



## Core service functions in proven Festo quality: D series, polymer

Perfect for the key tasks of compressed air preparation: the D series service units, polymer (DB components). The ideal introductory series into the world of modern compressed air preparation. Upgradeable thanks to the modularity of the Festo D series.



Core functionalities:



Extendable ...



and available without delay!

### **Economical thanks to focusing on the basics**

Economical compressed air preparation for basic requirements: this range concentrates on the core functions of compressed air preparation. Ideal for applications requiring reduced functionality and reliable quality.

### **Combinable for enhanced compressed air preparation**

The functions of service units can be extended at any time thanks to the compatibility of the D series, polymer and D series, metal. They can be easily combined with components such as on-off valves or soft-start valves.

### **Available without delay**

In addition to their intrinsic features, DB components offer two further benefits: Availability ex-stock ensures short delivery times and reliable deliveries. Furthermore, pre-assembly and testing before the components leave the factory ensure greater reliability.

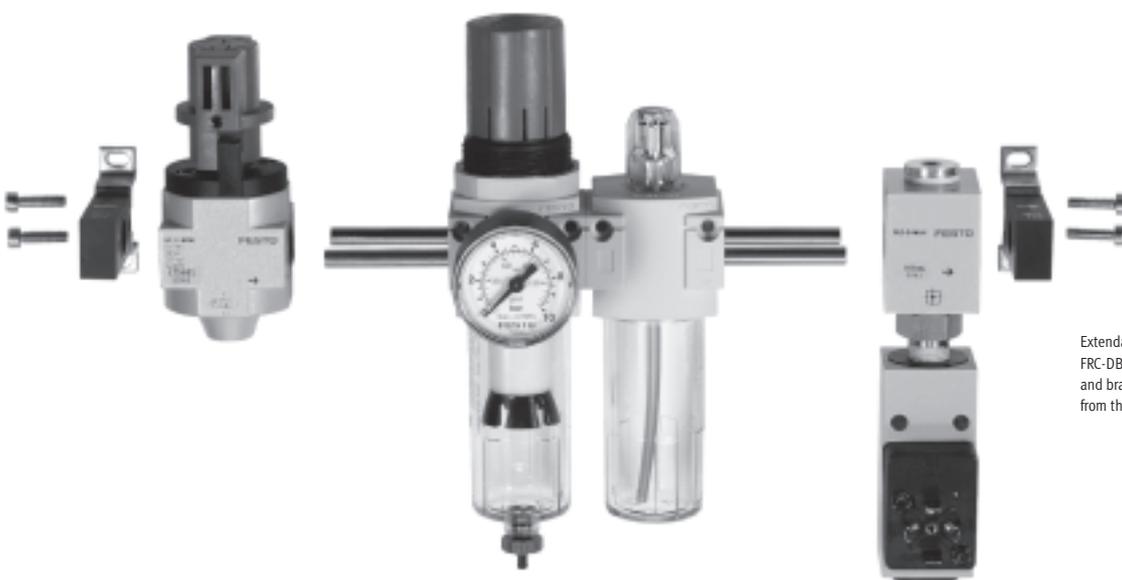


- 1 Economical functionality: Permissible primary pressure up to max. 10 bar
- 2 Concentrated product range: filter regulator, pressure regulator and filter regulator/lubricator service unit
- 3 Reliable in use: high-strength housing made of long-fibre polyamide with integrated connecting threads – simple to install and use.

**Easy to combine:**

The individual DB components and modules from the standard service units of the D series, metal can be easily extended to form new combinations.

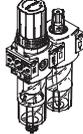
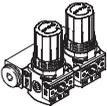
More information on the D series: Information brochure 403, the catalogue on CD-ROM and on the Internet under [www.festo.de/downloadarea](http://www.festo.de/downloadarea)



Extendable functionality: FRC-DB with on-off valve (left) and branching module (right) from the D series, metal.

# Service units, D series, polymer

Product range overview

Type	Size	Pneumatic connection			Pressure regulation range [bar]	Grade of filtration [µm]	
		G <sup>1</sup> / <sub>8</sub>	G <sup>1</sup> / <sub>4</sub>	G <sup>1</sup> / <sub>2</sub>		5	40
<b>Service units</b>							
FRC 	Mini	■	■	-	■	■	■
<b>Individual devices</b>							
Filter regulators LFR 	Mini	■	■	-	■	■	■
Pressure regulators LR 	Mini	■	■	-	■	-	-
Pressure regulator combinations LRB-K 	Mini	-	-	■	■	-	-

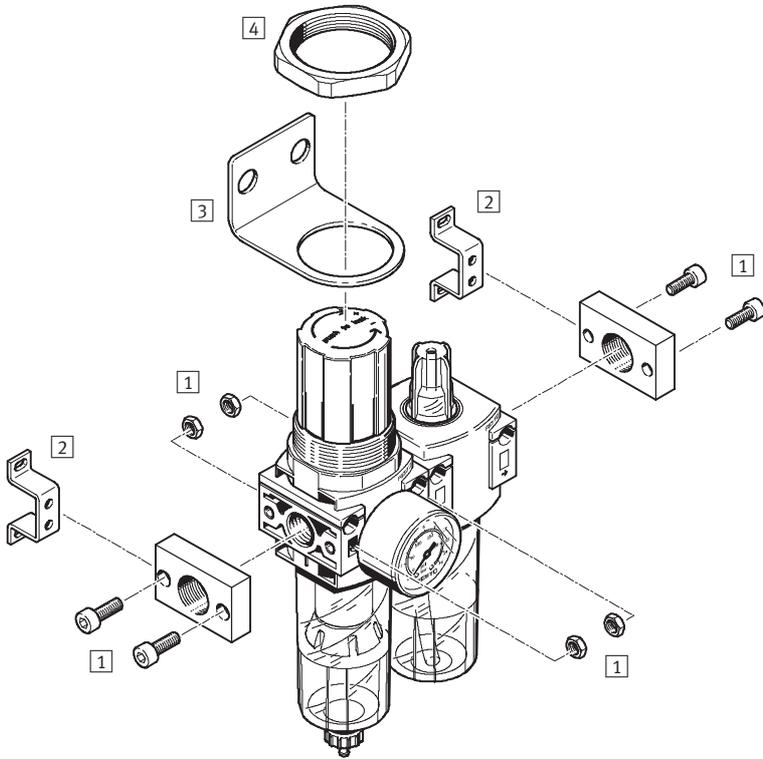
# Service units, D series, polymer

Product range overview

Type	Size	Condensate drain		Pressure display		Actuator lock	Regulating functions		→ Page
		Manual rotary	Semi-automatic	With pressure gauge	Without pressure gauge		Rotary knob with detent	With secondary venting	
<b>Service units</b>									
FRC	Mini	■	■	■	-	■	■	■	6
<b>Individual devices</b>									
Filter regulators LFR	Mini	■	■	■	■	■	■	■	12
Pressure regulators LR	Mini	-	-	■	■	■	■	■	18
Pressure regulator combinations LRB-K	Mini	-	-	-	■	■	■	■	23

## Service units FRC, D series, polymer

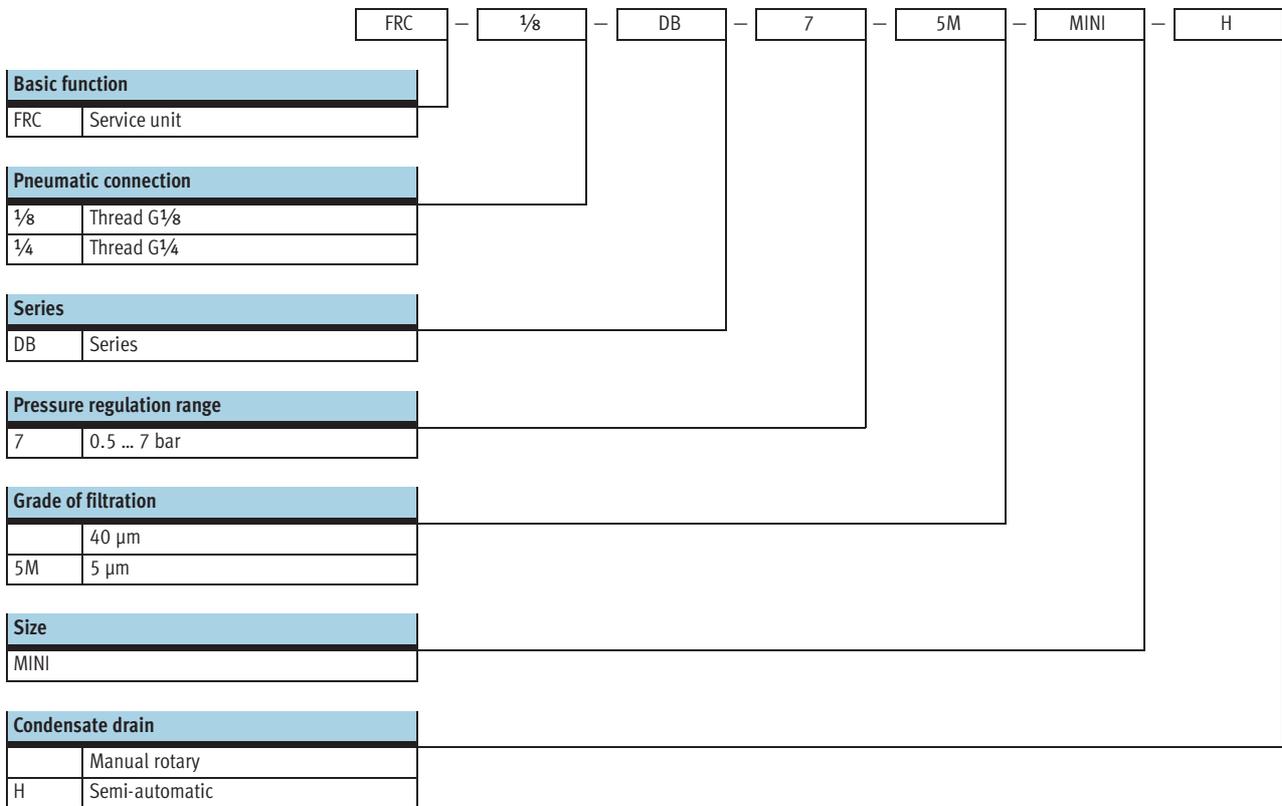
Peripherals overview



Mounting attachments and accessories		→ Page
1	Connecting plate kit PBL	30
2	Mounting bracket HFOE	31
3	Mounting bracket HR-D	30
4	Hex nut HMR	30

