



## Pressure regulators - G<sup>1/8</sup> – G<sup>1/2</sup>

Pressure regulators regulate the system pressure ( $p_1$ ) in a compressed air system to the working pressure ( $p_2$ ) and keep this pressure, regardless of pressure fluctuations and air consumption, largely constant. The excess pressure valve (secondary venting) allows a reduction of the secondary pressure ( $p_2$ ) (= exhaust) without air extraction. At the same time compressed air escapes into the atmosphere when the pressure on the secondary side exceeds the set value. Working pressure ranges from 0,5 to 3/6/10 and 16 bar. Operation by means of a toggle or handwheel. Special models (for example, without secondary air exhaust) upon request. Gauge can be mounted on either side. Panel or bracket mounting if desired. Port sizes G<sup>1/8</sup> to G<sup>1/2</sup>.

**Note:** To avoid losses an air filter should be installed upstream.

**Also suitable for use with neutral and non-toxic gases!**

### Standard versions:

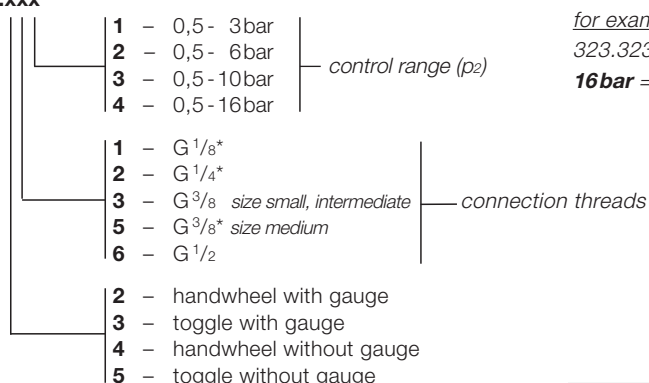
**Control range 0,5- 10bar, with toggle, with gauge**

Size	Order No.			
	G <sup>1/8</sup> *	G <sup>1/4</sup> *	G <sup>3/8</sup>	G <sup>1/2</sup>
small	323.313*	323.323*	323.333	-
intermediate	280.313*	280.323*	280.333	-
medium	-	-	280.353*	280.363

\* inlet and outlet reduced (reductions added loosely, see page 50)

### Order key for all variants:

323/280.xxx



for example:

323.323 – **without gauge and 0,5-16 bar** = 323.524

### Spare parts and accessories

	Order No.		
	small	intermediate	medium
<b>Bracket mounting</b> for fixing on lid	323-68	280-134	280-132
<b>Panel mounting</b>	323-69	323-66	280-133
panel thread: M14x1 (small), M20x1,5 (intermediate), M22x1 (medium)			
<b>Gauge</b> , horizontal, display ranges: 0 - 6 bar (for $p_2$ up to 3 bar)	42	213	213
∅50 (size small) 0 - 10 bar (for $p_2$ up to 6 bar)	55	214	214
∅63 (size intermediate, medium) 0 - 16 bar (for $p_2$ up to 10 bar)	85	215	215
0 - 25 bar (for $p_2$ up to 16 bar)	96	216	216
<b>Seal cone</b> complete	323-119	406-37	280-220
<b>Diaphragm</b> complete	323-152	280-223	280-221

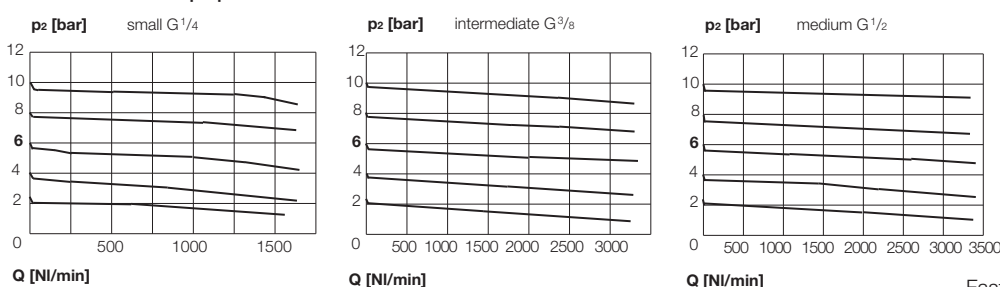
Gauges see chapter 11

### Technical data

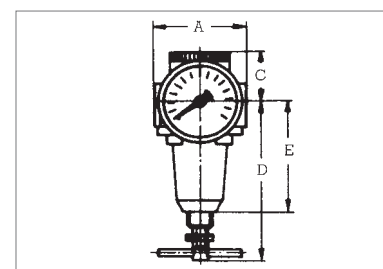
	Size small	Size intermediate	Size medium
<b>Nominal rates of flow**</b>	1000 NI/min	2000 NI/min	2670 NI/min
<b>Max. operating pressure (<math>p_1</math>)</b>	25 bar (PN25)		
<b>Max. secondary pressure (<math>p_2</math>)</b>	10 bar (optionally 3, 6, 16 bar)		
<b>Operating temperature</b>	-10°C up to +90°C		
<b>Mounting position</b>	any		
<b>Direction of flow</b>	see arrow		
<b>Nominal width</b>	DN6	DN10	DN15
<b>Dependence upon supply pressure</b>	< 3%	< 2%	< 2%
<b>Reversing control hysteresis</b>	~ 1 bar		
<b>Weight</b>	620 g	1150 g	1350 g
<b>Material</b>	- diaphragm, seals: NBR - housing/spring cover: zinc alloy		

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

### Rates of flow $p_1 = p_2 + 2$ bar



**Note:** Gauge added loosely



### Dimension [mm]

Size	small	intermediate	medium
<b>Connection threads</b>	G <sup>1/8</sup> , G <sup>1/4</sup>	G <sup>3/8</sup> , G <sup>1/2</sup>	G <sup>3/8</sup> , G <sup>1/2</sup>
A	61	54	77
C	30	30	33
D	100	100	127
E	67	90	78

\* inlet and outlet reduced (reductions added loosely)

Fasteners and connecting elements see page 49



## Pressure regulators - G<sup>3/4</sup> - G1<sup>1/2</sup>

Pressure regulators regulate the system pressure (p<sub>1</sub>) in a compressed air system to the working pressure (p<sub>2</sub>) and keep this pressure, regardless of pressure fluctuations and air consumption, largely constant. The excess pressure valve (secondary venting) allows a reduction of the secondary pressure (p<sub>2</sub>) (= exhaust) without air extraction. At the same time compressed air escapes into the atmosphere when the pressure on the secondary side exceeds the set value. Working pressure ranges from 0,5 - 3/6/10/16 and 25 bar. Operation by means of a toggle or handwheel (size large + max for 16 and 25 bar with hexagon screw AF19. Special models (for example, without secondary air exhaust) upon request. Gauge can be mounted on either side. Panel or bracket mounting if desired. Port sizes G<sup>3/4</sup> to G1<sup>1/2</sup>. **Note:** To avoid losses an air filter should be installed upstream. **Also suitable for use with neutral and non-toxic gases!**



406.xxx compact

280.xxx large/max

**Note:** Gauge added loosely

### Standard versions:

#### Control range 0,5 - 10bar, with gauge

Size	Order No.			
	G <sup>3/4</sup> *	G1	G1 <sup>1/4</sup> *	G1 <sup>1/2</sup>
compact	406.283*	406.293	-	-
large	280.383*	280.393	-	-
max	-	-	280.3103*	280.3113

\* inlet and outlet reduced (reductions added loosely, see page 50)

### Order key for all variants:

#### Size compact

406.xxx

- 1 - 0,5 - 3bar
  - 2 - 0,5 - 6bar
  - 3 - 0,5 - 10bar
  - 4 - 0,5 - 16bar
- control range (p<sub>2</sub>)
- 8 - G<sup>3/4</sup>\*
  - 9 - G1
- connection threads
- 2 - handwheel with gauge (up to 10 bar)
  - 3 - toggle with gauge
  - 4 - handwheel without gauge (up to 10 bar)
  - 6 - toggle without gauge

#### Size large / max

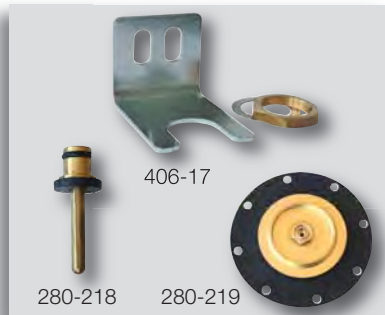
280.xxxx

- 1 - 0,5 - 3bar
  - 2 - 0,5 - 6bar
  - 3 - 0,5 - 10bar
  - 4 - 0,5 - 16bar
  - 5 - 0,5 - 25bar
- control range (p<sub>2</sub>)
- 8 - G<sup>3/4</sup>\*
  - 9 - G1
  - 10 - G1<sup>1/4</sup>\*
  - 11 - G1<sup>1/2</sup>
- connection threads
- 3 - toggle\*\*\* with gauge
  - 5 - toggle\*\*\* without gauge

\*\*\*16+25bar with hexagon screw

for example:

280.3113 - without gauge and 0,5-25bar = 280.5115



280-218

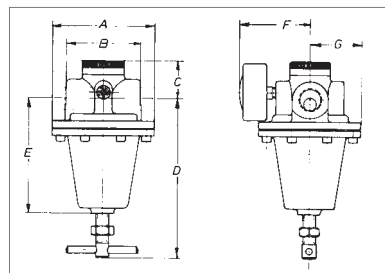
406-17

280-219

### Spare parts and accessories

	Order No.		
	compact	large	max
<b>Bracket mounting</b> for fixing on lid/attachment to the cover fixing screws	406-17	280-239	280-239
<b>Panel mounting</b> panel thread M28 x 1,5	406-18	-	-
<b>Gauge</b> horizontal, ø63 Display range: 0- 6bar (for p <sub>2</sub> up to 3 bar)	213	213	213
0- 10bar (for p <sub>2</sub> up to 6 bar)	214	214	214
0- 16bar (for p <sub>2</sub> up to 10 bar)	215	215	215
0- 25bar (for p <sub>2</sub> up to 16 bar)	216	216	216
0- 40bar (für p <sub>2</sub> up to 25 bar)	-	217	217
<b>Seal cone</b> complete	406-32	280-218	280-235
<b>Diaphragm</b> complete	406-50	280-219	280-219

Gauges see chapter 11



### Dimensions [mm]

Size	compact		large		max	
	G <sup>3/4</sup> *	G1	G <sup>3/4</sup> *	G1	G1 <sup>1/4</sup> *	G1 <sup>1/2</sup>
A	-	-	116	116	116	116
B	96	90	95	83	128	114
C	47	47	41	41	50	50
D	139	139	175	175	190	190
E	89	89	-	-	-	-
F	77	77	80	80	80	80
G	39	39	58	58	58	58

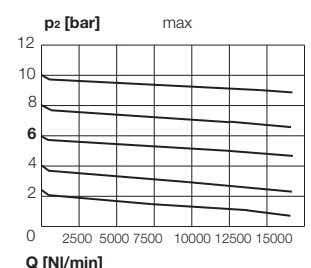
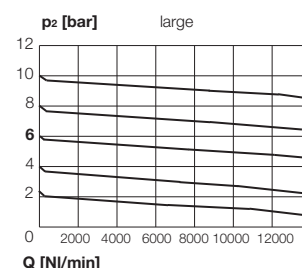
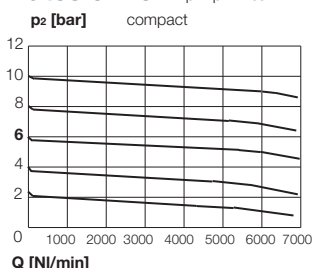
\*inlet and outlet reduced (reductions added loosely)

### Technical data

	Size compact	Size large	Size max
<b>Nominal rates of flow**</b>	5330 NI/min	7830 NI/min	12160 NI/min
<b>Max. operating pressure (p<sub>1</sub>)</b>	25 bar (PN25)	40 bar (PN40)	40 bar (PN40)
<b>Max. secondary pressure (p<sub>2</sub>)</b>	10 bar (optionally 3, 6, 16 bar)		
<b>Operating temperature</b>	-10°C up to +90°C		
<b>Mounting position</b>	any		
<b>Direction of flow</b>	see arrow		
<b>Nominal width</b>	DN20	DN20	DN25
<b>Dependence upon supply pressure</b>	< 3%	< 1,5%	< 1,5%
<b>Reversing control hysteresis</b>		~ 1 bar	
<b>Weight</b>	2050g	3480g	5260g
<b>Material</b>	- diaphragm - seals - housing/spring cover	NBR NBR zinc alloy	brass brass brass

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

### Rates of flow p<sub>1</sub>=p<sub>2</sub>+2bar



Fasteners and connecting elements see page 49



## Pressure regulators - G 1 1/2 – G 2

Pressure regulators regulate the system pressure ( $p_1$ ) in a compressed air system to the working pressure ( $p_2$ ) and keep this pressure, regardless of pressure fluctuations and air consumption, largely constant.

