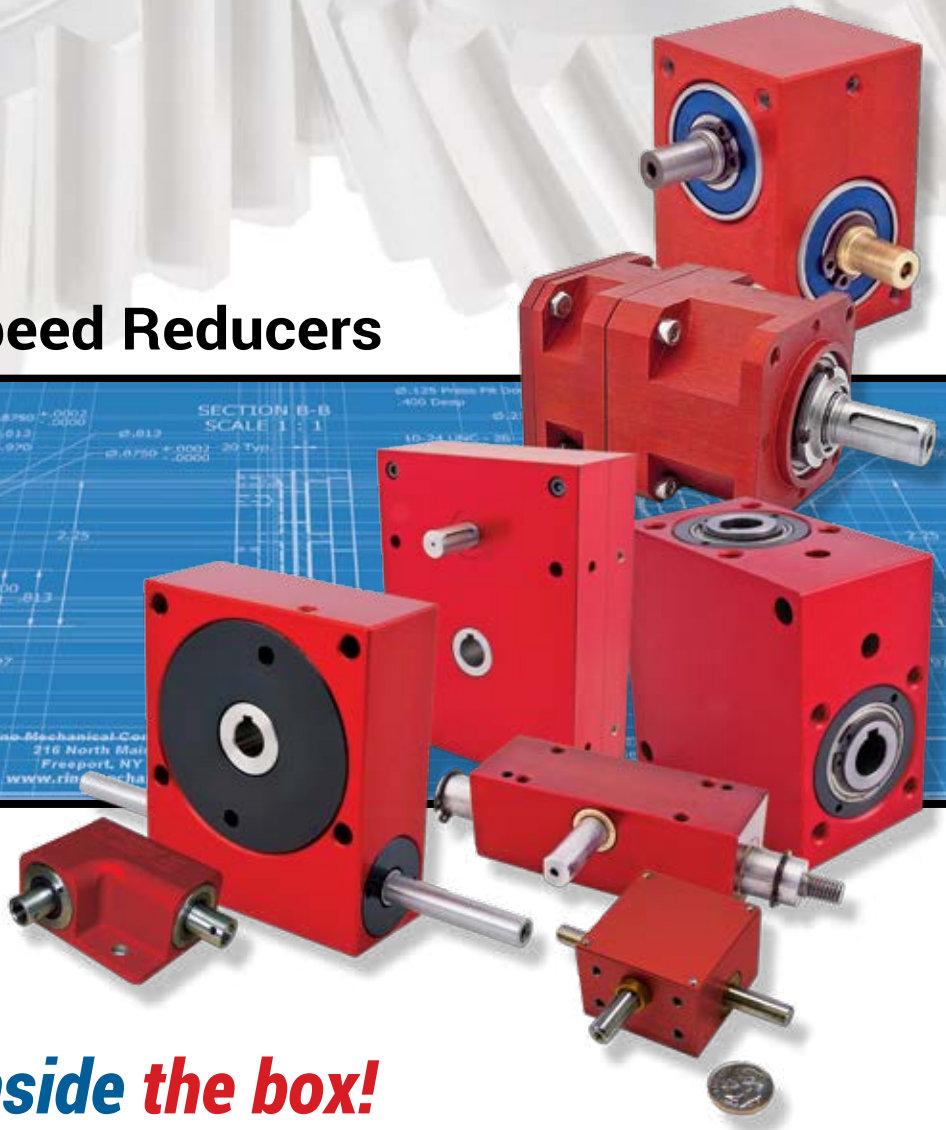
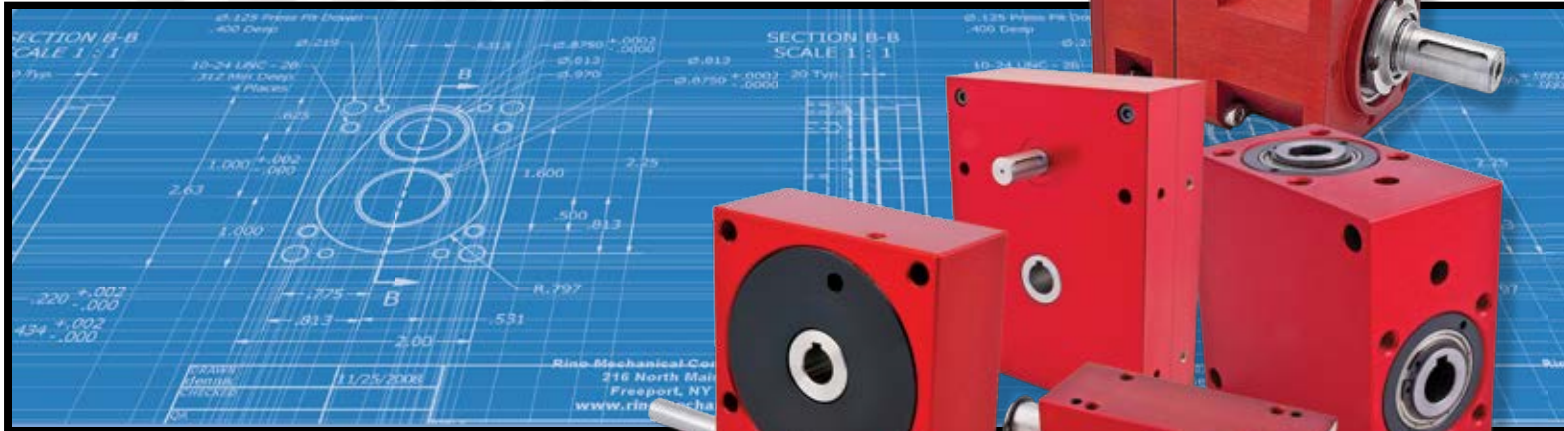


ondrives.us

Precision Manufacturing

Gearboxes & Speed Reducers



We think inside the box!

The RED box!

www.Ondrives.US

ABOUT US

ondrives.us
Precision Manufacturing

The Berg family has been the driving force and an integral part of the standardized precision mechanical components industry since its inception in 1953. Dennis Berg remains involved in this vibrant industry as the CEO of Ondrives.US Corp. bringing over 50 years of experience and knowledge to the business.

After running his own precision manufacturing company for over 15 years, Lee Berg merged his company with Ondrives.US in 2005. Lee is President of Ondrives.US Corp.

Ondrives.US Corp. has manufacturing facilities in Freeport, New York with sales and distribution efforts focused on North and South America. Ondrives Ltd. is located in Chesterfield, England with focused sales and distribution efforts in Europe and Asia.

Our manufacturing equipment is state of the art with new equipment being added regularly. The current facilities list for both companies can be found in the back of this brochure.

Together, the Ondrives companies are industry leaders and innovators, producing and distributing a vast array of gears, gearboxes, timing pulleys and belts, ground shafts, shaft couplings, fasteners and many other precision mechanical parts.

Application Engineers are available to assist customers in selecting the best component for a project. Our Design Engineers can design a complex gearbox or simple component to satisfy your needs.



Ondrives.US Corp.
216 North Main Street
Freeport, New York 11520



www.Ondrives.US



Customer Service
Toll Free: 1.888.260.7466
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Fax: 516.771.6444
sales@ondrives.us



ondrives



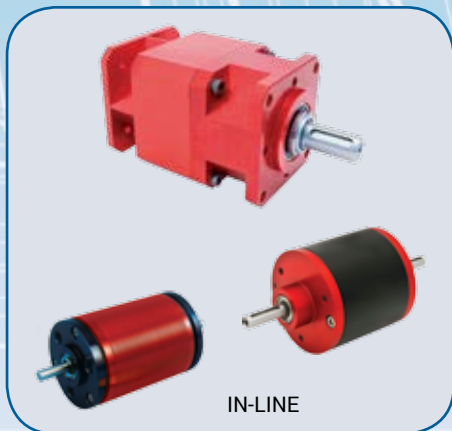
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RIGHT ANGLE



PARALLEL AXIS



IN-LINE



ACTUATOR

ONDRIVES.US GEARBOX BROCHURE

Presenting Our Broad Range of Gearboxes.

A General Products Brochure, showing our full range of products is available upon request.

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ONDRIVES.US GEARBOXES

WE THINK INSIDE **AND** OUTSIDE THE RED BOX!

Gearboxes are a fundamental component of many drive systems. They can accomplish speed reduction and in lower ratios, speed increase. They are also used to increase torque, reverse rotation, and change direction of the drive-shaft. Available configurations are Right Angle Worm, Cross Axis Helical, Right Angle Bevel, Rack and Pinion, Parallel Axis, and In-Line Shaft. Combinations of these configurations are possible and limited only by system requirements and designer imagination.

Ondrives.US offers precision gearboxes in a range of sizes from miniature to robust. We offer unique, compact, light weight gearboxes in ratios up to 3600:1. Output torque is available from instrumentation sizes to 850Nm

We offer the widest standard range of gearbox types. Worm and Wheel, Crossed Axis Helical, Crossed Axis Worm, Right Angle, Spur Gear, In-Line, Servo, NEMA Mount, Miniature, Taper Gear, Rack and Pinion, Washdown, and Motorized are available.

Our engineers have developed a White Paper ***"10 Points to consider to get the gearbox you need"*** to assist you in selecting the most appropriate gearbox for your application.

Another, ***"Inertia and the use of inertia figures"*** gives an example and formula for dealing with Inertia in gearbox selection. Custom gearboxes can be designed and built to your specification. White Papers are available on our website.

