# Facts – Data – Advantages

The differences lie in the details. When you evaluate offers, you should consider the features listed here are the calculations. Whether ease of handling, performance, or longevity - these ewo-qualities bring you benefits.

**Materials used:**

| | |
|---|---|
| Housing, fastening elements | zinc diecasting (Z410) |
| Cap, head (regulator) | PA6-GF30 |
| Handwheel | POM |
| Cover | ABS |
| Seals, diaphragm | NBR |
| Filter insert | PE sintered |
| Impact cartridge, cutting wheel | POM |
| Bowl | polycarbonate |
| Interlock | POM |
| Pressure spring | steel galvanized |
| Against pressure spring | stainless steel |
| Cone, diaphragm plate | brass |
| Oiler dome | spez. PA |
| Oil regulation | PU |
| Metal bowl, bezel | zinc diecasting (Z410) |
| Sighting tube (at metal bowl) | spez. PA |
| Bowl protection | aluminum |

- **Safety acc. EN 983**
- **Modern industrial design**
- **Robust metal housing**
  **(Zinc die casting with 2-fold surface protection)**
- **Thread connection acc. DIN with sealing surface**
- **Bayonet fixing for the plastic and metal bowl**
- **Retrofit metal bowl protection for the plastic bowl**
- **Option semi and fully automatic drain valves**
- **Two combinable connection possibilities (comfort - compact)**
- **Comfort connection with adhesive o-rings**
- **Integrated T-Bracket as connection module**
- **Direct wall mounting**
- **High stiffness / stability of the connection**
- **Optimal regulation characteristics through roll diaphragms**
- **Lubricator with enhanced flow rate and nebulisation**

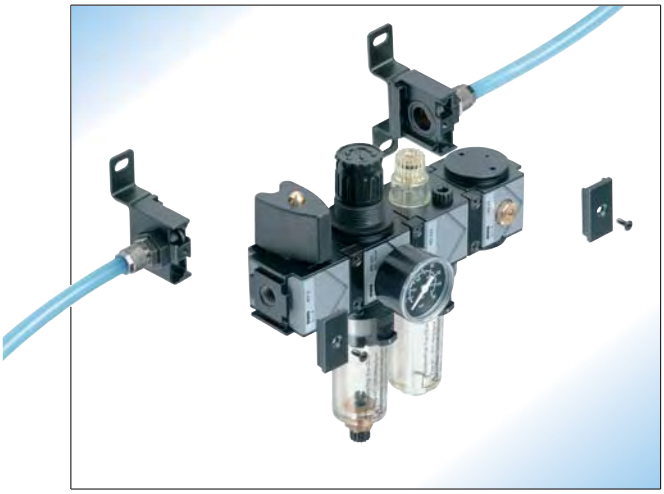
**The parts have a material indicator of formal, so they should be disposed of easily and are well recyclable.**

**Module fixation**
with bracket angle (for regulator) or direct wall mounting (2 screws) for all devices

**Comfort blocking**
faster change of components or complete sets with **connection module** (sealing rings adhesive)
Result: shorter assembling time (only size I).

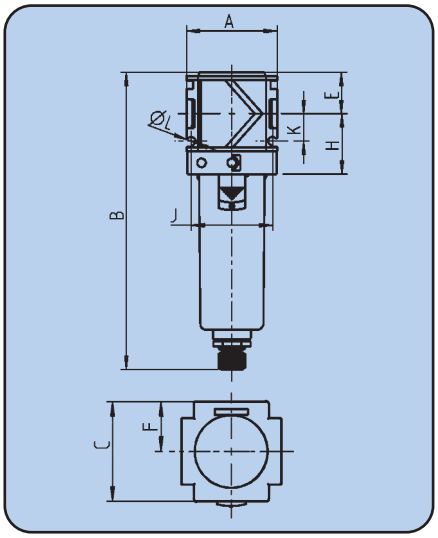
**Lockable handwheel** for pressure regulator, battery pressure regulator, filter regulator and service units available.

**Thread connecting plate**
with adhesive sealing rings ( also available with bracket ) for assembly friendly installation in pipe - or hose systems



**Compact connection**
with optional integrated T-Bracket

# Filter Type 482
## variobloc G 1/4 – G 1




Compressed air filters serve to remove impurities (condensation water, pipe scaling, rust particles) from the air in the working place. The cleansing is done in two stages by means of cycloning (condensation) and PE-Filter-elements (solid contamination). Three opportunities of drain valves are available: manually-operated-, semi-automatic- or fully-automatic (internal- or external) drain valves.

## Technical data

| | Size I | | Size II | |
|---|---|---|---|---|
| **Thread** | G 1/4 | G 3/8 | G 1/2 | G 3/4 G 1*** |
| **Nominal rates of flow*** | 1800 Nl/min | 2000 Nl/min | 3200 Nl/min | 3500 Nl/min |
| **Wideness of pores (filter)** | 40 µm (optionally: 5 µm) | | | |
| **Pre-Pressure ($p_1$) max.**** | 16 bar / 20 bar with metal bowl | | | |
| **Max. operating temperature** | 50 °C / 80 °C with metal bowl | | | |
| **Volume of condensate** | 25 cm³ | | 85 cm³ | |
| **Drain valve** | manually (opt.: semi-automatic, fully-automatic) | | | |
| **Material** | | | | |
| Housing | zinc alloy | | | |
| Bowl | polycarbonate | | | |
| **Weight** | 310 g | | 840 g (G 1 = 1300 g) | |

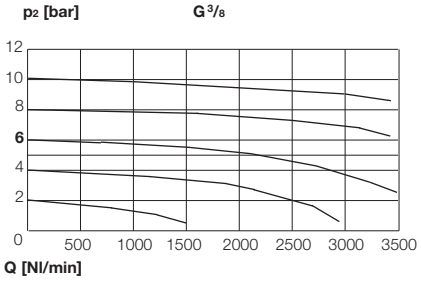
* measured at 6 bar pre-pressure ($p_1$) and Δp = 1 bar
** with internal automatic drain valve between 1 and 12 bar
*** mounting plates with G 1 see page 19
External-automatic drain valve see page 20
Fixing- and assembly-possibilities see page 19

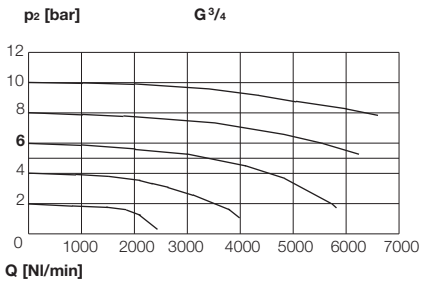
**special option - how to order:**

**482.x x x x**

- **S** **plastic bowl** **bowl protection** / **M** **metal bowl** — bowl/option
- **1** **40 µm** / **2** **5 µm**
- **Size I** **2 - G 1/4** **3 - G 3/8** / **Size II** **6 - G 1/2** **8 - G 3/4** **9 - G 1*****
- **2** **manually-operated drain valve**
- **3** **internal-automatic drain valve**
- **5** **semi-automatic drain valve**
- **6** **external-automatic drain valve „A"**

## Rates of flow




## Accessories and main spare parts

| | Size I | Size II |
|---|---|---|
| **Filter element** 40 µm | **480-7** | **480-219** |
| **Filter element** 5 µm | **480-45** | **480-220** |
| **Plastic bowl** with manually-operated drain valve | **480-18** | **480-210** |
| **Metal bowl** with manually-operated drain valve | **480-28** | **480-213** |
| **Plastic bowl** with protection cap | **480-90** | - |
| **Bowl protection** | **480-25** | **480-216** |

## Dimensions [mm]

| Thread | A | B | C | E | F | H | J | K | øL |
|---|---|---|---|---|---|---|---|---|---|
| G 1/4 and G 3/8 | 48 | 158 | 48 | 22 | 24 | 32 | 43 | 14,5 | 4,4 |
| G 1/2 and G 3/4 | 70 | 202 | 70 | 26 | 35 | 44 | 62 | 18 | 5,4 |
| G 1*** | 125 | 202 | 70 | 26 | 35 | 44 | 62 | 18 | 5,4 |

## Upon request:

Cover: "private label"

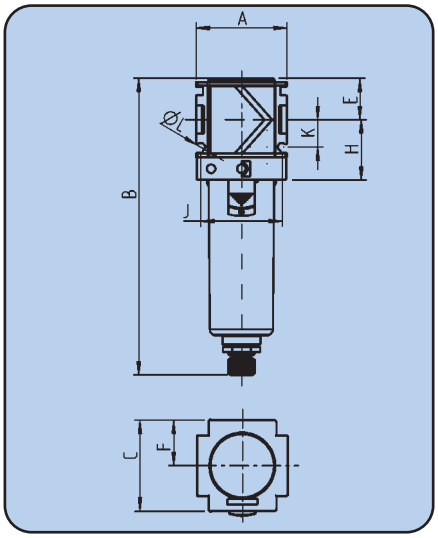
# Micro-Filter Type 491
## variobloc G 1/4 – G 1

Microborosilicate air filters are suitable for use in all situations in which the required purity of the compressed air is especially high. As the second stage after the standard filter they remove almost without residue the smallest remaining particles of water, oil or dirt to 99,999% (for 0,01µm).

## Technical Data

| | Size I | | | Size II | |
|---|---|---|---|---|---|
| **Thread** | G 1/4 | G 3/8 | G 1/2 | G 3/4 | G 1*** |
| **Nominal rates of flow*** | 370 Nl/min | 420 Nl/min | 1000 Nl/min | 1100 Nl/min | |
| **Particle separation**** | 99,999 %, related to 0,01 µm | | | | |
| **Residual oil content** | 0,01 mg/m³ | | | | |
| **Air quality ISO 8573.1** | Class 1 dirt, Class 1 oil | | | | |
| **Pre-Pressure ($p_1$) max.** | 16 bar / 20 bar with metal bowl | | | | |
| **Max. operating temperature** | 50 °C / 80 °C with metal bowl | | | | |
| **Volume of condensate** | 10 cm³ | | 30 cm³ | | |
| **Drain valve** | manually (opt.: semi-automatic, fully-automatic) | | | | |
| **Material** | | | | | |
| Housing | zinc alloy | | | | |
| Bowl | polycarbonate | | | | |
| **Weight** | 310 g | | 870 g | (G 1 = 1330 g) | |

* measured at 7 bar pre-pressure ($p_1$) and Δp = 0,1 bar
** Prefiltration necessary at 5 µm
*** mounting plates with G 1 see page 19
External-automatic drain valve see page 20
Fixing- and assembly-possibilities see page 19




**special option - how to order:**

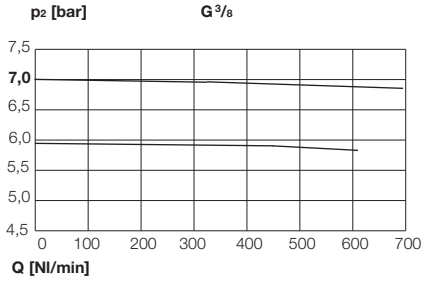
**491.x x x x**

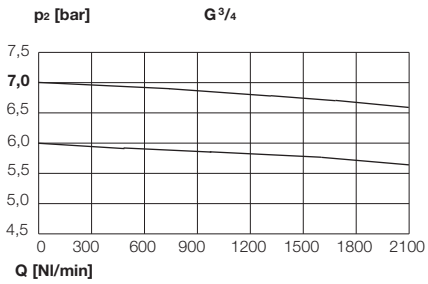
- **S** plastic bowl / **S** bowl protection / **M** metal bowl → bowl/option
- **0** without / **1** mechanical / **2** electrical → indicator
- **Size I** 2 - G 1/4, 3 - G 3/8 / **Size II** 6 - G 1/2, 8 - G 3/4, 9 - G 1*** → size
- **2** manually-operated drain valve / **5** semi-automatic drain valve / **6** external-automatic drain valve „A"

