TECHNICAL INFORMATION

schaerer

T.I. no.: 2018 - 09 Updated: -	Topic: Valve repair kit - update 2018

Date: 07.05.2018
Affected machines: -
From serial number: -
As of date: -

Priority	
	High
	Medium
X	Low

Need for action	
	As soon as possible
	On next visit to the machine
X	FYI only

GENERAL INFORMATION

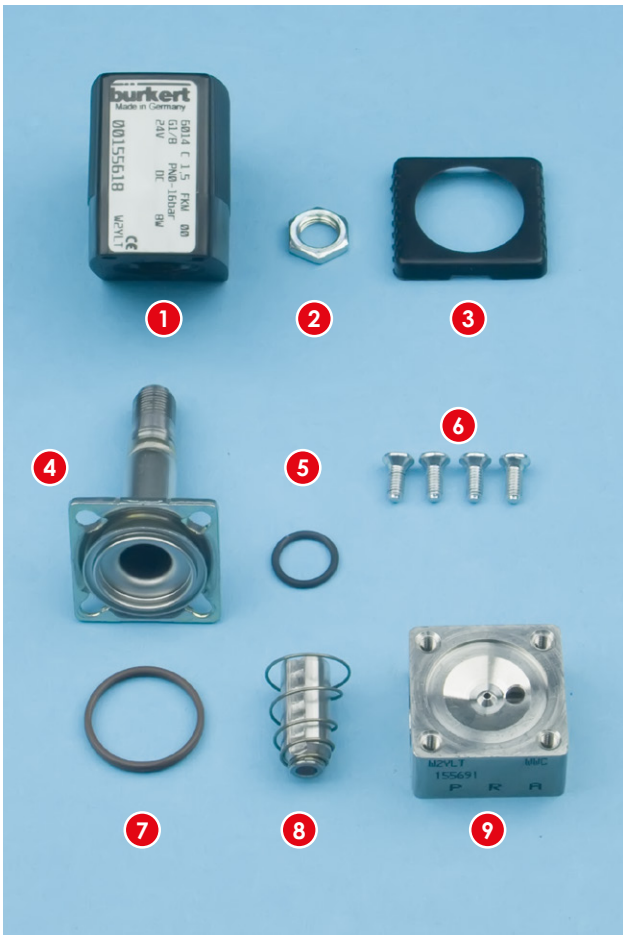
Repair kits are available for all stainless steel valves used in the Schaerer machine portfolio. Advantages: Cost savings!

This technical information gives an overview of which repair kit is to be used for which valve.

Cost savings

- In some cases, the difference between a new valve and a repair kit is not very significant and the cost savings are therefore not particularly big. However, note that the repairing a valve has another advantage: For a repair, it is not necessary to remove, clean, reseal with tape and then reassemble the fittings of the valve housing.
- For example, repairing valves is recommended for preventative maintenance of a machine, because several valves can be decalcified and repaired simultaneously during this process.

Valve structure



1. Spindle
2. Nut (11 or 14 mm)
3. Optional plastic frame for inserting between spindle and valve base (is only used for large valves)
4. Piston housing
5. O-ring between spindle and piston housing
6. Torx screws (T8 or T20)
7. Inner O-ring of the piston housing
8. Piston
9. Stainless steel valve socket

Figure: 3-way valve: 070'246

Repair procedure

► Remove valve from machine.

- ▶ Check valve condition. This means:
  - No external leaks.
  - No external traces of limescale.
  - No corrosion.
  - Spindle functions and does not exhibit any external damage.
- ▶ Remove spindle (socket wrench 11 or 14 mm).
- ▶ Open piston housing (Torx 8 or 10).
- ▶ Remove limestone deposits (e.g. by dipping the valve base and piston housing into a decalcifying solution).
- ▶ Remove O-ring from the piston housing.
- ▶ Clean valve housing and piston housing under running tap water.
- ▶ Insert new O-ring and piston into piston housing.
- ▶ Assemble piston housing (first slightly tighten screws by hand, then tighten crosswise).
- ▶ Replace O-ring between spindle and piston housing.
- ▶ Insert spindle.
- ▶ Tighten spindle screw by hand.
- ▶ Tighten nut with a 2/3 turn as shown in the figure 2 (or use a torque tool set to 2.8 Nm).

