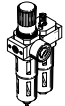
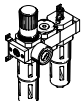
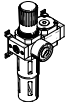
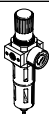


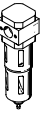
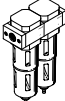
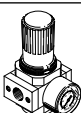


Pressure regulators LR/LRS/LRB/LRBS, D series

FESTO



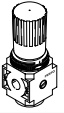
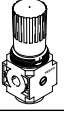
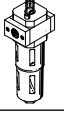
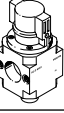
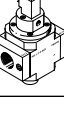
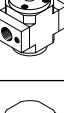
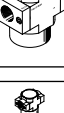
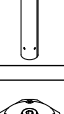


Product range overview – Service unit components, D series, metal

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

Product range overview – Service unit components, D series, metal

Type	Size	Bowl guard		Condensate drain			Pressure indicator		Actuator lock		Supply voltage			Options			→ Page/ Internet
		Metal bowl guard	Plastic bowl	Manual	Semi-automatic	Fully automatic	With pressure gauge	Without pressure gauge	Rotary knob with latch	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 display	
Service units																	
FRC/FRCS	Mini	■	-	■	-	■	■	■	■	■	-	-	-	-	-	-	frc
	Midi	■	-	■	-	■	■	■	■	■	-	-	-	-	-	-	frc
	Maxi	■	-	■	-	■	■	■	■	■	-	-	-	■	■	-	frc
FRC-K	Mini	■	-	■	-	■	■	-	■	-	■	-	-	-	-	-	frc
	Midi	■	-	■	-	■	■	-	■	-	■	-	-	-	-	-	frc
	Maxi	■	-	■	-	■	■	-	■	-	■	-	-	■	■	-	frc
LFR-K	Mini	■	-	■	-	■	■	-	■	■	■	-	-	-	-	-	lfr
	Midi	■	-	■	-	■	■	-	■	■	■	-	-	-	-	-	lfr
	Maxi	■	-	■	-	■	■	-	■	■	■	-	-	■	■	-	lfr
Individual devices																	
Filter regulators LFR/LFRS	Mini	■	-	■	-	■	■	■	■	■	-	-	-	-	-	-	lfr
	Midi	■	-	■	-	■	■	■	■	■	-	-	-	-	-	-	lfr
	Maxi	■	-	■	-	■	■	■	■	■	-	-	-	■	■	-	lfr
Filters LF	Mini	■	-	■	-	■	-	-	-	-	-	-	-	-	-	-	lf
	Midi	■	-	■	-	■	-	-	-	-	-	-	-	-	-	-	lf
	Maxi	■	-	■	-	■	-	-	-	-	-	-	-	-	-	-	lf
Fine and micro filters LFMA/LFMB	Mini	■	-	■	-	■	-	-	-	-	-	-	-	-	-	■	lfma, lfmb
	Midi	■	-	■	-	■	-	-	-	-	-	-	-	-	-	■	lfma, lfmb
	Maxi	■	-	■	-	■	-	-	-	-	-	-	-	-	-	■	lfma, lfmb
Activated carbon filters LFX	Mini	■	-	-	-	-	-	-	-	-	-	-	-	-	-	-	lfx
	Midi	■	-	-	-	-	-	-	-	-	-	-	-	-	-	-	lfx
	Maxi	■	-	-	-	-	-	-	-	-	-	-	-	-	-	-	lfx
Filter combinations LFMBA	Mini	■	-	■	-	■	-	-	-	-	-	-	-	-	-	■	lfmba
	Midi	■	-	■	-	■	-	-	-	-	-	-	-	-	-	■	lfmba
	Maxi	■	-	■	-	■	-	-	-	-	-	-	-	-	-	■	lfmba
Pressure regulators LR/LRS	Mini	-	-	-	-	-	■	■	■	■	-	-	-	■	-	-	lr
	Midi	-	-	-	-	-	■	■	■	■	-	-	-	■	-	-	lr
	Maxi	-	-	-	-	-	■	■	■	■	-	-	-	■	■	-	lr

Product range overview – Service unit components, D series, metal

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		Mini	-	-	-	■	-	-	-	-	-	-	■	■
		Midi	-	-	-	-	■	-	-	-	-	-	■	■
		Maxi	-	-	-	-	-	-	-	-	-	-	-	-
Pressure regulator manifolds LRB-K		Mini	-	-	-	■	■	-	-	-	-	-	■	■
		Midi	-	-	-	-	■	■	-	-	-	-	■	■
		Maxi	-	-	-	-	-	-	-	-	-	-	-	-
Lubricators LOE		Mini	-	-	■	■	■	-	-	-	-	-	-	-
		Midi	-	-	-	■	■	■	■	-	-	-	-	-
		Maxi	-	-	-	-	-	■	■	■	-	-	-	-
On/off valves HE		Mini	-	-	■	■	■	-	-	-	-	-	-	-
		Midi	-	-	-	■	■	■	■	-	-	-	-	-
		Maxi	-	-	-	-	-	■	■	■	-	-	-	-
On/off valves HEE		Mini	-	-	■	■	■	-	-	-	-	-	-	-
		Midi	-	-	-	■	■	■	■	-	-	-	-	-
		Maxi	-	-	-	-	-	■	■	■	-	-	-	-
On/off valves HEP		Mini	-	-	■	■	■	-	-	-	-	-	-	-
		Midi	-	-	-	■	■	■	■	-	-	-	-	-
		Maxi	-	-	-	-	-	■	■	■	-	-	-	-
Soft-start valves HEL		Mini	-	-	■	■	■	-	-	-	-	-	-	-
		Midi	-	-	-	■	■	■	■	-	-	-	-	-
		Maxi	-	-	-	-	-	■	■	■	-	-	-	-
Membrane air dryers LDM1		Mini	-	-	-	-	-	-	-	-	-	-	-	-
		Midi	-	-	-	-	-	-	-	-	-	-	-	-
		Maxi	-	-	-	-	-	■	■	■	-	-	-	-
Branching modules FRM		Mini	-	-	■	■	■	-	-	-	-	-	-	-
		Midi	-	-	-	■	■	■	■	-	-	-	-	-
		Maxi	-	-	-	-	-	■	■	■	-	-	-	-
Distributor block FRZ		Mini	-	-	-	-	-	-	-	-	-	-	-	-
		Midi	-	-	-	-	-	-	-	-	-	-	-	-
		Maxi	-	-	-	-	-	-	-	-	-	-	-	-

Product range overview – Service unit components, D series, metal

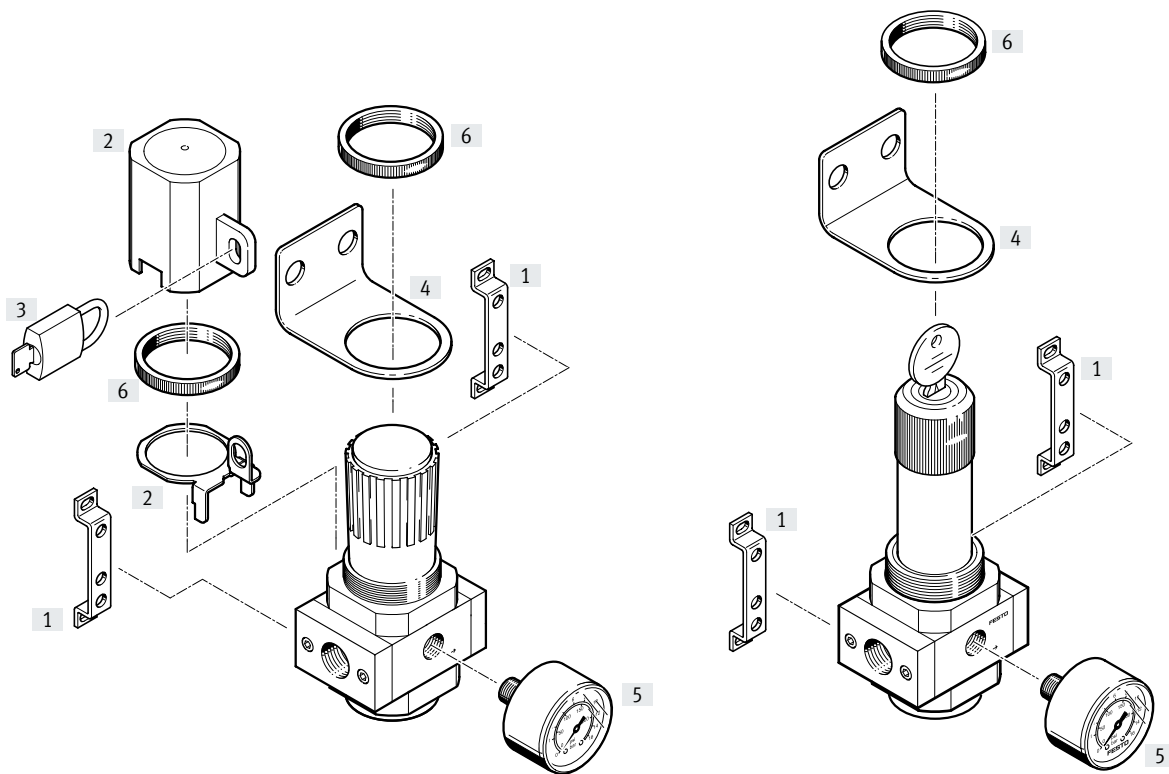
Type	Size	Bowl guard		Pressure indicator		Actuator lock		Supply voltage			Options		→ Page/ Internet
		Metal bowl guard	Plastic bowl	With pressure gauge	Without pressure gauge	Rotary knob with latch	Rotary knob with integrated lock	24 V DC	110 V AC	230 V AC	With non-return function	Pressure switch	
Individual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

Peripherals overview

Mini/Midi/Maxi

Pressure regulator LR

Pressure regulator LRS, lockable



Mounting attachments and accessories

	Rotary knob with latch	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	■	■	50
[6] Knurled nut (included in the scope of delivery) HMR	■	■	-

Type codes

001		Series
LR		Pressure regulator
LRS		Pressure regulator, lockable

002		Pneumatic connection
		None
1/8		Female thread G1/8
1/4		Female thread G1/4
3/8		Female thread G3/8
1/2		Female thread G1/2
3/4		Female thread G3/4
1		Female thread G1

003		Version
D		D series, metal

004		Pressure regulation range
7		0.5 ... 7 bar (0.05 ... 0.7 MPa)
		0.5 ... 12 bar (0.05 ... 1.2 MPa)

005		Pressure gauge
		With pressure gauge
0		Without pressure gauge

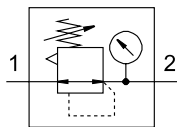
006		Additional function
		None
I		With integrated non-return function
DI		Directly actuated pressure regulator with integrated return flow function

007		Size
MINI		Grid dimension 40 mm (without connecting plates)
MIDI		Grid dimension 55 mm (without connecting plates)
MAXI		Grid dimension 66 mm (without connecting plates)

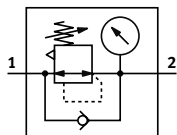
008		Display unit
		Bar/psi/without
MPA		MPa




Datasheet

LR/LRS
with pressure gauge



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



-  - Flow rate
120 ... 12500 l/min
-  - Temperature range
-10 ... +60 °C
-  - Operating pressure
0.1 ... 1.6 MPa



- Also suitable for front panel mounting
- Two pressure gauge connections for different installation options
- Good regulation characteristics with minimal pressure hysteresis
- High flow rate
- Two pressure regulation ranges: 0.5... 7 bar and 0.5 ... 12 bar
- Settings secured via latch on rotary knob
- Return flow option for exhausting from output 2 to input 1
- Pressure sensor (optional)
→ page 50

General technical data		Mini	Midi	Maxi
Size				
Pneumatic port 1, 2 ¹⁾		G1/8, G1/4, G3/8	G1/4, G3/8, G1/2, G3/4	G1/2, G3/4, G1
Design		Directly actuated diaphragm regulator		Pilot-actuated piston regulator
				Directly actuated diaphragm regulator LR/LRS-...-DI
Regulator function		Output pressure constant, with secondary exhausting, with primary pressure compensation, with return flow ²⁾		Output pressure constant, with secondary exhausting, with primary pressure compensation ³⁾ , with return flow ³⁾
Type of mounting		With accessories		
		In-line installation		
		Front panel mounting		
Mounting position		Any		
Actuator lock		Rotary knob with latch		
		Rotary knob with integrated lock		
Pressure regulation range	[MPa]	0.05 ... 0.7		
		0.05 ... 1.2		
	[bar]	0.5 ... 7		
		0.5 ... 12		
	[psi]	7.25 ... 101.5		
		7.25 ... 174		
Max. pressure hysteresis	[MPa]	0.02		0.04
	[bar]	0.2		0.4
	[psi]	2.9		5.8
Pressure indication		With pressure gauge		
		Prepared for G1/8	Prepared for G1/4	Prepared for G1/4

1) Connecting plates with threaded connection

2) For LR/LRS-...-I.

