



## Compressed air filters G 1/8 – G 1/2

Compressed air filters clean the compressed operating air of solid and liquid components (dirt particles, oxidation products, condensation water) and thereby they protect the following components against contamination and wear. Cleaning is done in two stages by cyclone separation and sinter filter. Available as additional option with protective metal cage or metal bowl. Connection thread from G 1/8 to G 1/2.

### Standard version: with plastic bowl and manual drain valve

Size	Order No.			
	G 1/8*	G 1/4*	G 3/8	G 1/2
<b>With plastic bowl and manual drain valve</b>				
BG 30 (small)	322.21	322.22	322.23	–
BG 40 (medium)	–	–	322.35*	322.36
<b>With plastic bowl and semi-automatic drain valve</b>				
BG 30 (small)	322.521	322.522	322.523	–
BG 40 (medium)	–	–	322.535*	322.536
<b>With plastic bowl and automatic attachable drain valve A (max. 16 bar)</b>				
BG 30 (small)	370.21	370.22	370.23	–
BG 40 (medium)	–	–	370.35*	370.36

\*inlet and outlet reduced (reductions enclosed) see page 119

### Order key for additional options

322.XX(X)X/370.XX(X)X

**M** metal bowl

### Spare parts and accessories

Size	Order No.	
	BG 30	BG 40
<b>Mounting set</b> for mounting at the top of the housing	322-24	322-25
<b>Metal bowl</b> with seal and manual drain valve	324-101	324-109
<b>Metal bowl</b> with seal and semi-automatic drain valve	324-113	324-117
<b>Metal bowl</b> with seal and automatic attachable drain valve A	324-114	324-118
<b>Plastic bowl</b> with seal and manual drain valve	322-112	322-118
<b>Plastic bowl</b> with seal and semi-automatic drain valve	322-113	322-119
<b>Plastic bowl</b> with seal and automatic attachable drain valve A	322-114	322-120
<b>Fastening ring</b> for plastic and metal bowl	287-25	297-2
<b>Sealing ring</b> for all bowls	287-6	297-10
<b>Filter element</b> filter porosity 40 µm (mounted)	287-10	267-37
<b>Filter element</b> filter porosity 5 µm	287-13	298-9

### Technical data

Size	BG 30			BG 40	
	G 1/8	G 1/4	G 3/8	G 3/8	G 1/2
Thread	G 1/8	G 1/4	G 3/8	G 3/8	G 1/2
Nominal flow rate**	1,140 l/min			5,080 l/min	
Max. operating pressure (p <sub>1</sub> ) with plastic bowl/metal bowl	16 bar/25 bar				
Operating temp. with plastic bowl/metal bowl	0 °C up to +50 °C/0 °C up to +90 °C				
Condensate volume	25 cm <sup>3</sup>			80 cm <sup>3</sup>	
Mounting position/flow direction	vertically/in arrow direction				
Nominal width	DN 6			DN 15	
Nominal pressure (housing)	PN 25			PN 25	
Weight	390 g			950 g	
Material seals	NBR				
Material housing	zinc die-cast				
Material filter element	sintered bronze				
Material plastic bowl	polycarbonate				

\*\*measured at p<sub>1</sub> = 6 bar and Δp = 1 bar

### Dimensions (mm)

	BG 30			BG 40	
	G 1/8	G 1/4	G 3/8	G 3/8	G 1/2
<b>A</b>	56	56	56	87	87
<b>B</b>	57	57	50	88	80
<b>C</b>	19	19	19	24	24
<b>D***</b>	135	135	135	172	172

\*\*\* with automatic attachable drain valve A: +90 mm



370.36

322.23



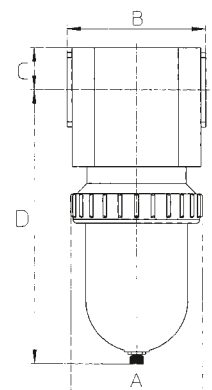
324-109



267-37



322-24





## Compressed air filters G 3/4 – G 1 1/2

Compressed air filters clean the compressed operating air of solid and liquid components (dirt particles, oxidation products, condensation water) and thereby they protect the following components against contamination and wear. Cleaning is done in two stages by cyclone separation and sinter filter. Available as additional option with protective metal cage or metal bowl. Connection thread from G 3/4 to G 1 1/2.

01 | Compressed air preparation



322.49



322.49M



370.411M



405.39M



405-4



267-37

### Standard version: with plastic bowl and manual drain valve

Size	Order No.			
	G 3/4*	G 1	G 1 1/4*	G 1 1/2
<b>With plastic bowl and manual drain valve</b>				
BG 55 (compact)	405.38	405.39	–	–
BG 60 (large)	322.48	322.49	–	–
BG 80 (max)	–	–	322.410	322.411
<b>With plastic bowl and semi-automatic drain valve</b>				
BG 55 (compact)	405.538	405.539	–	–
BG 60 (large)	322.548	322.549	–	–
BG 80 (max)	–	–	322.5410	322.5411
<b>With plastic bowl and automatic attachable drain valve A (max. 16 bar)</b>				
BG 55 (compact)	370.38	370.39	–	–
BG 60 (large)	370.48	370.49	–	–
BG 80 (max)	–	–	370.410	370.411

\*inlet and outlet reduced (reductions enclosed) see page 119

### Spare parts and accessories

Size	Order No.		
	BG 55	BG 60	BG 80
<b>Mounting set</b> for mounting at the top of the housing	405-4	281-26	281-26
<b>Protective metal cage</b> for plastic bowl	322-131	–	–
<b>Metal bowl</b> with seal and manual drain valve	324-109	322-125	322-125
<b>Metal bowl</b> with seal and semi-automatic drain valve	324-117	322-126	322-126
<b>Metal bowl</b> with seal and automatic attachable drain valve A	324-118	322-127	322-127
<b>Plastic bowl</b> with seal and manual drain valve	322-118	322-122	322-122
<b>Plastic bowl</b> with seal and semi-automatic drain valve	322-119	322-123	322-123
<b>Plastic bowl</b> with seal and automatic attachable drain valve A	322-120	322-124	322-124
<b>Fastening ring</b> for plastic and metal bowl	297-2	279-2	279-2
<b>Sealing ring</b> for all bowls	297-10	279-9	279-9
<b>Filter element</b> filter porosity 40 µm (mounted)	267-37	281-14	281-14
<b>Filter element</b> filter porosity 5 µm	298-9	–	–

### Technical data

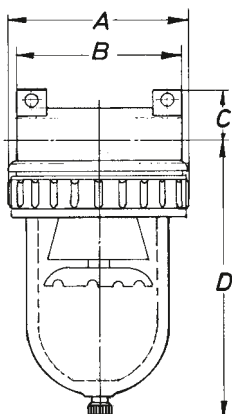
Size	BG 55		BG 60		BG 80	
	G 3/4	G 1	G 3/4	G 1	G 1 1/4	G 1 1/2
Thread	G 3/4	G 1	G 3/4	G 1	G 1 1/4	G 1 1/2
Nominal flow rate**	7,280 l/min		10,870 l/min		13,590 l/min	
Max. operating pressure (p <sub>1</sub> ) plastic bowl/metal bowl	16 bar/25 bar					
Operating temperature plastic bowl/metal bowl	0 °C up to +50 °C/0 °C up to +90 °C					
Condensate volume	80 cm <sup>3</sup>		260 cm <sup>3</sup>		260 cm <sup>3</sup>	
Mounting position/flow direction	vertically/in arrow direction					
Nominal width	DN 20		DN 20		DN 25	
Nominal pressure (housing)	PN 25					
Weight	1.32 kg		1.87 kg		2.12 kg	
Material seals	NBR					
Material housing	zinc die-cast		aluminum die-cast		aluminium	
Material filter element	sintered bronze					
Material plastic bowl	polycarbonate					

\*\*measured at p<sub>1</sub> = 6 bar and Δp = 1 bar; with filter element 5 µm the flow rate is reduced about 20 %

### Order key for additional options

405.XX(XX)X/322.XX(XX)X  
370.XX(XX)X

— **M** metal bowl



### Dimensions (mm)

	BG 55		BG 60		BG 80	
	G 3/4	G 1	G 3/4	G 1	G 1 1/4	G 1 1/2
<b>A</b>	87	87	133	133	133	133
<b>B</b>	102	90	134	120	134	120
<b>C</b>	38	38	36	36	46	46
<b>D***</b>	175	175	206	206	216	216

\*\*\* with automatic attachable drain valve A: +90 mm



## Compressed air filters G 1½–G 2

Compressed air filters clean the compressed operating air of solid and liquid components (dirt particles, oxidation products, condensation water) and thereby they protect the following components against contamination and wear. Cleaning is made in two stages by cyclone separation and sinter filter. Available as additional option with protective metal cage or metal bowl. Connection thread from G 1½ to G 2.

### Standard version: with plastic bowl and manual drain valve

Size	Order No.	
	G 1½*	G 2
<b>With plastic bowl and manual drain valve</b>		
BG 90 (super)	456.211	456.212
<b>With plastic bowl and semi-automatic drain valve</b>		
BG 90 (super)	456.511	456.512
<b>With plastic bowl and automatic attachable drain valve A (max. 16 bar)</b>		
BG 90 (super)	456.611	456.612

\*inlet and outlet reduced (reductions enclosed) see page 119



456.212

456.612M

### Order key for additional options

456.XXXX

**M** metal bowl

### Spare parts and accessories

Size	Order No.
<b>Mounting set</b> for mounting at the top of the housing	457-12
<b>Metal bowl</b> with seal and manual drain valve	322-125
<b>Metal bowl</b> with seal and semi-automatic drain valve	322-126
<b>Metal bowl</b> with seal and automatic attachable drain valve A	322-127
<b>Plastic bowl</b> with seal and manual drain valve	322-122
<b>Plastic bowl</b> with seal and semi-automatic drain valve	322-123
<b>Plastic bowl</b> with seal and automatic attachable drain valve A	322-124
<b>Fastening ring</b> for plastic and metal bowl	279-2
<b>Sealing ring</b> for all bowls	279-9
<b>Filter element</b> filter porosity 40 µm (mounted)	454-3
<b>Filter element</b> filter porosity 5 µm	454-11



457-12



454-3

### Technical data

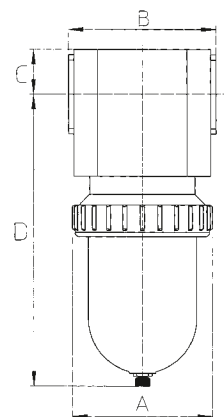
Size	BG 90	
Thread	G 1½	G 2
Nominal flow rate**	17,210 l/min	
Max. operating pressure (p <sub>1</sub> ) plastic bowl/metal bowl	16 bar/25 bar	
Operating temperature plastic bowl	0 °C up to +50 °C	
Operating temperature metal bowl	0 °C up to +90 °C	
Condensate volume	500 cm <sup>3</sup>	
Mounting position/flow direction	vertically/in arrow direction	
Nominal width	DN 50	
Nominal pressure (housing)	PN 25	
Weight	5.34 kg	
Material seals	NBR	
Material housing	aluminium	
Material filter element	sintered bronze	
Material plastic bowl	polycarbonate	

\*\* measured at p<sub>1</sub> = 6 bar and Δp = 0.5 bar; with filter element 5 µm the flow rate is reduced about 20 %

### Dimensions (mm)

	BG 90	
	G 1½	G 2
<b>A</b>	133	133
<b>B</b>	160	140
<b>C</b>	42	42
<b>D***</b>	280	280

\*\*\* with automatic attachable drain valve A: +90 mm





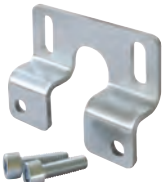
### Compressed air filters 40 bar G <sup>3</sup>/<sub>8</sub> – G 2

Compressed air filters clean the compressed operating air of solid and liquid components (dirt particles, oxidation products, condensation water) and therefore they protect the following components against dirt and wear. Cleaning is made in two stages by cyclone separation and sinter filter. 40 bar compressed air filter in compact design. Manual operation of the condensate drain under pressure is only possible up to 25 bar. Filter element made of sintered bronze. Housing made of aluminium. Brass bowl (aluminium for BG 90). The pressure bowl certificate is enclosed. Connection thread from G <sup>3</sup>/<sub>8</sub> to G 2.



445.016

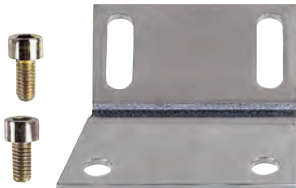
454.412



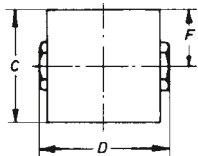
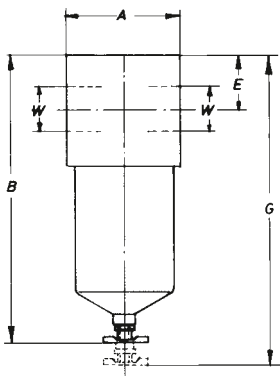
445-28



267-37



429-27



#### Standard version: with metal bowl and manual drain valve

Size	Order No.					
	G <sup>3</sup> / <sub>8</sub> *	G 1/2	G <sup>3</sup> / <sub>4</sub> *	G 1	G 1 1/2*	G 2
BG 40 (I)	445.015	445.016	-	-	-	-
BG 60 (II)	-	-	445.008	445.009	-	-
BG 90 (super)	-	-	-	-	454.411	454.412

\*inlet and outlet reduced (reductions enclosed) see page 119

#### Spare parts and accessories

Size	Order No.		
	BG 40	BG 60	BG 90
<b>Mounting set</b> for mounting at the top of the housing	445-39	445-28	429-27
<b>Filter element</b> filter porosity 40 µm (mounted)	394-16	267-37	454-3
<b>Filter element</b> filter porosity 5 µm	394-37	298-9	454-11
<b>Manual drain valve</b> for metal bowl	275-41**	275-41**	275-41**

\*\* condensate drain under pressure only possible up to 25 bar

#### Technical data

Size	BG 40		BG 60		BG 90	
	G <sup>3</sup> / <sub>8</sub>	G 1/2	G <sup>3</sup> / <sub>4</sub>	G 1	G 1 1/2	G 2
Nominal flow rate***	2,890 l/min		6,520 l/min		17,210 l/min	
Max. operating pressure (p <sub>1</sub> )	40 bar (PN 40)					
Operating temperature	0 °C up to +90 °C					
Condensate volume	80 cm <sup>3</sup>		100 cm <sup>3</sup>		300 cm <sup>3</sup>	
Mounting position/flow direction	vertically/in arrow direction					
Nominal width	DN 15		DN 20		DN 50	
Weight	1.22 kg		2 kg		5.8 kg	
Material seals	NBR					
Material housing	aluminium					
Material filter element	sintered bronze					
Material metal bowl	brass		brass		aluminium	

\*\*\* measured at p<sub>1</sub> = 6 bar and Δp = 0.2 bar; with filter element 5 µm the flow rate is reduced about 20 %

#### Dimensions (mm)

	BG 40		BG 60		BG 90	
	G <sup>3</sup> / <sub>8</sub>	G 1/2	G <sup>3</sup> / <sub>4</sub>	G 1	G 1 1/2	G 2
<b>W</b>	G <sup>3</sup> / <sub>8</sub>	G 1/2	G <sup>3</sup> / <sub>4</sub>	G 1	G 1 1/2	G 2
<b>A</b>	65	65	80	80	140	140
<b>B</b>	200	200	210	210	285	285
<b>C</b>	65	65	80	80	120	120
<b>D</b>	73	-	92	-	160	-
<b>E</b>	32.5	32.5	40	40	42.5	42.5
<b>F</b>	32.5	32.5	40	40	60	60
<b>G****</b>	250	250	285	285	350	350

\*\*\*\*space required for filter element replacement



## Compressed air filters 60 bar G 3/8–G 1

Compressed air filters clean the compressed air of solid and liquid components (dirt particles, oxidation products, condensation water) and therefore protect the following components from contamination and wear. The cleaning is executed in two stages by cyclone separation and a sinter filter. Compressed air filter in compact design. Manual operation of the condensate drain under pressure is only possible up to 25 bar. Filter element made of sintered bronze. Housing made of aluminium (black anodised), container made of brass. The pressure bowl certificate is enclosed. Connection thread from G 3/8 to G 1.