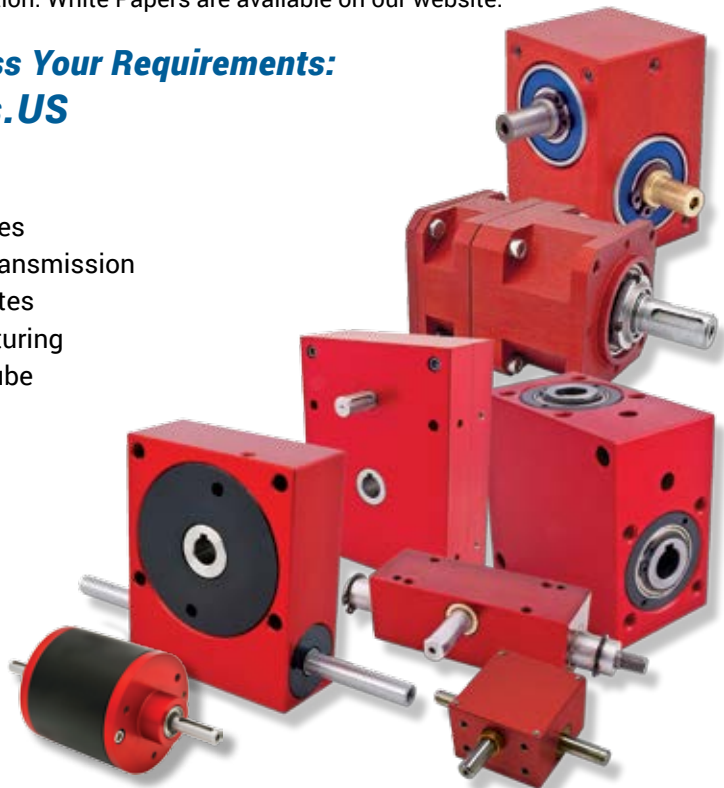
**Contact Our Application Engineers to Discuss Your Requirements:
1-888-260-7466 Or Sales@Ondrives.US**

The Ondrives.US Advantages:

- Standard, Modified or Complete Custom Gearboxes
- Gearboxes for Servo Drives, Encoders & Power Transmission
- Low Backlash Gearboxes to a Max. of 4 Arc Minutes
- 30 Plus Years of Experience in Gearbox Manufacturing
- Unique Miniature Gearboxes as Small as 0.55" Cube
- Light Weight Aluminum or Plastic Housings
- Available - Ingress Protection to IP65 or Higher
- All Gearboxes are Conservatively Rated
- Custom Gearboxes Made to Order
- High Efficiency Gearboxes
- NEMA Flange Mounts
- Torques to 850Nm
- Ratios to 3600:1
- Greased for Life

Broad Selection:

- | | | | |
|----------------------|----------------------------|-------------------------|----------------------|
| • Bevel - Bevel T | • Counter Rotating Outputs | • Cross Axis | • Complete Custom |
| • Epicyclic In-line | • High Ratio Bevel | • High Ratio Worm wheel | • Hollow Bore Output |
| • In-line | • In-line Planetary | • IP Rated | • Low Backlash |
| • Miniature | • Miter | • Motorized | • NEMA Mount |
| • Oil Filled Reducer | • Parallel Axis | • Rack and Pinion | • Right Angle |
| • SERVO | • Speed Increase | • Speed Reduction | • Spiral Miter Gears |
| • Spur Gear | • Taper Gear | • Wash Down | • Worm Wheel |



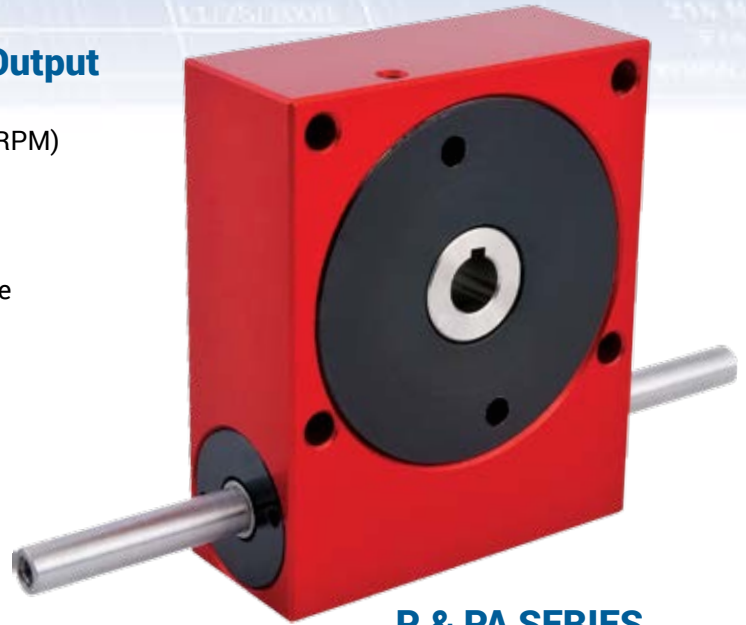
PRECISION WORM GEAR SPEED REDUCERS

SHAFT INPUT - HOLLOW BORE OUTPUT

The Ondrives.US Advantage:

Precision Ball Bearings - Input & Output

- 10 Frame Sizes
- High-Efficiency Reducers (up to 90% at 1,000 RPM)
- Standard Ratios From 5:1 to 120:1
- ≤ 30 Arc Minutes of Backlash as Standard
- ≤ 4 Arc Minutes of Backlash Available
- Single or Double-Ended Output Shafts Available
- Durable Construction and Components
- Solid Aluminum Housings
- Greased for Life
- Ball Bearings on Input and Output
- Custom Gear Reducers Available
- Compact Footprint
- Output Torques up to 420Nm



P & PA SERIES

Tapered Roller Bearing Input - Crossed Roller Bearing Output

- Available NEMA 34 Adapter
- Solid Aluminum Casing, Aluminum Bronze Wheel, HRC-50 Induction-Hardened Steel Worm Teeth
- Low Backlash (≈ 6 Arc Minutes)
- 50:1 Ratio
- $\approx 62\%$ Efficiency at 1,000 RPM
- Grease-Filled Gearbox for Minimal Maintenance

Shafts

Input and Output Shafts with Drive Keys and Retainer Rings can be supplied to your specifications for any of our Hollow Bore Gearboxes.

Standard shafts are available as Single or Double Ended.



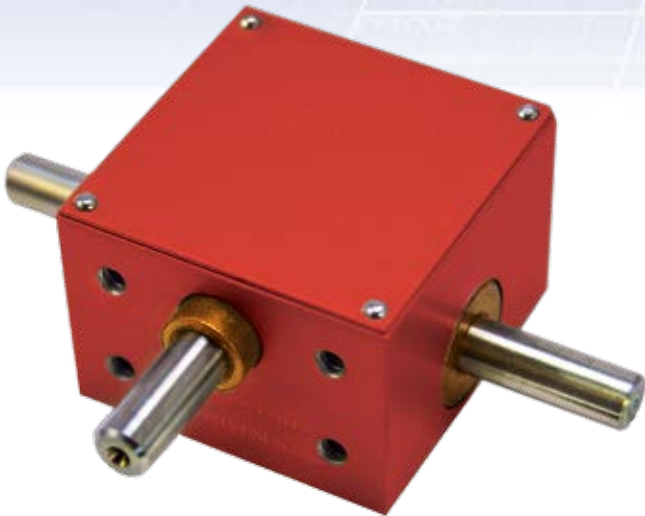
Email Drawings to: Sales@OnDrives.US to get a *FREE QUOTE!*

PRECISION WORM GEAR SPEED REDUCERS

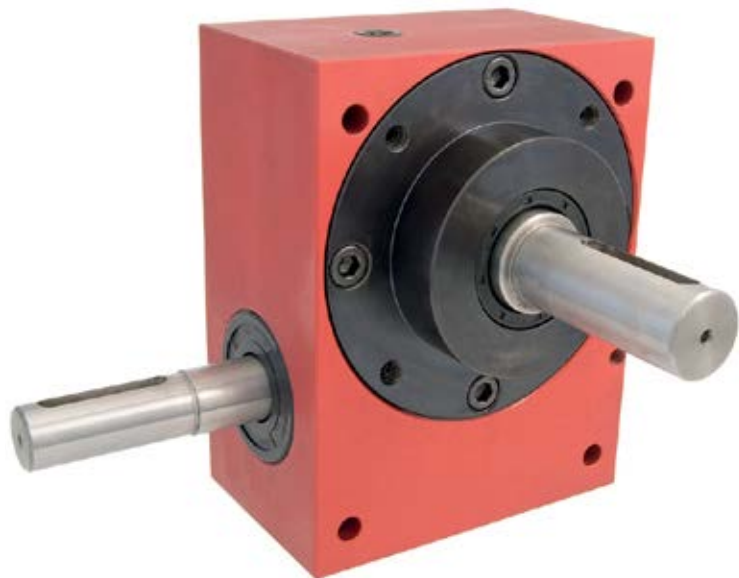
SHAFT INPUT - SHAFT OUTPUT

The Ondrives.US Advantage:

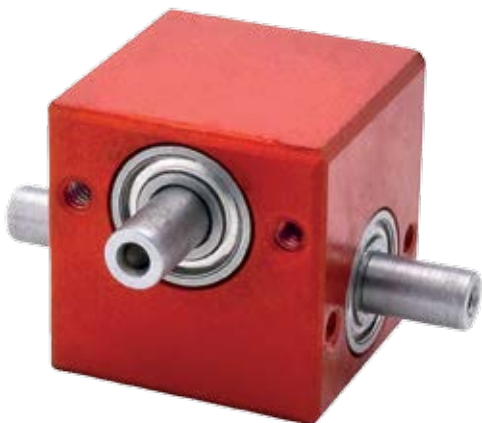
- Highly Efficient Worm & Wheel Reducers
- Ideal for Motion Control or Power Transmission
- Standard Ratios from 5:1 to 60:1
- Custom Ratios Available
- Backlash ≤ 30 Arc Minutes
- Machined Aluminum Housings
- Single or Double-Ended Output Shafts
- Greased for Life
- Output Torques to 83Nm



