

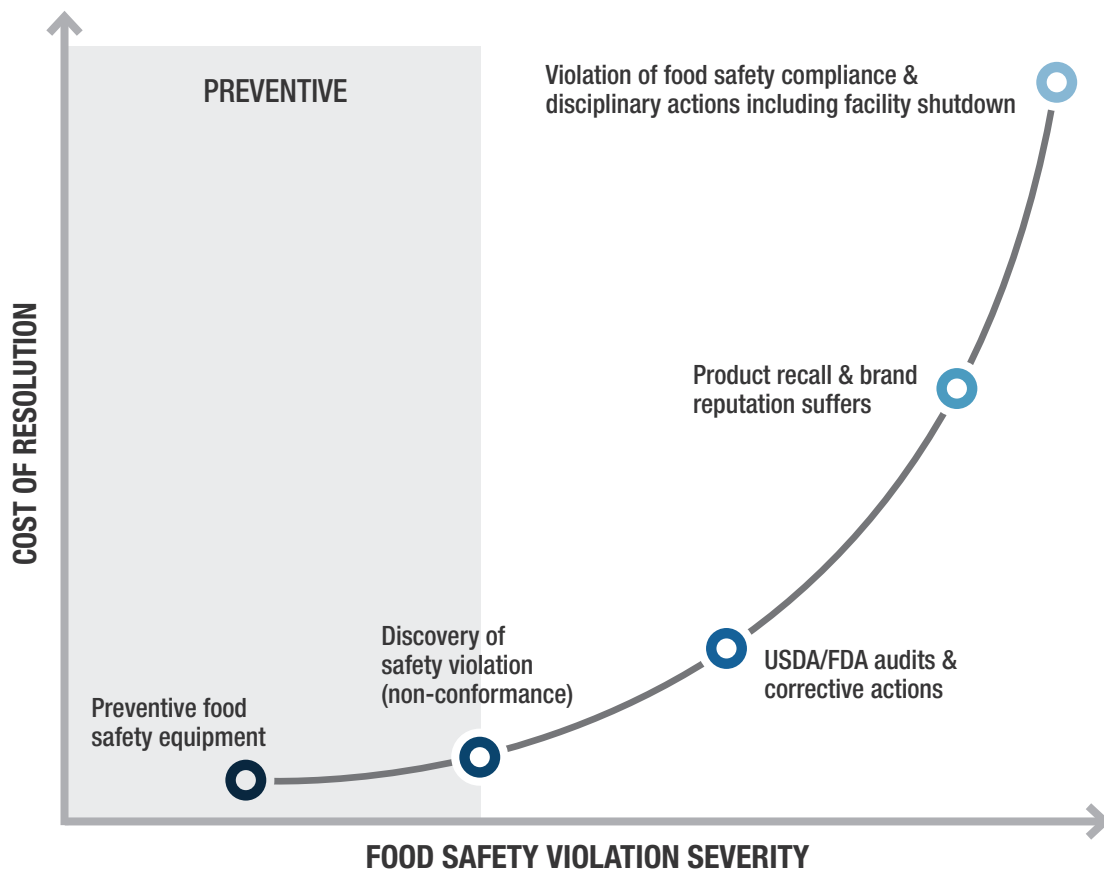
FOOD &
BEVERAGE
INDUSTRY

BALDOR
A MEMBER OF THE ABB GROUP

FOOD SAFETY

For Electrical and Mechanical Components

All food processing equipment should be designed, used, and maintained with food safety principles in mind. Violations of these practices can cost companies thousands, if not millions, to resolve. It is important that companies consider not only the initial purchase price, but also the Total Cost of Ownership (TCO), including the cleanability and reliability of the equipment, provided by suppliers who understand the principles of sanitary design. Industry leading Dodge® mechanical and Baldor-Reliance electrical products help ensure the highest level of food safety, reliability and performance in the food industry.



