



Cone Drive
BY TIMKEN

PRODUCT RANGE

PRECISION • MOTION CONTROL • TECHNOLOGY



Cone Drive is a world leader in precision motion control technology. We work with our customers every step of the way – from design specs to the final solution – to create highly precise, highly specific products that keep our customers’ technology at the forefront of their industry. Cone Drive offers engineering support, unique solutions, and innovative technology across a breadth of markets and products to drive your company forward.



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PRODUCT RANGE

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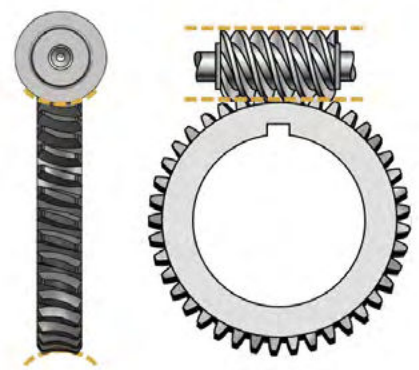
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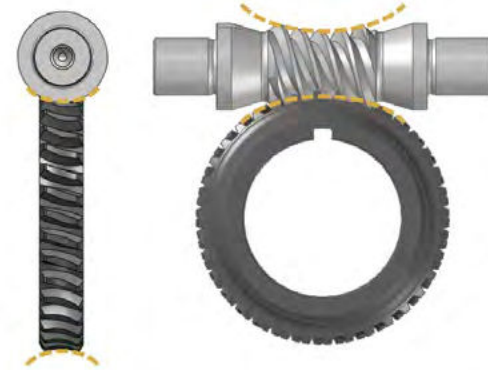
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The Double-Enveloping Worm

A better choice for so many reasons.



STANDARD CYLINDRICAL GEAR
Total load is concentrated to only one or two teeth



CONE DRIVE DOUBLE-ENVELOPING GEAR
Total load is distributed to more teeth along a greater surface area

CONE DRIVE DOUBLE-ENVELOPING TECHNOLOGY

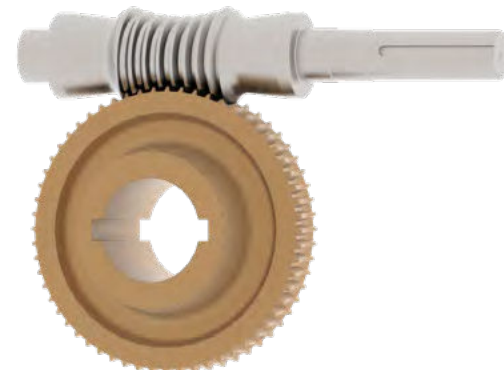
In 1925, Samuel I. Cone developed a method to machine the double-enveloping worm gear. With Cone Drive's double-enveloping technology, the worm 'hugs' the gear creating greater surface contact, higher load capacity, lower contact stress, and greater shock capacity. This gives you the flexibility to decrease the size of a worm drive gearbox to save space or increase the motor to get more power.

EFFICIENCY WITH A POWERFUL DESIGN

Greater surface area contact means the load is distributed across more teeth allowing the worm gear reducer to run cooler, quieter, and more efficiently. Cone Drive worms are through hardened to further provide additional strength. An efficient design without sacrificing power means cost savings with no loss of performance.

SERVICE FACTOR SAVINGS

Cone Drive worm drive gearboxes allow you to maintain service factor levels in a smaller package. The ability to down size equates to space savings in your system and cost savings in your pocket. We publish ratings you can rely on, Cone Drive tests their ratings in accordance with the American Gear Manufacturers Association (AGMA) standards.



PRODUCT VARIETY

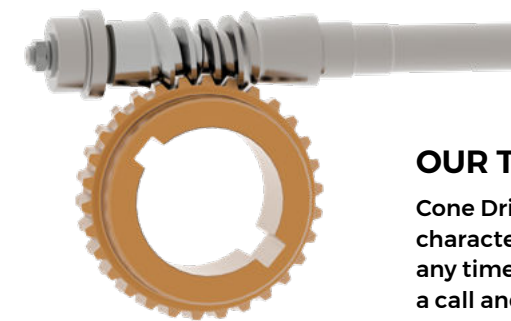
Cone Drive worm gearboxes cover a diverse spectrum of markets. We offer a wide range of hollow output bore options, including industry leading large bore sizes. If you are looking for a solution to a gearing application, Cone Drive has the answer and the product range to back it up.

LET'S TALK BEARINGS

We use two heavy duty roller bearings to provide dual support for the worm. The additional support increases the longevity of the worm gearbox which means less down time. Heavy duty bearings are used on the output shafts, which is excellent for applications that require high overhung loads. This not only simplifies the design, but lowers your cost.

WORM DRIVE GEARBOXES WITH POWER AND ACCURACY

The inherent accuracy and torsional stiffness of double-enveloping worm gearing keeps the deflection and torsional displacement low, which is exactly what you need for your most critical timing and indexing applications. For even further control, Cone Drive worm gears provide you with exact ratios, eliminating the problems posed by fractional units. We offer solutions with standard, low, and zero backlash worm gearsets.



CUSTOM IS OUR SPECIALTY

Our experienced team of customer service representatives, application engineers, design engineers and manufacturing engineers are ready and willing to take on a challenge. Let us put our expertise to work and develop a solution customized to fit your needs. We can design and manufacture any type of worm drive gearbox application that you require.

CONE DRIVE QUALITY

- **QUALITY ENGINEERING:** We will design the right gearbox for your application and build it with the finest materials and components.
- **QUALITY MANUFACTURING:** We operate with a strict attention to detail and manufacture to exact tolerances and dimensions. Your gearbox will be built with precision and accuracy.
- **QUALITY SERVICE:** When you need assistance with installation, Cone Drive will be there to support you. We are fully committed to offering you service before and after the sale.

WE HAVE STOOD THE TEST OF TIME

For nearly 100 years, we have been making quality, durable worm gears. Our double-enveloping worm gearboxes drive equipment in mining, steel, aerospace, automotive, printing, packaging, and solar power world-wide. When you choose Cone Drive, you have the confidence of knowing that our many years of experience are behind every unit that we build.

OUR TEAM

Cone Drive has a team of highly qualified, high character individuals to help if you have questions at any time throughout the purchasing process. Give us a call and we will offer dedicated, personal support to help get you started and identify what product will best fit your application.



Configure Your Cone Drive Product Online

At Cone Drive, we are committed to delivering exceptional customer service. Our team of experts provides personalized, dedicated support to ensure your systems operate seamlessly.

Beyond our hands-on assistance, we offer a suite of online tools designed for your convenience, providing guidance and support at your fingertips.

