



MACHINED TYPE NEEDLE ROLLER BEARINGS

Without Inner Ring



Shaft dia. 5 – 15mm

Shaft dia. mm	Identification number						Mass (Ref.) g
	RNA 49	RNA 69	RNA 48	TAF	TR	GTR	
5	—	—	—	TAF 51010	—	—	3.4
	—	—	—	TAF 51012	—	—	4.2
	RNA 493	—	—	—	—	—	4.6
6	RNA 494	—	—	—	—	—	5.3
	—	—	—	TAF 61212	—	—	6.4
7	RNA 495	—	—	—	—	—	5.9
	—	—	—	TAF 71410	—	—	6.9
	—	—	—	TAF 71412	—	—	8.3
8	RNA 496	—	—	—	—	—	7.4
	—	—	—	TAF 81512	—	—	9.1
	—	—	—	TAF 81516	—	—	12.9
9	—	—	—	TAF 91612	—	—	9.8
	—	—	—	TAF 91616	—	—	13.2
	RNA 497	—	—	—	—	—	9.3
10	—	—	—	TAF 101712	—	—	10.7
	—	—	—	TAF 101716	—	—	14.3
	RNA 498	—	—	—	—	—	12.6
12	—	—	—	TAF 121912	—	—	12.2
	—	—	—	TAF 121916	—	—	16.3
	RNA 499	—	—	—	—	—	13.6
14	—	—	—	—	—	—	16.5
	—	—	—	TAF 142216	—	—	21
	—	—	—	TAF 142220	—	—	26.5
15	—	—	—	TAF 152316	—	—	22.5
	—	—	—	TAF 152320	—	—	28

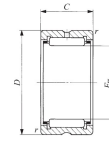
Notes(1) Minimum allowable value of chamfer dimension r

(2) Allowable rotational speed applies to oil lubrication. For grease lubrication, a maximum of 60% of this value is allowable.

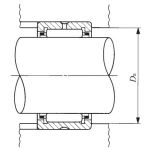
Remarks 1. TAF series with a roller set bore diameter F_w of 26 mm or less have no oil hole. In others, the outer ring has an oil groove and an oil hole.

2. No grease is prepacked. Perform proper lubrication.

D9



RNA49 TAF
RNA69 ($F_w \leq 35$)



F_w	Boundary dimensions mm				Standard mounting dimension D_a Max. mm	Basic dynamic load rating C N	Basic static load rating C_0 N	Allowable rotational speed ⁽²⁾ rpm
	D	C	r_s min ⁽¹⁾	r_s min ⁽¹⁾				
5	10	10	0.2	8.4	2 420	1 950	80 000	
	10	12	0.2	8.4	3 080	2 660	80 000	
	11	10	0.15	9.8	2 420	1 950	80 000	
6	12	10	0.15	10.8	2 700	2 320	70 000	
	12	12	0.2	10.4	3 440	3 170	70 000	
7	13	10	0.15	11.8	2 960	2 690	60 000	
	14	10	0.2	12.4	3 600	2 960	60 000	
	14	12	0.2	12.4	4 610	4 050	60 000	
8	15	10	0.15	13.8	3 960	3 420	50 000	
	15	12	0.2	13.4	5 060	4 690	50 000	
	15	16	0.2	13.4	7 080	7 220	50 000	
9	16	12	0.2	14.4	5 490	5 330	45 000	
	16	16	0.2	14.4	7 680	8 210	45 000	
	17	10	0.15	15.8	4 530	3 650	45 000	
10	17	12	0.2	15.4	5 880	5 970	40 000	
	17	16	0.2	15.4	8 230	9 190	40 000	
	19	11	0.2	17.4	6 180	5 030	40 000	
12	19	12	0.3	17	6 610	7 260	35 000	
	19	16	0.3	17	9 250	11 200	35 000	
	20	11	0.3	18	6 600	6 310	35 000	
14	22	13	0.3	20	9 230	10 100	30 000	
	22	16	0.3	20	11 700	13 700	30 000	
	22	20	0.3	20	14 800	18 600	30 000	
15	23	16	0.3	21	12 300	14 900	30 000	
	23	20	0.3	21	15 600	20 200	30 000	

