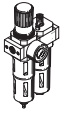
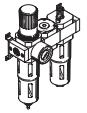
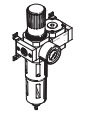
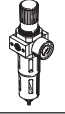
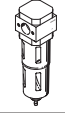
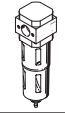
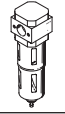
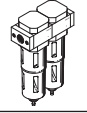
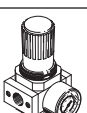


Service units FRC-K, D series

FESTO



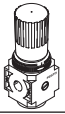
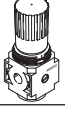
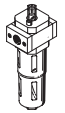
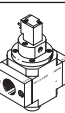
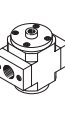
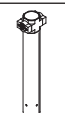
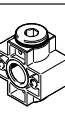
Product range overview – Service unit components, D series, metal

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		Micro	■	■	■	–	–	–	–	–	■	■	■	–	–	–	–	■	–
		Mini	–	–	■	■	■	–	–	–	–	–	■	■	–	–	–	■	■
		Midi	–	–	–	■	■	■	■	–	–	–	■	■	–	–	–	■	■
		Maxi	–	–	–	–	–	■	■	■	–	–	■	■	–	–	–	■	■
FRC-K		Micro	–																
		Mini	–	–	■	■	–	–	–	–	–	–	–	■	■	–	–	–	■
		Midi	–	–	–	■	■	■	–	–	–	–	–	■	■	–	–	–	■
		Maxi	–	–	–	–	–	■	■	–	–	–	–	■	■	–	–	–	■
LFR-K		Micro	–																
		Mini	–	–	■	■	–	–	–	–	–	–	–	■	■	–	–	–	■
		Midi	–	–	–	■	■	■	–	–	–	–	–	■	■	–	–	–	■
		Maxi	–	–	–	–	–	■	■	–	–	–	–	■	■	–	–	–	■
Individual devices																			
Filter regulators LFR/LFRS		Micro	■	■	■	–	–	–	–	–	■	■	■	–	–	–	–	■	–
		Mini	–	–	■	■	■	–	–	–	–	–	■	■	–	–	–	■	■
		Midi	–	–	–	■	■	■	■	–	–	–	■	■	–	–	–	■	■
		Maxi	–	–	–	–	–	■	■	■	–	–	■	■	–	–	–	■	■
Filters LF		Micro	■	■	■	–	–	–	–	–	■	■	–	–	–	–	–	■	–
		Mini	–	–	■	■	■	–	–	–	–	–	–	–	–	–	–	■	■
		Midi	–	–	–	■	■	■	■	–	–	–	–	–	–	–	–	■	■
		Maxi	–	–	–	–	–	■	■	■	–	–	–	–	–	–	–	■	■
Fine and micro filters LFMA/LFMB		Micro	–																
		Mini	–	–	■	■	■	–	–	–	–	–	–	–	–	■	■	–	–
		Midi	–	–	–	■	■	■	■	–	–	–	–	–	–	■	■	–	–
		Maxi	–	–	–	–	–	■	■	■	–	–	–	–	–	■	■	–	–
Activated carbon filters LFX		Micro	–																
		Mini	–	–	■	■	■	–	–	–	–	–	–	–	–	–	–	–	–
		Midi	–	–	–	■	■	■	■	–	–	–	–	–	–	–	–	–	–
		Maxi	–	–	–	–	–	■	■	■	–	–	–	–	–	–	–	–	–
Filter combinations LFMBA		Micro	–																
		Mini	–	–	■	■	■	–	–	–	–	–	–	–	–	■	■	–	–
		Midi	–	–	–	■	■	■	■	–	–	–	–	–	–	■	■	–	–
		Maxi	–	–	–	–	–	■	■	■	–	–	–	–	–	■	■	–	–
Pressure regulators LR/LRS		Micro	■	■	■	–	–	–	–	–	■	■	■	–	–	–	–	–	–
		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	Micro	–	■	■	■	–	■	■	■	–	–	–	–	–	–	–	frc
	Mini	■	–	■	–	■	■	■	■	■	–	–	–	–	–	–	
	Midi	■	–	■	–	■	■	■	■	■	–	–	–	–	–	–	
	Maxi	■	–	■	–	■	■	■	■	■	–	–	–	■	■	–	
FRC-K	Micro	–															6
	Mini	■	–	■	–	■	■	–	■	–	■	–	–	–	–	–	
	Midi	■	–	■	–	■	■	–	■	–	■	–	–	–	–	–	
	Maxi	■	–	■	–	■	■	–	■	–	■	–	–	■	■	–	
LFR-K	Micro	–															lfr
	Mini	■	–	■	–	■	■	–	■	■	■	–	–	–	–	–	
	Midi	■	–	■	–	■	■	–	■	■	■	–	–	–	–	–	
	Maxi	■	–	■	–	■	■	–	■	■	■	–	–	■	■	–	
Individual devices																	
Filter regulators LFR/LFRS	Micro	–	■	■	■	–	■	■	■	–	–	–	–	–	–	–	lfr
	Mini	■	–	■	–	■	■	■	■	■	–	–	–	–	–	–	
	Midi	■	–	■	–	■	■	■	■	■	–	–	–	–	–	–	
	Maxi	■	–	■	–	■	■	■	■	■	–	–	–	■	■	–	
Filters LF	Micro	–	■	■	■	–	–	–	–	–	–	–	–	–	–	–	lf
	Mini	■	–	■	–	■	–	–	–	–	–	–	–	–	–	–	
	Midi	■	–	■	–	■	–	–	–	–	–	–	–	–	–	–	
	Maxi	■	–	■	–	■	–	–	–	–	–	–	–	–	–	–	
Fine and micro filters LFMA/LFMB	Micro	–															lfma, lfmb
	Mini	■	–	■	–	■	–	–	–	–	–	–	–	–	–	■	
	Midi	■	–	■	–	■	–	–	–	–	–	–	–	–	–	■	
	Maxi	■	–	■	–	■	–	–	–	–	–	–	–	–	–	■	
Activated carbon filters LFX	Micro	–															lfx
	Mini	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
	Midi	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
	Maxi	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
Filter combinations LFMBA	Micro	–															lfmba
	Mini	■	–	■	–	■	–	–	–	–	–	–	–	–	–	■	
	Midi	■	–	■	–	■	–	–	–	–	–	–	–	–	–	■	
	Maxi	■	–	■	–	■	–	–	–	–	–	–	–	–	–	■	
Pressure regulators LR/LRS	Micro	–	–	–	–	–	■	■	■	–	–	–	–	–	–	–	lr
	Mini	–	–	–	–	–	■	■	■	■	–	–	–	■	–	–	
	Midi	–	–	–	–	–	■	■	■	■	–	–	–	■	–	–	
	Maxi	–	–	–	–	–	■	■	■	■	–	–	–	■	■	–	

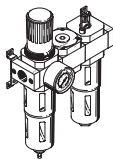
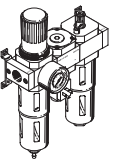
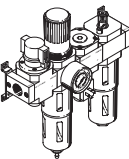
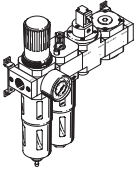
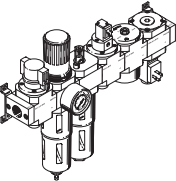
Product range overview – Service unit components, D series, metal

Type	Size	Pneumatic Connection											Pressure regulation range [bar]		
													0.5 ... 7	0.5 ... 12	
Individual devices															
Pressure regulators LRB/LRBS		Micro	–												
		Mini	–	–	–	■	–	–	–	–	–	–	■	■	
		Midi	–	–	–	–	■	–	–	–	–	–	■	■	
		Maxi	–												
Pressure regulator manifolds LRB-K		Micro	–												
		Mini	–	–	–	■	■	–	–	–	–	–	■	■	
		Midi	–	–	–	–	■	■	–	–	–	–	■	■	
		Maxi	–												
Lubricators LOE		Micro	■	■	■	–	–	–	–	–	■	■	–	–	
		Mini	–	–	■	■	■	–	–	–	–	–	–	–	
		Midi	–	–	–	■	■	■	■	–	–	–	–	–	
		Maxi	–	–	–	–	–	■	■	■	–	–	–	–	
On/off valves HE		Micro	–												
		Mini	–	–	■	■	■	–	–	–	–	–	–	–	
		Midi	–	–	–	■	■	■	■	–	–	–	–	–	
		Maxi	–	–	–	–	–	■	■	■	–	–	–	–	
On/off valves HEE		Micro	–												
		Mini	–	–	■	■	■	–	–	–	–	–	–	–	
		Midi	–	–	–	■	■	■	■	–	–	–	–	–	
		Maxi	–	–	–	–	–	■	■	■	–	–	–	–	
On/off valves HEP		Micro	–												
		Mini	–	–	■	■	■	–	–	–	–	–	–	–	
		Midi	–	–	–	■	■	■	■	–	–	–	–	–	
		Maxi	–	–	–	–	–	■	■	■	–	–	–	–	
Soft-start valves HEL		Micro	–												
		Mini	–	–	■	■	■	–	–	–	–	–	–	–	
		Midi	–	–	–	■	■	■	■	–	–	–	–	–	
		Maxi	–	–	–	–	–	■	■	■	–	–	–	–	
Membrane air dryers LDM1		Micro	–												
		Mini	–												
		Midi	–												
		Maxi	–	–	–	–	–	–	■	■	■	–	–	–	–
Branching modules FRM		Micro	–												
		Mini	–	–	■	■	■	–	–	–	–	–	–	–	
		Midi	–	–	–	■	■	■	■	–	–	–	–	–	
		Maxi	–	–	–	–	–	■	■	■	–	–	–	–	
Distributor block FRZ		Micro	–	–	–	–	–	–	–	–	–	–	–	–	
		Mini	–	–	–	–	–	–	–	–	–	–	–	–	
		Midi	–	–	–	–	–	–	–	–	–	–	–	–	
		Maxi	–	–	–	–	–	–	–	–	–	–	–	–	

