

SDM100

1 to 7 sections monoblock valve



- Fitted with a main pressure relief valve and a load check valve on every working section.
- Available with parallel circuit, one section with series-parallel (tandem) or series circuit on request.
- Optional carry-over port.
- Anticavitation and antishock valves (with fixed or adjustable setting) available on every section.
- Optional flange mounted pilot check valves on every sections.
- Optional unloader solenoid valves.
- Wide range of controls: manual, pneumatic, electropneumatic, hydraulic, electrohydraulic, electric and remote with flexible cable.

NEW PRODUCT

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	$\Delta p = 100 \text{ bar} - 1450 \text{ psi}$ 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	ISO 262	ANSI B1.20.3
		BS 2779	ANSI B1.1 unified		
CAVITY DIMENSION ACCORDING TO	ISO	1179		6149	
	SAE			J2244	J476a
	DIN	3852-2 shape X or Y			

Ports

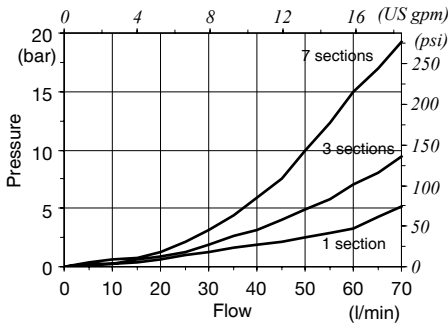
	BSP	UN-UNF	METRIC
Inlet P and carry-over C	G 1/2	7/8-14 (SAE10)	M22x1.5
Ports A and B	G 3/8	3/4-16 (SAE8)	M18x1.5
Outlet T	G 1/2	7/8-14 (SAE10)	M22x1.5
Hydraulic pilot	G 1/4	7/16-20 (SAE4)	G 1/4
Pneumatic pilot		NPTF 1/8-27	

NOTE - for different port size contact Sales Dpt.

PERFORMANCE DATA

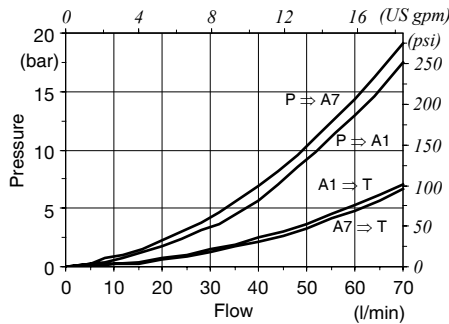
General

P ⇒ T pressure drop*

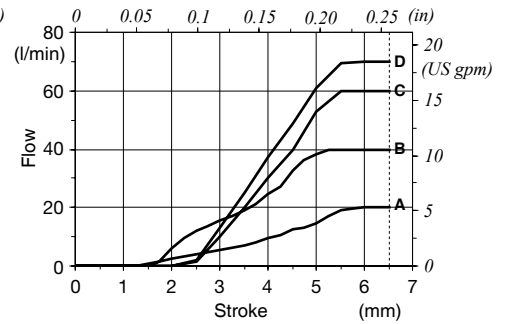


Note (*): pressure drop curve with spool type 101 (for up to 40 l/min - 10.5 US gpm flow)

P ⇒ A(B) e A(B) ⇒ T pressure drop*



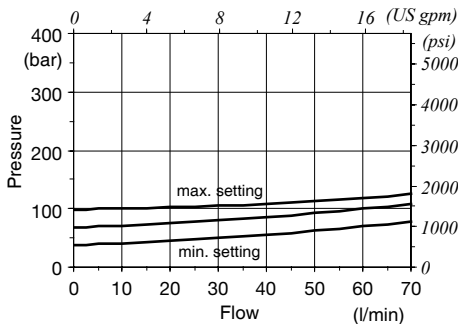
Spool type 1 P ⇒ A(B) metering curve
Qin = depending on spool - P = 60 bar / 870 psi



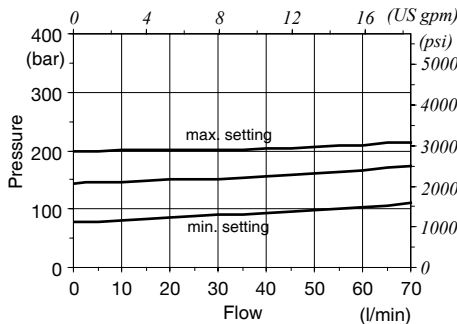
A = spool type 102, up to 20 l/min - 5.3 US gpm
B = spool type 101, up to 40 l/min - 10.5 US gpm
C = spool type 109, up to 60 l/min - 16 US gpm
D = spool type 127, up to 70 l/min - 18.5 US gpm

