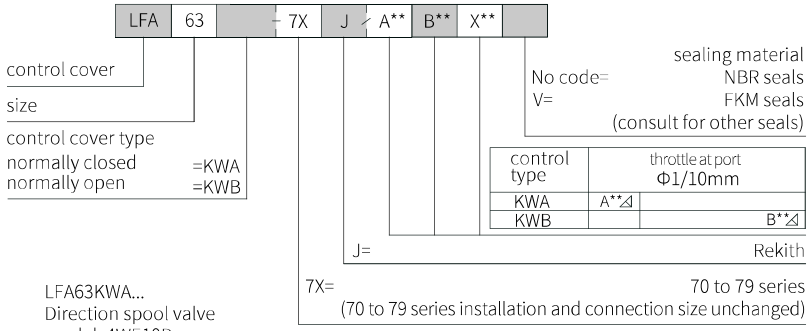
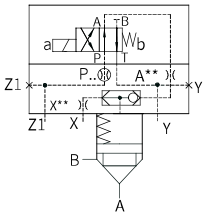
Control cover "KWA" and "KWB" for set-up of a directional spool or diretional seat valve

Size 63

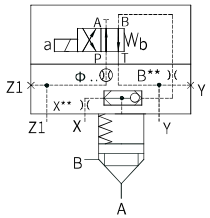


⊿ If necessary, please provide specifications of the throttle
e.g. X12= throttle Φ 1.2mm
Standard throttle see page 07/24

LFA63KWA...
Direction spool valve
model: 4WE10D

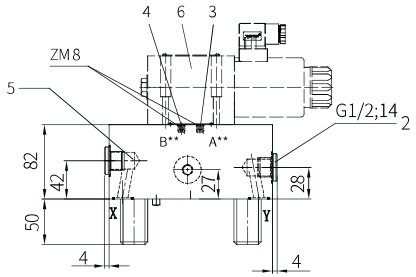


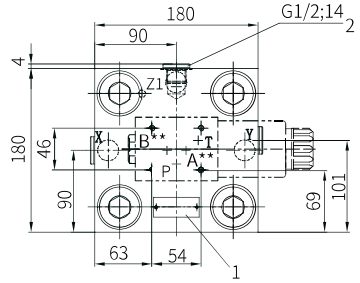
LFA63KWB...
Direction spool valve
model: 4WE10D



A**B**[1)]	ZM8

[1)]Ordering code of throttle see page 07/24





1 Name plate
2 Optional ports Y and Z1 used as threaded connection ports for size 40/50
3 Plug for model ..KWB...
4 Plug for model ..KWA...
5 Shuttle valve
6 Direction spool valve 4WE10D and screw M6x40-10.9 GB T70.1 must be ordered separately
Weight (kg): 18.6

2-way Logic Cartridge Valves Pressure Function

Model: LC...7XJ(logic cartridge valves)
LFA...7XJ(control cover)

- ◆ Size 16/63
- ◆ Maximum working pressure 420 bar
- ◆ Maximum working flow 2500 L/min

Contents

Features

- ● Cartridge spool and various sleeves to meet relief and reducing function
- ● One sleeve with multi-spool in cartridge structure
- ● Area ratio 1:1 and 1.07:1
- ● Optional throttle
- ● Different cracking pressures

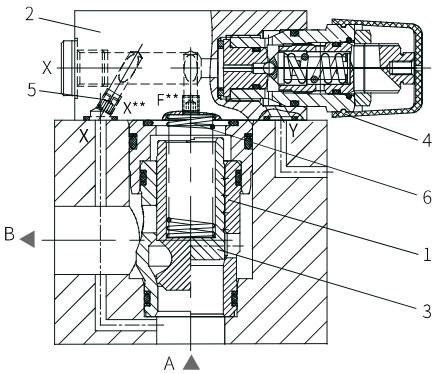
Function description, sectional drawing

General

The 2-way logic cartridge pressure valves are pilot operated poppet valves or spool valves. The main valve component is a logic cartridge valve (1) which is inserted into the standard hole according to DIN 7368 and sealed with control cover.

The pilot valve (4) is integrated into the control cover (2) or installed as pilot valve onto the control cover (2). Its mounting surface is in accordance with DIN24340(2).

