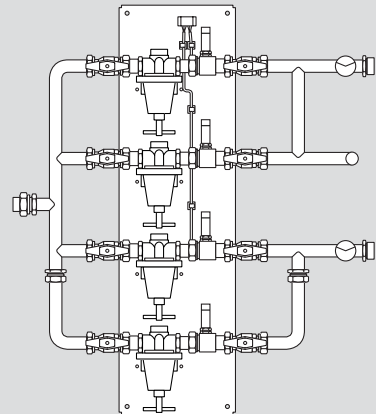
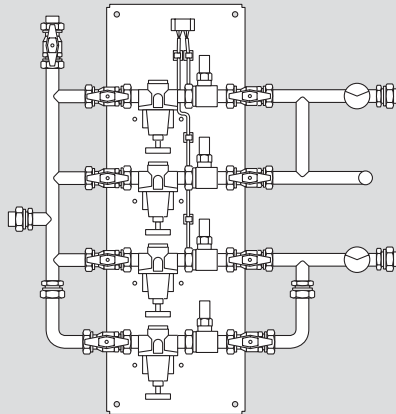
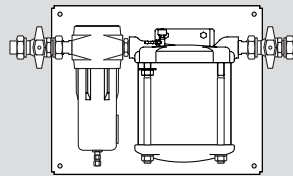
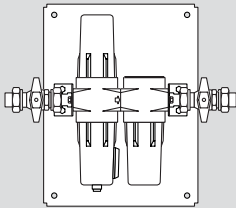


Instructions for Use

# Air Filter Station 60/190 Pressure Reducing Station 100/300



## **WARNING**

To properly use this medical device,  
read and comply with these  
Instructions for Use.

## Typographical Conventions

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- 1 Consecutive numbers indicate steps of action, with the numbering restarting with "1" for each new sequence of actions.
- Bullet points indicate individual actions or different options for action.
- Dashes indicate the listing of data, options, or objects.
- (A) Letters in parentheses refer to elements in the related illustration.
- A Letters in illustrations denote elements referred to in the text.

## Trademarks

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- DrägerService®

is a trademark owned by Dräger.

## Safety Information Definitions

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### **WARNING**

A **WARNING** statement provides important information about a potentially hazardous situation which, if not avoided, could result in death or serious injury.

### **CAUTION**

A **CAUTION** statement provides important information about a potentially hazardous situation which, if not avoided, may result in minor or moderate injury to the user or patient or in damage to the medical device or other property.

### **NOTE**

A **NOTE** provides additional information intended to avoid inconvenience during operation.

## Abbreviations and Symbols

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For explanations refer to sections "Abbreviations" and "Symbols" in chapter "Overview".

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# Contents

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<b>For Your Safety and that of Your Patients</b> . . .	7	<b>Disposal</b> . . . . .	42
General Safety Information. . . . .	7	Disposal of Filter Cartridges . . . . .	42
<b>Application</b> . . . . .	9	Disposal of the Medical Device . . . . .	42
Intended Use . . . . .	9	<b>Technical Data</b> . . . . .	43
<b>Overview</b> . . . . .	10	<b>Order List</b> . . . . .	48
Device Variants. . . . .	10	<b>Index</b> . . . . .	49
Pressure Reducing Station. . . . .	10		
Air Filter Station with Pressure Reducing Station. . . . .	18		
EcoPharm Tower with Pressure Reducing Station. . . . .	19		
Abbreviations . . . . .	20		
Symbols . . . . .	20		
<b>Assembly</b> . . . . .	21		
Air Filter Station with Pressure Reducing Station. . . . .	21		
EcoPharm Tower with Pressure Reducing Station. . . . .	23		
Electrical Connection Contact Pressure Gauge. . . . .	24		
<b>Preparation</b> . . . . .	25		
Acceptance and Handover. . . . .	25		
<b>Operation</b> . . . . .	26		
Air Filter Station 60 with Pressure Reducing Station 100 . . . . .	26		
Air Filter Station 190 with Pressure Reducing Station 300 . . . . .	27		
EcoPharm Tower with Pressure Reducing Station. . . . .	28		
Taking the System out of Service. . . . .	29		
<b>Problem Solving</b> . . . . .	32		
Fault – Cause – Remedy . . . . .	32		
<b>Maintenance</b> . . . . .	33		
Maintenance Intervals . . . . .	33		
Replacing the Filter Cartridges . . . . .	35		

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# For Your Safety and that of Your Patients

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## General Safety Information

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The following WARNING and CAUTION statements apply to general operation of the medical device.

WARNING or CAUTION statements specific to subsystems or particular features of the medical device appear in the respective sections of these Instructions for Use or in the Instructions for Use of another product being used with this device.

### Strictly follow these Instructions for Use

#### **WARNING**

Any use of the medical device requires full understanding and strict observation of all sections of these Instructions for Use. The medical device must only be used for the purpose specified under "Intended Use" on page 9. Strictly observe all WARNING and CAUTION statements throughout these Instructions for Use and all statements on medical device labels. Failure to observe these safety information statements constitutes a use of the medical device that is inconsistent with its intended use.

## Maintenance

#### **WARNING**

The medical device must be inspected and serviced regularly by professionals who possess the required qualifications due to their training and their experience. Repair of the medical device must also be performed by trained personnel with additional product-specific DrägerService training.

Dräger recommends that a service contract is obtained with DrägerService and that all repairs are performed by DrägerService. Dräger further recommends that only authentic Dräger repair parts are used for maintenance.

If the above are not complied with, the correct functioning of the medical device may be compromised.

See chapter "Maintenance".

## **Accessories**

### **WARNING**

Only the accessories indicated on the "Order List" on page 48 have been tested and approved for use with the medical device. Therefore, it is strongly recommended that only these accessories are used in conjunction with the medical device. Otherwise, the correct functioning of the medical device may be compromised.

## **Not for use in areas of explosion hazard**

### **WARNING**

This medical device is neither approved nor certified for use in areas where combustible or explosive gas mixtures are likely to occur.



## **Application**

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## **Intended Use**

---

Filter and pressure reducing station for the preparation of compressed air and pressure reduction in central medical compressed air systems.

## Overview

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### Device Variants

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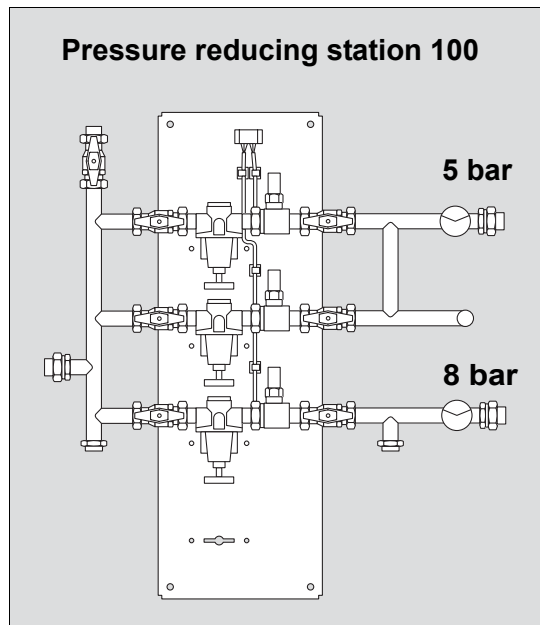
- Air filter station 60 in conjunction with a pressure reducing station 100
- Air filter station 190 in conjunction with a pressure reducing station 300
- EcoPharm tower in conjunction with a pressure reducing station 100
- EcoPharm tower in conjunction with a pressure reducing station 300

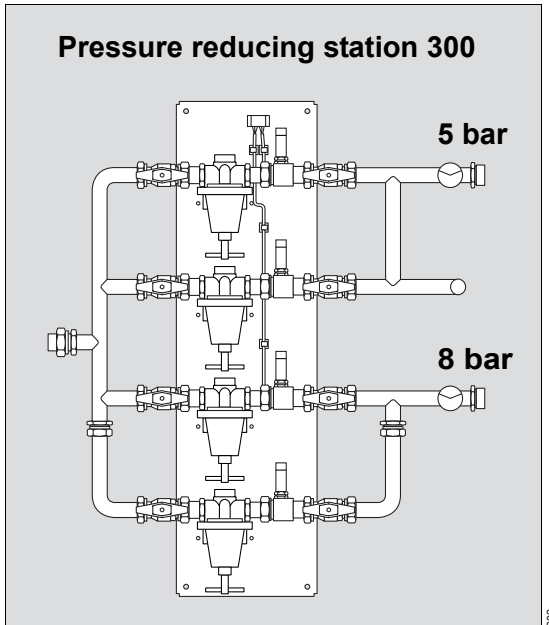
The Instructions for Use and Assembly Instructions "EcoPharm tower, reprocessing units for medical air" of the company Domnick Hunter in the current version are valid for the use and function of the EcoPharm tower.

### Pressure Reducing Station

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The pressure reducing station 100 and the pressure reducing station 300 are constructed analogously.





The pressure reducing station 100 has an additional input-side connection point (A) for the connection of a cylinder manifold system (reserve supply).

