

Pressure regulators LR/LRS/LRB/LRBS, D series

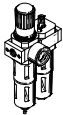
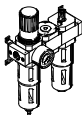
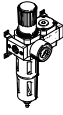
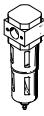
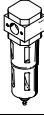
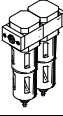
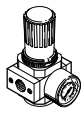
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Pressure regulators LR/LRS/LRB/LRBS, D series, metal design

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Product range overview D series service units, metal design

Type		Size	Pneumatic connection										Pressure regulation range [bar]			Grade of filtration [µm]			
			M5	M7	G1/8	G1/4	G3/8	G1/2	G3/4	G1	QS4	QS6	0.5 ...	0.5 ...	2.5 ...	0.01	1	5	40
Service units																			
FRC/FRCS		Micro	■	■	■	–	–	–	–	–	■	■	■	–	–	–	–	■	–
		Mini	–	–	■	■	■	–	–	–	–	■	■	–	–	–	–	■	■
		Midi	–	–	–	■	■	■	■	–	–	■	■	–	–	–	–	■	■
		Maxi	–	–	–	–	–	■	■	■	–	–	■	■	–	–	–	■	■
Service unit combinations																			
FRC-K		Micro	–																
		Mini	–	–	■	■	–	–	–	–	–	–	–	■	■	–	–	–	■
		Midi	–	–	–	■	■	■	–	–	–	–	–	■	■	–	–	–	■
		Maxi	–	–	–	–	–	■	■	–	–	–	–	■	■	–	–	–	■
LFR-K LFRS-K		Micro	–																
		Mini	–	–	■	■	–	–	–	–	–	–	–	■	■	–	–	–	■
		Midi	–	–	–	■	■	■	–	–	–	–	–	■	■	–	–	–	■
		Maxi	–	–	–	–	–	■	■	–	–	–	–	■	■	–	–	–	■
Individual devices																			
Filter regulators LFR/LFRS		Micro	■	■	■	–	–	–	–	–	■	■	■	–	–	–	–	■	–
		Mini	–	–	■	■	■	–	–	–	–	■	■	–	–	–	–	■	■
		Midi	–	–	–	■	■	■	■	–	–	■	■	–	–	–	–	■	■
		Maxi	–	–	–	–	–	■	■	■	–	–	■	■	–	–	–	■	■
Filters LF		Micro	■	■	■	–	–	–	–	–	■	■	–	–	–	–	–	■	–
		Mini	–	–	■	■	■	–	–	–	–	–	–	–	–	–	–	■	■
		Midi	–	–	–	■	■	■	■	–	–	–	–	–	–	–	–	■	■
		Maxi	–	–	–	–	–	■	■	■	–	–	–	–	–	–	–	■	■
Fine and micro filters LFMA/LFMB		Micro	–																
		Mini	–	–	■	■	■	–	–	–	–	–	–	–	■	■	–	–	
		Midi	–	–	–	■	■	■	■	–	–	–	–	–	■	■	–	–	
		Maxi	–	–	–	–	–	■	■	■	–	–	–	–	■	■	–	–	
Active carbon filters LFX		Micro	–																
		Mini	–	–	■	■	■	–	–	–	–	–	–	–	–	–	–	–	
		Midi	–	–	–	■	■	■	■	–	–	–	–	–	–	–	–	–	
		Maxi	–	–	–	–	–	■	■	■	–	–	–	–	–	–	–	–	
Filter combinations LFMBA		Micro	–																
		Mini	–	–	■	■	■	–	–	–	–	–	–	–	■	■	–	–	
		Midi	–	–	–	■	■	■	■	–	–	–	–	–	■	■	–	–	
		Maxi	–	–	–	–	–	■	■	■	–	–	–	–	■	■	–	–	
Pressure regulators LR/LRS		Micro	■	■	■	–	–	–	–	–	■	■	■	–	–	–	–	–	
		Mini	–	–	■	■	■	–	–	–	–	■	■	–	–	–	–	–	
		Midi	–	–	–	■	■	■	■	–	–	■	■	–	–	–	–	–	
		Maxi	–	–	–	–	–	■	■	■	–	–	■	■	–	–	–	–	

Pressure regulators LR/LRS/LRB/LRBS, D series, metal design

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Product range overview D series service units, metal design

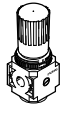
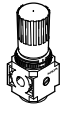
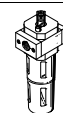
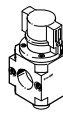
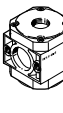
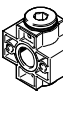
<https://www.markazbargh.com/brand/festo/>

Type	Size	Bowl guard		Condensate drain			Pressure indication		Actuator lock		Supply voltage			Options			→ Page/ Internet
		Metal bowl guard	Plastic bowl	Manual rotary	Semi-automatic	Fully automatic	With pressure gauge	Without pressure gauge	Rotary knob with detent	Rotary knob with integrated lock	24 V DC	110 V AC	230 V AC	Directly actuated pressure regulator with integrated return flow function	Pilot actuated pressure regulator with integrated return flow function	Differential pressure indicator	
Service units																	
FRC/FRCS	Micro	–	■	■	■	–	■	■	■	–	–	–	–	–	–	–	frc
	Mini	■	–	■	–	■	■	■	■	■	–	–	–	–	–	–	
	Midi	■	–	■	–	■	■	■	■	■	–	–	–	–	–	–	
	Maxi	■	–	■	–	■	■	■	■	■	–	–	–	■	■	–	
Service unit combinations																	
FRC-K	Micro	–															frc
	Mini	■	–	■	–	■	■	–	■	–	■	–	–	–	–	–	
	Midi	■	–	■	–	■	■	–	■	–	■	–	–	–	–	–	
	Maxi	■	–	■	–	■	■	–	■	–	■	–	–	■	■	–	
LFR-K LFRS-K	Micro	–															lfr
	Mini	■	–	■	–	■	■	–	■	■	■	–	–	–	–	–	
	Midi	■	–	■	–	■	■	–	■	■	■	–	–	–	–	–	
	Maxi	■	–	■	–	■	■	–	■	■	■	–	–	■	■	–	
Individual devices																	
Filter regulators LFR/LFRS	Micro	–	■	■	■	–	■	■	■	–	–	–	–	–	–	–	lfr
	Mini	■	–	■	–	■	■	■	■	■	–	–	–	–	–	–	
	Midi	■	–	■	–	■	■	■	■	■	–	–	–	–	–	–	
	Maxi	■	–	■	–	■	■	■	■	■	–	–	–	■	■	–	
Filters LF	Micro	–	■	■	■	–	–	–	–	–	–	–	–	–	–	–	lf
	Mini	■	–	■	–	■	–	–	–	–	–	–	–	–	–	–	
	Midi	■	–	■	–	■	–	–	–	–	–	–	–	–	–	–	
	Maxi	■	–	■	–	■	–	–	–	–	–	–	–	–	–	–	
Fine and micro filters LFMA/LFMB	Micro	–															lfma, lfmb
	Mini	■	–	■	–	■	–	–	–	–	–	–	–	–	–	■	
	Midi	■	–	■	–	■	–	–	–	–	–	–	–	–	–	■	
	Maxi	■	–	■	–	■	–	–	–	–	–	–	–	–	–	■	
Active carbon filters LFX	Micro	–															lfx
	Mini	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
	Midi	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
	Maxi	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
Filter combinations LFMBA	Micro	–															lfmba
	Mini	■	–	■	–	■	–	–	–	–	–	–	–	–	–	■	
	Midi	■	–	■	–	■	–	–	–	–	–	–	–	–	–	■	
	Maxi	■	–	■	–	■	–	–	–	–	–	–	–	–	–	■	
Pressure regulators LR/LRS	Micro	–	–	–	–	–	■	■	■	–	–	–	–	–	–	–	6
	Mini	–	–	–	–	–	■	■	■	■	–	–	–	■	–	–	
	Midi	–	–	–	–	–	■	■	■	■	–	–	–	■	–	–	
	Maxi	–	–	–	–	–	■	■	■	■	–	–	–	■	■	–	

Pressure regulators LR/LRS/LRB/LRBS, D series, metal design

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Product range overview D series service units, metal design

Type		Size	Pneumatic connection										Pressure regulation range [bar]	
													0.5 ... 7	0.5 ... 12
Individual devices														
Pressure regulators LRB/LRBS		Micro	-											
		Mini	-	-	-	■	-	-	-	-	-	-	■	■
		Midi	-	-	-	-	■	-	-	-	-	-	■	■
		Maxi	-											
Pressure regulator combinations LRB-K		Micro	-											
		Mini	-	-	-	■	■	-	-	-	-	-	■	■
		Midi	-	-	-	-	■	■	-	-	-	-	■	■
		Maxi	-											
Lubricators LOE		Micro	■	■	■	-	-	-	-	-	■	■	-	-
		Mini	-	-	■	■	■	-	-	-	-	-	-	-
		Midi	-	-	-	■	■	■	■	-	-	-	-	-
		Maxi	-	-	-	-	-	■	■	■	-	-	-	-
On-off valves HE		Micro	-											
		Mini	-	-	■	■	■	-	-	-	-	-	-	-
		Midi	-	-	-	■	■	■	■	-	-	-	-	-
		Maxi	-	-	-	-	-	■	■	■	-	-	-	-
On-off valves, electrical HEE		Micro	-											
		Mini	-	-	■	■	■	-	-	-	-	-	-	-
		Midi	-	-	-	■	■	■	■	-	-	-	-	-
		Maxi	-	-	-	-	-	■	■	■	-	-	-	-
On-off valves, pneumatic HEP		Micro	-											
		Mini	-	-	■	■	■	-	-	-	-	-	-	-
		Midi	-	-	-	■	■	■	■	-	-	-	-	-
		Maxi	-	-	-	-	-	■	■	■	-	-	-	-
Soft-start valves HEL		Micro	-											
		Mini	-	-	■	■	■	-	-	-	-	-	-	-
		Midi	-	-	-	■	■	■	■	-	-	-	-	-
		Maxi	-	-	-	-	-	■	■	■	-	-	-	-
Membrane air dryers LDM1		Micro	-											
		Mini	-											
		Midi	-											
		Maxi	-	-	-	-	-	■	■	■	-	-	-	-
Branching modules FRM		Micro	-											
		Mini	-	-	■	■	■	-	-	-	-	-	-	-
		Midi	-	-	-	■	■	■	■	-	-	-	-	-
		Maxi	-	-	-	-	-	■	■	■	-	-	-	-
Distributor block FRZ		Micro	-	-	-	-	-	-	-	-	-	-	-	
		Mini	-	-	-	-	-	-	-	-	-	-	-	
		Midi	-	-	-	-	-	-	-	-	-	-	-	
		Maxi	-	-	-	-	-	-	-	-	-	-	-	

Pressure regulators LR/LRS/LRB/LRBS, D series, metal design

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Product range overview D series service units, metal design

Type	Size	Bowl guard		Pressure indication		Actuator lock		Supply voltage			Options		→ Page/ Internet
		Metal bowl guard	Plastic bowl	With pressure gauge	Without pressure gauge	Rotary knob with detent	Rotary knob with integrated lock	24 V DC	110 V AC	230 V AC	Non-return function	Pressure switch	
Individual devices													
Pressure regulators LRB/LRBS	Micro	-											20
	Mini	-	-	-	■	■	■	-	-	-	-	-	
	Midi	-	-	-	■	■	■	-	-	-	-	-	
	Maxi	-											
Pressure regulator combinations LRB-K	Micro	-											28
	Mini	-	-	-	■	■	-	-	-	-	-	-	
	Midi	-	-	-	■	■	-	-	-	-	-	-	
	Maxi	-											
Lubricators LOE	Micro	-	■	-	■	-	-	-	-	-	-	-	loe
	Mini	■	-	-	■	-	-	-	-	-	-	-	
	Midi	■	-	-	■	-	-	-	-	-	-	-	
	Maxi	■	-	-	■	-	-	-	-	-	-	-	
On-off valves HE	Micro	-											he
	Mini	-	-	-	■	■	-	-	-	-	-	-	
	Midi	-	-	-	■	■	-	-	-	-	-	-	
	Maxi	-	-	-	■	■	-	-	-	-	-	-	
On-off valves, electrical HEE	Micro	-											hee
	Mini	-	-	-	■	-	-	■	■	■	-	-	
	Midi	-	-	-	■	-	-	■	■	■	-	-	
	Maxi	-	-	-	■	-	-	■	■	■	-	-	
On-off valves, pneumatic HEP	Micro	-											hep
	Mini	-	-	-	■	-	-	-	-	-	-	-	
	Midi	-	-	-	■	-	-	-	-	-	-	-	
	Maxi	-	-	-	■	-	-	-	-	-	-	-	
Soft-start valves HEL	Micro	-											hel
	Mini	-	-	-	■	-	-	-	-	-	-	-	
	Midi	-	-	-	■	-	-	-	-	-	-	-	
	Maxi	-	-	-	■	-	-	-	-	-	-	-	
Membrane air dryers LDM1	Micro	-											ldm1
	Mini	-											
	Midi	-											
	Maxi	■	-	-	■	-	-	-	-	-	-	-	
Branching modules FRM	Micro	-											frm
	Mini	-	-	-	■	-	-	-	-	-	■	■	
	Midi	-	-	-	■	-	-	-	-	-	■	■	
	Maxi	-	-	-	■	-	-	-	-	-	■	■	
Distributor block FRZ	Micro	-	-	-	■	-	-	-	-	-	-	-	frz
	Mini	-	-	-	■	-	-	-	-	-	-	-	
	Midi	-	-	-	■	-	-	-	-	-	-	-	
	Maxi	-	-	-	■	-	-	-	-	-	-	-	

