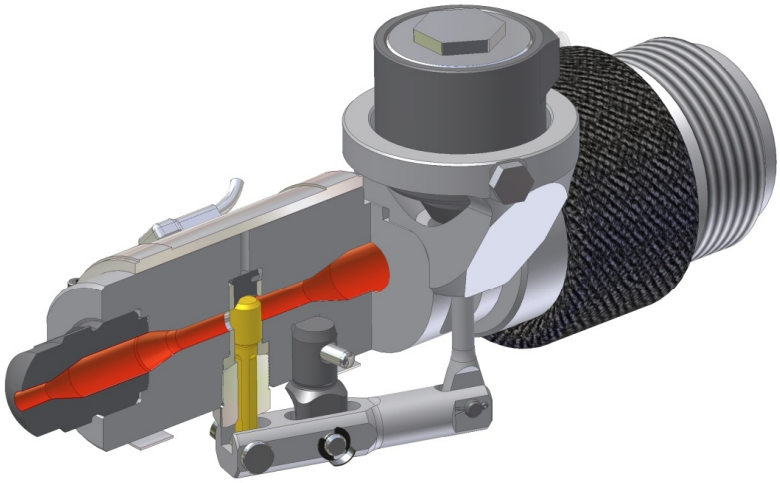
Machine bolt shut-off nozzle type B

pneumatically or hydraulically controlled



Appli-

cations:
Thermoplastics, shear sensitive plastics,
parts with long cavity ways (low pressure drop)

Shut-off mechanism:
Bolt shut-off with integrated 2-way actuator
pneumatically or hydraulically operated

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Safety instructions

This symbol indicates explanations about important matters.
Failure to read these or false handling could result in injury or damage.

Please pay attention to the following safety instructions and precautions

Handling

- Installation and servicing to be only carried out by suitable personnel according to the installation and service instructions.
- Nozzle can become extremely hot. Full face protection and heat resistant gloves must be worn.


Damage precaution

- Do not drop the nozzle or exert it to unnecessary forces.
- Take care that no foreign bodies enter the working parts of the nozzle.
- No adjustment or manipulation when nozzle is in operation.
- Never heat steel parts over **520°C**.
- The actuator is designed for temperatures up to **180°C**.
- Nozzle is only to be used for injection molding purposes.

Operational notes

- Maximum injection rate / temperature: **3000 bar at 400°C**.
- Torques on screws and threaded parts must be adhered to.
- Noise emisions from the nozzle do not exceed 70 dB(A).

Explosion danger

- Some plastics produce gases if they stay for a longer time in a heated environment. There is a risk that the gas may escape explosively through the nozzle orifice.

Keep this manual in a convenient place for future reference.

Installation instructions

Read safety instructions!

Legend:

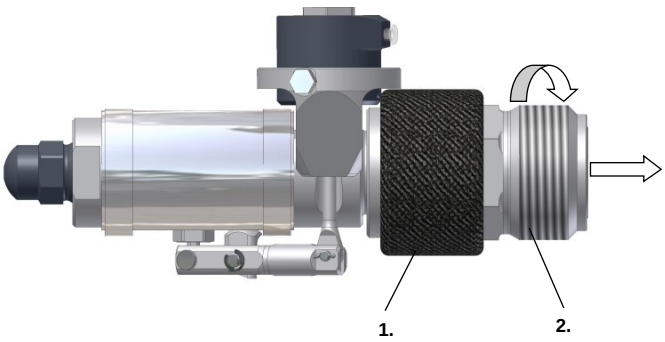
with Hand
smear with high temperature lubricant
tool
inspection
temperature equalisation

Note:
Nozzle is delivered pre-assembled. The following instructions are for installation on the machine. For easier handling remove the actuator.

Tools required:
Hexagonal wrench, allen key, ring spanner, socket wrench, pliers, punch.
See chapter **Assembly** for tool sizes and torques.

