BEIJING HUADE HYDRAULIC INDUSTRIAL GROUP CO.LTD.	**2-way cartridge valves directional function Cartridge valves type LC... Control covers type LFA...**			RE 81010/12.99
	Size 16 to 160	up to 42MPa	up to 25000L/min	Replaces：

Features:

- Valve poppet with or without damping nose
- 2 area ratios
- 4 different springs
- 2 stroke limiters
- Control cover with built-in poppet valve
- Control cover with built-in shuttle valve
- Control cover for mounting directional spool valves with or without built-in shuttle valve
- Control cover for mounting directional poppet valves with or without built-in shuttle valve





Function, section, symbol

2-way cartridge valves are designed as inserts for compact manifold control blocks. The main component with ports A and B fits into an installation cavity with dimensions to DIN 24342 and is built into the control block and sealed with a cover. In most cases, the cover also acts as a connection between the control side of the main component and the pilot valves. By controlling the main valve with suitable pilot valves, the main component can assume pressure,directional or throttling functions, or a combination of these.Particularly economic designs can be achieved by matching the valve sizes to the varying flows required by the individual paths of an actuator. When the element on the main valve is able to assume more than one function, a particularly economic design can be achieved.

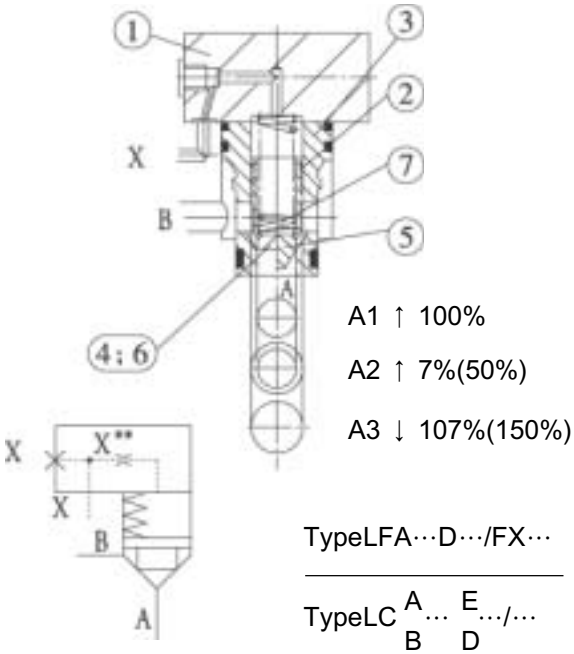
Directional function

2-way cartridge valves basically comprise of control cover (1) and cartridge element (2). The control cover contains the control drillings,and depending on the function required optionally a stroke limiter, a hydraulically controlled directional poppet valve or a shuttle valve. Inaddition, directional spool valves or directional poppet valves may be mounted onto the control cover. The cartridge element basically comprises of a bush (3), a ring (only up to NS32) ,optionally with damping nose (5), or without damping nose (6),and closing spring (7).

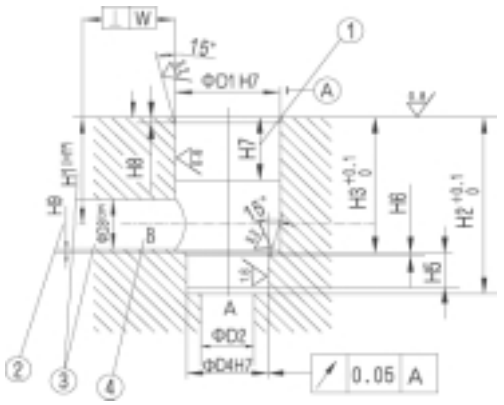
Basically the following applies:

Areas A1 and A2 operate to open the valve. Area A3 and the spring operates to close the valve. The effective direction of the resultant force (of opening and closing forces) determines the switched position of the 2-way cartridge valve.

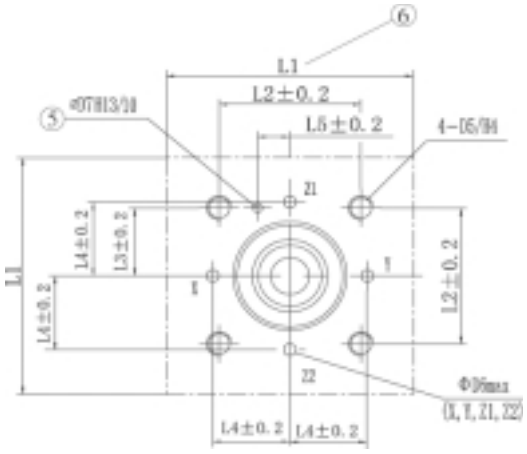
2-way cartridge valves may have flow passed from A to B or from B to A. When area A3 is pressurised by obtaining pilot oil from port B or by an external pilot oil supply, port A is closed, leak-free.



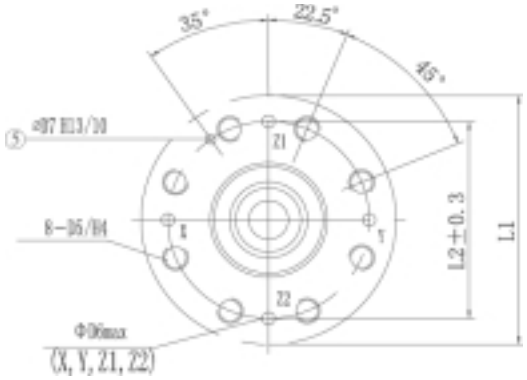
Installation cavity and porting pattern to DIN 24342 (with the exception of N6 125 and 160) **(Dimensions in mm)**



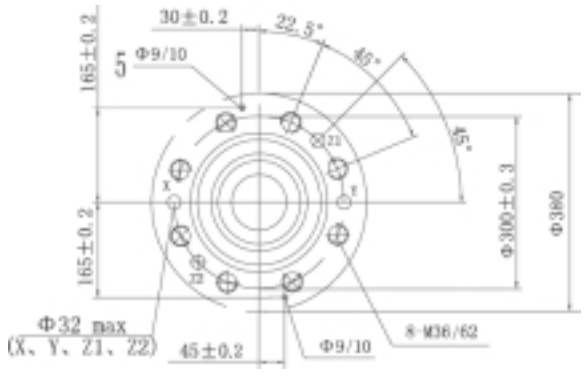
NS 16 to 63



NS 80,100



NS 125



NS	16	25	32	40	50	63	80	100	125	160
Φ D1^{H7}	32	45	60	75	90	120	145	180	225	300
Φ D2^{H7}	16	25	32	40	50	63	80	100	150$^{1)}$	200$^{1)}$
Φ D3^{H7}	16	25	32	40	50	63	80	100	125	200
(Φ D3*)	25	32	40	50	63	80	100	125	150	250$^{1)}$
Φ D4	25	34	45	55	68	90	110	135	200	270
Φ D5	M8	M12	M16	M20	M20	M30	M24	M30	-	-
Φ D6$^{H71)}$	4	6	8	10	10	12	16	20	-	-
Φ D7	4	6	6	6	8	8	10	10	-	-
H1	34	44	52	64	72	95	130	155	192	268
(H1*)	29.5	40.5	48	59	65.5	86.5	120	142	180	243
H2	56	72	85	105	122	155	205	245	300$^{+0.15}$	425$^{+0.15}$
H3	43	58	70	87	100	130	175 ± 0.2	210 ± 0.2	257 ± 0.5	370 ± 0.5
H4	20	25	35	45	45	65	50	63	-	-
H5	11	12	13	15	17	20	25	29	31	45
H6	2	2.5	2.5	3	3	4	5	5	7 ± 0.5	8 ± 0.5
H7	20	30	30	30	35	40	40	50	40	50
H8	2	2.5	2.5	3	4	4	5	5	5.5 ± 0.2	5.5 ± 0.2
H9	0.5	1	1.5	2.5	2.5	3	4.5	4.5	2	2
L1	65/80	85	102	125	140	180	250	300	-	-
L2	46	58	70	85	100	125	200	245	-	-
L3	23	29	35	42.5	50	62.5	-	-	-	-
L4	25	33	41	50	58	75	-	-	-	-
L5	10.5	16	17	23	30	38	-	-	-	-
W	0.05	0.05	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2

1 Depth of fit 1)Maximum deminsion

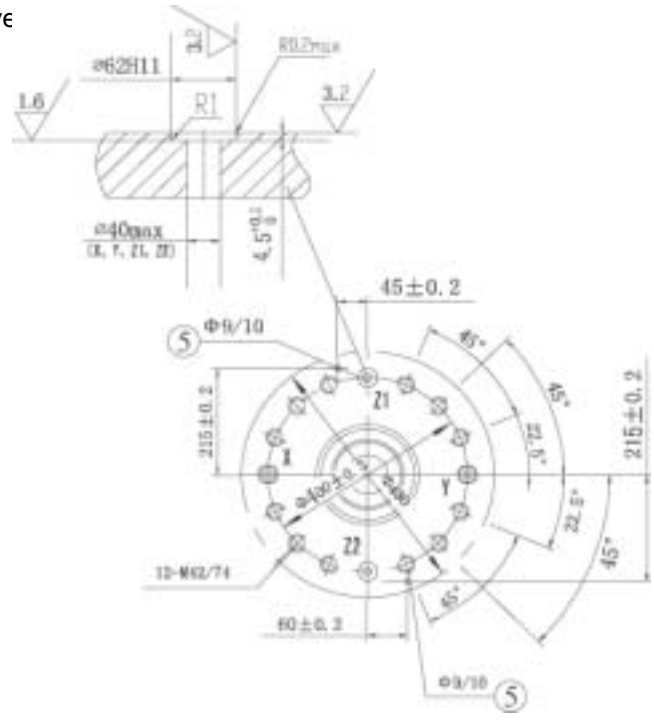
2 Reference dimension

3 For diameters of port B other than Φ D3 or (Φ D3*), the distance from the cover mounting surface to centre of the port must be calculated.

4 Port B may be moved about the central axis of port A. However, care must be taken that the fixing holes and control holes are not damaged.

5 Locating pin holes

6 **Note on porting pattern NS 16:** Length L1 (holes on x-y axis) is 80 mm in control covers with built-on directional valve



Ordering details: cartridge valve (without control cover)

LC						/		*

Size 16 — Size 25 — Size 32 — Size 40 — Size 50 — Size 63 — Size 80 — Size 100 — Series 6X: =16 =25 =32 =40 =50 =63 =80 =100

Size 125 — Size 160 — Series 2X: =125 =160

Area ratio 2:1 (annulus area = 50%) = A
Area ratio 14.3:1 (annulus area = 7%) = B

Cracking pressure approx. 0 Mpa (without spring) = 00
Cracking pressure approx. 0.05 Mpa = 05
Cracking pressure approx. 0.1 Mpa = 10
Cracking pressure approx. 0.2 Mpa = 20
Cracking pressure approx. 0.3 Mpa (only size 125) = 30
Cracking pressure approx. 0.4Mpa = 40
（For exact values, see page 4）

E = Valve poppet without damping nose
D = Valve poppet with damping nose

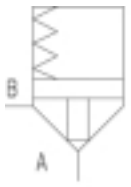
6X = (NS 16 and 100) Series 60 to 69 (60 to 69: unchanged installation and connection dimensions)
2X = (NS 125 and 160) Series 20 to 29 (20 to 29: unchanged installation and connection dimensions)

B= Technology of Beijing Huade Hydraulic

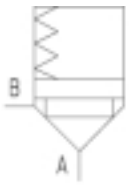
No code = Mineral oils
V = Phosphate ester

Further details in clear text

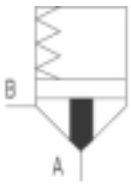
Symbols: cartridge valves (for details see ordering details)



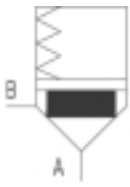
Area ratio 2：1 =...A..E../...



Area ratio 14.3：1 =...B..E../...

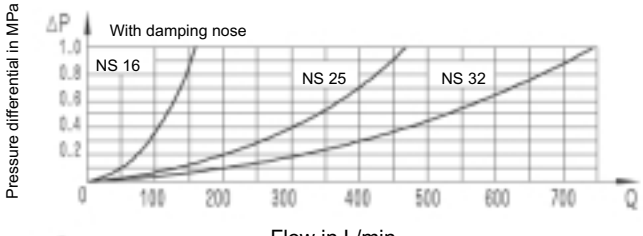


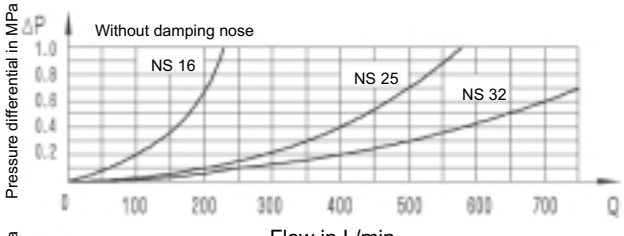
Area ratio 2：1 =...A..D../...

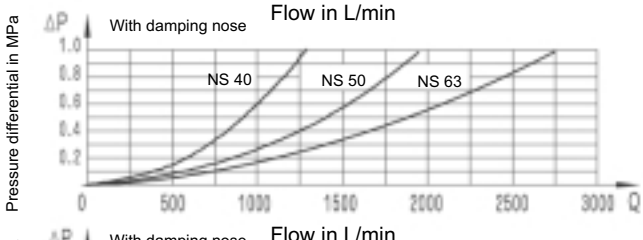


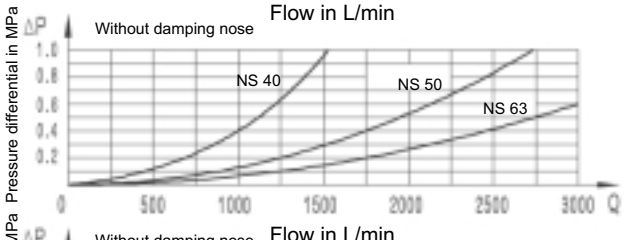
Area ratio 14.3：1 =...B..D../...

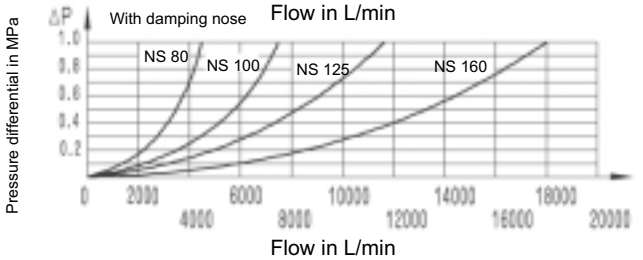
Characteristic curves (measured at v = 41X10^{-6} m^2/s and t = 50°C)

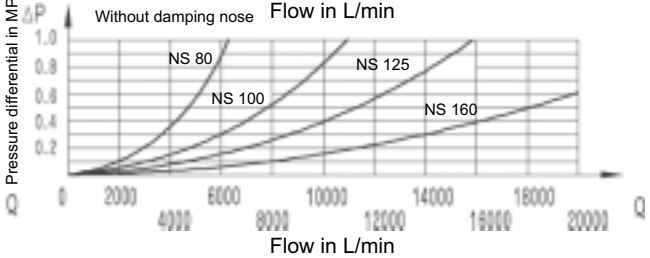












Technical data (for applications outside these parameters, please consult us!)