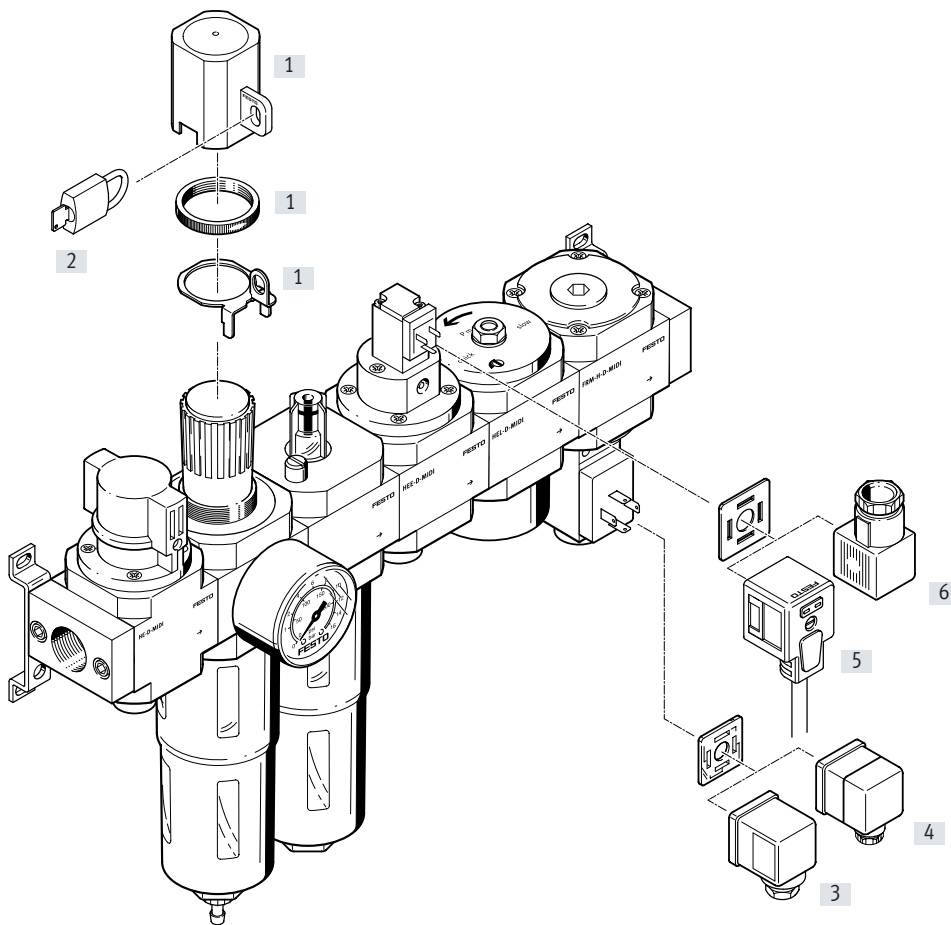
Product range overview – Service unit components, D series, metal

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	–	–	–	■	■	■	–	–	–	–	–		
	Maxi	–	–											
Pressure regulator manifolds LRB-K	Micro	–												lrb
	Mini	–	–	–	■	■	–	–	–	–	–	–		
	Midi	–	–	–	■	■	–	–	–	–	–	–		
	Maxi	–	–											
Lubricators LOE	Micro	–	■	–	■	–	–	–	–	–	–	–	loe	
	Mini	■	–	–	■	–	–	–	–	–	–	–		
	Midi	■	–	–	■	–	–	–	–	–	–	–		
	Maxi	■	–	–	■	–	–	–	–	–	–	–		
On/off valves HE	Micro	–												he
	Mini	–	–	–	■	■	–	–	–	–	–	–		
	Midi	–	–	–	■	■	–	–	–	–	–	–		
	Maxi	–	–	–	■	■	–	–	–	–	–	–		
On/off valves HEE	Micro	–												hee
	Mini	–	–	–	■	–	–	■	■	■	–	–		
	Midi	–	–	–	■	–	–	■	■	■	–	–		
	Maxi	–	–	–	■	–	–	■	■	■	–	–		
On/off valves HEP	Micro	–												hep
	Mini	–	–	–	■	–	–	–	–	–	–	–		
	Midi	–	–	–	■	–	–	–	–	–	–	–		
	Maxi	–	–	–	■	–	–	–	–	–	–	–		
Soft-start valves HEL	Micro	–												hel
	Mini	–	–	–	■	–	–	–	–	–	–	–		
	Midi	–	–	–	■	–	–	–	–	–	–	–		
	Maxi	–	–	–	■	–	–	–	–	–	–	–		
Membrane air dryers LDM1	Micro	–												ldm1
	Mini	–												
	Midi	–												
	Maxi	■	–	–	■	–	–	–	–	–	–	–		
Branching modules FRM	Micro	–												frm
	Mini	–	–	–	■	–	–	–	–	–	■	■		
	Midi	–	–	–	■	–	–	–	–	–	■	■		
	Maxi	–	–	–	■	–	–	–	–	–	■	■		
Distributor block FRZ	Micro	–	–	–	■	–	–	–	–	–	–	–	frz	
	Mini	–	–	–	■	–	–	–	–	–	–	–		
	Midi	–	–	–	■	–	–	–	–	–	–	–		
	Maxi	–	–	–	■	–	–	–	–	–	–	–		

Product range overview

FRC Rotary knob with latch					
	WTP	RH	KC	KE	KF
Individual devices					
On/off valve Manually operated	–	–	■	–	■
Filter regulator with pressure gauge	■	■	■	■	■
Branching module	■	–	–	–	–
Branching module with pressure switch	–	■	■	–	■
Lubricators	■	■	■	■	■
On/off valve Electrically actuated, 24 V DC	–	–	–	■	■
Soft-start valve Pneumatically actuated	–	–	–	■	■
Mounting bracket	■	■	■	■	■
→ Page/Internet	9	12	15	18	21

Peripherals overview



 Note

The range of accessories depends on the service unit selected. The example shows service unit FRC-KF.

Range of accessories

→ Peripherals pages of the individual devices

Mounting attachments and accessories		→ Page/Internet
[1]	Regulator lock LRVS	lrvs-d
[2]	Padlock LRVS	lrvs-d
[3]	Plug socket MSSD-C	35
[4]	Angled plug socket PEV-...-WD-LED	35
[5]	Plug socket with cable KMEB-1	35
[6]	Plug socket MSSD-EB	35
-	Filter cartridge LFP	34
-	Special oil OFSW	34

Type codes

001	Series	
FRC	Service unit	

002	Pneumatic connection	
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	

003	Version	
D	D series, metal	

004	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)	

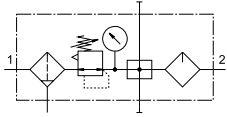
005	Service unit combination	
KA	Filter regulator, branching module and lubricator	
KC	Manually operated on/off valve, filter regulator, branching module and lubricator	
KB	Filter regulator, branching module with pressure switch and lubricator	
KE	Filter regulator, lubricator, on/off valve electrically actuated, 24 V DC, soft-start valve pneumatically actuated	
KF	On/off valve manually operated, filter regulator, lubricator, on/off valve electrically actuated, 24 V DC, soft-start valve pneumatically actuated, branching module with pressure switch	

006	Condensate drain	
A	Fully automatic	
	Manually rotating	

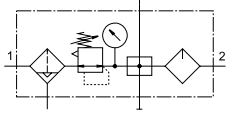
Datasheet FRC-KA

Function

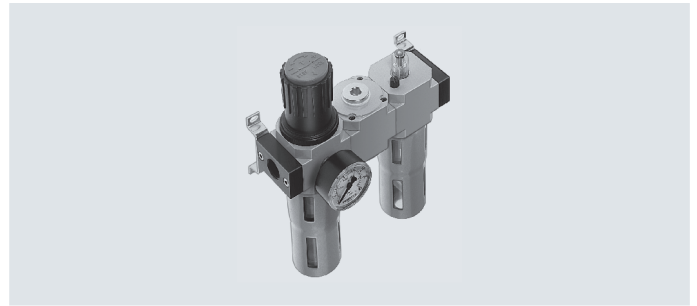
With condensate drain
Manual



With condensate drain
Fully automatic



-  Flow rate
650 ... 8200 l/min
-  Temperature range
-10 ... +60°C
-  Operating pressure
1 ... 16 bar
(0.1 ... 1.6 MPa)



- Filter regulator LFR
- Branching module FRM
- Lubricators LOE
- Mounting accessories

- For lubricated and unlubricated compressed air
- Two connections for unlubricated compressed air supply
- One connection for lubricated compressed air supply
- New filter cartridges → page 34

General technical data

Size	Mini		Midi			Maxi	
Pneumatic connection 1, 2	G1/8	G1/4	G1/4	G3/8	G1/2	G1/2	G3/4
Type of mounting	With accessories						
	In-line installation						
Mounting position	Vertical ±5°						
Grade of filtration [µm]	40						
Air purity class at the output	Compressed air to ISO 8573-1:2010 [7:4:-]						
	Inert gases						
Bowl guard	Metal bowl guard						
Condensate drain	Manual						
	Fully automatic						
Actuator lock	Rotary knob with latch						
Pressure regulation range [bar]	0.5 ... 12 (0.05 ... 1.2 MPa)						
Max. pressure hysteresis [bar]	0.15 (0.015 MPa)	0.2 (0.02 MPa)	0.25 (0.025 MPa)	0.2 (0.02 MPa)	0.3 (0.03 MPa)	0.1 (0.01 MPa)	0.2 (0.02 MPa)
Pressure indicator	With pressure gauge						
Max. condensate volume [cm ³]	22		43			80 (43) ¹⁾	

1) With FRC...-D-DI.

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

Standard nominal flow rate $q_{nN}^{1)}$ [l/min]

Connection	Mini		Midi			Maxi	
	G1/8	G1/4	G1/4	G3/8	G1/2	G1/2	G3/4
In main flow direction 1 → 2	650	980	1400	2100	2500	7500 (3900) ²⁾	8200 (5000) 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) With FRC...-D-DI.

• 125 l/min must be available for the fully automatic condensate drain to close correctly.

Datasheet FRC-KA

Operating and environmental conditions		
Condensate drain	Manual	Fully automatic
Operating pressure [bar]	1 ... 16 (0.1 ... 1.6 MPa)	2 ... 12 (0.2 ... 1.2 MPa)
Operating medium	Compressed air to ISO 8573-1:2010 [–:–:–]	
	Inert gases	
Ambient temperature [°C]	–10 ... +60	
Temperature of medium [°C]	–10 ... +60	
Corrosion resistance class CRC ¹⁾	2	

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

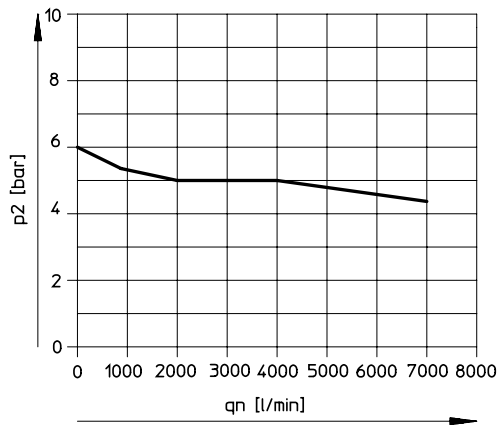
Weight [g]			
Size	Mini	Midi	Maxi
FRC	1000	2400	3500 (3700) ¹⁾

1) With FRC...-D-DI.