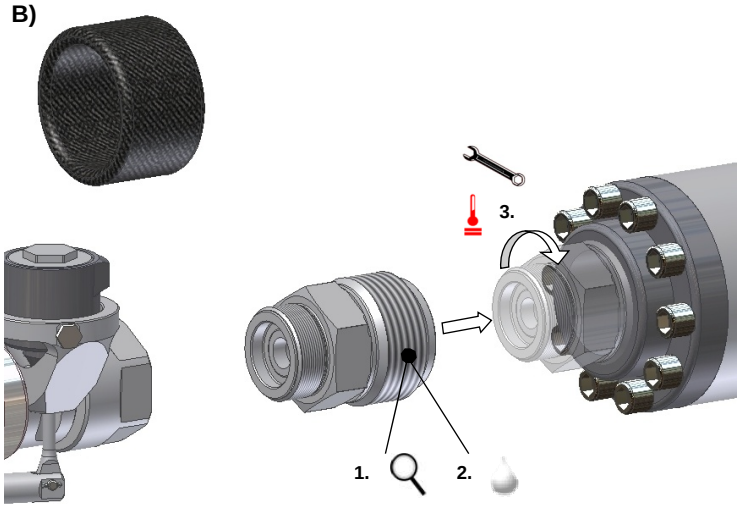
Installation steps A) - E)

A)



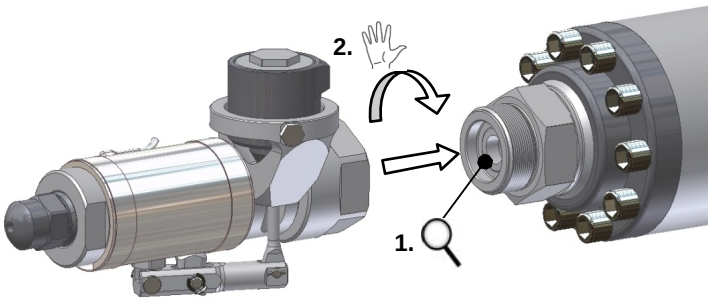
1. Remove insulation
2. Screw out adapter

B)



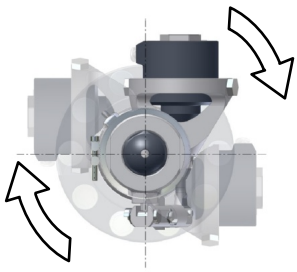
1. Check surfaces and threads
2. Grease adapter with high temperature paste
3. Mount adapter; await temperature equalisation and tighten acc. to machine handbook

C)

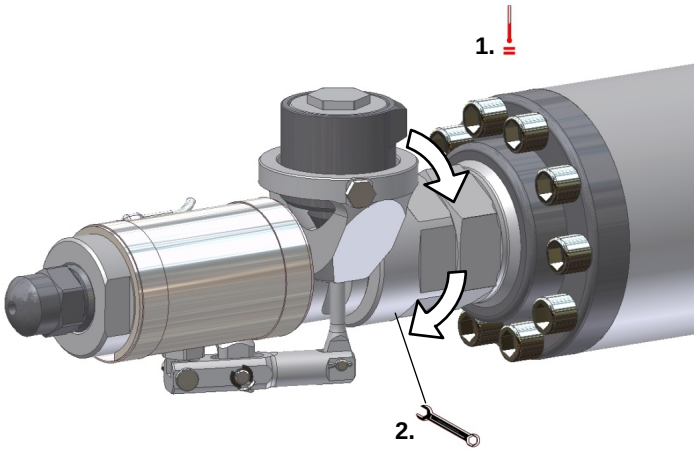


1. Check surfaces and threads
2. Screw nozzle onto the adapter until contact
3. Align the assembly.

   The end position of the assembly is 360° rotational
   If possible align the actuator vertically

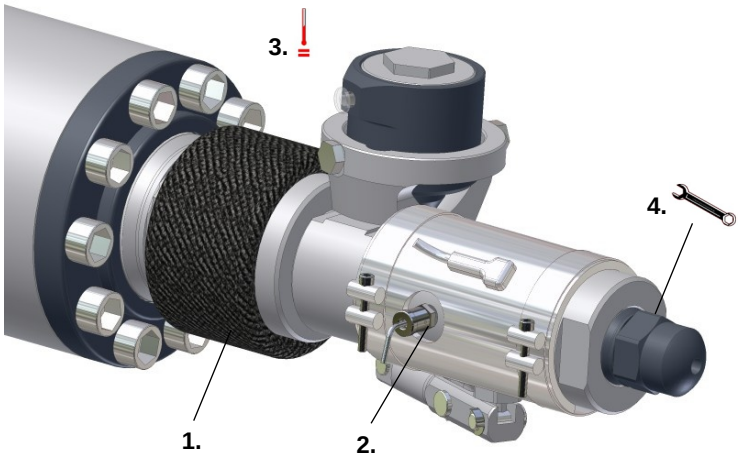


D)



1. Bring nozzle to operating tempertaure
2. Await temperature equalization and tightn
   (Torque in chapter **Assembly**)

E)



1. Mount insulation
2. Install temperature sensor
3. Bring nozzle to operating temperature
4. Await temperature equalization and tightn tip
   (Torque in chapter **Assembly**)

Only for the initial installtion:
Re-tighten tip and heater band screws with maximum torque. See chapter **Assembly** and Initial **Operation**.

