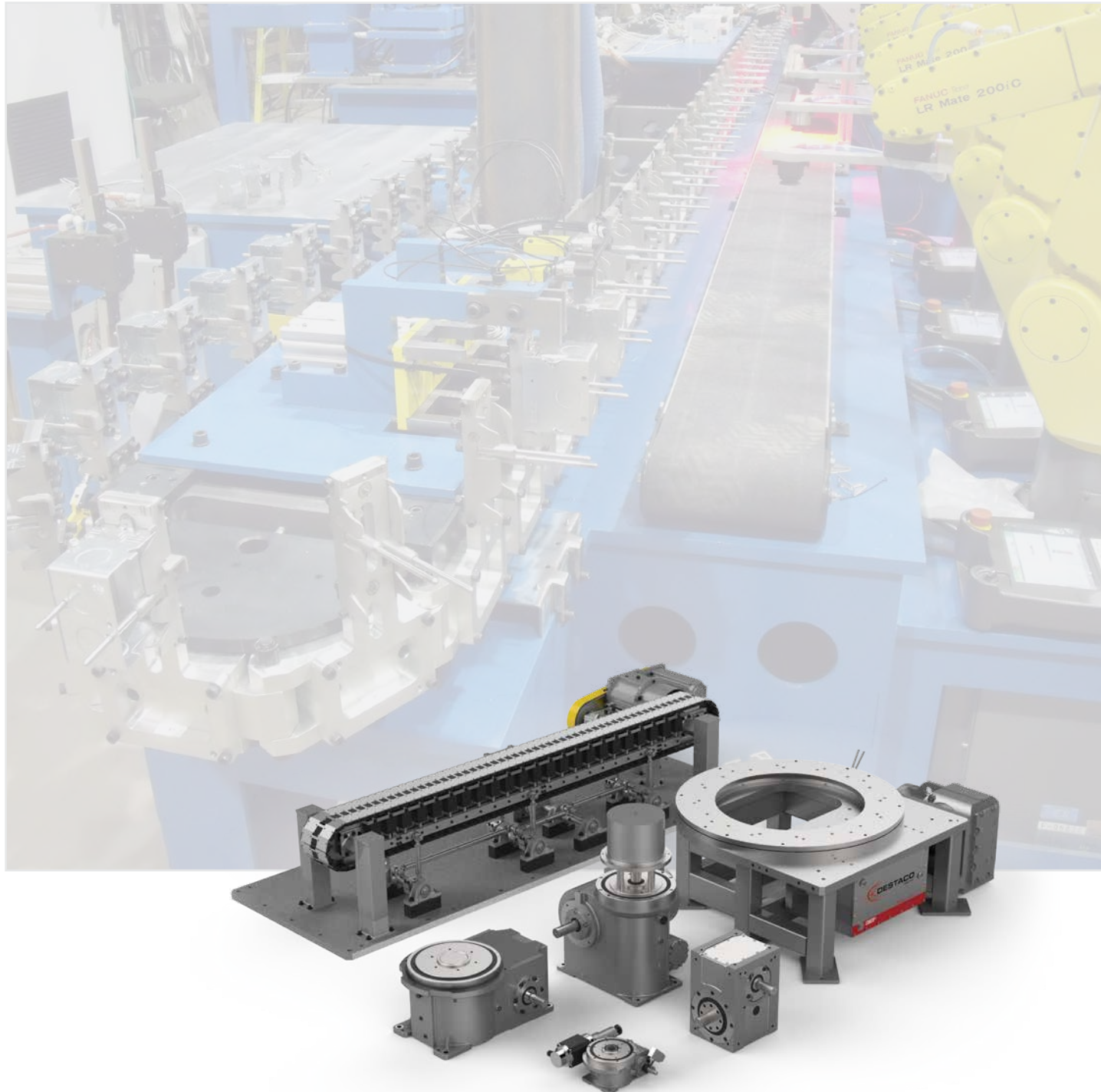


## Product Catalog

### Precision Indexing | Indexers, Conveyors, Part Handlers



# ABOUT DESTACO

Built on a Strong Foundation



DESTACO, a Dover company, is a global leader in the design and manufacture of high-performance automation, workholding and remote-handling solutions. The company serves customers in a variety of end-markets, including the automotive, life sciences, consumer packaged goods, aerospace, industrial and nuclear sectors.

Built on a legacy of more than 100 years, DESTACO offers a comprehensive portfolio of products designed to engineer precise movement, placement and control solutions that drive productivity and uptime for manufacturers around the world. The DESTACO family of products consists of industry-leading brands such as DESTACO Manual Clamps, Power Clamps, and End Effectors; CAMCO™ and Ferguson™ Indexers; Robohand™ Grippers; and CRL™ Manipulators and Transfer Ports.

DESTACO is based in Auburn Hills, Michigan, U.S.A. The company has more than 800 employees with 13 locations, in 9 countries, across the Americas, Europe and Asia.

DESTACO is part of Dover Corporation, a diversified global manufacturer with annual revenues of \$7 billion. The company delivers innovative equipment and components, specialty systems and support services through four major operating segments: Energy, Engineered Systems, Fluids, and Refrigeration & Food Equipment. Headquartered in Downers Grove, IL, (NYSE: DOV)

More information is available at [destaco.com](http://destaco.com) and [dovercorporation.com](http://dovercorporation.com)



# ABOUT DESTACO

## Focusing all of our Resources

### New Product Development

DESTACO has dedicated resources to design and build the next generation of products and solutions

### Customer and Technical Service

DESTACO has industry leading global support to address any product and application concerns you may have

### Design Tools

DESTACO provides an extensive CAD library, sizing software, and online tools to support our global customers



## Our Insight Working for You

### Application Engineering

We utilize our expertise and complete portfolio of products to create solution that fit our customers' needs and applications

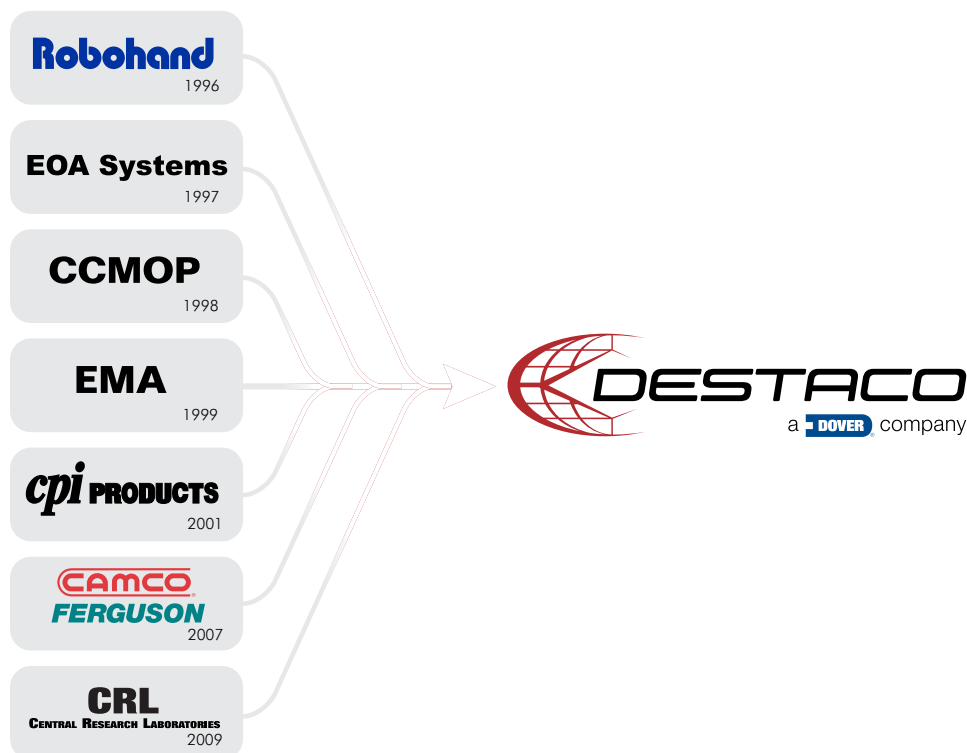
### Custom Solutions

If our off-the-shelf solutions don't fit, we will partner with our customers to develop products that will



## Building a Strong Brand

DESTACO has grown since 1915 through product development and acquired strong product brands to offer a comprehensive portfolio of products for automation, workholding, and containment solutions.



# PRECISION INDEXING SOLUTIONS

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Dial Indexers ..... IN-RNG



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Overload Clutches ..... IN-CLU



E-Series HD Drives ..... IN-EHD



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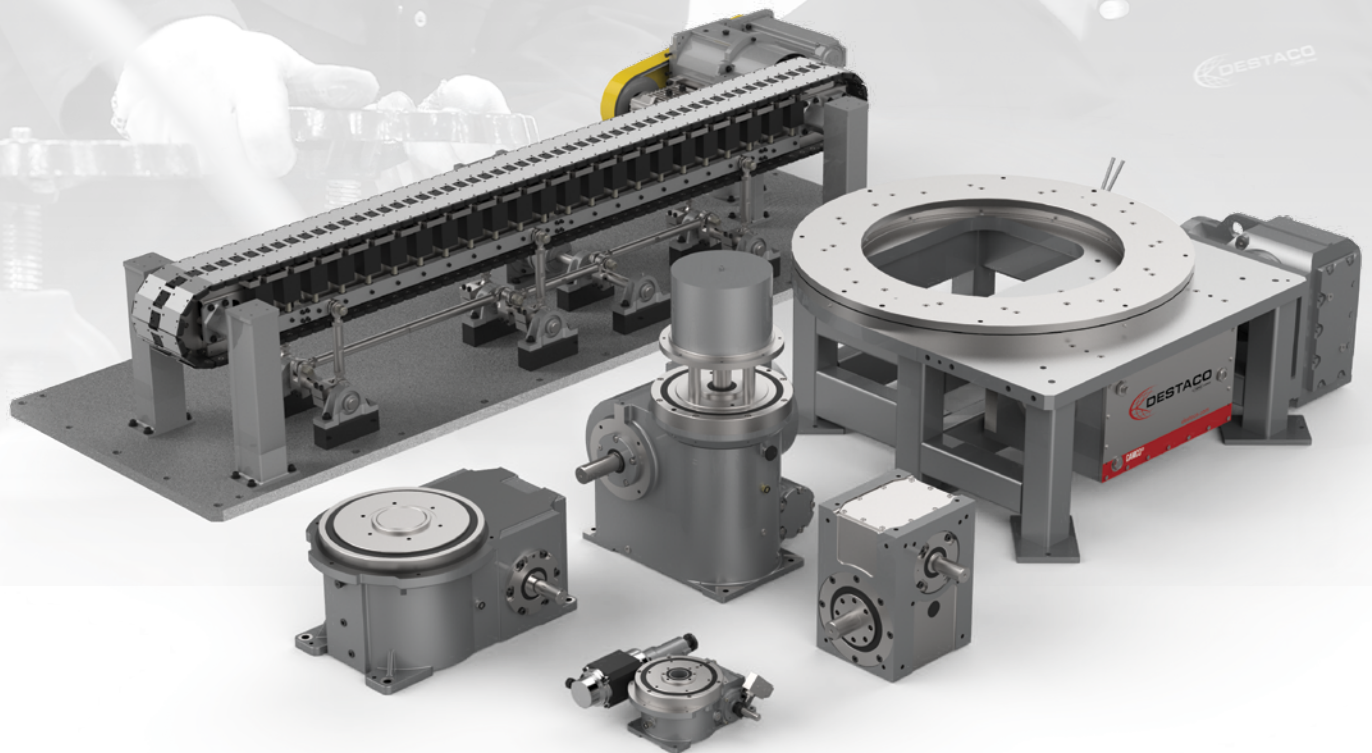
RGS/RGD  
Shaft/Flange Drives ..... IN-RGS



Parallel Shaft/  
Flange Drives ..... IN-PAR

# SMARTER PRECISION INDEXING

DESTACO Precision Indexing Solutions



## PRECISION INDEXING SOLUTIONS

DESTACO's CAMCO products have been the industry standard for the highest quality cam-actuated motion control products available. DESTACO manufactures a wide range of motion control products including indexing drives, linear and rotary parts handlers, precision link conveyors, magnetically-propelled conveyors, servo-mechanical drives, and custom cams.



[destaco.com](http://destaco.com)

End Effectors | Grippers | Indexers | Manual Clamps | Power Clamps | Remote Handling



# CUSTOM PRECISION INDEXING SOLUTIONS

## Custom Solutions for Indexing Products

Below are examples of a standard indexer and conveyor product modified to a customer's specified design criteria. All products in the standard catalog can be modified to fit your needs.



Contact us today to get started on your custom application: [solutions@destaco.com](mailto:solutions@destaco.com)

### Markets



Industrial



Consumer Goods



Food & Packaging



Transportation



Aerospace



Life Sciences

### Applications



Assembly



Plastic Injection  
Molding



Welding



White Goods/  
Appliance



Clean Room



Fixture and Testing

# MAKING OUR PRODUCTS SPECIAL FOR YOU

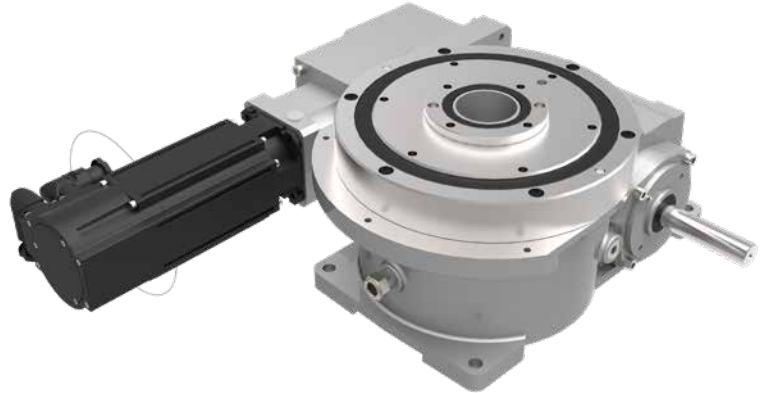
## Custom Solutions for Indexing Products

DESTACO offers three levels of modifications for customizing our rotary indexing and conveyor products to fit our customers' specified applications. Depending on the complexity of the modifications, quoting times may vary.

### Level 1 Modifications:

Basic product design with minimal modifications to an existing catalog product.

- Added Holes
- Extra shaft length
- Non-standard reducer mounting plate
- Non-standard coupling
- FDA or food-grade oil or grease
- Quotes within 2 days\*



### Level 2 Modifications:

Basic product design as extended with additional components or significant added machining.

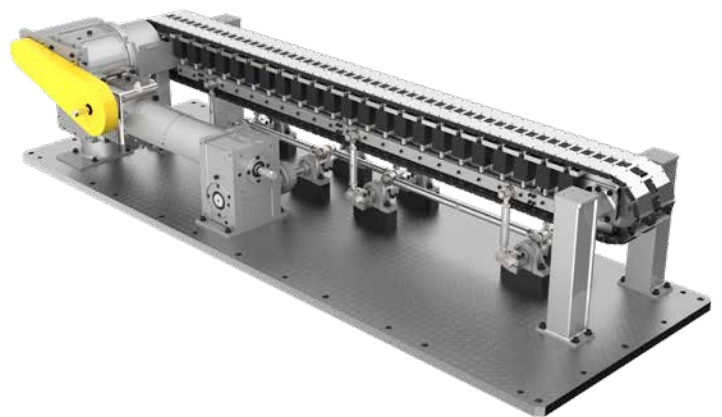
- Machine base added
- Tooling plate added
- Dial plate added
- Revisions to housing or output shaft/wheel
- Quotes within 3 days\*



### Level 3 Modifications:

Appreciably different from the basic product design by providing a unique design, unique construction, or multiple products assembled together

- Major materials change, such as stainless steel
- Special weldment for the housing
- Custom base or frame on which our product is mounted
- Multiple products connected together on a common base or frame
- Quotes within 5 days\*



(\* All inquiries subject to minimum order

# GTB SERIES

## Globoidal (Roller Gear) Servo Positioner | Table of Contents



### Features:

DESTACO's **CAMCO GTB Series** are lightweight, compact, high-accuracy programmable servo positioners.

The exceptional low profile high-torque output design supports the demands of high inertia load applications.

Available in four sizes, the GTB series units are lubricated for life and can be mounted in either horizontal or vertical orientations. The GTB Series feature the largest utility through hole diameter available for its size, making it ideal for space constrained machine applications.

### Table of Contents

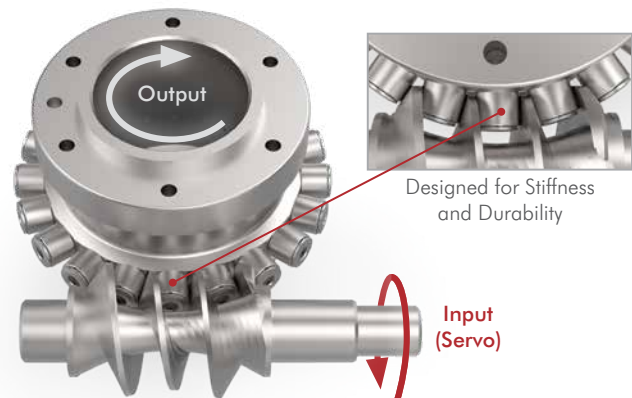
### IN-SRV-#

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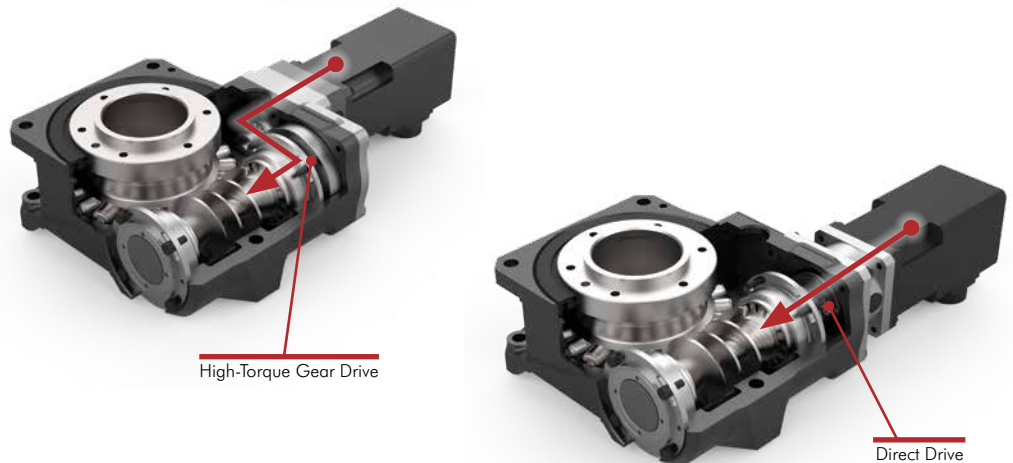
### Zero Backlash Roller Gear Cam Mechanism

Innovative roller gear design provides exceptionally smooth motion performance. The globoidal cam and output turret with integrated rollers are a preloaded system that delivers zero backlash for superior accuracy, stiffness and long term durability.



### Flexible Drive Options

Each GTB model can be ordered in two different drive options. The high-torque gear drive option is used for applications with large inertia requirements while maintaining a small motor size. The direct drive option provides zero backlash, high precision operation. Both options interface with an array of servo motor suppliers.



### Orientation Independent Mounting

GTB Series units can be mounted in any orientation for easy installation and machine standardization.

Install units in any configuration:

- Flat horizontal table mounting
- Vertical mounting
- Trunnion Mounting
- Inverted (upside down) mounting



Trunnion Mount



Table Mount

# GTB SERIES

## Globoidal (Roller Gear) Servo Positioner | How To Order

### GTB Series: How To Order

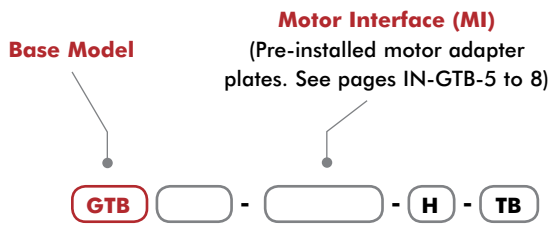
#### Globoidal (Roller Gear) Servo Positioner Base Unit

GTB Series units can be interfaced with wide variety of servo motor manufacturers. Use the MI code tables to identify the supported motors for each GTB unit. The MI code specifies the motor adapter plate that provides direct easy motor mounting to the GTB servo positioner.

The -H option for independent mounting orientation comes standard with every GTB series unit. The -T option for precision dial plate locating dowel hole and -B option for precision mounting dowel holes are also provided as standard.



GTB Series without motor installed



**Easily Integrates with a Variety of Servo Motor Manufacturers**

Allen Bradley      Siemens  
Mitsubishi        Yaskawa  
FANUC

Size	Supported Gear Ratios
40	45:1
	15:1
63	60:1
	20:1
80	60:1
	20:1
100	60:1
	20:1

**Standard Features**

- H** Orientation independent mounting. Supports vertical, horizontal, trunnion applications
- T** Single output flange surface dowel hole for precision dial plate locating
- B** Precision placement housing dowel holes, 2 on top of unit, 2 on bottom of unit

Units are available in two different gear ratios based on Direct or Geared motor coupling. See Motor Interface charts to determine what motors are supported for precision direct drive applications and geared drive high torque configurations.



**Gear Drive:**  
**High Inertia Applications**  
45:1 GTB40  
60:1 GTB63, GTB80, GTB100



**Direct Drive:**  
**Zero Backlash Precision Applications**  
15:1 GTB40  
20:1 GTB63, GTB80, GTB100

### GTB Series: How to Order configured System (Allen Bradley only)

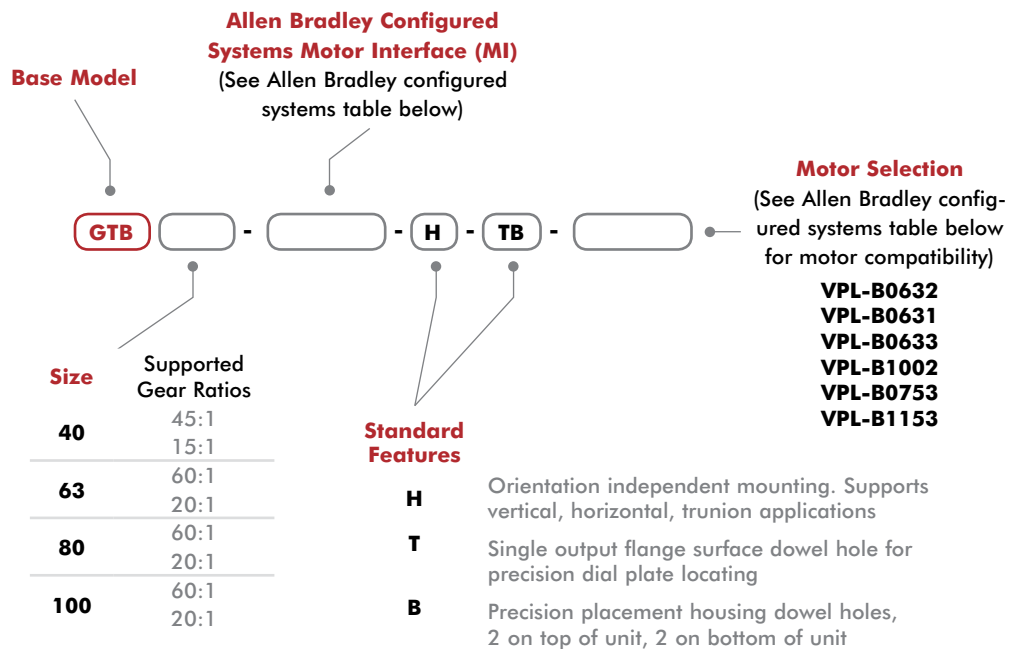
#### Servo Positioner Configured Systems

GTB Series units can be interfaced with wide variety of servo motor manufacturers. Use the MI code table to identify the supported motors for each GTB unit.

GTB series are also offered as a configured system when selecting Allen Bradley servo motors. The Allen Bradley servo motor will be installed to the GTB unit and shipped as a complete assembly. The GTB series and motor combinations are a matched pair that supports a variety of servo positioning rotary table applications. To use one of the configured systems you must verify the application requirements are within the operating parameters of the GTB unit and motor combination.



GTB Series with Allen Bradley Motor Installed\*



#### Allen Bradley Configured Systems

Size	Base Part #	Allen Bradley MI Code #	Motor Coupling	Gear Ratio	Motor Vendor	Allen Bradley Motor Part #	Motor Frame mm	Flange size mm	Shaft Ø mm
40	GTB40	FDG20	Direct	15:1	Allen Bradley	VPL-B0632	60	63	9
	GTB40	FGC20	Geared	45:1		VPL-B0631			
63	GTB63	GDP20	Direct	20:1		VPL-B0633			
	GTB63	GGC22	Geared	60:1		VPL-B0632	100	100	16
80	GTB80	HDP20	Direct	20:1		VPL-B1002			
	GTB80	HGD24	Geared	60:1		VPL-B0753			
100	GTB100	JDG20	Direct	20:1		VPL-B1153	100	115	19
	GTB100	JGE27	Geared	60:1			100		

\* = Servo Positioner units are assembled, tested and shipped with the above recommended motor for best performance.



### Ratio 45:1

Gear Drive: High Inertia Applications

Make / Series	Model	□ mm	kW	MI	Motor Shaft Bushing
Allen Bradley	VPL TLY-A130	40	0.14	FGA20	O
Allen Bradley	VPL VPL-B0631	60	0.19	FGC20*	O
Yaskawa	Σ5 SGMJV-01A	40	0.10	FGA20	-
Yaskawa	Σ5 SGMJV-01A	40	0.10	FGA20	-
Yaskawa	Σ5 SGMJV-C2A	40	0.15	FGA20	-
Yaskawa	Σ5 SGMJV-C2A	40	0.15	FGA20	-
Yaskawa	Σ7 SGM7J-01A	40	0.10	FGA20	-
Yaskawa	Σ7 SGM7J-C2A	40	0.15	FGA20	-
Yaskawa	Σ7 SGM7A-01A	40	0.10	FGA20	-
Yaskawa	Σ7 SGM7A-C2A	40	0.15	FGA20	-
Mitsubishi	J3 HF-KP13	40	0.10	FGA20	-
Mitsubishi	J3 HF-MP13	40	0.10	FGA20	-
Mitsubishi	J4 HG-KR13	40	0.10	FGA20	-
Mitsubishi	J4 HG-MR13	40	0.10	FGA20	-
Panasonic	A5 MSMD01	38	0.10	FGB20	-
Panasonic	A5 MSME01	38	0.10	FGB20	-
Panasonic	A6 MSMF01	38	0.10	FGB20	-
Panasonic	A6 MHMF01	40	0.10	FGA20	-
Sanyo	R2 R2AA04010F	40	0.10	FGA20	-

\* Recommended Motor Interface with shortest lead time

### Ratio 15:1

Direct Drive: Zero Backlash Precision Applications

Make / Series	Model	□ mm	kW	MI
Allen Bradley	VPL VPL-B0632	60	0.37	FDG20*
Allen Bradley	VPL VPL-B0752	70	0.67	FDH20
FANUC	β βiS0.5/6000	60	0.35	FDE20
FANUC	β βiS1/6000	60	0.50	FDA20
Mitsubishi	J3 HF-KP23	60	0.20	FDA20
Mitsubishi	J3 HF-KP43	60	0.40	FDA20
Mitsubishi	J3 HF-MP23	60	0.20	FDA20
Mitsubishi	J3 HF-MP43	60	0.40	FDA20
Mitsubishi	J4 HG-KR23	60	0.20	FDA20
Mitsubishi	J4 HG-KR43	60	0.40	FDA20
Mitsubishi	J4 HG-MR23	60	0.20	FDA20
Mitsubishi	J4 HG-MR43	60	0.40	FDA20
Panasonic	A5 MSMD02	60	0.20	FDC20
Panasonic	A5 MSMD04	60	0.40	FDD20
Panasonic	A5 MSME02	60	0.20	FDC20
Panasonic	A5 MSME04	60	0.40	FDD20
Panasonic	A5 MHMD02	60	0.20	FDC20
Panasonic	A5 MHMD04	60	0.40	FDD20
Panasonic	A6 MSMF02	60	0.20	FDC20
Panasonic	A6 MSMF04	60	0.40	FDD20
Panasonic	A6 MHMF02	60	0.20	FDC20
Panasonic	A6 MHMF04	60	0.40	FDD20
Sanyo	R2 R2AA06020F	60	0.20	FDA20
Sanyo	R2 R2AA06040F	60	0.40	FDA20
Sanyo	R2 R2AA06040H	60	0.40	FDA20
Yaskawa	Σ5 SGMJV-02A	60	0.20	FDA20
Yaskawa	Σ5 SGMJV-04A	60	0.40	FDA20
Yaskawa	Σ5 SGMJV-06A	60	0.55	FDB20
Yaskawa	Σ5 SGMJV-02A	60	0.20	FDA20
Yaskawa	Σ5 SGMJV-04A	60	0.40	FDA20
Yaskawa	Σ5 SGMJV-06A	60	0.60	FDB20
Yaskawa	Σ7 SGM7A-02A	60	0.20	FDA20
Yaskawa	Σ7 SGM7A-04A	60	0.40	FDA20
Yaskawa	Σ7 SGM7A-06A	60	0.60	FDB20
Yaskawa	Σ7 SGM7J-02A	60	0.20	FDA20
Yaskawa	Σ7 SGM7J-04A	60	0.40	FDA20
Yaskawa	Σ7 SGM7J-06A	60	0.60	FDB20

\* Recommended Motor Interface with shortest lead time

## □ = Motor Frame Size Globoidal (Roller Gear) Servo Positioner | Motor Interface Adapter Selection

### Ratio 60:1

Gear Drive: High Inertia Applications

Make / Series	Model	□ mm	kW	MI	Motor Shaft Bushing
Allen Bradley VPL	VPL-B0632	60mm	0.67	GGC22*	○
Allen Bradley VPL	VPL-B0752	70mm	0.67	GGE24	○
FANUC β	βiS05/6000	60	0.35	GGA22	○
FANUC β	βiS1/6000	60	0.50	GGA20	-
Mitsubishi J3	HF-KP23	60	0.20	GGA20	-
Mitsubishi J3	HF-KP43	60	0.40	GGA20	-
Mitsubishi J3	HF-MP23	60	0.20	GGA20	-
Mitsubishi J3	HF-MP43	60	0.40	GGA20	-
Mitsubishi J4	HG-KR23	60	0.20	GGA20	-
Mitsubishi J4	HG-KR43	60	0.40	GGA20	-
Mitsubishi J4	HG-MR23	60	0.20	GGA20	-
Mitsubishi J4	HG-MR43	60	0.40	GGA20	-
Panasonic A5	MSMD02	60	0.20	GGB21	○
Panasonic A5	MSMD04	60	0.40	GGB20	-
Panasonic A5	MSME02	60	0.20	GGB21	○
Panasonic A5	MSME04	60	0.40	GGB20	-
Panasonic A5	MHMD02	60	0.20	GGB21	○
Panasonic A5	MHMD04	60	0.40	GGB20	-
Panasonic A6	MSMF02	60	0.20	GGB21	○
Panasonic A6	MSMF04	60	0.40	GGB20	-
Panasonic A6	MHMF02	60	0.20	GGB21	○
Panasonic A6	MHMF04	60	0.40	GGB20	-
Sanyo R2	R2AA06020F	60	0.20	GGA20	-
Sanyo R2	R2AA06040F	60	0.40	GGA20	-
Sanyo R2	R2AA06040H	60	0.40	GGA20	-
Yaskawa Σ5	SGMAV-02A	60	0.20	GGA20	-
Yaskawa Σ5	SGMAV-04A	60	0.40	GGA20	-
Yaskawa Σ5	SGMAV-06A	60	0.55	GGA20	-
Yaskawa Σ5	SGMJV-02A	60	0.20	GGA20	-
Yaskawa Σ5	SGMJV-04A	60	0.40	GGA20	-
Yaskawa Σ5	SGMJV-06A	60	0.60	GGA20	-
Yaskawa Σ7	SGM7J-02A	60	0.20	GGA20	-
Yaskawa Σ7	SGM7J-04A	60	0.40	GGA20	-
Yaskawa Σ7	SGM7J-06A	60	0.60	GGA20	-
Yaskawa Σ7	SGM7A-02A	60	0.20	GGA20	-
Yaskawa Σ7	SGM7A-04A	60	0.40	GGA20	-
Yaskawa Σ7	SGM7A-06A	60	0.60	GGA20	-

\* Recommended Motor Interface with shortest lead time

### Ratio 20:1

Direct Drive: Zero Backlash Precision Applications

Make / Series	Model	□ mm	kW	MI
Allen Bradley VPL	VPL-B0633	60	0.65	GDP20*
Allen Bradley VPL	VPL-B0753	70	0.65	GDQ20
FANUC α	αiS2/5000	90	0.75	GDK20
FANUC α	αiS2/6000	90	1.00	GDK20
FANUC α	αiF1/5000	90	0.50	GDK20
FANUC α	αiF2/5000	90	0.75	GDK20
FANUC α	αiS1/6000	60	0.50	GDA20
FANUC α	αiS2/4000	90	0.50	GDK20
Mitsubishi J3	HF-KP43	60	0.40	GDA20
Mitsubishi J3	HF-KP73	80	0.75	GDB20
Mitsubishi J3	HF-MP43	60	0.40	GDA20
Mitsubishi J3	HF-MP73	80	0.75	GDB20
Mitsubishi J4	HG-KR43	60	0.40	GDA20
Mitsubishi J4	HG-KR73	80	0.75	GDB20
Mitsubishi J4	HG-MR43	60	0.40	GDA20
Mitsubishi J4	HG-MR73	80	0.75	GDB20
Panasonic A5	MSMD04	60	0.40	GDF20
Panasonic A5	MSMD08	80	0.75	GDG20
Panasonic A5	MSME04	60	0.40	GDF20
Panasonic A5	MSME08	80	0.75	GDG20
Panasonic A5	MHMD04	60	0.40	GDF20
Panasonic A5	MHMD08	80	0.75	GDG20
Panasonic A6	MSMF04	60	0.40	GDF20
Panasonic A6	MSMF08	80	0.75	GDG20
Panasonic A6	MSMF09	80	1.00	GDG20
Panasonic A6	MQMF04	80	0.40	GDH20
Panasonic A6	MHMF04	60	0.40	GDF20
Panasonic A6	MHMF08	80	0.75	GDG20
Panasonic A6	MHMF09	80	1.00	GDG20
Sanyo R2	R2AA06040H	60	0.40	GDA20
Sanyo R2	R2AA06040F	60	0.40	GDA20
Sanyo R2	R2AAB8075F	86	0.75	GDD20
Sanyo R2	R2AA08075F	80	0.75	GDJ20
Sanyo R2	R2AAB8100H	86	1.00	GDD20
Yaskawa Σ5	SGMAV-04A	60	0.40	GDA20
Yaskawa Σ5	SGMAV-06A	60	0.55	GDA20
Yaskawa Σ5	SGMAV-08A	80	0.75	GDB20
Yaskawa Σ5	SGMAV-10A	80	1.00	GDB20
Yaskawa Σ5	SGMGV-03A	90	0.30	GDC20
Yaskawa Σ5	SGMGV-05A	90	0.45	GDD20
Yaskawa Σ5	SGMJV-04A	60	0.40	GDA20
Yaskawa Σ5	SGMJV-06A	60	0.60	GDA20
Yaskawa Σ5	SGMJV-08A	80	0.75	GDB20
Yaskawa Σ7	SGM7A-04A	60	0.40	GDA20
Yaskawa Σ7	SGM7A-06A	60	0.60	GDA20
Yaskawa Σ7	SGM7A-08A	80	0.75	GDB20
Yaskawa Σ7	SGM7A-10A	80	1.00	GDB20
Yaskawa Σ7	SGM7J-04A	60	0.40	GDA20
Yaskawa Σ7	SGM7J-06A	60	0.60	GDA20
Yaskawa Σ7	SGM7J-08A	80	0.75	GDB20
Yaskawa Σ7	SGM7G-03A	90	0.30	GDE20
Yaskawa Σ7	SGM7G-05A	90	0.45	GDD20

\* Recommended Motor Interface with shortest lead time

### Ratio 60:1

Gear Drive: High Inertia Applications

Make / Series	Model	□ mm	kW	MI	Motor Shaft Bushing
Allen Bradley VPL	VPL-B0753	80	0.81	HGD24*	○
Allen Bradley VPL	VPL-B1002	100	1.12	HGG26	○
FANUC α	αiS2/5000	90	0.75	HGB23	○
FANUC α	αiS2/6000	90	1.00	HGB23	○
FANUC α	αiF1/5000	90	0.50	HGB23	○
FANUC α	αiF2/5000	90	0.75	HGB23	○
FANUC β	βiS2/4000	90	0.50	HGB23	○
Mitsubishi J3	HF-KP73	80	0.75	HGA20	-
Mitsubishi J3	HF-MP73	80	0.75	HGA20	-
Mitsubishi J4	HG-KR73	80	0.75	HGA20	-
Mitsubishi J4	HG-MR73	80	0.75	HGA20	-
Panasonic A5	MSMD08	80	0.75	HGC20	-
Panasonic A5	MSME08	80	0.75	HGC20	-
Panasonic A5	MHMD08	80	0.75	HGC20	-
Panasonic A6	MHMF08	80	0.75	HGC20	-
Panasonic A6	MHMF09	80	1.00	HGC20	-
Panasonic A6	MSMF08	80	0.75	HGC20	-
Panasonic A6	MSMF09	80	1.00	HGC20	-
Sanyo R2	R2AA08075F	80	0.75	HGA22	○
Sanyo R2	R2AAB8075F	86	0.75	HGB22	○
Sanyo R2	R2AAB8100F	86	1.00	HGB22	○
Sanyo R2	R2AAB8100H	86	1.00	HGB22	○
Yaskawa Σ5	SGMAV-08A	80	0.75	HGA20	-
Yaskawa Σ5	SGMAV-10A	80	1.00	HGA20	-
Yaskawa Σ5	SGMJV-08A	80	0.75	HGA20	-
Yaskawa Σ5	SGMGV-03A	90	0.30	HGB21	○
Yaskawa Σ5	SGMGV-05A	90	0.45	HGB22	○
Yaskawa Σ7	SGM7A-08A	80	0.75	HGA20	-
Yaskawa Σ7	SGM7A-10A	80	1.00	HGA20	-
Yaskawa Σ7	SGM7J-08A	80	0.75	HGA20	-
Yaskawa Σ7	SGM7G-03A	90	0.30	HGB22	○
Yaskawa Σ7	SGM7G-05A	90	0.45	HGB22	○

