

Instructions for maintenance and repair

for initial-pressure-controller type 80 / 81 BG 0-IIIB and series type 80 SKK, SKS



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Maintenance:

NI initial pressure controller shall be provided in design and manufacture in such a way that optimal quality and service-friendliness is attained. Minimum care and maintenance is the result when using our fittings.

We recommend to have the initial pressure controller / spare parts replaced only in an authorized technical workshop. In the absence of adequate means of repair, it is advisable to send the complete valve on the **Niezgodka GmbH** by post. All spare parts supplied by us are suitable for installation in our valves without exception. Since the valves supplied are however adapted to the respective case of application, it is necessary to also state our **valve number** and the delivery slip / invoice number or order number of processing while placing order for spare parts.

Test intervals:

Depending on the properties of the medium and the operational circumstances in the facility, maintenance shall be performed or function of valve verified once each year or also at shorter intervals.

Leakages:

Faults are often caused by soiling, which result in damages or softening of seals:

Leakages on the piston plate sealing (o-ring 350) are indicated by medium escaping through the spring hood opening. To repair, the respective o-ring (350) shall be renewed. Strongly increasing back pressure at low sampling indicates a defective soft sealing (062).

Caution!



In case of oxygen, keep all parts free of oil and grease. For operation in oxygen-charged atmosphere (-25°C/+250°C), only approved lubricants, e.g. „**gleitmo 594**“ shall be used for the lubrication of the o-rings, media-contacting guide areas and thread connections.

Adjustment of initial response pressure with „no“ changing of springs

Attention!



- Observe spring setting range.
- Dismantle valve head - see (Group **A**).
- Release lock nut (086); by turning the pressure screw (085) increasing or reducing response pressure.
- Secure spring setting using the lock nut (086).
- Assemble valve head - see (Group **A**) in reverse sequence.

Adjustment of the initial response pressure, „including“ changing of springs

Attention!



- Observe spring setting range.
- Dismantle valve head - see (Group **A**).
- Release lock nut (086); fully relieve the spring (081) by turning the adjusting screw (085).
- Screw off spring bonnet (030); remove upper spring plate (082) and spring (081).
- Other spring (081) to use
- Replace damaged parts.
- Reassemble in reverse sequence.
- Secure spring setting using the lock nut (086).
- Assemble valve head - see (Group **A**) in reverse sequence.



For further information, see our website

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Attention!



Care must be taken to ensure that the system is depressurised prior to assembly, dismantling or opening of the initial pressure controller. The remaining dimensions and seal properties, preloading forces, tightening torques etc. are to be determined by the user themselves in accordance with the operating instructions. In doing so special attention must be paid to the following:

Medium residues in the initial pressure controller or in the spring cap represent a serious chemical burning, burns and poisoning hazard. It must, therefore, be established prior to removing a valve from the plant which medium could be present in the pressure reducing valve. Appropriate safety measures must be taken.

Proceed as follows to dismantle:

- 1) Piping and initial pressure controller must be depressurised.
- 2) Remove the valve from the piping to facilitate servicing and repair work.

Group A:

Toggle spindle: loosen lock nut (086); fully relieve the spring (081) by turning the pressure toggle spindle (085).

Head C: screw off cap (120).

Group B:

Toggle spindle: screw off spring bonnet (030); remove upper spring plate (082) and spring (081).

Head C: loosen lock nut (086); fully relieve the spring (081) by turning the pressure adjusting screw (085); screw off spring bonnet (030); remove upper spring plate (082) and spring (081).

Check that the valve parts [inlet pressure piston (304) and piston plate (310), distance bush (311), lower springplate (084) and lock nut (314) on the upper side, and piston (300) with lift stopper (079) and screw (347) downside] move freely.

If they are stiff or if the seat or the piston plate (310) are seen to leak, disassembly should be continued

Group C:

Remove the bottom cap (357).

Group D:

Before further disassembly of the mounting parts, first the **LOCTITE** screw locking between the threaded stem of the piston (300) and the inlet pressure piston (304) is to **break loose**. In addition holding the mounting parts with a wrench applied to the screw (347) of the piston (300) and tighten the lock nut (314) at the lower spring plate (084) (turning clockwise). By the giving way disc (062) the **LOCTITE** screw locking breaks loose.

Hold the mounting parts at the screw (347) and loose and remove the inlet pressure piston (304) with the piston plate (310), the distance bush (311), the lower spring plate (084) from the piston (300) by turning the lock nut (314) anti clockwise.

