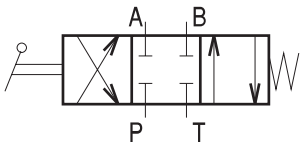
DIRECTIONAL CONTROL VALVE MANUALLY OPERATED, MODEL RSP 7-16, RSHP 7-16

KE 2055

11/02

D_n 16 mm	p_{max} 320 bar	Q_{max} 300 L/min	replaces 07/97



Manually operated RSP 7-16 and hydraulically operated RSHP 7-16 (which can be emergency controlled with hand lever) are used for control of start, stop and a flow direction.

Advantages:
- mounting pattern according to DIN 24 340-A; ISO 4401; CETOP RP 121H-07 (CETOP7)
- large number of spool types
- manual or hydraulic and manual controlling
- free mounting position

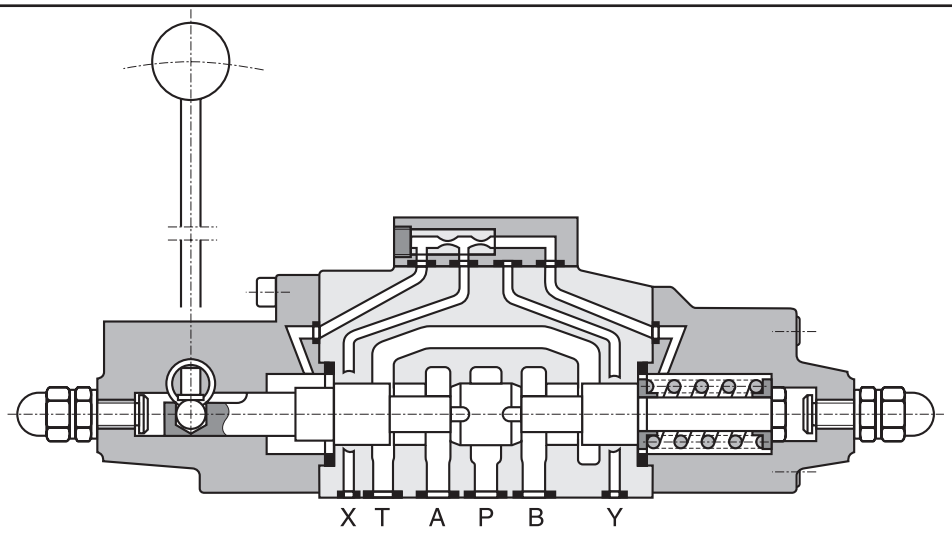
ORDERING CODE

R S □ 7 - 1 6 3 □□ 1 - □

- Directional control valve: **R S**
- Control method: hand lever **P**; hydraulic with possibility of hand lever emergency control **H P**
- Innovation stage: **3**
- Nominal size Dn 16 mm: **16**
- Number of working positions: **3** position
- Spool types (see page 2)
- Locking of the initial position: **1** by spring
- **1** Normal design; **2** Special (navy) design

GENERAL DESCRIPTION

These RSP 7-16 and RSHP 7-16 are directional control spool valves. The RSP directionals are controlled by hand lever only meanwhile RSHP ones can be controlled either hand lever or hydraulically. If RSHP are controlled hydraulically then pilot fluid can be supplied via lines X and Y (it means in the bottom side) or through upper cover via lines X1 and Y1. In this case the control element, which assures the main spool movement, have to be "Y" type for its central (initial) position. The RSHP directionals have enlarged demands for function of its return into starting position. For this reason these directionals are equipped with stronger spring which requests increasing of the pressure for spool movement. Both types of the directional valves have spools design as well as their controlling solved by this way that flow is proportional. Large swivel angle of the control lever, it means 42 degrees from the starting position, possible very fine flow regulation. The lever can be located either perpendicular or parallel with valve axis. Shorter stroke of the spool can be adjusted by stop screws on both sides of valve. Working fluid leakage from T space to flange space is drained via Y line. On the flange where lever is located there is machined surface with two M6 threaded ports. This face is destined for mechanical locking of the lever position or for another suitable purpose. Using area of these directional is determined with their technical data.



