

AUTOMATIONDIRECT.com



# Power Transmission

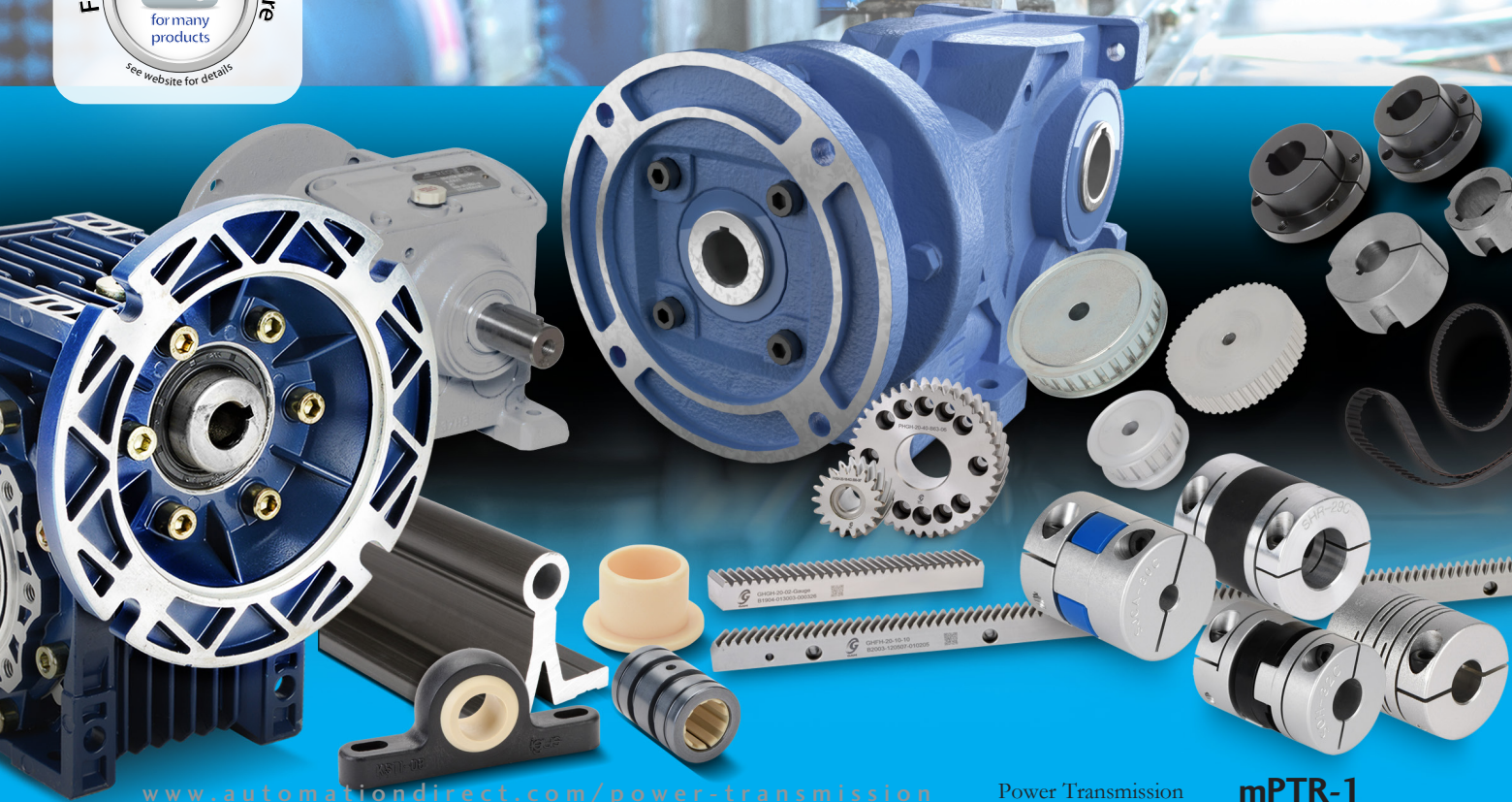
Up-to-date price list:  
[www.automationdirect.com/pricelist](http://www.automationdirect.com/pricelist)

FREE Technical Support:  
[www.automationdirect.com/support](http://www.automationdirect.com/support)

FREE Videos:  
[www.automationdirect.com/videos](http://www.automationdirect.com/videos)