Main pressure relief valve

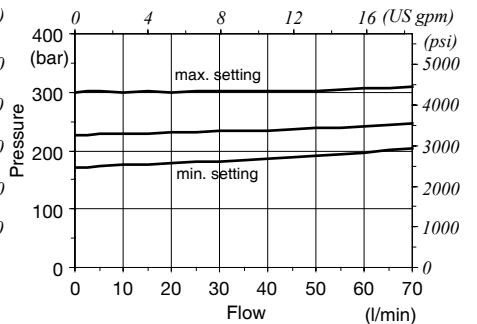
TVG2 valve setting range (green band)



TVG3 valve setting range (blue band)



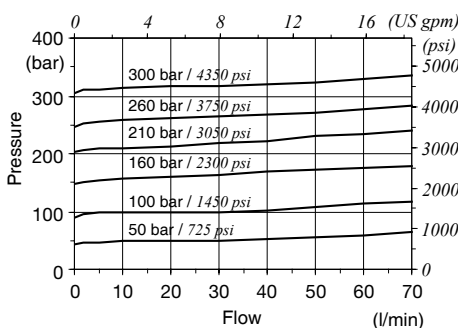
TVG4 valve setting range (red band)



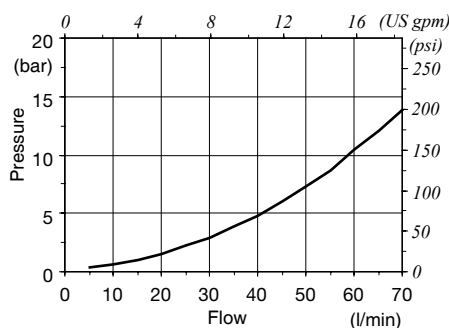
Auxiliary valves

Port valves type U

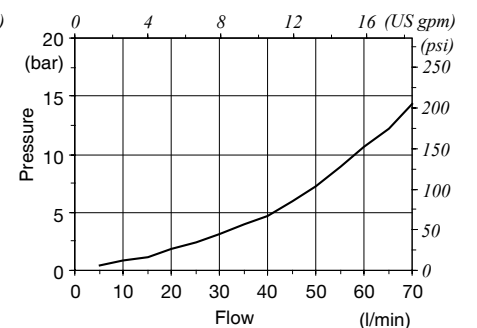
Setting examples (10 l/min - 2.6 US gpm)



Type U valves pressure drop (in anticavitation)