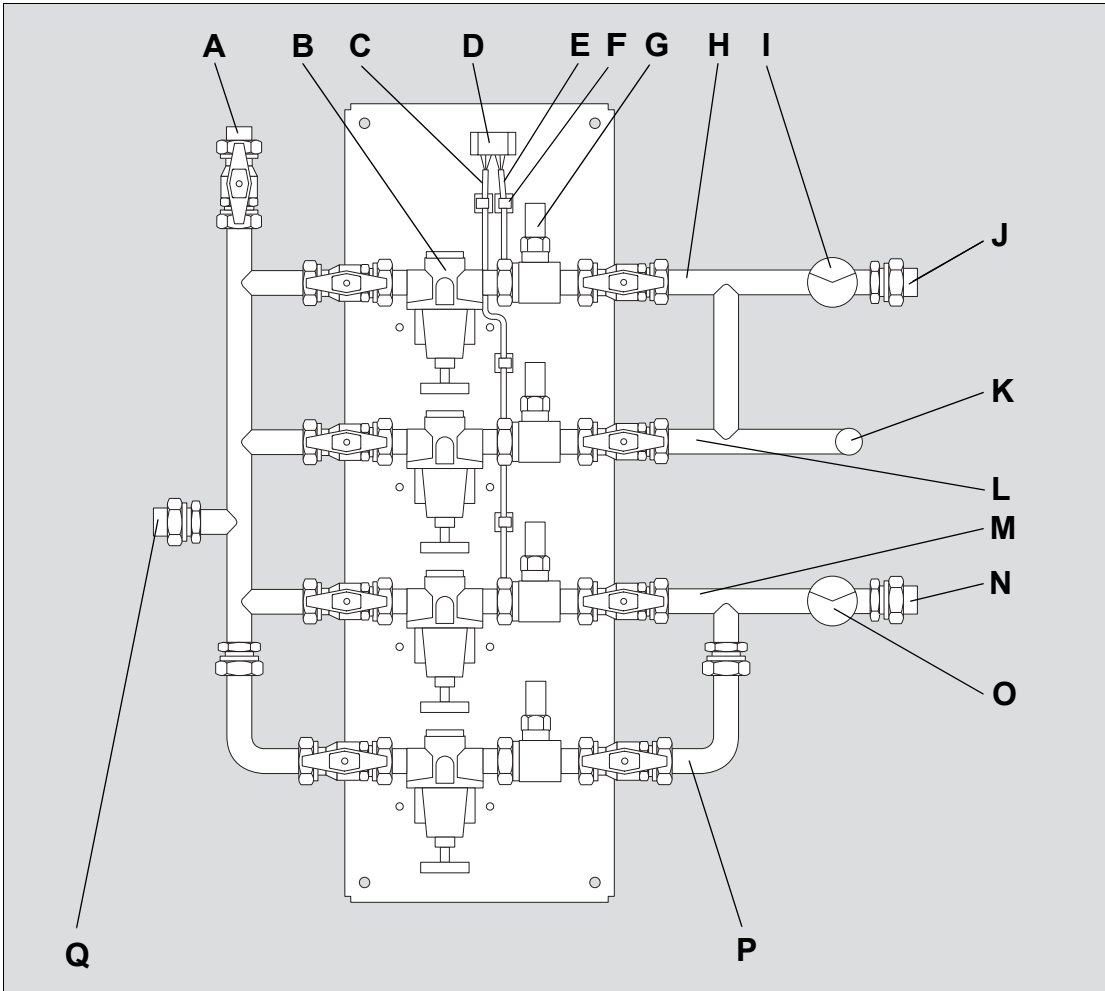
The pressure reducing stations are always constructed redundant for the 5 bar range.

This allows maintenance work to be conducted on the pressure reducers and safety valves without interrupting operation.

The 8 bar range can also be constructed redundant.

A redundancy for the surgical piping system is ensured by using pressure reducing set 80/8 or pressure reducing set 180/8 (see "Order List" on page 48).

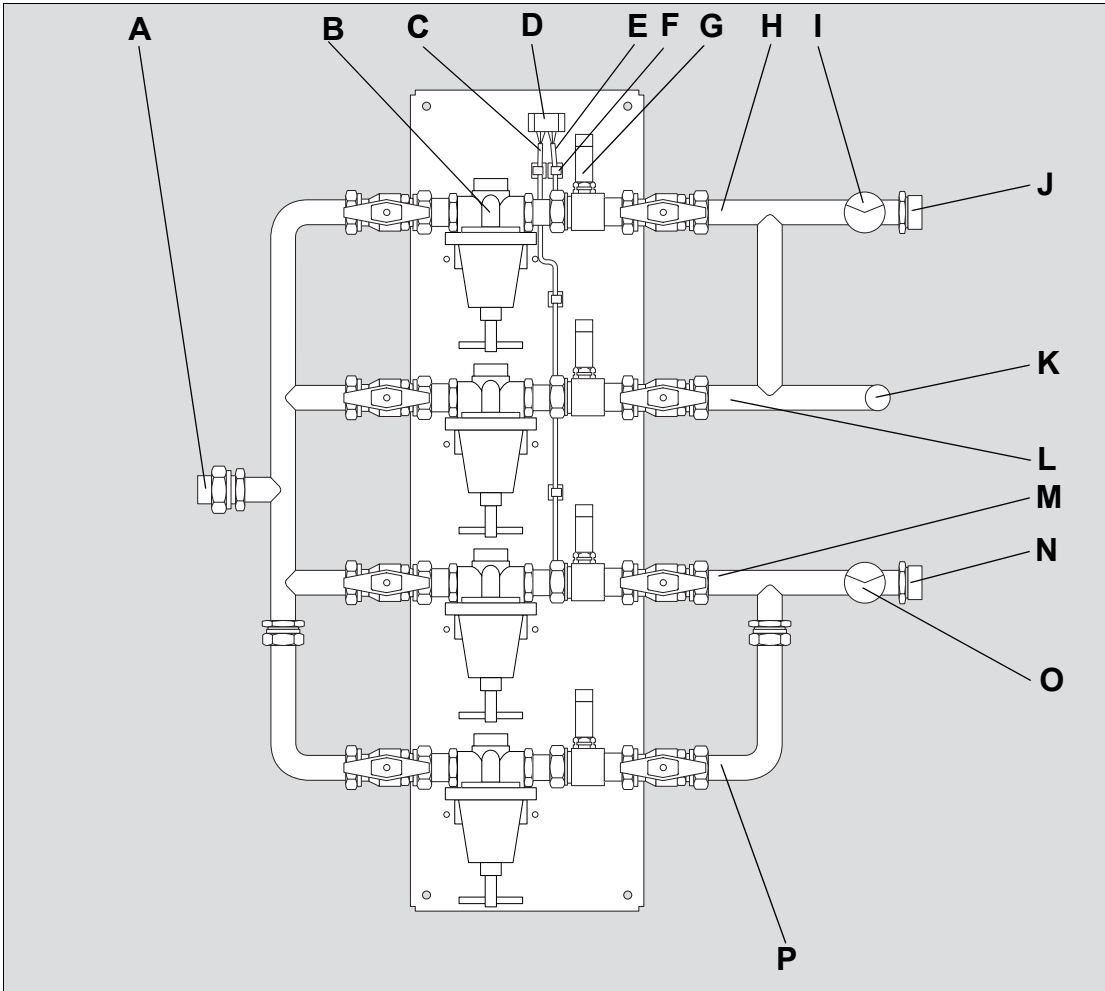
### Pressure reducing station 100



028

- A** Input for cylinder manifold system  
(reserve supply)
- B** Pressure reducer
- C** Contact pressure gauge cable 8 bar
- D** Connection terminal
- E** Contact pressure gauge cable 5 bar
- F** Cable clip
- G** Safety valve
- H** Primary strand 5 bar
- I** Contact pressure gauge 5 bar
- J** Output 5 bar
- K** Emergency supply feeding point  
(NIST connection)
- L** Redundant 5 bar strand
- M** Primary strand 8 bar
- N** Output 8 bar
- O** Contact pressure gauge 8 bar
- P** Redundant 8 bar strand (optional)
- Q** Input EcoPharm tower or  
air filter station 60

