

Throttle valve 500

Type SDM

NG 4
up to 25 l/min

Features

- High-precision control
- Adjustable while under pressure
- Bi-directional flow



Design

- Cartridge alone or in manifolds
- External surface stainless
- The valve setting can be locked by a counter nut

Applications

The throttle valve SDM is a part of the 500+ series. It is a directly and manually operated cartridge valve. Adjustable throttle valves are used for the adjustment of flow rates. The moving speed of a cylinder or motor can be influenced by these valves.



Technical data

Hydraulic fluid	mineral oil according to DIN 51524 (other fluids on request)
Fluid temperature range	-20 to 80 °C
Ambient temperature range	-30 to 50 °C
Viscosity range	5 to 420 mm ² /s
Porting	NG 4
Max. operating pressure port 1	700 bar
Max. operating pressure port 2	700 bar
Pressure loss	at 12 l/min (fully open) and 32 mm ² /s: 35 bar at 25 l/min (fully open) and 32 mm ² /s: 155 bar
Max. flow rate	25 l/min
Filtration (recommendation)	class 17/15/12 ISO/DIN 4406
Weight	0,12 kg (cartridge)
Materials	Valve body: high tensile corrosion-free steel Supporting ring: PTSM

Key sheet

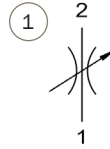
Example		SD	M	4E	G1/4AB43	V	A		00
Throttle valve									
Type	500+								
Nominal Size	4								
Cartridge	...E								
Connection Bieri	...B								
Connection In-line body	...R								
Design X Cartridge In manifold for valve bank with 3/2, 3/3, 4/2 and 4/3 valves G1/4AB43 G1/4, Throttle A and B, 4/3 seated valve G3/8AB43 G3/8, Throttle A and B, 4/3 seated valve G1/4P43 G1/4, Throttle P, 4/3 seated valve G3/8P43 G3/8, Throttle P, 4/3 seated valve G1/4T43 G1/4, Throttle T, 4/3 seated valve G3/8T43 G3/8, Throttle T, 4/3 seated valve G1/4AB42 G1/4, Throttle A and B, 4/2 seated valve G3/8AB42 G3/8, Throttle A and B, 4/2 seated valve G1/4P42 G1/4, Throttle P, 4/2 seated valve G3/8P42 G3/8, Throttle P, 4/2 seated valve G1/4T42 G1/4, Throttle T, 4/2 seated valve G3/8T42 G3/8, Throttle T, 4/2 seated valve G1/4AB33 G1/4, Throttle A and B, 3/3 seated valve G3/8AB33 G3/8, Throttle A and B, 3/3 seated valve G1/4P33 G1/4, Throttle P, 3/3 seated valve G3/8P33 G3/8, Throttle P, 3/3 seated valve G1/4T33 G1/4, Throttle T, 3/3 seated valve G3/8T33 G3/8, Throttle T, 3/3 seated valve G1/4AB32 G1/4, Throttle A and B, 3/2 seated valve G3/8AB32 G3/8, Throttle A and B, 3/2 seated valve G1/4P32 G1/4, Throttle P, 3/2 seated valve G3/8P32 G3/8, Throttle P, 3/2 seated valve G1/4T32 G1/4, Throttle T, 3/2 seated valve G3/8T32 G3/8, Throttle T, 3/2 seated valve In manifold for valve bank with 2/2 seated valve G1/4A22 G1/4 throttle A, 2/2 seated valve G3/8A22 G3/8 throttle A, 2/2 seated valve G1/4T22 G1/4 throttle T, 2/2 seated valve G3/8T22 G3/8 throttle T, 2/2 seated valve In-line mounting G1/4 G1/4 in-line mounting G3/8 G3/8 in-line mounting									
Seal material	V [FPM] other seal materials on request								
Special design 01 ... 99 (00 for standard)									
Part index Please leave blank (small letters a-d; different letters do not effect interchangeability)									
Desing revision Capital letters A-Z; identical letters equal same connecting dimensions									