## Accessories and main spare parts

| | I | II |
|---|---|---|
| **Filter element** with seal | 491-4 | 491-103 |
| **Plastic bowl** with manually-operated drain valve | 491-13 | 491-108 |
| **Metal bowl** with manually-operated drain valve | 480-28 | 480-213 |
| **Bowl protection** | 480-25 | 480-216 |
| **Pressure switch for electrical output** differential pressure 0,7 bar | 491-5 | 491-5 |

## Rates of flow



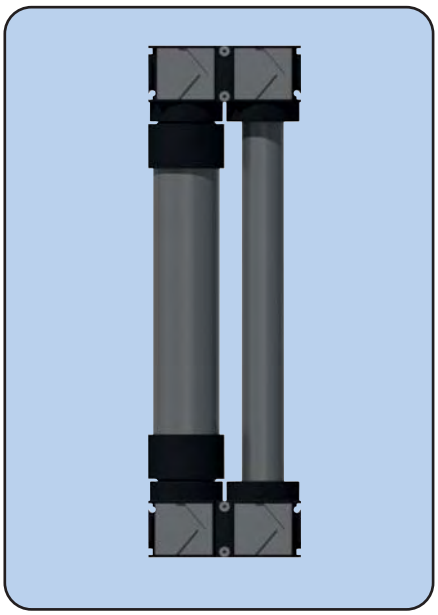

## Dimensions [mm]

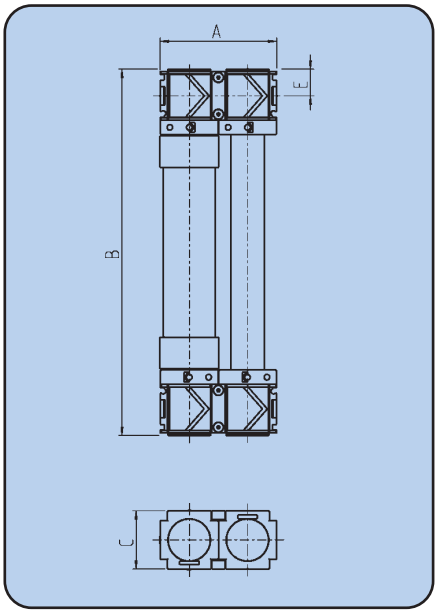
| Thread | A | B | C | E | F | H | J | K | øL |
|---|---|---|---|---|---|---|---|---|---|
| G 1/4 and G 3/8 | 48 | 158 | 48 | 22 | 24 | 32 | 43 | 14,5 | 4,4 |
| G 1/2 and G 3/4 | 70 | 202 | 70 | 26 | 35 | 44 | 62 | 18 | 5,4 |
| G 1*** | 125 | 202 | 70 | 26 | 35 | 44 | 62 | 18 | 5,4 |

## Upon request:

Cover: "private label"

# Membrane Air Dryer Type 494
## variobloc G 1/4 – G 1






Membrane dryer for efficient removal of water vapor from out of the air. It contributes significantly for the process security. The high demands on the air quality are implemented into highest reliability by this membrane dryer of our variobloc series.
Guaranteed drying, since in any case reduced moisture. Low pressure loss. Maintenance-free, since there are no wearing parts in the dryer. No electrical energy required. No environment polliting desiccant. No condensation, as this is blown into the atmosphere with the drying flow.
Easiest combination with all variobloc filters. **For proper function and long lifetime of the membrane dryer, it is absolutely necessary to pre-filter the compressed air! We recommend our pre-filter model 482 and microfilter model 491.**
Available in several sizes for different degrees of drying power, from 50 Nl/min up to 734 Nl/min.
To be used in a wide range of applications like automotive, metal-processing, wood craft, body shops, all industrial usage-based drying, instrument air drying, pneumatic controls, medical air, analyzer, air control panels, etc.

## Technical Data

| | Size I | | | Size II | | |
|---|---|---|---|---|---|---|
| **Thread** | G 1/4 | G 3/8 | | G 1/2 | G 3/4 | G 1* |
| **Operating pressure** | 0 - 12 bar | | | | | |
| **Operating temperature** | 1,5 - 60 °C | | | | | |
| **Differential pressure** | 200 mbar | | | | | |
| **Air quality to ISO 8573.1** | Class 1 dirt, Class 1 oil | | | | | |
| **Material** | | | | | | |
| Membrane fiber | PES | | | | | |
| Membrane shell | Aluminum | | | | | |
| Housing | zinc alloy | | | | | |
| Seals | NBR | | | | | |

* mounting plates with G 1 see page 19
Fixing- and assembly-possibilities see page 19

**special option - how to order:**

**494.x x x**

- **0** without mounting bracket
- **1** with T-bracket

| | Size I | Size II |
|---|---|---|
| **1** | 50 | 300 |
| **2** | 100 | 400 |
| **3** | 150 | 534 |
| **4** | 200 | 734 |

→ **Size** (nominal flow [Nl/min]**)

- **2** G 1/4
- **3** G 3/8

→ **Size I**

- **6** G 1/2
- **8** G 3/4
- **9** G 1*

→ **Size II**

→ **Connection thread**

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

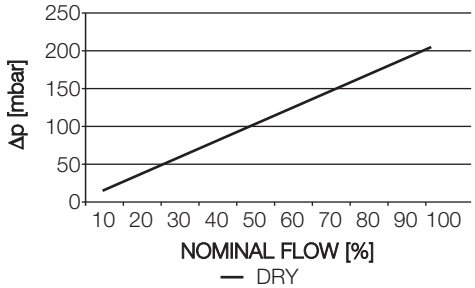
## Dimensions

| Connection Size thread | Size | Dimensions [mm] A | B | C | E |
|---|---|---|---|---|---|
| Size I | 1 | 96 | 298 | 48 | 22 |
| | 2 | | 396 | | |
| | 3 | | 498 | | |
| | 4 | | 578 | | |
| Size II | 1 | 140 | 406 | 70 | 26 |
| | 2 | | 470 | | |
| | 3 | | 559 | | |
| | 4 | | 686 | | |

## Performance

| | Nominal flow [Nl/min] | | | |
|---|---|---|---|---|
| | 50 | 37 | 23 | 17 |
| | 100 | 72 | 47 | 33 |
| | 150 | 107 | 72 | 52 |
| | 200 | 142 | 95 | 68 |
| | 300 | 213 | 142 | 103 |
| | 400 | 283 | 188 | 137 |
| | 534 | 427 | 283 | 207 |
| | 734 | 568 | 378 | 273 |
| Outlet dew point [°C] | 15 | 3 | -20 | -40 |
| Purge air consumption [%] | 10 | 14 | 21 | 29 |
| Water removal [%] | 69,70 | 86,53 | 98,20 | 99,77 |

at 7 bar and inlet dew point +35 °C, data refers on inlet flow capacity




**Correction factors**
To calculate the correct capacity of a given filter based on actual operating conditions, multiply the nominal flow capacity by the appropriate correction factor.

CORRECTED CAPACITY = NOMINAL FLOW CAPACITY x $C_{OP}$

| [bar] | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|
| $C_{OP}$ | 0,41 | 0,56 | 0,76 | 1 | 1,22 | 1,48 | 1,76 | 1,86 | 2,22 |



760C01P06A.201304

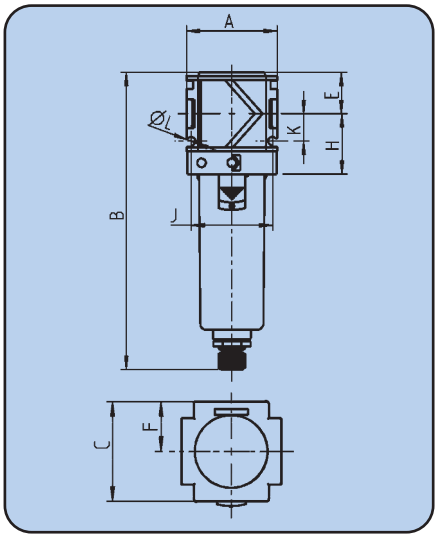
# Activated-Charcoal-Filter Type 493
## variobloc G 1/4 – G 1

Active-charcoal filters serve to remove oil vapours and other organic pollutants from pressurised air. The active-charcoal fibre (the adsorption capacity of which is sufficient for approx. 1,000 hours of operation) is positioned between two stainless-steel nettings. The air at the inflow opening should be dry and free of particles; this is why the prior attachment of a micro-filter is categorically recommended. Caution! Some hazardous substances are either not at all or only slightly adsorbent, therefore non-removable with active charcoal! Such substances are i.e., carbon dioxide, carbon monoxide, ammonia.

## Technical Data

| | Size I | | Size II | |
|---|---|---|---|---|
| **Thread** | G 1/4 | G 3/8 | G 1/2 | G 3/4 G 1** |
| **Nominal rates of flow*** | 800 Nl/min | 1000 Nl/min | 1200 Nl/min | 1300 Nl/min |
| **Residual oil content** | 0,003 mg/m³ | | | |
| **Air quality ISO 8573.1** | Class 1 dirt, Class 1 oil | | | |
| **Pre-Pressure ($p_1$) max.** | 16 bar / 20 bar with metal bowl | | | |
| **Max. operating temperature** | 50 °C / 80 °C with metal bowl | | | |
| **Material** | | | | |
| Housing | zinc alloy | | | |
| Bowl | polycarbonate | | | |
| **Weight** | 320 g | | 900 g (G 1 = 1400 g**) | |

* measured at 7 bar pre-pressure ($p_1$) and $\Delta p$ = 0,2 bar
** mounting plates with G 1 see page 19
Fixing- and assembly-possibilities see page 19




**special option - how to order:**

**493.0 x x**

- **S** **plastic bowl bowl protection)** / **M** **metal bowl** — bowl/option
- **Size I** **2 - G 1/4**, **3 - G 3/8**; **Size II** **6 - G 1/2**, **8 - G 3/4**, **9 - G 1****
- **0** **without drain valve**

## Accessories and main spare parts

| | I | II |
|---|---|---|
| **Filter element** with seal | **493-2** | **493-102** |
| **Plastic bowl** | **483-7** | **483-110** |
| **Metal bowl** | **483-10** | **483-113** |
| **Bowl protection** | **480-25** | **480-216** |

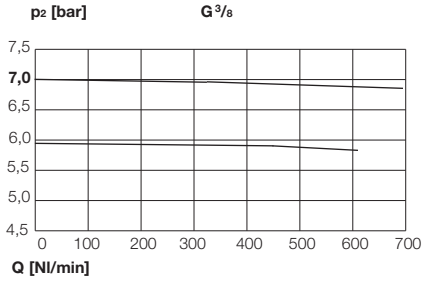
## Dimensions [mm]