### Standard version: with metal bowl and manual drain valve

Size	Order No.			
	G 3/8*	G 1/2	G 3/4*	G 1
BG 40 (I)	475.015	475.016	–	–
BG 60 (II)	–	–	475.008	475.009

\*inlet and outlet reduced (reductions enclosed) see page 119

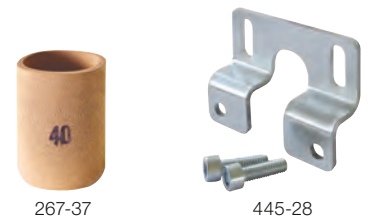


475.009

### Spare parts and accessories

Size	Order No.	
	BG 40	BG 60
Mounting set for mounting at the top of the housing	445-39	445-28
Filter element filter porosity 40 µm (mounted)	394-16	267-37
Filter element filter porosity 5 µm	394-37	298-9
Manual drain valve for metal bowl	275-41**	275-41**

\*\*condensate drain under pressure only possible up to 25 bar



267-37

445-28

### Technical data

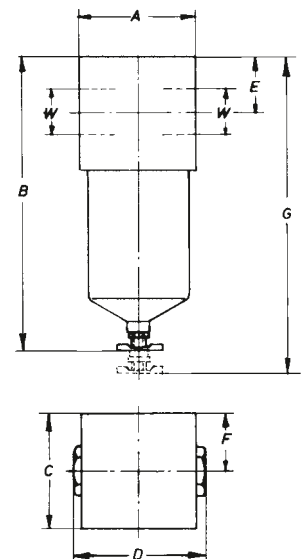
Size	BG 40		BG 60	
	G 3/8	G 1/2	G 3/4	G 1
Thread	G 3/8	G 1/2	G 3/4	G 1
Nominal flow rate***	2,890 l/min		6,520 l/min	
Max. operating pressure (p <sub>1</sub> )	60 bar (PN 60)			
Operating temperature	0 °C up to +90 °C			
Condensate volume	80 cm <sup>3</sup>		100 cm <sup>3</sup>	
Mounting position/flow direction	vertically/in arrow direction			
Nominal width	DN 15		DN 20	
Weight	1.4 kg		3 kg	
Material seals	NBR			
Material housing	aluminium			
Material filter element	sintered bronze			
Material metal bowl	brass			

\*\*\*measured at p<sub>1</sub> = 6 bar and Δp = 0.2 bar; with filter element 5 µm the flow rate is reduced about 20 %

### Dimensions (mm)

	BG 40		BG 60	
	G 3/8	G 1/2	G 3/4	G 1
W	G 3/8	G 1/2	G 3/4	G 1
A	65	65	80	80
B	185	185	200	200
C	65	65	80	80
D	73	–	92	–
E	25	25	29	29
F	32.5	32.5	40	40
G****	205	205	285	285

\*\*\*\* space required for filter element replacement





## Microfilters G 1/8 – G 3/8

Microfilters are suitable for all applications that require a particularly high purity of compressed air. Installed behind the compressed air filter, they remove 99.9999% of the smallest remaining particles (water, oil or dirt) almost completely (based on 0.01 µm). Residual oil content 0.01 mg/m<sup>3</sup>. The filter element has to be replaced after approx. six months. An additional option with protective metal cage or metal bowl is available. Connection thread from G 1/8 to G 3/8.



403.23

### Standard version: with plastic bowl and manual drain valve

Size	Order No.		
	G 1/8*	G 1/4*	G 3/8
<b>With plastic bowl and manual drain valve</b>			
BG 30 (small)	403.21	403.22	403.23
<b>With plastic bowl and semi-automatic drain valve</b>			
BG 30 (small)	403.521	403.522	403.523
<b>With plastic bowl and automatic attachable drain valve A (max. 16 bar)</b>			
BG 30 (small)	403.121	403.122	403.123

\*inlet and outlet reduced (reductions enclosed) see page 119

### Order key for additional options

403.XX(X)X

- M** metal bowl
- S** protective metal cage

### Spare parts and accessories

Size	Order No.
<b>BG 30</b>	
<b>Mounting set</b> for mounting at the top of the housing	322-24
<b>Protective metal cage</b> for plastic bowl, with mounting	322-130
<b>Metal bowl</b> with seal and manual drain valve	324-101
<b>Metal bowl</b> with seal and semi-automatic drain valve	324-113
<b>Metal bowl</b> with seal and automatic attachable drain valve A	324-114
<b>Plastic bowl</b> with seal and manual drain valve	403-9
<b>Plastic bowl</b> with seal and semi-automatic drain valve	403-26
<b>Plastic bowl</b> with seal and automatic attachable drain valve A	403-30
<b>Fastening ring</b> for plastic and metal bowl	287-25
<b>Sealing ring</b> for all bowls	287-6
<b>Microfilter element</b> , filter porosity 0.01 µm (M10 × 1, Ø28 × 68)	403-1



403-1



322-24

### Notice



For a longer downtime, a compressed air filter of 40 bar should be installed in front!

### Technical data

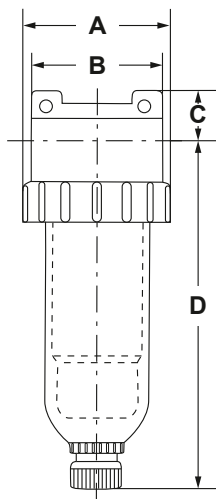
Size	BG 30		
	G 1/8	G 1/4	G 3/8
Thread	G 1/8	G 1/4	G 3/8
Nominal flow rate**	610 l/min		
Max. operating pressure (p <sub>1</sub> ) plastic bowl/metal bowl	16 bar/25 bar		
Operating temperature plastic bowl	0 °C up to +50 °C		
Operating temperature metal bowl	0 °C up to +90 °C		
Condensate volume	max. until microfilter element		
Mounting position/flow direction	vertically/in arrow direction		
Nominal width	DN 6		
Nominal pressure (housing)	PN 25		
Weight	380 g		
Material seals	NBR		
Material housing	zinc die-cast		
Material filter element	borosilicate microfibre fleece		
Material plastic bowl	polycarbonate		

\*\* measured at p<sub>1</sub> = 6 bar and Δp = 0.2 bar

### Dimensions (mm)

	BG 30		
	G 1/8	G 1/4	G 3/8
<b>A</b>	56	56	56
<b>B</b>	57	57	50
<b>C</b>	19	19	19
<b>D***</b>	135	135	135

\*\*\* with automatic attachable drain valve A: +90 mm







## Microfilters G 3/8 – G 1

Microfilters are suitable for all applications that require a particularly high purity of compressed air. Installed behind the compressed air filter, they remove 99.9999% of the smallest remaining particles (water, oil or dirt) almost completely (based on 0.01 µm). Residual oil content 0.01 mg/m³. The filter element has to be replaced after approx. six months. An additional option with protective metal cage or metal bowl is available. Connection thread from G 3/8 to G 1.

### Standard version: with plastic bowl and manual drain valve

Size	Order No.			
	G 3/8*	G 1/2	G 3/4*	G 1
<b>With plastic bowl and manual drain valve</b>				
BG 40 (medium)	403.35	403.36	–	–
BG 60 (large)	–	–	403.48	403.49
<b>With plastic bowl and semi-automatic drain valve</b>				
BG 40 (medium)	403.535	403.536	–	–
BG 60 (large)	–	–	403.548	403.549
<b>With plastic bowl and automatic attachable drain valve A (max. 16 bar)</b>				
BG 40 (medium)	403.135	403.136	–	–
BG 60 (large)	–	–	403.148	403.149

\*inlet and outlet reduced (reductions enclosed) see page 119



403.36

### Order key for additional options

403.XX(X)X  
M metal bowl

### Spare parts and accessories

Size	Order No.	
	BG 40	BG 60
<b>Mounting set</b> for mounting at the top of the housing	322-25	281-26
<b>Protective metal cage</b> for plastic bowl, with mounting ring	322-131	–
<b>Metal bowl</b> with seal and manual drain valve	324-109	322-125
<b>Metal bowl</b> with seal and semi-automatic drain valve	324-117	322-126
<b>Metal bowl</b> with seal and automatic attachable drain valve A	324-118	322-127
<b>Plastic bowl</b> with seal and manual drain valve	360-12	360-25
<b>Plastic bowl</b> with seal and semi-automatic drain valve	403-28	403-29
<b>Plastic bowl</b> with seal and automatic attachable drain valve A	403-32	403-33
<b>Fastening ring</b> for plastic and metal bowl	297-2	279-2
<b>Sealing ring</b> for all bowls	297-10	279-9
<b>Microfilter element</b> with seal, filter porosity 0.01 µm (M23 × 1 – Ø50 × 98)	403-3	–
<b>Microfilter element</b> with seal, filter porosity 0.01 µm (M35 × 1.5 – Ø75 × 125)	–	403-4



403.49



281-26

403-3

### Technical data

Size	BG 40		BG 60	
	G 3/8	G 1/2	G 3/4	G 1
Thread	G 3/8	G 1/2	G 3/4	G 1
Nominal flow rate**	2,170 l/min		4,350 l/min	
Max. operating pressure (p <sub>1</sub> ) plastic bowl/metal bowl	16 bar / 25 bar			
Operating temperature plastic bowl	0 °C up to +50 °C			
Operating temperature metal bowl	0 °C up to +90 °C			
Condensate volume	max. until microfilter element			
Mounting position/flow direction	vertically/in arrow direction			
Nominal width	DN 15		DN 20	
Nominal pressure (housing)	PN 25			
Weight	980 g		1.9 kg	
Material seals	NBR			
Material housing	zinc die-cast		aluminium	
Material filter element	borosilicate microfibre fleece			
Material plastic bowl	polycarbonate			

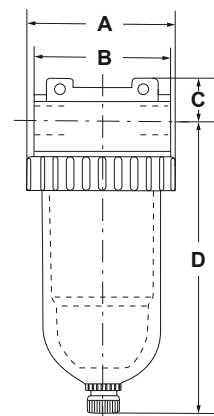
\*\* measured at p<sub>1</sub> = 6 bar and Δp = 0.2 bar

### Dimensions (mm)

	BG 40		BG 60	
	G 3/8	G 1/2	G 3/4	G 1
<b>A</b>	87	87	133	133
<b>B</b>	88	80	134	120
<b>C</b>	24	24	36	36
<b>D***</b>	172	172	206	206

\*\*\*with automatic attachable drain valve A: +90 mm

**Notice**  
 For a longer downtime, a compressed air filter of 40 bar should be installed in front!





## Microfilters G 1½ – G 2

Microfilters are suitable for all applications that require a particularly high purity of compressed air. Installed behind the compressed air filter, they remove 99.9999% of the smallest remaining particles (water, oil or dirt) almost completely (based on 0.01 µm). Residual oil content 0.01 mg/m<sup>3</sup>. The filter element has to be replaced after approximately six months. An additional option with protective metal cage or metal bowl is available. Connection thread from G 1½ to G 2.

01 | Compressed air preparation



403.512



454-17

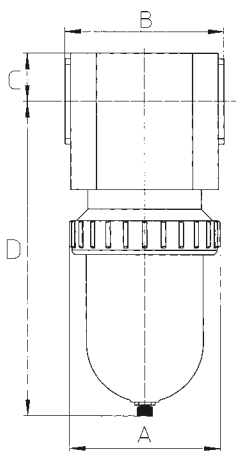


457-12

### Notice



For a longer downtime, a compressed air filter of 40 bar should be installed in front!



