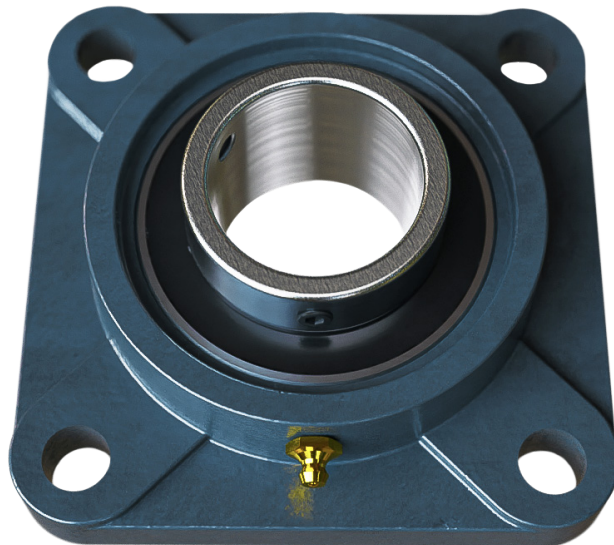


REPLACEMENT & AFTERMARKET

4-BOLT FLANGE BEARINGS



Collaborate / Create / Convey

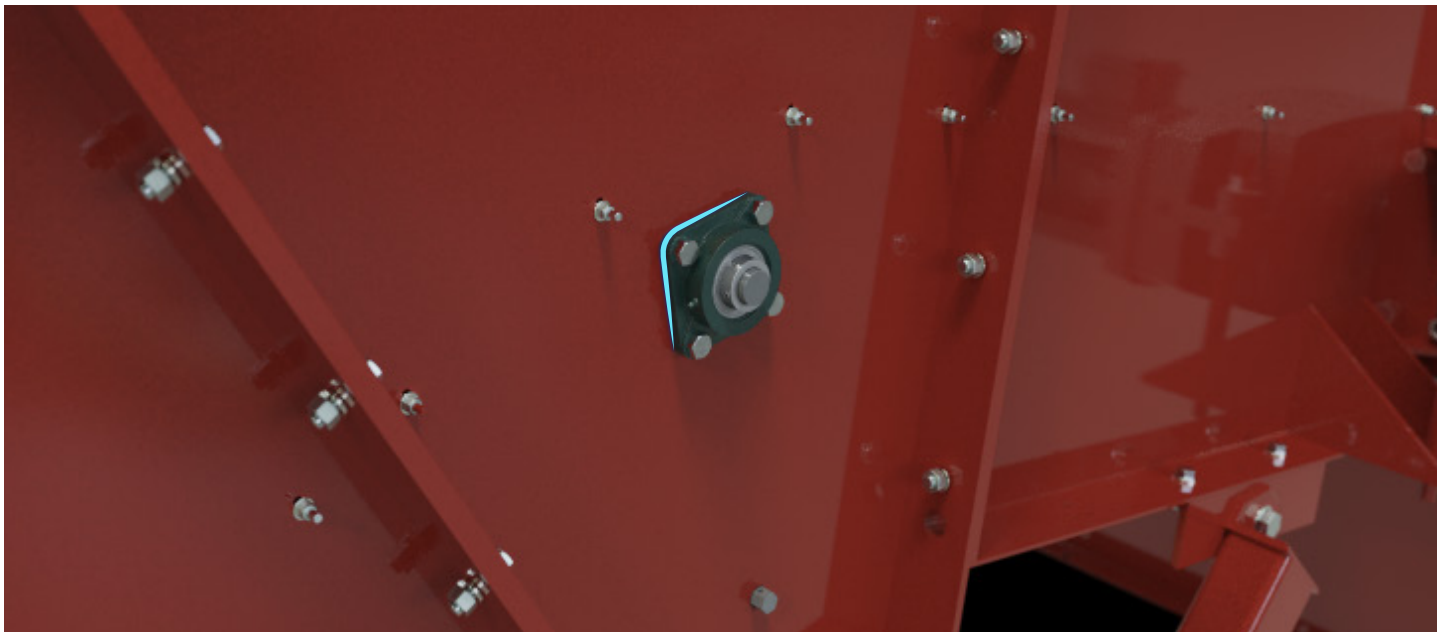
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4-BOLT FLANGE BEARINGS



4-Bolt Flange Bearings

4-bolt flange bearings secure vertically against frames to provide maximum mounting strength for heavy-duty conveyor head and tail shafts. Unsupported or misaligned shafts in these high-tension applications result in excessive vibration, worn internal components, and premature failure. Reliable shaft stabilization prevents structural damage to housings and conveyor drive systems under continuous-duty operations.

