



Product catalogue

PRODUCT CATALOG.

Our product range for you.

WE ARE SHAPING THE FUTURE OF COMPRESSED AIR TECHNOLOGY.

Our aim is to drive innovation and remain an innovation leader by focusing on people. Together with our customers, we will break new ground.

The first-class quality of our products and individualized solutions will distinguish us as the strongest manufacturer and partner for our customers.

Our brand will inspire people and generate the highest desirability on the market.

We manage that. This is our drive that motivates us to give our all every day.

KNOCKS – We are shaping the future of compressed air technology.



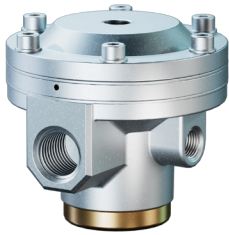
WHETHER STANDARD OR SPECIAL SOLUTIONS, WE OFFER EVERYTHING FROM A SINGLE SOURCE.

KNOCKS has an extensive FRL product portfolio.

We offer both standard products and individually manufactured custom-made solutions tailored to specific customer requirements.

Our products are manufactured to the highest standards of quality and durability at our development and production site in Selm.

Our products



STANDARD SERIES

Robust and solid.
Suitable for the toughest requirements.

[page 5](#)



MULTI-FIX SERIES

High Performance and modular design.
Ideal for use in compressed air treatment
in industry.

[page 23](#)



FUTURA SERIES

Innovative, compact and modular paired
with a strong price / performance ratio.

[page 49](#)



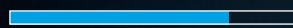
PRECISION REGULATOR

For demanding industrial environments
with maximum precision and reliability.

[page 81](#)



PROPERTIES



weight
high



modularity
restricted



temperature resistance
-10°C to +80°C



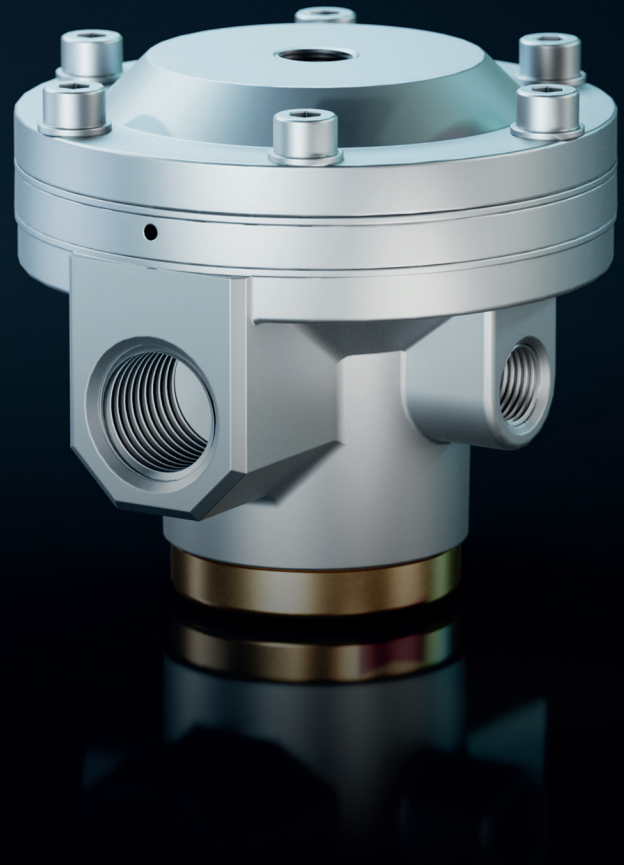
connection sizes
to G3"



resistance capability
very high



flow rate
very high



STANDARD-SERIES.

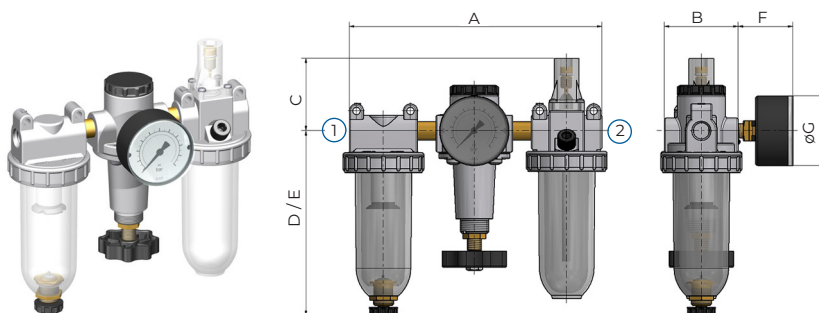
Our Standard Series represents an established product range of compressed air regulators on the market, characterized by its wide range of connection sizes, large flow volumes and impressive durability in the harshest industrial environments. The devices in the Standard series are designed to meet the highest standards and the most demanding requirements in various industrial environments. Even inlet pressures of up to

50 bar and temperatures from -10 °C to +80 °C are no problem for the Standard series.

Service 3 unit

Technical data

- Sintered filter, centrifugal principle; membrane pressure regulator with secondary venting; proportional lubricator
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 min.: 1,5 bar
- Input pressure P1 max.: 16 bar
- Installation position: vertical
- Filter fineness: BG1-BG3: 5 µm; BG5: 40µm; BG8: 60µm
- Container: PC container; PC container with protective cage or metal container
- Condensate drain: Semi-automatic drain (HA) or fully automatic drain (AM)
AM: valve open when pressureless
AMC: valve closed when pressureless
- Materials: Body: die-cast zinc; spring cover: POM; diaphragm and seals: NBR
- Oil dosing at qv=1000 l/min: 1-2 d/min
- Oil type: CL32 according to DIN 51517 - ISO VG32

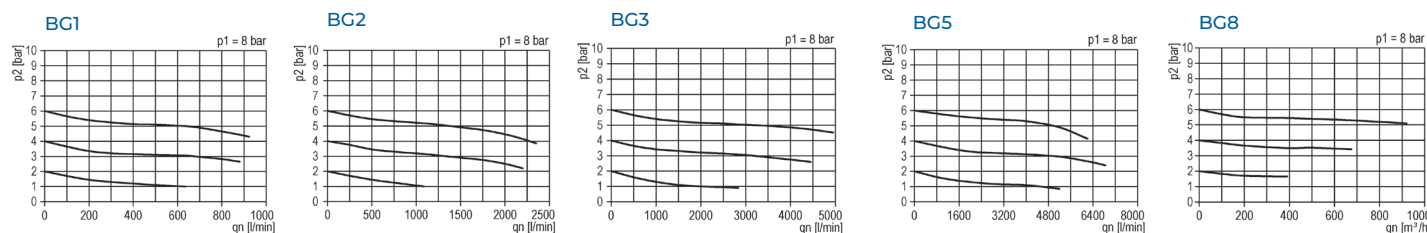


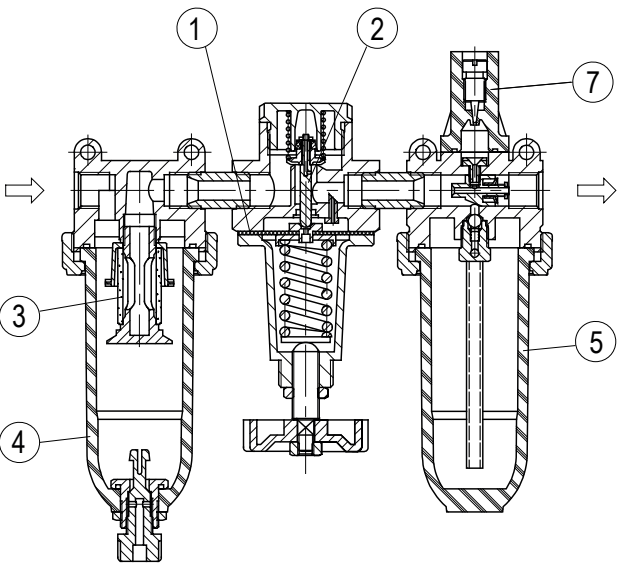
Symbol	Dimensions												
	Designation	Size	Connection thread	A	B	C	D (HA)	E (AM)	F	ø G Pressure gauge	H Pressure gauge thread	K Panel thread	Flow P1=10bar; P2=6,3bar ΔP=1bar
	FRO.11 G	BG1	G 1/4"	178	52	51	130	-	39	ø50	G1/4	M20x1,5	600 l/min
	FRO.12 G	BG1	G 3/8"	178	52	51	130	-	39	ø50	G1/4	M20x1,5	600 l/min
	FRO.22 G	BG2	G 3/8"	233	70	51	145	160	38	ø50	G1/4	M20x1,5	1400 l/min
	FRO.23 G	BG2	G 1/2"	233	70	51	145	160	38	ø50	G1/4	M20x1,5	1400 l/min
	FRO.33 G	BG3	G 1/2"	276	67	55	171	185	41	ø63	G1/4	M20x1,5	3200 l/min
	FRO.34 G	BG3	G 3/4"	296	67	58	171	187	41	ø63	G1/4	M20x1,5	3200 l/min
	FRO.35 G	BG3	G1"	296	67	58	171	187	41	ø63	G1/4	M20x1,5	3200 l/min
	FRO.54 G	BG5	G 3/4"	345	113	61	235	251	40	ø63	G1/4	-	5000 l/min
	FRO.55 G	BG5	G 1"	345	113	61	235	251	40	ø63	G1/4	-	5000 l/min
	FRO.88 G	BG8	G2"	444	118	77	401	411	40	ø63	G1/4	-	1800 l/min

Designation

Component	Size	Pressure range	Filter fineness	Bowl type	Condensate drain	Other accessories
FRO	BG1: 11 = G1/4, 12 = G3/8 BG3: 33 = G1/2, 34 = G3/4 BG5: 54 = G3/4, 55 = G1 BG8: 88 = G2	0,1 - 3 bar 0,5 - 6 bar 0,5 - 10 bar 0,5 - 16 bar	5 = 5 µm 40 = 40 µm 60 = 60 µm	PC = polycarbonate B = polycarbonate with protective cage M = metal	HA = semi automatic AM = fully automatic AMC = fully automatic usually closed	G = pressure gauge S = panel nut N = electrical level monitoring

Flow diagram



Cross-sectional view / spare parts		Pos.	Designation	Material	Size	Article type	Item no.
	1 2	Spare parts consisting of: membrane (1) valve cone (2) o-ring	brass-NBR-POM brass-NBR-PA6 NBR	1	ESA-DR.11	006113	
				2	ESA-DR.22	005839	
				3	ESA-DR.33	005990	
				5	ESA-DR.55	006048	
				7	ESA-DR.77 N	052505	
	3	filter element 5 µm	cellpor	1	C.00-26	052187	
				3	C.33-62	052188	
				3	C.33-62	052188	
	3	filter element 40 µm	cellpor	2	DF.22-6	050550	
				3	C.33-28	015699	
				5	C.55-28	008866	
4	condensate bowl with semi-automatic condensate drain and o-ring	polycarbonate NBR	1	DF.11-PC-HA	004375		
			2	DF.22-PC-HA	020255		
			3+5	DF.33-PC-HA	000768		
4	condensate bowl with fully automatic condensate drain (AM10) and o-ring	polycarbonate	1	DF.11-PC-AM	006190		
			2	DF.22-PC-AM	004392		
			3+5	DF.33-PC-AM	004393		
4	condensate bowl with fully automatic drain (AM10/NC) and o-ring	polycarbonate	1	DF.11-PC-AMC	050611		
			2	DF.22-PC-AMC	050612		
			3+5	DF.33-PC-AMC	044990		
4	metal bowl with semi-automatic drain and o-ring	metal	1	DF.11-M-HA	031504		
			2	DF.22-M-HA	031536		
			3+5	DF.33-M-HA	025447		
4	metal bowl with fully automatic drain (AM10) and o-ring	metal	1	DF.11-M-AM	026550		
			2	DF.22-M-AM	000769		
			3+5	DF.33-M-AM	031473		
4	metal bowl with fully automatic drain (AM10/NC) and o-ring	metal	1	DF.11-M-AMC	050615		
			2	DF.22-M-AMC	050616		
			3+5	DF.33-M-AMC	050617		
5	oil bowl with o-ring	polycarbonate	1	DO.11	006244		
			2	DO.22	006966		
			3+5	DO.33	005581		
5	metal oil bowl with o-ring	zinc die casting	1	DO.11 M	006999		
			2	DO.22 M	007003		
			3+5	DO.33 M	006989		
6	bowl guard with screw cap	metal	1	DF.11-35	031657		
			2	DF.22-11	031754		
			3+5	DF.33-11	031624		
7	dome assembly	polycarbonate seals: NBR					

Accessories

Item no. Designation

007024	BW.10	galvanized mounting bracket for size BG1
049757	BW.20	galvanized mounting bracket for size BG2
009487	BW.30	galvanized mounting bracket for size BG3
050549	BW.50 N	galvanized mounting bracket for size BG5 + BG8

051939	DR.11-7	panel nut M20x1,5 for size BG1 - BG3
054607	ESA-DR.11-7	panel nut M20x1,5 with washer

Item no. Designation

049783	WH.M 20	mounting bracket for panel mounting
008944	WH.M20 / DR.11-7	mounting bracket for panel mounting with panel nut M30x1,5 and washer

Service 2 unit

Technical data

- Sintered filter, centrifugal principle; membrane pressure regulator with secondary venting; proportional lubricator
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 min.: 1,5 bar
- Input pressure P1 max.: 16 bar
- Installation position: vertical
- Filter fineness: BG0-BG1+ BG3: 5 µm, BG3 + BG5: 40 µm
- Container: PC container; PC container with protective cage or metal container
- Condensate drain: Semi-automatic drain (HA) or fully automatic drain (AM)
AM: valve open when pressureless
AMC: valve closed when pressureless
- Materials: Body: die-cast zinc; spring cover: POM; diaphragm and seals: NBR
- Oil dosing at qv=1000 l/min: 1-2 d/min
- Oil type: CL32 according to DIN 51517 - ISO VG32



Symbol	Dimensions												
	Designation	Size	Connection thread	A	B	C	D (HA)	E (AM)	F	øG Pressure gauge	H Pressure gauge thread	K Panel thread	Flow P1=10bar; P2=6,3bar ΔP=1bar
	FDO.00 G	BG0	G 1/8"	85	40	64	102	-	~36	ø40	G1/8	M30x1,5	350 l/min
	FDO.01 G	BG0	G 1/4"	88	40	64	102	-	~36	ø40	G1/8	M30x1,5	350 l/min
	FDO.11 G	BG1	G 1/4"	117	52	98	130	-	~39	ø50	G1/4	M20x1,5	600 l/min
	FDO.12 G	BG1	G 3/8"	117	52	98	130	-	~39	ø50	G1/4	M20x1,5	600 l/min
	FDO.22 G	BG2	G 3/8"	153	70	116	148	160,5	~39	ø50	G1/4	M20x1,5	800 l/min
	FDO.23 G	BG2	G 1/2"	153	70	116	148	160,5	~39	ø50	G1/4	M20x1,5	800 l/min
	FDO.33 G	BG3	G 1/2"	175	ø82	130	171	178	~37	ø63	G1/4	M20x1,5	3200 /min
	FCO.54 G	BG5	G 3/4"	240	113	190	269	281	40	ø63	G1/4	-	5000 l/min
	FCO.55 G	BG5	G 1"	240	113	190	269	281	40	ø63	G1/4	-	5000 l/min

Designation

FDO . 11 - 10 - 5 - PC - HA - G

Compo-
nent

FDO

FCO

Size

BG0: 00 = G1/8, 01 = G1/4
 BG1: 11 = G1/4, 12 = G3/8
 BG2: 22 = G3/8, 23 = G1/2
 BG3: 33 = G1/2, 34 = G3/4
 BG5: 54 = G3/4, 55 = G1

Pressure range

0,1 - 3 bar
 0,5 - 6 bar
 0,5 - 10 bar
 0,5 - 16 bar

Filter fineness

5 = 5 µm
 40 = 40 µm

Bowl type

PC = polycarbonate
 B = polycarbonate with protective cage
 M = metal

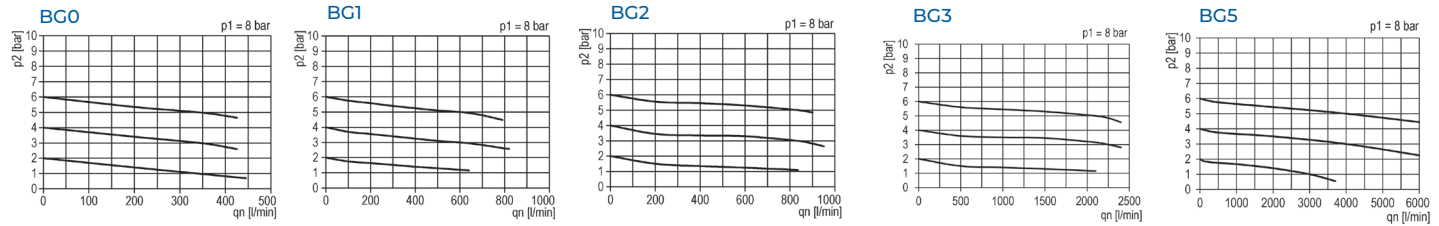
Condensate drain

HA = semi automatic
 AM = fully automatic
 AMC = fully automatic usually closed

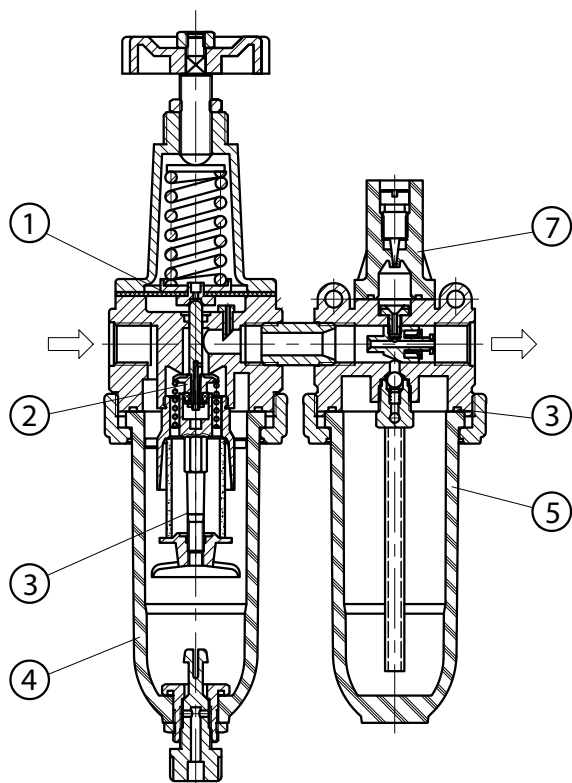
Other accessories

G = pressure gauge
 S = panel nut
 N = electrical level monitoring

Flow diagram



Cross-sectional view / spare parts



Pos.	Designation	Material	Size	Article type	Item no.
1 2	Spare parts consisting of: membrane (1) valve cone (2) o-ring	Ms-NBR-POM Ms-NBR-PA6 NBR	1	ESA-DR.11	006113
			2	ESA-DR.22	005839
			3	ESA-DR.33	005990
			5	ESA-DR.55	006048
			7	ESA-DR.77 N	052505
3	filter element 5 µm	cellpor	1	C.00-26	052187
			3	C.33-62	052188
			3	C.33-62	052188
3	filter element 40 µm	cellpor	2	DF.22-6	050550
			3	C.33-28	015699
			5	C.55-28	008866
4	condensate bowl with semi-automatic condensate drain and o-ring	polycarbonate NBR	1	DF.11-PC-HA	004375
			2	DF.22-PC-HA	020255
			3+5	DF.33-PC-HA	000768
4	condensate bowl with fully automatic condensate drain (AM10) and o-ring	polycarbonate	1	DF.11-PC-AM	006190
			2	DF.22-PC-AM	004392
			3+5	DF.33-PC-AM	004393
4	condensate bowl with fully automatic drain (AM10/NC) and o-ring	polycarbonate	1	DF.11-PC-AMC	050611
			2	DF.22-PC-AMC	050612
			3+5	DF.33-PC-AMC	044990
4	metal bowl with semi-automatic drain and o-ring	metal	1	DF.11-M-HA	031504
			2	DF.22-M-HA	031536
			3+5	DF.33-M-HA	025447
4	metal bowl with fully automatic drain (AM10) and o-ring	metal	1	DF.11-M-AM	026550
			2	DF.22-M-AM	000769
			3+5	DF.33-M-AM	031473
4	metal bowl with fully automatic drain (AM10/NC) and o-ring	metal	1	DF.11-M-AMC	050615
			2	DF.22-M-AMC	050616
			3+5	DF.33-M-AMC	050617
5	oil bowl with o-ring	polycarbonate	1	DO.11	006244
			2	DO.22	006966
			3+5	DO.33	005581
5	metal oil bowl with o-ring	zinc die casting	1	DO.11 M	006999
			2	DO.22 M	007003
			3+5	DO.33 M	006989
6	bowl guard with screw cap	metal	1	DF.11-35	031657
			2	DF.22-11	031754
			3+5	DF.33-11	031624
7	dome assembly	polycarbonate seals: NBR			

Accessories

Item no. Designation

007024	BW.10	galvanized mounting bracket for size BG1
049757	BW.20	galvanized mounting bracket for size BG2
009487	BW.30	galvanized mounting bracket for size BG3
050549	BW.50 N	galvanized mounting bracket for size BG5 + BG8

051939	DR.11-7	panel nut M20x1,5 for size BG1 - BG3
054607	ESA-DR.11-7	panel nut M20x1,5 with washer

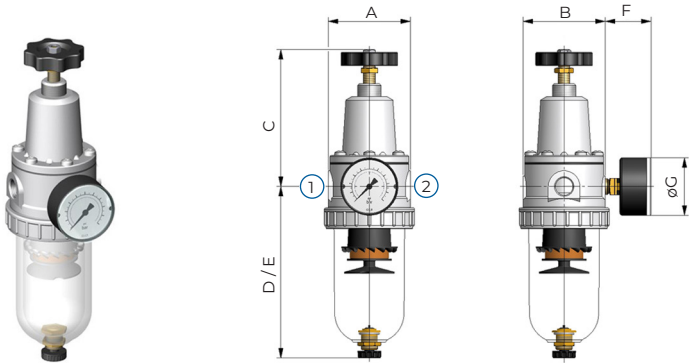
Item no. Designation

049783	WH.M 20	mounting bracket for panel mounting
008944	WH.M20 / DR.11-7	mounting bracket for panel mounting with panel nut M30x1,5 and washer

Filter-regulator

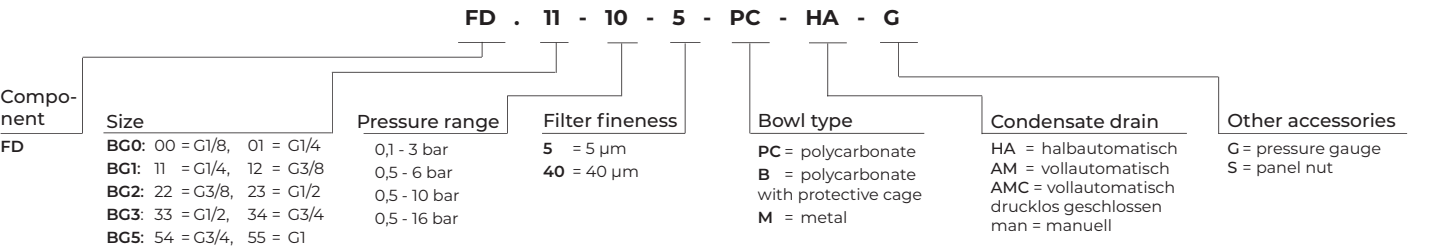
Technical data

- Sintered filter, centrifugal principle; membrane pressure regulator with secondary venting
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 min.: 1,5 bar
- Input pressure P1 max.: 16 bar
- Installation position: vertical
- Filter fineness: BG0-BG1: 5 µm, BG2 - BG5: 40 µm
- Container: PC container; PC container with protective cage or metal container
- Condensate drain: Semi-automatic drain (HA) or fully automatic drain (AM)
AM: valve open when pressureless
AMC: valve closed when pressureless
- Materials: Body: die-cast zinc; spring cover: POM; diaphragm and seals: NBR

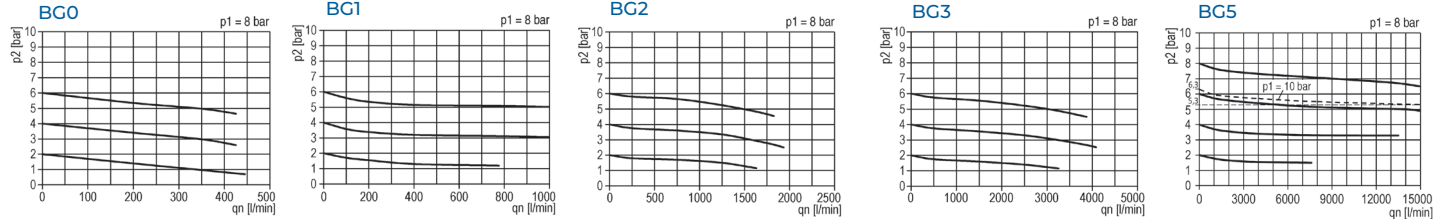


Symbol	Dimensions												
	Designation	Size	Connection thread	A	B	C	D (HA)	E (AM)	F	øG Pressure gauge	H Pressure gauge thread	K Panel thread	Flow P1=10bar; P2=6,3bar ΔP=1bar
	FD.00 G	BG0	G 1/8"	85	40	64	102	-	~36	ø40	G1/8	M30x1,5	350 l/min
	FD.01 G	BG0	G 1/4"	88	40	64	102	-	~36	ø40	G1/8	M30x1,5	350 l/min
	FD.11 G	BG1	G 1/4"	117	52	98	130	-	~39	ø50	G1/4	M20x1,5	600 l/min
	FD.12 G	BG1	G 3/8"	117	52	98	130	-	~39	ø50	G1/4	M20x1,5	600 l/min
	FD.22 G	BG2	G 3/8"	153	70	116	148	160,5	~39	ø50	G1/4	M20x1,5	800 l/min
	FD.23 G	BG2	G 1/2"	153	70	116	148	160,5	~39	ø50	G1/4	M20x1,5	800 l/min
	FD.33 G	BG3	G 1/2"	175	ø82	130	171	178	~37	ø63	G1/4	M20x1,5	3200 /min
	FC.54 G	BG5	G 3/4"	240	113	190	269	281	40	ø63	G1/4	-	5000 l/min
	FC.55 G	BG5	G 1"	240	113	190	269	281	40	ø63	G1/4	-	5000 l/min

Designation



Flow diagram



Cross-sectional view / spare parts

A detailed cross-sectional diagram of a condensate drain assembly. The diagram shows the internal components, including a valve mechanism at the top, a filter element, and a bowl. Numbered callouts (1, 2, 3, 4) identify specific parts: 1 points to the top valve assembly, 2 points to the valve cone, 3 points to the filter element, and 4 points to the condensate bowl. Arrows indicate the flow direction of the condensate through the assembly.

Pos.	Designation	Material	Size	Article type	Item no.
1 2	Spare parts consisting of: membrane (1) valve cone (2) o-ring	brass-NBR-POM brass-NBR-PA6 NBR	1	ESA-DR.11	006113
			2	ESA-DR.22	005839
			3	ESA-DR.33	005990
			5	ESA-DR.55	006048
			7	ESA-DR.77 N	052505
3	filter element 5 µm	cellpor	1	C.00-26	052187
			3	C.33-62	052188
			3	C.33-62	052188
3	filter element 40 µm	cellpor	2	DF.22-6	050550
			3	C.33-28	015699
			5	C.55-28	008866
4	condensate bowl with semi-automatic condensate drain and o-ring	polycarbonate NBR	1	DF.11-PC-HA	004375
			2	DF.22-PC-HA	020255
			3+5	DF.33-PC-HA	000768
4	condensate bowl with fully automatic condensate drain (AM10) and o-ring	polycarbonate	1	DF.11-PC-AM	006190
			2	DF.22-PC-AM	004392
			3+5	DF.33-PC-AM	004393
4	condensate bowl with fully automatic drain (AM10/NC) and o-ring	polycarbonate	1	DF.11-PC-AMC	050611
			2	DF.22-PC-AMC	050612
			3+5	DF.33-PC-AMC	044990
4	metal bowl with semi-automatic drain and o-ring	metal	1	DF.11-M-HA	031504
			2	DF.22-M-HA	031536
			3+5	DF.33-M-HA	025447
4	metal bowl with fully automatic drain (AM10) and o-ring	metal	1	DF.11-M-AM	026550
			2	DF.22-M-AM	000769
			3+5	DF.33-M-AM	031473
4	metal bowl with fully automatic drain (AM10/NC) and o-ring	metal	1	DF.11-M-AMC	050615
			2	DF.22-M-AMC	050616
			3+5	DF.33-M-AMC	050617
5 6	bowl guard (5) with screw cap (6)	metal	1	DF.11-35	031657
			2	DF.22-11	031754
			3+5	DF.33-11	031624

Accessories

Item no. Designation

007024	BW.10	galvanized mounting bracket for size BG1
049757	BW.20	galvanized mounting bracket for size BG2
009487	BW.30	galvanized mounting bracket for size BG3
050549	BW.50 N	galvanized mounting bracket for size BG5 + BG8

051939	DR.11-7	panel nut M20x1,5 for size BG1 - BG3
054607	ESA-DR.11-7	panel nut M20x1,5 with washer

Item no. Designation

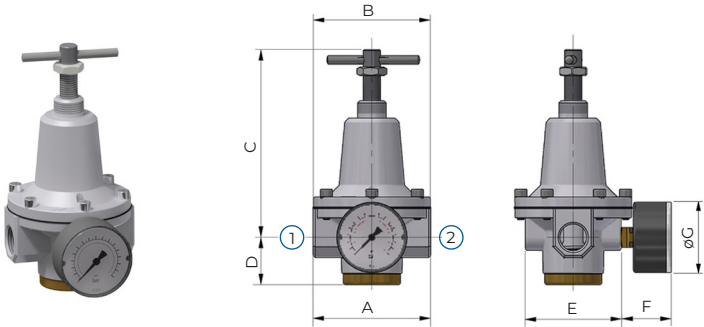
049783	WH.M 20	mounting bracket for panel mounting
008944	WH.M20 / DR.11-7	mounting bracket for panel mounting with panel nut M30x1,5 and washer

Pressure regulator

Technical data

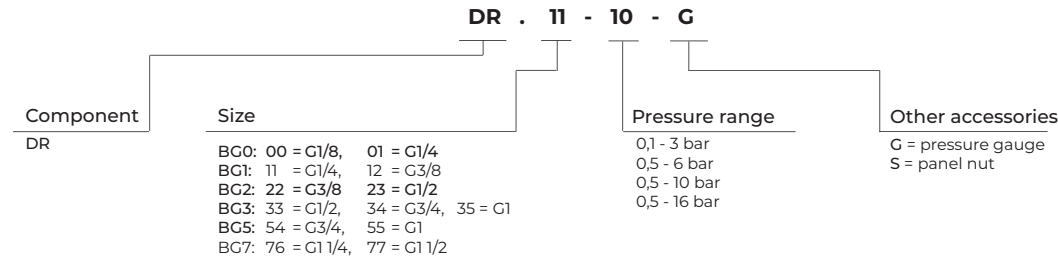
- membrane pressure regulator with secondary venting
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 max.: 16 bar *
- Output pressure P2 max.: 16 bar
- Installation position: vertical
- Materials: Body: die-cast zinc; diaphragm and seals: NBR

*From BG1: Also available with P1 max. 40 bar

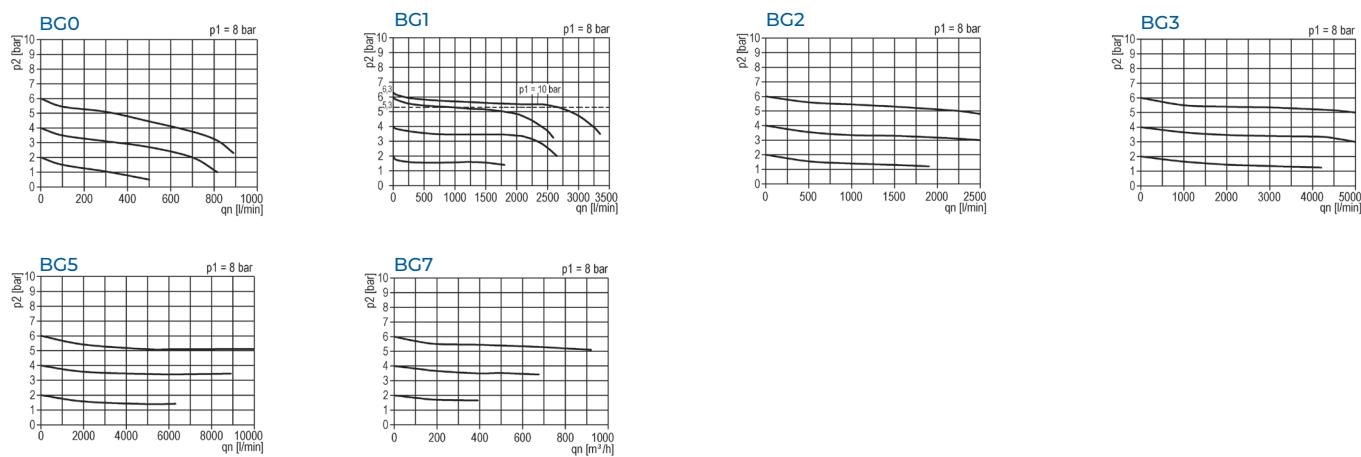


Symbol	Dimensions													
	Designation	Size	Conne- ction thread	A	B	C	D	E	F	øG Pressure gauge	H Pressure gauge thread	K Panel thread	Flow P1=10bar; P2=6,3bar ΔP=1bar	P1: max 40bar available
	DR.00 G	BG0	G 1/8"	40	-	63	15	40	34,5	ø40	G1/8	M30x1,5	330 l/min	Nein
	DR.01 G	BG0	G 1/4"	40	-	63	15	40	34,5	ø40	G1/8	M30x1,5	330 l/min	Nein
	DR.11 G	BG1	G 1/4"	54	ø46	97	32	52	39	ø50	G1/4	M20x1,5	1000 l/min	Ja
	DR.12 G	BG1	G 3/8"	54	ø46	97	32	52	39	ø50	G1/4	M20x1,5	1000 l/min	Ja
	DR.22 G	BG2	G 3/8"	70	ø67	112	34	70	38	ø50	G1/4	M20x1,5	2200 l/min	Ja
	DR.23 G	BG2	G 1/2"	70	ø67	112	34	70	38	ø50	G1/4	M20x1,5	2200 l/min	Ja
	DR.33 G	BG3	G 1/2"	82	ø81	130	33	67	39	ø63	G1/4	M20x1,5	5000 /min	Ja
	DR.34 G	BG3	G 3/4"	90	ø81	130	33	67	39	ø63	G1/4	M20x1,5	5000 l/min	Ja
	DR.35 G	BG3	G1"	90	ø81	130	33	67	39	ø63	G1/4	M20x1,5	5000 l/min	Ja
	DR.54 G	BG5	G 3/4"	117	ø125	190	48	113	39	ø63	G1/4	-	11000 l/min	Ja
	DR.55 G	BG5	G 1"	117	ø125	190	48	113	39	ø63	G1/4	-	11000 l/min	Ja
	DR.76 G	BG7	G 1 1/4"	119	ø125	201	52	118	39	ø63	G1/4	-	16500 l/min	Ja
	DR.77 G	BG7	G2"	119	ø125	201	52	118	39	ø63	G1/4	-	16500 l/min	Ja

Designation



Flow diagram



Cross-sectional view / spare parts

A detailed cross-sectional technical drawing of a valve assembly. The drawing shows the internal components, including a central valve cone (labeled 2) and a membrane (labeled 1). The valve is mounted on a body with two ports, indicated by arrows. A handwheel is attached to the top of the valve stem. The drawing is a black and white line drawing with hatching to indicate different materials.