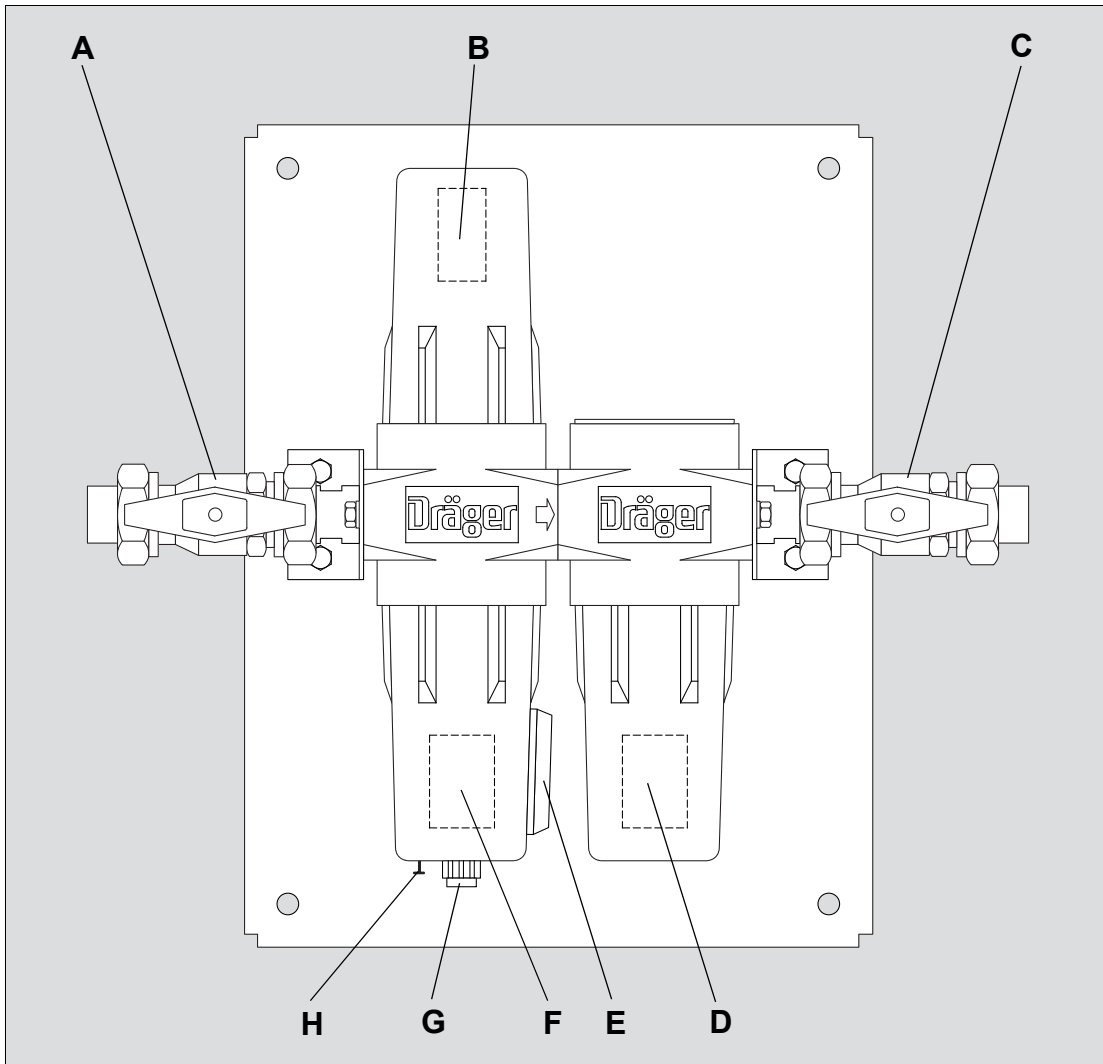
### Pressure reducing station 300



029

- A** Input EcoPharm tower or air filter station 190
- B** Pressure reducer
- C** Contact pressure gauge cable 8 bar
- D** Connection terminal
- E** Contact pressure gauge cable 5 bar
- F** Cable clip
- G** Safety valve
- H** Primary strand 5 bar
- I** Contact pressure gauge 5 bar
- J** Output 5 bar
- K** Emergency supply feeding point (NIST connection)
- L** Redundant 5 bar strand
- M** Primary strand 8 bar
- N** Output 8 bar
- O** Contact pressure gauge 8 bar
- P** Redundant 8 bar strand (optional)

## Air filter station 60



**A** Ball valve input

**B** Activated charcoal filter (2nd filter level)

**C** Ball valve output

**D** HEPA filter (3rd filter level)

**E** Fluid fill level display

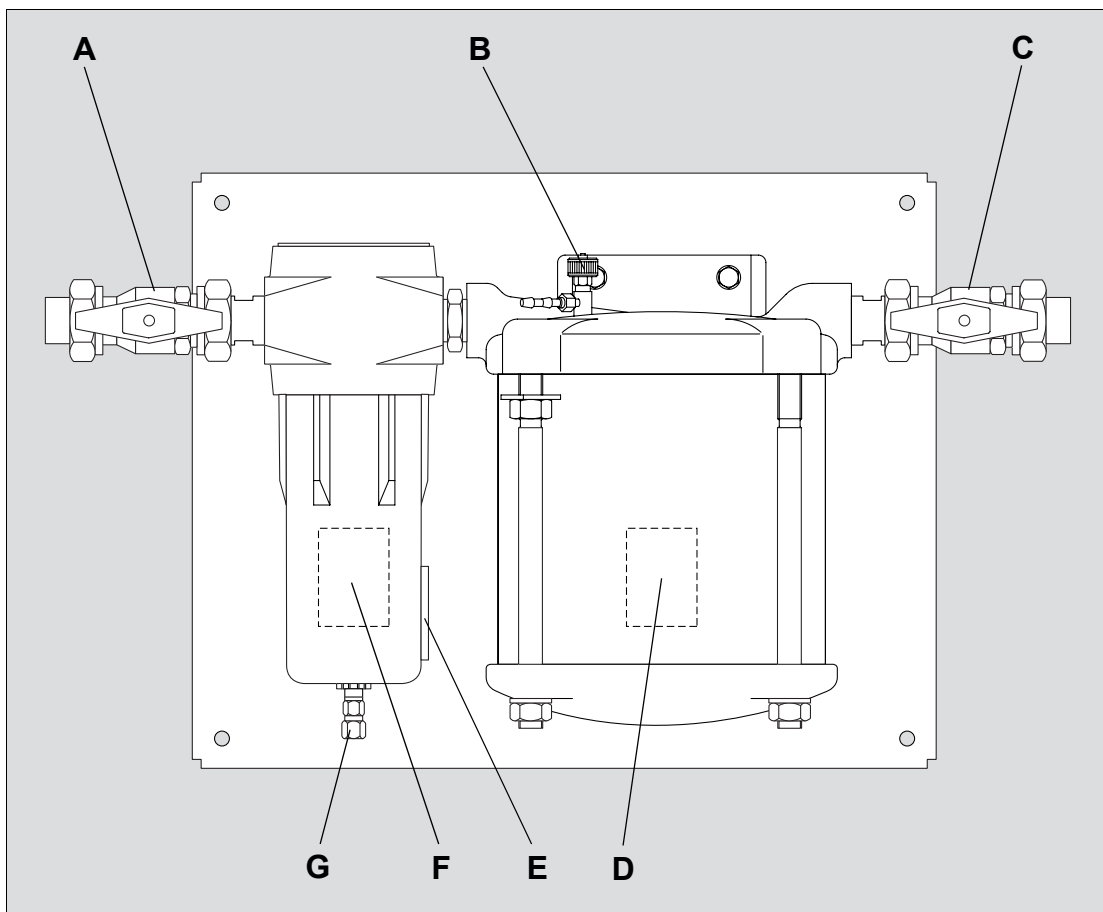
**F** Fine filter (1st filter level)

**G** Connection for condensate discharge

**H** Operation control and relief valve



## Air filter station 190



- A** Ball valve input
- B** Test and relief valve
- C** Ball valve output
- D** Activated charcoal filter (2nd filter level) and HEPA filter (3rd filter level)
- E** Fluid fill level display
- F** Fine filter (1st filter level)
- G** Connection for condensate discharge

## Air Filter Station with Pressure Reducing Station

---

### **WARNING**

**Risk of explosion e. g. in systems for oxygen!**

**Only use air filter station and pressure reducing station in systems for compressed air.**

**The air filter station and pressure reducing station cannot be used in systems for other gases.**

### **CAUTION**

Fast or suddenly escaping compressed air or bursting parts

If the ball valves are opened too quickly, fast or suddenly escaping compressed air or bursting parts may cause injury.

Always open ball valves slowly.

3-level filter with subsequent pressure reduction to the operating pressure of the piping network.

### **Air filter station**

- 1st filter level (fine filter):  
Separation of oil and water drops (aerosols)
- 2nd filter level (activated charcoal filter):  
Adsorption of oil from the vapor phase using activated charcoal
- 3rd filter level (HEPA filter):  
Filtration of bacteria

### **Pressure reducing station**

- Pressure reduction from approx. 11 bar to 15 bar input pressure to:  
5 bar output pressure for breathing air applications or 8 bar output pressure for surgical instruments.

## EcoPharm Tower with Pressure Reducing Station

---

Multi-level filtration and drying of the air in accordance with the European Pharmacopoeia with subsequent pressure reduction to the operating pressure of the piping network.

### EcoPharm tower

- Prefilter:  
Separation of oil and water drops (aerosols)
- Activated charcoal filter:  
Adsorption of oil from the vaporous state using activated charcoal
- Adsorption dryer:  
Drying of the air
- Hopcalite filter:  
Catalyst: CO is converted to CO<sub>2</sub> and absorbed
- Secondary filter:  
Dust filter
- HEPA filter

### Pressure reducing station

- Pressure reduction from approx. 11 bar to 15 bar input pressure to:  
5 bar output pressure for breathing air applications or 8 bar output pressure for surgical instruments.

## Abbreviations

---

<b>Abbreviation</b>	<b>Explanation</b>
---------------------	--------------------

DIN	Deutsches Institut für Normung (German Institute for Standardization)
EEC	European Economic Community
EN	European Standard
ISO	International Organization for Standardization
NIST	Non-Interchangeable Screw Threaded
UMDNS	Universal Medical Device Nomenclature System

## Symbols

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<b>Symbol</b>	<b>Explanation</b>
---------------	--------------------



Disposal information



Manufacturer

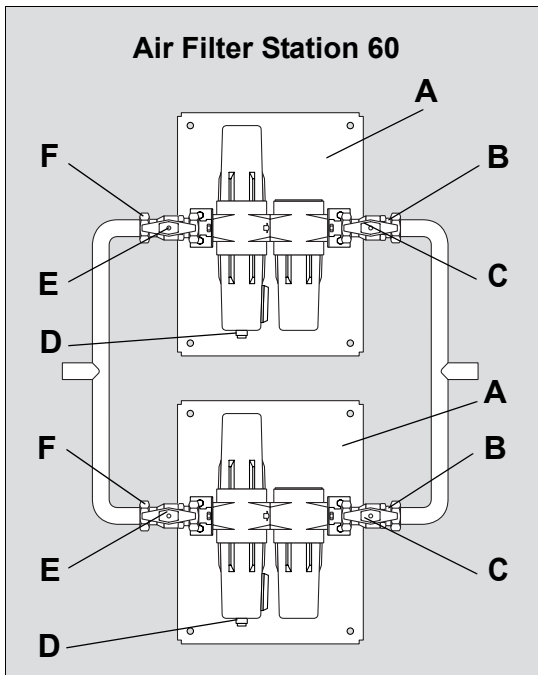
# Assembly

## Air Filter Station with Pressure Reducing Station

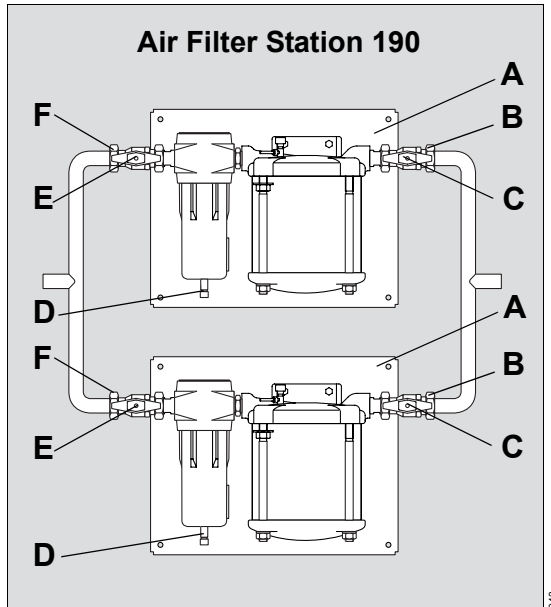
Pipe connections are not included with the delivery.