Product information

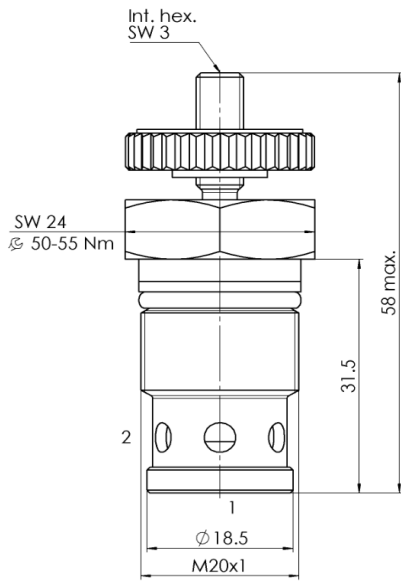
Cartridge

Type code	Part number	Symbol
SDM-4E-X-V-A*00	3830776	1

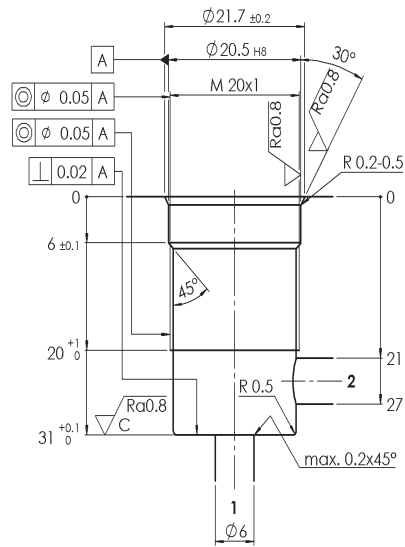
Symbol



Dimensional drawing



Cavity drawing

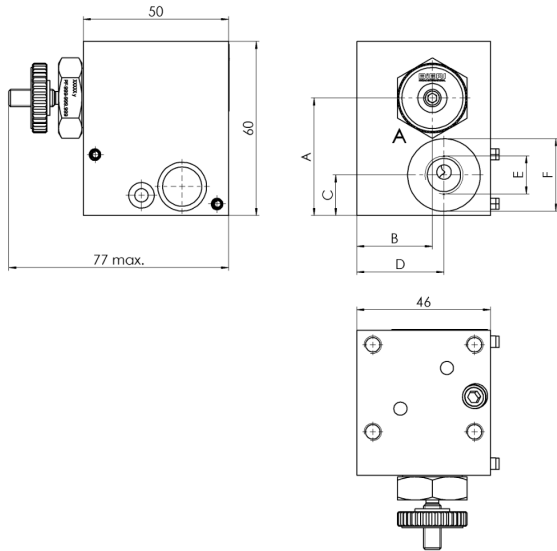


Type SDM

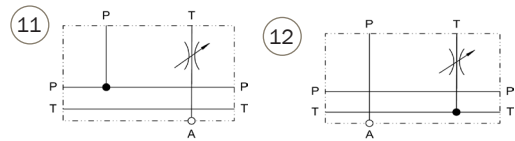
NG 4
up to 25/min

In manifold for valve bank with 2/2-way seated valve

Type	Part number	Symbol
SDM-4B-G1/4A22-V-A*00	3830833	11
SDM-4B-G3/8A22-V-A*00	3830834	11
SDM-4B-G1/4T22-V-A*00	3830835	12
SDM-4B-G3/8T22-V-A*00	3830836	12



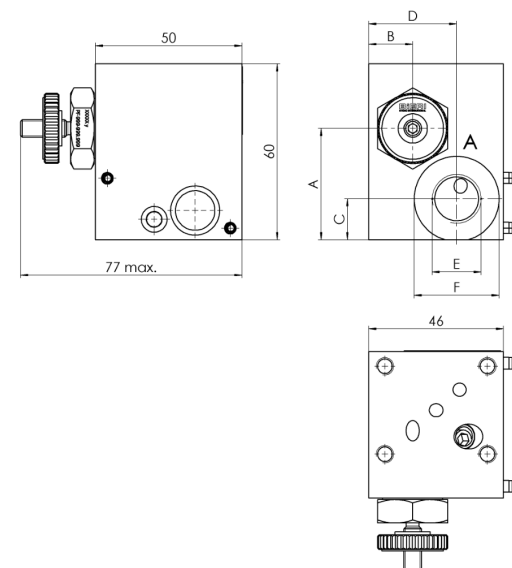
Symbols



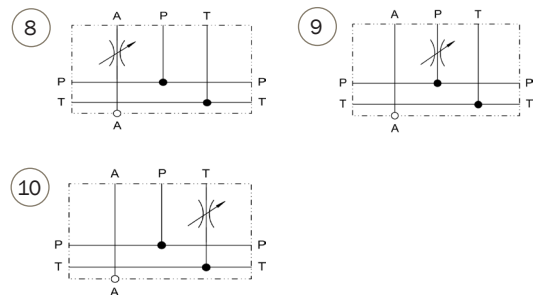
Type	Cartridge		Measurement connection			
	A	B	C	D	E	F
SDM-4B-G1/4A22-V-A*00	40.5	26	14	30	1/4"	Ø25
SDM-4B-G3/8A22-V-A*00	40.5	26	14	30	3/8"	Ø28
SDM-4B-G1/4T22-V-A*00	39.5	28.75	14	15	1/4"	Ø25
SDM-4B-G3/8T22-V-A*00	39.5	28.75	14	15	3/8"	Ø28

