

# Installation instructions

Original language: Englisch

## Valve ST-550 AIR

Product code: all variants



The choice of perfection

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[www.rm-suttner.com](http://www.rm-suttner.com)

### Technical Data

Maximum permissible pressure	550 bar / 55,0 MPa
Minimum pressure	2 bar / 0.2 MPa
Maximum flow rate	80.0l/min / 21gpm
Water temperature permanently	max. 100°C
Ambient temperature	max. 60°C
Air pressure	6 bar
Inlet	G3/8 IG
Outlet	G3/8 IG
Air feed hole	G1/4 IG
Max. solid material size	50µm
pH water	6.5-8.0
Conductivity water [µS/cm]	max. 2000 at 20°C

Abbreviations and symbols	
FT; MT	Female thread; male thread
G	Whitworth pipe thread according to DIN ISO 228, ident. BSP= British Standard Pipe

	<p>The user must wear appropriate protective clothing, for example, in the form of gloves, shoes and goggles. The local safety regulations currently in force should always be observed.</p>
	<p>Please read these Operating Instructions carefully before using the equipment!          Keep the Operating Instructions in a safe place for future use or for the next user!          These Operating Instructions were prepared with great care. However, SUTTNER GmbH can not be held responsible for any possible errors in the Operating Instructions or for any consequences arising thereof!</p>

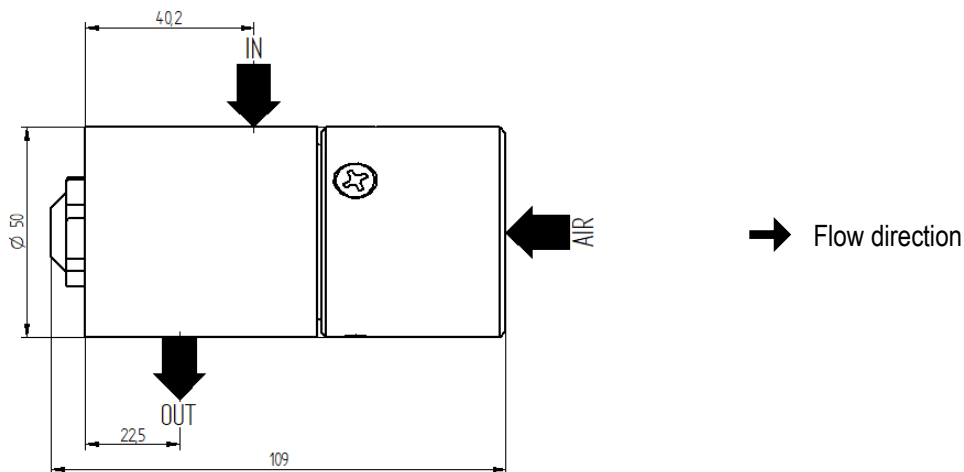


Fig. shows standard variant

## Description

ST-550 is 2/2 valve pneumatically operated. It can be used as remote operated spray gun.

The valve housing is made of brass. All components which come into contact with fluid are made in stainless steel. Dynamic seals are made from high grade PTFE compound.

## Intended use

The ST-550 valve is designed for use with water-operated high-pressure systems such as high-pressure cleaners.

All components of the high-pressure system must be compatible with each other. The component with the lowest values (pressure, temperature, etc.) determines the maximal possible load of the high-pressure system.

The ST-550 valve is approved only for use with Group II fluids as per EC 1272/2008. This can include, for instance, water and diluted commercially available cleaning or disinfection agents. All safety regulations and rules for high-pressure washers apply as well, e.g. DIN EN 60335-79-2 and DIN EN 1829-1.



**Dispensing flammable, explosive, caustic or toxic substances is forbidden!**

The ST-550 valve may not be used with abrasive substances. To avoid damaging the ST-550, install a fine filter with a recommended mesh size of 50 µm into the water inlet to the high-pressure pump.

## Normative references

- The product is classed as a pressure-maintaining component within the terms of Pressure Equipment Directive 2014/68/EU. Due to the operating parameters, it comes under the scope of Article 4 / Paragraph 3 of this guideline ("good engineering practice") and therefore no Declaration of Conformity and CE marking are allowed!
- The product must not be installed in equipment complying with the Pressure Equipment Directive 2014/68/EU.
- The product is a standard part within the terms of Machinery Directive 2006/42/EC!

## Symbols and their meanings



**Hazard!**

If these instructions are not followed there is a danger of physical injury, danger to life and material damage!



**Please comply with the Operating Instructions!**

Incorrect operation can lead to severe injury. Read the Operating Instructions before using the equipment.



**Wear safety gloves!**



**Wear protective goggles!**



**Keep hands away**



**Description of imminent hazard and failure to avoid hazard will result death**



**Description of hazard and possible resulting injuries or death.**





**Description of hazard that could result in minor or moderate injury.**

## For your safety

This Suttner product is state of the art and complies with generally recognised health and safety regulations. Due to the high pressures and temperatures nonetheless, there is the danger of material damage and injury for users and other persons. Please comply with these Operating Instructions at all times and the relevant regulations for liquid jet sprayers.

For details regarding personal protective equipment, refer to the local prevention regulations "Personal protective equipment". Personal protective equipment includes for example overalls, head protection, easy-grip protective gloves and non-slip boots, metatarsal foot protection, respiratory protection, ear protection, eye or face protection.

