

SDM122 DLM122

Monoblock valves for
Front Loader Applications



Additional information

This folder shows the product in the most standard configurations. Please contact Sales Dpt. for more detailed information or special request.

WARNING!

All specifications of this folder refer to the standard product at this date. Walvoil, oriented to a continuous improvement, reserves the right to discontinue, modify or revise the specifications, without notice.

WALVOIL IS NOT RESPONSIBLE FOR ANY DAMAGE CAUSED BY AN INCORRECT USE OF THE PRODUCT.

Features

- Open center and Load Sensing configurations
- Fitted with a main pressure relief valve (on SDM122) and a load check valve on every working section
- Optional Carry-Over port (on SDM122)
- Anticavitation and antishock valves (with fixed setting) available on every section
- Dedicated range of controls: manual, mechatronic and remote with flexible cable

SDM122-DLM122

Working conditions

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

Nominal flow rating		80 l/min	21 US gpm
Operating pressure (max.)		250 bar	3600 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	3 cm ³ /min	0.18 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	METRIC ISO
THREAD ACCORDING TO		ISO 228/1	ISO 263	ISO 261	ISO 261
		BS 2779	ANSI B1.1 unified		
CAVITY DIMENSION ACCORDING TO	ISO	1179	11926	9974/1	6149
	SAE		J1926		J2244
	DIN	3852-2 shape X or Y			

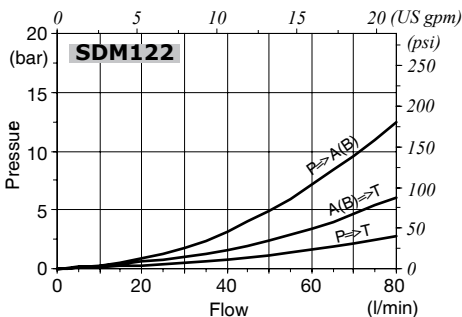
PORTS			
	BSP	UN-UNF	METRIC
Inlet P and carry-over C	G 3/4	11/16-12 (SAE12)	M27x2
Ports A and B	G 1/2	7/8-14 (SAE10)	M22x1.5
Outlet T	G 3/4	11/16-12 (SAE12)	M27x2
Load Sensing LS	G 1/4	9/16-18 (SAE6)	M14x1.5

NOTE- for different port size contact Sales Dpt.

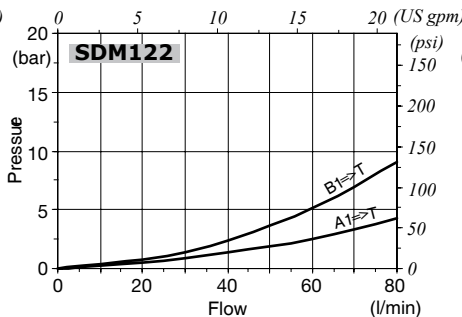
Performance data

General characteristics

Main pressure drop

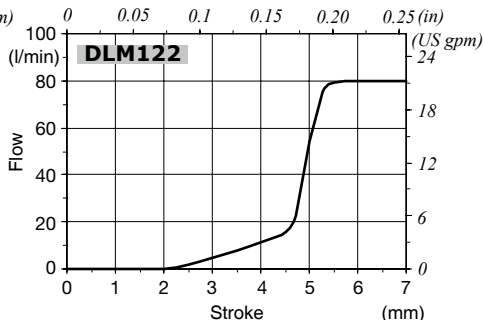
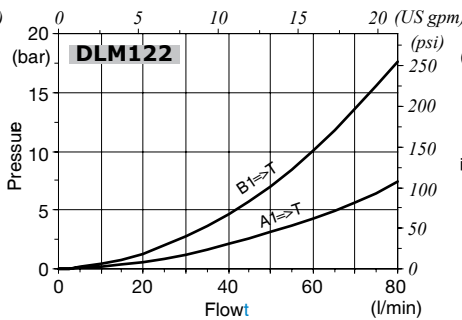
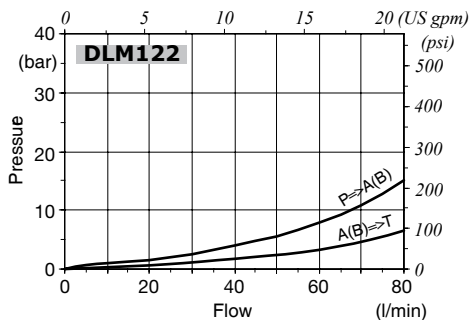
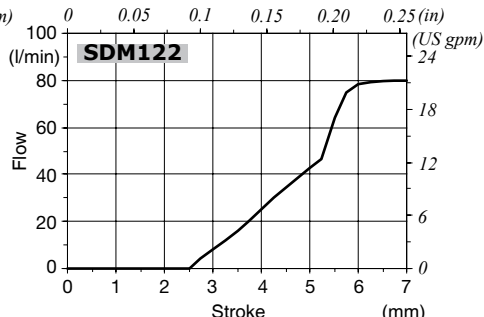


