

# Full-Complement Cylindrical Roller Bearings with Seals for Crane Sheaves

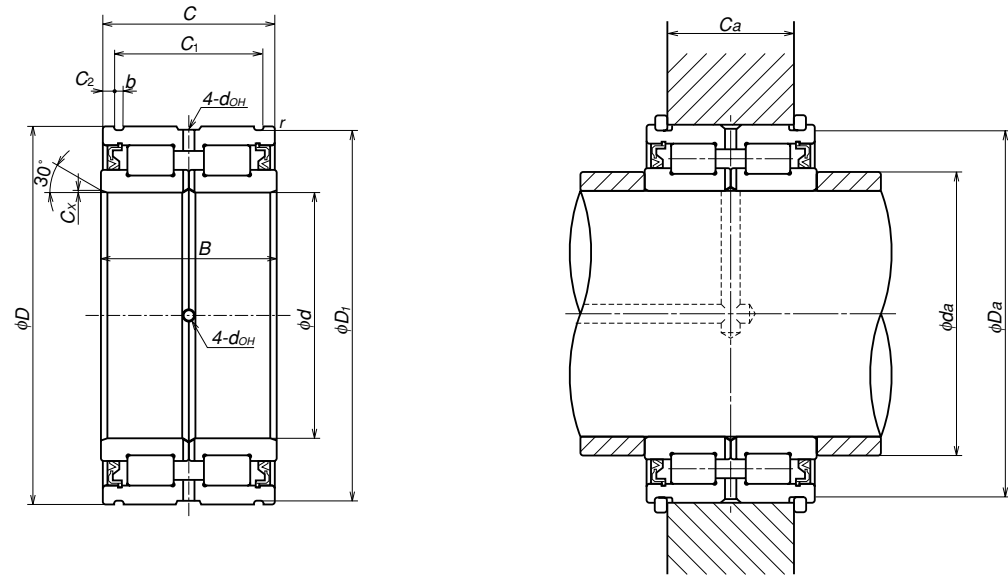
Cylindrical roller bearings equipped with advanced NSK seals to prevent entry of foreign substances



# Full-Complement Cylindrical Roller Bearings with Seals for Crane Sheaves

## 1. Features

- (1) **Improved seal** ..... Contact seal minimizes grease leakage and increases resistance to entry of water and foreign substances.
- (2) **High load capacity** ..... When used as a sheave bearing, radial and axial load capacities are increased.
- (3) **Corrosion resistance** ..... Phosphate surface treatment improves resistance to rust.
- (4) **Easy to apply grease** ..... Holes provided on inner and outer ring facilitate grease replenishment, even while the bearing is mounted.



## 2. Assembly examples

Assembly examples utilizing Full-Complement Cylindrical Roller Bearings are shown in Figs.1 and 2. Both bearings have rotating outer rings; an outer ring is fitted into the housing by interference, and the inner ring fitted on the shaft with slight clearance. The inner ring is secured with an end-plate. A lubrication hole is provided on the shaft for grease replenishment using a grease gun.

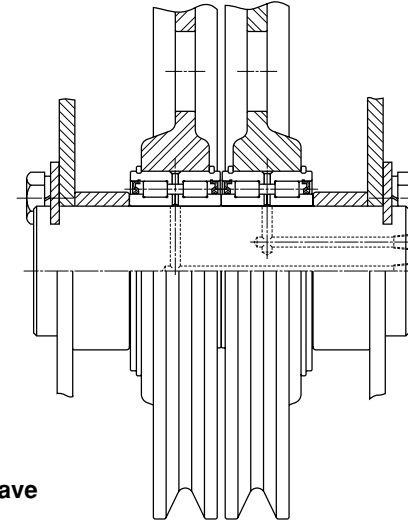


Fig.1 Crane sheave

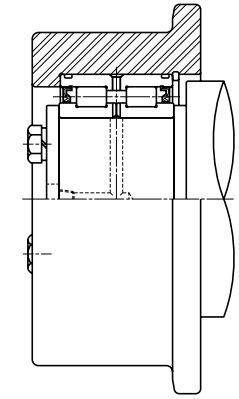


Fig. 2 Wagon wheel

## 3. Recommended fitting and bearing internal clearance

When a crane sheave or wagon wheel is used with an outer ring rotating load, bearing fitting and radial internal clearance are as follows:

	Load conditions	Tolerance range class of shaft	Tolerance range class of housing	Recommended internal clearance
Outer ring rotating	Heavy load with thin housing	g6 or h6	P7	C3
	Normal load or heavy load	g6 or h6	N7	C3
	Light load or fluctuating load	g6 or h6	M7	CN

## 4. Handling precautions

Be sure to push on the end face of the outer ring when mounting the bearing into a sheave. When mounting the bearing on a shaft, push on the end face of the inner ring.