- Cease operation immediately if any leakage or malfunctions occur.
- Malfunctions that may affect safety are to be rectified immediately.
- The ST-550 valve may only be used in a technically perfect condition, unmodified in any way, for the purpose intended, in awareness of and compliance with safety requirements and potential hazards and when following these Operating Instructions. Any other or additional use is deemed inappropriate.
- All assembly or installation work must be carried out by authorised specialist personnel.
- Also comply with the operating instructions for equipment and accessories connected to the valve and with the applicable regulations for cleaning agents.

 <b>WARNING</b>		<b>Risk of burning or scalding due to hot media!</b> Do not touch anything which is not insulated if you are working with consumables and additives where the temperature exceeds 45°C. Wear protective gloves!
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## Assembly

### Delivery scope

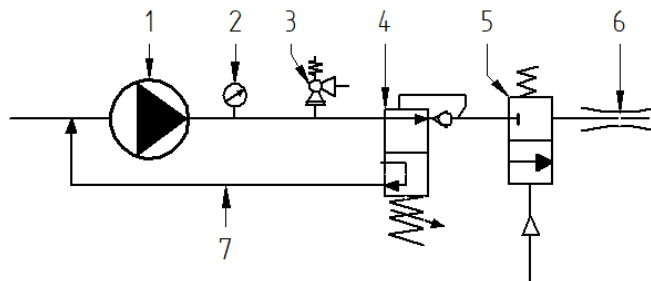
The ST-550 valve is delivered without connector fittings.

ST-550 valves are high-quality valves, which must be handled with particular care. The sealing surfaces on the seat and ball are smooth machined to achieve the necessary tightness. The penetration of foreign bodies into the valve must be avoided during assembly, installation and during operation. The tightness of ST-550 valve can be impaired by hemp, Teflon tape or other sealant as well as by welding beads. Even rough treatment of the finished ST-550 valve during storage, transport and assembly may cause a ST-550 valve to leak. If the ST-550 valves are painted, care must be taken that the sliding parts do not come into contact with paint.

ST-550 valves may be installed vertically or horizontally. The function of the valves is tested and confirmed in both installation positions. In order to ensure proper functioning of the valve, they must be installed in such a way that no impermissible static, dynamic or thermal stresses may act on the ST-550 valve. Ensure the maximum tightening torque of connectors is not exceeded.

- Switch the high-pressure generator (1) off before carrying out assembly work on the high-pressure system.
- Secure the high-pressure generator against being unintentionally switched on.
- Turn the water supply off.
- Release residual pressure by opening spray gun.
- Seal the screw connectors in accordance with your intended use with an appropriate sealant such as Teflon sealing tape or a liquid sealant (see R+M Catalogue, Chapter 06, Adhesives and sealing materials).
- Tighten the screw connections in the high-pressure area to 20 Nm
- Install the ST-550 valve into the pressure line whilst observing the flow direction
- Ensure the equipment meets the requirements of the machine guideline after installing the ST-550 valve in a machine/system!

1. High-pressure generator
2. Pressure gauge
3. Safety valve
4. unloader valve
5. ST-550 valve
6. Nozzle
7. Return line



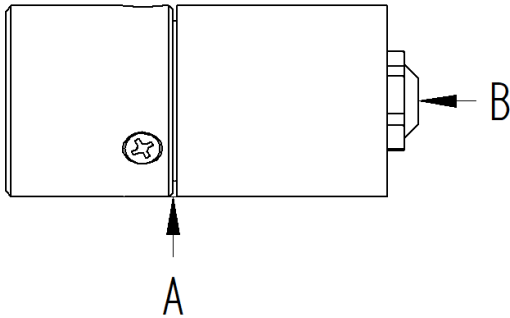
## Modification

No modifications of any kind are to be made to the ST-550 valve!

## Maintenance



Assembly, maintenance and repair work may only be carried out by persons trained in maintenance and repair work on high-pressure systems. Use only spare parts approved by Suttner GmbH. Only use high-pressure components (hoses, connectors, etc.) approved for the respective pressure and temperature range.



ST-550 valve is equipped with self-lubricated seals. Some drops of leakage at A-B site are permissible

- Does the ST-550 valve switch without delay?
- Do yearly exterior visual inspection to make sure the ST-550 valve is safe to use.
- Does the ST-550 valve leak?
- Does the ST-550 valve show signs of mechanical damage?

**After max. 1000 operating hours** or a year or if hot water (exceeding 80°C) and chemicals are used after 500 operating hours or 6 months: Check valve parts (O-rings, support rings, hose clips) for damage and if necessary replace completely with a Suttner repair kit.

**After max. 3000 operating hours** or 3 years or if hot water (exceeding 90°C) and chemicals are used after 1500 operating hours or 18 months: Replace valve parts (O-rings, support rings, hose clips) completely with a Suttner repair kit.

**After each use** with sticky or impure fluids, rinse the ST-550 valve with clear water

## Disposal



**Please dispose of old equipment in an environmentally friendly manner.**

Old equipment contains valuable recyclable materials which should be salvaged for recycling. Please therefore dispose of old equipment at suitable collection points.

## Manufacturer

Suttner GmbH

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