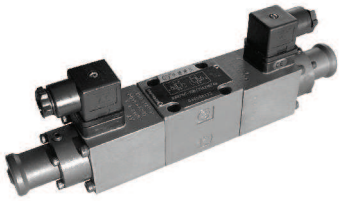
BEIJING HUADE HYDRAULIC INDUSTRIAL GROUP CO.,LTD.	Proportional pressure reducing valve of 3-way design,Type 3DREP			RE 24750/06.2004
	Size 6	up to 10 MPa	up to 15 L/min	Replaces：

Features:

- Directly controlled proportional valves for the control of the pressure and direction of a flow
- Actuated via proportional solenoids with central thread and removable coil
- Spring centred control spool



Function, section

The 3-way pressure reducing valve type 3DREP 6.. is directly actuated by proportional solenoids. They convert an electrical input signal into a proportional pressure output signal.

The proportional solenoids are controlable wet pin DC solenoids with central thread and removable coil. The solenoids are controlled optionally via external control electronics .

Design:

The valve mainly comprises of:

-Housing (3) with mounting surface

-Control spool (5) and(6) and (4)

-Solenoids (1 and 2) with control thread

Function:

With the solenoids (1 and 2) de-energised the control spool (5) is held in its centre position by compression springs

The control spool (2) is directly actuated when one of the solenoids is energised

E.g. by energising solenoid "a" (1)

→The pressure measuring spool (5) and control spool (4) move to the right in proportion to the electrical input signal

→ The connection from P to B and A to T is via orifice form cross-sections with progressive flow characteristics

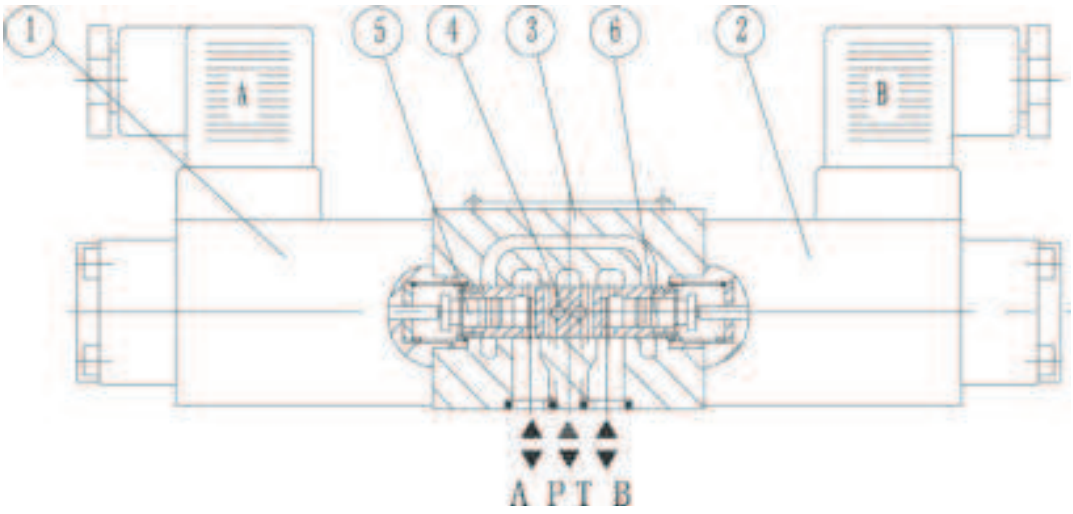
-De-energisation of the solenoid (1)

→The control spool (4) is returned to its centre position by the compression springs

In the middle postion the connections A and B to T are open, therefore, the pressure fluid can freely flow to tank. An optional hand overrides makes is possible to move the control spool (4) without energising the solenoid.

Attention!

Unintended use of the hand override can cause uncontrolled machine movement!



Type 3DREP6...

Ordering details

3DREP6 | 10 | B / A | | | | | | | *

Control form:
chamber A = A
chamber B = B
chambers A and B = C
See symbols (detailed)

Series 10 = 10
(10 to 19: unchanged installation and connection dimensions)

Technology of Beijing Huade Hydraulic =B

Pressure stage1.6 MPa = 16
Pressure stage 2.5 MPa = 25
Pressure stage 4.5 MPa = 45

Further details in clear text

M = NBR seals
V= FPM seals

Z4=Small quadrate plug-in connecter

No code = Without special protection
J = Sea water resistant

No code = Without hand override
N9 = With protected hand override

24 = DC supply voltage for the control electronics G24

Symbols

Simplified

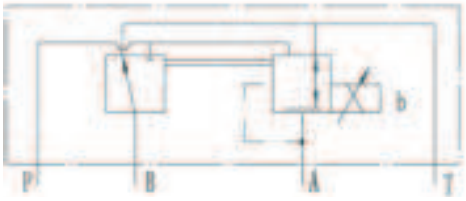
Type 3DREP6A-10B/...A...

