

NO. HL-EN-L-LC.. 06/2024

2-way cartridge valves -directional function

5.1-1

Cartridge valves Type L-LC..

Ordering code

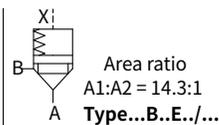
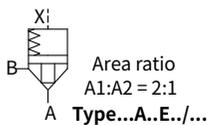
• Cartridge valves (without control cover)

	L-LC				-	7X	/	*	Further details in clear text
Cartridge valves									No code = NBR seals V = FKM seals
Nominal size 16	= 16								7X= Series 70 to 79 (70 to 79: unchanged installation and connection dimensions)
Nominal size 25	= 25								E = Valve poppet without damping nose D = Valve poppet with damping nose
Nominal size 32	= 32								00 = Cracking pressure approx. 0bar (without spring)
Nominal size 40	= 40								05 = Cracking pressure approx. 0.5 bar
Nominal size 50	= 50								10 = Cracking pressure approx. 1 bar
Nominal size 63	= 63								20 = Cracking pressure approx. 2 bar
Area ratio 2:1 (annulus area = 50%) = A									40 = Cracking pressure approx. 4bar (not size 125)
Area ratio 14.3:1 (annulus area = 7%) = B									

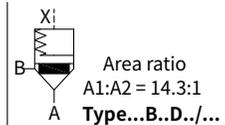
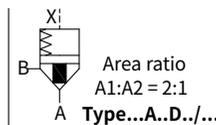
Symbols

• Cartridge valves (see Ordering details)

Poppet without damping nose



Poppet with damping nose



Technical data

• 2-way cartridge valves directional

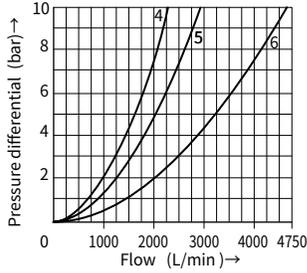
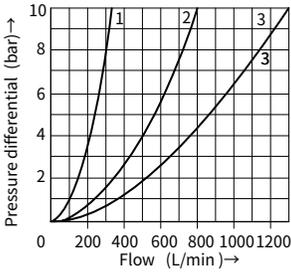
Area	Version	Size					
		16	25	32	40	50	63
A1 cm ²	LC..A..	1.89	4.26	6.79	11.1	19.63	30.2
	LC..B..	2.66	5.73	9.51	15.55	26.42	41.28
A2 cm ²	LC..A..	0.95	1.89	3.39	5.52	8.64	14
	LC..B..	0.18	0.43	0.67	1.07	1.85	2.90
A3 cm ²	LC..A..	2.84	6.16	10.18	16.62	28.27	44.2
	LC..B..	2.84	6.16	10.18	16.62	28.27	44.2
Stroke cm	LC..E..	0.9	1.17	1.4	1.7	2.1	2.3
	LC..D..	0.9	1.17	1.4	1.9	2.3	2.8
Pilot volume cm ³	LC..E..	2.56	7.21	14.3	28.3	59.4	102
	LC..D..	2.56	7.21	14.3	31.6	65.0	124
Theoretical ¹⁾ pilot fow (L/min)	LC..E..	15.4	43.3	86	170	356	612
	LC..D..	15.4	43.3	86	190	390	744
Weight kg	cartridge valves L-LC	0.25	0.5	1.1	1.9	3.9	7.2
Cracking pressure (bar)	LC..A 00..	0.02	0.02	0.05	0.05	0.05	0.07
	LC..A 05..	0.35	0.35	0.36	0.35	0.37	0.31
	LC..A 10..	0.70	0.68	0.72	0.71	0.67	0.64
	LC..A 20..	2.03	2.18	2.12	2.02	2.01	2
	LC..A 30..	-	-	-	-	-	-
	LC..A 40..	3.50	3.90	3.80	4.0	4.11	3.8
	LC..B 00..	0.01	0.02	0.04	0.04	0.04	0.05
	LC..B 05..	0.25	0.26	0.26	0.25	0.28	0.23
	LC..B 10..	0.49	0.50	0.51	0.51	0.48	0.47
	LC..B 20..	1.44	1.62	1.52	1.44	1.5	1.5
Direction of fow: A to B	LC..B 30..	-	-	-	-	-	-
	LC..B 40..	2.48	2.90	2.70	2.86	3.05	2.8
	LC..A 00..	0.04	0.05	0.1	0.1	0.1	0.14
	LC..A 05..	0.69	0.78	0.72	0.7	0.84	0.68
	LC..A 10..	1.38	1.53	1.42	1.43	1.47	1.37
	LC..A 20..	4.05	4.91	4.25	4.06	4.57	4.33
	LC..A 30..	-	-	-	-	-	-
	LC..A 40..	6.96	8.74	7.6	8.05	9.34	8.15
	LC..B 00..	0.24	0.25	0.5	0.5	0.5	0.8
	LC..B 05..	3.69	3.4	3.64	3.64	3.95	3.27
Direction of fow: B to A	LC..B 10..	7.43	6.69	7.24	7.37	6.88	6.62
	LC..B 20..	21.3	21.5	21.6	20.9	21.4	20.9
	LC..B 30..	-	-	-	-	-	-
	LC..B 40..	36.6	38.3	38.6	41.5	43.6	39.4

