

DODGE® MOUNTED BEARINGS For more than 120 years, DODGE® has been one of the leading suppliers of power transmission products and system components in the world. Today, as a business unit of Rockwell Automation, we utilize our global resources to ensure that bearing users throughout the world have access to the highest quality and best selection of mounted bearings in the industry.

The name DODGE has become synonymous with the best the industry has to offer. Competing on an international basis, DODGE continuously strives to create the world's most successful customers and suppliers. We focus our primary efforts on the aggregates, food, mining, forest products, and transportation industries. We also work hand-in-hand with unit handling, air handling, and environmental applications. This industry expertise is backed by dedicated, professional sales and application engineers. Experts who are at your service with proven ideas that can extend life, reduce maintenance costs, and increase uptime.

With DODGE, bearing users not only benefit from high-performance products, but from value-added service that is committed to total customer satisfaction and quality throughout every aspect of our operation. Manufacturing plants in the US, Mexico, and Germany employ ISO 9002 quality measures, performance-based employee training, and partnering supplier development techniques to ensure quality at the lowest possible cost. All DODGE mounted bearing products are backed by our worldwide distribution system and our highly trained and experienced technical sales team.

Manufacturing Locations (US & Mexico)

Mishawaka, IN
Columbus, IN (REEVES)
Columbus, IN (MASTER)
Rogersville, TN
Asheville, NC
Greenville, SC
Seattle, WA
Belton, SC
Marion, NC
Guadalajara, Mexico

International Sales

Canada
Mexico
United Kingdom
Germany
Singapore
Australia
China
Chile

Distribution Facilities

Main:

Crossville, TN

Regional:

Atlanta, GA
Dallas, TX
Los Angeles, CA
Philadelphia, PA
Reno, NV

International:

Edmonton, Canada
Montreal, Canada
Toronto, Canada
Guadalajara, Mexico
Monterrey, Mexico
Mexico City, Mexico
Telford, UK
Annecy, France
Elztal-Dallau, Germany

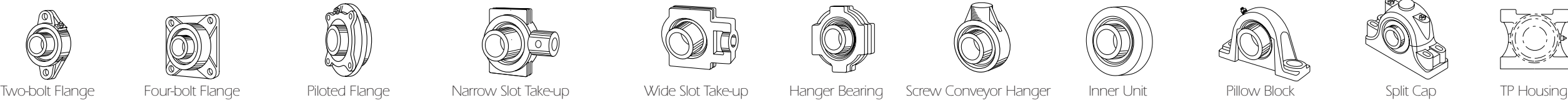
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Each section will indicate what housings are available by showing the appropriate icon.

Each bearing type will have a value chart that provides you with a scale of how each DODGE product relates in value to the DODGE SCM ball bearing. 100 is our standard reference for the SCM, so, for example, if a bearing has a number higher than 100 it has more capability than the SCM. For example, speed or load or cost more, i.e. price. If the number is less than 100, the opposite is true. All these factors are for general use. They may vary depending on size.



MOUNTED BALL BEARINGS & LOCKING DEVICES BALL

When it comes to reliable service and low maintenance, DODGE mounted ball bearings are unmatched in the industry. All DODGE mounted ball bearings are available with either of three proven locking devices: our exclusive 65° setscrew locking collars, our eccentric locking collars, or our D-LOK™ system.



Simplified Anti-rotation Pin

- Prevents rotation of outer race within housing
- Makes inserts easier to replace; eliminates removal and replacement of grease fittings, location pins, or other devices

Reinforced, Stabilized Nylon Cage

- Made of heat-stabilized nylon with 33% fill short fiberglass reinforcement for added strength
- Provides longer life under misalignment
- Allows higher operating temperatures than plain nylon
- Resists fatigue better than metal cages



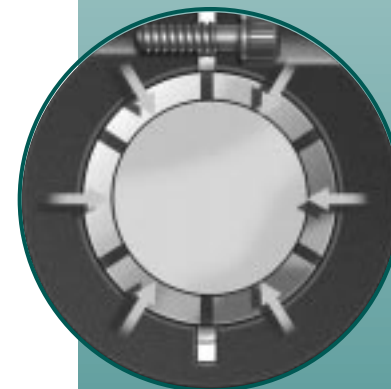
Precision-hardened and Honed Inner and Outer Rings

- Resist cracking and breaking
- Provide superior shock load absorption
- Offer greater wear resistance, quieter operation, and longer life



65° SETSCREW LOCKING COLLAR

- Features unique 65° spacing for setscrews
- Offers optimum balance between locking force and inner ring stress



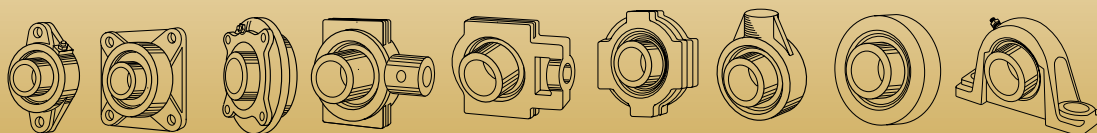
D-LOK CONCENTRIC CLAMP COLLAR

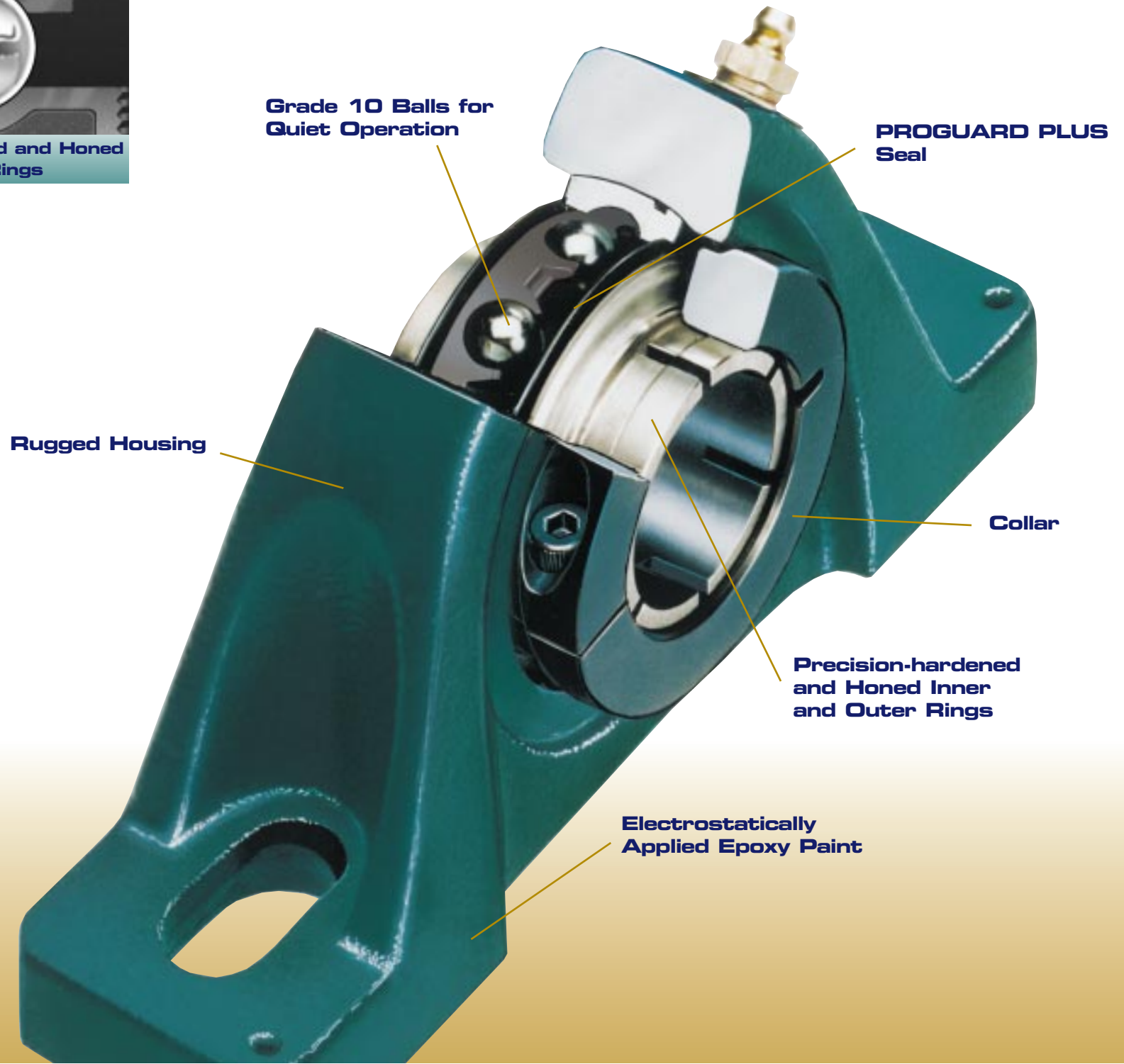
- Features single standard hex head cap screw and relief slot
- Generates greater holding power over competitive products
- Installs over slotted inner ring, locks bearing on shaft concentrically — without marring or burring
- Provides 360° clamping force to shaft with minimal run out (T.I.R.) for less vibration



ECCENTRIC LOCKING COLLAR

- Secures in place with a single setscrew

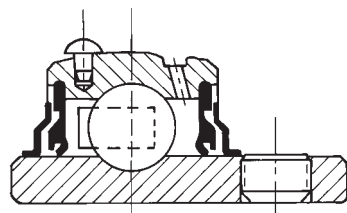




SEALS

MOUNTED BALL BEARING

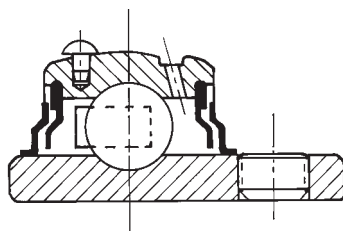
To ensure long bearing life — even in the harshest environments — DODGE offers superior sealing technology.



PROGUARD PLUS

PROGUARD Plus Seal

- Flingers form tight labyrinth with the PROGUARD Seal
- Provides added protection against contaminants and debris



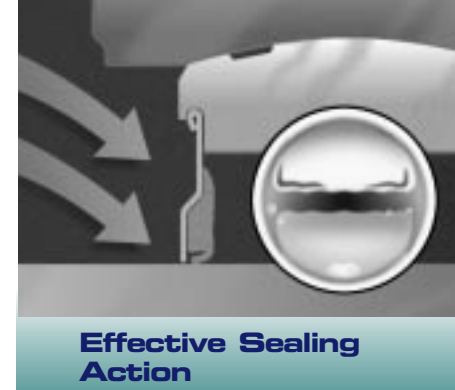
Low-torque Labyrinth

Low-torque Labyrinth

- No seal drag, no friction
- Provides added protection against contaminants and debris

PROGUARD Seal

- Features highly effective contact land-riding seal
- Constructed with steel shield that is mechanically anchored in outer ring to resist blow out during lubrication
- Assures uniform lip contact with inner ring
- Keeps contaminants out, lubricants in



