

CONTROL VALVES BY ERHARD

ERHARD RANGE

NEEDLE VALVE

ERHARD Needle valve is the right valve to use whenever pressure heads or flow rates need to be safely and reliably reduced and controlled. They are used for two main tasks:

- By restricting the cross-section, a change in flow rate, flow velocity and pressure is forced, which results in higher stress in the valve. The valve must therefore be designed so that potential cavitation cannot cause any damage whatsoever.
- To be able to control the pressure and flow precisely and finely, the control valve's control characteristics must be as linear as possible over the whole operating range.

Thanks to their well thought out and tested design, ERHARD Needle valves fulfil these requirements to the greatest possible degree and are therefore the ideal valves for numerous control tasks.



MARKETS



Water treatment



Water transmission



Water distribution network



Desalination



Industrial water applications



Dams and hydro power



Sewage network and treatment

TECHNICAL DATA

Fluid: drinking water, raw water
Air and Gas flow control

Nominal Diameter (DN):
from 100mm to 2000mm

Nominal Pressure (PN):
10 to 160

Medium Temperature:
up to 70°C

Body material: ductile iron

Coating: epoxy, enamel or special

APPROVALS

DVGW, KTW-270, WRAS, ACS, NFS

ADVANTAGES

MINIMUM PRESSURE LOSSES

Economic operations are ensured and cost effective regarding the cost of energy.

LONG LIFE VALVES

and low maintenance costs play a decisive role in the choice of this product.

DIMENSIONING AND DESIGN

Based on the hydraulic operating data to be exactly adapted, with highest quality material.

CHARACTERISTICS

└ **Each needle valve is tailor made; special inserts** – Defined regarding hydraulic conditions: vaned ring, slotted cylinder, perforated cylinder, in one or three parts etc. The vaned ring, unique on the market, drives cavitation in the centre of the pipe without causing any damage.

└ **Complete actuators portfolio is available** – Float control, electric, hydraulic, hydro-electric, pneumatic etc. The stem gearbox can be directly combined with handwheel, square stem cap or headstocks. The standardised connection is perfect to adapt to all types of actuator.

└ **Maintenance free** – Due to the design and material quality. Seat is removable and main gasket is in cavitation-free space and piston is machined to prevent seal tension.

└ **Control range up to 96% combined with slider crank mechanism and four hard-faced guides** provide the most accurate flow control with very low head losses when fully opened.

└ **Wide range of pressure ratings, nominal sizes and designs** allow adapted solution for numerous special applications.

STANDARD APPLICATION EXAMPLES

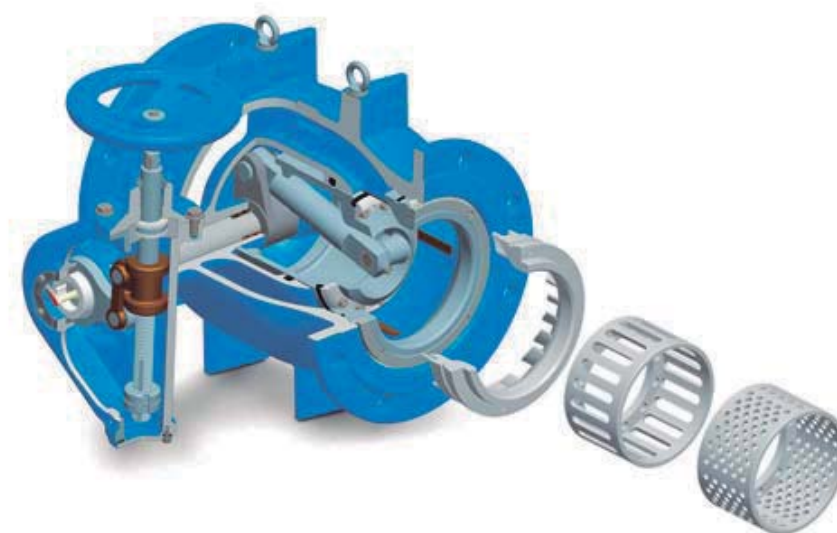
- └ ERHARD Needle valve as reservoir feeding valve.
- └ ERHARD Needle valve in the bottom outlet of a dam with special air-admission option.
- └ ERHARD Needle valve at the turbine inlet and in the turbine by-pass, or as quick-opening outlet valve of a turbine device.
- └ ERHARD Needle valve as combined in-line regulating and safety valve.

SPECIAL APPLICATION EXAMPLES

- └ **Pressure control valve** in natural gas lines.
- └ **In-line isolating valve** under high working pressure and flow velocity conditions.
- └ **Air-flow control valve** for activated sludge basins in sewage treatment plants (see good to know).

GOOD TO KNOW

- └ Pre-sales and after-sales support departments help to define the right solution (tailor-made) and the right sizing.
- └ By providing a full control range, ERHARD Needle Valve is very often used to control air admission in sludge basins. Energy cost savings are therefore much more important than the quality treatment.



NEEDLE VALVE IN CUT WITH DIFFERENT INSERTS

Diameter	100	125	150	200	250	300
Length (mm)	325	325	350	400	450	500
Weight (kg)	60	60	75	120	190	260
Height (mm)	329	329	361	443	530	588

Diameter	350	400	450	500	600	700
Length (mm)	700	800	900	1000	1200	1400
Weight (kg)	450	595	826	945	1780	2175
Height (mm)	622	682	751	831	1010	1179

Diameter	800	900	1000	1200	1400 to 2000
Length (mm)	1600	1800	2000	2400	contact us
Weight (kg)	3295	4310	5750	8350	
Height (mm)	1329	1528	1717	2068	

This table contains the dimensions of the standard products PN16, without handwheel or actuators.