

## 4/3 - 4/2 way Directional valves lever operated

L50L0... (LC04-LV)

**RE 18303-02**

Edition: 02.2016

Replaces: 07.2012



Size 4

Series 00

Maximum operating pressure 310 bar (4500 psi)

Maximum flow 25 l/min (6.6 gpm)

**NEW spool position sensor available for this valve.  
See RE18300-30**

### General specifications

Direct operated directional spool valve  
Hand lever actuator  
Flange mounting on industry standard surfaces  
according to CETOP RP121 H-4.2-4-P02

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## Ordering details

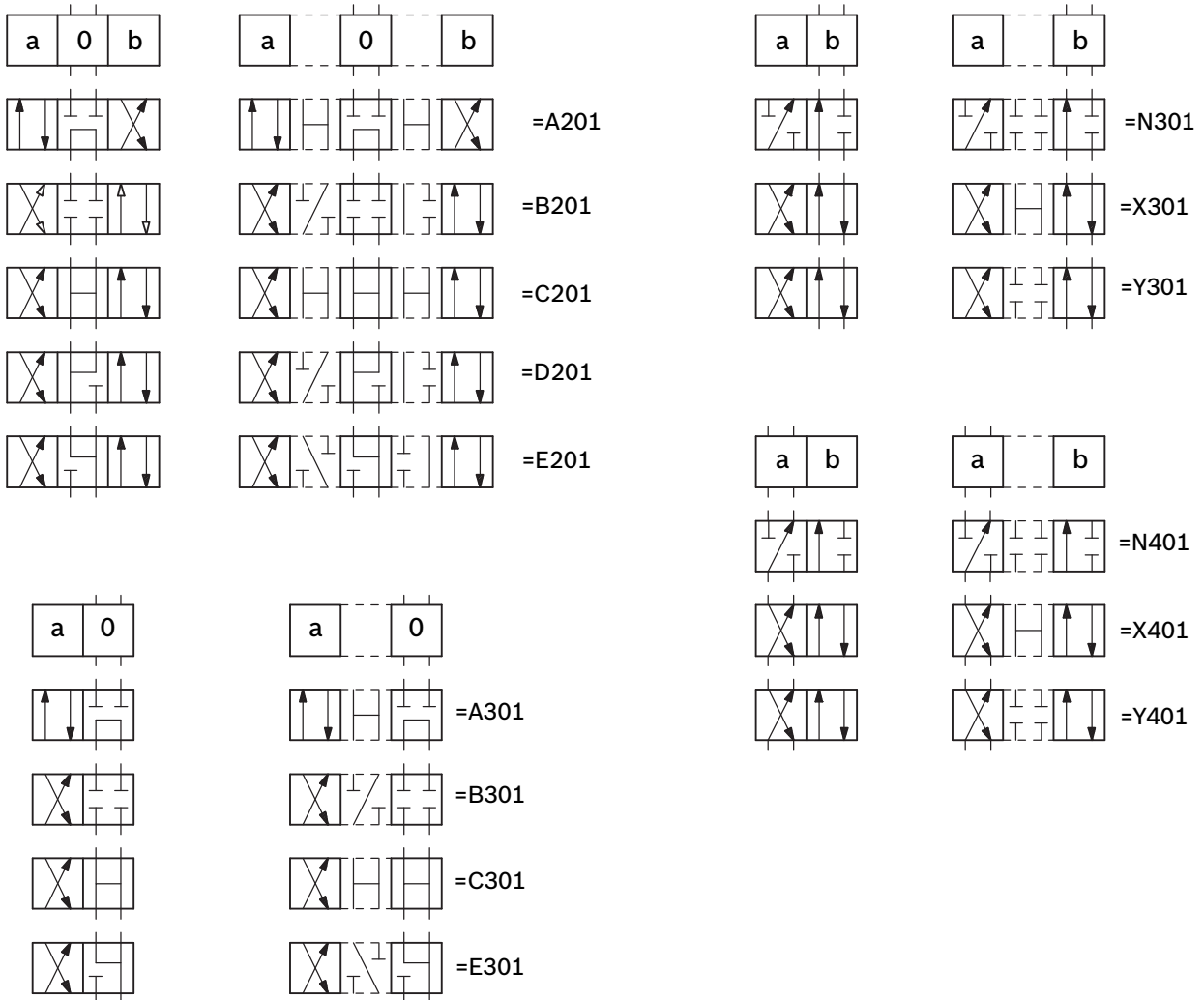
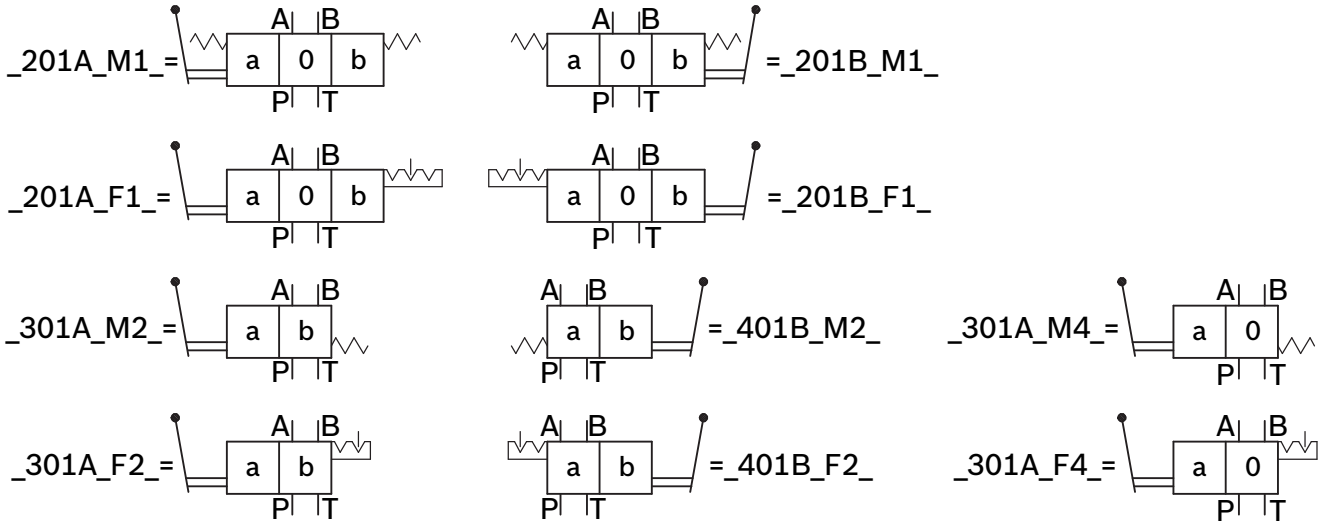
01	02	03	04	05	06	07	08	09	10
<b>L</b>	<b>5</b>	<b>0</b>	<b>L0</b>						<b>00</b>
<b>Family</b>									
01	Directional Valve elements								<b>L</b>
<b>Type</b>									
02	CETOP valves								<b>5</b>
<b>Size</b>									
03	NG 4 (P02)								<b>0</b>
<b>Operation</b>									
04	Hand lever operated								<b>L0</b>
<b>Hydraulic schemes <sup>1)</sup></b>									
05	4/3 operated on A or B side								<b>_ 2 _ _</b>
	4/2 operated on A side								<b>_ 3 _ _</b>
	4/2 operated on B side								<b>_ 4 _ _</b>
<b>Lever position <sup>1)</sup></b>									
06	On A side								<b>A</b>
	On B side								<b>B</b>
<b>Lever direction <sup>3)</sup></b>									
07	Vertical (label side)								<b>0</b>
	Horizontal (P side)								<b>1</b>
	Vertical (Flanging side)								<b>2</b>
	Horizontal (T side)								<b>3</b>
<b>Spool control <sup>2)</sup></b>									
08	With spring return								<b>M</b>
	With detent								<b>F</b>
<b>Spool position <sup>2)</sup></b>									
09	3 position (a/0/b)								<b>1</b>
	2 position (a/b)								<b>2</b>
	2 position (a/0)								<b>4</b>
<b>Optional</b>									
10	Standard								<b>00</b>