\* Recommended Motor Interface with shortest lead time

### Ratio 20:1

Direct Drive: Zero Backlash Precision Applications

Make / Series	Model	□ mm	kW	MI
Allen Bradley VPL	VPL-B1002	100	1.12	HDP20*
FANUC α	αiS2/5000	90	0.75	HDL20
FANUC α	αiS2/6000	90	1.00	HDL20
FANUC α	αiF1/5000	90	0.50	HDL20
FANUC α	αiF2/5000	90	0.75	HDL20
FANUC β	βiS2/4000	90	0.50	HDL20
Mitsubishi J3	HF-KP73	80	0.75	HDA20
Mitsubishi J3	HF-MP73	80	0.75	HDA20
Mitsubishi J4	HG-KR73	80	0.75	HDA20
Mitsubishi J4	HG-MR73	80	0.75	HDA20
Panasonic A5	MSMD08	80	0.75	HDE20
Panasonic A5	MSME08	80	0.75	HDE20
Panasonic A5	MSME10	100	1.00	HDF20
Panasonic A5	MSME15	100	1.50	HDG20
Panasonic A5	MSME20	100	2.00	HDG20
Panasonic A5	MHMD08	80	0.75	HDE20
Panasonic A6	MHMF08	80	0.75	HDE20
Panasonic A6	MHMF09	80	1.00	HDE20
Panasonic A6	MSMF08	80	0.75	HDE20
Panasonic A6	MSMF09	80	1.00	HDE20
Panasonic A6	MSMF10	100	1.00	HDF20
Panasonic A6	MSMF15	100	1.50	HDG20
Panasonic A6	MSMF20	100	2.00	HDG20
Sanyo R2	R2AA08075F	80	0.75	HDH20
Sanyo R2	R2AAB8075F	86	0.75	HDC20
Sanyo R2	R2AAB8100F	86	1.00	HDJ20
Sanyo R2	R2AAB8100H	86	1.00	HDC20
Sanyo R2	R2AA10075F	100	0.75	HDK20
Sanyo R2	R2AA10100F	100	1.00	HDK20
Sanyo Q1	Q1AA10100D	100	1.00	HDK20
Sanyo Q1	Q1AA10150D	100	1.50	HDK20
Sanyo Q1	Q1AA10200D	100	2.00	HDK20
Yaskawa Σ5	SGMAV-08A	80	0.75	HDA20
Yaskawa Σ5	SGMAV-10A	80	1.00	HDA20
Yaskawa Σ5	SGMGV-03A	90	0.30	HDB20
Yaskawa Σ5	SGMGV-05A	90	0.45	HDC20
Yaskawa Σ5	SGMJV-08A	80	0.75	HDA20
Yaskawa Σ5	SGMSV-10A	100	1.00	HDD20
Yaskawa Σ5	SGMSV-15A	100	1.50	HDD20
Yaskawa Σ5	SGMSV-20A	100	2.00	HDD20
Yaskawa Σ5	SGMSV-25A	100	2.50	HDD20
Yaskawa Σ7	SGM7A-08A	80	0.75	HDA20
Yaskawa Σ7	SGM7A-10A	80	1.00	HDA20
Yaskawa Σ7	SGM7A-15A	100	1.50	HDD20
Yaskawa Σ7	SGM7A-20A	100	2.00	HDD20
Yaskawa Σ7	SGM7A-25A	100	2.50	HDD20
Yaskawa Σ7	SGM7G-03A	90	0.30	HDC20
Yaskawa Σ7	SGM7G-05A	90	0.45	HDC20
Yaskawa Σ7	SGM7J-08A	80	0.75	HDA20

\* Recommended Motor Interface with shortest lead time



□ = Motor Frame Size

## Globoidal (Roller Gear) Servo Positioner | MI Adapter Selection

### Ratio 60:1

Gear Drive: High Inertia Applications

Make / Series	Model	□ mm	kW	MI	Motor Shaft Bushing
Allen Bradley	VPL VPL-B1153	100	1.83	JGE27*	○
Allen Bradley	VPL VPL-B1303	130	2.82	JGG20	○
FANUC	α αiF2/5000	90	0.75	JGB25	○
FANUC	α αiF4/4000	130	1.40	JGA21	○
FANUC	α αiF8/3000	130	1.60	JGA21	○
FANUC	α αiS2/5000	90	0.75	JGB25	○
FANUC	α αiS2/6000	90	1.00	JGB25	○
FANUC	α αiS8/4000	130	2.50	JGA21	○
FANUC	β βiS2/4000	90	0.50	JGB25	○
FANUC	β βiS8/3000	130	1.20	JGA21	○
FANUC	β βiS12/2000	130	1.40	JGA20	-
FANUC	β βiS12/3000	130	1.80	JGA20	-
Mitsubishi	J3 HF-SP51	130	0.50	JGA20	-
Mitsubishi	J3 HF-SP52	130	0.50	JGA20	-
Mitsubishi	J3 HF-SP81	130	0.85	JGA20	-
Mitsubishi	J3 HF-SP102	130	1.00	JGA20	-
Mitsubishi	J3 HF-SP152	130	1.50	JGA20	-
Mitsubishi	J4 HG-SR51	130	0.50	JGA20	-
Mitsubishi	J4 HG-SR52	130	0.50	JGA20	-
Mitsubishi	J4 HG-SR81	130	0.85	JGA20	-
Mitsubishi	J4 HG-SR102	130	1.00	JGA20	-
Mitsubishi	J4 HG-SR152	130	1.50	JGA20	-
Panasonic	A5 MDME102	130	1.00	JGA22	○
Panasonic	A5 MDME152	130	1.50	JGA22	○
Panasonic	A5 MDME202	130	2.00	JGA22	○
Panasonic	A6 MDMF102	130	1.00	JGA22	○
Panasonic	A6 MDMF152	130	1.50	JGA22	○
Panasonic	A6 MDMF202	130	2.00	JGA22	○
Sanyo	R2 R2AA13050D	130	0.55	JGA22	○
Sanyo	R2 R2AA13050H	130	0.55	JGA22	○
Sanyo	R2 R2AA13120B	130	1.20	JGA22	○
Sanyo	R2 R2AA13120L	130	1.20	JGA22	○
Sanyo	R2 R2AA13120D	130	1.20	JGA22	○
Sanyo	R2 R2AA13180H	130	1.80	JGA22	○
Sanyo	R2 R2AA13180D	130	1.80	JGA22	○
Yaskawa	Σ5 SGMGV-03A	90	0.30	JGB23	○
Yaskawa	Σ5 SGMGV-05A	90	0.45	JGB24	○
Yaskawa	Σ5 SGMGV-09A	130	0.85	JGA21	○
Yaskawa	Σ5 SGMGV-13A	130	1.30	JGA22	○
Yaskawa	Σ5 SGMGV-20A	130	1.80	JGA20	-
Yaskawa	Σ5 SGMSV-10A	100	1.00	JGC20	-
Yaskawa	Σ5 SGMSV-15A	100	1.50	JGC20	-
Yaskawa	Σ5 SGMSV-20A	100	2.00	JGC20	-
Yaskawa	Σ5 SGMSV-25A	100	2.50	JGC20	-
Yaskawa	Σ7 SGM7A-15A	100	1.50	JGC20	-
Yaskawa	Σ7 SGM7A-20A	100	2.00	JGC20	-
Yaskawa	Σ7 SGM7A-25A	100	2.50	JGC20	-
Yaskawa	Σ7 SGM7G-03A	90	0.30	JGB24	○
Yaskawa	Σ7 SGM7G-05A	90	0.45	JGB24	○
Yaskawa	Σ7 SGM7G-09A	130	0.85	JGA20	-
Yaskawa	Σ7 SGM7G-13A	130	1.30	JGA20	-
Yaskawa	Σ7 SGM7G-20A	130	1.80	JGA20	-

\* Recommended Motor Interface with shortest lead time

### Ratio 20:1

Direct Drive: Zero Backlash Precision Applications

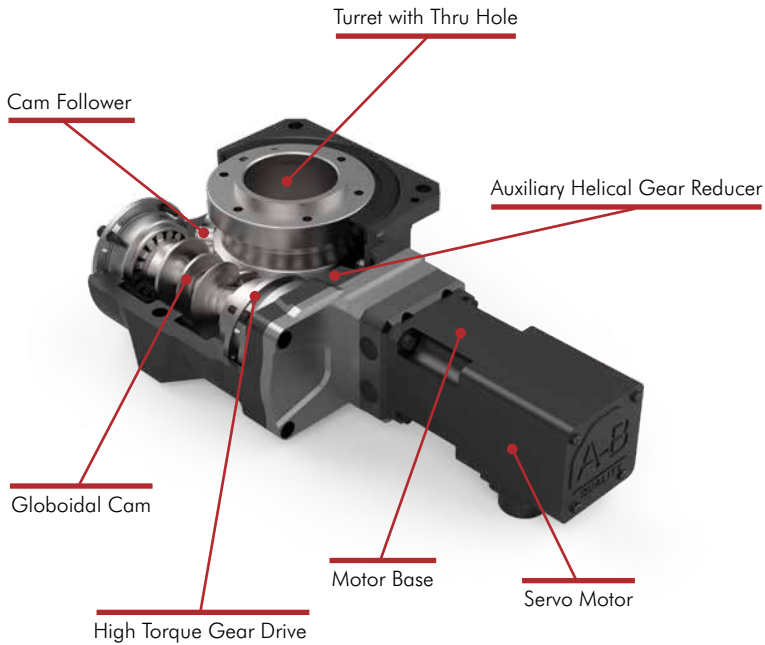
Make / Series	Model	□ mm	kW	MI
Allen Bradley	VPL VPL-B1153	100	1.75	JDG20*
Allen Bradley	VPL VPL-B1304	130	2.82	JDH20
FANUC	α αiS8/4000	130	2.50	JDA20
FANUC	α αiS12/4000	130	2.70	JDC20
FANUC	α αiF4/4000	130	1.40	JDA20
FANUC	α αiF8/3000	130	1.60	JDA20
FANUC	β βiS8/3000	130	1.20	JDA20
FANUC	β βiS12/2000	130	1.40	JDC20
FANUC	β βiS12/3000	130	1.80	JDC20
Mitsubishi	J3 HF-SP51	130	0.50	JDC20
Mitsubishi	J3 HF-SP81	130	0.85	JDC20
Mitsubishi	J3 HF-SP102	130	1.00	JDC20
Mitsubishi	J3 HF-SP152	130	1.50	JDC20
Mitsubishi	J4 HG-SR51	130	0.50	JDC20
Mitsubishi	J4 HG-SR81	130	0.85	JDC20
Mitsubishi	J4 HG-SR102	130	1.00	JDC20
Mitsubishi	J4 HG-SR152	130	1.50	JDC20
Panasonic	A5 MDME102	130	1.00	JDB20
Panasonic	A5 MDME152	130	1.50	JDB20
Panasonic	A5 MDME202	130	2.00	JDB20
Panasonic	A6 MDMF102	130	1.00	JDB20
Panasonic	A6 MDMF152	130	1.50	JDB20
Panasonic	A6 MDMF202	130	2.00	JDB20
Sanyo	R2 R2AA13050D	130	0.55	JDB20
Sanyo	R2 R2AA13050H	130	0.55	JDB20
Sanyo	R2 R2AA13120B	130	1.20	JDB20
Sanyo	R2 R2AA13120L	130	1.20	JDB20
Sanyo	R2 R2AA13120D	130	1.20	JDB20
Sanyo	R2 R2AA13180H	130	1.80	JDB20
Sanyo	R2 R2AA13180D	130	1.80	JDB20
Sanyo	Q1 Q1AA10150D	100	1.50	JDE20
Sanyo	Q1 Q1AA10200D	100	2.00	JDE20
Sanyo	Q1 Q1AA10250D	100	2.50	JDE20
Yaskawa	Σ5 SGMGV-09A	130	0.85	JDA20
Yaskawa	Σ5 SGMGV-13A	130	1.30	JDB20
Yaskawa	Σ5 SGMGV-20A	130	1.80	JDC20
Yaskawa	Σ5 SGMSV-15A	100	1.50	JDD20
Yaskawa	Σ5 SGMSV-20A	100	2.00	JDD20
Yaskawa	Σ5 SGMSV-25A	100	2.50	JDD20
Yaskawa	Σ7 SGM7A-15A	100	1.50	JDD20
Yaskawa	Σ7 SGM7A-20A	100	2.00	JDD20
Yaskawa	Σ7 SGM7A-25A	100	2.50	JDD20
Yaskawa	Σ7 SGM7G-09A	130	0.85	JDC20
Yaskawa	Σ7 SGM7G-13A	130	1.30	JDC20
Yaskawa	Σ7 SGM7G-20A	130	1.80	JDC20

\* Recommended Motor Interface with shortest lead time

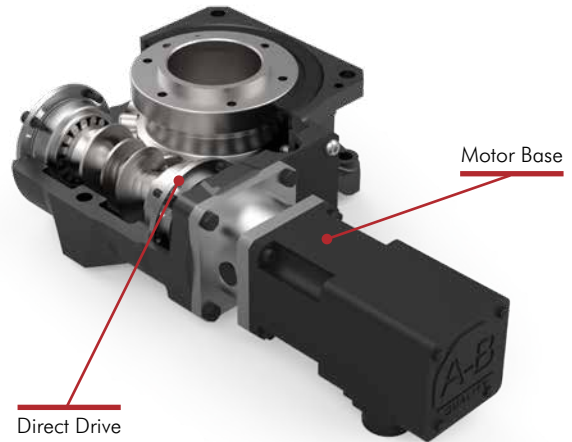
# GTB SERIES

## Globoidal (Roller Gear) Servo Positioner | Specifications

### High Torque Gear Drive: High Inertia Application



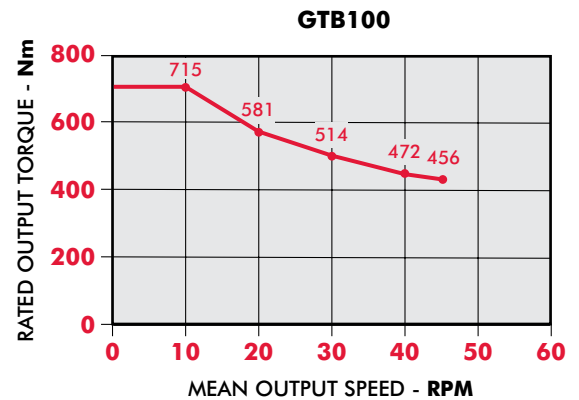
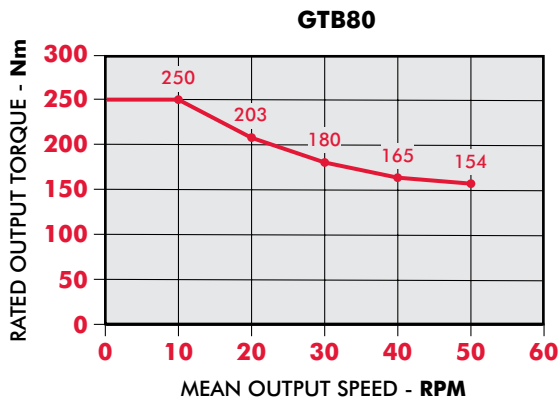
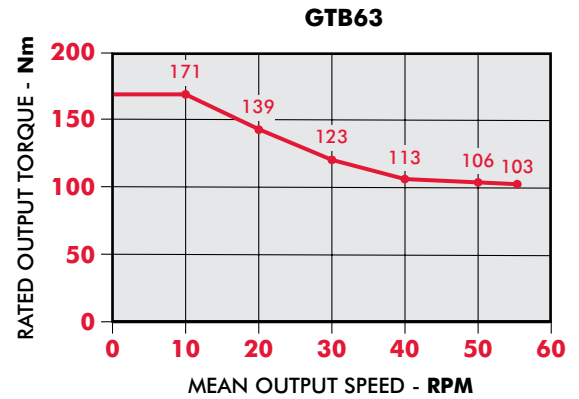
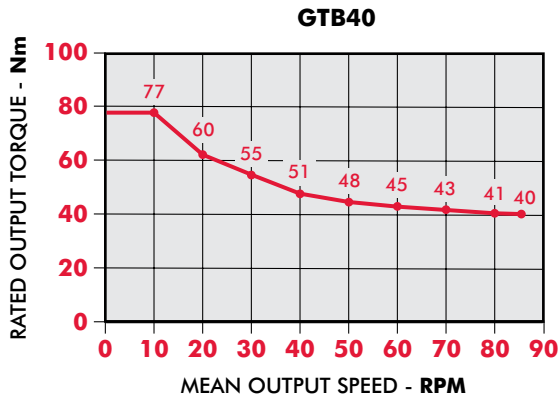
### Direct Drive: Zero Backlash Precision Applications



**NOTE:**

Motor brake must be applied for applications with gravity torque acting on output table (trunnion mounting) in the case of power loss. Follow the instruction manual for fitting and installing motor. Improper handling can cause damage or product malfunction.

General Specifications	Symbol	Units	GTB40		GTB63		GTB80		GTB100	
			Direct	Geared	Direct	Geared	Direct	Geared	Direct	Geared
Motor Coupling			Direct	Geared	Direct	Geared	Direct	Geared	Direct	Geared
Constant lead ratio			15:1	45:1	20:1	60:1	20:1	60:1	20:1	60:1
Center distance		mm	40		63		80		100	
Through hole diameter	Ø	mm	25		50		75		85	
Accuracy		arc-sec	90		60		40		40	
Allowable static torque	T <sub>s</sub>	Nm	176		411		600		1341	
Max start / stop torque	T <sub>u</sub>	Nm	94		210		307		880	
Allowable mean output speed	N <sub>m</sub>	rpm	86		55		50		45	
Allowable ultimate output speed	N <sub>u</sub>	rpm	100		70		60		50	
Allowable axial capacity on output	P <sub>a</sub>	N	1100		1850		3632		4100	
Allowable radial capacity on output	P <sub>r</sub>	N	740		1500		3100		3420	
Allowable moment capacity on output	P <sub>moment</sub>	Nm	40		85		226		313	
Inertia moment on input axis	J	kgm <sup>2</sup> x10 <sup>-4</sup>	0.263	0.17	0.871	0.4	3.214	1.52	10.39	4.08
Backlash		arc-sec	0	25	0	15	0	15	0	10
Average efficiency		%	90	80	90	80	90	80	90	80
Lubrication (Maintenance Free)			Grease		Grease		Grease		Grease	
Weight		kg	3.3	3.5	5.9	6.2	12.9	14.1	24.3	25.2

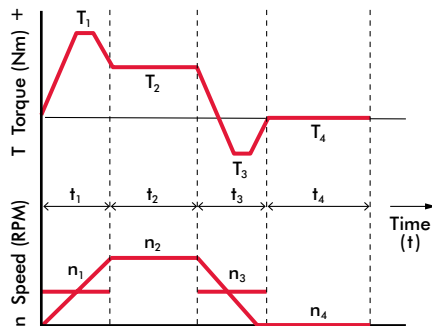


### Sizing GTB Series for an Application (Contact DESTACO for sizing application support)

#### 1. Load diagram

Check motion profile and resultant inertia torque.  
(Add working torque if applied).

Start and stop speed can be simplified to average speed within a segment.



#### 2. Check key conditions

**Mean torque**  $T_{mean} = \sqrt{\frac{\frac{10}{3} \left( n_1 \cdot t_1 \cdot |T_1| \frac{10}{3} + n_2 \cdot t_2 \cdot |T_2| \frac{10}{3} + \dots + n_n \cdot t_n \cdot |T_n| \frac{10}{3} \right)}{n_1 \cdot t_1 + n_2 \cdot t_2 + \dots + n_n \cdot t_n}}$  (Nm)

**Mean output speed**  $n_{mean} = \frac{n_1 \cdot t_1 + n_2 \cdot t_2 + \dots + n_n \cdot t_n}{t_1 + t_2 + \dots + t_n}$  (rpm)

**Max output speed**  $n_{max}$  (rpm)

#### 3. Pre-selection

Choose a size that meets these criteria.

$T_{mean} < \text{Maximum rated output torque (Nm)}$

$n_{mean} < \text{Allowable mean output speed Nm (rpm)}$

$n_{max} < \text{Allowable ultimate output speed Nu (rpm)}$

#### 4. Check specifications

**Start/stop torque**  $T_1 < \text{Maximum rated output torque (Nm)}$   
 $T_3 < \text{Maximum rated output torque (Nm)}$

**Operation condition factor**  
Smooth without any impact or sudden load  $f = 1.0$   
Normal, but occasional emergency stop  $f = 1.5$   
Operation with frequent impact or sudden load  $f = 3.0$

**Estimated lifetime**  $L_h = 12000 \left( \frac{T_{op}}{f \cdot T_{mean}} \right)^{\frac{10}{3}}$  (hours)

#### 5. Selection complete

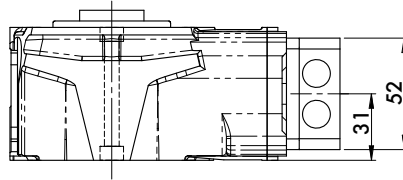
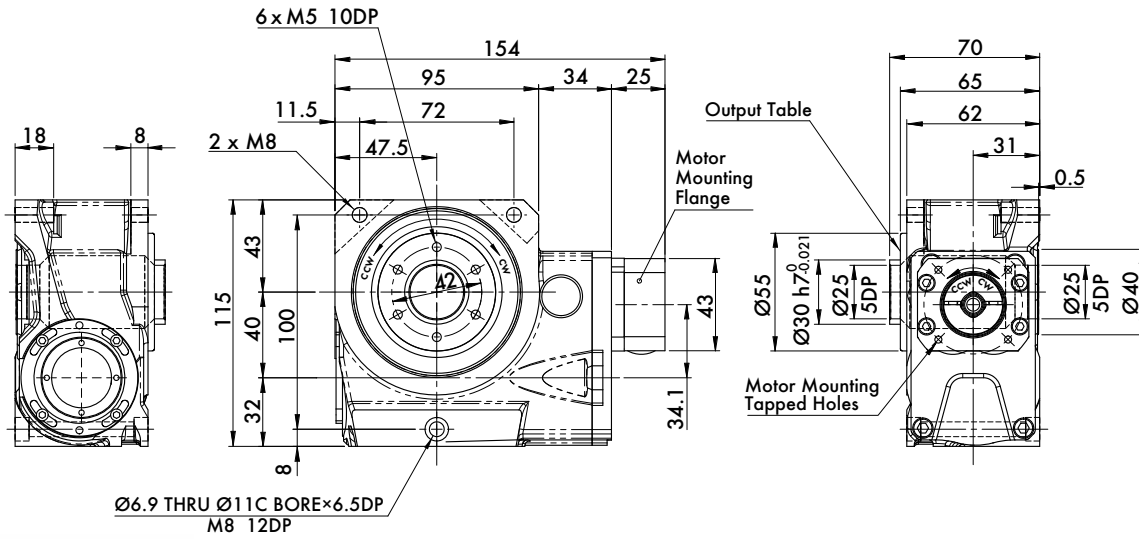
If above values don't satisfy requirements, go back to step 2 and 3 to re-select size.

# GTB40 SERIES

## Globoidal (Roller Gear) Servo Positioner | Dimensions

### GTB40-FG (Motor Frame Size □ = 38, 40)

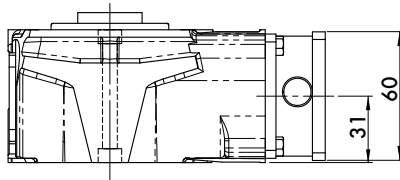
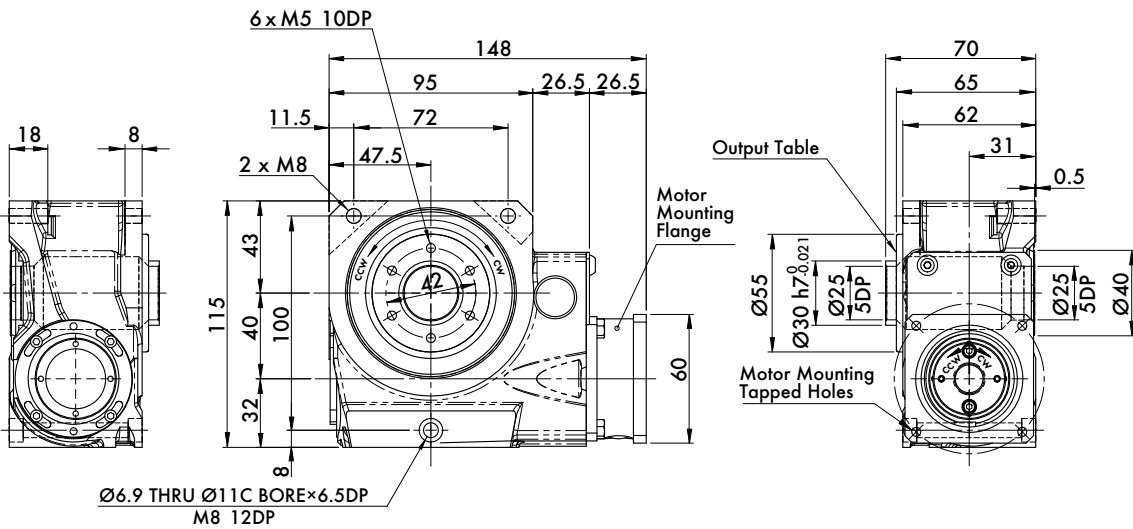
Gear Drive: High Inertia applications: Ratio 45:1



Input/Output Rotation: CW/CCW

### GTB40-FD (Motor Frame Size □ = 60)

Direct Drive: Zero Backlash Precision Applications: Ratio 15:1



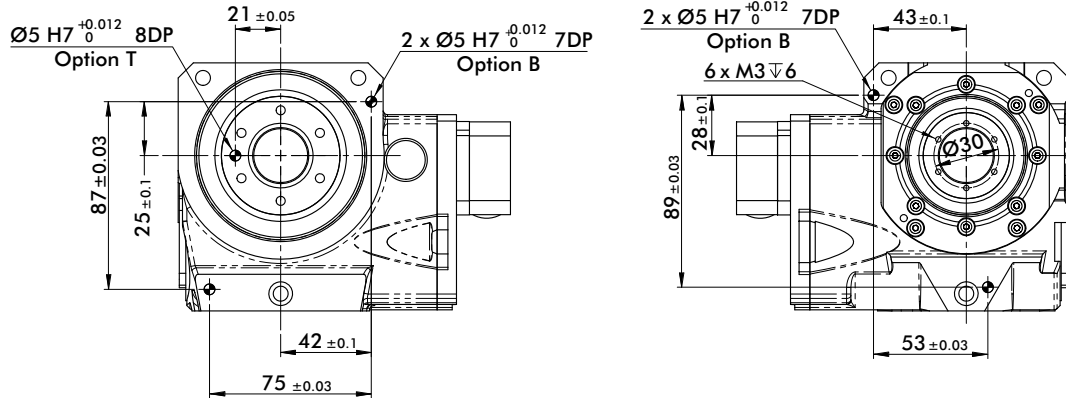
Input/Output Rotation: CW/CCW

# GTB40, GTB63 SERIES

Globoidal (Roller Gear) Servo Positioner | Dimensions

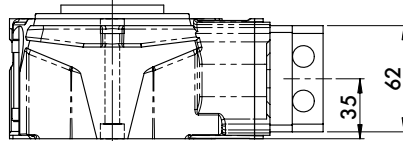
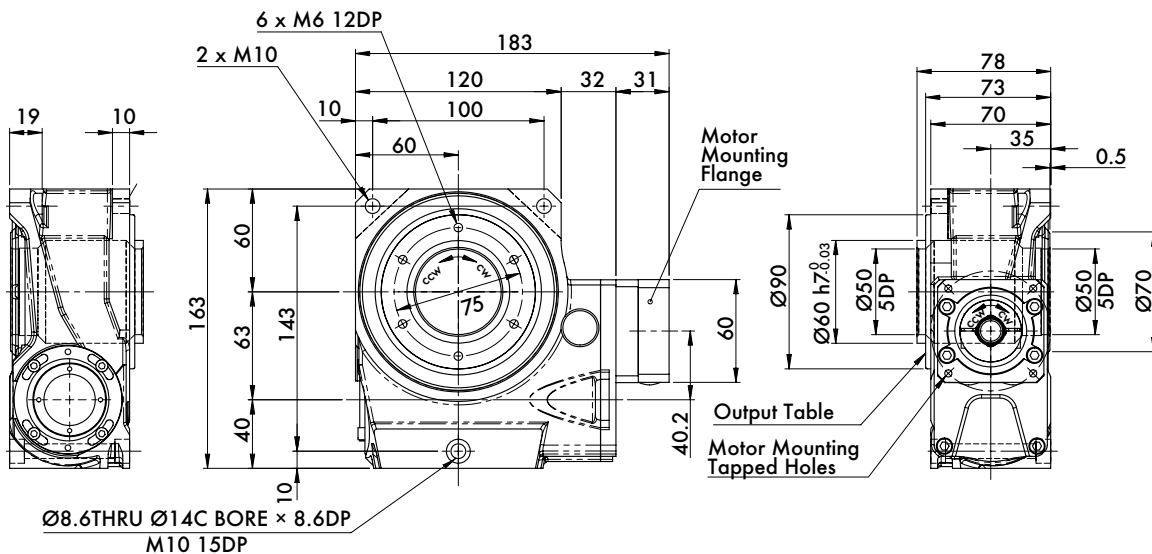
## GTB40 Option Specifications

Dowel hole options B: Housing / T: Output Table



## GTB-63-GG (Motor Frame Size □ = 60)

Gear Drive: High Inertia applications: Ratio 60:1



Input/Output Rotation: CW/CCW

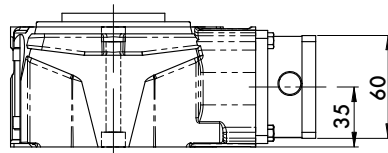
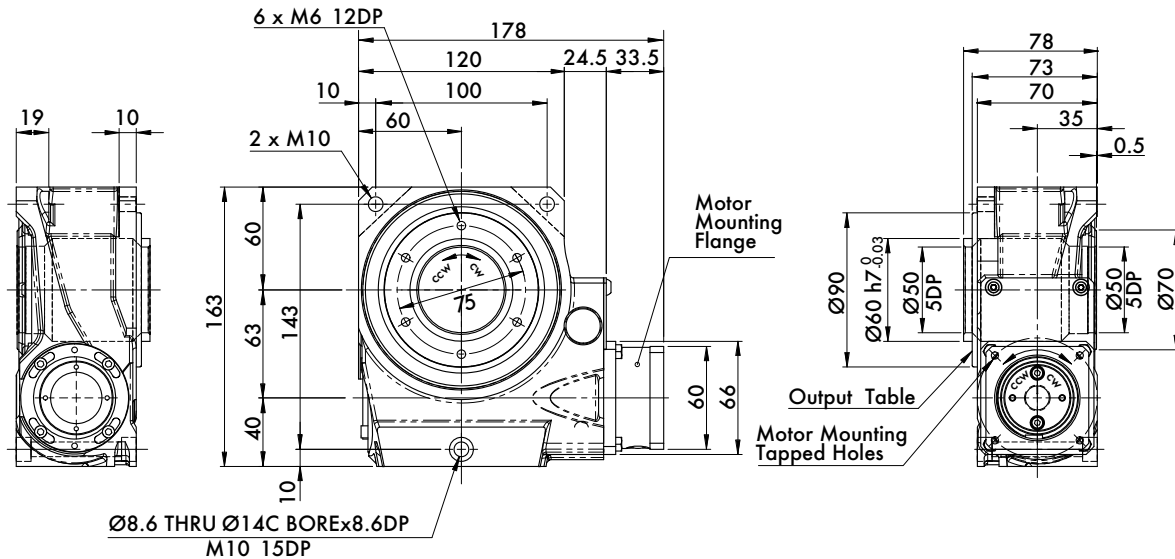


# GTB63 SERIES

## Globoidal (Roller Gear) Servo Positioner | Dimensions

### GTB63-GD (Motor Frame Size □ = 60)

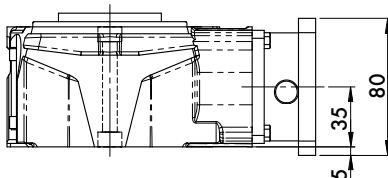
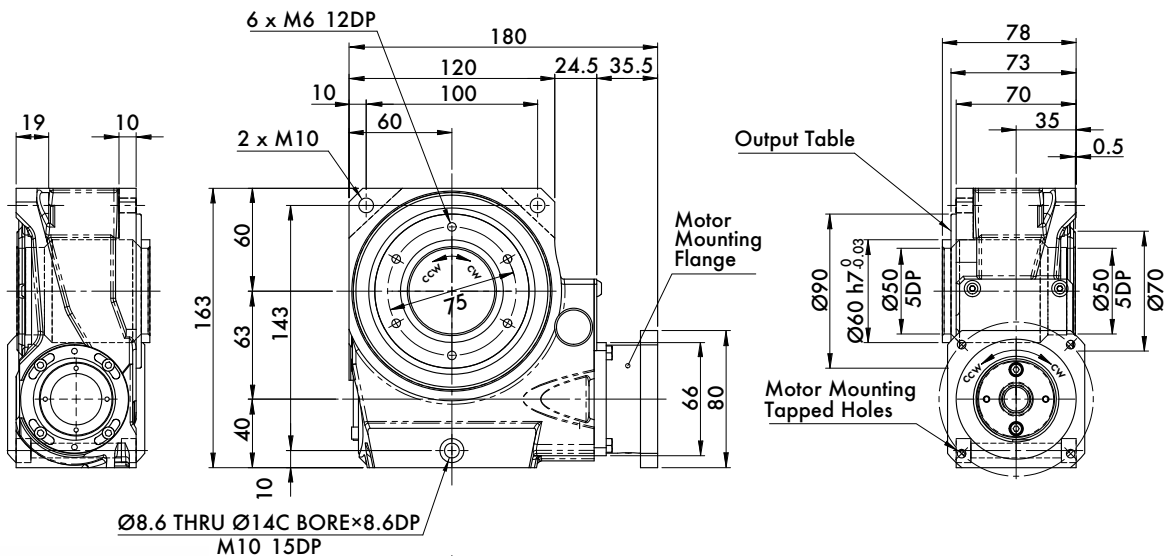
Standard Torque Direct Drive: Ratio 1:20



Input/Output Rotation: CW/CCW

### GTB63-GD (Motor Frame Size □ = 80)

Direct Drive: Zero Backlash Precision Applications: Ratio 20:1



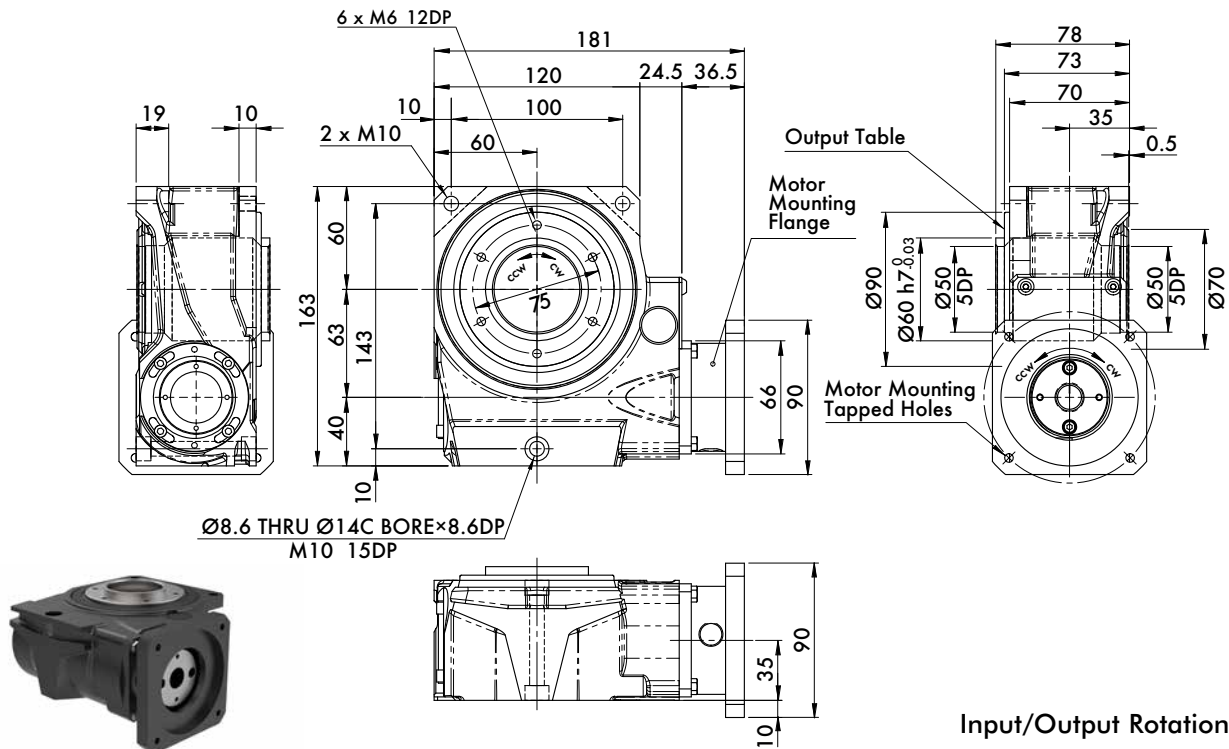
Input/Output Rotation: CW/CCW

# GTB63 SERIES

Globoidal (Roller Gear) Servo Positioner | Dimensions

**GTB63-GD** (Motor Frame Size □ = 86, 90)

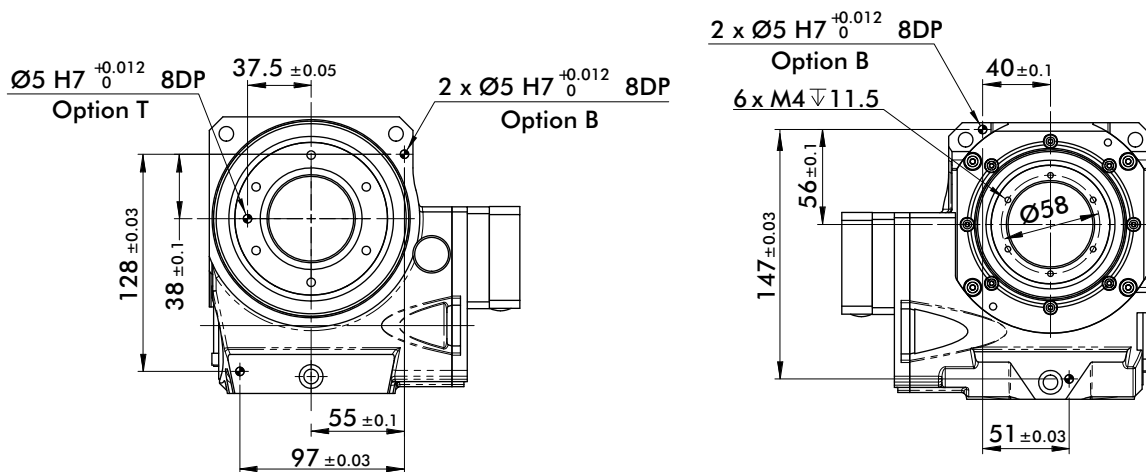
Direct Drive: Zero Backlash Precision Applications: Ratio 20:1



