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Laboratory ball valve Type 522, manually operated, DN6

Instruction manual

Observe instruction manual
The instruction manual is part of the product and an important element within the safety concept.
- Read and observe instruction manual.
- Always keep instruction manual available at the product.
- Pass instruction manual to following users of the product.

The manufacturer Georg Fischer Rohrleitungssysteme AG, 8201 Schaffhausen (Switzerland) declares that the ball valves type 522 according to the unifying standard DIN EN ISO 16135 are pressure-maintaining components in terms of the EG Pressure Equipment Directive 2014/68/EG and comply with the requirements of this directive that apply to valves. The CE sign on the valve proves this compliance (according to the Pressure Equipment Directive, only valves with a DN larger than 25 shall be indicated with CE).
The operation of these ball valves is not allowed until the conformity of the entire system, in which the ball valves have been installed has been declared with one of the mentioned EG Directives.
Changes to the ball valves that could effect the stated technical data and the intended purpose, void this declaration of conformity.
Additional information can be found in "Georg Fischer's planning fundamentals".

Schaffhausen, 01 October 2021

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161522000 Laboratory ball Valve Type 522, manual
MA_00008 / DE EN / 01 (10.2021)

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1. Intended use
The ball valve type 522 is intended exclusively for shutting off and conducting allowed media within the allowable pressure and temperature range or for controlling flow in the piping systems into which it has been installed. The maximum service life is 25 years.

2. About this document
2.1 Other related documents
Georg Fischer planning fundamentals industry
These documents can be obtained from the GF Piping Systems representation or under www.gfps.com.

2.2 Abbreviations

PN	Nominal pressure
DN	Dimension

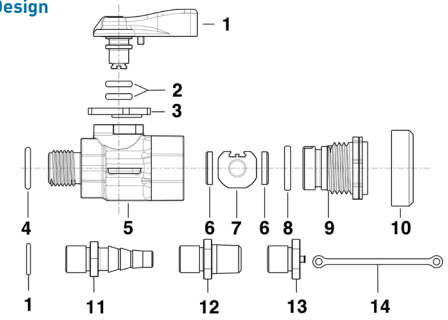
2.3 Safety Instructions and Warnings

DANGER	• Imminent danger! Non-observance may result in major injuries or death.
WARNING	• Possible danger! Non-observance may result in major injuries. •
CAUTION	• Dangerous situation! Non-observance may result in minor injuries.
NOTICE	• Dangerous situation! Non-observance may result in material losses.

3. Safety and responsibility
- Only use product as intended, see intended use.
- Do not use any damaged or faulty product. Replace any damaged product immediately.
- Make sure that the piping system has been installed professionally and that it is inspected regularly.
- Product and accessories shall only be installed by persons who have the required training, knowledge or experience.
- Regularly train personnel on all questions pertaining to the locally applicable regulations on occupational safety and environmental protection, especially on pressure-retaining pipelines.

The safety instructions for the valves are the same as for the piping system they are installed in.

4. Transport and storage
- Transport and store the product unopened in its original packaging.
- The product must be protected from harmful physical influences such as dust, heat, humidity and UV radiation.
- Ensure that the product and its components cannot be damaged either by mechanical or thermal influences.
- Store the product with the lever in the open position (delivery state).
- Check the product for transport damage prior to installation.

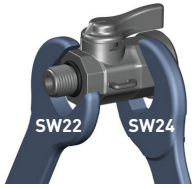
5. Design


Pos.	Description	Pos.	Description
1	Handle	9	Pressure ring
2	O rings	10	Safety clip
3	Blocking and dosage ring	11	Hose connector AG
4	O ring	12	Double nipple
5	Housing	13	Blanking plug
6	Ball seat ring	14	Fastening clip
7	Ball	15	Hose connector IG
8	O ring		

6. Installation
- Make a function test: Close the laboratory ball valve and reopen it manually. Laboratory ball valves with discernible malfunctions may not be installed.
- Always install the laboratory ball valve in the system with the ball position open.
- Make sure that the the pressure rating, type of connection, and connection dimensions correspond to the application conditions.

