

Combined Needle Roller Bearings(Compound Bearings, Complex Bearings)



Overview: PS Bearings' Combined Needle Roller Bearings incorporate a radial needle roller bearing and a thrust roller bearing into a convenient unitized package.

Application: Industrial applications, machine tools, and automotive transmissions.

Description:

NKIA	Needle Roller/Angular Contact Ball Bearings
NKIB	
NKX	Needle Roller/Thrust Ball Bearings
NX	Needle Roller/Full Complement Thrust Ball Bearings
NXKR	Needle Roller/Cylindrical Roller Thrust Bearings
RAX	Radial Needle Roller and Thrust Needle Roller Bearing without Inner Ring or Thrust Washer
RAXF	Closed End Drawn Cup Design Radial Needle Roller and Needle Thrust Roller Bearing without Inner Ring or Thrust Washer

Internal Radial Clearance for Combined Needle Bearings with Inner Ring:

Bore Diameter(mm)		Internal Radial Clearance(um)	
>	≤	Min.	Max.
	24	20	45
24	30	20	45
30	40	25	50
40	50	30	60
50	65	40	70
65	80	40	75
80	100	50	85

Inside Diameter Tolerance of Inner Ring for Combined Needle Bearings with Inner Ring:

d(mm)		I.D.Tolerance(um)		Width Tolerance(um)	
>	≤	Max	Min	Max	Min
2.5	10	0	-8	0	-120
10	18	0	-8	0	-120
18	30	0	-10	0	-120
30	50	0	-12	0	-120
50	80	0	-15	0	-150
80	120	0	-20	0	-200

Combined Needle Roller Bearings(Compound Bearings, Complex Bearings)

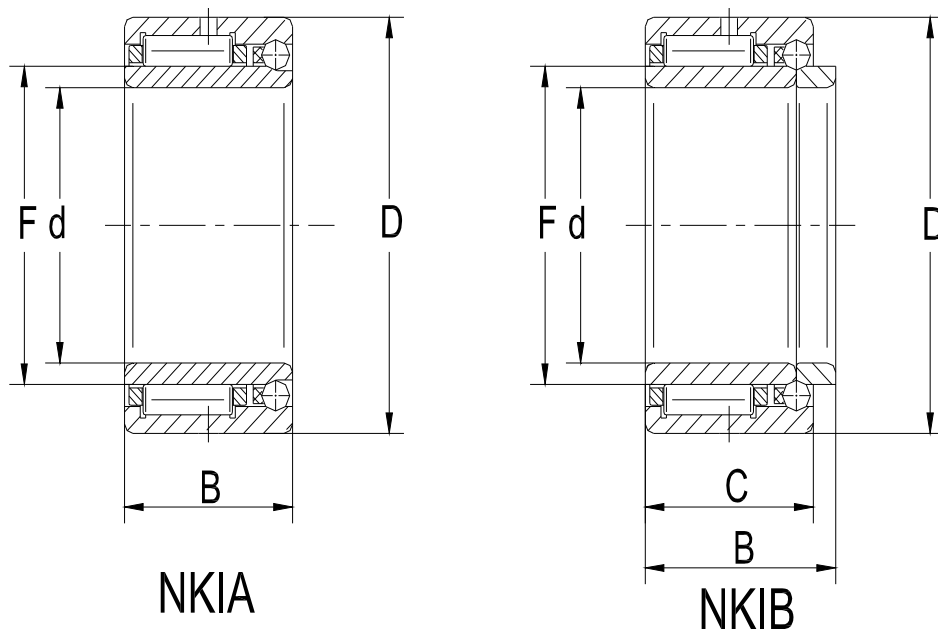
Outside Diameter Tolerance of Outer Ring for Combined Needle Bearings with Inner Ring:

D		O.D.Tolerance(um)		Width Tolerance(um)	
>	≤	Max	Min	Max	Min
6	18	0	-8	0	-120
18	30	0	-9	0	-120
30	50	0	-11	0	-120
50	80	0	-13	0	-150
80	120	0	-15	0	-200

