

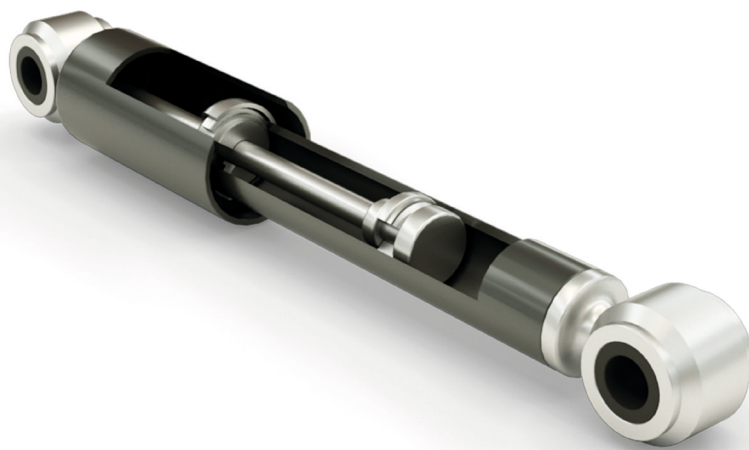
Piston rods

Product information | Technical data sheet

Mubea Precision Steel Tubes produce precision steel tubes for piston rods in shock absorbers.

There are a variety of demands on tubes for piston rods. Processing and refining the outer surface requires excellent tube surface qualities. Very good, homogeneous reshaping properties are required for the rolling of the thread. Stringent toleran-

ces ensure the efficient production of the piston rods. High levels of material purity guarantee the fatigue strength of shock absorbers. The increasing demand for light-weight design can be met by using high-tensile materials.



Tube requirements

High strength values
(elongation at break, tensile strength)

Excellent surface condition

High levels of fatigue strength

Very good geometrical accuracy

Good formability
(sufficient elongation)

Material properties

High strength (YS, TS) and
fatigue strength

Homogeneous strength properties
and ductility

Potential to reduce wall thickness

Structure

Homogeneous, fine-grain structure
in weld seam and basic material

Minimised surface decarburisation of
inner and outer surfaces (< 50 µm)

Excellent weld seam quality

Geometry

Minimised fluctuations in wall thickness and
inner/outer diameter

Minimised deviations in straightness

Minimised deviations in concentricity
and axial run-out

Minimised eccentricity

Specific tube end processing:
sawn/brushed; chamfered

Surface

Excellent surface condition

Minimised surface flaws
(adhesions, scratches, dents, etc.)

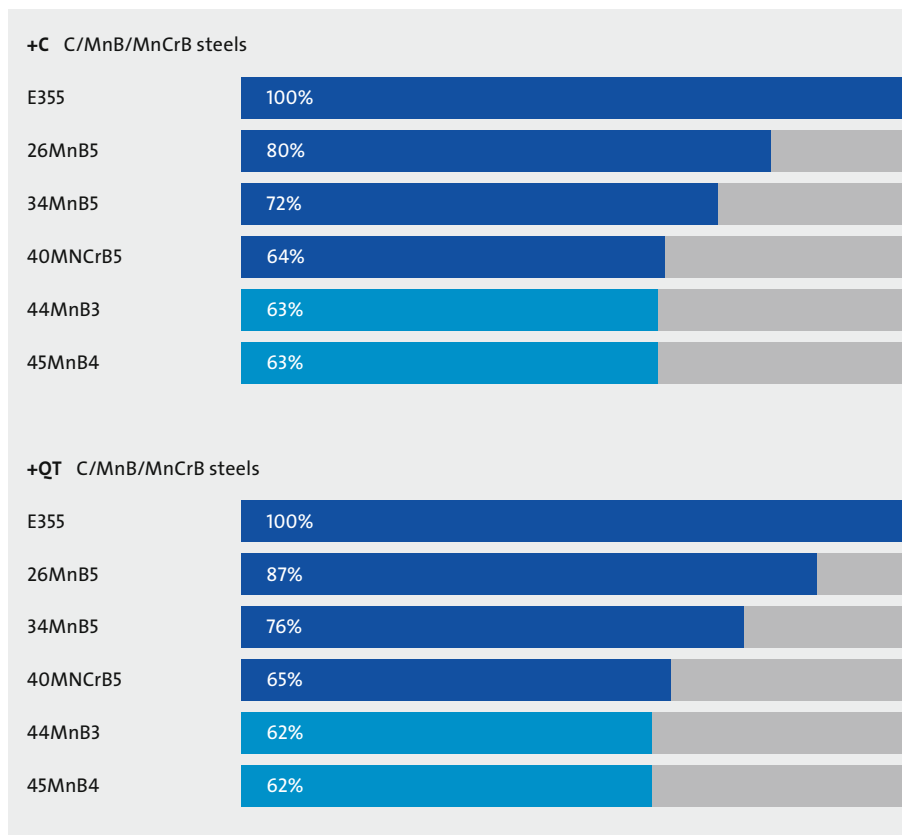
Increased surface hardness thanks to
surface coatings/hardening

Minimised corrosion protection,
optionally specific corrosion protection

Materials & dimensions

Application	Tube standard	Steel grades	Delivery condition	Dimensions range mm
Piston rods (Car)	✓ EN 10305-2	✓ E355	✓ +C	✓ OD 16 - 85 ✓ WT 2 - 5.5
		✓ 26MnB5		
		✓ 34MnB5		
		✓ 40MnCrB5		
		* 44MnB3		
		* 45MnB4		

Extract from achievable weight-savings



✓ ■ Series production
* ■ In validation

OD: outside diameter
WT: wall thickness