- Connect air filter stations in parallel.

Connection example:



042

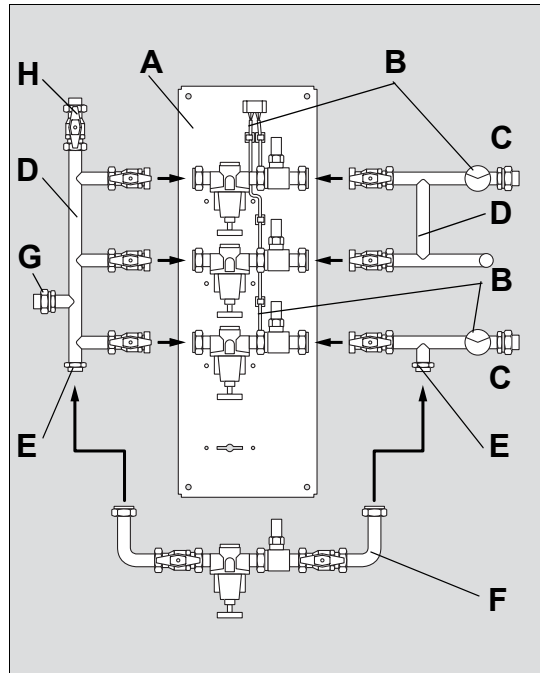


043

- 1 Attach base plate (A) to the wall.  
Screws, screw anchors and washers are included.
- 2 Connect soldered connections (F) with the inputs of the piping network
- 3 Connect soldered connections (B) with the outputs of the piping network
- 4 Connect pipe (D) for the condensate discharge.  
For air filter station 60:  
connection ISO 228/1-G 1/8i /G 1/4a  
For air filter station 190:  
connection ISO 228/1-G 1/8
- 5 Place air filter station under operating pressure:  
To do so:
- 6 Slowly open all ball valves (E) at the input.
- 7 Slowly open all ball valves (C) at the output.
- 8 Then test all connection points for leaks using a leak detection agent.
- 9 Close are ball valves at the input (E) and at the output (C).

## Pressure reducing station

This is the representation and description for the assembly of the pressure reducing station 100. Proceed analogously for the pressure reducing station 300.



- 1 Attach base plate (A) to the wall.  
Screws, screw anchors and washers are included.
- 2 Remove all protective caps.
- 3 Connect soldering groups (D) with the pressure reducers.  
O-rings are included.
- 4 Place cable (B) of the contact pressure gauge in the cable clip.
- 5 Connect cable of the contact pressure gauge with the connection terminal, see "Connection terminal allocation plan" on page 24.
- 6 Connect soldered connection (G) with the input of the piping network

- 7 Connect soldered connections (C) with the outputs of the piping network

If the 8 bar range is constructed redundant:

- 8 Remove and dispose of union nuts (E), gaskets and O-rings.
- 9 Place soldering group (F) on the base plate. Screws are included.
- 10 Connect soldering group (F) with the pressure reducing station. O-rings are included.

Only for pressure reducing station 100:

- 11 Connect reserve supply (H) (single-side cylinder manifold system) (for EN systems with two compressors).

Then:

- 12 Place system under operating pressure.
- 13 Slowly open all ball valves.
- 14 Test all connection points for leaks using a leak detection agent.
- 15 Close all ball valves.

## EcoPharm Tower with Pressure Reducing Station

---

### EcoPharm tower

The Instructions for Use and Assembly Instructions "EcoPharm tower, reprocessing units for medical air" of the company Domnick Hunter in the current version are valid for the assembly of the EcoPharm tower.

### Pressure reducing station

See page 22.

## Electrical Connection Contact Pressure Gauge

The contact pressure gauge monitors the operating pressure.

- In the 5 bar network:  
Switching contacts at 4 bar and 6 bar.
- In the 8 bar network:  
Switching contacts at 6.4 bar and 9.6 bar.

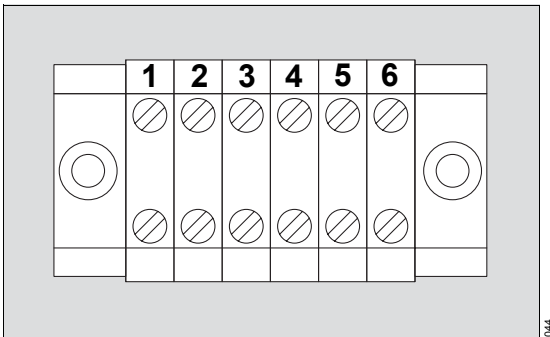
The contact pressure gauge works according to the closed current principle. The contacts are closed at the correct pressure values. In the event of the exceeding or falling short of the alarm thresholds ( $\pm 20\%$  of the nominal value), the contacts open and the connected warning signal is activated.

The contact pressure gauge can be replaced without interrupting operation during maintenance.

### Assigning of the cable colors

Cable color	Function
Black	Contact for rising pressure
Brown	Contact for falling pressure
Blue	Mass

### Connection terminal allocation plan



Terminal number	Cable color	Contact pressure gauge
1	Brown	8 bar network
2	Blue	8 bar network
3	Black	8 bar network
4	Brown	5 bar network
5	Blue	5 bar network
6	Black	5 bar network



## Preparation

---

### Acceptance and Handover

---

The air filter station and pressure reducing station are components of the central medical supply system. Commissioning by expert professionals may only take place following acceptance.

**NOTE**

Observe the national regulations!

In the European Economic Area (EEA),  
DIN EN ISO 7396-1 is valid.

After completion of the installation or maintenance measure and before the commissioning, the air filter station and the pressure reducing station must be checked by professionals. The check must be documented accordingly.

After acceptance, the operational air filter station and pressure reducing station are handed over to their owner along with the associated documentation. A written record of the handover is filed for reference.

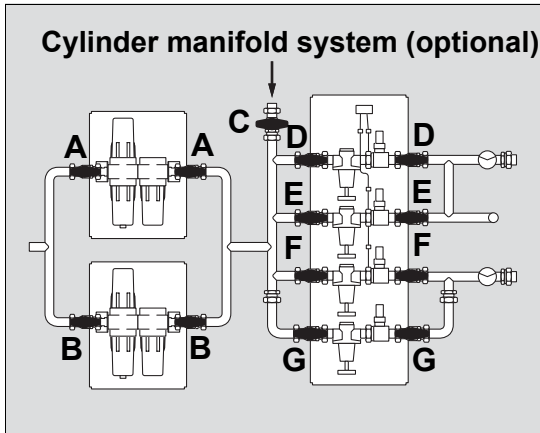
The operating personnel are instructed on the use of the plant.

## Operation

### Air Filter Station 60 with Pressure Reducing Station 100

The air filter station 60 with pressure reducing station 100 is intended for volume flows up to 60 m<sup>3</sup>/h.

#### Air filter station operation

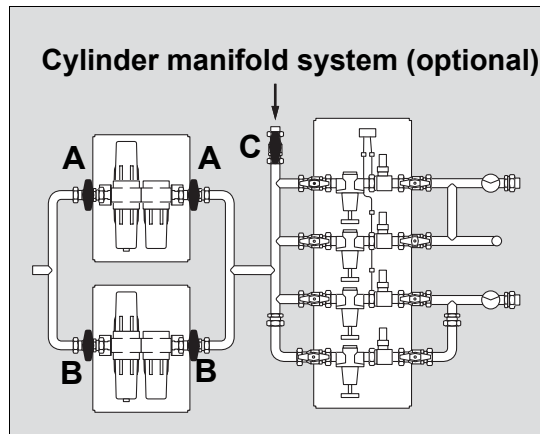


- 1 Ball valves (A) opened.
- 2 Ball valves (B) opened.
- 3 Ball valves (C) closed.
- 4 Ball valves (D) opened.
- 5 Ball valves (E) opened.
- 6 Ball valves (F) opened.

If present:

- 7 Ball valves (G) opened.

#### Reserve supply



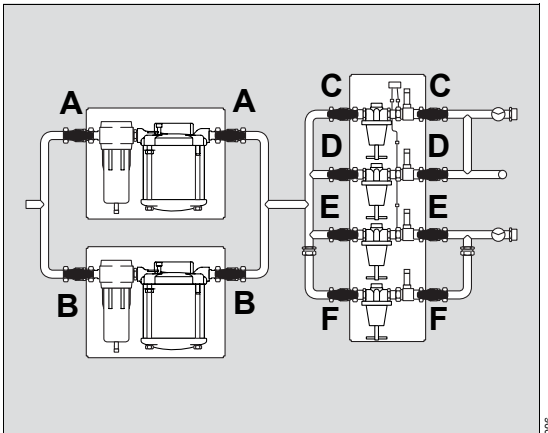
If the optional one-side cylinder manifold is connected, the reserve supply can be switched to in the event of the failure of the compressors.

