



# Assembly instructions

## Material pressure reducing valve with piston

**Art. No.:** 450.00.00, 450.00.01, 450.00.02, 450.00.03, 450.00.04, 450.00.05, 450.00.06, 450.00.07, 450.00.10, 450.00.11, 450.00.12, 450.00.13, 450.00.14, 450.00.15, 450.00.16, 450.00.17, 450.00.18, 450.00.19, 450.00.20, 450.00.21, 450.00.22, 450.00.23, 450.00.24, 450.00.27, 450.00.28, 1003471, 1006235, 1005686, 1006237, 1006236



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## 2 General

### 2.1 Object of the assembly instructions

These assembly instructions are to ensure the intended and efficient use of the module. They contain the relevant information for the safety, construction, function, assembly, operating, servicing and disposal.

Ignoring the assembly instructions and the safety information can lead to dangers and restrictions for:

- life and limb of the operator;
- the machine and material assets of the operating company;
- efficient operation of the system.

#### NOTICE

**The company DOPAG (hereafter called the manufacturer of the equipment) takes no responsibility for any damage resulting from not observing the assembly instructions.**

The assembly instructions is part of this module. They must be made available to the operators at all times. The assembly instructions include behavior information which DOPAG as manufacturer of the module hands on to the final consumer, even if this module is part of a machine.

### 2.2 Target audience

These assembly instructions are intended for the users, who can be in charge of the assembly, operation, maintenance or disposal in their scope of work.

#### Maintenance and assembly personnel

Persons who assemble and service the modules must be skilled and:

- adequately trained to undertake the operations necessary.
- be familiar with and follow the relevant technical regulations and safety instructions.
- have read and understood the assembly instructions.

Skilled persons mean those whose training and experience have provided them with adequate knowledge in the fields of hydraulics, pneumatics, and material-handling technology, in addition to being familiar with the regulations applicable to occupational safety and accident prevention, directives and generally recognized rules on technology and standards, so that they can evaluate operational safety of the system.

### 2.3 Note on changes

Text, illustrations and data are commensurate with the technical status of the module at the time of these assembly instructions going to print. The company reserves the right to make changes in the interests of ongoing development.

## 2.4 Symbols and pictograms

The assembly instructions contain various symbols and pictograms. They convey warnings, handling instructions, information and directions to the operating and maintenance personnel.

Symbols and pictograms	Meaning
	<b>Directions for action</b> The triangle indicates actions that must be undertaken in sequence. The spot indicates the reaction to an action.
	<b>Warning signs, prohibition signs and mandatory signs.</b> Safety information, prohibitions, instructions and warnings are indicated by the appropriate ISO Safety Signs. They can be found in the operating instructions and on the module and it is essential that they are obeyed.
	<b>Pictograms</b> Buttons, switches, pressure gauges and functions are designated by pictographs in the operating instructions and on the module itself. The letters <b>A, B, C...</b> in the pictograms identify the components.
	<b>Advice for the user</b> Operator advice and tips for efficient operation of the module are indicated by lights and heavy print. Follow these instructions!
	<b>Help symbols regarding directions for actions to be taken</b> Help symbols are found only in graphics. They support a direction for action to be taken by means of a sequence of numbers directly at the respective part. Help symbols usually consist of a colored circle and a number.

## 2.5 Safety information

There are four types of safety information : Danger, warning, caution, information. They contain: Type of danger, possible consequences and avoidance measures to be taken.

Signal word	Signification
<b>DANGER</b>	Signal word to indicate a danger with a high risk that could lead directly to death or serious physical injury.
<b>WARNING</b>	Signal words indicate a danger with a high risk that could lead directly to death or serious physical injury.
<b>CAUTION</b>	Signal words indicate a danger with a low risk that could lead directly to death or serious physical injury.
<b>NOTICE</b>	Signal word for a possible damaging situation, were the system or anything in the vicinity could be damaged.

## 3 Safety rules

### 3.1 Intended use

The material pressure regulators by DOPAG are products (partly completed machinery) in the sense of the directive 2006/42/EC. The products are solely intended to smooth, reduce the pressure of viscous liquids, adhesives, greases, etc. The materials to be processed must be approved by DOPAG Customer Service. They have been constructed according to the state of the art and according to the acknowledged safety rules. However, when using it, risks for life and limb of the user or a third person can remain or damage to the module or other material damage can occur.

- The provided technical limit values must imperatively be observed.
- The operation must occur within the specified environmental conditions.
- Working with materials that form explosive vapors is prohibited. This module has no protection against explosion.
- Processing foodstuff is prohibited. This module has not been designed for processing foodstuff. Toxic substances would contaminate foodstuff.
- The products are not designed for processing foodstuff, explosive substances, air, gas, water, fertilizer, sewage, mud or similar. The products are not designed for processing reactive and hardening materials (e.g. reactive mixtures).
- The products are not designed for processing reactive and hardening materials (e.g. reactive mixtures).
- The materials to be mixed must be approved by DOPAG Customer Service. If the composition changes or if a different type of material is to be used, this must be clarified and approved by DOPAG Customer Service.

#### NOTICE

**The use of material not approved by DOPAG Customer Service can damage the module. If for example seals cannot withstand the new compound, then they will be destroyed. Information on your telephone contact can be obtained from DOPAG Customer Service ([7.1.1 DOPAG Customer Service](#)).**

### 3.2 Improper use

This module must not be used for:

- Processing reactive (mixed) material.
- Processing air, gas and water.
- Processing foodstuffs.

### 3.3 Product safety

The module conforms to acknowledged rules of engineering and technology and the relevant safety regulations. The correct operation of the module is required to avoid damage and accidents. Operating the machine incorrectly or subjecting it to abuse may imperil:

- life and limb of the operator;
- the module and material assets of the operating company;
- efficient operation of the module.

The module may only be operated if it is in perfect condition and if the assembly instructions are observed.