In manifold for valve bank with 3/2-way seated valve

Type	Part number	Symbol
SDM-4B-G1/4A32-V-A*00	3830827	8
SDM-4B-G3/8A32-V-A*00	4001437	8
SDM-4B-G1/4P32-V-A*00	3830829	9
SDM-4B-G3/8P32-V-A*00	3830830	9
SDM-4B-G1/4T32-V-A*00	3830831	10
SDM-4B-G3/8T32-V-A*00	3830832	10



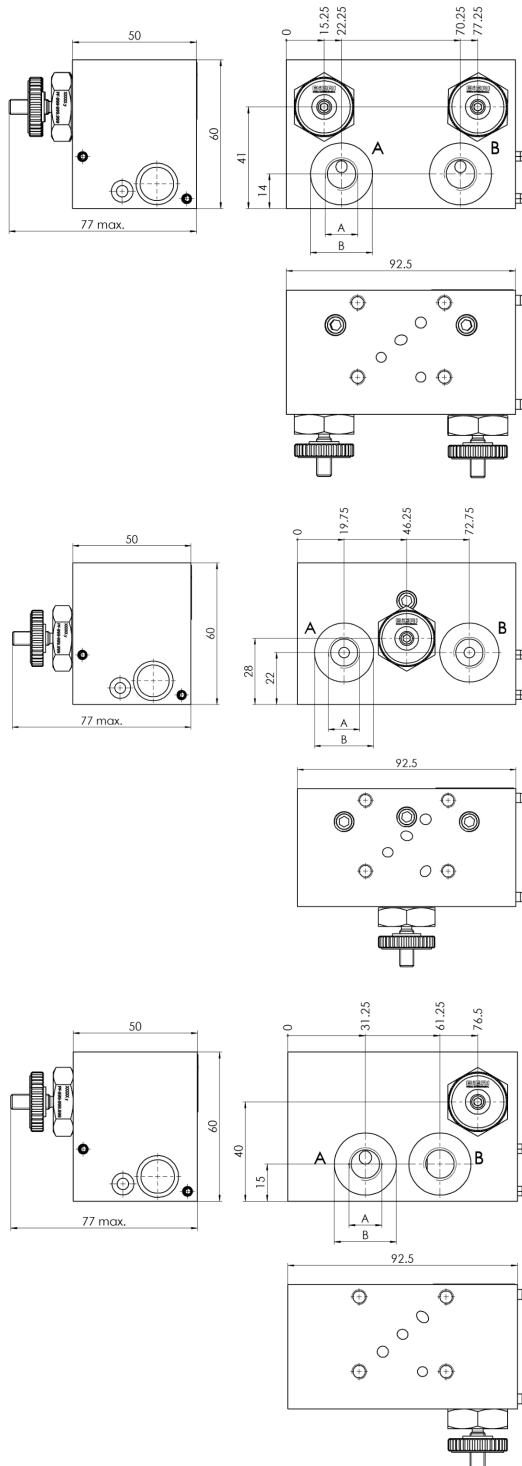
Symbols



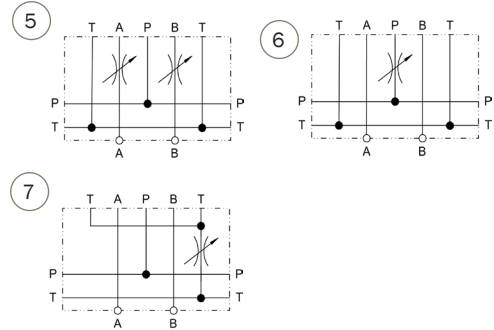
Type	Cartridge		Measurement connection			
	A	B	C	D	E	F
SDM-4B-G1/4A32-V-A*00	42	26	14	16	1/4"	Ø25
SDM-4B-G3/8A32-V-A*00	42	26	14	16	3/8"	Ø28
SDM-4B-G1/4P32-V-A*00	38	15	14	30	1/4"	Ø25
SDM-4B-G3/8P32-V-A*00	38	15	14	30	3/8"	Ø28
SDM-4B-G1/4T32-V-A*00	36	32.5	14	16	1/4"	Ø25
SDM-4B-G3/8T32-V-A*00	36	32.5	14	16	3/8"	Ø28

