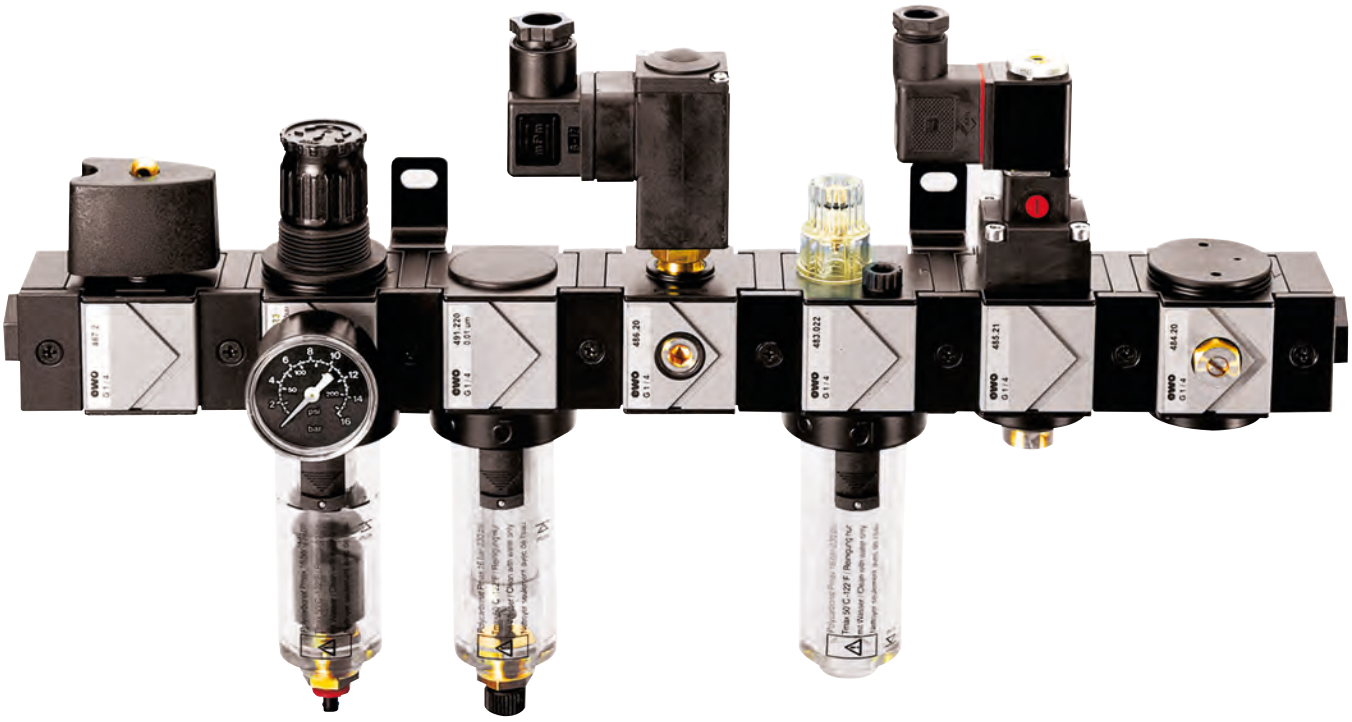
variobloc series – combinations for highest demands and top performance!



When handling compressed air, efficient filtration, low pressure drop, high flow and constant operating pressure as well as maximum safety are essential criteria for the productive and economical use of processing equipment.
The innovative variobloc module series fulfils these requirements for modern, high-performance systems with optimum handling properties at a high level.

The complete modular system provides a variety of design options and makes it easy to adapt the components individually and quickly to different conditions.

The differences are in the details: Easy handling, high performance or long service life – these qualities also provide advantages for you.

- **Safety acc. to EN 983 (machines, plants and components)**
- **Modern industrial design**
- **Durable metal housing (zinc die-cast) with dual-surface protection**
- **Connection thread acc. to DIN with flat sealing surface**
- **Plastic or metal bowls with bayonet lock**
- **Retrofittable protective metal cage for plastic bowl**
- **Optional semi- and fully automatic drain valves**
- **Two combinable connection systems (comfort / compact)**
- **Comfort connection module with self-adhesive O-rings**
- **Integrated T-bracket as connection module**
- **Direct wall mounting**
- **High torsional stiffness / stability of the connection**
- **Optimum control characteristics due to rolling diaphragm**
- **Lubricator with improved flow performance and atomization**

Materials used

Housing, mounting elements	zinc die-cast (Z 410)
Lid, bottom (regulator)	PA 6 – GF 30
Handwheel	POM
Cover	ABS
Seal, diaphragm	NBR
Filter element	PE, sintered
Impact insert, cutting wheel	POM
Bowl	polycarbonate
Latch	POM

Pressure spring	zinc-plated steel
Counter pressure spring	stainless steel
Cone, diaphragm plate	brass
Lubricator attachment	spec. PA
Oil regulation	PU
Metal bowl, bezel	zinc die-cast (Z 410)
Inspection tube (at metal bowl)	spec. PA
Protective basket	1.0338 DC 04

moulded parts have a material code, which makes them easy to dispose or well recyclable

Compressed air filters type 482 G ¼ – G 1

Compressed air filters clean the compressed air of solid and liquid components (dirt particles, oxidation products, condensation water) and therefore they protect the other components against dirt and wear. Filtration takes place in a two-stage process by cyclone separation (condensation water) and PE filter element (particles). Size: BG 20, BG 30 with connection threads G ¼ and G ⅜ as well as size: BG 40, BG 50 with connection threads G ½, G ¾ and G 1 available. There are three types of condensate drains available: manually operated, semi-automatic or fully automatic (float-controlled).

Standard version: with plastic bowl and manual drain valve, filter porosity 40 µm

	Order No.				
Size	**BG 20 (I)**	**BG 30 (I)**	**BG 40 (II)**	**BG 50 (II)**	
Thread	**G ¼**	**G ⅜**	**G ½**	**G ¾**	**G 1***
	482.221	**482.231**	–	–	–
	–	–	**482.261**	**482.281**	**482.291**

*inlet and outlet with threaded connection plate-set G 1 included, see page 75

482.221 482.231S 482.231M

Order key for all variants

482.XXXX

- plastic bowl (standard, without addition)
- **M** metal bowl
- **S** protective metal cage

→ bowl variant (optional)

- **1** 40 µm
- **2** 5 µm

→ filter porosity

- **2** G ¼ → BG 20
- **3** G ⅜ → BG 30
- **6** G ½ → BG 40
- **8** G ¾ → BG 50
- **9** G 1

→ thread

- **2** manual drain valve (p_1 0 – 20 bar)
- **3** automatic integrated drain valve (p_1 1.5 – 12 bar)
- **5** semi-automatic drain valve (p_1 0.5 – 20 bar)
- **6** automatic attachable drain valve A (p_1 4 – 16 bar)

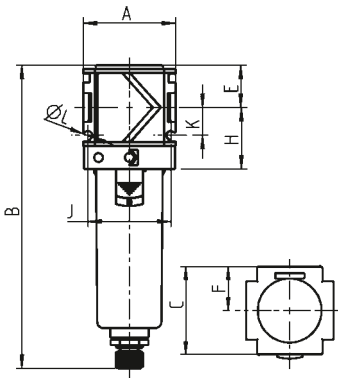
Notice

Cover available in individual colour on request (standard: grey).

480-7

Spare parts and accessories

	Order No.			
Size	**BG 20**	**BG 30**	**BG 40**	**BG 50**
Metal bowl with manual drain valve	**480-28**		**480-213**	
Plastic bowl with protective metal cage with manual drain valve	**480-90**		**480-226**	
Protective metal cage	**480-25**		**480-216**	
Plastic bowl with manual drain valve	**480-18**		**480-210**	
Filter element filter porosity 40 µm (mounted)	**480-7**		**480-219**	
Filter element filter porosity 5 µm	**480-45**		**480-220**	



Technical data

Size		**BG 20**	**BG 30**	**BG 40**	**BG 50**	
Thread		G ¼	G ⅜	G ½	G ¾	G 1
Nominal flow rate (l/min)**		1,960	2,170	3,480	3,800	3,800
Filter porosity		40 µm (optionally: 5 µm)				
Max. operating pressure (p_1)	plastic bowl	16 bar (12 bar with automatic integrated drain valve)				
	metal bowl	20 bar (12 bar with automatic integrated drain valve)				
Max. operating temperature	plastic bowl	50 °C				
	metal bowl	80 °C				
Condensate volume		25 cm^3	25 cm^3	85 cm^3	85 cm^3	85 cm^3
Condensate drain		manual (optionally: semi-automatic, automatic)				
Material housing		zinc die-cast				
Material bowl		plastic (polycarbonate) / (optionally: metal)				
Weight		310 g	310 g	840 g	840 g	1.3 kg

**measured at 6 bar inlet pressure (p_1) and pressure drop Δp = 1 bar; with filter element 5 µm flow rate approx. 20 % reduced

Dimensions (mm)

	BG 20	**BG 30**	**BG 40**	**BG 50**	
	G ¼	G ⅜	G ½	G ¾	G 1
A	48		70	125	
B	158		202	202	
C	48		70	70	
E	22		26	26	
F	24		35	35	
H	32		44	44	
J	43		62	62	
K	14.5		18	18	
L (Ø)	4.4		5.4	5.4	

condensate drain valves starting from page 95, fastening and connecting elements see page 75

Microfilters type 491 G ¼ – G 1

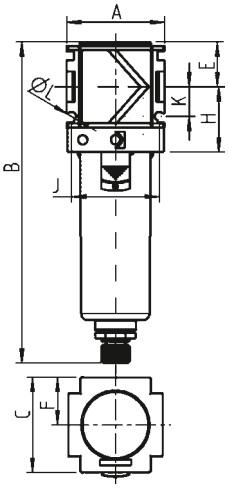
Microfilters with borosilicate micro-fibre fleece fulfil special requirements for the purity of compressed air. As high-performance filters, they protect valves, cylinders or other actuators. In a second stage behind the standard filter, they remove 99.999 % of the smallest remaining particles of water, oil and dirt (at 0.01 µm), removing almost all residues. Prefilter 5 µm recommended. Size: BG 20 or BG 30, with connection threads G ¼ and G ⅜, size: BG 40 or BG 50, available with connection threads G ½, G ¾ and G 1.