Pos.	Designation	Material	Size	Article type	Item no.
1 2 3	Spare parts consisting of: membrane (1) valve cone (2) o-ring	brass-NBR-POM brass-NBR-PA6 NBR	0	ESA-DR.00	007744
			1	ESA-DR.11	006113
			1	ESA-DR.11 (40bar)	057273
			2	ESA-DR.22	005850
			2	ESA-DR.22 (40bar)	057275
			3	ESA-DR.33	005990
			3	ESA-DR.33(40bar)	057276
			5	ESA-DR.55	006048
			5	ESA-DR.55 (40bar)	057278
7	ESA-DR.77 N	052505			
8	ESA-DR.77 (40bar)	057280			

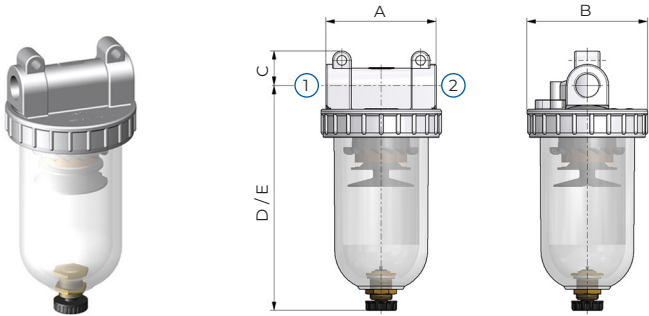
Accessories		
Item no.	Designation	
007024	BW.10	galvanized mounting bracket for size BG1
049757	BW.20	galvanized mounting bracket for size BG2
009487	BW.30	galvanized mounting bracket for size BG3
050549	BW.50 N	galvanized mounting bracket for size BG5 + BG8

Item no.	Designation	
051939	DR.11-7	panel nut M20x1,5 for size BG1 - BG3
054607	ESA-DR.11-7	panel nut M20x1,5 with washer
049783	WH.M 20	mounting bracket for panel mounting
008944	WH.M20 / DR.11-7	mounting bracket for panel mounting with panel nut M30x1,5 and washer

Filter

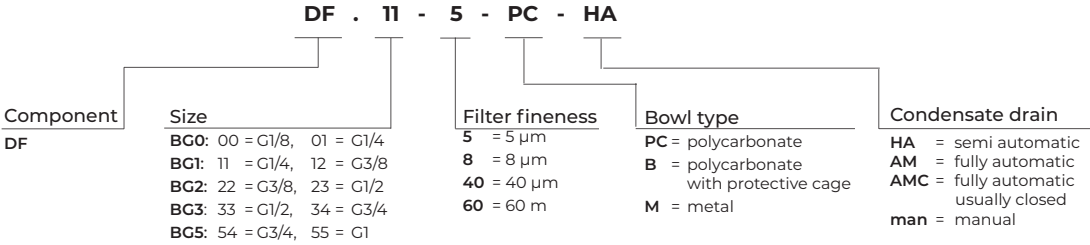
Technical data

- Sintered filter, centrifugal principle
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 min.: 1,5 bar
- Input pressure P1 max.: 16 bar
- Installation position: vertical
- Filter fineness: BG0-BG1: 5 µm, BG2 - BG5: 40 µm
- Container: PC container; PC container with protective cage or metal container
- Condensate drain: Semi-automatic drain (HA) or fully automatic drain (AM)
AM: valve opens when pressureless
AMC: valve closed when pressureless
- Materials: Body: die-cast zinc, seals: NBR

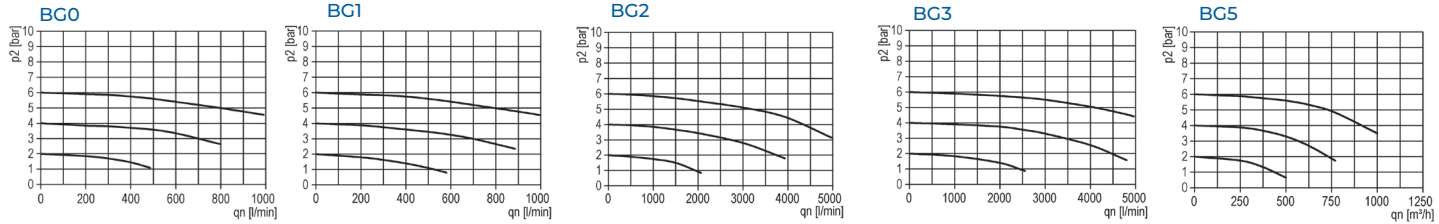


Symbol	Dimensions										
	Designation	Size	Connection thread	A	B	C	D (HA)	E (AM)	metal man	Filter element	Flow P1=6bar, ΔP=1bar
	DF.00	BG0	G 1/8"	40	ø40	10	102	-		5 µm	800 l/min
	DF.01	BG0	G 1/4"	40	ø40	10	102	-		5 µm	800 l/min
	DF.11	BG1	G 1/4"	48	ø57	19	130	146		5 µm	800 l/min
	DF.12	BG1	G 3/8"	48	ø57	19	130	146		5 µm	800 l/min
	DF.22	BG2	G 3/8"	70	ø77	22	142	160		5 µm	3100 l/min
	DF.23	BG2	G 1/2"	70	ø77	22	142	160		5 µm	3100 l/min
	DF.33	BG3	G 1/2"	79	ø87	24	170	185		5 µm	4000 l/min
	DF.34	BG3	G 3/4"	90	ø87	33	173	187	173	5 µm	4000 l/min
	DF.35	BG3	G 1"	90	ø87	33	173	187	173	5 µm	4000 l/min
	DF.54	BG5	G 3/4"	105	ø100	35	235	251		40 µm	5000 l/min
	DF.55	BG5	G 1"	105	ø100	35	235	251		40 µm	5000 l/min
	DF.56	BG5	G 1 1/4"	125	ø100	45	245	260	246	40 µm	12500 l/min
	DF.57	BG5	G 1 1/2"	125	ø100	45	245	260	246	40 µm	12500 l/min
	DF.86	BG8	G 1 1/4"	148	ø131	51	396	411		8 µm, 60 µm	30000 l/min
	DF.87	BG8	G 1 1/2"	148	ø131	51	396	411		8 µm, 60 µm	30000 l/min
	DF.88	BG8	G 2"	148	ø131	51	396	411		8 µm, 60 µm	30000 l/min

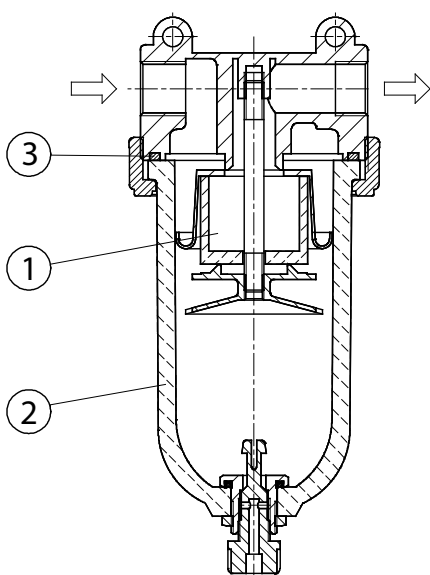
Designation



Flow diagram



Cross-sectional view / spare parts		Pos.	Designation	Material	Size	Article type	Item no.
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1	filter element 5 µm	cellpor	0 - 2	C.00-26	052187
			3	C.33-62	052188
	filter element 40 µm	cellpor	5	C.55-28	008866
	filter element 8 µm	cellpor	8	DF.88-22	018457
	filter element 60 µm	cellpor	8	DF.88-21	014413
2	condensate bowl with semi-automatic condensate drain and o-ring (3)	polycarbonate NBR	0	C.00 HA4	011972
			1	DF.11-PC-HA	004375
			2	DF.22-PC-HA	020255
			3+5	DF.33-PC-HA	000768
2	condensate bowl with fully automatic condensate drain (AM10) and o-ring (3)	polycarbonate	0	C.11-PC-AM	004429
			1	DF.11-PC-AM	006190
			2	DF.22-PC-AM	004392
			3+5	DF.33-PC-AM	004393
2	condensate bowl with fully automatic drain (AM10/NC) and o-ring (3)	polycarbonate	0	C.11-PC-AMC	037226
			1	DF.11-PC-AMC	050611
			2	DF.22-PC-AMC	050612
			3+5	DF.33-PC-AMC	044990
2	metal bowl with semi-automatic drain and o-ring (3)	metal	0	C.00 M HA	012870
			1	DF.11-M-HA	031504
			2	DF.22-M-HA	031536
			3+5	DF.33-M-HA	025447
2	metal bowl with fully automatic drain (AM10) and o-ring (3)	metal	0	C.11-M-AM	004411
			1	DF.11-M-AM	026550
			2	DF.22-M-AM	000769
			3+5	DF.33-M-AM	031473
2	metal bowl with fully automatic drain (AM10/NC) and o-ring (3)	metal	1	DF.11-M-AMC	050615
			2	DF.22-M-AMC	050616
			3+5	DF.33-M-AMC	050617
2	metal bowl with manual drain	metal	2	DF.22-M-MA	004374
			3+5	DF.33-M-MA	031411
3	o-ring	NBR	0 - 5	-	-
-	bowl guard with screw cap	metal	1	DF.11-35	031657
			2	DF.22-11	031754
			3+5	DF.33-11	031624

Accessories

Item no. Designation

007024	BW.10	galvanized mounting bracket for size BG1
049757	BW.20	galvanized mounting bracket for size BG2
009487	BW.30	galvanized mounting bracket for size BG3
050549	BW.50 N	galvanized mounting bracket for size BG5 + BG8

051939	DR.11-7	panel nut M20x1,5 for size BG1 - BG3
054607	ESA-DR.11-7	panel nut M20x1,5 with washer

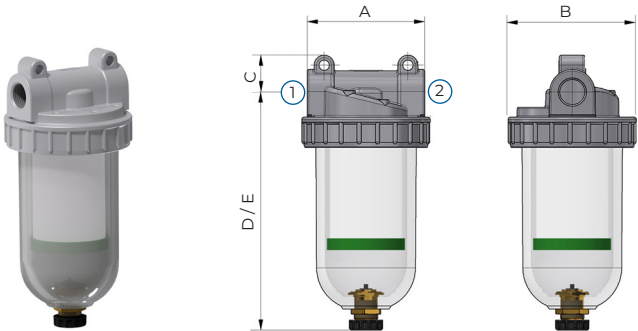
Item no. Designation

049783	WH.M 20	mounting bracket for panel mounting
008944	WH.M20 / DR.11-7	mounting bracket for panel mounting with panel nut M30x1,5 and washer

Fine filter

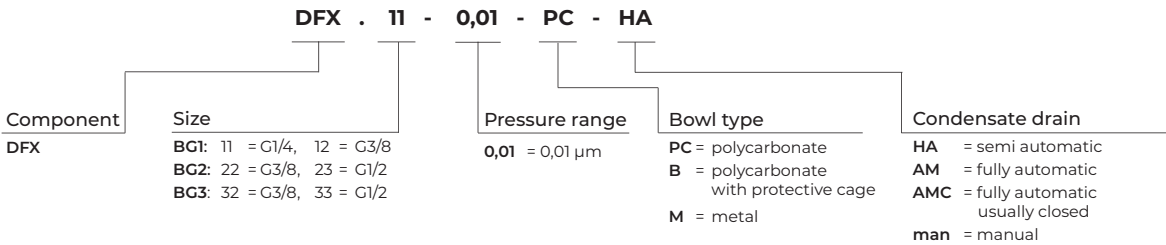
Technical data

- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 min.: 1,5 bar
- Input pressure P1 max.: 16 bar
- Installation position: vertical
- Filter fineness: 0,01 µm
- Dust separation: >0,01 µm 99,999%
- Residual oil content: 0,01 mg/m³
- Container: polycarbonate container, polycarbonate container with protective cage or metal container
- Condensate drain: Semi-automatic drain (HA) or fully automatic drain (AM)
AM: valve open when pressureless
AMC: valve closed when pressureless
- Materials: Body: die-cast zinc, seals: NBR

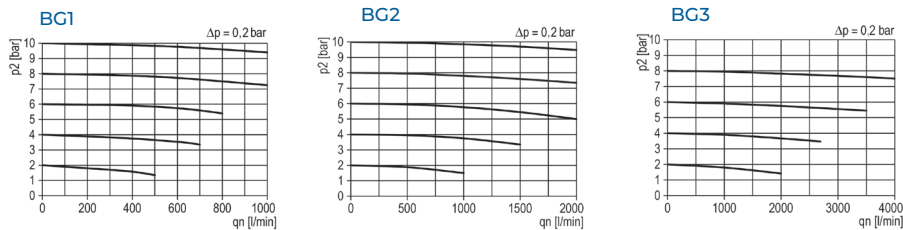


Symbol	Dimensions								
	Designation	Size	Connection thread	A	B	C	D PC HA	E M AM	Flow ΔP=0,2bar
	DFX.11	BG1	G 1/4"	48	ø57	20	130	-	600 l/min
	DFX.12	BG1	G 3/8"	48	ø57	20	130	-	600 l/min
	DFX.22	BG2	G 3/8"	70	ø77	22	142	155	900 l/min
	DFX.23	BG2	G 1/2"	70	ø77	22	142	155	900 l/min
	DFX.32	BG3	G 3/8"	79	ø87	24	170		4000 l/min
	DFX.33	BG3	G 1/2"	79	ø87	24	170		4000 l/min

Designation



Flow diagram



Cross-sectional view / spare parts

The diagram shows a cross-section of a condensate trap. It features a central vertical tube (1) surrounded by a filter element (2) which is housed within a bowl (3). The bowl has a semi-automatic drain at the bottom. The entire assembly is mounted on a base with two screws. Callout 1 points to the central tube, callout 2 points to the filter element, and callout 3 points to the bowl assembly.

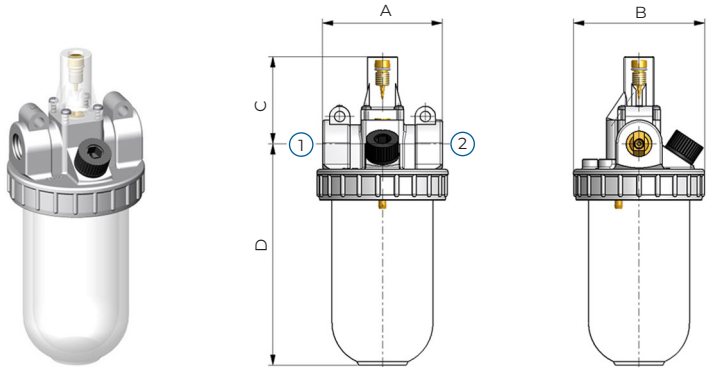
Pos.	Designation	Material	Size	Article type	Item no.
1	fine filter element 0,01 µm with o-ring	glass fiber with polyester fleece	1	X 28/70	004417
			2	X 46/80	004418
			3	X 50/100	004419
2	condensate bowl with semi-automatic drain and o-ring (3)	polycarbonate NBR	1	DF.11-PC-HA	004375
			2	DF.22-PC-HA	020255
			3	DF.33-PC-HA	000768
2	metal bowl with semi-automatic drain and o-ring (3)	metal	1	DF.11-M-HA	031504
			2	DFX.22-M-HA	031536
			3	DF.33-M-HA	025447
3	o-ring	NBR	0 - 3	-	-
-	bowl guard with screw cap	metal	1	DF.11-35	031657
			2	DF.22-11	031754
			3+5	DF.33-11	031624

Accessories		
Item no.	Designation	
052191	ZW.10	mounting bracket kit with 2 screws M5x20 for size BG1
052192	ZW.30	mounting bracket kit with 2 screws M6x25 for size BG2+BG3

Lubricator

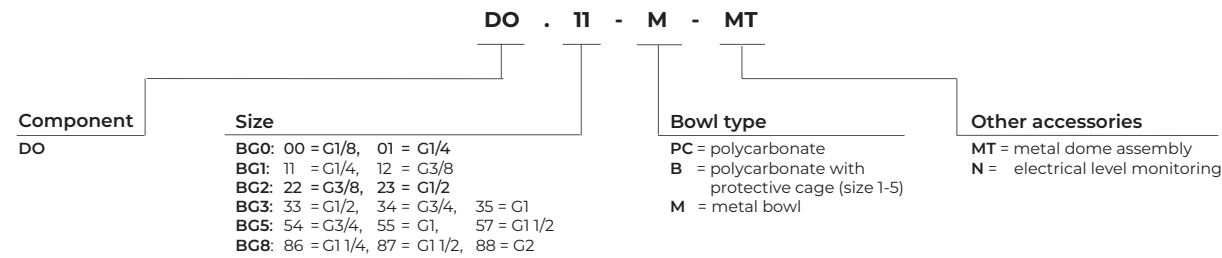
Technical data

- Proportional lubricator
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 max.: 16 bar with polycarbonate bowl
Input pressure P1 max.: 25 bar with metal bowl
- Installation position: vertical
- Oil container: polycarbonate, polycarbonate with protective cage or metal
- Materials: Body: die-cast zinc; diaphragm and seals: NBR
- Oil dosing at qv=1000 l/min: 1-2 d/min
- Oil type: CL32 according to DIN 51517 - ISO VG32

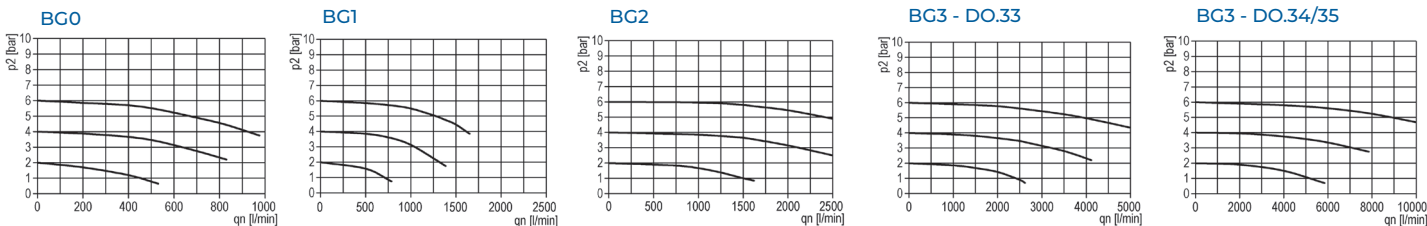


Symbol	Dimensions							
	Designation	Size	Connection thread	A	B	C	D	Flow P1=10bar; P2=6,3bar ΔP=1bar
	DO.00	BG0	G 1/8"	40	ø40	50	95	650 l/min
	DO.01	BG0	G 1/4"	40	ø40	50	95	650 l/min
	DO.11	BG1	G 1/4"	50	ø57	51	118	1200 l/min
	DO.12	BG1	G 3/8"	50	ø57	51	118	1200 l/min
	DO.22	BG2	G 3/8"	70	ø76	51	130	2400 l/min
	DO.23	BG2	G 1/2"	70	ø76	51	130	2400 l/min
	DO.33	BG3	G 1/2"	76	ø86	55	148	4000 l/min
	DO.34	BG3	G 3/4"	90	ø86	58	160	9000 l/min
	DO.35	BG3	G1"	90	ø86	58	160	9000 l/min
	DO.54	BG5	G 3/4"	105	ø100	61	223	9000 l/min
	DO.55	BG5	G1"	105	ø100	61	223	9000 l/min
	DO.57	BG5	G1 1/2"	125	ø100	70	232	9000 l/min
	DO.86	BG8	G1 1/4"	150	ø131	77	383	11000 l/min
	DO.87	BG8	G1 1/2"	150	ø131	77	383	11000 l/min
	DO.88	BG8	G2"	150	ø131	77	383	11000 l/min

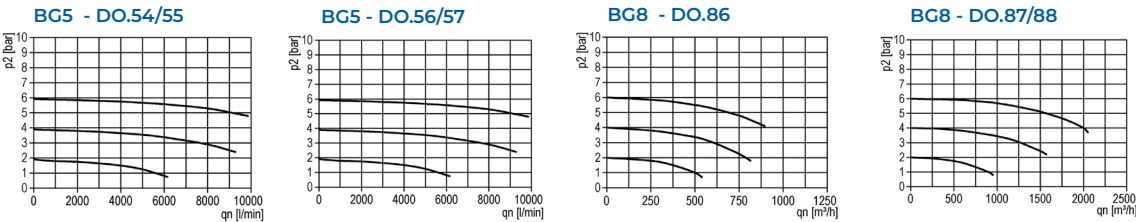
Designation



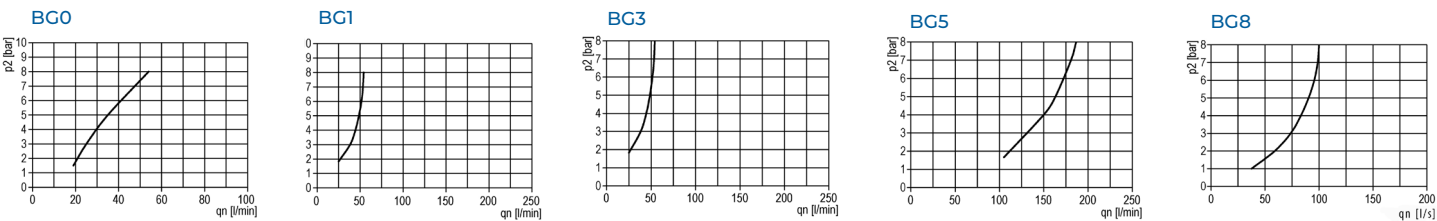
Flow diagram



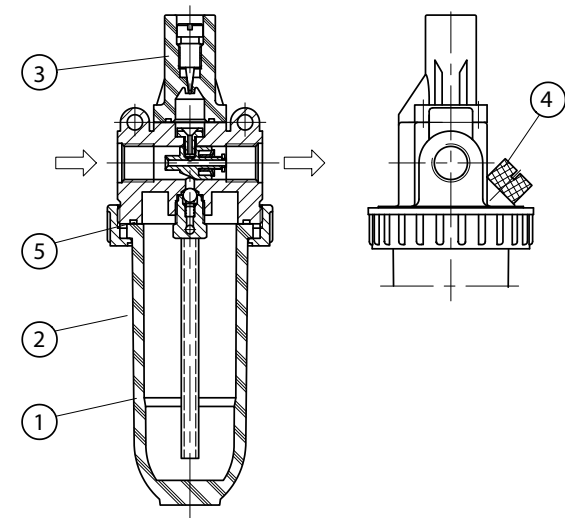
Flow diagram



Oiler response limit



Cross-sectional view / spare parts



Pos.	Designation	Material	Size	Article type	Item no.
1	oil bowl with o-ring (3)	polycarbonate	0	L.00-PC	013178
			1	DO.11-PC	006244
			2	DO.22-PC	006966
			3+8	DO.33-PC	005581
1	metal oil bowl with o-ring (5)	zinkc die casting	0	L.00-M	013179
			1	DO.11-M	006999
			2	DO.22-M	007003
			3+8	DO.33-M	006989
2	bowl guard with screw cap	metal	1	DF.11-35	031657
			2	DF.22-11	031754
			3+8	DF.33-11	031624
3	dome assembly	polycarbonate seals: NBR	0	ESA.0-1312	054979
	metal dome assembly		1 - 4	ESA.1-1312	027942
			0 - 5	L.33-H	006357
4	oil filler cap	-	-	-	-
5	o-ring	NBR	-	-	-

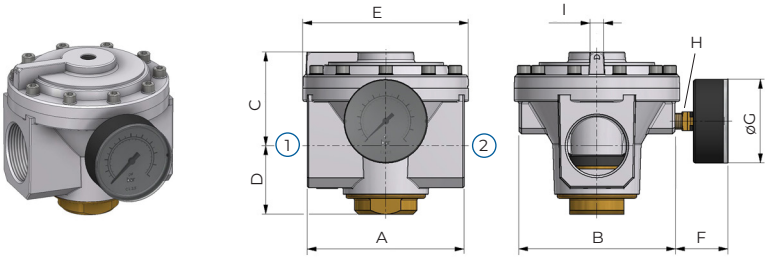
Accessories

Item no.	Designation	
052191	ZW.10	mounting bracket kit with 2 screws M5x20 for size BG1
052192	ZW.30	mounting bracket kit with 2 screws M6x25 for size BG2+BG3

Pressure regulator, pneumatic pilot operated

Technical data

- membrane pressure regulator with secondary venting pneumatic pilot operated
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 max.: 25 bar
- Installation position: vertical
- Materials: Body: die-cast zinc; diaphragm and seals: NBR



Symbol	Dimensions												
	Designation	Size	Connection thread	A	B	C	D	E	F	øG Pressure gauge	H Pressure gauge thread	I Panel thread	Flow P1=10bar; P2=6,3bar ΔP=1bar
	DRI.33 G	BG3	G 1/2"	82	ø81	33	33	ø82	39	ø63	G1/4	G 1/4	5000 /min
	DRI.54 G	BG5	G 3/4"	117	113	65	48	ø125	39	ø63	G1/4	G 1/4	11000 l/min
	DRI.55 G	BG5	G 1"	117	113	65	48	ø125	39	ø63	G1/4	G 1/4	11000 l/min
	DRI.76 G	BG7	G 1 1/4"	119	118	71	52	ø125	39	ø63	G1/4	G 1/4	16500 l/min
	DRI.77 G	BG7	G 1 1/2"	119	118	71	52	ø125	39	ø63	G1/4	G 1/4	16500 l/min
	DRI.87 G	BG8	G 1 1/2"	160	124	90	107	ø160	39	ø50	G1/4	G 1/4	50000 l/min
	DRI.88 G	BG8	G 2"	160	124	90	107	ø160	39	ø50	G1/4	G 1/4	50000 l/min

Designation
 Accessories

DRI

DRI . 77 - 10 - G

Component

Size

Pressure range

Other accessories

DRI

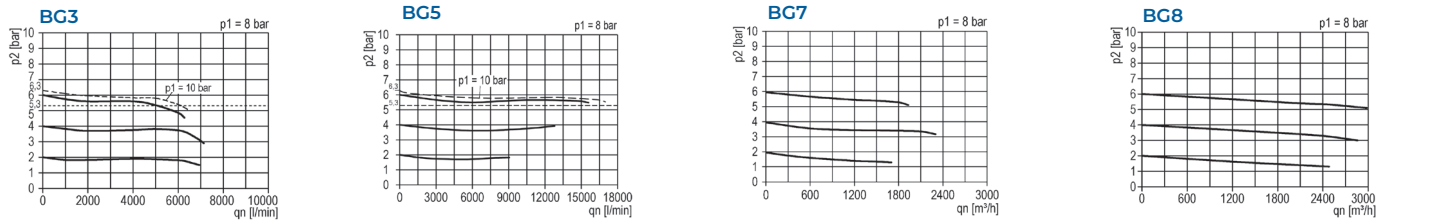
BG3: 33 = G1/2
BG5: 54 = G3/4, 55 = G1
BG7: 76 = G1 1/4, 77 = G1 1/2
BG8: 87 = G1 1/2, 88 = G 2

0,1 - 3 bar
0,5 - 6 bar
0,5 - 10 bar
0,5 - 16 bar

G = pressure gauge
S = panel nut

Item no.	Designation	
009487	BW.30	galvanized mounting bracket for size BG3
050549	BW.50 N	galvanized mounting bracket for size BG5 + BG7

Flow diagram



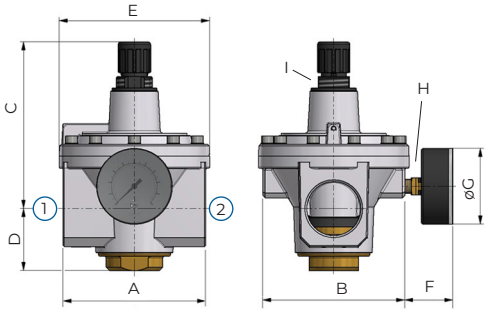
Cross-sectional view / spare parts

Pos.	Designation	Material	Size	Article type	Item no.
	Spare parts consisting of:				
1	membrane (1)	brass-NBR-POM	3	ESA-DRI.33	007758
2	valve cone (2)	brass-NBR-PA6	5	ESA-DRI.55 N	050482
3	o-ring (3)	NBR	7	ESA-DRI.77 N	051218
4	membrane (4)	NBR	8	ESA-DRI.88	007776

Pressure regulator, pilot control

Technical data

- membrane pressure regulator with secondary venting pilot control
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 max.: 25 bar
- Installation position: vertical
- Materials: Body: die-cast zinc; diaphragm and seals: NBR



Symbol	Dimensions												
	Designation	Size	Connection thread	A	B	C	D	E	F	øG Pressure gauge	H Pressure gauge thread	I pneum. connection	Flow P1=6bar; P2=6,3bar ΔP=1bar
	DRP.54 G	BG5	G 3/4"	117	113	144	48	ø125	39	ø63	G1/4	G 1/4	15000 l/min
	DRP.55 G	BG5	G 1"	117	113	144	48	ø125	39	ø63	G1/4	G 1/4	15000 l/min
	DRP.76 G	BG7	G 1 1/4"	119	118	154	52	ø125	39	ø63	G1/4	G 1/4	40000 l/min
	DRP.77 G	BG7	G 1 1/2"	119	118	154	52	ø125	39	ø63	G1/4	G 1/4	40000 l/min
	DRP.87 G	BG8	G 1 1/2"	160	124	157	106	ø160	39	ø50	G1/4	G 1/4	50000 l/min
	DRP.88 G	BG8	G 2"	160	124	157	106	ø160	39	ø50	G1/4	G 1/4	50000 l/min

Designation

Accessories

DRI . 77 - 10 - G

Component

Size

Pressure range

Other accessories

DRP

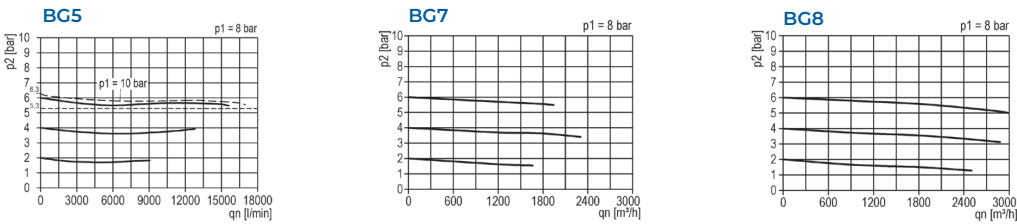
BG5: 54 = G3/4, 55 = G1
BG7: 76 = G1 1/4, 77 = G1 1/2
BG8: 87 = G1 1/2, 88 = G 2

0,1 - 3 bar
0,5 - 6 bar
0,5 - 10 bar
0,5 - 16 bar

G = pressure gauge
K = lockable hand wheel

- Item no. Designation
- 050549 BW.50 N galvanized mounting bracket for size BG5 + BG7

Flow diagram



Cross-sectional view / spare parts		Pos.	Designation	Material	Size	Article type	Item no.
	5 6 2 1 3 4		Spare parts consisting of:				
		1	diaphragm (1)	brass-NBR-POM	5	ESA-DRP.55 N	051622
		2	diaphragm (2)	brass-NBR-PA6	7	ESA-DRP.77 N	051623
		3	valve cone (3)	NBR			
		4	o-ring (4)	NBR	8	ESA-DRP.88	007263
		5	beaded diaphragm (5)	NBR			
		6	valve cone (6)	brass-NBR			

We present

MULTI-FIX-SERIES.

Our Multi-Fix-Series is characterized by its innovative modular design, which enables maximum flexibility and adaptability in industrial applications. The broad portfolio allows us to meet your specific requirements and optimize your operations. Robust materials and precise workmanship ensure reliable performance, even under the most demanding conditions. Even at extreme temperatures from -40°C to 60°C , you can rely on the Multi-Fix series.

PROPERTIES



weight
medium



modularity
high



temperature resistance
 -10°C to $+60^{\circ}\text{C}$ (optional -40°C)



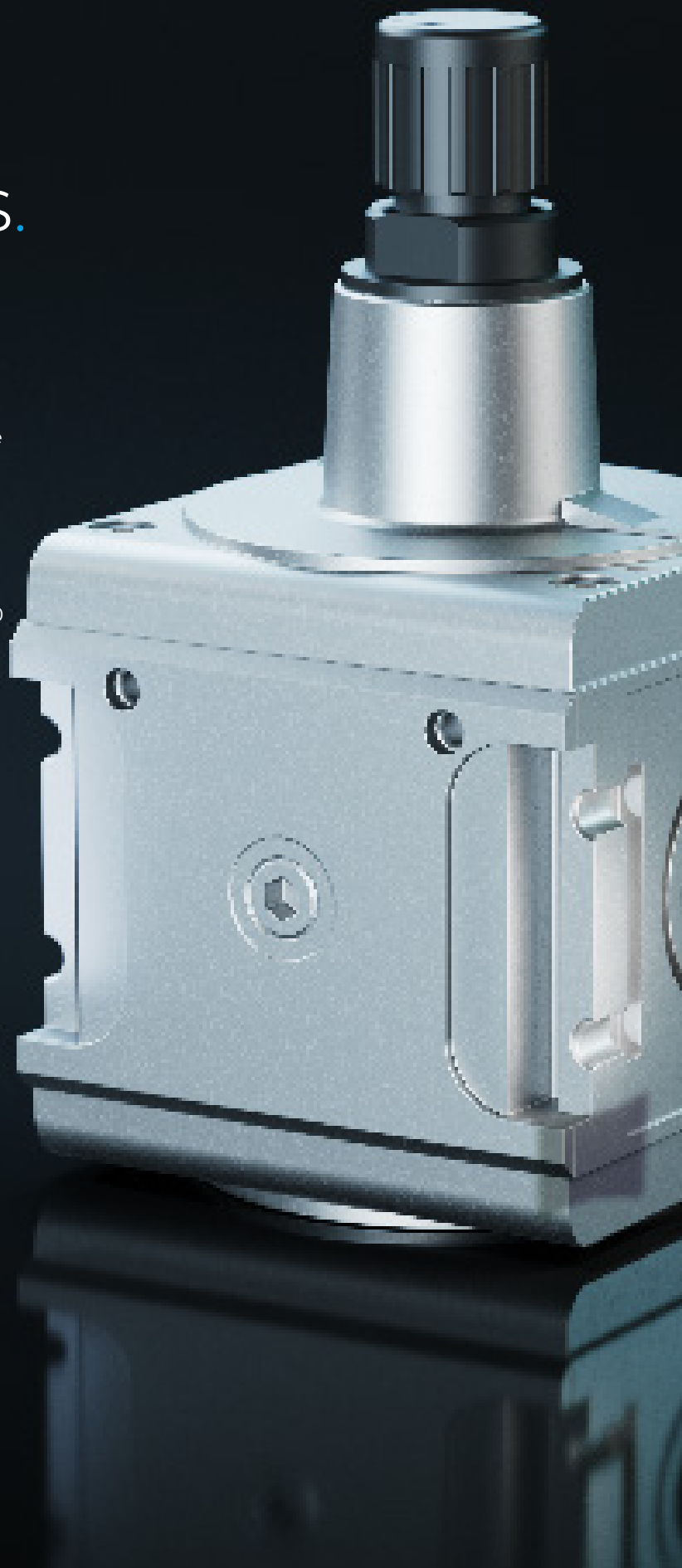
resistance capability
high



connection sizes
to G1"



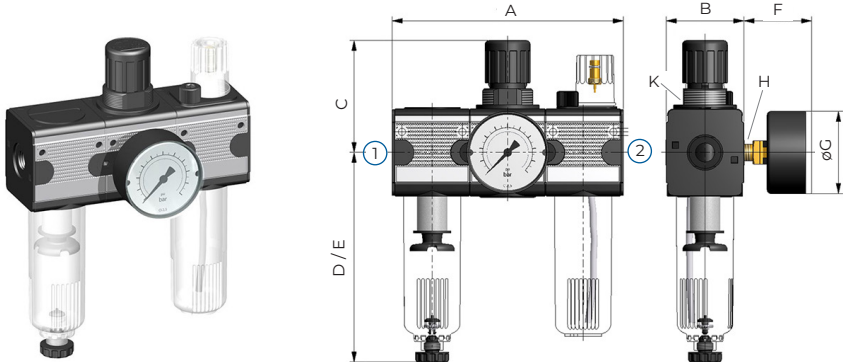
flow rate
high



Service 3 unit

Technical data

- Sintered filter, centrifugal principle; membrane pressure regulator with secondary venting; proportional lubricator
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 min.: 1,5 bar
- Input pressure P1 max.: 16 bar; BG0 = 12bar
- Installation position: vertial
- Filter fineness: 5 µm
- Condensate container: PC, PC with protective cage or metal container
- Condensate drain: semi-automatic drain (HA) or fully automatic (AM)
AM: valve opend when pressureless
AMC: valve closed when pressureless
- Materials: Körper: Body: die-cast zinc, spring cover: POM, diaphragm and seals: NBR
- Oil dosing at qv=1000 l/min: 1-2 d/min
- Oil type: CL32 according to DIN 51517 - ISO VG32

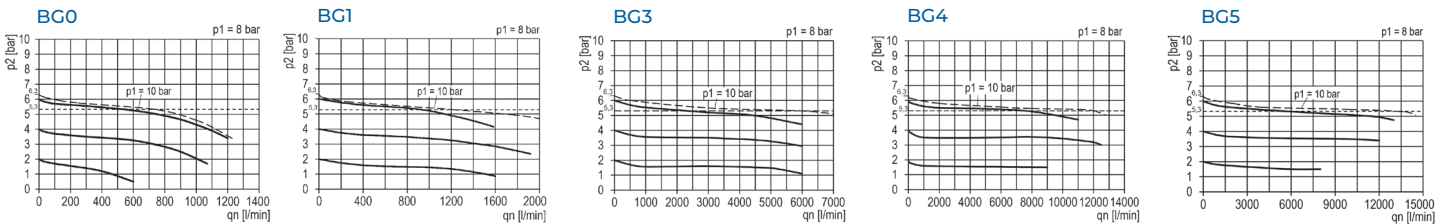


Symbol	Dimensions													
	Designation	Size	Connection thread	A	B	C	D (HA)	E (AM)	F	øG pressure gauge	H pressure gauge thread	Panel thread	internal air consumption	Flow P1=10bar; P2=6,3bar ΔP=1bar
	FRL.00 G	BG0	G 1/8"	120	40	60	103	141	36	ø40	G 1/8"	M30x1,5	-	750
	FRL.01 G	BG0	G 1/4"	120	40	60	103	141	36	ø40	G 1/8"	M30x1,5	-	750
	FRL.11 G	BG1	G 1/4"	138	46	67	125	140	40	ø50	G 1/4"	M30x1,5	-	1200
	FRL.12 G	BG1	G 3/8"	138	46	67	125	140	40	ø50	G 1/4"	M30x1,5	-	1200
	FRL.33 G	BG3	G 1/2"	201	69	99	147	162	40	ø50	G 1/4"	M50x1,5	-	5800
	FRL.34 G	BG3	G 3/4"	201	69	99	147	162	40	ø50	G 1/4"	M50x1,5	-	5800
	FRL.44	BG4	G 3/4"	255	89	125	190	205	42	ø63	G 1/4"	-	1,5 l/min	12000
	FRL.45	BG4	G 1"	255	89	125	190	205	42	ø63	G 1/4"	-	1,5 l/min	12000
	FRL.54 G	BG5	G 3/4"	300	103	128	254	268	42	ø63	G 1/4"	-	-	13500
	FRL.55 G	BG5	G 1"	300	103	128	254	268	42	ø63	G 1/4"	-	-	13500

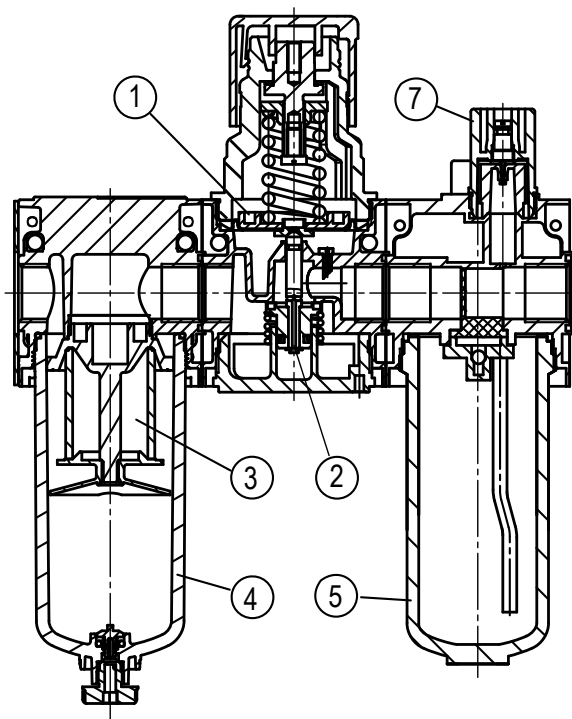
Designation

FRL . 11 - 10 - 5 - PC - HA - G						
Component	Size	Pressure range	filter fineness	Container type	Condensate drain	Other accessories
FRL	BG0: 00 = G1/8, 01 = G1/4 BG1: 11 = G1/4, 12 = G3/8 BG3: 33 = G1/2, 34 = G3/4 BG4: 44 = G3/4, 45 = G1 BG5: 54 = G3/4, 55 = G1	0,1 - 3 bar 0,5 - 6 bar 0,5 - 10 bar 0,5 - 16 bar	5 = 5 µm	PC = polycarbonate B = polycarbonate with protective cage M = metal	HA = semi automatic AM = fully automatic AMC = fully automatic usually closed	G = pressure gauge S = panel nut N = electrical level monitoring

Flow chart



Cross - sectional view / spare parts



Pos.	Designation	Material	Size	Article type	Item no.
1 2	Spare parts consisting of: membrane (1) valve cone (2) o-ring	brass-NBR-POM brass-NBR-PA6 NBR	0	ESA-R.00/RB.01	014366
			1	ESA-R/C.11	006109
			3	ESA-R/C.33	006111
			4	ESA-R/Ri/C.45	045985
			5	ESA-C.55	011939
4	filter element 5 µm	cellpor	0 + 1	C.00-26	052187
			3	C.33-62	052188
			4	FE.4-560	032171
			5	C.55-24	047562
4	condensate bowl with semi automatic drain (HA) and o-ring	polycarbonate	0	C.00-PC-HA	011972
			1	C.11-PC-HA	005483
			3+5	C.33-PC-HA	001370
			4	BE.4-PC-B-HA	030304
4	condensate bowl with fully automatic condensate drain (AM10) and o-ring	polycarbonate	0+1	C.11-PC-AM	004429
			3+5	C.33-PC-AM	026695
			4	BE.4-PC-B-AM	030304
4	condensate bowl with fully automatic condensate drain (AM10/NC) and o-ring	polycarbonate	0+1	C.11-AMC	024937
			3+5	C.33-AMC	032061
			4	BE.4-PC-B-AMC	030308
4	metal bowl with semi automatic drain (HA) and o-ring	metal	0	C.00-M-HA	012870
			1	C.11-H-HA	001227
			3	C.33-H-HA	001229
			4	BE.4-H-HA	033579
4	metal bowl with visual display, automatic drain(AM10) and o-ring	metal	0	C.00-M-AM	031836
			1	C.11-H-AM	001241
			3+5	C.33-H-AM	001251
			4	BE.4-HA-AM	033583
4	metal bowl with visual display, fully automatic drain (AM10/NC) and o-ring	metal	0	C.00-M-AMC	033859
			1	C.11-H-AMC	032397
			3+5	C.33-H-AMC	048407
			4	BE.4-HA-AMC	048407
5	oil bowl with o-ring	polycarbonate	0	L.00-PC	013178
			1	L.11	004420
			3+5	L.33-PC	004421
			4	BE.4-PC-B-c	046631
5	metal oil bowl with o-ring	zinc-die casting	0	L.00-M	013179
			1	L.11-H	004436
			3+5	L.33-H	004437
			4	BE.4-H-c	046632
6	bowl guard	metal	0	BC.00-45	014438
			1	C.11-45	021005
			3+5	C.33-45	017961
7	dome assembly polyamide	seals: NBR	1 - 5	L.33	005892
	metal dome assembly		1 - 5	L.33 H	006357

Accessories

Item no. Designation

012954	KP.00	coupling kit BG0
004909	KP.11	coupling kit BG1
004910	KP.33	coupling kit BG3
009537	KP.55	coupling kit BG5

052195	ZW.00-1	Mounting bracket (2x console with sliding wedge)
052196	ZW.11-1	Mounting bracket with 2 screws M4x50
052201	ZW.33-1	Mounting bracket with 2 screws M5x75
045984	ZW.45	Mounting bracket with 2 screws M6x12
009663	ZW.55	Mounting bracket with 2 screws M6x12

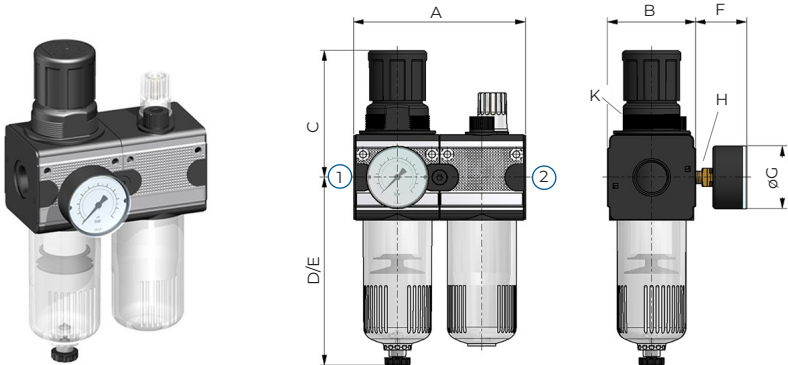
Item no. Designation

052194	MW.30	mounting bracket for panel mounting
012866	MW.50	mounting bracket for panel mounting
052193	MW.30/DR.00-34-2	mounting bracket with panel nut M30x1,5
008803	MW.50/C.33-42	mounting bracket with panel nut M50x1,5
049414	C.00-34	panel nut M30x1,5 KS
052012	DR.00-34-2	panel nut M30x1,5
052237	C.33-42	panel nut M36x1,5
052238	SM.2	panel nut M42x1,5

Service 2 unit

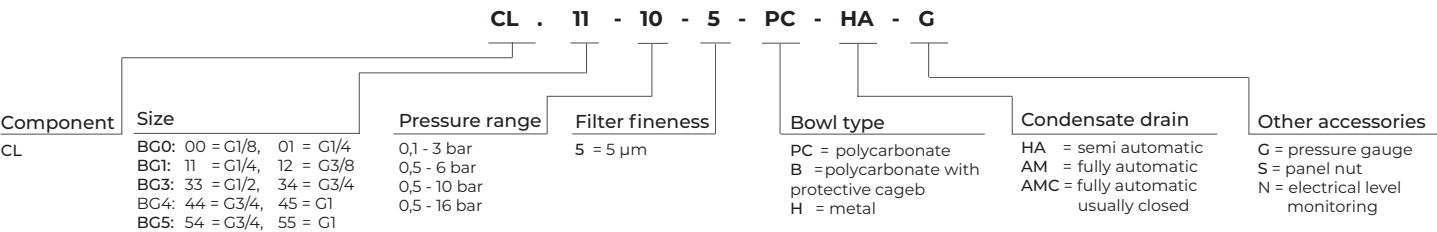
Technical data

- Sintered filter, centrifugal principle; membrane pressure regulator with secondary venting; proportional lubricator
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 min.: 1,5 bar
- Input pressure P1 max.: 16 bar; BG0 = 12bar
- Installation position: vertical
- Filter fineness: 5 µm
- Condensate bowl: PC container; PC container with protective cage or metal container
- Condensate drain: Semi-automatic drain (HA) or fully automatic drain (AM)
AM: valve open when pressureless
AMC: valve closed when pressureless
- Materials: Body: die-cast zinc, spring cover: POM, diaphragm and seals: NBR
- Oil dosing at qv=1000 l/min: 1-2 d/min
- Oil type: CL32 nach DIN 51517 - ISO VG32

