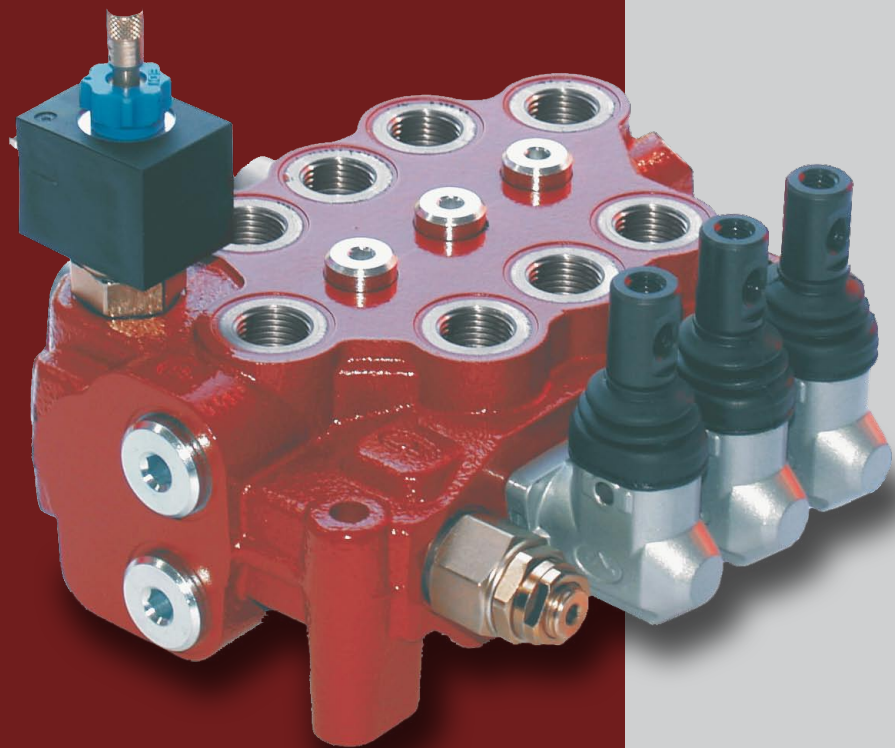


SDM100

1 to 8 sections
monoblock valve



Working conditions

This catalogue shows technical specifications and diagrams measured with mineral oil of 46mm²/s - 46 cSt viscosity at 40°C - 104°F temperature.

Nominal flow rating		70 l/min	18 US gpm
Operating pressure (max.)		315 bar	4600 psi
Back pressure (max.)	on outlet port T	10 bar	1450 psi
Internal leakage (max.) A(B)⇒T	Δp = 100 bar - 1450 psi fluid and valve at 40°C -104°F	5 cm ³ /min (max. 9 cm ³ /min)	0.31 in ³ /min (max. 0.55 in ³ /min)
Fluid		Mineral based oil	
Fluid temperature	with NBR (BUNA-N) seals	from -20°C to 80°C	from -4°F to 176°F
	with FPM (VITON) seals	from -20°C to 100°C	from -4°F to 212°F
Viscosity	operating range	from 15 to 75 mm ² /s	from 15 to 75 cSt
	min.	12 mm ² /s	12 cSt
	max.	400 mm ² /s	400 cSt
Max contamination level		-/19/16 - ISO 4406	NAS 1638 - class 10
Ambient temperature for working conditions	with mechanical devices	from -40°C to 60°C	from -40°F to 140°F
	with pneumatic and hydraulic devices	from -30°C to 60°C	from -22°F to 140°F
	with electric devices	from -20°C to 50°C	from -4°F to 122°F

NOTE - for different conditions please contact Sales Dpt

Standard threads

REFERENCE STANDARD						
		BSP		UN-UNF	METRIC	NPTF
THREAD ACCORDING TO		ISO 228/1		ISO 263		
		BS 2779		ANSI B1.1 unified	ISO 262	ANSI B1.20.3
CAVITY DIMENSION ACCORDING TO	ISO	1179		11926	6149	
	SAE			J1926	J2244	J476a
	DIN	3852-2 shape X or Y				