RW SERIES



BP60 SERIES



PR5 SERIES

PRECISION WORM GEAR SPEED REDUCERS

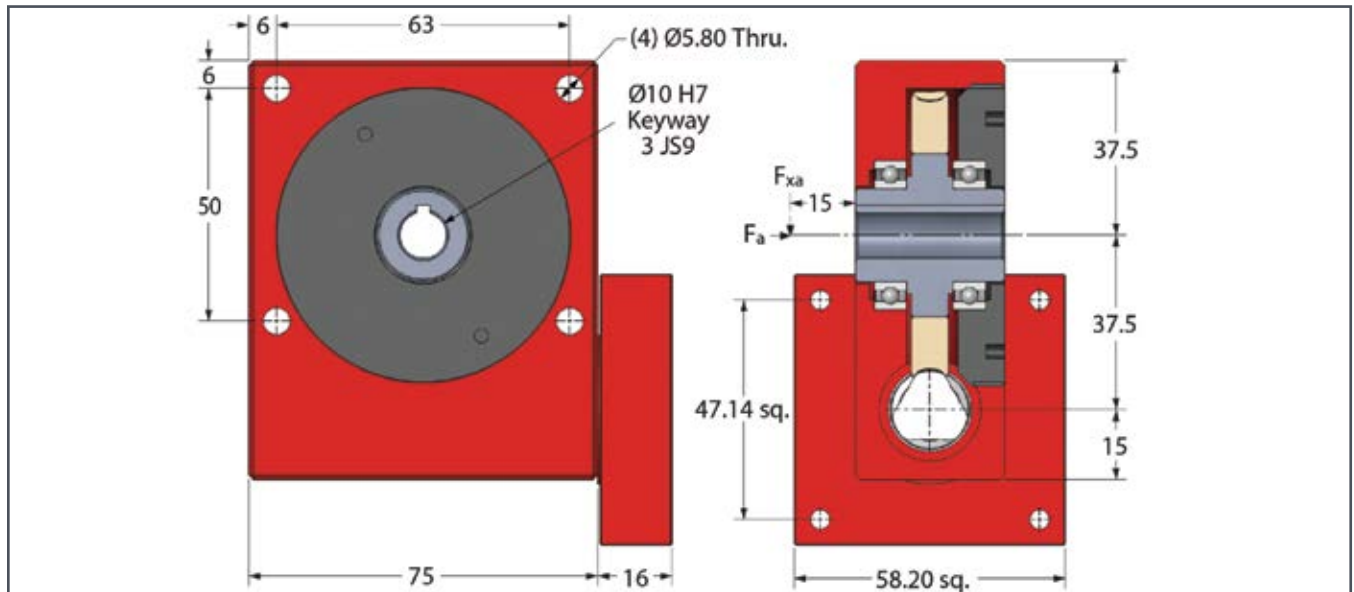
NEMA FLANGE INPUT - HOLLOW BORE OUTPUT

The Ondrives.US Advantage:

- NEMA 17, NEMA 23 and NEMA 34 Inputs Available
- Standard Reduction Ratios from 5:1 to 120:1
- ≤ 30 Arc Minutes of Backlash as Standard
- ≤ 4 Arc Minutes of Backlash Available
- Custom Reduction Ratios from Available
- Low Backlash—to ≤ 4 Arc Minutes Backlash
- High Efficiency Worm Gear Reducers—up to 90% at 1,000 RPM
- Solid Aluminum Casings; Steel Interior Mechanisms
- Optional Single and Double-Output Shafts
- Compact Footprint
- Output Torques up to 156Nm
- 3 Frame Sizes
- Ball Bearings Through Out
- 90° Output Angle
- Greased for Life
- Custom Gearboxes Available



PF-NM SERIES
NEMA FLANGE

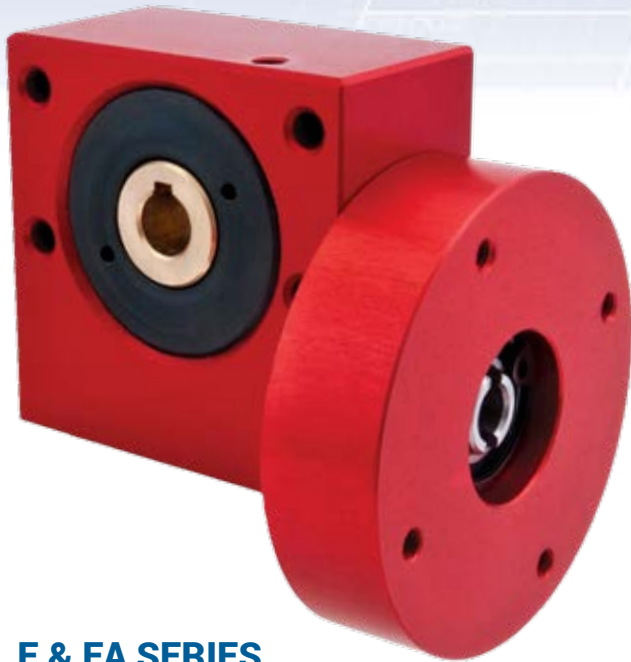


NOTE: Dimensions shown are for reference purposes only.

Email Drawings to: Sales@OnDrives.US to get a **FREE QUOTE!**

PRECISION WORM GEAR SPEED REDUCERS

FLANGE INPUT - HOLLOW BORE OUTPUT



E & EA SERIES

The Ondrives.US Advantage:

- Highly Efficient Worm Wheel Gear Reducers (up to 90% at 1,000 RPM)
- Ideal for Motion Control or Power Transmission
- Standard ratios from 5:1 to 120:1
- ≤ 30 Arc Minutes of Backlash as Standard
 ≤ 4 arc Mounted of Backlash Available
- Durable Construction and Components.
- Solid Aluminum Housings and Steel Interior Components
- Single or Double-Ended Output Shafts Available
- 8 Frame Sizes
- Greased for Life
- Ball Bearings on Input & Output
- Optional Motor Inputs Available
- Custom Gear Reducers Available
- Compact Footprint
- Output Torques up to 164Nm



Shafts

Input and Output Shafts with Drive Keys and Retainer Rings can be supplied to your specifications for any of our Hollow Bore Gearboxes.

Standard shafts are available as Single or Double Ended.

PRECISION WORM GEAR SPEED REDUCERS

HIGH RATIO - DOUBLE REDUCTION

The Ondrives.US Advantage:

- In-line Double Reduction Gear Reducers
- Standard Reduction Ratios from 25:1 to 900:1
- Custom Reduction Ratios Available
- Torque Values up to 300 inch-lbs.
- Maximum Input Speed: 3,000 RPM
- Very Low Backlash (roughly 2°)
- Dual Ball Bearings on all Shafts
- Rugged One-Piece Aluminum Housing
- Permanently Lubricated
- Custom Double Reduction Gearboxes Available
- Output Torques up to 34Nm



E & EA SERIES

Our PP Series Double Reduction Gear Reducers are, essentially, two reduction gearboxes in a single unit, with parallel input and output shafts.

They feature dual ball bearings on all shafts and permanent lubrication for years of dependable performance, even in nonstop or high cycle operation. Machined, one-piece aluminum block housings and steel internals make them tough enough for your most demanding applications.

Email Drawings to: Sales@OnDrives.US to get a *FREE QUOTE!*

CROSS AXIS GEARBOXES

RIGHT ANGLE OFFSET



E & EA SERIES

The Ondrives.US Advantage:

- Ruggedly Built, One Piece Aluminum Housings
- Light Weight
- Greased for Life
- Hardened Alloy Steel Helical Gears and Worm, Aluminum Bronze Worm Wheel Gear
- Special Ratios Available
- Can be Supplied with Mounting Flange for Motor Input
- Keyed Input and Output Shafts are Available
- RPM up to 4000
- Ratios of 1:1 to 40:1
- Solid Aluminum Housing
- Left Hand Helix on Request.
- 1° of Backlash as Standard
- ≤30 Arc Minutes Backlash Available
- 6 Frame Sizes

Our Gearboxes Are Conservatively Rated:

Ondrives.US Crossed Axis Gearboxes are built with crossed axis helical gears or a worm and worm-wheel gear.

Our Helical Gearboxes are available in ratios from 1:1 to 5:1. This type of gearbox is normally used as a speed reducer but in some applications they can function as a speed increaser. It is advised that you check with Ondrives.US Engineers before considering crossed axis helical gearboxes as speed increasers.

For larger ratios our crossed axis gearboxes use worm and wheel gears which are available in ratios from 8:1 to 40:1.

NOTE: Higher Ratio Gearboxes Should **Not** be Used as Speed Increasers!

PARALLEL AXIS SPEED REDUCERS

SHAFT INPUT OR BORE INPUT

Spur Gear Reducers



FF SERIES
Shaft to Bore



FFS SERIES
Thin Profile



FFS SERIES
Bore to Bore

The Ondrives.US Advantage:

- Highly Efficient Parallel Shaft Spur Gear Reducers (up to 93% at 1,000 RPM)
- Up to 850 Nm Torque Output Using Optional Hardened Gear Units
- Low Output Backlash ($\approx 1^\circ$)
- Standard Gear Ratios From 2:1 to 7:1
- Custom Gear Reducer Options Available
- Available in Standard, Slimline, and Bore Input Configurations
- Machined Aluminum Housings with Hardened Steel Interior Components
- Radial Ball Bearings on Input/Output
- Maximum Input Speed: 2,000 RPM
- Permanently Lubricated
- 6 Frame Sizes

THE LITTLE RED GEARBOX!

Email Drawings to Sales@OnDrivesUS.com for a FREE Quote!

