

Inch

Metric

Air Preparation - Basic Version

D-Series FRLs



Regulator, Type LR - Basic Version

1/8" – 1" NPT

Pressure Regulator

with Latching Regulator Cover and Pressure Gauge

Type LR-...-D-...-NPT



without pressure gauge

Type LR-...-D-O-...-NPT

The pressure regulator with secondary ventilation maintains a constant operating pressure (secondary side) despite fluctuations in line pressure (primary side) and the amount of air consumed.

This is a relieving-type regulator which will reduce over pressure on the pressure output.

Accessories:

Mounting Bracket, Type HFOE-.../HR-...

Pressure Gauges, Type MA-.../SDE1-...

Threaded bolt set, Type FRB-... used to combine a D-Series single unit with a pressure regulator.



Note: The Pressure Signal Conversion Unit, Type SDE1-... can be used as a digital-readout pressure indicator assembly on Regulator Units.

Order Number Part No. / Type	Pressure Regulator 12 bar with gauge	173644 LR-1/8-D- MINI-NPT	173648 LR-1/4-D- MINI-NPT	173652 LR-3/8-D- MINI-NPT	173656 LR-3/8-D- MIDI-NPT	173660 LR-1/2-D- MIDI-NPT	173664 LR-3/4-D- MIDI-NPT	173668 LR-3/4-D- MAXI-NPT	173672 LR-1-D- MAXI-NPT	
	Pressure Regulator 7 bar with gauge	173646 LR-1/8-D-7- MINI-NPT	173650 LR-1/4-D-7- MINI-NPT	173654 LR-3/8-D-7- MINI-NPT	173658 LR-3/8-D-7- MIDI-NPT	173662 LR-1/2-D-7- MIDI-NPT	173666 LR-3/4-D-7- MIDI-NPT	173670 LR-3/4-D-7- MAXI-NPT	173674 LR-1-D-7- MAXI-NPT	
	Pressure Regulator 12 bar without gauge	173645 LR-1/8-D-0- MINI-NPT	173649 LR-1/4-D-0- MINI-NPT	173653 LR-3/8-D-0- MINI-NPT	173657 LR-3/8-D-0- MIDI-NPT	173661 LR-1/2-D-0- MIDI-NPT	173665 LR-3/4-D-0- MIDI-NPT	173669 LR-3/4-D-0- MAXI-NPT	173673 LR-1-D-0- MAXI-NPT	
	Pressure Regulator 7 bar without gauge	173647 LR-1/8-D-7- 0-MINI-NPT	173651 LR-1/4-D-7- 0-MINI-NPT	173655 LR-3/8-D-7- 0-MINI-NPT	173659 LR-3/8-D-7- 0-MIDI-NPT	173663 LR-1/2-D-7- 0-MIDI-NPT	173667 LR-3/4-D-7- 0-MIDI-NPT	173671 LR-3/4-D-7- 0-MAXI-NPT	173675 LR-1-D-7- 0-MAXI-NPT	
	Mounting Brackets	159638 HFOE-D-MINI				159593 HFOE-D-MIDI/MAXI				
		164936 HR-D-MINI				162804 HR-D-MIDI				162805 HR-D-MAXI
	Adapter for Pressure Signal Conversion Unit	161207 PENV-A-H-1/8-D				161208 PENV-A-H-3/8-D				
	Threaded Bolt Set	159642 FRB-D-MINI				159595 FRB-D-MIDI				159643 FRB-D-MAXI
Medium	Compressed air (Filtered, lubricated or unlubricated)									
Design	MINI, MIDI: diaphragm regulator; MAXI: piston regulator									
Mounting	Conduit mounting, Mounting bracket, Installation									
Assembly Position	As desired									
Connection		1/8" NPT	1/4" NPT	3/8" NPT	3/8" NPT	1/2" NPT	3/4" NPT	3/4" NPT	1" NPT	
Nominal Flow*	LR-...-D-...	28 scfm / 800 l/min	53 scfm / 1500 l/min	60 scfm / 1700 l/min	113 scfm / 3200 l/min	124 scfm / 3500 l/min	124 scfm / 3500 l/min	389 scfm / 11000 l/min	406 scfm / 11500 l/min	
	LR-...-D-7-...	35 scfm / 1000 l/min	57 scfm / 1600 l/min	64 scfm / 1800 l/min	117 scfm / 3300 l/min	141 scfm / 4000 l/min	159 scfm / 4500 l/min	424 scfm / 12000 l/min	441 scfm / 12500 l/min	
Primary Pressure Range	15 to 240 psi / 1 to 16 bar									
Working Pressure Range	7.5 to 180 psi / 0.5 to12 bar or 7.5 to 105 psi / 0.5 to 7 bar									
Temperature Range	14 to 140°F / -10 to +60°C									
Materials	Housing: GD-Zn; Seals: Buna N; Adjustment knob: PA 6									
Weight		0.816 lb / 0.370 kg			1.720 lb / 0.780 kg		2.425 lb / 1.100 kg		2.646 lb / 1.200 kg	