TECHNICAL DATA

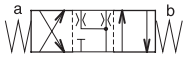
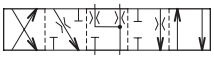
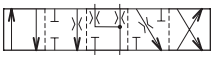
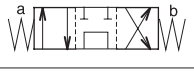
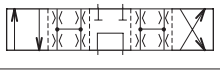
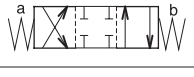
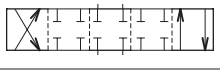
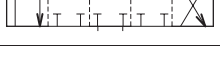
Technical data	Symbol	Unit	RSP 7-16	RSHP 7-16
Nominal size	D_n	mm	16	
Maximal flow	Q_{max}	L/min	300	
Max. operating pressure in ports P, A, B	p_{max}	bar	320	
Max. operating pressure in port T	p_{max}	bar	50	250
Max. pressure in port T, when use of separate Y	p_{max}	bar	250	-
Max. pressure in ports X, Y	p_{max}	bar	-	50
Pilot pressure (with manual override)	Δp	bar	-	6–20
Pilot oil volume (O → A or B)	V	ccm	-	4.4
Handle force start/end position	F	N	40/60	-
Pressure drop	Δp	bar	curve $\Delta p = f(Q)$	
Hydraulic medium			mineral oil (HL, HLP) by DIN 51 524	
Oil viscosity range	ν	m^2s^{-1}	$10 \cdot 10^{-6}$ up to $400 \cdot 10^{-6}$	
Fluid filtration	a) class 9 acc. to NAS 1638 or 18/15 acc. to ISO 4406 b) fluid filtration with $\beta_{20} \geq 100$ is recommended			
Fluid temperature range	t_{po}	°C	–20 up to +80	
Environment temperature range	t_k	°C	–20 up to +60	
Weight	m	kg	10.1	10.3

Note: All parametres measured with oil OH-HM 68 at temperature 50°C and viscosity 35 $mm^2 s^{-1}$.

DELIVERY, MATERIAL, SURFACE TREATMENT

The directional control valves are supplied in assembled configuration. Only hand lever is dismounted. No spare parts are delivered with valve. Fixing bolts M6×50 and M10×55 DIN 912-8.8 and connecting subplate (if used) must be ordered separately. Surface is phosphated. The value top coat can be carried out in agreement with producer. The instruction manual is supplied with each valve. Production materials used are caste iron, steel, stainless steel.