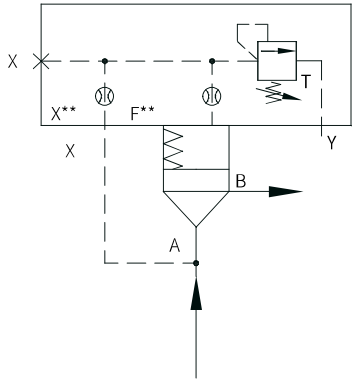
The different pressure functions can be realized by combining the logic cartridge valve and control cover.



Model LC..DB..D.. Model LC..DB..E..

Pressure relief function
Control cover LFA... DB...
Logic cartridge valve LC... DB...

The logic cartridge valve (1) (model LC... DB...) with pressure relief function is a seat valve with an area ratio 1:1 (no effective area at port B). The pressure acting at port A is fed to the spring cavity (6) of the main valve through the pilot oil supply orifice (5). When the pressure is lower than the setting pressure of the pilot valve (4), the hydraulic force on the main spool (3) is balanced and the spring force keeps the main valve closed. When the pressure reaches the set value, the main spool opens and limits the pressure at port A according to the pressure-flow characteristics.



Model LFA..DB..
Model LC..DB..

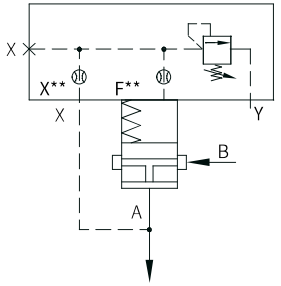
Function description, sectional drawing

Pressure reducing function

a)Normally open: Control cover LFA...DB...
Logic cartridge valve LC...DR...

The logic cartridge valve with pressure reducing function is seat valve with an area ratio of 1:1 (no effective area at port B). It adopts the control cover (model LFA...DB...) which has same function with the relief valve as pilot valve.

The pressure acting at port A is fed to the spring cavity of the main valve through the pilot oil supply orifice. When the pressure is lower than the setting pressure of the pilot valve, the hydraulic force on the main spool is balanced and the spring force keeps the main valve spool opens. The fluid can flow freely from B to A. When the pressure reaches the set value, the main spool closes and reducing the pressure at port A according to the pressure-flow characteristics.



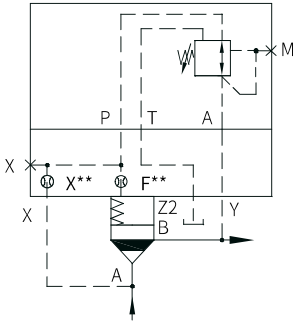
e.g. Model LFA..DB..
Model LC..DR..

b) Normally closed: Control cover LFA...DR...
Logic cartridge valve LC...DB..D...

For the pressure reducing function with opening characteristics, a logic cartridge pressure relief valve (mode LC...DB..D...) and a control cover (model LFA...DR) with a pressure reducing valve as the pilot valve are used.

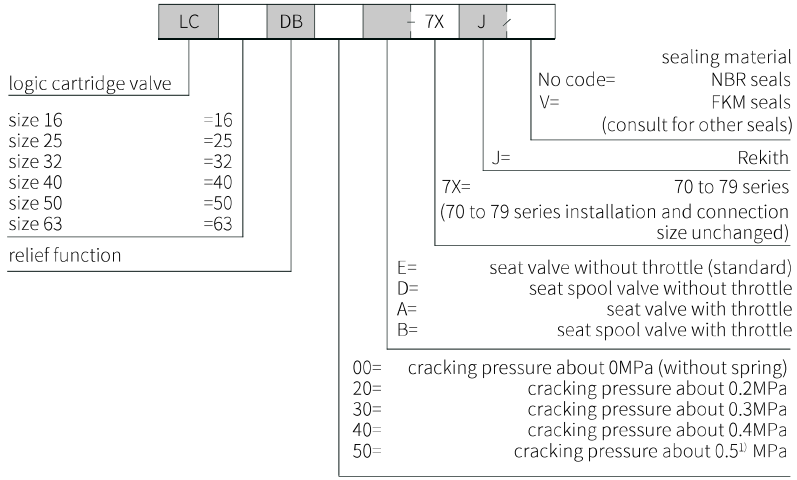
The pilot control oil supplied from port A flows into port B through the pilot oil supply orifice and the opened pilot reducing valve. The main spool is opened to allow freely flow from A to B. When the set pressure is reached, the main spool closes and reduces the pressure at port B according to the pressure-flow characteristics.

