


# Roller Followers

Separate, Solid

**Separate**



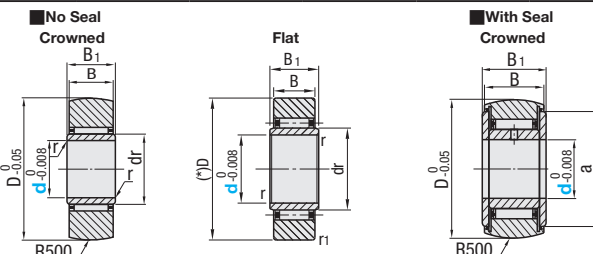
RoHS 10

Grease	No Seal		With Seal		Material
	Crowned	Flat	Crowned	Flat	
General	NASTR	NASTF	NASTZ	NASTFZ	SUJ2 Equivalent
Low Dust Generation	-	NASTFS	NASTZS	NASTFZS	SUS440C

D	Tolerance
19-30	$0_{-0.009}$
32	$0_{-0.011}$

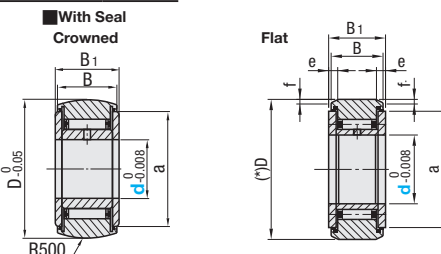
Operating Temp.: 80°C or lower

**No Seal**



R500

**With Seal**



R500

Operating Temp.: 80°C or lower

Outer ring, inner ring, and retainer will separate. See the figure on the overview page **P.1042**.

**No Seal**

Part Number	Type	d	D	dr	B	B <sub>1</sub>	r	r <sub>1</sub>	Basic Dynamic Load Rating		Basic Static Load Rating		Track Load Capacity (kN)		Max. Rotational Speed (rpm)	Mass (g)	Unit Price		
									C(kN)	Co(kN)	NASTZ	NASTFZ	NASTR	NASTF			NASTFS		
6	(Crowned) NASTR	19	10	10	9.8	10	0.5	0.5	4.12	4.55	1.37	3.53	3.53	20000	17.8	NASTR	NASTF	NASTFS	
8	(Flat) NASTF	24	12	12	11.8	12	0.5	1.0	5.68	5.89	1.86	4.02	5.89	17000	28				
10		30	14	14	15.8	16	0.5	1.5	9.70	9.67	2.45	5.59	5.59	15000	50				
12		32	16	16	18.8	18	0.5	1.5	10.4	10.9	2.74	5.98	5.98	13000	58				
15		35	20	20	-	-	-	-	12.3	14.3	3.14	-	-	10000	62				
17		40	22	22	-	-	-	-	17.4	20.9	3.72	-	-	9500	110				
20		47	25	25	-	-	-	-	19.2	24.5	4.61	-	-	8500	155				

kgf=Nx0.101972


**With Seal**

Apply ample grease before use.

Part Number	Type	d	D	a	B	B <sub>1</sub>	e	f	Basic Dynamic Load Rating		Basic Static Load Rating		Track Load Capacity (kN)		Max. Rotational Speed (rpm)	Mass (g)	Unit Price				
									C(kN)	Co(kN)	NASTZ	NASTFZ	NASTZS	NASTFSZ			NASTZS	NASTFSZS	NASTZS	NASTFSZS	NASTZS
6	(Crowned) NASTZS	19	14	13.8	14	2.5	0.8	0.8	4.12	4.55	1.37	3.53	3.53	8000	24.5	NASTZS	NASTFSZS	NASTZS	NASTFSZS		
8	(Flat) NASTFZS	24	17.5	17.5	16	3	0.8	0.8	5.68	5.89	1.86	4.51	4.51	6800	39						
10		30	23.5	23.5	18	3	0.8	0.8	9.70	9.67	2.45	6.86	6.86	6000	65						
12		32	25.5	25.5	19	3	0.8	0.8	10.4	10.9	2.74	7.35	7.35	5200	75						
15		35	29.0	29.0	20	3	0.8	0.8	12.3	14.3	3.14	8.04	8.04	4000	83						
17		40	32.5	32.5	21	3	0.8	0.8	17.4	20.9	3.72	11.8	11.8	3800	135						
20		47	38.0	38.0	22	3	0.8	0.8	19.2	24.5	4.61	13.8	13.8	3400	195						

