces operating errors to a minimum. New products can be configured quickly and conveniently.
- ① Dypipe for meat is a high pressure system with an easy open separator, specifically designed for meat-like products.

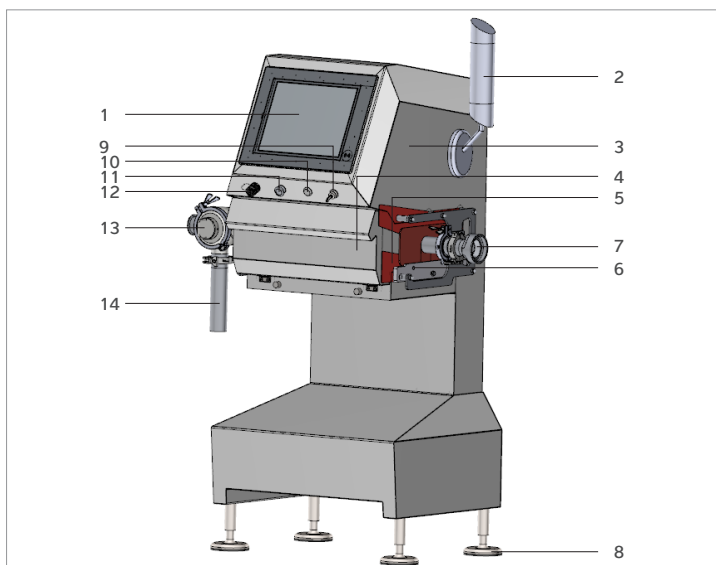
Technical specifications

Technical data – X-ray inspection system Dypipe				
	NW50 ¹	NW65	NW80	NW100
Protection class	IP65 optional IP69			
Nominal width (mm)	50, 65, 80, 100			
Infeed height	990 mm +/- 100 mm			
Weight	Approx. 315 kg			
Throughput capacity Q (m³/h)	3.5	6.0	9.0	14.0
Throughput/Product speed v max (m/s)	0.5	0.5	0.5	0.5
X-ray power	65 kV 1 mA			
Detector resolution	0.8 mm (standard) 0.4 (optional)			
Approvals	CE			
Safety locks	SIL 3 Category IV PL e, magnetic			
User interface	15-inch touchscreen			
Operating temperature	+5° to 35°C			
Machine cooling	Fan			
Relative air humidity	20% to 90%, no condensation			
Digital outputs	16 available			
Digital Inputs	16 available			
USB port	Yes			
Network connection	Ethernet			
Compressed air supply	5.5 to 6.9 bar			
Radiation safety	FDA CFR 21 part 1020.40			
Electrical supply	230 VAC ± 10% 50/60 Hz (standard) / 190 to 240 VAC 50/60 Hz (optional)			

¹ Also available for meat applications

System configuration

Dypipe is designed to meet the high sensitivity and hygiene requirements of viscous and liquid food products such as sauces, jams, marmalade, baby food, minced meat, etc. In order to cover a wide range of applications, the product can be configured to suit the most demanding customers' requirements. The following overview shows the modular design of the system with its optional components:



No.	Description
1.	Control panel
2.	Signal lamp
3.	Cabinet and PC
4.	Access door to the product inspection room
5.	Radiation shield to the product inspection room
6.	Connection to the test piece insertion
7.	Transport tube
8.	Frame feet
9.	X-ray button
10.	Button „System activation“
11.	Emergency stop button
12.	USB connection
13.	Separator unit
14.	Intervention protection

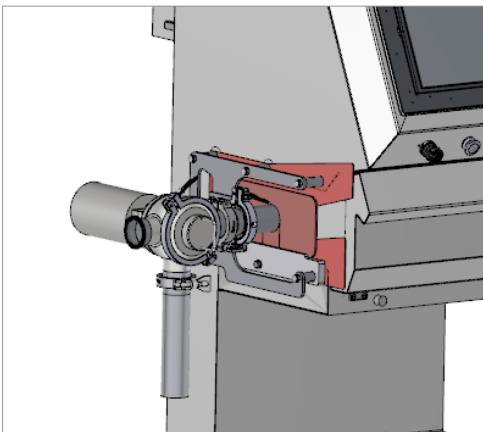
Dypipe connection standards

There are different flanges available depending on the application (non-meat, meat).