Bearing No.	Boundary dimensions (mm)						Basic load rating		Dimensions (mm)				Oil hole (mm)	Abutment dimensions (mm)			Snap ring	Mass (kg)
	d	D	B	C	C <sub>x</sub> (min)	r (min)	Cr (N)	Cor (N)	C <sub>1</sub>	C <sub>2</sub>	b	D <sub>1</sub>	d <sub>OH</sub>	d <sub>a</sub> (min)	D <sub>a</sub> (max)	C <sub>a</sub>	DIN471	(approx)
RS-5008DSE7NA	40	68	38	37	0.4	0.6	79 500	116 000	32.2	2.4	2.7	65.8	2.5	43.5	63	27	68 × 2.5	0.56
RS-5009DSE7NA	45	75	40	39	0.4	0.6	95 500	144 000	34.2	2.4	2.7	72.8	2.5	48.5	70	29	75 × 2.5	0.70
RS-5010DSE7NA	50	80	40	39	0.4	0.6	100 000	158 000	34.2	2.4	2.7	77.8	2.5	53.5	75	29	80 × 2.5	0.76
RS-5011DSE7NA	55	90	46	45	0.6	0.6	118 000	193 000	40.2	2.4	3.2	87.4	3	60	85	34	90 × 3	1.17
RS-5012DSE7NA	60	95	46	45	0.6	0.6	123 000	208 000	40.2	2.4	3.2	92.4	3	65	90	34	95 × 3	1.25
RS-5013DSE7NA	65	100	46	45	0.6	0.6	128 000	224 000	40.2	2.4	3.2	97.4	3	70	95	34	100 × 3	1.32
RS-5014DSE7NA	70	110	54	53	0.6	0.6	171 000	285 000	48.2	2.4	4.2	107.1	3	75	105	40	110 × 4	1.87
RS-5015DSE7NA	75	115	54	53	0.6	0.6	179 000	305 000	48.2	2.4	4.2	112.1	3	80	110	40	115 × 4	2.0
RS-5016DSE7NA	80	125	60	59	0.6	0.6	251 000	430 000	54.2	2.4	4.2	122.1	3	85	120	46	125 × 4	2.65
RS-5017DSE7NA	85	130	60	59	0.6	0.6	256 000	445 000	54.2	2.4	4.2	127.1	3	90	125	46	130 × 4	2.75
RS-5018DSE7NA	90	140	67	66	1	0.6	305 000	540 000	59.2	3.4	4.2	137	4	96	135	51	140 × 4	3.75
RS-5019DSE7NA	95	145	67	66	1	0.6	310 000	565 000	59.2	3.4	4.2	142	4	101	140	51	145 × 4	3.95
RS-5020DSE7NA	100	150	67	66	1	0.6	320 000	585 000	59.2	3.4	4.2	147	4	106	145	51	150 × 4	4.05
RS-5022DSE7NA	110	170	80	79	1.1	1	385 000	695 000	70.2	4.4	4.2	167	5	116.5	165	62	170 × 4	6.1
RS-5024DSE7NA	120	180	80	79	1.1	1	400 000	750 000	71.2	3.9	4.2	176	5	126.5	175	63	180 × 4	7.0
RS-5026DSE7NA	130	200	95	94	1.1	1	535 000	1 000 000	83.2	5.4	4.2	196	5	136.5	195	75	200 × 4	10.6

Notes: 1. Bearing No. DS indicates seal is included.  
 2. Shield type can be provided upon request. For details, please contact NSK.  
 3. For specification higher than RS-5026, please contact NSK.

4. Grease is factory-packed into the bearing. NSK recommends lithium grease for replenishing.  
 5. Snap rings are not produced by NSK.  
 6. C<sub>a</sub> dimension applies when DIN 471 snap rings are used.