

VZGG // VZVA



Your advantages

Series VZGG / VZVA

- High-precision measurement with excellent repeatability
- HT version for temperatures up to 150 °C with thermally insulated preamplifier (option)
- Variety of casing and sealing materials → Universally use for different measurement media
- Standard process connection via connecting plates → Quickly replaceable without lengthy interruptions to the process

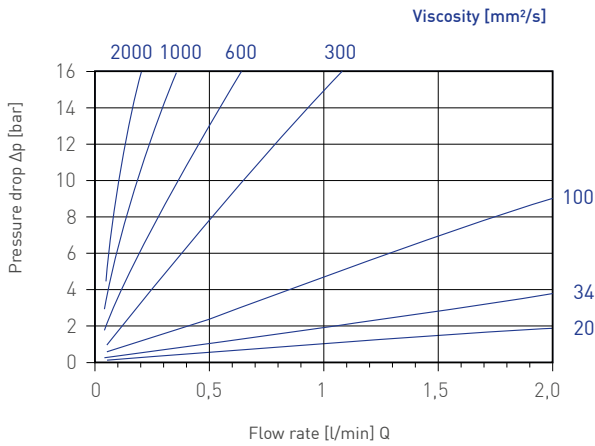
Type	VZ0.025	VZ0.04	VZ0.1	VZ0.2	VZ0.4	VZ1	VZ3	VZ5
Technical data								
Size	0.025	0.04	0.1	0.2	0.4	1	3	5
Process connection	Via subplate with lateral female thread connection							
Measuring range* [l/min]	0.008...2	0.02...4	0.04...8	0.16...16	0.2...40	0.4...80	0.6...160	1...250
Geometric gear volume [cm³]	0.025	0.04	0.1	0.245	0.4	1.036	3	5.222
Measuring accuracy	±0.3 % of reading (21 mm ² /s)							
Repeatability	< 0.1 % under same conditions							
Start of gear wheel rotation [l/min]	0.001	0.004	0.008	0.01	0.01	0.02	0.03	0.04
Viscosity of medium	1...100 000 mm ² /s							
Medium temperature range**	FKM	FEP	EPDM					
→ Standard	-15...120 °C	-30...120 °C	-30...120 °C					
→ Without preamplifier (for TD8250)	0...60 °C	0...60 °C	0...60 °C					
→ High temperature	-15...150 °C	-30...130 °C	-30...130 °C					
Ambient temperature range**	FKM	FEP	EPDM					
	-15...80 °C	-30...80 °C	-30...80 °C					
Pressure rating								
→ VZ 0.025... to VZ 1...	Max. 400 bar							
→ VZ 3... to VZ 5...	Max. 315 bar							
→ High pressure	Higher pressure rating on request							
Degree of protection EN 60529	IP65							
Output signals								
→ Puls rate [Pulse/l]	40 000	25 000	10 000	4081.63	2500	965.25	333.33	191.5
→ Resolution [ml/Puls]	0.025	0.04	0.1	0.245	0.4	1.036	3	5.222
→ Signal shape	2-channel, squarewave, PNP, pulse duty ratio 1:1							
Electrical data								
Electrical connection	Plug connector cable socket							
Power supply	12...30 VDC / max. 90 mA							
Power consumption [short-circuit proof]	0.9 W							