Effective Sealing Action



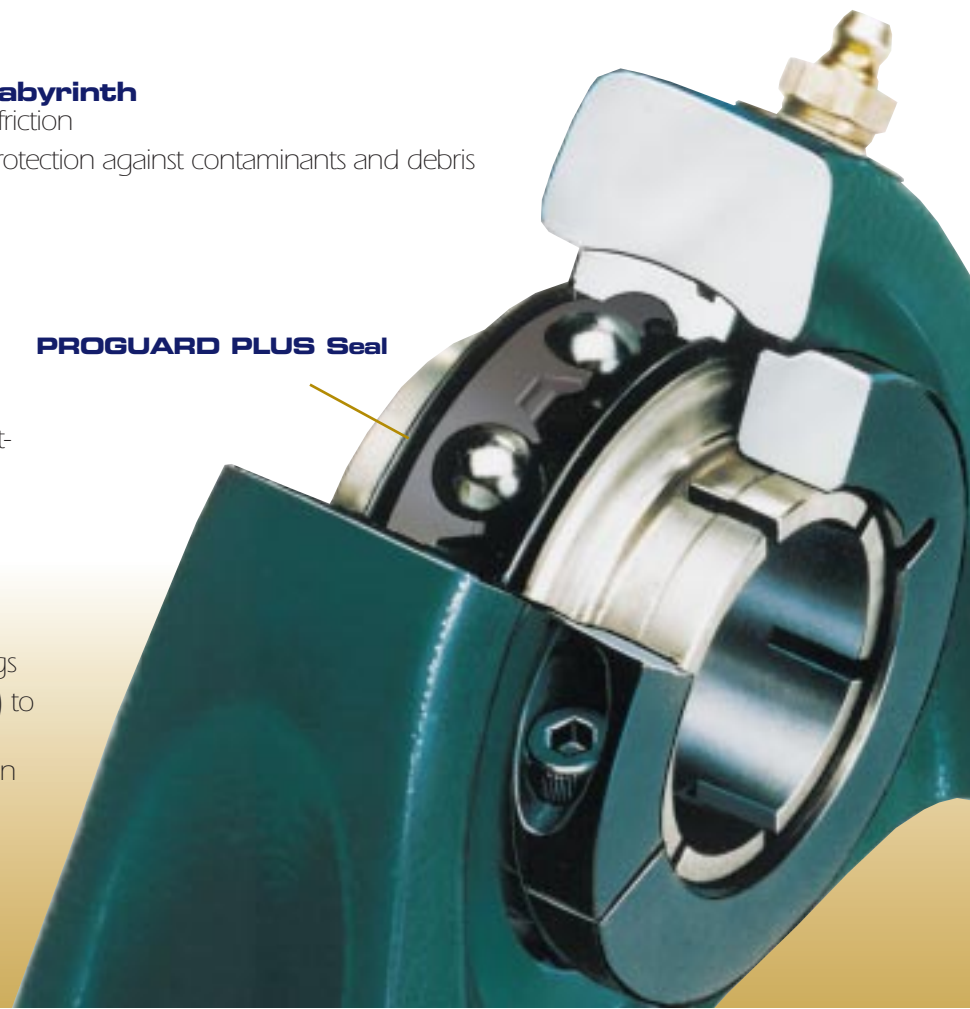
Ball Bearing End Cover

END COVERS

DODGE also offers a new series of injection-molded, impact-resistant end covers.

- Manufactured in OSHA safety yellow
- Fit all styles of DODGE cast-iron-housed ball bearings
- Meet requirements for exposed rotating shafts
- Feature stainless-steel “C” washer for gripping power
- Require no modification or machining for existing housings
- Constructed with concentric knockout grooves (on inside) to accommodate thru-shaft applications
- Embossed inside with six-digit part number and description
- Operate in temperatures up to 275°F

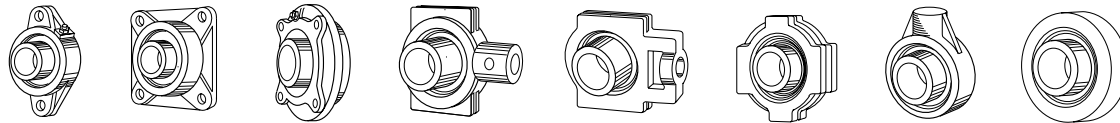
PROGUARD PLUS Seal



HOUSINGS

MOUNTED BALL BEARING

A wide variety of housing styles are available from DODGE. These include pillow blocks, flange bearings, take-ups, and hanger bearings. SC nickel-plated and E-Z KLEEN® bearings are available from stock. For light-duty applications, DODGE offers the formed steel SL and SLX line.



Mounted Ball Bearings

Description	Setscrew Family	D-LOK Family	Eccentric Collar Family
Pillow Blocks	1/2 - 3-1/2 17 - 85 mm	3/4 - 3-7/16 20 - 70 mm	1/2 - 2-15/16 17 - 75 mm
Piloted Flange	1 - 3-1/2 25 - 85 mm	1-1/8 - 2-7/16 30 - 70 mm	—
2, 3, and 4-bolt Flanges	1/2 - 3-1/2 17 - 85 mm	3/4 - 2-11/16 20 - 70 mm	1/2 - 2-15/16 17 - 75 mm
Take-up Bearings	1/2 - 2-15/16 20 - 75 mm	1-7/16 - 1-15/16	3/4 - 2-15/16
Hanger	1-1/16 - 2	—	1-1/16 - 2
Screw Conveyor Hanger Brg	1-3/16 - 3-1/2	—	1-1/2 - 2-7/16
Cylindrical Unit	7/8 - 1-7/16	—	7/8 - 1-7/16
Seals	Land-riding Contact	Land-riding Contact with Flingers	Land-riding Contact
Seal Options	Yes	Yes	Yes

Value Factors	SC	SCM	DL	DLM	SXR
Price	100	125	128	159	109
Speed	100	89	100	89	100
Load	100	126	100	126	100
Thrust	100	115	83	98	89
Temperature	100	100	100	100	100
Cap Load	100	114	105	119	100
Expansion	Yes	No	Yes	No	Yes

Factors may vary depending on size.

E-Z KLEEN[®]

MOUNTED BALL BEARINGS

E-Z KLEEN Polymer-housed Ball Bearings

- Designed for harsh operating environments in food and beverage industries
- Feature injection-molded, solid housings with no cavities and no fillings
- Manufactured with anti-microbial polymer that prevents bacterial and fungal growth
- Withstand repeated washdowns without cracking, flaking, peeling, or chipping

Polymer Housing

- A rugged, compact polymer housing is used in DODGE E-Z KLEEN ball bearings
- Stainless steel lube fitting
- Resists oxidation
- Provides "non-stick" surface for food industry
- Features stainless-steel ferrules in bolt holes
- Conforms to FDA/USDA specifications

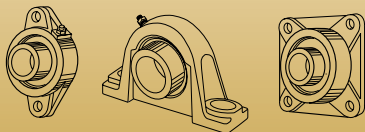
Insert Options

- 65° setscrew
- D-LOK concentric clamp collar
- Polymer sleeve

Applications

- Meat processing and packaging ▪ Dairy products
- Bottling ▪ Canning ▪ Vegetable and fruit processing
- Frozen foods ▪ Pharmaceutical and cosmetic industries

Ring Size	Shaft Size (inches)	Metric Size (mm)
204	3/4	20
205	1	25
206	1- 3/16, 1-1/4	30
207	1-1/4, 1-7/16	35
208	1-1/2	40
209	1-11/16	45
210	1-15/16	50





E-Z KLEEN Polymer-housed Ball Bearing
— No Cavities, No Fillings

Results of Housing Anti-microbial Activity Against Test Organisms

Test Organism	Type of Organism	Growth-free Zone (mm)	Contact Inhibition (%)
Staphylococcus aureus	Bacterial	0	100
Aspergillus niger	Fungal	0	100

E-Z KLEEN Polymer-housed Polymer Sleeve Bearing — No Lubrication Required

- All polymer and stainless-steel construction
- Operates in cold and wet environments
- Resists fungal and bacterial growth
- Resists corrosion and abrasion
- Conforms to FDA/USDA specifications
- Designed with quiet operating characteristics for excellent sound dampening
- Offered in a wide variety of housing configurations and all popular bore sizes
- Operates in subzero ambient temperatures to -40°F

Impregnated Polymer Sleeve Insert

- Self-lubricated polymer sleeve insert for maintenance-free operation
- Domestically manufactured with a blended polymer for excellent chemical resistance
- Ensures good load rating capability and low coefficient of friction
- Requires no thrust washer

Anti-rotation Device

- Locks polymer sleeve insert to housing
- Prevents insert from rotating in housing when unbalanced or eccentric load conditions exist



Polymer Sleeve Bearings

Value Factors	E-Z KLEEN
Price	165
Speed	100
Load	100
Thrust	100
Temperature	100
Cap Load	100
Expansion	No

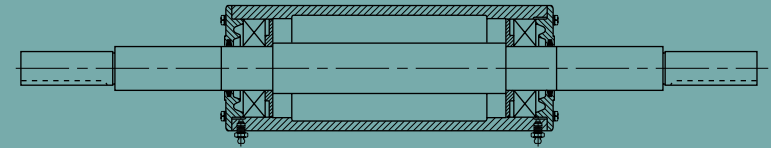
Factors may vary depending on size.

MONO BLOCK

DUPLEX BEARING HOUSINGS

Two-bearing Housing

- Specifically designed for fan and other very high-speed applications
- Features one-piece housing design
- Versions available for two ball bearings or one ball and one cylindrical roller bearing
- Virtually excludes misalignment
- Shaft sizes range from 25 to 140 mm
- Shown below with EZLINK feature for on line temperature and vibration monitoring

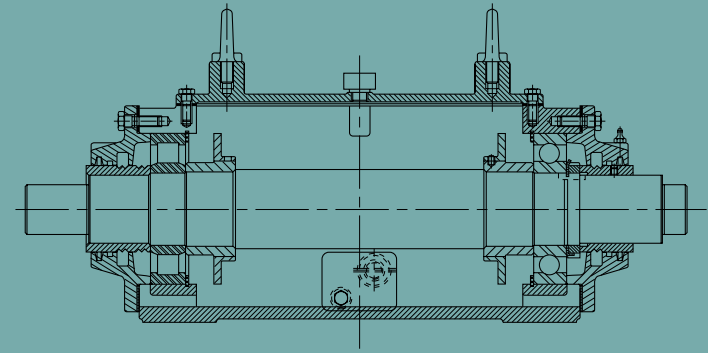


PDNF Housing

- Designed for grease lubrication
- Features internal grease flinger disks fixed on one side of each bearing for grease retention
- Supplied with bearings and shaft
- Can be shipped upon request as a housing assembly less bearing and shaft
- Matches critical dimensions of FAG VR Series and SKF PDN two-bearing housing