Pressure regulators LR/LRS, D series, metal design

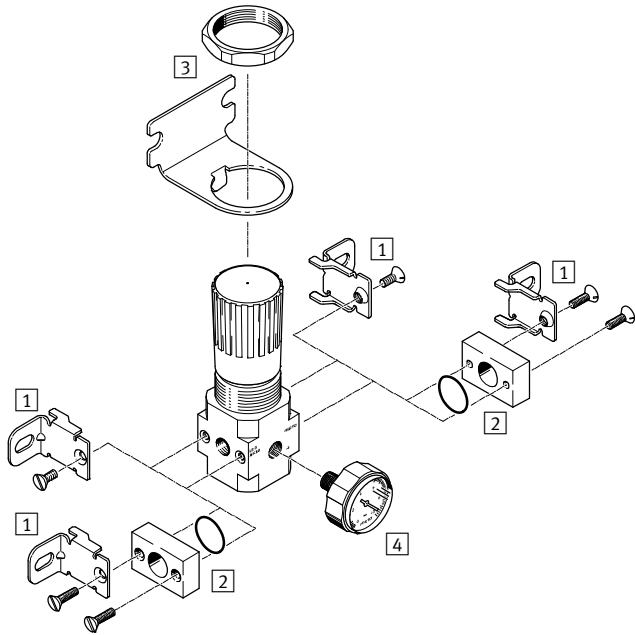
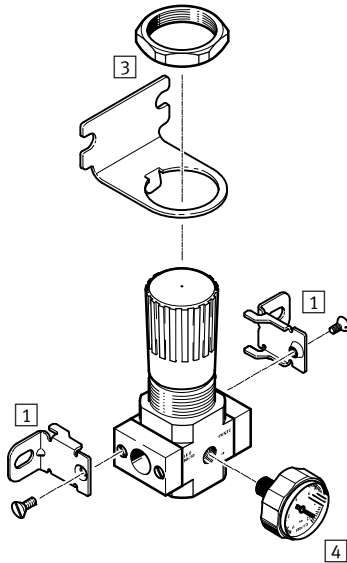
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Peripherals overview

Micro

Individual unit with connection plates,
connection size G $\frac{1}{8}$, QS-4 or QS-6

Individual unit without connection plates, for service unit combination
connection thread M5 or M7 in housing



Mounting attachments and accessories					
	Individual unit		Combination		→ Page/ Internet
	with connection plates	without connection plates	with connection plates	without connection plates	
1 Mounting bracket HFOE	■	■	■	■	hfoe-d
2 Connecting plate kit PBL	–	■	–	■	pbl
3 Mounting bracket HRS	■	■	■	■	hrs-d
4 Pressure gauge MA-27	■	■	■	■	52

Pressure regulators LR/LRS, D series, metal design

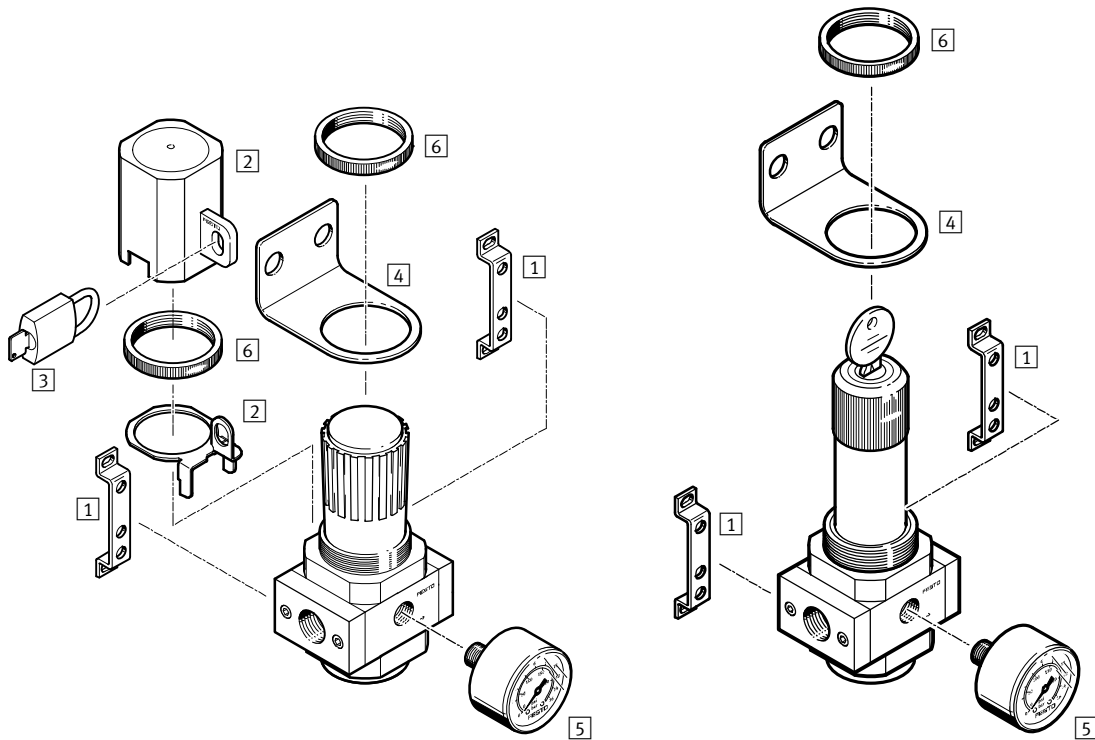
Peripherals overview

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Mini/Midi/Maxi

Pressure regulator LR

Pressure regulator LRS, lockable



Mounting attachments and accessories		Rotary knob with detent	Rotary knob, lockable	→ Page/ Internet
1	Mounting bracket HFOE	■	■	hfoe-d
2	Regulator lock LRVS	■	-	lrvs-d
3	Padlock LRVS-D	■	-	lrvs-d
4	Mounting bracket HR-D	■	■	hr-d
5	Pressure gauge MA	■	■	52
6	Knurled nut (included in scope of delivery) HMR	■	■	-

Pressure regulators LR/LRS, D series, metal design

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Type codes

LR – ½ – D – 7 – 0 – DI – MAXI

Basic function

LR	Pressure regulator
LRS	Pressure regulator, lockable

Pneumatic connection

MICRO (LR only)	
M5	Connecting thread M5 in housing
M7	Connecting thread M7 in housing
1/8	Connecting plates with connecting thread G1/8
QS4	Connecting plates with push-in connector QS-4
QS6	Connecting plates with push-in connector QS-6
MINI	
1/8	Connecting plates with connecting thread G1/8
1/4	Connecting plates with connecting thread G1/4
3/8	Connecting plates with connecting thread G3/8
MIDI	
1/4	Connecting plates with connecting thread G1/4
3/8	Connecting plates with connecting thread G3/8
1/2	Connecting plates with connecting thread G1/2
3/4	Connecting plates with connecting thread G3/4
MAXI	
1/2	Connecting plates with connecting thread G1/2
3/4	Connecting plates with connecting thread G3/4
1	Connecting plates with connecting thread G1

Series

D	Series
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Pressure regulation range

7	0.5 ... 7 bar
MINI/MIDI/MAXI	
	0.5 ... 12 bar

Pressure gauge

	With pressure gauge
0	Without pressure gauge

Functions (optional)

MINI/MIDI	
I	With integrated return flow function
MAXI	
DI	Directly actuated pressure regulator with integrated return flow function

Size

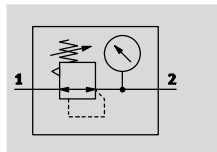
MICRO	Grid dimension 25 mm (without connecting plates)
MINI	Grid dimension 40 mm (without connecting plates)
MIDI	Grid dimension 55 mm (without connecting plates)
MAXI	Grid dimension 66 mm (without connecting plates)

Pressure regulators LR/LRS, D series, metal design

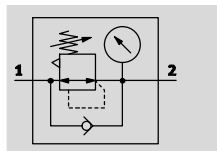
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Technical data

LR/LRS
with pressure gauge



LR/LRS-...-I-MINI/MIDI,
LR/LRS-...-DI-MAXI
with pressure gauge



- - Flow rate
120 ... 12,500 l/min

- - Temperature range
-10 ... +60 °C

- - Operating pressure
1 ... 16 bar



- Also suitable for front panel mounting
- Two pressure gauge connections for different fitting options
- Good regulating characteristics with minimal pressure hysteresis
- High flow rate
- Two pressure regulation ranges: 0.5 ... 7 bar and 0.5 ... 12 bar
- Setting values are secured by locking the rotary knob
- Return flow option for venting from output 2 to input 1
- Pressure sensor (optional) → 52

General technical data				
Size	Micro	Mini	Midi	Maxi
Pneumatic connection 1, 2 ¹⁾	M5 ²⁾ , M7 ²⁾ , G1/8, QS-4 ³⁾ , QS-6 ³⁾	G1/8, G1/4, G3/8	G1/4, G3/8, G1/2, G3/4	G1/2, G3/4, G1
Constructional design	Directly actuated diaphragm regulator	Directly actuated diaphragm regulator	Pilot actuated piston regulator	
			Directly actuated diaphragm regulator LR/LRS-...-DI	
Regulating function	With secondary venting	Output pressure constant, with secondary venting, with primary pressure compensation, with return flow action ⁴⁾		Output pressure constant, with secondary venting, with primary pressure compensation ⁵⁾ , with return flow action ⁵⁾
Type of mounting	Via accessories			
	In-line installation			
	Front panel mounting			
Assembly position	Any			
Regulator lock	Rotary knob with detent			
	–	Rotary knob with integrated lock		
Pressure regulation range [bar]	0.5 ... 7	0.5 ... 7		
		0.5 ... 12		
Max. hysteresis [bar]	0.3	0.2		0.4
Pressure indication	Via pressure gauge			
	M5 prepared	G1/8 prepared	G1/4 prepared	G1/4 prepared

1) Connecting plates with connecting thread

2) Without connecting plates, connecting thread in housing

3) Connecting plates with push-in connector

4) For the LR/LRS-...-I.

5) For the LR/LRS-...-DI.

- - Note: This product conforms to ISO 1179-1 and to ISO 228-1

Pressure regulators LR/LRS, D series, metal design

FESTO

Technical data

Standard nominal flow rate $q_{nN}^{1)}$ [l/min]						
Size		Micro				
Pneumatic connection 1, 2		M5	M7	G $\frac{1}{8}$	QS-4	QS-6
Pressure regulation range	0.5 ... 7 bar	120	300	450	160	450

1) Measured at $p_1 = 10$ bar, $p_2 = 6$ bar and $\Delta p = 1$ bar.

Standard nominal flow rate $q_{nN}^{1)}$ [l/min]											
Size	Mini			Midi				Maxi			
Pneumatic connection 1, 2	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{3}{4}$	G $\frac{1}{2}$	G $\frac{3}{4}$	G1	
Pressure regulation range	0.5 ... 7 bar	1,000	1,600	1,800	2,200	3,300	4,000	4,500	10,700 (7,300) ²⁾	12,000 (8,350) ²⁾	12,500 (8,400) ²⁾
	0.5 ... 12 bar	800	1,500	1,700	2,100	3,200	3,500	3,500	10,500 (5,400) ²⁾	11,000 (6,800) ²⁾	11,500 (7,000) ²⁾

1) Measured at $p_1 = 10$ bar, $p_2 = 6$ bar and $\Delta p = 1$ bar.

2) For the LR/LRS-...-DI.

Operating and environmental conditions				
Size	Micro	Mini	Midi	Maxi
Operating pressure [bar]	1 ... 10	1 ... 16		
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [7:4:4]			
	Inert gases			
Note on operating/pilot medium	–	Operation with lubricated medium possible (in which case lubricated operation will always be required)		
Ambient temperature [°C]	–10 ... +60			
Temperature of medium [°C]	–10 ... +60			
Storage temperature [°C]	–10 ... +60			
Corrosion resistance class CRC ¹⁾	2			
Certification	Germanischer Lloyd			

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Weight [g]					
Size	Micro		Mini	Midi	Maxi
	Connecting thread	Connecting plate			
With pressure gauge					
LR	90	110	350	720	1,200 (1,400) ¹⁾
LRS	–	–	520	1,250	1,290 (1,680) ¹⁾
Without pressure gauge					
LR	80	100	300	660	1,100 (1,330) ¹⁾
LRS	–	–	470	1,180	1,215 (1,610) ¹⁾

1) For the LR/LRS-...-DI.

