

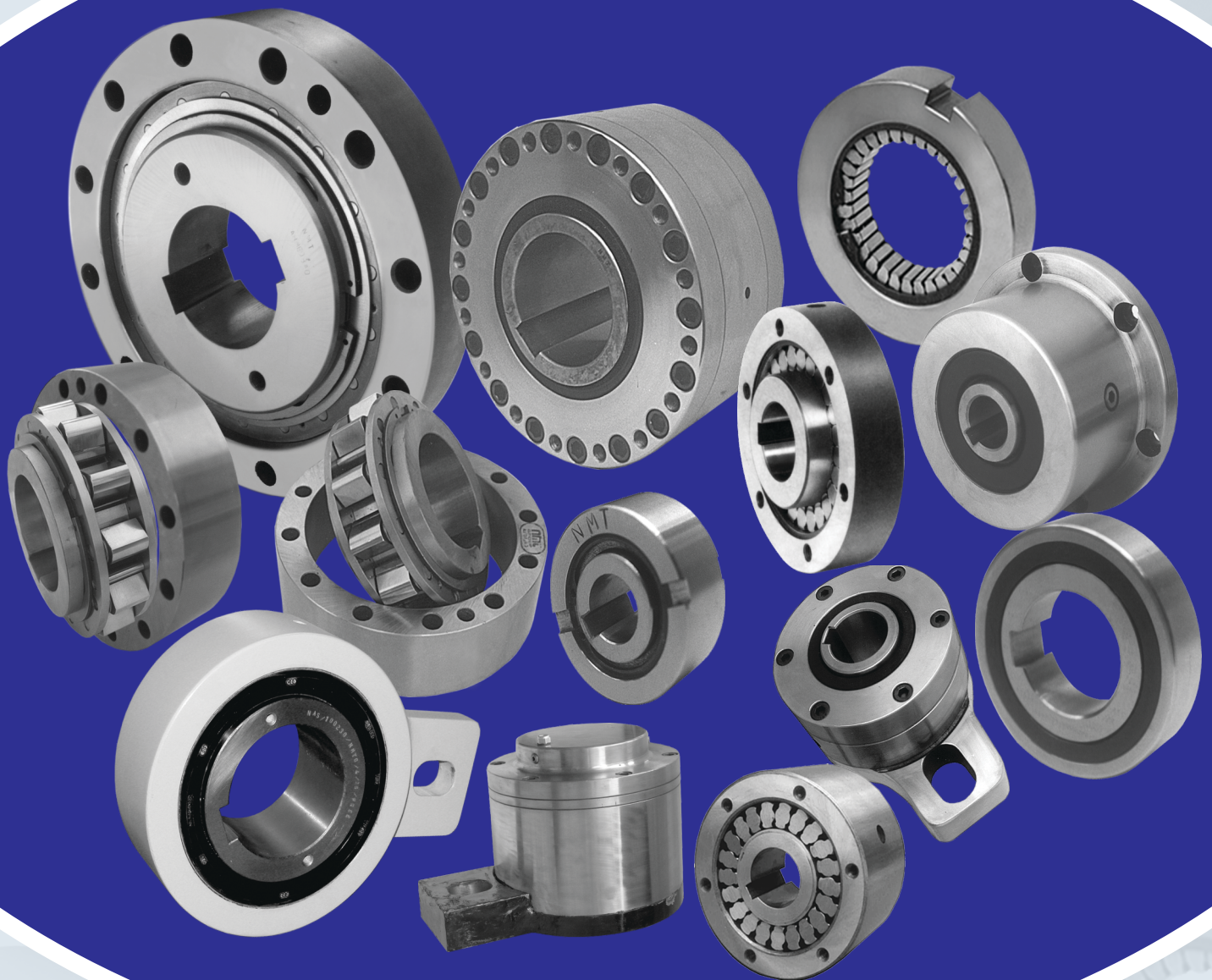
**PARTNER FOR
DELIVERING EXCELLENCE**



VERSION : 2022-23-00
N-DD-FWC-07

NMTG

FREEWHEEL (ONE WAY) CLUTCHES - SPRAG, Roller & CLS TYPE



NMTG MECHTRANS TECHNIQUES PVT. LTD.

An ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 & CE Certified Co

Sprag Type Freewheel Cage Assembly

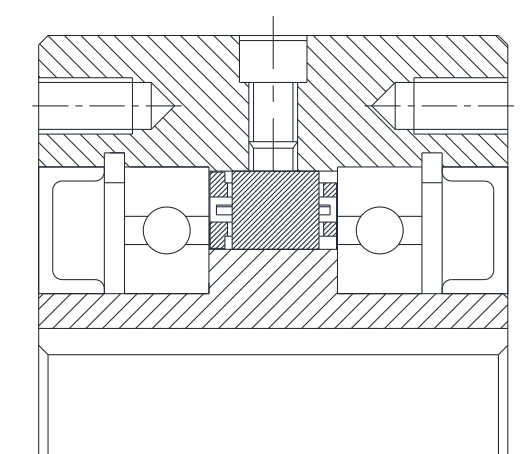
NDC Model



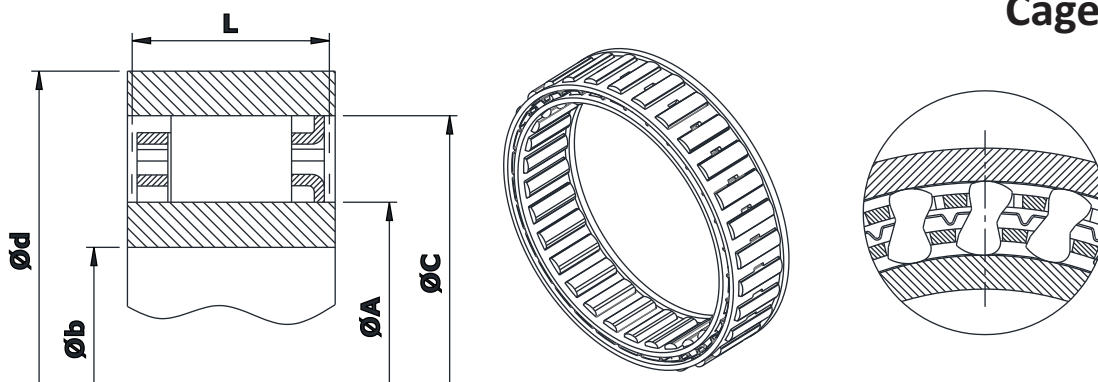
❖ Features:

- This NDC type Cage assembly is without Inner or Outer races.
- NDC type cage assembly must be installed in a Design providing races, bearing support for axial & radial loads, Lubrication & Sealing.
- Required Oil or Grease both type of Lubrications.
- Alternatively, races can be made in case hardened steel shafts, or housings, to the specification below.
- Surface Hardness of Finished part - 60 to 62 HRC for minimum 0.6 mm depth.
- Core hardness to be 35 to 45 HRC, Surface roughness not to exceed $0.8 \mu\text{m}$, Maximum taper between races - 0.007 mm for 25 mm width.

◆ Mounting Example:



NDC Cage Assembly



Size	Nominal Torque Nm	Overrunning Speed RPM		$\phi A + 0.008$ - 0.005 mm	$\phi C \pm 0.013$ mm	Sprag size mm	L min. mm	ϕd min. mm	ϕb max. mm	No. of Clips	No. of Sprags	Weight kg
		Ninner max.	Nouter max.									
NDC 2222G	63	8600	4300	22.225	38.885	8.33 ± 0.075	10.0	50	15	-	12	0.030
NDC 2776	119	6900	3400	27.762	44.422	8.33 ± 0.075	13.5	58	18	-	14	0.055
NDC 3034	124	6300	3100	30.340	47.000	8.33 ± 0.075	13.5	62	20	-	14	0.060
NDC 3175(C)	159	6000	3000	31.750	48.410	8.33 ± 0.075	13.5	63	21	3	16	0.060
NDC 3809A	275	5000	2500	38.092	54.752	8.33 ± 0.075	16.0	71	25	-	18	0.085
NDC 4127(C)	224	4600	2300	41.275	57.935	8.33 ± 0.075	13.5	75	27	3	18	0.090
NDC 4445A	363	4300	2100	44.450	61.110	8.33 ± 0.075	16.0	79	29	-	20	0.095
NDC 4972(C)	306	3800	1900	49.721	66.381	8.33 ± 0.075	13.5	86	33	4	22	0.100
NDC 5476A	525	3500	1700	54.765	71.425	8.33 ± 0.075	16.0	92	36	-	24	0.110
NDC 5476A (C)	525	3500	1700	54.765	71.425	8.33 ± 0.075	16.0	92	36	4	24	0.130
NDC 5476B (C)	769	3500	1700	54.765	71.425	8.33 ± 0.075	21.0	92	36	4	24	0.180
NDC 5476C (C)	990	3500	1700	54.765	71.425	8.33 ± 0.075	25.4	92	36	4	24	0.200
NDC 5776A	604	3300	1600	57.760	74.420	8.33 ± 0.075	16.0	98	38	-	26	0.110
NDC 6334B	806	3000	1500	63.340	80.000	8.33 ± 0.075	21.0	104	42	-	26	0.175
NDC 7221(C)	675	2600	1300	72.217	88.877	8.33 ± 0.075	13.5	115	48	5	30	0.140
NDC 7221B	1279	2600	1300	72.217	88.877	8.33 ± 0.075	21.0	115	48	-	30	0.185
NDC 7221B (C)	1279	2600	1300	72.217	88.877	8.33 ± 0.075	21.0	115	48	5	30	0.210
NDC 7969C (C)	2038	2400	1200	79.698	96.358	8.33 ± 0.075	25.4	124	53	5	34	0.280
NDC 8334C	2055	2300	1100	83.340	100.000	8.33 ± 0.075	25.4	132	55	-	34	0.270
NDC 8729A	1250	2200	1100	87.290	103.960	8.33 ± 0.075	16.0	134	58	-	34	0.165
NDC 10323A (C)	1612	1800	900	103.231**	119.891	8.33 ± 0.075	16.0	155	68	5	40	0.205
NDC 12334C	4800	1500	750	123.340**	140.000	8.33 ± 0.075	25.4	184	80	-	50	0.400

