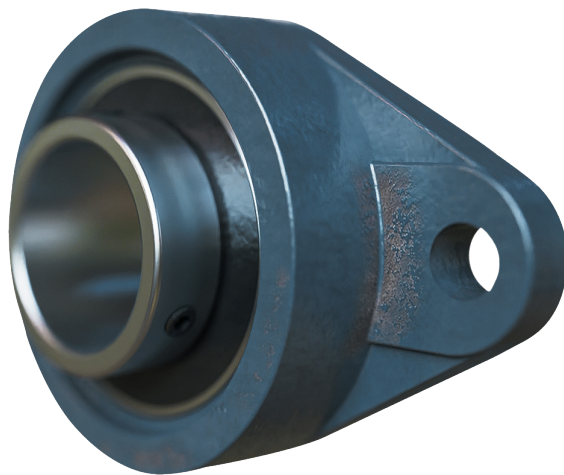


REPLACEMENT & AFTERMARKET

FLANGE BEARINGS



Collaborate / Create / Convey

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FLANGE BEARINGS



Flange Bearings

Industrial conveyor systems require perpendicular shaft support against vertical frames or walls where horizontal base mounting is physically impractical. Uncompensated thermal shaft growth creates severe axial forces that compromise fixed bearing housings and rolling elements during operation. Component failure in these vertical configurations leads to shaft misalignment, housing looseness, and extended operational downtime.

Dodge flange bearing units integrate case-hardened rolling elements within precision-machined housings to support extreme radial and thrust loads. Manufactured in 2-bolt, 3-bolt, and 4-bolt configurations, these assemblies utilize cast iron, cast steel, or stainless steel construction tailored to specific environmental demands. Components feature field-convertible expansion capabilities, allowing technicians to accommodate thermal shaft expansion without structural binding. Engineers specify exact bore tolerances from 3/4" to 7" to ensure precise shaft alignment across all vertical mounting applications.

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-Duty Conveyor Systems

High-tonnage material handling environments subject rotating components to extreme radial loads, fugitive dust, and constant vibration. Four-bolt square flange configurations provide maximum mounting rigidity and superior load distribution to maintain perpendicular shaft alignment under severe operational stress.



Industrial Manufacturing

Continuous production cycles generate thermal friction that causes drive and tail shafts to expand axially. Field-convertible expansion bearings allow the inner unit to float, accommodating thermal growth without loading the fixed mounting structure.



Food-Safe & Washdown Environments

Frequent high-pressure cleaning introduces moisture and corrosive chemicals that rapidly degrade standard bearing seals. Stainless steel housing construction paired with Trident triple-lip contact seals prevents fluid ingress and protects internal rolling elements from contamination.



High-Speed Processing

Rapid rotational speeds elevate internal bearing temperatures, requiring specialized thermal management and friction reduction. Ball bearing elements combined with labyrinth non-contact seals dissipate heat while maintaining structural integrity at elevated RPMs.

KEY FEATURES

01

Trident Triple-Lip Contact Seal:

Engineered to block dust, moisture, and debris from penetrating the bearing assembly in harsh industrial environments.

02

Labyrinth Non-Contact Seal:

Designed for high-speed and high-temperature operations where physical seal friction must be eliminated to prevent thermal overload.

03

Case-Hardened Rolling Element:

Manufactured from specialized alloys to lower continuous wear rates and extend L10 life ratings beyond standard ABMA parameters.

04

Precision-Machined Mounting Surface:

Fabricated with flat faces and cast-in dimples to guarantee accurate bolt hole spacing and maintain proper load distribution.

