



**PowerDrive** LLC

MECHANICAL P.T. COMPONENTS

[www.powerdrive.com](http://www.powerdrive.com)

**BEARINGS**



## ABOUT POWERDRIVE

**PowerDrive** is privately owned and operated company. It was initially organized in 1981 at United States with clear vision to produce and supply Hi-Class, Hi-quality engineering product with total reliability having latest engineering input. The corporate office, distribution centre are located in Michigan City, sales office is in Maysville. Power Drive's National distribution centre has approximately 100000 square feet. Satellite regional inventories are located in



Portland, San Francisco, Salt Lake City, Denver, Kansas City, Chicago, Atlanta, Hartford, Philadelphia, Dallas. We carry more than 50,000 sku's in stock & are on SAP system.

**PowerDrive** manufactures and distributes mechanical components for Power Transmission Industry like- V-Belt Drives, Chain Sprocket Drives, Synchronous drives, Shaft couplings of all types, Gear Racks, V-belt Accessories, All types of bushings, belts, Idler pulleys, Cam follower bearings, Pillow block bearings, ball bearings, cylindrical roller bearings, spherical roller bearings, taper roller bearings.

We can be proud of carrying one of the largest inventories in the country. We will stock items for you, assuring you of receiving the product when you need it, reducing your inventory costs. If there is an item we do not normally stock, but you need it quite often, call us. We can put the item in stock to accommodate your needs.

Now we are entering into complete range of Ball and Roller Bearing (metric and Inch) for all normal and common industrial application, Produced with latest technologically updated machineries, and Quality controlled by expertise engineers team.

**We have a state of the Art Belt Drive Selection program with EDI capabilities, we strongly encourage you to sign up for the program which called ADS (Advance Drive Solution).**

Most importantly, we will always offer you the lowest price and best service possible. Our sales staff is as specialized as our product line. So your calls will always be handled by a representative who knows the product and can recommend the quickest and most cost effective solution to your questions. We can offer you pricing that is competitive in today's market. We can help in improving your profit margins by supplying you with a top quality product at a very low cost.



**Our goal is to provide power transmission products that exceed the quality level set by industry leaders, at a price that will allow our customers to be more competitive in today's market.**

**POWER DRIVE IS A CERTIFIED MBE (MINORITY BUSINESS ENTERPRISE)**



## TECHNICAL INFORMATION

### DESIGN & DEVELOPMENT

- The Design of all types of Bearings & Tooling are done on Pro-Engineer 3D Modeling & Analysis Software.
- We have strong technical team to solve intricate problems with advise on design, development, manufacturing, installation and maintenance of bearing.

### SAP- ERP

- In order for smooth and transparent system for Sales, Production, Materials and Finance We have successfully implemented SAP - ERP.

### MATERIAL

- Our bearings are Manufactured from SAE 52100, High Carbon Anti Friction Bearing Steel as a Raw Material for Inner rings , Outer rings, Balls and Rollers.
- Standard Cage material is low carbon cold rolled CRCA steel. In addition to Standard cage we also manufacture cage from Brass or Bronze , Polyamide. We can supply you bearings with through hardening as well as case hardening also. Additionally Our rings and rollers having Crowning also.

### ASTM SAE 52100, DIN 100Cr6

- |              |              |
|--------------|--------------|
| • Carbon     | 0.93 to 1.05 |
| • Manganese  | 0.25 to 1.40 |
| • Phosphorus | 0.025 Max    |
| • Sulfur     | 0.15 Max     |
| • Silicon    | 0.15 to 0.35 |
| • Chromium   | 1.35 to 1.60 |
| • Nickel     | 0.10 Max     |
| • Molybdenum | 0.10 Max     |
| • Copper     | 0.10 Max     |
| • Oxygen     | 15 ppm       |
| • Aluminum   | 0.050        |

### ASTM SAE 8620

- |              |              |
|--------------|--------------|
| • Carbon     | 0.18 to 0.23 |
| • Manganese  | 0.70 to 0.90 |
| • Silicon    | 0.20 to 0.35 |
| • Sulfur     | 0.040        |
| • Phosphorus | 0.040        |
| • Chromium   | 0.40 to 0.60 |
| • Nickel     | 0.40 to 0.70 |
| • Molybdenum | 0.15 to 0.25 |

### CLASS AND CLEARANCE

- Our bearings are manufactured as per the ISO standard & tolerances are as per normal P0 ( ABEC1 ) & P6 class ( ABEC3 )
- Our all bearings are manufactured with normal clearance, but upon specific requirement we can supply with C2,C3,C4 or C5 clearance.