# Service units FRC, D series, polymer

Type codes

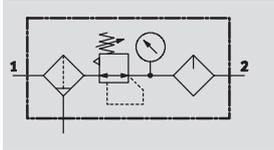


# Service units FRC, D series, polymer

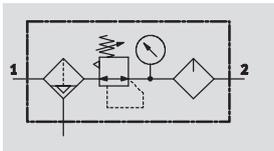
Technical data

Function

Condensate drain  
manual rotary



semi-automatic



-  - Flow rate  
400 ... 650 l/min
-  - Temperature range  
-5 ... +50 °C
-  - Input pressure  
1.5 ... 10 bar



- Filter, regulator and lubricator functions in a single unit
- High flow rate and highly efficient removal of contaminants
- Good regulating characteristics with minimal pressure hysteresis
- Setting values are secured by means of the rotary knob with detent
- With manual or semi-automatic condensate drain

The following oils are recommended for Festo components:

Viscosity range to  
ISO 3448 class VG 32  
32 mm<sup>2</sup>/s (cSt) at 40 °C

- Festo special oil  
→ 11
- ARAL Vitam GF 32
- BP Energol HLP 32
- Esso Nuto H 32
- Mobil DTE 24
- Shell Tellus Oil DO 32

General technical data		
Size	Mini	
Pneumatic connection	G $\frac{1}{8}$	G $\frac{1}{4}$
Operating medium	Compressed air	
Design	Filter/regulator/lubricator	
Regulating function	With return flow function	
	With secondary venting	
Type of mounting	Inline installation	
	Via through-holes	
	Via mounting bracket	
Assembly position	Vertical $\pm 5^\circ$	
Grade of filtration [µm]	5 or 40	
Max. hysteresis [bar]	0.5	
Input pressure [bar]	1.5 ... 10	
Pressure regulation range [bar]	0.5 ... 7	
Pressure indication	Via pressure gauge	
Pressure gauge connection	G $\frac{1}{8}$	

Standard nominal flow rate <sup>1)</sup> qnN [l/min]			
Pneumatic connection	G $\frac{1}{8}$		G $\frac{1}{4}$
Mini			
Grade of filtration	5 µm	≥ 400	≥ 550
	40 µm	≥ 550	≥ 650

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

## Service units FRC, D series, polymer

Technical data

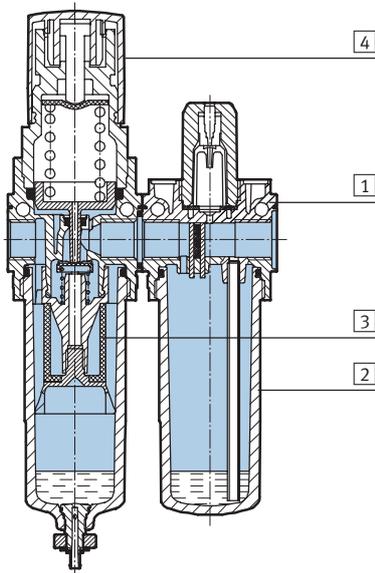
Ambient conditions		
Size	Mini	
Ambient temperature	[°C]	-5 ... +50
Temperature of medium	[°C]	-5 ... +50
Corrosion resistance class	CRC <sup>1)</sup>	1

1) Corrosion resistance class 1 according to Festo standard 940 070  
 Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Weight [g]	
Size	Mini
Service unit	300

### Materials

Sectional view



Service unit	Mini
1 Housing	Polyamide, reinforced
2 Bowl	Polycarbonate
3 Filter	Polyethylene
4 Rotary knob	Polyacetate
- Seals	Nitrile rubber

# Service units FRC, D series, polymer

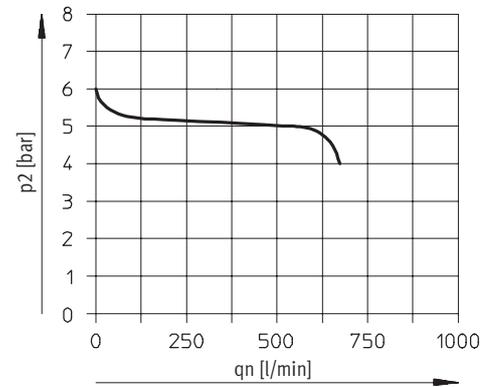
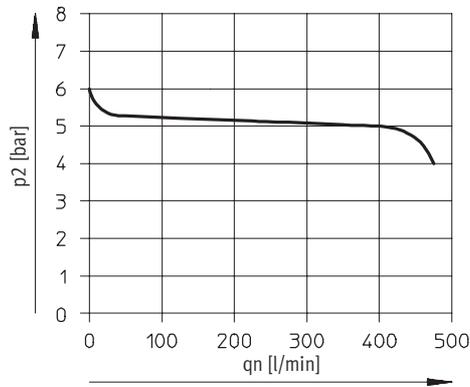
Technical data

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

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

Grade of filtration 5  $\mu\text{m}$

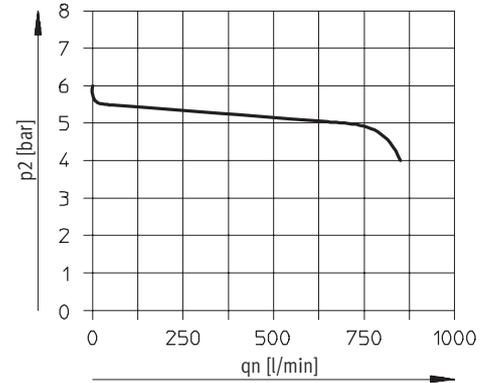
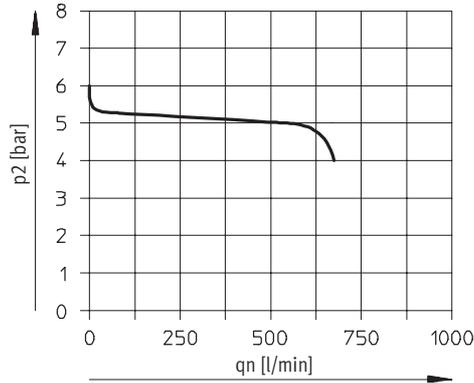
Grade of filtration 40  $\mu\text{m}$



