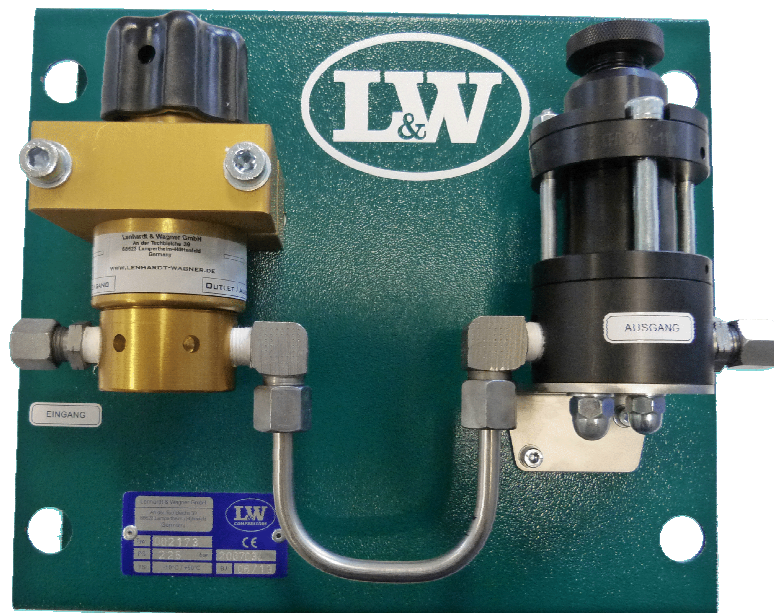


# Operating Instructions

## Pressure Reducing Station 300—200 bar





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## GENERAL INFORMATION

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### General Information

We strongly recommend reading this manual thoroughly prior to operation and follow all the safety precautions precisely. Damage resulting from any deviation from these instructions is excluded from warranty and liability for this product. Carry out other commissioning steps only if you have fully understood the following contents.

Before commissioning and using the unit, carry out all the essential preliminary work and measures concerning legal regulations and safety. These are described on the following pages of this operation manual.

### Description of marks and warning signs

The following warning signs are used in this document to identify the corresponding warning notes which require particular attention by the user. The warning signs are defined as follows:



#### Caution

Indicates an imminently hazardous situation which, if not avoided, could result in serious injury, physical injury or death.



#### Warning

Indicates a potentially hazardous situation which, if not avoided, could result in physical injury or damage to the product or environment.



#### Note

Indicates additional information on how to use the unit.



## DESCRIPTION

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### Scope of Delivery

Pressure reducing station 300/200bar for breathing air and industrial application. The pressure reducing station is ideal for safe reducing storage pressure down to the required filling pressure. The panel is maintenance free.

### Specifications

- Powder coated steel panel in RAL 6026
- High flow pressure reducer up to 420 bar
- Original L&W safety valve with CE or TÜV certificate
- Preset to filling pressure 210 bar
- Maintenance free

### Options

- Inlet pressure gauge
- Outlet pressure gauge
- Inlet ball valve
- Outlet ball valve
- Safety valve with TÜV approval
- Special set-up