Inscribed Circle Tolerance for Combined Needle Bearings without Inner Ring:

Fw (mm)		Deviation	
>	≤	Min.	Max.
3	6	10	18
6	10	13	22
10	18	16	27
18	30	20	33
30	50	25	41
50	80	30	49
80	120	36	58

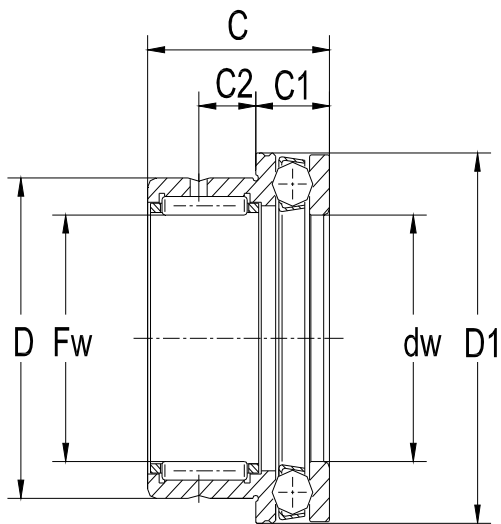
Combined Needle Roller Bearings(Compound Bearings, Complex Bearings)



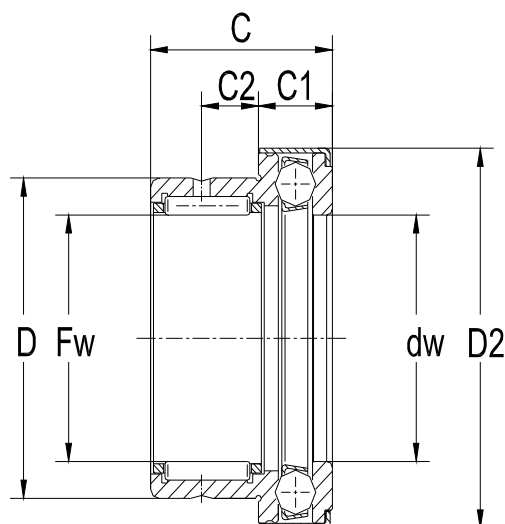
Part Number		Dimension(mm)					Load Rating(N)				Limiting Speed (RPM)	Weight (g)
		d	F	D	B	C	Radial		Axial Direction			
							Cr	Cor	Cr	Cor		
NKIA5901	--	12	16	24	16	--	8600	8300	2700	3450	21000	40
--	NKIB5901	12	16	24	17.5	16	8600	8300	2700	3450	21000	43
NKIA5902	--	15	20	28	18	--	12000	13600	2900	4200	17000	50
--	NKIB5902	15	20	28	20	18	12000	13600	2900	4200	17000	52
NKIA5903	--	17	22	30	18	--	12400	14600	3150	4900	15000	56
--	NKIB5903	17	22	30	20	18	12400	14600	3150	4900	15000	58
NKIA5904	--	20	25	37	23	--	23700	25500	4900	7400	14000	103
--	NKIB5904	20	25	37	25	23	23700	25500	4900	7400	14000	107
NKIA59/22	--	22	28	39	23	--	26000	29500	5300	8600	12000	118
--	NKIB59/22	22	28	39	25	23	26000	29500	5300	8500	12000	122
NKIA5905	--	25	30	42	23	--	26500	31500	5400	9300	12000	130
--	NKIB5905	25	30	42	25	23	26500	31500	5400	9300	12000	134
NKIA5906	--	30	35	47	23	--	28500	35500	5900	11200	10000	147
--	NKIB5906	30	35	47	25	23	28500	35500	5900	11200	10000	151
NKIA5907	--	35	42	55	27	--	35500	50000	7400	14900	9000	243
--	NKIB5907	35	42	55	30	27	35500	50000	7400	14900	9000	247
NKIA5908	--	40	48	62	30	--	48	67000	9200	19400	7500	315
--	NKIB5908	40	48	62	34	30	48500	67000	9200	19400	7500	320
NKIA5909	--	45	52	68	30	--	51000	73000	9600	21400	7000	375
--	NKIB5909	45	52	68	34	30	51000	73000	9600	21400	7000	380
NKIA5910	--	50	58	72	30	--	53000	80000	10100	24300	6500	380
--	NKIB5910	50	58	72	34	30	53000	80000	10100	24300	6500	385
NKIA5911	--	55	63	80	34	--	65000	100000	12100	29500	6000	550
--	NKIB5911	55	63	80	38	34	65000	100000	12100	29500	6000	555
NKIA5912	--	60	68	85	34	--	68000	108000	12400	32000	5500	590
--	NKIB5912	60	68	85	38	34	68000	108000	12400	32000	5500	595
NKIA5913	--	65	72	90	34	--	69000	112000	12800	34000	5500	635
--	NKIB5913	65	72	90	38	34	69000	112000	12800	34000	5500	640
NKIA5914	--	70	80	100	40	--	95000	156000	16800	44500	4900	980
--	NKIB5914	70	80	100	45	40	95000	156000	16800	44500	4900	985

