

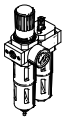
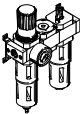
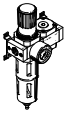

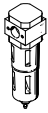
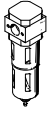
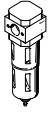
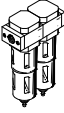
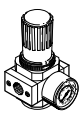
Pressure regulators LR/LRS/LRB/LRBS, D series



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



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
<b>Service units</b>																		
<b>FRC/FRCS</b> 	Micro	■	■	■	-	-	-	-	-	■	■	■	-	-	-	-	■	-
	Mini	-	-	■	■	■	-	-	-	-	-	■	■	-	-	-	■	■
	Midi	-	-	-	■	■	■	■	-	-	-	■	■	-	-	-	■	■
	Maxi	-	-	-	-	-	■	■	■	-	-	■	■	-	-	-	■	■
<b>Service unit combinations</b>																		
<b>FRC-K</b> 	Micro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Mini	-	-	■	■	-	-	-	-	-	-	■	■	-	-	-	-	■
	Midi	-	-	-	■	■	■	-	-	-	-	■	■	-	-	-	-	■
	Maxi	-	-	-	-	-	■	■	-	-	-	■	■	-	-	-	-	■
<b>LFR-K LFRS-K</b> 	Micro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Mini	-	-	■	■	-	-	-	-	-	-	■	■	-	-	-	-	■
	Midi	-	-	-	■	■	■	-	-	-	-	■	■	-	-	-	-	■
	Maxi	-	-	-	-	-	■	■	-	-	-	■	■	-	-	-	-	■
<b>Individual devices</b>																		
<b>Filter regulators LFR/LFRS</b> 	Micro	■	■	■	-	-	-	-	-	■	■	■	-	-	-	-	■	-
	Mini	-	-	■	■	■	-	-	-	-	-	■	■	-	-	-	■	■
	Midi	-	-	-	■	■	■	■	-	-	-	■	■	-	-	-	■	■
	Maxi	-	-	-	-	-	■	■	■	-	-	■	■	-	-	-	■	■
<b>Filters LF</b> 	Micro	■	■	■	-	-	-	-	-	■	■	-	-	-	-	-	■	-
	Mini	-	-	■	■	■	-	-	-	-	-	-	-	-	-	-	■	■
	Midi	-	-	-	■	■	■	■	-	-	-	-	-	-	-	-	■	■
	Maxi	-	-	-	-	-	■	■	■	-	-	-	-	-	-	-	■	■
<b>Fine and micro filters LFMA/LFMB</b> 	Micro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Mini	-	-	■	■	■	-	-	-	-	-	-	-	■	■	-	-	-
	Midi	-	-	-	■	■	■	■	-	-	-	-	-	■	■	-	-	-
	Maxi	-	-	-	-	-	■	■	■	-	-	-	-	■	■	-	-	-
<b>Active carbon filters LFX</b> 	Micro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Mini	-	-	■	■	■	-	-	-	-	-	-	-	-	-	-	-	-
	Midi	-	-	-	■	■	■	■	-	-	-	-	-	-	-	-	-	-
	Maxi	-	-	-	-	-	■	■	■	-	-	-	-	-	-	-	-	-
<b>Filter combinations LFMBA</b> 	Micro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Mini	-	-	■	■	■	-	-	-	-	-	-	-	■	■	-	-	-
	Midi	-	-	-	■	■	■	■	-	-	-	-	-	■	■	-	-	-
	Maxi	-	-	-	-	-	■	■	■	-	-	-	-	■	■	-	-	-
<b>Pressure regulators LR/LRS</b> 	Micro	■	■	■	-	-	-	-	-	■	■	■	-	-	-	-	-	-
	Mini	-	-	■	■	■	-	-	-	-	-	■	■	-	-	-	-	-
	Midi	-	-	-	■	■	■	■	-	-	-	■	■	-	-	-	-	-
	Maxi	-	-	-	-	-	■	■	■	-	-	■	■	-	-	-	-	-

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

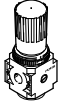
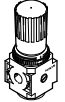
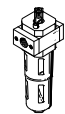
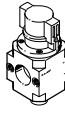
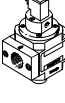
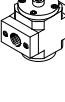
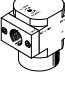
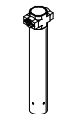
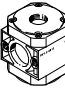
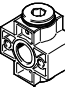
Product range overview D series service units, metal design

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	
<b>Service units</b>																	
FRC/FRCS	Micro	-	■	■	■	-	■	■	■	-	-	-	-	-	-	-	frc
	Mini	■	-	■	-	■	■	■	■	■	-	-	-	-	-	-	
	Midi	■	-	■	-	■	■	■	■	■	-	-	-	-	-	-	
	Maxi	■	-	■	-	■	■	■	■	■	-	-	-	■	■	-	
<b>Service unit combinations</b>																	
FRC-K	Micro	-															frc
	Mini	■	-	■	-	■	■	-	■	-	■	-	-	-	-	-	
	Midi	■	-	■	-	■	■	-	■	-	■	-	-	-	-	-	
	Maxi	■	-	■	-	■	■	-	■	-	■	-	-	■	■	-	
LFR-K LFRS-K	Micro	-															lfr
	Mini	■	-	■	-	■	■	-	■	■	■	-	-	-	-	-	
	Midi	■	-	■	-	■	■	-	■	■	■	-	-	-	-	-	
	Maxi	■	-	■	-	■	■	-	■	■	■	-	-	■	■	-	
<b>Individual devices</b>																	
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

FESTO

Product range overview D series service units, metal design

Type	Size	Pneumatic connection										Pressure regulation range [bar]		
		M5	M7	G1/8	G1/4	G3/8	G1/2	G3/4	G1	QS4	QS6	0.5 ... 7	0.5 ... 12	
<b>Individual devices</b>														
Pressure regulators <b>LRB/LRBS</b>		Micro	-											
		Mini	-	-	-	■	-	-	-	-	-	-	■	■
		Midi	-	-	-	-	■	-	-	-	-	-	■	■
		Maxi	-											
Pressure regulator combinations <b>LRB-K</b>		Micro	-											
		Mini	-	-	-	■	■	-	-	-	-	-	■	■
		Midi	-	-	-	-	■	■	-	-	-	-	■	■
		Maxi	-											
Lubricators <b>LOE</b>		Micro	■	■	■	-	-	-	-	-	■	■	-	-
		Mini	-	-	■	■	■	-	-	-	-	-	-	-
		Midi	-	-	-	■	■	■	■	-	-	-	-	-
		Maxi	-	-	-	-	-	■	■	■	-	-	-	-
On-off valves <b>HE</b>		Micro	-											
		Mini	-	-	■	■	■	-	-	-	-	-	-	-
		Midi	-	-	-	■	■	■	■	-	-	-	-	-
		Maxi	-	-	-	-	-	■	■	■	-	-	-	-
On-off valves, electrical <b>HEE</b>		Micro	-											
		Mini	-	-	■	■	■	-	-	-	-	-	-	-
		Midi	-	-	-	■	■	■	■	-	-	-	-	-
		Maxi	-	-	-	-	-	■	■	■	-	-	-	-
On-off valves, pneumatic <b>HEP</b>		Micro	-											
		Mini	-	-	■	■	■	-	-	-	-	-	-	-
		Midi	-	-	-	■	■	■	■	-	-	-	-	-
		Maxi	-	-	-	-	-	■	■	■	-	-	-	-
Soft-start valves <b>HEL</b>		Micro	-											
		Mini	-	-	■	■	■	-	-	-	-	-	-	-
		Midi	-	-	-	■	■	■	■	-	-	-	-	-
		Maxi	-	-	-	-	-	■	■	■	-	-	-	-
Membrane air dryers <b>LDM1</b>		Micro	-											
		Mini	-											
		Midi	-											
		Maxi	-	-	-	-	-	■	■	■	-	-	-	-
Branching modules <b>FRM</b>		Micro	-											
		Mini	-	-	■	■	■	-	-	-	-	-	-	-
		Midi	-	-	-	■	■	■	■	-	-	-	-	-
		Maxi	-	-	-	-	-	■	■	■	-	-	-	-
Distributor block <b>FRZ</b>		Micro	-											
		Mini	-											
		Midi	-											
		Maxi	-											

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

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	
<b>Individual devices</b>													
Pressure regulators <b>LRB/LRBS</b>	Micro	-	-	-	■	■	■	-	-	-	-	-	20
	Mini	-	-	-	■	■	■	-	-	-	-	-	
	Midi	-	-	-	■	■	■	-	-	-	-	-	
	Maxi	-	-	-	■	■	■	-	-	-	-	-	
Pressure regulator combinations <b>LRB-K</b>	Micro	-	-	-	■	■	-	-	-	-	-	-	28
	Mini	-	-	-	■	■	-	-	-	-	-	-	
	Midi	-	-	-	■	■	-	-	-	-	-	-	
	Maxi	-	-	-	■	■	-	-	-	-	-	-	
Lubricators <b>LOE</b>	Micro	-	■	-	■	-	-	-	-	-	-	-	loe
	Mini	■	-	-	■	-	-	-	-	-	-	-	
	Midi	■	-	-	■	-	-	-	-	-	-	-	
	Maxi	■	-	-	■	-	-	-	-	-	-	-	
On-off valves <b>HE</b>	Micro	-	-	-	■	■	-	-	-	-	-	-	he
	Mini	-	-	-	■	■	-	-	-	-	-	-	
	Midi	-	-	-	■	■	-	-	-	-	-	-	
	Maxi	-	-	-	■	■	-	-	-	-	-	-	
On-off valves, electrical <b>HEE</b>	Micro	-	-	-	■	-	-	■	■	■	-	-	hee
	Mini	-	-	-	■	-	-	■	■	■	-	-	
	Midi	-	-	-	■	-	-	■	■	■	-	-	
	Maxi	-	-	-	■	-	-	■	■	■	-	-	
On-off valves, pneumatic <b>HEP</b>	Micro	-	-	-	■	-	-	-	-	-	-	-	hep
	Mini	-	-	-	■	-	-	-	-	-	-	-	
	Midi	-	-	-	■	-	-	-	-	-	-	-	
	Maxi	-	-	-	■	-	-	-	-	-	-	-	
Soft-start valves <b>HEL</b>	Micro	-	-	-	■	-	-	-	-	-	-	-	hel
	Mini	-	-	-	■	-	-	-	-	-	-	-	
	Midi	-	-	-	■	-	-	-	-	-	-	-	
	Maxi	-	-	-	■	-	-	-	-	-	-	-	
Membrane air dryers <b>LDM1</b>	Micro	-	-	-	■	-	-	-	-	-	-	-	ldm1
	Mini	-	-	-	■	-	-	-	-	-	-	-	
	Midi	-	-	-	■	-	-	-	-	-	-	-	
	Maxi	■	-	-	■	-	-	-	-	-	-	-	
Branching modules <b>FRM</b>	Micro	-	-	-	■	-	-	-	-	-	■	■	frm
	Mini	-	-	-	■	-	-	-	-	-	■	■	
	Midi	-	-	-	■	-	-	-	-	-	■	■	
	Maxi	-	-	-	■	-	-	-	-	-	■	■	
Distributor block <b>FRZ</b>	Micro	-	-	-	■	-	-	-	-	-	-	-	frz
	Mini	-	-	-	■	-	-	-	-	-	-	-	
	Midi	-	-	-	■	-	-	-	-	-	-	-	
	Maxi	-	-	-	■	-	-	-	-	-	-	-	