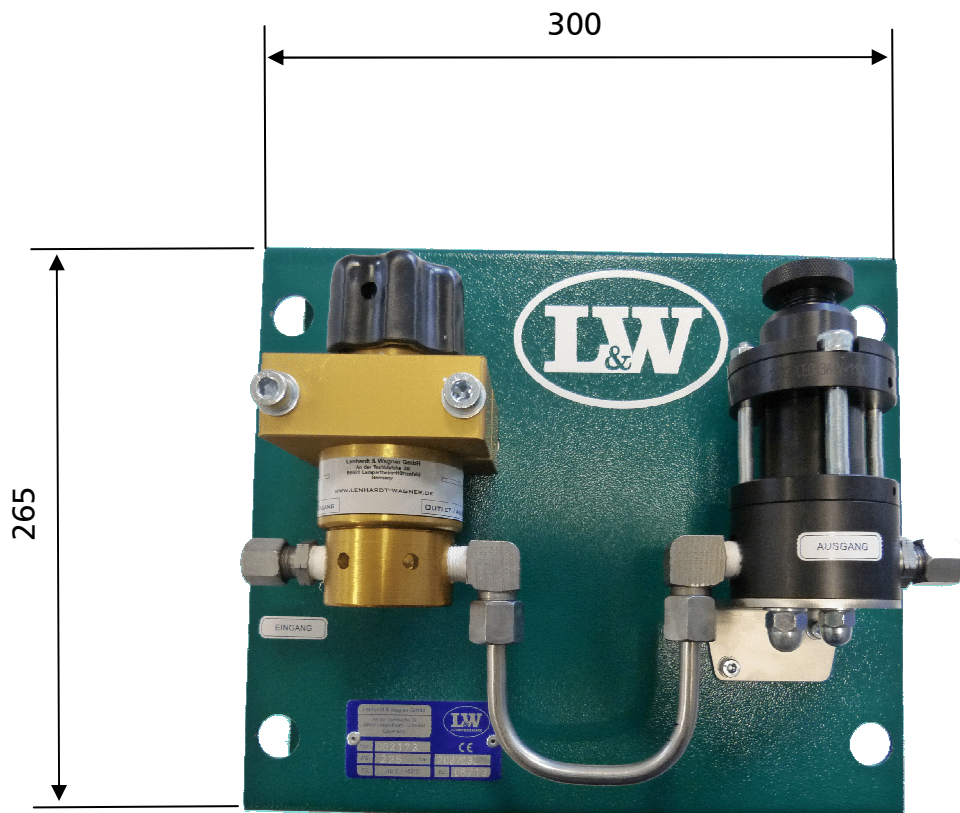


## DESCRIPTION

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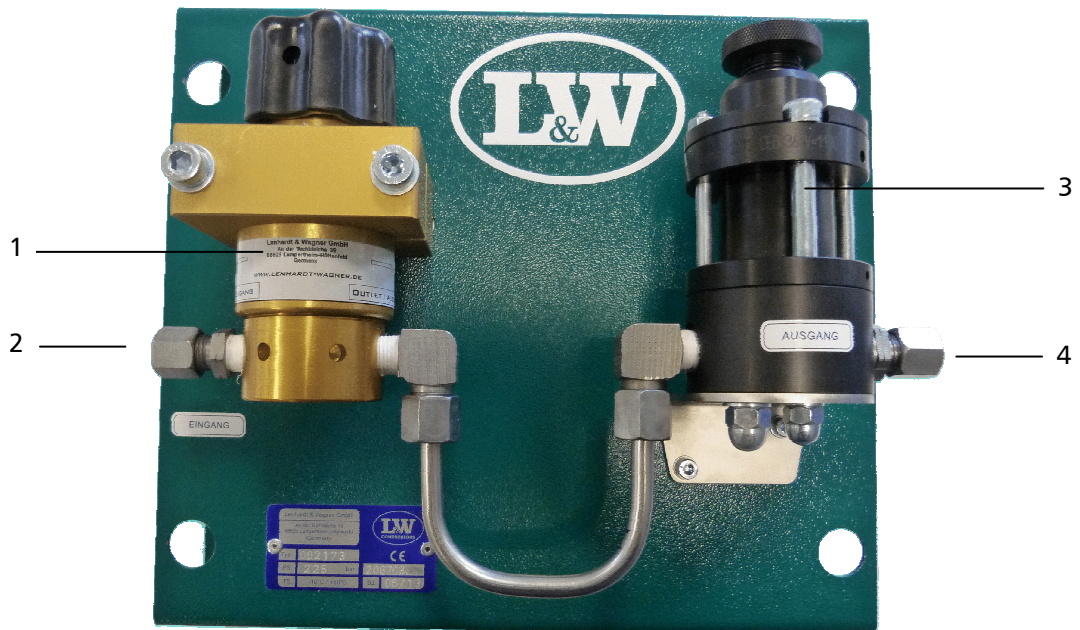
### Technical Data

Pressure Reducing Panel	W x H x D [mm]	Weight [kg]	Max WP [bar]	Adjusted WP [bar]
300 / 200 bar	300 x 265 x 60	6.5	350	210



