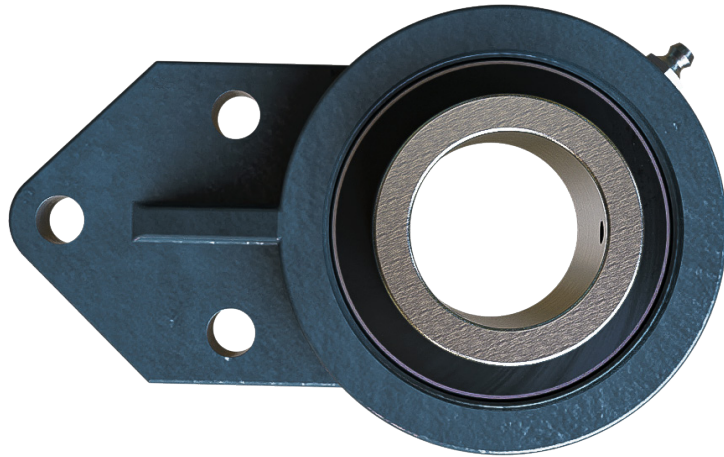


REPLACEMENT & AFTERMARKET

3-BOLT FLANGE BEARINGS



Collaborate / Create / Convey

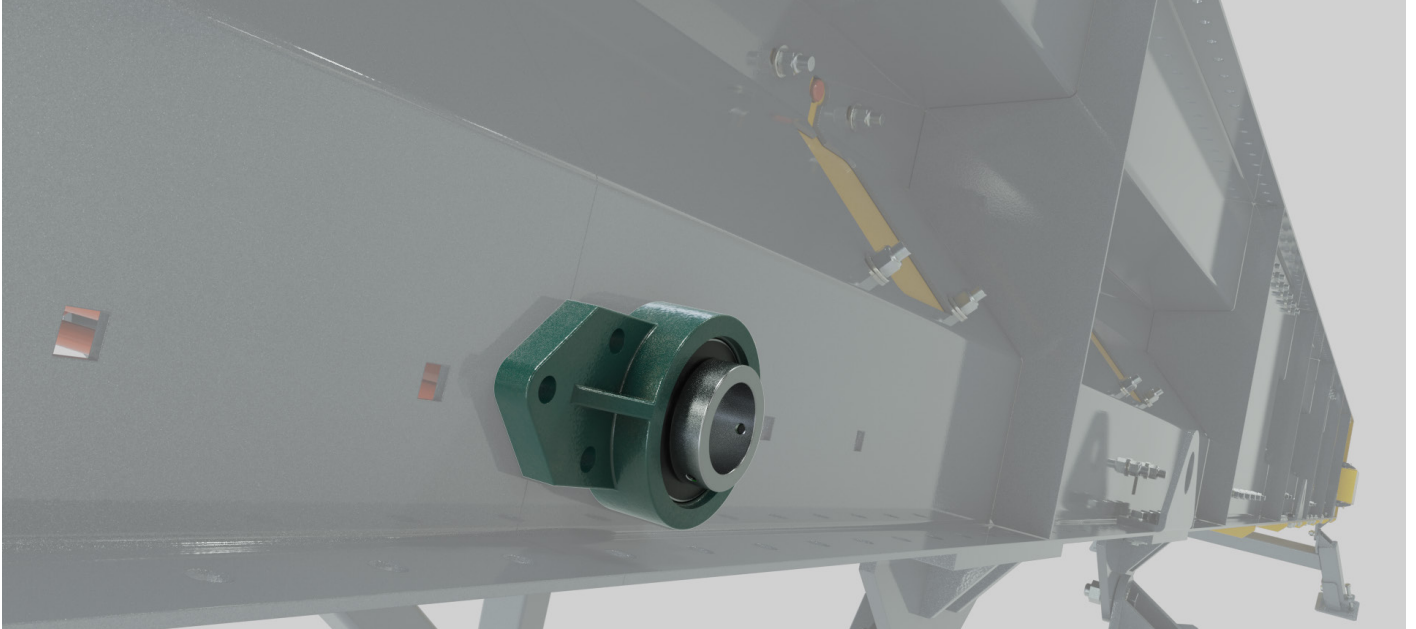
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3-BOLT FLANGE BEARINGS



3-Bolt Flange Bearings

Conveyor head, tail, and idler shafts operating under moderate to heavy loads require rigid vertical mounting to maintain structural alignment. Standard 2-bolt configurations lack the stability required for higher tension forces, leading to shaft slippage, excessive vibration, and premature internal wear. Left unaddressed, mounting deflection accelerates bearing failure, resulting in unplanned conveyor downtime and damaged rotating components.

