

Pressure relief valve, pilot-operated

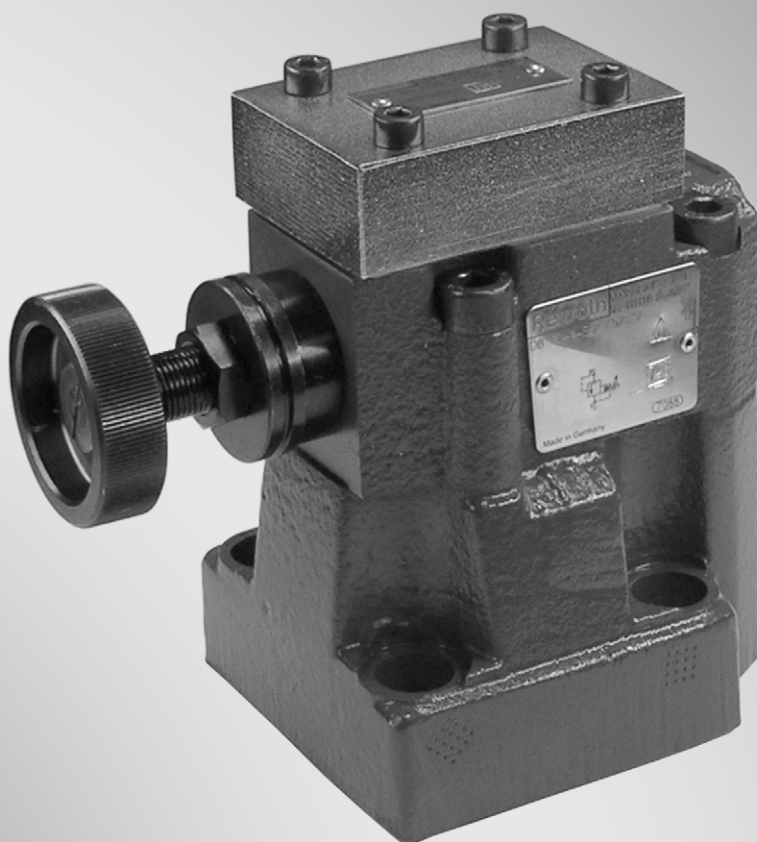
(Area of application in accordance with the explosion protection directive
2014/34/EU: **IM2; II2G; II2D**)

Type DB...5X/...XC



Operating instructions
RE25802-XC-B/07.19

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English



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The data specified serves to describe the product. If there is also information on the use, it is only to be regarded as application examples and proposals. Catalog information does not constitute warranted properties. The information given does not release the user from the obligation of own judgment and verification. Our products are subject to a natural process of wear and aging.

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The cover shows an example configuration. The product supplied may therefore differ from the figure shown.

The original operating instructions were prepared in German.

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1 About this documentation

1.1 Validity of the documentation

This documentation applies to the following products:

- DB...5X/...XC

This documentation is intended for assemblers, operators, service engineers, system end-users, machine and system manufacturers.

This documentation contains important information on the safe and proper assembly, transport, commissioning, operation, use, maintenance, disassembly and simple troubleshooting of the product.

- You should read this documentation thoroughly and in particular chapter 2 "Safety instructions" and chapter 3 "General information on damage to property and damage to product", before working with the product.



The documentation version with which the product was supplied is valid.

1.2 Required and amending documentation

- The product must not be commissioned until you have been provided with the documentation marked with the book symbol  and you have understood and observed it.

Table 1: Required and amending documentation

	Title	Document number	Document type
	Pressure relief valve, pilot-operated	25802-XC	Data sheet
	Subplates	45100	Data sheet
	Declaration of conformity DB...5X/...XC	Document	refer to chapter 17

1.3 Representation of information

Uniform safety instructions, symbols, terms and abbreviations are used so that you can quickly and safely work with your product using this documentation. For a better understanding, they are explained in the following sections.

1.3.1 Safety instructions

In this documentation, safety instructions are included in chapter 2.6 "Product-specific safety instructions" and in chapter 3 "General information on damage to property and damage to product" and whenever a sequence of actions or instructions is explained which bear the danger of personal injury or damage to property. The hazard avoidance measures described must be observed.

Safety instructions are structured as follows:

 SIGNAL WORD
Type and source of danger! Consequences in case of non-compliance ► Hazard avoidance measures ► <Enumeration>

- **Warning sign:** draws attention to the danger
- **Signal word:** identifies the degree of danger
- **Type and source of danger!:** specifies the type and source of danger
- **Consequences:** describes the consequences in case of non-compliance
- **Precaution:** specifies how the danger can be prevented

Table 2: Risk classes according to ANSI Z535.6-2006

Warning sign, signal word	Meaning
 DANGER	Indicates a dangerous situation which will cause death or severe injury if not avoided.
 WARNING	Indicates a dangerous situation which may cause death or severe injury if not avoided.
 CAUTION	Indicates a dangerous situation which may cause minor or medium personal injury if not avoided.
NOTICE	Damage to property: The product or the environment could be damaged.

1.3.2 Symbols

The following symbols indicate notes which are not safety-relevant but increase the comprehensibility of the documentation.

Table 3: Meaning of the symbols

Symbol	Meaning
	If this information is not observed, the product cannot be used and/or operated optimally.
►	Individual, independent action
1.	Numbered instruction:
2.	The numbers indicate that the actions must be carried out one after the other.
3.	

1.3.3 Abbreviations

The following abbreviations are used in this documentation:

Table 4: Abbreviations

Abbreviation	Meaning
ATEX	EU Explosion Protection Directive (<i>Atmosphère explosible</i>)
EN	European Standard
EU	European Community
DIN	Deutsche Industrienorm (German Industry Standard)

Abbreviation	Meaning
DB	Pressure relief valve
ISO	International Organization for Standardization
IEC	International Electrotechnical Commission
RE	Rexroth document
IP	Ingress protection class of electric operating equipment
T	Hydraulic connection (tank)
P	Hydraulic connection (pump)
X	Hydraulic port (external pilot oil supply)
Y	Hydraulic port (external pilot oil return)
ANSI	American National Standards Institute

2 Safety instructions

2.1 General information on this chapter

The product has been manufactured according to the generally accepted codes of practice. However, there is still the danger of personal injury and damage to property if you do not observe this chapter and the safety instructions in this documentation.

- ▶ Read this documentation completely and thoroughly before working with the product.
- ▶ Keep this documentation in a location where it is accessible to all users at all times.
- ▶ Always include the required documentation when you pass the product on to third parties.

2.2 Intended use

The product is a hydraulic component.

You may use the product as follows:

- as a pilot-operated pressure relief valve for intended use in explosive atmospheres.

The product is only intended for professional use and not for private use.

Intended use includes having read and understood this documentation completely, especially chapter 2 "Safety instructions".

The valve complies with the requirements of the ATEX directive 2014/34/EU.

You can find details about the device group, category and temperature class and equipment protection level (EPL) in accordance with ATEX directive 2014/34/EU and the derived standards in "Data sheet 25802-XC" under "Information on explosion protection" and on the name plate of the valve.

The valve may only be operated in a technically perfect condition and used as described in these operating instructions. The connection conditions, application conditions and performance data defined in these operating instructions must not be changed.

If you intend to use the valve with other connection, application or performance data than those defined by Bosch Rexroth AG in these operating instructions, please contact Bosch Rexroth AG beforehand. The valve must not be used with other connection, application and performance data than those defined in these operating instructions without the written approval by Bosch Rexroth AG.

