

|   |                           |                |                |                               |
|---|---------------------------|----------------|----------------|-------------------------------|
| BEIJING HUADE<br>HYDRAULIC INDUSTRIAL<br>GROUP CO.,LTD. | <b>Check valve type S</b> |                |                | RE 20375/12.2004              |
|   | Size 6 to 30              | up to 31.5 MPa | up to 400L/min | Replaces:<br>RE 20375/05.2001 |

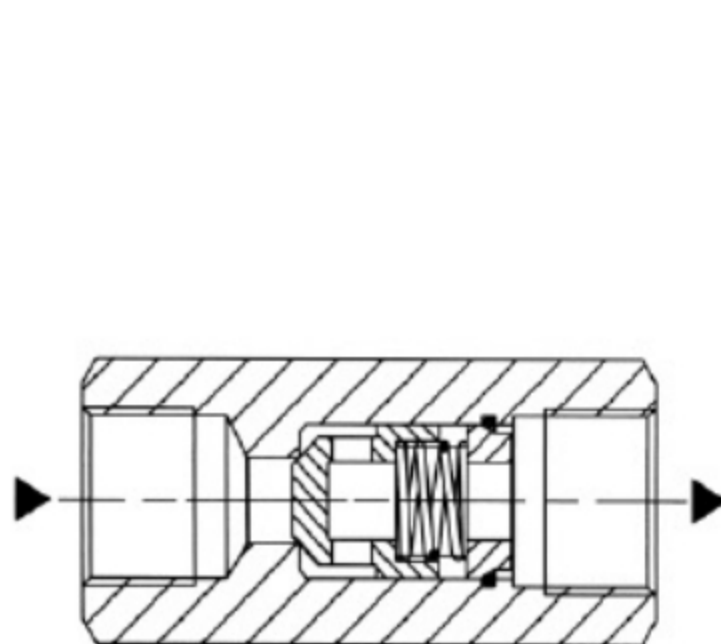
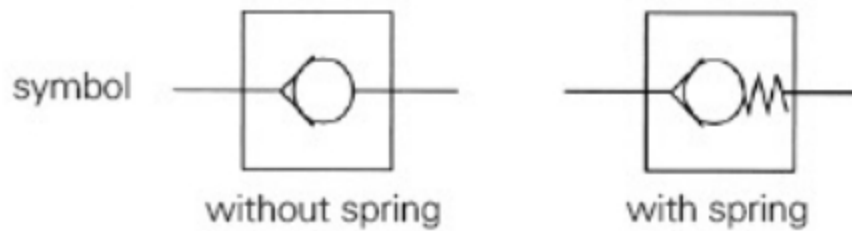
**Features:**

- For threaded connection (screw-in connection)
- Subplate mounting
- Leakage-free closure in one direction
- Various cracking pressures, optional (see ordering details)