Pressure drop in float position



Spool metering curve

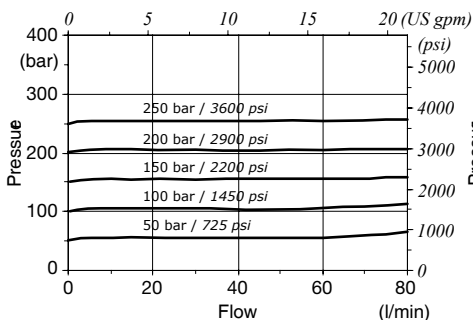
Q_{in} = 80 l/min (21 US gpm)
P = 150 bar (2200 psi)



Valves characteristics

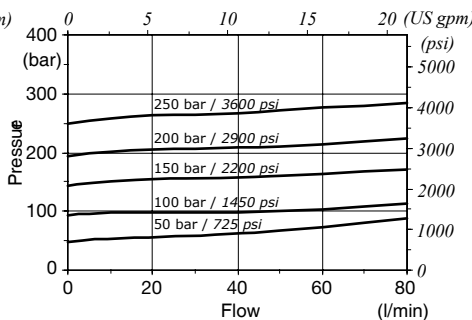
Main pressure relief valve

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



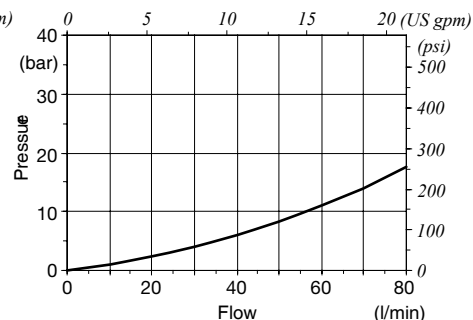
Port valves type U

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