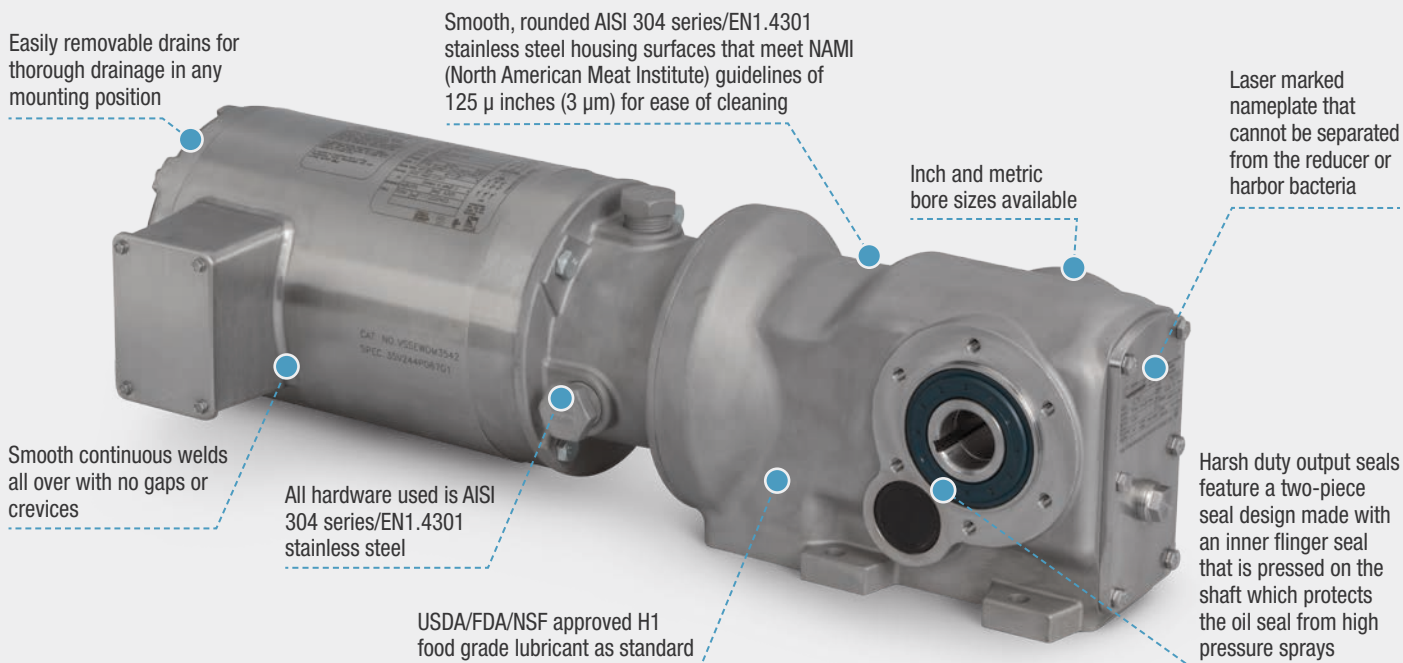
FOOD SAFETY SOLUTIONS

DESIGNED FOR SAFETY IN FOOD APPLICATIONS

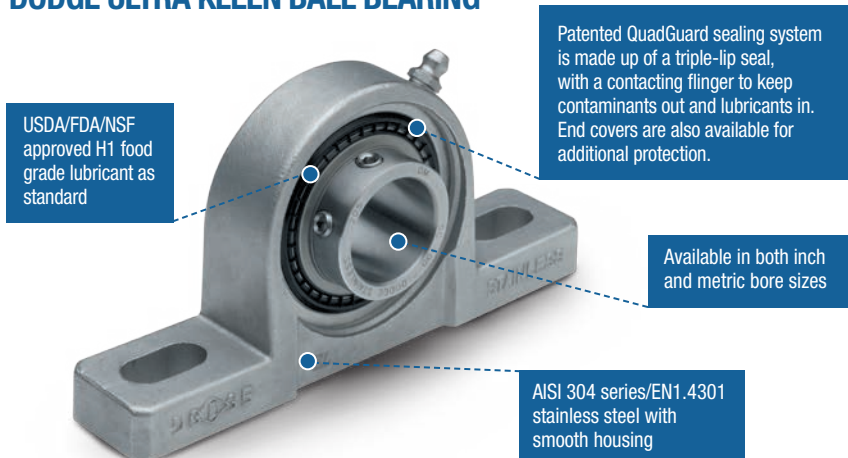
Our products are engineered to meet, or exceed, stringent food safety guidelines and recommendations. These sanitary design principles ensure that our products provide the best solution for all harsh washdown conditions.

A critical factor that influences performance and product life is the quality of the food contact surface. All Baldor-Reliance SSE motors and Dodge® Ultra Klean® products feature AISI 304 series/EN1.4301 stainless steel that can withstand caustic, high pressure, and high temperature (176°F/80°C) sanitary washdown applications.

DODGE ULTRA KLEEN QUANTIS® REDUCER & BALDOR-RELIANCE SSE GEARMOTOR PACKAGE



DODGE ULTRA KLEEN BALL BEARING



Dodge Ultra Klean all stainless steel enclosed gearing, mounted bearings and Baldor-Reliance motors outperform competitive products that use coatings or aluminum parts. Stainless steel material, smooth housing design, food grade lubricants, and the ultimate sealing system, make these washdown products the premier choice in food safety.

BALDOR-RELIANCE WASHDOWN DUTY MOTORS

The Industry Standard in Food & Beverage



Prior to investing in the people, equipment, and material required to produce Baldor-Reliance washdown duty motors, we invested our time and attention to listen to equipment designers, operators, and plant maintenance engineers. We took note of their specific requests and incorporated them into our product capabilities and characteristics.