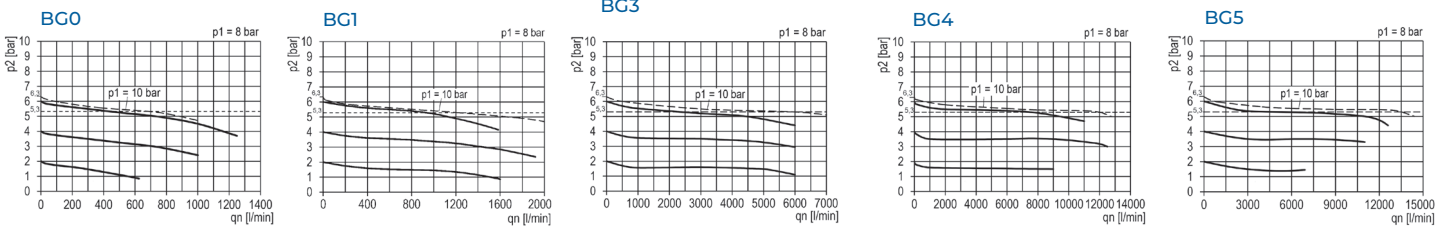


Symbol	Dimensions													
	Designation	Size	Connection thread	A	B	C	D (HA)	E (AM)	F	øG Pressure gauge	Pressure gauge thread	Panel thread	internal air consumption	Flow P1=10bar; P2=6,3bar ΔP=1bar
	CL.00 G	BG0	G 1/8"	80	40	60	103	141	36	ø40	G 1/8"	M30x1,5	-	750
	CL.01 G	BG0	G 1/4"	80	40	60	103	141	36	ø40	G 1/8"	M30x1,5	-	750
	CL.11 G	BG1	G 1/4"	93	46	67	125	140	40	ø50	G 1/4"	M30x1,5	-	1200
	CL.12 G	BG1	G 3/8"	93	46	67	125	140	40	ø50	G 1/4"	M30x1,5	-	1200
	CL.33 G	BG3	G 1/2"	135	69	99	147	162	40	ø50	G 1/4"	M50x1,5	-	5800
	CL.34 G	BG3	G 3/4"	135	69	99	147	162	40	ø50	G 1/4"	M50x1,5	-	5800
	CL.44	BG4	G 3/4"	170	89	125	190	205	42	ø63	G 1/4"	-	1,5 l/min	12000
	CL.45	BG4	G 1"	170	89	125	190	205	42	ø63	G 1/4"	-	1,5 l/min	12000
	CL.54 G	BG5	G 3/4"	200	103	128	254	268	42	ø63	G 1/4"	-	-	13500
	CL.55 G	BG5	G 1"	200	103	128	254	268	42	ø63	G 1/4"	-	-	13500

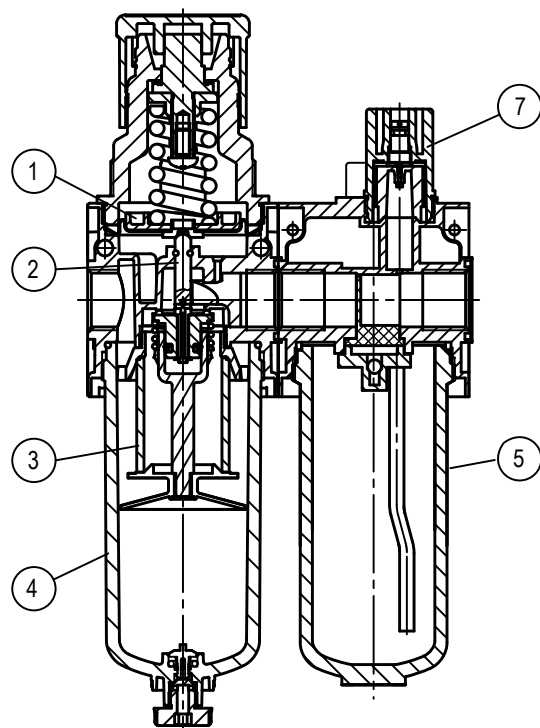
Designation



Flow chart



Cross - sectional view / spare parts



Pos.	Designation	Material	Size	Article type	Item no.
1 2	Spare parts consisting of: membrane (1) valve cone (2) o-ring	brass-NBR-POM brass-NBR-PA6 NBR	0	ESA-R.00/RB.01	014366
			1	ESA-R/C.11	006109
			3	ESA-R/C.33	006111
			4	ESA-R/RI/C.45	045985
			5	ESA-C.55	011939
4	filter element 5 µm	cellpor	0 + 1	C.00-26	052187
			3	C.33-62	052188
			4	FE.4-560	032171
			5	C.55-24	047562
4	condensate bowl with semi automatic drain (HA) and o-ring	polycarbonate	0	C.00-PC-HA	011972
			1	C.11-PC-HA	005483
			3+5	C.33-PC-HA	001370
			4	BE.4-PC-B-HA	030304
4	condensate bowl with fully automatic condensate drain (AM10) and o-ring	polycarbonate	0+1	C.11-PC-AM	004429
			3+5	C.33-PC-AM	026695
			4	BE.4-PC-B-AM	030304
			4	BE.4-PC-B-AMC	030308
4	condensate bowl with fully automatic condensate drain (AM10/NC) and o-ring	polycarbonate	0+1	C.11-AMC	024937
			3+5	C.33-AMC	032061
			4	BE.4-PC-B-AMC	030308
			4	BE.4-H-HA	033579
4	metal bowl with semi automatic drain (HA) and o-ring	metal	0	C.00-M-HA	012870
			1	C.11-H-HA	001227
			3	C.33-H-HA	001229
			4	BE.4-H-HA	033579
4	metal bowl with visual display, automatic drain(AM10) and o-ring	metal	0	C.00-M-AM	031836
			1	C.11-H-AM	001241
			3+5	C.33-H-AM	001251
			4	BE.4-HA-AM	033583
4	metal bowl with visual display, fully automatic drain (AM10/NC) and o-ring	metal	0	C.00-M-AMC	033859
			1	C.11-H-AMC	032397
			3+5	C.33-H-AMC	048407
			4	BE.4-HA-AMC	048407
5	oil bowl with o-ring	polycarbonate	0	L.00-PC	013178
			1	L.11	004420
			3+5	L.33-PC	004421
			4	BE.4-PC-B-c	046631
5	metal oil bowl with o-ring	zinc-die casting	0	L.00-M	013179
			1	L.11-H	004436
			3+5	L.33-H	004437
			4	BE.4-H-c	046632
6	bowl guard	metal	0	BC.00-45	014438
			1	C.11-45	021005
			3+5	C.33-45	017961
7	dome assembly polyamide	seals: NBR	1 - 5	L.33	005892
	metal dome assembly		1 - 5	L.33 H	006357

Accessories

Item no. Designation

012954	KP.00	coupling kit BG0
004909	KP.11	coupling kit BG1
004910	KP.33	coupling kit BG3
009537	KP.55	coupling kit BG5

052195	ZW.00-1	Mounting bracket (2x console with sliding wedge)
052196	ZW.11-1	Mounting bracket with 2 screws M4x50
052201	ZW.33-1	Mounting bracket with 2 screws M5x75
045984	ZW.45	Mounting bracket with 2 screws M6x12
009663	ZW.55	Mounting bracket with 2 screws M6x12

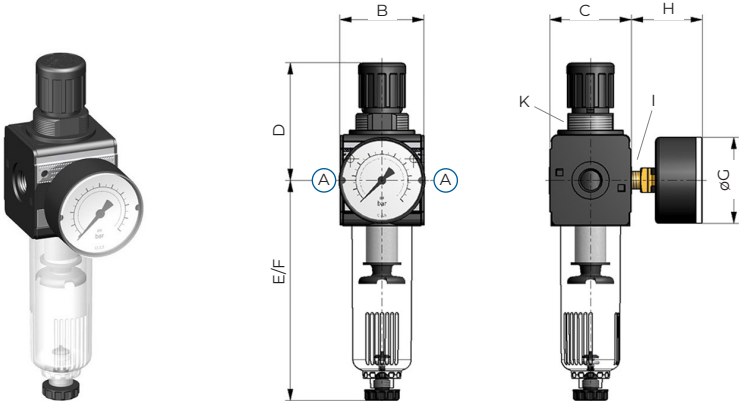
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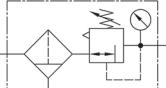
052194	MW.30	mounting bracket for panel mounting
012866	MW.50	mounting bracket for panel mounting
052193	MW.30/DR.00-34-2	mounting bracket with panel nut M30x1,5
008803	MW.50/C.33-42	mounting bracket with panel nut M50x1,5
049414	C.00-34	panel nut M30x1,5 KS
052012	DR.00-34-2	panel nut M30x1,5
052237	C.33-42	panel nut M36x1,5
052238	SM.2	panel nut M42x1,5

Filter-regulator

Technical data

- Sintered filter, centrifugal principle; membrane pressure regulator with secondary venting
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 min.: 1,5 bar
- Input pressure P1 max.: 16 bar; BG0 = 12bar
- Installation position: vertical
- Filter fineness: 5 µm
- Condensate bowl: PC container; PC container with protective cage or metal container
- Condensate drain: Semi-automatic drain (HA) or fully automatic drain (AM)
AM: valve opens when pressureless
AMC: valve closed when pressureless
- Werkstoffe: Körper: Zinkdruckguss, Federhaube: POM, Membrane und Dichtungen: NBR,



Symbol	Dimensions													
	Designa- tion	Size	Conne- ction thread	A	B	C	D (HA)	E (AM)	F	øG Pressure gauge	Pres- sure gauge thread	Panel thread	Internal air con- sumption	Flow P1=10bar; P2=6,3bar ΔP=1bar
	C.00 G	BG0	G 1/8"	40	40	60	103	141	36	ø40	G 1/8"	M30x1,5	-	750
	C.01 G	BG0	G 1/4"	40	40	60	103	141	36	ø40	G 1/8"	M30x1,5	-	750
	C.11 G	BG1	G 1/4"	48	46	67	125	140	40	ø50	G 1/4"	M30x1,5	-	1200
	C.12 G	BG1	G 3/8"	48	46	67	125	140	40	ø50	G 1/4"	M30x1,5	-	1200
	C.33 G	BG3	G 1/2"	69	69	99	147	162	40	ø50	G 1/4"	M50x1,5	-	5800
	C.34 G	BG3	G 3/4"	69	69	99	147	162	40	ø50	G 1/4"	M50x1,5	-	5800
	C.44	BG4	G 3/4"	85	89	125	190	205	42	ø63	G 1/4"	-	1,5 l/min	12000
	C.45	BG4	G 1"	85	89	125	190	205	42	ø63	G 1/4"	-	1,5 l/min	12000
	C.54 G	BG5	G 3/4"	100	103	128	254	268	42	ø63	G 1/4"	-	-	13500
	C.55 G	BG5	G 1"	100	103	128	254	268	42	ø63	G 1/4"	-	-	13500

Designation

C . 11 - 10 - 5 - PC - HA - G

Component

C

Size

BG0: 00 = G1/8, 01 = G1/4
BG1: 11 = G1/4, 12 = G3/8
BG3: 33 = G1/2, 34 = G3/4
BG4: 44 = G3/4, 45 = G1
BG5: 54 = G3/4, 55 = G1

Pressure range

0,1 - 3 bar
0,5 - 6 bar
0,5 - 16 bar

Filter fineness

5 = 5 µm

Bowl type

PC=polycarbonate
B = polycarbonate with protective cage
M = metal
H = metal bowl with visual display

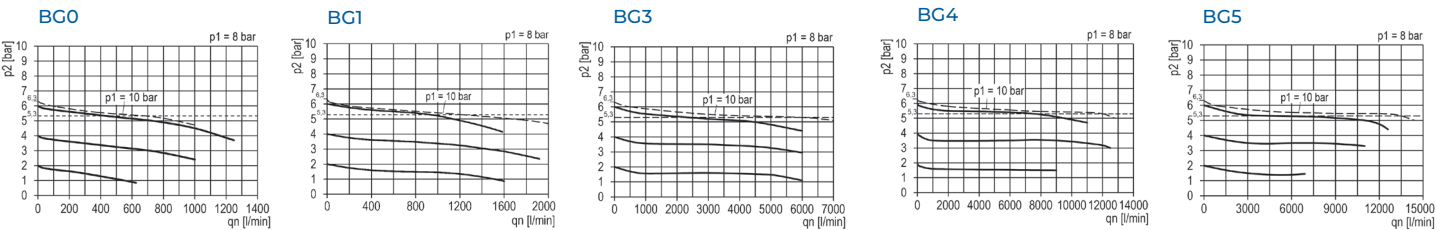
Condensate drain

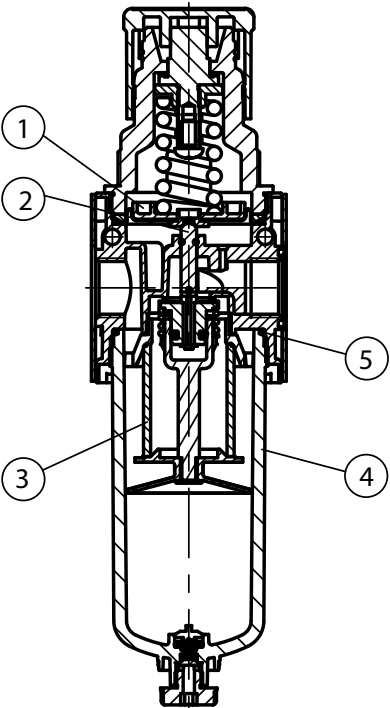
HA = semi automatic
AM = fully automatic
AMC = fully automatic usually closed

Other accessories

G = pressure gauge
S = panel nut

Flow chart



Cross - sectional view / spare parts		Pos.	Designation	Material	Size	Article type	Item no.
	1 2		Spare parts consisting of: membrane (1) valve cone (2) o-ring	brass-NBR-POM brass-NBR-PA6 NBR	0	ESA-R.00/RB.01	014366
					1	ESA-R/C.11	006109
					3	ESA-R/C.33	006111
					4	ESA-R/RI/C.45	045985
					5	ESA-C.55	011939
	4		filter element 5 µm	cellpor	0 + 1	C.00-26	052187
					3	C.33-62	052188
					4	FE.4-560	032171
					5	C.55-24	047562
	4		condensate bowl with semi automatic drain (HA) and o-ring	polycarbonate	0	C.00-PC-HA	011972
					1	C.11-PC-HA	005483
					3+5	C.33-PC-HA	001370
					4	BE.4-PC-B-HA	030304
	4		condensate bowl with fully automatic condensate drain (AM10) and o-ring	polycarbonate	0+1	C.11-PC-AM	004429
					3+5	C.33-PC-AM	026695
					4	BE.4-PC-B-AM	030304
	4		condensate bowl with fully automatic condensate drain (AM10/NC) and o-ring	polycarbonate	0+1	C.11-AMC	024937
					3+5	C.33-AMC	032061
					4	BE.4-PC-B-AMC	030308
	4		metal bowl with semi automatic drain (HA) and o-ring	metal	0	C.00-M-HA	012870
					1	C.11-H-HA	001227
					3	C.33-H-HA	001229
					4	BE.4-H-HA	033579
	4		metal bowl with visual display, automatic drain(AM10) and o-ring	metal	0	C.00-M-AM	031836
					1	C.11-H-AM	001241
					3+5	C.33-H-AM	001251
					4	BE.4-HA-AM	033583
	4		metal bowl with visual display, fully automatic drain (AM10/NC) and o-ring	metal	0	C.00-M-AMC	033859
					1	C.11-H-AMC	032397
					3+5	C.33-H-AMC	048407
					4	BE.4-HA-AMC	048407
	5		o-ring 30x2	NBR	0+1	-	-
					3+5	-	-
					4	-	-
	6		bowl guard	metal	0	BC.00-45	014438
					1	C.11-45	021005
					3+5	C.33-45	017961

Accessories

Item no. Designation

012954	KP.00	coupling kit BG0
004909	KP.11	coupling kit BG1
004910	KP.33	coupling kit BG3
009537	KP.55	coupling kit BG5

052195	ZW.00-1	Mounting bracket (2x console with sliding wedge)
052196	ZW.11-1	Mounting bracket with 2 screws M4x50
052201	ZW.33-1	Mounting bracket with 2 screws M5x75
045984	ZW.45	Mounting bracket with 2 screws M6x12
009663	ZW.55	Mounting bracket with 2 screws M6x12

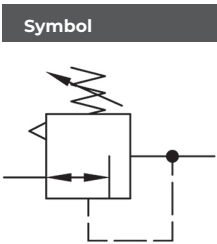
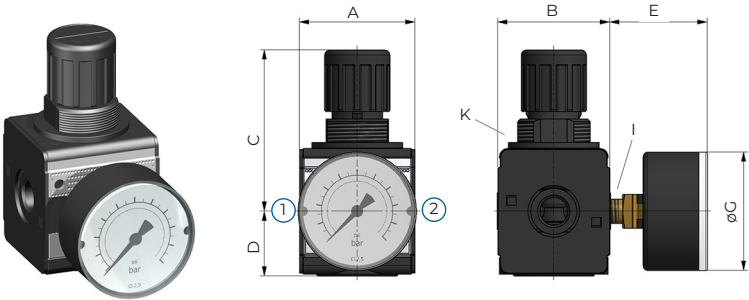
Item no. Designation

052194	MW.30	mounting bracket for panel mounting
012866	MW.50	mounting bracket for panel mounting
052193	MW.30/DR.00-34-2	mounting bracket with panel nut M30x1,5
008803	MW.50/C.33-42	mounting bracket with panel nut M50x1,5
049414	C.00-34	panel nut M30x1,5 KS
052012	DR.00-34-2	panel nut M30x1,5
052237	C.33-42	panel nut M36x1,5
052238	SM.2	panel nut M42x1,5

Pressure regulator

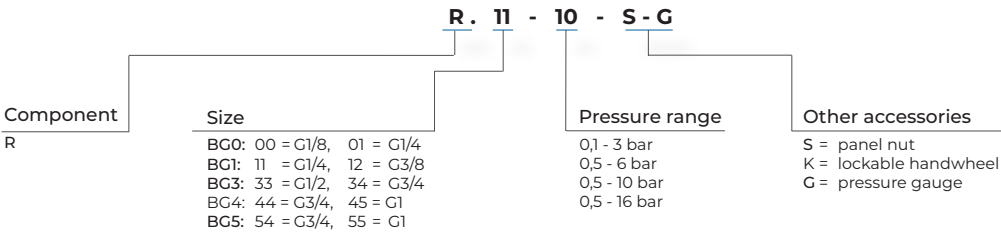
Technical data

- membrane pressure regulator with secondary venting
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 max.: 16 bar
- Installation position: vertical
- Materials: Body: die-cast zinc; spring cover: POM; diaphragm and seals: NBR

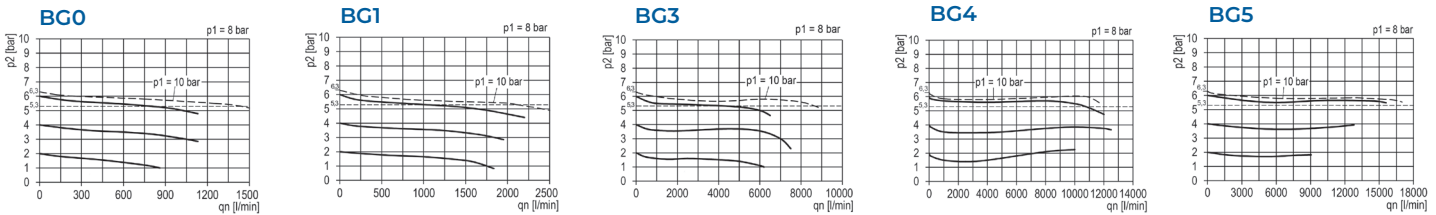


Dimensions													
Designation	Size	Connection thread	A	B	C	D	E	øG Pressure gauge	I Pressure gauge thread	K Panel thread	Internal air consumption	Flow P1=10bar; P2=6,3bar ΔP=1bar	
R.00 G	BG0	G 1/8"	40	40	60	103	36	ø40	G 1/8"	M30x1,5	-	1100	
R.01 G	BG0	G 1/4"	40	40	60	103	36	ø40	G 1/8"	M30x1,5	-	1100	
R.11 G	BG1	G 1/4"	48	46	67	125	40	ø50	G 1/4"	M30x1,5	-	1500	
R.12 G	BG1	G 3/8"	48	46	67	125	40	ø50	G 1/4"	M30x1,5	-	1500	
R.33 G	BG3	G 1/2"	69	69	99	147	40	ø50	G 1/4"	M50x1,5	-	3500	
R.34 G	BG3	G 3/4"	69	69	99	147	40	ø50	G 1/4"	M50x1,5	-	3500	
R.44	BG4	G 3/4"	85	89	125	190	42	ø63	G 1/4"	-	1,5 l/min	12000	
R.45	BG4	G 1"	85	89	125	190	42	ø63	G 1/4"	-	1,5 l/min	12000	
R.54 G	BG5	G 3/4"	100	103	128	254	42	ø63	G 1/4"	-	-	12000	
R.55 G	BG5	G 1"	100	103	128	254	42	ø63	G 1/4"	-	-	12000	

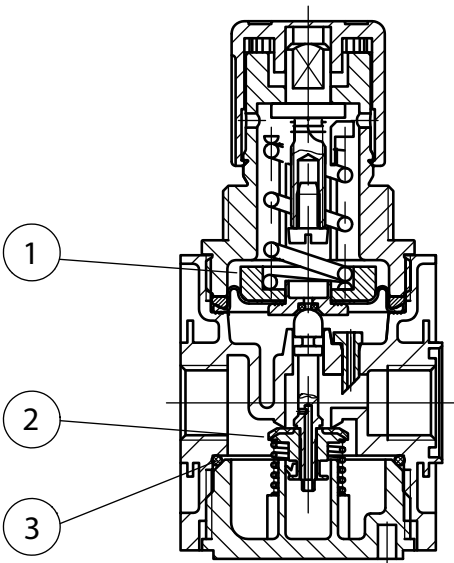
Designation



Flow chart



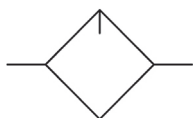
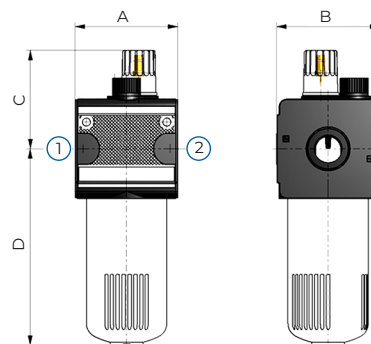
Cross - sectional view / spare parts



Pos.	Benennung	Werkstoff	BG	Artikel-Typ	Artikel-Nr.
1 2	Spare parts consisting of: membrane (1) valve cone (2) o-ring	brass-NBR-POM brass-NBR-PA6 NBR	0	ESA-R.00/RB.01	014366
			1	ESA-R/C.11	006109
			3	ESA-R/C.33	006111
			4	ESA-R/R/C.45	045985
			5	ESA-C.55	011939

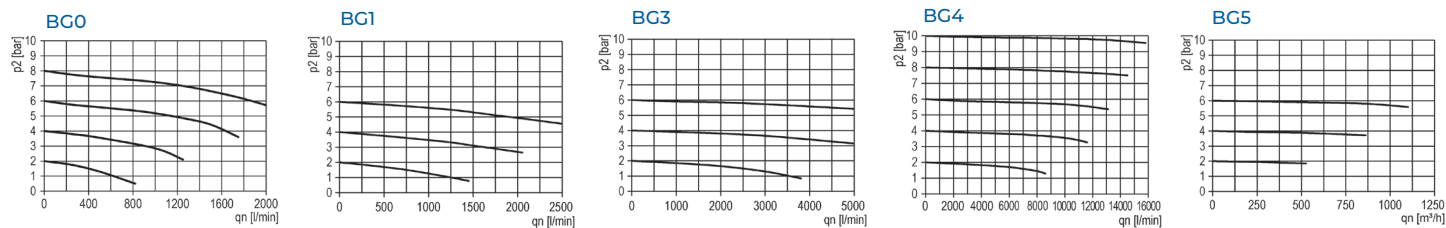
Accessories					
Item no.	Designation		Item no.	Designation	
012954	KP.00	coupling kit BG0	052194	MW.30	mounting bracket for panel mounting
004909	KP.11	coupling kit BG1	012866	MW.50	mounting bracket for panel mounting
004910	KP.33	coupling kit BG3			
009537	KP.55	coupling kit BG5	052193	MW.30/DR.00-34-2	mounting bracket with panel nut M30x1,5
			008803	MW.50/C.33-42	mounting bracket with panel nut M50x1,5
052195	ZW.00-1	Mounting bracket (2x console with sliding wedge)	049414	C.00-34	panel nut M30x1,5 KS
052196	ZW.11-1	Mounting bracket with 2 screws M4x50	052012	DR.00-34-2	panel nut M30x1,5
052201	ZW.33-1	Mounting bracket with 2 screws M5x75	052237	C.33-42	panel nut M36x1,5
045984	ZW.45	Mounting bracket with 2 screws M6x12	052238	SM.2	panel nut M42x1,5
009663	ZW.55	Mounting bracket with 2 screws M6x12			

- proportional lubricator
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 max.: 16 bar
- Installation position: vertical
- Condensate bowl: PC container; PC container with protective cage or metal container
- Oil dosing at $q_v=1000 \text{ l/min}$: 1-2 d/min
- Oil type: CL32 nach DIN 51517 - ISO VG32
- Tropfaufsatz: PC/PA
- Materials: Body: die-cast zinc

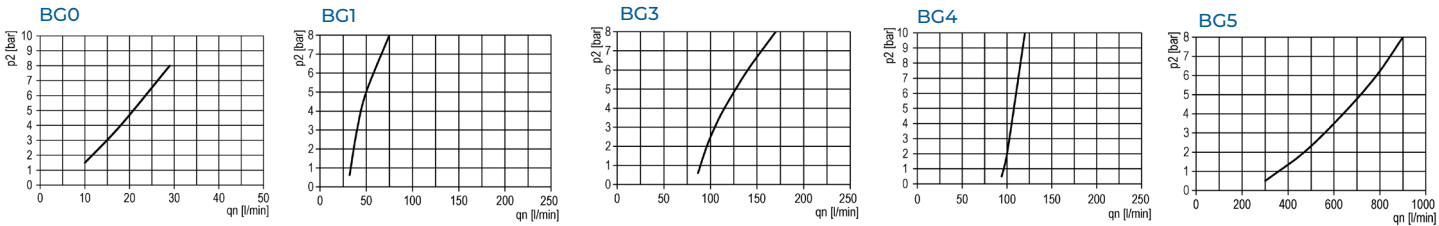


Dimensions							
Designation	Size	Connection thread	A	B	C	D	Flow P1=10bar; P2=6,3bar ΔP=1bar
L.00	BG0	G 1/8"	40	40	50	96	1000
L.01	BG0	G 1/4"	40	40	50	96	1000
ML.11	BG1	G 1/4"	48	46	58	110	1500
L.11	BG1	G 1/4"	48	46	58	110	1900
L.12	BG1	G 3/8"	48	46	58	110	1900
ML.33	BG3	G 1/2"	69	69	66	132	4700
L.33	BG3	G 1/2"	69	69	66	132	5000
L.34	BG3	G 3/4"	69	69	66	132	5000
L.44	BG4	G 3/4"	85	89	86	182	14000
L.45	BG4	G 1"	85	89	86	185	14000
L.54	BG5	G 3/4"	100	103	85	237	18000
L.55	BG5	G 1"	100	103	85	237	18000

L . 11 - PC - N	
Component	Size
L = Lubricator	BG0: 00 = G1/8, 01 = G1/4
ML = Micro lubricator	BG1: 11 = G1/4, 12 = G3/8
	BG3: 33 = G1/2, 34 = G3/4
	BG4: 44 = G3/4, 45 = G1
	BG5: 54 = G3/4, 55 = G1
	Bowl type
	PC = polycarbonate
	B = polycarbonate with protective cage
	M = metal
	H = metal with visual display
	Other accessories
	N = electrical level monitoring



Oiler response limit



Cross - sectional view / spare parts

A detailed cross-sectional technical drawing of a mechanical assembly, likely a pump or sprayer. The drawing shows internal components such as a central shaft, various seals, and housing parts. Three specific areas are highlighted with numbered callouts:

- Callout 1:** Points to the main cylindrical body or housing at the bottom of the assembly.
- Callout 2:** Points to a complex internal assembly at the top, which appears to be the oil bowl and its associated guard.
- Callout 3:** Points to a small circular component, likely an O-ring, located within the internal assembly.

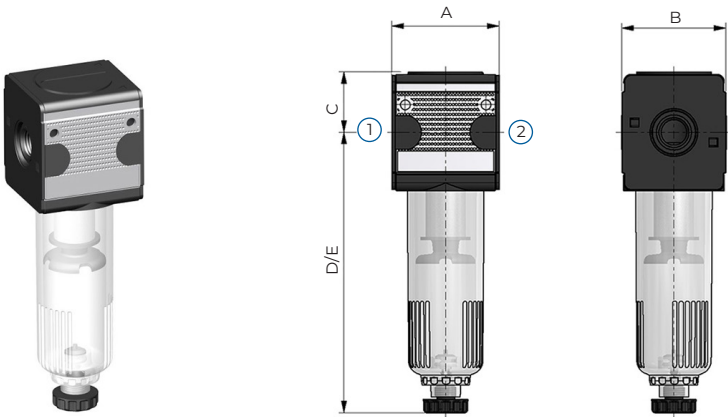
Pos.	Designation	Material	Size	Article type	Item no.	
1	oil bowl with o-ring (3)	polycarbonate	0	L.00-PC	013178	
			1	L.11	004420	
			3+5	L.33-PC	004421	
			4	BE.4-PC-B-c	046631	
1	metal oil bowl with o-ring (3)	zinc-die casting	0	L.00-M	013179	
			1	L.11-H	004436	
			3+5	L.33-H	004437	
			4	BE.4-H-c	046632	
2	bowl guard	metal	0	BC.00-45	014438	
			1	C.11-45	021005	
			3+5	C.33-45	017961	
2	dome assembly polyamide	polycarbonate seals: NBR	0	ESA.0-1312	054979	
	metal dome assembly		1 - 4	ESA.1-1312	027942	
			0 - 5	L.33-H	006357	
3	o-ring 30x2	NBR	0 - 1	DF.00-2	008894	
	o-ring 50x2		3 - 5	C.33-23	008895	

Accessories			Item no.	Designation	
012954	KP.00	coupling kit BG0	052195	ZW.00-1	Mounting bracket (2x console with sliding wedge)
004909	KP.11	coupling kit BG1	052196	ZW.11-1	Mounting bracket with 2 screws M4x50
004910	KP.33	coupling kit BG3	052201	ZW.33-1	Mounting bracket with 2 screws M5x75
009537	KP.55	coupling kit BG5	045984	ZW.45	Mounting bracket with 2 screws M6x12
			009663	ZW.55	Mounting bracket with 2 screws M6x12

Filter

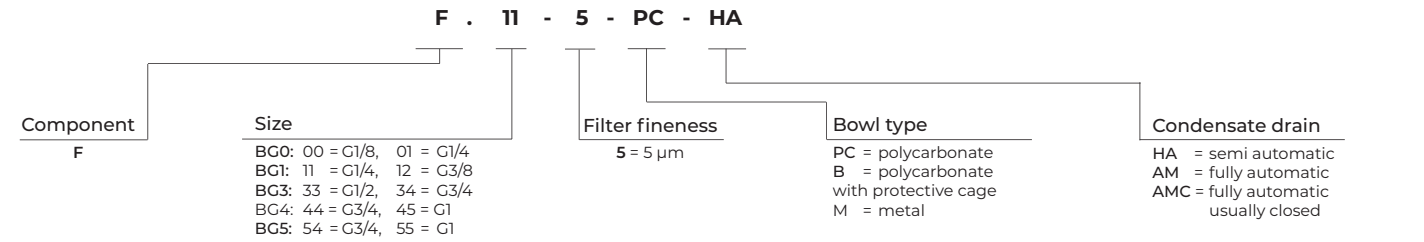
Technical data

- Sintered filter, centrifugal principle
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 min.: 1,5 bar
- Input pressure P1 max.: 16 bar; BG0 = 12bar
- Installation position: vertical
- Filter fineness: 5 µm
- Condensate bowl: PC container; PC container with protective cage or metal container
- Condensate drain: Semi-automatic drain (HA) or fully automatic drain (AM)
AM: valve open when pressureless
AMC: valve closed when pressureless
- Materials: Body: die-cast zinc, spring cover: POM, diaphragm and seals: NBR

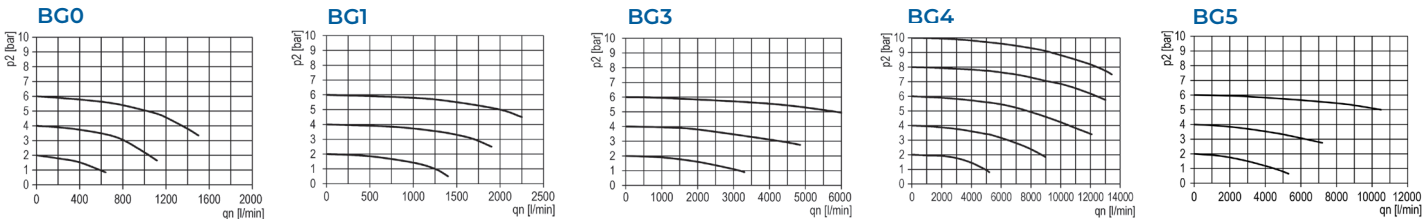


Symbol	Dimensions									
	Designation	Size	Connection thread	A	B	C	D (HA)	E (AM)	Internal air consumption	Flow P1=6bar; ΔP=1bar
	F.00	BG0	G 1/8"	40	40	12	103	141	-	1000
	F.01	BG0	G 1/4"	40	40	12	103	141	-	1000
	F.11	BG1	G 1/4"	48	46	27	125	140	-	2100
	F.12	BG1	G 3/8"	48	46	27	125	140	-	2100
	F.33	BG3	G 1/2"	69	69	35	147	162	-	4000
	F.34	BG3	G 3/4"	69	69	35	147	162	-	4000
	F.44	BG4	G 3/4"	85	89	53	190	205	1,5 l/min	8000
	F.45	BG4	G 1"	85	89	53	190	205	1,5 l/min	8000
	F.54	BG5	G 3/4"	100	103	52	254	268	-	8000
	F.55	BG5	G 1"	100	103	52	254	268	-	8000

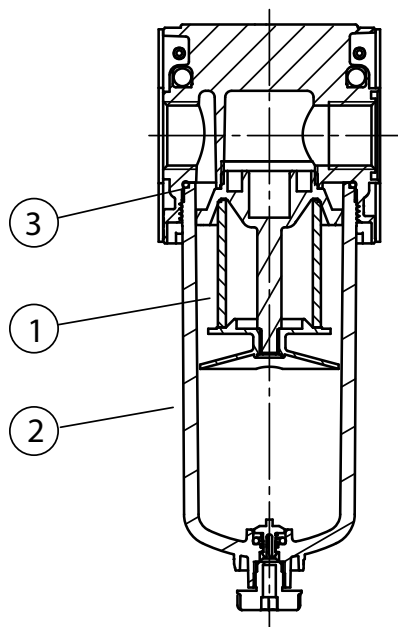
Designation



Flow chart



Cross - sectional view / spare parts



Pos.	Designation	Material	Size	Article type	Item no.
1	filter element 5 µm	cellpor	0 + 1	C.00-26	052187
			3	C.33-62	052188
			4	FE.4-560	032171
			5	C.55-24	047562
2	condensate bowl with semi automatic drain (HA) and o-ring (3)	polycarbonate	0	C.00-PC-HA	011972
			1	C.11-PC-HA	005483
			3+5	C.33-PC-HA	001370
			4	BE.4-PC-B-HA	030304
2	condensate bowl with fully automatic condensate drain (AM10) and o-ring (3)	polycarbonate	0+1	C.11-PC-AM	004429
			3+5	C.33-PC-AM	026695
			4	BE.4-PC-B-AM	030304
			0+1	C.11-AMC	024937
2	condensate bowl with fully automatic condensate drain (AM10/NC) and o-ring (3)	polycarbonate	3+5	C.33-AMC	032061
			4	BE.4-PC-B-AMC	030308
2	metal bowl with semi automatic drain (HA) and o-ring (3)	metal	0	C.00-M-HA	012870
			1	C.11-H-HA	001227
			3+5	C.33-H-HA	001229
			4	BE.4-H-HA	033579
2	metal bowl with visual display, automatic drain(AM10) and o-ring (3)	metal	0	C.00-M-AM	031836
			1	C.11-H-AM	001241
			3+5	C.33-H-AM	001251
			4	BE.4-HA-AM	033583
2	metal bowl with visual display, fully automatic drain (AM10/NC) and o-ring (3)	metal	0	C.00-M-AMC	033859
			1	C.11-H-AMC	032397
			3+5	C.33-H-AMC	048407
			4	BE.4-HA-AMC	033586
2	bowl guard	metal	0	BC.00-45	014438
			1	C.11-45	021005
			3+5	C.33-45	017961
3	o-ring 30x2	NBR	0 + 1	DF.00-2	-
	o-ring 50x2		3+5	C.33-23	-
	o-ring 55x2.5		4	OR-0-9	-

Accessories

Item no. Designation

012954	KP.00	coupling kit BG0
004909	KP.11	coupling kit BG1
004910	KP.33	coupling kit BG3
009537	KP.55	coupling kit BG5

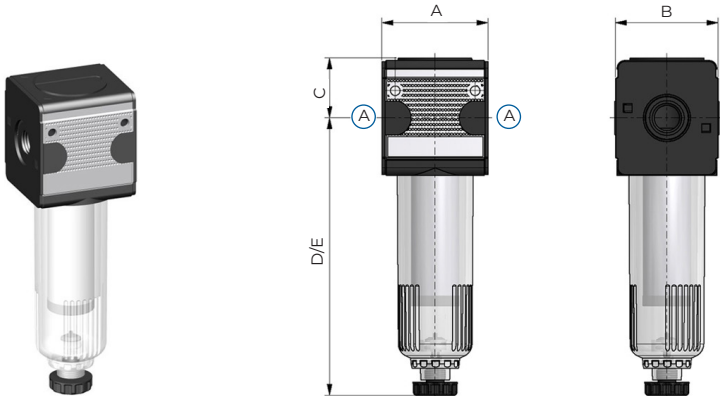
Item no. Designation

052195	ZW.00-1	Mounting bracket (2x console with sliding wedge)
052196	ZW.11-1	Mounting bracket with 2 screws M4x50
052201	ZW.33-1	Mounting bracket with 2 screws M5x75
045984	ZW.45	Mounting bracket with 2 screws M6x12
009663	ZW.55	Mounting bracket with 2 screws M6x12

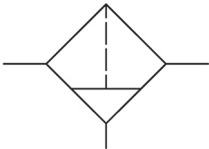
Finefilter

Technical data

- Pre-filter, centrifugal principle
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 min.: 1,5 bar
- Input pressure P1 max.: 16 bar; BG0 = 12bar
- Installation position: vertical
- Filter fineness: 0,3 µm
- Dust separation: 99,999 %
- Condensate bowl: PC container; PC container with protective cage or metal container
- Condensate drain: Semi-automatic drain (HA) or fully automatic drain (AM)
AM: valve open when pressureless
AMC: valve closed when pressureless
- Materials: Body: die-cast zinc, diaphragm and seals: NBR

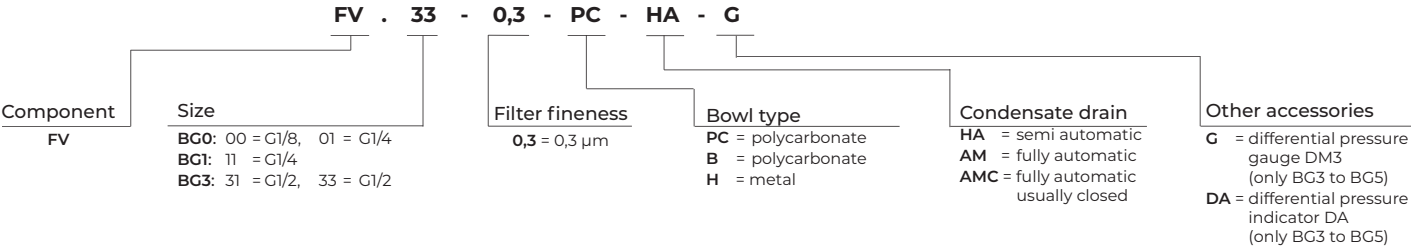


Symbol

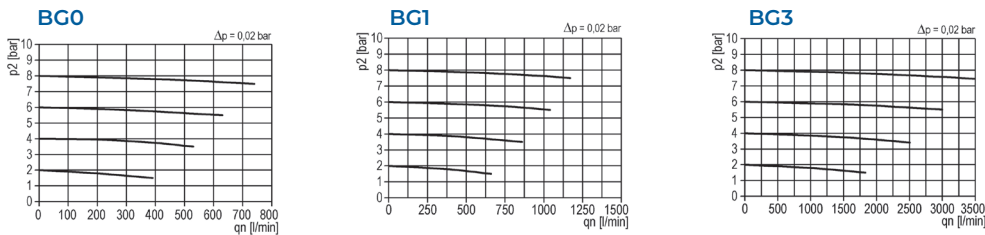


Dimensions									
Designation	Size	Connection thread	A	B	C	D (HA)	E (AM)	Internal air consumption	Flow P1=6bar; ΔP=0,02bar
FV.00	BG0	G 1/8"	40	40	12	103	141	-	130
FV.01	BG0	G 1/4"	40	40	12	125		-	130
FV.11	BG1	G 1/4"	48	46	27	125	140	-	160
FV.31	BG3	G 1/2"	69	69	35	147	162	-	350
FV.33	BG3	G 3/4"	69	69	35	147	162	-	500
FV.44	BG4	G 3/4"	85	89	58	190	205	1,5 l/min	8000
FV.45	BG4	G 1"	85	89	53	190	205	1,5 l/min	8000
FV.54	BG5	G 3/4"	100	103	52	254	268	-	8000
FV.55	BG5	G 1"	100	103	52	254	268	-	8000