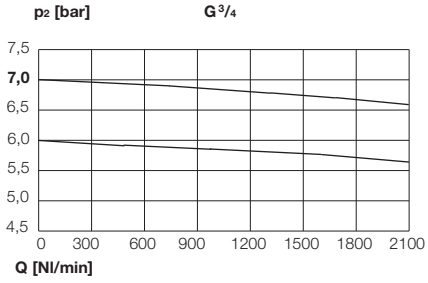
| Thread | A | B | C | E | F | H | J | K | øL |
|---|---|---|---|---|---|---|---|---|---|
| G 1/4 and G 3/8 | 48 | 142 | 48 | 22 | 24 | 32 | 43 | 14,5 | 4,4 |
| G 1/2 and G 3/4 | 70 | 193 | 70 | 26 | 35 | 44 | 62 | 18 | 5,4 |
| G 1** | 125 | 193 | 70 | 26 | 35 | 44 | 62 | 18 | 5,4 |

## Upon request:

Cover: “private label”

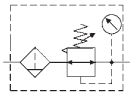
## Rates of flow



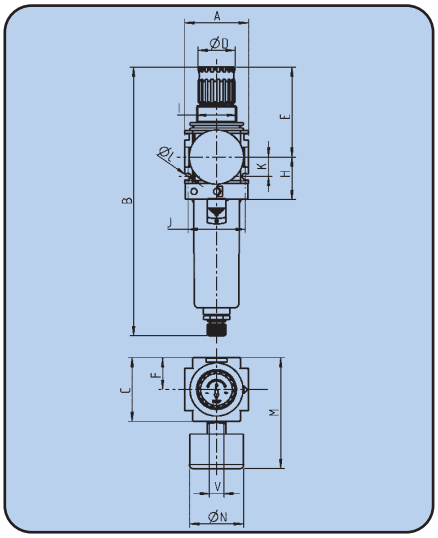



# Filter Pressure Regulator Type 480

## variobloc G 1/4 – G 1



480.233 480.233 SD 480.333 MD




Filter pressure regulators unique in space-saving model the functions of a filter and a regulator in one piece of equipment. (see single definitions).

## Technical Data

| | Size I | | Size II | |
|---|---|---|---|---|
| **Thread** | G 1/4 | G 3/8 | G 1/2 | G 3/4 G 1*** |
| **Nominal rates of flow*** | 2000 Nl/min | 3000 Nl/min | 5500 Nl/min | 6500 Nl/min |
| **Wideness of pores (filter)** | 40 µm (optionally: 5 µm) | | | |
| **Pre-Pressure ($p_1$) max.**** | 16 bar / 20 bar with metal bowl | | | |
| **Secondary pressure ($p_2$) max.** | 10 bar (optionally: 6, 16 bar) | | | |
| **Max. operating temperature** | 50 °C / 80 °C with metal bowl | | | |
| **Volume of condensate** | 25 cm³ | | 85 cm³ | |
| **Drain valve** | manually (opt.: semi-automatic, fully-automatic) | | | |
| **Material** | | | | |
| Housing | zinc alloy | | | |
| Seals | NBR | | | |
| Plastic bowl | polycarbonate | | | |
| **Weight** (without gauge) | 460 g | | 1150 g (G 1 = 1610 g) | |

* measured at 10 bar pre-pressure ($p_1$), 6 bar secondary pressure ($p_2$) and Δp = 1 bar after ISO 6953.
** with internal-automatic drain valve between 1,0 and 12 bar
*** mounting plates with G 1 see page 19
External-automatic drain valve see page 20
Fixing- and assembly-possibilities see page 19

**special option - how to order:**

**480.xxxx**

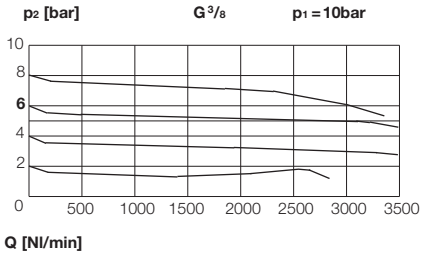
bowl/option
- **plastic bowl**
- **S bowl protection**
- **M metal bowl**
- **A lockable**
- **D gauge with color code 0 - 16 bar**

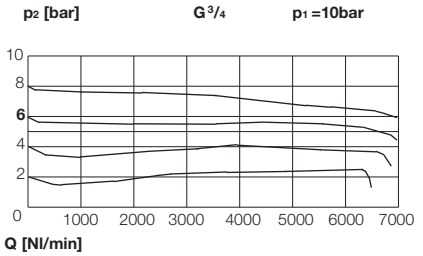
adjusting pressure
- **2 6 bar** (scale 0 - 10 bar)
- **3 10 bar** (scale 0 - 16 bar)
- **4 16 bar** (scale 0 - 25 bar)

**Size I** **2 - G 1/4** **3 - G 3/8**
**Size II** **6 - G 1/2** **8 - G 3/4** **9 - G 1*****

- **2** manually-operated drain valve + gauge
- **3** internal-automatic drain valve + gauge
- **4** manually-operated drain valve without gauge
- **5** semi-automatic drain valve + gauge
- **6** external-automatic drain valve A + gauge
- **7** internal-automatic drain valve without gauge
- **8** external-automatic drain valve A without gauge
- **9** semi-automatic drain valve without gauge

## Rates of flow




## Accessories and main spare parts

| | | I | II |
|---|---|---|---|
| **Gauge** scale | 0 - 10 bar | **723** | **55** |
| | 0 - 16 bar | **734** | **85** |
| | 0 - 25 bar | **745** | **96** |
| **Filter insert** | 40 µm | **480-7** | **480-219** |
| | 5 µm (reduced flow) | **480-45** | **480-220** |
| **Plastic bowl** with manually-operated drain valve | | **480-18** | **480-210** |
| **Plastic bowl** with bowl protection | | **480-90** | **-** |
| **Metal bowl** with manually-operated drain valve | | **480-28** | **480-213** |
| **Bowl protection** | | **480-25** | **480-216** |
| **Wear parts** | | | |
| **Diaphragm** complete with gliding ring | | **480-92** | **480-263** |
| **Seal cone** complete | | **480-48** | **480-218** |

### Advice:

Pressure gauge (self-tightened) added loosely

### Upon request:

Cover: “private label”

## Dimensions [mm]

| Thread | A | B | C | øD | E | F | H | I | J | K | øL | M | øN | V |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G 1/4 and G 3/8 | 48 | 203 | 48 | 28 | 68 | 24 | 32 | M30x1,5 | 43 | 14,5 | 4,4 | 84 | 40 | G 1/4 |
| G 1/2 and G 3/4 | 70 | 273 | 70 | 39 | 98 | 35 | 44 | M42x1,5 | 62 | 18 | 5,4 | 106 | 50 | G 1/4 |
| G 1*** | 125 | 273 | 70 | 39 | 98 | 35 | 44 | M42x1,5 | 62 | 18 | 5,4 | 106 | 50 | G 1/4 |

# Pressure Regulator Type 481

## variobloc G 1/4 – G 1

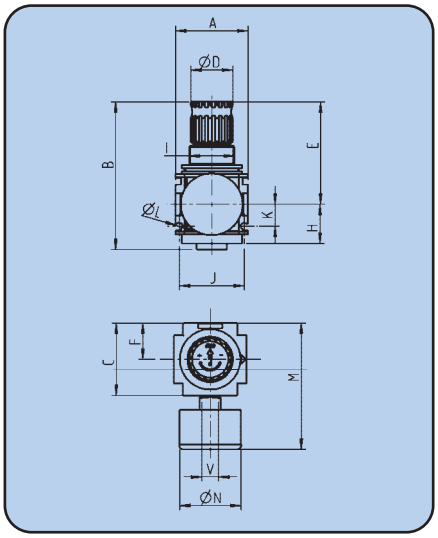
Pressure regulators (diaphragm type) of compact block design in two sizes. Facilities on both sides for flange mounting of further units. Panel mounting, direct mounting or bracket mounting on housing or cover. These units are, of course, fitted with a secondary exhaust (self-relieving) and are largely unaffected by fluctuations in primary pressure. Three pressure ranges are available, up to 6, 10 or 16 bar; regulators are also available without pressure gauges. Simple locking of setting by pressing in handwheel. Version available with keylockable handwheel. Pressure gauge can be mounted on either side.
**Important:** Use of filter always recommended.

481.233 481.233D 481.233A

## Technical Data

| | Size I | | Size II | |
|---|---|---|---|---|
| **Thread** | G 1/4 | G 3/8 | G 1/2 | G 3/4 G 1*** |
| **Nominal rates of flow*** | 2000 Nl/min | 3200 Nl/min | 7000 Nl/min | 8000 Nl/min |
| **Pre-pressure ($p_1$) max.** | 25 bar | | | |
| **Secondary pressure ($p_2$) max.** | 10 bar (opt. 6, 16 bar) | | | |
| **Max. operating temperature** | 80 °C | | | |
| **Material** | | | | |
| Housing | zinc alloy | | | |
| Seals | NBR | | | |
| **Weight** (without gauge) | 390 g | | 950 g (G 1 = 1410 g) | |

* measured at 10 bar pre-pressure ($p_1$), 6 bar secondary pressure ($p_2$) and $\Delta p$ = 1 bar after DIN ISO 6953.
*** mounting plates with G 1 see page 19
Fixing- and assembly-possibilities see page 19




**special option - how to order:**

**481.x x x x**

- **A** **lockable** - option
- **D** **gauge with color code 0-16 bar** - option
- **2** **6 bar** (scale 0-10 bar)
- **3** **10 bar** (scale 0-16 bar)
- **4** **16 bar** (scale 0-25 bar)

(2, 3, 4: adjusting pressure)

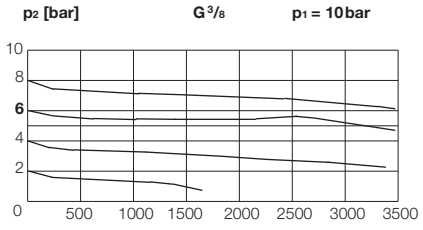
- **Size I** **2 - G 1/4** **3 - G 3/8**
- **Size II** **6 - G 1/2** **8 - G 3/4** **9 - G 1*****

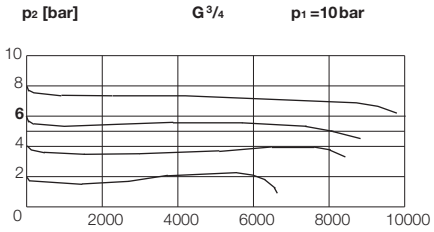
- **2** **with gauge**
- **4** **without gauge**

## Accessories and main spare parts

| | | I | II |
|---|---|---|---|
| **Gauge** scale | 0-10 bar | **723** | **55** |
| | 0-16 bar | **734** | **85** |
| | 0-25 bar | **745** | **96** |
| **Wear parts** | | | |
| **Diaphragm** complete with slip ring | | **480-92** | **480-263** |
| **Seal cone** complete | | **481-17** | **480-218** |