30 years have passed, but we still continue to incorporate customer input as food and beverage demands change.

Customers continue to expect better performance and reliability from their equipment. We accomplished this by adding features such as an improved paint system, Class F insulation with Class B (or lower) temperature rise, Mobil Polyrex® EM grease, customer-friendly drain plugs and premium shaft seals.

Baldor-Reliance washdown motors are designed for long lasting performance in the harsh environments of the food and beverage industry.



Baldor-Reliance washdown duty motors provide easy cleaning and reliable life for the food and beverage processing industry.

CLEANABILITY, RELIABILITY AND AVAILABILITY MAKE BALDOR-RELIANCE WASHDOWN DUTY MOTORS THE BEST VALUE.



BALDOR-RELIANCE WASHDOWN DUTY MOTORS



All Baldor-Reliance food grade washdown duty motors are rated NEMA Premium®

SSE SUPER-E® ENCAPSULATED STAINLESS MOTOR

- NEMA Premium (56C-215TC)
- TEFC & TENV
- 1/2 – 15HP & 1/2 – 3HP
- C-Face, foot-mounted, and footless
- Class H insulation
- Inverter rated
- Welded conduit box
- Smooth body surface
- IP69K for water
- 230/460 volts, 575 volts
- Three-phase
- Triple sealed bearing



STAINLESS STEEL WASHDOWN DUTY MOTOR

- NEMA Premium (56C – 256TC)
- TEFC & TENV
- 1/3 – 20HP
- C-Face, foot-mounted, and footless
- Inverter rated
- Labyrinth seals
- Smooth body surface
- 230/460 volts, 575 volts



PAINT FREE WASHDOWN DUTY MOTOR

- NEMA Premium (56C – 215TC)
- TEFC & TENV
- 1/2 – 10HP
- C-Face, foot-mounted, and footless
- Inverter rated
- Labyrinth seal
- No painted surfaces
- 230/460 volts



WHITE WASHDOWN DUTY MOTOR

- NEMA Premium (56C – 256TC)
- TEFC & TENV
- 1/3 – 20HP
- Standard foot-mounted, C-Face, foot-mounted, and footless
- Inverter rated
- Improved exterior paint, 300 series stainless steel shaft, hardware and nameplate
- Easily removable drain plugs, neoprene gaskets and sealers
- Lip & v-ring seal on DE
- 230/460 volts, 575 volts



BALDOR-RELIANCE SSE STAINLESS STEEL SUPER-E® MOTOR

PREMIUM SOLUTION FOR HIGH PRESSURE WASHDOWN

TENV vs TEFC motors

— Where feasible, TENV motors reduce potential for food and debris to collect by eliminating fan and fan cover.



Polypropylene external fan — Impervious to cleaning agents and other caustic solutions.

Maintenance-friendly drains — Four condensation drain holes on each end of motor allow for thorough drainage in any mounting position. Stainless screw-in plugs can be removed or relocated as needed for optimal drainage.



Welded conduit box — Welded to the frame to provide a leak-proof seal.

Lipped conduit box lid — Prevents water from entering.

Neoprene rubber gasket on conduit box — Ensures a tight, waterproof seal.

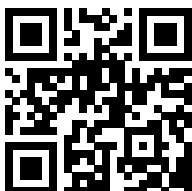
Oversized conduit boxes — Exceed NEC standards; make connections easier.

Waterproof connectors — Heat shrink sealed closed-end connector kit provides leak-proof connections.