Pressure fluid		Mineral oils for NBR seals phosphate ester for FPM seals
Pressure fluid temperature range	(℃)	-20 to +80
Viscosity range	(mm^2/S)	2.8 to 380
Degree of contamination		Maximum permissible degree of contamination of the fluid is to NAS 1638 class 9. We, therefore, recommend a filter with a minimum retention rate of $\beta_{10} \geqslant 75$。
Max. operating pressure	(MPa)	42.0(Without directional valve)
for Ports A, B, X, Z1, Z2		31.5/42.0 Pmax of mounting directional spool/ directional poppet valve
Max. operating pressure for Port Y	(MPa)	Corresponds to the tank pressure of the built-on valve

2-way cartridge valve - directional function

		Nominal size									
		16	25	32	40	50	63	80	100	125	160
Area A1 in CM^2	LC · · · A · · ·	1.54	3.3	5.3	9.24	16.6	22.9	37.9	63.6	95	160.6
	LC · · · B · · ·	2.14	4.6	7.55	12.95	22.9	32.2	52.8	89.1	133.7	244.8
Area A2 in CM^2	LC · · · A · · ·	0.73	1.61	2.74	4.61	8.03	11.3	18.84	31.4	48	79.9
	LC · · · B · · ·	0.13	0.31	0.49	0.9	1.73	2.0	3.94	5.9	9.3	15.7
Area A3 in CM^2	LC · · · A · · · LC · · · B · · ·	2.27	4.91	8.04	13.85	24.63	34.2	56.74	95	143	240.5
Stroke in CM	LC · · · E · · ·	0.7	0.78	0.92	1.2	1.6	1.9	2.4	3.0	3.8	5.0
	LC · · · D · · ·	0.7	1.0	1.22	1.6	2.0	2.4	3.0	3.8	4.8	6.5
Pilot volume in CM^3	LC · · · E · · ·	1.6	3.8	7.4	16.6	39.4	65	136	285	544	1203
	LC · · · D · · ·	1.6	4.9	9.8	22.2	49.3	82	170	361	687	1563
Theoretical pilot flow at a switching time of 10 ms in L/min	LC · · · E · · ·	9.6	22.8	44	100	236	390	816	1710	3264	7218
	LC · · · D · · ·	9.6	29.4	59	133	296	492	1020	2166	4122	9378
Weight in Kg	Cartridge valve	0.2	0.4	1.0	1.8	3.8	7.0	13.0	27.0	44.0	75.0
	Control cover	1.2	2.3	4.0	7.4	10.5	21.0	27.0	42.0	88.0	150.0
Cracking pressure in MPa											
Direction of flow A to B	LC···A 00···	0.002	0.0025	0.005	0.005	0.005	0.007	0.007	0.01	0.15	0.015
	LC···A 05···	0.043	0.045	0.046	0.043	0.045	0.042	0.044	0.043	0.043	0.045
	LC···A 10···	0.086	0.088	0.091	0.087	0.085	0.085	0.088	0.088	0.088	-
	LC···A 20···	0.176	0.177	0.185	0.173	0.174	0.17	0.175	0.175	0.176	0.194
	LC···A 30···	-	-	-	-	-	-	-	-	0.205	-
	LC···A 40···	0.34	0.345	0.334	0.349	0.335	0.332	0.313	0.304	-	-
	LC···B 00···	0.0014	0.002	0.0035	0.0035	0.0035	0.005	0.005	0.007	0.01	0.01
	LC···B 05···	0.031	0.032	0.032	0.031	0.032	0.03	0.031	0.031	0.031	0.032
	LC···B 10···	0.062	0.063	0.064	0.062	0.063	0.061	0.063	0.063	0.062	-
	LC···B 20···	0.127	0.127	0.13	0.124	0.126	0.121	0.126	0.125	0.125	0.14
	LC···B 30···	-	-	-	-	-	-	-	-	0.145	-
	LC···B 40···	0.245	0.247	0.235	0.25	0.243	0.236	0.225	0.217	-	-
Direction of flow B to A	LC···A 00···	0.004	0.005	0.01	0.01	0.01	0.014	0.014	0.02	0.030	0.033
	LC···A 05···	0.09	0.092	0.089	0.086	0.093	0.085	0.088	0.088	0.086	0.091
	LC···A 10···	0.18	0.18	0.177	0.174	0.18	0.173	0.177	0.178	0.173	-
	LC···A 20···	0.37	0.36	0.36	0.346	0.36	0.344	0.353	0.354	0.350	0.39
	LC···A 30···	-	-	-	-	-	-	-	-	0.40	-
	LC···A 40···	0.72	0.71	0.65	0.70	0.69	0.67	0.63	0.62	-	-
	LC···B 00···	0.024	0.025	0.05	0.05	0.05	0.08	0.07	0.10	0.15	0.15
	LC···B 05···	0.50	0.48	0.49	0.41	0.43	0.47	0.42	0.46	0.44	0.46
	LC···B 10···	1.00	0.94	0.98	0.82	0.84	0.96	0.84	0.94	0.89	-
	LC···B 20···	2.06	1.90	2.0	1.64	1.67	1.90	1.69	1.87	1.79	2.0
	LC···B 30···	-	-	-	-	-	-	-	-	2.07	-
	LC···B 40···	4.00	3.68	3.60	3.32	3.22	3.70	3.02	3.25		-

General notes on the ordering details for control covers

1	2	3	4[2])	5[3])	6[4])	7[5])	8[6])	9	10	7) 11	12	13	14	15	16	17	18	19
LFA			/															*

X=available

Nominal size										Type	Series	nominal pressure MPa	Area ratio	cracking pressure	damping	Electrical monitoring of closed position	Remote control port	Orifices in ports						Seal material	Further details in clear text
16	25	32	40	50	63	80	100	125	160									A	B	F	P	T	X	Z1	
-	-	-	-	-	-	-	-	X	X		2X														
X	X	X	X	X	X	X	X	-	-		6X														
X	X	X								D														Ordering details can be found on the pages covering the individual control cover variations	
X	X	X	X	X	X	X	X	X[1])	X[1])	D							F						X		
	X	X								H1															
X	X	X	X							H1							F						X		
	X	X								H2															
X	X	X	X	X	X	X	X	X	X	H2							F								
X	X	X	X	X	X	X	X			H2							F						X		
	X	X								H3															
X	X	X	X							H3							F						X		
	X	X								H4															
X	X	X	X	X	X	X	X			H4							F						X		
X	X	X	X	X	X	X	X			G										X			X	X	
	X	X	X	X	X	X	X			R										X				X	
	X	X	X	X	X	X	X			R2										X				X	
X	X	X	X	X	X	X	X			WEA								X			X	X			
					X	X				WEA		63						X			X	X			
X	X	X	X	X	X	X	X			WEB									X		X	X			
X	X	X	X	X	X	X	X			WEA8										X	X	X			
X	X	X	X	X	X	X	X			WEA8										X	X	X			
X	X	X	X	X	X	X	X			WEA9								X	X		X	X			
X	X	X	X	X	X	X	X			GWA								X			X	X			
					X	X				GWA		63						X			X	X			
X	X	X	X	X	X	X	X			GWB									X		X	X			
X	X	X	X	X	X	X	X			KWA								X			X	X	X		
					X	X				KWA		63						X			X	X	X		
X	X	X	X	X	X	X	X			KWB									X		X	X	X		
X	X	X	X	X	X					E			X	X	D	QOG24	F						X		
X	X	X	X	X	X					EH2			X	X	D	QOG24	F						X		
X	X	X	X	X	X					EWA			X	X	D	QOG24		X			X	X			
X	X	X	X	X	X					EWB			X	X	D	QOG24			X		X	X			

1) Orifices in port X is on request.

2) 6X = Series 60 to 69 and
2X = Series 20 to 29 : (unchanged installation and connection dimensions)

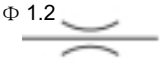
3) Operating pressure of popper valve os above 31.5MPa must write code 630
no code =operating pressure ⩽ 31.5MPa

4) CA=2:1 (area ratio A1 : A2)
CB=14.3:1 (area ratio A1 : A2)
CD=0%
In control covers with electrical monitoring of the closed position (incl. limit switch) the type code includes the model of the control cover and that of the cartridge valve

5) 10 = 0.1 MPa cracking pressure
20 = 0.2 MPar cracking pressure
40 = 0.4 MPa cracking pressure

6) D = Valve poppet of cartridge element with damping nose

7) Sequence of orifices when ordering and for representation in symbols and on circuits.
See pages on individual control coversand page 7 for further information (orifice characteristic curves).

Orifice Symbol	Symbol in ordering code
Φ 1.2 	

This orifice is designed as a drilled hole, no type is entered in the ordering code.(orifice diameter in mm)

Orifice Symbol	Symbol in ordering code
Z1-12 	

This orifice is designed as a screwed orifice.It is a standardorifice, no type code is entered in the ordering code. (orifice diameter in 1/10 mm)

Orifice Symbol	Symbol in ordering code
A1.2 	A12 

This orifice is designed as a screwed orifice.If this orifice is required,the correct type code must be entered together with the orifice diameter in 1/10 mm in the ordering code.
Example: A12 = Orifice with diameter 1.2 mm in port A.

General notes on the ordering details for control covers (pilot valves)

Directional spool valve	Size	Catalogue sheet no.	Control cover Type
4WE6 D5X/··· (wet pin)	6		WE^{A}_{B},WE^{A}_{B}8,GWA^{A}_{B} KW^{A}_{B},EW
3WE6 A5X··· (wet pin)			WEA9
4WE10 D3X/··· (wet pin)	10		WE^{A}_{B},GW^{A}_{B},KW^{A}_{B}

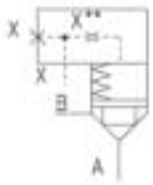
Pilot valves must be ordered separately. For further details see relevant catalogue sheet.

Directional poppet valve	Size	Catalogue sheet no.	Control cover of type
M-3SEW6 U 2X/420··· M-3SEW6 C 2X/420···	6		WEA,WEA8,GWA KWA,EWA
M-3SEW10 U 2X/315··· M-3SEW10 C 2X/315···			WEA,GEA KWA
M-3SEW10 U 2X/630··· M-3SEW10 C 2X/630···	10		WEA···/630,GWA···/630 KAW···/630

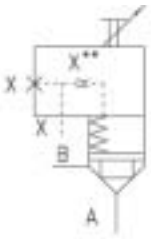
Note:By combining a 2-way cartridge valve with a pilot valve, various valve functions may be implemented. The following components, with porting pattern A6 (up to NS 63) and form A10 (NS 80 to 100) DIN 24 340 may be considered.

Symbols (basic symbols)

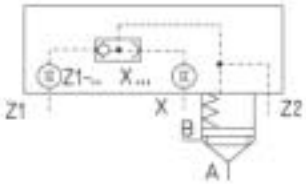
LFA . D.../F...
Control cover with remote control port
NS 16 to 160



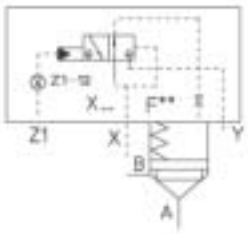
LFA . H2.../F...
Control cover with stroke limiter,with remote control port
NS 16 to 160



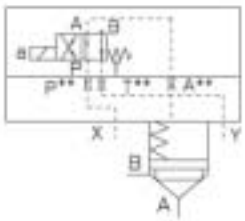
LFA . G.../...
Control cover with built-in shuttle valve
NS 16 to 100



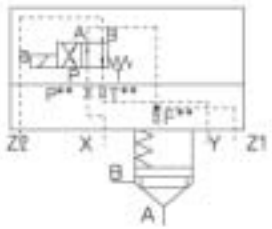
LFA . R.../...
Control cover with built-in hydraulically actuated pilot valve (directional poppet valve)
NS 25 to 100



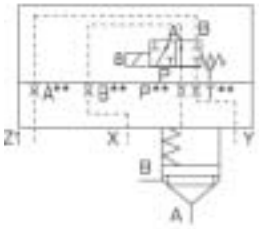
LFA . WEA.../...
Control cover for mounting a directional spool or poppet valve
NS 16 to 160



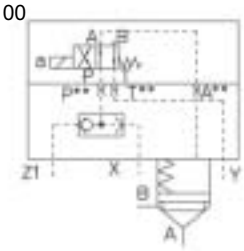
LFA···WEA8-60/···
Control cover for mounting a directional spool or poppet valve with control port for switching a 2nd valve
NS 16 to 63



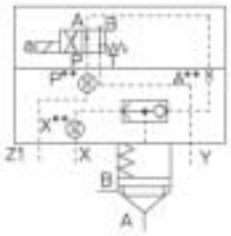
LFA···WEA 9-60/···
Control cover for mounting a directional spool valve as a check valve circuit
NS 16 to 63



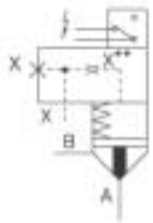
LFA . GWA.../...
Control cover for mounting a directional spoolor poppet valve, with built-in shuttle valve
NS 16 to 100



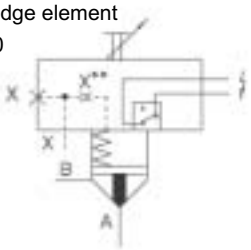
LFA . KWA.../...
Control cover for mounting a directional spool or poppet valve, with built-in shuttle valve as a check valve circuit
NS 16 to 100



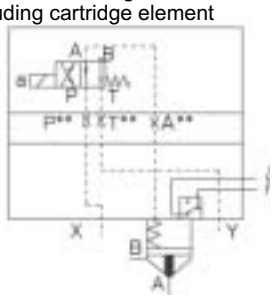
LFA···E60/···DQ.G24F
Control cover with electrical monitoring of closed position including cartridge element
NS 16 to 100



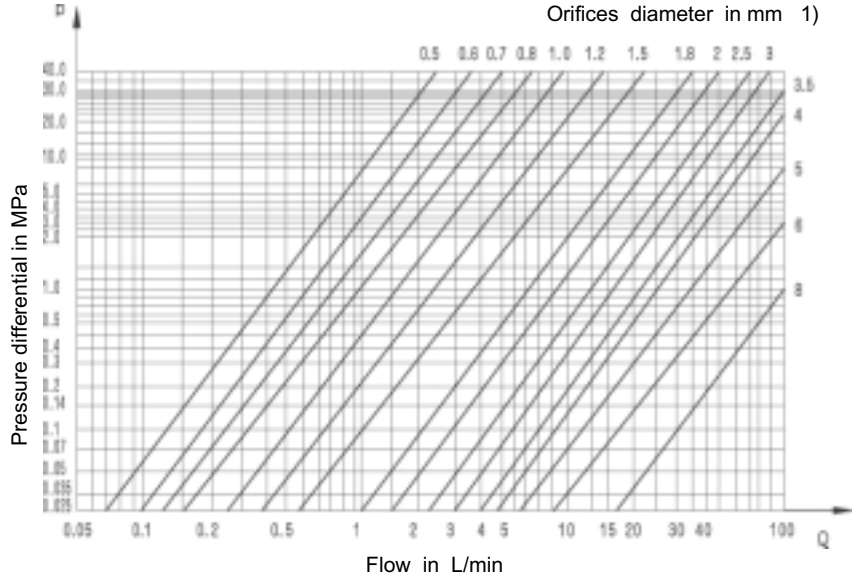
LFA···EH2-60/···DQ.G24F
Control cover with electrical monitoring of closed position and stroke limiter including cartridge element
NS 16 to 100



LFA···EWA60/···DQOG24.
Control cover with electrical monitoring of closed position, for mounting a directional spool valve including cartridge element
NS 16 to 63



Characteristic curves for the selection of orifices



1)Possible orifice diameter in relation the the thread size

Thread	Orifices diameter in mm
M6 taper	0.5 to 2.5
M8X1 taper	0.8 to 3.5
G3/8"	0.8 to 6.0
G1/2"	1.0 to 8.0

Material numbers for orifices and plugs

Standard orifice for nominal size	Thread / Orifice diameter in mm	Material number			
		ZM6	ZM8 × 1	G3/8″	G1/2″
	0.5	157 933	-	-	-
	0.5	157 934	-	-	-
16	0.7	157 931	-	-	-
25	0.8	152 276	136 843	159 043	-
32	1.0	149 335	136 842	159 033	139 115
40	1.2	152 286	139 101	159 032	150 714
50	1.5	148 823	133 712	159 031	139 117
63	1.8	157 932	150 953	159 030	159 026
80	2.0	156 650	137 299	159 029	148 352
100	2.5	157 929	137 445	146 259	148 353
	3.0	-	144 761	149 044	148 361
	3.5	-	136 079	146 258	159 027
	4.0	-	-	149 052	149 939
	5.0	-	-	152 287	143 775
	6.0	-	-	135 774	147 875
	8.0	-	-	-	159 028
Plug		008 702	003 443	006 325	006 445

Dimensions of O-rings for ports X, Y, Z1, Z2 (included within the scope of supply)

	Nominal size	Dimensions in mm	Material number	
			NBR seals	FPM seals
O-ring	16	7.65 × 1.78	004 491	006 585
	25	9.25 × 1.78	007 111	009 097
	32	10.82 × 1.78	008 937	008 941
	40，50	12.37 × 2.62	004 489	008 949
	63	18.72 × 2.62	009 245	002 045
	80	26.58 × 3.53	004 490	008 944
	100	34.52 × 3.53	009 354	009 191
	125	40.87 × 3.53	009 376	009 505
	160	53.35 × 5.33	009 264	009 263

Seal kits, fixing screw for cartridge valves and control covers:

Seal kits for cartridge valves type LC.../...（NS 16 to 160）

Seal kits for	Material No.	
	NBR seals	FPM seals
LC16 to 60/...	314352	314353
LC25 to 60/...	314354	314355
LC32 to 60/...	314356	314357
LC40 to 60/...	314055	314064
LC50 to 60/...	314056	314065

Seal kits for	Material No.	
	NBR seals	FPM seals
LC63 to 60/...	314057	314066
LC80 to 60/...	314058	314067
LC100 to 60/...	314059	314068
LC125 to 60/...	314060	314069
LC160 to 60/...	314497	314388

Seal kits for control valves （NS 16 to 160）

NS / Seal kits for	Material No.							
	16		25		32		40	
	NBR seals	FPM seals	NBR seals	FPM seals	NBR seals	FPM seals	NBR seals	FPM seals
...D..;..D../F;..WE..; ..WE.8..;..WE.9..;	313758	313759	313760	313761	313762	313763	313863	31384
..H.-..;..H.-../F..	313951	313952	313953	313954	313800	313801	313867	313868
..G..;..GW..;..KW..	313961	313962	313804	313805	313808	313809	313873	313874
..R..;R2-..			313996	313997	313998	313999	310836	310837
..E../F..	313830	313831	312829	312831	312838	313839	312005	312006
..EH2-..	313857	313858	313834	313835	313861	313862		
..EW..	312199		312194	312195	312196		311547	311548