Pressure regulator (diaphragm type) with servomechanism. Port sizes G 1 1/2 to G 2. The excess pressure valve (secondary venting) allows a reduction of the secondary pressure ( $p_2$ ) (= exhaust) without air extraction. Working pressure ranges from 0,5 - 6, 10, 16, 25 and 35 bar. Two gauges (inlet and outlet pressure) can be mounted on either side. Panel or bracket mounting if desired. **Note:** To avoid losses an air filter should be installed upstream. **Also suitable for use with neutral and non-toxic gases!**

### Standard versions:

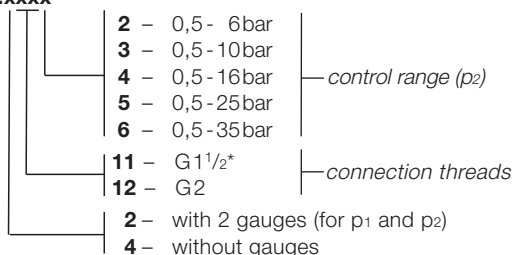
Control range (for  $p_2$ ) 0,5-10bar, with gauge

Size	Order No.	
	Connection threads G 1 1/2*	G 2
super	<b>417.2113*</b>	<b>417.2123</b>

\* inlet and outlet reduced (reductions added loosely, see page 50)

### Order key for all variants:

417.xxxx



for example:

417.2113 –  
**without gauges and**  
**0,5 - 16bar = 417.4114**

### Spare parts and accessories

	Order No.
<b>Bracket mounting</b> for fixing on the housing	size super <b>417-47</b>
<b>Gauge</b> , horizontal, $\varnothing 63$ Display range: 0-10bar (for $p_2$ up to 6 bar)	<b>214</b>
	0-16bar (for $p_2$ up to 10 bar)
	<b>215</b>
	0-25bar (for $p_2$ up to 16 bar)
	<b>216</b>
	0-40bar (for $p_2$ up to 25 bar)
	<b>217</b>
	0-60bar (for $p_1$ and for $p_2$ up to 35 bar)
	<b>218</b>
<b>Spare parts kit</b> (seals, diaphragms, sealing cone)	for $p_2$ up to 6/10/16/25 bar      for $p_2$ up to 35 bar
	<b>417-75</b> <b>417-85</b>
<b>Seal cone</b> complete	<b>417-67</b> <b>417-87</b>
<b>Diaphragm</b> complete	<b>417-66</b> <b>417-86</b>

Gauges see chapter 11



417.2125

Remote control on request!

**Note:** Gauge added loosely



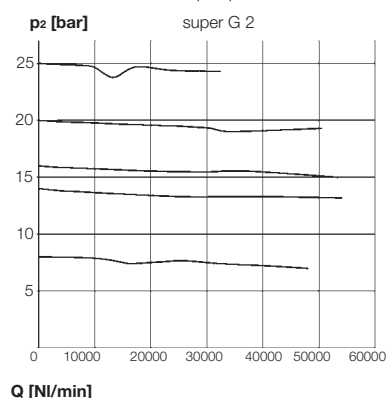
417-75

### Technical data

	Size super
<b>Nominal rates of flow**</b>	48000 NI/min
<b>Max. operating pressure (<math>p_1</math>)</b>	40bar (PN40)
<b>Max. secondary pressure (<math>p_2</math>) (control range)</b>	0,5 to 6, 10, 16, 25 and 35bar
<b>Operating temperature</b>	-10°C up to +90°C
<b>Mounting position</b>	any
<b>Direction of flow</b>	see arrow
<b>Nominal width</b>	DN50
<b>Dependence upon supply pressure</b>	< 1%
<b>Reversing control hysteresis</b>	~ 0,5bar
<b>Weight</b>	5500g
<b>Material</b>	- diaphragm/seals: NBR - housing: aluminum alloy

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

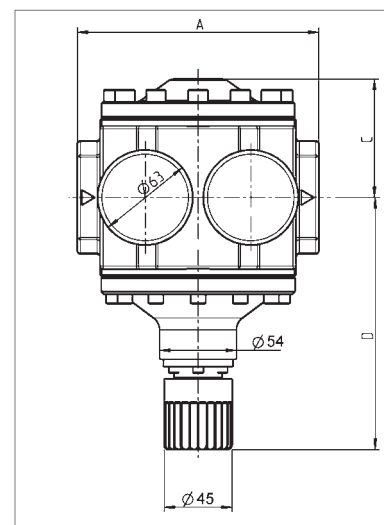
### Rates of flow $p_1 = p_2 + 2\text{bar}$



### Dimensions [mm]

Size	super	
	G 1 1/2*	G 2
<b>Connection threads</b>	G 1 1/2*	G 2
A	180	160
C	78	78
D	170	170

\* inlet and outlet reduced (reductions added loosely)





## Pressure regulators 40bar - G<sup>1</sup>/<sub>4</sub> – G<sup>1</sup>/<sub>2</sub>



**Note:** Gauge added loosely

Pressure regulators regulate the system pressure ( $p_1$ ) in a compressed air system to the working pressure ( $p_2$ ) and keep this pressure, regardless of pressure fluctuations and air consumption, largely constant. Pressure regulator (diaphragm type) with servomechanism. Port sizes G<sup>1</sup>/<sub>4</sub> to G<sup>1</sup>/<sub>2</sub>. The excess pressure valve (secondary venting) allows a reduction of the secondary pressure ( $p_2$ ) (= exhaust) without air extraction. Working pressure ranges from 0,5 to 3, 6, 10, 16 and 25 bar. Adjustment by means of a locknut. Gauge can be mounted on either side. Panel or bracket mounting if desired. **Note:** To avoid losses an air filter should be installed upstream. **Also suitable for use with neutral and non-toxic gases!**

### Standard versions:

#### Control range 0,5- 10bar, with gauge

Size	Order No.	
	Connection threads G <sup>1</sup> / <sub>4</sub>	G <sup>1</sup> / <sub>2</sub>
small	<b>286.323</b>	-
medium	-	<b>274.663</b>

### Order key for all variants:

286/274.xxx

- 1 – 0,5- 3bar
  - 2 – 0,5- 6bar
  - 3 – 0,5- 10bar
  - 4 – 0,5- 16bar
  - 5 – 0,5- 25bar (not size small)
- } control range ( $p_2$ )
- 2 – G<sup>1</sup>/<sub>4</sub>
  - 6 – G<sup>1</sup>/<sub>2</sub>
- } connection threads
- 3 – with gauge (size small, except for 25 bar)
  - 6 – with gauge (size medium)
  - 4 – without gauge

for example:

274.663 – **without gauge** and **0,5- 16bar** = 274.464



### Spare parts and accessories

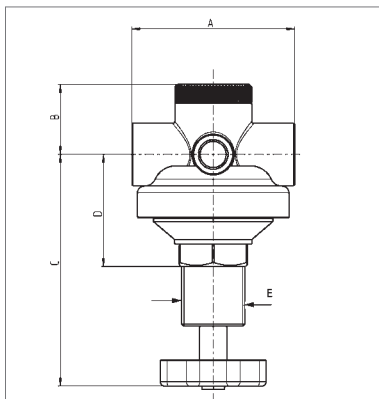
**Bracket mounting** for fixing on lid

**Panel mounting**

Panel thread M14x1 (size small), M22x1 (size medium)

Gauge horizontal, $\varnothing$ 40 (size small) / $\varnothing$ 63 (size medium)	Display range:	Order No.	
		small	medium
0- 6bar (for $p_2$ up to 3 bar)	<b>714</b>	<b>213</b>	
0- 10bar (for $p_2$ up to 6 bar)	<b>723</b>	<b>214</b>	
0- 16bar (for $p_2$ up to 10 bar)	<b>734</b>	<b>215</b>	
0- 25bar (for $p_2$ up to 16 bar)	<b>745</b>	<b>216</b>	
0- 40bar (for $p_2$ up to 25 bar)	-	<b>217</b>	
<b>Seal cone complete</b>		<b>286-120</b>	<b>274-75</b>
<b>Diaphragm complete</b>	Control range (for $p_2$ ): 0- 3bar	<b>286-126</b>	<b>274-65</b>
	0- 10bar	<b>286-126</b>	<b>274-66</b>
	0- 16bar	<b>286-126</b>	<b>274-67</b>
	0- 25bar	-	<b>274-67</b>

Gauges see chapter 11



### Dimensions [mm]

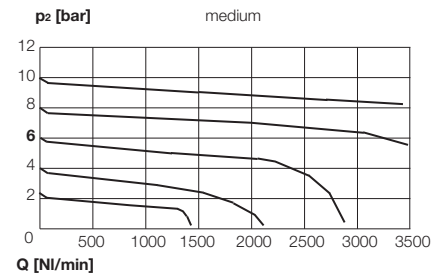
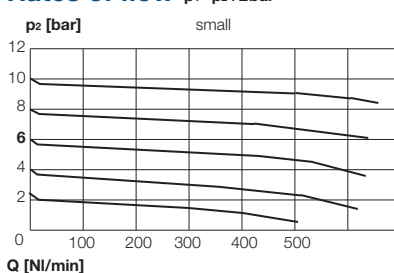
Size	small	medium
Connection threads	G <sup>1</sup> / <sub>4</sub>	G <sup>1</sup> / <sub>2</sub>
A	45	72
B	23	30
C	81	115
D	35	52
E	M20x1,5	M28x1,5

### Technical data

	Size small	Size medium
<b>Nominal rates of flow*</b>	430NI/min	1250NI/min
<b>Max. operating pressure (<math>p_1</math>)</b>	40bar (PN40)	40bar (PN40)
<b>Control range for secondary pressure (<math>p_2</math>)</b>	0,5 up to 3, 6, 10, 16, 25bar	0,5 up to 3, 6, 10, 16, 25bar
<b>Operating temperature</b>	-10°C up to +90°C	-10°C up to +90°C
<b>Control range (<math>p_2</math>)</b>	0,5 to 3, 6, 10, 16 and 25bar	0,5 bis 3, 6, 10, 16 und 25bar
<b>Mounting position</b>	any	any
<b>Direction of flow</b>	see arrow	see arrow
<b>Nominal width</b>	DN6	DN12
<b>Dependence upon supply pressure</b>	< 10%	< 4%
<b>Reversing control hysteresis</b>	~ 1 bar	~ 1 bar
<b>Weight</b>	390g	1000g
<b>Material</b>	- diaphragm/seals: NBR - housing/spring cover: brass	- diaphragm/seals: NBR - housing/spring cover: brass

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

### Rates of flow $p_1 = p_2 + 2\text{bar}$



Fasteners and connecting elements see page 49



## High pressure regulators 60bar - G<sup>1/4</sup> – G1



Pressure regulators regulate the system pressure ( $p_1$ ) in a compressed air system to the working pressure ( $p_2$ ) and keep this pressure, regardless of pressure fluctuations and air consumption, largely constant. Pressure regulator (piston type). Secondary air exhaust (relieving) and almost complete independence of primary are provided. Working pressure ranges  $p_2$  at 0,5 to 12, 20, 35 and 50 bar. Setting in size I and II with handwheel (35/50 bar with toggle), in size III with toggle (50 bar with hexagon screw). Gauge can be mounted on either side. Panel or bracket mounting if desired. **Note:** To avoid losses an air filter should be installed upstream.

