

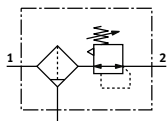
Filter regulator LFR

FESTO



Characteristics

At a glance



Space-saving design with filter and regulator in a single device.

- Good particle separation and high flow rate
- Good regulation characteristics with minimal hysteresis
- Resistant to UV radiation and corrosive environments
- Setting values are secured by locking the rotary knob

Version

[D] D series, metal

Sturdy in full metal design for the specific requirements of the process automation industry

Pressure regulation range

Two pressure regulation ranges: 0.5...12 bar and 0.5...16 bar

Pressure gauge

A pressure gauge can be ordered as an option. The interface has a G1/4 thread.

Temperature range

Two temperature ranges can be selected. Suitable for outdoor use and low temperatures down to $-40\text{ }^{\circ}\text{C}$.

EU certification

Suitable for use in potentially explosive environments in zones 1 and 21

Type code

001	Series	
LFR	Filter regulator	
002	Pneumatic connection	
1/4	Female thread G1/4	
1/2	Female thread G1/2	
N1/2	Female thread 1/2 NPT	
N1/4	Female thread 1/4 NPT	
003	Version	
D	D series, metal	
004	Pressure regulation range	
	0.5 ... 12 bar (0.05 ... 1.2 MPa)	
16	0.5 ... 16 bar	

005	Grade of filtration	
	40 µm	
5M	5 µm	
006	Pressure gauge	
0	Without pressure gauge	
007	Size	
MIDI	Grid dimension 55 mm (without connecting plates)	
008	Temperature range	
T3	-40 ... +80°C	
T18	-20 ... +80°C	
009	EU certification	
EX4	II 2GD	

Datasheet

General technical data

Temperature range	-40 ... +80°C	-20 ... +80°C
Size	Midi	
Pneumatic connection, port 1	G1/4, G1/2, 1/4 NPT, 1/2 NPT	
Pneumatic connection, port 2	G1/4, G1/2, 1/4 NPT, 1/2 NPT	
Standard nominal flow rate (standardised to DIN 1343)	1,150 ... 3,400 l/min	1,370 ... 3,400 l/min
Pressure regulation range	7.25 ... 232 psi	
Pressure regulation range	0.05 ... 1.6 MPa	
Pressure regulation range	0.5 ... 16 bar	
Max. pressure hysteresis	0.02 MPa	
Max. pressure hysteresis	2.9 psi	
Design	Filter regulator without pressure gauge	
Type of mounting	Either:, In-line installation, With accessories	
Mounting position	Vertical +/- 5°	
Actuator lock	Rotary knob with detent	
Pressure gauge (ANALOG) or Pressure display (DIGITAL)	Prepared for G1/4	
Grade of filtration	5 µm 40 µm	
Operating medium	Compressed air to ISO 8573-1:2010 [-:9:-], Inert gases	
Condensate drain	Manually rotating	
Max. condensate volume	42 cm³	

Operating and environmental conditions

Temperature range	-40 ... +80°C	-20 ... +80°C
Operating pressure	0.1 ... 2 MPa	
Operating pressure	1 ... 20 bar	
Operating pressure	14.5 ... 290 psi	
Operating medium	Compressed air to ISO 8573-1:2010 [-:9:-] Inert gases	
Note on operating and pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)	
Ambient temperature	-40 ... 80°C	-20 ... 80°C
Media temperature	-40 ... 80°C	-20 ... 80°C
Storage temperature	-40 ... 80°C	-20 ... 80°C
Corrosion resistance class CRC ¹⁾	3 - high corrosion stress	

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

ATEX

Temperature range	-40 ... +80°C	-20 ... +80°C
ATEX category gas	II 2G	
Explosion ignition protection type for gas	Ex h IIC T6 Gb X	
ATEX category dust	II 2D	
Explosion ignition protection type for dust	Ex h IIIC T85°C Db X	
Explosion ambient temperature	-40°C ≤ Ta ≤ +80°C	-20°C ≤ Ta ≤ +80°C
CE mark (see declaration of conformity) ¹⁾	To EU Explosion Protection Directive (ATEX)	
UKCA marking (see declaration of conformity) ²⁾	To UK EX instructions	
Explosion protection certification outside the EU	EPL Db (GB) EPL Gb (GB)	

1) Further information www.festo.com/catalogue/lfr → Support/Downloads.

