BEIJING HUADE HYDRAULIC INDUSTRIAL GROUP CO.,LTD.	Pressure reducing valve, direct operated, type DR 5 DP			RE 26580/12.2004
	Size 5	up to 31.5MPa	up to 15L/min	Replaces: RE26580/05.2001

Features:

- Subplate mounting
- 5 pressure ratings
- 4 adjustment elements:
  - · Rotary knob,
  - · Set screw with hexagon and protective cap,
  - · Lockable rotary knob with scale,
  - · Rotary knob with scale
- Check valve, optional
- Porting pattern to DIN 24 340, form D,ISO 5781 and CETOP-RP 121H

Functional,section

The valve type DR5 DP is a 3-way direct operated pressure reducing valve with a pressure relief function on the secondary side.

It is used to reduce the system pressure. The secondary pressure is set by the pressure adjustment element (4). At rest, the valve is normally open and the pressure fluid can flow unhindered from port P to port A. The pressure in port A is at the same time, via the control line (6), present at the spool area opposite to the compression spring (3). When the pressure in port A exceeds the pressure level set at compression spring (3), the control spool (2) moves into the control position and holds the set pressure in port A constant.

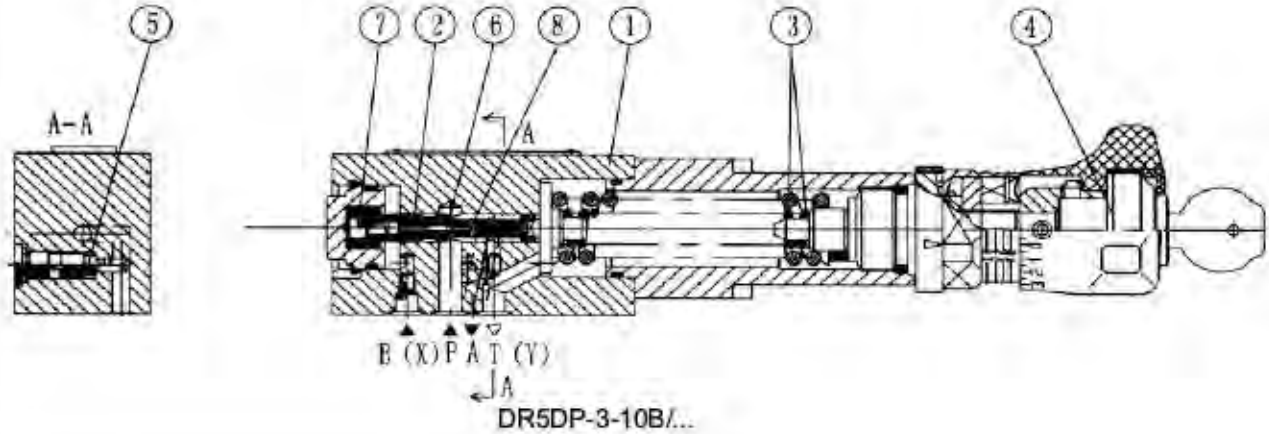
The control and pilot oil are taken from port A via control line (6).

If the pressure in port A still increases due to external forces on the actuator, the control spool(2) moves still further towards the compression spring(3).

This causes a flow path to be opened at port A via control land (8) on the control spool (2) to the tank. Sufficient pressure fluid then flows to tank to prevent any further rise in pressure.

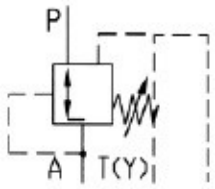
The spring chamber is always drained to tank externally via port T (Y).

For free return flow from port A to port P an optional check valve (5) can be fitted.

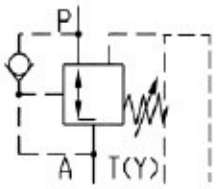


DR5DP-3-10B/...

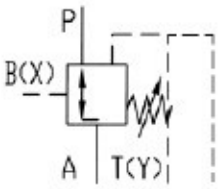
Symbol



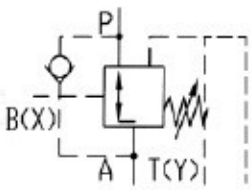
without non-return valve Type "YM"



with non-return valve Type "Y"



without non-return valve Type "XYM"



with non-return valve Type "XY"

Ordering code

	DR	5	D	P		-	10	B /		Y			*

For subplate mounting = No code
For front flange mounting = F

Size 5 =5

Direct operated = D

Subplate mounting = P

Adjusting element
Rotary knob = 1
Head screw with hexagon and protective cap = 2
Lockable rotary knob with scale 1) = 3
Rotary knob with scale = 7

Series 10 to 19 = 10
(50 to 59 = unchanged installation and connection dimensions)