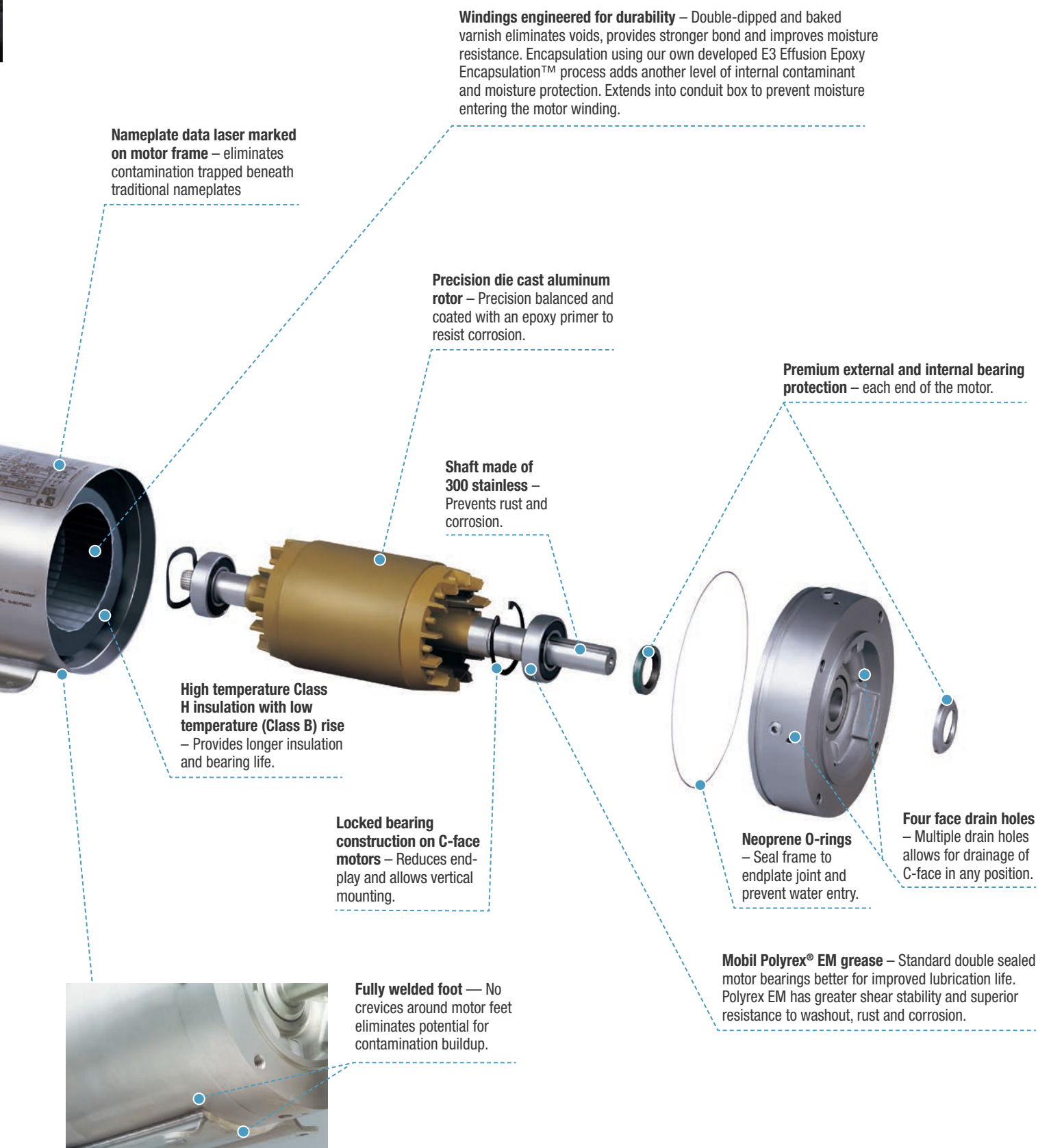
Multiple foot mounting holes — Makes motor change-out easy.



IP69K Rated



Super-E design with NEMA Premium® efficiency for low electricity use. Approved by UL E46145 and CSA LR2262 files. Complies with North American related directives as well as RoHS and WEEE directives.



DODGE® WASHDOWN ENCLOSED GEAR REDUCERS

The Best Sealing Technology in the Industry



How do you know if the gear reducers in your plant were designed to withstand the Clean in Place (CIP) procedures used to sanitize food processing equipment? The International Electrotechnical Commission (IEC) has defined an ingress protection code for enclosures called IP69K, which address actual CIP procedures utilizing high pressure, high temperature, close-range washdowns.

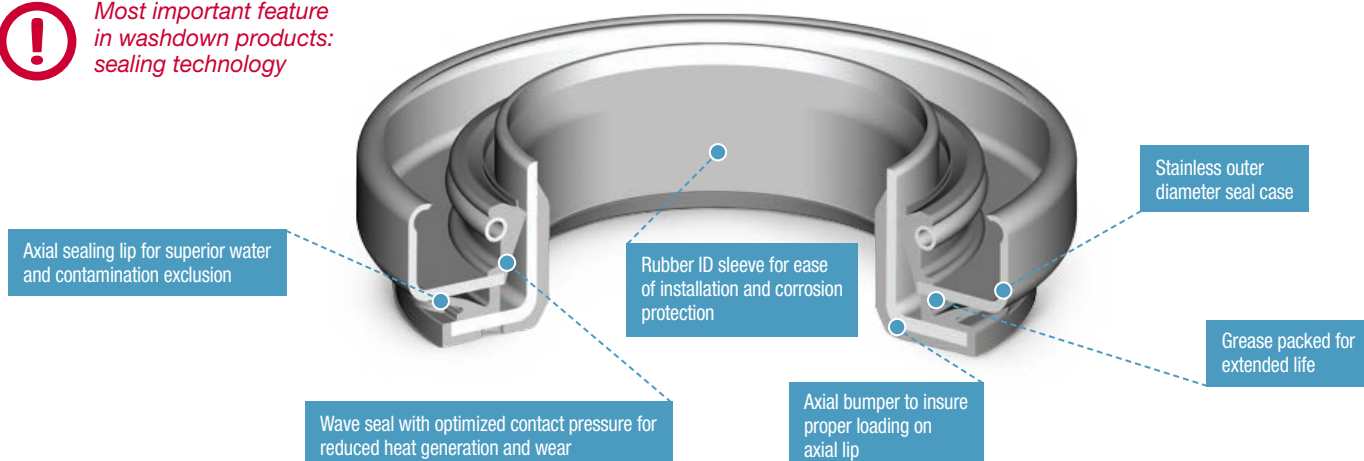
Dodge Ultra Klean® Quantis® and Tigear®-2 reducers have been designed, tested and certified to meet IP69K requirements for water protection. With an all stainless steel construction and the toughest sealing in the industry, Dodge products lead the industry at keeping contaminants out, lubricant in, and providing the longest life.