05

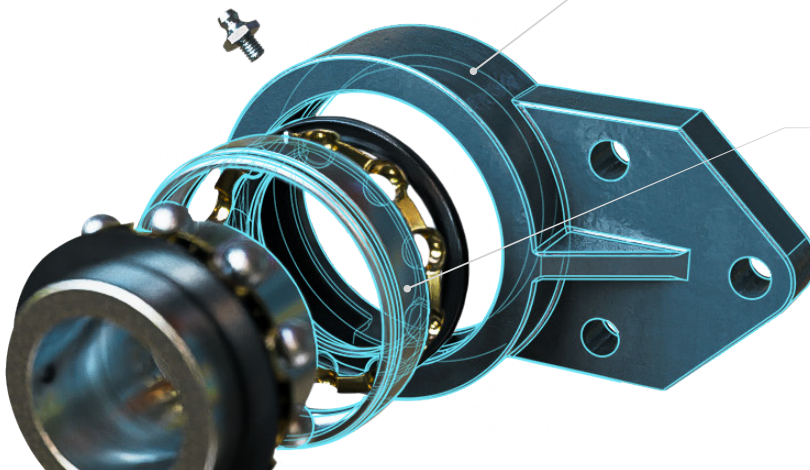
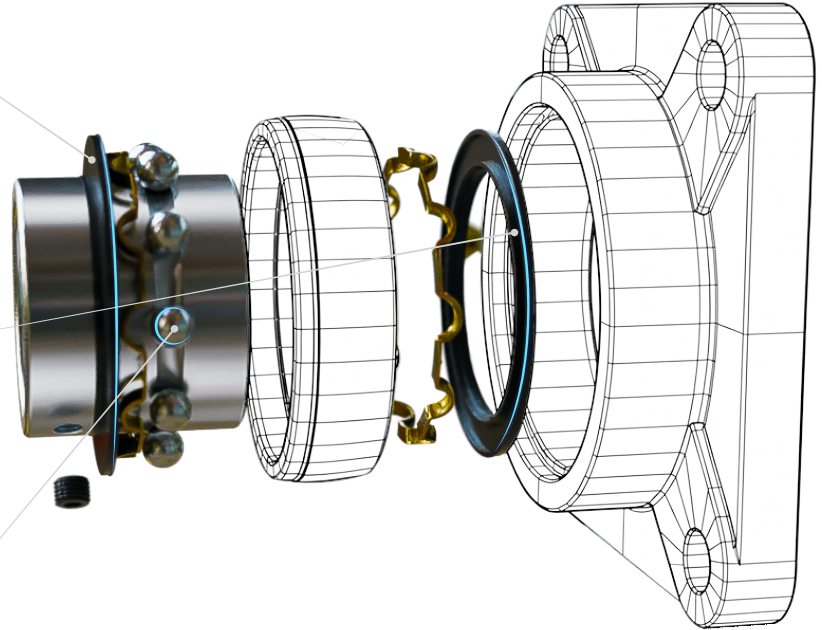
Cast Iron Housing Construction:

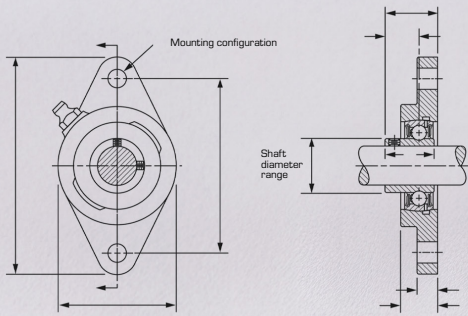
Poured in standard gray iron or ductile iron to provide rigid structural support for vertical shaft alignments.

06

Field-Convertible Snap Ring Assembly:

Allows technicians to remove the internal non-expansion spacer on-site, transitioning the unit to an axial expansion configuration.





FLANGE BEARINGS SPECIFICATIONS

Parameter	Standard Specification
Bearing families	DL, DI, DLM, SC, SCM, SL, SLX, SXR, SXRAG, SXV, VSC, Type E, Type E Defender, Type EXL, Imperial, Type K, S-2000, and more
Bore Size Range	3/4" to 7"
Bearing Elements	Ball (high-speed/moderate loads), tapered roller (combined radial/thrust loads), spherical roller (extreme loads/self-aligning)
Housing Materials	Cast iron (gray/ductile), cast steel, stainless steel
Sealing Options	Trident triple-lip contact seal, labyrinth non-contact seal
Lubrication	Factory pre-lubricated with relubrication grease fittings
Duty Classifications	Standard, light, washdown, backside, food-safe
Standards Compliance	ABMA and ISO compliant
Note: Operating temperature ratings vary and are strictly determined by specific bearing family, seal type, and grease selection.	

