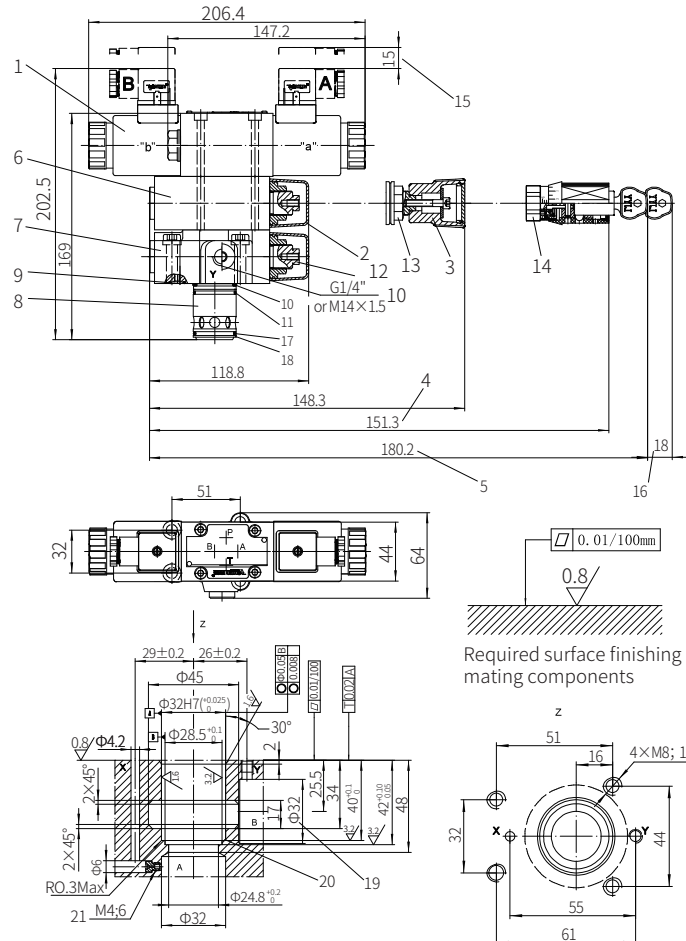


## Component size

Size unit: mm

with (DBC2U10 or 30) or without (DBC2U)



1 Solenoid directional valve (type H, type D, optional)

2 Adjustment form "2"

3 Adjustment form "1"

4 Adjustment form "3"

5 Adjustment form "7"

6 Secondary pilot valve

7 Primary pilot valve

8 Main spool

9 O ring 9.25x1.78

10 O ring 28x2.65

11 O ring 28x1.8

12 External hexagon screw S=10

13 Hexagon nut S=24

14 External hexagon screw S=24

15 Space required to remove the plug

16 Space required to remove the key

17 O ring 27.3x2.4

18 Retainer ring 32x28.4x0.8

19 The Φ32 hole can intersect Φ45 hole at any position

Be careful not to damage oil port X and fixing holes

20 The retainer ring and O-ring should be installed in this hole before install main spool

21 Throttle must be ordered separately

Valve fixing screw

M8x40-10.9 grade GB/T70.1-2000

Tightening torque  $M_A=34.3\text{Nm}$ 

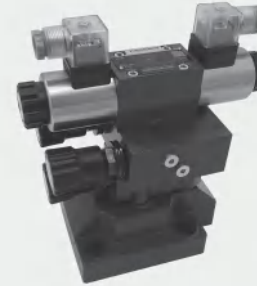
it must be ordered separately

if connection subplate is needed

G51/01(G1/4"); G51/02 (M14x1.5)

## Multistage Electro-hydraulic Pilot Relief Valve

Model: DB3U...5XJ



- ◆ Size 10 to 32
- ◆ Maximum working pressure 350 bar
- ◆ Maximum working flow 600 L/min

