

NEEDLE ROLLER BEARINGS



FOR 3 mm TO 25 mm HARDENED SHAFTS
EXTREMELY HIGH-SPEED
HIGH LOAD CAPACITY

PHONE: 516.328.3300 • FAX: 516.326.8827 • WWW.SDP-SI.COM



> MATERIAL:

- Roller Cup** - Case-Hardened Steel
- Needle Bearing** - 52100 Hardened Chrome Steel
- Bearing Cage** - Low Carbon Steel

> FEATURES:

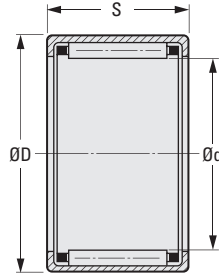
- Low profile, lightweight caged.
- Caged needle bearings offer up to 3 times the speed of uncaged designs.
- Extremely low rolling friction.
- High lubrication capacity.
- Low sensitivity to misalignment.
- Needles have high length to diameter ratios.

> SHAFT REQUIREMENTS Δ :

- Shaft surface hardness must be HRC 58 minimum;
- or use inner race over softer shaft, where available.

> HOUSING TOLERANCES $**$:

- Recommended tolerances for steel or cast iron housing bore diameter according to N6. For light metal, use tolerance R6.



TOLERANCE CHART

Dimensions		Shaft Δ h6	Bore $**$ N6	Bore $**$ R6
Over	Incl.			
—	3	0/-0.006	-0.004/-0.010	-0.010/-0.016
3	6	0/-0.008	-0.005/-0.013	-0.012/-0.020
6	10	0/-0.009	-0.007/-0.016	-0.016/-0.025
10	18	0/-0.011	-0.009/-0.020	-0.020/-0.031
18	30	0/-0.013	-0.011/-0.024	-0.024/-0.037
30	50	0/-0.016	-0.012/-0.028	-0.029/-0.045

METRIC COMPONENT

Catalog Number	d Shaft Diameter h6	D Dia.	S Face Width 0 -0.2	Speed* Limit Oil rpm	Load Capacity		Inner Race Available See Series S99RH2M...
					Dynamic N	Static N	
S99NH2MBN0306	3	6.5	6	46000	1230	840	—
S99NH2MBN0408	4	8	8	41000	1780	1310	—
S99NH2MBN0509	5	9	9	38000	2400	1990	—
S99NH2MBN0609	6	10	9	35000	2850	2600	—
S99NH2MBN0709	7	11	9	31000	3100	2950	—
S99NH2MBN0810	8	12	10	28000	3800	3950	S99RH2MBN0508
S99NH2MBN0910	9	13	10	25000	4250	4650	S99RH2MBN0609
S99NH2MBN1010	10	14	10	23000	4400	5100	S99RH2MBN0710
S99NH2MBN1212	12	18	12	19000	6500	7300	S99RH2MBN0812
S99NH2MBN1312	13	19	12	18000	6800	7900	S99RH2MBN0912
S99NH2MBN1412	14	20	12	16000	7100	8500	S99RH2MBN1014
S99NH2MBN1512	15	21	12	16000	7900	9400	S99RH2MBN1215
S99NH2MBN1612	16	22	12	15000	7600	9700	S99RH2MBN1216
S99NH2MBN1712	17	23	12	14000	7900	10300	S99RH2MBN1417
S99NH2MBN1812	18	24	12	13000	8100	10900	S99RH2MBN1518
S99NH2MBN2012	20	26	12	12000	8600	12100	S99RH2MBN1520
S99NH2MBN2212	22	28	12	11000	9100	13400	S99RH2MBN1722
S99NH2MBN2512	25	32	12	10000	11000	15200	S99RH2MBN2025

* With grease lubricant, 60% of given values are permissible. Standard bearings are oiled or greased with general purpose lubricants. Other lubricants are available on special order.

INNER RACES FOR NEEDLE BEARINGS

SDP/SI

USED AS INNER RACE ON SOFT SHAFTS
CAN BE USED AS HARDENED BUSHINGS

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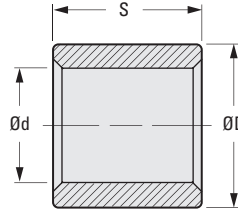
> MATERIAL:

Alloy Steel, Hardened to HRC 58 Min.

> SPECIFICATIONS:

O.D. ground to 0.40 μm AA surface roughness.
Recommended fit tolerances for shaft according to k6.
All corners chamfered for easy assembly.
Wider units available to accommodate shaft translation.

Other sizes available on special order.



TOLERANCE CHART

Dimensions		H6	h5	h6	k6
Over	Incl.				
3	6	+0.008/0	0/-0.005	0/-0.008	+0.009/+0.001
6	10	+0.009/0	0/-0.006	0/-0.009	+0.010/+0.001
10	18	+0.011/0	0/-0.008	0/-0.011	+0.012/+0.001
18	30	+0.013/0	0/-0.009	0/-0.013	+0.015/+0.002

METRIC COMPONENT

Catalog Number	d Bore H6	D Dia. h5	S h6	Use with Bearing No.
S99RH2MBNR0508	5	8	12	S99NH2MBN0810
S99RH2MBNR0609	6	9	12	S99NH2MBN0910
S99RH2MBNR0710	7	10	12	S99NH2MBN1010
S99RH2MBNR0812	8	12	12	S99NH2MBN1212
S99RH2MBNR1013	10	13	12.5	S99NH2MBN1312
S99RH2MBNR1014	10	14	12	S99NH2MBN1412
S99RH2MBNR1215	12	15	12	S99NH2MBN1512
S99RH2MBNR1216	12	16	12	S99NH2MBN1612
S99RH2MBNR1417	14	17	17	S99NH2MBN1712
S99RH2MBNR1518	15	18	16	S99NH2MBN1812
S99RH2MBNR1520	15	20	12	S99NH2MBN2012
S99RH2MBNR1722	17	22	13	S99NH2MBN2212
S99RH2MBNR2025	20	25	16	S99NH2MBN2512