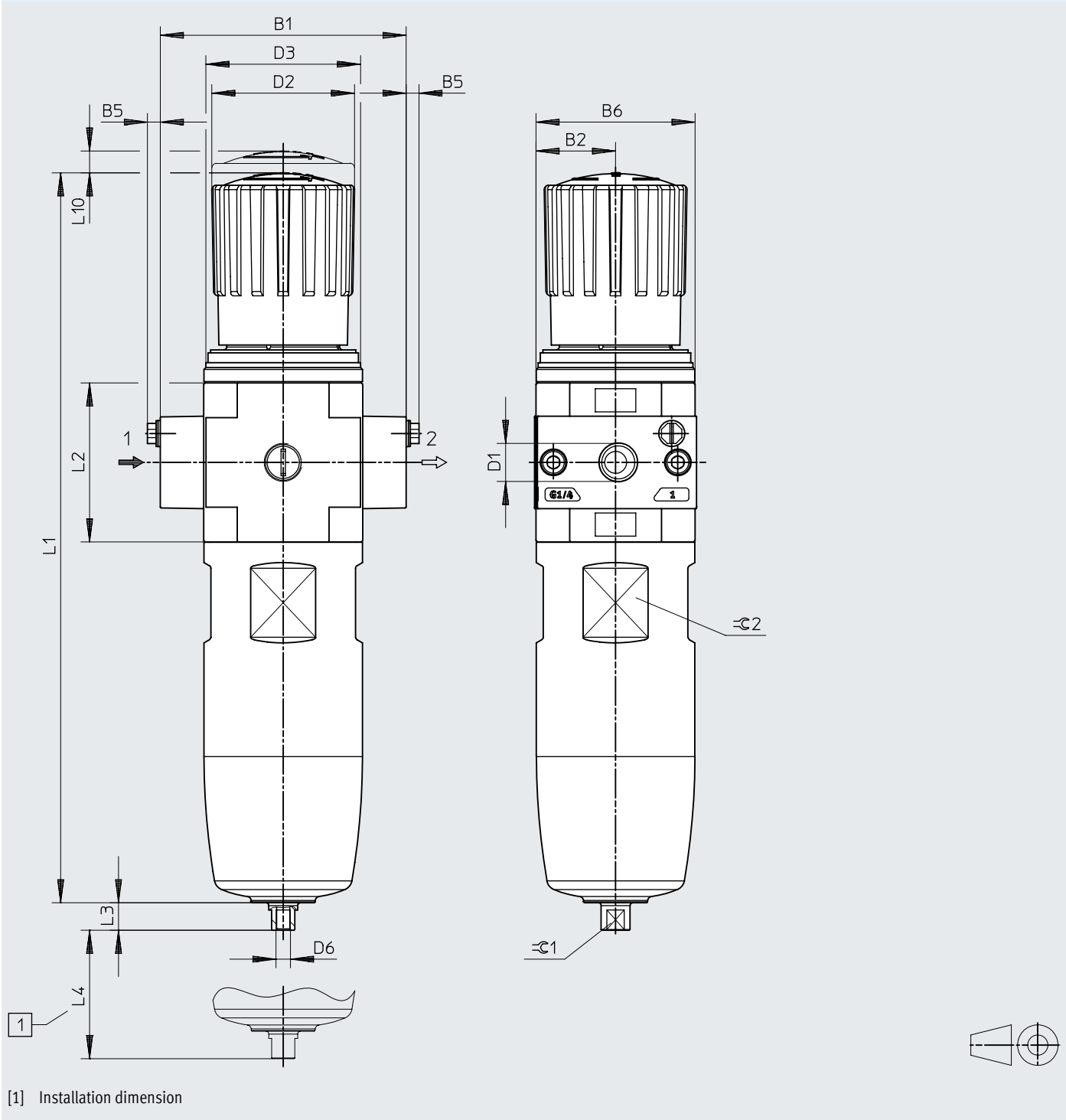
2) Further information www.festo.com/catalogue/lfr → Support/Downloads.