CONE DRIVE ONLINE CONFIGURATOR

Ready to build your product? Visit our user friendly Cone Tools product builder to select your product and instantly access:

- Drawings
- Specifications
- CAD Models
- Submit for Quote

POWERMATE™ & SERVOMATE™

Build a worm gearbox based on motor specifications

COMPETITOR INTERCHANGE

Find a Cone Drive replacement for a competitor's worm, slew, or harmonic product

LOCAL SALES SUPPORT MAP

Find dedicated sales representation in your area

LITERATURE

Digital catalogs, product summary sheets, and maintenance information

VIDEOS

A library of informative product, company, and application videos



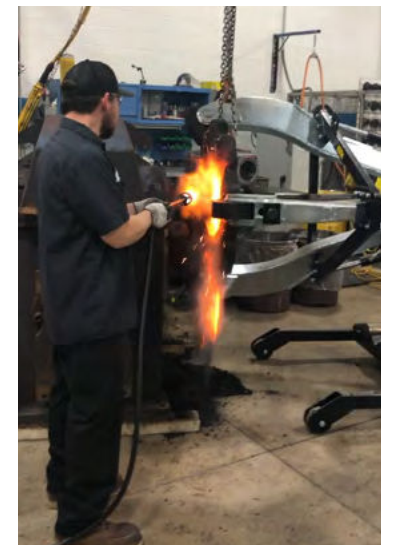
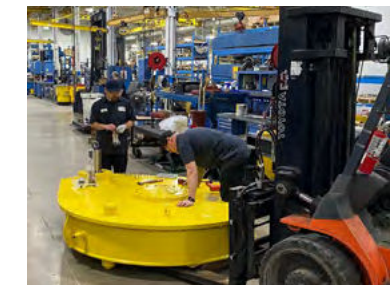
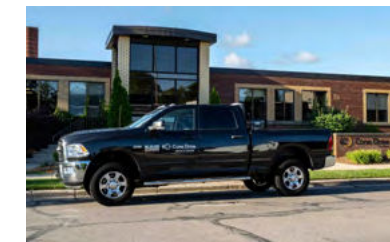
www.ConeDrive.com/tools

Cone Drive Service Center

Whether you are interested in a partial or complete rebuild, extended service contract, or on-site service, we are ready to answer your call. Rebuild it with the people who know it best. It doesn't matter if your gearbox has been in service for 5 years or 25 years, we will rebuild it with Cone Drive approved parts and workmanship that you have come to trust.

SERVICES WE PROVIDE

- Remanufacturing and Repair
- Preventative Maintenance Plans
- Video Scope Inspection
- Inspection Reports
- Oil Analysis
- Technical Assistance
- Spare Parts Sales
- Rebuilds with Warranty
- Reverse Engineering & Manufacture
- Field Service



FIND MORE INFORMATION AT www.ConeDrive.com/repair-and-rebuild-center

— C A P A B I L I T I E S —

- Storage maintenance of customer transmissions
- Complete test facility, with bearing & sump temperature monitoring
- Inspection and reverse engineering services, using the latest technology provided by the FARO Edge portable CMM



PRECISION MOTION CONTROL

Cone Drive's precision gearing solutions exceed the most demanding needs in motion control applications. Available in both right angle and in-line configurations, we have a variety of products to fit your precision and power needs.

INDUSTRIAL MOTION CONTROL

Cone Drive's industrial gearboxes are built to control motion and deliver torque. Our right angle worm solutions are available in a wide variety of sizes and ratios and feature customizations sure to adapt to a variety of applications.

RIGHT ANGLE, DOUBLE ENVELOPING WORM GEAR



SERIES FS

- Low or standard backlash
- IP69k
- 316 stainless steel adapter and housing
- Viton™ output seals
- 5 year warranty



SERIES W

- Zero, low, or standard backlash
- Aluminum housing
- Angular contact ball bearings (worm shaft)
- Zero backlash bellows style coupling
- 5 year warranty



SERIES RG

- Low or standard backlash
- Cast iron housing
- White epoxy or stainless steel paint available
- 5 year warranty



SERIES S

- Conex proprietary worm gearing
- Aluminum housing
- USDA white epoxy paint available
- Optional wash down design
- 2 year warranty



SERIES HP

- Low or standard backlash
- Vented, cast iron housing
- Bellows or jaw style coupling
- 5 year warranty



SERIES HP

- Single, double, or triple reduction
- Vented, cast iron construction
- Fan or water cooling available
- Wide range of sizes
- 5 year warranty



SERIES HP-A

- Universal housing
- Cast iron construction
- Fan cooling available
- Viton™ seals available
- Optional drywell feature
- 5 year warranty



SERIES RG

- Single or in-line double reduction
- Cast iron housing
- Optional low backlash
- White epoxy or stainless steel paint available
- 5 year warranty



SERIES F

- IP69k rated
- 316 stainless steel adapter and housing
- Viton™ output seals
- Single or in-line double reduction
- Optional low backlash
- 5 year warranty



SERIES B

- Conex proprietary worm gearing
- Aluminum housing
- Single or double reduction
- Optional wash down design
- 2 year warranty

IN-LINE PRECISION



CONE DRIVE HARMONIC SOLUTIONS®

- Low to zero backlash
- High transmission accuracy
- Customizations available upon request
- 1 year warranty



SPINEA CYCLOIDAL TWINSPIN®

- Low backlash
- High reduction ratio
- High kinematic accuracy
- High moment capacity and stiffness
- Compact and lightweight



SPINEA CYCLOIDAL DRIVESPIN®

- Zero backlash
- Dynamic, high performance actuator
- Compact design
- High torsional and tilting stiffness



PLANETARY SOLUTIONS

- Quiet operation
- Low backlash, high efficiency
- Stainless steel option
- Competitive interchanges available
- 5 year warranty

PINCH ROLLING



DUODRIVE

- Designed for pinch rolling applications
- One input shaft powering two output gears
- Unequal ratio configurations available
- Cast iron housing
- Water or fan cooled
- 5 year warranty

SLEWING



SLEW DRIVES & SLEW BEARINGS

- Select sizes available from stock
- Low profile
- Sealed drive options available
- Capable of combined tilting, radial, and axial loads
- Strong shock resistance
- Long life performance
- 2 year warranty

SOLAR & TRACKING



SLEW DRIVES & SLEW BEARINGS

- Select sizes available from stock
- Low profile
- Sealed drive options available
- Capable of combined tilting, radial, and axial loads
- Strong shock resistance
- Long life performance
- 2 year warranty

CONE DRIVE HARMONIC SOLUTIONS®

Cone Drive's harmonic gearing is zero to low backlash by design. It provides high transmission accuracy and can support a high ratio reduction in a single stage with low inertia. The highly accurate, torque dense design makes harmonic gearing the perfect solution for ultimate precision motion control applications.