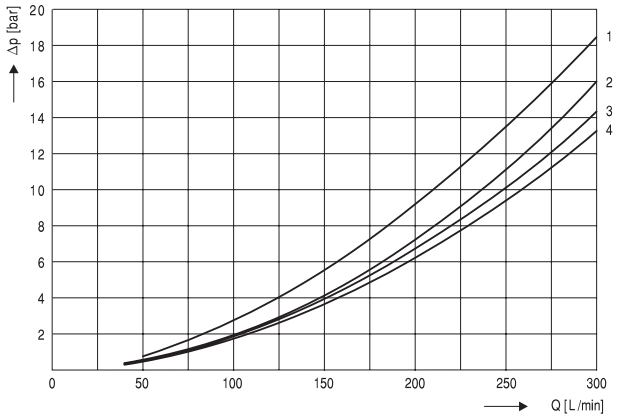
TABLE OF SPOOL TYPES

Type	Symbol	Interpositions
Y3		
Y5		
C1		
Z5		
Z6		

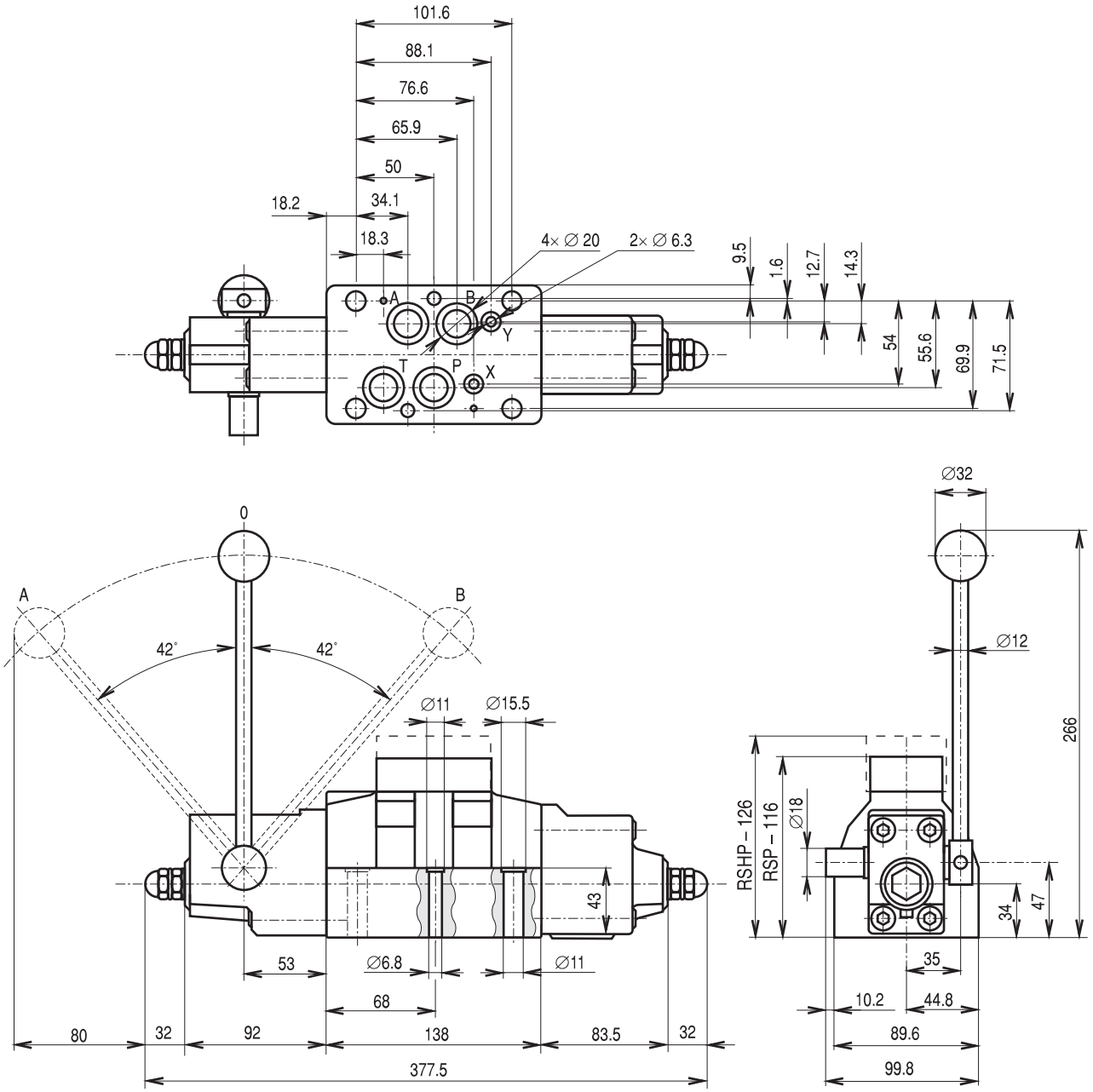
PRESSURE DROPS Δp = f(Q)

Measured at ν = 35 mm²/s; t = 50 °C

Spool type	Pressure drop according to curve				
	P – A	P – B	A – T	B – T	P – T
C1					–
Y3	2	3	4	3	–
Y5	3	3	1	1	–
Z5	2	2	4	2	–
Z6	3	3	1	1	–