G

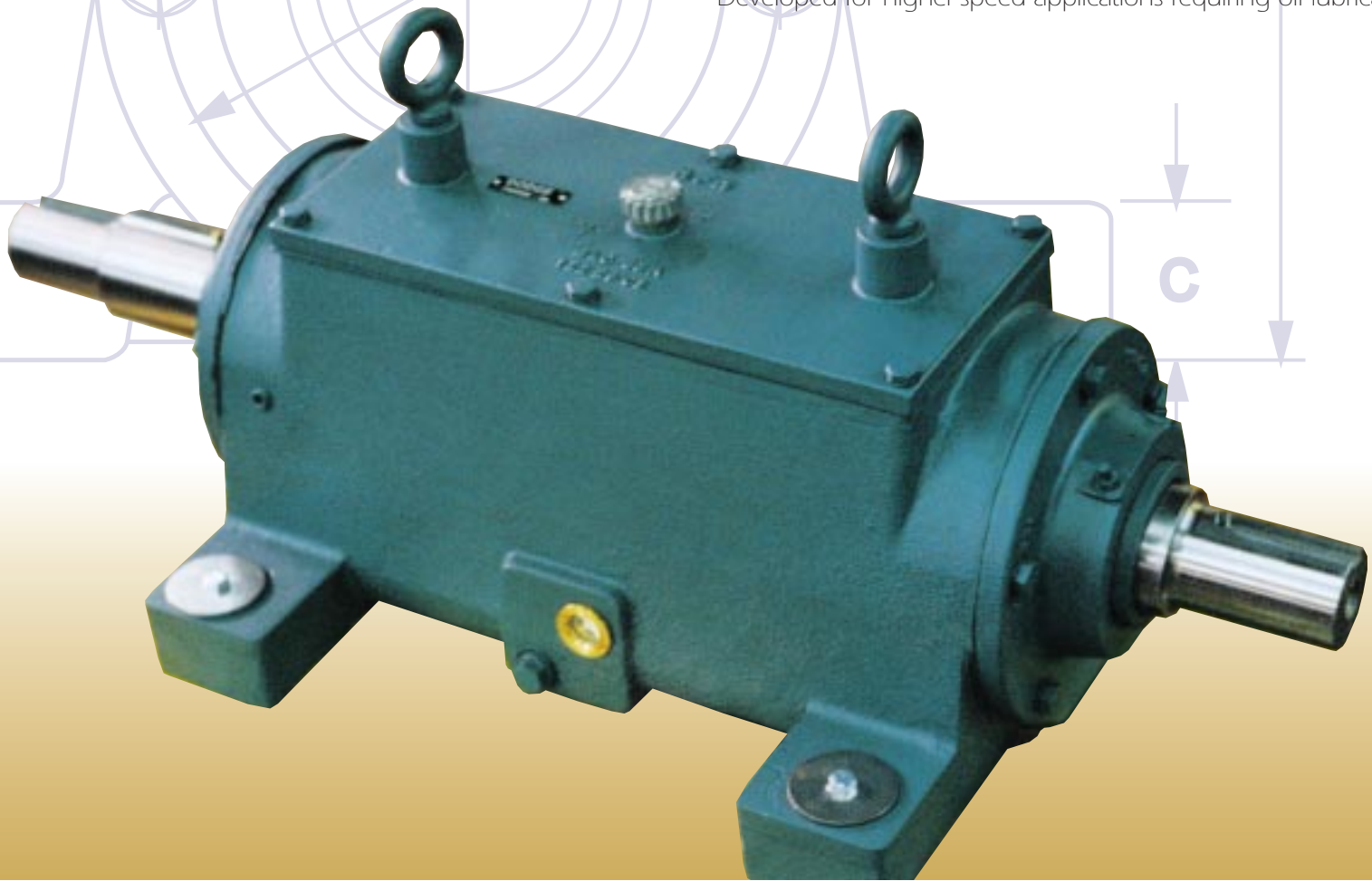


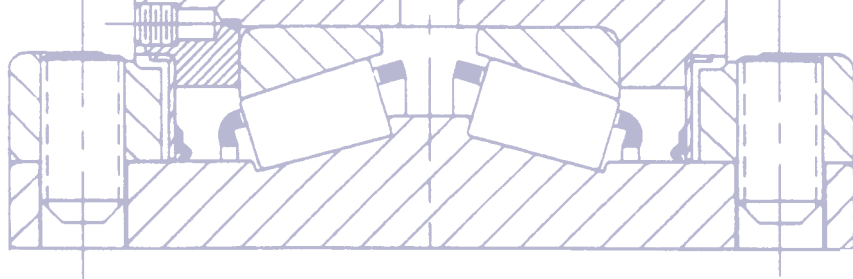
BLO-A Series

- Designed for oil lubrication
- Features internal oil flingers to aid bearing lubrication at high speeds
- Features heavier construction than PDNF two-bearing housing
- Developed for higher-speed applications requiring oil lubrication

H

C





TYPE E

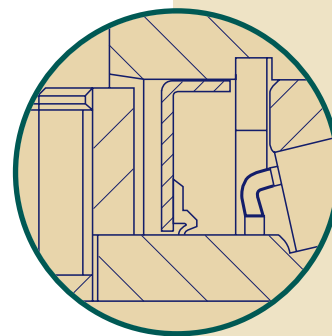
TAPERED ROLLER BEARINGS

Our DODGE Type E bearing family includes the Type E-EXTRA™, DOUBLE-INTERLOCK®, TAF, and Type K bearings. All products in the Type E family offer value-added, user-friendly features.

- High-capacity TIMKEN roller bearings
- Exclusive “R” seal system for improved protection
- Factory adjusted, sealed, and pre-lubricated
- Dual SPRINGLOK® collar mount with 65° setscrews

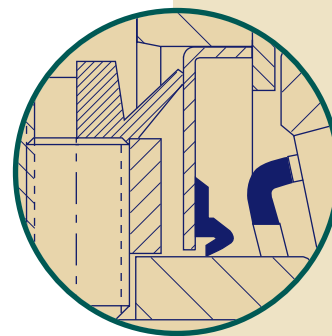


SEAL OPTIONS



“R” Seal

- Protects against contamination in dusty or damp environments
- Performs significantly better than competitive seals
- Includes oversized collar flingers that form a grease dam
- Features seal carrier that rides close to OD of TIMKEN cone



E-TECT Seal Kits

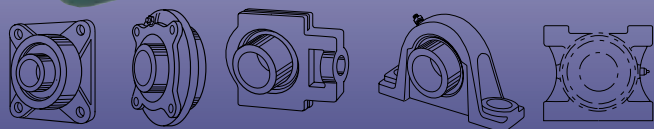
- For use on Type E-EXTRA, DOUBLE-INTERLOCK, Type K, and TAF bearings
- Feature added V-ring seal
- Provide added protection in extremely wet and dirty environments
- Reduce contamination for longer bearing life
- Put flinger collar, V-ring seal, clearance seal, lip seal, and two grease dams between rollers and outside environment

Type E Bearing Configurations

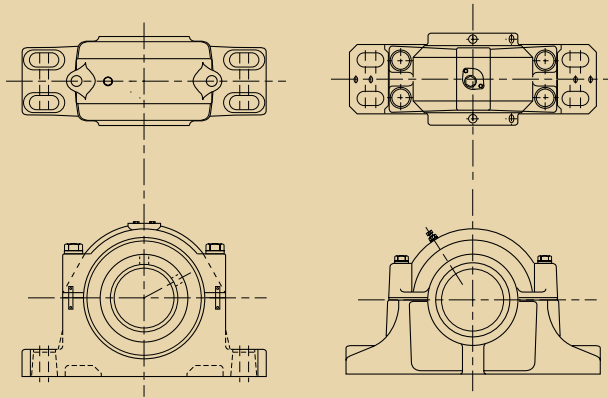
- Two-bolt and four-bolt pillow blocks (1 3/8" - 7", 35 mm - 180 mm)
- Flange (1 3/8" - 4 1/2", 35 mm - 115 mm)
- Piloted flange (1 7/8" - 5", 35 mm - 125 mm)
- Top-angle take-ups (1 3/4" - 4", 45 mm - 100 mm)
- Center pull frame with wide slot take-up bearings (1 3/8" - 3", 35 mm - 75 mm)

Value Factors	Type E
Price	213
Speed	68
Load	457
Thrust	182
Temperature	100
Cap Load	128
Expansion	No

Factors may vary depending on size.



Interchangeable with SAF Key Dimensions



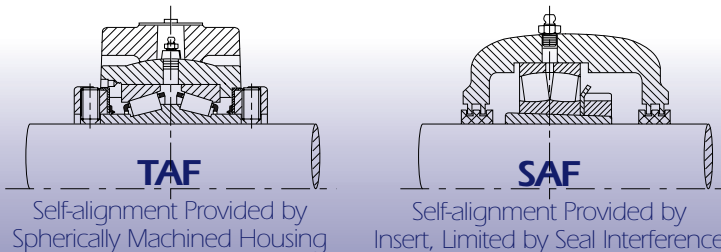
Requires Less Grease

Bore Size	TAF Grease Charge *	SAF Grease Charge *	Grease Saved
2-7/16	2 oz	9 oz	78%
3-7/18	5 oz	21 oz	78%
4-7/16	10 oz	50 oz	80%
4-15/16	15 oz	56 oz	73%

* Initial fill shown.

- Designed with smaller grease cavity
- Aids in prevention of lubrication contamination
- Requires less grease to purge old grease from bearing

Features Self-aligning Capability



- Features precision-fit inner units
- Functions similar to ball-and-socket joint
- Permits seals to ride with the inner unit for complete sealing
- Allows up to $\pm 4^\circ$ of static misalignment

Saves Installation Time

	TAF (in man min)	SAF (in man min)	Time Saved with TAF (in man min)
2-15/16"	13	73	60
4-15/16"	14	100	86

TAF

TAPERED ROLLER BEARINGS

The Cost-saving Alternative to SAF Bearings

DODGE TAF bearings are a proven, cost-saving alternative to SAF spherical bearings with up to 7" bores.

- High strength four bolt cap, with tapped base design
- Expansion and non-expansion housings available

Offer Decreased Mounting Time

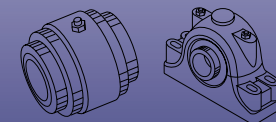
- Mount six times faster than SAF bearings
- Require no striking tools or feeler gauge for on-site clearance reduction
- Feature dual SPRINGLOK collar setscrew mount system
 - Requires only torque wrench for gripping force in excess of load capability
- Utilize optimized setscrew spacing for holding power that exceeds radial capacity
 - 65° setscrew spacing
 - Exclusive "R" seal system
 - Optional E-TECT™ seal kit

Adaptable to Smart Products and EZLINK™

- Incorporate thermocouple, speed sensors, and vibration accelerometers directly to housing
 - Accelerometers avert catastrophic failure
 - Thermocouples assure accuracy of $\pm 0.5^\circ\text{F}$
 - Speed pickups measure lock collar revolutions

Ship Shaft-ready, Simplify Ordering and Handling

- Inner unit fits into outer housing
- Factory sealed, lubricated, and adjusted
- Shipped in a single package (seals, bearings, and locking collars)



Value Factors	TAF
Price	317
Speed	68
Load	457
Thrust	153
Temperature	100
Cap Load	196
Expansion	Yes

Factors may vary depending on size.

DOUBLE-INTERLOCK[®]

TAPERED ROLLER BEARINGS

- Combine tapered roller bearing durability with mounting flexibility
- Feature heavy-duty housing construction for proven performance
- Available with optional corrosion-proof construction
- Optional E-TECT seal for added protection
- Available with special clearances and greases
- Self-aligning
- Factory assembled, adjusted, and lubricated — shaft ready



Pillow Block
1³/₁₆" - 7"

32 mm - 180 mm



Flanges
1³/₁₆" - 5"

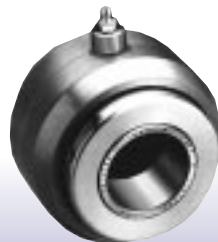
35 mm - 125 mm



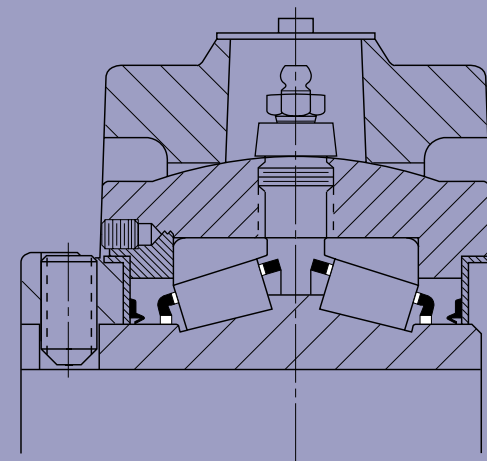
S-1 Unit



B-1 Unit



D Unit

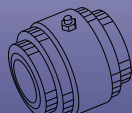
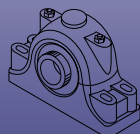
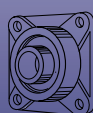


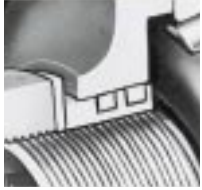
TYPE K

- Fits where others won't
- Specifically designed for small space requirements
- Features single collar inner unit that reduces required shaft length
- Over 10% more narrow than comparable tapered bearings
- Uses same housing as DOUBLE-INTERLOCK bearing
- Available in expansion and non-expansion constructions

Value Factors	DOUBLE-INTERLOCK	Type K
Price	381	403
Speed	68	68
Load	457	457
Thrust	153	153
Temperature	100	100
Cap Load	216	216
Expansion	Yes	Yes

Factors may vary depending on size.