3) For LR/LRS-...-DI.

† - Note: This product corresponds to ISO 1179-1 and ISO 228-1.

Datasheet

Standard nominal flow rate $q_{nN}^{1)}$ [l/min]											
Size		Mini			Midi			Maxi			
Pneumatic port 1, 2		G1/8	G1/4	G3/8	G1/4	G3/8	G1/2	G3/4	G1/2	G3/4	G1
Pressure regulation range	0.5 ... 7 bar (0.05 ... 0.7 MPa)	1000	1600	1800	2200	3300	4000	4500	10700 (7300) ²⁾	12000 (8350) ²⁾	12500 (8400) ²⁾
	0.5 ... 12 bar (0.05 ... 1.2 MPa)	800	1500	1700	2100	3200	3500	3500	10500 (5400) ²⁾	11000 (6800) ²⁾	11500 (7000) ²⁾

1) Measured at $p_1 = 10$ bar (1 MPa), $p_2 = 6$ bar (0.6 MPa) and $\Delta p = 1$ bar (0.1 MPa).

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

Operating and environmental conditions	
Operating pressure	[MPa] 0 ... 1.6
	[bar] 0 ... 16
	[psi] 0 ... 232
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]
	Inert gases
Note on the operating/ pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)
Ambient temperature	[°C] -10 ... +60
Temperature of medium	[°C] -10 ... +60
Corrosion resistance class CRC ¹⁾	2 - Moderate corrosion stress

1) More information www.festo.com/x/topic/crc

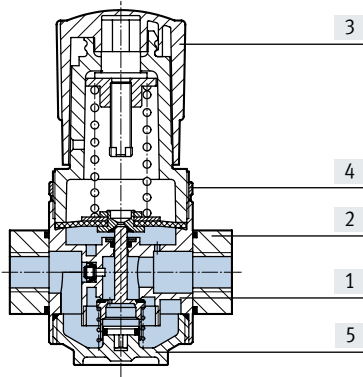
Weight [g]			
Size	Mini	Midi	Maxi
With pressure gauge			
LR	350	720	1200 (1400) ¹⁾
LRS	520	1250	1290 (1680) ¹⁾
Without pressure gauge			
LR	300	660	1100 (1330) ¹⁾
LRS	470	1180	1215 (1610) ¹⁾

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

Datasheet

Materials

Sectional view

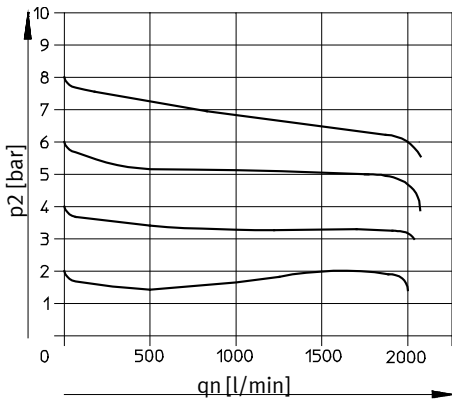


[1]	Housing	Die-cast zinc/aluminium
[2]	Connecting plates	Die-cast zinc/aluminium
[3]	Regulator knob	PA
[4]	Knurled nut	Aluminium
[5]	Cover	PC
-	Seals	NBR
Note on materials		RoHS-compliant
LABS (PWIS) conformity		VDMA24364-B1/B2-L

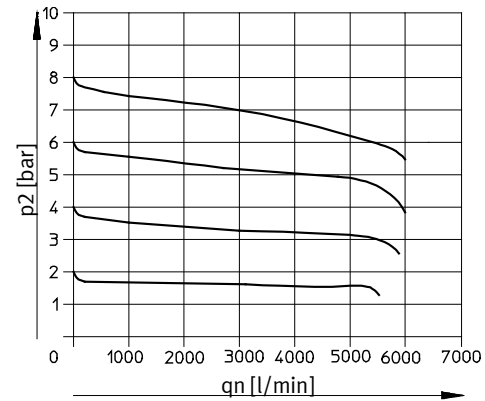
Datasheet

Standard flow rate q_n as a function of output pressure p_2

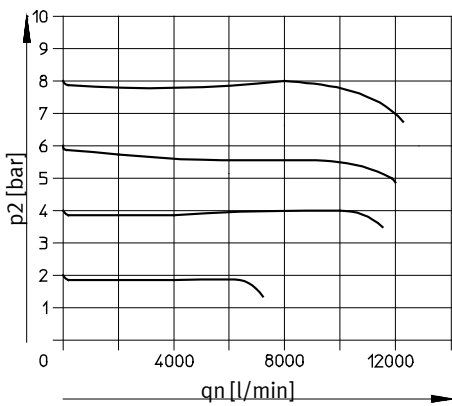
LR/LRS-1/4-D-MINI



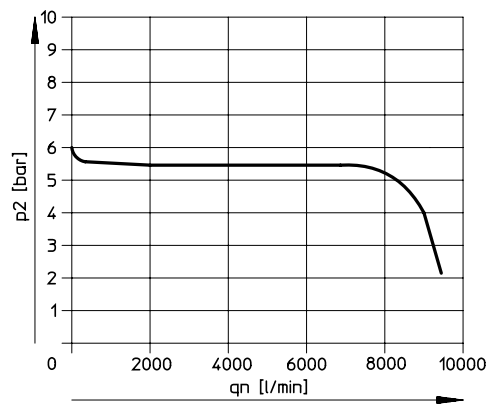
LR/LRS-1/2-D-MIDI



LR/LRS-1-D-MAXI



LR/LRS-1-D-DI-MAXI



Primary pressure $p_1 = 10$ bar

Note

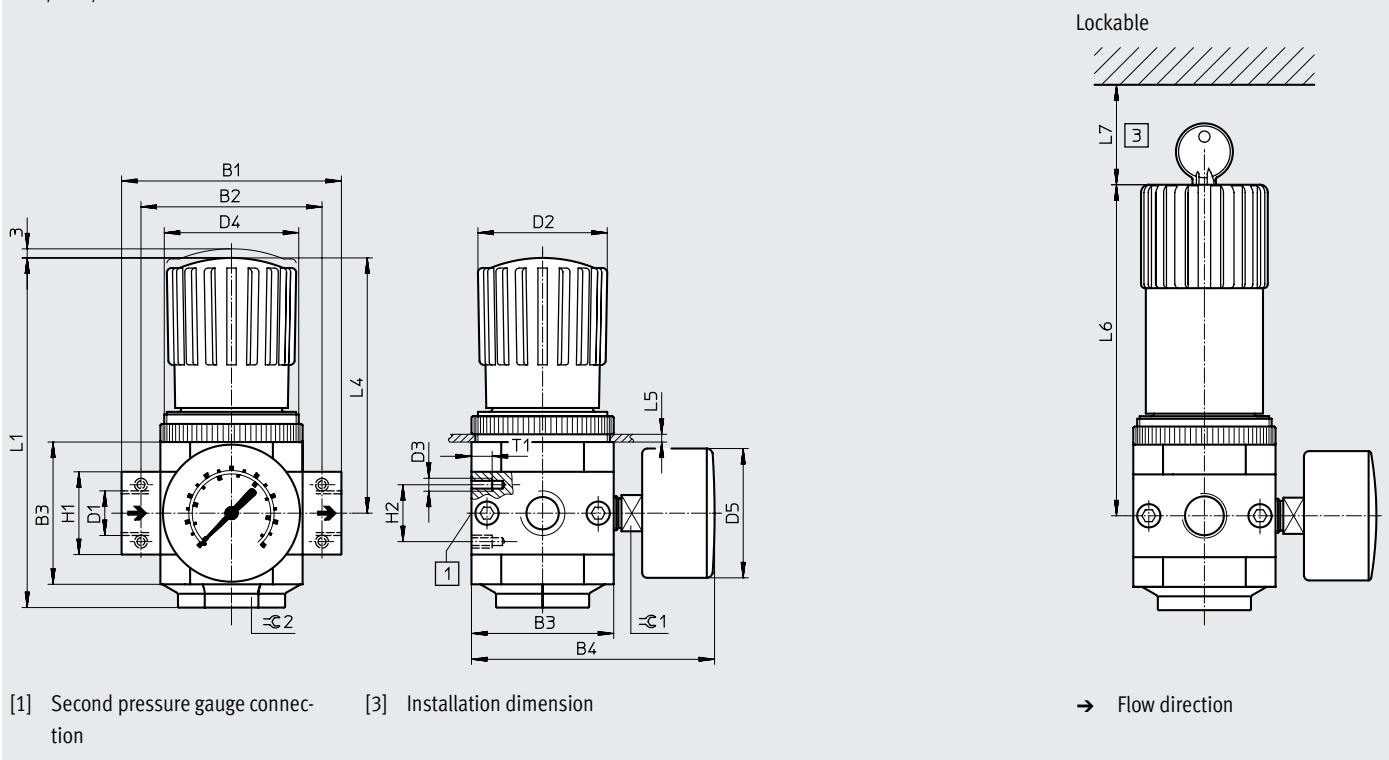
In order to improve the control performance, internal air consumption depending on the primary pressure is integrated into the design of the LR/LRS-...-MAXI.

Datasheet

Dimensions

Mini/Midi/Maxi

Download CAD data → www.festo.com



Type	B1	B2	B3	B4	D1	D2 ∅	D3	D4	D5 ∅
Mini									
LR/LRS-1/8-D-(I)-MINI	64	52	40	76	G1/8	31	M4	M36x1.5	39
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	39
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	106	G1/2	31	M5	M36x1.5	39
LR/LRS-1/2-D-DI-MAXI				105		49		M52x1.5	
LR/LRS-3/4-D-MAXI				106	G3/4	31		M36x1.5	
LR/LRS-3/4-D-DI-MAXI				105		49		M52x1.5	
LR/LRS-1-D-MAXI	116	91	106	G1	31	M36x1.5			
LR/LRS-1-D-DI-MAXI			105		49	M52x1.5			

Note: This product corresponds to ISO 1179-1 and ISO 228-1.

