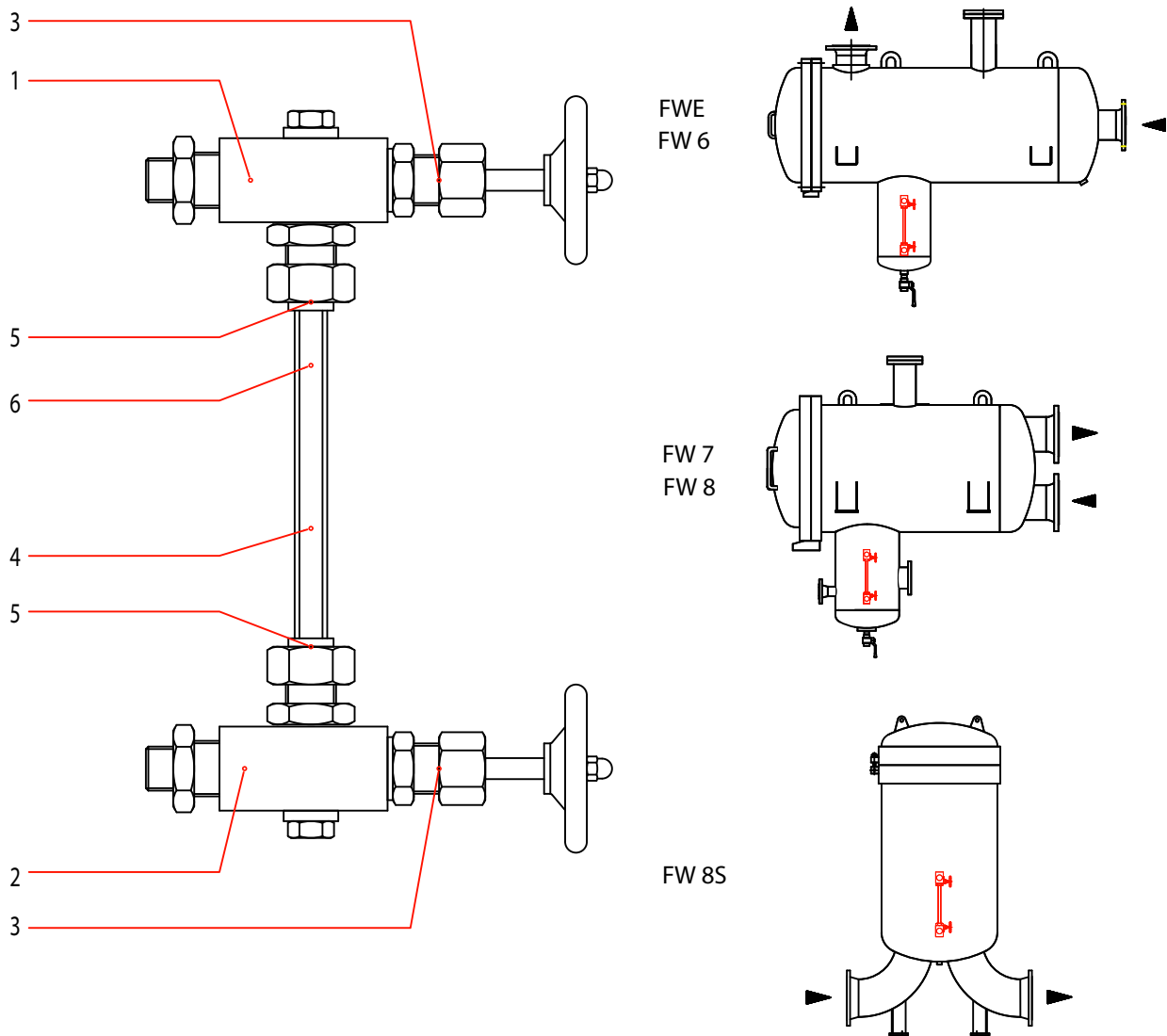


# PRODUCT CATALOGUE

Products for Aviation Applications  
- Vessel Accessories -



# Z-3.2 Water Level Indicator



ACCESSORIES

## Construction

The water level indicator consists of reception and shutoff instruments (1) and (2). The shutoff cocks (3) are tightened and can be retightened by a screw cap. Between the cocks the sight glass (4) is inserted. The seals (5) can be retightened by means of a screw cap. Inside the glass tube is the ball (6), which floats on the water/fuel interface and indicates the water level. A slot tube protects the glass tube.

## Maintenance

Retighten the cap nut respectively replace the seals on leaks.

Pos.	Qty.	Designation	Material	Article no.	Spare part	Subject to wear
	1	Water Level Gauge (compl.)	-	300 119 6	X	
1	2	Shut off instrument R ½"	Stainless Steel	887 421 6	X	
2	1	Angle Profil	Edelstahl	300 256 1	X	
3	2	Seal for shut off cock (package)	FAW 205	898 246 4		X
4	1	Sight glass Ø16 mm	DURAN 50	887 418 2	X	
5	2	Seal for sight glass	VITON®	941 813 8		X
6	1	Ball Ø7 mm, coloured	PP-H	886 570 1	X	

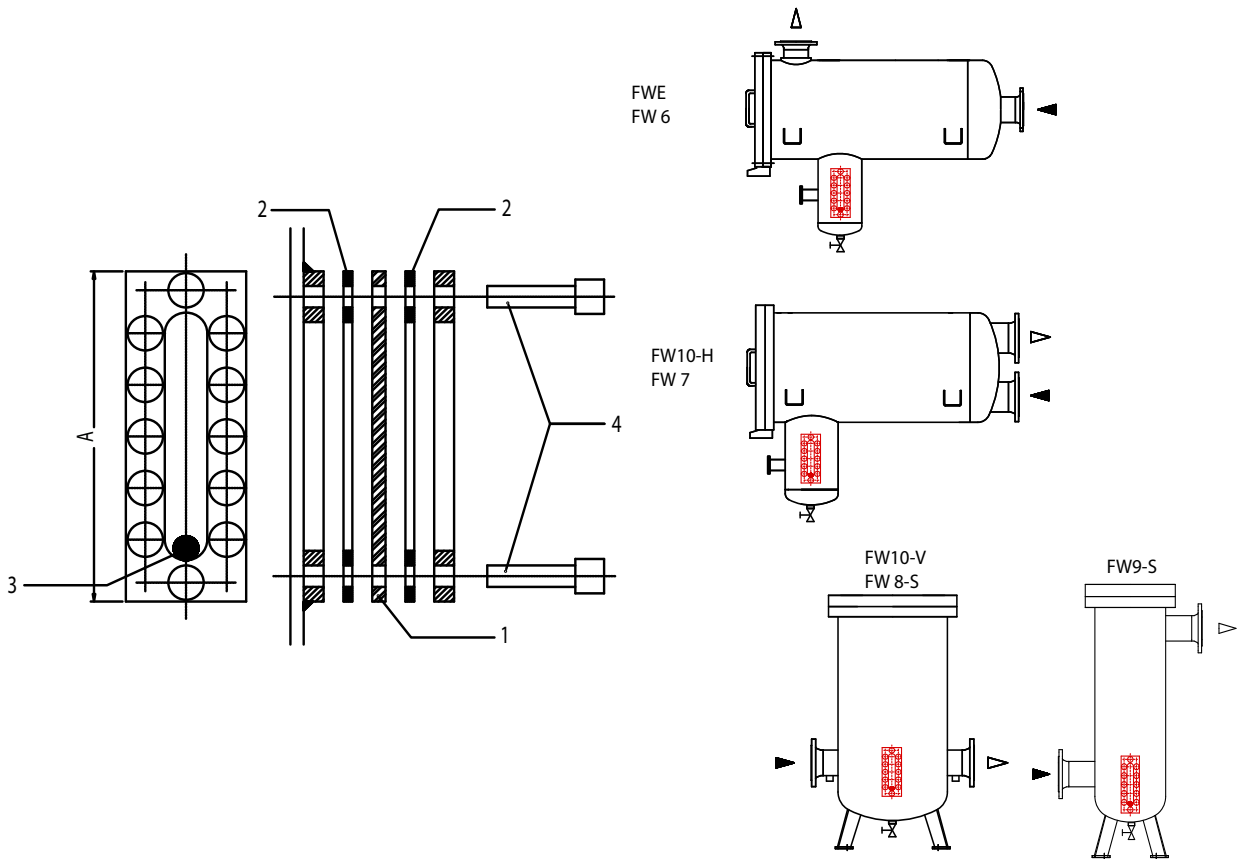
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# Z-3.4 Frame Type Sight Glass



## Construction

The sight glass consists of a welded on- and a blind frame, sight glass (1), seals (2), ball (3) and hexagonal screws (4). The sight glass (1) is inserted together with the seals (2) between the welded on- and blind frame and fastened by means of cylindrical screws (4). Inside the sight glass there is a ball (3) floating on the interface water/fuel and indicating the water level.

## Maintenance

In case of leakage, check seals (2) and retighten the cylindrical screws (4).

Pos.	Qty.	Designation	Material	Article no.	Spare part	Subject to wear
1	1	Sight glass	related to the vessel		X	
2	2	Seal	related to the vessel			X
3	2	ball Ø 7 mm, colored	PP-H	886 570 1	X	

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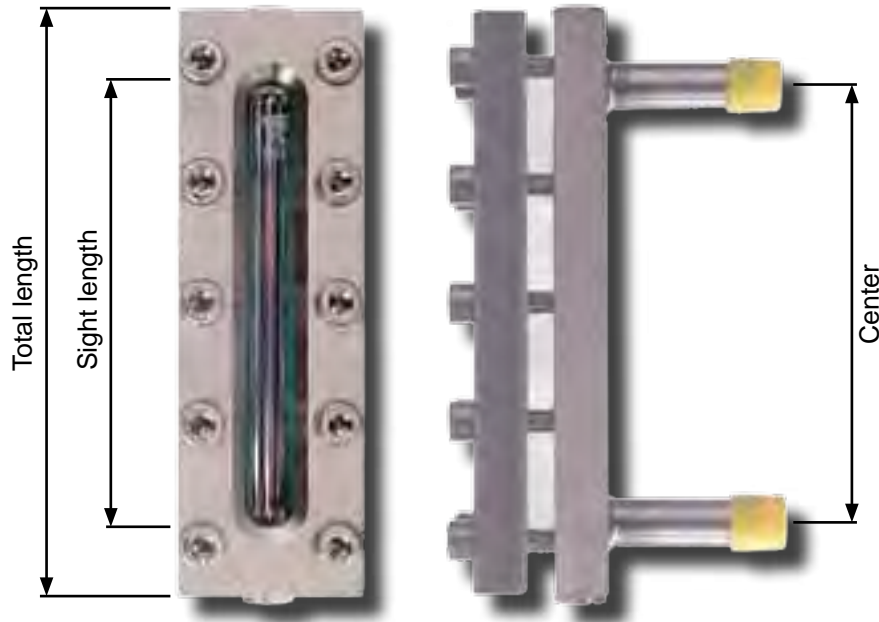




# Z-3.5 Water Level Indicator

## Applications

Water level indicator for mobile and stationary applications. For indicating the fluid level in tanks or vessels with a design pressure up to 40 bar.



Designed with sockets ( $\varnothing$  20 mm) on the back side. Other sizes on request.  
The indicator is consisting of the support frame with a closed base, deck frame, sheet, seal, screws and sockets.

## Technical Details

- Temperatur Range: -20°C to +160°C, resp. -50°C to +200°C
- Sealing:
  - Klingersil C 4400 (for -20°C - +160°C)
  - Graphite/Tanged Steel (for -50°C - +200°C)
- Max. Design pressure: 16/40 bar
- Support Frame: Stainless Steel (1.4571)
- Deck Frame: Stainless Steel (1.4571)
- Fastening: Stud, Nut (Stainless Steel)
- Sheet: Borosilicate Glas DIN 7081, reflex

## Dimensions and Ordering Details

Total Length in mm	Sight Length in mm	Center in mm <sup>*1</sup>	Quantity of Screws	Temperatur Range in °C	Article Code (16 bar)	Article Code (40 bar)
170	120	120	8	-20 to +160	300 57 32	300 68 02
170	120	120	8	-50 to +200	300 57 33	300 68 03
250	200	200	12	-20 to +160	300 57 35	300 68 05
250	200	200	12	-50 to +200	300 57 34	300 68 04

<sup>\*1</sup> Must be minimum 50 mm less than total length

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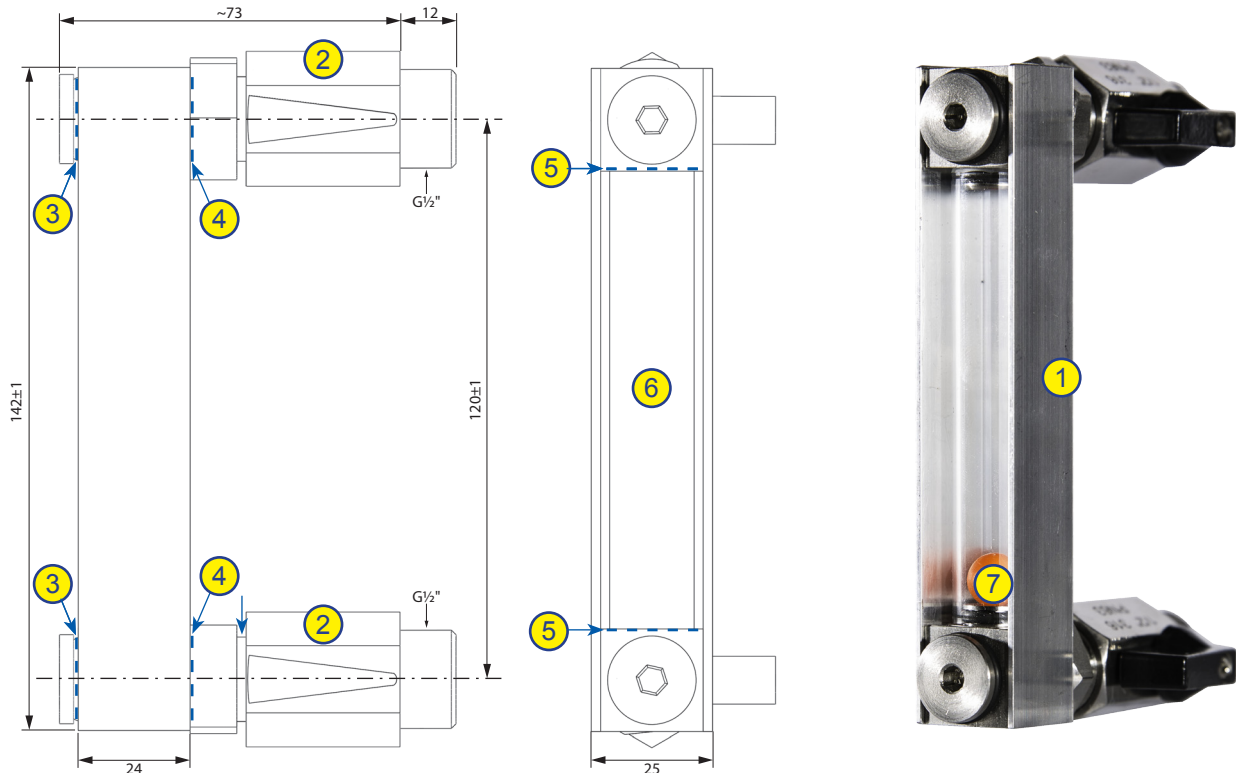




# Z-3.6 Water Level Indicator

## Application

Water level indicator for mobile and stationary applications. For indicating the fluid level in tanks or vessels with a design pressure up to 16 bar.