The valve may only be operated with the hydraulic fluids stated in the technical data. Please consult us for information on the use of the product with other hydraulic fluids.

Any safeguards fitted by Bosch Rexroth AG have to be present, properly installed and fully functional, unless this is not appropriate for setup or maintenance operation. Their position must not be changed, they must not be circumvented or made ineffective.

2.3 Improper use

Any use deviating from the intended use is improper and thus not admissible.

The installation or use of inappropriate products in safety-relevant applications could result in unintended operating states when being used which in turn could cause personal injuries and/or damage to property. Therefore, please only use a product for safety-relevant applications if this use is expressly specified and permitted in the documentation of the product.

A sealing at the valve may not be removed by the machine end-user.

Name plates and product identifications may not be overlacquered; they must be kept in a readable condition.

Changes and/or modifications on the valve are not admissible, refer to chapter 13 "Extension and modification". This does not apply to the "Modification of the valve to solenoid-actuated unloading", see chapter 13.1 "Modification of the valve to solenoid-actuated unloading".

Bosch Rexroth AG does not assume any liability for damage caused by improper use. The user assumes all risks involved with improper use.

2.4 Qualification of personnel

The activities described in this documentation require basic knowledge of mechanics, electrics, hydraulics, pneumatics as well as knowledge of the appropriate technical terms. For transporting and handling the product, additional knowledge of how to handle lifting gear and the necessary attachment devices is required. In order to ensure safe use, these activities may only be carried out by an expert in the respective field or an instructed person under the direction and supervision of an expert.

Experts are those who are able to recognize potential dangers and apply the appropriate safety measures due to their professional training, knowledge and experience, as well as their understanding of the relevant conditions pertaining to the work to be undertaken. An expert must observe the relevant specific professional rules and have the necessary expert knowledge.

Expert knowledge means for example for hydraulic products:

- reading and completely understanding hydraulic schemes,
- in particular, completely understanding the correlations regarding the safety equipment and
- Having knowledge of the function and set-up of hydraulic components.

Qualification of personnel for installation and commissioning of valves in an explosion-proof area

The personnel must have the following additional qualifications to the extent required to fulfill their tasks:

- Understanding of the general principles of explosion protection, protection classes and device identification
- Understanding of those aspects of device design which influence the protection concept
- Understanding of the contents of certificates and of the relevant parts of this standard
- General understanding of the testing, maintenance and repair requirements of IEC 60079-17
- Familiarity with the special methods which are to be applied during the selection and installation of devices to which this standard refers.
- Understanding of the additional importance of work authorization systems and safe electrical isolation with regards to the explosion protection



Bosch Rexroth offers measures supporting training in specific fields. Please find an overview of the training contents on the Internet at:

<http://www.boschrexroth.de/didactic>

2.5 General safety instructions

- Observe the valid regulations on accident prevention and environmental protection.
- Observe the safety regulations and provisions of the country in which the product is used/applied.
- Only use Bosch Rexroth products in a technically perfect condition.
- Observe all notes on the product.
- Persons assembling, operating, disassembling or maintaining Bosch Rexroth products must not be under the influence of alcohol, other drugs or medications influencing the ability to react.
- Only use original Bosch Rexroth accessories and spare parts in order to prevent any hazard to persons due to unsuitable spare parts.
- Comply with the technical data and environmental conditions specified in the product documentation.
- The installation or use of inappropriate products in safety-relevant applications could result in unintended operating states when being used which in turn could cause personal injuries and/or damage to property. Therefore, please only use a product for safety-relevant applications if this use is expressly specified and permitted in the documentation of the product.
- Do not commission the product until you can be sure that the end product (for example a machine or system) where the Bosch Rexroth products are installed complies with the country-specific provisions, safety regulations and standards of the application.

2.6 Product-specific safety instructions

The following safety instructions apply to chapters 5.1.2 to 14.

WARNING

Explosion hazard due to ignitable atmosphere during all work on the valve!

During all work on the valve (assembly, disassembly etc.), there must not be an explosive atmosphere. Otherwise, an ignition may be triggered which may lead to an explosion.

- ▶ Before working with the valve, ensure that no explosive atmosphere can occur during the work.

Easily inflammable liquid!

In connection with an explosive atmosphere or other heat sources, the use of liquids (e.g. hydraulic fluid, coolants etc.) may lead to explosions.

- ▶ Only use the valve in the intended explosion protection area.
- ▶ The ignition temperature of the liquid used must be 50 K higher than the maximum surface temperature.

Hot surface at the valve!

Risk of burning!

- ▶ Provide for a suitable touch guard.
- ▶ During operation, only touch the valve using heat-protective gloves. Allow the valve to cool down to room temperature before touching it directly with your hands during maintenance work.

Pressurized system parts and leaking hydraulic fluid!

When working at hydraulic systems with stored energy (accumulator or cylinders working under gravity), valves may even be pressurized after switching off the pressure supply. During assembly and disassembly works, the valve or parts may fly around and cause personal injuries and/or damage to property. Furthermore, there is the danger of serious injury caused by a powerful leaking hydraulic fluid jet.

- ▶ Before working at the valve, ensure that the hydraulic system is depressurized and the electrical control is de-energized.
- ▶ Completely unload the pressure at machines and systems before working at the valve.

Non-compliance with functional safety!

The valve controls movements in machines or systems. In case of mechanical and electric faults, e.g. failure of the energy supply, persons may be caught by the system, kicked away or bruised.

- ▶ During set-up of your circuit, observe functional safety e.g. according to EN ISO 13849.

! CAUTION

Contaminated hydraulic fluid!

Contamination in the hydraulic fluid may cause functional failures of the valve. In the worst case, this may result in unexpected system movements and thus constitute a risk of injury for persons.

- ▶ Ensure adequate hydraulic fluid cleanliness according to the details in the data sheet over the entire operating range.

Leakage in case of incorrect working temperatures!

Use of the valve outside the approved temperature ranges may lead to permanent leakage at the valves. Thus, hydraulic fluid in the form of a leaking hydraulic fluid jet may injure persons, lead to damage to property and endanger the environment.

- ▶ Only use the valve within the intended environmental and hydraulic fluid temperature range.
- ▶ In case of leakage, immediately exchange damaged seal rings or the valve.

Corrosion!

The valve described has surface protection (see "*Data sheet 25802-XC*"). Use of the valve in humid environments still holds the danger of corrosion on the valve and on the valve mounting screws and thus a reduction of the preload force of the screw connection. To prevent the valve from becoming loose and causing a risk of injury:

- ▶ Exchange the valves with corrosion damages as soon as possible.
- ▶ Check the surface protection on the valve and the valve mounting screws at regular intervals.



Contact with salt water leads to increased corrosion on the valve. This can lead to chemical corrosion of individual components of the valve. Therefore, take suitable corrosion protection measures.

2.7 Notes on the valve use

- ▶ Be aware of possible pressure intensification if the valve is connected to the chamber on the piston rod side of a differential cylinder. If the outflow of the hydraulic fluid from this chamber is obstructed, pressure on the cylinder may result in a pressure intensification that may damage cylinder chamber, supply line and valve.
- ▶ The valve must always be filled with hydraulic fluid.

2.8 Personal protective equipment

The machine end-user must provide the personal protective equipment (such as gloves, working shoes, safety goggles, working clothes, etc.).

2.9 Obligations of the machine end-user

The machine end-user is obligated to check in the order confirmation whether the delivered valve corresponds to the required category and associated zone or equipment protection level.