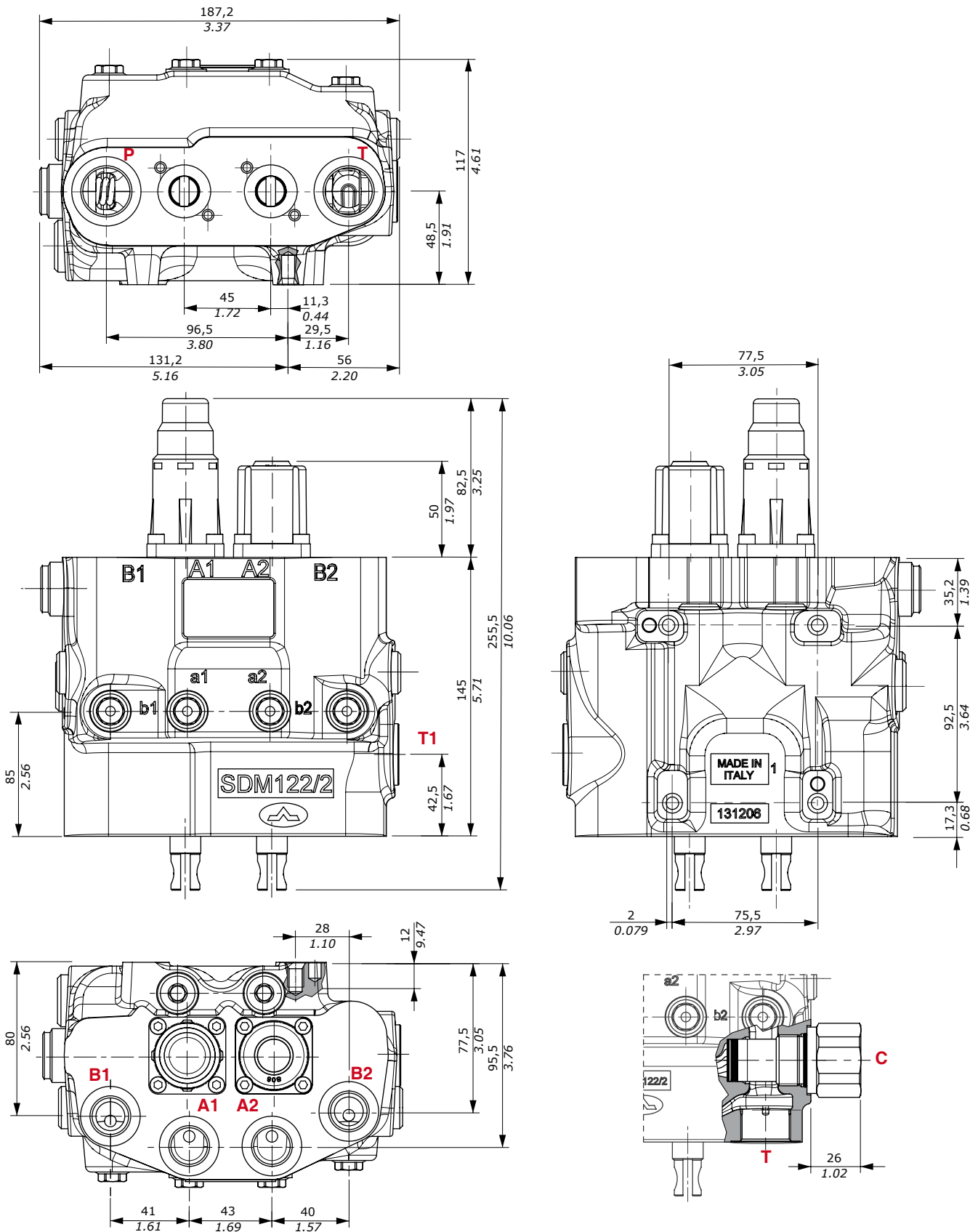
Port valves type U

Pressure drop



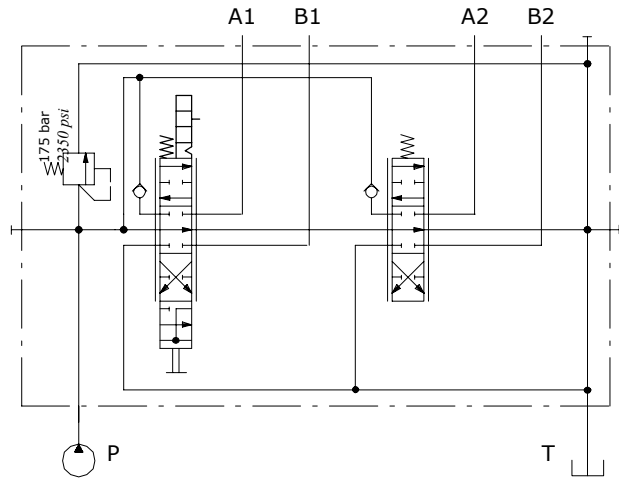
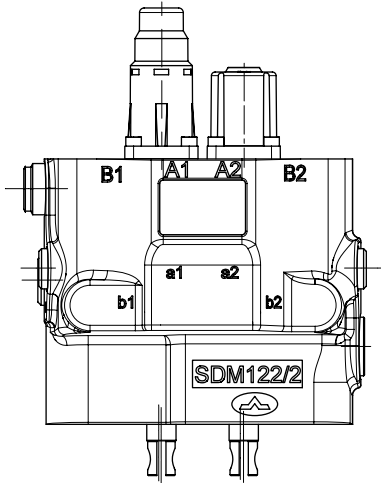
SDM122

Dimensional data

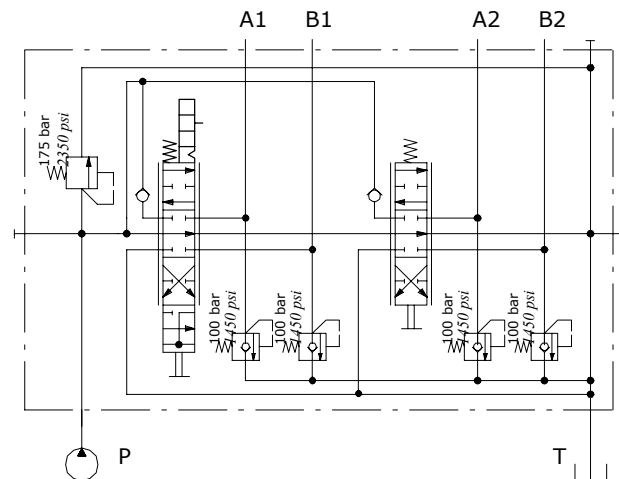
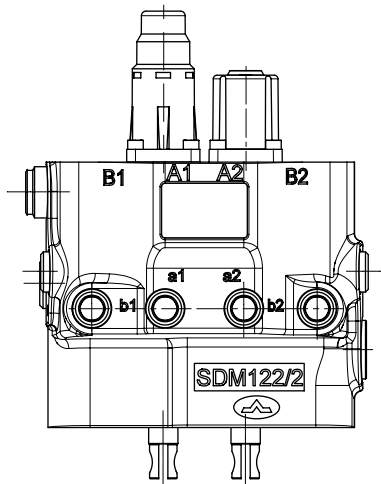


Hydraulic circuit

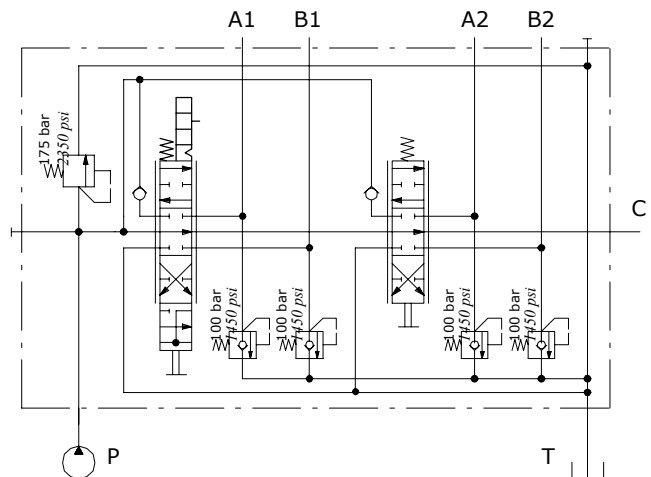
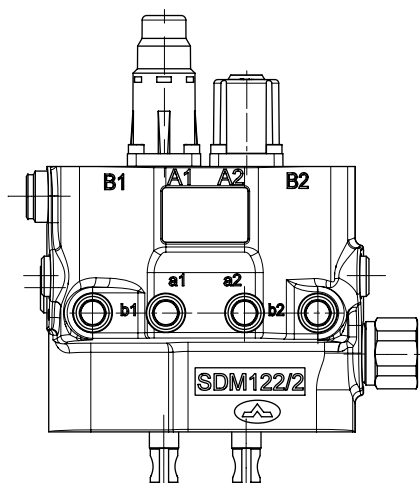
Configuration without port valves



