

# Drive shaft monobloc

## Product information | Technical data sheet

Mubea Precision Steel Tubes produce welded-drawn precision steel tubes made of high-tensile materials for one-part drive shafts.

The tubes for the one-part drive shafts (monobloc) are cold-formed during manufacturing. For this reason, manufacturers of monobloc drive shafts greatly value identical reshaping properties and high levels of dimensional stability in the delivery condition of the tubes. Additionally,

after inductive hardening, high strength values with low levels of surface decarburisation are required. The trend towards light-weight design increasingly demands high-strength materials, which allow for weight reduction with comparable physical properties.



## Tube requirements

- Very good formability
- High torsional strength and durability
- High geometrical accuracy (eccentricity, roundness)
- Excellent surface condition

## Material properties

- High torsional strength and fatigue strength
- Excellent reforming properties
- Homogeneous strength properties and ductility
- Excellent hardening properties

## Structure

- Homogeneous, fine-grain structure in weld seam and basic material
- Minimised surface decarburisation of inner and outer surfaces (< 50 µm)
- Very good weld seam quality
- Very good reforming properties

## Geometry

- Minimised fluctuations in wall thickness and inner/outer diameter
- Minimised deviations in concentricity and axial run-out
- Minimised eccentricity
- Specific tube end processing: sawn/brushed; chamfered, completely processed/chamfered

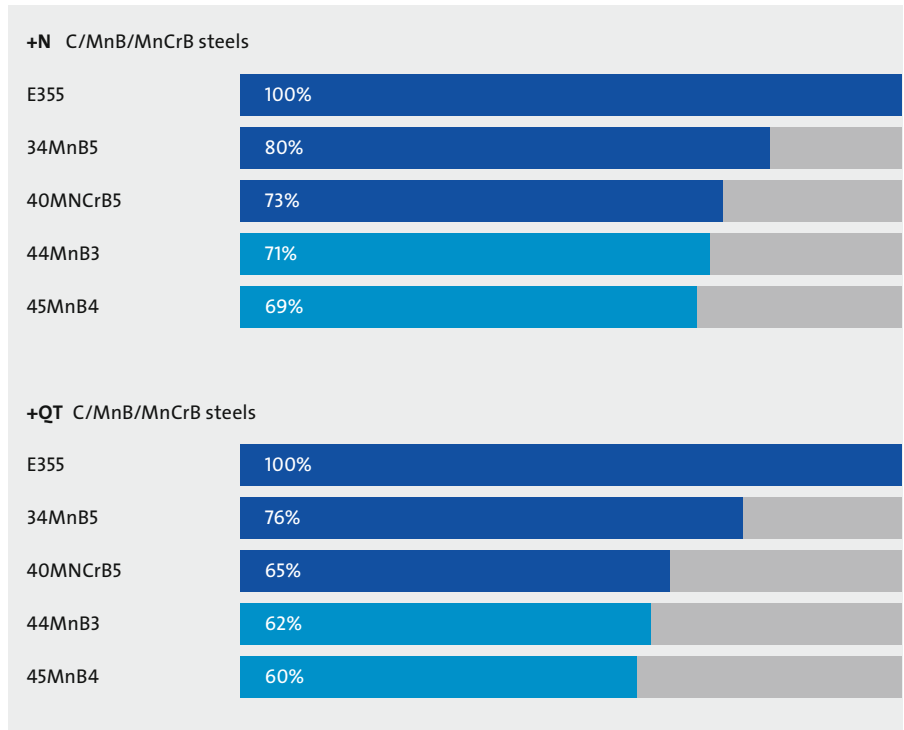
## Surface

- Excellent surface condition
- Minimised surface flaws (adhesions, scratches, dents, etc.)
- Minimised corrosion protection, optionally specific corrosion protection

## Materials & dimensions

Application	Tube standard	Steel grades	Delivery condition	Dimensions range mm
Drive shaft (Monobloc)	✓ EN 10305-2	<ul style="list-style-type: none"> <li>✓ E355</li> <li>✓ 34MnB5</li> <li>✓ 40MnCrB5</li> <li>* 44MnB3</li> <li>* 45MnB4</li> </ul>	✓ +N	<ul style="list-style-type: none"> <li>✓ OD 25 - 60</li> <li>✓ WT 2 - 6,5</li> </ul>

## Extract from achievable weight-savings



- ✓ ■ Series production
- \* ■ In validation

OD: outside diameter  
WT: wall thickness