## SPHERICAL ROLLER BEARINGS

- From design point of view , spherical roller bearings can accommodate heavy radial and axial load in application prone to misalignment or shaft deflection
- In addition , it can accommodate high vibration level.

### PRODUCT FEATURES

- Designed for high vibration level
- Higher load carrying capacity
- Lower operating temperature
- Longer lubricant life

### USER BENEFIT :

- Increase uptime and productivity
- Excellent high speed performance
- Increased power output
- Lower maintenance and operating cost
- Environmentally friendly



### SERIES AVAILABLE (IN PLAIN BORE & TAPERED BORE)

- |               |    |             |
|---------------|----|-------------|
| • 21304 CCW33 | TO | 21320 CCW33 |
| • 22205 CCW33 | TO | 22260 CCW33 |
| • 22205 EW33  | TO | 22222 EW33  |
| • 22208 MBW33 | TO | 22260 MBW33 |
| • 22308 CCW33 | TO | 22340 CCW33 |
| • 22307 MBW33 | TO | 22340 MBW33 |
| • 22308 EW33  | TO | 22318 EW33  |
| • 23024 CCW33 | TO | 23084 CCW33 |
| • 23120 CCW33 | TO | 23164 CCW33 |
| • 23218 CCW33 | TO | 23256 CCW33 |
| • 23936 MW33  | TO | 23960 MW33  |
| • 24024 MW33  | TO | 24056 MW33  |
| • 24124 MW33  | TO | 24152 MW33  |
| • 476208B-107 | TO | 76222B-400  |

## SPHERICAL ROLLER THRUST BEARINGS

- From design point of view , spherical roller thrusts bearing are the only bearings that can accommodate substantial radial load and heavy thrust loads.
- Spherical roller thrust bearings are also self-aligning. Which means they can handle considerable misalignment and shaft deflection

### PRODUCT FEATURES :

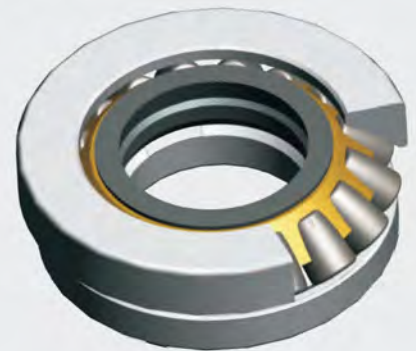
- High load carrying capacity
- Lower operating temperature
- Reduced vibration and noise levels
- Longer lubricant life

### USER BENEFITS :

- Increased uptime & productivity
- Excellent high-speed performance
- Increased power output
- Lower maintenance & operating cost
- Environmentally friendly

### SERIES AVAILABLE :

- 29318M TO 23340M
- 29412M TO 29460M
- 29412E TO 29460E



## TAPER ROLLER BEARINGS

- Designed to meet and exceed the quality and performance requirement in application with heavy combined load and tilting movements.
- A very low dimensional spread of the rollers combined with optimized surface finish provides low noise and vibration levels and enable a high degree of running accuracy.
- Optimized internal bearing geometry, combined with a maximum number of rollers and optimized roller end/flange contact, enable our tapered roller bearings to accommodate very heavy loads.

### PRODUCT FEATURES :

- Lower noise and vibration level
- Lower operating temperature
- Longer lubricant life
- High load carrying capacity
- High running accuracy

### USER BENEFITS :

- Increased uptime and productivity
- Extended maintenance intervals
- Reduced operating cost
- Reduced energy consumption
- Reduced lubricant consumption

### SERIES AVAILABLE :

- 30202 TO 30260
- 30302 TO 30330
- 31303 TO 31324
- 32004 TO 32060
- 32204 TO 32240
- 32305 TO 32324
- 32908 TO 32924
- 33009 TO 33122
- 33108 TO 33122
- 33205 TO 33220
- Inch series also available  
( TS,L,LM,JLM,JHM,JP,JW,M,HM,H,HH,TSF,TDI,TDO,TDIE,.....)