NS / Seal kits for	Material No.							
	50		63		80		100	
	NBR seals	FPM seals	NBR seals	FPM seals	NBR seals	FPM seals	NBR seals	FPM seals
..D..					312785	312814	312786	312815
...D..;..D../F;..WE..; ..WE.8..;..WE.9..;	313863	313864	313865	313866				
WE./SE.					314824	314825	314836	314837
..H1-..;..H2-..(../F.)	313869	313870	313871	313872	314816	314817	314828	314829
..H3-..;..H4-..(../F.)	313869	313870	313871	313872	314818	314819	314830	314831
..G..;..GW..;..KW..	313875	313876	313877	313878	314826	314827	314838	314839
..R..;R2-..	310836	310837	310840	310841	314822	314823	314834	314835
..E../F..	312007	312008						
..EH2-..	314422							
..EW..	312095		314423					

NS / Seal kits for	Material No.			
	125		160	
	NBR seals	FPM seals	NBR seals	FPM seals
..D../F..	314074	310850	310868	310869
..H2-..	314840	314841	314498	314499

Seal kits for control cover	Material No.	
	NBR seals	FPM seals
	320489	320490
O-ring 9.25 × 1.78	077111	009097

Fixing screws,porting pattern to GB/T70.1-2000 (included within the scope of supply)

NS	Control cover	Qty.	Dimensions	Tightening toxque in Nm
16	WE^{A}_{B},GW^{A}_{B} ..EH2-.. EW^{A}_{B}.. [1)]	4	M8 × 45 M8 × 80 M8 × 85 M8 × 40	32
25	..EH2-..,..EW^{A}_{B}.. [1)]	4	M12 × 90 M12 × 50	110
32	..EH2-..,..EW^{A}_{B}.. [1)]	4	M16 × 110 M16 × 60	270
40	..E..,EW^{A}_{B} ..EH2-.. H1-, H2- [1)]	4	M20 × 140 M20 × 150 M20 × 90 M20 × 70	520

NS	Control cover	Qty.	Dimensions	Tightening toxque in Nm
50	..H2-..,..H4-.. ..E..,EW^{A}_{B}.. EH2-.. [1)]	4	M20 × 120 M20 × 140 M20 × 160 M20 × 80	520
63	..H2-..,..H4-.. ..E..,EW^{A}_{B}.. EH2-.. [1)]	4	M30 × 140 M20 × 180 M20 × 180 M30 × 100	1800
80	..H2-..,..H4-.. [1)]	8	M24 × 120 M24 × 100	900
100	..D..,WE^{A}_{B}.. [1)]	8	M30 × 120 M30 × 140	1800
125	All of attainable control over	8	M36 × 160	3100
160	All of attainable control over	12	M42 × 220	5000

[1)]All of the other non-standard control cover.

Compression springs:type LC··· $\frac{A}{B}$ ··· $\frac{E}{D}$ ···

Size	Type	Spring dimensions in mm	Material NO.
16	LC16 * 05 ** 6X	10.5/0.8 × 42/7	097 129
	LC16 * 10 ** 6X	10.5/1 × 42/8.5	097 130
	LC16 * 20 ** 6X	10.2/1.25 × 42/11	097 131
	LC16 * 40 ** 6X	10/1.4 × 42/9.5	097 132
25	LC25 * 05 ** 6X	16/1.4 × 61/10.5	097 133
	LC25 * 10 ** 6X	15.8/1.6 × 61/9.5	097 134
	LC25 * 20 ** 6X	15.5/1.8 × 61/8	097 135
	LC25 * 40 ** 6X	15/2.25 × 58/9	097 136
32	LC32 * 05 ** 6X	20.5/1.8 × 79/11.5	097 137
	LC32 * 10 ** 6X	20/2 × 79/9.5	097 138
	LC32 * 20 ** 6X	20/2.5 × 79/7.5	097 139
	LC32 * 40 ** 6X	19/3.2 × 68/10	097 140
40	LC40 * 05 ** 6X	27.5/2.5 × 108/13.5	097 141
	LC40 * 10 ** 6X	27.5/2.8 × 108/10.5	097 144
	LC40 * 20 ** 6X	27/3.2 × 108/9.5	097 147
	LC40 * 40 ** 6X	26/4 × 104/11	097 150
50	LC50 * 05 ** 6X	36/3.2 × 130/10.5	097 142
	LC50 * 10 ** 6X	35.5/3.6 × 130/9	097 145
	LC50 * 20 ** 6X	34.5/4.5 × 130/12	097 148
	LC50 * 40 ** 6X	33.5/5.6 × 117/10	097 151

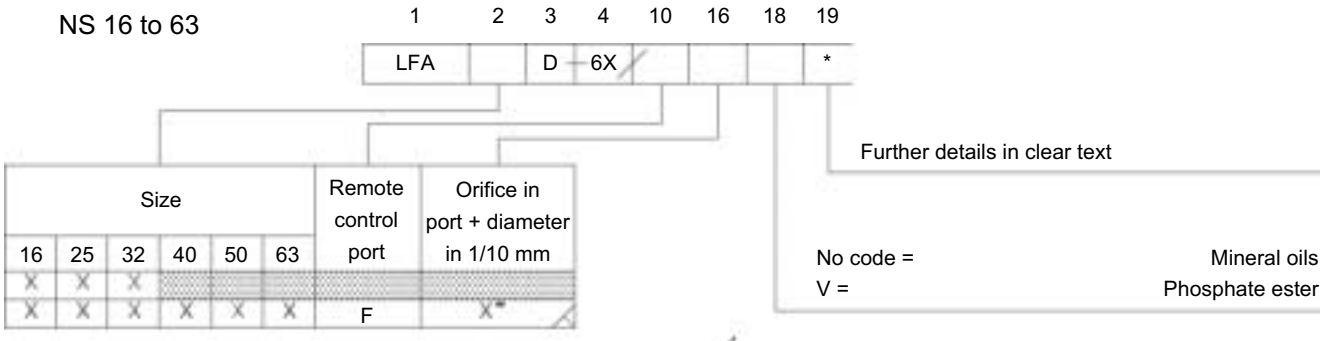
Size	Type	Spring dimensions in mm	Material NO.
63	LC63 * 05 ** 6X	43.5/3.6 × 165/9	097 143
	LC63 * 10 ** 6X	43/4 × 165/7	097 146
	LC63 * 20 ** 6X	42/5 × 164/9	097 149
	LC63 * 40 ** 6X	40.5/6.3 × 158/11	097 152
80	LC80 * 05 ** 6X	57/5 × 200/10.5	002 357
	LC80 * 10 ** 6X	56.5/5.6 × 200/8.5	002 359
	LC80 * 20 ** 6X	55/7 × 201/11.5	002 362
	LC80 * 40 ** 6X	53/9 × 176/10	002 365
100	LC100 * 05 ** 6X	74/7 × 250/14	002 363
	LC100 * 10 ** 6X	73/8 × 251/12.5	002 364
	LC100 * 20 ** 6X	72/9 × 251/10.5	002 366
	LC100 * 40 ** 6X	69/11.5 × 222/10	002 367
125	LC125 * 05 ** 6X	86/8 × 308/12.5	011 090
	LC125 * 10 ** 6X	85/9 × 310/10.5	002 649
	LC125 * 20 ** 6X	83/11 × 310/12.5	002 454
	LC125 * 40 ** 6X	80/14 × 255/10	002 650
160	LC160 * 05 ** 6X	112.5/10 × 418/11.5	011 097
	LC160 * 10 ** 6X	106/16 × 365/11	011 232

* A or B

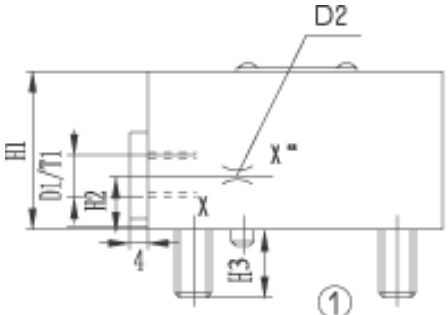
** E or D

Control cover with or without remote control connection: types...D..., ...D.../F (Dimensions in mm)

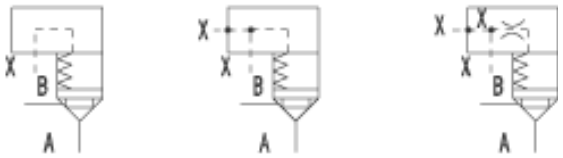
NS 16 to 63



Orifice possible, if required state details



LFA···D···/··· LFA···D···/F··· LFA···D···/FX**



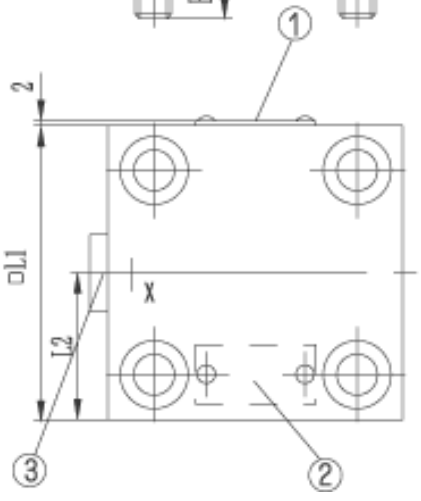
Size	16	25	30	40	50	63
D1	G1/8″	G1/4″	G1/4″	G1/2″	G1/2″	G3/4″
D2[1])	M6	M6	M6	M8 × 1	M8 × 1	M8 × 1
H1	35	40	50	60	68	82
H2	12	16	16	30	32	40
H3	15	24	28	32	34	50
L1	65	85	100	125	140	180
L2	32.5	42.5	50	72	80	90
T1	8	12	12	14	14	16

[1]) For orifice ordering details, see page 7.

1 Nameplate for sizes 16, 25, 32

2 Nameplate for sizes 40, 50, 63

3 Port X optionally as a threaded connection



Control cover with remote control connection: types...D/F... (Dimensions in mm)

NS 80 to 160

1	2	3	4[2])		10	16	18	19
LFA		D	–	6X /	F			*

Further details in clear text

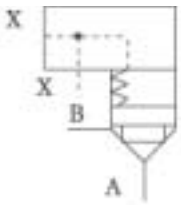
Size				Remote control port	Orifice in port + diameter in 1/10 mm
80	100	125	160		
X	X	X	X	F	
X	X	X	X		
X	X	X	X		

No code = Mineral oils
V = Phosphate ester

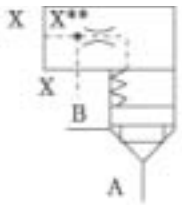
◿ Orifice possible, if required state details

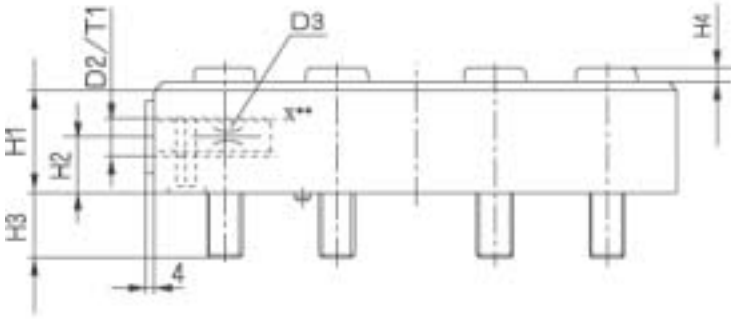
[2]) 6X = Series 6X (NS 80, 100)
2X = Series 2X (NS 125, 160)

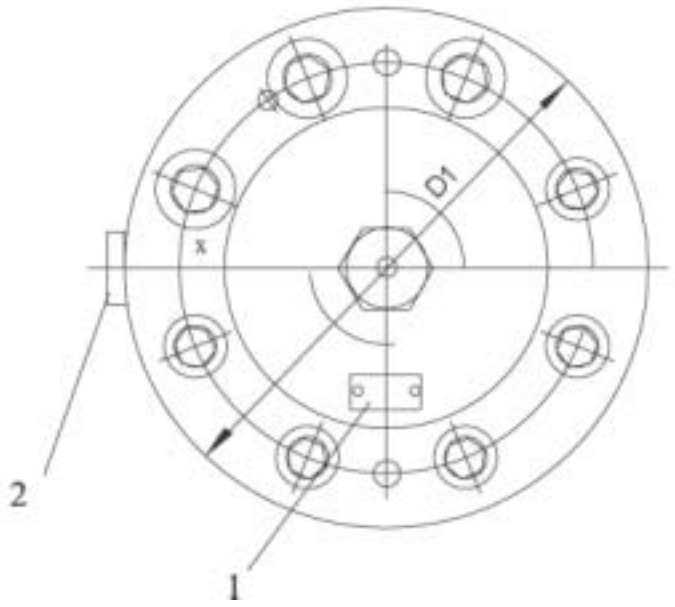
LFA.DX.-.../F..



LFA.D.-.../FX**..







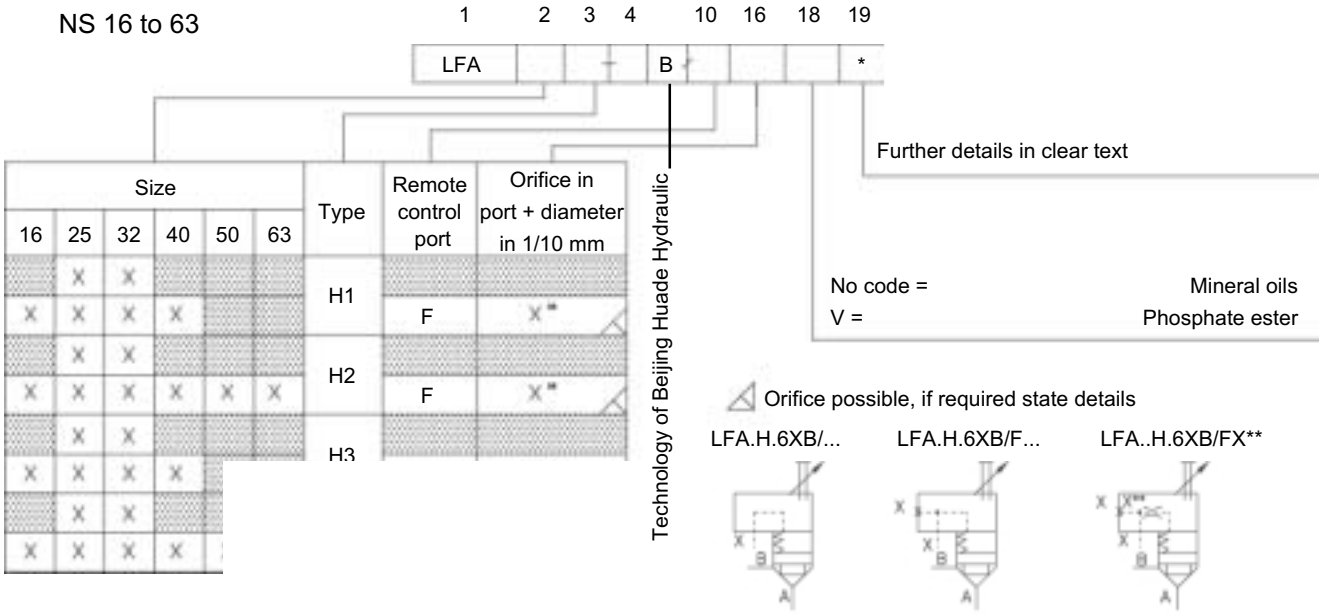
Size	80	100	125	160
D1	250	300	380	480
D2	G3/4″	G1″	G1 1/4″	G1 1/4″
D3 [1])	G3/8″	G1/2″	G1″	G1″
H1	70	75	105	147
H2	35	40	50	70
H3	45	52.5	61	74
H4	-	24	31	42
T1	16	18	20	20

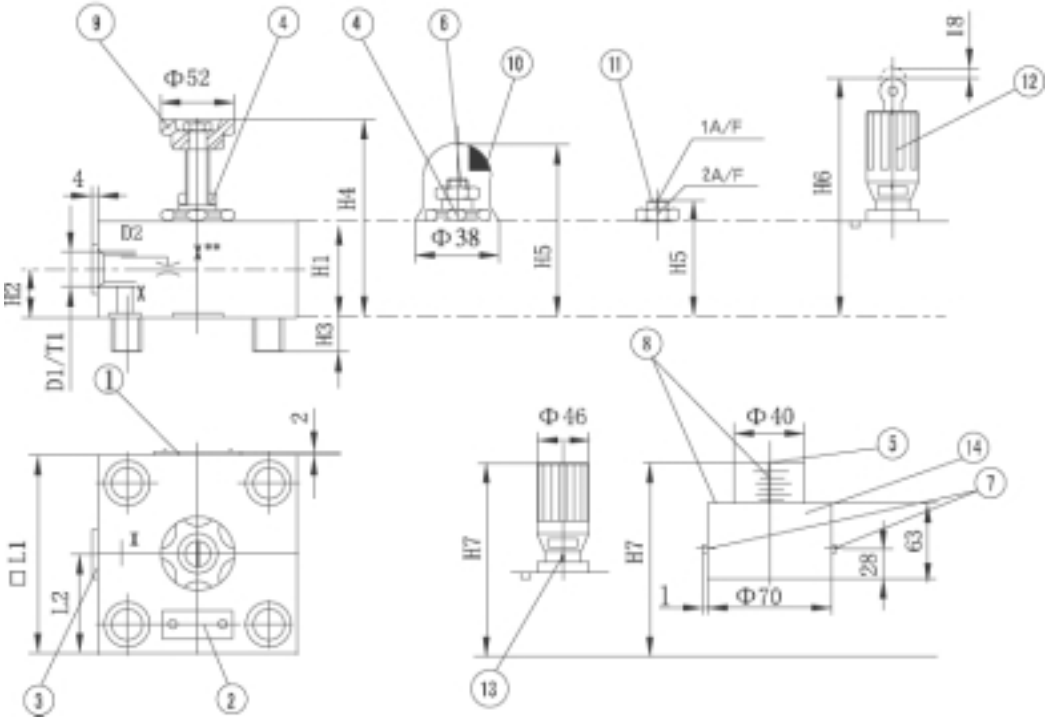
[1])For orifice ordering details, see page 7.

