



PILOT OPERATED DIRECTIONAL CONTROL VALVE 4DP20

ENGINEERING

1

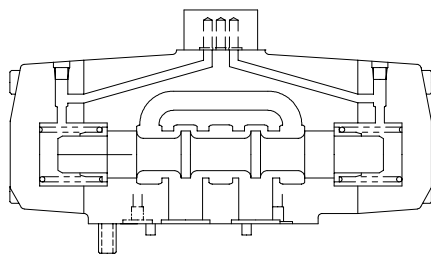
Ref. No. P04161
Release 07/2002

Description

Available as spring centered, spring offset Valve
mounting interface conforms to International and National
standards.

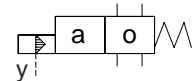


Section

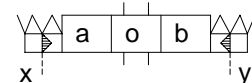


Hydraulic Symbol

2 position spring offset



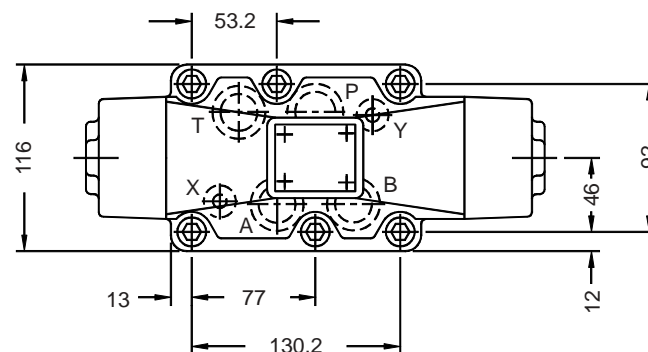
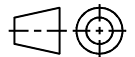
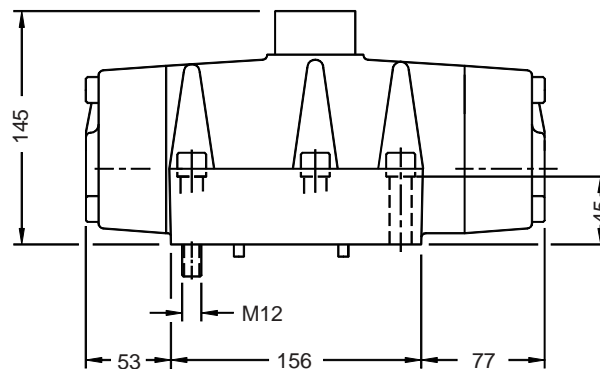
3 position spring centred



Unit dimension

Valve

Dimensions in mm.



Polyhydron Pvt. Ltd.
78-80, Machhe Industrial Estate,
Machhe, Belgaum - 590 014. INDIA.

Phone : +91-(0)831-411001
Fax : +91-(0)831-411002
E-mail : polyhydron@vsnl.com
Website : www.polyhydron.com