- 1 Check the operational readiness of the reserve supply.
- 2 Open ball valves in the supply line of the reserve supply.
- 3 Slowly open ball valve (C).
- 4 Close ball valves (A).
- 5 Close ball valves (B).

## Air Filter Station 190 with Pressure Reducing Station 300

The air filter station 190 with pressure reducing station 300 is intended for volume flows up to 190 m<sup>3</sup>/h.

### Air filter station operation



- 1 Ball valves (A) opened.
  - 2 Ball valves (B) opened.
  - 3 Ball valves (C) opened.
  - 4 Ball valves (D) opened.
  - 5 Ball valves (E) opened.
- If present:
- 6 Ball valves (F) opened.

## EcoPharm Tower with Pressure Reducing Station

---

### EcoPharm tower

The Instructions for Use and Assembly Instructions "EcoPharm tower, reprocessing units for medical air" of the company Domnick Hunter in the current version are valid for the operation of the EcoPharm tower.

### Pressure reducing station

This is the representation and description for the assembly of the pressure reducing station 100. Proceed analogously for the operation of the pressure reducing station 300.

### Normal operation

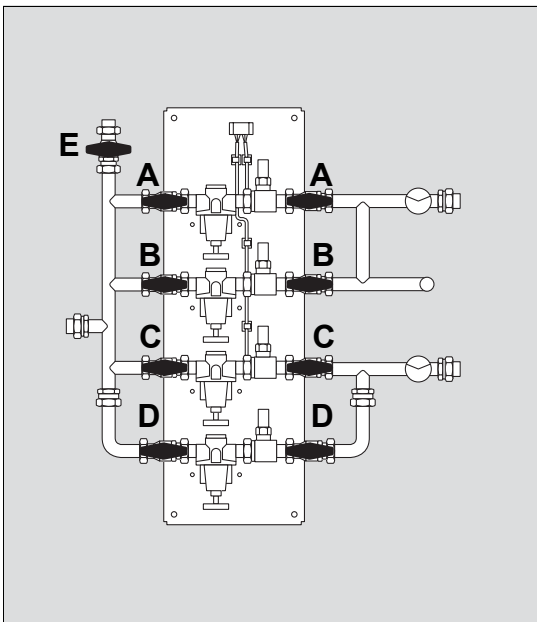
- 1 Ball valves (A) opened.
- 2 Ball valves (B) opened.
- 3 Ball valves (C) opened.

If present:

- 4 Ball valves (D) opened.

Only for pressure reducing station 100:

- 5 Ball valve (E) closed.



## Taking the System out of Service

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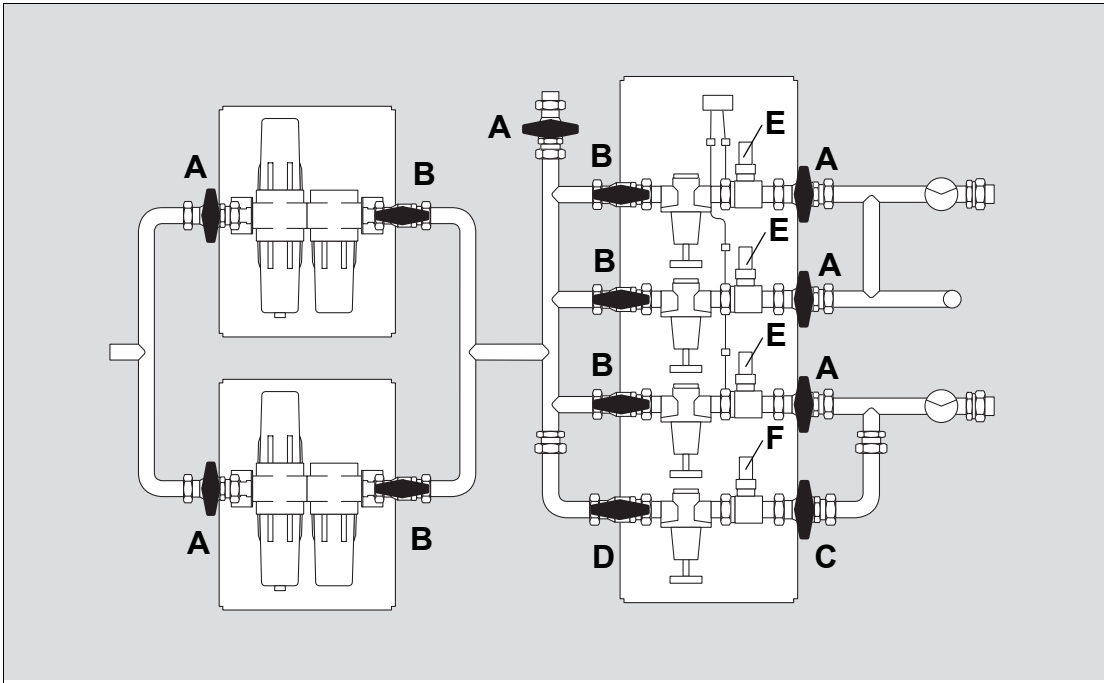
### **WARNING**

#### **Risk of patient injury**

**The complete station may only be shut down if it has been ensured that no patients are endangered by the failure of the compressed air supply!**

- Inform the technical service and care personnel of the hospital before shutting down the system.
- Take measures to ensure the hospital supply e. g. feed compressed air to the central supply system via an emergency feeding point.

## Air filter station 60 with pressure reducing station 100

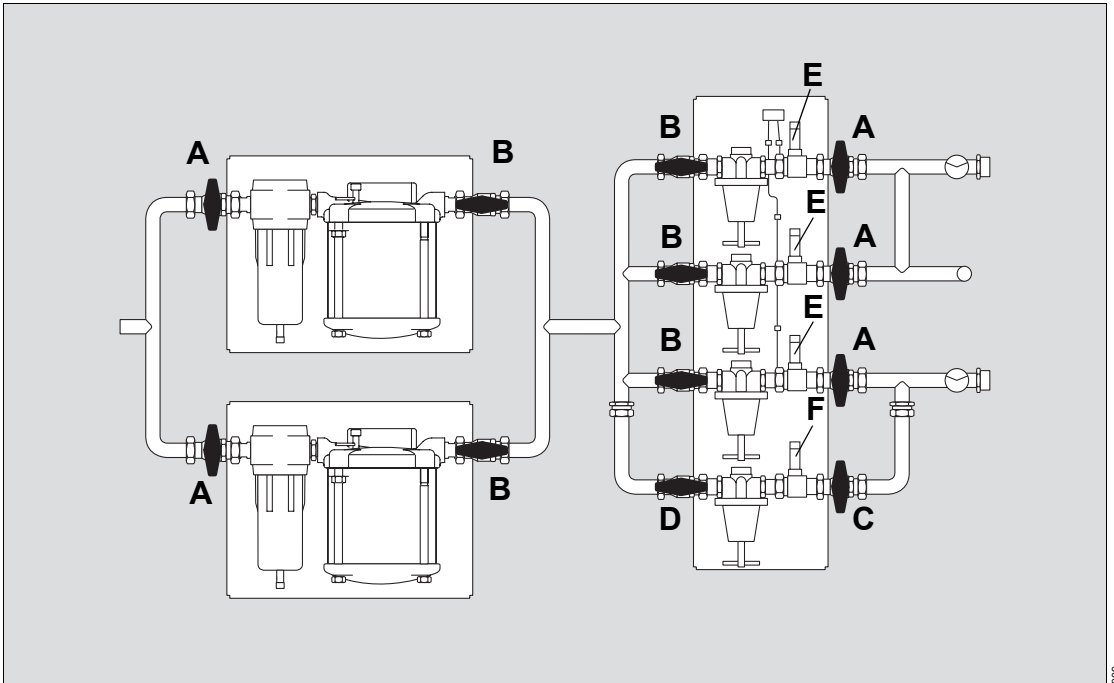


- 1 Close ball valves (A).
- 2 Open ball valves (B).
- 3 Turn caps (E) of the safety valves counterclockwise to fully relieve the air filter station and pressure reducing station of pressure.

If present:

- 4 Close ball valves (C).
- 5 Open ball valves (D).
- 6 Turn caps (F) of the safety valves counterclockwise to fully relieve the air filter station and pressure reducing station of pressure.

**Air filter station 190 with pressure  
reducing station 300**



- 1 Close ball valves (A).
- 2 Open ball valves (B).
- 3 Turn caps (E) of the safety valves counterclockwise to fully relieve the air filter station and pressure reducing station of pressure.

If present:

- 4 Close ball valves (C).
- 5 Open ball valves (D).
- 6 Turn caps (F) of the safety valves counterclockwise to fully relieve the air filter station and pressure reducing station of pressure.