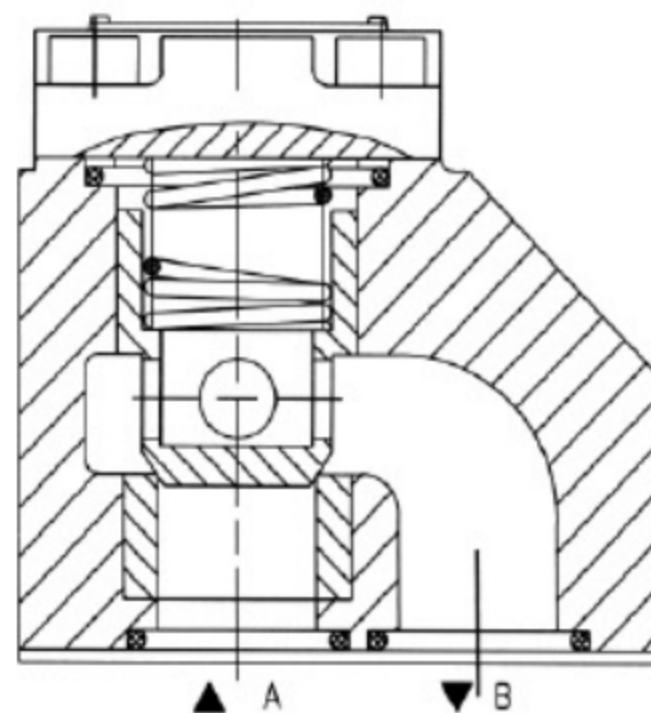


**Function,section,symbols**

The check valve type S has the task of, preferably closing a flow leak free in one direction and to permit free flow in the opposite direction. The stroke of the poppet, which is guided on its outside diameter, is limited by a mechanical stop. The built-in compression spring supports the closing movement. Furthermore the compression spring holds the poppet in the closed position even when there is no flow through the valve.