Dismount the disc parts (disc thrust piece (061) with o-ring (071), disc (560), connection plate (072) and disc (062)) and pull out the piston (300) with stroke limiter (079) and screw (347) from the initial pressure controller (301, 302). If the discsealing is Nylon or PTFE also remove o-ring (073). Remove the piston o-ring (351) from the initial pressure controller (301, 302).

If necessary, the inlet pressure piston (304), the piston plate (310), the distance bush (311) and the lower spring plate (084) can be dismantled as follows:

Clamp the piston plate (310) axially in a vice, (important: use soft jaw pads!) and unscrew the lock nut (314). Remove the lower springplate (084) and the distance bush (311). Remove the inlet pressure piston (304) with o-ring (352) from the piston plate (310).

Dismantle the o-ring (352) and the o-ring (350).

Proceed as follows to reassemble:

After uninstalling and cleaning, you may have to remove pressure points in the surface of the valve-body and of the piston by grinding it with very fine emery paper. If the piston surface looks as if has been eaten into, the piston must always be replaced because the o-ring (351) will no longer be able to seal the destroyed surface.

All the soft seals (disc sealing (062) and the o-rings) have to be replaced (included in set of spare parts). Reassemble the unit by following the above instructions in reverse order. We recommend that "**gleitmo 591**" (-25°C/+250°C), also for foodstuff approved grease, can be used for lubricating the o-ring seals and guide surfaces in contact with the medium, and also for threads (adjusting screw, bottom plug and cap). The connection piston (300) and inlet pressure piston (304) is to be secured by the application of "Loctite". Before installing, check if the thread is complete clean and free of residual- "**Loctite**". The thread-connection piston (300) / inlet pressure piston (304) must be soft running.

The **tightening torques** for the piston / outlet pressure piston (300/304) are the following:

thread dimension M8: 1.5 Nm;

thread dimension M10: 3 Nm;

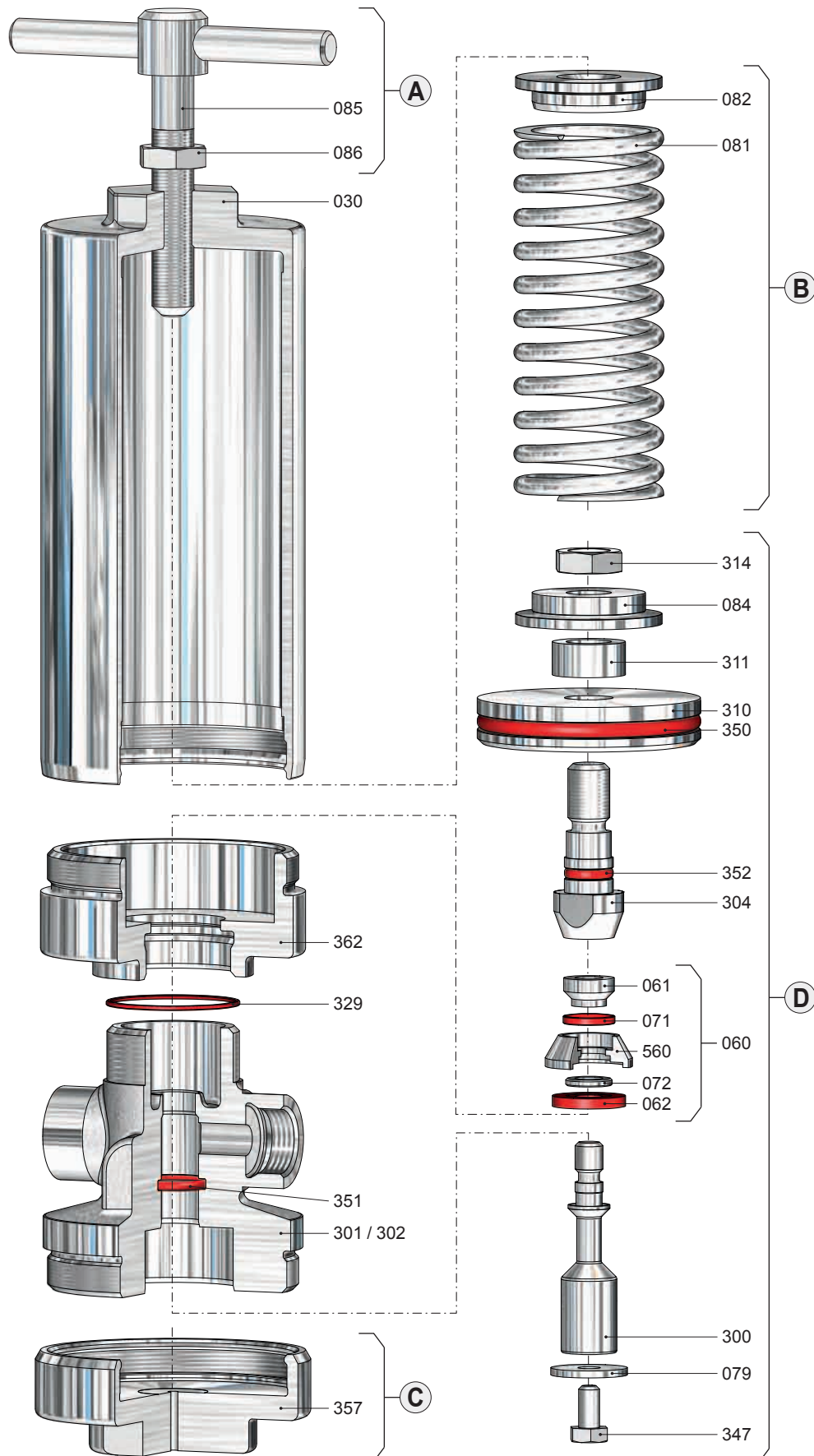
thread dimension M14 x 1.5: 5 Nm.