## Problem Solving

---

### Fault – Cause – Remedy

---

Fault	Cause	Remedy
Air filter station and/or pressure reducing station leak.	Sealing ring faulty	Replace sealing ring at input and/or output.
	Screws not tight	
Viewing glass on the filter shows condensate.	Automatic condensate discharge faulty	Switch to redundant air filter station.
		Have DrägerService perform maintenance.
Ball valve cannot be closed with normal hand force	Ball valve faulty	Have DrägerService perform maintenance.
Operating pressure is too low in closed piping network.	Pressure reducer not set correctly	Adjust the pressure reducer with the adjustment screw.
Safety valve on the pressure reducing station discharges.	Pressure reducer not set correctly	Adjust the pressure reducer with the adjustment screw.
	Pressure reducer faulty	Switch to redundant pressure reducer.
		Have DrägerService perform maintenance.
Display of an external Alarm Management System: <b>Working pressure too high</b>	Pressure reducer is improperly set or defective	Call DrägerService
	No gas extraction	Increase gas extraction



# Maintenance

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## Maintenance Intervals

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### EcoPharm tower

#### NOTE

The Instructions for Use and Assembly Instructions "EcoPharm tower, reprocessing units for medical air" of the company Domnick Hunter in the current version are valid for the maintenance intervals of the EcoPharm tower.

### Pressure reducing station 100 and pressure reducing station 300

#### Daily:

- Check operational readiness via visual inspection.  
To do so, check the operating pressure at the operating pressure gauges.

#### At least once yearly:

- Have a functional and visual inspection of the entire station performed by qualified personnel.
- Check pressure switch, including alarm notification.
- Check set values and recovery behavior of pressure reducer.
- Check safety valve for functionality.
- Check entire station for leaks.
- Document the inspection. We recommend obtaining a service agreement with DrägerService.

#### Every 6 years:

Major overhaul by qualified personnel

- of the pressure reducers

Replacement by qualified personnel

- of the safety valve
- of the pressure reduction membrane and closing plunger
- of further sealing elements as required
- Document the inspection. We recommend obtaining a service agreement with DrägerService.

#### NOTE

Only authentic Dräger spare parts may be used for maintenance.

## Air filter station 60 and air filter station 190

### Daily:

- Check the function of the automatic condensate discharge at the fine filter.  
To do so, check the fill level of the condensate using the sight glass (A) of the fine filter.

If the fill level in the fine filter rises, the automatic condensate discharge is faulty.

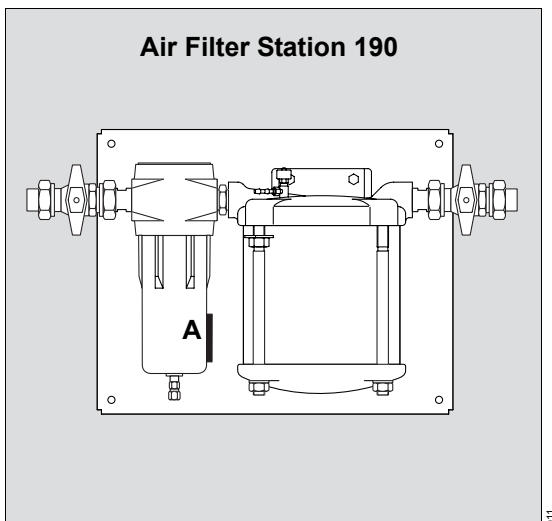
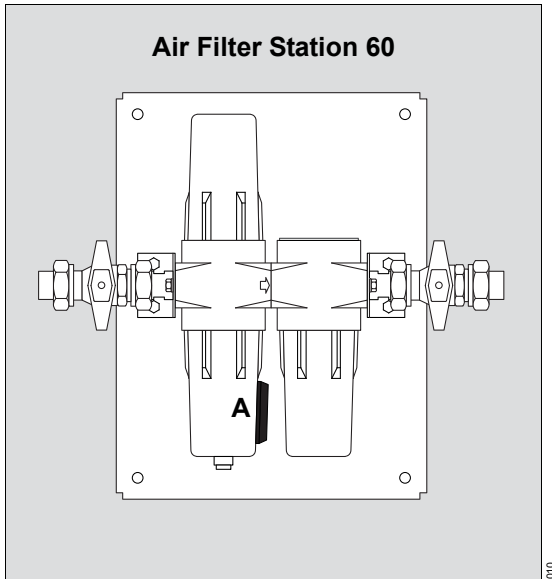
Have DrägerService perform maintenance.

### Every 6 months:

- Replace the filter cartridges.
- Have qualified personnel carry out an inspection.

### Every 6 years:

- Major overhaul from DrägerService



## Replacing the Filter Cartridges

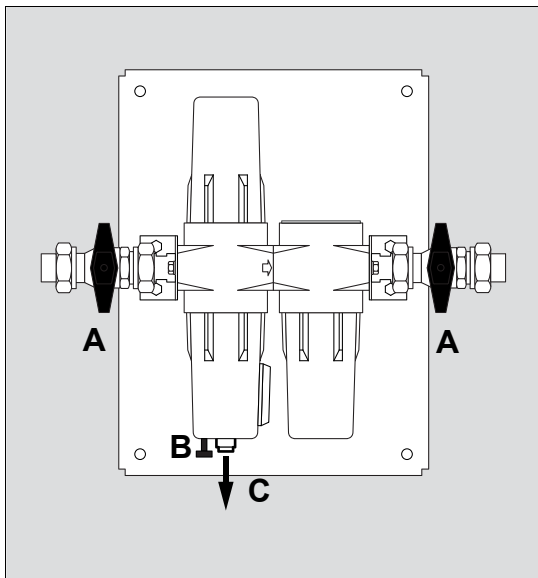
### CAUTION

Risk of Personal Injury

If a filter is opened without first relieving pressure from the air filter station, personal injuries could be caused by fast or suddenly escaping compressed air or bursting parts of the air filter station.

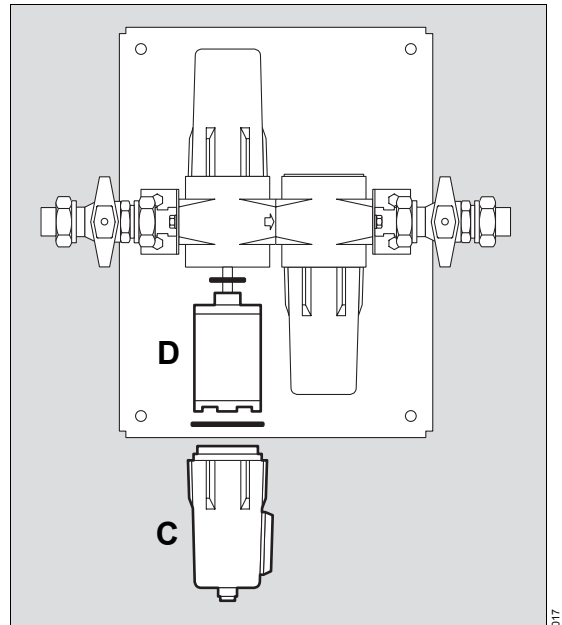
Only replace filter cartridge when the air filter station is without pressure.

### Air filter station 60



- 1 Close ball valves (A).
- 2 Relieve air filter station 60 of pressure by opening the relief valve (B) at the fine filter.
- 3 Unscrew pipe (C) for the condensate discharge.

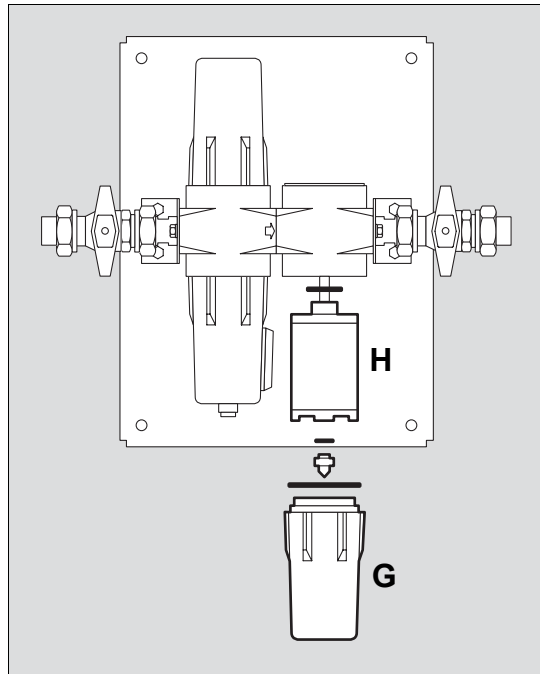
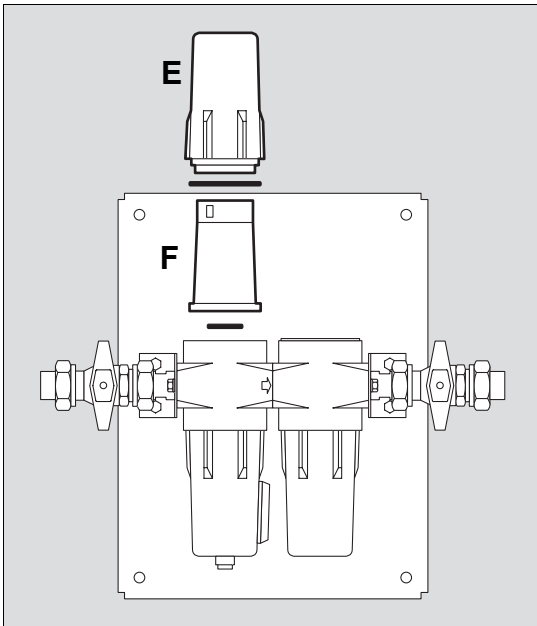
### Replacing the fine filter cartridge



- 1 Unscrew filter housing (C) by hand.
- 2 Unscrew the fine filter cartridge (D) and dispose of it in accordance with the local regulations.
- 3 Insert the new fine filter cartridge.
- 4 Screw together the filter housing (C) and make it hand-tight.

