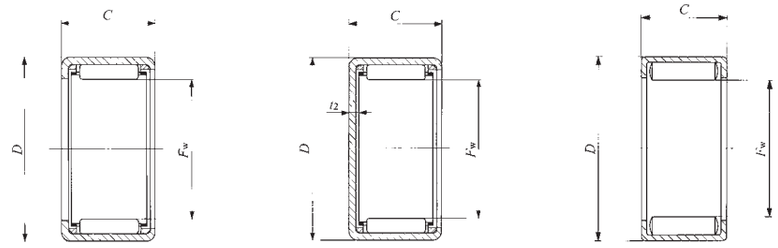
SHELL TYPE NEEDLE ROLLER BEARINGS





TA···Z TLA···Z　　TAM TLAM　　YT YTL

Shaft dia. 4 — 10mm

Shaft dia. mm	Identification number									
	Standard	Mass (Ref.) g	Closed end	Mass (Ref.) g	Standard	Mass (Ref.) g	Closed end	Mass (Ref.) g	Grease retained	Mass (Ref.) g
4	—	—	—	—	TLA 48 Z	1.54	TLAM 48	1.67	—	—
	—	—	—	—	—	—	—	—	YTL 48	1.73
5	—	—	—	—	TLA 59 Z	1.9	TLAM 59	2	—	—
	—	—	—	—	—	—	—	—	YTL 59	2.4
6	—	—	—	—	TLA 69 Z	2.2	TLAM 69	2.3	—	—
7	—	—	—	—	TLA 79 Z	2.5	TLAM 79	2.7	—	—
8	—	—	—	—	TLA 810 Z	3.1	TLAM 810	3.3	—	—
	TA 810 Z	6.7	TAM 810	7.1	—	—	—	—	—	—
	TA 815 Z	9.7	TAM 815	10.1	—	—	—	—	—	—
	TA 820 Z	12.9	TAM 820	13.3	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	YT 810	7.7
9	—	—	—	—	TLA 910 Z	3.4	TLAM 910	3.6	—	—
	—	—	—	—	TLA 912 Z	4	TLAM 912	4.3	—	—
	TA 912 Z	8.7	TAM 912	9.2	—	—	—	—	—	—
	TA 916 Z	11.4	TAM 916	11.9	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	YT 912	10.1
10	—	—	—	—	TLA 1010 Z	3.7	TLAM 1010	4	—	—
	—	—	—	—	TLA 1012 Z	4.4	TLAM 1012	4.8	—	—
	—	—	—	—	TLA 1015 Z	5.5	TLAM 1015	5.9	—	—
	TA 1010 Z	7.9	TAM 1010	8.5	—	—	—	—	—	—
	TA 1012 Z	9.3	TAM 1012	10	—	—	—	—	—	—
	TA 1015 Z	11.5	TAM 1015	12.2	—	—	—	—	—	—
	TA 1020 Z	15.4	TAM 1020	16	—	—	—	—	—	—

Boundary dimensions mm				Standard mounting dimensions mm						Basic dynamic load rating	Basic static load rating	Allowable rotational speed(1)	Assembled inner ring
				Shaft dia. h6		Housing bore dia. J7		Housing bore dia. N7					
F_w	D	C	t_2 Max.	Max.	Min.	Max.	Min.	Max.	Min.	C N	C_0 N	rpm	
4	8	8	1	4.000	3.992	—	—	7.996	7.981	1 350	1 010	75 000	—
4	8	8	—							3 010	2 900	40 000	—
5	9	9	1	5.000	4.992	—	—	8.996	8.981	1 880	1 600	65 000	—
5	9	9	—							4 320	4 750	30 000	—
6	10	9	1	6.000	5.992	—	—	9.996	9.981	2 100	1 900	55 000	—
7	11	9	1	7.000	6.991	—	—	10.995	10.977	2 490	2 450	50 000	—
8	12	10	1	8.000	7.991	—	—	11.995	11.977	3 320	3 670	45 000	—
8	15	10	1.3	8.000	7.991	15.010	14.992	—	—	3 470	2 880	45 000	—
8	15	15	1.3							5 780	5 570	45 000	—
8	15	20	1.3							8 340	8 920	45 000	—
8	15	10	—							7 530	7 950	19 000	—
9	13	10	1	9.000	8.991	—	—	12.995	12.977	3 500	4 040	45 000	—
9	13	12	1							4 460	5 510	45 000	—
9	16	12	1.3	9.000	8.991	16.010	15.992	—	—	5 140	4 880	45 000	—
9	16	16	1.3							6 960	7 210	45 000	—
9	16	12	—							9 690	11 200	17 000	—
10	14	10	1	10.000	9.991	—	—	13.995	13.977	3 870	4 740	40 000	IRT 710
10	14	12	1							4 920	6 460	40 000	IRT 712
10	14	15	1							6 390	9 040	40 000	IRT 715
10	17	10	1.3	10.000	9.991	17.010	16.992	—	—	4 150	3 780	40 000	IRT 710
10	17	12	1.3							5 590	5 540	40 000	IRT 712
10	17	15	1.3							6 920	7 300	40 000	IRT 715
10	17	20	1.3							9 990	11 700	40 000	—

