

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

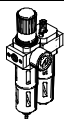
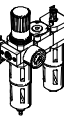
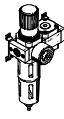
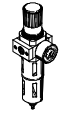
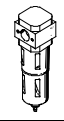
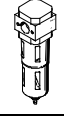
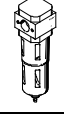
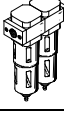
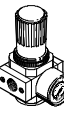
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Pressure regulators LR/LRS/LRB/LRBS, D series, metal design

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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]				
												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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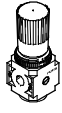
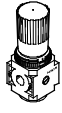
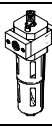
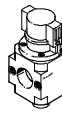
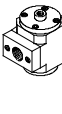
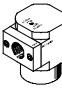
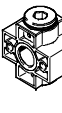
Product range overview D series service units, metal design

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]	
			M5	M7	G1/8	G1/4	G3/8	G1/2	G3/4	G1	QS4	QS6	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

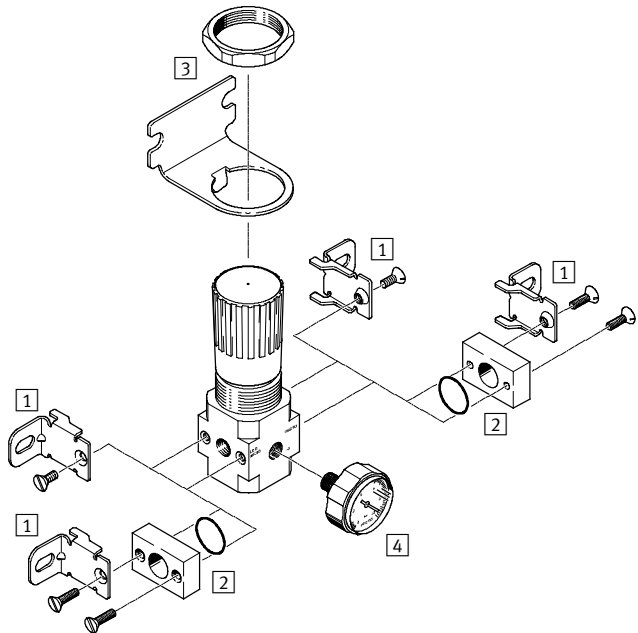
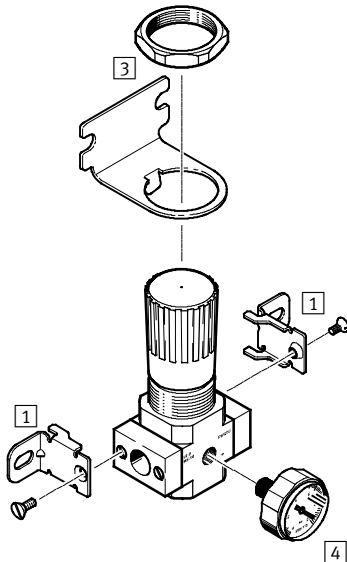
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Peripherals overview

Micro

Individual unit with connection plates,
connection size G $\frac{1}{8}$, QS4 or QS6

Individual unit without connection plates, for service unit combination
connection size 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

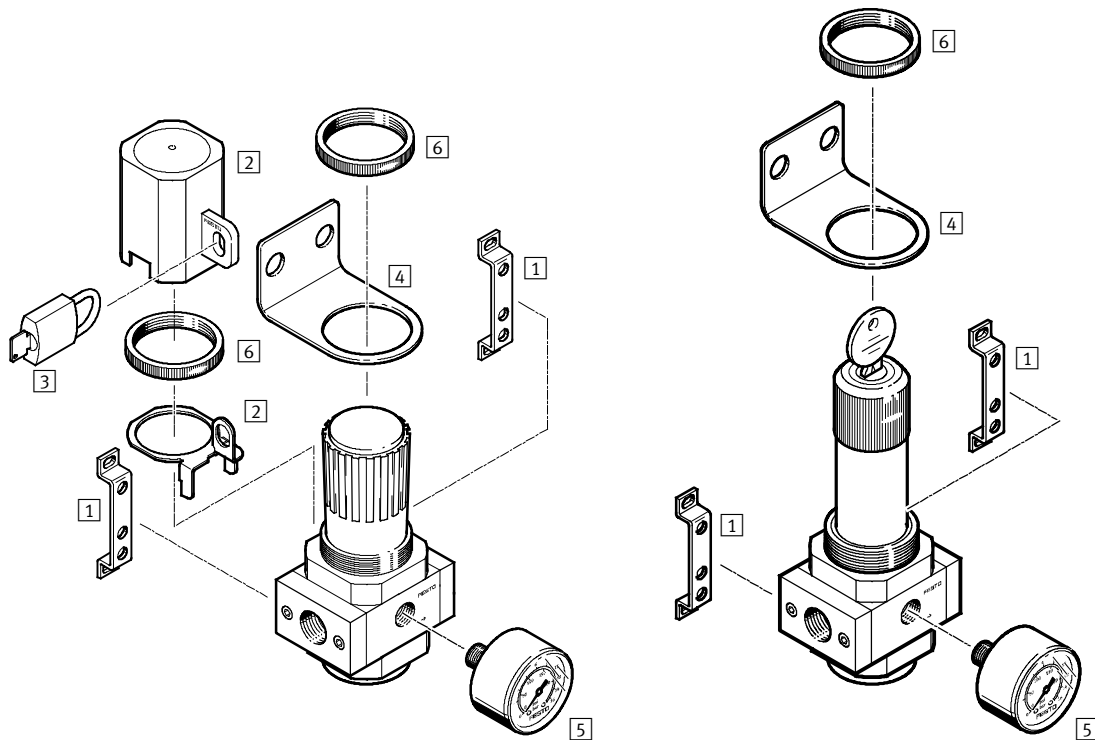
Peripherals overview

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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

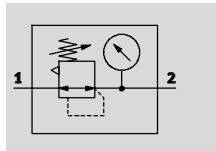
		LR	–	1/2	–	D	–	7	–	0	–	DI	–	MAXI	
Basic function															
LR	Pressure regulator														
LRS	Pressure regulator, lockable														
Pneumatic connection															
M5	Thread M5														
M7	Thread M7														
QS4	Push-in fitting QS4														
QS6	Push-in fitting QS6														
1/8	Thread G1/8														
1/4	Thread G1/4														
3/8	Thread G3/8														
1/2	Thread G1/2														
3/4	Thread G3/4														
1	Thread G1														
Series															
D	Series														
Pressure regulation range															
	0.5 ... 12 bar														
7	0.5 ... 7 bar														
Pressure gauge															
	With pressure gauge														
0	Without pressure gauge														
Functions															
I	With integrated return flow function														
DI	Directly actuated pressure regulator with integrated return flow function (MAXI units only)														
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

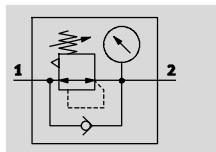
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Technical data

LR/LRS-...-MICRO/MINI/MIDI
with pressure gauge



LR/LRS-...-I-MINI/MIDI,
LR/LRS-...-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	M5	M7	G1/8	QS4	QS6	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 ¹⁾							Output pressure constant, with secondary venting, with primary pressure compensation ²⁾ , with return flow action ²⁾		
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) For the LR/LRS-...-I.

2) 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 ¹⁾ qnN [l/min]					
Connection	Female thread		Connecting plate		
	M5	M7	G1/8	QS4	QS6
Micro					
Pressure regulation range 0.5 ... 7 bar	120	300	450	160	450

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

Standard nominal flow rate ¹⁾ qnN [l/min]							
Connection		G1/8	G1/4	G3/8	G1/2	G3/4	G1
Mini							
Pressure regulation range	0.5 ... 7 bar	1,000	1,600	1,800	–	–	–
	0.5 ... 12 bar	800	1,500	1,700	–	–	–
Midi							
Pressure regulation range	0.5 ... 7 bar	–	2,200	3,300	4,000	4,500	–
	0.5 ... 12 bar	–	2,100	3,200	3,500	3,500	–
Maxi							
Pressure regulation range	0.5 ... 7 bar	–	–	–	10,700 (7,300) ²⁾	12,000 (8,350) ²⁾	12,500 (8,400) ²⁾
	0.5 ... 12 bar	–	–	–	10,500 (5,400) ²⁾	11,000 (6,800) ²⁾	11,500 (7,000) ²⁾

1) Measured at p1 = 10 bar, p2 = 6 bar and Δp = 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 [–:–:–]	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 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Weight [g]					
Size	Micro		Mini	Midi	Maxi
	Female 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.