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

Grade of filtration 5  $\mu\text{m}$

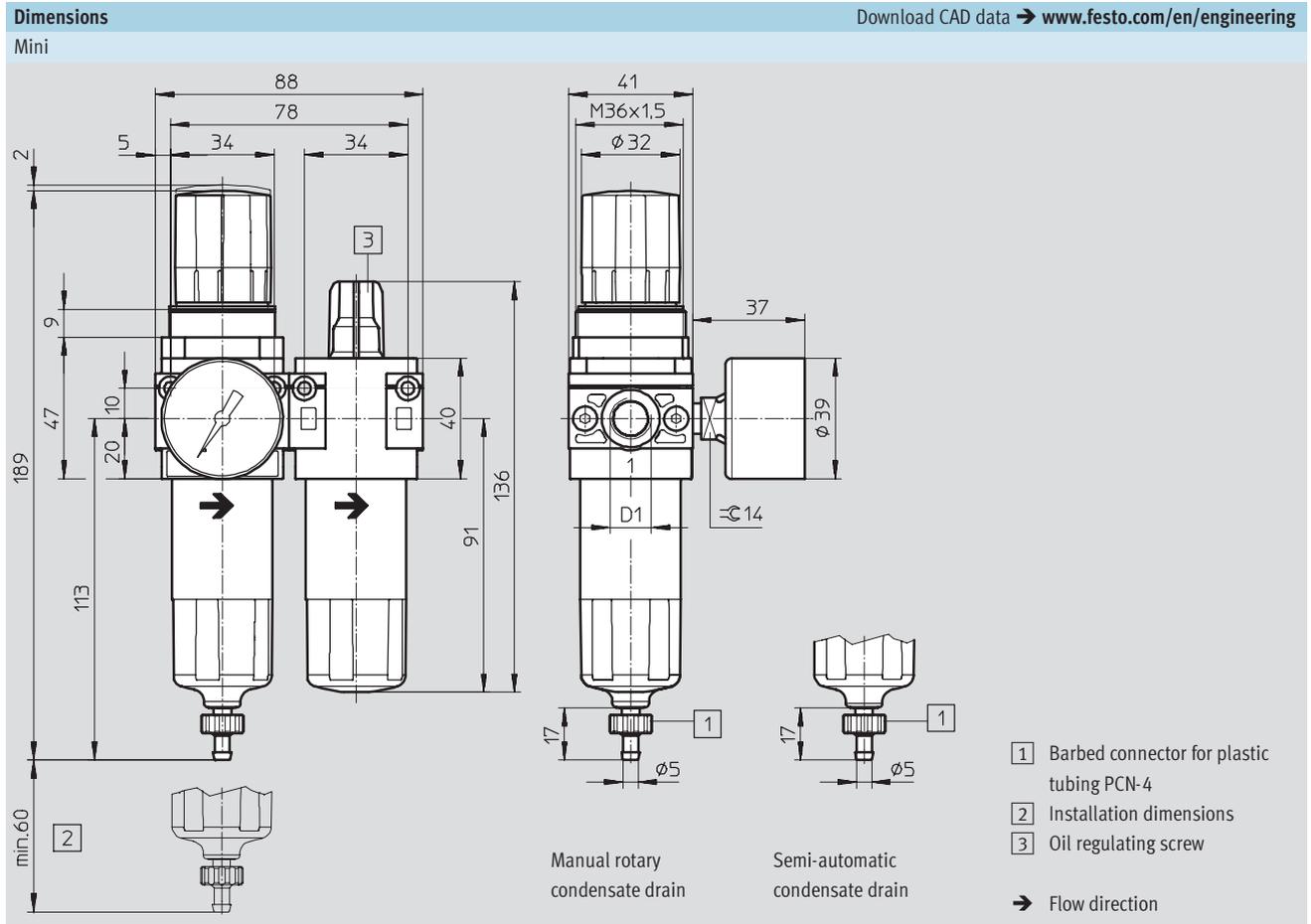
Grade of filtration 40  $\mu\text{m}$



Primary pressure  $p_1 = 10$  bar

# Service units FRC, D series, polymer

Technical data



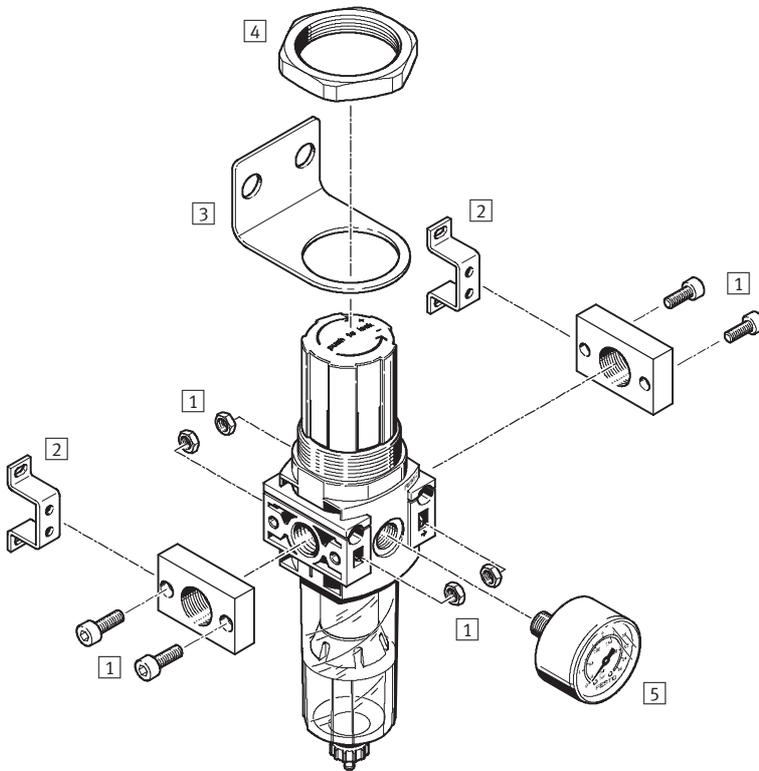
Type	D1
FRC-1/8-DB	G1/8
FRC-1/4-DB	G1/4

Ordering data						
Pressure regulation range 0.5 ... 7 bar						
Condensate drain	Size	Connection	Grade of filtration 5 µm		Grade of filtration 40 µm	
			Part No.	Type	Part No.	Type
With pressure gauge						
Manual rotary	Mini	G1/8	537 659	FRC-1/8-DB-7-5M-MINI	537 655	FRC-1/8-DB-7-MINI
		G1/4	537 658	FRC-1/4-DB-7-5M-MINI	537 654	FRC-1/4-DB-7-MINI
Semi-automatic	Mini	G1/8	537 661	FRC-1/8-DB-7-5M-MINI-H	537 657	FRC-1/8-DB-7-MINI-H
		G1/4	537 660	FRC-1/4-DB-7-5M-MINI-H	537 656	FRC-1/4-DB-7-MINI-H

Ordering data – Special oil			
	Scope of delivery	Part No.	Type
	1 litre	152 811	OFSW-32

# Filter regulators LFR, D series, polymer

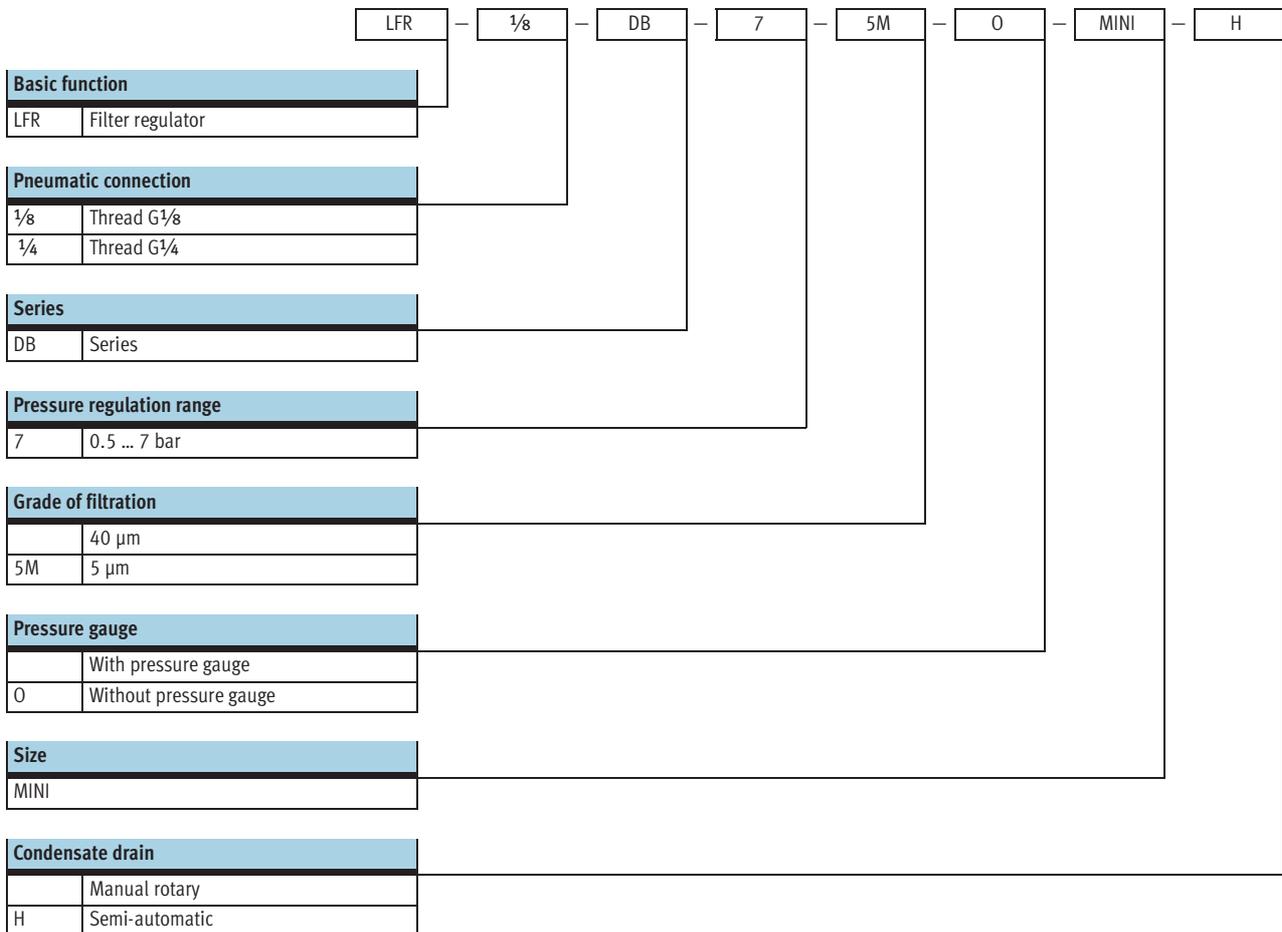
Peripherals overview



Mounting attachments and accessories		→ Page
1	Connecting plate kit PBL	30
2	Mounting bracket HFOE	31
3	Mounting bracket HR-D	30
4	Hex nut HMR	30
5	Pressure gauge MA	33

# Filter regulators LFR, D series, polymer

Type codes

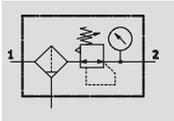


# Filter regulators LFR, D series, polymer

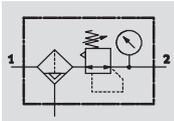
Technical data

Function

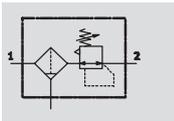
with pressure gauge  
Condensate drain  
manual rotary



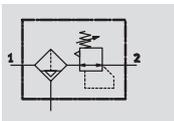
semi-automatic



without pressure gauge  
Condensate drain  
manual rotary



semi-automatic



-  - Flow rate  
500 ... 1200 l/min
-  - Temperature range  
-5 ... +50 °C
-  - Input pressure  
1.5 ... 10 bar



- Space-saving design with filter and regulator in a single unit
- Good particle separation and high flow rate
- Good regulating characteristics with minimal hysteresis
- With manual or semi-automatic condensate drain
- Setting values are secured by locking the rotary knob
- Choice of filter cartridges: 5 µm or 40 µm
- Filter cartridges → 35

## General technical data

Size	Mini	
	with pressure gauge	without pressure gauge
Pneumatic connection	G1/8 G1/4	G1/8 G1/4
Operating medium	Compressed air	
Design	Filter regulator with pressure gauge   Filter regulator without pressure gauge	
Regulating function	With return flow function With secondary venting	
Type of mounting	Inline installation Via through-holes Via mounting bracket	
Assembly position	Vertical ±5°	
Grade of filtration [µm]	5 or 40	5 or 40
Max. hysteresis [bar]	0.5	
Input pressure [bar]	1.5 ... 10	
Pressure regulation range [bar]	0.5 ... 7	
Pressure indication	Via pressure gauge	G1/8 prepared
Pressure gauge connection	G1/8	

## Standard nominal flow rate<sup>1)</sup> qnN [l/min]

Pneumatic connection	G1/8		G1/4
<b>Mini</b>			
Grade of filtration	5 µm	≥ 500	≥ 1000
	40 µm	≥ 700	≥ 1200