Remark: Other types like NATA, NATB, NJA and NJB are also workabe.

Combined Needle Roller Bearings(Compound Bearings, Complex Bearings)



NKX



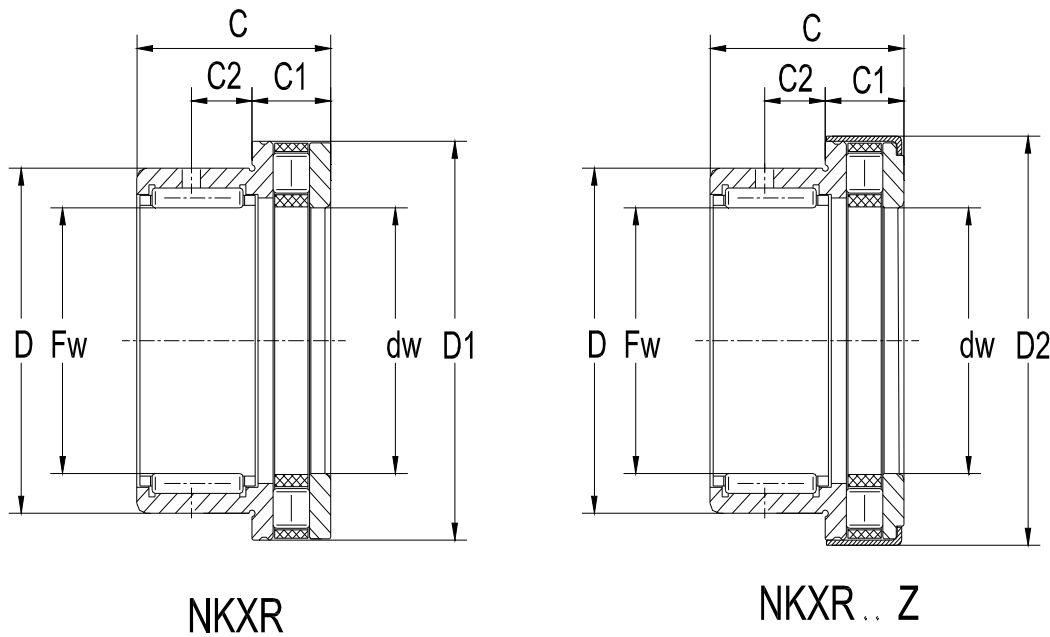
NKX..Z

Part Number		Dimension(mm)							
Without Retain Cap	With Retain Cap	FW	D	D1	D2 Max.	C	C1	C2	dw
NKX10TV	NKX10ZTV	10	19	24.1	25.2	23	9	6.5	10
NKX12	NKX12Z	12	21	26.1	27.2	23	9	6.5	12
NKX15	NKX15Z	15	24	28.1	29.2	23	9	6.5	15
NKX17	NKX17Z	17	26	30.1	31.2	25	9	8	17
NKX20	NKX20Z	20	30	35.1	36.2	30	10	10.5	20
NKX25	NKX25Z	25	37	42.1	43.2	30	11	9.5	25
NKX30	NKX30Z	30	42	47.1	48.2	30	11	9.5	30
NKX35	NKX35Z	35	47	52.1	53.2	30	12	9	35
NKX40	NKX40Z	40	52	60.1	61.2	32	13	10	40
NKX45	NKX45Z	45	58	65.2	66.5	32	14	9	45
NKX50	NKX50Z	50	62	70.2	71.5	35	14	10	50
NKX60	NKX60Z	60	72	85.2	86.5	40	17	12	60
NKX70	NKX70Z	70	85	95.2	96.5	40	18	11	70

Part Number		Load Rating(N)				Limiting Speed (RPM)	Weight(g)	
Without Retain Cap	With Retain Cap	Radial		Axial Direction			Without Retain Cap	With Retain Cap
		Co	Cor	Co	Cor			
NKX10TV	NKX10ZTV	7000	7800	10000	14000	12400	34	36
NKX12	NKX12Z	10100	11000	10300	15400	10900	38	40
NKX15	NKX15Z	12100	12700	10500	16800	9200	44	47
NKX17	NKX17Z	13500	15000	10800	18200	8400	53	55
NKX20	NKX20Z	18600	23800	14300	24700	7200	83	90
NKX25	NKX25Z	21300	30500	19600	37500	5800	125	132
NKX30	NKX30Z	25500	36000	20400	42000	5000	141	148
NKX35	NKX35Z	27500	41500	21200	47000	4400	161	168
NKX40	NKX40Z	29500	47000	27000	63000	3900	200	208
NKX45	NKX45Z	31000	53000	28000	69000	3500	252	265
NKX50	NKX50Z	43000	74000	29000	75000	3200	280	300
NKX60	NKX60Z	47500	90000	41500	113000	2750	360	380
NKX70	NKX70Z	50000	92000	43000	127000	2320	500	520

Remark: Other types like NAX and NAX..Z are also workabe.

Combined Needle Roller Bearings(Compound Bearings, Complex Bearings)