## Rates of flow




## Advice:

Pressure gauge (self-tightened) added loosely

## Upon request:

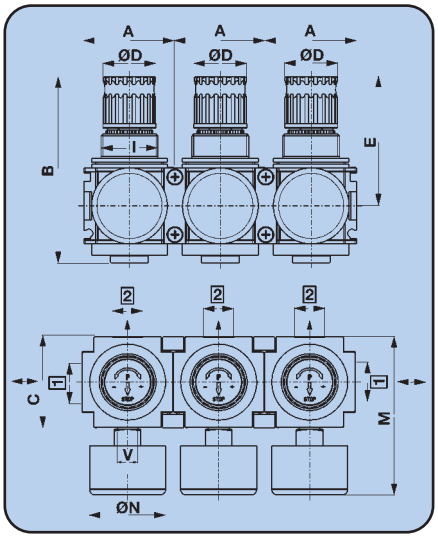
Cover: “private label”

## Dimensions [mm]

| Thread | A | B | C | øD | E | F | H | I | J | K | øL | M | øN | V |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G 1/4 and G 3/8 | 48 | 98 | 48 | 28 | 68 | 24 | 26 | M30x1,5 | 43 | 14,5 | 4,4 | 84 | 40 | G 1/4 |
| G 1/2 and G 3/4 | 70 | 134 | 70 | 39 | 98 | 35 | 33 | M42x1,5 | 62 | 18 | 5,4 | 106 | 50 | G 1/4 |
| G 1*** | 125 | 134 | 70 | 39 | 98 | 35 | 33 | M42x1,5 | 62 | 18 | 5,4 | 106 | 50 | G 1/4 |

# Battery Regulator Type 490

## variobloc G 1/4 – G 1


These kind of regulators are equipped with a continious pressure supply.
The pressure inlet can be selected on left or right side, so that it can be used for a so called "battery mounting" .
The attached regulators are offering independent and different pressure adjustments because the supply pressure is existing on both sides of the unit (Connection No. 1).
The working pressure (secondary pressure) which is kept almost constant regardless of pressure fluctuations (inlet pressure) in the system and air consumption, is available on the backside connection (No. 2).
The regulator(diaphragm type ) is fitted with a secondary exhaust (self-relieving) to reduce the working pressure without air extraction. Contamination and damage could be avoided if a filter of the model 482 is installed. We recommend to use the units port size G 3/8 or G 3/4 as they have the higher flow capacity. **Important:** Use of filter always recommended.

## Technical Data

| | Size I | | Size II | | |
|---|---|---|---|---|---|
| **Connection 1** | G 1/4 | G 3/8 | G 1/2 | G 3/4 | G 1*** |
| **Connection 2** | G 1/4 | | G 1/2 | G 3/4 | |
| **Nominal rate of flow*** | 1.800 Nl/min | | 5.800 Nl/min | 6.800 Nl/min | |
| **Inlet pressure ($p_1$) max.** | 25 bar | | | | |
| **Outlet pressure range ($p_2$) max.** | 10 bar (opt. 6, 16 bar) | | | | |
| **Operating temperature max.** | 80 °C | | | | |
| **Material** | | | | | |
| Housing | zinc alloy | | | | |
| Seals | NBR | | | | |
| **Weight** (without gauge) | 390 g | | 950 g (G1 = 1.410 g) | | |

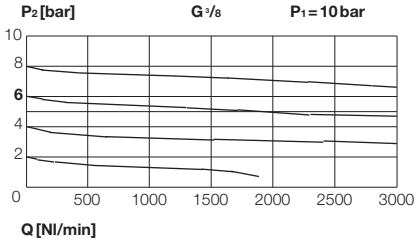
* measured from 10 bar inlet pressure ($P_1$), 6 bar outlet pressure ($P_2$) and decrease of $\Delta p$ = 1 bar according to DIN ISO 6953
*** mounting plates with G 1 see page 19
Fixing- and assembly-possibilities see page 19

**special option - how to orde:**

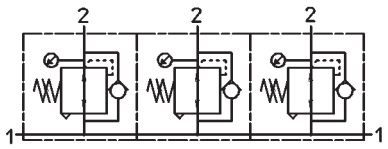
**490.x x x x**

- **A** **lockable** - option
- **D** **Gauge with color code 0 - 16 bar** - option
- adjustment:
  - **2** **6 bar** (scale 0 - 10 bar)
  - **3** **10 bar** (scale 0 - 16 bar)
  - **4** **16 bar** (scale 0 - 25 bar)
- **Size I** **2 – G 1/4** **3 – G 3/8** **Size II** **6 – G 1/2** **8 – G 3/4** **9 – G 1*****
- **2** **with gauge**
- **4** **without gauge**

## Rate of flow




**function**




## Accessories and main spare parts

| | | | |
|---|---|---|---|
| **Gauge** scale | 0 - 10 bar | **723** | **55** |
| | 0 - 16 bar | **734** | **85** |
| | 0 - 25 bar | **745** | **96** |

| | | | |
|---|---|---|---|
| **Plug** with female hexagon | G 1/4 | **280-127** | **280-127** |
| | G 3/8 | **447-28** | **-** |
| | G 1/2 | **-** | **424-67** |

**Main spare parts**

| | | |
|---|---|---|
| **Diaphragm** complete with slip ring | **480-92** | **480-263** |
| **Seal cone** complete | **481-17** | **480-218** |

**Advice:**

Pressure gauge (self-tightened) added loosely

**Upon request:**

Cover: "private label"

## Dimensions [mm]

| Thread 1 | A | B | C | øD | E | F | I | M | øN | V / 2 |
|---|---|---|---|---|---|---|---|---|---|---|
| G 1/4 and G 3/8 | 48 | 98 | 48 | 28 | 68 | 24 | M30x1,5 | 84 | 40 | G 1/4 |
| G 1/2 and G 3/4 | 70 | 134 | 70 | 39 | 98 | 35 | M42x1,5 | 106 | 50 | G 1/2 and G 3/4 |
| G 1*** | 125 | 134 | 70 | 39 | 98 | 35 | M42x1,5 | 106 | 50 | G 3/4 |

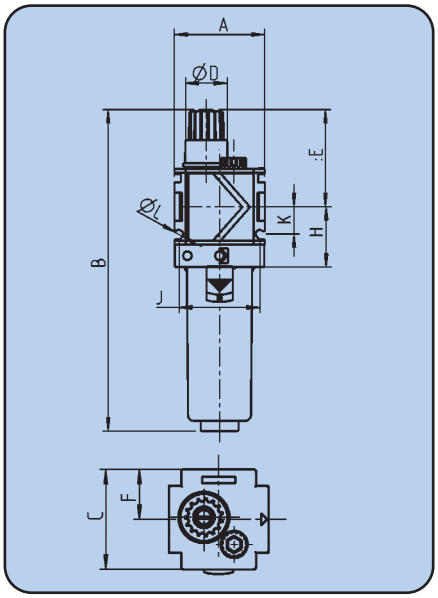
# Lubricator Type 483
## variobloc G 1/4 – G 1

Lubricators add a fine oil fog to the compressed air, this effecting a constant and reliable lubrication of pneumatically controlled compressed air tools, valves and cylinders etc... Refilling oil while under pressure is possible. Needle valve for oil adjustment with high drop constancy for long periods of time. Also available with metal sight dome.

## Technical Data

| | Size I | | Size II | |
|---|---|---|---|---|
| **Thread** | G 1/4 | G 3/8 | G 1/2 | G 3/4 G 1*** |
| **Nominal rates of flow*** | 3400 Nl/min | 4400 Nl/min | 4600 Nl/min | 7500 Nl/min |
| **Pre-pressure ($p_1$) max.** | 16 bar / 20 bar with metal bowl | | | |
| **Max. operating temperature** | 50°C** | | | |
| **Oil volume** | 50 cm³ | | 125 cm³ | |
| **Lubricator function** | from 50 l/min | | from 150 l/min | |
| **Sort of oil** | according to DIN 51524 - ISO VG 32 | | | |
| **Material** | | | | |
| Housing | zinc alloy | | | |
| Plastic bowl | polycarbonate | | | |
| Seals | NBR | | | |
| **Weight** | 300 g | | 800 g (G 1 = 1260 g) | |

* measured at 6 bar pre-pressure ($p_1$), and $\Delta p$ = 1 bar
** 80 °C with metal bowl and oiler dome out of metal
*** mounting plates with G 1 see page 19
Fixing- and assembly-possibilities see page 19




**special option - how to order:**

**483.x x x x**

- **S** Plastic Bowl protection
- **M** Metal bowl

→ bowl/option

**Size I** 2 - G 1/4, 3 - G 3/8 **Size II** 6 - G 1/2, 8 - G 3/4, 9 - G 1***

**2** Normal-Lubricator → model

- **0** without drain valve
- **1** manually-operated drain valve

## Recommended oil see chapter 9

Oil containers made of plastic (polycarbonate) are attached by oil additives, anti-frost or synthetic oils. We therefore recommend normal lubricating oils of approx. 22 to 32 cSt at 40°C (in the case of striking tools 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.

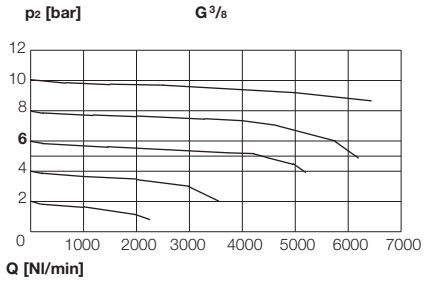
## Accessories and main spare parts

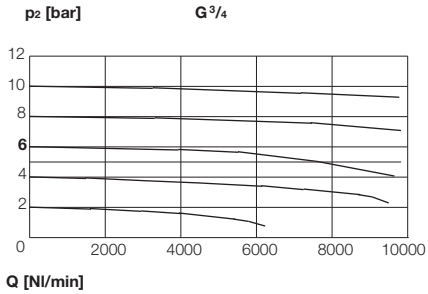
| | I | II |
|---|---|---|
| **Oiler dome** out of plastic | 483-6 | 423-179 |
| **Oiler dome** out of metal | 483-21 | 423-65 |
| **Plastic bowl** without drain valve | 483-7 | 483-110 |
| **Plastic bowl** with protection cap | 483-24 | - |
| **Metal bowl** without drain valve | 483-10 | 483-113 |
| **Metal bowl** with manually-operated drain valve | 480-28 | 480-213 |
| **Bowl protection** | 480-25 | 480-216 |
| **Wear parts** | | |
| **Regulation insert** | 483-3 | - |

## Upon request:

Cover: “private label”

## Rates of flow



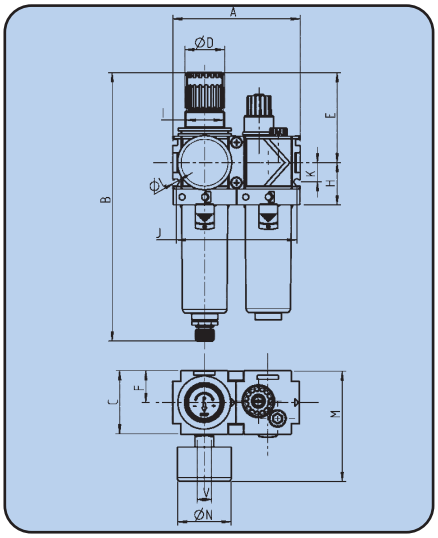




## Dimensions [mm]

| Thread | A | B | C | øD | E | F | H | J | K | øL |
|---|---|---|---|---|---|---|---|---|---|---|
| G 1/4 and G 3/8 | 48 | 171 | 48 | 22 | 52 | 24 | 32 | 43 | 14,5 | 4,4 |
| G 1/2 and G 3/4 | 70 | 224 | 70 | 22 | 57 | 35 | 44 | 62 | 18 | 5,4 |
| G 1*** | 125 | 224 | 70 | 22 | 57 | 35 | 44 | 62 | 18 | 5,4 |

# Two-Piece Maintenance Unit Typ 488

## variobloc G 1/4 – G 1


The number of possible variations which can be created by the simple block-mounting of individual units to form air treatment units is naturally countless. We have listed some of the most frequently-used versions below. As regards filters, there are options for the bowls and drain valves, while for filter regulators there is generally a pressure range of up to 10 bar; various reservoir options are available for the lubricators.