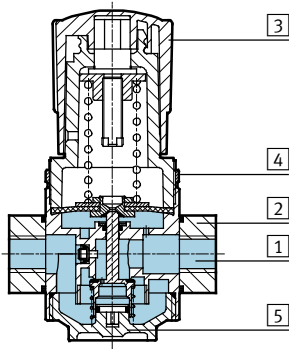
Pressure regulators LR/LRS, D series, metal design

FESTO

Technical data

Materials

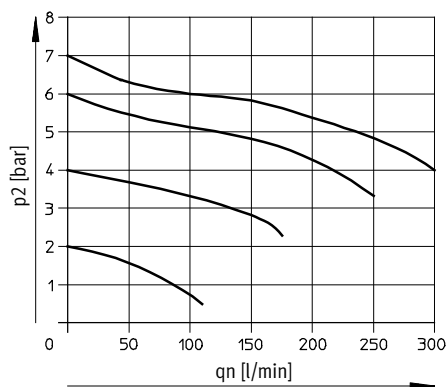
Sectional view



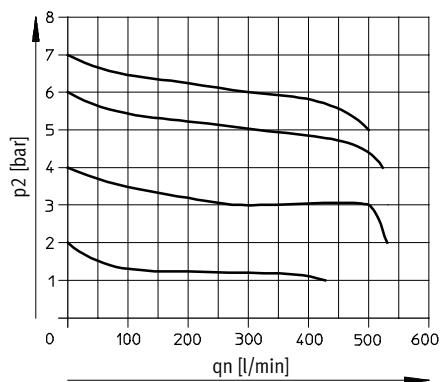
Pressure regulator	Micro	Mini/Midi/Maxi
1 Housing	Die-cast zinc	Die-cast zinc/aluminium
2 Connecting plates	Wrought aluminium alloy	Die-cast zinc/aluminium
3 Regulating knob	POM	PA
4 Knurled nut	–	Aluminium
5 Plug cap	PC	PC
– Seals	NBR	NBR
Note on materials	–	RoHS-compliant
	–	Free of copper and PTFE → Ordering data

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

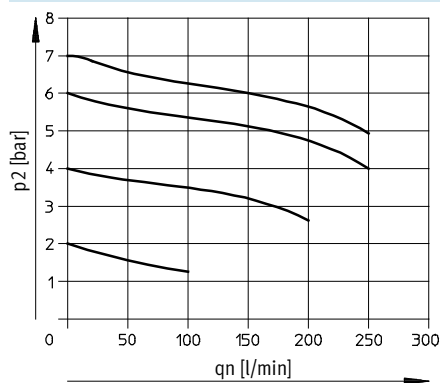
LR-M5-...-MICRO



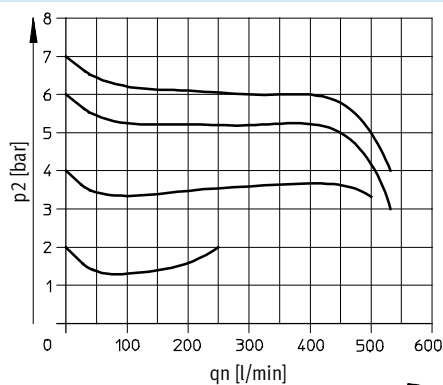
LR-M7-...-MICRO B



LR-QS4-...-MICRO



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



Primary pressure $p_1 = 10$ bar

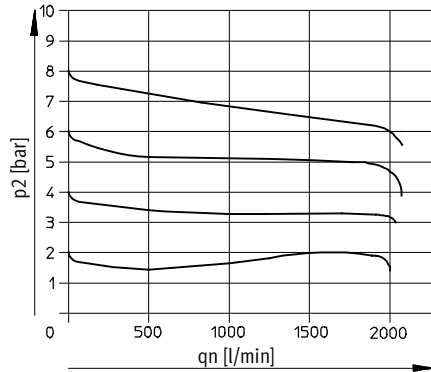
Pressure regulators LR/LRS, D series, metal design

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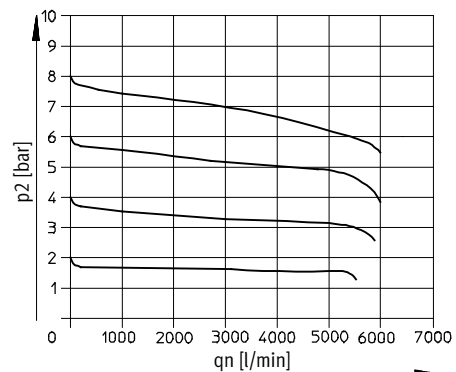
Technical data

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

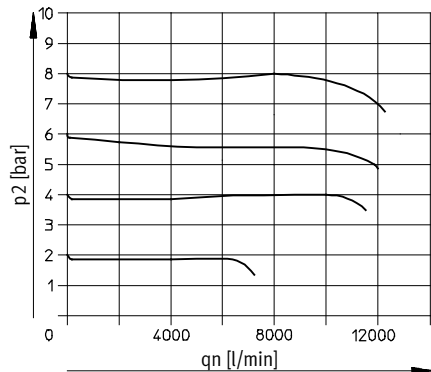
LR/LRS-1/4-D-MINI



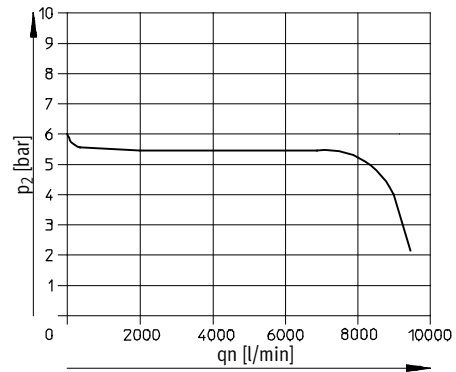
LR/LRS-1/2-D-MIDI



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.

Pressure regulators LR/LRS, D series, metal design

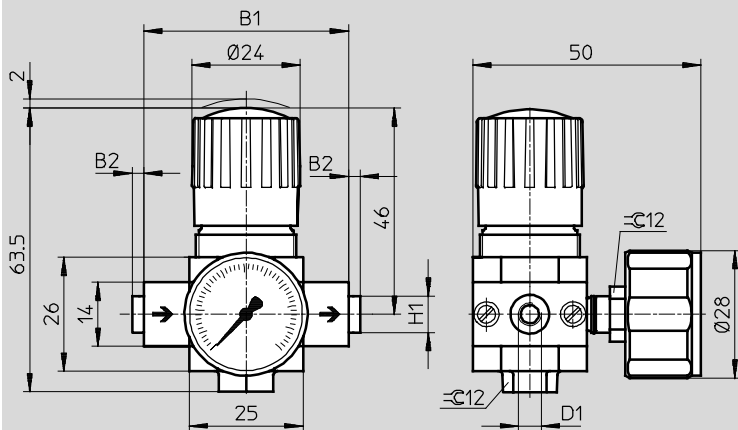
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Technical data

Dimensions

Download CAD data → www.festo.com

Micro



→ Flow direction

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	-	G1/8	-
LR-QS4-D-7-MICRO		~2.5	QS4	~8
LR-QS6-D-7-MICRO			QS6	~10

