

Technical and Commercial Manual

ZAES® Needle Valves

Installation , operation and maintenance .

1. Application and Scope of Use

Needle valves **ZAES®** are designed for precise control of fluid flow in systems industrialists demanding. Thanks to its shaft design conical and step restricted , allow for adjustment fine and progressive flow, being ideal for applications where required high precision in the control of liquids or gases.

With operating capacities up to **690 bar (10,000 PSI)** and **500 °C (932 °F)** depending on the type of packaging and materials selected, these valves are ideal for high pressure environments pressure and temperature.

⚠ Important: Not recommended his use in high fluids viscosity or with the presence of particles solid, since the passage hole reduced can clog easily.

2. Installation Correct

To ensure proper functioning optimal and a long life useful, it is essential follow the following recommendations during installation.

Threaded Valves

- Check that the connections are clean and free of chips or impurities.
- Apply several turns of PTFE tape on the threads to ensure tightness effective.
- Rosque manually open the valve to the stop and then Tighten between 1/2 and 1 1/2 turns additional with a key adequate.

⚠ Do not exceed This torque to avoid overload damage mechanics.

Welding Valves

- Keep the valve completely open during the welding process.
- Cut the pipe in right angle, deburring properly and clean with solvent.
- Align perfectly the ends to avoid efforts mechanics unwanted.
- Do not exceed 70 A welding current.
- Apply heat as much as possible far away possible from the valve body and check that the temperature does not exceed **200 °C**.

☒ **Overheating can compromise the sealing elements.**

3. Operation Operational

- Turn the handle in sense schedule to reduce the flow and in sense counterclockwise to increase it .
- For closing complete, use only manual force.

✗ Never use tools as keys or tubes to close, since it can damage the mechanism.

- In high- quality environments temperature, handle with protection suitable to avoid burns.
- Versions with actuator include indicators position mechanics (“ open ” or “ closed ”).
- Operate the valve periodically Yeah goes to be inactive for long periods, to avoid blockages internal and secure his operability.

4. Maintenance Preventive and Corrective

Before performing any intervention, make sure that the system this completely **depressurized and cold**.

General procedure:

1. **Drainage complete** if working with fluids dangerous.
2. **Packing adjustment:**
 - Turn the hand one turn complete in sense counterclockwise.
 - Tighten the packing nut until it is removed . leaks maintaining a maneuvering torque appropriate.
 - In valves with **Grafoil**, wait 2 minutes before performing evidence functional.
3. **Pressurize the** system again and check for leaks and proper operation . operation.

Metalúrgica Zaes, S.L.
C/ Dolores Almeda, 12
ES-08940 Cornellá de Llobregat
(Barcelona). SPAIN (UE)



☑ Only backseated valves allow replace the packing without disassembly, under non-pressurized conditions.

⚠ **Caution :**

Never loosen the bonnet from the body while the valve be under pressure.

Do not disassemble components inmates without being sure that the system this sure.

Because choose ZAES®?

- High reliability in applications criticisms.
- Design robust and precise control.
- Technical service specialized and advice in selection and maintenance.
- Compliance with regulations international design and quality.