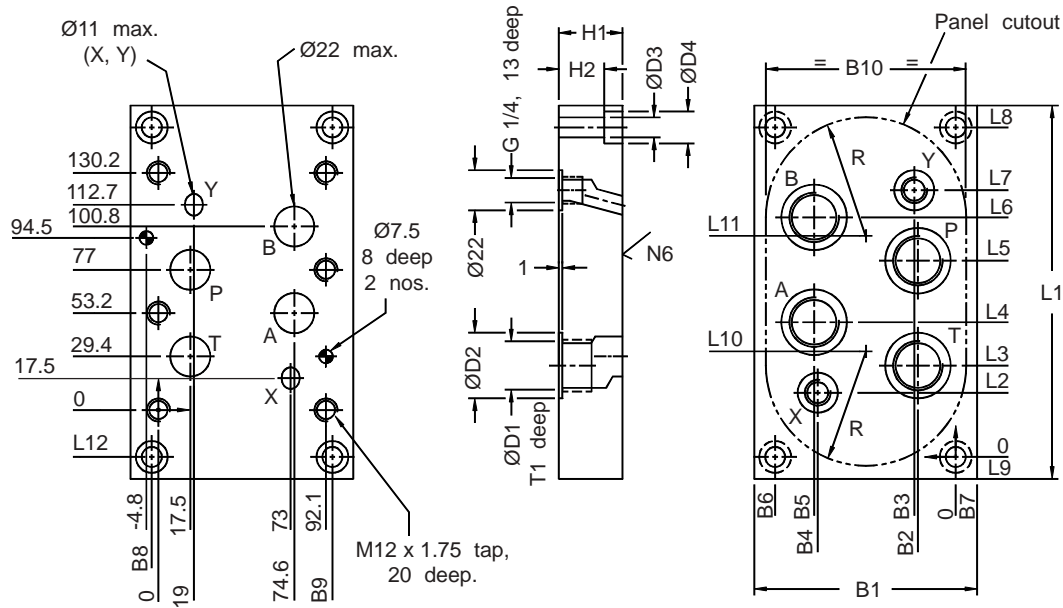
PILOT OPERATED DIRECTIONAL CONTROL VALVE 4DP20

ENGINEERING

2

Ref. No. P04161

Subplate



| Subplate type | ØD1 | ØD2 | T1 | ØD3 | ØD4 | H1 | H2 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 | B9 |
|---------------|--------|-----|----|-----|------|----|----|-----|------|----|-----|------|------|-----|-----|-----|
| 1SD07G06 | G 3/4 | 36 | 18 | 11 | 17.5 | 35 | 25 | 116 | 17.5 | 19 | 73 | 74.5 | 92.1 | -12 | 0 | 92. |
| 1SD07G08 | G 1 | 44 | 18 | 11 | 17.5 | 35 | 25 | 116 | 17.5 | 19 | 73 | 74.5 | 92.1 | -12 | 0 | 92. |
| 1SD07G10 | G1 1/4 | 54 | 21 | 14 | -- | 78 | 43 | 170 | 32 | 36 | 106 | 110 | 142 | -14 | -25 | 11 |

| Subplate type | B10 | L1 | L2 | L3 | L4 | L5 | L6 | L7 | L8 | L9 | L10 | L11 | L12 | R | Mass kg. |
|---------------|-----|-----|------|------|----|-------|-------|-------|-----|-----|------|-------|-------|-----|----------|
| 1SD07G06 | 110 | 205 | 35.3 | 50.2 | 74 | 107.8 | 131.6 | 146.5 | 181 | -12 | 50.2 | 131.6 | -25.8 | 55 | 6 |
| 1SD07G08 | 110 | 205 | 35.3 | 50.2 | 74 | 107.8 | 131.6 | 146.5 | 181 | -12 | 50.2 | 131.6 | -25.8 | 55 | 6 |
| 1SD07G10 | 160 | 250 | 16.8 | 60.2 | 84 | 137.8 | 161.6 | 205 | 222 | -14 | 103 | 119 | -46 | 113 | 19 |

Note : Valve fixing screws M12 X 1.75, 65 long. 6 nos. Property class 12.9, Tightening torque 105 Nm.

Technical specification

| | |
|--------------------------------------|--|
| Construction | Spool type |
| Mounting | Subplate mounting as per ISO 4401 - AE - 08 - 4 - A and IS - 10187 - 20 mm. diameter nominal port. |
| Mounting position | Optional |
| Flow direction | As per spool type. |
| Operating pressure | For port P, A, B, X and Y 350 bar For port T 250 bar |
| Minimum pilot pressure | 5 bar |
| Hydraulic medium | Mineral oil |
| Viscosity range | 10 cSt to 380 cSt. |
| Fluid temperature range | -20 °C to +70 °C |
| Fluid cleanliness requirement | As per ISO 16/13 or better. |
| Maximum flow handling capacity | Refer performance curves. |
| Mass | 17.5 kg. APPROX. |



**PILOT OPERATED
DIRECTIONAL CONTROL VALVE
4DP20**

ENGINEERING

3

Ref. No. P04161

Performance Curve

Oil used : ISO VG 68, Viscosity : 68 cSt @ 40 °C, Temp test : 50 °C.