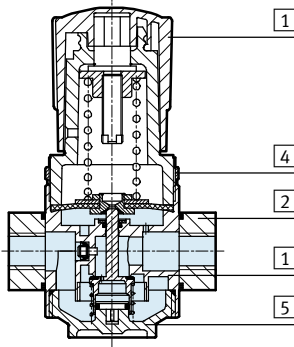
Pressure regulators LR/LRS, D series, metal design

FESTO

Technical data

Materials

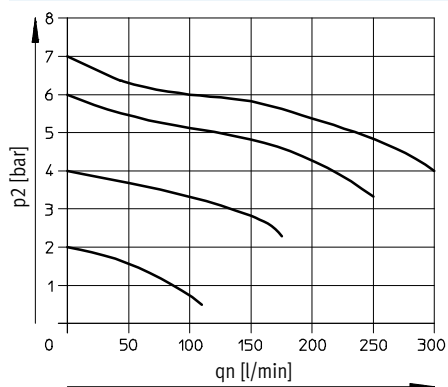
Sectional view



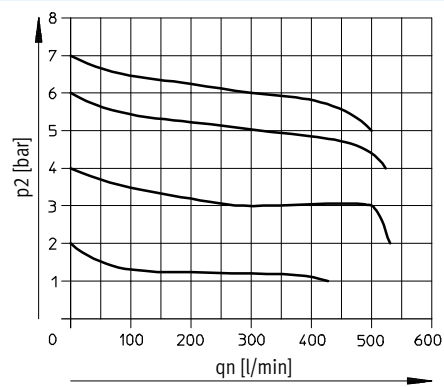
Size	Micro	Mini/Midi/Maxi	
		With pressure gauge	Without pressure gauge
1 Housing	Die-cast zinc	Die-cast zinc/aluminium	
2 Connecting plates	Wrought aluminium alloy	Die-cast zinc/aluminium	
3 Regulating knob	POM	PA	
4 Knurled nut	–	Aluminium	
5 Plug cap	PC	PC	
– Seals	NBR	NBR	
Note on materials	RoHS-compliant	RoHS-compliant	
	–	–	Free of copper and PTFE

Standard flow rate q_n as a function of the output pressure p_2

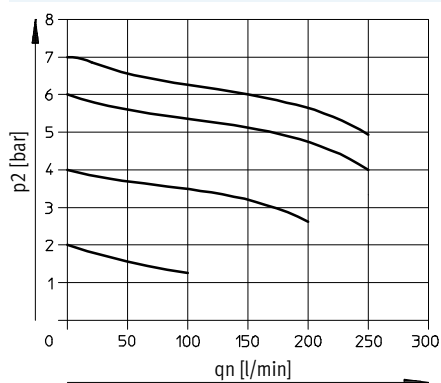
LR-M5-...-MICRO



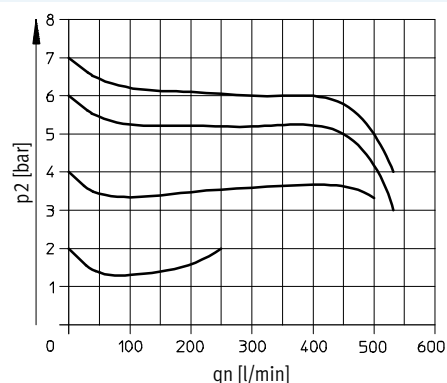
LR-M7-...-MICRO B



LR-QS4-...-MICRO



LR-QS6-...-MICRO and LR-1/8-...-MICRO



Primary pressure $p_1 = 10$ bar

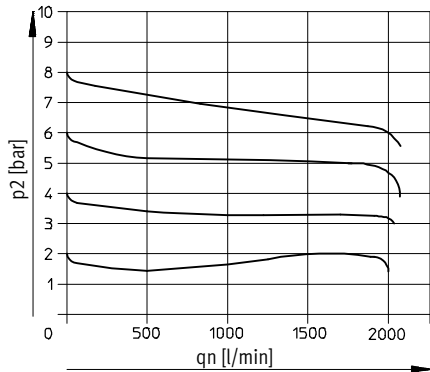
Pressure regulators LR/LRS, D series, metal design

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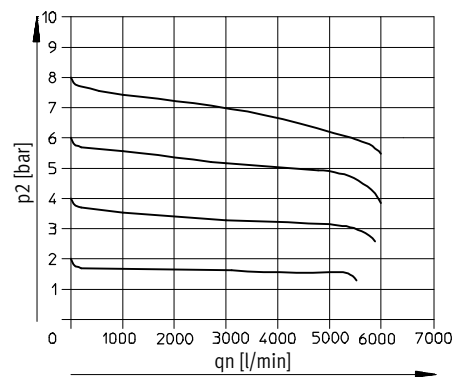
Technical data

Standard flow rate q_n as a function of the output pressure p_2

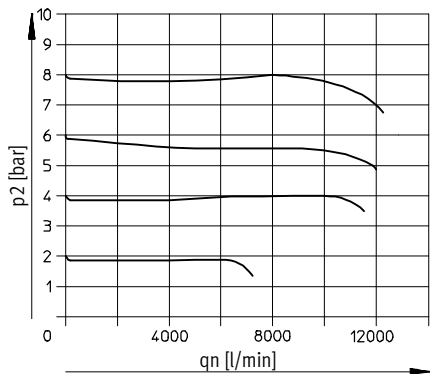
LR/LRS-1/4-D-MINI



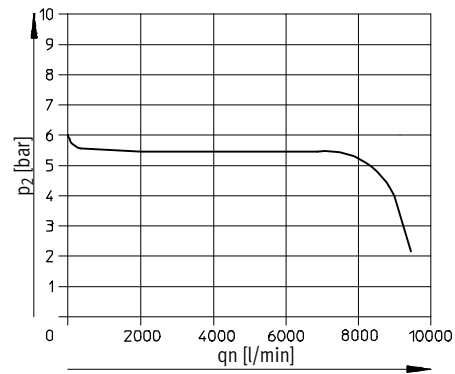
LR/LRS-1/2-D-MIDI



LR/LRS-1-D-MAXI



LR/LRS-1-D-DI-MAXI



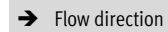
Primary pressure $p_1 = 10$ bar

-  - Note

In order to improve control behaviour, primary-pressure dependent internal air consumption is provided on the LR/LRS-...-MAXI.

Technical data

Micro



• Note: This product conforms to ISO 1179-1 and to ISO 228-1

Pressure regulators LR/LRS, D series, metal design

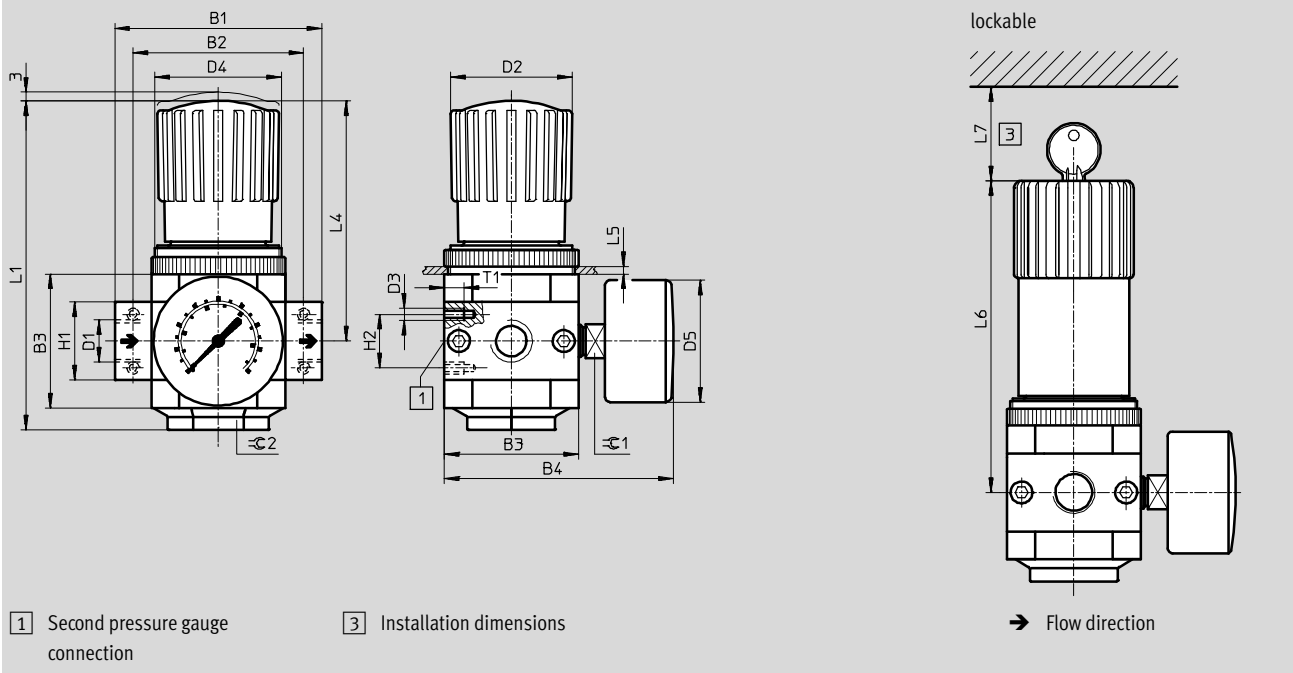
Technical data

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Dimensions

Download CAD data → www.festo.com

Mini/Midi/Maxi



Type	B1	B2	B3	B4	D1	D2 Ø	D3	D4	D5 Ø
Mini									
LR/LRS-1/8-D-(I)-MINI	64	52	40	76	G1/8	31	M4	M36x1.5	41
LR/LRS-1/4-D-(I)-MINI					G1/4				
LR/LRS-3/8-D-(I)-MINI					G3/8				
Midi									
LR/LRS-1/4-D-(I)-MIDI	85	70	55	95	G1/4	50	M5	M52x1.5	50
LR/LRS-3/8-D-(I)-MIDI					G3/8				
LR/LRS-1/2-D-(I)-MIDI					G1/2				
LR/LRS-3/4-D-(I)-MIDI					G3/4				
Maxi									
LR/LRS-1/2-D-MAXI	96	80	66	107	G1/2	31	M5	M36x1.5	50
LR/LRS-1/2-D-DI-MAXI						49		M52x1.5	
LR/LRS-3/4-D-MAXI					G3/4	31		M36x1.5	
LR/LRS-3/4-D-DI-MAXI						49		M52x1.5	
LR/LRS-1-D-MAXI	116	91		G1	31	M36x1.5			
LR/LRS-1-D-DI-MAXI					49	M52x1.5			

– Note: This product conforms to ISO 1179-1 and to ISO 228-1

Pressure regulators LR/LRS, D series, metal design

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Technical data

Type	H1	H2	L1	L4	L5 max.	L6	L7	T1	⇨ 1	⇨ 2
Mini										
LR/LRS-1⁄8-D-MINI	20	11	96	68	3	98	60	7	14	17
LR/LRS-1⁄4-D-MINI										
LR/LRS-3⁄8-D-MINI										
Midi										
LR/LRS-1⁄4-D-MIDI	32	22	135	99	5	130	60	8	14	36
LR/LRS-3⁄8-D-MIDI										
LR/LRS-1⁄2-D-MIDI										
LR/LRS-3⁄4-D-MIDI										
Maxi										
LR/LRS-1⁄2-D-MAXI	32	22	125	82	4	111	60	8	14	22
LR/LRS-1⁄2-D-DI-MAXI			148	105		135				
LR/LRS-3⁄4-D-MAXI			125	82		111				
LR/LRS-3⁄4-D-DI-MAXI			148	105		135				
LR/LRS-1-D-MAXI	40		125	82	111					
LR/LRS-1-D-DI-MAXI			148	105	135					

Pressure regulators LR/LRS, D series, metal design

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Technical data

Ordering data			
Size	Connection	Pressure regulation range 0.5 ... 7 bar	
		Part No.	Type
With pressure gauge, outer scale in bar			
Micro	Without connecting plates, connecting thread in housing		
	M5	526261	LR-M5-D-7-MICRO
	M7	534180	LR-M7-D-7-MICRO-B
	Connecting plates with connecting thread		
	G1/8	526263	LR-1/8-D-7-MICRO
	Connecting plates with push-in connector		
	QS-4	526269	LR-QS4-D-7-MICRO
	QS-6	526271	LR-QS6-D-7-MICRO
Without pressure gauge			
Micro	Without connecting plates, connecting thread in housing		
	M5	526262	LR-M5-D-O-7-MICRO
	M7	534181	LR-M7-D-O-7-MICRO-B
	Connecting plates with connecting thread		
	G1/8	526264	LR-1/8-D-O-7-MICRO
	Connecting plates with push-in connector		
	QS-4	526270	LR-QS4-D-O-7-MICRO
	QS-6	526272	LR-QS6-D-O-7-MICRO

Ordering data					
Rotary knob with detent, connecting plates with connecting thread					
Size	Connection	Pressure regulation range 0.5 ... 7 bar		Pressure regulation range 0.5 ... 12 bar	
		Part No.	Type	Part No.	Type
With pressure gauge, outer scale in bar, inner scale in psi					
Mini	G1/8	162582	LR-1/8-D-7-MINI	159624	LR-1/8-D-MINI
	G1/4	162583	LR-1/4-D-7-MINI	159625	LR-1/4-D-MINI
	G3/8	162584	LR-3/8-D-7-MINI	162580	LR-3/8-D-MINI
Midi	G1/4	186453	LR-1/4-D-7-MIDI	186451	LR-1/4-D-MIDI
	G3/8	162585	LR-3/8-D-7-MIDI	159580	LR-3/8-D-MIDI
	G1/2	162586	LR-1/2-D-7-MIDI	159581	LR-1/2-D-MIDI
	G3/4	162587	LR-3/4-D-7-MIDI	162581	LR-3/4-D-MIDI
Maxi	G1/2	186457	LR-1/2-D-7-MAXI	186455	LR-1/2-D-MAXI
	G3/4	162588	LR-3/4-D-7-MAXI	159626	LR-3/4-D-MAXI
	G1	162589	LR-1-D-7-MAXI	159627	LR-1-D-MAXI
Without pressure gauge					
Mini	G1/8	162598	LR-1/8-D-7-O-MINI ¹⁾	162590	LR-1/8-D-O-MINI ¹⁾
	G1/4	162599	LR-1/4-D-7-O-MINI ¹⁾	162591	LR-1/4-D-O-MINI ¹⁾
	G3/8	162600	LR-3/8-D-7-O-MINI ¹⁾	162592	LR-3/8-D-O-MINI ¹⁾
Midi	G1/4	186454	LR-1/4-D-7-O-MIDI ¹⁾	186452	LR-1/4-D-O-MIDI ¹⁾
	G3/8	162601	LR-3/8-D-7-O-MIDI ¹⁾	162593	LR-3/8-D-O-MIDI ¹⁾
	G1/2	162602	LR-1/2-D-7-O-MIDI ¹⁾	162594	LR-1/2-D-O-MIDI ¹⁾
	G3/4	162603	LR-3/4-D-7-O-MIDI ¹⁾	162595	LR-3/4-D-O-MIDI ¹⁾
Maxi	G1/2	186458	LR-1/2-D-7-O-MAXI ¹⁾	186456	LR-1/2-D-O-MAXI ¹⁾
	G3/4	162604	LR-3/4-D-7-O-MAXI ¹⁾	162596	LR-3/4-D-O-MAXI ¹⁾
	G1	162605	LR-1-D-7-O-MAXI ¹⁾	162597	LR-1-D-O-MAXI ¹⁾