## Contacts

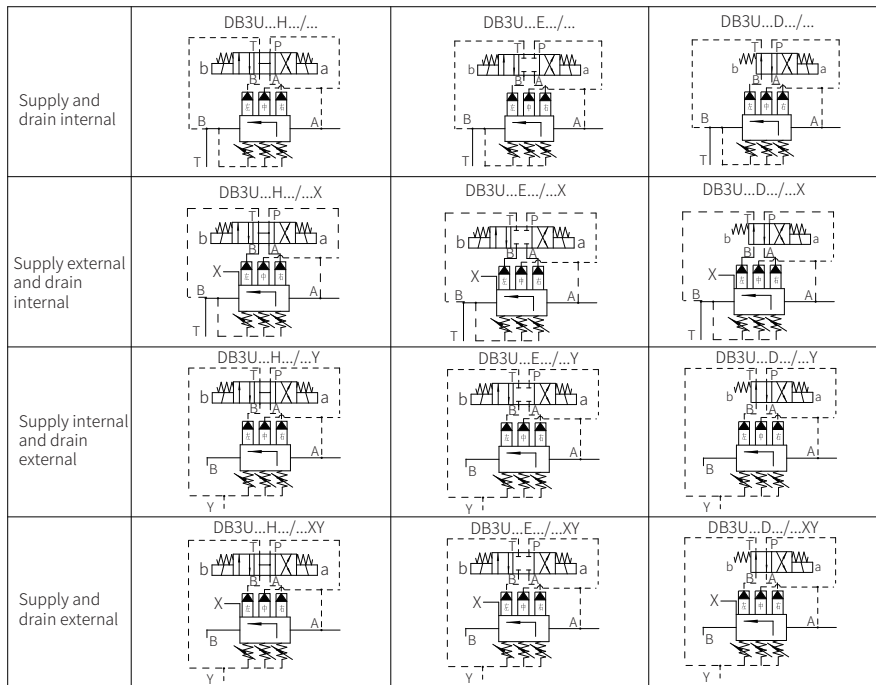
Function description, sectional drawing	02
Models and specifications	03
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Technical parameters	04
Characteristic limit	05
Component size	06-08

## Features

- Subplate mounting
- Threaded connection
- Cartridge connection
- Two-stage or three-stage pressure setting
- Controlled by solenoid directional valve
- Pressure adjusting forms:
  - Rotary knob
  - Internal hexagon screw with protective cap
  - Lockable rotary knob with scale



## Functional symbols



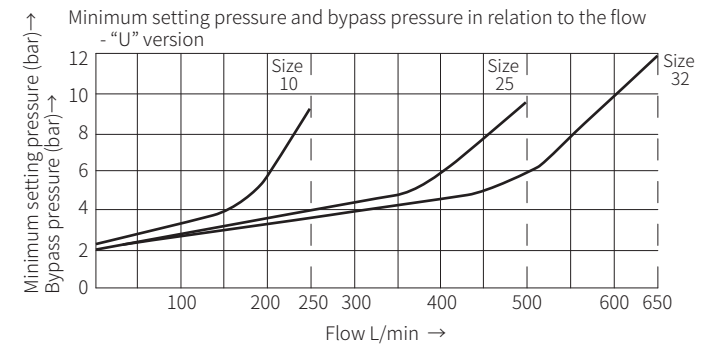
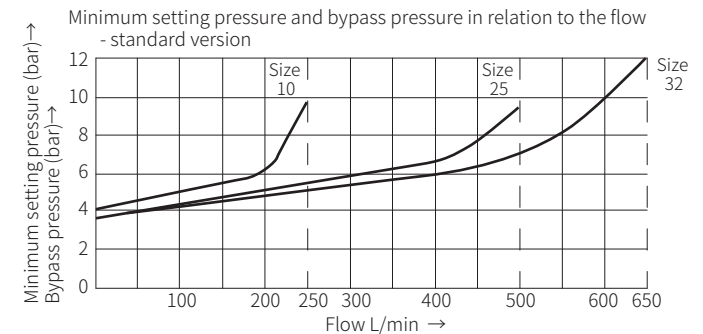
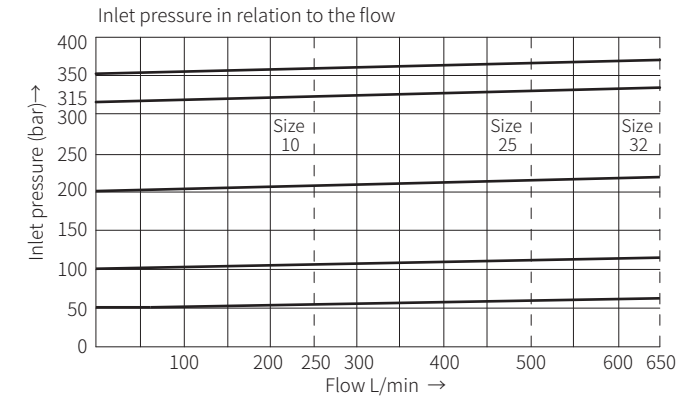
## Technical parameters