491.230 491.230S 491.230M

Notice

Cover available in individual colour on request (standard: grey).

491-5 491-4



Dimensions (mm)

	BG 20	BG 30	BG 40	BG 50	
	G ¼	G ⅜	G ½	G ¾	G 1
A	48		70	70	125
B	158		202	202	202
C	48		70	70	70
E	22		26	26	26
F	24		35	35	35
H	32		44	44	44
J	43		62	62	62
K	14.5		18	18	18
L(Ø)	4.4		5.4	5.4	5.4

Standard version: with plastic bowl and manual drain valve, without contamination indicator

	Order No.				
Size	**BG 20 (I)**	**BG 30 (I)**	**BG 40 (II)**	**BG 50 (II)**	
Thread	**G ¼**	**G ⅜**	**G ½**	**G ¾**	**G 1***
	491.220	**491.230**	–	–	–
	–	–	**491.260**	**491.280**	**491.290**

*inlet and outlet with threaded connection plate-set G 1 included, see page 75

Order key for all variants

491.XXXX

- plastic bowl (standard, without addition)
- **M** metal bowl
- **S** protective metal cage

→ bowl variant (optional)

- **0** without
- **1** mechanical
- **2** electrical

→ contamination indicator

- **2** G ¼ → BG 20
- **3** G ⅜ → BG 30
- **6** G ½ → BG 40
- **8** G ¾ → BG 50
- **9** G 1 → BG 50

→ thread

- **2** manual drain valve (p_1 0 – 20 bar)
- **5** semi-automatic drain valve (p_1 0.5 – 20 bar)
- **6** automatic attachable drain valve A (p_1 4 – 16 bar)

Spare parts and accessories

	Order No.			
Size	**BG 20**	**BG 30**	**BG 40**	**BG 50**
Metal bowl with manual drain valve	**480-28**		**480-213**	
Protective metal cage	**480-25**		**480-216**	
Pressure switch for electrical output signal, differential pressure 0.7 bar	**491-5**		**491-5**	
Plastic bowl with manual drain valve	**491-13**		**491-108**	
Microfilter element with seal	**491-4**		**491-103**	

Technical data

Size		**BG 20**	**BG 30**	**BG 40**	**BG 50**	
Thread		G ¼	G ⅜	G ½	G ¾	G 1**
Nominal flow rate (l/min)**		402	457	1,090	1,200	1,200
Particle separation		99.999 %, referred to 0.01 µm (prefiltration to 5 µm necessary)				
Residual oil content		0.01 mg/m³				
Air quality acc. to ISO 8573.1		class 1 dirt, class 1 oil				
Max. operating pressure (p_1)	plastic bowl	16 bar				
	metal bowl	20 bar				
Max. operating temperature	plastic bowl	50 °C				
	metal bowl	80 °C				
Condensate volume		10 cm³	10 cm³	30 cm³	30 cm³	30 cm³
Condensate drain		manual (optionally: semi-automatic, automatic)				
Material housing		zinc die-cast				
Material bowl		plastic (polycarbonate) / (optionally: metal)				
Weight		310 g	310 g	870 g	870 g	1.33 kg

**measured at 7 bar pre-pressure (p_1), and pressure drop Δp = 0.1 bar

condensate drain valves starting from page 95

Membrane air dryer type 494 G ¼ – G 1

A membrane air dryer is used for the efficient removal of water vapour from the compressed air and makes a significant contribution to increasing process reliability. The membrane dryer fulfils the high demands on compressed air quality with the highest reliability (guaranteed drying). Low pressure loss. Maintenance-free as there are no wearing parts. No electrical energy and no environmentally harmful drying materials necessary. No condensate accumulation, as this is "flushed" into the atmosphere with the drying stream. Simple combination with variobloc filters. Pre-filtered compressed air is essential for the function and service life of the membrane dryers. We recommend the model 482 and the model 491 microfilter as pre-filters. Available in two sizes for different degrees of drying: performance ranges with nominal flow rates of 54 l/min – 217 l/min (BG 20, 30) and 326 l/min – 798 l/min (BG 40, 50). With pressure dew point suppression of 20 K. **Areas of application:** automotive, metal and wood industry as well as other industries (e.g. paint shops, industrial drying, instrument air, pneumatic controls, medical air, analysis equipment, compressed air control cabinets, etc.).

Standard version: output 217 l/min (BG 20, 30) or 798 l/min (BG 40, 50), with T-bracket

	Order No.				
Size	**BG 20 (I)**	**BG 30 (I)**	**BG 40 (II)**	**BG 50 (II)**	
Thread	**G ¼**	**G ⅜**	**G ½**	**G ¾**	**G 1***
	494.241	**494.341**	**–**	**–**	**–**
	–	**–**	**494.641**	**494.841**	**494.941**

*inlet and outlet with threaded connection plate-set G 1 included, see page 75

494.241

Order key for all variants

494.XXX

- **0** without mounting / **1** with T-bracket — combination possible

	BG 20, 30	BG 40, 50
1	54	326
2	109	435
3	163	580
4	217	800

size (= flow rate [l/min]**)

2	G ¼	BG 20
3	G ⅜	BG 30
6	G ½	BG 40
8	G ¾	BG 50
9	G 1	

thread

**at 7 bar, inlet pressure dew point +35 °C, outlet pressure dew point +15 °C

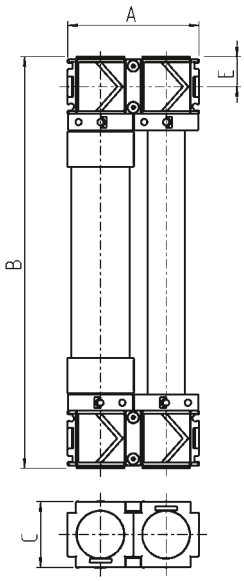
Technical data

Size	**BG 20**	**BG 30**	**BG 40**	**BG 50**	
Thread	G ¼	G ⅜	G ½	G ¾	G 1
Operating pressure range (p_1)	0 – 12 bar				
Operating temperature	1.5 – 60 °C				
Differential pressure	200 mbar				
Air quality acc. to ISO 8573.1	class 1 dirt, class 1 oil				
Material membrane fiber	PES				
Material membrane cover	aluminium				
Material housing	zinc die-cast				
Material seals	NBR				
Weight for size 1-4 (kg)	4.2/4.4/4.6/4.8		5.2/5.4/5.6/5.8		

Size	**flow rate [l/min]** at output pressure dew point (°C)**			
	15 °C	**3 °C**	**-20 °C**	**-40 °C**
BG 20, BG 30				
1	54	40	25	18
2	109	78	51	36
3	163	116	78	57
4	217	154	103	74
BG 40, BG 50				
1	326	232	154	112
2	435	308	204	148
3	581	464	308	225
4	798	618	411	297
Purging air requirement (%)	10	14	21	29
Drainage (%)	69.70	86.53	98.20	99.77

Adjusted performance = flow rate × C_{OP}									
Calculation of the correct capacity of the membrane dryer (flow rate × correction factor)									
bar	4	5	6	7	8	9	10	11	12
C_{OP} (Correction factor)	0.41	0.56	0.76	1	1.22	1.48	1.76	1.86	2.22

fastening and connecting elements see page 75



Dimensions (mm)

	BG 20, BG 30			
Size	1	2	3	4
A	96			
B	298	396	498	578
C	48			
E	22			
	BG 40, BG 50			
Size	1	2	3	4
A	140			
B	406	470	559	686
C	70			
E	26			

Activated carbon filter type 493 G ¼ – G 1

Activated carbon filters are used to remove oil vapours and other organic pollutants from compressed air. The activated carbon fibres are located between two stainless steel nets (cleaning is not possible, replacement recommended after approx. 1,000 operating hours). The compressed air which is to be cleaned should be dry and free of impurities. The use of a microfilter is strongly recommended. **Notice:** some hazardous substances are either not or only slightly absorbable with activated carbon (e.g. carbon dioxide, carbon monoxide, ammonia).


493.03


493.03S


493.03M

Standard version: with plastic bowl, without drain valve

	Order No.				
Size	**BG 20 (I)**	**BG 30 (I)**	**BG 40 (II)**	**BG 50 (II)**	
Thread	**G ¼**	**G ⅜**	**G ½**	**G ¾**	**G 1***
	493.02	**493.03**	**–**	**–**	**–**
	–	**–**	**493.06**	**493.08**	**493.09**

*inlet and outlet with threaded connection plate-set G 1 included, see page 75

Order key for all variants

493.0XX

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

→ additional option

- **2** G ¼
- **3** G ⅜
- **6** G ½
- **8** G ¾
- **9** G 1

→ BG 20 / BG 30 / BG 40 / BG 50 → thread

Notice

Cover available in individual colour on request (standard: grey).