1 Nameplate
2 Port X optionally as a threaded connection

Control cover with remote control connection: types...D/F... (Dimensions in mm)

NS 16 to 63





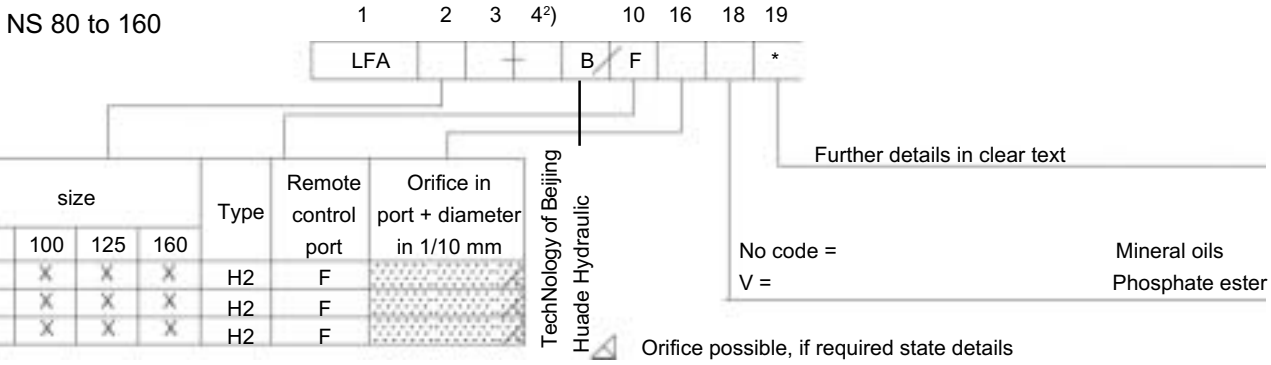
size	16	25	30	40	50	63
D1	G1/8″	G1/4″	G1/4″	G1/2″	G1/2″	G3/4″
D2[1])	M6	M6	M6	M8 × 1	M8 × 1	M8 × 1
H1	35	40	50	80 | 60[3])	68	82
H2	12	16	16	30 | 22[3])	32	40
H3	15	24	28	32	34	50
$H4_{max}$	85	92	109	136	-	-
$H5_{max}$	75	80	94	115	135	155
$H6_{max}$	136	142	156	195	-	-
$H7_{max}$	112	117	132	170	188	205
□ L1	65	85	100	125	140	180
L2	32.5	42.5	50	62.5[3]) | 72	80	90
T1	8	12	12	14	14	16
1 A/F	-	-	-	12	17	19
2 A/F	-	-	-	36	46	55

1 Nameplate for size 16, 25, 32
2 Nameplate for size 40,50,63
3 Port X optionally as a threaded connection
4 nut,19 wide of opposite side
5 internal thread,19 wide of opposite side
6 nut,6 wide of opposite side
7 lock nut,5 wide of opposite side
8 scale
9 control "H1"(size 16 to 40)
10 control "H2"(size 16 to 32)
11 control "H2"(size 40 to 63)
12 control "H3"(size 16 to 40)
13 control "H4"(size 16 to 40)
14 control "H2"(size 50 and 63)

[1]) For orifice ordering details, see page 7.
[3]) Only applicable to adjustments "H3" and "H4"

Control cover with stroke limiter and remote control connection: type...H... (Dimensions in mm)

NS 80 to 160

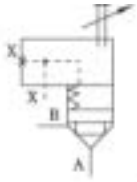


size				Type	Remote control port	Orifice in port + diameter in 1/10 mm
80	100	125	160			
X	X	X	X	H2	F	
X	X	X	X	H2	F	
X	X	X	X	H2	F	

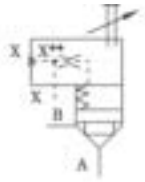
Orifice possible, if required state details

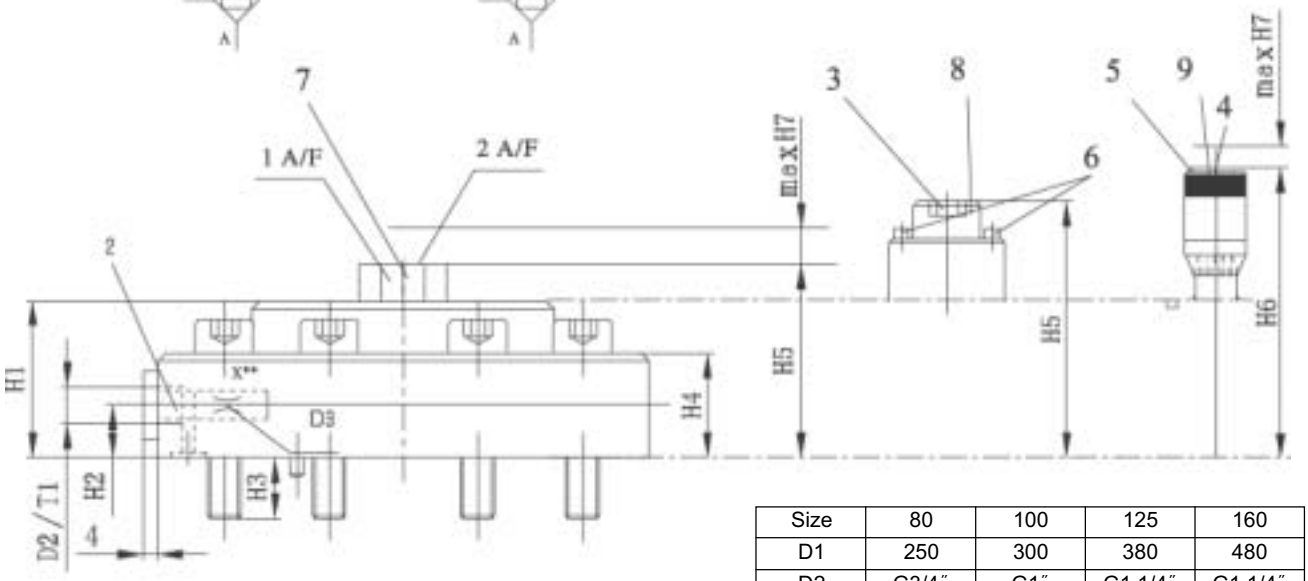
[2]) 6X=6X series（80 and 100）
2X=2X series（125 and 160）

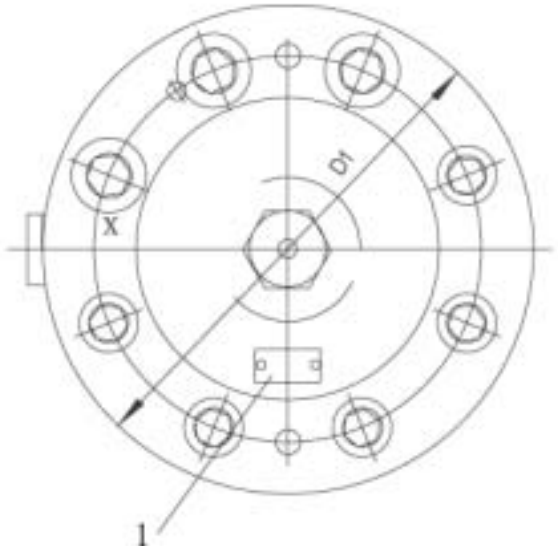
LFA.H.-.../F..



LFA.H.-.../FX**







Size	80	100	125	160
D1	250	300	380	480
D2	G3/4″	G1″	G1 1/4″	G1 1/4″
D3 [1])	G3/8″	G1/2″	G1″	G1″
H1	114	132	170	225
H2	25 | 24[3])	35	50	70
H3	45	52.5	61	74
H4	76	88.5	100	147
H5	137	157	195	340
H6	229	247	-	-
H7	30	38	48	-
T1	16	18	20	20
SW1	75	75	95	-
SW2 [4])	24	27	27	-

[1]) For orifice ordering details, see page 7.

[3]) Only applicable to adjustment "H4"

[4]) Internal thread

1 Nameplate
2 Port X optionally as a threaded connection
3 Internal thread,32 wide of opposite side
4 Internal thread,14 wide of opposite side
5 Internal thread,5 wide of opposite side
6 Internal thread,8 wide of opposite side
7 Control "H2"(size 80 to 125)
8 Control "H2"(size 160)
9 Control "H4"(size 80 and 100)

NS 16 to 63

1	2	3	4		10	16	18	19
LFA		G	6X	B				*

Further details in clear text

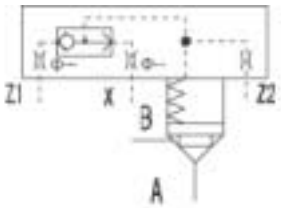
Size	Orifice in port	
	X	Z1
16	Φ 1.2	Φ 1.2
25	Φ 1.5	Φ 1.5
32	Φ 2.0	Φ 2.0
40	X12	Z1-12
50	X15	Z1-15
63	X18	Z1-18

Technology of Beijing Huade Hydraulic

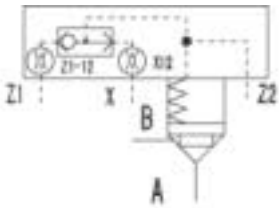
No code = Mineral oils
V = Phosphate ester

◢ Drilled orifice (diameter in mm)
◿ Standard orifice (diameter in 1/10 mm)
] does not appear in the type code

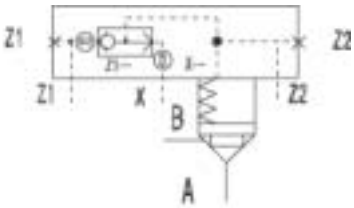
LFA.G 6XB/.
NS 16 to 32

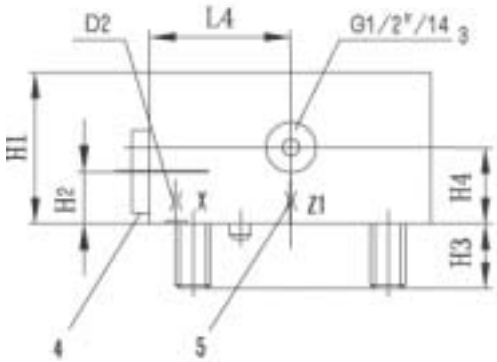


LFA.G 6XB/.
NS 40

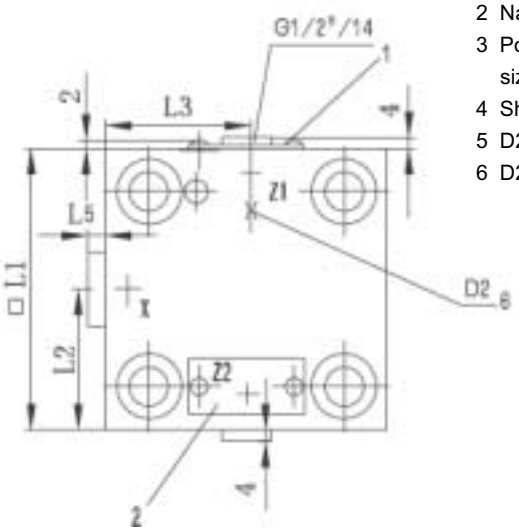


LFA.G 6XB/.
NS 50 to 63





Size	16	25	30	40	50	63
D1	Φ 1.2	Φ 1.5	Φ 2.0	M6	M8 × 1	M8 × 1
D2	Φ 1.2	Φ 1.5	Φ 2.0	M6	M8 × 1	M8 × 1
H1	35	40	50	60	68	82
H2	17	17	21.5	30	32	40
H3	15	24	28	32	34	50
H4	-	-	-	-	32	40
L1	65	85	100	125	140	180
L2	36.5	45.5	50	62.5	74	90
L3	-	-	-	-	72	79
L4	-	-	-	-	72	90
L5	2.5	2	-	-	6	2



1 Nameplate for size 16, 25, 32
2 Nameplate for size 40, 50, 63
3 Ports Z1 and Z2 optionally as a threaded connection for size 50 and 63
4 Shuttle valve
5 D2 for size 16 to 40
6 D2 for size 50 to 63

Control cover with built-in shuttle valve: type ...G... (Dimensions in mm)

NS 80 and 100

1	2	3	4		10	16	18	19
LFA		G	—	6X	B			*

Further details in clear text

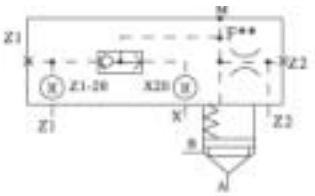
No code = Mineral oils
V = Phosphate ester

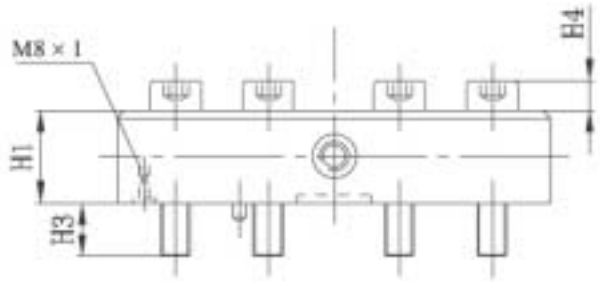
Size	Orifice in port (diameter in 1/10 mm)		
	F	X	Z1
80	F**	X20	Z1-20
100	F**	X20	Z1-20

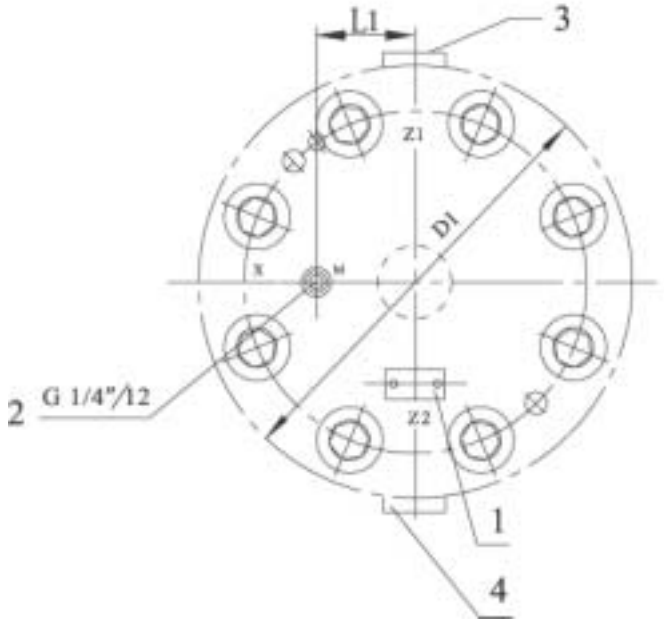
Standard orifice - does not appear in the type code

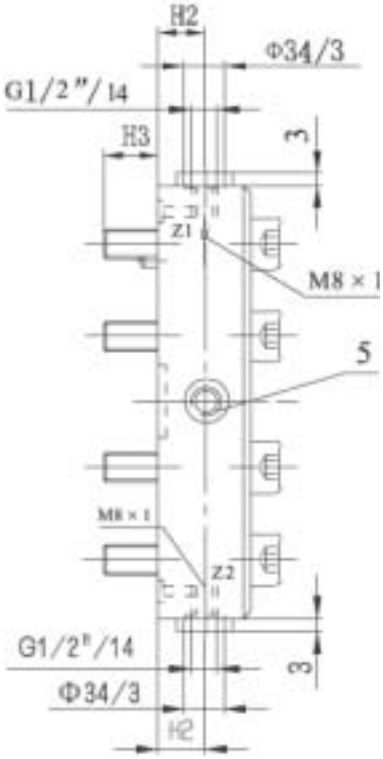
Orifice possible, if required state details

LFA.G 6XB/.