Technology of Beijing Huade Hydraulic =B

25= Max. sequence pressure 2.5 MPa
75= Max. sequence pressure 7.5 MPa
150= Max. sequence pressure 15 MPa
210= Max. sequence pressure 21 MPa
315= Max. sequence pressure 31.5 MPa
(31.5 MPa unit only available without non-return valve)

Y= Pilot oil supply internal, drain external
XY = Pilot oil supply internal, drain external

No code. = with non-return valve
M = without non-return valve

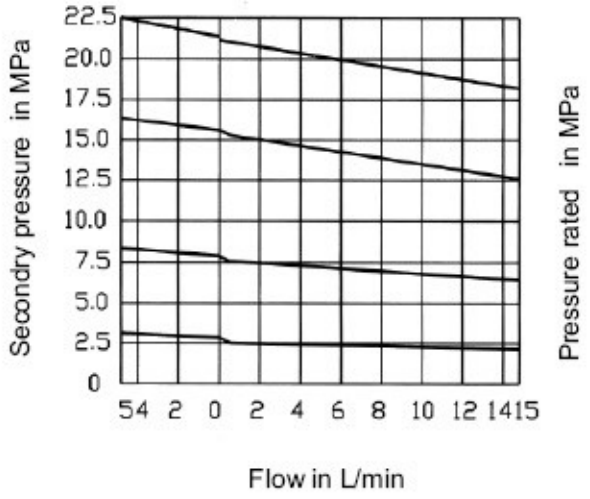
No code. = mineral oils
V = phosphate ester

further details in clear text

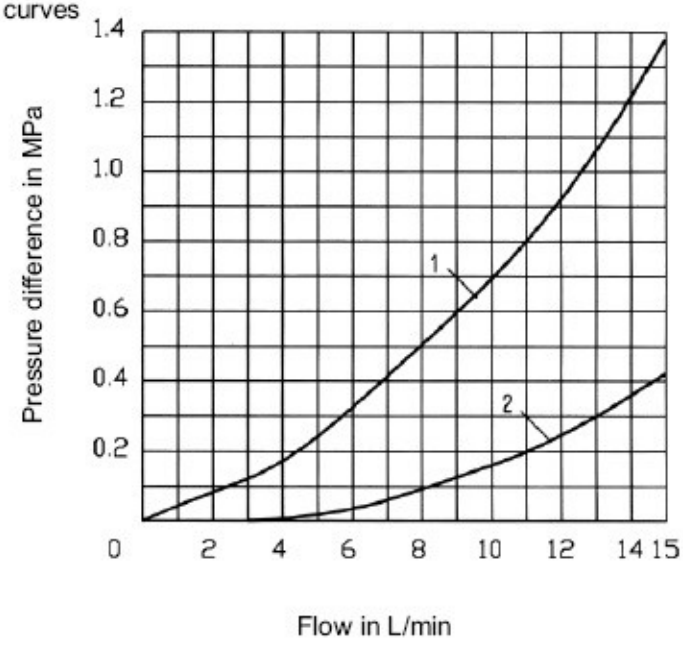
Technical data		
Max. operating pressure(Port P)	(MPa)	up to 31.5
Max. secondary pressure (Port A)	(MPa)	up to 21.0;without non-return valve up to 31.5
Max. back pressure(Ports T (Y))	(MPa)	up to 6.0
Max. flow	(L/min)	up to 15
Pressure fluid		Mineral oil (for NBR seal)or phosphate ester(for FPM seal)
Viscosity range	(mm^2/s)	-10~800
Pressure fluid - temperature range	(°C)	-30 to +80
Degree of contamination	(μm)	Maximum permissible degree of contamination of the fluid is to NAS 1638 class 9.
Weight	(Kg)	approx. 1.0

Characteristic curves (measured at n = 41 mm^2/s and t = 50°C)