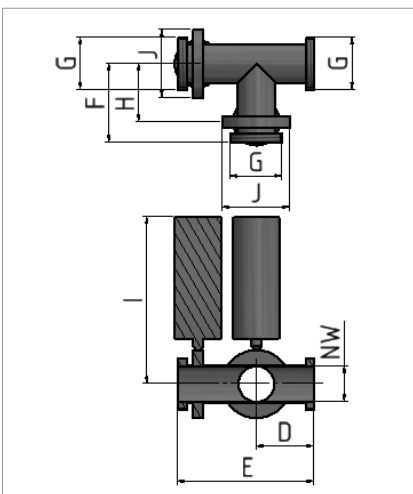
Flanges Fe 1.4301 (AISI 304)	
Dypipe standard applications (Separator AMV and ABV)	Dypipe meat applications (only ABV separator)
Dairy Thread DIN 11851	Vemag HP
Tri-clamp DIN 32676	Handtmann VF quick-opening
	Handtmann VF nipple flange
	Dairy thread flange DIN 11851
	Tri-clamp flange ISO 2852
	Handtmann ball flange
	Weld-on end
	Vemag DP flange

Separator unit

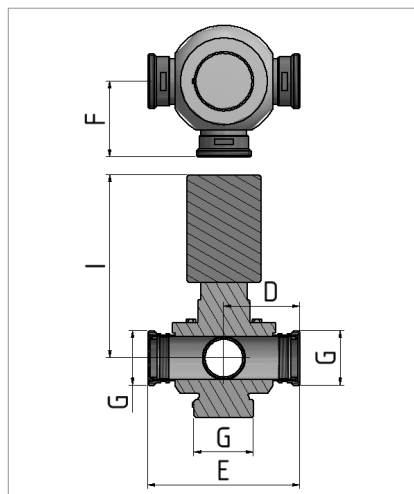
There are two separators available: Multi-way flap valve (AMV) and Arc valve (ABV)



Specification	AMV	ABV
Homogeneous liquid and viscose products	•	•
Liquid and viscous mass with soft solids ≤ 2 mm	•	•
Liquid and viscous mass with soft and hard solids ≤ 15 mm	•	•
Liquid and viscous mass with fibrous solids		•
Piggable?		•



Pipe with dairy thread and multi-way flap valve separator AMV

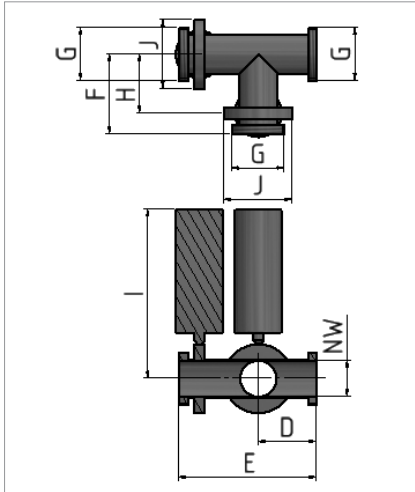


Pipe with dairy thread and arc valve separator ABV

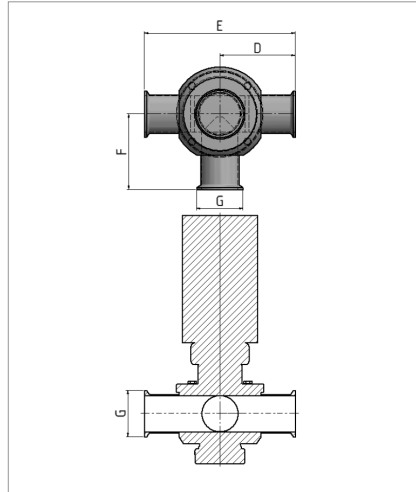
No.	Description
NW	Nominal width (inner diameter) product guide pipe (mm)
D	Distance from center point of contaminated line to start of separator (mm)
E	Length of separator (mm)
F	Distance from center point of good line until end of contaminated line separator (mm)
G	Outer diameter of flange (inches)
H	Center-to-center distance of operating units (mm)
I	Distance from center point of separator to gage block operating unit (mm)
J	Outer diameter of flange

Pipe with dairy thread and separator AMV							
NW	D	E	F	G	H	I	J
50	93	224	131	RD78 x 1/6"	95	241.5	109
65	105	248	143	RD95 x 1/6"	105	249	124
80	115	285	170	RD110 x 1/4"	120	258	142
100	136	320	184	RD130 x 1/4"	132	270	163

Pipe with dairy thread and separator ABV					
NW	D	E	F	G	I
50	89	179	94	RD78 x 1/6"	272.5
65	128	259.5	131.8	RD95 x 1/6"	318.5
80	123.5	250	131.5	RD110 x 1/4"	348.5
100	155.5	311	155.5	RD130 x 1/4"	364