SPECIAL DUTY

TAPERED ROLLER BEARINGS

Special Duty Pillow Blocks

Dual Piston Ring Seals

- Contained within self-aligning inner unit
- Unaffected by misalignment
- Features sealed bearing both on and off shaft (before, during, and after installation)
- Allow extremely close clearances
- Prevent most materials from entering bearing



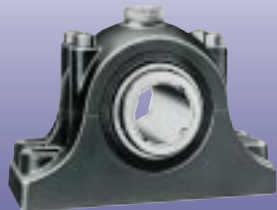
Tapered Adapter Sleeve Mounting

- Features split tapered adapter sleeve extending through entire length of pillow block
- Used to securely fasten bearing to shaft tighter than shorter adapter sleeves
- Uses single adapter nut on sizes 3½" and smaller; two adapter nuts on larger sizes
- Can be used to remove bearing from shaft



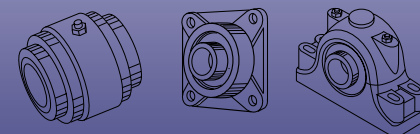
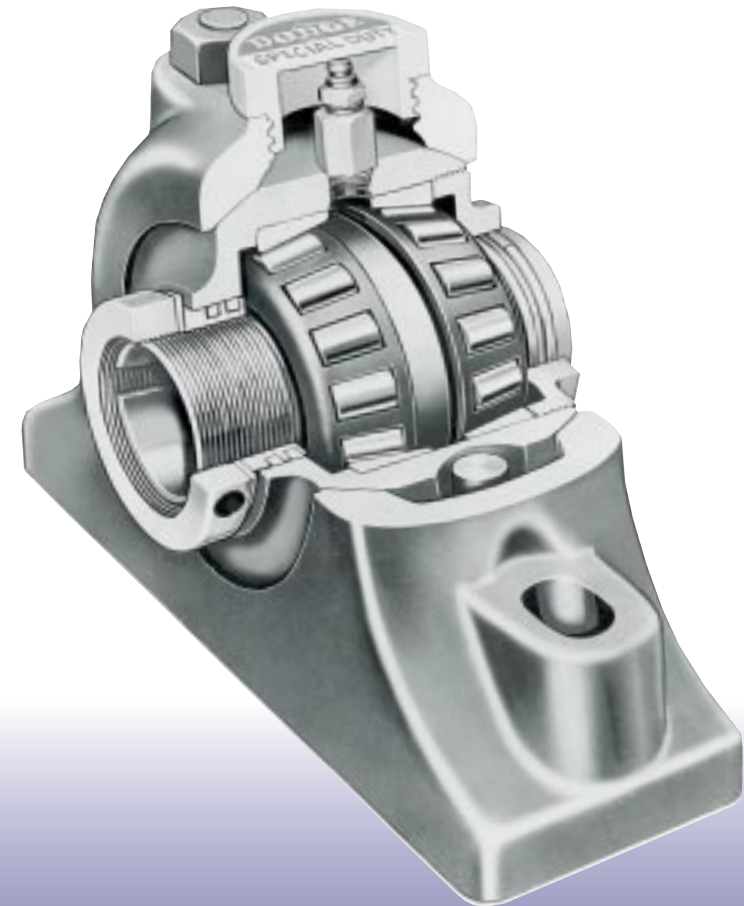
Duplex Tapered Roller Bearing

- Uses case-hardened inner race, outer races, and rollers with adapter sleeve mounting
- Results in unsurpassed load handling capability and longer useful bearing life
- Handles any combination of radial and thrust load from 100% radial load to 100% thrust load



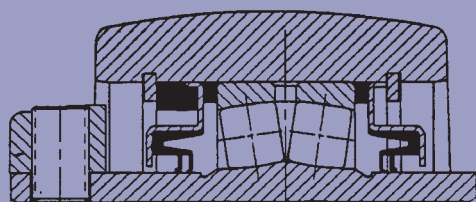
Rugged, Two-piece Outer Housing

- Features split housing with heavy-duty, gray-iron construction
- Houses completely assembled inner unit
- Constructed with elongated bolt holes that provide lateral adjustment
- Assures easy pillow block installation



Value Factors	Special Duty
Price	690
Speed	60
Load	484
Thrust	263
Temperature	100
Cap Load	131
Expansion	Yes

Factors may vary depending on size.



High-capacity Double-row Spherical Rollers

Installation Savings

Factory lubed, sealed, and adjusted — ready to slip onto shaft
65° SPRINGLOK collar mount for increased holding power

Field convertible from non-expansion to expansion through 3 1/2" (90 mm)

S-2000/SN-2000

SPHERICAL ROLLER BEARINGS

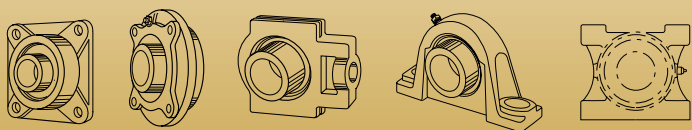
Patented Seal Options

S2R Hinged, Double-lip Rubbing Seal

- Ideal for lower to medium speeds at normal ambient temperatures
- Assures maximum sealing protection
- Utilizes nitrile seal material for low coefficient of friction
- Allows misalignment with minimized drag
- Features SPRINGLOK collar that acts as flinger

S2S SPRING-DISC™ Seal

- Ideal for high speeds and higher ambient temperatures
- Spring loaded with multiple discs
- Features self-aligning steel rings for a tight labyrinth
- Utilizes SPRING-DISC to hold rings tight against outer seal housing
 - Forces grease purge under bore of rings
- Features SPRINGLOK collar that acts as flinger



S-2000

- Designed for longer bearing life
- Features high-capacity, double-row spherical rollers
- Offers up to 250% more L¹⁰ life than competitive brands
- Allows more contact area
- Constructed with case-carburized inner rings that resist cracking
- Permits static or dynamic misalignment up to 2°
- Capable of expansion up to ¼" (6 mm)
- Factory sealed, lubed, and adjusted

SN-2000

- Includes all S-2000 bearing features
- Features fully metric housing that meets international standards; provides a slip-fit interchange with SN plummer blocks
- Available in two-bolt plummer blocks from 30 mm up to 90 mm (1 ½" up to 3 ½")
- Constructed with cast-in drilling location dimples for dowels
- Features H7 bearing seats for 25% tighter bearing support than H8 fits
- Designed with stiff ductile, higher-shock-resistant iron housing
 - Has 65,000 PSI tensile strength
 - Withstands lower ambient temperatures



Value Factors	S-2000	SN-2000™
Price	252	303
Speed	71	71
Load	323	323
Thrust	53	53
Temperature	100	100
Cap Load	115	291
Expansion	Yes	Yes

Factors may vary depending on size.

HFO and HFOE Series

- Utilizes oil conveying ring lubrication
- Used with 22200, 22300, 22200K, and 22300K Series spherical roller bearings
- Features labyrinth seals
- Available with or without end covers, with fixed or floating bearing option
- Supplied with oil level gauge for better control
- Best suited for applications where reliability and long, maintenance-free intervals are required
- Operating temperatures reduced compared to conventional static oil systems



HFO

HBND

- Features one-piece, cast-steel housing
- Available in adapter-mount or direct-mount options
- Offered with labyrinth seals and optional labyrinth end covers
- Interchangeable with FAG BND

SSN

- Features standard SN dimensions
- Available in ductile iron and cast steel

SD 3100

- Features 23100K Series spherical bearings
- Available with optional end cover
- Dimensionally interchangeable with SKF SD 3100 and FAG SD3 ITS



SBND



SD



SSN

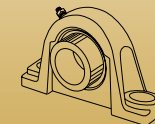
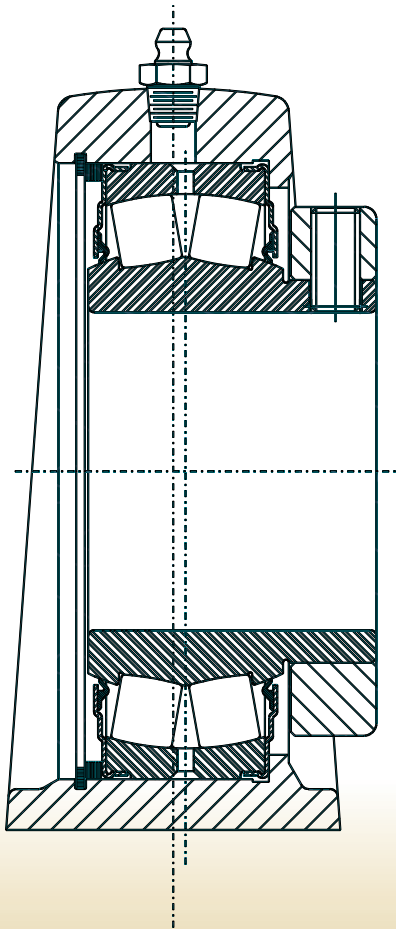
Value Factors	HFO	HFOE
Price	1299	1299
Speed	160	160
Load	342	342
Thrust	49	49
Temperature	178	178
Cap Load	196	196
Expansion	Yes	Yes



- Dimensionally interchangeable with ball bearings in their length through bore, base-to-center height, and footprint
- Have approximately five times the rating of ball bearings
- Feature same rolling elements and installation-ready components as S-2000
- Pillow blocks utilize ductile-iron housing with 65,000 PSI tensile strength — 92% the strength of steel
- Maintain sealing effectiveness with proven "R" seal
- Sphered seal area maintains seal contact during maximum misalignment

UNISPHERE® II

SPHERICAL ROLLER BEARINGS



Value Factors	UNISPHERE
Price	387
Speed	58
Load	323
Thrust	53
Temperature	100
Cap Load	291
Expansion	Yes

Factors may vary depending on size.

- Industry's only push/pull adapter nut system
- Ductile-iron, two-bolt pillow block for increased cap load capacity
- Available with gray-iron, four-bolt pillow blocks, flanges, and take-ups
- Can be mounted on commercial shafting
- Full concentric shaft attachment with adapter sleeve mount
- Operate with reduced vibration levels compared to setscrew mounting
- Capable of withstanding static or dynamic misalignment of $\pm 2^\circ$
- $1\frac{7}{16}" - 3\frac{15}{16}"$ bores

IMPERIALTM

SPHERICAL ROLLER BEARINGS

Install or Remove in Less Than 15 Minutes

- Clockwise rotation of adapter locknut tightens bearing on shaft
- Counterclockwise rotation of adapter locknut loosens bearing
- Utilize shaft-ready, single-piece housing that needs no assembly
- Require no special tools for installation
- Allow easy clearance setting
- Factory lubricated for dependable performance

Virtually Eliminate Fretting Corrosion

- Unique adapter-mount design developed to withstand axial forces generated during mounting/dismounting
- Adapter provides superior holding power, suppresses fretting corrosion and vibration

Test Conditions:

Speed: 1150 RPM

Radial Load: 3000 lbf

Duration: 500 hours for setscrew mounted bearing
2500 hours for IMPERIALTM bearing

Test Results:

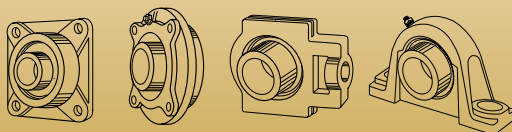
After only 500 hours in service, the setscrew mounted bearing left shaft fretting corrosion and scarring. But even after 2500 hours in service, the IMPERIAL bearing demounted quickly and revealed no shaft fretting corrosion or scarring.