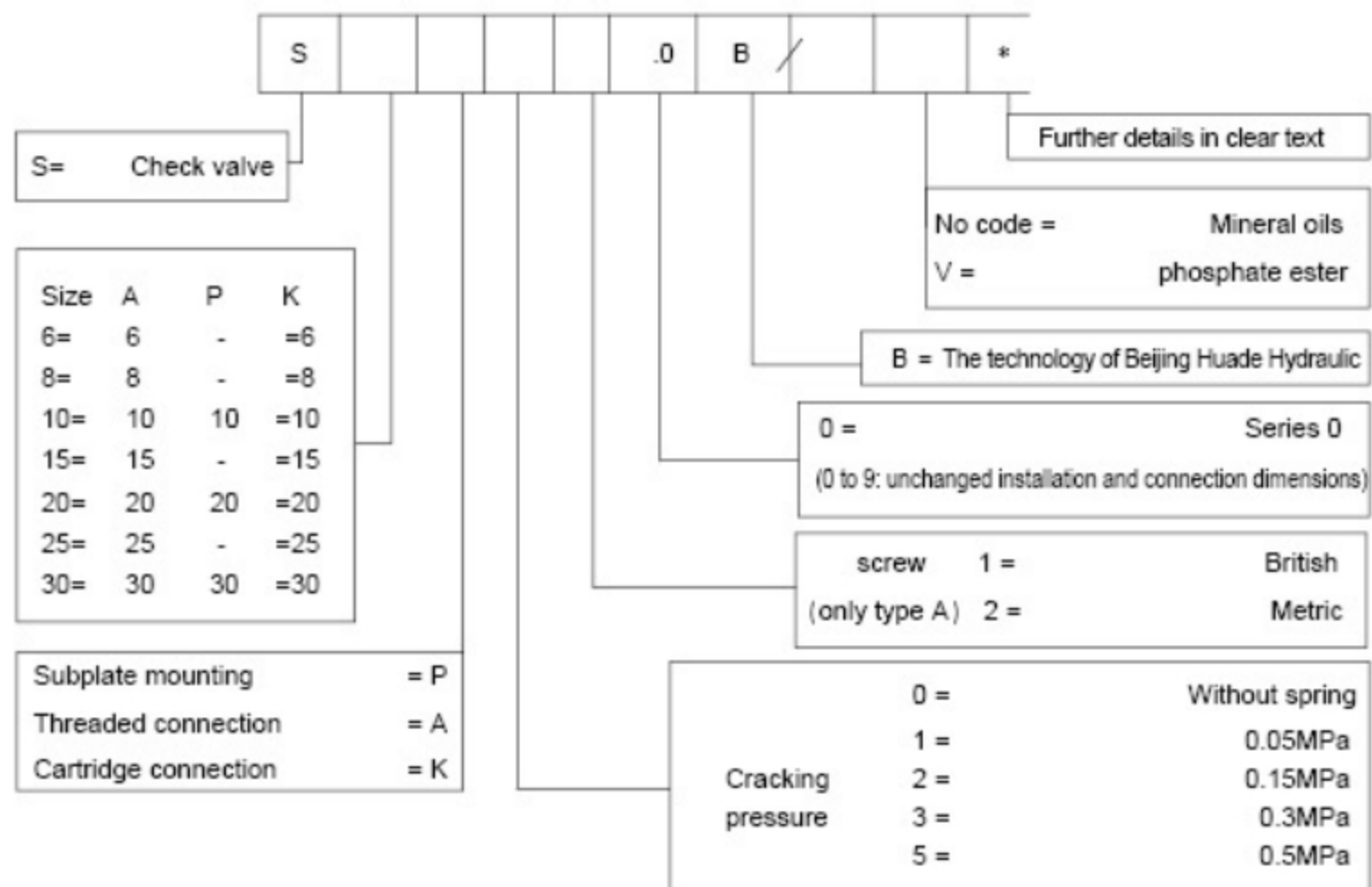


Threaded connection



Subplate mounting

## Ordering details



## The model of check valve cartridge

### A straight-through cartridge

|    | K1     | K2     | K3     |
|----|--------|--------|--------|
| 6  | 301889 | 301896 | 301903 |
| 8  | 301890 | 301897 | 301904 |
| 10 | 301891 | 301898 | 301905 |
| 15 | 301892 | 301899 | 301906 |
| 20 | 301893 | 301900 | 301907 |
| 25 | 301894 | 301901 | 301908 |
| 30 | 301895 | 301902 | 301909 |

