

PHOENIX Armaturenwerke GmbH

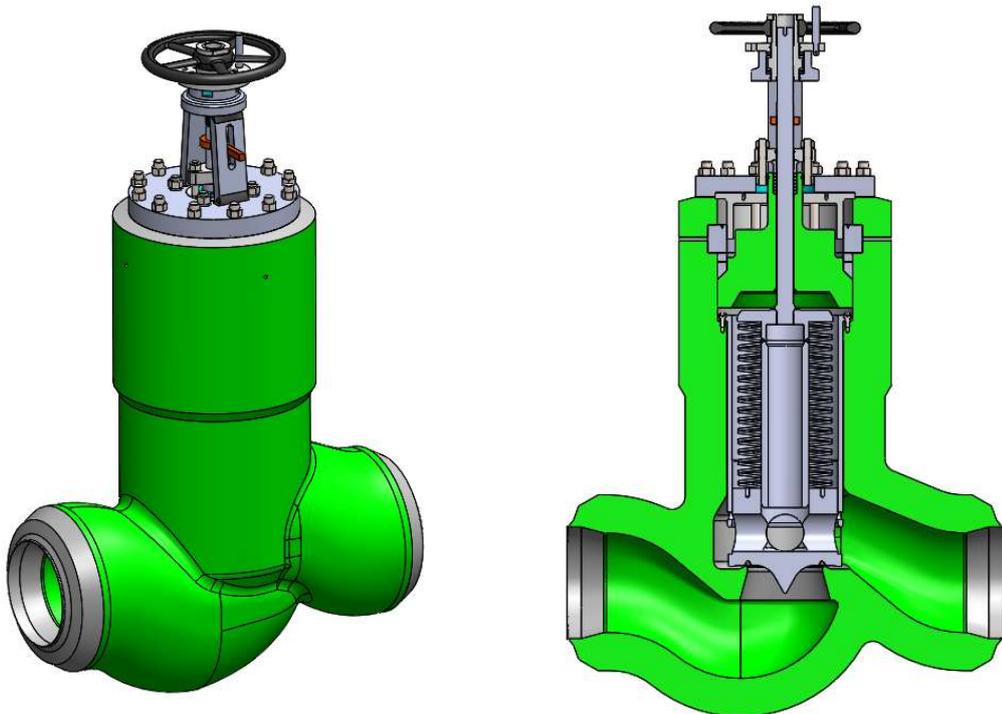
Brand: STRACK



Operation Instruction for Lift Plug Valves

BA S600-E-SLBV

Edition 2023-08-00



Ausgabe	0								
Datum	Name	08/23	Wo						
Ausgabe									
Datum	Name								

Operating Instruction Spring Loaded Bypass Valves

Declaration of Conformity acc. to Directive 2014/68/EU

The manufacturer	PHOENIX Armaturenwerke GmbH 34471 Volkmarsen, Germany
declares that the	Brand STRACK , STRACK Armaturenwerke GmbH Lift plug valves types S50 and S51 • Operation with handwheel or gear or gear and actuator
<ol style="list-style-type: none">are pressure bearing equipments within the meaning of the EC Pressure Equipment Directive 2014/68/EU and in conformity with the requirements of this directive, Note: Lift plug valves < DN 32 are not concerned by this directivecan only be used and operated under observance of the attached operation manual N° BA S600-SLBV.	

Related standards:

EN 16668	Industrial Valves-Requirements for metallic valves as pressure accessories
EN 12516	Calculation of valve bodies of steel – Part 1: Table method
ASME B16.34	Valves-Flanged, Threaded, and Welding Ends

Description of type and technical features:

STRACK-type data sheets < S600 >

NOTE: This manufacturer declaration is valid for all variants of type mentioned in the STRACK catalogue

Applied procedure for the rating of the conformity:

to Annex II of the Pressure Equipment Directive 2014/68/EU Module „H“

Name of the notified body:

Identification N° of the notified body:

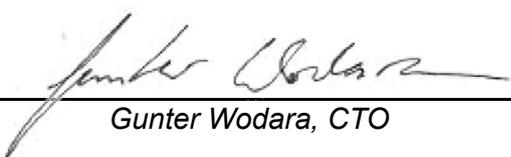
LRQA Deutschland GmbH

0525

Modifications on Lift plug valves and/or components with consequences for the technical features of the valve, of the “defined use” acc. to section 1 of the operation instruction and which will modify the valve essentially cancel these declarations.