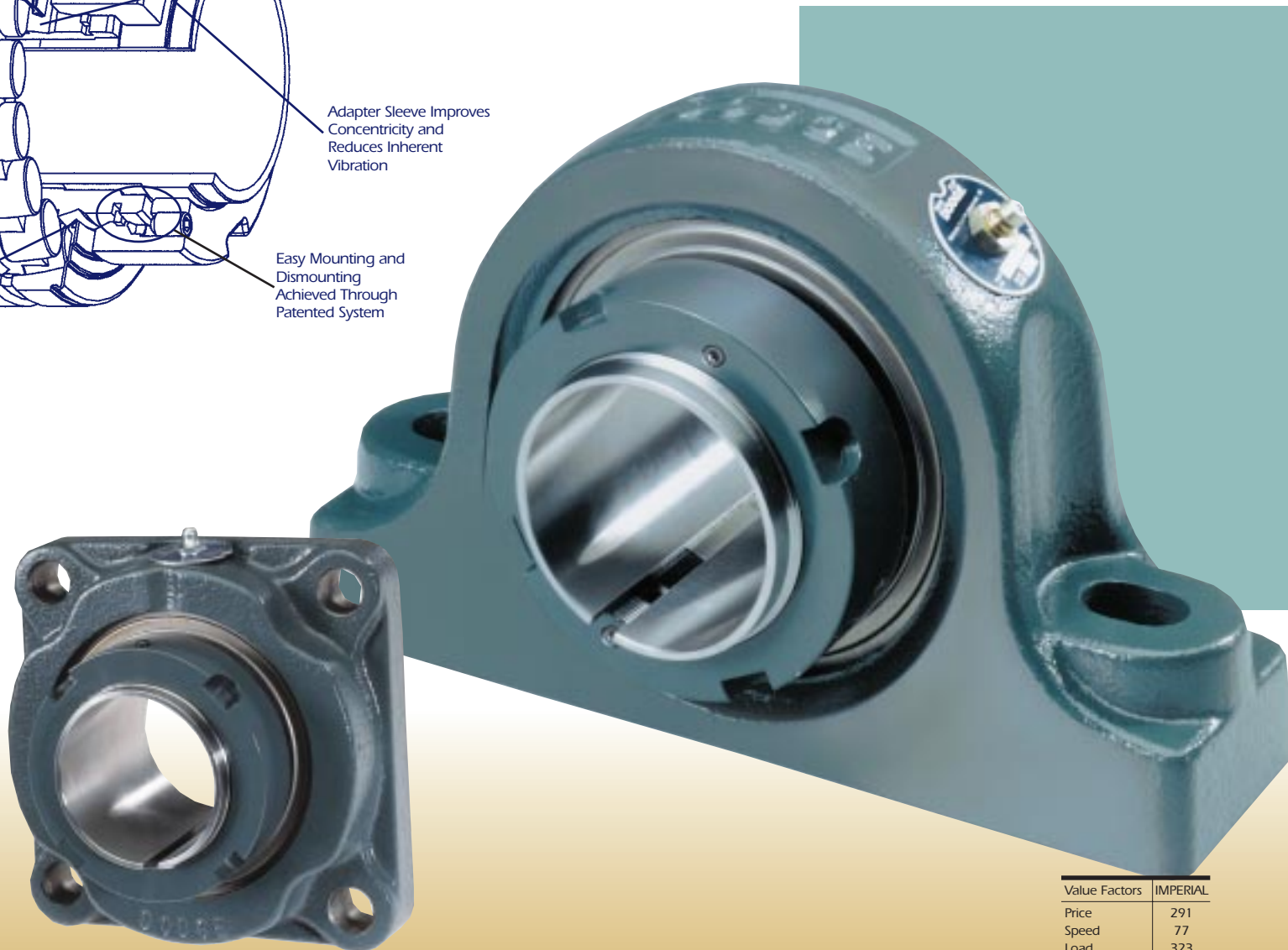
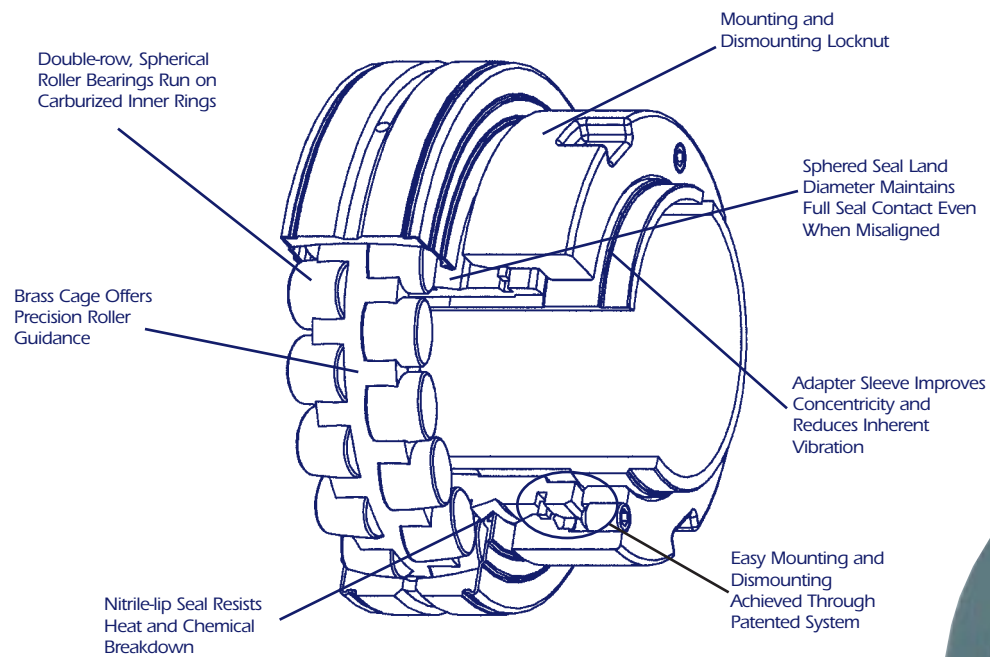


**Setscrew Bearing Shaft
After 500 Hours**



**IMPERIAL Bearing Shaft
After 2500 Hours**





Value Factors	IMPERIAL
Price	291
Speed	77
Load	323
Thrust	41
Temperature	100
Cap Load	291
Expansion	Yes

Factors may vary depending on size.

DODGE USAF/USDAF/USN bearings feature a totally new pillow block design for use worldwide. Built for customized mounting, lubrication systems, or sensor monitoring, these unique products contain virtually every feature bearing users want in a pillow block.



Solid Cast-iron Feet

- Increase strength in both two- and four-bolt styles



Oil Return Slots

- Cast into interior seal grooves
- Keep lubricants in
- Allow oil in seal grooves to return to oil sump instead of leaking

USAF/USDAF/USN

SPHERICAL & SPLIT-SPHER[™] ROLLER BEARINGS

Standard Housings

- Feature two oversized drains adaptable to circulating oil system
- Available with H7 bearing seats (suitable for air handling applications)

Cast-in Dimples

- Locate drill holes for dowels and optional drilled mounting holes

Pry Slots

- Allow easy separation of pillow block

Housing Base

- Threaded to accept four Grade 5 cap bolts for added strength
- Features cap bolts that match four-bolt base bolts for one-wrench installation

Cast-closed Housing

- Promotes 50% reduction in seal failures



Optional Heat Switches, Vibration Pickups, and Thermocouple Packages

- Provide vital feedback
- Allow predictable maintenance



Exclusive Oil-equalization Passage

- Simplifies maintenance
- Allows pillow block to be drained completely from either side



Large-capacity Oil Sump and Undercut Bearing Seat

- Permit lower operating temperatures
- Allow full lateral travel of expansion bearing
- Prevent metal stabilizer ring from binding
- Make installation easy



Offset Dowels

- Feature matched numbers on cap and base joint
- Simplify correct assembly



Modifications

- For wet and harsh environments
- Include nylon coating, and stainless-steel hardware

DODGE SPLIT-SPHER Bearing

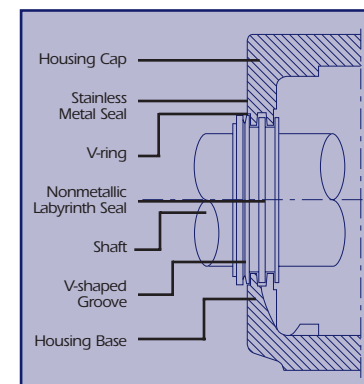
- Available as optional fully split bearing
- Permits easy installation and removal in hard-to-reach applications
- Requires no shaft removal for replacement
- Offered up to 6"



SEAL OPTIONS

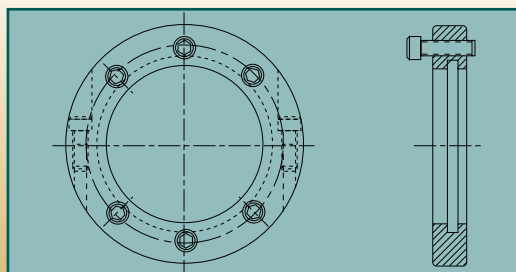
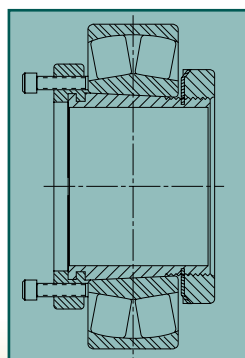
Patented, Drop-in Triple-Tect* Seal

- For wet or dirty environments
- Has original Triple-Tect features
- Offers three times the sealing action of labyrinths
- Allows for quick, easy field assembly

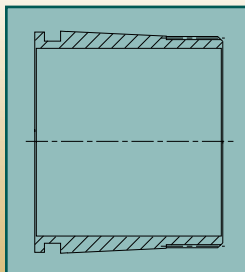


D-mount Adapter System

- Saves time removing bearings from shaft
- Reduces use of blue flame torches
- Increases uptime
- Lowers maintenance costs



D-mount Tool



D-mount Adapter Sleeve

Additional Seal Options

LER Seal

- Ideal for high speeds in relatively clean or hot environments
- Provides metal labyrinth protection and easy installation

Auxiliary Taconite Seal

- For dusty environments

Split Seal

- Permits easy installation in hard-to-reach applications without removing shaft
- Provides elastomeric labyrinth protection

End Cover Seal

- Features rigid construction
- Seals against sides of grooves, not at bottom of grooves
- Allows use of open shaft housing as closed-end

Value Factors	USAF	SPLIT-SPHER™
Price	317	885
Speed	100	69
Load	397	303
Thrust	49	37
Temperature	178	100
Cap Load	196	169
Expansion	Yes	Yes

Factors may vary depending on size.

* Patent numbers 4348067 and 5259628.



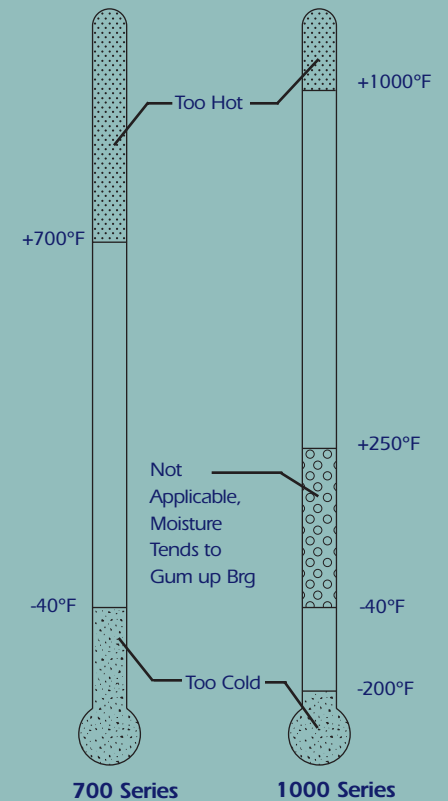
SOLIDLUBE Bearings

SLEEVE

STOCK-MOUNTED SLEEVE BEARINGS

SOLIDLUBE

- Functions in harsh environments where ball bearings will not
- Self-lubricating, statically self-aligning for extreme industrial applications
- Good in temperature extremes and inaccessible locations; -200°F to 1000°F
- Functions effectively in a vacuum
- Ideal where bearings are subject to dry cycles or where lube systems would be too costly
- Usable in many corrosive (chemical) medias
- Operates in submersible applications of some low viscosity liquids
- Recommended for slow speeds and limited shaft movement applications



**SOLIDLUBE
Bearing
Operating
Temperature**

Babbitted and Bronze Bushed Bearings

- Good for slow speeds and shock loads
- Capable of MPTA load ratings
- Feature cast-iron housings
- Offered in two- and four-bolt housings

Babbitted

- Features solid or fully split housing
- Utilizes babbitted bearing surface

Bronze Bushed

- Features fully split housing
- Has replaceable bronze bushings
- Utilizes brass locking spool for easy bushing replacement



Babbitted Bearings



BRONZOIL® Bearings

BRONZOIL®

- Feeds oil to shaft with self-oiling bushing
- Features split pressed steel housing
- Is statically self-aligning
- Features bushing shoulder that provides self-lubricating bearing thrust surface
- Designed with slotted bolt holes
- Available with oil-resistant rubber grommets for sound isolation and static electricity protection

