

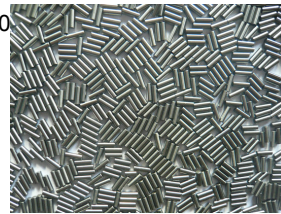


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MANUFACTURERS OF HARDED NEEDLE ROLLERS FOR PRECISION BEARING SHAFTS! SUPPLIER OF NEEDLE ROLLERS PINS AS ROLLING ELEMENTS FOR BEARING SHAFTS IN CHINA.



generally the length of needle rollers between 3-10 times the diameter, but the diameter is usually not more than 6mm. we have over 20 years of manufacturing experience of precision rollers. we had most stock, delivery time: send to europe, USA, or canada only 3-5 work days



usually, the material of needle rollers(cylindrical rollers) is chrome steel 52100, then stainless steel: such as 302,304,316,306AL,420,420C,440C etc. then tungsten steel, the newest ceramic material is silicon nitride (si3n4), or zirconium oxide(ZrO2) etc.



It is widely used in auto, lathe, metallurgical, textile, printing industry & other various machinery equipment. With this kind of bearing, machine design can realize the goal of small-scale & lightweight.



needle roller contour surface in the proximal surface of the slight contraction. needle and raceway contact line results can be amended to avoid damaging the edge of the stress.



the ends of needle rollers had different types: such as:NRA (round ends), NRB (flat ends), crowned ends, pointed ends, or one end is round(pointed), the other end is flat etc.



needle rollers main use is as rolling elements in bearings where they are particularly useful when space is limited and a high radial load is required. They are also useful as locating pins and mini shafts.

standard sizes of steel needle rollers pins only

loose needle rollers,cylindrical pins, needle rolling elements,

φ1x5.8	φ1x6.8	φ1x7.8	φ1x9.8				
φ1.5x5.8	φ1.5x6.8	φ1.5x7.8	φ1.5x9.8	φ1.5x11.8	φ1.5x13.8		
φ2x6.8	φ2x7.8	φ2x9.8	φ2x11.8	φ2x13.8	φ2x15.8	φ2x17.8	φ2x19.8
φ2.5x7.8	φ2.5x9.8	φ2.5x11.8	φ2.5x13.8	φ2.5x15.8	φ2.5x17.8	φ2.5x19.8	φ2.2x21.8
φ2.5x23.8							
φ3x9.8	φ3x11.8	φ3x13.8	φ3x15.8	φ3x17.8	φ3x19.8	φ3x21.8	φ3x23.8
φ3x25.8	φ3x27.8	φ3x29.8					
φ3.5x11.8	φ3.5x13.8	φ3.5x15.8	φ3.5x17.8	φ3.5x19.8	φ3.2x21.8	φ3.5x23.8	φ3.5x25.8
φ3.5x27.8	φ3.5x29.8	φ3.5x34.8					
φ4x11.8	φ4x13.8	φ4x15.8	φ4x17.8	φ4x19.8	φ4x21.8	φ4x23.8	φ4x25.8
φ4x27.8	φ4x29.8	φ4x34.8	φ4x39.8				
φ5x15.8	φ5x17.8	φ5x19.8	φ5x21.8	φ5x23.8	φ5x25.8	φ5x27.8	φ5x29.8
φ5x34.8	φ5x39.8	φ5x49.8					
φ6x17.8	φ6x19.8	φ6x21.8	φ6x23.8	φ6x25.8	φ6x27.8	φ6x29.8	φ6x34.8
φ6x39.8	φ6x49.8	φ6x59.8					
loose needle rollers,cylindrical rollers, needle rolling elements, bearing,precision needle rollers							

- home
- products
- contact
- equipments
- needle rollers
- standard sizes or stocks
- NRB flat ended
- NRA round ended
- V chamfering
- logarithmic profile
- special shape
- crowned ended
- ultrafine needles
- short rollers
- manufacturing process
- G2G3G5
- different ends
- hardened chrome steel
- hardened stainless steel
- precision accuracy
- FAQ
- drive pins
- steel balls
- cylindrical roller
- dowel pins

heat treatment for needle rollers pins

the needle rollers are then subjected to a heat treatment process to improve their mechanical properties, such as hardness, strength, and toughness. This typically involves quenching and tempering, which involves heating the rollers to a specific temperature, then rapidly cooling them to create a hard, durable surface layer.

manufacturer and supplier of needle rollers

we are professional manufacture of bearing rollers and cylindrical needle rollers. we produce rollers of diameter 0.5 mm to 60 mm. the rollers could satisfy the request of DIN 5402 G2 rollers.

technical parameters of needle rollers

precision needle rollers, needle roller bearing pins

diameter tolerance	+0/-0.005, +0/-0.003, +0/-0.002, grouping for 0.001mm or 0.0005mm
length tolerance	+/-0.015, +/-0.01, +0/-0.015, +/-0.005,+0/-0.005
radius	R0.03-R0.3
parallelism	0.01, 0.005
perpendicularity	0.01, 0.005
circularity	0.001
cylindricity	0.001
roughness	Ra0.1
needle rollers, needle roller bearings, miniature pins, needle rollers suppliers, precision shafts	

grinding and finishing for steel needle rollers

once the needle rollers are heat treated, they are typically ground to achieve a high level of precision and a smooth, uniform surface finish. this is done using specialized grinding machines that are capable of removing extremely small amounts of material to achieve the desired shape and surface finish.