Size		10	15	20	25	30
Flow (L/min)	threaded connection valve	200		400		600
	subplate mounting valve	200	—	400	—	600
Working pressure	Mpa	Port A, B, X to 35				
Port Y back pressure	Mpa	to 31.5				
Minimum setting pressure	Mpa	Related to flow, see characteristic curve				
Maximum setting pressure	Mpa	35				
Medium		Mineral hydraulic oil or phosphate hydraulic oil				
Viscosity range	mm <sup>2</sup> /s	10 to 800				
Temperature range	°C	-30 to +80 (NBR seal)		-20 to +80 (FKM seal)		
Solenoid valve characteristic		See 4WE6 solenoid valve				

## Characteristic curve

(Measured when using HLP46,  $\vartheta_{oil}=40^{\circ}\text{C} \pm 5^{\circ}\text{C}$ )

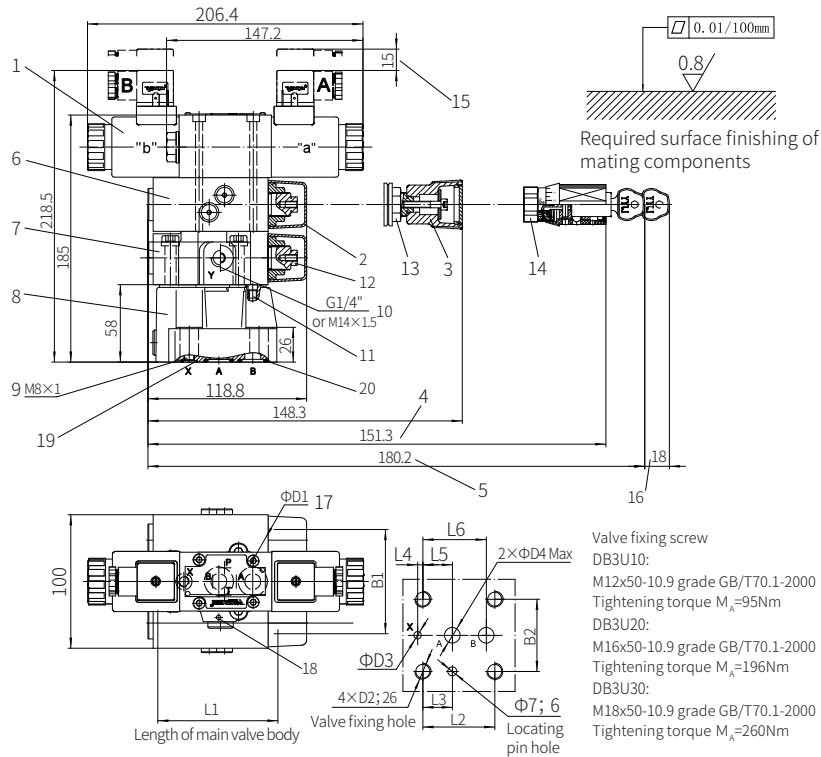
The curve was measured at zero pressure for externally controlled oil leakage.  
For internal control oil return, the pressure at port B is added to the command value.



## Component size

Size unit: mm

Subplate mounting valve model DB3U...-5XJ/...



Valve fixing screw  
 DB3U10:  
 M12x50-10.9 grade GB/T70.1-2000  
 Tightening torque  $M_t=95\text{Nm}$   
 DB3U20:  
 M16x50-10.9 grade GB/T70.1-2000  
 Tightening torque  $M_t=196\text{Nm}$   
 DB3U30:  
 M18x50-10.9 grade GB/T70.1-2000  
 Tightening torque  $M_t=260\text{Nm}$

Size	L1	L2	L3	L4	L5	L6	B1	B2	D1	D2	D3	D4
10	90	53.8	22.1	0	22.1	47.5	78	53.8	14	M12	6	12
20	117	66.7	33.4	23.8	11.1	55.6	100	70	18	M16	6	22
30	149.3	88.9	44.5	31.8	12.7	76.2	115	82.6	20	M18	7	30