### A straight-angled cartridge

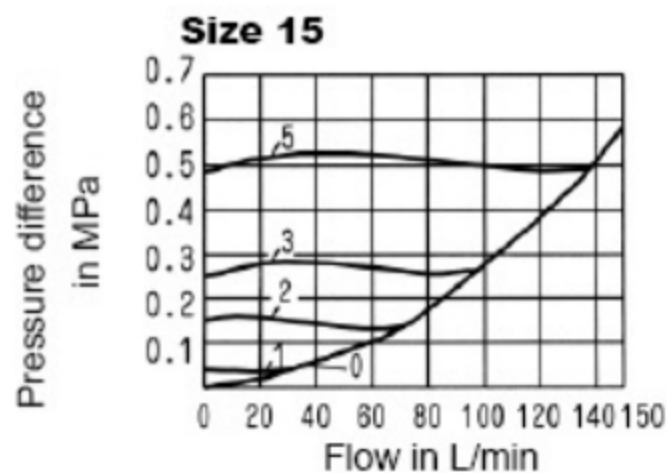
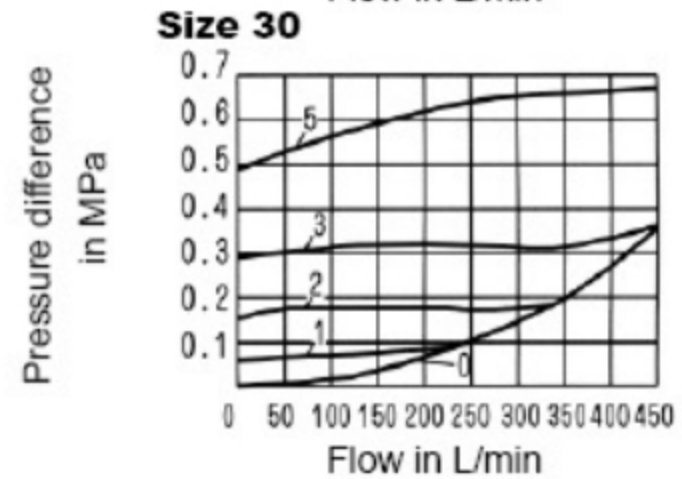
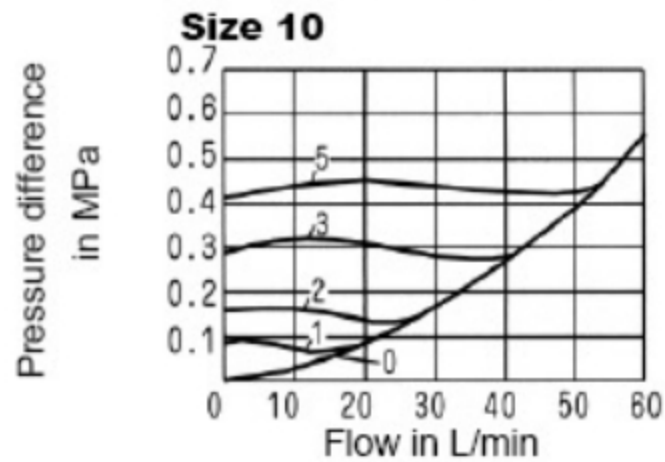
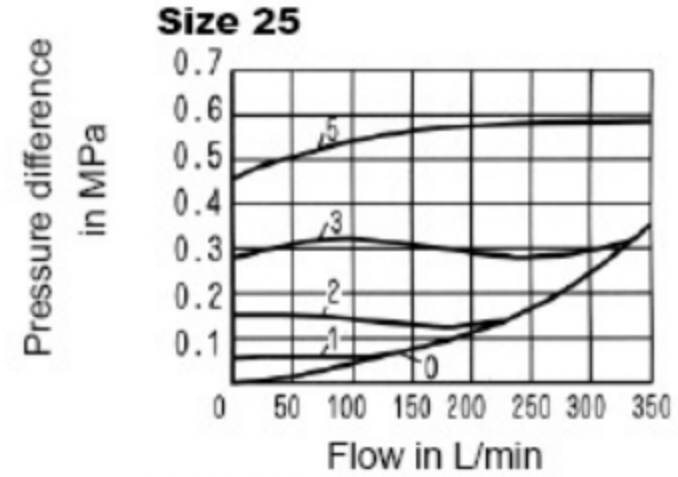
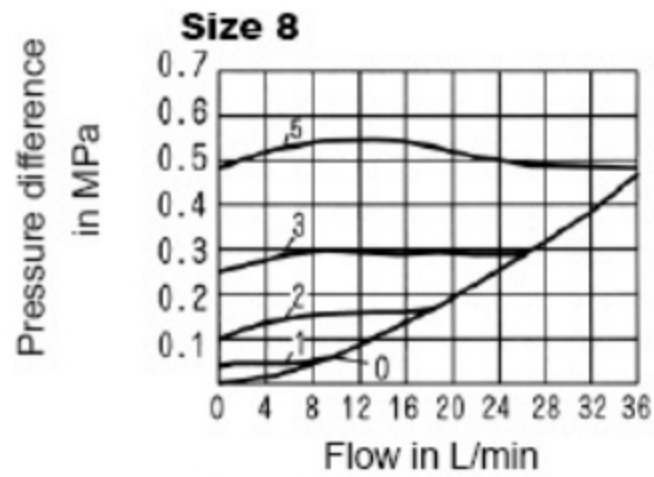
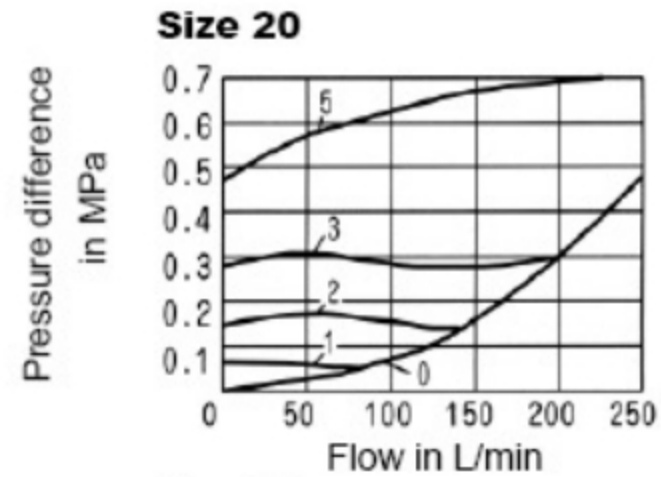
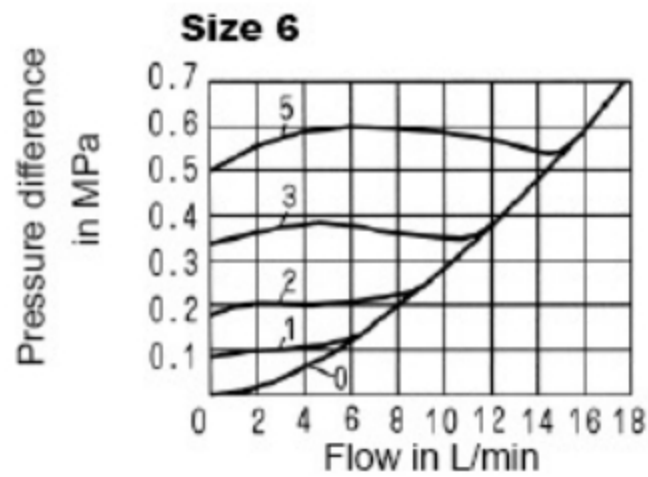
|    | K1     | K2     | K3     |
|----|--------|--------|--------|
| 6  | 301910 | 301917 | 301924 |
| 8  | 317701 | 317702 | 317703 |
| 10 | 301912 | 301919 | 301926 |
| 15 | 317704 | 317705 | 317706 |
| 20 | 301914 | 301921 | 301928 |
| 25 | 301915 | 301922 | 301929 |
| 30 | 301916 | 301923 | 301930 |