1) Free of copper and PTFE

Pressure regulators LR/LRS, D series, metal design

FESTO

Technical data

Ordering data					
With integrated return flow function, rotary knob with detent, connecting plates with connecting thread					
Size	Connection	Pressure regulation range 0.5 ... 7 bar		Pressure regulation range 0.5 ... 12 bar	
		Part No.	Type	Part No.	Type
With pressure gauge, outer scale in bar, inner scale in psi					
Mini	G1/8	192299	LR-1/8-D-7-I-MINI	192298	LR-1/8-D-I-MINI
	G1/4	192301	LR-1/4-D-7-I-MINI	192300	LR-1/4-D-I-MINI
	G3/8	192303	LR-3/8-D-7-I-MINI	192302	LR-3/8-D-I-MINI
Midi	G1/4	192311	LR-1/4-D-7-I-MIDI	192310	LR-1/4-D-I-MIDI
	G3/8	192313	LR-3/8-D-7-I-MIDI	192312	LR-3/8-D-I-MIDI
	G1/2	192315	LR-1/2-D-7-I-MIDI	192314	LR-1/2-D-I-MIDI
	G3/4	192317	LR-3/4-D-7-I-MIDI	192316	LR-3/4-D-I-MIDI
Without pressure gauge					
Mini	G1/8	192305	LR-1/8-D-7-O-I-MINI ¹⁾	192304	LR-1/8-D-O-I-MINI ¹⁾
	G1/4	192307	LR-1/4-D-7-O-I-MINI ¹⁾	192306	LR-1/4-D-O-I-MINI ¹⁾
	G3/8	192309	LR-3/8-D-7-O-I-MINI ¹⁾	192308	LR-3/8-D-O-I-MINI ¹⁾
Midi	G1/4	192319	LR-1/4-D-7-O-I-MIDI ¹⁾	192318	LR-1/4-D-O-I-MIDI ¹⁾
	G3/8	192321	LR-3/8-D-7-O-I-MIDI ¹⁾	192320	LR-3/8-D-O-I-MIDI ¹⁾
	G1/2	192323	LR-1/2-D-7-O-I-MIDI ¹⁾	192322	LR-1/2-D-O-I-MIDI ¹⁾
	G3/4	192325	LR-3/4-D-7-O-I-MIDI ¹⁾	192324	LR-3/4-D-O-I-MIDI ¹⁾

1) Free of copper and PTFE

Ordering data				
Directly actuated pressure regulator with integrated return flow function, rotary knob with detent, connecting plates with connecting thread				
Size	Connection	Pressure regulation range 0.5 ... 7 bar		Pressure regulation range 0.5 ... 12 bar
		Part No.	Type	Part No. Type
With pressure gauge, outer scale in bar, inner scale in psi				
Maxi	G1/2	192358	LR-1/2-D-7-DI-MAXI	192356 LR-1/2-D-DI-MAXI
	G3/4	192362	LR-3/4-D-7-DI-MAXI	192360 LR-3/4-D-DI-MAXI
	G1	192366	LR-1-D-7-DI-MAXI	192364 LR-1-D-DI-MAXI
Without pressure gauge				
Maxi	G1/2	192359	LR-1/2-D-7-O-DI-MAXI ¹⁾	192357 LR-1/2-D-O-DI-MAXI ¹⁾
	G3/4	192363	LR-3/4-D-7-O-DI-MAXI ¹⁾	192361 LR-3/4-D-O-DI-MAXI ¹⁾
	G1	192367	LR-1-D-7-O-DI-MAXI ¹⁾	192365 LR-1-D-O-DI-MAXI ¹⁾

1) Free of copper and PTFE

Pressure regulators LR/LRS, D series, metal design

FESTO

Technical data

Ordering data				
Rotary knob with integrated lock, connecting plates with connecting thread				
Size	Connection	Pressure regulation range 0.5 ... 7 bar		Pressure regulation range 0.5 ... 12 bar
		Part No.	Type	Part No. Type
With pressure gauge, outer scale in bar, inner scale in psi				
Mini	G1⁄8	194606	LRS-1⁄8-D-7-MINI	194602 LRS-1⁄8-D-MINI
	G1⁄4	194614	LRS-1⁄4-D-7-MINI	194610 LRS-1⁄4-D-MINI
	G3⁄8	194622	LRS-3⁄8-D-7-MINI	194618 LRS-3⁄8-D-MINI
Midi	G1⁄4	194630	LRS-1⁄4-D-7-MIDI	194626 LRS-1⁄4-D-MIDI
	G3⁄8	194638	LRS-3⁄8-D-7-MIDI	194634 LRS-3⁄8-D-MIDI
	G1⁄2	194646	LRS-1⁄2-D-7-MIDI	194642 LRS-1⁄2-D-MIDI
	G3⁄4	194656	LRS-3⁄4-D-7-MIDI	194650 LRS-3⁄4-D-MIDI
Maxi	G1⁄2	194660	LRS-1⁄2-D-7-MAXI	194658 LRS-1⁄2-D-MAXI
	G3⁄4	194662	LRS-3⁄4-D-7-MAXI	194664 LRS-3⁄4-D-MAXI
	G1	194668	LRS-1-D-7-MAXI	194666 LRS-1-D-MAXI
Without pressure gauge				
Mini	G1⁄8	194608	LRS-1⁄8-D-7-O-MINI	194604 LRS-1⁄8-D-O-MINI
	G1⁄4	194616	LRS-1⁄4-D-7-O-MINI	194612 LRS-1⁄4-D-O-MINI
	G3⁄8	194624	LRS-3⁄8-D-7-O-MINI	194620 LRS-3⁄8-D-O-MINI
Midi	G1⁄4	194632	LRS-1⁄4-D-7-O-MIDI	194628 LRS-1⁄4-D-O-MIDI
	G3⁄8	194640	LRS-3⁄8-D-7-O-MIDI	194636 LRS-3⁄8-D-O-MIDI
	G1⁄2	194648	LRS-1⁄2-D-7-O-MIDI	194644 LRS-1⁄2-D-O-MIDI
	G3⁄4	194654	LRS-3⁄4-D-7-O-MIDI	194652 LRS-3⁄4-D-O-MIDI
Maxi	G1⁄2	194661	LRS-1⁄2-D-7-O-MAXI	194659 LRS-1⁄2-D-O-MAXI
	G3⁄4	194663	LRS-3⁄4-D-7-O-MAXI	194665 LRS-3⁄4-D-O-MAXI
	G1	194669	LRS-1-D-7-O-MAXI	194667 LRS-1-D-O-MAXI

Ordering data				
With integrated return flow function, rotary knob with integrated lock, connecting plates with connecting thread				
Size	Connection	Pressure regulation range 0.5 ... 7 bar		Pressure regulation range 0.5 ... 12 bar
		Part No.	Type	Part No. Type
With pressure gauge, outer scale in bar, inner scale in psi				
Mini	G1⁄8	194607	LRS-1⁄8-D-7-I-MINI	194603 LRS-1⁄8-D-I-MINI
	G1⁄4	194615	LRS-1⁄4-D-7-I-MINI	194611 LRS-1⁄4-D-I-MINI
	G3⁄8	194623	LRS-3⁄8-D-7-I-MINI	194619 LRS-3⁄8-D-I-MINI
Midi	G1⁄4	194631	LRS-1⁄4-D-7-I-MIDI	194627 LRS-1⁄4-D-I-MIDI
	G3⁄8	194639	LRS-3⁄8-D-7-I-MIDI	194635 LRS-3⁄8-D-I-MIDI
	G1⁄2	194647	LRS-1⁄2-D-7-I-MIDI	194643 LRS-1⁄2-D-I-MIDI
	G3⁄4	194657	LRS-3⁄4-D-7-I-MIDI	194651 LRS-3⁄4-D-I-MIDI
Without pressure gauge				
Mini	G1⁄8	194609	LRS-1⁄8-D-7-O-I-MINI	194605 LRS-1⁄8-D-O-I-MINI
	G1⁄4	194617	LRS-1⁄4-D-7-O-I-MINI	194613 LRS-1⁄4-D-O-I-MINI
	G3⁄8	194625	LRS-3⁄8-D-7-O-I-MINI	194621 LRS-3⁄8-D-O-I-MINI
Midi	G1⁄4	194633	LRS-1⁄4-D-7-O-I-MIDI	194629 LRS-1⁄4-D-O-I-MIDI
	G3⁄8	194641	LRS-3⁄8-D-7-O-I-MIDI	194637 LRS-3⁄8-D-O-I-MIDI
	G1⁄2	194649	LRS-1⁄2-D-7-O-I-MIDI	194645 LRS-1⁄2-D-O-I-MIDI
	G3⁄4	194655	LRS-3⁄4-D-7-O-I-MIDI	194653 LRS-3⁄4-D-O-I-MIDI

Pressure regulators LR/LRS, D series, metal design

FESTO

Technical data

Ordering data					
Directly actuated pressure regulator with integrated return flow function, rotary knob with integrated lock, connecting plates with connecting thread					
Size	Connection	Pressure regulation range 0.5 ... 7 bar		Pressure regulation range 0.5 ... 12 bar	
		Part No.	Type	Part No.	Type
With pressure gauge, outer scale in bar, inner scale in psi					
Maxi	G1½	194672	LRS-½-D-7-DI-MAXI	194670	LRS-½-D-DI-MAXI
	G¾	194676	LRS-¾-D-7-DI-MAXI	194674	LRS-¾-D-DI-MAXI
	G1	194680	LRS-1-D-7-DI-MAXI	194678	LRS-1-D-DI-MAXI
Without pressure gauge					
Maxi	G1½	194673	LRS-½-D-7-O-DI-MAXI	194671	LRS-½-D-O-DI-MAXI
	G¾	194677	LRS-¾-D-7-O-DI-MAXI	194675	LRS-¾-D-O-DI-MAXI
	G1	194681	LRS-1-D-7-O-DI-MAXI	194679	LRS-1-D-O-DI-MAXI

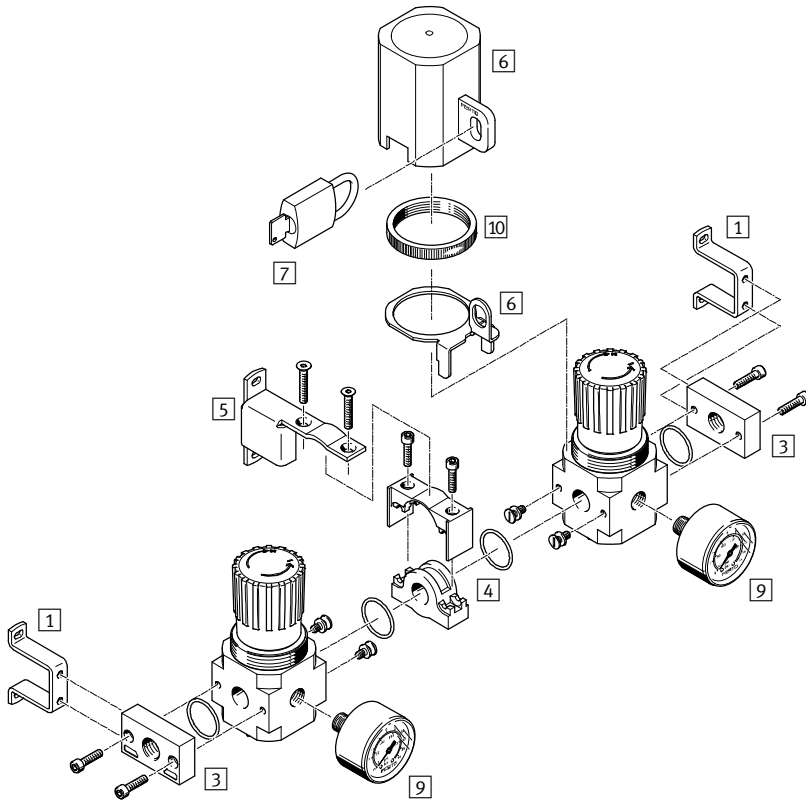
Pressure regulators LRB/LRBS, D series, metal design

Peripherals overview

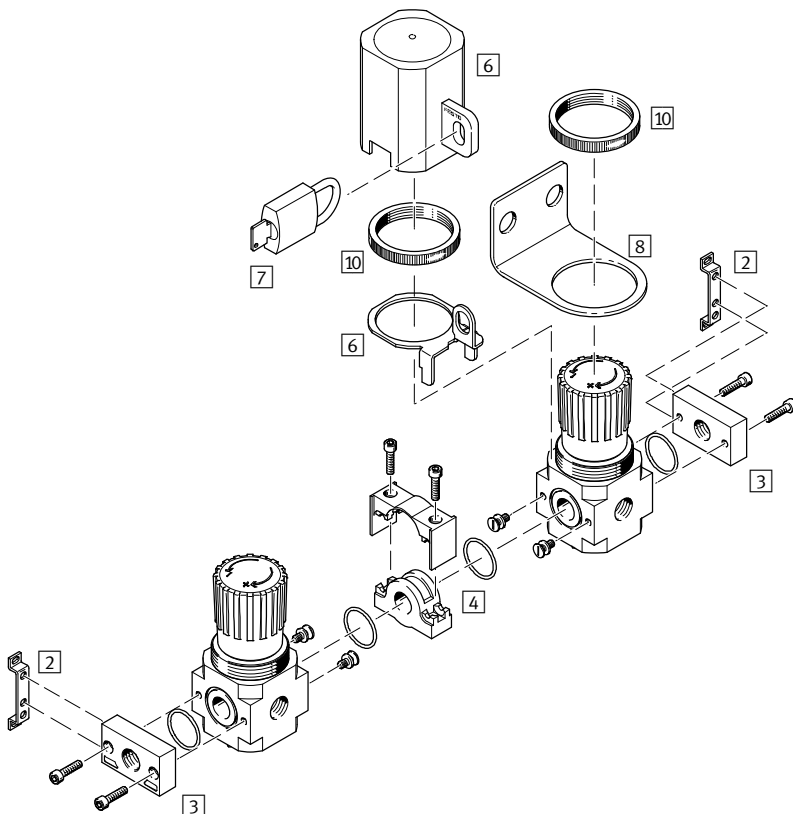
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Mini/Midi

Pressure regulator LRB – pressure output at rear



Pressure regulator LRB – pressure output at front



Pressure regulators LRB/LRBS, D series, metal design

Peripherals overview

Mounting attachments and accessories			
Pressure regulator LRB	Pressure output at rear	Pressure output at front	→ Page/ Internet
1 Mounting bracket HRB	■	–	hrb-d
2 Mounting bracket HFOE	–	■	hfoe-d
3 Connection plates LRBAS	■	■	lrbas
4 Adapter kit HRBC	■	■	hrbc-d
5 Mounting bracket HRBK	■ ¹⁾	–	hrbk-d
6 Regulator lock LRVS	■	■	lrvs-d
7 Padlock LRVS-D	■	■	lrvs-d
8 Mounting bracket HR-D	–	■	hr-d
9 Pressure gauge MA	■	–	52
10 Knurled nut (included in scope of delivery) HMR	■	■	–

1) The mounting bracket must be mounted after every second pressure regulator.