The machine end-user of the Bosch Rexroth valve is responsible that

- the valve is only being used according to the intended use as defined in these operating instructions.
- the valve is only stored, operated and maintained according to the technical data, operating and environmental conditions indicated in "*Data sheet 25802-XC*", in particular that the limit values indicated in "*Data sheet 25802-XC*" are not exceeded.
- the applicable provisions, rules and directives on explosion protection are being complied with.
- the operating personnel are instructed at regular intervals.
- a danger zone is marked, if required.
- the safety measures for their specific area of application of the valve are complied with.

3 General information on damage to property and damage to product

The warranty only applies to the delivered configuration and the admissible modification according to chapter 13.1 "Modification of the valve to solenoid-actuated unloading".

- The claim to warranty expires if the product is assembled, commissioned and operated incorrectly, not used as intended and/or handled improperly.
- The following safety instructions apply to chapters 5.1.2 to 14.

NOTICE

Inadmissible mechanical load!

Impact or shock forces on the valve may damage or even destroy it.

- ▶ Never use the valve as a handle or a step. Do not place/put any objects on top of it.

Dirt and foreign particles in the valve!

Penetrating dirt and foreign particles in the valve lead to wear and malfunctions. Safe function of the valve is therefore no longer ensured.

- ▶ During installation, ensure utmost cleanliness in order to prevent foreign particles such as welding beads or metal chips from getting into the hydraulic lines.
- ▶ Before commissioning, ensure that all hydraulic connections are tight and that all seals are correctly installed and undamaged.
- ▶ Do not use linting cleaning fabric for cleaning.
- ▶ Ensure that no cleaning agents are able to penetrate the hydraulic system.

Hydraulic fluid harmful to the environment!

Leaking hydraulic fluid leads to environmental pollution.

- ▶ Immediately remedy possible leakage.
- ▶ Dispose of the hydraulic fluid in accordance with the currently applicable national regulations in your country.

4 Scope of delivery

The scope of delivery includes:

- Pressure relief valve, pilot-operated
Type DB...5X/...XC
 - Product documentation (operating instructions with declaration of conformity and data sheet)
-
- ▶ Check the scope of delivery for completeness.
 - ▶ Check the scope of delivery for possible transport damage, see chapter 6 "Transport and storage".



In case of complaints, please contact Bosch Rexroth AG, see chapter 16.1 "List of addresses".

Accessories such as valve subplates and valve mounting screws are not included in the scope of delivery and must be ordered separately. See chapter 7.6 "Required accessories".

5 Product information



For information on the performance and product description please refer to "Data sheet 25802-XC" of your valve.

5.1 Product identification

5.1.1 Information on the name plate

The meaning of the information on the name plate can be read in the correspondingly numbered fields of the following table.

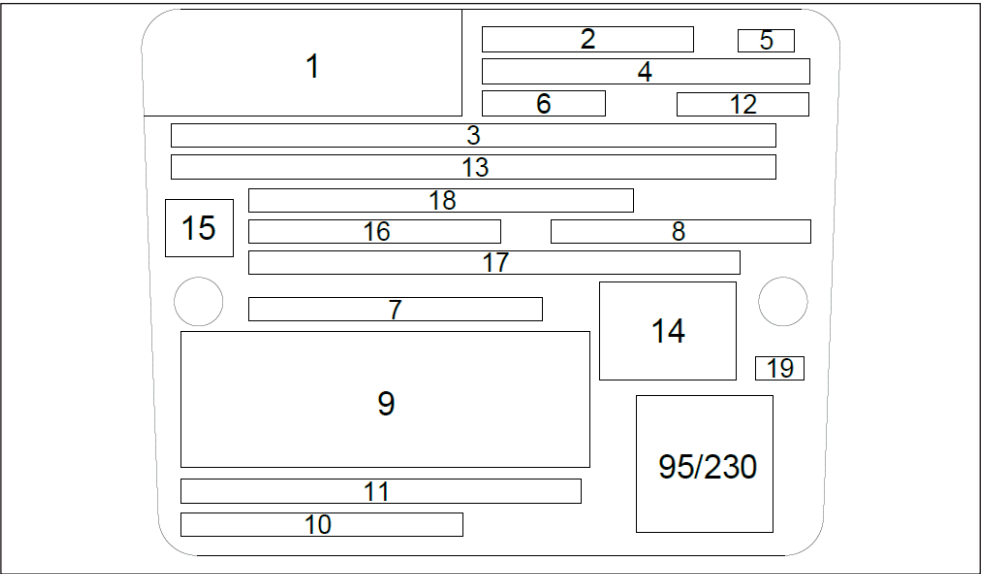


Fig. 1: Name plate

Table 5: Information on the name plate

No.	Type of information
1	Manufacturer's logo
2	Material no. of the valve
3	Type designation complete valve
4	Serial number of the valve
5	Manufacturer's factory number
6	Date of manufacture (year and week)
7	Maximum operating pressure
8	Ambient temperature range
9	Hydraulic symbol according to ISO 1219
10	Designation of origin
11	Name and address of the manufacturer
12	Customer's or production order number
13	Customer material number or additional information
14	CE mark
15	Explosion protection mark
16	Mark according to ATEX directive 2014/34 EU and for type of protection according to EN ISO 80079-38

No.	Type of information
17	Mark according to ATEX directive 2014/34 EU and for type of protection according to EN ISO 80079-36 and EN ISO 80079-37
18	Mark according to ATEX directive 2014/34 EU and for type of protection according to EN ISO 80079-36 and EN ISO 80079-37
19	---
95/230	Bosch Rexroth QR code

5.1.2 Explosion protection marking

Zones, device groups and categories

The user/machine end-user has to classify potentially explosive areas according to EU directive 1999/92/EC into zones. The table below lists zones with device groups and categories.

The valve may only be used in the areas and zones which correspond to the device group and category. During use, also observe the other information on explosion protection in "Data sheet 25802-XC".

Table 6: Device groups and categories

Device group according to 2014/34/EU	Category according to 2014/34/EU	Area of application, properties (excerpt from the directives)	Usable in zone according to 1999/92/EC
I	M1	Areas susceptible to firedamp (=device group I), i. e.: underground mines and their pitheads. If there is an explosive atmosphere, the operation can continue. Very high level of safety.	-
I	M2	Areas susceptible to firedamp (=device group I), i. e.: underground mines and their pitheads. If there is an explosive atmosphere, it must be possible to switch off the device. High safety level.	-
II	1G	Potentially explosive atmospheres in which explosive gases, mists or vapors (=device group II) occur permanently or for a long time or frequently. Corresponds to zone 0 according to directive 1999/92/EC. Very high level of safety.	0, 1, 2
II	2G	Potentially explosive atmospheres in which explosive gases, mists or vapors (=device group II) sometimes occur. Corresponds to zone 1 according to directive 1999/92/EC. High safety level.	1, 2
II	3G	Potentially explosive atmospheres in which explosive gases, mists or vapors (=device group II) do not normally occur or only rarely or for a short time. Corresponds to zone 2 according to directive 1999/92/EC. Normal safety level.	2
II	1D	Explosive areas in which explosive dust/air mixtures (=device group II) occur permanently or for a long time or frequently. Corresponds to zone 20 according to directive 1999/92/EC. Very high level of safety.	20, 21, 22
II	2D	Explosive areas in which explosive dust/air mixtures (=device group II) sometimes occur. Corresponds to zone 21 according to directive 1999/92/EC. High safety level.	21, 22
II	3D	Explosive areas in which an explosive atmosphere due to blown up dust (=device group II) does not normally occur or only rarely or for a short time. Corresponds to zone 22 according to directive 1999/92/EC. Normal safety level.	22

6 Transport and storage

6.1 Valve transport

CAUTION

Danger of damage to property and personal injuries!