Datasheet

Type	H1	H2	L1	L4	L5 max.	L6	L7	T1	≅ 1	≅ 2
Mini										
LR/LRS-1/8-D-MINI	20	11	95	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	32		148	105		135				
LR/LRS-3/4-D-MAXI	32		125	82		111				
LR/LRS-3/4-D-DI-MAXI	36		148	105		135				
LR/LRS-1-D-MAXI	40		125	82		111				
LR/LRS-1-D-DI-MAXI	41		148	105		135				

Datasheet

Ordering data					
Rotary knob with latch, connecting plates with threaded connection					
Size	Connection	Pressure regulation range 0.5 ... 7 bar (0.05 ... 0.7 MPa)		Pressure regulation range 0.5 ... 12 bar (0.05 ... 1.2 MPa)	
		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
With pressure gauge, outer scale in MPa, inner scale in bar					
Mini	G1/8	8002288	LR-1/8-D-7-MINI-MPA	8002274	LR-1/8-D-MINI-MPA
	G1/4	8002289	LR-1/4-D-7-MINI-MPA	8002275	LR-1/4-D-MINI-MPA
	G3/8	8002290	LR-3/8-D-7-MINI-MPA	8002286	LR-3/8-D-MINI-MPA
Midi	G1/4	8002369	LR-1/4-D-7-MIDI-MPA	8002368	LR-1/4-D-MIDI-MPA
	G3/8	8002291	LR-3/8-D-7-MIDI-MPA	8002256	LR-3/8-D-MIDI-MPA
	G1/2	8002292	LR-1/2-D-7-MIDI-MPA	8002257	LR-1/2-D-MIDI-MPA
	G3/4	8002293	LR-3/4-D-7-MIDI-MPA	8002287	LR-3/4-D-MIDI-MPA
Maxi	G1/2	8002371	LR-1/2-D-7-MAXI-MPA	8002370	LR-1/2-D-MAXI-MPA
	G3/4	8002294	LR-3/4-D-7-MAXI-MPA	8002276	LR-3/4-D-MAXI-MPA
	G1	8002295	LR-1-D-7-MAXI-MPA	8002277	LR-1-D-MAXI-MPA
Without pressure gauge					
Mini	G1/8	162598	LR-1/8-D-7-O-MINI	162590	LR-1/8-D-O-MINI
	G1/4	162599	LR-1/4-D-7-O-MINI	162591	LR-1/4-D-O-MINI
	G3/8	162600	LR-3/8-D-7-O-MINI	162592	LR-3/8-D-O-MINI
Midi	G1/4	186454	LR-1/4-D-7-O-MIDI	186452	LR-1/4-D-O-MIDI
	G3/8	162601	LR-3/8-D-7-O-MIDI	162593	LR-3/8-D-O-MIDI
	G1/2	162602	LR-1/2-D-7-O-MIDI	162594	LR-1/2-D-O-MIDI
	G3/4	162603	LR-3/4-D-7-O-MIDI	162595	LR-3/4-D-O-MIDI
Maxi	G1/2	186458	LR-1/2-D-7-O-MAXI	186456	LR-1/2-D-O-MAXI
	G3/4	162604	LR-3/4-D-7-O-MAXI	162596	LR-3/4-D-O-MAXI
	G1	162605	LR-1-D-7-O-MAXI	162597	LR-1-D-O-MAXI

Datasheet

Ordering data

With integrated return flow function, rotary knob with latch, connecting plates with threaded connection

Size	Connection	Pressure regulation range 0.5 ... 7 bar (0.05 ... 0.7 MPa)		Pressure regulation range 0.5 ... 12 bar (0.05 ... 1.2 MPa)	
		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

With pressure gauge, outer scale in MPa, inner scale in bar

Mini	G1/8	8002389	LR-1/8-D-7-I-MINI-MPA	8002388	LR-1/8-D-I-MINI-MPA
	G1/4	8002391	LR-1/4-D-7-I-MINI-MPA	8002390	LR-1/4-D-I-MINI-MPA
	G3/8	8002393	LR-3/8-D-7-I-MINI-MPA	8002392	LR-3/8-D-I-MINI-MPA
Midi	G1/4	8037017	LR-1/4-D-7-I-MIDI-MPA	8002394	LR-1/4-D-I-MIDI-MPA
	G3/8	8002395	LR-3/8-D-7-I-MIDI-MPA	8037018	LR-3/8-D-I-MIDI-MPA
	G1/2	8037019	LR-1/2-D-7-I-MIDI-MPA	8002396	LR-1/2-D-I-MIDI-MPA
	G3/4	-	-	8002397	LR-3/4-D-I-MIDI-MPA

Without pressure gauge

Mini	G1/8	192305	LR-1/8-D-7-O-I-MINI	192304	LR-1/8-D-O-I-MINI
	G1/4	192307	LR-1/4-D-7-O-I-MINI	192306	LR-1/4-D-O-I-MINI
	G3/8	192309	LR-3/8-D-7-O-I-MINI	192308	LR-3/8-D-O-I-MINI
Midi	G1/4	192319	LR-1/4-D-7-O-I-MIDI	192318	LR-1/4-D-O-I-MIDI
	G3/8	192321	LR-3/8-D-7-O-I-MIDI	192320	LR-3/8-D-O-I-MIDI
	G1/2	192323	LR-1/2-D-7-O-I-MIDI	192322	LR-1/2-D-O-I-MIDI
	G3/4	192325	LR-3/4-D-7-O-I-MIDI	192324	LR-3/4-D-O-I-MIDI

Ordering data

Directly actuated pressure regulator with integrated return flow function, rotary knob with latch, connecting plates with threaded connection

Size	Connection	Pressure regulation range 0.5 ... 7 bar (0.05 ... 0.7 MPa)		Pressure regulation range 0.5 ... 12 bar (0.05 ... 1.2 MPa)	
		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

With pressure gauge, outer scale in MPa, inner scale in bar

Maxi	G3/4	-	-	8002398	LR-3/4-D-DI-MAXI-MPA
------	------	---	---	---------	----------------------

Without pressure gauge

Maxi	G1/2	192359	LR-1/2-D-7-O-DI-MAXI	192357	LR-1/2-D-O-DI-MAXI
	G3/4	192363	LR-3/4-D-7-O-DI-MAXI	192361	LR-3/4-D-O-DI-MAXI
	G1	192367	LR-1-D-7-O-DI-MAXI	192365	LR-1-D-O-DI-MAXI

Datasheet

Ordering data

Rotary knob with integrated lock, connecting plates with threaded connection

Size	Connection	Pressure regulation range 0.5 ... 7 bar (0.05 ... 0.7 MPa)		Pressure regulation range 0.5 ... 12 bar (0.05 ... 1.2 MPa)	
		Part no.	Type	Part no.	Type

With pressure gauge, outer scale in bar, inner scale in psi

Mini	G1/8	194606	LRS-1/8-D-7-MINI	194602	LRS-1/8-D-MINI
	G1/4	194614	LRS-1/4-D-7-MINI	194610	LRS-1/4-D-MINI
	G3/8	194622	LRS-3/8-D-7-MINI	194618	LRS-3/8-D-MINI
Midi	G1/4	194630	LRS-1/4-D-7-MIDI	194626	LRS-1/4-D-MIDI
	G3/8	194638	LRS-3/8-D-7-MIDI	194634	LRS-3/8-D-MIDI
	G1/2	194646	LRS-1/2-D-7-MIDI	194642	LRS-1/2-D-MIDI
	G3/4	194656	LRS-3/4-D-7-MIDI	194650	LRS-3/4-D-MIDI
Maxi	G1/2	194660	LRS-1/2-D-7-MAXI	194658	LRS-1/2-D-MAXI
	G3/4	194662	LRS-3/4-D-7-MAXI	194664	LRS-3/4-D-MAXI
	G1	194668	LRS-1-D-7-MAXI	194666	LRS-1-D-MAXI

With pressure gauge, outer scale in MPa, inner scale in bar

Mini	G1/8	-	-	8037013	LRS-1/8-D-MINI-MPA
	G1/4	8037015	LRS-1/4-D-7-MINI-MPA	-	-

Without pressure gauge

Mini	G1/8	194608	LRS-1/8-D-7-O-MINI	194604	LRS-1/8-D-O-MINI
	G1/4	194616	LRS-1/4-D-7-O-MINI	194612	LRS-1/4-D-O-MINI
	G3/8	194624	LRS-3/8-D-7-O-MINI	194620	LRS-3/8-D-O-MINI
Midi	G1/4	194632	LRS-1/4-D-7-O-MIDI	194628	LRS-1/4-D-O-MIDI
	G3/8	194640	LRS-3/8-D-7-O-MIDI	194636	LRS-3/8-D-O-MIDI
	G1/2	194648	LRS-1/2-D-7-O-MIDI	194644	LRS-1/2-D-O-MIDI
	G3/4	194654	LRS-3/4-D-7-O-MIDI	194652	LRS-3/4-D-O-MIDI
Maxi	G1/2	194661	LRS-1/2-D-7-O-MAXI	194659	LRS-1/2-D-O-MAXI
	G3/4	194663	LRS-3/4-D-7-O-MAXI	194665	LRS-3/4-D-O-MAXI
	G1	194669	LRS-1-D-7-O-MAXI	194667	LRS-1-D-O-MAXI

Ordering data

With integrated return flow function, rotary knob with integrated lock, connecting plates with threaded connection

Size	Connection	Pressure regulation range 0.5 ... 7 bar (0.05 ... 0.7 MPa)		Pressure regulation range 0.5 ... 12 bar (0.05 ... 1.2 MPa)	
		Part no.	Type	Part no.	Type

With pressure gauge, outer scale in bar, inner scale in psi

Mini	G1/8	194607	LRS-1/8-D-7-I-MINI	194603	LRS-1/8-D-I-MINI
	G1/4	194615	LRS-1/4-D-7-I-MINI	194611	LRS-1/4-D-I-MINI
	G3/8	194623	LRS-3/8-D-7-I-MINI	194619	LRS-3/8-D-I-MINI
Midi	G1/4	194631	LRS-1/4-D-7-I-MIDI	194627	LRS-1/4-D-I-MIDI
	G3/8	194639	LRS-3/8-D-7-I-MIDI	194635	LRS-3/8-D-I-MIDI
	G1/2	194647	LRS-1/2-D-7-I-MIDI	194643	LRS-1/2-D-I-MIDI
	G3/4	194657	LRS-3/4-D-7-I-MIDI	194651	LRS-3/4-D-I-MIDI

With pressure gauge, outer scale in MPa, inner scale in bar

Mini	G1/8	8037014	LRS-1/8-D-7-I-MINI-MPA	8002400	LRS-1/8-D-I-MINI-MPA
	G1/4	8037016	LRS-1/4-D-7-I-MINI-MPA	-	-

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

Datasheet

Ordering data

Directly actuated pressure regulator with integrated return flow function, rotary knob with integrated lock, connecting plates with threaded connection