NOTE

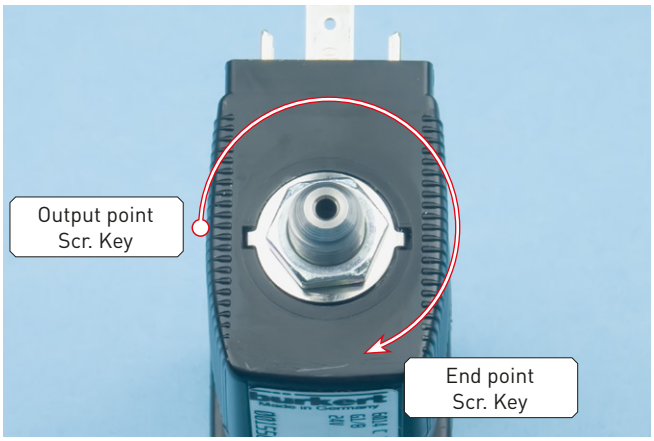
If the nut is tightened, the spindle must not be turned any more.

- If there is a proportional valve, this could twist the valve body.
- For other valves, the O-ring can be damaged, causing leaks.

ATTENTION

Do not mix up parts from different valves! This can cause malfunctions and/or water system leaks.

Tightening the nut which secures the spindle



IMPORTANT

Tighten the nut as follows:

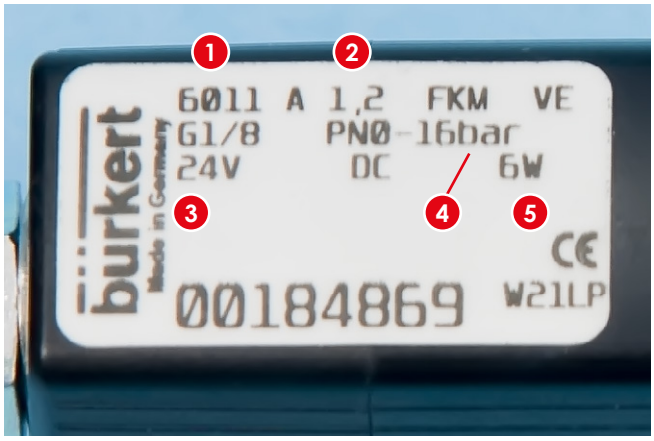
1. Tighten nut by hand.
2. Tighten nut with a 2/3 turn as shown in the figure 2 (or use a torque tool set to 2.8 Nm).

Do NOT over-tighten the nut. If you use too much force, the piston housing can get deformed.

In this case, the piston can no longer move up and down freely. The valve may then remain open because the piston gets stuck in the upper position.

General INFORMATION on BURKERT stainless steel valves

Description

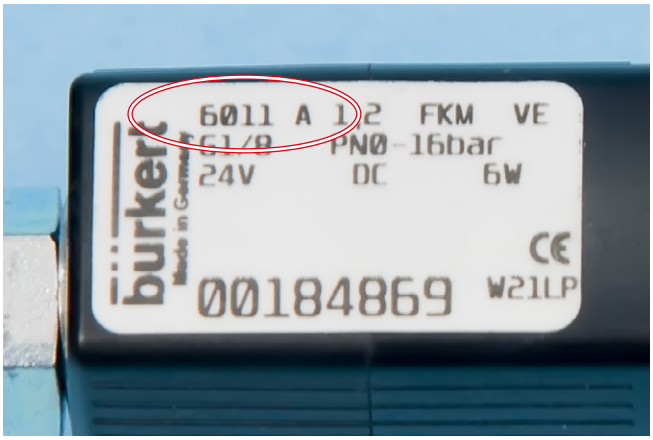


The label attached to this series of Bürkert stainless steel valves contains the following information:

1. 6011 — Bürkert serial number
2. 1.6 — Diameter of valve seat
3. 24V (DC) — Operation voltage
4. 16 bar — Maximum pressure the valve can withstand
5. 6W — Spindle power consumption

Connection between repair kit and valve

Compare the labels to determine which repair kit goes with which valve: The Burkert serial number of the valve must correspond to the Burkert serial number on the repair kit.