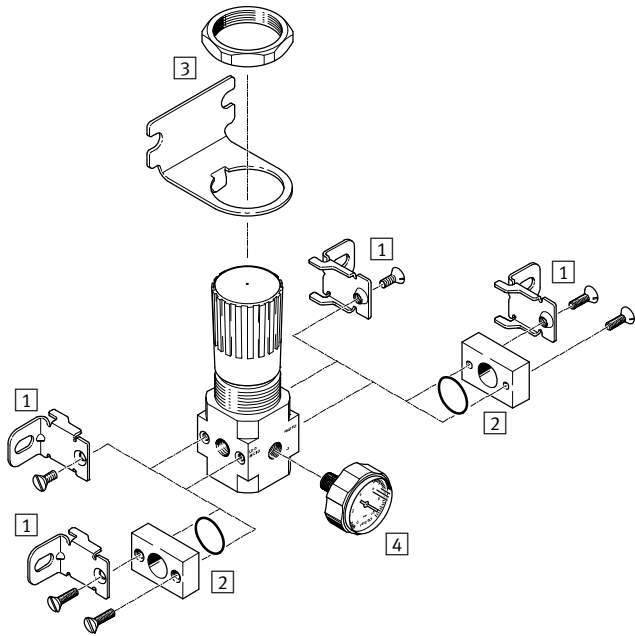
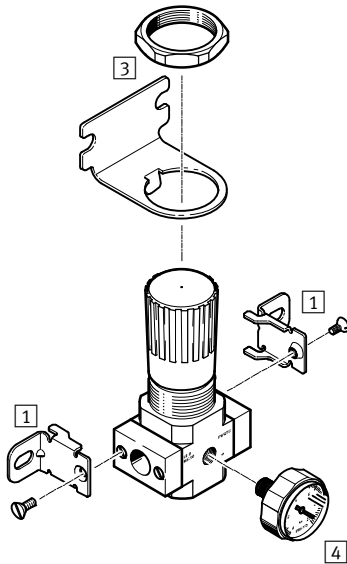
# Pressure regulators LR/LRS, D series, metal design

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

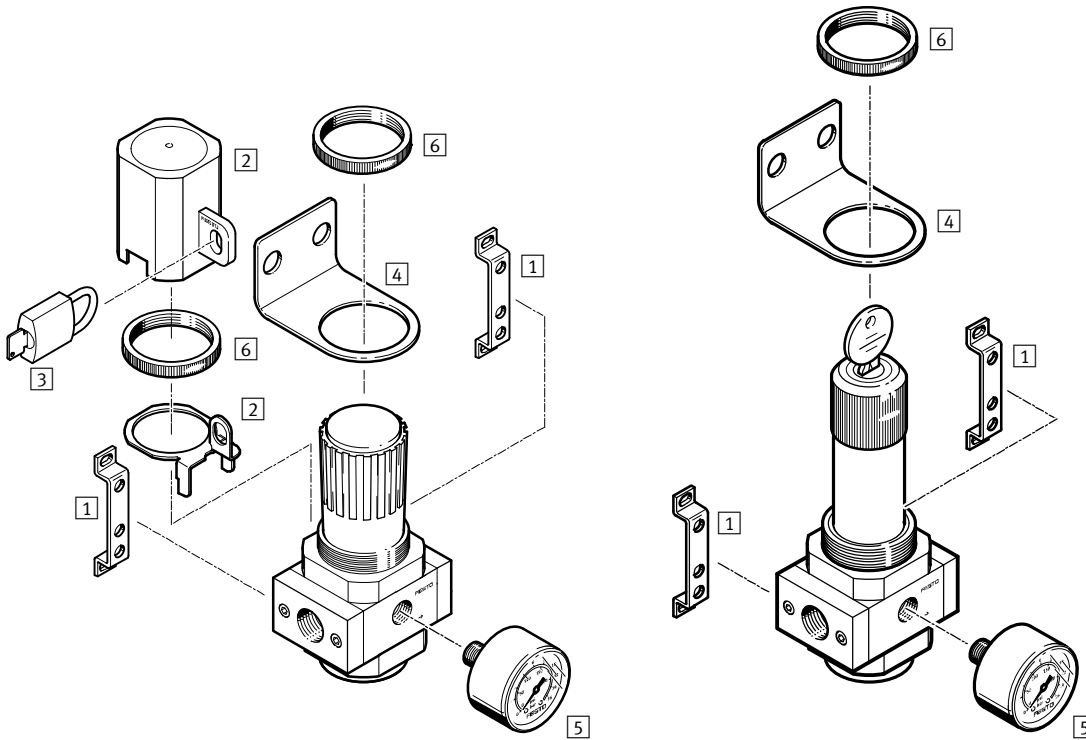
# Pressure regulators LR/LRS, D series, metal design

Peripherals overview

**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

Type codes

LR - 1/2 - 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
---	--------

### 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

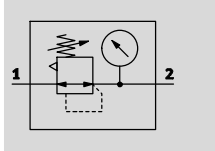
MICRO	Grid dimension 25 mm (without connecting plates)
MINI	Grid dimension 40 mm (without connecting plates)
MIDI	Grid dimension 55 mm (without connecting plates)
MAXI	Grid dimension 66 mm (without connecting plates)



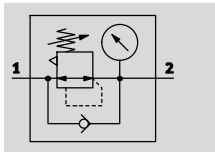
# Pressure regulators LR/LRS, D series, metal design

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 <sup>1)</sup>	M5 <sup>2)</sup> , M7 <sup>2)</sup> , G1/8, QS-4 <sup>3)</sup> , QS-6 <sup>3)</sup>	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 <sup>4)</sup>		Output pressure constant, with secondary venting, with primary pressure compensation <sup>5)</sup> , with return flow action <sup>5)</sup>
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) <sup>2)</sup>	12,000 (8,350) <sup>2)</sup>	12,500 (8,400) <sup>2)</sup>
	0.5 ... 12 bar	800	1,500	1,700	2,100	3,200	3,500	3,500	10,500 (5,400) <sup>2)</sup>	11,000 (6,800) <sup>2)</sup>	11,500 (7,000) <sup>2)</sup>

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 <sup>1)</sup>	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) <sup>1)</sup>
LRS	–	–	520	1,250	1,290 (1,680) <sup>1)</sup>
Without pressure gauge					
LR	80	100	300	660	1,100 (1,330) <sup>1)</sup>
LRS	–	–	470	1,180	1,215 (1,610) <sup>1)</sup>

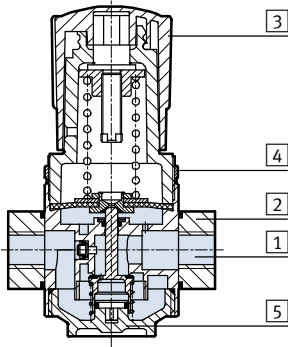
1) For the LR/LRS-...-DI.

# Pressure regulators LR/LRS, D series, metal design

Technical data

## Materials

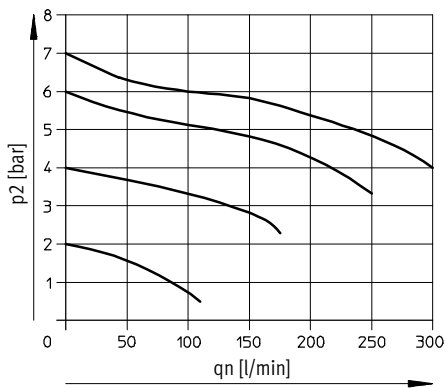
Sectional view



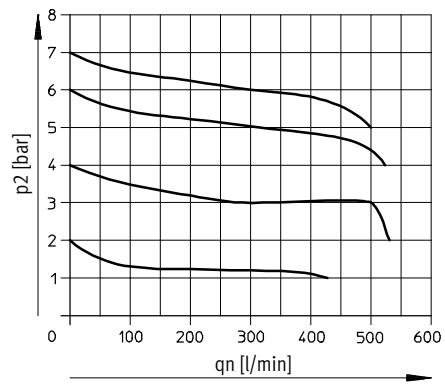
Size	Micro	Mini/Midi/Maxi	
		With pressure gauge	Without pressure gauge
1 Housing	Die-cast zinc	Die-cast zinc/aluminium	
2 Connecting plates	Wrought aluminium alloy	Die-cast zinc/aluminium	
3 Regulating knob	POM	PA	
4 Knurled nut	-	Aluminium	
5 Plug cap	PC	PC	
- Seals	NBR	NBR	
Note on materials	RoHS-compliant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

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

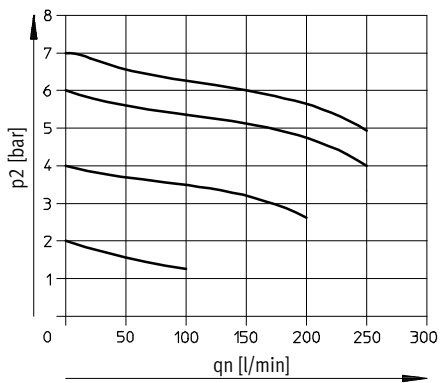
LR-M5-...-MICRO



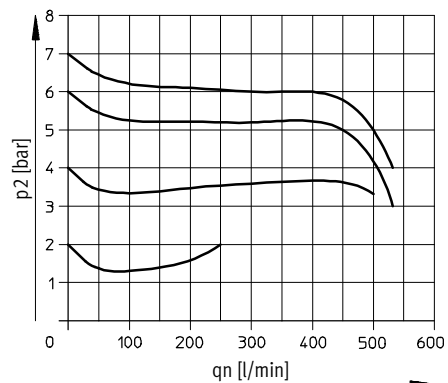
LR-M7-...-MICRO B



LR-QS4-...-MICRO



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



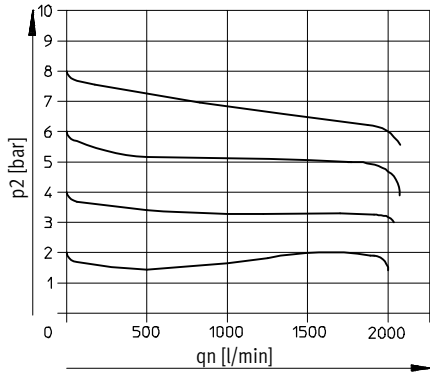
Primary pressure  $p_1 = 10$  bar

# Pressure regulators LR/LRS, D series, metal design

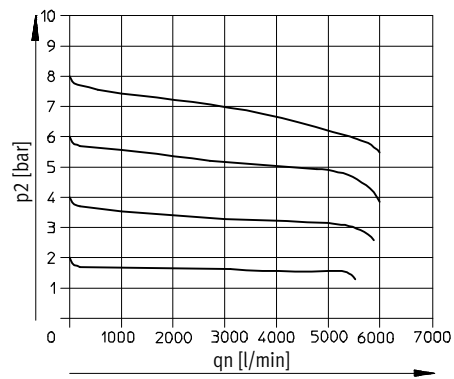
Technical data

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

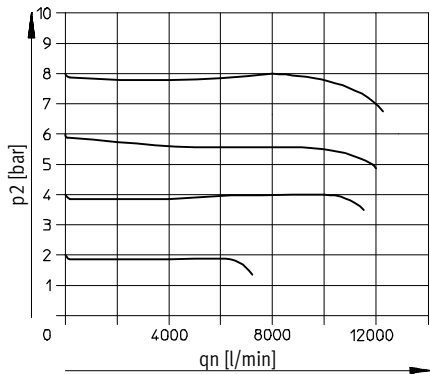
LR/LRS-1/4-D-MINI



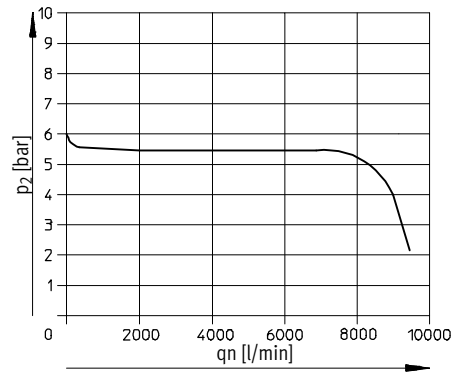
LR/LRS-1/2-D-MIDI




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.