If the unexpected pressure increases on the pressure reducing side (port B), pressure relief via the third port of the pilot valve. By installing a directional valve, an additional isolating function can also be attained (model LFA...DRW...).



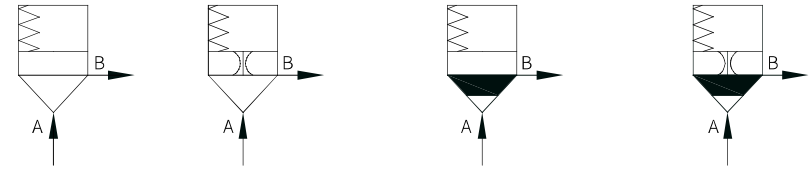
e.g. Model LFA..DR..
Model LC..DB40D..

Logic cartridge valves models and specifications



1) Only for size 16, 25, 32

Logic cartridge valves functional symbols



Seat valve without throttle Type E

Seat valve with throttle Type A

Seat spool valve without throttle Type D

Seat spool valve with throttle Type B

Technical parameters

Working medium		Mineral oil - for NBR seal or FKM seal Phosphate ester - for FKM seal					
Working medium temperature range °C		30 to +80 (NBR seal) 20 to +80 (FKM seal)					
Viscosity range mm²/s		2.8 to 380					
Cleanliness of oil		The maximum allowable pollution level of oil is NAS1638 Class 9 and ISO4406 Class 20 / 18 / 15					
2-way logic cartridge valve							
Maximum working pressure-oil port A and B bar		420					
Maximum flow (Recommended)	Size	16	25	32	40	50	63
	Logic cartridge seat valves "E" and "A" L/min	300	450	600	1000	1600	2500
	Logic cartridge spool valves "D" and "B" L/min	175	300	450	700	1400	1750

1) The oil must meet the cleanliness degree requested by the components in the hydraulic system. Effective oil filtration can prevent failure and increase the service life of the components.

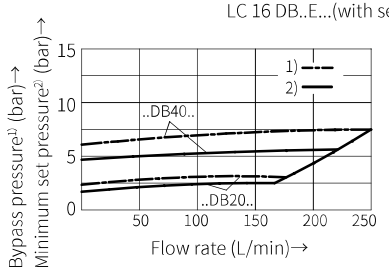
Characteristic curve

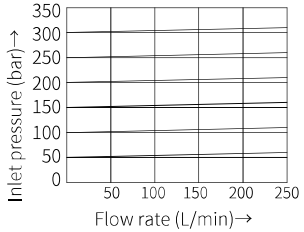
(Measured when using HLP46, ϑ_{oil}=40°C ± 5°C)

Size 16

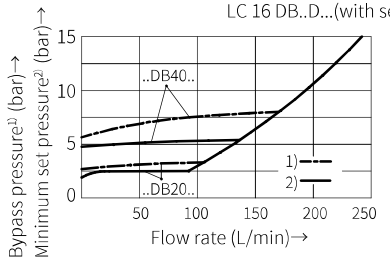
The characteristic curve is measured when the external pilot oil drains at zero pressure.
When the internal pilot oil drains, the inlet pressure increases along with the pressure at port B.