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

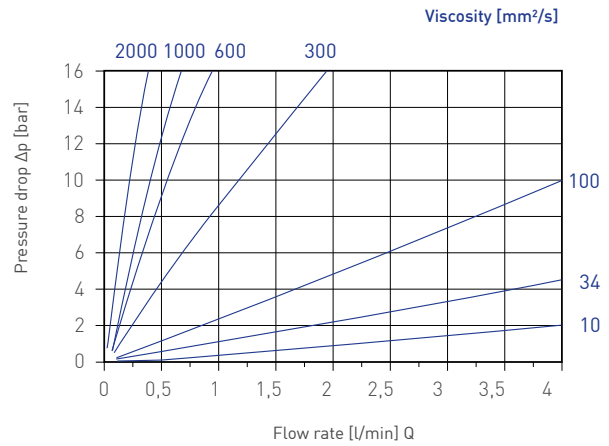
** Depending on sealing material

Options	
For type	On request
VZVA	→ Direct process connection

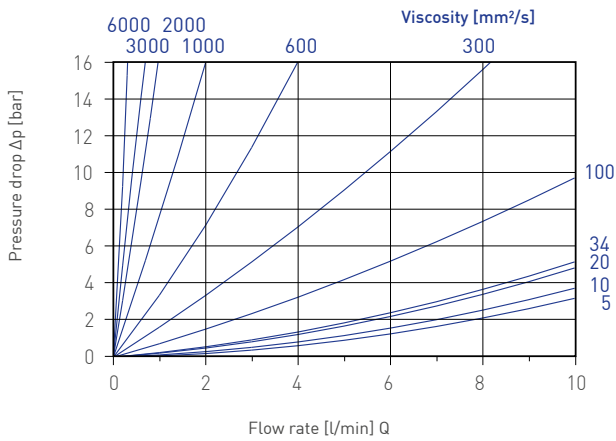
Typical pressure drop VZ0.025



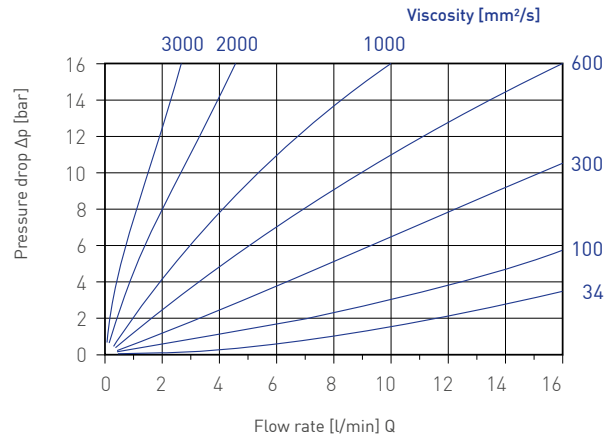
Typical pressure drop VZ0.04



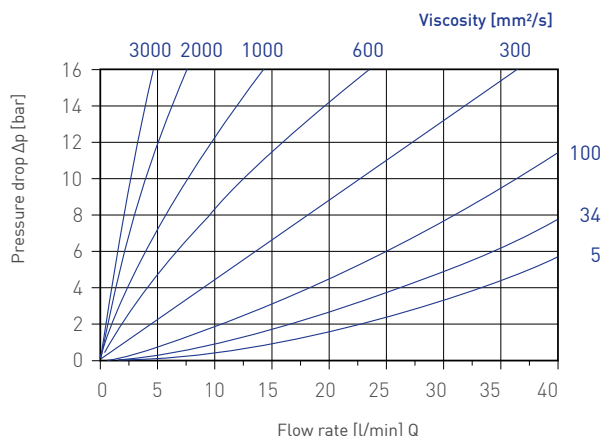
Typical pressure drop VZ0.1