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

Pressure regulators LR/LRS, D series, metal design

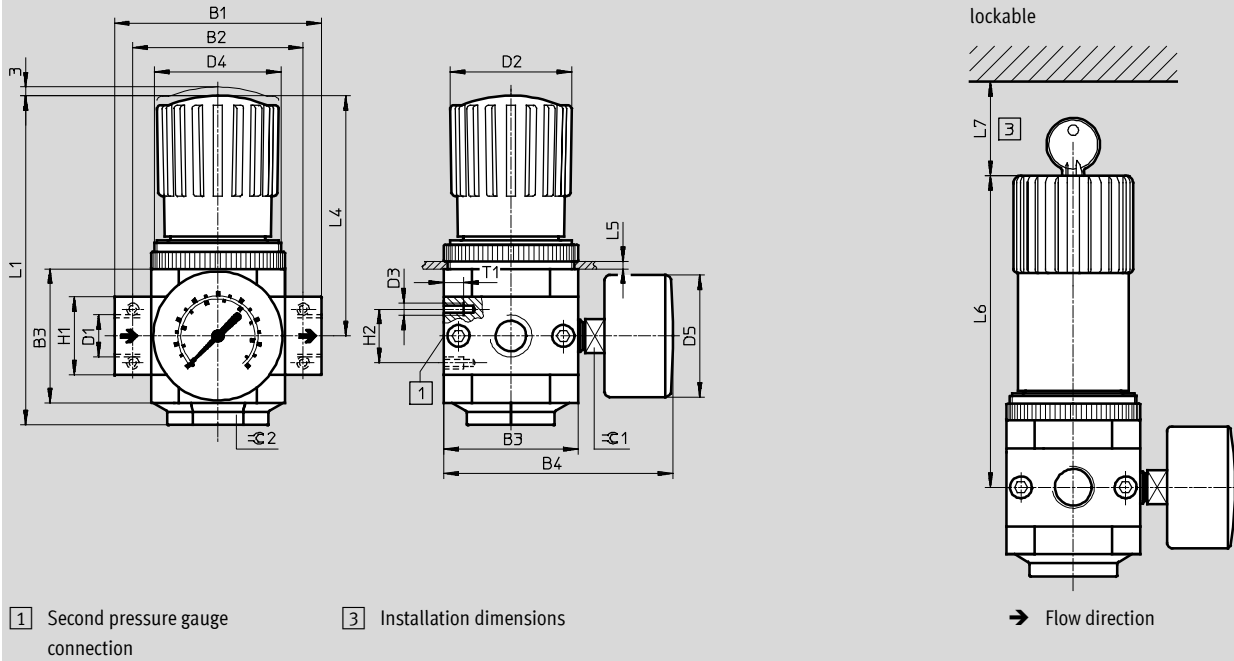
Technical data

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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	70				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			
Micro	Without threaded connecting plates, connecting thread in housing		
	M5	526261	LR-M5-D-7-MICRO
	M7	534180	LR-M7-D-7-MICRO-B
	With threaded connecting plates		
	G1/8	526263	LR-1/8-D-7-MICRO
	With connecting plate and push-in fitting		
	QS4	526269	LR-QS4-D-7-MICRO
	QS6	526271	LR-QS6-D-7-MICRO
Without pressure gauge			
Micro	Without threaded connecting plates, connecting thread in housing		
	M5	526262	LR-M5-D-O-7-MICRO
	M7	534181	LR-M7-D-O-7-MICRO-B
	With threaded connecting plates		
	G1/8	526264	LR-1/8-D-O-7-MICRO
	With connecting plate and push-in fitting		
	QS4	526270	LR-QS4-D-O-7-MICRO
	QS6	526272	LR-QS6-D-O-7-MICRO

Ordering data					
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					
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					
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					
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					
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					
Maxi	G1½	192358	LR-½-D-7-DI-MAXI	192356	LR-½-D-DI-MAXI
	G¾	192362	LR-¾-D-7-DI-MAXI	192360	LR-¾-D-DI-MAXI
	G1	192366	LR-1-D-7-DI-MAXI	192364	LR-1-D-DI-MAXI
Without pressure gauge					
Maxi	G1½	192359	LR-½-D-7-O-DI-MAXI ¹⁾	192357	LR-½-D-O-DI-MAXI ¹⁾
	G¾	192363	LR-¾-D-7-O-DI-MAXI ¹⁾	192361	LR-¾-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					
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					
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					
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					
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					
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					
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

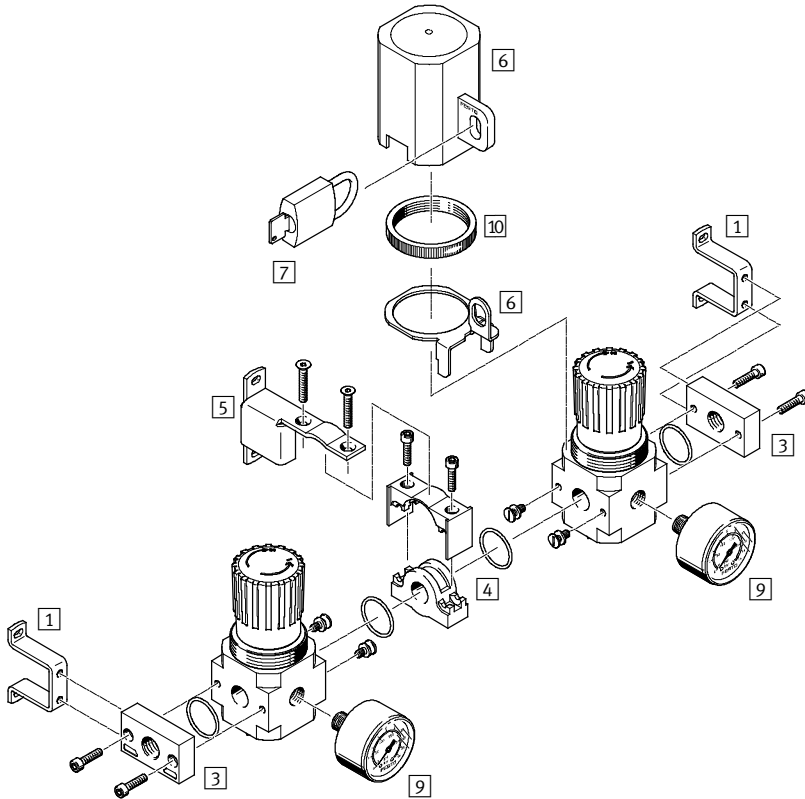
Pressure regulators LRB/LRBS, D series, metal design

Peripherals overview

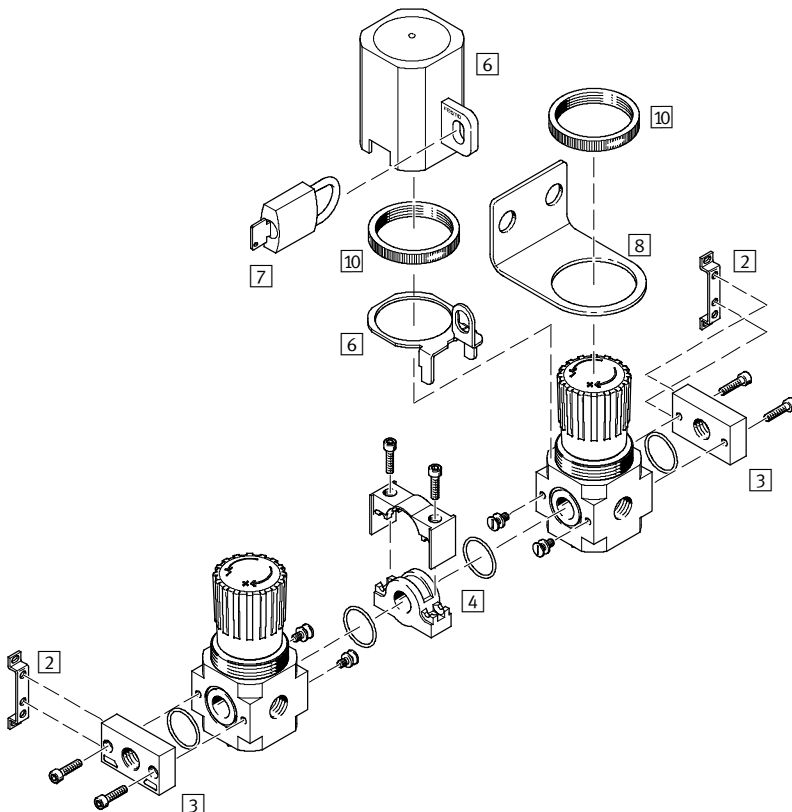
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Mini/Midi

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.

