



Series VZ-S

Technical data

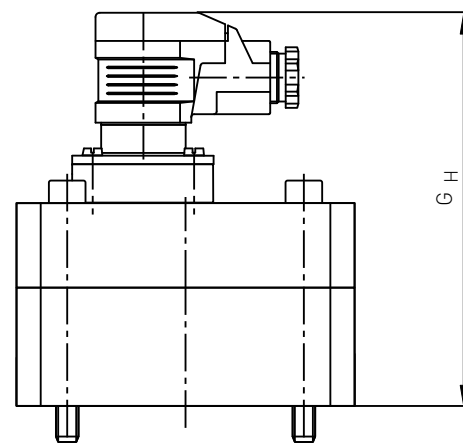
	VZ...GG-S	VZ...VA-S
Measuring accuracy	±0.3 % of reading (21 mm ² /s)	
Repeatability	0.05 % for same conditions	
Viscosity of medium	1...100 000 mm ² /s	
Pressure rating	→ VZ 0.025... to VZ 1... -max. 400 bar → VZ 3... to VZ 5... -max. 315 bar → Higher pressure rating on request	
Medium temperature range (depends on sealing material)	FKM	FEP
→ Standard	-15...120 °C	-30...120 °C
→ High temperature	-15...150 °C	-30...130 °C
→ Ex version	-15...80 °C	-30...80 °C
Ambient temperature range (depends on sealing material)	FKM	FEP
	-15...80 °C	-30...80 °C
Process connection	Via subplate with lateral female thread connection	
Power supply	12...30 VDC / max. 90 mA	
Electrical connection	Via standard socket	
Degree of protection EN 60529	IP65	
Output signal	2-channel, squarewave, pulse duty ratio 1:1, PNP	
Material		
Housing	Cast iron GGG 40	Stainless steel 1.4404
Gear wheels	Steel 1.7139	Stainless steel 1.4462
Ball bearings	100CR6 / 1.3505	X105CrMo17 / 1.4125
Seals	Standard: FKM Option: EPDM, FEP	
Subplate material	Cast iron GGG 40	Stainless steel 1.4404

Size	Start of gear wheel rotation [l/min]	Measuring range* [l/min]	Measuring volume [ml/Pulse]	Resolution [Pulse/l]
VZ 0.025-S	0.001	0.008...2	0.025	40 000
VZ 0.04-S	0.004	0.02...4	0.04	25 000
VZ 0.2-S	0.01	0.16...16	0.245	4081.63
VZ 0.4-S	0.01	0.2...40	0.4	2500
VZ 1-S	0.02	0.4...80	1.036	965.25
VZ 3-S	0.03	0.6...160	3.000	333.33
VZ 5-S	0.04	1...250	5.222	191.50

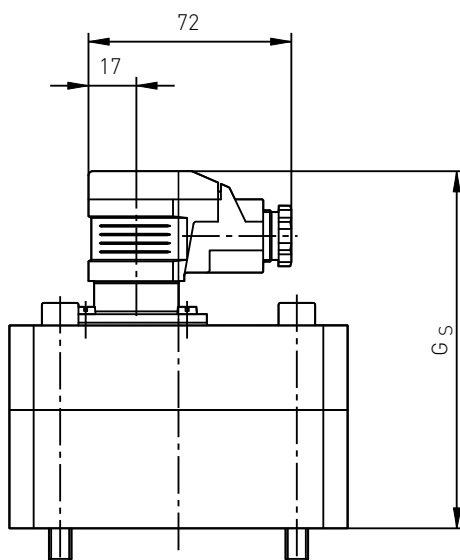
* For media with high viscosity the measuring range is reduced. The max. pressure drop shouldn't exceeded 16 bar (see pressure drop diagrams).

Dimensions positive displacement flow sensors VZ...GG-S

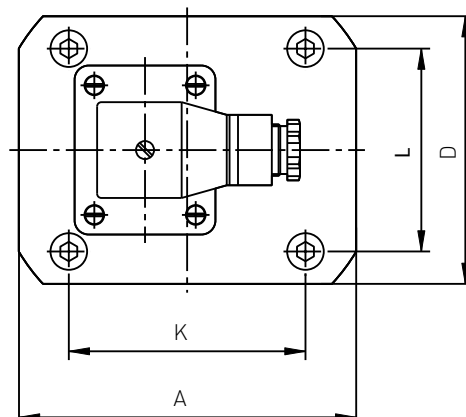
Size	A [mm]	D [mm]	G _S [mm]	G _H [mm]	Weight [kg]
0.025	85	60	101	114	1.8
0.04	85	60	107	120	2.0
0.2	85	60	108	121	2.0
0.4	100	90	114	127	3.7
1	120	95	123	136	5.2
3	170	120	140	153	9.0
5	170	120	156	169	13.0