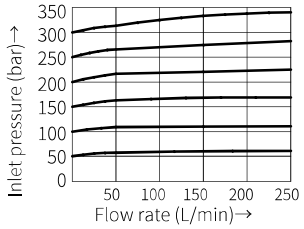
LC 16 DB..E...(with seat valve)





LC 16 DB..D...(with seat spool valve)

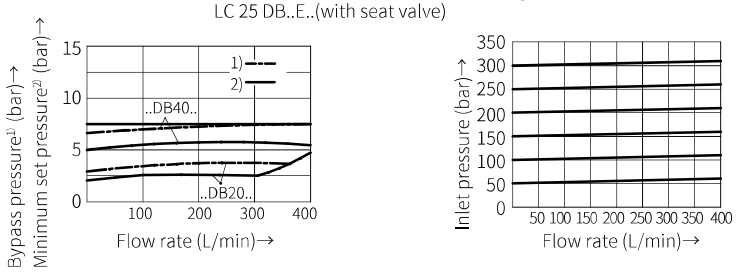




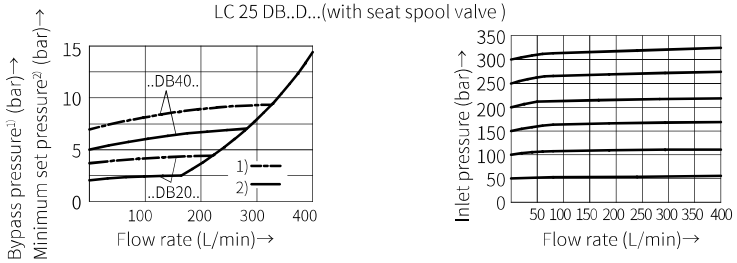
Characteristic curve

(Measured when using HLP46, ϑ_{oil}=40°C ± 5°C)
Size 25
The characteristic curve is measured when the external pilot oil drains at zero pressure.
When the internal pilot oil drains, the inlet pressure increases along with the pressure at port B.

LC 25 DB..E..(with seat valve)



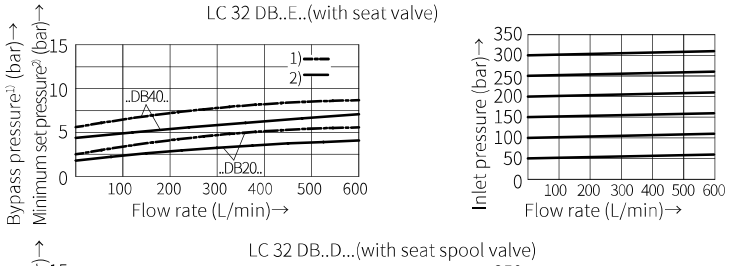
LC 25 DB..D...(with seat spool valve)



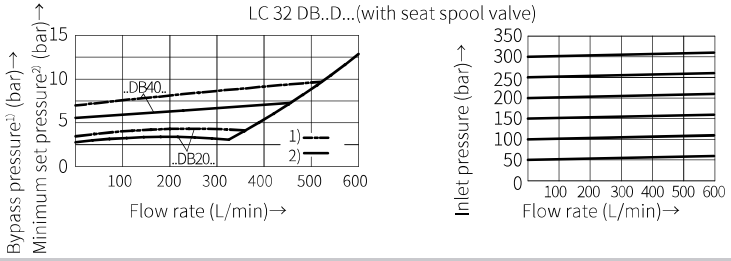
Characteristic curve

(Measured when using HLP46, ϑ_{oil}=40°C ± 5°C)
Size 32
The characteristic curve is measured when the external pilot oil drains at zero pressure.
When the internal pilot oil drains, the inlet pressure increases along with the pressure at port B.

LC 32 DB..E..(with seat valve)



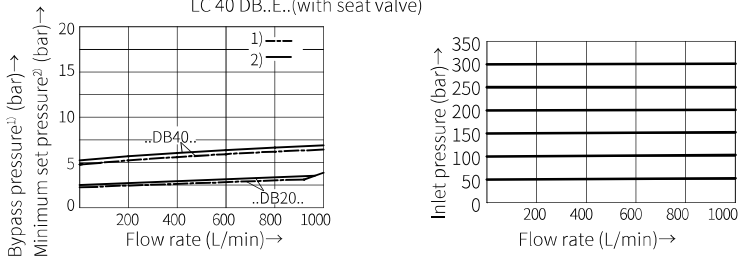
LC 32 DB..D...(with seat spool valve)