RACK AND PINION ACTUATORS

LINEAR TO ROTARY - ROTARY TO LINEAR

RPA SERIES

The Ondrives.US Advantage:

- Five Frame Sizes
- Sturdy and Durable
- Solid One Piece Aluminum Housing
- 10 - 30 mm Stroke
- 7.5 - 60 Kg Output Load
- Rack and Gears are High Carbon Steel
- Greased for Life



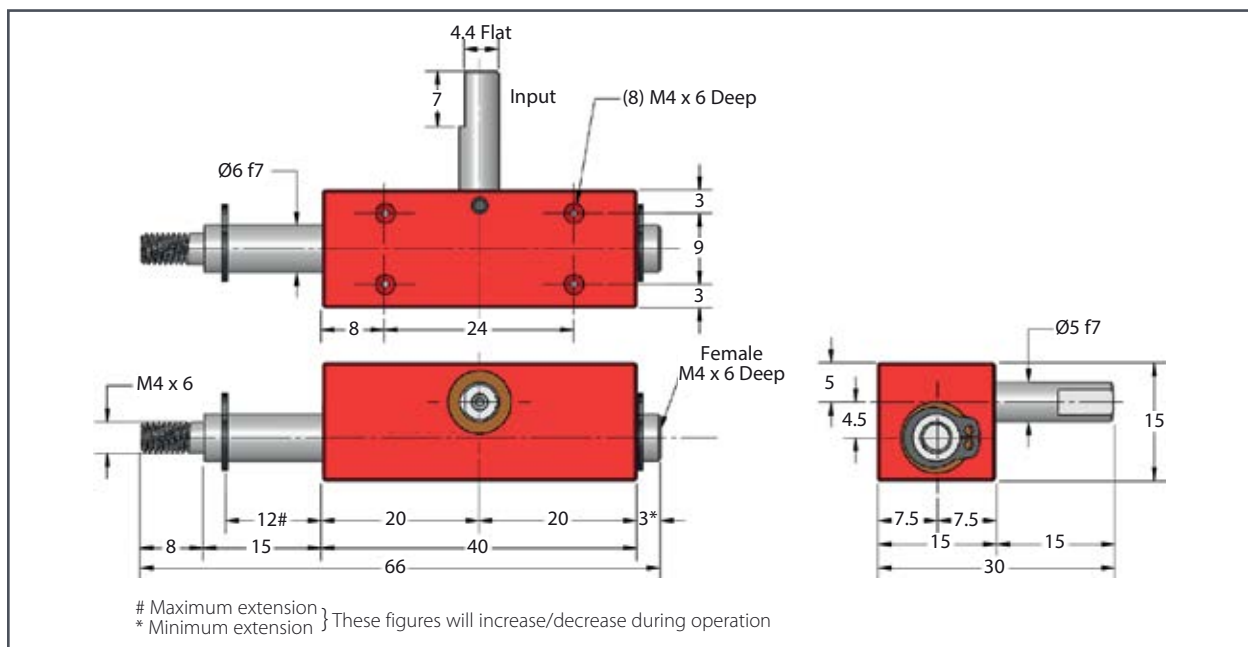
Contact Ondrives.US Application Engineers to Discuss Your Requirements

Rack and pinion gearboxes consist of a housing containing a gear rack with a pinion gear.

Driving the pinion gear converts rotational motion into linear motion.

This type of box can also convert linear motion into rotational motion by driving the rack axially.

Ondrives.US rack and pinion gearboxes are designed as actuators and have relatively short strokes from 10mm to 30mm. special stroke lengths can be supplied to meet your requirements.



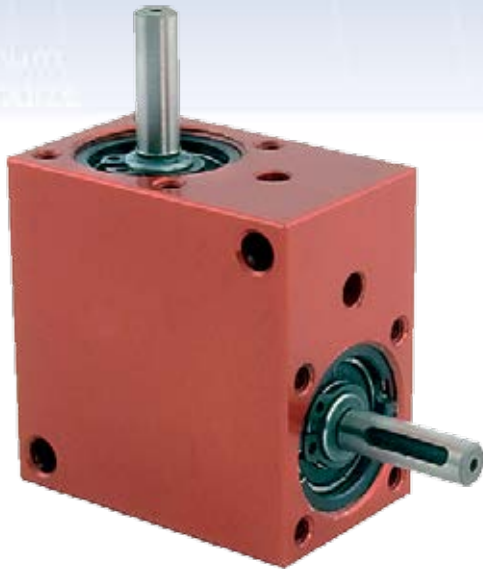
NOTE: Dimensions shown are for reference purposes only.

BEVEL & MITER GEARBOXES

HEAVY DUTY BEVEL GEARBOX

The Ondrives.US Advantage:

- Shaft-To-Bore and Bore-To-Bore Configurations Available
- Highly Efficient Heavy Duty Bevel Bore Gearboxes (as high as 88% at 1,000 RPM)
- Input Speed: up to 3,000 RPM
- Torque Outputs up to 70 Nm
- Low Backlash ($\approx 1^\circ$)
- 1:1 to 24:1 Gear Ratios
- Right Angle (90°) Output
- Sturdy Aluminum Housings
- Hardened Steel Gears
- Permanent Lubrication



BLH SERIES
Shaft To Shaft



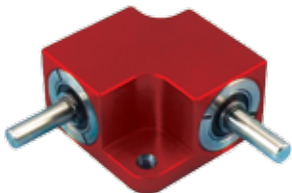
BLHN SERIES
Double Reduction



BLHI SERIES
Shaft To Bore



BLHB SERIES
Bore To Bore



COMPACT BG SERIES
Right Angle

Email Drawings to: Sales@OnDrives.US to get a **FREE QUOTE!**

BEVEL & MITER GEARBOXES

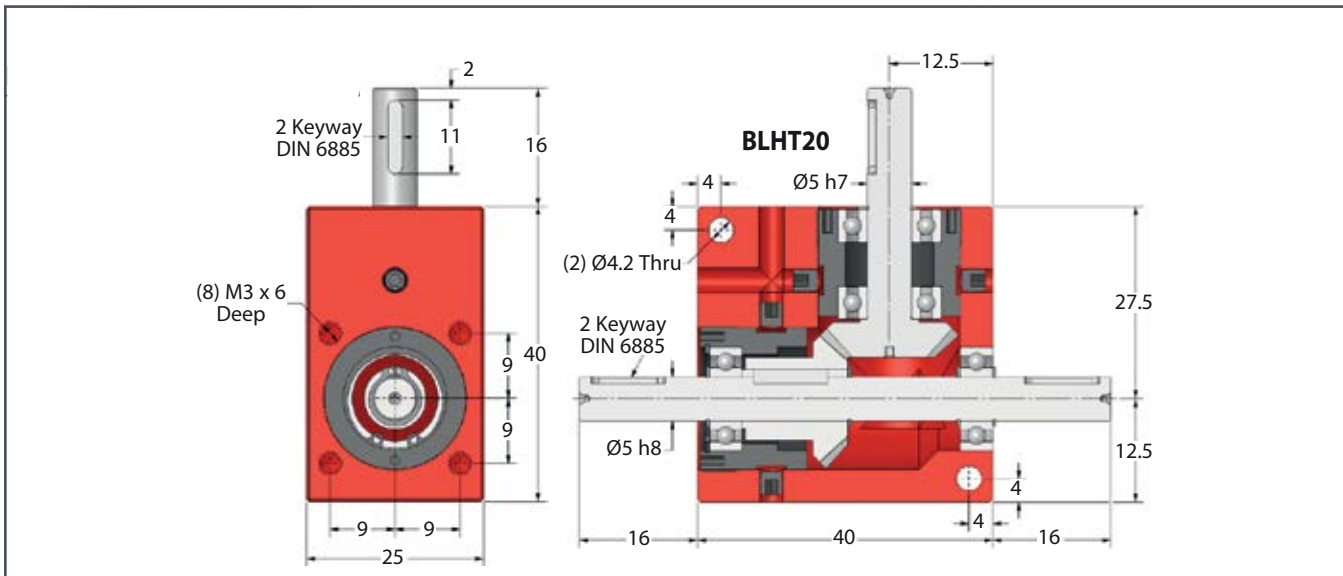
DOUBLE SHAFT OUTPUT



The Ondrives.US Advantage:

- High-Efficiency Bevel and Bevel Tee Gearboxes (up to 88% at 1,000 RPM)
- Low Backlash Performance—Roughly 1° of Backlash
- 1:1 and 2:1 Ratios
- Maximum Input Speed: 3,000 RPM
- Manufactured From Durable, High Quality Materials
- Greased for Life
- 90° Output Angle
- 6 Frame Sizes
- Single Input Shaft
- Dual Output Shaft
- Torque to 128Nm

BLHT SERIES



NOTE: Dimensions shown are for reference purposes only.

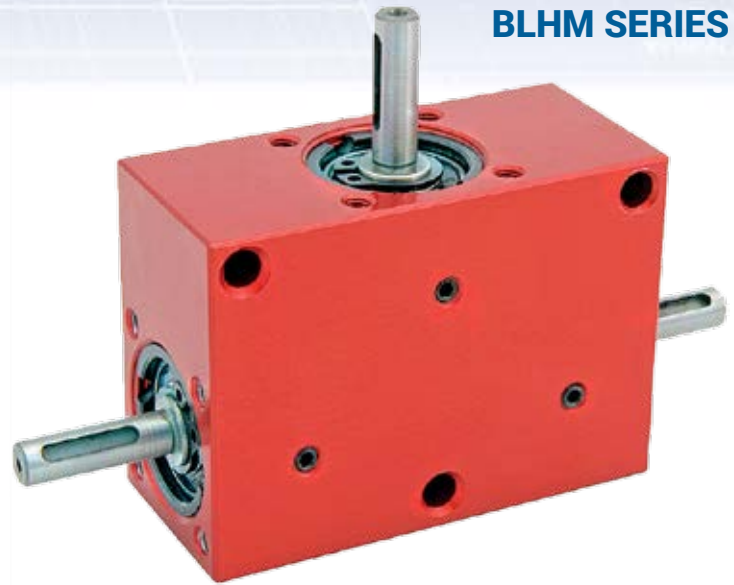
BEVEL & MITER GEARBOXES

COUNTER ROTATING - DOUBLE SHAFT OUTPUT

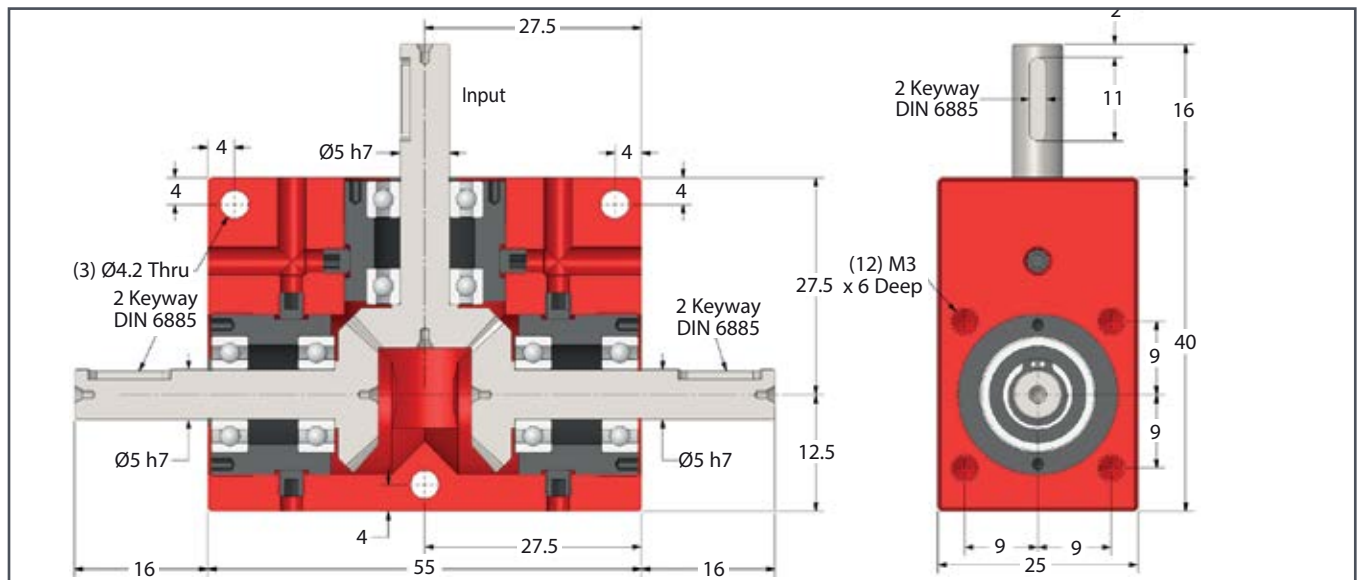
The Ondrives.US Advantage:

- Greased for Life
- Heavy Duty Bevel Gearbox
- Approximately 1° Backlash
- Hardened Gears
- Manufactured From Durable, High Quality Materials
- Greased for Life
- 3 Hardened Steel Gears
- Single Piece Machined Aluminum Housing
- Efficiency up to 88% @ 1,000 RPM
- Maximum Input Speed 3,000 RPM
- 1:1 and 2:1 Ratios
- 6 Frame Sizes

BLHM SERIES



Ondrives.US counter rotating bevel gearbox is a "T" Style bevel gearbox which has two output shafts on the same axis and one input shaft at 90 degrees to the others. The two outputs rotate in opposite directions.



NOTE: Dimensions shown are for reference purposes only.

Email Drawings to: Sales@OnDrives.US to get a **FREE QUOTE!**

IN-LINE SPEED REDUCERS

30 YEARS OF UNPARALLELED QUALITY

The Ondrives.US Advantage:

- Greased for Life
- Input Speed to 4,000 rpm
- Ratios to 3600:1
- Modifications Available
- Custom Gear Reducer Options Available
- Fully Machined From Block Housings
- Ball Bearings

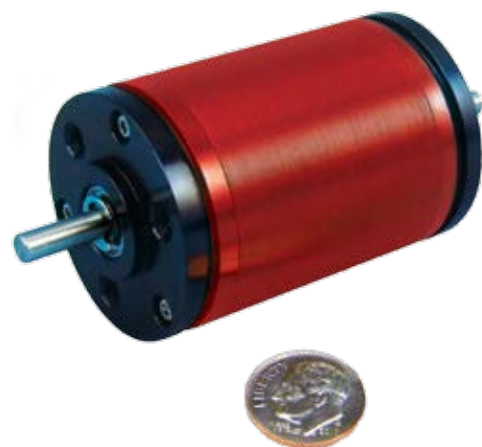


EDH SERIES

Epicyclic (Planetary) Servo Gearbox

Ondrives.US internal epicyclic servo reducers are extremely rugged and compact. They have fully machined housings in aluminum or steel and are supplied with ball bearings throughout. These in-line gearboxes have flexible motor mounting options and deliver output torques up to 380Nm.

- Low Backlash ≤ 30 Arc/Min at Input
- Input speed to 3,000 rpm
- Machined Aluminum Block Housing
- Ratios From 3:1 to 36:1
- Output Torque 380Nm



SRX SERIES

Encoder, Low Backlash In-Line Gearboxes

These compact, low backlash and lightweight in-line gearboxes are designed for encoder applications. They have a very low moment of inertia at the input shaft and are rated for input speeds up to 3000 rpm. A wide range of ratios are available from 4.96:1 to 3600:1 in two frame sizes. Syncro cleats for use on these gearboxes are available from stock.

- Output Torque 1 Oz-Inches
- Backlash 15 Arc-Minutes at Any Ratio
- Ratios 4.96:1 to 3600:1
- Input Speed to 3,000 rpm
- Diameters 1-1/16" or 1-3/4"
- Aluminum Housing, Black Anodized
- Gears and Shafts 303 Stainless Steel

IN-LINE SPEED REDUCERS

30 YEARS OF UNPARALLELED QUALITY

In-Line Low Backlash Taper Gearboxes

Ondrives.US taper gearboxes are in-line planetary gearboxes with backlash equal to or better than 8 arc/min. These in-line gearboxes were designed for tight space applications and are available either as a shaft input or mounted to a 24v DC motor.

- Low Backlash ≤ 8 Arc/Min at Input
- Slim Design
- Shaft Input or With Mounted Motor
- Ratios From 2:1 to 16:1
- Output Torques From 1.14Nm to 12.7Nm



FG SERIES

Spur In-Line Gearboxes

This range of spur gear in-line planetary gearboxes is compact and lightweight. We offer a selection of gearboxes for direct mounting to motors or for shaft coupling. Ratios are available from 2:1 to 625:1 and torques range from 0.13Nm to 90Nm.

- Input Speed: to 4,000 rpm
- Machined Aluminum Block Housing



J & XJ SERIES

Contact Ondrives.US Application Engineers to Discuss Your Requirements

Email Drawings to: Sales@OnDrives.US to get a *FREE QUOTE!*

MINIATURE GEARBOXES

The Ondrives.US Advantage:

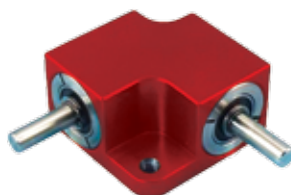
- Broadest Selection of Small Gearboxes
- Highly Efficient Worm & Wheel Reducers
- Ideal for Motion Control
- Single or Double-Ended Output Shafts
- Modifications and Special Ratios Available
- Custom Ruggedly Built Boxes Made to Suit
- Greased for Life



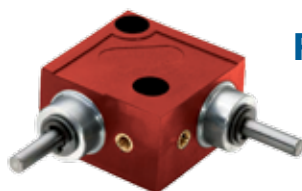
Helical
6MM SHAFT DIA



Worm
5MM SHAFT DIA



Right Angle Bevel
1/8" SHAFT DIA



Plastic Housing
4MM SHAFT DIA



14mm SQ.
3MM SHAFT DIA



In-Line Encoder
1/8" SHAFT DIA



Worm
3/16" SHAFT DIA

Small is No Big Problem:

Our standard miniature gearboxes are available in many styles including worm and wheel, helical, bevel, and in-line spur. We have built many, very small custom gearboxes for a vast assortment of applications and we offer this service to all our customers.

The links for our small gearboxes also include the full range of frame sizes for that series of gearboxes.

THE MINI RED GEARBOX!

PRECISION LOW BACKLASH

The Ondrives.US Advantage:

- Backlash as Low as 4 Arc/Min
- Input Speed to 3,000 rpm
- Machined Aluminum Block Housing
- Dual Ball Bearings on All Shafts
- Ratios From 3:1 to 3600:1
- Output Torques 380Nm



**E & EA
Cross Axis**
≤30' Backlash
up to 4,000 RPM Input
6mm to 30mm Shafts
1:1 to 40:1 Ratios



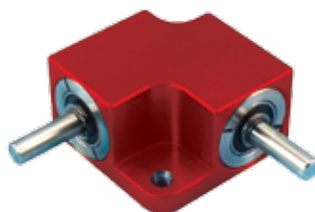
**PF-NM
Wormgear Reducer**
≤4' Backlash
up to 3,000 RPM Input
5:1 to 120:1 Ratios



**EHD
Epicyclic Servo**
≤30' Backlash
Up to 380 Nm Torque
3:1 to 36:1 Ratios



**SRX
In-Line Encoder**
≤15' Backlash
2 Frame Sizes
5:1 to 3500:1 Ratios



**BG
Bevel Gearbox**
≤30' Backlash
1/8" TO 3/8" Shaft Sizes
1:1 Ratio



**TG
In-Line Spur Gear**
≤8' Backlash
Shaft Input
or Motorized
2:1 to 16:1 Ratios

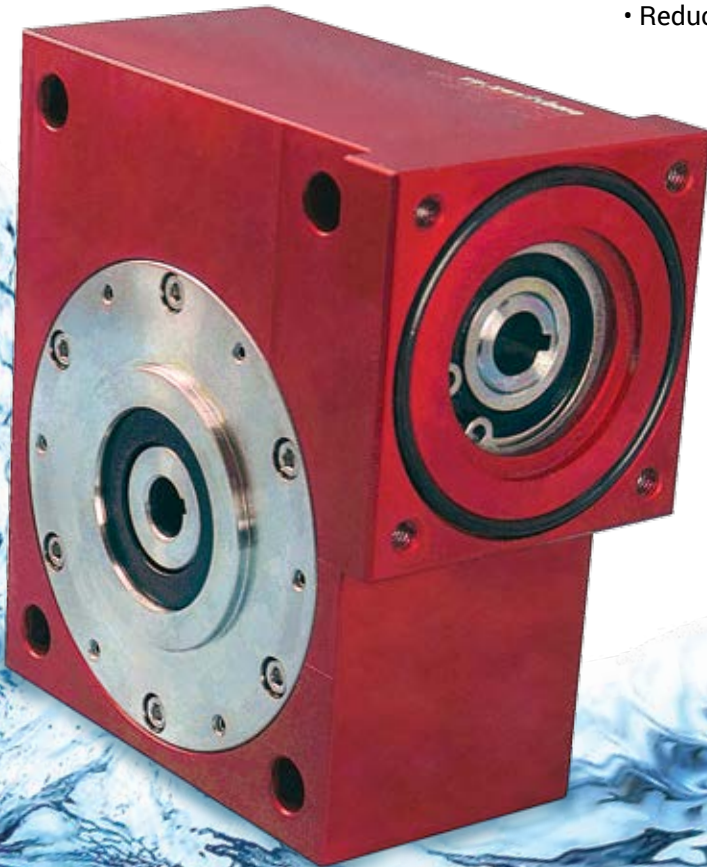
Email Drawings to: Sales@OnDrives.US to get a **FREE QUOTE!**

