Cone Drive

PRODUCT RANGE
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 industries and products to drive your company forward.
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**FEAT URES**

- DOUBLE ENVELOPING WORM GEARING
- 5 YEAR WARRANTY
- 300% OVERLOAD
- FAN AND WATER COOLING OPTIONS

**SPECS**

<table>
<thead>
<tr>
<th>CENTER DISTANCES</th>
<th>1.5” - 24”</th>
</tr>
</thead>
<tbody>
<tr>
<td>OUTPUT TORQUE</td>
<td>Up to 2.9 million lb. in.</td>
</tr>
<tr>
<td>GEAR RATIOS</td>
<td>5:1 to 70:1 in single reduction, Up to 3600:1 in double reduction</td>
</tr>
<tr>
<td>INPUT OPTIONS</td>
<td>Solid, Single or Double extended, NEMA adaptor</td>
</tr>
<tr>
<td>OUTPUT OPTIONS</td>
<td>Solid, Hollow, Shrink Disc</td>
</tr>
<tr>
<td>BACKLASH OPTIONS</td>
<td>Standard, Low, Absolute Zero</td>
</tr>
</tbody>
</table>

**DEFENSE | FOOD PACKAGING & PROCESSING | PLASTIC & RUBBER | OIL & GAS | PULP & PAPER**
**FEATURES**

- SUPPLIED IN MATCHING SETS
- GREATER DURABILITY AND RELIABILITY
- 300% SHOCK LOAD

- 5 YEAR WARRANTY
- CUSTOM RATIOS AVAILABLE
- INCH OR METRIC SIZES

**SPECS**

**SIZES**
From 1.50” - 54”

**GEAR RATIOS**
From 5:1 to 70:1

**INPUT OPTIONS**
Single or Double Extended and Custom Designed

**OUTPUT OPTIONS**
Solid, Hollow, or Flange Type

**MATERIAL OPTIONS**
Gears available in standard tin bronze or aluminum bronze. Worms are hardened steel or optional stainless.
The Cone Drive double-enveloping design provides more tooth contact — up to eight times more than straight worms.

The mesh of common straight worm gearing provides one to 1½ gear teeth in contact with the worm.

The Cone Drive double-enveloping design provides more tooth contact - up to eight times more than straight worms.
FEATURES

• NEMA AND SERVO MOTOR ADAPTATION
• NO LEAK DRY WELL DESIGN
• DIRECT DIMENSIONAL REPLACEMENT AGAINST RENOLD, RADICON, AND FLENDER
• 5 YEAR WARRANTY
• FAN COOLING
• FLANGE MOUNT

SPECS

CENTER DISTANCES 100, 125, 160, 200
OUTPUT TORQUE Up to 78,600 lb. in.
GEAR RATIOS 5:1 to 70:1 in single reduction,
INPUT OPTIONS Solid, NEMA or SERVO, Single or Double extended
OUTPUT OPTIONS Solid, Hollow, Standard dry well option
### Precision Right Angle Drive

**Features**
- Double enveloping worm gearing
- Double seals throughout
- 5 year warranty
- IP 65 rated
- Vent-free and sealed for life
- Aluminum construction

**Specs**
- **Sizes**: 38, 51, 64, 76, 89mm
- **Output Torque**: Up to 7,800 lb-in
- **Gear Ratios**: 5, 6, 7, 8, 9, 10, 15, 20, 25, 30, 40, 50, 60
- **Input Options**: Solid Shaft, Servo Motor Mount
- **Output Options**: Solid Shaft, Keyed Hollow Shaft, Shrink Disc Hollow Shaft, Direct Mount
- **Backlash Options**: Standard, Low, Absolute Zero

### Midrange Right Angle Drive

**Features**
- Double enveloping worm gearing
- 5 year warranty
- Double seals throughout
- Vent-free and sealed for life
- IP 65 rated
- Flange mount
- Cast iron construction

**Specs**
- **Sizes**: 1.50”, 2.00”, 2.50”, 3.00”, 3.50”
- **Output Torque**: Up to 7,800 lb-in
- **Gear Ratios**: 5, 6, 7, 8, 9, 10, 15, 20, 25, 30, 40, 50, 60
- **Input Options**: Any Servo or Stepper Motor
- **Output Options**: Solid Shaft, Keyed Hollow Shaft, Shrink Disc Hollow Shaft
- **Backlash Options**: Standard or Low
RIGHT ANGLE DRIVE - NEMA

**FEATURES**
- Hollow bore standard for maximum flexibility
- Guaranteed motor removal with patented fret free motor bushing
- Complete mounting accessories
- Dimensionally interchangeable with other manufacturers
- Lightweight aluminum construction
- Conex® double enveloping worm gearing
- 2 Year warranty