**Note**

Materials → Datasheet for the individual devices

Standard flow rate qn as a function of output pressure p2
FRC-1/2-D-DI-MAXI-KA(-A)



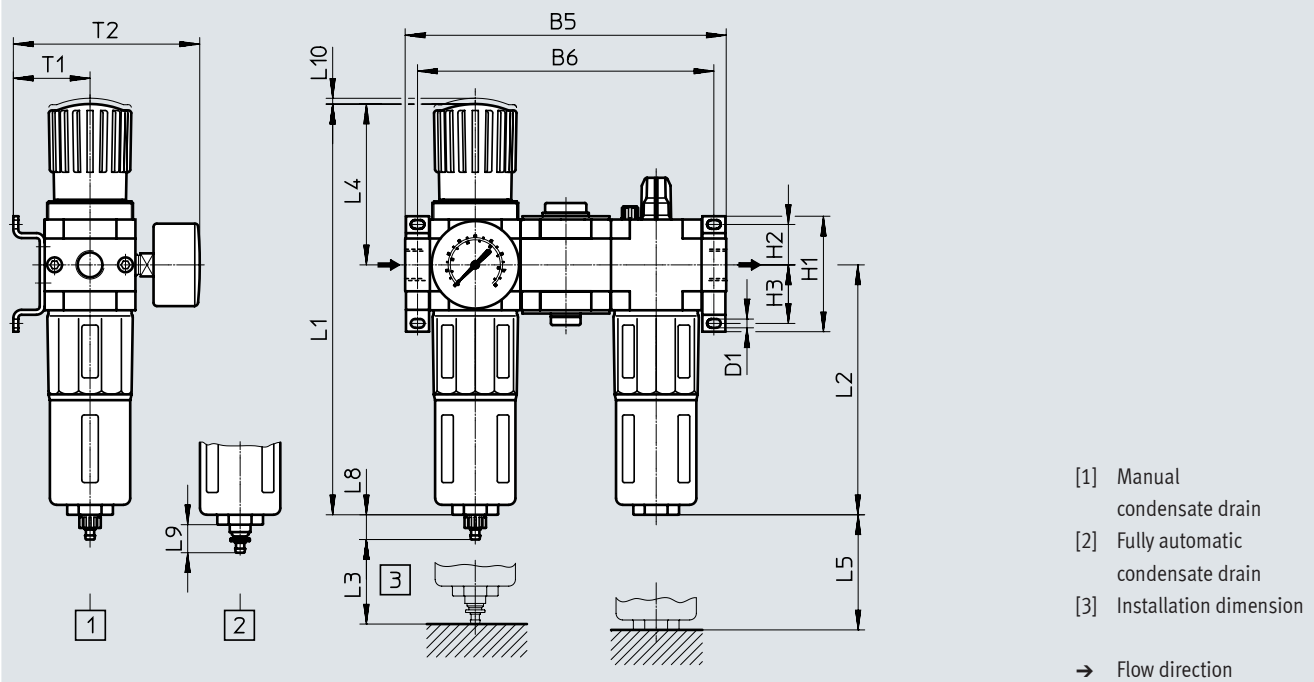
Primary pressure p1 = 10 bar (1 MPa)

Datasheet FRC-KA

Dimensions

Download CAD data → www.festo.com

FRC...-KA



Type	B5	B6	D1	H1	H2	H3	L1	L2	L3	L4	L5	L8	L9	L10	T1	T2
Mini																
FRC...-D-MINI-KA (-A)	144	132	4.3	43	17.5	17.5	193	124	60	68	100	15	19	3	39	95
Midi																
FRC...-D-MIDI-KA (-A)	195	180	5.3	70	24.5	35.5	250	152	80	99	120	15	19	3	47	114
Maxi																
FRC...-D-MAXI-KA (-A)	228	212	5.3	70	24.5	35.5	252	171	90	82	150	15	19	3	53	126

Ordering data

Pressure gauge with outer scale in bar and inner scale in psi

Size	Connection	Condensate drain		Condensate drain	
		Manual		Fully automatic	
		Part no.	Type	Part no.	Type
Mini	G1/8	185791	FRC-1/8-D-MINI-KA	185792	FRC-1/8-D-MINI-KA-A
	G1/4	185793	FRC-1/4-D-MINI-KA	185794	FRC-1/4-D-MINI-KA-A
Midi	G1/4	185795	FRC-1/4-D-MIDI-KA	185796	FRC-1/4-D-MIDI-KA-A
	G3/8	185797	FRC-3/8-D-MIDI-KA	185798	FRC-3/8-D-MIDI-KA-A
	G1/2	185799	FRC-1/2-D-MIDI-KA	185800	FRC-1/2-D-MIDI-KA-A
Maxi	G1/2	186053	FRC-1/2-D-MAXI-KA	186054	FRC-1/2-D-MAXI-KA-A
	G3/4	185801	FRC-3/4-D-MAXI-KA	185802	FRC-3/4-D-MAXI-KA-A

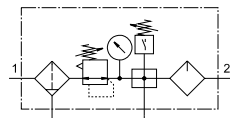
Note: This product conforms to ISO 1179-1 and ISO 228-1.

Datasheet FRC-KB

Function

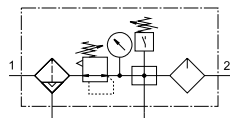
With condensate drain

Manual



With condensate drain

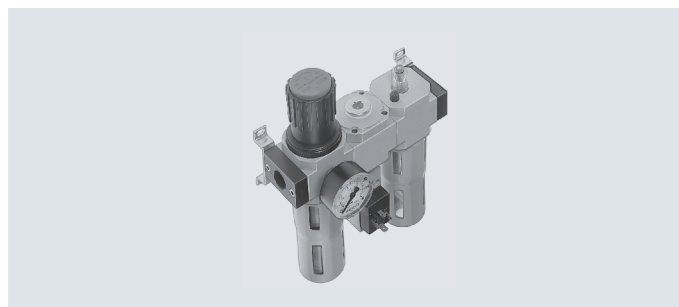
Fully automatic



Flow rate
650 ... 8200 l/min

Temperature range
-10 ... +60°C

Operating pressure
1 ... 16 bar
(0.1 ... 1.6 MPa)



- Electrical pressure monitoring with adjustable switching pressure
- For lubricated and unlubricated compressed air
- One connection for unlubricated compressed air supply
- One connection for lubricated compressed air supply
- New filter cartridges → page 34

- Filter regulator LFR
- Branching module FRM with pressure switch
- Lubricators LOE
- Mounting accessories

General technical data

Size	Mini		Midi			Maxi	
Pneumatic connection 1, 2	G1/8	G1/4	G1/4	G3/8	G1/2	G1/2	G3/4
Type of mounting	With accessories						
	In-line installation						
Mounting position	Vertical ±5°						
Grade of filtration [µm]	40						
Air purity class at the output	Compressed air to ISO 8573-1:2010 [7:4:-]						
	Inert gases						
Bowl guard	Metal bowl guard						
Condensate drain	Manual						
	Fully automatic						
Actuator lock	Rotary knob with latch						
Pressure regulation range [bar]	0.5 ... 12 (0.05 ... 1.2 MPa)						
Max. pressure hysteresis [bar]	0.25 (0.025 MPa)	0.2 (0.02 MPa)	0.25 (0.025 MPa)	0.35 (0.035 MPa)	0.35 (0.035 MPa)	0.1 (0.01 MPa)	0.2 (0.02 MPa)
Pressure indicator	With pressure gauge						
Max. condensate volume [cm³]	22		43			80 (43) ¹⁾	

1) With FRC-...D-DI.

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

Standard nominal flow rate $q_{nN}^{1)}$ [l/min]

Connection	Mini		Midi			Maxi	
	G1/8	G1/4	G1/4	G3/8	G1/2	G1/2	G3/4
In main flow direction 1 → 2	650	980	1400	2100	2500	7500 (5400) ²⁾	8200 (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) With FRC-...D-DI.

- 125 l/min must be available for the fully automatic condensate drain to close correctly.

Datasheet FRC-KB

Operating and environmental conditions		
Condensate drain	Manual	Fully automatic
Operating pressure [bar]	1 ... 16 (0.1 ... 1.6 MPa)	2 ... 12 (0.2 ... 1.2 MPa)
Operating medium	Compressed air to ISO 8573-1:2010 [--:--:]	
	Inert gases	
Ambient temperature [°C]	-10 ... +60	
Temperature of medium [°C]	-10 ... +60	
Corrosion resistance class CRC ¹⁾	2	

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Weight [g]			
Size	Mini	Midi	Maxi
FRC	1200	2600	3500 (3700) ¹⁾

1) With FRC...-D-DI.