**Im manifold block for valve bank with
4/2-way seated valve**

Type	Part number	Symbol
SDM-4B-G1/4AB42-V-A*00	4001220	5
SDM-4B-G3/8AB42-V-A*00	3830816	5
SDM-4B-G1/4P42-V-A*00	3830817	6
SDM-4B-G3/8P42-V-A*00	3830818	6
SDM-4B-G1/4T42-V-A*00	3830819	7
SDM-4B-G3/8T42-V-A*00	3830820	7



Symbols



	A	B
SDM-4B-G1/4AB42-V-A*00	1/4"	Ø25
SDM-4B-G3/8AB42-V-A*00	3/8"	Ø28

	A	B
SDM-4B-G1/4P42-V-A*00	1/4"	Ø25
SDM-4B-G3/8P42-V-A*00	3/8"	Ø28

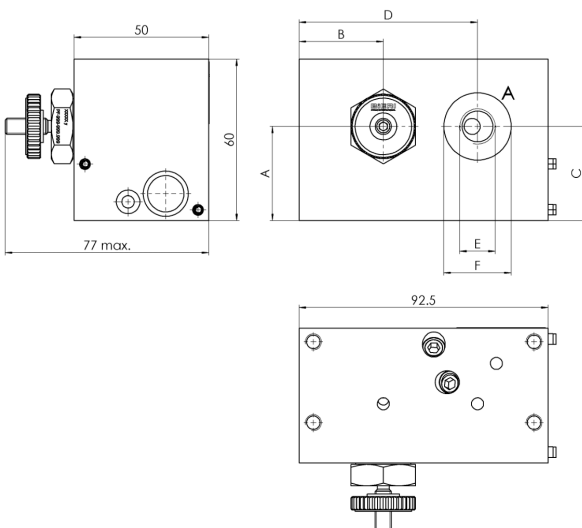
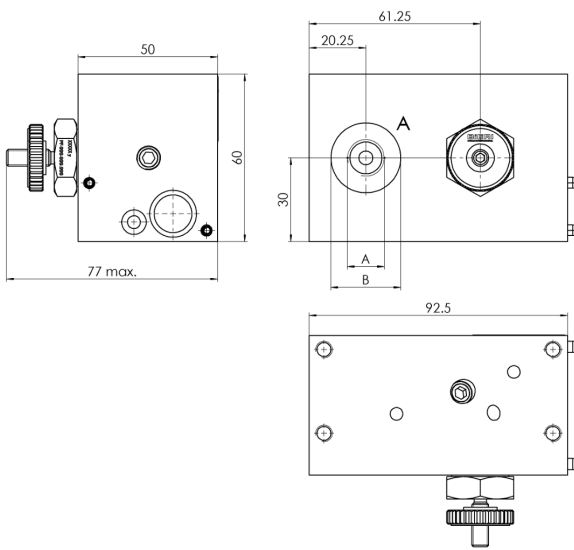
	A	B
SDM-4B-G1/4T42-V-A*00	1/4"	Ø25
SDM-4B-G3/8T42-V-A*00	3/8"	Ø28

Type SDM

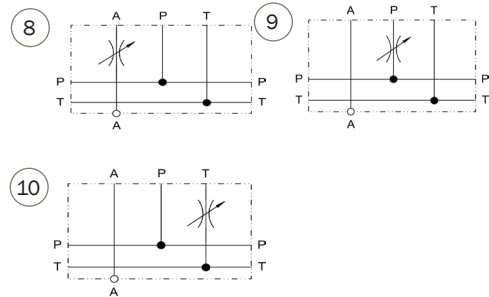
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In manifold for valve bank with 3/3-way seated valve

Type	Part number	Symbol
SDM-4B-G1/4A33-V-A*00	3830821	8
SDM-4B-G3/8A33-V-A*00	3830822	8
SDM-4B-G1/4P33-V-A*00	3830823	9
SDM-4B-G3/8P33-V-A*00	3830824	9
SDM-4B-G1/4T33-V-A*00	3830830	10
SDM-4B-G3/8T33-V-A*00	3830826	10