WARNING
The laboratory ball valve type 522 has product-specific installation dimensions, connections, etc.
The use of other components and installation dimensions (than those intended for type 522) can result in damage to the piping system.
- Compare the installation dimensions and descriptions in the technical documentation to the components at hand.

- Remove the laboratory ball valve from its original packaging only immediately prior to installation.
- Make sure that the laboratory ball valve and the piping are aligned to avoid mechanical strain.



- Installing the laboratory ball valve. Mounting with the help of flat wrenches with SW22 and SW24.
- Adhere specific jointing instructions for solvent cementing, fusion and screw connection methods, see operating manuals of the fusion machines or the cementing instructions of the adhesive manufacturer.
- Join the connecting parts with the pipe ends according to their materials and types (fusion, cementing, screwing, flanges).
- The tightening torque of the flange screws and other useful information, see Georg Fischer Planning Fundamentals.

NOTICE
Preventing thermal expansion during temperature changes results in axial or bending forces.
So as not to impair the functioning of the valve:
- Make sure that the forces are absorbed by suitable fixed points before or behind the valve. Use a fixing plate for fixing the valve from the front. This absorbs the forces that can occur when operating the valve (e.g. breakaway torque).
- Transfer of the operating forces to the piping system is prevented.

WARNING
The test pressure on a valve must not exceed the value PN).
The component of the piping system with the lowest PN determines the maximum allowable test pressure in the piping section.
- The valves and connections should be checked for a tight seal during the pressure test. Document your results.

Valve pressure testing is subject to the same regulations as the piping system. For detailed information, see the chapter Processing and Installation in the planning fundamentals.
- Check that all valves are in the required open or closed position
- Fill the piping system and deaerate it carefully.
- After the successful leak testing: remove the test medium.

7. Disassembly
WARNING
Risk of injury due to uncontrolled evasion of the medium.
If the pressure was not relieved completely, the medium can evade uncontrolled.
Depending on the type of medium, risk of injury may exist.
- Before dismounting, release all pressure from the piping system.
- In case of harmful, flammable, or explosive media: Completely empty and rinse pipe prior to dismounting. Pay attention to potential residues.
- Provide for safe collection of the medium by implementing appropriate measures (e.g. connection of a collection container).
After dismounting, the laboratory ball valve should be stored or disassembled.
- Partially open the dismounted laboratory ball valve (45° position and let it drain in vertical position. Thereby, collect the medium.

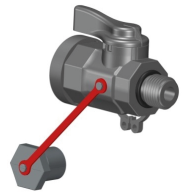
8. Maintenance
Laboratory ball valves require no maintenance under normal operation conditions. However, the following measures must be considered:
- Periodic inspection to make sure that no medium is leaking is sufficient.
- Make a function test for ball valves which are kept permanently in the same position 1–2 x a year to check serviceability.

CAUTION
Risk of material damage and/or injury.
For replacements, the original replacement parts by GF Piping Systems may only be used.
- Order spare parts using the information on the data label.
- Do not use mineral oil-based greases or Vaseline (Petrolatum).
- Observe special manufacturer's notice for paint-compatible ball valves.
- Lubricate gaskets with grease based on silicone or polycol.
- All gaskets (made of e.g. EPDM, FPM) are organic materials. They react to environmental influences and must therefore be kept in their original packaging, and stored cool, dry and dark. Before installing them, the gaskets have to be checked on possible ageing damages, such as fissures and hardenings. Do not use defective spare parts.

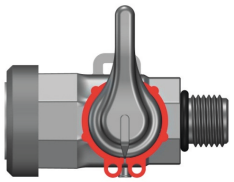
9. Disposal
Dispose in accordance with the local regulations.

10. Additional functions

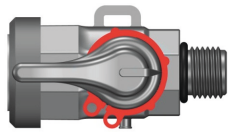

The blocking and dosage ring can be clipped when not in use



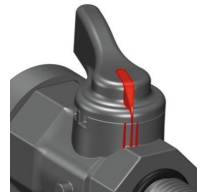
When not in use, attach the blanking plug to the housing with the fastening clip



The blocking ring secures the valve in the closed position against unintended opening



In the "Open" position, the blocking ring secures the valve against unintended closing



Three metering marks provide nominal values for flow control