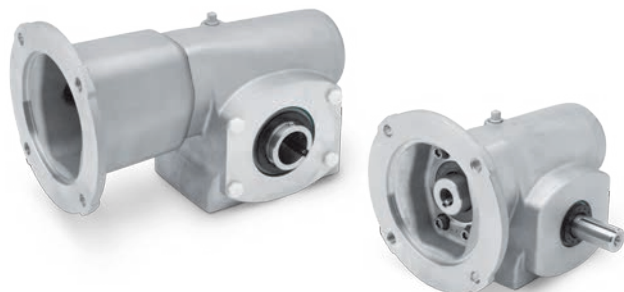
TWO-PIECE HARSH DUTY WASHDOWN SEAL



*Most important feature
in washdown products:
sealing technology*

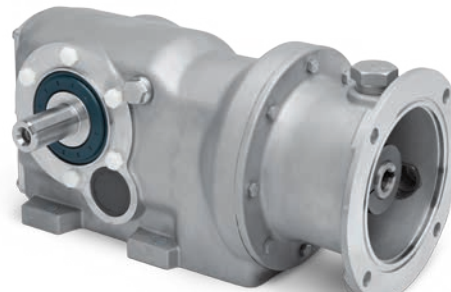


QUANTIS® & TIGEAR®-2 GEAR REDUCERS



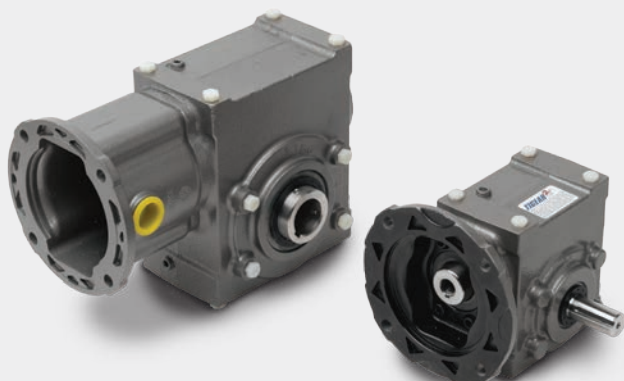
ULTRA KLEEN® TIGEAR-2

- Smooth AISI 304 series stainless steel housing
- Standard two-piece harsh duty seal
- Factory-filled USDA/FDA compliant H1 food grade synthetic oil
- Available with either quill style or 3-piece coupled NEMA Premium® C-face inputs
- Solid or hollow output shaft configurations
- Ratios 5:1 - 60:1
- Output torque capacity up to 2,400 lb-in
- Suitable for temperatures -9°F to 104°F (-23°C to 40°C)
- Available in 5 frame sizes
- Laser marked nameplate



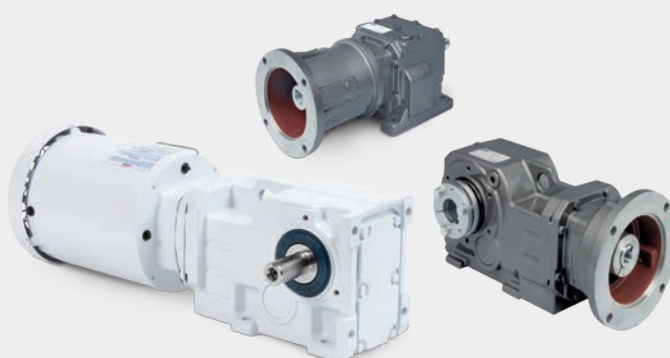
ULTRA KLEEN QUANTIS

- Smooth AISI 304 series stainless steel housing
- Standard two-piece harsh duty seal
- Factory-filled USDA/FDA compliant H1 food grade synthetic oil
- Totally enclosed, no paths for contamination
- Available in sizes 38 and 48 right angle bevel (RHB)
- Solid or hollow output shaft configurations
- Ratios up to 179:1
- Output torque capacity up to 4,000 lb-in
- Suitable for temperatures -25°F to 106°F (-31°C to 41°C)
- Laser marked nameplate
- 95% efficient