### Replacing the activated charcoal filter cartridge

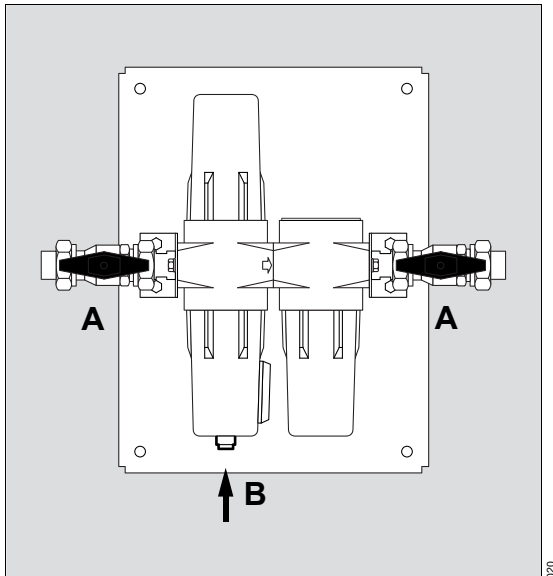
### Replacing the HEPA filter cartridge



- 1 Unscrew filter housing (E) by hand.
- 2 Unscrew the activated charcoal filter cartridge (F) and dispose of it in accordance with the local regulations.
- 3 Insert the new activated charcoal filter cartridge.
- 4 Screw together the filter housing (E) and hand-tighten it.

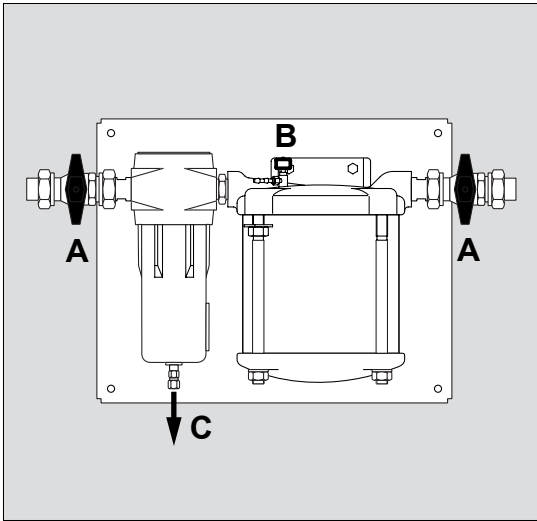
- 1 Unscrew filter housing (G) by hand.
- 2 Unscrew the HEPA filter cartridge (H) and dispose of it in accordance with the local regulations.
- 3 Wipe-disinfect the filter housing (G).
- 4 Insert the new HEPA filter cartridge (H).
- 5 Screw together the filter housing (G) and hand-tighten it.

### Restoring operational readiness



- 1 Connect pipe (B) for the condensate discharge to the preliminary filter.
- 2 Slowly open ball valves (A).

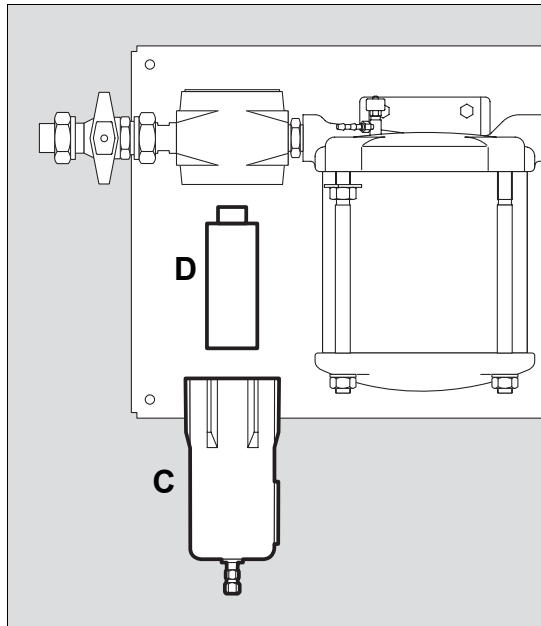
## Air filter station 190



120

- 1 Close ball valves (A).
- 2 Relieve air filter station 190 of pressure by opening the relief valve (B) at the HEPA filter.
- 3 Unscrew pipe (C) for the condensate discharge.

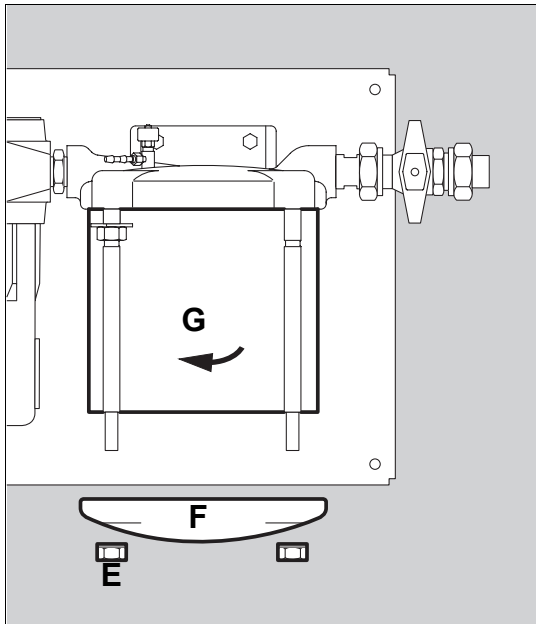
## Replacing the fine filter cartridge



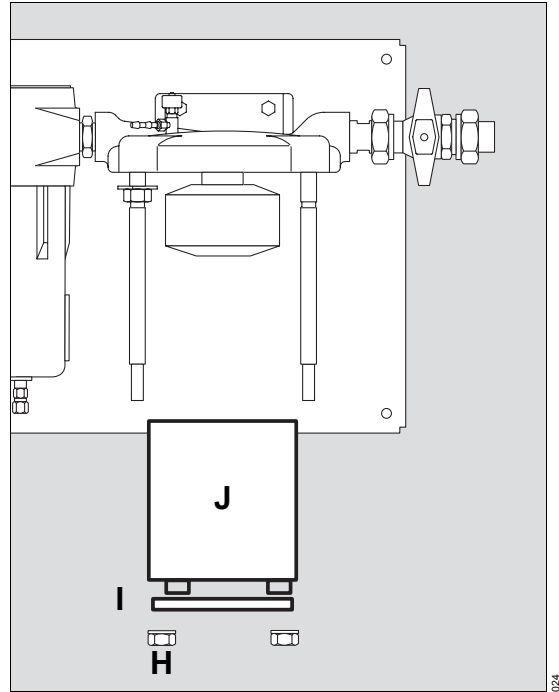
202

- 1 Unscrew filter housing (C) by hand.
- 2 Unscrew the fine filter cartridge (D) and dispose of it in accordance with the local regulations.
- 3 Insert the new fine filter cartridge.
- 4 Screw together the filter housing (C) and make it hand-tight.

## Removing the HEPA filter

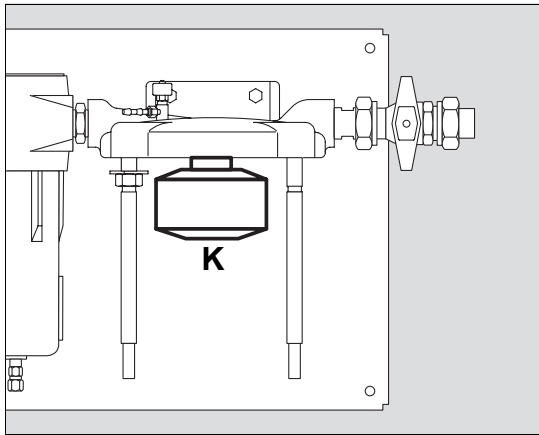


- 1 Loosen the four nuts (E) of the HEPA filter housing diagonally.
- 2 Hold the filter cover (F) and completely unscrew the nuts (E).
- 3 Remove the filter cover (F).
- 4 Turn the filter shell (G) by 10° counterclockwise and then remove it.



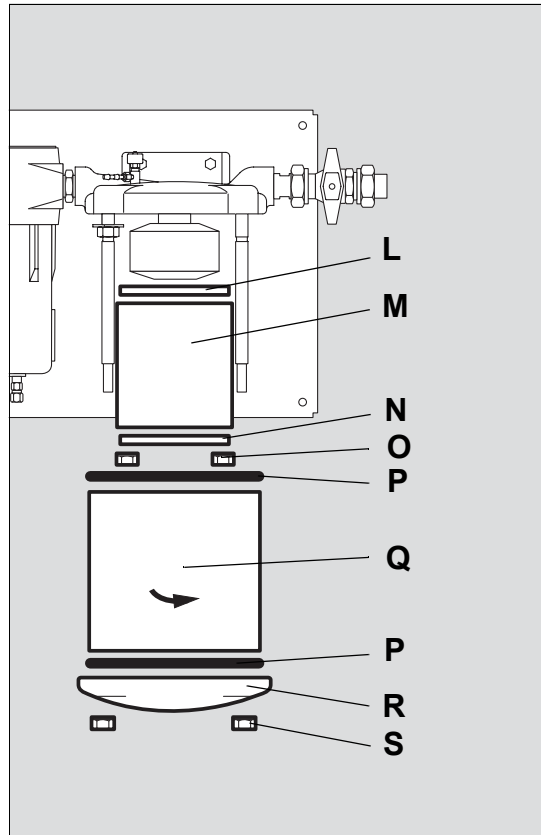
- 5 Loosen the hexagonal nuts (H) below the HEPA filter cartridge (J).
- 6 Hold the crossbar (I) and completely unscrew the hexagonal nuts (H).
- 7 Remove the crossbar (I).
- 8 Remove the HEPA filter cartridge (J) and dispose of it in accordance with the local regulations, use protective gloves if necessary.
- 9 Wipe-disinfect filter cover (F) and filter shell (G).