Connections

Note: All 2- and 3-way valves are designed for a special flow direction.

The following flow directions apply for this series:

- P = inlet ("pressure side", P = pressure).
- A = outlet (A = atmosphere).
- R = 3rd way ("return").

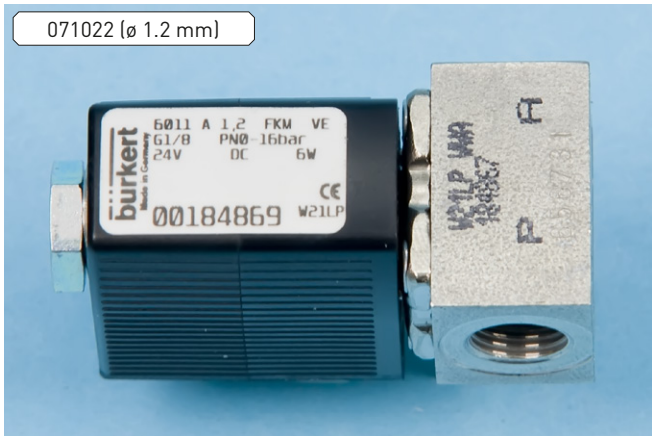
Notes

- The nominal pressure on the valve only applies if the valve is connected in the direction of flow (P to A). If the valve is connected in the opposite direction, then this value is much lower!
- The smaller the diameter of the valve, the more pressure it can withstand. In general, it can be said that valves with a diameter of less than or equal to 1.2 mm are suitable for use in the hot water or coffee water circuit. All valves with a diameter over 1.6 mm can only be used in the steam circuit. In the steam circuit, the maximum pressure ± 4.0 bar.

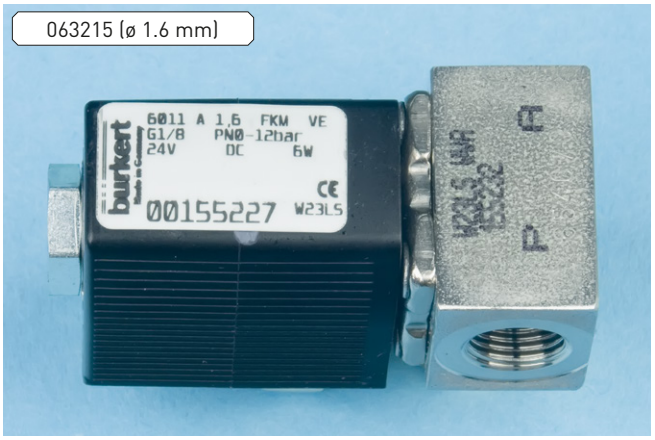
Valve overview

071022: 2-way ø 1.2 mm – 063215: 2-way ø 1.6 mm – 070503: 2-way ø 2.4 mm

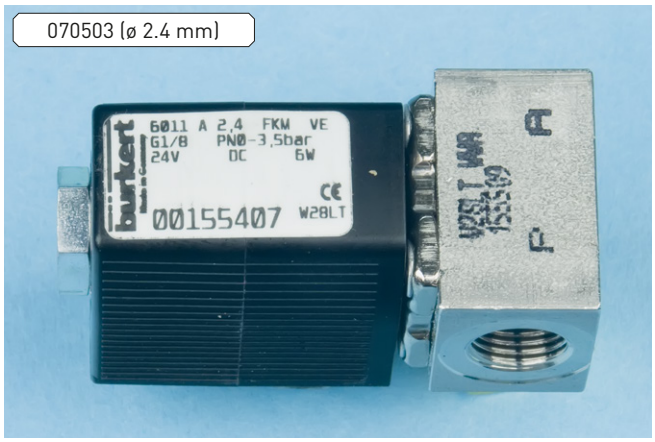
071022 (ø 1.2 mm)