Constructed with a triangular cast housing, 3-bolt flange bearings maximize mounting rigidity while maintaining a compact footprint along conveyor frames and walls. Engineered for direct OEM replacement, these units incorporate precision-machined mounting surfaces to guarantee exact load distribution across the bearing face. Deployable in fixed non-expansion or thermal-accommodating expansion states, the assemblies integrate advanced locking collars and extreme-duty sealing profiles to match the specific drive or tail shaft configuration exactly.

APPLICATIONS



Waste & Recycling

Built for demanding waste and recycling conveyors, flange bearings ensure stable alignment under heavy loads and contamination. Sealed against debris and moisture, they deliver reliable 24/7 performance with reduced maintenance.



Food and Beverage Processing

Strict sanitary environments mandate frequent washdowns that corrode standard metals. Thermoplastic housings with NSF H1 food-grade grease resist degradation while preventing internal contamination.



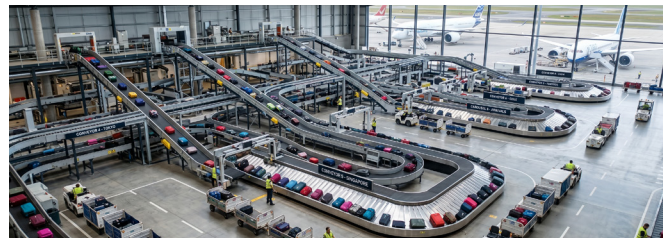
Contaminated Environments

Extremely dusty operations threaten bearing raceways with abrasive particle ingress. FloBack and triple-lip contact seals actively redirect harsh debris away from the internal bearing cavity.



High-Temperature Applications

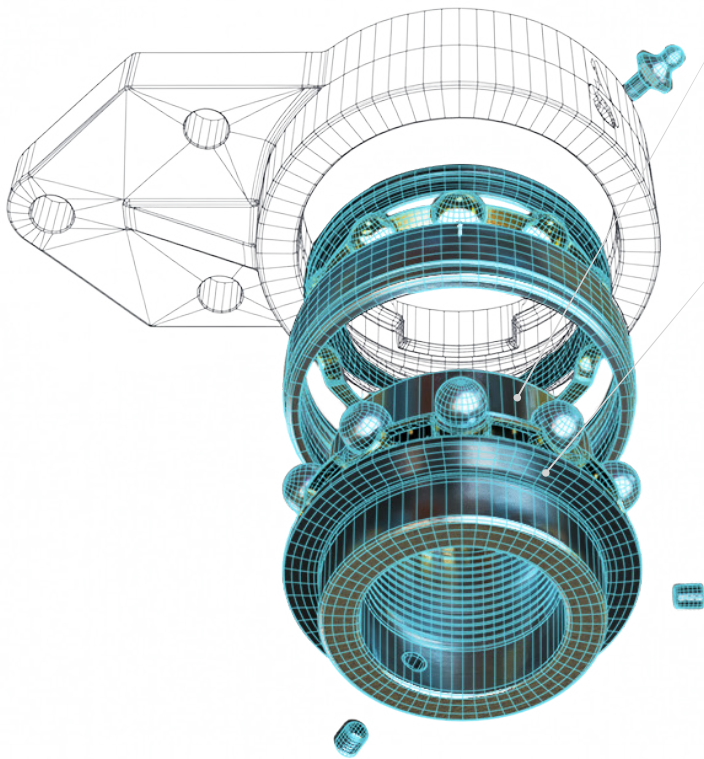
Extreme thermal conditions combined with high rotational speeds create excessive friction that degrades standard contact seals. Non-contact labyrinth seals maintain necessary exclusion parameters without generating additional heat.