**Also suitable for use with neutral and non-toxic gases!**

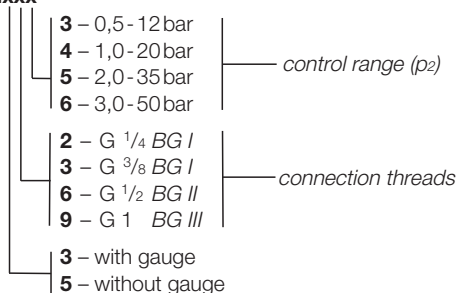
### Standard versions:

Control range 0,5-12 bar, with gauge

Size	Order No.			
	Connection threads			
	G <sup>1/4</sup>	G <sup>3/8</sup>	G <sup>1/2</sup>	G1
I	<b>302.323</b>	<b>302.333</b>	-	-
II	-	-	<b>302.363</b>	-
III	-	-	-	<b>302.393</b>

### Order key for all variants:

302.xxx



for example:

302.333 – but **without gauge**  
and **2,0-35bar** = 302.535

### Spare parts and accessories

	Order No.	
	size I + II	size III
<b>Bracket mounting</b> for fixing on lid/ attachment to the cover fixing screws	<b>274-48</b>	<b>302-19</b>
<b>Gauge</b> horizontal, ø63 Display range: 0-16 bar (for $p_2$ up to 12 bar)	<b>215</b>	<b>215</b>
		0-25 bar (for $p_2$ up to 20 bar)
	<b>216</b>	<b>216</b>
		0-40 bar (for $p_2$ up to 35 bar)
	<b>217</b>	<b>217</b>
		0-60 bar (for $p_2$ up to 50 bar)
	<b>218</b>	<b>218</b>
<b>Seal cone</b> complete	<b>406-37</b>	<b>302-6</b>

Gauges see chapter 11



**Note:** Gauge added loosely



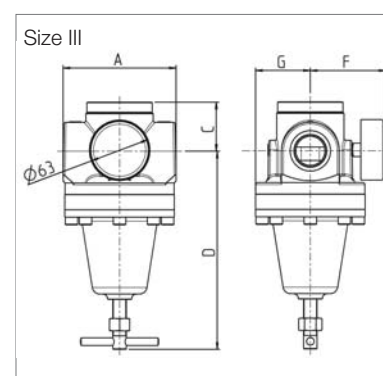
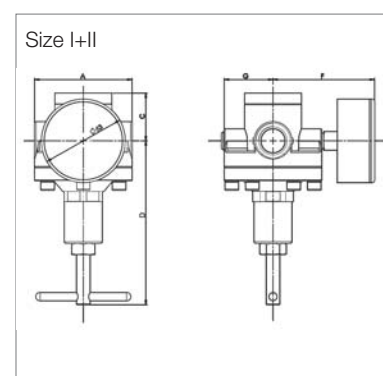
### Technical data

	Size I		Size II	Size III
<b>Connection threads</b>	G <sup>1/4</sup>	G <sup>3/8</sup>	G <sup>1/2</sup>	G1
<b>Nominal rates of flow (NI/min)*</b>	2000	2500	3500	5000
<b>Max. operating pressure (<math>p_1</math>)</b>	60bar (PN60)			
<b>Control range for secondary pressure (<math>p_2</math>)</b>	0,5 to 12, 20, 35 and 50bar			
<b>Operating temperature</b>	-10°C up to +90°C			
<b>Mounting position</b>	any			
<b>Direction of flow</b>	see arrow			
<b>Nominal width</b>	DN12		DN12	DN20
<b>Weight</b>	1500 g		1500 g	6500 g
<b>Material</b>	- seals - housing		NBR brass	

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

### Dimensions [mm]

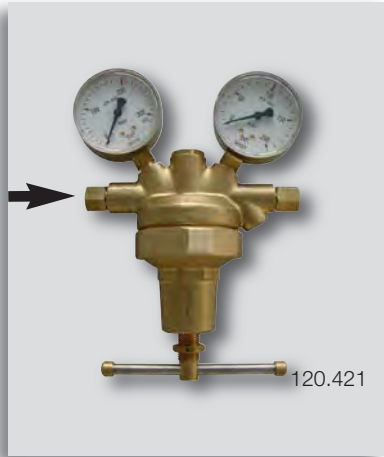
Size	I	II	III
<b>Connection threads</b>	G <sup>1/4</sup> , G <sup>3/8</sup>	G <sup>1/2</sup>	G1
A	72	72	118
C	35	35	51
D	133	121	206
F	66	75	80
G	36	36	58



Fasteners and connecting elements see page 49



## Pressure line regulators - G 1/4

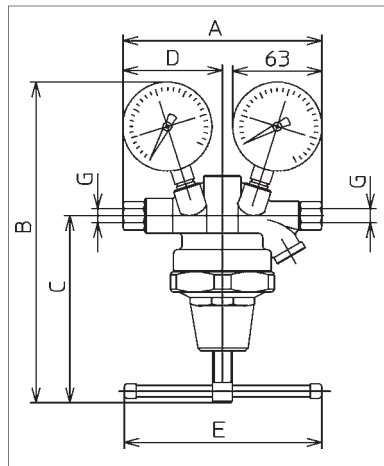


**Note:** Gauge added loosely

Line pressure regulator for up to max. 200bar inlet pressure (max. Operating pressure  $p_1$ ). Output pressure (setting range  $p_2$ ) to max. 150bar, depending on the model. Non-taxable. Connection thread G 1/4. Suitable for compressed air, nitrogen and other inert, compressed gases.

Pressure range	Adjustments	Order No.
		Connection thread G 1/4
50 bar	handwheel	<b>120.420</b>
100 bar	toggle	<b>120.421</b>
150 bar	toggle	<b>120.422</b>

3 standard



### Technical data

<b>Nominal rates of flow</b>	50 bar = 2500 NI/min 100 bar = 2700 NI/min 150 bar = 2900 NI/min
<b>Size port</b>	G 1/4 female thread on both sides
<b>Gauge inlet</b>	ø63, 0-200 bar
<b>Gauge outlet</b>	ø63, 0-50 bar, 100 bar, 200 bar
<b>Max. operating pressure (p<sub>1</sub>)</b>	200 bar (PN200)
<b>Control range for secondary pressure (p<sub>2</sub>)</b>	1 up to 50 bar, 100 bar, 150 bar
<b>Operating temperature</b>	-10 °C up to +90 °C
<b>Mounting position</b>	any
<b>Direction of flow</b>	left to right
<b>Nominal width</b>	DN3
<b>Over-pressure protection</b>	blow-off valve
<b>Adjustment</b>	toggle (50 bar - handwheel)
<b>Weight</b>	2200 g
<b>Material</b> - seals	NBR
- housing, spring cover	brass

Gauges see chapter 11

### Dimensions [mm]

Connection thread	G 1/4
A	150
B	215
C	130
D	160
E	130
G	G 1/4

## Precision pressure regulators - G<sup>1/8</sup> – G<sup>1/2</sup>



Pressure regulator with a **precise regulation for highest demands**. It is suitable for all processes that require a precise regulation of compressed air. Pressure regulators as “diaphragm type” regulate the changing inlet pressure ( $p_1$ ) in the air system to a mostly constant working pressure ( $p_2$ ), independent of pressure fluctuations and air consumption. This type has an exceptional little **air consumption of 1,5l/min**. The built-in excess pressure valve (secondary venting) allows a reduction of the secondary pressure (= exhaust) without air extraction. Control ranges for  $p_2$  from 0,2 up to 10 bar. Gauge can be mounted on each side. Handwheel can be fixed with lock nut. To avoid contamination or loss, there should be a *micro-filter type 403* pre-connected.

**Also suitable for use with neutral and non-toxic gases!**

### Standard versions:

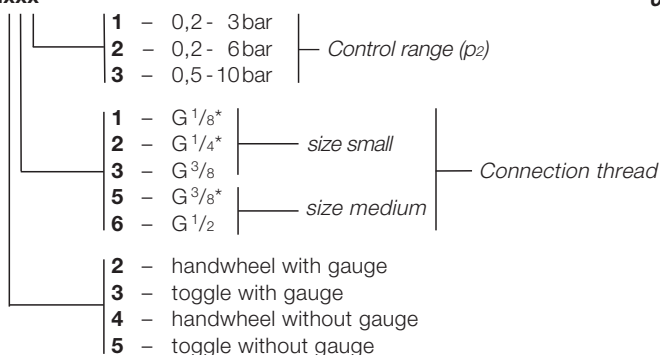
Control range 0,2-6 bar, with handwheel, with gauge

Size	Order No.			
	G <sup>1/8</sup> *	G <sup>1/4</sup> *	G <sup>3/8</sup>	G <sup>1/2</sup>
small	595.212*	595.222*	595.232	-
medium	-	-	595.252*	595.262

\* inlet and outlet reduced (reductions added loosely, see page 50)

### Order key for all variants:

595.xxx



for example:

595.323 – **without gauge** and  
**0,2-3 bar** = 595.521

### Spare parts and accessories

Bracket mounting for fixing on lid

Bracket mounting

Panel thread:

M14x1 (size small), M22x1 (size medium)

Gauge horizontal,  $\varnothing 50$

Class 1,6

Display range: 0- 4bar (for  $p_2$  up to 3 bar)

0- 6bar (for  $p_2$  up to 6 bar)

0- 10bar (for  $p_2$  up to 10 bar)

Seal cone complete

Diaphragm complete

	Order No.	
	small	medium
Bracket mounting for fixing on lid	323-68	280-132
Bracket mounting	323-69	280-133
Display range: 0- 4bar (for $p_2$ up to 3 bar)		501
0- 6bar (for $p_2$ up to 6 bar)		502
0- 10bar (for $p_2$ up to 10 bar)		503
Seal cone complete	323-119	280-220
Diaphragm complete	595-7	595-8