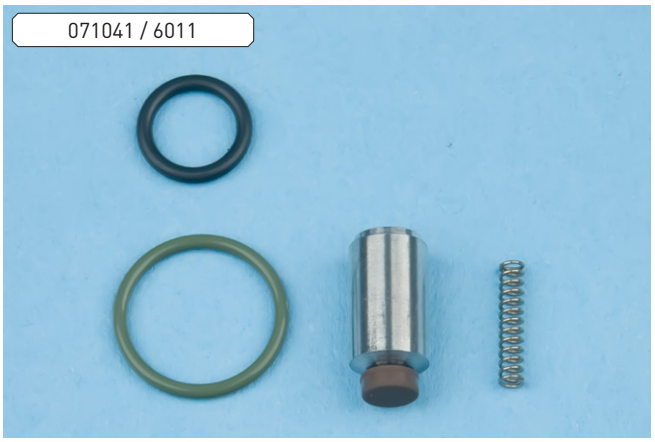
063215 (ø 1.6 mm)



070503 (ø 2.4 mm)

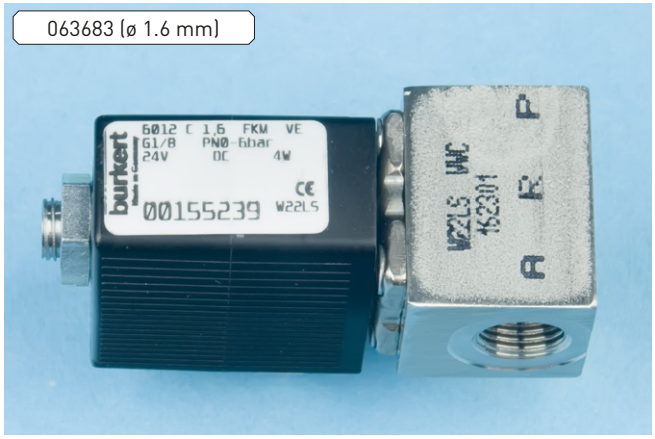


071041 / 6011

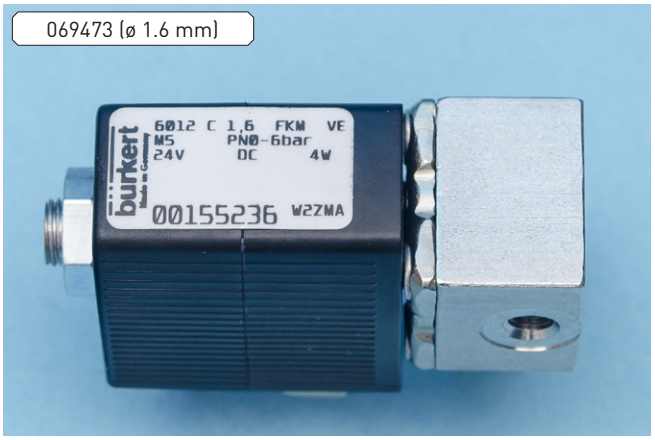


063683: 3-way ø 1.6 mm – 069473: 3-way ø 1.6 mm

063683 (ø 1.6 mm)



069473 (ø 1.6 mm)



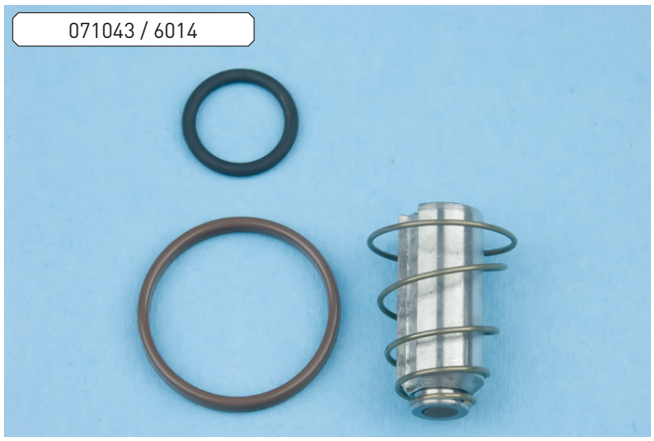
071042 / 6012

070246: 3-way ø 1.5 mm – 066410: 3-way ø 1.5 mm

070246 (ø 1.5 mm)