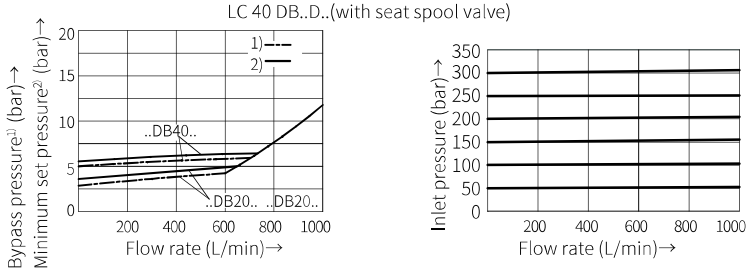
Characteristic curve

(Measured when using HLP46, ϑ_{oil}=40°C ± 5°C)
Size 40
The characteristic curve is measured when the external pilot oil drains at zero pressure.
When the internal pilot oil drains, the inlet pressure increases along with the pressure at port B.

LC 40 DB..E..(with seat valve)



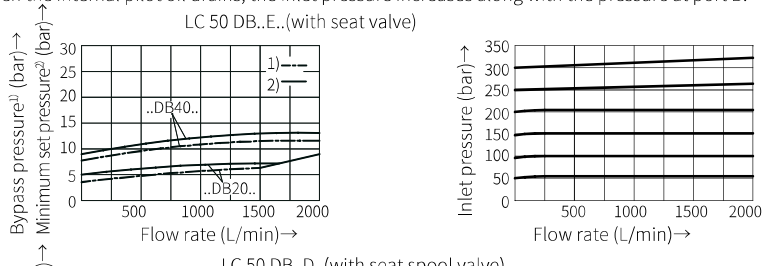
LC 40 DB..D..(with seat spool valve)



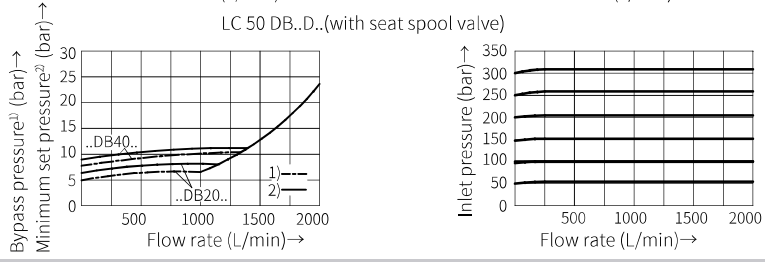
Characteristic curve

(Measured when using HLP46, ϑ_{oil}=40°C ± 5°C)
Size 50
The characteristic curve is measured when the external pilot oil drains at zero pressure.
When the internal pilot oil drains, the inlet pressure increases along with the pressure at port B.

LC 50 DB..E..(with seat valve)



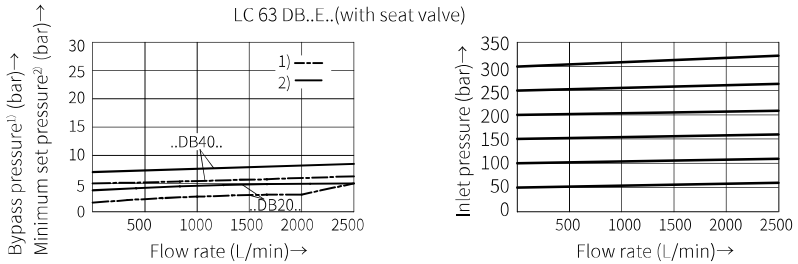
LC 50 DB..D..(with seat spool valve)



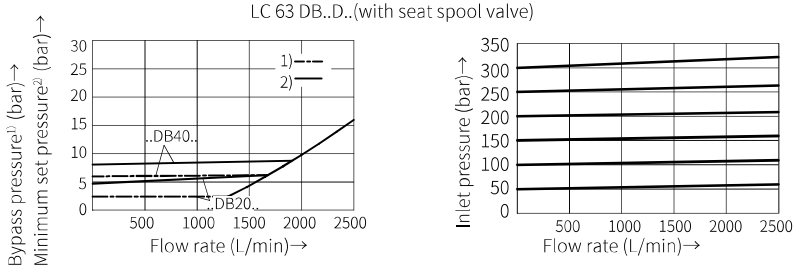
Characteristic curve

(Measured when using HLP46, ϑ_{oil}=40°C ± 5°C)
Size 63
The characteristic curve is measured when the external pilot oil drains at zero pressure.
When the internal pilot oil drains, the inlet pressure increases along with the pressure at port B.