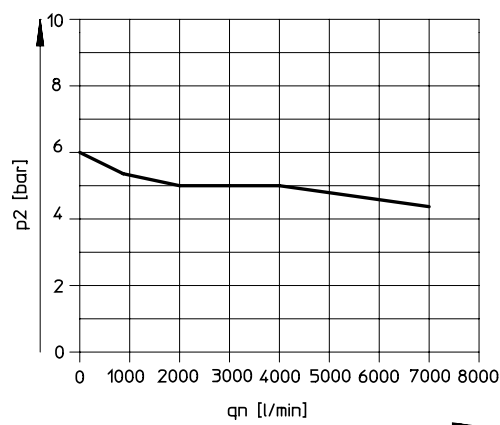


Note

Materials → Datasheet for the individual devices

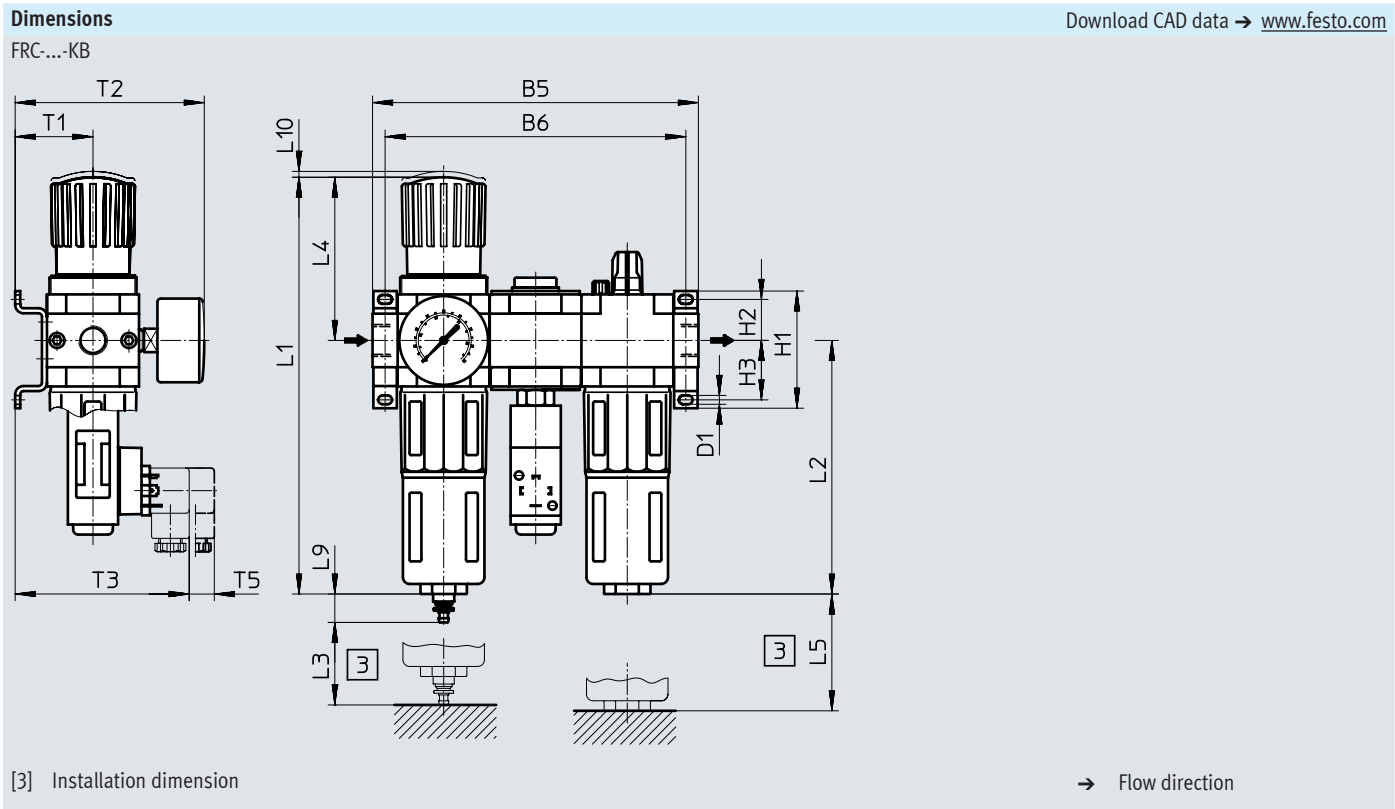
Standard flow rate q_n as a function of output pressure p_2

FRC-1/2-D-DI-MAXI-KB(-A)



Primary pressure $p_1 = 10$ bar (1 MPa)

Datasheet FRC-KB



Type	B5	B6	D1	H1	H2	H3	L1	L2	L3	L4	L5	L9	L10	T1	T2	T3	T5
Mini																	
FRC-...-D-MINI-KB (-A)	144	132	4.3	43	17.5	17.5	193	124	60	68	100	19	3	39	95	97	15
Midi																	
FRC-...-D-MIDI-KB (-A)	195	180	5.3	70	24.5	35.5	250	152	80	99	120	19	3	47	114	105	15
Maxi																	
FRC-...-D-MAXI-KB (-A)	228	212	5.3	70	24.5	35.5	252	171	90	82	150	19	3	53	126	111	15

Ordering data

Pressure gauge with outer scale in bar and inner scale in psi

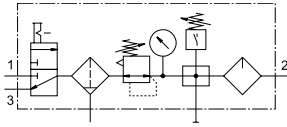
Size	Connection	Condensate drain		Condensate drain	
		Manual		Fully automatic	
		Part no.	Type	Part no.	Type
Mini	G1/8	185803	FRC-1/8-D-MINI-KB	185804	FRC-1/8-D-MINI-KB-A
	G1/4	185805	FRC-1/4-D-MINI-KB	185806	FRC-1/4-D-MINI-KB-A
Midi	G1/4	185807	FRC-1/4-D-MIDI-KB	185808	FRC-1/4-D-MIDI-KB-A
	G3/8	185809	FRC-3/8-D-MIDI-KB	185810	FRC-3/8-D-MIDI-KB-A
	G1/2	185811	FRC-1/2-D-MIDI-KB	185812	FRC-1/2-D-MIDI-KB-A
Maxi	G1/2	186055	FRC-1/2-D-MAXI-KB	186056	FRC-1/2-D-MAXI-KB-A
	G3/4	185813	FRC-3/4-D-MAXI-KB	185814	FRC-3/4-D-MAXI-KB-A

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

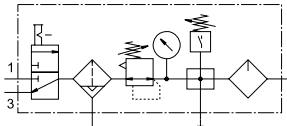
Datasheet FRC-KC

Function

With condensate drain
Manual

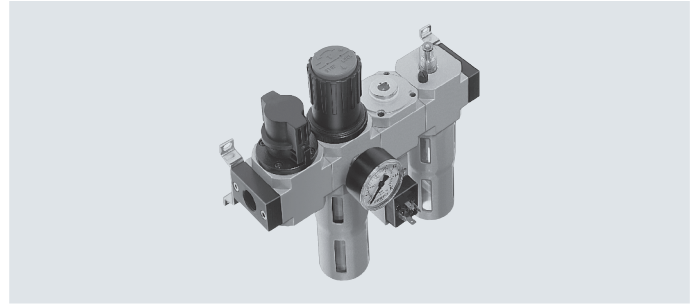


With condensate drain
Fully automatic



- On/off valve HE, manually operated
- Filter regulator LFR
- Branching module FRM with pressure switch
- Lubricators LOE
- Mounting accessories

- Flow rate
640 ... 7800 l/min
- Temperature range
-10 ... +60°C
- Operating pressure
1 ... 16 bar
(0.1 ... 1.6 MPa)



- An additional quick exhaust valve is required at the service unit outlet for safe exhausting of the system
- Electrical pressure monitoring with adjustable switching pressure
- The system is exhausted when it is switched off
- For lubricated and unlubricated compressed air
- One connection for unlubricated compressed air supply
- One connection for lubricated compressed air supply
- New filter cartridges → page 34

General technical data

Size	Mini		Midi			Maxi	
Pneumatic connection 1, 2	G1/8	G1/4	G1/4	G3/8	G1/2	G1/2	G3/4
Type of mounting	With accessories						
	In-line installation						
Mounting position	Vertical ±5°						
Grade of filtration [µm]	40						
Air purity class at the output	Compressed air to ISO 8573-1:2010 [7:4:-]						
	Inert gases						
Bowl guard	Metal bowl guard						
Condensate drain	Manual						
	Fully automatic						
Actuator lock	Rotary knob with latch						
Pressure regulation range [bar]	0.5 ... 12 (0.05 ... 1.2 MPa)						
Max. pressure hysteresis [bar]	0.2 (0.02 MPa)	0.2 (0.02 MPa)	0.4 (0.04 MPa)	0.3 (0.03 MPa)	0.3 (0.03 MPa)	0.15 (0.015 MPa)	0.15 (0.015 MPa)
Pressure indicator	With pressure gauge						
Max. condensate volume [cm ³]	22		43			80 (43) ¹⁾	

1) With FRC...-D-DI.

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

Standard nominal flow rate $q_{nN}^{1)}$ [l/min]

Connection	Mini		Midi			Maxi	
	G1/8	G1/4	G1/4	G3/8	G1/2	G1/2	G3/4
In main flow direction 1 → 2	640	870	1320	1870	2400	6600 (4800) ²⁾	7800 (5400) 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) With FRC...-D-DI.

• 125 l/min must be available for the fully automatic condensate drain to close correctly.

Datasheet FRC-KC

Operating and environmental conditions		
Condensate drain	Manual	Fully automatic
Operating pressure [bar]	1 ... 16 (0.1 ... 1.6 MPa)	1.5 ... 12 (0.15 ... 1.2 MPa)
Operating medium	Compressed air to ISO 8573-1:2010 [–:–:–]	
	Inert gases	
Ambient temperature [°C]	–10 ... +60	
Temperature of medium [°C]	–10 ... +60	
Corrosion resistance class CRC ¹⁾	2	

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

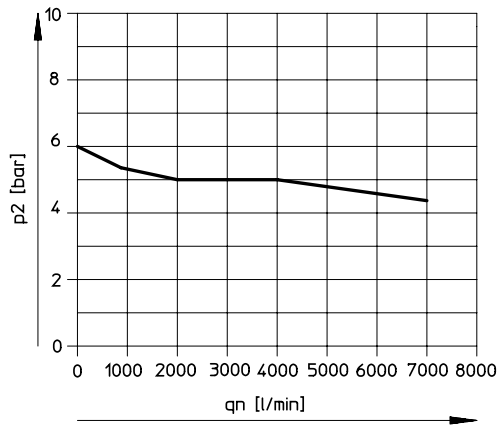
Weight [g]			
Size	Mini	Midi	Maxi
FRC	1400	3000	4600 (4800) ¹⁾

1) With FRC...-D-DI.

 **Note**

Materials → Datasheet for the individual devices

Standard flow rate qn as a function of output pressure p2
FRC-1/2-D-DI-MAXI-KC(-A)



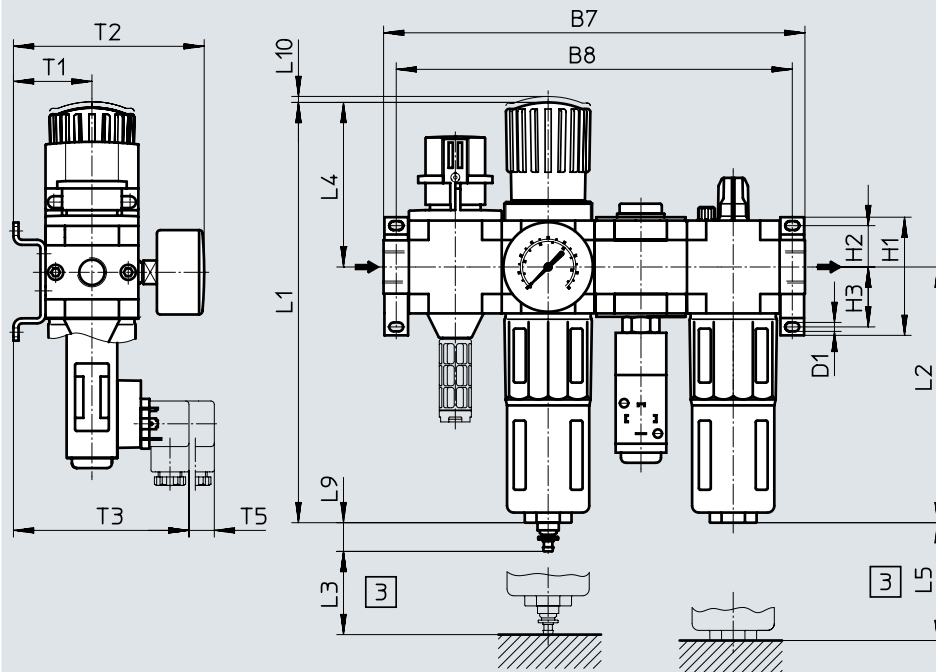
Primary pressure p1 = 10 bar (1 MPa)