Type 3DREP6B-10B/...A...

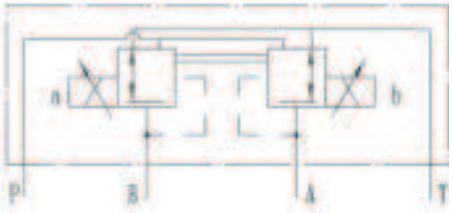
Type 3DREP6C-10B/...A...

Detailed

Type 3DREP6A-10B/...A...



Type 3DREP6C-10B/...A...



Type 3DREP6B-10B/...A...

Technical data

Hydraulic

Operating pressure (MPa)	Port P	10,If excess 10,then installate the valve,type ZDR6DP...-30B/...in input port
	Port T	3
Max. flow (L/min)		15 (Δ P=5MPa)
Degree of contamination (μm)		Filter recommendation with a minimum retention rate of $\beta_{10} \geqslant 75$
Hysteresis (%)		⩽ 3
Repeatability accuracy (%)		⩽ 1
Response sensitivity (%)		⩽ 1
Reversal span (%)		⩽ 1
Pressure fluid		Mineral oil(for NBR seal),Phosphate ester (for FPM seal)
Viscosity range (mm²/s)		2.8 to 380
Pressure fluid temperature range (℃)		-20 to +70
Installation		optional, preferably horizontal
Weight (kg)		Type C: 2.6; type A,B: 1.5

Electrical, solenoid

Supply voltage		DC24V
Nominal current per solenoid (A)		0.8
Max. current per solenoid (A)		⩽ 0.02
Solenoid coil resistance (Ω)	Cold value at 20℃	19.5
	Max. warm value .	28.8
Working state		continuous
Condition temperature (℃)		~+50
Coil temperature (℃)		~+150
Protection to DIN 40 050		IP65
Electrical connections	3DREP	with component plug to DIN 43 650-AM2 plug-in connector to DIN 43 650-AF2/Pg11 1)
	3DREPE	with component plug to E DIN 43 563-AM6-3 plug-in connector E DIN 43 563-BF6-3/Pg11 1)

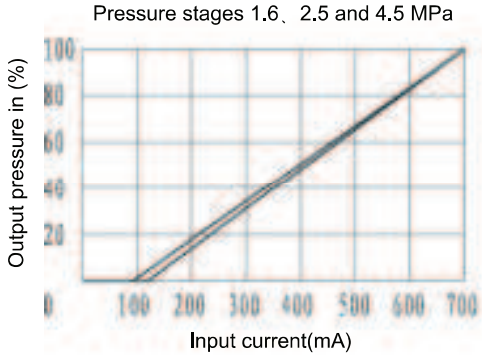
Electrical connections (Dimensions in mm)