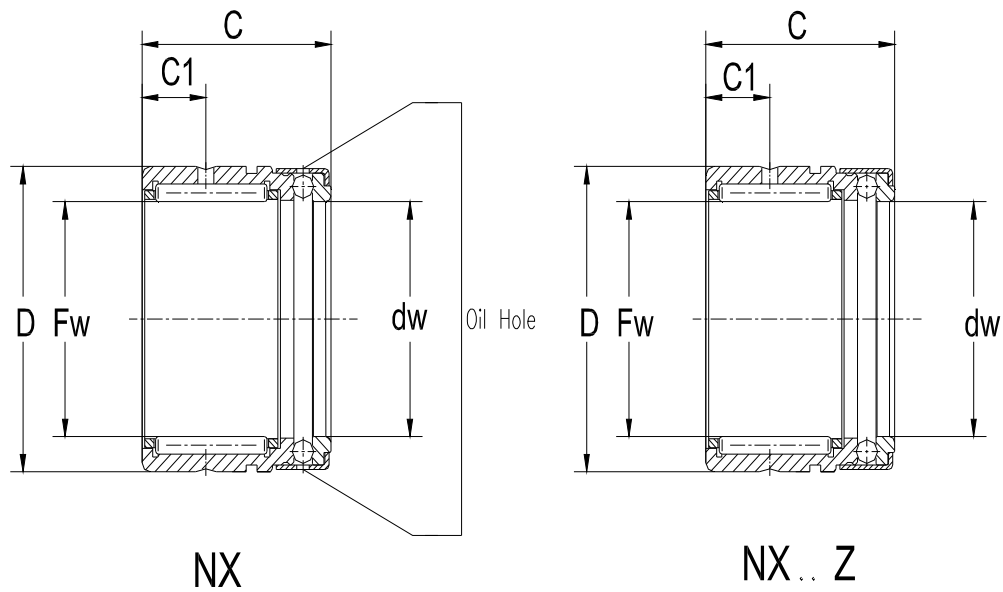


Part Number		Dimension (mm)							
Without Retain Cap	With Retain Cap	Fw	D	D1 Max.	D2 Max.	C	C ₁	C ₂	d _w
NKXR15	NKXR15Z	15	24	28.1	29.2	23	9	6.5	15
NKXR17	NKXR17Z	17	26	30.1	31.2	25	9	8	17
NKXR20	NKXR20Z	20	30	35.1	36.2	30	10	10.5	20
NKXR25	NKXR25Z	25	37	42.1	43.2	30	11	9.5	25
NKXR30	NKXR30Z	30	42	47.1	48.2	30	11	9.5	30
NKXR35	NKXR35Z	35	47	52.1	53.2	30	12	9	35
NKXR40	NKXR40Z	40	52	60.1	61.2	32	13	10	40
NKXR45	NKXR45Z	45	58	65.2	66.5	32	14	9	45
NKXR50	NKXR50Z	50	62	70.2	71.5	35	14	10	50

Part Number		Radial		Axial Direction		Limiting Speed RPM	Weight(g)	
Without Retain Cap	With Retain Cap	Co	Cor	Co	Cor		Without Retain Cap	With Retain Cap
		N						
NKXR15	NKXR15Z	12	12700	14400	28500	9200	42	45
NKXR17	NKXR17Z	13	15000	15900	33500	8400	50	53
NKXR20	NKXR20Z	18	23800	24900	53000	7200	80	84
NKXR25	NKXR25Z	21	30500	33500	76000	5800	120	125
NKXR30	NKXR30Z	25	36000	35500	86000	5000	135	141
NKXR35	NKXR35Z	27	41500	39000	101000	4400	157	165
NKXR40	NKXR40Z	29	47000	56000	148000	3900	204	214
NKXR45	NKXR45Z	31	53000	59000	163000	3500	244	260
NKXR50	NKXR50Z	43	74000	61000	177000	3200	268	288

Remark: Other types like NBX and NBX..Z are also workabe.

Combined Needle Roller Bearings(Compound Bearings, Complex Bearings)