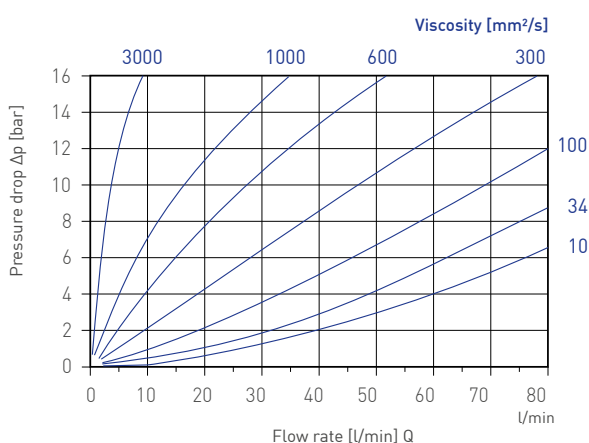
Typical pressure drop VZ0.2



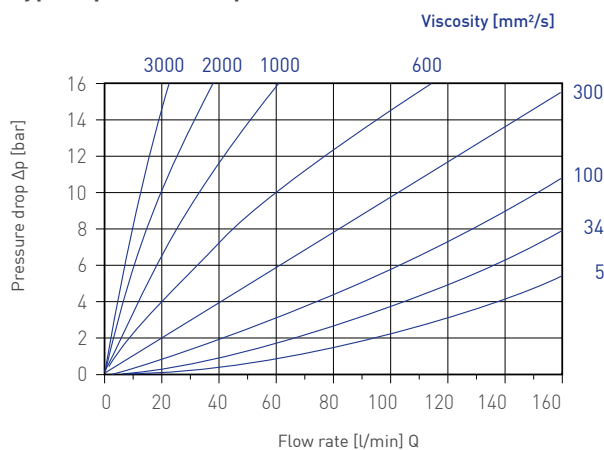
Typical pressure drop VZ0.4



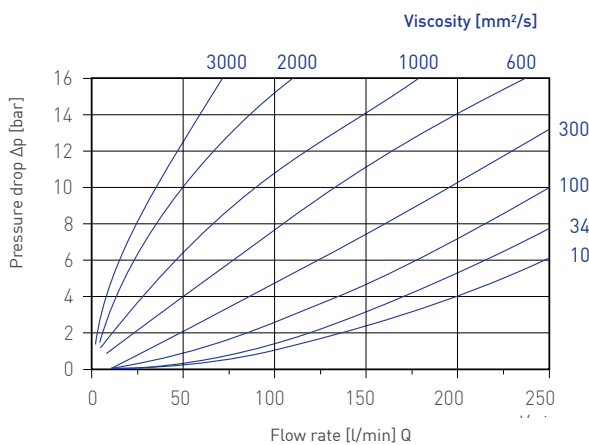
Typical pressure drop VZ1



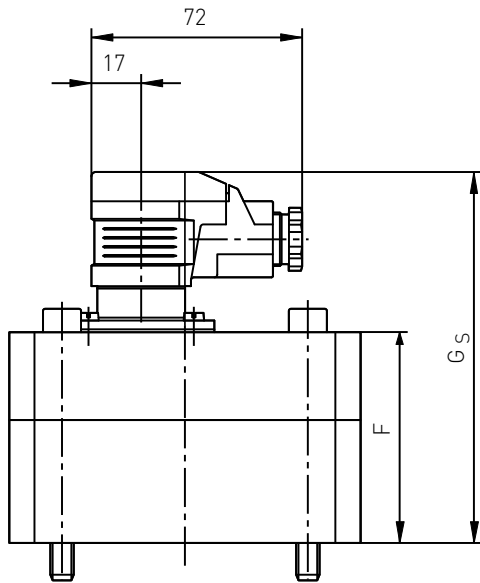
Typical pressure drop VZ3



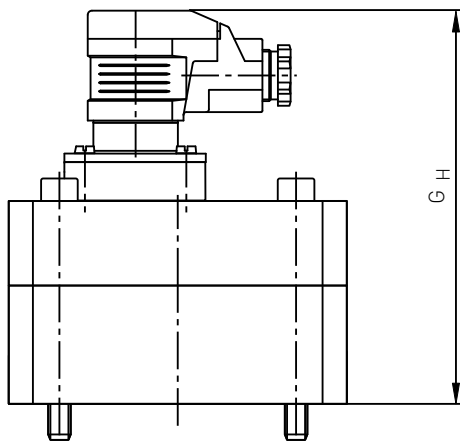
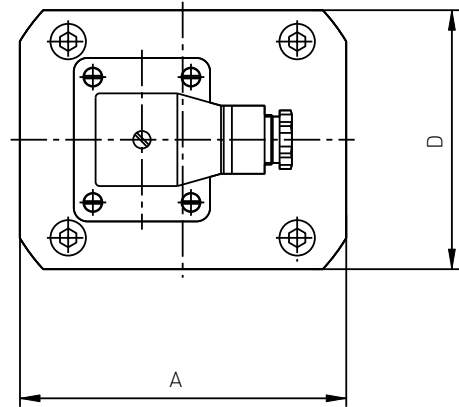
Typical pressure drop VZ5