1 Nameplate
2 Test point
3 Port Z1 optionally as a threaded connection
4 Port Z2 optionally as a threaded connection
5 Shuttle valve

Size	80	100
D1	250	300
H1	80	75
H2	45	43
H3	45	52.5
H4	4	23.5
L1	73	96.5

Control cover with built-in directional poppet valve: types ,...R...,...R2... (Dimensions in mm)

NS 25 to 63

1	2	3	4		10	16	18	19
LFA			6X	B				*

Further details in clear text

No code = Mineral oils
V = Phosphate ester

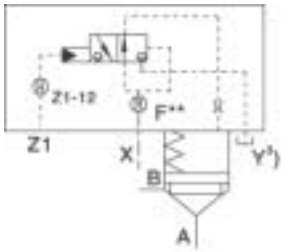
Size	Type	Orifice in port (diameter in 1/10 mm)		
		F	X	Z1
25	R	F**	X10	Z1-12
32		F**	X10	Z1-12
40		F**	X15	Z1-12
50		F**	X15	Z1-12
63		F**	X18	Z1-12
25	R2-[2)]	F**	X10	Z1-12
32		F**	X10	Z1-12
40		F**	X15	Z1-12
50		F**	X15	Z1-12
63		F**	X18	Z1-12

◿ Standard orifice - does not appear in the type code

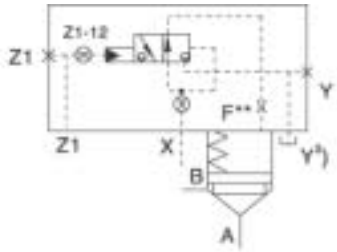
◿ Orifice possible, if required state details

[2)] Directional poppet valve with spring return

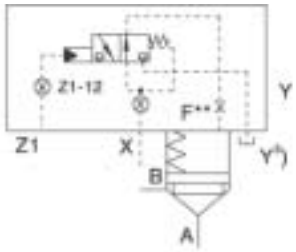
LFA.R 6XB/···
NS 25 to 50



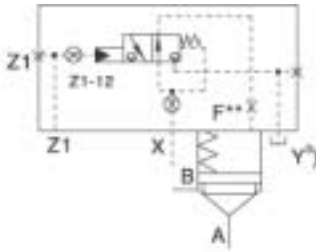
LFA.R 6XB/···
NS 63

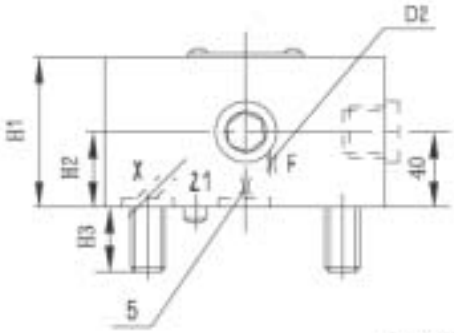


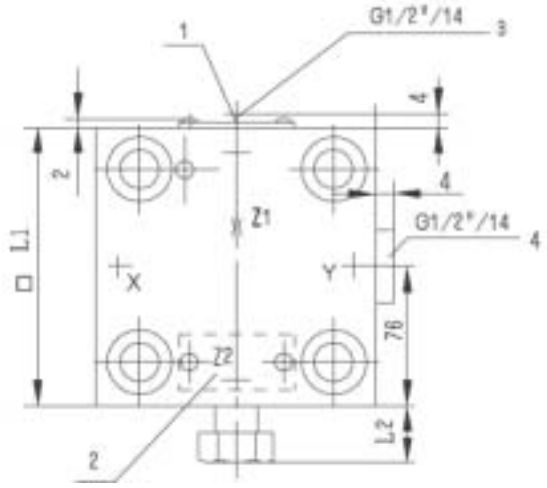
LFA.R2- 6XB/···
NS 25 to 50



LFA.R2- 6XB/···
NS 63







Area relationship $\frac{A_{Z1}}{A_X} = \frac{3}{1}$

NS		25	32	40	50	63
D1		M6	M6	M8 × 1	M8 × 1	M8 × 1
D2[1)]		M6	M6	M8 × 1	M8 × 1	M8 × 1
H1		40	50	60	68	82
H2		17	22	33	32	40
H3		24	28	32	34	50
□L1		85	100	125	140	180
L2	R	2	1	27	24	18.5
	R2-	18.5	17.5	27	24	18.5

[1)] For orifice ordering details, see page 7.
[3)] Pressure in port Y max. 0.5MPa
1 Nameplate for size 25, 32
2 Nameplate for size 40, 50, 63
3 Port Z1 optionally as a threaded connection for size 63
4 Port Y optionally as a threaded connection for size 63
5 D1 for size 16 to 50
6 D1 for size 63

Control cover with built-in directional poppet valve: types ,...R...,...R2... (Dimensions in mm)

NS 80 and 100

1	2	3	4	15	17	18	19
LFA			6X	B			*

Further details in clear text

No code = Mineral oils
V = Phosphate ester

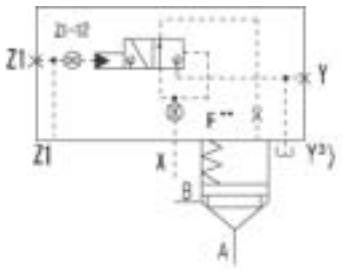
Size	Type	Orifice in port (diameter in 1/10 mm)		
		F	X	Z1
80	R	F**	X20	Z1-12
100		F**	X25	Z1-12
80	R2-[2)]	F**	X20	Z1-12
100		F**	X25	Z1-12

◿ Standard orifice - does not appear in the type code

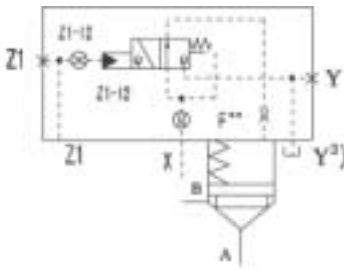
◿ Orifice possible, if required state details

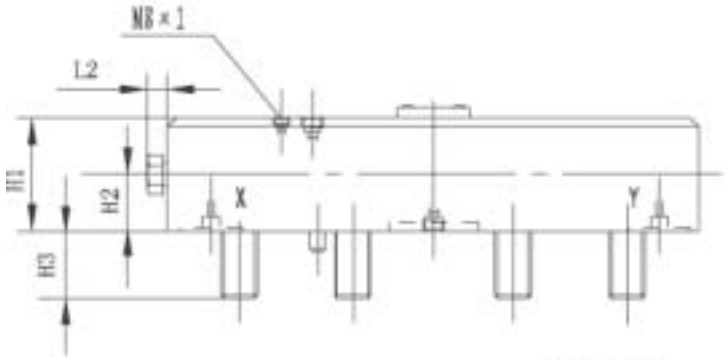
[2)] Directional poppet valve with spring return

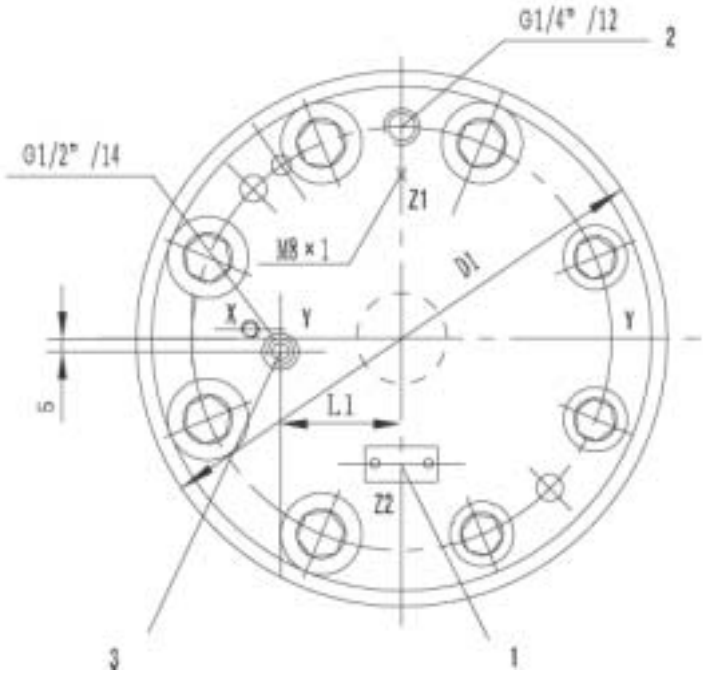
LFA.R 6XB/···
Size 80 and 100



LFA.R2- 6XB/···
Size 80 and 100







Area relationship $\frac{A_{Z1}}{A_X} = \frac{3}{1}$

Size	80	100
D1	250	300
H1	80	90
H2	40	45
H3	45	52.5
L1	51	74
L2	21	17

[1)] For orifice ordering details, see page 7.

[3)] Pressure in port Y max. 0.5MPa

1 Nameplate
2 Port Z1 optionally as a threaded connection
3 Port X optionally as a threaded connection

Control cover for mounting a directional spool or directional poppet valve: types ...WE $^{A}_{B}$ ... (Dimensions in mm)

NS 16 to 63

1	2	3	4	11	12	13	14	18	19
LFA			6X	B					*

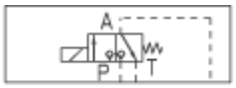
Further detials in clear text

No code = Mineral oils
V = Phosphate ester

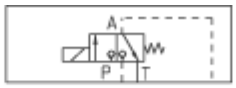
Techology of Beijing Huade Hydraulic

NS						Type	Orifice in port (diameter in 1/10 mm)			
16	25	32	40	50	63		A	B	P	T
X	X	X	X	X	X	WEA	A**		P**	T**
X	X	X	X	X	X	WEB		B**	P**	T**

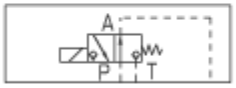
Orifice possible, if required state details



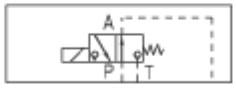
M — 3SEW6C2XB/420L···



M — 3SEW6C2XB/420L···

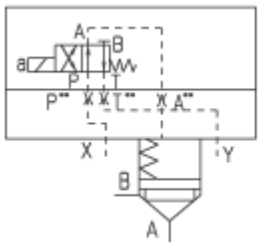


M — 3SEW6U2XB/420L···

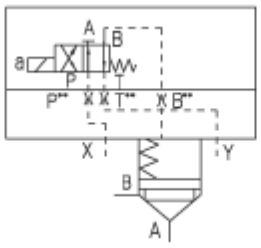


M — 3SEW6U2XB/420L···

4WE6D5XB/···

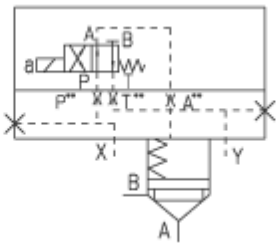


LFA.WEA6XB/···
Size 16 to 32

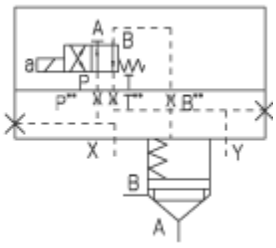


LFA.WEB6XB/···
Size 16 to 32

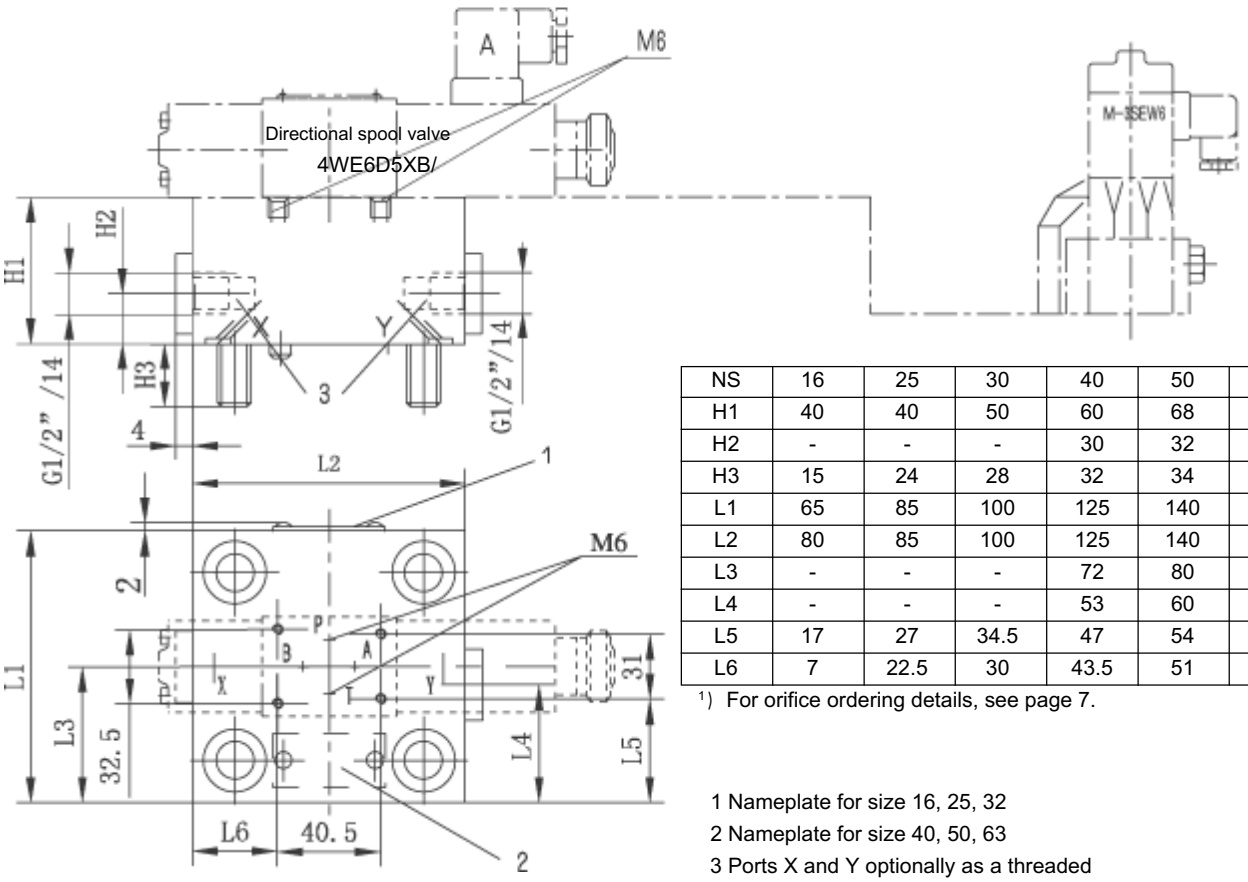
4WE6D5XB/···



LFA.WEA6XB/···
Size 40 to 63



LFA.WEB6XB/···
Size 40 to 63



NS	16	25	30	40	50	63
H1	40	40	50	60	68	82
H2	-	-	-	30	32	40
H3	15	24	28	32	34	50
L1	65	85	100	125	140	180
L2	80	85	100	125	140	180
L3	-	-	-	72	80	101
L4	-	-	-	53	60	79
L5	17	27	34.5	47	54	74.5
L6	7	22.5	30	43.5	51	71

[1]) For orifice ordering details, see page 7.

