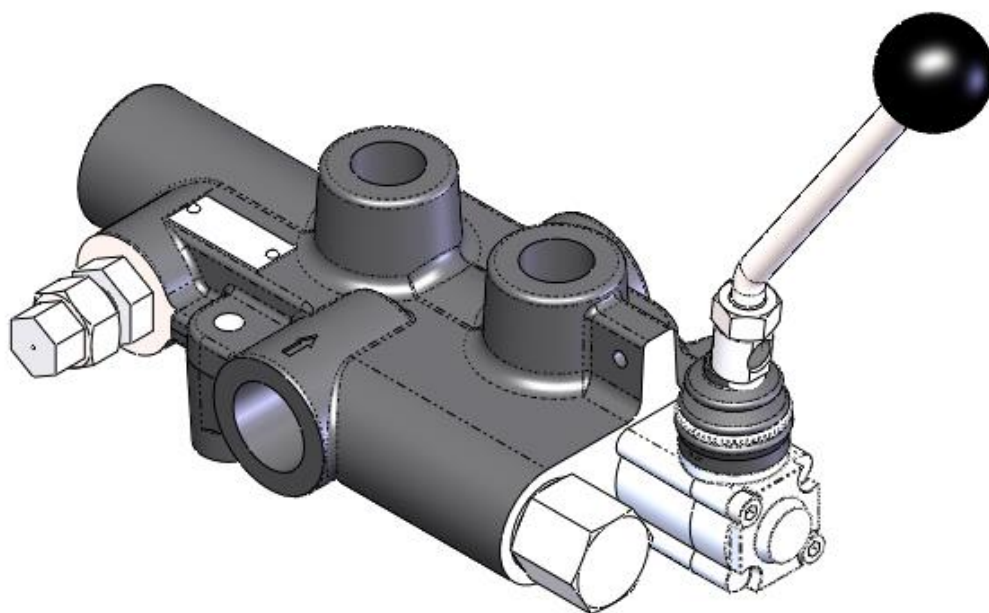


P81/Rs



P81/Rs

Simple compact and heavy duty designed monoblock for splitting applications with dual speeds. It is specifically designed to reduce system costs by allowing a single stage pump to be used in systems currently using two stage (hi-low) pumps. When extra force is required (split mode) user can shift from (fast mode) pos. (3) to pos. (1) manually very easy due to the “soft stop” integrated in the positioner.

- Flow capacity - inlet flow 16 l/min (4 US gpm), max outlet flow in regeneration mode 80 l/min (*21 US gpm*)
- Fitted with a main pressure relief
- Spring centred from pos. 3 (regeneration mode – fast speed) and pos. 1 (split mode) to pos. 0 and detent in pos. 2 (retract) with pressure release functionality “kick out” so that spool is centred back in neutral position at a given preset pressure.
- Protected lever control kit type KZ, can be installed up an down position
- Diameter 18 mm *0.63 in hydraulically balanced spools.*
- Detent pressure release adjustable from 70 (*1015 psi*) to 140 bar (*2030 psi*)

Additional information

This catalogue shows the product in the most standard configuration. For special requests please contact sales.

WARNING!

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

**BADESTNOST IS NOT RESPONSIBLE FOR ANY DAMAGE CAUSED BY AN
INCORRECT USE OF THE PRODUCT**

First edition 10-2024

Working conditions

Nominal flow rating (inlet)		16 l/min	4 US gpm
Operating pressure (max.)	at port P	250 bar	3600 psi
	at workports A&B	315 bar	4600 psi
Back pressure (max.)		10 bar	150psi
Internal leakage (min.) A(B) to T		$\Delta p = 100 \text{ bar (1450 psi)}$ fluid and valve at 40 °C (104 °F)	20 cm ³ /min 1.22 in ³ /min
Hydraulic fluid		Mineral based oil	
Fluid temperature	with NBR 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
Permissible degree of fluid contamination		-/19/16 - ISO 4406	NAS 1683 - class 10
Ambient temperature	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