LC 63 DB..E..(with seat valve)



LC 63 DB..D..(with seat spool valve)



Technical parameters (Max. working pressure of pilot valve)

	Control cover		Maximum working pressure Y, T bar			
	Size	Model	x	Pressure limitation	Static	Remark
D BD.2K-20/...1)	16 to 32	DB, DBW, DBWD DBU2, DBBU3D, DBS	420	Zero pressure (up to about 2 bar)	315	Supply included
D BD.6K10/...2)	40 to 63		400		315	
.WE6...			350		21(=); 16(~)	Order separately

1)Possible pressure: 25, 50, 100, 200, 315, 400 2)Possible pressure: 25, 50, 100, 200, 315, 400

Technical parameters (model L F A... D B...)

Maximum working pressure	bar	420 Note: The maximum working pressure of the pilot valve must be considered!
Working medium		Mineral oil - for NBR seal or FKM seal
		Phosphate ester - for FKM seal
Working medium temperature range	°C	-30 to +80 (NBR seal))
		-20 to +80 (FKM seal)
Viscosity range	mm^2/s	2.8 to 380
Cleanliness of oil		The maximum allowable pollution level of oil is NAS1638 class 9 and ISO4406 class 20 / 18 / 15

1) The oil must meet the cleanliness degree requested by the components in the hydraulic system. Effective oil filtration can prevent failure and increase the service life of the components.

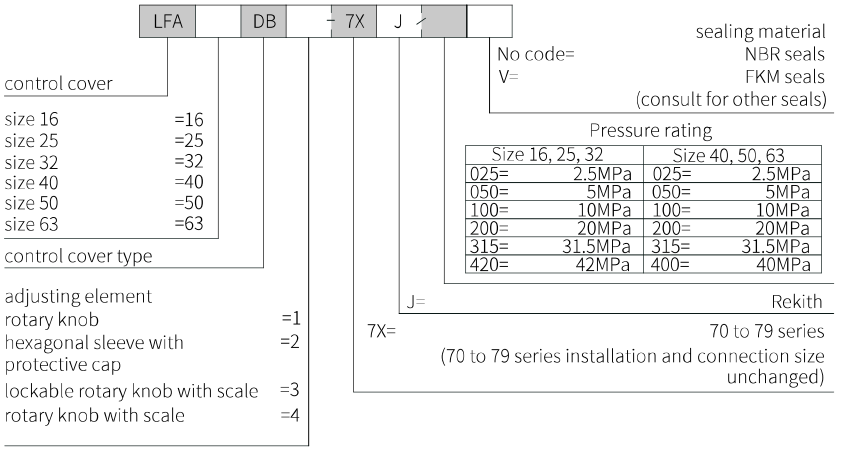
Valve fixing screw (included in the supply list)

GB/T70.1 10.9 grade			
Size	Quantity	Dimension	Tightening torque (Nm)
16	4	M8×45	32
25		M12×50	110
32		M16×60	270
40		M20× 70	520

GB/T70.1 10.9 grade			
Size	Quantity	Dimension	Tightening torque (Nm)
50	4	M20×80	520
63		M30×100	1800
80		M24×120	900
100		M30×120	1800

Control cover "DB" with manual pressure regulation

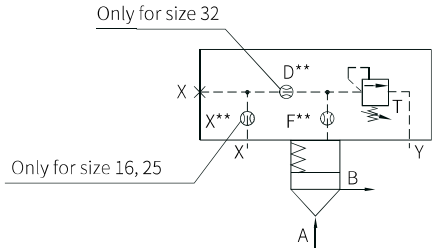
.. DB... Type (size 16 to 63)