### Standard version: with plastic bowl and manual drain valve

Size	Order No.	
	G 1½*	G 2
<b>With plastic bowl and manual drain valve</b>		
BG 90 (super)	403.511	403.512
<b>With plastic bowl and semi-automatic drain valve</b>		
BG 90 (super)	403.5511	403.5512
<b>With plastic bowl and automatic attachable drain valve A (max. 16 bar)</b>		
BG 90 (super)	403.1511	403.1512

\*inlet and outlet reduced (reductions enclosed) see page 119

### Order key for additional options

403.XXX(X)X M metal bowl

### Spare parts and accessories

Size	Order No.
<b>BG 90</b>	
<b>Mounting set</b> for mounting at the top of the housing	457-12
<b>Metal bowl</b> with seal and manual drain valve	322-125
<b>Metal bowl</b> with seal and semi-automatic drain valve	322-126
<b>Metal bowl</b> with seal and automatic attachable drain valve A	322-127
<b>Plastic bowl</b> with seal and manual drain valve	322-122
<b>Plastic bowl</b> with seal and semi-automatic drain valve	322-123
<b>Plastic bowl</b> with seal and automatic attachable drain valve A	322-124
<b>Fastening ring</b> for plastic and Metal bowl	279-2
<b>Sealing ring</b> for all bowls	279-9
<b>Microfilter element</b> with seal, 0.01 µm (Ø63 x 115)	454-17

### Technical data

Size	BG 90	
	G 1½	G 2
Thread	G 1½	G 2
Nominal flow rate**	7,610 l/min	
Max. operating pressure (p <sub>1</sub> ) with plastic bowl / metal bowl	16 bar / 25 bar	
Operating temperature with plastic bowl	0 °C up to +50 °C	
Operating temperature with metal bowl	0 °C up to +90 °C	
Condensate volume	max. until microfilter element	
Mounting position / flow direction	vertically / in arrow direction	
Nominal width	DN 50	
Nominal pressure (housing)	PN 25	
Weight	5.4 kg	
Material seals	NBR	
Material housing	aluminium	
Material filter element	borosilicate microfibre fleece	
Material plastic bowl	polycarbonate	

\*\*measured at p<sub>1</sub> = 6 bar and Δp = 0.2 bar

### Dimensions (mm)

	BG 90	
	G 1½	G 2
<b>A</b>	133	133
<b>B</b>	160	140
<b>C</b>	42	42
<b>D***</b>	330	330

\*\*\*with automatic attachable drain valve A: +90 mm





## Microfilters 40 bar G 3/8–G 2

Microfilters are suitable for all applications that require a particularly high purity of compressed air. Installed behind the compressed air filter, they guarantee the best possible quality and remove 99.9999% of the smallest remaining particles (water, oil or dirt) almost completely (based on 0.01 µm). Residual oil content 0.01 mg/m<sup>3</sup>. The filter element has to be replaced after approx. six months. Compressed air filter in compact design. The filter elements with pore widths below 0.01 µm are made of borosilicate microfibre fleece with V2A support sheaths and an outer foam cover. They are flooded from inside to outside. Housing made of aluminium. Container made of brass (for BG 90 made of aluminium). With condensate drain for manual operation, condensate drain is only possible up to 25 bar under pressure. A pressure bowl certificate is enclosed.

### Standard version: with metal bowl and manual drain valve

Size	Order No.					
	G 3/8*	G 1/2	G 3/4*	G 1	G 1 1/2*	G 2
BG 40 (I)	445.115	445.116	–	–	–	–
BG 60 (II)	–	–	445.108	445.109	–	–
BG 90 (super)	–	–	–	–	454.511	454.512

\*inlet and outlet reduced (reductions enclosed) see page 119



445.116

**Notice**

**!** For a longer downtime, a compressed air filter of 40 bar should be installed in front!

### Spare parts and accessories

Size	Order No.		
	BG 40	BG 60	BG 90
<b>Mounting set</b> for fastening at the top of the housing	445-39	445-28	429-27
<b>Microfilter element</b> with seal, filter porosity 0.01 µm	448-8	403-3	454-17
<b>Manual drain valve</b> for metal bowl	275-41**	275-41**	275-41**

\*\*condensate drain under pressure only possible up to 25 bar



445-28



403-3

### Technical data

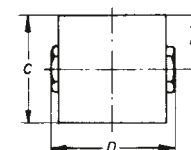
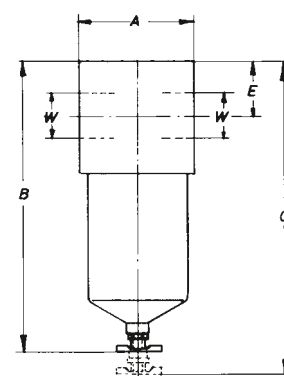
Size	BG 40		BG 60		BG 90	
	G 3/8	G 1/2	G 3/4	G 1	G 1 1/2	G 2
Thread	G 3/8	G 1/2	G 3/4	G 1	G 1 1/2	G 2
Nominal flow rate***	2,170 l/min		3,260 l/min		7,610 l/min	
Max. operating pressure (p <sub>1</sub> )	40 bar (PN 40)					
Operating temperature	0 °C up to +90 °C					
Condensate volume	max. until microfilter element					
Mounting position/flow direction	vertically/in arrow direction					
Nominal width	DN 15		DN 20		DN 50	
Weight	1.22 kg		2 kg		5.8 kg	
Material seals	NBR					
Material housing	aluminium					
Material filter element	borosilicate microfibre fleece					
Material metal bowl	brass		brass		aluminium	

\*\*\*measured at p<sub>1</sub> = 6 bar and Δp = 0.2 bar

### Dimensions (mm)

	BG 40		BG 60		BG 90	
	G 3/8	G 1/2	G 3/4	G 1	G 1 1/2	G 2
<b>W</b>	G 3/8	G 1/2	G 3/4	G 1	G 1 1/2	G 2
<b>A</b>	65	65	80	80	140	140
<b>B</b>	200	200	210	210	285	285
<b>C</b>	65	65	80	80	120	120
<b>D</b>	73	–	92	–	160	–
<b>E</b>	32.5	32.5	40	40	42.5	42.5
<b>F</b>	32.5	32.5	40	40	60	60
<b>G****</b>	250	250	285	285	350	350

\*\*\*\*space required for filter element replacement





## Microfilters 60 bar G 3/8–G 1

Microfilters are suitable for all applications where the requirement for the purity of compressed air is particularly high. With an efficiency of 99.9999% related to 0.01 µm, as the second stage after the compressed air filter they guarantee the best possible quality. The residual oil content is 0.01 mg/m<sup>3</sup>. Compressed air filter in compact design. The filter elements with pore widths below 0.01 µm are made of borosilicate microfibre fleece with V2A support sheaths and an outer foam cover. They are flooded from inside to outside. Housing made of aluminium (black anodised), bowl made of brass. With condensate drain for manual operation, condensate drain is only possible up to 25 bar under pressure. The filter element must be replaced after approx. 6 months. A pressure bowl certificate is enclosed.

01 | Compressed air preparation



475.109

### Standard version: with metal bowl and manual drain valve

Size	Order No.			
	G 3/8*	G 1/2	G 3/4*	G 1
BG 40 (I)	475.115	475.116	–	–
BG 60 (II)	–	–	475.108	475.109

\*inlet and outlet reduced (reductions enclosed) see page 119

#### Notice

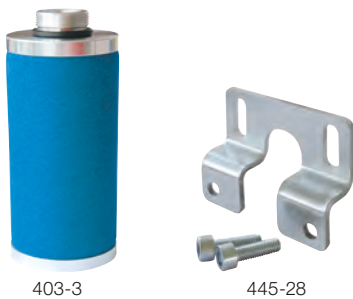


For a longer downtime, a compressed air filter of 60 bar should be installed in front!

### Spare parts and accessories

Size	Order No.	
	BG 40	BG 60
Mounting set for mounting at the top of the housing	445-39	445-28
Microfilter element with seal, filter porosity 0.01 µm	448-8	403-3
Manual drain valve for metal bowl	275-41**	275-41**

\*\*condensate drain under pressure only possible up to 25 bar



403-3

445-28

### Technical data

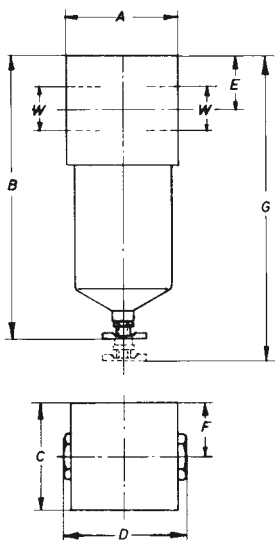
Size	BG 40		BG 60	
	G 3/8	G 1/2	G 3/4	G 1
Thread				
Nominal flow rate***	2,170 l/min		3,260 l/min	
Max. operating pressure (p <sub>1</sub> )	60 bar (PN 60)			
Operating temperature	0 °C up to +90 °C			
Condensate volume	max. until microfilter element			
Mounting position/flow direction	vertically/in arrow direction			
Nominal width	DN 15		DN 20	
Weight	1.4 kg		3 kg	
Material seals	NBR			
Material housing	aluminium			
Material filter element	borosilicate microfibre fleece			
Material metal bowl	brass			

\*\*\*measured at p<sub>1</sub> = 6 bar and Δp = 0.2 bar

### Dimensions (mm)

	BG 40		BG 60	
	G 3/8	G 1/2	G 3/4	G 1
W	65	65	80	80
A	185	185	200	200
B	65	65	80	80
D	73	–	92	–
E	25	25	29	29
F	32.5	32.5	40	40
G****	205	205	285	285

\*\*\*\*space required for filter element replacement





## Pressure regulators G 1/8 – G 1/2

Pressure regulators adjust the line pressure ( $p_1$ ) of a compressed air system to the selected operating pressure/ secondary pressure ( $p_2$ ) and keep it largely constant, independent of pressure fluctuations and air consumption. Pressure regulator (diaphragm type) in flow-through form. With secondary venting to reduce the secondary pressure ( $p_2$ ) without air withdrawal. **Control ranges for  $p_2$  from 0.5–3/6/10 and 16 bar.** Actuation by toggle, optional handwheel. Special versions (e.g. without reverse control) on request. Pressure gauge can be mounted on the front or rear side. Panel mounting or mounting kit available as accessory. Connection thread from G 1/8 to G 1/2. Notice: To avoid failures, a compressed air filter should be installed in front of the unit. Also suitable for use with neutral and non-toxic gases. The manometer is enclosed.

### Standard version: control range 0.5–10 bar, with toggle and pressure gauge

Size	Order No.			
	G 1/8*	G 1/4*	G 3/8	G 1/2
BG 30 (small)	323.313	323.323	323.333	–
BG 35 (intermediate)	280.313	280.323	280.333	–
BG 40 (medium)	–	–	280.353*	280.363

\*inlet and outlet reduced (reductions enclosed) see page 119



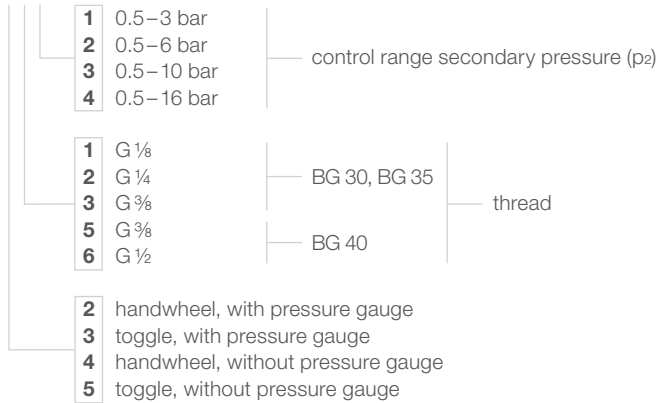
323.333



280-132

### Order key for all variants

#### 323/280.XXX



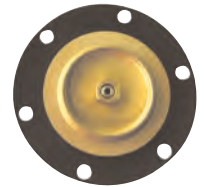
### Spare parts and accessories

Size	Order No.		
	BG 30	BG 35	BG 40
<b>Mounting set</b> for fixing at the bottom of the lid	323-68	280-134	280-132
<b>Panel mounting</b> with thread: M14 x 1 (BG 30), M20 x 1.5 (BG 35), M22 x 1 (BG 40)	323-69	323-66	280-133
<b>Pressure gauge</b> horizontally**	Ø 50	Ø 63	Ø 63
Display range 0–6 bar (for $p_2$ up to 3 bar)	42	213	213
Display range 0–10 bar (for $p_2$ up to 6 bar)	55	214	214
Display range 0–16 bar (for $p_2$ up to 10 bar)	85	215	215
Display range 0–25 bar (for $p_2$ up to 16 bar)	96	216	216
<b>Sealing cone</b> , complete	323-119	406-37	280-220
<b>Diaphragm</b> , complete	323-152	280-223	280-221

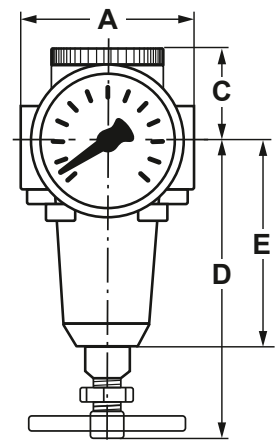
\*\*pressure gauges starting from page 154



323-119



280-221



### Technical data

Size	BG 30			BG 35			BG 40	
	G 1/8	G 1/4	G 3/8	G 1/8	G 1/4	G 3/8	G 3/8	G 1/2
Thread	G 1/8	G 1/4	G 3/8	G 1/8	G 1/4	G 3/8	G 3/8	G 1/2
Nominal flow rate***	1,090 l/min			2,170 l/min			2,900 l/min	
Max. operating pressure ( $p_1$ )	25 bar (PN 25)							
Max. secondary pressure ( $p_2$ )	10 bar (optionally 3, 6, 16 bar)							
Operating temperature	-10 °C up to +90 °C							
Mounting position/flow direction	any/in arrow direction							
Nominal width	DN 6			DN 10			DN 15	
Pre-pressure dependence	< 3 %			< 2 %			< 2 %	
Reverse control hysteresis	~ 1 bar							
Weight	620 g			1.5 kg			1.35 kg	
Material diaphragm/seals	NBR							
Material housing, spring cover	zinc die-cast							

\*\*\*measured at  $p_1 = 8$  bar,  $p_2 = 6$  bar and  $\Delta p = 1$  bar

### Dimensions (mm)

	BG 30		BG 35			BG 40	
	G 1/8	G 1/4	G 3/8	G 1/8	G 1/4	G 3/8	G 1/2
<b>A</b>	61	54	77	70	90	82	
<b>C</b>	30	30	33	33	34	34	
<b>D</b>	100	100	127	127	136	136	
<b>E</b>	67	67	78	78	85	85	



## Pressure regulators G 3/4 – G 1 1/2

Pressure regulators regulate the line pressure ( $p_1$ ) of a compressed air system to the preset operating pressure/secondary pressure ( $p_2$ ) and keep it largely constant, independent of pressure fluctuations and air consumption. Pressure regulator (diaphragm type) in flow-through form. Secondary venting (reverse control) and extensive inlet pressure independence is given. **Control ranges for  $p_2$  from 0.5–3/6/10/16 and 25 bar.** Actuation: BG 55 (compact) up to 10 bar with handwheel, 16 bar with toggle; BG 60 (large) and BG 80 (max) up to 10 bar with toggle, 16 and 25 bar with hexagon head screw AF 19. Special versions (e.g. without reverse control) on request. Pressure gauge can be mounted on the front or rear side. Panel mounting or mounting kit available as accessory. Connection thread from G 3/4 to G 1 1/2. **Notice:** To avoid failures, a compressed air filter should be installed in front of the unit. Also suitable for use with neutral and non-toxic gases. The manometer is enclosed.