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

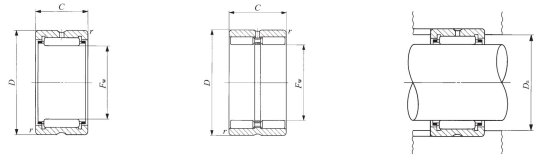
D10

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NA
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MACHINED TYPE NEEDLE ROLLER BEARINGS

Without Inner Ring



RNA49 TAF TR
RNA69 ($F_w \leq 35$)

GTR

Shaft dia. 16 – 22mm

Shaft dia. mm	Identification number						Mass (Ref.) g
	RNA 49	RNA 69	RNA 48	TAF	TR	GTR	
16	RNA 4901	—	—	—	—	—	18.1
	—	—	—	TAF 162416	—	—	23
	—	RNA 6901	—	TAF 162420	—	—	29
	—	—	—	—	—	—	30
17	—	—	—	TAF 172516	—	—	24.5
	—	—	—	TAF 172520	—	—	30.5
18	RNA 49/14	—	—	—	—	—	19.9
	—	—	—	TAF 182616	—	—	25.5
	—	—	—	TAF 182620	—	—	32
19	—	—	—	TAF 192716	—	—	27
	—	—	—	TAF 192720	—	—	34
20	RNA 4902	—	—	—	—	—	21.5
	—	—	—	TAF 202816	—	—	27.5
	—	RNA 6902	—	TAF 202820	—	—	35.5
	—	—	—	—	—	—	37
	—	—	—	—	TR 203320	—	59.5
21	—	—	—	—	—	—	69
	—	—	—	TAF 212916	—	—	29
	—	—	—	TAF 212920	—	—	36
22	RNA 4903	—	—	—	—	—	23.5
	—	—	—	TAF 223016	—	—	30
	—	RNA 6903	—	TAF 223020	—	—	37.5
	—	—	—	—	—	—	40.5
	—	—	—	—	TR 223425	—	73.5
—	—	—	—	—	GTR 223425	87	

Notes(1) Minimum allowable value of chamfer dimension r

(2) Allowable rotational speed applies to oil lubrication. For grease lubrication, a maximum of 60% of this value is allowable.

Remarks 1. TAF series with a roller set bore diameter F_w of 26 mm or less have no oil hole. In others, the outer ring has an oil groove and an oil hole.

2. No grease is prepacked. Perform proper lubrication.

F_w	Boundary dimensions mm			Standard mounting dimension D_a Max. mm	Basic dynamic load rating C N	Basic static load rating C_0 N	Allowable rotational speed ⁽²⁾ rpm
	D	C	r_s min ⁽¹⁾				
16	24	13	0.3	22	9 660	11 100	25 000
16	24	16	0.3	22	12 300	15 100	25 000
16	24	20	0.3	22	15 500	20 400	25 000
16	24	22	0.3	22	17 100	23 000	25 000
17	25	16	0.3	23	12 900	16 300	25 000
17	25	20	0.3	23	16 300	22 000	25 000
18	26	13	0.3	24	10 600	12 800	20 000
18	26	16	0.3	24	13 400	17 500	20 000
18	26	20	0.3	24	17 000	23 600	20 000
19	27	16	0.3	25	14 000	18 700	20 000
19	27	20	0.3	25	17 700	25 300	20 000
20	28	13	0.3	26	10 900	13 800	20 000
20	28	16	0.3	26	13 900	18 800	20 000
20	28	20	0.3	26	17 600	25 400	20 000
20	28	23	0.3	26	19 300	28 800	20 000
20	33	20	0.3	31	24 300	26 500	20 000
20	33	20	0.3	31	29 200	37 200	7 500
21	29	16	0.3	27	14 400	20 000	19 000
21	29	20	0.3	27	18 200	27 100	19 000
22	30	13	0.3	28	11 700	15 600	18 000
22	30	16	0.3	28	14 900	21 200	18 000
22	30	20	0.3	28	18 900	28 700	18 000
22	30	23	0.3	28	20 800	32 500	18 000
22	34	25	0.3	32	29 100	36 800	18 000
22	34	25	0.3	32	37 900	57 800	7 000