**SPECs**
- Sizes: 1.33” - 3.54”
- Output torque: Up to 4,500 lb-in
- Gear ratios: Up to 3600:1 in double reduction
- Input options: Solid shaft, NEMA
- Output options: Solid or hollow shaft

RIGHT ANGLE DRIVE - SERVO

**FEATURES**
- Lightweight aluminum construction
- Versatile mounting options
- Trouble-free servo motor mounting
- Double sealed input
- 2 Year warranty
- Conex® double enveloping gearing

**SPECs**
- Center distances: 1.33”, 1.54”, 1.97”, 2.38”, 3.00”, 3.54”
- Servo motor capacity: Up to 7.5 KW
- Gear ratios: 5, 7.5, 10, 15, 20, 25, 30, 40, 50, 60
- Output options: Solid or hollow shaft (single or double)
1.33” - 3.54”
Up to 4,500 lb-in
Up to 3600:1 in double reduction
Solid shaft, NEMA
Solid or Hollow Shaft
1.33”, 1.54”, 1.97”, 2.38”, 3.00”, 3.54”
Up to 7.5 KW
5, 7.5, 10, 15, 20, 25, 30, 40, 50, 60
Solid or Hollow Shaft
(singl or double)
FEATURES

• IP69K RATED
• LIFE-TIME LUBRICATION WITH FOOD-GRADE OIL
• DOUBLE-ENVELOPING WORM GEARING
• INCH OR METRIC SHAFTS
• DOUBLE INPUT & OUTPUT SEALS
• ASEPTIC DESIGN

• GUARANTEE MOTOR REMOVAL WITH PATENTED FRET-FREE MOTOR BUSHING
• DOUBLE WORM BEARINGS
• NSF & A3 CERTIFIED
• 5 YEAR WARRANTY
• LASER ETCHED NAMEPLATE

SPECS

CENTER DISTANCES 1.54”, 1.75”, 1.97”, 2.38”, 3.00”
NEMA FRAMES Up to 184TC frame
OUTPUT TORQUE Up to 6,660 lb-in
GEAR RATIOS From 5:1 to 60:1, single reduction
OUTPUT OPTIONS Solid or Hollow Shaft in inch or metric sizes
MATERIAL 316 Stainless Steel
FEATURES

• HIGH TORQUE CAPACITY WITH NO INCREASE IN SIZE
• ABILITY TO WITHSTAND HIGH STARTING AND STOPPING LOADS
• 5 YEAR WARRANTY

300% SHOCK LOAD
• FAN OR WATER COOLING OPTIONS

SPECs

CENTER DISTANCES 2” - 24”
OUTPUT TORQUE Up to 2,900,000 lb-in
GEAR RATIOS Up to 4,900:1
Unequal ratio Pinch Roll available
INPUT OPTIONS Solid shaft (single or double extended),
NEMA flange (56C - 256TC)
OUTPUT OPTIONS Solid or Hollow Shaft in inch or metric sizes
FEATURES

• DOUBLE ENVELOPING WORM GEARING
• 5 YEAR WARRANTY
• 300% OVERLOAD
• WATER COOLING OPTION

SPECS

CENTER DISTANCES  2.50” - 10”
OUTPUT TORQUE  Up to 175,000 lb-in
GEAR RATIOS  From 5:1 up to 280:1
INPUT OPTIONS  Solid shaft, Standard NEMA C-face, D-flange, or Sugar Scoop
OUTPUT OPTIONS  Solid or Hollow Shaft, Shrink Disc, Flange Mount, and Torque Arm
FEATURES

- MOTOR ADAPTATION
- ULTRA-LOW TO ZERO BACKLASH
- STANDARD & CUSTOM RATIOS
- CONE DRIVE OPTIMIZED TOOTH PROFILES
- HIGH EFFICIENCY/ HIGH RATIOS
- BACK-DRIVEABLE
- DIRECT DIMENSIONAL REPLACEMENT AGAINST INDUSTRY STANDARDS
- MADE IN THE USA
- 2 YEAR WARRANTY

SPECS

SIZES 11-45, Custom
INPUT ADAPTERS Servo, Stepper, AC, Air, Hydraulic, Manual
GEAR RATIOS 50, 80, 100, 120, 160, Custom
OUTPUT OPTIONS Solid, Hollow, or Custom
HARMONIC COMPONENT SETS

HARMONIC GEARHEAD
**PRECISION INLINE DRIVE**

**FEATURES**
- COMPACT DESIGN & UNIVERSAL HOUSING
- PRECISION BEARINGS AND PRECISION GROUND GEARING
- 3 ARC-MINUTE BACKLASH
- 5 YEAR WARRANTY

