# FILTER-REGULATOR

Dear Customer,

Thank you for your confidence in our product.
In the following pages you will find the technical data required for the trouble-free installation and maintenance of these pneumatic components. Please read and observe the instructions fully to ensure that the product will give you long, trouble-free service.

**Warning**: Servicing and repair work must only be carried out by a qualified technician.

## 1. TECHNICAL DATA

| *Characteristics* | | | Pressures are gauge pressures | |
|---|---|---|---|---|
| Port size | | | G1/8 | G1/4 |
| Pore size of filter insert | | µm | 25 (white)<br>5 (yellow) | |
| Max. condensate capacity | | cm³ | 12 | |
| Condensate drainage | | | standard: manual<br>on request: semiautomatic<br>with pressure relief | |
| Installation | | | vertical (bowl downwards) | |
| Medium and ambient temperature range | $\vartheta_{min}$<br>$\vartheta_{max}$ | °C<br>°C | 0<br>+50 ① (other temperatures on request) | |
| Weight (mass) | | kg | 0,12 | |
| *Pneumatic Characteristics* | | | | |
| Operating pressure range Inlet | $p_{1min}$<br>$p_{1max}$ | bar | 0<br>10 | |
| Operating pressure range Outlet | $p_{2min}$<br>$p_{2max}$ | bar | 0,5<br>8 | ( 0,5 0,5<br>3 4 ) ④ |
| Min. pressure difference | $p_1$-$p_2$ | bar | 0,2 | |
| Hysteresis $p_1$=10/$p_2$=0<br>$p_1$=10/$p_2$=10 | | bar<br>bar | 1,6<br>0,6 | |
| Recommended flow rate ② | $Q_n$ | l/min<br>m³/h | **300**<br>**18** | **550**<br>**33** |
| Maximum flow rate ③ | $Q_{max}$ | l/min<br>m³/h | 550<br>33 | 550<br>33 |
| Filtration efficiency at recommended flow rate | - | % | >90 | |

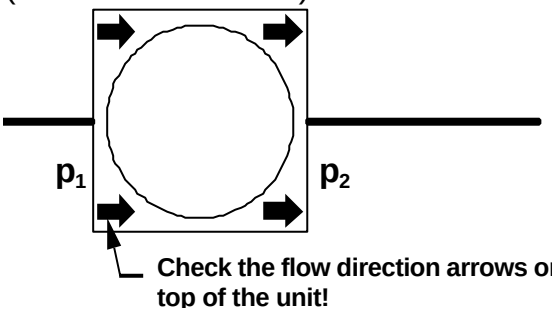
① at 10 bar ② at $p_2$=6,3 bar and 25 m/s ③ at $p_1$=10 bar and $p_2$=6,3 bar and ∗p=1bar
④ the exact $p_2$ range can be selected by the use of special springs

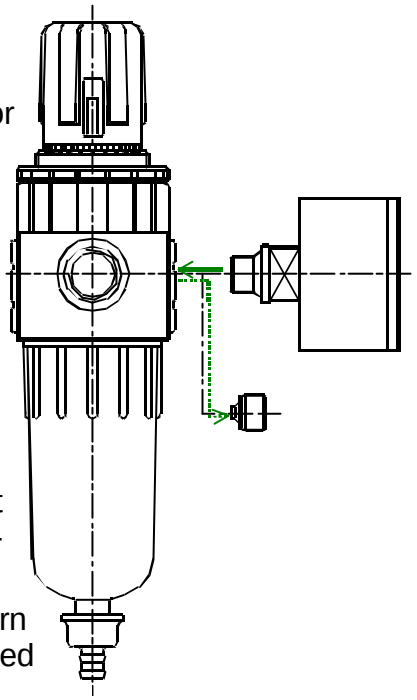
## 2. INSTALLATION INSTRUCTIONS

**Warning**: The unit must be used only in industrial applications for compressed air.
To avoid danger of injuries, the compressed air system must be fully depressurized while pneumatic components are being installed.

**Note**: The bowl must not come into contact with the following materials (whether in liquid or gaseous form):
acetone, benzene, brake fluid, chloroform, acetic acid, glycerine, methanol, carbon bisulphide, tri-, tetra- and per-compounds, toluene, xylene (cellulose thinners) and high flash-point synthetic oils (e.g. phosphoric ester base, etc.).
Incompatible materials can be carried from the ambient air or from equipment upstream (e.g. oil from compressors). This can cause bursting of the bowl.
Check this possibility before installing the unit. If in doubt, please consult your sales contact.