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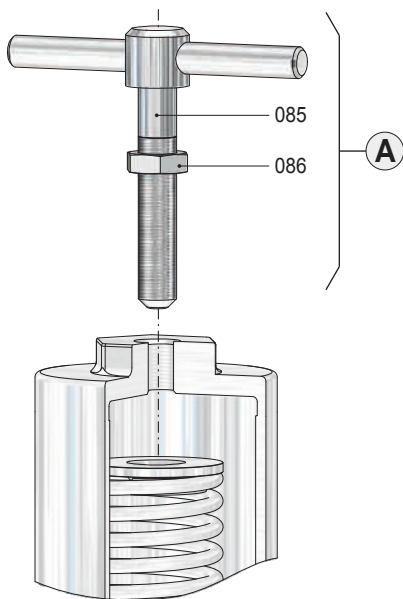
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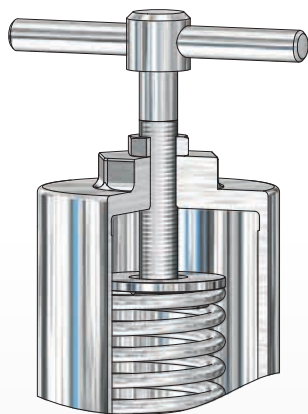


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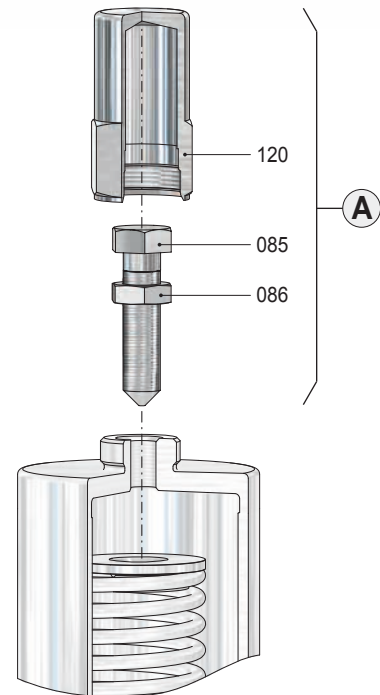
Knebelschraube



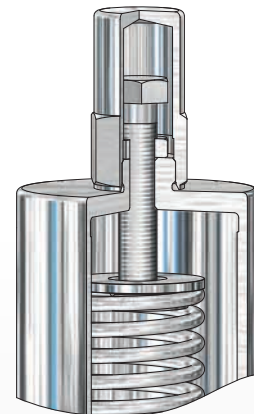
| Pos. | Bezeichnung |
|------|---------------|
| 085 | Druckschraube |
| 086 | Gegenmutter |



Ventilkopf C



| Pos. | Bezeichnung |
|------|---------------|
| 085 | Druckschraube |
| 086 | Gegenmutter |
| 120 | Kappe |



* Verschleißteile