493-2

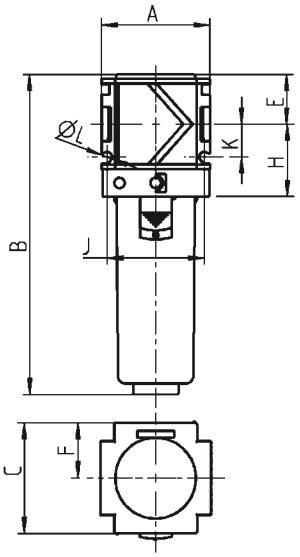
Spare parts and accessories

	Order No.			
Size	**BG 20**	**BG 30**	**BG 40**	**BG 50**
Metal bowl	**483-10**		**483-113**	
Protective metal cage	**480-25**		**480-216**	
Plastic bowl	**483-7**		**483-110**	
Activated carbon filter element with seal	**493-2**		**493-102**	

Technical data

Size		**BG 20**	**BG 30**	**BG 40**	**BG 50**	
Thread		G ¼	G ⅜	G ½	G ¾	G 1
Nominal flow rate (l/min)**		870	1,090	1,300	1,410	1,410
Residual oil content		0.003 mg/m³				
Air quality acc. to ISO 8573.1		class 1 dirt, class 1 oil				
Max. operating pressure (p_1)	plastic bowl	16 bar				
	metal bowl	20 bar				
Max. operating temperature	plastic bowl	50 °C				
	metal bowl	80 °C				
Material housing		zinc die-cast				
Material bowl		plastic (polycarbonate) / (optionally: metal)				
Weight		320 g	320 g	900 g	900 g	1.4 kg

**measured at 7 bar pre-pressure (p_1), and pressure drop Δp = 0.2 bar



Dimensions (mm)

	BG 20	**BG 30**	**BG 40**	**BG 50**	
	G ¼	G ⅜	G ½	G ¾	G1
A	48		70	70	125
B	142		193	193	193
C	48		70	70	70
E	22		26	26	26
F	24		35	35	35
H	32		44	44	44
J	43		62	62	62
K	14.5		18	18	18
L (Ø)	4.4		5.4	5.4	5.4

fastening and connecting elements see page 75

Pressure regulator type 481 G ¼ – G 1

Pressure regulators with a diaphragm design regulate the line pressure within the interconnected system to the set working pressure/secondary pressure (p_2) and keep it at a largely constant level, independent of pressure fluctuations and air consumption. This guarantees an optimal and economical effectiveness of the systems. The integrated overpressure protection (secondary venting) allows a reduction of the secondary pressure (reverse control) without air extraction. At the same time, compressed air vents into the atmosphere as soon as the pressure on the secondary side exceeds the set value. **Notice:** to avoid contamination or failure, a 482 filter should be installed in front.

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

	Order No.				
Size	**BG 20 (I)**	**BG 30 (I)**	**BG 40 (II)**	**BG 50 (II)**	
Thread	**G ¼**	**G ⅜**	**G ½**	**G ¾**	**G 1***
	481.223	**481.233**	**–**	**–**	**–**
	–	**–**	**481.263**	**481.283**	**481.293**

*inlet and outlet with threaded connection plate-set G 1 included, see page 75

481.233 481.233 A 481.233 D

Order key for all variants

481.XXXX

- **A** lockable, with padlock
- **D** gauge with color code 0 – 16 bar

→ additional options (combination possible)

- **2** 0.5 – 6 bar
- **3** 0.5 – 10 bar
- **4** 0.5 – 16 bar

→ control range secondary pressure (p_2)

- **2** G ¼ → BG 20
- **3** G ⅜ → BG 30
- **6** G ½ → BG 40
- **8** G ¾ → BG 50
- **9** G 1 → BG 50

→ thread

- **2** with pressure gauge
- **4** without pressure gauge

480-92

481-17

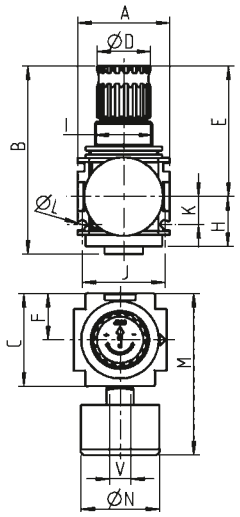
Notice

Cover available in individual colour on request (standard: grey).
Gauge (self-sealing) is enclosed.

Spare parts and accessories

	Order No.			
Size	**BG 20**	**BG 30**	**BG 40**	**BG 50**
Diaphragm, complete, with sliding ring	**480-92**		**480-263**	
Sealing cone, complete	**481-17**		**480-218**	
Pressure gauge horizontally**	**Ø 40**		**Ø 50**	
Display range 0 – 10 bar (for p_2 up to 6 bar)	**723**		**55**	
Display range 0 – 16 bar (for p_2 up to 10 bar)	**734**		**85**	
Display range 0 – 25 bar (for p_2 up to 16 bar)	**745**		**96**	

**pressure gauges starting from page 154



Technical data

Size	**BG 20**	**BG 30**	**BG 40**	**BG 50**	
Thread	G ¼	G ⅜	G ½	G ¾	G 1
Nominal flow rate (l/min)***	2,170	3,480	7,610	8,700	8,700
Max. operating pressure (p_1)	25 bar				
Max. secondary pressure (p_2)	10 bar (optionally 6 bar, 16 bar)				
Max. operating temperature	80 °C				
Material housing	zinc die-cast				
Material seals	NBR				
Weight (without pressure gauge)	390 g	390 g	950 g	950 g	1.41 kg

***measured at 10 bar pre-pressure (p_1), 6 bar secondary pressure (p_2) and pressure drop Δp = 1 bar acc. to DIN ISO 6953

Dimensions (mm)

	BG 20	**BG 30**	**BG 40**	**BG 50**	
	G ¼	G ⅜	G ½	G ¾	G 1
A	48		70	70	125
B	98		134	134	134
C	48		70	70	70
D (Ø)	28		39	39	39
E	68		98	98	98
F	24		35	35	35
H	26		33	33	33
I	M30 × 1.5		M42 × 1.5	M42 × 1.5	
J	43		62	62	62
K	14,5		18	18	18
L (Ø)	4.4		5.4	5.4	5.4
M	84		106	106	106
N (Ø)	40		50	50	50
V	G ¼		G ¼	G ¼	G ¼

fastening and connecting elements see page 75

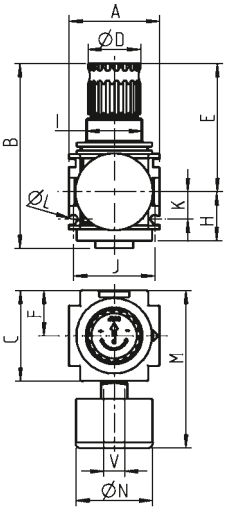
Precision pressure regulator type 495 G ¼ – G 1

Pressure regulator with precision regulation for highest requirements. It is suitable for all processes that require precise air pressure regulation. Pressure regulators regulate the line pressure of a pressure system to the set operating pressure/secondary pressure (p_2) and keep it at a largely constant level, independent of pressure fluctuations and air consumption. Diaphragm-type pressure regulator with a very low air consumption of 1.5 l/min. Secondary venting (reverse control) practically without hysteresis. **Control ranges for p_2 from 0.1 to 3 bar, 0.2 to 6 bar and 0.5 to 10 bar**. Pressure gauge can be mounted on both sides. To avoid contamination or failure, a type 491 microfilter should be installed upstream.

495.224

495-101

481-17



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

	Order No.				
Size	**BG 20 (I)**	**BG 30 (I)**	**BG 40 (II)**	**BG 50 (II)**	
Thread	**G ¼**	**G ⅜**	**G ½**	**G ¾**	**G 1***
	495.224	**495.234**	**–**	**–**	**–**
	–	**–**	**495.264**	**495.284**	**495.294**

*inlet and outlet with threaded connection plate-set G 1 included, see page 75

Order key for all variants

495.XXXX

- **A** lockable, with padlock — additional options
- **2** 0.1 – 3 bar
- **3** 0.2 – 6 bar
- **4** 0.5 – 10 bar — control range secondary pressure (p_2)
- **2** G ¼ — BG 20
- **3** G ⅜ — BG 30
- **6** G ½ — BG 40
- **8** G ¾ — BG 50
- **9** G 1 — thread
- **2** with pressure gauge
- **4** without pressure gauge

Notice

Cover available in individual colour on request (standard: grey).
Gauge (self-sealing) is enclosed.

Spare parts and accessories

	Order No.			
Size	**BG 20**	**BG 30**	**BG 40**	**BG 50**
Diaphragm, complete, with sliding ring	**495-101**		**495-207**	
Sealing cone, complete	**481-17**		**480-218**	
Pressure gauge horizontally, quality class 1.6	**Ø40**		**Ø50**	
Display range 0 – 4 bar (for p_2 up to 3 bar)	**401**		**501**	
Display range 0 – 6 bar (for p_2 up to 6 bar)	**402**		**502**	
Display range 0 – 10 bar (for p_2 up to 10 bar)	**403**		**503**	

*pressure gauges starting from page 154

Dimensions (mm)

	BG 20	BG 30	BG 40	BG 50	
	G ¼	G ⅜	G ½	G ¾	G 1
A	48		70	70	125
B	98		134	134	134
C	48		70	70	70
D (Ø)	28		39	39	39
E	68		98	98	98
F	24		35	35	35
H	26		33	33	33
I	M30 × 1.5		M42 × 1.5	M42 × 1.5	
J	43		62	62	62
K	14.5		18	18	18
L (Ø)	4.4		5.4	5.4	5.4
M	84		106	106	106
N (Ø)	40		50	50	50
V	G ¼		G ¼	G ¼	G ¼

Technical data

Size	**BG 20**	**BG 30**	**BG 40**	**BG 50**	
Thread	G ¼	G ⅜	G ½	G ¾	G 1
Nominal flow rate (l/min)**	2,170	3,480	7,610	8,700	8,700
Max. operating pressure (p_1)	25 bar				
Max. secondary pressure (p_2)	10 bar (optionally 3 bar, 6 bar)				
Operating temperature	-10 up to + 60 °C				
Flow direction	in arrow direction				
Pre-pressure dependence	< 3 %				
Reverse control hysteresis	< 0.1 bar				
Air consumption (at 10 bar inlet pressure [p_1])	< 1.5 l/min				
Material housing	zinc die-cast				
Material seals	NBR				
Weight (without pressure gauge)	390 g	390 g	950 g	950 g	1.41 kg

** measured at 10 bar pre-pressure (p_1), 6 bar secondary pressure (p_2) and pressure drop Δp = 1 bar acc. to DIN ISO 6953

fastening and connecting elements see page 75

Battery pressure regulator type 490 G ¼ – G 1

The pressure regulators arranged in line allow an independent outlet pressure at a common inlet pressure. The inlet of the pressure supply can be either left or right. The regulated operating pressure (secondary pressure), which almost completely is kept constant regardless of the fluctuating supply pressure (inlet pressure) and air consumption, is available at the rear connection (connection 2). **Notice:** to avoid contamination or failure, a 482 series filter should be installed in front. For a higher flow rate with several units, we recommend the following connection threads G ⅜ or G ¾.

