



# ***Instruction Manual***

## ***SKP***

### ***Pneumatic Actuator for Ball Valves***



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# ***Safety Information***

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## ***General Instructions***

To ensure safe operation, the device should only be operated according to the specifications in the instruction manual. The requisite Health & Safety regulations for a given application must also be observed. This statement also applies to the use of accessories.

Every person who is commissioned with the initiation or operation of this device must have read and understood the operating instructions and in particular the safety instructions!

The liability of the manufacturer expires in the event of damage due to improper use, non-observance of this operating manual, use of insufficiently qualified personnel and unauthorized modification of the device.

## ***Proper Usage***

The pneumatic actuator built on the ball valves of the model series SKG01 or SKG02 enables remote controlled opening and closing of the ball valve. All other usage is regarded as being improper and outside the scope of the device.

The series SKP devices should not be deployed as the sole agents to prevent dangerous conditions occurring in plant or machinery. Machinery and plant need to be designed in such a manner that faulty conditions and malfunctions do not arise that could pose a safety risk for operators.

## ***Qualified Personnel***

The SKP devices may only be installed by trained, qualified personnel who are able to mount the devices correctly. Qualified personnel are persons, who are familiar with assembling, installation, placing in service and operating these devices and who are suitably trained and qualified.

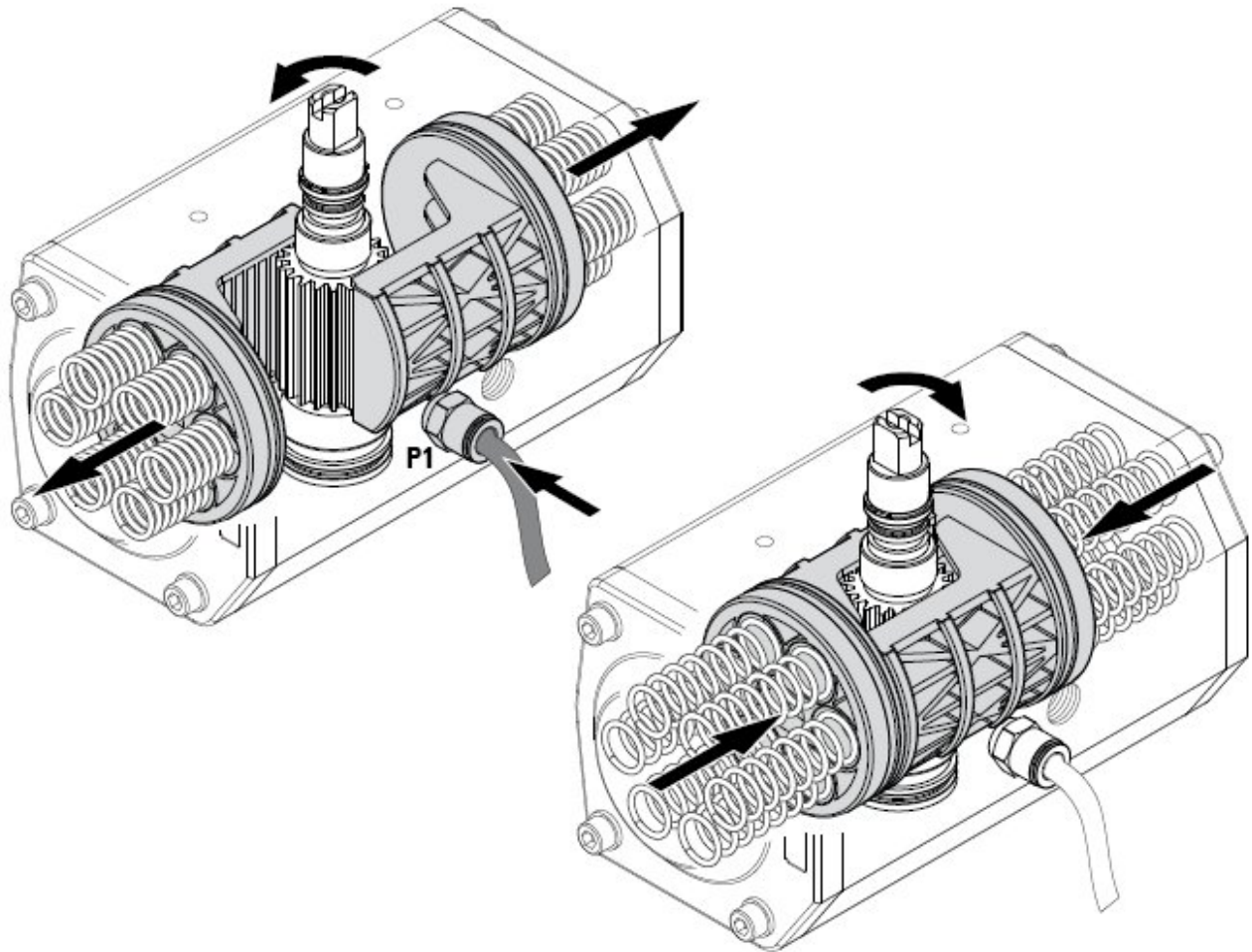
## ***Inward Monitoring***

Please check directly after delivery the device for any transport damages and deficiencies. Additional with reference to the accompanying delivery note the number of parts must be checked. Claims for replacement or goods which relate to transport damage can only be considered valid if the delivery company is notified without delay.

## ***Description of function***

### **Function „single-acting“**

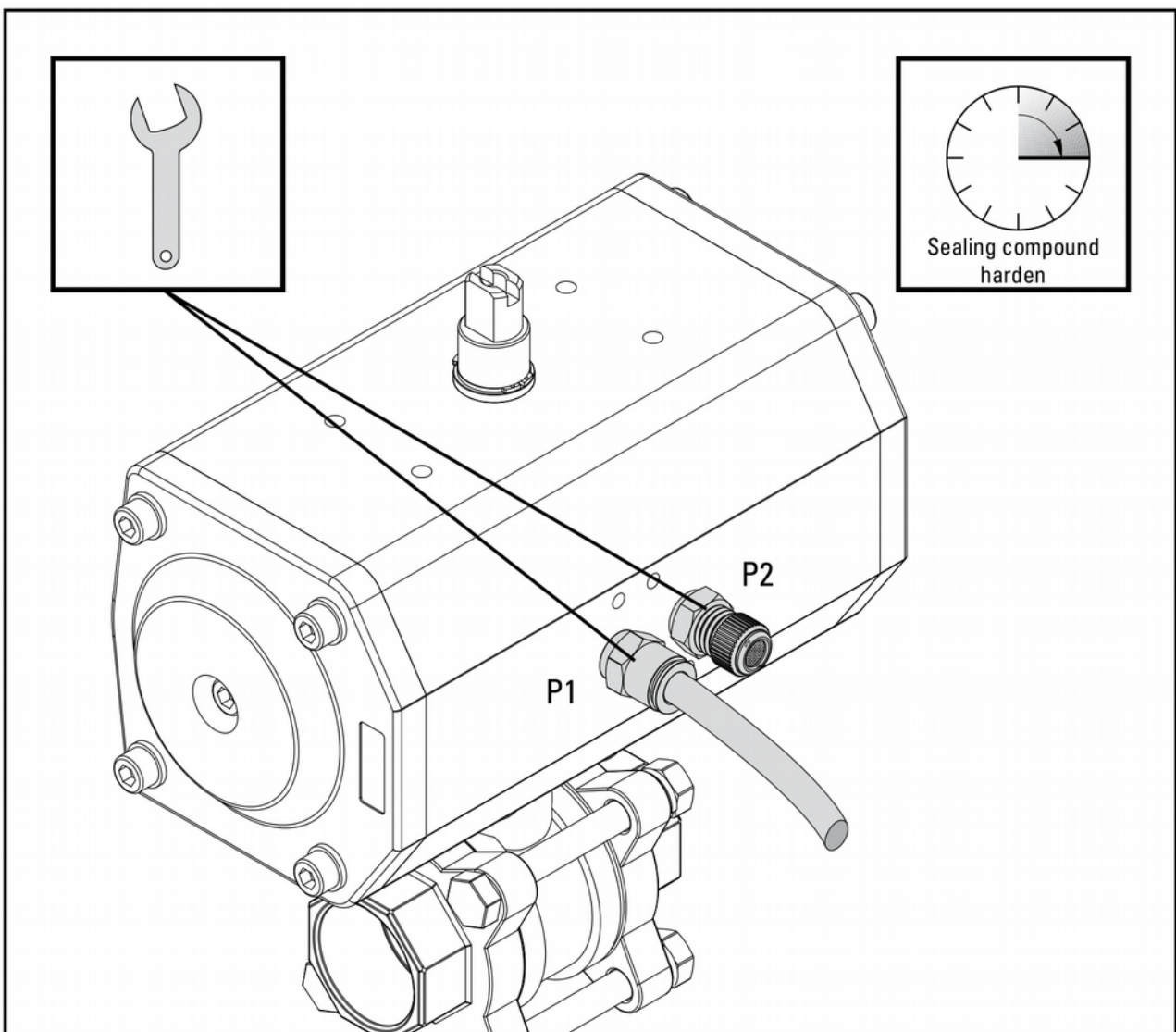
Pressure is given through port „P1“ into the actuator between the two piston surfaces. The pistons expand against the spring force. The pistons force will be transfer to the pinion by racks. The pinion turns round counterclockwise about 90° ->the actuator moves into the position „OPEN“. Exhausting the port „P1“ the pistons will be replaced by the spring force. Therefore the pinion turns clockwise about 90° -> the actuator moves into the position „Close“. The springs will be able to adjust to the working conditions.