If transported improperly, the valve may fall down and cause damage and/or injuries since the parts are e.g. sharp-edged, oily, instable, loose or bulky.

- ▶ Use the original packaging for transport.
- ▶ Use personal protective equipment (such as gloves, working shoes, safety goggles, working clothes, etc.).
- ▶ Comply with the national laws and regulations regarding occupational health and safety and transport.
- ▶ Do not transport the valve using components with little stability.

Sharp edges!

Danger of cut injuries!

- ▶ Wear suitable protective equipment for the transport of the safety valve.



Further information regarding transport is available from Bosch Rexroth, see chapter 16.1 "List of addresses".



Notify your responsible sales contact person any transport damage within one week. The addresses of the sales subsidiaries can be found on the Internet at: <http://www.boschrexroth.com/adressen>

6.2 Storing the hydraulic valve

Valves are delivered in a perfect state.



For transporting and storing the product, always observe the environmental conditions specified in "*Data sheet 25802-XC*". Improper storage may damage the valve.

Valves can be stored for up to 12 months under the following conditions:

- ▶ Comply with a storage temperature range as specified in "*Data sheet 25802-XC*".
- ▶ The relative air humidity must not exceed 65%.
- ▶ The storage rooms must provide 100% UV protection.
- ▶ No ozone formation may occur near the storage facility.
- ▶ Do not store the valve outdoors but in a well-ventilated room.
- ▶ The storage facilities must be free from etching substances and gases.
- ▶ Protect the valve against humidity, particularly ground humidity. Store the valve on a shelf or on a pallet.
- ▶ Store the valve protected against impacts and sliding and do not stack it.

- ▶ Store the valve in the original packaging or comparable packaging in order to protect it from dust and dirt.
- ▶ All connections at the valve must be closed with cap elements.
- ▶ After opening the transport packaging, it must be closed properly again for storage. Use the original packaging for storage.

**Procedure after expiry
of the maximum storage
time of 12 months**



1. Check the complete valve for damage and corrosion prior to installation.
2. In a test run, check the valve for correct function and leak-tightness.

After expiry of the maximum storage time, we recommend having the valve checked by your competent Bosch Rexroth service. In case of questions regarding spare parts, please contact the Bosch Rexroth service responsible for your valve, see chapter 10.6 "Spare parts".

Following disassembly

If a dismantled valve is to be stored, it has to be preserved for protection against corrosion for the duration of storage.

Bosch Rexroth recommends the following procedure:

1. Clean the valve; refer to chapter 10.1 "Cleaning and care".
 2. Close all connections so that they are airtight.
 3. Pack the valve with a desiccant air-tightly in corrosion protection film.
 4. Store the valve protected against shocks.
- ▶ In each case, please observe any applicable provisions and laws regarding the handling of substances hazardous to water or to health.

7 Assembly

CAUTION

High pressure!

Risk of injury due to parts shooting out during works on hydraulic accumulators which have not been unloaded.

- ▶ Carry out any work at the valve only after the system has been depressurized.
- ▶ Unload accumulators which may have been mounted at the system.
- ▶ Check the system with test pressure according to ISO 4413.
- ▶ Assembly and commissioning may only be carried out by specialists.

7.1 Unpacking

CAUTION

Falling parts!

Risk of injury! If the packaging is opened improperly, parts may fall out and cause injuries or damage of the parts.

- ▶ Put the packaging on level, bearing ground.
- ▶ Only open the packaging from the top.

The main stage has been sealed with the pilot stage of the valve by the manufacturer.

- ▶ Check whether the sealing is undamaged.

Dispose of the packaging in accordance with the national regulations of your country.

7.2 Changes at the surface protection of the valve

WARNING

Explosion hazard due to insufficient heat dissipation!

Dissipation of the valve heat must not be obstructed. This means that the explosion protection is no longer ensured!

- ▶ Additional coatings at the valves are not permitted.

7.3 Installation conditions

- ▶ For installing the product always observe the environmental conditions specified in "*Data sheet 25802-XC*".
- ▶ It is imperative to provide for absolute cleanliness. The valve must be protected from dirt during installation. Contamination of the hydraulic fluid may considerably reduce the life cycle of the valve.
- ▶ Observe the installation position specified in "*Data sheet 25802-XC*".

7.4 Prior to assembly

WARNING

Explosion hazard due to wrong area of application!

A valve which is not approved for the area of application can cause explosions!

- ▶ Check whether all the explosion protection marks on the name plate of the valve comply with the information in these operating instructions.
- ▶ Please check if you have the right valve type by means of the type designation on the name plate of the valve.
- ▶ Check whether the zone assignment and the temperature class correspond to the area of application of the valve.

- ▶ Check the scope of delivery for completeness and possible transport damage.
- ▶ Also observe the safety instructions in chapter 2.6 "Product-specific safety instructions".
- ▶ Check whether the sealing is undamaged.
- ▶ Transport protection elements (e.g. cover plates, protective plugs) must be removed prior to use in an explosive atmosphere. Apart from that, plastic caps are not admissible for use in explosive atmospheres.

7.5 Required tools

You only require standard tools to assemble the valve.

7.6 Required accessories

The following accessories are recommended for the connection of the valve. These accessories are not included in the scope of delivery and can be ordered separately from Bosch Rexroth:

Valve mounting screws, valves for subplate mounting



For reasons of stability only use the valve mounting screws listed in "*Data sheet 25802-XC*".

Subplates



Subplates with dimensions for valves with porting pattern according to ISO 6264 are listed in the "*Data sheet 45100*".

Ordering address for accessories and valves

The address of our responsible sales organizations can be found on the Internet on www.boschrexroth.com and in the appendix 16.1 "List of addresses".

7.7 Assembling the valve



WARNING

Explosion hazard due to missing equipotential bonding!

There is an explosion hazard due to electric discharge as a consequence of electrostatic charging caused by fluid friction.

- ▶ Provide for correct grounding and provide for proper equipotential bonding.
- ▶ The subplate on which the valve is to be fitted and/or the housing in which the valve is to be screwed must be electrically conductive and included in the equipotential bonding.

Faulty installation of plug screws and lines!

Improperly fastened plug screws and lines may become loose during subsequent operation and fly around due to the pressure. This may cause serious injuries!

- ▶ Only pressurize your system after all plug screws and lines have been completely and properly mounted according to the specification.

Faulty mounting!

Mounting of the valve using valve mounting screws of reduced stability, insufficient mounting or fastening at blocks and plates with insufficient stability may cause the valve to become loose and fall down. Consequently, hydraulic fluid may leak and lead to personal injuries and/or damage to property. Special care must be taken with valves with suspended installation.

- ▶ Completely assemble the valve according to the assembly specifications using suitable assembly aids.
- ▶ Only assemble the valve at blocks or plates suitable for the weight of the valve.
- ▶ Observe the tightening torques, screw stability and the minimum length of the valve mounting screws.



CAUTION

Insufficient installation space!

Insufficient installation space may lead to jamming or abrasions in case of actuation and adjustment work at the valve.

- ▶ Provide for sufficient installation space.
- ▶ Ensure that actuation and adjustment elements are easily accessible.

Leaking hydraulic fluid!

Hydraulic fluid may leak during assembly and disassembly of the valve. Consequently, persons may slip or fall.

- ▶ Only remove the protective caps of valve directly before the assembly.
- ▶ After the disassembly, provide the bores containing the hydraulic fluid with suitable closing elements.
- ▶ Immediately remove leaked hydraulic fluid.