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

	Order No.				
Size	**BG 20 (I)**	**BG 30 (I)**	**BG 40 (II)**	**BG 50 (II)**	
Thread	**G ¼**	**G ⅜**	**G ½**	**G ¾**	**G 1***
	490.223	**490.233**	**–**	**–**	**–**
	–	**–**	**490.263**	**490.283**	**490.293**

*inlet and outlet with threaded connection plate-set G 1 included, see page 75

490.223

490.223D

Order key for all variants

490.XXXX

- **A** lockable, with padlock
- **D** gauge with color code 0 – 16 bar

→ additional options (combination possible)

- **2** 0.5 – 6 bar
- **3** 0.5 – 10 bar
- **4** 0.5 – 16 bar

→ control range secondary pressure (p_2)

- **2** G ¼ — BG 20
- **3** G ⅜ — BG 30
- **6** G ½ — BG 40
- **8** G ¾ — BG 50
- **9** G 1 — BG 50

→ thread

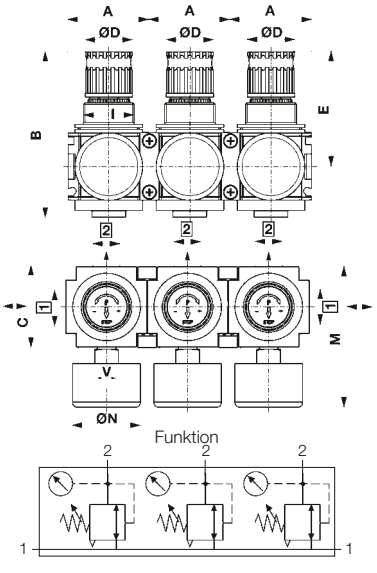
- **2** with pressure gauge
- **4** without pressure gauge

480-92

481-17

Notice

Cover available in individual colour on request (standard: grey).
Gauge (self-sealing) is enclosed.



Spare parts and accessories

	Order No.			
Size	**BG 20**	**BG 30**	**BG 40**	**BG 50**
Diaphragm, complete, with sliding ring	**480-92**		**480-263**	
Sealing cone, complete	**481-17**		**480-218**	
Pressure gauge horizontally***	**Ø 40**		**Ø 50**	
Display range 0 – 10 bar (for p_2 up to 6 bar)	**723**		**55**	
Display range 0 – 16 bar (for p_2 up to 10 bar)	**734**		**85**	
Display range 0 – 25 bar (for p_2 up to 16 bar)	**745**		**96**	
Screw plug with hexagon socket, connection G ¼	**280-127****		**280-127****	
Screw plug with hexagon socket, connection G ⅜	**447-28****		**–**	
Screw plug with hexagon socket, connection G ½	**–**		**424-67**	

**delivery only in packaging unit (PU) of 5 pieces each ***pressure gauges starting from page 154

Technical data

Size	**BG 20**	**BG 30**	**BG 40**	**BG 50**	
Thread 1	G ¼	G ⅜	G ½	G ¾	G 1
Thread 2	G ¼		G ½		
Nominal flow rate (l/min)****	1,960	1,960	6,300	7,400	7,400
Max. operating pressure (p_1)	25 bar				
Max. secondary pressure (p_2)	10 bar (optionally 6 bar, 16 bar)				
Max. operating temperature	80 °C				
Material housing	zinc die-cast				
Material seals	NBR				
Weight (without pressure gauge)	390 g	390 g	950 g	950 g	1.41 kg

**** measured at 10 bar pre-pressure (p_1), 6 bar secondary pressure (p_2) and pressure drop Δp = 1 bar acc. to DIN ISO 6953

Dimensions (mm)

	BG 20	**BG 30**	**BG 40**	**BG 50**	
	G ¼	G ⅜	G ½	G ¾	G1
A	48		70	70	125
B	98		134	134	134
C	48		70	70	70
D (Ø)	28		39	39	39
E	68		98	98	98
F	24		35	35	35
I	M 30 × 1.5		M 42 × 1.5	M 42 × 1.5	
M	84		106	106	106
N (Ø)	40		50	50	50
V	G ¼		G ¼	G ¼	G ¼

fastening and connecting elements see page 75

Compressed air lubricators type 483 G ¼ – G 1

Compressed air lubricators are used for the dosed enrichment of compressed air with finely atomized oil mist. A control valve ensures that the oil quantity is mixed in proportion to the flow rate. The droplet quantity is regulated by the adjusting screw of the lubricator attachment. The oil can be refilled during operation.

483.023 483.023M 483.023S

Standard version: with plastic bowl, without drain valve

	Order No.				
Size	**BG 20 (I)**	**BG 30 (I)**	**BG 40 (II)**	**BG 50 (II)**	
Thread	**G ¼**	**G ⅜**	**G ½**	**G ¾**	**G 1***
	483.022	**483.023**	**–**	**–**	**–**
	–	**–**	**483.026**	**483.028**	**483.029**

*inlet and outlet with threaded connection plate-set G 1 included, see page 75

Order key for all variants

483.XXXX

- plastic bowl (standard, without addition)
- **M** metal bowl
- **S** protective metal cage

→ additional option

- **2** G ¼ → BG 20
- **3** G ⅜ → BG 30
- **6** G ½ → BG 40
- **8** G ¾ → BG 50
- **9** G 1 → BG 50

→ thread

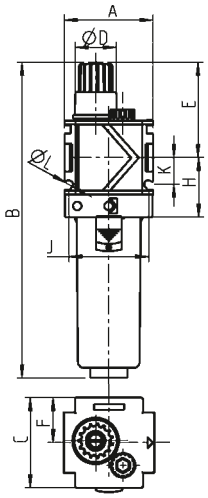
- **2** model: lubricator
- **0** without drain valve
- **1** with manual drain valve

Notice

Cover available in individual colour on request (standard: grey).

423-65

483-3



Spare parts and accessories

	Order No.			
Size	**BG 20**	**BG 30**	**BG 40**	**BG 50**
Metal bowl without drain valve	**483-10**		**483-113**	
Metal bowl with drain valve	**480-28**		**480-213**	
Protective metal cage	**480-25**		**480-216**	
Plastic bowl with protective metal cage, without drain valve	**483-24**		**483-126**	
Lubricator attachment metal (only BG 40/50 with O-rings)	**483-21**		**423-65**	
Plastic bowl without drain valve	**483-7**		**483-110**	
Lubricator attachment made of plastic	**483-6**		**423-179**	
Regulator insert	**483-3**		**–**	

Technical data

Size	**BG 20**	**BG 30**	**BG 40**	**BG 50**	
Thread	G ¼	G ⅜	G ½	G ¾	G 1
Nominal flow rate (l/min)**	3,700	4,780	5,000	8,150	8,150
Max. operating pressure (p_1)	16 bar / 20 bar with metal bowl				
Max. operating temperature	50 °C / 80 °C with metal bowl and metal lubricator attachment				
Usable bowl capacity	50 cm^3	50 cm^3	125 cm^3	125 cm^3	125 cm^3
Lubricator function	onwards 50 l/min		onwards 150 l/min		
Oil type	according to DIN 51524 – ISO VG 32				
Material housing	zinc die-cast				
Material bowl	polycarbonate				
Material seals	NBR				
Weight	300 g	300 g	800 g	800 g	1.26 kg

**measured at 6 bar inlet pressure (p_1) and pressure drop Δp = 1 bar

Dimensions (mm)

	BG 20	**BG 30**	**BG 40**	**BG 50**	
	G ¼	G ⅜	G ½	G ¾	G 1
A	48		70	70	125
B	171		224	224	224
C	48		70	70	70
D (Ø)	22		22	22	22
E	52		57	57	57
F	24		35	35	35
H	32		44	44	44
J	43		62	62	62
K	14.5		18	18	18
L (Ø)	4.4		5.4	5.4	5.4

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.

fastening and connecting elements see page 75

Filter pressure regulators type 480 G ¼ – G 1

Filter pressure regulators combine the functions of a filter and a pressure regulator in a space-saving design in one device.
(details see individual descriptions on page 59 and page 63).

Standard version: control range (p_2) 0.5 – 10 bar, plastic bowl with manual drain valve, with pressure gauge, filter porosity 40 µm

	Order No.				
Size	**BG 20 (I)**	**BG 30 (I)**	**BG 40 (II)**	**BG 50 (II)**	
Thread	**G ¼**	**G ⅜**	**G ½**	**G ¾**	**G 1***
	480.223	**480.233**	–	–	–
	–	–	**480.263**	**480.283**	**480.293**

*inlet and outlet with threaded connection plate-set G 1 included, see page 75

480.233 480.333 MD 480.233 SD

Order key for all variants

480.XXXXX

- **V** filter element 5 µm (standard: 40 µm, without addition)
- plastic bowl (standard, without addition)
  - **M** metal bowl
  - **S** protective metal cage
  - **A** lockable, with padlock
  - **D** gauge with color code 0 – 16 bar

  → additional options (combination possible except M with S)
- **2** 0.5 – 6 bar
- **3** 0.5 – 10 bar
- **4** 0.5 – 16 bar

  → control range secondary pressure (p_2)
- **2** G ¼ – BG 20
- **3** G ⅜ – BG 30
- **6** G ½ – BG 40
- **8** G ¾ – BG 50
- **9** G 1 – BG 50

  → thread
- **2** manual drain valve, pressure gauge (p_1 0 – 20 bar)
- **3** internal automatic drain valve, pressure gauge (p_1 1.5 – 12 bar)
- **4** manual drain valve, without pressure gauge (p_1 0 – 20 bar)
- **5** semi-automatic drain valve, pressure gauge (p_1 0.5 – 20 bar)
- **6** external automatic drain valve A, pressure gauge (p_1 4 – 16 bar)
- **7** internal automatic drain valve, without pressure gauge (p_1 1.5 – 12 bar)
- **8** external automatic drain valve A, without pressure gauge (p_1 4 – 16 bar)
- **9** semi-automatic drain valve, without pressure gauge (p_1 0.5 – 20 bar)

Notice

Cover available in individual colour on request (standard: grey).
Gauge (self-sealing) is enclosed.