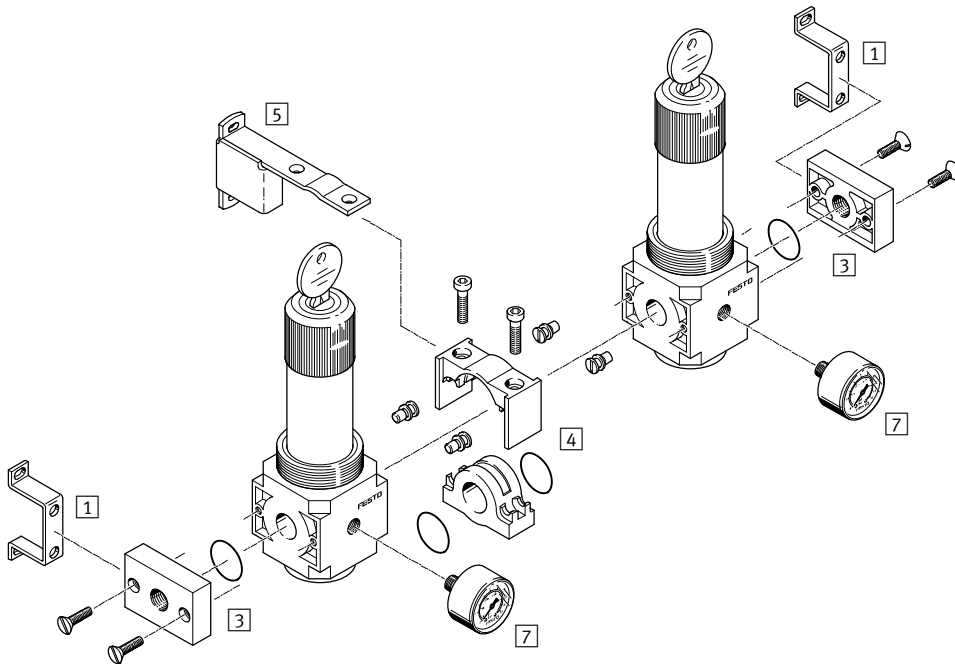
Pressure regulators LRB/LRBS, D series, metal design

Peripherals overview

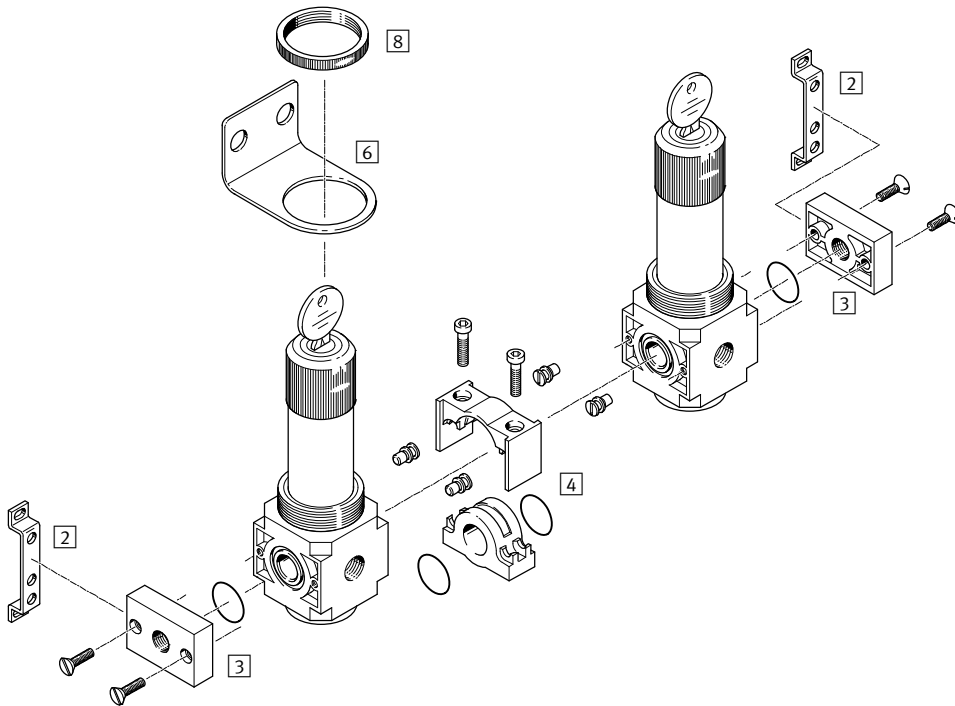
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Mini/Midi

Pressure regulator LRBS lockable – pressure output at rear



Pressure regulator LRBS lockable – pressure output at front



Pressure regulators LRB/LRBS, D series, metal design

Peripherals overview

FESTO

Mounting attachments and accessories			
Pressure regulator LRBS, lockable	Pressure output at rear	Pressure output at front	→ Page/ Internet
1 Mounting bracket HRB	■	–	hrb-d
2 Mounting bracket HFOE	–	■	hfoe-d
3 Connection plates LRBAS	■	■	lrbas
4 Adapter kit HRBC	■	■	hrbc-d
5 Mounting bracket HRBK	■ ¹⁾	–	hrbk-d
6 Mounting bracket HR-D	–	■	hr-d
7 Pressure gauge MA	■	–	52
8 Knurled nut (included in scope of delivery) HMR	■	■	–

1) The mounting bracket must be mounted after every second pressure regulator.

Pressure regulators LRB/LRBS, D series, metal design

FESTO

Type codes

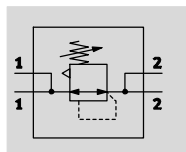
		LRB	–	D	–	7	–	0	–	MINI	
Basic function											
LRB	Pressure regulator for manifold assembly										
LRBS	Pressure regulator for manifold assembly, lockable										
Series											
D	Series										
Pressure regulation range											
7	0.5 ... 7 bar										
	0.5 ... 12 bar										
Pressure gauge											
0	Without pressure gauge										
Size											
MINI	Grid dimension 40 mm (without connecting plates)										
MIDI	Grid dimension 55 mm (without connecting plates)										

Pressure regulators LRB/LRBS, D series, metal design

FESTO

Technical data

Function



-  - Flow rate
1,600 ... 3,800 l/min
-  - Temperature range
-10 ... +60 °C
-  - Operating pressure
1 ... 16 bar



The pressure regulator is suitable for manifold assemblies with through air supply on both sides, for configuring a regulator manifold with separate, independent pressure ranges. Pressure output is at the front or rear.

- Good control characteristics with low hysteresis and primary pressure compensation
- Manifold assembly with through air supply
- For configuring a regulator manifold with independent pressure ranges
- Two pressure regulation ranges: 0.5 ... 7 bar and 0.5 ... 12 bar
- Settings secured via detent on knob and push-in adjustment lock

General technical data				
Size	Mini		Midi	
Pneumatic connection 1	—1)	—1)	—1)	—1)
Pneumatic connection 2	G¼		G¾	
Constructional design	Directly actuated diaphragm regulator with through pressure supply			
Regulating function	Output pressure constant, with secondary venting, with primary pressure compensation			
Type of mounting	Via accessories			
	In-line installation			
Assembly position	Any			
Regulator lock	Rotary knob with detent			
	Rotary knob with integrated lock			
Pressure regulation range	[bar]	0.5 ... 7		
		0.5 ... 12		
Max. hysteresis	[bar]	0.2		
Pressure indication	G¼ prepared		G¼ prepared	

1) - Dependent on connecting plate selected, must be ordered separately as an accessory → Internet: lrbas

-  - Note: This product conforms to ISO 1179-1 and to ISO 228-1

Standard nominal flow rate ¹⁾ qnN [l/min]			
Size	Mini		Midi
Pressure regulation range	0.5 ... 7 bar	1,800	3,800
	0.5 ... 12 bar	1,600	3,200

1) - Measured at p1 = 10 bar, p2 = 6 bar and Δp = 1 bar.

Pressure regulators LRB/LRBS, D series, metal design

FESTO

Technical data

Operating and environmental conditions		
Operating pressure	[bar]	1 ... 16
Operating medium		Compressed air in accordance with ISO 8573-1:2010 [7:4:4] Inert gases
Ambient temperature	[°C]	-10 ... +60
Temperature of medium	[°C]	-10 ... +60
Storage temperature	[°C]	-10 ... +60
Corrosion resistance class CRC ¹⁾		2

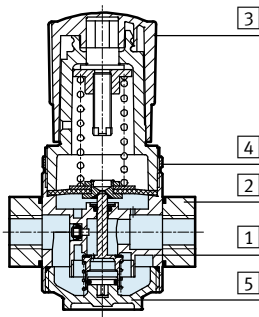
1) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Weight [g]		
Size	Mini	Midi
LRB	250	700
LRBS	350	940

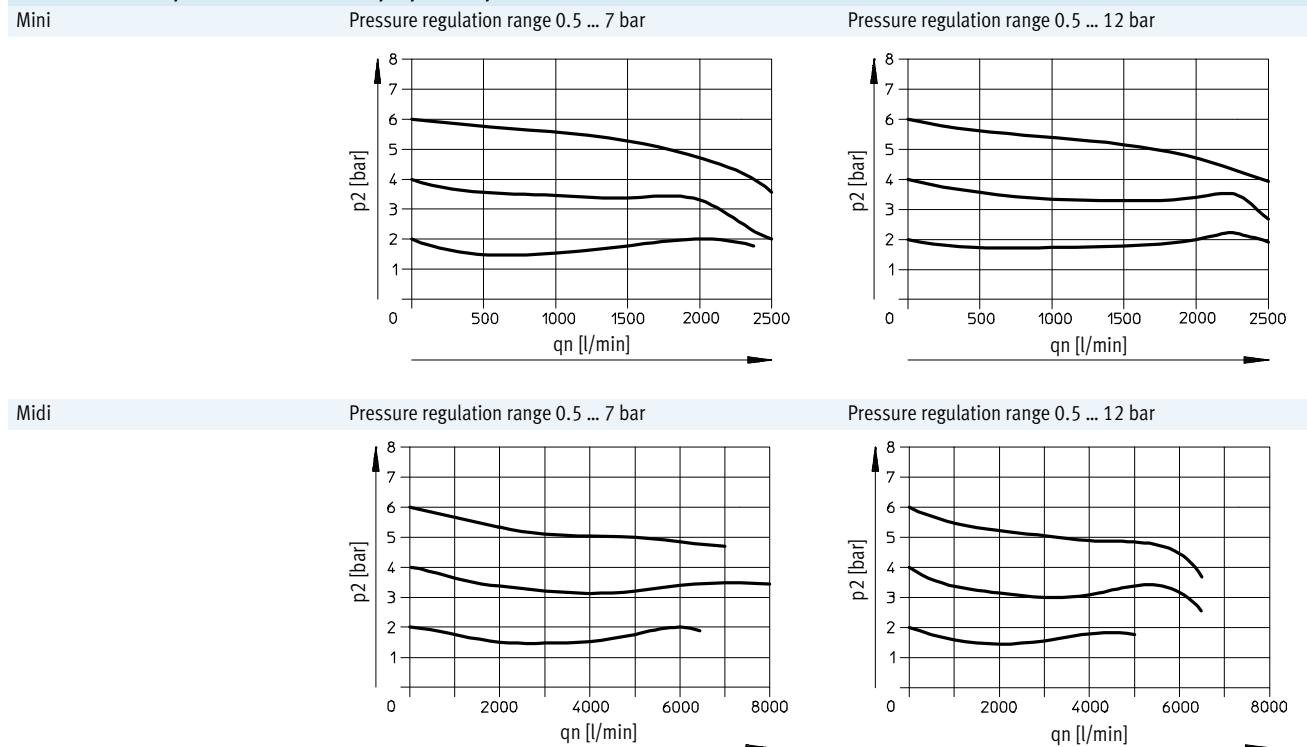
Materials

Sectional view



Pressure regulator	LRB	LRBS
1 Housing	Die-cast zinc	
2 Connecting plates	Die-cast zinc	
3 Regulating knob	PA	Aluminium
4 Knurled nut	Aluminium	
5 Plug cap	PC	
– Seals	NBR	
Note on materials	RoHS-compliant	
	Free of copper and PTFE	