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

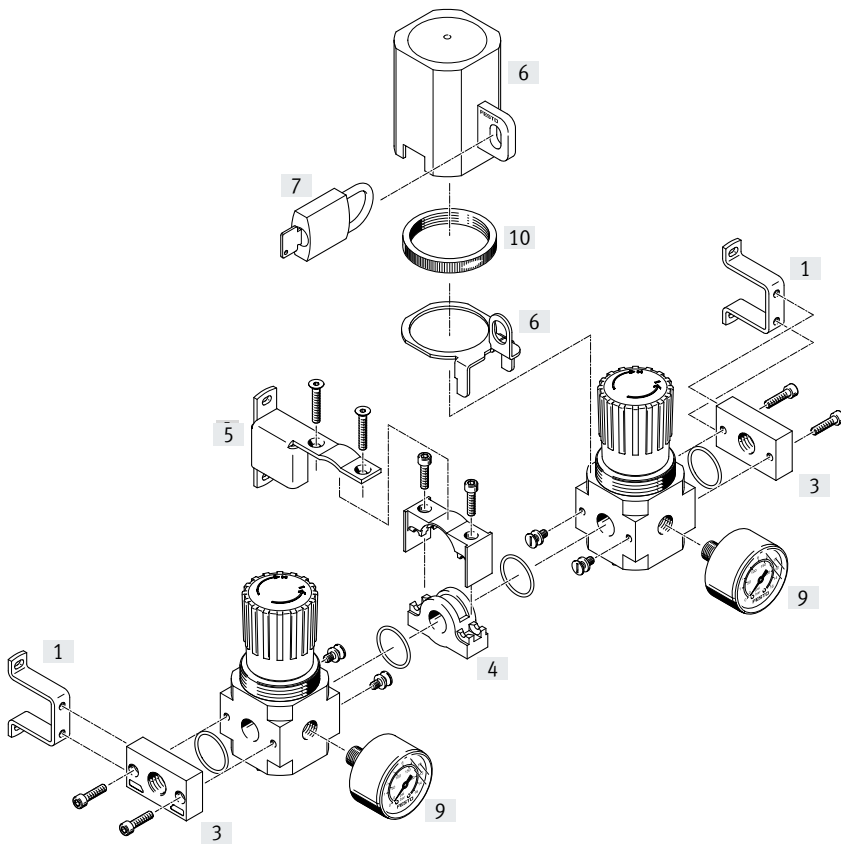
Without pressure gauge

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

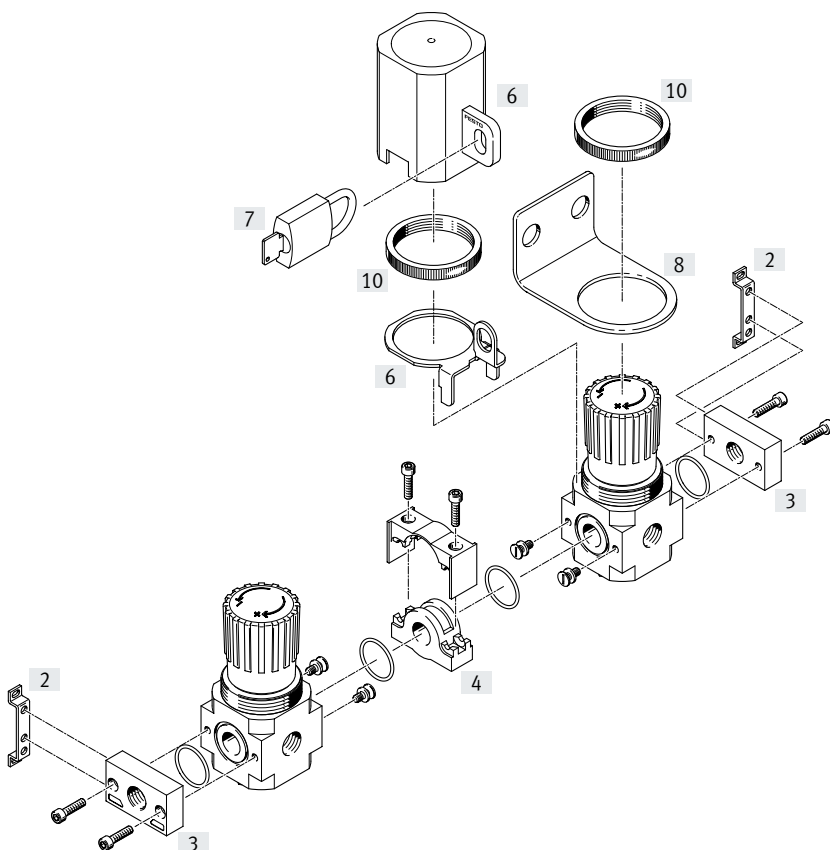
Peripherals overview

Mini/Midi

Pressure regulator LRB – pressure output at the rear



Pressure regulator LRB – pressure output at the front



Peripherals overview

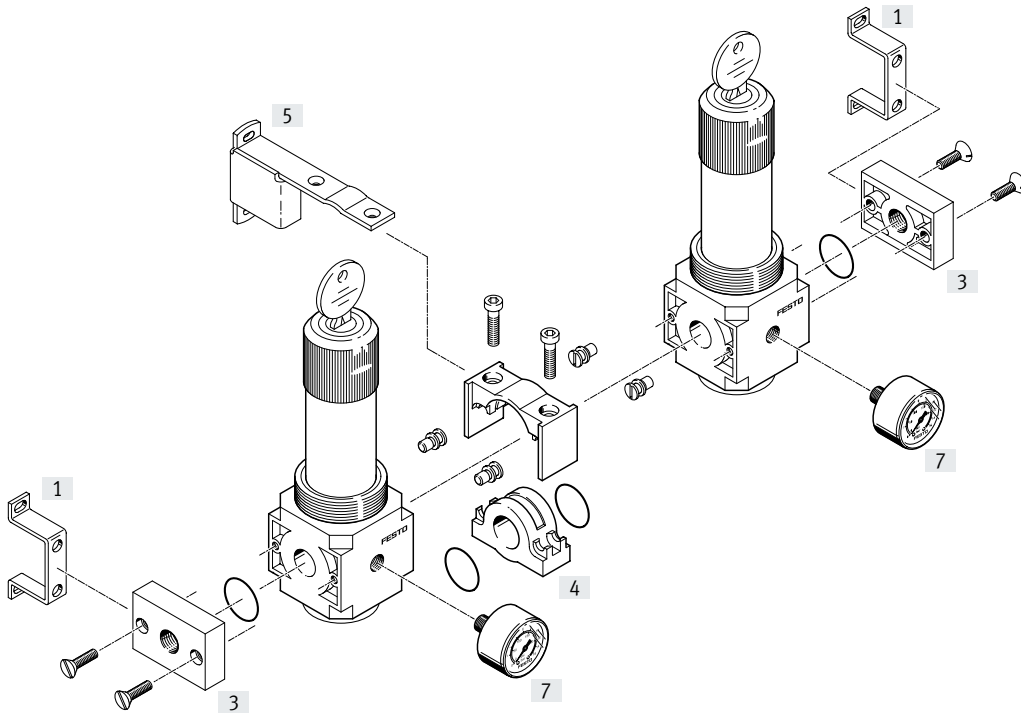
Mounting attachments and accessories		Pressure output at the rear	Pressure output at the front	→ Page/Internet
Pressure regulator LRB				
[1]	Mounting bracket hrb	■	–	hrb-d
[2]	Mounting bracket HFOE	–	■	hfoe-d
[3]	Connecting plates lrbas	■	■	lrbas
[4]	Connecting kit hrbc	■	■	hrbc-d
[5]	Mounting bracket 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	■	–	50
[10]	Knurled nut (included in the scope of delivery) HMR	■	■	–

1) A mounting bracket must be fitted after every second pressure regulator.

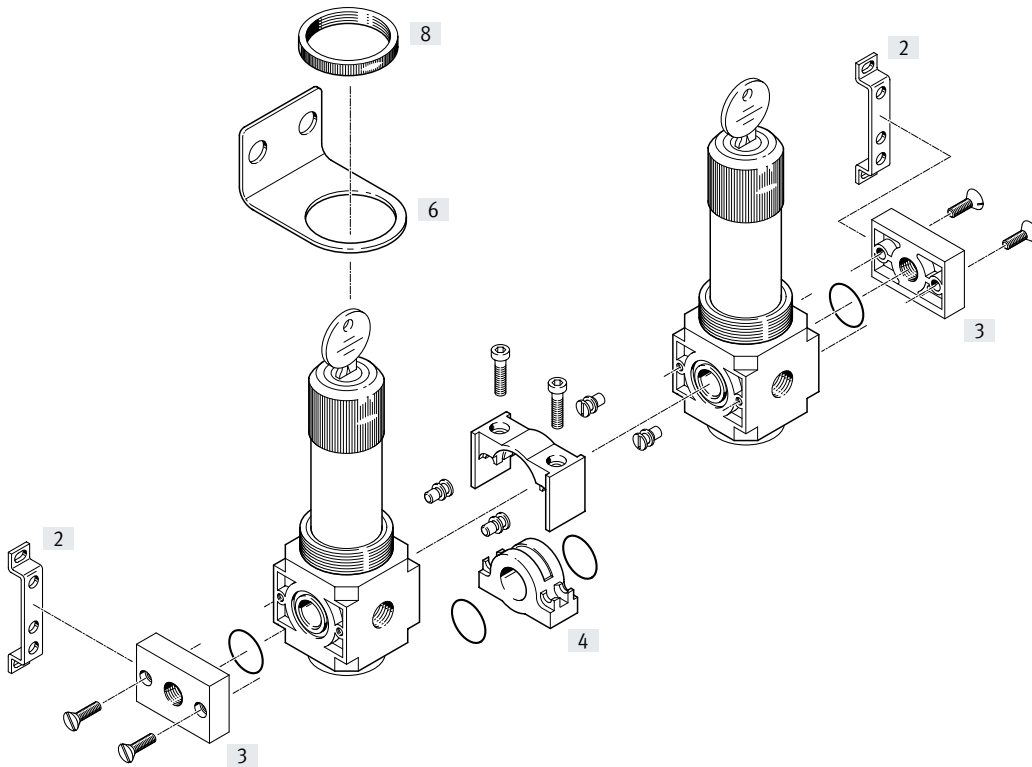
Peripherals overview

Mini/Midi

Pressure regulator LRBS, lockable – pressure output at rear



Pressure regulator LRBS, lockable – pressure output at front



Peripherals overview

Mounting attachments and accessories				
Pressure regulator LRBS, lockable		Pressure output at the rear	Pressure output at the front	→ Page/Internet
[1]	Mounting bracket hrb	■	–	hrb-d
[2]	Mounting bracket HFOE	–	■	hfoe-d
[3]	Connecting plates lrbas	■	■	lrbas
[4]	Connecting kit hrbc	■	■	hrbc-d
[5]	Mounting bracket HRBK	■ ¹⁾	–	hrbk-d
[6]	Mounting bracket HR-D	–	■	hr-d
[7]	Pressure gauge MA	■	–	50
[8]	Knurled nut (included in the scope of delivery) HMR	■	■	–

1) A mounting bracket must be fitted after every second pressure regulator.

Type codes

001	Series
LRB	Pressure regulator
LRBS	Pressure regulator, lockable

002	Version
D	D series, metal

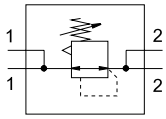
003	Pressure regulation range
7	0.5 ... 7 bar (0.05 ... 0.7 MPa)
	0.5 ... 12 bar (0.05 ... 1.2 MPa)




004	Pressure gauge
0	Without pressure gauge

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

Datasheet

Function



-  - Flow rate
1600 ... 3800 l/min
-  - Temperature range
-10 ... +60 °C
-  - Operating pressure
0.1 ... 1.6 MPa



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

- Good regulation characteristics with minimal hysteresis and input pressure compensation
- Manifold assembly with through air supply
- For attaching a regulator manifold with independent pressure ranges
- Two pressure regulation ranges: 0.5... 7 bar and 0.5 ... 12 bar
- Settings secured via latch on rotary knob and push-in anti-tamper lock

General technical data		Mini		Midi	
Size					
Pneumatic port 1		- ¹⁾		- ¹⁾	
Pneumatic port 2		G1/4		G3/8	
Design		Directly actuated diaphragm regulator with through compressed air supply			
Regulator function		Output pressure constant, with secondary exhausting, with primary pressure compensation			
Type of mounting		With accessories In-line installation			
Mounting position		Any			
Actuator lock		Rotary knob with latch Rotary knob with integrated lock			
Pressure regulation range	[MPa]	0.05 ... 0.7			
		0.05 ... 1.2			
	[bar]	0.5 ... 7 0.5 ... 12			
	[psi]	7.25 ... 101.5 7.25 ... 174			
Max. pressure hysteresis	[MPa]	0.02			
	[bar]	0.2			
	[psi]	2.9			
Pressure indication		Prepared for G1/8		Prepared for G1/4	

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

† Note: This product corresponds to ISO 1179-1 and ISO 228-1.

Standard nominal flow rate ¹⁾ qnN [l/min]		
Size	Mini	Midi
Pressure regulation range	0.5 ... 7 bar (0.05 ... 0.7 MPa)	1800
	0.5 ... 12 bar (0.05 ... 1.2 MPa)	1600
		3800
		3200

1) Measured at p₁ = 10 bar (1 MPa), p₂ = 6 bar (0.6 MPa) and Δp = 1 bar (0.1 MPa).