Datasheet FRC-KC

Dimensions

Download CAD data → www.festo.com

FRC-...-KC



[3] Installation dimension

→ Flow direction

Type	B7	B8	D1	H1	H2	H3	L1	L2	L3	L4	L5	L9	L10	T1	T2	T3	T5
Mini																	
FRC-...-D-MINI-KC (-A)	184	172	4.3	43	17.5	17.5	193	124	60	68	100	19	3	39	95	97	15
Midi																	
FRC-...-D-MIDI-KC (-A)	250	235	5.3	70	24.5	35.5	250	152	80	99	120	19	3	47	114	105	15
Maxi																	
FRC-...-D-MAXI-KC (-A)	294	278	5.3	70	24.5	35.5	252	171	90	82	150	19	3	53	126	111	15

Ordering data

Pressure gauge with outer scale in bar and inner scale in psi

Size	Connection	Condensate drain		Condensate drain	
		Manual		Fully automatic	
		Part no.	Type	Part no.	Type
Mini	G1/8	185815	FRC-1/8-D-MINI-KC	185816	FRC-1/8-D-MINI-KC-A
	G1/4	185817	FRC-1/4-D-MINI-KC	185818	FRC-1/4-D-MINI-KC-A
Midi	G1/4	185819	FRC-1/4-D-MIDI-KC	185820	FRC-1/4-D-MIDI-KC-A
	G3/8	185821	FRC-3/8-D-MIDI-KC	185822	FRC-3/8-D-MIDI-KC-A
	G1/2	185823	FRC-1/2-D-MIDI-KC	185824	FRC-1/2-D-MIDI-KC-A
Maxi	G1/2	186057	FRC-1/2-D-MAXI-KC	186058	FRC-1/2-D-MAXI-KC-A
	G3/4	185825	FRC-3/4-D-MAXI-KC	185826	FRC-3/4-D-MAXI-KC-A

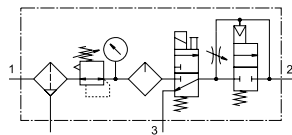
Note: This product conforms to ISO 1179-1 and ISO 228-1.

Datasheet FRC-KE

Function

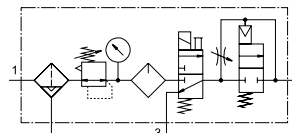
With condensate drain

Manual



With condensate drain

Fully automatic

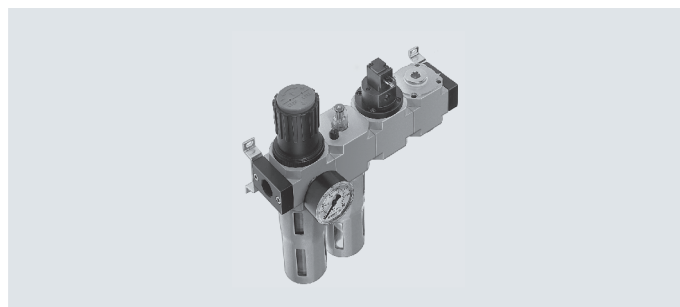


- Filter regulator LFR
- Lubricators LOE
- On/off valve HEE, electrically actuated, 24 V DC
- Soft-start valve HEL, pneumatically actuated
- Mounting accessories

–  – Flow rate
550 ... 3800 l/min

–  – Temperature range
–10 ... +60°C

–  – Operating pressure
3 ... 16 bar
(0.3 ... 1.6 MPa)



- Gradual pressure build-up at switch-on prevents sudden, unpredictable movements
- When the unit is switched off, quick exhausting ensures rapid pressure reduction
- For lubricated compressed air
- New filter cartridges → page 34

General technical data

Size	Mini		Midi			Maxi	
Pneumatic connection 1, 2	G1/8	G1/4	G1/4	G3/8	G1/2	G1/2	G3/4
Type of mounting	With accessories						
	In-line installation						
Mounting position	Vertical ±5°						
Grade of filtration [µm]	40						
Air purity class at the output	Compressed air to ISO 8573-1:2010 [7:4:–]						
	Inert gases						
Bowl guard	Metal bowl guard						
Condensate drain	Manual						
	Fully automatic						
Actuator lock	Rotary knob with latch						
Pressure regulation range [bar]	2.5 ... 12 (0.25 ... 1.2 MPa)						
Max. pressure hysteresis [bar]	0.15 (0.015 MPa)	0.15 (0.015 MPa)	0.25 (0.025 MPa)	0.2 (0.02 MPa)	0.4 (0.04 MPa)	0.3 (0.03 MPa)	0.3 (0.03 MPa)
Pressure indicator	With pressure gauge						
Max. condensate volume [cm ³]	22		43			80 (43) ¹⁾	

1) With FRC...D-DI.

–  Note: This product conforms to ISO 1179-1 and ISO 228-1.Standard nominal flow rate $q_{nN}^{1)}$ [l/min]

Connection	Mini		Midi			Maxi	
	G1/8	G1/4	G1/4	G3/8	G1/2	G1/2	G3/4
In main flow direction 1 → 2	550	650	1100	1420	1590	3500 (2900) ²⁾	3800 (3300) 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) With FRC...D-DI.

–  125 l/min must be available for the fully automatic condensate drain to close correctly.

Datasheet FRC-KE

Operating and environmental conditions		
Condensate drain	Manual	Fully automatic
Operating pressure [bar]	3 ... 16 (0.3 ... 1.6 MPa)	
Operating medium	Compressed air to ISO 8573-1:2010 [---:-]	
	Inert gases	
Ambient temperature [°C]	-10 ... +60	
Temperature of medium [°C]	-10 ... +60	
Corrosion resistance class CRC ¹⁾	2	

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Weight [g]			
Size	Mini	Midi	Maxi
FRC	1200	2800	4200 (4400) ¹⁾

1) With FRC...-D-DI.

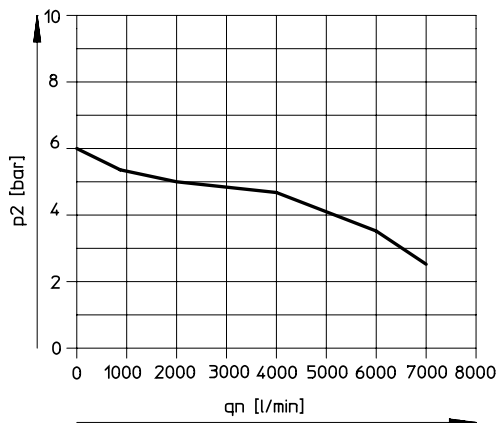


Note

Materials → Datasheet for the individual devices

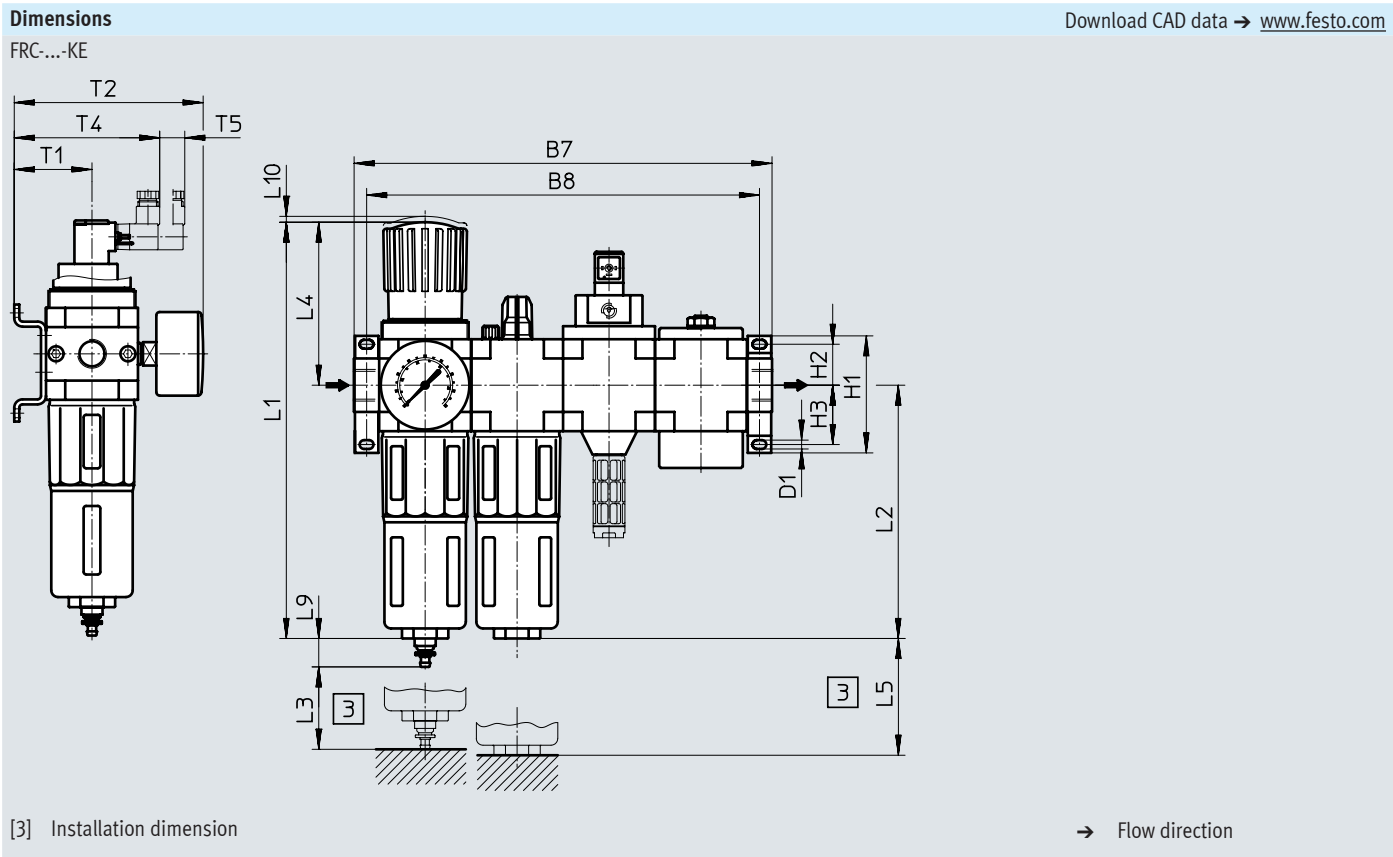
Standard flow rate q_n as a function of output pressure p_2