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

# Filter regulators LFR, D series, polymer

Technical data

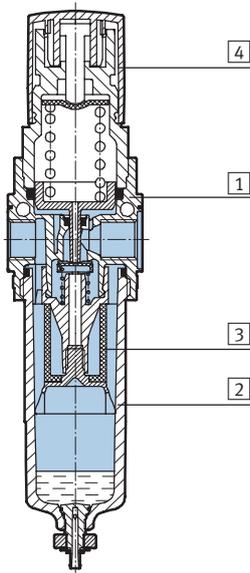
Ambient conditions		
Size	Mini	
Ambient temperature	[°C]	-5 ... +50
Temperature of medium	[°C]	-5 ... +50
Corrosion resistance class	CRC <sup>1)</sup>	1

1) Corrosion resistance class 1 according to Festo standard 940 070  
 Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Weight [g]	
Size	Mini
Filter regulator	200

## Materials

Sectional view



Filter regulator	Mini
1 Housing	Polyamide, reinforced
2 Bowl	Polycarbonate
3 Filter	Polyethylene
4 Rotary knob	Polyacetate
- Seals	Nitrile rubber

# Filter regulators LFR, D series, polymer

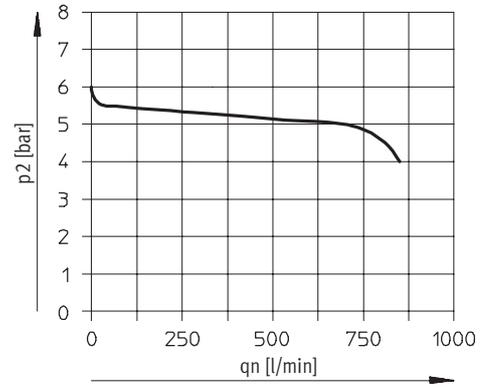
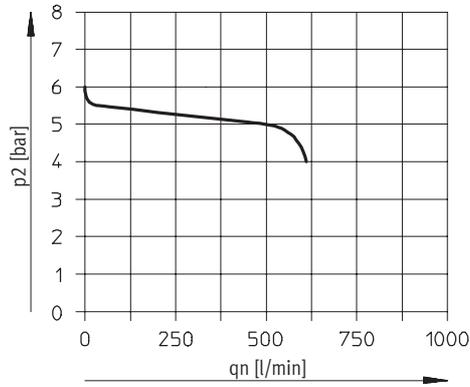
Technical data

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

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

Grade of filtration  $5\ \mu\text{m}$

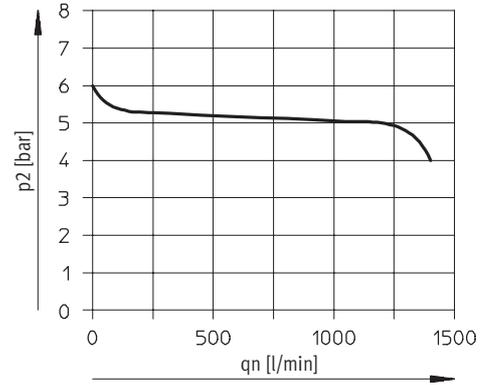
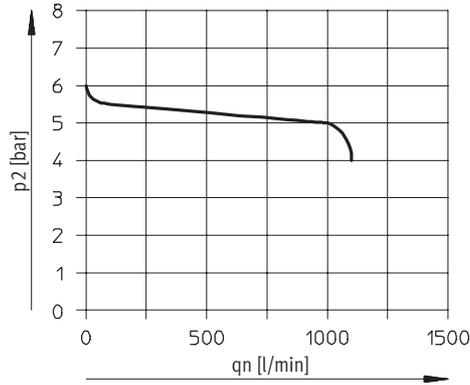
Grade of filtration  $40\ \mu\text{m}$



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

Grade of filtration  $5\ \mu\text{m}$

Grade of filtration  $40\ \mu\text{m}$



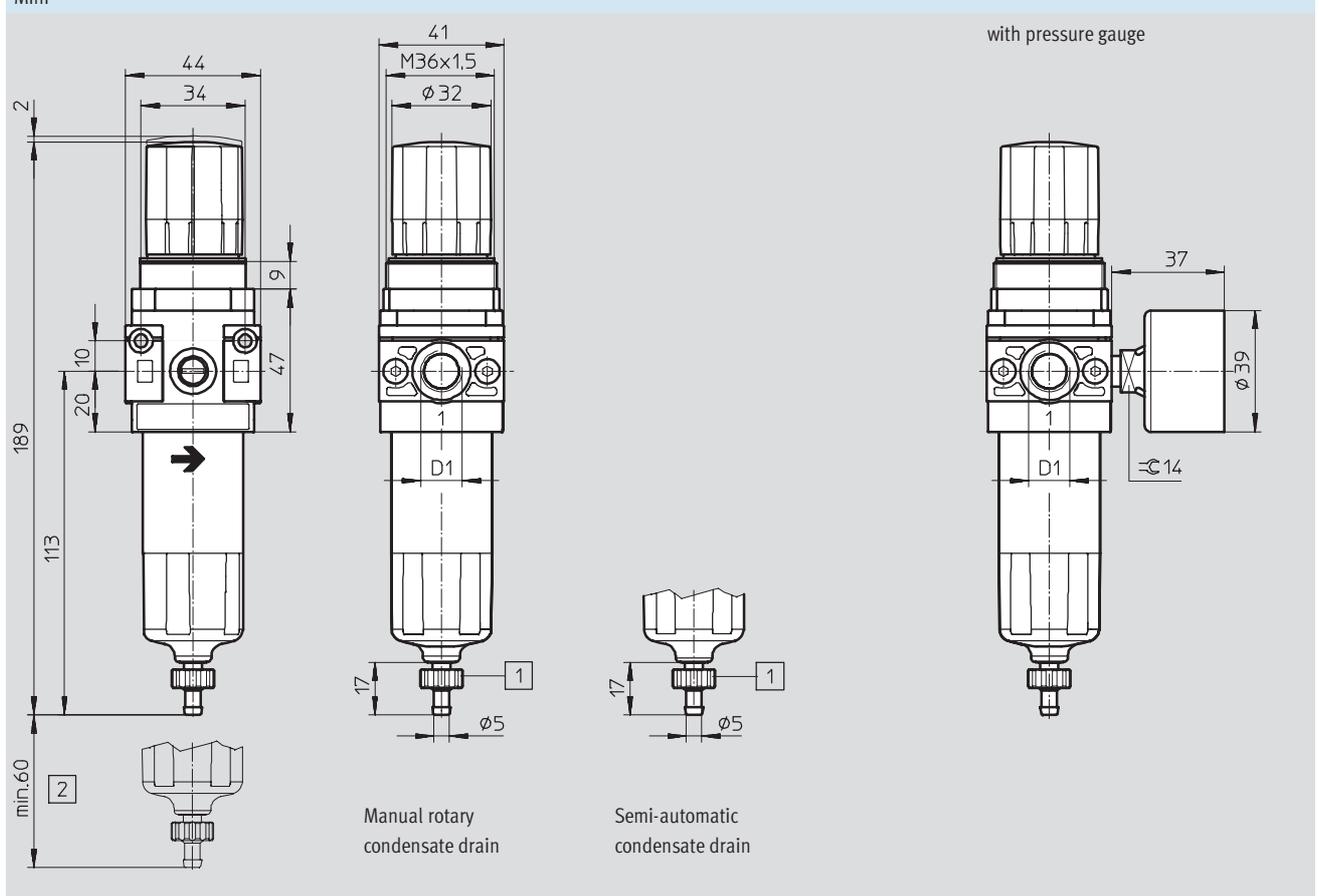
Primary pressure  $p_1 = 10\ \text{bar}$

# Filter regulators LFR, D series, polymer

Technical data

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

Mini



with pressure gauge

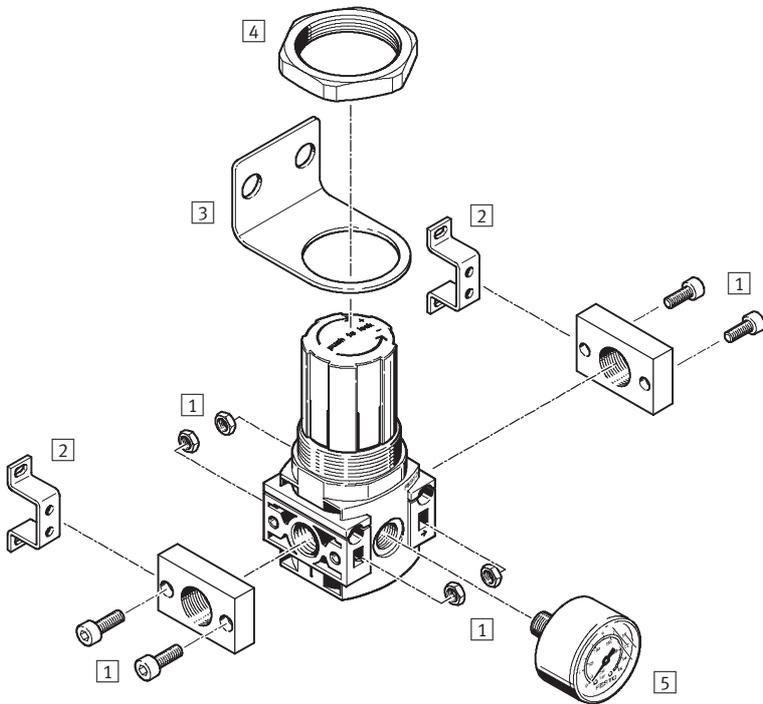
1 Barbed connector for plastic tubing PCN-4      2 Installation dimensions      → Flow direction