### 3.4 Responsibilities of the operating company

The following responsibilities are generally applicable to the user of the module:

- Observe the generally recognised rules that apply to occupational safety. Moreover, observe the basic regulations and rules on occupational safety and accident prevention applicable on site.
- The operating company is obliged to observe the regulations applicable to the use of equipment, especially those specified in EC Directive 2009/104/EC.
- The module may only be operated in a perfect and clean condition.
- It is forbidden to remove, change, bypass or override any kind of protection, safety or monitoring systems.
- Redesigning or modifying this module is prohibited.
- For repairs, contact DOPAG Customer Service ([7.1.1 DOPAG Customer Service](#)). Only genuine DOPAG spare parts may be used.
- Check the module at least once per shift for visible signs of damage and for correct functions.

### 3.5 Changes on the module

Changes on the module are basically prohibited. If changes become necessary, please observe the following points:

- Do not undertake changes, add-on or modification to the module without express approval by the manufacturer.
- All redesigning measures require written approval by the manufacturer.
- Only genuine DOPAG spare parts may be used. Safe operation is not guaranteed if parts other than the genuine parts are used.

### 3.6 Hazardous zones

The hazardous zone denotes the area on a module and/or in its vicinity in which there are dangers to personal health or safety. There are various danger zones around the module. All safety regulations given in the operating instructions and information signs on the module must be observed. Observe the safety regulations for the installation site.

Warning signs	Meaning
	<p><b>Particular sources of danger</b></p> <p>Operating this module is safe. Even so, dangers can arise in various situations.</p> <ul style="list-style-type: none"> <li>• Under all situations when working on the equipment, whether installation, dismantling and re-assembly, commissioning, operation, relocation, adaptation, maintenance and cleaning, the safety information given in the assembly instructions are to be observed.</li> <li>• All service and maintenance work on the module must be only carried out after switching off the module.</li> <li>• In all cases observe local regulations applicable to safety and accident prevention.</li> </ul>
	<p><b>Danger from electric power</b></p> <p>Electricity is dangerous in many ways.</p> <ul style="list-style-type: none"> <li>• Work on power supply systems may only be performed by qualified electricians.</li> <li>• Check the system's electrical module regularly. Loose connections and burnt cables should be removed immediately or restored to their proper condition.</li> <li>• If work is necessary on live parts, a second person, who can turn off the main switch in an emergency, must assist.</li> <li>• Remove the mains plug.</li> </ul>
	<p><b>Warning of hand injuries due to movable parts</b></p> <p>Danger of crushing fingers or hands due to automatically driven parts of the module</p> <ul style="list-style-type: none"> <li>• Keep hands away from the danger area.</li> </ul>
	<p><b>Danger from high pressure</b></p> <p>Pneumatic and hydraulic systems are pressurised.</p> <ul style="list-style-type: none"> <li>• When dealing with the module, you must wear protective goggles and gloves.</li> <li>• Depressurize the module before beginning the repair works.</li> </ul>

### 3.7 Warranty and liability

In principle, our general conditions of sale and supply are applicable. They will be available to the operating company no later than the date on which the contract is finalized. Claims under the warranty for personal and material damage are excluded if they are due to one or several of the following causes:

- Improper use of the module.
- Improper assembly, commissioning, operation and maintenance.
- Operating the module with faulty safety systems or protective systems that have been incorrectly fitted, or non-functional safety- and protection systems.
- Disregarding instructions on safety, transport, storage, assembly, commissioning, maintenance and disposal of the module.
- Unauthorized structural modification to the module.
- Poor monitoring of components subject to wear.
- Improperly executed repairs.
- Disasters caused by extraneous influences and force majeure.
- Use of spare parts which are not genuine DOPAG parts.
- Damage arising from normal wear and tear.

## 4 Structure and function

### 4.1 Function

Material pressure reducing valves reduce the pressure of the delivered material to the required working pressure. Apart from reducing pressure (main function), these valves compensate for pulsations which occur during material delivery with piston pumps and are due to the changeover position of the pump. Such pulsations would cause a short-time drop of pressure and lead to a slight reduction of the material flow. In case of minimum-quantity metering, this might impair product quality as especially for such applications, an absolutely consistent material flow must be ensured. One pressure gauge each for material input and material output pressures can be installed as an option.

- 1 Prestressing nut
- 2 Spring assembly
- 3 Lock nut
- 4 Piston
- 5 Material outlet/pressure gauge connection
- 6 Valve seat
- 7 Ball
- 8 Compression spring
- 9 Filter element, 30 mesh
- 10 Material inlet/pressure gauge connection

