



Operating instructions 3-piece Ball valves, stainless steel	
Please read these instructions carefully for your own safety, before proceeding to the installation, use or maintenance of the ball valves. This instructions must be conserved for future consultation.	

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General information

These operating instructions are an integral part of the ball valves. Please read the instructions for use, safety regulations and instructions contained in these operating instructions carefully before installation, commissioning, adjustment or maintenance, as they provide important information regarding safe use and maintenance. To ensure safe use and correct maintenance, the ball valves may only be used by an operator who is familiar with the contents of the operating instructions. The information contained in these operating instructions is necessary for the correct use of the ball valves and completes the information that is part of the normal technical knowledge of the persons entrusted with its operation. For further information or specific solutions to problems, please contact our sales engineering.

Therefore, always keep the corresponding operating instructions with your product.

Ball valves have been developed for specific applications. RIEGLER expressly points out that these must not be changed and/or used in a way that does not correspond to the intended use.

RIEGLER accepts no liability or warranty for injuries and damage resulting from improper use, use for other than the intended purpose or non-compliance with the safety regulations.

In addition, the accident prevention regulations and general safety regulations applicable to the area of use of the ball valves must be observed.

Symbols

Explanation of symbols used

	DANGER
Warns of an immediate danger. Failure to comply may result in a fatal or serious injury.	
	WARNING
Warns of a potentially dangerous situation. Failure to comply may result in serious injuries or death.	
	CAUTION
Warns of a possible danger. Failure to comply this warning may result in a medium or minor injury.	


GENERAL MANDATORY SIGN

This symbol indicates instructions which, if ignored, will result in damage, malfunction and/or failure of the appliance.


OBSERVE INSTRUCTIONS

The operator is obliged to read and observe all instructions for use, operating instructions and safety regulations and to instruct all users of the tool in accordance with these.


USE HAND PROTECTION
Intended Use

Ball valves are used to completely shut off and release the flow of liquid or gaseous media within a closed piping system. Ball valves are not designed to regulate flow.


WARNING
Improper use of the product!

- Improper use of ball valves can pose a risk to people, surrounding equipment, and the environment.
- Liability claims and warranty expire.
- The item may only be used in accordance with the operating conditions specified in this document.

Note on the Pressure Equipment Directive 2014/68/EU

The subject matter of the declaration described above complies with the relevant harmonization legislation of the European Union:

Item number	Type number	DN	PN max.	Fluid group	CE marking	Conformity assessment procedures applied
103455	391.01	11,6	63 bar	II	no*	-
103456	391.02	12,7	63 bar	II	no*	-
103457	391.03	15	63 bar	II	no*	-
103458	391.04	20	63 bar	II	no*	-
103459	391.05	25	63 bar	II	no*	-
103460	391.06	32	63 bar	II	no*	-
103461	391.07	40	63 bar	II	yes	Module A (internal production control) according to Category I (Diagram 7, Article 4 Annex II)
103462	391.08	50	63 bar	II	yes	Module A (internal production control) according to Category I (Diagram 7, Article 4 Annex II)
135910	3390.01	8	63 bar	II	no*	-
135911	3390.02	10	63 bar	II	no*	-
135912	3390.03	15	63 bar	II	no*	-
135913	3390.04	20	63 bar	II	no*	-
135914	3390.05	25	63 bar	II	no*	-
135915	3390.06	32	63 bar	II	no*	-
135916	3390.07	40	63 bar	II	yes	Module A (internal production control) according to Category I (Diagram 7, Article 4 Annex II)
135917	3390.08	50	63 bar	II	yes	Module A (internal production control) according to Category I (Diagram 7, Article 4 Annex II)
135918	3390.09	65	40 bar	II	yes	Module A (internal production control) according to Category I (Diagram 7, Article 4 Annex II)
135919	3390.10	80	40 bar	II	yes	Module A (internal production control) according to Category I (Diagram 7, Article 4 Annex II)

*The following applies to these articles in accordance with the Pressure Equipment Directive 2014/68/EU

- Manufactured and designed in accordance with "Article 4, Paragraph 3" of good engineering practice.
- CE marking and CE declaration of conformity must not be affixed or issued.

General Safety Instructions

These do not take into account any accidental influences or events that may occur during installation, commissioning, operation, or maintenance of the ball valve.

**WARNING**

Unintentional operation or improper handling can cause dangerous situations and physical injury.

**CAUTION**

For protection against injuries:

- Ensure that the system cannot be operated unintentionally.
- Only operate the ball valve when it is in perfect condition and in accordance with the operating instructions.
- Do not subject the housing to mechanical stress.
- Do not make any external changes to the housing.
- The general rules of technology must be observed when operating the ball valve.
- Sufficient lighting must be installed.
- Persons under the influence of alcohol, drugs, or other intoxicating substances are not permitted to operate the ball valve.

**CAUTION**

- Caution in extreme temperatures – risk of scalding/frostbite.
- For ball valves with welding ends, the cooling phases must be observed.

**General Information****Contact address**

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Warranty

The warranty is subject to the ball valve being used for its intended purpose in accordance with the specified operating conditions.

Information on the Internet

Operating instructions and data sheets are available on the internet at www.riegler.de

Technical Data

Construction

Housing: 3-piece

Connections: G 1/4 to G 3 or weld-on studs

Medium

Operating medium:

Compressed air, water, non-toxic and non-aggressive gases and liquids.