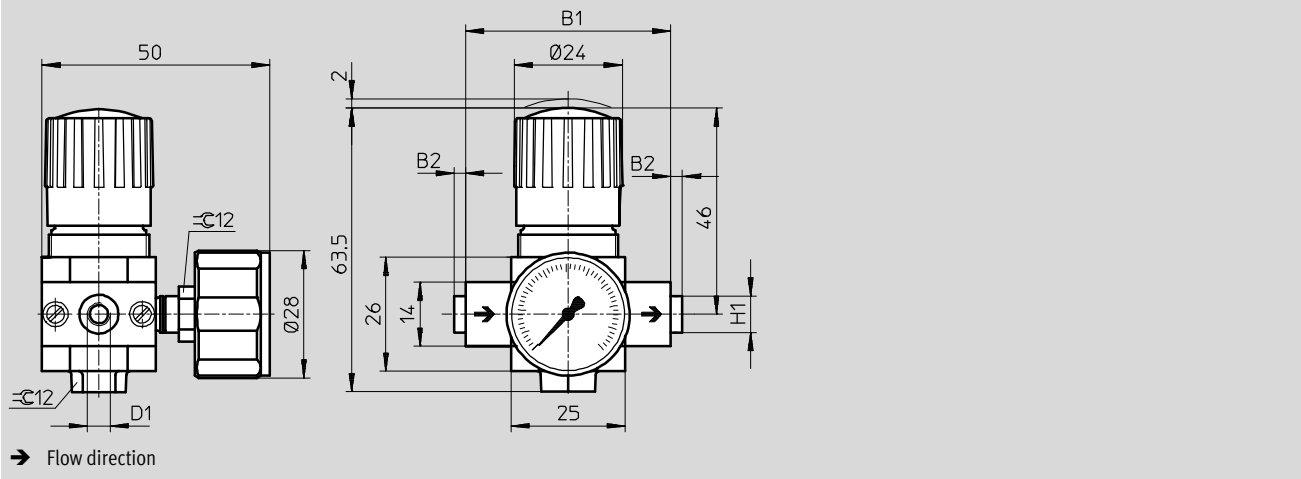
# Pressure regulators LR/LRS, D series, metal design

Technical data

## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

### Micro



Type	B1	B2	D1	H1
Micro				
LR-M5-D-7-MICRO	25	-	M5	-
LR-M7-D-7-MICRO B			M7	
LR-1/8-D-7-MICRO	45	~2.5	G1/8	-
LR-QS4-D-7-MICRO			QS-4	~8
LR-QS6-D-7-MICRO			QS-6	~10

|| 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

**Dimensions** Download CAD data → [www.festo.com](http://www.festo.com)

Mini/Midi/Maxi

lockable

1 Second pressure gauge connection      3 Installation dimensions

→ Flow direction

Type	B1	B2	B3	B4	D1	D2	D3	D4	D5
<b>Mini</b>									
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				
<b>Midi</b>									
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				
<b>Maxi</b>									
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



Technical data

Type	H1	H2	L1	L4	L5 max.	L6	L7	T1	⌀ 1	⌀ 2
<b>Mini</b>										
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										
<b>Midi</b>										
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										
<b>Maxi</b>										
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	40		125	82		111				
LR/LRS-3/4-D-DI-MAXI			148	105		135				
LR/LRS-1-D-MAXI			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 <sup>1)</sup>	162590	LR-1/8-D-O-MINI <sup>1)</sup>
	G1/4	162599	LR-1/4-D-7-O-MINI <sup>1)</sup>	162591	LR-1/4-D-O-MINI <sup>1)</sup>
	G3/8	162600	LR-3/8-D-7-O-MINI <sup>1)</sup>	162592	LR-3/8-D-O-MINI <sup>1)</sup>
Midi	G1/4	186454	LR-1/4-D-7-O-MIDI <sup>1)</sup>	186452	LR-1/4-D-O-MIDI <sup>1)</sup>
	G3/8	162601	LR-3/8-D-7-O-MIDI <sup>1)</sup>	162593	LR-3/8-D-O-MIDI <sup>1)</sup>
	G1/2	162602	LR-1/2-D-7-O-MIDI <sup>1)</sup>	162594	LR-1/2-D-O-MIDI <sup>1)</sup>
	G3/4	162603	LR-3/4-D-7-O-MIDI <sup>1)</sup>	162595	LR-3/4-D-O-MIDI <sup>1)</sup>
Maxi	G1/2	186458	LR-1/2-D-7-O-MAXI <sup>1)</sup>	186456	LR-1/2-D-O-MAXI <sup>1)</sup>
	G3/4	162604	LR-3/4-D-7-O-MAXI <sup>1)</sup>	162596	LR-3/4-D-O-MAXI <sup>1)</sup>
	G1	162605	LR-1-D-7-O-MAXI <sup>1)</sup>	162597	LR-1-D-O-MAXI <sup>1)</sup>

1) Free of copper and PTFE



# Pressure regulators LR/LRS, D series, metal design

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 <sup>1)</sup>	192304	LR-1/8-D-O-I-MINI <sup>1)</sup>
	G1/4	192307	LR-1/4-D-7-O-I-MINI <sup>1)</sup>	192306	LR-1/4-D-O-I-MINI <sup>1)</sup>
	G3/8	192309	LR-3/8-D-7-O-I-MINI <sup>1)</sup>	192308	LR-3/8-D-O-I-MINI <sup>1)</sup>
Midi	G1/4	192319	LR-1/4-D-7-O-I-MIDI <sup>1)</sup>	192318	LR-1/4-D-O-I-MIDI <sup>1)</sup>
	G3/8	192321	LR-3/8-D-7-O-I-MIDI <sup>1)</sup>	192320	LR-3/8-D-O-I-MIDI <sup>1)</sup>
	G1/2	192323	LR-1/2-D-7-O-I-MIDI <sup>1)</sup>	192322	LR-1/2-D-O-I-MIDI <sup>1)</sup>
	G3/4	192325	LR-3/4-D-7-O-I-MIDI <sup>1)</sup>	192324	LR-3/4-D-O-I-MIDI <sup>1)</sup>

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 <sup>1)</sup>	192357	LR-1/2-D-O-DI-MAXI <sup>1)</sup>
	G3/4	192363	LR-3/4-D-7-O-DI-MAXI <sup>1)</sup>	192361	LR-3/4-D-O-DI-MAXI <sup>1)</sup>
	G1	192367	LR-1-D-7-O-DI-MAXI <sup>1)</sup>	192365	LR-1-D-O-DI-MAXI <sup>1)</sup>

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	G $\frac{1}{8}$	194606	LRS- $\frac{1}{8}$ -D-7-MINI	194602	LRS- $\frac{1}{8}$ -D-MINI
	G $\frac{1}{4}$	194614	LRS- $\frac{1}{4}$ -D-7-MINI	194610	LRS- $\frac{1}{4}$ -D-MINI
	G $\frac{3}{8}$	194622	LRS- $\frac{3}{8}$ -D-7-MINI	194618	LRS- $\frac{3}{8}$ -D-MINI
Midi	G $\frac{1}{4}$	194630	LRS- $\frac{1}{4}$ -D-7-MIDI	194626	LRS- $\frac{1}{4}$ -D-MIDI
	G $\frac{3}{8}$	194638	LRS- $\frac{3}{8}$ -D-7-MIDI	194634	LRS- $\frac{3}{8}$ -D-MIDI
	G $\frac{1}{2}$	194646	LRS- $\frac{1}{2}$ -D-7-MIDI	194642	LRS- $\frac{1}{2}$ -D-MIDI
	G $\frac{3}{4}$	194656	LRS- $\frac{3}{4}$ -D-7-MIDI	194650	LRS- $\frac{3}{4}$ -D-MIDI
Maxi	G $\frac{1}{2}$	194660	LRS- $\frac{1}{2}$ -D-7-MAXI	194658	LRS- $\frac{1}{2}$ -D-MAXI
	G $\frac{3}{4}$	194662	LRS- $\frac{3}{4}$ -D-7-MAXI	194664	LRS- $\frac{3}{4}$ -D-MAXI
	G1	194668	LRS-1-D-7-MAXI	194666	LRS-1-D-MAXI
Without pressure gauge					
Mini	G $\frac{1}{8}$	194608	LRS- $\frac{1}{8}$ -D-7-O-MINI	194604	LRS- $\frac{1}{8}$ -D-O-MINI
	G $\frac{1}{4}$	194616	LRS- $\frac{1}{4}$ -D-7-O-MINI	194612	LRS- $\frac{1}{4}$ -D-O-MINI
	G $\frac{3}{8}$	194624	LRS- $\frac{3}{8}$ -D-7-O-MINI	194620	LRS- $\frac{3}{8}$ -D-O-MINI
Midi	G $\frac{1}{4}$	194632	LRS- $\frac{1}{4}$ -D-7-O-MIDI	194628	LRS- $\frac{1}{4}$ -D-O-MIDI
	G $\frac{3}{8}$	194640	LRS- $\frac{3}{8}$ -D-7-O-MIDI	194636	LRS- $\frac{3}{8}$ -D-O-MIDI
	G $\frac{1}{2}$	194648	LRS- $\frac{1}{2}$ -D-7-O-MIDI	194644	LRS- $\frac{1}{2}$ -D-O-MIDI
	G $\frac{3}{4}$	194654	LRS- $\frac{3}{4}$ -D-7-O-MIDI	194652	LRS- $\frac{3}{4}$ -D-O-MIDI
Maxi	G $\frac{1}{2}$	194661	LRS- $\frac{1}{2}$ -D-7-O-MAXI	194659	LRS- $\frac{1}{2}$ -D-O-MAXI
	G $\frac{3}{4}$	194663	LRS- $\frac{3}{4}$ -D-7-O-MAXI	194665	LRS- $\frac{3}{4}$ -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	G $\frac{1}{8}$	194607	LRS- $\frac{1}{8}$ -D-7-I-MINI	194603	LRS- $\frac{1}{8}$ -D-I-MINI
	G $\frac{1}{4}$	194615	LRS- $\frac{1}{4}$ -D-7-I-MINI	194611	LRS- $\frac{1}{4}$ -D-I-MINI
	G $\frac{3}{8}$	194623	LRS- $\frac{3}{8}$ -D-7-I-MINI	194619	LRS- $\frac{3}{8}$ -D-I-MINI
Midi	G $\frac{1}{4}$	194631	LRS- $\frac{1}{4}$ -D-7-I-MIDI	194627	LRS- $\frac{1}{4}$ -D-I-MIDI
	G $\frac{3}{8}$	194639	LRS- $\frac{3}{8}$ -D-7-I-MIDI	194635	LRS- $\frac{3}{8}$ -D-I-MIDI
	G $\frac{1}{2}$	194647	LRS- $\frac{1}{2}$ -D-7-I-MIDI	194643	LRS- $\frac{1}{2}$ -D-I-MIDI
	G $\frac{3}{4}$	194657	LRS- $\frac{3}{4}$ -D-7-I-MIDI	194651	LRS- $\frac{3}{4}$ -D-I-MIDI
Without pressure gauge					
Mini	G $\frac{1}{8}$	194609	LRS- $\frac{1}{8}$ -D-7-O-I-MINI	194605	LRS- $\frac{1}{8}$ -D-O-I-MINI
	G $\frac{1}{4}$	194617	LRS- $\frac{1}{4}$ -D-7-O-I-MINI	194613	LRS- $\frac{1}{4}$ -D-O-I-MINI
	G $\frac{3}{8}$	194625	LRS- $\frac{3}{8}$ -D-7-O-I-MINI	194621	LRS- $\frac{3}{8}$ -D-O-I-MINI
Midi	G $\frac{1}{4}$	194633	LRS- $\frac{1}{4}$ -D-7-O-I-MIDI	194629	LRS- $\frac{1}{4}$ -D-O-I-MIDI
	G $\frac{3}{8}$	194641	LRS- $\frac{3}{8}$ -D-7-O-I-MIDI	194637	LRS- $\frac{3}{8}$ -D-O-I-MIDI
	G $\frac{1}{2}$	194649	LRS- $\frac{1}{2}$ -D-7-O-I-MIDI	194645	LRS- $\frac{1}{2}$ -D-O-I-MIDI
	G $\frac{3}{4}$	194655	LRS- $\frac{3}{4}$ -D-7-O-I-MIDI	194653	LRS- $\frac{3}{4}$ -D-O-I-MIDI