MACHINED TYPE NEEDLE ROLLER BEARINGS

Without Inner Ring



Shaft dia. 24 – 30mm

Shaft dia. mm	Identification number						Mass (Ref.) g
	RNA 49	RNA 69	RNA 48	TAF	TR	GTR	
24	—	—	—	TAF 243216	—	—	32
	—	—	—	TAF 243220	—	—	40.5
25	RNA 4904	RNA 6904	—	TAF 253316	—	—	33.5
			—	TAF 253320	—	—	42
			—	—	—	—	55.5
	—	—	—	—	—	—	95.5
	—	—	—	—	TR 253820	—	71
	—	—	—	—	TR 253825	—	89
26	—	—	—	TAF 263416	—	—	34.5
	—	—	—	TAF 263420	—	—	43.5
28	RNA 49/22	RNA 69/22	—	TAF 283720	—	—	51.5
			—	TAF 283730	—	—	83.5
	—	—	—	—	—	—	56.5
	—	—	—	—	—	—	97.5
29	—	—	—	TAF 293820	—	—	57
	—	—	—	TAF 293830	—	—	85
30	RNA 4905	RNA 6905	—	TAF 304020	—	—	64.5
			—	TAF 304030	—	—	97.5
			—	—	—	—	64
	—	—	—	—	—	—	111
	—	—	—	—	TR 304425	—	115
—	—	—	—	—	GTR 304425	133	

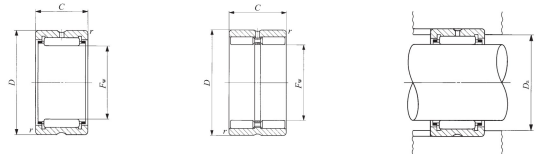
Notes(1) Minimum allowable value of chamfer dimension r

(2) Allowable rotational speed applies to oil lubrication. For grease lubrication, a maximum of 60% of this value is allowable.

Remarks 1. TAF series with a roller set bore diameter F_w of 26 mm or less have no oil hole. In others, the outer ring has an oil groove and an oil hole.

2. No grease is prepacked. Perform proper lubrication.

D13



RNA49 TAF TR
RNA69 ($F_w \leq 35$)

GTR

Boundary dimensions	mm			Standard mounting dimension D_a Max. mm	Basic dynamic load rating C N	Basic static load rating C_0 N	Allowable rotational speed ⁽²⁾ rpm
	F_w	D	C				
24	32	16	0.3	30	15 300	22 500	17 000
24	32	20	0.3	30	19 400	30 500	17 000
25	33	16	0.3	31	15 800	23 700	16 000
25	33	20	0.3	31	20 000	32 100	16 000
25	37	17	0.3	35	21 000	25 000	16 000
25	37	30	0.3	35	35 400	48 900	16 000
25	38	20	0.3	36	28 900	35 000	16 000
25	38	25	0.3	36	34 800	44 400	16 000
25	38	20	0.3	36	33 300	46 500	6 000
25	38	25	0.3	36	42 400	63 700	6 000
26	34	16	0.3	32	16 300	24 900	15 000
26	34	20	0.3	32	20 600	33 800	15 000
28	37	20	0.3	35	21 700	37 100	14 000
28	37	30	0.3	35	31 100	58 900	14 000
28	39	17	0.3	37	21 400	28 900	14 000
28	39	30	0.3	37	36 300	56 900	14 000
29	38	20	0.3	36	21 600	37 200	14 000
29	38	30	0.3	36	30 900	59 100	14 000
30	40	20	0.3	38	25 100	40 100	13 000
30	40	30	0.3	38	36 000	63 900	13 000
30	42	17	0.3	40	23 700	30 700	13 000
30	42	30	0.3	40	42 100	64 300	13 000
30	44	25	0.3	42	37 900	52 100	13 000
30	44	25	0.3	42	47 000	76 500	5 000

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

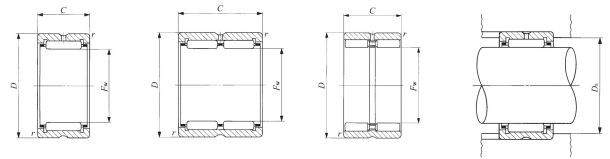
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MACHINED TYPE NEEDLE ROLLER BEARINGS

Without Inner Ring



RNA49 TAF TR
RNA69 ($F_w \leq 35$)