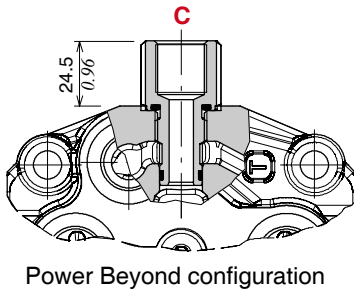
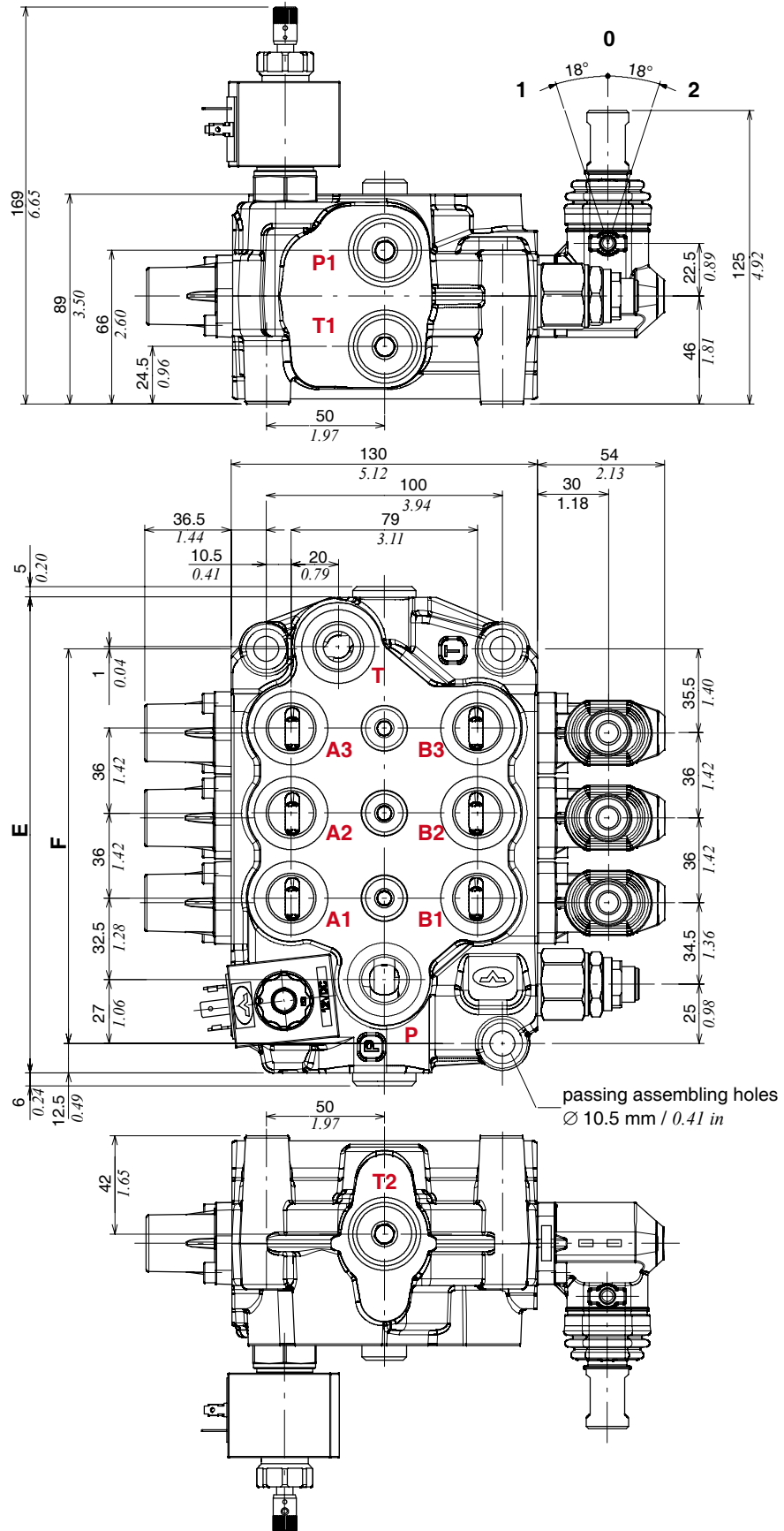


Unloader valve pressure drop
On SDM100/3 directional valve



SDM100

DIMENSIONAL DATA

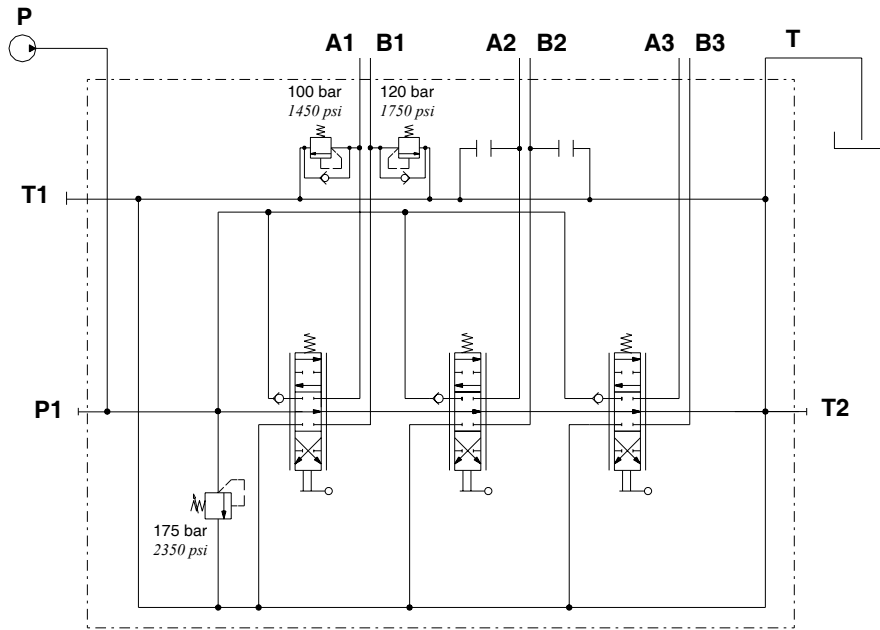


NOTE: Drawings and dimensions are referred to BSP thread configuration.