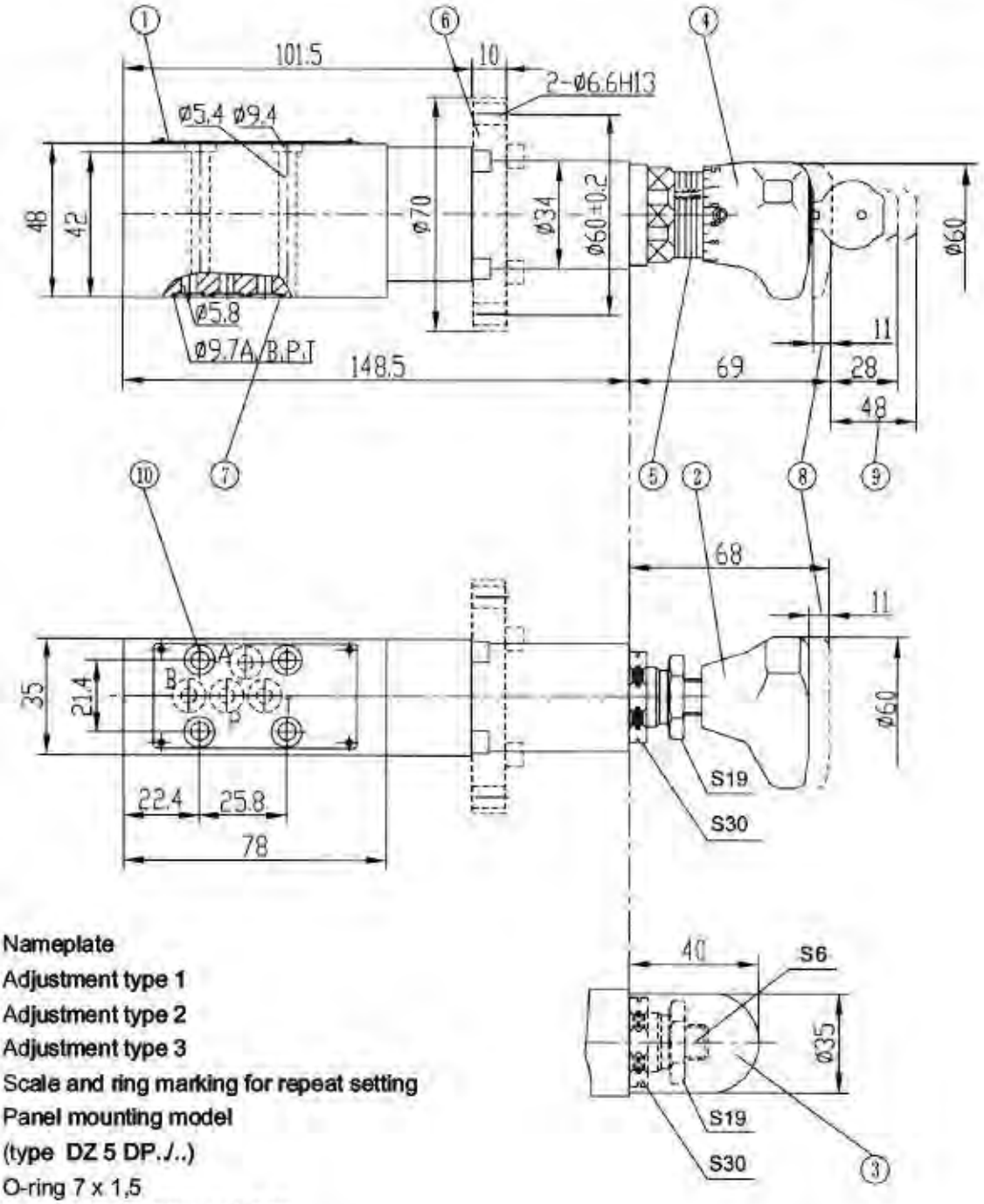
p_A-q_V characteristic curves



Δ p - Qq characteristic curves



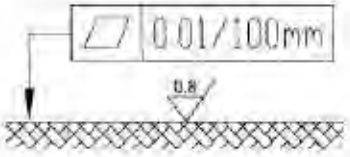
Unit dimensions **(Dimensions in mm)**



1 **Nameplate**
2 **Adjustment type 1**
3 **Adjustment type 2**
4 **Adjustment type 3**
5 **Scale and ring marking for repeat setting**
6 **Panel mounting model (type DZ 5 DP./..)**
7 O-ring 7 x 1,5 for ports P, A, B(X) and T(Y)
8 Max. stroke
9 Space required to remove key
10 Valve fixing hole

Subplates: see page 153
G115/01 (G1/4") G115/02 (M14 × 1.5)
G96/01 (G1/4") G96/02 (M14 × 1.5)
must be ordered separately

Valve fixing screws:
M5x50-10.9(GB/T70.1-2000); M_A = 9.0 Nm



Required surface finish of mating piece

BEIJING HUADE HYDRAULIC INDUSTRIAL GROUP CO.,LTD.	Pressure reducing valve, direct operated, type DR 6 DP			RE 26896/12.2004
	Size 6	up to 21MPa	up to 60L/min	Replaces, RE26896/05.2001

Features:

- Subplate mounting
- 5 pressure ratings
- 4 adjustment elements:
  - · Rotary knob,
  - · Set screw with hexagon and protective cap,
  - · Lockable rotary knob with scale,
  - · Rotary knob with scale
- Check valve, optional
- Porting pattern to DIN 24 340, form D,ISO 5781 and CETOP-RP 121H

Functional,section

The valve type DR 6 DP is a 3-way direct operated pressure reducing valve with a pressure relief function on the secondary side.

It is used to reduce the system pressure. The secondary pressure is set by the pressure adjustment element (4). At rest, the valve is normally open and the pressure fluid can flow unhindered from port P to port A. The pressure in port A is at the same time, via the control line (6), present at the spool area opposite to the compression spring (3). When the pressure in port A exceeds the pressure level set at compression spring (3), the control spool (2) moves into the control position and holds the set pressure in port A constant.