According to the guidelines for the application of the Council’s general direction 2014/34/EU 26.02.2014 for adapting legal regulations valid in the single member countries and dealing with apparatuses and safety systems and their application in areas endangered by explosion, lift plug valves do not have an integrated potential source of sparks as revealed by the danger of releasing sparks analysis. Due to this, lift plug valves are not subject to the guideline mentioned above.

Volkmarsen, 24.08.2023



Gunter Wodara, CTO

TABLE OF CONTENTS

- 0. Introduction
- 1. Defined Use
- 2. Safety Instruction
 - 2.1 General Safety Instruction
 - 2.2 Safety Instruction for the User
 - 2.3. Special Risk
 - 2.4. Marking of the Valve
- 3. Unauthorized Modification and Manufacture of Spare Parts
- 4. Transport and Storage
- 5. Installation into the Piping System
 - 5.1 General
 - 5.2 Working Steps
- 6. Pressure Test of the Piping Section
- 7. Information

Operating Instruction Spring Loaded Bypass Valves

0. Introduction

These operating instructions shall provide the user support for installation, operation and maintenance of spring-loaded bypass valves type **S600**.

 Warning	<p>Failure to heed or comply with this warning could cause danger and result in the in the revocation of the manufacturer's guarantee.</p> <p>For questions pertaining to this or any other matters, please contact the manufacturer at the address listed in Section 7.</p>
---	---

1. Defined Use

After installation in a piping system (either between flanges or by welding), the use of the valves **type S600** is exclusively defined as stopping or conveying the flow of media within the admitted pressure and temperature limits. The use of these valves for media with solid matters, especially with abrasive particles, is not recommended.

 Warning	<p>The valves are not allowed to be operated outside the permissible operating range, especially with regard to pressure and temperature. The limits are indicated on the name plate.</p>
---	---

The safety instructions in Section 2 shall be observed at all times.

2. Safety Instructions

2.1 General Safety Instructions

Valves are subject to the same safety instructions applicable for the piping system in which the valves shall be installed. Hence, the present instructions mention only instructions which should additionally be taken into consideration for valves.

 Life Threatening	<p>The valves shall be operated within the permissible operating range, especially with regards to pressure and temperature. The limits are indicated on the name plate Valves for which the permissible pressure-temperature range is not sufficient for the operating conditions shall not be used. For materials, pressure or temperatures not indicated in the above-mentioned name plate, a release note from the manufacturer is mandatory.</p> <p>Failure to comply with this warning can endanger life and physical condition and/or cause damage to the piping system.</p>
--	--

2.2 Safety Instructions for the User

It is not within the responsibility of the manufacturer and therefore must be ensured by the user of the spring-loaded bypass valve that

⇒ the valve is only to be used as described in Section 1 "Defined Use".

 Danger	<p>Protection against improper use of the valves :</p> <p>In particular it must be ensured that the selected materials of the wetted parts of the valve are suitable for the handled media. The manufacturer is not responsible for damage to the valves caused by corrosive agents.</p> <p>Failure to heed or comply with this warning can cause danger to the user and/or cause damage to the piping system.</p>
--	--

Operating Instruction Spring Loaded Bypass Valves

- ⇒ the valve shall be professionally installed in the piping system, especially such types of valves which are fitted into the piping system by welding.
- ⇒ in this piping system, the usual flow rates in continuous operation shall not be exceeded and exceptional operating conditions such as vibrations, water hammers, cavitation and higher percentages of solid matters in the media – especially abrasive ones – shall be cleared with the manufacturer,
- ⇒ valves used at operating temperatures $>+50^{\circ}\text{C}$ or $<-10^{\circ}\text{C}$, together with the pipeline connections are protected against contact,
- ⇒ only competent employees qualified for pressure bearing piping systems shall operate and maintain the valves.