01 | Compressed air preparation



280.3104  
BG 60/80

406.294  
BG 55



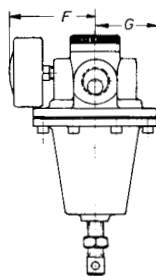
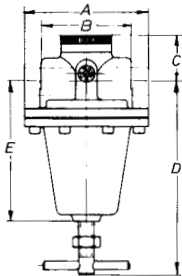
406-17



280-219



280-218



### Dimensions (mm)

	BG 55		BG 60		BG 80	
	G 3/4	G 1	G 3/4	G 1	G 1 1/4	G 1 1/2
<b>A</b>	–	–	116	116	116	116
<b>B</b>	96	90	95	83	128	114
<b>C</b>	47	47	41	41	50	50
<b>D</b>	139	139	175	175	190	190
<b>E</b>	89	89	–	–	–	–
<b>F</b>	77	77	80	80	80	80
<b>G</b>	39	39	58	58	58	58

### Standard version: control range 0.5–10 bar, with pressure gauge

Size	Order No.			
	G 3/4*	G 1	G 1 1/4*	G 1 1/2
BG 55 (compact)	406.283	406.293	–	–
BG 60 (large)	280.383	280.393	–	–
BG 80 (max)	–	–	280.3103	280.3113

\*inlet and outlet reduced (reductions enclosed) see page 119

### Order key for all variants

#### BG 55 406.XXX

- 1 0.5–3 bar
  - 2 0.5–6 bar
  - 3 0.5–10 bar
  - 4 0.5–16 bar
- control range  
sec. pressure ( $p_2$ )
- 8 G 3/4
  - 9 G 1
- thread
- 2 handwheel, with gauge (up to 10 bar)
  - 3 toggle, with pressure gauge
  - 4 handwheel, without gauge (up to 10 bar)
  - 6 toggle, without pressure gauge

#### BG 60/BG 80 280.XX(X)X

- 1 0.5–3 bar
  - 2 0.5–6 bar
  - 3 0.5–10 bar
  - 4 0.5–16 bar
  - 5 0.5–25 bar
- control range  
sec. pressure ( $p_2$ )
- 8 G 3/4
  - 9 G 1
  - 10 G 1 1/4
  - 11 G 1 1/2
- thread
- 3 toggle, with pressure gauge\*\*
  - 5 toggle, without pressure gauge\*\*

\*\* 16 and 25 bar with hexagon head screw

### Spare parts and accessories

Size	Order No.		
	BG 55	BG 60	BG 80
<b>Mounting set</b> for mounting at the bottom of the cover or on the mounting screws	406-17	280-239	280-239
<b>Panel mounting</b> with thread: M28 x 1.5	406-18	–	–
<b>Pressure gauge</b> horizontally***	Ø63	Ø63	Ø63
Display range 0–6 bar (for $p_2$ up to 3 bar)	213	213	213
Display range 0–10 bar (for $p_2$ up to 6 bar)	214	214	214
Display range 0–16 bar (for $p_2$ up to 10 bar)	215	215	215
Display range 0–25 bar (for $p_2$ up to 16 bar)	216	216	216
Display range 0–40 bar (for $p_2$ up to 5 bar)	–	217	217
<b>Sealing cone</b> , complete	406-32	280-218	280-235
<b>Diaphragm</b> , complete	406-50	280-219	280-219
<b>Double diaphragm</b> , complete (for 0.5 to 25 bar)	–	280-249	280-249

\*\*\* pressure gauges starting from page 154

### Technical data

Size	BG 55		BG 60		BG 80	
	G 3/4	G 1	G 3/4	G 1	G 1 1/4	G 1 1/2
Thread	G 3/4	G 1	G 3/4	G 1	G 1 1/4	G 1 1/2
Nominal flow rate****	5,800 l/min		8,510 l/min		13,220 l/min	
Max. operating pressure ( $p_1$ )	25 bar (PN 25)		40 bar (PN 40)			
Max. secondary pressure ( $p_2$ )	10 bar (optionally 3, 6, 16 and 25 bar)					
Operating temperature	–10 °C up to +90 °C					
Mounting position/flow direction	any/in arrow direction					
Nominal width	DN 20		DN 20		DN 25	
Pre-pressure dependence	< 3 %		< 1.5 %		< 1.5 %	
Reverse control hysteresis	~ 1 bar					
Weight	2.05 kg		3.48 kg		5.26 kg	
Material diaphragm/seals	NBR					
Material housing, spring cover	zinc die-cast		brass		brass	

\*\*\*\* measured at  $p_1 = 8$  bar,  $p_2 = 6$  bar and  $\Delta p = 1$  bar



## Large pressure regulators G 1½–G 2

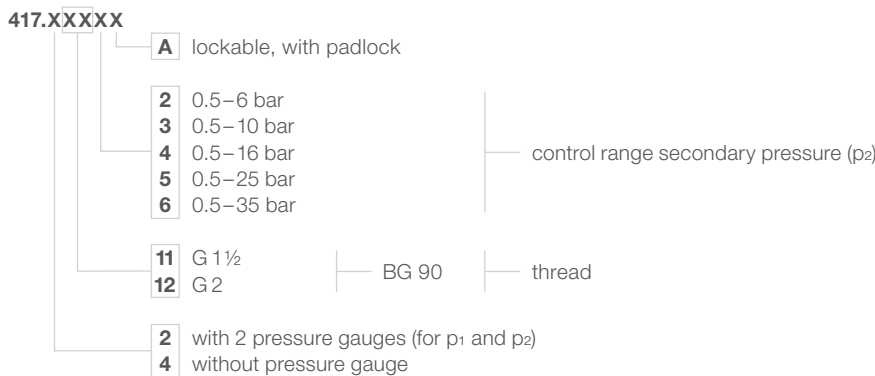
Pressure regulators regulate the line pressure ( $p_1$ ) of a compressed air system to the set operating pressure/secondary pressure ( $p_2$ ) and keep it nearly constant, independent of pressure fluctuations and air consumption. Diaphragm-type pre-controlled pressure regulator. Secondary venting (reverse control) and extensive inlet pressure independence is given. **Control ranges for  $p_2$  from 0.5–6, 10, 16, 25 and 35 bar.** Two pressure gauges (for inlet and outlet pressure [ $p_1$  and  $p_2$ ]), can be mounted at the front and rear. Mounting kit available as accessory. Connection thread from G 1½ to G2. **Notice:** To avoid failures, a compressed air filter should be installed in front of the unit. Also suitable for use with neutral and non-toxic gases. Remote control version available on request. **Areas of application:** marine engineering, mechanical and industrial engineering, fluid technology, use in production lines for the manufacture of PET bottles, generally when high flow rates at constant pressure are required.

### Standard version: control range ( $p_2$ ) 0.5–10 bar, with pressure gauge

Size	Order No.	
	G 1½*	G 2
BG 90 (super)	417.2113	417.2123

\*inlet and outlet reduced (reductions enclosed) see page 119

### Order key for all variants



### Spare parts and accessories

Size	Order No.	
<b>Mounting set</b> for attaching to housing	417-47	
<b>Pressure gauge</b> horizontally**	Ø 63	
Display range 0–10 bar (for $p_2$ up to 6 bar)	214	
Display range 0–16 bar (for $p_2$ up to 10 bar)	215	
Display range 0–25 bar (for $p_2$ up to 16 bar)	216	
Display range 0–40 bar (for $p_2$ up to 25 bar)	217	
Display range 0–60 bar (for $p_1$ and $p_2$ up to 35 bar)	218	
<b>Control range secondary pressure <math>p_2</math></b>	<b>up to 6, 10, 16, 25 bar</b>	<b>up to 35 bar</b>
<b>Spare parts set</b> (seals, diaphragms, sealing cone)	417-75	417-85
<b>Sealing cone</b> , complete	417-67	417-78
<b>Diaphragm</b> , complete	417-66	417-86

\*\*pressure gauges starting from page 154



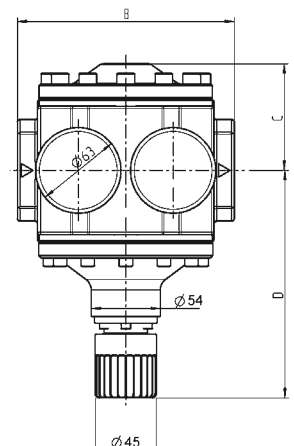
### Technical data

Size	BG 90	
Thread	G 1½	G 2
Nominal flow rate***	52,190 l/min	
Max. operating pressure ( $p_1$ )	40 bar (PN 40)	
Max. secondary pressure ( $p_2$ )	0.5 up to 6, 10, 16, 25 and 35 bar	
Operating temperature	-10 °C up to +90 °C	
Mounting position/flow direction	any/in arrow direction	
Nominal width	DN 50	
Pre-pressure dependence	< 1 %	
Reverse control hysteresis	~ 0.5 bar	
Weight	5.5 kg	
Material diaphragm/seals	NBR	
Material housing, spring cover	aluminum die-cast	

\*\*\*measured at  $p_1 = 10$  bar,  $p_2 = 8$  bar and  $\Delta p = 1$  bar

### Dimensions (mm)

	BG 90	
	G 1½	G 2
<b>B</b>	180	160
<b>C</b>	78	78
<b>D</b>	170	170





## Pressure regulators 40 bar G ¼ – G ½

Pressure regulators regulate the line pressure ( $p_1$ ) of a compressed air system to the set operating pressure/secondary pressure ( $p_2$ ) and keep it almost constant, independent of pressure fluctuations and air consumption. Pressure regulator (diaphragm type) in flow-through form. Secondary venting (reverse control) and extensive inlet pressure independence is given. **Control ranges for  $p_2$  from 0.5–3, 6, 10, 16 and 25 bar.** Adjustment with handwheel, for BG 40 (medium) up to 25 bar lockable with hexagonal screw AF 14 each with lock nut. Pressure gauge can be mounted on the front and rear. Panel mounting or bracket set available as accessory. Connection thread from G ¼ to G ½. **Notice:** To avoid failures, a compressed air filter should be installed in front of the unit. Also suitable for use with neutral and non-toxic gases. The manometer is enclosed.

01 | Compressed air preparation



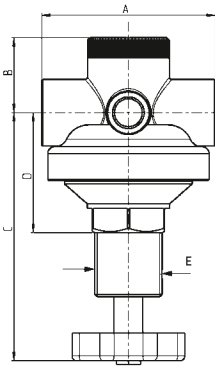
### Standard version: control range 0.5–10 bar, with pressure gauge

Size	Order No.	
	G ¼	G ½
BG 20 (small)	286.323	–
BG 40 (medium)	–	274.663

### Order key for all variants

286/274.XXXX

- 1 oil and grease free
  - 2 without reverse control
  - 3 oil and grease free and without reverse control
- 
- 1 0.5–3 bar
  - 2 0.5–6 bar
  - 3 0.5–10 bar
  - 4 0.5–16 bar
  - 5 0.5–25 bar (not BG 20)
- control range secondary pressure ( $p_2$ )
- 
- 2 G ¼ — BG 20
  - 6 G ½ — BG 40
- thread
- 
- 3 with pressure gauge (for BG 20 except 25 bar)
  - 6 with pressure gauge (for BG 40)
  - 4 without pressure gauge



### Dimensions (mm)

	BG 20	BG 40
	G ¼	G ½
<b>A</b>	45	72
<b>B</b>	23	30
<b>C</b>	81	115
<b>D</b>	35	52
<b>E</b>	M20 x 1.5	M28 x 1.5

### Spare parts and accessories

Size	Order No.		
	BG 20	BG 40	
<b>Mounting set</b> for fixing at the bottom of the lid	286-88	274-48	
<b>Panel mounting:</b> M20 x 1.5 (BG 30 small), M28 x 1.5 (BG 40 medium)	286-89	274-49	
<b>Pressure gauge</b> horizontally*	Ø 40	Ø 63	
Display range 0–6 bar (for $p_2$ up to 3 bar)	714	213	
Display range 0–10 bar (for $p_2$ up to 6 bar)	723	214	
Display range 0–16 bar (for $p_2$ up to 10 bar)	734	215	
Display range 0–25 bar (for $p_2$ up to 16 bar)	745	216	
Display range 0–40 bar (for $p_2$ up to 25 bar)	–	217	
<b>Sealing cone</b> , complete	286-120	274-75	
<b>Diaphragm</b> , complete	Control range (for $p_2$ ) 0–3 bar	286-126	274-65
	Control range (for $p_2$ ) 0–10 bar	286-126	274-66
	Control range (for $p_2$ ) 0–16 bar	286-126	274-67
	Control range (for $p_2$ ) 0–25 bar	–	274-67

\*pressure gauges starting from page 154

### Technical data

Size	BG 20	BG 40
Thread	G ¼	G ½
Nominal flow rate**	470 l/min	1,360 l/min
Max. operating pressure ( $p_1$ )	40 bar (PN 40)	
Max. secondary pressure ( $p_2$ )	0.5 up to 3, 6, 10, 16 and 25 bar (BG 40)	
Operating temperature	-10 °C up to +90 °C	
Mounting position/flow direction	any/in arrow direction	
Nominal width	DN 6	DN 12
Pre-pressure dependence	< 10 %	
Reverse control hysteresis	~ 1 bar	
Weight	390 g	1 kg
Material diaphragm/seals	NBR	
Material housing, spring cover	brass	

\*\*measured at  $p_1 = 8$  bar,  $p_2 = 6$  bar and  $\Delta p = 1$  bar





## High pressure regulators 60 bar G ¼–G 1

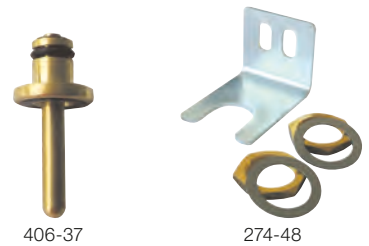
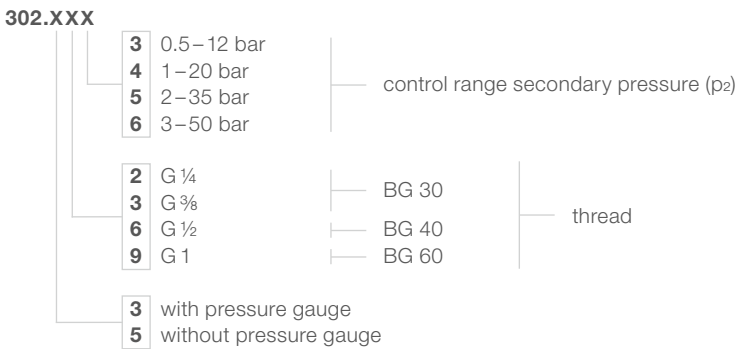
Pressure regulators regulate the line pressure ( $p_1$ ) of a compressed air system to the set operating pressure/secondary pressure ( $p_2$ ) and keep it nearly constant, independent of pressure fluctuations and air consumption. Pressure regulator (piston type) in passage form. Secondary pressure venting (reverse control) and extensive inlet pressure independence is given. **Control ranges for  $p_2$  from 0.5–12, 1–20, 2–35 and 3–50 bar.** Adjustment with knob. Pressure gauge can be mounted on the front and rear. Panel mounting or mounting kit available as accessory. Connection thread from G ¼ to G 1. **Notice:** To avoid failures, a compressed air filter should be installed in front of the unit. Also suitable for use with neutral and non-toxic gases. The pressure gauge is enclosed.