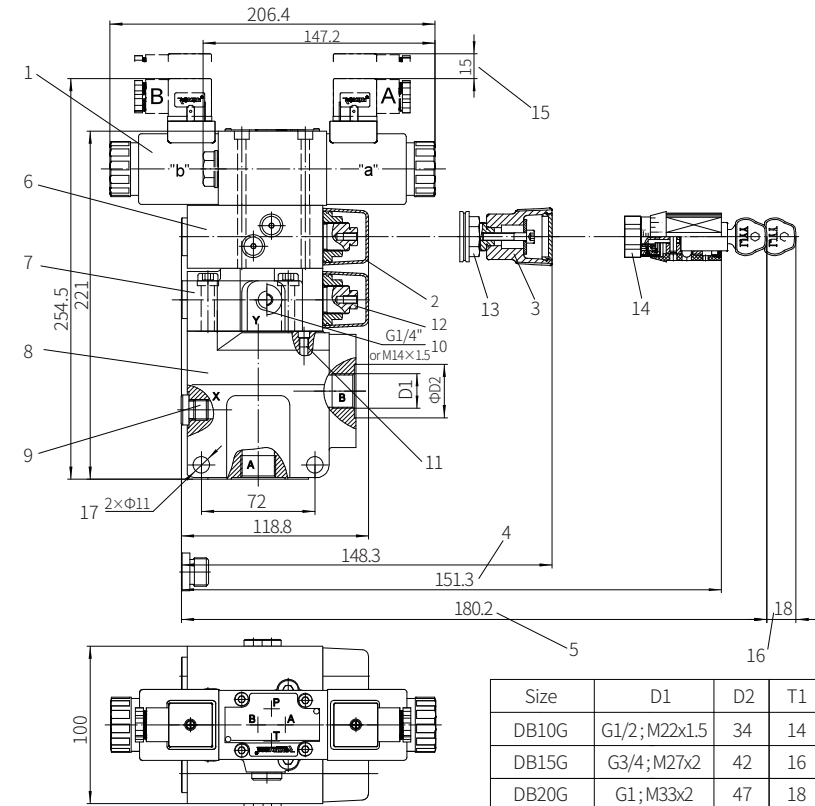
- 1 Solenoid directional valve (type H, type D, optional)
- 2 Adjustment form "2"
- 3 Adjustment form "1"
- 4 Adjustment form "3"
- 5 Adjustment form "7"
- 6 Secondary or tertiary pilot valve
- 7 Primary pilot valve
- 8 Main valve
- 9 Port X for external pilot oil supply
- 10 Port Y for external pilot oil drain (G1/4" and M14x 1.5, optional)
- 11 Omitted with internal pilot oil drain
- 12 External hexagon screw S=10
- 13 Hexagon nut S=24
- 14 External hexagon screw S=24
- 15 Space required to remove the plug
- 16 Space required to remove the key
- 17 Valve screw fixing holes
- 18 Locating pin hole
- 19 O ring 9.25x1.78 (for port X)
- 20 DB2U10:  
O ring 17.12x2.62(for port A, B)  
DB2U20:  
O ring 28.17x3.53(for port A, B)  
DB2U30:  
O ring 34.52x3.53(for port A, B)

It must be ordered separately if connection subplate is needed  
**DB3U10 Subplate model:**  
 G545/01(G3/8"); G545/02 (M18x1.5)  
 G546/01(G1/2"); G546/02(M22x1.5)  
**DB3U20 Subplate model:**  
 G408/01(G3/4"); G408/02 (M27x2)  
 G409/01(G1"); G409/02 (M33x2)  
**DB3U30 Subplate model:**  
 G410/01(G11/4"); G410/02 (M42x2)  
 G411/01(G112"); G411/02(M48x2)

## Component size

Size unit: mm

Threaded connection valve model DB3U...-5XJ/...