The bearing assemblies feature case-hardened rolling elements and precision-ground raceways housed within a four-bolt square flange configuration. Multiple housing materials, including standard-duty cast iron and maximum corrosion-resistant stainless steel, match specific contamination and washdown demands. These units accommodate drive systems and large diameter idler shafts experiencing significant radial and thrust loads. Field-convertible expansion options allow the inner bearing unit to float axially, managing thermal shaft growth without full unit replacement.

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.



Heavy Manufacturing & Aggregate Processing

Industrial material handling equipment in mining and aggregate processing subjects shafts to continuous heavy loads and severe dust contamination. Four-bolt square flange configurations provide rigid vertical surface mounting while triple-lip contact seals exclude destructive debris.



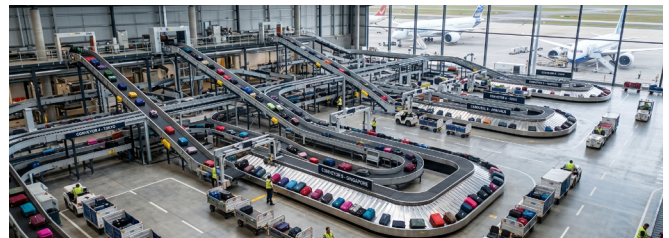
Food Processing & Packaging

Sanitary environments demand regular washdown cycles that accelerate component corrosion. Thermoplastic housings paired with NSF H1 food-grade grease deliver washdown duty performance without degradation.



Chemical & Marine Environments

Extreme moisture exposure and harsh chemicals rapidly deteriorate standard cast housings. Stainless steel housings equipped with AISI 440 stainless inserts maximize corrosion-resistant bearing protection.



High-Tension Belt Systems

Large diameter idler shafts require robust support for accurate conveyor belt tracking. Eccentric collar locking mechanisms deliver uniform clamping force to manage significant axial loads and vibration.

KEY FEATURES

01

Triple-Lip Contact Seal Array:

Utilizes three sealing lips to exclude moisture and dust ingress while allowing scheduled grease relubrication.

02

Eccentric Collar Locking Mechanism:

Wraps around the shaft circumference to generate uniform clamping force and manage thermal expansion in a single direction.

03

Set Screw Hub Assembly:

Secures the shaft via two set screws threaded into a wide inner ring, creating dimples in hardened shafts to prevent axial movement.

04

Four-Bolt Square Flange Configuration:

Distributes load forces evenly across the mounting plane to maximize rigidity compared to two-bolt or three-bolt alternatives.

05

Case-Hardened Rolling Elements:

Manufactured with precision-ground raceways to reduce component wear rates and extend L10 life ratings beyond industry standards.