NOTICE

Wear, tear and malfunctions!

The cleanliness of the hydraulic fluid has a considerable impact on the cleanliness and life cycle of the valve. Any contamination of the hydraulic fluid will result in wear and malfunctions. Particularly foreign particles may damage the valve.

- ▶ Ensure cleanliness.
- ▶ Install the valve in clean condition.
- ▶ Make sure that all connections, hydraulic lines and attachment parts are clean.
- ▶ Ensure that no cleaning agents are able to penetrate the hydraulic system.
- ▶ Only use seal kits as listed in chapter 10.6 "Spare parts".

7.7.1 Assembly of valves for subplate mounting

1. Before any assembly and disassembly work starts, the environment must be cleaned so that no dirt can get into the oil circuit. Only fiber-free cloth or special paper may be used for cleaning.
2. Remove existing preservative agent.
3. Check the valve contact surface for the required surface quality (see "*Data sheet 25802-XC*"). Remove the protective plate from the valve and keep it safe for returns in case any repairs become necessary later.
4. Dry the valve connection surface using suitable cleaning materials.
5. Check the seal rings at the valve connection surface for completeness. Other sealants are not admissible.

CAUTION! Faulty assembly! Swapping the ports may cause damage to the valve in case of pressurization!

- ▶ Check whether with version Y (optional), the return line is connected to Y. If subplates according to "*Data sheet 45100*" are used, correctness of the ports with regard to P, T and X has to be ensured. The measuring port in X may only be used for pressure measurements.
6. Place the valve on the contact surface.



For reasons of stability only use the valve mounting screws listed in "*Data sheet 25802-XC*".

Always fasten the valve with all 4 valve mounting screws as otherwise, leak-tightness is not guaranteed.

7. When using the subplates mentioned under 7.6 "Required accessories" or in case of assembly on comparable cast iron installation surfaces, tighten all four valve mounting screws using a torque power screwdriver. The tightening torque refers to the maximum admissible operating pressure.
8. For variants with external pilot oil discharge (**Y**), observe the information in chapter 7.7.2 "Assembly of valves with threaded connection".

Table 7: Tightening torque of valves for subplate mounting

Valve type	Bolt dimension	Tightening torque
DB10...5X/...XC	M12 x 50	75 Nm $\pm$ 10%
DB20...5X/...XC	M16 x 50	185 Nm $\pm$ 10%
DB30...5X/...XC	M18 x 50	248 Nm $\pm$ 10%



If the valve is to be used at a reduced maximum pressure and is to be mounted on connection surfaces of a different material in this connection, it might be necessary to use a lower tightening torque in order to avoid any damage.

7.7.2 Assembly of valves with threaded connection

The ports of the valve must be clean and free from hydraulic fluid.

► Use non-linting fabric for cleaning the ports.

1. Remove the transport protection from the valve and keep it safe for returns in case any repairs become necessary later.
2. If required, fix the valve in place using the two valve mounting screws (see "Data sheet 25802-XC, unit dimensions: threaded connection").

WARNING! Faulty assembly! A valve with threaded connection which you install under high mechanical load generates additional forces during operation, which reduce the life cycle of the valve and of the overall machine or system.

► Mount the valve in a way that ensures that reaction forces which act on the valve (e.g. due to vibration, shock) and hydraulic forces which act on the connection lines (in particular when the line tears off) are absorbed by the fixation in a risk-free manner.

3. Check the seal rings at the pipe fitting for completeness. Other sealants are inadmissible.
4. Tighten pipe fittings which are directly screwed into the valve.



Observe the tightening torque information by the pipe fitting manufacturer.

CAUTION! Faulty assembly! Exchanging P and T or X and Y (with external versions) may cause damage at the valve in case of pressurization!

► Check whether at the threaded connections of the valve, the pressure connecting line is connected to P and, if applicable, to X. Check whether at the threaded connections of the valve, the return line is connected to T and, if applicable, to Y.

Table 8: Connection thread dimensions of the valves with threaded connection

Valve type	Dimension
DB10...5X/...XC	G 1/2
DB20...5X/...XC	G 1
DB30...5X/...XC	G 1 1/2

7.7.3 Hydraulic connection of the valve



Damage of the valve

During operation, hydraulic lines and hoses installed under mechanical stress create additional mechanical forces, which reduce the life cycle of the valve and the complete machine or system.

► Assemble lines and hoses without stress.

1. Depressurize the relevant system part.
2. Establish all connections. In this connection, observe the operating instructions of the system.
3. Make sure that pipes and/or hoses are connected to all ports and/or that the ports are closed with plug screws.
4. Carry out a special check to make sure that the cap nuts and flanges are correctly tightened at the pipe fittings and flanges.



Mark all checked fittings, e.g. using a permanent marker.

5. Make sure that all pipes and hose lines and every combination of connection pieces, couplings or connection points with hoses or pipes are checked for their operational safety by a person with appropriate knowledge and experience.
6. To avoid exceeding the maximum admissible operating pressure, the operating pressure must be checked using a suitable measuring device during adjustments.

8 Commissioning

WARNING

Explosion hazard caused by spark formation!

During adjustment works, adjustment speeds >1 m/s may cause inadmissible heating of the valve and generate an ignition spark!

- ▶ Operation of the adjustment element is only admissible without additional aids and only manually.

Faulty assembly!

If the valve is not correctly mounted, persons might be injured and the valve or system could be damaged when commissioning the valve.

- ▶ Only commission your system after all hydraulic connections and the valve have been completely and properly mounted according to the specifications.
- ▶ Look out for defective sealing points and exchange defective seal rings immediately.
- ▶ Wear personal protective equipment during the initial commissioning.

Damage to persons and property!

Commissioning of the valve requires basic hydraulic and electrical knowledge.

- ▶ Only qualified personnel (see section 2.4 "Qualification of personnel") is authorized to commission the valve.

- ▶ Make sure that all hydraulic connections are closed.
- ▶ Commission the valve only if it is completely installed.
- ▶ Immediately depressurize the system if hydraulic fluid still leaks despite proper assembly and continue with chapter 14 "Troubleshooting".

Precautions against excessive pressure

To make sure that the maximum admissible pressure for the relevant system is not exceeded during initial commissioning, the valve must be set to the minimum adjustable pressure by turning the adjustment device counter-clockwise before pressurization.

Bleeding the hydraulic system



Observe the operating instructions of the device and/or system into which the valve is installed.

Switch the valve several times under operating pressure before the actual operation. This will press out any remaining air from the valve. Thus, mechanical damage being caused by inadmissibly high acceleration of the fluid and the closing element is avoided and the life cycle of the valve is extended.

Performing the leak test

Check whether during operation hydraulic fluid leaks at the valve and at the ports.

Information on the hydraulic fluid

The released operating media and limitations of operation for your valve are contained in "Data sheet 25802-XC".

9 Operation

9.1 General information

WARNING

Explosion hazard by the ignition of dust accumulations!

If the maximum dust layer thickness of > 50 mm is exceeded, there is an explosion hazard!

- ▶ Ensure that the maximum dust layer thickness according to EN 60079-14 and/or EN 1127 is not exceeded.
- ▶ Regularly remove dust accumulations, if required.

CAUTION

Loud noise!

In case of an unfavorable disposition of valves, resonance or fluid noises, e.g. whistling, may result. In continuous operation, these noises may cause hearing damage in persons or damage at the valves.

- ▶ In this case, contact a service engineer.