Version HT



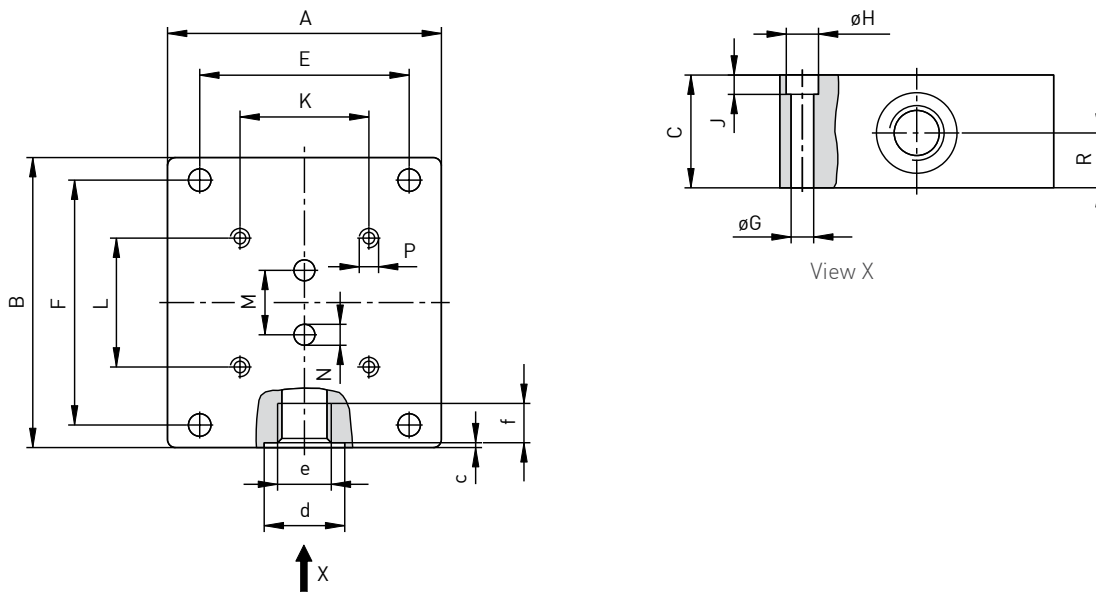
Standard version and Ex version



Dimensions subplates for VZ ...GG-S

Appropriate to	A [mm]	B [mm]	C [mm]	E [mm]	F [mm]	G [mm]	H [mm]	J [mm]	K [mm]	L [mm]
VZ 0.025 / 0.04 / 0.2	85	90	35	65	76	7	11	7	70	40
VZ 0.4	100	110	37	86	96	7	11	7	80	38
VZ 1	100	120	37	80	106	7	11	7	84	72
VZ 3 / 5	160	165	80	140	145	9	15	9	46	95

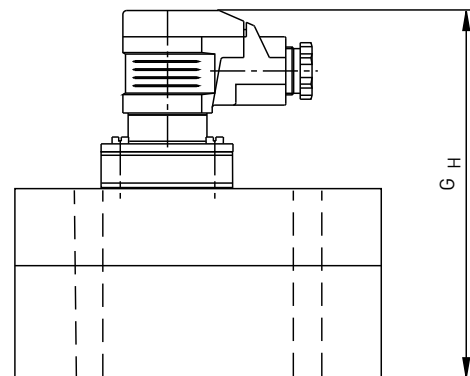
Appropriate to	M [mm]	N [mm]	P [mm]	R [mm]	c [mm]	d [mm]	e	f [mm]	Weight [kg]
VZ 0.025 / 0.04 / 0.2	20	6.5	M 6/14t	17	0.7	25	G $\frac{3}{8}$	13	1.8
VZ 0.4	34	16	M 8/18t	18.5	0.7	29	G $\frac{1}{2}$	15	2.7
VZ 1	35	12	M 8/18t	17.5	0.7	29	G $\frac{1}{2}$	15	2.9
VZ 3 / 5	50	25	M 12/24t	28	1	42	G 1	19	14