* At upstream pressure 150 psi / 10 bar, operating pressure 90 psi / 6 bar, and $\Delta p = 15$ psi / 1 bar.

Delivery: Short lead time

Regulator, Type LR - Basic Version

G $\frac{1}{8}$ – G1 ISO

Pressure Regulator

with Latching Regulator Cover and Pressure Gauge

Type LR-...-D-...



without pressure Gauge

Type LR-...-D-O-...

The pressure regulator with secondary ventilation maintains a constant operating pressure (secondary side) despite fluctuations in line pressure (primary side) and the amount of air consumed.

This is a relieving-type regulator which will reduce over pressure on the pressure output.

Accessories:

Mounting Bracket, Type HFOE-.../HR-...

Pressure Gauges, Type MA-.../SDE1-...

Threaded bolt set, Type FRB-... used to combine a D-Series single unit with a pressure regulator.

Pressure Regulators are available in two working pressure ranges: 174 psi / 12 bar and 102 psi / 7 bar.

Note: The Pressure Signal Conversion Unit, Type SDE1... can be used as a digital-readout pressure indicator assembly on Regulator Units.



Order Number Part No. / Type	Pressure Regulator 12 bar with gauge	159624 LR-1/8-D- MINI	159625 LR-1/4-D- MINI	162580 LR-3/8-D- MINI	159580 LR-3/8-D- MIDI	159581 LR-1/2-D- MIDI	162581 LR-3/4-D- MIDI	159626 LR-3/4-D- MAXI	159627 LR-1-D- MAXI	192360 LR-3/4-D- DI-MAXI	192364 LR-1-D- DI-MAXI	
	Pressure Regulator 7 bar with gauge	162582 LR-1/8-D-7- MINI	162583 LR-1/4-D-7- MINI	162584 LR-3/8-D-7- MINI	162585 LR-3/8-D-7- MIDI	162586 LR-1/2-D-7- MIDI	162587 LR-3/4-D-7- MIDI	162588 LR-3/4-D-7- MAXI	162589 LR-1-D-7- MAXI	192362 LR-3/4-D- 7-DI-MAXI	192366 LR-1-D- 7-DI-MAXI	
	Pressure Regulator 12 bar without gauge	162590 LR-1/8-D-0- MINI	162591 LR-1/4-D-0- MINI	162592 LR-3/8-D-0- MINI	162593 LR-3/8-D-0- MIDI	162594 LR-1/2-D-0- MIDI	162595 LR-3/4-D-0- MIDI	162596 LR-3/4-D-0- MAXI	162597 LR-1-D-0- MAXI	192361 LR-3/4-D-0- DI-MAXI	192365 LR-1-D-0- DI-MAXI	
	Pressure Regulator 7 bar without gauge	162598 LR-1/8-D-7- 0-MINI	162599 LR-1/4-D-7- 0-MINI	162600 LR-3/8-D-7- 0-MINI	162601 LR-3/8-D-7- 0-MIDI	162602 LR-1/2-D-7- 0-MIDI	162603 LR-3/4-D-7- 0-MIDI	162604 LR-3/4-D-7- 0-MAXI	162605 LR-1-D-7- 0-MAXI	192363 LR-3/4-D-7- 0-DI-MAXI	192367 LR-1-D-7- 0-DI-MAXI	
	Mounting Brackets	159638 HFOE-D-MINI			159593 HFOE-D-MIDI/MAXI			162804 HR-D-MIDI				
	Adapter for Pressure Signal Conversion Unit	161207 PENV-A-H-1/8-D			161208 PENV-A-H-3/8-D			162805 HR-D-MAXI				
	Threaded Bolt Set	159642 FRB-D-MINI			159595 FRB-D-MIDI			159643 FRB-D-MAXI				
Medium		Compressed air (Filtered, lubricated or unlubricated)										
Design		MINI, MIDI: diaphragm regulator; MAXI: piston regulator										
Mounting		Conduit mounting, Mounting bracket, or in line assembly										
Assembly Position		As desired										
Connection		G 1/8 ISO	G 1/4 ISO	G 3/8 ISO	G 3/8 ISO	G 1/2 ISO	G 3/4 ISO	G 3/4 ISO	G 1 ISO	G 3/4 ISO	G 1 ISO	
Nominal Flow*	LR-...-D-...	28 scfm / 800 l/min	53 scfm / 1500 l/min	60 scfm / 1700 l/min	113 scfm / 3200 l/min	124 scfm / 3500 l/min	124 scfm / 3500 l/min	389 scfm / 11000 l/min	406 scfm / 11500 l/min	406 scfm / 11500 l/min	406 scfm / 11500 l/min	
	LR-...-D-7-...	35 scfm / 1000 l/min	57 scfm / 1600 l/min	64 scfm / 1800 l/min	117 scfm / 3300 l/min	141 scfm / 4000 l/min	159 scfm / 4500 l/min	424 scfm / 12000 l/min	441 scfm / 12500 l/min	424 scfm / 12000 l/min	441 scfm / 12500 l/min	
Primary Pressure Range		15 to 240 psi / 1 to 16 bar										
Working Pressure Range		7.5 to 180 psi / 0.5 to 12 bar or 7.5 to 105 psi / 0.5 to 7 bar										
Temperature Range		14 to 140°F / -10 to +60°C										
Materials		Housing: GD-Zn; Seals: Buna N; Adjustment knob: PA 6										
Weight		0.816 lb / 0.370 kg			1.720 lb / 0.780 kg			2.425 lb / 1.100 kg	2.646 lb / 1.200 kg	2.425 lb / 1.100 kg	2.646 lb / 1.200 kg	

* At upstream pressure 150 psi / 10 bar, operating pressure 90 psi / 6 bar, and $\Delta p = 15$ psi / 1 bar.