- ▶ Only use the valve within the performance range provided in "*Data sheet 25802-XC*". The machine and/or system manufacturer is responsible for the correct project planning of the hydraulic system and its control.
- ▶ Modifications of settings on the valve are not admissible.
- ▶ It must be ensured that
 - discharge lines of valves end in a risk-free way
 - no fluid can accumulate in the discharge lines.



For information on the operation, please refer to the operating instructions for the hydraulic system into which the valve is installed.

If errors occur, refer to chapter 14 "Troubleshooting".

9.2 Setting the valve to the desired response pressure



WARNING

Explosion hazard! Damage to persons and property!

Depending on the adjustment position and the flow the valves may exceed the max. pressure range.

- ▶ The set pressure must be monitored by means of a pressure gauge.
- ▶ Operation of the measuring port with pressure gauge is only admissible in non-ignitable environments.
- ▶ Observe the counter pressure.

Explosion hazard caused by spark formation!

During adjustment works, adjustment speeds >1 m/s may cause inadmissible heating of the valve and generate an ignition spark!

- ▶ Operation of the adjustment element is only admissible without additional aids and only manually.

The valves can be set to any response pressure within the admissible pressure range ($p_{\min}$ to $p_{\max}$, see "Data sheet 25802-XC").

For convenience, the system into which the valve is installed should be equipped with a pressure gauge which indicates the pressure at port P. Alternatively, a pressure gauge can be temporarily connected to the additional measuring port which is normally sealed by a plug screw. This does not apply to type DB..G...5X/..X..

1. Deactivate or remove any other pressure limiting functions of the system which act on the pressure port P. Seal any resulting openings, if required.
2. With systems without installed pressure gauge, connect a pressure gauge to the measuring port in the line which leads to the pressure port (see "Data sheet 25802-XC, unit dimensions").
3. Turn the adjustment element counter-clockwise to the port (unload valve) to start at the lowest possible response pressure.
4. Switch on the system and wait until the system pressure has built up.
5. Setting the desired response pressure:
Turn the adjustment element to the **right** to set the pressure relief valve to a higher response pressure. Turn the adjustment element to the **left** to set the pressure relief valve to a lower response pressure.
6. Hold the adjustment element at the desired set pressure and tighten the lock nut with 10...15 Nm.
7. After removal of the pressure gauge at the measuring port, the measuring port bore is to be sealed with the plug screw again
($M_a = 30 \pm 3 \text{ Nm}$). Make sure that the seal is available and correctly seated.



To prevent dust from entering the adjustment device, the nut must be counteracted at the valve body.

10 Maintenance and repair

10.1 Cleaning and care

NOTICE

Penetrating dirt and fluids will cause faults!

Safe function is no longer ensured due to the ingress of dirt and liquids.

- ▶ Always ensure absolute cleanliness when working at the valve.

Solvents and aggressive cleaning agents!

Aggressive cleaning agents may damage the seals and the surface of the valve and let them age faster.

- ▶ Never use solvents or aggressive cleaning agents.
- ▶ Observe the ignition temperature of the cleaning agent.

Damage to the hydraulic system and seals!

A high-pressure washer's water pressure could damage the hydraulic system and the seals of the valve. The water displaces the oil from the hydraulic system and seals.

- ▶ Do not use high-pressure washers for cleaning.

For cleaning and care of the valve, observe the following:

- ▶ Close all openings with appropriate protective caps/devices.
- ▶ Ensure that all seals are firmly attached so that no humidity can penetrate the valve during cleaning.
- ▶ Remove external coarse dirt and keep sensitive and important parts clean.
- ▶ Remove dust and dirt accumulations on the valve at regular intervals. Comply with the max. admissible dust layer thickness according to EN 60079-14.
- ▶ Only clean the valve using a damp, non-linting cloth. Only use water and, if necessary, a mild cleaning agent.

10.2 Inspection and maintenance

WARNING

Uncontrolled machine movements!

Risk of injury due to maintenance work at an activated machine.

- ▶ Unless expressly prescribed otherwise, deactivate the machine via the main switch, lock it and remove the key before carrying out works.

The following inspection, testing and maintenance works are to be carried out regularly. The intervals for the same have to be selected in a way - also dependent on the operating conditions - that deficiencies that have to be anticipated are identified timely. The check must, however, at least be carried out every **three years from the date of manufacture of the valve**. The date of manufacture of the valve can be found on the name plate, see chapter 5.1.1.



Before initial commissioning or re-commissioning of the valve in the system, check whether the valve requires maintenance. If required, carry out maintenance.

For order details for seal kits, please refer to chapter 10.6 "Spare parts".

In order to ensure a long life cycle and functionality, include the following activities in your maintenance schedule for the overall system:

1. Remove coarse dirt from the exterior.
2. Check valve for external leakage. Replace the seals, if required, see chapter 10.5 "Rectifying external leakage". For order details regarding the seal kits, refer to chapter 10.6 "Spare parts".
3. Check all external fittings for completeness and firm seat.
4. Check the valve function regarding the application conditions.

10.3 Maintenance schedule

Valves require low maintenance when you use them as intended.

For a long and reliable operation of the valve, Bosch Rexroth recommends to regularly check the hydraulic system and the valve.

10.3.1 Checking for leakage

Check the valve for leakage. Early detection of hydraulic fluid loss may help you to identify and remedy errors. Bosch Rexroth therefore recommends that you keep the valve and/or the system permanently clean.

10.3.2 Checking for noise development

Check the valve for noise development. Based on noise development or the increase of noise development, a possible failure of one or several components can be recognized in time and consequential damage can be avoided.

10.3.3 Checking the mounting elements

Check that the mounting elements are attached firmly. All mounting elements are to be checked with the system being switched off, depressurized and cooled down.

10.4 Repair

WARNING

Explosion hazard due to improper repair!

In case of improper repair, the explosion protection no longer applies in subsequent operation!

- ▶ For repair works, the valve may only be disassembled to the extent described in these operating instructions.
- ▶ Defective parts may only be replaced by new, interchangeable components in original equipment quality.
- ▶ The sealing between main and pilot stage may not be removed.

10.5 Rectifying external leakage

External leakage at the valve connection surface can be rectified on site.

With other leakage, the valve must be replaced by a new valve (see chapter 14 "Troubleshooting").



Only the seals indicated in chapter 10.6 "Spare parts" may be used. Using other seals is not admissible!

10.5.1 Rectifying leakage at the valve connection surface

1. Switch off the hydraulic power unit, let the pressure decrease and relieve any pressure accumulators, if applicable.
2. Remove the safety valve, see chapter 11 "Disassembly and removal".
3. Check whether the recesses for the seal rings at the valve connection surface are clean and intact.
4. Dry the valve connection surface and the valve contact surface using suitable cleaning materials.
5. Assemble the new seals, observe the suitability of the seal material for the hydraulic fluid used.
6. Assemble the valve, see chapter 7 "Assembly".

If hydraulic fluid continues to leak after re-installation, the valve is defective. Send the valve back to the manufacturer for replacement.

10.5.2 Rectifying leakage at port X or Y

1. Depressurize the system. Verify the depressurized state using a pressure gauge so that the ports can be opened in a risk-free manner.
2. Remove the plug screw using a suitable tool (internal hexagon, wrench size 6).
3. Check whether the surface for the seal ring is clean and intact.
4. Screw the plug screw in again and tighten it using a torque power screwdriver and a tightening torque of 30 ± 3 Nm. Make sure that the seal is available and correctly seated.