Pipe with clamp flange and separator AMV



Pipe with clamp flange and separator ABV

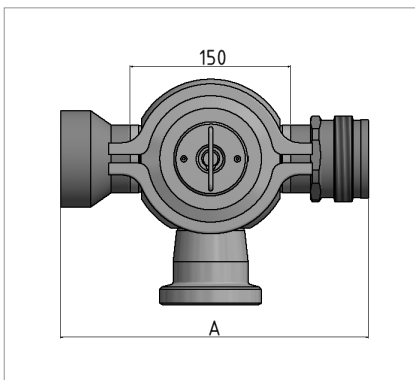
No.	Description
NW	Nominal width (inner diameter) product guide pipe (mm)
D	Distance from center point of contaminated line to start of separator (mm)
E	Length of separator (mm)
F	Distance from center point of good line until end of contaminated line separator (mm)
G	Outer diameter of flange (mm)
H	Center distance of operating units (mm)
I	Distance from center point of separator to gage block operating unit (mm)
J	Outer diameter of flange (mm)

Pipe with Tri-clamp flange and separator AMV							
NW	D	E	F	G	H	I	J
50	93	224	131	64	95	241.5	109
65	105	248	143	91	105	249	124
80	115	285	170	106	120	258	142
100	136	320	184	119	132	270	163

Pipe with clamp flange and separator ABV				
NW	D	E	F	G
50	104	208	104	64
65	138	276	138	91
80	143	286	143	106
100	158	316	158	119

Dypipe for meat applications:

For meat applications, the separator used is a 3-way-arc valve separator (ABV) with an easy open function that works at 6 bar.

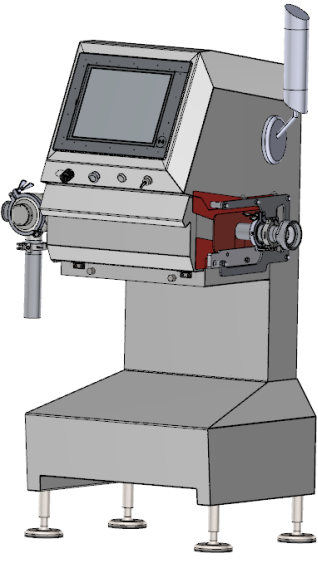
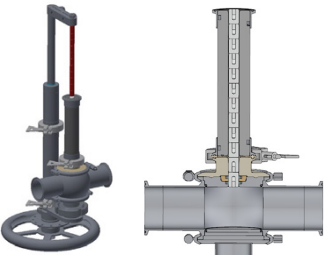
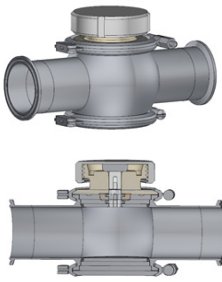


An additional assembly aid ensures a safe work environment for the operator

Separator ABV easy open		
Flange	NW	A
Vemag HP	50	268
Handtman VF quick open / Vemag DP	50	345
Dairy pipe thread	50	251
Tri-clamp	50	255
Handtmann ball	50	270

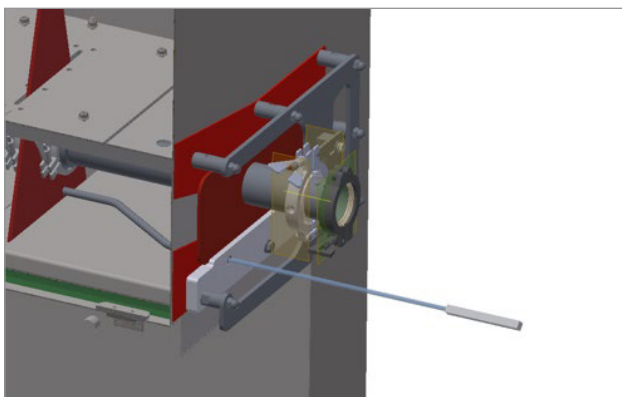
Real test piece insertion

The Dypipe system allows a real test piece validation by using an innovative test piece insertion.