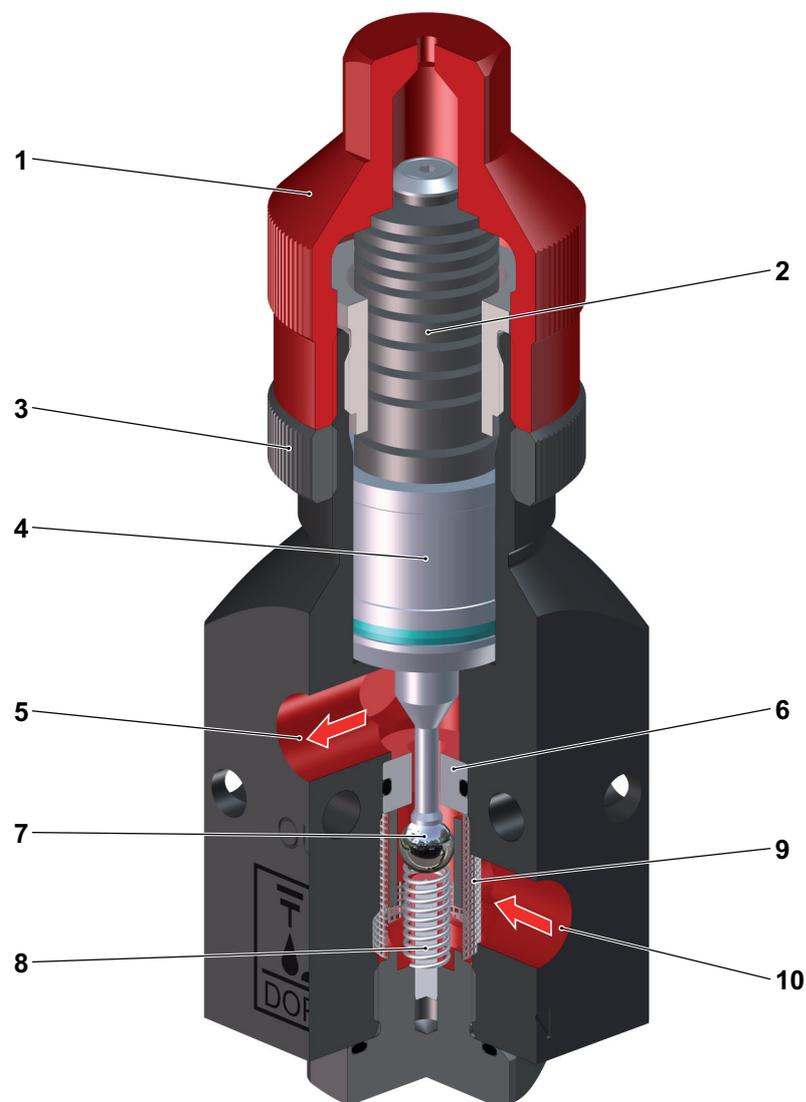


Fig. 4-1 Function

## 4.2 Structure



In these assembly instructions, additional options are described which are possibly not contained in the assembly supplied to you. These assembly instructions cover all possible versions and variants of this line of products.

- 1 Prestressing nut
- 2 Lock nut
- 3 Material outlet/pressure gauge connection
- 4 Fastening bores
- 5 Material inlet/pressure gauge connection
- 6 Type plate

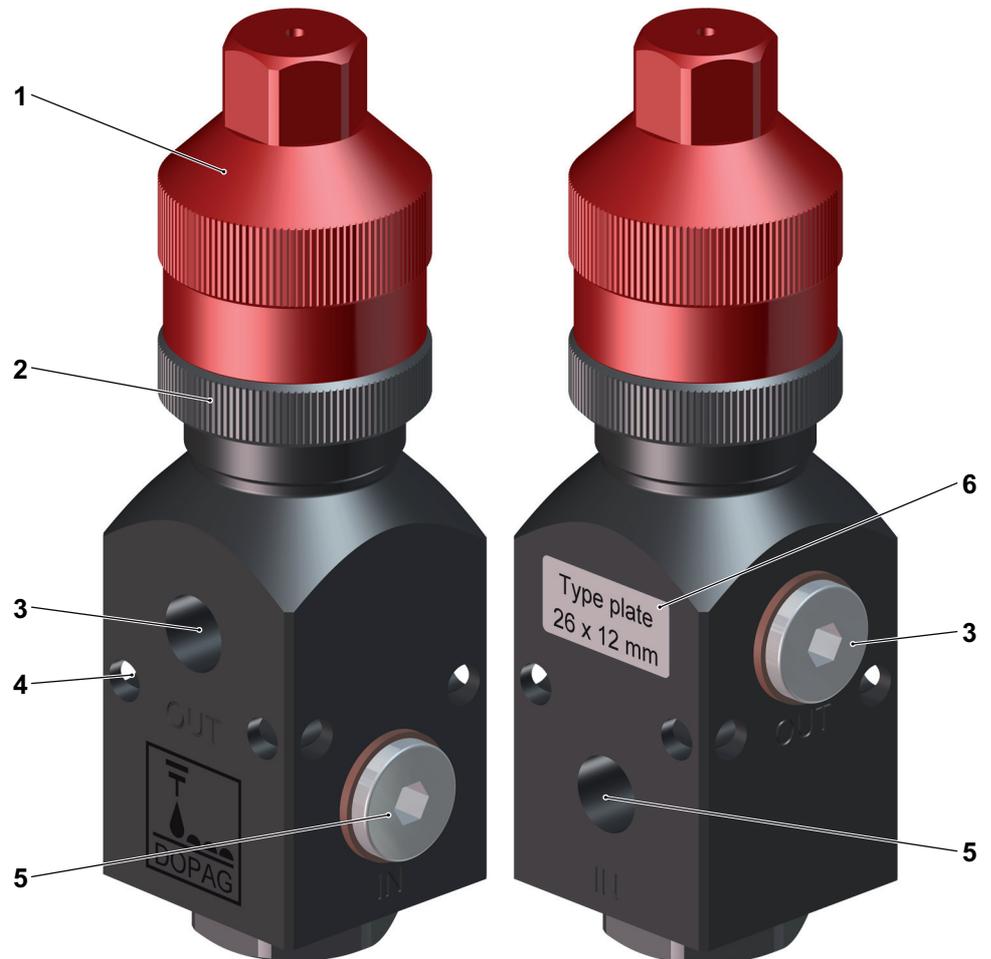


Fig. 4-2 Structure

### 4.3 Field of application

Material pressure reducing valves of this type are preferably used to process self-lubricating media such as e.g. grease, oil, and 1K as well as 2K silicone. The spring housing is sealed using an end face mechanical seal.

The valves are used for material viscosities of between 5,000 and 500,000 mPas. Filter elements for the material inlets preventing contaminants from entering are available as an option.

Material flow rate curve as a function of viscosity.