**SIZES (TYPE S)**
- 60, 90, 115, 140, 180, 220

**OUTPUT TORQUE (TYPE S)**
- Up to 13,275 lb-in

**GEAR RATIOS**
- Up to 100:1 in two stages

**INPUT OPTIONS**
- Fits any servo motor

**OUTPUT OPTIONS**
- Output with or without keyway

**SPECS**

**INLINE DRIVE**

**FEATURES**
- UNIVERSAL HOUSING
- QUIET & SMOOTH
- FAST AND ERROR FREE MOTOR ASSEMBLY
- 5 ARC-MINUTE BACKLASH
- 5 YEAR WARRANTY

**SIZES**
- 50, 70, 90, 120, 155, 205, 235

**OUTPUT TORQUE**
- Up to 13,275 lb-in

**GEAR RATIOS**
- From 3:1 in a single stage to 100:1 in two stages

**INPUT OPTIONS**
- Fits Servo or Stepper motors
**FEATURES**

- LOW PROFILE DESIGN
- OPTIONAL PLANETARY OR WORM GEAR DRIVEN SPUR ROTATION DRIVE
- CAPABLE OF COMBINED TITLING, RADIAL, AND AXIAL LOADS
- STRONG SHOCK RESISTANCE, LONG LIFE PERFORMANCE
- SMOOTH ROTATION, HIGHLY ADAPTABLE
- COST EFFICIENT & RELIABLE
- SEALED DRIVE OPTIONS
- 2 YEAR WARRANTY

**SPECS**

<table>
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<tr>
<th>FEATURES</th>
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</tr>
</thead>
<tbody>
<tr>
<td>SIZES</td>
<td>7”, 9”, 12”, 14”, 17”, 21”, 25”</td>
</tr>
<tr>
<td>RATIO</td>
<td>47, 62, 79, 86, 104, 90, 104</td>
</tr>
<tr>
<td>OUTPUT TORQUE</td>
<td>Up to 60 kNm (44,220 lb-ft)</td>
</tr>
<tr>
<td>HOLDING TORQUE</td>
<td>Up to 158 kNm (116,535 lb-ft)</td>
</tr>
<tr>
<td>OVERTURNING MOMENT</td>
<td>Up to 310 kNm (228,644 lb-ft)</td>
</tr>
<tr>
<td>OUTPUT OPTIONS</td>
<td>Standard bolt circle diameters published for each size</td>
</tr>
<tr>
<td>HOUSING OPTIONS</td>
<td>Open, Closed, High Strength</td>
</tr>
</tbody>
</table>

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**FEATURES**

- LOW PROFILE DESIGN
- CAPABLE OF COMBINED TILTING, RADIAL, AND AXIAL LOADS
- STRONG SHOCK RESISTANCE, LONG LIFE PERFORMANCE
- SMOOTH ROTATION
- HIGHLY ADAPTABLE
- COST EFFICIENT & RELIABLE
- PROTECTED BEARING
- 2 YEAR WARRANTY

**SPECS**

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<tr>
<td>SIZES</td>
<td>224mm (8.82”) - 800mm (31.5”) ball pitch diameter bearing</td>
</tr>
<tr>
<td>STYLES</td>
<td>Slew Ring, Slew Ring External Teeth, Slew Ring Internal Teeth</td>
</tr>
</tbody>
</table>
Up to 60 kNm (44,220 lb-ft)
Up to 158 kNm (116,535 lb-ft)
Up to 310 kNm (228,644 lb-ft)

Standard bolt circle diameters published for each size

Open, Closed, High Strength
We recognize that ready-made products are not always the best solution. Our product range is engineered to enable a high degree of flexibility. From product modifications to full customization services, our experienced engineering and application support teams are available to work with you. Our engineers can recommend the best possible gearing solution to minimize the total cost of ownership.

**Customizable Options Include:**
- Ratio
- Shaft Diameters
- Shaft Lengths
- Materials
- Bearings
- Housings
- Design to Specification

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**CUSTOM GEAR SETS**

<table>
<thead>
<tr>
<th>Capabilities</th>
<th>Details</th>
</tr>
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<tbody>
<tr>
<td>SIZES</td>
<td>Custom sizes ranging from 1.25” CD - 54” CD</td>
</tr>
<tr>
<td>GEAR RATIOS</td>
<td>Custom ratios available from 3:1 to 300:1 in a single stage</td>
</tr>
<tr>
<td>BACKLASH</td>
<td>As low as Absolute Zero</td>
</tr>
<tr>
<td>MATERIALS</td>
<td>Gears available in tin bronze, aluminum bronze, or ductile iron. Worms available carbon steel, stainless, and plastics.</td>
</tr>
</tbody>
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