1) Only on the 3 position scheme (= \_2\_) it's possible to choose if the lever is mounted on A side or B side; for all the other schemes (= \_3\_ / = \_4\_), the lever mounting on A side or B side is univocally defined by the chosen scheme.

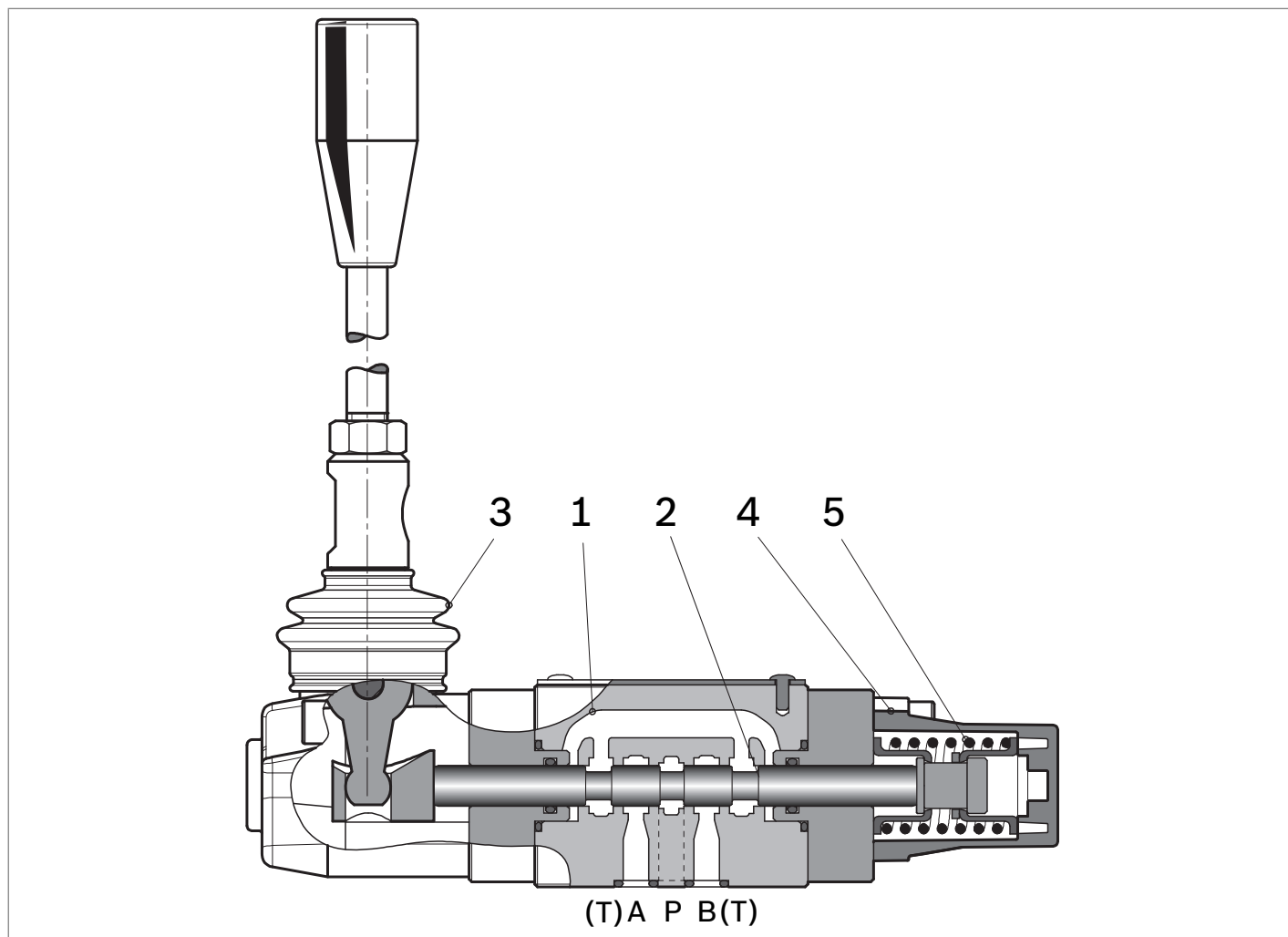
2) The spool positions' options depend on the chosen hydraulic scheme.

3) See overall drawing.

Symbols



## Functional description



### Type L50L0

The hand lever operated valves type L 50L0 provide 3 or 4 way flow control, usually from port P to either port A or B, and the consequent flow return to T from B or A respectively.

The valves are composed by a central cast iron body (1) which mounts on industry standard surfaces where the flow ports and the installation holes are located; the central body houses the precisely machined directional control spool (2) can travel between 2 or 3 position, and which is held in the neutral or initial position by the return spring (5), or can be maintained in the shifted position by a mechanical detent.

Through the hand operated lever (3), the control spool can be pushed from the initial position into a shifted position where oil flow is allowed from P to either A or B.

The control spool assembly (4) is available also with mechanical detent which holds the spool in the shifted position: in this case the spool can be brought back into

the central or initial position only by actuating the hand operated lever (3).

### Type L50L0\_201\_0M100

(available with hydraulic schemes =\_M\_ see page 17)

These are 2 or 3 positions hand lever operated valves with control spool (2) normally kept in the neutral or initial position by the return spring (5): when the control lever (3) is released, the spool (2) returns to the central or initial position pushed by the spring force.