inspection and quality control: the needle rollers are inspected to ensure that they meet the required specifications and quality standards. this typically involves using advanced measuring and testing equipment to verify the dimensions, roundness, and surface finish of each roller.

chamfer limits of flat ends needle rollers

precision needle rollers, needle roller bearing pins

$D_{w\text{exceed}}$	$D_{w\text{to}}$	$T_{S\text{min}}$	diameter direction $T_{S\text{min}}$	axis direction $T_{S\text{min}}$
-	1	0.1	0.3	0.5
1	1.5	0.1	0.4	0.6
1.5	3	0.1	0.6	0.8
3	6	0.1	0.9	1
needle rollers, needle roller bearings, miniature pins, needle rollers suppliers, precision shafts				

needle rollers are typically smaller in diameter than cylindrical rollers, and are characterized by their long, thin cylindrical shape. they are often used in needle roller bearings, which are used to reduce friction and facilitate motion in various applications. needle rollers are typically made from hardened steel or other high strength materials, and are capable of supporting high loads while maintaining a small profile.

tolerance of precision needles rollers pins

precision needle rollers,bearing roller needles, needle roller bearing pins

tolerance grade(μm)	diameter changes(μm)	average diameter vibration $D_{w\text{mp}}(\mu\text{m})$	circular deviation(max)	diameter changes $V_{D\text{mp,max}}(\mu\text{m})$	length tolerance(μm)
G2	2	0/-2,-1/-3,-2/-4,-3/-5, -4/-6,-5/-7, -6/-8,-7/-9,-8/-10	1	1	<0.20
G3	3	0/-3,-1.5/-4.5, -3/-6,-4.5/-7.5, -6/-9,-7/-10	1.5	1.5	<0.20
G5	5	0/-5,-3/-8,-5/-10	2.5	2.5	h13
precision needle rollers,needles, rollers, pins, bearing roller needles, needle roller bearing pins					

needle rollers are long, thin cylindrical rollers with a high length-to-diameter ratio. they are typically used in applications where space is limited and a high load-carrying capacity is required. needle rollers are commonly used in automotive and industrial applications.

needle rollers and dowel pins are both types of cylindrical rollers used in various applications, but they have different designs and functions. we are professional manufacture of bearing rollers and cylindrical needle rollers. we produce rollers of diameter 0.5 mm to 60 mm. the rollers could satisfy the request of DIN 5402 G2 rollers.

chemical properties for rolling bearing chrome (axletree) steel

rolling bearing chrome (axletree) steel

specification	mark	C	Si	Mn	S	P	Cr	Mo
china(GB)	GCr15	0.95-1.05	0.15-0.35	0.25-0.45	<0.025	<0.025	1.40-1.65	-
USA(AISI,UNS)	52100(G52986)	0.98-1.10	0.15-0.35	<0.5	<0.025	<0.025	1.30-1.60	<0.10
japan (JIS)	SUJ2	0.95-1.10	0.15-0.35	<0.5	<0.025	<0.025	1.30-1.60	<0.08
germany(DIN/W-Nr)	100Cr6/w3(1.3505)	0.95-1.05	0.15-0.35	<0.5	<0.025	<0.025	1.30-1.60	<0.08
france NF	100C6	0.95-1.05	0.15-0.35	<0.5	<0.025	<0.025	1.30-1.60	<0.08
UK(BS)	535A99	0.95-1.05	0.15-0.35	<0.5	<0.025	<0.025	1.30-1.60	<0.08
sweden(SKF)	SKF3	0.95-1.05	0.15-0.35	<0.5	<0.025	<0.025	1.30-1.60	<0.08

rolling bearing chrome (axletree) steel cylindrical roller pins,needle rollers

needle rollers have perfectly ground diameter provides perfect location of mating. tightened surface finish assure better contact with mating parts. highly controlled mechanical properties for more than desired requirements. high grade cylindrical rollers for good strength & wear resistance.

since the profile of needle is not cylindrical along its whole length as there is a very slight taper towards the ends, therefore precise measurement of the diameter can only be carried out in the central area of the needle. needle rollers have a greater taper at the end may be supplied on request.

V-block measurement for roundness of needle rollers

precision needle rollers of loose roller bearing pins

angle	wave numbers									
	3	5	7	9	11	13	15	17	19	21
90°C	2	2	-	-	2	2	-	-	2	2
120°C	1	2	2	1	-	-	1	2	2	

needle rollers, needle roller bearings, miniature pins, needle rollers suppliers, precision shafts

needle rollers Vs mini shafts needle rollers Vs grooved pins needle rollers Vs dowel pins needle rollers Vs cylindrical rollers needle rollers Vs locating pins needle rollers Vs locating pins rollers Vs needle bearings different types manufacturing process stainless steel bearing steel robot joint bearings linear actuators roller sensors cross guide rails cross bearings drive pins needle roller bearing copyright©2017 YDTech®