

2/2 way directional seat valve

3/2 way directional seat valve

NG3 and NG6 for water oil and air

- Protection against Inadvertent operation
- Operating solenoid protected against dirt and humidity

- Operating elements can each be rotated through 90°
- Wear parts easily accessible and can be replaced quickly

Application

The valves are used for water and oil hydraulic Systems. They can also be used as Pilot valves.

Technical data:

Type

Directly controlled ball seated valve

Connections

Plate mounting with 'O' ring seal on request, available with connection plate, connection thread:
 NG 3 = R 1/4" or 1/4" NPT
 NG 6 = R 3/8" or 3/8" NPT

Medium

Oil and water; to be specially indicated in the Order.

Viscosity range

$2 \cdot 10^{-6} \text{ m}^2$ to $300 \cdot 10^{-6} \text{ m}^2$ (1 to 300 cSt)

Ambient temperature

Dependent on the actuator; see table "Technical data of the actuators"; higher temperatures on request

Seals

NBR; other seat materials upon request

Seal on the valve seat

Ball on seat

Pressure Range

0 to 320 bar (630 bar)

for 3/2 dir.

The Pressure at Port "R" must not exceed 50% of working Pressure

Switching time

Dependent on working Pressure and temperature (see table "Technical data of **control elements**")

Installation Position

Any

Direction of flow:

2/2W: From "P" to "A"

3/2W: From "P" to "A" or from "A" to "R".

Ports "P", "A" and "R" must not be mixed up

Flow rate with fluids

max. 20 l/min for NG 6

max. 5 l/min for NG 3

Modes of operation

Electrical, hydraulic, pneumatic, mechanical or man

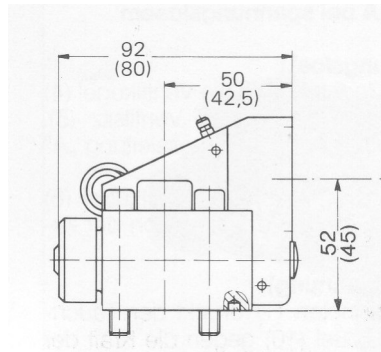
Materials

All Parts coming into contact with the flow medium are made of corrosion-resistant materials

Special Features

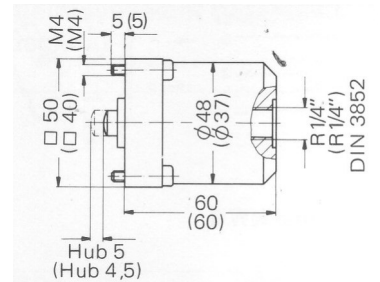
A distinguishing feature of the valve is its short response time. The solenoid plunger is carried in double bearings and is consequently protected against wear. The operating solenoid is protected against dirt and moisture by a diaphragm seal between the stem and plunger space. The lockable manual control becomes accessible after removing the rating plate and is consequently protected against inadvertent operation. The solenoid and all other actuators can be rotated through 90°. All wearing Parts are easily accessible and rapidly replaceable.

Valve body with console

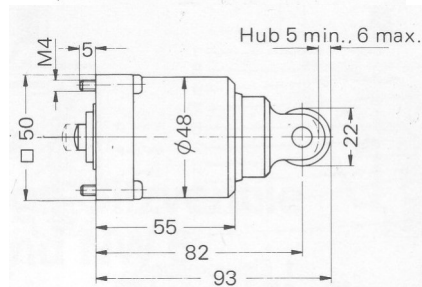


Hydraulic and pneumatic operation

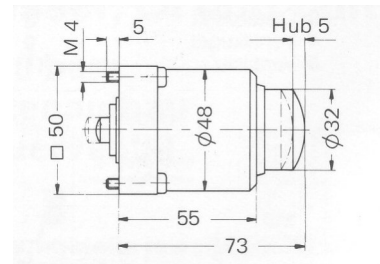
Pressure range
Pneumatic 2,5 – 64 bar
Hydraulic 2,5 – 64 bar
22 – 320 bar