Standard flow rate q_n as a function of the output pressure p_2



Input pressure $p_1 = 10$ bar

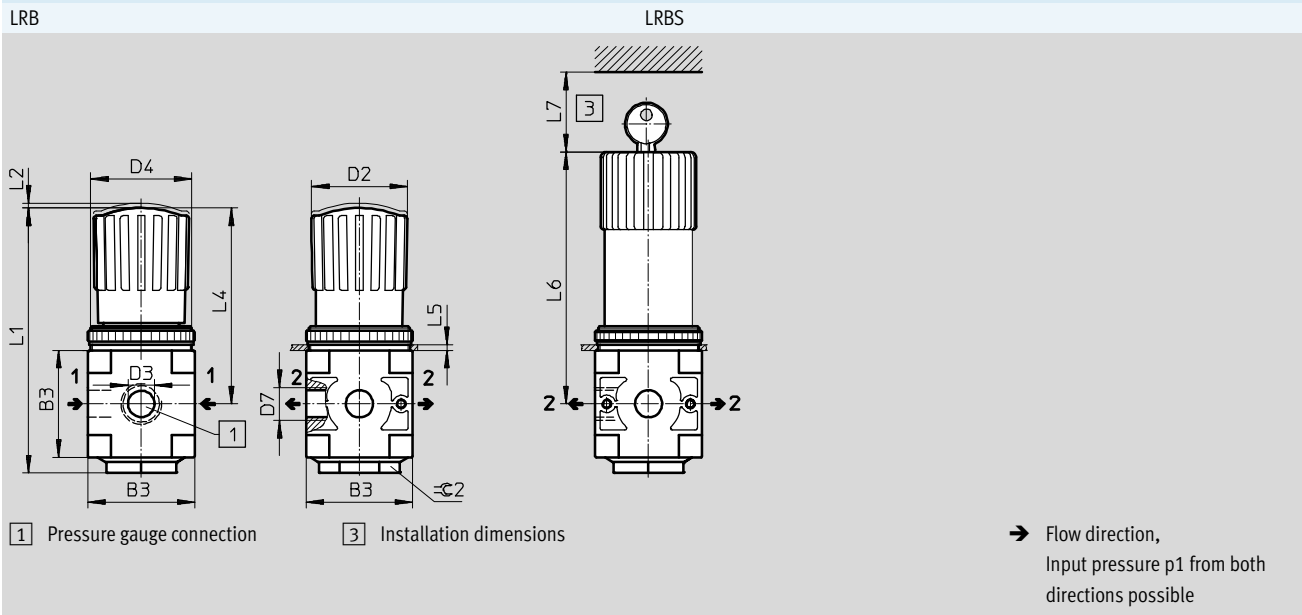
Pressure regulators LRB/LRBS, D series, metal design

Technical data

FESTO

Dimensions

Download CAD data → www.festo.com



Type	B3	D2	D3	D4	D7	L1	L2	L4	L5 max.	L6	L7 min.	⊆ 2
Mini												
LRB-D-...-MINI	40	31	G⅛	M36x1.5	G¼	~95.4	3	~68.9	3	98	60	17
LRBS-D-...-MINI												
Midi												
LRB-D-...-MIDI	55	49.3	G¼	M52x1.5	G⅜	~135.8	3	~100.3	5	129.2	60	36
LRBS-D-...-MIDI												

• Note: This product conforms to ISO 1179-1 and to ISO 228-1

Ordering data

Pressure regulator for manifold assembly

Size	Pressure regulation range 0.5 ... 7 bar		Pressure regulation range 0.5 ... 12 bar	
	Part No.	Type	Part No.	Type
Rotary knob with detent				
Mini	197534	LRB-D-7-O-MINI	197535	LRB-D-O-MINI
Midi	197538	LRB-D-7-O-MIDI	197539	LRB-D-O-MIDI
Rotary knob with integrated lock				
Mini	194683	LRBS-D-7-O-MINI	194682	LRBS-D-O-MINI
Midi	194687	LRBS-D-7-O-MIDI	194686	LRBS-D-O-MIDI

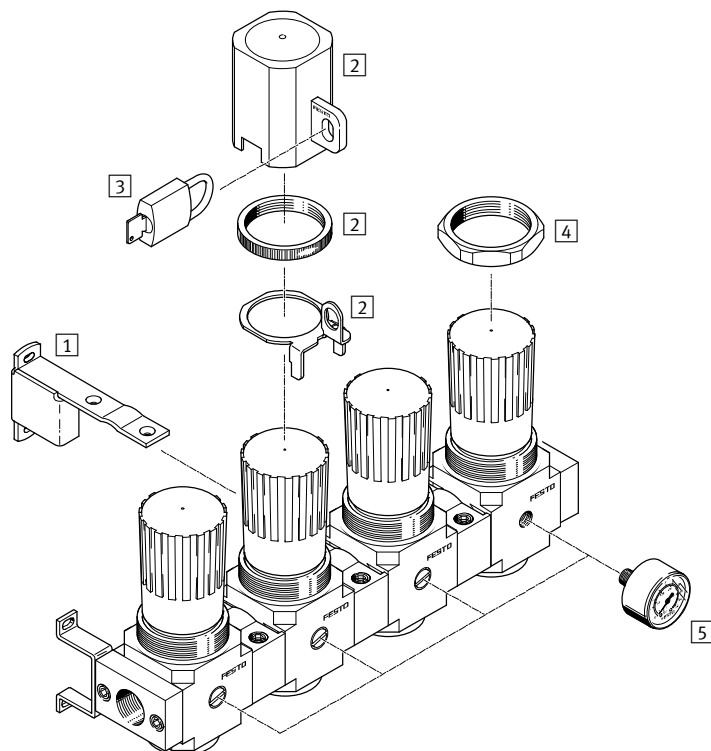
Pressure regulator combinations LRB-K, D series, metal design

Peripherals overview

FESTO

Mini/Midi

Pressure regulator combination LRB-K



Mounting attachments and accessories

	→ Page/ Internet
1) Mounting bracket (included in scope of delivery) HRBK ¹⁾	hrbk-d
2) Regulator lock LRVS	lrvs-d
3) Padlock LRVS-D	lrvs-d
4) Hex nut (for front panel mounting) HMR	hmr-d
5) Pressure gauge MA	52

1) The mounting bracket must be mounted after every second pressure regulator.

Pressure regulator combinations LRB-K, D series, metal design

FESTO

Type codes

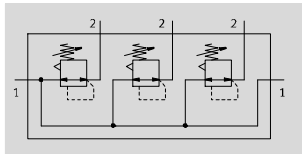
		LRB	–	1/4	–	D	–	7	–	0	–	K2	–	MINI
Basic function														
LRB	Pressure regulator combination													
Pneumatic connection														
MINI														
1/4	Connecting plates with connecting thread G1/4													
3/8	Connecting plates with connecting thread G3/8													
MIDI														
3/8	Connecting plates with connecting thread G3/8													
1/2	Connecting plates with connecting thread G1/2													
Series														
D	Series													
Pressure regulation range														
7	0.5 ... 7 bar													
	0.5 ... 12 bar													
Pressure gauge														
0	Without pressure gauge													
Functions														
K2	Manifold with 2 pressure regulators													
K3	Manifold with 3 pressure regulators													
K4	Manifold with 4 pressure regulators													
K5	Manifold with 5 pressure regulators													
Size														
MINI	Grid dimension 40 mm (without connecting plates)													
MIDI	Grid dimension 55 mm (without connecting plates)													

Pressure regulator combinations LRB-K, D series, metal design

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Technical data

Function



-  - Flow rate
1,600 ... 3,800 l/min
-  - Temperature range
-10 ... +60 °C
-  - Operating pressure
1 ... 16 bar

Pressure regulator combinations

LRB-...-D-...-O-K2

LRB-...-D-...-O-K3

LRB-...-D-...-O-K4

LRB-...-D-...-O-K5

with through pressure supply for
manifold assembly



- Good control characteristics with low hysteresis and primary pressure compensation
- Manifold assembly with through air supply
- For configuring a regulator manifold with independent pressure ranges
- Two pressure regulation ranges: 0.5 ... 7 bar and 0.5 ... 12 bar
- Settings secured via detent on knob and push-in adjustment lock
- Directly actuated diaphragm regulator

General technical data				
Size	Mini		Midi	
Pneumatic connection 1	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{3}{8}$	G $\frac{1}{2}$
Pneumatic connection 2	G $\frac{1}{4}$		G $\frac{3}{8}$	
Design	Directly actuated diaphragm regulator with through pressure air supply			
Regulator type	Output pressure constant, with primary pressure compensation, with secondary venting			
Type of mounting	Via accessory (mounting bracket HRB or HRBK included in scope of delivery)			
Assembly position	Any			
Regulator lock	Rotary knob with detent			
Pressure regulation range [bar]	0.5 ... 7			
	0.5 ... 12			
Max. hysteresis [bar]	0.2			
Pressure indication	G $\frac{1}{8}$ prepared		G $\frac{1}{4}$ prepared	

-  Note: This product conforms to ISO 1179-1 and to ISO 228-1

Standard nominal flow rate $q_{nN}^{1)}$ [l/min]			
Size	Mini		Midi
Pressure regulation range	0.5 ... 7 bar	1,800	3,800
	0.5 ... 12 bar	1,600	3,200

1) Measured at $p_1 = 10$ bar, $p_2 = 6$ bar and $\Delta p = 1$ bar.

Pressure regulator combinations LRB-K, D series, metal design

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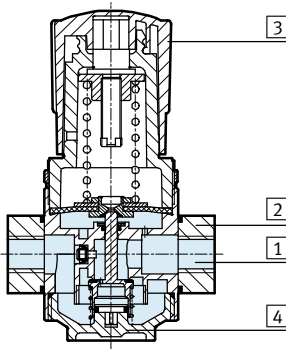
Technical data

Operating and environmental conditions		
Operating pressure	[bar]	1 ... 16
Operating medium		Compressed air in accordance with ISO 8573-1:2010 [7:4:4]
Ambient temperature	[°C]	-10 ... +60
Temperature of medium	[°C]	-10 ... +60

Weight [g]		
Size	Mini	Midi
Manifold with 2 pressure regulators		
LRB-...-K2	760	1,950
Manifold with 3 pressure regulators		
LRB-...-K3	1,090	3,144
Manifold with 4 pressure regulators		
LRB-...-K4	1,480	3,834
Manifold with 5 pressure regulators		
LRB-...-K5	1,860	4,828

Materials

Sectional view



Pressure regulator	Mini/Midi
1 Housing	Die-cast zinc
2 Connecting plates	Die-cast zinc
3 Regulating knob	PA
4 Plug cap	PC
– Seals	NBR

Pressure regulator combinations LRB-K, D series, metal design

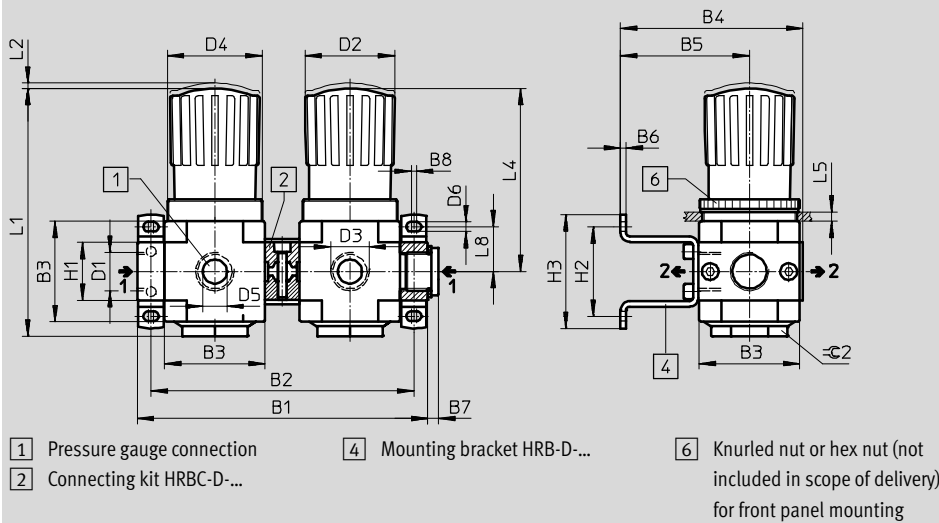
FESTO

Technical data

Dimensions

Download CAD data → www.festo.com

LRB-...-D-...-K2-...



Type	B1	B2	B3	B4	B5	B6	B7	B8	D1	D2	D3	D4
Mini												
LRB-1/4-D-...-K2-MINI	119	~107	40	80.7	59.2	2.5	5	3	G1/4	31	G1/4	M36x1.5
LRB-3/8-D-...-K2-MINI	125								G3/8			
Midi												
LRB-3/8-D-...-K2-MIDI	159	~144	55	99.9	70.6	3	5	3	G3/8	49.3	G3/8	M52x1.5
LRB-1/2-D-...-K2-MIDI							6		G1/2			

Type	D5	D6	H1	H2 ±0.2	H3 ±0.5	L1	L2	L4	L5 max.	L8	≈ 2
Mini											
LRB-1/4-D-...-K2-MINI	G1/8	4.3	20	35	47.3	~95.4	3	~68.9	3	17.5	17
LRB-3/8-D-...-K2-MINI											
Midi											
LRB-3/8-D-...-K2-MIDI	G1/4	5.3	32	49	62	~135.8	3	~100.3	5	24.5	36
LRB-1/2-D-...-K2-MIDI											

- || - Note: This product conforms to ISO 1179-1 and to ISO 228-1

Pressure regulator combinations LRB-K, D series, metal design

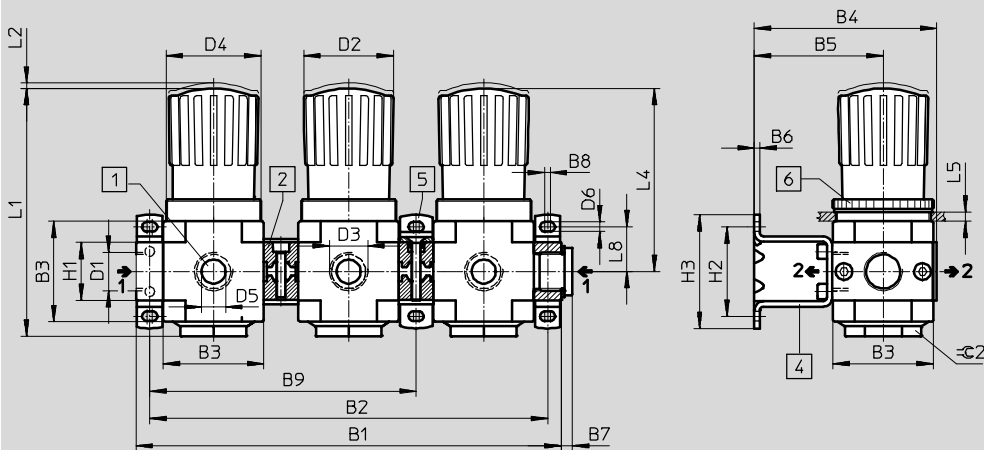
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Technical data

Dimensions

Download CAD data → www.festo.com

LRB-...-D-...-K3-...