AUTOMATION & ROBOTICS | MEDICAL | SATELLITE COMMUNICATION | MILITARY & DEFENSE



ULTIMATE PRECISION

- Ring, cup, and hat styles available
- Component sets and gearheads
- Low to zero backlash
- High transmission accuracy
- Customizations available upon request
- Manufactured and assembled in controlled environment
- Competitive lead times
- 1 year warranty



CONFIGURE & DOWNLOAD YOUR MODEL AT www.ConeDrive.com/tools

— SPECIFICATIONS —

Sizes: 11 thru 32

Ratio: 50:1 thru 160:1

Nominal Backlash: ≤ 1 mRad

Continuous Output Torque: ≤ 172 Nm

Peak Output Torque: ≤ 824 Nm

Standard Input Options: Keyed or set screws (including Oldham style coupling)


Custom Input Options: Throughbore, solid input, dowel pins, tapped holes, piloted stepper/servo motor ready, special materials and coatings

Configurations: Component gearset or gearhead, sealed, throughbore, lightweight, and other options available

Custom solutions for your applications.



SPINEA CYCLOIDAL GEARING

 **SPINEA** TwinSpin® and DriveSpin® cycloidal reducers are designed for high precision, torque density, and weight reduction. The G & GH series provide high tilting stiffness, low friction, and high torque overload capacity with a high precision output bearing. In addition the DS & DSH series provide rotary motion and transfer output torque with high radial-axial load capacity.

AUTOMATION & ROBOTICS | MEDICAL | SATELLITE COMMUNICATION | MILITARY | MACHINE TOOLS

HIGH TORQUE PRECISION

TwinSpin®

- High reduction ratio and high kinematic accuracy
- Low lost motion
- High moment capacity and stiffness
- Compact and lightweight

DriveSpin®

- Dynamic, high performance actuator
- Compact design
- High torsional and tilting stiffness
- Zero backlash



DEDICATED NORTH AMERICAN STOCKING PROGRAMS



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— SPECIFICATIONS —

TwinSpin®

Sizes: 065 thru 285

Ratio: 35:1 thru 137:1

Lost Motion: < 1 arc min

Rated Output Torque: $\leq 1,700$ Nm

Max. Accel./Decel. Torque: $\leq 4,250$ Nm

DriveSpin®

Sizes: 050 thru 170

Rated Output Torque: ≤ 460 Nm

Max. Acceleration Torque: $\leq 1,150$ Nm

(ratings vary by size and style)



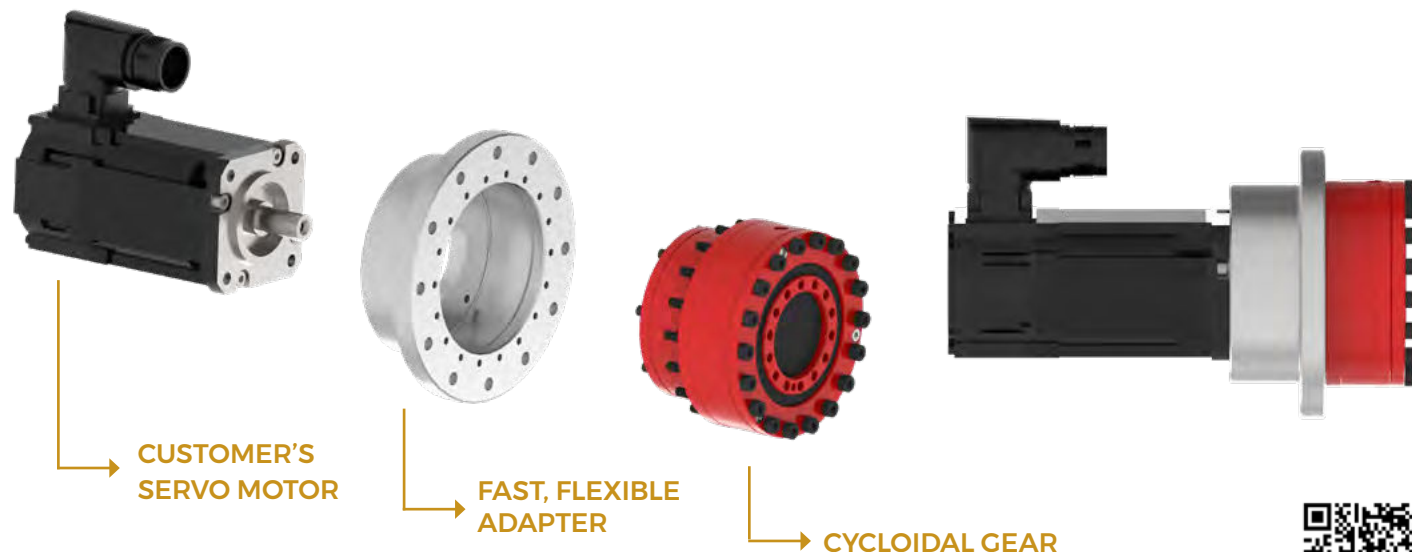
SERVO DRIVEN CYCLOIDAL POWER PRECISION MOTION CONTROL

When timing matters, rely on Cone Drive to quickly engineer custom adapters that seamlessly integrate your servo motor with a Spinea high-precision cycloidal gear. Our solutions ensure performance, efficiency, and compatibility across a wide range of servo motors.

AUTOMATION & ROBOTICS | MEDICAL | SATELLITE COMMUNICATION | MILITARY | MACHINE TOOLS

RAPID GEAR INTEGRATION

- **SPINEA** cycloidal gears
- **FAST** lead times
- Sizes: 085 to 225
- Ratios: 43:1 to 137:1 (size dependent)
- Rated torque: 75Nm to 1,270Nm
- Allowable tilting moment: 336Nm to 4,380Nm
- Ease of integration



PLANETARY GEARING

Cone Drive's planetary gearing offers an in-line solution to satisfy the most demanding automation application needs. The compact design and universal housing make planetary gearing ideal for multiple applications. The precision bearings and planetary gearing provides high torque density while maintaining positional performance.

SATELLITE COMMUNICATION | PACKAGING | AUTOMATION & ROBOTICS | AEROSPACE

COMPACT PRECISION

- Multiple versions available (P_{S-Type}, P_{N-Type}, LE, LS)
- Quiet operation
- Ratios to 10:1 in a single stage
- Low backlash
- High efficiency
- Stainless steel option
- Competitive interchanges available
- Best in class lead times
- 5 year warranty



CONFIGURE & DOWNLOAD YOUR MODEL AT www.ConeDrive.com/tools

— SPECIFICATIONS —

Case Size: 50 thru 240

Ratio: 3:1 thru 100:1

Nominal Backlash: 3 - 14 arcmin

Output Torque (ConstantSpeed): $\leq 2,400$ Nm

Output Torque (Acceleration): $\leq 3,700$ Nm

Input Shaft: Fits servo or stepper motors

Output Shaft: Solid shaft (smooth or keyed)

Lubricant: Factory filled with synthetic grease

I.P. Rating: IP 54, IP 55, IP 65, IP 66



SERVO DRIVEN WORM GEAR POWER
PRECISION MOTION CONTROL

Cone Drive offers a wide selection of right angle gearing solutions adaptable to a variety of servo style motors. We have motor adapters designed for the most common servo motors. Our team of skilled application engineers can design an adapter to fit your specific needs.

