



NEEDLE ROLLER BEARINGS

SEALED HEAVY-DUTY
NEEDLE ROLLER BEARINGS

INCH SERIES

- Bearing diameters and widths listed are nominal.
- For inspection purposes, see tolerance tables on page B-4-46.
- Available with one or two lip-contact seals designed to retain lubricant and exclude foreign material.
- Single seals are normally installed in the stamped end of bearing.

- Seals limit the bearing operating temperature between -30° C and +110° C (-25° F and +225° F).
- For operating temperature outside of the above range or if seals are exposed to unusual fluids, please consult your representative.

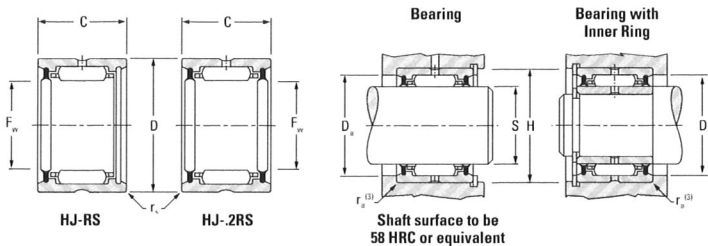
Shaft Dia.	F _w	D	C (B)	r _s min.	Bearing Designation		Used With Inner Ring ⁽¹⁾	Load Ratings		Fatigue Load Limit C ₁₀	Speed Rating ⁽²⁾
								Dynamic	Static		
					One Seal	Two Seals		C	C ₀		
in	mm	mm	mm	mm				kN	lbf	kN	min ⁻¹
1/8	15.875 0.6250	28.575 1.1250	25.40 1.000	0.64 0.03	HJ-101816RS	HJ-101816.2RS	—	19.3 4350	20.7 4650	3.25	12000
3/4	19.050 0.7500	31.750 1.2500	25.40 1.000	1.02 0.04	HJ-122016RS	HJ-122016.2RS	IR-081216	20.7 4650	23.3 5240	3.65	10000
7/8	22.225 0.8750	34.925 1.3750	25.40 1.000	1.02 0.04	HJ-142216RS	HJ-142216.2RS	IR-101416	23.0 5180	27.9 6270	4.35	8700
1	25.400 1.0000	38.100 1.5000	25.40 1.000	1.02 0.04	HJ-162416RS	HJ-162416.2RS	IR-121816 IR-131816	25.3 5680	32.5 7300	5.10	7600
1 1/8	28.575 1.1250	41.275 1.6250	31.75 1.250	1.02 0.04	HJ-182620RS	HJ-182620.2RS	IR-141820	36.3 8170	53.8 12100	8.45	6800
1 1/4	31.750 1.2500	44.450 1.7500	31.75 1.250	1.02 0.04	HJ-202820RS	HJ-202820.2RS	IR-162020	37.4 8410	57.4 12900	9.00	6100
1 3/8	34.925 1.3750	47.625 1.8750	31.75 1.250	1.02 0.04	HJ-223020RS	HJ-223020.2RS	IR-182220	39.8 8950	64.1 14400	10.1	5600
1 1/2	38.100 1.5000	52.388 2.0625	31.75 1.250	1.52 0.06	HJ-243320RS	HJ-243320.2RS	IR-192420	47.6 10700	72.5 16300	11.4	5100
1 5/8	41.275 1.6250	55.563 2.1875	31.75 1.250	1.52 0.06	HJ-263520RS	HJ-263520.2RS	IR-212620	48.5 10900	76.5 17200	12.1	2400
1 3/4	44.450 1.7500	58.738 2.3125	31.75 1.250	1.52 0.06	HJ-283720RS	HJ-283720.2RS	IR-222820 IR-232820 IR-242820	49.8 11200	81.0 18200	12.8	4400
2	50.800 2.0000	65.088 2.5625	31.75 1.250	1.52 0.06	HJ-324120RS	HJ-324120.2RS	IR-243220 IR-253220 IR-263220 IR-273220	53.8 12100	93.0 20900	14.7	3800
2 1/4	57.150 2.2500	76.200 3.0000	44.45 1.750	1.52 0.06	HJ-364828RS	HJ-364828.2RS	IR-283628	89.9 20200	164.1 36900	25.7	1700
2 1/2	63.500 2.5000	82.550 3.2500	44.45 1.750	2.03 0.08	HJ-405228RS	HJ-405228.2RS	IR-314028 IR-324028	97.0 21800	187.3 42100	29.4	3100
2 3/4	69.850 2.7500	88.900 3.5000	44.45 1.750	2.03 0.08	HJ-445628RS	HJ-445628.2RS	IR-354428 IR-364428	101.0 22700	203.3 45700	31.9	1400
3	76.200 3.0000	95.250 3.7500	44.45 1.750	2.03 0.08	HJ-486028RS	HJ-486028.2RS	IR-384828 IR-404828	107.2 24100	226.4 50800	35.5	2500

⁽¹⁾ See pages B-4-54 to B-4-57 for inch series inner rings. Order inner rings separately.