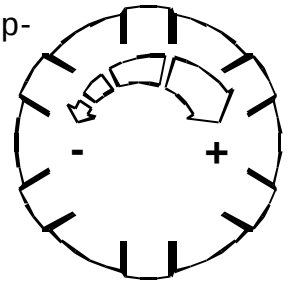
1. Clean out the air line carefully, removing all loose rust or other deposits.
2. Fit a mounting bracket, if applicable.
3. Fit a pressure gauge, if applicable.
4. Connect the air line to the filter-regulator (check flow direction!)



5. Pull the adjusting knob upwards and turn it anticlockwise to the stop (see arrow on adjusting knob).
6. Turn on the compressed air supply and turn the adjusting knob clockwise until the desired pressure is obtained.
   Lock the adjusting knob.

## 3. PRESSURE SETTING

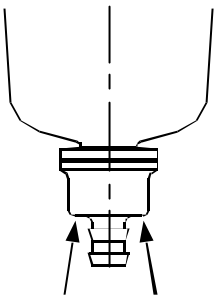



1. To set the desired pressure, pull the adjusting knob upwards and turn it anticlockwise until the pressure is below the desired pressure.
2. Turn the adjusting knob clockwise, carefully increasing the pressure from the lower pressure up to the desired pressure.

## 4. MAINTENANCE

The regulator itself is maintenance-free. However it is important that the whole compressed air system is correctly maintained (air filtered and dewatered).

### 4.1. Manual Drainage



To drain condensate from the bowl, press the plastic part upwards against the bowl ⇒ this opens the valve.
The condensate level should never be above the "Maximum" mark on the bowl.

### 4.2. Cleaning

As soon as serious pressure drop is observed, clean the filter element and also the bowl.
Clean the filter element with petrol, paraffin or similar and blow it out from inside to outside. The element must be completely dry before reassembly.
The bowl and other plastic parts should only be cleaned with warm water and normal washing-up liquid.

## 5. DISMANTLING

**Warning**: To avoid danger of injuries, the unit must only be dismantled with the pneumatic system completely depressurized!

If possible the unit should be removed from the air line before dismantling.

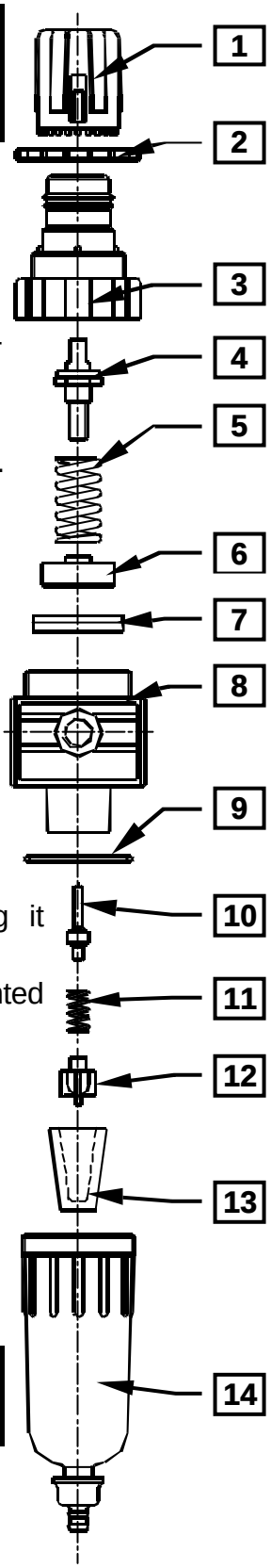
### 5.1. Dismantling the Upper Part

1. Pull the adjusting knob ① upwards and turn it anti-clockwise to the stop.
2. Unscrew the upper part ③.
3. Remove the regulating spring ⑤ and adjusting screw ④.
4. Remove the piston ⑥ from the housing ⑧.
5. Remove the gasket ⑦ from the housing ⑧.

### 5.2. Dismantling the Lower Part

To make dismantling easier, turn the unit over with the bowl ⑭ upwards.

1. Unscrew the bowl ⑭.
2. Remove the conical filter element ⑬ from the bowl.
3. Turn the unit over with the filter mount upwards.
4. Loosen the insert ⑫ with pointed pliers by turning it slightly to the left and remove it from the housing ⑧.
5. Remove the spring ⑪ from the housing with pointed pliers.
6. Pull the valve piston ⑩ out of the housing ⑥.
7. Remove the O-ring ∅31 × 2 ⑨ from the housing..




## 6. REASSEMBLY

Reassembly of the unit is carried out in the reverse order – first the lower part, then the upper part.

**Note:** If new seals are fitted, grease them thoroughly before fitting.

Reassembling the Lower Part:

1. Place the O-ring ∅31 × 2 ② in the housing.
2. Place the valve piston ⑩ and spring ⑪ in the housing ⑧.
3. Place the insert ⑫ in the housing ⑧ with pointed pliers (centring the spring ⑪ ) and secure it by turning it to the right.