Initial operation

Read safety instructions!

Initial operation:
1. Bring nozzle to operating temperature
2. **Only by first initial operation**: tighten screws and heater band screws to the maximum recommended torques
3. Make sure that the Polymer is completely melted
4. Eject the heated material. This follows after extrusion at low speed (time ca. 25 - 30 S) or through injecting out at three to five times the rate of injection

Actuator:
Operational data according to engraving on cylinder

Leakage:
Between bolt and guide there is a melt film which prevents the bolt from blocking. The melt film will be continuously renewed and will eventually leak out of the nozzle.

At machine downtimes: nozzle temperature must be lowered.

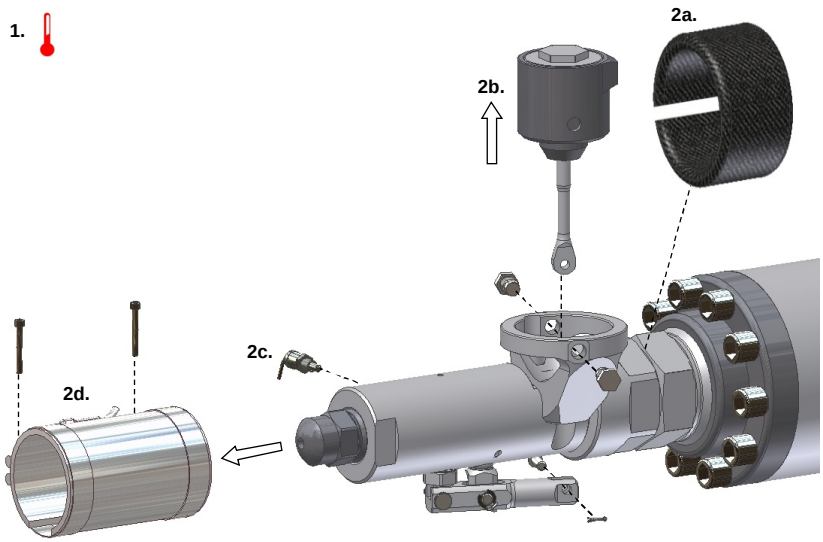
Service instructions

Read safety and cleaning instructions!
Assembly Note: Grease all threads with high temperature paste!

Attention
Actuator service information available seperately in documentation **Actuator**.
For more information see www.herzog-ag.com.

Disassembly A) - B)

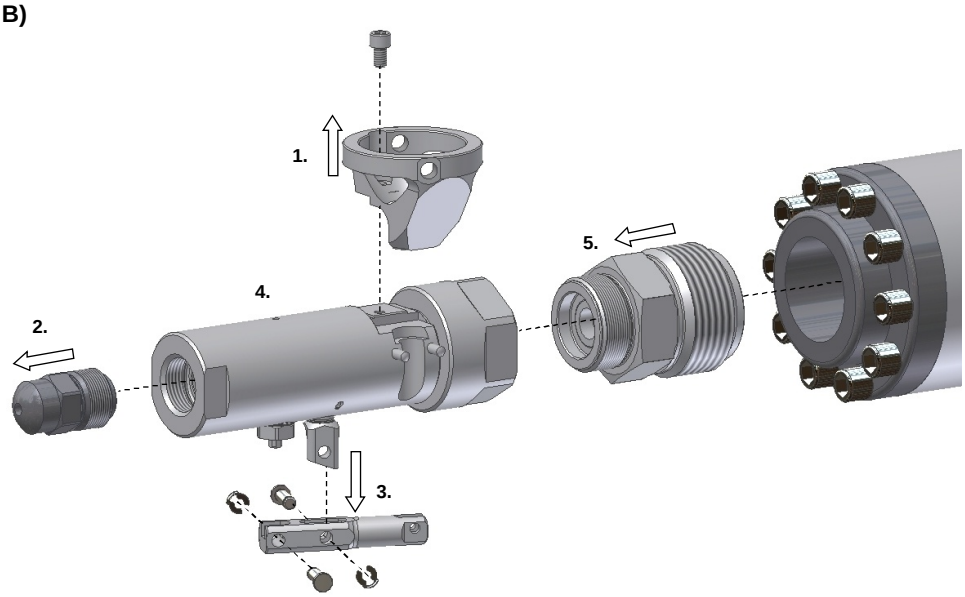
A) **1.**



Removing the nozzle from the machine:

1. Heat to operating temperature
2. Remove insulation (**2a.**), actuator (**2b.**), sensor (**2c.**) and heater band (**2d.**)

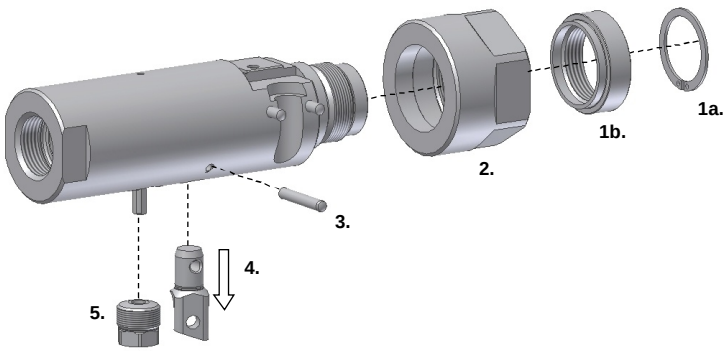
B)



1. Remove bracket
2. Screw out tip
3. Remove lever
4. Remove nozzle
5. Screw out adapter

Installation note: grease all threads with high temperature paste

C)

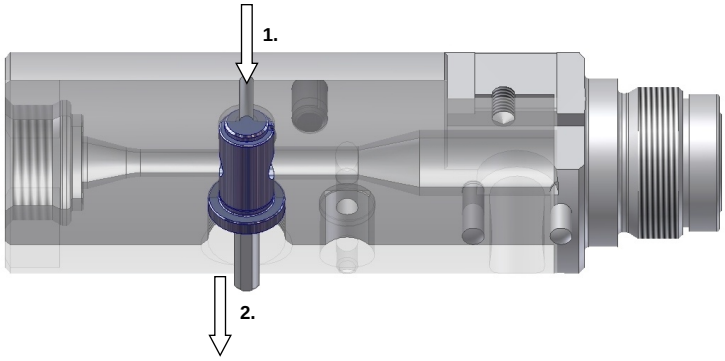


1. Remove splint (**1a.**) and ring (**1b.**)
2. Remove clamping nut
3. Carefully strike out pivot bolt with a punch
4. Remove lever pivot
5. Screw out locking screw

Installation note: grease all threads with high temperature paste

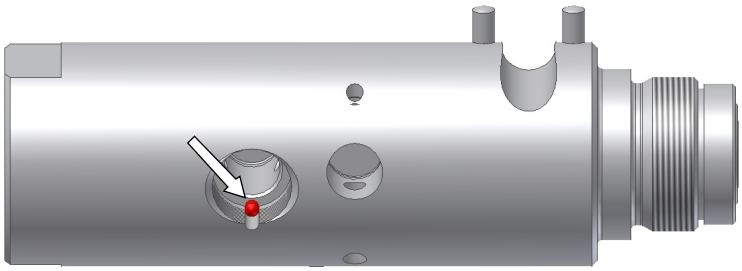
D)

Important:
Bolt and bolt sleeve can sometimes be difficult to remove. Do not use excessive force when removing these parts! Should you encounter problems when performing these disassembly Stepps, please contact Herzog for further information and support.