## CYLINDRICAL ROLLER BEARINGS

- Cylindrical roller bearings are used in application where there are heavy radial load combined with high speed
- Our bearings offer design features that result in a bearings that is lighter and more cost effective, while offering outstanding performance and up to three times longer service life
- The internal geometry like E design , has been optimized to distribute load in a way that significantly reduce the risk of edge stresses. This provides increased operational reliability. The roller end/flange contact has also been improved to reduce friction and thus heat generated by bearings and maximizes the effectiveness of the lubricant. The cross section have been designed to provide max. service life.



### PRODUCT FEATURES :

- Optimized roller end/flange geometry
- Excellent surface topography
- Ultra clean steel
- Variety of cage design

### USER BENEFITS :

- Higher radial load carrying capacity
- Up to 3 times longer service life
- Reduced noise and vibration level
- Less heat generated by bearings
- Reduced lubricant consumption

### SERIES AVAILABLE ( WITH STEEL, BRASS CAGE ) :

- |                     |                    |
|---------------------|--------------------|
| • N – NJ – NU – NUP | 204E TO 240E       |
| • N – NJ – NU – NUP | 304E TO 330E       |
| • N – NJ – NU – NUP | 405E TO 420E       |
| • N – NJ – NU – NUP | 2205E TO 2230E     |
| • NU                | 1008 EM TO 1030 EM |
| • NU                | 5206 M TO 5230 M   |



## DEEP GROOVE BALL BEARINGS

- Designed to perform in a wide variety of application
- Capable of supporting both radial and axial load at higher and/or uneven speeds
- Offer outstanding reliability, require little attention or maintenance , provided that they are selected to meet to need of the application and installed properly.
- Simple in design , non-seperable , have deep raceways and a high degree of conformity between balls and raceways. This enable they to carry axial load in both direction. In addition to it radial load at high speed.
- Our bearings run cooler and smoother.

### PRODUCT FEATURES :

- High degree of running accuracy
- Generates less heat
- Reduced vibrating levels
- Quick running
- Increased speed capacity

### USER BENEFITS :

- Extended service life
- High speed performance and increased productivity
- Lower operation cost
- Reduced noice level

### SERIES AVAILABLE ( in Plain,Z,ZZ,RS,2RS ):

- 6000 TO 6060
- 6200 TO 6240
- 6300 TO 6334
- 6403 TO 6420
- 16005 TO 16040
- 6900 TO 6940
- 6800 TO 6840





## ANGULAR CONTACT BALL BEARINGS

- Manufactured from ultra clean steel , these bearings offer higher rotation speed and load carrying capacity.
- Have new crown cage design that provide better ball guidance and better lubrication. This results in higher speed.

### PRODUCT FEATURES :

- Manufacture from ultra clean steel
- High axial load carrying capacity
- New crown cage
- Upgraded balls

### USER BENEFITS :

- Improved bearing service life
- Reduced lubricant consumption
- Reduced need for maintenance
- Reduced noise and vibration level

### SERIES AVAILABLE :

- 7000 B TO 7030 B
- 7200 B TO 7230 B
- 7302 B TO 7322 B
- 3200 TO 3222
- 3302 TO 3320

**On special requirement we can supply A&C Angle.**



## SELF ALIGNING BALL BEARINGS

- Optimal for application prone to misalignment or shaft deflection
- Two row of balls with a common sphere raceway in outer rings. This results in excellent accommodation of misalignment , the lowest operation friction of all rolling bearings and a significantly longer service life.
- basic types include open and sealed design , tapered bore.