For example, Booked valve inserted of size 6 with opening pressure 0.05MPa, the ordering code is: S6K1-301889

**Technical data** (For applications outside these parameters, please consult us!)

|                                    |                      |                                 |
|------------------------------------|----------------------|---------------------------------|
| Pressure fluid                     |                      | mineral oils or phosphate ester |
| Pressure fluid - temperature range | (°C)                 | -30~+80                         |
| Viscosity range                    | (mm <sup>2</sup> /s) | 2.8~500                         |
| Max.operating pressure             | (MPa)                | 31.5                            |
| Cracking pressure                  | (MPa)                | See characteristic curves below |
| Maximum flow                       | (L/min)              |                                 |

**Characteristic curves** (measured at  $v = 41 \text{ mm}^2/\text{s}$  and  $t = 50^\circ\text{C}$ )

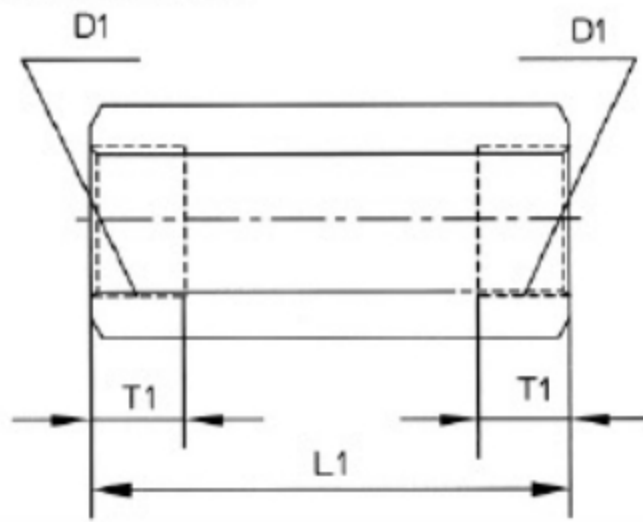


Pressure difference  $\Delta p$  related to the flow  $q_v$  at the cracking pressure

**Unit dimensions**

**(Dimensions in mm)**

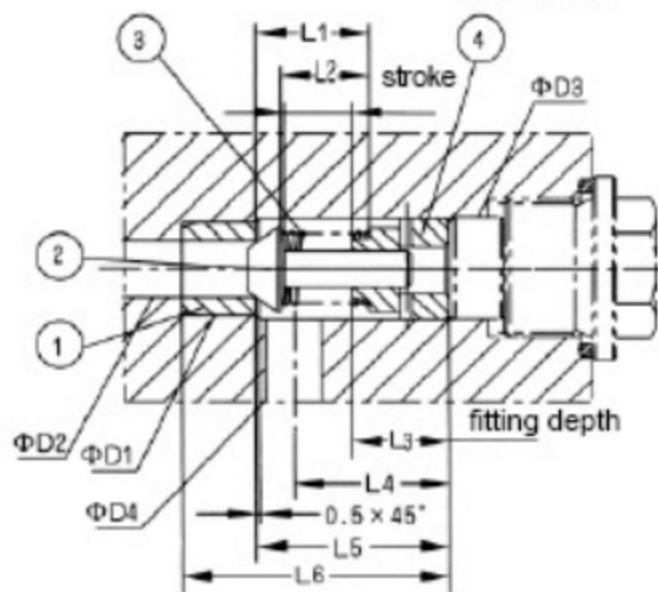
Threaded connection:



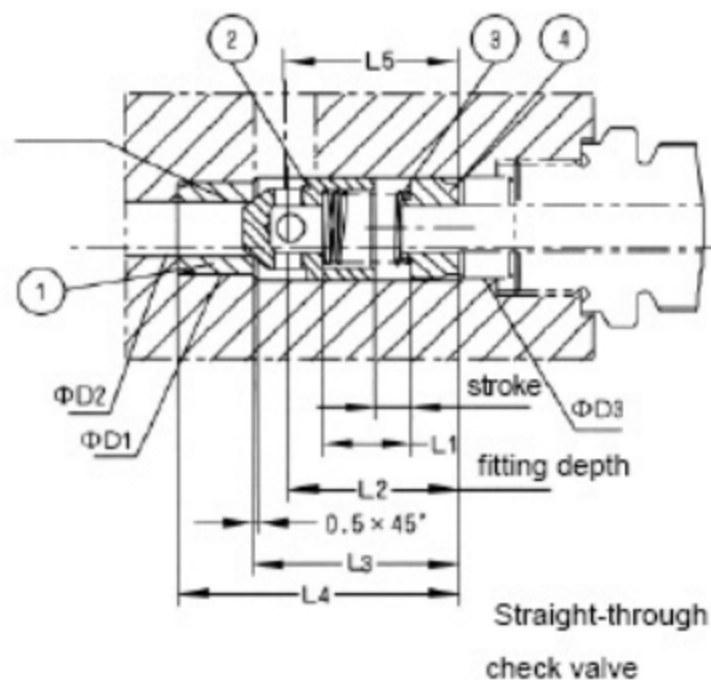
| Size         | 6       | 8       | 10      | 15    | 20    | 25      | 30      |
|--------------|---------|---------|---------|-------|-------|---------|---------|
| D1           | G1/4"   | G3/8"   | G1/2"   | G3/4" | G1"   | G1 1/4" | G1 1/2" |
|              | M14X1.5 | M18X1.5 | M22X1.5 | M27X2 | M33X2 | M42X2   | M48X2   |
| H1           | 22      | 28      | 34.5    | 41.5  | 53    | 69      | 75      |
| L1           | 58      | 58      | 72      | 85    | 98    | 120     | 132     |
| T1           | 12      | 12      | 14      | 16    | 18    | 20      | 22      |
| S            | 19      | 24      | 30      | 36    | 46    | 60      | 65      |
| Weight (K g) | 0.1     | 0.2     | 0.3     | 0.5   | 1     | 2       | 2.5     |

Valve cartridge

Straight-angled check valve



| N G     | 6      | 8      | 10     | 15    | 20    | 25     | 30    |
|---------|--------|--------|--------|-------|-------|--------|-------|
| Φ D1H7  | 10     | 13     | 17     | 22    | 28    | 36     | 42    |
| Φ D2    | 6      | 8      | 10     | 15    | 20    | 25     | 30    |
| Φ D3H8  | 11     | 14     | 18     | 24    | 30    | 38     | 44    |
| Φ D4    | 6      | 8      | 10     | 15    | 20    | 25     | 30    |
| Journey | 4      | 4      | 4      | 5     | 5     | 7      | 7     |
| L1      | 11.2   | 11.9   | 14.3   | 18    | 18.8  | 28.5   | 28.5  |
| L2      | 9.5    | 9.5    | 11.5   | 14.5  | 16    | 24.5   | 25    |
| L3      | 10     | 16     | 16     | 18    | 23    | 31     | 37    |
| L4      | 16.5   | 21.5   | 23.5   | 25.5  | 30    | 43     | 47.5  |
| L5      | 20.5   | 26.5   | 29.5   | 34    | 40.5  | 57.5   | 63.5  |
| L6      | 28.5   | 36.5   | 39.5   | 46    | 55.5  | 75.5   | 83.5  |
| Weight  | 0.05Kg | 0.05Kg | 0.05Kg | 0.1Kg | 0.2Kg | 0.25Kg | 0.3Kg |