The control and pilot oil are taken from port A via control line (6).

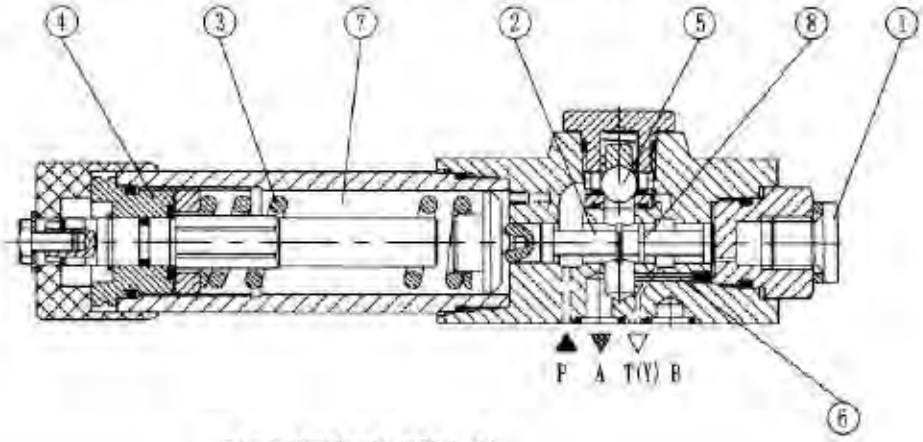
If the pressure in port A still increases due to external forces on the actuator, the control spool (2) moves still further towards the compression spring (3).

This causes a flow path to be opened at port A via control land (8) on the control spool (2) to the tank. Sufficient pressure fluid then flows to tank to prevent any further rise in pressure.

The spring chamber (7) is always drained to tank externally via port T (Y).

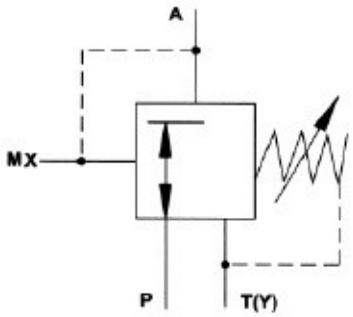
For free return flow from port A to port P an optional check valve (5) can be fitted.

A pressure gauge connection (1), permitts the secondary pressure at the valve to be monitored.

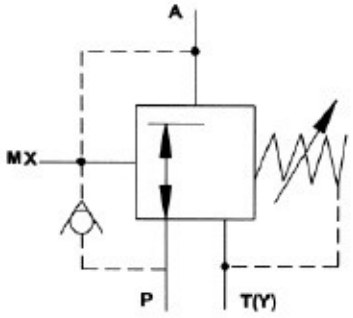


Type DR6DP1-50B/...Y...

Symbols



Version "YM"
Pilot oil supply internal
oil drain external
without check valve



Version "Y"
Pilot oil supply internal
oil drain external
with check valve

Ordering details

DR	6	D	P		-	50	B	/		Y			*

Size 10 =10

Direct operated pressure reducing valve

Subplate mounting =P

Adjustment element
Rotary knob = 1
Set screw with hexagon and protective cap = 2
Lockable rotary knob with scale = 3
Rotary knob with scale = 7

Series 50 to 59 = 50
(50 to 59: unchanged installation and connection dimensions)

Technology of Beijing Huade Hydraulic = B

25= Max. secondary pressure 2.5 MPa
75= Max. secondary pressure 7.5 MPa
150= Max. secondary pressure 15.0 MPa
210= Max. secondary pressure 21.0 MPa

Y = Pilot oil supply internal, drain external

No code. = mineral oils
V = phosphate ester

No code = With check valve
M = Without check valve

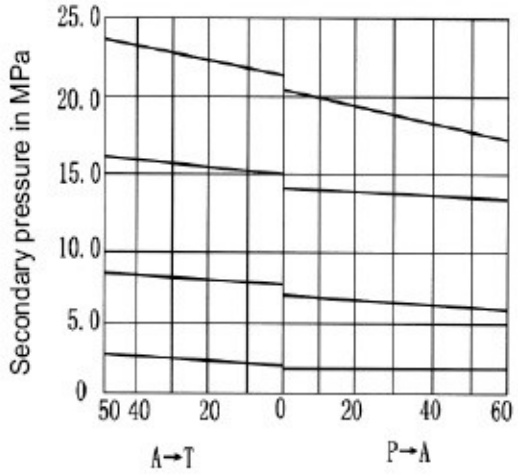
Further details in clear text

Technical data

Max. operating pressure Port P	(MPa)	up to 315
Max. secondary pressure Port A	(MPa)	up to 2.5; up to 7.5; up to 15.0; up to 21.0; up to 31.5
Max. back pressure Ports T (Y)	(MPa)	up to 160
Max. flow	(L/min)	up to 60
Pressure fluid		Mineral oil (for NBR seal)or phosphate ester(for FPM seal)
Viscosity range	(mm^2/s)	10~800
Pressure fluid - temperature range	(°C)	-30 to +80
Degree of contamination	(μm)	Maximum permissible degree of contamination of the fluid is to NAS 1638 class 9.
Weight	(Kg)	approx. 1.2

