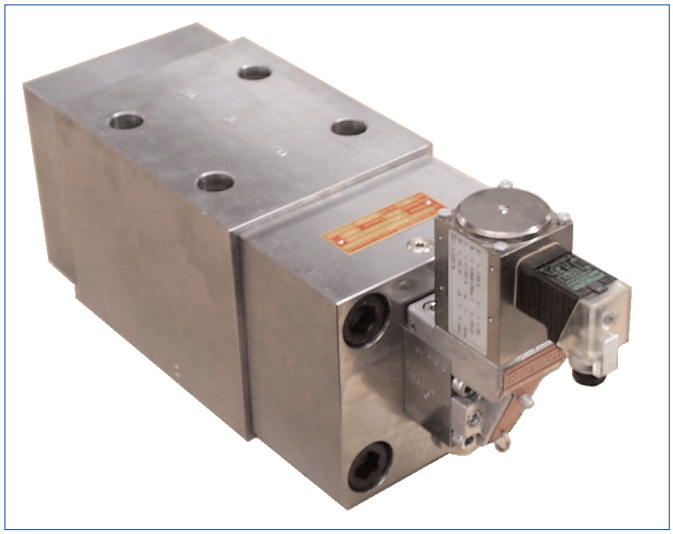
TIEFENBACH
Control Systems GmbH



11A

3/2 direct. contr. high pressure valve NW 15 to NW 40

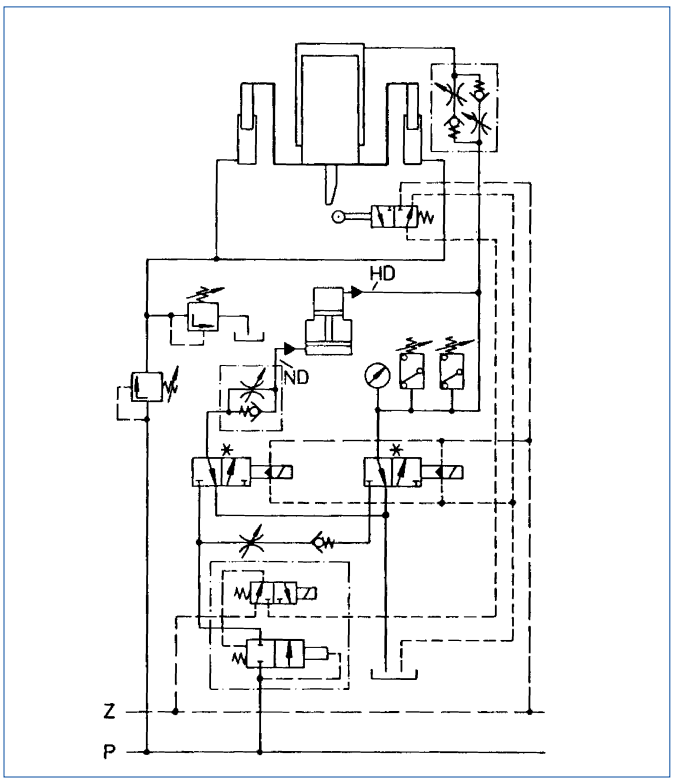
for water and oil
max. 320 bar for plate mounting

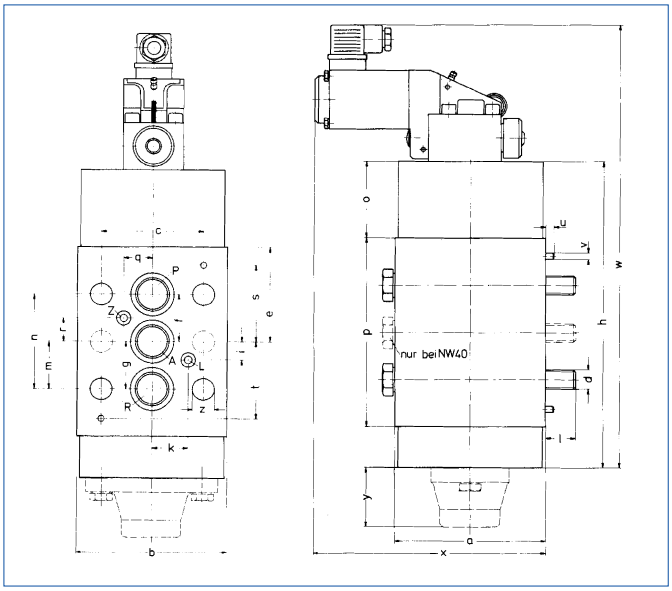
The 3/2 directional control plate-mounting valves listed in the table are used to determine the direction of a hydraulic flow in which, respectively, one port can be blocked without leakage while, at the same time, the other two ports can be connected to one another. These are robust electromagnetically / hydraulically operated seat valves. The working piston of the main valve is supported at two points and extended to the outside through the valve housing. This provides the possibility to attach an optical, mechanical, or electrical position indicator. The valve is sealed by pressing two metal surfaces against one another. In contrast to slide valves, there are no leakage losses in the closure of the valve. By fitting orifice plates or an intermediate plate with switch period adjustment between the pilot and main valves, the control medium can be throttled. This influences the switch period of the main valve. Throttle gap or throttle grooves on the main valve piston prevent undesirable pressure surges during the switching process. This type of seat valves - as individual valves or combined with other control elements into compact control systems - are used wherever reliable sealing is required under difficult conditions, e.g. press and rolling mill engineering. There are no particular requirements as regards the lubrication capability of the medium. Via the associated pilot-control valve, the valves can be operated manually, mechanically, pneumatically, hydraulically or electrically using direct or alternating current. They are also available in protection class (Sch) and (Ex) d2/G5. For all standard supply voltages, control electromagnets are available.