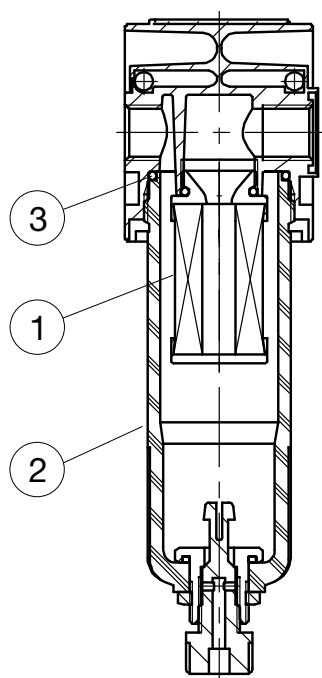
Designation



Flow chart



Cross - sectional view / spare parts



Pos.	Designation	Material	Size	Article type	Item no.
1	pre filter element 0,3 µm with o-ring	Paper - POM	0	V 23/35	030405
			1	V 23/40	010457
			3	V 38/60	037184
2	condensate bowl with semi automatic drain (HA) and o-ring (3)	polycarbonate	0	C.00-PC-HA	011972
			1	C.11-PC-HA	005483
			3	C.33-PC-HA	001370
2	condensate bowl with fully automatic condensate drain (AM10) and o-ring (3)	polycarbonate	0+1	C.11-PC-AM	004429
			3	C.33-PC-AM	026695
2	condensate bowl with fully automatic condensate drain (AM10/NC) and o-ring (3)	polycarbonate	0+1	C.11-AMC	024937
			3	C.33-AMC	032061
2	metal bowl with semi automatic drain (HA) and o-ring (3)	metal	0	C.00-M-HA	012870
			1	C.11-H-HA	001227
			3	C.33-H-HA	001229
2	metal bowl with visual display, automatic drain(AM10) and o-ring (3)	metal	0	C.00-M-AM	031836
			1	C.11-H-AM	001241
			3	C.33-H-AM	001251
2	metal bowl with visual display, fully automatic drain (AM10/NC) and o-ring (3)	metal	0	C.00-M-AMC	033859
			1	C.11-H-AMC	032397
			3	C.33-H-AMC	048407
2	bowl guard	metal	0	BC.00-45	014438
			1	C.11-45	021005
			3	C.33-45	017961
3	O-Ring 30x2	NBR	0 + 1	-	-
	O-Ring 50x2		3+5	-	-

Accessories

Item no. Designation

012954	KP.00	coupling kit BG0
004909	KP.11	coupling kit BG1
004910	KP.33	coupling kit BG3
009537	KP.55	coupling kit BG5

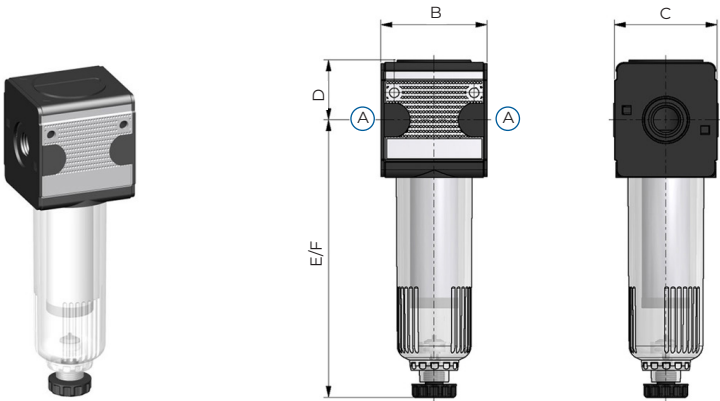
Item no. Designation

052195	ZW.00-1	Mounting bracket (2x console with sliding wedge)
052196	ZW.11-1	Mounting bracket with 2 screws M4x50
052201	ZW.33-1	Mounting bracket with 2 screws M5x75
045984	ZW.45	Mounting bracket with 2 screws M6x12
009663	ZW.55	Mounting bracket with 2 screws M6x12

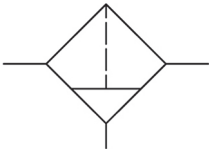
Finefilter

Technical data

- Fine filter
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 min.: 1,5 bar
- Input pressure P1 max.: 16 bar; BG0 = 12bar
- Installation position: senkrecht
- Filter fineness: 0,01 µm
- Dust separation: 99,999 %
- Residual oil content: 0,01 mg/m³
- Condensate bowl: PC container; PC container with protective cage or metal container
- Condensate drain: Semi-automatic drain (HA) or fully automatic drain (AM)
AM: valve open when pressureless
AMC: valve closed when pressureless
- Materials: Body: die-cast zinc, spring cover: POM, diaphragm and seals: NBR
- Fixing: 2 holes in the body or bracket

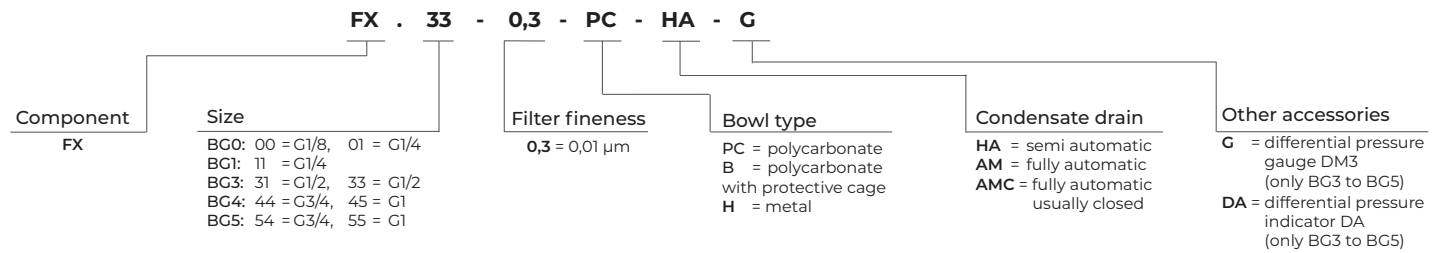


Symbol

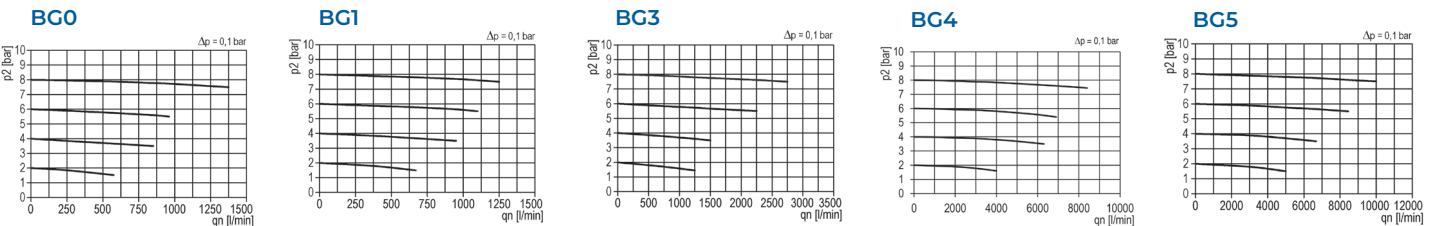


Dimensions									
Designation	Size	Connection thread	A	B	C	D (HA)	E (AM)	Internal air consumption	Flow P1=6bar; ΔP=0,1bar
FX.00	BG0	G 1/8"	40	40	12	103	141	-	130
FX.01	BG0	G 1/4"	40	40	12	103	141	-	130
FX.11	BG1	G 1/4"	48	46	27	125	140	-	160
FX.33	BG3	G 1/2"	69	69	35	147	162	-	350
FX.44	BG4	G 3/4"	85	89	53	190	205	1,5 l/min	350
FX.45	BG4	G 1"	85	89	53	190	205	1,5 l/min	350
FX.54	BG5	G 3/4"	100	103	52	254	268	-	500
FX.55	BG5	G 1"	100	103	52	254	268	-	500

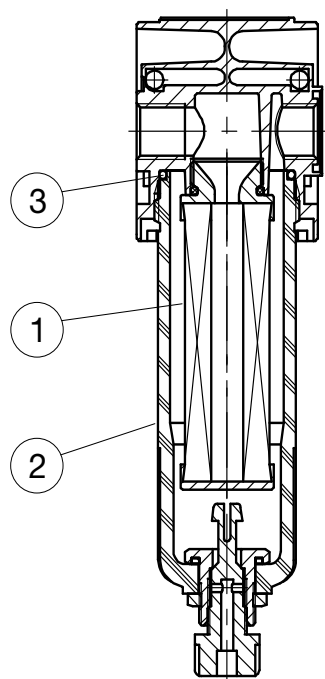
Designation



Flow chart



Cross - sectional view / spare parts



Pos.	Designation	Material	Size	Article type	Item no.
1	Fine filter element 0,01 µm with o-ring	borsilicate - Al	0	X 23/60	013005
			1	X 23/70	016461
			3	X 38/60	012495
2	condensate bowl with semi automatic drain (HA) and o-ring (3)	polycarbonate	0	C.00-PC-HA	011972
			1	C.11-PC-HA	005483
			3	C.33-PC-HA	001370
2	condensate bowl with fully automatic condensate drain (AM10) and o-ring (3)	polycarbonate	0+1	C.11-PC-AM	004429
			3	C.33-PC-AM	026695
2	condensate bowl with fully automatic condensate drain (AM10/NC) and o-ring (3)	polycarbonate	0+1	C.11-AMC	024937
			3	C.33-AMC	032061
2	metal bowl with semi automatic drain (HA) and o-ring (3)	metal	0	C.00-M-HA	012870
			1	C.11-H-HA	001227
			3	C.33-H-HA	001229
2	metal bowl with visual display, automatic drain(AM10) and o-ring (3)	metal	0	C.00-M-AM	031836
			1	C.11-H-AM	001241
			3	C.33-H-AM	001251
2	metal bowl with visual display, fully automatic drain (AM10/NC) and o-ring (3)	metal	0	C.00-M-AMC	033859
			1	C.11-H-AMC	032397
			3	C.33-H-AMC	048407
2	bowl guard	metal	0	BC.00-45	014438
			1	C.11-45	021005
			3	C.33-45	017961
3	o-ring 30x2	NBR	0 + 1	-	-
	o-ring 50x2		3+5	-	-

Accessories

Item no. Designation

012954	KP.00	coupling kit BG0
004909	KP.11	coupling kit BG1
004910	KP.33	coupling kit BG3
009537	KP.55	coupling kit BG5

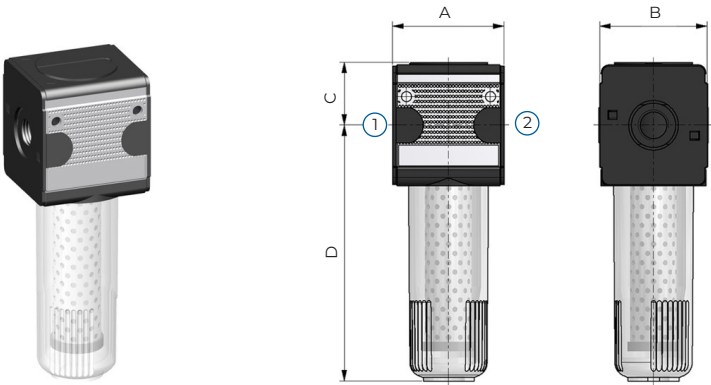
Item no. Designation

052195	ZW.00-1	Mounting bracket (2x console with sliding wedge)
052196	ZW.11-1	Mounting bracket with 2 screws M4x50
052201	ZW.33-1	Mounting bracket with 2 screws M5x75
045984	ZW.45	Mounting bracket with 2 screws M6x12
009663	ZW.55	Mounting bracket with 2 screws M6x12

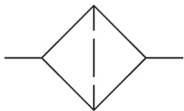
Activated carbon filter

Technical data

- Activated carbon filter
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 min.: 0 bar
- Input pressure P1 max.: 16 bar
- Installation position: vertical
- Residual oil content: 0,005 mg/m³
- Condensate bowl: PC container; PC container with protective cage or metal container
- Materials: Body: die-cast zinc, spring cover: POM, diaphragm and seals: NBR
- Fixing: 2 holes in the body or bracket



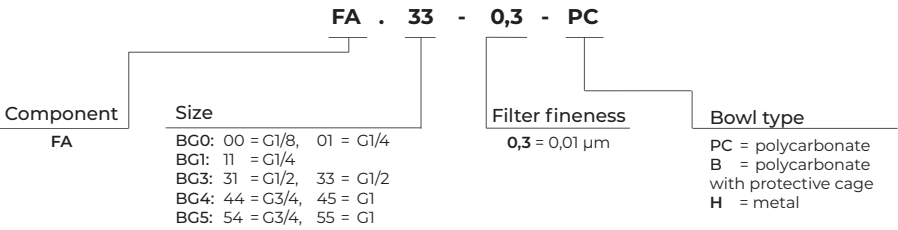
Symbol



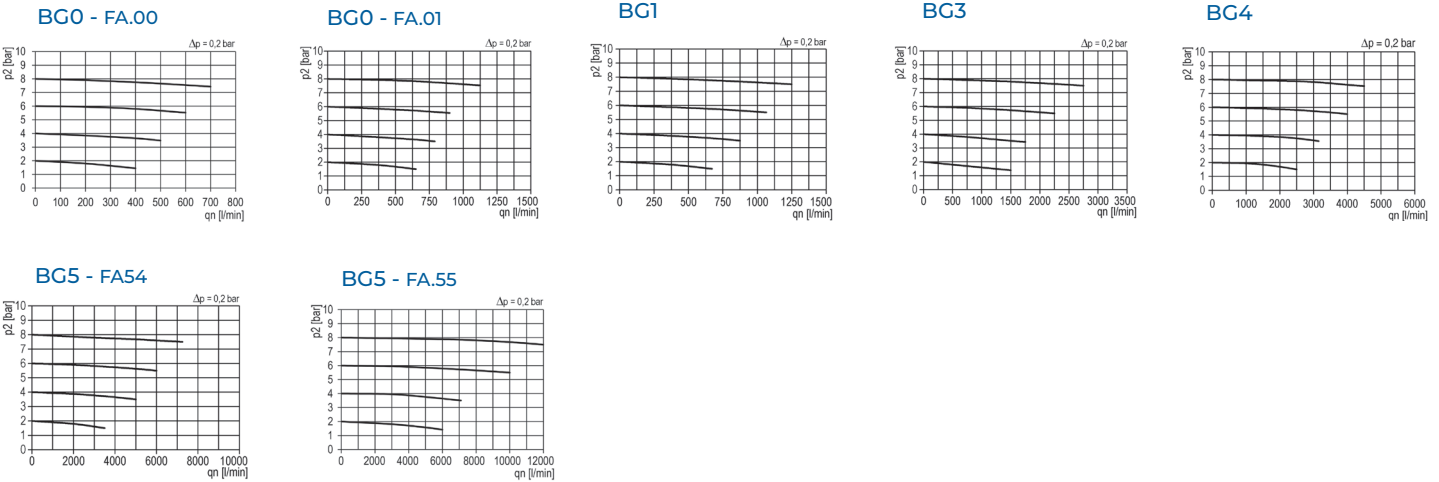
Dimensions

Designation	Size	Connection thread	A	B	C	D	Internal air consumption	Flow P1=6bar; ΔP=0,2bar
FA.00	BG0	G 1/8"	40	40	12	96	-	310
FA.01	BG0	G 1/4"	40	40	12	110	-	380
FA.11	BG1	G 1/4"	48	46	27	110	-	380
FA.33	BG3	G 1/2"	69	69	35	132	-	1500
FA.44	BG4	G 3/4"	85	89	53	183	1,5 l/min	2500
FA.45	BG4	G 1"	85	89	53	183	1,5 l/min	2500
FA.54 M	BG5	G 3/4"	100	103	52	226	-	3000
FA.55 M	BG5	G 1"	100	103	52	326	-	5500

Designation



Durchflussdiagramm



Cross - sectional view / spare parts

A detailed cross-sectional diagram of a water filter assembly. The diagram shows a central vertical filter element (1) housed within a polycarbonate bowl (2) and a metal bowl (2). The assembly is sealed with o-rings (3) and a bowl guard (2). The diagram is labeled with circled numbers 1, 2, and 3, corresponding to the parts listed in the table.

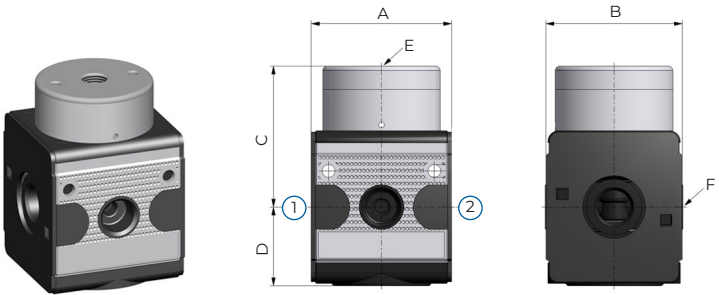
Pos.	Designation	Material	Size	Article type	Item no.
1	activated carbon filter element with o-ring	borsilicate - Al	0	A 23/60	042789
			0 + 1	A 23/80	014078
			1	A 23/70	010335
			3	A 38/90	004416
			3	A 38/185	012487
2	closed polycarbonate bowl with o-ring (3)	polycarbonate	0	L.00-PC	013178
			1	L.11	004436
			3	L.33	004421
2	metal bowl with o-ring (3)	metal	0	L.00-M	013179
			1	L.11-M	006265
			3	L.33-M	001438
			3	L.33 M/240	012523
2	bowl guard	metal	0	BC.00-45	014438
			1	C.11-45	021005
			3	C.33-45	017961
3	o-ring 30x2	NBR	0 + 1	-	-
	o-ring 50x2		3+5	-	-

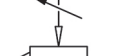
Accessories					
Item no.	Designation		Item no.	Designation	
012954	KP.00	coupling kit BG0	052195	ZW.00-1	Mounting bracket (2x console with sliding wedge)
004909	KP.11	coupling kit BG1	052196	ZW.11-1	Mounting bracket with 2 screws M4x50
004910	KP.33	coupling kit BG3	052201	ZW.33-1	Mounting bracket with 2 screws M5x75
009537	KP.55	coupling kit BG5	045984	ZW.45	Mounting bracket with 2 screws M6x12
			009663	ZW.55	Mounting bracket with 2 screws M6x12

Pressure regulator pneumatic pilot operated

Technical data

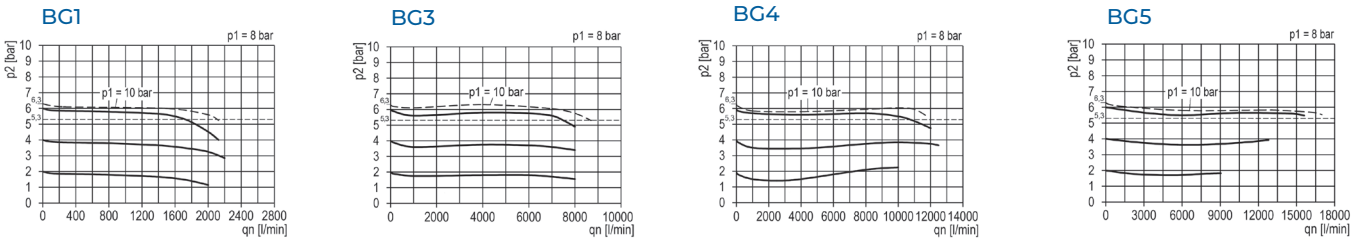
- membrane pressure regulator with secondary venting pneumatic pilot-operated (1:1)
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 max.: 16 bar
- Installation position: vertical
- Materials: Body: die-cast zinc, diaphragm and seals: NBR



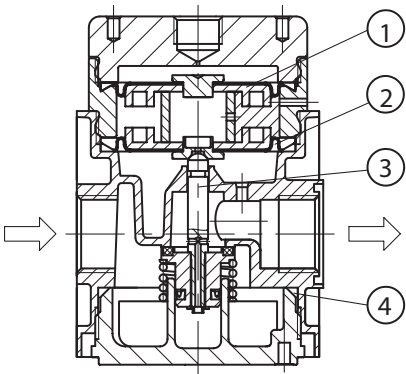
Symbol	Dimensions										
	Designation	Size	Connection thread	A	B	C	D	E	I pressure gauge thread	Internal air consumption	Flow P1=10bar; P2=6,3bar ΔP=1bar
	RI.11	BG1	G 1/4"	48	46	48	27	G1/8"	G 1/4"	-	1800 l/min
	RI.33	BG3	G 1/2"	69	69	59	35	G1/4"	G 1/4"	-	4800 l/min
	RI.34	BG3	G3/4"	69	69	59	35	G1/4"	G 1/4"	-	4800 l/min
	RI.44	BG4	G 3/4"	85	89	88	53	G1/4"	G 1/4"	1,5 l/min	12000 l/min
	RI.45	BG4	G 1"	85	89	88	53	G1/4"	G 1/4"	1,5 l/min	12000 l/min
	RI.54	BG5	G 3/4"	100	103	60	52	G1/4"	G 1/4"	-	12500 l/min
	RI.55	BG5	G 1"	100	103	60	52	G1/4"	G 1/4"	-	12500 l/min

Designation	Accessories		
Component RI Size BG1: 11 = G1/4 BG3: 33 = G1/2, 34 = G3/4 BG4: 44 = G3/4, 45 = G1 BG5: 54 = G3/4, 55 = G1 Other accessories G = pressure gauge	Item no.	Designation	
	012954	KP.00	coupling kit BG0
	004909	KP.11	coupling kit BG1
	004910	KP.33	coupling kit BG3
Designation RI. 11 - G	052196	ZW.11-1	Mounting bracket with 2 screws M4x50
	052201	ZW.33-1	Mounting bracket with 2 screws M5x75
	045984	ZW.45	Mounting bracket with 2 screws M6x12
	009663	ZW.55	Mounting bracket with 2 screws M6x12

Flow chart



Cross - sectional view / spare parts

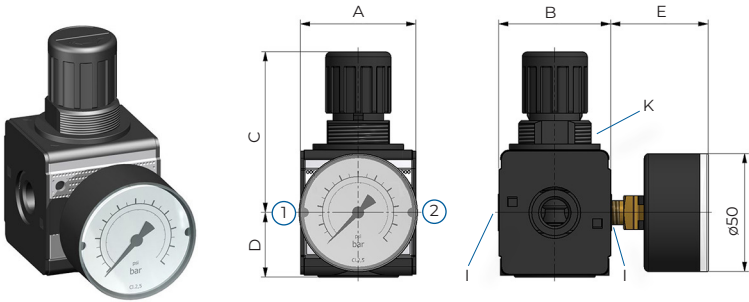


Pos.	Designation	Material	Size	Article-type	Item-no.
1	Spare parts consisting of: diaphragm with o-ring (1)	brass-NBR-POM	1	ESA-RI.11	025279
2	diaphragm without secondary venting (2)		3	ESA-RI.33	016091
3	valve cone (3)	brass-NBR-PA6 NBR	5	ESA-RI.55	013636
4	o-ring (4)				

Precision pressure regulator

Technical data

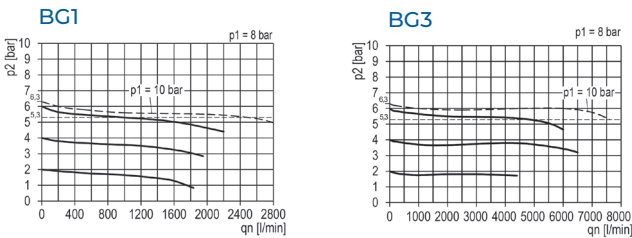
- membrane pressure regulator with secondary venting
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 max.: 16 bar
- Installation position: vertical
- Materials: Body: die-cast zinc, spring cover: POM, diaphragm and seals: NBR



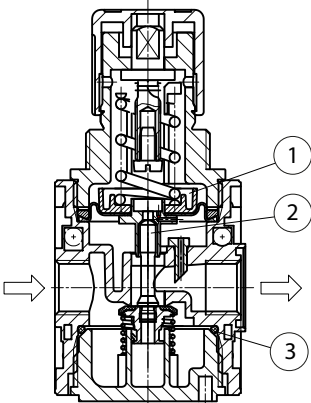
Symbol	Dimensions									
	Designation	Size	Connection thread	A	B	C	D	E	I pressure gauge thread	K Panel thread
	RP.11 G	BG1	G 1/4"	48	46	67	27	~40	G1/4"	M30x1,5
	RB.33 G	BG3	G 1/2"	69	69	99	35	~40	G1/4"	M50x1,5
									Internal air consumption	Flow P1=106bar; P2=6,3bar ΔP=1bar
									2,6 l/min	2500 l/min
									2,6 l/min	6000 l/min

Designation	Accessories		
RP . 11 - G Component Size Other accessories RP BG1: 11 = G1/4 BG3: 33 = G1/2 G = pressure gauge S = panel nut H = lockable hand wheel	Item no.	Designation	
	004909	KP.11	coupling kit BG1
	004910	KP.33	coupling kit BG3
	052196	ZW.11-1	Mounting bracket with 2 screws M4x50
	052201	ZW.33-1	Mounting bracket with 2 screws M5x75
	052194	MW.30	mounting bracket for panel mounting
	012866	MW.50	mounting bracket for panel mounting
	052193	MW.30/DR.00-34-2	mounting bracket with panel nut M30x1,5
	008803	MW.50/C.33-42	mounting bracket with panel nut M50x1,5
	049414	C.00-34	panel nut M30x1,5 KS
	052012	DR.00-34-2	panel nut M30x1,5
	052237	C.33-42	panel nut M36x1,5

Flow chart



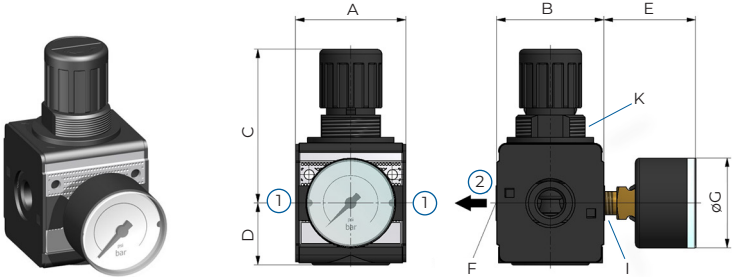
Cross - sectional view / spare parts					
Pos.	Designation	Material	Size	Article-type	Item-no.
1 2 3	Spare parts consisting of: diaphragm (1) valve cone (2) o-ring (3)	brass-NBR-POM	1	ESA-RP.11	015055
		brass-NBR-PA6	3	ESA-RP.33	007755
		NBR			



Pressure regulator with continuous pressure supply

Technical data

- membrane pressure regulator with secondary venting
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 max.: 16 bar
- Installation position: vertical
- Materials: Body: die-cast zinc, spring cover: POM, diaphragm and seals: NBR



Symbol	Dimensions												
	Designation	Size	Connection thread	A	B	C	D	E	F	øG pressure gauge	I pressure gauge thread	K Panel thread	Flow P1=10bar; P2=6,3bar ΔP=1bar
	RB.01 G	BG0	G 1/4"	40	40	60	22	~34,5	G1/4"	40	G1/8"	M30x1,5	1200 l/min
	RB.11 G	BG1	G 1/4"	48	46	67	27	~40	G1/4"	40	G1/4"	M30x1,5	2000 l/min
	RB.33 G	BG3	G 1/2"	69	69	99	35	~40	G1/2"	50	G1/4"	M50x1,5	5500 l/min

Designation

RB . 11 - G

Component

RB

Size

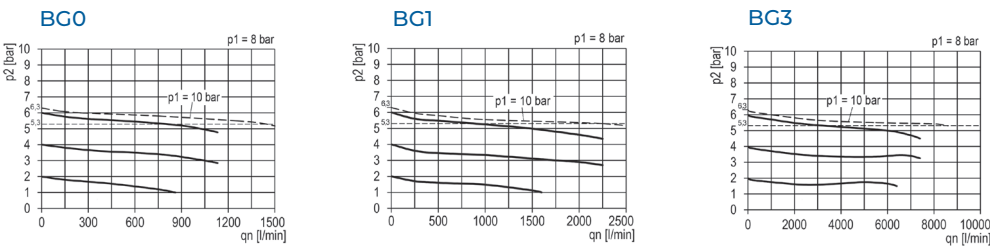
BG0: 01 = G1/4
BG1: 11 = G1/4
BG3: 33 = G1/2

Other accessories

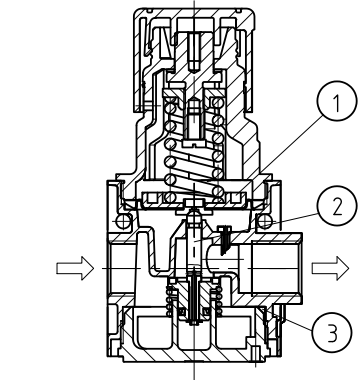
G = pressure gauge
H = Handrad abschließbar

Accessories		
Item no.	Designation	
012954	KP.00	coupling kit BG0
004909	KP.11	coupling kit BG1
004910	KP.33	coupling kit BG3
052195	ZW.00-1	Mounting bracket (2x console with sliding wedge)
052196	ZW.11-1	Mounting bracket with 2 screws M4x50
052201	ZW.33-1	Mounting bracket with 2 screws M5x75
052194	MW.30	mounting bracket for panel mounting
012866	MW.50	mounting bracket for panel mounting
052193	MW.30/DR.00-34-2	mounting bracket with panel nut M30x1,5
008803	MW.50/C.33-42	mounting bracket with panel nut M50x1,5
049414	C.00-34	panel nut M30x1,5 KS
052012	DR.00-34-2	panel nut M30x1,5
052237	C.33-42	panel nut M36x1,5

Flow chart



Cross - sectional view / spare parts

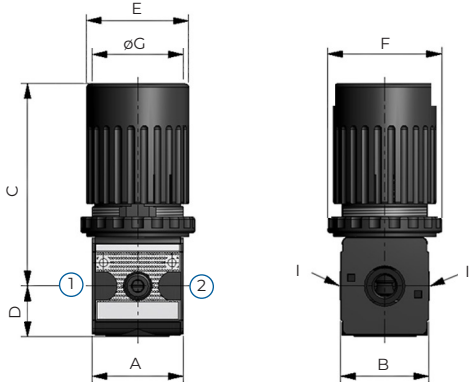


Pos.	Designation	Material	Size	Article-type	Item-no.
1	Spare parts consisting of:		0	ESA-R.00/RB.01	014366
	diaphragm with o-ring (1)	brass-NBR-POM	1	ESA-R/C.11	016091
	valve cone (2)	brass-NBR-PA6	3	ESA-R/C.33	006111
3	o-ring (3)	NBR			

Druckregelventil mit Manometer im Handrad

Technical data

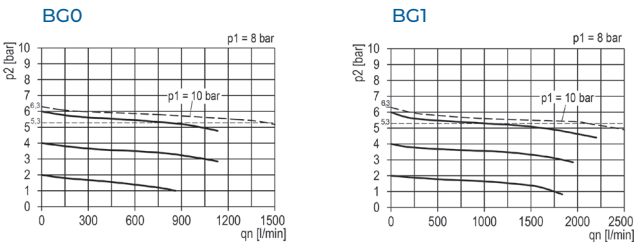
- membrane pressure regulator with secondary venting
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 max.: 16 bar
- Installation position: vertical
- Befestigungsart: Schalttafeleinbau
- Handrad kann durch Herunterdrücken arretiert werden
- Materials: Body: die-cast zinc, spring cover: POM, diaphragm and seals: NBR



Symbol	Dimensions												
	Designation	Size	Con- nection thread	A	B	C	D	E	F	Schalttafel- einbau-ø	G pressure gauge thread	I	Flow P1=10bar; P2=6,3bar ΔP=1bar
	RG.01 S	BG0	G 1/4"	40	40	90	22	ø33,6	ø39,5	ø36,5	ø25	G1/8"	1100 l/min
	RG.01 S	BG0	G 1/4"	40	40	102	22	ø54	ø60	ø48,5	ø40	G1/8"	1100 l/min
	RG.11 S	BG1	G 1/4"	48	47	107	26	ø54	ø60	ø48,5	ø40	G1/4"	1500 l/min
	RG.12 S	BG1	G 3/8"	48	47	107	26	ø54	ø60	ø48,5	ø40	G1/4"	1500 l/min

Designation			Accessories		
 Component: RG Size: 11 Other accessories: S			Item no.	Designation	
			012954	KP.00	coupling kit BG0
			004909	KP.11	coupling kit BG1

Flow chart

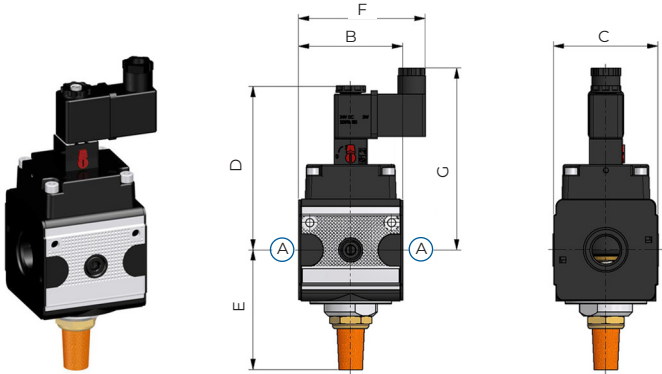


Cross - sectional view / spare parts					
Pos.	Designation	Material	Size	Article-type	Item-no.
1	Spare parts consisting of: diaphragm with o-ring (1)	brass-NBR-POM	0	ESA-RG.00	054473
2	valve cone (2)	brass-NBR-PA6	1	ESA-RG.11	023987
3	o-ring (3)	NBR			

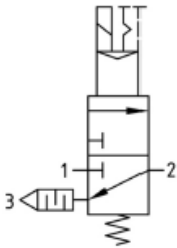
3/2 Directional control valve

Technical data

- 3/2-way poppet valve
- Installation position: arbitrary
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 min. 2 bar; P1 max. 10 bar
- Operation: electric standard, pneumatic
- Valve control: 24 V= (alternative: 115V/50Hz, 230V/50Hz)
- Relative duty cycle: 100%
- Performance: 4,8 W
- Protection class: IP65 according to DIN 40050
- Electrical connection: cable plug EN 175301-803, form B nr. of poles 2 + PE (incl.)
- Materials: Body: die-cast zinc
diaphragm and seals: NBR
- Fixing: BG1: coupling kit wall mounting
BG1 - BG5: two holes in the body or mounting bracket



Symbol



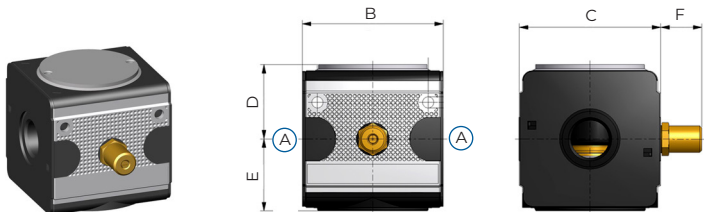
Dimensions										
Designation	Size	Connection thread A	B	C	D	E	F	G	Exhaust air	Flow l/min
S.01	BG0	G 1/4"	45	48	95	29	64	106	G 1/4	1600
S.11	BG1	G 1/4"	48	46	95	44	75	106	G 1/4	900
S.33	BG3	G 1/2"	69	69	108	79	84	120	G 1/2	4000
S.44	BG4	G 3/4"	85	89	-	101	-	103	G 1/2	12500
S.45	BG4	G 1"	85	89	-	101	-	103	G 1/2	12500
S.54	BG5	G 3/4"	102	103	104	94	-	116	G 1/2	14000
S.55	BG5	G 1"	102	103	104	94	-	116	G 1/2	14000

additional I = pneumatically operated
 additional C = with CNOMO adapter without pilot valve

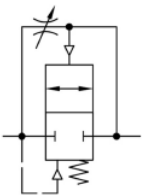
Soft start valve

Technical data

- Seat valve, operated by secondary pressure
- Installation position: arbitrary
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 min. 2,5 bar; P1 max. 16 bar
- Switching pressure: 50% P1 (only for closed systems)
- Materials: Body: die-cast zinc
diaphragm and seals: NBR
- Fixing: BG1: coupling kit wall mounting
BG1 - BG5: two holes in the body or mounting bracket



Symbol

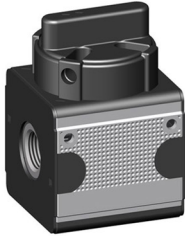
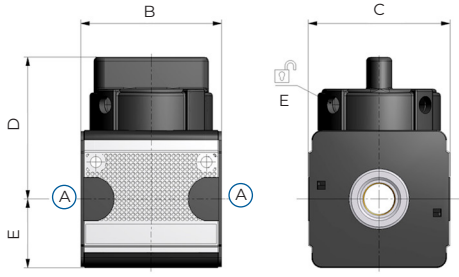


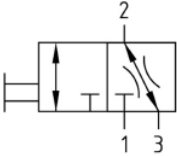
Dimensions									
Designation	Size	Connection thread A	B	C	D	E	F	Durchfluss l/min	
A.01 F	BG0	G 1/4"	45	40	49	29	2,2	2250	
A.11 F	BG1	G 1/4"	48	46	27	27	20	1100	
A.33 F	BG3	G 1/2"	69	69	36	35	20	3500	
A.44 F	BG4	G 3/4"	85	89	66	53	-	10000	
A.45 F	BG4	G 1"	85	89	66	53	-	10000	
A.54 F	BG5	G 3/4"	100	103	52	52	20	16000	
A.55 F	BG5	G 1"	100	103	52	52	20	16000	

Ball valve

Technical data

- 3/2 way valve, exhaust air ducted
- Installation position: arbitrary
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 max. 16 bar
- Lockable with padlock
- Betätigung: Knebel 90° drehbar
- Materials: Body: die-cast zinc
diaphragm and seals: NBR
- Fixing: BG1: coupling kit wall mounting
BG1 - BG5: two holes in the body or mounting bracket

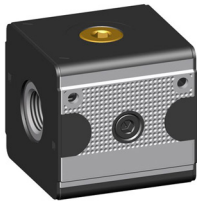
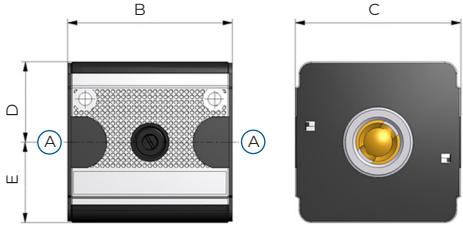



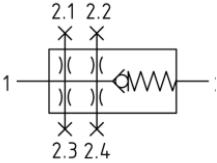
Symbol	Dimensions								
	Designation	Size	Connection thread A	B	C	D	E	Exhaust air	Flow l/min
	K.00	BG0	G 1/8"	40	40	38	28	G 1/4	2000
	K.01	BG0	G 1/4"	40	40	38	28	G 1/4	2000
	K.11	BG1	G 1/4"	48	46	54	34	G 1/4	2000
	K.12	BG1	G 3/8"	48	46	54	34	G 1/4	2000
	K.33	BG3	G 1/2"	69	69	69	77	G 1/2	4300
	K.34	BG3	G 3/4"	69	69	69	77	G 1/2	4300
	K.44	BG4	G 3/4"	85	89	90	50	G 1/2	12500
	K.45	BG4	G 1"	85	89	90	50	G 1/2	12500
	K.5-	BG5	G 1"	60	103	83	85	G 1/2	12500

Non-return valve

Technical data

- Seat valve, spring loaded
- Installation position: arbitrary
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 min.: 0,1 bar
- Input pressure P1 max.: 16 bar
- Materials: Body: die-cast zinc
diaphragm and seals: NBR
- Fixing: two holes in the body or mounting bracket

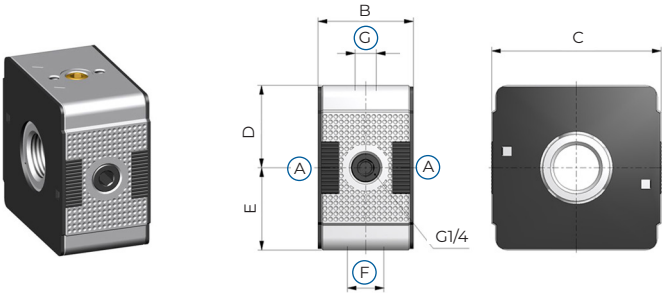



Symbol	Dimensions							
	Designation	Size	Connection thread A	B	C	D	E	Flow l/min
	V.11	BG1	G 1/4"	48	46	26	26	2000
	V.12	BG1	G 3/8"	48	46	26	26	2000
	V.33	BG1	G 1/2"	69	69	34	34	2000
	V.34	BG2	G 3/4"	69	69	34	34	4300

Distributor small

Technical data

- Distributor 2-fold (BG0)
Cross distributor 4-fold (BG1, BG3, BG5)
- Installation position: arbitrary
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 max.: 16 bar
- Materials: Body: die-cast zinc
diaphragm and seals: NBR
- Fixing: two holes in the body or mounting bracket

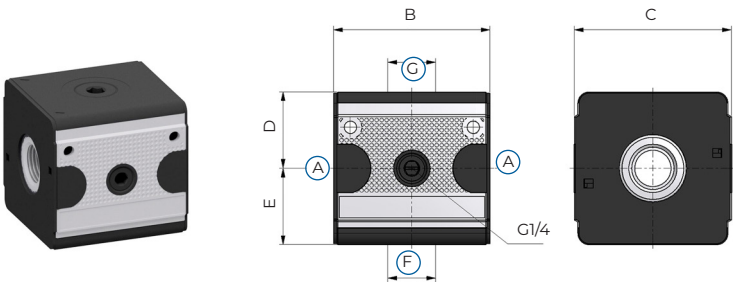


Symbol		Dimensions									
		Designation	Size	Connection thread A	B	C	D	E	F	G	Flow 1 → 2 l/min
		Z.01	BG0	G 1/4"	23	40	17	17	G1/8"	G1/8"	2700 l/min
		Z.11	BG1	G 1/4"	35	46	26	26	G1/4"	G1/8"	3300 l/min
		Z.33	BG3	G1/2"	39	69	34	34	G3/8"	G1/8"	11000 l/min
		Z.5-	BG5	G1"	60	103	52	50	G1/2"	G1/2"	25000 l/min

Distributor

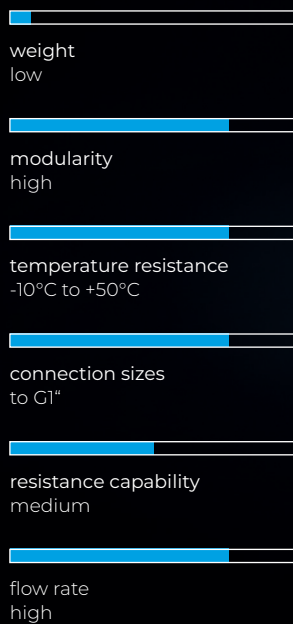
Technical data

- Distributor 2-fold (BG0)
Cross distributor 4-fold (BG1, BG3, BG5)
- Installation position: arbitrary
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure P1 max.: 16 bar
- Materials: Body: die-cast zinc
diaphragm and seals: NBR
- Fixing: two holes in the body or mounting bracket



Symbol		Dimensions									
		Designation	Size	Connection thread A	B	C	D	E	F	G	Flow 1 → 2 l/min
		T.11	BG1	G 1/4"	48	46	26	26	G1/4"	G1/4"	2500 l/min
		T.12	BG1	G 3/8"	48	46	26	26	G1/4"	G1/4"	2500 l/min
		T.33	BG3	G1/2"	69	69	34	34	G1/2"	G1/2"	11000 l/min
		T.34	BG3	G3/4"	69	69	34	34	G1/2"	G1/2"	11000 l/min
		T.44	BG4	G3/4"	85	89	50	58	G1	G3/4"	18000 l/min
		T.45	BG4	G1	85	89	50	58	G1	G3/4"	18000 l/min

PROPERTIES



FUTURA-SERIES.