### Type L50L0\_201\_0F100

(available with hydraulic schemes =\_F\_ see page 17)

In these valves the directional control spool (2) can travel between 2 or 3 positions, each one with mechanical detent: the spool (2) stays in any reached position also if the hand control lever (3) is released. The hand operated lever needs to be actuated only in order to shift the spool from one position to another one.

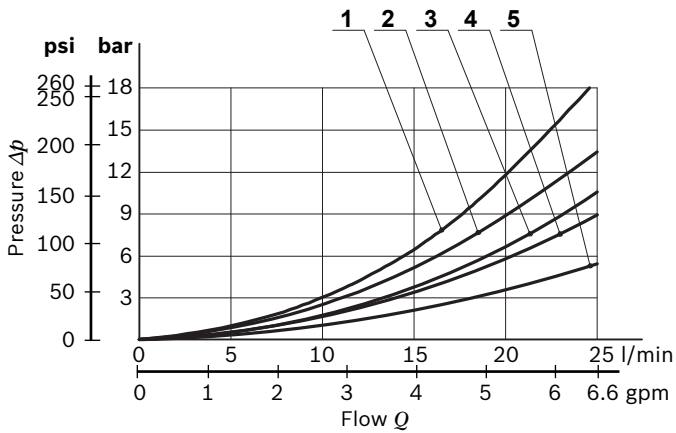
**Technical data**

<b>General</b>		
Valve element weight	kg (lbs)	1.10 (2.25)
Mounting position		Unrestricted
Ambient Temperature	°C (°F)	-20....+50 (-4....+122) (NBR seals)
<b>Hydraulic</b>		
Maximum pressure at P, A and B ports	bar (psi)	310 (4500)
Maximum pressure at T	bar (psi)	160 (2320)
Maximum inlet flow	l/min (gpm)	25 (6.6)
Hydraulic fluid		
General properties: it must have physical lubricating and chemical properties suitable for use in hydraulic systems such as, for example:		Mineral oil based hydraulic fluids HL (DIN 51524 part 1). Mineral oil based hydraulic fluids HLP (DIN 51524 part 2). For use of environmentally acceptable fluids (vegetable or polyglycol base) please consult us.
Fluid Temperature	°C (°F)	-20....+80 (-4....+176) (NBR seals)
Permissible degree of fluid contamination		ISO 4572: $\beta_{x \geq 75} X=12...15$ ISO 4406: class 20/18/15 NAS 1638: class 9
Viscosity range	mm <sup>2</sup> /s	5....420

**Note**

For applications with different specifications consult us

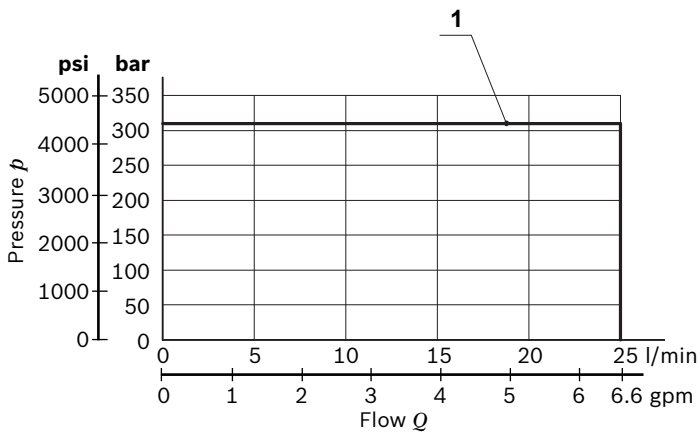
### Characteristic curves



Spool Variant	Curve no.				
	P>T	P>A	P>B	A>T	B>T
A201, A301	1	2	2	3	3
B201, B301, E201, E301, Y301, Y401	-	3	3	5	5
C201, C301, X301, X401	3	3	3	5	5
D201, N301	-	4	4	-	-