# Pressure regulators LR/LRS, D series, metal design

Technical data

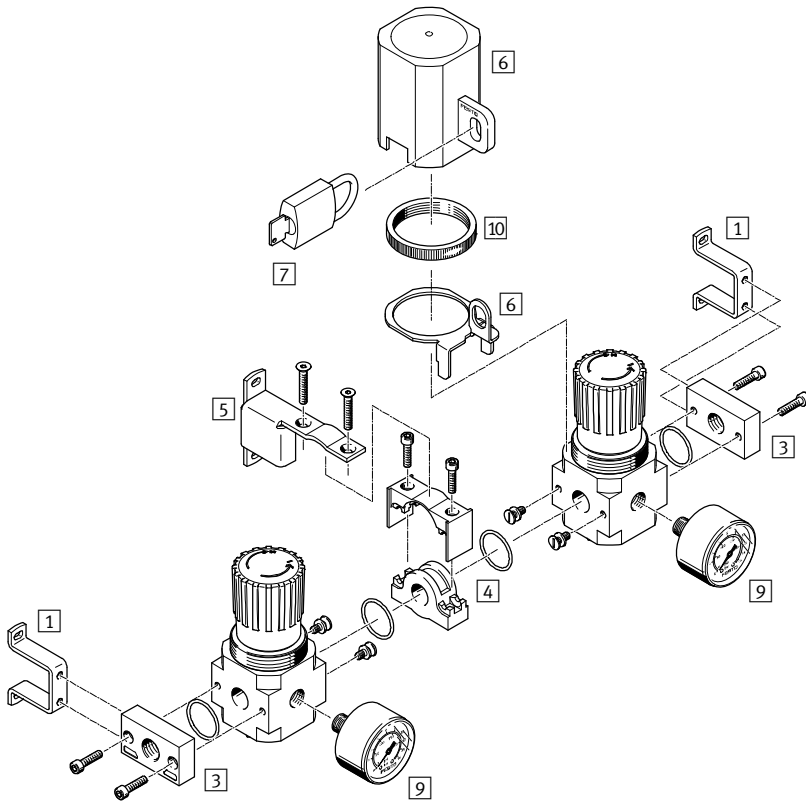
Ordering data					
Directly actuated pressure regulator with integrated return flow function, rotary knob with integrated lock, connecting plates with connecting thread					
Size	Connection	Pressure regulation range 0.5 ... 7 bar		Pressure regulation range 0.5 ... 12 bar	
		Part No.	Type	Part No.	Type
With pressure gauge, outer scale in bar, inner scale in psi					
Maxi	G1/2	194672	LRS-1/2-D-7-DI-MAXI	194670	LRS-1/2-D-DI-MAXI
	G3/4	194676	LRS-3/4-D-7-DI-MAXI	194674	LRS-3/4-D-DI-MAXI
	G1	194680	LRS-1-D-7-DI-MAXI	194678	LRS-1-D-DI-MAXI
Without pressure gauge					
Maxi	G1/2	194673	LRS-1/2-D-7-O-DI-MAXI	194671	LRS-1/2-D-O-DI-MAXI
	G3/4	194677	LRS-3/4-D-7-O-DI-MAXI	194675	LRS-3/4-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

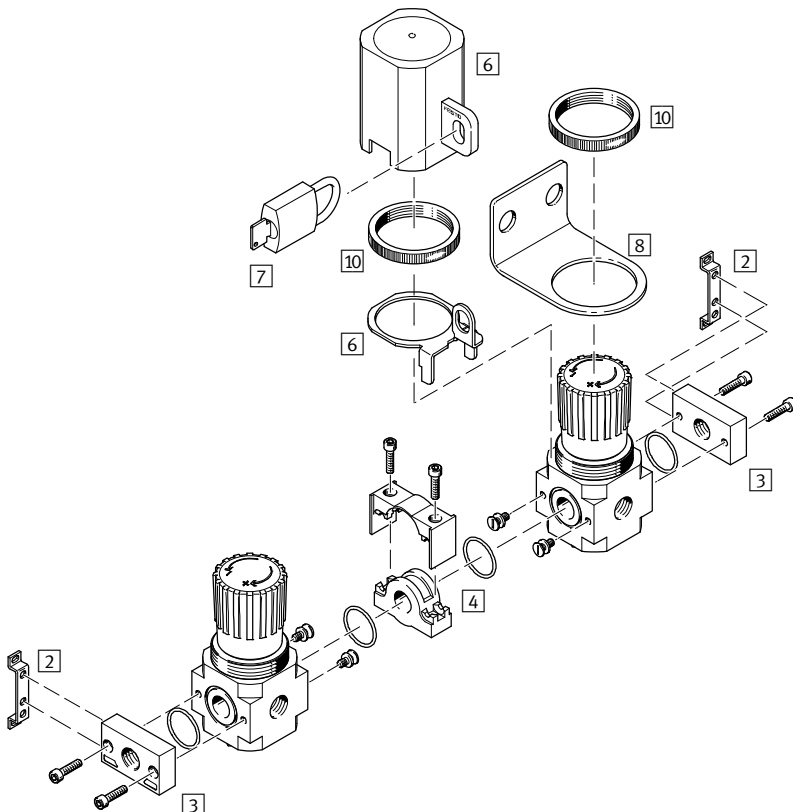
Peripherals overview

## 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	■ <sup>1)</sup>	-	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.

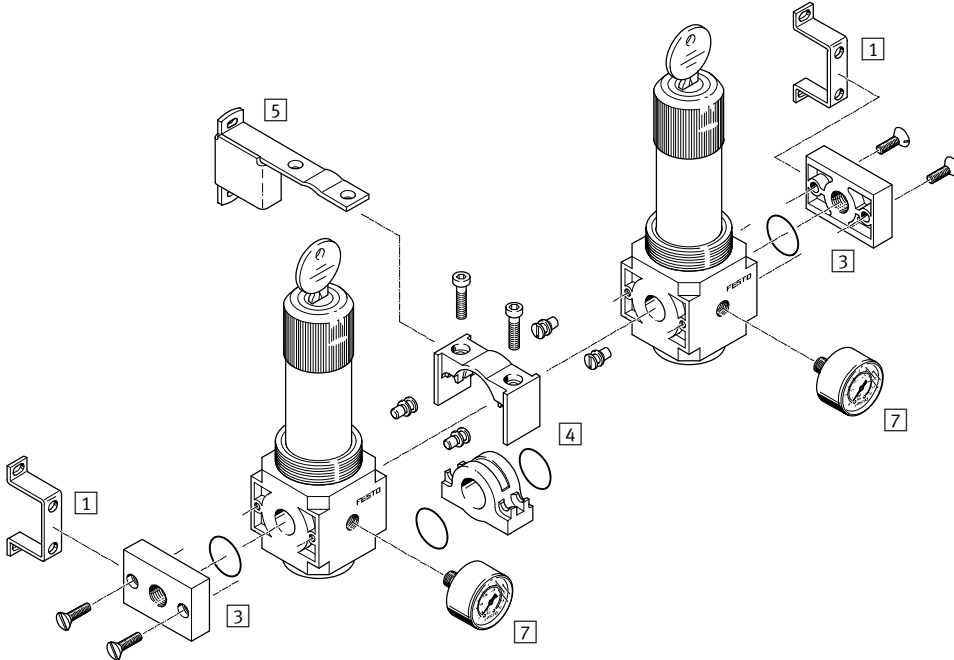
# Pressure regulators LRB/LRBS, D series, metal design

Peripherals overview

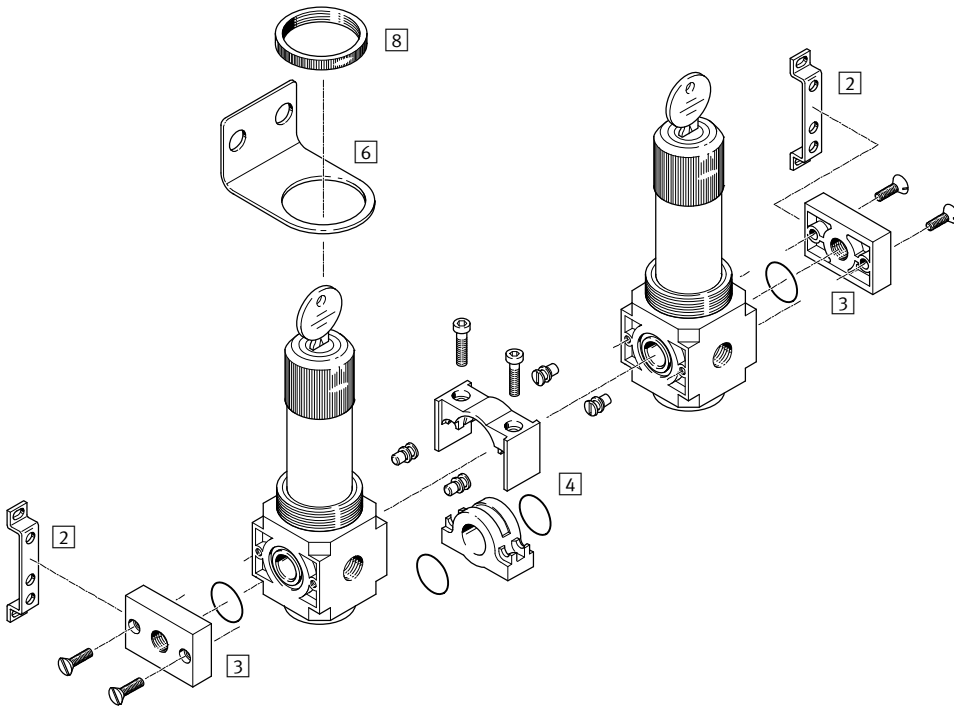
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## Mini/Midi

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

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	■ <sup>1)</sup>	–	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

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**

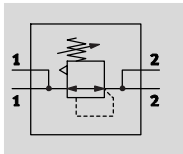
MINI	Grid dimension 40 mm (without connecting plates)
MIDI	Grid dimension 55 mm (without connecting plates)






# Pressure regulators LRB/LRBS, D series, metal design

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 and push-in adjustment lock

General technical data				
Size	Mini		Midi	
Pneumatic connection 1	-1)	-1)	-1)	-1)
Pneumatic connection 2	G $\frac{1}{4}$		G $\frac{3}{8}$	
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	G $\frac{1}{8}$ prepared		G $\frac{1}{4}$ 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 <sup>1)</sup> qnN [l/min]				
Size	Mini		Midi	
Pressure regulation	0.5 ... 7 bar	1,800	3,800	
range	0.5 ... 12 bar	1,600	3,200	

1) Measured at p<sub>1</sub> = 10 bar, p<sub>2</sub> = 6 bar and Δp = 1 bar.

# Pressure regulators LRB/LRBS, D series, metal design

Technical data



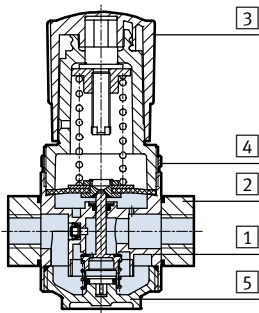
Operating and environmental conditions	
Operating pressure [bar]	1 ... 16
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [7:4:4]
	Inert gases
Ambient temperature [°C]	-10 ... +60
Temperature of medium [°C]	-10 ... +60
Storage temperature [°C]	-10 ... +60
Corrosion resistance class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

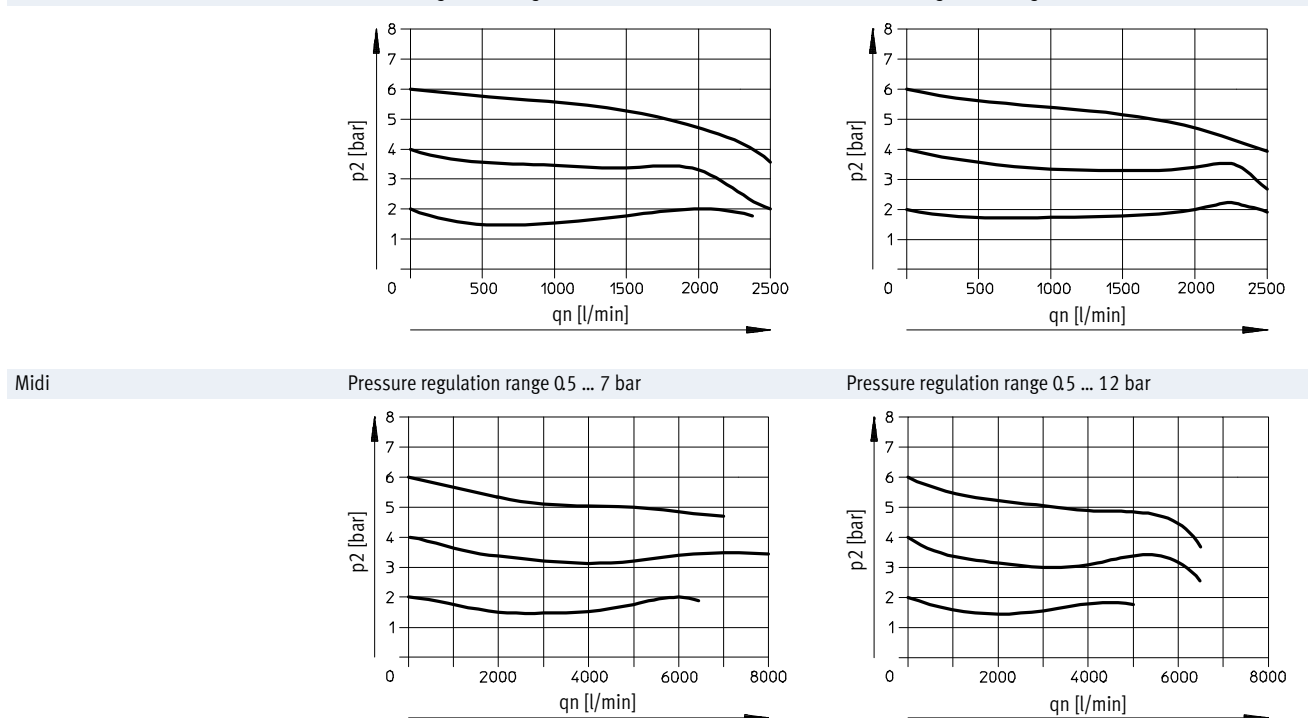
## Materials

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 qn as a function of the output pressure p2