## Technical Data

| | Size I | | Size II | |
|---|---|---|---|---|
| **Thread** | G 1/4 | G 3/8 | G 1/2 | G 3/4 G 1*** |
| **Nominal rates of flow*** | 1500 Nl/min | 1800 Nl/min | 3400 Nl/min | 5000 Nl/min |
| **Wideness of pores (filter)** | 40 µm (optionally: 5 µm) | | | |
| **Pre-Pressure ($p_1$) max.**** | 16 bar / 20 bar with metal bowl | | | |
| **Secondary-pressure ($p_2$) max.** | 10 bar (opt. 6, 16 bar) | | | |
| **Max. operating temperature** | 50 °C**** | | | |
| **Volume of condensate** | 25 cm³ | | 85 cm³ | |
| **Drain valve** | manually (opt.: semi-automatic, fully-automatic) | | | |
| **Oil volume** | 50 cm³ | | 125 cm³ | |
| **Lubricator function** | from 50 l/min | | from 150 l/min | |
| **Material** | | | | |
| Housing | zinc alloy | | | |
| Bowl | polycarbonate | | | |
| Seals | NBR | | | |
| **Weight** (without gauge) | 720 g | | 2070 g (G 1 = 2530 g) | |

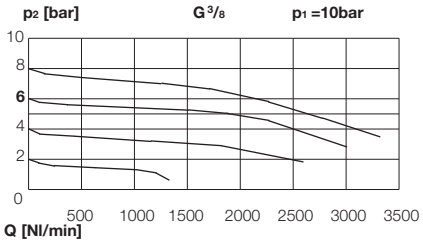
* measured at 10 bar pre-pressure ($p_1$), 6 bar secondary pressure ($p_2$) and Δp = 1 bar, according tor ISO 6953
** with internal-automatic drain valve between 1,0 and 12 bar
*** mounting plates with G 1 see page 19
**** 80 °C with metal bowl and oiler dome out of metal
External-automatic drain valve see page 20
Recommended oil see page 10
Fixing- and assembly-possibilities see page 19

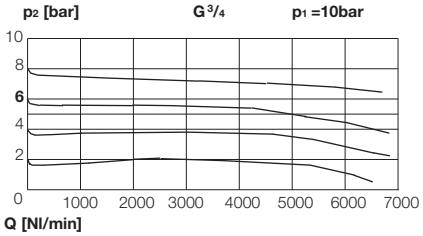
**special option - how to order:**

**488.x x x x**

- bowl / option
  - **plastic bowl**
  - **S** bowl protection
  - **M** metal bowl
  - **A** lockable
  - **D** gauge with color code
  - **0 - 16 bar**
- fixing
  - **0** Compact
  - **1** Compact with T-bracket
  - **2** Comfort (only size I)
- **Size I** 2 - G 1/4, 3 - G 3/8 — **Size II** 6 - G 1/2, 8 - G 3/4, 9 - G 1***
- **2** manually-operated drain valve + gauge
- **3** internal-automatic drain valve + gauge
- **4** manually-operated drain valve without gauge
- **5** semi-automatic drain valve + gauge
- **6** external-automatic drain valve A + gauge
- **7** internal-automatic drain valve without gauge
- **8** external-automatic drain valve A without gauge
- **9** semi-automatic drain valve without gauge

## Rates of flow




## Accessories and main spare parts see stand-alone device

| Wear parts | I | II |
|---|---|---|
| **Diaphragm** complete (with slip ring) | 480-92 | 480-263 |
| **Seal cone** complete | 480-48 | 480-218 |
| **Regulation insert** | 483-3 | - |

**Advice:**

Pressure gauge (self-tightened) added loosely

**Upon request:**

Cover: “private label”

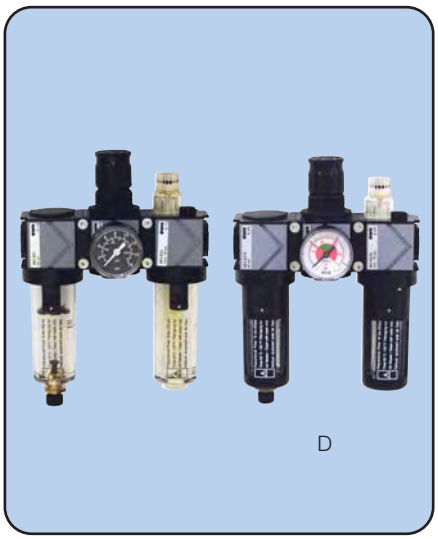
## Dimensions [mm]

| Thread | A | B | C | øD | E | F | H | I | J | K | øL | M | øN | V |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G 1/4 and G 3/8 | 96 | 203 | 48 | 28 | 68 | 24 | 32 | M30x1,5 | 91 | 14,5 | 4,4 | 84 | 40 | G 1/4 |
| G 1/2 and G 3/4 | 140 | 273 | 70 | 39 | 98 | 35 | 44 | M42x1,5 | 132 | 18 | 5,4 | 106 | 50 | G 1/4 |
| G 1*** | 195 | 273 | 70 | 39 | 98 | 35 | 44 | M42x1,5 | 132 | 18 | 5,4 | 106 | 50 | G 1/4 |

# Three-Piece Maintenance Unit Type 489

## variobloc G 1/4 – G 1

The number of possible variations which can be created by the simple blockmounting of individual units to form air treatment units is naturally countless. We have listed some of the most frequently-used versions below. As regards filters, there are options for the bowls and drain valves, while for regulators there is generally a pressure range of up to 10 bar; various reservoir options are available for the lubricators.


D

## Technical Data

| | Size I | | Size II | |
|---|---|---|---|---|
| **Thread** | G 1/4 | G 3/8 | G 1/2 | G 3/4 G 1*** |
| **Nominal rates of flow*** | 1500 Nl/min | 1800 Nl/min | 3400 Nl/min | 5000 Nl/min |
| **Wideness of pores (filter)** | 40 µm (optionally: 5 µm) | | | |
| **Pre-Pressure ($p_1$) max.**** | 16 bar / 20 bar with metal bowl | | | |
| **Secondary-pressure ($p_2$) max.** | 10 bar (opt. 6, 16 bar) | | | |
| **Max. operating temperature** | 50 °C**** | | | |
| **Volume of condensate** | 25 cm³ | | 85 cm³ | |
| **Drain valve** | manually (opt.: semi-automatic, fully-automatic) | | | |
| **Oil volume** | 50 cm³ | | 125 cm³ | |
| **Lubricator function** | from 50 l/min | | from 150 l/min | |
| **Material** | | | | |
| Housing | zinc alloy | | | |
| Bowl | polycarbonate | | | |
| Seals | NBR | | | |
| **Weight** (without gauge) | 1220 g | | 2800 g (G 1 = 3260 g) | |

* measured at 10 bar pre-pressure ($p_1$), 6 bar secondary pressure ($p_2$) and $\Delta p$ = 1 bar, after ISO 6953
** with internal-automatic drain valve between 1,0 and 12 bar
*** mounting plates with G 1 see page 19
**** 80 °C with metal bowl and oiler dome out of metal
External-automatic drain valve see page 20
Recommended oil see page 10
Fixing- and assembly-possibilities see page 19

**special option - how to order:**

**489.xxxx**

bowl / option
- **plastic bowl**
- **S** bowl protection
- **M** metal bowl
- **A** lockable
- **D** gauge with color code

fixing
- **0** Compact
- **1** Compact with T-bracket
- **2** Comfort (only size I)

**Size I** **2** - G 1/4, **3** - G 3/8
**Size II** **6** - G 1/2, **8** - G 3/4, **9** - G 1***

- **2** manually-operated drain valve + gauge
- **3** internal-automatic drain valve + gauge
- **4** manually-operated drain valve without gauge
- **5** semi-automatic drain valve + gauge
- **6** external-automatic drain valve A + gauge
- **7** internal-automatic drain valve without gauge
- **8** external-automatic drain valve A without gauge
- **9** semi-automatic drain valve without gauge

## Accessories and main spare parts see stand-alone device

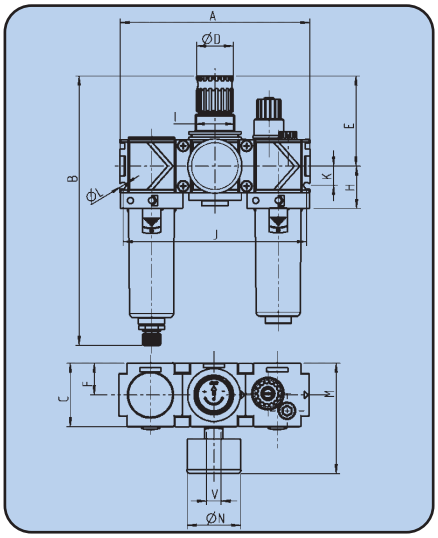
| Wear parts | I | II |
|---|---|---|
| **Diaphragm** complete (with slip ring) | 480-92 | 480-263 |
| **Seal cone** complete | 481-17 | 480-218 |
| **Regulation insert** | 483-3 | - |

### Advice:

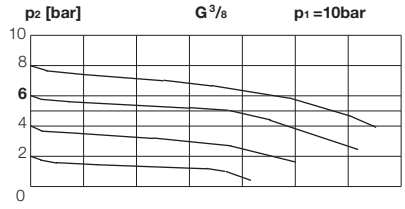
Pressure gauge (self-tightened) added loosely

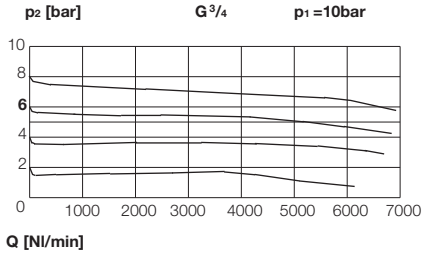
### Upon request:

Cover: “private label”