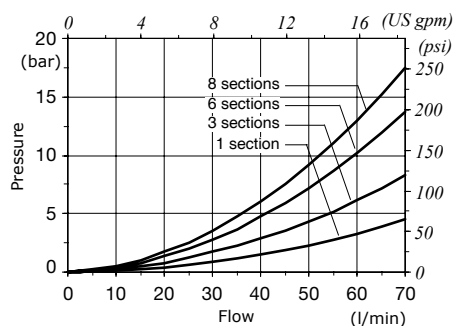
PORTS			
	BSP	UN-UNF	METRIC
Inlet P and power beyond C	G 1/2	7/8-14 (SAE10)	M22x1.5
Ports A and B	G 3/8	3/4-16 (SAE8)	M18x1.5
Outlet T	G 1/2	7/8-14 (SAE10)	M22x1.5
Hydraulic pilot	G 1/4	7/16-20 (SAE4)	G 1/4
Pneumatic pilot		NPTF 1/8-27	

NOTE- for different port size contact Sales Dpt

Performance data

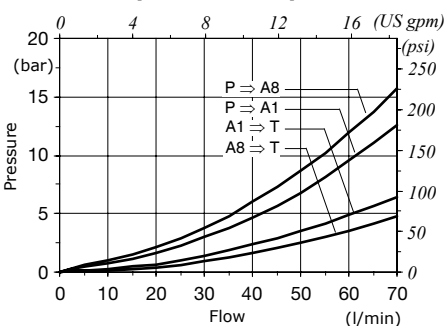
General

P ⇒ T pressure drop*



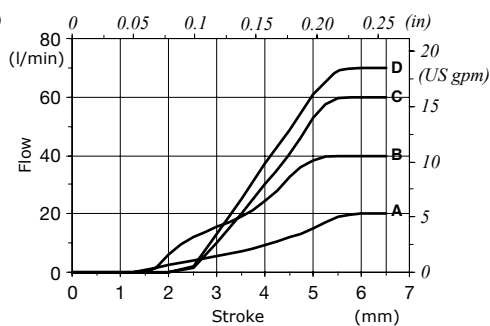
Note (*): pressure drop curve with spool type 109 (for up to 60 l/min - 16 US gpm flow)

P ⇒ A(B) e A(B) ⇒ T pressure drop*



Spool type 1 P ⇒ A(B) metering curve

Q_{in} = depending on spool - P = 60 bar / 870 psi



A = spool type 102, up to 20 l/min - 5.3 US gpm

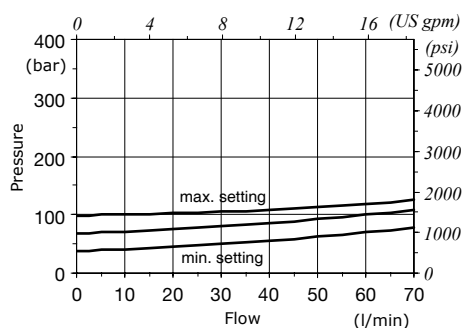
B = spool type 101, up to 40 l/min - 10.5 US gpm

C = spool type 109, up to 60 l/min - 16 US gpm

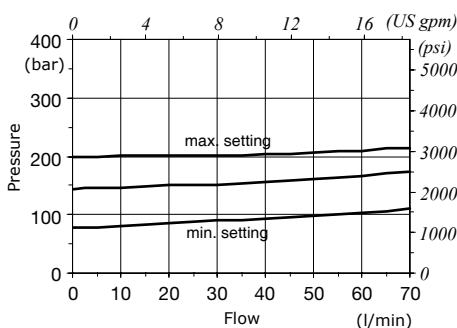
D = spool type 127, up to 70 l/min - 18.5 US gpm