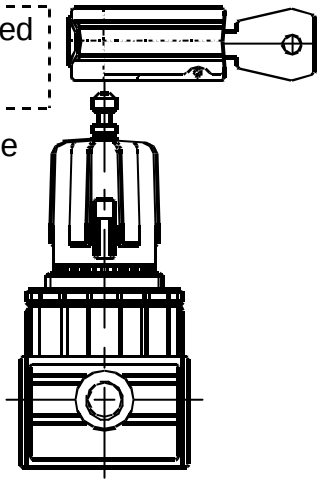
4. Place the filter element ③ (5µm…yellow, 25µm…white) in the deflector ring mount (in the bowl).
5. Screw the bowl ④ into the housing (centring the filter element) and tighten it hand-tight.

Reassembling the Upper Part:

1. Place the gasket ⑦ in the bore with the sealing lip towards the bottom of the housing (be careful not to damage the sealing lip).
2. Centre the valve piston ⑩ (already in place).
3. Push the piston ⑥ into the housing ⑥. Make sure that the valve piston ⑩ is centred in the bore of the piston ⑥.
4. Push the adjusting screw ④ into the upper part ③.
5. Place the spring ⑤ on the centring seat of the piston ⑥.
6. Screw the upper part ③ onto the housing ⑧ (holding the adjusting screw still) and tighten it.

## 7. FITTING THE LOCK

Note: The lock can only be fitted to regulators ordered with option -X.



1. Position the key obliquely to the hole and place the lock on the post.
2. Turn the key clockwise and remove it.

## 8. DISPOSAL

The method of disposal of packaging and discarded parts must comply with local regulations.

## 9. ASSEMBLY OF SEVERAL COMPONENTS

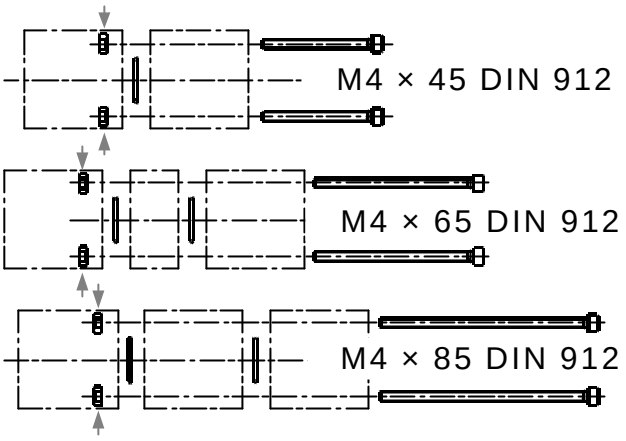
Only components of the same size can be assembled into combined units.

### 9.1. Assembly of Pressure Regulators or Filter-Regulators with Other Components

1. Remove the black cover plates from the inlets and outlets of the components you wish to assemble.

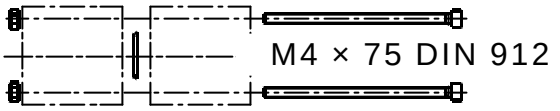
   The coloured cover plates remain on the component (filter, lubricator), through which the assembly screws will go.
2. Remove the coloured cover plates from the component (regulator, filter-regulator) in whose recesses the nuts will be placed.

3. Turn the component so that the flange surface which is to be joined to the other component is on top.
4. Lay the O-ring from the coupling kit on the flange surface.
5. Place the hexagonal nuts in the recesses of the component.
6. Place the other component on the flange surface.

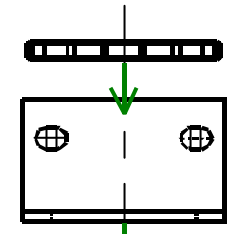



7. Push the screws into the through-holes of the other component.
8. Tighten the screws.
9. Fit the black cover plates over the inlets and outlets of the components.
10. Fit the coloured cover plates.

## 9.2. Assembly of Oil Mist Lubricators with Filters or Filters with Other Types of Filter




1. The coloured cover plates remain on the components. The coloured cover plates remain on the components.
2. Turn the component so that the flange surface which is to be joined to the other component is on top.
3. Lay the O-ring from the coupling kit on the flange surface.
4. Place the hexagonal nuts in the recesses of the component.
5. Place the other component on the flange surface.
6. Push the screws into the through-holes of the other component.
7. Tighten the screws.
8. Fit the black cover plates over the inlets and outlets of the components.



## 10. FITTING THE MOUNTING BRACKET

1. Secure the mounting bracket, insert the regulator into it from below and secure it from above using the mounting ring supplied.

Note: The mounting bracket can be fitted with the mounting strap either upwards or downwards.
If the mounting strap is downwards, the mounting bracket must be secured to the wall before the regulator is mounted in it.