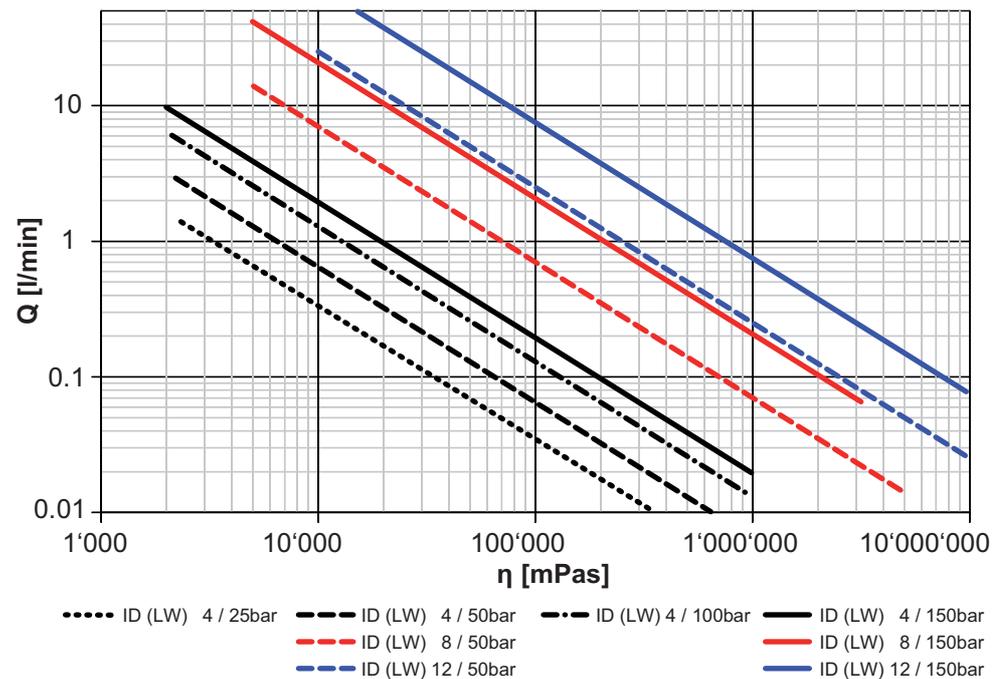


Fig. 4-3 Max. material flow rate

### Example

The INPUT/OUTPUT diagram makes clear how pulsations resulting from material delivery through the changeover positions of the piston pumps are compensated for.

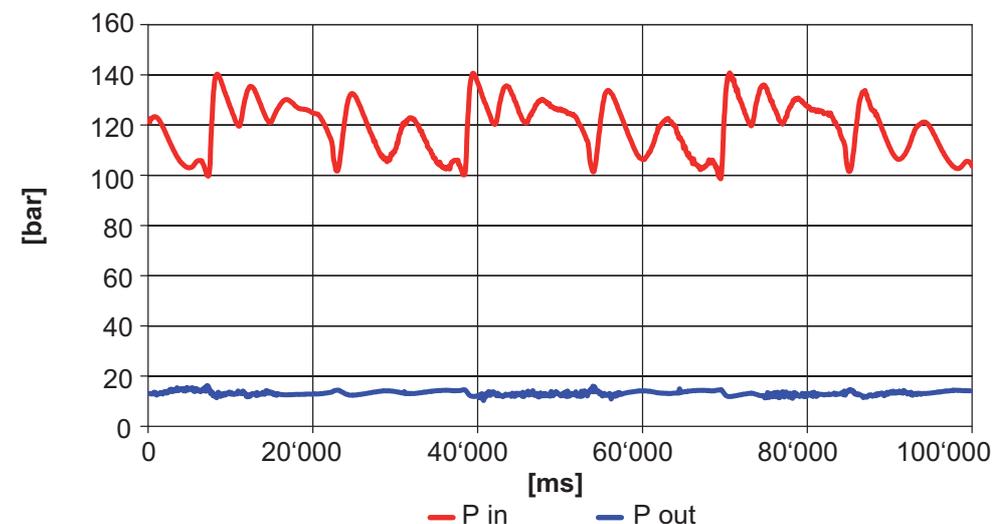


Fig. 4-4 Max. material flow rate

## 4.4 Technical data

### 4.4.1 Valve size CO4

#### Pressure specifications

Standard Article No.	Pressure gauge		Inlet pressure	Outlet pressure	Maximum pressure
	Input	Output			
450.00.00			20-250 bar	6-50 bar	250 bar
450.00.01	400 bar	60 bar	20-250 bar	6-50 bar	250 bar
450.00.02 / 450.00.24			20-250 bar	12-100 bar	250 bar
450.00.03	400 bar	160 bar	20-250 bar	12-100 bar	250 bar
450.00.04			20-250 bar	6-50 bar	250 bar
450.00.05		60 bar	20-250 bar	6-50 bar	250 bar
450.00.06		160 bar	20-250 bar	6-50 bar	250 bar
450.00.07		60 bar	20-250 bar	6-50 bar	250 bar
450.00.13			30-400 bar	15-150 bar	500 bar
450.00.22	400 bar	160 bar	30-400 bar	15-150 bar	500 bar
450.00.23		160 bar	30-400 bar	15-150 bar	500 bar
450.00.28	400 bar	60 bar	20-250 bar	6-50 bar	250 bar
1003471			20-100 bar	6-25 bar	250 bar
1006235		25 bar	20-100 bar	6-25 bar	250 bar
1005686	160 bar	25 bar	20-100 bar	6-25 bar	250 bar
1006237		160 bar	20-250 bar	12-100 bar	250 bar

#### Properties

Standard Article No.	Mech. stability	Chem. stability	Sealing type	Version
450.00.00	None	None	PTFE/FPM	Seat sealing ball
450.00.01	None	None	PTFE/FPM	Seat sealing ball
450.00.02/ 450.00.24	None	None	PTFE/FPM	Seat sealing ball
450.00.03	None	None	PTFE/FPM	Seat sealing ball
450.00.04	Wear resistant	None	PTFE/FPM	Seat sealing ball
450.00.05	None	None	PTFE/FPM	Seat sealing ball
450.00.06	None	None	PTFE/FPM	Seat sealing ball
450.00.07	Wear resistant	None	PTFE/FPM	Seat sealing ball
450.00.13	None	None	PTFE/FPM	Seat sealing ball
450.00.22	None	None	PTFE/FPM	Seat sealing ball
450.00.23	None	None	PTFE/FPM	Seat sealing ball
450.00.28	Wear resistant	None	PTFE/FPM	Seat sealing ball
1003471	None	None	PTFE/FPM	Seat sealing ball
1006235	None	None	PTFE/FPM	Seat sealing ball
1005686	None	None	PTFE/FPM	Seat sealing ball
1006237	None	None	PTFE/FPM	Seat sealing ball