FREE Documentation:  
[www.automationdirect.com/documentation](http://www.automationdirect.com/documentation)

FREE CAD drawings:  
[www.automationdirect.com/cad](http://www.automationdirect.com/cad)





# Affordable Power Transmission

## IronHorse® General Purpose Gearboxes

AutomationDirect's IronHorse gearboxes are designed for use with C-face electric motors to reduce output speed, increase torque, change drive direction, or run two loads from one motor. Multiple frame sizes and gear ratios in right hand, left hand and dual shaft output configurations are offered and optional mounting bases

are also available for ease of installation. These units are manufactured in an ISO9001 certified plant by one of the leading worm gearbox manufacturers in the world today. Strict adherence to and compliance with the toughest international and U.S. testing standards and manufacturing procedures assure you the highest quality mechanical power transmission products.

### Cast Iron Worm Gearboxes (Speed Reducers)

- Four output types: Dual Shaft, Right Hand Shaft, Left Hand Shaft and Hollow Shaft
- Five frame sizes: 1.75", 2.06", 2.37", 2.62", 3.25"
- Six ratios: 5:1, 10:1, 15:1, 20:1, 30:1, 40:1, 60:1
- These gearboxes utilize C-face mounting interfaces for C-face motors
- Worm gear reducer mounting bases are also available for ease of installation

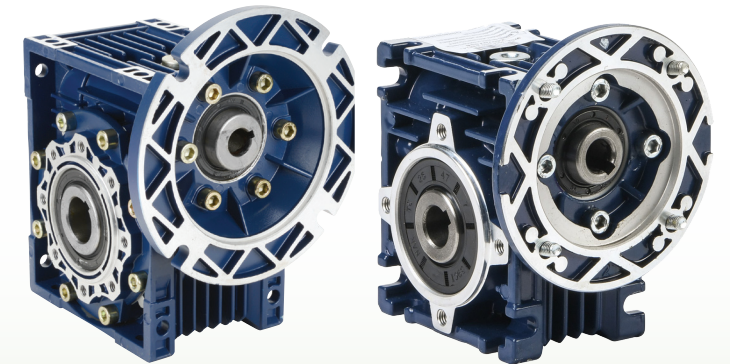


## IRONHORSE®

# Affordable Power Transmission

## Aluminum Worm Gearboxes (for NEMA and IEC Motors)

- Hollow shaft output
- Five frame sizes: 30, 40, 50, 63, and 75 mm
- Gear ratios: 10:1 to 100:1 (in most sizes)
- NEMA input faces: 56C, 145TC, 182/4TC
- IEC Input face types: B5 & B14 (to fit IEC motor frame sizes: 63, 71, 80, and 90)
- Mounting flanges, output shafts, torque arms and covers are also available to allow many mounting and configuration options

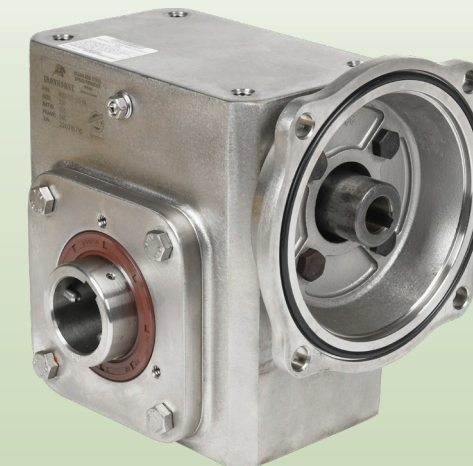


NEMA Mount

IEC Mount

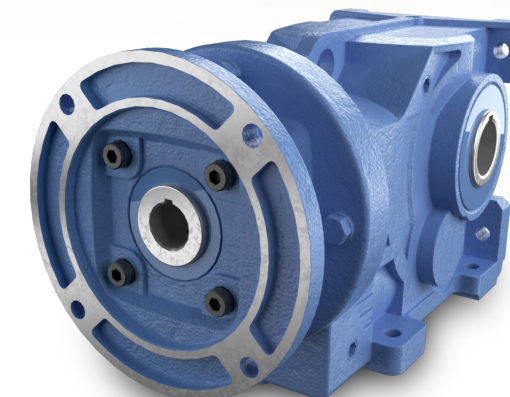
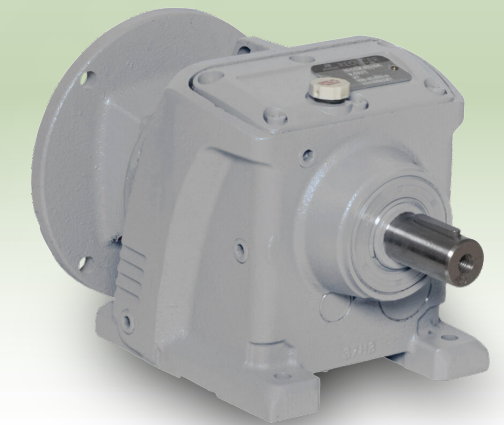
## Stainless Steel Worm Gearboxes