Input/Output Rotation: CW/CCW

## GTB63 Option Specifications

Dowel hole options B: Housing / T: Output Table

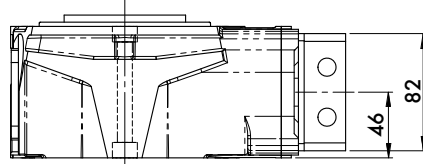
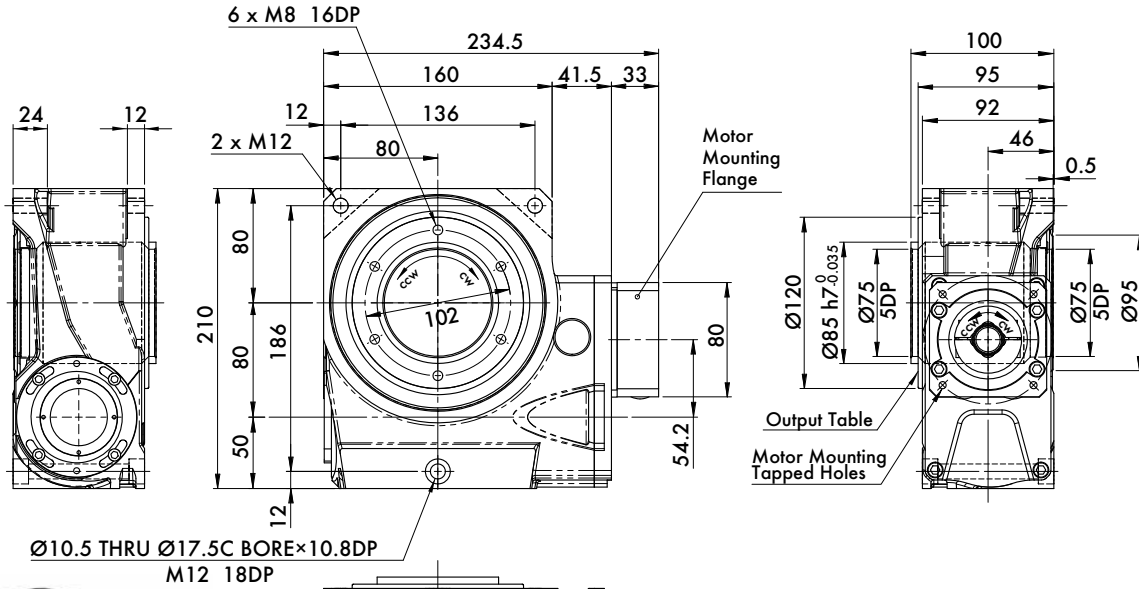


# GTB80 SERIES

## Globoidal (Roller Gear) Servo Positioner | Dimensions

### GTB80-HG (Motor Frame Size □ = 80)

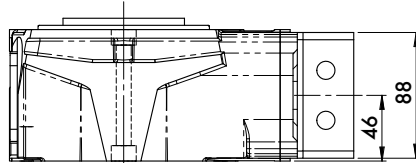
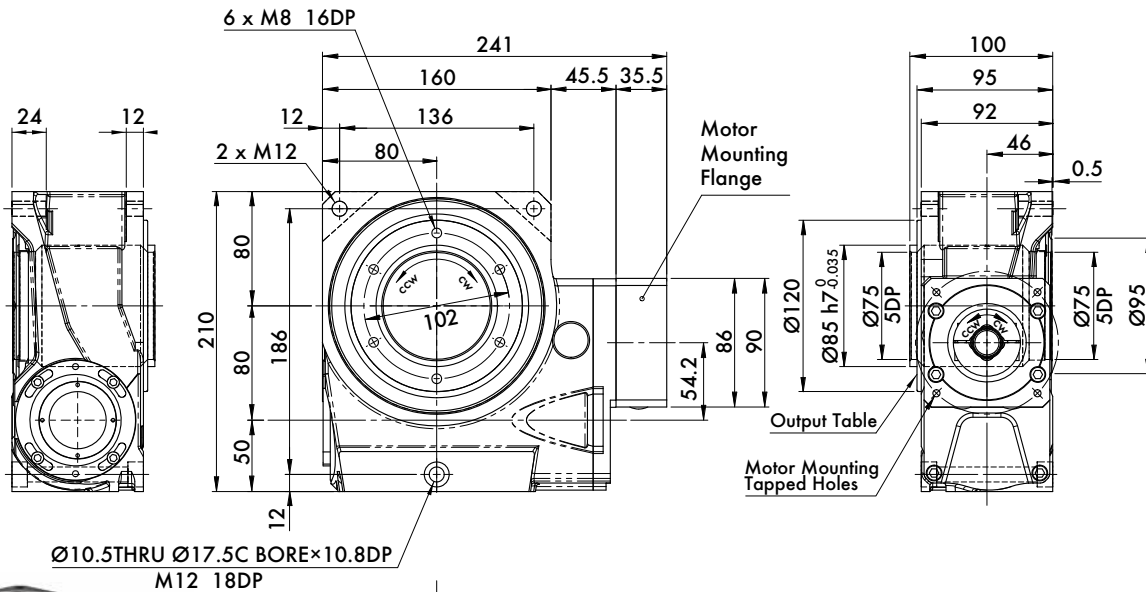
Gear Drive: High Inertia applications: Ratio 60:1



Input/Output Rotation: CW/CCW

### GTB80-HG (Motor Frame Size □ = 86, 90)

Gear Drive: High Inertia applications: Ratio 60:1



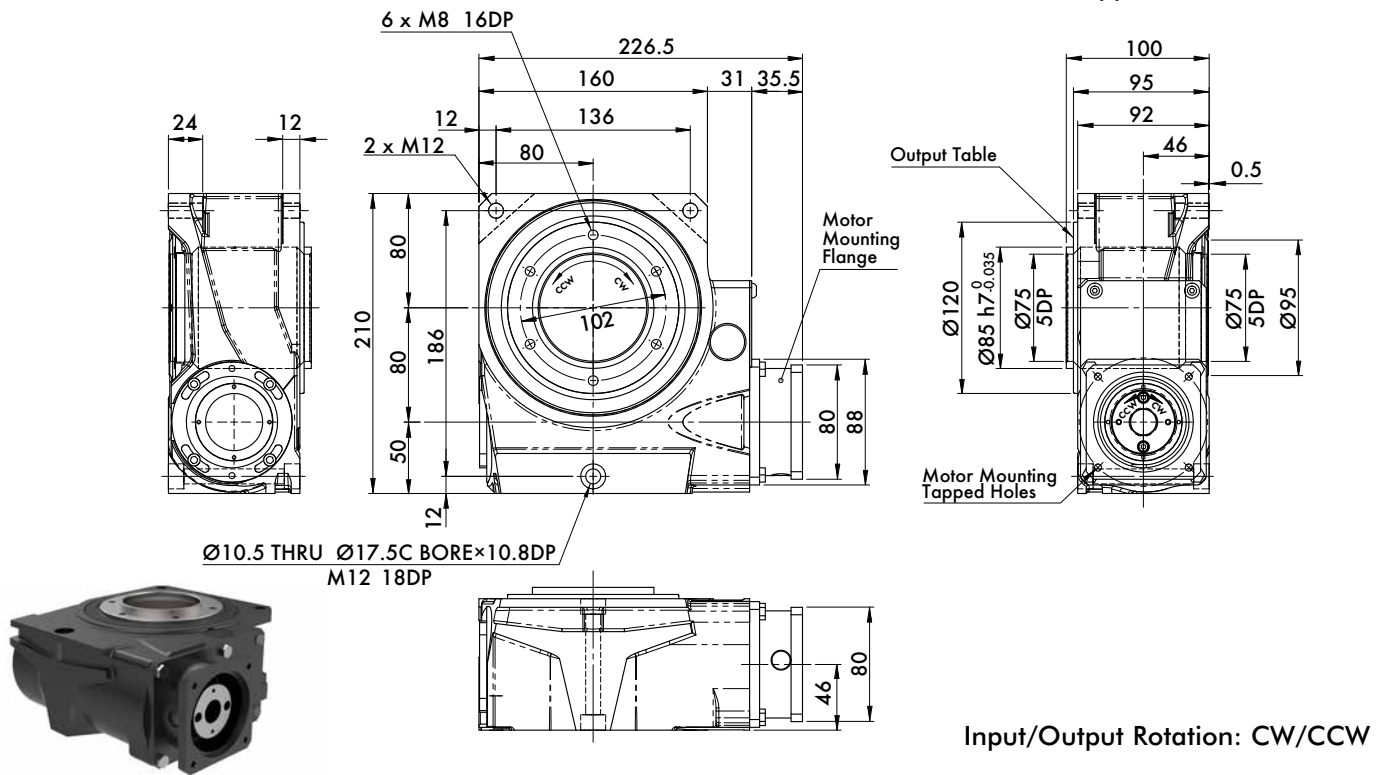
Input/Output Rotation: CW/CCW

# GTB80 SERIES

## Globoidal (Roller Gear) Servo Positioner | Dimensions

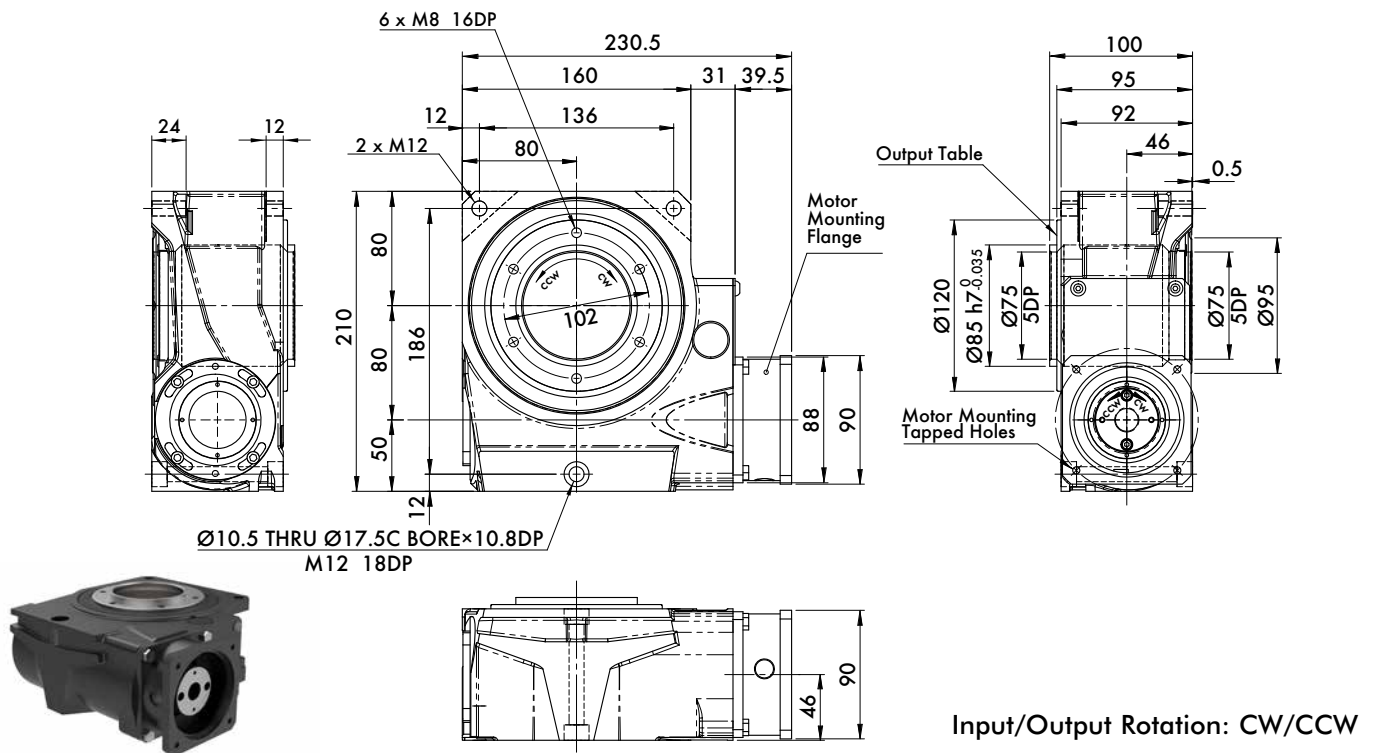
### GTB80-HD (Motor Frame Size $\square = 80$ )

Direct Drive: Zero Backlash Precision Applications: Ratio 20:1



### GTB80-HD (Motor Frame Size $\square = 86, 90$ )

Direct Drive: Zero Backlash Precision Applications: Ratio 20:1

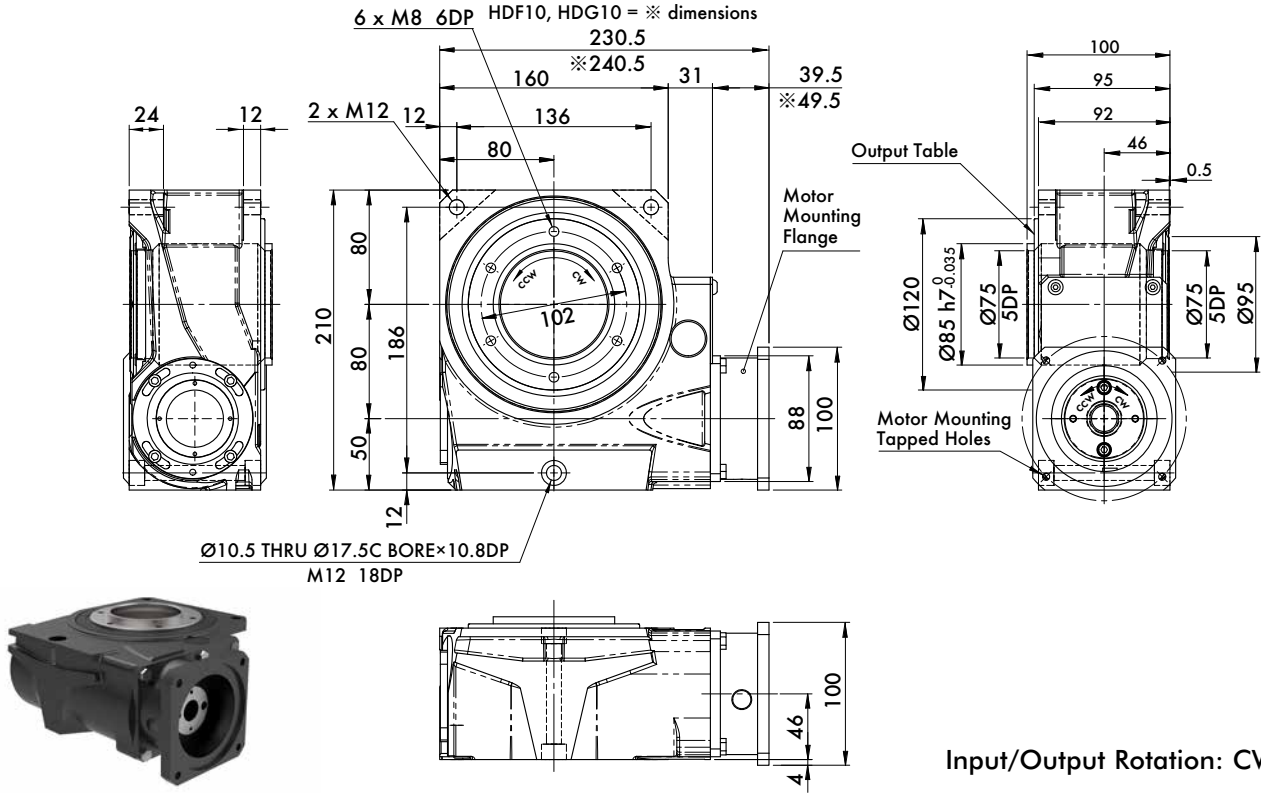


# GTB80 SERIES

## Globoidal (Roller Gear) Servo Positioner | Dimensions

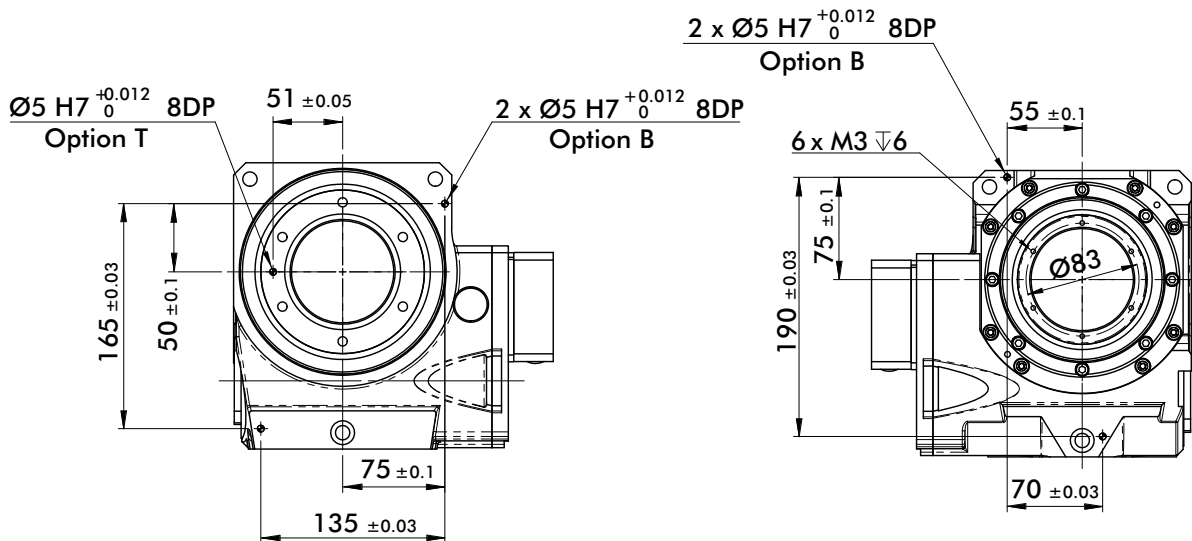
### GTB80-HD (Motor Frame Size □ = 100)

Direct Drive: Zero Backlash Precision Applications: Ratio 20:1



### GTB80 Option Specifications

Dowel hole options B: Housing / T: Output Table



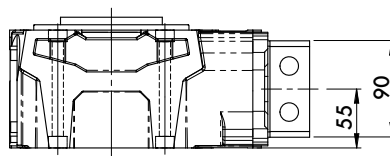
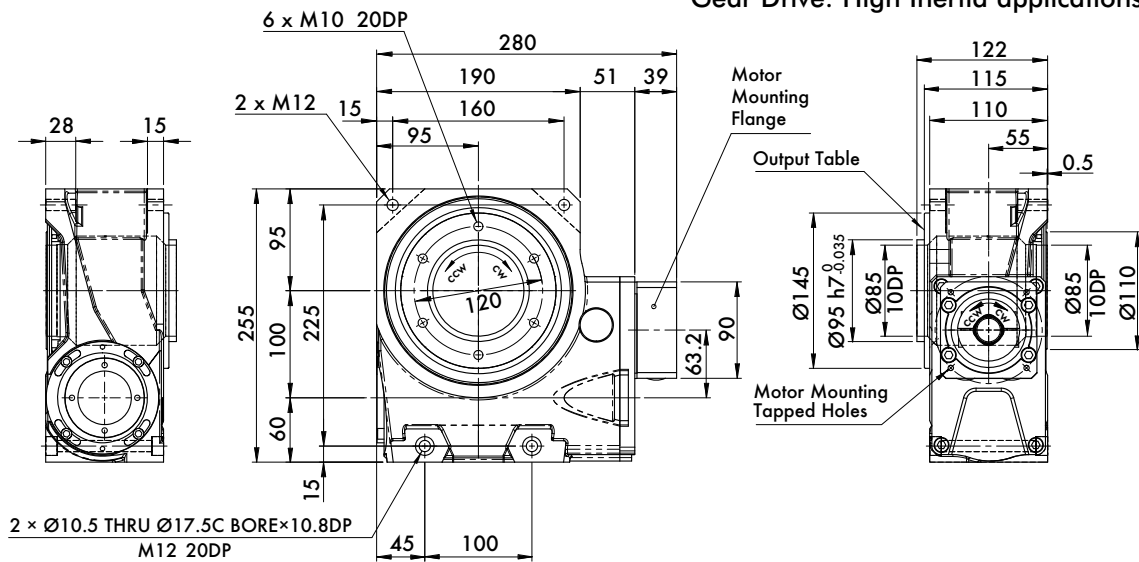


# GTB100 SERIES

## Globoidal (Roller Gear) Servo Positioner | Dimensions

### GTB100-JG (Motor Frame Size □ = 90)

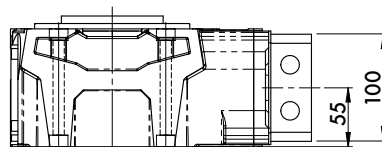
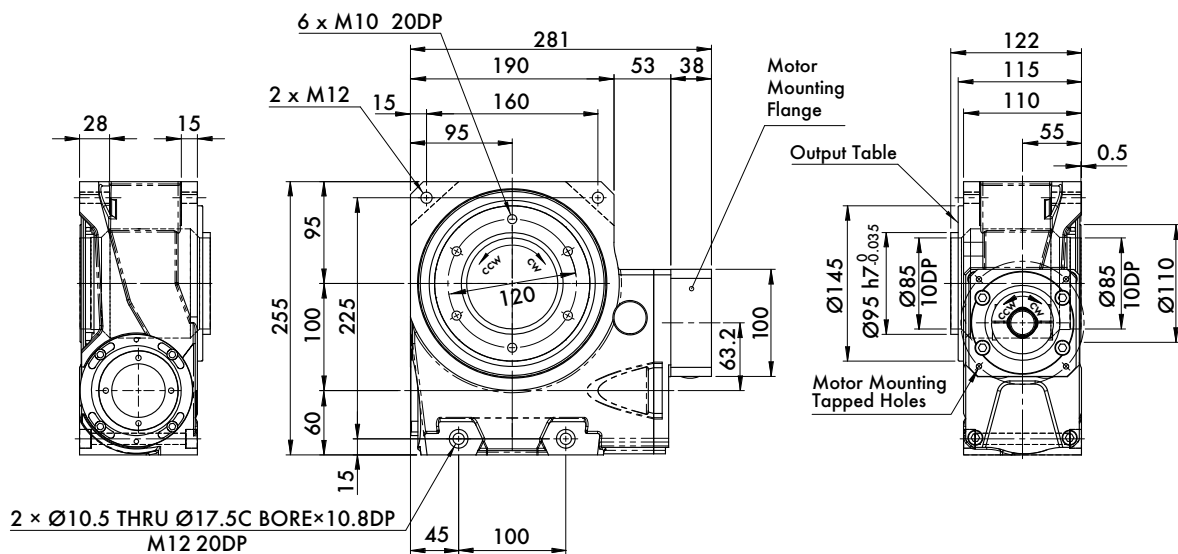
Gear Drive: High Inertia applications: Ratio 60:1



Input/Output Rotation: CW/CCW

### GTB100-JG (Motor Frame Size □ = 100)

Gear Drive: High Inertia applications: Ratio 60:1



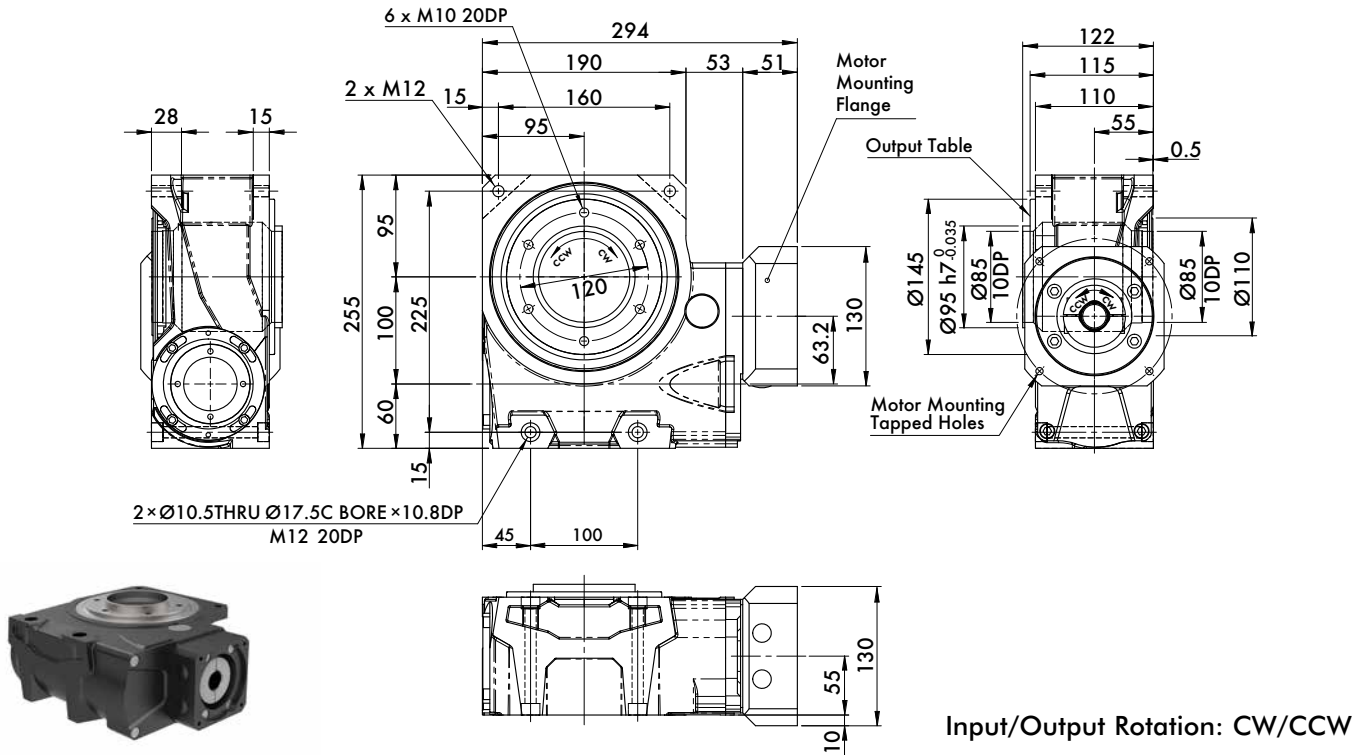
Input/Output Rotation: CW/CCW

# GTB100 SERIES

## Globoidal (Roller Gear) Servo Positioner | Dimensions

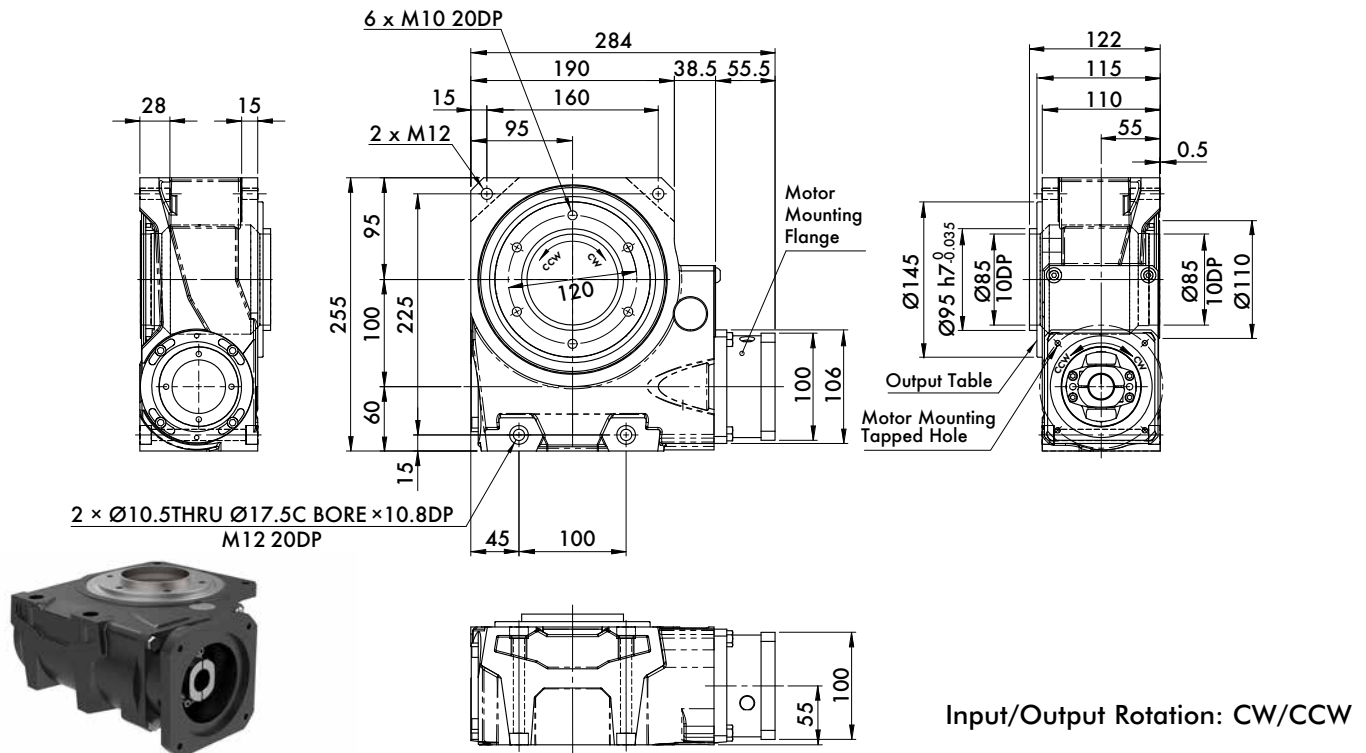
### GTB100-JG (Motor Frame Size □ = 130)

Gear Drive: High Inertia applications: Ratio 60:1



### GTB100-JD (Motor Frame Size □ = 100)

Direct Drive: Zero Backlash Precision Applications: Ratio 20:1

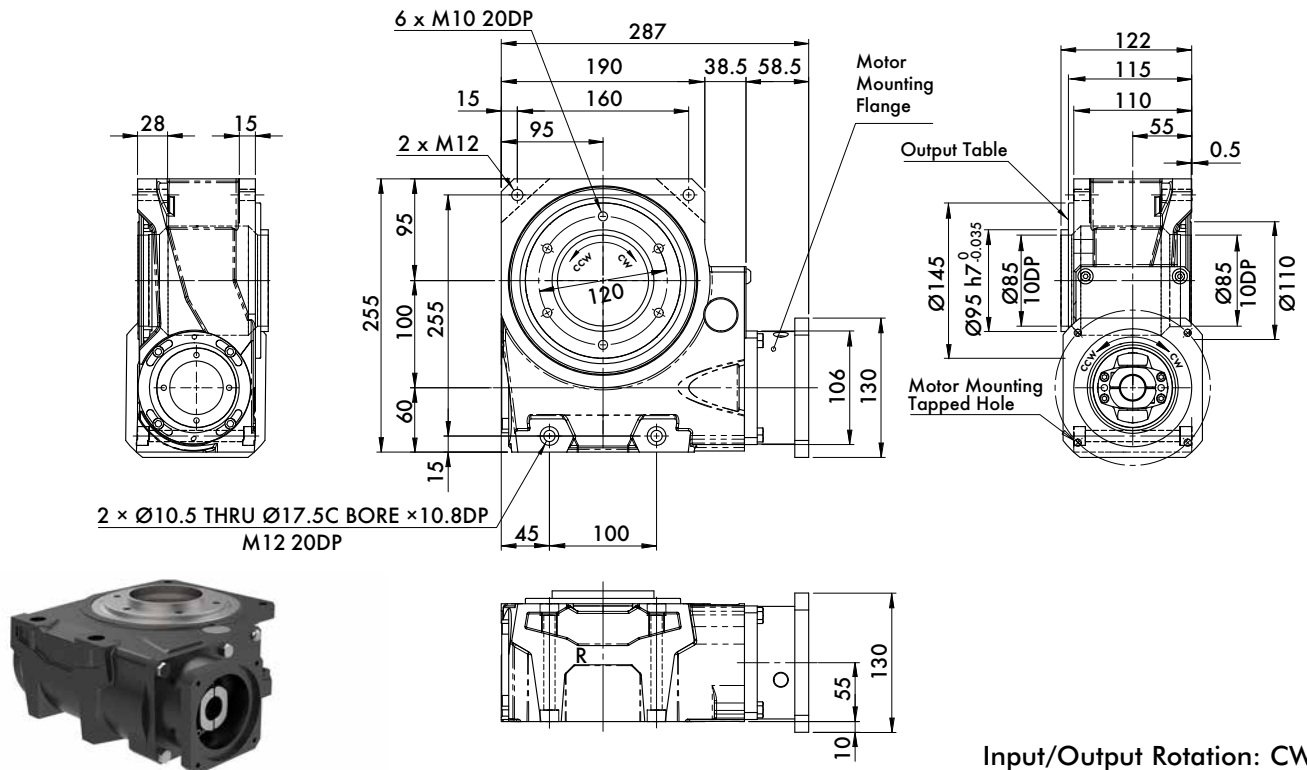


# GTB100 SERIES

Globoidal (Roller Gear) Servo Positioner | Dimensions

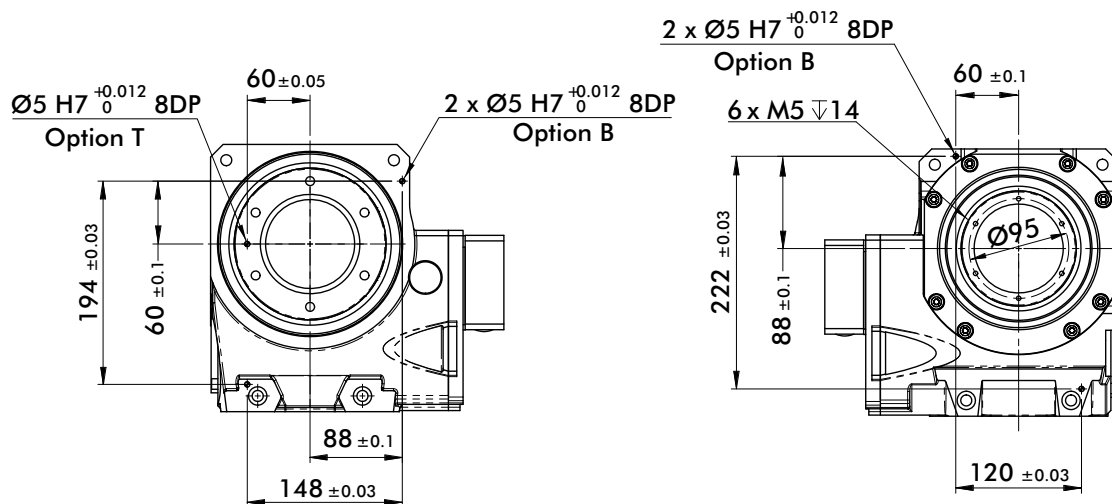
**GTB100-JD** (Motor Frame Size □ = 130)

Direct Drive: Zero Backlash Precision Applications: Ratio 20:1



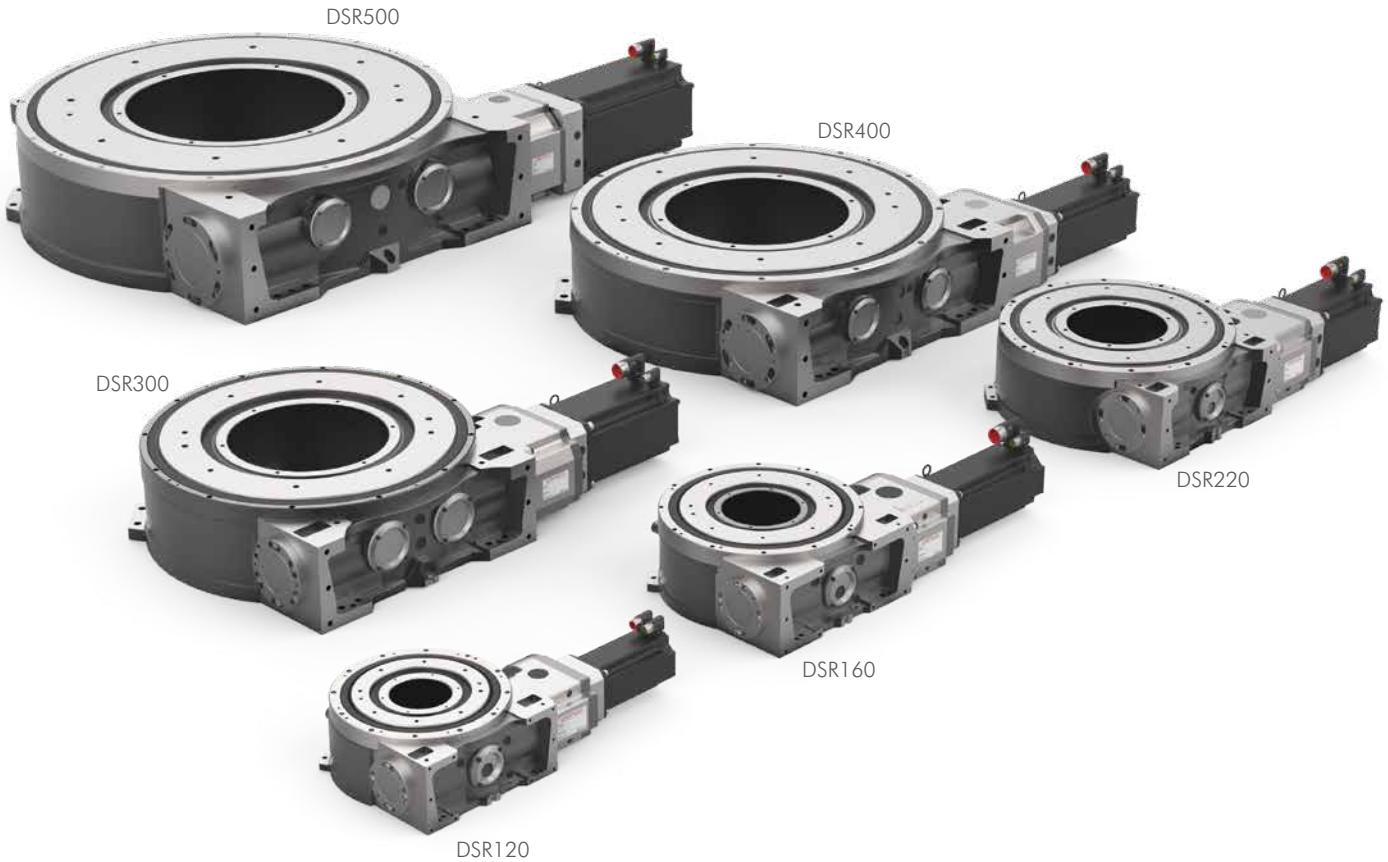
## GTB100 Option Specifications

Dowel hole options B: Housing / T: Output Table



# DSR SERIES

## Double Contact Bearing Heavy-Duty Servo Positioner | Table of Contents



### Features:

DESTACO's **DSR Series Low-Profile Heavy-Duty Positioner** is designed to handle payloads in a range of 2,000kg to 20,000kg.