FRC-1/2-D-DI-MAXI-KE(-A)



Primary pressure $p_1 = 10 \text{ bar (1 MPa)}$

Datasheet FRC-KE



Type	B7	B8	D1	H1	H2	H3	L1	L2	L3	L4	L5	L9	L10	T1	T2	T4	T5
Mini																	
FRC-...-D-MINI-KE (-A)	184	172	4.3	43	17.5	17.5	193	124	60	68	100	19	3	39	95	78	15
Midi																	
FRC-...-D-MIDI-KE (-A)	250	235	5.3	70	24.5	35.5	250	152	80	99	120	19	3	47	114	86	15
Maxi																	
FRC-...-D-MAXI-KE (-A)	294	278	5.3	70	24.5	35.5	252	171	90	82	150	19	3	53	126	92	15

Ordering data

Pressure gauge with outer scale in bar and inner scale in psi

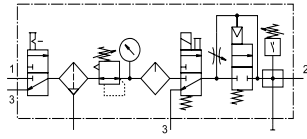
Size	Connection	Condensate drain		Condensate drain	
		Manual		Fully automatic	
		Part no.	Type	Part no.	Type
Mini	G1/8	185827	FRC-1/8-D-MINI-KE	185828	FRC-1/8-D-MINI-KE-A
	G1/4	185829	FRC-1/4-D-MINI-KE	185830	FRC-1/4-D-MINI-KE-A
Midi	G1/4	185831	FRC-1/4-D-MIDI-KE	185832	FRC-1/4-D-MIDI-KE-A
	G3/8	185833	FRC-3/8-D-MIDI-KE	185834	FRC-3/8-D-MIDI-KE-A
	G1/2	185835	FRC-1/2-D-MIDI-KE	185836	FRC-1/2-D-MIDI-KE-A
Maxi	G1/2	186059	FRC-1/2-D-MAXI-KE	186060	FRC-1/2-D-MAXI-KE-A
	G3/4	185837	FRC-3/4-D-MAXI-KE	185838	FRC-3/4-D-MAXI-KE-A

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

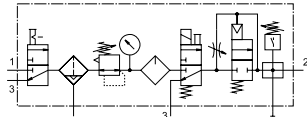
Datasheet FRC-KF

Function

With condensate drain
Manual

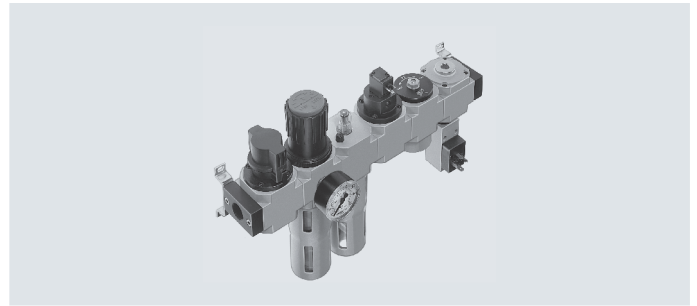


With condensate drain
Fully automatic



- On/off valve HE, manually operated
- Filter regulator LFR
- Lubricators LOE
- On/off valve HEE, electrically actuated, 24 V DC
- Soft-start valve HEL, pneumatically actuated
- Branching module FRM with pressure switch
- Mounting accessories

- Flow rate
530 ... 6000 l/min
- Temperature range
-10 ... +60°C
- Operating pressure
3 ... 16 bar
(0.3 ... 1.6 MPa)



- Gradual pressure build-up at switch-on prevents sudden, unpredictable movements
- An additional quick exhaust valve is required at the service unit outlet for safe exhausting of the system
- For lubricated compressed air
- Two branch connections are available
- Supply pressure can be opened and closed
- New filter cartridges → page 34

General technical data

Size	Mini		Midi			Maxi	
Pneumatic connection 1, 2	G1/8	G1/4	G1/4	G3/8	G1/2	G1/2	G3/4
Type of mounting	With accessories						
	In-line installation						
Mounting position	Vertical ±5°						
Grade of filtration [µm]	40						
Air purity class at the output	Compressed air to ISO 8573-1:2010 [7:4:-]						
	Inert gases						
Bowl guard	Metal bowl guard						
Condensate drain	Manual						
	Fully automatic						
Actuator lock	Rotary knob with latch						
Pressure regulation range [bar]	2.5 ... 12 (0.25 ... 1.2 MPa)						
Max. pressure hysteresis [bar]	0.2 (0.02 MPa)	0.3 (0.03 MPa)	0.25 (0.025 MPa)	0.3 (0.03 MPa)	0.25 (0.025 MPa)	0.3 (0.03 MPa)	0.25 (0.025 MPa)
Pressure indicator	With pressure gauge						
Max. condensate volume [cm ³]	22		43			80 (43) ¹⁾	

1) With FRC...-D-DI.

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

Standard nominal flow rate $q_{nN}^{1)}$ [l/min]

Connection	Mini		Midi			Maxi	
	G1/8	G1/4	G1/4	G3/8	G1/2	G1/2	G3/4
In main flow direction 1 → 2	530	620	1060	1150	1220	3400 (5000) ²⁾	3700 (6000) 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) With FRC...-D-DI.

• 125 l/min must be available for the fully automatic condensate drain to close correctly.

Datasheet FRC-KF

Operating and environmental conditions		
Condensate drain	Manual	Fully automatic
Operating pressure [bar]	3 ... 16 (0.3 ... 1.6 MPa)	
Operating medium	Compressed air to ISO 8573-1:2010 [–:–:–]	
	Inert gases	
Ambient temperature [°C]	–10 ... +60	
Temperature of medium [°C]	–10 ... +60	
Corrosion resistance class CRC ¹⁾	2	

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

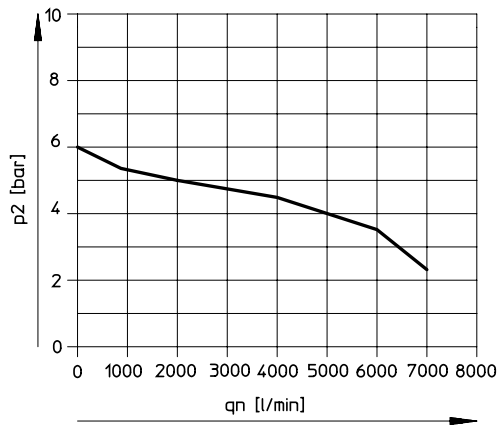
Weight [g]			
Size	Mini	Midi	Maxi
FRC	1800	4000	6300 (6500) ¹⁾

1) With FRC-...-D-DI.

 **Note**

Materials → Datasheet for the individual devices

Standard flow rate qn as a function of output pressure p2
FRC-1/2-D-DI-MAXI-KF(-A)



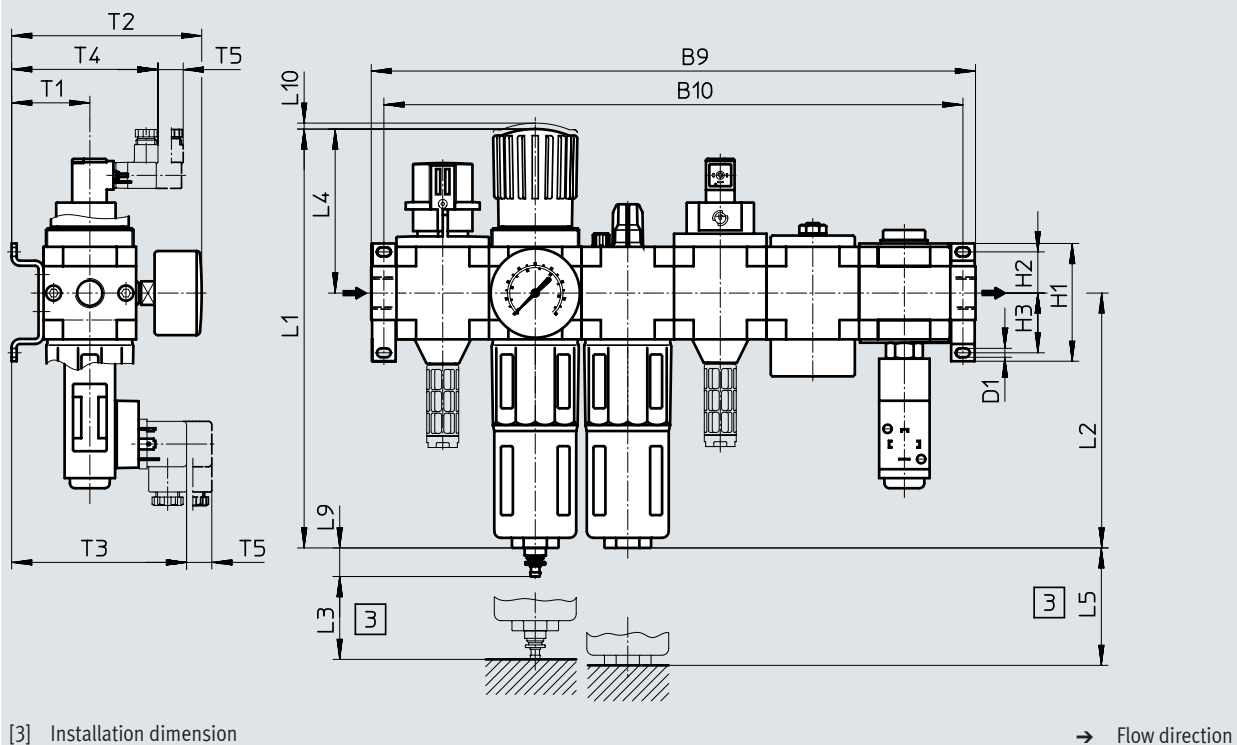
Primary pressure p1 = 10 bar (1 MPa)

Datasheet FRC-KF

Dimensions

Download CAD data → www.festo.com

FRC-...-KF



Type	B9	B10	D1	H1	H2	H3	L1	L2	L3	L4	L5	L9	L10	T1	T2	T3	T4	T5
Mini																		
FRC-...-D-MINI-KF (-A)	264	252	4.3	43	17.5	17.5	193	124	60	68	100	19	3	39	95	97	78	15
Midi																		
FRC-...-D-MIDI-KF (-A)	360	344	5.3	70	24.5	35.5	250	152	80	99	120	19	3	47	114	105	86	15
Maxi																		
FRC-...-D-MAXI-KF (-A)	426	410	5.3	70	24.5	35.5	252	171	90	82	150	19	3	53	126	111	92	15