Input pressure p1 = 10 bar

# Pressure regulators LRB/LRBS, D series, metal design

Technical data

**Dimensions** Download CAD data → [www.festo.com](http://www.festo.com)

**LRB**

**LRBS**

1 Pressure gauge connection      3 Installation dimensions

→ Flow direction, Input pressure p1 from both directions possible

Type	B3	D2	D3	D4	D7	L1	L2	L4	L5 max.	L6	L7 min.	≈ 2
<b>Mini</b>												
LRB-D-...-MINI	40	31	G $\frac{1}{8}$	M36x1.5	G $\frac{1}{4}$	~95.4	3	~68.9	3	98	60	17
LRBS-D-...-MINI												
<b>Midi</b>												
LRB-D-...-MIDI	55	49.3	G $\frac{1}{4}$	M52x1.5	G $\frac{3}{8}$	~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

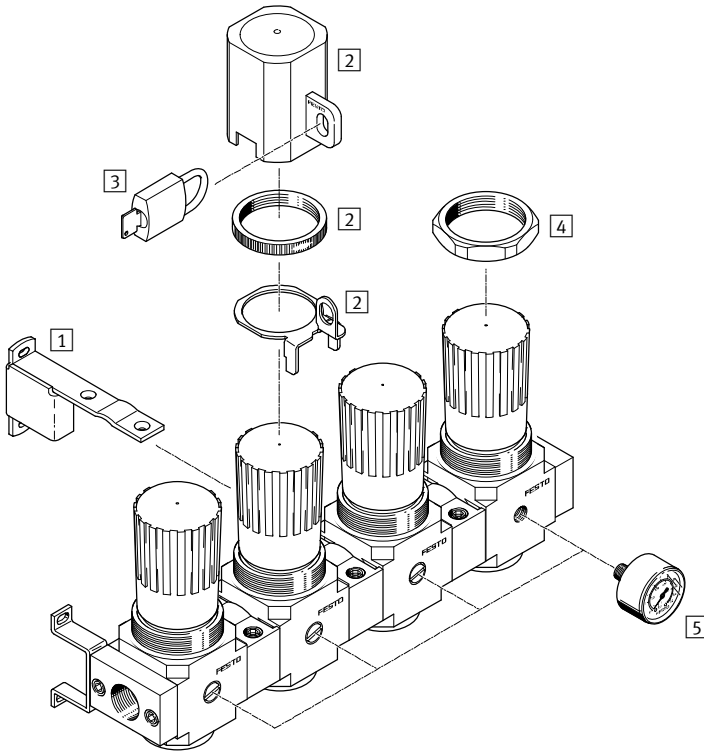
<b>Ordering data</b>				
Pressure regulator for manifold assembly				
Size	Pressure regulation range 0.5 ... 7 bar		Pressure regulation range 0.5 ... 12 bar	
	Part No.	Type	Part No.	Type
<b>Rotary knob with detent</b>				
Mini	197534	LRB-D-7-O-MINI	197535	LRB-D-O-MINI
Midi	197538	LRB-D-7-O-MIDI	197539	LRB-D-O-MIDI
<b>Rotary knob with integrated lock</b>				
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

## Mini/Midi

### Pressure regulator combination LRB-K



#### Mounting attachments and accessories

	→ Page/ Internet
1 Mounting bracket (included in scope of delivery) HRBK <sup>1)</sup>	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

Type codes

LRB – ¼ – D – 7 – 0 – K2 – MINI

**Basic function**

LRB	Pressure regulator combination
-----	--------------------------------

**Pneumatic connection**

MINI	
¼	Connecting plates with connecting thread G¼
¾	Connecting plates with connecting thread G¾
MIDI	
¾	Connecting plates with connecting thread G¾
½	Connecting plates with connecting thread G½

**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

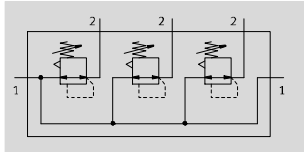
**Size**




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

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

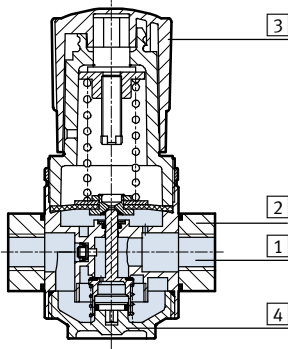
Technical data

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

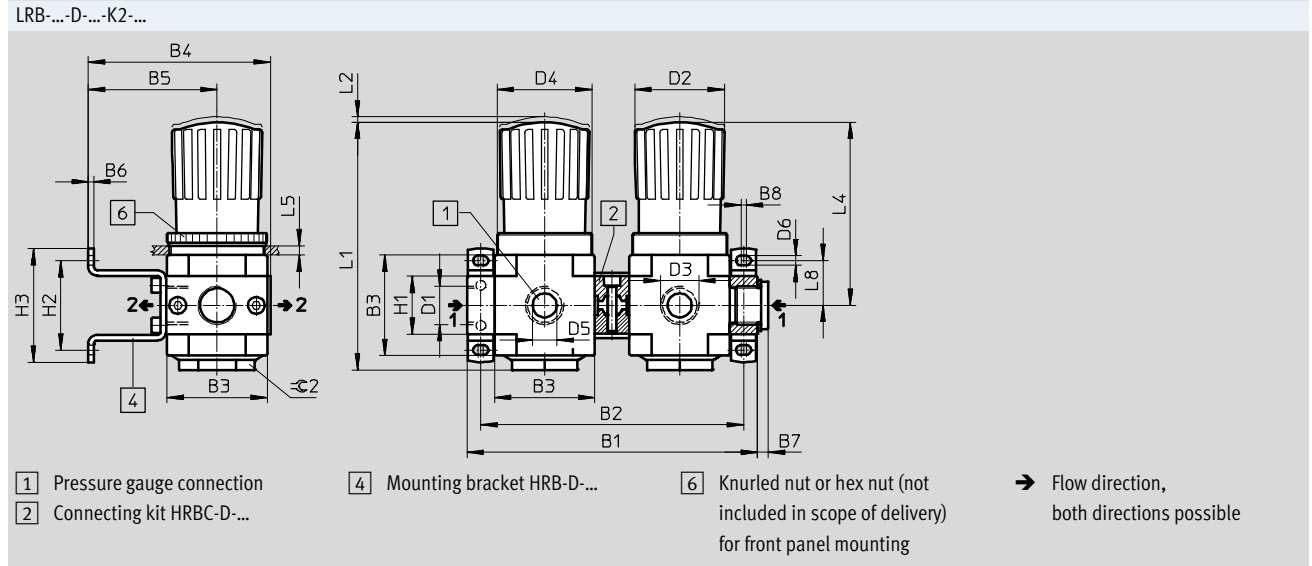


Pressure regulator	Mini/Midi
1 Housing	Die-cast zinc
2 Connecting plates	Die-cast zinc
3 Regulating knob	PA
4 Plug cap	PC
- Seals	NBR

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

Technical data

Dimensions Download CAD data → [www.festo.com](http://www.festo.com)



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

Technical data

**Dimensions** Download CAD data → [www.festo.com](http://www.festo.com)

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

1 Pressure gauge connection    
 4 Mounting bracket HRB-D-...    
 6 Knurled nut or hex nut (not included in scope of delivery) for front panel mounting  
2 Connecting kit HRBC-D-...    
 5 Mounting bracket HRB-D-...    
 → Flow direction, both directions possible

Type	B1	B2	B3	B4	B5	B6	B7	B8	B9	D1	D2	D3	D4
<b>Mini</b>													
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			
<b>Midi</b>													
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
<b>Mini</b>											
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											
<b>Midi</b>											
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

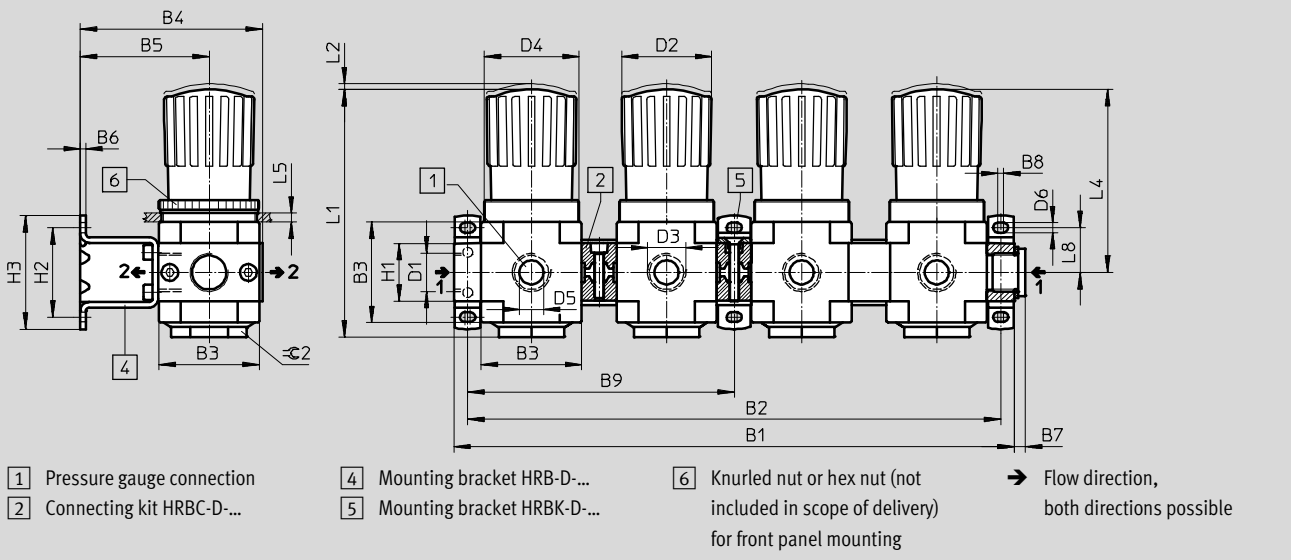
Technical data

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## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

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



Type	B1	B2	B3	B4	B5	B6	B7	B8	B9	D1	D2	D3	D4
<b>Mini</b>													
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			
<b>Midi</b>													
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			

