

Upgraded Products for Steel, Cement, Mining and Power Sector Industries



The Concept of **Ultimate Performance**
- The Next Generation of Bearings

ULTAGE[®]

The name for NTN's new generation of bearings that are noted for their industry-leading performance.

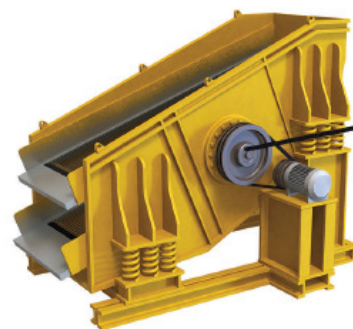
The name comes from the combination of "Ultimate," signifying refinement, and "Stage," signifying NTN's intention that this series of products be employed in diverse applications.

Design Aspect	Advantages (SRB)
Dynamic load capacity	Max 65% UP
Static load capacity	Max 35% UP
Compact Size	Min 30% Down
Limiting Speed	Max 20% UP



The ULTAGE Range

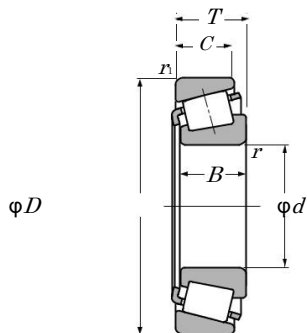
- ❖ Spherical roller bearings
- ❖ Thrust roller bearings
- ❖ Large Taper roller bearings
- ❖ Cylindrical roller bearings
- ❖ Ball Bearings



**Ultage Spherical Roller Bearings
EMA Type**

3. Dimension Table

3.1 Single row tapered roller bearings



Equivalent radial load
dynamic

$$P_r = XF_r + YF_a$$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y ₂

static

$$P_{0r} = 0.5F_r + Y_0F_a$$

When $P_{0r} < F_r$ use $P_{0r} = F_r$

For values of e , Y_2 , and Y_0 refer to that of conventional bearings.

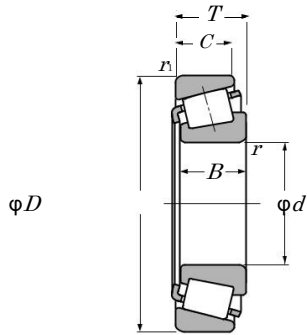
d 90~130mm

Boundary dimensions mm							Bearing numbers	dynamic kN C_r	Basic load ratings static C_{0r}
D	D	T	B	C	r_s min ¹⁾	r_1 s min ¹⁾			
90	140	32	32	24	2	1.5	32018XU	215	270
95	200	49.5	45	32	4	3	30319DU	379	355
120	180	38	29	2.5	2	245	32024XU	314	420
130	280	107.75	102	85	4	4	32226U	678	815

1) Minimal allowable dimension for chamfer dimension r or r_1 .

3. Dimension Table

3.2 Single row tapered roller bearings



Equivalent radial load
dynamic

$$P_r = X F_r + Y F_a$$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y_2

static

$$P_{0r} = 0.5 F_r + Y_0 F_a$$

When $P_{0r} < F_r$ use $P_{0r} = F_r$

For values of e , Y_2 , and Y_0 refer to that of conventional bearings.

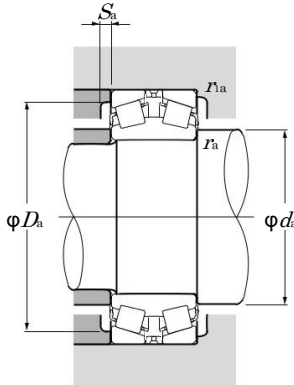
d 200~260mm

Boundary dimensions mm						Bearing numbers	dynamic dynamic kN C_r	Basic load ratings static C_{0r}
d	D	T	B	C	$r_s \text{ min}^{1)}$			
165	336.55	92.07	95.250	69.85	4	THH437549/HH437510	1357	1510
206	336.50	98.42	100.01	77.788	6.4	T-H242649/H242610	1421	2030
254	533.40	133.35	120.63	77.788	6.4	HH953749/HH953710	2150	2610

1) Minimal allowable dimension for chamfer dimension r_s .

3. Dimension Table

3.3 Double row tapered roller bearings



Equivalent radial load
dynamic

$$P_r = XF_r + YF_a$$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y_2

static

$$P_{0r} = 0.5F_r + Y_0F_a$$

When $P_{0r} < F_r$ use $P_{0r} = F_r$

For values of e , Y_2 , and Y_0 refer to that of conventional bearings.

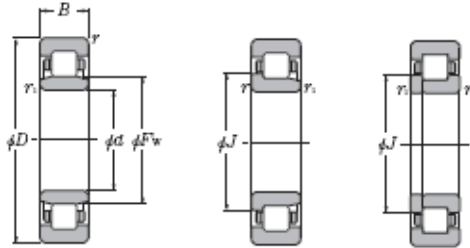
d 270~280mm

Boundary dimensions mm					Bearing numbers	dynamic kN C_r	Basic load ratings static C_{0r}
d	D	B	C	r_s min ¹⁾			
279.400	457.200	244.475	244.475	6.4	HH255149D/HH255110+A	4544	7900

1) Minimal allowable dimension for chamfer dimension r_1 .

4. Dimension Table

4.1 Cylindrical roller bearings



d 70~280mm

Boundary dimensions mm					Bearing numbers	dynamic KN C_r	Basic load ratings static C_{br}
d	D	B_1	r_1 min ¹⁾	r_2 min ¹⁾			
70	150	35	2.1	2.1	E-NU314E	227	222
80	170	39	2.1	2.1	NU316E	256	282
120	215	40	2.1	2.1	NU224E	335	420
130	230	40	3	3	E-NUP226E	404	455
130	230	64	3	3	E-NU2226E	586	735
140	250	42	3	3	E-NU228E	437	515
150	270	45	3	3	NU230E	450	595
160	290	48	3	3	NU232E	500	665
170	360	72	4	4	NU334	795	1 010
180	320	52	4	4	E-NU236E	691	850
280	500	165.1	5	5	RNU5617	2 190	3 850

1) Minimal allowable dimension for chamfer dimension r_1 or r_2 .

Remarks: Bearing numbers marked "☆" designate bearing with hollow rollers and pin type cages.