Type	D1
LFR-1/8-DB	G1/8
LFR-1/4-DB	G1/4

Ordering data						
Pressure regulation range 0.5 ... 7 bar						
Condensate drain	Size	Connection	Grade of filtration 5 µm		Grade of filtration 40 µm	
			Part No.	Type	Part No.	Type
<b>With pressure gauge</b>						
Manual rotary	Mini	G1/8	539 687	LFR-1/8-DB-7-5M-MINI	539 683	LFR-1/8-DB-7-MINI
		G1/4	539 689	LFR-1/4-DB-7-5M-MINI	539 685	LFR-1/4-DB-7-MINI
Semi-automatic	Mini	G1/8	539 688	LFR-1/8-DB-7-5M-MINI-H	539 684	LFR-1/8-DB-7-MINI-H
		G1/4	539 690	LFR-1/4-DB-7-5M-MINI-H	539 686	LFR-1/4-DB-7-MINI-H
<b>Without pressure gauge</b>						
Manual rotary	Mini	G1/8	537 648	LFR-1/8-DB-7-5M-O-MINI	537 651	LFR-1/8-DB-7-O-MINI
		G1/4	537 644	LFR-1/4-DB-7-5M-O-MINI	537 647	LFR-1/4-DB-7-O-MINI
Semi-automatic	Mini	G1/8	537 650	LFR-1/8-DB-7-5M-O-MINI-H	537 649	LFR-1/8-DB-7-O-MINI-H
		G1/4	537 646	LFR-1/4-DB-7-5M-O-MINI-H	537 645	LFR-1/4-DB-7-O-MINI-H

## Pressure regulators LR, D series, polymer

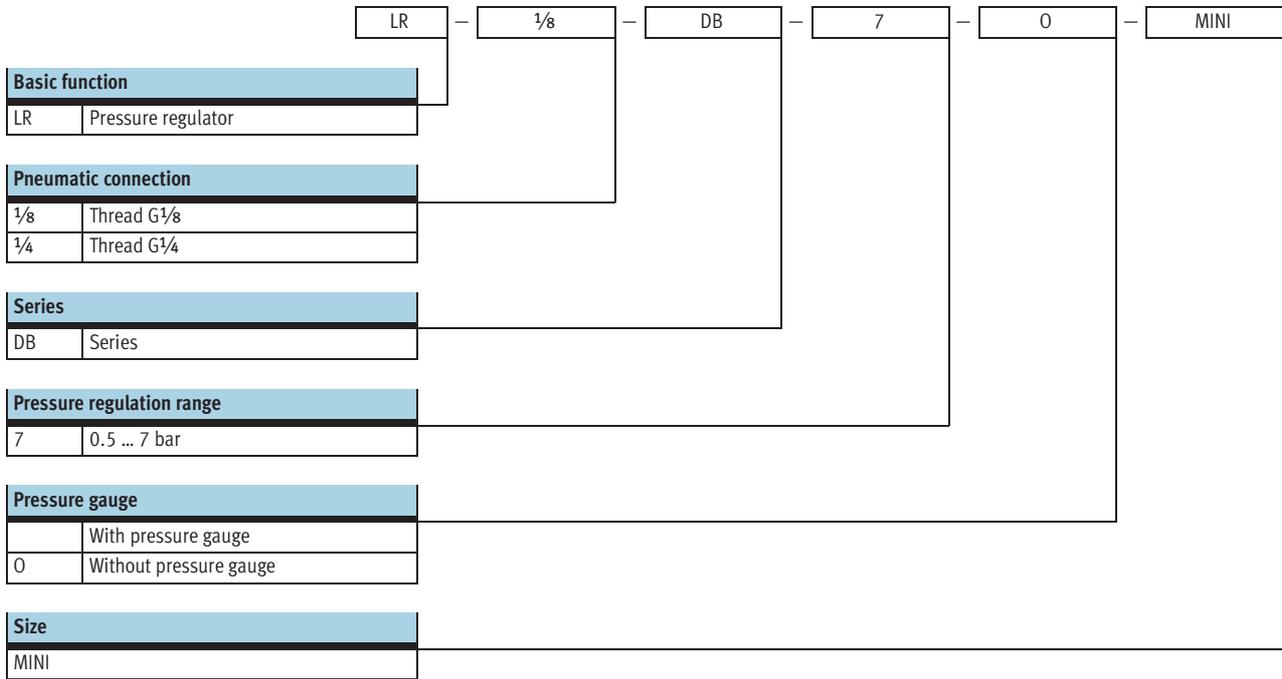
Peripherals overview



Mounting attachments and accessories		→ Page
1	Connecting plate kit PBL	30
2	Mounting bracket HFOE	31
3	Mounting bracket HR-D	30
4	Hex nut HMR	30
5	Pressure gauge MA	33

# Pressure regulators LR, D series, polymer

Type codes

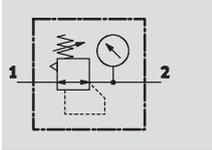


# Pressure regulators LR, D series, polymer

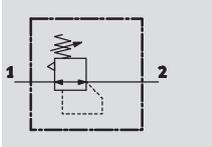
Technical data

Function

with pressure gauge



without pressure gauge



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



- 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
Operating medium	Compressed air			
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			
Max. hysteresis [bar]	0.5			
Input pressure [bar]	1.5 ... 10			
Pressure regulation range [bar]	0.5 ... 7			
Pressure indication	Via pressure gauge		G1/8 prepared	
Pressure gauge connection	G1/8			

Standard nominal flow rate <sup>1)</sup> qnN [l/min]		
Pneumatic connection	G1/8	G1/4
Mini		
Pressure regulation range 0.5 ... 7 bar	≥ 800	≥ 1300

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

# Pressure regulators LR, D series, polymer

Technical data

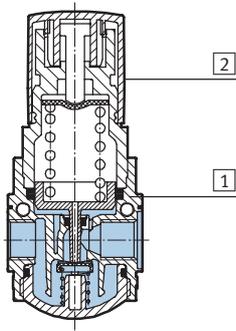
Ambient conditions		
Size		Mini
Ambient temperature	[°C]	-5 ... +50
Temperature of medium	[°C]	-5 ... +50
Corrosion resistance class	CRC <sup>1)</sup>	1

1) Corrosion resistance class 1 according to Festo standard 940 070  
 Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Weight [g]	
Size	Mini
Pressure regulator	150

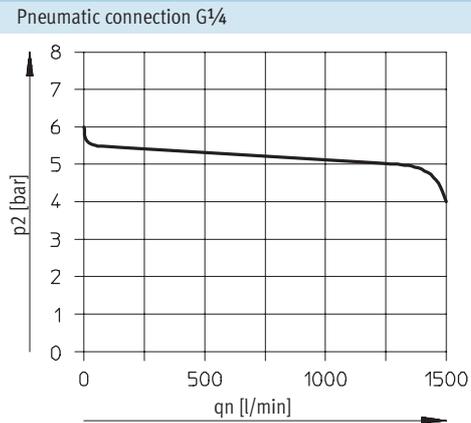
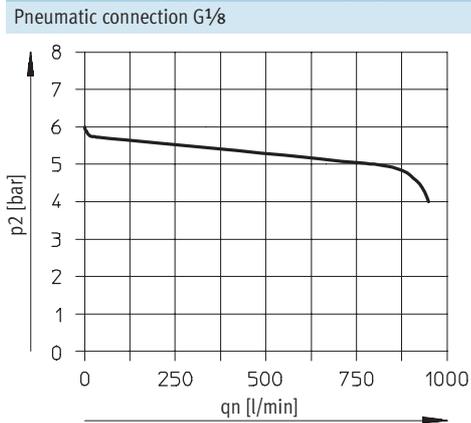
## Materials

Sectional view



Pressure regulator	Mini
1) Housing	Polyamide, reinforced
2) Rotary knob	Polyacetate
- Seals	Nitrile rubber

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

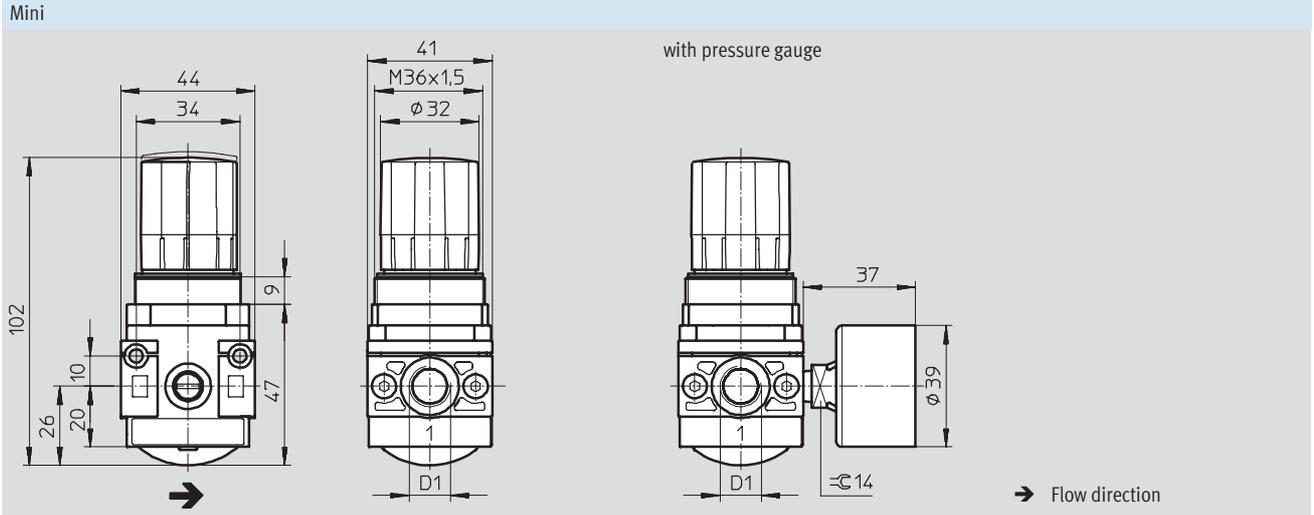


Primary pressure  $p_1 = 10$  bar

# Pressure regulators LR, D series, polymer

Technical data

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



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	539 681	LR-1/8-DB-7-MINI
	G1/4	539 682	LR-1/4-DB-7-MINI
Without pressure gauge			
Mini	G1/8	537 642	LR-1/8-DB-7-O-MINI
	G1/4	537 643	LR-1/4-DB-7-O-MINI