For applications outside these parameters, please consult us!

¹⁾Theoretical pilot flow to achieve a switching time of 10 ms .

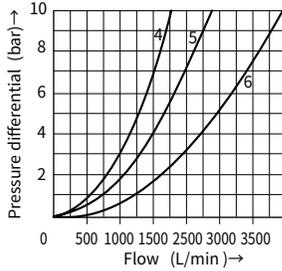
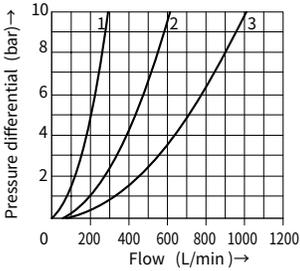
Characteristic curves (Measured at $\vartheta_{oil}=40^{\circ}\text{C} \pm 5^{\circ}\text{C}$, using HLP46)

• Without damping nose



- 1 Size 16
- 2 Size 25
- 3 Size 32
- 4 Size 40
- 5 Size 50
- 6 Size 63

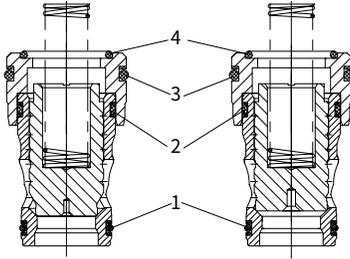
• With damping nose



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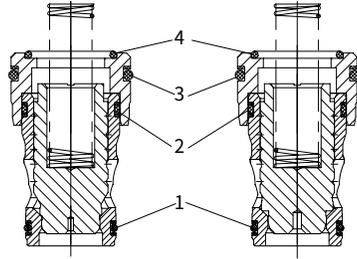
Dimension of O-rings for Cartridge valve type L-LC

• Sizes 16, 25 and 32



Type L-LC..A..E./...

Type L-LC..B..E./...

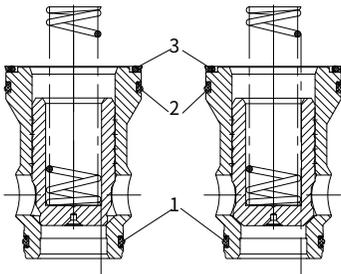


Type L-LC..A..D./...

Type L-LC..B..D./...

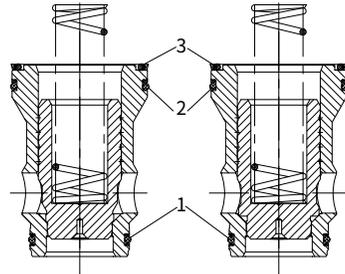
O-rings	No.	Nominal size		
		16	25	32
	1	21.2×1.8	28×2.65	40×2.65
	2	22.4×2.65	32.5×2.65	43.7×3.55
	3	26.5×2.65	38.7×3.55	54.5×3.55
	4	20×2.65	30×2.65	37.5×3.55

• Size 40, 50, 63



Type L-LC..A..E./...

Type L-LC..B..E./...



Type L-LC..A..D./...

Type L-LC..B..D./...

O-rings	No.	Nominal size		
		40	50	63
	1	48.7×3.55	61.5×3.55	80×5.3
	2	69×3.55	80×5.3	109×5.3
	3	67×3.55	77.5×5.3	106×5.3

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