Available in six sizes, the DSR series units are lubricated for life and can be mounted in either horizontal or vertical orientations. The DSR Series feature the largest utility through hole diameter available for its size, making it ideal for space constrained machine, welding and automotive applications.

### Table of Contents

### IN-SRV-#

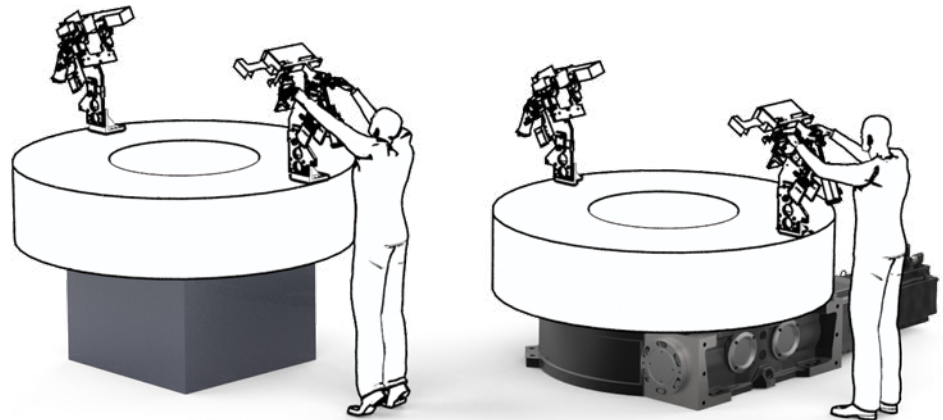
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## Double Contact Bearing Heavy-Duty Servo Positioner | Features & Benefits

### Super flat design allows for easier work handling

With existing rotary tables, it tends to be difficult to access and handle jigs or peripheral devices on the table due to the overall height of the system.

The DSR's reduced height is due to its super flat structure, resulting in safer and easier operation.



### Robust mechanism provides high acceleration

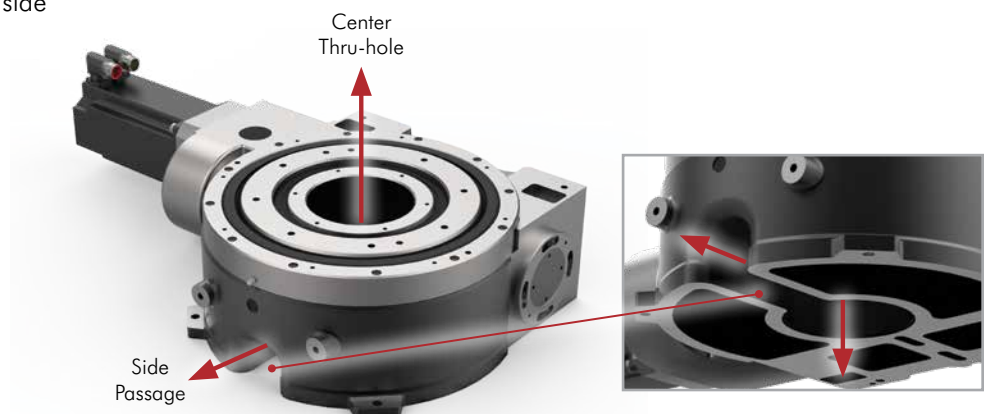
The DSR Series utilizes a roller reducer mechanism which provides quick and accurate, high-capacity load positioning with zero-backlash.



Double Contact Barrel Design  
Provides Backlash-free Operation

### Center Thru-Hole and Side Passage

The DSR Series features both a center thru-hole and a side passage. This allows the DSR to be mounting onto a flat, flush surface, and cables and tubing can be routed through the side passage and up the center hole.





# DSR SERIES

## Double Contact Bearing Heavy-Duty Servo Positioner | How To Order

### DSR Series: How To Order

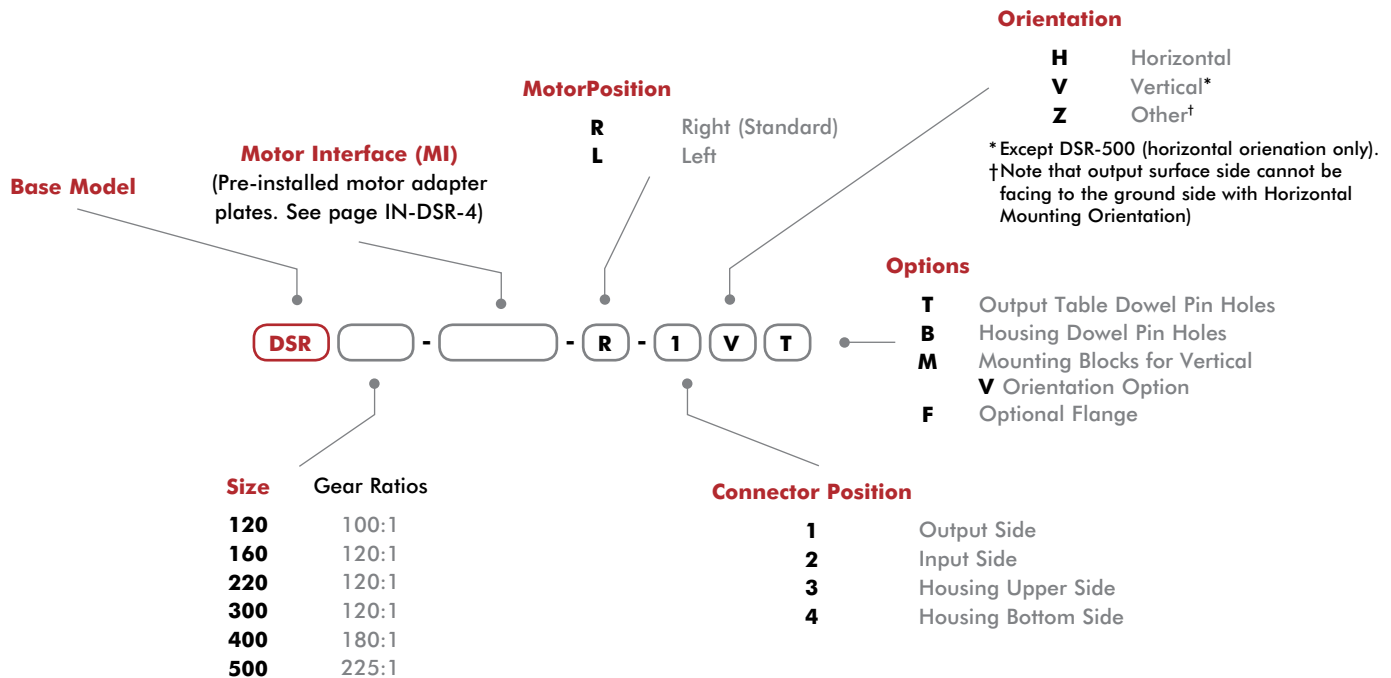
### Double Contact Bearing Heavy-Duty Servo Positioner Base Unit

DSR Series units can be interfaced with wide variety of servo motor manufacturers. Use the MI code tables to identify the supported motors for each DSR unit. The MI code specifies the motor adapter plate that provides direct easy motor mounting to the DSR servo positioner.

The -H option for independent mounting orientation comes standard with every DSR series unit. The -T option for precision dial plate locating dowel hole and -B option for precision mounting dowel holes are also provided as standard.

#### Easily Integrates with a Variety of Servo Motor Manufacturers

Allen Bradley	Siemens
Mitsubishi	Yaskawa
FANUC	SEW
KUKA	AMK



Contact our application engineer for custom / special requirements.



Model	DSR120	DSR160	DSR220	DSR300	DSR400	DSR500
<b>Payload</b>	2,000 kg	3,000 kg	7,500 kg	10,000 kg	15,000 kg	20,000 kg
<b>Table-Top Height</b>	175 mm	205 mm	225 mm	250 mm	280 mm	340 mm
<b>Table Diameter</b>	Ø290 mm	Ø375 mm	Ø500 mm	Ø700 mm	Ø900 mm	Ø1,136 mm
<b>Thru Hole Diameter</b>	Ø130 mm	Ø180 mm	Ø255 mm	Ø380 mm	Ø500 mm	Ø630 mm
<b>Servo Power</b>	1.3-4.4kW	1.6-6.3kW	2.8-5.9kW	3.0-9.7kW	3.5-14.5kW	13-17.4kW
<b>Reduction Ratio</b>	100:1	120:1	120:1	120:1	180:1	225:1
<b>Repeatability</b>	±0.05mm (r=1,000 mm)					

## Double Contact Bearing Heavy-Duty Servo Positioner | How To Order

Indexer Size	Make/Series	Model	□ mm	kw	MI	Motor Shaft Bushing
120	Mitsubishi / J4	HG-SR152	130	1.5	FA20	-
	Yaskawa / Σ7	SGM7G-13A	130	1.3	FA20	-
	FANUC / α	αiF8/3000	130	1.6	FA21	O
	Allen Bradley/ MP	MPM-A1304 / MPM-B1304E	113.7	2.2	FB20	-
	Siemens / S-1FK7	1FK7062-3BF71	126	1.9	FB20	-
	SEW / CMP	CMPZ71M	116	4.4	FB20	-
	AMK / DT	DT5-9-10-XX0-3800	100	2.1	FC22	O
	KUKA / MG	MG_120_KSP40	126	2.2	FB20	-
160	Mitsubishi / J4	HG-SR202	176	2	GA20	-
	Yaskawa / Σ5	SGMGV-30A	180	2.9	GA20	-
	FANUC / α	αiF12/3000	174	3	GA20	-
	Allen Bradley/ MP	MPM-A1652F	143.5	4.03	GB21	O
	Siemens / S-1FK7	1FK7081-3BF71	155	2.7	GB22	O
	SEW / CMP	CMPZ80S	138	6.3	GB21	O
	AMK / DT	DT7-11-20-XX0-3500	142	1.9	GB23	O
	KUKA / MG	MG_160_KSP64	155	3	GB22	O
220	Mitsubishi / J4	HG-SR352	176	3.5	HA20	-
	Yaskawa / Σ7	SGM7G-30A	180	2.9	HA20	-
	FANUC / α	αiF22/3000	174	4	HA20	-
	Allen Bradley/ MP	MPM-B2152M	185	5.9	HB20	-
	Siemens / S-1FK7	1FK7100-2AF71	192	3.8	HB20	-
	SEW / CMP	CMPZ100S	163	5.3	HC21	O
	AMK / DT	DT7-17-20-XX0-3500	142	2.8	HD22	O
	KUKA / MG	MG_180_KSP64	192	3.5	HB21	O
300	FANUC / α	αiF30/3000	174	7	JA20	-
	Mitsubishi / J4	HG-SR702	176	7	JA20	-
	Yaskawa / Σ7	SGM7G-44A	180	4.4	JA20	-
	Allen Bradley/ MP	MPM-B2153E	185	7.2	JB20	-
	Siemens / S-1FK7	1FK7103-2AF71	192	4.4	JB20	-
	SEW / CMP	CMPZ100M	163	9.7	JC21	O
	AMK / DT	DT7-28-20-XX0-2000	142	3	JD22	O
	KUKA / MG	MG_480_KSP64	192	8.6	JB20	-
400	Mitsubishi / J4	HG-JR11K1M	220	11	KA20	-
	Yaskawa / Σ7	SGM7G-1AA	220	11	KA21	O
	FANUC / α	αiS50/3000	174	5	KB20	-
	Allen Bradley/ MP	MPM-B2154B	185	6.9	KC20	-
	Siemens / S-1FK7	1FK7105-2AC71	192	7.7	KC20	-
	SEW / CMP	CMP112L	190→205	14.5	KC20	-
	AMK / DT	DT10-54-20-XX0-1500	190	3.5	KC20	-
500	Mitsubishi / J4	HG-JR15K1M	220	15	LA20	-
	Yaskawa / Σ7	SGM7G-1EA	220	15	LA20	-
	FANUC / α	αiS50/3000+FAN	174	14	LB20	-
	Allen Bradley/ MP	MPL-B980E	267	13	LC21	O
	SEW / CMP	CMP112H	190→205	17.4	LD20	-

# DSR SERIES

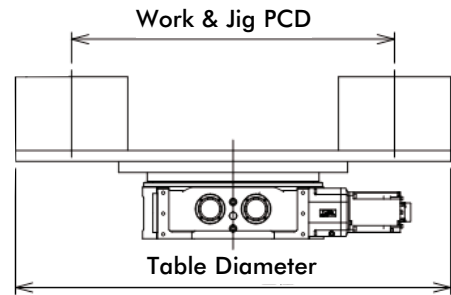
## Double Contact Bearing Heavy-Duty Servo Positioner | Indexer Sizing

### 1. Inertia

Any moving part attached to the table.

Item	Units
Table Diameter	mm
Table Weight	kg
Work & Jig PCD	mm
Work & Jig Weight	kg
Work & Jig Quantity	

Item	Units
Inertia Moment	kg.m <sup>2</sup>
Work & Jig Weight	kg



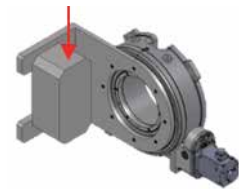
### 2. Other Loading Condition

Load acting on output table apart from inertia load.

Item	Units
External Torque	Nm
Friction Torque	Nm
Unbalanced Torque	Nm
Moment Load	Nm



External and friction torque



Unbalanced gravitational torque

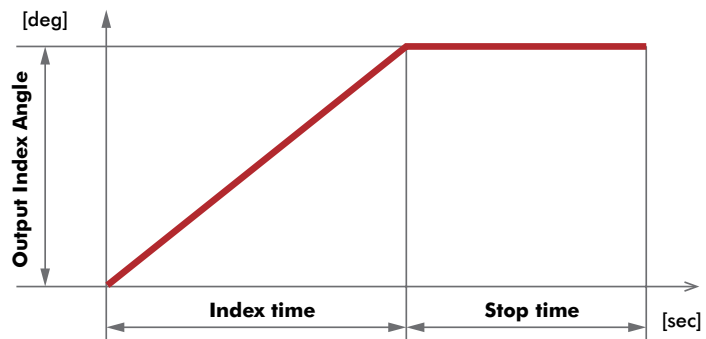


Moment load due to offset or inclined installation

### 3. Operation Condition

Indexing time, angle, and dwell time.  
Emergency operation conditions.

Item	Units
Index Time	mm
Dwell Time	Kg
Index Angle	Deg.
Emergency Stop Time	Sec.
Emergency Stop Angle	Deg.



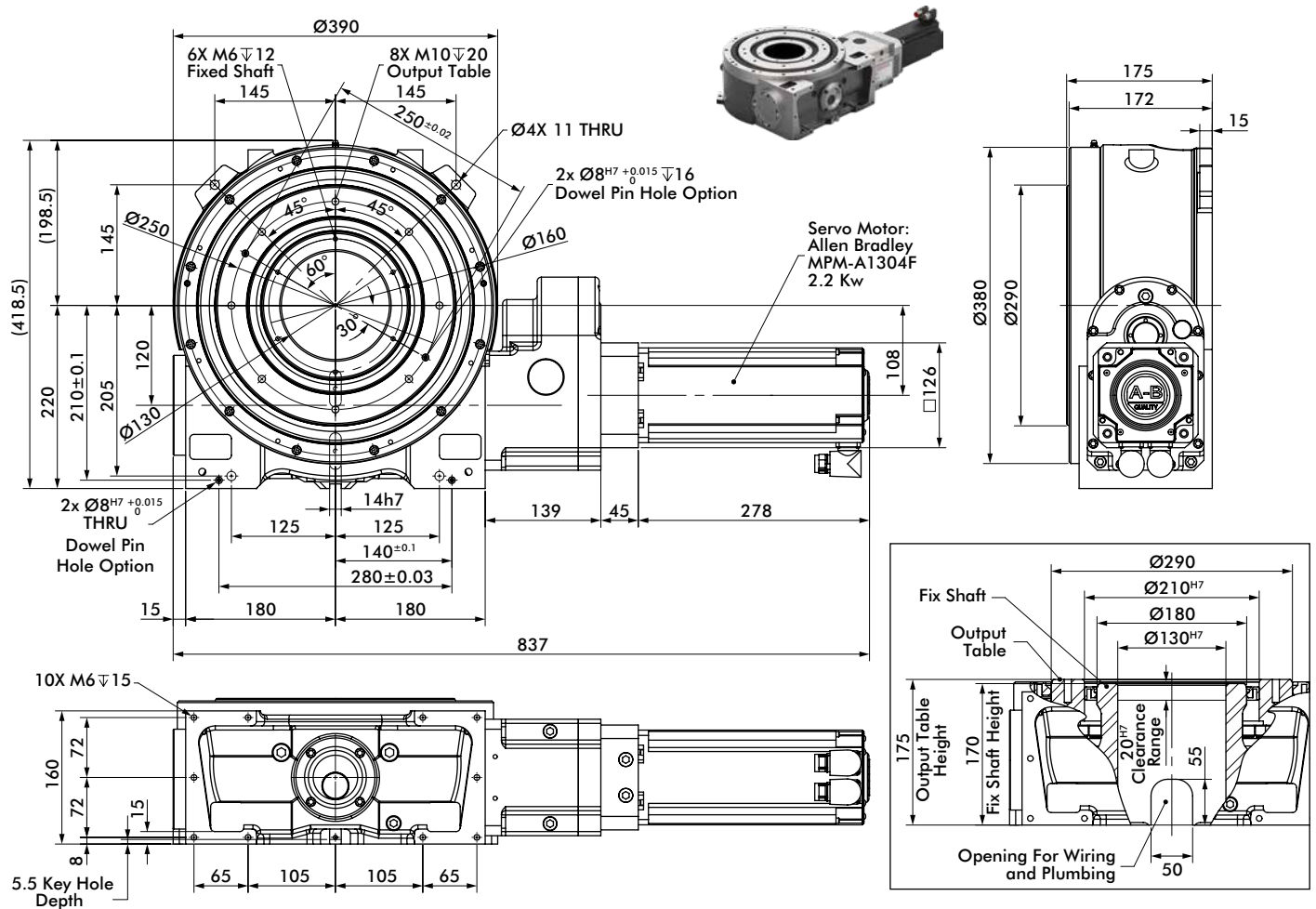
### 4. Servo Motor Manufacturers

Available Servo Motor manufacturers:

**Easily Integrates with a Variety of Servo Motor Manufacturers**

Allen Bradley	Siemens
Mitsubishi	Yaskawa
FANUC	SEW
KUKA	AMK

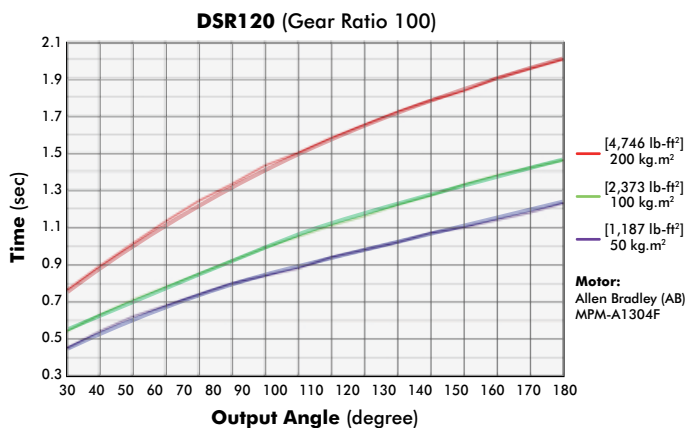
## Double Contact Bearing Heavy-Duty Servo Positioner | Dimensions



Specifications	Units	DSR120
Axis distance	mm	120
Gear ratio <sup>1</sup>		100 (20x5)
Inertia moment on input axis <sup>2</sup>	kg.m <sup>2</sup>	13x10 <sup>-4</sup>
Repeatability	mm	±0.05 (R=1,000)
Weight (without motor)	kg	125
Recommended servo power <sup>3</sup>	kW	1.3-4.4

Loading Capacity	Units	DSR120
Allowable Torque	(Static) T <sub>s</sub>	Kn-m 2.4
	(Rated) Top	Kn-m 1.1
Allowable Radial Load	Pr Max	kN 14.5
Allowable Axial Load	Pa Max	kN 19.6
Allowable Moment Load	M Mean Max	Kn-m 5

- Please contact us for detailed dimensions.
- Each servo motor can be mounted with a 1.3-4.4 kW class motor.
- Guide key is attached.
- Each load is a value when operating independently.

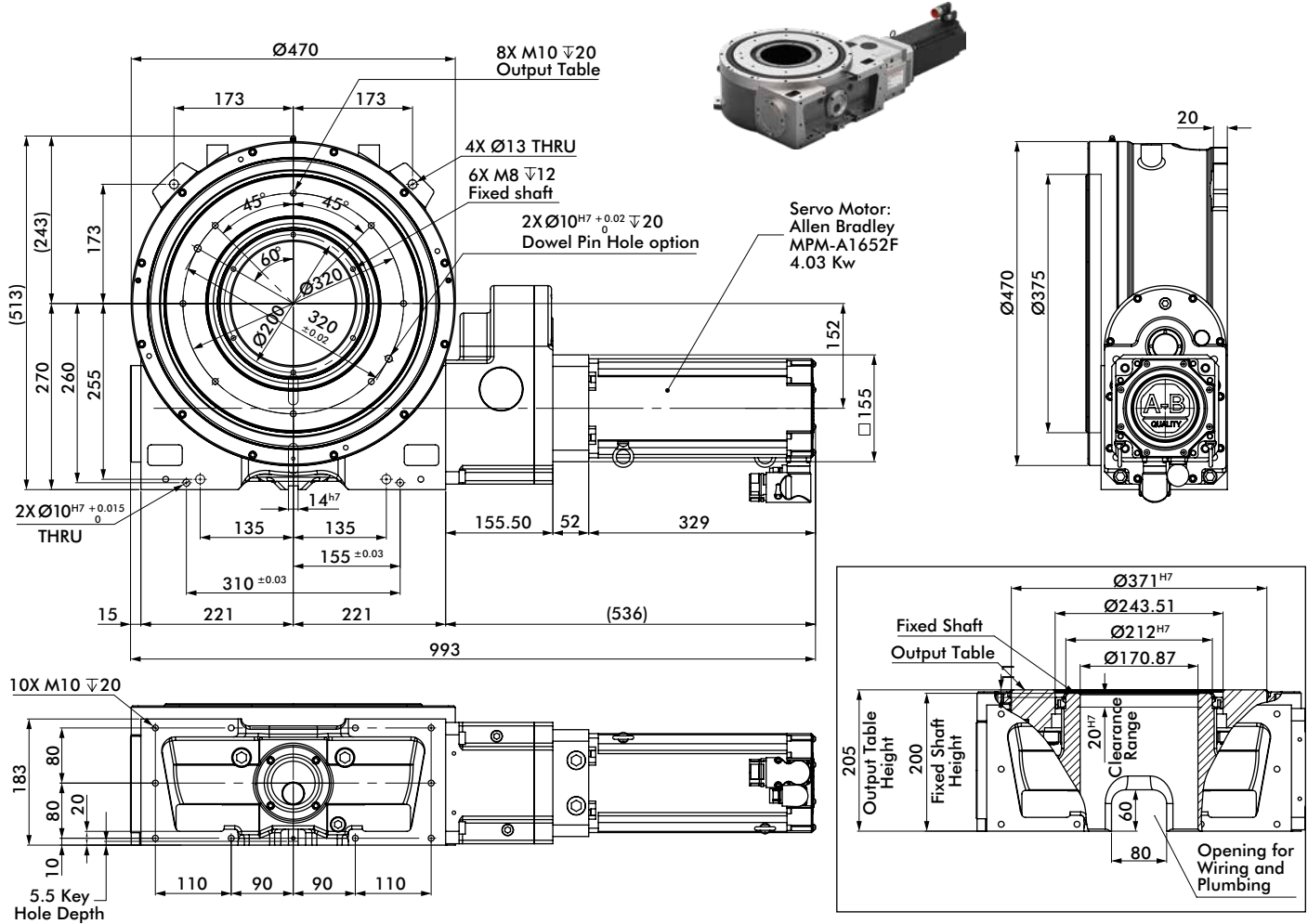


### Notes:

1. For other gear ratio, please contact us about custom availability.
  2. Inertia moment shown in here doesn't include servo motors rotor.
  3. For motor selection, be sure that operating condition fulfills motor driver's requirements such as regenerative resistor capacity.
- Motor brake must be applied for applications with gravity torque acting on output table, in the case of electric power out.
  - Motor fitting or replacement should be done by trained engineer. Please ask us about on site service work.
  - Please contact to our engineer for special requirements if custom is possible or not.

# DSR160

## Double Contact Bearing Heavy-Duty Servo Positioner | Dimensions



Specifications	Units	DSR160
Axis distance	mm	160
Gear ratio <sup>1</sup>		120 (24x5)
Inertia moment on input axis <sup>2</sup>	kg.m <sup>2</sup>	43.5x10 <sup>-4</sup>
Repeatability	mm	$\pm 0.05$ (R=1,000)
Weight (without motor)	kg	215
Recommended servo power <sup>3</sup>	kW	1.6-6.3

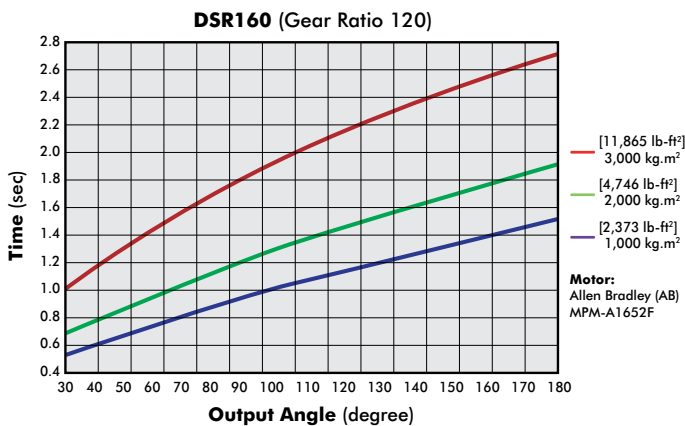
Loading Capacity	Units	DSR160
Allowable Torque	(Static) Ts	Kn-m 5.4
	(Rated) Top	Kn-m 1.7
Allowable Radial Load	Pr Max	kN 22.5
Allowable Axial Load	Pa Max	kN 29.4
Allowable Moment Load	M Mean Max	Kn-m 7

- Please contact us for detailed dimensions.
- Each servo motor can be mounted with a 1.6-6.3 kW class motor.
- Guide key is attached.
- Each load is a value when operating independently.

**Notes:**

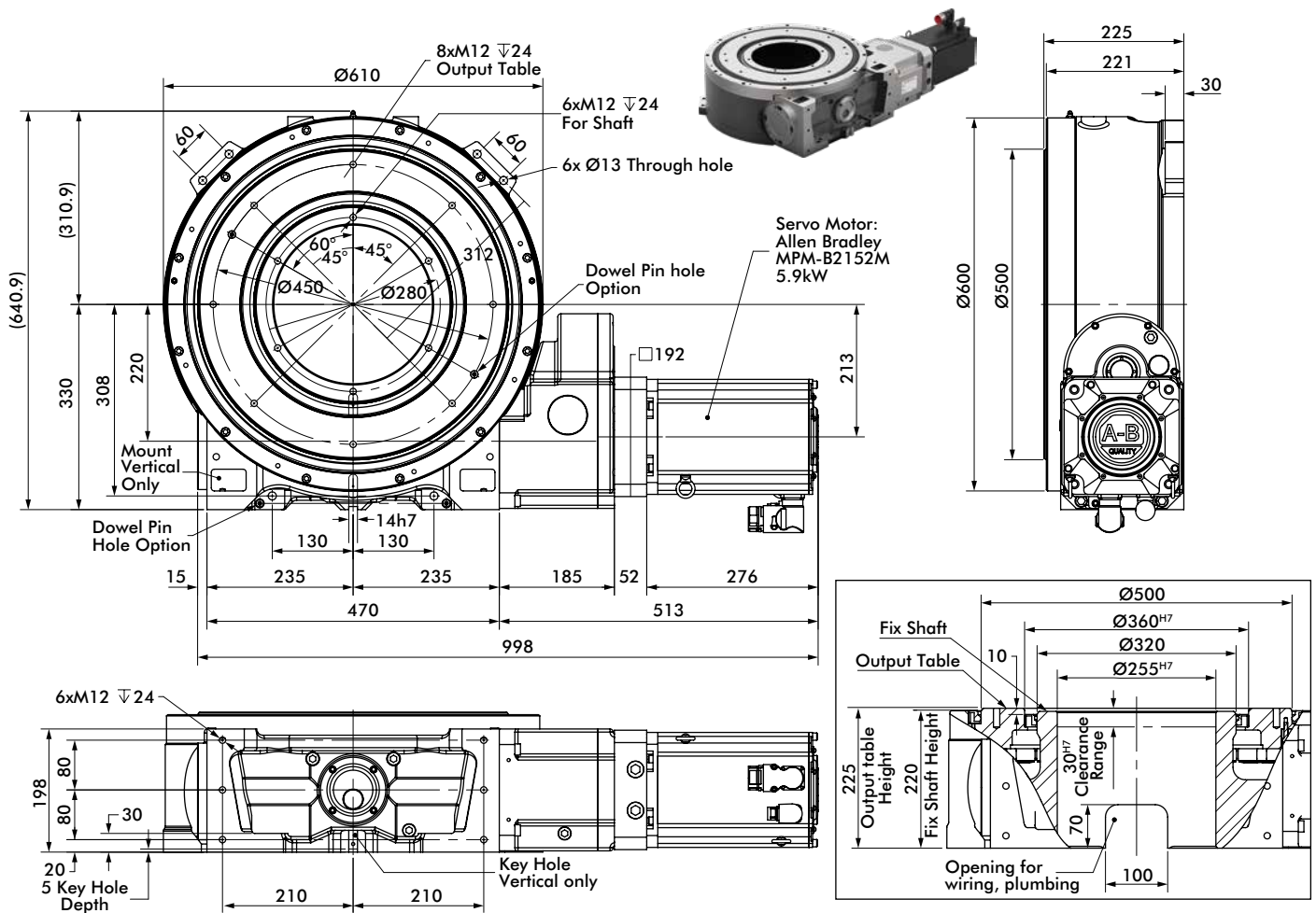
1. For other gear ratio, please contact us about custom availability.
2. Inertia moment shown in here doesn't include servo motors rotator.
3. For motor selection, be sure that operating condition fulfills motor driver's requirements such as regenerative resistor capacity.

- Motor brake must be applied for applications with gravity torque acting on output table, in the case of electric power out.
- Motor fitting or replacement should be done by trained engineer. Please ask us about on site service work.
- Please contact to our engineer for special requirements if custom is possible or not.





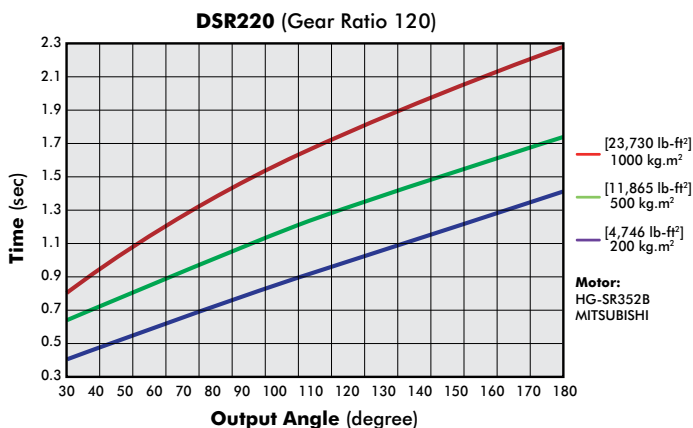
## Double Contact Bearing Heavy-Duty Servo Positioner | Dimensions



Specifications	Units	DSR220
Axis distance	mm	220
Gear ratio <sup>1</sup>		120 (24x5)
Inertia moment on input axis <sup>2</sup>	kg.m <sup>2</sup>	60.3x10 <sup>-4</sup>
Repeatability	mm	±0.05 (R=1,000)
Weight (without motor)	kg	310
Recommended servo power <sup>3</sup>	kW	2.8-5.9

Loading Capacity	Units	DSR220
Allowable Torque (Static) Ts	Kn-m	11.8
Allowable Torque (Rated) Top	Kn-m	4.6
Allowable Radial Load Pr Max	kN	56.5
Allowable Axial Load Pa Max	kN	73.5
Allowable Moment Load M Mean Max	Kn-m	20

- Please contact us for detailed dimensions.
- Each servo motor can be mounted with a 2.8-5.9 kW class motor.
- Guide key is attached.
- Each load is a value when operating independently.

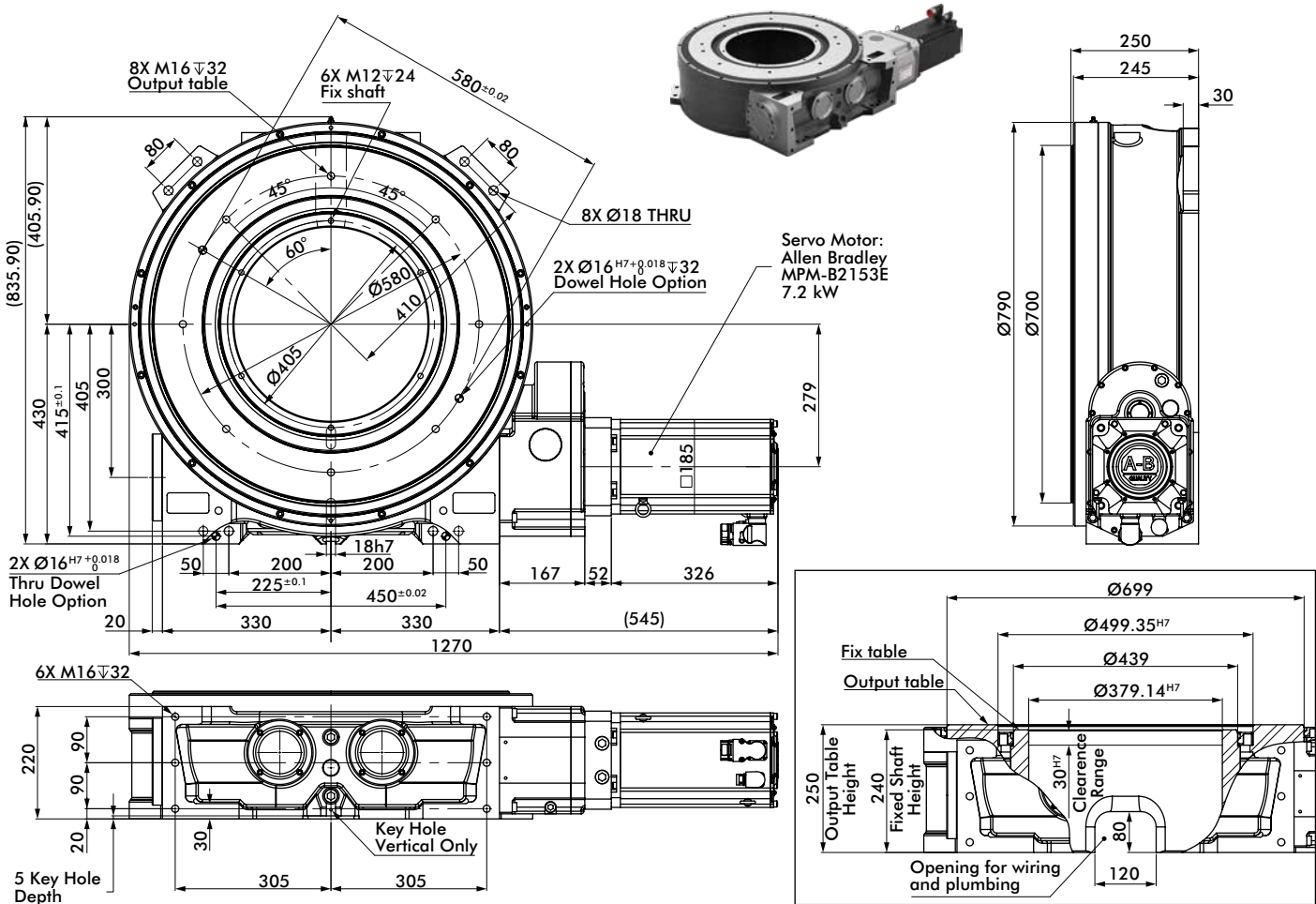


### Notes:

1. For other gear ratio, please contact us about custom availability.
  2. Inertia moment shown in here doesn't include servo motors rotator.
  3. For motor selection, be sure that operating condition fulfills motor driver's requirements such as regenerative resistor capacity.
- Motor brake must be applied for applications with gravity torque acting on output table, in the case of electric power out.
  - Motor fitting or replacement should be done by trained engineer. Please ask us about on site service work.
  - Please contact to our engineer for special requirements if custom is possible or not.