Datasheet

Operating and environmental conditions

Operating pressure	[MPa]	0.1 ... 1.6
	[bar]	1 ... 16
	[psi]	14.5 ... 232
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]	
	Inert gases	
Ambient temperature	[°C]	-10 ... +60
Temperature of medium	[°C]	-10 ... +60
Corrosion resistance class CRC ¹⁾	2 - Moderate corrosion stress	

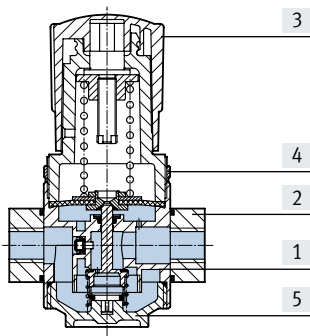
1) More information www.festo.com/x/topic/crc

Weight [g]

Size	Mini	Midi
LRB	250	700
LRBS	350	940

Materials

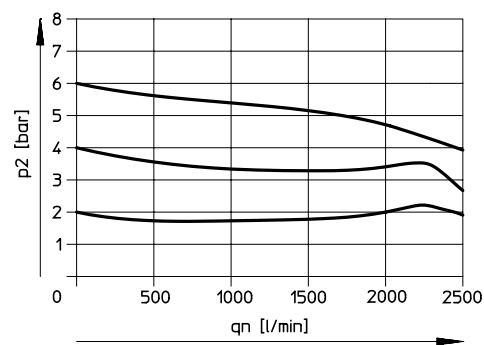
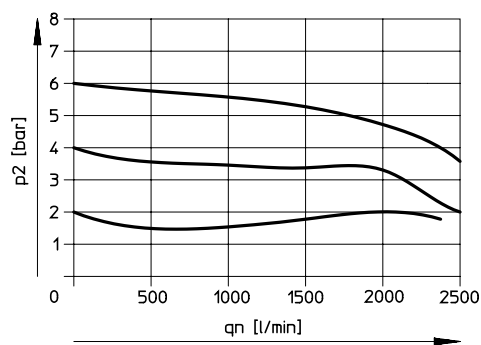
Sectional view



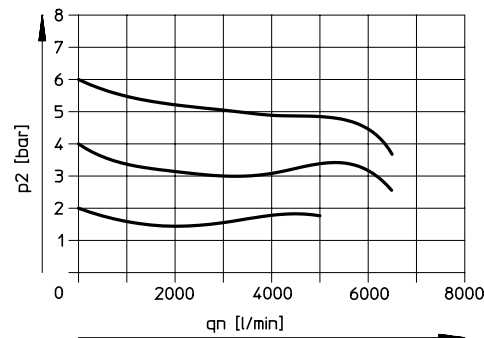
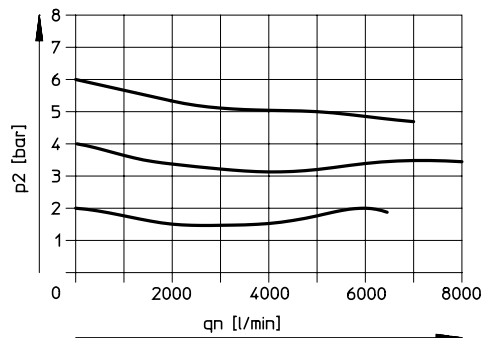
Pressure regulator	LRB	LRBS
[1] Housing	Die-cast zinc	
[2] Connecting plates	Die-cast zinc	
[3] Regulator knob	PA	Aluminium
[4] Knurled nut	Aluminium	
[5] Cover	PC	
- Seals	NBR	
Note on materials	RoHS-compliant	
LABS (PWIS) conformity	VDMA24364-B1/B2-L	

Standard flow rate q_n as a function of 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

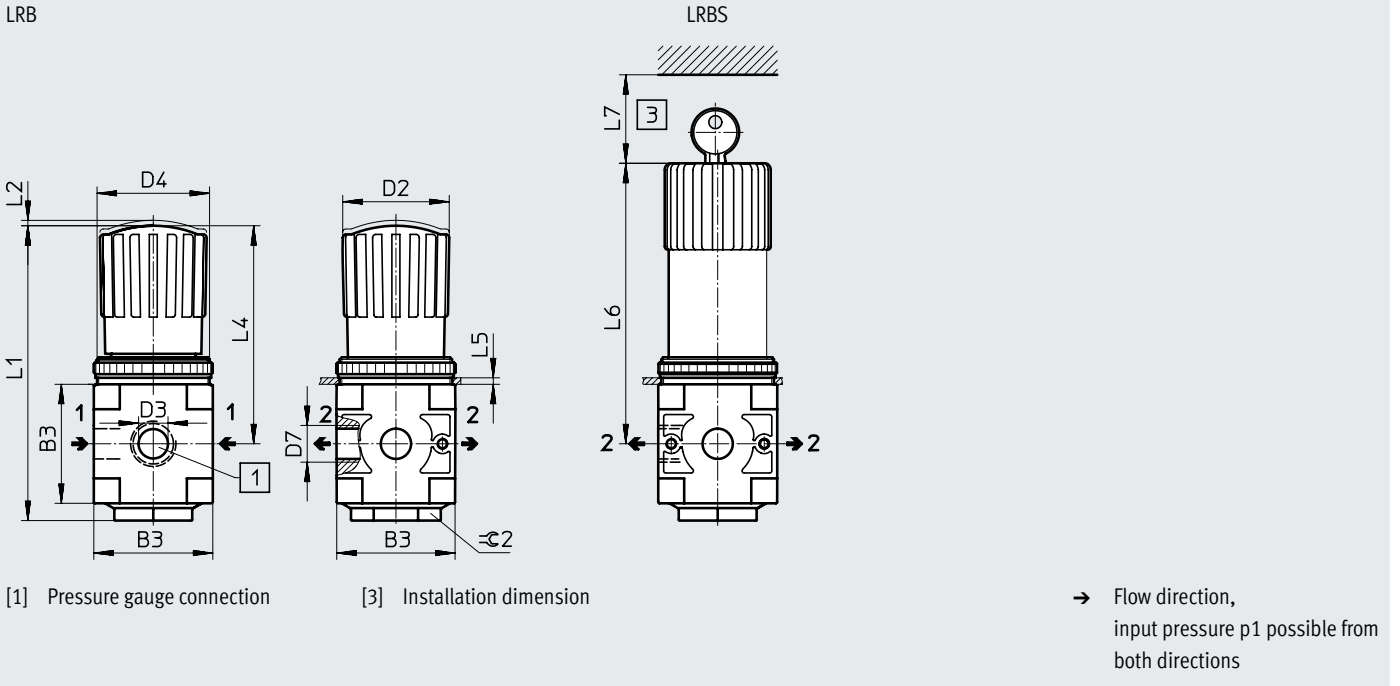


Input pressure $p_1 = 10$ bar

Datasheet

Dimensions

Download CAD data → www.festo.com



Type	B3	D2	D3	D4	D7	L1	L2	L4	L5 max.	L6	L7 min.	±G 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 corresponds to ISO 1179-1 and ISO 228-1.

Ordering data

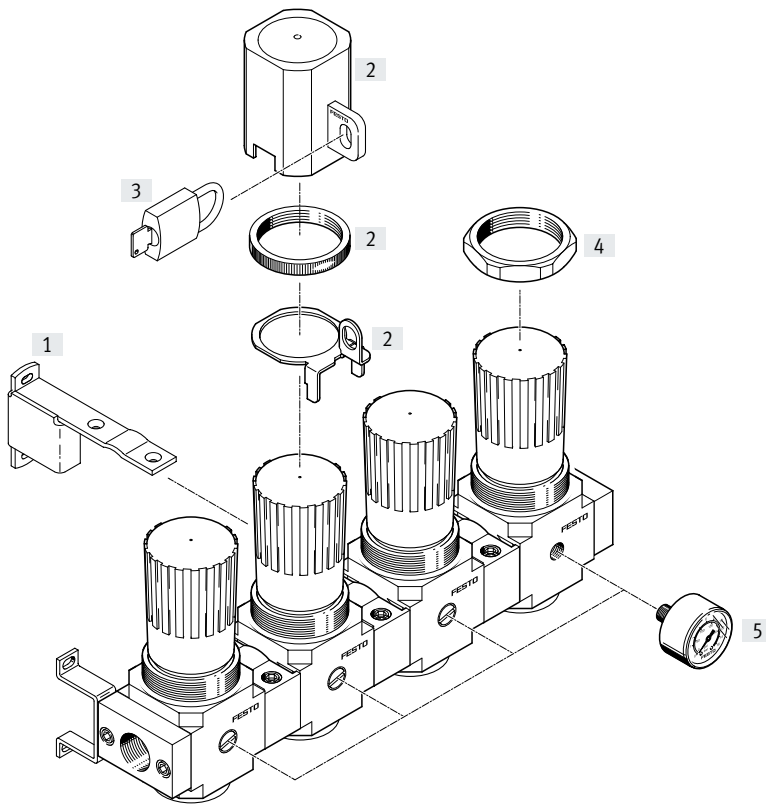
Pressure regulator for manifold assembly

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

Peripherals overview

Mini/Midi

Pressure regulator manifold LRB-K



Mounting attachments and accessories

		→ Page/Internet
[1]	Mounting bracket (included in the 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	50

1) A mounting bracket must be fitted after every second pressure regulator.

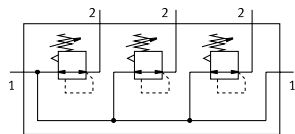
Type codes




001	Series	
LRB	Pressure regulator	
002	Pneumatic connection	
1/4	Female thread G1/4	
3/8	Female thread G3/8	
1/2	Female thread G1/2	
003	Version	
D	D series, metal	
004	Pressure regulation range	
7	0.5 ... 7 bar (0.05 ... 0.7 MPa)	
	0.5 ... 12 bar (0.05 ... 1.2 MPa)	

005	Pressure gauge	
0	Without pressure gauge	
006	Pressure regulator	
K2	Regulator manifold, 2 positions	
K3	Regulator manifold, 3 positions	
K4	Regulator manifold, 4 positions	
K5	Regulator manifold, 5 positions	
007	Size	
MINI	Grid dimension 40 mm (without connecting plates)	
MIDI	Grid dimension 55 mm (without connecting plates)	

Datasheet

Function



-  - Flow rate
1600 ... 3800 l/min
-  - Temperature range
-10 ... +60 °C
-  - Operating pressure
0.1 ... 1.6 MPa



Pressure regulator combinations

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

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

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

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

With through compressed air supply
for manifold assembly

- Good regulation characteristics with minimal hysteresis and input pressure compensation
- Manifold assembly with through air supply
- For attaching a regulator manifold with independent pressure ranges
- Two pressure regulation ranges: 0.5... 7 bar and 0.5 ... 12 bar
- Settings secured via latch on rotary knob and push-in anti-tamper lock
- Directly actuated diaphragm regulator

General technical data		Mini		Midi	
Size					
Pneumatic port 1		G1/4	G3/8	G3/8	G1/2
Pneumatic port 2		G1/4		G3/8	
Design		Directly actuated diaphragm regulator with through compressed air supply			
Regulator function		Output pressure constant, with primary pressure compensation and secondary exhausting			
Type of mounting		Via accessory (mounting bracket HRB or HRBK included in the scope of delivery)			
Mounting position		Any			
Actuator lock		Rotary knob with latch			
Pressure regulation range	[MPa]	0.05 ... 0.7			
		0.05 ... 1.2			
	[bar]	0.5 ... 7			
		0.5 ... 12			
Max. pressure hysteresis	[MPa]	0.02			
	[bar]	0.2			
	[psi]	2.9			
Pressure indication		Prepared for G1/8		Prepared for G1/4	

† Note: This product corresponds to ISO 1179-1 and ISO 228-1.

Standard nominal flow rate $q_{nN}^{1)}$ [l/min]		Mini	Midi
Pressure regulation range	0.5 ... 7 bar (0.05 ... 0.7 MPa)	1800	3800
	0.5 ... 12 bar (0.05 ... 1.2 MPa)	1600	3200

1) Measured at $p_1 = 10$ bar (1 MPa), $p_2 = 6$ bar (0.6 MPa) and $\Delta p = 1$ bar (0.1 MPa).