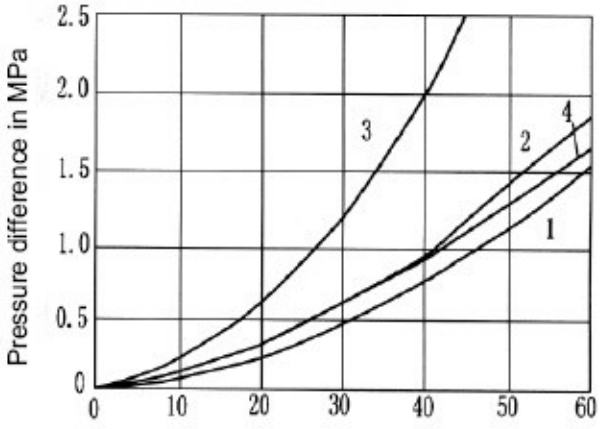
Characteristic curves (measured at v = 41 mm^2/s and t = 50°C)

p_A-q_V characteristic curves



Flow in L/min

D_p-C_q characteristic curves

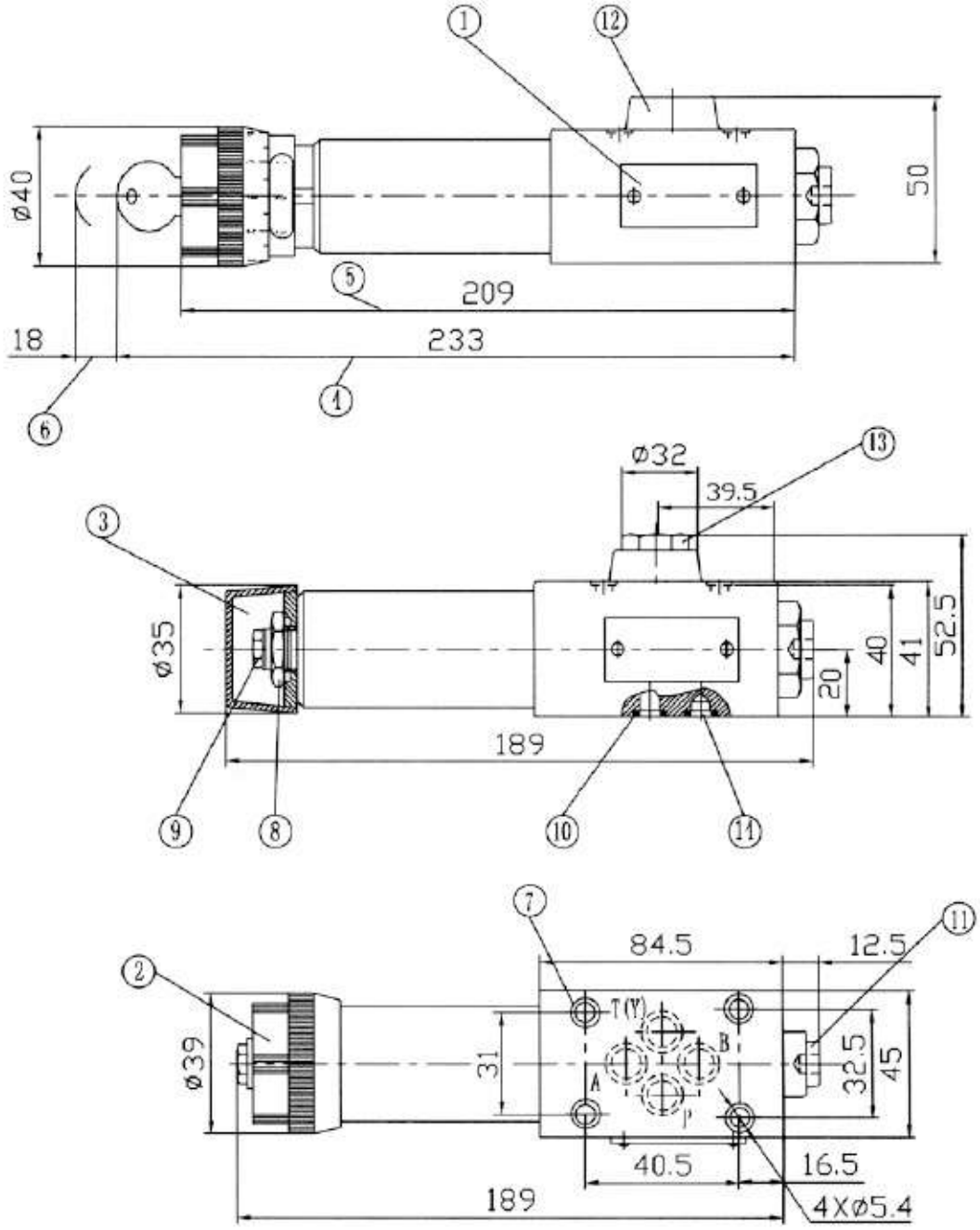


Flow in L/min

Note:
The curve characteristics remain, with a low set pressure,
the same in relation to the pressure rating .
The characteristic curves for the pressure relief function are valid for the outlet pressure = zero over the entire flow range!

1 P to A (min. pressure differential)
2 A to T (Y) (min. pressure differential)
3 △ p only over the check valve
4 △ p over the check valve and fully open control cross section

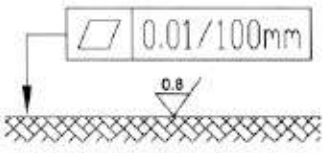
Unit dimensions: type DR6DP **(Dimensions in mm)**



1. Nameplate
2. Adjustment element 1
3. Adjustment element 2
4. Adjustment element 3
5. Adjustment element 7
6. Space required to remove key
7. Valve fixing holes
8. Lock nut 24 A/F
9. Hexagon 10 A/F
10. O-ring 9.25 x 1.78 for ports A, B, P, T(Y)
11. Pressure gauge connection G 1/4; Deep12; internal hexagon 6 A/F
12. Without check valve
13. With check valve
14. Port B has no function

Subplates:see page 152
G341/01(G1/4")
G341/02(M14X1.5)
G342/01(G3/8")
G342/02(M18X1.5)

Valve fixing screws
M5 x 50 - 10.9(GB/T70.1-2000)
Tightening torque M_A = 8.9 Nm



Required surface finish of mating piece

BEIJING HUADE HYDRAULIC INDUSTRIAL GROUP CO.,LTD.	**Pressure reducing valve, direct operated, type DR 10 DP**			RE 26897/12.2004