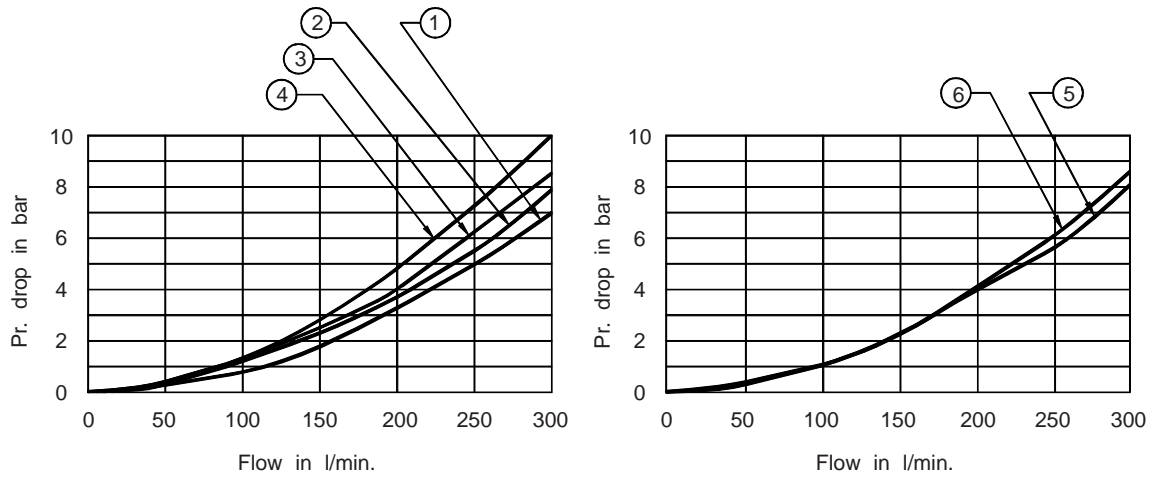


Table showing the relation between the spool type, direction of flow and curve in the above graph to be referred to.

| Direction of flow | P to T | P to A | P to B | A to T | B to T |
|-------------------|-----------|--------|--------|--------|--------|
| Spool type | Curve No. | | | | |
| E | -- | 2 | 2 | 2 | 2 |
| F | -- | 1 | 1 | 1 | 2 |
| G | 3 | 6 | 6 | 5 | 4 |
| H | -- | -- | -- | 1 | 1 |
| J | -- | 2 | 2 | 1 | 1 |
| L | -- | 2 | 2 | 1 | 2 |
| P | -- | 1 | 1 | 2 | 1 |



**PILOT OPERATED
DIRECTIONAL CONTROL VALVE
4DP20**

ENGINEERING

4

Ref. No. P04161

Ordering code

4 DP 20 E S 10

4 service ports

Directional control valve
pilot operated

Size 20

Spool type (ref. chart)

Design code
subject to change.
Installation dimensions
remain same for design
code 10 thru 19.

S

Spring centred or
Spring off set for
2 position valve.

Spring centred or
Spring off set for
3 position valve.

Spool Chart

| Type | Symbol | Crossover | Type | Symbol | Crossover |
|------|--------|-----------|------|--------|-----------|
| | a 0 | | | a 0 b | |
| | A B | | | A B | |
| C | | | T | | |
| | P T | | | P T | |
| D | | | M | | |
| E | | | P | | |
| F | | | Q | | |
| G | | | U | | |
| H | | | V | | |
| J | | | | | |
| L | | | | | |

Note : Subplate to be ordered separately.