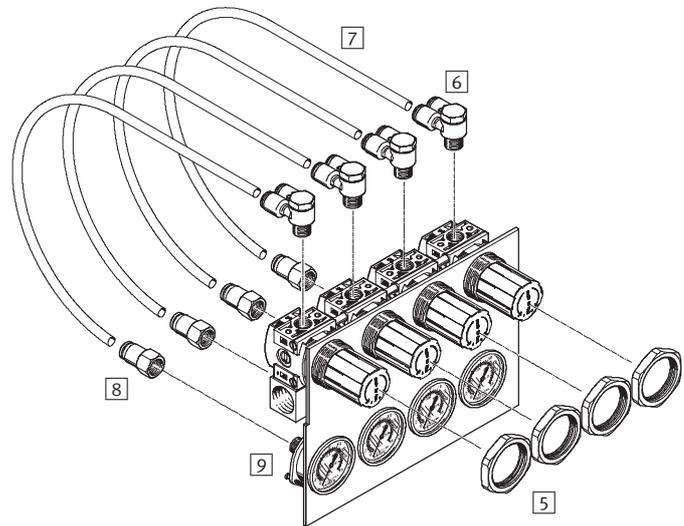
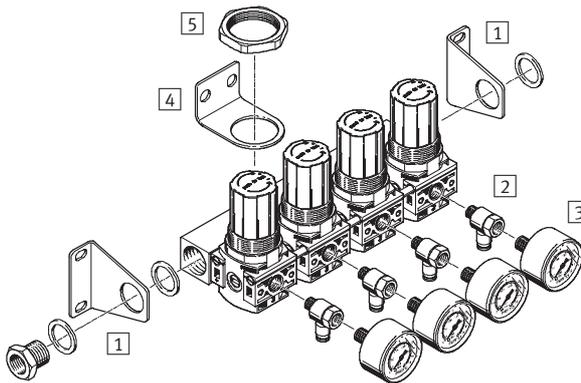
# Pressure regulator combinations LRB-K, D series, polymer

Peripherals overview

**Mini**

With mounting bracket

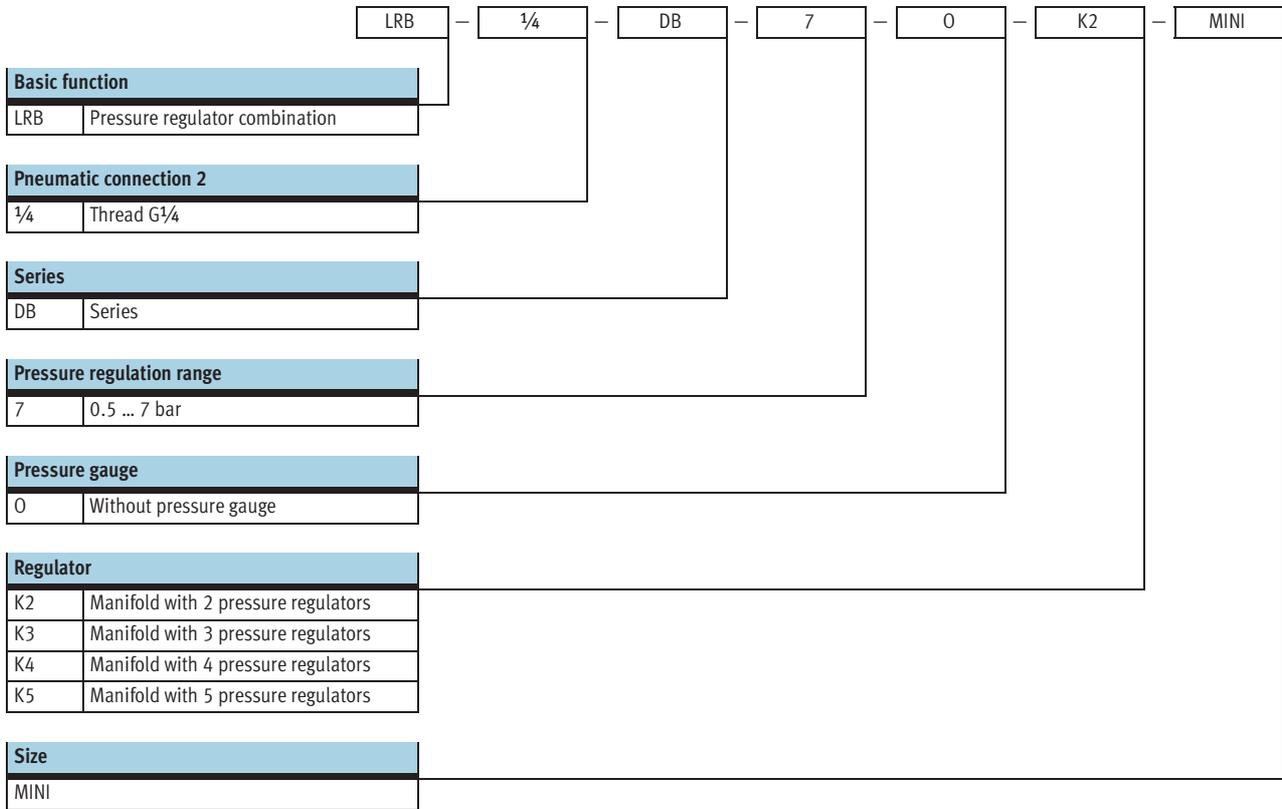
Front panel mounting



Mounting attachments and accessories			
	With mounting bracket	Front panel mounting	→ Page
1 Mounting bracket kit HRBS-DB-MINI	■	-	31
2 Push-in T-fitting QSTF	■	-	34
3 Pressure gauge MA	■	-	33
4 Mounting bracket HR-D	■	-	30
5 Hex nut HMR	■	■	30
6 Push-in Y-fitting QSYLV	-	■	34
7 Plastic tubing PUN-E	-	■	35
8 Push-in fitting QSF	-	■	34
9 Flanged pressure gauge FMA	-	■	33

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

Type codes



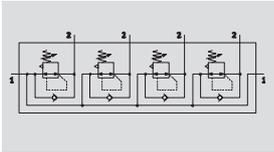
# Pressure regulator combinations LRB-K, D series, polymer

FESTO

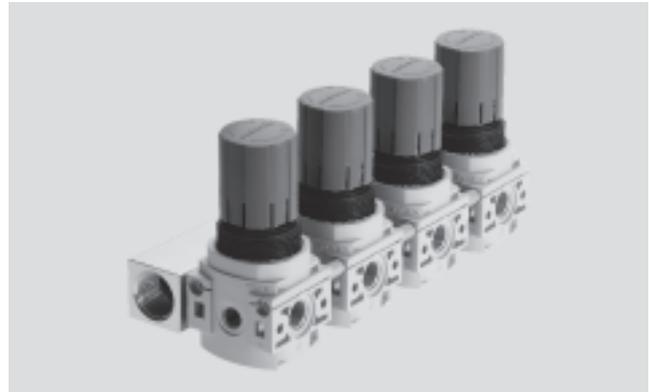
Technical data

Function

without pressure gauge



-  Flow rate  
1000 l/min
-  Temperature range  
-5 ... +50 °C
-  Input 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
Operating medium	Compressed air
Regulating functions	Output pressure constant
	With return flow function
	With secondary venting
Design	Directly actuated piston regulator
	On P-manifold
Type of mounting	Front panel mounting
	Via accessories
Assembly position	Any
Max. hysteresis [bar]	0.5
Input pressure [bar]	1.5 ... 10
Pressure regulation range [bar]	0.5 ... 7

Standard nominal flow rate <sup>1)</sup> q <sub>nN</sub> [l/min]	
Size	Mini
Pressure regulation range 0.5 ... 7 bar	≥ 1000

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

Ambient conditions		
Ambient temperature	[°C]	-5 ... +50
Temperature of medium	[°C]	-5 ... +50
Corrosion resistance class	CRC <sup>1)</sup>	1

1) Corrosion resistance class 1 according to Festo standard 940 070  
Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

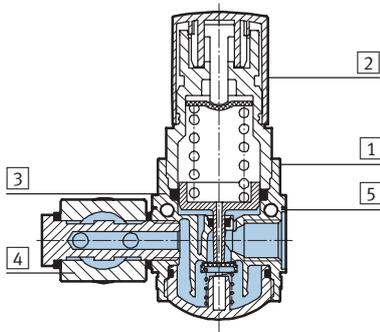
## Pressure regulator combinations LRB-K, D series, polymer

Technical data

Weight [g]	
Size	Mini
Manifold with 2 pressure regulators	
LRB-...-K2	500
Manifold with 3 pressure regulators	
LRB-...-K3	750
Manifold with 4 pressure regulators	
LRB-...-K4	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

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

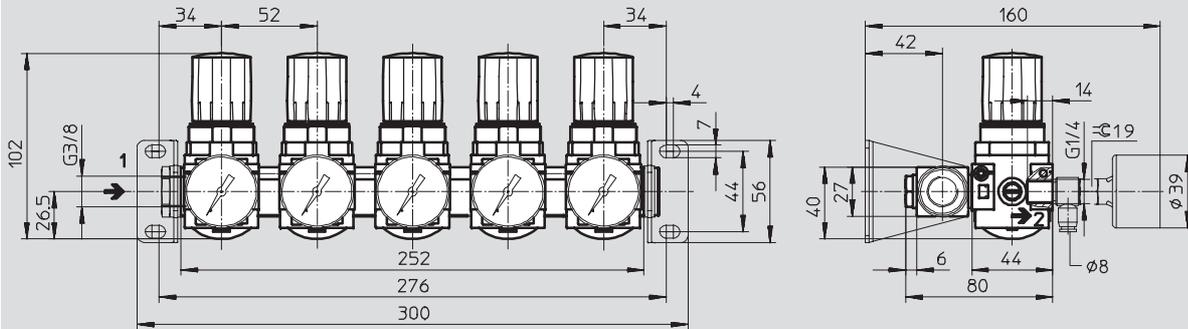
Technical data

**Dimensions**

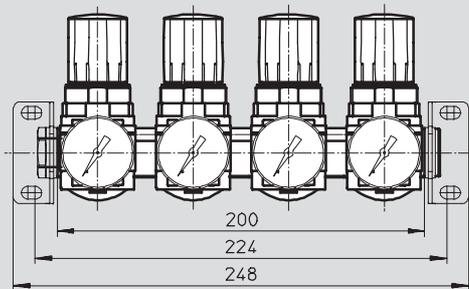
Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