- BISSC certified (Baking Industry Sanitation Standards Committee)
- IP69K rated
- Housing, covers, & flange – 304 stainless steel
- Available ratios – 5:1 to 60:1
- Input faces: 56C, 145TC
- Hollow shaft output
- Accessories available include single and dual output shafts, output flanges, output covers and output bushings



## Cast Iron Helical Gearboxes

- Five frame sizes: 37, 47, 67, 77, 87 mm
- Gear ratios: 5:1, 10:1, 15:1, 20:1, 30:1, 40:1, 60:1
- Input faces: 56C, 145TC, 182/4TC, 213/5TC, 254/6TC
- Drop-in replacement for most popular European inline gear reducers



## Cast Iron Helical Bevel Gearboxes

- Five frame sizes: 37, 47, 67, 77, 87 mm
- Gear ratios: 5:1, 10:1, 15:1, 20:1, 30:1, 40:1, 60:1
- Input faces: 56C, 145TC, 182/4TC, 213/5TC, 254/6TC
- Drop-in replacement for most popular European right-angle gear reducers
- High efficiency in a right-angle gearbox



# Affordable Power Transmission



## Timing Belts, Timing Pulleys, and Tapered Bushings

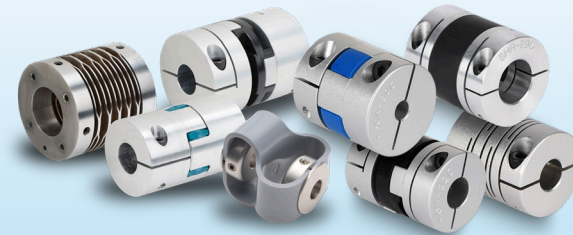
The SIM® and SureMotion® line of power transmission products includes pulleys and timing belts that allow speed and torque changes while connecting mechanically rotating components. SIM MXL, XL, L, and 5M timing pulleys are made of hard anodized aluminum, with or without hub and with smooth bore and setscrew. Also available are SIM L and 5M pulleys that include quick/disconnect bushings.

- Timing belts - MXL, XL, L, 5M and 8M sizes
- Timing pulleys - MXL, XL, L and 5M sizes

## Drive Couplings

Shaft misalignment is a common issue with shaft-driven components and can place unwanted stress on bearings, shafts and related parts of the assembly. This stress can cause breakdowns and costly system repairs. SIM and SureMotion drive couplings can be used to compensate for shaft misalignment, whether the misalignment is an intentional or an unintentional part of the design.

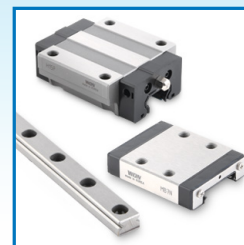
- Jaw / spider couplings
- Oldham couplings
- Beam-style servo couplings
- Double loop couplings
- Bore reducers
- High-gain servo couplings



## Linear Guides and Rail Systems

WON linear bearing guides use continuously circulating ball bearings to provide high load capacities with smooth motion. All bearing/rail systems provide 4-direction load sharing for lower friction and smooth motion.

- 11 sizes available
- Load ratings up to 74,600N (16,770lbf)
- End seals included in all bearings blocks
- Rails available in 80-1,000mm lengths
- Rails hardness: HRC58-64
- Made from stainless or carbon steel



**WON**



**SureMotion**

SureMotion linear carriage use V-shaped wheels to resist debris in dirty, dusty processes. Ball bearings are sealed inside the hub of the V-wheel.