Gauges see chapter 11



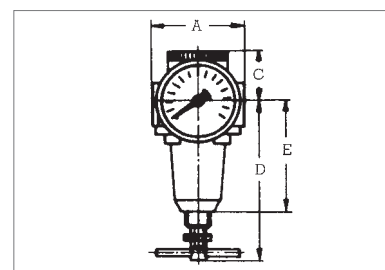
Note: Gauge added loosely



### Technical data

	Size small	Size medium
Nominal rates of flow**	1000 NI/min	2670 NI/min
Max. operating pressure ( $p_1$ )	25 bar (PN25)	
Operating temperature	-10°C up to +90°C	
Mounting position	any	
Direction of flow	see arrow	
Nominal width	DN6	DN15
Dependence upon supply pressure	< 3%	< 2%
Reversing control hysteresis	~ 1 bar	
Air consumption	< 1,5 l/min	
Weight	620g	1350g
Materials - diaphragm, seals	NBR	
- housing/spring cover	Zinc alloy	

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



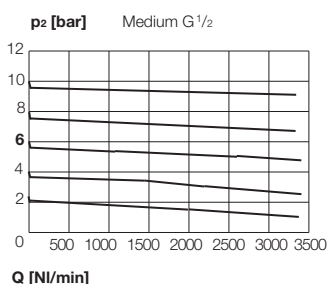
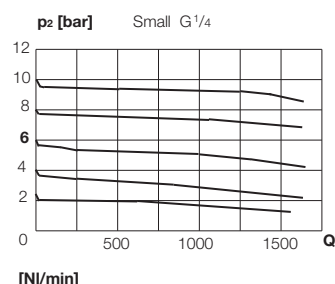
### Dimensions [mm]

Size	Small		Medium		
Connc. threads	G <sup>1/8</sup> *	G <sup>1/4</sup> *	G <sup>3/8</sup>	G <sup>3/8</sup> *	G <sup>1/2</sup>
A	61	54	90	82	
C	30	30	34	34	
D	100	100	136	136	
E	67	67	85	85	

\*inlet and outlet reduced (reductions added loosely)

Fasteners and connecting elements see page 49

### Rates of flow $p_1 = p_2 + 2$ bar





## Pressure regulators with internal gauge in setting knob



367.333

Pressure regulators regulate the system pressure ( $p_1$ ) in a compressed air system to the working pressure ( $p_2$ ) and keep this pressure, regardless of pressure fluctuations and air consumption, largely constant. Pressure regulator (diaphragm type), ideal for panel mounting. Port size  $G^{3/8}$ . Secondary air exhaust (relieving) and almost complete independence of primary pressure. Working pressure ranges from 0,5 to 3, 6, 10 and 16 bar. Gauge integrated in setting handwheel. Panel mounting possible if desired.

**Note:** To avoid losses an air filter should be installed upstream.

### Standard version:

**Control range 0,5 - 10 bar**

Size	Order No.
	367.333

Connection thread  
 $G^{3/8}$

### Order key for all variants:

367.33x

1	- 0,5 - 3 bar	} control range ( $p_2$ )
2	- 0,5 - 6 bar	
3	- 0,5 - 10 bar	
4	- 0,5 - 16 bar	

for example:

367.333 – but **0,5 - 16 bar** =  
367.334

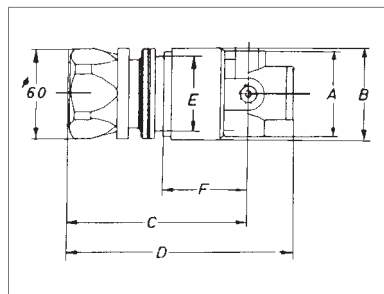


323-119

367-88

### Spare parts and accessories

<b>Panel mounting</b> panel thread M48 x 1,5	Order No.	<b>367-33</b>
<b>Pressure gauge</b> Display range: 0 - 6 bar (for $p_2$ up to 3 bar)	Order No.	<b>673</b>
horizontal (M8x1), $\varnothing 40$ 0 - 10 bar (for $p_2$ up to 6 bar)	Order No.	<b>674</b>
0 - 16 bar (for $p_2$ up to 10 bar and 16 bar)	Order No.	<b>675</b>
<b>Seal cone</b> complete	Order No.	<b>323-119</b>
<b>Diaphragm</b> complete	Order No.	<b>367-88</b>



### Technical data

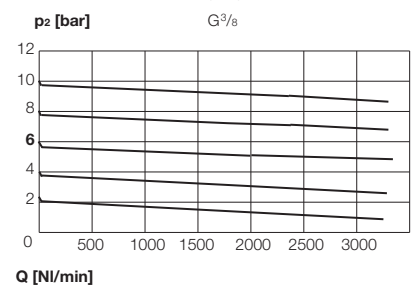
<b>Nominal rates of flow*</b>	1000 NI/min
<b>Max. operating pressure (<math>p_1</math>)</b>	25 bar (PN25)
<b>Control range for secondary pressure (<math>p_2</math>)</b>	0,5 to 3, 6, 10 and 16 bar
<b>Operating temperature</b>	-10 °C up to +90 °C
<b>Mounting position</b>	any
<b>Direction of flow</b>	see arrow
<b>Nominal width</b>	DN10
<b>Dependence upon supply pressure</b>	< 3%
<b>Reversing control hysteresis</b>	~ 1 bar
<b>Weight</b>	985 g
<b>Material</b> - diaphragm/seals	NBR
- housing	zinc alloy and aluminum

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

### Dimensions [mm]

Connection thread	$G^{3/8}$
A	54
B	60
C	115
D	145
E	48
F	56

### Rates of flow $p_1 = p_2 + 2$ bar





## Water pressure regulators - G 1/4 – G 1 1/2



Pressure regulators protect water installations against line pressures that are too high. When the specifications are observed, these can also be applied in industrial and commercial sectors. While in use pressure swings are avoided and water consumption is reduced. The set working pressure ( $p_2$ ) is kept constant at different inlet pressures. At the same flow noise can be reduced. Control range for  $p_2$  from 0,5 - 6/10/16 and 25 bar. Gauge can be mounted on both sides. Handwheel/knob/screw with lock nut to be locked. Panel mounting and bracketed kit optional available.

	Order No.			
	Connection threads			
	G 1/4	G 1/2	G 1	G 1 1/2
<b>With gauge</b>				
<b>Control range for <math>p_2</math></b>	small	medium	large	max
0,5- 6 bar	<b>286.599</b>	<b>274.599</b>	<b>280.599</b>	<b>280.1599</b>
0,5-10 bar	<b>286.600</b>	<b>274.600</b>	<b>280.600</b>	<b>280.1600</b>
0,5-16 bar	<b>286.601</b>	<b>274.601</b>	<b>280.601</b>	<b>280.1601</b>
0,5-25 bar	<b>286.602</b>	<b>274.602</b>	<b>280.602</b>	<b>280.1602*</b>

<b>Without gauge</b>				
0,5- 6 bar	<b>286.399</b>	<b>274.399</b>	<b>280.399</b>	<b>280.1399</b>
0,5-10 bar	<b>286.400</b>	<b>274.400</b>	<b>280.400</b>	<b>280.1400</b>
0,5-16 bar	<b>286.401</b>	<b>274.401</b>	<b>280.401</b>	<b>280.1401</b>
0,5-25 bar	<b>286.402</b>	<b>274.402</b>	<b>280.402</b>	<b>280.1402*</b>

\* with adjustment screw

### Spare parts and accessories

	Order No.			
	small	medium	large	max
<b>Bracket mounting</b> attachment to the cover fixing screws	<b>286-88</b>	<b>274-48</b>	<b>280-239</b>	<b>280-239</b>
<b>Panel mounting</b>	<b>286-89</b>	<b>274-49</b>	-	-
Panel thread: M20x1,5 (size small), M28x1,5 (size medium)				
<b>Gauge</b> horizontal, Display range:				
ø40 (size small) 0 - 10 bar (for $p_2$ up to 6bar)	<b>723</b>	<b>214</b>	<b>214</b>	<b>214</b>
ø63 (size medium, large, max) 0 - 16 bar (for $p_2$ up to 10bar)	<b>734</b>	<b>215</b>	<b>215</b>	<b>215</b>
0 - 25 bar (for $p_2$ up to 16bar)	<b>745</b>	<b>216</b>	<b>216</b>	<b>216</b>
0 - 25 bar (size small) / 40 bar (for $p_2$ up to 25bar)	<b>745</b>	<b>217</b>	<b>217</b>	<b>217</b>
<b>Seal cone</b> complete	<b>286-124</b>	<b>274-82</b>	<b>280-171</b>	<b>280-172</b>
<b>Diaphragm</b> complete	<b>286-45</b>	<b>274-81</b>	<b>280-173</b>	<b>280-173</b>

Gauges see chapter 11

### Technical data

	small	medium	large	max
<b>Nominal rates of flow*</b>	2,5l/min	15l/min	24l/min	56l/min
<b>Max. operating pressure (<math>p_1</math>)</b>	40bar (PN40)			
<b>Operating temperature</b>	+5°C up to +90°C			
<b>Mounting position</b>	any			
<b>Direction of flow</b>	see arrow			
<b>Nominal width</b>	DN6	DN12	DN20	DN25
<b>Regulation</b>	handwheel	handwheel	toggle	toggle or adjustment screw
<b>Reversing control hysteresis</b>	~ 1 bar			
<b>Weight</b>	390g	1000g	3480g	5260g
<b>Material</b> - diaphragm/ seals	NBR			
- housing	brass			

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

### Dimensions [mm]

Size	small	medium	large	max
<b>Connection threads</b>	G 1/4	G 1/2	G 1	G 1 1/2
A	45	72	116	116
B	45	72	83	114
C	23	30	41	50
D	81	115	175	190
E	56	76	125	140
F	50	55	80	80
G	18	36	58	58



280.600

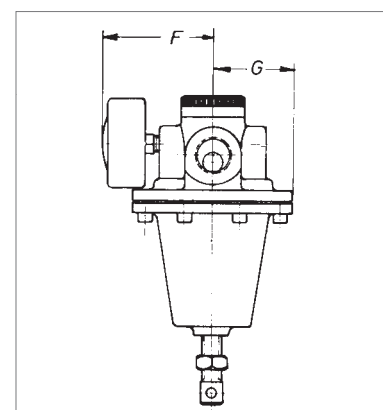
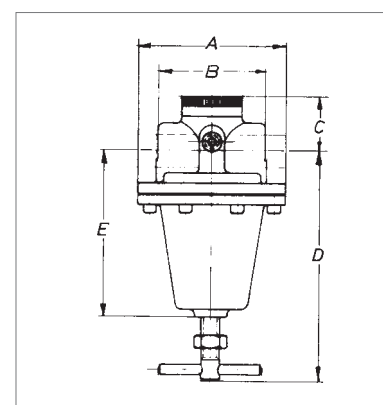
**Note:** Gauge added loosely



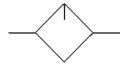
280-239

280-173

280-171



Fasteners and connecting elements see page 49



## Lubricators - G<sup>1/8</sup> – G<sup>1/2</sup>



Air lubricators are used for metered enrichment of compressed air with finely atomized oil mist. A control valve causes the proportional flow rate of added oil.

Air lubricator in straight way pattern. Multigrade oiler with proportional characteristic. Refilling oil while under pressure is possible. Needle valve for oil adjustment with high drop constancy for long periods of time. Plastic bowl (polycarbonate). Available as an option with bowl protection or metal bowl. Metal oil regulating valve available on request. Connection threads G<sup>1/8</sup> up to G<sup>1/2</sup>.