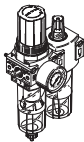
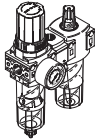
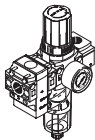
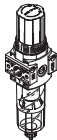
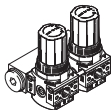
Ordering data

Pressure gauge with outer scale in bar and inner scale in psi

Size	Connection	Condensate drain		Condensate drain	
		Manual		Fully automatic	
		Part no.	Type	Part no.	Type
Mini	G1/8	185839	FRC-1/8-D-MINI-KF	185840	FRC-1/8-D-MINI-KF-A
	G1/4	185841	FRC-1/4-D-MINI-KF	185842	FRC-1/4-D-MINI-KF-A
Midi	G1/4	185843	FRC-1/4-D-MIDI-KF	185844	FRC-1/4-D-MIDI-KF-A
	G3/8	185845	FRC-3/8-D-MIDI-KF	185846	FRC-3/8-D-MIDI-KF-A
	G1/2	185847	FRC-1/2-D-MIDI-KF	185848	FRC-1/2-D-MIDI-KF-A
Maxi	G1/2	186061	FRC-1/2-D-MAXI-KF	186062	FRC-1/2-D-MAXI-KF-A
	G3/4	185849	FRC-3/4-D-MAXI-KF	185850	FRC-3/4-D-MAXI-KF-A

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

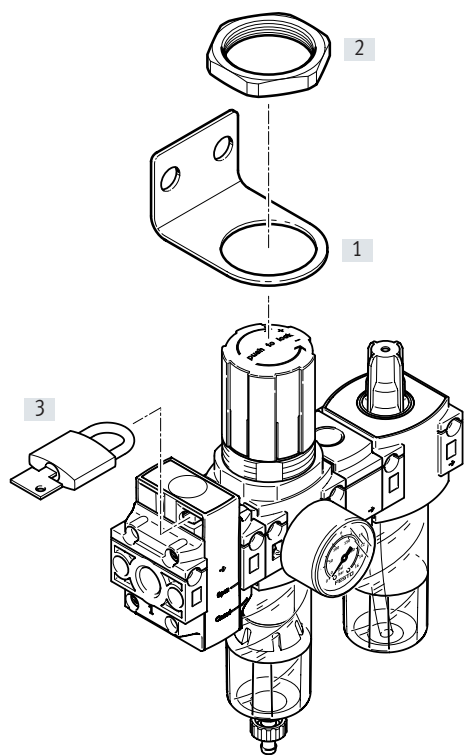
Product range overview – Service unit components, D series, polymer

Type	Size	Pneumatic connection		Pressure regulation range [bar]	Grade of filtration	
					[µm]	
		G1/4	G1/2	0.5 ... 7	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 indicator		Actuator lock	Regulating functions		→ Page/ Internet
		Manual	Semi-automatic	With pressure gauge	Without pressure gauge	Rotary knob with latch	With secondary exhausting	With return flow function	
Service units									
FRC	Mini	■	■	■	–	■	■	■	frc
Service unit combinations									
FRC-K	Mini	■	–	■	–	■	■	■	26
LFR-K	Mini	■	–	■	–	■	■	■	lfr
Individual devices									
Filter regulators LFR	Mini	■	■	■	■	■	■	■	lfr
Pressure regulators LR	Mini	–	–	■	■	■	■	■	lr
Pressure regulator manifolds LRB-K	Mini	–	–	–	■	■	■	■	lrb
On/off valves HE	Mini	–	–	–	■	–	–	–	he

Peripherals overview



 **Note**

The range of accessories depends on the service unit combination selected. The example shows the service unit combination FRC-KC.

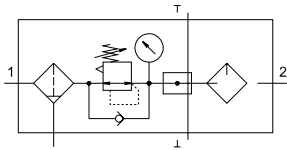
Mounting attachments and accessories		→ Page/Internet
[1]	Mounting bracket HR-D	hr-d
[2]	Hex nut HMR	hmr-d
[3]	Padlock LRVS	lrvs-d
-	Filter cartridge MS4-LFP-E	34
-	Special oil OFSW	34

Type codes

001	Series		005	Size	
FRC	Service unit		MINI	Grid dimension 40 mm (without connecting plates)	
002	Pneumatic connection		006	Service unit combination	
1/4	Female thread G1/4		KA	Filter regulator, branching module and lubricator	
003	Version		KC	Manually operated on/off valve, filter regulator, branching module and lubricator	
DB	D series, polymer		007	Display unit	
004	Pressure regulation range			Bar/psi/without	
7	0.5 ... 7 bar (0.05 ... 0.7 MPa)		MPA	MPa	

Datasheet FRC-KA

Function



- Filter regulating valve
- Distributor module
- Lubricators

-  - Standard nominal flow rate
700 l/min
-  - Temperature range
-5 ... +50°C
-  - Operating pressure
1.5 ... 10 bar
(0.15 ... 1 MPa)



- For filtered and lubricated compressed air
- Output pressure is infinitely adjustable within the pressure regulation range

- Removal of filtered and unlubricated compressed air at the distributor module ports
- New filter cartridges → page 34

The following oils are recommended for Festo components:
Viscosity range to
ISO 3448 class VG 32
32 mm²/s (cSt) at 40°C

- Approved oils:
- Festo special oil → page 34
 - 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 1, 2, 3	G1/4
Design	Filter regulator-distributor module-lubricator
Regulator function	Output pressure constant, without primary pressure compensation, with return flow, with secondary exhausting
Type of mounting	In-line installation
	Via through-hole
	With mounting bracket
Mounting position	Vertical ±5°
Grade of filtration [µm]	40
Condensate drain	Manual
Actuator lock	Rotary knob with latch
Pressure regulation range [bar]	0.5 ... 7 (0.05 ... 0.7 MPa)
Max. pressure hysteresis [bar]	0.5 (0.05 MPa)
Pressure indicator	With pressure gauge
Pressure gauge connection	G1/8
Max. condensate volume [ml]	13

Flow rates [l/min]	
Standard nominal flow rate $q_{nN}^{1)}$	700
Max. standard flow rate	2500

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

 **Note**

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

Datasheet FRC-KA

Operating and environmental conditions		
Operating pressure	[bar]	1.5 ... 10 (0.15 ... 1 MPa)
Operating medium		Compressed air to ISO 8573-1:2010 [7:9:4]
Note on the operating/pilot medium		Lubricated operation not possible
Ambient temperature	[°C]	-5 ... +50
Temperature of medium	[°C]	-5 ... +50
Storage temperature	[°C]	-5 ... +50
Corrosion resistance class CRC ¹⁾		1

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

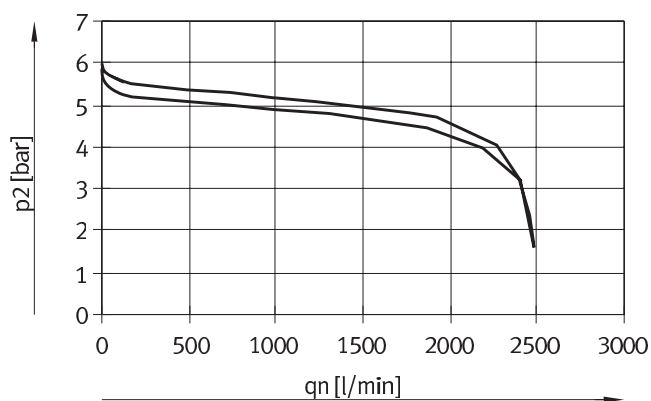
Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, or parts which are covered in the application (e.g. drive trunnions).

Weight [g]	
Service unit	285

Materials	
Housing	Reinforced PA
Bowl	PC
Rotary knob	POM
Filters	PE
Seals	NBR
Note on materials	RoHS-compliant

Standard flow rate q_n as a function of output pressure p_2

FRC-1/4-DB-7-MINI-KA



Input pressure $p_1 = 10$ bar (1 MPa)

Datasheet FRC-KA

Dimensions

Download CAD data → www.festo.com

Mini

[1] Barbed connector for plastic tubing PUN(-H)-8x1.25

[2] Installation dimension

[3] Oil adjusting screw

[4] Socket head screw M4 for wall mounting (2 included in the scope of delivery)

[5] Recommended through-holes for wall mounting via socket head screws

→ Flow direction

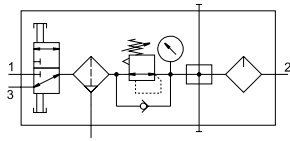
Type	D1	B1	B2	B3	B4	B5	B6	B7	D2 Ø	D3	D4	D5 Ø	D6 Ø
FRC-1/4-DB	G1/4	108	98	47	78	44	34	5	32	M4	M36x1.5	39	5.6

Type	H1	H2	H3	L1	L2	L3 min.	L4	L5	L8	L10	T1	≈G 1
FRC-1/4-DB	40	20	10	189	136	60	113	91	17	2	9	14

Ordering data				
Condensate drain	Size	Connection	Grade of filtration 40 µm	
			Part no.	Type
Pressure gauge with outer scale in bar and inner scale in psi				
Manual	Mini	G1/4	8002800	FRC-1/4-DB-7-MINI-KA
Pressure gauge with outer scale in MPa and inner scale in bar				
Manual	Mini	G1/4	3339282	FRC-1/4-DB-7-MINI-KA-MPA

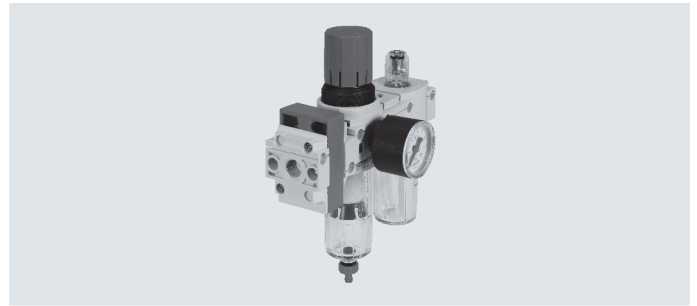
Datasheet FRC-KC

Function



- Manually operated on/off valve
- Filter regulating valve
- Distributor module
- Lubricators

-  - Standard nominal flow rate
400 l/min
-  - Temperature range
-5 ... +50°C
-  - Operating pressure
1.5 ... 10 bar
(0.15 ... 1 MPa)



- For filtered and lubricated compressed air
- The operating pressure can be switched on or off
- Output pressure is infinitely adjustable within the pressure regulation range

- The unit is exhausted when switched off
- Removal of filtered and unlubricated compressed air at the distributor module ports
- New filter cartridges → page 34

The following oils are recommended for Festo components:
Viscosity range to
ISO 3448 class VG 32
32 mm²/s (cSt) at 40°C

Approved oils:

- Festo special oil → page 34
- 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 1, 2, 3	G1/4
Design	On/off valve-filter regulator-distributor module-lubricator
Regulator function	Output pressure constant, without primary pressure compensation, with return flow, with secondary exhausting
Type of mounting	In-line installation Via through-hole With mounting bracket
Mounting position	Vertical ±5°
Actuation type	Manual
Grade of filtration [µm]	40
Condensate drain	Manual
Actuator lock	Rotary knob with latch Padlock (optional)
Exhaust function	Cannot be throttled
Pressure regulation range [bar]	0.5 ... 7 (0.05 ... 0.7 MPa)
Max. pressure hysteresis [bar]	0.5 (0.05 MPa)
Pressure indicator	With pressure gauge
Pressure gauge connection	G1/8
Max. condensate volume [ml]	13

Flow rates [l/min]	
Standard nominal flow rate $q_{nN}^{1)}$	400
Max. standard flow rate	2400

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

- - Note

Minor leakage at the output is intended by design. It improves the control behaviour of the regulator which is not compensated for input pressure.