Delivery: Short lead time

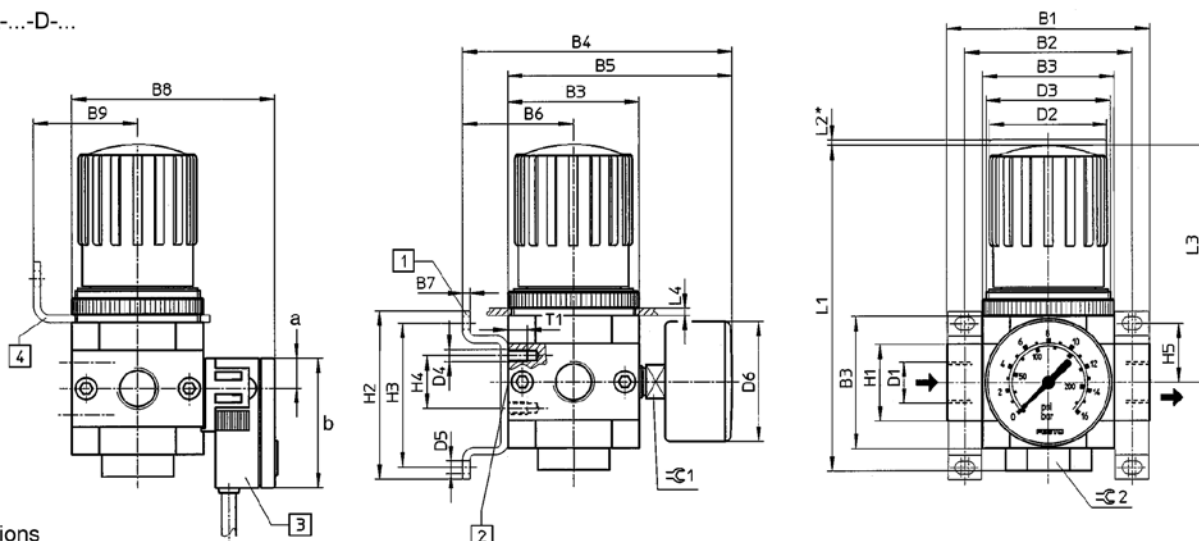
Metric

Inch

Filter-Regulator, Type LR - Basic Version

Dimensions

Type LR-...-D-...



Dimensions

- a 0.51 in / 13 mm
b 2.13 in / 54 mm

- 1 Mounting brackets Type HFOE-D-... (order separately)
2 Second pressure gauge connection
3 Digital indicator pressure switch Type PENV-A-... and fixture Type PENV-A-H-... (order separately)
4 Mounting bracket Type HR-D- (order separately)
→ Flow direction

