

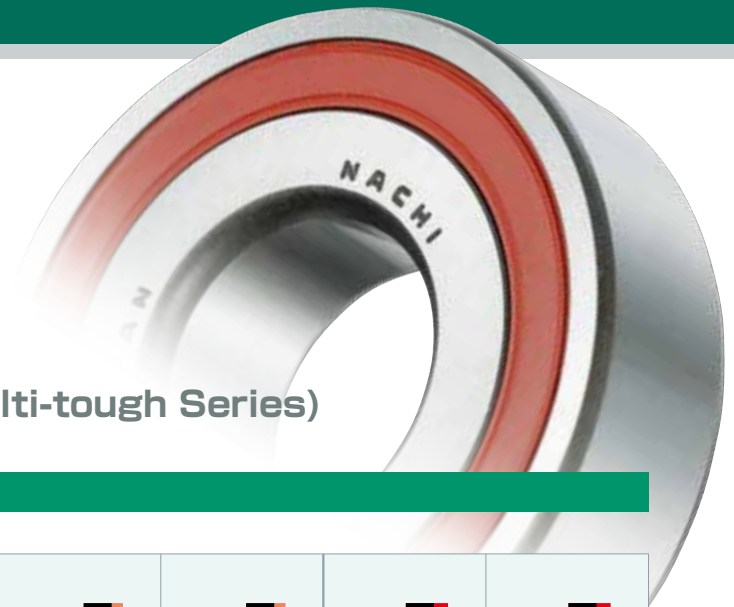
NACHI

**High Durability
Ball Screw Support Bearing**

TAB *SERIES*



TAB SERIES



More than Double the Durability (Multi-tough Series)

Features

Long Life and High Reliability (Multi-tough Series)

- Greatly improved rolling life by using specialized heat treatment
- Withstands surface damage from impact load and fretting and shows superior durability even in contaminated environments

High-performance seal

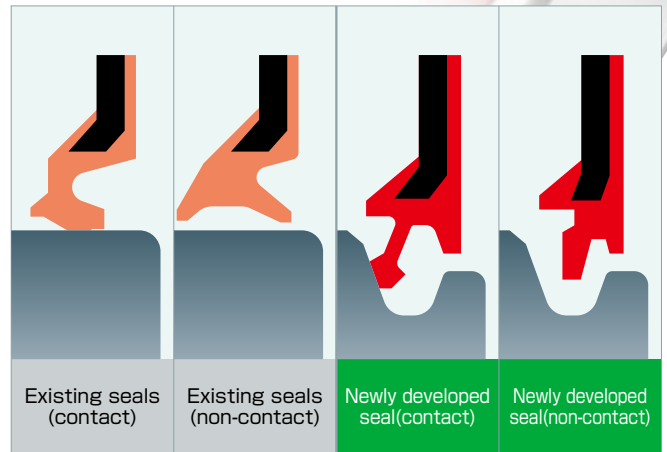
- Uses triple-lip construction to better keep grease in and dust out
- Light contact and energy savings

Long lasting grease

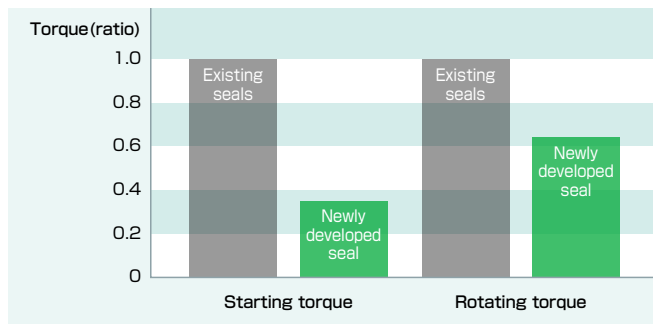
- Grease forms superior oil film at high surface pressure to provide excellent protection from fretting and coolant intrusion

High Axial Rigidity

- The axial rigidity is high because of a contact angle 60° and a large number of balls