## Field of application

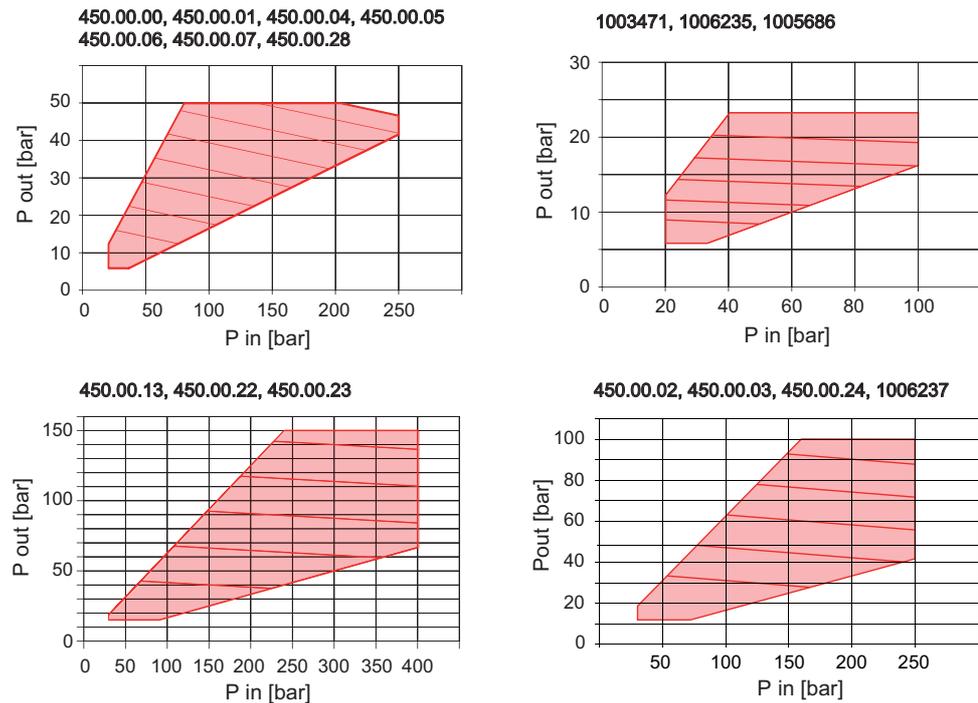


Fig. 4-5 Field of application

### 4.4.2 Valve size CO8

#### Pressure specifications

Standard Article No.	Pressure gauge		Inlet pressure	Outlet pressure	Maximum pressure
	Input	Output			
450.00.10			20-250 bar	6-50 bar	400 bar
450.00.14	400 bar	60 bar	20-250 bar	6-50 bar	400 bar
450.00.15		60 bar	20-250 bar	6-50 bar	400 bar
450.00.16		160 bar	20-250 bar	6-50 bar	400 bar
450.00.27	400 bar	160 bar	20-250 bar	6-50 bar	400 bar

#### Properties

Standard Article No.	Mech. stability	Chem. stability	Sealing type	Version
450.00.10	Wear resistant	None	PTFE/FPM	Seat sealing ball
450.00.14	Wear resistant	None	PTFE/FPM	Seat sealing ball
450.00.15	Wear resistant	None	PTFE/FPM	Seat sealing ball
450.00.16	Wear resistant	None	PTFE/FPM	Seat sealing ball
450.00.27	Wear resistant	None	PTFE/FPM	Seat sealing ball

**Field of application**

450.00.10, 450.00.14, 450.00.15  
450.00.16, 450.00.27

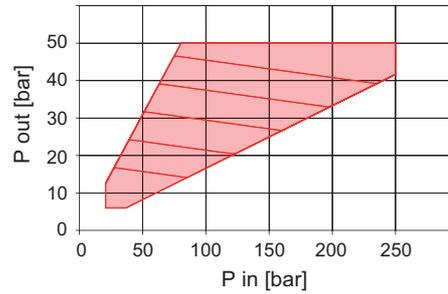


Fig. 4-6 Field of application

**4.4.3 Valve size CO12**

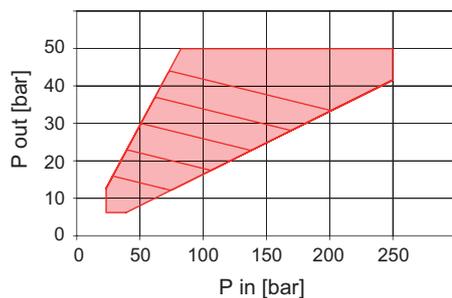
**Pressure specifications**

Standard Article No.	Pressure gauge		Inlet pressure	Outlet pressure	Maximum pressure
	Input	Output			
450.00.11			20-250 bar	6-50 bar	400 bar
450.00.12			30-250 bar	15-150 bar	400 bar
450.00.17	400 bar	60 bar	20-250 bar	6-50 bar	400 bar
450.00.18		60 bar	20-250 bar	6-50 bar	400 bar
450.00.19		160 bar	20-250 bar	6-50 bar	400 bar
450.00.20	400 bar	160 bar	30-250 bar	15-150 bar	400 bar
450.00.21		160 bar	30-250 bar	15-150 bar	400 bar

**Properties**

Standard Article No.	Mech. stability	Chem. stability	Sealing type	Version
450.00.11	Wear resistant	None	PTFE/FPM	Seat sealing ball
450.00.12	Wear resistant	None	PTFE/FPM	Seat sealing ball
450.00.17	Wear resistant	None	PTFE/FPM	Seat sealing ball
450.00.18	Wear resistant	None	PTFE/FPM	Seat sealing ball
450.00.19	Wear resistant	None	PTFE/FPM	Seat sealing ball
450.00.20	Wear resistant	None	PTFE/FPM	Seat sealing ball
450.00.21	Wear resistant	None	PTFE/FPM	Seat sealing ball