High-Vibration Equipment

Continuous conveyor vibration systematically loosens standard set screw mountings over time, causing axial displacement. Eccentric collar mechanisms apply a uniform clamping force to secure the shaft securely and prevent positional drift.

KEY FEATURES



01

Eccentric Collar Locking Mechanism:

Wraps the shaft circumference with a progressive clamping force to prevent axial movement and manage unidirectional thermal expansion.

02

FloBack Seal Geometry:

Profiles the internal sealing surface to actively redirect abrasive contaminants away from the bearing cavity in extremely dusty environments.

03

Trident Triple-Lip Contact Seals:

Engineered with three distinct sealing lips to block dust ingress and exclude moisture while permitting scheduled grease relubrication.

04

Set Screw Locking Interface:

Secures hardened shafts matching a minimum Rockwell C30 hardness using dual threaded screws penetrating a wide inner ring.

05

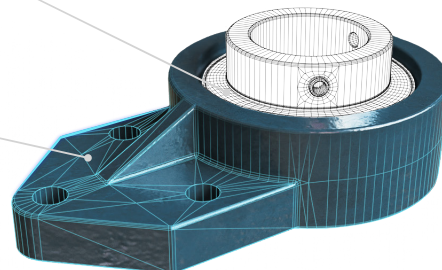
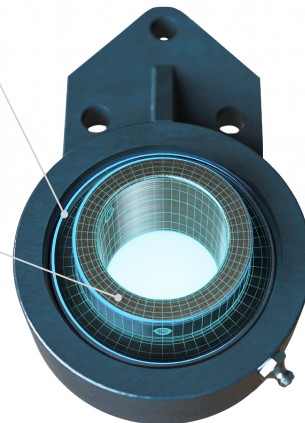
Labyrinth Non-Contact Seals:

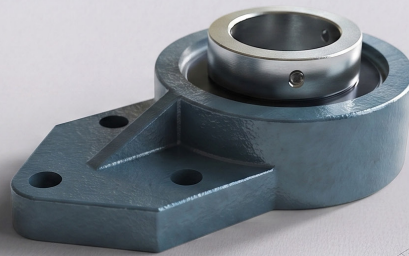
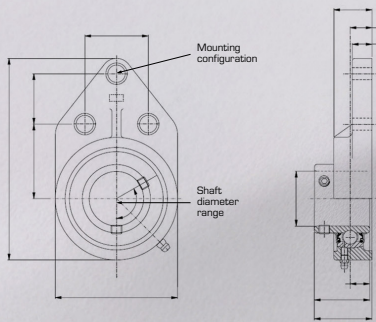
Eliminates seal-to-raceway friction to protect high-speed and high-temperature conveyor components from contaminant ingress.

06

Thermoplastic Housing Construction:

Replaces standard cast iron with glass-reinforced or PBT polymers to withstand corrosive chemical washdown cycles in sanitary processing lines.





3-BOLT FLANGE BEARINGS SPECIFICATIONS

Parameter	Standard Specification
Bearing families	SL, SCM, SLX, SXR, DL, IP, S2
Bearing types	Ball, tapered roller, spherical roller
Shaft diameter range	3/4" – 3-7/16" (depend on bearing family)
Locking mechanisms	Set screw, eccentric collar, Grip Tight concentric clamp, tapered adapter sleeve
Mounting configuration	3-bolt triangular pattern
Lubrication	Factory pre-lubricated with relubrication provisions
Expansion capability	Expansion and non-expansion configurations
Duty classifications	Standard, light, washdown, food-safe
Standards compliance	ABMA and ISO standards
Note: Bolt hole spacing, specific expansion capability, operating temperatures, and dynamic/static load ratings vary by bearing series, seal selection, and shaft size.	

Housing Material

Image	Housing material	Duty classification	Operating environment
	Cast iron	Standard duty	General industrial conveyor applications with moderate temperatures and dry to moderately dusty conditions.
	Thermoplastic	Washdown duty	Food processing and packaging applications requiring corrosion resistance, hygiene, and NSF H1 grease compatibility for incidental food contact.
	Stainless steel	Heavy duty	Harsh chemical environments, marine applications, or extreme moisture exposure requiring high corrosion resistance.