Note(1) Allowable rotational speed applies to oil lubrication. For grease lubrication, a maximum of 60% of this value is allowable.
Remark Shell Type Grease Retained Full Complement Needle Roller Bearings are provided with prepacked grease. Standard type and closed end type bearings are not provided with prepacked grease, so perform proper lubrication when using these types of bearings.

1N=0.102kgf=0.2248lbs.
1mm=0.03937inch

INNER RINGS

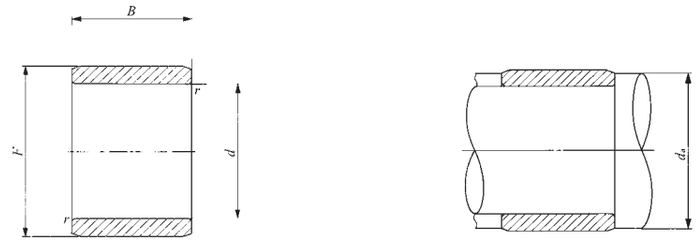
Inner Rings for Shell Type Needle Roller Bearings



Shaft dia. 7 — 17mm

Shaft dia. mm	Identification number	Mass (Ref.) g	Boundary dimensions mm d	F	B	$r_{s\,min}$ (1)	Standard mounting dimension mm d_a Min.	Max.	Assembled bearings TA···Z (TAM)	TLA···Z (TLAM)	YT YTL
7	**IRT 710**	3.2	7	10	10.5	0.3	9	9.7	**TA 1010Z**	**TLA 1010Z**	—
	IRT 712	3.9	7	10	12.5	0.3	9	9.7	**TA 1012Z**	**TLA 1012Z**	—
	IRT 715	4.8	7	10	15.5	0.3	9	9.7	**TA 1015Z**	**TLA 1015Z**	—
8	**IRT 810**	5.1	8	12	10.5	0.3	10	11	—	**TLA 1210Z**	**YTL 1210**
	IRT 812	6	8	12	12.5	0.3	10	11	**TA 1212Z**	**TLA 1212Z**	**YT 1212**
	IRT 815	7.5	8	12	15.5	0.3	10	11	**TA 1215Z**	—	—
10	**IRT 1012**	5.2	10	13	12.5	0.3	12	12.7	—	**TLA 1312Z**	—
	IRT 1012-2	7.2	10	14	12.5	0.3	12	13	—	**TLA 1412Z**	—
	IRT 1016-2	9.6	10	14	16.5	0.3	12	13	**TA 1416Z**	**TLA 1416Z**	—
	IRT 1020-2	11.9	10	14	20.5	0.3	12	13	**TA 1420Z**	—	—
	IRT 1010-1	7.9	10	15	10.5	0.3	12	14	**TA 1510Z**	—	—
	IRT 1012-1	9.4	10	15	12.5	0.3	12	14	**TA 1512Z**	**TLA 1512Z**	—
	IRT 1015-1	11.7	10	15	15.5	0.3	12	14	**TA 1515Z**	—	—
	IRT 1020-1	15.5	10	15	20.5	0.3	12	14	**TA 1520Z**	—	—
	IRT 1025-1	19.3	10	15	25.5	0.3	12	14	**TA 1525Z**	—	—
12	**IRT 1212**	6.1	12	15	12.5	0.3	14	14.5	**TA 1512Z**	**TLA 1512Z**	—
	IRT 1216	8.1	12	15	16.5	0.3	14	14.5	—	**TLA 1516Z**	—
	IRT 1222	11	12	15	22.5	0.3	14	14.5	—	**TLA 1522Z**	—
	IRT 1212-1	8.5	12	16	12.5	0.3	14	15	—	**TLA 1612Z**	—
	IRT 1216-1	11.2	12	16	16.5	0.3	14	15	**TA 1616Z**	**TLA 1616Z**	—
	IRT 1220-1	13.9	12	16	20.5	0.3	14	15	**TA 1620Z**	—	—
	IRT 1222-1	15.2	12	16	22.5	0.3	14	15	—	**TLA 1622Z**	—
	IRT 1215-2	13.6	12	17	15.5	0.3	14	16	**TA 1715Z**	—	**YT 1715**
	IRT 1220-2	18	12	17	20.5	0.3	14	16	**TA 1720Z**	—	—
	IRT 1225-2	22.5	12	17	25.5	0.3	14	16	**TA 1725Z**	—	**YT 1725**
15	**IRT 1512**	7.5	15	18	12.5	0.3	17	17.5	—	**TLA 1812Z**	—
	IRT 1513	8.1	15	18	13.5	0.3	17	17.5	**TA 1813Z**	—	—