WASHDOWN GEARBOXES

IP65 RATED ENCLOSURES

The Ondrives.US Advantage:

- Sealing O-Ring on NEMA 17, 23 or 34 Flange, Custom Motor Sizes Possible
- One-Piece Anodized Aluminum Standard Housing, Other Materials on Request
- Inch and Metric Bores, Keyed or Custom Shaped
- Rotary Shaft Seals
- Low Backlash, Precision and Customizable
- Reducers Ratios From 5:1 to 120:1



PFN SERIES

PRECISION WORM GEAR SPEED REDUCERS

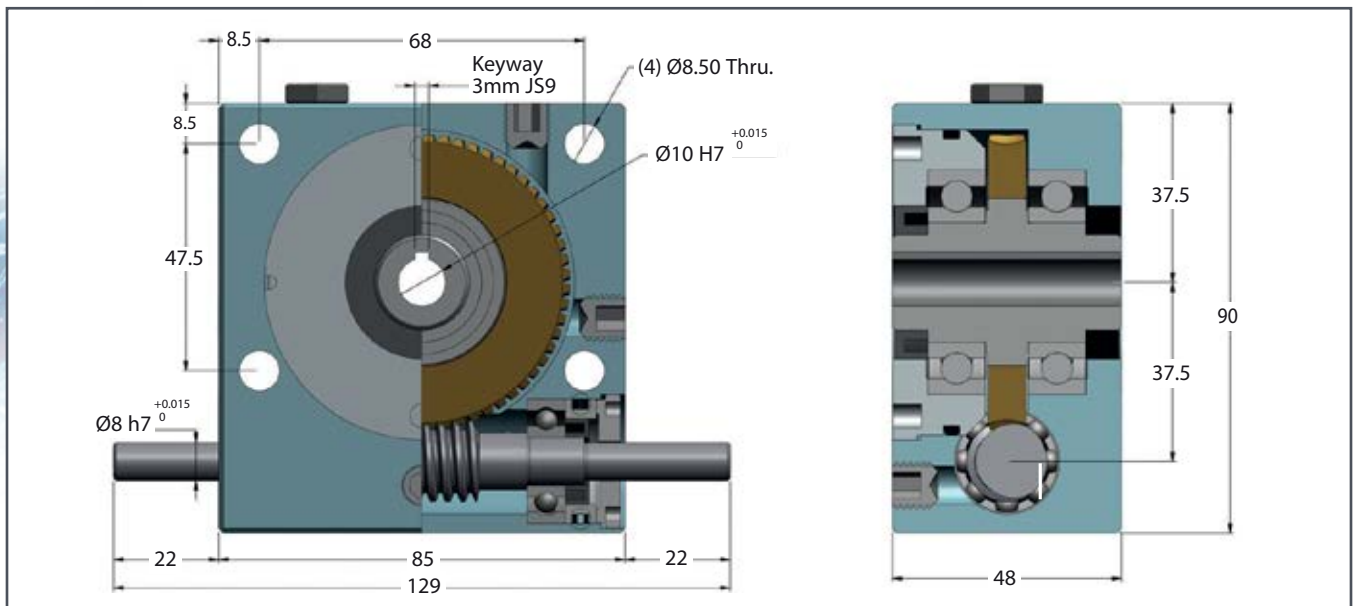
OIL FILLED SPEED REDUCERS

OFG Speed Reducer:

- Oil Filled
- Standard Ratios 5:1 to 120:1
- High-Efficiency Gear Reducers (as high as 90% at 1,000 RPM)
- Standard Ratios From 5:1 to 120:1
- ≤ 30 Arc Minutes of Backlash as Standard
- ≤ 8 Arc Minutes of Backlash Available
- Single or Double-Ended Output Shafts
- Durable Construction and Components
- Solid Aluminum Housings
- Ball Bearings on Input and Output



OFG SERIES



NOTE: Dimensions shown are for reference purposes only.

Email Drawings to: Sales@OnDrives.US to get a **FREE QUOTE!**

UNIQUE GEARBOXES

MOTORIZED GEARBOXES

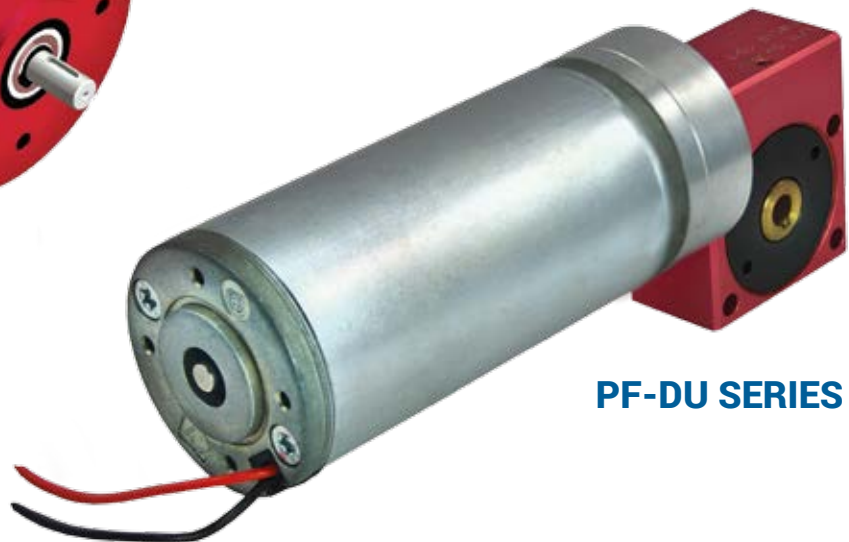
The Ondrives.US Advantage:

- High Precision Worm Gear Reducers
- Output Torques From 100.5Nm to 2.1Nm
- Fitted With 24V DC Motors

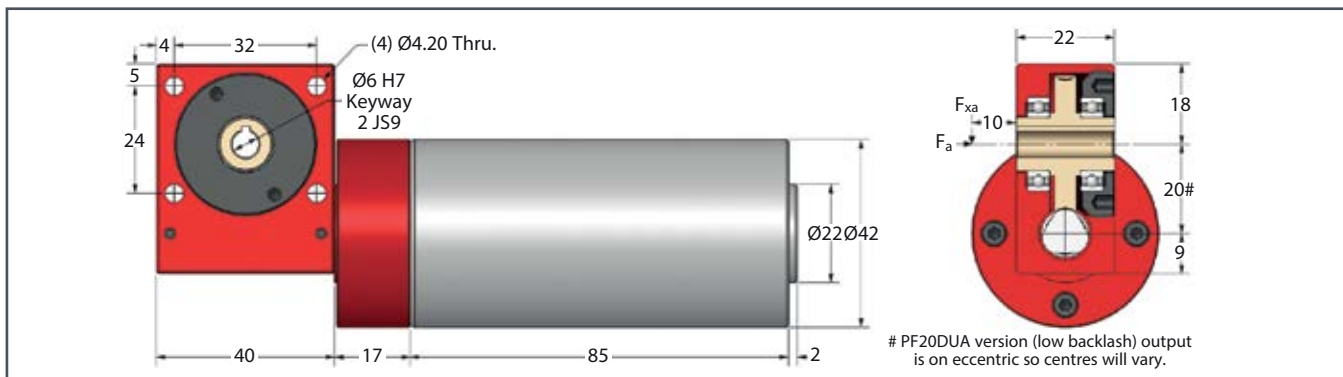
**TG-112 ADC
SERIES**



PF-DU SERIES



PF-DU SERIES



NOTE: Dimensions shown are for reference purposes only.

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CUSTOM GEARBOX DESIGNS

DESIGNED TO YOUR REQUIREMENTS

The Ondrives.US Advantage:

- Application Engineering Assistance.
- Design Service
- Output Torques From Instrumentation to 900Nm
- Greased for Life
- Sealed Units to IP Standards.
- Very Low Backlash Available if Needed
- Speed Reducers or Speed Increasers
- High Precision Gears and ABEC Ball Bearings



Ondrives.US Makes Custom Gearboxes Every Day.

Our expertise in designing and building an extensive line of standard gearboxes is used to design gearboxes exactly how you want them. The Ondrives.US facility and equipment are especially geared to units from miniature to 900Nm output torque.

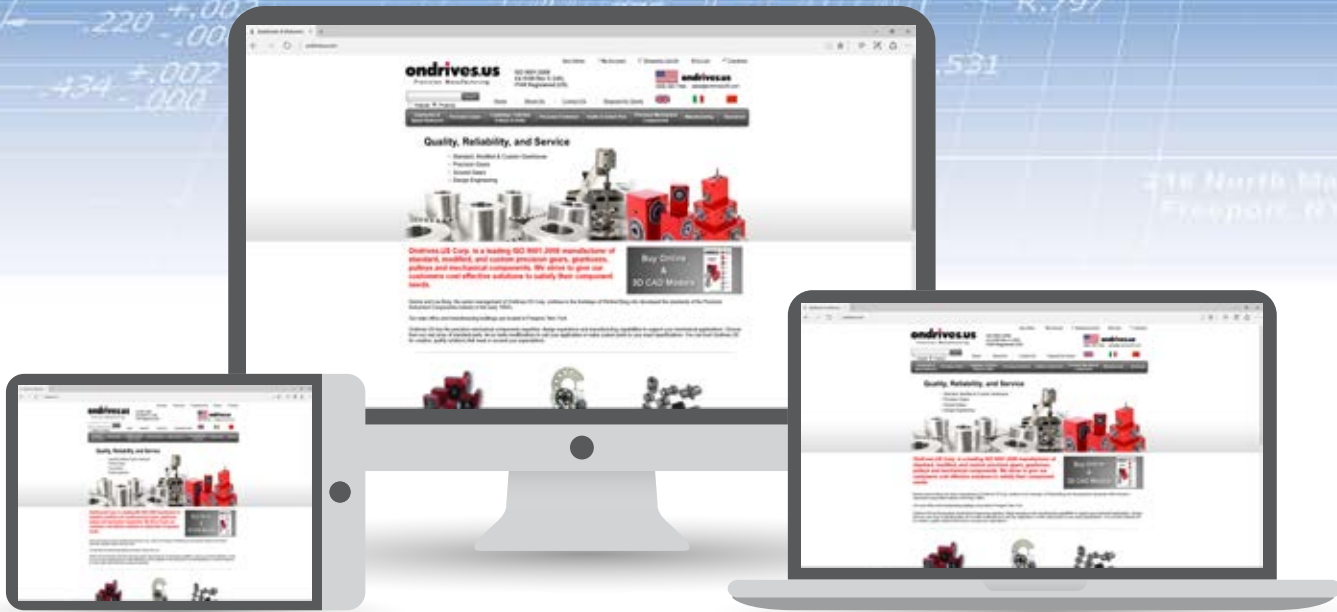
Whether you need right angle gearboxes, parallel shaft gearboxes, crossed axis gearboxes it doesn't matter. We know how to build them.