1 Pressure gauge connection

2 Connecting kit HRBC-D-...

4 Mounting bracket HRB-D-...

5 Mounting bracket HRBK-D-...

6 Knurled nut or hex nut (not included in scope of delivery)
for front panel mounting

→ Flow direction,
both directions possible

Type	B1	B2	B3	B4	B5	B6	B7	B8	B9	D1	D2	D3	D4
Mini													
LRB-1/4-D-...-K3-MINI	174	~162	40	80.7	59.2	2.5	5	3	108.5	G1/4	31	G1/4	M36x1.5
LRB-3/8-D-...-K3-MINI	180									G3/8			
Midi													
LRB-3/8-D-...-K3-MIDI	233	~218	55	99.9	70.6	3	5	3	146	G3/8	49.3	G3/8	M52x1.5
LRB-1/2-D-...-K3-MIDI							6			G1/2			

Type	D5	D6	H1	H2 ±0.2	H3 ±0.5	L1	L2	L4	L5 max.	L8	≅ 2
Mini											
LRB-1/4-D-...-K3-MINI	G1/8	4.3	20	35	47.3	~95.4	3	~68.9	3	17.5	17
LRB-3/8-D-...-K3-MINI											
Midi											
LRB-3/8-D-...-K3-MIDI	G1/4	5.3	32	49	62	~135.8	3	~100.3	5	24.5	36
LRB-1/2-D-...-K3-MIDI											

• Note: This product conforms to ISO 1179-1 and to ISO 228-1

Pressure regulator combinations LRB-K, D series, metal design

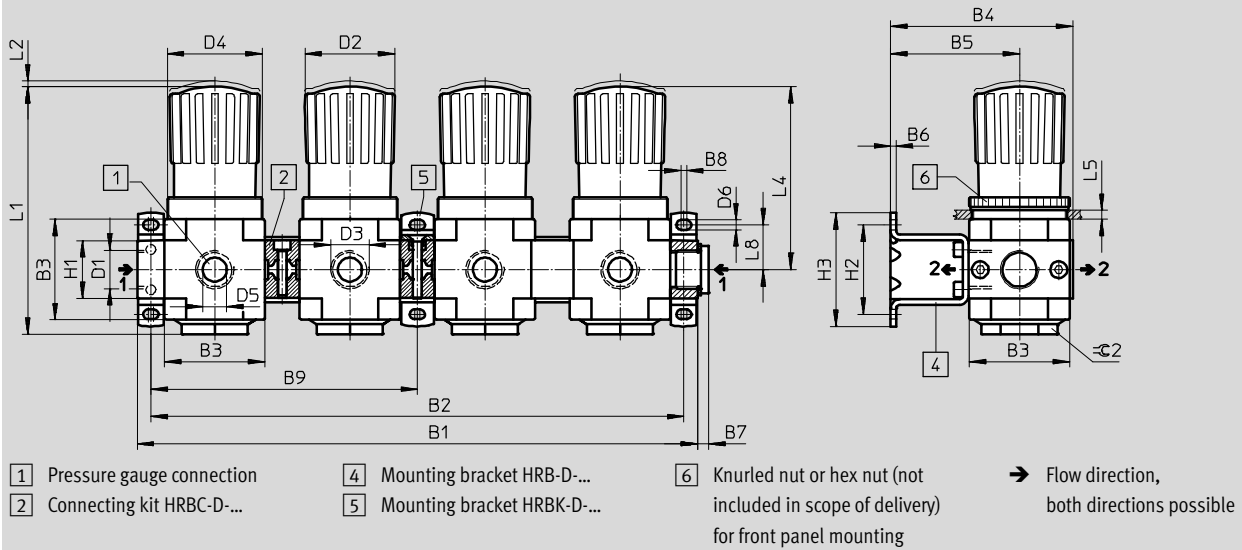
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Technical data

Dimensions

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LRB-...-D-...-K4-...



Type	B1	B2	B3	B4	B5	B6	B7	B8	B9	D1	D2	D3	D4
Mini													
LRB-1/4-D-...-K4-MINI	229	~217	40	80.7	59.2	2.5	5	3	108.5	G1/4	31	G1/4	M36x1.5
LRB-3/8-D-...-K4-MINI	235									G3/8			
Midi													
LRB-3/8-D-...-K4-MIDI	307	~292	55	99.9	70.6	3	5	3	146	G3/8	49.3	G3/8	M52x1.5
LRB-1/2-D-...-K4-MIDI							6			G1/2			

Type	D5	D6	H1	H2 ±0.2	H3 ±0.5	L1	L2	L4	L5 max.	L8	≈ 2
Mini											
LRB-1/4-D-...-K4-MINI	G1/8	4.3	20	35	47.3	~95.4	3	~68.9	3	17.5	17
LRB-3/8-D-...-K4-MINI											
Midi											
LRB-3/8-D-...-K4-MIDI	G1/4	5.3	32	49	62	~135.8	3	~100.3	5	24.5	36
LRB-1/2-D-...-K4-MIDI											

• Note: This product conforms to ISO 1179-1 and to ISO 228-1

Pressure regulator combinations LRB-K, D series, metal design

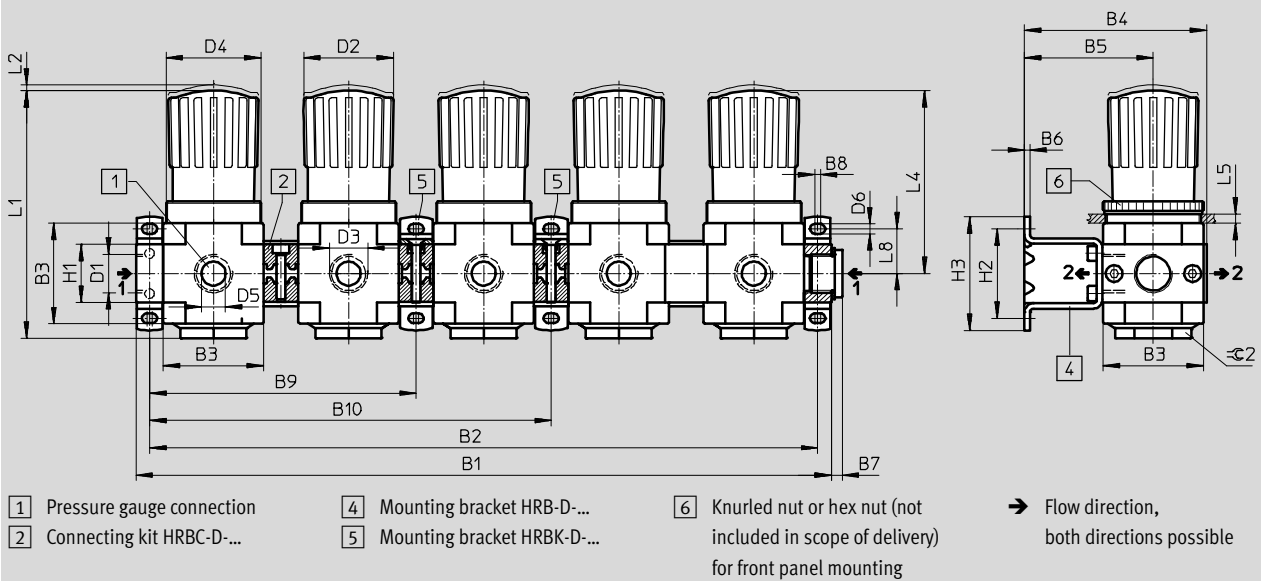
FESTO

Technical data

Dimensions

Download CAD data → www.festo.com

LRB-...-D-...-K5-...



Type	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	D1	D2	D3	D4
Mini														
LRB-1/4-D-...-K5-MINI	284	~272	40	80.7	59.2	2.5	5	3	108.5	163.5	G1/4	31	G1/4	M36x1.5
LRB-3/8-D-...-K5-MINI	290										G3/8			
Midi														
LRB-3/8-D-...-K5-MIDI	381	~366	55	99.9	70.6	3	5	3	146	220	G3/8	49.3	G3/8	M52x1.5
LRB-1/2-D-...-K5-MIDI							6				G1/2			

Type	D5	D6	H1	H2 ±0.2	H3 ±0.5	L1	L2	L4	L5 max.	L8	≈ 2
Mini											
LRB-1/4-D-...-K5-MINI	G1/8	4.3	20	35	47.3	~95.4	3	~68.9	3	17.5	17
LRB-3/8-D-...-K5-MINI											
Midi											
LRB-3/8-D-...-K5-MIDI	G1/4	5.3	32	49	62	~135.8	3	~100.3	5	24.5	36
LRB-1/2-D-...-K5-MIDI											

• Note: This product conforms to ISO 1179-1 and to ISO 228-1

Pressure regulator combinations LRB-K, D series, metal design

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Technical data

Ordering data					
Connecting kits, connecting plates with connecting thread and mounting brackets					
Size	Connection	Pressure regulation range 0.5 ... 7 bar		Pressure regulation range 0.5 ... 12 bar	
		Part No.	Type	Part No.	Type
Manifold with 2 pressure regulators					
Mini	G ¹ / ₄	528952	LRB- ¹ / ₄ -D-7-O-K2-MINI	528954	LRB- ¹ / ₄ -D-O-K2-MINI
	G ³ / ₈	528953	LRB- ³ / ₈ -D-7-O-K2-MINI	528955	LRB- ³ / ₈ -D-O-K2-MINI
Midi	G ³ / ₈	528956	LRB- ³ / ₈ -D-7-O-K2-MIDI	528958	LRB- ³ / ₈ -D-O-K2-MIDI
	G ¹ / ₂	528957	LRB- ¹ / ₂ -D-7-O-K2-MIDI	528959	LRB- ¹ / ₂ -D-O-K2-MIDI
Manifold with 3 pressure regulators					
Mini	G ¹ / ₄	528968	LRB- ¹ / ₄ -D-7-O-K3-MINI	528970	LRB- ¹ / ₄ -D-O-K3-MINI
	G ³ / ₈	528969	LRB- ³ / ₈ -D-7-O-K3-MINI	528971	LRB- ³ / ₈ -D-O-K3-MINI
Midi	G ³ / ₈	528972	LRB- ³ / ₈ -D-7-O-K3-MIDI	528974	LRB- ³ / ₈ -D-O-K3-MIDI
	G ¹ / ₂	528973	LRB- ¹ / ₂ -D-7-O-K3-MIDI	528975	LRB- ¹ / ₂ -D-O-K3-MIDI
Manifold with 4 pressure regulators					
Mini	G ¹ / ₄	528984	LRB- ¹ / ₄ -D-7-O-K4-MINI	528986	LRB- ¹ / ₄ -D-O-K4-MINI
	G ³ / ₈	528985	LRB- ³ / ₈ -D-7-O-K4-MINI	528987	LRB- ³ / ₈ -D-O-K4-MINI
Midi	G ³ / ₈	528988	LRB- ³ / ₈ -D-7-O-K4-MIDI	528990	LRB- ³ / ₈ -D-O-K4-MIDI
	G ¹ / ₂	528989	LRB- ¹ / ₂ -D-7-O-K4-MIDI	528991	LRB- ¹ / ₂ -D-O-K4-MIDI
Manifold with 5 pressure regulators					
Mini	G ¹ / ₄	529000	LRB- ¹ / ₄ -D-7-O-K5-MINI	529002	LRB- ¹ / ₄ -D-O-K5-MINI
	G ³ / ₈	529001	LRB- ³ / ₈ -D-7-O-K5-MINI	529003	LRB- ³ / ₈ -D-O-K5-MINI
Midi	G ³ / ₈	529004	LRB- ³ / ₈ -D-7-O-K5-MIDI	529006	LRB- ³ / ₈ -D-O-K5-MIDI
	G ¹ / ₂	529005	LRB- ¹ / ₂ -D-7-O-K5-MIDI	529007	LRB- ¹ / ₂ -D-O-K5-MIDI

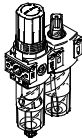
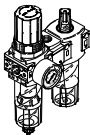
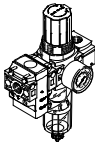
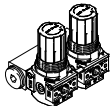
Pressure regulator combinations LRB-K, D series, metal design
Technical data



Pressure regulators LR/LRB, D series, polymer

FESTO

Product range overview D series service units, polymer

Type		Size	Pneumatic connection			Pressure regulation range [bar]	Grade of filtration [µm]	
			G1/8	G1/4	G1/2		5	40
Service units								
FRC		Mini	■	■	–	■	■	■
Service unit combinations								
FRC-K		Mini	–	■	–	■	–	■
LFR-K		Mini	–	■	–	■	–	■
Individual devices								
Filter regulators LFR		Mini	■	■	–	■	■	■
Pressure regulators LR		Mini	■	■	–	■	–	–
Pressure regulator combinations LRB-K		Mini	–	–	■	■	–	–
On-off valves HE		Mini	–	■	–	–	–	–