# DSR300

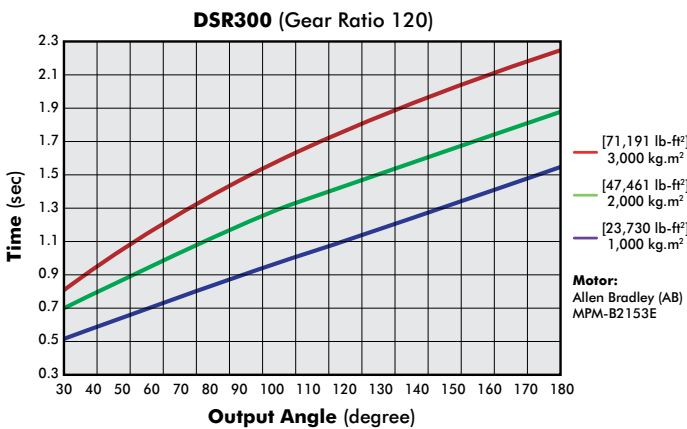
## Double Contact Bearing Heavy-Duty Servo Positioner | Dimensions



Specifications	Units	DSR300
Axis distance	mm	300
Gear ratio <sup>1</sup>		120 (24x5)
Inertia moment on input axis <sup>2</sup>	kg.m <sup>2</sup>	84.3x10 <sup>-4</sup>
Repeatability	mm	$\pm 0.05$ (R=1,000)
Weight (without motor)	kg	550
Recommended servo power <sup>3</sup>	kW	3.0-9.7

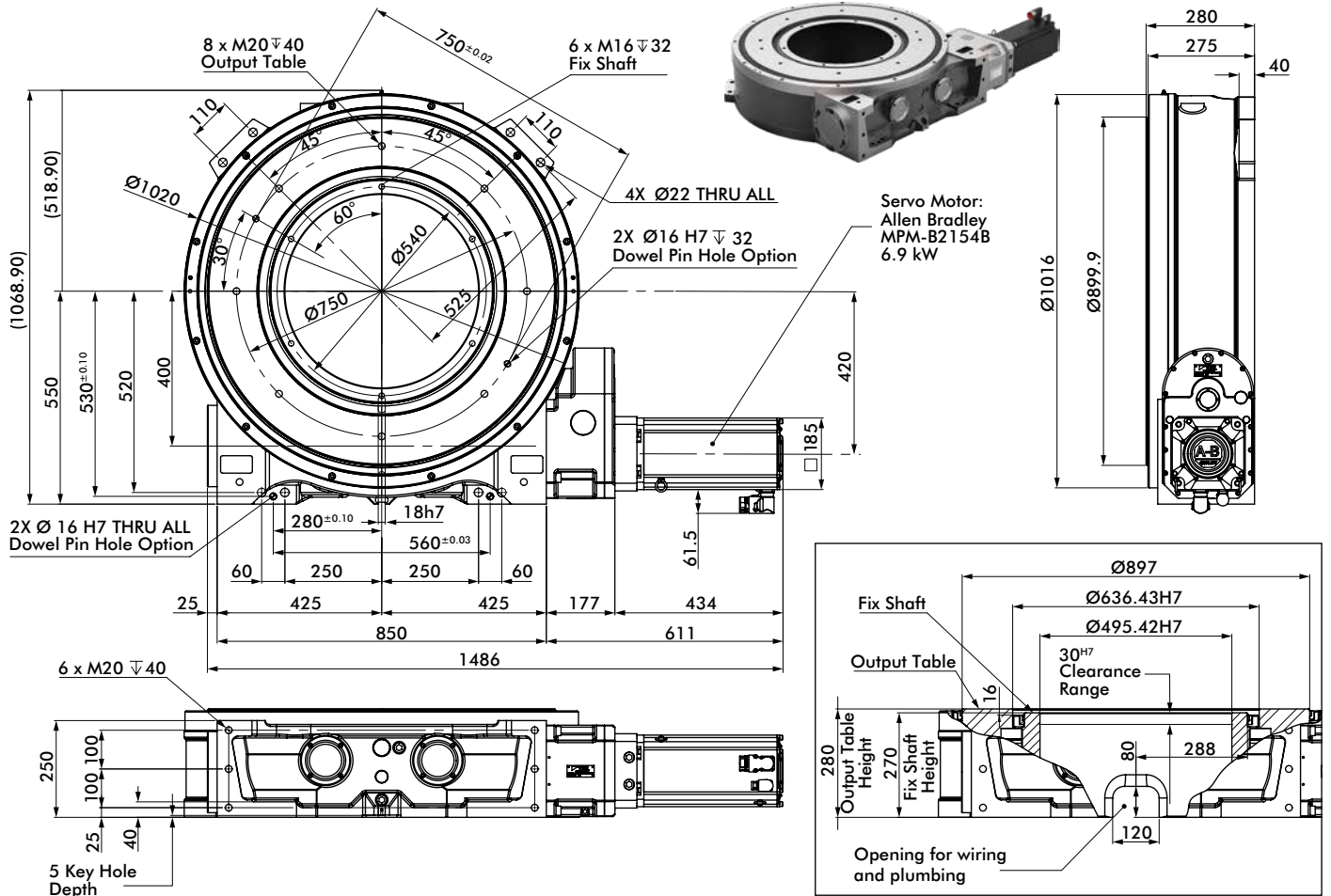
Loading Capacity	Units	DSR300
Allowable Torque	(Static) Ts	Kn-m 26.4
	(Rated) Top	Kn-m 9.2
Allowable Radial Load	Pr Max	kN 78.5
Allowable Axial Load	Pa Max	kN 98
Allowable Moment Load	M Mean Max	Kn-m 42

- Please contact us for detailed dimensions.
- Each servo motor can be mounted with a 3.0-9.7 kW class motor.
- Guide key is attached.
- Each load is a value when operating independently.



- Notes:**
1. For other gear ratio, please contact us about custom availability.
  2. Inertia moment shown in here doesn't include servo motors rotator.
  3. For motor selection, be sure that operating condition fulfills motor driver's requirements such as regenerative resistor capacity.
- Motor brake must be applied for applications with gravity torque acting on output table, in the case of electric power out.
  - Motor fitting or replacement should be done by trained engineer. Please ask us about on site service work.
  - Please contact to our engineer for special requirements if custom is possible or not.

## Double Contact Bearing Heavy-Duty Servo Positioner | Dimensions



Specifications	Units	DSR400
Axis distance	mm	400
Gear ratio <sup>1</sup>		180 (24x7.5)
Inertia moment on input axis <sup>2</sup>	kg.m <sup>2</sup>	180x10 <sup>-4</sup>
Repeatability	mm	$\pm$ 0.05 (R=1,000)
Weight (without motor)	kg	960
Recommended servo power <sup>3</sup>	kW	3.5-14.5

Loading Capacity	Units	DSR400
Allowable Torque	(Static) T <sub>s</sub> Kn-m	61
	(Rated) Top Kn-m	21
Allowable Radial Load	Pr Max kN	122
Allowable Axial Load	Pa Max kN	147
Allowable Moment Load	M Mean Max Kn-m	70

- Please contact us for detailed dimensions.
- Each servo motor can be mounted with a 3.5-14.5 kW class motor.
- Guide key is attached.
- Each load is a value when operating independently.

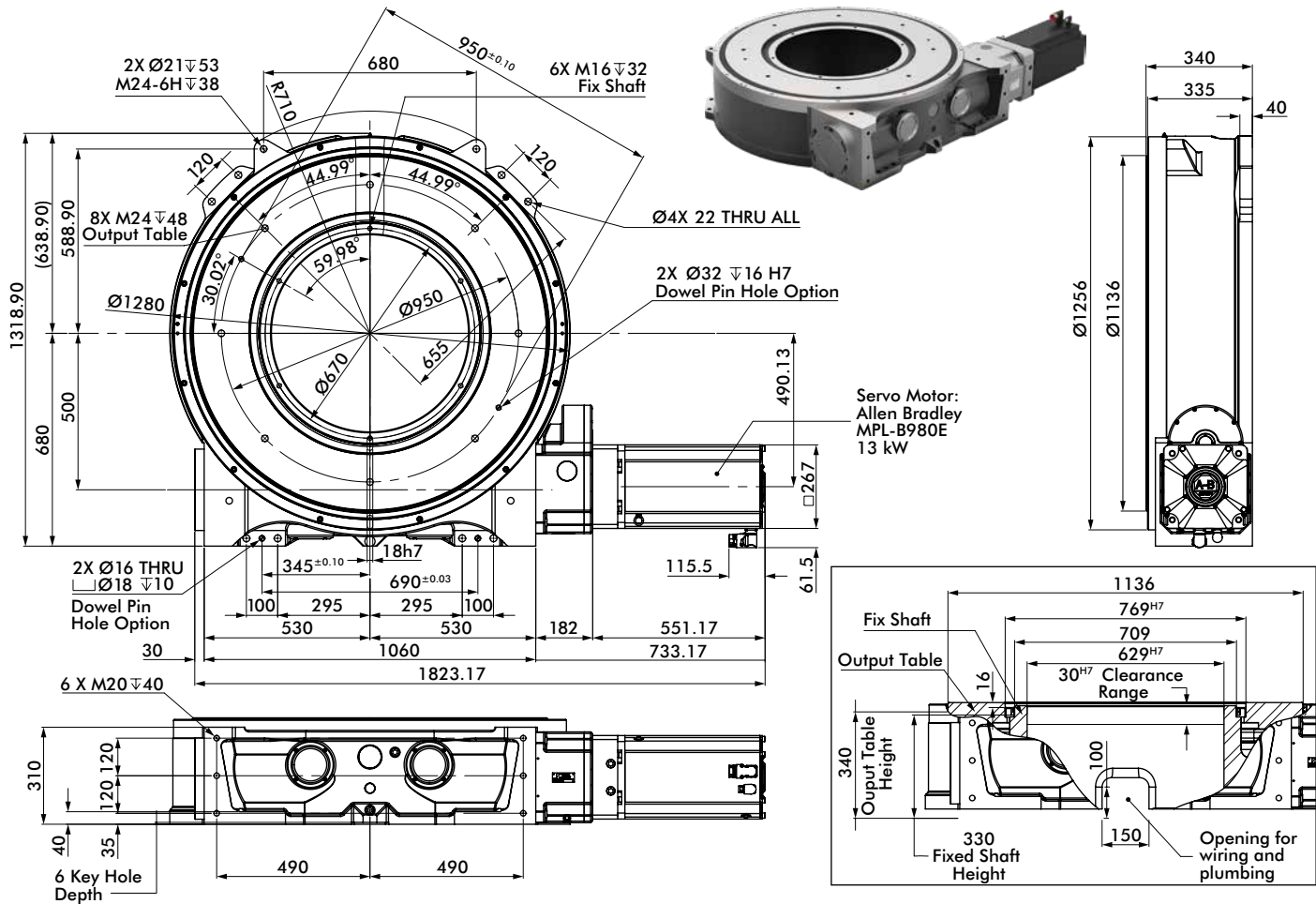


**Notes:**

1. For other gear ratio, please contact us about custom availability.
  2. Inertia moment shown in here doesn't include servo motors rotor.
  3. For motor selection, be sure that operating condition fulfills motor driver's requirements such as regenerative resistor capacity.
- Motor brake must be applied for applications with gravity torque acting on output table, in the case of electric power out.
  - Motor fitting or replacement should be done by trained engineer. Please ask us about on site service work.
  - Please contact to our engineer for special requirements if custom is possible or not.

# DSR500

## Double Contact Bearing Heavy-Duty Servo Positioner | Dimensions



Specifications	Units	DSR500
Axis distance	mm	500
Gear ratio <sup>1</sup>		225 (30x7.5)
Inertia moment on input axis <sup>2</sup>	kg.m <sup>2</sup>	280x10 <sup>-4</sup>
Repeatability	mm	±0.05 (R=1,000)
Weight (without motor)	kg	1,800
Recommended servo power <sup>3</sup>	kW	13-17.4

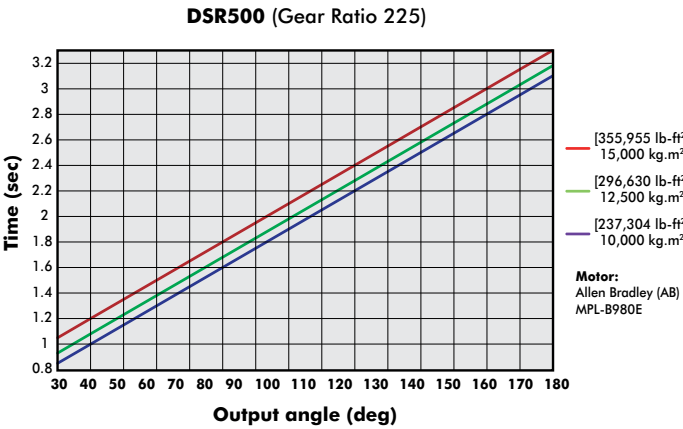
Loading Capacity	Units	DSR500
Allowable Torque (Static) Ts	Kn-m	73
Allowable Torque (Rated) Top	Kn-m	36
Allowable Radial Load Pr Max	kN	162
Allowable Axial Load Pa Max	kN	196
Allowable Moment Load M Mean Max	Kn-m	92

- Please contact us for detailed dimensions.
- Each servo motor can be mounted with a 13-17.4 kW class motor.
- Guide key is attached.
- Each load is a value when operating independently.

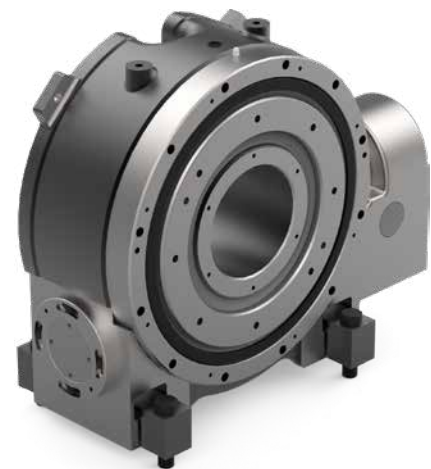
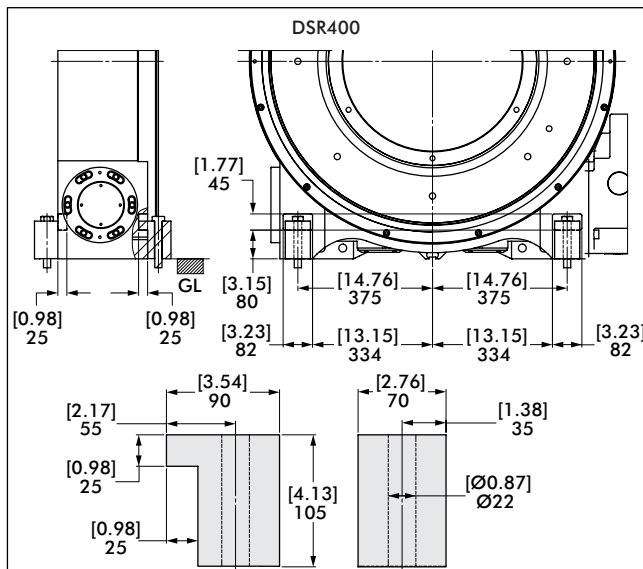
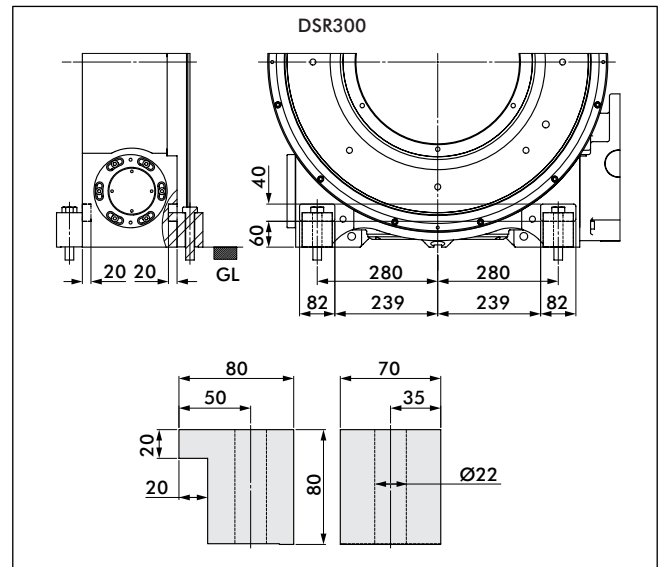
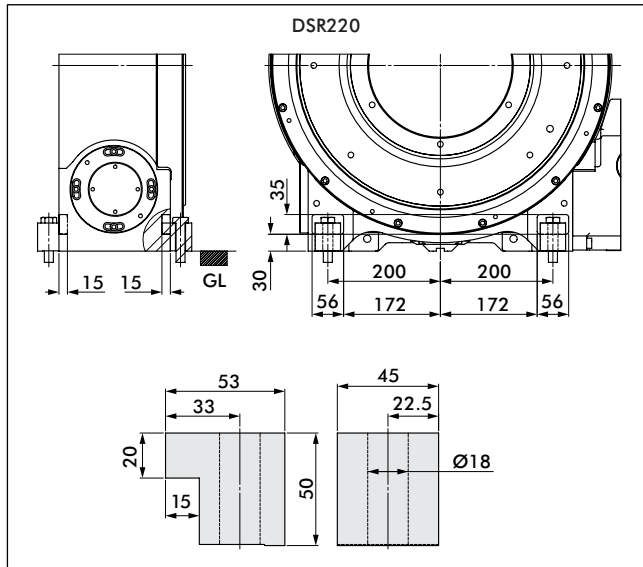
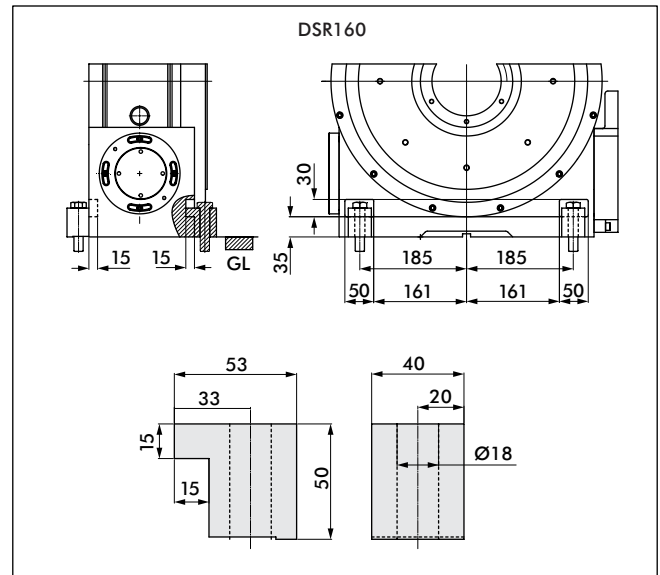
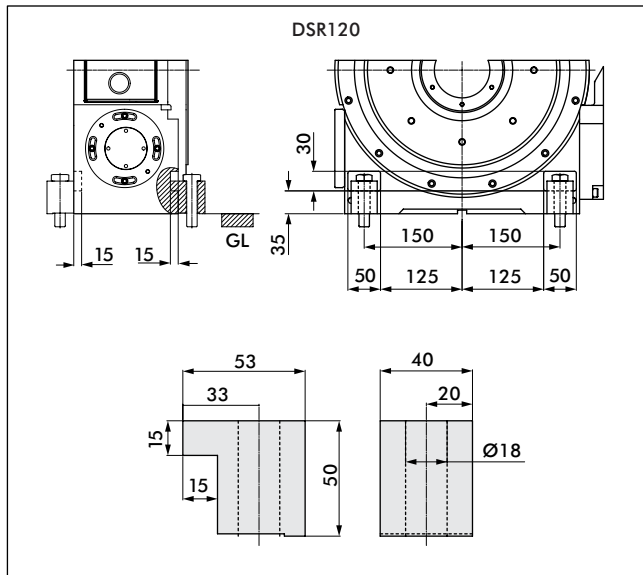
**Notes:**

1. For other gear ratio, please contact us about custom availability.
2. Inertia moment shown in here doesn't include servo motors rotator.
3. For motor selection, be sure that operating condition fulfills motor driver's requirements such as regenerative resistor capacity.

- Motor brake must be applied for applications with gravity torque acting on output table, in the case of electric power out.
- Motor fitting or replacement should be done by trained engineer. Please ask us about on site service work.
- Please contact to our engineer for special requirements if custom is possible or not.



## Mounting Blocks for Vertical Orientation Option | Dimensions





# PGM SERIES

## Parallel Gear Servo Positioner | Table of Contents



PGM40

### Features:

DESTACO's **CAMCO PGM Parallel Gear Reducers** is a precision servo reducer with parallel cam mechanism.

Light, accurate, and high cost performance offers easy to use character for wide range of applications. It features a pre-loaded precision parallel cam, low input inertia, through-hole design, integrated sealed tapered bearings, high performance grease and several motor options with integrated motor clamp system for easy fitting.

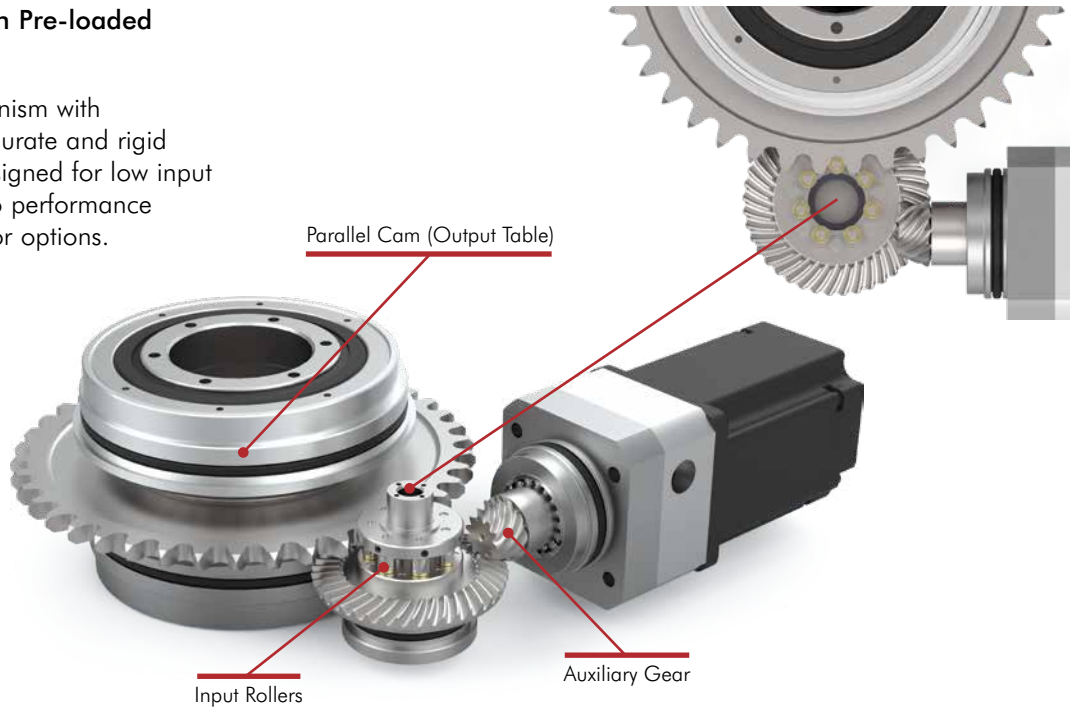
### Table of Contents

### IN-SRV-#

Features & Benefits .....	2
How to Order .....	3
Specifications .....	4
PGM40 .....	5

### Precision Servo Reducer with Pre-loaded Parallel Cam Structure

The PGM parallel cam mechanism with pre-loaded structure offers accurate and rigid indexing performance. It is designed for low input inertia and offers greater servo performance through a wide variety of motor options.



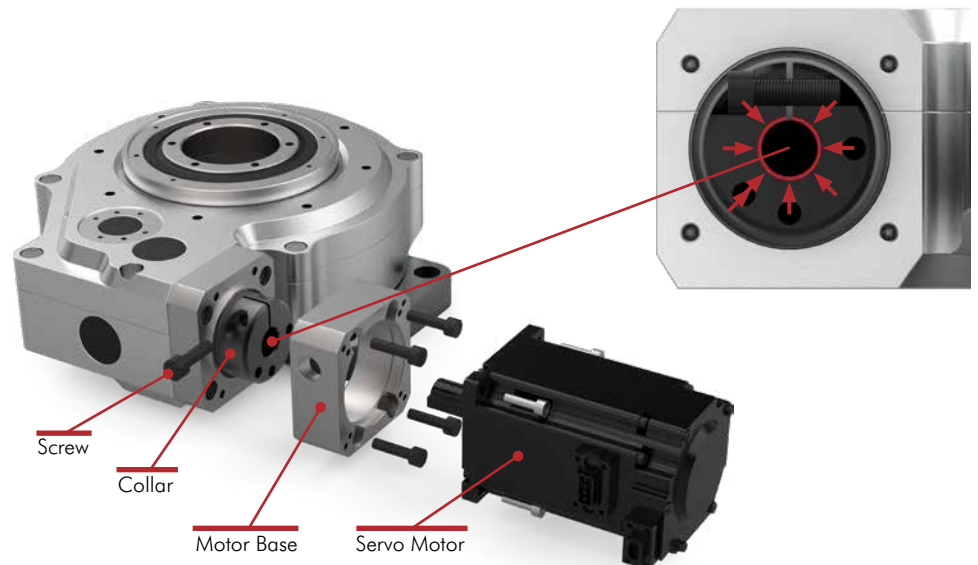
### Thru-hole Design

Large central opening through the center of the output shaft structure is suitable for wiring and piping.



### Integrated Motor Clamp System

The PGM offers a wide-variety of motor options that easily attach through the use of an integrated motor clamp.



# PGM SERIES

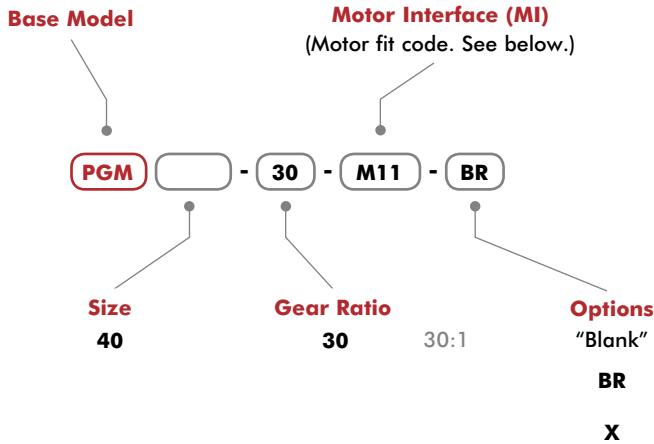
## Parallel Gear Servo Positioner | How To Order

### Parallel Gear Reducer Base Unit

PGM Series units can be interfaced with wide variety of servo motor manufacturers. Use the MI code tables to identify the supported motors for the PGM unit. Motors are ordered separately using the tables below.



PGM40 with optional fixture bracket. Motor not shown.



#### Easily Integrates with a Variety of Servo Motor Manufacturers

- FANUC
- Keyence
- Mitsubishi
- Panasonic
- Sanyo
- Yaskawa

No additional options  
 Optional fixture bracket for flexible mounting  
 Customer specified options. Please contact DESTACO for more information.

□ = Motor Frame Size

Motor Interface (MI)						
MI	a [mm]	b [mm]	c [mm]	d [mm]	e [mm]	f
M11	23-31	≤4.0	50.0	≤5.0	70	M4
M12						M5

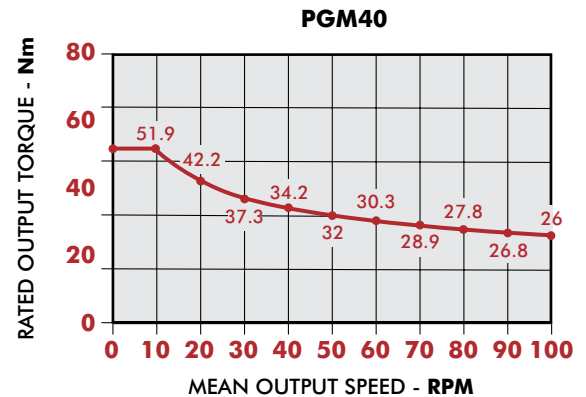
**Note:** Follow the instruction manual for motor fitting and installing. Improper handling can cause damages and malfunction.

Make / Series	Model	□ mm	kW	MI	
FANUC	β	βiS1/6000	50	0.5	M12
Keyence	SV	SV-M020	50	0.2	M12
Keyence	SV	SV-M040	50	0.4	M12
Keyence	SV2	SV2-M020	50	0.2	M12
Keyence	SV2	SV2-M040	50	0.4	M12
Mitsubishi	J3	HF-KP23	50	0.2	M12
Mitsubishi	J3	HF-KP43	50	0.4	M12
Mitsubishi	J3	HF-MP23	50	0.2	M12
Mitsubishi	J3	HF-MP43	50	0.4	M12
Mitsubishi	J4	HG-KR23	50	0.2	M12
Mitsubishi	J4	HG-KR43	50	0.4	M12
Mitsubishi	J4	HG-MR23	50	0.2	M12
Mitsubishi	J4	HG-MR43	50	0.4	M12
Sanyo	R2	R2AA06020F	50	0.2	M12
Sanyo	R2	R2AA06040F	50	0.4	M12
Sanyo	R2	R2AA06040H	50	0.4	M12
Yaskawa	Σ5	SGMAV-02A	50	0.2	M12
Yaskawa	Σ5	SGMAV-04A	50	0.4	M12
Yaskawa	Σ5	SGMAV-06A	50	0.55	M12
Yaskawa	Σ5	SGMJV-02A	50	0.2	M12
Yaskawa	Σ5	SGMJV-04A	50	0.4	M12
Yaskawa	Σ5	SGMJV-06A	50	0.6	M12
Yaskawa	Σ7	SGM7J-02A	50	0.2	M12
Yaskawa	Σ7	SGM7J-04A	50	0.4	M12
Yaskawa	Σ7	SGM7J-06A	50	0.6	M12
Yaskawa	Σ7	SGM7A-02A	50	0.2	M12
Yaskawa	Σ7	SGM7A-04A	50	0.4	M12
Yaskawa	Σ7	SGM7A-06A	50	0.6	M12

□ = Motor Frame Size

Make / Series	Model	□ mm	kW	MI	
Panasonic	A5	MSMD04	50	0.4	M11
Panasonic	A5	MSME04	50	0.4	M11
Panasonic	A5	MHMD04	50	0.4	M11
Panasonic	A6	MSMF04	50	0.4	M11
Panasonic	A6	MHMF04	50	0.4	M11

General Specifications	Symbol	Units	PGM40
Axis distance		mm	101
Output hollow dia.		mm	50
Gear ratio	i		45
Max start / stop torque	$T_U$	Nm	63.9
Allowable mean output speed	$N_m$	rpm	100
Allowable ultimate output speed	$N_U$	rpm	150
Inertia moment on input axis	J	$\text{kgm}^2 \times 10^{-4}$	0.448
Backlash		sec	60
Allowable axial Load on output	$P_a$	N	1415
Allowable radial Load on output	$P_r$	N	2172
Allowable moment Load on output	$P_{mean}$	Nm	102
Lubrication (Maintenance Free)			Grease
Weight		kg	6.7

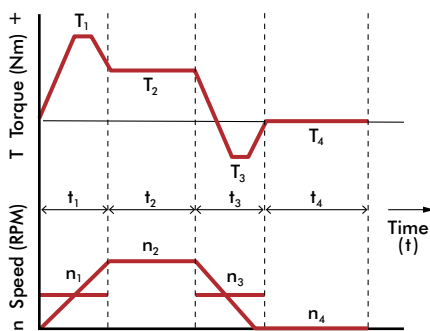


### Sizing PGM Series for an Application (Contact DESTACO for sizing application support)

#### 1. Load diagram

Check motion profile and resultant inertia torque.  
(Add working torque if applied).

Start and stop speed can be simplified to average speed within a segment.



#### 2. Check key conditions

**Mean torque**  $T_{mean} = \sqrt{\frac{\frac{10}{3} \left( \frac{n_1 \cdot t_1 \cdot |T_1|}{3} + \frac{10}{3} + n_2 \cdot t_2 \cdot |T_2| \frac{10}{3} + \dots + n_n \cdot t_n \cdot |T_n| \frac{10}{3} \right)}{n_1 \cdot t_1 + n_2 \cdot t_2 + \dots + n_n \cdot t_n}}$  (Nm)

**Mean output speed**  $n_{mean} = \frac{n_1 \cdot t_1 + n_2 \cdot t_2 + \dots + n_n \cdot t_n}{t_1 + t_2 + \dots + t_n}$  (rpm)

**Max output speed**  $n_{max}$  (rpm)

#### 3. Pre-selection

Choose a size that meets these criteria.

- $T_{mean} <$  Maximum rated output torque (Nm)
- $n_{mean} <$  Allowable mean output speed  $N_m$  (rpm)
- $n_{max} <$  Allowable ultimate output speed  $N_U$  (rpm)

#### 4. Check specifications

**Start/stop torque**  $T_1 <$  Maximum rated output torque (Nm)  
 $T_3 <$  Maximum rated output torque (Nm)

**Operation condition factor**  
Smooth without any impact or sudden load  $f = 1.0$   
Normal, but occasional emergency stop  $f = 1.5$   
Operation with frequent impact or sudden load  $f = 3.0$

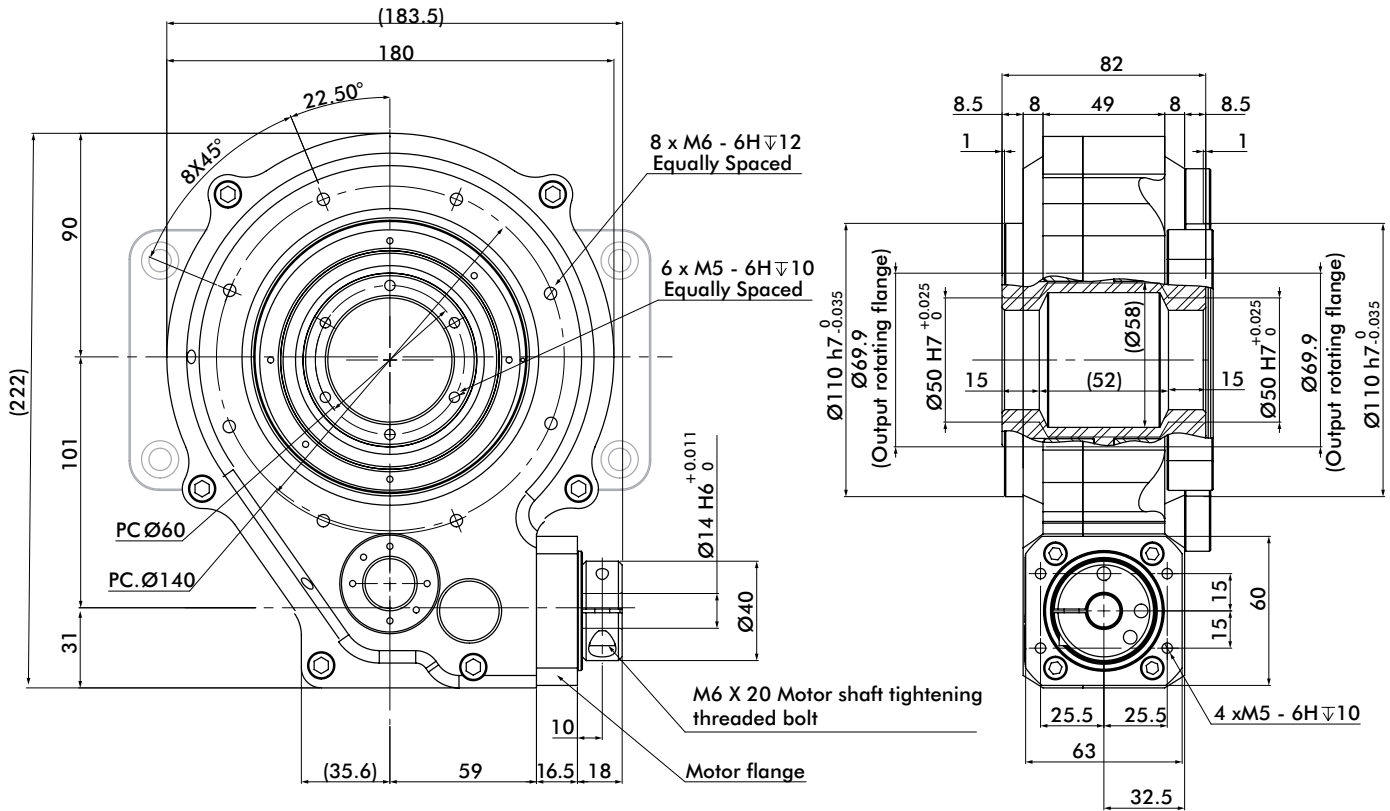
**Estimated lifetime**  $L_h = 12000 \left( \frac{T_{op}}{f \cdot T_{mean}} \right)^{\frac{10}{3}}$  (hours)

#### 5. Selection complete

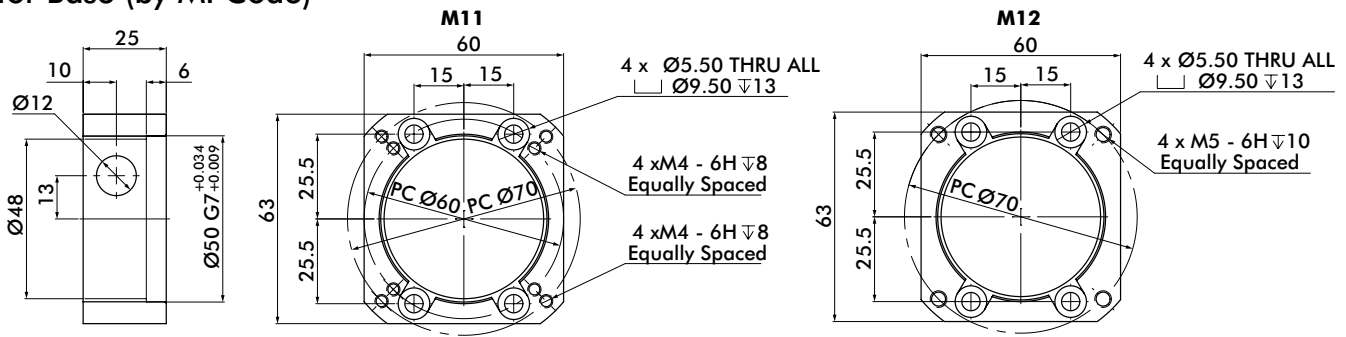
If above values don't satisfy requirements, go back to step 2 and 3 to re-select size.

# PGM40

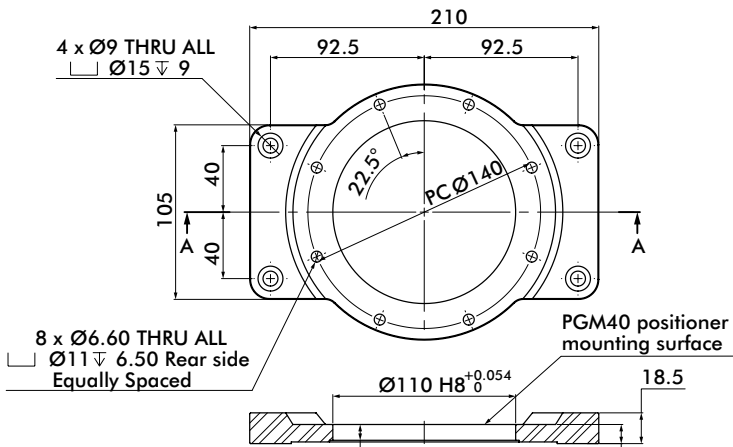
## Parallel Gear Servo Positioner | Dimensions



### Motor Base (by MI Code)



### Optional Fixture Bracket







# RSD SERIES

## Rotary Servo Drive | Product Overview



Flange output



Shaft output



Internal shrink disk output



Shrink disk output

## Smarter Indexing

The **CAMCO RSD Rotary Servo Drive** is a zero-backlash, cam-actuated drive compatible with industry-standard servo motors for precise control, efficiency and flexibility.