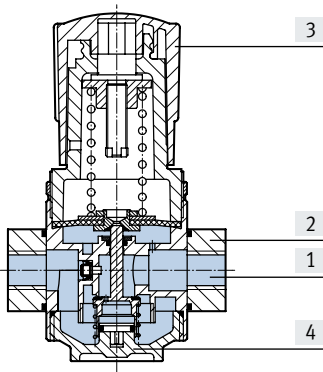
Datasheet

Operating and environmental conditions		
Operating pressure	[MPa]	0.1 ... 1.6
	[bar]	1 ... 16
	[psi]	14.5 ... 232
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]
Ambient temperature	[°C]	-10 ... +60
Temperature of medium	[°C]	-10 ... +60

Weight [g]		
Size	Mini	Midi
Block with 2 pressure regulators		
LRB-...-K2	760	1950
Block with 3 pressure regulators		
LRB-...-K3	1090	3144
Block with 4 pressure regulators		
LRB-...-K4	1480	3834
Block with 5 pressure regulators		
LRB-...-K5	1860	4828

Materials

Sectional view



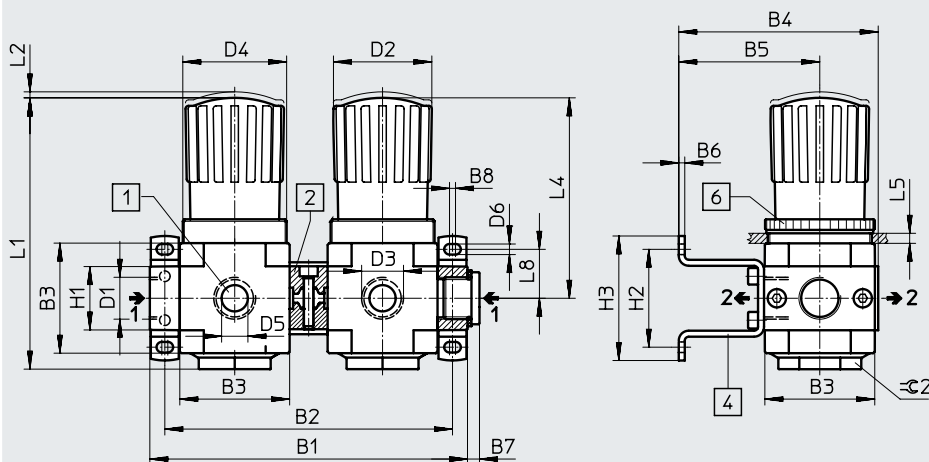
Pressure regulator	Mini/Midi
[1] Housing	Die-cast zinc
[2] Connecting plates	Die-cast zinc
[3] Rotary knob	PA
[4] Cover	PC
- Seals	NBR
LABS (PWIS) conformity	VDMA24364-B1/B2-L

Datasheet

Dimensions

Download CAD data → www.festo.com

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



- [1] Pressure gauge connection
 - [2] Connecting kit HRBC-D-...
 - [4] Mounting bracket HRB-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	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											

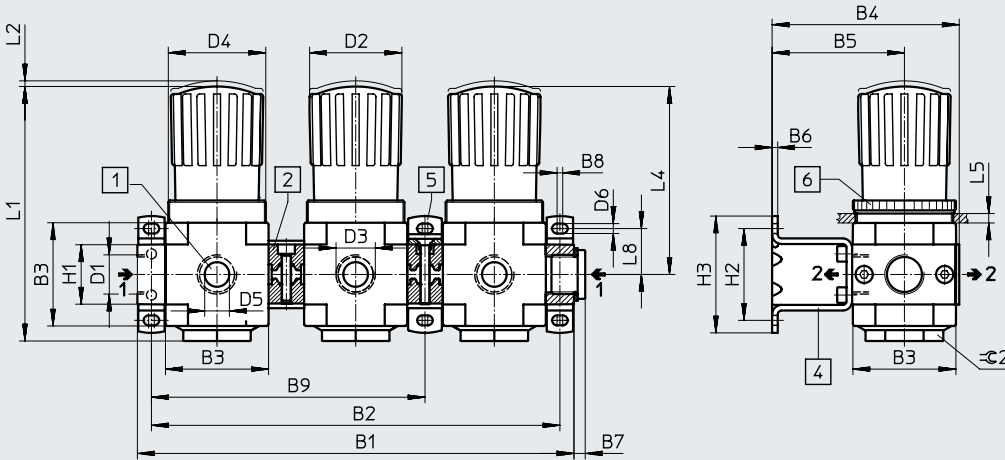
Note: This product corresponds to ISO 1179-1 and ISO 228-1.

Datasheet

Dimensions

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

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- [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											

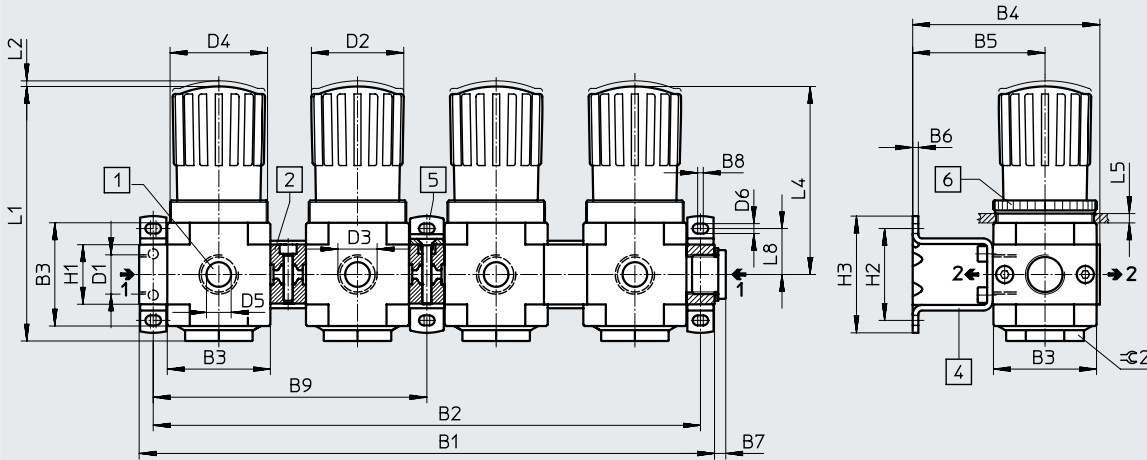
† Note: This product corresponds to ISO 1179-1 and ISO 228-1.

Datasheet

Dimensions

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



- [1] Pressure gauge connection
 - [2] Connecting kit HRBC-D-...
 - [3] Mounting bracket HRB-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-...-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											

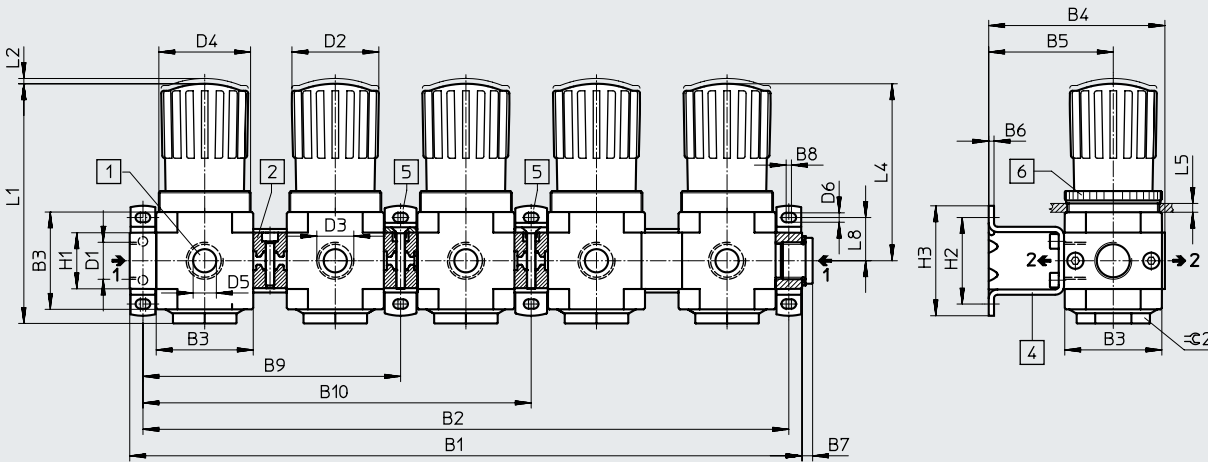
† Note: This product corresponds to ISO 1179-1 and ISO 228-1.

Datasheet

Dimensions

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

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- [1] Pressure gauge connection
 - [2] Connecting kit HRBC-D-...
 - [3] Mounting bracket 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	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 corresponds to ISO 1179-1 and ISO 228-1.

Datasheet

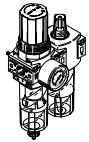
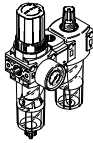
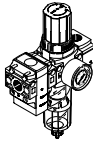
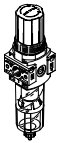

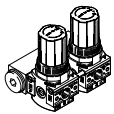

Ordering data

Connecting kits, connecting plates with threaded connection 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
Block with 2 pressure regulators					
Mini	G1/4	528952	LRB-1/4-D-7-O-K2-MINI	528954	LRB-1/4-D-O-K2-MINI
	G3/8	528953	LRB-3/8-D-7-O-K2-MINI	528955	LRB-3/8-D-O-K2-MINI
Midi	G3/8	528956	LRB-3/8-D-7-O-K2-MIDI	528958	LRB-3/8-D-O-K2-MIDI
	G1/2	528957	LRB-1/2-D-7-O-K2-MIDI	528959	LRB-1/2-D-O-K2-MIDI
Block with 3 pressure regulators					
Mini	G1/4	528968	LRB-1/4-D-7-O-K3-MINI	528970	LRB-1/4-D-O-K3-MINI
	G3/8	528969	LRB-3/8-D-7-O-K3-MINI	528971	LRB-3/8-D-O-K3-MINI
Midi	G3/8	528972	LRB-3/8-D-7-O-K3-MIDI	528974	LRB-3/8-D-O-K3-MIDI
	G1/2	528973	LRB-1/2-D-7-O-K3-MIDI	528975	LRB-1/2-D-O-K3-MIDI
Block with 4 pressure regulators					
Mini	G1/4	528984	LRB-1/4-D-7-O-K4-MINI	528986	LRB-1/4-D-O-K4-MINI
	G3/8	528985	LRB-3/8-D-7-O-K4-MINI	528987	LRB-3/8-D-O-K4-MINI
Midi	G3/8	528988	LRB-3/8-D-7-O-K4-MIDI	528990	LRB-3/8-D-O-K4-MIDI
	G1/2	528989	LRB-1/2-D-7-O-K4-MIDI	528991	LRB-1/2-D-O-K4-MIDI
Block with 5 pressure regulators					
Mini	G1/4	529000	LRB-1/4-D-7-O-K5-MINI	529002	LRB-1/4-D-O-K5-MINI
	G3/8	529001	LRB-3/8-D-7-O-K5-MINI	529003	LRB-3/8-D-O-K5-MINI
Midi	G3/8	529004	LRB-3/8-D-7-O-K5-MIDI	529006	LRB-3/8-D-O-K5-MIDI
	G1/2	529005	LRB-1/2-D-7-O-K5-MIDI	529007	LRB-1/2-D-O-K5-MIDI

Datasheet

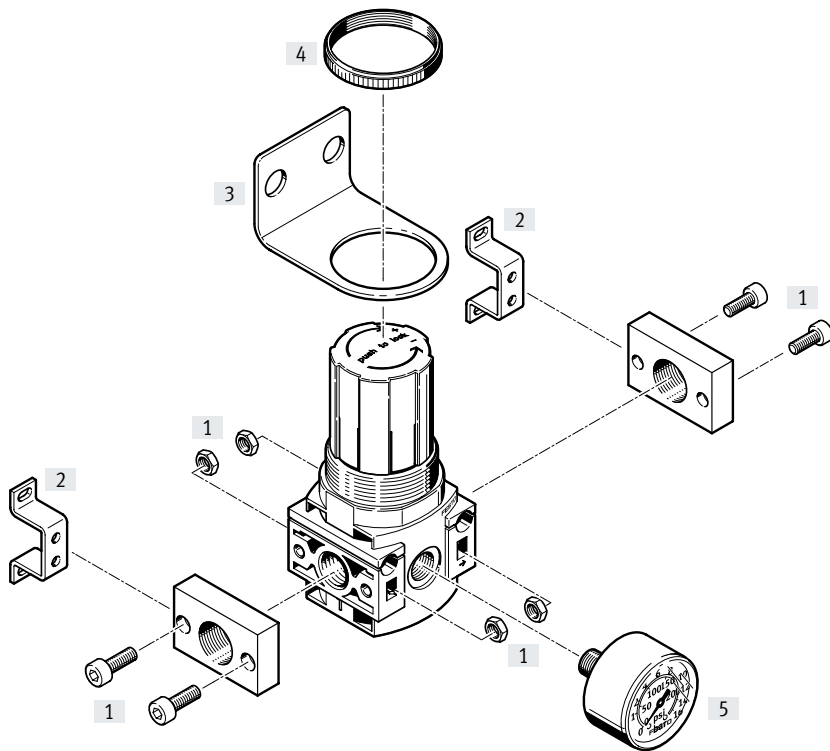
Product range overview – Service unit components, D series, polymer