### With plastic bowl

Size	Order No.			
	Connection threads			
	G <sup>1/8</sup> *	G <sup>1/4</sup> *	G <sup>3/8</sup>	G <sup>1/2</sup>
small	<b>327.021*</b>	<b>327.022*</b>	<b>327.023</b>	-
medium	-	-	<b>327.035*</b>	<b>327.036</b>

\* inlet and outlet reduced (reductions added loosely, see page 50)

### Order key for additional options:

**327.0xxx**

- M** – metal bowl
- S** – bowl protection

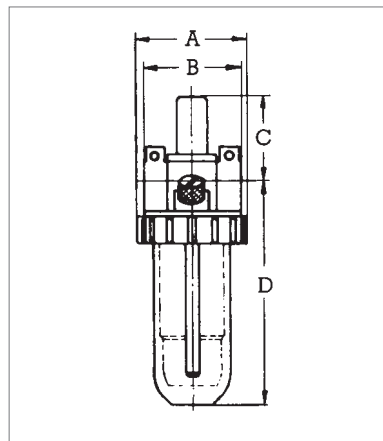
for example:

327.023 with bowl protection = 327.023**S**



### Spare parts and accessories

	Order No.	
	small	medium
<b>Bracket mounting</b> for mounting on top of the housing	<b>322-24</b>	<b>322-25</b>
<b>Bowl protection</b> for plastic bowl, with bowl ring	<b>322-130</b>	<b>322-131</b>
<b>Metal bowl with seal</b>	<b>327-92</b>	<b>327-96</b>
<b>Plastic bowl with seal</b>	<b>327-106</b>	<b>327-108</b>
<b>Bowl ring</b> for plastic bowl and metal bowl	<b>287-25</b>	<b>297-2</b>
<b>Sealing ring</b> for all bowls	<b>287-6</b>	<b>297-10</b>
<b>Oil regulating valve</b> plastic, kit	<b>330-92</b>	<b>330-92</b>
<b>Oil regulating valve</b> metal, kit	<b>327-67</b>	<b>327-67</b>



### Technical data

	Size small	Size medium
<b>Nominal rates of flow**</b>	1160 NI/min	4330 NI/min
<b>Min. flow rate***</b>	47 NI/min	117 NI/min
<b>Max. operating pressure (p<sub>1</sub>)</b>	- plastic bowl: 16 bar - metal bowl: 25 bar	
<b>Operating temperature</b>	- plastic bowl: 0 °C up to +50 °C - metal bowl: 0 °C up to +90 °C	
<b>Effective bowl volume</b>	40 cm <sup>3</sup>	135 cm <sup>3</sup>
<b>Mounting position</b>	vertical	
<b>Direction of flow</b>	see arrow	
<b>Nominal width</b>	DN6	DN15
<b>Nominal pressure (housing)</b>	PN25	
<b>Weight</b>	400g	890g
<b>Material</b>	- seals: NBR - housing: zinc alloy - plastic bowl: polycarbonate	

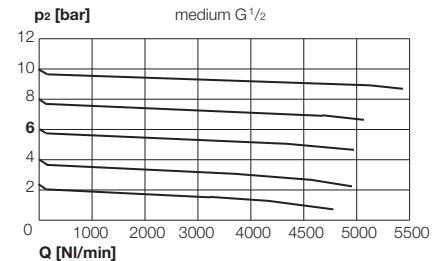
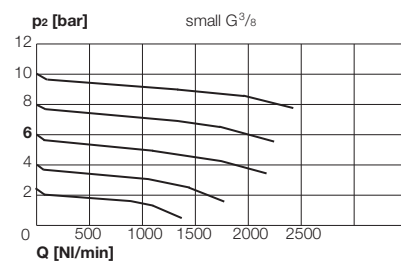
\*\* measured at p<sub>1</sub> = 6 bar and Δp = 1 bar \*\*\* oil delivery 10 droplets/min at 6 bar

### Dimensions [mm]

Size	small			medium	
	G <sup>1/8</sup> *	G <sup>1/4</sup> *	G <sup>3/8</sup>	G <sup>3/8</sup> *	G <sup>1/2</sup>
A	56	56	56	87	87
B	57	57	50	88	80
C	51	51	51	55	55
D	119	119	119	156	156

\*inlet and outlet reduced (reductions added loosely)

### Rates of flow



**Recommended oil:** Oil containers made of plastic (polycarbonate) are attacked by oil additives, anti-frost or synthetic oils. We therefore recommend regular lubricating oils of approx. **22 up to 32cSt** 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.



### ewo Compressed Air special oil

Oils see chapter 11.

Container	Order No.
Volume 1 litre	<b>583</b>
Volume 5 litre	<b>583.1</b>

Fasteners and connecting elements see page 49



## Lubricators - G<sup>3/4</sup> – G 1<sup>1/2</sup>

Air lubricators are used for metered enrichment of compressed air with finely atomized oil mist. A control valve causes the proportional flow rate of added oil.

Air lubricator in straight way pattern. Multigrade oiler with proportional characteristic. Refilling oil while under pressure is possible. Needle valve for oil adjustment with high drop constancy for long periods of time. Plastic bowl (polycarbonate). Available as an option with bowl protection or metal bowl. Metal Oil regulating valve available on request. Connection threads G<sup>3/4</sup> to G 1<sup>1/2</sup>.

### With plastic bowl

Size	Order No.			
	Connection threads			
	G <sup>3/4</sup> *	G1	G1 <sup>1/4</sup> *	G1 <sup>1/2</sup>
compact	<b>407.038*</b>	<b>407.039</b>	-	-
large	<b>300.080*</b>	<b>300.090</b>	-	-
max	-	-	<b>327.410*</b>	<b>327.411</b>

\* inlet and outlet reduced (reductions added loosely, see page 50)

### Order key for additional options:

407.0xxx

M – metal bowl  
S – bowl protection

for example:

407.038 *with bowl protection* = 327.038S

### Spare parts and accessories

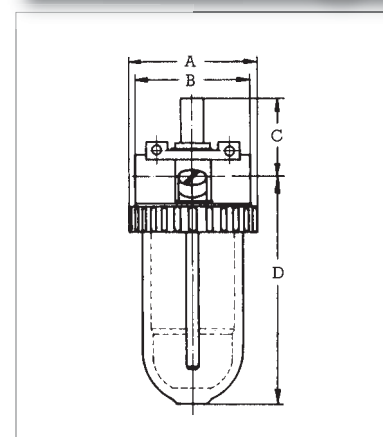
	Order No.		
	compact	large	max
<b>Bracket mounting</b> for mounting on top of the housing	<b>405-4</b>	<b>281-26</b>	<b>281-26</b>
<b>Bowl protection</b> for plastic bowl	<b>322-131</b>	<b>281-24</b>	<b>281-24</b>
<b>Bowl ring</b> for bowl protection	<b>297-13</b>	<b>300-31</b>	<b>300-31</b>
<b>Metal bowl with seal</b>	<b>327-96</b>	<b>327-112</b>	<b>327-112</b>
<b>Plastic bowl with sea</b>	<b>327-108</b>	<b>327-111</b>	<b>327-111</b>
<b>Bowl ring</b> for plastic bowl and metal bowl	<b>297-2</b>	<b>279-2</b>	<b>279-2</b>
<b>Sealing ring</b> for all bowls	<b>297-10</b>	<b>279-9</b>	<b>279-9</b>
<b>Oil regulating valve</b> plastic, kit	-	<b>330-92</b>	<b>330-92</b>
<b>Oil regulating valve</b> metal, kit	<b>327-67****</b>	<b>327-67</b>	<b>327-67</b>

\*\*\*\* mounted

### Technical data

	Size compact	Size large	Size max
<b>Nominal rates of flow**</b>	6330 NI/min	7330 NI/min	7830 NI/min
<b>Min. flow rate***</b>	117 NI/min	167 NI/min	167 NI/min
<b>Max. operating pressure (p<sub>1</sub>)</b>	- plastic bowl - metal bowl	16bar 25bar	
<b>Operating temperature</b>	- plastic bowl - metal bowl	0°C up to +50°C 0°C up to +90°C	
<b>Effective bowl volume</b>	135 cm <sup>3</sup>	360 cm <sup>3</sup>	360 cm <sup>3</sup>
<b>Mounting position</b>		vertical	
<b>Direction of flow</b>		see arrow	
<b>Nominal width</b>	DN20	DN20	DN25
<b>Nominal pressure (housing)</b>		PN25	
<b>Weight</b>	1270g	1700g	1970g
<b>Material</b>	- seals - housing - plastic bowl	NBR aluminum polycarbonate	aluminum

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

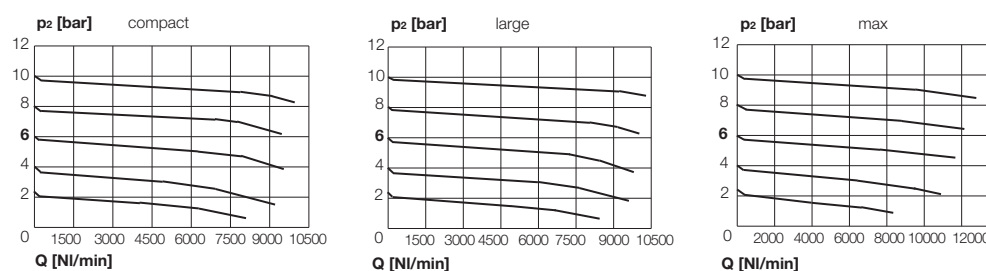


### Dimensions [mm]

Size	compact		large		max	
	G <sup>3/4</sup> *	G1	G <sup>3/4</sup> *	G1	G1 <sup>1/4</sup> *	G1 <sup>1/2</sup>
A	102	90	133	133	133	133
B	-	-	134	120	134	120
C	69	69	58	58	65	65
D	166	166	190	190	200	200

\*inlet and outlet reduced (reductions added loosely)

### Rates of flow



**Recommended oil:** Oil containers made of plastic (polycarbonate) are attacked by oil additives, anti-frost or synthetic oils. We therefore recommend regular lubricating oils of approx. **22 up to 32 cSt** 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.

### ewo Compressed air special oil

Oils see chapter 11.

Container	Order No.
Volume 1 litre	<b>583</b>
Volume 5 litre	<b>583.1</b>



Fasteners and connecting elements see page 49



## Lubricators - G 1 1/2 – G2



457.012

Air lubricators are used for metered enrichment of compressed air with finely atomized oil mist. A control valve causes the proportional flow rate of added oil.

Air lubricator in straight way pattern. Multigrade oiler with proportional characteristic. Refilling oil while under pressure is possible. Needle valve for oil adjustment with high drop constancy for long periods of time. Plastic bowl (polycarbonate). Available as an option with bowl protection or metal bowl. Metal Oil regulating valve available on request. Connection threads G 1 1/2 to G2.