VZGG



Standard version



High temperature version

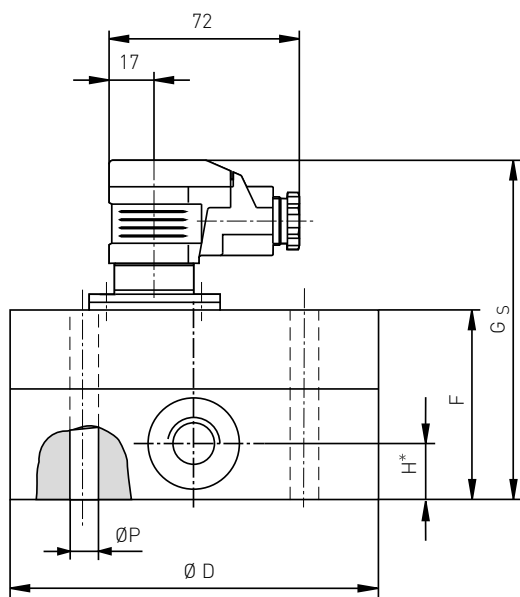
Material

Housing	Ductile iron EN-GJS-400-15
Gear wheels	Steel 1.7139
Bearings	Ball bearings
Seals	Standard: FKM Option: EPDM, FEP

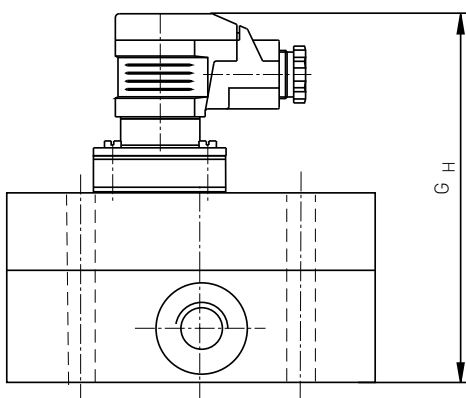
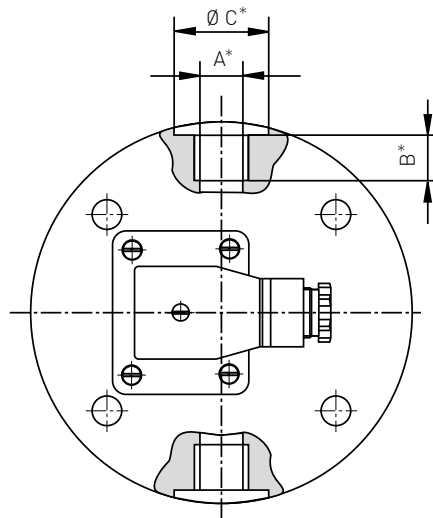
Dimensions

Type	VZ0.025GG	VZ0.04GG	VZ0.1GG	VZ0.2GG	VZ0.4GG	VZ1GG	VZ3GG	VZ5GG
A [mm]	85	85	85	85	100	120	170	170
D [mm]	60	60	60	60	90	95	120	120
F [mm]	50	56	65	57	63	72	89	105
GS [mm]	101	107	116	108	114	123	140	156
GH [mm]	114	120	129	121	127	136	153	169
Weight [kg]	1.8	2	2.3	2	3.7	5.2	9	13