	Size 10	up to 21MPa	up to 80L/min	Replaces: RE26897/05.2001

Features:

- For subplate mounting
- 4 pressure ranges
- 4 setting elements:
  - · Rotary knob
  - · Hex. head sleeve with protective cap
  - · Lockable rotary knob with scale
  - · Rotary knob with scale
- With pressure gauge port
- Optional non return valve
- Porting pattern to DIN 24 340, form D,ISO 5781 and CETOP-RP 121H

Functional, section

The valve type DR 10 DP is a direct operated valve of 3 way design, with a pressure relief function on the reduced pressure side.

Pressure setting is by means of the pressure setting element (1).

At rest, the valve is normally open, and fluid can flow unhindered from port B to port A. Pressure in port A is also present on the end of the spool (2), via control line (4), opposing the compression spring (3). When the pressure in port A reaches the pressure level set at spring (3), spool (2) moves to the control position and holds the pressure in port A constant.

Fluid to control the valve is taken from port A via control drilling

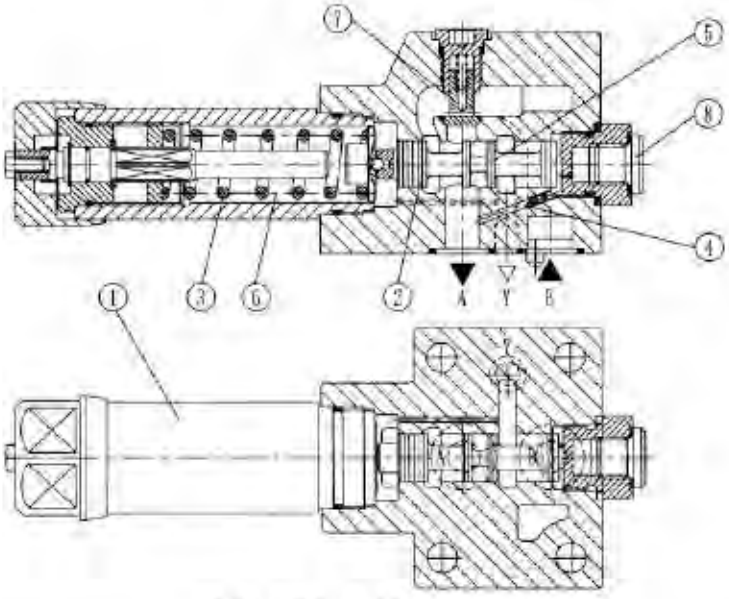
If the pressure in port A rises still further due external forces, the spool (2) is moved still further towards the compression spring (3).

This causes a flow path to be opened over control land (5) in the control spool (2) to tank (port Y) . Sufficient fluid then flows to tank to prevent any further rise in pressure.