## ***Pneumatically Installation***

The installation of the air supply have to take place with great care. Especially the threaded connection, fittings and sealings have to be clean and free of pollution. Pollution which attains inside the actuator, will causes hasten wear and the damage of the sealings and the treads.

- At first you have to remove the protection caps from the ports „P1“ and „P2“.
- Screw in a suitable pneumatic fitting into the port „P1“ by using a fit seal-ing compound and tighten the fitting.
- Insert a hose into the fitting at port „P1“ which will feed the actuator with compressed air during the opening operation.
- Screw in a throttle valve with silencer into the port „P2“ by using a fit sealing compound and tighten the throttle valve.
- Tighten the hose in the fitting at port „P1“.
- Check the tightness of all connections.
- This completes the mounting and the pneumatically installation of the actuator.



## ***Disassembly***

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Although the disassembly of an actuator in principle proceeds in the reverse sequence to the mounting, some essential points should be clarified!

In order, for example, for the operational chemical plant which was mentioned at the beginning to remain in operation:

- Will the actuator to be disassembled be replaced immediately by another (of equal valve)? If not, in which position should the actuator be, following the disassembly?
- Must the actuator be fixed in its intended position?
- If appropriate, does the production process of the plant need to be stopped?
- Is it necessary to inform specific personnel about the disassembly? etc.

**Never remove a armature under pressure.**

**Ball valves are able to enclose the pressurize medium. Release the pressure in the pipes, to relieve the pressure at the armature.**

### ***Pneumatically disassembly***

Turn the actuator with the slide/valve/flap into its fix position !

Switch off the compressed air supply and the control of the actuator!

If necessary, set up warning signs in order to prevent

- the inadvertent starting up of the devices / machines / plants, or
- the switching on of power supply of the control of the actuator

Loosen the fitting of the pilot medium and take away the pipe of the pilot medium.

Close the pipe of the pilot medium if the pipe is not also being disassembled or is not to be immediately reconnected to another pneumatic actuator.

### ***Mechanical disassembly***

Unscrew the four fastening screws of the actuator and pull the actuator from mounting position.

This completes the disassembly of the actuator.