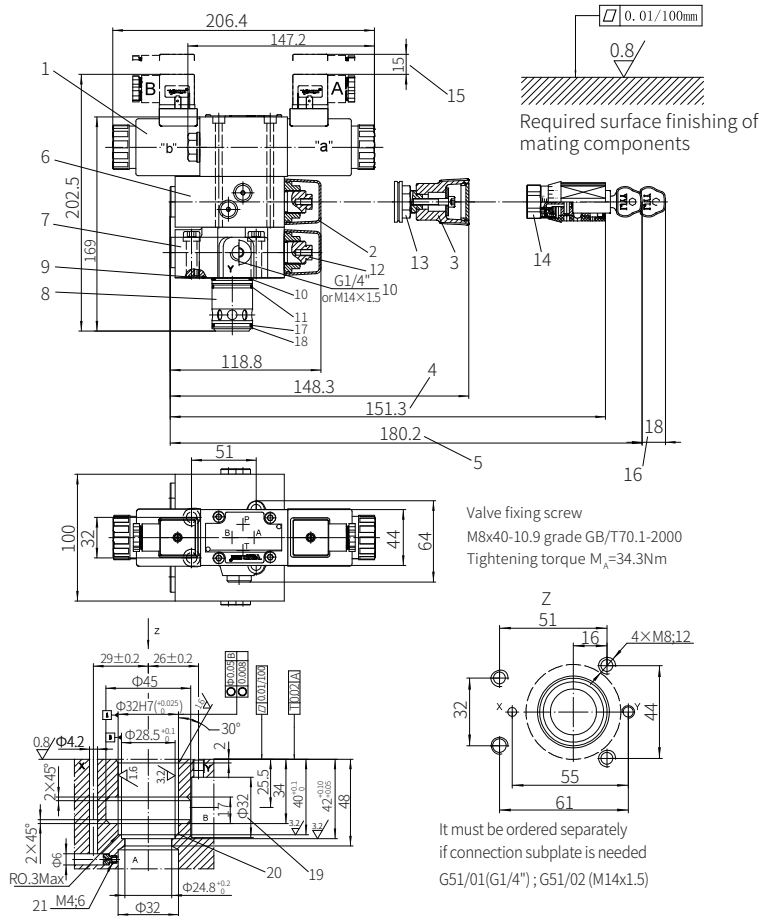
Size	D1	D2	T1
DB10G	G1/2; M22x1.5	34	14
DB15G	G3/4; M27x2	42	16
DB20G	G1; M33x2	47	18
DB25G	G1 1/4; M42x2	58	20
DB30G	G1 1/2; M48x2	65	22

- 1 Solenoid directional valve (type H, type D, optional)
- 2 Adjustment form "2"
- 3 Adjustment form "1"
- 4 Adjustment form "3"
- 5 Adjustment form "7"
- 6 Secondary or tertiary pilot valve
- 7 Primary pilot valve
- 8 Main valve
- 9 Port X for external pilot oil supply
- 10 Port Y for external pilot oil drain (G1/4" and M14x 1.5, optional)
- 11 Omitted with internal pilot oil drain
- 12 External hexagon screw S=10
- 13 Hexagon nut S=24
- 14 External hexagon screw S=24
- 15 Space required to remove the plug
- 16 Space required to remove the key
- 17 Valve screw fixing holes

## Component size

Size unit: mm

with (DBC3U10 or 30) or without (DBC3U)



- |   |  |
|---|--|
| 1 Solenoid directional valve (type H, type D, optional) | 12 External hexagon screw S=10   |
| 2 Adjustment form "2"                                   | 13 Hexagon nut S=24  |
| 3 Adjustment form "1"                                   | 14 External hexagon screw S=24   |
| 4 Adjustment form "3"                                   | 15 Space required to remove the plug   |
| 5 Adjustment form "7"                                   | 16 Space required to remove the key  |
| 6 Secondary or tertiary pilot valve                     | 17 O ring 27.3x2.4   |
| 7 Primary pilot valve                                   | 18 Retainer ring 32x28.4x0.8   |
| 8 Main spool  | 19 The $\Phi 32$ hole can intersect $\Phi 45$ hole at any position                         |
| 9 O ring 9.25x1.78                                      | Be careful not to damage oil port X and fixing holes                                       |
| 10 O ring 28x2.65                                       | 20 The retainer ring and O-ring should be installed in this hole before install main spool |
| 11 O ring 28x1.8  | 21 Throttle must be ordered separately   |

## Pilot Relief Valve/ Solenoid Pilot Relief Valve

Model: DB/DBW...5XJ



- ◆ Size 10 to 32
- ◆ Maximum working pressure 350 bar
- ◆ Maximum working flow 650L/min

## Contents

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## Features

- Subplate mounting:  
size 10/20/30
- Threaded connection:  
size 10/15/20/25/32
- Setting pressure:  
5MPa/10MPa/20MPa/31.5bar/35MPa
- Flow rate:  
250L/min (for size 10 only)  
500L/min (for size 15, 20, 25)  
650L/min (for size 32 only)