Connections at component plug

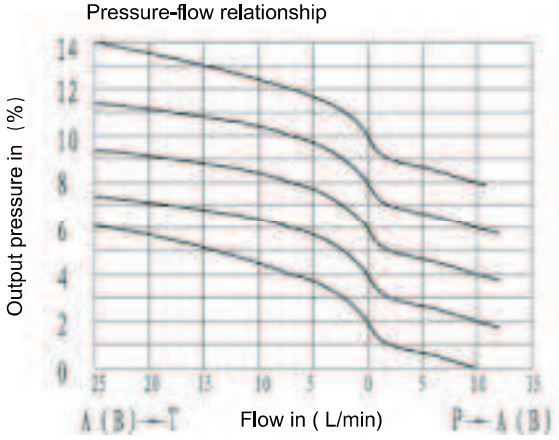
Connections at plug-in connector

Char

Pressure stages 1.6、2.5 and 4.5 MPa

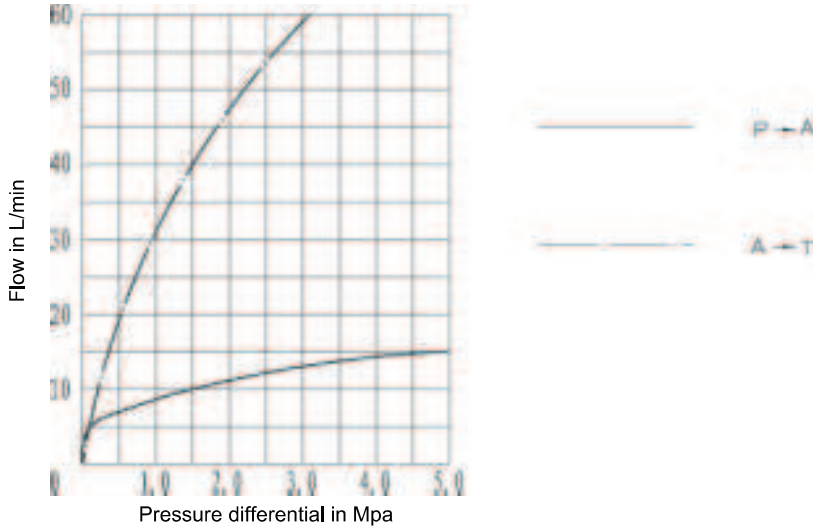


Pressure-flow relationship

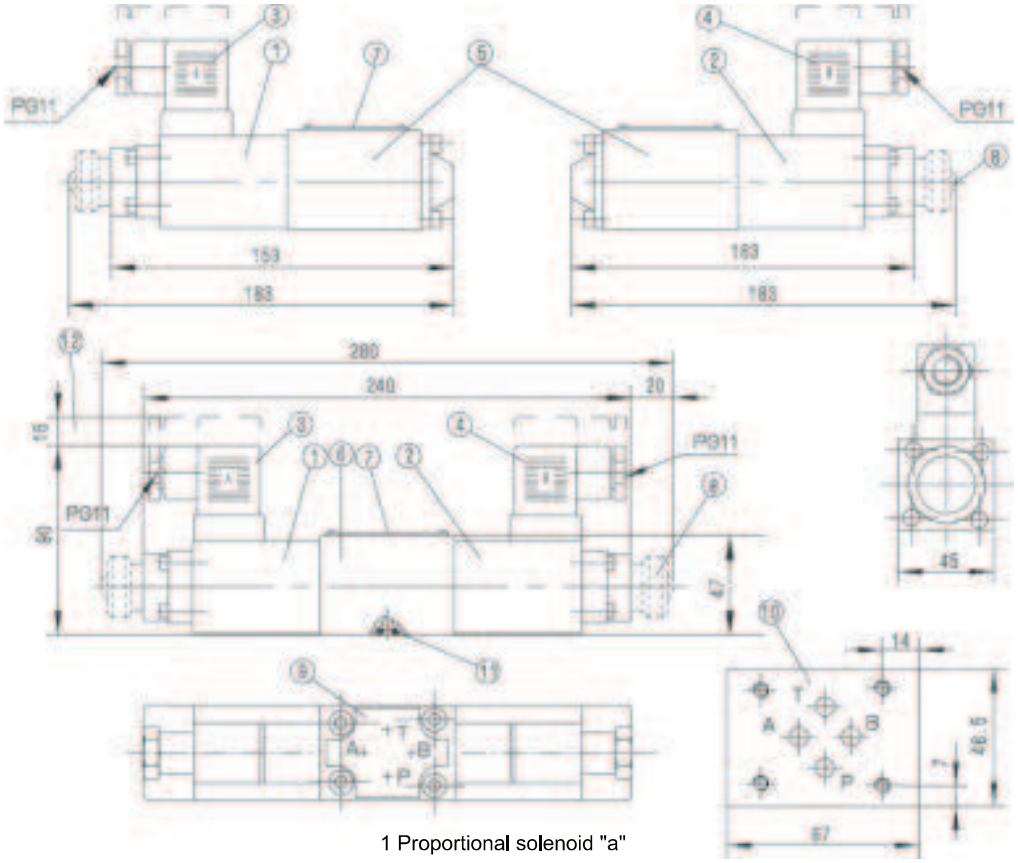


Characteristic curves

Pressure stages 1.6, 2.5 and 4.5Mpa



Unit dimensions: type 3DREP (Dimensions in mm)



1 Proportional solenoid "a"
2 Proportional solenoid "b"
3 Plug-in connector coloured grey
4 Plug-in connector coloured black
5 2-Position valve
6 3-Position valve
7 Nameplate 8 Protected hand override"N"
9 Ports position 10 Machined valve mounting face and position of the ports
11 O-ring, 9.25 x 1.78 (for ports A, B, P, T)
12 Space required to remaove the plug-in connector
Subplates G 340/01 (G 1/4) G 341/01 (G 3/8) G 502/01 (G 1/2)
Valve fixing screws
M5 x 50 DIN 912-10.9; M_A = 8.9 Nm see page 80

When used with a proportional directional valve type 4WRZ then the following throttle inserts are to be used for ports A and B:

NS	10	16	25	37
Hde (mm)	1.5	1.8	2.3	2.8
material no.	156476	158510	157511	157948

Notice

1. **The fluid must be filtered. Minimum filter fineness is 10 μm.**
2. **The tank must be sealed up and an air breather/filter must be installed on air suction/entrance.**
3. **Subplate are not supplied, if required, please ordering separetly.**
4. **Valve fixing bolts/screws must be high tensilel (class 10.9). Please select and consult manufacturer. according to the parameter listed in the datasheet.**
5. **Roughness of surface mating with the valve is required to** 

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6. **Surface straightness of mating piece is required to 0.01/100mm.**

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