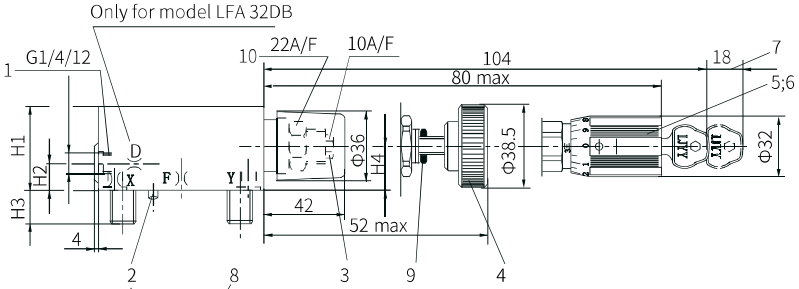


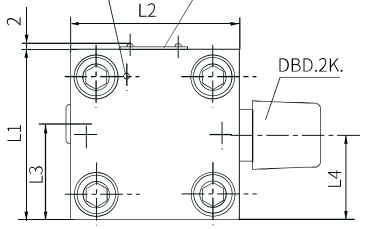
Control cover "DB" with manual pressure regulation

..DB...type (size 16, 25 and 32)

LFA..DB..-7X/..
Size 16, 25 and 32







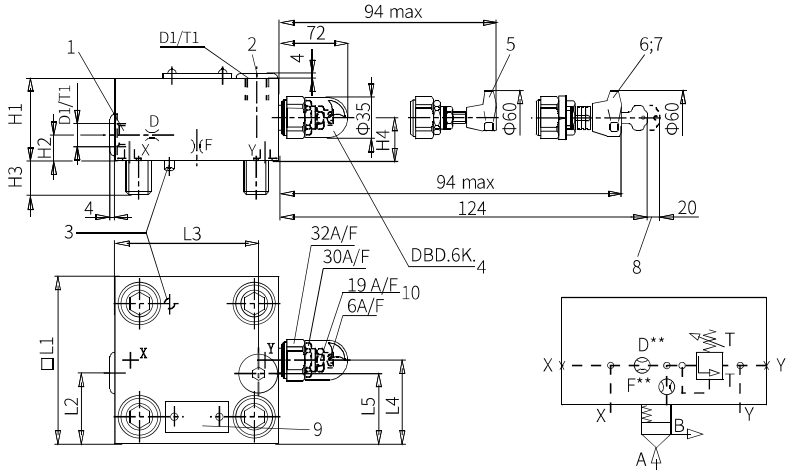
Size	16	25	32
H1	40	40	50
H2	17	19	26
H3	15	24	28
H4	19	19	26
L1	65	85	100
L2	80	85	100
L3	36.5	49	56.5
L4	32.5	45.5	53
Weight Kg	1.7	2.1	3.8

1 Optional port X used as threaded hole
2 Locating pin
3 Adjustment form "2"
4 Adjustment form "1"
5 Adjustment form "3"
6 Adjustment form "4"
7 Space required to remove the key
8 Name plate
9 Locking nut

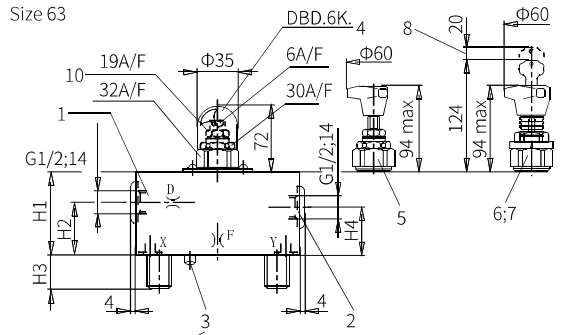
Control cover "DB" with manual pressure regulation

..DB...type (size 40, 50 and 63)

Size 40, 50



Size 63



LFA..DB..-7X/..
Size 40, 50 and 63

Size	40	50	63
D1	G1 /4	G1 /2	
H1	60	68	82
H2	28	19.5	30
H3	32	34	50
H4	27	35	50
□L1	125	140	180
L2	69	80	
L3	89	105	
L4	76	84	
L5	60	70	
T1	12	14	
Weight Kg	6.8	9.6	18.9

1 Optional port X used as threaded hole
2 Optional port Y used as threaded hole
3 Locating pin
4 Adjustment form "2"
5 Adjustment form "1"
6 Adjustment form "3"
7 Adjustment form "4"
8 Space required to remove the key
9 Name plate
10 Locking nut