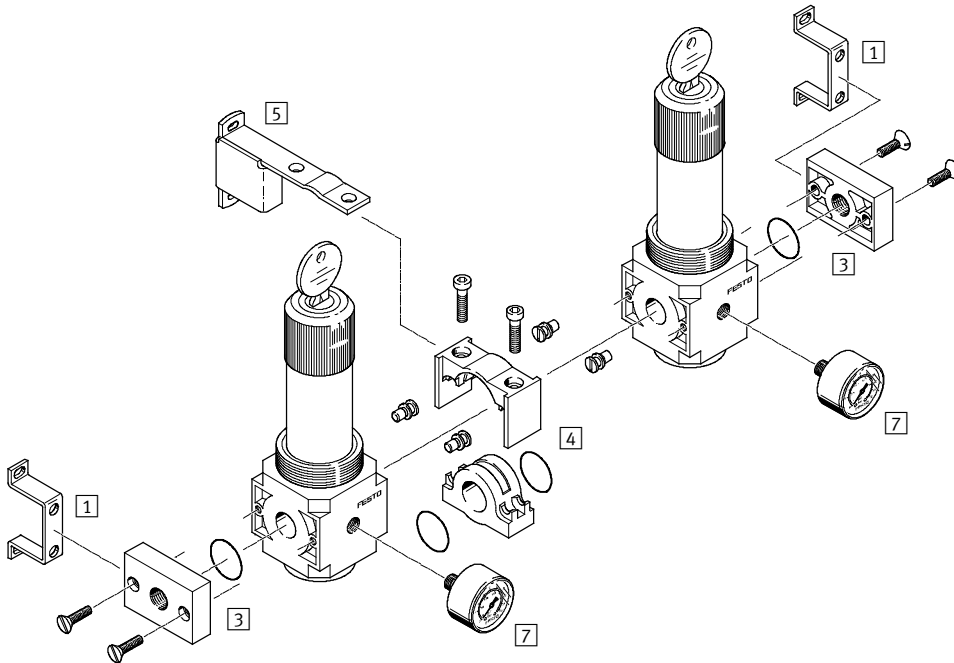
Pressure regulators LRB/LRBS, D series, metal design

Peripherals overview

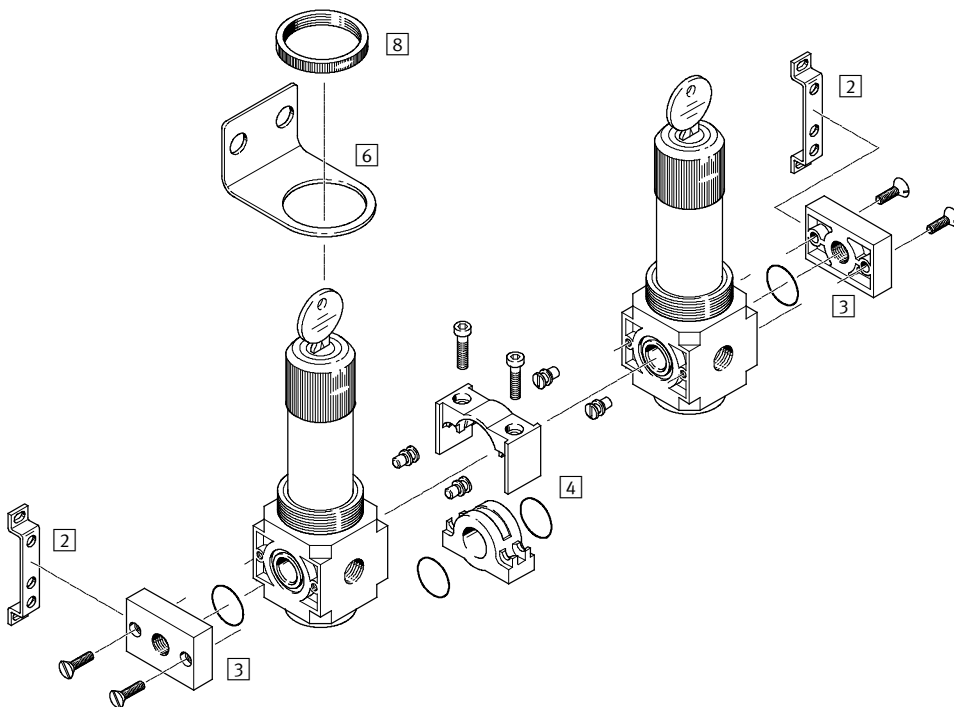
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Mini/Midi

Pressure regulator LRBS lockable – pressure output at rear



Pressure regulator LRBS lockable – pressure output at front



Pressure regulators LRB/LRBS, D series, metal design

FESTO

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	■ 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

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Type codes

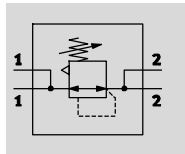
		LRB	–	D	–	7	–	0	–	MINI
Basic function										
LRB	Pressure regulator for manifold assembly									
LRBS	Pressure regulator for manifold assembly, lockable									
Series										
D	Series									
Pressure regulation range										
	0.5 ... 12 bar									
7	0.5 ... 7 bar									
Pressure gauge										
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⁾	G ¹ / ₄	G ³ / ₈	G ³ / ₈	G ¹ / ₂
Pneumatic connection 2	G ¹ / ₄		G 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 ¹ / ₈ prepared		G 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 ¹⁾ q _{nN} [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.

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
Storage temperature [°C]	-10 ... +60
Corrosion resistance class CRC ¹⁾	2

1) Corrosion resistance class 2 according to Festo standard 940 070
 Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Pressure regulators LRB/LRBS, D series, metal design

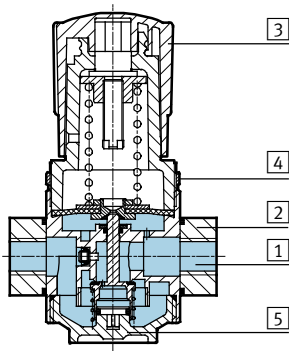
FESTO

Technical data

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

Materials

Sectional view



Pressure regulator

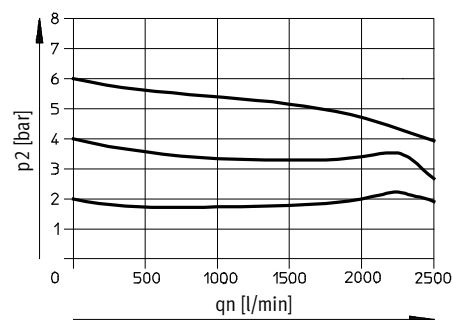
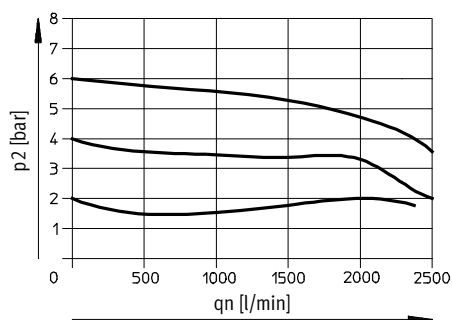
1	Housing	Die-cast zinc
2	Connecting plates	Die-cast zinc
3	Regulating knob	PA
4	Knurled nut	Aluminium
5	Plug cap	PC
-	Seals	NBR
Note on materials		Free of copper and PTFE

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

Mini

Pressure regulation range 0.5 ... 7 bar

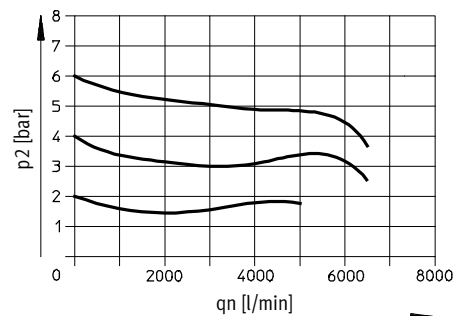
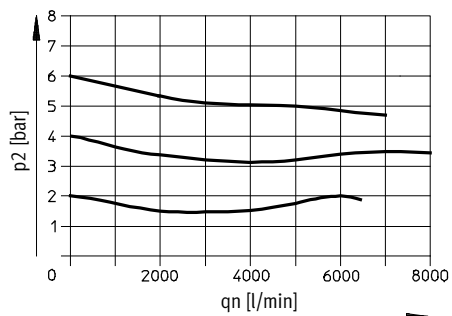
Pressure regulation range 0.5 ... 12 bar