Main pressure relief valve

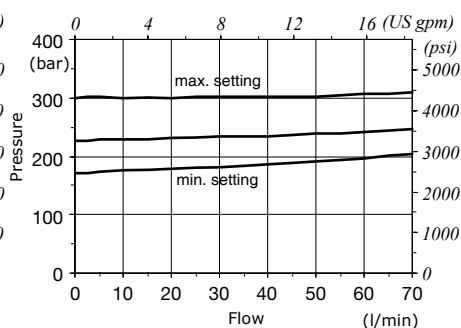
TVG2 valve setting range
(green band)



TVG3 valve setting range
(blue band)



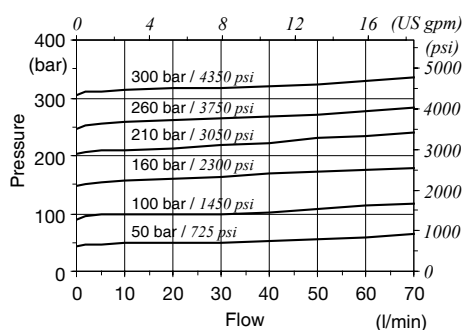
TVG4 valve setting range
(red band)



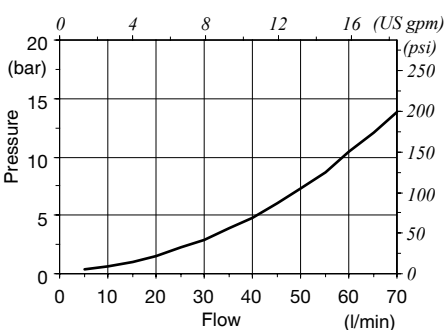
Auxiliary valves

Port valves type U

Setting examples (10 l/min - 2.6 US gpm)

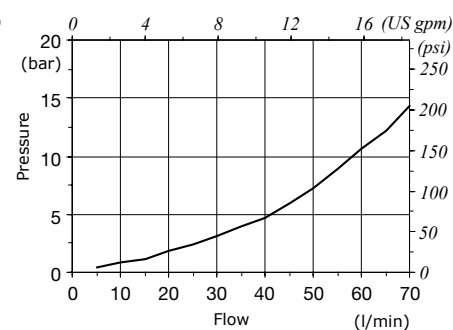


Type U valves pressure drop
(in anticavitation)