SERVO DRIVEN WORM GEAR POWER
SERIES FS STAINLESS STEEL

The Series FS Stainless Steel-Servo gearbox provides servo motion control in a stainless steel package. The smooth contours of the housing allow fluids to wick away preventing bacteria from forming on the surface. When your application demands strict hygienic performance, look no further than Cone Drive's Series F Stainless Steel gearbox.



PRODUCT	SERIES FS (Page 15)	SERIES W (Page 16)	SERIES S (Page 17)	SERIES RC (Page 18)	SERIES HP (Page 19)
Size	39 - 76 mm	38 - 89 mm	1.33 - 3.54 in	1.5 - 3.5 in	3.0 - 8.0 in
Construction	316 Stainless Steel	Aluminum	Aluminum	Cast Iron	Cast Iron
Nominal Backlash Range	4 - 27 arcmin	0 - 24 arcmin	12 - 41 arcmin	4 - 27 arcmin	2 - 35 arcmin
Ratio	5:1 - 60:1	5:1 - 60:1	5:1 - 60:1	5:1 - 60:1	5:1 - 70:1
Output Torque (Constant Speed)	≤ 5,950 lb-in	≤ 10,800 lb-in	≤ 6,370 lb-in	≤ 10,800 lb-in	≤ 97,100 lb-in
Output Torque (Acceleration)	≤ 6,380 lb-in	≤ 11,700 lb-in	≤ 7,540 lb-in	≤ 11,700 lb-in	≤ 121,000 lb-in
IP Rating	IP 69k	IP 65	IP 55	IP 65	N/A
Warranty	5 Year	5 Year	2 Year	5 Year	5 Year

FOOD & BEVERAGE | PACKAGING | PHARMACEUTICAL | MEAT & DAIRY | MIXERS



HYGIENIC PRECISION

- Double-enveloping worm gearing supported with two input bearings
- Low or standard backlash
- 316 stainless steel adapter and housing
- Viton™ output seals
- Adheres to strict NSF and A3 hygienic standards and carries an ingress protection rating of IP69k
- Optional torque arm, flange, or side mounting available
- Best in class lead times
- 5 year warranty



CONFIGURE & DOWNLOAD YOUR MODEL AT www.ConeDrive.com/tools

— S P E C I F I C A T I O N S —

Center Distance: 39 thru 76 mm

Ratio: 5:1 thru 60:1

Nominal Backlash: 4 - 27 arcmin

Output Torque (ConstantSpeed): < 5,950 lb-in

Output Torque (Acceleration): < 6,380 lb-in

Input Shaft: Single or double extended

Output Shaft: Inch or metric, solid (single or double extended), hollow, shrink disc

Lubricant: Factory filled with food grade lubricant

I.P. Rating: IP 69K



SERVO DRIVEN WORM GEAR POWER SERIES W

The Series W is Cone Drive's highest precision right angle solution. The Series W has a compact, anodized aluminum housing. The design offers high torsional rigidity and is capable of speeds of up to 6,000 rpm. Quiet and smooth running, the Series W features Cone Drive's double enveloping worm gear technology with optional zero backlash.

PACKAGING | FOOD & BEVERAGE | SATELLITE COMMUNICATION | AUTOMATION & ROBOTICS

MADE IN
USA

ULTIMATE PRECISION

- Double-enveloping worm gearing supported with two input bearings
- Zero, low, or standard backlash
- Aluminum housing
- Angular contact ball bearings (worm shaft)
- Zero backlash bellows style coupling
- Best in class lead times
- 5 year warranty



CONFIGURE & DOWNLOAD YOUR MODEL AT www.ConeDrive.com/tools

— SPECIFICATIONS —

Center Distance: 38 thru 89 mm

Ratio: 5:1 thru 60:1

Nominal Backlash: 0 - 24 arcmin

Output Torque (ConstantSpeed): $\leq 10,800$ lb-in

Output Torque (Acceleration): $\leq 11,700$ lb-in

Input Shaft: Single or double extended

Output Shaft: Solid (single or double extended), Hollow, Shrink Disc

Lubricant: Factory filled with synthetic lubricant

I.P. Rating: IP 65



SERVO DRIVEN WORM GEAR POWER SERIES S

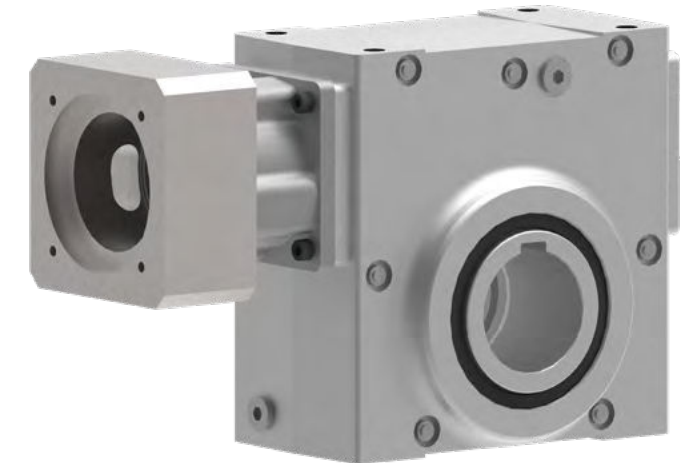
The Series S gearbox is highly a flexible and economical servo reducer. Directly interchangeable with the competition, the Series S features a lightweight, aluminum housing which provides improved thermal performance. No other gearboxes offer the flexibility, performance, and reliability that you have come to expect from Cone Drive.

PACKAGING | AUTOMATION & ROBOTICS | CONVEYOR | SATELLITE COMMUNICATION

MADE IN
USA

ADAPTABLE PRECISION

- Conex proprietary worm gearing supported with two input bearings
- Lightweight, aluminum construction
- USDA white epoxy paint available
- Optional wash down design
- Best in class lead times
- 2 year warranty



CONFIGURE & DOWNLOAD YOUR MODEL AT www.ConeDrive.com/tools

— SPECIFICATIONS —

Center Distance: 1.33 thru 3.54 in

Ratio: 5:1 thru 60:1

Nominal Backlash: 12 - 41 arcmin

Output Torque (ConstantSpeed): $\leq 6,370$ lb-in

Output Torque (Acceleration): $\leq 7,540$ lb-in

Input Shaft: Solid, single extended

Output Shaft: Inch or metric, solid (single or double extended), hollow

Lubricant: Factory filled with synthetic lubricant

I.P. Rating: IP 55



SERVO DRIVEN WORM GEAR POWER SERIES RG

The Series RG-Servo gearbox is an adaptable solution for your motion control needs. Designed for various servo motors, the Series RG-Servo provides you with Cone Drive's double-enveloping worm gear technology and offers multiple output options. Tapered roller output bearings provide the capacity required to handle heavy overhung loads.