Midi

Pressure regulation range 0.5 ... 7 bar

Pressure regulation range 0.5 ... 12 bar

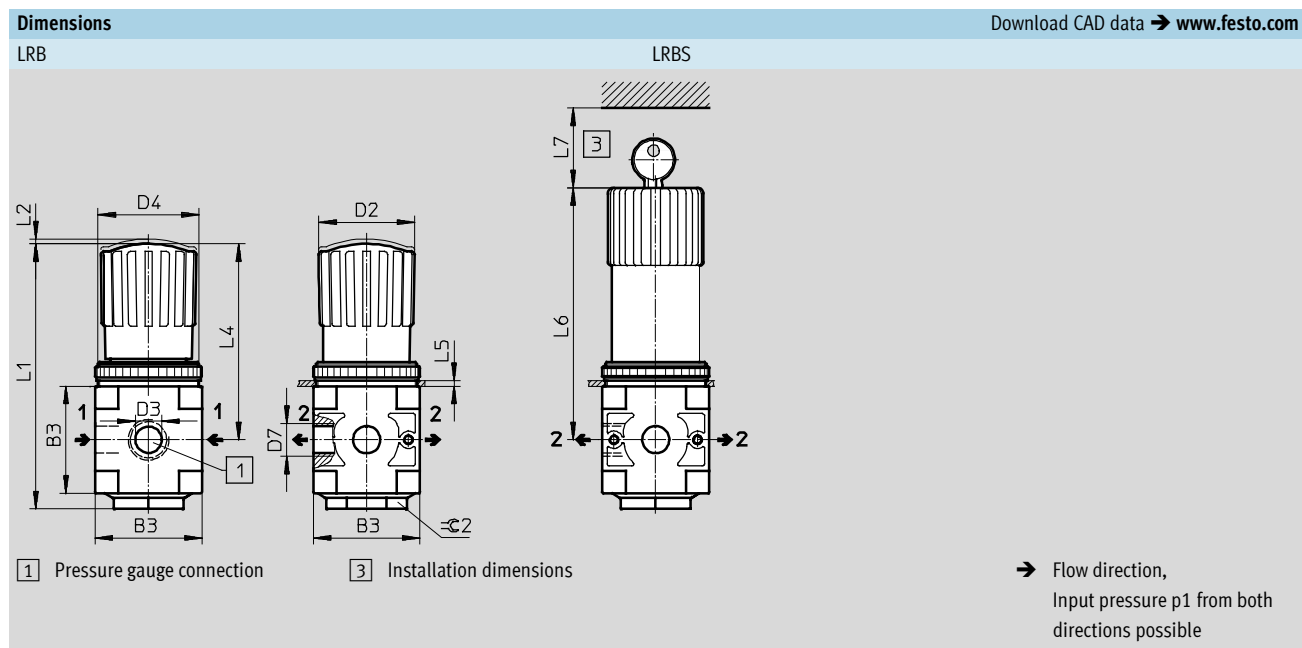


Input pressure $p_1 = 10$ bar

Pressure regulators LRB/LRBS, D series, metal design

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Technical data



Type	B3	D2	D3	D4	D7	L1	L2	L4	L5 max.	L6	L7 min.	⊖ 2
Mini												
LRB-D-...-MINI	40	31	G1/8	M36x1.5	G1/4	~95.4	3	~68.9	3	98	60	17
LRBS-D-...-MINI												
Midi												
LRB-D-...-MIDI	55	49.3	G1/4	M52x1.5	G3/8	~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

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 LRB-D-O-MINI
Midi	194687	LRBS-D-7-O-MIDI	194686 LRB-D-O-MIDI

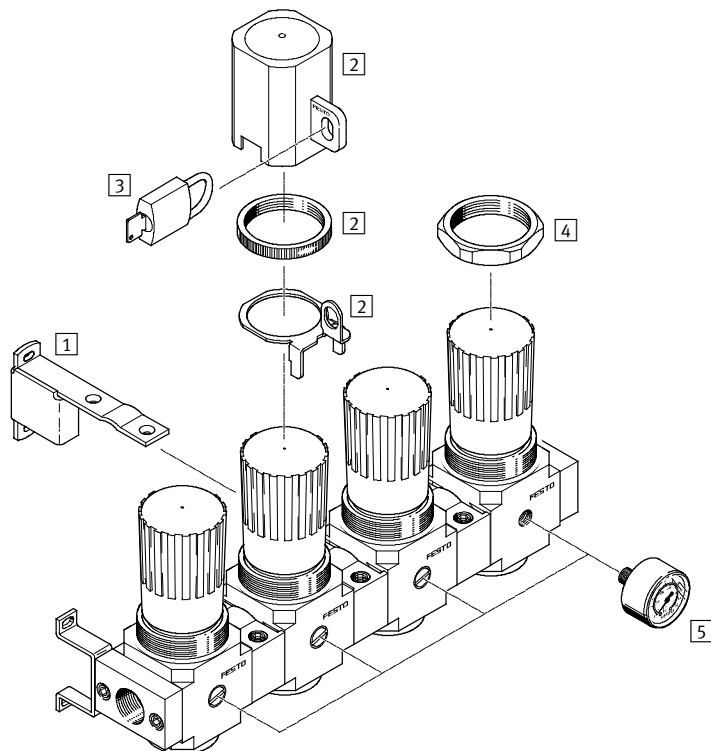
Pressure regulator combinations LRB-K, D series, metal design

Peripherals overview

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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

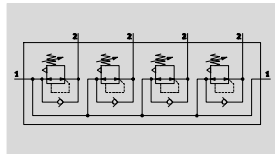
		LRB	–	1/4	–	D	–	7	–	0	–	K2	–	MINI
Basic function														
LRB	Pressure regulator combination													
Pneumatic connection														
1/4	Thread G1/4													
3/8	Thread G3/8													
1/2	Thread G1/2													
Series														
D	Series													
Pressure regulation range														
	0.5 ... 12 bar													
7	0.5 ... 7 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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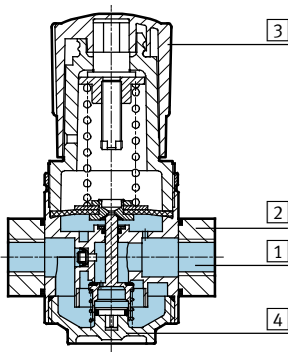
Technical data

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	1950
Manifold with 3 pressure regulators		
LRB-...-K3	1090	3144
Manifold with 4 pressure regulators		
LRB-...-K4	1480	3834
Manifold with 5 pressure regulators		
LRB-...-K5	1860	4828

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

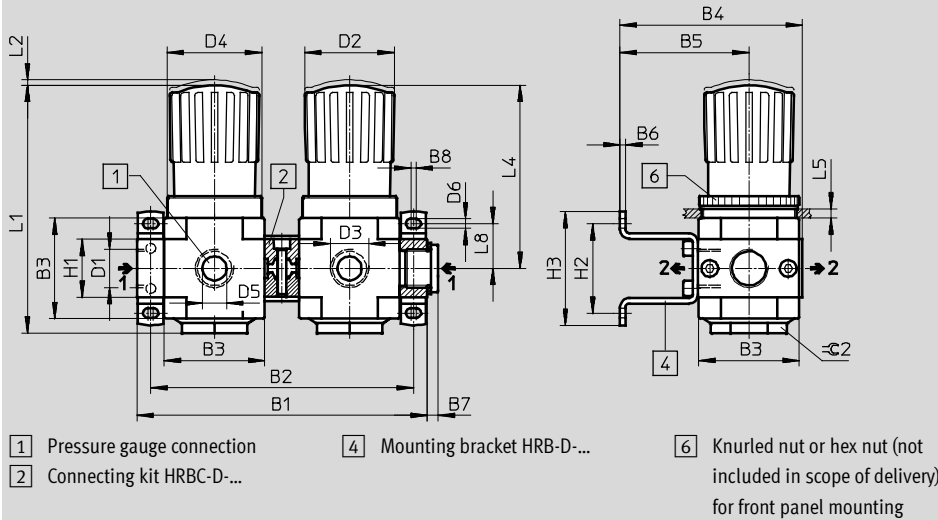
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Technical data

