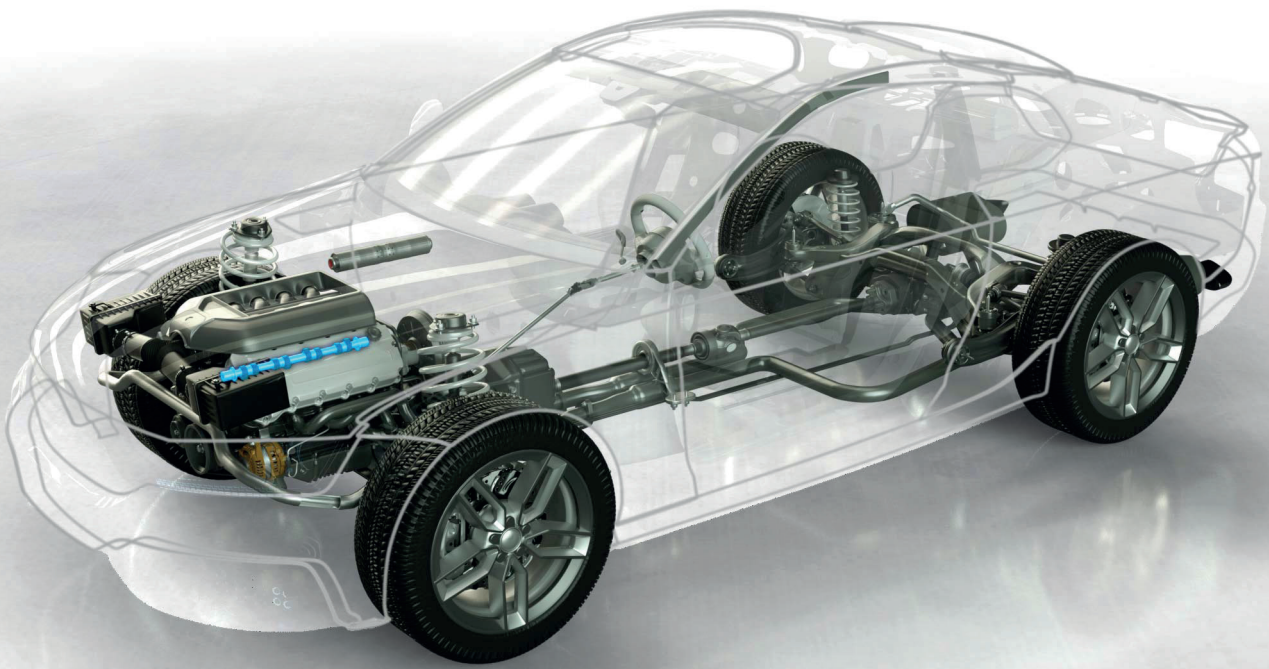


Camshaft hydroformed

Mubea

PRECISION STEEL TUBES



Product information | Technical data sheet

Mubea Precision Steel Tubes produce welded-drawn precision steel tubes made of modified C-grade steel for hydroformed camshafts.

For the manufacturers of hydroformed (HF) camshafts, accurate concentricity, high degrees of roundness and straightness as well as consistent formability properties are important aspects of the

tube selection process. These criteria guarantee ideal tube processing on production systems as well as smooth operation of installed camshafts in engines.



Tube requirements

- Very good formability
- High torsional strength and reverse bending strength
- High geometrical accuracy
- Excellent surface condition

Material properties

- High tensile strength
- Homogeneous strength properties and ductility
- Potential for reduced wall thickness

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 fluctuation in wall thickness and diameter across the entire circumference and length
- Tube end processing: sawn/brushed; chamfered, completely processed/chamfered
- High accuracy in tube end processing (chamfer geometry)

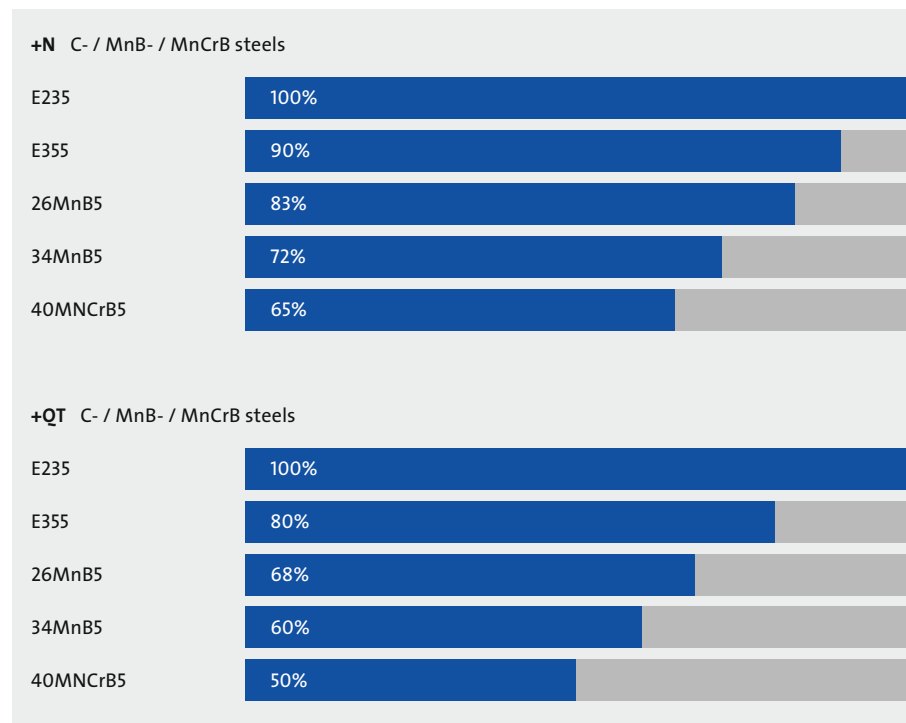
Surface

- 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
Camshaft (car)	✓ EN 10305-2	<ul style="list-style-type: none"> ✓ E235 ✓ E355 ✓ 26MnB5 ✓ 34MnB5 ✓ 40MnCrB5 	✓ +N	<ul style="list-style-type: none"> ✓ OD 22 - 60 ✓ WT 4 - 6,5 also available as TDT tube with variable wall thickness

Extract from achievable weight-savings



- ✓ Series production
- * In validation

TDT: Tailor Drawn Tube OD: ø outside diameter
WT: wall thickness