**Field of application**

 450.00.11, 450.00.17, 450.00.18,  
450.00.19


450.00.12, 450.00.20, 450.00.21

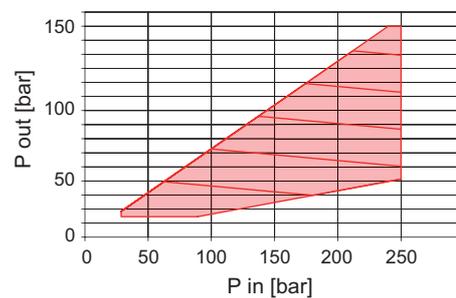


Fig. 4-7 Field of application

**Ambient conditions**

Operation (without material)	
Air temperature	+ 5 to + 40 °C
Relative air humidity	30 to 70%

**Transport and storage**

Transport and storage (without material)	
Air temperature	- 25 to + 55 °C
Relative air humidity	30 to 60%

## 5 Options

### 5.1 Filter element, 100 mesh



Contaminants in the material can be removed with a filter. The 100 mesh filter element is installed above the 30 mesh filter element, which is installed as standard.

#### Types

400.25.69	LW4
400.26.28	LW8 / LW12

### 5.2 Pressure gauge



Connection straight G1/4"

#### Types

135902	0-60 bar	No specific stability
135904	0-160 bar	No specific stability
135906	0-400 bar	No specific stability



Connection 90° G1/4"

#### Types

135903	0-60 bar	No specific stability
135905	0-160 bar	No specific stability
135907	0-400 bar	No specific stability

### 5.3 Mounting bracket set



The mounting bracket set is to be used for installation of the material pressure reducing valve on a wall or a superordinate assembly.

#### Types

139387	LW4 (150 bar)/ LW8 / LW12
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### 5.4 lubriLine yoke mounting bracket set



The mounting bracket set is intended for mounting a material pressure reducing valve at a lubriLine yoke.

#### NOTICE

**When using this mounting bracket set, a pressure gauge can only be mounted at the outlet of the material pressure reducing valve. Additional information can be obtained from DOPAG Customer Service ([7.1.1 DOPAG Customer Service](#)).**

#### Types

1006834	LW4 / LW8 / LW12
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## 6 Assembly

### 6.1 Transport

The module is packaged and delivered by the manufacturer in a proper manner. It is protected for transportation and against weather conditions, and provided with suitable packaging materials.



**Transport the module to final destination as packaged and only remove package before first use. The packaging protects the module.**

### 6.2 Removing packaging

#### Disposal

All packaging must be disposed of with care. Packaging material must be disposed of in the correct manner ([9 Disposal](#)).

#### Warranty conditions

Check the module for transport damage and integrity. If damage is ascertained, then the conditions of guarantee must be observed. These are described in the sales documents.

### 6.3 Connection

#### Material pressure regulator

For connection, the following points must be observed:

- Mind material inlet/outlet
- The installation position can be selected arbitrarily and has no influence on the function
- Possible installation of a filter

- 1 Pressure gauge for outlet pressure (option)
- 2 Pressure gauge for inlet pressure (option)
- 3 Material filter (optional)

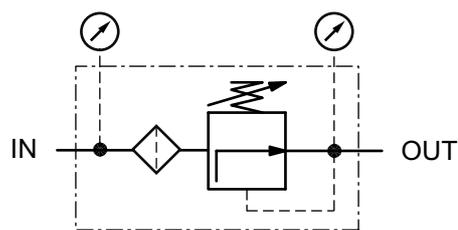


Fig. 6-1 Functional diagram

## 6.4 Setting the material pressure regulator

The material pressure regulator reduces the inlet pressure to the required outlet pressure and prevents pulsations. The outlet pressure is set with the tensioning nut. The setting is dependant on the material and its viscosity. Depending on the operating pressure the tensioning nut is adjusted in or out. The difference in ratio between inlet and outlet pressure should not be greater than 5:1.

- 1 Reduce outlet pressure
- 2 Increase outlet pressure
- 3 Tensioning nut SW19
- 4 Lock nut



Fig. 6-2 material pressure regulator setting

### Setting:

- ▶ Screw out the tensioning nut, i.e. reduce output pressure to 0 bar.
- ▶ Set operating pressure to min. 3 bar.
- ▶ Start the system.
- ▶ Turn tensioning nut slowly inwards and increase output pressure.



### Recommendations for the output pressure

The output pressure to be set greatly depends on the discharge system of the machine. A difference must be made between the valves listed below.

Output pressure (recommendation)	
Outlet valve	3 to 150 bar
Needle metering valve	3 to 20 bar
Chamber metering valve	40 to 80 bar
<i>ceradis/ceramix</i>	2 to 10 bar
<i>shotmix</i>	40 to 150 bar
<i>metadis/metamix</i>	3 to 95 bar

## 7 Maintenance

### 7.1 General

Maintenance work must be undertaken by properly trained service staff (*2.2 Target audience*).



#### **DANGER**

##### **Danger arising from service work!**

If you undertake service work without having received the necessary training, the safety of the assembly is no longer guaranteed. The outcome could be serious physical injury or death.

Observe all safety instructions and leave maintenance to trained staff.



#### **DANGER**

##### **Danger from high pressure!**

When carrying out maintenance work on systems that have not been switched off or depressurized, there is danger of serious injuries or death.

Carry out the maintenance work only on systems that have been switched off and disconnected from the compressed air supply. Release the material pressure in the system before carrying out maintenance work. No residual pressure may exist.

#### 7.1.1 DOPAG Customer Service

Note the customer service center responsible for your area. For current addresses, go to [www.dopag.com](http://www.dopag.com).

#### 7.1.2 DOPAG Spare parts

DOPAG spare parts can be found in the spare parts list. For further information, see the spare parts drawing.