Permissible temperatures

Operating temperature: -20 °C to 180 °C (max. 150 °C for valves with weld-on studs)

Storage & transport temperature: - 20 °C to 50 °C

Permissible temperature range

Max. Operating pressure: 63 bar (max. 40 bar for G 2 ½ and G 3)

Materials

Housing material: Stainless Steel 1.4408

Ball material: Stainless Steel 1.4408 / Stainless Steel 1.4401

Hand lever material: Stainless Steel 1.4301, with plastic coating

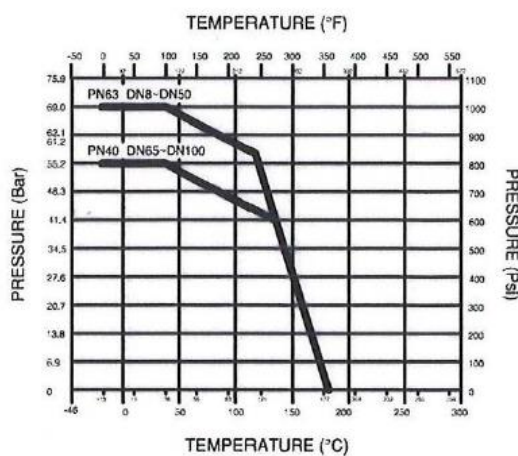
Ball seal: PTFE / RPTFE (15% glass fiber reinforced)

Stem seal: PTFE / RPTFE (15% glass fiber reinforced)

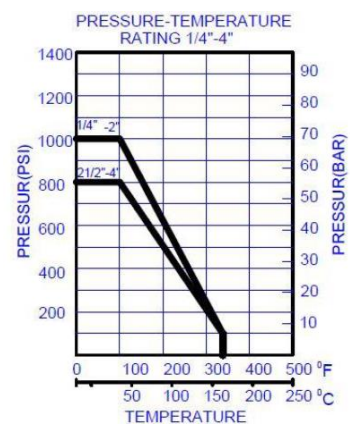
→ the exact technical data can be found in the corresponding data sheet.

Pressure / Temperature diagrams

Type 3390.XX (Thread connections)



Type 391.XX (weld-on studs)



Commissioning and Installation

	DANGER
Danger to life due to pressure, temperature, or media leakage. - Before performing any work on the ball valve, ensure that the system is completely depressurized, drained, and cooled down. - Leaking media can cause burns, poisoning, or explosions.	

	WARNING
Risk of injury due to improper installation. - Improper installation can result in injury and damage to the device and surrounding area. - Work may only be carried out by trained specialists using suitable tools. - Accidental activation of the system can lead to dangerous situations.	

	
Mounting Position	Ball valves can generally be installed in any position, unless otherwise specified by the manufacturer. However, a horizontal spindle position is recommended to ensure even loading of the seals.
Installation Direction	The specified flow direction (arrow marking) must be observed.
Connection Preparation	The pipes must be installed and aligned without tension. Neither axial nor lateral forces may act on the ball valve. Clean the thread before assembly and check for damage. Do not overtighten! Use sealant sparingly. Only use suitable sealing materials (e.g., PTFE tape, hemp with sealing paste) that are compatible with the medium and temperature range.
	Before starting operation, ensure that: - The ball valve is properly installed and all connections are tight. - The valve is in the open position when the system is filled with medium.
	Initial filling and pressure build-up: - Fill the system slowly with medium to avoid pressure surges. - In the event of leaks or sluggishness, do not force the ball valve – rectify the cause

Operation

- Perform regular visual inspections for leaks, corrosion, or mechanical damage.
- Ball valves should be operated at regular intervals to prevent the ball from sticking.
- Lever position indicates valve position: parallel = open, vertical = closed.
- Operate slowly and evenly.
- Do not use extensions or tools for operation.
- Only fully open or closed positions are permitted; intermediate positions are not permitted.

Assembly and Disassembly



DANGER

Danger to life due to pressure, temperature, or media leakage.

- Before performing any work on the ball valve, ensure that the system is completely depressurized, drained, and cooled down.
- Leaking media can cause burns, poisoning, or explosions.



Assembly

- Install the ball valve between the connections and tighten evenly.
- Do not apply tools directly to the spindle or lever.

Disassembly

Take the system out of operation:

Shut off the relevant part of the system and ensure that there is no longer any pressure or temperature load.

1. Loosen connections evenly, remove ball valve
2. Collect residual media and dispose of it in an environmentally friendly manner.

Allow to cool:

At elevated operating temperatures, ensure that the ball valve has cooled down to ambient temperature before continuing work.

Maintenance and Repair



DANGER

Danger to life due to pressure, temperature, or media leakage.

- Before performing any work on the ball valve, ensure that the system is completely depressurized, drained, and cooled down.
- Leaking media can cause burns, poisoning, or explosions.



WARNING

Risk of injury due to improper maintenance work.

- Improper maintenance can result in injury and damage to the device and surrounding area.
- Accidental activation of the system can lead to dangerous situations.

Transport, Storage and Disposal

	GENERAL MANDATORY SIGN
Transport	- Inadequately protected devices may be damaged during transport. - Transport the ball valve in shockproof packaging to protect it from moisture and dirt.
Storage	- Incorrect storage can cause damage to the product. - Store ball valves in a dry, dust-free, and UV-protected location.
Disposal	Dispose of the device and packaging in an environmentally friendly manner.

Applies to the following articles:
Stainless steel ball valve, length acc. to DIN 3202-M3, full passage

Article No.

Type No.

135910 to 135919

3390.01 to 3390.10

Stainless steel ball valve, 3-piece, full passage

Article No.

Type No.

103455 to 103462

391.01 to 391.08