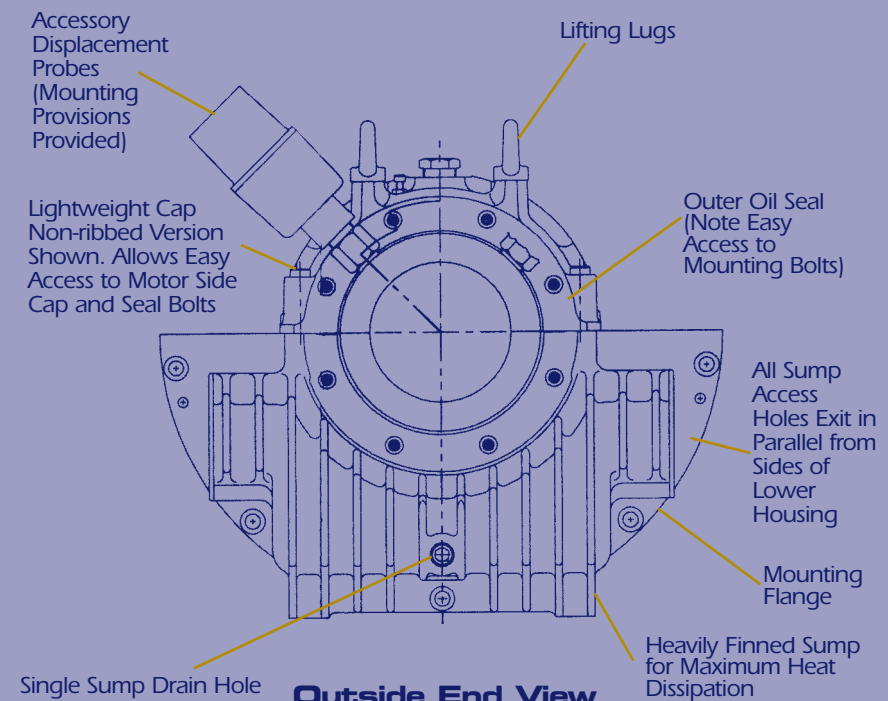
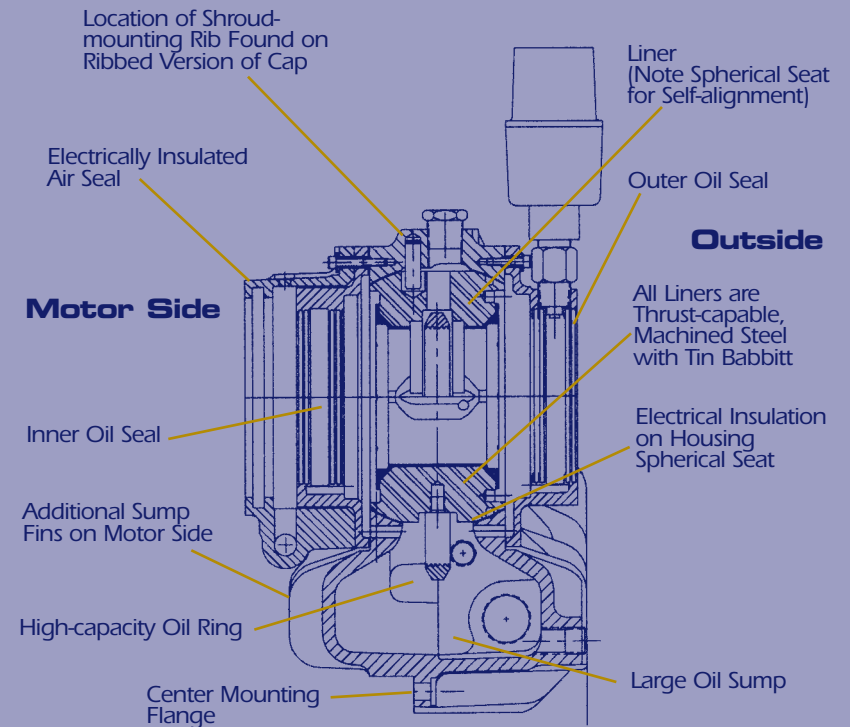
Value Factors	Babbitted Rigid	Babbitted Angle	Split Bronze	Angle Bronze	LT700 SOLIDLUBE	LT1000 SOLIDLUBE	E-Z KLEEN
Price	113	178	309	443	240	367	120
Speed	10	10	10	10	20	20	11
Load	63	63	107	107	105	105	64
Thrust	10	10	10	10	12	12	26
Temperature	58	58	133	133	311	444	44
Cap Load	0	0	0	0	0	0	0
Expansion	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Factors may vary depending on size.

- Specifically designed for large motors and generators
- Manufactured at the DODGE advanced ISO 9002-certified plant in Columbus, IN
- Can be ordered from stock in bore sizes from 80 mm through 200 mm

M-SERIES

SLEEVOIL® CENTER FLANGE-MOUNTED HYDRODYNAMIC BEARINGS

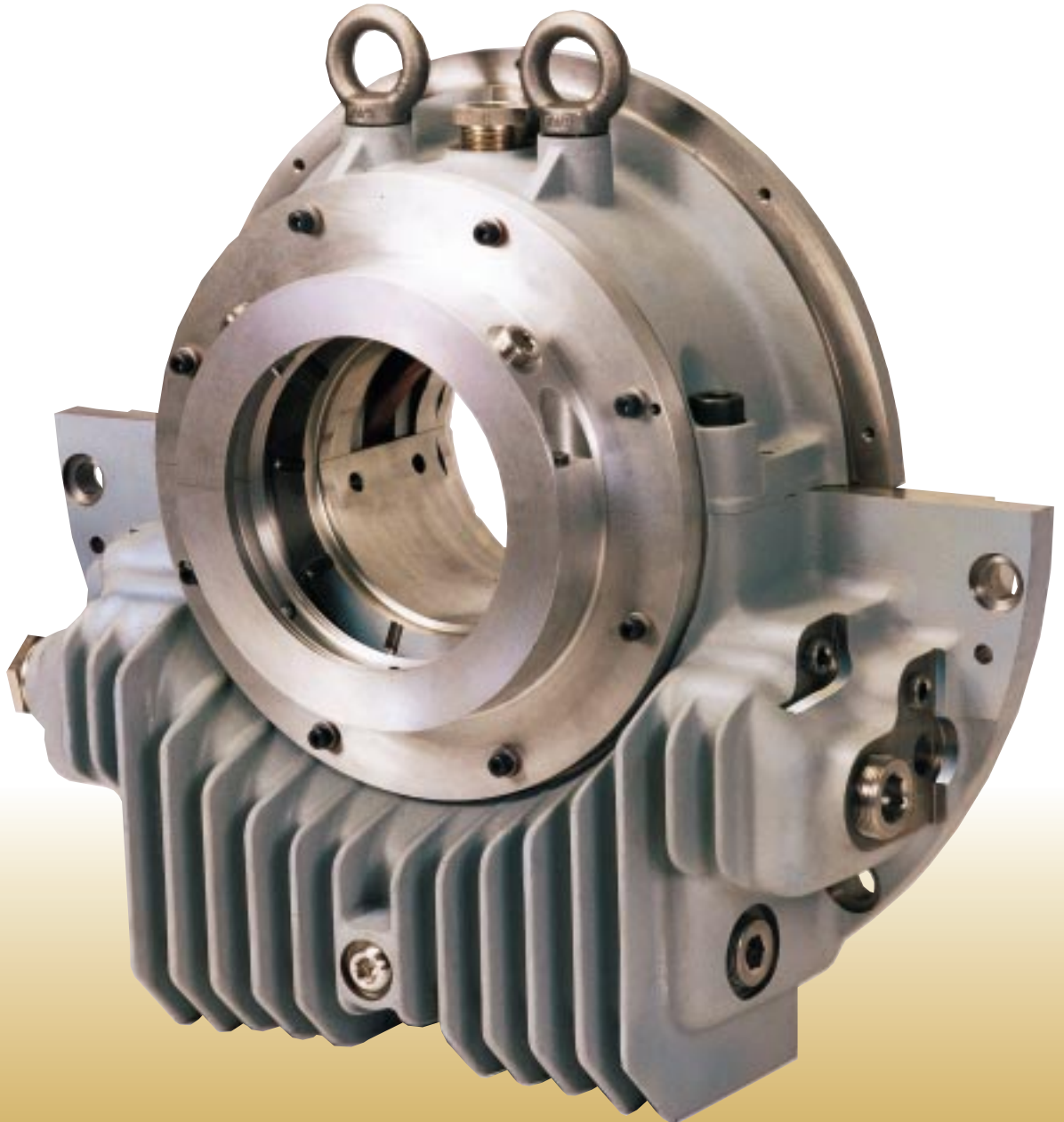


Value-added Advantages

- Specifically designed for large AC/DC motors, generators, and alternators
- Stocked in four housing sizes:
 - M-18 (160, 180, and 200 mm bores)
 - M-14 (125, 140, and 160 mm bores)
 - M-11 (100, 110, and 125 mm bores)
 - M-9 (80, 90, and 100 mm bores)
- Dimensionally interchangeable with:
 - DIN standard 31694
 - ISO 11687-3
- Meet API and NEMA end-flange specifications

High-performance Features

- Fully split components allow trouble-free assembly and disassembly
- High-tin babbitt liners assure conformability and shaft protection
- Circulating oil-ready housing accommodates high speeds, elevated temperatures, and dirty environments
- Large-capacity oil sump promotes cooler operation
- Fins on motor side of oil sump provide greater heat dissipation
- 100% testing of grounding and insulation ensures dependable performance
- Grounding screw permits easy ground checks
- Electrically insulated air seal
- Unribbed housing cap version provides easy access to mounting cap bolts
- Lightweight housing cap
- Standard thrust capability minimizes spares
- One liner handles both expansion and non-expansion applications
- Ready-to-accept vibration probes
- Floating or rigid oil seals meet IP44; optional bolt on baffle meets IP55



Our SLEEVOIL hydrodynamic bearings are suitable for a variety of industries and feature:

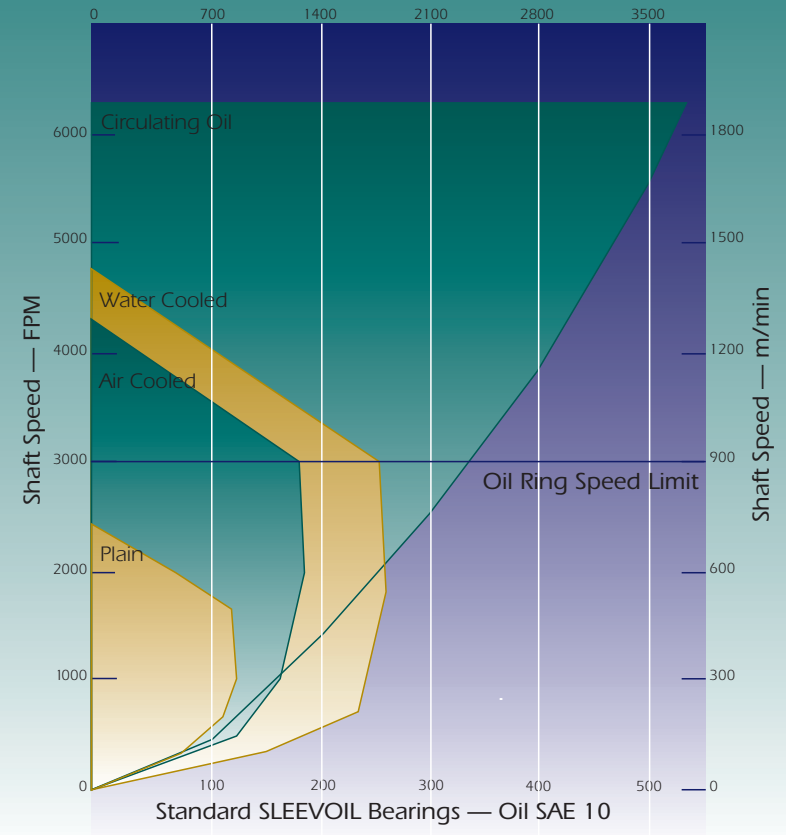
- fully split housing for trouble-free assembly and disassembly;
- rugged construction with gray-iron housing and liner for durability;
- babbitt lining for conformability and shaft protection;
- ball and socket mounting between liner and base, completely self-aligning;
- dependable oil ring lubrication with self-contained oil supply;
- convenient oil gauge that can be positioned at one end on either side of housing;
- self-pressurized full oil film;
- hydrodynamic oil film that absorbs shock;
- journal surrounded by improved coolant chambers;
- full separation of mating parts.