Universal mounting

Maintenance-free operation

Large output bearing for greater overturning moment capacity

Large thru-hole for accessory lines (electric, pneumatic, etc.)

IP-65 rating

Class 100 rated with Med-Redi preparation

## Features

Designed to accept a variety of servo motors

Preloaded system

- Zero backlash
- High accuracy
- Smooth motion
- Quiet operation
- High speed

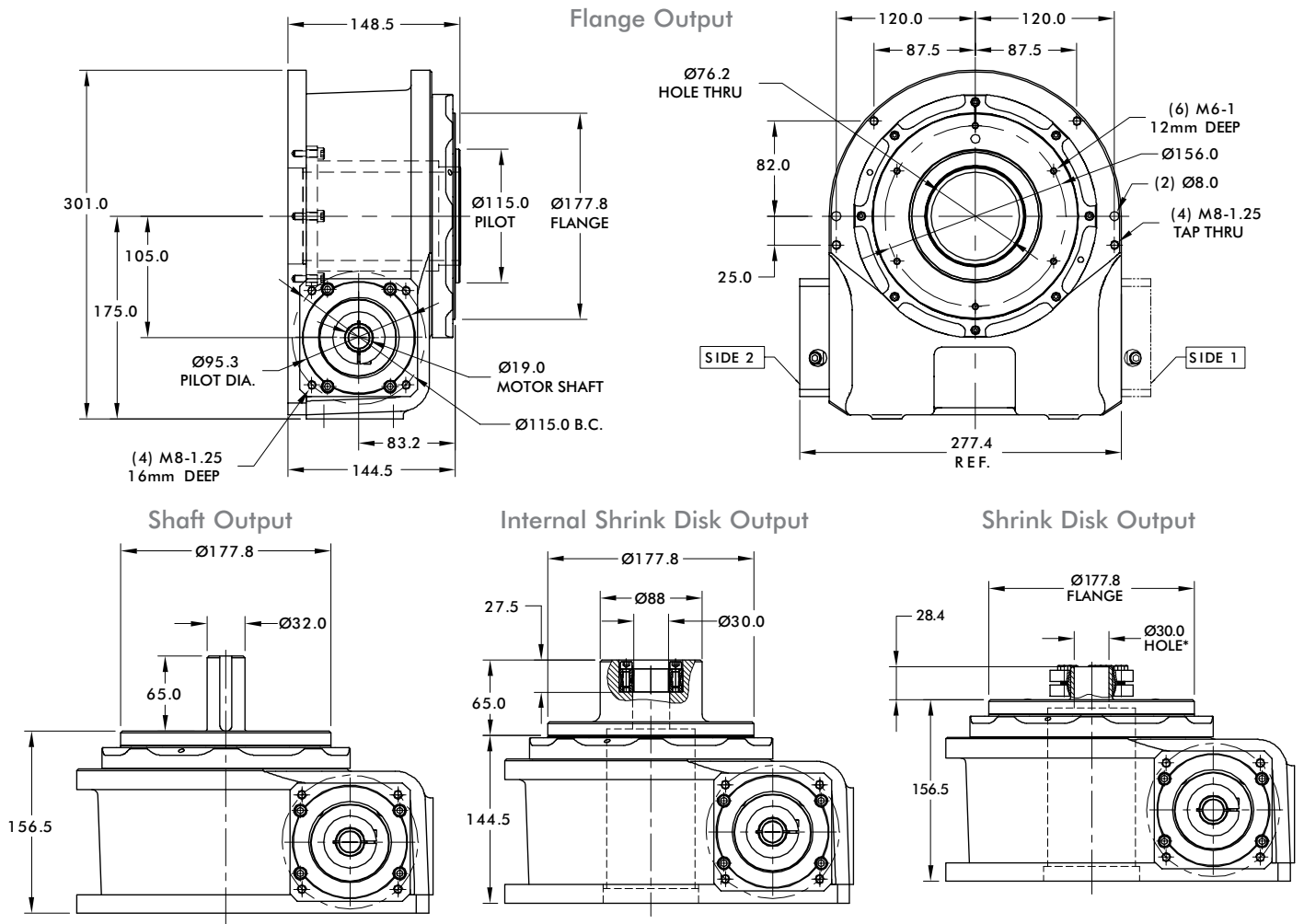
Indexing flexibility

- Run different parts on the same indexer
- Variable indexing: reversing, sorting, vary distance with each index

4:1 to 18:1 ratios in a single stage

# 115RSD SERIES

## Rotary Servo Drive | Dimensions






















\* Also available with 40mm bore.

## Technical Information

Specifications	Units	Standard Ratios			Other Available Ratios					
Single Reduction Ratio	-	8:1	16:1	4:1	5:1	6:1	9:1	12:1	15:1	18:1
Maximum Torque Capacity	in-lbs	3540	3755	2950	3195	3355	3595	3695	3740	3770
Maximum Inertia on Output Dial	lb-in <sup>2</sup>	19,463	77,853	4,866	7,603	10,948	24,633	43,792	68,425	98,533
Unit Output Inertia Reflected at Input Shaft	lb-in <sup>2</sup>	5.29	3.93	11.30	8.75	6.65	4.81	5.14	4.05	3.71
Stiffness	in-lbs/arcmin	169	179	141	153	160	172	177	179	180
Input Torque of Unit Only	in-lb	20			20					
Maximum Axial Load	Lbs	2,270			2,270					
Maximum Radial Load	Lbs	910			910					
Maximum Offset Load (Overturning Moment)	in-lb	3180			3,180					
Output Face Flatness	in. TIR	0.002			0.002					
Axial Run-Out	inches	0.0015			0.0015					
Accuracy	arc seconds	±30			±30					
Repeatability	arc seconds	±7			±7					
Torsional Backlash	arc seconds	0			0					
Operating Temperature Range	°F	40 Minimum			140 Maximum					

# INDEXING PRODUCTS

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	Servo Positioner Rotary Table ..... IN-GTB		RNG Easy Access Dial Indexers ..... IN-RNG
	Double Contact Bearing HD Servo Positioner ..... IN-DSR		Rite-Link Conveyors ..... IN-RLC
	Parallel Gear Servo Positioner ..... IN-PGM		Table-Top Modular Conveyors ..... IN-TTC
	RSD Flexible Servo Drives .. IN-RSD		Heavy Duty Modular Conveyors ..... IN-HDC
	RDM Dial Indexers ..... IN-RDM		LPP Linear Part Handles ..... IN-LPP
	RA Right Angle Drives ..... IN-RA		RPP Rotating Part Handlers .. IN-RPP
	RD HD Dial Indexers ..... IN-RD		Overload Clutches ..... IN-CLU
	E-Series HD Drives ..... IN-EHD		Custom Cams ..... IN-CAM
	MDE/HDE Indexers ..... IN-MDE		
	RGS/RGD Shaft/Flange Drives ..... IN-RGS		
	Parallel Shaft/ Flange Drives ..... IN-PAR		

# ROTARY INDEX DRIVES

Features | Table of Contents



## Features:

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The **CAMCO RDM Series Index Drive** is ideal for rotary dial applications with features including:

Large output Mounting Surface supported by 4-point contact bearing offering superior thrust and moment capacity

Large Center Thru Hole

Low Profile

Complete, Motorized Drive Packages

Optional Output Overload Clutch

## Table of Contents

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80RDM .....	5
601RDM .....	7
902RDM .....	9
1100RDM .....	11
1305RDM .....	13
1800RDM .....	15



# RDM SERIES

## Rotary Index Drive | How To Order

<p><b>Base Model</b> Description</p> <p><b>80RDM</b> w/ R180 reducer &amp; 1/3 hp AC motor (220/440V)</p> <p><b>601RDM</b> w/ R180 reducer &amp; 1/3 hp AC motor (220/440V)</p> <p><b>902RDM</b> w/ R225 reducer &amp; 1 hp AC motor (220/440V)</p> <p><b>1100RDM</b> w/ KH47 reducer &amp; 1-1/2 hp AC motor (220/440V)</p> <p><b>1305RDM</b> w/ 7300C reducer &amp; 2 hp AC motor (220/440V)</p> <p><b>1800RDM</b> w/ 7400C reducer &amp; 3 hp AC motor (220/440V)</p>		<p><b>Control</b> Description</p> <p><b>1</b> 1 hp 120V 80RDM,601RDM &amp; 902RDM only</p> <p><b>2</b> 1 hp 240V 80RDM,601RDM &amp; 902RDM only</p> <p><b>3</b> 1 hp 440V 80RDM,601RDM &amp; 902RDM only</p> <p><b>4</b> 2 hp 240V 1100RDM &amp; 1305RDM only</p> <p><b>5</b> 2 hp 440V 1100RDM &amp; 1305RDM only</p> <p><b>6</b> 3 hp 240V 1800RDM only</p> <p><b>7</b> 3 hp 440V 1800RDM only</p>	
		<p><b>Clutch</b> Description</p> <p><b>1</b> Standard detector plate</p> <p><b>2</b> Detector plate with hole</p>	
		<p><b>Setting</b> (in-lbs)</p> <p><b>A</b> 420</p> <p><b>B</b> 620</p> <p><b>C</b> 750</p> <p><b>D</b> 1150</p> <p><b>E</b> 1750</p> <p><b>F</b> 2950</p> <p><b>G</b> 4000</p> <p>* Eg: For 601RDM</p>	

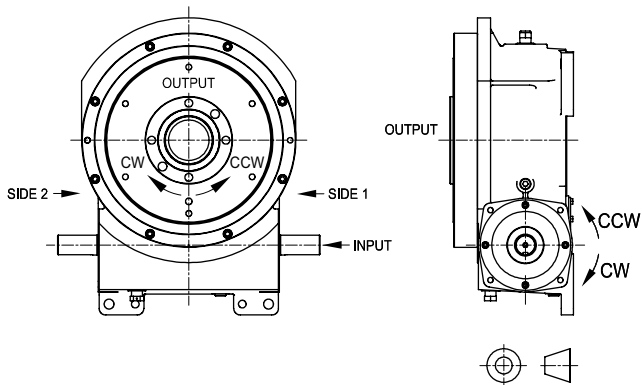
  

<p><b>Motion</b></p> <p><b>A</b> 2</p> <p><b>B</b> 3</p> <p><b>C</b> 4</p> <p><b>D</b> 6</p> <p><b>E</b> 8</p> <p><b>F</b> 12</p> <p><b>G</b> 16</p>	<p><b>Stops</b></p> <p>2</p> <p>3</p> <p>4</p> <p>6</p> <p>8</p> <p>12</p> <p>16</p>	<p><b>Index Period</b></p> <p>330</p> <p>330</p> <p>330</p> <p>330</p> <p>330</p> <p>330</p> <p>330</p>	<p><b>Index Mounting</b> (See Figure 3)</p> <p><b>1</b></p> <p><b>2</b></p> <p><b>3</b></p> <p><b>4</b></p> <p><b>5</b></p> <p><b>6</b></p>	<p><b>Reducer Ratio</b></p> <p><b>1100RDM</b></p> <p><b>A</b> 15 15.86</p> <p><b>B</b> 20 19.58</p> <p><b>C</b> 25 24.06</p> <p><b>D</b> 30 29.37</p> <p><b>E</b> 40 39.61</p> <p><b>F</b> 50 48.95</p> <p><b>G</b> 60 56.83</p> <p><b>H</b> 15 --</p>	<p><b>Reducer Mounting</b> (See Figure 4)</p> <p><b>A</b> <b>J</b></p> <p><b>B</b> <b>K</b></p> <p><b>C</b> <b>L</b></p> <p><b>D</b> <b>M</b></p> <p><b>E</b> <b>N</b></p> <p><b>F</b> <b>P</b></p> <p><b>G</b> <b>R</b></p> <p><b>H</b> <b>S</b></p>	<p><b>Signal Switch</b></p> <p><b>M</b> Mechanical</p> <p><b>D</b> Double</p> <p><b>P</b> Proximity</p> <p><b>Example: MR, MS, DR, DS, PR or PS</b></p>	<p><b>Signal Switch Side</b> (See Figure 2)</p> <p><b>R</b> Reducer</p> <p><b>S</b> Shaft</p>
------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------

Note about signal switch options:  
a) Mechanical is a single switch with cam.  
b) Proximity option is a mounting bracket for 8 or 12 mm proximity switch. A proximity switch will not be supplied. Cam supplied as target.

Other Motions (stops and index periods) available. Contact your DESTACO sales representative for more information.

### Input Shaft Configuration/Rotation (Figure 1)

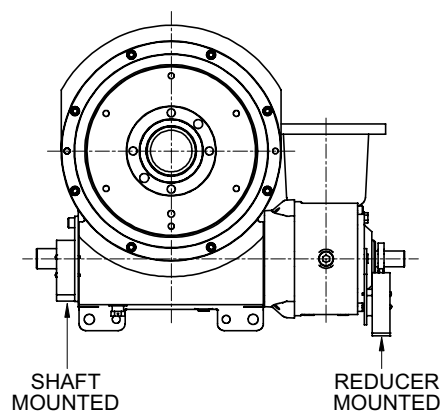


#### Relative Rotation for Right Hand Cam:

CW Input Side 1 CCW Output  
CCW Input Side 2 CCW Output

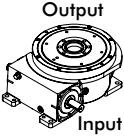
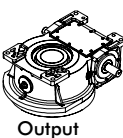
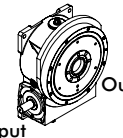
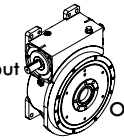
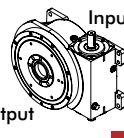
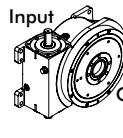
NOTE: Input can be driven in either direction

### Signal Switch Mounting Position (Figure 2)

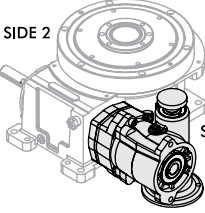
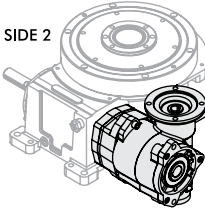
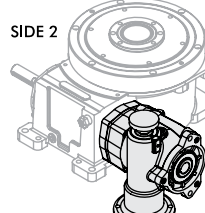
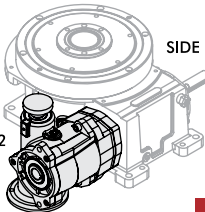
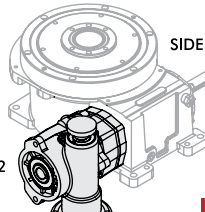
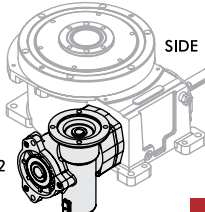
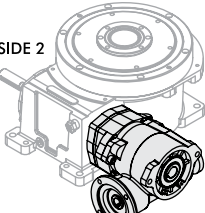
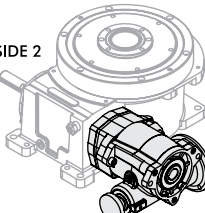
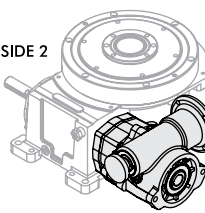
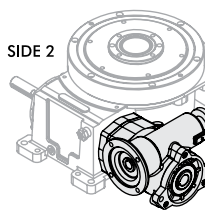
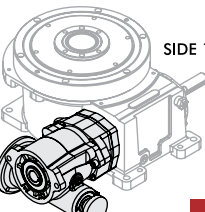
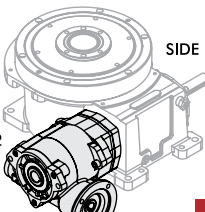
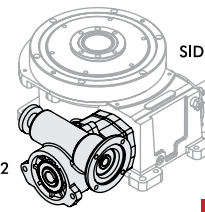
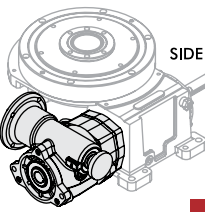


# RDM SERIES

## Rotary Index Drive | Input/Output Orientation (Figure 3)

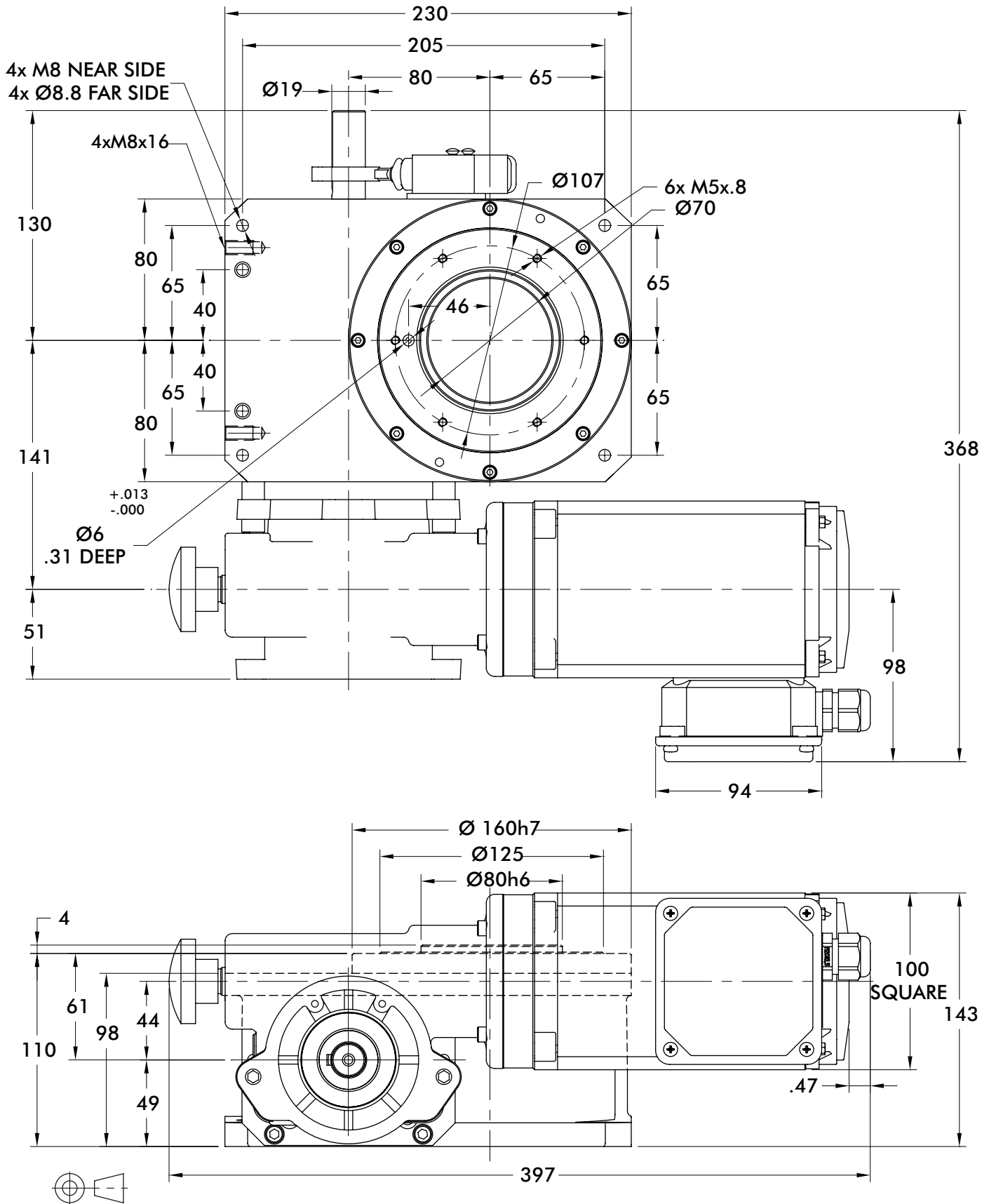
<b>OVOI</b> (output vertical, over input)	<b>OVUI</b> (output vertical, under input)	<b>OHOI</b> (output horizontal, over input)	<b>OHUI</b> (output horizontal, under input)	<b>H-S1-UP</b> (output horizontal, side 1 up)	<b>H-S2-UP</b> (output horizontal, side 2 up)
 <p>Output Input</p> <p><b>1</b></p>	 <p>Input Output</p> <p><b>2</b></p>	 <p>Output Input</p> <p><b>3</b></p>	 <p>Input Output</p> <p><b>4</b></p>	 <p>Input Output</p> <p><b>5</b></p>	 <p>Input Output</p> <p><b>6</b></p>

## Gear Reducer Mounting Positions (Figure 4)

		<b>Mounting "A"</b>		<b>Mounting "B"</b>	
		<b>RD Worm</b>	<b>LD Worm</b>	<b>RD Worm</b>	<b>LD Worm</b>
<b>SIDE 1</b>	 <p><b>A</b></p>	 <p><b>B</b></p>	 <p><b>C</b></p>	 <p><b>D</b></p>	
	<b>SIDE 2</b>	 <p><b>E</b></p>	 <p><b>F</b></p>	 <p><b>G</b></p>	 <p><b>H</b></p>
		<b>Mounting "C"</b>		<b>Mounting "D"</b>	
		<b>RD Worm</b>	<b>LD Worm</b>	<b>RD Worm</b>	<b>LD Worm</b>
<b>SIDE 1</b>	 <p><b>J</b></p>	 <p><b>K</b></p>	 <p><b>L</b></p>	 <p><b>M</b></p>	
	<b>SIDE 2</b>	 <p><b>N</b></p>	 <p><b>P</b></p>	 <p><b>R</b></p>	 <p><b>S</b></p>

# 8ORDM SERIES

## Rotary Index Drive | Dimensions



Unless otherwise noted,  
all dimensions are in mm.

Maximum Inertia x 1000 [lb-in <sup>2</sup> ] for standard package							
Stops	Motion Time [seconds]						
	0.458	0.611	0.764	0.917	1.222	1.528	1.833
2	0	1	2	5	10	16	23
3	1	3	7	11	21	32	47
4	2	6	13	23	46	74	104
6	5	13	28	43	84	137	191
8	7	15	25	39	76	127	191
12	17	34	57	88	170	191	191
16	16	31	52	79	153	191	191
Reducer Ratio							
	15	20	25	30	40	50	60

Contact your DESTACO sales representative for more information.

### Features

- R180 Reducer (Ratios from 15:1 to 60:1)
  - Double Extended Worm Shaft (Input)
  - Worm Shaft Handwheel
- Double Extended Camshaft (Input Shaft)
- Center Thru Hole (70 mm / 2.76 in. Diameter)
- 1/3 hp AC Drive Package with Inverter Duty Motor and IM-pAC AC Drive (up to 60 cpm)
- Cycle Cam and Limit Switch Mounted to Camshaft
- Right Hand Cam
- Universal Mounting Capability

### Optional Accessories

- 1/3 hp DC Motor
- Varipak DC Motor Control (up to 30 cpm)
- Stationary Center Post
- Dual Cam and Limit Switch
- Electric Clutch-Brake
- Left Hand Cam

### Output Load Capacity (loads carried during index):

Radial	755 lbs
Thrust/Axial	1,885 lbs
Moment	1,885 in-lb

### Typical Application Dial Diameter:

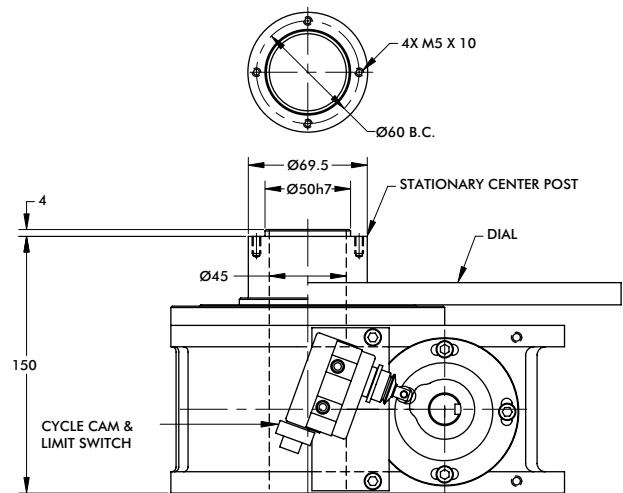
8 in. to 28 in.

### Accuracy

±44 arcsec / ±.003" at 14" Radius

### Repeatability

±11 arcsec / ±.0007" at 14" Radius



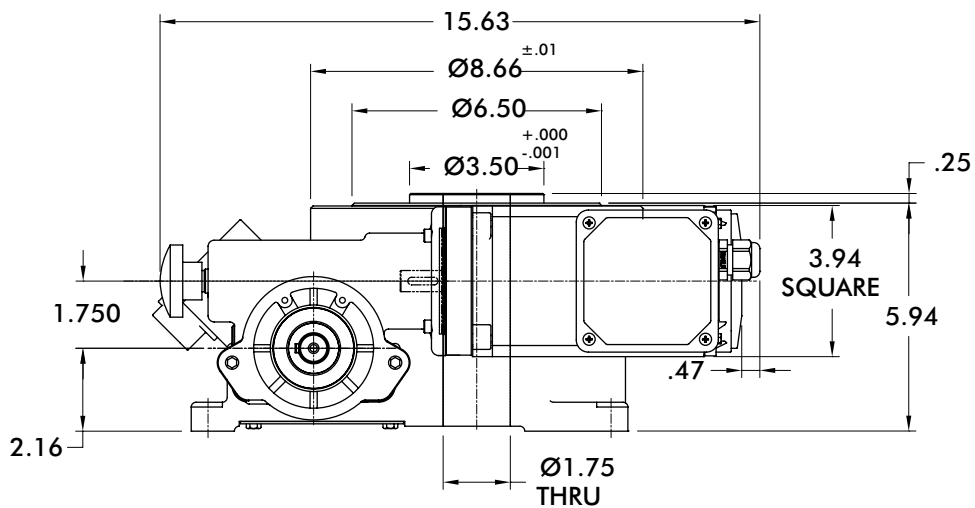
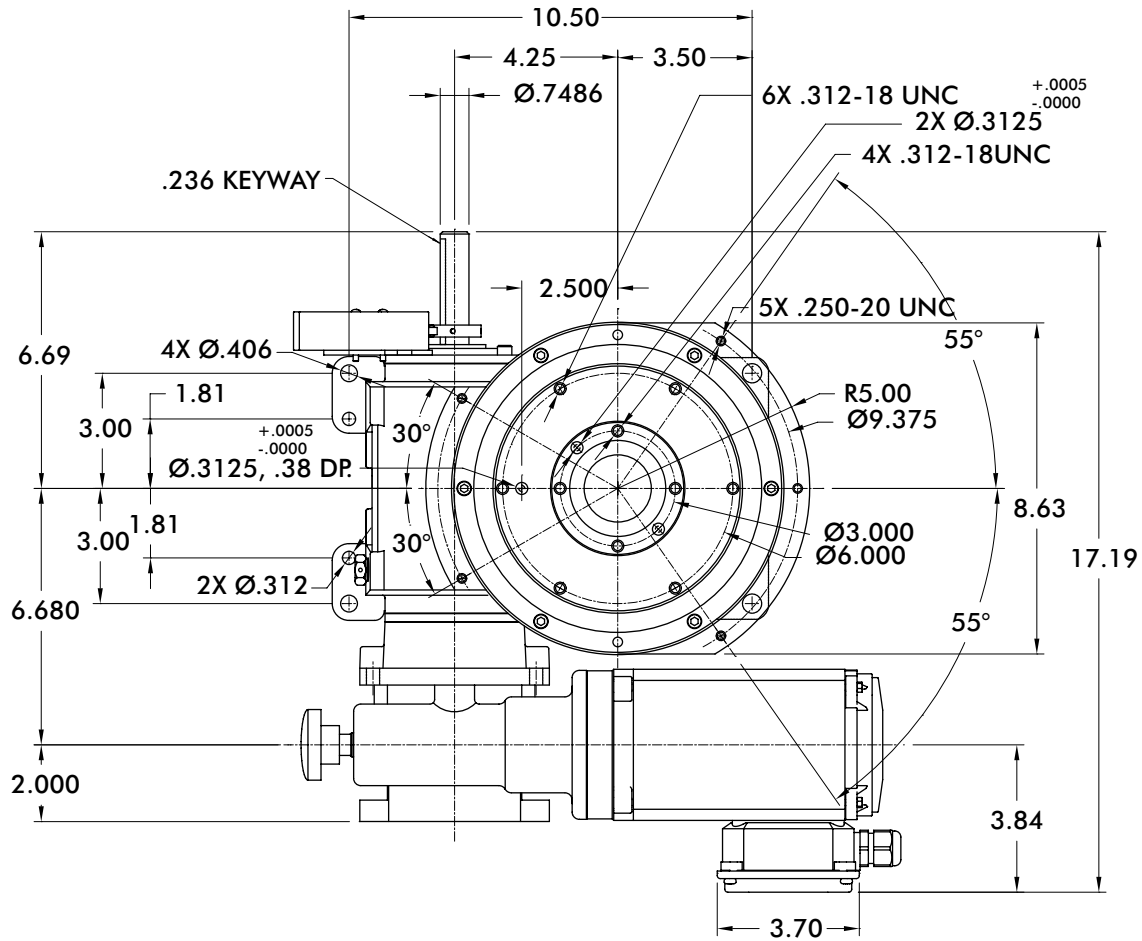
8ORDM OPTIONS



Unless otherwise noted,  
all dimensions are in mm.

# 601RDM SERIES

## Rotary Index Drive | Dimensions



Unless otherwise noted,  
all dimensions are in inches.



Maximum Inertia x 1000 [lb-in <sup>2</sup> ] for standard package							
Stops	Motion Time [seconds]						
	0.458	0.611	0.764	0.917	1.222	1.528	1.833
2	0	1	2	5	11	17	24
3	1	3	7	12	28	42	58
4	2	6	13	23	52	78	106
6	5	14	28	51	112	168	228
8	10	25	51	90	199	299	406
12	22	57	115	204	449	478	478
16	40	101	205	361	478	478	478
Reducer Ratio							
	15	20	25	30	40	50	60

Other Motions (stops and index periods) available. Contact your DESTACO sales representative for more information.

### Features

- R180 Reducer (Ratios from 15:1 to 60:1)
  - Double Extended Worm Shaft (Input)
  - Worm Shaft Handwheel
- Double Extended Camshaft (Input Shaft)
- Center Thru Hole (1.75 in. Diameter)
- 1/3 hp AC Drive Package with Inverter Duty Motor and IM-pAC AC Drive (up to 60 cpm)
- Cycle Cam and Limit Switch Mounted to Camshaft
- Right Hand Cam

### Output Load Capacity (loads carried during index):

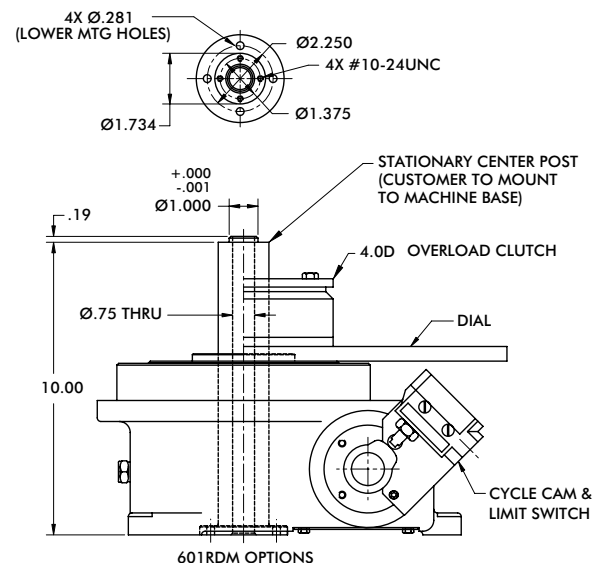
Radial	945 lbs
Thrust/Axial	2,360 lbs
Moment	3,305 in-lb

### Typical Application

<b>Dial Diameter:</b>	12 in. to 36 in.
<b>Accuracy</b>	±39 arcsec / ±.003" at 18" Radius
<b>Repeatability</b>	±10 arcsec / ±.0009" at 18" Radius

### Optional Accessories

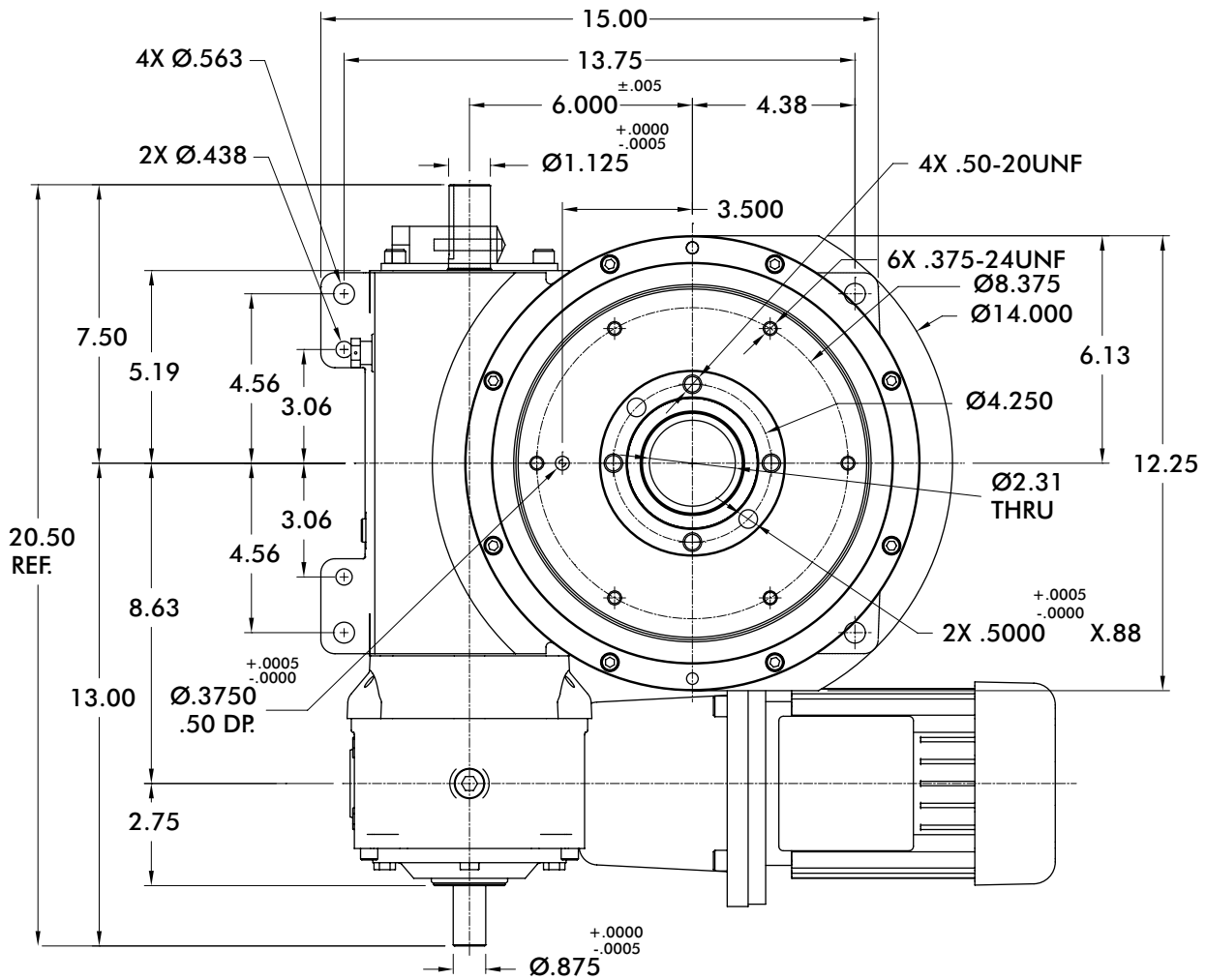
- 1/3 hp DC Motor
- Varipak DC Motor Control (up to 30 cpm)
- Output Overload Clutch model 4.0D
  - Available Settings (in-lbs): 420, 620, 750, 1150, 1750, 2940, 4000
- Stationary Center Post
- Dual Cam and Limit Switch
- Left Hand Cam
- Relief in Dwell for shot-pin applications



Unless otherwise noted, all dimensions are in inches.

# 902RDM SERIES

## Rotary Index Drive | Dimensions



Unless otherwise noted,  
all dimensions are in inches.

Maximum Inertia x 1000 [lb-in <sup>2</sup> ] for standard package							
Stops	Motion Time [seconds]						
	0.458	0.611	0.764	0.917	1.222	1.528	1.833
2	1	3	7	12	26	40	55
3	4	11	23	41	84	126	174
4	8	20	41	73	150	226	310
6	18	44	90	158	323	485	667
8	32	80	160	282	575	864	1,187
12	73	181	338	487	865	1,352	1,948
16	130	313	506	728	1,295	2,024	2,914
Reducer Ratio							
	15	20	25	30	40	50	60

Other Motions (stops and index periods) available. Contact your DESTACO sales representative for more information.