## Technical Details

Max. Design Pressure: 232 psi (16 bar)

Material: Stainless Steel or Aluminum

Sealings: FKM (Viton®)

## Maintenance

Pos.	Qty.	Designation	Material	Article No.	Spare Part	Subject of wear
1	1	Water Level Indicator (compl.)	Stainless Steel	3 012 364	X	
			Aluminum	3 012 359		
2	2	Shut off instrument	Stainless Steel	3 012 353	X	
3	2	O-Ring Ø12,37x2,62	FKM (Viton®)	8 874 166		X
4	2	O-Ring Ø10,69x3,53	FKM (Viton®)	3 012 349		X
5	2	O-Ring Ø18 / Ø6x2	FKM (Viton®)	3 012 350		X
6	1	Sight Glass	Duran	3 012 348	X	
7	1	Ball Ø12, orange	PPH	3 012 332	X	

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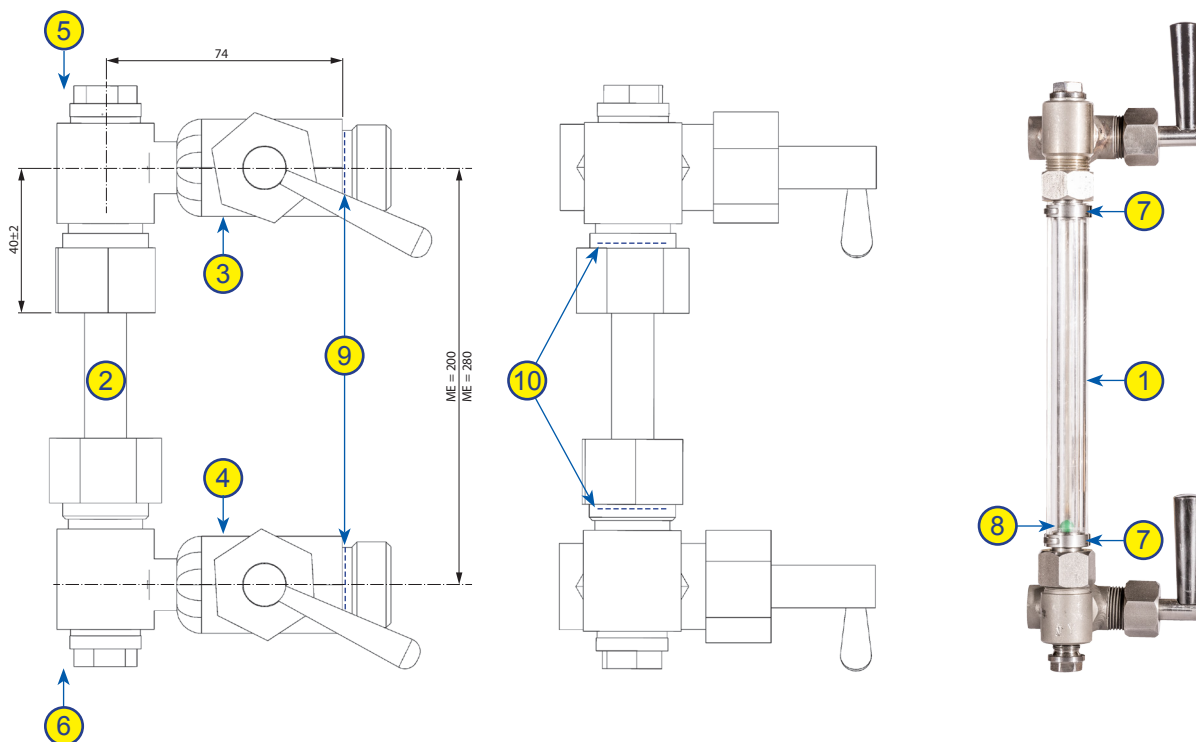




# Z-3.7 Water Level Indicator

## Applications

Water level indicator for stationary applications. For indicating the fluid level in tanks or vessels with a design pressure up to 16 bar.



## Technical Details

Max. Design Pressure: 580 psi (40 bar)

Material: Stainless Steel or Aluminum

Sealing Material: FKM (Viton®)

## Maintenance

Pos.	Qty.	Designation	Material/Version	Article No.	Spare Part	Wear part
1	1	Water Level Indicator (compl.)	ME = 200 mm	3 012 406	X	
			ME = 280 mm	3 012 407		
2	1	Glass Tube	ME = 200 mm	3 012 397	X	
			ME = 280 mm	3 012 402		
3	1	Außenschutzhülle Plexiglas	ME = 200 mm	3 012 404	X	
		Außenschutzhülle Plexiglas	ME = 280 mm	3 012 403	X	
4	1	Isolation Valve top	Edelstahl	3 012 399	X	
	1	Isolation Valve bottom	Edelstahl	3 012 398	X	
5	1	Locking Screw G 3/8" top	Edelstahl	3 012 400	X	
6	1	Locking Screw G 3/8" bottom	Edelstahl	3 012 405	X	
7	2	Hose Clamp 22,4-25,6 mm	Edelstahl	3 012 446	X	
8	1	Ball ø7, grün	PP-H	8 865 701	X	
9	2	Seal 21 x 17	Aluminium	6 047 963		X
10	2	Seal 12 x 12 x 10	FKM (Viton®)	3 012 606		X

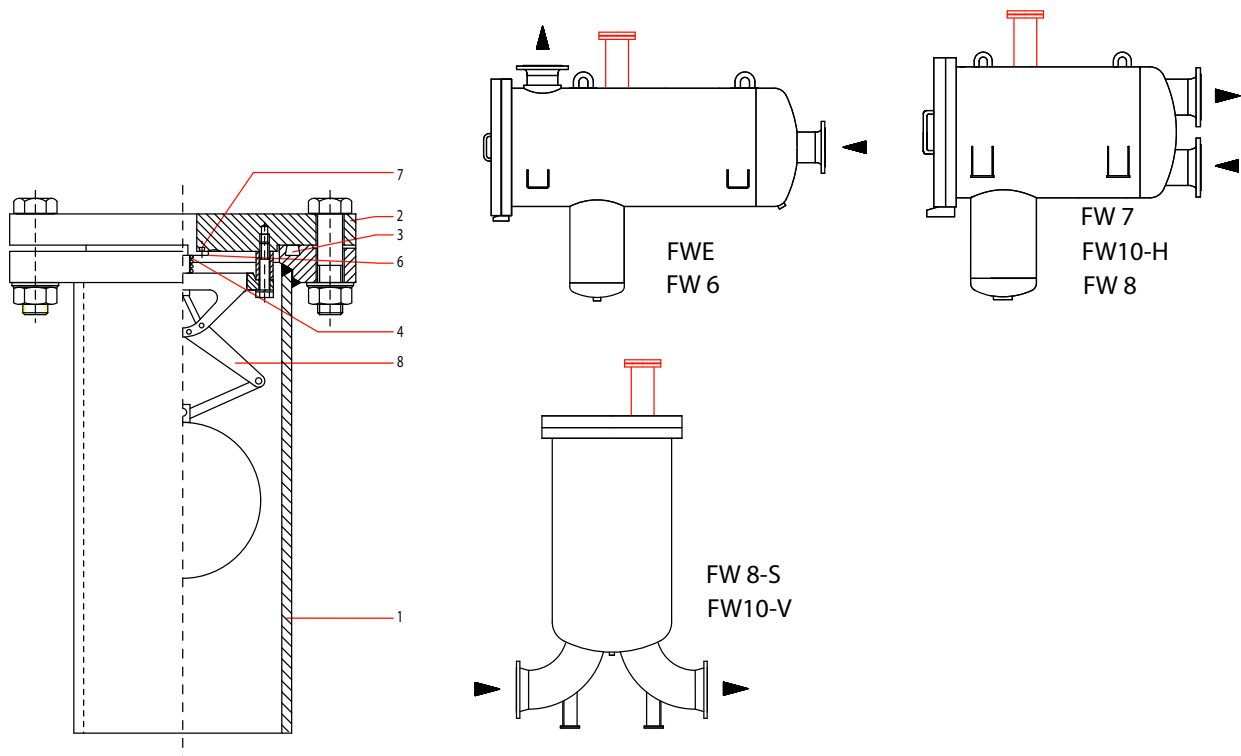
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# Z-4.1 Automatic High Efficiency Air Eliminator



## Construction

The air eliminator consists of a casing (1) welded to the pressure vessel, cover (2), cover seal (3), main valve (6) with seal (7), servo valve (4) with seal (5) and bridge with rods and float ball (8).

## Function

In an unfilled condition the float is in the low position. The servo valve and the main valve is opened filling the unit, the displaced air is discharged, the float shuts the servo and the main valve by means of the rods. In case of presence of air or gas bubbles during operation, the float of this double stage first opens the servo-valve and at high quantities of air the main valve with an opening diameter of 18 mm.

## Maintenance

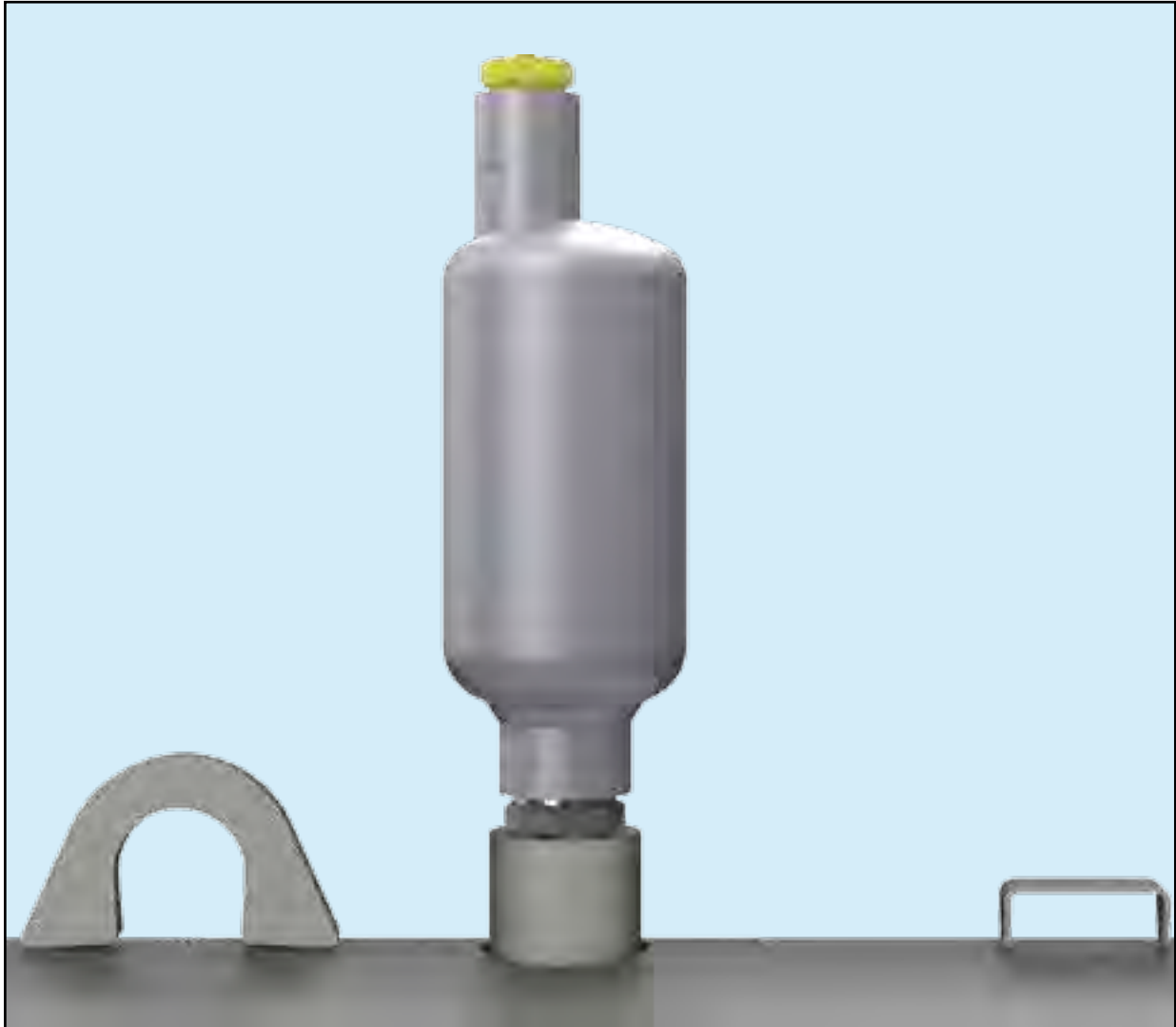
When the operation instruction is disregarded, troubles can occur. The interior of the unit is accessible for cleaning after removal of the cover. In case of malfunction the seals have to be renewed.

Pos.	Qty.	Designation	Material	Article no.	Spare part	Subject to wear
8	1	Rods with float ball	GALSi/1.4571	900 725 3	X	
3	1	Cover seal (sealing ring)	VITON®	886 994 3		X
5	1	O-ring for main valve	VITON®	920 822 4		X
7	1	O-ring for servo valve	VITON®	920 827 3		X

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## Construction

The aeration and deaeration valve consists of a housing completely welded and a float ball made of stainless steel.

## Function

In unfilled condition the float is in lower position and the deaeration valve is opened. When filling the pressure vessel the air escapes. When the liquid rises in the deaeration housing, the ball floats and the deaeration valve is closed. If air present during the operation process and thus descending of the ball, the valve opens for a short time so that the air can escape.