E-Z KLEEN® TIGEAR-2

- 13 step coating system provides 3x the corrosion resistance of epoxy paint
- Standard two-piece harsh duty seal
- Factory-filled USDA/FDA compliant H1 food grade synthetic oil
- Available in quill style or 3-piece coupled NEMA C-face input
- Solid or hollow output configurations
- Output torque capacity up to 6,845 lb-in.
- Suitable for temperatures -9°F to 104°F (-23°C to 40°C)
- Available in 8 frame sizes
- Laser marked nameplate



E-Z KLEEN QUANTIS

- 13 step coating system provides 3x the corrosion resistance of epoxy paint
- Standard two-piece harsh duty seal
- Factory-filled USDA/FDA compliant H1 food grade synthetic oil
- Available in sizes 38, 48, 68 and 108 for inline (ILH), right-angle (RHB) and motorized shaft mount (MSM)
- NEMA dimensioned clamp collar or 3 piece coupled
- Ratios up to 7,500:1
- Output torque capacity up to 45,000 lb-in
- Suitable for temperatures -25°F to 106°F (-31°C to 41°C)
- Also available in integral gearmotor design
- Laser marked nameplate
- 95% efficient

DODGE® WASHDOWN MOUNTED BALL BEARINGS

The Best Sealing Technology in the Industry



Ultra Klean® and E-Z Klean® mounted ball bearings for extreme sanitary washdown applications



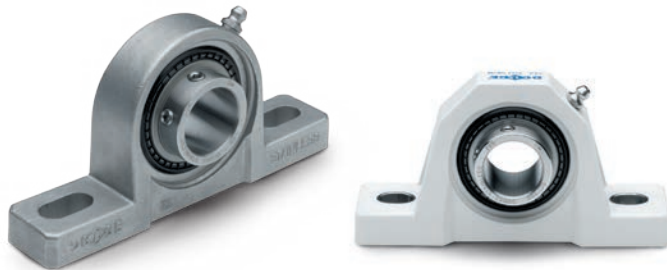
Dodge Ultra Klean and E-Z Klean ball bearings are designed specifically for the food and beverage industry, and meet FDA standards for incidental food contact per regulations FDA 21 CFR 175.300. These products offer an array of features that provide extended life in these challenging conditions.

Dodge bearings are the only bearings in the industry to offer a patented triple-seal, plus a rubberized flinger called the QuadGuard sealing system. These units also include an exclusive ball retainer called the Max Life cage that helps retain food-grade lubricants and prevents washout in wet environments.

Combine these features with a complete line of stainless and polymer housing offerings, with optional concentric and adapter mounting options, and you have a family of mounted ball bearings that are unsurpassed in the industry.



ULTRA KLEEN® MOUNTED BALL BEARINGS



- Available in stainless or reinforced polymer housing
- 100% stainless steel insert
- Factory-filled H1 USDA/FDA/NSF compliant food grade grease
- Patented QuadGuard sealing system
- Max Life cage that extends bearing life
- Operating temperature range -40°F to 180°F (-40°C to 82°C)
- 3/4" to 2" (20mm to 50mm) bore sizes
- 65° set screws provide maximum locking force
- Optional snap-on end covers