Symbols



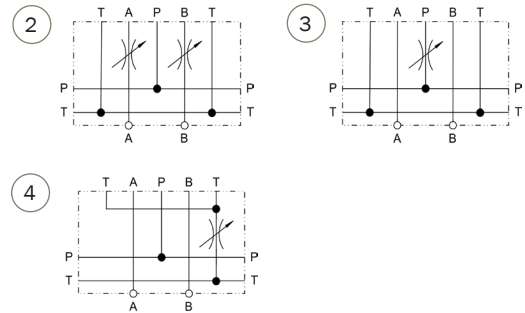
	A	B
SDM-4B-G1/4A33-V-A*00	G 1/4"	Ø25
SDM-4B-G3/8A33-V-A*00	G 3/8"	Ø28

Type	Cartridge		Measurement connection			
	A	B	C	D	E	F
SDM-4B-G1/4P33-V-A*00	35	31.25	35	66.25	1/4"	Ø25
SDM-4B-G3/8P33-V-A*00	35	31.25	35	66.25	3/8"	Ø28
SDM-4B-G1/4T33-V-A*00	30	31.25	35	66.25	1/4"	Ø25
SDM-4B-G3/8T33-V-A*00	30	31.25	35	66.25	3/8"	Ø28

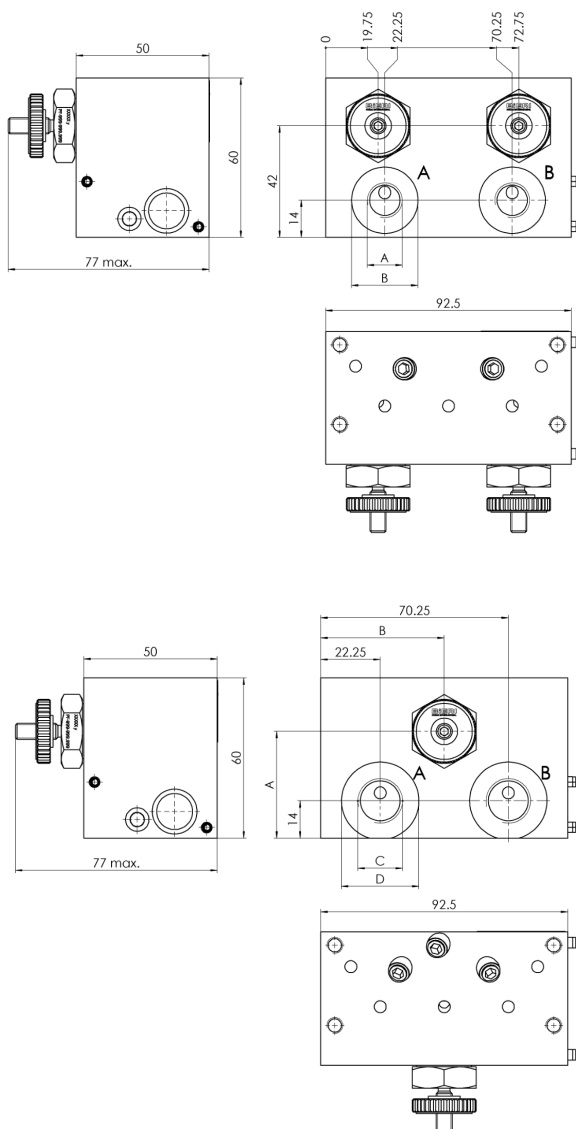
**In manifold for valve bank with
4/3-way seated valve**

Type	Part number	Symbol
SDM-4B-G1/4AB43-V-A*00	3830780	2
SDM-4B-G3/8AB43-V-A*00	3830781	2
SDM-4B-G1/4P43-V-A*00	3830782	3
SDM-4B-G3/8P43-V-A*00	3830783	3
SDM-4B-G1/4T43-V-A*00	3830784	4
SDM-4B-G3/8T43-V-A*00	3830815	4

Symbols



Dimensional drawing



	A	B
SDM-4B-G1/4AB43-V-A*00	G 1/4"	Ø25
SDM-4B-G3/8AB43-V-A*00	G 3/8"	Ø28

	A	B	E	F
SDM-4B-G1/4P43-V-A*00	40	46.25	1/4"	Ø25
SDM-4B-G3/8P43-V-A*00	40	46.25	3/8"	Ø28
SDM-4B-G1/4T43-V-A*00	37	53.25	1/4"	Ø25
SDM-4B-G3/8T43-V-A*00	37	53.25	3/8"	Ø28