### Standard version: control range 0.5–10 bar, with pressure gauge

Size	Order No.			
	G ¼*	G ¾	G ½	G 1
BG 30 (I)	302.323	302.333	–	–
BG 40 (II)	–	–	302.363	–
BG 60 (III)	–	–	–	302.393

\*inlet and outlet reduced (reductions enclosed) see page 119

### Order key for all variants



### Spare parts and accessories

Size	Order No.		
	BG 30	BG 40	BG 60
<b>Mounting set</b> for fixing at the bottom of the lid or on the fastening screws	274-48		302-19
<b>Pressure gauge</b> horizontally**	Ø 63		Ø 63
Display range 0–16 bar (for $p_2$ up to 12 bar)	215		215
Display range 0–25 bar (for $p_2$ up to 20 bar)	216		216
Display range 0–40 bar (for $p_2$ up to 35 bar)	217		217
Display range 0–60 bar (for $p_2$ up to 50 bar)	218		218
<b>Sealing cone, complete</b>	406-37		302-6

\*\*pressure gauges starting from page 154

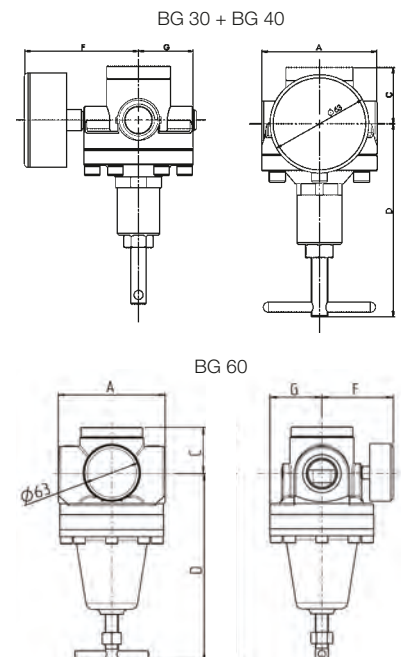
### Technical data

Size	BG 30		BG 40	BG 60
Thread	G ¼	G ¾	G ½	G 1
Nominal flow rate***	2,170 l/min	2,720 l/min	3,810 l/min	5,440 l/min
Max. operating pressure ( $p_1$ )	60 bar (PN 60)			
Max. secondary pressure ( $p_2$ )	12, 20, 35 and 50 bar			
Operating temperature	-10 °C up to +90 °C			
Mounting position/flow direction	any/in arrow direction			
Nominal width	DN 12			DN 20
Weight	1.5 kg			6.5 kg
Material seals	NBR			
Material housing	brass			

\*\*\*measured at  $p_1 = 20$  bar,  $p_2 = 10$  bar and  $\Delta p = 4$  bar

### Dimensions (mm)

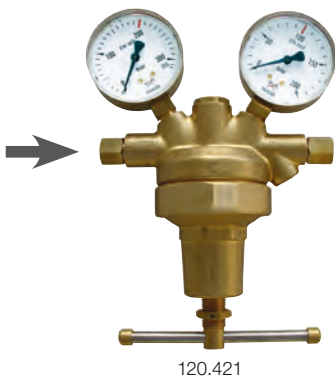
	BG 30		BG 40	BG 60
	G ¼	G ¾	G ½	G 1
<b>A</b>	72		72	118
<b>C</b>	35		35	51
<b>D</b>	133		121	206
<b>F</b>	66		75	80
<b>G</b>	36		36	58





## Pressure line regulators G ¼

Pressure line regulator for an inlet pressure (max. operating pressure)  $p_1$  up to max. 200 bar. Output pressure/secondary pressure (control range)  $p_2$  up to max. 150 bar, depending on version. Can not be reversed. Connection thread G ¼. Suitable for compressed air, nitrogen and other neutral gases also compressed gases.



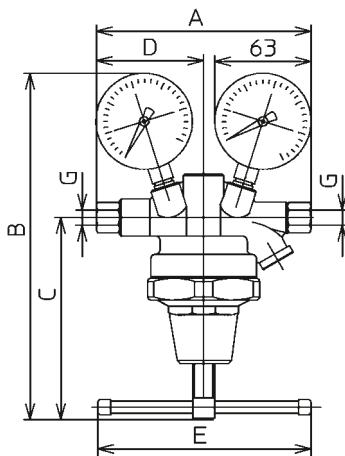
### Version: control range 1 – 100 bar, with knob, with pressure gauge

Outlet pressure ( $p_2$ ) max.	Adjustment	Order No.
50 bar*	handwheel	120.420
100 bar*	toggle	120.421
150 bar*	toggle	120.422

\*pressure gauges starting from page 154

### Technical data

Thread	G ¼
Nominal flow rate	50 bar = 2,720 l/min 100 bar = 2,940 l/min 150 bar = 3,150 l/min
Pressure gauge inlet	Ø63, 0–200 bar
Pressure gauge outlet	Ø63, 0–50, 100, 200 bar
Max. operating pressure ( $p_1$ )	200 bar (PN 200)
Max. secondary pressure ( $p_2$ ) (control range)	1 up to 50, 100, 150 bar
Operating temperature	-10 °C up to +90 °C
Mounting position/flow direction	any/left to right
Nominal width	DN 3
Overpressure protection	blow-off valve
Adjustment	toggle (from 50 bar – handwheel)
Weight	2.2 kg
Material seals	NBR
Material housing, spring cover	brass



### Dimensions (mm)

G	G ¼
A	150
B	215
C	130
D	75
E	130
G	G ¼



## Precision pressure regulators G 1/8 – G 1/2

Pressure regulator with high precision regulation for highest requirements. It is suitable for all applications that require precise air pressure regulation. Pressure regulators regulate the line pressure ( $p_1$ ) of a pressure system to the set operating pressure/secondary pressure ( $p_2$ ) and keep it constant, independent of pressure fluctuations and air consumption. Diaphragm type pressure regulator with the lowest air consumption of 1.5 l/min – this is unique on the market. Secondary venting (reverse control) practically without hysteresis. **Control ranges for  $p_2$  from 0.2–3, 0.2–6 bar and 0.5–10 bar.** Pressure gauge can be mounted on the front and rear side. Adjustment wheel can be locked with lock nut. A microfilter should be installed in front of the pressure gauge to avoid contamination or failure. Also suitable for use with neutral and non-toxic gases. Connection thread from G 1/8 to G 1/2. Pressure gauge is enclosed.

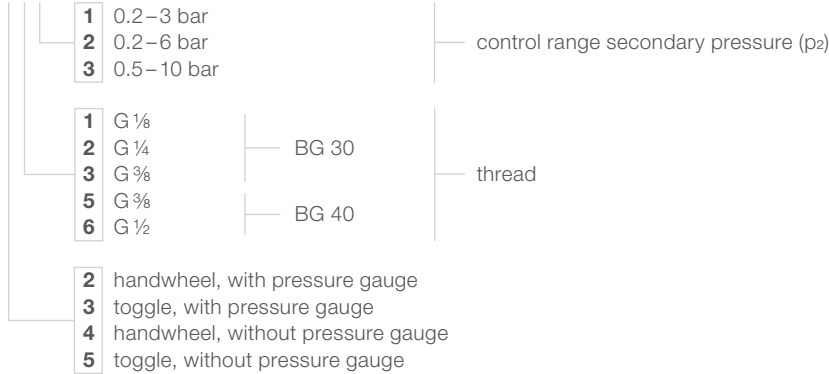
**Standard version: control range 0.2–6 bar, with handwheel, with pressure gauge**

Size	Order No.			
	G 1/8*	G 1/4*	G 3/8	G 1/2
BG 30 (small)	595.212	595.222	595.232	–
BG 40 (medium)	–	–	595.252*	595.262

\*inlet and outlet reduced (reductions enclosed) see page 119

### Order key for all variants

595.XXX



### Spare parts and accessories

Size	Order No.	
	BG 30	BG 40
Mounting set for fixing at the bottom of the lid	323-68	280-132
Mounting panel with thread: M14 x 1 (BG 30), M22 x 1 (BG 40)	323-69	280-133
Pressure gauge horizontally, quality class 1.6**	Ø 50	Ø 50
Display range 0–4 bar (for $p_2$ up to 3 bar)		501
Display range 0–6 bar (for $p_2$ up to 6 bar)		502
Display range 0–10 bar (for $p_2$ up to 10 bar)		503
Sealing cone, complete	323-119	280-220
Diaphragm, complete	595-7	595-8

\*\*pressure gauges starting from page 154

### Technical data

Size	BG 30			BG 40	
	G 1/8	G 1/4	G 3/8	G 3/8	G 1/2
Thread	G 1/8	G 1/4	G 3/8	G 3/8	G 1/2
Nominal flow rate***	1,090 l/min			2,900 l/min	
Max. operating pressure ( $p_1$ )	25 bar (PN 25)				
Max. secondary pressure ( $p_2$ )	6 bar (optionally 3 bar, 10 bar)				
Operating temperature	-10 °C up to +90 °C				
Mounting position/flow direction	any/in arrow direction				
Nominal width	DN 6			DN 15	
Pre-pressure dependence	< 3 %			< 2 %	
Reverse control hysteresis	~ 1 bar				
Weight	620 g			1.35 kg	
Material diaphragm/seals	NBR				
Material housing, spring cover	zinc die-cast				

\*\*\*measured at  $p_1 = 8$  bar,  $p_2 = 6$  bar and  $\Delta p = 1$  bar

### Dimensions (mm)

	BG 30			BG 40	
	G 1/8*	G 1/4*	G 3/8	G 3/8*	G 1/2
A	61		54	90	82
C	30		30	34	34
D	100		100	136	136
E	67		67	85	85



## Pressure regulator with internal gauge in setting knob G 3/8

Pressure regulators regulate the line pressure ( $p_1$ ) of a pressure system to the set operating pressure/secondary pressure ( $p_2$ ) and keep it constant, independent of pressure fluctuations and air consumption. Pressure regulator with internal gauge in setting knob (diaphragm type) is ideal for panel mounting. Secondary venting (reverse control) and extensive inlet pressure independence are given. **Control ranges 0.5–3, 6, 10 and 16 bar.** Fixed pressure gauge in the adjustment wheel. Panel mounting available as accessory. Connection thread G 3/8.

**Notice:** To avoid failures, a compressed air filter should be installed in front of the unit.



367.333

### Standard version: control range 0.5–10 bar

Size	Order No.
BG 30 (I)	367.333

### Order key for all variants

367.33X

1	0.5–3 bar	control range secondary pressure ( $p_2$ )
2	0.5–6 bar	
3	0.5–10 bar	
4	0.5–16 bar	



367-88

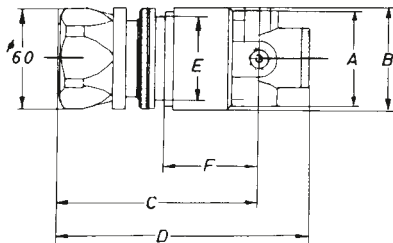


323-119

### Spare parts and accessories

Size	Order No.
<b>Panel mounting</b> with thread: M48 × 1.5	<b>BG 30</b>
<b>Pressure gauge</b> horizontally (M8 × 1)*	<b>367-33</b>
Display range 0–6 bar (for $p_2$ up to 3 bar)	<b>Ø 40</b>
Display range 0–10 bar (for $p_2$ up to 6 bar)	<b>673</b>
Display range 0–16 bar (for $p_2$ up to 10 and 16 bar)	<b>674</b>
<b>Sealing cone</b> , complete	<b>675</b>
<b>Diaphragm</b> , complete	<b>323-119</b>
	<b>367-88</b>

\*pressure gauges starting from page 154



### Technical data

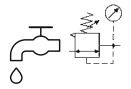
Size	BG 30
Thread	G 3/8
Nominal flow rate**	1,090 l/min
Max. operating pressure ( $p_1$ )	25 bar (PN 25)
Max. secondary pressure ( $p_2$ )	0.5–3, 6, 10 and 16 bar
Operating temperature	-10 °C up to +90 °C
Mounting position/flow direction	any/in arrow direction
Nominal width	DN 10
Pre-pressure dependence	< 3 %
Reverse control hysteresis	~ 1 bar
Weight	985 g
Material diaphragm/seals	NBR
Material housing	zinc die-cast and aluminium

\*\*measured at  $p_1 = 8$  bar,  $p_2 = 6$  bar and  $\Delta p = 1$  bar

### Dimensions (mm)

	BG 30
	G 3/8
<b>A</b>	54
<b>B</b>	60
<b>C</b>	115
<b>D</b>	145
<b>E</b>	48
<b>F</b>	56

## Water pressure regulators G ¼ – G 1½



Water pressure regulators protect water installations from excessive line pressure. They can also be used for industrial and commercial applications in compliance with specifications. When used, pressure fluctuations are avoided and water consumption is reduced. The set working pressure/ secondary pressure ( $p_2$ ) is kept constant at different upstream pressures. At the same time, disturbing flow noises are reduced. **Control ranges for  $p_2$  from 0.5–6, 10, 16 and 25 bar.** Pressure gauge can be mounted on the front and rear. Handwheel, toggle and adjusting screw can be locked with lock nut. Panel mounting and mounting kit available as accessories. Connection thread from G ¼ to G 1½. The pressure gauge is enclosed.