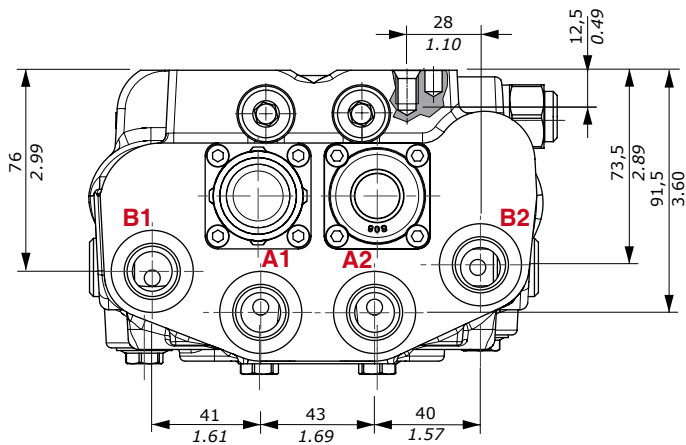
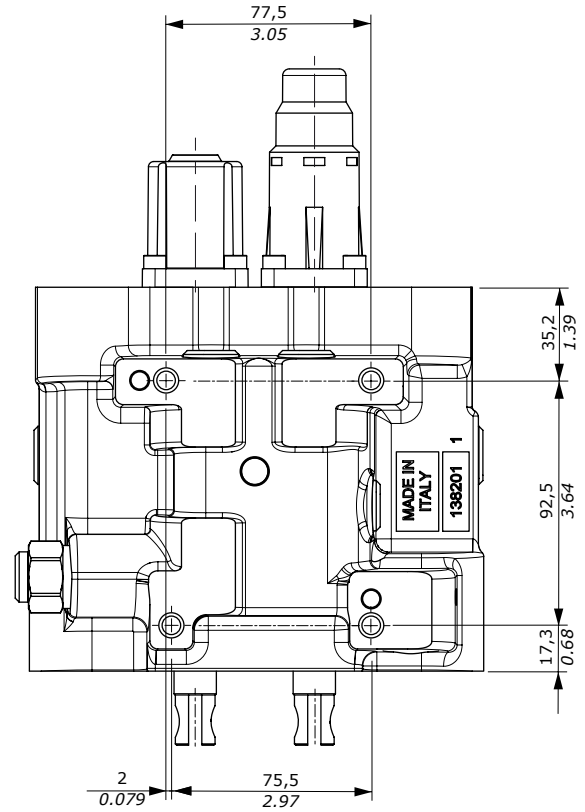
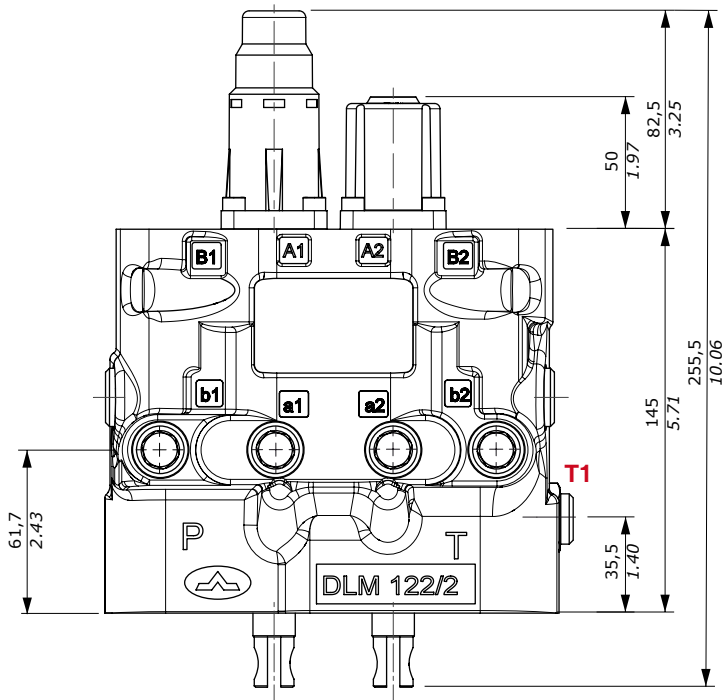
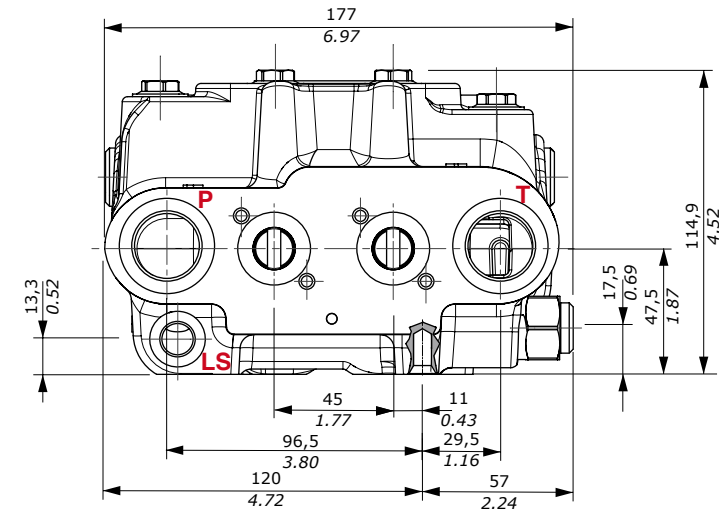
Configuration with port valves