RNA69

GTR

Shaft dia. 32 – 40mm

Shaft dia. mm	Identification number						Mass (Ref.) g
	RNA 49	RNA 69	RNA 48	TAF	TR	GTR	
32	—	—	—	TAF 324220	—	—	68
	RNA 49/28	—	—	TAF 324230	—	—	102
	—	RNA 69/28	—	—	—	—	76.5
	—	—	—	—	—	GTR 324530	133
35	—	—	—	TAF 354520	—	—	73.5
	RNA 4906	—	—	TAF 354530	—	—	112
	—	RNA 6906	—	—	—	—	72.5
	—	—	—	—	TR 354830	—	125
37	—	—	—	—	—	—	139
	—	—	—	—	—	GTR 354830	163
37	—	—	—	TAF 374720	—	—	77.5
	—	—	—	TAF 374730	—	—	117
38	—	—	—	TAF 384820	—	—	79
	—	—	—	TAF 384830	—	—	119
	—	—	—	—	TR 385230	—	168
	—	—	—	—	—	GTR 385230	195
40	—	—	—	TAF 405020	—	—	83
	RNA 49/32	—	—	TAF 405030	—	—	125
	—	RNA 69/32	—	—	—	—	96
	—	—	—	—	—	—	172
40	—	—	—	—	TR 405520	—	129
	—	—	—	—	—	GTR 405520	144

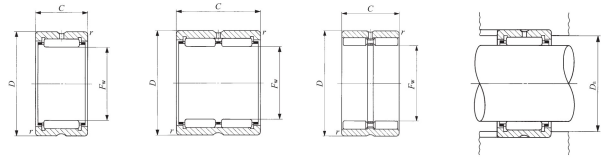
Notes(1) Minimum allowable value of chamfer dimension r
 (2) Allowable rotational speed applies to oil lubrication. For grease lubrication, a maximum of 60% of this value is allowable.
 Remarks 1. The outer ring has an oil groove and an oil hole.
 2. No grease is prepacked. Perform proper lubrication.

F_w	Boundary dimensions mm			Standard mounting dimension D_a Max. mm	Basic dynamic load rating C N	Basic static load rating C_0 N	Allowable rotational speed(2) rpm
	D	C	r_s min (1)				
32	42	20	0.3	40	25 700	42 200	12 000
32	42	30	0.3	40	36 800	67 200	12 000
32	45	17	0.3	43	24 500	32 700	12 000
32	45	30	0.3	43	41 800	64 800	12 000
32	45	30	0.3	43	58 000	101 000	4 500
35	45	20	0.3	43	26 900	46 200	11 000
35	45	30	0.3	43	38 600	73 600	11 000
35	47	17	0.3	45	25 200	34 700	11 000
35	47	30	0.3	45	43 000	69 000	11 000
35	48	30	0.3	46	47 400	72 300	11 000
35	48	30	0.3	46	61 100	110 000	4 500
37	47	20	0.3	45	28 200	50 100	11 000
37	47	30	0.3	45	40 500	79 800	11 000
38	48	20	0.3	46	28 100	50 200	11 000
38	48	30	0.3	46	40 300	80 000	11 000
38	52	30	0.6	48	50 800	81 100	11 000
38	52	30	0.6	48	64 200	121 000	4 000
40	50	20	0.3	48	29 400	54 100	10 000
40	50	30	0.3	48	42 300	86 200	10 000
40	52	20	0.6	48	31 200	47 800	10 000
40	52	36	0.6	48	53 500	95 700	10 000
40	55	20	0.6	51	37 400	55 700	10 000
40	55	20	0.6	51	44 300	73 600	3 500



MACHINED TYPE NEEDLE ROLLER BEARINGS

Without Inner Ring



RNA49 TAF TR

RNA69

GTR

Shaft dia. 42 – 50mm

Shaft dia. mm	Identification number						Mass (Ref.) g
	RNA 49	RNA 69	RNA 48	TAF	TR	GTR	
42	—	—	—	TAF 425220	—	—	86.5
	—	—	—	TAF 425230	—	—	130
	RNA 4907	—	—	—	—	—	113
	—	RNA 6907	—	—	—	—	200
	—	—	—	—	TR 425630	—	183
43	—	—	—	—	—	GTR 425630	210
	—	—	—	TAF 435320	—	—	88.5
	—	—	—	TAF 435330	—	—	133
45	—	—	—	TAF 455520	—	—	92
	—	—	—	TAF 455530	—	—	138
	RNA 49/38	—	—	—	—	—	120
	—	—	—	—	TR 455930	—	193
47	—	—	—	—	—	GTR 455930	225
	—	—	—	TAF 475720	—	—	95
	—	—	—	TAF 475730	—	—	144
48	RNA 4908	—	—	—	—	—	152
	—	—	—	—	TR 486230	—	205
	—	RNA 6908	—	—	—	—	275
	—	—	—	—	—	GTR 486230	240
50	—	—	—	TAF 506225	—	—	159
	—	—	—	TAF 506235	—	—	225
	—	—	—	—	TR 506430	—	210
	RNA 49/42	—	—	—	—	—	174
	—	—	—	—	—	GTR 506430	245