#### **DANGER**

##### **It is dangerous to use incorrect spare parts!**

Using spare parts that have not been tested and approved by DOPAG means that the safety of the assembly is not guaranteed. This may cause personal injuries.

Use only DOPAG spare parts.

For DOPAG Customer Service being able to deal with your order, please give the following order details:

Order details	Example
Serial number	16885
Description	Set of seals
DOPAG No.	418.00.02.01
Number of items	1



Storing the key spare parts and parts subject to wear at the installation site is an important prerequisite for ongoing operation and service-readiness of the system or of the module supplied. If you have any question concerning the recommended spare parts, please contact DOPAG Customer Service.

### 7.1.3 Operating material and Lubricants

DOPAG recommends the following operating materials and lubricants:

#### Pneumatic and Hydraulic oils

Manufacturer	Pneumatic oils	Hydraulic oils
	Temperature range 0 – 30°C Viscosity ISO-VG22	Temperature range 0 – 30°C Viscosity ISO-VG46
ARAL	Vitam GF 22	Vitam GF 46
BP	Energol HLP-HM 22	
ESSO	Nuto H 22	Nuto H 46
MOBIL		DTE 15M
SHELL	Tellus 22	Tellus 46
TEXACO	Rando HD 32	Rando HD 46

#### Sealing fluid

For filling the seal chambers, DOPAG recommends Mesamoll<sup>®</sup> sealing fluid.

#### Greases

DOPAG recommends commercially available Vaseline. Use a grease gun for greasing the grease nipples (not delivered with the machine).

## 7.2 Maintenance of the modules

### 7.2.1 Maintenance schedule

To ensure trouble-free operation, the following service intervals must be observed for various components:

Maintenance task	Interval
Visual inspection	daily
Cleaning	daily
Clean the filter element	if required, depending on material

### 7.2.2 Visual inspection

The following points should be checked:

- Are all safety systems available and fully functional?
- Are the whole assembly instructions of the module available?
- Are all safety and danger warnings as well as signs available and clearly legible?
- Are all the connecting couplings tight?

### 7.2.3 Cleaning

The module should be cleaned daily and immediately if it is contaminated with material. Dried material is very difficult to remove and requires a great effort.



#### DANGER

##### **Danger of explosion when using solvents!**

When using solvents based on halogenated hydrocarbons, such as trichlorethane, chemical reactions can arise on aluminium and on galvanised parts. The parts can oxidise and be destroyed as a result. In extreme cases, the reaction can occur in an explosive manner.

Do not use any solvents based on halogenated hydrocarbons.

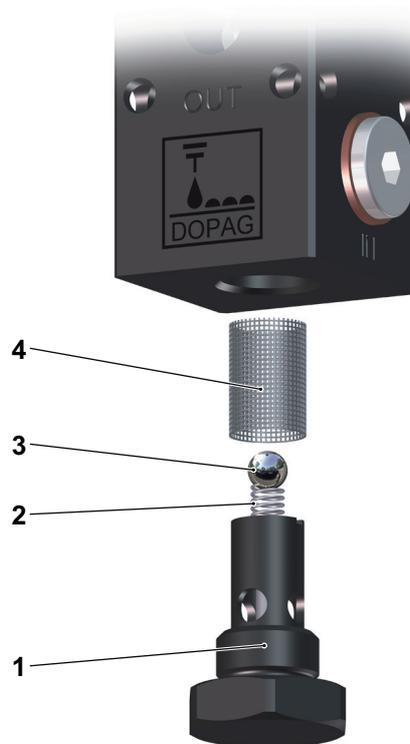
#### NOTICE

**Under no circumstances should the system be sprayed with water. Determine which cleaning agent to use from the material used, and clean the system as environmentally friendly and with as much care as possible.**

### 7.2.4 Clean/replace filter element

The filter element inside the material pressure regulator must be checked for contamination and cleaned or replaced on a regular basis.

- 1 Locking screw
- 2 Compression spring
- 3 Ball
- 4 Filter element



*Fig. 7-1 Clean/replace filter element*

## 8 Spare parts

The material pressure reducing valve must be checked on a regular basis. Replace all seals and parts with signs of wear. The frequency required for inspection depends on the operation and on the material used.



**The seal set includes all seals required for the assembly. The spare parts include the seal set and wear parts as well as parts which are not worth cleaning.**

### Scope of delivery

- 1 Piston unit incl. seals
- 2 Sealing ring
- 3 O-ring
- 4 Valve seat
- 5 Ball
- 6 Compression spring
- 7 Filter element