Configuration with port valves and carry-over

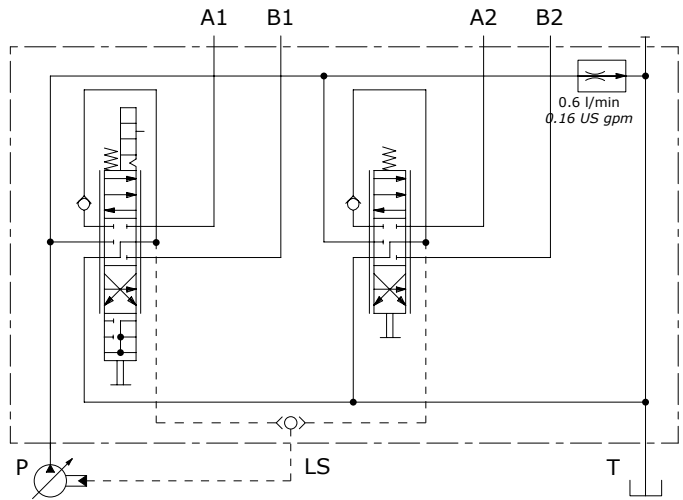
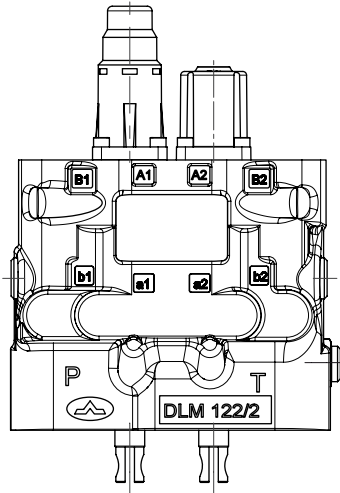


Dimensional data

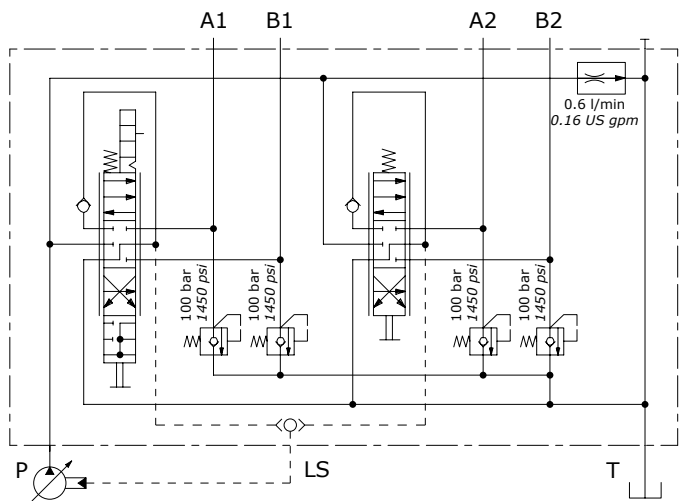
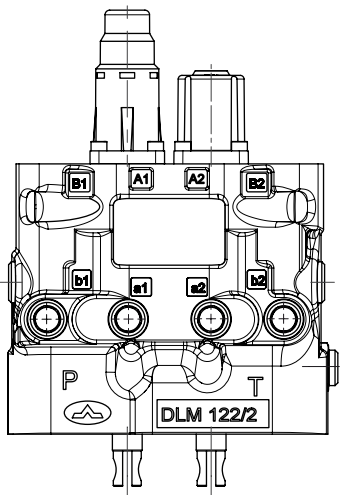