kgf=Nx0.101972

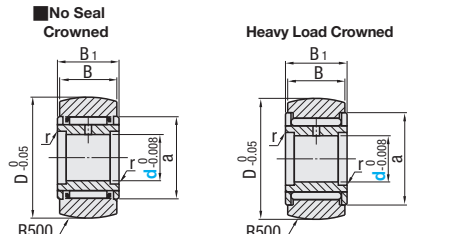
**Solid**



RoHS 10

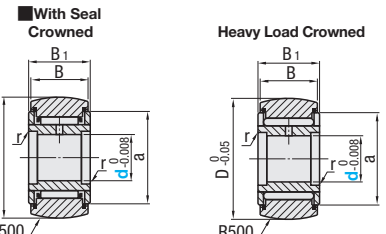
Grease	No Seal		With Seal		Material
	Crowned	Heavy Load Crowned	Crowned	Heavy Load Crowned	
General	NARTR	NARTV	NARTU	NARTV	SUJ2 Equivalent
Low Dust Generation	-	-	NARTUS	NARTVS	SUS440C

**No Seal**



R500

**With Seal**



R500

**No Seal**

Part Number	Type	d	D	a	B	B <sub>1</sub>	r	Basic Dynamic Load Rating C (kN)		Basic Static Load Rating Co (kN)		Track Load Capacity (kN)		Max. Rotational Speed (rpm)		Mass (g)	Unit Price		
								NARTR	NARTV	NARTU	NARTV	NARTR	NARTV	NARTR	NARTV		NARTR	NARTV	NARTR
5	(Crowned) NARTR	16	12	11	12	0.5	0.5	2.84	6.46	2.65	7.81	1.08	25000	10500	15	NARTR	NARTV	NARTV	
6	(Heavy Load Crowned) NARTV	19	14	14	14	0.5	0.5	3.33	7.58	3.35	10.2	1.37	20000	8700	21				
8		24	17.5	17.5	15	0.5	0.5	5.68	11.7	5.89	15.6	1.86	17000	7000	42				
10		30	23.5	23.5	16	0.5	0.5	7.94	15.8	7.59	18.5	2.45	15000	5700	66				
12		32	25.5	25.5	17	0.5	0.5	8.53	17.0	8.44	21.0	2.74	13000	5200	73				

kgf=Nx0.101972

**With Seal**


Part Number	Type	d	D	a	B	B <sub>1</sub>	r	Basic Dynamic Load Rating C (kN)		Basic Static Load Rating Co (kN)		Track Load Capacity (kN)		Max. Rotational Speed (rpm)		Mass (g)	Unit Price				
								NARTU	NARTV	NARTU	NARTV	NARTU	NARTV	NARTU	NARTV		NARTU	NARTV	NARTU	NARTV	
5	(Crowned) NARTU	16	12	11	12	0.5	0.5	2.84	6.46	2.65	7.81	1.08	10000	4200	14.5	NARTU	NARTV	NARTU	NARTV		
6	(Heavy Load Crowned) NARTV	19	14	14	14	0.5	0.5	3.33	7.58	3.35	10.2	1.37	8000	3480	20.5						
8		24	17.5	17.5	15	0.5	0.5	5.68	11.7	5.89	15.6	1.86	6800	2800	41.5						
10		30	23.5	23.5	16	0.5	0.5	7.94	15.8	7.59	18.5	2.45	6000	2280	64.5						
12		32	25.5	25.5	17	0.5	0.5	8.53	17.0	8.44	21.0	2.74	5200	2080	71						
15		35	29.0	29.0	18	0.5	0.5	13.7	25.3	16.4	36.9	3.14	4000	1720	102						
17		40	32.5	32.5	19	0.5	0.5	17.4	32.0	19.3	46.6	3.72	3800	1560	149						
20		47	38.0	38.0	20	0.5	0.5	22.9	41.7	30.6	67.7	7.15	3200	1360	250						

kgf=Nx0.101972

Ordering Example: Part Number NASTR8

# Urethane Roller Followers / Roller Follower Pins

**Urethane Roller Followers**



RoHS 10

**Separate, R**

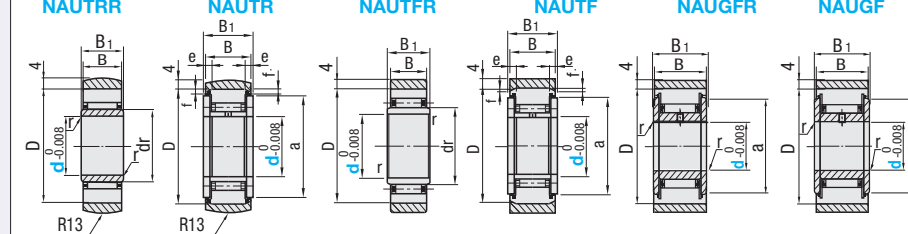
(No Seal) NAUTRR (With Seal) NAUTR

**Separate, Flat**

(No Seal) NAUTFR (With Seal) NAUTF

**Solid, Flat**

(No Seal) NAUGFR (With Seal) NAUGF



Operating Temp.: 80°C or lower

Urethane is baked on the outer rings of the cam followers. Material Main Body: SUJ2 Equivalent Urethane Shore A90 (Black)