Notes(1) Minimum allowable value of chamfer dimension r
 (2) Allowable rotational speed applies to oil lubrication. For grease lubrication, a maximum of 60% of this value is allowable.
 Remarks1. The outer ring has an oil groove and an oil hole.
 2. No grease is prepacked. Perform proper lubrication.

Boundary dimensions	mm			Standard mounting dimension Da Max. mm	Basic dynamic load rating C N	Basic static load rating C ₀ N	Allowable rotational speed ⁽²⁾ rpm
	F _w	D	C				
42	52	20	0.3	50	29 900	56 200	9 500
42	52	30	0.3	50	43 000	89 400	9 500
42	55	20	0.6	51	32 000	50 100	9 500
42	55	36	0.6	51	54 900	100 000	9 500
42	56	30	0.6	52	53 800	90 100	9 500
42	56	30	0.6	52	67 500	133 000	3 500
43	53	20	0.3	51	30 500	58 200	9 500
43	53	30	0.3	51	43 800	92 600	9 500
45	55	20	0.3	53	31 000	60 200	9 000
45	55	30	0.3	53	44 600	95 800	9 000
45	58	20	0.6	54	33 600	54 600	9 000
45	59	30	0.6	55	55 100	94 800	9 000
45	59	30	0.6	55	70 300	142 000	3 500
47	57	20	0.3	55	31 500	62 200	8 500
47	57	30	0.3	55	45 200	99 100	8 500
48	62	22	0.6	58	41 600	67 400	8 500
48	62	30	0.6	58	56 300	99 500	8 500
48	62	40	0.6	58	71 300	135 000	8 500
48	62	30	0.6	58	72 700	154 000	3 000
50	62	25	0.3	60	43 000	85 300	8 000
50	62	35	0.3	60	58 000	125 000	8 000
50	64	30	0.6	60	57 700	104 000	8 000
50	65	22	0.6	61	42 500	70 300	8 000
50	64	30	0.6	60	74 600	158 000	3 000



MACHINED TYPE NEEDLE ROLLER BEARINGS

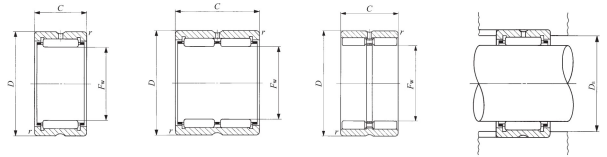
Without Inner Ring



Shaft dia. 52 – 68mm

Shaft dia. mm	Identification number						Mass (Ref.) g
	RNA 49	RNA 69	RNA 48	TAF	TR	GTR	
52	RNA 4909	—	—	—	—	—	197
	—	RNA 6909	—	—	—	—	355
55	—	—	—	TAF 556825	—	—	193
	RNA 49/48	—	—	TAF 556835	—	—	255
	—	—	—	—	—	—	188
58	RNA 4910	—	—	—	—	—	179
	—	RNA 6910	—	—	—	—	320
	—	—	—	—	TR 587745	GTR 587745	515 590
60	—	—	—	TAF 607225	—	—	187
	—	—	—	TAF 607235	—	—	260
	RNA 49/52	—	—	—	—	—	205
62	—	—	—	—	TR 628138	—	460
	—	—	—	—	—	GTR 628138	520
63	RNA 4911	—	—	—	—	—	265
	—	RNA 6911	—	—	—	—	475
65	—	—	—	TAF 657825	—	—	225
	—	—	—	TAF 657835	—	—	315
	RNA 49/58	—	—	—	—	—	275
68	—	—	—	TAF 688225	—	—	250
	—	—	—	TAF 688235	—	—	350
	RNA 4912	—	—	—	—	—	285
	—	RNA 6912	—	—	—	—	510

Notes⁽¹⁾ Minimum allowable value of chamfer dimension r
⁽²⁾ Allowable rotational speed applies to oil lubrication. For grease lubrication, a maximum of 60% of this value is allowable.
 Remarks 1. The outer ring has an oil groove and an oil hole.
 2. No grease is prepacked. Perform proper lubrication.