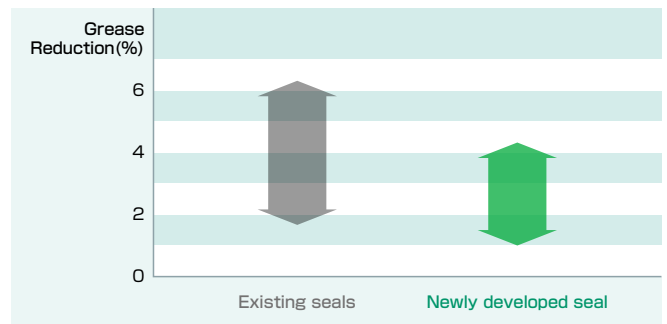


Torque(contact seal)



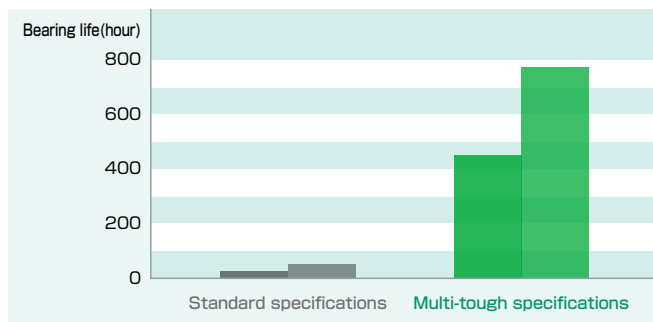
Test conditions	Bearing	RPM	1800min ⁻¹
	20TAB04-2LR (current seals)	Bearing Temperature	Room Temperature
	20TAB04-2NSE (newly developed seal)		

Grease Reduction(contact seal)



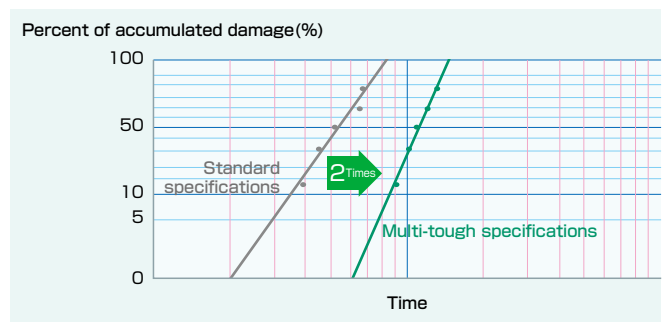
Test conditions	Bearing	RPM	1800min ⁻¹
	20TAB04-2LR (current seals)	Bearing Temperature	Room Temperature
	20TAB04-2NSE (newly developed seal)	Load	Medium preload

Life characteristics(with indentation)



Test conditions	Bearing	RPM	1400min ⁻¹
	30TAB06 (standard specifications; with indentation)	Axial load	20,000N
	30TAB06 (multi-tough specifications; with indentation)	Bearing Temperature	Room Temperature

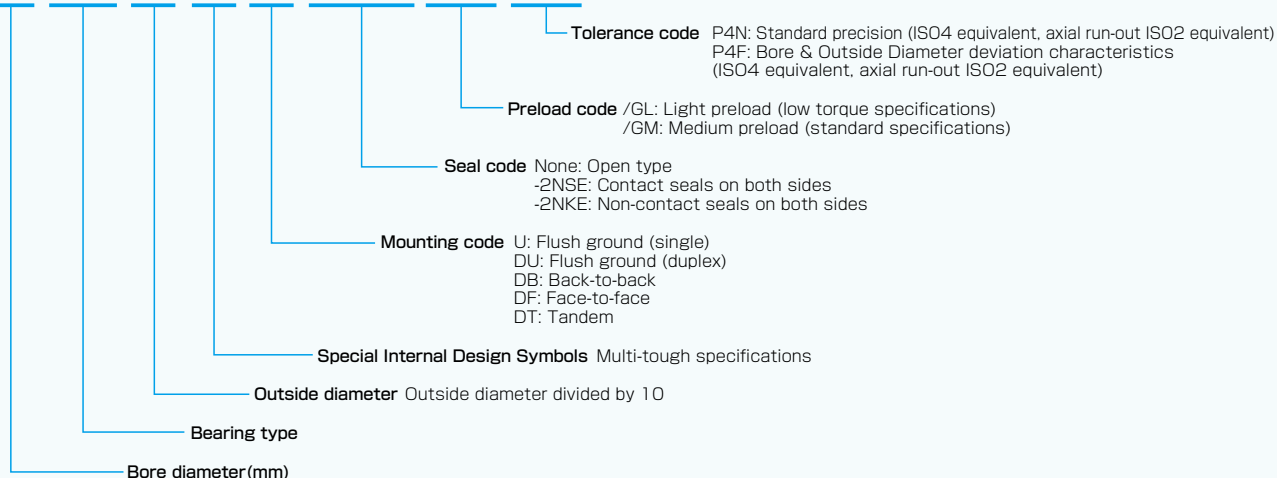
Life characteristics(contaminated oil)