VZVA



Standard version



High temperature version

* For direct process connection

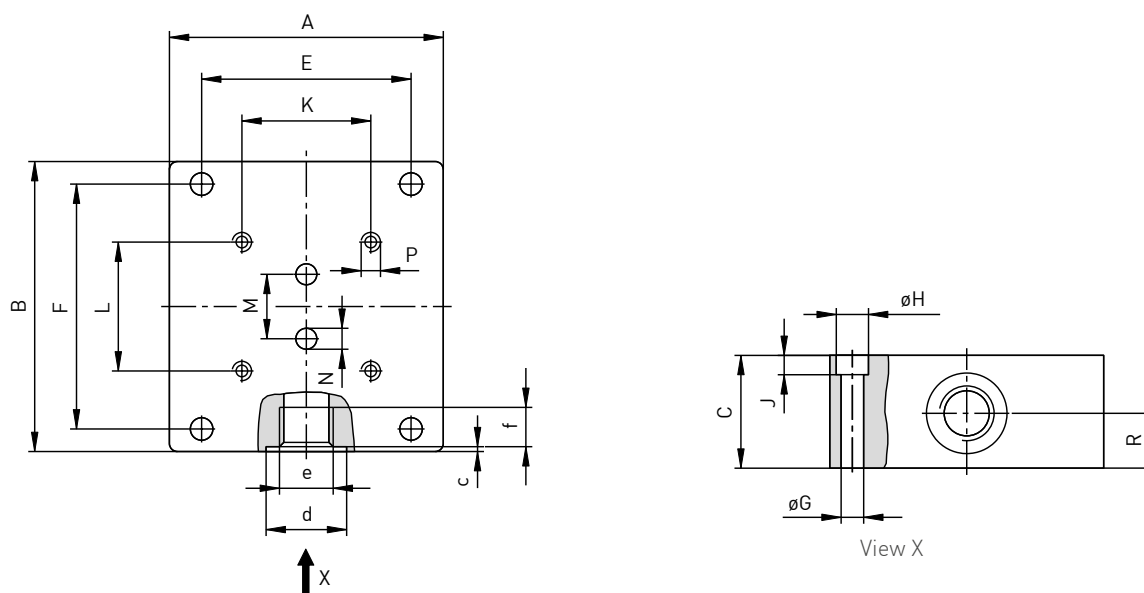
Material	
Housing	Stainless steel 1.4404
Gear wheels	Stainless steel 1.4462
Bearings	Ball bearings stainless steel
Seals	Standard: FKM Option: EPDM, FEP

Dimensions

Type	VZ0.025VA	VZ0.04VA	VZ0.1VA	VZ0.2VA	VZ1VA	VZ3VA	VZ5VA
D [mm]	94	94	94	94	124	170	170
F [mm]	55	56	65	57	72	89	105
GS [mm]	106	107	116	108	123	140	156
GH [mm]	119	120	129	121	136	153	169
Gewicht [kg]	3	3	3	3.1	7	15.9	18.7
Direct process connection							
A [mm]	G1/8	G1/4	G3/8	G3/8	G1/2	G 1	G 1
B [mm]	9	13	13	13	15	19	19
C [mm]	17	21	25	25	29	42	42
H [mm]	15	15	20	16	22	30	30