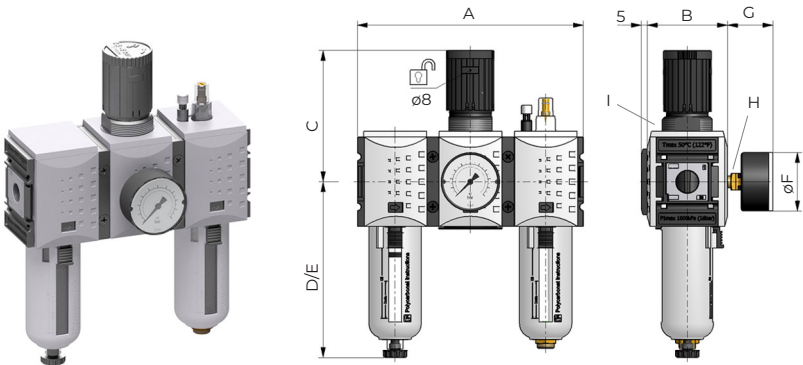
Our Futura series is one of the most innovative FRL solutions in the field of compressed air treatment. With its modular design and a housing made of fiber-reinforced PA66, you get an innovative and high-quality FRL solution. Thanks to its modular design, the Futura series can be used to develop a tailor-made FRL solution for you. The series can also support you in the area of brand

awareness thanks to its customizable design. The Futura series impresses with its high control accuracy, low carbon footprint and high efficiency.

Service 3 unit

Technical data

- Sintered filter, centrifugal principle, membrane pressure regulator with secondary venting; proportional lubricator
- Locking: lockable with plug-in lock or padlock
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +50 °C
- Input pressure P1 min.: 1,5 bar
- Input pressure P1 max.: 16 bar; BG0 = 12bar
- Installation position: vertical
- Filter fineness: 5 µm
- Condensate container: PC with protective cage PA or metal container
- Condensate drain: semi-automatic drain (HA) or fully automatic (AM / AMC)
- Materials: Body: PA66 GF60, spring cover: POM, diaphragm and seals: NBR,
- Oil dosing at qv = 1000 l/min: 1-2 d/min
- Oil type: CL32 according to DIN 51517 - ISO VG32

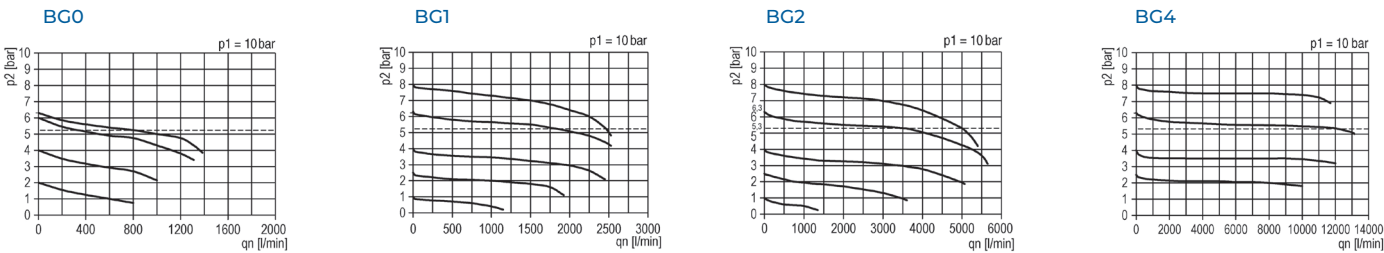


Symbol	Dimensions									
		A	B	C	D (HA)	E (AM)	F	G	H pressure gauge thread	I Panel thread
	BG0	129	48	63	105	143	-	12	-	M30x1,5
	BG1	156	54	96	130	145	ø50	38	G 1/8"	M36x1,5
	BG2	189	67	110	147	163	ø50	38	G 1/8"	M42x1,5
	BG4	255	93	137	189	206	ø63	38	G 1/8"	M50x1,5

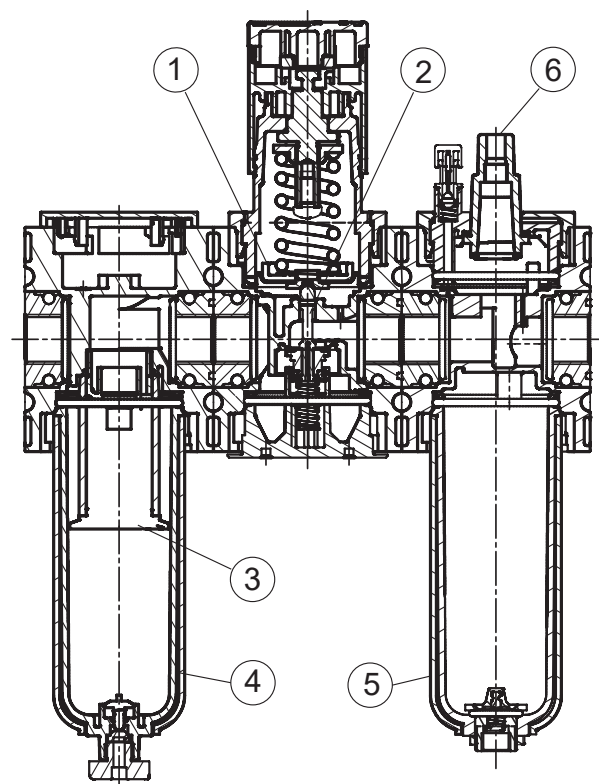
Technical specifications							
Designation	Size	Connection thread	Flow P1=10bar; p2=6,3bar ΔP=1bar	drain connec- tion thread	weight	internal air consumption	lockable with a padlock
KS3U-014	BG0	G 1/4"	400 l/min	G 1/8"	0.5012 kg	-	no
KS3U-114	BG1	G 1/4"	1500 l/min	G 1/8"	0.8361 kg	-	yes
KS3U-138	BG1	G3/8"	1500 l/min	G 1/8"	0.8361 kg	-	yes
KS3U-238	BG2	G3/8"	3500 l/min	G 1/8"	1.422 kg	-	yes
KS2U-212	BG2	G1/2"	3500 l/min	G 1/8"	1.3734 kg	-	yes
KS3U-434	BG4	G3/4"	12000 l/min	G 1/8"	2.9811 kg	max. 1,5 l/min	yes
KS3U-41	BG4	G1"	12000 l/min	G 1/8"	2.7822 kg	max. 1,5 l/min	yes

Designation						
KS3U - 114 - 8 - 5 - PC - B - HA - G						
Component	Size	Pressure range	filter fineness	Container type	Condensate drain	Other accessories
KS3U	BG0: 014 = G1/4 BG1: 114 = G1/4, 138 = G1/2 BG2: 212 = G1/2, 238 = G3/8 BG4: 434 = G3/4, 41 = G1	0,1 - 1 bar 0,1 - 2 bar 0,1 - 4 bar 0,5 - 8 bar 0,5 - 10 bar 0,5 - 16 bar	5 = 5 µm	PC-B = polycarbonate with protective cage H = metal	HA = semi automatic AM = fully automatic AMC = fully automatic pressureless closed	G = pressure gauge S = panel nut

Flow chart



Cross - sectional view / spare parts



Pos.	Designation	Material	Size	Article type	Item no.
1 + 2	Spare parts consisting of: membrane (1) + valve cone (2)	brass-NBR-POM brass-NBR-PA6	0	-	-
			1	KESA.1-1311	035244
			2	KESA.2-1311	035225
			4	KESA.4-1311	042038
3	filter element 5 µm	Cellpor	0 + 1	C.00-26	052187
			2	C.22-26	050551
			4	FE.4-560	032171
4	condensate bowl with bowl guard, semi automatic drain (HA) and o-ring	polycarbonate	0	C.00-PC-HA	011972
			1	BE.1-PC-B-HA	026238
			2	BE.2-PC-B-HA	028069
			4	BE.4-PC-B-HA	030303
4	condensate bowl with bowl guard, fully automatic condensate drain (AM10) and o-ring	polycarbonate	0	C.11-PC-AM	004429
			1	BE.1-PC-B-AM	026239
			2	BE.2-PC-B-AM	028070
			4	BE.4-PC-B-AM	030304
4	condensate bowl with bowl guard, fully automatic condensate drain (AM10/NC) and o-ring	polycarbonate	0	C.11-AMC	024937
			1	BE.1-AMC	026240
			2	BE.2-AMC	028071
			4	BE.4-AMC	030308
4	metal bowl with visual display, with semi automatic drain (HA) and o-ring	metal	0	C.00-M-HA	012870
			1	BE.1-H-HA	027210
			2	BE.2-H-HA	028560
			4	BE.4-H-HA	033579
4	metal bowl with visual display, fully automatic condensate drain (AM10) and o-ring	metal	0	C.00-M-AM	031836
			1	BE.1-H-AM	027211
			2	BE.2-H-AM	028563
			4	BE.4-H-AM	033583
4	metal bowl with visual display, fully automatic condensate drain (AM10/NC) and o-ring	metal	0	C.00-M-AMC	033859
			1	BE.1-H-AMC	027214
			2	BE.2-H-AMC	028564
			4	BE.4-H-AMC	033586
5	oil bowl with o-ring	polycarbonate	0	L.00	013178
			1	BE.1 LUB	026241
			2	BE.2 LUB	028073
			4	BE.4 LUB	030310
5	metal oil bowl with o-ring	zinc-die casting	0	L.00-M	013179
			1	BE.1-H-LUB	027212
			2	BE.2-H-LUB	028566
			4	BE.4-H-LUB	033589
6	dome assembly	polycarbonate seals: NBR	0	ESA.0-1312	054979
			1 - 4	ESA.1-1312	027942

Accessories

Item no. Designation

035762	KKOP.0	coupling kit BG0
034271	KKOP.1	coupling kit BG1
034601	KKOP.2	coupling kit BG2
034831	KKOP.4	coupling kit BG4
035763	KKOP.0W	coupling kit wall mounting BG0
034270	KKOP.1W	coupling kit wall mounting BG1
034604	KKOP.2W	coupling kit wall mounting BG2
034832	KKOP.4W	coupling kit wall mounting BG4
040319	KKOP-014K	coupling kit BG0 G1/4 for wall assembly
040327	KKOP-018K	coupling kit BG0 G1/8 for wall assembly
040320	KKOP-114K	coupling kit BG1 G1/4 for wall assembly
040324	KKOP-138K	coupling kit BG1 G3/8 for wall assembly
040321	KKOP-238K	coupling kit BG2 G3/8 for wall assembly
040323	KKOP-212K	coupling kit BG2 G1/2 for wall assembly
040347	KKOP-234K	coupling kit BG2 G3/4 for wall assembly
040322	KKOP-434K	coupling kit BG4 G3/4 for wall assembly
030321	KKOP-41K	coupling kit BG4 G1 for wall assembly

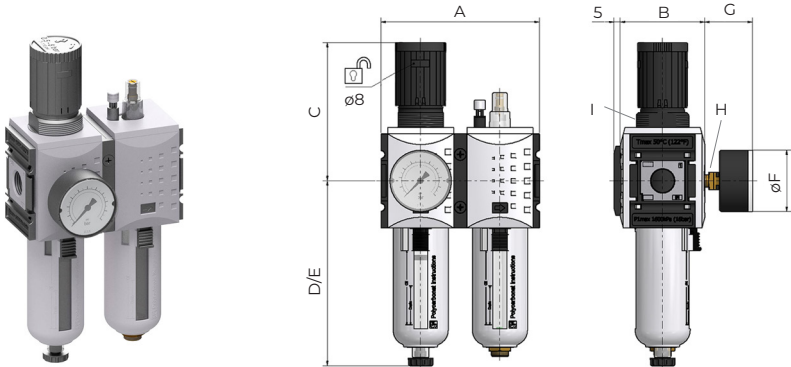
Item no. Designation

040566	KKOP-0A	coupling adapter BG0/BG1
040378	KKOP-1A	coupling adapter BG1/BG2
040379	KKOP-2A	coupling adapter BG2/BG4
052203	KBW.0-1225	mounting bracket BG0 with screws
052210	KBW.1-1225	mounting bracket BG1 with screws
052204	KBW.2-1225	mounting bracket BG2 with screws
034330	KBW.4-1225	mounting bracket BG4 with screws
035760	KBW.0-1227	mounting bracket for panel mounting BG0
052275	KBW.1-1228	mounting bracket for panel mounting BG1
052205	KBW.2-1227	mounting bracket for panel mounting BG2
044020	KBW.1-1228-S	mounting bracket with panel nut M36x1,5
044022	KBW.2-1227-S	mounting bracket with panel nut M42x1,5
049414	C.00-34	panel nut M30x1,5 KS
052237	SM.1	panel nut M36x1,5
052238	SM.2	panel nut M42x1,5
032263	VH.31	padlock with E11 closing, without key
032264	VH.32	padlock with key and G1663 closing

Service 2 unit

Technical data

- Sintered filter, centrifugal principle, membrane pressure regulator with secondary venting; proportional lubricator
- Locking: lockable with plug-in lock or padlock
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +50 °C
- Input pressure P1 min.: 1,5 bar
- Input pressure P1 max.: 16 bar; BG0 = 12bar
- Installation position: vertical
- Filter fineness: 5 µm
- Condensate container: PC with protective cage PA or metal container
- Condensate drain: semi-automatic drain (HA) or fully automatic (AM / AMC)
- Materials: Body: PA66 GF60, spring cover: POM, diaphragm and seals: NBR,
- Oil dosing at qv = 1000 l/min: 1-2 d/min
- Oil type: CL32 according to DIN 51517 - ISO VG32



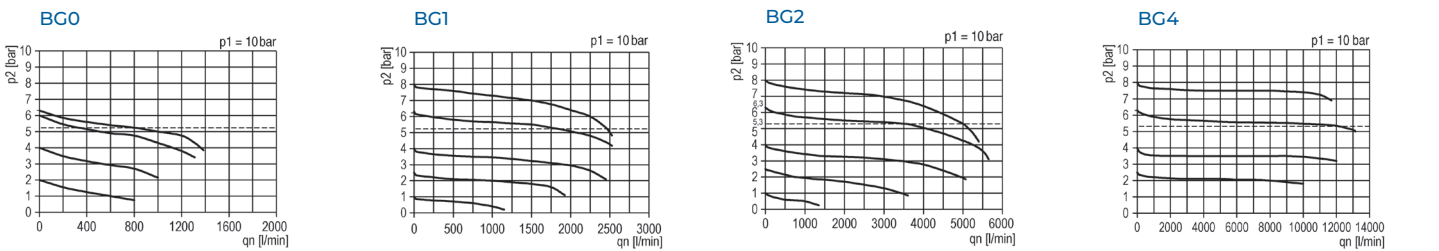
Symbol	Dimensions								
	A	B	C	D (HA)	E (AM)	F	G	H pressure gauge thread	I panel thread
BG0	86	48	63	105	143	-	12	-	M30x1,5
BG1	104	54	96	130	145	ø50	38	G 1/8"	M36x1,5
BG2	126	67	110	147	163	ø50	38	G 1/8"	M42x1,5
BG4	170	93	137	189	206	ø63	38	G 1/8"	M50x1,5

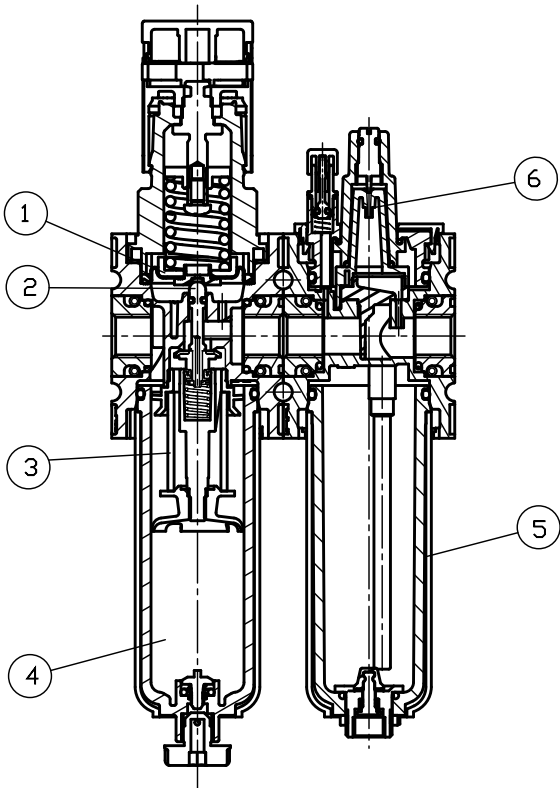
Technical specifications							
Designation	Size	Connection thread	flow P1=10bar; p2=6,3bar ΔP=1bar	drain connection thread	weight	internal air consumption	lockable with a padlock
KS2U-014	BG0	G 1/4"	600 l/min	G 1/8"	0.5012 Kg	-	no
KS2U-114	BG1	G 1/4"	1800 l/min	G 1/8"	0.8361 Kg	-	yes
KS2U-138	BG1	G3/8"	1800 l/min	G 1/8"	0.8361Kg	-	yes
KS2U-238	BG2	G3/8"	3500 l/min	G 1/8"	1.422 Kg	-	yes
KS2U-212	BG2	G1/2"	3500 l/min	G 1/8"	1.3734 Kg	-	yes
KS2U-434	BG4	G3/4"	12000 l/min	G 1/8"	2.9811 Kg	max. 1,5 l/min	yes
KS2U-41	BG4	G1"	12000 l/min	G 1/8"	2.7822 Kg	max. 1,5 l/min	yes

Designation

KS2U - 114 - 8 - 5 - PC - B - HA - G							
Component	Size	Pressure range	filter fineness	Container type	Condensate drain	Other accessories	
KS2U	BG0: 014 = G1/4 BG1: 114 = G1/4, 138 = G1/2 BG2: 212 = G1/2, 238 = G3/8 BG4: 434 = G3/4, 41 = G1	0,1 - 1 bar 0,1 - 2 bar 0,1 - 4 bar 0,5 - 8 bar 0,5 - 10 bar 0,5 - 16 bar	5 = 5 µm	PC-B = polycarbonate with protective cage H = metal	HA = semi automatic AM = fully automatic AMC = fully automatic pressureless closed	G = pressure gauge S = panel nut	

Flow chart



Cross - sectional view / spare parts		Pos.	Designation	Material	Size	Article type	Item no.
	1 + 2		Spare parts consisting of: membrane (1) + valve cone (2)	brass-NBR-POM brass-NBR-PA6	0	-	-
					1	KESA.1-1311	035244
					2	KESA.2-1311	035225
					4	KESA.4-1311	042038
	3		filter element 5 µm	Cellpor	0 + 1	C.00-26	052187
					2	C.22-26	050551
					4	FE.4-560	032171
	4		condensate bowl with bowl guard, semi automatic drain (HA) and o-ring	polycarbonate	0	C.00-PC-HA	011972
					1	BE.1-PC-B-HA	026238
					2	BE.2-PC-B-HA	028069
					4	BE.4-PC-B-HA	030303
	4		condensate bowl with bowl guard, fully automatic condensate drain (AM10) and o-ring	polycarbonate	0	C.11-PC-AM	004429
					1	BE.1-PC-B-AM	026239
					2	BE.2-PC-B-AM	028070
					4	BE.4-PC-B-AM	030304
	4		condensate bowl with bowl guard, fully automatic condensate drain (AM10/NC) and o-ring	polycarbonate	0	C.11-AMC	024937
					1	BE.1-AMC	026240
					2	BE.2-AMC	028071
					4	BE.4-AMC	030308
	4		metal bowl with visual display, with semi automatic drain (HA) and o-ring	metal	0	C.00-M-HA	012870
					1	BE.1-H-HA	027210
					2	BE.2-H-HA	028560
					4	BE.4-H-HA	033579
	4		metal bowl with visual display, fully automatic condensate drain (AM10) and o-ring	metal	0	C.00-M-AM	031836
					1	BE.1-H-AM	027211
					2	BE.2-H-AM	028563
					4	BE.4-H-AM	033583
	4		metal bowl with visual display, fully automatic condensate drain (AM10/NC) and o-ring	metal	0	C.00-M-AMC	033859
					1	BE.1-H-AMC	027214
					2	BE.2-H-AMC	028564
					4	BE.4-H-AMC	033586
	5		oil bowl with o-ring	polycarbonate	0	L.00	013178
					1	BE.1 LUB	026241
					2	BE.2 LUB	028073
					4	BE.4 LUB	030310
	5		metal oil bowl with o-ring	zinc-die casting	0	L.00-M	013179
					1	BE.1-H-LUB	027212
					2	BE.2-H-LUB	028566
					4	BE.4-H-LUB	033589
	6		dome assembly	polycarbonate seals: NBR	0	ESA.0-1312	054979
					1 - 4	ESA.1-1312	027942

Accessories

Item no. Designation

035762	KKOP.0	coupling kit BG0
034271	KKOP.1	coupling kit BG1
034601	KKOP.2	coupling kit BG2
034831	KKOP.4	coupling kit BG4
035763	KKOP.0W	coupling kit wall mounting BG0
034270	KKOP.1W	coupling kit wall mounting BG1
034604	KKOP.2W	coupling kit wall mounting BG2
034832	KKOP.4W	coupling kit wall mounting BG4
040319	KKOP-014K	coupling kit BG0 G1/4 for wall assembly
040327	KKOP-018K	coupling kit BG0 G1/8 for wall assembly
040320	KKOP-114K	coupling kit BG1 G1/4 for wall assembly
040324	KKOP-138K	coupling kit BG1 G3/8 for wall assembly
040321	KKOP-238K	coupling kit BG2 G3/8 for wall assembly
040323	KKOP-212K	coupling kit BG2 G1/2 for wall assembly
040347	KKOP-234K	coupling kit BG2 G3/4 for wall assembly
040322	KKOP-434K	coupling kit BG4 G3/4 for wall assembly
030321	KKOP-41K	coupling kit BG4 G1 for wall assembly

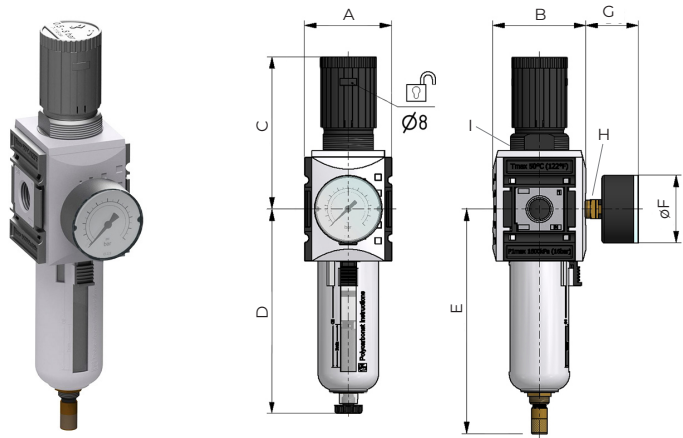
Item no. Designation

040566	KKOP-0A	coupling adapter BG0/BG1
040378	KKOP-1A	coupling adapter BG1/BG2
040379	KKOP-2A	coupling adapter BG2/BG4
052203	KBW.0-1225	mounting bracket BG0 with screws
052210	KBW.1-1225	mounting bracket BG1 with screws
052204	KBW.2-1225	mounting bracket BG2 with screws
034330	KBW.4-1225	mounting bracket BG4 with screws
035760	KBW.0-1227	mounting bracket for panel mounting BG0
052275	KBW.1-1228	mounting bracket for panel mounting BG1
052205	KBW.2-1227	mounting bracket for panel mounting BG2
044020	KBW.1-1228-S	mounting bracket with panel nut M36x1,5
044022	KBW.2-1227-S	mounting bracket with panel nut M42x1,5
049414	C.00-34	panel nut M30x1,5 KS
052237	SM.1	panel nut M36x1,5
052238	SM.2	panel nut M42x1,5
032263	VH.31	padlock with E11 closing, without key
032264	VH.32	padlock with key and G1663 closing

Filter regulator

Technical data

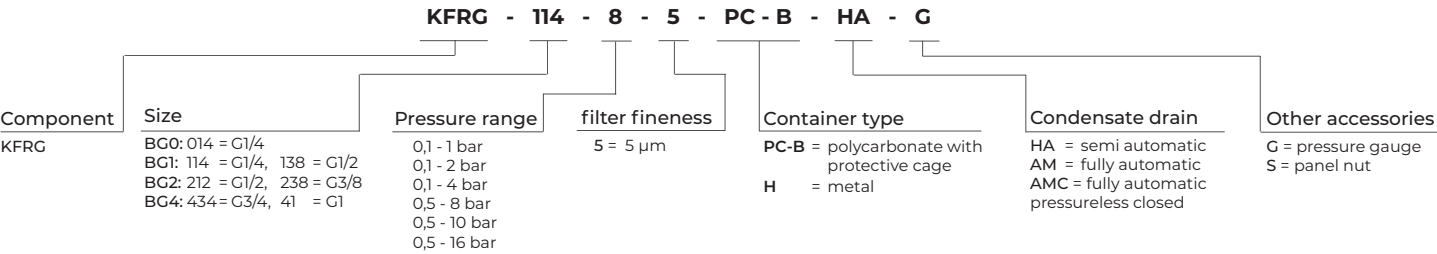
- Sintered filter, centrifugal principle, membrane pressure regulator with secondary venting
- Locking: lockable with plug-in lock or padlock
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +50 °C
- Input pressure P1 min.: 1,5 bar
- Input pressure P1 max.: 16 bar; BG0 = 12bar
- Installation position: vertical
- Filter fineness: 5 µm
- Condensate container: PC with protective cage PA or metal container
- Condensate drain: semi-automatic drain (HA) or fully automatic (AM / AMC)
- Materials: Body: PA66 GF60, spring cover: POM, diaphragm and seals: NBR,



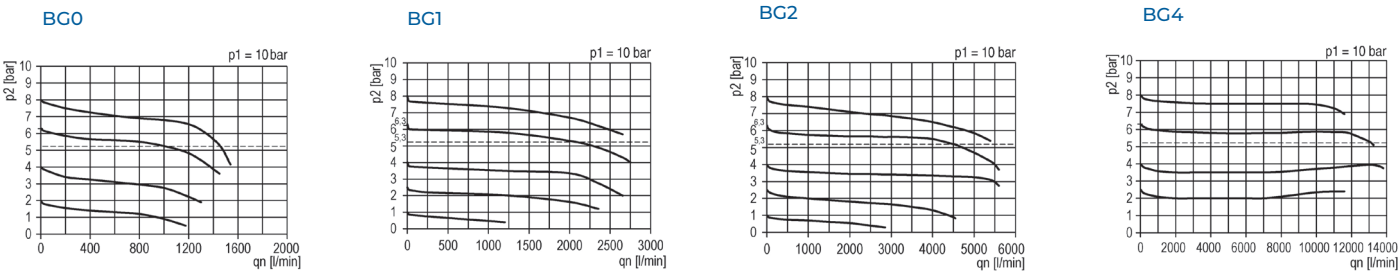
Symbol	Dimensions									
		A	B	C	D (HA)	E (AM)	F	G	H pressure gauge thread	I panel thread
	BG0	43	48	63	105	143	-	12	-	M30x1,5
	BG1	52	54	96	130	145	ø50	38	G 1/8"	M36x1,5
	BG2	63	67	110	147	163	ø50	38	G 1/8"	M42x1,5
	BG4	85	93	137	189	206	ø63	38	G 1/8"	M50x1,5

Technical specifications							
Designation	Size	Connection thread	flow P1=10bar; P2=6,3bar ΔP=1bar	drain connection thread	weight	internal air consumption	lockable with a padlock
KFRG-014	BG0	G 1/4"	1000 l/min	G 1/8"	0.224 Kg	-	no
KFRG-114	BG1	G 1/4"	2200 l/min	G 1/8"	0.3476 Kg	-	yes
KFRG-138	BG1	G3/8"	2600 l/min	G 1/8"	0.3476 Kg	-	yes
KFRG-238	BG2	G3/8"	4300 l/min	G 1/8"	0.5726 Kg	-	yes
KFRG-212	BG2	G1/2"	5200 l/min	G 1/8"	0.5726 Kg	-	yes
KFRG-434	BG4	G3/4"	14000 l/min	G 1/8"	1.317 Kg	max. 1,5 l/min	yes
KFRG-41	BG4	G1"	14000 l/min	G 1/8"	1.317 Kg	max. 1,5 l/min	yes

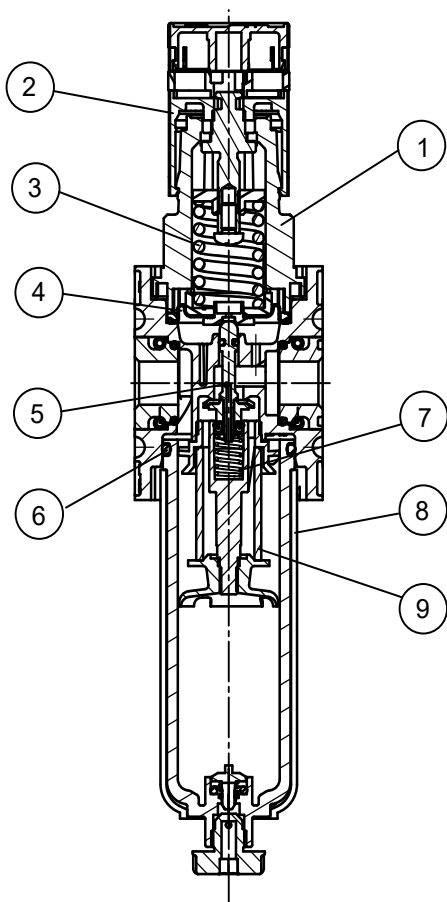
Designation



Flow chart



Cross - sectional view / spare parts



Pos.	Designation	Material	Size	Article type	Item no.
1 + 2	Spare parts consisting of: membrane (1) + valve cone (2)	brass-NBR-POM brass-NBR-PA6	0	-	-
			1	KESA.1-1311	035244
			2	KESA.2-1311	035225
			4	KESA.4-1311	042038
3	filter element 5 µm	Cellpor	0 + 1	C.00-26	052187
			2	C.22-26	050551
			4	FE.4-560	032171
4	condensate bowl with bowl guard, semi automatic drain (HA) and o-ring	polycarbonate	0	C.00-PC-HA	011972
			1	BE.1-PC-B-HA	026238
			2	BE.2-PC-B-HA	028069
			4	BE.4-PC-B-HA	030303
4	condensate bowl with bowl guard, fully automatic condensate drain (AM10) and o-ring	polycarbonate	0	C.11-PC-AM	004429
			1	BE.1-PC-B-AM	026239
			2	BE.2-PC-B-AM	028070
			4	BE.4-PC-B-AM	030304
4	condensate bowl with bowl guard, fully automatic condensate drain (AM10/NC) and o-ring	polycarbonate	0	C.11-AMC	024937
			1	BE.1-AMC	026240
			2	BE.2-AMC	028071
			4	BE.4-AMC	030308
4	metal bowl with visual display, with semi automatic drain (HA) and o-ring	metal	0	C.00-M-HA	012870
			1	BE.1-H-HA	027210
			2	BE.2-H-HA	028560
			4	BE.4-H-HA	033579
4	metal bowl with visual display, fully automatic condensate drain (AM10) and o-ring	metal	0	C.00-M-AM	031836
			1	BE.1-H-AM	027211
			2	BE.2-H-AM	028563
			4	BE.4-H-AM	033583
4	metal bowl with visual display, fully automatic condensate drain (AM10/NC) and o-ring	metal	0	C.00-M-AMC	033859
			1	BE.1-H-AMC	027214
			2	BE.2-H-AMC	028564
			4	BE.4-H-AMC	033586

Accessories

Item no. Designation

035762	KKOP.0	coupling kit BG0
034271	KKOP.1	coupling kit BG1
034601	KKOP.2	coupling kit BG2
034831	KKOP.4	coupling kit BG4
035763	KKOP.0W	coupling kit wall mounting BG0
034270	KKOP.1W	coupling kit wall mounting BG1
034604	KKOP.2W	coupling kit wall mounting BG2
034832	KKOP.4W	coupling kit wall mounting BG4
040319	KKOP-014K	coupling kit BG0 G1/4 for wall assembly
040327	KKOP-018K	coupling kit BG0 G1/8 for wall assembly
040320	KKOP-114K	coupling kit BG1 G1/4 for wall assembly
040324	KKOP-138K	coupling kit BG1 G3/8 for wall assembly
040321	KKOP-238K	coupling kit BG2 G3/8 for wall assembly
040323	KKOP-212K	coupling kit BG2 G1/2 for wall assembly
040347	KKOP-234K	coupling kit BG2 G3/4 for wall assembly
040322	KKOP-434K	coupling kit BG4 G3/4 for wall assembly
030321	KKOP-41K	coupling kit BG4 G1 for wall assembly

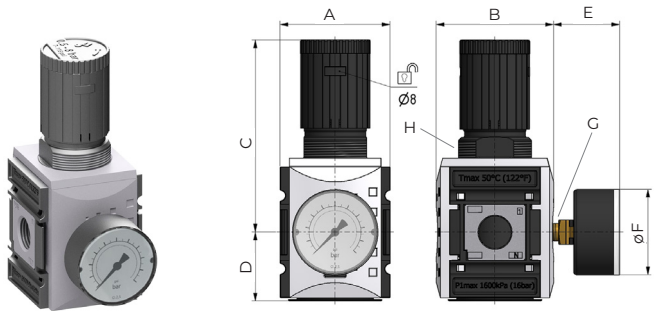
Item no. Designation

040566	KKOP-0A	coupling adapter BG0/BG1
040378	KKOP-1A	coupling adapter BG1/BG2
040379	KKOP-2A	coupling adapter BG2/BG4
052203	KBW.0-1225	mounting bracket BG0 with screws
052210	KBW.1-1225	mounting bracket BG1 with screws
052204	KBW.2-1225	mounting bracket BG2 with screws
034330	KBW.4-1225	mounting bracket BG4 with screws
035760	KBW.0-1227	mounting bracket for panel mounting BG0
052275	KBW.1-1228	mounting bracket for panel mounting BG1
052205	KBW.2-1227	mounting bracket for panel mounting BG2
044020	KBW.1-1228-S	mounting bracket with panel nut M36x1,5
044022	KBW.2-1227-S	mounting bracket with panel nut M42x1,5
049414	C.00-34	panel nut M30x1,5 KS
052237	SM.1	panel nut M36x1,5
052238	SM.2	panel nut M42x1,5
032263	VH.31	padlock with E11 closing, without key
032264	VH.32	padlock with key and G1663 closing

Pressure regulator

Technical data

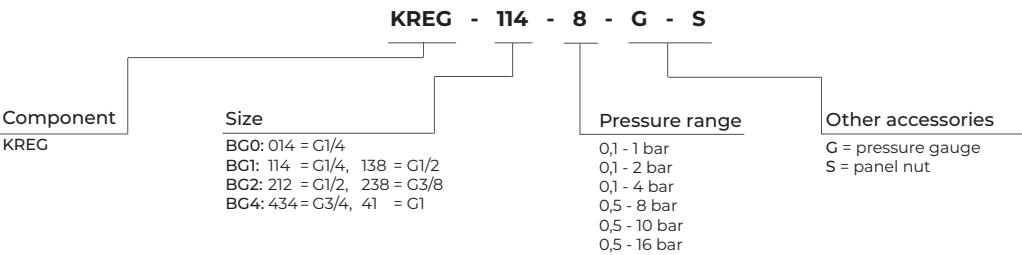
- membrane pressure regulator with secondary venting
- Locking: lockable with plug-in lock or padlock
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +50 °C
- Input pressure P1 max.: 16 bar
- Installation position: arbitrary
- Materials: Body: PA66 GF60, spring cover: POM, diaphragm and seals: NBR,



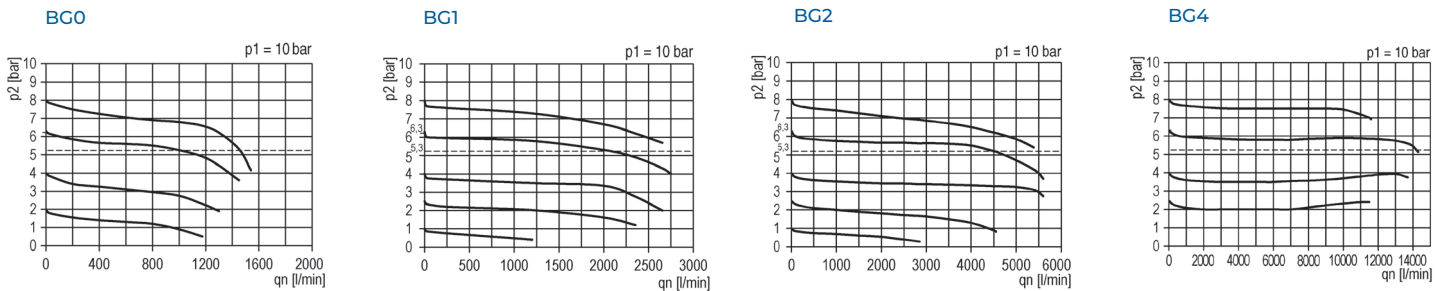
Symbol	Dimensions								
		A	B	C	D	E	F	H pressure gauge thread	I panel thread
	BG0	43	48	63	25	12	-	-	M30x1,5
	BG1	52	54	96	33	38	ø50	G 1/8"	M36x1,5
	BG2	63	67	110	40	38	ø50	G 1/8"	M42x1,5
	BG4	85	93	137	54	38	ø63	G 1/8"	M50x1,5

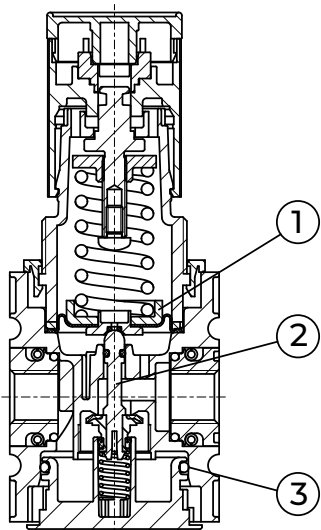
Technical specifications						
Designation	Size	Connection thread	flow P1=10bar; P2=6,3bar ΔP=1bar	weight	internal air consumption	lockable with a padlock
KREG-014	BG0	G 1/4"	1000 l/min	0.1641 kg	-	no
KREG-114	BG1	G 1/4"	2000 l/min	0.3684 kg	-	yes
KREG-138	BG1	G 3/8"	2500 l/min	0.3476 kg	-	yes
KREG-238	BG2	G 3/8"	4500 l/min	0.5726 kg	-	yes
KREG-212	BG2	G 1/2"	5200 l/min	0.5493 kg	-	yes
KREG-434	BG4	G 3/4"	14200 l/min	1.1075 kg	max. 1,5 l/min	yes
KREG-41	BG4	G 1"	14200 l/min	1.1075 kg	max. 1,5 l/min	yes

Designation



Flow chart



Cross - sectional view / spare parts		Pos.	Designation	Material	Material	Article type	Article type
			Spare parts consisting of:	brass-NBR-POM brass-NBR-PA6 NBR	0	KESA.0-1301	036979
		1	1x membrane (1)		1	KESA.1-1311	035244
		2	1x valve cone (5),		2	KESA.2-1311	035225
		3	1x o-ring (6)		4	KESA.4-1311	042038