Notes :

- 1) Function : Overrunning, Indexing, Backstopping
- 2) Tmax = 2 x Tn.
- 3) Oil / Grease filled, ready to fit.

- 4) Other sizes on request.
- 5) All dimensions are in mm.
- 6) We manufacturing in inch series also.
- 7) ** Extension of Tolerance to ± 0.013 permissible.

Ordering Example :

➤ NDC 2222

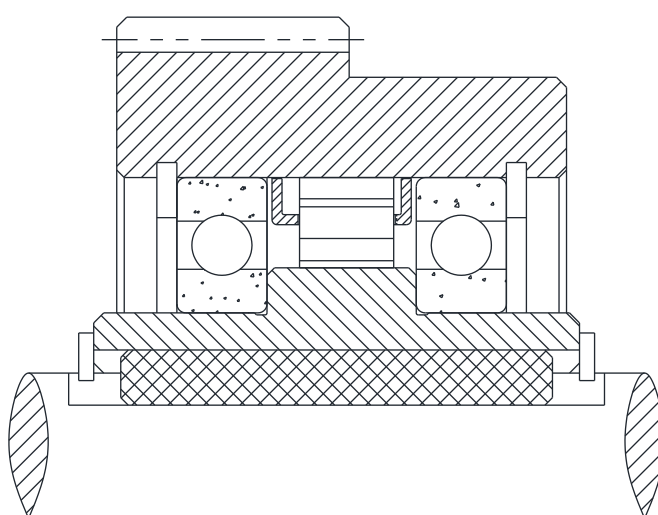
Sprag Type Freewheel Cage Assembly NSC Model



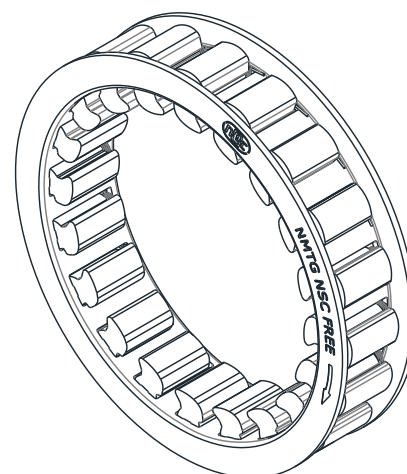
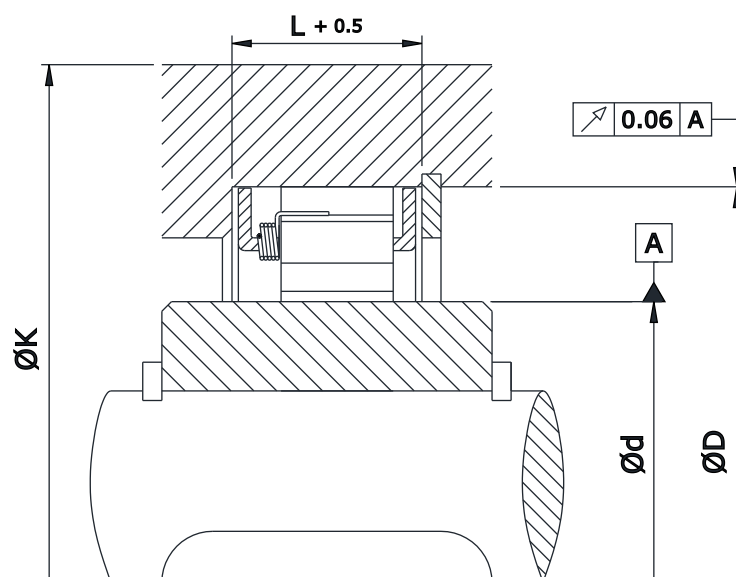
❖ Features:

- NSC cage freewheels are sprag type freewheels. NSC assembly to be installed between Inner and Outer races of customer arrangement.
- NSC cage assembly must be installed in a Design providing races, bearing support for axial & radial loads, lubrication & sealing.
- Depending on operating data, oil or grease lubrication must be provided in mounting arrangement.
- Inner race and Outer race or Housing is in Customer scope. It must be Case Hardening Steel material with Hardness 60 ± 3 .
- Case hardening depth Minimum 1.5 mm must be used, Surface roughness in between $1.6\ \mu\text{m}$ to $6.3\ \mu\text{m}$ of Both Races.

◆ Mounting Example:



NSC Cage Assembly



Model	Nominal Torque (Tn) Nm	$\begin{matrix} -0.01 \\ \text{Ød} -0.03 \\ \text{mm} \end{matrix}$	$\begin{matrix} \text{ØD} \pm 0.01 \\ \text{mm} \end{matrix}$	L mm	ØK mm	No. of Sprag	Weight kg
NSC 37D	275	37	55	14.5	75	14	0.06
NSC 44D	505	44	62	14.5	90	20	0.08
NSC 50H	685	50	68	18.5	90	20	0.10
NSC 57H	955	57	75	18.5	105	24	0.13
NSC 72F	2110	72	90	23.5	135	32	0.23
NSC 82C	2310	82	100	25	140	36	0.26
NSC 107C	3320	107	125	25	170	48	0.35
NSC 127C	4930	127	145	25	210	56	0.40

Notes :

- 1) Function : Backstopping, Overrunning, Indexing
- 2) $T_{max} = 2 \times T_n$.
- 3) Ready to fit, Oil & Grease lubrication required in Customer arrangement.

- 4) Other sizes on request.
- 5) All dimensions are in mm.

Ordering Example :

- When ordering please specify cage assembly model.
- Example: NSC 44D

NMTG is an engineering set up situated at Naroda, GIDC, Ahmedabad, Gujarat, since last two and half decades and engaged in manufacturing of high precision products in modern CNC environment. These products are mainly used for the purpose of drive transmission and are available in wide range of sizes and applications. Depending upon specific applications there are four varieties of products namely (1) Free Wheel – one way – Clutches used as Hold Back / Back-stop, Overrunning Clutch and Indexing Clutch (2) Keyless Transmission Elements (3) Tensioner Nut & Bolts and (4) Cam follower / Track Rollers.

Keyless Transmission Elements: These are available in mainly two varieties (1) Locking Assembly and (2) Shrink Disks and are offered in different types. These are versatile in nature, can withstand high fatigue stresses under alternating tensional stresses. These are most suitable and economical for fixing on shaft or on hub or between shaft and hub offering easy mounting and removal, wear free operation, perfect alignment and adjustable also. For mounting no key way is necessary in shaft and hub as they are shrunk fit and thus minimizes notch effect. Widely used for drive applications like Shaft mounted gear arrangement, Gear Wheels, Chain Sprocket, Lever, Cams, Break Drums and at many other places.

Tensioner Nuts & Bolts: These units offer great benefit in application where ordinary hexagonal nuts on stud or bolt require very high tightening force for full tightening. For this unit very low tightening force (torque) is required for each clamping screws provided, with the help of standard torque wrench, to achieve the same or better results. Hence they are widely used for general mechanical fitment in heavy and medium duty equipment. Loosening under full load conditions is eliminated as there is no play between male and female threads of multiple Tensioner Bolts and Nuts assembly. However, standard torque Wrench has to be used for tightening purpose.

Cam Followers / Stud type Track Rollers: Standard as well as eccentric designs of Stud and Cage Guide are available ready to fit condition for applications like heavy loads and medium speeds.

All NMTG Products are versatile in nature, offer great economy in use hence extensively used in almost all industries and thus rule the market.



**Application of products
Multifarious - especially Medium
& Heavy Projects - all Industries.**