### Standard version: control ranges for secondary pressure 0.5–25 bar

Size	Secondary pressure $p_2$ (control range)	Order No.			
		BG 20 (small) G ¼	BG 40 (medium) G ½	BG 60 (large) G 1	BG 80 (max) G 1½
<b>With pressure gauge</b>					
	0.5–6 bar	286.599	274.599	280.599	280.1599
	0.5–10 bar	286.600	274.600	280.600	280.1600
	0.5–16 bar	286.601	274.601	280.601	280.1601
	0.5–25 bar	286.602	274.602	280.602	280.1602*
<b>Without pressure gauge</b>					
	0.5–6 bar	286.399	274.399	280.399	280.1399
	0.5–10 bar	286.400	274.400	280.400	280.1400
	0.5–16 bar	286.401	274.401	280.401	280.1401
	0.5–25 bar	286.402	274.402	280.402	280.1402*

\*with adjusting screw



280.601

### Spare parts and accessories

Size	Order No.			
	BG 20	BG 40	BG 60	BG 80
<b>Mounting set</b> for fastening to the lid-fixing screws	286-88	274-48	280-239	280-239
<b>Control panel</b> mounting with thread: M20 x 1.5 (BG 20), M28 x 1.5 (BG 40)	286-89	274-49	–	–
<b>Pressure gauge</b> horizontally**	Ø40	Ø63	Ø63	Ø63
Display range 0–10 bar (for $p_2$ up to 6 bar)	723	214	214	214
Display range 0–16 bar (for $p_2$ up to 10 bar)	734	215	215	215
Display range 0–25 bar (for $p_2$ up to 16 bar)	745	216	216	216
Display range 0–25 bar (BG 20)/ 40 bar (for $p_2$ up to 25 bar)	745	217	217	217
<b>Sealing cone</b> , complete	286-124	274-82	280-171	280-172
<b>Diaphragm</b> , complete	286-45	274-81	280-173	280-173
<b>Double diaphragm</b> , complete (for 0.5 to 25 bar)	–	–	280-286OR	280-286OR

\*\*pressure gauges starting from page 154



280-239



280-171



280-173

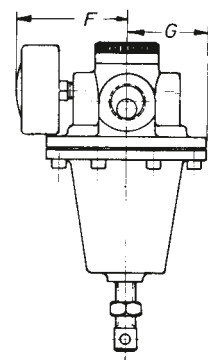
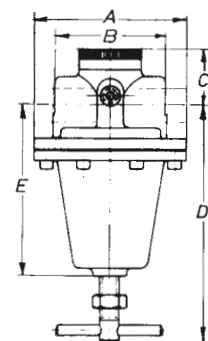
### Technical data

Size	BG 20	BG 40	BG 60	BG 80
Thread	G ¼	G ½	G 1	G 1½
Nominal flow rate***	2.5 l/min	15 l/min	24 l/min	56 l/min
Max. operating pressure ( $p_1$ )	40 bar (40 PN)			
Max. secondary pressure ( $p_2$ )	0.5–6, 10, 16 und 25 bar			
Operating temperature	+5 °C up to +90 °C			
Mounting position/flow direction	any/in arrow direction			
Nominal width	DN 6	DN 12	DN 20	DN 25
Regulation	handwheel	handwheel	toggle	toggle or adjusting screw
Reverse control hysteresis	~ 1 bar			
Weight	390 g	1 kg	3.48 kg	5.26 kg
Material diaphragm/seals	NBR			
Material housing	brass			

\*\*\*measured at  $p_1 = 7$  bar,  $p_2 = 6$  bar and  $\Delta p = 1$  bar

### Dimensions (mm)

	BG 20 G ¼	BG 40 G ½	BG 60 G 1	BG 80 G 1½
<b>A</b>	45	72	116	116
<b>B</b>	45	72	83	114
<b>C</b>	23	30	41	50
<b>D</b>	81	115	175	190
<b>E</b>	56	76	125	140
<b>F</b>	50	55	80	80
<b>G</b>	18	36	58	58





## Compressed air lubricators G 1/8 – G 1/2

Compressed air lubricators are used for the metered enrichment of compressed air with finely atomized oil mist. A control valve ensures the admixture of the oil quantity proportional to the flow rate. Compressed air lubricator in passage form. Multi-grade lubricator with proportional characteristic. Oil refilling under pressure possible. Needle valve for oil dosing with high drop constancy over long periods of time. Bowl made of plastic (polycarbonate). Available as additional option with protective metal cage or metal bowl. Metal oiler attachment available as accessory. Connection thread from G 1/8 to G 1/2.

01 | Druckluftschneidwerkzeuge



327.023M



327.023

### Standard version: with plastic bowl

Size	Order No.			
	G 1/8*	G 1/4*	G 3/8	G 1/2
BG 30 (small)	327.021	327.022	327.023	–
BG 40 (medium)	–	–	327.035*	327.036

\*inlet and outlet reduced (reductions enclosed) see page 119

### Order key for additional options

327.XXXX

└─ M metal bowl

### Spare parts and accessories



322-24

327-67

330-92

Size	Order No.	
	BG 30	BG 40
<b>Mounting set</b> for mounting at the top of the housing	322-24	322-25
<b>Metal bowl with seal</b>	327-92	327-96
<b>Plastic bowl with seal</b>	327-106	327-108
<b>Mounting ring</b> for plastic and metal bowl	287-25	297-2
<b>Sealing ring</b> for all bowls	287-6	297-10
<b>Lubricator attachment</b> , complete, plastic	330-92**	330-92**
<b>Lubricator attachment</b> , complete, metal	327-67	327-67

\*\*mounted

### Oil recommendation

Oil containers made of plastic (polycarbonate and acetate) are attacked by oil additives, anti-frost or synthetic oils. Therefore we recommend regular lubricating oils of approx. 22 up to 32 cSt (Order No.: 583 und 583.1) at 40 °C (in case of percussive tools - such as impact wrenches - up to 68 cSt). Metal containers should be used for other oils, especially for low-temperature oils. Also recommended is a metal lubricator adjusting cap.

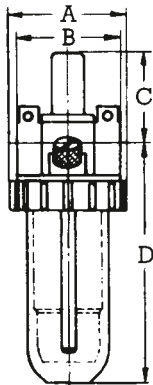
### Technical data

Size	BG 30			BG 40	
	G 1/8	G 1/4	G 3/8	G 3/8	G 1/2
Thread	G 1/8	G 1/4	G 3/8	G 3/8	G 1/2
Nominal flow rate***	1,260 l/min			4,710 l/min	
Min. flow rate****	51 l/min			127 l/min	
Max. operating pressure (p <sub>1</sub> )	plastic bowl	16 bar			
	metal bowl	25 bar			
Operating temperature	plastic bowl	0 °C up to +50 °C			
	metal bowl	0 °C up to +90 °C			
Usable bowl capacity	40 cm <sup>3</sup>			135 cm <sup>3</sup>	
Mounting position / flow direction	vertically / in arrow direction				
Nominal width	DN 6			DN 15	
Nominal pressure (housing)	PN 25				
Weight	400 g			890 g	
Material seals	NBR				
Material housing	zinc die-cast				
Material plastic bowl	polycarbonate				

\*\*\*measured at p<sub>1</sub> = 6 bar and Δp = 1 bar \*\*\*\*oil supply 10 drops/min at 6 bar

### Dimensions (mm)

	BG 30			BG 40	
	G 1/8	G 1/4	G 3/8	G 3/8	G 1/2
<b>A</b>	56		56	87	87
<b>B</b>	57		50	88	80
<b>C</b>	51		51	55	55
<b>D</b>	119		119	156	156







## Compressed air lubricators G 3/4 – G 1 1/2

Compressed air lubricators are used for the metered enrichment of compressed air with finely atomized oil mist. A control valve ensures the admixture of the oil quantity proportional to the flow rate. Compressed air lubricator in a straight through form. Multi-purpose lubricator with proportional characteristic. Housing made of zinc die-cast or aluminium. Available as additional option with protective metal cage or metal container. Oil refilling under pressure possible. Needle valve for oil dosing with high drop constancy over long periods of time. Metal lubricator attachment available as accessory. Connection thread from G 3/4 to G 1 1/2.

### Standard version: with plastic bowl

Size	Order No.			
	G 3/4*	G 1	G 1 1/4*	G 1 1/2
BG 55 (compact)	407.038	407.039	–	–
BG 60 (large)	300.080	300.090	–	–
BG 80 (max)	–	–	327.410	327.411

\*inlet and outlet reduced (reductions enclosed) see page 119



### Order key for additional options

407.XXXX/300.XXXX/327.XXXX

**M** metal bowl

### Spare parts and accessories

Size	Order No.		
	BG 55	BG 60	BG 80
<b>Mounting set</b> for fastening at the top of the housing	405-4	281-26	281-26
<b>Protective metal cage</b> for plastic bowl, (BG 55 with mounting ring)	322-131	–	–
<b>Metal bowl</b> with seal	327-96	327-112	327-112
<b>Plastic bowl</b> with seal	327-108	327-111	327-111
<b>Mounting ring</b> for plastic and metal bowl	297-2	279-2	279-2
<b>Sealing ring</b> for all bowls	297-10	279-9	279-9
<b>Lubricator attachment</b> , complete, plastic	–	330-92**	330-92**
<b>Lubricator attachment</b> , complete, metal	327-67**	327-67	327-67

\*\*mounted



### Technical data

Size	BG 55		BG 60		BG 80	
	G 3/4	G 1	G 3/4	G 1	G 1 1/4	G 1 1/2
Thread	G 3/4	G 1	G 3/4	G 1	G 1 1/4	G 1 1/2
Nominal flow rate***	6,880 l/min		7,970 l/min		8,510 l/min	
Min. flow rate****	127 l/min		182 l/min		182 l/min	
Max. operating pressure (p <sub>1</sub> )	plastic bowl	16 bar				
	metal bowl	25 bar				
Operating temperature	plastic bowl	0 °C up to +50 °C				
	metal bowl	0 °C up to +90 °C				
Usable bowl capacity	135 cm <sup>3</sup>		360 cm <sup>3</sup>		360 cm <sup>3</sup>	
Mounting position/flow direction	vertically/in arrow direction					
Nominal width	DN 20		DN 20		DN 25	
Nominal pressure (housing)	PN 25					
Weight	1.27 kg		1.7 kg		1.97 kg	
Material seals	NBR					
Material housing	zinc die-cast		aluminium		aluminium	
Material plastic bowl	polycarbonate					

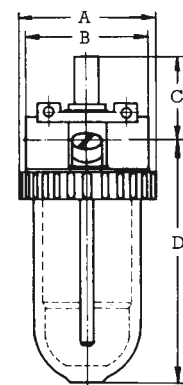
\*\*\*measured at p<sub>1</sub> = 6 bar and Δp = 1 bar \*\*\*\*oil supply 10 drops/min at 6 bar

### Dimensions (mm)

	BG 55		BG 60		BG 80	
	G 3/4	G 1	G 3/4	G 1	G 1 1/4	G 1 1/2
<b>A</b>	87	87	133	133	133	133
<b>B</b>	102	90	134	120	134	120
<b>C</b>	69	69	58	58	65	65
<b>D</b>	166	166	190	190	200	200

### Oil recommendation

Oil containers made of plastic (polycarbonate and acetate) are attacked by oil additives, anti-frost or synthetic oils. Therefore we recommend regular lubricating oils of approx. 22 up to 32 cSt (Order No.: 583 und 583.1) at 40 °C (in case of percussive tools - such as impact wrenches - up to 68 cSt). Metal containers should be used for other oils, especially for low-temperature oils. Also recommended is a metal lubricator adjusting cap.





## Compressed air lubricators G 1½–G 2

Compressed air lubricators are used for the controlled enrichment of compressed air with finely atomised oil mist. A control valve ensures the admixture of the oil quantity proportional to the flow rate. Compressed air lubricator in continuous form. Multi-purpose lubricator with proportional characteristic. Oil refilling under pressure possible. Needle valve for oil dosing with high drop constancy over long periods of time. As additional option with protective metal cage or metal container. Metal lubricator attachment available as accessory. Connection thread from G 1½ to G 2.



457.012



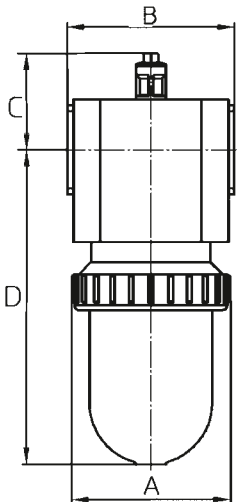
423-179



423-65



457-12



### Standard version: with plastic bowl

Size	Order No.	
	G 1½*	G 2
BG 90 (super)	457.011	457.012

\*inlet and outlet reduced (reductions enclosed) see page 119

### Order key for additional options

457.XXXX M metal bowl

### Spare parts and accessories

Size	Order No.
<b>BG 90</b>	<b>BG 90</b>
<b>Mounting set</b> for mounting at the top of the housing	457-12
<b>Metal bowl</b> with seal	327-112
<b>Plastic bowl</b> with seal	327-111
<b>Fastening ring</b> for plastic and metal bowl	279-2
<b>Sealing ring</b> for all bowls	279-9
<b>Lubricator attachment</b> , complete, plastic	423-179
<b>Lubricator attachment</b> , complete, metal	423-65**

\*\* mounted

### Technical data

Size	BG 90	
Thread	G 1½	G 2
Nominal flow rate***	14,350 l/min	
Min. flow rate****	185 l/min	
Max. operating pressure (p <sub>1</sub> )	plastic bowl	16 bar
	metal bowl	25 bar
Operating temperature	plastic bowl	0 °C up to +50 °C
	metal bowl	0 °C up to +90 °C
Usable bowl capacity	600 cm <sup>3</sup>	
Mounting position/flow direction	vertically/in arrow direction	
Nominal width	DN 50	
Nominal pressure (housing)	PN 25	
Weight	5.29 kg	
Material seals	NBR	
Material housing	aluminium	
Material plastic bowl	polycarbonate	

\*\*\*measured at p<sub>1</sub> = 6 bar and Δp = 1 bar \*\*\*\*oil supply 10 drops/min at 6 bar

### Dimensions (mm)

	BG 90	
	G 1½	G 2
<b>A</b>	133	133
<b>B</b>	160	140
<b>C</b>	80	80
<b>D</b>	270	270

### Oil recommendation

Oil containers made of plastic (polycarbonate and acetate) are attacked by oil additives, anti-frost or synthetic oils. Therefore we recommend regular lubricating oils of approx. 22 up to 32 cSt (Order No.: 583 und 583.1) at 40 °C (in case of percussive tools - such as impact wrenches - up to 68 cSt). Metal containers should be used for other oils, especially for low-temperature oils. Also recommended is a metal lubricator adjusting cap.