With mounting bracket

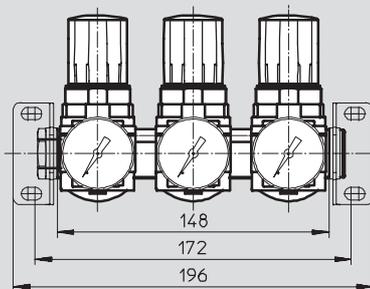
LRB-...-K5



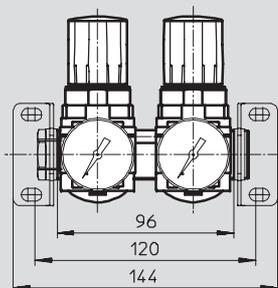
LRB-...-K4



LRB-...-K3



LRB-...-K2



→ Flow direction

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

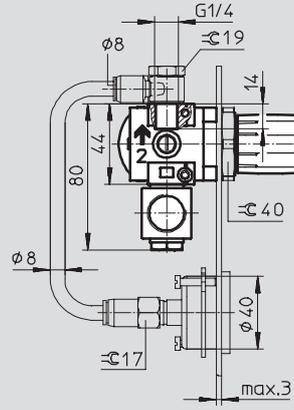
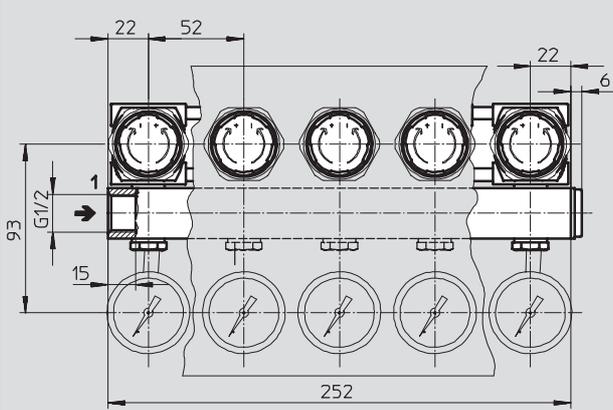
Technical data

**Dimensions**

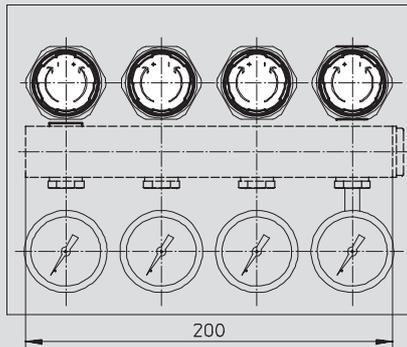
Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

Front panel mounting

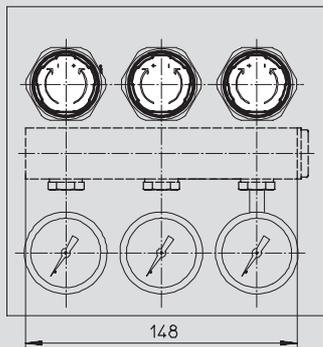
LRB-...-K5



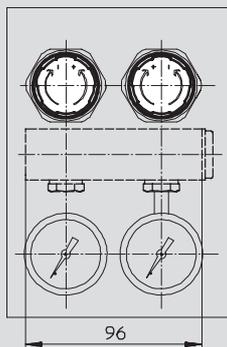
LRB-...-K4



LRB-...-K3



LRB-...-K2



→ Flow direction

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

**FESTO**

Technical data

<b>Ordering data</b>			
Size	Connection	Pressure regulation range 0.5 ... 7 bar	
		Part No.	Type
<b>Manifold with 2 pressure regulators</b>			
Mini	G $\frac{1}{4}$	<b>540 040</b>	<b>LRB-<math>\frac{1}{4}</math>-DB-7-O-K2-MINI</b>
<b>Manifold with 3 pressure regulators</b>			
Mini	G $\frac{1}{4}$	<b>540 041</b>	<b>LRB-<math>\frac{1}{4}</math>-DB-7-O-K3-MINI</b>
<b>Manifold with 4 pressure regulators</b>			
Mini	G $\frac{1}{4}$	<b>540 042</b>	<b>LRB-<math>\frac{1}{4}</math>-DB-7-O-K4-MINI</b>
<b>Manifold with 5 pressure regulators</b>			
Mini	G $\frac{1}{4}$	<b>540 043</b>	<b>LRB-<math>\frac{1}{4}</math>-DB-7-O-K5-MINI</b>

## Mounting attachments, D series, polymer

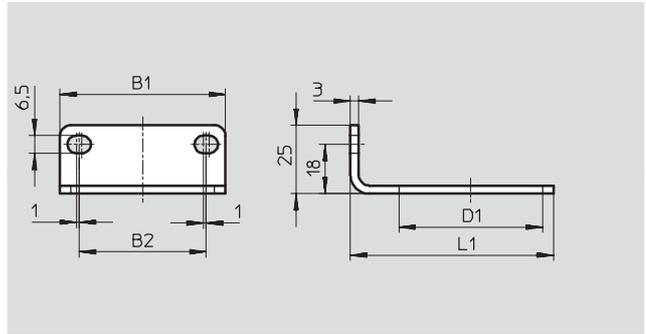
Accessories

### Mounting bracket HR-D

- For wall mounting

Material:  
Galvanised steel

 **Note**  
The hex nut for attaching this bracket must be ordered separately.



Dimensions and ordering data							
Size	B1	B2	D1 Ø	L1	CRC <sup>1)</sup>	Part No.	Type
Mini	42	28	36	57.5	2	164 936	HR-D-MINI

1) Corrosion resistance class 2 according to Festo standard 940 070  
Components requiring moderate corrosion resistance. 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.

### Hex nut HMR

- For front panel mounting
- For attaching the mounting bracket HR-D

Material:  
Wrought aluminium alloy



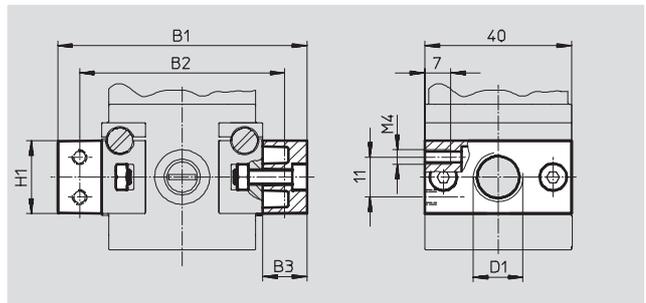
Ordering data		
Size	Part No.	Type
Mini	530 025	HMR-D-MINI/MAXI

### Connecting plate kit PBL

- For wall mounting
- For establishing a pneumatic connection G $\frac{3}{8}$

Material:  
Connecting plate: Die-cast zinc  
Nut, screws: Galvanised steel  
Seals: Nitrile rubber

Note on materials:  
Free of copper and PTFE



Dimensions and ordering data							
Size	B1	B2	B3	D1	H1	CRC <sup>1)</sup>	Part No. Type
Mini	68	56	12	G $\frac{1}{8}$	20	1	542 787 PBL- $\frac{1}{8}$ -DB-MINI
	68	56	12	G $\frac{1}{4}$	20		542 788 PBL- $\frac{1}{4}$ -DB-MINI
	74	56	15	G $\frac{3}{8}$	23		542 789 PBL- $\frac{3}{8}$ -DB-MINI

1) Corrosion resistance class 1 according to Festo standard 940 070  
Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

 Core Range

## Mounting attachments, D series, polymer

Accessories

### Mounting bracket HFOE

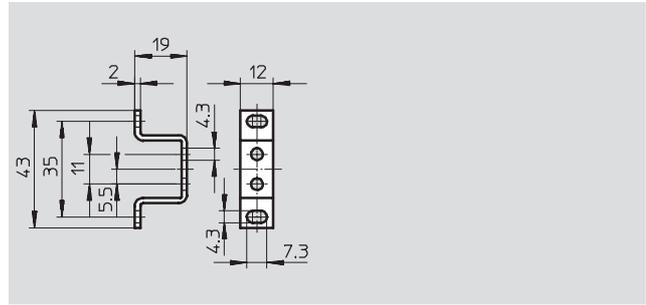
■ For wall mounting

Material:

Galvanised steel

Note on materials:

Free of copper and PTFE



Dimensions and ordering data			
Size	CRC <sup>1)</sup>	Part No.	Type
Mini	2	159 638	HFOE-D-MINI

- 1) Corrosion resistance class 2 according to Festo standard 940 070  
 Components requiring moderate corrosion resistance. 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.

### Mounting bracket kit HRBS-DB-MINI

■ For wall mounting

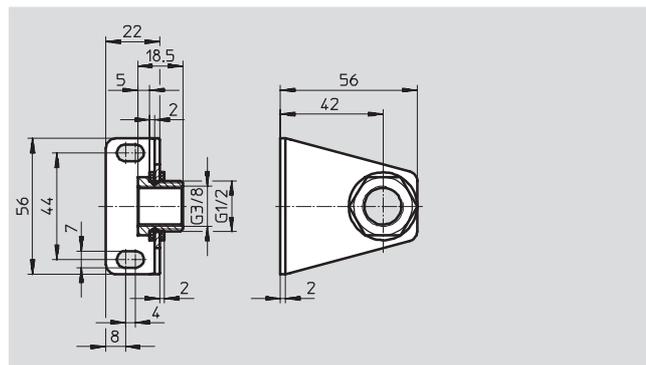
Material:

Hollow bolt, housing: Galvanised steel

Sealing ring: Polyvinyl chloride

Note on materials:

Free of copper and PTFE



Dimensions and ordering data					
Size	Pneumatic connection 1	CRC <sup>1)</sup>	Weight [g]	Part No.	Type
Mini	G $\frac{3}{8}$	2	150	540 791	HRBS-DB-MINI

- 1) Corrosion resistance class 2 according to Festo standard 940 070  
 Components requiring moderate corrosion resistance. 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.