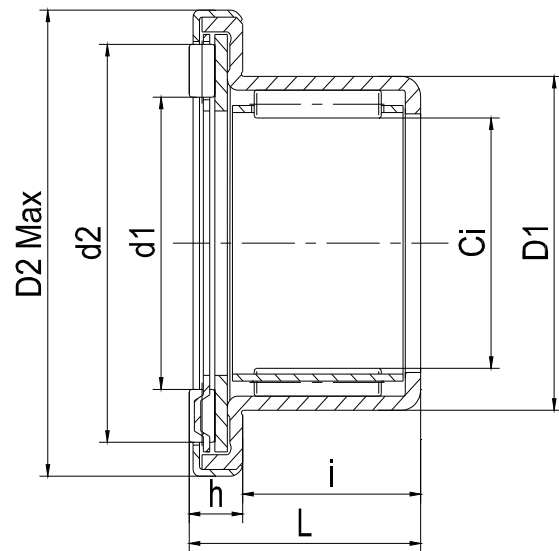


NX

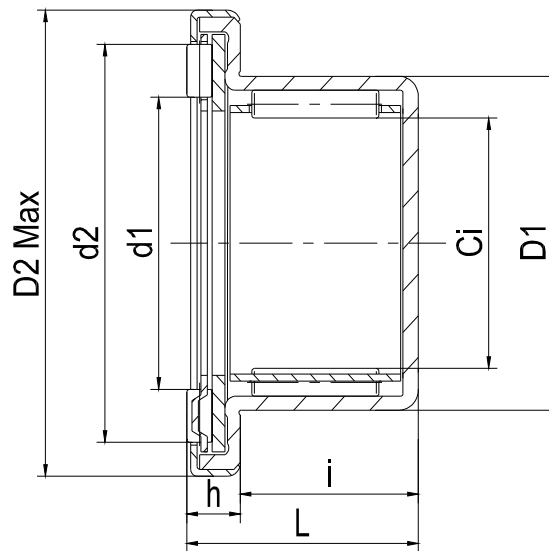
NX..Z

Part Number		Dimension(mm)					Loading Rating(N)				Limiting Speed (RPM)	Weight (g)
							Radia Direction		Axial Direction			
Oil	Grease	Fw	D	C	C1	dw	Cr	Cor	Cr	Cor		
NX7TV	NX7ZTV	7	14	18	4.7	7	3250	2650	3150	4300	15000	14
NX10	NX10Z	10	19	18	4.7	10	5000	3700	4600	7200	11000	25
NX12	NX12Z	12	21	18	4.7	12	5400	4300	4850	8200	9500	28
NX15	NX15Z	15	24	28	8	15	12100	12700	5600	10400	8000	48
NX17	NX17Z	17	26	28	8	17	13500	15000	5800	11500	7500	53
NX20	NX20Z	20	30	28	8	20	14600	17500	7000	14700	6500	68
NX25	NX25Z	25	37	30	8	25	16800	22400	11100	24300	4900	115
NX30	NX30Z	30	42	30	10	30	25500	36000	11700	28000	4300	130
NX35	NX35Z	35	47	30	10	35	27500	41500	12400	32500	3700	160

Combined Needle Roller Bearings(Compound Bearings, Complex Bearings)



RAX



RAXF

Part Number		Dimension (mm)							
		Ci	D1	D2 Max	i	h	L	d1	d2
RAX705	--	5	9	15.5	7.7	3.3	11	7.2	11.2
RAX712	RAXF712	12	18	27.5	10	4.2	14.2	15	22.6
RAX714	RAXF714	14	20	29.5	10	4.2	14.2	17	24.6