2.3 Special Risks

 Life Threatening	the operating stem is sealed by a stuffing box. Before loosening the nuts on the gland follower, the piping system shall be completely depressurized to avoid any leakage of the media out of the stuffing box.
 Life Threatening	Before removing the valve from the piping system and/or before loosening the bolts and nuts of the bonnet the piping system shall be completely depressurized to avoid any uncontrollable fugitive emission of the media.
 Danger	When a valve is removed from the piping system, media can escape either from the piping and/or the valve. For liquids which are harmful to health or dangerous, the piping system must be completely drained before the valve can be removed from the system. Be careful of residues coming out of or remaining in dead spots of the valve or the piping system itself.

2.4 Marking of the Valve

Each valve body is generally hard stamped as follows

For	Marking	Note
Body material	e.g.: 1.7383 / A182 F22	N° of material standard to EN 12516, Part 1 or/and ASME material standard
Heat-/ Melt N°	e.g.: 566212	Heat-/Melt N° of the forging shop

Each valve is generally fitted with a name plate as follows:

For	Marking	Note
CE mark	CE	In accordance with PED 2014/68/EU Art. 4 valves without safety functions $>\text{DN } 32$ and above shall bear the CE mark.
Code	0525	Identified according to EU Guideline as Lloyds Register
Brand	STRACK (SAG)	Is the logo for <STRACK Armaturenwerke GmbH>
Manufacturer	PHOENIX (PAG)	PHOENIX Armaturenwerke GmbH
Date of manufacture	e.g.: 05/09	The first figures indicate the calendar week of manufacture, the last figures are the year of manufacture, e.g. (09 = 2009)
Valve type	Type (and numerical value)	e.g. Type S600, see STRACK data sheet

Operating Instruction Spring Loaded Bypass Valves

Material	e.g.: 1.7383	N° of body material standard to EN 12516, Part 1 or/and ASME material standard
Trim	e.g.: Stellite	
Size	DN or NPS (and numerical value)	Numerical value in mm (e.g. DN 200) or inch (NPS 8)
Design Pressure	e.g.: 200 bar	Numerical value in [bar]
Design Temperature	e.g.: 550 °C	Numerical value in [°C]
Shell Test Pressure	e.g.: 200 bar	Numerical value in [bar]
Tag No	e.g.: KKS no: W1LCC27BP001	Additional information

3. Unauthorized Modification and Manufacture of Spare Parts

Modifications or alterations to the valve are only permitted after consultation with the manufacturer. Original spare parts and accessories authorized by the manufacture ensure safety. The use of other parts can invalidate any liability of the manufacture for subsequent damage.

4. Transport and Storage

Valves shall be carefully handled, transported and stored:

- ⇒ The valve shall be stored in its protective packing and/or with its protective caps on the inlet and outlet. Valves weighing more than 10 kilos shall be stored and transported on pallets (or similar), even during transport to the installation site.

 Warning	<p><i>To protect the valve against damage :</i></p> <p>Ropes and belts shall only be fixed on body or yoke but never on the handwheel, stem or actuator!</p>
---	--

- ⇒ Before installation the valve shall be stored in a closed area and shall be protected against detrimental influences such as dirt and humidity.

5. Installation into the piping system

5.1 General

Responsibility for the positioning and installing the valves always lies with the engineering company, the construction company or the plant user. Planning and installation errors may impair the reliable function of the valves and pose a substantial safety hazard.

