

DEK STANDARD ENGINEERING INSTRUCTION

Title

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HARDENED STAINLESS PRECISION SHAFTS/GUIDE-BARS

DSM 1.2.6

Material Designation:

"X46 Stainless Steel"

X46Cr13 (1.4034) as per EN 10088-3

Induction Hardened

This product is supplied induction hardened and ready to cut and finish to the required length.

Typical Composition (%)

Carbon: 0.45

Sulphur: 0.003

Phosphorous: 0.030

Silicon: 0.40

Molybdenum: 0.50

Chromium: 13.0

Description:

Precision ground stainless steel shafts induction hardened and ground. The surface hardness and case depth are uniform over the whole length. As a result the shafts have good dimensional stability and long service lives. The base material X46Cr13, in its non-hardened form is commonly referred to as "420 Stainless Steel". "X46" as a product of Headland Engineering is supplied in the induction hardened condition.

Application:

Guide bars used in conjunction with linear ball bearings/phosphor bushes where a sufficient application of grease is not practical to maintain and where the material will come into contact with human hands accelerating the oxidization/corrosion process.

X46 Specifications:

Surface Roughness: 0.4 um Ra Max

Surface hardness: 52-56 HRC

Straightness: 0.1mm/1m

Case Depths: Ø5-Ø16mm : 1mm / Ø20-Ø25mm : 1.8mm
Ø30mm : 2mm / Ø40-Ø50mm : 2.5mm
Ø60-Ø80mm : 3mm / Ø100mm : 3.3mm

X46 Commonly Available Sizes:

Metric (Ø): 5, 6, 8, 10, 12, 14, 16, 20, 25, 30, 40, 50, 60, 70, 80 & 100mm to either h6 or h7.

Imperial (Ø): ¼, 3/8, ½, 5/8, ¾, 1, 1¼, 1½, 2 & 2½" to h6 tolerance only.

X46 Source of Supply:

Headland Engineering

Unit 3, Seven Stars Business Centre

100 Seven Stars Road

Oldbury, West Midlands

B69 4JS

Tel: (01215) 444 477

Fax: (01215) 445 933

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