**Separate, No Seal (Common to R and Flat)**

Part Number	Type	d	D	dr	B	B <sub>1</sub>	r	Allowable Load (N)	Max. Rotational Speed (rpm)	Mass (g)	Unit Price
6	NAUTRR	19	10	10	9.8	10	0.5	96	4900	22.3	NAUTRR NAUTFR
8		24	12	12	11.8	12	0.5	115	4150	33.5	
10		30	14	14	15.8	16	0.5	147	3475	58	
12		32	16	16	18.8	18	0.5	151	3300	66	

**Separate, With Seal (Common to R and Flat)**

Part Number	Type	d	D	a	B	B <sub>1</sub>	e	f	Allowable Load (N)	Max. Rotational Speed (rpm)	Mass (g)	Unit Price
6	NAUTR	19	14	13.8	14	2.5	0.8	0.8	96	1360	23	NAUTR NAUTF
8		24	17.5	17.5	16	3	0.8	0.8	115	1660	44.5	
10		30	23.5	23.5	18	3	0.8	0.8	147	1390	73	
12		32	25.5	25.5	19	3	0.8	0.8	151	1320	83	

kgf=Nx0.101972

**Solid, Flat**

Part Number	Type	d	D	a	B	B <sub>1</sub>	r	Allowable Load (N)	Max. Rotational Speed (rpm)	Mass (g)	Unit Price
5	NAUGFR	16	12	11	12	0.5	0.5	100	6525	19.5	NAUGFR NAUGF
6		19	14	14	14	0.5	0.5	125	5220	26.5	
8		24	17.5	17.5	15	0.5	0.5	150	5910	50	
10		30	23.5	23.5	16	0.5	0.5	190	4785	74	
12		32	25.5	25.5	17	0.5	0.5	196	5055	81	

kgf=Nx0.101972

**Roller Follower Pins Threaded**

Type	Material	Surface Treatment
L Selectable	S45C	Black Oxide
F Configurable	SUS304	-

D	M (Course)	ℓ	T	B (C)
5	M 5	14	2	8 9.2
6	M 6	14	2	10 11.5
8	M 8	16	3	13 15.0
10	M 10	19	3	17 19.6
12	M 12	22	3	19 21.9
15	M 15	25	4	24 27.7
17	M 16	28	5	27 31.2
20	M 20	31	5	27 31.2

Ordering Example: Part Number NAUTF6

Part Number	Type	Dg6	L	ℓ	Unit Price
5	RFN	-0.004	20 25 30	14	
6		-0.012	30 32 34 36	16	
8		-0.005	30 32 34 36 38	19	
10		-0.014	36 38 42	22	
12		-0.006	38 42 46	22	
15		-0.017	38 42 46 50	25	
17		-0.007	38 42 46 50	28	
20		-0.022	38 42 46 50 54	31	

Ordering Example: Part Number RFN6 - L - F

Part Number	Type	Dg6	L	ℓ	Unit Price
5	FRFN	-0.004	20-30	14	
6		-0.012	20-36	16	
8		-0.005	20-38	19	
10		-0.014	20-42	22	
12		-0.006	25-46	22	
15		-0.017	25-50	25	
17		-0.017	25-50	28	
20		-0.022	25-54	31	

Ordering Example: Part Number FRFN6 - L - F10

**Roller Follower Pins Retaining Ring**

Type	Material	Surface Treatment
RFC Retaining Ring	S45C	Black Oxide
RFSS Retaining Ring with Flange	SUS304	-

Ordering Example: Part Number RFC5 - L

Part Number	Type	Dg6	L	d	Tolerance	m	Tolerance	M	T	H	Unit Price
5	RFC	-0.004	20-44	4	+0.075	0.7	+0.1	2	2	10	RFC, RFS
6		-0.012	22-46	5	0	0.9	0	3	3	11	RFCS, RFSS
8		-0.005	22-47	7	+0.093	0.9	+0.14	3	3	13	
10		-0.014	25-48	9.6	-0.09	1.15	0	4	4	15	
12		-0.006	25-52	11.5	0	1.15					