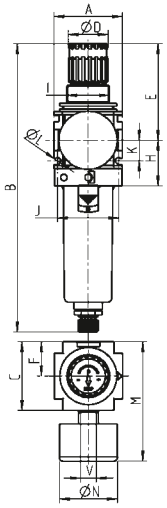
480-92

480-48

Spare parts and accessories

	Order No.			
Size	**BG 20**	**BG 30**	**BG 40**	**BG 50**
Filter element filter porosity 40 µm (mounted)	**480-7**		**480-219**	
Filter element filter porosity 5 µm (reduced flow rate)	**480-45**		**480-220**	
Plastic bowl with protective metal cage and manual drain valve	**480-90**		**480-226**	
Metal bowl with manual drain valve	**480-28**		**480-213**	
Protective metal cage	**480-25**		**480-216**	
Pressure gauge horizontally**	**Ø 40**		**Ø 50**	
Display range 0 – 10 bar (for p_2 up to 6 bar)	**723**		**55**	
Display range 0 – 16 bar (for p_2 up to 10 bar)	**734**		**85**	
Display range 0 – 25 bar (for p_2 up to 16 bar)	**745**		**96**	
Plastic bowl with manual drain valve	**480-18**		**480-210**	
Diaphragm, complete, with sliding ring	**480-92**		**480-263**	
Sealing cone, complete	**480-48**		**480-218**	

**pressure gauges starting from page 154



Technical data

Size	**BG 20**	**BG 30**	**BG 40**	**BG 50**	
Thread	G ¼	G ⅜	G ½	G ¾	G 1
Nominal flow rate (l/min)***	2,170	3,260	5,980	7,070	7,070
Filter porosity	40 µm (optionally: 5 µm)				
Max. operating pressure (p_1)	16 bar (20 bar with metal bowl/12 bar with autom. integr. drain valve)				
Max. secondary pressure (p_2)	10 bar (optionally: 6, 16 bar)				
Max. operating temperature	50 °C/80 °C with metal bowl				
Condensate volume	25 cm^3		85 cm^3		
Condensate drain	manual (optionally: semi-automatic, automatic)				
Material housing/bowl	zinc die-cast/polycarbonate				
Material seals	NBR				
Weight	460 g	460 g	1.15 kg	1.15 kg	1.61 kg

***measured at 10 bar pre-pressure (p_1), 6 bar secondary pressure (p_2) and pressure drop Δp = 1 bar acc. to DIN ISO 6953

Dimensions (mm)

	BG 20	**BG 30**	**BG 40**	**BG 50**	
	G ¼	G ⅜	G ½	G ¾	G 1
A	48		70	70	125
B	203		273	273	273
C	48		70	70	70
D (Ø)	28		39	39	39
E	68		98	98	98
F	24		35	35	35
H	32		44	44	44
I	M30 × 1.5		M42 × 1.5	M42 × 1.5	
J	43		62	62	62
K	14.5		18	18	18
L (Ø)	4.4		5.4	5.4	5.4
M	84		106	106	106
N (Ø)	40		50	50	50
V	G ¼		G ¼	G ¼	G ¼

condensate drain valves starting from page 95, for oils see page 157
fastening and connecting elements see page 75

Two-piece maintenance unit type 488 G ¼ – G 1

Numerous variants of maintenance units are possible by simply mounting the individual modules in blocks. The following are the most common versions of a two-piece maintenance unit, consisting of a filter pressure regulator and a compressed air lubricator. For options, see individual units. Pressure range of the filter pressure regulator 0 – 10 bar (standard).

488.230

488.230SD

Standard version: control range (p_2) 0.5 – 10 bar, plastic bowl with manual drain valve, with pressure gauge, filter porosity 40 µm, monobloc mounting with compact connection set with integrated T-bracket for wall mounting

	Order No.				
Size	**BG 20 (I)**	**BG 30 (I)**	**BG 40 (II)**	**BG 50 (II)**	
Thread	**G ¼**	**G ⅜**	**G ½**	**G ¾**	**G 1***
	488.221	**488.231**	**–**	**–**	**–**
	–	**–**	**488.261**	**488.281**	**488.291**

*inlet and outlet with threaded connection plate-set G 1 included, see page 75

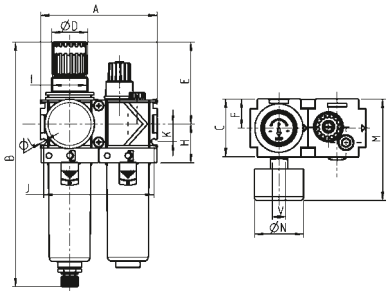
Notice

Cover available in individual colour on request (standard: grey). Gauge (self-sealing) is enclosed.

480-92

483-3

480-48



Order key for all variants

488.XXXXX

- **V** filter element 5 µm (standard: 40 µm, without addition)
- plastic bowl (standard, without addition)
  - **M** metal bowl
  - **S** protective metal cage
  - **A** lockable, with padlock
  - **D** gauge with color code 0 – 16 bar

  → additional options (combination possible except M with S)
- **0** compact connection set
- **1** compact connection set with T-bracket
- **2** comfort connection set (only BG 20, BG 30)

  → block mounting
- **2** G ¼ → BG 20
- **3** G ⅜ → BG 30
- **6** G ½ → BG 40
- **8** G ¾ → BG 50
- **9** G 1

  → thread
- **2** manual drain valve, pressure gauge (p_1 0 – 20 bar)
- **3** internal automatic drain valve, pressure gauge (p_1 1.5 – 12 bar)
- **4** manual drain valve, without pressure gauge (p_1 0 – 20 bar)
- **5** semi-automatic drain valve, pressure gauge (p_1 0.5 – 20 bar)
- **6** external automatic drain valve A, pressure gauge (p_1 4 – 16 bar)
- **7** internal automatic drain valve, without pressure gauge (p_1 1.5 – 12 bar)
- **8** external automatic drain valve A, without pressure gauge (p_1 4 – 16 bar)
- **9** semi-automatic drain valve, without pressure gauge (p_1 0.5 – 20 bar)

Spare parts and accessories

	Order No.			
Size	**BG 20**	**BG 30**	**BG 40**	**BG 50**
Diaphragm, complete, with sliding ring	**480-92**		**480-263**	
Sealing cone, complete	**480-48**		**480-218**	
Regulation insert	**483-3**		**–**	

additional spare parts and accessories see page 66 and page 67

Dimensions (mm)

	BG 20	BG 30	BG 40	BG 50	
	G ¼	G ⅜	G ½	G ¾	G 1
A	96		140	140	195
B	203		273	273	273
C	48		70	70	70
D (Ø)	28		39	39	39
E	68		98	98	98
F	24		35	35	35
H	32		44	44	44
I	M30 × 1.5		M42 × 1.5	M42 × 1.5	
J	91		132	132	132
K	14.5		18	18	18
L (Ø)	4.4		5.4	5.4	5.4
M	84		106	106	106
N (Ø)	40		50	50	50
V	G ¼		G ¼	G ¼	G ¼

Technical data

Size	**BG 20**	**BG 30**	**BG 40**	**BG 50**	
Thread	G ¼	G ⅜	G ½	G ¾	G 1
Nominal flow rate (l/min)**	1,630	1,960	3,700	5,440	5,440
Filter porosity	40 µm (optionally: 5 µm)				
Max. operating pressure (p_1)	16 bar (20 bar with metal bowl)/ 12 bar with automatic integrated drain valve				
Max. secondary pressure (p_2)	10 bar (optionally: 6, 16 bar)				
Max. operating temperature	50 °C/80 °C with metal bowl and metal lubricator attachment				
Condensate volume	25 cm^3		85 cm^3		
Condensate drain	manual (optionally: semi-automatic, automatic)				
Usable bowl capacity	50 cm^3		125 cm^3		
Lubricator function	onwards 50 l/min		onwards 150 l/min		
Material housing	zinc die-cast				
Material bowl	polycarbonate				
Material seals	NBR				
Weight (without pressure gauge)	720 g	720 g	2.07 kg	2.07 kg	2.53 kg

** measured at 10 bar pre-pressure (p_1), 6 bar secondary pressure (p_2) and pressure drop Δp = 1 bar acc. to DIN ISO 6953

condensate drain valves starting from page 95, for oils see page 157
fastening and connecting elements see page 75

Three-piece maintenance unit type 489 G ¼ – G 1

Numerous variants of maintenance units are possible by simply mounting the individual modules in blocks. Below are some of the versions of a three-piece maintenance unit consisting of compressed air filter, pressure regulator and compressed air lubricator. For more options, see individual units. Pressure range of the pressure regulator: 10 bar (standard).