RAX715	RAXF715	15	21	31.5	10	4.2	14.2	19	26.6
RAX718	RAXF718	18	24	33.5	14	4.2	18.2	21	28.6
RAX720	RAXF720	20	26	36.5	14	4.2	18.2	22	31.6
RAX725	RAXF725	25	33	45.5	18	4.2	22.2	30	39.6
RAX730	RAXF730	30	38	50.5	18	4.2	22.2	35	44.7
RAX735	RAXF735	35	43	56.5	18	4.2	22.2	39	50.9
RAX740	RAXF740	40	48	61.5	18	4.2	22.2	43	54.9
RAX745	RAXF745	45	52	66.5	18	4.2	22.2	48	59.9

Part Number		Load Rating (N)				Limiting Speed (RPM)	Weight(g)	
		Radial		Axial			RAX	RAXF
		Cr	Cor	Cr	Cor			
RAX705	--	2150	1950	3150	6350	25000	4.5	--
RAX712	RAXF712	6300	7200	6900	17700	13000	16.5	17.5
RAX714	RAXF714	6900	8500	7400	20000	11500	18	20
RAX715	RAXF715	7400	9300	7800	22000	10500	20	22
RAX718	RAXF718	11500	17700	8000	23000	10000	27	30
RAX720	RAXF720	12200	19500	11800	39000	9000	31	35
RAX725	RAXF725	20500	32000	13700	52000	7200	55	60
RAX730	RAXF730	22300	37500	14900	60000	6300	63	70
RAX735	RAXF735	24500	45000	19400	88000	5500	75	84
RAX740	RAXF740	26200	51000	20400	96000	5000	86	96
RAX745	RAXF745	24800	55000	21800	109000	4500	88	99