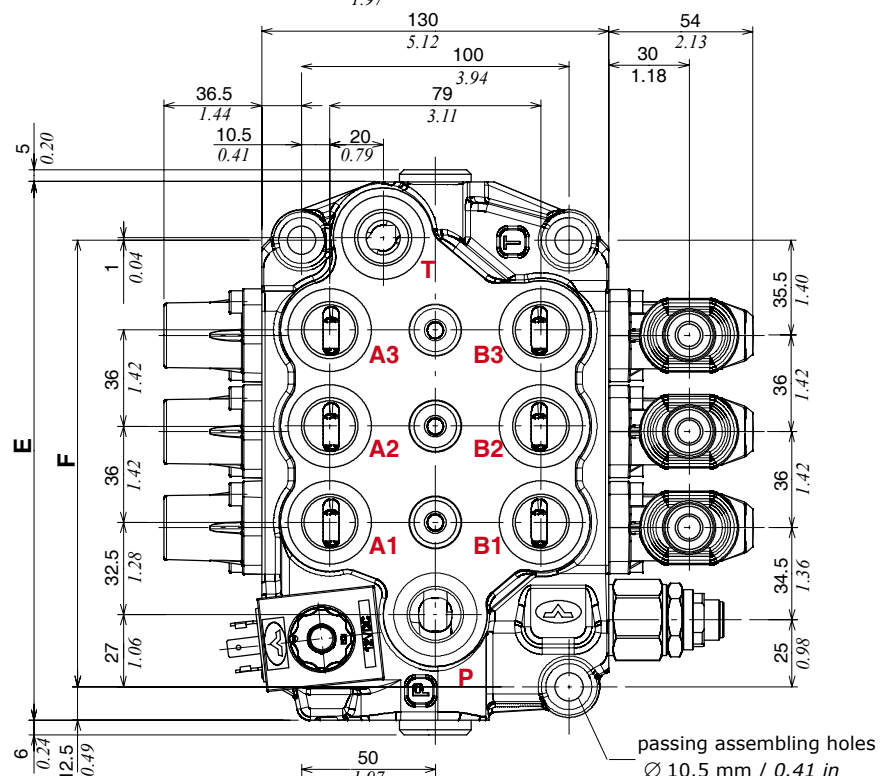
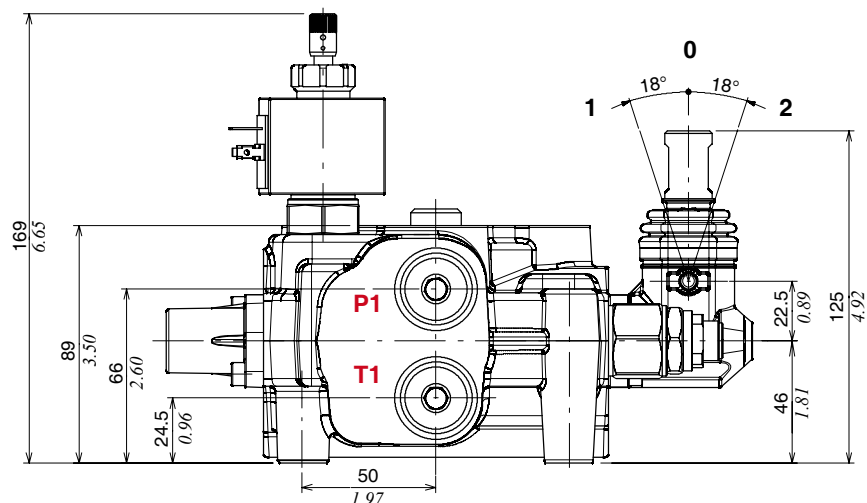
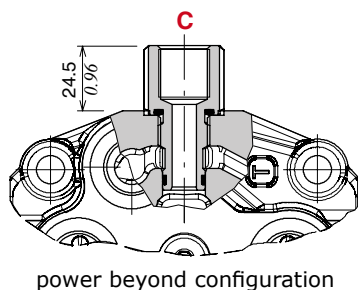