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

Product range overview – Service unit components, D series, polymer

Type	Size	Condensate drain		Pressure indication		Actuator lock	Regulator functions		→ Page/ Internet
		Manual	Semi-automatic	With pressure gauge	Without pressure gauge		With secondary exhausting	With return flow function	
Service units									
FRC	Mini	■	■	■	-	■	■	■	frc
Service unit combinations									
FRC-K	Mini	■	-	■	-	■	■	■	frc
LFR-K	Mini	■	-	■	-	■	■	■	lfr
Individual devices									
Filter regulators LFR	Mini	■	■	■	■	■	■	■	lfr
Pressure regulators LR	Mini	-	-	■	■	■	■	■	38
Pressure regulator manifolds LRB-K	Mini	-	-	-	■	■	■	■	43
On/off valves HE	Mini	-	-	-	■	-	-	-	he

Peripherals overview



Mounting attachments and accessories

		→ Page/Internet
[1]	Connection set PBL	pbl
[2]	Mounting bracket HFOE	hfoe-d
[3]	Mounting bracket HR-D	hr-d
[4]	Knurled nut (included in the scope of delivery) LRVS	-
[5]	Pressure gauge MA	50

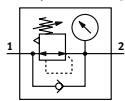
Type codes

001	Series
LR	Pressure regulator
002	Pneumatic connection
1/4	Female thread G1/4
003	Version
DB	D series, polymer

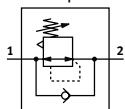
004	Pressure regulation range
7	0.5 ... 7 bar (0.05 ... 0.7 MPa)
005	Pressure gauge
	With pressure gauge
0	Without pressure gauge
006	Size
MINI	Grid dimension 40 mm (without connecting plates)




Datasheet

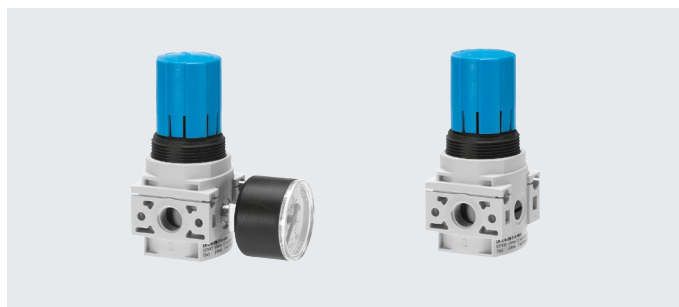
With pressure gauge



Without pressure gauge



-  - Flow rate
800 ... 1300 l/min
-  - Temperature range
-5 ... +50 °C
-  - Operating pressure
1.5 ... 10 bar



- Settings secured via latch on rotary knob
- High flow rate
- Good regulation characteristics with minimal pressure hysteresis

General technical data	
Size	Mini
	With pressure gauge Without pressure gauge
Pneumatic connection	G1/4
Design	Pressure regulator with pressure gauge Pressure regulator without pressure gauge
Regulator function	With return flow function With secondary exhausting
Type of mounting	In-line installation Via through-hole With mounting bracket Front panel mounting
Mounting position	Any
Air purity class at the output	Compressed air to ISO 8573-1:2010 [7:4:4]
Actuator lock	Rotary knob with latch
Max. pressure hysteresis [bar]	0.5
Pressure regulation range [bar]	0.5 ... 7
Pressure indication	With pressure gauge Prepared for G1/8
Pressure gauge connection	G1/8

Standard nominal flow rate ¹⁾ qnN [l/min]	
Size	Mini
Pressure regulation range 0.5 ... 7 bar (0.05 ... 0.7 MPa)	≥ 1300

1) Measured at p1 = 10 bar (1 MPa), p2 = 6 bar (0.6 MPa) and Δp = 1 bar (0.1 MPa).

Datasheet

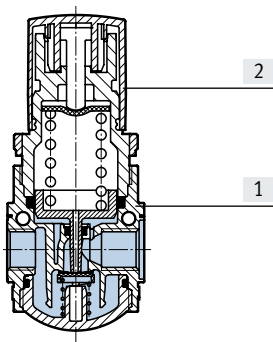
Operating and environmental conditions	
Size	Mini
Operating pressure [bar]	1.5 ... 10 (0.15 ... 1 MPa)
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]
Note on the operating/pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)
Ambient temperature [°C]	-5 ... +50
Temperature of medium [°C]	-5 ... +50
Corrosion resistance class CRC ¹⁾	1 - Low corrosion stress

1) More information www.festo.com/x/topic/crc

Weight [g]	
Size	Mini
Pressure regulator	150

Materials

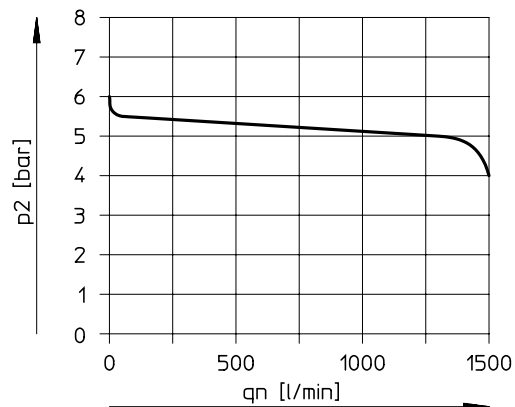
Sectional view



Pressure regulator	Mini
[1] Housing	Reinforced PA
[2] Rotary knob	POM
- Seals	NBR
Note on materials	RoHS-compliant

Standard flow rate q_n as a function of output pressure p_2

Operating pressure $p_1 = 10$ bar



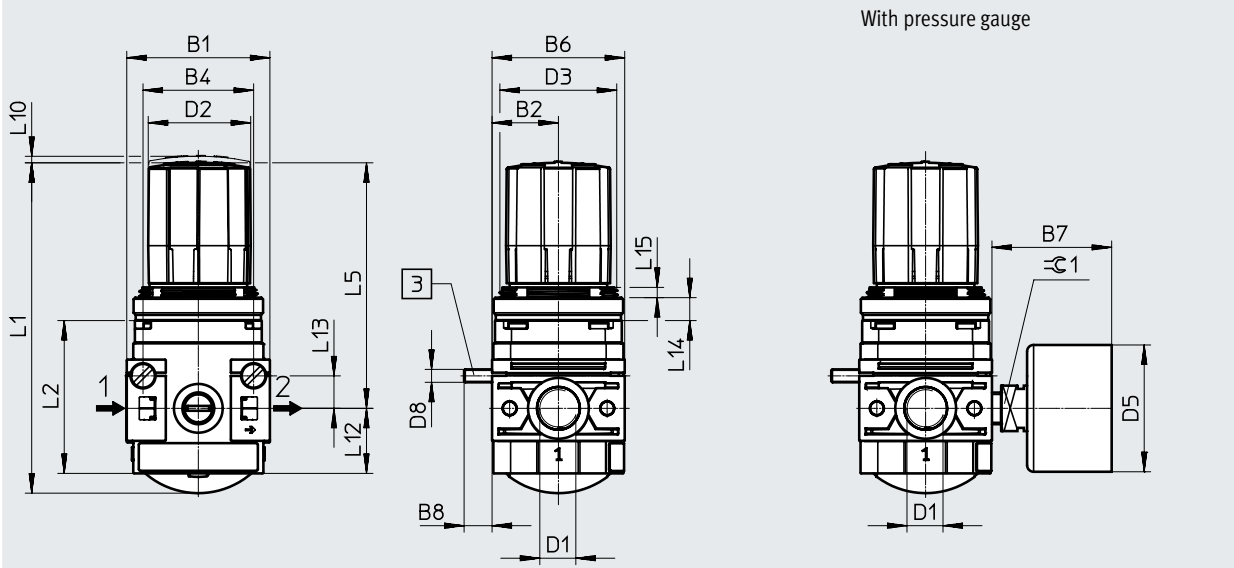
- - Note

Minor leakage at the output is intended by design. It improves the control behaviour of the regulator which is not compensated for primary pressure. In rare cases, however, the leakage can be up to 500 l/h.

Datasheet

Dimensions Download CAD data → www.festo.com

Mini



[3] Socket head screw for wall mounting (2 included in the scope of delivery)

→ Flow direction

Type	B1	B2	B4	B6	B7 max.	B8	D1	D2 ∅	D3	D5 ∅	D8
LR-1/4-DB	44	20.5	34	41	37	9	G1/4	32	M36x1.5	39	M4

Type	L1	L2	L5	L10	L12	L13	L14	L15	⊕ 1
LR-1/4-DB	102	47	75.9	2	20	10	7	3.2	14

Ordering data

Pressure regulation range 0.5 ... 7 bar (0.05 ... 0.7 MPa)

Size	Connection	Part no.	Type
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With pressure gauge, outer scale in bar, inner scale in psi

Mini	G1/4	539682	LR-1/4-DB-7-MINI
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Without pressure gauge

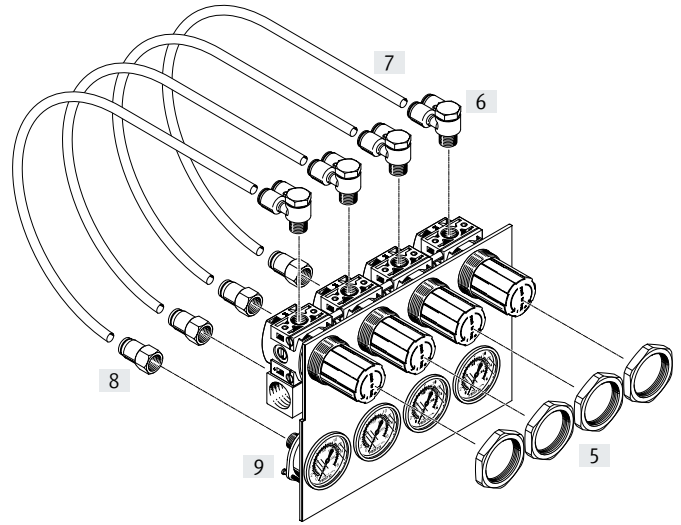
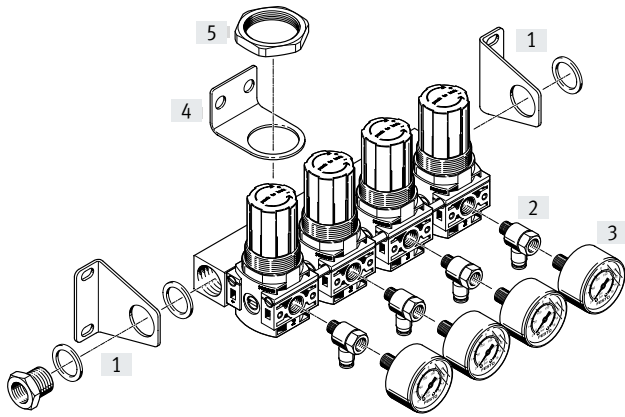
Mini	G1/4	537643	LR-1/4-DB-7-O-MINI
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Peripherals overview

Mini

With mounting bracket

Front panel mounting



Mounting attachments and accessories

	With mounting bracket	Front panel mounting	→ Page/Internet
[1] Mounting bracket SET HRBS-DB-MINI	■	–	hrbs-db
[2] Push-in T-fitting QSTF	■	–	50
[3] Pressure gauge MA	■	–	50
[4] Mounting bracket HR-D	■	–	hr-d
[5] Hex nut HMR	■	■	hmr-d
[6] Push-in Y-fitting QSYLV	–	■	50
[7] Plastic tubing PUN-E	–	■	pun-e
[8] Push-in fitting QSF	–	■	50
[9] Flanged pressure gauge FMA	–	■	50