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

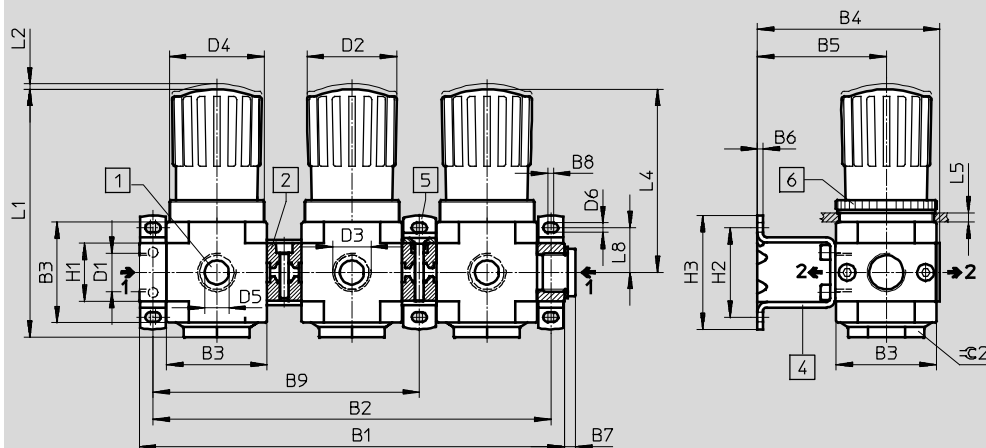
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Technical data

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			

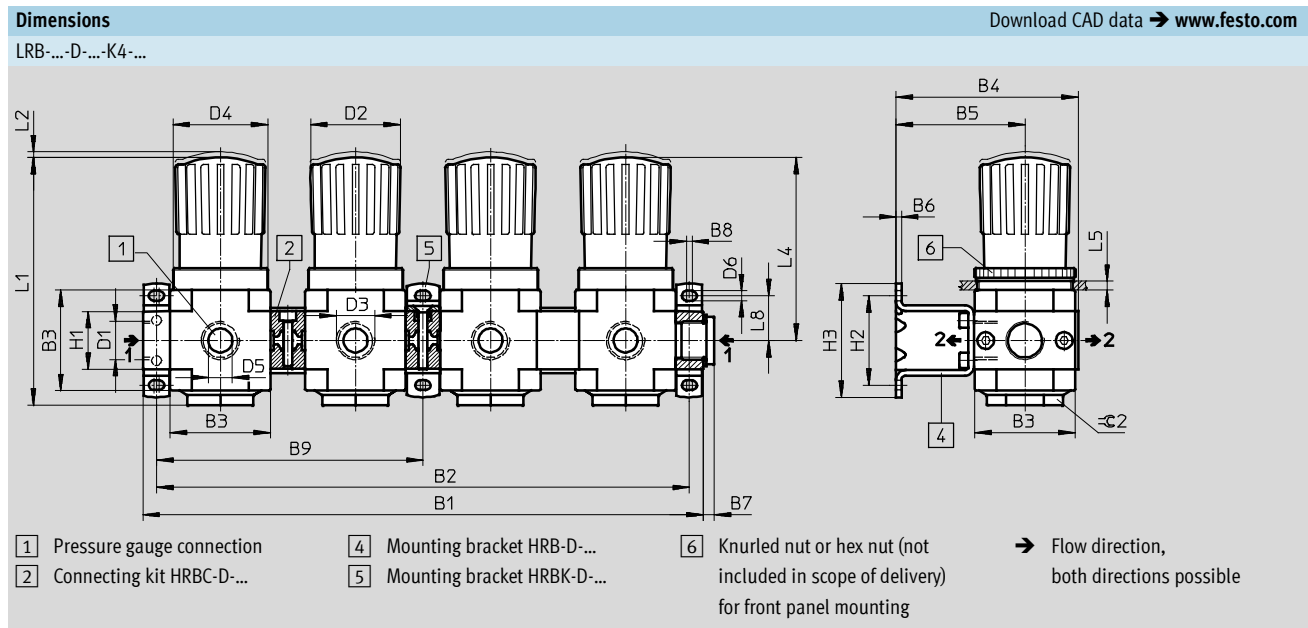
Type	D5	D6	H1	H2 ±0.2	H3 ±0.5	L1	L2	L4	L5 max.	L8	≅ 2
Mini											
LRB-1/4-D-...-K3-MINI	G1/8	4.3	20	35	47.3	~95.4	3	~68.9	3	17.5	17
LRB-3/8-D-...-K3-MINI											
Midi											
LRB-3/8-D-...-K3-MIDI	G1/4	5.3	32	49	62	~135.8	3	~100.3	5	24.5	36
LRB-1/2-D-...-K3-MIDI											

• 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



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

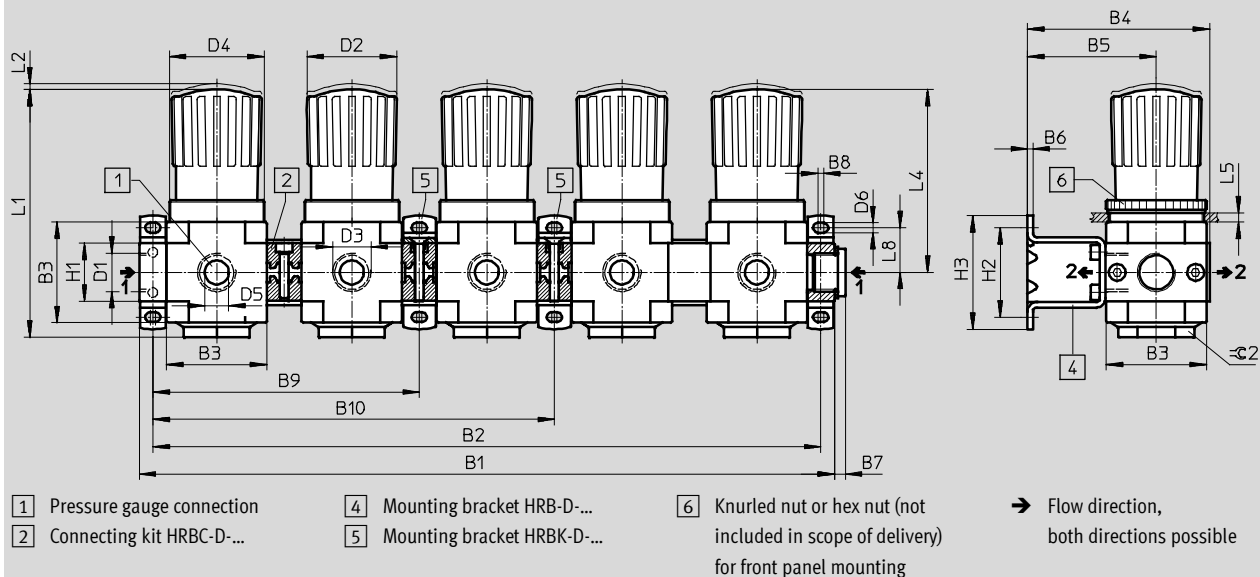
FESTO

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

FESTO

Technical data

Ordering data					
Connecting kit, connecting plate and mounting bracket					
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	G1¼	528952	LRB-¼-D-7-O-K2-MINI	528954	LRB-¼-D-O-K2-MINI
	G¾	528953	LRB-¾-D-7-O-K2-MINI	528955	LRB-¾-D-O-K2-MINI
Midi	G¾	528956	LRB-¾-D-7-O-K2-MIDI	528958	LRB-¾-D-O-K2-MIDI
	G½	528957	LRB-½-D-7-O-K2-MIDI	528959	LRB-½-D-O-K2-MIDI
Manifold with 3 pressure regulators					
Mini	G1¼	528968	LRB-¼-D-7-O-K3-MINI	528970	LRB-¼-D-O-K3-MINI
	G¾	528969	LRB-¾-D-7-O-K3-MINI	528971	LRB-¾-D-O-K3-MINI
Midi	G¾	528972	LRB-¾-D-7-O-K3-MIDI	528974	LRB-¾-D-O-K3-MIDI
	G½	528973	LRB-½-D-7-O-K3-MIDI	528975	LRB-½-D-O-K3-MIDI
Manifold with 4 pressure regulators					
Mini	G1¼	528984	LRB-¼-D-7-O-K4-MINI	528986	LRB-¼-D-O-K4-MINI
	G¾	528985	LRB-¾-D-7-O-K4-MINI	528987	LRB-¾-D-O-K4-MINI
Midi	G¾	528988	LRB-¾-D-7-O-K4-MIDI	528990	LRB-¾-D-O-K4-MIDI
	G½	528989	LRB-½-D-7-O-K4-MIDI	528991	LRB-½-D-O-K4-MIDI
Manifold with 5 pressure regulators					
Mini	G1¼	529000	LRB-¼-D-7-O-K5-MINI	529002	LRB-¼-D-O-K5-MINI
	G¾	529001	LRB-¾-D-7-O-K5-MINI	529003	LRB-¾-D-O-K5-MINI
Midi	G¾	529004	LRB-¾-D-7-O-K5-MIDI	529006	LRB-¾-D-O-K5-MIDI
	G½	529005	LRB-½-D-7-O-K5-MIDI	529007	LRB-½-D-O-K5-MIDI

