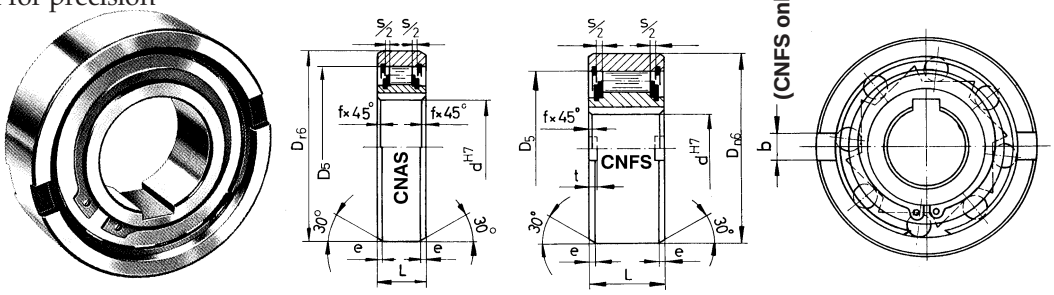
Types CNAS and CNFS Roller Ramp Clutches

Types CNAS and CNFS freewheels are light duty roller ramp clutches manufactured to standard bearing dimensions; CNAS type as 62 series ball bearings and CNFS type as NU 23 roller bearings. The clutches are mainly used for precision indexing and overrunning applications. Torque transmission is via a key on the shaft, and for type CNAS a press fit of outer into housing, and type CNFS via two keys in the end face of the outer race.



Dimensions Type CNAS

Clutch Size	Bore mm	Nominal Torque (1)	Max Overrun (2) Speed rpm		Dimensions mm						Approx Weight	Overrun Drag Torque
	d_{H7}	Nm	Inner Race	Outer Race	D_{r6}	D_5	L	s*	e	f	kg	Ncm
CNAS 6	6	1.7	5000	7500	19	15.8	6	0.8	0.6	0.3	0.01	0.18
CNAS 8	8	3.0	4300	6500	24	20	8	1.3	0.6	0.3	0.02	0.24
CNAS 10	10	5.4	3500	5200	30	25.9	9	1.3	0.6	0.3	0.03	0.36
CNAS 12	12	10	3200	4800	32	28	10	1.3	0.6	0.3	0.04	0.48
CNAS 15	15	11	2800	4300	35	31	11	1.4	0.6	0.3	0.05	0.70
CNAS 20	20	32	2200	3300	47	40	14	2.4	0.8	0.8	0.12	1.4
CNAS 25	25	45	1900	2900	52	45.9	15	2.4	0.8	0.8	0.14	2.4
CNAS 30	30	72	1600	2400	62	55	16	2.4	0.8	1	0.22	7.8
CNAS 35	35	114	1300	2000	72	64	17	2.5	0.8	1	0.31	9.0
CNAS 40	40	148	1200	1800	80	72	18	2.5	0.8	1	0.39	10
CNAS 45	45	174	1000	1600	85	77	19	2.5	1.2	1	0.44	11
CNAS 50	50	184	950	1500	90	82	20	2.5	1.2	1	0.49	13
CNAS 55	55	246	800	1300	100	90	21	2.5	1.2	1	0.66	14
CNAS 60	60	406	700	1100	110	100	22	2.5	1.2	1.5	0.81	26
CNAS 80	80	850	600	900	140	128	26	2.5	1.2	1.5	1.41	58

Dimensions Type CNFS

Clutch Size	Bore	Nominal Torque (1)	Max (2) Overrun		Dimension mm								Approx Weight	Overrun Drag Torque
	d_{H7} mm	Nm	Inner Race	Outer Race	D_{n6}	L	D_5	b	t	s*	e	f	kg	Ncm
CNFS 8	8	9	3300	5000	35	13	28	4	1.4	2.4	0.6	0.3	0.07	1.6
CNFS 12	12	9	3300	5000	35	13	28	4	1.4	2.4	0.6	0.3	0.06	1.6
CNFS 15	15	24	2400	3600	42	18	37	5	1.8	2.4	0.8	0.3	0.11	1.9
CNFS 17	17	39	2300	3400	47	19	40	5	2.3	2.4	1.2	0.8	0.15	1.9
CNFS 20	20	62	2100	3100	52	21	42	6	2.3	2.4	1.2	0.8	0.19	1.9
CNFS 25	25	100	1700	2600	62	24	51	8	2.8	2.4	1.2	0.8	0.38	5.6
CNFS 30	30	204	1400	2200	72	27	60	10	2.5	2.4	1.8	1	0.54	14
CNFS 35	35	306	1200	1900	80	31	70	12	3.5	2.4	1.8	1	0.74	16
CNFS 40	40	430	1100	1700	90	33	78	12	4.1	2.5	1.8	1	0.92	38
CNFS 45	45	624	1000	1600	100	36	85	14	4.6	2.5	1.8	1	1.31	43
CNFS 50	50	810	850	1350	110	40	92	14	5.6	2.5	1.8	1	1.74	55
CNFS 60	60	1460	750	1050	130	46	110	18	5.5	3.6	2.6	1.5	2.77	110
CNFS 70	70	1840	600	950	150	51	125	20	6.9	3.6	2.6	1.5	4.16	140
CNFS 80	80	2620	550	850	170	58	140	20	7.5	3.6	2.6	1.5	6.09	180
CNFS 90	90	4260	500	750	190	64	160	20	8.0	3.6	2.6	2	8.20	230
CNFS 100	100	5800	450	680	215	73	175	24	8.5	3.6	2.6	2	12.60	380
CNFS 120	120	10800	370	550	260	86	215	28	10	3.6	2.6	2.5	22	650
CNFS 150	150	21300	300	460	320	108	260	32	12	3.6	3.6	2.5	42	1000
CNFS 200	200	35600	230	350	420	138	350	45	16	7.6	3.6	3	93	2000

(1) Nominal toque can be exceeded up to 2.5x for brief periods only.
(2) Speeds for oil lubrication system.
For Grease lubrication x0.50.
*Axial clearance optional see below.

Keyways:- CNAS 6 without keyway
CNAS 8, 10 & 12, CNFS 8, CNFS 12, CNFS 200 to DIN 6885/1.
Other sizes to DIN 6885/3.

Installation

Our design makes precise axial adjustment of outer and inner races unnecessary. The two races may be shifted to either side by dimension "S/2", without generating axial tension. Modified freewheels in which the axial clearance "S" is reduced to a minimum are available on request. These freewheels are identified by the index "S", e.g. CNFS 20-S.

Torque transmission from shaft to inner race is via a key, with recommended shaft tolerance h6 or j6 (except CNAS 6 which requires n6).

On type CNAS torque transmission from outer is interference fit obtained with housing bore tolerance H6 or J7. On type CNFS torque transmission is normally via two keys fitted in the end face of the outer race, when housing bore tolerance of H7 or F7 is advised; but if keys are not used housing bore must be to K6 tolerance to transmit torque.

Note:
Types CNAS & CNFS freewheels have no integral bearings. Inner and outer races must be precisely aligned by external bearings.

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