The spring chamber (6) is drained to tank externally via port Y.

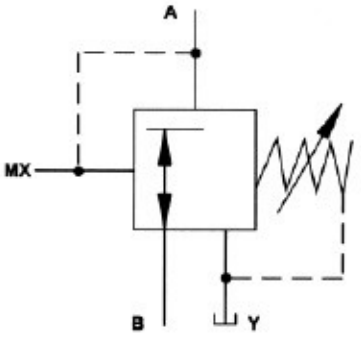
An optional non return valve (7) is available to allow free flow from port A to port B.

A pressure gauge connection (8), permits the secondary pressure to be monitored.

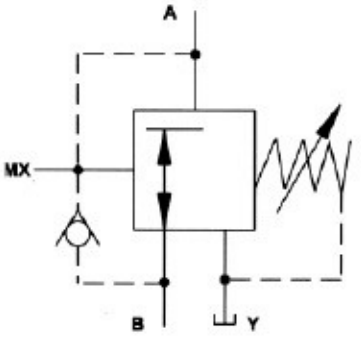


DR 10 DP 1-40B/...Y...

Symbols



Type "YM"
Pilot oil supply internal
drain external
without check valve



Type "Y"
Pilot oil supply internal
drain external
with check valve

Ordering details

DR	10	D	P		-	40	B	/		Y			*

Size 10 =10

Direct operated pressure reducing valve size 6

Subplate mounting =P

Adjustment element
Rotary knob = 1
Set screw with hexagon and protective cap = 2
Lockable rotary knob with scale = 3

Series 40 to 49 = 40
(40 to 49: unchanged installation and connection dimensions)

Technology of Beijing Huade Hydraulic =B

Further details in clear text

No code. = mineral oils
V = phosphate ester

No code = With check valve
M = Without check valve

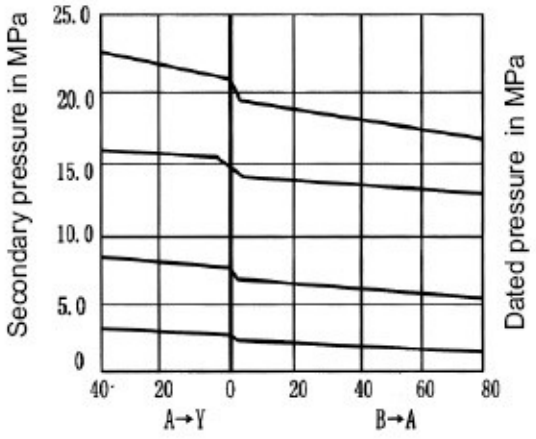
Y = Pilot oil supply internal, drain external

25 = Max. secondary pressure 2.5 MPa
75 = Max. secondary pressure 7.5 MPa
150 = Max. secondary pressure 15 MPa
210 = Max. secondary pressure 21 MPa

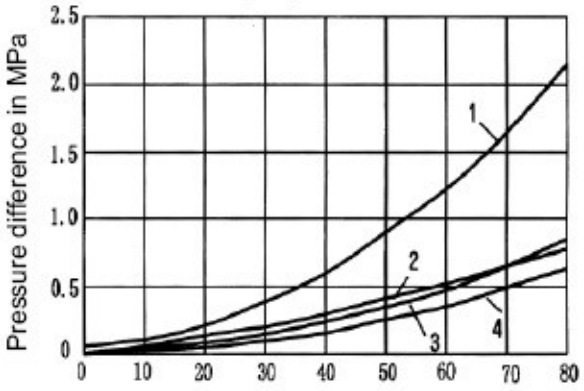
Technical data		
Max. operating pressure(Port P)	(MPa)	up to 31.5
Max. secondary pressure(Port A)	(MPa)	up to 2.5、up to 7.5、up to 15.0、up to 21.0、up to 31.5
Max. back pressure(Ports T (Y))	(MPa)	up to 16.0
Max. flow	(L/min)	up to 80
Pressure fluid		Mineral oil (for NBR seal)or phosphate ester(for FPM seal)
Viscosity range	(mm^2/s)	10~800
Pressure fluid - temperature range	(℃)	-30 to +80
Degree of contamination	(μm)	Maximum permissible degree of contamination of the fluid is to NAS 1638 class 9.
Weight	(Kg)	approx. 3

Characteristic curves (measured at V = 41 mm^2/s and t = 50℃)

p_A-q_V characteristic curves



$\triangle_p$ - Q_q characteristic curves



Note:

For any particular setting range (spring selection) all flow curves at pressure settings lower than the maximum remain parallel to the maximum setting curve of that range.