Type codes

001	Series	
LRB	Pressure regulator	

002	Pneumatic connection	
1/4	Female thread G1/4	

003	Version	
DB	D series, polymer	

004	Pressure regulation range	
7	0.5 ... 7 bar (0.05 ... 0.7 MPa)	

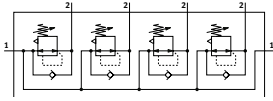
005	Pressure gauge	
0	Without pressure gauge	




006	Pressure regulator	
K2	Regulator manifold, 2 positions	
K3	Regulator manifold, 3 positions	
K4	Regulator manifold, 4 positions	
K5	Regulator manifold, 5 positions	

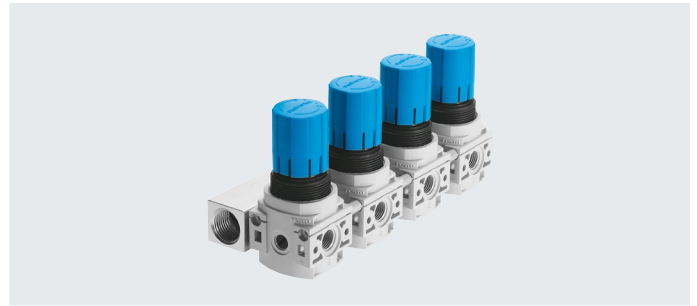
007	Size	
MINI	Grid dimension 40 mm (without connecting plates)	

Datasheet

Function



-  - Flow rate
1000 l/min
-  - Temperature range
-5 ... +50 °C
-  - Operating pressure
1.5 ... 10 bar



- Good regulation characteristics with minimal hysteresis and input pressure compensation
- Manifold assembly with through air supply
- For attaching a regulator manifold with independent pressure ranges
- Settings secured via latch on rotary knob

General technical data	
Size	Mini
Pneumatic port 1	G1/2
Pneumatic port 2	G1/4
Design	Directly actuated piston regulator On common supply manifold
Regulator functions	Output pressure constant With return flow function With secondary exhausting
Type of mounting	Front panel mounting With accessories
Mounting position	Any
Actuator lock	Rotary knob with latch
Max. pressure 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 (0.05 ... 0.7 MPa)	≥ 1000

1) Measured at p₁ = 10 bar (1 MPa), p₂ = 6 bar (0.6 MPa) and Δp = 1 bar (0.1 MPa).

Operating and environmental conditions	
Size	Mini
Operating pressure [bar]	1.5 ... 10 (0.15 ... 1 MPa)
Operating medium	Compressed air to ISO 8573-1:2010 [-:-:-]
Ambient temperature [°C]	-5 ... +50
Temperature of medium [°C]	-5 ... +50
Corrosion resistance class CRC ¹⁾	1 - Low corrosion stress

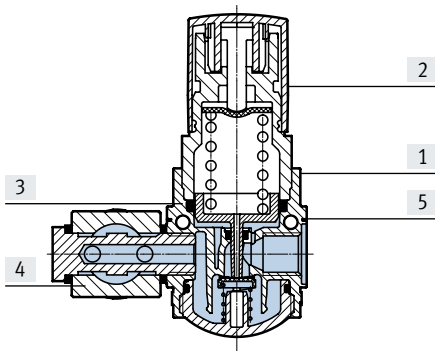
1) More information www.festo.com/x/topic/crc

Datasheet

Weight [g]	
Size	Mini
Block with 2 pressure regulators	
LRB-...-K2	500
Block with 3 pressure regulators	
LRB-...-K3	750
Block with 4 pressure regulators	
LRB-...-K4	1000
Block with 5 pressure regulators	
LRB-...-K5	1250

Materials

Sectional view



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

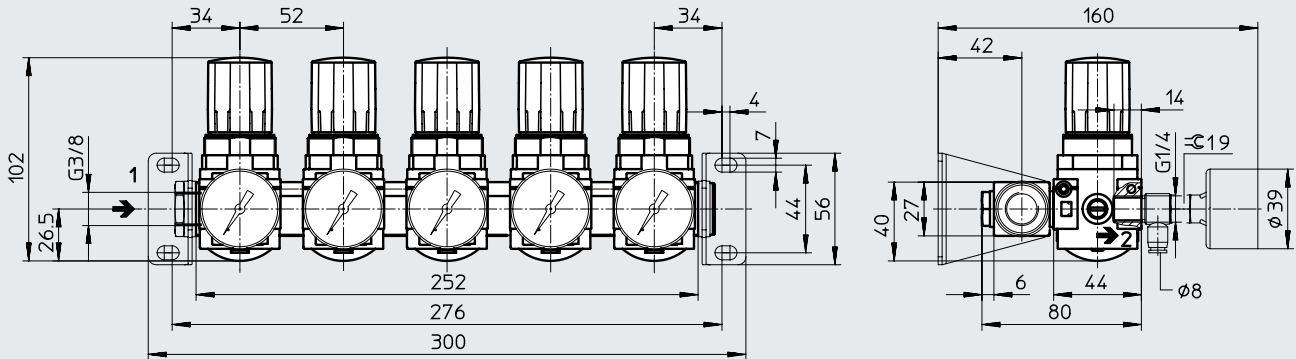
Datasheet

Dimensions

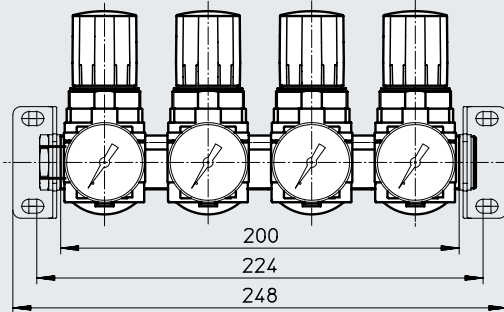
Download CAD data → www.festo.com

With mounting bracket

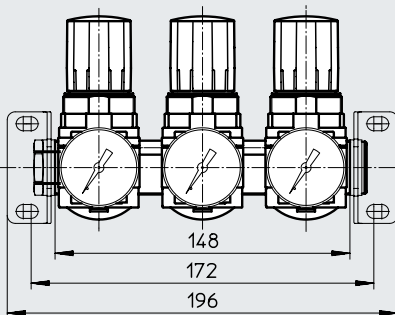
LRB-...-K5



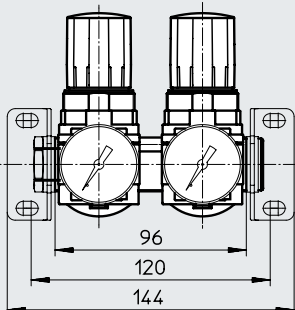
LRB-...-K4



LRB-...-K3



LRB-...-K2



→ Flow direction

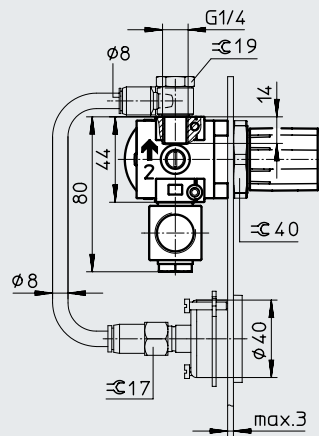
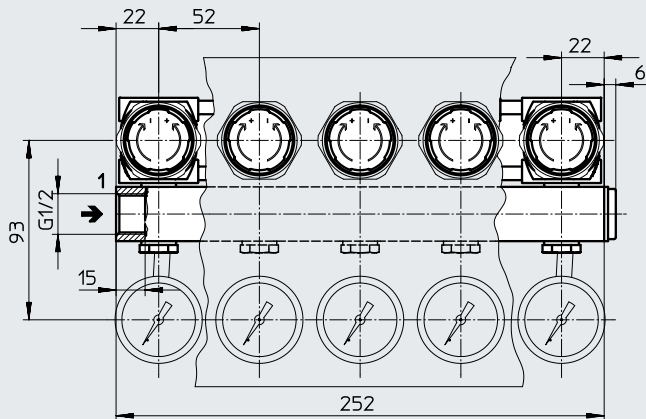
Datasheet

Dimensions

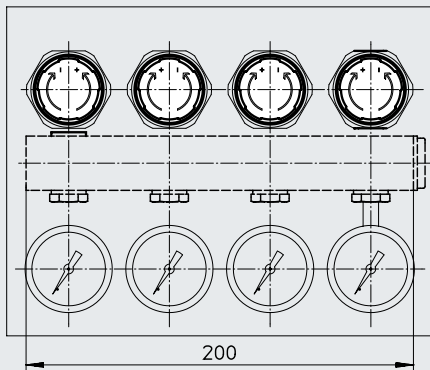
Download CAD data → www.festo.com

Front panel mounting

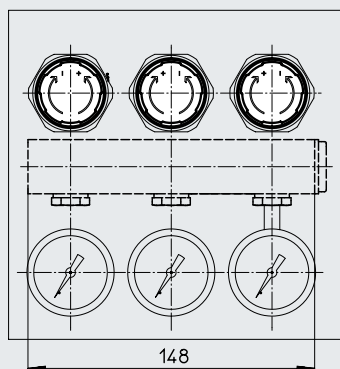
LRB-...-K5



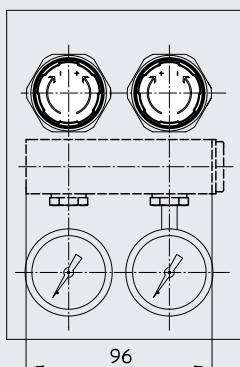
LRB-...-K4



LRB-...-K3



LRB-...-K2





→ Flow direction




Datasheet

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

Accessories

Ordering data – Pressure gauge MA						
	Nominal size	Pneumatic connection	Display range		Part no.	Type
			Outer scale	Inner scale		
	Pressure gauge MA Datasheets → Internet: ma					
	40	G1/8	0 ... 10 bar	0 ... 145 psi	359874	MA-40-10-1/8
			0 ... 16 bar	0 ... 232 psi	345395	MA-40-16-1/8
	50	G1/4	0 ... 10 bar	0 ... 145 psi	359873	MA-50-10-1/4
			0 ... 16 bar	0 ... 232 psi	356759	MA-50-16-1/4
	Pressure gauge MA Datasheets → Internet: ma					
	40	G1/8	0 ... 1 MPa	–	192732	MA-40-1-G1/8-MPA
			0 ... 1.6 MPa	–	192733	MA-40-1.6-G1/8-MPA
50	G1/4	0 ... 1 MPa	–	192734	MA-50-1-G1/4-MPA	
		0 ... 1.6 MPa	–	192735	MA-50-1.6-G1/4-MPA	
Pressure gauge MA, DIN EN 837-1 Datasheets → Internet: ma						
40	R1/8	0 ... 10 bar	0 ... 145 psi	162835	MA-40-10-1/8-EN	
	G1/4	0 ... 10 bar	0 ... 145 psi	183900	MA-40-10-G1/4-EN	
Flanged pressure gauge FMA, DIN EN 837-1 Datasheets → Internet: fma						
40	G1/4	0 ... 10 bar	0 ... 145 psi	159596	FMA-40-10-1/4-EN	
		0 ... 16 bar	0 ... 232 psi	159597	FMA-40-16-1/4-EN	
50	G1/4	0 ... 10 bar	0 ... 145 psi	159599	FMA-50-10-1/4-EN	
		0 ... 16 bar	0 ... 232 psi	159600	FMA-50-16-1/4-EN	

Ordering data – Pressure sensors SPAU						
	Pneumatic connection	Switching output	Display type	Electrical connection	Part no.	Type
	Male thread R1/8	2x PNP or 2x NPN, switchable	Illuminated LCD	M8x1, 4-pin	8001203	SPAU-P10R-T-R18M-L-PNLK-PNVBA-M8D
				M12x1, 4-pin	8001206	SPAU-P10R-T-R18M-L-PNLK-PNVBA-M12D
	Male thread R1/4			M8x1, 4-pin	8001209	SPAU-P10R-T-R14M-L-PNLK-PNVBA-M8D
				M12x1, 4-pin	8001208	SPAU-P10R-T-R14M-L-PNLK-PNVBA-M12D

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

1) Packaging unit