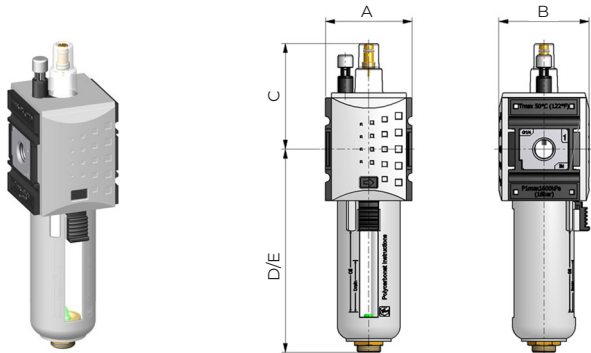
Accessories

Item no.	Designation		Item no.	Designation	
035762	KKOP.0	coupling kit BG0	040566	KKOP-0A	coupling adapter BG0/BG1
034271	KKOP.1	coupling kit BG1	040378	KKOP-1A	coupling adapter BG1/BG2
034601	KKOP.2	coupling kit BG2	040379	KKOP-2A	coupling adapter BG2/BG4
034831	KKOP.4	coupling kit BG4			
035763	KKOP.0W	coupling kit wall mounting BG0	052203	KBW.0-1225	mounting bracket BG0 with screws
034270	KKOP.1W	coupling kit wall mounting BG1	052210	KBW.1-1225	mounting bracket BG1 with screws
034604	KKOP.2W	coupling kit wall mounting BG2	052204	KBW.2-1225	mounting bracket BG2 with screws
034832	KKOP.4W	coupling kit wall mounting BG4	034330	KBW.4-1225	mounting bracket BG4 with screws
040319	KKOP-014K	coupling kit BG0 G1/4 for wall assembly	035760	KBW.0-1227	mounting bracket for panel mounting BG0
040327	KKOP-018K	coupling kit BG0 G1/8 for wall assembly	052275	KBW.1-1228	mounting bracket for panel mounting BG1
040320	KKOP-114K	coupling kit BG1 G1/4 for wall assembly	052205	KBW.2-1227	mounting bracket for panel mounting BG2
040324	KKOP-138K	coupling kit BG1 G3/8 for wall assembly	044020	KBW.1-1228-S	mounting bracket with panel nut M36x1,5
040321	KKOP-238K	coupling kit BG2 G3/8 for wall assembly	044022	KBW.2-1227-S	mounting bracket with panel nut M42x1,5
040323	KKOP-212K	coupling kit BG2 G1/2 for wall assembly	049414	C.00-34	panel nut M30x1,5 KS
040347	KKOP-234K	coupling kit BG2 G3/4 for wall assembly	052237	SM.1	panel nut M36x1,5
040322	KKOP-434K	coupling kit BG4 G3/4 for wall assembly	052238	SM.2	panel nut M42x1,5
030321	KKOP-41K	coupling kit BG4 G1 for wall assembly	032263	VH.31	padlock with E11 closing, without key
			032264	VH.32	padlock with key and G1663 closing

Lubricator

Technical data

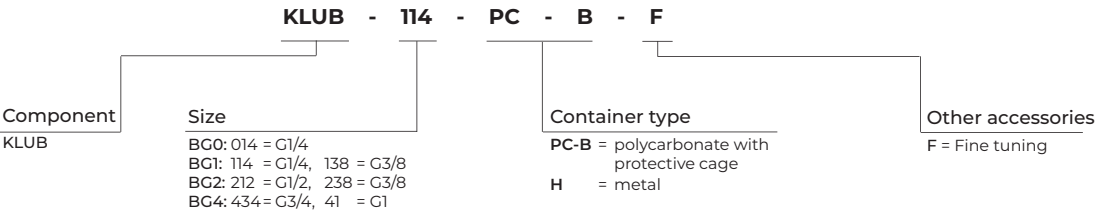
- Lubricator with automatic oil filling
- Oil suction under pressure possible (P max.: 10 bar)
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +50 °C
- Input pressure P1 min.:
- Input pressure P1 max.: 16 bar; BG0 = 12 bar
- Installation position: vertial
- Oil type: CL32 according to DIN 51517 - ISO VG32
- Oil dosing at qv = 1000 l/min: 1-2 d/min
- Condensate container: PC with protective cage PA or metal container
- Dropper attachment: PC/PA
- Materials: body: PA66 GF60, seals: NBR



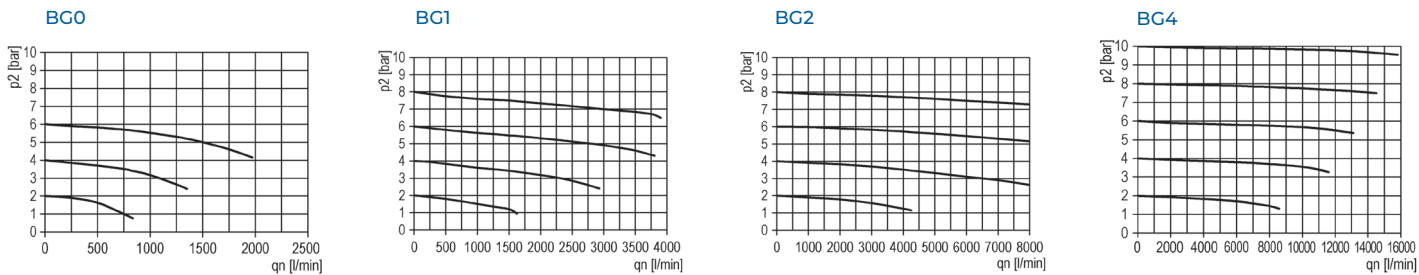
Symbol	Dimensions					
	A	B	C	D (PC bowl)	E (metal bowl)	
	BG0	43	48	58	98	87
	BG1	52	54	64	122	123
	BG2	63	67	70	140	145
	BG4	85	93	88	183	183

Technical specifications					
Designation	Size	Connection thread	flow P1=10bar; P2=6,3bar ΔP=1bar	weight lubricator with PC bowl	weight lubricator with metal bowl
KLUB-014	BG0	G 1/4"	1400 l/min	0,1485 kg	0,4523 kg
KLUB-114	BG1	G 1/4"	2800 l/min	0,2714 kg	0,4453 kg
KLUB-138	BG1	G3/8"	2800 l/min	0,2579 kg	0,4318 kg
KLUB-238	BG2	G3/8"	8000 l/min	0,4272 kg	0,6722 kg
KLUB-212	BG2	G1/2"	8000 l/min	0,4108 kg	0,6558 kg
KLUB-434	BG4	G3/4"	16000 l/min	0,9532 kg	1,4504 kg
KLUB-41	BG4	G1"	16000 l/min	0,8930 kg	1,3762 kg

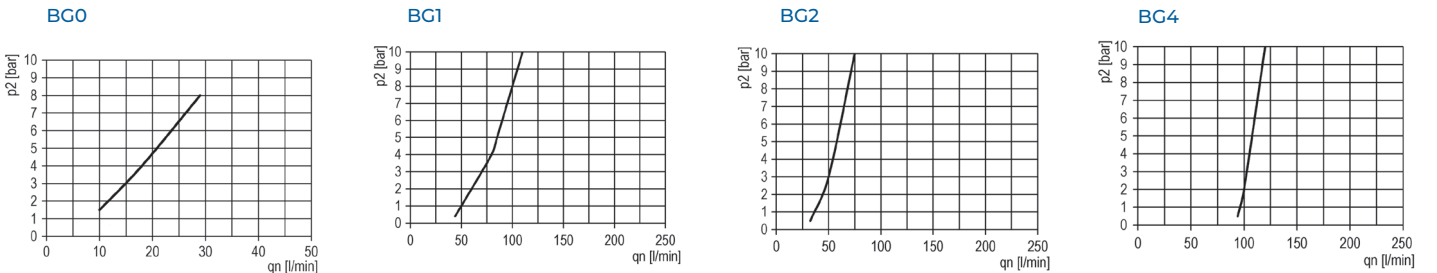
Designation



Flow chart



Oiler response limit



Cross - sectional view / spare parts

Pos.	Designation	Material	Size	Article type	Item no.
1	PC oil bowl with o-ring (3)	polycarbonate	0	L.00	013178
	PC oil bowl with bowl guard and o-ring (3)		1	BE.1 LUB	026241
			2	BE.2 LUB	028073
			4	BE.4 LUB	030310
1	metal bowl with o-ring (3)	metal	0	L.00-M	013179
	metal oil bowl with visidual display and o-ring (3)		1	BE.1-H-LUB	027212
			2	BE.2-H-LUB	028566
			4	BE.4-H-LUB	033589
2	dome assembly	polycarbonate seals: NBR	0	ESA.0-1312	054979
			1	ESA.1-1312	027942
			2	ESA.1-1312	027942
			4	ESA.1-1312	027942
3	o-ring	NBR	0 - 4	-	-

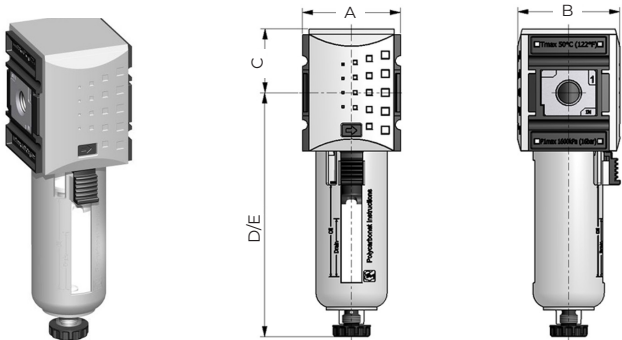
Accessories

Item no.	Designation		Item no.	Designation	
035762	KKOP.0	coupling kit BG0	040566	KKOP-0A	coupling adapter BG0/BG1
034271	KKOP.1	coupling kit BG1	040378	KKOP-1A	coupling adapter BG1/BG2
034601	KKOP.2	coupling kit BG2	040379	KKOP-2A	coupling adapter BG2/BG4
034831	KKOP.4	coupling kit BG4			
035763	KKOP.0W	coupling kit wall mounting BG0	052203	KBW.0-1225	mounting bracket BG0 with screws
034270	KKOP.1W	coupling kit wall mounting BG1	052210	KBW.1-1225	mounting bracket BG1 with screws
034604	KKOP.2W	coupling kit wall mounting BG2	052204	KBW.2-1225	mounting bracket BG2 with screws
034832	KKOP.4W	coupling kit wall mounting BG4	034330	KBW.4-1225	mounting bracket BG4 with screws
040319	KKOP-014K	coupling kit BG0 G1/4 for wall assembly			
040327	KKOP-018K	coupling kit BG0 G1/8 for wall assembly			
040320	KKOP-114K	coupling kit BG1 G1/4 for wall assembly			
040324	KKOP-138K	coupling kit BG1 G3/8 for wall assembly			
040321	KKOP-238K	coupling kit BG2 G3/8 for wall assembly			
040323	KKOP-212K	coupling kit BG2 G1/2 for wall assembly			
040347	KKOP-234K	coupling kit BG2 G3/4 for wall assembly			
040322	KKOP-434K	coupling kit BG4 G3/4 for wall assembly			
030321	KKOP-41K	coupling kit BG4 G1 for wall assembly			

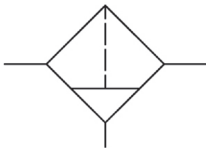
Filter

Technical data

- Sintered filter, centrifugal principle
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +50 °C
- Input pressure P1 min.: 1,5 bar
- Input pressure P1 max.: 16 bar; BG0 = 12 bar
- Installation position: vertial
- Filter fineness: 5 µm
- Condensate container: PC with protective cage PA or metal container
- Condensate drain: semi-automatic drain (HA) or fully automatic (AM / AMC)
- Materials: Body: PA66 GF60, diaphragm and seals: NBR



Symbol



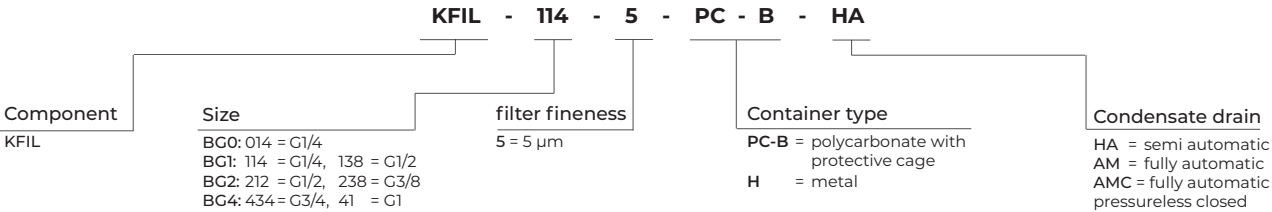
Dimensions

	A	B	C	D (HA)	E (AM)
BG0	43	48	27	105	143
BG1	52	54	34	130	145
BG2	63	67	43	147	163
BG4	85	93	58	189	206

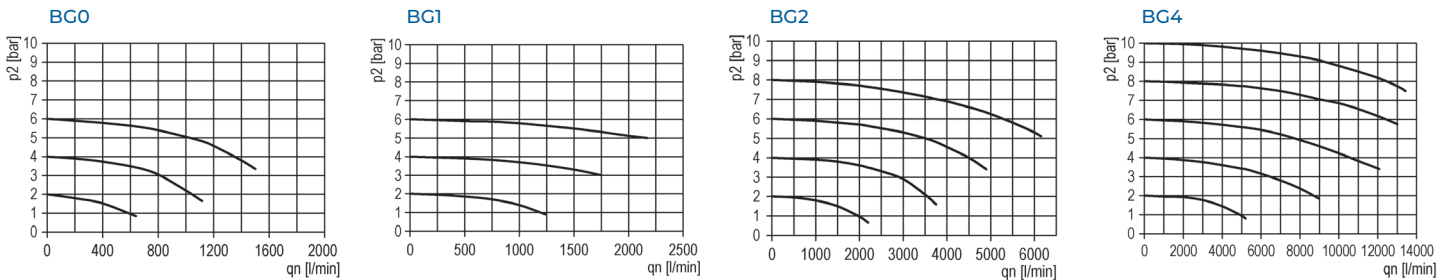
Technical specifications

Designation	Size	Connection thread	Flow P1=6 bar; ΔP=1bar	weight PC bowl with HA	weight PC bowl with AM	weight metal bowl with HA	weight metal bowl with AM
KFIL-014	BG0	G 1/4"	1000 l/min	0,128 kg	0,168 kg	0,200 kg	-
KFIL-114	BG1	G 1/4"	2000 l/min	0,250 kg	0,280 kg	0,443 kg	0,474 kg
KFIL-138	BG1	G3/8"	2000 l/min	0,237 kg	0,266 kg	0,430 kg	0,461 kg
KFIL-238	BG2	G3/8"	3500 l/min	0,415 kg	0,445 kg	0,686 kg	0,715 kg
KFIL-212	BG2	G1/2"	3500 l/min	0,399 kg	0,428 kg	0,663 kg	0,699 kg
KFIL-434	BG4	G3/4"	9000 l/min	0,887 kg	0,937 kg	1,412 kg	1,427 kg
KFIL-41	BG4	G1"	9000 l/min	0,855 kg	0,870 kg	1,345 kg	1,360 kg

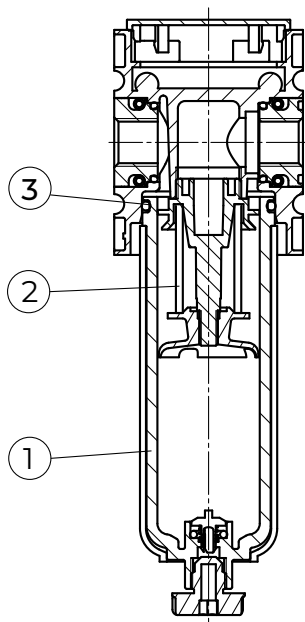
Designation



Flow chart



Cross - sectional view / spare parts



Pos.	Designation	Material	Size	Article type	Item no.
1	PC condensate bowl with bowl guard, semi automatic drain (HA) and o-ring	polycarbonate	0	C.00-PC-HA	011972
			1	BE.1-PC-B-HA	026238
			2	BE.2-PC-B-HA	028069
			4	BE.4-PC-B-HA	030303
1	PC condensate bowl with bowl guard, fully automatic condensate drain (AM10) and o-ring	polycarbonate	0	C.11-PC-AM	004429
			2	BE.1-PC-B-AM	026239
			2	BE.2-PC-B-AM	028070
			4	BE.4-PC-B-AM	030304
1	PC condensate bowl with bowl guard, fully automatic condensate drain (AM10/NC) and o-ring	polycarbonate	0	C.11-AMC	024937
			1	BE.1-AMC	026240
			2	BE.2-AMC	028071
			4	BE.4-AMC	030308
1	metal condensate bowl with visual display, with semi automatic drain (HA) and o-ring	metal	0	C.00-M-HA	012870
			1	BE.1-H-HA	027210
			2	BE.2-H-HA	028560
			4	BE.4-H-HA	033579
1	metal bowl with visual display, fully automatic condensate drain (AM10) and o-ring	metal	0	C.00-M-AM	031836
			1	BE.1-H-AM	027211
			2	BE.2-H-AM	028563
			4	BE.4-H-AM	033583
1	metal bowl with visual display, fully automatic condensate drain (AM10/NC) and o-ring	metal	0	C.00-M-AMC	033859
			1	BE.1-H-AMC	027214
			2	BE.2-H-AMC	028564
			4	BE.4-H-AMC	033586
2	filter element 5 µm	Cellpor	0 + 1	C.00-26	052187
			2	C.22-26	050551
			4	FE.4-560	032171
2	filter element 40 µm	Cellpor	0 + 1	C.00-26	052187
			2	C.22-26	050551
			4	FE.4-560	032171
3	o-ring	NBR	-	-	-

Accessories

Item no. Designation

035762	KKOP.0	coupling kit BG0
034271	KKOP.1	coupling kit BG1
034601	KKOP.2	coupling kit BG2
034831	KKOP.4	coupling kit BG4

035763	KKOP.0W	coupling kit wall mounting BG0
034270	KKOP.1W	coupling kit wall mounting BG1
034604	KKOP.2W	coupling kit wall mounting BG2
034832	KKOP.4W	coupling kit wall mounting BG4

040319	KKOP-014K	coupling kit BG0 G1/4 for wall assembly
040327	KKOP-018K	coupling kit BG0 G1/8 for wall assembly
040320	KKOP-114K	coupling kit BG1 G1/4 for wall assembly
040324	KKOP-138K	coupling kit BG1 G3/8 for wall assembly
040321	KKOP-238K	coupling kit BG2 G3/8 for wall assembly
040323	KKOP-212K	coupling kit BG2 G1/2 for wall assembly
040347	KKOP-234K	coupling kit BG2 G3/4 for wall assembly
040322	KKOP-434K	coupling kit BG4 G3/4 for wall assembly
030321	KKOP-41K	coupling kit BG4 G1 for wall assembly

Item no. Designation

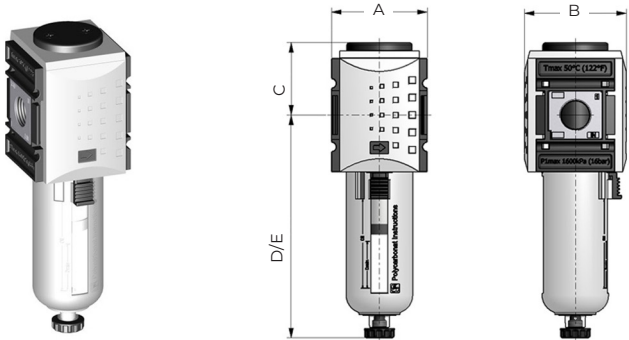
040566	KKOP-0A	coupling adapter BG0/BG1
040378	KKOP-1A	coupling adapter BG1/BG2
040379	KKOP-2A	coupling adapter BG2/BG4

052203	KBW.0-1225	mounting bracket BG0 with screws
052210	KBW.1-1225	mounting bracket BG1 with screws
052204	KBW.2-1225	mounting bracket BG2 with screws
034330	KBW.4-1225	mounting bracket BG4 with screws

Prefilter

Technical data

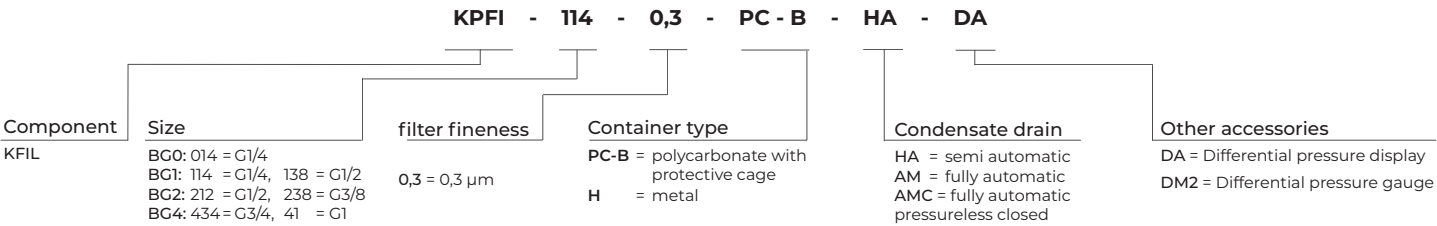
- Pre-filter for removing solid contaminants down to 0.3 μm
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +50 °C
- Input pressure P1 min.: 1,5 bar
- Input pressure P1 max.: 16 bar; BG0 = 12 bar
- Installation position: vertial
- Filter fineness: 0,3 μm
- Dust separation: 99,999%
- Condensate container: PC with protective cage PA or metal container
- Condensate drain: semi-automatic drain (HA) or fully automatic (AM / AMC)
- Materials: Body: PA66 GF60, diaphragm and seals: NBR



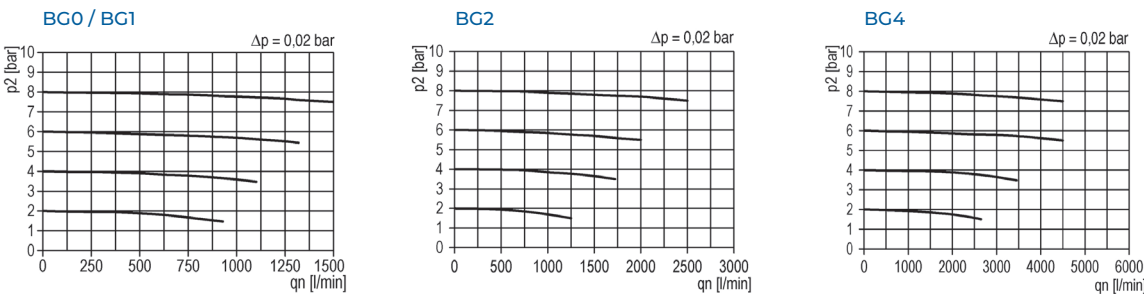
Symbol	Dimensions					
		A	B	C	D (HA)	E (AM)
	BG0	43	48	27	105	143
	BG1	52	54	39	130	147
	BG2	63	67	48	147	163
	BG4	85	93	63	189	206

Technical specifications							
Designation	Size	Connection thread	Flow P1=6bar; ΔP=0,02bar	weight PC bowl with HA	weight PC bowl with AM	weight metal bowl with HA	weight metal bowl with AM
KPFI-014	BG0	G 1/4"	140 l/min	0,133 kg	0,173 kg	0,210 kg	-
KPFI-114	BG1	G 1/4"	300 l/min	0,282 kg	0,306 kg	0,475 kg	0,500 kg
KPFI-138	BG1	G 3/8"	300 l/min	0,269 kg	0,293 kg	0,468 kg	0,494 kg
KPFI-238	BG2	G 3/8"	500 l/min	0,306 kg	0,336 kg	0,563 kg	0,603 kg
KPFI-212	BG2	G 1/2"	500 l/min	0,290 kg	0,319 kg	0,554 kg	0,597 kg
KPFI-434	BG4	G 3/4"	1500 l/min	0,985 kg	1,034 kg	1,518 kg	1,531 kg
KPFI-41	BG4	G 1"	1500 l/min	0,953 kg	0,967 kg	1,450 kg	1,464 kg

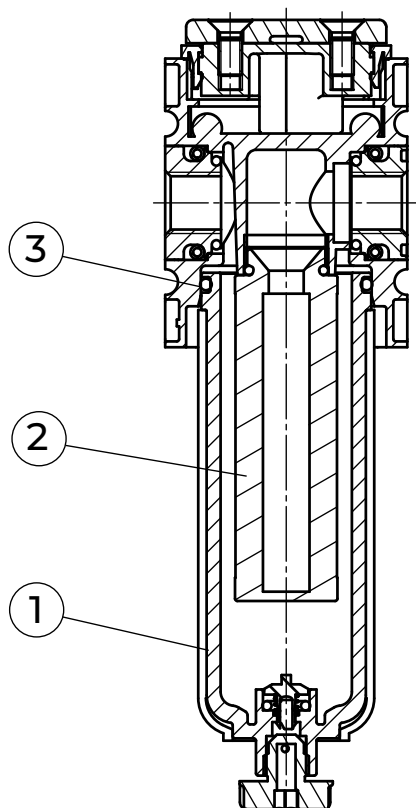
Designation



Flow chart



Cross - sectional view / spare parts



Pos.	Designation	Material	Size	Article type	Item no.
1	PC condensate bowl with bowl guard, semi automatic drain (HA) and o-ring	polycarbonate	0	C.00-PC-HA	011972
			1	BE.1-PC-B-HA	026238
			2	BE.2-PC-B-HA	028069
			4	BE.4-PC-B-HA	030303
1	PC condensate bowl with bowl guard, fully automatic condensate drain (AM10) and o-ring	polycarbonate	0	C.11-PC-AM	004429
			1	BE.1-PC-B-AM	026239
			2	BE.2-PC-B-AM	028070
			4	BE.4-PC-B-AM	030304
1	PC condensate bowl with bowl guard, fully automatic condensate drain (AM10/NC) and o-ring	polycarbonate	0	C.11-AMC	024937
			1	BE.1-AMC	026240
			2	BE.2-AMC	028071
			4	BE.4-AMC	030308
1	metal condensate bowl with visual display, with semi automatic drain (HA) and o-ring	metal	0	C.00-M-HA	012870
			1	BE.1-H-HA	027210
			2	BE.2-H-HA	028560
			4	BE.4-H-HA	033579
1	metal bowl with visual display, fully automatic condensate drain (AM10) and o-ring	metal	0	C.00-M-AM	031836
			1	BE.1-H-AM	027211
			2	BE.2-H-AM	028563
			4	BE.4-H-AM	033583
1	metal bowl with visual display, fully automatic condensate drain (AM10/NC) and o-ring	metal	0	C.00-M-AMC	033859
			1	BE.1-H-AMC	027214
			2	BE.2-H-AMC	028564
			4	BE.4-H-AMC	033586
2	pre filter element 0,3 µm	Cellpor	0	V 23/35	030405
			1	V 23/40	010457
			1	V 23/70	026261
			2	V 28/67	028196
			4	V 40/100	032173
3	o-ring	NBR	-	-	-

Accessories

Item no. Designation

035762	KKOP.0	coupling kit BG0
034271	KKOP.1	coupling kit BG1
034601	KKOP.2	coupling kit BG2
034831	KKOP.4	coupling kit BG4
035763	KKOP.0W	coupling kit wall mounting BG0
034270	KKOP.1W	coupling kit wall mounting BG1
034604	KKOP.2W	coupling kit wall mounting BG2
034832	KKOP.4W	coupling kit wall mounting BG4
040319	KKOP-014K	coupling kit BG0 G1/4 for wall assembly
040327	KKOP-018K	coupling kit BG0 G1/8 for wall assembly
040320	KKOP-114K	coupling kit BG1 G1/4 for wall assembly
040324	KKOP-138K	coupling kit BG1 G3/8 for wall assembly
040321	KKOP-238K	coupling kit BG2 G3/8 for wall assembly
040323	KKOP-212K	coupling kit BG2 G1/2 for wall assembly
040347	KKOP-234K	coupling kit BG2 G3/4 for wall assembly
040322	KKOP-434K	coupling kit BG4 G3/4 for wall assembly
030321	KKOP-41K	coupling kit BG4 G1 for wall assembly

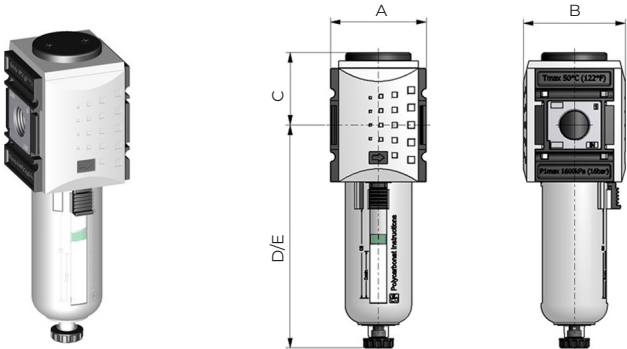
Item no. Designation

040566	KKOP-0A	coupling adapter BG0/BG1
040378	KKOP-1A	coupling adapter BG1/BG2
040379	KKOP-2A	coupling adapter BG2/BG4
052203	KBW.0-1225	mounting bracket BG0 with screws
052210	KBW.1-1225	mounting bracket BG1 with screws
052204	KBW.2-1225	mounting bracket BG2 with screws
034330	KBW.4-1225	mounting bracket BG4 with screws
027477	DA.1	Differential pressure display $\Delta p=0,35\text{bar}$
052397	DM 2	Differential pressure gauge 0-0,5 bar

Finefilter

Technical data

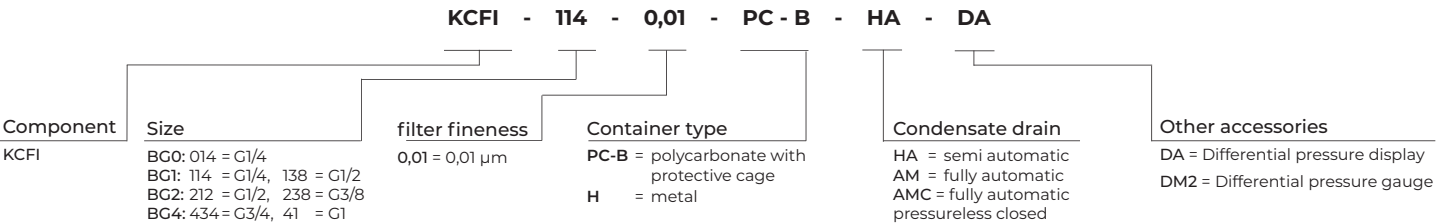
- Fine filter for removing oil, water and solid contaminants down to 0.01 µm
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +50 °C
- Input pressure P1 min.: 1,5 bar
- Input pressure P1 max.: 16 bar, BG0 = 12 bar
- Installation position: vertial
- Filter fineness: 0,01 µm
- Dust separation: 99,999%
- Condensate container: PC with protective cage PA or metal container
- Condensate drain: semi-automatic drain (HA) or fully automatic (AM / AMC)
- Materials: Body: PA66 GF60, diaphragm and seals: NBR



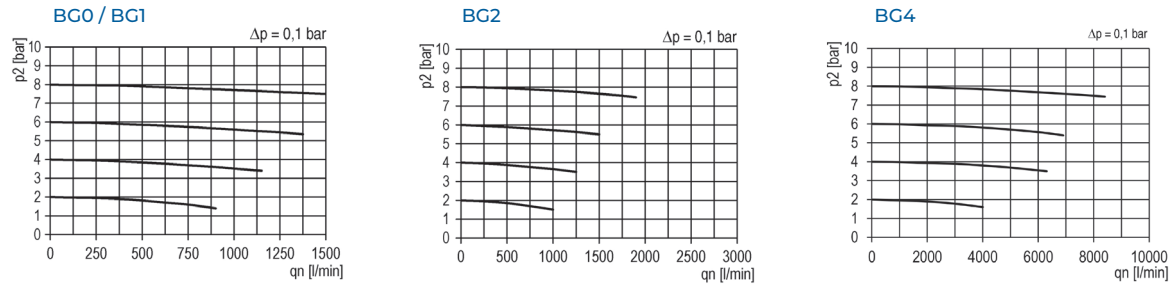
Symbol	Dimensions					
		A	B	C	D (HA)	E (AM)
	BG0	43	48	27	105	143
	BG1	52	54	39	130	147
	BG2	63	67	48	147	163
	BG4	85	93	63	189	206

Technical specifications							
Designation	Size	Connection thread	Flow P1=6bar; ΔP=0,1bar	weight PC bowl with HA	weight PC bowl with AM	weight metal bowl with HA	weight metal bowl with AM
KCFI-014	BG0	G 1/4"	140 l/min	0,133 kg	0,173 kg	0,210 kg	-
KCFI-114	BG1	G 1/4"	300 l/min	0,282 kg	0,306 kg	0,475 kg	0,500 kg
KCFI-138	BG1	G3/8"	300 l/min	0,269 kg	0,293 kg	0,468 kg	0,494 kg
KCFI-238	BG2	G3/8"	500 l/min	0,306 kg	0,336 kg	0,563 kg	0,603 kg
KCFI-212	BG2	G1/2"	500 l/min	0,290 kg	0,319 kg	0,554 kg	0,597 kg
KCFI-434	BG4	G3/4"	1500 l/min	0,985 kg	1,034 kg	1,518 kg	1,531 kg
KCFI-41	BG4	G1"	1500 l/min	0,953 kg	0,967 kg	1,450 kg	1,464 kg

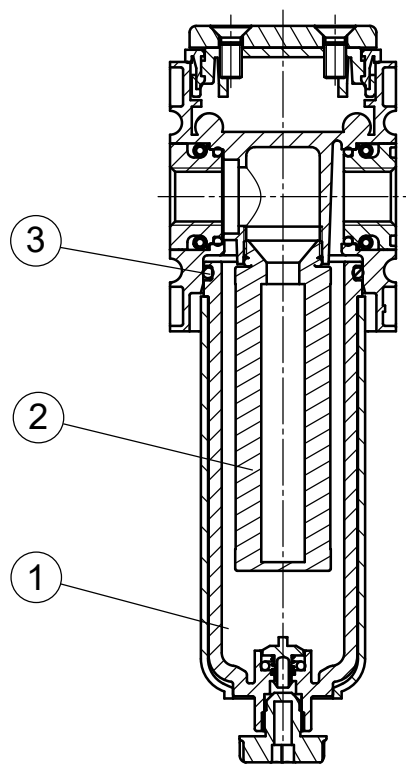
Designation



Flow chart



Cross - sectional view / spare parts



Pos.	Designation	Material	Size	Article type	Item no.
1	PC condensate bowl with bowl guard, semi automatic drain (HA) and o-ring	polycarbonate	0	C.00-PC-HA	011972
			1	BE.1-PC-B-HA	026238
			2	BE.2-PC-B-HA	028069
			4	BE.4-PC-B-HA	030303
1	PC condensate bowl with bowl guard, fully automatic condensate drain (AM10) and o-ring	polycarbonate	0	C.11-PC-AM	004429
			1	BE.1-PC-B-AM	026239
			2	BE.2-PC-B-AM	028070
			4	BE.4-PC-B-AM	030304
1	PC condensate bowl with bowl guard, fully automatic condensate drain (AM10/NC) and o-ring	polycarbonate	0	C.11-AMC	024937
			1	BE.1-AMC	026240
			2	BE.2-AMC	028071
			4	BE.4-AMC	030308
1	metal condensate bowl with visual display, with semi automatic drain (HA) and o-ring	metal	0	C.00-M-HA	012870
			1	BE.1-H-HA	027210
			2	BE.2-H-HA	028560
			4	BE.4-H-HA	033579
1	metal bowl with visual display, fully automatic condensate drain (AM10) and o-ring	metal	0	C.00-M-AM	031836
			1	BE.1-H-AM	027211
			2	BE.2-H-AM	028563
			4	BE.4-H-AM	033583
1	metal bowl with visual display, fully automatic condensate drain (AM10/NC) and o-ring	metal	0	C.00-M-AMC	033859
			1	BE.1-H-AMC	027214
			2	BE.2-H-AMC	028564
			4	BE.4-H-AMC	033586
2	fine filter element 0,01 µm	Cellpor	0	X 23/35	030405
			1	X 23/40	010457
			1	X 23/70	026261
			2	X 28/67	028196
			4	X 40/100	032173
3	o-ring	NBR	-	-	-

Accessories

Item no. Designation

035762	KKOP.0	coupling kit BG0
034271	KKOP.1	coupling kit BG1
034601	KKOP.2	coupling kit BG2
034831	KKOP.4	coupling kit BG4
035763	KKOP.0W	coupling kit wall mounting BG0
034270	KKOP.1W	coupling kit wall mounting BG1
034604	KKOP.2W	coupling kit wall mounting BG2
034832	KKOP.4W	coupling kit wall mounting BG4
040319	KKOP-014K	coupling kit BG0 G1/4 for wall assembly
040327	KKOP-018K	coupling kit BG0 G1/8 for wall assembly
040320	KKOP-114K	coupling kit BG1 G1/4 for wall assembly
040324	KKOP-138K	coupling kit BG1 G3/8 for wall assembly
040321	KKOP-238K	coupling kit BG2 G3/8 for wall assembly
040323	KKOP-212K	coupling kit BG2 G1/2 for wall assembly
040347	KKOP-234K	coupling kit BG2 G3/4 for wall assembly
040322	KKOP-434K	coupling kit BG4 G3/4 for wall assembly
030321	KKOP-41K	coupling kit BG4 G1 for wall assembly

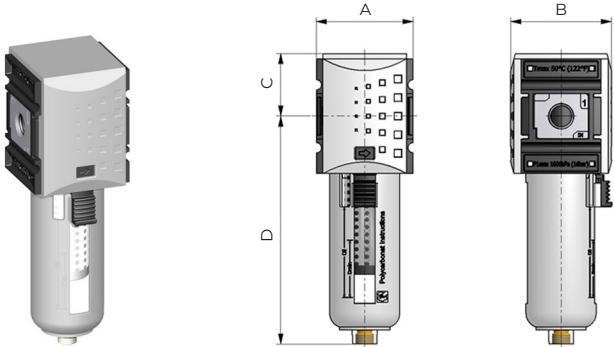
Item no. Designation

040566	KKOP-0A	coupling adapter BG0/BG1
040378	KKOP-1A	coupling adapter BG1/BG2
040379	KKOP-2A	coupling adapter BG2/BG4
052203	KBW.0-1225	mounting bracket BG0 with screws
052210	KBW.1-1225	mounting bracket BG1 with screws
052204	KBW.2-1225	mounting bracket BG2 with screws
034330	KBW.4-1225	mounting bracket BG4 with screws
027477	DA.1	Differential pressure display $\Delta p=0,35\text{bar}$
052397	DM 2	Differential pressure gauge 0-0,5 bar

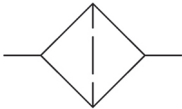
Activated carbon filter

Technical data

- Activated carbon filter for absorbing oil vapour from compressed air and gases; a fine filter must be installed as a pre-filter.
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +50 °C
- Input pressure P1 min.: 1,5 bar
- Input pressure P1 max.: 16 bar, BG0 = 12 bar
- Installation position: vertial
- residual oil content: 0,005 µm
- Condensate container: PC with protective cage PA or metal container
- Condensate drain: without
- Materials: Body: PA66 GF60, diaphragm and seals: NBR



Symbol



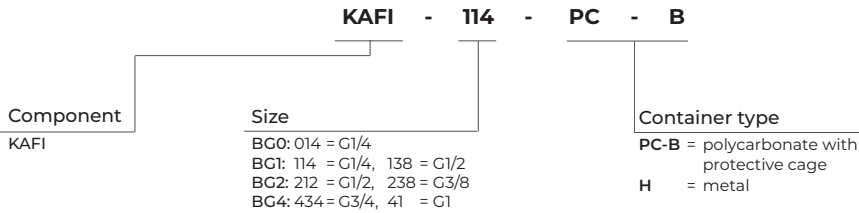
Dimensions

	A	B	C	D
BG0	43	48	27	98
BG1	52	54	34	123
BG2	63	67	43	141
BG4	85	93	58	184

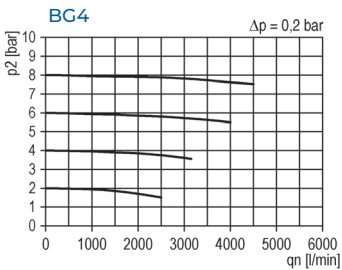
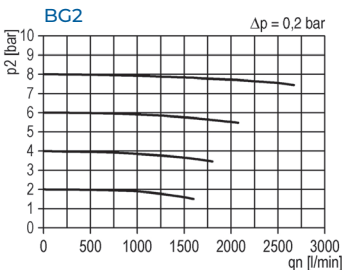
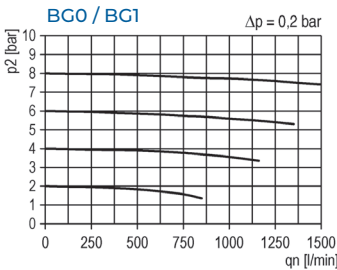
Technical specifications

Designation	Size	Connection thread	Flow P1=6bar; ΔP=0,2bar	weight PC bow	weight metal bowl
KAFI-014	BG0	G 1/4"	470 l/min	0,135 kg	0,203 kg
KAFI-114	BG1	G 1/4"	470 l/min	0,260 kg	0,452 kg
KAFI-138	BG1	G1/2"	470 l/min	0,246 kg	0,430 kg
KAFI-238	BG2	G3/8"	1700 l/min	0,415 kg	0,679 kg
KAFI-212	BG2	G1/2"	1700 l/min	0,399 kg	0,663 kg
KAFI-434	BG4	G3/4"	2500 l/min	0,887 kg	1,412 kg
KAFI-41	BG4	G1"	2500 l/min	0,855 kg	1,345 kg