### PRODUCT FEATURES :

- Extremely low friction
- Lower operating temperature
- Reduced vibration levels
- Lower noise levels
- Low requirements on lubrication

### USER BENEFITS :

- Excellent high-speed performance
- Increased uptime & productivity
- Lower maintenance and operation cost
- Significantly longer lubricant life
- Environmentally friendly

### SERIES AVAILABLE : ( with Plain and Tapered bore)

- 1204 TO 1230
- 1304 TO 1322
- 2204 TO 2222
- 2305 TO 2320



## THRUST BALL BEARINGS

- It contains shaft washer, housing washer, ball and cage Thrust Assembly.
- Can carry axial load in one/both direction and hence locate shaft axially on one direction.
- Not suitable for radial load

### **SERIES AVAILABLE :**

- 51100 TO 51160
- 51200 TO 51260
- 51305 TO 51336
- 52202 TO 52220





## PILLOW BLOCK BEARINGS

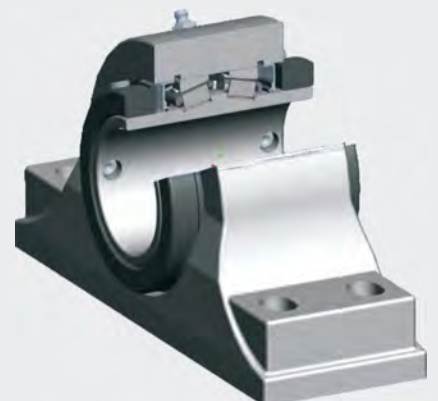
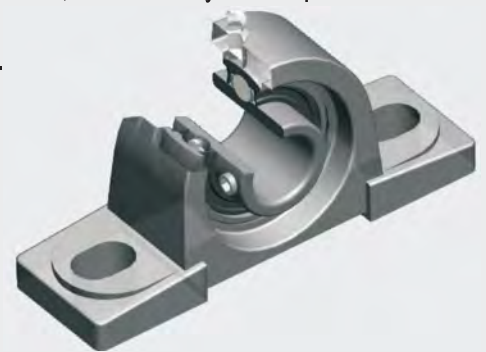
- These bearings are combination of ball bearings, seal and housing of high grade casting.
- Castings are in various shapes like Pillow , Take-up, Oval ,Square.
- It can accommodate moderate initial misalignment, but normally do not permit axial displacement.
- They are ready-to-mount, ready-to-use Units.
- Easy for assembly.

### **SERIES AVAILABLE :**

- UC 204 TO 220
- UCP 204 TO 220
- UCT 204 TO 220
- UCF 204 TO 220
- UCFL 204 TO 220
- UCFC 204 TO 220

### **E-TYPE PILLOW BLOCK BEARING :**

- General features
- Case hardened rollers and races
- Easy installation and maintenance
- Double rubber lip contacting seals
- Factory assembled , adjusted and pre-lubricated



## OTHER PRODUCTS



<b>SHEAVES</b>	
<b>FIXED PITCH</b>	AK15 to AK184 BK23 to BK190
	AS15 to AS124 AL54 to AL124
<b>VARIABLE PITCH</b>	1VP25 to 1VP75 1VL25 to 1VL44
<b>H BUSHED</b>	AK30H to AK184H BK30H to BK190H
<b>QUICK DETACHABLE</b>	1B to 10B 3C to 12C 1-3V to 10-3V 2-5V to 10-5V
<b>SPLIT TAPER(ST™)</b>	1TA to 4TA 1TB to 6TB 1TC to 6TC

**T5V™** TRUE 5V SHEAVES

Material :- Cast Iron, Aluminum, Zinc &amp; Nylon



<b>BUSHINGS &amp; HUBS</b>	
<b>QUICK DETACHABLE</b>	JA, SH, SDS, SD, SK, SF, E, F, J, M, N & P U2, W1, W2 & Y0
<b>SPLIT TAPER (ST™)</b>	G, H, P1 - P3, B, Q1 - Q3, R1, S1, S2, O0, U1, U2, W1, W2 & Y0
<b>TAPER LOCK®</b>	1008, 1108, 1210, 1215, 1610, 1615, 2012, 2517, 2525, 3020, 3030, 4040, 4545 & 5050
<b>XTB / XTH®</b>	15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 100 & 120



QUICK DETACHABLE

**ROLLER CHAIN SPROCKETS  
INDUCTION HARDENED**

TYPE	PITCH
A	25 to 120 1/4" - 1 1/2"
B	35 to 100 3/8 - 1 1/4
FB	35 to 80 3/8 - 1
ST	35 to 80 3/8 - 1
TL	35 to 80 3/8 - 1
	40 to 80 1/2 - 1