Type	B1	B2	B3	B4	B5	B6	B7	B8	B9
Inch and Metric Series	in / mm	in / mm	in / mm	in / mm	in / mm	in / mm	in / mm	in / mm	in / mm
LR-1/8-D-MINI-...	2.52 / 64	2.05 / 52	1.57 / 40	3.78 / 96	3.03 / 77	1.54 / 39	0.08 / 2	2.74 / 69.5	1.42 / 36
LR-1/4-D-MINI-...	2.52 / 64	2.05 / 52	1.57 / 40	3.78 / 96	3.03 / 77	1.54 / 39	0.08 / 2	2.74 / 69.5	1.42 / 36
LR-3/8-D-MINI-...	2.76 / 70	2.05 / 52	1.57 / 40	3.78 / 96	3.03 / 77	1.54 / 39	0.08 / 2	2.74 / 69.5	1.42 / 36
LR-3/8-D-MIDI-...	3.35 / 85	2.76 / 70	2.17 / 55	4.45 / 113	3.70 / 94	1.85 / 47	0.12 / 3	3.33 / 84.5	1.73 / 44
LR-1/2-D-MIDI-...	3.35 / 85	2.76 / 70	2.17 / 55	4.45 / 113	3.70 / 94	1.85 / 47	0.12 / 3	3.33 / 84.5	1.73 / 44
LR-3/4-D-MIDI-...	3.35 / 85	2.76 / 70	2.17 / 55	4.45 / 113	3.70 / 94	1.85 / 47	0.12 / 3	3.33 / 84.5	1.73 / 44
LR-3/4-D-MAXI-...	3.78 / 96	3.15 / 80	2.60 / 66	4.92 / 125	4.21 / 107	2.09 / 53	0.12 / 3	3.84 / 97.5	1.97 / 50
LR-1-D-MAXI-...	4.57 / 116	3.58 / 91	2.60 / 66	4.92 / 125	4.21 / 107	2.09 / 53	0.12 / 3	3.84 / 97.5	1.97 / 50
Type	D1	D2	D3	D4	D5	D6	H1	H2	H3
Inch and Metric Series	Thread	dia in / mm	Mounting Nut Thread	in / mm	dia in / mm	dia in / mm	in / mm	in / mm	in / mm
LR-1/8-D-MINI-...	1/8 NPT / G 1/8 ISO	1.22 / 31	M36 x 1.5	M4	0.17 / 4.3	1.54 / 39	0.79 / 20	1.69 / 43	1.38 / 35
LR-1/4-D-MINI-...	1/4 NPT / G 1/4 ISO	1.22 / 31	M36 x 1.5	M4	0.17 / 4.3	1.54 / 39	0.79 / 20	1.69 / 43	1.38 / 35
LR-3/8-D-MINI-...	3/8 NPT / G 3/8 ISO	1.22 / 31	M36 x 1.5	M4	0.17 / 4.3	1.54 / 39	0.79 / 20	1.69 / 43	1.38 / 35
LR-3/8-D-MIDI-...	3/8 NPT / G 3/8 ISO	1.97 / 50	M52 x 1.5	M5	0.21 / 5.3	2.01 / 51	1.26 / 32	2.76 / 70	2.36 / 60