Seal Configuration

Seal type	Mechanical function	Operating environment
Triple lip contact	Three sealing lips provide dust ingress protection and moisture exclusion while permitting grease relubrication.	Standard industrial applications.
FloBack	Seal geometry redirects contaminants away from the internal bearing cavity.	Extremely dusty environments.
Labyrinth	Non-contact architecture eliminates contact friction and subsequent heat generation.	High-temperature and high-speed applications.

THE ENGINEERING ADVANTAGE

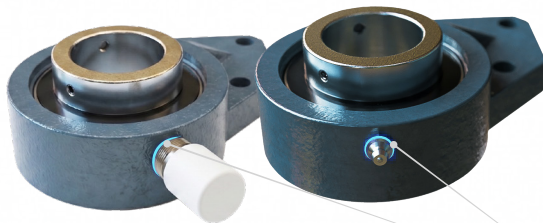
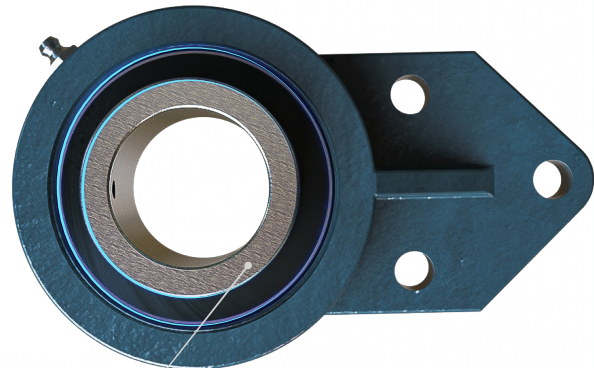
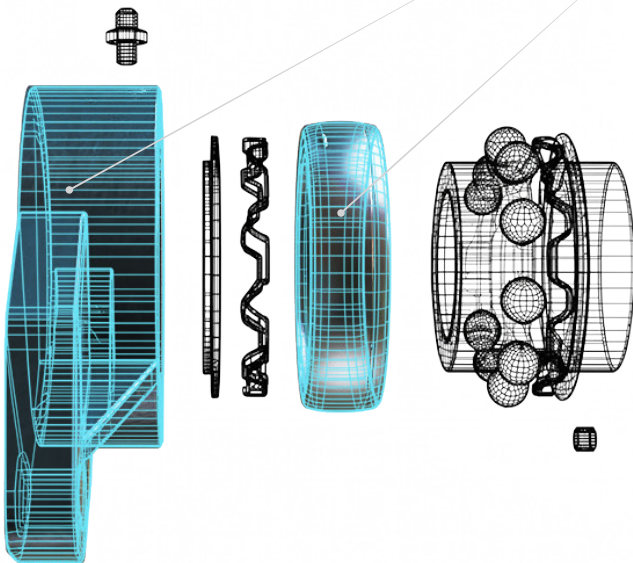
This section outlines the core engineering methodology behind 3-bolt flange bearings, covering precision mounting and adaptive component design to ensure exact application fit.

Precision-Machined Mounting Surface:

Fabricated with exact-tolerance flat faces and positioned bolt holes to distribute heavy radial loads evenly across the conveyor frame.

Field-Convertible Expansion Configuration:

Engineered with a removable snap ring and non-expansion spacer system to switch between fixed-end and thermal-floating states on-site.



IoT Sensor Integration Porting:

Pre-drilled and tapped housing geometry accepts direct installation of OPTIFY vibration and temperature monitoring hardware.

Progressive Clamping Architecture:

Utilizes an eccentric collar wrap to apply balanced, 360-degree holding force that secures high-vibration shafts without structural deformation.

CONTACT INFORMATION

OUR ENGINEERS WILL SPEC THE EXACT PART FOR YOUR SYSTEM

For product specifications, engineering support, or order inquiries, please contact our team using the information provided below. Our specialists are available to ensure accurate recommendations and efficient service for your application requirements.

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