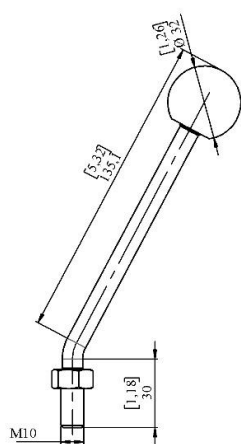
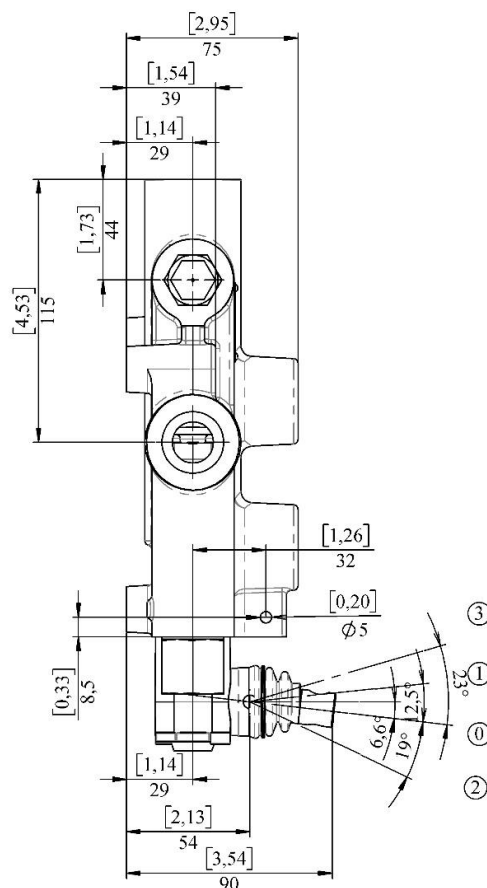
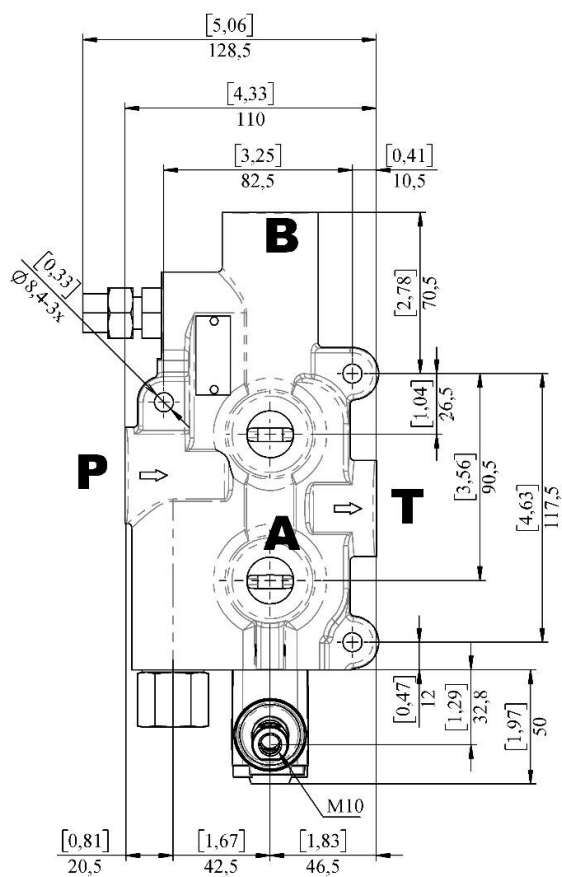
Standard threads

Reference standard				
	BSP	UN-UNF	Metric	NPTF
Thread	ISO 228/1	ISO 263	ISO 262	Ansi B1.20.3
according to	BS 2779	ANSI B1.1 unified		
Cavity	ISO 1179	11926	9974-1	
dimension	SAE	J1926	J2244	J476a
according to	DIN 3852-2 (Shape X or Y)		3852-1 (Shape X or Y)	