Hydraulic circuit

Configuration without port valves, with Bleed valve

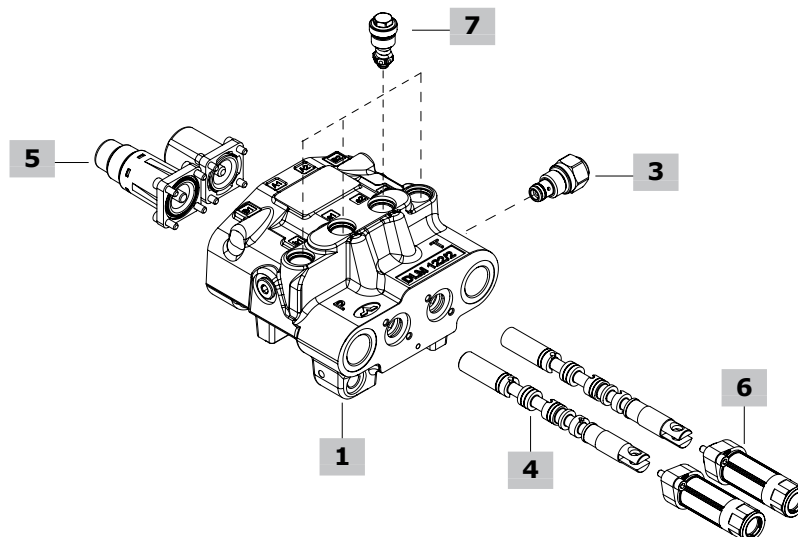
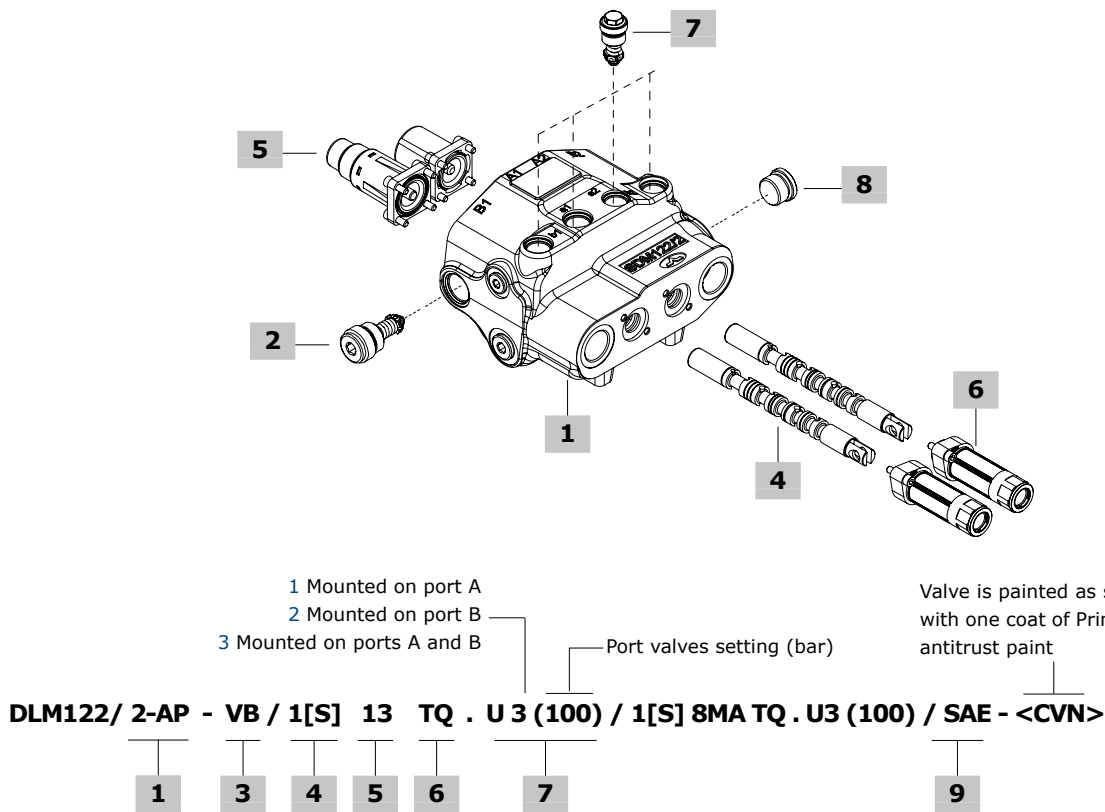
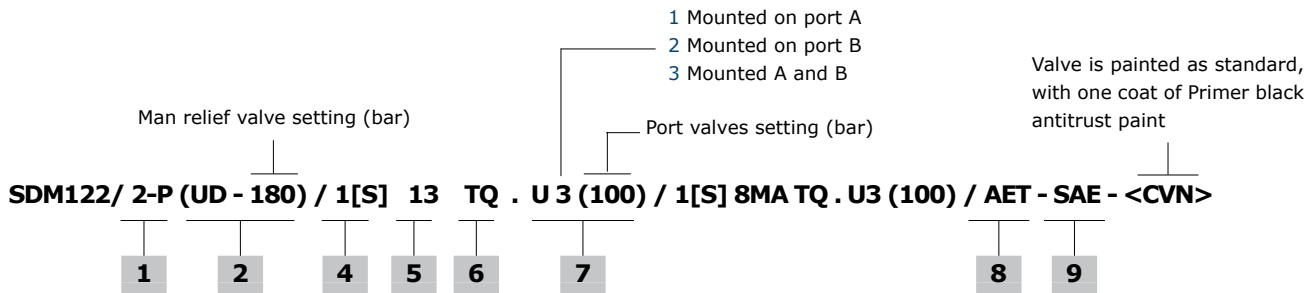


Configuration with port valves and Bleed valve



SDM122-DLM122

Description composition



Description composition

1 Body kit

SDM122/2-P

DLM122/2-APF

2 section bodies with parallel circuit; include body, seals, rings and load check valves

2 Pressure relief valve: only for SDM122

Fixed setting relief valves

Standard setting is referred 5 l/min - 1.32 US gpm flow

(UD-170): Setting 170 bar - 2600 psi

(UD-180): Setting 180 bar - 2600 psi

(UD-190): Setting 190 bar -

(UD-210): Setting 210 bar

(UD-260): Setting 260 bar

SV: Valve blanking plug

Several settings are available, contact Sales Department

3 Bleed valve: only for DLM122

VB: Bleed valve compensated (different holes available)

VBF (FC 1.2): Joint with fixed calibrate hole (different diameter available)

_ : Monoblock valve not arranged for bleed valve

It prevents spools sticking due to temperature shock

4 Spools

1[S] : With positioner kit 8MA: double acting, 3 positions, A and B closed in neutral position.