## Small lubricators G ¼ and G ¾



### Oil mist due to pulsed air flow.

Compressed air lubricator for attachment to pneumatic tools with intermittent working rhythm, e.g. impact wrenches etc. The oil mist is created by a cyclic air flow. Adjustable oil dosage. Mount the oil suction at the lowest point on the opposite side of the filler plug. With plastic bowl. Connection thread G ¼ and G ¾. **Oil dosage:** The factory-set dosage is approx. 0.4 cm<sup>3</sup> per 100 working cycles. One filling is enough for approx. 3,000 cycles. The regulating screw under the filler plug seals with an O-ring and can be adjusted.

Thread	Order No.
G ¼*	317.12
G ¾	317.14

\*inlet and outlet reduced

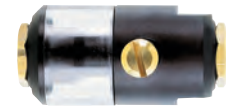
Spare part	Order No.
Closing screw with seal	317-56

### Technical data

Max. operating pressure (p <sub>1</sub> )	10 bar (PN 10)
Operating temperature	0 °C up to +50 °C
Mounting position/flow direction	intake nozzle must always be submerged in oil/ any
Flow rate	approx. 750 l/min at Δp = 1 bar
Usable bowl capacity	12 ml
Nominal width	DN 8
Dimensions	38.5 x 67/60 mm
Weight	87 g
Material seals	NBR
Material housing	anodised aluminium
Material oil inspection glass	polycarbonate

### Oil recommendation

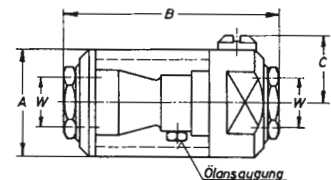
Oil containers made of plastic (polycarbonate and acetate) are attacked by oil additives, anti-frost or synthetic oils. Therefore we recommend regular lubricating oils of approx. 22 up to 32 cSt (Order No.: 583 und 583.1) at 40 °C (in case of percussive tools - such as impact wrenches - up to 68 cSt). Metal containers should be used for other oils, especially for low-temperature oils. Also recommended is a metal lubricator adjusting cap.



317.12



317.14



### Dimensions (mm)

W	G ¼	G ¾
A	33	33
B	67	60
C	22	22

## Small lubricator G ¼



### Oil mist at flowing air stream.

Compressed air lubricator for direct connection to compressed air tools such as wrenches, grinders etc. The oil mist is created by a flowing stream of air. Oil dosage is preset. Easy to fill due to oil filler screw. Oil suction: The suction nozzle must be at the lowest point. Connection thread G ¼ female-G ¼ male. **Oil dosage:** The factory-set dosage is approx. 50 mm<sup>3</sup> per 1 m<sup>3</sup> flow rate. One dosage is sufficient for approx. 10 hours at 109 l/min operation.

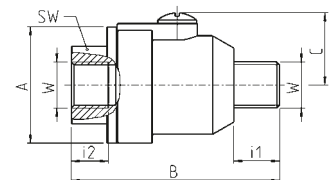
Thread	Order No.
G ¼	317.10

### Technical data

Max. operating pressure (p <sub>1</sub> )	8 bar
Recommended operating pressure (p <sub>1</sub> )	6.2 bar
Operating temperature	-5 °C up to +60 °C
Mounting position/flow direction	intake nozzle must always be submerged in oil/ any
Flow rate	approx. 2,000 l/min at 6 bar
Usable bowl capacity	approx. 5 ml
Nominal width	DN 6
Dimensions	38.5 x 63 mm
Weight	approx. 54 g
Material seals	NBR
Material housing	aluminium
Material oil inspection glass	acetate



317.10



### Dimensions (mm)

W	G ¼
A	36
B	63
C	20.5
W	G ¼
i1	13
i2	10.5



## Filter pressure regulators G 1/8 – G 1/2

Compressed air filter and pressure regulator combined in one space-saving device! Descriptions see individual units (page 29 and page 39). Condensate drain is manual, also in semi-automatic version or available with attached automatic drain. Diaphragm-type pressure regulator with secondary venting (reverse control) and largely independent of upstream pressure. **Control ranges for p<sub>2</sub> from 0.5–3, 6, 10 and 16 bar.** Pressure gauge can be mounted at the front or rear. Mounting with bracket set possible. Actuation by toggle or handwheel. Special versions (e.g. without reverse control) available on request. Connection thread from G 1/8 to G 1/2. The pressure gauge is enclosed.

01 | Compressed air preparation



324.333S



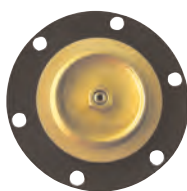
324.363



324.362M



323-68



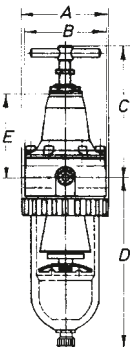
280-221



267-37



323-119



### Dimensions (mm)

	BG 30			BG 40	
	G 1/8	G 1/4	G 3/8	G 3/8	G 1/2
<b>A</b>	56	56	56	87	87
<b>B</b>	61	61	54	90	82
<b>C</b>	99	99	99	134	134
<b>D</b>	131	131	131	172	172
<b>E</b>	67	67	67	87	87

**Standard version: control range 0.5–10 bar, with plastic bowl, with toggle, with pressure gauge, filter porosity 40 µm**

Size	Order No.			
	G 1/8*	G 1/4*	G 3/8	G 1/2
BG 30 (small)	324.313	324.323	324.333	–
BG 40 (medium)	–	–	324.353*	324.363

\*inlet and outlet reduced (reductions enclosed) see page 119

### Order key for all variants

324.XXXX

- plastic bowl (standard, without addition)
- M** metal bowl
- S** protective metal cage — additional options
- 1** 0.5–3 bar
- 2** 0.5–6 bar
- 3** 0.5–10 bar
- 4** 0.5–16 bar — control range secondary pressure (p<sub>2</sub>)
- 1** G 1/8
- 2** G 1/4
- 3** G 3/8
- 5** G 3/8
- 6** G 1/2 — BG 30 — thread
- 2** handwheel, with pressure gauge, with manual drain valve
- 3** toggle, with pressure gauge, with manual drain valve
- 4** handwheel, without pressure gauge, with manual drain valve
- 5** toggle, without pressure gauge, with manual drain valve

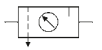
### Spare parts and accessories

Size	Order No.	
	BG 30	BG 40
<b>Mounting set</b> for fastening to the lid	323-68	280-132
<b>Protective metal cage</b> for plastic bowl with mounting ring	322-130	322-131
<b>Metal bowl</b> with seal and manual drain valve	324-101	324-109
<b>Pressure gauge</b> horizontally	Ø50	Ø63
Display range 0–6 bar (for p <sub>2</sub> up to 3 bar)	42	213
Display range 0–10 bar (for p <sub>2</sub> up to 6 bar)	55	214
Display range 0–16 bar (for p <sub>2</sub> up to 10 bar)	85	215
Display range 0–25 bar (for p <sub>2</sub> up to 16 bar)	96	216
<b>Plastic bowl</b> with sealing and manual drain valve	322-112	322-118
<b>Fastening ring</b> for plastic and metal bowl	287-25	297-2
<b>Sealing ring</b> for all bowls	287-6	297-10
<b>Sealing cone</b> , complete	323-119	280-220
<b>Diaphragm</b> , complete	323-152	280-221
<b>Filter element</b> filter porosity 40 µm (mounted)	287-10	267-37
<b>Filter element</b> filter porosity 5 µm	287-13	298-9

### Technical data

	BG 30			BG 40	
	G 1/8	G 1/4	G 3/8	G 3/8	G 1/2
Thread	G 1/8	G 1/4	G 3/8	G 3/8	G 1/2
Nominal flow rate**	990 l/min			2,890 l/min	
Max. operating pressure (p <sub>1</sub> ) plastic bowl/metal bowl	16 bar / 25 bar				
Operating temperature plastic bowl/metal bowl	0 °C up to +50 °C / 0 °C up to +90 °C				
Usable bowl capacity	25 cm <sup>3</sup>			80 cm <sup>3</sup>	
Mounting position/flow direction	vertically, filter downwards/in arrow direction				
Nominal width	DN 6			DN 15	
Nominal pressure (housing)	PN 25				
Pre-pressure dependence	< 3 %			< 2 %	
Reverse control hysteresis	~ 1 bar				
Weight	840 g			2.29 kg	
Material diaphragm/seals	NBR				
Material housing/spring cover	zinc die-cast				
Material plastic bowl/filter element	polycarbonate / sintered bronze				

\*\*measured at p<sub>1</sub> = 8 bar, p<sub>2</sub> = 6 bar and Δp = 1 bar



## Two-piece maintenance unit G 1/8 – G 1/2

Maintenance unit consisting of filter pressure regulator and compressed air lubricator – connected via double nipple. Variations of the individual units are available for purpose-built items. Mounting set is available as accessory. Connection thread from G 1/8 to G 1/2. The pressure gauge is enclosed.

### Standard version: control range 0.5–10 bar, with plastic bowl and manual drain valve

Size	Order No.			
	G 1/8*	G 1/4*	G 3/8	G 1/2
BG 30 (small)	331.21	331.22	331.23	–
BG 40 (medium)	–	–	331.35*	331.36

\*inlet and outlet reduced (reductions enclosed) see page 119



331.23

### Order key for additional options

331.XXX

- M** metal bowl
- S** protective metal cage

### Spare parts and accessories

Size	Order No.	
	BG 30	BG 40
<b>Mounting set</b> for fixing to the lid (pressure regulator)	323-68	280-132
<b>Connecting parts</b> (double nipple) of the base units (without reduction) for G 3/8	185.55**	185.55**
<b>Connecting parts</b> (double nipple) of the base units (without reduction) for G 1/2	–	185.77**

\*\* delivery only in packaging unit (PU) of 5 pieces each



331.36M



323-68

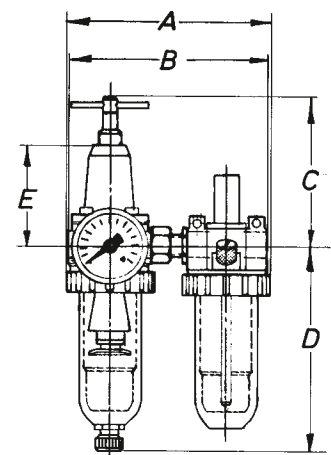
### Technical data

Size	BG 30			BG 40	
	G 1/8	G 1/4	G 3/8	G 3/8	G 1/2
Thread	G 1/8	G 1/4	G 3/8	G 3/8	G 1/2
Nominal flow rate***	630 l/min			1,990 l/min	
Min. flow rate****	51 l/min			127 l/min	
Max. operating pressure (p <sub>1</sub> )	plastic bowl	16 bar			
	metal bowl	25 bar			
Operating temperature	plastic bowl	0 °C up to +50 °C			
	metal bowl	0 °C up to +90 °C			
Usable bowl capacity	filter bowl	25 cm <sup>3</sup>		80 cm <sup>3</sup>	
	oil bowl	40 cm <sup>3</sup>		135 cm <sup>3</sup>	
Mounting position/flow direction	vertically/in arrow direction				
Nominal width	DN 6			DN 15	
Nominal pressure (housing)	PN 25				
Pre-pressure dependence	< 3 %			< 2 %	
Reverse control hysteresis	~ 1 bar				
Weight	1.4 kg			3.67 kg	
Material diaphragm/seals	NBR				
Material housing/spring cover	zinc die-cast				
Material plastic bowl	polycarbonate				
Material filter element	sintered bronze				

\*\*\* measured at p<sub>1</sub> = 8 bar, p<sub>2</sub> = 6 bar and Δp = 1 bar \*\*\*\* oil supply: 10 drops/min at 6 bar

### Dimensions (mm)

	BG 30			BG 40	
	G 1/8	G 1/4	G 3/8	G 3/8	G 1/2
<b>A</b>	124	124	124	182	182
<b>B</b>	130	130	122	184	176
<b>C</b>	99	99	99	134	134
<b>D</b>	131	131	131	172	172
<b>E</b>	67	67	67	87	87



### Three-piece maintenance unit G 1/8 – G 1/2



Maintenance unit consisting of compressed air filter, pressure regulator and compressed air lubricator - connected via double nipple. Variations of the individual units are available for purpose-built items. Mounting set available as accessory. Connection thread G 1/8 to G 1/2. The pressure gauge is enclosed.



333.23

**Standard version: control range 0.5–10 bar, with plastic bowl and manual drain valve**

Size	Order No.			
	G 1/8*	G 1/4*	G 3/8	G 1/2
BG 30 (small)	333.21	333.22	333.23	–
BG 40 (medium)	–	–	334.35*	334.36

\*inlet and outlet reduced (reductions enclosed) see page 119

#### Order key for additional options

333.XXX/334.XXX

- M metal bowl
- S protective metal cage

#### Oil recommendation

Oil containers made of plastic (polycarbonate and acetate) are attacked by oil additives, anti-frost or synthetic oils. Therefore we recommend regular lubricating oils of approx. 22 up to 32 cSt (Order No.: 583 und 583.1) at 40 °C (in case of percussive tools - such as impact wrenches - up to 68 cSt). Metal containers should be used for other oils, especially for low-temperature oils. Also recommended is a metal lubricator adjusting cap.