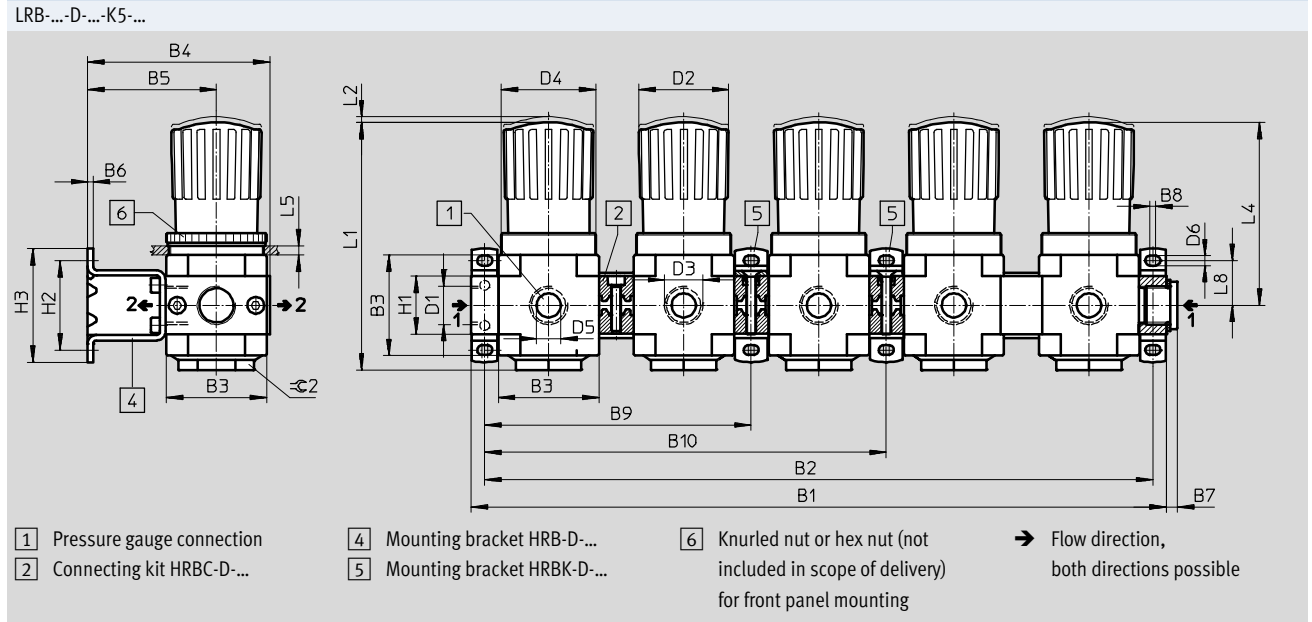
Type	D5	D6	H1	H2 ±0.2	H3 ±0.5	L1	L2	L4	L5 max.	L8	≈ 2
<b>Mini</b>											
LRB-1/4-D-...-K4-MINI	G1/8	4.3	20	35	47.3	~95.4	3	~68.9	3	17.5	17
LRB-3/8-D-...-K4-MINI											
<b>Midi</b>											
LRB-3/8-D-...-K4-MIDI	G1/4	5.3	32	49	62	~135.8	3	~100.3	5	24.5	36
LRB-1/2-D-...-K4-MIDI											

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

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

Technical data

Dimensions Download CAD data → [www.festo.com](http://www.festo.com)



Type	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	D1	D2	D3	D4
<b>Mini</b>														
LRB-1/4-D-...-K5-MINI	284	~272	40	80.7	59.2	2.5	5	3	108.5	163.5	G1/4	31	G3/8	M36x1.5
LRB-3/8-D-...-K5-MINI	290										G3/8			
<b>Midi</b>														
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
<b>Mini</b>											
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											
<b>Midi</b>											
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
<b>Manifold with 2 pressure regulators</b>					
Mini	G $\frac{1}{4}$	528952	LRB- $\frac{1}{4}$ -D-7-O-K2-MINI	528954	LRB- $\frac{1}{4}$ -D-O-K2-MINI
	G $\frac{3}{8}$	528953	LRB- $\frac{3}{8}$ -D-7-O-K2-MINI	528955	LRB- $\frac{3}{8}$ -D-O-K2-MINI
Midi	G $\frac{3}{8}$	528956	LRB- $\frac{3}{8}$ -D-7-O-K2-MIDI	528958	LRB- $\frac{3}{8}$ -D-O-K2-MIDI
	G $\frac{1}{2}$	528957	LRB- $\frac{1}{2}$ -D-7-O-K2-MIDI	528959	LRB- $\frac{1}{2}$ -D-O-K2-MIDI
<b>Manifold with 3 pressure regulators</b>					
Mini	G $\frac{1}{4}$	528968	LRB- $\frac{1}{4}$ -D-7-O-K3-MINI	528970	LRB- $\frac{1}{4}$ -D-O-K3-MINI
	G $\frac{3}{8}$	528969	LRB- $\frac{3}{8}$ -D-7-O-K3-MINI	528971	LRB- $\frac{3}{8}$ -D-O-K3-MINI
Midi	G $\frac{3}{8}$	528972	LRB- $\frac{3}{8}$ -D-7-O-K3-MIDI	528974	LRB- $\frac{3}{8}$ -D-O-K3-MIDI
	G $\frac{1}{2}$	528973	LRB- $\frac{1}{2}$ -D-7-O-K3-MIDI	528975	LRB- $\frac{1}{2}$ -D-O-K3-MIDI
<b>Manifold with 4 pressure regulators</b>					
Mini	G $\frac{1}{4}$	528984	LRB- $\frac{1}{4}$ -D-7-O-K4-MINI	528986	LRB- $\frac{1}{4}$ -D-O-K4-MINI
	G $\frac{3}{8}$	528985	LRB- $\frac{3}{8}$ -D-7-O-K4-MINI	528987	LRB- $\frac{3}{8}$ -D-O-K4-MINI
Midi	G $\frac{3}{8}$	528988	LRB- $\frac{3}{8}$ -D-7-O-K4-MIDI	528990	LRB- $\frac{3}{8}$ -D-O-K4-MIDI
	G $\frac{1}{2}$	528989	LRB- $\frac{1}{2}$ -D-7-O-K4-MIDI	528991	LRB- $\frac{1}{2}$ -D-O-K4-MIDI
<b>Manifold with 5 pressure regulators</b>					
Mini	G $\frac{1}{4}$	529000	LRB- $\frac{1}{4}$ -D-7-O-K5-MINI	529002	LRB- $\frac{1}{4}$ -D-O-K5-MINI
	G $\frac{3}{8}$	529001	LRB- $\frac{3}{8}$ -D-7-O-K5-MINI	529003	LRB- $\frac{3}{8}$ -D-O-K5-MINI
Midi	G $\frac{3}{8}$	529004	LRB- $\frac{3}{8}$ -D-7-O-K5-MIDI	529006	LRB- $\frac{3}{8}$ -D-O-K5-MIDI
	G $\frac{1}{2}$	529005	LRB- $\frac{1}{2}$ -D-7-O-K5-MIDI	529007	LRB- $\frac{1}{2}$ -D-O-K5-MIDI

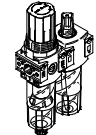
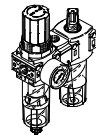
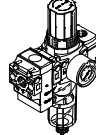
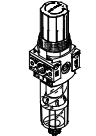

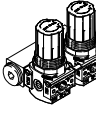
# Pressure regulator combinations LRB-K, D series, metal design

Technical data

**FESTO**

# Pressure regulators LR/LRB, D series, polymer

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	
<b>Service units</b>								
FRC		Mini	■	■	-	■	■	■
<b>Service unit combinations</b>								
FRC-K		Mini	-	■	-	■	-	■
LFR-K		Mini	-	■	-	■	-	■
<b>Individual devices</b>								
Filter regulators LFR		Mini	■	■	-	■	■	■
Pressure regulators LR		Mini	■	■	-	■	-	-
Pressure regulator combinations LRB-K		Mini	-	-	■	■	-	-

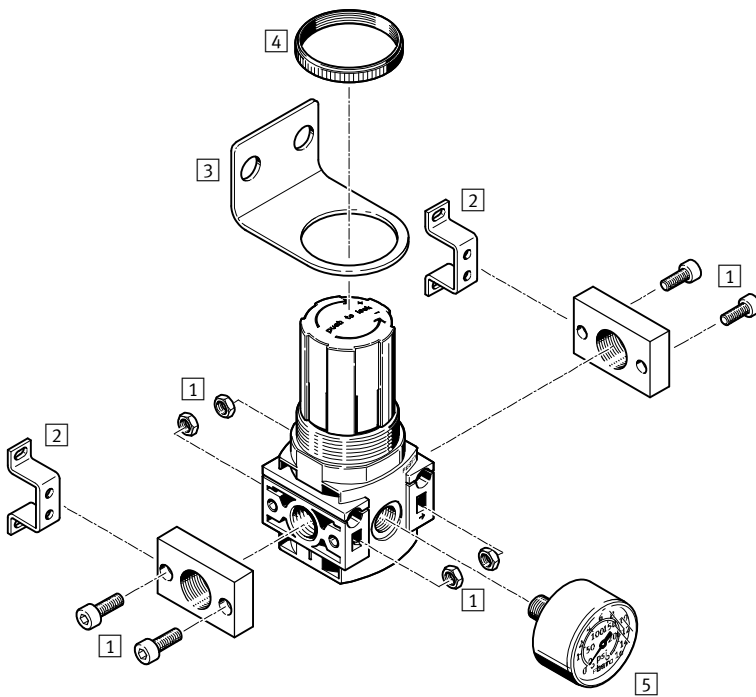
# Pressure regulators LR/LRB, D series, polymer

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		With secondary venting	With return flow function	
<b>Service units</b>									
FRC	Mini	■	■	■	-	■	■	■	frc
<b>Service unit combinations</b>									
FRC-K	Mini	■	-	■	-	■	■	■	frc
LFR-K	Mini	■	-	■	-	■	■	■	lfr
<b>Individual devices</b>									
Filter regulators LFR	Mini	■	■	■	■	■	■	■	lfr
Pressure regulators LR	Mini	-	-	■	■	■	■	■	40
Pressure regulator combinations LRB-K	Mini	-	-	-	■	■	■	■	45

# Pressure regulators LR, D series, polymer

Peripherals overview



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**

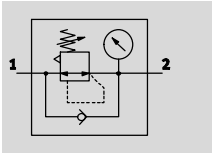
MINI	
------	--

# Pressure regulators LR, D series, polymer

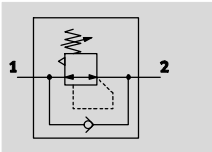
Technical data


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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	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{8}$	G $\frac{1}{4}$
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		G $\frac{1}{8}$ prepared	
Pressure gauge connection	G $\frac{1}{8}$			

Standard nominal flow rate <sup>1)</sup> qnN [l/min]		
Pneumatic connection	G $\frac{1}{8}$	G $\frac{1}{4}$
Mini		
Pressure regulation range 0.5 ... 7 bar	≥ 800	≥ 1,300

1) Measured at p<sub>1</sub> = 10 bar, p<sub>2</sub> = 6 bar and Δp = 1 bar.

# Pressure regulators LR, D series, polymer

Technical data

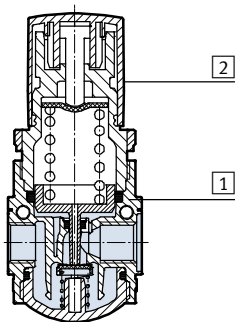
Operating and environmental conditions	
Size	Mini
Operating pressure [bar]	1.5 ... 10
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [-:-:-]
Ambient temperature [°C]	-5 ... +50
Temperature of medium [°C]	-5 ... +50
Corrosion resistance class CRC <sup>1)</sup>	1

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

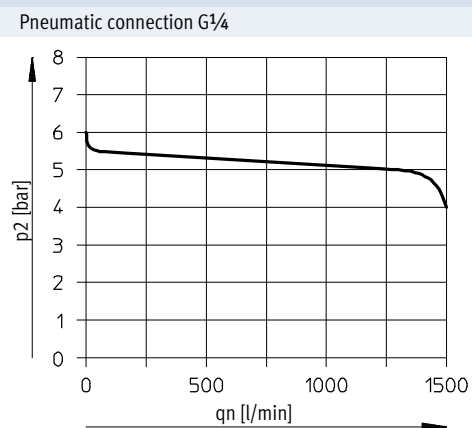
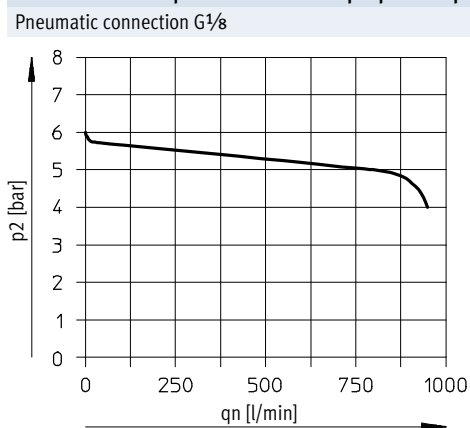
## Materials