Pos.	Qty.	Designation	Material	Article No.	Spare Part	Subject to wear
1	1	Automatic Aeration Valve type 11-AV	Stainless Steel	897 280 4	X	
2	1	Double nipple R $\frac{3}{4}$ "	Stainless Steel	884 778 2	X	

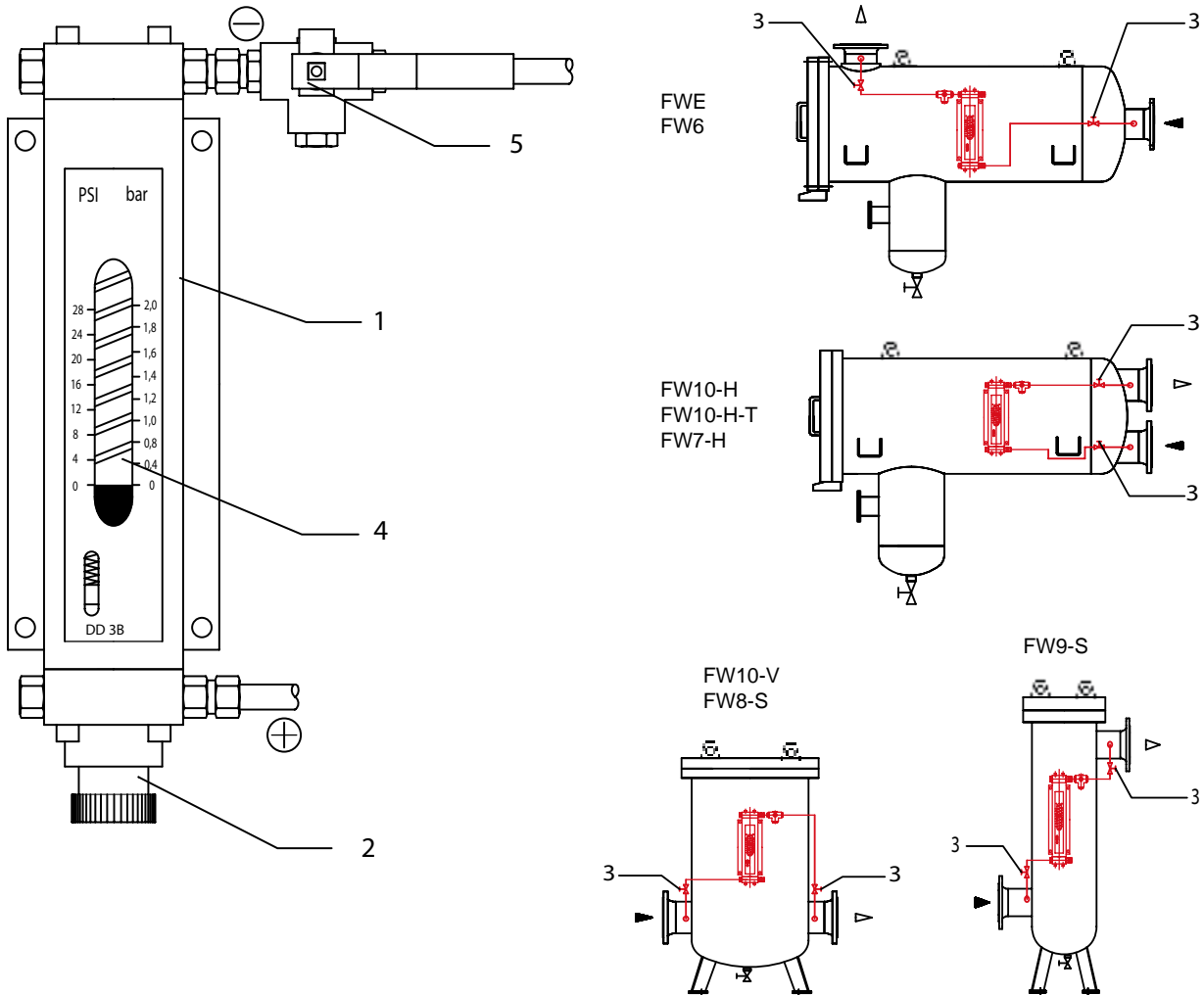
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# Z-5.1 Piston Type Differential Pressure Gauge



## Construction

The differential pressure measuring device consists of the precision differential pressure gauge (1) with built in protective filter (2), the shutoff valves (3) and the connecting pipes. The unit allows the reading of the entire differential pressure (1st and 2nd stage) of a filter/water separator. In order to avoid a possible bursting of the glass cylinder by pressure formation due to heat influence, at least one shutoff valve must always be open. The device vents automatically. With the 3 way ball valve you can check the function of the differential pressure gauge.

## Maintenance

If necessary, replace filter elements (2). Before opening and cleaning shut off the ball valves (3).

Pos.	Qty.	Designation	Material	Article no.	Spare part	Subject to wear
1	1	Piston differential pressure gauge	AL	887 667 4	X	
2	1	Filter element for item (1)	-	887 669 0		X
3	2	Ball valve	MS/VE/PTFE	300 320 6	X	
4	1	Sight glass	-	300 307 3		X
5	1	3-way ball valve	MS/VE/PTFE	300 351 7	X	

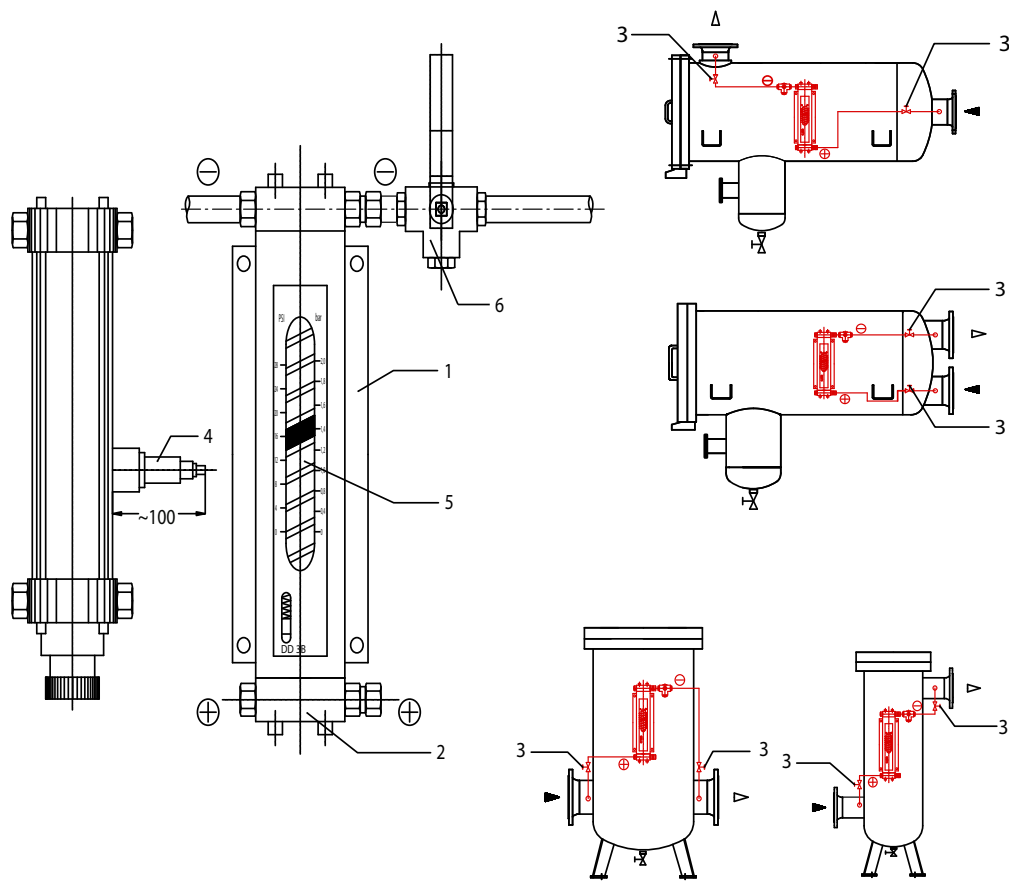
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# Z-5.2 Piston Type Differential Pressure Gauge



## Construction

The differential pressure gauge measuring device consists of the precision differential pressure gauge (1) with protective filter (2), the built on proximity switch (4), the ball valves (3) and the connecting pipes. The device allows the reading of the total differential (1<sup>st</sup> and 2<sup>nd</sup> stage). In order to avoid the bursting of the glass cylinder by pressure formation due to heat influence, at least one ball valve must always be open. The device vents automatically. The proximity switch allows an automatic switching off or signaling when reaching or exceeding the maximum differential pressure. With the 3 way ball valve you can check the function of the differential pressure gauge.

## Maintenance

If necessary, replace filter elements (2). Before opening and cleaning shut the ball valves.

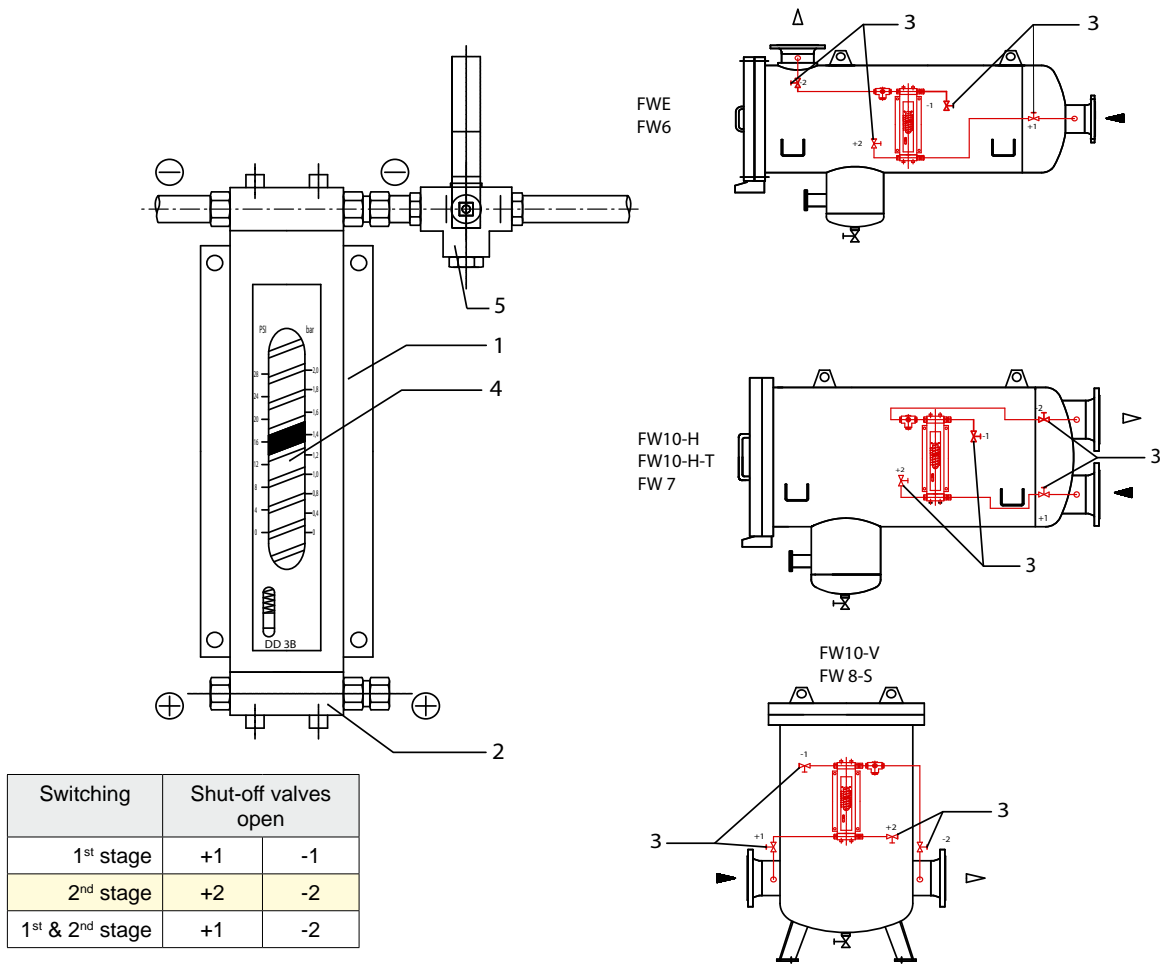
Pos.	Qty.	Designation	Material	Article no.	Spare part	Subject to wear
1	1	Piston differential pressure gauge	AL	887 668 2	X	
2	1	Filter element for item (1)	-	887 669 0		X
3	2	Ball valve	MS/VE/PTFE	300 320 6	X	
4	1	Proximity switch	-	890 786 7		X
5	1	Sight glass	-		X	
6	1	3-way ball valve	MS/VE/PTFE	300 351 7		

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# Z-5.3 Piston Type Differential Pressure Gauge



Switching	Shut-off valves open	
1 <sup>st</sup> stage	+1	-1
2 <sup>nd</sup> stage	+2	-2
1 <sup>st</sup> & 2 <sup>nd</sup> stage	+1	-2

## Construction

The differential pressure measuring device consists of a precision differential pressure gauge (1) with built in protective filter (2), the ball valves (3) as well as the connection pipes. The unit allows measuring according to chart. In order to avoid a possible bursting of the glass cylinder by pressure formation due to heat influence, at least one ball valve must always be open. The advice vents automatically. With the 3 way ball valve you can check the function of the differential pressure gauge.

## Maintenance

If necessary, replace filter element (2). Before opening and cleaning shut the ball valves (3).

Pos.	Qty.	Designation	Material	Article no.	Spare part	Subject to wear
1	1	Piston differential pressure gauge	AL	887 667 4	X	
2	1	Filter element for item (1)	-	887 669 0		X
3	4	Ball valve	MS/VE/PTFE	300 320 6	X	
4	1	Sight glass	-	300 307 3		X
5	1	3-way ball valve	MS/VE/PTFE	300 351 7	X	

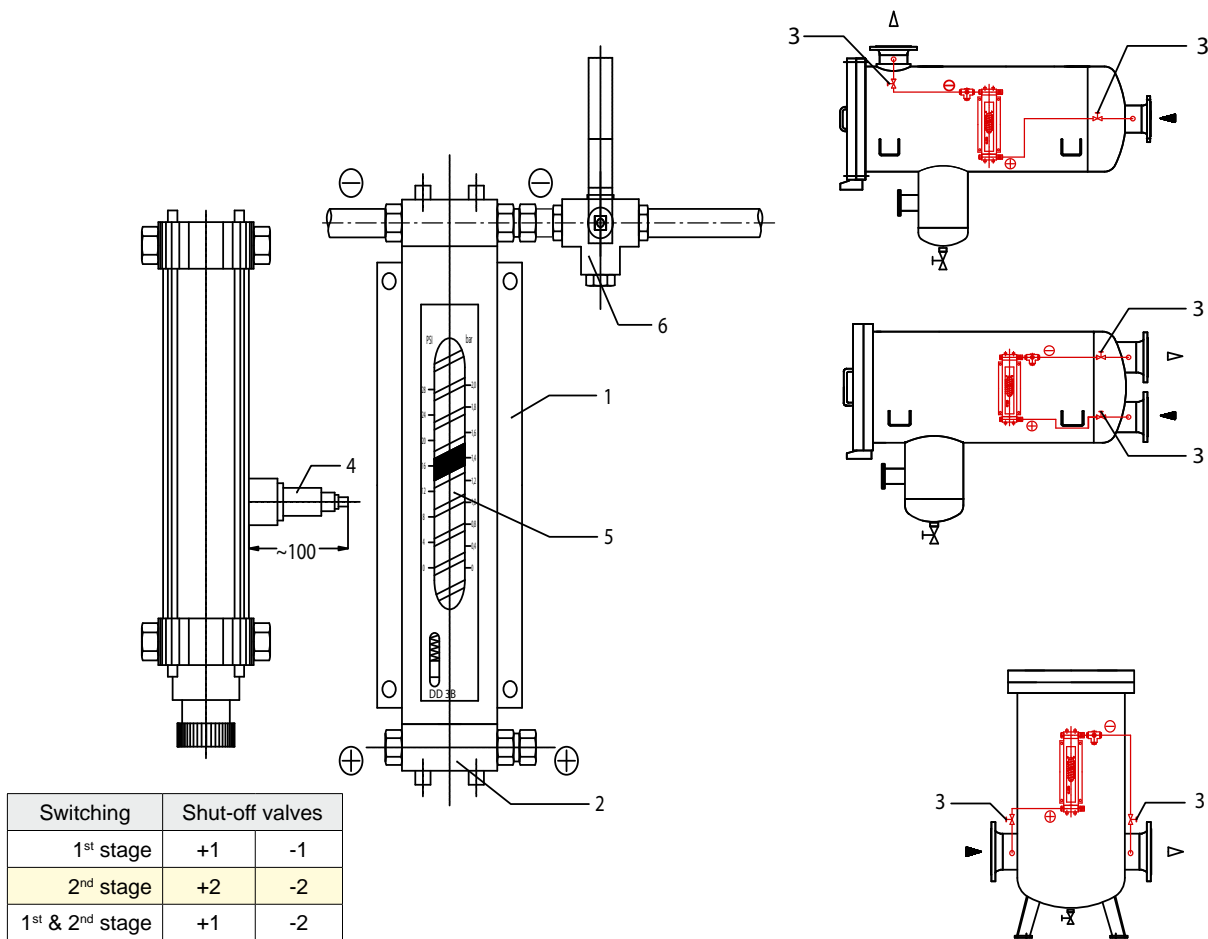
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# Z-5.4 Piston Type Differential Pressure Gauge



Switching	Shut-off valves	
1 <sup>st</sup> stage	+1	-1
2 <sup>nd</sup> stage	+2	-2
1 <sup>st</sup> & 2 <sup>nd</sup> stage	+1	-2

## Construction

The differential pressure measuring device consists of a precision differential pressure gauge (1) withbuilt in protective filter (2), the built on approximation initiator (4), the ball valves (3) as well as the connecting pipe lines. The unit allows measuring according to chart. In order to avoid a possible bursting of the glass cylinder by pressure formation due to heat influence, at least one ball valve must always be open. The device vents automatically. The approximation initiator allows an automatic switching off or signaling when reaching or exceeding the maximum differential pressure. With the 3 way ball valve you can check the function of the differential pressure gauge.