TYPE	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

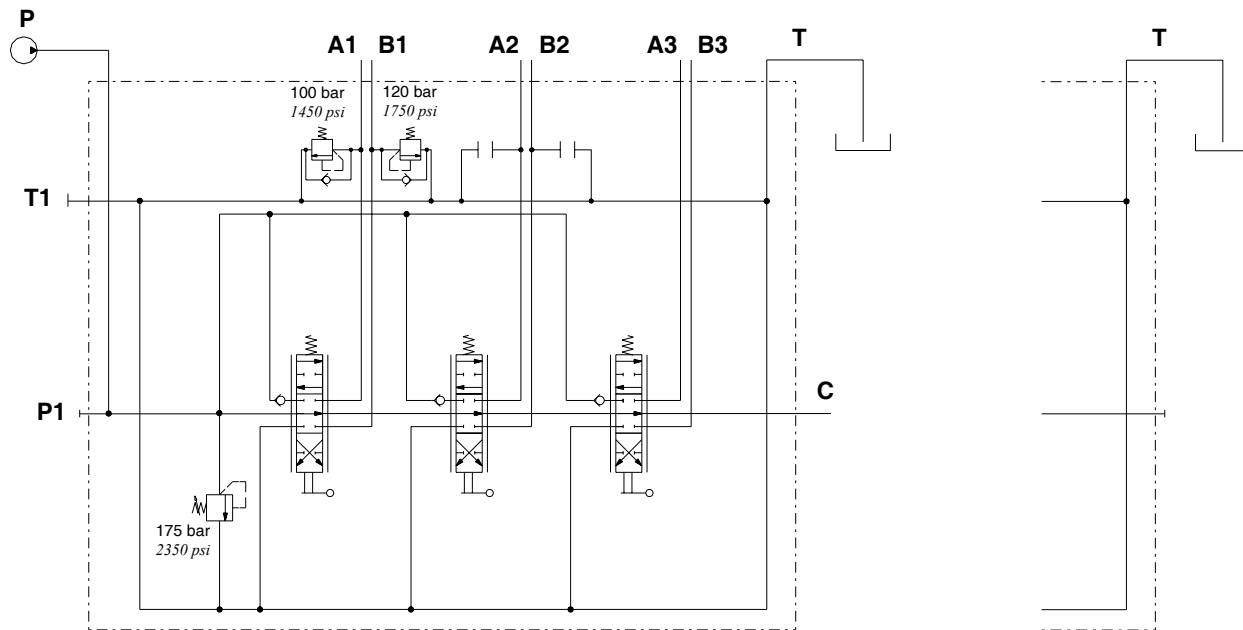
HYDRAULIC CIRCUIT

Open center configuration



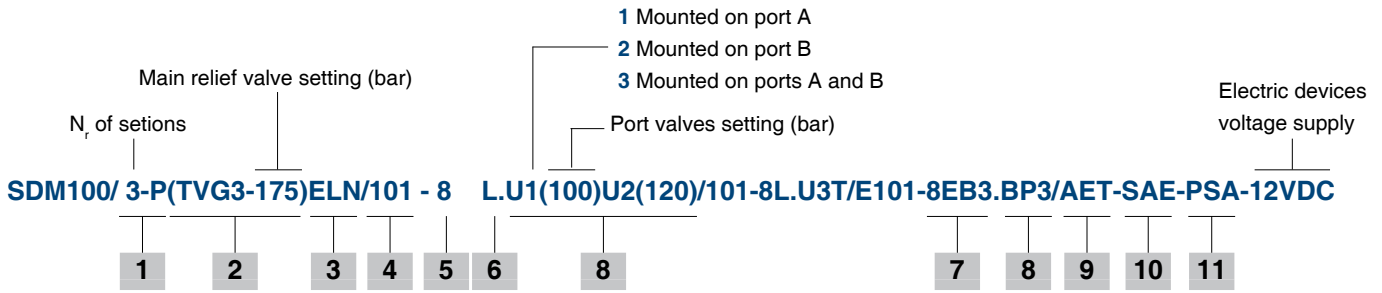
Power Beyond configuration

Close center configuration



SDM100

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
- 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 - 13 US gpm; 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 2

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

NEW PRODUCT

SDM100