Unloader valve pressure drop

On SDM100/3 directional valve

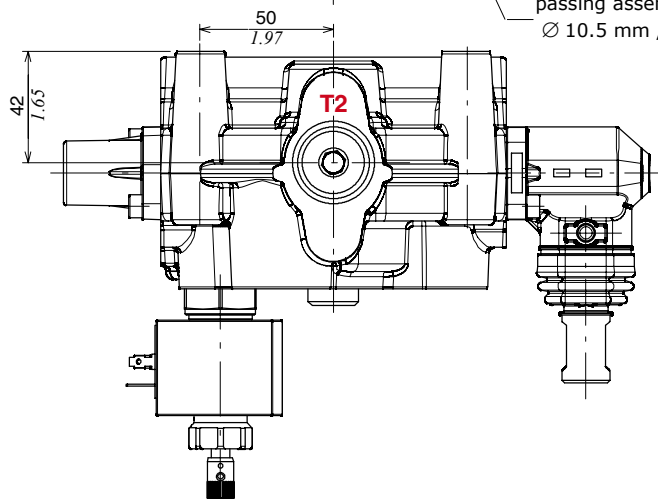


Dimensional data



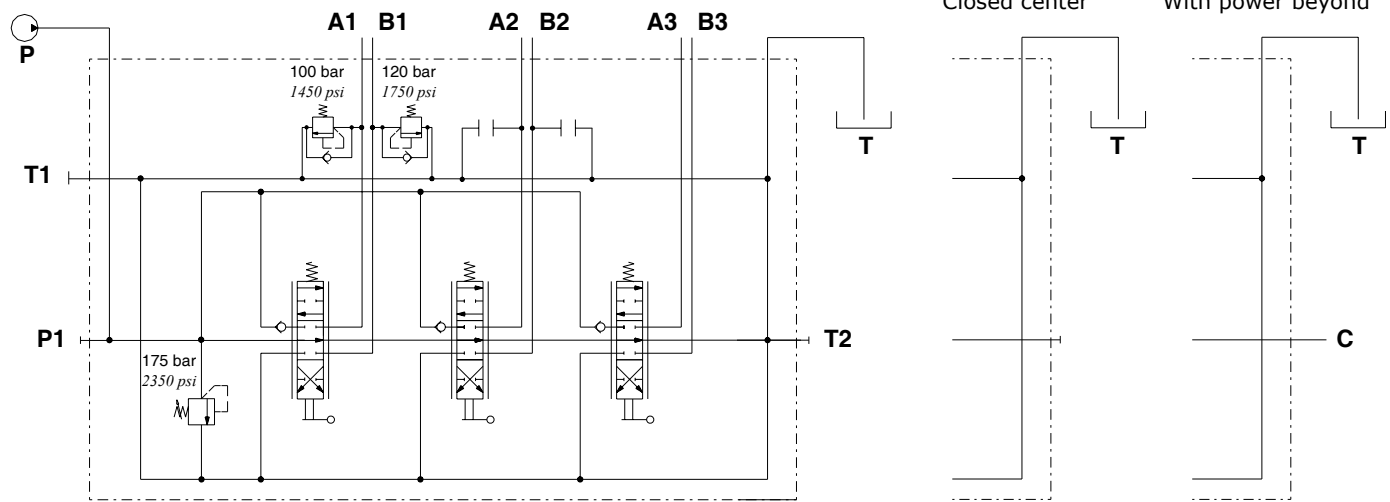
NOTE: Drawings and dimensions are referred to BSP thread configuration

TIPO	E		F	
	mm	in	mm	in
SDM100/1-P	129,5	5.10	95	3.74
SDM100/2-P	165,5	6.52	131	5.16
SDM100/3-P	201,5	7.93	167	6.57
SDM100/4-P	237,5	9.35	203	7.99
SDM100/5-P	273,5	10.77	239	9.41
SDM100/6-P	309,5	12.19	275	6.89
SDM100/7-P	345,5	13.60	311	12.24
SDM100/8-P	381,5	15.02	347	13.66