10.6 Spare parts

FKM seal kits for the valve connection surface of valves for subplate mounting

Table 9: Spare seal kit for the valve connection surface

Valve type	Material number
DB10...5X/...XC	R961001283
DB20...5X/...XC	R961001290
DB30...5X/...XC	R961001293

Plug screws

Table 10: Spare plug screws

Connection	Dimension	Material number
Y port	G 1/4	R913011609
X port	G 1/4	R913011609

Seals for directional valve



See operating instructions of the relevant directional valve.

The operating instructions of the directional valve can be found at:

www.boschrexroth.com/medienverzeichnis

In case of questions about spare parts, please contact your responsible

Bosch Rexroth Service:

Bosch Rexroth AG

Service Hydraulics

Bürgermeister-Dr.-Nebel-Str. 8

97816 Lohr am Main

Tel: +49 (0) 9352/40 50 60

service@boschrexroth.de

For the addresses of our sales and service network, please refer to:

www.boschrexroth.com/adressen

11 Disassembly and removal



WARNING

Danger of damage to property and personal injuries at energized or pressurized system parts!

For works at pressurized or energized system parts, there is a danger of injury by escaping hydraulic fluid or electric energy.

- Before disassembly, ensure that the hydraulic system is depressurized, and the electrical control is de-energized.

CAUTION

Falling of an incompletely disassembled valve!

An incompletely disassembled valve may fall down and cause injuries.

- ▶ During the disassembly, secure the valve against falling down.

Have sufficiently dimensioned collecting containers, sufficient cleaning cloths and medium-binding materials ready in order to collect or bind leaking hydraulic fluid.

1. De-energize and depressurize the relevant system part.
2. Unload the pressure accumulators, if available.
3. Let the valve cool down until it can be removed in a risk-free manner.
4. If applicable, professionally remove the electric connections at the directional valve which may be attached.
5. Prepare a container for collecting leaking hydraulic fluid.
6. Detach the valve from the pipelines or the subplate using appropriate tools.
7. Loosen the mounting screws of the valve and remove them.
8. Collect escaping hydraulic fluid in the provided container and dispose of it properly.
9. If the valve is to be returned to the manufacturer for repair, close the valve connection surface using the protective plate supplied or seal the ports using protective covers or equivalent packaging in order to avoid contamination and damage.
10. Seal the subplate and/or the pipelines in order to avoid contamination.
11. Properly dispose of the collected hydraulic fluid.

If the valve is exchanged, all further steps are analogous to mounting, see chapter 7 "Assembly".

12 Disposal

12.1 Environmental protection

Careless disposal of the valve and the hydraulic fluid may lead to environmental pollution.

- ▶ Thus, dispose of the product and the hydraulic fluid in accordance with the currently applicable national regulations in your country.
- ▶ Dispose of hydraulic fluid residues according to the applicable safety data sheets for these hydraulic fluids.
- ▶ Please observe the following information for the environmentally-friendly disposal of the valve.

12.2 Return to Bosch Rexroth AG

The hydraulic products manufactured by us can be returned to us for disposal purposes at no costs. There must be no inappropriate foreign substances or third-party components when products are returned. Valves are to be drained before being returned. The components have to be sent free to the door to the following address:

Bosch Rexroth AG
Service Industriehydraulik [Industrial Hydraulics]
Bürgermeister-Dr.-Nebel-Straße 8
97816 Lohr am Main
Germany

12.3 Packaging

Upon request, reusable systems can be used for regular deliveries.

The materials for disposable packaging are mostly cardboard, wood, and expanded polystyrene. They can be recycled without any problems. For ecological reasons, disposable packaging should not be used for returning products to Bosch Rexroth.

12.4 Materials used

Hydraulic components from Bosch Rexroth do not contain any hazardous materials that could be released during intended use. Normally, no negative effects on human beings and on the environment have to be expected.

The valves are basically made of:

- Cast iron
- Steel
- Copper
- Plastics
- Electronics components and assemblies
- Elastomers

12.5 Recycling

Due to the high metal content, hydraulic products can mostly be recycled.

In order to achieve an ideal metal recovery, disassembly into individual assemblies is required. The metals contained in electric and electronic assemblies can be recovered by means of special separation procedures as well.

13 Extension and modification

WARNING

Explosion hazard due to inadmissible modification!

Any unauthorized modification results in the loss of the explosion protection.

- ▶ Modifications exceeding the extent described in these operating instructions are not permitted.
- ▶ The pilot control valve may not be disassembled.

13.1 Modification of the valve to solenoid-actuated unloading

WARNING

Explosion hazard due to ignitable atmosphere during modification of the valve to solenoid-actuated unloading!

During modification, there must not be an explosive atmosphere. During work at the valve, this condition could trigger an ignition which may lead to an explosion.

- ▶ Before modification of the valve to solenoid-actuated unloading, ensure that no explosive atmosphere can occur during the work.

Explosion hazard!

A valve which is not approved for the area of application (solenoid-actuated unloading) may cause an explosion!

- ▶ Prior to modification, it must be checked whether category and protection class which result from the combination of pressure relief valve and directional valve meet the requirements of the relevant potentially explosive area.
See "*Data sheet 25802-XC, solenoid-actuated unloading*".
- ▶ Other modifications are not admissible. In particular, the pilot control valve **(4)** must not be removed from the main stage **(5)**.
- ▶ The modification to solenoid-actuated unloading may only be made prior to commissioning.

Damage to persons and property caused by faulty assembly!

If the cover plate **(2)** and the sealing plate **(3)** have been removed for modification to solenoid-actuated unloading, leakage and thus damage to persons and property may result in case of faulty re-assembly of the sealing plate on the pressure relief valve.

- ▶ After disassembly of the cover plate **(2)** and the sealing plate **(3)**, see below, they must not be reattached at the pressure relief valve.
- ▶ In case reassembly of the cover plate and the sealing plate is required, send the pressure relief valve to Bosch Rexroth, see chapter 16.1 "List of addresses".

By attaching a directional spool valve 3WE 6..., the valve can be modified so that it can be switched to depressurized circulation by electric control, if required.

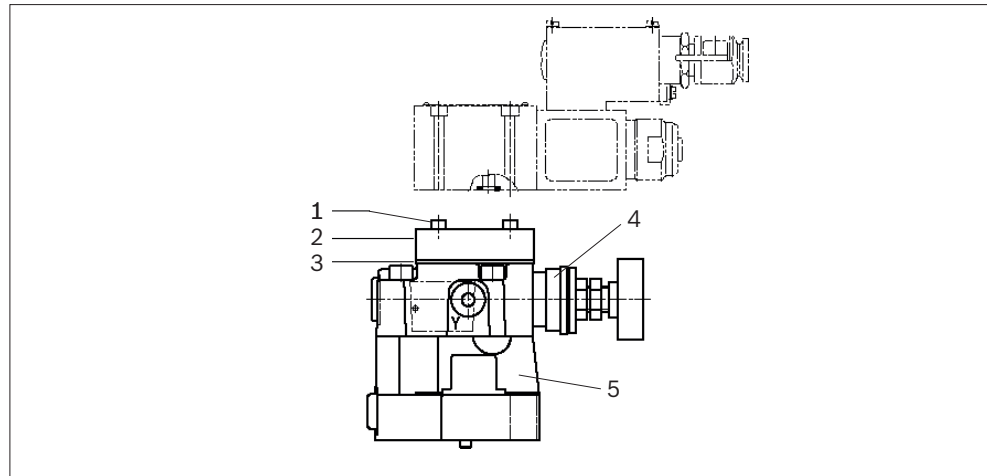


Fig. 2: Example of solenoid-actuated unloading

- 1** Mounting screws
- 2** Cover plate
- 3** Sealing plate
- 4** Pilot control valve
- 5** Main stage

- 1.** Remove the 4 mounting screws **(1)** and remove the cover plate **(2)** including sealing plate **(3)** from the pressure relief valve.
- 2.** Check whether the seals and sealing surfaces are intact. The directional valve may only be mounted if the sealing surfaces and seals are intact. Seals are included in the scope of delivery of the directional valve.
- 3.** Assemble the directional valve. In this connection, observe the operating instructions of the directional valve. Only the screws specified in the relevant operating instructions and the prescribed tightening torque may be used for mounting.
- 4.** Establish the electrical connection, see operating instructions of the directional valve.