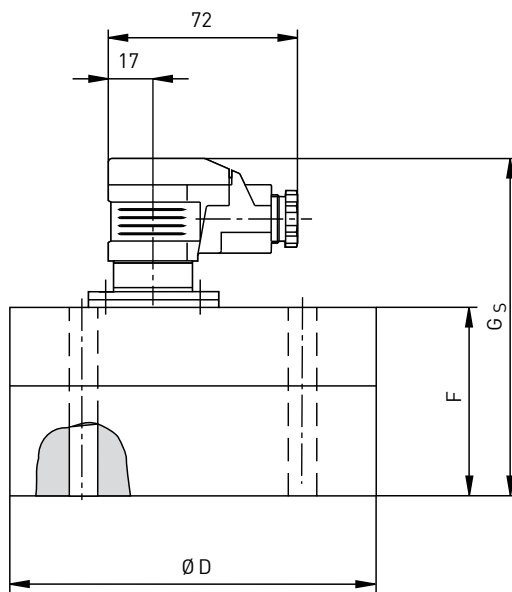
VZ...GG-S

Dimensions positive displacement flow sensors VZ...VA-S

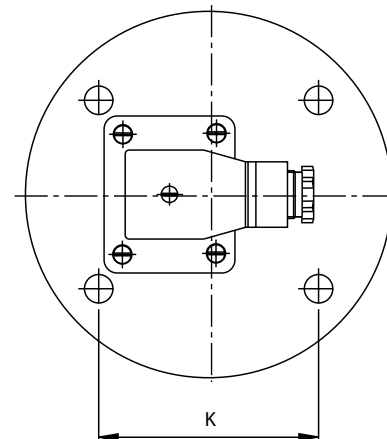
Size	D [mm]	F [mm]	G _S [mm]	G _H [mm]	Weight [kg]
0.025	94	55	106	119	3.0
0.04	94	56	107	120	3.0
0.2	94	57	108	121	3.1
1	124	72	123	136	7.0
3	170	89	140	153	15.9
5	170	105	156	169	18.7



Version HT



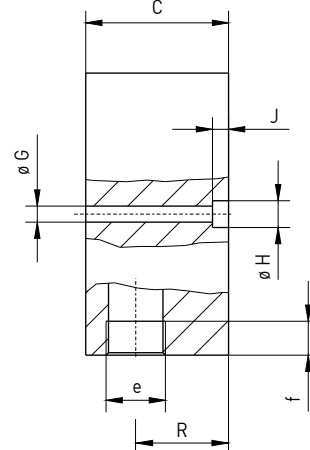
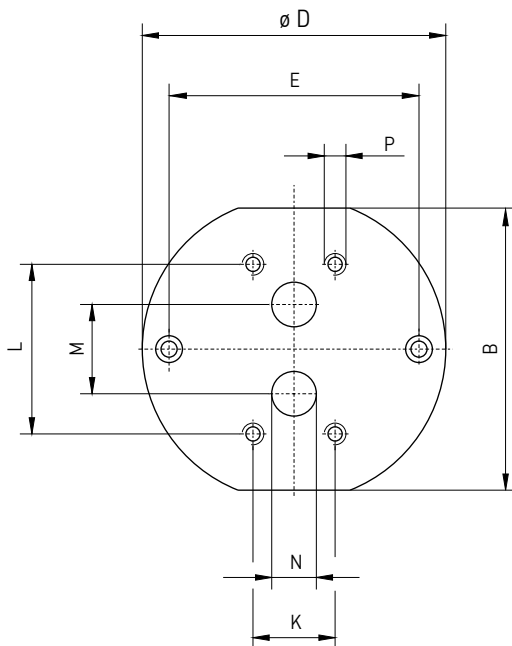
Standard version and Ex version