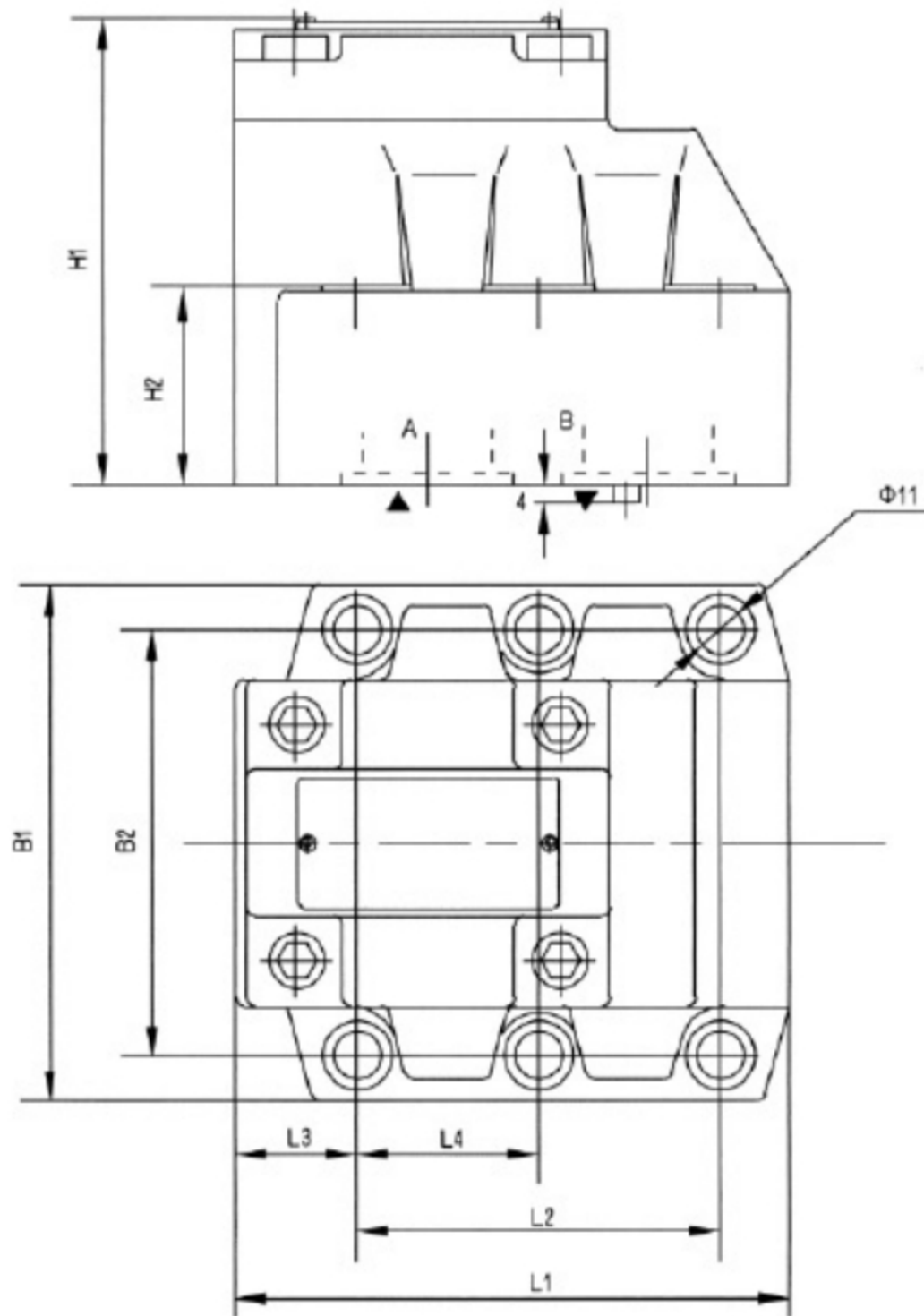


| NG      | 6      | 8      | 10     | 15    | 20    | 25     | 30    |
|---------|--------|--------|--------|-------|-------|--------|-------|
| Φ D1H7  | 10     | 13     | 17     | 22    | 28    | 36     | 42    |
| Φ D2    | 6      | 8      | 10     | 15    | 20    | 25     | 30    |
| Φ D3H8  | 11     | 14     | 18     | 24    | 30    | 38     | 44    |
| Journey | 4      | 4      | 4      | 5     | 5     | 7      | 7     |
| L1      | 9.5    | 9.5    | 11.5   | 14.5  | 16    | 24.5   | 25    |
| L2      | 19     | 18     | 21     | 27    | 29    | 29     | 42    |
| L3      | 21.8   | 22.8   | 28.8   | 36.4  | 44    | 55     | 63    |
| L4      | 29.8   | 32.8   | 38.8   | 48.4  | 59    | 73     | 83    |
| L5      | 18     | 18     | 23     | 28    | 33    | 41     | 47    |
| Weight  | 0.05Kg | 0.05Kg | 0.05Kg | 0.1Kg | 0.2Kg | 0.25Kg | 0.3Kg |

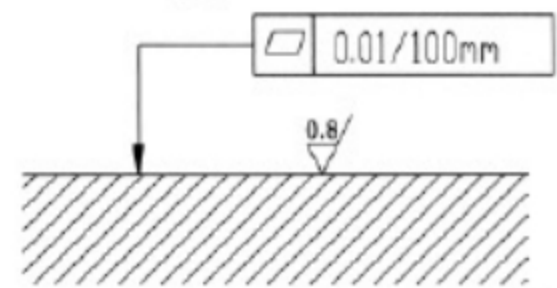
**Unit Dimensions**

**(Dimensions in mm)**

Subplate mounting:



Required surface finish of mating piece



| Size | The valve fixing screws<br>(GB/T70.1-2000) | O-ring for<br>ports A,B |
|------|--|-------------------------|
| 10   | 4-M10 × 40 -10.9                           | 17.12 × 2.62            |
| 20   | 4-M10 × 50 -10.9                           | 28.17 × 3.53            |
| 30   | 4-M10 × 70-10.9                            | 34.52 × 3.53            |

Subplate: NG10;

G460/01 G460/02  
G461/01 G461/02

NG20;

G412/01 G412/02  
G413/01 G413/02

NG30;

G414/01 G414/02  
G415/01 G415/02

must be ordered separately, see page 204

| NG | B1  | B2   | L1  | L2   | L3   | L4   | H1    | H2   |
|----|-----|------|-----|------|------|------|-------|------|
| 10 | 85  | 66.7 | 78  | 42.9 | 17.8 | -    | 88.0  | 31.5 |
| 20 | 102 | 79.4 | 101 | 60.3 | 23   | -    | 93.5  | 31.5 |
| 30 | 120 | 96.8 | 128 | 84.2 | 28   | 42.1 | 106.5 | 46   |

## Notice

1. The fluid must be filtered. Minimum filter fineness is 20  $\mu\text{m}$ .
2. The tank must be sealing up and an air filter must be installed on air entrance.
3. Products without subplate when leaving factory, if need them, please ordering specially.
4. Valve fixing screws must be high intensity level (class 10.9). Please select and use them according to the parameter listed in the sample book.
5. Roughness of surface linked with the valve is required to  $\frac{0.8}{\sqrt{\text{ }}$ .
6. Surface finish of mating piece is required to 0.01/100mm.