## DESCRIPTION

### Unit Assembly

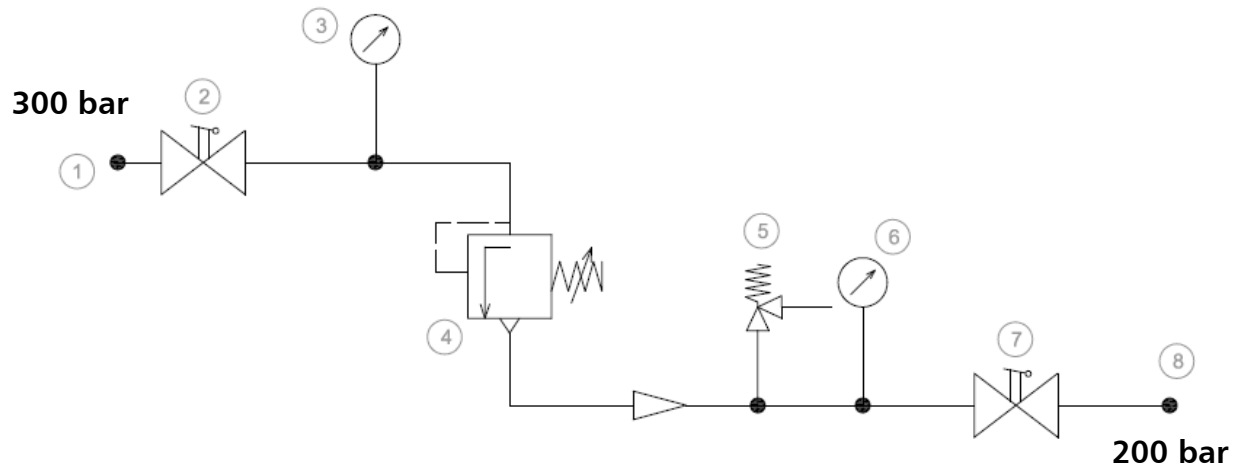


No.	Designation
1	Pressure Reducer
2	Inlet Connection: 8L
3	Safety Valve
4	Outlet Connection: 8L

## DESCRIPTION

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### Flow chart



- 1. Inlet 8L
- 2. Inlet ball valve (Option)
- 3. Inlet pressure gauge (Option)
- 4. Pressure regulator

- 5. Outlet pressure gauge (Option)
- 6. Outlet ball valve (Option)
- 7. Outlet 8L



## **SAFETY PRECAUTIONS**



## **SAFETY PRECAUTIONS**

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### **Intended Use**

Only use the unit in perfect condition for its intended purpose, safety and intended use and observe the operating instructions! In particular disorders that may affect safety have to be eliminated immediately!

Use the unit exclusively for the determined medium (see "Technical Data"). Any other use that is not specified is not authorized. The manufacturer/supplier shall not be liable for any damages resulting from such use. Such risk lies entirely with the user. Authorization for use is also under the condition that the instruction manual is complied with and inspection and maintenance requirements are enforced.

No change and modification to the unit can be made without the written agreement of the manufacturer. The manufacturer is not liable for damage to persons or property resulting from unauthorised modifications.

### **Operators**

Target groups in these instructions;

#### **Operators**

Operators are persons who are authorized and briefed for the use of the compressor.

#### **Qualified personnel**

Qualified personnel are persons who are entitled to repair, service, modify and maintain the system.



#### **Warning**

Only trained personnel are permitted to work on the unit!



#### **Warning**

Work on the electrical equipment on / with the machine / unit may only be carried out by qualified electricians.



## **SAFETY PRECAUTIONS**

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### **General Safety Precautions**

- Read the Operating Instructions of this product carefully prior to use.
- Strictly follow the instructions. The user must fully understand and strictly observe the instructions. Use the product only for the purposes specified in the intended use section of this document.
- Do not dispose the operating instructions. Ensure that they are retained and appropriately used by the product user.
- Only trained and competent personnel are permitted to use this product.
- Comply with all local and national rules and regulations associated with this product.
- Only trained and competent personnel are permitted to inspect, repair and service the product.
- Only authentic L&W parts and accessories may be used for maintenance work. Otherwise, the proper functioning of the product may be impaired.
- Do not use faulty or incomplete products. Do not modify the product.
- Inform L&W in the event of any product or component fault or failure.
- The quality of the air supply must meet EN 12021 specifications for breathing air.
- Do not use the product in areas prone to explosion or in the presence of flammable gases. The product is not designed for these applications. An explosion might be the result if certain conditions apply.



## **SAFETY PRECAUTIONS**

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### **Unit customised safety notices**

#### **Organisational measures**

- In addition to the instruction manual, observe and comply with universally valid legal and other obligatory regulations regarding accident prevention and environment protection.
- In addition to the instruction manual, provide supplementary instructions for supervision and monitoring duties taking into consideration exceptional factors e.g. with regard to organisation of work, production, personnel employed.
- Supervise personnel's work in accordance with the instruction manual, taking into account safety and danger factors.
- Observe all safety and danger notices on the compressor and check readability and completeness.

#### **Safety instructions operation**

- Take measures to ensure that the machine is only taken into operation under safe and functional conditions. Only operate the compressor if all protective and safety equipment, e.g. detachable protective equipment, are provided and in good working order.
- Check the unit at least once per day for obvious damage and defects. Inform the responsible department / person immediately if anything is not as it should be (including operation performance). Shut down the machine immediately if necessary and lock it.
- In case of malfunction, lock it. Repair malfunctions immediately.
- Ensure safe and environmentally friendly disposal of consumables and old parts.
- The stipulated hearing protectors must be worn.
- When handling with fats, oils and other chemical agents, observe the note for the product-related safety.