<p>Dypipe</p> 	<p>Test piece unit TT multi</p>  <p>+</p> <p>or</p> <p>Test piece unit TT single</p> 	<p>Full test equipment for frequent system validation:</p> <ul style="list-style-type: none">■ Insertion of test piece in product flow■ Consecutive tests, thanks to test piece clip■ Validation during full production <p>Manual test equipment for punctual system validation:</p> <ul style="list-style-type: none">■ Insertion of test piece in product flow■ Simple design
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Flexible test rods

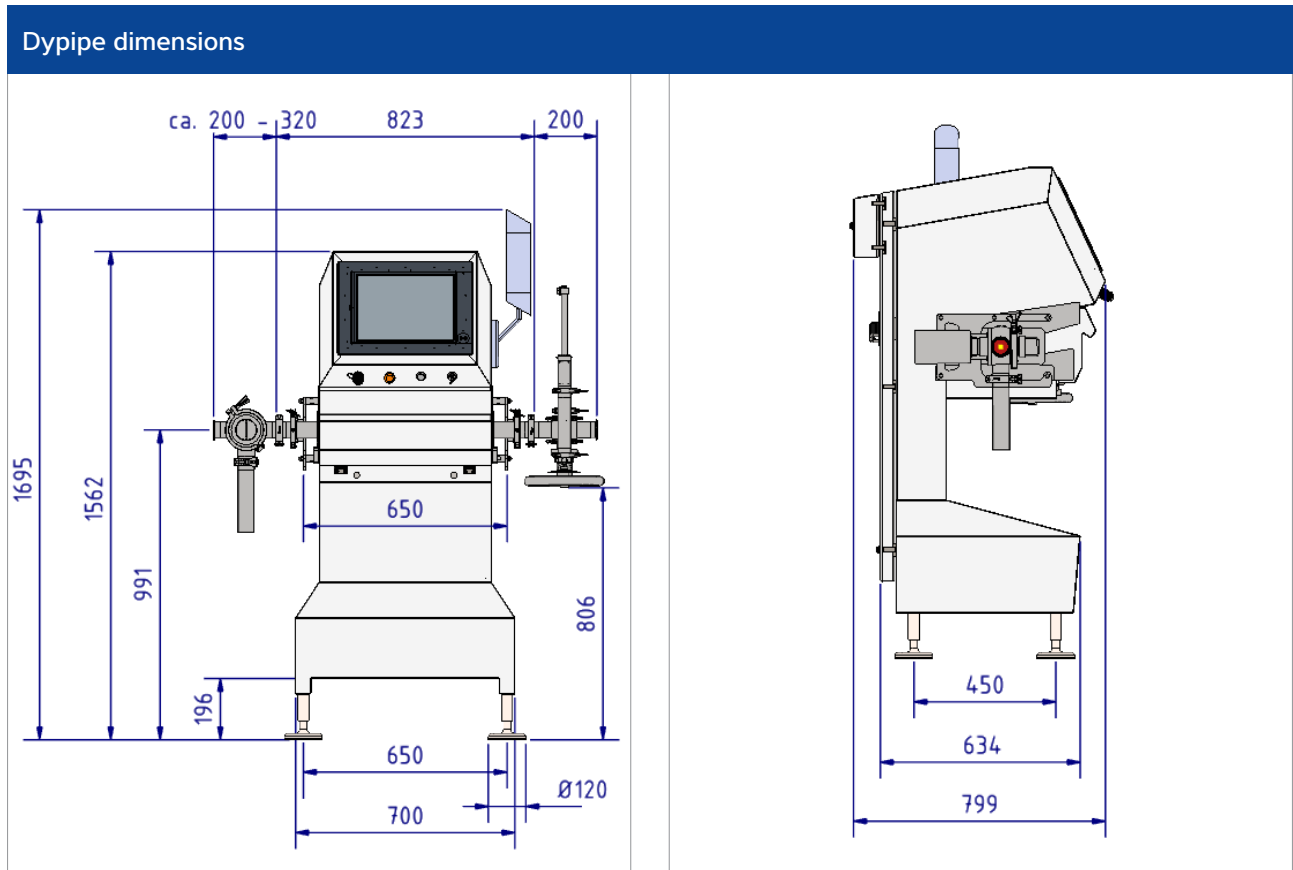
The flexible test rods have been specially developed for pipeline applications. The thin tube can be inserted in the machine and allows you to test the X-ray system in a way that no test piece insertion into the product stream is needed. The handle is manufactured with PTFE Grade 400 and the flexible stick with semi rigid Nylon. It is tested in accordance to FDA 177.1550 and EC 1935/2004.



Options

- Remote control
- Extended warranties
- Bar code reader
- Acoustic signal emitter
- Service contracts
- Feedback signal from Filler

Technical drawings



All dimensions in mm

The products and solutions presented in this data sheet make major contributions in the following sectors:



The technical data given serves as a product description only and should not be understood as guaranteed properties in the legal sense.

Specifications subject to change without notice
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