

Material Data Sheet C60 – 1.0601 (Precision Hollow Shaft)

Precision Hollow Shaft with:

- Good hardening properties
- Excellent ground finish

For use in Quality Linear Bearing, Guide and Slideway systems.

// Chemical Analysis %

Material	C	Si	Mn	P	S
C 60	0,50	max.	0,60	max.	max.
	0,65	0,40	0,90	0,035	0,035

Specification to EN 10083

// Mechanical Properties

Diameter (mm)	Re (N/mm ²)	RM (N/mm ²)	A (%)
12 - 80	= > 325	= > 550	= > 14

Mechanical properties to DIN EN 10305-1
Condition of delivery +SR +A +N in our choice

Density: 7,85 kg/dm³

Roundness: ½ Diameter tolerance

Surface Finish: Polished, surface finish Ra < = 0,30 µm

Straightness: = > Ø 12 mm - Ø 20 mm
0,30 mm/m (TIR max. 0,60 mm/m)
= > Ø 20 mm - Ø 40 mm
0,20 mm/m (TIR max. 0,40 mm/m)
= > Ø 40 mm - Ø 80 mm
0,10 mm/m (TIR max 0,20 mm/m)

Bore/

Concentricity: < = 5% of the wall thickness

Induction hardened: Surface Hardness 60 - 66 HRC

Diameter (mm)	Depth of Hardness at ends Rht 550 HV1 DIN EN 10328
= > 12 - 18	0,80 mm + 0,50 mm
> 18 - 30	1,20 mm + 0,80 mm
> 31 - 50	1,50 mm + 1,00 mm
> 51 - 80	2,20 mm + 1,00 mm

// Standard Diameters

Standard Ø (mm)	Tolerance (µm)		* Production Length (mm)
	h 6	h 7	
12	0 - 11	0 - 18	6.000 + 400
16			
20			
25	0 - 13	0 - 21	6.100 ± 100
30			
40			
50	0 - 16	0 - 25	6.800 + 200 / 6.100 ± 100
60			
80			
	0 - 19	0 - 30	6.100 ± 100

* Stock material - The bar ends are not hardened for 75 mm and up to 150 mm length of a production bar may not be within dimensional tolerance. When providing material for stock this material may amount to 10%, we do not invoice this material.

// Bore Diameter

Outer Ø (mm)	Inner Ø (mm)	Inner Ø Tolerances (mm)
12	4,0	± 0,45
16	7,0	± 0,15
20	14,0	± 0,15
25	15,4	± 0,15
30	18,0	± 0,15
40	26,0	± 0,15
50	28,0 / 29,5	± 0,25
60	36,5	± 0,30
80	57,4	± 0,35

Specials:

Other hardness depths and tolerances are available. Please contact us for detailed information, dimensions and minimum order quantities.

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