## **SAFETY PRECAUTIONS**

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### **Maintenance instructions**

- Immediately repair any damage. Escaping compressed air can cause injury.
- Depressurise system and pressure lines before beginning repair work.
- Pressurised air lines must be laid and mounted by qualified personnel. Connections must not be mixed up. Fittings, length and quality of the piping must correspond to requirements.
- Adjustment, maintenance and inspection activities and keep appointments, including information on replacement parts / equipment, prescribed in the operating instructions have to be respected.
- The machine and especially the connections and fittings should be cleaned from oil, fuel and maintenance products at the beginning of the maintenance / repair. Do not use aggressive cleaning agents. Use fibre-free cleaning cloths.
- After cleaning, examine all pipes for leaks, loose connections, chafing and damage. Immediately eliminate any faults.
- Always retighten any screw connections loosened for maintenance or repair work.
- If it is necessary to remove safety devices for maintenance and repair work, these must be replaced and checked immediately after completion of the maintenance or repair work.
- Only personnel with particular knowledge and experience with pneumatics may carry out work on pneumatic equipment.
- Only personnel with particular knowledge and experience in gas equipment may carry out work on gas equipment.





## **SAFETY PRECAUTIONS**

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### **Transportation instructions**

- Parts which need to be dismantled for transport purposes must be carefully replaced and secured before taking into operation.
- The transport may only be carried out by trained personnel.
- For transportation, only use lifting devices and equipment with sufficient lifting power.
- Do not stand or work under suspended loads.
- Also separate from minor relocation machinery / system of any external energy supply. Before recommissioning, reconnect the machine to the mains according to regulations.
- When recommissioning, proceed according to the operating instructions..

### **Safety regulations**

- Inspections according to legal and local obligatory regulations regarding accident prevention are carried out by the manufacturer or by authorised expert personnel. No guarantees whatsoever are valid for damage caused or favoured by the non-consideration of these directions for use.



# OPERATION



## OPERATION

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### Important operation instructions



#### Note

Ensure that all persons handling the pressure reducing station are familiar with safety regulations and operation of the unit.

### **Prior to first commissioning, observe the following:**

Necessary steps are described on the next page.

- Check all connections and retighten if necessary.
- Check if the outlet pressure is adjusted.
- Check if the safety valve does open by screwing the knurled screw on top.

### **Prior to daily operation observe the following:**

- Ensure that the outlet pressure is still adjusted pressure

## OPERATION

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### Pressure regulator

The pressure regulator (1) reduce the inlet pressure to the needed outlet pressure. You can regulate the pressure by turning the black handwheel (2) on top of the pressure regulator.

Increasing working pressure:

- Turn black handwheel anti-clockwise

Reduce working pressure:

- Turn black handwheel clockwise

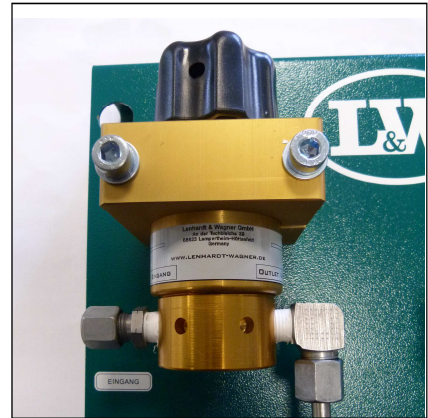


Fig. 1 - Pressure regulator

### Maintenance intervals

There is no need to maintenance the pressure regulator. If there are any leakage there is the possibility to order a repair kit for it. This contains all important parts to maintain the unit. P/N: 000565



Fig. 2 - Black handwheel



# OPTIONS

## OPTIONS

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### Inlet & outlet pressure gauges

The standard version does not include pressure gauges. The pressure reducing station can be equipped with pressure gauges in the inlet (1) and outlet. These are very helpful to know the detailed inlet pressure and to adjust the pressure regulator correctly. The pressure gauges can be reordered easily.



Fig. 1 - Inlet pressure gauge

### Inlet & outlet ball valves

The standard version does not include ball valves. The pressure reducing station can be equipped with ball valves in the inlet and outlet (2). These are very helpful to interrupt the air supply in the inlet or outlet. The ball valves can be reordered easily.

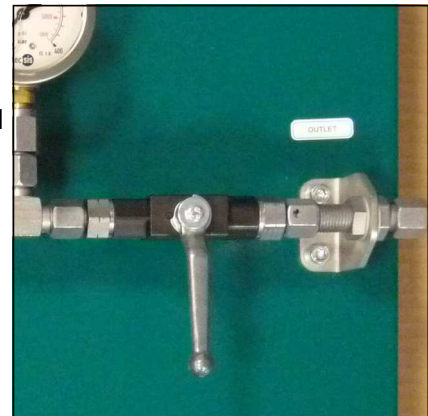


Fig. 2 - Outlet ball valve



# MAINTENANCE AND SERVICE



## MAINTENANCE AND SERVICE

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### Service, Repair and Maintenance

Carry out service and maintenance work exclusively when the unit depressurised. The unit should be leak-checked regularly. Leaks can be preferably localised by using a leak detector spray (if necessary, brush pipes with soapy water).