RNA49 TAF TR

RNA69

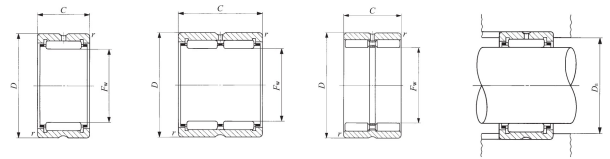
GTR

F_w	Boundary dimensions mm			Standard mounting dimension D_a Max. mm	Basic dynamic load rating C N	Basic static load rating C_0 N	Allowable rotational speed ⁽²⁾ rpm
	D	C	r_s min ⁽¹⁾				
52	68	22	0.6	64	43 500	73 300	7 500
52	68	40	0.6	64	74 600	147 000	7 500
55	68	25	0.3	66	45 400	94 000	7 500
55	68	35	0.3	66	61 200	138 000	7 500
55	70	22	0.6	66	44 300	76 300	7 500
58	72	22	0.6	68	46 200	82 100	7 000
58	72	40	0.6	68	79 200	164 000	7 000
58	77	45	1	72	104 000	191 000	7 000
58	77	45	1	72	135 000	280 000	2 500
60	72	25	0.3	70	47 500	103 000	6 500
60	72	35	0.3	70	64 100	151 000	6 500
60	75	22	0.6	71	47 100	85 100	6 500
62	81	38	1	76	92 000	166 000	6 500
62	81	38	1	76	118 000	241 000	2 500
63	80	25	1	75	57 600	97 200	6 500
63	80	45	1	75	98 700	194 000	6 500
65	78	25	0.6	74	49 600	112 000	6 000
65	78	35	0.6	74	67 000	164 000	6 000
65	82	25	1	77	58 900	101 000	6 000
68	82	25	0.6	78	54 800	117 000	6 000
68	82	35	0.6	78	72 000	166 000	6 000
68	85	25	1	80	60 200	105 000	6 000
68	85	45	1	80	103 000	211 000	6 000



MACHINED TYPE NEEDLE ROLLER BEARINGS

Without Inner Ring



RNA49 TAF TR RNA69 GTR

Shaft dia. 70 – 85mm

Shaft dia. mm	Identification number						Mass (Ref.) g
	RNA 49	RNA 69	RNA 48	TAF	TR	GTR	
70	—	—	—	TAF 708525	—	—	280
	—	—	—	TAF 708535	—	—	395
	RNA 49/62	—	—	—	—	—	320
72	—	—	—	—	TR 708945	—	605
	—	—	—	—	—	GTR 708945	690
73	RNA 49/68	RNA 69/13	—	—	—	—	325
	—	—	—	—	—	—	585
75	—	—	—	TAF 739025	—	—	335
	—	—	—	TAF 739035	—	—	475
80	—	—	—	TAF 759225	—	—	345
	—	—	—	TAF 759235	—	—	485
	RNA 49/68	—	—	—	—	—	470
83	—	—	—	TAF 809525	—	—	315
	—	—	—	TAF 809535	—	—	445
	RNA 49/14	RNA 69/14	—	—	—	—	495
85	—	—	—	—	TR 8310845	—	910
	—	—	—	—	—	GTR 8310845	995
	RNA 49/15	—	—	TAF 8510525	—	—	435
85	—	—	—	—	—	—	525
	—	—	—	TAF 8510535	—	—	610
	RNA 69/15	—	—	—	—	—	960

Notes(1) Minimum allowable value of chamfer dimension r
 (2) Allowable rotational speed applies to oil lubrication. For grease lubrication, a maximum of 60% of this value is allowable.
 Remarks1. The outer ring has an oil groove and an oil hole.
 2. No grease is prepacked. Perform proper lubrication.