1 Nameplate for size 16, 25, 32
2 Nameplate for size 40, 50, 63
3 Ports X and Y optionally as a threaded connection for size 40 , 50 and 63

Control cover for mounting a directional spool or directional poppet valve: types ...WE $^{A}_{B}$ ... (Dimensions in mm)

NS 80 and 100

1	2	3	4		5	11	12	13	14	18	19
LFA			6X	B							*

Further detials in clear text

NS		Type		Orifice in port (diameter in 1/10 mm)			
50	63			A	B	P	T
X	X	WEA		A**		P**	T**
X	X	WEA	630[2])	A**		P**	T**
X	X	WEB			B**	P**	T**

No code = Mineral oils
V = Phosphate ester

Orifice possible, if required state details

[2]) for mounting a directional spool valve; operating pressure >31.5 MPa



M — 3SEW 10 C 2XB/315…

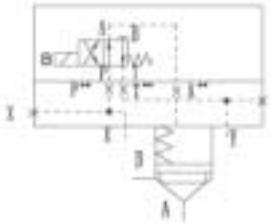


M — 3SEW 10 C 2XB/630…

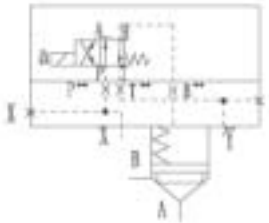


M — 3SEW 10 U 2XB/315…

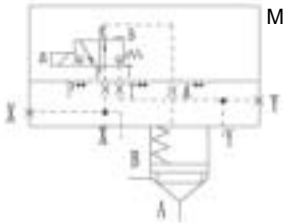
4WE 10 D 3XB/…



LFA.WEA.6XB/…
Size 80 and 100

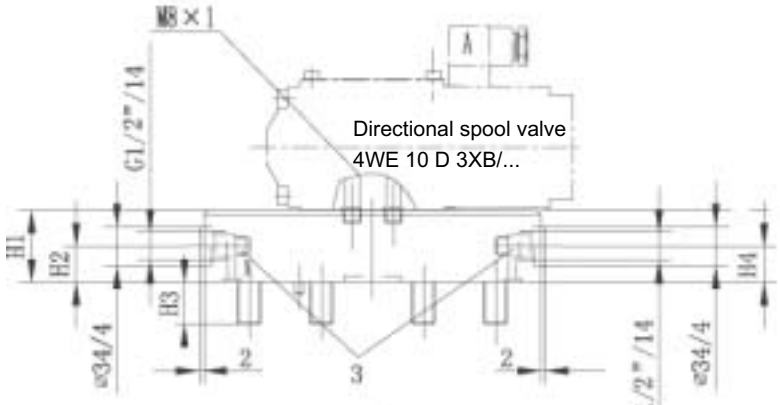


LFA.WEB.6XB/…
Size 80 and 100

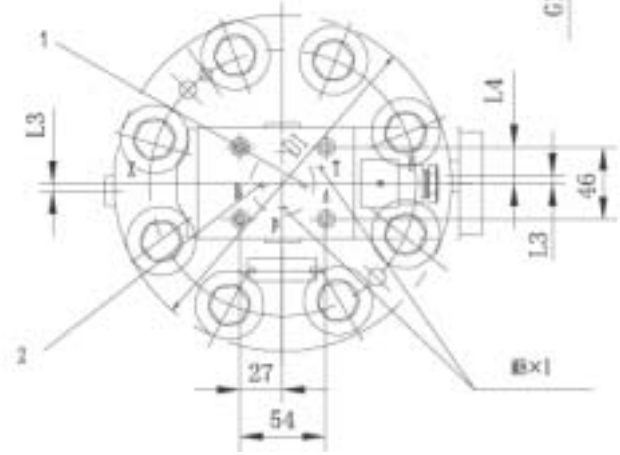


M — 3SEW 10 U 2XB/630…

LFA.WEA.6XB/630…
Size 80 and 100







Size	80	100
D1	250	300
H1	80	100
H2	30	24
H3	45	52.5
H4	45	55
L3	10	13
L4	30	28

For orifice ordering details, see page 7.

1 Plug for type .. WEB..
2 Plug for type .. WEA.
3 Ports X and Y optionally as a threaded connection

Control cover for mounting a directional spool or directional poppet valve: types ...WE $^{A}_{B}$ 8 ... (Dimensions in mm)

NS 16 to 63

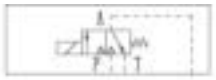
1	2	3	4		13	14	14	18	19
LFA		–	6X	B					*

Further detials in clear text

Size						Type	Orifice in port (diameter in 1/10 mm)		
16	25	32	40	50	63		B	P	T
X	X	X	X	X	X	WEA8	F**	P**	T**
X	X	X	X	X	X	WEB8	F**	P**	T**

No code = Mineral oils
V = Phosphate ester

Orifice possible, if required state details



M — 3SEW6C2XB/420L···



M — 3SEW6U2XB/420L···

4WE6D5XB/···

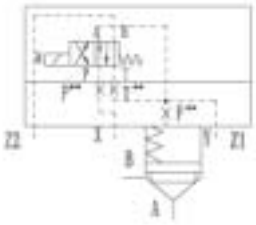


M — 3SEW6C2XB/420L···

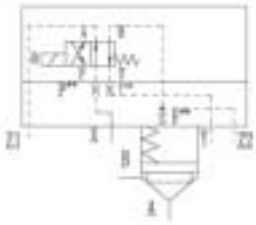


M — 3SEW6U2XB/420L···

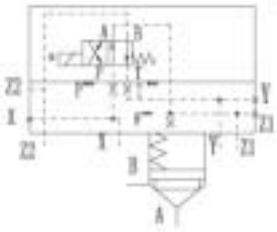
4WE6D5XB/···



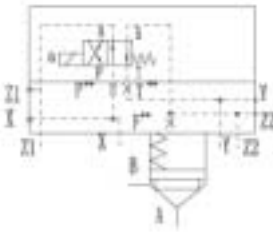
LFA.WEA 8-6XB/···
Size 16 to 32



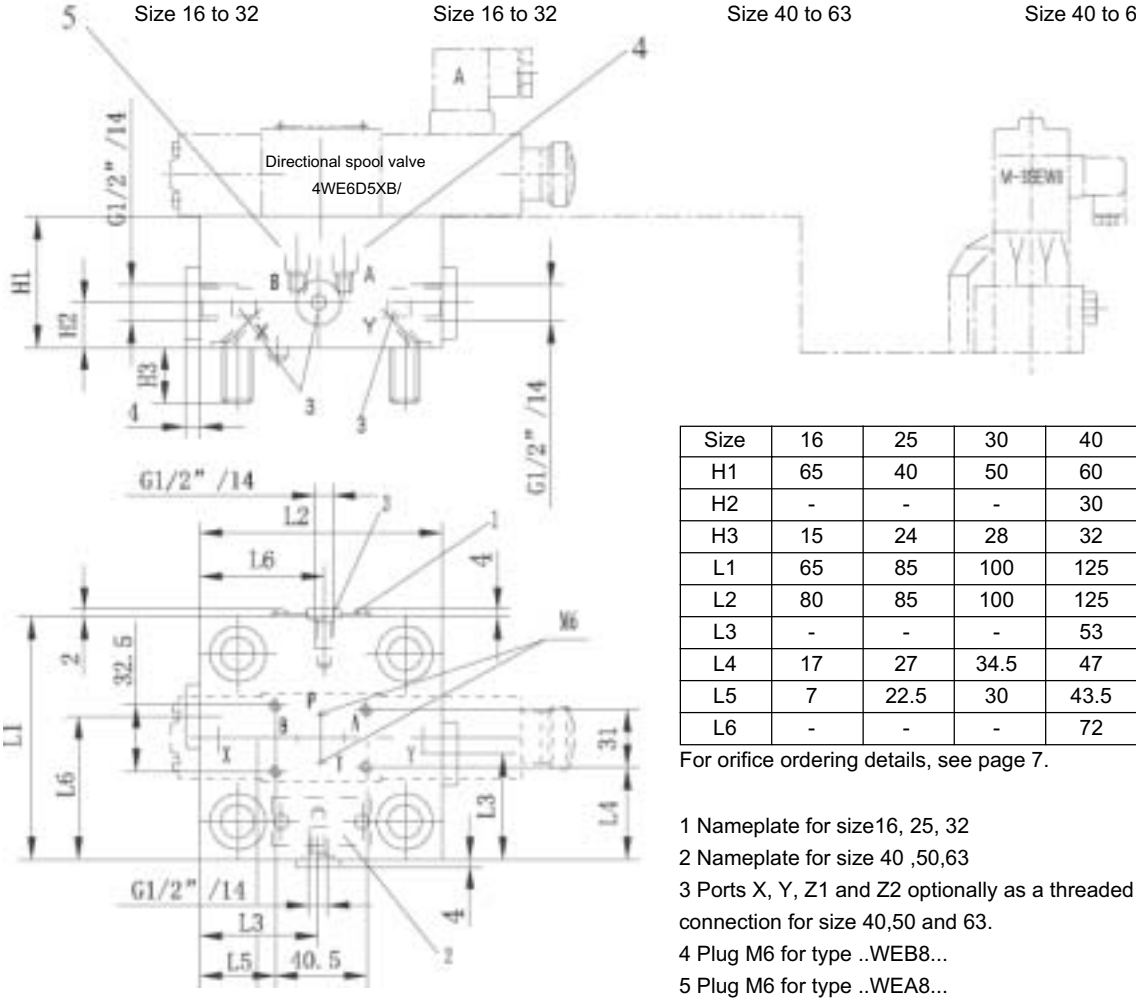
LFA.WEB 8-6XB/···
Size 16 to 32



LFA.WEA 8-6XB/···
Size 40 to 63



LFA.WEB 8-6XB/···
Size 40 to 63



Size	16	25	30	40	50	63
H1	65	40	50	60	68	82
H2	-	-	-	30	32	40
H3	15	24	28	32	34	50
L1	65	85	100	125	140	180
L2	80	85	100	125	140	180
L3	-	-	-	53	60	79
L4	17	27	34.5	47	54.5	74.5
L5	7	22.5	30	43.5	51	71
L6	-	-	-	72	80	101

For orifice ordering details, see page 7.

1 Nameplate for size16, 25, 32
2 Nameplate for size 40 ,50,63
3 Ports X, Y, Z1 and Z2 optionally as a threaded connection for size 40,50 and 63.
4 Plug M6 for type ..WEB8...
5 Plug M6 for type ..WEA8...

Control cover for mounting a directional spool valve: type ..WEA9 (Dimensions in mm)

NS 16 to 63

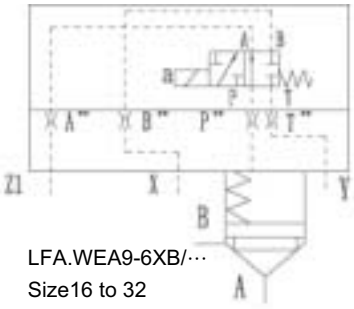
1	2	3	4	11	12	13	14	18	19
LFA			6X	B					*

Further detials in clear text

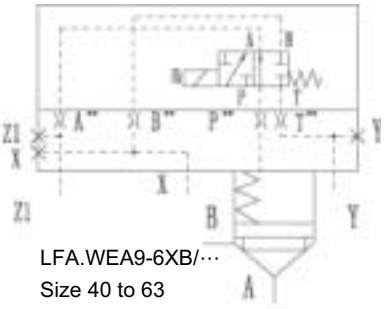
Size						Type	Orifice in port (diameter in 1/10 mm)			
16	25	32	40	50	63		A	B	P	T
X	X	X	X	X	X	WEA9	A**	B**	P**	T**

No code = Mineral oils
V = Phosphate ester

Orifice possible, if required state details

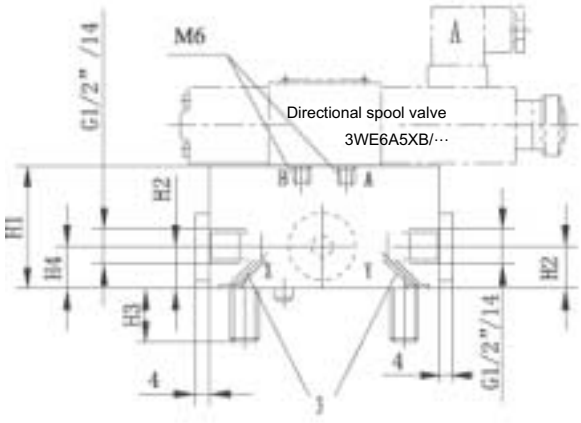


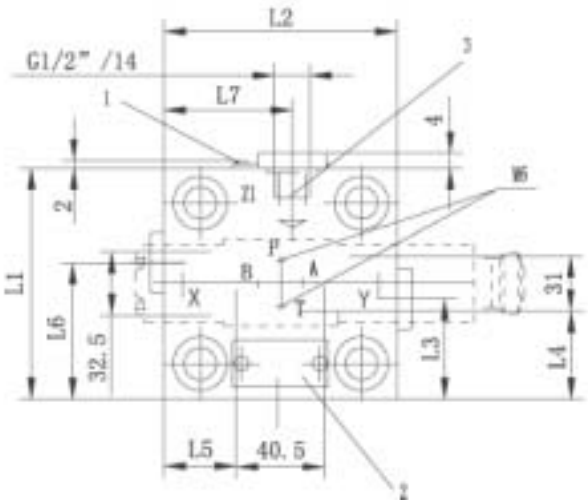
LFA.WEA9-6XB/…
Size16 to 32



3 WE 6A 5XB/…

LFA.WEA9-6XB/…
Size 40 to 63





NS	16	25	30	40	50	63
H1	40	40	50	60	68	82
H2	-	-	-	30	32	40
H3	15	24	28	32	34	50
H4	-	-	-	30	32	60
L1	65	85	100	125	140	180
L2	80	85	100	125	140	180
L3	-	-	-	53	60	79
L4	17	27	34.5	47	54.5	74.5
L5	7	22.5	30	43.5	51	71
L6	-	-	-	62.5	70	90
L7	-	-	-	72	80	101

For orifice ordering details, see page 7.

1 Nameplate for size 16, 25, 32

2 Nameplate for size 40 ,50 ,63

3 Ports X, Yand Z1 optionally as a threaded connection for size 40, 50 and 63.

Control cover for mounting a directional spool or directional poppet valve: types ...GW $\frac{A}{B}$ ...(Dimensions in mm)

NS 16 to 63

1	2	3	4	11	12	13	14	18	19
LFA			6X	B					*

Further detials in clear text

Size						Type	Orifice in port (diameter in 1/10 mm)			
16	25	32	40	50	63		A	B	P	T
X	X	X	X	X	X	GWA	A**		P**	T**
X	X	X	X	X	X	GWB		B**	P**	T**

No code = Mineral oils
V = Phosphate ester

Orifice possible, if required state details

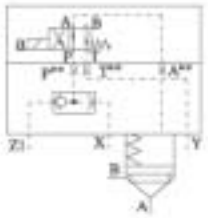


M — 3SEW6C2XB/420L···

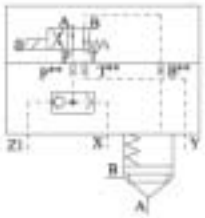


M — 3SEW6U2XB/420L···

4WE6D5XB/···



LFA.GWA 6XB/···
Size 16 to 32



LFA.GWB 6XB/···
Size 16 to 32

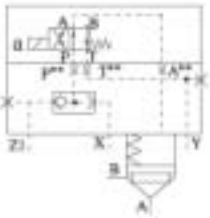


M — 3SEW6C2XB/420L···

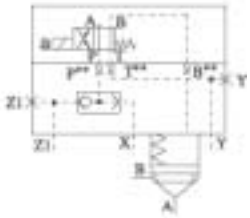


M — 3SEW6U2XB/420L···

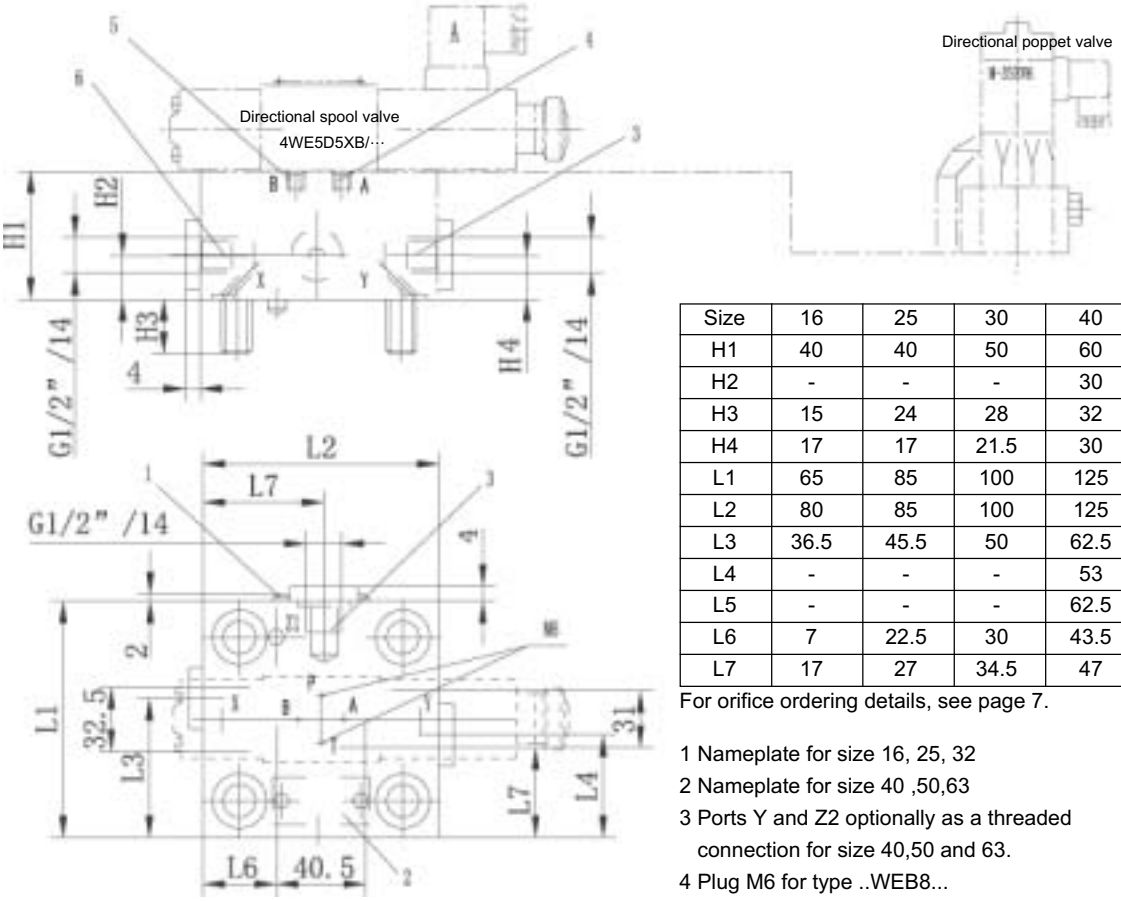
4WE6D5XB/···



LFA.GWA 6XB/···
Size 40 to 63



LFA.GWB 6XB/···
Size 40 to 63



Size	16	25	30	40	50	63
H1	40	40	50	60	68	82
H2	-	-	-	30	32	40
H3	15	24	28	32	34	50
H4	17	17	21.5	30	32	42
L1	65	85	100	125	140	180
L2	80	85	100	125	140	180
L3	36.5	45.5	50	62.5	70	90
L4	-	-	-	53	60	79
L5	-	-	-	62.5	70	90
L6	7	22.5	30	43.5	51	71
L7	17	27	34.5	47	54.5	74.5

For orifice ordering details, see page 7.