### With plastic bowl

Size	Order No.	
	Connection threads	
super	G 1 1/2*	G2
	<b>457.011*</b>	<b>457.012</b>

\* inlet and outlet reduced (reductions added loosely, see page 50)

### Order key for additional options:

457.0xxx  
 M – metal bowl  
 S – bowl protection

for example:

457.012 with bowl protection = 457.012**S**



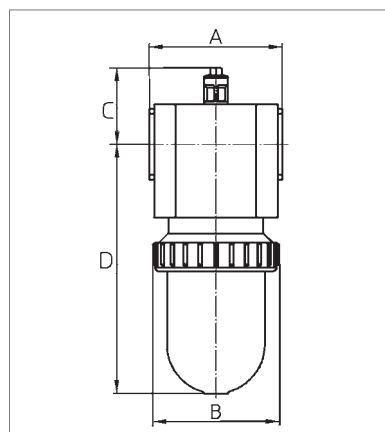
457-12

423-65

423-179

### Spare parts and accessories

	Order No.
Bracket mounting for mounting on top of the housing	super <b>457-12</b>
Bowl protection for plastic bowl	<b>281-24</b>
Bowl ring for bowl protection	<b>300-31</b>
Metal bowl with seal	<b>327-112</b>
Plastic bowl with seal	<b>327-111</b>
Bowl ring for plastic bowl and metal bowl	<b>279-2</b>
Sealing ring for all bowls	<b>279-9</b>
Oil regulating valve metall, kit	<b>423-65</b>
Oil regulating valve plastic, kit	<b>423-179</b>



### Technical data

	Size super
Nominal rates of flow**	14000NI/min
Min. flow rate***	170NI/min
Max. operating pressure (p <sub>1</sub> )	- plastic bowl 16bar - metal bowl 25bar
Operating temperature	- plastic bowl 0°C up to +50°C - metal bowl 0°C up to +90°C
Effective bowl volume	600cm <sup>3</sup>
Mounting position	vertical
Direction of flow	see arrow
Nominal width	DN50
Nominal pressure (housing)	PN25
Weight	5290g
Material	- seals NBR - housing aluminum - plastic bowl polycarbonate

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

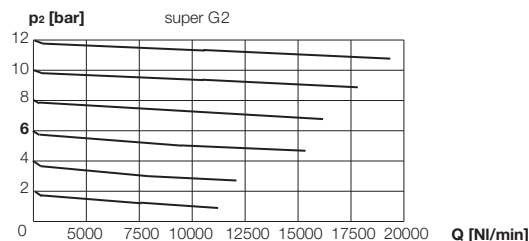
\*\*\* oil delivery 10 droplets/min at 6 bar

### Dimensions [mm]

Connection threads	G 1 1/2*	G2
A	140	140
B	140	140
C	80	80
D	350	350

\*inlet and outlet reduced (reductions added loosely)

### Rates of flow



**Recommended oil:** Oil containers made of plastic (polycarbonate) are attacked by oil additives, anti-frost or synthetic oils. We therefore recommend regular lubricating oils of approx. **22 up to 32cSt** 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.



### ewo Compressed air special oil

Oils see chapter 11

Container	Order No.
Volume 1 litre	<b>583</b>
Volume 5 litre	<b>583.1</b>

Fasteners and connecting elements see page 49



## Small lubricators – G<sup>1/4</sup> - G<sup>3/8</sup>

### Oil mist by cyclical air stream

Air lubricator for mounting on impact air tools with fitful working rhythm such as impact wrenches, etc. The oil mist is created during cyclically airflow. Connection thread G<sup>3/8</sup> and G<sup>1/4</sup> (G<sup>1/4</sup> with inner reduction). Dosable Oil flow. Oil aspiration opposite the inlet screw. With plastic bowl.

**Oil dosage:** The permanently set dosage is about 0,4 cm<sup>3</sup> per 100 working strokes. One filling lasts for about 3000 cycles. The adjustment screw on the filler, seals with an O-ring and can be adjusted.

Connection thread	Order No.
G <sup>1/4</sup> *	317.12*
G <sup>3/8</sup>	317.14

\* inlet and outlet reduced

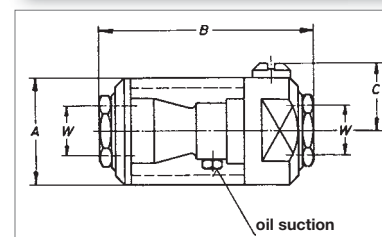


### Spare parts

Screw with seal	Order No.
	317-56

### Technical data

Max. operating pressure (p <sub>1</sub> )	10bar (PN10)
Operating temperature	0 °C up to +50 °C
Mounting position	oil suction at lowest point!
Flow rate	approx. 750 l/min at Δp=1 bar
Direction of flow	any
Effective bowl volume	12ml
Nominal width	DN8
Mass	33x67mm
Weight	87g
Material	- seals NBR - housing aluminum anodized - oil sight glass polycarbonate



### Dimensions [mm]

Connection thread	G <sup>1/4</sup> *	G <sup>3/8</sup>
A	33	33
B	67	60
C	22	22

\* inlet and outlet reduced

## Small lubricators – G<sup>1/4</sup>

### Oil mist by flowing air stream

Compressed air lubricator for direct connection to compressed air tools like impact wrenches, grinder and so on. The oil fog is created by the flowing air. Connection thread G<sup>1/4</sup> inside and outside. Oil dosage is preset and fixed. Easy refill with external screw. Oil aspiration: Intake has to be at lowest position.

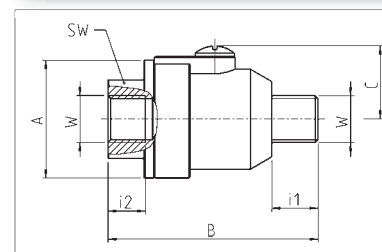
**Oil dosage:** The permanently set dosage is about 50mm<sup>3</sup> per 1m<sup>3</sup> flow rate. One filling lasts about 10 h at 100 NI/min operating. The adjustment screw on the filler, seals with an o-ring and can be adjusted.

Connection thread	Order No.
G <sup>1/4</sup>	317.10

### Technical data

Max. operating pressure (p <sub>1</sub> )	8 bar (PN8)
Recommended operating pressure (p <sub>1</sub> )	6,2 bar
Operating temperature	-5 °C up to +60 °C
Mounting position	oil suction at lowest point!
Flow rate	approx. 2.000l/min at 6bar
Direction of flow	any
Effective bowl volume	5 ml
Mass	36x63mm
Weight	54g
Material	- seals NBR - housing aluminum - oil sight glass acetate

**Recommended oil:** Oil containers made of plastic (polycarbonate and acetate) are attacked by oil additives, anti-frost or synthetic oils. We therefore recommend regular lubricating oils of approx. **22 up to 32 cSt** 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]

Connection thread	G <sup>1/4</sup>
A	36
B	63
C	20,5
W	G <sup>1/4</sup>
i1	13
i2	10,5
SW (AF)	25

### ewo Compressed air special oil

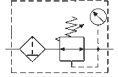
Oils see chapter 11

Container	Order No.
Volume 1 litre	583
Volume 5 litre	583.1



Fasteners and connecting elements see page 49





## Filter pressure regulators - G<sup>1/8</sup> – G<sup>1/2</sup>



Compressed air filter and pressure regulator combined in one unit! Detailed description see separate components. With manually operated drain valve. Pressure regulator diaphragm type with secondary vent (exhaust) and extensive form of independence. Control range for p<sub>2</sub> at 0,5 up to 3/6/10/16 bar. Gauge can be mounted on either side. Bracket mounting available if desired. Operation by toggle or handwheel. Special models (for example, without secondary air exhaust) upon request. Connection threads G<sup>1/8</sup> up to G<sup>1/2</sup>.

### Standard versions:

**Control range 0,5-10 bar, with plastic bowl, with toggle, with gauge, filter porosity 40 μm**

Size	Order No.			
	Connection threads			
	G <sup>1/8</sup> *	G <sup>1/4</sup> *	G <sup>3/8</sup>	G <sup>1/2</sup>
small	<b>324.313*</b>	<b>324.323*</b>	<b>324.333</b>	-
medium	-	-	<b>324.353*</b>	<b>324.363</b>

\* inlet and outlet reduced (reductions added loosely, see page 50)

### Order key for all variants:

- 324.xxxx**
- plastic bowl (without addition)
  - M** – metal bowl
  - S** – bowl protection — *additional options*
  - 1** – 0,5- 3 bar
  - 2** – 0,5- 6 bar
  - 3** – 0,5-10 bar
  - 4** – 0,5-16 bar — *control range (p<sub>2</sub>)*
  - 1** – G<sup>1/8</sup>\*
  - 2** – G<sup>1/4</sup>\*
  - 3** – G<sup>3/8</sup> *small*
  - 5** – G<sup>3/8</sup> *medium*
  - 6** – G<sup>1/2</sup> — *connection threads*
  - 2** – handwheel with gauge with manual drain valve
  - 3** – toggle with gauge with manual drain valve
  - 4** – handwheel without gauge with manual drain valve
  - 5** – toggle without gauge with manual drain valve

*for example*

324.333 - but **without gauge**, 0,5- 10 bar and **with metal bowl** = 324.533M

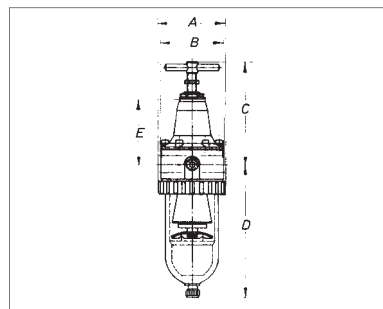
Note: Gauge added loosely



### Spare parts and accessories

	Order No.	
	small	medium
<b>Bracket mounting</b> for mounting on top of the cover	<b>323-68</b>	<b>280-132</b>
<b>Bowl protection</b> for plastic bowl, with bowl ring	<b>322-130</b>	<b>322-131</b>
<b>Metal bowl</b> with seal and manually operated drain valve	<b>324-101</b>	<b>324-109</b>
<b>Gauge horizontal</b> , Display range: 0- 6bar (for p <sub>2</sub> up to 3 bar)	<b>42</b>	<b>213</b>
ø50 (size small) 0- 10 bar (for p <sub>2</sub> up to 6 bar)	<b>55</b>	<b>214</b>
ø63 (size medium) 0- 16 bar (for p <sub>2</sub> up to 10 bar)	<b>85</b>	<b>215</b>
0- 25 bar (for p <sub>2</sub> up to 16 bar)	<b>96</b>	<b>216</b>
<b>Plastic bowl</b> with seal and manually operated drain valve	<b>322-112</b>	<b>322-118</b>
<b>Bowl ring</b> for plastic bowl and metal bowl	<b>287-25</b>	<b>297-2</b>
<b>Sealing ring</b> for all bowls	<b>287-6</b>	<b>297-10</b>
<b>Seal cone</b> complete	<b>323-119</b>	<b>280-220</b>
<b>Diaphragm</b> complete	<b>323-152</b>	<b>280-221</b>
<b>Filter element</b> filter porosity 40 μm (mounted)	<b>287-10</b>	<b>267-37</b>
filter porosity 5 μm	<b>287-13</b>	<b>298-9</b>

Gauges see chapter 11



### Dimensions [mm]

Size	small			medium	
Connection threads	G <sup>1/8</sup> *	G <sup>1/4</sup> *	G <sup>3/8</sup>	G <sup>3/8</sup> *	G <sup>1/2</sup>
A	56	56	56	87	87
B	61	61	54	90	82
C	99	99	99	134	134
D	131	131	131	172	172
E	67	67	67	87	87

\* inlet and outlet reduced (reductions added loosely)

Condensate drain valves see chapter 8  
Fasteners and connecting elements see page 49