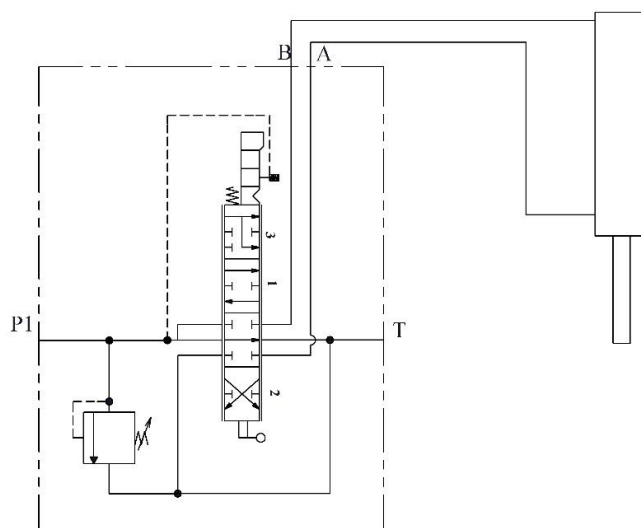
Port threadings and codes

Codes:	G	S	N
Main ports	BSP	UN-UNF	NPTF
Inlet P and outlet T	G1/2	1 1/16-12 (SAE12)	3/4-14 NPTF
Working ports A and B	G3/4	7/8-14 (SAE10)	1/2-14 NPTF