Note(1) Minimum allowable value of chamfer dimension r
Remark No oil hole is provided.



IRT

Shaft dia. mm	Identification number	Mass (Ref.) g	Boundary dimensions mm d	F	B	$r_{s\,min}$ (1)	Standard mounting dimension mm d_a Min.	Max.	Assembled bearings TA···Z (TAM)	TLA···Z (TLAM)	YT YTL
15	**IRT 1515**	9.3	15	18	15.5	0.3	17	17.5	**TA 1815Z**	—	—
	IRT 1516	9.9	15	18	16.5	0.3	17	17.5	—	**TLA 1816Z**	—
	IRT 1517	10.5	15	18	17.5	0.3	17	17.5	**TA 1817Z**	—	—
	IRT 1519	11.7	15	18	19.5	0.3	17	17.5	**TA 1819Z**	—	—
	IRT 1520	12.3	15	18	20.5	0.3	17	17.5	**TA 1820Z**	—	—
	IRT 1525	15.2	15	18	25.5	0.3	17	17.5	**TA 1825Z**	—	—
	IRT 1516-1	13.6	15	19	16.5	0.3	17	18	**TA 1916Z**	—	—
	IRT 1520-1	16.8	15	19	20.5	0.3	17	18	**TA 1920Z**	—	—
	IRT 1515-2	16.4	15	20	15.5	0.3	17	19	**TA 2015Z**	—	**YT 2015**
	IRT 1520-2	21.5	15	20	20.5	0.3	17	19	**TA 2020Z** **TA 202820Z**	**TLA 2020Z**	**YT 202820**
	IRT 1525-2	27	15	20	25.5	0.3	17	19	**TA 2025Z**	—	**YT 2025**
	IRT 1530-2	32	15	20	30.5	0.3	17	19	**TA 2030Z**	**TLA 2030Z**	—
17	**IRT 1716**	11.1	17	20	16.5	0.3	19	19.5	—	**TLA 2016Z**	—
	IRT 1720	13.7	17	20	20.5	0.3	19	19.5	**TA 2020Z** **TA 202820Z**	**TLA 2020Z**	**YT 202820**
	IRT 1730	20.5	17	20	30.5	0.3	19	19.5	**TA 2030Z**	**TLA 2030Z**	—
	IRT 1716-1	15.1	17	21	16.5	0.3	19	20	**TA 2116Z**	—	**YT 2116**
	IRT 1720-1	18.8	17	21	20.5	0.3	19	20	**TA 2120Z**	—	**YT 2120**
	IRT 1710-2	12.4	17	22	10.5	0.3	19	21	**TA 2210Z**	—	—
	IRT 1715-2	18.3	17	22	15.5	0.3	19	21	**TA 2215Z**	—	—
	IRT 1716-2	19.4	17	22	16.5	0.3	19	21	**TA 223016Z**	**TLA 2216Z**	**YT 223016**
	IRT 1720-2	24	17	22	20.5	0.3	19	21	**TA 2220Z** **TA 223020Z**	**TLA 2220Z**	**YT 223020**
	IRT 1725-2	30	17	22	25.5	0.3	19	21	**TA 2225Z**	—	—
	IRT 1730-2	36	17	22	30.5	0.3	19	21	**TA 2230Z**	—	—

Note(1) Minimum allowable value of chamfer dimension r
Remark No oil hole is provided.

1N=0.102kgf=0.2248lbs.
1mm=0.03937inch