

Material Data Sheet 42CrMo4QT – 1.7225

Piston Rod material with:

- Good hardening properties
- Excellent Ground Finish

Selected for use for High Quality Hydraulic and Pneumatic applications where more durable Induction Hardened materials are required.

// Chemical Analysis %

Material	C	Si	Mn	P	S	Cr	Mo
42CrMo4QT	0,38	max.	0,60	max.	max.	0,90	0,15
	0,45	0,40	0,90	0,025	0,035	1,20	0,30

Specification to EN 10083

// Mechanical Properties

Mechanical Properties divergent to EN 10 083 for better formability

Diameter (mm)	Re (N/mm ²)	Rm (N/mm ²)	A (%)	Z (%)
12 - 41	= > 750	900 - 1.050	= > 11	= > 45
> 41 - 101	= > 690	900 - 1.050	= > 12	= > 50
> 101 - 160	= > 620	800 - 950	= > 13	= > 50
> 160 - 300	= > 500	750 - 900	= > 14	= > 55

Density: 7,85 kg/dm³

Roundness: ½ Diameter tolerance

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

Straightness: < Ø 20 mm = < 0,20 mm/m
(TIR max. 0,40 mm/m)
= > Ø 20 mm = 0,10 mm/m
(TIR max. 0,20 mm/m)

Chrome Thickness: 20 ± 5 µm

Chrome Hardness: = > 800 HV

Induction hardened: Surface Hardness 56 - 64 HRC

Diameter (mm)	Depth of Surface Hardness Rht 500 HV1 DIN EN 10328
12 - 25	0,75 mm + 0,5 mm
> 25 - 102	1,25 mm + 1,0 mm
> 102 - 140	2,00 mm + 1,5 mm

// Standard Diameters

Standard Ø (mm)	Tolerance (µm)	* Production Length (mm)
12	- 16 - 34	3.300
20		7.600
22		6.000
25	- 20	
28	- 41	
30		
32		
35		
36	- 25	
40	- 50	
45		7.600
50		
56		
60	- 30	
63	- 60	
70		
80		
82		
90	- 36	
100	- 71	7.000
110		6.800

* When ordering stock, as opposed to fixed length bars, please be aware that up to 10% of the delivery may be out of tolerance. Stock bars do not have their ends cut which means that up to 250 mm of each end are not chrome plated and may not be within geometrical tolerance. Length tolerance ± 200 mm.

Specials:

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

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