#### Spare parts and accessories

Size	Order No.	
	BG 30	BG 40
<b>Mounting set</b> for fixing to the lid (pressure regulator)	323-68	280-132
<b>Connecting parts</b> (double nipple) of the base units (without reduction) for G 3/8	185.55**	185.55**
<b>Connecting parts</b> (double nipple) of the base units (without reduction) for G 1/2	–	185.77**

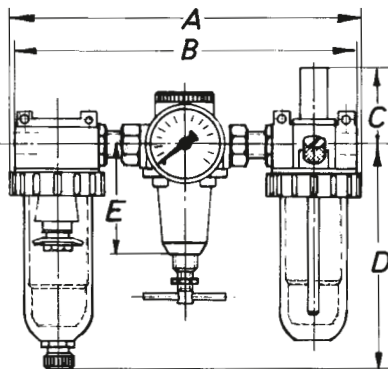
\*\* delivery only in packaging unit (PU) of 5 pieces each

#### Technical data

Size	BG 30			BG 40
	G 1/8	G 1/4	G 3/8	G 1/2
Thread	G 1/8	G 1/4	G 3/8	G 1/2
Nominal flow rate***	540 l/min			1,990 l/min
Min. flow rate****	51 l/min			127 l/min
Max. operating pressure (p <sub>1</sub> )	plastic bowl			16 bar
	metal bowl			25 bar
Operating temperature	plastic bowl			0 °C up to +50 °C
	metal bowl			0 °C up to +90 °C
Usable bowl capacity	filter bowl		25 cm <sup>3</sup>	80 cm <sup>3</sup>
	oil bowl		40 cm <sup>3</sup>	135 cm <sup>3</sup>
Mounting position/flow direction	vertically/in arrow direction			
Nominal width	DN 6			DN 15
Nominal pressure (housing)	PN 25			
Pre-pressure dependence	< 3 %			< 2 %
Reverse control hysteresis	~ 1 bar			
Weight	1.78 kg			3.22 kg
Material diaphragm/seals	NBR			
Material housing/spring cover	zinc die-cast			
Material plastic bowl	polycarbonate			
Material filter element	sintered bronze			

\*\*\* measured at p<sub>1</sub> = 8 bar, p<sub>2</sub> = 6 bar and Δp = 1 bar

\*\*\*\* oil supply 10 drops/min at 6 bar

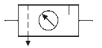


#### Dimensions (mm)

	BG 30			BG 40	
	G 1/8	G 1/4	G 3/8	G 3/8	G 1/2
<b>A</b>	196	196	196	281	281
<b>B</b>	205	205	197	282	274
<b>C</b>	51	51	51	55	55
<b>D</b>	135	135	135	172	172
<b>E</b>	67	67	67	85	85



### Three-piece maintenance unit G 3/4 – G 1 1/2



Maintenance units consisting of compressed air filter, pressure regulator and compressed air lubricator – connected via double nipple. Variations of the individual units are available for purpose-built items. Mounting set available as accessory. Connection thread G 3/4 to G 1 1/2. The pressure gauge is enclosed.

#### Standard version: control range 0.5–10 bar, with plastic bowl and manual drain valve

Size	Order No.			
	G 3/4*	G 1	G 1 1/4*	G 1 1/2
BG 55 (compact)	415.38	415.39	–	–
BG 60 (large)	334.48	334.49	–	–
BG 80 (max)	–	–	334.410	334.411

\*inlet and outlet reduced (reductions enclosed) see page 119



334.49

#### Order key for additional options

415.XX(X)X/334.XX(X)X

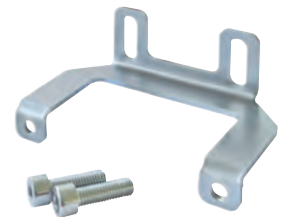
**M** metal bowl

#### Spare parts and accessories

Size	Order No.		
	BG 55	BG 60	BG 80
<b>Mounting set</b> for mounting at the top of the housing (required twice)	406-17	281-26	281-26
<b>Connecting parts</b> (double nipple) of the base units (without reduction) for G 1	415-12	415-14	–
<b>Connecting parts</b> (double nipple) of the base units (without reduction) for G 1 1/2	–	–	280-228



406-17



281-26

#### Technical data

Size	BG 55		BG 60		BG 80	
	G 3/4	G 1	G 3/4	G 1	G 1 1/4	G 1 1/2
Thread	G 3/4	G 1	G 3/4	G 1	G 1 1/4	G 1 1/2
Nominal flow rate***	5,800 l/min		6,520 l/min		7,250 l/min	
Min. flow rate****	127 l/min		182 l/min		182 l/min	
Max. operating pressure (p <sub>1</sub> )	plastic bowl	16 bar				
	metal bowl	25 bar				
Operating temperature	plastic bowl	0 °C up to +50 °C				
	metal bowl	0 °C up to +90 °C				
Usable bowl capacity	filter bowl	80 cm <sup>3</sup>	260 cm <sup>3</sup>	260 cm <sup>3</sup>	260 cm <sup>3</sup>	260 cm <sup>3</sup>
	oil bowl	135 cm <sup>3</sup>	360 cm <sup>3</sup>	360 cm <sup>3</sup>	360 cm <sup>3</sup>	360 cm <sup>3</sup>
Mounting position/flow direction	vertically / in arrow direction					
Nominal width	DN 20		DN 20		DN 25	
Nominal pressure (housing)	PN 25					
Pre-pressure dependence	< 3 %		< 1.5 %			
Reverse control hysteresis	~ 1 bar					
Weight	5.25 kg		7.27 kg		9.95 kg	
Material diaphragm/seals	NBR		NBR		NBR	
Material housing: filter/compressed air lubricators	zinc die-cast		aluminium		aluminium	
Material housing: pressure regulators	zinc die-cast		brass		brass	
Material filter element	sintered bronze		sintered bronze		sintered bronze	
Material plastic bowl	polycarbonate		polycarbonate		polycarbonate	

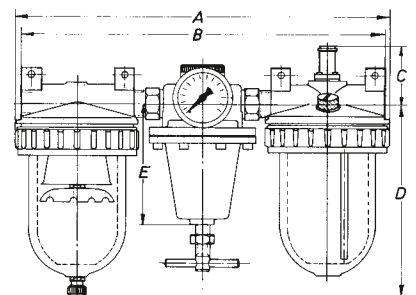
\*\*\* measured at p<sub>1</sub> = 8 bar, p<sub>2</sub> = 6 bar and Δp = 1 bar \*\*\*\* oil supply 10 drops/min at 6 bar

#### Oil recommendation

Oil containers made of plastic (polycarbonate and acetate) are attacked by oil additives, anti-frost or synthetic oils. Therefore we recommend regular lubricating oils of approx. 22 up to 32 cSt (Order No.: 583 und 583.1) at 40 °C (in case of percussive tools - such as impact wrenches - up to 68 cSt). Metal containers should be used for other oils, especially for low-temperature oils. Also recommended is a metal lubricator adjusting cap.

#### Dimensions (mm)

	BG 55		BG 60		BG 80	
	G 3/4	G 1	G 3/4	G 1	G 1 1/4	G 1 1/2
<b>A</b>	290	290	426	426	426	426
<b>B</b>	315	290	382	370	382	370
<b>C</b>	69	69	58	58	58	58
<b>D</b>	176	176	206	206	206	206
<b>E</b>	90	90	130	130	130	130



### Three-piece maintenance unit G 1½–G 2



Maintenance unit consisting of compressed air filter, pressure regulator and compressed air lubricator—connected via double nipple. Variations of the individual units are available for purpose-built items. Mounting set available as accessory. Connection thread from G 1½ to G 2.



458.212

#### Standard version: control range 0.5–10 bar, with plastic bowl and manual drain valve

Size	Order No.	
	G 1½*	G 2
BG 90 (super)	458.211	458.212

\*inlet and outlet reduced (reductions enclosed) see page 119

#### Order key for all variants

458.21XX M metal bowl



458-1

#### Spare parts and accessories

Size	Order No.
<b>Mounting set</b> for attachment to housing (at filter and lubricator) complete with 2 brackets	<b>BG 90</b> 458-1
<b>Connecting parts</b> (double nipples) of the base units (without reduction) for G 1½	454-9

#### Technical data

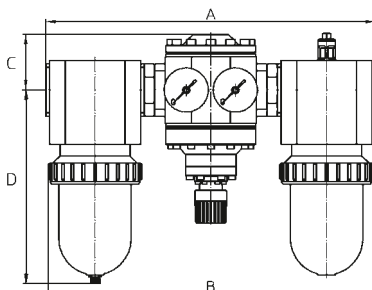
Size	BG 90	
Thread	G 1½	G 2
Nominal flow rate***	12,680 l/min	
Min. flow rate****	182 l/min	
Max. operating pressure (p <sub>1</sub> )	plastic bowl	16 bar
	metal bowl	25 bar
Operating temperature	plastic bowl	0 °C up to +50 °C
	metal bowl	0 °C up to +90 °C
Usable bowl capacity	filter bowl	500 cm <sup>3</sup>
	oil bowl	600 cm <sup>3</sup>
Mounting position/flow direction	vertically/in arrow direction	
Nominal width	DN 50	
Nominal pressure (housing)	PN 25	
Pre-pressure dependence	< 1 %	
Reverse control hysteresis	~ 1 bar	
Weight	17.53 kg	
Material diaphragm/seals	NBR	
Material housing: filters and compressed air lubricators/pressure regulators	aluminium/aluminium die-cast	
Material plastic bowl	polycarbonate	
Material filter element	sintered bronze	

\*\*\*measured at p<sub>1</sub> = 8 bar, p<sub>2</sub> = 6 bar and Δp = 1 bar

\*\*\*\*oil supply 10 drops/min at 6 bar

#### Oil recommendation

Oil containers made of plastic (polycarbonate and acetate) are attacked by oil additives, anti-frost or synthetic oils. Therefore we recommend regular lubricating oils of approx. 22 up to 32 cSt (Order No.: 583 und 583.1) at 40 °C (in case of percussive tools - such as impact wrenches - up to 68 cSt). Metal containers should be used for other oils, especially for low-temperature oils. Also recommended is a metal lubricator adjusting cap.



#### Dimensions (mm)

	BG 90	
	G 1½	G 2
<b>A</b>	490	470
<b>B</b>	462	462
<b>C</b>	90	90
<b>D</b>	270	270

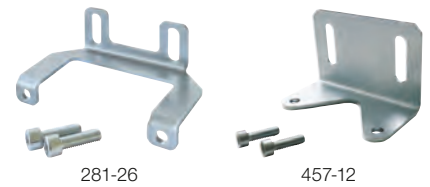
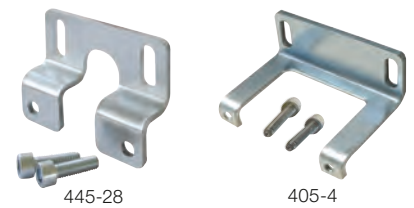
## Mounting and connecting elements

### Mounting sets for attachment at the top of the housing

Contents: bracket and two (four) cap screws.

Suitable for	Size	Order No.
Compressed air filters, microfilters, compressed air lubricators	<b>BG 30 (small)</b>	<b>322-24</b>
Compressed air filters, microfilters, compressed air lubricators	<b>BG 40 (medium)</b>	<b>322-25</b>
Compressed air filters, microfilters, compressed air lubricators	<b>BG 55 (compact)</b>	<b>405-4</b>
Compressed air filters, microfilters, compressed air lubricators, three-piece* maintenance unit	<b>BG 60 (large)</b> <b>BG 80 (max)</b>	<b>281-26</b>
Compressed air filters, microfilters, compressed air lubricators	<b>BG 90 (super)</b>	<b>457-12</b>
40/60 bar compressed air filter, 40/60 bar microfilters	<b>BG 40 (I)</b>	<b>445-39</b>
40/60 bar compressed air filter, 40/60 bar microfilters	<b>BG 60 (II)</b>	<b>445-28</b>
40 bar compressed air filter, 40 bar microfilters	<b>BG 90 (super)</b>	<b>429-27</b>
Three-piece maintenance unit (Contents: 2 brackets and 4 screws)	<b>BG 90 (super)</b>	<b>458-1</b>
Large pressure regulator (must be fastened with 4 screws)	<b>BG 90 (super)</b>	<b>417-47</b>
60 bar high-pressure regulator (must be fastened with 4 screws)	<b>BG 60 (III)</b>	<b>302-19</b>

\*set is required twice



### Mounting sets for fixing to the lid

Contents: Mounting bracket, nut and spacer.

Suitable for	Size	Order No.
Pressure regulators, precision pressure regulators, filter pressure regulators, two-piece/three-piece* maintenance unit	<b>BG 30 (small)</b>	<b>323-68</b>
Pressure regulator	<b>BG 35 (intermediate)</b>	<b>280-134</b>
Pressure regulators, precision pressure regulators, filter pressure regulators, two-piece/three-piece* maintenance unit	<b>BG 40 (medium)</b>	<b>280-132</b>
Pressure regulator, three-piece* maintenance unit	<b>BG 55 (compact)</b>	<b>406-17</b>
40 bar pressure regulator, water pressure regulator (contents: elbow shape bracket with two screws, two nuts)	<b>BG 30 (small)</b>	<b>286-88</b>
40 bar pressure regulator, water pressure regulator (contents: elbow shape bracket with two screws, two nuts)	<b>BG 40 (medium)</b>	<b>274-48</b>
60 bar High pressure regulator (contents: elbow shape bracket with two screws, two nuts)	<b>BG 30 (I) + 40 (II)</b>	

\*set is required twice



### Mounting sets for fastening to the lid fastening screws

Two fastening screws have to be loosened and the bracket has to be mounted between them.

Contents: Mounting bracket and two cylindrical screws.

Suitable for	Size	Order No.
Pressure regulators, filter pressure regulators, water pressure regulators	<b>BG 60 (large)</b> <b>BG 80 (max)</b>	<b>280-239</b>



## Panel mounting

### Panel mountings

Contents: one or two nuts and spacers.

Suitable for	Size	Thread (nut)	Order No.
Pressure regulators, precision pressure regulators	<b>BG 30 (small)</b>	M14 × 1	<b>323-69</b>
Pressure regulator	<b>BG 35 (intermediate)</b>	M20 × 1.5	<b>323-66</b>
Pressure regulator, Precision pressure regulators	<b>BG 40 (medium)</b>	M22 × 1	<b>280-133</b>
Pressure regulator	<b>BG 55 (compact)</b>	M28 × 1.5	<b>406-18</b>
40 bar Pressure regulator, Water pressure regulator	<b>BG 30 (small)</b>	M20 × 1.5	<b>286-89</b>
40 bar Pressure regulator, Water pressure regulator	<b>BG 40 (medium)</b>	M28 × 1.5	<b>274-49</b>
Pressure regulator with internal gauge	<b>BG 30 (I)</b>	M48 × 1.5	<b>367-33</b>