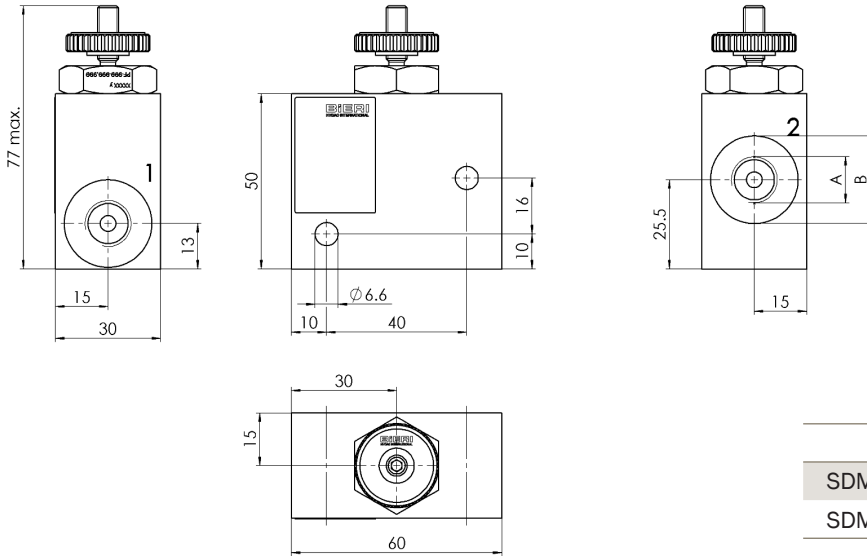
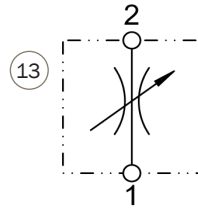
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In-line body

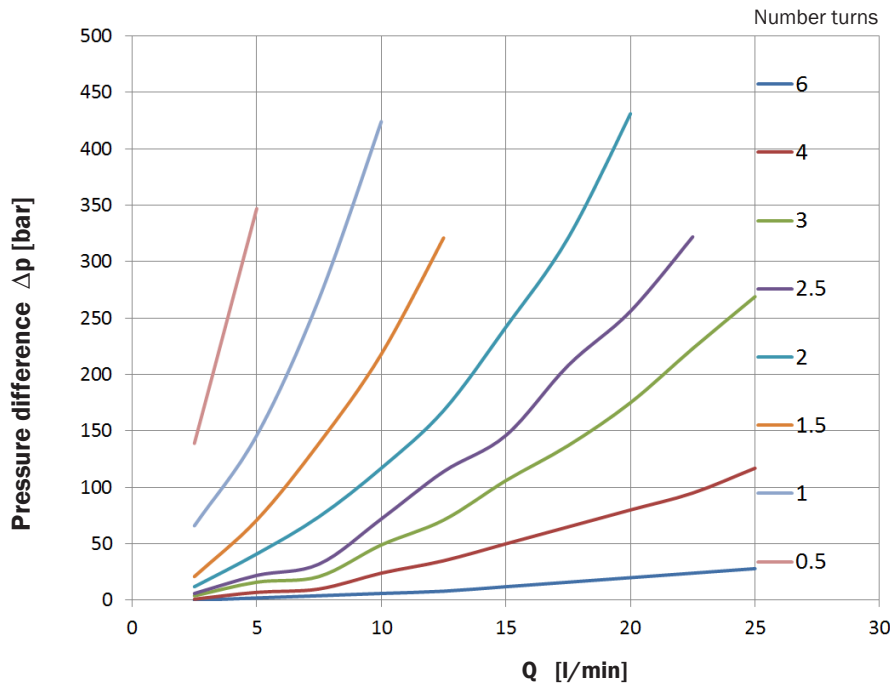
Type	Part number	Symbol
SDM-4R-G1/4-V-A*00	3830837	13
SDM-4R-G3/8-V-A*00	3830838	13

Symbol



	A	B
SDM-4R-G1/4-V-A*00	G 1/4"	Ø25
SDM-4R-G3/8-V-A*00	G 3/8"	Ø28

Characteristics $\Delta p(Q)$



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The information in this brochure relates to the operating conditions and applications described.
 For applications and operating conditions not described, please contact the relevant technical department.
 Subject to technical modifications.