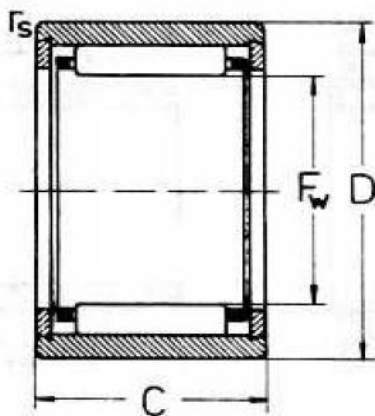


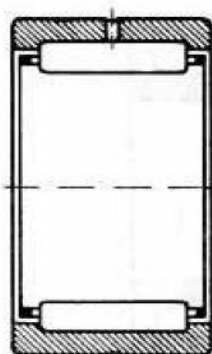
## Needle roller bearings without inner ring (standardized)

Dimensions		Basic radial load				Speed limit		Designation	Weight
F <sub>w</sub>	D	C	r <sub>s</sub> min.	dyn. C <sub>r</sub>	stat. C <sub>0r</sub>	grease	oil	-	Kg
mm	mm	mm	mm	KN	KN	min <sup>-1</sup>	min <sup>-1</sup>	-	Kg
8	15	12	0.3	3.7	3.95	19000	32000	<b>RNA081512</b>	0.008
	15	16	0.3	4.95	5.65	19000	32000	<b>RNA081516</b>	0.012
9	16	12	0.3	4.3	4.8	18000	30000	<b>RNA091612</b>	0.01
	16	16	0.3	5.6	6.9	18000	30000	<b>RNA091616</b>	0.013
10	17	12	0.3	4.5	5.35	17000	28000	<b>RNA101712</b>	0.011
	17	16	0.3	5.8	6.5	17000	28000	<b>RNA101716</b>	0.014
12	18	15	0.3	5.6	7.75	16000	26000	<b>RNA121815TN</b>	0.012
	19	12	0.3	4.65	5.8	16000	26000	<b>RNA121912</b>	0.013
	19	16	0.3	6.15	8.1	16000	26000	<b>RNA121916</b>	0.017
	22	12	0.3	5.3	6.65	16000	26000	<b>RNA122212</b>	0.021
14	22	13	0.3	8.25	9.1	15000	24000	<b>RNA4900</b>	0.017
	22	16	0.3	9.8	11.3	15000	24000	<b>RNA142216</b>	0.021
	22	20	0.3	11.8	15.4	15000	24000	<b>RNA142220</b>	0.028
16	24	13	0.3	9.1	10.6	15000	24000	<b>RNA4901</b>	0.018
	24	22	0.3	14.8	20.2	15000	24000	<b>RNA6901</b>	0.032
18	28	15	0.3	9.5	11.9	14000	22000	<b>RNA182815</b>	0.036
20	28	13	0.3	10.4	13.2	13000	20000	<b>RNA4902</b>	0.022
	28	23	0.3	16.8	24.5	13000	20000	<b>RNA6902</b>	0.04
22	30	13	0.3	10.7	13.9	11000	18000	<b>RNA4903</b>	0.023
	30	23	0.3	18.2	27.8	11000	18000	<b>RNA6903</b>	0.043
25	37	17	0.3	20	24.4	9500	16000	<b>RNA4904</b>	0.053
	37	30	0.3	33	47.6	9500	16000	<b>RNA6904</b>	0.101
30	40	20	0.3	21	33	8000	13000	<b>RNA304020</b>	0.065
	42	17	0.3	22.2	28.3	8000	13000	<b>RNA4905</b>	0.068
	42	30	0.3	40.1	60.1	8000	13000	<b>RNA6905</b>	0.155
35	45	20	0.3	24.2	38.5	7000	11000	<b>RNA354520</b>	0.074
	47	17	0.3	23.7	32.1	7000	11000	<b>RNA4906</b>	0.14
	47	30	0.3	43.1	49.3	7000	11000	<b>RNA6906</b>	0.131
38	48	20	0.3	24.3	41.4	7000	11000	<b>RNA384820</b>	0.08
42	55	20	0.6	29.8	45.5	6300	9500	<b>RNA4907</b>	0.109
	55	36	0.6	52.7	95	6300	9500	<b>RNA6907</b>	0.214
45	55	30	0.3	40.2	86.9	6000	9000	<b>RNA455530</b>	0.137
48	62	22	0.6	38.7	60.9	5600	8500	<b>RNA4908</b>	0.147
	62	40	0.6	63.8	116	5600	8500	<b>RNA6908</b>	0.266
50	62	22	1	35.5	60.3	5300	8000	<b>RNA506222</b>	0.153
	62	25	0.6	36.3	76	5300	8000	<b>RNA506225</b>	0.157
	62	35	0.6	49.4	114	5300	8000	<b>RNA506235</b>	0.209
52	68	22	0.6	46.4	73.9	5000	7500	<b>RNA4909</b>	0.197
	68	40	0.6	64.5	123	5000	7500	<b>RNA6909</b>	0.283
55	68	25	0.6	38.5	82.2	5000	7500	<b>RNA556825TN</b>	0.181
58	72	22	0.6	45	73.5	4800	7000	<b>RNA4910</b>	0.167
	72	40	0.6	67.3	136	4800	7000	<b>RNA6910</b>	0.335
60	72	25	0.6	40.2	84	4500	6700	<b>RNA607225TN</b>	0.16
	72	35	0.6	55.7	130	4500	6700	<b>RNA607235</b>	0.224
63	80	25	1	59.3	101	4500	6700	<b>RNA4911</b>	0.278
	80	45	1	83.8	173	4500	6700	<b>RNA6911</b>	0.477