Standard version: control range (p_2) 0.5 – 10 bar, plastic bowl with manual drain valve, with pressure gauge, filter porosity 40 µm, monoblock mounting with compact connection set with integrated T-bracket for wall mounting

	Order No.				
Size	**BG 20 (I)**	**BG 30 (I)**	**BG 40 (II)**	**BG 50 (II)**	
Thread	**G ¼**	**G ⅜**	**G ½**	**G ¾**	**G 1***
	489.221	**489.231**	–	–	–
	–	–	**489.261**	**489.281**	**489.291**

*inlet and outlet with threaded connection plate-set G 1 included, see page 75

489.230

489.230SD

Order key for all variants

489.XXXXX

- **V** filter element 5 µm (standard: 40 µm, without addition)
- plastic bowl (standard, without addition)
  - **M** metal bowl
  - **S** protective metal cage
  - **A** lockable, with padlock
  - **D** gauge with color code 0 – 16 bar

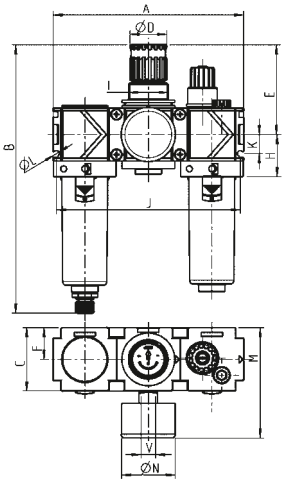
  (additional options, combination possible except M with S)
- **0** compact connection set
- **1** compact connection set with T-bracket
- **2** comfort connection set (only BG 20, BG 30)

  (block mounting)
- **2** G ¼ – BG 20
- **3** G ⅜ – BG 30
- **6** G ½ – BG 40
- **8** G ¾ – BG 50
- **9** G 1

  (thread)
- **2** manual drain valve, pressure gauge (p_1 0 – 20 bar)
- **3** internal automatic drain valve, pressure gauge (p_1 1.5 – 12 bar)
- **4** manual drain valve, without pressure gauge (p_1 0 – 20 bar)
- **5** semi-automatic drain valve, pressure gauge (p_1 0.5 – 20 bar)
- **6** external automatic drain valve A, pressure gauge (p_1 4 – 16 bar)
- **7** internal automatic drain valve, without pressure gauge (p_1 1.5 – 12 bar)
- **8** external automatic drain valve A, without pressure gauge (p_1 4 – 16 bar)
- **9** semi-automatic drain valve, without pressure gauge (p_1 0.5 – 20 bar)

Notice

Cover available in individual colour on request (standard: grey). Gauge (self-sealing) is enclosed.



Spare parts and accessories

	Order No.			
Size	**BG 20**	**BG 30**	**BG 40**	**BG 50**
Diaphragm, complete, with sliding ring	**480-92**		**480-263**	
Sealing cone, complete	**481-17**		**480-218**	
Regulation insert	**483-3**		–	

additional spare parts and accessories see single units

Technical data

Size	**BG 20**	**BG 30**	**BG 40**	**BG 50**	
Thread	G ¼	G ⅜	G ½	G ¾	G 1
Nominal flow rate (l/min)**	1,630	1,960	3,700	5,440	5,440
Filter porosity	40 µm (optionally: 5 µm)				
Max. operating pressure (p_1)	16 bar (20 bar with metal bowl) / 12 bar with automatic integrated drain valve				
Max. secondary pressure (p_2)	10 bar (optionally: 6, 16 bar)				
Max. operating temperature	50 °C / 80 °C with metal bowl and and metal lubricator attachment				
Condensate volume	25 cm^3		85 cm^3		
Condensate drain	manual (optionally: semi-automatic, automatic)				
Usable bowl capacity	50 cm^3		125 cm^3		
Lubricator function	onwards 50 l/min		onwards 150 l/min		
Material housing	zinc die-cast				
Material bowl	polycarbonate				
Material seals	NBR				
Weight (without pressure gauge)	1.22 kg	1.22 kg	2.8 kg	2.8 kg	3.26 kg

**measured at 10 bar pre-pressure (p_1), 6 bar secondary pressure (p_2) and pressure drop Δp = 1 bar acc. to ISO 6953

Dimensions (mm)

	BG 20	**BG 30**	**BG 40**	**BG 50**	
	G ¼	G ⅜	G ½	G ¾	G 1
A	144		210	210	265
B	203		273	273	273
C	48		70	70	70
D (Ø)	28		39	39	39
E	68		98	98	98
F	24		35	35	35
H	32		44	44	44
I	M30 × 1.5		M42 × 1.5	M42 × 1.5	
J	139		194	194	194
K	14.5		18	18	18
L (Ø)	4.4		5.4	5.4	5.4
M	84		106	106	106
N (Ø)	40		50	50	50
V	G ¼		G ¼	G ¼	G ¼

condensate drain valves starting from page 95, for oils see page 157
fastening and connecting elements see page 75

Mobile maintenance unit type 489 G ½ – G 1

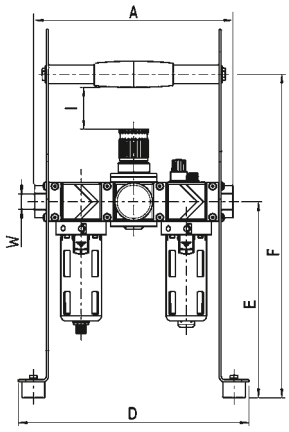
The mobile maintenance unit was designed with variobloc components (only size BG 40, 50) in order to ensure optimum preconditions with reference to cleaning and lubrication of the pneumatic tools directly on site. It consists of a compressed air filter, pressure regulator and compressed air lubricators, which are mounted in a metal frame with carrying handle. Other combinations of maintenance units are possible on request. The mobile maintenance unit is recommended wherever distances of more than 5 metres have to be covered between air distribution and the place of operation.

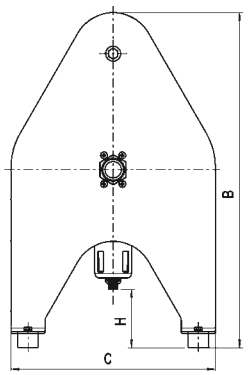
Application areas:
- Truck workshops
- Mechanical and industrial engineering
- Shipbuilding/Shipyards

489.200

Notice

Cover available in individual colour on request (standard: grey).





Version

	Order No.		
Size	**BG 40 (II)**	**BG 50 (II)**	
Thread	**G ½**	**G ¾**	**G 1**
Control range (p_2) 0.5 – 10 bar, plastic bowl with protective metal cage and manual drain valve, with pressure gauge, filter porosity 40 µm, monobloc mounting with compact connection, connection plates set*	**489.200**	**489.100**	**489.000**

*inlet and outlet with threaded connection plate-set G 1 included, see page 75

Spare parts and accessories

	Order No.	
Size	**BG 40**	**BG 50**
Diaphragm, complete, with sliding ring	**480-263**	
Sealing cone, complete	**480-218**	

additional spare parts and accessories see single units

Technical data

Size	**BG 40**	**BG 50**	
Thread	G ½	G ¾	G 1
Nominal flow rate (l/min)**	3,700	5,440	5,440
Max. operating pressure (p_1)	16 bar		
Control range (p_2)	0.5 – 10 bar		
Max. operating temperature	50 °C		
Filter porosity	40 µm		
Condensate drain	manual (optionally: semi-automatic, automatic)		
Condensate volume	85 cm^3		
Usable bowl capacity	125 cm^3		
Lubricator function	onwards 150 l/min		
Material housing	zinc die-cast		
Material bowl / protective basket	polycarbonate / steel		
Material seals	NBR		
Material side panels	sheet steel painted		
Material feet	rubber		
Weight	8.5 kg		

** measured at 10 bar pre-pressure (p_1), 6 bar secondary pressure (p_2) and pressure drop Δp = 1 bar acc. to ISO 6953

Dimensions (mm)

	BG 40	**BG 50**	
W	G ½	G ¾	G 1
A	269	269	264
B	491	491	491
C	300	300	300
D	307	307	307
E	261	261	261
F	431	431	431
H	85.5	85.5	85.5
I	55.5	55.5	55.5

fastening and connecting elements see page 75, for oils see page 157

Ball valve with vent type 487 G ¼ – G 1

Ball valve with venting (3/2 way valve). For flanging onto maintenance units. Serves as main shut-off valve at the inlet of the maintenance unit. Actuation by 90° rotation of the lever. Switch-on position clearly marked: turning knob in lateral direction – valve closed, air discharged. Rotary knob in longitudinal direction – valve open, drain closed. Can be locked in either end positions with a standard padlock Ø 4.5 mm (or as an additional option with padlock in two versions, available). With silencer to reduce the ventilation noise. Connection thread from G ¼ to G 1. Wall mounting possible by direct mounting or bracket mounting on the housing. In correspondence with EN 983. The version with pneumatic actuator (BG 40, 50) allows the operation as remote control in hazardous areas. The stroke construction guarantees a high initial torque and therefore a high releasing torque (required after long down time).

Standard version: lockable (without padlock Ø 4.5 mm)

	Order No.				
Size	**BG 20 (I)**	**BG 30 (I)**	**BG 40 (II)**	**BG 50 (II)**	
Thread	**G ¼**	**G ⅜**	**G ½**	**G ¾**	**G 1***
	487.2	**487.3**	–	–	–
	–	–	**487.6**	**487.8**	**487.9**

*inlet and outlet with threaded connection plate-set G 1 included, see page 75

487.3

487.3D
Inkl. Schloss

Order key for all variants

487.XX

- **A** with padlock Ø 4.5 mm
- **D** with padlock Ø 8 mm
- **P** with pneumatic actuator (only for BG 40, 50)

2	G ¼	BG 20	threads
3	G ⅜	BG 30	
6	G ½	BG 40	
8	G ¾	BG 50	
9	G 1		

487.8P
Ausführung mit pneumatischem Antrieb

487-17

Spare parts and accessories

	Order No.
Padlock Ø 4.5 mm	**487-17**
Padlock Ø 8 mm	**487-26**

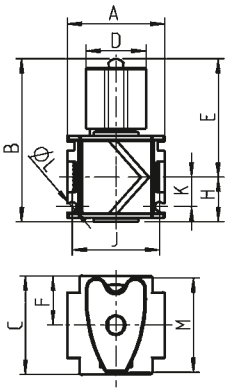
Notice

Cover available in individual colour on request (standard: grey).