With positioner kit 13: 4 positions, A and B to tank in 4th positions (float)

5 "A" side spool positioners

8MA: With spring return in neutral position

13: With detent in 4th position and spring return in neutral position

6 "B" side options

SL: Mechanical control kit arrangement

TQ: With cable control kit

EMC: Proportional mechatronic control

7 Port valves

C: Anticavitation valve

UT: Port valve blanking plug

Fixed setting antishock with prefill valve

Setting is referred to 10 l/min - 2.6 US gpm flow

U025: Setting 25 bar

U150: Setting 150 bar

U030: Setting 30 bar

U160: Setting 160 bar

U040: Setting 40 bar

U175: Setting 175 bar

U050: Setting 50 bar

U190: Setting 190 bar

U063: Setting 63 bar

U200: Setting 200 bar

U080: Setting 80 bar

U210: Setting 210 bar

U100: Setting 100 bar

U220: Setting 220 bar

U110: Setting 110 bar

U230: Setting 230 bar

U125: Setting 125 bar

U240: Setting 240 bar

U140: Setting 140 bar

U250: Setting 250 bar

8 Circuit options: only for SDM122

AET: Open centre

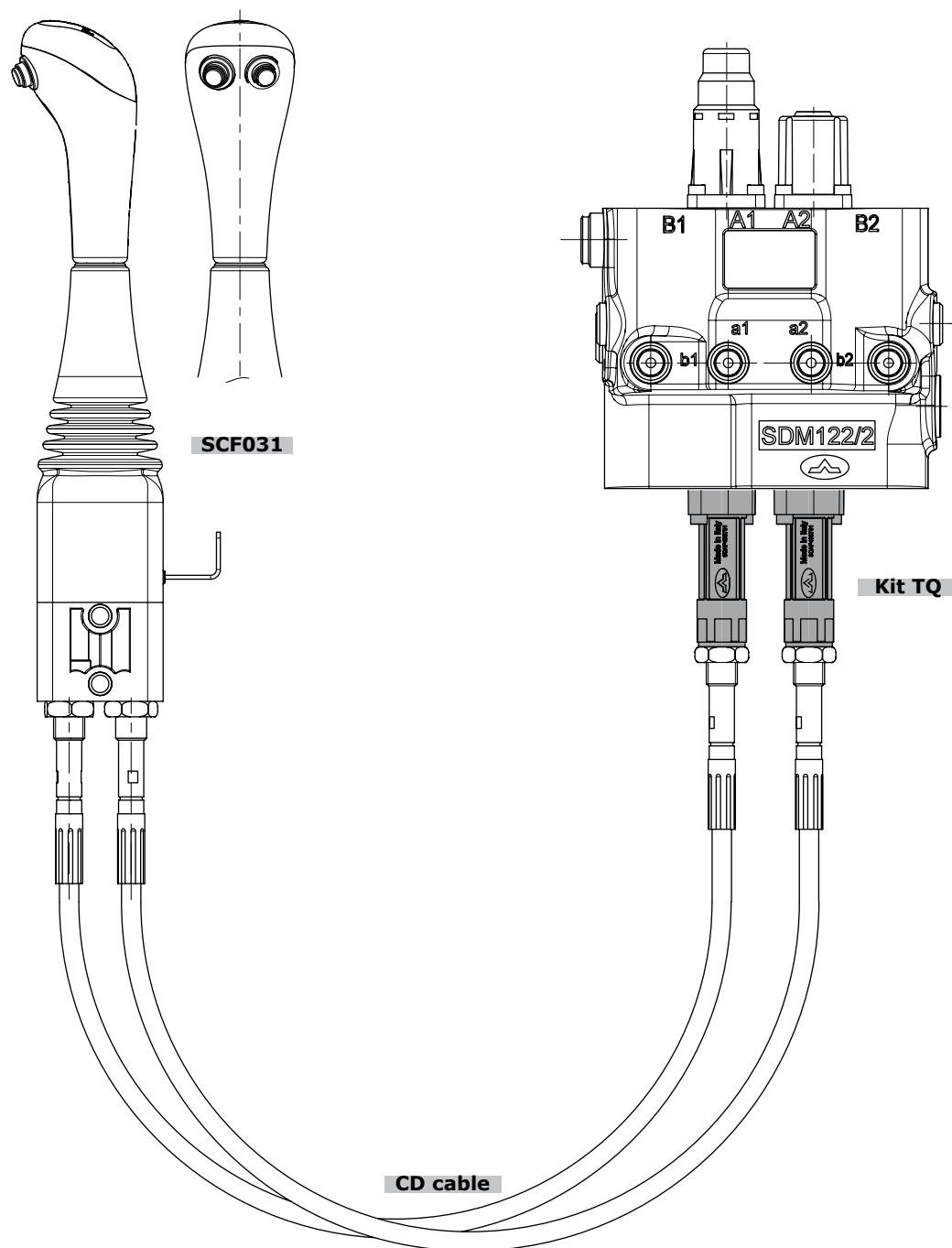
AE: With female Carry-Over sleeve

MAE: With male Carry-Over sleeve

9 Threading specification

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

Example of cable control configuration



SCF031 remote control

It allows single or dual spools operation for 2 sections directional valve.