Pressure regulators LR/LRB, D series, polymer

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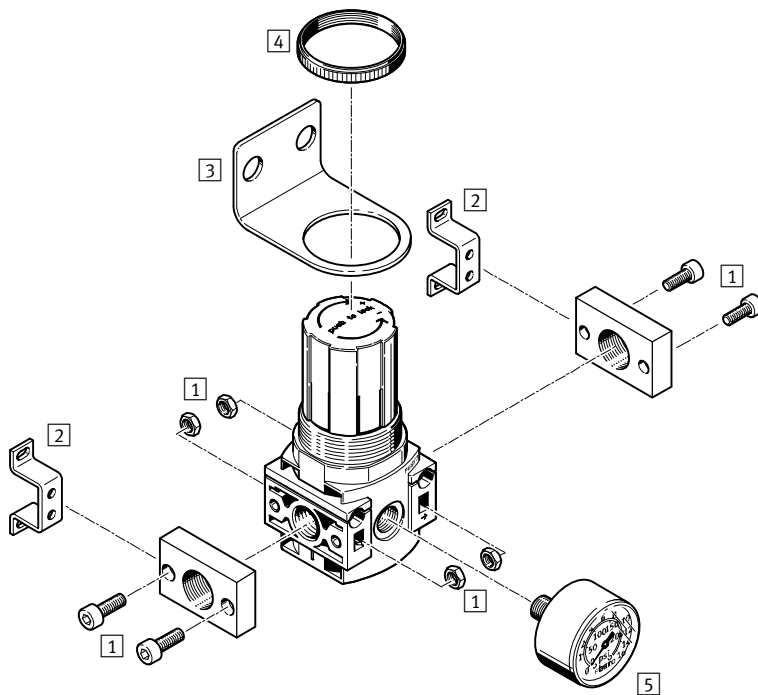
Product range overview D series service units, polymer

Type	Size	Condensate drain		Pressure display		Actuator lock	Regulating functions		→ Page/ Internet
		Manual rotary	Semi-automatic	With pressure gauge	Without pressure gauge	Rotary knob with detent	With secondary venting	With return flow function	
Service units									
FRC	Mini	■	■	■	-	■	■	■	frc
Service unit combinations									
FRC-K	Mini	■	-	■	-	■	■	■	frc
LFR-K	Mini	■	-	■	-	■	■	■	lfr
Individual devices									
Filter regulators LFR	Mini	■	■	■	■	■	■	■	lfr
Pressure regulators LR	Mini	-	-	■	■	■	■	■	40
Pressure regulator combinations LRB-K	Mini	-	-	-	■	■	■	■	45
On-off valves HE	Mini	-	-	-	■	-	-	-	he

Pressure regulators LR, D series, polymer

Peripherals overview

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Mounting attachments and accessories		→ Page/ Internet
1	Connecting plate kit PBL	pbl
2	Mounting bracket HFOE	hfoe-d
3	Mounting bracket HR-D	hr-d
4	Knurled nut (included in scope of delivery) LRVS	–
5	Pressure gauge MA	52

Pressure regulators LR, D series, polymer



Type codes

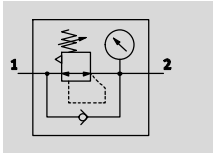
	LR	–	1/8	–	DB	–	7	–	0	–	MINI
Basic function											
LR	Pressure regulator										
Pneumatic connection											
1/8	Thread G1/8										
1/4	Thread G1/4										
Series											
DB	Series										
Pressure regulation range											
7	0.5 ... 7 bar										
Pressure gauge											
	With pressure gauge										
0	Without pressure gauge										
Size											
MINI											

Pressure regulators LR, D series, polymer

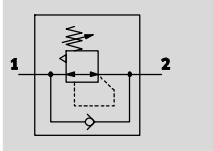
Technical data

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with pressure gauge



without pressure gauge



-  - Flow rate
800 ... 1,300 l/min

-  - Temperature range
-5 ... +50 °C

-  - Operating pressure
1.5 ... 10 bar



- Setting values are secured by locking the rotary knob
- High flow rate
- Good regulating characteristics with minimal pressure hysteresis

General technical data				
Size	Mini			
	With pressure gauge		Without pressure gauge	
Pneumatic connection	G1/8	G1/4	G1/8	G1/4
Design	Pressure regulator with pressure gauge		Pressure regulator without pressure gauge	
Regulating function	With return flow function			
	With secondary venting			
Type of mounting	Inline installation			
	Via through-holes			
	Via mounting bracket			
	Front panel mounting			
Assembly position	Any			
Regulator lock	Rotary knob with detent			
Max. hysteresis [bar]	0.5			
Pressure regulation range [bar]	0.5 ... 7			
Pressure indication	Via pressure gauge		G1/8 prepared	
Pressure gauge connection	G1/8			

Standard nominal flow rate ¹⁾ qnN [l/min]		
Pneumatic connection	G1/8	G1/4
Mini		
Pressure regulation range 0.5 ... 7 bar	≥ 800	≥ 1,300

1) Measured at p1 = 10 bar, p2 = 6 bar and Δp = 1 bar.

Pressure regulators LR, D series, polymer

FESTO

Technical data

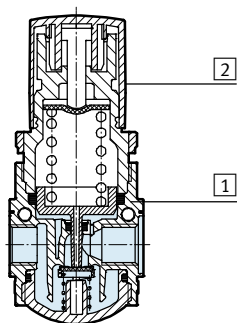
Operating and environmental conditions	
Size	Mini
Operating pressure [bar]	1.5 ... 10
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [–:–:–]
Ambient temperature [°C]	–5 ... +50
Temperature of medium [°C]	–5 ... +50
Corrosion resistance class CRC ¹⁾	1

- 1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. For dry indoor applications or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Weight [g]	
Size	Mini
Pressure regulator	150

Materials

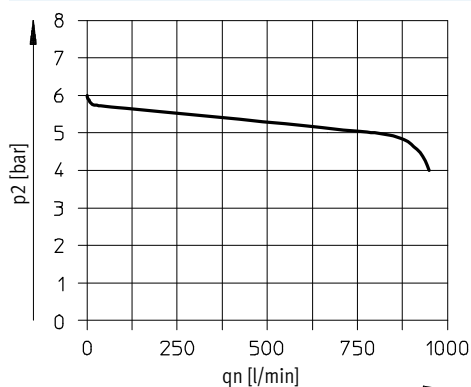
Sectional view



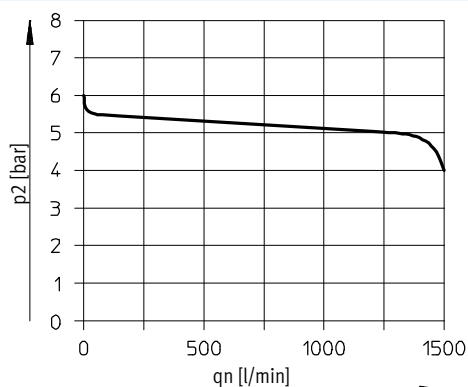
Pressure regulator	Mini
1 Housing	Polyamide, reinforced
2 Rotary knob	Polyacetate
– Seals	Nitrile rubber
Note on materials	RoHS-compliant

Standard flow rate q_n as a function of output pressure p_2

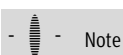
Pneumatic connection G $\frac{1}{8}$



Pneumatic connection G $\frac{1}{4}$



Primary pressure $p_1 = 10$ bar



Note

Slight leakage at the output has been taken into account in the design. It improves the control behaviour of the non pre-pressure compensated controller.

In a few cases leakage may amount to 500 l/h.

- 7 - Type discontinued
Available up until 2016

Pressure regulators LR, D series, polymer

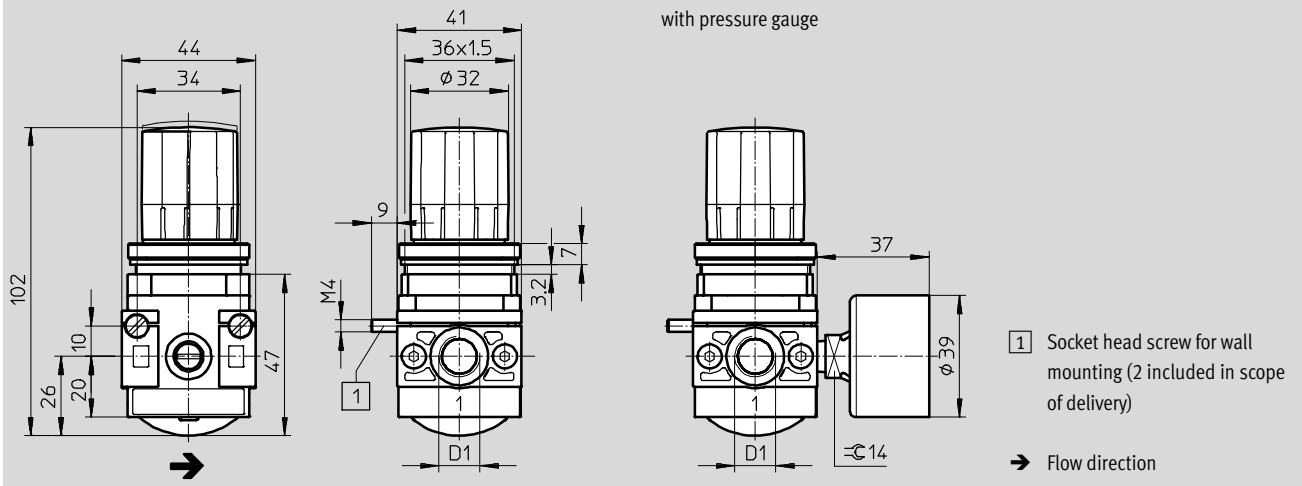
Technical data

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Dimensions

Download CAD data → www.festo.com

Mini



Type	D1
Mini	
LR-1/8-DB	G1/8
LR-1/4-DB	G1/4

Ordering data

Size	Connection	Pressure regulation range 0.5 ... 7 bar		
		Part No.	Type	
With pressure gauge, outer scale in bar, inner scale in psi				
Mini	G1/8	539681	LR-1/8-DB-7-MINI	- 7 -
	G1/4	539682	LR-1/4-DB-7-MINI	
Without pressure gauge				
Mini	G1/8	537642	LR-1/8-DB-7-O-MINI	- 7 -
	G1/4	537643	LR-1/4-DB-7-O-MINI	

Pressure regulators LR/LRS/LRB/LRBS, D series

Accessories

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Ordering data – Pressure gauge MA						
	Nominal size	Pneumatic connection	Indicating range		Part No.	Type
			[bar]	[psi]		
	Pressure gauge MA				Technical data ➔ Internet: ma	
	27	M5	0 ... 10	–	526323	MA-27-10-M5
	40	G $\frac{1}{8}$	0 ... 10	0 ... 145	359874	MA-40-10- $\frac{1}{4}$
			0 ... 16	0 ... 232	345395	MA-40-16- $\frac{1}{4}$
	50	G $\frac{1}{4}$	0 ... 10	0 ... 145	359873	MA-50-10- $\frac{1}{4}$
			0 ... 16	0 ... 232	356759	MA-50-16- $\frac{1}{4}$
	Pressure gauge MA, DIN EN 837-1					Technical data ➔ Internet: ma
	40	R $\frac{1}{8}$	0 ... 10	0 ... 145	162835	MA-40-10- $\frac{1}{8}$ -EN
		G $\frac{1}{4}$	0 ... 10	0 ... 145	183900	MA-40-10-G $\frac{1}{4}$ -EN
	Flanged pressure gauge FMA, DIN EN 837-1					Technical data ➔ Internet: fma
40	G $\frac{1}{4}$	0 ... 10	0 ... 145	159596	FMA-40-10- $\frac{1}{4}$ -EN	
		0 ... 16	0 ... 232	159597	FMA-40-16- $\frac{1}{4}$ -EN	
50	G $\frac{1}{4}$	0 ... 10	0 ... 145	159599	FMA-50-10- $\frac{1}{4}$ -EN	
		0 ... 16	0 ... 232	159600	FMA-50-16- $\frac{1}{4}$ -EN	

Ordering data – Pressure sensor SPAU						Technical data → Internet: spau	
	Pneumatic connection	Switching output	Display type	Electrical connection	Part No.	Type	
Pressure sensor SPAU for direct mounting on the service unit with pressure gauge connection (adapter for pneumatic connection included in scope of delivery), pressure measuring range 0 ... 10 bar, relative pressure measurement							
	Male thread R1/8	2x PNP or 2x NPN, switchable	Illuminated LCD	M8x1, 4-pin	8001203	SPAU-P10R-T-R18M-L-PNLK-PNVBA-M8D	
	Male thread R1/4			M12x1, 4-pin	8001206	SPAU-P10R-T-R18M-L-PNLK-PNVBA-M12D	
				M8x1, 4-pin	8001209	SPAU-P10R-T-R14M-L-PNLK-PNVBA-M8D	
				M12x1, 4-pin	8001208	SPAU-P10R-T-R14M-L-PNLK-PNVBA-M12D	

Ordering data – Push-in fitting					
	Pneumatic connection	Tubing O.D.	Part No.	Type	PU ¹⁾
Push-in fitting QSF, female thread with external hex					
	G $\frac{1}{4}$	8	153026	QSF- $\frac{1}{4}$ -8-B	10
Push-in T-fitting QSTF, 360° rotatable, with male and female thread					
	G $\frac{1}{4}$	8	186203	QSTF-G $\frac{1}{4}$ -8	1
Push-in Y-fitting QSYLV, 360° rotatable, male thread with external hex					
	G $\frac{1}{4}$	8	186210	QSYLV-G $\frac{1}{4}$ -8	1

1) Packaging unit quantity