### Features

- R225 Reducer (Ratios from 15:1 to 60:1)
- Single Extended wormshaft (Standard)
- Double Extended Camshaft (Input Shaft)
- Center Thru Hole (2.25 in. Diameter)
- 1 hp AC Drive Package with Inverter Duty Motor and IM-pAC AC Drive (up to 60 cpm)
- Cycle Cam and Limit Switch Mounted to Camshaft
- Right Hand Cam

### Output Load Capacity (loads carried during index):

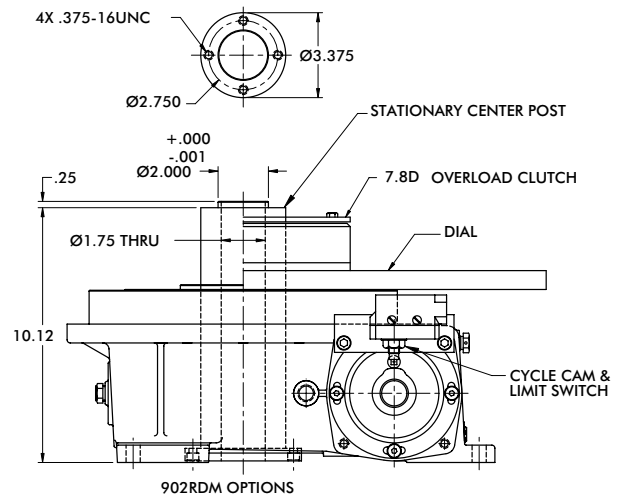
Radial	3,540 lbs
Thrust/Axial	7,000 lbs
Moment	21,620 in-lb

### Typical Application

<b>Dial Diameter:</b>	20 in. to 48 in.
<b>Accuracy</b>	±27 arcsec / ±.003" at 24" Radius
<b>Repeatability</b>	±7 arcsec / ±.0008" at 24" Radius

### Optional Accessories

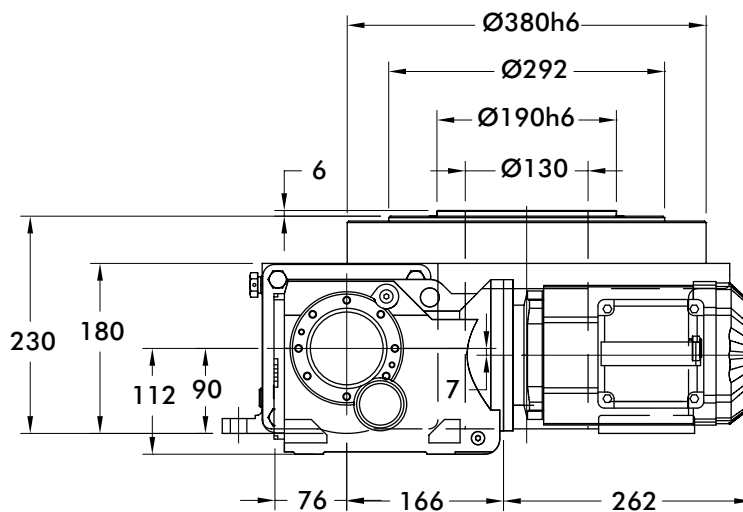
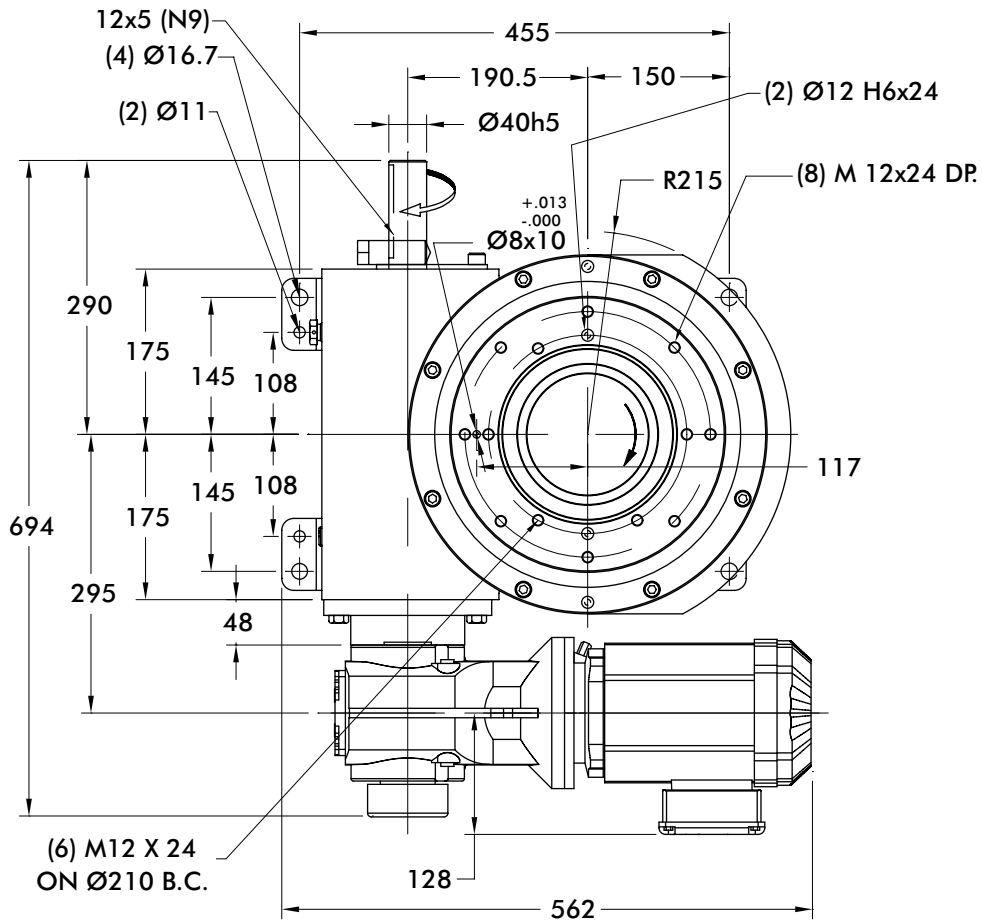
- 1 hp DC Motor
- Varipak DC Motor Control (up to 30 cpm)
- Output Overload Clutch model 7.8D
  - Available Settings (in-lbs): 1400, 1700, 2600, 3200, 4200, 5000, 7200, 10000
- Stationary Center Post
- Dual Cam and Limit Switch
- Base Riser Blocks
- Electric Clutch-Brake
- Left Hand Cam
- Relief in Dwell for shot-pin applications



Unless otherwise noted,  
all dimensions are in inches.

# 1100RDM SERIES

## Rotary Index Drive | Dimensions



Unless otherwise noted,  
all dimensions are in mm.

Maximum Inertia x 1000 [lb-in <sup>2</sup> ] for standard package							
Stops	Motion Time [seconds]						
	0.458	0.611	0.764	0.917	1.222	1.528	1.833
2	1	5	11	22	60	117	177
3	6	13	27	52	137	265	400
4	13	27	55	104	270	521	785
6	30	61	120	227	582	1,122	1,688
8	55	111	216	405	1,037	1,995	2,705
12	126	251	488	913	2,335	4,293	5,786
16	225	449	869	1,414	2,659	4,061	5,474
Reducer Ratio							
	15.86	19.58	24.06	29.32	39.61	48.95	56.83

Other Motions (stops and index periods) available. Contact your DESTACO sales representative for more information.

### Features

- KH47 Reducer and AC Motor with Optional Brake
- Double Extended Camshaft (Input Shaft)
- Center Thru Hole (130 mm / 5.1 in. Diameter)
- AC drive package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
- Cycle Cam and Limit Switch Mounted to Camshaft
- Right Hand Cam

### Output Load Capacity (loads carried during index):

Radial	3100 lbs
Thrust/Axial	8000 lbs
Moment	28,674 in-lbs

### Typical Application Dial Diameter:

20 in. to 60 in.

### Accuracy

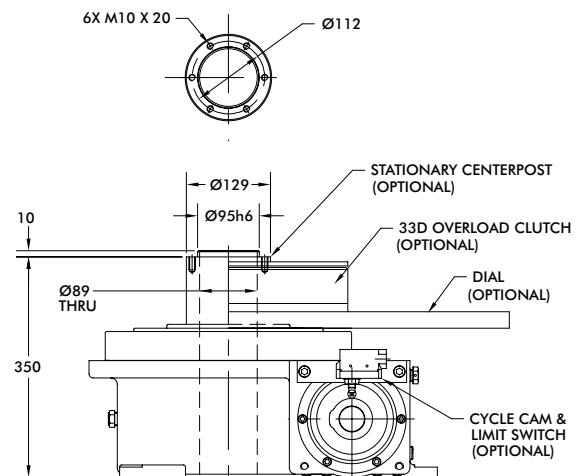
±22 arcsec / ±.003" at 30" Radius

### Repeatability

±5 arcsec / ±.0008" at 30" Radius

### Optional Accessories

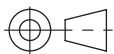
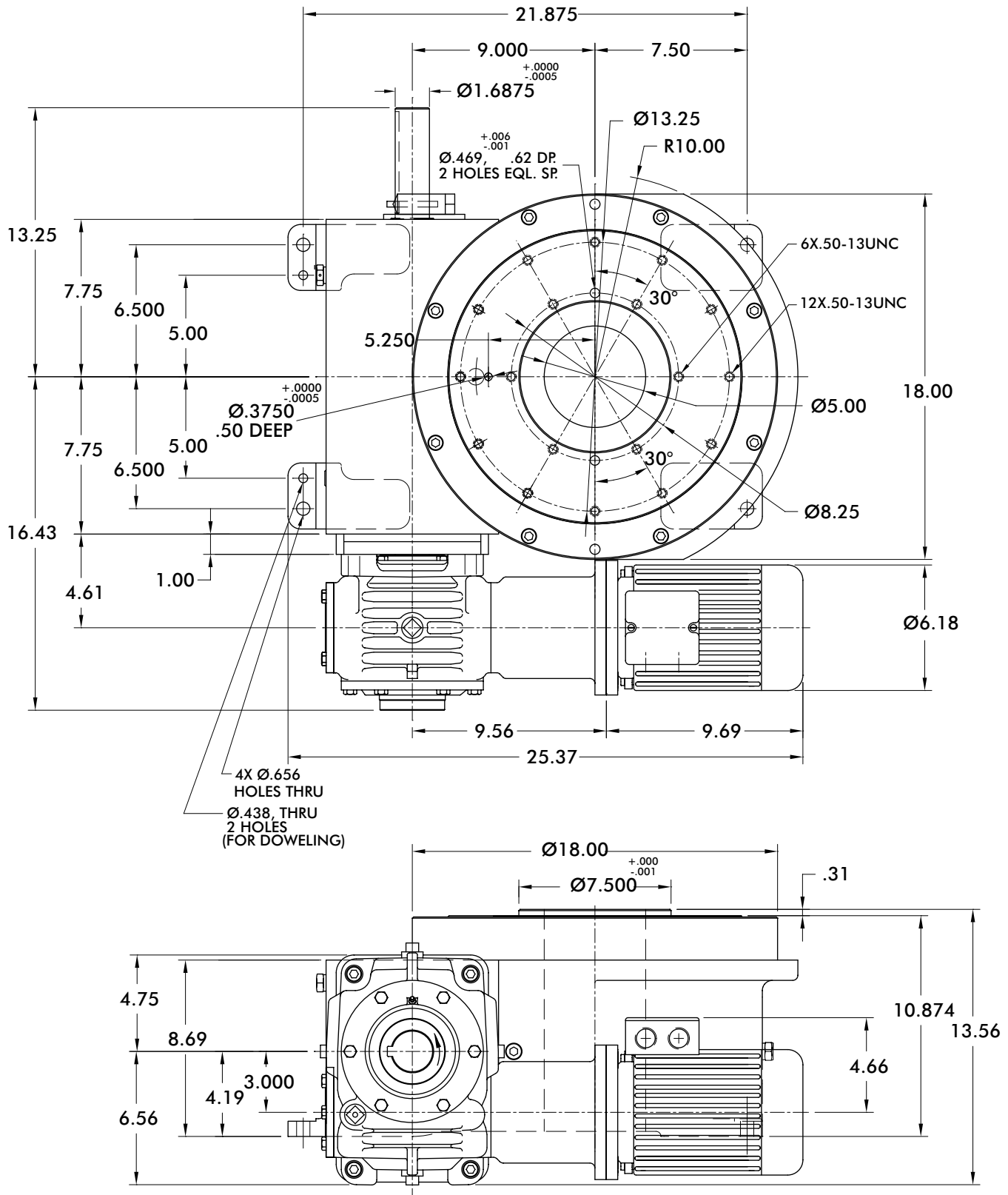
- 7300C Reducer (Ratios from 15:1 to 60:1)
- 1.5 hp DC motor
- Varipak DC Motor Control (up to 30 cpm)
- 7350C Heavy Duty Reducer (Ratios from 10:1 to 60:1)
- Stationary Center Post
- Dual Cam and Limit Switch
- Left Hand Cam
- Relief in Dwell for shot-pin applications



Unless otherwise noted,  
all dimensions are in mm.

# 1305RDM SERIES

## Rotary Index Drive | Dimensions



Unless otherwise noted,  
all dimensions are in inches.



Maximum Inertia x 1000 [lb-in <sup>2</sup> ] for standard package							
Stops	Motion Time [seconds]						
	0.458	0.611	0.764	0.917	1.222	1.528	1.833
2	0	4	13	26	48	73	102
3	2	11	26	50	88	133	184
4	10	32	71	130	227	340	467
6	25	72	154	281	485	724	994
8	47	131	277	502	864	1,290	1,770
12	111	300	629	1,134	1,950	2,908	3,988
16	200	537	1,121	2,019	3,470	5,173	7,092
Reducer Ratio							
	15	20	25	30	40	50	60

Other Motions (stops and index periods) available. Contact your DESTACO sales representative for more information.

### Features

- 7300C Reducer (Ratios from 15:1 to 60:1)
- Double Extended Camshaft (Input Shaft)
- Center Thru Hole (5.00 in. Diameter)
- 2 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
- Cycle Cam and Limit Switch Mounted to Camshaft
- Right Hand Cam

### Output Load Capacity (loads carried during index):

Radial	4,650 lbs
Thrust/Axial	11,650 lbs
Moment	40,528 in-lb

### Typical Application

#### Dial Diameter:

20 in. to 72 in.

#### Accuracy

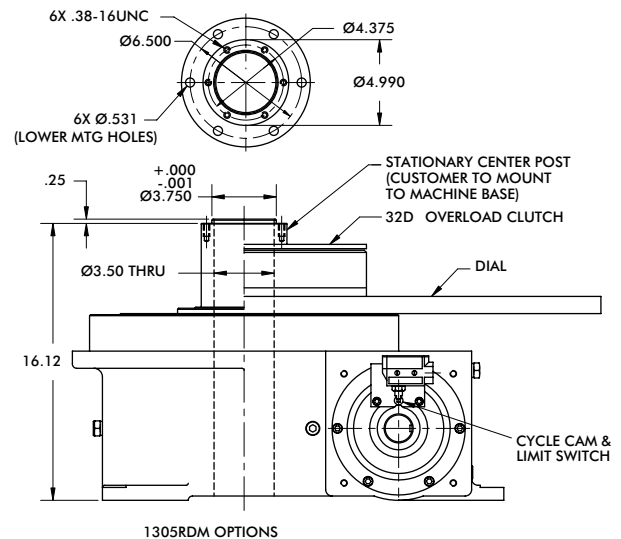
±38 arcsec / ±.007" at 36" Radius

#### Repeatability

±10 arcsec / ±.002" at 36" Radius

### Optional Accessories

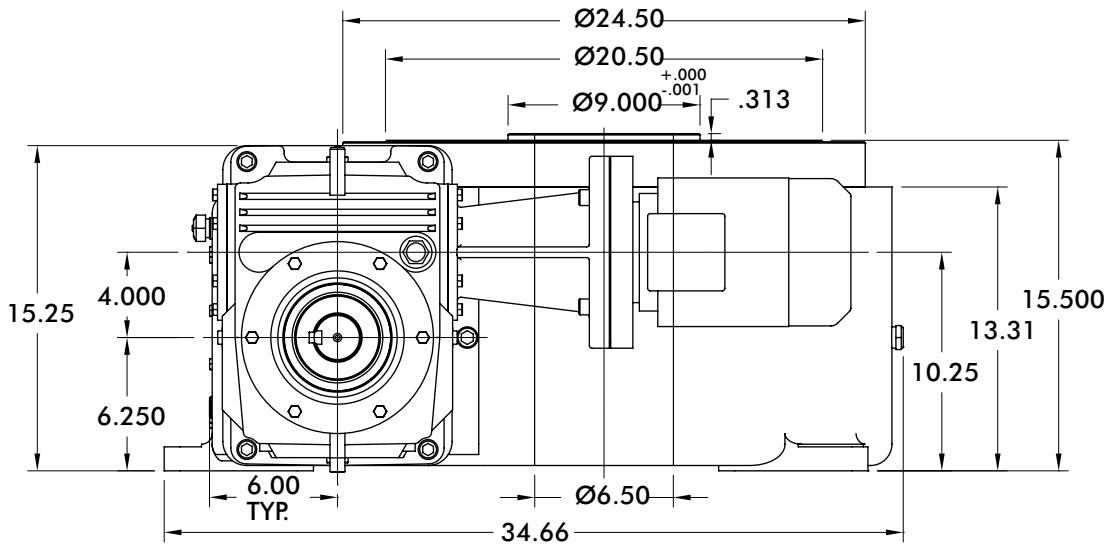
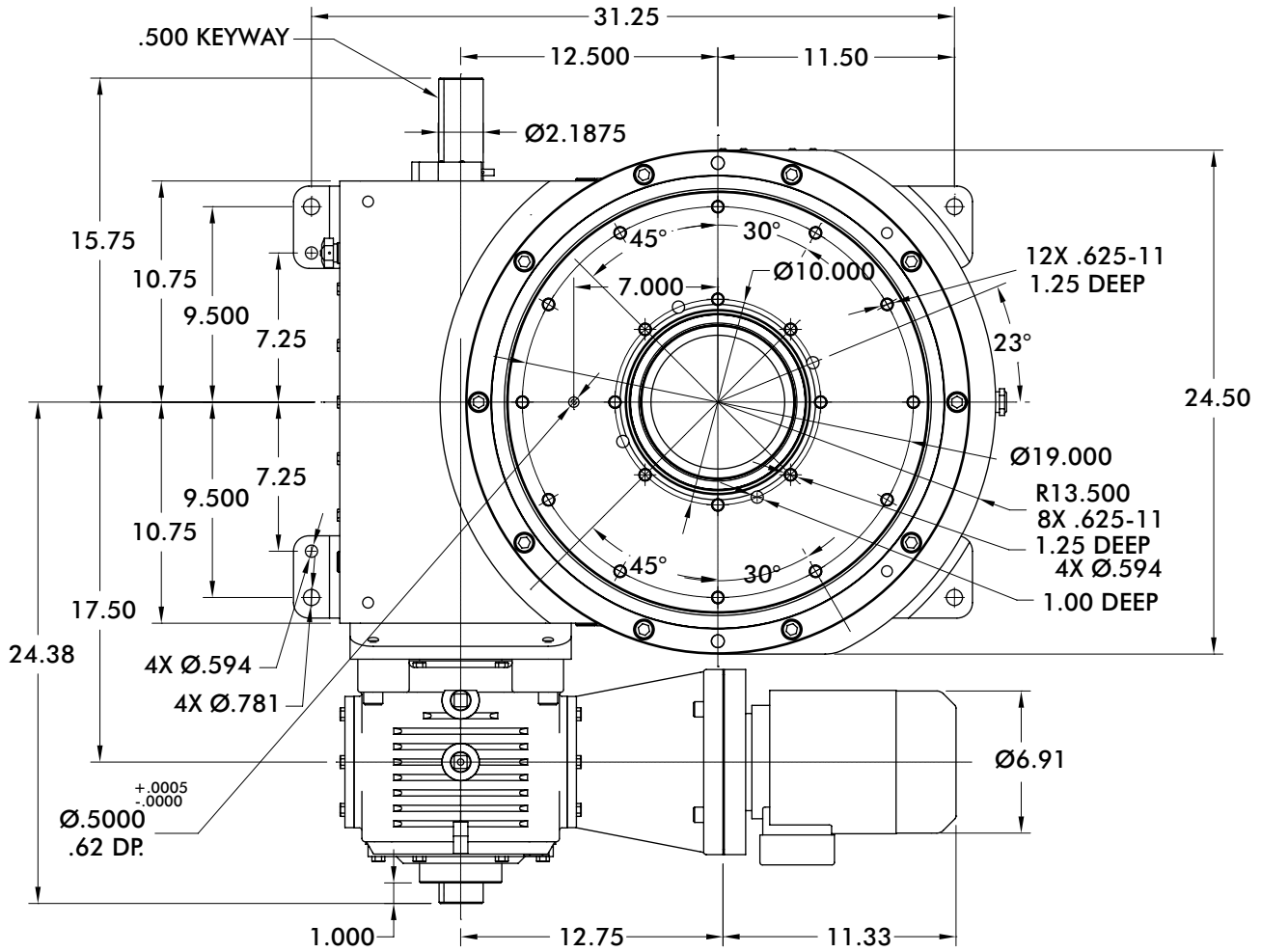
- 2 hp DC Motor
- Varipak DC Motor Control (up to 30 cpm)
- 7350C Heavy Duty Reducer (Ratios from 10:1 to 60:1)
- Output Overload Clutch model 32D
  - Available Settings (in-lbs): 8500, 13000, 20000, 31000
- Stationary Center Post
- Dual Cam and Limit Switch
- Base Riser Blocks
- Electric Clutch-Brake
- Left Hand Cam
- Relief in Dwell for shot-pin applications



Unless otherwise noted, all dimensions are in inches.

# 1800RDM SERIES

## Rotary Index Drive | Dimensions



Unless otherwise noted,  
all dimensions are in inches.

# 1800RDM SERIES

## Rotary Index Drive | Product Overview | Technical Specifications

Maximum Inertia x 1000 [lb-in <sup>2</sup> ] for standard package							
Stops	Motion Time [seconds]						
	0.458	0.611	0.764	0.917	1.222	1.528	1.833
2	0	0	8	27	91	182	256
3	0	11	41	87	246	472	655
4	1	31	85	169	455	862	1,192
6	19	83	197	375	981	1,842	2,542
8	45	158	361	678	1,754	3,286	4,530
12	120	376	832	1,544	3,966	7,412	10,211
16	224	679	1,490	2,756	7,062	13,188	18,163
Reducer Ratio							
	15	20	25	30	40	50	60

### Features

- 7400C Reducer (Ratios from 15:1 to 60:1)
- Double Extended Camshaft (Input Shaft)
- Center Thru Hole (6.50 in. Diameter)
- 2 or 3 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
- Cycle Cam and Limit Switch Mounted to Camshaft
- Right Hand Cam

### Output Load Capacity (loads carried during index):

- Radial 5,850 lbs
- Thrust/Axial 14,650 lbs
- Moment 68,119 in-lb

### Typical Application Dial Diameter:

26 in. to 96 in.

### Accuracy

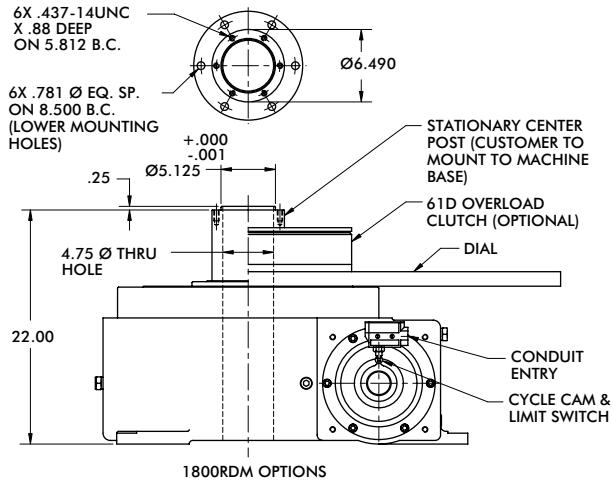
±27 arcsec / ±.006" at 48" Radius

### Repeatability

±7 arcsec / ±.0016" at 48" Radius

### Optional Accessories




















- 2 hp DC Motor with Varipak DC Motor Control (up to 30 cpm)
- 3 hp DC Motor
- 7500C Heavy Duty Reducer (Ratios from 10:1 to 60:1)
- Output Overload Clutch model 61D – Available Settings (in-lbs): 23000, 36000, 44000, 50000, 60000
- Stationary Center Post
- Dual Cam and Limit Switch
- Base Riser Blocks
- Electric Clutch-Brake
- Left Hand Cam
- Relief in Dwell for shot-pin applications



Unless otherwise noted, all dimensions are in inches.

# INDEXING PRODUCTS

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	Parallel Gear Servo Positioner ..... IN-PGM		Table-Top Modular Conveyors ..... IN-TTC
	RSD Flexible Servo Drives .. IN-RSD		Heavy Duty Modular Conveyors ..... IN-HDC
	RDM Dial Indexers ..... IN-RDM		LPP Linear Part Handles ..... IN-LPP
	RA Right Angle Drives ..... IN-RA		RPP Rotating Part Handlers .. IN-RPP
	RD HD Dial Indexers ..... IN-RD		Overload Clutches ..... IN-CLU
	E-Series HD Drives ..... IN-EHD		Custom Cams ..... IN-CAM
	MDE/HDE Indexers ..... IN-MDE		
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# RIGHT ANGLE INDEX DRIVES

Features | Table of Contents



## **Features:**

---

**CAMCO Right Angle Index Drives** are ideal for dial applications or actuation-type applications such as driving a linkage or in-line conveyor.

Fixed center distance between input and output

Hardened, ground barrel cam

Compact design requiring minimum use of floor space.

Preloaded “rib-centered” design with modified-sine motion provides smooth acceleration and deceleration with precision positioning.

Universal mounting available on RA models.

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# RA SERIES

## Right Angle Index Drive | How to Order

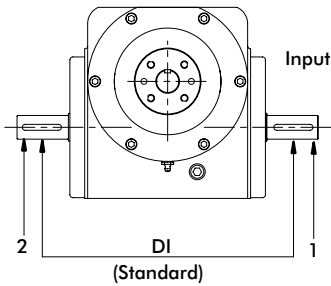
### Indexer Ordering Procedure

1. Model
2. Input Shaft Configuration
  - Side 1
  - Side 2
  - Double Input – DI (Standard)
4. Indexer Mounting Position: 1-6
5. Indexer Housing Mounting Holes: Side 1-6 (more than one side can be selected)

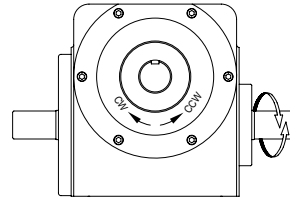
### Reducer Ordering Procedure

1. Model
2. Ratio: 5:1, 10:1, 15:1, 20:1, 25:1, 30:1, 40:1, 50:1, 60:1
3. Motor Adapter
4. Reducer Input Shaft Extension: Single Input (SE) or Double Input (DE)
5. Mounting (see diagram below)

### Input Shaft Configuration (Top View)



### Input Shaft Rotation

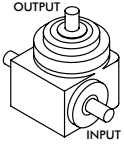
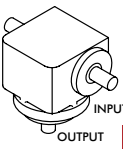
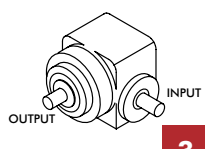
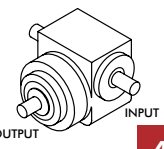
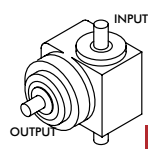
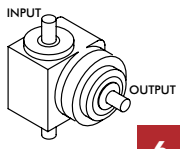


#### Relative Rotation for Right Hand Cam:

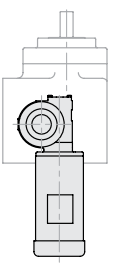
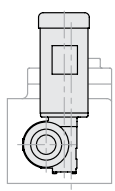
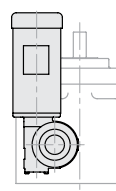
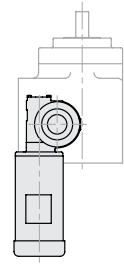
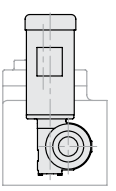
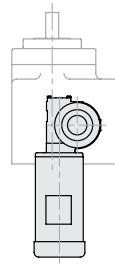
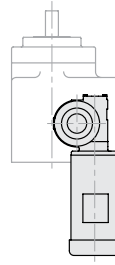
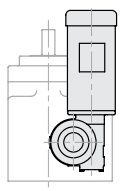
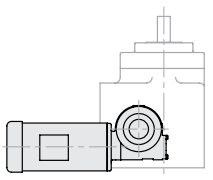
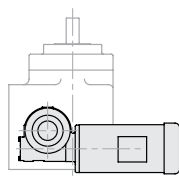
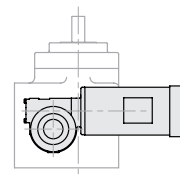
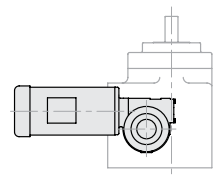
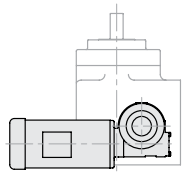
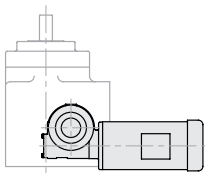
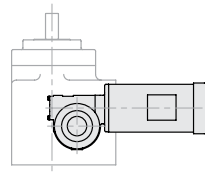
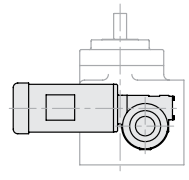
- CW Input Side 1 CCW Output
- CCW Input Side 2 CCW Output

NOTE: Input can be driven in either direction



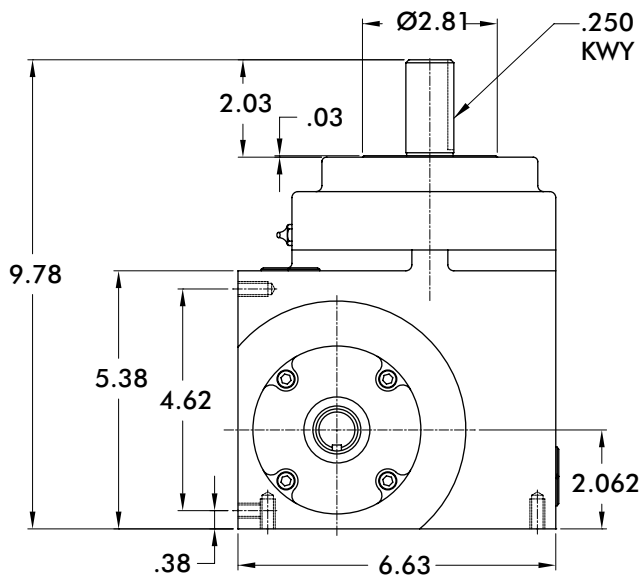
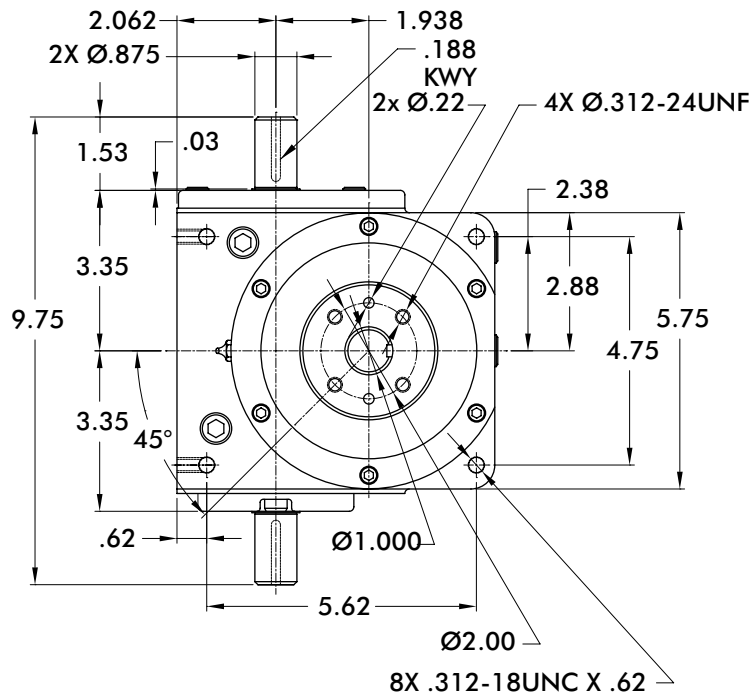
<b>OVOI</b> (output vertical, over input)	<b>OVUI</b> (output vertical, under input)	<b>OHOI</b> (output horizontal, over input)	<b>OHUI</b> (output horizontal, under input)	<b>H-S1-UP</b> (output horizontal, side 1 up)	<b>H-S2-UP</b> (output horizontal, side 2 up)
 <b>1</b>	 <b>2</b>	 <b>3</b>	 <b>4</b>	 <b>5</b>	 <b>6</b>

### Gear Reducer Mounting Positions

		<b>Mounting "A"</b>		<b>Mounting "B"</b>	
		<b>RH</b>	<b>LH</b>	<b>RH</b>	<b>LH</b>
<b>SIDE 1</b>	 <b>A</b>	 <b>B</b>	 <b>C</b>	 <b>D</b>	
	<b>SIDE 2</b>	 <b>E</b>	 <b>F</b>	 <b>G</b>	 <b>H</b>
		<b>Mounting "C"</b>		<b>Mounting "D"</b>	
		<b>RH</b>	<b>LH</b>	<b>RH</b>	<b>LH</b>
<b>SIDE 1</b>	 <b>J</b>	 <b>K</b>	 <b>L</b>	 <b>M</b>	
	<b>SIDE 2</b>	 <b>N</b>	 <b>P</b>	 <b>R</b>	 <b>S</b>

# 400RA SERIES

## Right Angle Index Drive | Dimensions



400RA Indexer Capacities					
Stops	Index Period	Motion	B <sub>10</sub> Capacity at 50 RPM (in-lb)	Internal Inertia (lb-in <sup>2</sup> )	Model
2	330	ms	595	15	400RA2H20-330
3	270	ms	1591	15	400RA3H24-270
4	270	ms	1858	15	400RA4H24-270
	180	ms	2098	15	400RA4H24-180
6	270	ms	1711	15	400RA6H24-270
	120	ms	2024	15	400RA6H24-120
8	270	ms	1987	15	400RA8H24-270
	120	ms	2354	15	400RA8H24-120
12	270	ms	1290	15	400RA12H20-270
	120	ms	1568	15	400RA12H20-120
16	270	ms	1426	15	400RA16H20-270 II
	180	ms	2947	15	400RA16H24-180 II
24	270	ms	1640	15	400RA24H20-270 II
	180	ms	1894	15	400RA24H20-180 II

Other Motions (stops and index periods) available. Contact your DESTACO sales representative for more information.

### Features

- R180 Reducer (ratios from 15:1 to 60:1)
  - Double Extended Worm Shaft (Input)
  - Worm Shaft Handwheel
- Double Extended Camshaft (Input Shaft)
- 1/3 hp AC Drive Package with Inverter Duty Motor and IM-pAC AC Drive (up to 60 cpm)
- Cycle Cam and Limit Switch Mounted to Camshaft
- Right Hand Cam

### Output Load Capacity (loads carried during index):

Radial	810 lbs
Thrust/Axial	1,406 lbs
Moment	1,620 in-lb

**Accuracy** ±48 arcsec / ±.0007" at 3" Radius

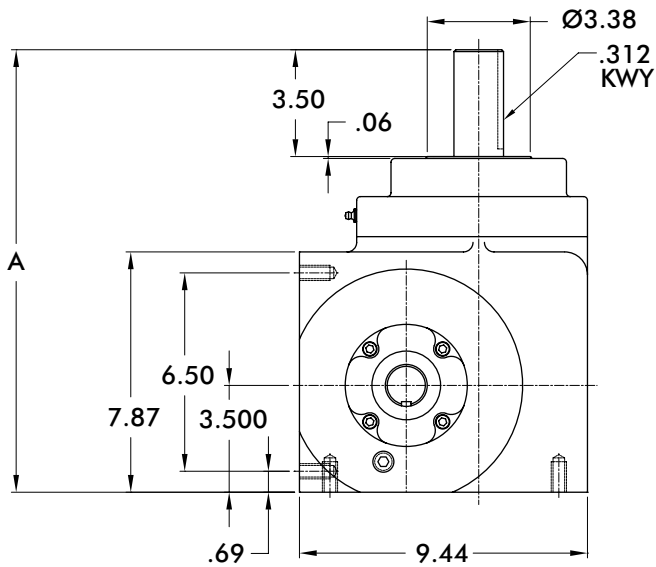
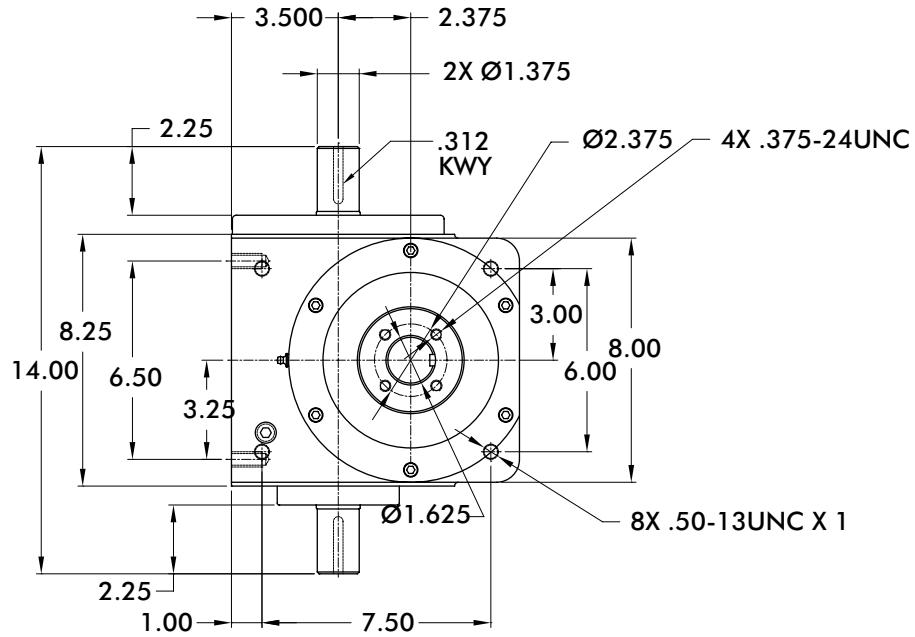
**Repeatability** ±12 arcsec / ±.0002" at 3" Radius

### Optional Accessories

- 1/3 hp DC motor
- R225 Reducer (ratios from 10:1 to 60:1)
  - 1 hp DC Motor
  - 56C Motor Adapter and Coupling
- Varipak DC Motor Control (up to 30 cpm)
- Output Overload Clutch Models: 2.3F, 2.3FC, 2.3S, 2.3C, 2.3FC-SD, 2.3S-SD, 2.3C-SD
  - Available Settings (in-lb): 400, 600, 700, 850, 1000, 1300, 1800, 2000, 2300
- Dual Cycle Cam and Limit Switch
- Finished cover for ceiling mount or tooling plate mounting
- Left Hand Cam
- Relief in Dwell for shot-pin applications

# 512RA SERIES

## Right Angle Index Drive | Dimensions



512RA Indexer Capacities						
Stops	Index Period	Motion	B <sub>10</sub> Capacity at 50 RPM (in-lb)	Internal Inertia (lb-in <sup>2</sup> )	Model	A
2	270	msc.33	2061	45	512RA2H32-270 MSC.33	14.93
3	270	ms	2360	45	512RA3H32-270	14.50
	180	msc.33	2852	45	512RA3H32-180 MSC 0.33	14.93
4	270	ms	2710	45	512RA4H32-270	14.50
	120	msc.33	3648	45	512RA4H32-120 MSC 0.33	14.93
6	270	ms	2613	45	512RA6H32-270	14.50
	120	ms	3179	45	512RA6H32-120	14.50
8	270	ms	3172	45	512RA8H32-270	14.50
	120	ms	3802	45	512RA8H32-120	14.50
12	270	ms	2738	45	512RA12H28-270	14.50
	120	ms	3176	45	512RA12H28-120	14.93

Other Motions (stops and index periods) available. Contact your DESTACO sales representative for more information.