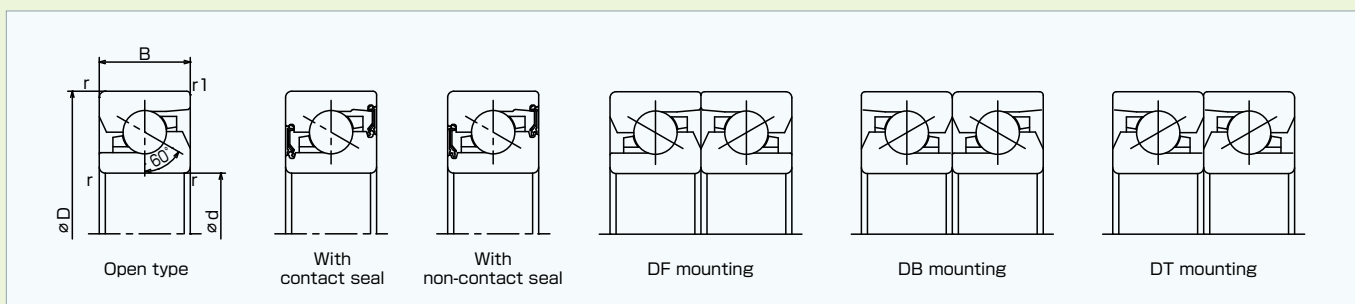
Test conditions	Sample	ø62×20×9 (disc)	Bearing Temperature	Room Temperature
	RPM	1800min ⁻¹	Contaminant	0.2g/l

Configuration of Bearing Numbers

30 TAB 06 ** DB -2NSE /GM P4N



Configurations



Bearing No.			Boundary dimensions (mm)					Basic dynamic load rating Ca ⁽²⁾ (N)		Permissible Axial load ⁽³⁾ (N)	Limiting Rotation Speed ⁽⁴⁾ (grease, min ⁻¹)
Open type	With seal		d	D	B	r (min)	r1 (min)	Standard specifications	Multi-tough specifications		
	Contact	Non-contact									
15TAB04	15TAB04-2NSE	15TAB04-2NKE	15	47	15	1 ⁽¹⁾	0.6	25,900	32,500	32,000	6,300
17TAB04	17TAB04-2NSE	17TAB04-2NKE	17	47	15	1	0.6	25,900	32,500	32,000	6,300
20TAB04	20TAB04-2NSE	20TAB04-2NKE	20	47	15	1	0.6	25,900	32,500	32,000	6,300
25TAB06	25TAB06-2NSE	25TAB06-2NKE	25	62	15	1	0.6	29,900	38,000	46,400	4,650
30TAB06	30TAB06-2NSE	30TAB06-2NKE	30	62	15	1	0.6	29,900	38,000	46,400	4,650
35TAB07	35TAB07-2NSE	35TAB07-2NKE	35	72	15	1	0.6	32,500	41,000	54,300	3,750
40TAB07	40TAB07-2NSE	40TAB07-2NKE	40	72	15	1	0.6	32,500	41,000	54,300	3,750
40TAB09	40TAB09-2NSE	40TAB09-2NKE	40	90	20	1	0.6	65,000	82,000	101,000	3,150
45TAB07	45TAB07-2NSE	45TAB07-2NKE	45	75	15	1	0.6	33,500	42,500	59,500	3,400
45TAB10	45TAB10-2NSE	45TAB10-2NKE	45	100	20	1	0.6	68,000	86,000	113,000	2,850
50TAB10	50TAB10-2NSE	50TAB10-2NKE	50	100	20	1	0.6	69,500	88,000	119,000	2,700
55TAB10	55TAB10-2NSE	55TAB10-2NKE	55	100	20	1	0.6	69,500	88,000	119,000	2,700
55TAB12	55TAB12-2NSE	55TAB12-2NKE	55	120	20	1	0.6	73,000	92,500	137,000	2,300
60TAB12	60TAB12-2NSE	60TAB12-2NKE	60	120	20	1	0.6	73,000	92,500	137,000	2,300