We urgently recommend that all maintenance, repair and installation work must only be carried out by trained personnel. This is necessary because all maintenance work can not be explained exactly and detailed in this manual.

Only use authentic spare parts for service work.



#### **Danger**

Components under pressure, such as hose ends, can quickly come loose when manipulated and can cause potentially fatal injuries due to the pressure surge. Any work on system parts may only be performed in a pressure-compensated state.



#### **Warning**

The use of accessories that have not been tested can lead to death or serious injury or damage to the unit. Only use authentic spare parts for service work.



#### **Warning**

Carry out maintenance or service work when the unit is switched off and protected against unexpected restart.





## MAINTENANCE AND SERVICE

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### Daily before taking unit into operation

Maintenance work	Type	Quantity	Order No.
Ensure that the outlet pressure is still adjusted	-	-	-

### Every 6 months

Maintenance work	Type	Quantity	Order No.
Check all connections and retighten if necessary.	-	-	-
Check if the safety valve does open by screwing	-	-	-

## MAINTENANCE AND SERVICE

### Safety valve



#### Note

Replace a defective safety valve immediately!

The pressure reducing panel is equipped with an over pressure safety valve. The safety valve avoids a non permissible high pressure.

The adjusted blow-off pressure [bar] of the safety valve is indicated on its housing.

The safety valve is factory sealed with a special L&W safety seal to avoid manipulation of the limit value settings.

Safety valves with removed seals have to be immediately checked for the prescribed settings and replaced if necessary.

The safety valve is furthermore equipped with a knurled screw to be activated once.

Turning the knurled screw clockwise could vent the valve and therefore the unit completely.

During normal operation conditions, the knurled screw has to be turned anti-clockwise up to the upper stop. An integrated circlip avoids complete unscrewing.



Safety valve

### Pressure regulator

Maintenance interval:

There is no need to maintenance the pressure regulator. If there are any leakages there is the possibility to order a repair kit for it. This contains all important parts to service the unit. P/N: 000565



Pressure regulator



# MAINTENANCE RECORDS







# STORAGE



## **STORAGE**

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### **Conservation / storage of the unit**

If the unit is not to be used for an extended period of time, we recommend the following conservation to be carried out before storage:

- Store the unit in a dry and dust-free place. A cover is recommended as long as condensation can be avoided.

### **Recommissioning**

Before recommissioning the following steps have to be carried out:

- Clean pressure lines from contaminations
- Tighten all pressure lines and connections and check for leaks.
- Check the correct function of the safety valve.

### **Transportation notes**

- Parts which need to be dismantled for transport purposes must be carefully replaced and secured before recommissioning.
- The transport may only be carried out by trained personnel.
- For transportation, only use lifting devices and equipment with sufficient lifting power.
- Do not stand or work under suspended loads.
- Also separate from minor relocation machinery / system of any external energy supply. Before recommissioning, reconnect the machine to the mains according to regulations.
- When recommissioning, proceed according to the operating instructions.

### **Disposal**

The product must be disposed in accordance with national waste disposal regulations and by an appropriate waste disposal company.