Sectional view



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

## Standard flow rate qn as a function of output pressure p2



Primary pressure p<sub>1</sub> = 10 bar

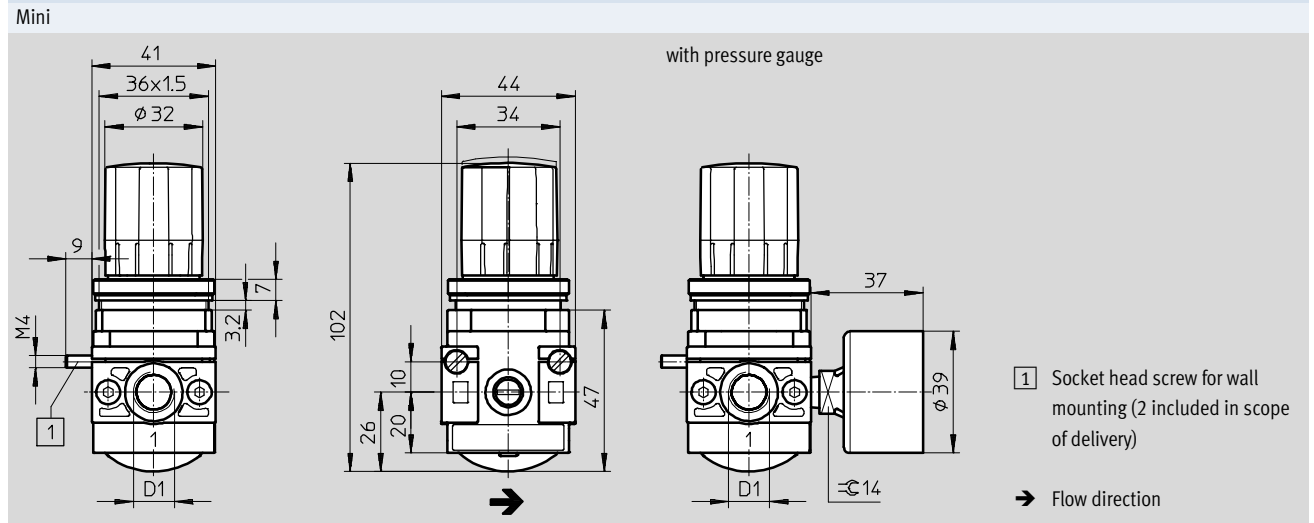
Note  
 Slight leakage at the output has been taken into account in the design. It improves the control behaviour of the non pre-pressure compensated controller.  
 In a few cases leakage may amount to 500 l/h.

# Pressure regulators LR, D series, polymer

Technical data

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Dimensions Download CAD data → [www.festo.com](http://www.festo.com)



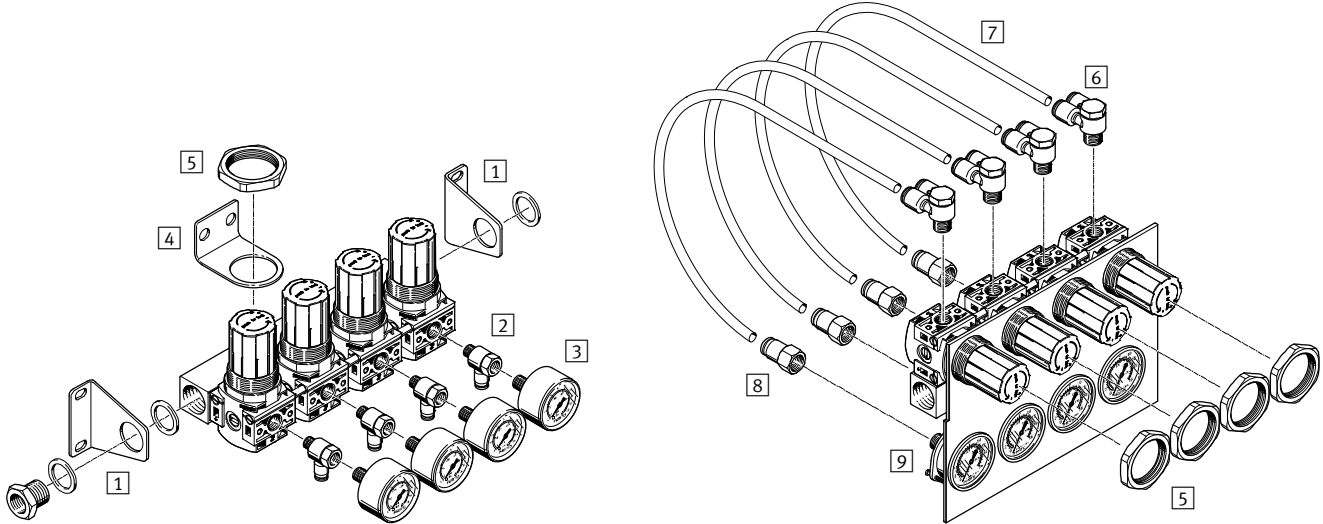
Type	D1
Mini	
LR-1/8-DB	G1/8
LR-1/4-DB	G1/4

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
	G1/4	539682	LR-1/4-DB-7-MINI
Without pressure gauge			
Mini	G1/8	537642	LR-1/8-DB-7-O-MINI
	G1/4	537643	LR-1/4-DB-7-O-MINI

# Pressure regulator combinations LRB-K, D series, polymer

Peripherals overview

**Mini**  
 With mounting bracket Front panel mounting



Mounting attachments and accessories		With mounting bracket	Front panel mounting	→ Page/ Internet
1	Mounting bracket kit HRBS-DB-MINI	■	-	hrbs-db
2	Push-in T-fitting QSTF	■	-	52
3	Pressure gauge MA	■	-	52
4	Mounting bracket HR-D	■	-	hr-d
5	Hex nut HMR	■	■	hmr-d
6	Push-in Y-fitting QSYLV	-	■	52
7	Plastic tubing PUN-E	-	■	pun-e
8	Push-in fitting QSF	-	■	52
9	Flanged pressure gauge FMA	-	■	52

# Pressure regulator combinations LRB-K, D series, polymer

Type codes

LRB - 1/4 - DB - 7 - 0 - K2 - MINI

**Basic function**

LRB	Pressure regulator combination
-----	--------------------------------

**Pneumatic connection 2**

1/4	Thread G1/4
-----	-------------

**Series**

DB	Series
----	--------

**Pressure regulation range**

7	0.5 ... 7 bar
---	---------------

**Pressure gauge**

0	Without pressure gauge
---	------------------------

**Regulator**

K2	Manifold with 2 pressure regulators
K3	Manifold with 3 pressure regulators
K4	Manifold with 4 pressure regulators
K5	Manifold with 5 pressure regulators

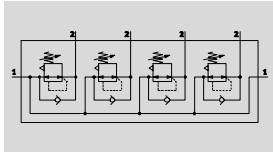
**Size**




MINI	
------	--

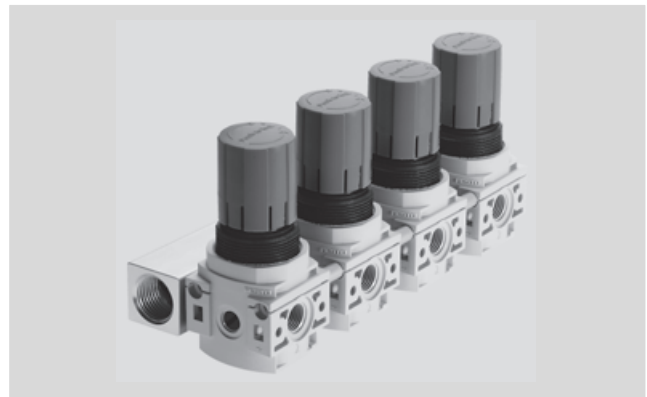
# Pressure regulator combinations LRB-K, D series, polymer

Technical data

Function



-  Flow rate  
1,000 l/min
-  Temperature range  
-5 ... +50 °C
-  Operating pressure  
1.5 ... 10 bar



- Good control characteristics with low hysteresis and primary pressure compensation
- Manifold assembly with through air supply
- For the configuration of a regulator manifold with independent pressure ranges
- Setting values are secured by locking the rotary knob

General technical data	
Size	Mini
Pneumatic connection 1	G½
Pneumatic connection 2	G¼
Design	Directly actuated piston regulator On P-manifold
Regulating functions	Output pressure constant
	With return flow function
	With secondary venting
Type of mounting	Front panel mounting
	Via accessories
Assembly position	Any
Regulator lock	Rotary knob with detent
Max. hysteresis [bar]	0.5
Pressure regulation range [bar]	0.5 ... 7

Standard nominal flow rate <sup>1)</sup> qnN [l/min]	
Size	Mini
Pressure regulation range 0.5 ... 7 bar	≥ 1,000

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

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 <sup>1)</sup>	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).

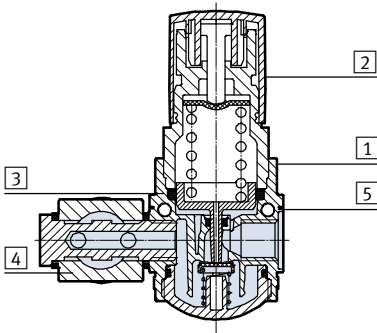
# Pressure regulator combinations LRB-K, D series, polymer

Technical data

Weight [g]	
Size	Mini
Manifold with 2 pressure regulators	
LRB-...-K2	500
Manifold with 3 pressure regulators	
LRB-...-K3	750
Manifold with 4 pressure regulators	
LRB-...-K4	1,000
Manifold with 5 pressure regulators	
LRB-...-K5	1,250

## Materials

Sectional view



Pressure regulator	Mini
1 Housing	PA reinforced
2 Rotary knob	POM
3 Sealing ring	PVC
4 Manifold strip	Wrought aluminium alloy
5 Spacing bolt	Wrought aluminium alloy
- Seals	NBR



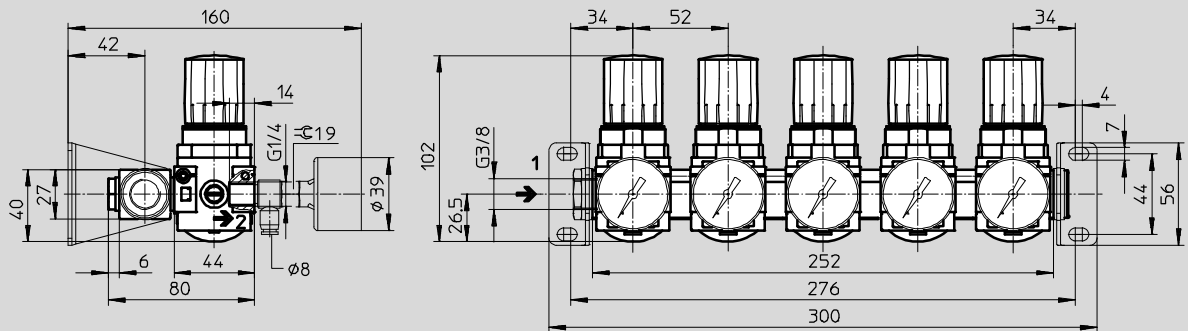
# Pressure regulator combinations LRB-K, D series, polymer

Technical data

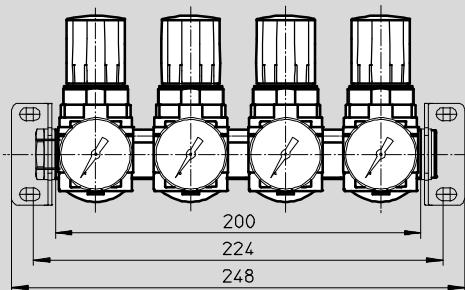
Dimensions Download CAD data → [www.festo.com](http://www.festo.com)