Note 1: Minimum r for inner ring is 0.6.

Note 2: When the axial load is on a 2-row or 3-row arrangement, the values in the table should be multiplied by 1.62 and 2.16 respectively.

Note 3: When the axial load is on a 2-row or 3-row arrangement, the values in the table should be multiplied by 2 and 3 respectively.

Note 4: Allowable RPM if GM preload is applied.

Accuracy table

P4N Standard precision (ISO4 equivalent, axial run-out ISO2 equivalent)

P4F Bore & outside diameter deviation characteristics (ISO4 equivalent, axial run-out ISO2 equivalent)

Unit: μm

Nominal bearing bore diameter and outside diameter (mm)		Single plane mean bore diameter and bore diameter deviation $\Delta\text{dmp}, \Delta\text{ds}$				Single plane mean outside diameter and outside diameter deviation $\Delta\text{Dmp}, \Delta\text{Ds}$				Outer and inner ring width deviation ⁽¹⁾ $\Delta\text{Bs}, \Delta\text{Cs}$	
		P4N		P4F		P4N		P4F		P4N, P4F	
Over	Incl.	High	Low	High	Low	High	Low	High	Low	High	Low
10	18	0	-4	0	-4	-	-	-	-	0	-80
18	30	0	-5	0	-4	-	-	-	-	0	-120
30	50	0	-6	0	-4	0	-6	0	-4	0	-120
50	80	0	-7	0	-5	0	-7	0	-5	0	-150
80	120	-	-	-	-	0	-8	0	-6	-	-

Note 1: Width deviation of outer ring depends on the value for that bearings inner ring.

Unit: μm

Nominal bearing bore diameter and outside diameter (mm)		Inner ring width variation V_{Bs}	Radial run-out of inner ring K_{ia}	Outer and inner ring axial run-out $S_{\text{ia}}, S_{\text{ea}}$	Radial run-out of outer ring K_{ea}
		P4N, P4F	P4N, P4F	P4N, P4F	P4N, P4F
Over	Incl.	Max	Max	Max	Max
10	18	2.5	2.5	2	-
18	30	3	3	2.5	-
30	50	4	4	2.5	5
50	80	4	4	2.5	5
80	120	-	-	-	6

Preload and torque

Bearing No.	DB or DF mounting					
	Preload(N)		Axial rigidity(N/ μm)		Starting torque ⁽¹⁾ (N·cm)	
	/GL	/GM	/GL	/GM	/GL	/GM
15TAB04	1,080	2,160	540	735	8	15
17TAB04	1,080	2,160	540	735	8	15
20TAB04	1,080	2,160	540	735	8	15
25TAB06	1,665	3,330	757	981	15	20
30TAB06	1,665	3,330	757	981	15	20
35TAB07	1,960	3,920	933	1,230	20	25
40TAB07	1,960	3,920	933	1,230	20	25
40TAB09	2,600	5,200	1,000	1,320	30	50
45TAB07	2,060	4,120	981	1,270	20	30
45TAB10	2,990	5,980	1,107	1,470	35	60
50TAB10	3,140	6,280	1,163	1,520	40	65
55TAB10	3,140	6,280	1,163	1,520	40	65
55TAB12	3,530	7,060	1,358	1,770	45	70
60TAB12	3,530	7,060	1,358	1,770	45	70

Note 1: Starting torque shows values for an open type and non-contact seal type with grease lubrication.

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