⁽²⁾ Based on standard seal shaft contact speed of 5 m/sec., 1000 ft./min.

⁽³⁾ r_p max. is equal to the minimum bearing chamfer (r_s min.) at unmarked end.

Heavy-Duty Needle Roller Bearings



Approx. Wt.	Mounting Dimensions Clearance Fit				Bearing Designation	Mounting Dimensions Tight Transition Fit				Shoulder Dia.	Shaft Dia.
	S (ISO h6)		H (ISO H7)			S (ISO f6)		H (ISO N7)		D _s	
	Max.	Min.	Max.	Min.		Max.	Min.	Max.	Min.	±0.38 ±0.015	
	mm in	mm in	mm in	mm in		mm in	mm in	mm in	mm in	mm in	
kg lbs	mm in	mm in	mm in	mm in		mm in	mm in	mm in	mm in	mm in	in
0.07 0.15	15.875 0.6250	15.865 0.6246	28.595 1.1258	28.575 1.1250	HJ-101816-	15.860 0.6244	15.850 0.6240	28.567 1.1247	28.547 1.1239	23.83 0.938	5/8
0.08 0.17	19.050 0.7500	19.037 0.7495	31.775 1.2510	31.750 1.2500	HJ-122016-	19.030 0.7492	19.017 0.7487	31.742 1.2497	31.717 1.2487	26.97 1.062	3/4
0.09 0.19	22.225 0.8750	22.212 0.8745	34.950 1.3760	34.925 1.3750	HJ-142216-	22.205 0.8742	22.192 0.8737	34.917 1.3747	34.892 1.3737	30.18 1.188	7/8
0.10 0.21	25.400 1.0000	25.387 0.9995	38.125 1.5010	38.100 1.5000	HJ-162416-	25.380 0.9992	25.367 0.9987	38.092 1.4997	38.067 1.4987	33.32 1.312	1
0.13 0.29	28.575 1.1250	28.562 1.1245	41.300 1.6260	41.275 1.6250	HJ-182620-	28.555 1.1242	28.542 1.1237	41.267 1.6247	41.242 1.6237	36.53 1.438	1 1/8
0.15 0.32	31.750 1.2500	31.735 1.2494	44.475 1.7510	44.450 1.7500	HJ-202820-	31.725 1.2490	31.709 1.2484	44.442 1.7497	44.417 1.7487	39.67 1.562	1 1/4
0.16 0.35	34.925 1.3750	34.910 1.3744	47.650 1.8760	47.625 1.8750	HJ-223020-	34.900 1.3740	34.884 1.3734	47.617 1.8747	47.592 1.8737	42.88 1.688	1 3/8
0.20 0.43	38.100 1.5000	38.085 1.4994	52.418 2.0637	52.388 2.0625	HJ-243320-	38.075 1.4990	38.059 1.4984	52.380 2.0622	52.349 2.0610	47.63 1.875	1 1/2
0.21 0.46	41.275 1.6250	41.260 1.6244	55.593 2.1887	55.563 2.1875	HJ-263520-	41.250 1.6240	41.234 1.6234	55.555 2.1872	55.524 2.1860	50.80 2.000	1 5/8
0.22 0.49	44.450 1.7500	44.435 1.7494	58.768 2.3137	58.738 2.3125	HJ-283720-	44.425 1.7490	44.409 1.7484	58.730 2.3122	58.699 2.3110	53.98 2.125	1 3/4
0.25 0.55	50.800 2.0000	50.782 1.9993	65.118 2.5637	65.088 2.5625	HJ-324120-	50.770 1.9988	50.752 1.9981	65.080 2.5622	65.049 2.5610	60.33 2.375	2
0.53 1.17	57.150 2.2500	57.132 2.2493	76.230 3.0012	76.200 3.0000	HJ-364828-	57.120 2.2488	57.102 2.2481	76.192 2.9997	76.162 2.9985	68.28 2.688	2 1/4
0.59 1.29	63.500 2.5000	63.482 2.4993	82.586 3.2514	82.550 3.2500	HJ-405228-	63.470 2.4988	63.452 2.4981	82.537 3.2495	82.502 3.2481	74.63 2.938	2 1/2
0.64 1.40	69.850 2.7500	69.832 2.7493	88.936 3.5014	88.900 3.5000	HJ-445628-	69.820 2.7488	69.802 2.7481	88.887 3.4995	88.852 3.4981	80.98 3.188	2 3/4
0.68 1.51	76.200 3.0000	76.182 2.9993	95.286 3.7514	95.250 3.7500	HJ-486028-	76.170 2.9988	76.152 2.9981	95.237 3.7495	95.202 3.7481	87.33 3.438	3