For the installation of valves into a system, the same instructions are valid as for the connection of pipes and similar piping components. For the transport to the installation site please read the information provided in Section 4 of this manual.

 Note	<p>Spring loaded bypass valves which are to be installed in a horizontal pipeline should be installed with the stem pointing upwards.</p>
--	--

 Warning	<p><i>To avoid damage to spring loaded bypass valves with welded ends:</i></p> <p>During the welding of the valves into the piping system, the welding procedure shall be performed in such a way that the applied heat energy is limited and distortion of the valve body is avoided. Therefore, larger sizes shall be welded in alternating</p>
---	---

Operating Instruction Spring Loaded Bypass Valves

	procedures once from one side and then from the other to avoid distorting the valve body.
--	---

Handwheels:

 Danger	<i>Handwheels are neither "stepboards" nor "ladders".</i> Heavy loads shall not be placed on handwheels; as this can damage or destroy both the handwheel and/or the valve.
--	--

5.2 Working steps

- ⇒ Transport the valve in its protective packing to the installation site and unpack the valve just before fitting it into the piping system. This ensures that the valve is protected against contamination.
- ⇒ Inspect the valve for possible transport damage. Damaged valves shall not be installed.
- ⇒ Before installation a functional test shall be performed. The valve must close and open correctly. Any noticeable functional failures must be repaired before the commissioning of the valve. See also section 7.
- ⇒ Make sure that only valves are installed whose pressure rating, type and dimensions of connections correspond to the operating conditions. In this regard, please also see the related marking of the valve.

 Life Threatening	The valves shall be operated inside the permissible operating range, especially with regards to pressure and temperature. The limits are indicated on the name plate. Valves whose admitted pressure-temperature range is not sufficient for the operating conditions shall not be used. For materials or pressures or temperatures not indicated in the above-mentioned name plate, a release note from the manufacturer is mandatory. Failure to comply with this warning can be life-threatening and/or cause damage to the piping system.
--	---

- ⇒ The connections of the pipeline shall be in complete alignment with the end connections of the valve and have plane-parallel ends.
- ⇒ Before installation, both the valve and the connecting pipe must be carefully cleaned to remove dirt, contaminations and especially any hard foreign particles.

For valves with welded ends:

- ⇒ The welded ends of the valve shall be in true alignment, plane parallel and must be similar to and suitable for the pipe material – please see type plate on the valve. Opposite welded ends must match each other as far as diameter and weld joints are concerned.
- ⇒ Responsibility for the welding the valve into the piping and for any heat treatment required lies with the contractor or the plant user.
- ⇒ When welding is performed in a professional manner, it can be certain that no considerable tension will be created in the piping section or be transferred to the valve nor will the valve body be distorted due to unilateral heat exposure during the welding procedure. Only temperatures of < 300°C, measured on the body wall, are permitted.
- ⇒ Weldings must be performed in a professional manner
- ⇒ Welding cables shall be affixed to the pipeline and not to the valve.



Warning

Negligence of this warning can cause distortion to the valve body. Even 1/10 mm of permanent distortion in the seat area of the valve can result in the valve becoming unusable.

6. Pressure Test of the Piping Section

For the pressure test of valves, the same instructions are valid as for the piping system. In addition the following shall be considered:

- ⇒ Newly installed piping systems shall be carefully flushed clean to remove all foreign particles.
- ⇒ The test pressure of an **opened valve** shall **not exceed the Shell test pressure according to the nameplate.**
- ⇒ The seat test pressure shall **not exceed 30 bar, Flow to Close (FTC)**

7. Information

The data sheets, drawings and maintenance instructions and other information are also available in other languages. Please direct your request to:

Info@phoenix-valvegroup.com oder <http://www.phoenix-valvegroup.com>

or to the following address:

**PHOENIX Armaturenwerke GmbH
STRACK Armaturenwerke GmbH
Am Stadtbruch 6
34471 Volkmarsen**

**Tel.: 05693-988-0
Fax.: 05693-988-140**