## Maintenance

If necessary, replace filter element (2). Before opening and cleaning shut the ball valves (3).

Pos.	Qty.	Designation	Material	Article no.	Spare part	Subject to wear
1	1	Piston differential pressure gauge	AL	887 668 2	X	
2	1	Filter element for item (1)	-	887 669 0		X
3	4	Ball valve	MS/VE/PTFE	887 610 4	X	
4	1	Proximity switch		890 786 7		
5	1	Sight glass	-	300 320 6		X
6	1	3-way ball valve	MS/VE/PTFE	300 351 7	X	

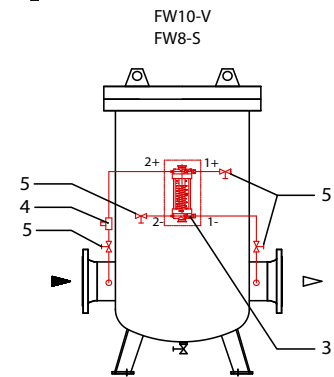
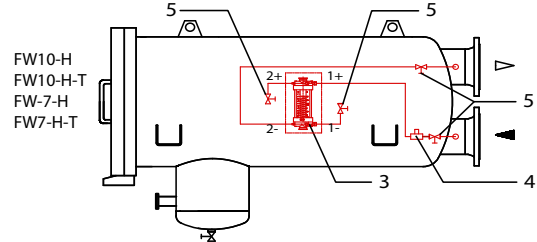
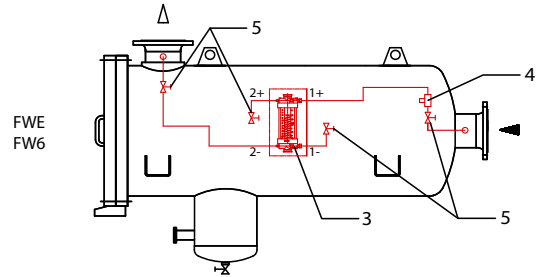
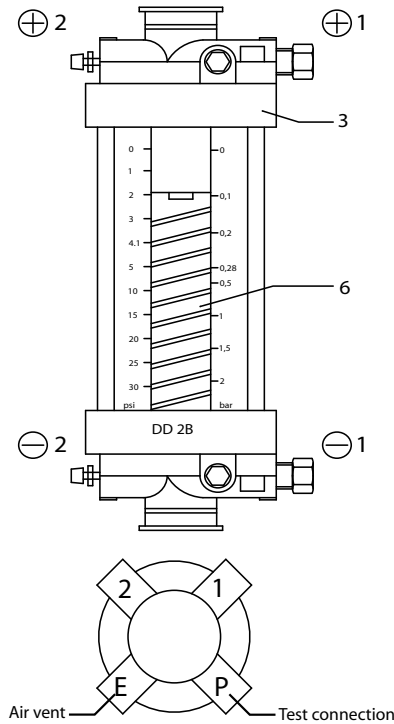
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# Z-5.5 Piston Type Differential Pressure Gauge



Switching	Shut-off valves	
1 <sup>st</sup> stage	1	1
2 <sup>nd</sup> stage	2	2
1 <sup>st</sup> & 2 <sup>nd</sup> stage	1	2
Air vent	E	E
Zero calibration	2	1

## Construction

The differential pressure measuring device consists of a precision differential pressure gauge (3), the protective filter (4), the shutoff valves (5) as well as the connecting pipes. In order to avoid a possible bursting of the glass cylinder by pressure formation due to heat influence, at least one shutoff valve must always be open. The unit allows measuring according to chart. For venting air vent nipples must be turned left until liquid comes out. Zero calibration must be made starting up for the first time and during every maintenance.

## Maintenance

Check the protective filter (4) every six months. If necessary, replace or clean. Before opening and cleaning close all shutoff valves.

Pos.	Qty.	Designation	Material	Article no.	Spare part	Subject to wear
3	1	Piston differential pressure gauge	AL	887 666 6	X	
4	1	Filter insert for protective filter	Synthetics	887 921 5		X
4	1	Seal for protective filter	-	-		X
5	4	Shut-off valve	1.4571	887 445 5	X	
6	1	Sight glass	-	300 320 6		X

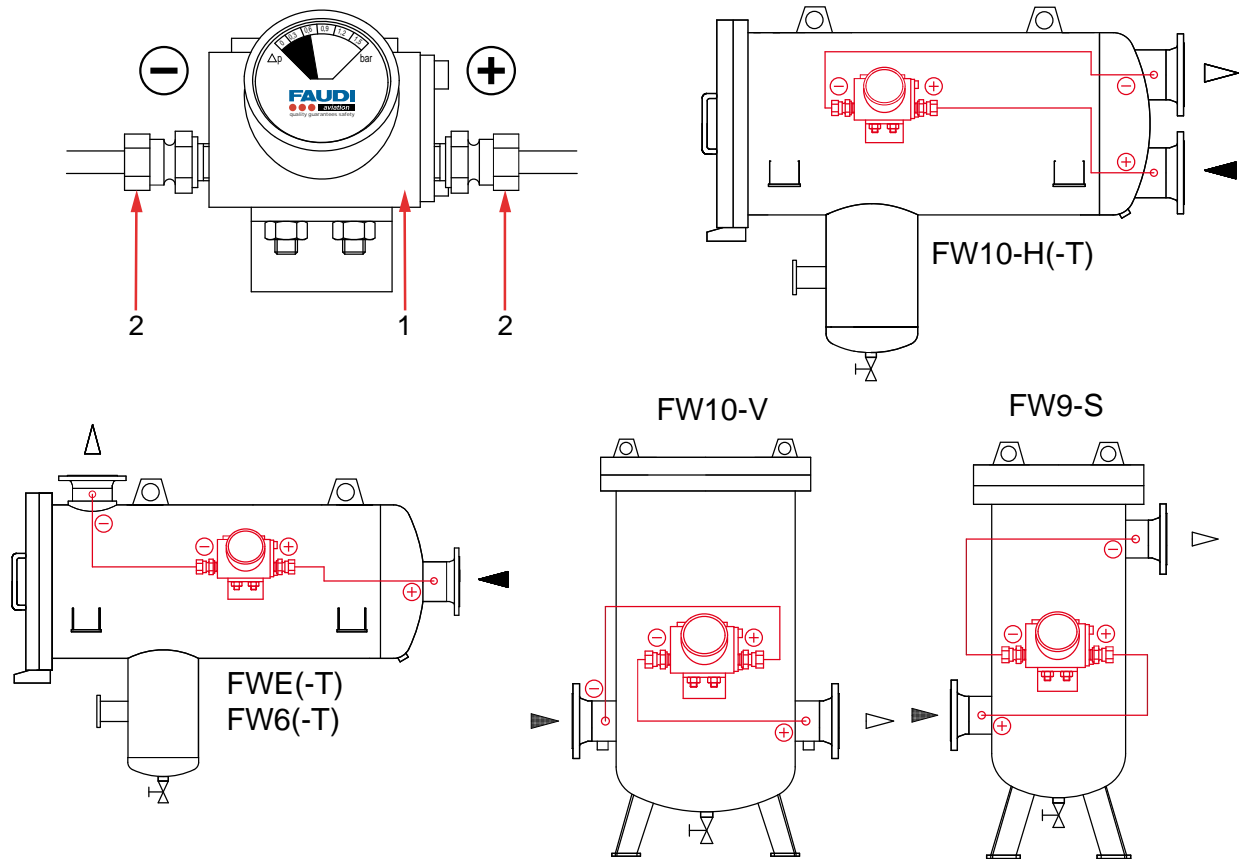
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# Z-5.8 Differential Pressure Gauge



## Construction

The differential pressure measuring device consists of the differential pressure gauge (1), the connecting pipes (3) and the boltings (2).

The device allows the reading of the total differential pressure (1st and 2nd stage).

Measuring range:  $D_p = 1,5 \text{ bar}$

Marking: at 70% = 1,1 bar

## Maintenance

The unit is maintenance-free. In case of leakages, check roller diaphragm and replace it if necessary.

Pos.	Qty.	Designation	Material	Article no.	Spare part	Subject to wear
1	1	Differential pressure gauge	-	887 653 4	X	
2	2	Bolting	-	300 264 9	X	

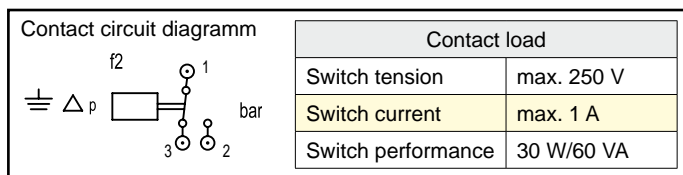
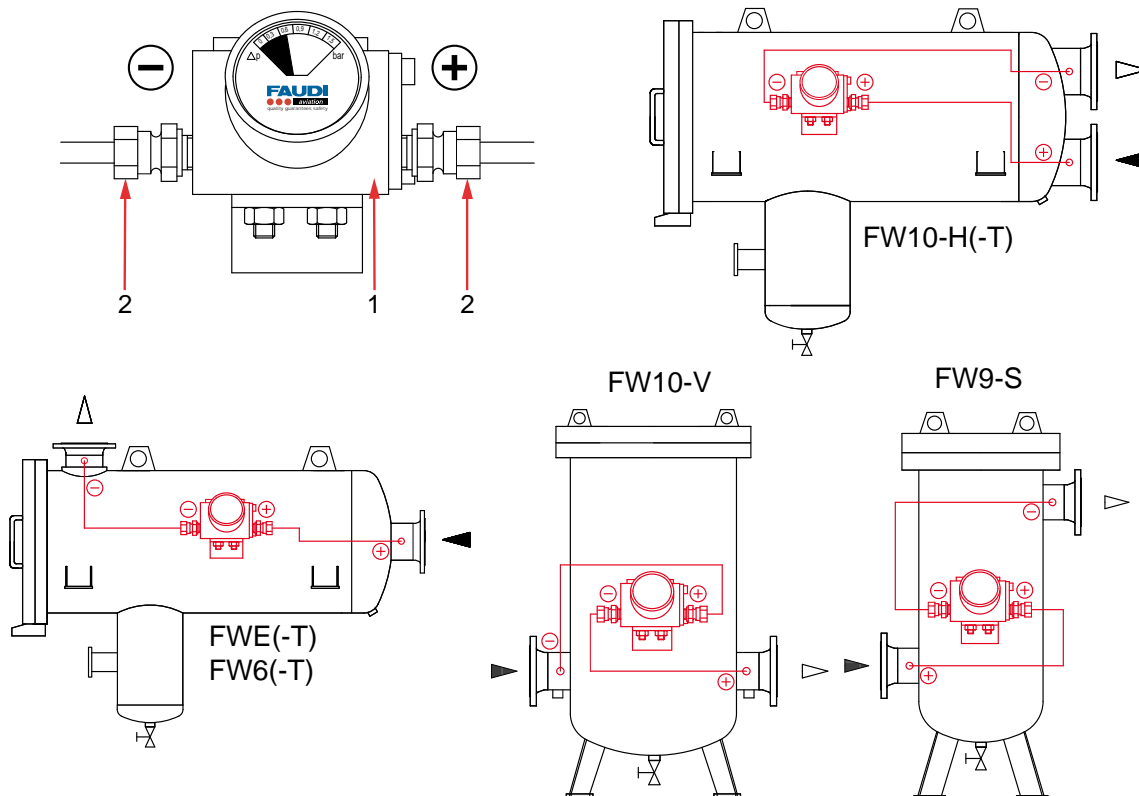
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# Z-5.9 Differential Pressure Gauge



## Construction

The differential pressure measuring device consists of the differential pressure gauge (1), the connecting pipes (3) and the boltings (2).

The device allows the reading of the total differential pressure (1st and 2nd stage). The device is equipped with a contact (Reed contact). For flame-proof version an intrinsically safe circuit has to be provided.

Measuring range  $D_p$ : 0 - 1,5 bar

Marking at 70 %: 1,1 bar

Two-Way-Contact

## Maintenance

The unit is maintenance-free. In case of leakages, check roller diaphragm and replace it if necessary.

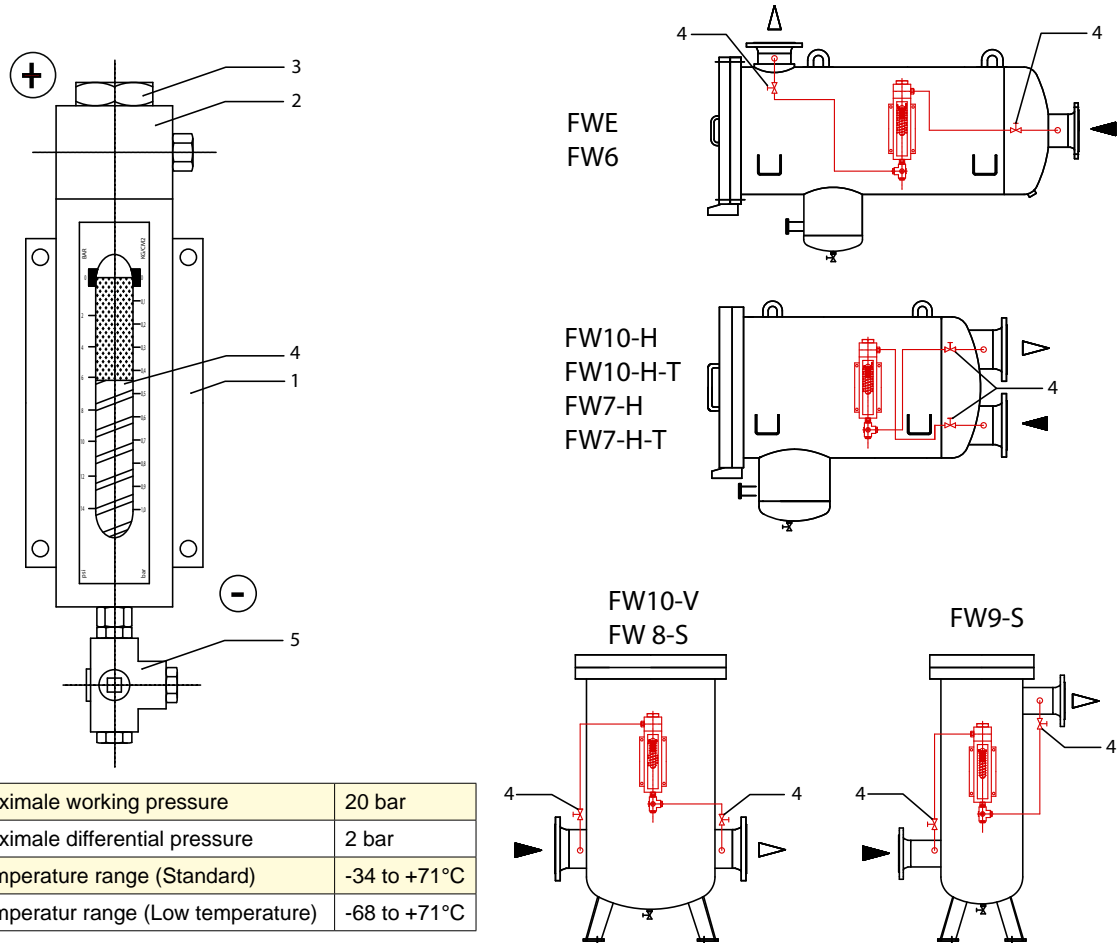
Pos.	Anz..	Designation	Material	Article no.	Spare Part	Wear Part
1	1	Differential pressure gauge	-	887 657 5	X	
2	2	Bolting	-	300 264 9	X	

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# Z-5.10 Piston Type Differential Pressure Gauge



Maximale working pressure	20 bar
Maximale differential pressure	2 bar
Temperature range (Standard)	-34 to +71 °C
Temperatur range (Low temperature)	-68 to +71 °C

## Construction

The differential pressure measuring device consists of the precision differential pressure gauge (1) with built in protective filter (2), the ball valves (4) and the connecting pipes. The unit allows the reading of the entire differential pressure (1st and 2nd stage). For ventilation open screw (3) until liquid appears. In order to avoid a possible bursting of the glass cylinder by pressure formation due to heat influence, at least one shutoff valve must always be open. With the 3 way ball valve you can check the function of the differential pressure gauge.

