Operating Instructions

ERHARD Ball Valve

with special actuator

1 Description of Product and Range of Application

ERHARD Ball Valves DN80- DN1200    Product No. 49... ....
with special actuator in accordance with separate instructions
with or without inspection cover – depending on the corresponding type

ERHARD Ball Valves are the appropriate valves wherever minimizing of head losses is required, e.g., upstream of turbines. Their actuator being adapted to the hydraulic moments they are suitable for high flow velocities occurring e.g. during flushing and emptying services of pipelines. ERHARD Ball Valves are also field-approved for contaminated types of water including those containing foreign bodies as well as sludge.

2 Design Features – Technical Data

The ERHARD Ball Valve is a valve with completely unreduced bore suitable for swabbing. Its robust ball plug eccentrically supported in the body is equipped with a sealing ring the type and material of which are selected according to the operating conditions. This seal is lifted off the body seat after about 3° travel of the ball plug. There is a large gap area between ball plug and body which in intermediate positions is rinsed by the flow bringing about a self-cleaning effect as well as a very good hydraulic behaviour of the Ball Valve during opening and closing under operating conditions.
In the open position, the ball sealing ring and the body seat ring are located outside the flow and thus protected against wear and tear.

Perfect operation is guaranteed by the positive connection of shaft and ball plug ensuring secure power transmittance without any fluttering.

3 Installation into the Pipeline - Mounting

Remove all packing material from the valve. Prior to installation, check the pipeline for impurities and foreign matters and clean it if necessary. The valve can be mounted in any position.

Exceptions:
For valves with an arrow showing the flow direction, this direction must be observed!
For valves with weight-loaded hydraulic actuator, observe actuator location!
For valves with foot plate, this plate only serves as a support of the valve!

It is important that all around the valve there is free access for operation and maintenance. For outdoor installation, the customer has to protect the valve against the direct effects of the weather.

During installation of the valve, the distance between the pipe flanges should exceed the valve face-to-face dimension by at least 20 mm. Thus, the raised faces will not be damaged and the gaskets can be inserted. Steel-reinforced rubber seals are recommended for use as flange gaskets, for slip-on flanges they are absolutely necessary (consider resistance to flow medium and temperature).
The mating pipe flanges must be plain-parallel and concentric.

Tighten the connecting bolts evenly (without distortion) and crosswise. The pipeline mustn't by any means be pulled up to the valve.

4 Initial Operation

After installation, check the valve for ease of operation moving the actuator over the whole travel.

For ball valves DN 350 and larger, the air in the body can be evacuated by an air release plug.
5 Operation and Application

The valve is operated by means of the actuator without any need of excessive forces or pressures.

5.1 Inadmissible modes of operation

Avoid installation immediately upstream of elbows, T-pieces, Butterfly Valves or Check Valves.
The temperature limits for the flow medium must not be exceeded.
Keep within the limits of the maximum working pressure.
The nominal pressure is the maximum pressure to be applied on the closed valve.
Extending the operating elements, e.g. by levers is not allowed.

6 Maintenance

For inspection or maintenance work, protective equipment shall only be removed after the pipeline section in which the valve is installed has been isolated and pressure-relieved.

ERHARD Ball Valves are equipped with maintenance-free plain bearings. We recommend to move the ball valve over the whole travel at least once a year.

6.1 Inspection

Check the external condition of valve and actuator.
Clean them and repair coating if necessary.
Check the flanges for tightness.
Make sure that valve and actuator are operating smoothly:
• by moving the valve manually over the whole travel.
Check for tightness on the closure.
Verify shaft sealing tightness.