Datasheet

Materials		
Grade of filtration	5	40
Material housing	Die-cast zinc	
Material bowl	Wrought aluminium alloy	
Note on materials	RoHS-compliant	
LABS (PWIS) conformity	VDMA24364 zone III	
Air purity class at output	Compressed air to ISO 8573-1:2010 [6:8:4], Inert gases	Compressed air to ISO 8573-1:2010 [7:8:4], Inert gases

Dimensions

Dimensions – LFR-...-MIDI Download CAD data www.festo.com



Dimensions

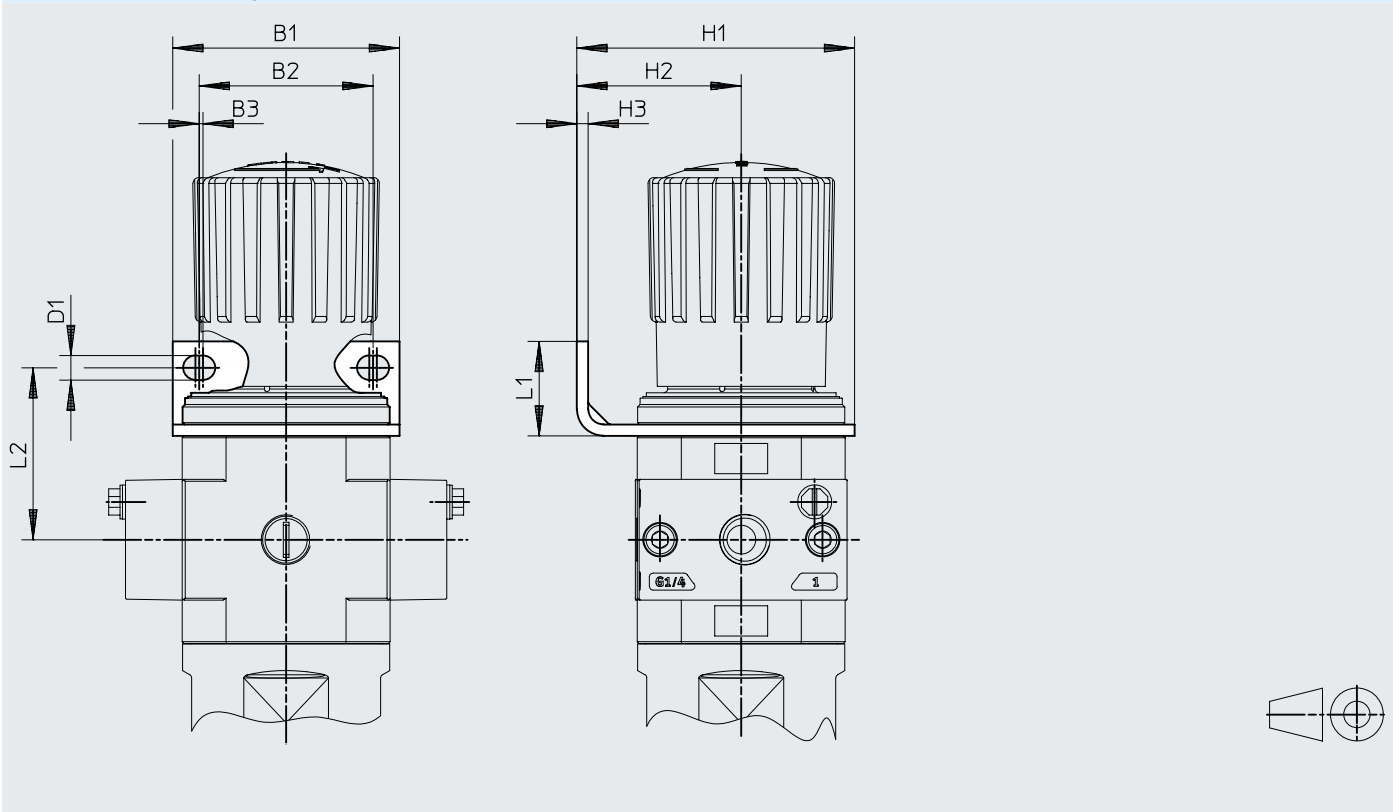
	B1	B2	B5	B6	D1	D2 Ø	D3	D6
LFR-1/4-...-MIDI	85	27,5	~4,5	55	G1/4	49	M52x1,5	M5
LFR-1/2-...-MIDI					G1/2			
LFR-N1/4-...-MIDI					1/4 NPT			
LFR-N1/2-...-MIDI					1/2 NPT			