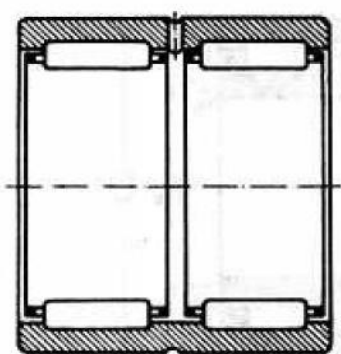
Dimensions				Basic radial load		Speed limit		Designation	Weight
$F_w$	D	C	$r_s$ min.	dyn. $C_r$	stat. $C_{0r}$	grease	oil		
mm	mm	mm	mm	KN	KN	$\text{min}^{-1}$	$\text{min}^{-1}$	-	Kg
68	85	25	1	62	109	4000	6000	<b>RNA4912</b>	0.296
	85	45	1	89.1	175	4000	6000	<b>RNA6912</b>	0.493
72	90	25	1	58.3	110	3800	5600	<b>RNA4913</b>	0.318
	90	45	1	91.3	193	3800	5600	<b>RNA6913</b>	0.545
80	95	25	1	53.4	115	3400	5000	<b>RNA809525</b>	0.312
	100	30	1	76.5	148	3400	5000	<b>RNA4914TN</b>	0.485
	100	54	1	125	254	3400	5000	<b>RNA6914</b>	0.545
85	105	30	1	80.6	158	3200	4800	<b>RNA4915</b>	0.504
	105	54	1	127	270	3200	4800	<b>RNA6915</b>	0.965
90	110	30	1	84.9	169	3000	4500	<b>RNA4916</b>	0.52
	110	54	1	144	316	3000	4500	<b>RNA6916</b>	0.973
95	115	26	1	74.3	137	2800	4300	<b>RNA95/26</b>	0.523
100	120	35	1.1	98.8	222	2600	4000	<b>RNA4917</b>	0.672
	120	63	1.1	143	378	2600	4000	<b>RNA6917</b>	1.24
105	125	35	1.1	110	222	2400	3800	<b>RNA4918</b>	0.712
	125	63	1.1	144	400	2400	3800	<b>RNA6918</b>	1.36
110	130	30	1.1	99.6	210	2200	3600	<b>RNA110/30</b>	0.626
	130	35	1.1	105	244	2200	3600	<b>RNA4919</b>	0.729
	130	63	1.1	149	411	2200	3600	<b>RNA6919</b>	1.48
115	140	40	1.1	124	267	2200	3600	<b>RNA4920</b>	1.17
120	140	30	1	102	222	2200	3400	<b>RNA4822</b>	0.729
125	150	40	1.1	127	283	2000	3400	<b>RNA4922</b>	1.25
130	150	30	1	86.8	228	1800	3000	<b>RNA4824</b>	0.73
135	165	45	1.1	170	385	1800	3000	<b>RNA4924</b>	1.93
145	165	35	1.1	122	316	1700	2800	<b>RNA4826</b>	1.02
150	180	50	1.5	188	421	1700	2800	<b>RNA4926</b>	2.25
155	175	35	1.1	128	323	1600	2600	<b>RNA4828</b>	1.21
	180	32	1.5	116	258	1600	2600	<b>RNA155/32</b>	1.22
160	190	50	1.5	190	484	1600	2600	<b>RNA4928</b>	2.5
165	190	40	1.1	150	386	1500	2400	<b>RNA4830</b>	1.68