## Mounting attachments, D series, polymer

Accessories

### Threaded pin FRB

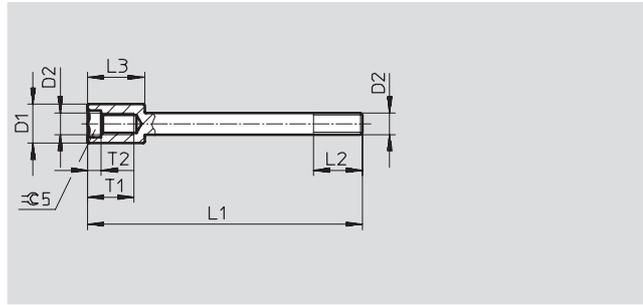
■ For service unit combinations

Material:

Steel

Note on materials:

Free of copper and PTFE



Dimensions and ordering data										
Size	D1	D2	L1	L2 min.	L3	T1	T2	CRC <sup>1)</sup>	Part No.	Type
Mini	7.2 ∅	M4	50.5	9	10.5	8.5	2.5	1	<b>542 187</b>	<b>FRB-DB-MINI</b>

1) Corrosion resistance class 1 according to Festo standard 940 070  
Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

### Nut assortment M4-DB

■ For service unit combinations

Material:

Galvanised steel

Note on materials:

Free of copper and PTFE



Ordering data				
Size	CRC <sup>1)</sup>	Part No.	Type	
Mini	1	<b>542 790</b>	<b>M4-DB-MINI</b>	

1) Corrosion resistance class 1 according to Festo standard 940 070  
Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

## Pressure gauges, D series, polymer

Accessories

### Pressure gauge MA, DIN EN 837-1

- For filter regulators and pressure regulators

Further pressure gauges

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



Ordering data				
Pneumatic connection	Indicating range		Part No.	Type
	[bar]	[psi]		
R $\frac{1}{8}$	0 ... 10	0 ... 145	162 835	MA-40-10-R $\frac{1}{8}$ -EN

### Pressure gauge MA, DIN EN 837-1

- For pressure regulator combinations with mounting via bracket

Further pressure gauges

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



Ordering data				
Pneumatic connection	Indicating range		Part No.	Type
	[bar]	[psi]		
G $\frac{1}{4}$	0 ... 10	0 ... 145	183 900	MA-40-10-G $\frac{1}{4}$ -EN

### Flanged pressure gauge FMA, DIN EN 837-1

- For pressure regulator combinations with front panel mounting

Further pressure gauges

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



Ordering data					
Nominal size	Pneumatic connection	Indicating range		Part No.	Type
		[bar]	[psi]		
40	G $\frac{1}{4}$	0 ... 10	0 ... 145	159 596	FMA-40-10-G $\frac{1}{4}$ -EN

## Push-in fittings, D series, polymer

Accessories

**Push-in T-fitting QSTF**  
360° rotatable  
with male and female thread

Further push-in fittings  
→ [www.festo.com](http://www.festo.com)



Ordering data					
Pneumatic connection			Part No.	Type	PU*
Male thread	Female thread	Tubing O.D.			
G $\frac{1}{4}$	G $\frac{1}{4}$	8	<b>186 203</b>	<b>QSTF-G<math>\frac{1}{4}</math>-8</b>	<b>1</b>

\* Packaging unit quantity

**Push-in Y-fitting QSYLV**  
360° rotatable  
Male thread  
with external hex

Further push-in fittings  
→ [www.festo.com](http://www.festo.com)



Ordering data					
Pneumatic connection		Tubing O.D.	Part No.	Type	PU*
G $\frac{1}{4}$		8	<b>186 210</b>	<b>QSYLV-G<math>\frac{1}{4}</math>-8</b>	<b>1</b>

\* Packaging unit quantity

**Push-in fitting QSF**  
Female thread  
with external hex

Further push-in fittings  
→ [www.festo.com](http://www.festo.com)



Ordering data					
Pneumatic connection		Tubing O.D.	Part No.	Type	PU*
G $\frac{1}{4}$		8	<b>153 026</b>	<b>QSF-<math>\frac{1}{4}</math>-8-B</b>	<b>10</b>

\* Packaging unit quantity

## Plastic tubing and filter cartridges, D series, polymer

Accessories

### Plastic tubing PCN

■ For condensate drain

Material: Polyvinyl chloride

Further tubing

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



Ordering data					
Tubing O.D. [mm]	Tubing I.D. [mm]	Weight [g/m]	Part No.	Type	PU* [m]
6.5	4	25	7 134	PCN-4-NT	50

\* Packaging unit

### Plastic tubing PUN-E

Highly flexible, hydrolysis and microbe resistant tubing

Material: Polyurethane

Note on materials:

Free of copper and PTFE

Further tubing

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



Ordering data					
Tubing O.D. [mm]	Colour	Part No.	Type	PU* [m]	
8	Silver	535 322	PUN-E-8x1-SI	50	
		534 174	PUN-E-8x1-SI-400	400	
	Blue	535 327	PUN-E-8x1-BL	50	
		534 175	PUN-E-8x1-BL-400	400	
	Black	538 467	PUN-E-8x1-SW	50	
		538 462	PUN-E-8x1-SW-400	400	

\* Packaging unit

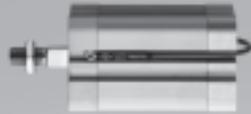
### Filter cartridges LFP



Ordering data				
Size	Grade of filtration [µm]	Part No.	Type	
Mini	5	547 957	LFP-DB-MINI-5M	
	40	534 502	MS4-LFP-E	

## Products and services – everything from a single source

Products incorporating new ideas are created when enthusiasm for technology and efficiency come together. Tailor-made service goes without saying when the customer is the focus of attention.



### Pneumatic and electrical drives

- Pneumatic cylinders
- Semi-rotary drives
- Handling modules
- Servopneumatic positioning systems
- Electromechanical drives
- Positioning controllers and controllers



### Valves and valve terminals

- Standard valves
- Universal and application-optimised valves
- Manually and mechanically actuated valves
- Shut-off, pressure control and flow control valves
- Proportional valves
- Safety valves

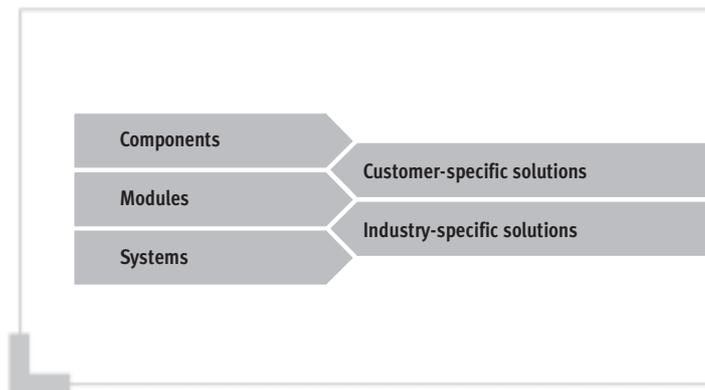
### Fieldbus systems/ electrical peripherals

- Fieldbus Direct
- Installation system CP/CPI
- Modular electrical terminal CPX



### Compressed air preparation

- Service unit combinations
- Filter regulators
- Filters
- Pressure regulators
- Lubricators
- On-off and soft-start valves
- Dryers
- Pressure amplifiers
- Accessories for compressed air preparation



## Services from Festo to increase your productivity – across the entire value creation sequence



### Engineering – for greater speed in the development process

- CAD models
- 14 engineering tools
- Digital catalogue
- FluidDRAW®
- More than 1,000 technical consultants and project engineers worldwide
- Technical hotlines



### Supply chain – for greater speed in the procurement process

- E-commerce and online shop
- Online order tracking
- Euro special manufacturing service
- Logistics optimisation



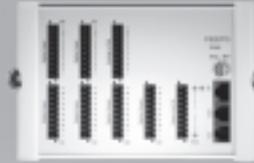
### Gripping and vacuum technology

- Vacuum generators
- Vacuum grippers
- Vacuum security valves
- Vacuum accessories
- Standard grippers
- Micro grippers
- Precision grippers
- Heavy-duty grippers



### Sensors and monitoring units

- Proximity sensors
- Pressure and flow sensors
- Display and operating units
- Inductive and optical proximity sensors
- Displacement encoders for positioning cylinders
- Optical orientation detection and quality inspection



### Controllers/bus systems

- Pneumatic and electropneumatic controllers
- Programmable logic controllers
- Fieldbus systems and accessories
- Timers/counters
- Software for visualisation and data acquisition
- Display and operating units



### Accessories

- Pipes
- Tubing
- Pipe connectors and fittings
- Electrical connection technology
- Silencers
- Reservoirs
- Air guns

### All in all, 100% product and service quality

A customer-oriented range with unlimited flexibility: Components combine to produce ready-to-install modules and systems. Included in this are special designs – since at Festo, most industry-specific products and customer-specific solutions are based on the 23,000 plus catalogue products. Combined with the services for the entire value creation sequence, the end result is unbeatable economy.



### Assembly – for greater speed in the assembly/commissioning process

- Prepack
- Preassembly
- Turnkey pneumatics
- Handling solutions



### Operation – for greater speed in the operational process

- Spare parts service
- Energy saving service
- Compressed air consumption analysis
- Compressed air quality analysis
- Customer service

## What must be observed when using Festo components?

Specified limit values for technical data and any specific instructions must be adhered to by the user in order to ensure recommended operating conditions.

When pneumatic components are used, the user shall ensure that they are operated using correctly prepared compressed air without aggressive media.

When Festo components are used in safety-oriented applications, the user shall ensure that all applicable

national and local safety laws and regulations, for example the machine directive, together with the relevant references to standards are observed. Unauthorised conversions or modifications to products and systems from Festo involve a safety risk and are thus not permissible.

Festo does not accept any liability for resulting damages.

You should contact Festo's advisors if one of the following apply to your application:

- The ambient conditions and conditions of use or the operating medium differ from the specified technical data.
- The product is to perform a safety function.
- A risk or safety analysis is required.
- You are unsure about the product's suitability for use in the planned application.
- You are unsure about the product's suitability for use in safety-oriented applications.

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