PATENTED POLYMER FORMULATION

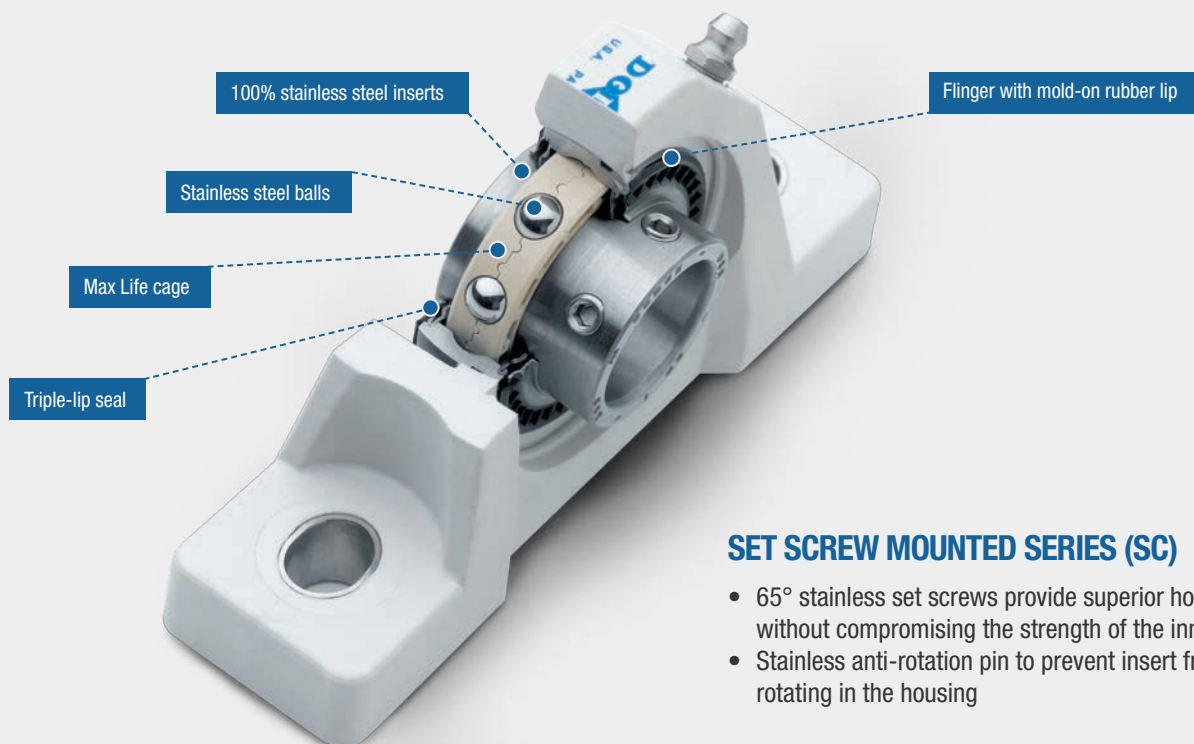
- Features an anti-microbial agent which resists bacterial and fungus growth
- Smooth solid cross-section base housings
- No core cavities to trap contaminants
- Features a molded, reinforced grease zerk; preventing separation from the polymer housing



Dodge® polymer housings feature a smooth, solid base



Competitive bearing with cavities and fillings that can trap bacteria



SET SCREW MOUNTED SERIES (SC)

- 65° stainless set screws provide superior holding force without compromising the strength of the inner ring
- Stainless anti-rotation pin to prevent insert from rotating in the housing

DODGE® BALL BEARING PRODUCTS

E-Z Kleen® Ball Bearings

GRIP TIGHT®



D-LOK



SET SCREW



- Available in stainless steel or reinforced polymer housing
- Corrosion resistant insert has a patented nickel alloy composite coating
- Factory-filled H1 USDA/FDA/NSF compliant food grade grease
- Patented QuadGuard sealing system
- Max Life cage that extends bearing life
- Operating temperature range -40°F to 180°F (-40°C to 83°C)
- 3/4" to 2" (20mm to 50mm) bore sizes
- Offered in adapter mount (Grip Tight), concentric collar (D-LOK), and set screw (SC) locking mechanisms
- Optional snap-on end covers

The Dodge E-Z Kleen corrosion resistant (CR) insert outperforms other coatings in the market today such as black oxide, zinc, and thin dense chrome (TDC). Tests have proven that the Dodge CR insert exhibited a 300% longer bearing life than a typical TDC coated insert. The Dodge CR insert maintains its full load capacity, whereas stainless steel inserts must be de-rated.

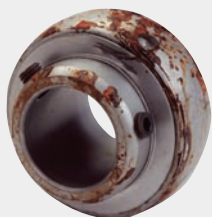
24 HOUR SALT FOG TEST RESULTS:



Dodge corrosion resistant insert



Black oxide



Zinc plating



Thin Dense Chrome (TDC)

DODGE® METAL DETECTABLE END COVER

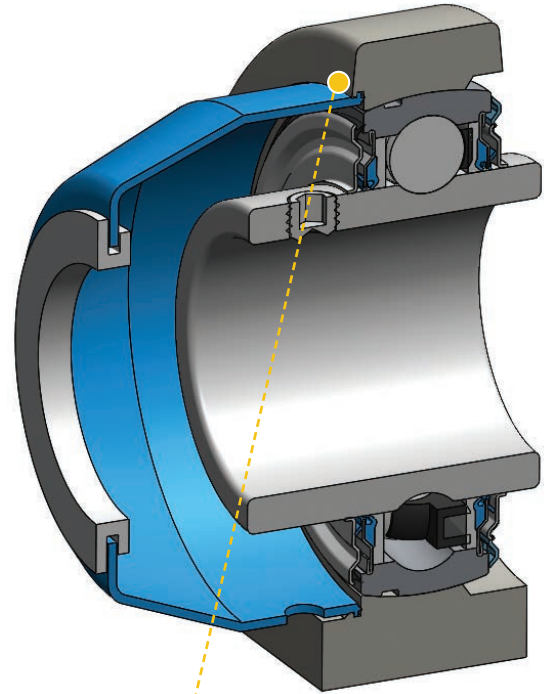
FEATURES:

- Made from a metal-detectable patent-pending polyethylene material containing stainless steel
- Easily visible blue color for quick inspection
- Snap on style providing easy installation and rigid performance in washdown applications and fit all Dodge E-Z Kleen® and Ultra Kleen® mounted ball bearings
- Ideal for meat-processing industry where metal detection equipment is used



DODGE METAL DETECTABLE END COVERS:

- Include a drain hole to prevent moisture from collecting inside the cover
- Incorporate an additional lip on the mounting surface for a more rigid fit within the housing that creates a better seal and reduces the chances that the cover will get knocked off during operation or high pressure cleaning
- Provide positive sealing in wet environments
- Create a safer working condition by covering exposed, rotating shafts



Extended lip provides a secure fit and positive sealing

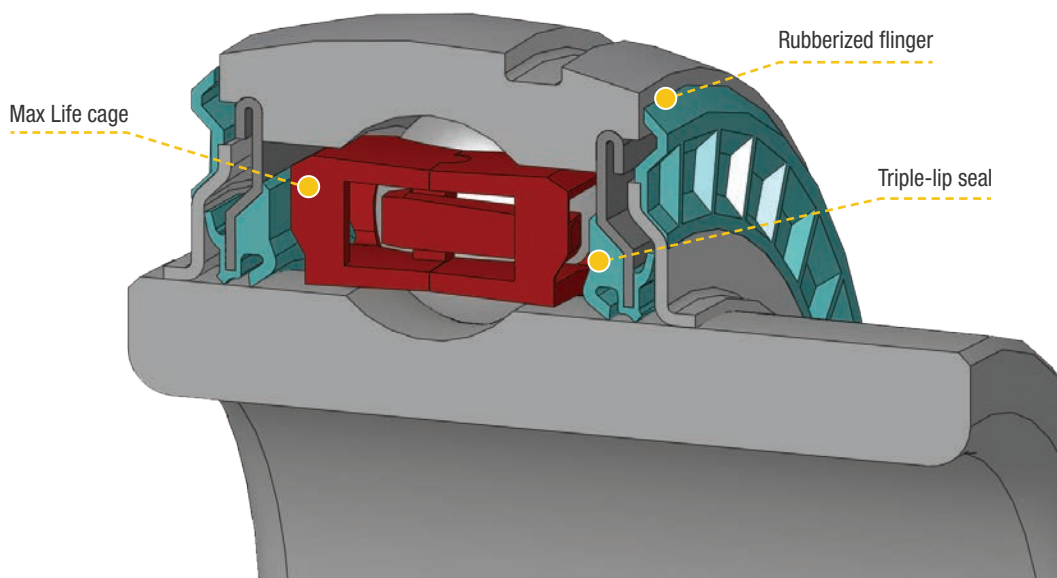
DODGE® WASHDOWN BEARING FEATURES

For Increased Reliability

PATENTED QUADGUARD SEAL

Our patented sealing system is made up of a triple-lip seal and a rubberized contact flinger creating four points of protection. This superior design keeps contaminants out and grease in, increasing service life in severe washdown conditions.

- Mechanically retained seal with two contact points on the inner rings and one that rides against the flinger surface
- Rubberized flingers provide external protection, discarding contaminants as it rotates
- Internal grease chambers keep lube in the race surrounding the rolling elements

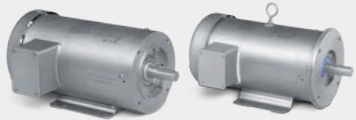


MAX LIFE CAGE

Industry leading two-piece design that creates a constant grease compartment around each of the rolling elements.

- Compartments provide constant contact between balls and grease to prevent wear and minimize friction
- Holds in the grease to prevent it from being washed out during high pressure cleaning
- Extends bearing life with lower frequency of re-lubrication versus standard designs



	EXTREME SANITATION Ideal for meat and poultry processing, dairy and other equipment that goes through severe washdown conditions	MODERATE SANITATION Ideal for food processing equipment that has light-duty washdown	DRY OR DIRTY Ideal for packaging or dry areas, as well as bottling lines. Also used in outdoor environments such as grain and sugar processing
MOUNTED BEARINGS	 Ultra Kleen® all stainless bearing in stainless or polymer housing	 E-Z Kleen® corrosion resistant bearing in a stainless or polymer housing	 Standard or extreme duty
GEARING	 Ultra Kleen Stainless Quantis® Ultra Kleen Stainless Tigear®-2	 E-Z Kleen Quantis E-Z Kleen Tigear-2	 Standard Quantis Standard Tigear-2
MOTORS	 SSE Stainless Steel Encapsulated Stainless Steel	 Paint Free White Washdown	 Severe Duty General Purpose

MISSION

Our mission is to be the best (as determined by our customers)
marketers, designers and manufacturers of industrial electric motors,
drives and mechanical power transmission products

Taking care of our customers safely



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