## Rates of flow



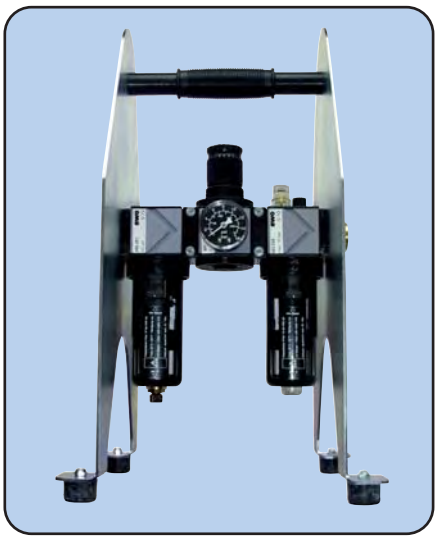




## Dimensions [mm]

| Thread | A | B | C | øD | E | F | H | I | J | K | øL | M | øN | V |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G 1/4 and G 3/8 | 144 | 203 | 48 | 28 | 68 | 24 | 32 | M30x1,5 | 139 | 14,5 | 4,4 | 84 | 40 | G 1/4 |
| G 1/2 and G 3/4 | 210 | 273 | 70 | 39 | 98 | 35 | 44 | M42x1,5 | 194 | 18 | 5,4 | 106 | 50 | G 1/4 |
| G 1*** | 265 | 273 | 70 | 39 | 98 | 35 | 44 | M42x1,5 | 194 | 18 | 5,4 | 106 | 50 | G 1/4 |

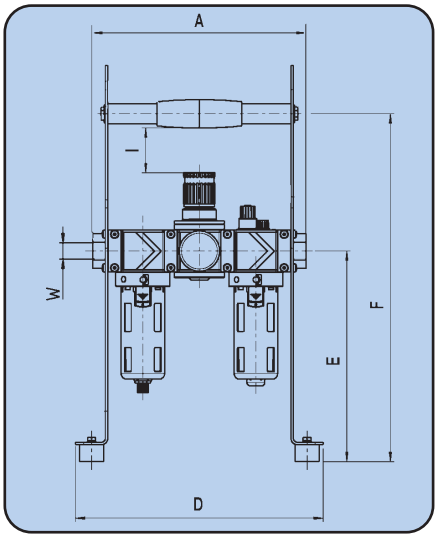
# Mobile Maintenance Unit Typ 489

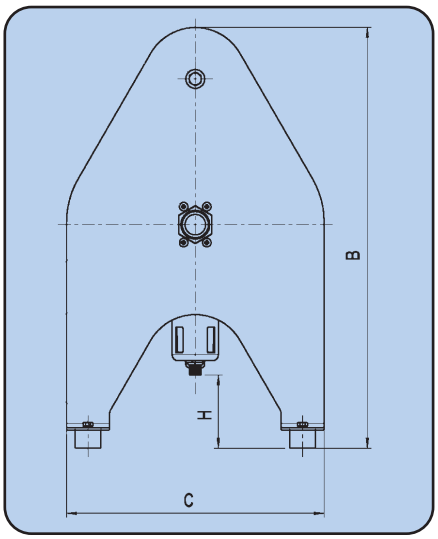
## variobloc G 1/2 – G 1



To ensure optimal conditions in regard to cleaning and lubrication of pneumatic tools directly on site, this portable maintenance unit was designed with components from our variobloc line.
It is advisable to use it everywhere where to manage distribution and location between air distribution routes over 5 meters.

**Examples:**
- Truck workshops
- Machine and plant construction
- Shipbuilding and shipyards




## Technical Data

| | Size II | | |
|---|---|---|---|
| **Thread** | G 1/2 | G 3/4 | G 1 |
| **Nominal rates of flow*** | 3.400 Nl/min | 5.000 Nl/min | 5.000 Nl/min |
| **Max. operating pressure** | 16 bar | | |
| **Control range** | 0,5 - 10 bar | | |
| **Max. operating temperature** | 50 °C | | |
| **Widness of pores (filter)** | 40 µm | | |
| **Drain valve** | manually (opt.: semi-automatic, fully-automatic) | | |
| **Volume of condensate** | 85 cm³ | | |
| **Oil volume** | 125 cm³ | | |
| **Lubricator function** | from 150 l/min | | |
| **Material** | | | |
| Housing | zinc alloy | | |
| Bowl / Bowl protection | polycarbonate / steel | | |
| Seals | NBR | | |
| Side parts | painted steel | | |
| Feets | rubber | | |

* measured at 6 bar pre-pressure ($p_1$) and $\Delta p$ = 1 bar

## Mobile Maintenance Unit 0,5 - 10 bar

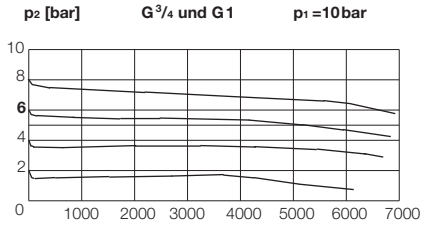
| Article | G 1/2 | G 3/4 | G 1 |
|---|---|---|---|
| Mobile Maintenance Unit | **489.200** | **489.100** | **489.000** |

## Accessories and main spare parts see stand-alone device

### Wear parts

| | |
|---|---|
| **Diaphragm** complete (with slip ring) | **480-263** |
| **Seal cone** complete | **480-218** |

## Rates of flow




## Upon request:

Cover: “private label”

## Dimensions [mm]

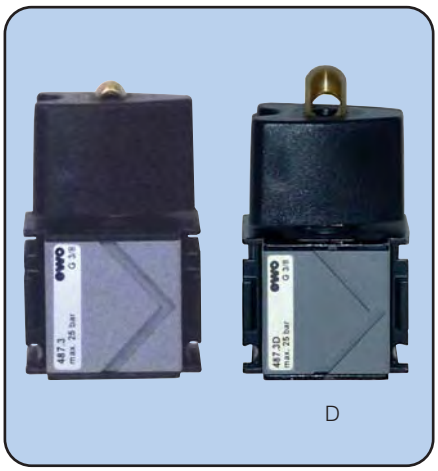
| Thread | A | B | C | D | E | F | H | I |
|---|---|---|---|---|---|---|---|---|
| G 1/2 and G 3/4 | 269 | 491 | 300 | 307 | 261 | 431 | 85,5 | 55,5 |
| G 1 | 264 | 491 | 300 | 307 | 261 | 431 | 85,5 | 55,5 |

# Ball Valve Type 487

## variobloc G 1/4 – G 1

Ball valves with exhaust (3/2 directional control valves) for flange-mounting to variobloc-FRL´s are particularly suitable for use at the start of these as main shut-off valves. Actuation by 90° rotation of lever, marked clearly with switching position: Lever in transverse direction - Valve closed, outlet exhausted (narrower nominal size). Lever in lengthwise: Valve open, exhaust closed. Silencer to reduce exhaust noise. Two sizes with port threads from G 1/4 to G 1. Direct mounting or bracket mounting on the housing is possible.

**Version with pneumatic gear** (onliy size II) enables the application in danger of explosion areas as remote control. The swing construction warrants a high starting linge moment and so a high forming energy (nessesary after long period of down time).



D

## Technical Data

| | Size I | | Size II | |
|---|---|---|---|---|
| **Thread** | G 1/4 | G 3/8 | G 1/2 | G 3/4 G 1** |
| **Nominal rates of flow*** | 4300 Nl/min | 4400 Nl/min | 9000 Nl/min | 11000 Nl/min |
| **Max. operating pressure** | 25 bar | | | |
| **Working temperature** | 80 °C | | | |
| **Material** | | | | |
| Housing | zinc alloy | | | |
| **Weight** | 295 g | | 840 g (G 1 = 1300 g) | |
| **Weight** (pneumatic gear) | – | | 1100 g (G 1 = 1560 g) | |
| **Pressure range** (pneumatic gear) | – | | 5,6 - 7,4 bar | |

* measured at 6 bar pre-pressure ($p_1$) and $\Delta p$ = 1 bar
** mounting plates with G 1 see page 19
Fixing- and assembly-possibilities see page 19

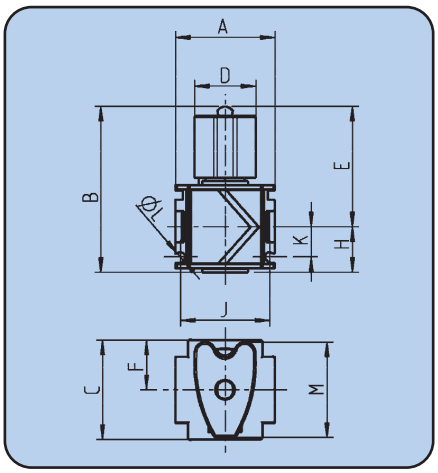
**special option - how to order:**

**487.x x**

- **A lockable, with padlock ø4,5**
- **D lockable, with padlock ø8,0**
- **P with peumatic gear (only Size II)**

→ option

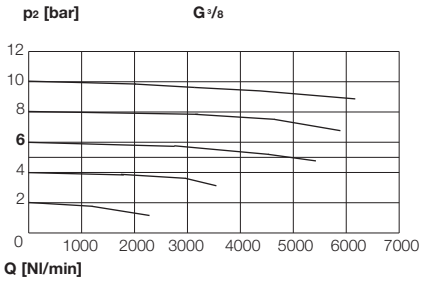
**Size I** **2 - G 1/4**, **3 - G 3/8**
**Size II** **6 - G 1/2**, **8 - G 3/4**, **9 - G 1****

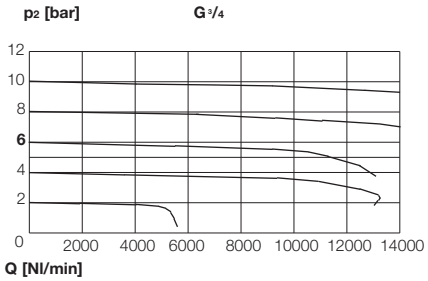



## Accessories and main spare parts

| | |
|---|---|
| **Padlock** ø4,5 | **487-17** |
| **Padlock** ø8,0 | **487-26** |

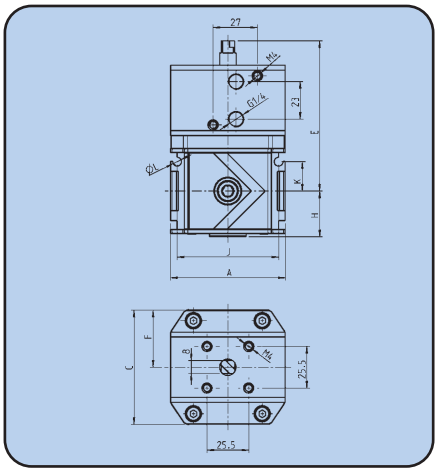
## Rates of flow




## Upon request:

Cover: “private label”



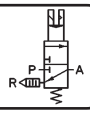
## Dimensions [mm]

| Thread | A | B | C | D | E | F | H | J | K | øL | M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| G 1/4, G 3/8 | 48 | 80 | 48 | 30 | 58 | 24 | 22 | 43 | 14,5 | 4,4 | 45 |
| G 1/2, G 3/4 | 70 | 92 | 70 | 30 | 64 | 35 | 28 | 62 | 18 | 5,4 | 45 |
| G 1 | 125 | 92 | 70 | 30 | 64 | 35 | 28 | 62 | 18 | 5,4 | 45 |
| G 1/2, G 3/4*** | 70 | 120 | 70 | - | 92 | 35 | 28 | 62 | 18 | 5,4 | - |
| G 1*** | 125 | 120 | 70 | - | 92 | 35 | 28 | 62 | 18 | 5,4 | - |

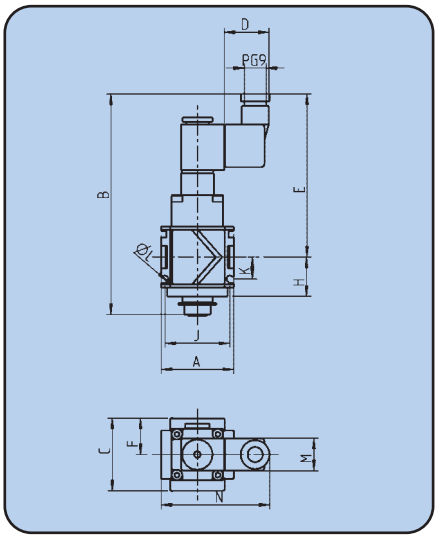
***pneumatic gear

# 3/2-Way Starting Valve, electrical Type 485

## variobloc G 1/2 – G 1




**Solenoid valvel**
As shutoff vlave with speed exhaus.Combination with starting valve recommended.




3/2-way starting valves in modular design for flange-mounting to variobloc-maintenance units. Without electrical power – valve closed, with manual emergency-operation.
Port sizes G 1/4 to G1.