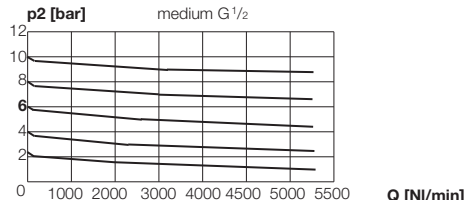
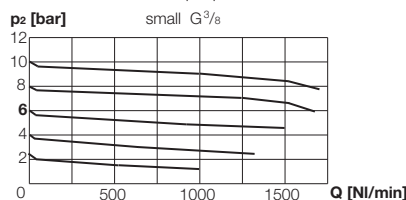
### Technical data

	Size small	Size medium
<b>Nominal rates of flow**</b>	910NI/min	2660NI/min
<b>Max. operating pressure (p<sub>1</sub>)</b>	- plastic bowl 16 bar - metal bowl 25 bar	
<b>Operating temperature</b>	- plastic bowl 0°C up to +50°C - metal bowl 0°C up to +90°C	
<b>Effective bowl volume</b>	25 cm <sup>3</sup>	80 cm <sup>3</sup>
<b>Mounting position</b>	vertical, filter down	
<b>Direction of flow</b>	see arrow	
<b>Nominal width</b>	DN6	DN15
<b>Nominal pressure (housing)</b>	PN25	
<b>Dependence upon supply pressure</b>	< 3%	< 2%
<b>Reversing control hysteresis</b>	~ 1 bar	
<b>Weight</b>	840g	2290g
<b>Material</b>	- seals - housing/spring cover - plastic bowl - filter element	NBR zinc die-cast polycarbonate sintered bronze

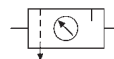
\*\*measured at p<sub>1</sub> = 8 bar, p<sub>2</sub> = 6 bar and Δp = 1 bar

### Rates of flow

p<sub>1</sub> = p<sub>2</sub> + 2 bar



## Two-piece maintenance units - G<sup>1/8</sup> – G<sup>1/2</sup>



Maintenance unit consisting of filter pressure regulator and lubricator, connected with double nipple. Can be combined with additional equipment to make other variations. Bracket mounting available as accessory. Connection threads G<sup>1/8</sup> up to G<sup>1/2</sup>.

**Control range 0,5-10 bar, with plastic bowl and manually operated drain valve**

Size	Order No.			
	Connection threads			
	G <sup>1/8</sup> *	G <sup>1/4</sup> *	G <sup>3/8</sup>	G <sup>1/2</sup>
small	<b>331.21*</b>	<b>331.22*</b>	<b>331.23</b>	-
medium	-	-	<b>331.35*</b>	<b>331.36</b>

\* inlet and outlet reduced (reductions added loosely, see page 50)

### Order key for additional options:

331.xxx

M – metal bowl  
S – bowl protection

for example:

331.21 *with* bowl protection  
= 331.21**S**

Note: Gauge added loosely

### Spare parts and accessories

	Order No.	
	small	medium
<b>Bracket mounting</b> for mounting on top of the cover	<b>323-68</b>	<b>280-132</b>
<b>Connecting parts</b> (double nipple) of the basic units (without reduction) for G <sup>3/8</sup>	<b>185.55</b>	<b>185.55</b>
G <sup>1/2</sup>	-	<b>185.77</b>

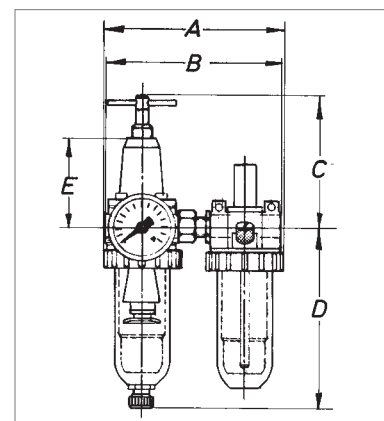
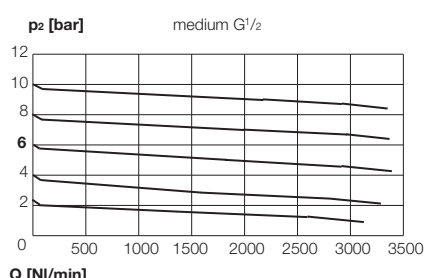
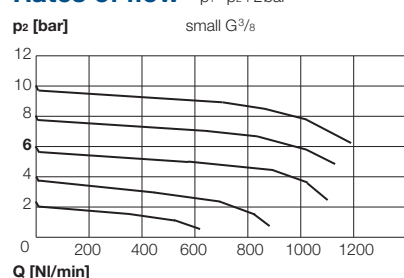


Technical data	Size small	Size medium
<b>Nominal rates of flow**</b>	580 NI/min	1830 NI/min
<b>Min. flow rate***</b>	50 NI/min	117 NI/min
<b>Max. operating pressure (p<sub>1</sub>)</b>	- plastic bowl - metal bowl	16 bar 25 bar
<b>Operating temperature</b>	- plastic bowl - metal bowl	0°C up to +50°C 0°C up to +90°C
<b>Effective bowl volume</b>	- filter bowl 25 cm <sup>3</sup> - oil bowl 40 cm <sup>3</sup>	80 cm <sup>3</sup> 135 cm <sup>3</sup>
<b>Mounting position</b>	vertical	
<b>Direction of flow</b>	see arrow	
<b>Nominal width</b>	DN6	DN15
<b>Nominal pressure (housing)</b>	PN25	
<b>Dependence upon supply pressure</b>	< 3%	< 2%
<b>Reversing control hysteresis</b>	~ 1 bar	
<b>Weight</b>	1400g	3670g
<b>Material</b>	- diaphragm/seals - housing - plastic bowl - filter element	NBR zinc alloy polycarbonate sintered bronze

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

\*\*\* oil delivery 10 droplets/min at 6 bar

### Rates of flow



### Dimensions [mm]

Size	small		medium		
connection threads	G <sup>1/8</sup> *	G <sup>1/4</sup> *	G <sup>3/8</sup>	G <sup>3/8</sup> *	G <sup>1/2</sup>
A	124	124	124	182	182
B	130	130	122	184	176
C	99	99	99	134	134
D	131	131	131	172	172
E	67	67	67	87	87

\* inlet and outlet reduced (reductions added loosely)

**Recommended oil:** Oil containers made of plastic (polycarbonate) are attacked by oil additives, anti-frost or synthetic oils. We therefore recommend regular lubricating oils of approx. **22 up to 32 cSt** 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.

### ewo Compressed air special oil

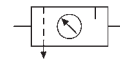
Oils see chapter 11

Container	Order No.
Volume 1 litre	<b>583</b>
Volume 5 litre	<b>583.1</b>



Filter pressure regulators see page 44  
Lubricators see page 40

Condensate drain valves see chapter 8  
Fasteners and connecting elements see page 49



## Three-piece maintenance units - G<sup>1/8</sup> – G<sup>1/2</sup>



Note: Gauge added loosely



Maintenance unit consisting of filter pressure regulator and lubricator, connected with double nipple. Can be combined with additional equipment to make other variations. Bracket mounting available as accessory. Connection threads G<sup>1/8</sup> up to G<sup>1/2</sup>.

Control range 0,5-10 bar, with plastic bowl and manually operated drain valve

Size	Order No.			
	Connection threads			
	G <sup>1/8</sup> *	G <sup>1/4</sup> *	G <sup>3/8</sup>	G <sup>1/2</sup>
small	333.21*	333.22*	333.23	-
medium	-	-	334.35*	334.36

\* inlet and outlet reduced (reductions added loosely, see page 50)

### Order key for additional options:

333/334.xxx

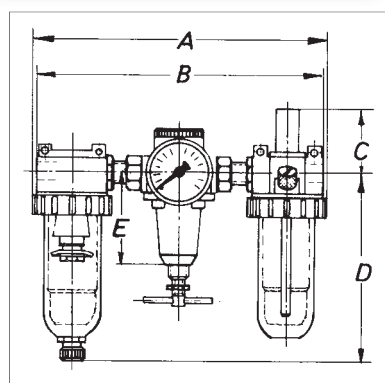
- M – metal bowl
- S – bowl protection

for example:

333.21 *with bowl protection* = 333.21S

### Spare parts and accessories

Bracket mounting for mounting on top of the cover	Order No.			
	small	medium		
323-68	280-132	323-68	280-132	
Connecting parts (double nipple) of the basic units (without reduction) for	G <sup>3/8</sup>	G <sup>1/2</sup>	Order No.	
			185.55	185.55
			-	185.77



### Dimensions [mm]

Size	small		medium	
Connection threads	G <sup>1/8</sup> *	G <sup>1/4</sup> *	G <sup>3/8</sup>	G <sup>1/2</sup>
A	196	196	281	281
B	197	197	282	274
C	51	51	55	55
D	135	135	172	172
E	67	67	85	85

\* inlet and outlet reduced (reductions added loosely)

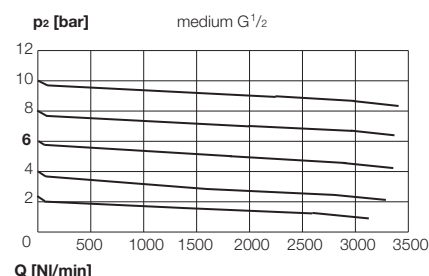
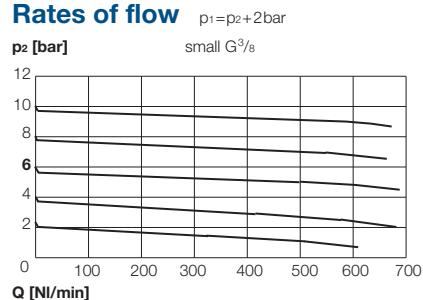
### Technical data

	Size small	Size medium
Nominal rates of flow**	500NI/min	1830NI/min
Min. flow rate***	50NI/min	117NI/min
Max. operating pressure (p <sub>1</sub> )	- plastic bowl - metal bowl	16bar 25bar
Operating temperature	- plastic bowl - metal bowl	0°C up to +50°C 0°C up to +90°C
Effective bowl volume	- filter bowl 25 cm <sup>3</sup> - oil bowl 40 cm <sup>3</sup>	80 cm <sup>3</sup> 135 cm <sup>3</sup>
Mounting position	vertical	
Direction of flow	see arrow	
Nominal width	DN6	DN15
Nominal pressure (housing)	PN25	
Dependence upon supply pressure	< 3%	< 2%
Reversing control hysteresis	~ 1 bar	
Weight	1780g	3220g
Material	- diaphragm/seals - housing - plastic bowl - filter element	NBR zinc alloy polycarbonate sintered bronze

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

\*\*\* oil delivery 10 droplets/min at 6 bar

### Rates of flow



**Recommended oil:** Oil containers made of plastic (polycarbonate) are attacked by oil additives, anti-frost or synthetic oils. We therefore recommend regular lubricating oils of approx. **22 up to 32 cSt** 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.



### ewo Compressed air special oil

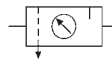
Oils see chapter 11

Container	Order No.
Volume 1 litre	583
Volume 5 litre	583.1

Filters see page 20  
Pressure regulators see page 31  
Lubricators see page 40

Condensate drain valves see chapter 8  
Fasteners and connecting elements see page 49

## Three-piece maintenance units - G<sup>3/4</sup> – G 1 1/2



Maintenance unit consisting of filter pressure regulator and lubricator, connected with a double nipple. Can be combined with additional equipment to make other variations. Bracket mounting available as accessory. Connection threads G<sup>3/4</sup> up to G 1 1/2.