Bearing Configuration

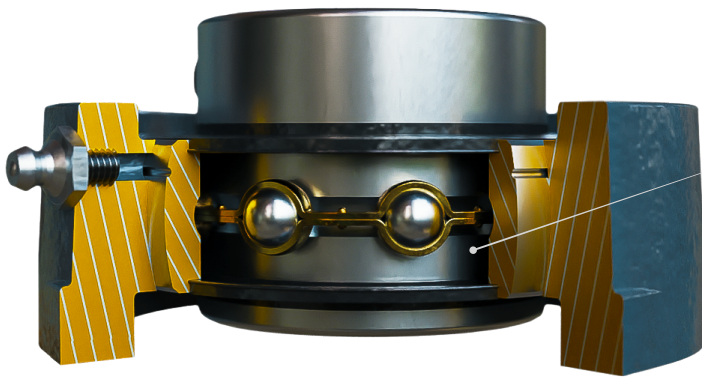
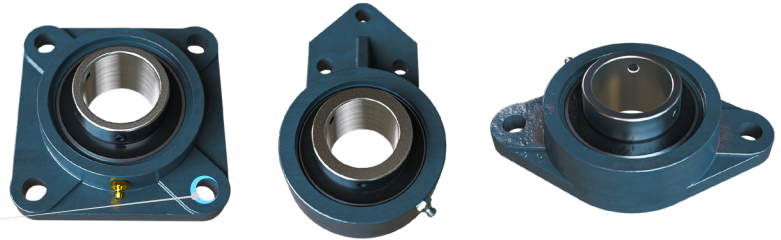
Image	Configuration	Geometry Options	Load Capacity	Best For
	2-Bolt Flange	Low-profile diamond	Light to moderate loads	Compact vertical mounting footprints
	3-Bolt Flange	Round, triangular	Moderate loads	Even force distribution with a compact footprint
	4-Bolt Flange	Square, piloted round	Heavy-duty loads	Superior load distribution and mounting rigidity
Note: Piloted round flange configurations require a machined pilot bore for precise alignment.				

THE ENGINEERING ADVANTAGE

This section outlines the core mechanical methodology behind flange bearings, covering design principle areas to ensure exact fit and extended service life.

Multi-Bolt Load Distribution Geometry:

Engineered in 2-bolt diamond, 3-bolt round, and 4-bolt square layouts to match spatial footprint constraints with the required vertical mounting rigidity.



Thermal Shaft Expansion Accommodation:

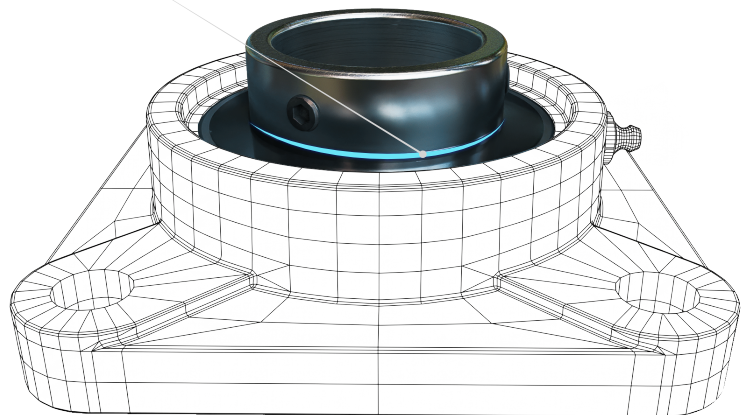
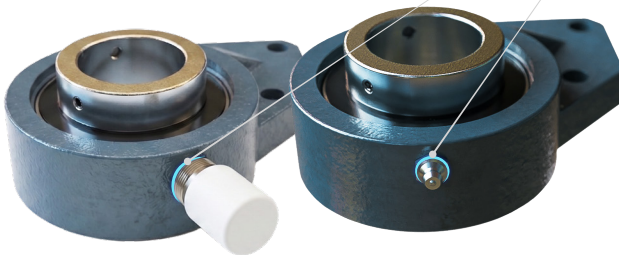
Designed with an internal floating mechanism that permits axial inner unit movement to absorb dimensional shaft growth during operation.

IoT Sensor Integration Architecture:

Configured OPTIFY-ready to accept physical condition monitoring hardware for continuous tracking of operational vibration and temperature data.

Precision-Ground Raceway Machining:

Manufactured to exact dimensional tolerances to minimize rolling friction, decrease operational vibration, and lower continuous heat generation.



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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