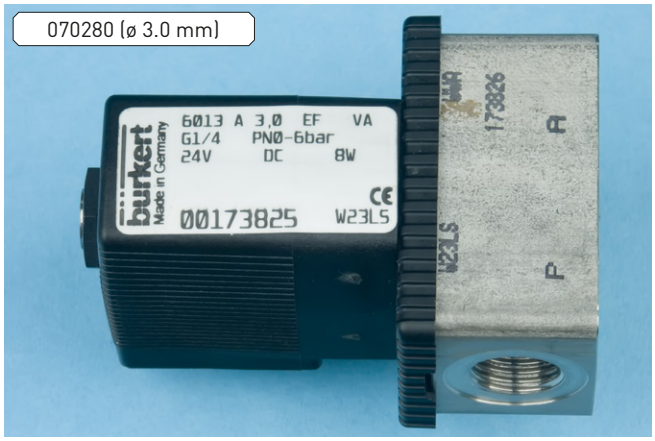
066410 (ø 1.5 mm)

071043 / 6014



070280: 3-way ø 3.0 mm

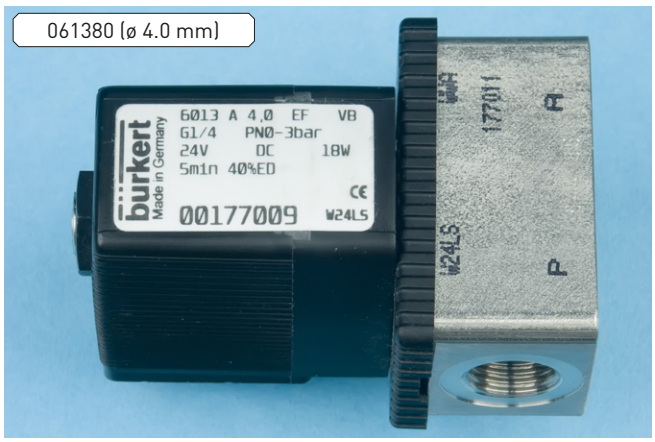
070280 (ø 3.0 mm)



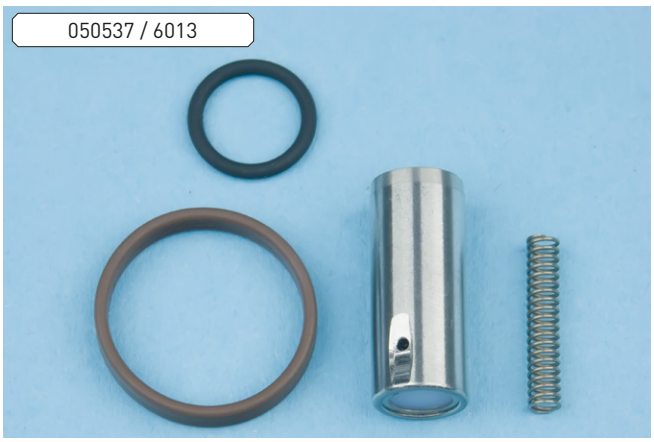
071375 / 6013

061380: 2-way ø 4.0 mm

061380 (ø 4.0 mm)



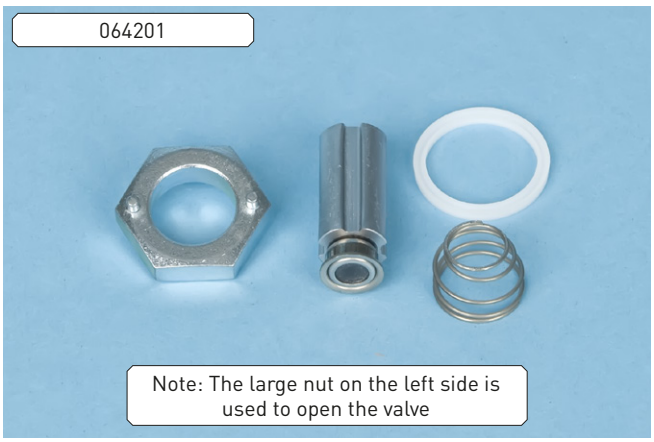
050537 / 6013



064000: 2-way ø 3.2 mm ('Parker' valve for Ambient-1 Powersteam)

064000 (ø 3.2 mm)

064201



Note: The large nut on the left side is used to open the valve

33.4007.4000: Proportional valve