Body, rubber boot and knob made in self-extinguishing and recyclable plastic polymer.

The control is available with ergonomic handles with push-buttons available and mechanical safety lock in central position mounted on every side.

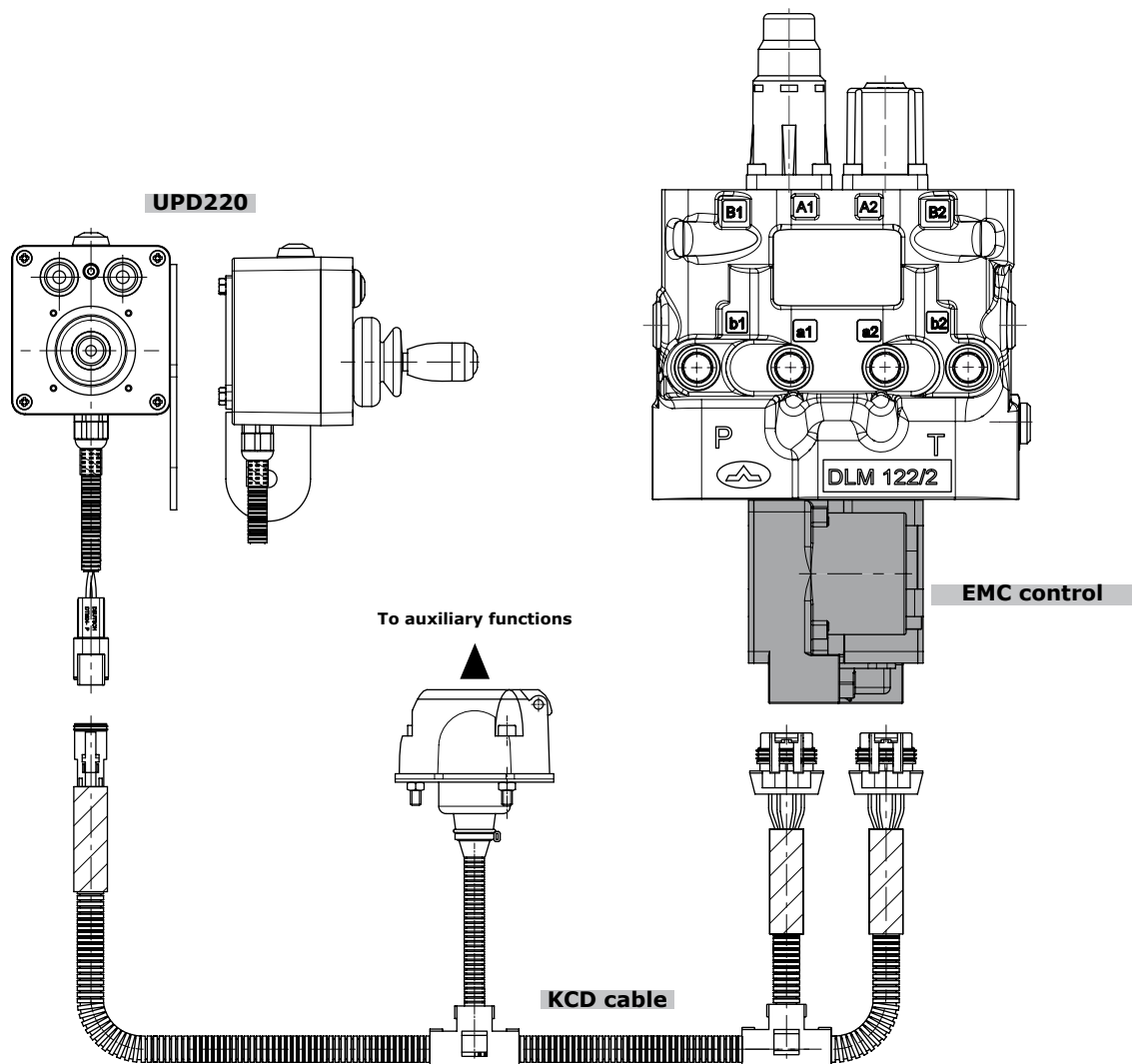
TQ kit

It allows cables connection and correct positioning. Waterproof construction.

CD cable

Cable expressly designed to provide minimum backlash, high efficiency and flexibility; it is available from 0.5 to 6 m (20 to 236 in) length

Example of mechatronic control configuration



UPD220

Two proportional axis CAN Bus joystick with auxiliary and on/off functions, expressly designed to control mechatronic modules.

It's suitable for installation on remote control inside mobile machines cabs, on armrests or fixed positions.

KCD cable

This cable combines excellent mechanical features and protection features against the corrosive agents.

The wrinkled pipe increases the mechanical sturdiness, and protects the wires in the most difficult environmental situations.

EMC control

CAN Bus mechatronic module.

It allows an extremely precise and reliable proportional control, with fast response time and negligible hysteresis.

Maintenance free and long life (brushless electric motor) construction.

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