PACKAGING | AUTOMATION & ROBOTICS | CONVEYOR | SATELLITE COMMUNICATION



POWERFUL PRECISION

- Double-enveloping worm gearing supported with two input bearings
- Low or standard backlash
- Cast iron construction
- White epoxy or stainless steel paint available
- Competitive pricing
- Best in class lead times
- 5 year warranty



SERVO DRIVEN WORM GEAR POWER SERIES HP

The Series HP - Servo gearbox is designed with power and precision in mind. Cone Drive's industry leading right angle, double-enveloping gearboxes are made for applications that require high torque and motion control in a quiet, compact package. The Series HP - Servo is ready to deliver the performance and accuracy you need.

FOOD & BEVERAGE | PACKAGING | AUTOMATION & ROBOTICS | AEROSPACE | DEFENSE



HIGH POWER PRECISION

- Double-enveloping worm gearing supported with two input bearings
- Low or standard backlash
- Vented, cast iron housing
- Bellows or jaw style coupling
- Best in class lead times
- 5 year warranty



CONFIGURE & DOWNLOAD YOUR MODEL AT www.ConeDrive.com/tools



CONFIGURE & DOWNLOAD YOUR MODEL AT www.ConeDrive.com/tools

— SPECIFICATIONS —

Center Distance: 1.5 thru 3.5 in

Ratio: 5:1 thru 60:1

Nominal Backlash: 4 - 27 arcmin

Output Torque (ConstantSpeed): $\leq 10,800$ lb-in

Output Torque (Acceleration): $\leq 11,700$ lb-in

Input Shaft: Single or double extended

Output Shaft: Inch or metric, solid (single or double extended), hollow, shrink disc, mounting flange

Lubricant: Factory filled with synthetic lubricant

I.P. Rating: IP 65



— SPECIFICATIONS —

Center Distance: 3.0 thru 8.0 in

Ratio: 5:1 thru 70:1

Nominal Backlash: 2 - 35 arcmin

Output Torque (ConstantSpeed): $\leq 97,100$ lb-in

Output Torque (Acceleration): $\leq 121,000$ lb-in

Input Shaft: Single or double extended

Output Shaft: Solid (single or double extended), Hollow, Shrink Disc

Cooling: Optional fan cooling



NEMA DRIVEN WORM GEAR POWER
INDUSTRIAL MOTION CONTROL

Cone Drive offers a wide selection of right angle gearing solutions adaptable to a variety of NEMA motor sizes. In addition to our standard product offerings, we can develop custom solutions to meet your needs across single, double, and triple reduction configurations.

NEMA DRIVEN WORM GEAR POWER
SERIES F STAINLESS STEEL

The Series F Stainless Steel gearbox provides you Cone Drive's gearing technology in a stainless steel package. The smooth contours of the housing allow fluids to wick away preventing bacteria from forming on the surface. When your application demands strict hygienic performance, look no further than Cone Drive's stainless steel Series F gearbox.



PRODUCT	SERIES F (Page 21)	SERIES B (Page 22)	SERIES HP (Page 23)	SERIES RG (Page 24)	DUODRIVE (Page 25)	SERIES HP-A (Page 26)
Size	39 - 76 mm	1.33 - 3.54 in	1.50 - 28 in	1.5 - 3.5 in	2.0 - 28 in	100 - 200 mm
Construction	316 Stainless Steel	Aluminum	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Ratio	5:1 - 600:1	5:1 - 3,600:1	5:1 - 343,000:1	5:1 - 600:1	Equal: 5:1 - 70:1 Unequal: 1:1 - 4:1	5:1 - 70:1
Output Torque (Constant Speed)	≤ 5,950 lb-in	≤ 6,370 lb-in	≤ 2,900,000 lb-in	≤ 10,800 lb-in	≤ 260,000 lb-in	≤ 88,100 lb-in
Output Torque	≤ 5,950 lb-in	≤ 6,370 lb-in	≤ 2,900,000 lb-in	≤ 10,800 lb-in	≤ 260,000 lb-in	≤ 88,100 lb-in
Shock Load Capacity	Moderate	Moderate	High	High	High	High
IP Rating	IP 69k	IP 55	N/A	IP 65	N/A	N/A
Warranty	5 Year	2 Year	5 Year	5 Year	5 Year	5 Year

FOOD & BEVERAGE | PACKAGING | PHARMACEUTICAL | MEAT & DAIRY | MIXERS



STAINLESS STEEL TORQUE

- Double-enveloping worm gearing supported with two input bearings
- Low or standard backlash
- 316 stainless steel adapter and housing
- Viton™ output seals
- Adheres to strict NSF and A3 hygienic standards and carries an ingress protection rating of IP69k
- High efficiency double reduction in single right angle configuration
- Optional torque arm, flange, or side mounting available
- Best in class lead times
- 5 year warranty



CONFIGURE & DOWNLOAD YOUR MODEL AT www.ConeDrive.com/tools

— S P E C I F I C A T I O N S —

Center Distance: 39 thru 76 mm

Ratio: 5:1 thru 600:1

Reductions: Single or double

Output Torque (ConstantSpeed): ≤ 5,950 lb-in

Motor Connection: Non-fretting bushing

Input Shaft: Single or double extended

Output Shaft: Inch or metric, solid (single or double extended), hollow, shrink disc

Lubricant: Factory filled with food grade lubricant

I.P. Rating: IP 69K



NEMA DRIVEN WORM GEAR POWER SERIES B

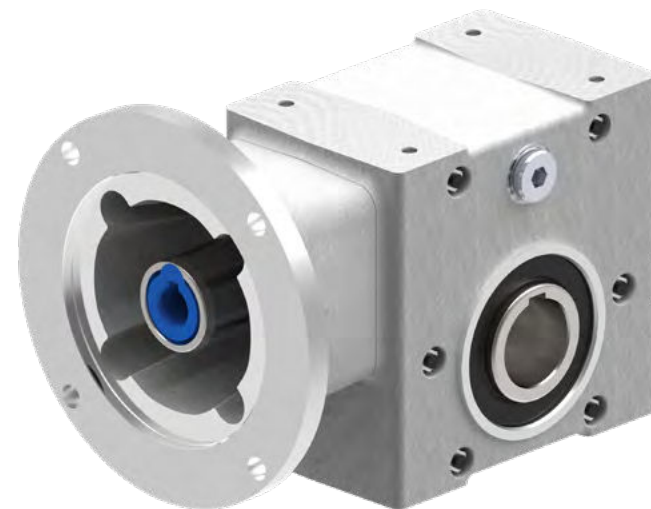
The Series B gearbox is a highly flexible and economical right angle gearing solution. Directly interchangeable with competitor reducers, the Series B features a lightweight aluminum housing which provides improved thermal performance. No other reducers offer the flexibility, performance, and reliability that you expect from Cone Drive.