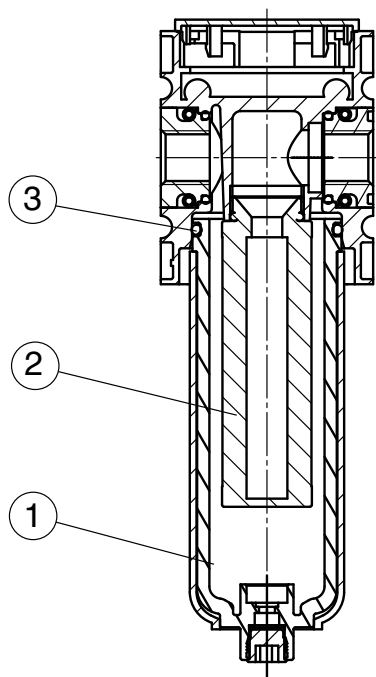
Designation



Flow chart



Cross - sectional view / spare parts



Pos.	Designation	Material	Size	Article type	Item no.
1	PC condensate bowl with bowl guard and o-ring	polycarbonate	0	L.00	013178
			1	BE.1 c	026242
			2	BE.2 c	028072
			4	BE.4 c	032060
1	metal condensate bowl with visual display and o-ring	metal	0	L.00 M	013179
			1	BE.1 H c	027213
			2	BE.2 H c	028565
			4	BE.4 H c	33587
2	activated carbon filter element with o-ring	activated carbon	0	A.23-60	014071
			1	A 23-70	010335
			2	A 28/90	028198
			4	A 40/123	032175
3	O-Ring	NBR	-	-	-

Accessories

Item no. Designation

035762 KKOP.0 coupling kit BG0
 034271 KKOP.1 coupling kit BG1
 034601 KKOP.2 coupling kit BG2
 034831 KKOP.4 coupling kit BG4

035763 KKOP.0W coupling kit wall mounting BG0
 034270 KKOP.1W coupling kit wall mounting BG1
 034604 KKOP.2W coupling kit wall mounting BG2
 034832 KKOP.4W coupling kit wall mounting BG4

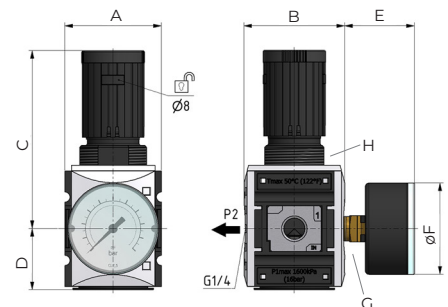
040319 KKOP-014K coupling kit BG0 G1/4 for wall assembly
 040327 KKOP-018K coupling kit BG0 G1/8 for wall assembly
 040320 KKOP-114K coupling kit BG1 G1/4 for wall assembly
 040324 KKOP-138K coupling kit BG1 G3/8 for wall assembly
 040321 KKOP-238K coupling kit BG2 G3/8 for wall assembly
 040323 KKOP-212K coupling kit BG2 G1/2 for wall assembly
 040347 KKOP-234K coupling kit BG2 G3/4 for wall assembly
 040322 KKOP-434K coupling kit BG4 G3/4 for wall assembly
 030321 KKOP-41K coupling kit BG4 G1 for wall assembly

Item no. Designation

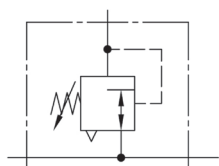
040566 KKOP-0A coupling adapter BG0/BG1
 040378 KKOP-1A coupling adapter BG1/BG2
 040379 KKOP-2A coupling adapter BG2/BG4

052203 KBW.0-1225 mounting bracket BG0 with screws
 052210 KBW.1-1225 mounting bracket BG1 with screws
 052204 KBW.2-1225 mounting bracket BG2 with screws
 034330 KBW.4-1225 mounting bracket BG4 with screws

- membrane pressure regulator with secondary venting
- Locking: lockable with plug-in lock or padlock
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +50 °C
- Input pressure P1 max.: 16 bar
- Installation position: arbitrary
- Materials: Body: PA66 GF60, spring cover: POM, diaphragm and seals: NBR,



Dimensions

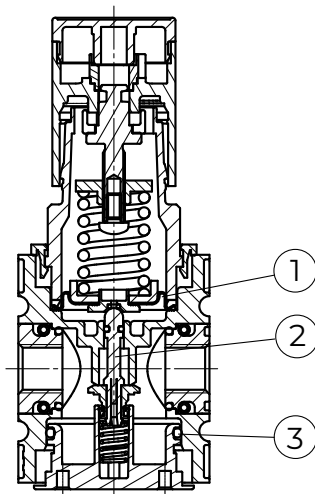


	A	B	C	D	E	F	G pressure gauge thread	H panel thread
BG0	43	48	68	25	12	-	-	M30x1,5
BG1	52	54	96	33	38	ø50	G 1/8"	M36x1,5
BG2	63	67	110	40	38	ø50	G 1/8"	M42x1,5

Designation	Size	Connection thread	P2 connection	flow P1=10bar, P2=6,3bar; ΔP=1bar	weight	internal air consumption	lockable with a padlock
KRBE-014	BG0	G 1/4"	G 1/4"	1000 l/min	0.1728 kg	-	no
KRBE-114	BG1	G 1/4"	G 1/4"	2000 l/min	0.3145 kg	-	yes
KRBE-138	BG1	G3/8"	G 1/4"	2000 l/min	0.3145 kg	-	yes
KRBE-238	BG2	G3/8"	G 3/8"	4500 l/min	1.1075 kg	no	yes
KRBE-212	BG2	G1/2"	G 3/8"	5200 l/min	0.5493 kg	no	yes

Component	Size	Pressure range	Other accessories
KRBE	BG0: 014 = G1/4 BG1: 114 = G1/4, 138 = G1/2 BG2: 238 = G3/8, 212 = G1/2	0,1 - 1 bar 0,1 - 2 bar 0,1 - 4 bar 0,5 - 8 bar 0,5 - 10 bar 0,5 - 16 bar	G = pressure gauge S = panel nut

Cross - sectional view / spare parts



Pos.	Designation	Material	Size	Article type	Item no.
1	Spare parts consisting of	brass-NBR-PA6 brass-NBR-POM NBR	0	KESA.0-1301	036979
2	membrane (1)		1	KESA.1-1311	035244
3	valve cone (5)		2	KESA.2-1311	035225
	o-ring (6)				

Accessories

Item no. Designation

035762	KKOP.0	coupling kit BG0
034271	KKOP.1	coupling kit BG1
034601	KKOP.2	coupling kit BG2
034831	KKOP.4	coupling kit BG4
035763	KKOP.0W	coupling kit wall mounting BG0
034270	KKOP.1W	coupling kit wall mounting BG1
034604	KKOP.2W	coupling kit wall mounting BG2
034832	KKOP.4W	coupling kit wall mounting BG4
040319	KKOP-014K	coupling kit BG0 G1/4 for wall assembly
040327	KKOP-018K	coupling kit BG0 G1/8 for wall assembly
040320	KKOP-114K	coupling kit BG1 G1/4 for wall assembly
040324	KKOP-138K	coupling kit BG1 G3/8 for wall assembly
040321	KKOP-238K	coupling kit BG2 G3/8 for wall assembly
040323	KKOP-212K	coupling kit BG2 G1/2 for wall assembly
040347	KKOP-234K	coupling kit BG2 G3/4 for wall assembly
040322	KKOP-434K	coupling kit BG4 G3/4 for wall assembly
030321	KKOP-41K	coupling kit BG4 G1 for wall assembly

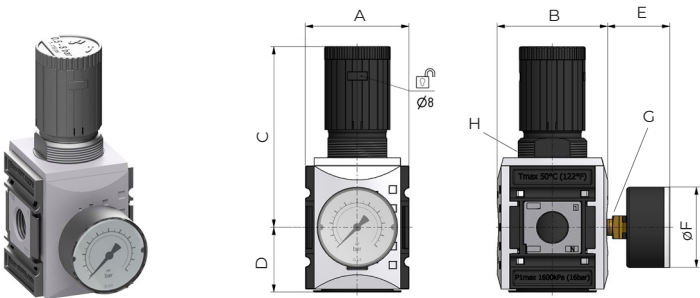
Item no. Designation

040566	KKOP-0A	coupling adapter BG0/BG1
040378	KKOP-1A	coupling adapter BG1/BG2
040379	KKOP-2A	coupling adapter BG2/BG4
052203	KBW.0-1225	mounting bracket BG0 with screws
052210	KBW.1-1225	mounting bracket BG1 with screws
052204	KBW.2-1225	mounting bracket BG2 with screws
034330	KBW.4-1225	mounting bracket BG4 with screws
035760	KBW.0-1227	mounting bracket for panel mounting BG0
052275	KBW.1-1228	mounting bracket for panel mounting BG1
052205	KBW.2-1227	mounting bracket for panel mounting BG2
044020	KBW.1-1228-S	mounting bracket with panel nut M36x1,5
044022	KBW.2-1227-S	mounting bracket with panel nut M42x1,5
049414	C.00-34	panel nut M30x1,5 KS
052237	SM.1	panel nut M36x1,5
052238	SM.2	panel nut M42x1,5
032263	VH.31	padlock with E11 closing, without key
032264	VH.32	padlock with key and G1663 closing

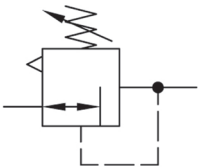
Precision pressure regulator

Technical data

- membrane pressure regulator with secondary venting
- Locking: lockable with plug-in lock or padlock
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +50 °C
- Input pressure P1 max.: 16 bar
- Materials: Body: PA66 GF60, spring cover: POM, diaphragm and seals: NBR,



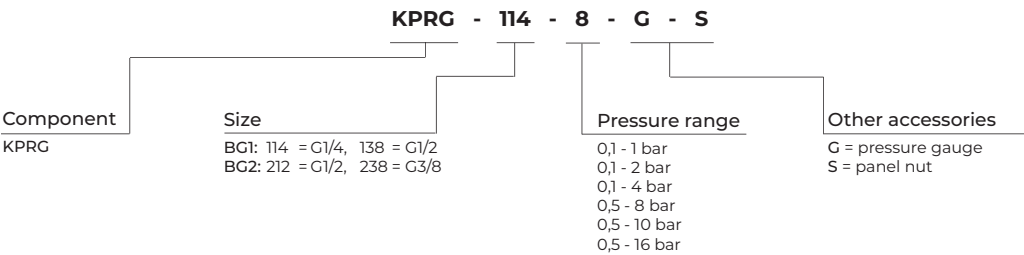
Symbol



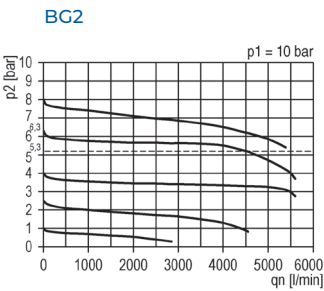
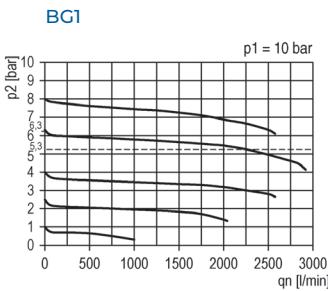
Dimensions								
	A	B	C	D	E	F	G pressure gauge thread	H panel thread
BG1	52	54	96	33	38	ø50	G 1/8"	M36x1,5
BG2	63	67	110	40	38	ø50	G 1/8"	M42x1,5

Technical specifications						
Designation	Size	Connection thread	flow P1=10bar, P2=6,3bar ΔP=1bar	weight without gauge	internal air consumption	lockable with a padlock
KPRG-114	BG1	G 1/4"	2200 l/min	0.2994 kg	-	yes
KPRG-138	BG1	G 3/8"	2700 l/min	0.2859 kg	-	yes
KPRG-238	BG2	G 3/8"	4300 l/min	0.5074 kg	-	yes
KPRG-212	BG2	G 1/2"	5000 l/min	0.5074 kg	-	yes

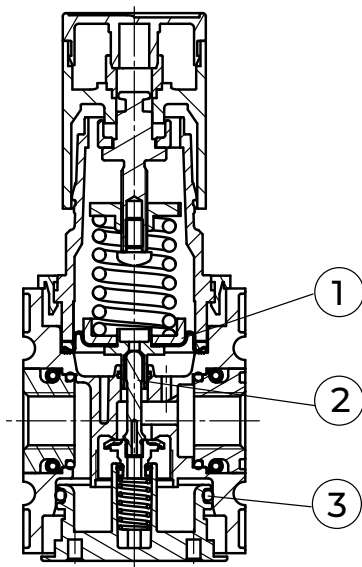
Designation



Flow chart



Cross - sectional view / spare parts



Pos.	Designation	Material	Size	Article type	Item no.
1	Ersatzteilsatz bestehend aus: 1x membrane	brass-NBR-POM	1	KESA.1-1311	035224
2	1x valve cone	brass-NBR-PA6	2	KESA.2-1311	035225
3	1x o-ring	NBR			

Accessories

Item no. Designation

034271	KKOP.1	coupling kit BG1
034601	KKOP.2	coupling kit BG2
034270	KKOP.1W	coupling kit wall mounting BG1
034604	KKOP.2W	coupling kit wall mounting BG2
040320	KKOP-114K	coupling kit BG1 G1/4 for wall assembly
040324	KKOP-138K	coupling kit BG1 G3/8 for wall assembly
040321	KKOP-238K	coupling kit BG2 G3/8 for wall assembly
040323	KKOP-212K	coupling kit BG2 G1/2 for wall assembly
040347	KKOP-234K	coupling kit BG2 G3/4 for wall assembly

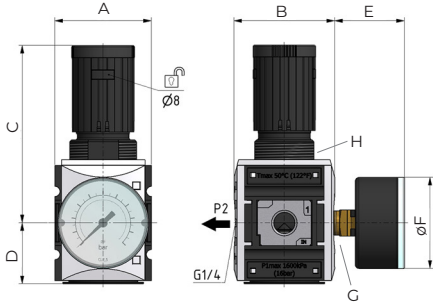
Item no. Designation

040378	KKOP-1A	coupling adapter BG1/BG2
040379	KKOP-2A	coupling adapter BG2/BG4
052210	KBW.1-1225	mounting bracket BG1 with screws
052204	KBW.2-1225	mounting bracket BG2 with screws
052275	KBW.1-1228	mounting bracket for panel mounting BG1
052205	KBW.2-1227	mounting bracket for panel mounting BG2
044020	KBW.1-1228-S	mounting bracket with panel nut M36x1,5
044022	KBW.2-1227-S	mounting bracket with panel nut M42x1,5
052237	SM.1	panel nut M36x1,5
052238	SM.2	panel nut M42x1,5
032263	VH.31	padlock with E11 closing, without key
032264	VH.32	padlock with key and G1663 closing

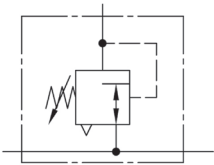
Precision pressure regulator with continuous pressure supply

Technical data

- membrane pressure regulator with secondary venting
- Locking: lockable with plug-in lock or padlock
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +50 °C
- Input pressure P1 max.: 16 bar
- Installation position: arbitrary
- Materials: Body: PA66 GF60, spring cover: POM, diaphragm and seals: NBR,



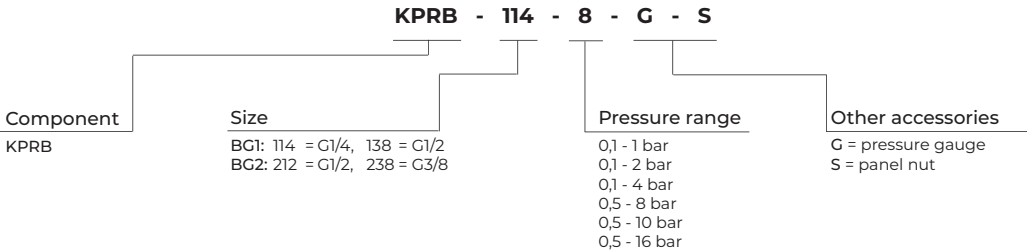
Symbol



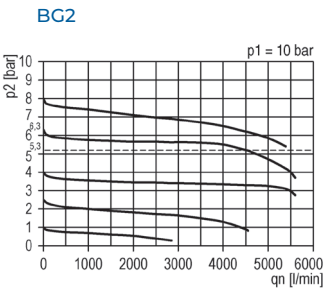
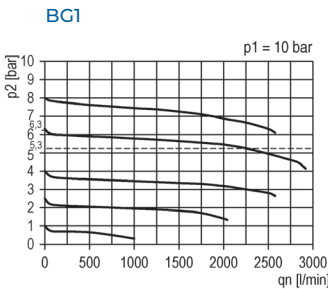
Dimensions								
	A	B	C	D	E	F	G pressure gauge thread	H panel thread
BG1	52	54	96	33	38	ø50	G 1/8"	M36x1,5
BG2	63	67	110	40	38	ø50	G 1/8"	M42x1,5

Technical specifications						
Designation	Size	Connection thread	flow P1=10bar; P2=6,3bar ΔP=1bar	weight without gauge	internal air consumption	lockable with a padlock
KPRB-114	BG1	G 1/4"	2200 l/min	0.2994 kg	-	yes
KPRB-138	BG1	G 3/8"	2700 l/min	0.2859 kg	-	yes
KPRB-238	BG2	G 3/8"	4300 l/min	0.5074 kg	-	yes
KPRB-212	BG2	G 1/2"	5000 l/min	0.5074 kg	-	yes

Designation



Flow chart



Cross - sectional view / spare parts

A detailed cross-sectional technical drawing of a valve assembly. The drawing shows the internal components, including a central valve cone, a membrane, and an O-ring. Three callout circles with numbers 1, 2, and 3 are positioned to the right of the drawing, with leader lines pointing to the respective parts: 1 points to the membrane, 2 points to the valve cone, and 3 points to the O-ring.

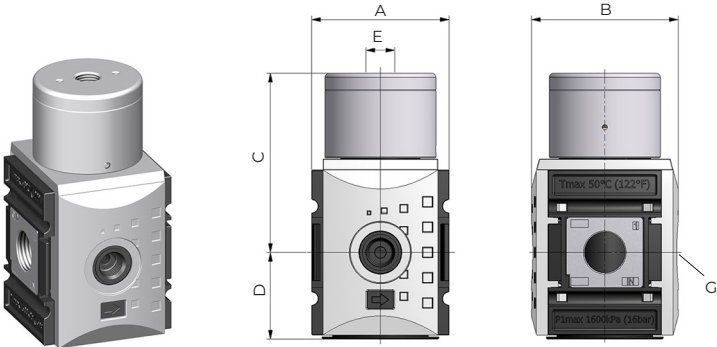
Pos.	Designation	Material	Size	Article type	Item no.
1	Spare parts consisting of 1x membrane 1x valve cone 1x o-ring	brass-NBR-POM brass-NBR-PA6 NBR	1	KESA.-1311	035224
2			KESA.2-1311	035225	
3					

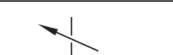
Accessories					
Item no.	Designation		Item no.	Designation	
034271	KKOP.1	coupling kit BG1	052210	KBW.1-1225	mounting bracket BG1 with screws
034601	KKOP.2	coupling kit BG2	052204	KBW.2-1225	mounting bracket BG2 with screws
034270	KKOP.1W	coupling kit wall mounting BG1	052275	KBW.1-1228	mounting bracket for panel mounting BG1
034604	KKOP.2W	coupling kit wall mounting BG2	052205	KBW.2-1227	mounting bracket for panel mounting BG2
040320	KKOP-114K	coupling kit BG1 G1/4 for wall assembly	044020	KBW.1-1228-S	mounting bracket with panel nut M36x1,5
040324	KKOP-138K	coupling kit BG1 G3/8 for wall assembly	044022	KBW.2-1227-S	mounting bracket with panel nut M42x1,5
040321	KKOP-238K	coupling kit BG2 G3/8 for wall assembly	052237	SM.1	panel nut M36x1,5
040323	KKOP-212K	coupling kit BG2 G1/2 for wall assembly	052238	SM.2	panel nut M42x1,5
040347	KKOP-234K	coupling kit BG2 G3/4 for wall assembly	032263	VH.31	padlock with E11 closing, without key
040378	KKOP-1A	coupling adapter BG1/BG2	032264	VH.32	padlock with key and G1663 closing
040379	KKOP-2A	coupling adapter BG2/BG4			

Pressure regulator pneumatically remote-controlled

Technical data

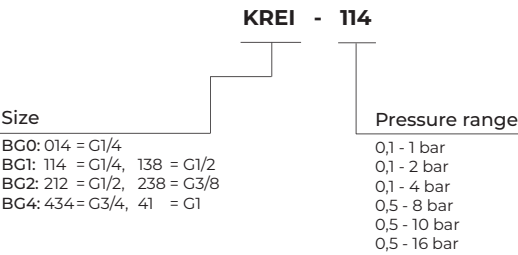
- membrane pressure regulator with secondary venting
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +50 °C
- Input pressure P1 max.: 16 bar
- Installation position: arbitrary
- Materials: Body: PA66 GF60, diaphragm and seals: NBR,



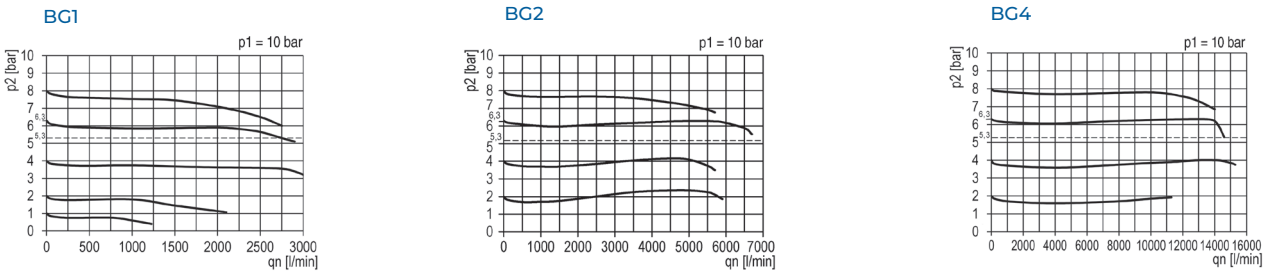
Symbol	Dimensions						
	A	B	C	D	E Control air connection	G pressure gauge thread	
	BG1	52	54	72	33	G 1/8"	G 1/8"
	BG2	63	67	82	40	G 1/4"	G 1/8"
	BG4	85	93	91	54	G 1/4"	G 1/8"

Technical specifications							
Designation	Size	Connection thread	Control air connection	flow P1=10bar; P2=6,3bar ΔP=1bar	weight	internal air consumption	lockable with a padlock
KREI-114	BG1	G 1/4"	G 1/8	2700 l/min	0.3145 Kg	-	nein
KREI-138	BG1	G3/8"	G 1/8	2700 l/min	0.3145 Kg	-	nein
KREI-212	BG2	G1/2"	G 1/4	6750 l/min	0.5493 Kg	-	nein
KREI-434	BG4	G3/4"	G 1/4	14600 l/min	1.0727 Kg	max. 1,5 l/min	nein
KREI-41	BG4	G1"	G 1/4	14600 l/min	1.0055 Kg	max. 1,5 l/min	nein

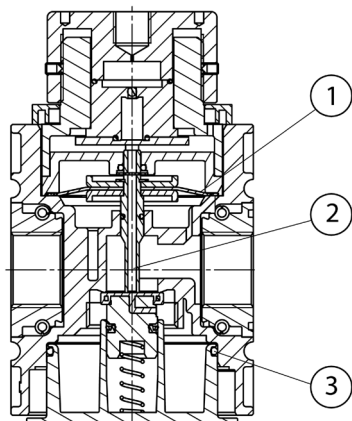
Designation



Flow chart



Cross - sectional view / spare parts



Pos.	Designation	Material	Size	Article type	Item no.
1 2 3	Spare parts consisting of membrane valve cone o-ring	brass-NBR-POM brass-NBR-PA6 NBR	0	-	-
			1	KESA.1-1311	035244
			2	KESA.2-1311	035225
			4	KESA.4-1311	042038

Accessories

Item no. Designation

034271	KKOP.1	coupling kit BG1
034601	KKOP.2	coupling kit BG2
034831	KKOP.4	coupling kit BG4
034270	KKOP.1W	coupling kit wall mounting BG1
034604	KKOP.2W	coupling kit wall mounting BG2
034832	KKOP.4W	coupling kit wall mounting BG4
040320	KKOP-114K	coupling kit BG1 G1/4 for wall assembly
040324	KKOP-138K	coupling kit BG1 G3/8 for wall assembly
040321	KKOP-238K	coupling kit BG2 G3/8 for wall assembly
040323	KKOP-212K	coupling kit BG2 G1/2 for wall assembly
040347	KKOP-234K	coupling kit BG2 G3/4 for wall assembly
040322	KKOP-434K	coupling kit BG4 G3/4 for wall assembly
030321	KKOP-41K	coupling kit BG4 G1 for wall assembly

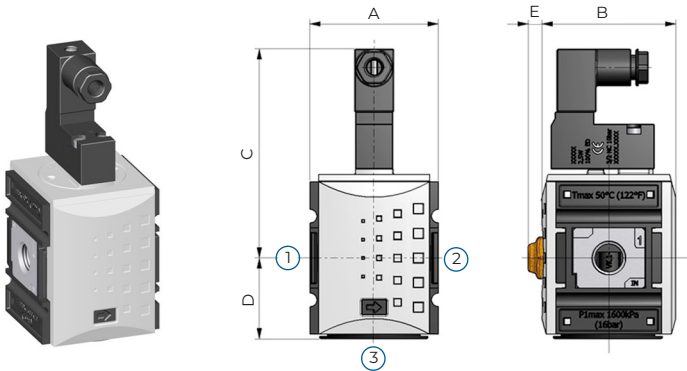
Item no. Designation

040378	KKOP-1A	coupling adapter BG1/BG2
040379	KKOP-2A	coupling adapter BG2/BG4
052210	KBW.1-1225	mounting bracket BG1 with screws
052204	KBW.2-1225	mounting bracket BG2 with screws
034330	KBW.4-1225	mounting bracket BG4 with screws

3/2 Directional control valve, electric operated

Technical data

- 3/2-way poppet valve
- Installation position: arbitrary
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +50 °C
- Input pressure P1 min. 2 bar; P1 max. 10 bar
- Power supply: 24 V=
- Relative operation cycle: 100%
- Performance: 2,5 W
- Protection class: IP65 according to DIN 40050
- Electrical connection: Cable plug EN 175301-803, form B number of poles 2 + PE (included)
- Materials: Body: PA66 GF60, diaphragm and seals: NBR

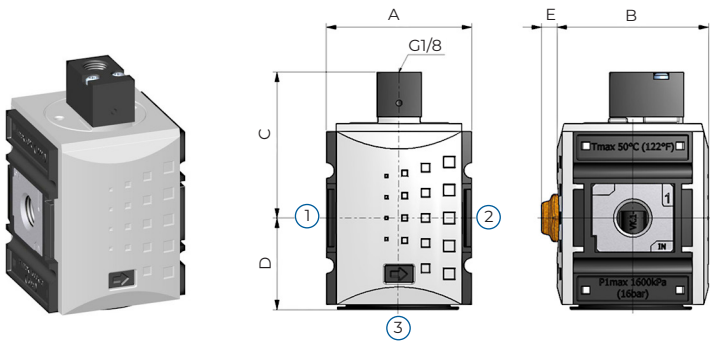


Symbol	Technical specifications									
	Designation	Size	Connection thread	air exhaust	A	B	C	D	E	flow 1 → 2 l/min
	KSOV-014	BG0	G 1/4"	G 1/4	43	48	93	45	-	2000
	KSOV-114	BG1	G 1/4"	G 1/4	52	54	85	33	6	2000
	KSOV-138	BG1	G3/8"	G 1/4	52	54	85	33	6	2000
	KSOV-238	BG2	G3/8"	G 1/2	63	67	94	57	-	4300
	KSOV-212	BG2	G1/2"	G 1/2	63	67	94	57	-	4300
	KSOV-434	BG4	G3/4"	G 1/2	85	93	111	102	-	12500
	KSOV-41	BG4	G1"	G 1/2	85	93	111	102	-	12500

3/2 Directional control valve, pneumatically operated

Technical data

- 3/2-way poppet valve
- Installation position: arbitrary
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +50 °C
- Input pressure P1 min. 2 bar; P1 max. 10 bar
- Power supply: pneumatic
- Relative operation cycle: 100%
- Performance: 2,5 W
- Protection class: IP65 according to DIN 40050
- Materials: Body: PA66 GF60, diaphragm and seals: NBR

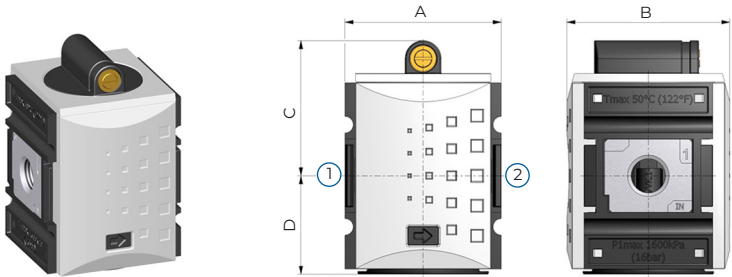


Symbol	Technical specifications									
	Designation	Size	Connection thread	air exhaust	A	B	C	D	E	flow 1 → 2 l/min
	KSOV-014	BG0	G 1/4"	G 1/4	43	48	60	45	-	2000
	KSOV-114	BG1	G 1/4"	G 1/4	52	54	52	33	6	2000
	KSOV-138	BG1	G3/8"	G 1/4	52	54	52	33	6	2000
	KSOV-238	BG2	G3/8"	G 1/2	63	67	61	57	-	4300
	KSOV-212	BG2	G1/2"	G 1/2	63	67	61	57	-	4300
	KSOV-434	BG4	G3/4"	G 1/2	85	93	78	102	-	12500
	KSOV-41	BG4	G1"	G 1/2	85	93	78	102	-	12500

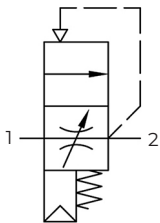
Soft start valve with adjustable filling time

Technical data

- poppet valve, actuated by secondary pressure
- Installation position: arbitrary
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +50 °C
- Input pressure P1 min. 2,5 bar
- Input pressure P1 max. 16 bar (BG0 = 12 bar)
- Relative operation cycle: 100%
- Switching pressure: 50% P1 (only for closed systems)
- Materials: Body: PA66 GF60, diaphragm and seals: NBR



Symbol

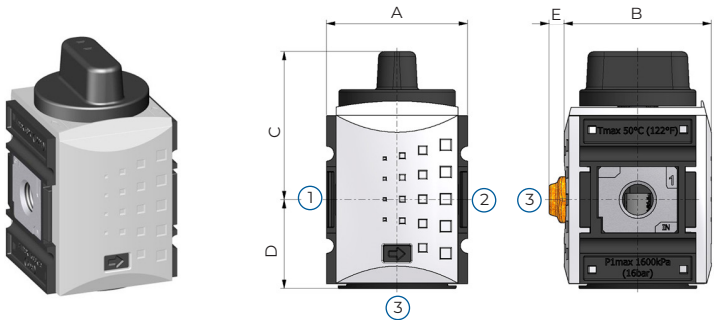


Dimensions							
Designation	Size	Connection thread	A	B	C	D	flow l/min
KSSV-014	BG0	G 1/4"	43	48	53	28	2000
KSSV-114	BG1	G 1/4"	52	54	45	33	1900
KSSV-138	BG1	G3/8"	52	54	45	33	1900
KSSV-238	BG2	G3/8"	63	67	54	58	4400
KSSV-212	BG2	G1/2"	63	67	54	58	4400
KSSV-434	BG4	G3/4"	85	93	58	54	10000
KSSV-41	BG4	G1"	85	93	58	54	10000

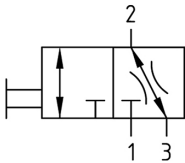
Ball valve

Technical data

- 3/2 directional poppet valve, operated by toggle, 3-way lock
- Installation position: arbitrary
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +50 °C
- Input pressure P1 max. 16 bar (BG0 = 12 bar)
- Locking: Lockable with padlock
- Operation: Toggle 90° ratable
- Materials: Body: PA66 GF60, diaphragm and seals: NBR



Symbol

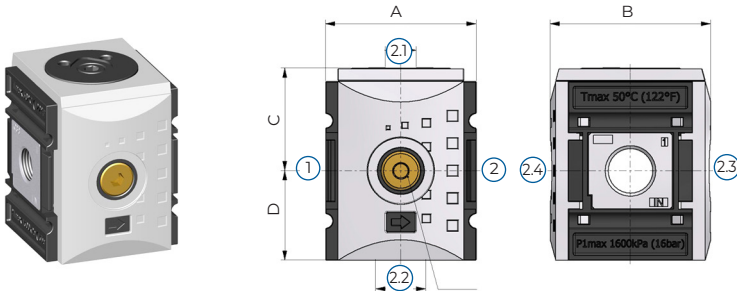


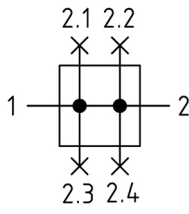
Technical specifications										
Designation	Size	Connection thread	air exhaust bottom 3	air exhaust back 3	A	B	C	D	E	flow 1 + 2
KBAV-014	BG0	G 1/4"	G 1/4	-	43	48	51	36	-	2300 l/min
KBAV-114	BG1	G 1/4"	-	G 1/4	52	54	55	33	6	1900 l/min
KBAV-138	BG1	G3/8"	-	G 1/4	52	54	55	99	6	1900 l/min
KBAV-238	BG2	G3/8"	G 1/2	-	63	67	70	92	-	11000 l/min
KBAV-212	BG2	G1/2"	G 1/2	-	63	67	70	92	-	11000 l/min
KBAM-434	BG4	G3/4"	G 3/4	-	85	93	94	117	-	25000 l/min
KBAM-41	BG4	G1"	G 3/4	-	85	93	94	117	-	25000 l/min

Distributor

Technical data

- Cross distributor
- Installation position: arbitrary
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +50 °C
- Input pressure P1 max.: 16 bar (BG0 = 12 bar)
- Materials: Body: PA66 GF60, diaphragm and seals: NBR

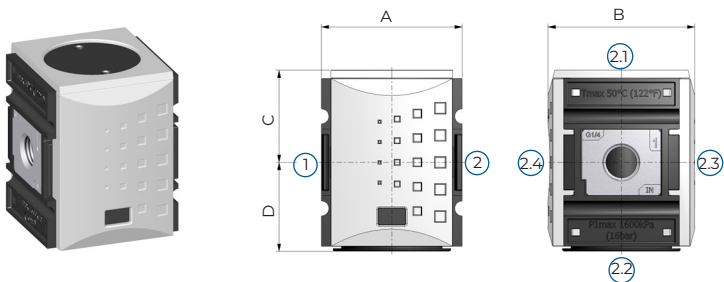


Symbol	Dimensions											
	Designation	Size	Connection thread	air exhaust top 2.1	air exhaust bottom 2.2	air exhaust front 2.3	air exhaust back 2.4	A	B	C	D	flow 1 × 2 l/min
	KDIS-014	BG0	G 1/4"	G 1/4	G 1/4	-	-	43	48	29	28	2700
	KDIS-114	BG1	G 1/4"	G 1/4	G 1/4	G 1/4	-	52	54	35	31	2700
	KDIS-138	BG1	G 3/8"	G 1/4	G 1/4	G 1/4	-	52	54	35	31	3600
	KDIS-238	BG2	G 3/8"	G 1/4	G 3/8	G 3/8	G 3/8	63	67	43	38	7250
	KDIS-212	BG2	G 1/2"	G 1/4	G 3/8	G 3/8	G 3/8	63	67	43	38	7250
	KDIS-434	BG4	G 3/4"	G 3/4	G 3/4	-	-	85	93	59	51	18000
	KDIS-41	BG4	G 1"	G 3/4	G 3/4	-	-	85	93	59	51	18000

Non return valve

Technical data

- Poppet valve, spring-loaded
- Installation position: arbitrary
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +50 °C
- Input pressure: P1 max. 16 bar (BG0 = 12 bar)
- Materials: Body: PA66 GF60, diaphragm and seals: NBR

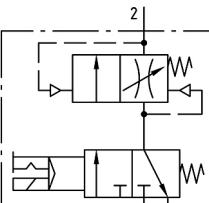


Symbol	Dimensions											
	Designation	Size	Con-nection thread	air ex-haust top 2.1	air ex-haust bottom 2.2	air ex-haust front 2.3	air ex-haust back 2.4	A	B	C	D	flow 1 → 2 l/min
	KREV-014	BG0	G 1/4"	-	G 1/4	-	-	43	48	27	39	800 l/min
	KREV-114	BG1	G 1/4"	-	-	-	G 1/4	52	54	34	33	1250 l/min
	KREV-138	BG1	G 3/8"	-	-	-	G 1/4	52	54	34	33	1250 l/min
	KREV-238	BG2	G 3/8"	G 1/4	G 1/2	G 3/8	G 3/8	63	67	43	38	4500 l/min
	KREV-212	BG2	G 1/2"	G 1/4	G 1/2	G 3/8	G 3/8	63	67	43	38	4500 l/min
	KREV-434	BG4	G 3/4"	-	-	-	-	85	93	58	54	16000 l/min
	KREV-41	BG4	G 1"	-	-	-	-	85	93	58	54	16000 l/min

Filling unit electric operated

Technical data

- poppet valve
- Installation position: arbitrary
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +50 °C
- Input pressure P1 min. 2,5 bar, P1 max. 10 bar
- Power supply: 24 V= (alternatively: 115V/50Hz, 230V/50Hz)
- Relative operation cycle: 100%
- Performance: 2,5 W
- Protection class: IP65 accoring to DIN 40050
- Electrical connection: Cable plug EN 175301-803, form B number of poles 2 + PE (included)
- Materials: Body: PA66 GF60, diaphragm and seals: NBR

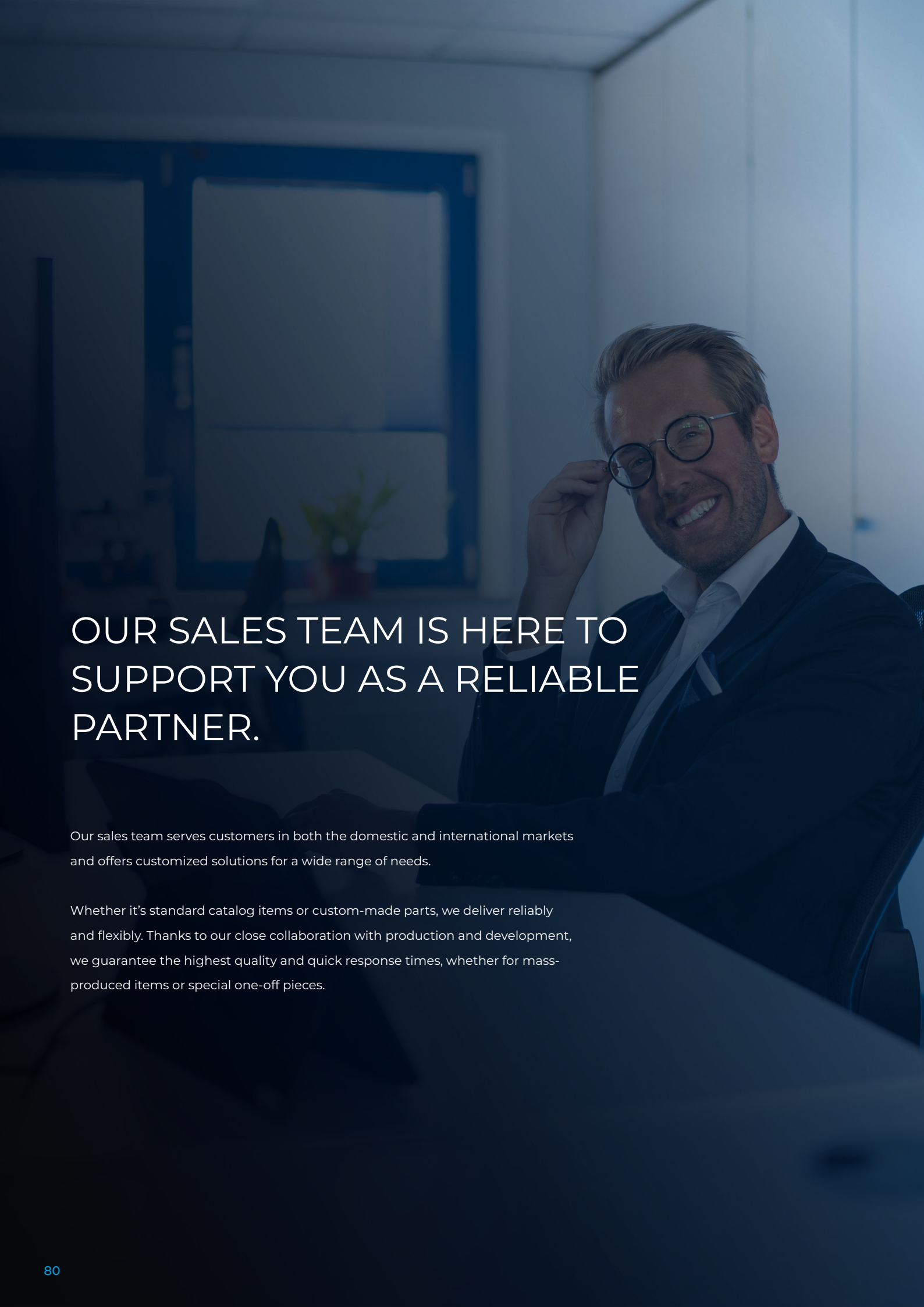
Symbol	Dimensions									
	Designation	Size	Connection thread	air exhaust	A	B	C	D	E	flow 1→2
	K2SA-014	BG0	G 1/4"	G 1/4	86	48	93	37	6	1300
	K2SA-114	BG1	G 1/4"	G 1/4	104	54	85	33	4	1300
	K2SA-138	BG1	G 3/8"	G 1/4	104	54	85	33	4	1300
	K2SA-238	BG2	G3/8"	G 1/2	126	67	94	58	5	3400
	K2SA-212	BG2	G1/2"	G 1/2	126	67	94	58	5	3400
	K2SA-434	BG4	G3/4"	G 1/2	170	93	111	67	5	8750
	K2SA-41	BG4	G1"	G 1/2	170	93	111	67	5	8750

Filling unit pneumatic operated

Technical data

- poppet valve
- Installation position: arbitrary
- Medium: Compressed air, neutral gases
- Temperature area: -10 °C - +50 °C
- Input pressure P1 min. 2,5 bar, P1 max. 10 bar
- Power supply: pneumatic
- Relative operation cycle: 100%
- Performance: 2,5 W
- Protection class: IP65 accoring to DIN 40050
- Materials: Body: PA66 GF60, diaphragm and seals: NBR

Symbol	Dimensions									
	Designation	Size	Connection thread	air exhaust	A	B	C	D	E	flow 1→2 l/min
	K2SA-014 I	BG0	G 1/4"	G 1/4	86	48	93	37	6	1300
	K2SA-114 I	BG1	G 1/4"	G 1/4	104	54	85	33	4	1300
	K2SA-138 I	BG1	G3/8"	G 1/4	104	54	85	33	4	1300
	K2SA-238 I	BG2	G3/8"	G 1/2	126	67	94	58	5	3400
	K2SA-212 I	BG2	G1/2"	G 1/2	126	67	94	58	5	3400
	K2SA-434 I	BG4	G3/4"	G 1/2	170	93	111	67	5	8750
	K2SA-41 I	BG4	G1"	G 1/2	170	93	111	67	5	8750

A man with short blonde hair and round glasses is sitting at a desk in an office. He is wearing a dark suit jacket over a light blue shirt. He is smiling and looking towards the camera, with his right hand resting on his chin. The background shows a blurred office environment with a window and some plants.