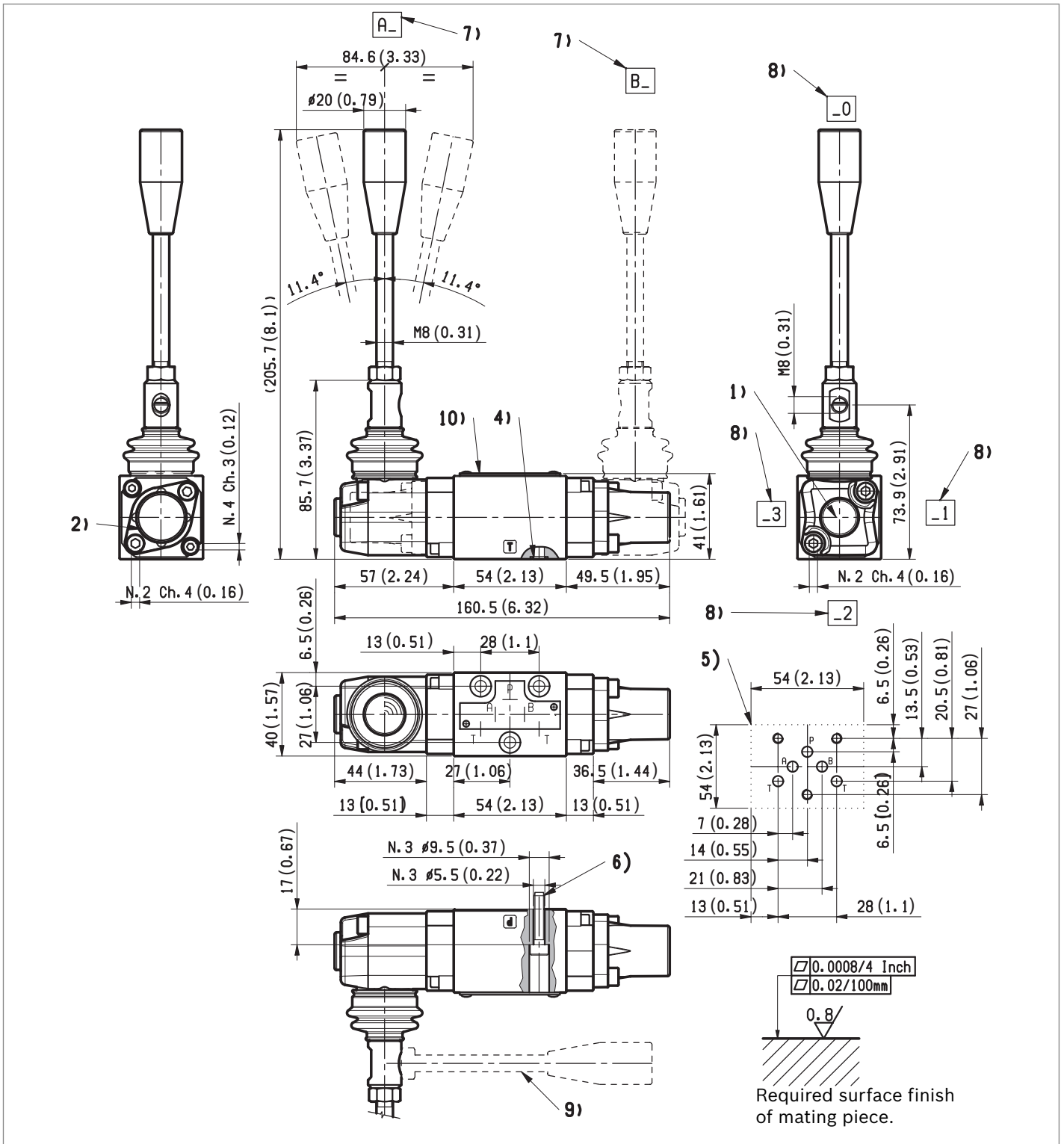
Measured with hydraulic fluid ISO-VG32 at  $45^\circ \pm 5^\circ \text{C}$  ( $113^\circ \pm 9^\circ \text{F}$ ); ambient temperature  $20^\circ \text{C}$  ( $68^\circ \text{F}$ ).

### Performance limits



Spool Variant	Curve no.
A201, A301, B201, B301, C201, C301, D201, E201, E301, N301, X301, X401, Y301, Y401	1

**External dimensions and fittings**



- 1 Hand lever assembly, with 2 fixation screws.
- 2 Rear side end cap, with 2 fixation screws M5x14.
- 4 Seals (same O Ring) on ports A,B,P,T.
- 5 Drilling specifications of standard mounting surface according to CETOP RP 121 H-4.2-4-P02.
- 6 Locking screws 3 pcs: ISO 4762 (UNI 5931) hexagon socket head

- 7 Lever assembly mounting side (Standard side is "A").
  - 8 Lever orientation.
  - 9 Lever packing position.
  - 10 Identification label..
- cap screw M 5x25, recommended specific strength 8.8 class, to be ordered separately. Torque 5±6 Nm (3.69±4.42 ft-lb).

8 **L50L0... (LC04-LV)** | 4/3 - 4/2 way Directional valves  
External dimensions and fittings

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Subject to change.