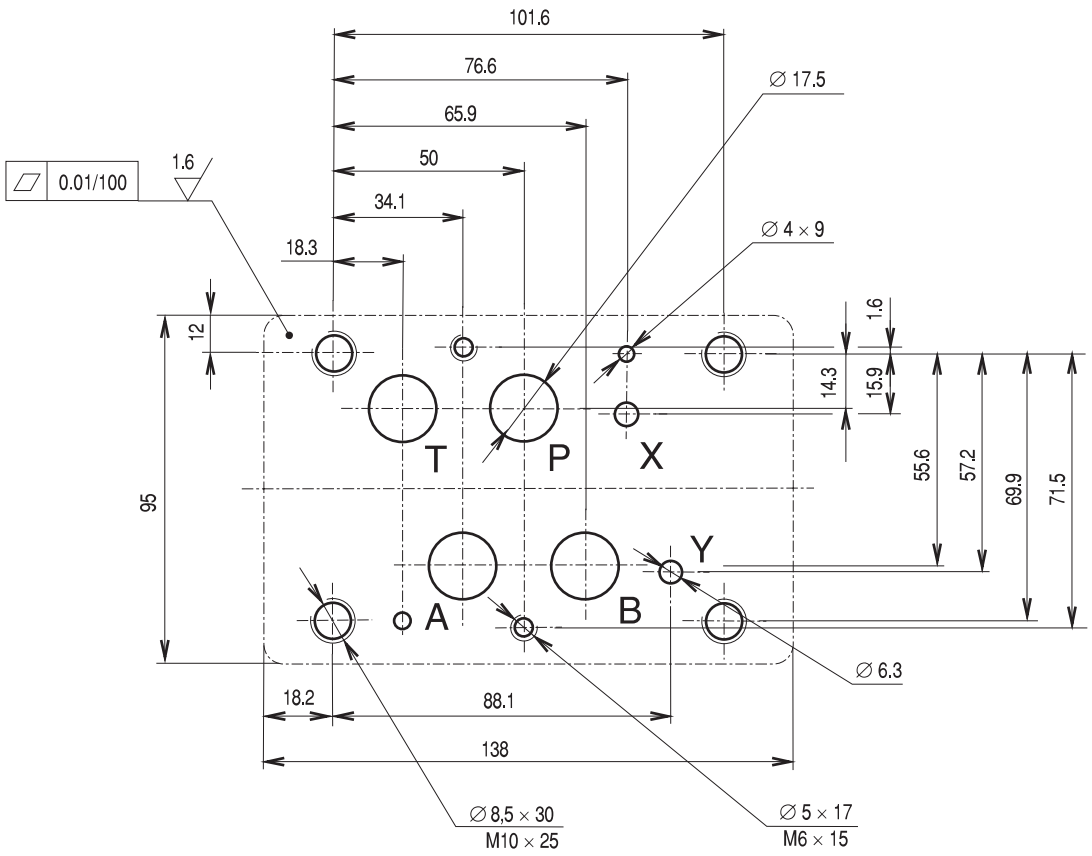
UNIT DIMENSIONS



Note: Sealing between valve and matting surface is assured with O-ring 22.3×2.4 for P, A, B and T ports. O-ring 10×2 is used for X and Y ports.

INSTALATION (VIEW TOWARDS PANEL)

all dimensions in [mm]



Stockholm
Turebergsvägen 5
SE-191 47 Sollentuna
Tel. +46 (0)8-59 470 470
Fax +46 (0)8-59 470 479
Försäljning

Göteborg
EA Rosengrens gata 29
SE-421 31 V:a Frölunda
Tel. +46 (0)31-499 490
Fax +46 (0)31-499 499
Lager Ekonomi Försäljning

Malmö
Carlsgatan 12A
SE-211 20 Malmö
Tel. +46 (0)40-699 81 80
Fax.+46 (0)40-699 81 81
Försäljning

F-skatt 556552-9848
Momsreg.nr. SE 556552984801
Säte Göteborg
Bankgiro 5238-2801
Plusgiro 6224-0
IBAN: SE02 3000 0000 0312 4170 3035