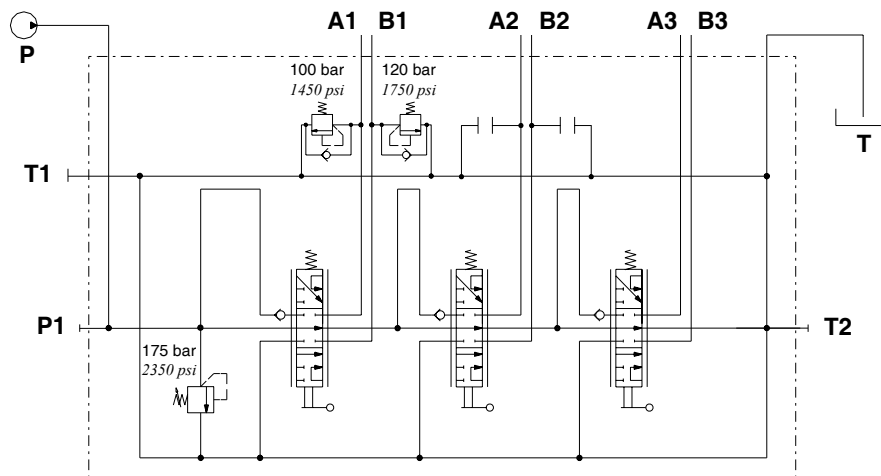


Hydraulic circuit

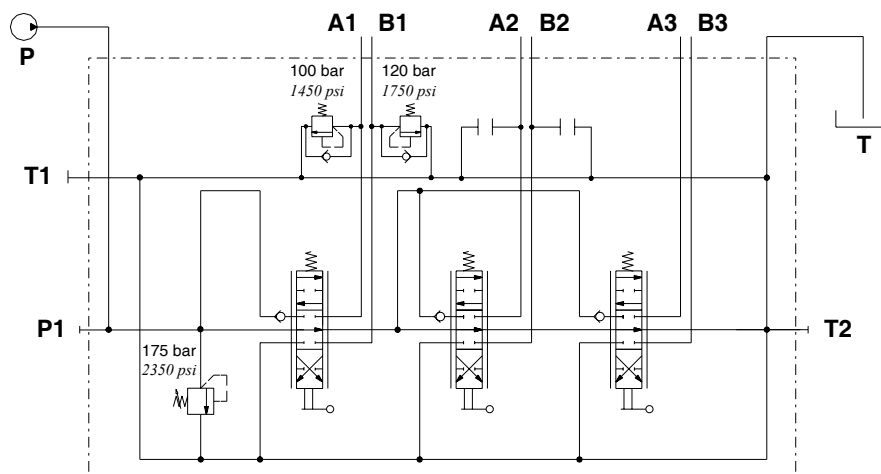
Parallel circuit configuration



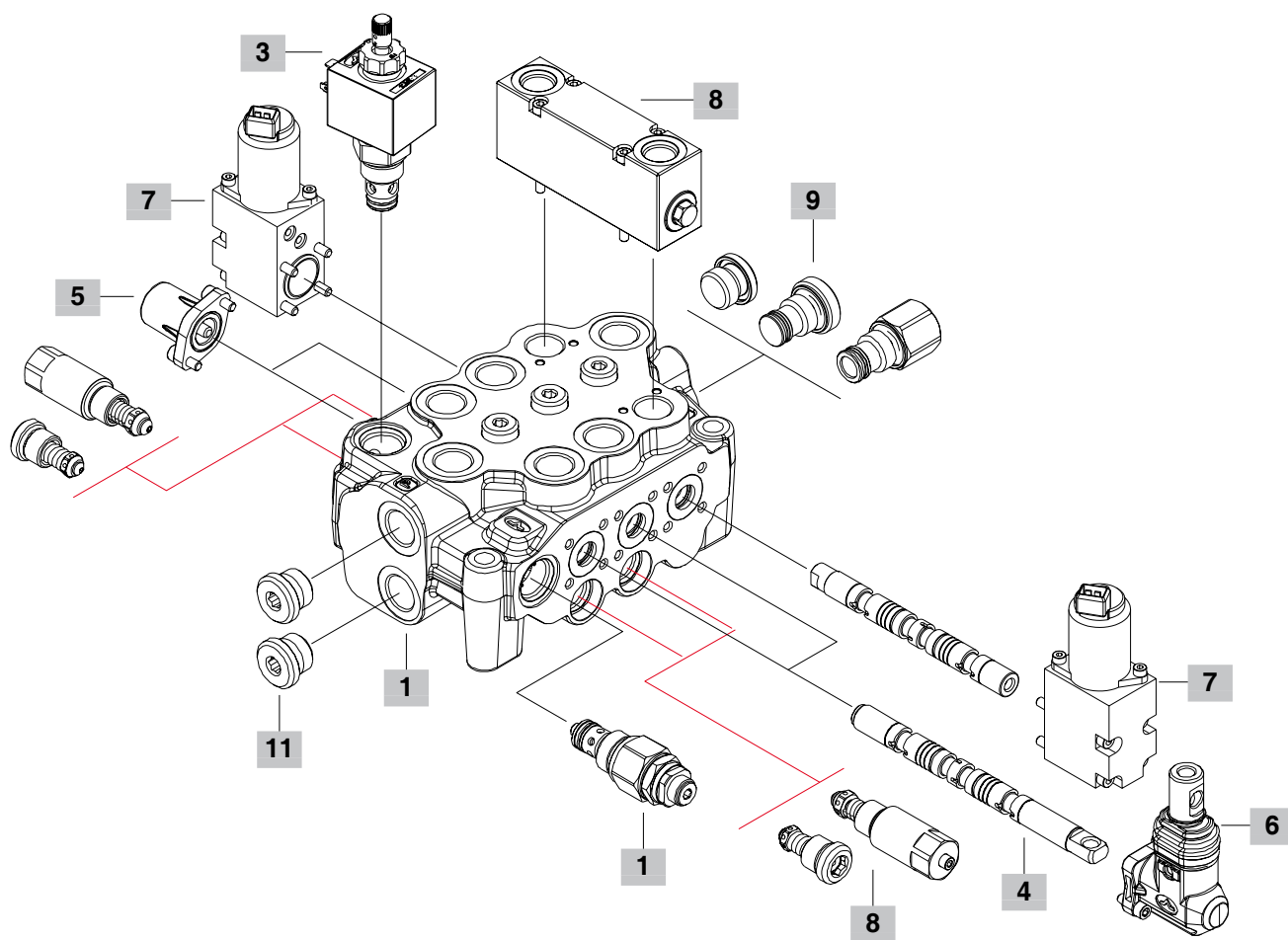
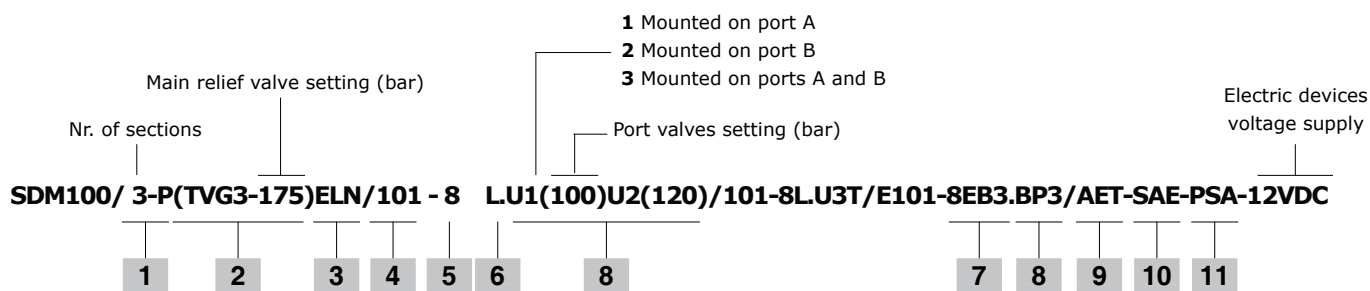
Series circuit configuration



Series-parallel circuit (tandem) configuration



Description composition



1 Body kit

- 1-P:** 1 section body
2-P: 2 sections body
3-P: 3 sections body
4-P: 4 sections body
5-P: 5 sections body
6-P: 6 sections body
7-P: 7 sections body
8-P: 8 sections body
- For series and series-parallel circuit contact Sales Department

2 Pressure relief valve

Direct operation

- (TVG2-80):** Setting range from 63 to 100 bar / 900 to 1450 psi, standard setting 80 bar / 1160 psi
(TVG3-175): Setting range from 100 to 200 bar / 1450 to 2990 psi, standard setting 175 bar / 2550 psi
(TVG4-220): Setting range from 200 to 300 bar / 2900 to 4350 psi, standard setting 220 bar / 3200 psi
SV: Valve blenking plug

Description composition

3 Unloader valve

ELN: Solenoid operated without emergency push-button
ELP: Solenoid operated with emergency push-button
ELT: Solenoid operated with "push and twist" emergency push-button
LT: Valve blanking plug