14 Troubleshooting and fault correction

14.1 How to proceed for troubleshooting

- ▶ Always work systematically and purposefully, even when under time pressure. Random, thoughtless disassembly and changing of settings might in the worst case result in the inability to restore the original cause of error.
- ▶ First get a general idea of the function of your valve in conjunction with the overall system
- ▶ Try to find out whether the valve functioned properly in conjunction with the overall system before the error occurred.
- ▶ Try to determine any changes to the overall system in which the valve is integrated:
 - Were there any changes to the application conditions or to the area of application of the valve?
 - Have any changes (e.g. refittings) been made or have repair works been carried out at the overall system (machine/system, electrical systems, control) or at the valve? If so: What were they?
 - Was the valve or machine used as intended?
 - How did the fault become apparent?
- ▶ Try to get a clear idea of the cause of error. Ask the direct (machine) operator, if necessary.

Fault table The valve is not sensitive to faults as long as the specified application conditions are complied with, in particular the oil quality and the operating temperature.

Table 11: Fault table

Error	Possible cause(s)	Remedy
Desired operating pressure cannot be set	Spring broken - Material fatigue - Material defect	Remove valve and replace it with a new one or send valve to Bosch Rexroth for repair, see chapter 16.1 "List of addresses"
Valve responds at insufficient pressure.	Response pressure set wrongly	Set a different response pressure, see chapter 9.2 "Setting the valve to the desired response pressure"
	A valve with unsuitable pressure rating has been installed.	Check the specified pressure rating of the valve at the name plate. Select and order a valve with suitable pressure rating.
Valve only responds at excessive pressure.	Response pressure set wrongly.	Set a different response pressure, see chapter 9.2 "Setting the valve to the desired response pressure"
Valve is oscillating	The valve, together with other components, constitutes an oscillating system in which there are regulating oscillations.	Find cause and take remedial action

Error	Possible cause(s)	Remedy
Sealing of the connection between main stage and pilot control valve is damaged or missing.	The lead seal has been destroyed by the operating personnel or mechanical influence.	Send valve to Bosch Rexroth for repair, see chapter 16.1 "List of addresses".
External leakage	The seal of the adjustment device is worn.	Remove valve and replace it with a new one or send valve to Bosch Rexroth for repair, see chapter 16.1 "List of addresses"
	Plug screw at X or Y port is leaking; seal ring at the plug screw is worn	Replace plug screw; make sure the sealing surface is intact. Screw-in the plug screw and tighten it using the specified tightening torque, see chapter 10.5.2 "Rectifying leakage at port X or Y"
Leakage at the valve connection surface	The valve is leaking between the housing and the connection surface or pipe fitting. The seal ring in the housing connection surface is worn.	Order new seal kit according to the spare parts list (see chapter 10.6 "Spare parts") and replace the seal ring. Install the valve according to the specifications in chapter 7 "Assembly".
Leakage at the transition from the pilot control valve to the attached directional valve	Seal between the pilot control valve and the directional valve is worn.	Check whether the sealing surfaces and seals are intact. Damaged seals may not be used anymore and must be replaced by new seals.
Leakage at the transition from the main stage to the pilot control valve	Seal between main stage and pilot control valve is worn.	Send valve to Bosch Rexroth for repair, see chapter 16.1 "List of addresses"
Rotary handle is destroyed	Transport damage, improper handling	Send valve to Bosch Rexroth for repair, see chapter 16.1 "List of addresses"
Name plate is missing or cannot be completely read		Replace the valve
Leakage at the transition from the pilot control valve to the cover plate		Send valve to Bosch Rexroth for repair, see chapter 16.1 "List of addresses"

Following faults due to contamination, it is - in addition to the repair - essential to check the oil quality and improve it, if necessary, by suitable measures such as flushing or the additional installation of filters.

15 Technical data

For the technical data of your valve please refer to "Data sheet 25802-XC".

16 Appendix

16.1 List of addresses

Contacts for service and spare parts

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97816 Lohr am Main
Germany

Phone +49 (0) 9352/40 50 60
Email service@boschrexroth.de

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The addresses of our sales and service network and sales organizations can be found at www.boschrexroth.com/adressen

17 Declaration of conformity


EU-Konformitätserklärung - Original
EU declaration of conformity

Dok.-Nr. / Doc. No.: DCTC 31001-026

Datum / Date: 21.05.2019

- ☐ nach Maschinenrichtlinie 2006/42/EG / in accordance with Machinery Directive 2006/42/EC
☐ nach Niederspannungsrichtlinie 2014/35/EU / in accordance with Low Voltage Directive 2014/35/EU
☐ nach EMV-Richtlinie 2014/30/EU / in accordance with EMC Directive 2014/30/EU
☐ nach Druckgeräte-Richtlinie 2014/68/EU / in accordance with Pressure Equipment Directive 2014/68/EU
☒ nach ATEX-Richtlinie 2014/34/EU / in accordance with ATEX Directive 2014/34/EU
☐ nach RoHS-Richtlinie 2011/65/EU / in accordance with RoHS Directive 2011/65/EU

Hiermit erklärt der Hersteller, / The manufacturer

Bosch Rexroth AG
Zum Eisengießer 1
97816 Lohr am Main
Deutschland

dass das nachstehende Produkt / hereby declares that the product below

Bezeichnung / Name: **Druckbegrenzungsventil, vorgesteuert / Pressure relief valve, pilot operated**
 Typ / Type: **DB...5X/...XC**
 Kennzeichnung / Marking: **I M2, II 2G, II 2D**

in Übereinstimmung mit oben genannte(n) Richtlinie(n) entwickelt, konstruiert und gefertigt wurde. / was developed, designed and manufactured in compliance with the above-mentioned directive(s).

Die alleinige Verantwortung für die Ausstellung dieser EU-Konformitätserklärung trägt der Hersteller. / This EU declaration of conformity is issued under the sole responsibility of the manufacturer.

Angewandte harmonisierte Normen / Harmonized Standards applied:
EN 80079-36: 2016; EN 80079-37: 2016; EN 80079-38: 2017

Weitere Erläuterungen / Further explanations:

Die Montage- und Installationshinweise gemäß Produktdokumentation sind zu beachten. / The assembling and installation instructions according to the product documentation have to be followed.

 RA56909433
 DCTC-31001-026_KOE_M_DE_EN_2019-05-21.docx

Lohr am Main Ort / Place	21.05.2019 Datum / Date	i.V. Achim Richartz, DC-IH/EHC Leiter Entwicklung Head of development	i.V. Thomas Lettmann, LoP1/PT Leiter Fertigung Head of production
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Änderungen im Inhalt der EU-Konformitätserklärung sind vorbehalten. Derzeit gültige Ausgabe auf Anfrage.
 We reserve the right to make changes to the content of the EU Declaration of Conformity. Current issue on request.

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