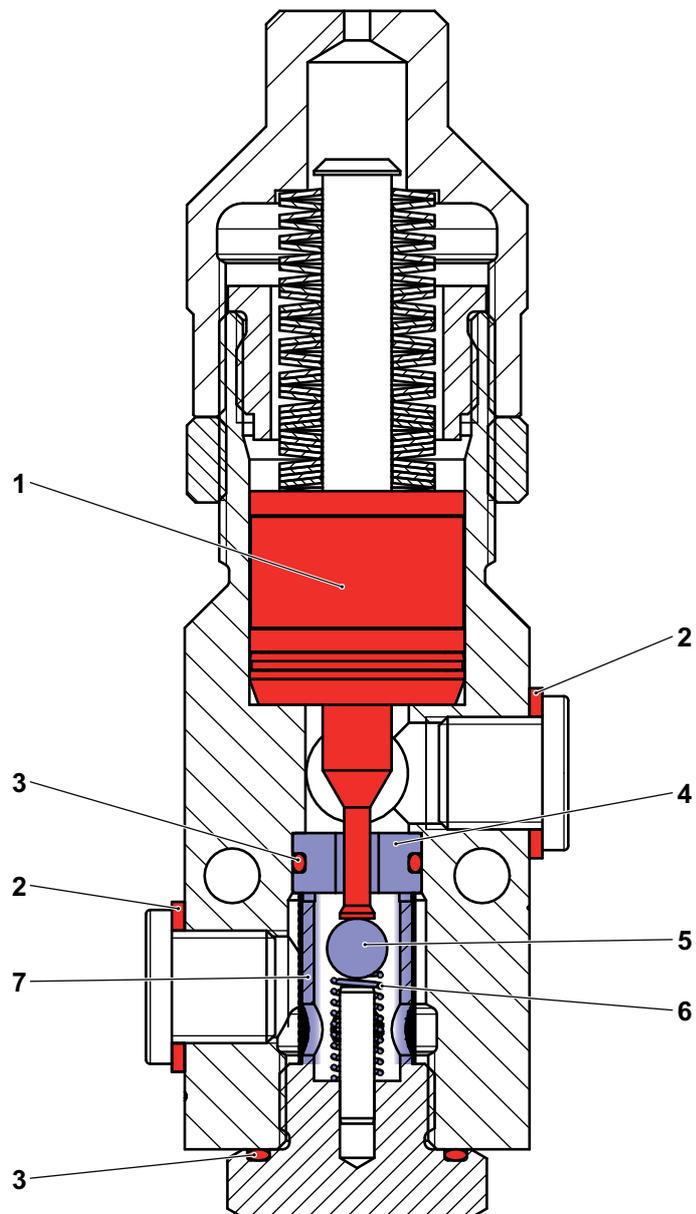


Fig. 8-1 Seal set - spare parts

Type	Seal set	Spare parts
Seals complete (according to type)	x	x
Piston unit incl. seals	x	x
Sealing rings/O-rings	x	x
Valve seat	-	x
Ball	-	x
Compression spring	-	x
Filter element	-	x

**Seal set  
Spare parts kit**

Article No.	Seal set	Spare parts kit
450.00.00	450.00.00.01	450.00.00.02
450.00.01	450.00.01.01	450.00.01.02
450.00.02	450.00.02.01	450.00.02.02
450.00.03	450.00.03.01	450.00.03.02
450.00.04	450.00.04.01	450.00.04.02
450.00.05	450.00.05.01	450.00.05.02
450.00.06	450.00.06.01	450.00.06.02
450.00.07	450.00.07.01	450.00.07.02
450.00.10	450.00.10.01	450.00.10.02
450.00.11	450.00.11.01	450.00.11.02
450.00.12	450.00.12.01	450.00.12.02
450.00.13	450.00.13.01	450.00.13.02
450.00.14	450.00.14.01	450.00.14.02
450.00.15	450.00.15.01	450.00.15.02
450.00.16	450.00.16.01	450.00.16.02
450.00.17	450.00.17.01	450.00.17.02
450.00.18	450.00.18.01	450.00.18.02
450.00.19	450.00.19.01	450.00.19.02
450.00.20	450.00.20.01	450.00.20.02
450.00.21	450.00.21.01	450.00.21.02
450.00.22	450.00.22.01	450.00.22.02
450.00.23	450.00.23.01	450.00.23.02
450.00.24	450.00.24.01	450.00.24.02
450.00.27	450.00.27.01	450.00.27.02
450.00.28	450.00.28.01	450.00.28.02
1003471	1003471.01	1003471.02
1006235	1006235.01	1006235.02
1005686	1005686.01	1005686.02
1006237	1006237.01	1006237.02



**DOPAG offers training on maintenance and inspection. Please contact DOPAG Customer Service for this purpose (7.1.1 DOPAG Customer Service). Note that all parts of the spare parts list may also be ordered individually.**

## 9 Disposal

### 9.1 Principle

Exercise caution when handling raw materials present in this module. Check the re-usability value of materials and components prior to disposing of them. Recycle as much as possible.

Careless or incorrect disposal can result in unforeseen consequences. Be concerned about yourself and us, our future generations, nature, the environment and the economy. Materials and components should be disposed of in a manner that is proven to be un-detrimental to humans, nature and the environment. Note the details provided by the manufacturer and legislation and regulations.

### 9.2 Materials, packaging and system parts

Dispose of elements and system parts separately according to type of material:

- Aluminum from scrap steel
- Copper and non-ferrous heavy metal in electrical parts and conductors
- Batteries
- Plastics
- Organic substances, such as timber

Recycle as much as possible.

## 10 EC Declaration of incorporation (as per directive 2006/42/EC)

We, the manufacturer of the partly completed machinery, declare that:

- the following partly completed machinery complies with the essential requirements of the directive 2006/42/EC stated below
- the relevant technical documentation has been compiled according to Annex VII, part B
- this relevant technical documentation will be presented in paper or digital (pdf) format in accordance with Annex VII, part B and in response to a duly reasoned request by the competent national authorities

This partly completed machinery may only be commissioned after assertion that the machine in which it is due to be installed, complies with the provisions of the directive 2006/42/EC.

**Manufacturer:** **DOPAG Dosiertechnik und Pneumatik AG**  
Langackerstrasse 25  
CH-6330 Cham

**Authorized person for the compilation of the technical documentation:** **DOPAG Dosiertechnik und Pneumatik AG, Urs Lüthi**  
Langackerstrasse 25  
CH-6330 Cham

**Type description:** Material pressure reducing valve with piston

**Serial No./Item No.:** 450.00.00, 450.00.01, 450.00.02, 450.00.03, 450.00.04, 450.00.05, 450.00.06, 450.00.07, 450.00.10, 450.00.11, 450.00.12, 450.00.13, 450.00.14, 450.00.15, 450.00.16, 450.00.17, 450.00.18, 450.00.19, 450.00.20, 450.00.21, 450.00.22, 450.00.23, 450.00.24, 450.00.27, 450.00.28, 1003471, 1006235, 1005686, 1006237, 1006236

**Directives:**

Designation	Date
2006/42/EC	09.06.2006
2014/30/EU	20.04.2016
2014/35/EU	20.04.2016

**Standards:**

Designation	Date
DIN EN 82079-1	06/2013
DIN EN ISO 13857	06/2008
DIN EN ISO 4414	04/2011
DIN EN ISO 12100	03/2011
DIN EN ISO 13732-1	12/2008

**Place and date:** Cham, 10/18

**Technical Director:** Urs Lüthi









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