**SPARE PARTS LISTS  
/ DETAILED VIEWS**





## SPARE PART LIST

### Baugruppe: Sicherheitsventil / Assembly: Safety Valve

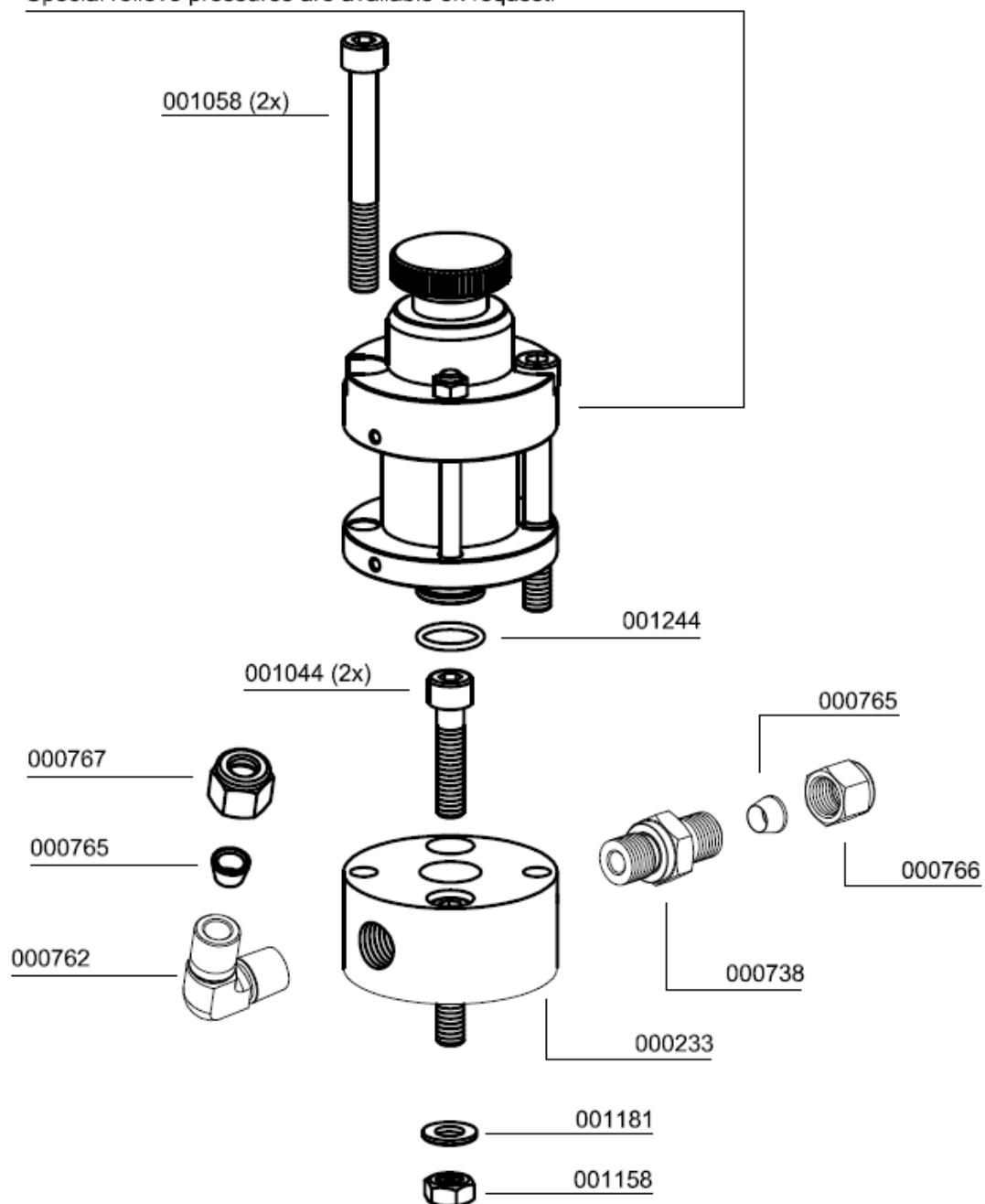
Best.-Nr. / Order No.	Benennung	Description
000165	Gehäuse Rückschlagventil	Body Non-Return Valve
000233	Sockel für Sicherheitsventil mit TÜV/CE	Base f. Safety Valve TÜV type
000553	Sicherheitsventil - Bauteilgeprüft	Safety Valve TÜV 225 bar
000554	Sicherheitsventil - Bauteilgeprüft	Safety Valve TÜV 250 bar
000555	Sicherheitsventil - Bauteilgeprüft	Safety Valve TÜV 300 bar
000556	Sicherheitsventil - Bauteilgeprüft	Safety Valve TÜV 330 bar
000557	Sicherheitsventil - Bauteilgeprüft	Safety Valve TÜV 350 bar
000738	Verschraubung	Connection
000762	Verschraubung	Elbow Connection
000765	Schneidring	Olive Seal
000766	Mutter	Nut
000767	Mutter	Union Nut 08 S
001044	Zylinderschraube	Allen Screw
001058	Zylinderschraube	Allen Bolt
001158	Mutter	Nut M8
001181	U-Scheibe A8	Washer A8
001244	O-Ring	O-Ring, flange safety valve
001814	Sicherheitsventil - Bauteilgeprüft	Safety Valve
001815	Sicherheitsventil - Bauteilgeprüft	Safety Valve
001816	Sicherheitsventil - Bauteilgeprüft	Safety Valve
001817	Sicherheitsventil - Bauteilgeprüft	Safety Valve

## DETAILED VIEW

### Baugruppe: Sicherheitsventil / Assembly: Safety Valve

Druck/ Pressure	SV-Ventil mit CE-Prüfung/ Safety Valve with CE	SV-Ventil mit TÜV-Prüfung/ Safety Valve with TÜV
225 bar	001814	000553
250 bar	001815	000554
285/300 bar	_____	000555
330 bar	001816	000556
350 bar	001817	000557

Sonder-Einstelldrücke auf Anfrage! /  
Special relieve pressures are available on request!