4 Spools

If not specified otherwise, the spools are up to 40 l/min - 10.5 US gpm flow

102: Double acting, 3 positions, with A and B closed in neutral position; for up to 20 l/min - 5.3 US gpm flow
101: As previous, up to 40 l/min - 10.5 US gpm flow
109: As previous, up to 60 l/min - 16 US gpm flow
127: As previous, up to 70 l/min - 18.5 US gpm flow
201: Double acting, 3 positions, with A and B open to tank in neutral position
2H01: Double acting, 3 positions, with A and B partially open to tank in neutral position
1S02: Double acting, 3 positions, with A and B closed in neutral position, for series circuit
2S01: Double acting, 3 positions, with A and B closed in neutral position, for series circuit
301: Single acting in A, 3 positions, B plugged
401: Single acting in B, 3 positions, A plugged:
801: Double acting, 3 positions, regenerative in 2nd positions with spool out
501: Double acting, 4 positions, floating in 4th positions with spool in: for "A" side positioners type 13 and 13F. Need special body, contact Sales Department

5 "A" side spool positioners

7FTN: With friction and neutral position sensor
8: With spring return in neutral position
8D: As type 8 and pin with M6 female thread for dual control
8F2: With spring return in neutral position and adjustable flow limiter in position 2
8TL: As type 8 and pin control for flexible cable operation
9B: With detent in position 1 and spring return in neutral position
10B: With detent in position 2 and spring return in neutral position
11B: With detent in position 1 and 2, spring return in neutral position
8K: As type 8 with spool solenoid lock device
8RM2: With spring return in neutral position and electromagnetic detent in position 2
8MG3(NO): With spring return in neutral position and operation with microswitch in pos. 1 and 2
8PP: Proportional pneumatic kit
8EP3: ON/OFF electropneumatic kit
13: 4 positions, spring return in neutral, detent in 4th position: for spool type 501
13F: 4 positions with spring return in neutral: for spool type 501

6 "B" side options

L: Standard lever box
LF1: Lever box with adjustable flow limiter in position 1
LB3: Steel lever box, heavy duty type
SLP: Without lever box, with dust-proof plate
SLC: Without lever box, with endcap
LCA1-4: Joystick for 2 sections operation: config. type 1 and 4
LCA2-3: Joystick for 2 sections operation: config. type 2 and 3
SLK: Type SLP with solenoid spool lock device, needs special spools: contact Sales Department

7 Complete controls

They need special spools and particular bodies: contact Sales Dpt.

ON/OFF direct solenoid control

Note: The correct operation of the control, at the valve nominal pressure, is assured up to 50 l/min; please Contact the Sales Department for higher flow.

8ES1: Spring return to neutral, single acting in A

8ES2: Spring return to neutral, single acting in B

8ES3: Spring return to neutral, double acting

Double side proportional hydraulic control

8IM: Spring return to neutral

13IM: Spring return to neutral for floating circuit spool

Double side proportional electrohydraulic control

8EB3: Spring return to neutral

8EB3LH: With spring return to neutral and wet-type lever control

13EB3: As type 8EB3 for floating circuit spool

13EB3LH: As type 8EB3LH for floating circuit spool

8 Port valves

C: Anticavitation valve

P: Fixed setting antishock valve: for complete list contact Sales Dpt.

U: Fixed setting antishock with prefill valve: for list contact Sales Dpt.

UR: Adjustable setting antishock with prefill valve: for adjusting range contact Sales Department

UT: Valve blanking plug

BP: Flange mounted pilot check valves: assembled on ports side

9 Circuit options

AET: Open center

AEK: Closed center

AE: With power beyond sleeve

VRC: With backpressure valve

VRE: With backpressure valve and power beyond sleeve

10 Threading specification

Specify thread type only if is different from BSP standard: see page 4

11 Port selections

PSA: Upper inlet P and outlet T

PSL: Side inlet P1 and outlet T2

PSL-NOTAP(T1): Side inlet P1 and outlet T1, on each side