- 6 carriage sizes available
- Load ratings up to 4,700N (1,057lbf)
- LV series (external carriage) uses wheel covers to provide constant lubrication
- LU series (internal carriage) does not require internal rail lubrication (perfect for clean room applications)
- Guide tracks are available in lengths from 266-1,520mm (10.47-59.84") and can be joined end-to-end for longer runs



**PBC Linear**

PBC Linear ceramic coated aluminum guide tracks support self-lubricating anodized aluminum slides. FrelonGOLD® (a PTFE compound) plain bearings are bonded to the slides for smooth and quiet operation.

- Vibration damping and shock resistant
- No lubricant required
- Maintenance-free bearing surface
- Rated for static loads up to 8,200 N (1,843 lbf)
- Available lengths up to 2000mm
- Operates within a wide temperature range -400°F to 400°F (-240°C to 204°C)
- 7 available sizes

# Affordable Power Transmission

## Rack & Pinion Components

GAM helical rack and pinion components are part of a complete linear motion solution.

- High precision helical rack for smooth, quiet operation available in module sizes of 1.5, 2 and 3 that mate with GAM pinions
- Pinions can be mounted to SureGear® gearboxes, are hardened to work with ISO 10 hardened rack
- Pinions available in module sizes of 1.5, 2 and 3 from 18 to 40 teeth
- Most cost-effective solution for linear motion greater than 2 meters
- Rack installation gauges available for use when installing multiple racks



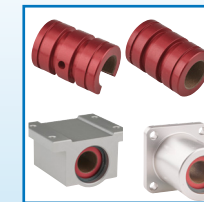
## Steel Shafts, Shaft Supports, and Bearings

PBC Linear shafts, shaft supports, and bearings are manufactured to very tight tolerances and are a great choice where precision power transmission is required.



PBC Simplicity® 60 plus linear shafts are precision manufactured with an optimized surface for bearings to slide on.

- 1060 carbon steel or 440C stainless steel
- Round and fully supported versions
- Diameters from 1/4" to 1-1/4" and lengths from 6" to 36"
- Shaft supports available for all diameter shafts and can be used for all shaft types and materials



PBC Simplicity® plain bearings are made from an aluminum alloy shell with FrelonGOLD® liner which is excellent for reduced friction without using ball bearings.

- Self-lubricating design
- Closed or open style in standard (0.0005" clearance) and compensated (0.0015" clearance) versions
- Available preinstalled in pillow blocks in closed or open style and standard and compensated versions
- Available preinstalled in flanges in closed style and standard and compensated versions



PBC Linear ball bearings are made from heat-treated steel and are of the highest precision.

- End seals included
- Coefficient of friction: 0.05
- Diameters available from 1/4" to 1-1/4"
- Unmounted bearings available in closed or open style
- Available preinstalled in pillow blocks in closed or open style

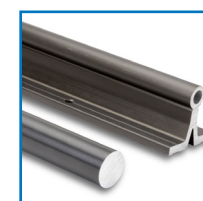


PBC Linear roller pillow blocks carry heavy loads and easily maneuver over joined or misaligned shafts over long travels. Large cam followers, equipped with side seals, deliver industrial strength performance and excel in dirty environments.

- Available for various shafts sizes from 1/2" thru 1 1/4"
- Dynamic load ratings up to 2,800 lb (12,455 N)
- Designed and pre-adjusted for use with PBC Simplicity 60 Plus series shafts
- Interchangeable with industry standard pillow blocks

## Aluminum Shafts, Shaft Supports, and Bearings

Shafts, shaft supports, and bearings are manufactured for accurate tolerances, perfect for reliable power transmission.



igus® DryLin® R hard-anodized shafts are designed to be the optimal sliding surface for DryLin R linear bearings.

- Hard-anodized 6061-T6 aluminum
- Round and fully supported styles
- Four diameters, lengths up to 1m



igus® igubal® mounted spherical bearings are lubrication free. They are lighter and more economical than traditional mounted spherical bearings.

- Five popular mounting configurations
- Four popular shaft sizes
- Maintenance-free
- Excellent wear resistance



igus® DryLin® R linear plain bearings have a low friction liner suitable for wet or dirty environments.

- Dimensionally interchangeable with ball bearings
- Four shaft diameters in fixed or self-aligning housings



igus® iglide® plastic bearings are economical, dry-running and maintenance free.

- 3 popular materials
- Sleeve and flange bearings
- Fits shafts from 1/4" to 1"
- Good chemical resistance