With mounting bracket

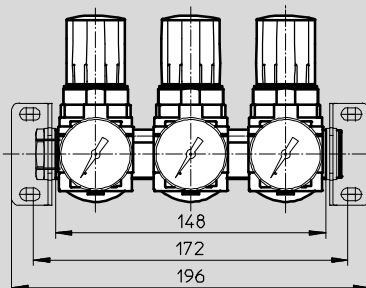
LRB-...-K5



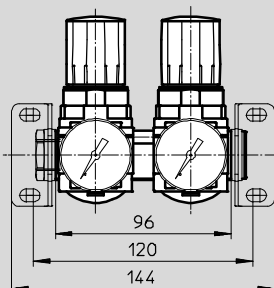
LRB-...-K4



LRB-...-K3



LRB-...-K2



→ Flow direction

# Pressure regulator combinations LRB-K, D series, polymer

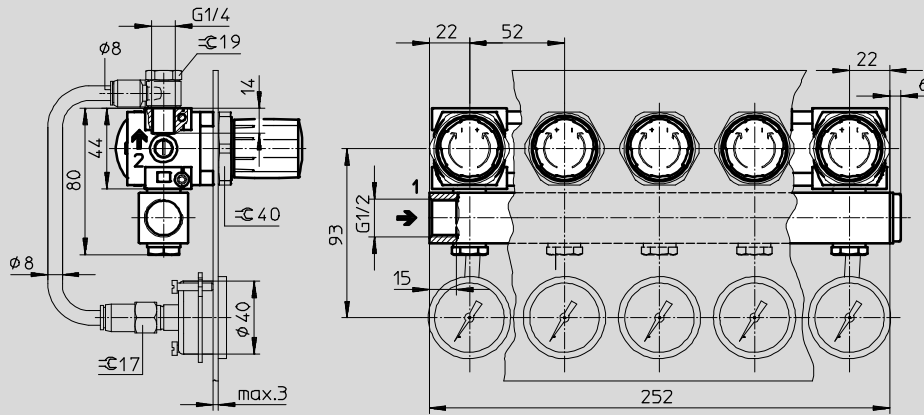
Technical data

## Dimensions

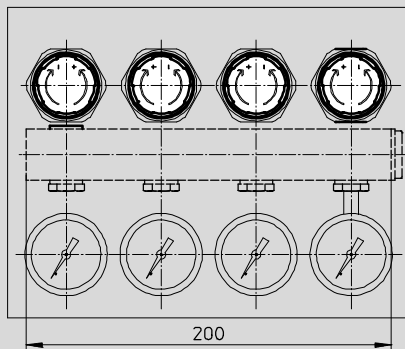
Download CAD data → [www.festo.com](http://www.festo.com)

### Front panel mounting

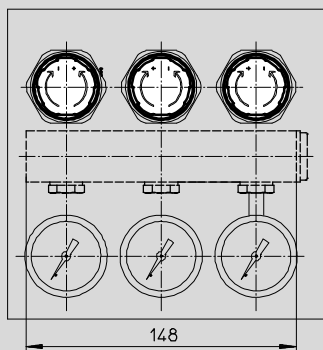
#### LRB-...-K5



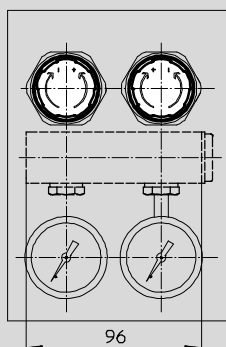
#### LRB-...-K4



#### LRB-...-K3



#### LRB-...-K2



→ Flow direction

# Pressure regulator combinations LRB-K, D series, polymer


Technical data

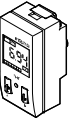
Ordering data			
Size	Connection	Pressure regulation range 0.5 ... 7 bar	
		Part No.	Type
Manifold with 2 pressure regulators			
Mini	G1/4	<b>540040</b>	<b>LRB-1/4-DB-7-O-K2-MINI</b>
Manifold with 3 pressure regulators			
Mini	G1/4	<b>540041</b>	<b>LRB-1/4-DB-7-O-K3-MINI</b>
Manifold with 4 pressure regulators			
Mini	G1/4	<b>540042</b>	<b>LRB-1/4-DB-7-O-K4-MINI</b>
Manifold with 5 pressure regulators			
Mini	G1/4	<b>540043</b>	<b>LRB-1/4-DB-7-O-K5-MINI</b>




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

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Accessories

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	G1/8	0 ... 10	0 ... 145	359874	MA-40-10-1/4	
			0 ... 16	0 ... 232	345395	MA-40-16-1/4	
	50	G1/4	0 ... 10	0 ... 145	359873	MA-50-10-1/4	
			0 ... 16	0 ... 232	356759	MA-50-16-1/4	
	Pressure gauge MA, DIN EN 837-1					Technical data → Internet: ma	
	40	R1/8	0 ... 10	0 ... 145	162835	MA-40-10-1/8-EN	
		G1/4	0 ... 10	0 ... 145	183900	MA-40-10-G1/4-EN	
	Flanged pressure gauge FMA, DIN EN 837-1					Technical data → Internet: fma	
40	G1/4	0 ... 10	0 ... 145	159596	FMA-40-10-1/4-EN		
		0 ... 16	0 ... 232	159597	FMA-40-16-1/4-EN		
50	G1/4	0 ... 10	0 ... 145	159599	FMA-50-10-1/4-EN		
		0 ... 16	0 ... 232	159600	FMA-50-16-1/4-EN		

Ordering data – Pressure sensor SDE1						Technical data → Internet: sde1	
	Pneumatic connection	Electrical output	Electrical connection	Display	Part No.	Type	
Pressure sensor SDE1 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	1 switch output PNP	M8x1, 3-pin	LCD	192026	SDE1-D10-G2-R18-C-P1-M8	
		2 switch outputs PNP	M8x1, 4-pin	LCD	192027	SDE1-D10-G2-R18-C-P2-M8	
	Male thread R1/4	1 switch output PNP	M8x1, 3-pin	LCD	192028	SDE1-D10-G2-R14-C-P1-M8	
		2 switch outputs PNP	M8x1, 4-pin	LCD	192029	SDE1-D10-G2-R14-C-P2-M8	

Ordering data – Push-in fitting						
	Pneumatic connection	Tubing O.D.	Part No.	Type	PU <sup>1)</sup>	
Push-in fitting QSF, female thread with external hex						
	G1/4	8	153026	QSF-1/4-8-B	10	
					Technical data → Internet: qsf	
Push-in T-fitting QSTF, 360° rotatable, with male and female thread						
	G1/4	8	186203	QSTF-G1/4-8	1	
					Technical data → Internet: qstf	
Push-in Y-fitting QSYLV, 360° rotatable, male thread with external hex						
	G1/4	8	186210	QSYLV-G1/4-8	1	
					Technical data → Internet: qsyvlv	

1) Packaging unit quantity

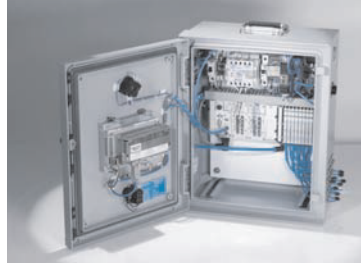
## Product Range and Company Overview

### A Complete Suite and Company Overview

Our experienced engineers provide complete support at every stage of your development process, including: conceptualization, analysis, engineering, design, assembly, documentation, validation, and production.



**Custom Automation Components**  
Complete custom engineered solutions



**Custom Control Cabinets**  
Comprehensive engineering support and on-site services



**Complete Systems**  
Shipment, stocking and storage services

### The Broadest Range of Automation Components

With a comprehensive line of more than 30,000 automation components, Festo is capable of solving the most complex automation requirements.



**Electromechanical**  
Electromechanical actuators, motors, controllers & drivers



**Pneumatics**  
Pneumatic linear and rotary actuators, valves, and air supply



**PLCs and I/O Devices**  
PLC's, operator interfaces, sensors and I/O devices

### Supporting Advanced Automation... As No One Else Can!

Festo is a leading global manufacturer of pneumatic and electromechanical systems, components and controls for industrial automation, with more than 16,000 employees in 60 national headquarters serving more than 180 countries. For more than 80 years, Festo has continuously elevated the state of manufacturing with innovations and optimized motion control solutions that deliver higher performing, more profitable automated manufacturing and processing equipment. Our dedication to the advancement of automation extends beyond technology to the education and development of current and future automation and robotics designers with simulation tools, teaching programs, and on-site services.

### Quality Assurance, ISO 9001 and ISO 14001 Certifications

Festo Corporation is committed to supply all Festo products and services that will meet or exceed our customers' requirements in product quality, delivery, customer service and satisfaction.

To meet this commitment, we strive to ensure a consistent, integrated, and systematic approach to management that will meet or exceed the requirements of the ISO 9001 standard for Quality Management and the ISO 14001 standard for Environmental Management.

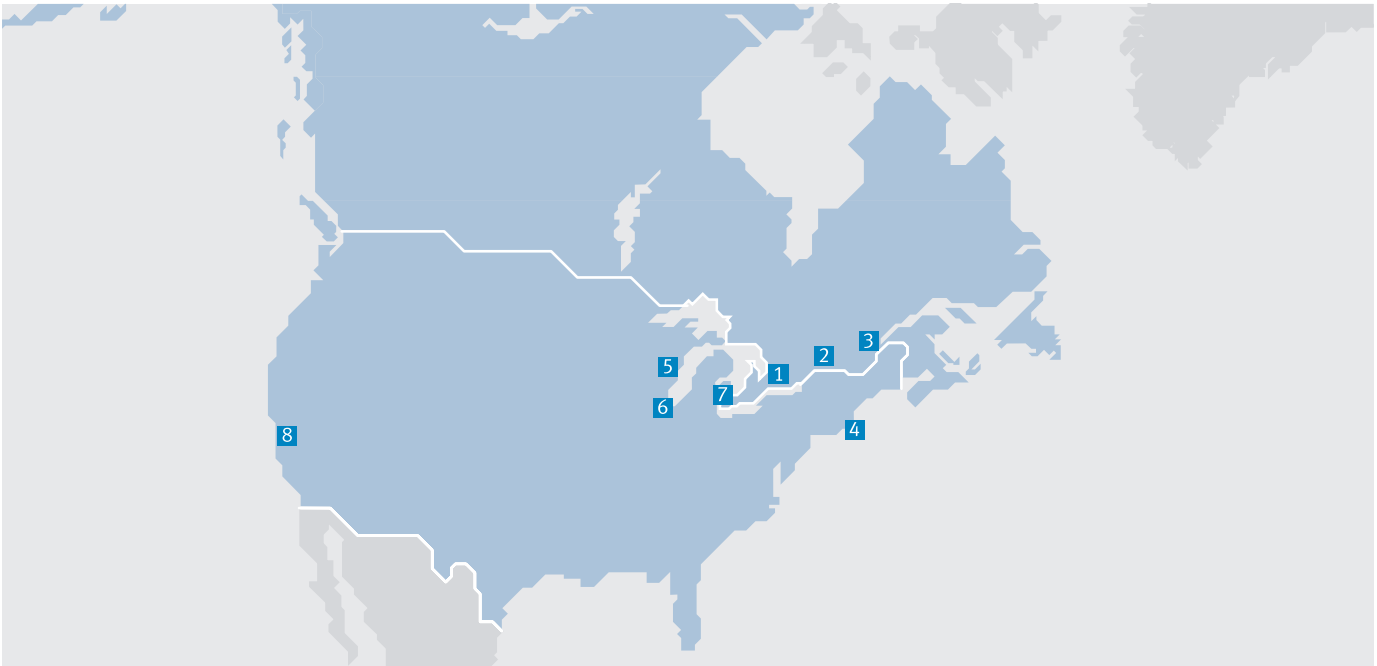


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# Festo North America



**1 Festo Canada  
Headquarters  
Festo Inc.**  
5300 Explorer Drive  
Mississauga, ON  
L4W 5G4

**2 Montréal**  
5600, Trans-Canada  
Pointe-Claire, QC  
H9R 1B6

**3 Québec City**  
2930, rue Watt#117  
Québec, QC  
G1X 4G3



**4 Festo United States  
Headquarters  
Festo Corporation**  
395 Moreland Road  
Hauppauge, NY  
11788

**5 Appleton**  
North 922 Tower View Drive, Suite N  
Greenville, WI  
54942

**7 Detroit**  
1441 West Long Lake Road  
Troy, MI  
48098

**6 Chicago**  
85 W Algonquin - Suite 340  
Arlington Heights, IL  
60005

**8 Silicon Valley**  
4935 Southfront Road, Suite F  
Livermore, CA  
94550

## Festo Regional Contact Center

### Canadian Customers

Commercial Support:  
Tel: 1 877 GO FESTO (1 877 463 3786)  
Fax: 1 877 FX FESTO (1 877 393 3786)  
Email: festo.canada@ca.festo.com

Technical Support:  
Tel: 1 866 GO FESTO (1 866 463 3786)  
Fax: 1 877 FX FESTO (1 877 393 3786)  
Email: technical.support@ca.festo.com

### USA Customers

Commercial Support:  
Tel: 1 800 99 FESTO (1 800 993 3786)  
Fax: 1 800 96 FESTO (1 800 963 3786)  
Email: customer.service@us.festo.com

Technical Support:  
Tel: 1 866 GO FESTO (1 866 463 3786)  
Fax: 1 800 96 FESTO (1 800 963 3786)  
Email: product.support@us.festo.com