In rare cases, however, the leakage can be up to 500 l/h.

Datasheet FRC-KC

Operating and environmental conditions		
Operating pressure	[bar]	1.5 ... 10 (0.15 ... 1 MPa)
Operating medium		Compressed air to ISO 8573-1:2010 [7:9:4]
Note on the operating/pilot medium		Lubricated operation not possible
Ambient temperature	[°C]	-5 ... +50
Temperature of medium	[°C]	-5 ... +50
Storage temperature	[°C]	-5 ... +50
Corrosion resistance class CRC ¹⁾		1

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

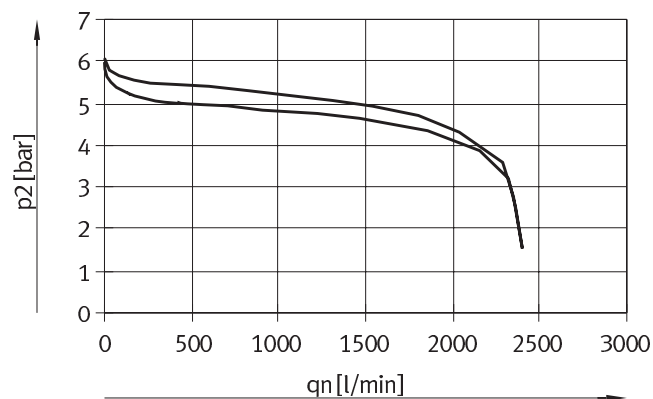
Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, or parts which are covered in the application (e.g. drive trunnions).

Weight [g]	
Service unit	360

Materials	
Housing	Reinforced PA
Piston spool	POM
Bowl	PC
Rotary knob	POM
Filters	PE
Seals	NBR
On/off valve seals	FPM
Note on materials	RoHS-compliant

Standard flow rate q_n as a function of output pressure p_2

FRC-1/4-DB-7-MINI-KC



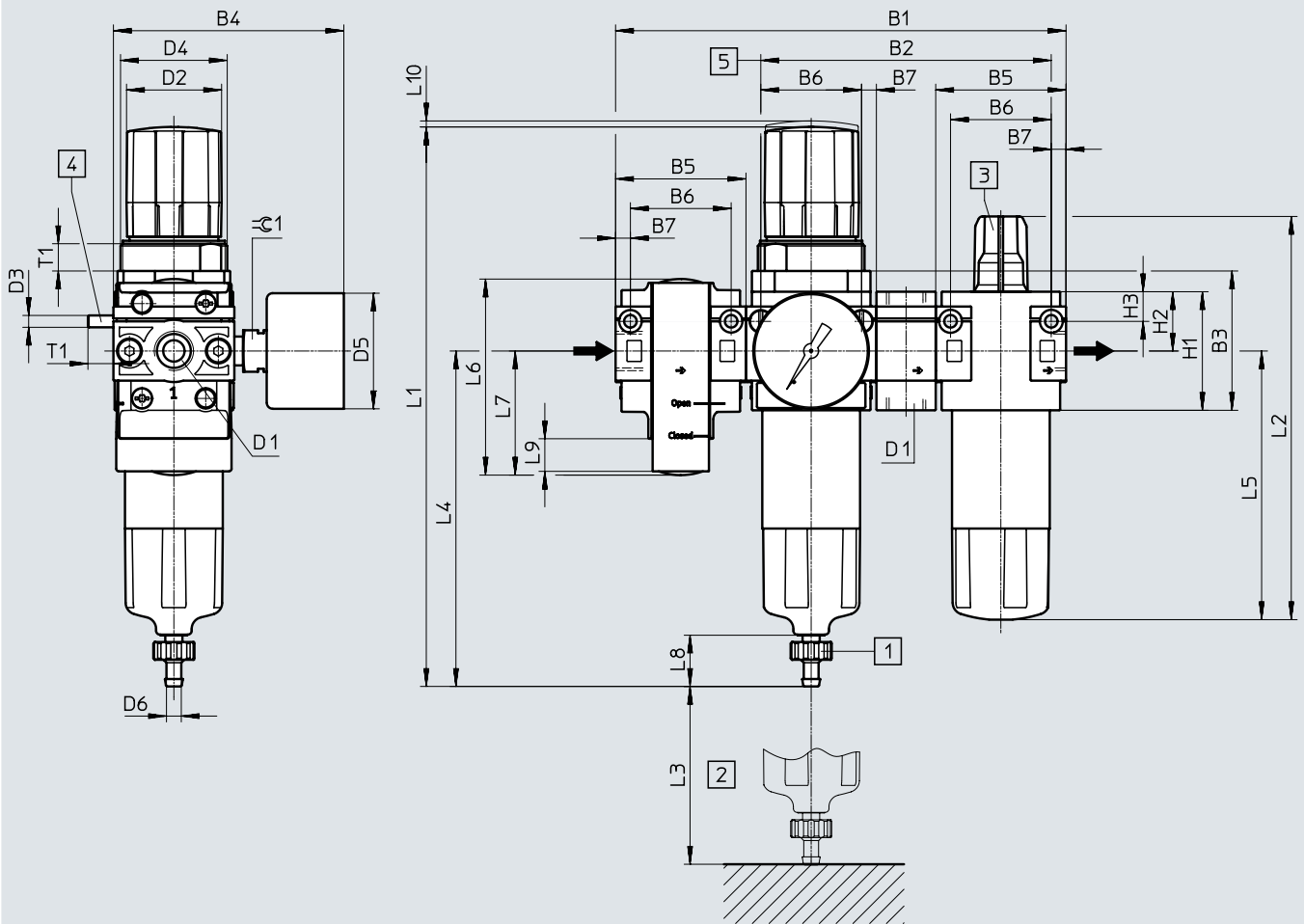
Input pressure $p_1 = 10$ bar (1 MPa)

Datasheet FRC-KC

Dimensions

Download CAD data → www.festo.com

Mini



[1] Barbed connector for plastic tubing PUN(-H)-8x1.25

[2] Installation dimension

[3] Oil adjusting screw
[4] Socket head screw M4 for wall mounting (2 included in the scope of delivery)

[5] Recommended through-holes for wall mounting via socket head screws

→ Flow direction

Type	D1	B1	B2	B3	B4	B5	B6	B7	D2 ø	D3	D4	D5 ø	D6 ø
FRC-1/4-DB	G1/4	152	98	47	78	44	34	5	32	M4	M36x1.5	39	5.6

Type	H1	H2	H3	L1	L2	L3 min.	L4	L5	L6	L7	L8	L9	L10	T1	≈ 1
FRC-1/4-DB	40	20	10	189	136	60	113	91	66	42	17	11	2	9	14

Ordering data

Condensate drain	Size	Connection	Grade of filtration 40 µm	
			Part no.	Type

Pressure gauge with outer scale in bar and inner scale in psi

Manual	Mini	G1/4	8002801	FRC-1/4-DB-7-MINI-KC
--------	------	------	---------	----------------------

Pressure gauge with outer scale in MPa and inner scale in bar

Manual	Mini	G1/4	3339280	FRC-1/4-DB-7-MINI-KC-MPA
--------	------	------	---------	--------------------------

Accessories

Filter cartridges, D series, metal



Ordering data		Part no.	Type
Size	Grade of filtration [µm]		
Mini	40 (colour: white)	363665	LFP-D-MINI-40M
Midi	40 (colour: white)	363667	LFP-D-MIDI-40M
Maxi	40 (colour: white)	363664	LFP-D-MAXI-40M

Filter cartridges, D series, polymer



Ordering data		Part no.	Type
Size	Grade of filtration [µm]		
Mini	40	534502	MS4-LFP-E

Special oil

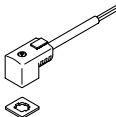


Ordering data		
Scope of delivery	Part no.	Type
1 litre	152811	OFSW-32

Accessories

Ordering data – Angled plug socket PEV						Datasheets → Internet: pev-1/4	
	Description	Operating voltage range	Electrical connection	Switching status indication	Part no.	Type	
	For PEV-1/4-...-OD	15 30 V DC	4-pin	Yellow LED	164274	PEV-1/4-WD-LED-24	
		≤ 230 V AC ≤ 180 V DC	4-pin	Yellow LED	164275	PEV-1/4-WD-LED-230	

Ordering data – Plug socket MSSD						Datasheets → Internet: mssd	
	Description	Operating voltage range	Electrical connection	Type of mounting for cable connection	Part no.	Type	
	For PEV-1/4-...-OD	≤ 250 V AC/DC	3-pin	Clamping screws	171157	MSSD-C-4P	
	For on/off valve HEE	≤ 250 V AC/DC	3-pin	Clamping screws	151687	MSSD-EB	
			4-pin	Insulation displacement technology	192745	MSSD-EB-S-M14	

Ordering data – Plug socket with cable KMEB						Datasheets → Internet: kmeb	
	Description	Operating voltage	Electrical connection	Switching status indication	Cable length [m]	Part no.	Type
	For on/off valve HEE	24 V DC	3-pin	LED	2.5	151688	KMEB-1-24-2.5-LED
					5	151689	KMEB-1-24-5-LED
					10	193457	KMEB-1-24-10-LED
		230 V AC	3-pin	–	2.5	151690	KMEB-1-230AC-2.5
					5	151691	KMEB-1-230AC-5

Ordering data – Illuminating seal MEB-LD						Datasheets → Internet: meb	
	Description	Operating voltage range			Part no.	Type	
	For plug socket with cable KMEB and plug socket MSSD-EB	12 ... 24 V DC			151717	MEB-LD-12-24DC	
		230 V DC/AC ±10%			151718	MEB-LD-230AC	

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