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

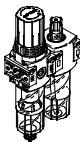
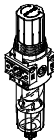
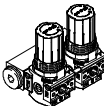
Technical data

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Pressure regulators LR/LRB, D series, polymer

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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	0.5 ... 7	5	40
Service units								
FRC		Mini	■	■	–	■	■	■
Individual devices								
Filter regulators LFR		Mini	■	■	–	■	■	■
Pressure regulators LR		Mini	■	■	–	■	–	–
Pressure regulator combinations LRB-K		Mini	–	–	■	■	–	–

Pressure regulators LR/LRB, D series, polymer

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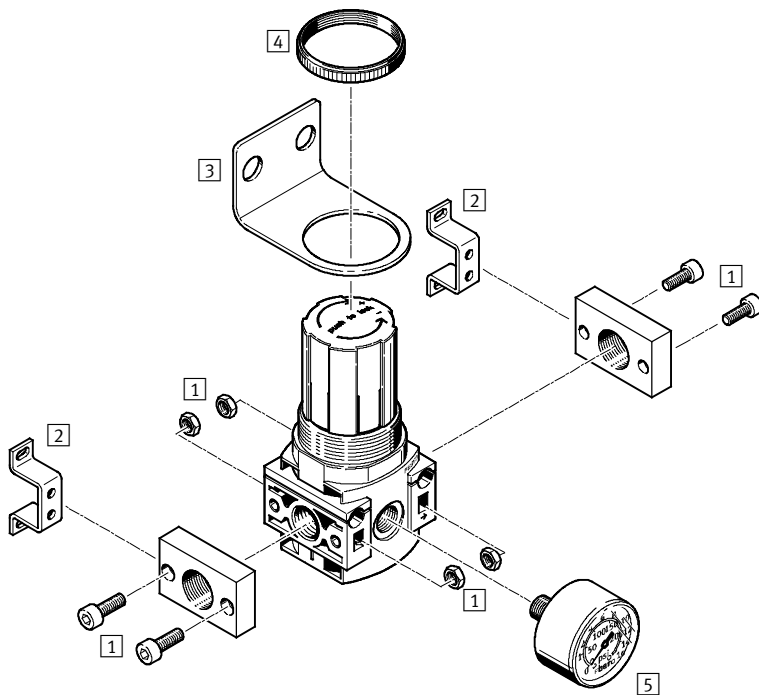
Product range overview D series service units, polymer

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
Individual devices									
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

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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

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Type codes

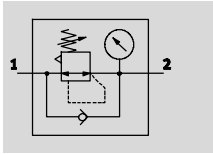
	LR	–	1/8	–	DB	–	7	–	0	–	MINI
Basic function											
LR	Pressure regulator										
Pneumatic connection											
1/8	Thread G1/8										
1/4	Thread G1/4										
Series											
DB	Series										
Pressure regulation range											
7	0.5 ... 7 bar										
Pressure gauge											
	With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

Pressure regulators LR, D series, polymer

Technical data

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with pressure gauge

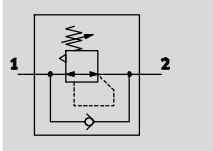


-  - Flow rate
800 ... 1,300 l/min

-  - Temperature range
-5 ... +50 °C

-  - Operating pressure
1.5 ... 10 bar

without pressure gauge



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

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 rate¹⁾ 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 p₁ = 10 bar, p₂ = 6 bar and Δp = 1 bar.

Pressure regulators LR, D series, polymer

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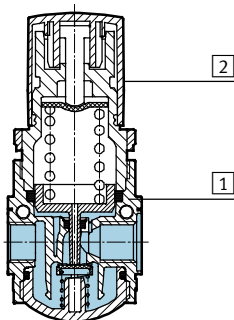
Technical data

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) CRC1: Corrosion resistance class to Festo standard 940 070
Components with light corrosion exposure. Protection for transport and storage. Components without significant decorative function or surface, e.g. installed out of sight internally or behind covers.

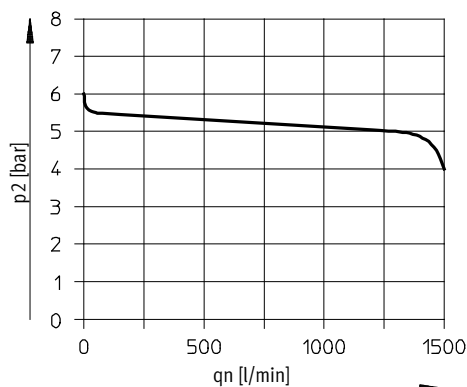
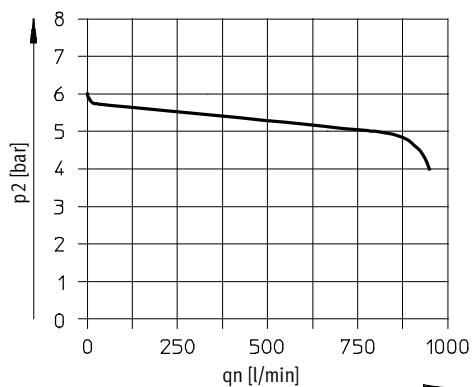
Weight [g]	
Size	Mini
Pressure regulator	150

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	
Pneumatic connection G ¹ / ₈	Pneumatic connection G ¹ / ₄



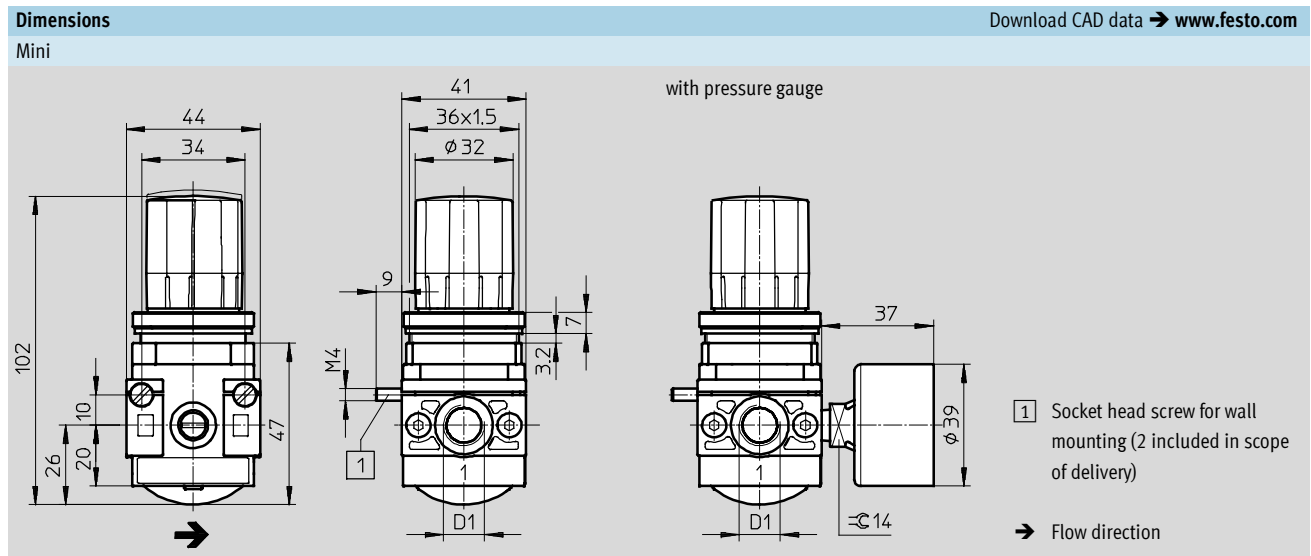
Primary pressure p1 = 10 bar

 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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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			
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