Dimensions subplates for VZ...VA-S

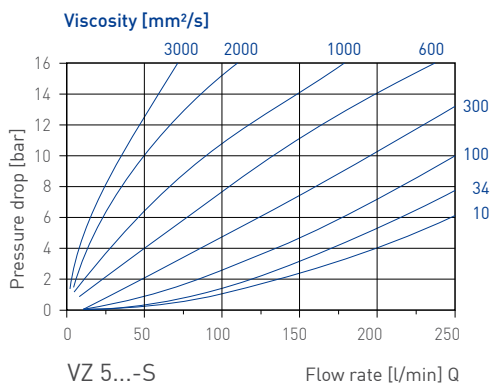
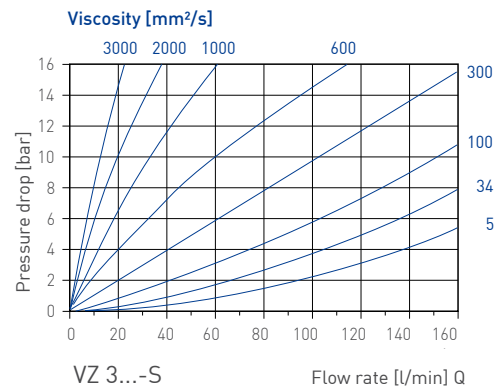
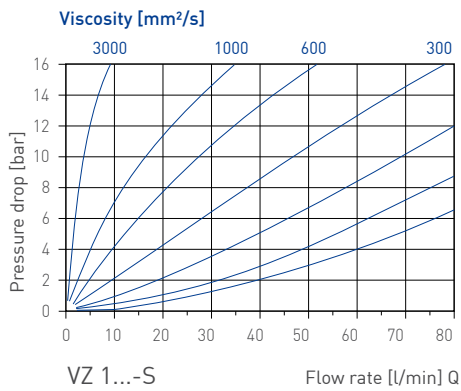
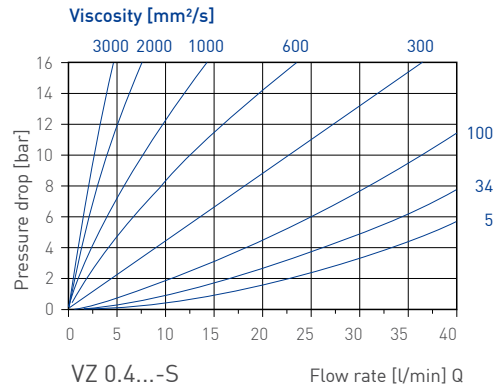
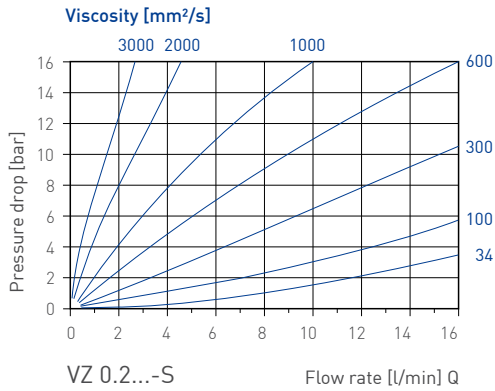
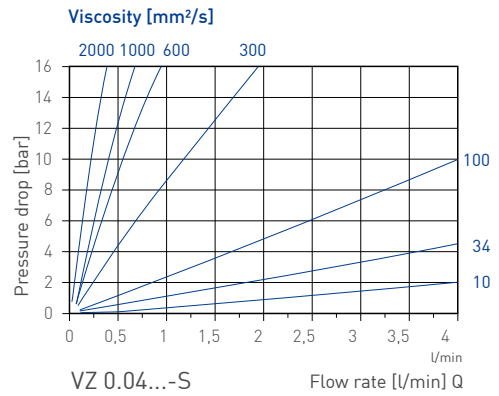
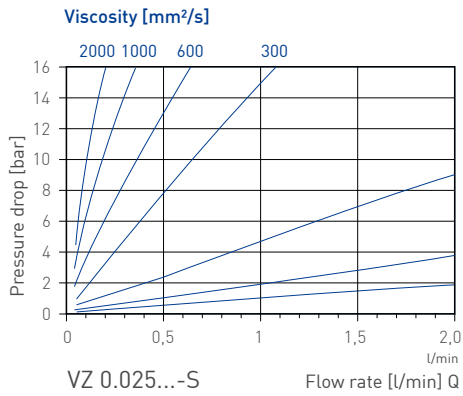
Appropriate to	B [mm]	C [mm]	D [mm]	E [mm]	G [mm]	H [mm]	J [mm]	K [mm]
VZ 0.025 / 0.04 / 0.2	85	35	94	75	7	11	7	70
VZ 1	116	37	124	100	9	15	9	84
VZ 3 / 5	158	80	170	140	9	15	9	46

Appropriate to	L [mm]	M [mm]	N [mm]	P [mm]	R [mm]	e	f [mm]	Weight [kg]
VZ 0.025 / 0.04 / 0.2	40	20	6.5	M 6/14t	18	G $\frac{3}{8}$	13	1.7
VZ 1	72	35	12	M 8/18t	19,5	G $\frac{1}{2}$	15	3.2
VZ 3 / 5	95	50	25	M 12/24t	52	G 1	19	13.9



VZ...VA-S

Typical pressure drop



Order code

Order example	VZ0025	GG	V	3	2	I	00S
Size							
0.025	VZ0025						
0.04	VZ004						
0.2	VZ020						
0.4 (only cast iron)	VZ040						
1	VZ100						
3	VZ300						
5	VZ500						
Material							
Cast iron		GG					
Stainless steel		VA					
Seals							
FKM			V				
EPDM			E				
FEP			P				
Power supply							
12...30 VDC				3			
Process connection							
With subplates					2		
Direct (only for stainless steel)					1		
Preamplifier							
Integrated						I	
Without preamplifier (for TD 8250)						K	
Isolated for HT (not possible for Ex)						E	
Version							
Standard							00S
Intrinsically safe Ex							10S

Order example	AP004	GG	0380S
Subplates appropriate to			
VZ 0.025 / VZ 0.04 / VZ 0.2	AP004		0380S
VZ 0.4 (only cast iron)	AP040		0120S
VZ 1	AP100		0120S
VZ 3 / VZ 5	AP500		1000S
Material			
Cast iron		GG	
Stainless steel		VA	