	L1	L2	L3	L4 min.	L10	≈ 2	≈ 3
LFR-1/4-...-MIDI	252,5	55	9,5	80	2,5	8	50
LFR-1/2-...-MIDI							
LFR-N1/4-...-MIDI							
LFR-N1/2-...-MIDI							

Dimensions

Dimensions – With mounting bracket HR-D-R3

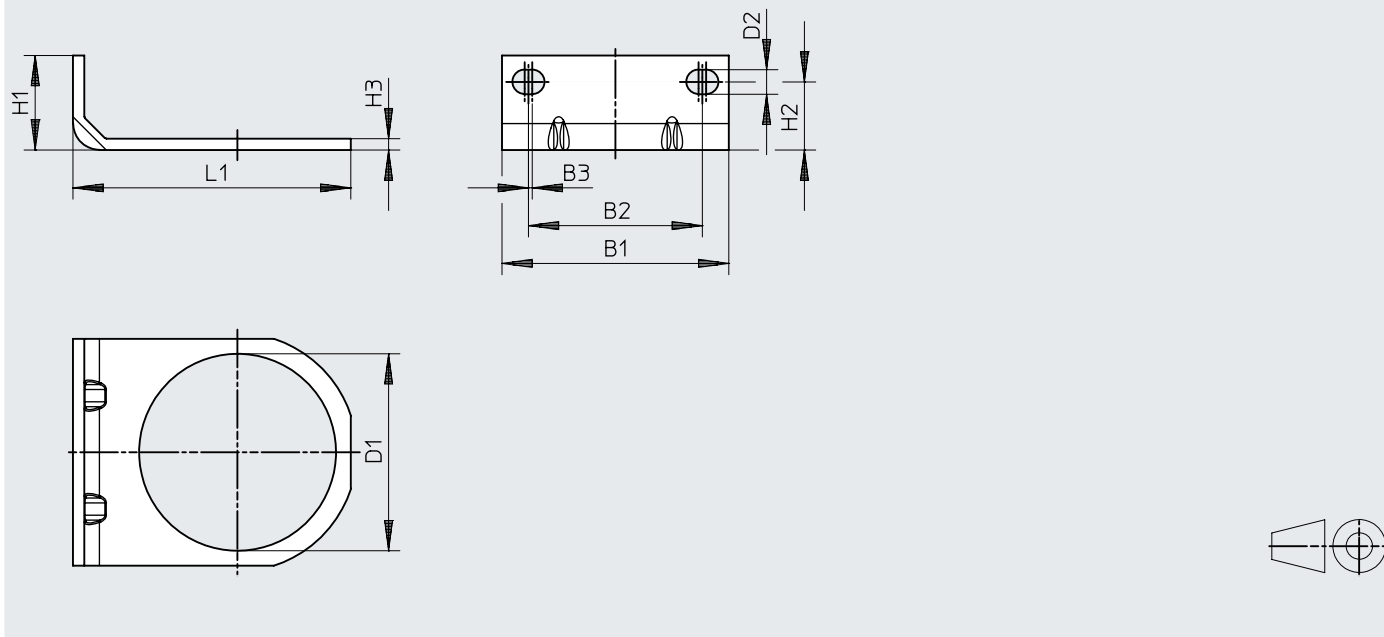
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	B1	B2	B3	D1	H1	H2 LFR...-EX4	H3	L1	L2 LFR...-EX4
HR-D-R3	60	46	1	6,5	73,5	43,5	3	25	45,5