RNA,  $F_w \leq 12\text{mm}$



RNA



RNA69

## Needle roller bearings without inner ring (non-standardized)

Dimensions			Basic radial load		Speed limit		Fig.	Designation	Weight	
$F_w$	D	C	dyn. $C_r$	stat. $C_{Or}$	grease	oil				
mm	mm	mm	mm	KN	KN	$\text{min}^{-1}$	$\text{min}^{-1}$	-	Kg	
12.5	57.81	23		27	35	2800	5600	9	490401	0.199
19.05	31.75	25.4	1	27.7	33.4	13000	20000	1	RNA193225A	0.078
22	40	20	0.6	18.6	28.1	9000	19000	1	RNA224020	0.127
	40	20	0.6	27.2	46.8	4000	8000	2	RNA224020V	0.127
25	33	16	0.3	11.5	18.5	9000	16000	1	RNA253316	0.039
25.4	38.1	19.05	0.6	24.5	30.6	9000	16000	1	RNA253819A	0.07
26.008	46	47.5	1.5	15.2	26.6	9000	16000	8	RNA264647A	0.274
27	39.688	38.48	0.5	39.5	57.5	9000	16000	4	RNA274038A	0.133
28	60	12	1	16.3	26.1	3400	7000	3	RNA286012V	0.2
28.58	41.28	31.75	1	43.5	66.1	9000	14000	1	RNA294132A	0.133
31.75	44.45	31.75	1	43.2	67.5	8000	13000	1	RNA324423A	0.14
36.51	49.213	25.4	1.5	37.3	58.4	7000	11000	1	RNA364925A	0.125
41.275	65.088	31.75	1	82.1	106	6000	9000	1	RNA416532A	0.378
41.51	55	36	0.6	46.1	97.8	6300	9500	7	RNA6907AP5	0.269
47.625	61.912	31.75	1.5	66	114	6000	9000	1	RNA486232A	0.236
69.85	88.9	38.1	2	96.7	196	4000	6000	1	RNA708938A	0.557
78.3	95	20	2	41.7	108	1200	2500	5	RNA789520AV	0.29
90	105	26	1.5	59.6	143	3200	4800	6	RNA090/26	0.383

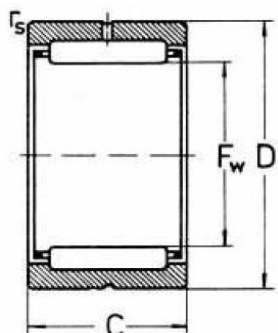


Fig.1

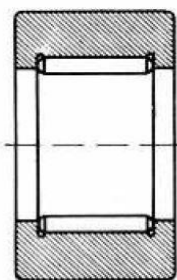


Fig.2



Fig.3

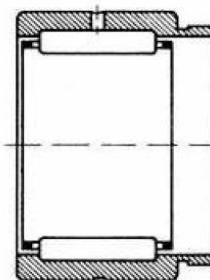


Fig.4



Fig.5



Fig.6

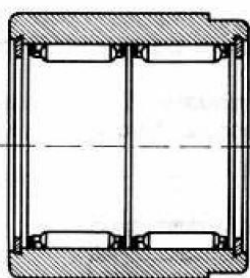


Fig.7

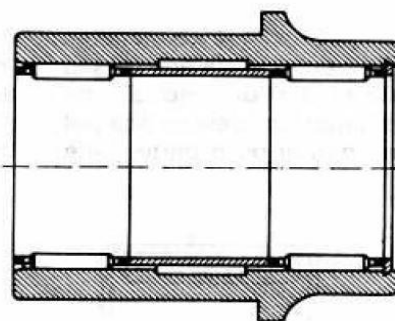


Fig.8

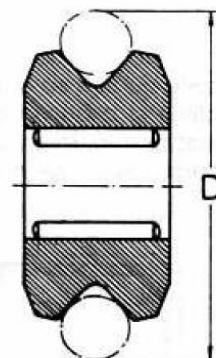


Fig.9