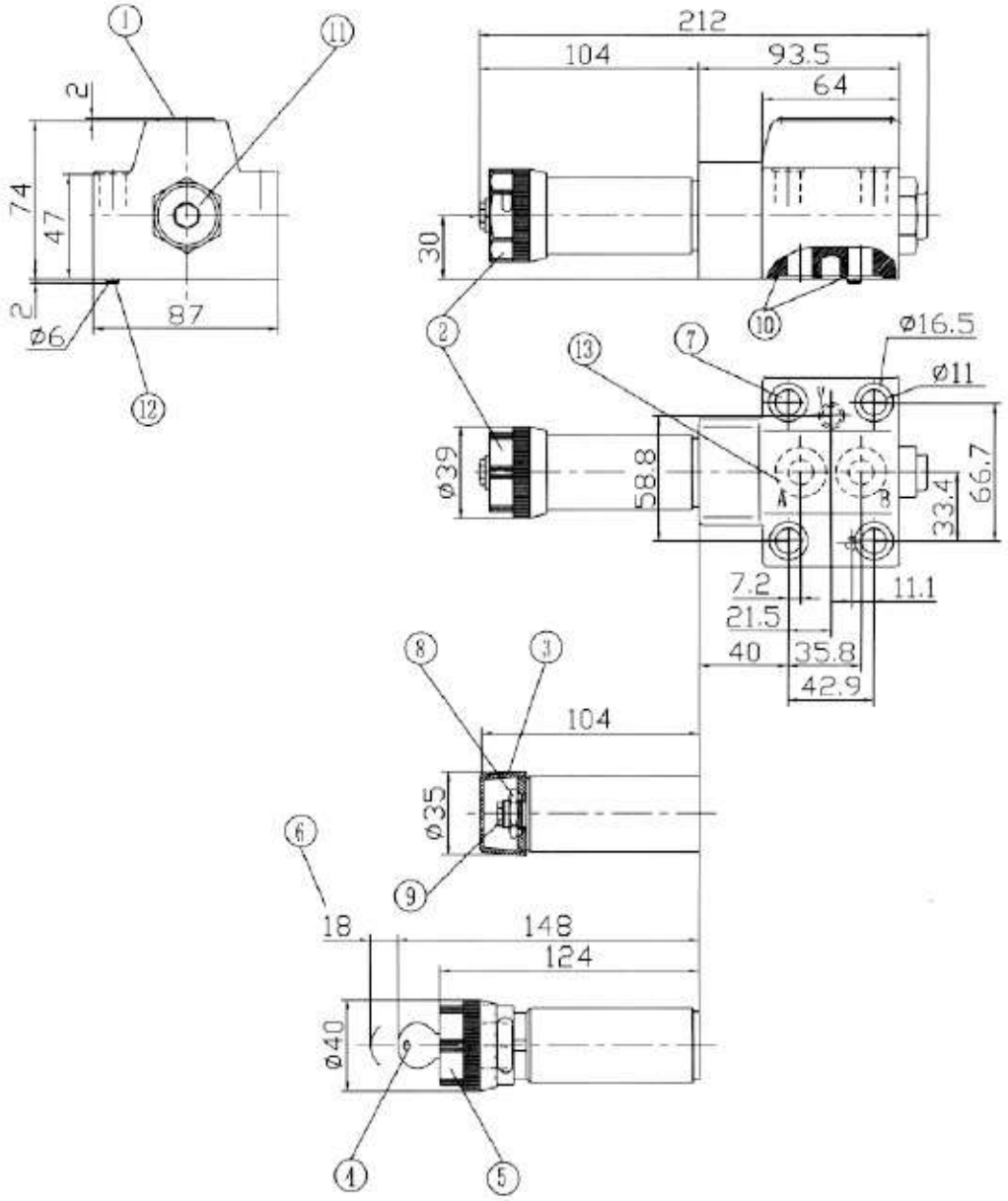
1 Pressure drop / flow curve A to Y via non-return valve

2 Pressure drop / flow curve B to A

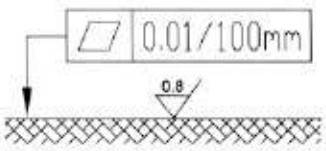
3 Pressure drop via check valve only

4 △p over the check valve and fully open control cross section

Unit dimensions:type DR10DP **(Dimensions in mm)**



1. Nameplate
2. Adjustment element 1
3. Adjustment element 2
4. Adjustment element 3
5. Adjustment element 7
6. Space required to remove key
7. Valve fixing holes
8. Lock nut 24 A/F
9. Hexagon 10 A/F
10. O-ring 17.12 x 2.62 for ports A, B, 9.25 x 1.78 for ports Y
11. Pressure gauge connection port G 1/4;
12. Locating pin
13. Subplates see page 150
    G460/01(G3/8″)
    G460/02(M18X1.5)
    G461/01(G1/2″)
    G461/02(M22X1.5)
    Valve fixing screws (GB/T70.1-2000):
    M10X60-10.9 M_A =75Nm



Required surface finish of mating piece