06

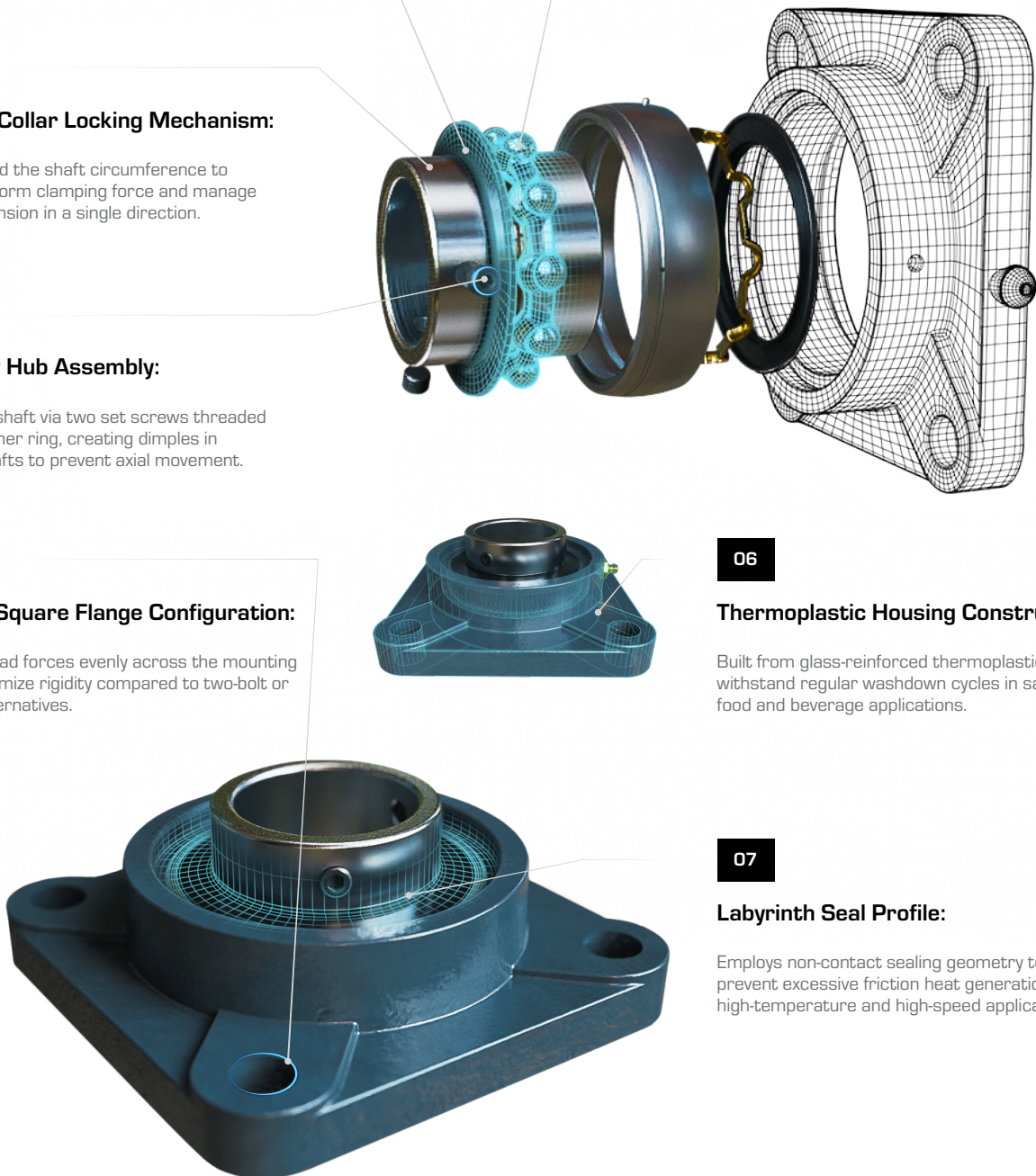
Thermoplastic Housing Construction:

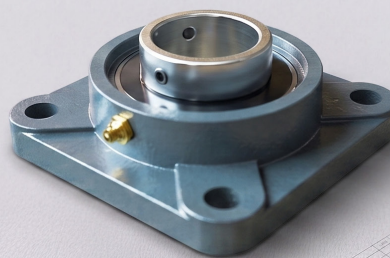
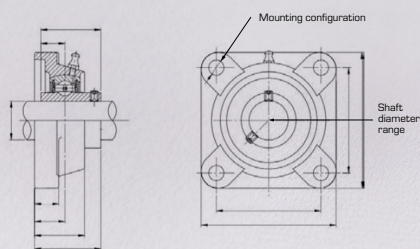
Built from glass-reinforced thermoplastic PBT to withstand regular washdown cycles in sanitary food and beverage applications.

07

Labyrinth Seal Profile:

Employs non-contact sealing geometry to prevent excessive friction heat generation in high-temperature and high-speed applications.





4-BOLT FLANGE BEARINGS SPECIFICATIONS

Parameter	Standard Specification
Bearing families	DI, DL, DLM, Type E, Type E Defender, Type EXL, Imperial IP, Type K, S-2000, SC, SCM, SL
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, D-LOK concentric clamp, Grip Tight adapter-style systems
Mounting configuration	4-bolt square flange, piloted round flange
Lubrication	Factory pre-lubricated with relubrication provisions (grease fittings)
Expansion capability	Expansion, non-expansion configurations
Duty classifications	Standard, light, washdown, backside, foodsafe
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 structural methodologies behind 4-bolt flange bearings, covering mounting precision and sealing configurations to ensure reliable load distribution and component preservation.

FloBack Seal Geometry:

Redirects airborne contaminants away from the bearing cavity to optimize exclusion in extremely dusty material handling environments.

Field-Convertible Expansion Configuration:

Permits on-site transition from non-expansion to expansion setups via snap ring and spacer adjustment, allowing the inner unit to float axially.

Precision-Machined Mounting Faces:

Engineered with flat profiles and accurately positioned bolt holes to maintain correct shaft alignment and distribute operational loads evenly.

IoT Sensor Integration Ports:

Includes pre-drilled and tapped housings on select units to accept continuous vibration and temperature monitoring hardware.

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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