LR-1/2-D-MIDI-...	1/2 NPT / G 1/2 ISO	1.97 / 50	M52 x 1.5	M5	0.21 / 5.3	2.01 / 51	1.26 / 32	2.76 / 70	2.36 / 60
LR-3/4-D-MIDI-...	3/4 NPT / G 3/4 ISO	1.97 / 50	M52 x 1.5	M5	0.21 / 5.3	2.01 / 51	1.26 / 32	2.76 / 70	2.36 / 60
LR-3/4-D-MAXI-...	3/4 NPT / G 3/4 ISO	1.22 / 31	M36 x 1.5	M5	0.21 / 5.3	2.01 / 51	1.26 / 32	2.76 / 70	2.36 / 60
LR-1-D-MAXI-...	1 NPT / G 1 ISO	1.22 / 31	M36 x 1.5	M5	0.21 / 5.3	2.01 / 51	1.57 / 40	2.76 / 70	2.36 / 60
Type	H4	H5	L1	L2	L3	L4	T1	1	2
Inch and Metric Series	in / mm	in / mm	in / mm	max in / mm	in / mm	in / mm	in / mm		
LR-1/8-D-MINI-...	0.43 / 11	0.69 / 17.5	3.78 / 96	0.08 / 2	2.72 / 69	0.12 / 3	0.28 / 7	12	17
LR-1/4-D-MINI-...	0.43 / 11	0.69 / 17.5	3.78 / 96	0.08 / 2	2.72 / 69	0.12 / 3	0.28 / 7	12	17
LR-3/8-D-MINI-...	0.43 / 11	0.69 / 17.5	3.78 / 96	0.08 / 2	2.72 / 69	0.12 / 3	0.28 / 7	12	17
LR-3/8-D-MIDI-...	0.87 / 22	0.96 / 24.5	5.31 / 135	0.08 / 2	3.86 / 98	0.20 / 5	0.31 / 8	14	30
LR-1/2-D-MIDI-...	0.87 / 22	0.96 / 24.5	5.31 / 135	0.08 / 2	3.86 / 98	0.20 / 5	0.31 / 8	14	30
LR-3/4-D-MIDI-...	0.87 / 22	0.96 / 24.5	5.31 / 135	0.08 / 2	3.86 / 98	0.20 / 5	0.31 / 8	14	30
LR-3/4-D-MAXI-...	0.87 / 22	0.96 / 24.5	4.84 / 123	0.08 / 2	3.23 / 82	0.16 / 4	0.31 / 8	14	22
LR-1-D-MAXI-...	0.87 / 22	0.96 / 24.5	4.84 / 123	0.08 / 2	3.23 / 82	0.16 / 4	0.31 / 8	14	22

* Distance regulating knob must be lifted to make adjustment.

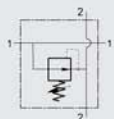
Pressure Regulators, Type LRB/LRBS - Basic Version

G $\frac{1}{4}$ – G $\frac{1}{2}$ ISO

Pressure Regulator

with Latching Regulator Knob

Type LRB-D-...



with Lockable Regulator Knob

Type LRBS-D-...