If you have a design, we can build to it and we will reverse engineer a sample. From the initial concept our application engineers will work with you to bring it to fruition.

Large Quantities or Small - WE DO IT ALL!

Email Drawings to: Sales@OnDrives.US to get a *FREE QUOTE!*

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Ondrives.US has the precision mechanical components expertise, design experience and manufacturing capabilities to support your mechanical applications. Choose from our vast array of standard parts which can be modified to suit your application or make custom parts to your exact specifications. You can trust Ondrives.US for creative, quality solutions that meet or exceed your expectations.

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3D CAD Models



3D CAD models are available on our website for most of our standard products, with more models being added regularly. 2D drawings and dimensional tables are found on product PDF's also on our site.

PRODUCT REFERENCE PDFs

ondrives.us

Precision Manufacturing



PF20NM

e-cad
Drawings
Available

GEARBOXES

Precision Worm Gear Reducers
Nema 17 Flange Input 1.25 – 5 Nm **5:1 - 120:1**

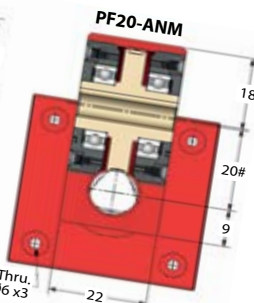
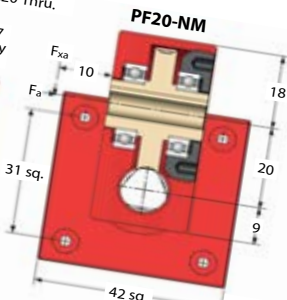
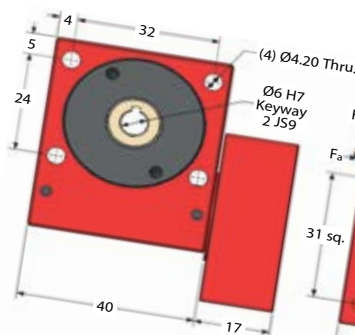
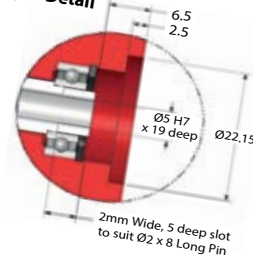


PF20-NM



PF20-ANM

Input Detail



PF20ANM version (low backlash) output is on eccentric so centres will vary

Standard ≤30	Part Number Low Backlash ≤8"	Ratio	Efficiency at 1000 Rpm	Reflected Inertia at Input (kg.m ²)	Self Locking Output
PF20-10NM	PF20-10ANM	10:1	86%	2.53 x 10 ⁻²	✗
PF20-12NM	PF20-12ANM	12:1	85%	2.43 x 10 ⁻²	✗
PF20-15NM	PF20-15ANM	15:1	84%	2.35 x 10 ⁻²	✗
PF20-20NM	PF20-20ANM	20:1	78%	2.28 x 10 ⁻²	✗
PF20-30NM	PF20-30ANM	30:1	71%	2.24 x 10 ⁻²	✗
PF20-60NM	PF20-60ANM	60:1	60%	2.21 x 10 ⁻²	✗
PF20-120NM	PF20-120ANM	120:1	32%	2.00 x 10 ⁻²	✓
Accessories					
P20-X	PF20-SPNM	5:1-120:1			
KK2-DX	PF20-SPANM				
KK2-20					

Weight: 0.23 kg. Greased for Life: Shell Gadus S5 V42P 2.5.
F_{xx} at 1000 Rpm: 12 kg. F_t at 1000 Rpm: 5 kg.

Modifications and custom designed gearboxes available. Contact Sales for details.
Testing in your application is necessary.
You will need to assess duty cycles and confirm suitability with your own calculations.
All figures listed are to be used for guidance only.

Single Output Shafts
Double Output Shafts
Output Key

Output Torque Nm

Rpm	10:1	12:1	15:1	20:1	30:1	60:1	120:1
3000	1.40	1.50	1.80	1.70	1.90	4.10	1.25
2000	1.70	1.70	1.80	1.80	2.10	2.40	1.42
1000	2.10	2.30	2.30	2.50	2.70	2.90	1.70
500	2.70	2.50	2.80	2.90	3.20	3.50	1.94
200	3.40	3.50	3.50	3.70	3.90	4.10	2.27
100	3.90	3.90	4.10	4.20	4.30	4.50	2.55
50	4.40	4.50	4.50	4.60	4.70	4.80	2.72
10	4.80	4.80	4.90	4.90	5.00	5.00	2.72

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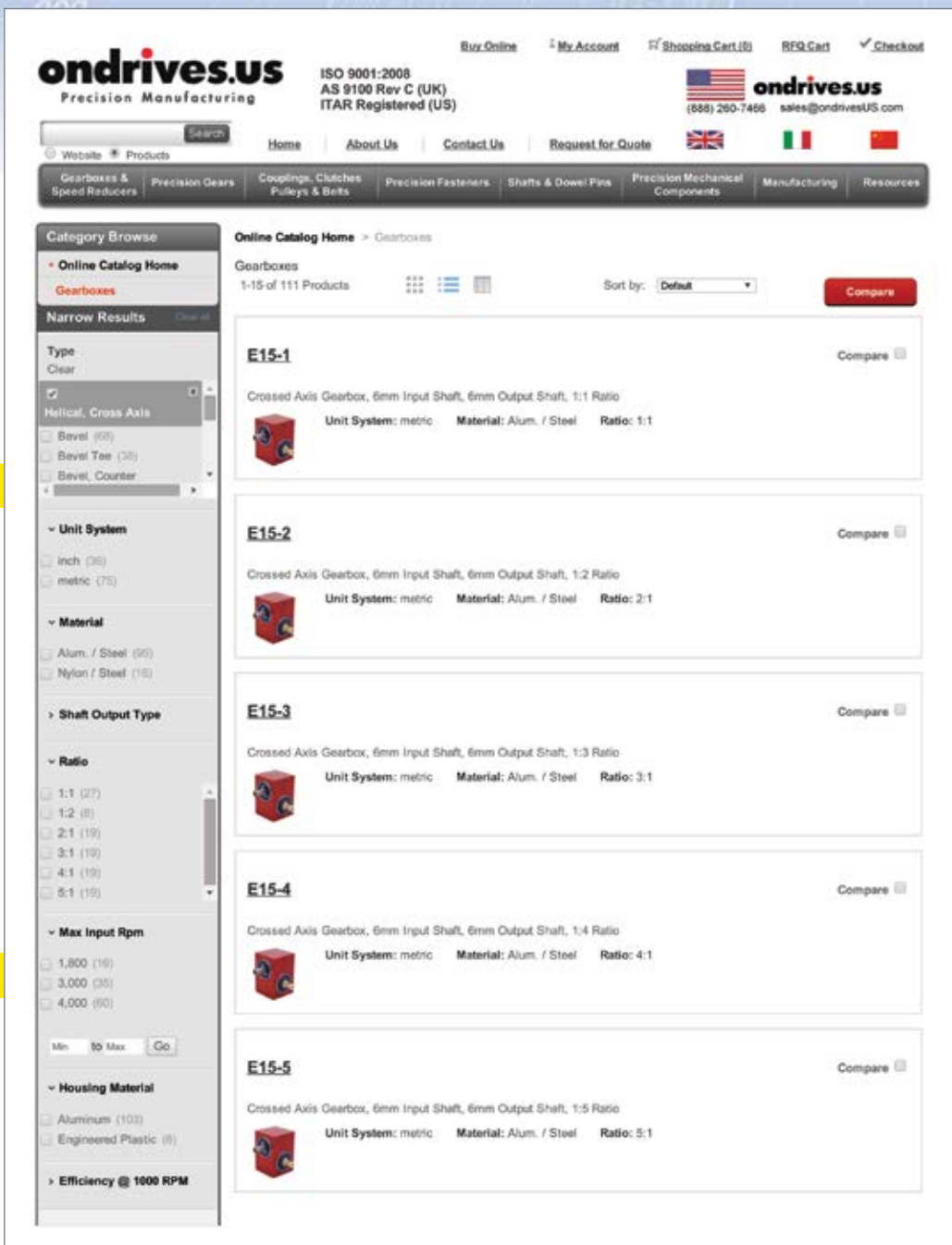
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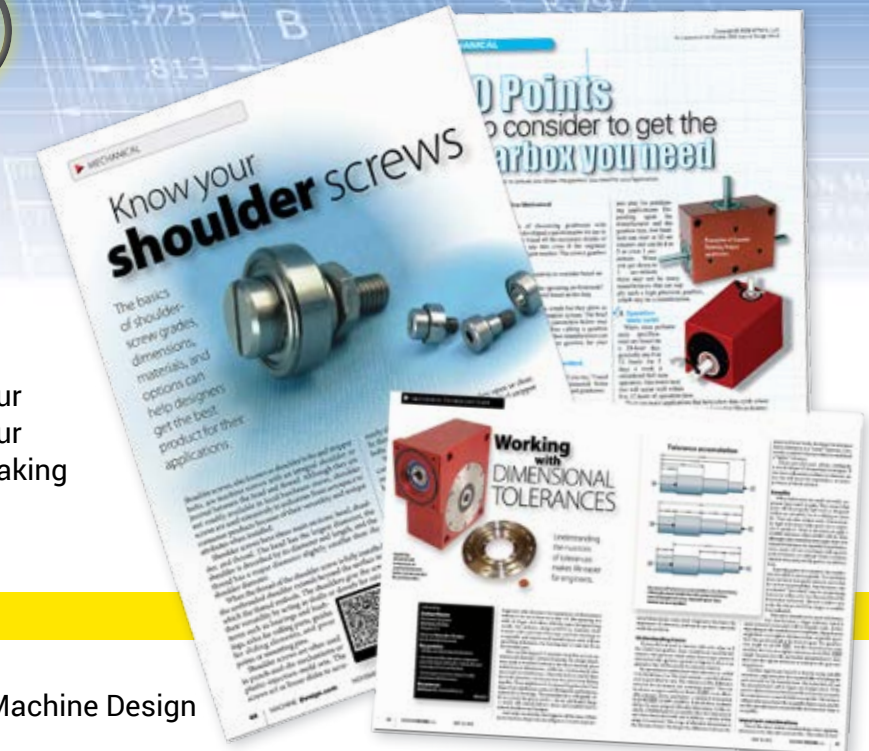
Online Catalog Home Page: ondrivesus.com/online-catalog

TECH NOTES AND WHITE PAPERS



Ondrives.US Engineers continue to develop Technical Data Sheets and White Papers dealing with topics of interest that are closely related to our products and services.