Dimensions

Dimensions – Accessories: mounting bracket HR-D-R3

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


	B1	B2	B3	D1 Ø	D2	H1	H2	H3	L1
HR-D-R3	60	46	1	52,1	6,5	25	18	3	73,5

Ordering data

Ordering data – Temperature range -20 ... +80 °C (pressure regulation range 0.5 ... 12 bar)

	Size	Pneumatic connection, port 1	Grade of filtration	Product weight	Part no.	Type
	Midi	G1/4	5 µm	1,400 g	4772764	LFR-1/4-D-5M-O-MIDI-T18-EX4
			40 µm		4772765	LFR-1/4-D-O-MIDI-T18-EX4
		G1/2	5 µm		4772768	LFR-1/2-D-5M-O-MIDI-T18-EX4
			40 µm		4772769	LFR-1/2-D-O-MIDI-T18-EX4
		1/4 NPT	5 µm		4772772	LFR-N1/4-D-5M-O-MIDI-T18-EX4
			40 µm		4772773	LFR-N1/4-D-O-MIDI-T18-EX4
		1/2 NPT	5 µm		4772776	LFR-N1/2-D-5M-O-MIDI-T18-EX4
			40 µm		4772777	LFR-N1/2-D-O-MIDI-T18-EX4

Ordering data – Temperature range -20 ... +80 °C (pressure regulation range 0.5 ... 16 bar)

	Size	Pneumatic connection, port 1	Grade of filtration	Product weight	Part no.	Type
	Midi	G1/4	5 µm	1,400 g	4772766	LFR-1/4-D-16-5M-O-MIDI-T18-EX4
			40 µm		4772767	LFR-1/4-D-16-O-MIDI-T18-EX4
		G1/2	5 µm		4772770	LFR-1/2-D-16-5M-O-MIDI-T18-EX4
			40 µm		4772771	LFR-1/2-D-16-O-MIDI-T18-EX4
		1/4 NPT	5 µm		4772774	LFR-N1/4-D-16-5M-O-MIDI-T18-EX4
			40 µm		4772775	LFR-N1/4-D-16-O-MIDI-T18-EX4
		1/2 NPT	5 µm		4772778	LFR-N1/2-D-16-5M-O-MIDI-T18-EX4
			40 µm		4772779	LFR-N1/2-D-16-O-MIDI-T18-EX4

Ordering data – Temperature range -40 ... +80 °C (pressure regulation range 0.5 ... 12 bar)

	Size	Pneumatic connection, port 1	Grade of filtration	Product weight	Part no.	Type
	Midi	G1/4	5 µm	1,400 g	5271792	LFR-1/4-D-5M-O-MIDI-T3-EX4
			40 µm		5271793	LFR-1/4-D-O-MIDI-T3-EX4
		G1/2	5 µm		5271796	LFR-1/2-D-5M-O-MIDI-T3-EX4
			40 µm		5271797	LFR-1/2-D-O-MIDI-T3-EX4
		1/4 NPT	5 µm		5271800	LFR-N1/4-D-5M-O-MIDI-T3-EX4
			40 µm		5271801	LFR-N1/4-D-O-MIDI-T3-EX4
		1/2 NPT	5 µm		5271804	LFR-N1/2-D-5M-O-MIDI-T3-EX4
			40 µm		5271805	LFR-N1/2-D-O-MIDI-T3-EX4

Ordering data – Temperature range -40 ... +80 °C (pressure regulation range 0.5 ... 16 bar)