## Maintenance

If necessary, replace filter elements (2). Before opening and cleaning shut the ball valves (4).

Pos.	Qty.	Designation	Material	Article no.	Spare part	Subject to wear
1	1	Piston differential pressure gauge	AL	601 757 8	X	
2	1	Filter element for item (1)	-	601 567 1		X
3	1	Bleeder plug	AL	301 001 5	X	
4	1	Sight glass	-	300 388 7	X	
5	2	3-way ball valve	MS/VE/PTFE	300 351 7	X	

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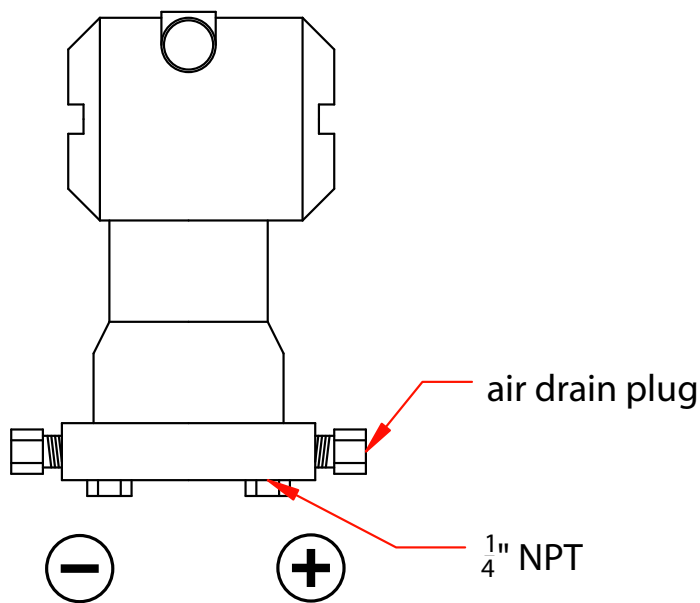
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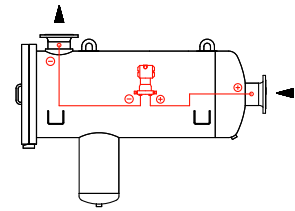




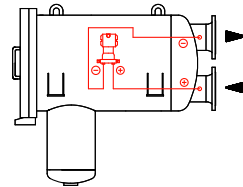
# Z-5.11 Differential Pressure Measuring Device



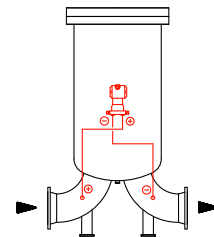
FWE  
FW 6



FW 7  
FW10-H  
FW 8



FW 8-S  
FW10-V



Output signal	4 - 20 mA with digital signal acc. to HART-Protocol
Connection (Process)	1/4" NPT
Connection (Electrical)	M20 x 1,5
Specification	According to ATEX 94/9/EC

## Construction

The differential pressure measuring device consists of the differential pressure measuring transmitter, the connecting pipe lines the boltings, the shut off valves (2) and the LCD Display. The device allows the reading of the total differential pressure (1st and 2nd stage).

## Maintenance

Pos.	Qty.	Designation	Material	Article no.	Spare part	Subject to wear
1	1	Differential pressure transmitter	-	300 125 0	X	
2	2	Shut-off valve	1.4571	887 445 5	X	
3	1	Display	LCD	300 124 9		X

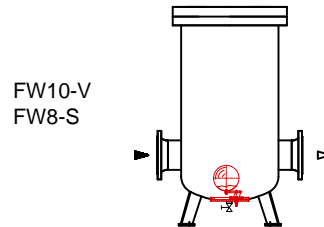
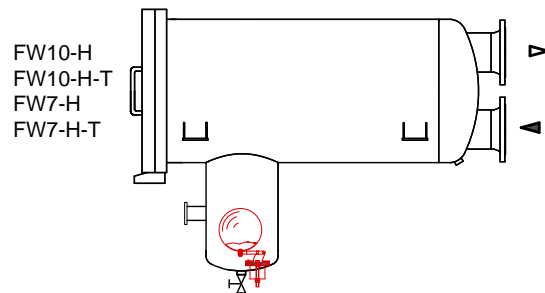
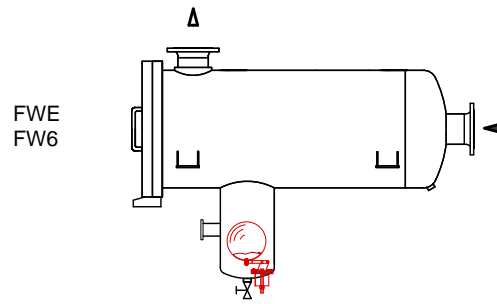
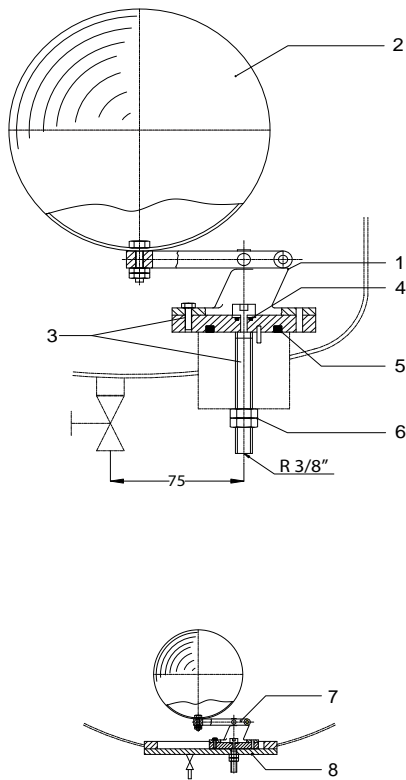
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# Z-6.1 Automatic Water Drain



## Construction

The water drain consists of the bearing block with rods and valve tappet (1), ball float (2), mounting plate with connecting pipe (3), seals (4) and (5) as well as tightening nuts (6).

## Function

The adjusted ball float (2) allows the removal of the separated water through the drain valve due to its respective position. The drain pipe line has to be led pressureless into the slop tank.

## Maintenance

When the operation instruction is disregarded, troubles can occur. The dismantling of the unit is effected by loosening the tightening nuts and by taking off the ball float with bearing block and rods from the interior of the filter/water separator. Clean seal and valve, if necessary replace them. Take care to vent sufficiently.

Pos.	Qty.	Designation	Material	Article No.	Spare Part	Wear Part
1-6	1	Automatic Water Drain (complete)	-	889 904 9	X	
2	1	Ball Float	Stainless Steel	884 975 4	X	
4	1	O-Ring 2,6 x 1,7	VITON®	886 961 2		X
5	1	O-Ring 42 x 5	VITON®	886 978 6		X
7	1	Sealing	VITON®	300 323 4		X
8	1	O-Ring 2,6 x 1,7	VITON®	886 961 2		X

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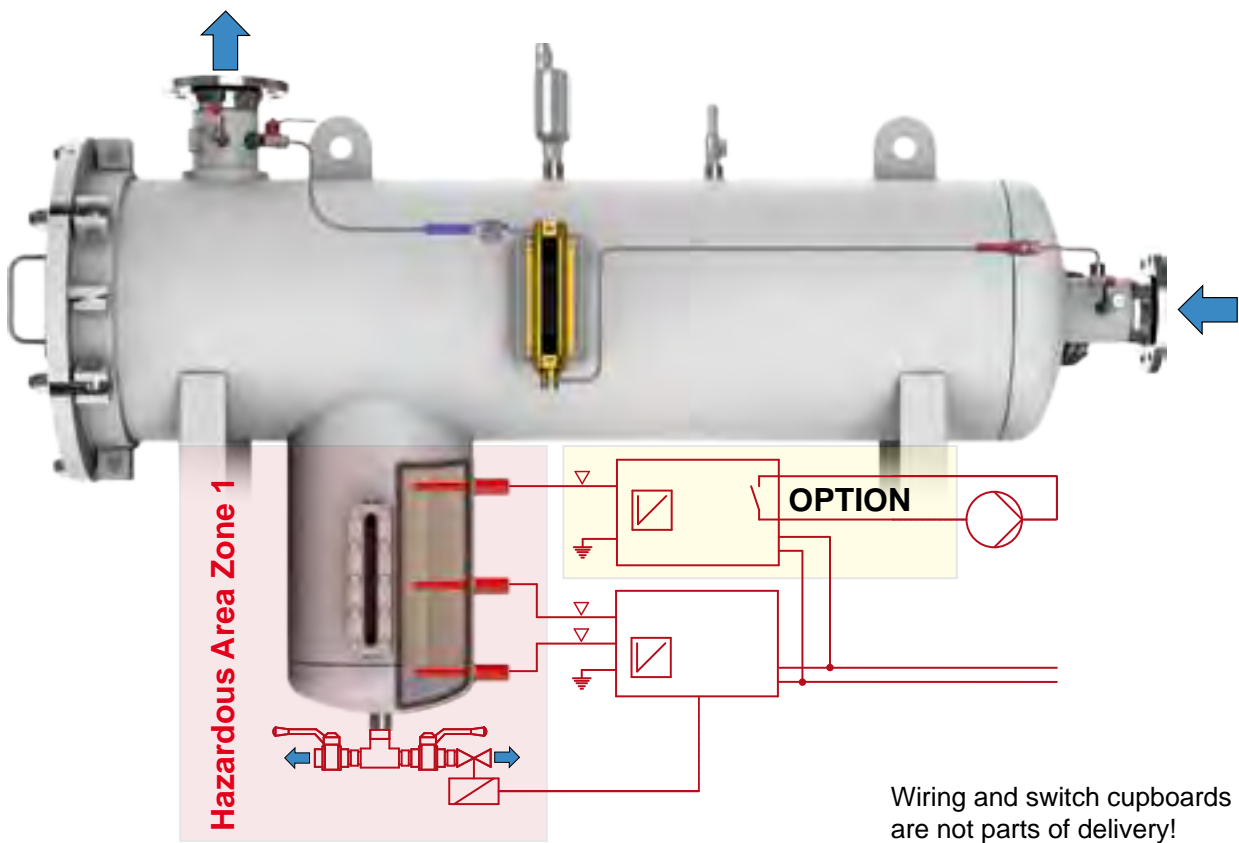
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# Z-6.2 Automatic Water Drain

ACCESSORIES



Signalzustände			
Probe	Condition	Action	Utilization
probe 1	low level	magnetic valve (5) closing	on automatic water drain
probe 2	high level	magnetic valve (5) opens	on automatic water drain
probe 3 (optional)	alarm/water slug	closing of the potential-free contact of Level Tester 2	i.e. Stopping the pump i.e. Closing the block valve

## Functioning

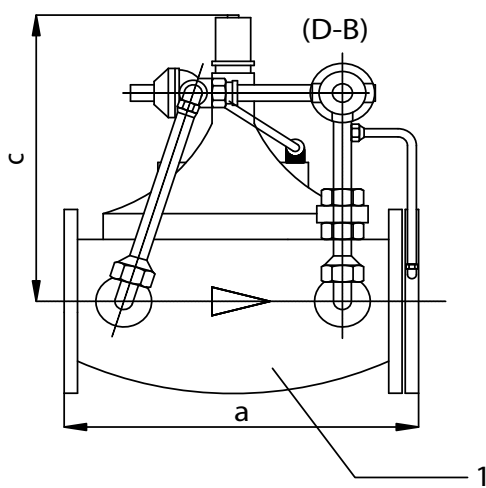
The water drain device consists of the probes (1), (2) and (3), the switch amplifiers (4) with connecting terminals and the magnetic valve (5), as well as of the valve (6). The probe circuit is made intrinsically safe and explosion-proof. Operation voltage: 220 VAC. The switch amplifiers must be installed in a switch box outside the (ex) zone. Es-protected casings for the switch amplifiers can be supplied upon request. For the manual water drain and the discharge of the vessel, valve (7) has been provided. The probes function by measuring conductivity. In case of circuit failure the magnetic valve is closed and the pump stopped, independent of the probe measurement.