Technical data

Size	**BG 20**	**BG 30**	**BG 40**	**BG 50**	
Thread	G ¼	G ⅜	G ½	G ¾	G 1
Nominal flow rate (l/min)**	4,670	4,780	9,780	11,960	11,960
Max. operating pressure (p_1)	25 bar				
Max. operating temperature	80 °C				
Material housing	zinc die-cast				
Weight	295 g	295 g	840 g	840 g	1.3 kg
Weight (with pneumatic actuator)	–	–	1.1 kg	1.1 kg	1.56 kg
Pressure range (with pneumatic actuator)	–	–	5.6–7.4 bar	5.6–7.4 bar	5.6–7.4 bar

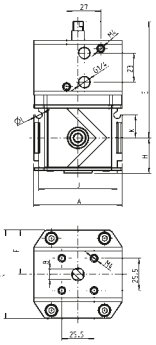
**measured at 6 bar inlet pressure (p_1) and pressure drop Δp = 1 bar



Dimensions (mm)

	BG 20	**BG 30**	**BG 40**	**BG 50**		**BG 40**	**BG 50**	
	G ¼	G ⅜	G ½	G ¾	G 1	G ½	G ¾	G 1
						with pneumatic actuator		
A	48		70	70	125	70	70	125
B	80		92	92	92	120	120	120
C	48		70	70	70	70	70	70
D	30		30	30	30	–	–	–
E	58		64	64	64	92	92	92
F	24		35	35	35	35	35	35
H	22		28	28	28	28	28	28
J	43		62	62	62	62	62	62
K	14.5		18	18	18	18	18	18
L (Ø)	4.4		5.4	5.4	5.4	5.4	5.4	5.4
M	45		45	45	45	–	–	–

with pneumatic actuator



fastening and connecting elements see page 75

3/2-way electrical switching valve type 485 G ¼ – G 1

3/2-way electrical switching valves in monobloc design are suitable for flange-mounting to variobloc maintenance units. The magnetic valve at the inlet or outlet of the maintenance unit serves as a master shut-off valve with rapid venting. The valve is closed without current. Electric switching valves have manual override. The combination with a start-up valve is recommended. Possible connection threads from G ¼ up to G 1. Corresponds to EN 983.

485.34

485.35

447-76

485-18

447-120

Standard version: rated voltage 24 V ⎓

	Order No.				
Size	**BG 20 (I)**	**BG 30 (I)**	**BG 40 (II)**	**BG 50 (II)**	
Thread	**G ¼**	**G ⅜**	**G ½**	**G ¾**	**G 1***
	485.24	**485.34**	**–**	**–**	**–**
	–	**–**	**485.64**	**485.84**	**485.94**

*inlet and outlet with threaded connection plate-set G 1 included, see page 75

Order key for all variants

485.XX

- **1** 24 V ~/50 Hz
- **2** 220 V ~/50 Hz
- **3** 110 V ~/50 Hz
- **4** 24 V ⎓
- **5** 24 V ⎓

→ manual override bistable, DIN 43650 (1, 2, 3, 4)

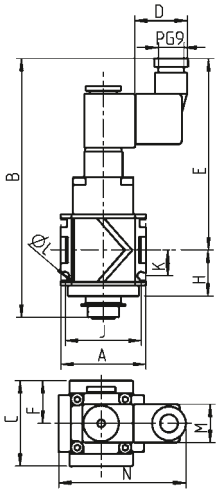
→ manual override monostable, M12 (5)

- **2** G ¼ → BG 20
- **3** G ⅜ → BG 30
- **6** G ½ → BG 40
- **8** G ¾ → BG 50
- **9** G 1 → BG 50

→ thread

Spare parts and accessories

	Order No.			
Size	**BG 20**	**BG 30**	**BG 40**	**BG 50**
Magnetic coil 24 V ⎓	**447-76**			
Magnetic coil 24 V ~/50 Hz	**447-130**			
Magnetic coil 220 V ~/50 Hz	**447-74**			
Magnetic coil 110 V ~/50 Hz	**447-75**			
Magnetic coil 24 V ⎓ (M12)	**447-133**			
Magnetic valve as shut-off valve with rapid venting 24 V ⎓	**485-16**			
Magnetic valve as shut-off valve with rapid venting 24 V ~/50 Hz	**485-17**			
Magnetic valve as shut-off valve with rapid venting 220 V ~/50 Hz	**485-18**			
Magnetic valve as shut-off valve with rapid venting 110 V ~/50 Hz	**485-19**			
Magnetic valve as shut-off valve with rapid venting 24 V ⎓ (monostable)	**485-20**			
Socket DIN 43650	**447-120**			



Dimensions (mm)

	BG 20	BG 30	BG 40	BG 50	
	G ¼	G ⅜	G ½	G ¾	G 1**
A	48		70	70	125
B	46		157	157	157
C	48		70	70	70
D (Ø)	30		30	30	30
E	108		113	113	113
F	24		35	35	35
H	26		33	33	33
J	43		62	62	62
K	14.5		18	18	18
L (Ø)	4.4		5.4	5.4	5.4
M	22		22	22	22
N	72		82	82	82

Technical data

Size	**BG 20**	**BG 30**	**BG 40**	**BG 50**	
Thread	G ¼	G ⅜	G ½	G ¾	G 1
Nominal flow rate (l/min)**	2,400	2,830	3,590	4,130	4,130
Operating pressure range (p_1)	3–10 bar				
Max. operating temperature	50 °C				
Protection class	IP 65 acc. to DIN 40050				
Rated voltage	24 V ⎓ optionally 24 V/50 Hz, 110 V/50 Hz, 220 V/50 Hz				
Power supply	socket according to DIN 43650, Form B Ind. PG 9				
Material housing	zinc die-cast				
Weight	445 g	445 g	980 g	980 g	1.44 kg
Disposal of waste equipment	WEEE Reg. No.: DE51604370				

**measured at 6 bar inlet pressure (p_1) and pressure drop Δp = 1 bar

fastening and connecting elements see page 75

Distributors type 486 G ¼ – G 1

Compressed air distributor with four outlets. Can be used at any extraction point or as a carrier for additional modules (e.g. pressure switches). The version with non-return valve is ideal for extracting unlubricated air if it is connected in front of the mist lubricator. The non-return valve prevents oil from being suctioned out of the oiler or the pipes. However, the system cannot be easily vented after the non-return valve. Available in two sizes. Outlets closed on delivery. Connection thread from G ¼ to G 1.

Standard version: without non-return valve

	Order No.				
Size	**BG 20 (I)**	**BG 30 (I)**	**BG 40 (II)**	**BG 50 (II)**	
Thread	**G ¼**	**G ⅜**	**G ½**	**G ¾**	**G 1***
	486.20	**486.30**	**–**	**–**	**–**
	–	**–**	**486.60**	**486.80**	**486.90**

*inlet and outlet with threaded connection plate-set G 1 included, page 75

486.30

Order key for all variants

486.XX

- **0** without non-return valve
- **1** with non-return valve

- **2** G ¼
- **3** G ⅜
- **6** G ½
- **8** G ¾
- **9** G 1

→ BG 20, BG 30, BG 40, BG 50 → thread

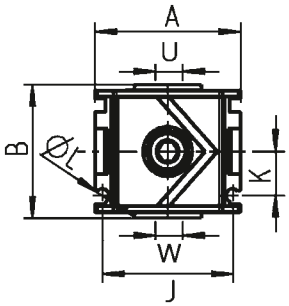
Notice

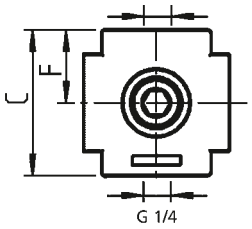
Cover available in individual colour on request (standard: grey).

Technical data

Size	**BG 20**	**BG 30**	**BG 40**	**BG 50**	
Thread	G ¼	G ⅜	G ½	G ¾	G 1
Outlets top and bottom	G ⅜		G ⅜ and G ½		
Outlets front and rear	G ¼				
Nominal flow rate without NV (l/min)**	4,570	5,440	9,780	11,960	11,960
Nominal flow rate with NV (l/min)**	979	979	4,350	5,440	5,440
Max. operating pressure (p_1)	25 bar				
Max. operating temperature	80 °C				
Material housing	zinc die-cast				
Weight	290 g	290 g	780 g	780 g	1.24 kg

**measured at 6 bar inlet pressure (p_1) and pressure drop Δ_p = 1 bar





Dimensions (mm)

	BG 20	**BG 30**	**BG 40**	**BG 50**	
	G ¼	G ⅜	G ½	G ¾	G 1
A	48		70	70	125
B	46		56	56	56
C	48		70	70	70
F	24		35	35	35
J	43		62	62	62
K	14.5		18	18	18
L (Ø)	4.4		5.4	5.4	5.4
U	G ⅜		G ⅜	G ⅜	G ⅜
W	G ⅜		G ½	G ½	G ½

fastening and connecting elements see page 75

Pneumatic starting valve type 484 G ¼ – G 1

Starting and filling valve in monobloc design for flange-mounting to variobloc maintenance units. Used for increasing pressure gradually in pneumatic systems, e.g. at the restart after an emergency stop. During switch-on, only a small cross-section is initially pressurized via an adjustable regulator. The full cross-section is released only when the pressure has reached about half of the operating pressure. In conjunction with a 3/2-way valve, a ball valve or a magnetic valve, a complete on/off unit can be set up. Connection thread from G ¼ to G 1. Corresponds to EN 983. **Only suitable for closed systems.**

484.60

Version: regulator adjustable

	Order No.		
Size	**BG 40 (II)**	**BG 50 (II)**	
Thread	**G ½**	**G ¾**	**G 1***
	–	–	–
	484.60	**484.80**	**484.90**

*inlet and outlet with threaded connection plate-set G 1 included, see page 75

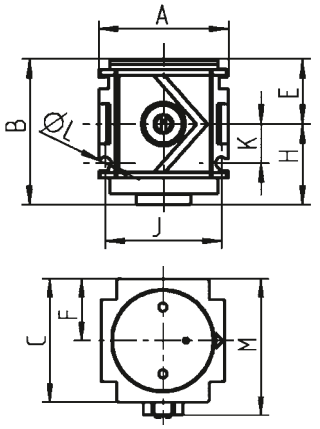
Technical data

Size	**BG 40**	**BG 50**	
Thread	G ½	G ¾	G 1
Nominal flow rate (l/min)**	4,130	4,570	4,570
Point of dispatch (full cross-section open)	approx. 0.6 × operating pressure		
Operating pressure range (p_1)	2 – 25 bar		
Max. operating temperature	50 °C		
Material housing	zinc die-cast		
Weight	730 g	730 g	1.19 kg

**measured at 6 bar inlet pressure (p_1) and pressure drop Δp = 1 bar

Notice

Cover available in individual colour on request (standard: grey).