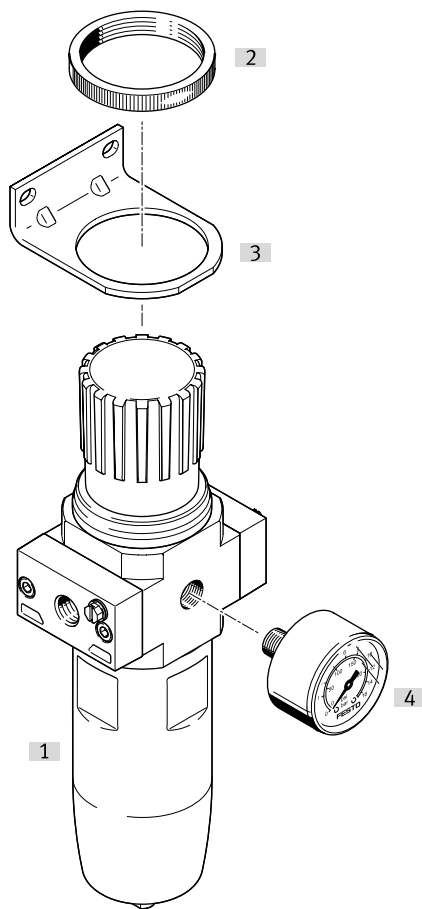
	Size	Pneumatic connection, port 1	Grade of filtration	Product weight	Part no.	Type
	Midi	G1/4	5 µm	1,400 g	5271794	LFR-1/4-D-16-5M-O-MIDI-T3-EX4

Ordering data

Ordering data – Temperature range –40 ... +80 °C (pressure regulation range 0.5 ... 16 bar)						
	Size	Pneumatic connection, port 1	Grade of filtration	Product weight	Part no.	Type
	Midi	G1/4	40 µm	1,400 g	5271795	LFR-1/4-D-16-O-MIDI-T3-EX4
		G1/2	5 µm		5271798	LFR-1/2-D-16-5M-O-MIDI-T3-EX4
			40 µm		5271799	LFR-1/2-D-16-O-MIDI-T3-EX4
		1/4 NPT	5 µm		5271802	LFR-N1/4-D-16-5M-O-MIDI-T3-EX4
			40 µm		5271803	LFR-N1/4-D-16-O-MIDI-T3-EX4
		1/2 NPT	5 µm		5271806	LFR-N1/2-D-16-5M-O-MIDI-T3-EX4
			40 µm		5271807	LFR-N1/2-D-16-O-MIDI-T3-EX4

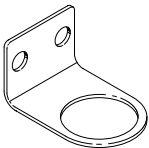
Peripherals

Peripherals overview – LFR...-MIDI



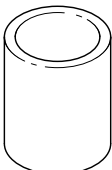
Accessories		→ Link
Type/order code	Description	
[1] Filter-regulators LFR-D-EX4		lfr-d-ex4
[2] Knurled nut HMR	Included in the scope of delivery	lfr-d-ex4
[3] Mounting bracket HR-D-R3		13
[4] Pressure gauge MA		13

Accessories

Mounting bracket HR-D-R3					
	Material bracket	Corrosion resistance class CRC ¹⁾	Product weight	Part no.	Type
	Steel	3 - high corrosion stress	73 g	4650310	HR-D-R3

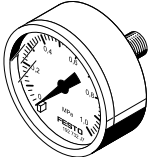
1) Corrosion resistance class CRC 3 to Festo standard FN 940070

High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional surface requirements that are in direct contact with a normal industrial environment.

Filter cartridges, D series, metal			
	Grade of filtration ¹⁾	Part no.	Type
	5 µm	159594	LFP-D-MIDI-5M
	40 µm	363667	LFP-D-MIDI-40M

1) Grade of filtration 5 µm: colour blue

Grade of filtration 40 µm: colour white

Pressure gauge MA						
	Pneumatic connection	Indicating range	Indicating range	Product weight	Part no.	Type
	G1/4	0 ... 16 bar	0 ... 232 psi	70 g	183901	MA-40-16-G1/4-EN
		0 ... 25 bar	0 ... 362.5 psi		183902	MA-40-25-G1/4-EN