PACKAGING | PLASTICS & RUBBER | STEEL | CONVEYOR | PULP & PAPER

MADE IN
USA

ADAPTABLE POWER

- Conex proprietary worm gearing supported with two input bearings
- Lightweight, aluminum construction
- Non-fretting motor connection
- USDA white epoxy paint available
- Optional wash down design
- Best in class lead times
- 2 year warranty



CONFIGURE & DOWNLOAD YOUR MODEL AT www.ConeDrive.com/tools

— SPECIFICATIONS —

Center Distance: 1.33 thru 3.54 in

Ratio: 5:1 thru 3,600:1

Reductions: Single or double

Output Torque (ConstantSpeed): $\leq 6,370$ lb-in

Available Versions: Optional horizontal or vertical base, output bracket, torque arm

Input Shaft: Solid, single extended

Output Shaft: Solid (single or double extended), hollow

Lubricant: Factory filled with synthetic lubricant

I.P. Rating: IP 55



NEMA DRIVEN WORM GEAR POWER SERIES HP

Cone Drive's Series HP is designed with high torque in mind. Our industry leading right angle, double-enveloping worm gear technology is perfect for applications that require extremely high torque and precision in a quiet, compact package. Since 1935, the Cone Drive Series HP has been excelling at meeting our customers' high power needs.

FOOD & BEVERAGE | PACKAGING | METALS & MINING | OIL & GAS | PAPER & PULP

MADE IN
USA

HIGH POWER

- Double-enveloping worm gearing supported with two input bearings
- Low or standard backlash
- Vented, cast iron construction
- Triple reductions can produce almost 3 million lb-in of torque
- Wide range of sizes
- Best in class lead times
- 5 year warranty



CONFIGURE & DOWNLOAD YOUR MODEL AT www.ConeDrive.com/tools

— SPECIFICATIONS —

Center Distance: 1.50 thru 28 in

Ratio: 5:1 thru 343,000:1

Reductions: Single, double, triple

Output Torque (ConstantSpeed): $\leq 2,900,000$ lb-in

Orientation: Worm over gear, worm under gear, vertical gearshaft

Input Shaft: Single or double extended

Output Shaft: Solid (single or double extended), hollow

Cooling: Fan or water cooled

Configurations: Reducer, NEMA flange, D-Flange motor (helical worm)



NEMA DRIVEN WORM GEAR POWER SERIES RG

The Series RG gearbox is an adaptable solution for mid range power applications. Available with single or double reduction, the Series RG is designed with Cone Drive's double-enveloping worm gear technology and offers multiple output options. Tapered roller output bearings provide the capacity required to handle heavy overhung loads.

PACKAGING | PLASTICS & RUBBER | STEEL | CONVEYOR | PULP & PAPER



RUGGED PERFORMER

- Double-enveloping worm gearing supported with two input bearings
- Low or standard backlash
- Cast iron construction
- High efficiency double reduction in single right angle configuration
- White epoxy or stainless steel paint available
- Best in class lead times
- 5 year warranty



NEMA DRIVEN WORM GEAR POWER DUODRIVE

The DuoDrive is a torque dense, double enveloping solution that supplies input power to two gears simultaneously. The DuoDrive is designed for pinch rolling applications such as cold-roll forming, tube mills, and wire mills where high torque is needed to smoothly drive metal through high pressure mill rollers.

ROLL FORMING | METAL PROCESSING | FOOD PROCESSING | DUAL SCREW DRIVES



PINCH ROLLING TORQUE

- Double-enveloping worm gearing supported with two input bearings
- One input shaft powering two output gears
- Unequal ratio configurations available
- Cast iron housing
- Water or fan cooled
- Best in class lead times
- 5 year warranty



 CONFIGURE & DOWNLOAD YOUR MODEL AT www.ConeDrive.com/tools

 LEARN MORE AT www.ConeDrive.com

— SPECIFICATIONS —

Center Distance: 1.5 thru 3.5 in
Ratio: 5:1 thru 600:1
Reductions: Single or double
Output Torque (ConstantSpeed): $\leq 10,800$ lb-in
Motor Connection: Integrated spider coupling (single reduction), Non-fretting bushing (double reduction)

Input Shaft: Single or double extended
Output Shaft: Inch or metric, solid (single or double extended), hollow, shrink disc, mounting flange
Lubricant: Factory filled with synthetic lubricant
I.P. Rating: IP 65



— SPECIFICATIONS —

Center Distance: 2.0 thru 28 in
Exact Ratios: 5:1 thru 70:1 (additional ratios available upon request)
Unequal Ratios: 1:1 thru 4:1 (sizes 2.0 thru 12.0 in)
Reductions: Single or double

Output Torque (ConstantSpeed): $\leq 260,000$ lb-in
Input Shaft: Single or double extended
Motor Adaptation: NEMA, IEC, and servo
Output Shaft: Solid, hollow, or custom
Cooling Available: Fan or internal water



NEMA DRIVEN WORM GEAR POWER SERIES HP-A

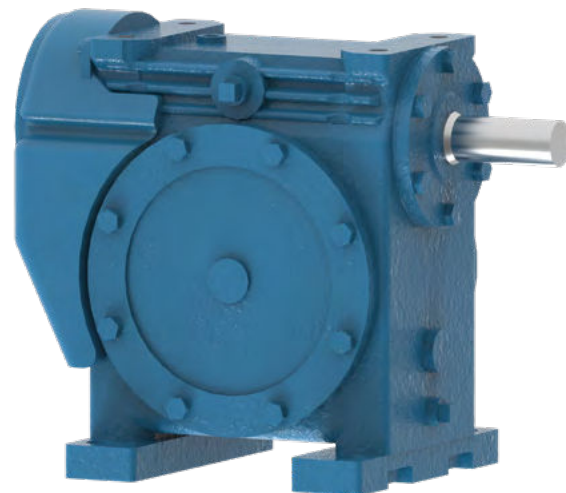
The Series HP-A gearbox features the high performance and dependability of Cone Drive's double enveloping worm gearing in a metric, universal housing. Offering features ideal for the processing and material handling markets, the Cone Drive Series HP-A gearbox provides high torque in a compact package.