**Control range 0,5-10 bar, with plastic bowl and manually operated drain valve**

Size	Order No.			
	Connection threads			
	G <sup>3/4</sup> *	G1	G 1 1/4*	G 1 1/2
compact	<b>415.38*</b>	<b>415.39</b>	-	-
large	<b>334.48*</b>	<b>334.49</b>	-	-
max	-	-	<b>334.410*</b>	<b>334.411</b>

\* inlet and outlet reduced (reductions added loosely, see page 50)

### Order key for additional options:

415/334.xxx

M – metal bowl  
S – bowl protection

for example:

415.38 with bowl protection = 415.38S

### Spare parts and accessories

Bracket mounting for mounting on top of the cover (required 2x)	Order No.			
	compact	large	max	
406-17	281-26	281-26	-	
Connecting parts (double nipple) of the basic units (without reduction)	for...			
	G1	415-12	415-14	-
	G 1 1/2	-	-	280-228



Note: Gauge added loosely

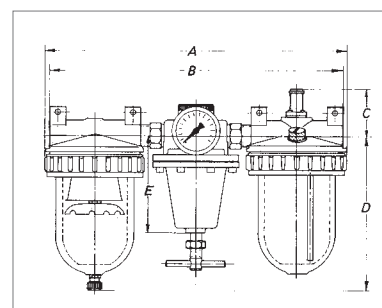


### Technical data

	Size compact	Size large	Size max
Nominal rates of flow**	5330 NI/min	6000 NI/min	6670 NI/min
Min. flow rate***	117 NI/min	167 NI/min	167 NI/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	
Effective bowl volume	- filter bowl - oil bowl	80 cm <sup>3</sup> 135 cm <sup>3</sup>	260 cm <sup>3</sup> 360 cm <sup>3</sup>
Mounting position	vertical		
Direction of flow	see arrow		
Nominal width	DN20	DN20	DN25
Nominal pressure (housing)	PN25		
Dependence upon supply pressure	< 2%		
Reversing control hysteresis	~ 1 bar		
Weight	5250g	7270g	9950g
Material	- diaphragm/seals - housing: - filters/lubricators - pressure regulator - filter element - plastic bowl	NBR zinc alloy zinc alloy sintered bronze polycarbonate	NBR aluminum brass sintered bronze polycarbonate

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

\*\*\* oil delivery 10 droplets/min at 6 bar



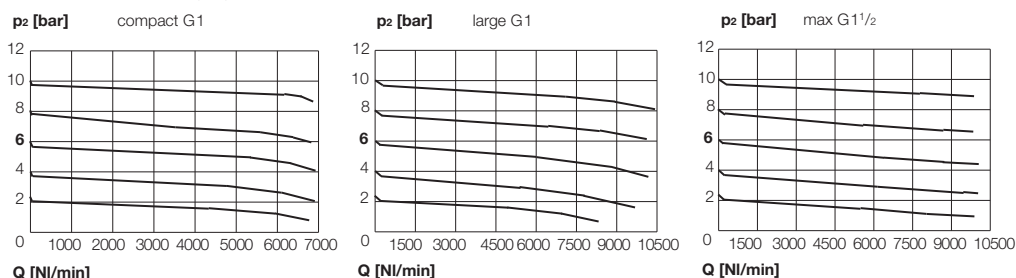
### Dimensions [mm]

Size	compact		large		max	
Connection threads	G <sup>3/4</sup> *	G1	G <sup>3/4</sup> *	G1	G 1 1/4*	G 1 1/2
A	290	290	426	426	426	426
B	315	290	382	370	382	370
C	69	69	58	58	58	58
D	176	176	206	206	206	206
E	90	90	130	130	130	130

\* inlet and outlet reduced (reductions added loosely)

### Rates of flow

p<sub>1</sub> = p<sub>2</sub> + 2 bar



**Recommended oil:** Oil containers made of plastic (polycarbonate) are attacked by oil additives, anti-frost or synthetic oils. We therefore recommend regular lubricating oils of approx. **22 up to 32 cSt** 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.

### ewo Compressed air special oil

Oils see chapter 11

Container	Order No.
Volume 1 litre	<b>583</b>
Volume 5 litre	<b>583.1</b>



Filters see page 21

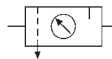
Pressure regulators see page 32

Lubricators see page 41

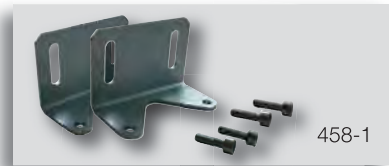
Condensate drain valves see chapter 8  
Fasteners and connecting elements see page 49



## Three-piece maintenance units - G 1 1/2 – G 2



Note: Gauges added loosely



Maintenance unit consisting of filter pressure regulator and lubricator, connected with a double nipple. Can be combined with additional equipment to make other variations. Bracket mounting available as accessory. Connection threads G 1 1/2 up to G 2.

Control range 0,5-10 bar, with plastic bowl and manually operated drain valve	Order No.	
	Connection threads	
Size	G 1 1/2*	G 2
super	458.211*	458.212

\* inlet and outlet reduced (reductions added loosely, see page 50)

### Order key for additional options:

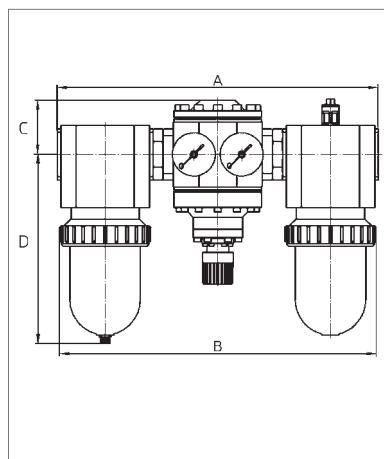
458.21xx  
 M – metal bowl  
 S – bowl protection

for example:

458.212 with bowl protection = 458.212S

### Spare parts and accessories

	Order No.
Bracket kit for mounting on the housing (at filter + lubricator), complete with 2 brackets	458-1
Connecting parts (double nipple), connection thread G 2	454-9



### Technical data

	Size super
Nominal rates of flow**	11,660 NI/min
Min. flow rate***	167 NI/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
Effective bowl volume	- filter bowl: 500 cm <sup>3</sup> - oil bowl: 600 cm <sup>3</sup>
Mounting position	vertical
Direction of flow	see arrow
Nominal width	DN 50
Nominal pressure (housing)	PN 25
Dependence upon supply pressure	< 2%
Reversing control hysteresis	~ 1 bar
Weight	17,530 g
Material	- diaphragm/seals: NBR - housing: aluminum - filters/lubricators: alu alloy - pressure regulator: sintered bronze - filter element: polycarbonate - plastic bowl: polycarbonate

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

\*\*\* oil delivery 10 droplets/min at 6 bar

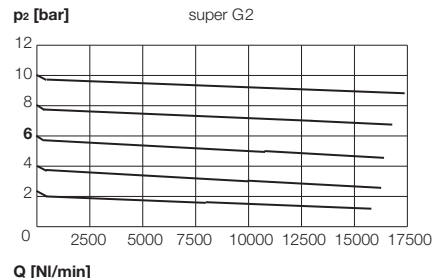
### Dimensions [mm]

Size	super	
	G 1 1/2*	G 2
A	332	332
B	332	320
C	69	69
D	176	176

\*\* inlet and outlet reduced (reductions added loosely)

### Rates of flow

p<sub>1</sub> = p<sub>2</sub> + 2 bar  
super G 2



**Recommended oil:** Oil containers made of plastic (polycarbonate) are attacked by oil additives, anti-frost or synthetic oils. We therefore recommend regular lubricating oils of approx. **22 up to 32 cSt** 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.



### ewo Compressed air special oil

Oils see chapter 11

Container	Order No.
Volume 1 litre	583
Volume 5 litre	583.1

Filters see page 22

Pressure regulators see page 33

Lubricators see page 42

Condensate drain valves see chapter 8

Fasteners and connecting elements see page 49



## Fasteners and connectors

### Bracket sets for mounting on top of the housing

Content: mounting set and 2 cap screws.

Suitable for	Size	Order No.
Filters, Microfilters, Lubricators	small	<b>322-24</b>
Filters, Microfilters, Lubricators	medium	<b>322-25</b>
Filters, Microfilters, Lubricators	compact	<b>405-4</b>
Filters, Microfilters, Lubricators, 3er Maintenance units*	large, max	<b>281-26</b>
Filters, Microfilters, Lubricators	super	<b>457-12</b>
Filters 40/60bar, Microfilters 40/60bar	I	<b>445-39</b>
Filters 40/60bar, Microfilters 40/60bar	II	<b>445-28</b>
Filters 40/60bar, Microfilter 40 bar	super	<b>429-27</b>
Maintenance units (3er) (Contents: 2 brackets and 4 screws)	super	<b>458-1</b>
Pressure regulator (secured with 4 screws)	super	<b>417-47</b>
High pressure regulators 60bar (secured with 4 screws)	II	<b>302-19</b>

\* 2 sets required!

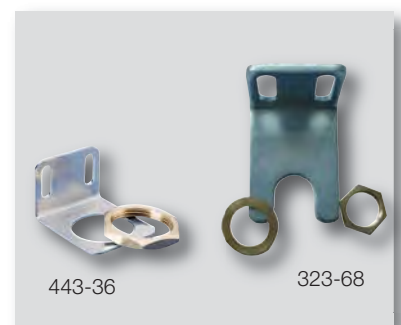


### Bracket mounting for fixing on lid

Content: Mounting brackets, nut and washer.

Suitable for	Size	Order No.
Small pressure regulator (content: Mounting brackets and nut without washer)	small	<b>443-36</b>
Pressure regulators, 2er/3er-Maintenance units, Filter pressure regulators	small	<b>323-68</b>
Pressure regulators	intermediate	<b>280-134</b>
Pressure regulators, Filter pressure regulators, 2er/3er*-Maintenance units, Precision pressure regulators	medium	<b>280-132</b>
Pressure regulators 3er-Maintenance units*	compact	<b>406-17</b>
Pressure regulators 40bar, Water pressure regulators (bracket, 2 screws, 2 nuts)	small	<b>286-88</b>
Pressure regulators 40bar, Water pressure regulators (bracket, 2 screws, 2 nuts)	medium	<b>274-48</b>
High pressure regulators 60bar	I	

\* 2 sets required!



### Bracket set for mounting on cap-screws

(2 screws to be released and to be mounted in between)

Content: Mounting bracket and 2 cylindric screws.

Suitable for	Size	Order No.
Pressure regulators, Filter pressure regulators, Water pressure regulator	large, max	<b>280-239</b>



### Connecting parts of the basic units (without reduction) for 2- and 3-piece maintenance units

Double nipples also see chapter 10, page 133

Suitable for	Connection threads	Size	Order No.
2 piece maintenance units	G <sup>3/8</sup>	small	<b>185.55</b>
	G <sup>1/2</sup>	medium	<b>185.77</b>
3 piece maintenance units	G <sup>3/8</sup>	small	<b>185.55</b>
	G <sup>1/2</sup>	medium	<b>185.77</b>
	G1	compact	<b>415-12</b>
	G1	large	<b>415-14</b>
	G1 <sup>1/2</sup>	max	<b>280-228</b>
	G2	super	<b>454-9</b>