The pressure regulator with secondary ventilation maintains a constant operating pressure (secondary side) despite fluctuations in line pressure (primary side) and the amount of air consumed.

With pressure supply facility on both sides and pressure set point front and back.

This is a relieving-type regulator which will reduce over pressure on the pressure output.

Accessories:

Mounting Bracket, Type HRB-...

LRB



LRBS



HRBC
Joining Kit



Pressure Regulators are available in two working pressure ranges: 174 psi / 12 bar and 102 psi / 7 bar.

Order Number	Pressure Regulator	197535	197539
Part No. / Type	12 bar with latching knob	LRB-D-O-MINI	LRB-D-O-MIDI
	Pressure Regulator	197534	197538
	7 bar with latching knob	LRB-D-7-O-MINI	LRB-D-7-O-MIDI
	Pressure Regulator	194682	194686
	12 bar with lockable knob	LRBS-D-0-MINI	LRBS-D-0-MIDI
	Pressure Regulator	194683	194687
	7 bar with lockable knob	LRBS-D-7-O-MINI	LRBS-D-7-O-MIDI
	Port Block Wall	525029	525030
	Mounting Bracket	HRB-D-MINI	HRB-D-MIDI
	Intermediate Wall	525031	525032
	Mounting Bracket	HRBK-D-MINI	HRBK-D-MIDI
	Joining Kit	529022 HRBC-D-MINI	529023 HRBC-D-MIDI
Medium	Compressed air (Filtered, lubricated or unlubricated)		
Design	Diaphragm regulator		
Mounting	Line mounting, mounting bracket, or inline assembly		
Assembly Position	As desired		
Connection	G 1/8 ISO	G 3/8 ISO	G 3/8 ISO G 1/2 ISO
Nominal Flow*	LRB(S)-...-D-...	42 scfm / 1200 l/min	113 scfm / 3200 l/min
	LRB(S)-...-D-7-...	49 scfm / 1400 l/min	134 scfm / 3800 l/min
Primary Pressure Range	15 to 240 psi / 1 to 16 bar		
Working Pressure Range	7.5 to 180 psi / 0.5 to 12 bar or 7.5 to 105 psi / 0.5 to 7 bar		
Temperature Range	14 to 140°F / -10 to +60°C		
Materials	Housing: GD-Zn; Seals: NBR; Adjustment knob: PA 6		
Weight	LRB-...-D-...	0.551 lb / 0.250 kg	1.543 lb / 0.700 kg
	LRBS-...-D-...	0.772 lb / 0.350 kg	2.072 lb / 0.940 kg

* At upstream pressure 150 psi / 10 bar, operating pressure 90 psi / 6 bar, and $\Delta p = 15$ psi / 1 bar.

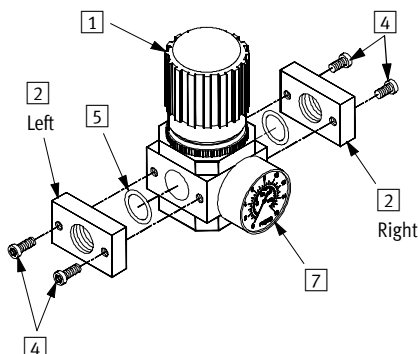
Delivery: Short lead time

Metric

Inch

Ship-From-Stock Component Program

D-Series Service Units Port Sizes 1/8" to 1"



Ordering via the Ship-From-Stock Component Program allows for off-the-shelf availability of the components required to assemble a complete air preparation unit.

A complete regulator assembly consists of the following items:

Item	Description	Qty Required per Assy
1	Main Unit	1
2	Port Block	2 [one left, one right]
4	Port Block Screw	4
5	Port Block Seal	3
6	Mounting Bracket Kit [Not shown]	1

Note: Item 3, joining rods, are not needed in this assembly.
Most combinations use 2 Port Block Seals [Item 5]. Some use 3. It is recommended to order 3.