FOOD & BEVERAGE | PACKAGING | METALS & MINING | OIL & GAS | PAPER & PULP

MADE IN
USA

ALTERNATIVE METRIC DESIGN

- Double-enveloping worm gearing supported with two input bearings
- Low or standard backlash
- Cast iron construction
- Universal housing with optional drywell feature
- Competitive OEM pricing
- Best in class lead times
- 5 year warranty



CONFIGURE & DOWNLOAD YOUR MODEL AT www.ConeDrive.com/tools

— SPECIFICATIONS —

Center Distance: 100 thru 200 mm

Ratio: 5:1 thru 70:1

Reductions: Single

Output Torque (ConstantSpeed): $\leq 88,100$ lb-in

Orientation: Worm over gear, worm under gear, vertical gearshaft

Input Shaft: Inch or metric, single or double extended

Output Shaft: Inch or metric, solid (single or double extended), hollow

Additional Options: Fan cooled, double oil seals, viton seals, drywell feature



GEARSETS

Since 1925, customers have been trusting Cone Drive's double-enveloping worm gearing to provide the power and precision required for various applications. For customers who would like the additional performance of a Cone Drive gear set while maintaining their current housing, Cone Drive can manufacture a gear set to fit into most any application.

FOOD & PACKAGING | AEROSPACE & DEFENSE | PHARMACEUTICAL & MEDICAL | OIL & GAS

MADE IN
USA

TRUSTED SINCE 1925

- Zero, low, or standard backlash available
- Supplied as matched sets
- Wide range of exact ratios and sizes
- Adaptable to a multitude of customer specific applications
- Custom ratios available upon request
- Competitive lead times
- 1 year warranty



LEARN MORE AT www.ConeDrive.com

— SPECIFICATIONS —

Center Distance: 1.5 thru 36 in

Ratio: 5:1 thru 70:1

Gear Materials: Tin + aluminum bronze, ductile iron, steel aluminum, Torlon®

Worm Materials: Hardened Steel + Nitride, Stainless Steel

Modified Output Configuration: Keyways, splines

Custom Design Options: Custom center distance, custom ratios

Special Ratios: Up to 200:1 single stage (size dependent), sector gears



SLEWING SOLUTIONS

Cone Drive’s slewing technology provides a large ratio in a single stage of gearing. The slew bearing and gears are assembled into a low profile, self-retaining, and ready-to-install housing optimized for weight and performance. Our highly adaptable slew gearing feature strong shock resistance, long life performance and smooth rotation.

ELECTRIC DRIVEN DOUBLE REDUCTION

READY TO GET RID OF YOUR MESSY, HYDRAULIC SYSTEM?
Cone Drive’s double reduction slew drives are designed for optimal performance with electric motors (Servo or NEMA). Pairing them with a planetary gear as the primary reducer enhances control, integration, efficiency, and reliability. We stock adapters and shafts for common gearboxes, offering fast turnaround and a complete, one-stop solution.

CONSTRUCTION EQUIPMENT | AERIAL LIFTS | AERIAL WORK PLATFORMS

LOW PROFILE POWER

- Select sizes available from stock
- Low profile
- Sealed drive options available
- Capable of combined tilting, radial, and axial loads
- Strong shock resistance
- Long life performance
- Competitive lead times
- 2 year warranty



CONFIGURE & DOWNLOAD YOUR MODEL AT www.ConeDrive.com/tools

— S P E C I F I C A T I O N S —

BEARINGS

Ball Pitch Diameter: 3.1 thru 49.2 in

Styles: No teeth, internal teeth (flanged only), external teeth

Moment Loads (Standard): $\leq 2,400,000$ lb-ft

Moment Loads (Flanged): $\leq 75,500$ lb-ft

DRIVES

Sizes: 3 thru 28 in

Housing Options: Open, closed, high strength

Output Torque: $\leq 42,800$ lb-ft

Holding Torque: $\leq 182,300$ lb-ft

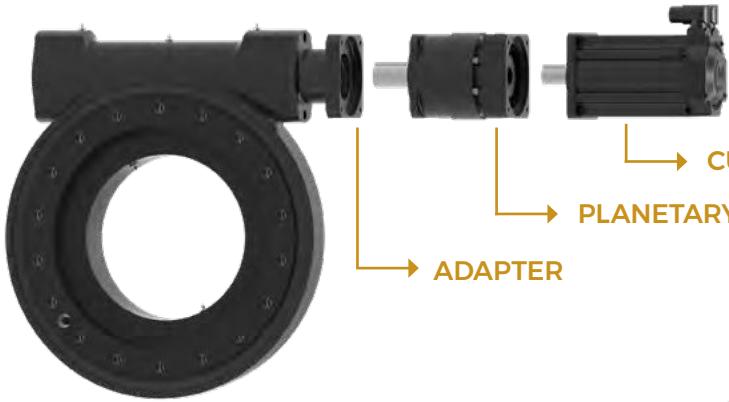
Overturning Moment: $\leq 229,000$ lb-ft



WELDING POSITIONERS | AUTOMATED CONSTRUCTION | AERIAL WORK PLATFORMS

CLEAN, EFFICIENT POWER

- Clean setup
- Superior control
- Ease of integration
- Energy efficient
- Reduced maintenance
- Adapters in stock





TRACKING & POSITIONING

Cone Drive has a long history of developing solutions for both single-axis and dual-axis tracker drives and positioning systems. As a global manufacturer, we have the experience and the reach to deliver highly effective custom solutions to address azimuth + elevation motion control, capable of meeting the tightest specifications.



MOTORS

In addition to ordering your Series F Stainless Steel gearbox, Cone Drive offers the convenience of bundling a stainless steel motor with your purchase. TECO-Westinghouse motors are specifically designed for the rugged and demanding environments required for wash down applications.



SOLAR TRACKING | SATELLITE & ANTENNAE POSITIONING | COMMUNICATION SYSTEMS

FOOD & BEVERAGE | PACKAGING | PHARMACEUTICAL | MEAT & DAIRY | MIXERS

TRACKING PRECISION

- Gated Product Development Process
- Specification Development
- Simulation, FEA
- Engineering Analysis, DFMEA
- Prototyping
- Custom Solar Tracker Test Design & Design Verification
- Custom Solar Drive Manufacturing



STAINLESS STEEL POWER

HP	FRAME	PART NUMBER	
		FAN COOLED	NON VENTED
0.5	56C	WFPV0/54C	WFNV0/54C
0.75	56C	WFPV0/74C	WFNV0/74C
1	56C	WFPV0014C	WFNV0014C
1.5	56C	WFPV1/54C	WFNV1/54C
2	56C	WFPV0024C	WFNV0024C
3	182TC	WPV0034C	WNV0034C
5	184TC	WPV0054C	—