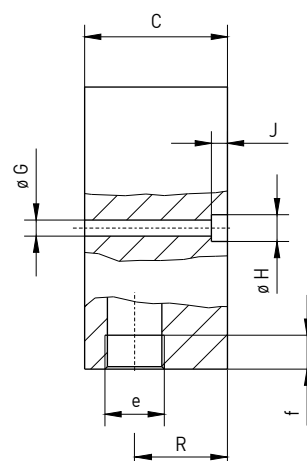
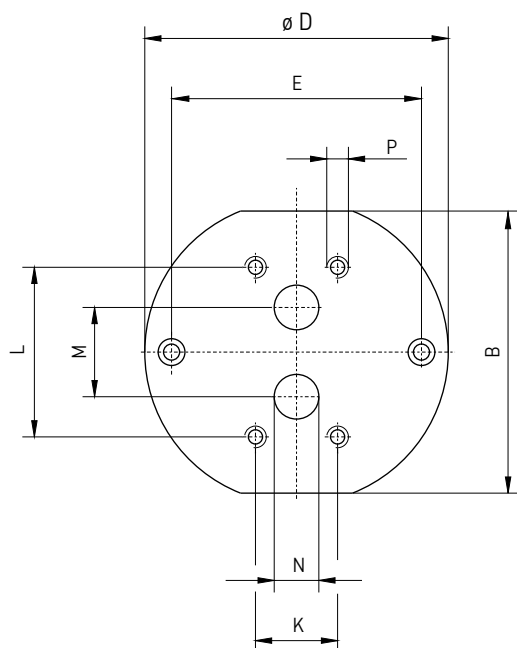
VZGG // Subplates

For type	VZ0.025GG / VZ0.04GG / VZ0.1GG / VZ0.2GG	VZ0,4GG	VZ1GG	VZ3GG / VZ5GG
A [mm]	85	100	100	160
B [mm]	90	110	120	165
C [mm]	35	37	37	80
c [mm]	0.7	0,7	0.7	1
d [mm]	25	29	29	42
E [mm]	65	86	80	140
e	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{2}$	G 1
F [mm]	76	96	106	145
f [mm]	13	15	15	19
G [mm]	7	7	7	9
H [mm]	11	11	11	15
J [mm]	7	7	7	9
K [mm]	70	80	84	46
L [mm]	40	38	72	95
M [mm]	20	34	35	50
N [mm]	6,5	16	12	25
P [mm]	M 6/14t	M 8/18t	M 8/18t	M 12/24t
R [mm]	17	18.5	17.5	28
Weight [kg]	1.8	2.7	2.9	14
Material	Ductile iron EN-GJL-250	Ductile iron EN-GJL-400-15		Ductile iron EN-GJL-250



VZVA // Subplates

For type	VZ0.025VA / VZ0.04VA / VZ0.1VA / VZ0.2VA	VZ1VA	VZ3VA / VZ5VA
B [mm]	85	116	158
C [mm]	35	37	80
D [mm]	94	124	170
E [mm]	75	100	140
e	G $\frac{3}{8}$	G $\frac{1}{2}$	G1
f [mm]	13	15	19
G [mm]	7	9	9
H [mm]	11	15	15
J [mm]	7	9	9
K [mm]	70	84	46
L [mm]	40	72	95
M [mm]	20	35	50
N [mm]	6.5	12	25
P [mm]	M 6/14t	M 8/18t	M 12/24t
R [mm]	18	19.5	52
Weight [kg]	1.7	3.2	13.9
Material	Stainless steel 1.4404		



Order code				
Type	Size			
VZ0.025	0.025	VZ0025		
VZ0.04	0.04	VZ004		
VZ0.1	0.1	VZ010		
VZ0.2	0.2	VZ020		
VZ0.4	0.4 (only ductile iron)	VZ040		
VZ1	1	VZ100		
VZ3	3	VZ300		
VZ5	5	VZ500		
Material				
Ductile iron		GG		
Stainless steel		VA		
Seals				
FKM			V3	
EPDM			E3	
FEP			P3	
Process connection				
Via subplates				2
Direct (only for stainless steel)				1
Preamplifier				
Integrated				I00S
Without preamplifier, for TD8250				K00S
Isolated for high temperature version				E00S
Example order number		VZ0025	GG	V3
				2
				I00S

Order code				
Subplates appropriate to				
VZ0.025 / VZ0.04 / VZ0.1 / VZ0.2	AP004			0380S
VZ0.4 (only ductile iron)	AP040			0120S
VZ1	AP100			0120S
VZ3 / VZ5	AP500			1000S
Material				
Ductile iron		GG		
Stainless steel		VA		
Example order number	AP004	GG		0380S