1 Nameplate for size 16, 25, 32
2 Nameplate for size 40 ,50,63
3 Ports Y and Z2 optionally as a threaded connection for size 40,50 and 63.
4 Plug M6 for type ..WEB8...
5 Plug M6 for type ..WEA8...
6 Shuttle valve

Control cover for mounting a directional spool or directional poppet valve: types ...GW $^{A}_{B}$ ...(Dimensions in mm)

NS 80 and 100

1	2	3	4	11	12	13	14	18	19
LFA			6X	B					*

Further detials in clear text

No code = Mineral oils
V = Phosphate ester

Orifice possible, if required state details

[2]) For pressure >31.5MPa

Size		Type		Orifice in port (diameter in 1/10 mm)			
16	25			A	B	P	T
X	X	GWA		A**		P**	T**
X	X	GWA	630[2])	A**		P**	T**
X	X	GWB			B**	P**	T**



M — 3SE 10 C 2XB/315…

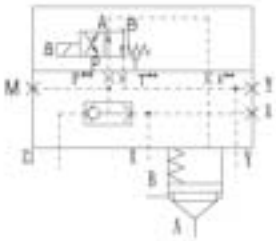


M — 3 SE 10 U 2XB/315…

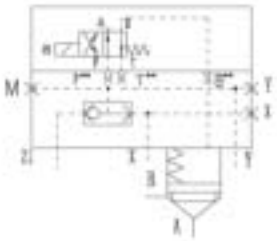


M — 3 SE 10 C 2XB/630…

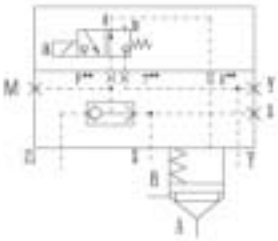
4WE 10 D 3XB/…



LFA.GWA .6XB/…
Size 80 and 100

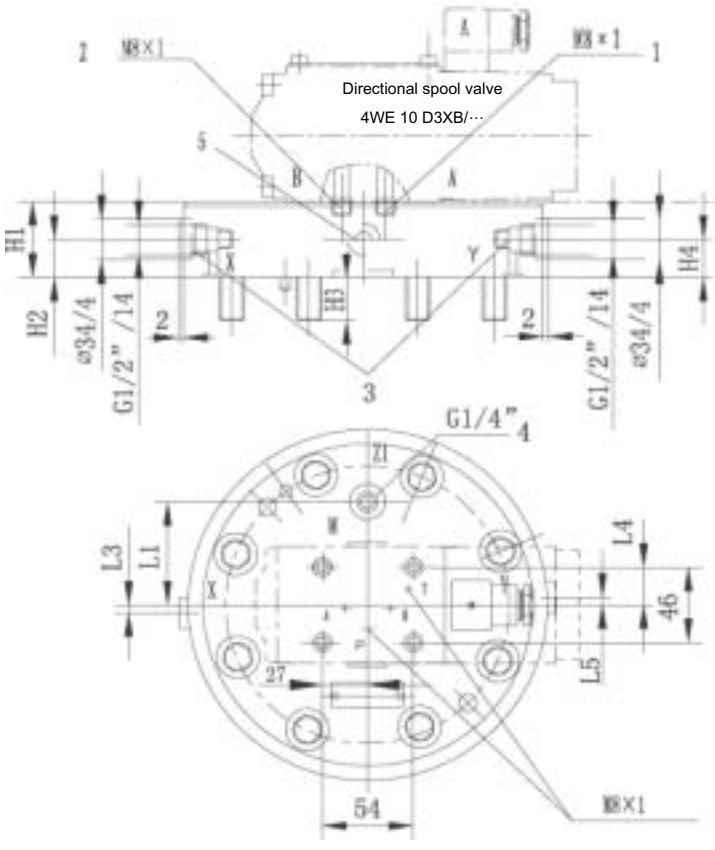


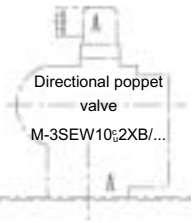
LFA.GWB 6XB/…
Size 80 and 100



M — 3SE 10 U 2XB/630…

LFA.GWA 6XB/630…
Size 80 and 100





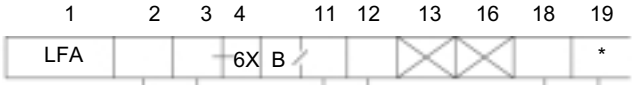
Size	80	100
D1	250	300
H1	80	100
H2	26	40
H3	45	52.5
H4	26	55
L1	74	96.5
L3	9.5	13
L4	29	28
L5	10.5	13

[1]) For orifice ordering details, see page 7.

1 Plug M6 for type ..WEB...
2 Plug M6 for type ..WEA...
3 Ports X and Y optionally as a threaded connection
4 Test point
5 Shuttle valve

Control cover for mounting a directional spool or directional poppet valve: types ...KW $^{A}_{B}$ ...(Dimensions in mm)

NS16 to 63



Further detials in clear text

No code = Mineral oils
V = Phosphate ester

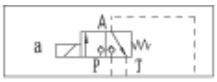
Size	Type	Orifice in port (diameter in 1/10 mm) A	B	P	T
16	KWA	A**		P10	X12
25		A**		P10	ø1.5
32		A**		P10	ø2.0
40		A**		P12	X12
50		A**		P15	X15
63		A**		P18	X18
16	KWB		A**	P10	P10
25			A**	P10	P10
32			A**	P10	P10
40			A**	P12	P12
50			A**	P15	P15
63			A**	P18	P18

Orifice drilled (diameter in mm)
Standard orifice (diameter in 1/10 mm)
Orifice possible, if required state details(diameter in 1/10 mm)
Does not appear in the type code

For orifice ordering details, see page 7.

1 Nameplate for sizes 16, 25 and 32
2 Nameplate for sizes 40,50 and 63
3 Ports Y and Z1 optionally as a threaded connection for sizes 50 and 63
4 Plug for type ..KWB...
5 Plug for type ..KWA...
6 Shuttle valve
7 M6 for sizes 16 and 40, M8 x 1 for size 50 and 63

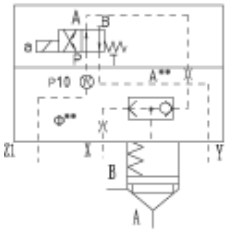
M — 3SEW6C 2XB/420L



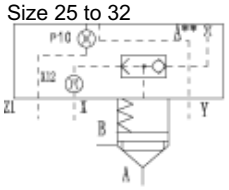
M — 3SEW6C 2XB/420L



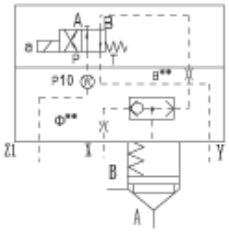
4WE 6 D 5XB/···



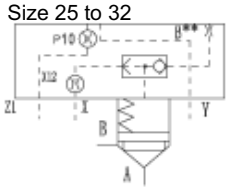
LFA.KWA .6XB/···
Size 25 to 32



LFA.KWA .6XB/···
Size 16



LFA.KWB .6XB/···
Size 25 to 32



LFA.KWA .6XB/···
Size 16

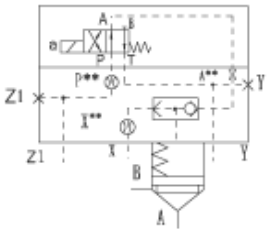
M — 3SEW6C 2XB/420L



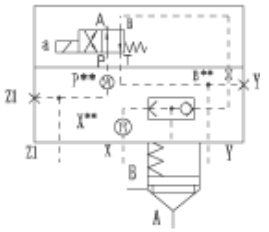
M — 3SEW6C 2XB/420L



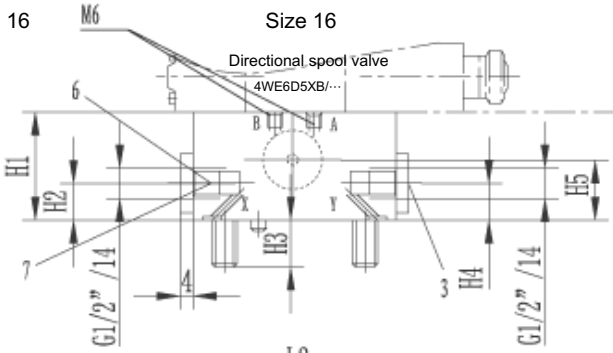
4WE 6 D 5XB/···

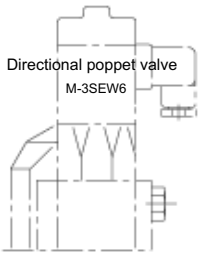


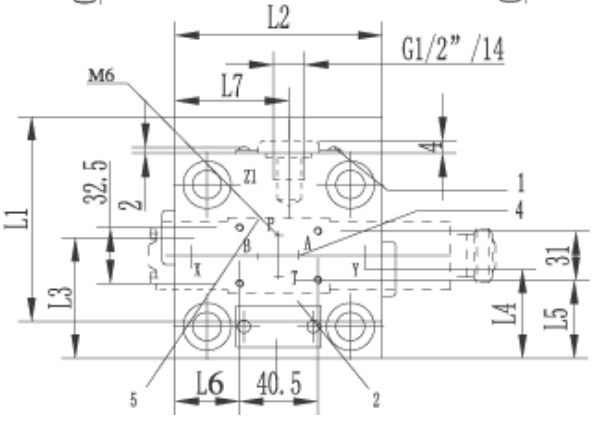
LFA.KWA .6XB/···
Size 40 to 63



LFA.KWB 6XB/···
Size 40 to 63







Size	16	25	32	40	50	63
H1	40	40	50	60	68	82
H2	17	17	21.5	30	32	40
H3	15	24	28	32	34	50
H4	-	-	-	30	32	42
H5	-	-	-	30	50	60
L1	65	85	100	125	140	180
L2	80	85	100	125	140	180
L3	36.5	45.5	50	62.5	72	90
L4	-	-	-	53	60	79
L5	17	27	34.5	47	54.5	74.5
L6	7	22.5	30	43.5	51	71
L7	-	-	-	62.5	70	90

Control cover for mounting a directional spool or directional poppet valve: types ...KW $\frac{A}{B}$ ...(Dimensions in mm)

NS 80 and 100

1	2	3	4	5	11	12	13	14	16	18	19
LFA			6X B								*

Further detials in clear text

No code = Mineral oils
V = Phosphate ester

Size		Type		Orifice in port (diameter in 1/10 mm)				
80	100			A	B	P	T	X
x	x	GWA		A**		P20	T**	X20
x	x	GWA	630[2])	A**		P20	T**	X20
x	x	GWA			B**	P20	T**	X20

◿ Standard orifice - does not appear in the type code

◿ Orifice possible, if required state details

[2])for mounting directional spool valve operating pressure>31.5MPa



M — 3SE 10C 2XB/315···

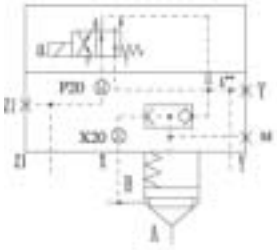


M — 3SE 10U 2XB/315···

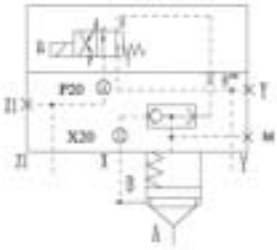


M--3SE 10C 2XB/630···

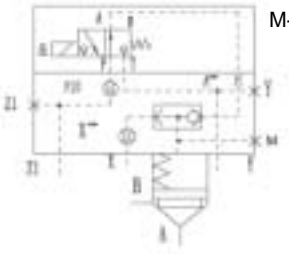
4WE 10 D 3XB/···



LFA.KWA.6XB/···
NS 25 and 32

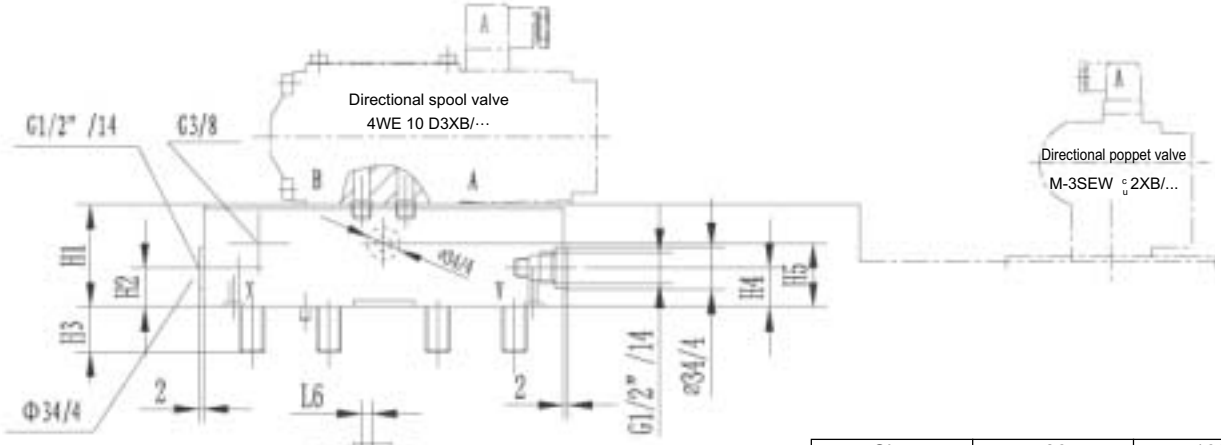


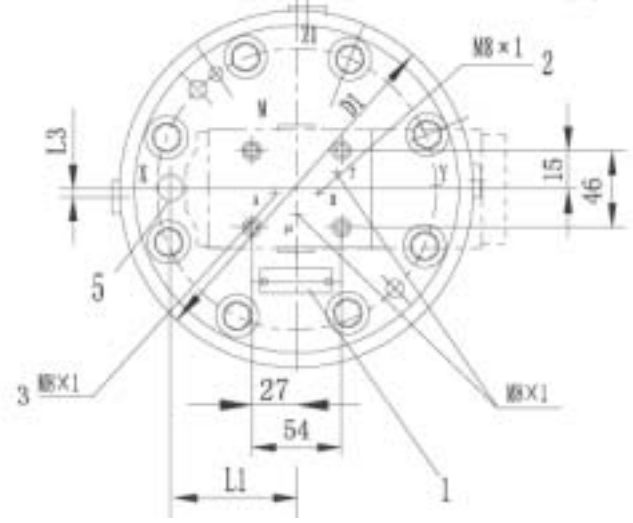
LFA.KWB 6XB/···
NS 25 and 32



M--3SE 10U 2XB/630···

LFA.KWA.6XB/···
NS 40 and 63





Size	80	100
D1	250	300
H1	100	110
H2	19.5	27
H3	45	52.5
H4	60	70
H5	52	62
L1	55	62
L3	6.5	5
L6	6.5	2

For orifice ordering details, see page 7.

1 Nameplate
2 Plug for type ..KWB...
3 Plug for type ..KWA...
4 Shuttle valve

Control cover with electrical monitoring of the closed position: type ..E...

