

MS ELBOW

Mild Steel Pipe Elbow for Industrial, Plumbing, Water Supply & Pipeline Applications

Product Overview

MS Elbow (Mild Steel Elbow) is a durable pipe fitting designed to change the direction of fluid flow within piping systems. Manufactured from quality mild steel, it provides strength, pressure resistance and dependable service for a wide range of industrial and infrastructure applications.

Available in standard 45° and 90° configurations, MS elbows can be supplied in multiple diameters, wall thicknesses and end configurations. Their robust construction, accurate dimensions and smooth finish support efficient installation and reliable pipeline operation.

Key Specifications

Parameter	Specification
Product Name	MS Elbow / Mild Steel Elbow
Material	Mild Steel
Standard Bend Angles	45° and 90°
Manufacturing	Hot-formed; Seamless or Welded
Tensile Strength	Approx. 350–600 MPa*
Pressure Classes	150 / 300 / 600*
Operating Temperature	Approx. -20°C to 350°C*
Pressure Capacity	Up to 45 bar*
End Types	Plain / Beveled
Surface Finish	Black Paint / Anti-Rust Oil
Customization	Angle / Size / Wall Thickness
Service Life	20+ years under suitable conditions*

*Actual pressure, temperature, dimensions, material properties and service life depend on the exact size, wall thickness, manufacturing specification, fluid and operating conditions. Confirm against the applicable technical standard.

Built for Strength and Longevity

- **Robust Mild Steel Construction:** Provides dependable mechanical strength for demanding piping applications.
- **High Tensile Strength:** Material options may provide tensile strength in the stated 350–600 MPa range, subject to grade and specification.
- **Pressure Performance:** Available for applications using pressure classes such as 150, 300 and 600, subject to design requirements.
- **Temperature Capability:** Suitable for specified operating conditions when the material, wall thickness and design rating are correctly selected.
- **Long Service Potential:** Proper installation, inspection and corrosion protection can significantly extend operational life.

Versatile Applications Across Industries

Industry	Typical Applications
Oil & Gas	Pipeline systems, process lines and industrial fluid transport
Water Supply	Water distribution networks and treatment infrastructure
Fire Fighting	Fire protection and industrial firefighting piping systems
HVAC	Industrial heating, ventilation and cooling pipework
Chemical Processing	Process piping and fluid handling systems
Power Generation	Plant piping and utility systems
Construction	Building services, structural and industrial pipeline installations

Quality Manufacturing and Finishing

MS elbows can be manufactured using advanced hot-forming processes in either seamless or welded construction, depending on the required specification. Surface protection may include black painting or anti-rust oil. Plain and beveled ends are available for different joining and installation requirements. Beveled ends are commonly used for butt-welded connections, while plain ends may be selected where the installation method or further processing requires them.

Key Product Benefits

- **Directional Control:** Changes pipeline flow direction by standard 45° or 90° bends.
- **Strong Construction:** Designed for mechanical strength and demanding industrial service.
- **Installation Flexibility:** Available with plain or beveled ends.
- **Size & Thickness Options:** Can be supplied according to pipeline design requirements.
- **Surface Protection:** Black paint or anti-rust oil helps protect the steel surface.
- **Customizable:** Special bend angles, dimensions and wall thicknesses may be manufactured on request.

FAQ's of MS Elbow

Q: How are MS elbows with various bend angles manufactured?

A: MS elbows are commonly produced through hot-forming processes and may be supplied in seamless or welded construction. Standard 90° and 45° bends are widely available, while custom angles can be manufactured according to project requirements.

Q: What are the key benefits of using MS elbows in pipelines?

A: MS elbows provide strength, dimensional consistency, directional flow control and suitability for a broad range of industrial piping systems. Properly selected and installed butt-welded elbows can provide strong, reliable connections.

Q: When should I use a beveled end versus a plain end on an MS elbow?

A: Beveled ends are generally selected for butt-welding because the prepared edge supports the welding procedure. Plain ends may be used where the installation method or subsequent fabrication requires an un-beveled end. The correct selection should follow the applicable piping standard and joint design.

Q: Where are MS elbows commonly used?

A: MS elbows are used in oil and gas, water supply, fire fighting, power generation, chemical processing, HVAC, construction and general industrial pipeline systems.

Q: What is the pressure rating and load capacity of these MS elbows?

A: The supplied product description references pressure classes 150, 300 and 600 and pressure capability up to 45 bar. Actual allowable pressure depends on diameter, wall thickness, material grade, temperature, manufacturing standard and design conditions.

Q: How should MS elbows be maintained to maximize service life?

A: Perform routine inspection for external corrosion, coating deterioration and weld integrity. Reapply suitable protective coatings when required and operate the fitting within its specified pressure and temperature limits. Proper installation and compliance with applicable piping standards are essential for long service life.

Product Note: Final dimensions, material grade, pressure rating, temperature rating, wall thickness, end preparation and applicable standards should be verified against the supplier's technical datasheet or drawing for the exact MS Elbow being ordered.