Special features

The valves are insensitive against vibrations and pressure surges in the hydraulic system. The emergency manual controls fitted as standard can be locked in position and are accessible only by removing the type plates; they are thus protected against accidental activation. The respective position of the valve pistons can be detected optically. Valve response times are fast. All wear parts are made of corrosion resistant materials, easy to access, and fast to replace.

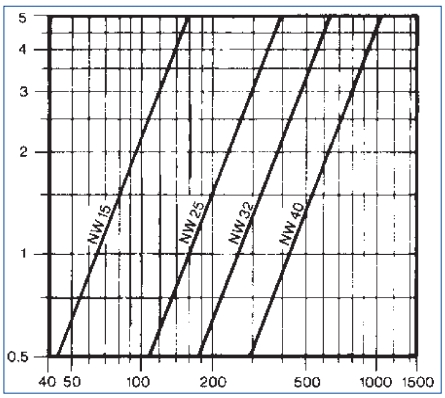
Mounting example:
* 3/2 directional control valve

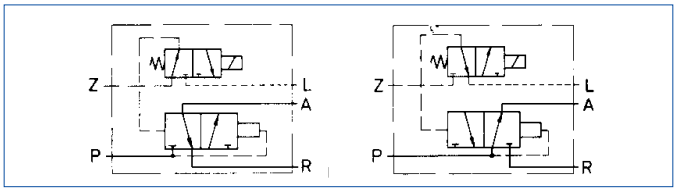




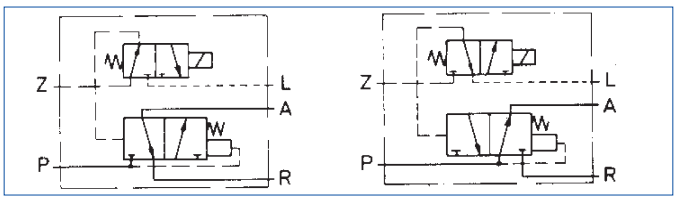
O-ring seal for ports				
NW	P	A	L	Z
15	18*2,5	18*2,5	8*2	8*2
25	30*3	30*3	8*2	8*2
32	38*4	38*4	8*2	8*2
40	47*4	47*4	8*2	8*2

Pressure loss and flow rate for water (20°)

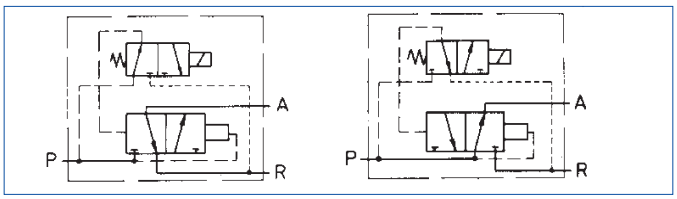




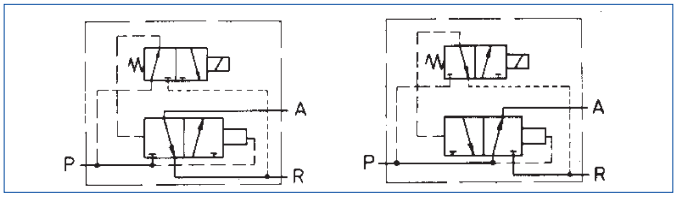
Ext. controlled with closing spring
Type
3/2BAV-015-06-XLS-NNEN-25
3/2BAV-025-06-XLS-NNEN-25
3/2BAV-032-06-XLS-NNEN-25
3/2BAV-040-06-XLS-NNEN-25



Ext. controlled with opening spring
Type
3/2BAV-015-06-XLO-NNEN-25
3/2BAV-025-06-XLO-NNEN-25
32/2BAV-032-06-XLO-NNEN-25
3/2BAV-040-06-XLO-NNEN-25



Self-controlled with closing spring
Port "Z" is no longer required
Type
3/2BAV-015-06-IIS-NNEN-25
3/2BAV-025-06-IIS-NNEN-25
3/2BAV-032-06-IIS-NNEN-25
3/2BAV-040-06-IIS-NNEN-25



Self-controlled with opening spring
Port "Z" is no longer required
Type
3/2BAV-015-06-IIO-NNEN-25
3/2BAV-025-06-IIO-NNEN-25
3/2BAV-032-06-IIO-NNEN-25
3/2BAV-040-06-IIO-NNEN-25

* positive valve
** negative valve

NW	P	A	R	L	Z	a	b	c	d	e	f	g	h	i	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
15	15	15	15	6	6	95	95	65	M12	60	25	25	200	12	23	15	30	60	50	120	16	12					315	178	32	14
25	25	25	25	6	6	125	125	85	M16	80	40	40	270	15	30	25	40	80	70	160	24	20					385	193	50	18
32	32	32	32	6	6	145	150	100	M20	100	50	50	340	20	35	25	50	100	90	200	27	25	85	85	6	5	455	203	55	22
40	40	40	40	6	6	160	160	120	M20	115	60	60	380	25	40	30	60	120	95	230	35	30	100	100	6	5	495	210	62	22