(monitoring of closed spool position) **(Dimensions in mm)**

Technical data and notes are valid for all control cover with electrical monit foring(E..., EH2-...,EWA...and EWB...)
The solid state limit switch with integral amplifier switches when the closed position is reached. This limit switch has the followin advantages:
- No dynamic seals
- Direct monitoring of the closed switched position of the valve
- Long service life
- Control cover and cartridge valve completely included in the type code
- pmax = 40MPa.

connection:
24 V DC (residual ripple ⩽ 10%)
Max. loading :0.4A(PNP output)

Function:

Normally closed:high resistance
Normally open :low resistance

Pin allocation(in plug Z4):
4 = Normally open (high resistance to low resistance)
3 = 24V +
2 = Normally closed (low resistance to high resistance)
1 =0 V -

Temperature range:-10℃ to 80℃
Insulation to DIN 40050 IP65

NS 16 to 63

1	2	3	4		6	7	8	9	10	16	18	19
LFA		E	6X	B			D	QOG24	F			*

Further detials in clear text

Size					
16	25	32	40	50	63
X	X	X	X	X	X

Area ratio A1:A2
CA=2:1 [1]
CB=14.3:1 [2]

Cracking pressure Po
10=0.1MPa
20=0.2MPa
40=0.4MPa

Orifice in port
X**

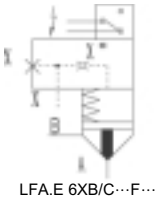
No code = Mineral oils
V = Phosphate ester

Orifice possible, if required state details (diameter in 1/10 mm)

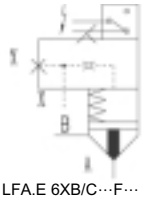
[1]) Annulus area = 50%

[2]) Annulus area = 7%

Technology of Beijing Huade Hydraulic

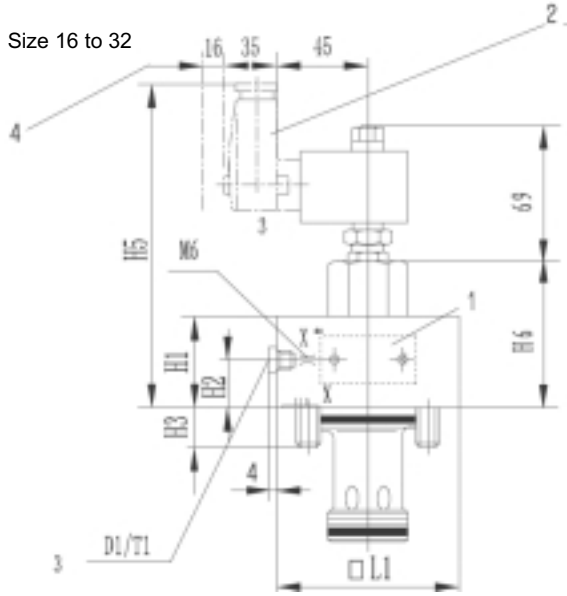


LFA.E 6XB/C···F···

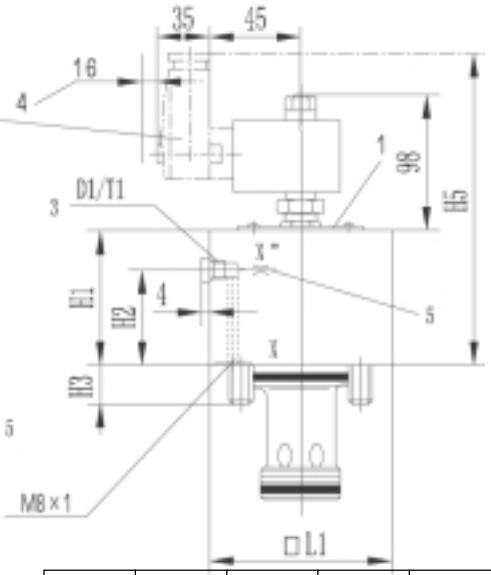


LFA.E 6XB/C···F···

Size 16 to 32



Size 40 to 63



Size	16	25	32	40	50	63
D1	G1/8″	G1/4″	G1/4″	G1/2″	G1/2″	G3/4″
H1	35	40	50	120	130	150
H2	12	16	16	90	105	116
H3	15	24	28	32	34	50
H5	159	164	168	219	229	249
H6	70	75	79	-	-	-
□L1	65	85	100	125	140	180
L2	8	12	12	14	14	16

1 Nameplate
2 Plug-in connector (separate order)
3 Port X optionally as a threaded connection
4 Space required to remove plug-in connector
5 M8X1 for size 40 and 50,G3/8" for size 63

For orifice ordering details, see page 7.

Control cover with electrical monitoring of the closed position and stroke limiter: type...EH2...

(monitoring of closed spool position) **(Dimensions in mm)**

NS 16 to 63

1	2	3	4	6	7	8	9	10	16	18	19
LFA		EH2	6X	B		D	QOG24	F			*

Further detials in clear text

Size					
16	25	32	40	50	63
X	X	X	X	X	X

Area ratio A1:A2
CA=2:1 [1])
CB=14.3:1 [2])

Cracking pressure Po
10=0.1MPa
20=0.2MPa
40=0.4MPa

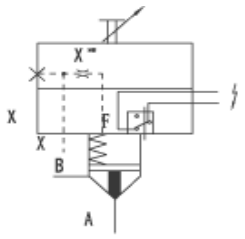
Orifice in port
A**

No code = Mineral oils

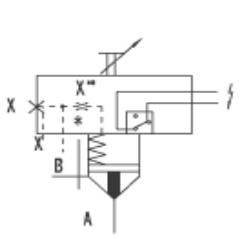
V = Phosphate ester

Orifice possible, if required state details

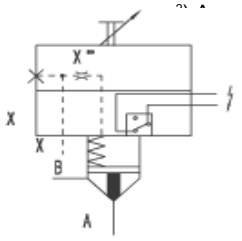
[1]) Annulus area = 50%



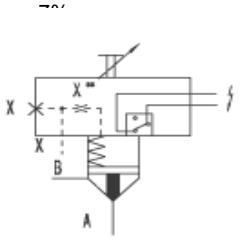
LFA.EH2- 6XB/CA···F···
size 16 to 32



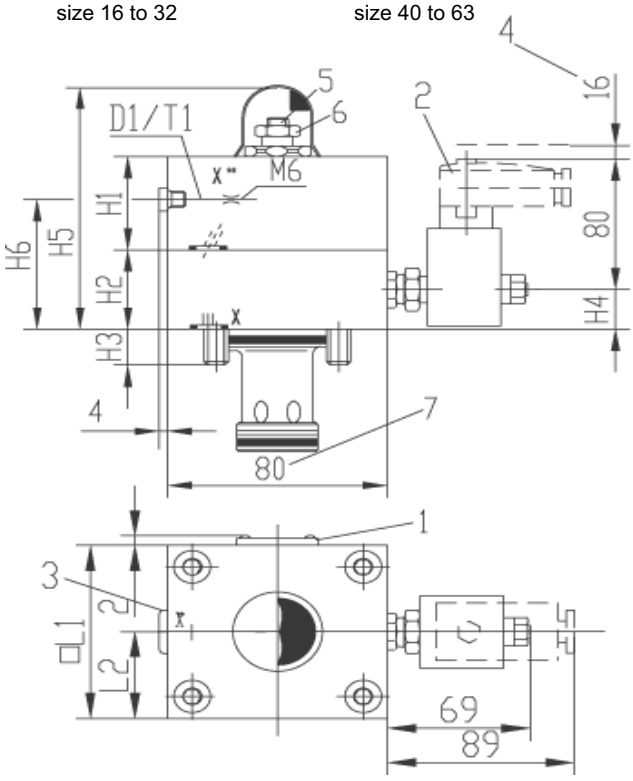
LFA.EH2- 6XB/CA···F···
size 40 to 63



LFA.EH2- 6XB/CB···F···
size 16 to 32



LFA.EH2- 6XB/CB···F···
size 40 to 63



Size	16	25	32	40	50	63
D1	G1/8″	G1/4″	G1/4″	G1/2″	G1/2″	G3/4″
H1	35	40	50	140	150	170
H2	40	40	50	-	-	-
H3	15	24	28	32	34	50
H4	20	20	25	30	30	30
H5	115	120	144	165[3)]	195[3)]	235[3)]
H6	52	56	66	90	100	112
L1	65	85	100	125	140	180
L2	32.5	42.5	50	72	80	90
T1	8	12	12	14	14	16
1A/F	-	-	-	12	17	19
2A/F	-	-	-	36	46	55

1 Nameplate
2 Plug-in connector (separate order)
3 Port X optionally as a threaded connection
4 Space required to remove plug-in connector
5 Nut 6A/F
6 Nut 19A/F
7 For size 16 (only lower cover)

For orifice ordering details, see page 7

[3)]Max. dimension.

Control cover with electrical monitoring of the closed position for mounting a directional spool orpoppet valve: types...EW$^{A}_{B}$ ...(monitoring of closed spool position) **(Dimensions in mm)**

NS 16 to 63

1	2	3	4	6	7	8	9	11	12	13	14	18	19
LFA			6X	B		D	QOG24						*

Further detials in clear text

Size						Type
16	25	32	40	50	63	
X	X	X	X	X	X	EWA
X	X	X	X	X	X	EWB

Area ratio A1:A2
CA=2:1 [1])
CB=14.3:1 [2])

Cracking pressure Po
10=0.1MPa
20=0.2MPa
40=0.4MPa

Orifice in port			
A	B	P	T
A**		P**	T**
	B**	P**	T**

No code = Mineral oils
V = Phosphate ester

⊿ Orifice possible, if required state details
[1]) Annulus area = 50%
[2]) Annulus area = 7%

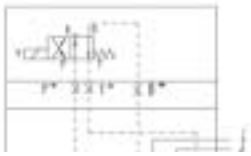


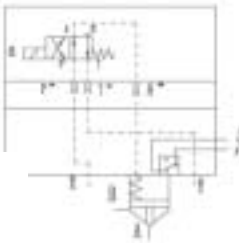
M—3SEW6C30B/420L...



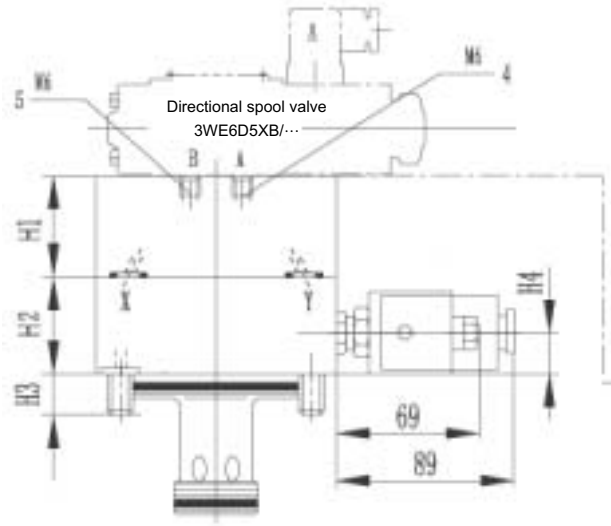
M—3SEW6U30B/420L...

4WE6D...

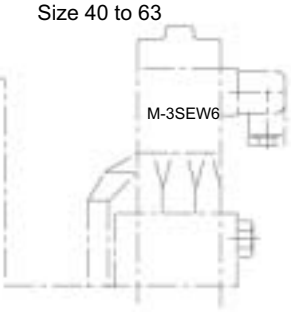




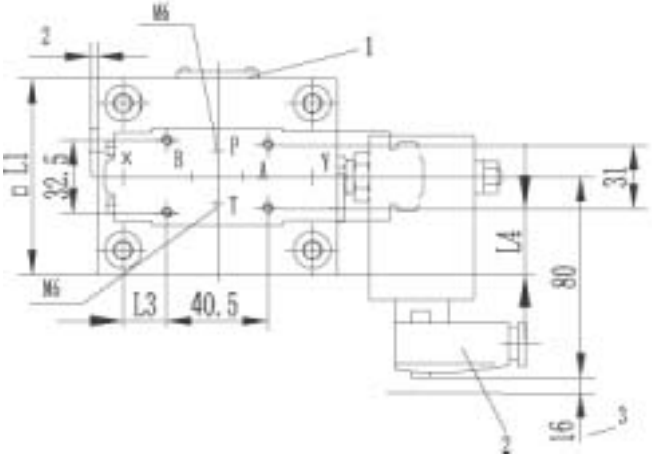
NS 16 to 32



LFA.EWA 6XB/···
Size 40 to 63



LFA.EWB 6XB/···
Size 40 to 63



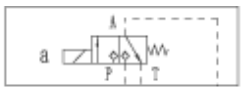
Size	16	25	32
H1	40	40	50
H2	40	40	50
H3	15	24	28
H4	20	20	25
L1	65	85	100
L2	80	85	100
L3	7	22.5	30
L4	17	27	34.5

For orifice ordering details, see page 7.

1 Nameplate
2 Plug-in connector (separate order)
3 Space required to reremove plug-in connector
4 Ports X and Y optionally as a threaded connection
5 Plug M6 for type ..EWB...
6 Plug M6 for type ..EWA...

Control cover with electrical monitoring of the closed position for mounting a directional spool or poppet valve: types...EW $^{A}_{B}$ ...(monitoring of closed spool position) **(Dimensions in mm)**

NS 40 to 63

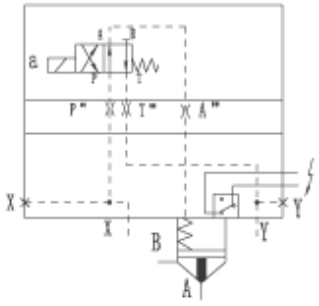


M — 3SEW6C2XB/420L···

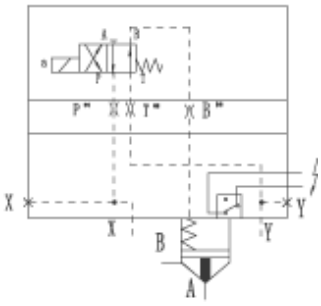


M — 3SEW6U2XB/420L···

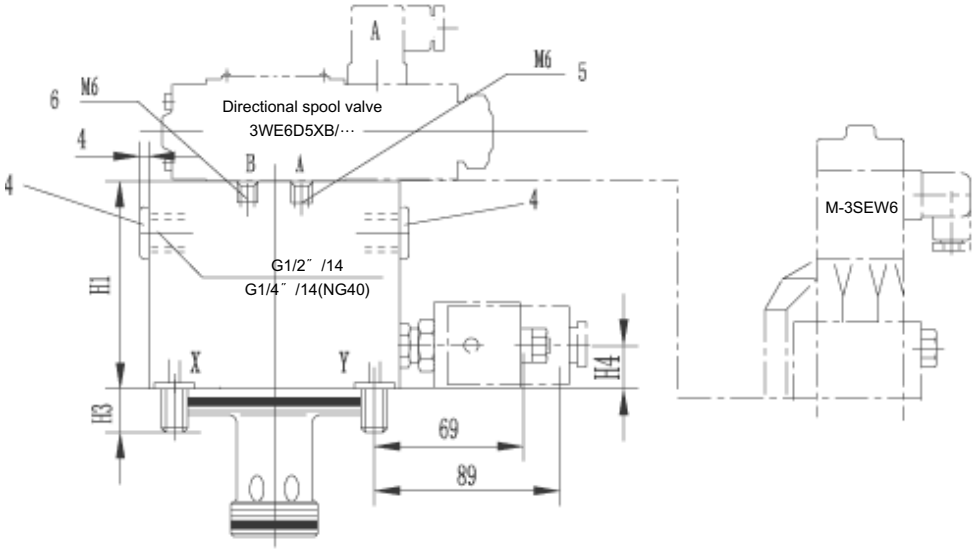
4WE6D5XB/···

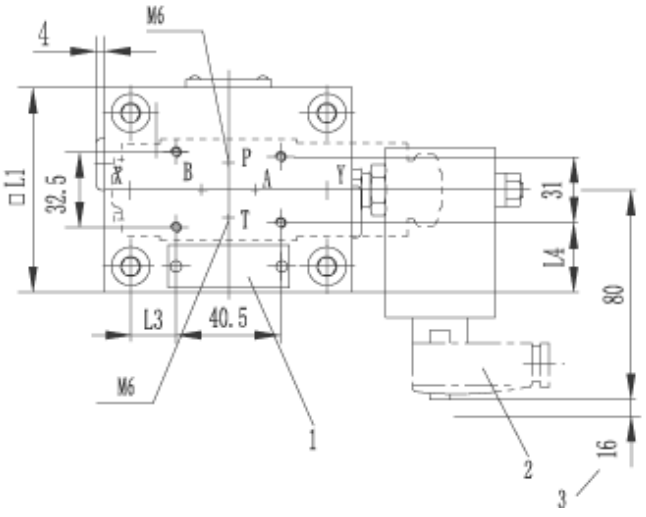


LFA.EWA 6XB/···
Size 40 to 63



LFA.EWB 6XB/···
Size 40 to 63





Size	40	50	63
H1	120	130	150
H3	32	34	50
H4	30	30	30
□L1	125	140	180
L2	43.5	51	71
L3	47	54.5	74.5

For orifice ordering details, see page 7.

1 Nameplate
2 Plug-in connector (separate order)
3 Space required to reremove plug-in connector
4 Plug M6 for type ..EWB...
5 Plug M6 for type ..EWA...

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