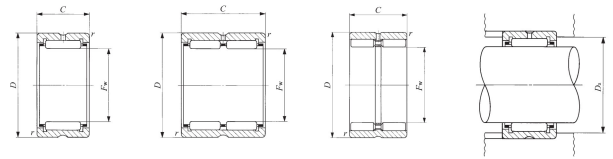
F_w	Boundary dimensions mm				Standard mounting dimension D_a Max. mm	Basic dynamic load rating C N	Basic static load rating C_0 N	Allowable rotational speed ⁽²⁾ rpm
	D	C	r_s min ⁽¹⁾	r				
70	85	25	0.6	81	55 500	120 000	5 500	
70	85	35	0.6	81	73 000	171 000	5 500	
70	88	25	1	83	61 500	109 000	5 500	
70	89	45	1	84	114 000	228 000	5 500	
70	89	45	1	84	147 000	336 000	2 000	
72	90	25	1	85	62 700	113 000	5 500	
72	90	45	1	85	108 000	227 000	5 500	
73	90	25	1	85	61 100	127 000	5 500	
73	90	35	1	85	80 400	181 000	5 500	
75	92	25	1	87	62 100	131 000	5 500	
75	92	35	1	87	81 700	186 000	5 500	
75	95	30	1	90	79 900	147 000	5 500	
80	95	25	1	90	59 400	137 000	5 000	
80	95	35	1	90	78 100	195 000	5 000	
80	100	30	1	95	83 200	158 000	5 000	
80	100	54	1	95	134 000	311 000	5 000	
83	108	45	1	103	146 000	270 000	5 000	
83	108	45	1	103	190 000	396 000	1 800	
85	105	25	1	100	76 300	145 000	4 500	
85	105	30	1	100	86 200	169 000	4 500	
85	105	35	1	100	102 000	210 000	4 500	
85	105	54	1	100	138 000	331 000	4 500	

D
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MACHINED TYPE NEEDLE ROLLER BEARINGS

Without Inner Ring



RNA49 TAF TR RNA69 GTR

Shaft dia. 90 – 105mm

Shaft dia. mm	Identification number						Mass (Ref.) g
	RNA 49	RNA 69	RNA 48	TAF	TR	GTR	
90	—	—	—	TAF 9011025	—	—	455
	RNA 4916	—	—	—	—	—	550
	—	RNA 6916	—	TAF 9011035	—	—	640
	—	—	—	—	—	—	1 010
93	—	—	—	—	TR 9311850	—	1 210
	—	—	—	—	—	GTR 9311850	1 340
95	—	—	—	TAF 9511526	—	—	495
	RNA 49/82	—	—	TAF 9511536	—	—	575
	—	—	—	—	—	—	690
	—	—	—	—	TR 9512045	—	1 120
100	—	—	—	—	—	GTR 9512045	1 230
	—	—	—	TAF 10012026	—	—	525
	RNA 4917	—	—	—	—	—	705
	—	—	—	TAF 10012036	—	—	725
	—	RNA 6917	—	—	—	—	1 300
	—	—	—	—	TR 10012550	—	1 290
105	—	—	—	—	—	GTR 10012550	1 440
	—	—	—	TAF 10512526	—	—	545
	RNA 4918	—	—	—	—	—	740
	—	—	—	TAF 10512536	—	—	760
	—	RNA 6918	—	—	—	—	1 360

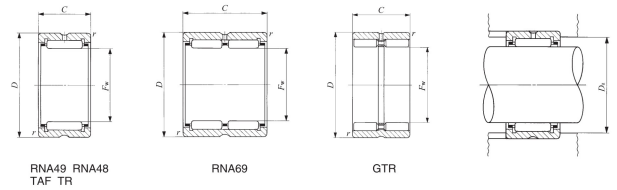
Notes(1) Minimum allowable value of chamfer dimension r
 (2) Allowable rotational speed applies to oil lubrication. For grease lubrication, a maximum of 60% of this value is allowable.
 Remarks1. The outer ring has an oil groove and an oil hole.
 2. No grease is prepacked. Perform proper lubrication.