All available in Single, Double & Triple configuration  
Each type available from 8 thru 125 teeth.**SPROCKETS**

	American				
	25	35	40	50	60
Tooth No.	10 - 80	9 - 80	8 - 90	8 - 90	8 - 90
	80	100	120	140	160
Tooth No.	9 - 90	9 - 90	9 - 80	10 - 60	10 - 60

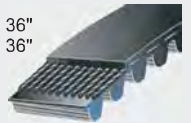
**GRID COUPLING**Available in 19 sizes with a max. bore of 13" and max. torque of 1,500,000 in-lbs.  
Both horizontal and vertical split cover designs. Fully interchangeable with industry standards  
Tapered grid design provides torsional damping Sizes available from 1020 to 1200**GEAR COUPLING**Available from 1010 to 1070 , with a max. bore of 44" and max. torque of 54,390,000 in-lbs  
Various types :Continuous Sleeve, Flanged Sleeve, Labyrinth Seal, Alloy Steel & Nylon Sleeve  
couplings are available High Performance, Heavy Duty, Slow speed couplings and  
special OEM gear couplings are also available Sizes**JAW COUPLING**Jaw Type couplings are available in 24 sizes from a minimum torque rating of 3.5 in-lbs  
to a maximum torque rating of 170,004 in-lbs and a bore range of .125 inches to 7 inches.**CHAIN COUPLING**Chain couplings have harden tooth sprocket that provide long life  
Commonly used in slow speed high torque application  
Available with Split Taper(ST™) and Taper bore® bushing

## OTHER PRODUCTS

### BELTS



<b>A1</b>	- <b>A180</b>	<b>AX16</b>	- <b>AX239</b>	MXL, XL, L, H, XH, XXH belts upto 36"
<b>B2</b>	- <b>B315</b>	<b>BX23</b>	- <b>BX210</b>	3M, 5M, 8M & 14M HTD belts upto 36"
<b>C5</b>	- <b>C420</b>	<b>CX51</b>	- <b>CX210</b>	T2.5, T5, T10 & T20 belts upto 12"
<b>D10</b>	- <b>D660</b>	<b>E180</b>	- <b>E660</b>	AT5, AT10 & AT20 belts upto 12"
<b>3V25</b>	- <b>3V1400</b>	<b>3VX250</b>	- <b>3VX1400</b>	Polychain® Belts are also available.
<b>5V50</b>	- <b>5V3550</b>	<b>5VX500</b>	- <b>5VX2000</b>	
<b>8V1000</b>	- <b>8V5600</b>			



### GEAR



Nitrided gears upto 62 RC  
Anti-backlash gears  
Tapered, Internal & Spline Gears  
Customs Gears from 1/4" upto 36" in diameter  
**Helical, Bevel, Spur, Hub, Worm & Crown Gears**

### RACK

Hardened Rack upto 58 RC  
Gear Racks accurate upto +/- 0.00015"  
Light Actuation & Angular Measuring Racks  
Custom Racks 1 D.P. to 120 D.P,  
Upto 13" Face width & 82" lengths



### TIMING PULLEYS & PULLEY STOCK



**IMPERIAL SERIES** MXL, 40DP, XL, L, H, XH, XXH pitch  
**HTD® & POLYCHAIN® SERICES** 3M, 5M, 8M, 14M pitch  
**METRIC SERIES** T2.5, T5, T10, T20 pitch  
**TYPES OF BORE** Split Taper (ST™), Taper Lock®, QUICK DETACHABLE  
**Material :-** Steel, Aluminum, Stainless Steel & Nylon  
**Surface treatment :-** Black Oxidizing, Phosphating, Clear Anodizing.



### TIGHTENERS & IDLERS



Single Adjusting, Double Adjusting,  
Fixed Flange Tighteners, Tightener shafts  
Idler bushings, Flat Face, V-Groove, Sprocket, Idlers,

### BELT ACCESSORIES

Wall Racks 36" long  
V-Belt Tension Checker  
V-







## ➡ Our warehouses

**Michigan City, Portland, San Francisco, Salt lake, Denver, Kansas, Chicago, Atlanta, Hartford, Philadelphia, Memphis, Minneapolis, Detroit, Dallas**





## ***POWERDRIVE BEARINGS PVT. LTD.***

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