Pos.	Qty.	Designation	Article No.	Spare Part	Wear Part
1, 2, 3	2 (3)	Probe	300 256 8	X	
4	1 (2)	Niveautester	300 256 9	X	
5	1	2-Way Magnetic Valve EEx 24VDC	300 183 8	X	
6	1	2/2-Way Ball Valve G $\frac{3}{4}$ "	300 257 0	X	

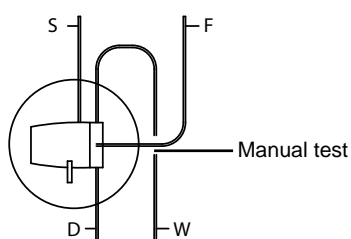
FAUDI Aviation GmbH Scharnhorststrasse 7 B D-35260 Stadtallendorf Germany	Phone: +49 6428 4465-275 Fax: +49 6428 4465-231 E-Mail: contact@faudi-aviation.com Web: www.faudi-aviation.com	<b>FAUDI</b> ●●● aviation quality guarantees safety
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# Z-7.2 Automatic Water Drain

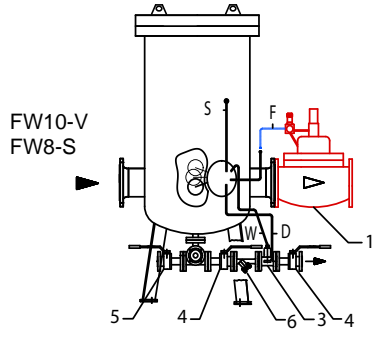
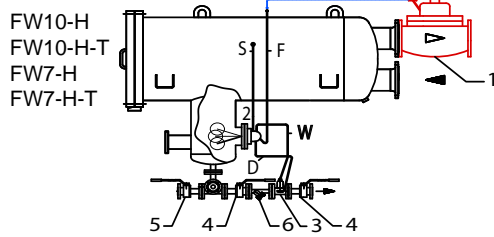
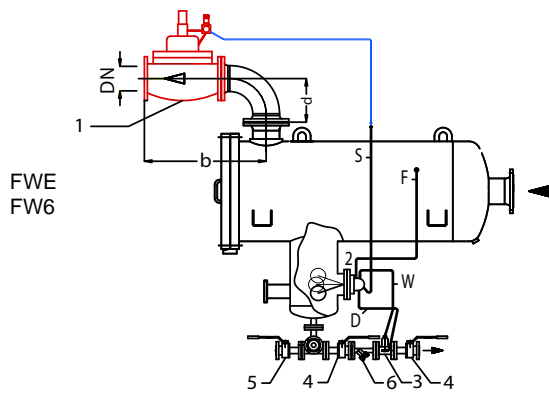


view on control valve (2)



The shutoff valve is available in two versions::

- A) with limitation of flow quantity
- B) without limitation of flow quantity



## Dimensions

DN		80	100	150	200
a	PN10	325	402	529	66
	PN16	357	418	554	69
b		522	623	839	105
c		292	365	438	50
d		165	205	285	36

**Please note**  
The pipeline ends with the vessel flange. The line to the valve will be provided and have to be assembled from customer.

## Construction

The control device consists of shutoff valve (1), float control valve with manual tester (2), water drain valve 3/4" NPT (3) and the connecting pipe lines (F, W, D, S). The manual drain is effected through valve (5). The valve (4) only serves to shutoff the automatic water drain valve (3) in case of function failure. The version with flow limiter at the shutoff valve (marked D-B) allows to limit the flow to a preset maximum value. The Y-Strainer (6) protects the automatic water drain valve (3).

## Function

The float control device effects the discharge of water separated from the fuel and at the same time shut off the flow in case of a water slug.

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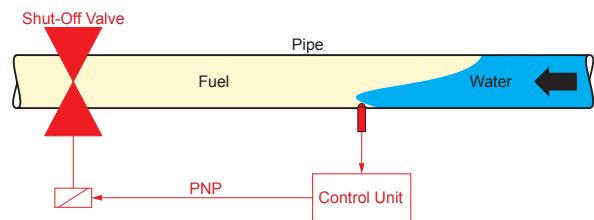
# SLUGGUARD® - Water slug indication

## Applications

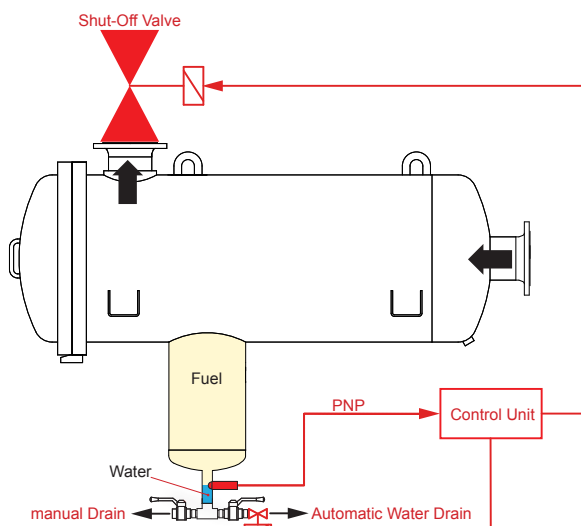
The SLUGGUARD® of FAUDI Aviation GmbH is the best way to differentiate media with just one sensor to be installed in water sumps, drain-pipes, filter heads or wherever a clear indication about the actual water-situation is required. Connected to a control system enables the user to easily configure automated drainage of vessels according to JIG requirements.



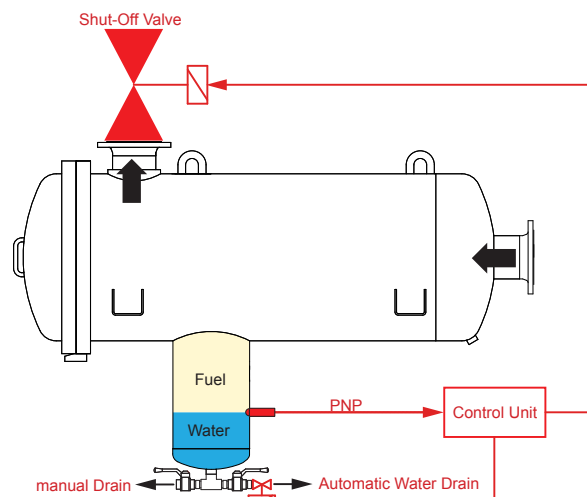
Slugguard®



Sample of Application: Installation in a pipe



Sample of Application: Filter Water Separator



Sample of Application: Filter Water Separator

## Technical Details

- Wetted parts in stainless steel and PEEK
- Compact design
- LED switch indicator available
- Preconfigured by FAUDI Aviation
- Process temperature -40 ... +115°C
- Precise switching point with no requirement for calibration
- Maintenance free
- Best for media separation
- ATEX approval
- Measures and differentiates media like water, Jet A1, Diesel (ask for different media)

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# SLUGGUARD® - Water slug indication

## Technical Data

<b>Sensor</b>		<b>Approval Ex ia IIC, ATEX II 1G</b>	
Radiated signal	100...180 MHz	Supply range	24...30 VDC
Process connection	Refer to dimensional drawing	Temperature class	T1...T4: $-40 < T_{amb} < 85^{\circ}\text{C}$ T1...T5: $-40 < T_{amb} < 74^{\circ}\text{C}$
Insulating material	PEEK		
<b>Mechanical Data</b>		<b>Approval Ex ta IIIC T100 Da, ATEX II 1D</b>	
Housing	Stainless steel	Supply range	12...30 VDC
Amb. temperature	-40...85°C	Temperature class	T100°C: $-40 < T_{amb} < 85^{\circ}\text{C}$
Process temperature	-40...115°C	<b>Approval Ex NA II T5, ATEX II 3G</b>	
Protection class	IP67 (IEC 529)	Supply range	12...30 VDC
Media pressure	max. 100 bar	Temperature class	T1...T5: $-40 < T_{amb} < 85^{\circ}\text{C}$
Vibrations	IEC 60068-2-6, GL test 2		
Installation	any position		
<b>Electrical Connection</b>		<b>Output</b>	
Cable	10 meter, 4 wire	Output (active)	Max. 20 mA, short-circuit and high-temperature protected
Plug M12	Plastic or Stainless steel 304	Output type	PNP or NPN
<b>Other Electrical Data</b>		Output polarity	NO and NC
Power supply	12...30 VDC, 35 mA max.	Active „High“	PNP (VDC -1.5V) $\pm$ 0.5V; $R_{load}$ 10 kOhm
Damping	0...10 sec.	Active „Low“	NPN (VDC -1.5V) $\pm$ 0.5V; $R_{load}$ 10 kOhm
Power-up time	< 2 sec.	Off leak current	$\pm$ 100 $\mu$ A max.
Hysteresis	$\pm$ 1 mm		
Repeatability	$\pm$ 1 mm		
Reaction time	0,1 sec. (100 ms)		
<b>Disposal of Product and Packing</b>		<b>Factory Settings</b>	
According to national laws		Damping	0.1 sec.
<b>EMC Data and Packing</b>		<b>Approvals/Conformities</b>	
Immunity	EN 61326	Approvals/ conformities	DNV Marine Approval EN 50155 Railway 3A, EHEDG, FDA, WHG (pending)
Emission	EN 61326		
Internal inductivity	$L_i \leq 10\mu\text{H}$		
Internal capacity	$C_i \leq 43\text{ nF}$		
Barrier data	$U \leq 30\text{ VDC}$ ; $I < 0.1\text{ A}$ ; $P < 0.75\text{ W}$		

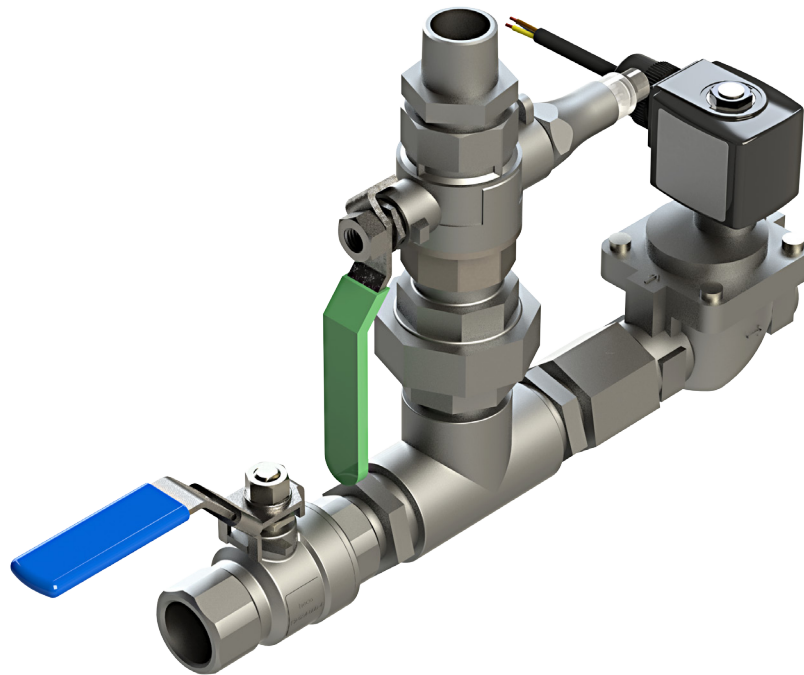
## Scope of delivery

	Article Description	Part No.
<b>SLUGGUARD®</b>	<b>SLUGGUARD®</b> ATEX approved, SS, <u>without</u> LED, process connection: G ½" nipple, electrical connection via M12 plug connector, PNP output	600 040
	<b>SLUGGUARD®</b> ATEX approved, SS, <u>with</u> LED, process connection: G ½" nipple, electrical connection via M12 plug connector, PNP output	600 001
	<b>Barrier</b> with power supply LBFS	600 041
	<b>Process Socket</b> PM 20 G ½"	600 042
	Connection cable with M12 connector, 10 m	526 000

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## Application

The **DRAINGUARD®- Sump** is a fully automated drainage system for water sumps of filter water separators. It is the preferred state of the art retrofit kit including about everything needed to generate a failsafe drainage system including the water defense functionality to shut down the flow in case of excessive water. The heart of the **DRAINGUARD®- Sump** is the FAUDI Aviation SLUGGUARD® sensor to detect and differentiate between water and fuel. In case of water the SLUGGUARD® sensor activates the enclosed electrical drain valve. The **DRAINGUARD®- Sump** is including a service valve to externally check the SLUGGUARD® sensor when required (even during operation).

## Technical Details

- 24 VDC Power Supply
- Digital Signal Output
- Process temperature: 0 to +90°C\*
- Ambient temperature: max. 55°C
- Process flow: 1 l/min
- Compact design
- LED switch indicator
- Best for sump water drainage
- ATEX approved\*\*
- All Process Connections (G 3/4")
- Cable Length: 5 m
- Max. Design pressure: 16 bar

\*Media temperature

\*\* electrical components

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## DRAINGUARD® - Sump

### Scope of supply

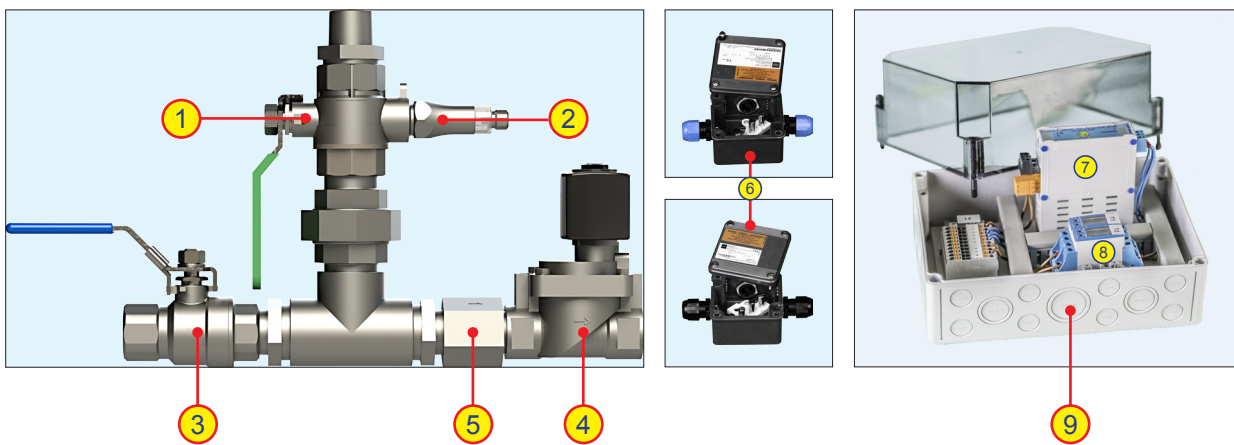
DRAINGUARD®- Sump unit consisting of:

①	1 x Service Valve for sensor access
②	1 x SLUGGUARD® Sensor
③	1 x Ball Valve (spring-loaded)
④	1 x 2/2-Way Solenoid Valve*
⑤	1 x Flow Limiter

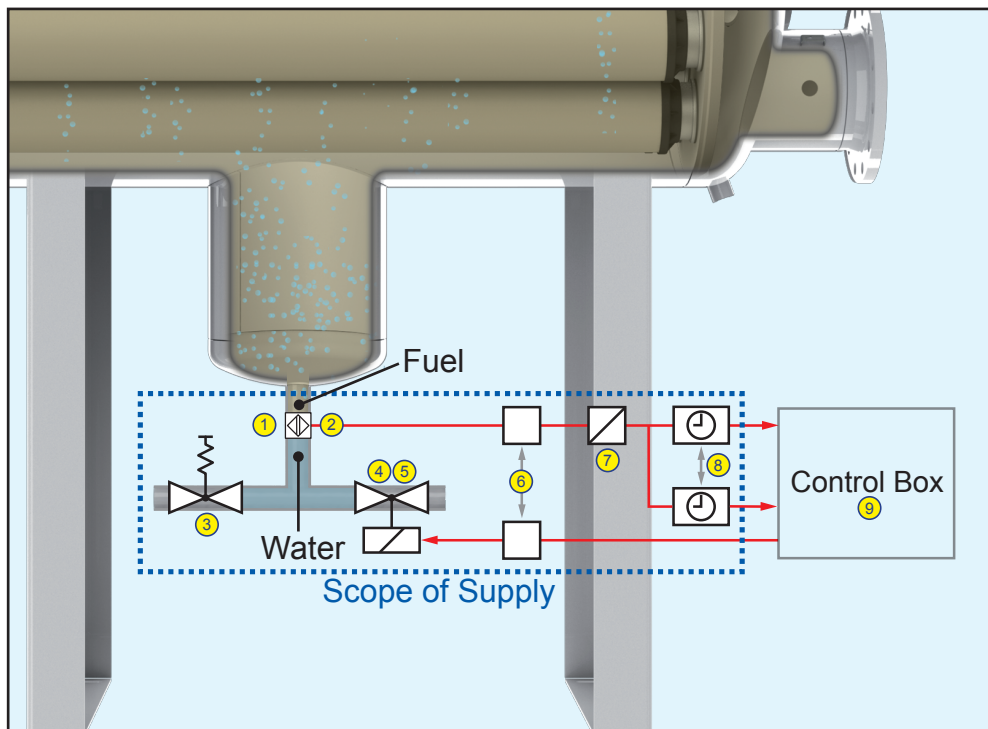
\* servo assisted

⑥	2 x Cable Terminal (stand-alone)
⑦	1 x Barrier (stand-alone)
⑧	2 x Timing Relay (stand-alone)
⑨	1 x Connection Box** (optionally)

\*\* Connection Box can be ordered when a switchboard is not available on-site. It consists the connecting block, separation stage (⑦) & the timing relays (⑧).