Boundary dimensions	mm				Standard mounting dimension D _a Max. mm	Basic dynamic load rating C N	Basic static load rating C ₀ N	Allowable rotational speed ⁽²⁾ rpm
	F _w	D	C	r _{s min} ⁽¹⁾				
90	110	25	1	105	77 300	150 000	4 500	
90	110	30	1	105	87 300	175 000	4 500	
90	110	35	1	105	103 000	217 000	4 500	
90	110	54	1	105	143 000	351 000	4 500	
93	118	50	1	113	165 000	329 000	4 500	
93	118	50	1	113	224 000	509 000	1 600	
95	115	26	1	110	79 700	159 000	4 000	
95	115	30	1	110	90 000	186 000	4 000	
95	115	36	1	110	106 000	231 000	4 000	
95	120	45	1.5	112	155 000	305 000	4 000	
95	120	45	1.5	112	204 000	455 000	1 600	
100	120	26	1	115	82 400	168 000	4 000	
100	120	35	1.1	113.5	110 000	244 000	4 000	
100	120	36	1	115	110 000	244 000	4 000	
100	120	63	1.1	113.5	173 000	467 000	4 000	
100	125	50	1.5	117	172 000	355 000	4 000	
100	125	50	1.5	117	234 000	549 000	1 500	
105	125	26	1	120	84 700	178 000	4 000	
105	125	35	1.1	118.5	113 000	258 000	4 000	
105	125	36	1	120	113 000	258 000	4 000	
105	125	63	1.1	118.5	178 000	490 000	4 000	



MACHINED TYPE NEEDLE ROLLER BEARINGS

Without Inner Ring



Shaft dia. 110 – 170mm

Shaft dia. mm	Identification number						Mass (Ref.) g
	RNA 49	RNA 69	RNA 48	TAF	TR	GTR	
110	—	—	—	TAF 11013030	—	—	660
	RNA 4919	—	—	—	—	—	770
	—	RNA 6919	—	TAF 11013040	—	—	880
	—	—	—	—	—	—	1 420
	—	—	—	—	TR 11013550	—	1 400
115	—	—	—	—	—	GTR 11013550	1 560
	RNA 4920	—	—	—	—	—	1 190
	—	—	—	—	TR 11515350	—	2 350
120	—	—	RNA 4822	—	—	—	2 600
125	RNA 4922	—	—	—	—	—	790
130	—	—	RNA 4824	—	—	—	1 280
135	RNA 4924	—	—	—	—	—	850
140	—	—	—	—	TR 14017860	—	1 930
145	—	—	RNA 4826	—	—	—	3 320
	—	—	—	—	—	GTR 14017860	3 730
	—	—	—	—	—	—	1 100
150	RNA 4926	—	—	—	—	—	2 360
	—	—	—	—	TR 15018860	—	3 540
	—	—	—	—	—	GTR 15018860	3 970
155	—	—	RNA 4828	—	—	—	1 170
160	RNA 4928	—	—	—	—	—	2 500
165	—	—	RNA 4830	—	—	—	1 750
170	RNA 4930	—	—	—	—	—	4 090

Notes(1) Minimum allowable value of chamfer dimension r
 (2) Allowable rotational speed applies to oil lubrication. For grease lubrication, a maximum of 60% of this value is allowable.
 Remarks1. The outer ring has an oil groove and an oil hole.
 2. No grease is prepacked. Perform proper lubrication.

F_w	Boundary dimensions mm				Standard mounting dimension D_a Max. mm	Basic dynamic load rating C N	Basic static load rating C_0 N	Allowable rotational speed(2) rpm
	D	C	r_s min ⁽¹⁾	r				
110	130	30	1	125	106 000	240 000	3 500	
110	130	35	1.1	123.5	116 000	271 000	3 500	
110	130	40	1	125	134 000	324 000	3 500	
110	130	63	1.1	123.5	182 000	514 000	3 500	
110	135	50	1.5	127	183 000	395 000	3 500	
110	135	50	1.5	127	245 000	603 000	1 400	
115	140	40	1.1	133.5	145 000	329 000	3 500	
115	153	50	1.5	145	233 000	414 000	3 500	
115	153	50	1.5	145	315 000	614 000	1 300	
120	140	30	1	135	93 200	239 000	3 500	
125	150	40	1.1	143.5	152 000	357 000	3 000	
130	150	30	1	145	96 900	259 000	3 000	
135	165	45	1.1	158.5	187 000	435 000	3 000	
140	178	60	1.5	170	307 000	625 000	3 000	
140	178	60	1.5	170	409 000	923 000	1 100	
145	165	35	1.1	158.5	116 000	340 000	3 000	
150	180	50	1.5	172	215 000	540 000	2 500	
150	188	60	1.5	180	320 000	675 000	2 500	
150	188	60	1.5	180	423 000	989 000	1 000	
155	175	35	1.1	168.5	120 000	363 000	2 500	
160	190	50	1.5	182	224 000	580 000	2 500	
165	190	40	1.1	183.5	168 000	446 000	2 500	
170	210	60	2	201	324 000	712 000	2 500	