Dimensions (mm)

	BG 40	**BG 50**	
	G ½	G ¾	G 1
A	70	70	125
B	72	72	72
C	70	70	70
E	36	36	36
F	35	35	35
H	36	36	36
J	62	62	62
K	18	18	18
L (Ø)	5.4	5.4	5.4
M	75	75	75

fastening and connecting elements see page 75

Intermediate modules for block mounting, pipe connection

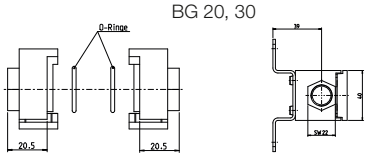
"Plug and Work" – according to this motto you can choose your desired combination for block mounting from the following variety, select the pipe connection (inlet and outlet) and the wall mounting.

Threaded connection plate set

For pipe connection at inlet and outlet. Self-adhesive sealing rings. With or without T-Bracket for wall mounting.

Size	Thread	Order No.
Version without T-Bracket		
BG 20 (I)	G ¼	**480-75**
BG 30 (I)	G ⅜	**480-37**
BG 40 (II)	G ½	**480-283**
BG 50 (II)	G ¾	**480-282**
BG 60 (II)	G 1	**480-271**
Version with T-Bracket		
BG 20 (I)	G ¼	**480-120**
BG 30 (I)	G ⅜	**480-121**
BG 40 (II)	G ½	**480-287**
BG 50 (II)	G ¾	**480-288**
BG 60 (II)	G 1	**480-289**

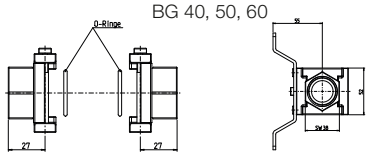
BG 20, 30



BG 40, BG 50, BG 60

BG 20, BG 30

BG 40, 50, 60



BG 40, BG 50, BG 60

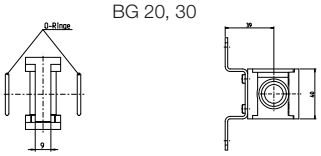
BG 20, BG 30

Comfort connection set (intermediate module)

For block mounting. Single modules can be easily removed without disassembling the whole unit.
Self-adhesive sealing rings. With or without T-Bracket for wall mounting.

Size	Thread	Order No.
Version without T-Bracket		
BG 20	G ¼	**480-38**
BG 30	G ⅜	
Version with T-Bracket		
BG 20	G ¼	**480-122**
BG 30	G ⅜	

BG 20, 30



480-122

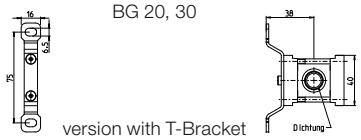
480-38

Compact connection set (intermediate module)

For block mounting. Incl. sealing kit. With or without T-Bracket for wall mounting.

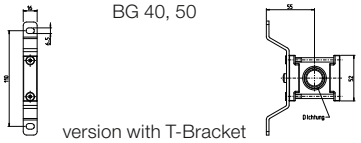
Size	Thread	Order No.
Version without T-Bracket		
BG 20	G ¼	**480-570**
BG 30	G ⅜	**480-360**
BG 40	G ½	**480-238**
BG 50	G ¾	**480-237**
Version with T-Bracket		
BG 20	G ¼	**480-560**
BG 30	G ⅜	**480-350**
BG 40	G ½	**480-264**
BG 50	G ¾	**480-265**

BG 20, 30



version with T-Bracket

BG 40, 50



version with T-Bracket

480-265

480-237

Sealing set for compact connection set

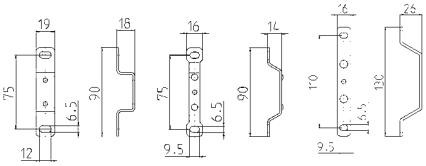
Consisting of sleeve and O-ring.

Size	Thread	Order No.
BG 20	G ¼	**480-85**
BG 30	G ⅜	**480-11**
BG 40	G ½	**480-267**
BG 50	G ¾	**480-268**

480-85

T-Bracket single for wall mounting

Suitable for intermediate module	Size	Order No.
Comfort connection	BG 20, 30	**480-84**
Compact connection	BG 20, 30	**480-640**
Compact connection	BG 40, 50	**480-270**



480-84 480-640 480-270

Comfort BG 20, 30

480-84

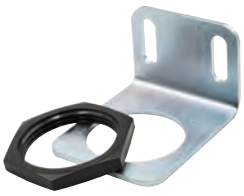
Compact BG 20, 30

480-640

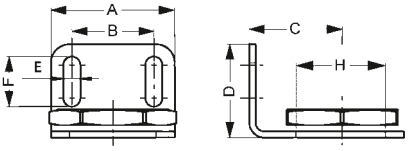
Compact BG 40, 50

480-270

Wall mounting elements



443-36



Bracket set for mounting on cap (handwheel thread)

Contents: mounting bracket and nut.

Suitable for	Order No.
BG 20 (I), BG 30 (I)	**443-36**
BG 40 (II), BG 50 (II)	**443-104**

Dimensions (mm)

Size		A	B	C	D	E	F	H
BG 20	**BG 30**	40	26.5	30	30	5.5	16	30.5
BG 40	**BG 50**	55	35	42.5	40	7	20	43

381-32

Single nut

For control panel mounting.

Suitable for		Dimensions	Material	Order No.
BG 20	BG 30	M 30 × 1.5	PA6	**381-32**
BG 40	BG 50	M 42 × 1.5	Ms	**443-106**

Bracket set for mounting on the housing

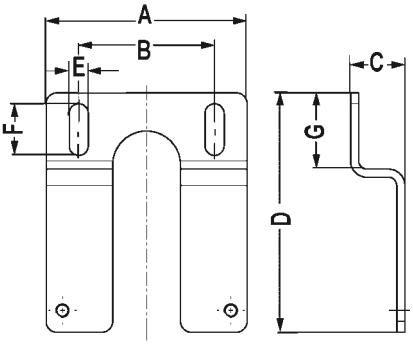
Only for mounting a single device. Contents: mounting bracket and two mounting screws.

Suitable for	Order No.
BG 20, BG 30	**480-67**
BG 40, BG 50	**480-252**

480-252

Dimensions (mm)

Size		A	B	C	D	E	F	G
BG 20	**BG 30**	50	34	15	71	5.5	16	25
BG 40	**BG 50**	74	50	20	88	7	19	28



Mounting screws (set of 2)

For direct mounting of individual devices.

Suitable for		Dimensions	Order No.
BG 20	BG 30	M 4 × 40	**480-83**
BG 40	BG 50	M 5 × 60	**480-266**

480-83

Spare parts and accessories

Filter elements

Model	Size	Order No.
PE filter element 40 µm	BG 20, BG 30 (I)	480-7
PE filter element 5 µm		480-45
Microfilter element, complete		491-4
Activated carbon filter element, complete		493-2
PE filter element 40 µm	BG 40, BG 50 (II)	480-219
PE filter element 5 µm		480-220
Microfilter element, complete		491-103
Activated carbon filter element, complete		493-102


480-7


491-4


493-2

Bowl options

Model	Version	Order No.			
		BG 20	BG 30	BG 40	BG 50
Plastic bowl	with manual drain valve	480-18		480-210	
	with semi-automatic drain valve	480-78		480-255	
	with automatic integrated drain valve	480-79		480-256	
	with automatic attachable drain valve A	480-95		480-257	
	without drain valve, for lubricators	483-7		483-110	
Metal bowl	with manual drain valve (bis 20 bar)	480-28		480-213	
	with semi-automatic drain valve (up to 20 bar)	480-80		480-258	
	with automatic integrated drain valve (up to 12 bar)	480-81		480-259	
	with automatic attachable drain valve A (up to 16 bar)	480-96		480-260	
	without drain valve, for lubricators (up to 20 bar)	483-10		483-113	
Protective metal cage	for attaching to plastic bowls	480-25		480-216	


480-18


480-28


480-25

Padlocks

Suitable for	Shackle-Ø (mm)	Order No.
Pressure regulators and filter pressure regulators BG 20, 30 and BG 40, 50	3	480-430
Ball valve for model 487.xA	4.5	487-17
Ball valve for model 487.xD	8	487-26


487-17

Overview of advantages

Module mounting to the wall with bracket (for regulator) or direct mounting (two screws) for all devices.

Compact connection with optional integrated T-holder

Threaded connection plates for pipe connection with self-adhesive sealing rings (also available with bracket) for easy installation in pipe and hose systems.

Lockable handwheel for pressure regulator, battery pressure regulator, filter pressure regulator and maintenance units available.

Comfort blocking – fast component or combination change with connection module (self-adhesive sealing rings) shortens assembly times (only for size BG 20, 30).