### Sample of Application



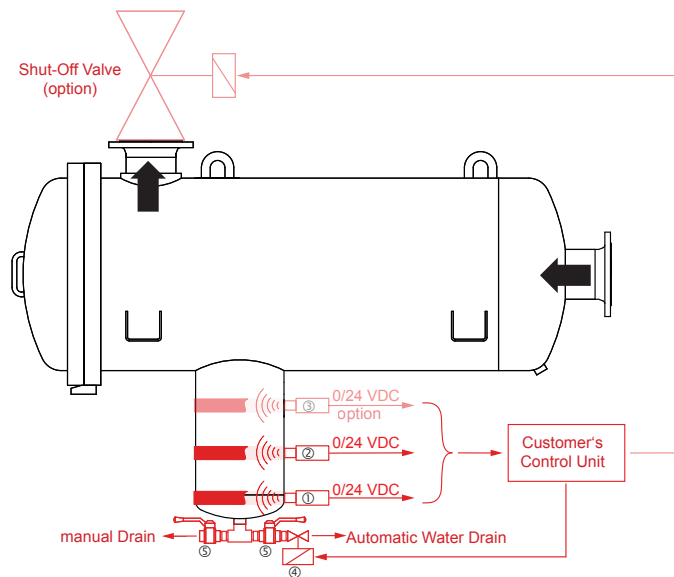
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## Applications

For contactless detection of interlayers in kerosine and other media to drain water from water sumps of filter water separators automatically and residual-free. The unit can be fitted on existing water sumps without any metall-cutting. A new pressure test of the vessel is not necessary after installation of the unit. SonicGuard® is working by modern ultrasonic technology and provides a binary signal (0/24VDC) for processing in electronic control units.



## Technical Details

- For mobile and stationary applications
- Suitable for Jet A1, Jet A. Other fuels upon request
- Contactless measurement by ultrasonic
- Power supply: 18-24 VDC, max. 80 mA
- Output: NPN or PNP, 20 mA on 24 VDC power supply
- Accuracy: Static  $\pm 1$  mm (to Sensor center)
- Safety class: IP 67 (oil resistant), Hazardous area approved ATEX zone 1
- Residual-free water draining by timing relay possible if available by end user. (time for draining must be corresponding to the volume of water sump)
- Suitable for diameters of water sump up to 950 mm

## Ordering Details

Pos.	Qty.	Article Description	Article No.	Spare Part	Wear Part
1	2 (3)*	Ultrasonic-Sensor SONICGUARD®	170 000	X	
2	1	High Performance Adhesive SONICGUARD®	530 000	X	
3	2 (3)*	Mounting Plate DN200 to DN1000 SONICGUARD®	531 000	X	
4	2 (3)*	Tie Strap SONICGUARD®	532 000	X	

\* 3 pcs. on optional „Water Slug Detection“

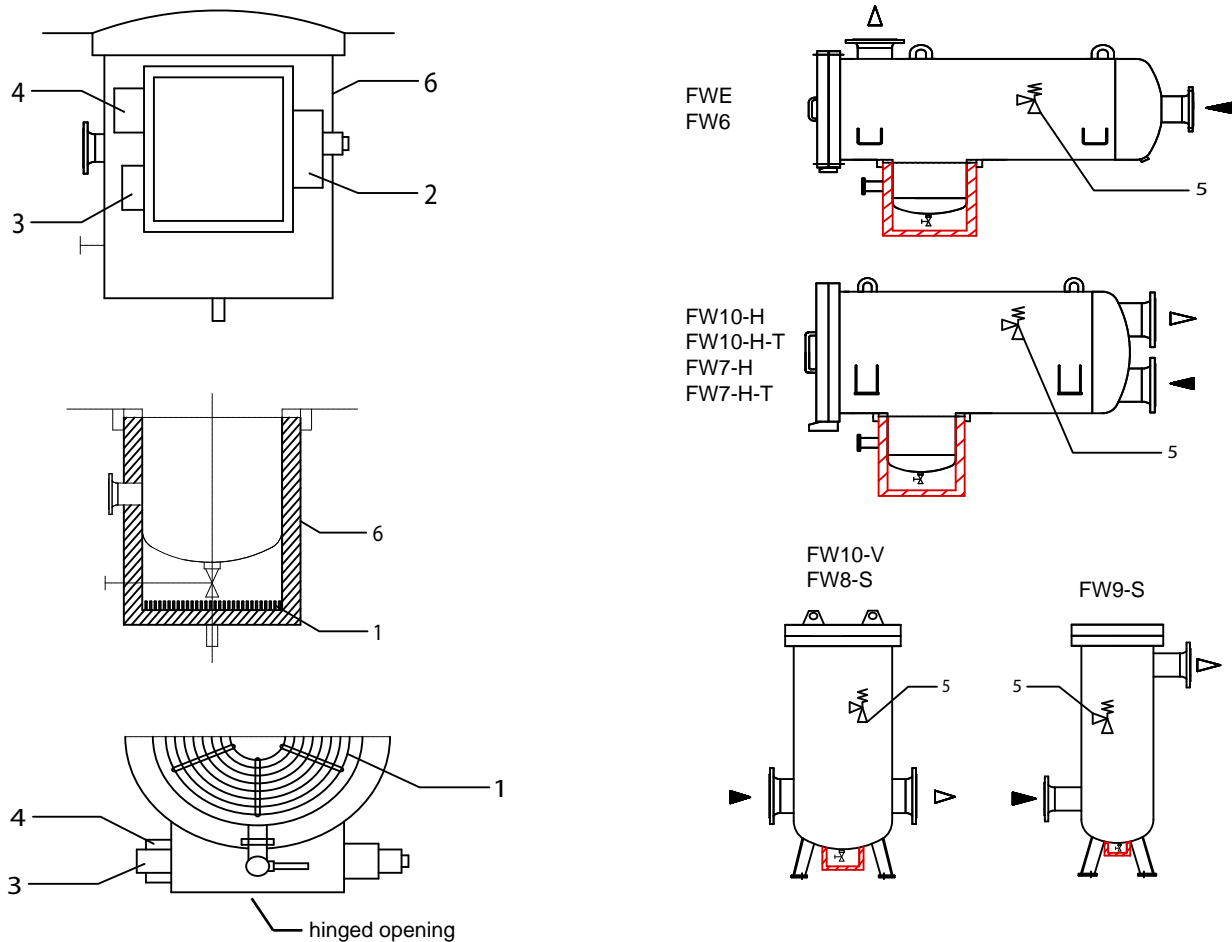
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# Z-8.1 Electrical Heating Device



## Construction

The heating device consists of the self-regulating strip heater EEx-e T5 (1), terminal box (2), master switch (3), thermostat (4), pressure relief valve (5) as well as heat protecting hood (6). The protecting hood is completely isolated and serves at the same time as mechanical protection of the strip heater. The terminal box is mounted at the heat protecting hood. Openings for water drain, discharge, sight glass etc. are provided for. The thermostat switches in the self-regulating strip heater at  $t \leq +10 \text{ }^\circ\text{C}$ . The system voltage is 230 V. The arrangement is EEx-e T5 protected.

## Function

The heating device prevents freezing of the separated water existing in the water collecting sump. The heating device can be in operation continuously, as the strip heater is self-regulating, i. e. the heat capacity drops by rising temperature and becomes practically 0 at  $40 \text{ }^\circ\text{C}$ . Only when opening the unit must the heating be switched off, the operating personnel must be informed accordingly. For dissipation of thermal expansion a pressure relief is provided for. On the pressurized casing the adjusted blow-off-pressure is stamped on with its approval No.

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# Z-8.1 Electrical Heating Device

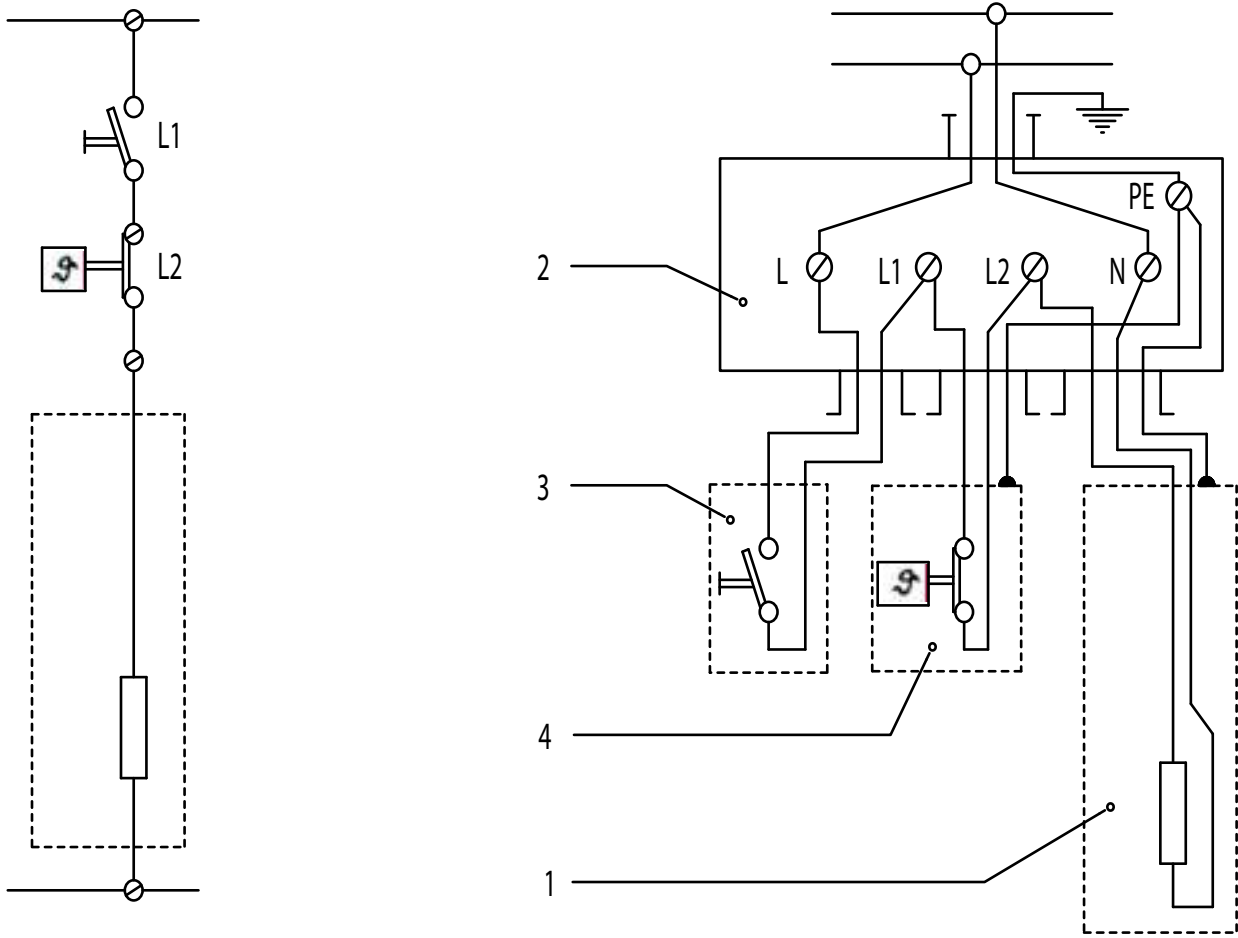
## Maintenance

The bottom with the strip heater can be taken off completely when disconnecting the strip heater in the terminal box. Before carrying out any work at the heater this must be currentless. Clearing of faults at the heating device has to be made by appropriate trained personnel only.

The requirements of VDE 0165, IEC 31 (CO) 43 Elex-V safety regulations have to be observed.

The pressure relief valve can only be exchanged completely.

## Circuit Diagram

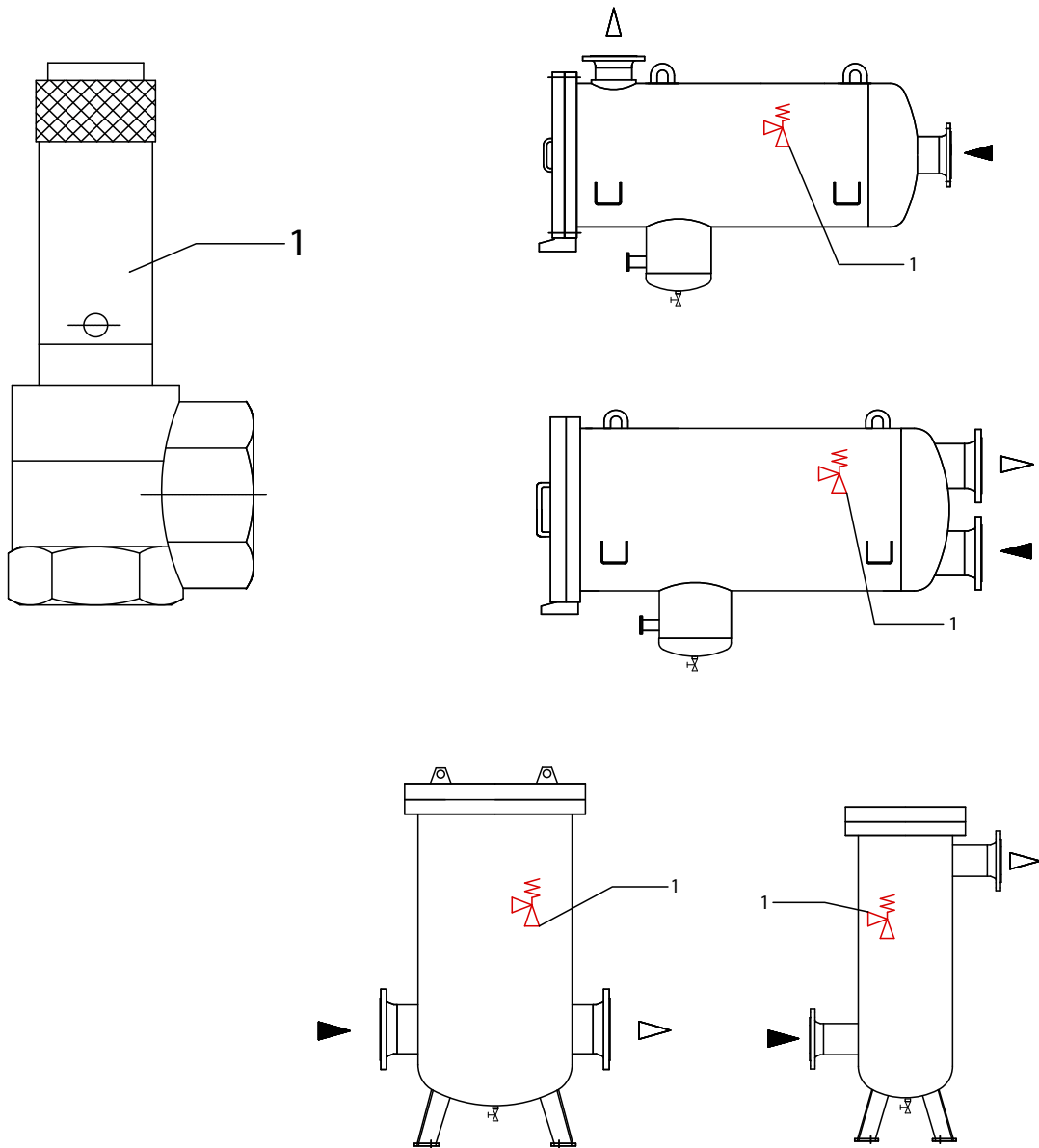


Pos.	Qty.	Designation	Material	Article no.	Spare part	Subject to wear
1	1	Strip heater	Related to vessel		X	
2	1	Terminal Box	-	887 988 4	X	
3	1	Master switch	-	887 989 2	X	
4	1	Thermostat (Ex TR 10/10)	-	888 012 2	X	
5	1	Pressure relief valve	RG	887 321 8	X	

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# Z-9.1 Pressure Relief Valve



## Construction

The pressure relief valve is gas-tight. The valve disk is spring loaded and initially adjusted to the design pressure of the unit. The pressure relief valve is component-tested. On the pressurized casing the adjusted blow-off pressure is stamped on with its approval No.