SLEEVOIL®

HYDRODYNAMIC BEARINGS

Plain, Water or Air Cooled, & Circulating Oil Standard Unit

Standard SLEEVOIL Bearings — Oil SAE 10



These features ensure these user advantages:

- proven reliability and dependable performance,
- protection against catastrophic failures,
- extended life (no metal-to-metal contact during operation),
- more than 10 times the theoretical life of anti-friction bearings,
- high-speed capabilities,
- adequate vibration dampening,
- effective heat transfer,
- quiet operation.



- Originally designed for the exacting requirements of the air handling industry; used today in a variety of applications
- Available in plain or externally cooled (XC) styles
- Provides more than 10 times the theoretical life of anti-friction bearings

Options

Thermocouple

- Monitors bearing's babbitt temperature
- Helps protect system against abnormal operating conditions

Circulating Oil

- Provides controlled delivery of oil, regardless of shaft surface speed
- Allows more rapid heat dissipation
- Constantly cleans oil
- Floods bearing journal
- Permits significantly higher speed operation

Heat Exchanger

- Cools oil sump for higher-speed operation
- Ensures better performance in higher temperature ambients

Heater and Thermoswitch

- Maintain consistent bearing oil sump temperature on startup in cold environments

Vibration Detector Kit

- Attaches vibration sensors to bearing housing
- Allows constant monitoring of system balance

Auxiliary Seals

- Provide additional protection from environmental contaminants and locations where high velocity air flows over bearing

End Cap

- Closes off bearing housing in short-shafted applications

Air Seal

- Provides air pressure balance on both sides of housing
- Prevents oil loss due to fan suction



R SERIES

PILLOW BLOCK

Electrical Insulation

- Prevents conduction of journal-generated electricity to ground or back to other system components

Hydrostatic Oil Lift

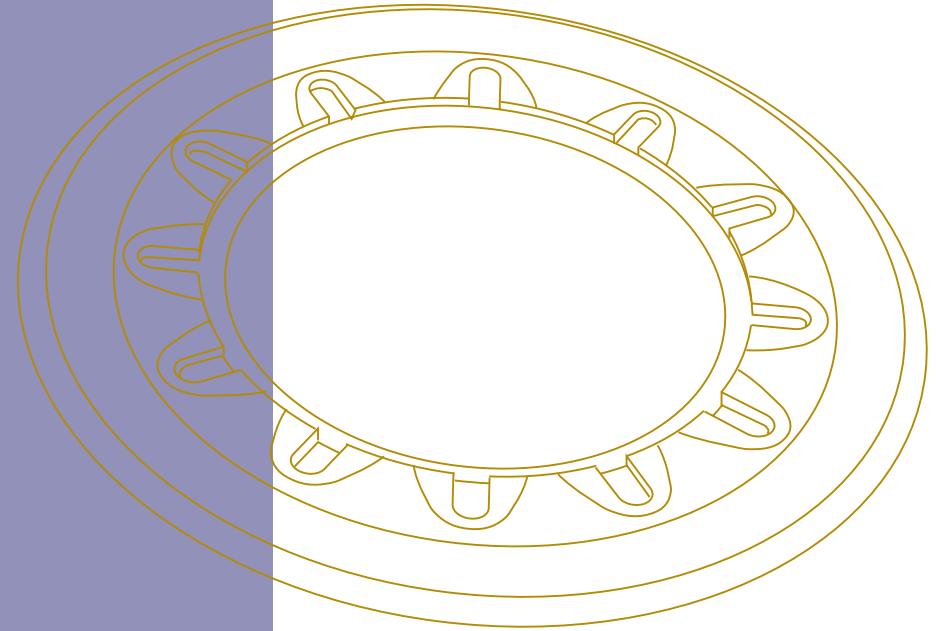
- Maintains fully developed oil film by pressurized oil delivery to support bearing journal
- Used primarily for slow-speed operation or startup under extremely heavy loads

Value Factors	SLEEVOIL
Price	1358
Speed	244
Load	25
Thrust	26
Temperature	58
Cap Load	0
Expansion	No

Factors may vary depending on size.



SLEEVOIL RTL Pillow Block



RTL/RXT

HYDRODYNAMIC PILLOW BLOCK BEARINGS

RTL Series

- Ensures reliable, high-speed operation with three times the thrust load capability of R Series
- Provides effective heat dissipation
- Offers improved bearing performance near high-heat sources

RXT Series

- Incorporates best features of R Series and RTL designs
- Requires less space on shaft
- Designed to operate in heavily and lightly loaded conditions
- Operates reliably in wide range of speeds

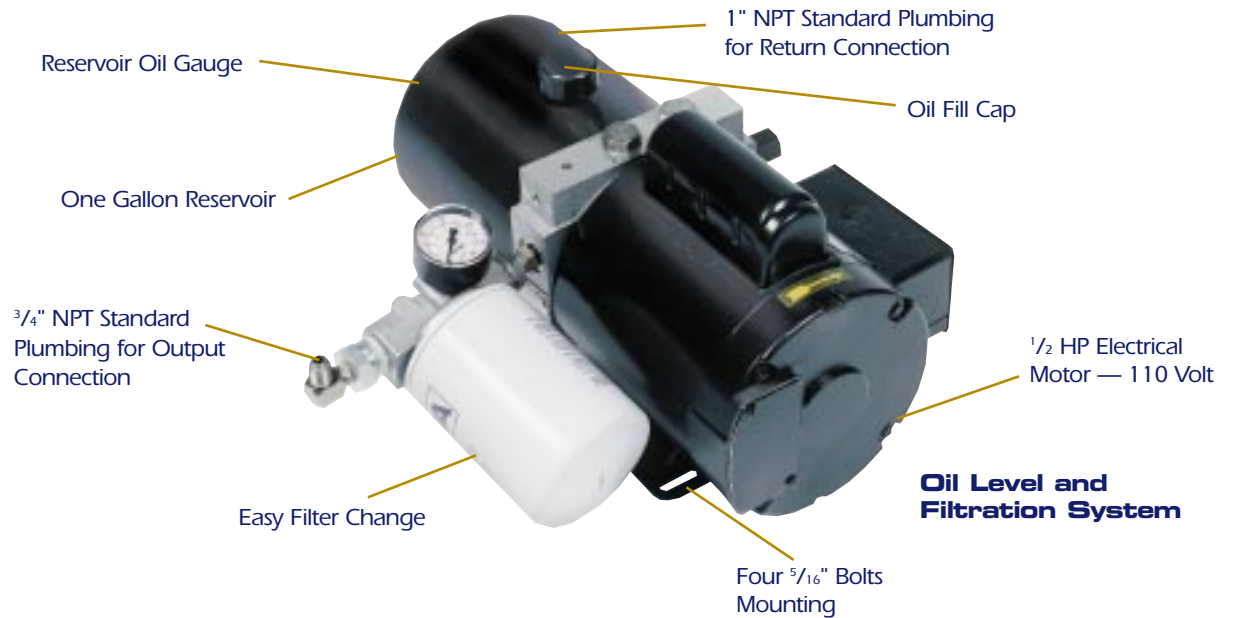


Oil Level and Filtration System (OLF)

- Maintains proper oil level while fan is running
- Increases bearing performance and life
- Allows even oil distribution
- Ensures filtered clean oil
- Permits easy filter change
- Allows standard plumbing connection
- Increases productivity
- Requires less maintenance

DODGE Oil Circulating Oil System

- Custom-engineered to support SLEEVOIL bearings
- Provides continuous operation
- Ensures startup protection
- Assures accurate bearing oil supply
- Provides easy monitoring
- Available with multiple options
- Shipped with complete set of support documentation



OIL DELIVERY SYSTEMS





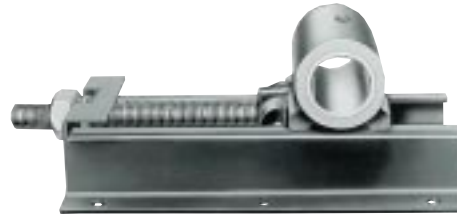
Top Angle



HD Protected Screw



Type C Elevator Boot



Type B



Wide Slot Ball Bearing



Type A



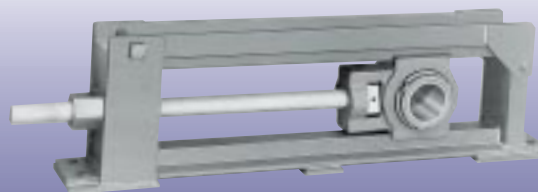
BRONZOIL Take-up

TAKE-UP FRAMES

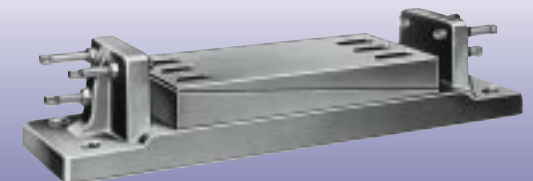
FOR BALL, ROLLER, & SLEEVE BEARINGS



TPHU



Center Pull



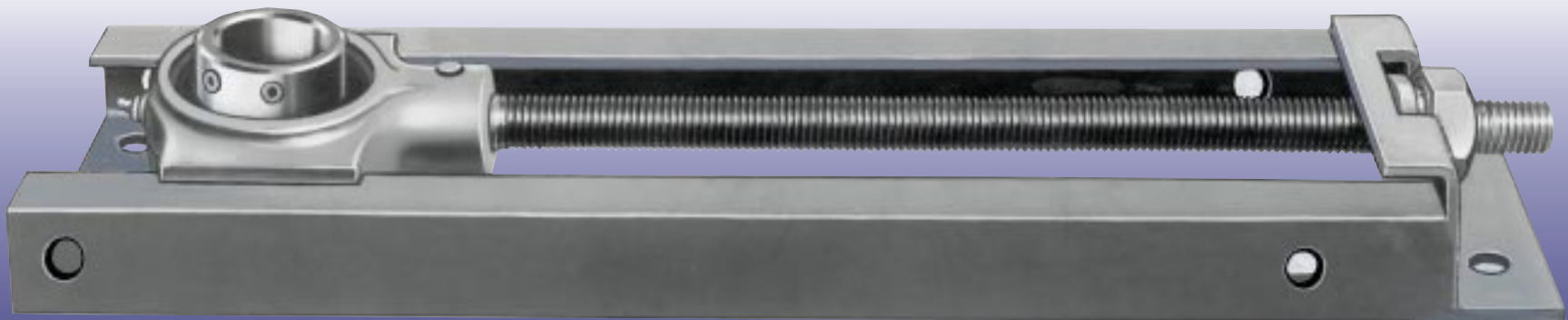
Base Plates

Type	Nomenclature	Stock Sizes Available	Travel	Bearing Bore Size Range	Bearing Type		
					Ball	Roller	Plain
Narrow Slot Ball Bearing	NS	5	6" to 18"	$\frac{1}{2}$ " to $2\frac{7}{8}$ " $\frac{3}{4}$ " to $2\frac{1}{2}$ "	■		■
Wide Slot Ball Bearing	WS	6	1½" to 30"	$\frac{1}{2}$ " to 3" $\frac{3}{4}$ " to 3"	■		■
Top Angle	TP	6	12" to 48"	$1\frac{1}{8}$ " to $3\frac{1}{2}$ " $1\frac{3}{4}$ " to 4" $1\frac{5}{8}$ " to $3\frac{5}{8}$ "	■	■	■
Heavy-duty Top Angle	TPHU	8	12" to 36"	$1\frac{7}{8}$ " to 5"		■	
Center Pull Wide Slot	CP	9	12" to 36"	$1\frac{1}{8}$ " to 5"		■	
Type C Elevator Boot	CEB	1	9"	$1\frac{3}{8}$ " to $2\frac{1}{8}$ "		■	
BRONZOIL	BOTU	1	4"	$\frac{1}{2}$ " to 1"			■
Type A and B	TUA and TUB	5	5" to 18"	$1\frac{5}{8}$ " to $2\frac{7}{8}$ "			■
LD Protected Screw	LD	6	6" to 48"	$\frac{1}{2}$ " to $3\frac{1}{2}$ " $1\frac{7}{8}$ " to $3\frac{1}{2}$ " $\frac{1}{2}$ " to 3"	■	■	■
HD Protected Screw	HD	8	12" to 60"	$1\frac{1}{2}$ " to 9" $1\frac{5}{8}$ " to $5\frac{1}{8}$ "		■	■

Narrow Slot Ball Bearing



LD Protected Screw



Economical, Factory Installed, and Fully Protected for Increased Reliability

DODGE leads the industry by offering monitored bearings that monitor temperature, vibration, and speed. These sensorized products:

- provide economical solutions to on-line monitoring,
- help avoid costly downtime.