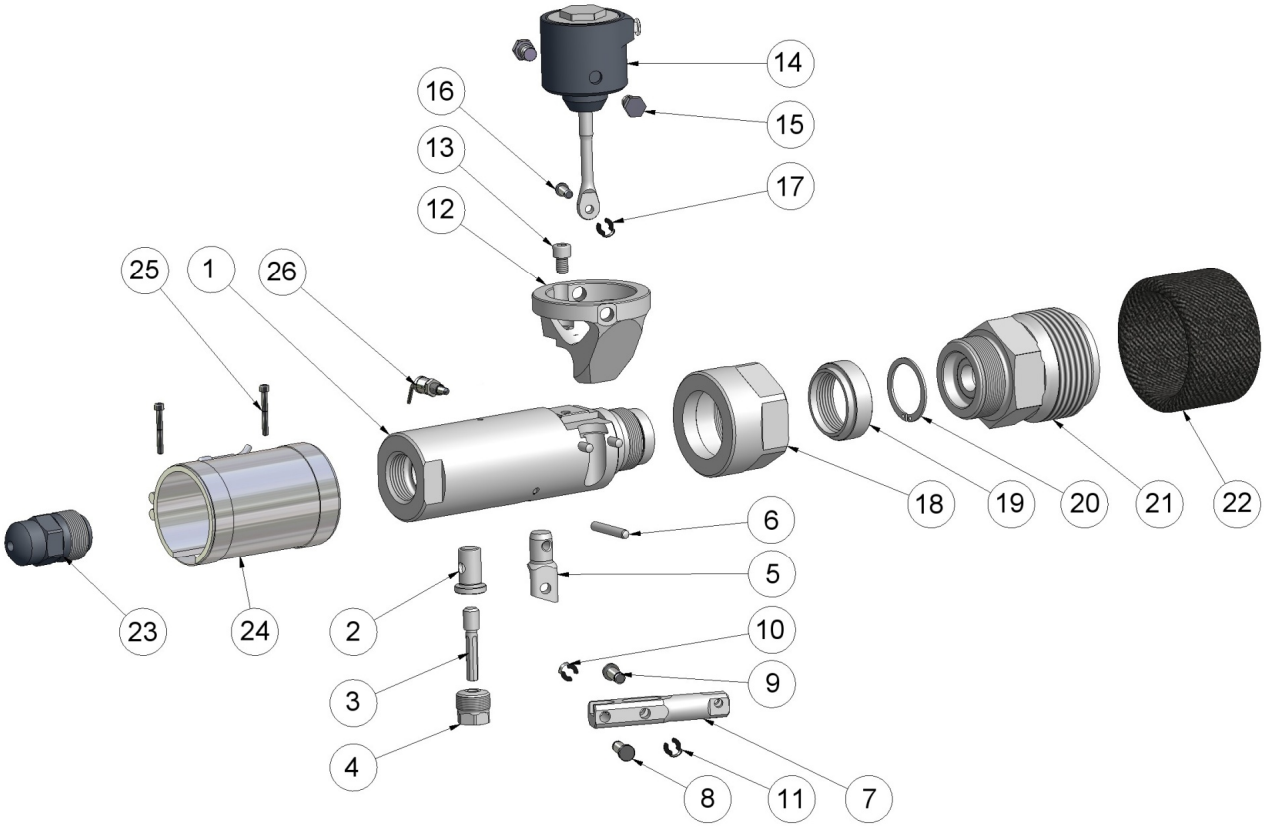


1. Carefully strike out the bolt sleeve from above using a punch.
2. Remove bolt and sleeve from beneath.

Assembly note: The slot on the bolt sleeve must be aligned with the positioning pin on the nozzle body.



Assembly



Assemble the nozzle according to the numerical order. Disassemble the opposite way around.

Key	Quantity	Description	Tool size *(Torque)*
			B
1	1	Body	-
2	1	Bolt guide	-
3	1	Bolt B2	-
4	1	Locking nut	SW27 *(150 Nm)*
5	1	Lever pivot	-
6	1	Pivot bolt ø10 mm	-
7	1	Lever	-
8	1	Bolt ø8 mm	-
9	1	Bolt ø8 mm	-
10	1	Splint	-
11	1	Splint	-
12	1	Actuator bracket	-
13	1	Bracket screw	SW8 *(25 Nm)*
14	1	Actuator	-
15	2	Actuator screws	SW17 *(50 Nm)*
16	1	Bolt ø8 mm	-
17	1	Splint	-
18	1	Clamping nut	SW85 *(800 Nm at 2500 bar, 900 Nm at 3000 bar 150 Nm)*
19	1	Ring	-
20	1	Splint	-
21	1	Adapter	SW46 / 60 *(torque according to machine handbook)*
22	1	Insulation	-
23	1	Tip	SW46 *(150 Nm)*. Counter on the body: SW70
24	1	Heater band ø80 mm x 140 mm	-
25	2	Heater band screws	SW 4 *(hand tight)*
26	1	Temperature sensor	SW 14 *(180 Nm)*

Parts subject to wear / ordering spare parts

Your contact information:

Company	
Street	
City / Zip	
Contact	
Tel. / Fax	
E-Mail	

Lasered nozzle identity no.: please insert here

Quantity	**Part** (for part name, see chapter **Assembly**)

Send to:

herzog systems ag
CH-9230 Flawil / Switzerland

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