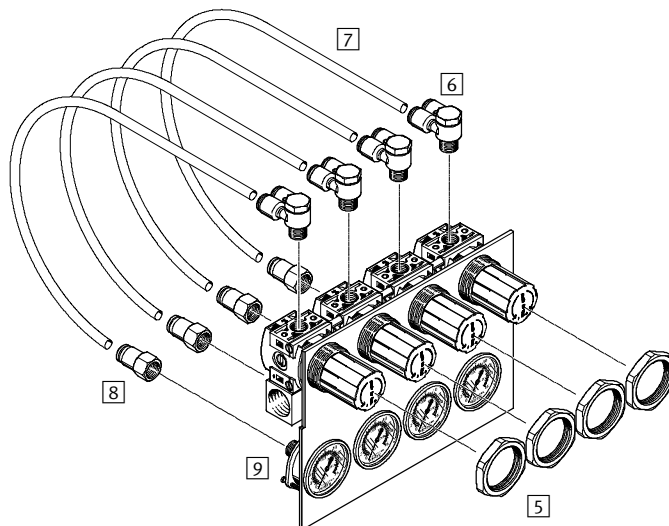
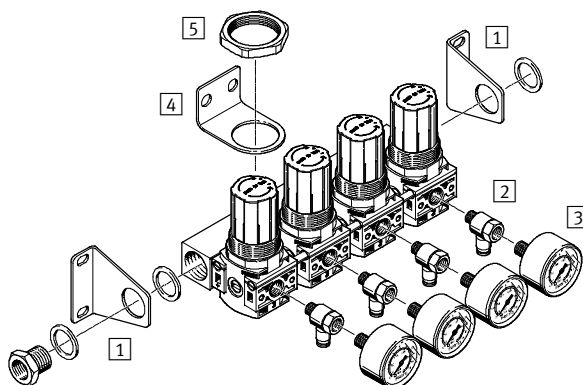
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Peripherals overview

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

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Type codes

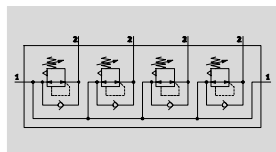
		LRB	–	1/4	–	DB	–	7	–	0	–	K2	–	MINI
Basic function														
LRB	Pressure regulator combination													
Pneumatic connection 2														
1/4	Thread G1/4													
Series														
DB	Series													
Pressure regulation range														
7	0.5 ... 7 bar													
Pressure gauge														
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

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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 ¹⁾ 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 ¹⁾	1

1) CRC1: Corrosion resistance class to Festo standard 940 070
Components with light corrosion exposure. Protection for transport and storage. Components without significant decorative function or surface, e.g. installed out of sight internally or behind covers.

Pressure regulator combinations LRB-K, D series, polymer

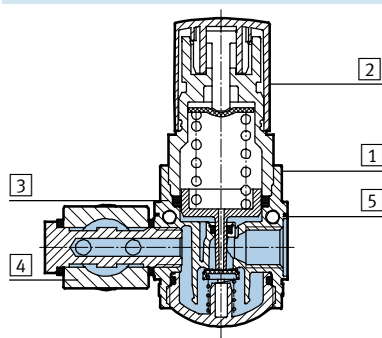
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Technical data

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	1000
Manifold with 5 pressure regulators	
LRB-...-K5	1250

Materials

Sectional view



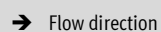
Pressure regulator	Mini
1 Housing	Polyamide, reinforced
2 Rotary knob	Polyacetate
3 Sealing ring	Polyvinyl chloride
4 Manifold strip	Wrought aluminium alloy
5 Spacing bolt	Wrought aluminium alloy
- Seals	Nitrile rubber

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Dimensions

Download CAD data → www.festo.com

LRB-...-K5



Pressure regulator combinations LRB-K, D series, polymer

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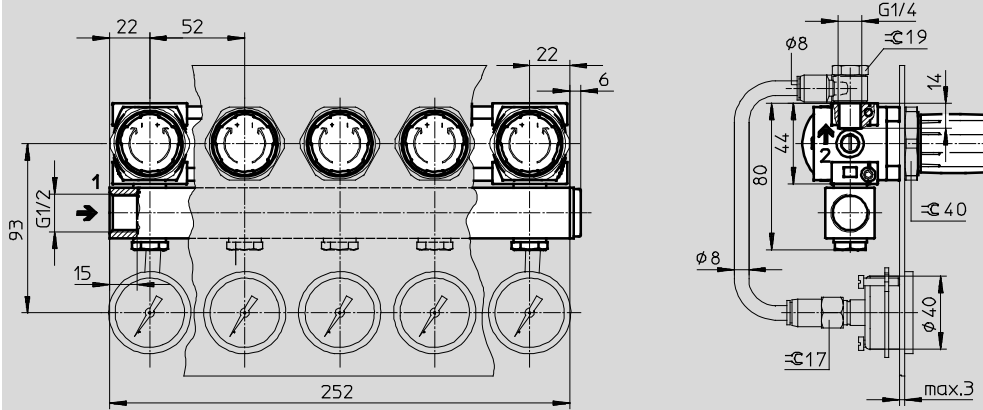
Technical data

Dimensions

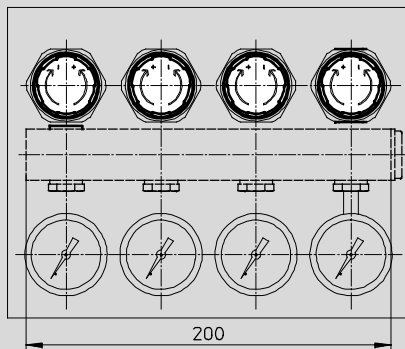
Download CAD data → www.festo.com

Front panel mounting

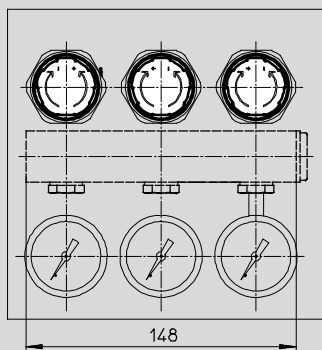
LRB-...-K5



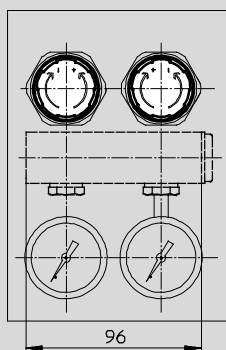
LRB-...-K4



LRB-...-K3



LRB-...-K2



→ Flow direction

Pressure regulator combinations LRB-K, D series, polymer

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Technical data

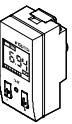
Ordering data			
Size	Connection	Pressure regulation range 0.5 ... 7 bar	
		Part No.	Type
Manifold with 2 pressure regulators			
Mini	G1/4	540040	LRB-1/4-DB-7-O-K2-MINI
Manifold with 3 pressure regulators			
Mini	G1/4	540041	LRB-1/4-DB-7-O-K3-MINI
Manifold with 4 pressure regulators			
Mini	G1/4	540042	LRB-1/4-DB-7-O-K4-MINI
Manifold with 5 pressure regulators			
Mini	G1/4	540043	LRB-1/4-DB-7-O-K5-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 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 R $\frac{1}{8}$	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 R $\frac{1}{4}$	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 ¹⁾	
Push-in fitting QSF, female thread with external hex						Technical data → Internet: qsf
	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						Technical data → Internet: qstf
	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						Technical data → Internet: qsyv
	G $\frac{1}{4}$	8	186210	QSYLV-G $\frac{1}{4}$ -8	1	

1) Packaging unit quantity