## Technical Data

| | Size I | | Size II | |
|---|---|---|---|---|
| **Thread** | G 1/4 | G 3/8 | G 1/2 | G 3/4 G1*** |
| **Nominal rates of flow*** | 2200 Nl/min | 2600 Nl/min | 3300 Nl/min | 3800 Nl/min |
| **Working pressure range**** | 3 to 10 bar** | | | |
| **Max. surrounding temperature** | 50 °C | | | |
| **Protection class** | IP 65 after DIN 40050 | | | |
| **Rated voltage** | 24 V= (opt. 24 V/50 Hz, 110 V/50 Hz, 220 V/50 Hz | | | |
| **Electrical thread** | female connector after DIN 43650, Form B Ind. PG9 | | | |
| **Material** | | | | |
| Housing | zinc alloy | | | |
| **Weight** | 445 g | | 980 g (G1 = 1440 g) | |

* measured at 6 bar pre-pressure ($p_1$) and $\Delta p$ = 1 bar
** higher pressures upon request
*** mounting plates with G 1 Seite 19
Fixing- and assembly-possibilities see page 19

**special option - how to order:**

**485.x x**

- **1** 24 V/AC
- **2** 220 V/AC
- **3** 110 V/AC
- **4** 24 V/DC

— manual override bistable, DIN 43650

- **5** 24 V/DC

— manual override monostable, M12

**Size I** **2 - G 1/4** **3 - G 3/8**
**Size II** **6 - G 1/2** **8 - G 3/4** **9 - G 1**

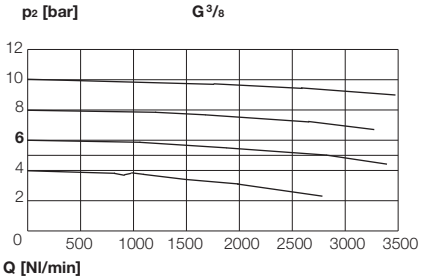
## Accessories and main spare parts

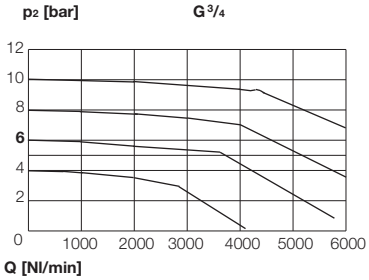
| | | |
|---|---|---|
| **Magnetic coil** | 24 V/DC | **447-76** |
| | 24 V/AC | **447-130** |
| | 220 V/AC | **447-74** |
| | 110 V/AC | **447-75** |
| | 24 V/DC, M12 | **447-133** |
| **Magnetic valve** | 24 V/DC | **485-16** |
| | 24 V/AC | **485-17** |
| | 220 V/AC | **485-18** |
| | 110 V/AC | **485-19** |
| | 24 V/DC, monostable | **485-20** |
| **Female connector** DIN 43650 | | **447-120** |

## Upon request:

Cover: “private label”

## Rates of flow




## Dimensions [mm]

| Thread | A | B | C | øD | E | F | H | J | K | øL | M | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G 1/4, G 3/8 | 48 | 146 | 48 | 30 | 108 | 24 | 26 | 43 | 14,5 | 4,4 | 22 | 72 |
| G 1/2, G 3/4 | 70 | 157 | 70 | 30 | 113 | 35 | 33 | 62 | 18 | 5,4 | 22 | 82 |
| G 1 | 125 | 157 | 70 | 30 | 113 | 35 | 33 | 62 | 18 | 5,4 | 22 | 82 |

waste electrical and electronic equipment WEEE-Reg.-Nr.: DE51604370

# Distributor Type 486
## variobloc G 1/4 – G 1

Distributors with non-return valves are ideal for tapping off unlubricated compressed air when flange-mounted upstream of the lubricator. The non-return valve prevents oil from being taken in from the lubricator or lines. This does, however, mean that the system downstream of the non-return valve cannot readily be exhausted. Two sizes with four outlets and port threads from G 1/4 to G 1.


## Technical Data

| | | Size I | | Size II | | |
|---|---|---|---|---|---|---|
| **Thread** | | G 1/4 | G 3/8 | G 1/2 | G 3/4 | G1** |
| **Dispatches** | top / down | G 3/8 | | G 3/8 / G 1/2 | | |
| | front + rear | G 1/4 | | G 1/4 | | |
| **Nom. R.o.F. without NRV*** | | 4200 Nl/min | 5000 Nl/min | 9000 Nl/min | 11000 Nl/min | |
| **Nom. R.o.F. with NRV*** | | 900 Nl/min | 900 Nl/min | 4000 Nl/min | 5000 Nl/min | |
| **Max. working pressure** | | 25 bar | | | | |
| **Max. operating temperature** | | 80°C | | | | |
| **Material** | | | | | | |
| | Housing | zinc alloy | | | | |
| **Weight** | | 290 g | | 780 g (G1 = 1240 g) | | |

* measured at 6 bar pre-pressure ($p_1$) and $\Delta p$ = 1 bar
** mounting plates with G 1 see page 19
Fixing- and assembly-possibilities see page 19

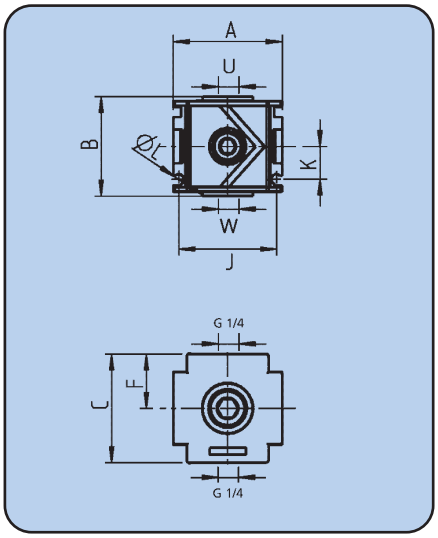
**special option - how to order:**

**486.x x**

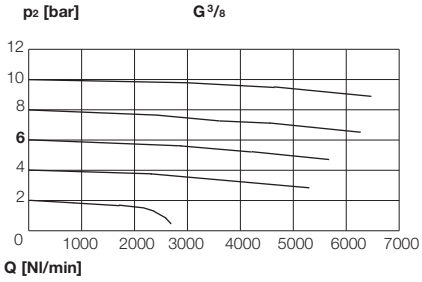
- **0** **without Non-Return Valve**
- **1** **with Non-Return Valve**

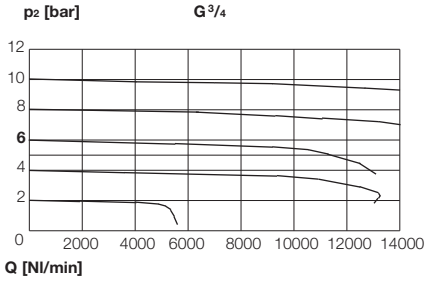
**Size I** **2 - G 1/4** **3 - G 3/8**

**Size II** **6 - G 1/2** **8 - G 3/4** **9 - G 1**




## Rates of flow




## Upon request:

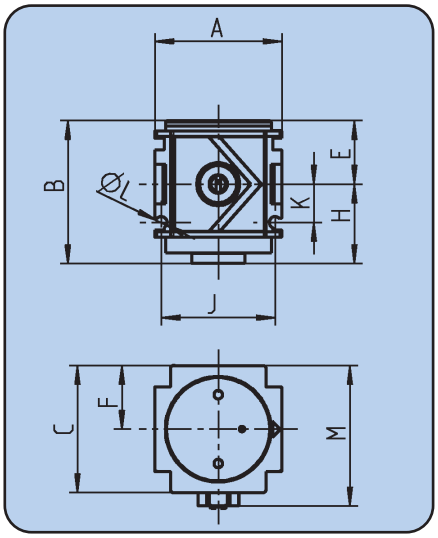
Cover: “private label”

## Dimensions [mm]

| Thread | A | B | C | F | J | K | øL | U | W |
|---|---|---|---|---|---|---|---|---|---|
| G 1/4 and G 3/8 | 48 | 44 | 48 | 24 | 43 | 14,5 | 4,4 | G 3/8 | G 3/8 |
| G 1/2 and G 3/4 | 70 | 56 | 70 | 35 | 62 | 18 | 5,4 | G 3/8 | G 1/2 |
| G 1 | 125 | 56 | 70 | 35 | 62 | 18 | 5,4 | G 3/8 | G 1/2 |

# Pneumatic Starting Valve Type 484

## variobloc G 1/4 – G 1


Starting valves and filling valves in modular block design serve to raise the pressure gradually in pneumatic systems when they are being started, for example after emergency shut-off. When switched on, throttles release at first only a small orifice. Only when the pressure has reached about 60% of operating pressure is the full orifice opened. In the opposite direction (relieving) the full orifice is opened by means of a non-return valve. In combination with *ewo*-equipment such as the 3/2-way valve, ball valve or solenoid valve a complete on-and-off unit can be assembled. Port sizes G 1/4 to G 1.