Step 1: Based upon the required Port Size, Maximum Output Pressure, Maximum Flow, Drain Type, and Thread Type, select the Main Unit [Item 1] and the Left and Right Port Block [Item 2]. Note the Product Type/Description for the next step.

			Item							
			1	2					7	
Port size	Max. Output Pressure [bar/psi]	Max. Flow (l/min/sfcm)	Main Body	NPT Thread		BSP Thread		Gauge [If required]	Product Type/Description	
				Left Connection Port Block	Right Connection Port Block	Left Connection Port Block	Right Connection Port Block			
1/8	7/102	1000/35.3	127 301	372 030	372 038	380 285	380 287	359 874	LR-...-D-MINI-...	
	12/174	800/28.3	122 997					345 395		
1/4	7/102	1600/56.5	127 301	372 031	372 039	380 289	380 295	359 874		
		2200/77.7	127 307	–	–	380 902	380 903	359 873		LR-...-D-MIDI-...
	12/174	1500/52.9	122 997	372 031	372 039	380 289	380 295	345 395	LR-...-D-MINI-...	
		2100/74.2	120 517	–	–	380 902	380 903	356 759	LR-...-D-MIDI-...	
3/8	7/102	1800/63.6	127 301	372 032	372 040	380 293	380 295	359 874	LR-...-D-MINI-...	
		3300/116.5	127 307	372 035	372 043	380 297	380 299	359 873	LR-...-D-MIDI-...	
	12/174	1700/60.0	122 997	372 032	372 040	380 293	380 295	345 395	LR-...-D-MINI-...	
		3200/113.0	120 517	372 035	372 043	380 297	380 299	356 759	LR-...-D-MIDI-...	
1/2	7/102	4000/141.3	127 307	372 033	372 041	380 301	380 303	359 873	LR-...-D-MAXI-...	
		10700/377.9	127 314	–	–	381 529	381 530			
	12/174	3500/123.6	120 517	372 033	372 041	380 301	380 303	356 759	LR-...-D-MIDI-...	
		10500/370.8	123 594	–	–	381 529	381 530		LR-...-D-MAXI-...	
3/4	7/102	4500/158.9	127 307	372 034	372 042	380 305	380 307	359 873	LR-...-D-MIDI-...	
		12000/423.8	127 314	372 036	372 044	380 309	380 311		LR-...-D-MAXI-...	
	12/174	3500/123.8	120 517	372 034	372 042	380 305	380 307	356 759	LR-...-D-MIDI-...	
		11000/388.5	123 594	372 036	372 044	380 309	380 311		LR-...-D-MAXI-...	
1	7/102	12500/441.4	127 314	372 037	372 045	380 313	380 315	359 873		
	12/174	11500/406.1	123 594					356 759		

☐ Not available

Next...Step 2

Inch

Metric

Filter Regulator Selector Guide

D-Series Service Units Port Sizes 1/8" to 1"

Step 2: Based upon the Product Type/Description from Step 1, select the Port Block Screws [Item 4], the Port Block Seals [Item 5], and the Mounting Bracket Kit [Item 6].

	Item 4	5	6 [Not shown]
Product Type/ Description	Port Block Screws	Port Block Seals	Mounting Bracket Kit
LR-...-D-MINI-...	200 664	235 260	159 638
LR-...-D-MIDI-...	202 824	200 950	159 593
LR-...-D-MAXI-...		234 380	

Step3: Determine the appropriate quantity of each Item.

Ordering Example:

Required: 3/8 port size, 8 bar output pressure, 1600 l/min flow, BSP threads.

	Item	Part No.	Qty	Description
Order:	1	122 997	1	Main Unit
	2	380 293	1	Left Port Block
		380 295		Right Port Block
	4	200 664	4	Port Block Screws
	5	235 260	3	Port Block Seals
	6	159 638	1	Mounting Bracket Kit