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Product Series

FEATURES



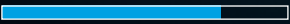
Weight
medium



Modularity
medium



Temperature-resistant
-10°C to +60°C (optional -40°C)



Connection sizes
up to G3/4"



Resilience
very high



Flow
high



PRECISION REGULATOR.

Our precision compressed air regulators set the standard for outstanding adjustability and control accuracy, while also delivering high flow rates. These regulators are specifically designed to deliver the highest levels of precision and reliability in demanding industrial environments.

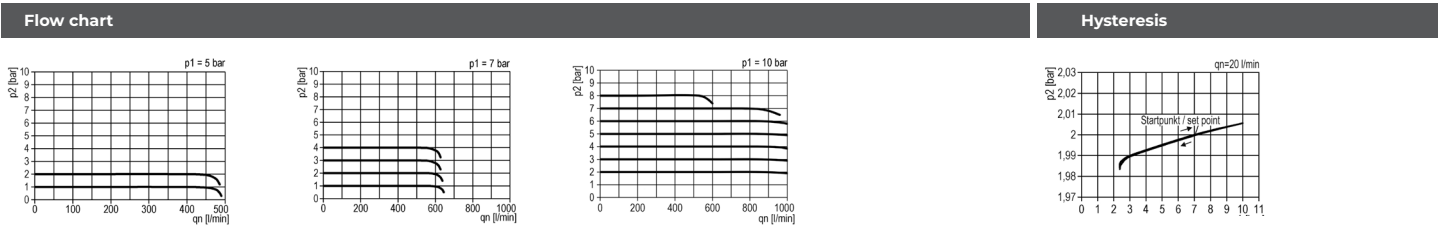
With their various series and corresponding material designs, they offer complete flexibility while ensuring operational reliability.

FDR.02 | Precision pressure regulator

Technical data

- Precision pressure regulator
- Installation position: arbitrary
- Medium: compressed air, filtered 5 µm, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure: P1 max. 16 bar
- Control accuracy 5 mbar (very high)
- Internal air consumption at inlet pressure:
< 2,2 l/min at Pe 5 bar, <3,0 l/min at Pe 7 bar, < 4,1 l/min at Pe 10 bar
- Ambient temperature: max. 60°C
- Materials: Body: die-cast zinc
diaphragm and seals: NBR
- weight: 600g

Symbol	Dimensions									accessories
	Designation	Control range	Connection thread A	B	C	D	E	air exhaust	flow l/min	mounting bracket
	FDR.02-B2	0,05-2 bar	G 1/4"	109	58	17	M12x1	G 1/8	450	FDR.02-52
	FDR.02-B4	0,05-4 bar	G 1/4"	109	58	17	M12x1	G 1/8	600	FDR.02-52
	FDR.02-B7	0,05-7 bar	G 1/4"	109	58	17	M12x1	G 1/8	600	FDR.02-52
	FDR.02-B10	0,05-10 bar	G 1/4"	109	58	17	M12x1	G 1/8	900	FDR.02-52

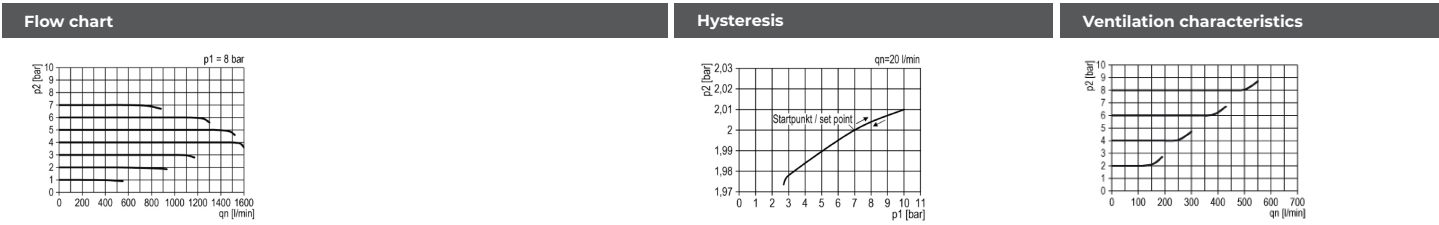


FDR.07 | Precision pressure regulator

Technical data

- Precision pressure regulator
- Installation position: arbitrary
- Medium: compressed air, filtered 5 µm, neutral gases
- Temperature area: -35 °C - +60 °C
- Input pressure: P1 max. 16 bar
- Control accuracy 5 mbar (very high)
- Internal air consumption at inlet pressure: 0,5 l/min at P2=6 bar
- Ambient temperature: max. 60°C
- Materials: Body: aluminium
diaphragm and seals: NBR
- weight: 505g

Symbol	Dimensions										accessories	
	Designation	Control range	Connection thread A	B	C	D	E	F	G	air ex- haust	flow l/min	mounting bracket
	FDR.07-B4	0,05-4 bar	G 1/4"	110	51	35	25	M30x1,5	M12x1	G 1/4"	1250	MW.30
	FDR.02-B8	0,05-8 bar	G 1/4"	110	51	35	25	M30x1,5	M12x1	G 1/4"	1250	MW.30

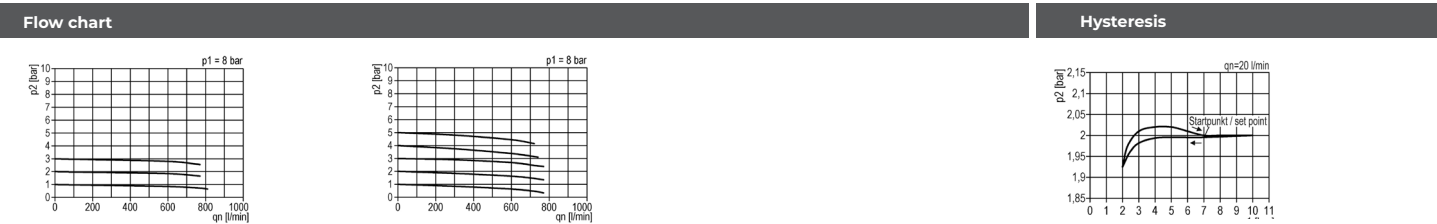


FDR.11 | Precision pressure regulator

Technical data

- Precision pressure regulator
- Installation position: arbitrary
- Medium: compressed air, filtered 5 µm, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure: P1 max. 16 bar
- Control accuracy 5 mbar (high)
- Internal air consumption at inlet pressure: < 1,0 l/min bei P2 6 bar>
- Ambient temperature: max. 60°C
- Materials: Body: die-cast zinc
diaphragm and seals: NBR
- weight: 600g

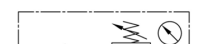
Symbol	Dimensions									accessories	
	Designation	Control range	Connection thread A	B	C	D	spindle	pressure gauge	flow l/min	mounting bracket	
	FDR.11-E2	0,1-2 bar	G 1/4"	111	58	32	M8x1	G 1/8	750	FDP.11-40	
	FDR.11-E3	0,1-3 bar	G 1/4"	111	58	32	M8x1	G 1/8	750	FDP.11-40	
	FDR.11-E5	0,1-5 bar	G 1/4"	111	58	32	M8x1	G 1/8	750	FDP.11-40	
	FDR.11 NPT	0,1-2/3/5 bar	1/4-18NPT	111	58	32	M8x1	G 1/8	750	FDP.11-40	

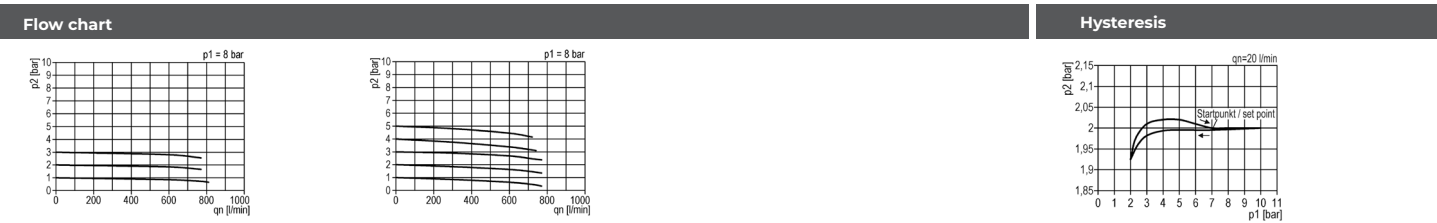


FDP.11 | Precision filter-regulator

Technical data

- Sintered filter, centrifugal principle, membrane pressure regulator with secondary venting
- Installation position: vertical
- Filter fineness: 10 µm
- Medium: compressed air, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure: P1 max. 16 bar
- Control accuracy 15 mbar (high)
- Internal air consumption at inlet pressure: <1,0 l/min at P2=6 bar
- Ambient temperature: max. 60°C
- Materials: Body: die-cast zinc
diaphragm and seals: NBR
- weight: 600g

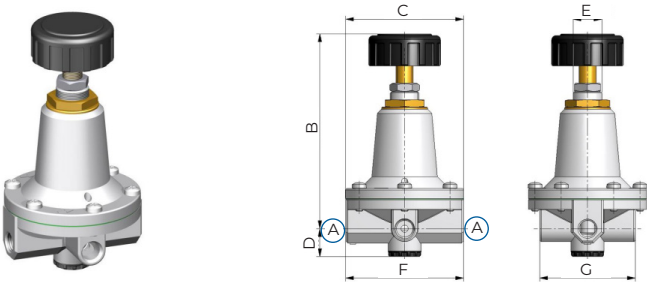
Symbol	Dimensions										accessories	
	Designation	Control range	Connection thread A	B	C	D	spindle	pressure gauge	air ex-haust	flow l/min	mounting bracket	Filter-element
	FDP.11-E2	0,1-2 bar	G 1/4"	108	60	96	M8x1	G 1/8	750	750	MW.30	FDP.11-19
	FDR.11-E3	0,1-3 bar	G 1/4"	108	60	96	M8x1	G 1/8	750	750	MW.30	FDP.11-19
	FDR.11-E5	0,1-5 bar	G 1/4"	108	60	96	M8x1	G 1/8	750	750	MW.30	FDP.11-19
	FDR.11-E7	0,1-7 bar	G 1/4"	108	60	96	M8x1	G 1/8	750	750	MW.30	FDP.11-19
	FDR.11-NPT	0,1-2/3/5/7 bar	G 1/4"	108	60	96	M8x1	G 1/8		750	MW.30	FDP.11-19

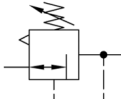


DRF.31/33 | Fine pressure regulator

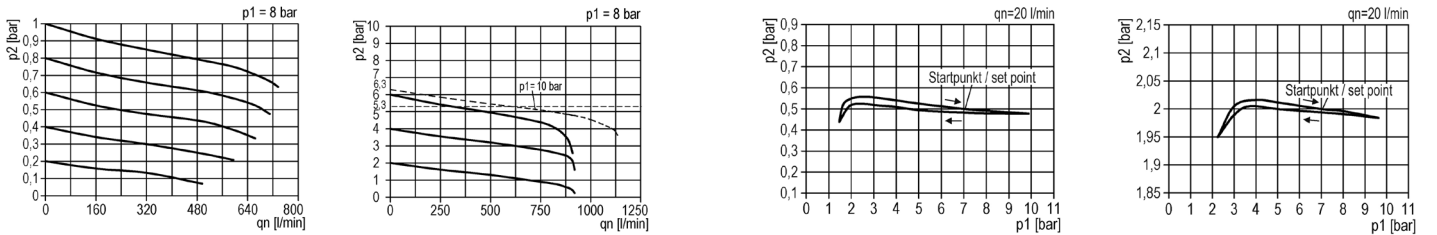
Technical data

- Fine pressure regulator
- Installation position: arbitrary
- Medium: compressed air, filtered 5 µm, neutral gases
- Temperature area: -10 °C - +60 °C
- Input pressure: P1 max. 16 bar
- Control accuracy 15 mbar (high)
- no internal air consumption
- Ambient temperature: max. 60°C
- Materials: Body: die-cast zinc
diaphragm and seals: NBR
- weight: 910g

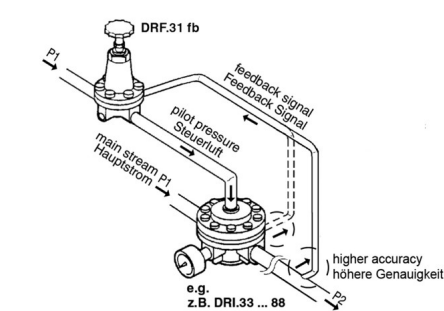


Symbol	Dimensions												accessories
	Designation	Control range	Connection thread A	B	C	D	E	F	G	Feedback version	pressure gauge	flow l/min	mounting bracket
	DRF.31-1	0,1-2 bar	G 1/4"	135	82	19	M20x1,5	82	67	Ja	G 1/8	540	BW.30
	DRF.31-3	0,1-3 bar	G 1/4"	135	82	19	M20x1,5	82	67	Ja	G 1/8	540	BW.30
	DRF.31-6	0,1-6 bar	G 1/4"	135	82	19	M20x1,5	82	67	Ja	G 1/8	540	BW.30
	DRF.31-10	0,1-10 bar	G 1/4"	135	82	19	M20x1,5	82	67	Ja	G 1/8	540	BW.30
	DRF.31-16	01,-16 bar	G 1/4"	135	82	19	M20x1,5	82	67	Ja	G 1/8	540	BW.30
	DRF.33-1	0,1-2 bar	G 1/2"	129	82	33	M20x1,5	82	67	Ja	G 1/8	540	BW.30
	DRF.33-3	0,1-3 bar	G 1/2"	129	82	33	M20x1,5	82	67	Ja	G 1/8	540	BW.30
	DRF.33-6	0,1-6 bar	G 1/2"	129	82	33	M20x1,5	82	67	Ja	G 1/8	540	BW.30
	DRF.33-10	0,1-10 bar	G 1/2"	129	82	33	M20x1,5	82	67	Ja	G 1/8	540	BW.30
	DRF.33-16	01,-16 bar	G 1/2"	129	82	33	M20x1,5	82	67	Ja	G 1/8	540	BW.30

Flow chart
Hysteresis



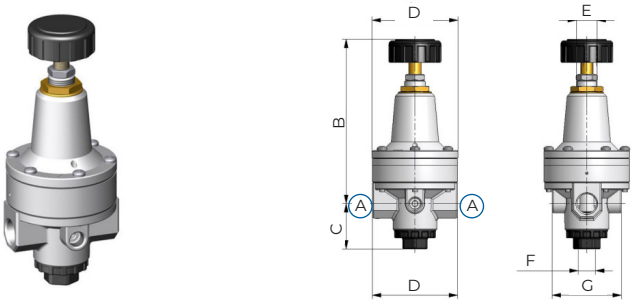
Example of use DRF.31/33 FB



FDR.03 | Precision pressure regulator

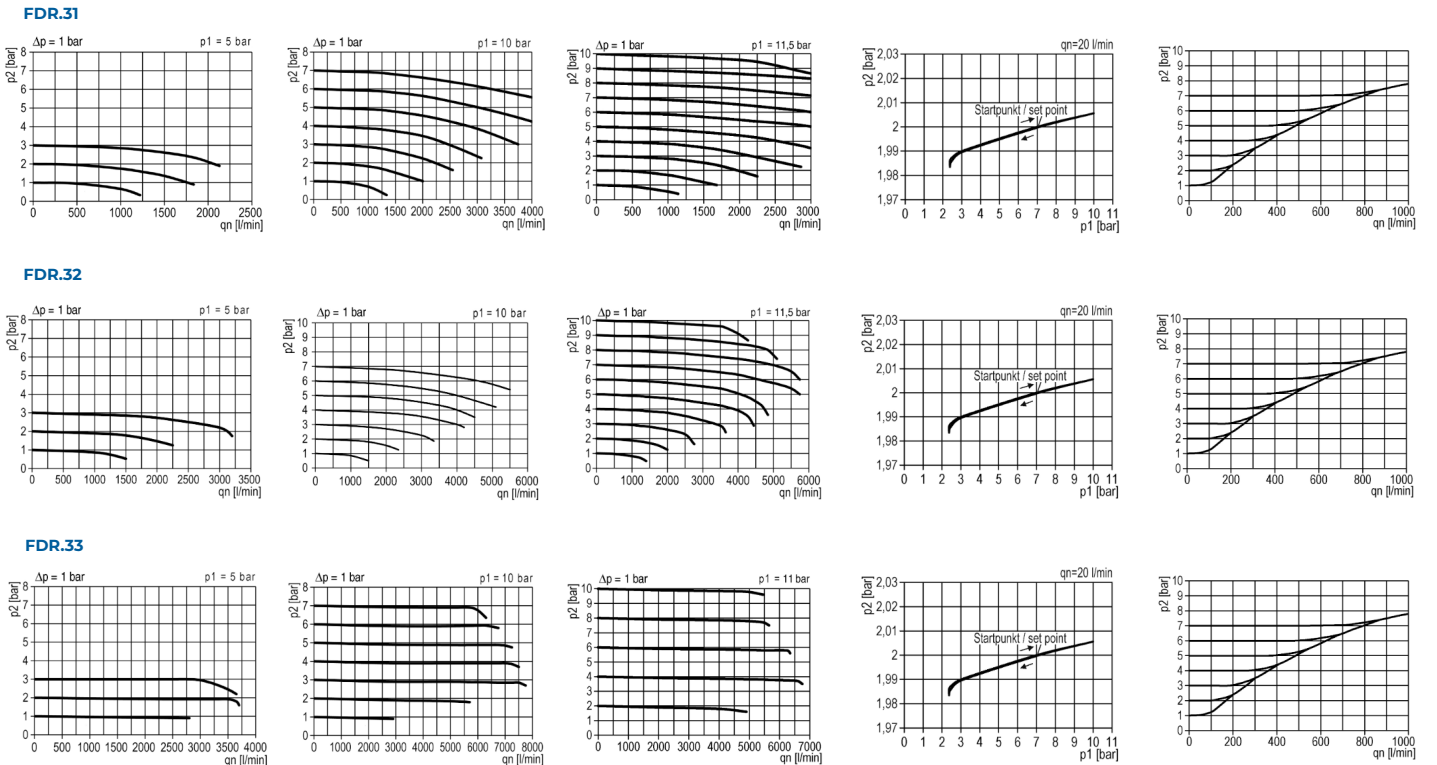
Technical data

- Precision pressure regulator
- Installation position: arbitrary
- Medium: compressed air, filtered 5 µm, neutral gases
- Temperature area: -35 °C - +60 °C
- Input pressure: P1 max. 16 bar
- Control accuracy 5 mbar (very high)
- Internal air consumption at inlet pressure: max. 6,0 l/min at P2=6 bar
- Ambient temperature: max. 60°C
- Materials: Body: die-cast zinc diaphragm and seals: NBR
- weight: 1460g



Symbol	Dimensions												accessories
	Designation	Control range	Connection thread A	B	C	D	Panel thread E	Ventilation F	G	Flow l/min	pressure gauge	ventilation l/min	mounting bracket
	FDR.03-31 B3	0,05-3 bar	G 1/4"	160	44	82	M20x1,5	G3/8"	67	2050	G 1/8	800	BW.30
	FDR.03-31 B5	0,05-5 bar	G 1/4"	160	44	82	M20x1,5	G3/8"	67	2500	G 1/8	800	BW.30
	FDR.03-31 B7	0,05-7 bar	G 1/4"	160	44	82	M20x1,5	G3/8"	67	3000	G 1/8	800	BW.30
	FDR.03-31 B10	0,05-10 bar	G 1/4"	160	44	82	M20x1,5	G3/8"	67	3000	G 1/8	800	BW.30
	FDR.03-32 B3	0,05-3 bar	G 3/8"	160	44	82	M20x1,5	G3/8"	67	3200	G 1/8	800	BW.30
	FDR.03-32 B5	0,05-5 bar	G 3/8"	160	44	82	M20x1,5	G3/8"	67	3500	G 1/8	800	BW.30
	FDR.03-32 B7	0,05-7 bar	G 3/8"	160	44	82	M20x1,5	G3/8"	67	4000	G 1/8	800	BW.30
	FDR.03-32 B10	0,05-10 bar	G 3/8"	160	44	82	M20x1,5	G3/8"	67	4000	G 1/8	800	BW.30
	FDR.03-33 B3	0,05-3 bar	G 1/2"	160	44	82	M20x1,5	G3/8"	67	3500	G 1/8	800	BW.30
	FDR.03-33 B5	0,05-5 bar	G 1/2"	160	44	82	M20x1,5	G3/8"	67	5000	G 1/8	800	BW.30
	FDR.03-33 B7	0,05-7 bar	G 1/2"	160	44	82	M20x1,5	G3/8"	67	6500	G 1/8	800	BW.30
	FDR.03-33 B10	0,05-10 bar	G 1/2"	160	44	82	M20x1,5	G3/8"	67	6500	G 1/8	800	BW.30

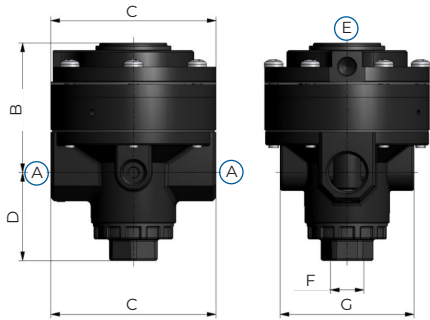
Flow chartHysteresisVentilation characteristics



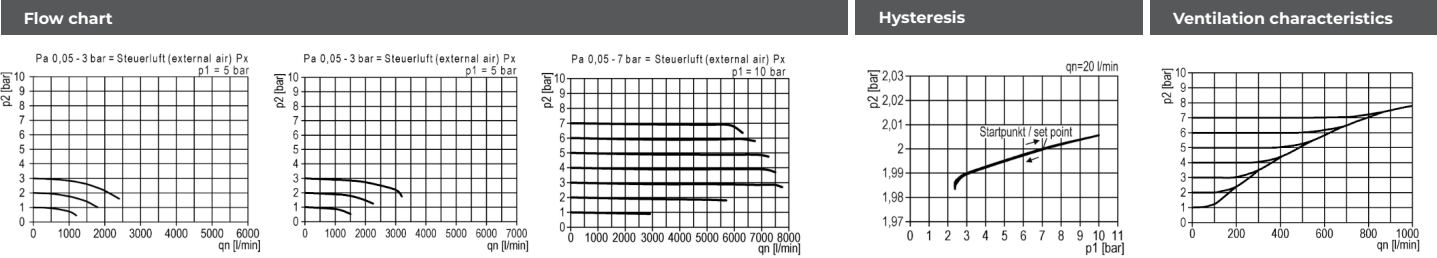
FDRI.03 | Precision pressure regulator pneumatically remote-controlled

Technical data

- Precision pressure regulator with remote control
- Installation position: arbitrary
- Medium: compressed air, filtered 5 µm, neutral gases
- Temperature area: -35 °C - +60 °C
- Input pressure: P1 max. 16 bar
- Control accuracy 5 mbar (very high)
- Internal air consumption at inlet pressure: max. 6,0 l/min at P1=16 bar
- Ambient temperature: max. 60°C
- Materials: Body: die-cast zinc diaphragm and seals: NBR
- weight: 1460g



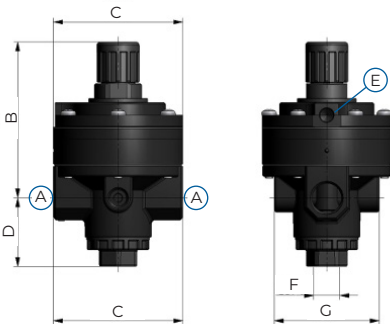
Symbol	Dimensions												accessories
	Designation	Connection thread A	B	C	D	E	F	G	Flow l/min	pressure gauge	Ventilation l/min	air exhaust	mounting bracket
	FDRI.03-31	G 1/4"	64	82	44	G1/8"	G3/8"	67	2700	G 1/8	800	G 3/8"	BW.30
	FDRI.03-32	G 3/8"	64	82	44	G1/8"	G3/8"	67	4300	G 1/8	800	G 3/8"	BW.30
	FDRI.03-33	G 1/2"	64	82	44	G1/8"	G3/8"	67	6500	G 1/8	800	G 3/8"	BW.30



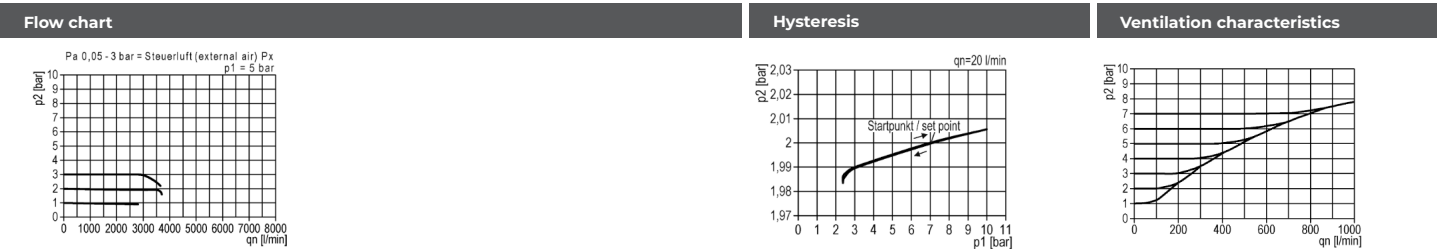
FDRZ.03 | Precision pressure regulator remote-controlled, incl. fine adjustment

Technical data

- Precision pressure regulator with remote control and fine adjustment
- Installation position: arbitrary
- Medium: compressed air, filtered 5 µm, neutral gases
- Temperature area: -35 °C - +60 °C
- Input pressure: P1 max. 16 bar
- Control accuracy 5 mbar (very high)
- Internal air consumption at inlet pressure: max. 6,0 l/min at P1=16 bar
- Ambient temperature: max. 60°C
- Materials: Body: die-cast zinc diaphragm and seals: NBR
- weight: 1460g



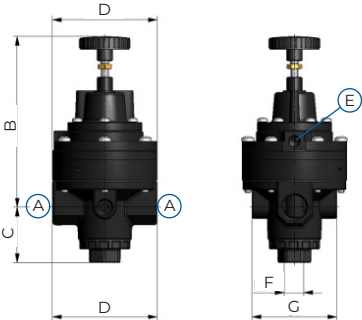
Symbol	Dimensions												accessories
	Designation	Control range	Connection thread A	B	C	D	E	F	G	Flow l/min	pressure gauge	Ventilation l/min	mounting bracket
	FDRZ.03-31-B1	0,05-1 bar	G 1/4"	99	82	44	G1/8"	G3/8"	67	2700	G 1/8	800	BW.30
	FDRZ.03-32-B1	0,05-1 bar	G 3/8"	99	82	44	G1/8"	G3/8"	67	4300	G 1/8	800	BW.30
	FDRZ.03-33-B1	0,05-1 bar	G 1/2"	99	82	44	G1/8"	G3/8"	67	6500	G 1/8	800	BW.30



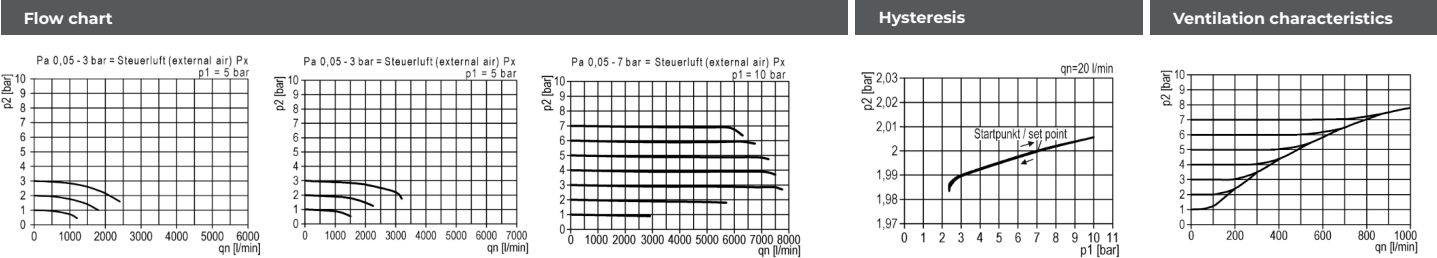
FDRZ.03 | Precision pressure regulator remote-controlled, incl. fine adjustment

Technical data

- Precision pressure regulator with remote control and fine adjustment
- Installation position: arbitrary
- Medium: compressed air, filtered 5 µm, neutral gases
- Temperature area: -35 °C - +60 °C
- Input pressure: P1 max. 16 bar
- Control accuracy 5 mbar (very high)
- Internal air consumption at inlet pressure: max. 6,0 l/min at P1=16 bar
- Ambient temperature: max. 60°C
- Materials: Body: die-cast zinc
diaphragm and seals: NBR
- weight: 1460g



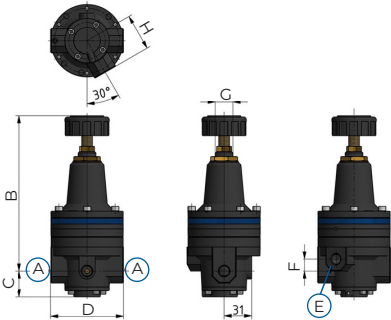
Symbol	Dimensions												accessories
	Designation	Control range	Connection thread A	B	C	D	E	F	G	Flow l/min	pressure gauge	ventilation l/min	mounting bracket
	FDRZ.03-31-B6	0,05-6 bar	G 1/4"	134	44	82	G1/8"	G3/8"	67	2700	G 1/8	800	BW.30
	FDRZ.03-32-B6	0,05-6 bar	G 3/8"	134	44	82	G1/8"	G3/8"	67	4300	G 1/8	800	BW.30
	FDRZ.03-33-B6	0,05-6 bar	G 1/2"	134	44	82	G1/8"	G3/8"	67	6500	G 1/8	800	BW.30



FDR.3000 | Präzisionsdruckregler mit hoher Rückentlüftung

Technical data

- Precision pressure regulator with high back vent
- Installation position: arbitrary
- Medium: compressed air, filtered 5 µm, neutral gases
- Temperature area: -35 °C - +60 °C
- Input pressure: P1 max. 16 bar
- Control accuracy 5 mbar (very high)
- Internal air consumption at inlet pressure: max. 6,0 l/min at P1=16 bar
- Ambient temperature: max. 60°C
- Materials: Body: die-cast zinc
diaphragm and seals: NBR
- weight: 1460g



Symbol	Dimensions													accessories
	Designation	Control range	Connection thread A	B	C	D	E	F	G	H	Flow l/min	pressure gauge	ventilation l/min	mounting bracket
	FDR.3000-31-B7	0,05-7 bar	G 1/4"	175	29	82	G3/8"	13,5	M20x1,5	41	2700	G 1/8	4000	BW.30
	FDR.3000-32-B7	0,05-7 bar	G 3/8"	175	29	82	G3/8"	13,5	M20x1,5	41	6500	G 1/8	4000	BW.30
	FDR.3000-33-B7	0,05-7 bar	G 1/2"	175	29	82	G3/8"	13,5	M20x1,5	41	6500	G 1/8	4000	BW.30

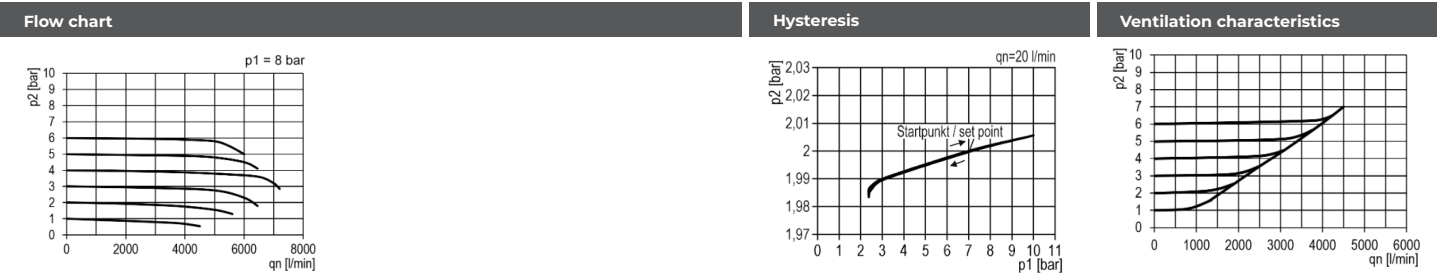


FDRi.3000 | Precision pressure regulator with remote control

Technical data

- Precision regulator with remote control and high back vent
- Installation position: arbitrary
- Medium: compressed air, filtered 5 µm, neutral gases
- Temperature area: -35 °C - +60 °C
- Input pressure: P1 max. 16 bar
- Control accuracy 5 mbar (very high)
- Internal air consumption at inlet pressure: max. 6,0 l/min at P1=16 bar
- Ambient temperature: max. 60°C
- Materials: Body: die-cast zinc
diaphragm and seals: NBR
- weight: 1460g

Symbol	Dimensions														accessories
	Designation	Connection thread A	B	C	D	E	F	E	G	H	I	Flow l/min	pressure gauge	Ventilation l/min	mounting bracket
	FDRi.3000	G 1/4"	81	29	82	G3/8"	13,5	G1/2"	G 1/8	67,9	41	2700	G 1/8	4000	BW.30
	FDRi.3000	G 3/8"	81	29	82	G3/8"	13,5	G1/2"	G 1/8	67,9	41	4300	G 1/8	4000	BW.30
	FDRi.3000	G 1/2"	81	29	82	G3/8"	13,5	G1/2"	G 1/8	67,9	41	6500	G 1/8	4000	BW.30

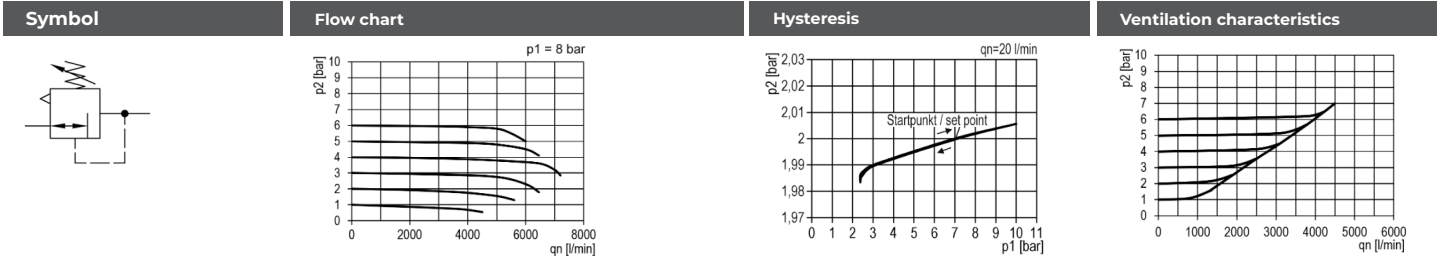


FDRZ.3000 | Precision pressure regulator, remote controlled and fine adjustment

Technical data

- Precision regulator with remote control and fine tuning
- Installation position: arbitrary
- Medium: compressed air, filtered 5 µm, neutral gases
- Temperature area: -35 °C - +60 °C
- Input pressure: P1 max. 16 bar
- Control accuracy 5 mbar (very high)
- Internal air consumption at inlet pressure: max. 6,0 l/min at P1=16 bar
- Ambient temperature: max. 60°C
- Materials: Body: die-cast zinc
diaphragm and seals: NBR
- weight: 1460g

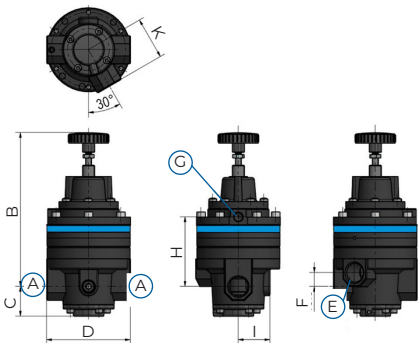
Dimensions															accessories
Designation	Control range	Connection thread A	B	C	D	E	F	G	H	I	K	Flow l/min	pressure gauge	Ventilation l/min	mounting bracket
FDRZ.3000-31-B1	0,05-1 bar	G 1/4"	117	29	82	G3/8"	13,5	G1/8"	67,9	M30x1,5	41	2700	G 1/8	4000	BW.30
FDRZ.3000-32-B1	0,05-1 bar	G 3/8"	117	29	82	G3/8"	13,5	G1/8"	67,9	M30x1,5	41	6500	G 1/8	4000	BW.30
FDRZ.3000-33-B1	0,05-1 bar	G 1/2"	117	29	82	G3/8"	13,5	G1/8"	67,9	M30x1,5	41	6500	G 1/8	4000	BW.30



FDRZ.3000 | Pecision pressure regulator, remote controlled and fine adjustment

Technical data

- Remote-controlled precision pressure regulator with fine adjustment and high back venting
- Installation position: arbitrary
- Medium: compressed air, filtered 5 µm, neutral gases
- Temperature area: -35 °C - +60 °C
- Input pressure: P1 max. 16 bar
- Control accuracy 5 mbar (very high)
- Internal air consumption at inlet pressure: max. 6,0 l/min at P1=16 bar
- Ambient temperature: max. 60°C
- Materials: Body: die-cast zinc
diaphragm and seals: NBR
- weight: 1460g



Dimensions															accessories
Designation	Control range	Connection thread A	B	C	D	E	F	G	H	I	K	Flow l/min	pressure gauge	Ventilation l/min	mounting bracket
FDRZ.3000-31-B1	0,05-1 bar	G 1/4"	150	29	82	G3/8"	13,5	G1/8"	68	31	41	2700	G 1/8	4000	BW.30
FDRZ.3000-32-B1	0,05-1 bar	G 3/8"	150	29	82	G3/8"	13,5	G1/8"	68	31	41	6500	G 1/8	4000	BW.30
FDRZ.3000-33-B1	0,05-1 bar	G 1/2"	150	29	82	G3/8"	13,5	G1/8"	68	31	41	6500	G 1/8	4000	BW.30

Flow chart

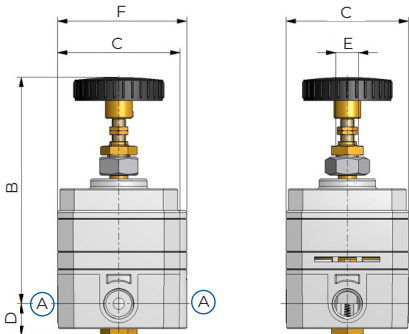
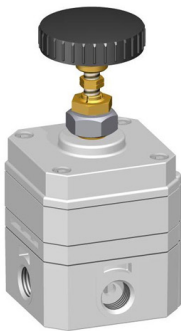
Hysteresis

Ventilation characteristics

FDR.04 | Precision pressure regulator with fine adjustment

Technical data

- Precision pressure regulator with fine adjustment
- Installation position: arbitrary
- Medium: compressed air, filtered 5 µm, neutral gases
- Temperature area: -35 °C - +60 °C
- Input pressure: P1 max. 16 bar
- Control accuracy 1 mbar (extremely high)
- Internal air consumption at inlet pressure: max. 2,5 l/min at P1=16 bar
- Ambient temperature: max. 60°C
- Materials: Body: PA66
diaphragm and seals: NBR
- weight: 285g



Symbol	Dimensions									accessories
	Designation	Control range	Connection thread A	B	C	D	E	F	Flow l/min	mounting bracket
	FDR.04-B4	0,001-2 bar	G 1/4"	109	58	17	M12x1	57	450	FDR.04-34
	FDR.04-B8	0,001-8 bar	G 1/4"	109	58	17	M12x1	57	600	FDR.04-34

Flow chart

Hysteresis

Ventilation characteristics



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KNOCKS FLUID-TECHNIK GMBH

Otto-Hahn-Str. 4
59379 Selm
Deutschland

T 02592 966-0
F 02592 966-600
info@knocks.de



KNOCKS Fluid-Technik GmbH
www.knocks.de