**Replacing the activated charcoal filter cartridge**



- 1 Unscrew the activated charcoal filter cartridge (K) and dispose of it in accordance with the local regulations.
- 2 Install the new activated charcoal filter cartridge.

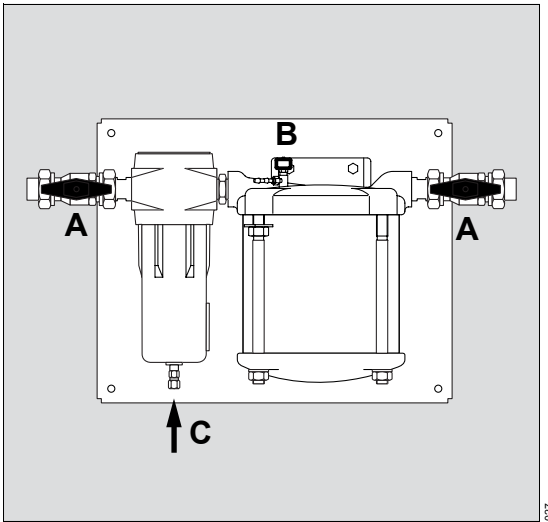
**Installing the HEPA filter**



- 1 Insert new HEPA filter cartridge (M) with new O-ring (L).
- 2 Install the crossbar (N).
- 3 Attach the crossbar (N) with hexagonal nuts (O).
- 4 Have the HEPA filter (M) tested for leaks using the oil thread test in accordance with DIN 24184 by DrägerService or correspondingly trained personnel.
- 5 Install filter shell (Q) with new O-rings (P) and turn approximately 10° counterclockwise.
- 6 Position and hold onto filter cover (R).
- 7 Screw on nuts (S) and tighten diagonally with a torque of 30±3 Nm,



### Restoring operational readiness



- 1 Connect pipe (C) for the condensate discharge.
- 2 Close relief valve (B).
- 3 Slowly open ball valves (A).

## Disposal

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### Disposal of Filter Cartridges

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- Dispose of fine filter cartridges, activated charcoal filter cartridges and HEPA filter cartridges in accordance with the local regulations.

### Disposal of the Medical Device

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When disposing of the medical device:

- Consult the relevant waste disposal company for appropriate disposal.
- Observe the applicable laws and regulations.

## Technical Data

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### Pressure reducing station 100

Maximum input pressure	16 bar
Operating pressure	5 bar and 8 bar
Flow rates	Q1 = approx. 100 Nm <sup>3</sup> /h at 5 bar line pressure and a pressure reduction of 0.5 bar Q2 = approx. 80 Nm <sup>3</sup> /h at 8 bar line pressure and a pressure reduction of 0.5 bar Qtotal = approx. 100 Nm <sup>3</sup> /h for the entire system
Safety valve for 5 bar	Discharge capacity >120 Nm <sup>3</sup> /h
Safety valve for 8 bar	Discharge capacity >120 Nm <sup>3</sup> /h
Maximum cable cross section at the terminal block	Flexible pipes: 0.2 to 4.0 mm <sup>2</sup> Rigid pipes: 0.2 to 2.5 mm <sup>2</sup>
Inputs	Soldered connections Ø 22 mm
Outputs	Soldered connections Ø 22 mm
Dimensions (W x H)	approx. 800 mm x 700 mm
Weight of pressure reducing station 100	approx. 18 kg
Weight of pressure reducer set 80/8	approx. 3 kg
Operating temperature	+10 °C to +50 °C (+50 °F to +122 °F)
Storage temperature	-20 °C to +70 °C (-4 °F to +158 °F)
Classification	IIb
according to Directive 93/42/EEC, Appendix IX	
UMDNS-Code	18-046
Universal Medical Device Nomenclature System – Nomenclature for medical devices	

## Pressure reducing station 300

Maximum input pressure	16 bar
Operating pressure	5 bar and 8 bar
Flow rates	Q1 = approx. 250 Nm <sup>3</sup> /h at 5 bar line pressure and a pressure reduction of 0.5 bar Q2 = approx. 180 Nm <sup>3</sup> /h at 8 bar line pressure and a pressure reduction of 0.5 bar Qtotal = approx. 300 Nm <sup>3</sup> /h for the entire system
Safety valve for 5 bar	Discharge capacity >320 Nm <sup>3</sup> /h
Safety valve for 8 bar	Discharge capacity >320 Nm <sup>3</sup> /h
Maximum cable cross section at the terminal block	Flexible pipes: 0.2 to 4.0 mm <sup>2</sup> Rigid pipes: 0.2 to 2.5 mm <sup>2</sup>
Inputs	Soldered connections Ø 28 mm
Outputs	Soldered connections Ø 28 mm
Dimensions (W x H)	approx. 1000 mm x 870 mm
Weight of pressure reducing station 300	approx. 33 kg
Weight of pressure reducer set 180/8	approx. 8 kg
Operating temperature	+10 °C to +50 °C (+50 °F to +122 °F)
Storage temperature	-20 °C to +70 °C (-4 °F to +158 °F)
Classification	IIb
according to Directive 93/42/EEC, Appendix IX	
UMDNS-Code	18-046
Universal Medical Device Nomenclature System	

## Contact pressure gauge

Pressure range	0 bar to 16 bar
Display accuracy	Class 2.5
Switching voltage	1.5 V to 24 V
Switching current	5 mA to 50 mA
Contact load	max. 3 W
Switching precision during operation	±4 %
Switching points	
Contact pressure gauge 5 bar	4.0 bar and 6.0 bar
Contact pressure gauge 8 bar	6.4 bar and 9.6 bar
Cable connection	
Blue	Mass
Black	Lower contact
Brown	Upper contact

## Air filter station 60

Maximum input pressure	16 bar
Flow rate	approx. 61 Nm <sup>3</sup> /h at ca. 12 bar line pressure
Fine filter (1st filter level)	
Smallest elimination size	0.01 µm
Residual oil content after filter at 7 bar and 21 °C	<0.01 mg/m <sup>3</sup>
Condensate discharge connection	ISO 228/1–G 1/8i /G 1/4a
Activated charcoal filter (2nd filter level)	
Oil separation performance:	
Residual oil content after filter at 7 bar and 21 °C	<0.003 mg/m <sup>3</sup> Oil vapor and odor-free
HEPA filter (3rd filter level)	
Transmission level in accordance with DIN 24184 (test aerosol 1)	<0.03 %
Inputs	Soldered connections Ø 22 mm
Outputs	Soldered connections Ø 22 mm
Dimensions (W x H)	approx. 380 mm x 440 mm
Weight of air filter station 60	approx. 6.6 kg
Weight of pressure reducer set 180/8	approx. 8 kg
Operating temperature	+10 °C to +50 °C (+50 °F to +122 °F)
Storage temperature (fine filter emptied and dried)	–20 °C to +70 °C (–4 °F to +158 °F)
Classification according to Directive 93/42/EEC, Appendix IX	Ila
UMDNS-Code Universal Medical Device Nomenclature System	15-649

## Air filter station 190

Maximum input pressure	16 bar
Flow rate	approx. 144 Nm <sup>3</sup> /h at ca. 7 bar line pressure approx. 190 Nm <sup>3</sup> /h at ca. 12 bar line pressure
Fine filter (1st filter level)	
Smallest elimination size	0.01 µm
Residual oil content after filter at 7 bar and 21 °C	<0.01 mg/m <sup>3</sup>
Condensate discharge connection	ISO 228/1–G 1/8
Activated charcoal filter (2nd filter level)	
Oil separation performance:	
Intake capacity	100g Oil vapor and odor-free
HEPA filter (3rd filter level)	
Transmission level in accordance with DIN 24184 (test aerosol 1)	<0.04 %
Inputs	Soldered connections Ø 28 mm
Outputs	Soldered connections Ø 28 mm
Dimensions (W x H)	approx. 400 mm x 690 mm
Weight of air filter station 190	approx. 6.6 kg
Weight of pressure reducer set 180/8	approx. 23.5 kg
Operating temperature	+10 °C to +50 °C (+50 °F to +122 °F)
Storage temperature (fine filter emptied and dried)	–20 °C to +70 °C (–4 °F to +158 °F)
Classification according to Directive 93/42/EEC, Appendix IX	Ila
UMDNS-Code	15-649
Universal Medical Device Nomenclature System	

## Order List

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Name/description	Part number
Pressure reducing station 100	G41580
Pressure reducer set 80/8	G41624
O-ring set DN 20 (2x)	G41548
Pressure reducing station 300	G41610
Pressure reducer set 180/8	G41625
O-ring set DN 25 (2x)	G41553
Air filter station 60	G41590
Fine filter cartridge	G40259
Activated charcoal filter cartridge	G40261
HEPA filter cartridge	G40348
O-ring set DN 20 (2x)	G41548
Air filter station 190	G41620
Fine filter cartridge	G40338
Activated charcoal filter cartridge	6733540
HEPA filter cartridge	G41525
O-ring set DN 25 (2x)	G41553



# Index

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## A

Abbreviations .....	20
Alarm - Cause - Remedy .....	32

## D

Definition of the Safety Information .....	3
Disposal .....	42

## F

Fault - Cause - Remedy .....	32
------------------------------	----

## S


Safety .....	7
Symbols .....	20

## T


Technical Data .....	43
Trademarks .....	2
Typographical Conventions .....	2




Directive 93/42/EEC  
concerning Medical Devices

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Dräger reserves the right to make  
modifications to the device without prior notice.



As of 2015-08:  
Dräger Medical GmbH  
changes to  
**Drägerwerk AG & Co. KGaA**