## Functioning

The pressure relief valve has been provided for the dissipation of thermal expansion. The outlet line must be connected pressureless to a slop tank.

## Maintenance

Pos.	Qty.	Designation	Material	Article No.	Spare part	Wear part
1	1	Pressure Relief Valve R ½"	SS	pressure-dependent	X	

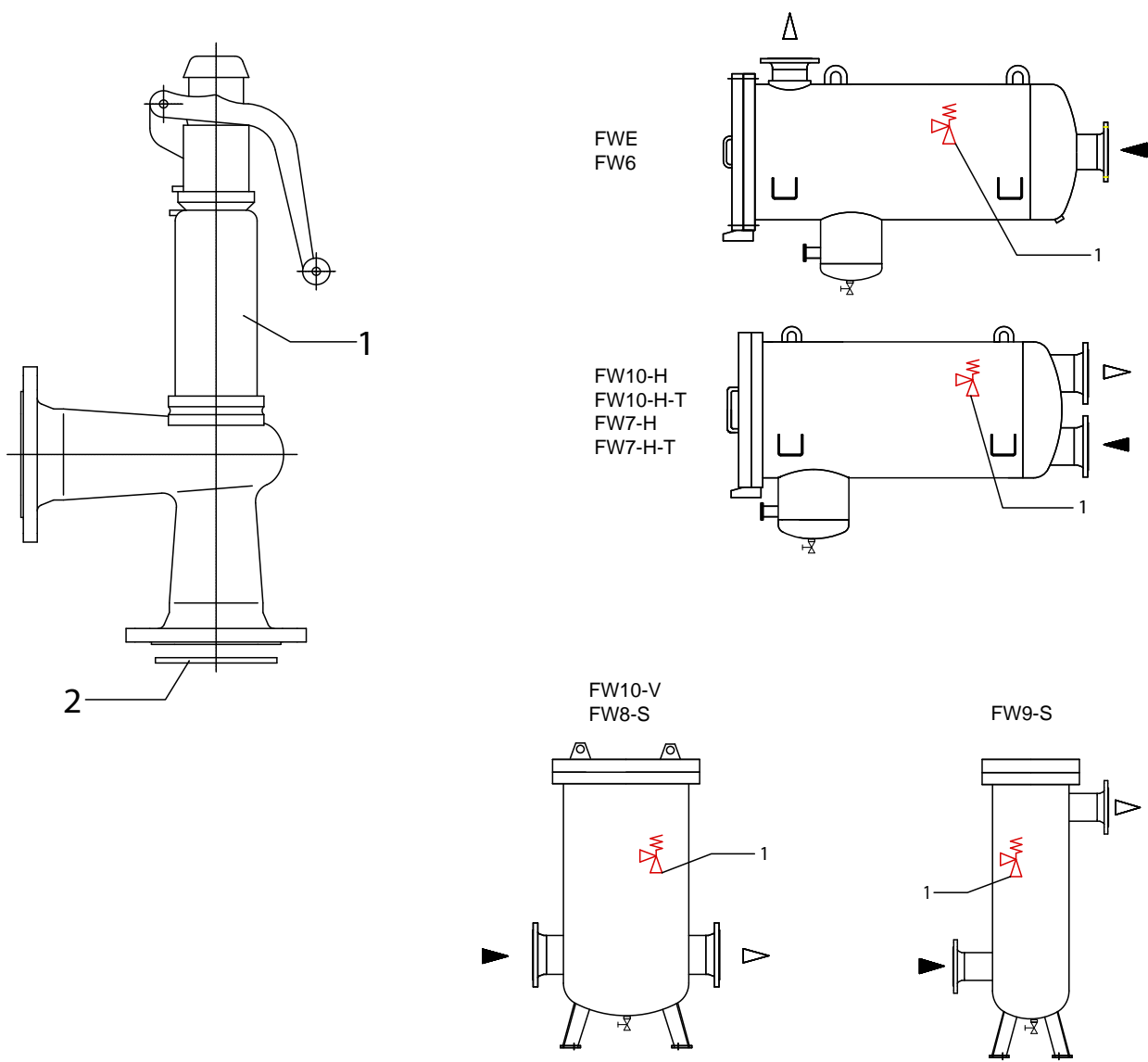
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# Z-9.2 Pressure Relief Valve



## Construction

The pressure relief valve is gas-tight. The valve disk is spring loaded and initially adjusted to the design pressure of the unit. The pressure relief valve is component-tested. On the pressurized casing the adjusted blow-off pressure is stamped on with its approval No.

## Functioning

The pressure relief valve has been provided for the dissipation of thermal expansion. The outlet line must be connected pressureless to a slop tank.

## Maintenance

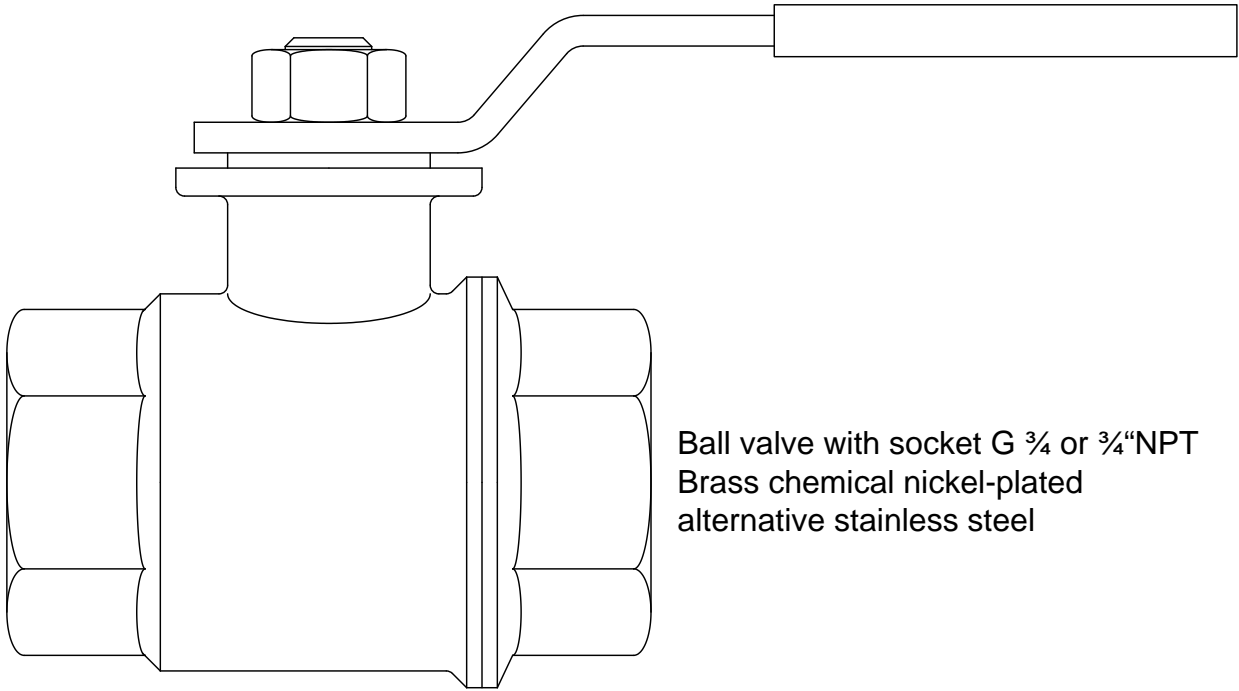
It is recommended only to replace the complete pressure relief valve.

Pos.	Qty.	Designation	Material	Article no.	Spare part	Subject to wear
1	1	Pressure relief valve	G SL-25	887 391 1	X	
2	2	Flat seal	C-4400	886 766 5	X	

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## Z-11.1 Drain Valve



Ball valve with socket G  $\frac{3}{4}$  or  $\frac{3}{4}$ "NPT  
Brass chemical nickel-plated  
alternative stainless steel

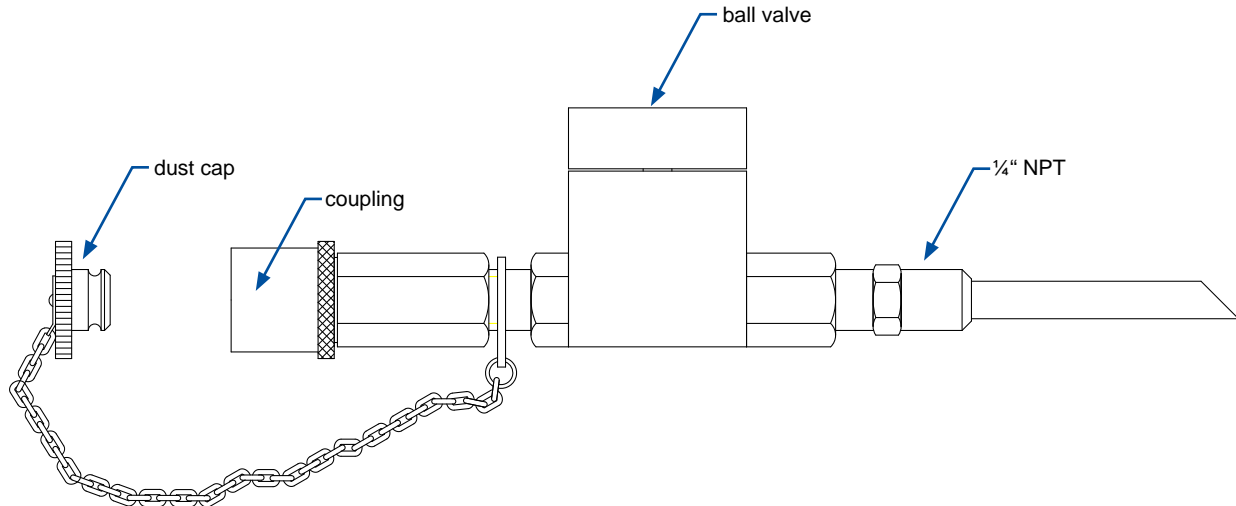
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# Z-12.1 Sampling Kit



## Construction

The sampling kit consists of non-ferrous materials. It can be used in any pipe of 2" size up. The probe soaks through the pipe coupling that is welded to the pipe. The threads on the probe are made of a 1/4" NPT socket. The construction secures that there is no possibility of rust and dirt, that usually collects in stagnant pockets (such as welded couplings), reaching the best membrane.

## Function

The sampling kit has been designed for obtaining test samples of jet fuel. It ensures the extraction of clean fuel out of the flow stream.

## Maintenance

The sampling kit can only be exchanged completely.

Pos.	Qty.	Designation	Material	Article no.	Spare part	Subject to wear
1	1	Sampling kit (temperature range: -40°C to +50°C)	Stainless steel	300 756 9	X	

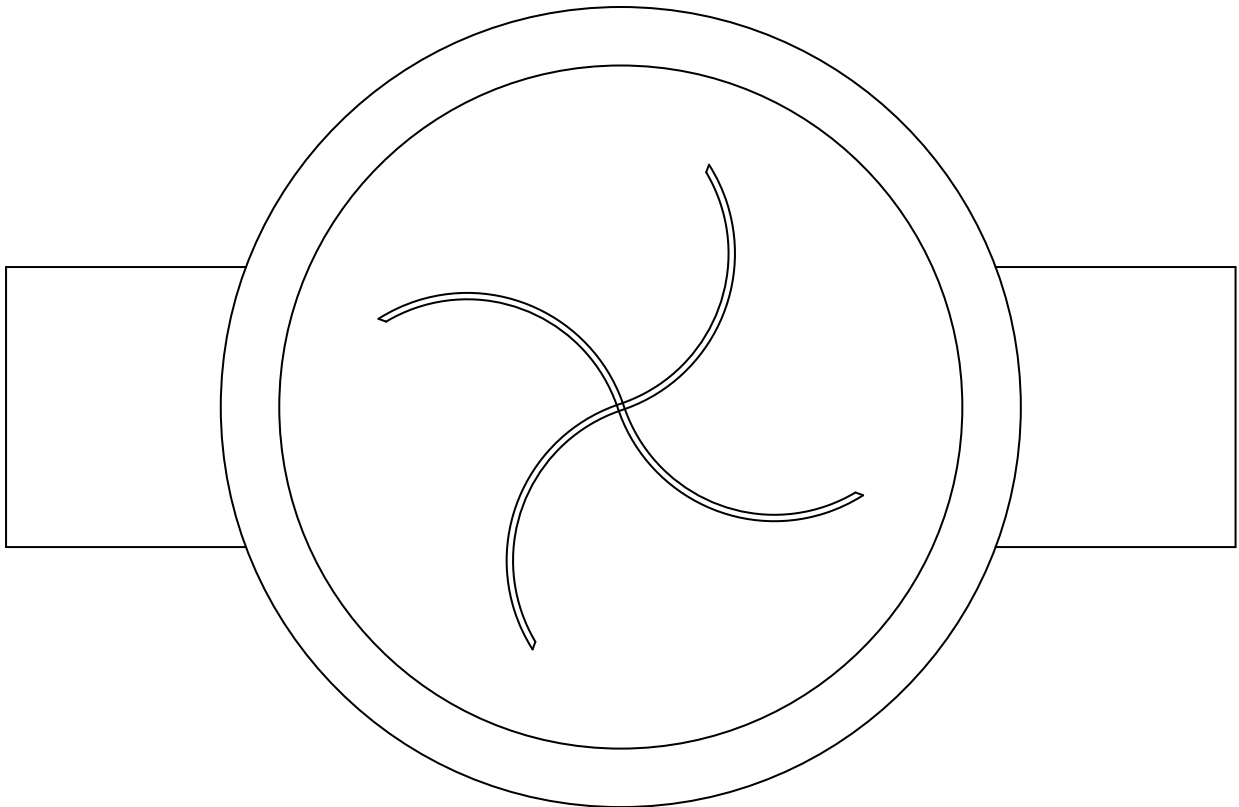
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Flow indicator with impeller	
Material	Stainless steel
Pressure stage	PN16
Connections	G ½" to G 2"
Flow rate	< 1 m/s

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