Mechanical operating



Manual operation



Elektromagnetic operation NG3 an NG6, firedamp-proof and explosion-proof

Type dE4 (NG3) and dE3 (NG6), protection class acc. To VDE 0170/0171

NG3

Sch)d/(Ex)d2 G4 certificate No.T5681/BVS

NG6

(Sch)d/(Ex)d2 G5 Besch.-Nr. T5538/BVS

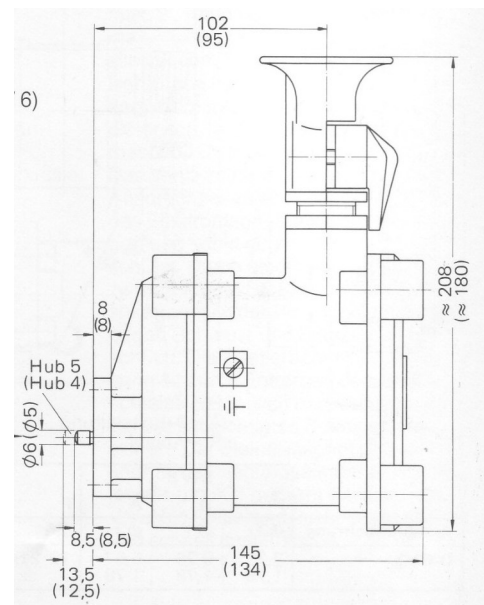
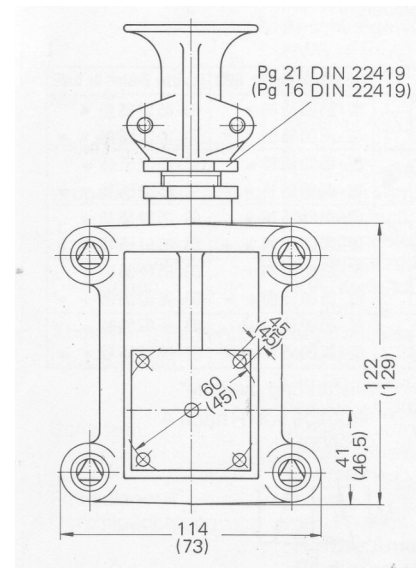
NG3 / Pg 16 DIN 22419 available for voltage from 12 – 240 V direct and alternating current.

Power consumption
Up to approx. 20 Watt

Connetion cable
12,5 - 14 mm (A15) NG6 / Pg 21 DIN 22419 available for Voltagees from 24 –500 V direct and alternating current.

Power consumption
Up to approx. 32 Watt

Connetion cable
15-19mm(A19)



actuatorl	NG6 (NG3)						
Design typet	Elektromagnet				Hydraulik- oder Pneumatikzylinder		Hydraulikzylinder
			dE4	dE4	Zy1.31295	Zy1.31887	mech.
Protection class housing for NG3 and NG6	IP 54 DIN 40050	IP 54 DIN 40050	(Sch)d/(EX)d2G4 VDE 0170/0171	(Sch)d/(EX)d2G4 VDE 0170/0171			
Protection class connection compartment for NG3 and NG6			Sch)e/(Ex)e VDE0170/0171 IP54 DIN 40050	(Sch)e/(Ex)e VDE0170/0171 IP54 DIN 40050			
Connetion typet	Plug (Plug)	Plug (Plug)	Terminal (Terminal)	Terminal (Terminal)	Thread R1/4" (Thread R1/4")	Thread R1/4" (Thread R1/4")	
Control medium for NG3 and NG6					Öil in water emulsion, compressed air and neutel gases	Öil in water emulsion,	
Medium temperaturer					-30°C bis+110°C (-30°C bis+110°C)	-30°C bis+110°C (-30°C bis+110°C)	
Ambiont temperature	max.+35°C (max.+35°C)	max.+35°C (max.+35°C)	max.+40°C (max.+40°C)	max.+40°C (max.+40°C)	max.+80°C (max.+80°C)	max.+80°C (max.+80°C)	max.+80°C (max.+80°C)
Pressure range					2,5-64 bar (2,5-64 bar)	25-320 bar (25-320 bar)	
Mouting position	any (any)	any (any))	any (any)	any (any)	any (any)	any (any)	any (any)
Operating voltage*	24 V DC (24 V DC)	220 V AC (220 V AC)	24 V DC (24 V DC)	220 V AC (220 V AC)			
Current intensity	1,5A (0,54 A)	0,163 A (0,06 A)	0,542 A (0,54 A)	0,318 A (0,06 A)			
Switch-on period	100% ED (100% ED)	100% ED (100% ED)	100% ED (100% ED)	100% ED (100% ED)			
Pull-in power	36 W (13 W)	36 W (13 W)	13 W (13 W)	13 W (13 W)			
Hold performance	36 W (13 W)	13 W36 W (13 W)	13 W (13 W)	13 W (13 W)			
On period (100bar)	83 ms (-)	73 ms (-)	112 ms (-)	124 ms (-)			
Off period	20 ms (-)	113 ms (-)	24 ms (-)	80 ms (-)			
Lifting forcet	93 N (31 N)	79 N (26 N)	58 N (31 N)	54 N (26 N)			

