

Tapered roller bearing units

Inch sizes and AAR standards



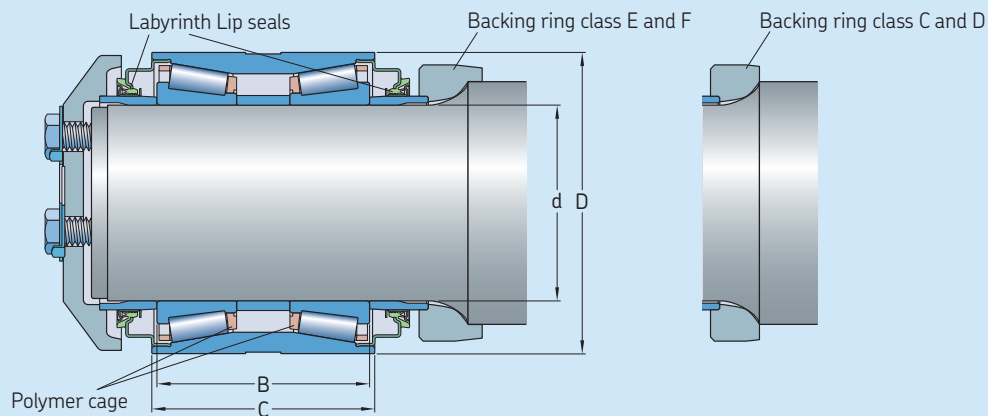
Tapered roller bearing units (TBUs) consist of two inner rings with a tapered roller and polymer cage assembly, a common outer ring, a central spacer, two sealing systems and a grease fill.

The classic TBU for American freight car bogies is designed with inch size dimensions following the standards of the Association of American Railroads (AAR).

For new freight cars with increased cargo, inch size compact tapered roller bearing units (CTBUs) are used. The sealing system of the CTBU consists of two parts: a (stationary) seal that is anchored in the outer ring and a flinger ring that is fitted directly on the inner ring shoulder. This design offers increased reliability.



TBU tapered roller bearing units, inch sizes to AAR standards



Size	Principal dimensions				Designation	Certificate	
	d	D	B	C			
– mm (inch)							
Class C	5" x 9"	119,088 (4.6885)	195,263 (7.6875)	136,525 (5.3750)	142,875 (5.6250)	BT2-8735 BB	AAR Certificate 23
Class D	5 1/2" x 10"	131,775 (5.1880)	207,963 (8.1875)	146,75 (5.7780)	152,40 (6.0000)	BT2-8547 BB	AAR Certificate 23
Class E	6" x 11"	144,475 (5.6870)	220,663 (8.6875)	155,575 (6.1250)	163,51 (6.4370)	BT2-8516 BB	AAR Certificate 23
Class F	6 1/2" x 12"	157,175 (6.1879)	252,413 (9.9375)	177,80 (7.0000)	184,15 (7.2500)	BT2-8512 BB	AAR Certificate 23

The dimensions listed are for information only. For detailed product specifications, contact SKF.

Design features

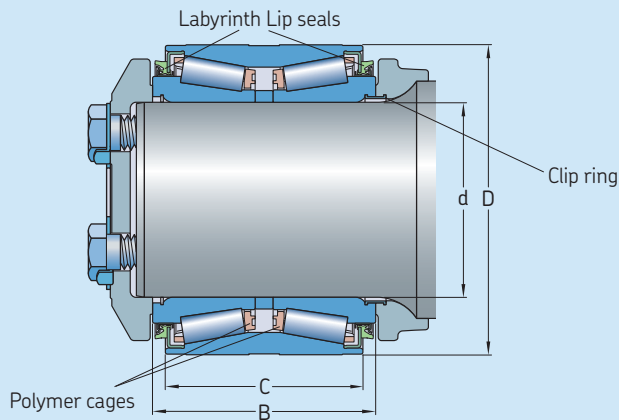
The TBU design for inch sizes is in accordance with the requirements of the Association of American Railroads (AAR).

- The material for inner and outer rings and rollers is case hardened steel.
- The grease is approved by AAR.
- The SKF inch size TBUs and CTBUs listed in the tables are equipped with polymer cages and Labyrinth Lip seals. The SKF LL-seal design offers reduced friction torque and consequently important savings in energy consumption, together with lower operating temperature.

The AAR certificates approving SKF are listed in the product tables.

For additional information about design features, refer to the *SKF Railway technical handbook, volume 1*.

CTBU compact tapered roller bearing units, inch sizes



Size		Principal dimensions				Designation	Certificate
		d	D	B	C		
–		mm (inch)					
CTBU Class K	6 1/2" x 9"	157,175 (6.1880)	250 (9.8425)	180,6 (7.1102)	160 (6.2992)	BT2-8606	AAR Certificate 30
CTBU Class G	7" x 12"	177,815 (7.0006)	276,225 (10.8750)	200 (7.8740)	185,725 (7.3120)	BT2-8609	AAR Certificate 30

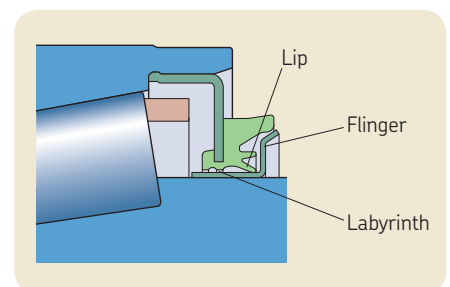
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Polymer cage benefits

- reduced friction and roller slip, reduced wear and lower operating temperature
- improved safety and performance
- safer failure mode without seizing

Labyrinth Lip seal benefits

- improved protection against contaminants
- longer grease life
- better and longer performance



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