**Only suitable for closed systems!**

## Technical Data

| | Size I | | Size II | |
|---|---|---|---|---|
| **Thread** | G 1/4 | G 3/8 | G 1/2 | G 3/4 G 1*** |
| **Nominal rates of flow*** | 1200 Nl/min | 1400 Nl/min | 3800 Nl/min | 4200 Nl/min |
| **Point of dispatch**** | about 0,6 x working pressure | | | |
| **Working pressure range** | 2 to 25 bar | | | |
| **Max. surrounding temperature** | 50 °C | | | |
| **Material** | | | | |
| Housing | zinc alloy | | | |
| **Weight** | 295 g | | 730 g (G 1 = 1190 g) | |

* measured at 6 bar pre-pressure ($p_1$) and $\Delta p$ = 1 bar.
** profile completely opened
*** mounting plates G 1 see page 19
Fixing- and assembly-possibilities see page 19

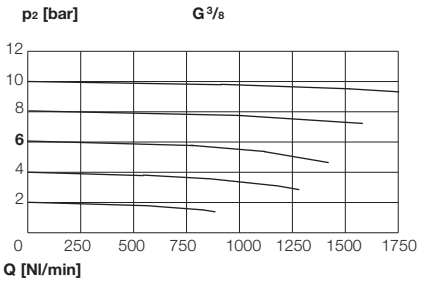
**special option - how to order:**

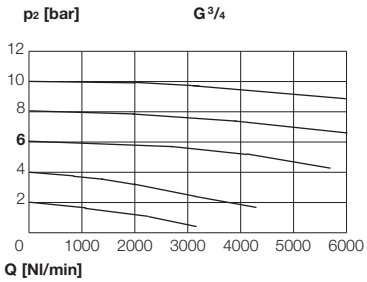
**484.x 0**

**0 Air regulator adjustable**

**Size I** **2 - G 1/4**, **3 - G 3/8**
**Size II** **6 - G 1/2**, **8 - G 3/4**, **9 - G 1**

## Rates of flow




## Upon request:

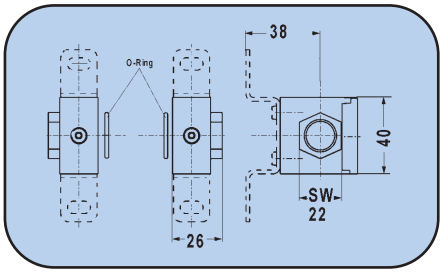
Cover: “private label”

## Dimensions [mm]

| Threat | A | B | C | E | F | H | J | K | øL | M |
|---|---|---|---|---|---|---|---|---|---|---|
| G 1/4, G 3/8 | 48 | 54 | 48 | 24 | 24 | 30 | 43 | 14,5 | 4,4 | 53 |
| G 1/2, G 3/4 | 70 | 72 | 70 | 36 | 35 | 36 | 62 | 18 | 5,4 | 75 |
| G 1 | 125 | 72 | 70 | 36 | 35 | 36 | 62 | 18 | 5,4 | 75 |

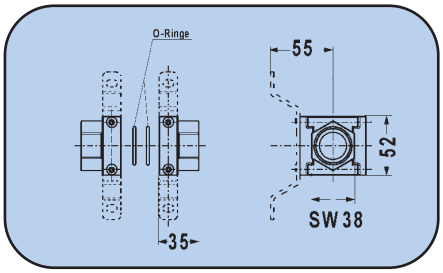
# Fixing- and Assembly-Possibilities
## variobloc

*"Plug and Work"* - this is the motto after which you can choose your prefered combination from the variety of the fixing- and accessory elements.

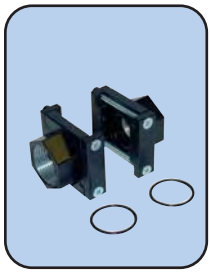


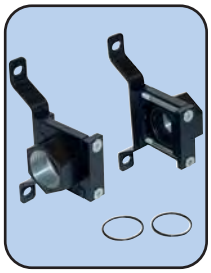

### Mounting plates set

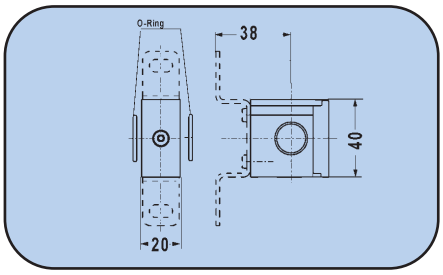
| Thread Size I | Order No. | with holder |
|---|---|---|
| G 1/4 | 480-75 | 480-120 |
| G 3/8 | 480-37 | 480-121 |




| Thread Size II | Order No. | with holder |
|---|---|---|
| G 1/2 | 480-283 | 480-287 |
| G 3/4 | 480-282 | 480-288 |
| G 1 | 480-271 | 480-289 |

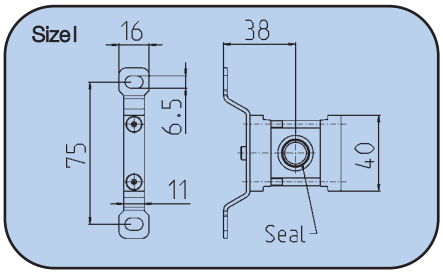






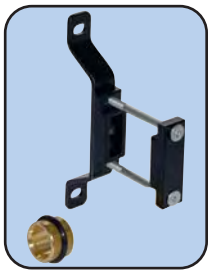

### Set Comfort Connection (inside module)

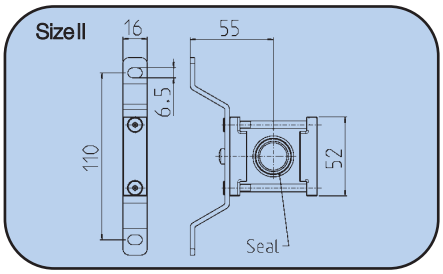
| Thread Size I | Order No. | with holder |
|---|---|---|
| G 1/4 + G 3/8 | 480-38 | 480-122 |

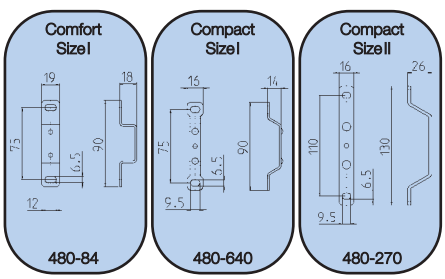



### Set Compact Connection

| Thread | | Order No. | with holder |
|---|---|---|---|
| Size I | G 1/4 | 480-570 | 480-560 |
| | G 3/8 | 480-360 | 480-350 |
| Size II | G 1/2 | 480-238 | 480-264 |
| | G 3/4 | 480-237 | 480-265 |

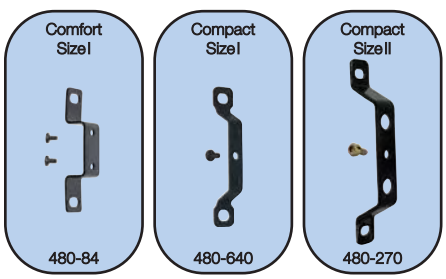




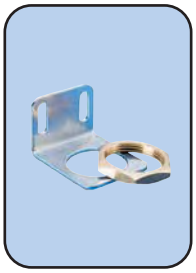




### T-bracket separately

| | Order No. |
|---|---|
| Comfort Size I | 480-84 |
| Compact Size I | 480-640 |
| Compact Size II | 480-270 |



# Accessories
## variobloc

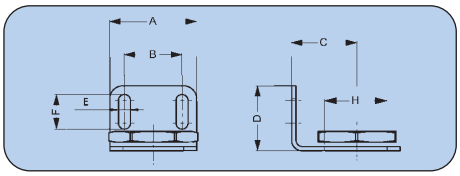


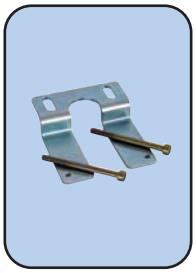
### Fixing bracket at the handwheel cap with nut

| Size | Order No. | A | B | C | D | E | F | H |
|---|---|---|---|---|---|---|---|---|
| I | **443-36** | 40 | 26,5 | 30 | 30 | 5,5 | 16 | 30,5 |
| II | **443-104** | 55 | 35 | 42,5 | 40 | 7 | 20 | 43 |

### Panel mounting (nut)

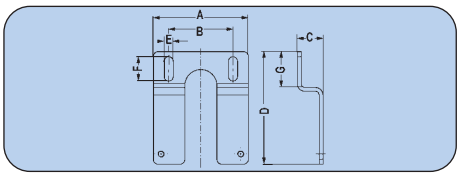
| | | | |
|---|---|---|---|
| I | **381-32** | M30x1,5 | (PA6) |
| II | **443-106** | M42x1,5 | (brass) |



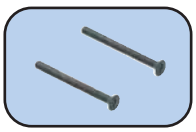



### Fixing on housing

| Size | Order No. | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|---|
| I | **480-67** | 50 | 34 | 15 | 71 | 5,5 | 16 | 25 |
| II | **480-252** | 74 | 50 | 20 | 88 | 7 | 19 | 28 |




| Article | Order No. |
|---|---|
| **Seal for Compact Connection** | |
| I G 1/4 G 3/8 form seal | **480-85** **480-11** |
| II G 1/2 G 3/4 sleeve + seal | **480-267** **480-268** |



| Article | Order No. |
|---|---|
| **Fastening screws for direct mounting for single devices** | |
| I (2x M4x40) | **480-83** |
| II (2x M5x60) | **480-266** |

| Article | Order No. I | Order No. II |
|---|---|---|
| PE-Filter insert 40 µm | **480-7** | **480-219** |
| PE-Filter insert 5 µm | **480-45** | **480-220** |
| Micro filter cartridge | **491-4** | **491-103** |
| Activated carbon filter cartr. | **493-2** | **493-102** |

| Gauge | | ø40 | ø50 |
|---|---|---|---|
| Gauge scale | 0-10 bar | **723** | **55** |
| | 0-16 bar | **734** | **85** |
| | 0-25 bar | **745** | **96** |

| Gauge with color code | ø40 | ø50 |
|---|---|---|
| Gauge scale 0-16 bar | **746** | **105** |

| Article | Order No. I | Order No. II |
|---|---|---|
| Plastic bowl with manually operated drain valve (figure) | **480-18** | **480-210** |
| Plastic bowl with semi-automatic drain valve | **480-78** | **480-255** |
| Plastic bowl with internal-automatic drain valve | **480-79** | **480-256** |
| Plastic bowl with external-automatic drain valve A | **480-95** | **480-257** |
| Plastic bowl for lubricator (without drain valve) | **483-7** | **483-110** |

| | | |
|---|---|---|
| Metal bowl with manually operated drain valve (20 bar) | **480-28** | **480-213** |
| Metal bowl with semi-automatic drain valve (20 bar) | **480-80** | **480-258** |
| Metal bowl with internal-automatic drain valve (12 bar) | **480-81** | **480-259** |
| Metal bowl with external-automatic drain valve A (16 bar) | **480-96** | **480-260** |
| Metal bowl for lubricator (without drain valve) (20 bar) | **483-10** | **483-113** |

| | | |
|---|---|---|
| Bowl protection for plastic bowl | **480-25** | **480-216** |
| Padlock for ballvalves Model 487 | **487-17** | |
| Padlock for ballvalves Model 487 | **487-17** | |

| | | |
|---|---|---|
| Padlock for ballvalves Model 487 | **487-17** | |
| Padlock for pressure regulator and filter pressure regulator | **480-430** | |

| Article | | Order No. |
|---|---|---|
| **Drain Bolt** out of plastic | G 1/8 | **423-110** |
| **Semi-automatic drain valve** with insert for plastic and metal bowl (ø14) | LW 6 | **495-100** |
| **External-autom. drain valve A** (4-16 bar) for external mounting to e.g. a micro-filter | | |
| Housing + cap (brass) | G 1/8 | **5370.3** |
| Housing (polyamide) | G 1/8 | **5370.4** |
| **External-autom. drain valve B** (1-12bar) Internal-automatic drain valve in housing for external mounting (thread G 1/8) | LW 5 | **441.11** |
| **Internal-autom. drain valve** (1-12bar) for bowl with borehole ø14 | LW 5 | **441.1** |

Drain valves see chapter 8