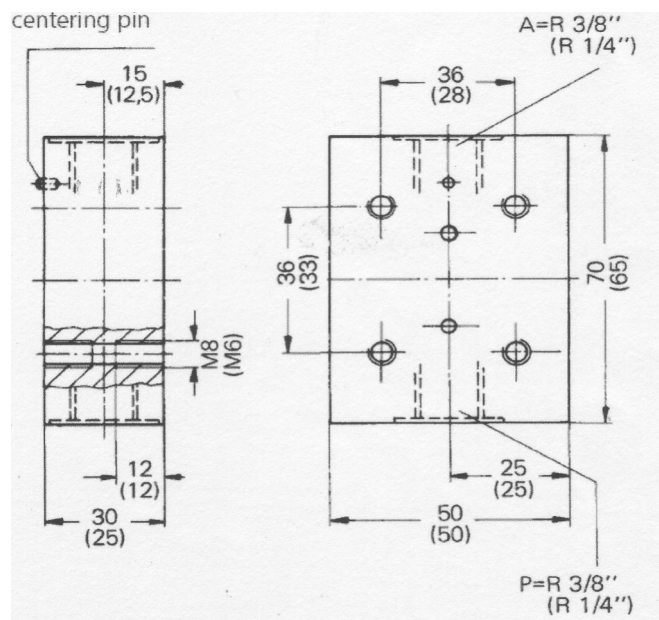
AnderSpannungen auf Anfrage

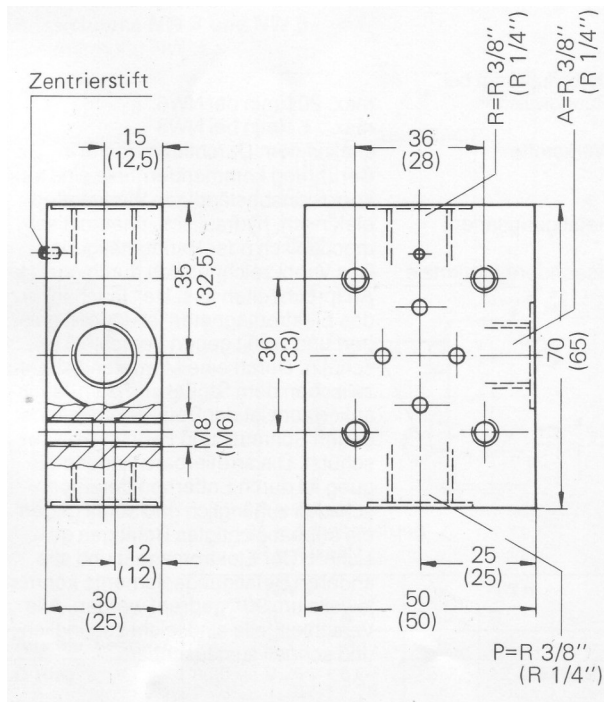
Connetion plate 2/2 way NG3 and NG6

Dimensions in brackets NG3

3/2 way

2/2 way





Order code KSV 3/2 way directional seat valve

Example

3	/	2	K	S	V	-	0	6	P	-	2	5	N	B	N	N	N	-	E	D	0	2	4	*	*	-	*	*	*
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
1						2			3		4			5		6		7		8		9				X				Y	

1. Model

3/2KSV = 3/2 way directional seat valve
2/2KSV = 2/2 way directional seat valve

2. Nominal value

03 = NG3
06 = NG6

3. Basis position

P = Positive P → A closed
N = Negative P → A opened

4. Operating pressure

20 = 100 bar
24 = 250 bar
25 = 320 bar
26 = 400 bar
27 = 500 bar
28 = 630 bar
29 = 700 bar
30 = 800 bar

5. Seal

NB = NBR
VT = Viton
PU = Polyurethan

6. Spezifikation

N Standard version:
(HFA, Luft, HFC, HFD usw.)
320 bar
D Standard version with
firedamp protection - / Ex-protection
320 bar
and standard version for
higher pressure
S Sea water inside and outside
sea water but outside
210 bar
W Water / main water /
glacier water 320 bar
V deonised water / to demineralize
water / sea water but inside
320 bar
G neutral gas 100 bar
A aggressive gas 100 bar
(e.g. sour gas)

7. Positions monitor

N = with out (Standard)
G = applicable for closed position
O = applicable for opened position
B = applicable for the two position

8. Manual operation

N = Standard (with manual operation
and adjustment)
H = with manual operation
without adjustment
S = sealing
O = with out manual operation.

9. Operation

E = E- Magnet
RO = Mechanical operating
BL = no operation, bat with blind
Z = Cylinder

Example Z = Cylinder

21	22	23	24
M	3	2	0
11		12	

11 Material

M = brass
A = aluminium

12 pressure range

64 = 2,5 - 64 bar
320 = 25 - 320 bar

X. Provision the operation

Example E = E-Magnet

21	22	23	24	25	26
D	0	2	4	T	U
11		12		13	

11 Kind of current

A = alternating current (AC)
D = direct current (DC)

12 Operating voltage

012 = 12V
024 = 24V
036 = 36V
042 = 42V
048 = 48V
060 = 60V
110 = 110V
120 = 120V
220 = 220V
500 = 500V

13 In addition to Operating

D31 = DE3D1
D32 = DE3D2
E31 = DE3E1
E32 = DE3E2
E43 = DE4/3
iE5 = iE5
TU = Tüchelstecker

Y: Special design

SO = special model

Additive appellation:

Example

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
K	U	G	E	L	S	I	T	Z	V	E	N	T	I	L						