For many customers, powering and interfacing sensors in the real world is quite a challenge. To help customers, DODGE has identified key interface components and modules that will power our sensors and allow easy interface with PLCs and data acquisition systems. Plus, DODGE offers stand-alone modules.

- For use in non-hazardous environments
- Feature cover that exceeds NEMA 4
- Contain insulation gaskets that are automotive-engine-grade, rubberized cork
- UL and CSA approved monitors (all)

Temperature Alarm

- Is normally open
- Handles AC voltage up to 250V, 50/60 Hz
- Withstands 10 ampere maximum load current
- Allows 220°F standard closure temperature $\pm 9^\circ\text{F}$
- Features optional 150°F and 260°F closure temperatures
- Maintains contact resistance $< 40 \text{ m}\Omega$
- Provides warning signal when bearing overheats

TEMPERATURE
RECORDER/
POWER

- Offers simple, compact, easy-to-use design
- Available in complete pillow block or housing-only configurations
- Available with optional DODGE alarm monitor
- Uses AWG 16 wire to place monitor up to 10,000 feet from the bearing (maximum distance will change if different gauge wire is used)

Temperature Measurements

Thermocouple/Transmitter Option

- Features Type J thermocouple
- Operates in 0°F to 250°F temperature range
- Provides 4 - 20 milliamp output
- Is supply voltage 8.5V to 35V reverse polarity protected
- Maintains accuracy with $\pm .5^\circ\text{F}$
- Features pre-adjusted zero and span
- Contains embedded thermocouple for consistent readings
- Has on-board transmitter to minimize thermocouple lead length

Temperature Indicator

- Powers thermocouple transmitter
- Indicates temperature of bearing, using digital display
- Features two setable switches for alarm and shut down
- Powered by 100 - 240 VAC voltage
- Designed for panel mounting
- Operates in 32°F to 122°F temperature range

BEARING MONITOR

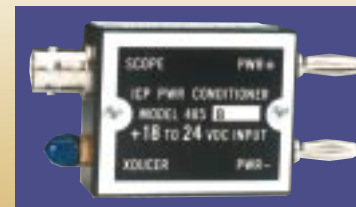
FOR TEMPERATURE, SPEED, & VIBRATION CONTROL



Alarm Monitor for Connection to Embedded Temperature Switch



Panel mounted LED readout for thermocouple.



Power Conditioner Module to connect accelerometer to PC Data Acquisition System



Vibration Transmitter to connect accelerometer to PLC

Vibration Measurements

Accelerometer

- Features shock-resistant Piezo electric element
- Maintains 100 mV/g sensitivity
- Operates in +50 g range
- Provides frequency response +3dB, .5 - 10,000 Hz
- Operates in -65°F - 185°F temperature range
- Generates full scale output +5V
- Features single-axis monitor
- Compatible with most vibration monitoring equipment
- Available as complete pillow block and housing-only configurations
- Allows continuous monitoring of vibration amplitude and frequency
- Protects from catastrophic failures due to excessive vibration

Power Conditioner Module

- Powers DODGE bearings equipped with accelerometers
- Provides +5V signal indicator of acceleration (100 mV/g)
- Powered by 24 VDC
- Interfaceable to data acquisition system

Vibration Transmitter

- Powers DODGE bearings equipped with accelerometers
- Provides 4 - 20 mA signal indicator of average vibration velocity
- Interfaces easy with PLCs and data acquisition systems
- Provides power input 20 - 30 VDC, minimum 60 mA

SENSOR OPTIONS FOR	TAF	USAF USN	S-2000	SC/ SCM	Type E-XTRA	IMPERIAL	UNISPHERE	SLEEVOIL
Temperature Switch		✓	✓	✓	✓	✓	✓	✓
Thermocouple/ or RTD	✓	✓						✓
Speed Pickup	✓	✓						
Accelerometer	✓	✓	✓	✓	✓	✓		
Accelerometer with Miniature Transmitter	✓	✓						

DODGE Pillow Block Bearings — Available with Sensor Options (2⁷/₁₆", 60 mm and Larger)

Speed Pickup

Speed Pickup

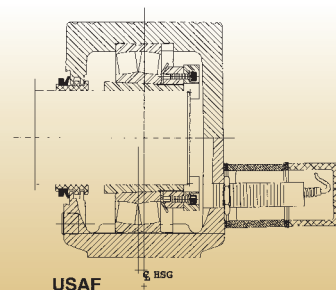
- Available with AB proximity probes from DODGE, mounted on pillow block for slip and sequence feedback
- Factory installed, gapped, and targeted

Micrologix™ Speed Switch Option

- Features DODGE-programmed AB Micrologix™ controller, configured as a speed switch
- Eliminates timing problems with long programs
- Can monitor three bearings equipped with speed pickups
- Features on-time delay of 1.0 seconds
- Alarms when time between pulses reaches two seconds
- Emits shut-down signal when time between pulses reaches five seconds
- Provides relay outputs
- Features user-friendly module in attractive package
- Conducts 120 VAC input
- Generates 120 - 250 VAC output or 24 VDC
- Designed for panel mounting



Micrologix Speed Switch



RS

Customers with mounted bearings can take control and virtually eliminate costly, unscheduled downtime with our new patented, low-cost DODGE EZLINK™ monitoring system.

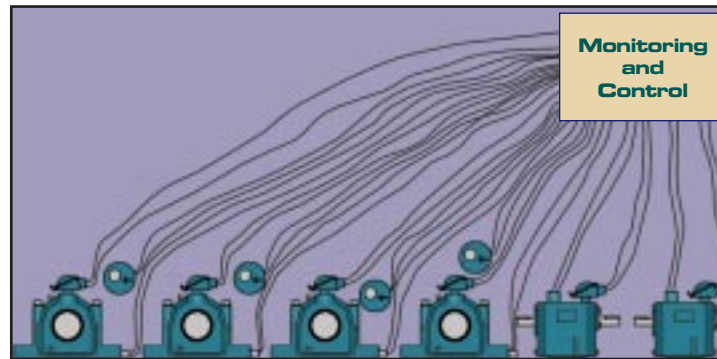
Allows for predictive maintenance

- On-line measurements of temperature, speed, and vibration
- Series communication up to 500 KB
- Standard interface to DeviceNet scanners
- Vibration monitoring through DODGE PC software

Accommodates basic PLC/scanner monitoring

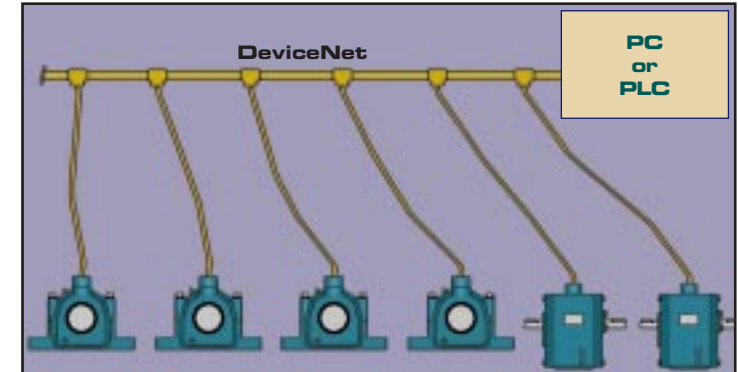
- DeviceNet scanner option for exceeding set limits on speed, pressure, and temperature
- Instruction sheets for setting nodes with standard programming
- Point-and-click configuration for address and limit setting

DeviceNet vs Traditional Approach



Traditional Monitoring and Control

- Sensors
- Power supplies
- Signal conditioners
- Transmitters
- Programming
- A/D cards
- Extensive wiring



Monitoring and Control

DODGE EZLINK™

ON-LINE CONDITIONS MONITORING SYSTEM

Ensures full-feature monitoring

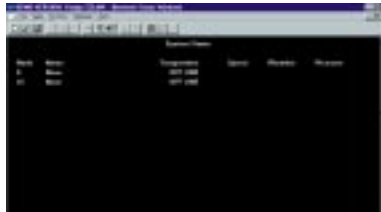
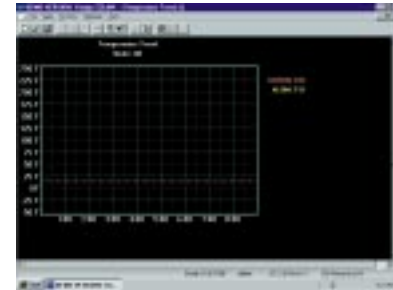
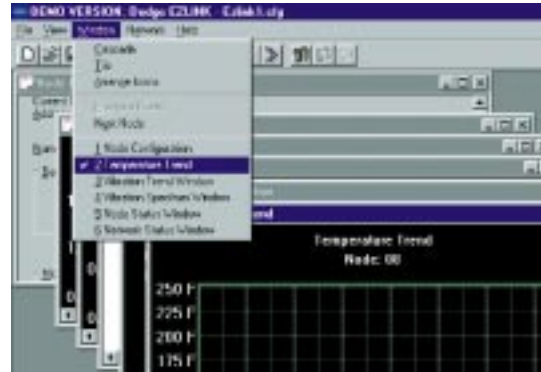
- DODGE PC and software options
- Windows-based user interface
- Easy node setup
- User-friendly limit setting
- Retained history and time plot displays on temperature and vibration

EZLINK/DeviceNet

- Requires less wiring
- Simplifies PLC programming
- Eliminates dedicated signal conditioners and power supplies
- Increases reliability for more uptime
- Reduces installation cost

DODGE EZLINK Software Monitoring

- Features PC workstation with built-in DeviceNet power supply, KFD, and software
- Available with DeviceNet "In a Box" for complete networking capability
- Capable of communication to any PLC with DeviceNet scanner through RS232 interface (KFD)



Network Status Window

- Provides real-time readings for all EZLINK nodes in a scrolled window
- Shows status information at-a-glance with color-coded lines

Temperature Trend Window

- Provides time-based trend for temperature on a specific EZLINK node in your network
- Lets user proceed through all nodes with easy point-and-click operation

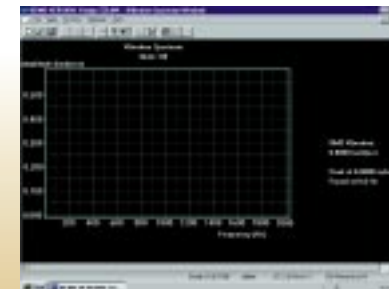


Node Status Window

- Provides graphical readings for a specific EZLINK node in your network
- Lets user proceed through all nodes with easy point-and-click operation

Vibration Spectrum Window

- Provides current RMS vibration level and display of vibration spectrum for a specific EZLINK node in your network
- Lets user proceed through all nodes with easy point-and-click operation



EZLINK PC

* Module that allows PC to communicate with DeviceNet nodes and scanner