LEARN MORE AT www.ConeDrive.com

PRODUCT	DESCRIPTION	PRECISION LEVEL	OUTPUT TORQUE	RATIOS
Vertical Slewing Drive (VE)	Foot Mounted Elevation Slewing Drive	≤ 5.26 mRad(≤0.3°)	400 - 28,000	50:1 - 125:1
Dual Axis Drive (DD)	Helical Gear/Output Flange Mounted Dual Axis Drive	≤ 3.49 mRad(≤0.2°)	400 - 28,000	61:1 - 125:1
Slewing Drive (SE)	Housing Mounted Azimuth Slewing Drive	≤ 3.49 mRad(≤0.2°)	400 - 58,000	61:1 - 150:1
Dual Axis Slewing Drive (WD)	Worm Gear/Output Flange Mounted Dual Axis Drive	≤ 3.49 mRad(≤0.2°)	400 - 40,000	28:1 - 105:1
Double Enveloping Worm drive (DW)	Double Enveloping Worm Gear/Output Flange Mounted Azimuth Drive	≤ 1.5 mRad(≤0.085°)	100 - 2,850	60:1



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— SPECIFICATIONS —

Frame Sizes: 56C, 182/184TC

Horsepower: 0.5 - 5.0 hp

Voltage: 230/460 V

Style: C-Face, Non Footed

Phase: 3 Phase

Ingress Protection: IP 66



TIMKEN® ENCODERS

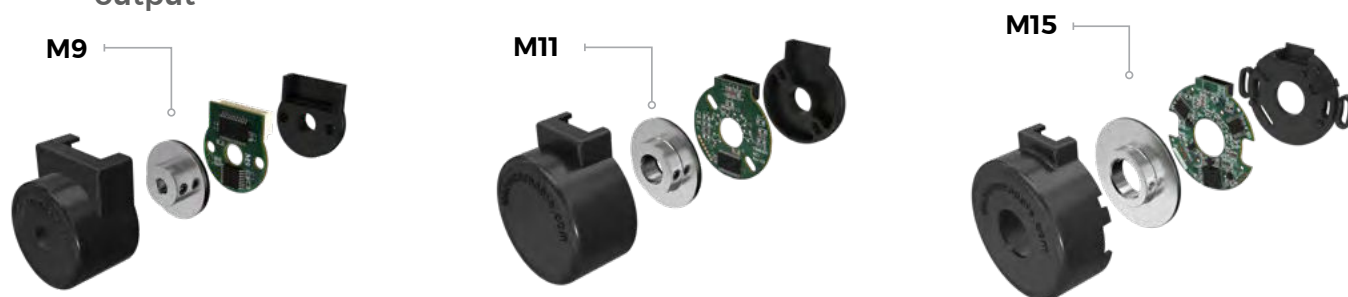
MODULAR MAGNETIC ENCODERS

Timken® modular magnetic encoders offer high-resolution, reliable performance across a wide range of industries and applications. Engineered for durability, they deliver accurate speed and position data—even in demanding environments—while providing clear operational and cost advantages over traditional sensing technologies.

ROBOTICS | SERVO & STEPPER MOTORS | PTZ CAMERAS | MEDICAL EQUIPMENT | INDUSTRIAL AUTOMATION

ROBUST AND RELIABLE SOLUTIONS

- High-resolution magnetic encoders
- Environmentally robust
- Bearingless, non-contact design
- Reliable, compact, and cost-effective
- Incremental, quadrature, and index output
- Easy installation with configurable, customizable options
- Fast lead times and expert application engineering support



CONFIGURE, DOWNLOAD & PURCHASE AT

TIMKENENCODERS.COM

— SPECIFICATIONS —

Resolution: 100 – 8192 PPR

Standard Sizes: 0.9", 1.1" and 1.5" (21.6, 30.25 and 41 mm ODs)

Standard Bore Sizes: 1/8" – 1/2", 5 – 13 mm

Maximum RPM: 10,000+ RPM

Operating Temperature: -40° to 85° C, options to 125° C

Commutation (UVW): 0 – 20 pole

Incremental Output (ABZ): Open Collector, Line Driver

Absolute Output: SPI/SSI, BiSS-C

Termination: 8 and 15 pin connectors standard

Enclosure Rating: NEMA 1/IP40

7 Optical Ave., Keene, NH 03431 | Phone: 603-358-4760
Email: sensorapplications@timken.com



Stronger. **By Design.**

TIMKEN® ENCODERS

ABSOLUTE POSITION MAGNETIC ENCODERS

Timken® absolute position magnetic encoders deliver high-resolution, reliable position data—even in the most demanding environments. Engineered with advanced features, they offer significant operational and cost advantages over conventional technologies.

ROBOTICS | AGVS | EXOSKELETONS | DRONES

RELIABLE PERFORMANCE, EVERY TIME

- High-resolution magnetic encoders
- Environmentally robust
- Compact, reliable, and cost-effective design
- 3× larger air gap than competitors
- Easy installation with configurable, customizable options
- Dual/quad sensor options for improved mounting flexibility
- Fast lead times and expert application engineering support



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TIMKENENCODERS.COM

— SPECIFICATIONS —

Resolution: 16 – 22 bit, optional 16 bit turns counter

Standard Sizes: 39mm, 49mm, 80mm, 100mm and 225mm

Standard Bore Sizes: 23 - 93 mm

Maximum RPM: Up to 5,000 RPM

Operating Temperature: -40° to 85° C, options to 105° C

Absolute Output: SPI/SSI, BiSS-C

7 Optical Ave., Keene, NH 03431 | Phone: 603-358-4760
Email: sensorapplications@timken.com




Stronger. **By Design.**


A Global System of Support

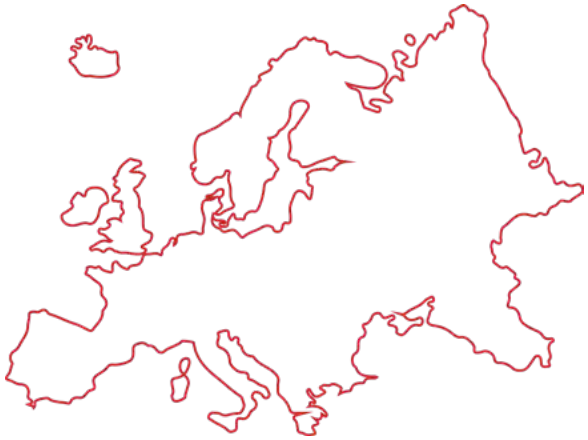
At Cone Drive, our commitment to customer success extends far beyond the point of sale. With a global network of sales, engineering, and service support, we ensure responsive, localized assistance wherever our products are in use. Whether you're designing a new application or troubleshooting in the field, our worldwide team is equipped to provide expert guidance and dependable support every step of the way.





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GLOBAL LOCATIONS

NORTH AMERICA | EUROPE | ASIA



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