## SPARE PART LIST

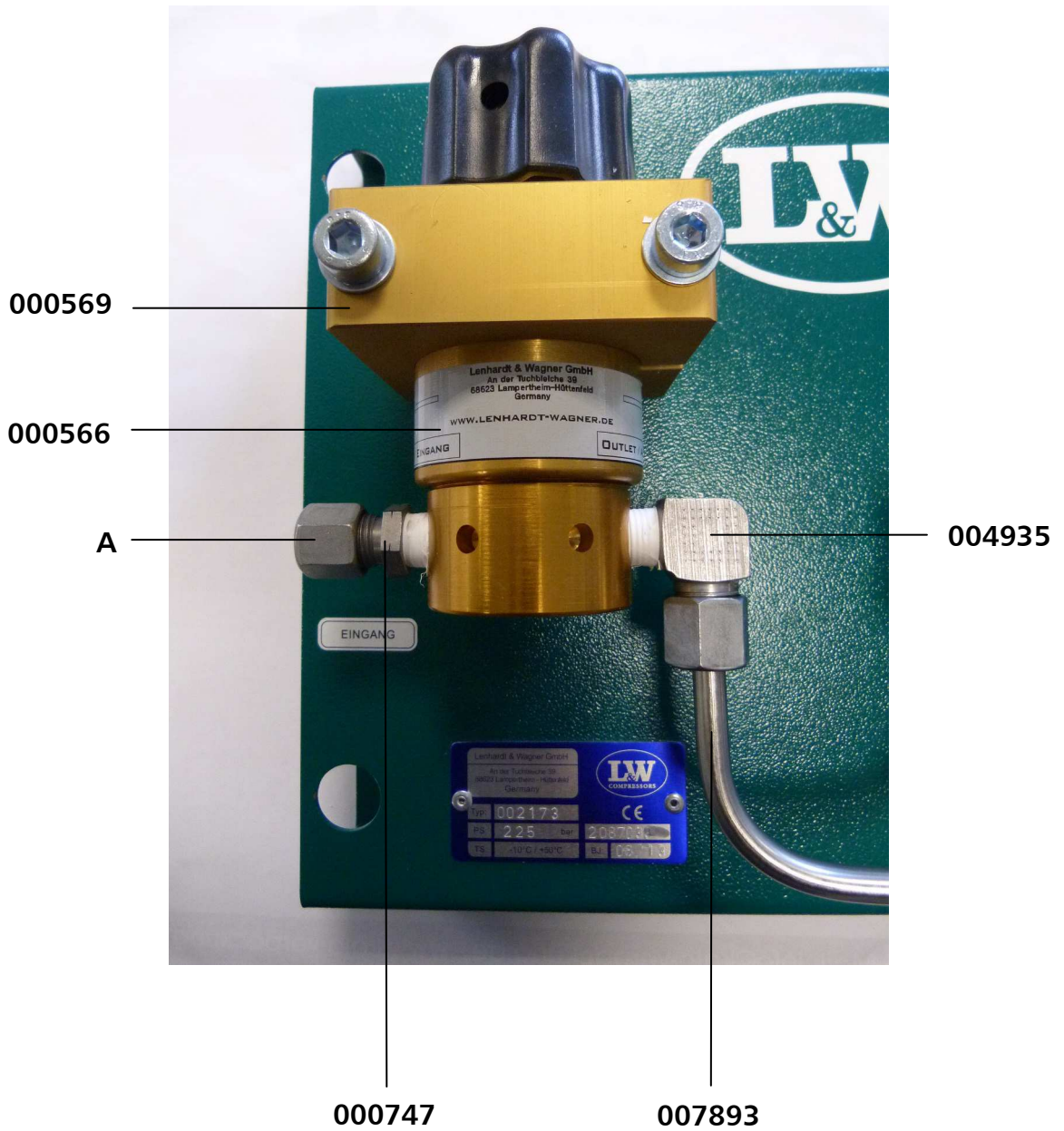
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### Druckminderer / Pressure Regulator

Best.-Nr. / Order No.	Benennung	Description
000566	Druckminderer	Pressure Regulator
000569	Halterung Druckminderer	Bracket Pressure Regulator
000747	Gerade Verschraubung 8L	Straight Connection 8L
000765	Schneidring PSR 08 LX	Olive Seal PSR 08 LX
000766	Mutter M08LCFX	Nut M08LCFX
004935	NPT Winkelverschraubung 8S	NPT Elbow Connection 8S
007893	Rohrleitung (Druckminderer / Sicherheitsventil)	Pipe (Pressure regulator / Safety Valve)