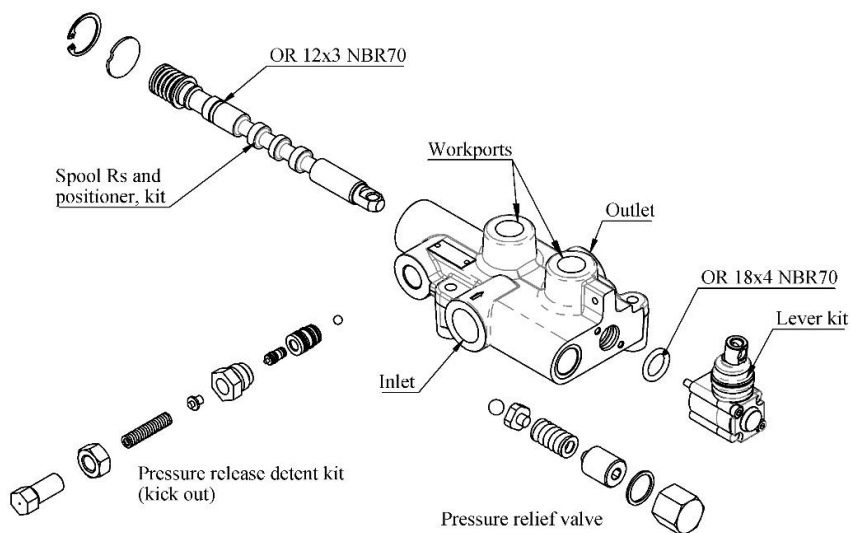
Dimensions

Handle M10

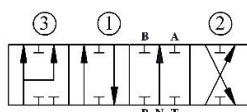
Hydraulic circuits



P81 components

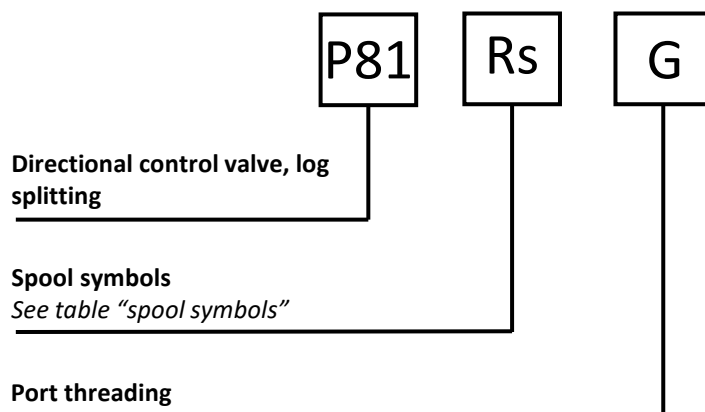


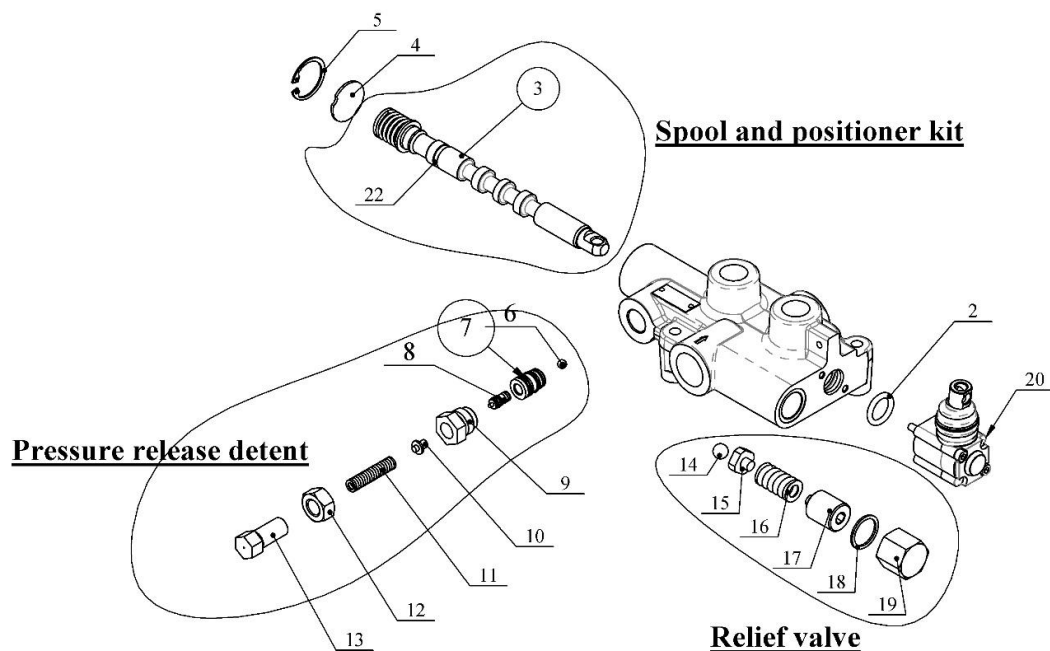
Spool options



Double acting spool A, with regenerative position

Order code





Pressure relief valve:

Standard factory setting is 150 bar (2175 *psi*), if other setting is required can be specified in () after valve name. The relief is adjusted by removing the acorn nut (19) and turning the adjusting screw (17). Turning the adjusting screw clockwise will increase the pressure and counterclockwise will decrease the pressure.

Pressure release detent (kick out):

The feature provides a pressure release detent from pos. 1 (spool out, handle in) to pos. 0 (neutral). When the spool is moved in detent position, oil is directed to work port B, and when the pressure matches the preset pressure of 70 bar (1015 *psi*) (default factory setting) the spool is released from the detent and moves to pos. 0 (neutral). To adjust the pressure loosen the nut (12) and turn the adjusting screw (13) clockwise to increase pressure and counterclockwise to decrease the pressure.

Change O-ring:

To replace the O-ring (2), first you need to remove the lever kit (20) and the pressure release detent kit, to remove it use needle nose pliers to reach into the cavity and to grip onto the small stem on the piston – remove it. Then remove the steel ball at the bottom of the cavity of the release valve, now you can remove the snap ring (5) and end plate (4) which keeps the spool and positioner kit (3). Replace the O-ring (2) with a new one and assemble same steps opposite direction – spool, end plate, snap ring, pressure release, etc.

To replace the O-ring (22), you will need to do all the above steps, then you need to disassemble the spool positioner kit, by untightening the screw on top of it (hex 5), that way you can remove the spring guides and springs and will have space to change the O-ring.