Our White Papers are designed to educate our customers and potential customers about our products. Tech Notes help in the decision making process between comparative products



WHITE PAPERS:

- **Shoulder Screws White Paper**

Published in the November 2011 issue of Machine Design

- **Linear Shaft Supports White Paper**

The Advantage or "Top Loading" Linear Shaft Supports

- **Feather Keys White Paper**

Feather Keys - The Forgotten and Ignored Drive Component

- **Working with Dimensional Tolerances**

Published in the May 2012 issue of Machine Design Magazine.

- **Precision Gears Technical Data Terms**

Definitions and Formulas for Spur, Helical, Bevel & Worm Wheel Gears

TECH NOTES:

- **Gearbox Selection Guide**

Published in the October 2009 issue of Design World Magazine.

- **Inertia and Gearbox Selection**

Inertia and the use of Inertia Figures to Aid Gearbox Selection

- **Misalignment Coupling Selection Guide**

Items to Consider When Choosing Shaft Misalignment Couplings



More At: ondrivesus.com/resources/technical-notes-and-white-papers

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USA & UK FACILITIES LISTS

Ondrives.US Corp. New York, USA



Turning: 17 Units

1 DMG MORI NLX1500SY – **NEW**
1 Haas SL10 Chucker
2 Haas SL10 w/ Servo Bar 300
3 Omniturn GT75
4 Omniturn Conversion
1 Star SR20 (3 Live Tools)
2 Star SB16D (3 Live Tools)
1 Star SA16 (3 Live Tools)
1 Star SH16
1 Citizen B12
2 Tsugami B205-III – **NEW**

Machining Centers: 3 Units

1 Haas VF1
1 Haas VF2
1 Haas VF2SS

Inspection: 4 Units

1 Tesa Micro-Hite 3D CMM
1 Deltronic Image Master Optical Comparator
1 Nikon Profile Projector Model 6C
1 Vari-Roll VR-G2 Precision Gear Checker – **NEW**

Gear Cutting: 33 Units

2 Mikron 120
14 Mikron 79
6 Mikron 132
1 Mikron 102.5 Spur and Helical
Hobbing Machine
3 Fellows Gear Shaper #3
2 Fellows Gear Shaper #7
3 Barber Colman 6-10
1 Barber Colman 16-16
1 Barber Colman 16-36

Secondary Operations: 12 Units

1 Sunnen MBBB1660 Honing Machine
1 Pioneer Broach
1 Haas HA5C
1 Haas HTS6
2 Rotary Transfer Machines, 6 Station
6 Centerless Grinders

Marking: 1 Unit

1 Tykma Zetalase Fiber 10

Ondrives LTD. Chesterfield, UK



Gear Grinding: 2 Units

1 Niles-Kapp ZE400 Gear Profile Grinding Machine
1 Gleason Phoenix 280G Spiral Hypoid HRH
Curvic Bevel Grinder

Diameter & Bore Grinding: 1 Units

1 Studer S21 CNC Universal Grinder

Gear Cutting: 5 Units

3 P90 Gleason Pfauter CNC Gear Cutting and Worm
Milling Machine
1 P60 Gleason Pfauter CNC Gear Cutting and Worm
Milling Machine
1 Lorenz LS156 CNC Gear Shaping Machine

Machining Centers: 8 Units

2 Doosan Horizontal HC400 7 Pallet and Twin Pallet
1 Doosan Vertical NM510
2 Dugard 760 Vertical
1 Bridgeport Vertical VMC800X
1 Quasar Vertical MV204II
1 DMU50 DMG 5 Axis

Turning: 14 Units

4 Mazak QT Nexus 200MSY (1 Gantry 3 Barfed)
4 Mazak Smart 200 (2 Barfed)
2 Colchester Multi-Turn 2000

1 Colchester Live tooling
Bar Fed Lathe
1 Doosan Puma 400B1 Doosan Lynx
with Bar Feed
1 Doosan 3100Y with Bar Feed

EDM: 1 Unit

1 Agie Charmilles CUT200 CNC Wire

Eroding Inspection: 5 Units

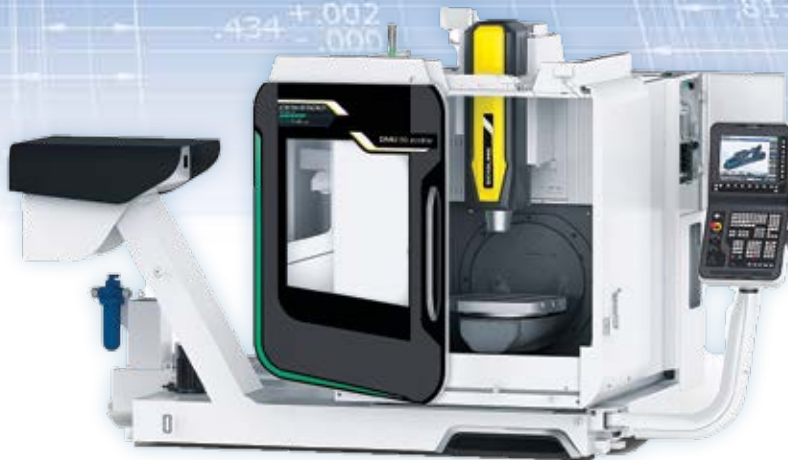
1 Gleason 475GMS Gear Analytical Inspection
Closed Loop with Gleason Phoenix 280G
1 Wenzel Inova Gear Inspection Machine
1 Mitutoyo CNC Crysta Apex C574 CMM
1 TESA-SCAN 50 Plus Optical Measurement
1 Surface Scan for Surface Roughness Testing

Marking: 1 Unit

1 Trumpf TruMark Station 501

Secondary Operations: 2 Units

1 Delapena E1000 CNC Honing Machine
1 Leistritz Polymat 25 Keywaying Machine



MORI SEIKI DMU 50 ECOLINE



DMG MORI NLX1500SY



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Ondrives.US Corp. NY, USA and Ondrives Ltd. Chesterfield, UK are leading manufacturers of precision gears, gearboxes and mechanical drive components. Through continued investments in state of the art manufacturing equipment and technology we remain at the forefront of precision manufacturing and continue to deliver quality, reliability and service.

With our qualified and experienced design team we are able to offer a complete service from design, modifications and prototypes through production volumes. Our engineers are always available to assist you with applications, product selection and any technical inquiries.

Our **Manufacturing Capabilities** are extensive and include a broad range of product types, materials and capacity.

Our **Facilities List** shows the comprehensive equipment and capabilities of both factories.



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Machining Capabilities:

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- Gearboxes and Reducers
- Precision Turning
 - CNC Lathes
 - Manual Lathes
- Precision Milling
 - CNC Mills
 - Manual Mills
- Centerless Grinding
- Engraving
- Honing
- Precision Assembly
- Custom Machine Parts up to 14" Diameter
 - Gears
 - Speed Reducers
 - Shoulder Screws
 - Thumb Screws
 - Machine Screws
 - Collars
 - Clamps
 - Shaft Couplings
 - Clutches
 - Shaft Supports
 - Shafts and Dowel Pins
- Complete CAD/CAM Drafting, Design, and Machine Downloading Capabilities

Production Capabilities:

- Prototype to Large Production Quantities

Material Options:

- Most Machinable Materials, Including:
 - Aluminum
 - Brass
 - Bronze
 - Plastic
 - Steel
 - Stainless Steel
 - Titanium

Quality and Inspection:

- ISO 9001:2008 Certified
- ITAR Registered
- Certified Inspection and Test Equipment
- Coordinate Measuring Machine (CMM)
- AGMA Gear Tolerancing to Q14

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QUALITY - RELIABILITY - SERVICE

Ondrives.US has the precision mechanical components expertise, design experience and manufacturing capabilities to support your mechanical applications. Choose from our vast array of standard parts, let us make modifications to suit your application or make custom parts to your exact specifications. You can trust Ondrives.US for creative, quality solutions that meet or exceed your expectations.

MAINTAINING THE HIGHEST STANDARDS

Manufacturing:

Ondrives.US operates a modern manufacturing facility regularly adding new state of the art machinery. Our Facilities List and Capabilities show the breath of our expertise and abilities.

Engineering and Design:

Ondrives.US employs Application Engineers to assist our customers in the selection of the best product for the application. If the project requires a custom product, our design engineers will create a solution to meet the customer's specifications. Two dimensional drawings or 3D CAD models can be supplied for the customers' approval prior to production.

Quality Control:

Ondrives has a strong commitment to Quality and constant improvement. We are ISO 9001:2008 certified.

Our Mission:

To offer cost effective solutions, expert service and timely delivery for our customer's mechanical components needs.

Ondrives is a leading manufacturer and distributor of precision mechanical components and assemblies. With an extensive knowledge and experience in the design and application of mechanical components we can assure our customers the very best selection of products and services, at competitive prices.



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