**DETAILED VIEW**

**Druckminderer / Pressure Regulator**



A	
Nut 8L	000766
Olive seal	000765



## SPARE PART LIST

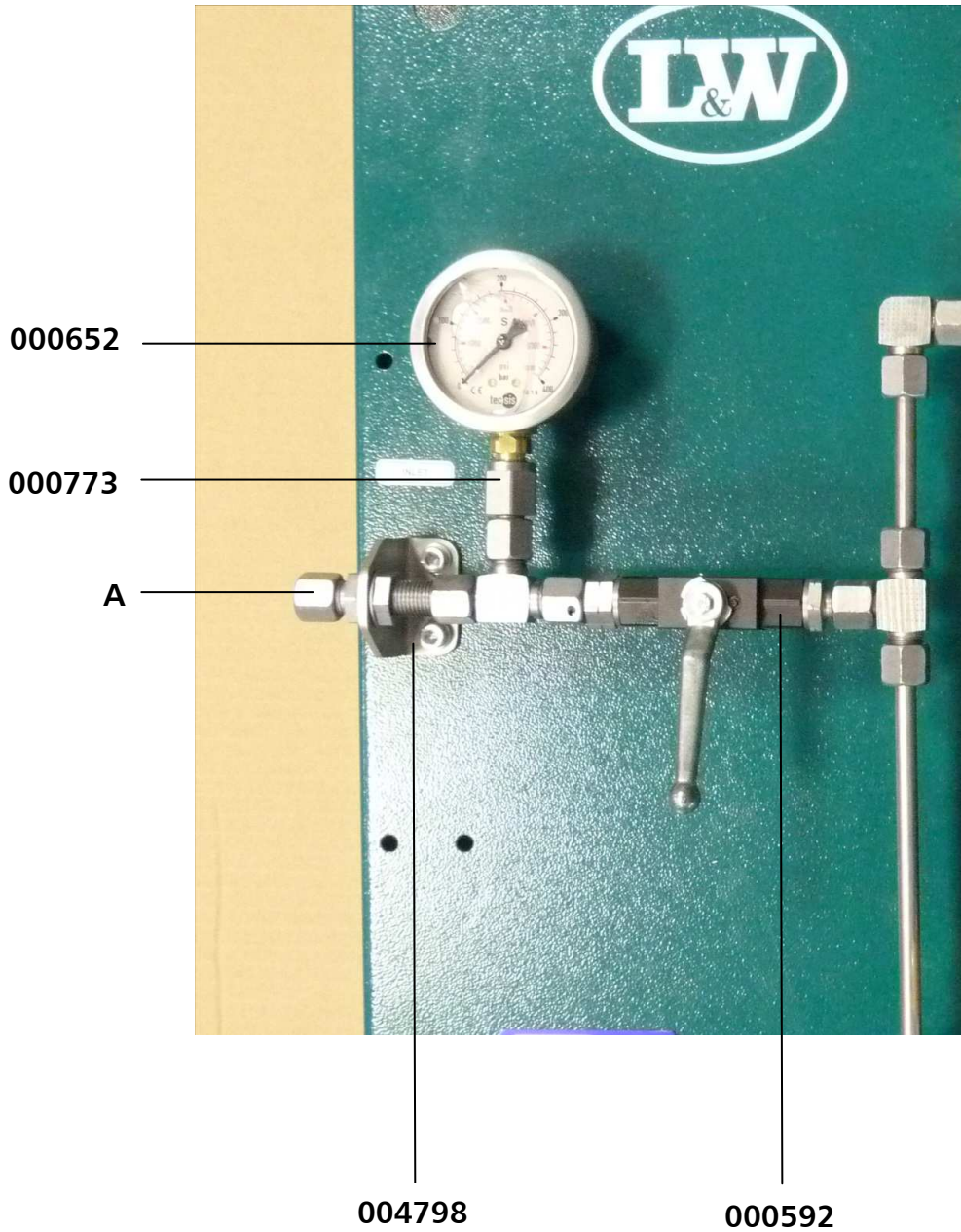
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### Option: Manometer & Kugelhahn / Pressure Gauge & Ball Valve

Best.-Nr. / Order No.	Benennung	Description
000592	Kugelhahn	Ball Valve
000652	Manometer 0-400 bar	Pressure Gauge 0-400 bar
000765	Schneidring PSR 08 LX	Olive Seal PSR 08 LX
000766	Mutter M08LCFX	Nut M08LCFX
000773	Manometerverschraubung 8L	Pressure Gauge Connection 8L
004798	Haltewinkel Schottverschraubung 6S und 8L	Bracket bulkhead connection 6S and 8L

**DETAILED VIEW**

**Option: Manometer & Kugelhahn / Pressure Gauge & Ball Valve**



A	
Nut 8L	000766
Olive seal	000765



**LENHARDT & WAGNER GMBH**

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**Manufacturer in terms of 97/23/EC**

The full name and address of the manufacturer is:

Lenhardt & Wagner GmbH

An der Tuchbleiche 39  
68623 Hüttenfeld / Germany

Phone: +49 (0) 62 56 - 85 88 0 - 0

Fax: +49 (0) 62 56 - 85 88 0 - 14

E-Mail: [service@lw-compressors.com](mailto:service@lw-compressors.com)

Internet: [www.lw-compressors.com](http://www.lw-compressors.com)



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Pressure Reducing Station 300/200 bar