### Features

- R225 Reducer (ratios from 10:1 to 60:1)
  - 56C Motor Adapter and Coupling
- Double Extended Camshaft (Input Shaft)
- 1 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
- Cycle Cam and Limit Switch Mounted to Camshaft
- Right Hand Cam

### Output Load Capacity (loads carried during index):

Radial	1,986 lbs
Thrust/Axial	2,277 lbs
Moment	6,951 in-lb

**Accuracy** ±37 arcsec / ±.0011" at 6" Radius

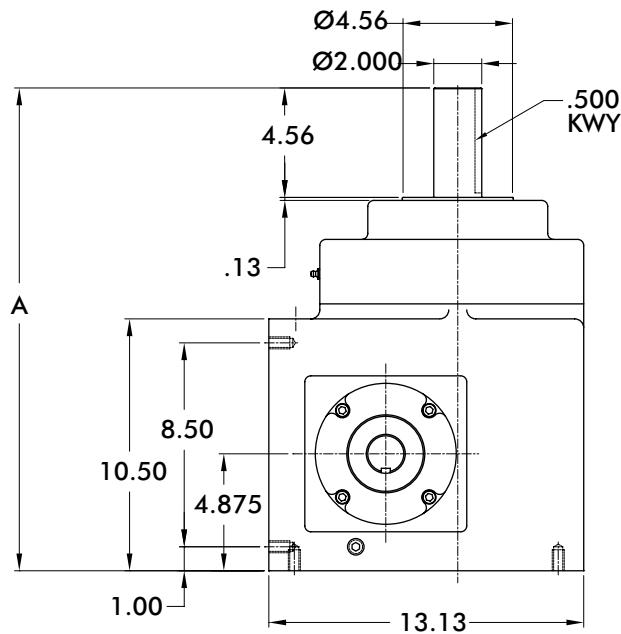
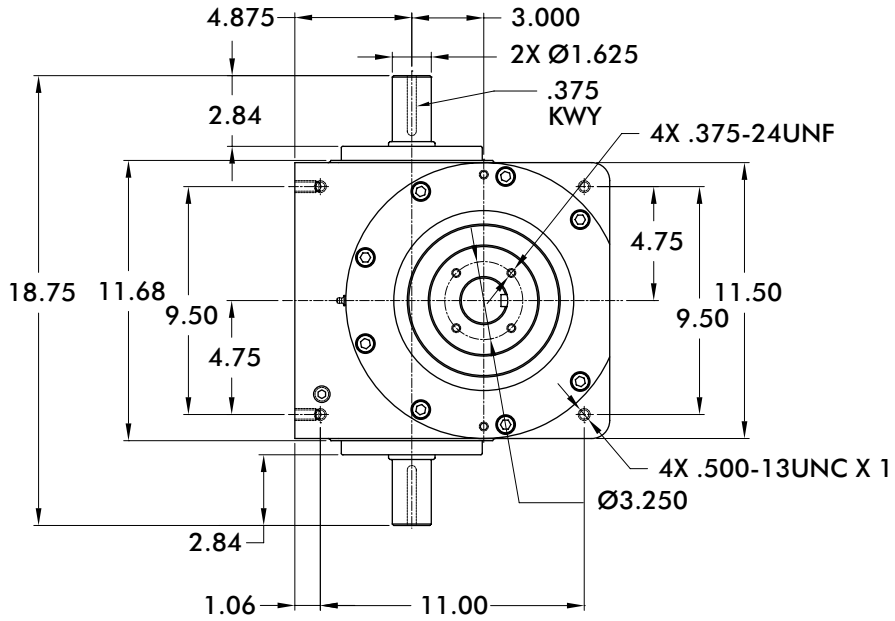
**Repeatability** ±9 arcsec / ±.0003" at 6" Radius

### Optional Accessories

- 1 hp DC motor
- Varipak DC Motor Control (up to 30 cpm)
- Output Overload Clutch Models: 6.0F, 6.0FC, 6.0S and 6.0C, 6.0C-SD, 6.0FC-SD, 6.0S-SD
  - Available Settings (in-lb): 670, 825, 1100, 1400, 1700, 2000, 2300, 2500, 3000, 3800, 4000, 5000, 6000
- Dual Cycle Cam and Limit Switch
- Finished cover for ceiling mount or tooling plate mounting
- Left Hand Cam
- Relief in Dwell for shot-pin applications

# 662RA SERIES

## Right Angle Index Drive | Dimensions





662RA Indexer Capacities						
Stops	Index Period	Motion	B <sub>10</sub> Capacity at 50 RPM (in-lb)	Internal Inertia (lb-in <sup>2</sup> )	Model	A
2	270	ms	6534	172	662RA2H48-270	20.88
3	270	ms	5913	169	662RA3H40-270	20.13
	180	ms	6146	169	662RA3H40-180	20.88
4	270	ms	6903	172	662RA4H40-270	20.13
	120	ms	7751	172	662RA4H40-120	20.88
6	270	ms	5734	169	662RA6H40-270	20.13
	120	ms	7551	169	662RA6H40-120	20.13
8	270	ms	7187	172	662RA8H40-270	20.13
	90	ms	8987	172	662RA8H40-90	20.88
12	270	ms	4504	165	662RA12H32-270	20.13
	90	ms	5536	165	662RA12H32-90	20.88

Other Motions (stops and index periods) available. Contact your DESTACO sales representative for more information.

### Features

- 7300C Reducer (ratios from 5:1 to 60:1)
  - Motor Adapter and Coupling
- Double Extended Camshaft (Input Shaft)
- 1 or 2 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
- Varipak DC Motor Control (up to 30 cpm)
- Cycle Cam and Limit Switch Mounted to Camshaft
- Right Hand Cam

### Output Load Capacity (loads carried during index):

Radial	2,842 lbs
Thrust/Axial	5,239 lbs
Moment	2,959 in-lb

**Accuracy** ±36 arcsec / ±.001" at 6" Radius




















**Repeatability** ±9 arcsec / ±.0003" at 6" Radius

### Optional Accessories

- 1 hp DC motor
- 7350C Reducer (ratios from 5:1 to 60:1)
  - Motor Adapter and Coupling
- 2 hp DC Motor with Varipak DC Motor Control (up to 30 cpm)
- Output Overload Clutch Models: 11F, 11FC, 11FC-SD
  - Available Settings (in-lb): 2300, 4000, 6000, 8500, 11,000
- Dual Cycle Cam and Limit Switch
- Finished cover for ceiling mount or tooling plate mounting
- Left Hand Cam
- Relief in Dwell for shot-pin applications

# INDEXING PRODUCTS

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	Parallel Gear Servo Positioner ..... IN-PGM		Table-Top Modular Conveyors ..... IN-TTC
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	RA Right Angle Drives ..... IN-RA		RPP Rotating Part Handlers .. IN-RPP
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	MDE/HDE Indexers ..... IN-MDE		
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	Parallel Shaft/ Flange Drives ..... IN-PAR		

# ROLLER DIAL INDEX DRIVES

Features | Table of Contents



## Features:

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**CAMCO Roller Dial Index Drives** have a robust, flexible design with superior load capabilities. Other features include:

Short camshaft motion periods, due to oversized roller gear cam design, are well suited for continuous running applications or for special motion requirements such as oscillating motions

Universal mounting including a horizontal mounting ideal for trunnion applications

Option Center Thru-Hole facilitates passage of electrical wiring, pneumatic lines or mechanical linkages

Optional Stationary Center Post with thru-hole provides mounting for upper tool plate

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# RD SERIES

## Roller Dial Index Drives | How To Order

<b>Base Model</b>	Description
<b>425RD</b>	w/ R180 reducer & 1/3 hp AC motor (220/440V)
<b>800RD</b>	w/ 7300C reducer & 2 hp AC motor (220/440V)
<b>1301RD</b>	w/ 7350C reducer & 2 hp AC motor (220/440V)
<b>1801RD</b>	w/ 7500C reducer & 3 hp AC motor (220/440V)

**Control** (only available with these models)

- 1** 1 hp 120V 425RD only
- 2** 1 hp 240V 425RD only
- 3** 1 hp 440V 425RD only
- 4** 2 hp 240V 800RD & 1301RD only
- 5** 2 hp 440V 800RD & 1301RD only
- 6** 3 hp 240V 1801RDM only
- 7** 3 hp 440V 1801RDM only



Motion	Stops	Index Period
<b>A</b>	2	330
<b>B</b>	3	330
<b>C</b>	4	330
<b>D</b>	6	330
<b>E</b>	8	330
<b>F</b>	12	330
<b>G</b>	16	330*

\*1301RD & 1801RD

**Index Mounting**  
(See Figure 1)

- 1**
- 2**
- 3**
- 4**
- 5**
- 6**

**Reducer Ratio**

- A** 15
- B** 20
- C** 25
- D** 30
- E** 40
- F** 50
- G** 60

**Reducer Mounting**  
(See Figure 4)

- A** **J**
- B** **K**
- C** **L**
- D** **M**
- E** **N**
- F** **P**
- G** **R**
- H** **S**

**Signal Switch**    **Signal Switch Side**  
(See Figure 2)

- M** Mechanical    **R** Reducer
- P** Proximity      **S** Shaft

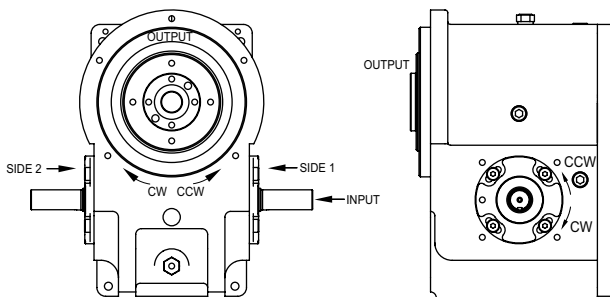
**Example: MR, MS, PR or PS**

Note about signal switch options:

- a) Mechanical is a single switch with cam.
- b) Proximity option is a mounting bracket for 8 or 12 mm proximity switch. A proximity switch will not be supplied. Cam supplied as target.

Other Motions (stops and index periods) available. Contact your DESTACO sales representative for more information.

### Input Shaft Configuration/Rotation (Figure 1)

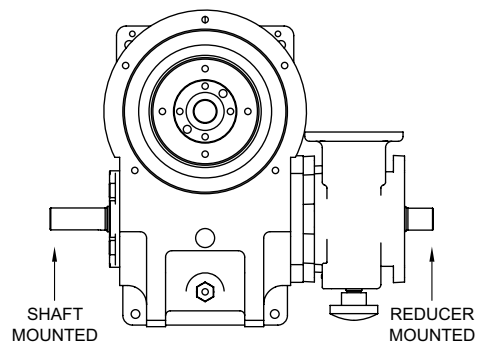


**Relative Rotation for Right Hand Cam:**

CW Input Side 1 CCW Output  
CCW Input Side 2 CWW Output

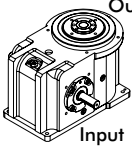
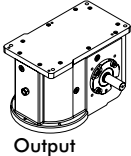
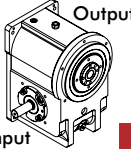
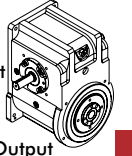
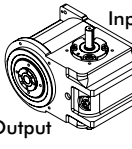
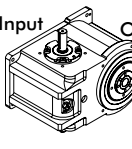
NOTE: Input can be driven in either direction

### Signal Switch Mounting Position (Figure 2)

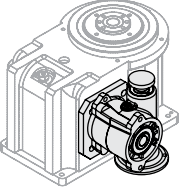
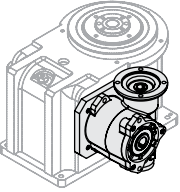
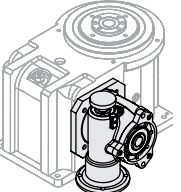
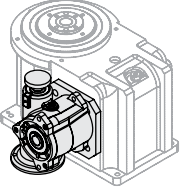
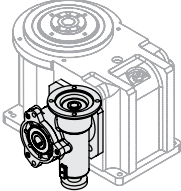
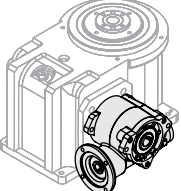
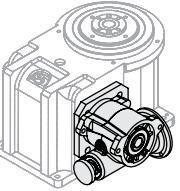
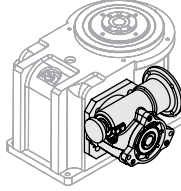
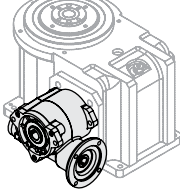
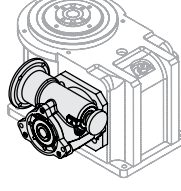
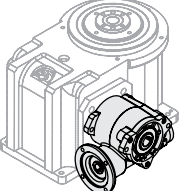
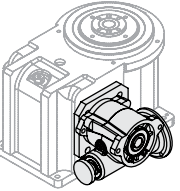
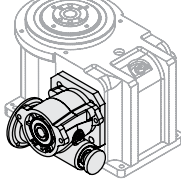
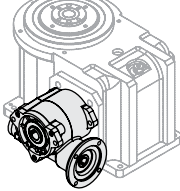


# RD SERIES

## Roller Dial Index Drives | Input/Output Orientation (Figure 3)

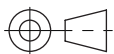
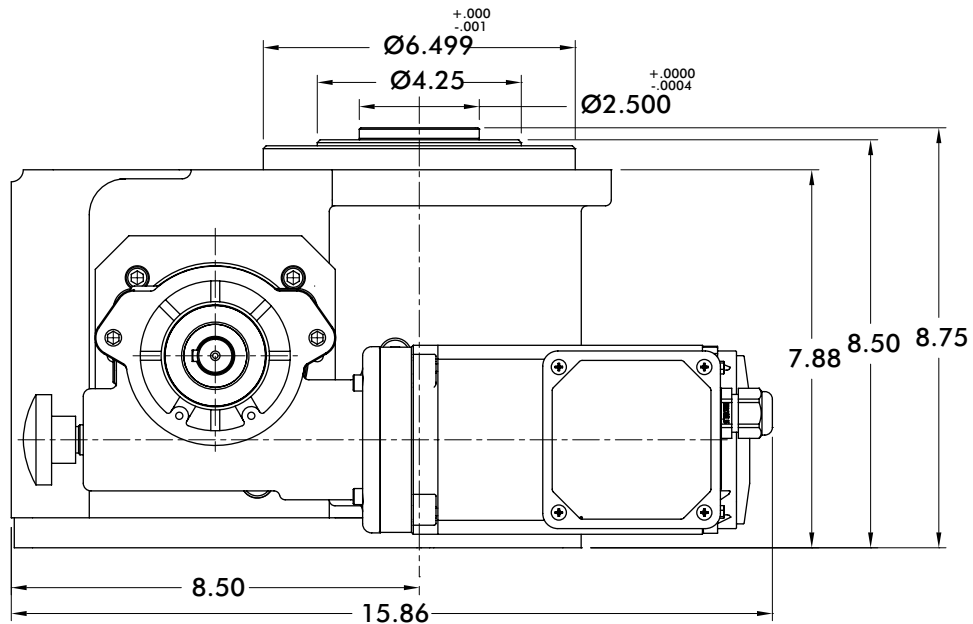
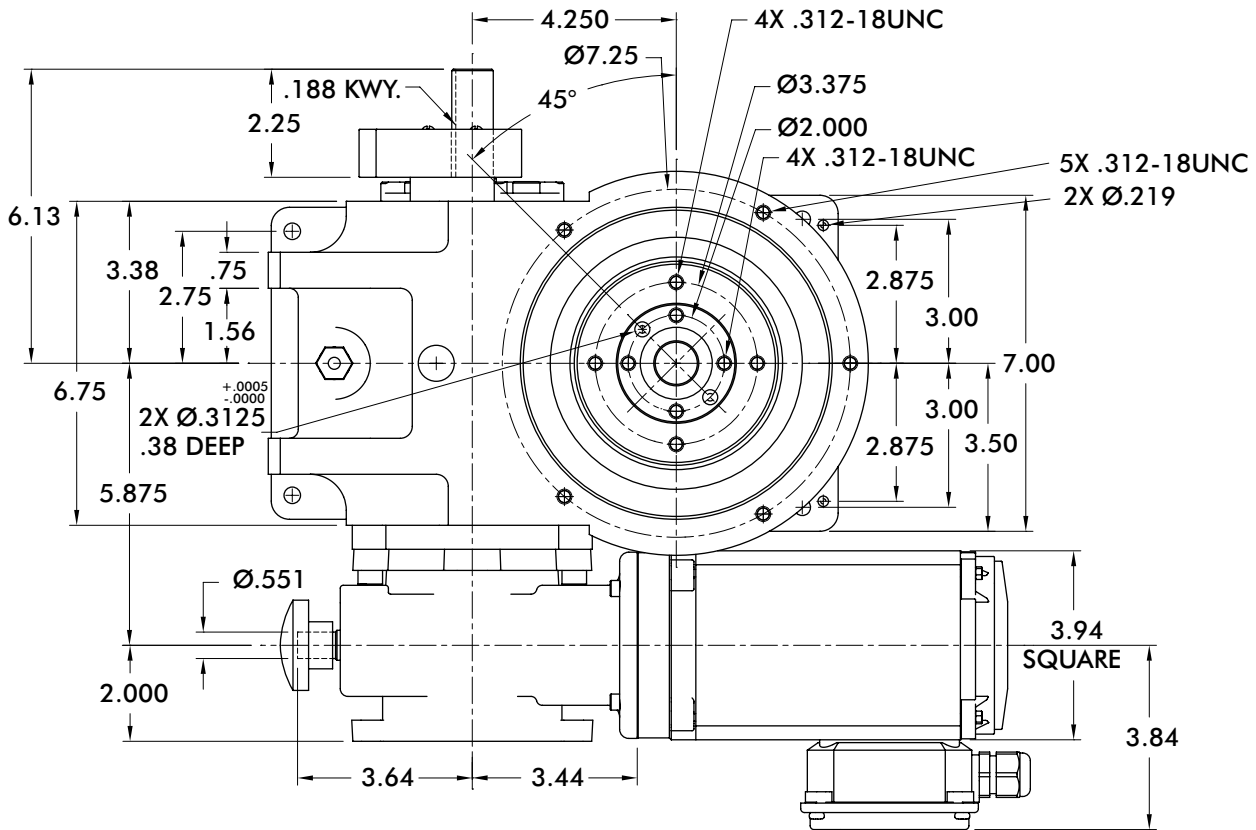
<b>OVOI</b> (output vertical, over input)	<b>OVUI</b> (output vertical, under input)	<b>OHOI</b> (output horizontal, over input)	<b>OHUI</b> (output horizontal, under input)	<b>H-S1-UP</b> (output horizontal, side 1 up)	<b>H-S2-UP</b> (output horizontal, side 2 up)
 <p>Output</p> <p>Input</p> <p><b>1</b></p>	 <p>Input</p> <p>Output</p> <p><b>2</b></p>	 <p>Output</p> <p>Input</p> <p><b>3</b></p>	 <p>Input</p> <p>Output</p> <p><b>4</b></p>	 <p>Input</p> <p>Output</p> <p><b>5</b></p>	 <p>Input</p> <p>Output</p> <p><b>6</b></p>

## Gear Reducer Mounting Positions (Figure 4)

		<b>Mounting "A"</b>		<b>Mounting "B"</b>	
		<b>RD Worm</b>	<b>LD Worm</b>	<b>RD Worm</b>	<b>LD Worm</b>
<b>SIDE 1</b>		<b>A</b>			
		<b>E</b>			
<b>SIDE 2</b>		<b>J</b>			
		<b>N</b>			
		<b>Mounting "C"</b>		<b>Mounting "D"</b>	
		<b>RD Worm</b>	<b>LD Worm</b>	<b>RD Worm</b>	<b>LD Worm</b>
<b>SIDE 1</b>		<b>J</b>		<b>L</b>	<b>M</b>
		<b>N</b>		<b>R</b>	<b>S</b>

# 425RD SERIES

## Roller Dial Index Drives | Dimensions



Unless otherwise noted,  
all dimensions are in inches.



Maximum Inertia x 1000 [lb-in <sup>2</sup> ] for standard package							
Stops	Motion Time [seconds]						
	0.458	0.611	0.764	0.917	1.222	1.528	1.833
2	0	1	2	4	11	16	22
3	1	2	6	11	25	37	50
4	1	5	10	19	44	66	90
6	4	11	24	44	100	150	156
8	7	20	43	79	156	156	156
12	16	45	89	136	147	147	147
Reducer Ratio							
	15	20	25	30	40	50	60

## Features

- R180 Reducer (ratios from 15:1 to 60:1)
  - Double Extended Worm Shaft (Input)
  - Worm Shaft Handwheel
- Double Extended Camshaft (Input Shaft)
- 1/3 hp AC Drive Package with Inverter Duty Motor and IM-pAC AC Drive (up to 60 cpm)
- R225 Reducer with 1 hp AC or DC Motor (ratios of 5:1 to 60:1)
- Cycle Cam and Limit Switch Mounted to Camshaft
- Right Hand Cam

## Optional Accessories

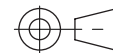
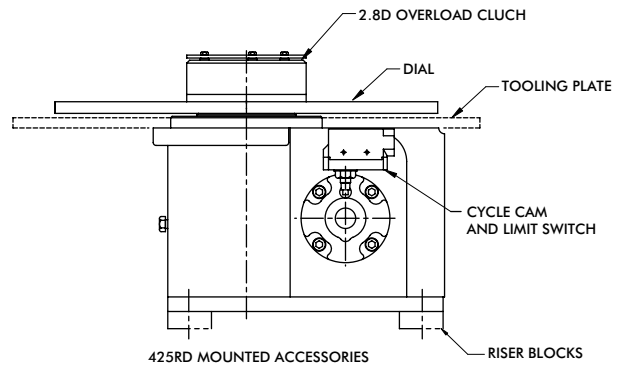
- 1/3 hp DC Motor
- Varipak DC Motor Control (up to 30 cpm)
- 2.8D Output Overload Clutch
  - Available Settings (in-lbs): 400, 480, 700, 850, 1100, 1300, 1800, 2200, 3100
- Center Thru Hole (0.81 in. Diameter)
- Stationary Center Post
- Dual Cam and Limit Switch
- Left Hand Cam
- Relief in Dwell for shot-pin applications
- Universal Mounting Capability
- Custom Dial Plate

## Output Load Capacity (loads carried during index):

Radial	2,700 lbs
Thrust/Axial	1,600 lbs
Moment	5,800 in-lbs

**Accuracy** ±47 arcsec / ±.0027" at 12" Radius

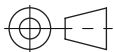
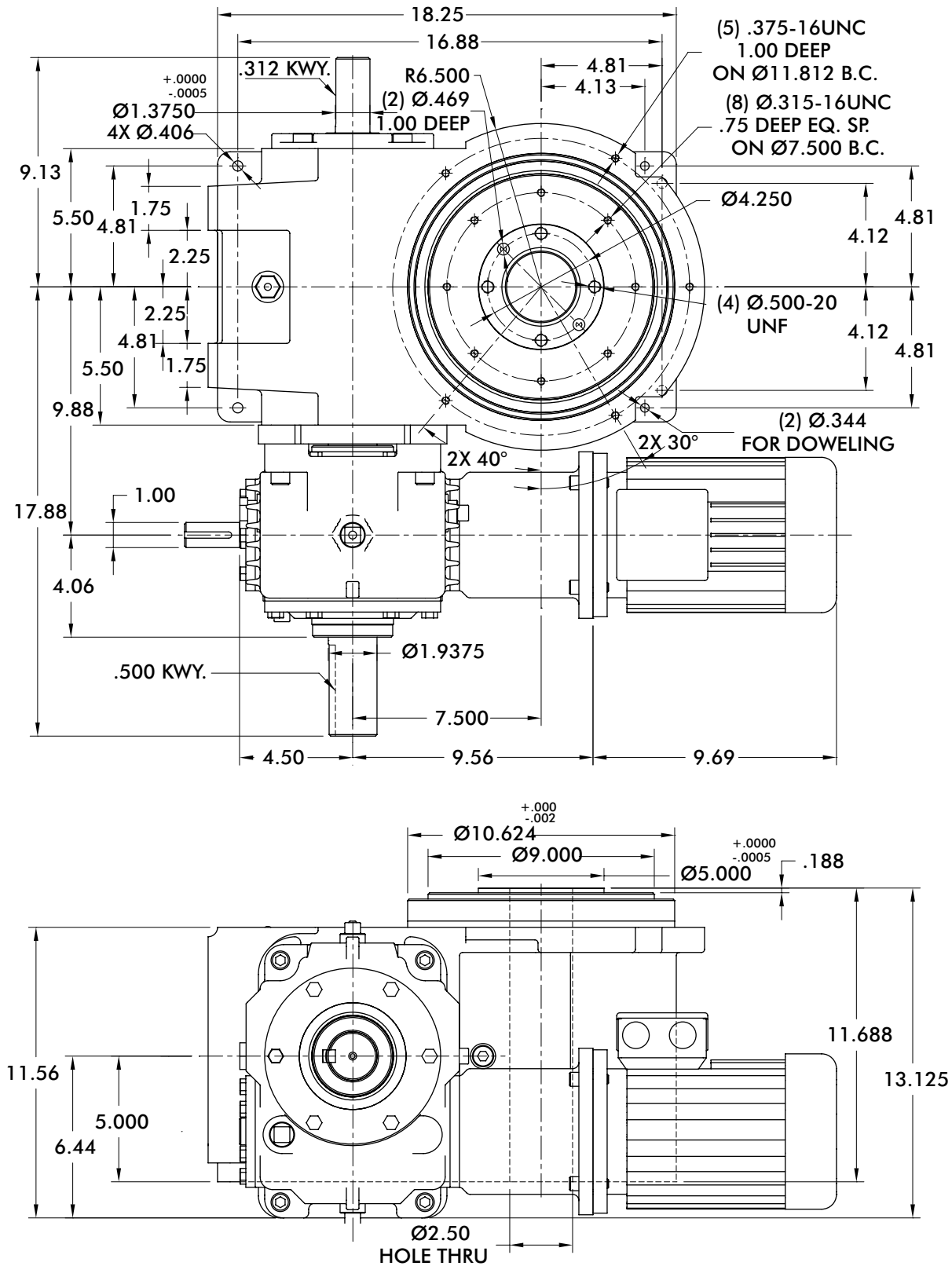
**Repeatability** ±12 arcsec / ±.0007" at 12" Radius



Unless otherwise noted, all dimensions are in inches.

# 800RD SERIES

## Roller Dial Index Drives | Dimensions



Unless otherwise noted, all dimensions are in inches.

Maximum Inertia x 1000 [lb-in <sup>2</sup> ] for standard package							
Stops	Motion Time [seconds]						
	0.458	0.611	0.764	0.917	1.222	1.528	1.833
2	2	8	17	32	55	83	114
3	7	19	40	72	125	187	258
4	13	35	72	130	223	334	459
6	30	79	164	293	504	753	1,034
8	54	142	292	521	897	1,232	1,232
12	123	312	522	794	1,156	1,156	1,156
Reducer Ratio							
	15	20	25	30	40	50	60

### Features

- 7300C Reducer (Ratios from 15:1 to 60:1)
  - Double Extended Worm Shaft (Input)
  - Motor Adapter and Coupling
- Double Extended Camshaft (Input Shaft)
- 1 hp AC Drive Package with Inverter Duty Motor and IM-pAC AC Drive (up to 60 cpm)
- Cycle Cam and Limit Switch Mounted to Camshaft
- Right Hand Cam

### Optional Accessories

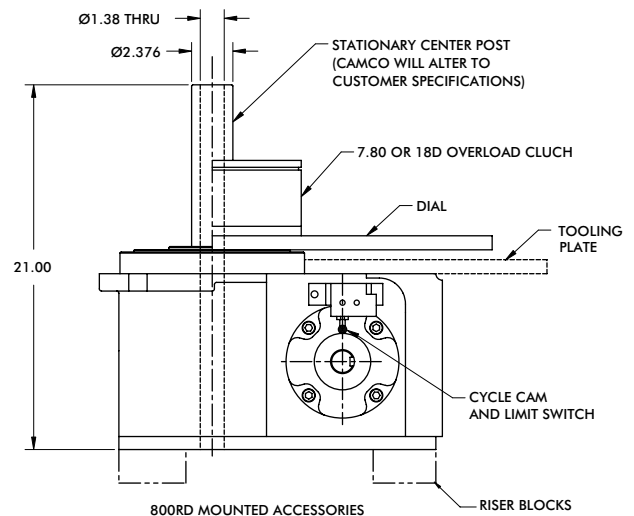
- 7350C Reducer (ratios from 5:1 to 60:1) with 1 hp AC or DC Motor
- 1 hp DC Motor
- Varipak DC Motor Control (up to 30 cpm)
- Output Overload Clutch model 7.8D
  - Available Settings (in-lbs): 1400, 1700, 2600, 3200, 4200, 5000, 7200, 10,000
- Output Overload Clutch model 18D
  - Available Settings (in-lbs): 5000, 7000, 7800, 10,000, 12,000, 16,000, 19,000, 21,000, 27,000, 42,000, 45,000
- Center Thru Hole (2.50 in. Diameter)
- Stationary Center Post
- Dual Cam and Limit Switch
- Left Hand Cam
- Relief in Dwell for shot-pin applications
- Universal Mounting Capability
- Custom Dial Plate

### Output Load Capacity (loads carried during index):

Radial 4,977 lbs  
 Thrust/Axial 3,561 lbs  
 Moment 22,398 in-lbs

**Accuracy** ±30 arcsec / ±.004" at 24" Radius

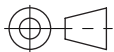
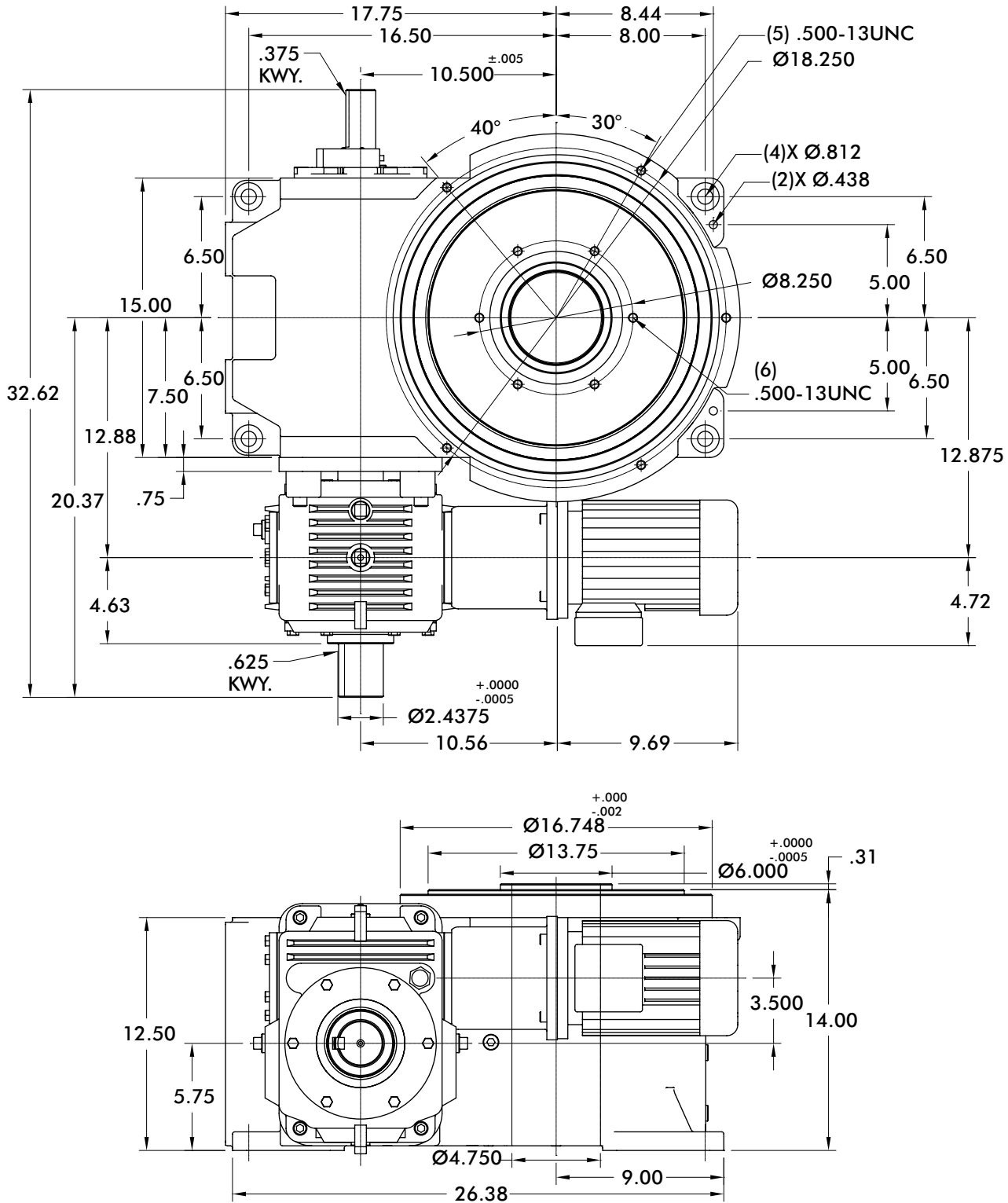
**Repeatability** ±8 arcsec / ±.0009" at 24" Radius



Unless otherwise noted, all dimensions are in inches.

# 1301RD SERIES

## Roller Dial Index Drives | Dimensions



Unless otherwise noted,  
all dimensions are in inches.

Maximum Inertia x 1000 [lb-in <sup>2</sup> ] for standard package							
Stops	Motion Time [seconds]						
	0.458	0.611	0.764	0.917	1.222	1.528	1.833
2	0	5	15	29	51	78	108
3	4	16	37	68	119	179	246
4	10	31	67	123	214	321	440
6	26	73	155	281	485	725	995
8	48	132	278	503	865	1,291	1,771
12	111	301	630	1,135	1,951	2,909	3,989
16	201	538	1,122	2,020	3,471	5,174	7,093
Reducer Ratio							
	15	20	25	30	40	50	60

## Features

- 7350C Reducer (Ratios from 15:1 to 60:1)
  - Double Extended Worm Shaft (Input)
  - Motor Adapter and Coupling
- Double Extended Camshaft (Input Shaft)
- 2 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
- Cycle Cam and Limit Switch Mounted to Camshaft
- Right Hand Cam

## Optional Accessories

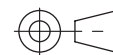
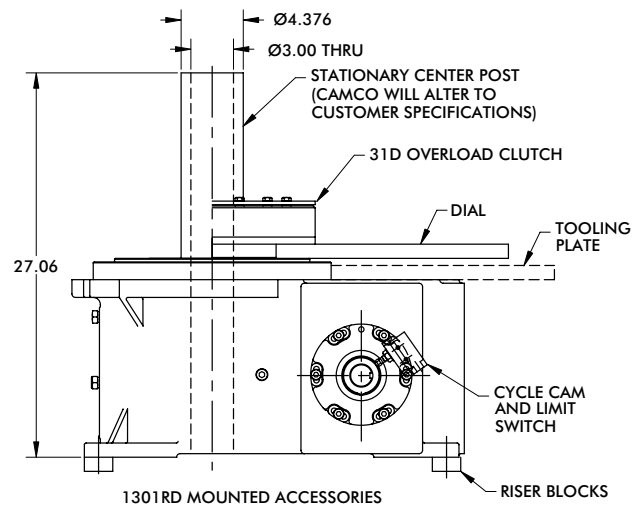
- 7400C Reducer (Ratios from 5:1 to 60:1) with Motor Adapter and Coupling
- 2 hp DC Motor
- Varipak DC Motor Control (up to 30 cpm)
- Output Overload Clutch model 31D
  - Available Settings (in-lbs): 8500, 13,000, 20,000, 31,000
- Center Thru Hole (4.75 in. Diameter)
- Stationary Center Post
- Dual Cam and Limit Switch
- Left Hand Cam
- Relief in Dwell for shot-pin applications
- Universal Mounting Capability
- Custom Dial Plate

## Output Load Capacity (loads carried during index):

Radial 15,800 lbs  
 Thrust/Axial 10,800 lbs  
 Moment 109,000 in-lbs

**Accuracy** ±39 arcsec / ±.0068" at 36" Radius

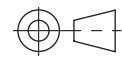
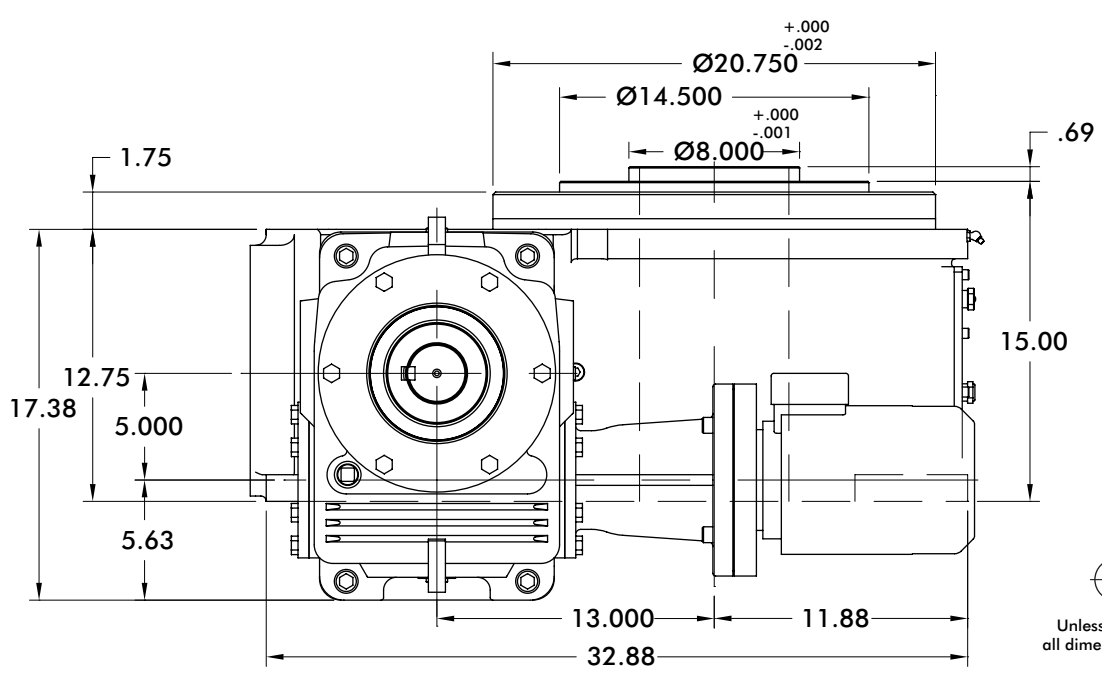
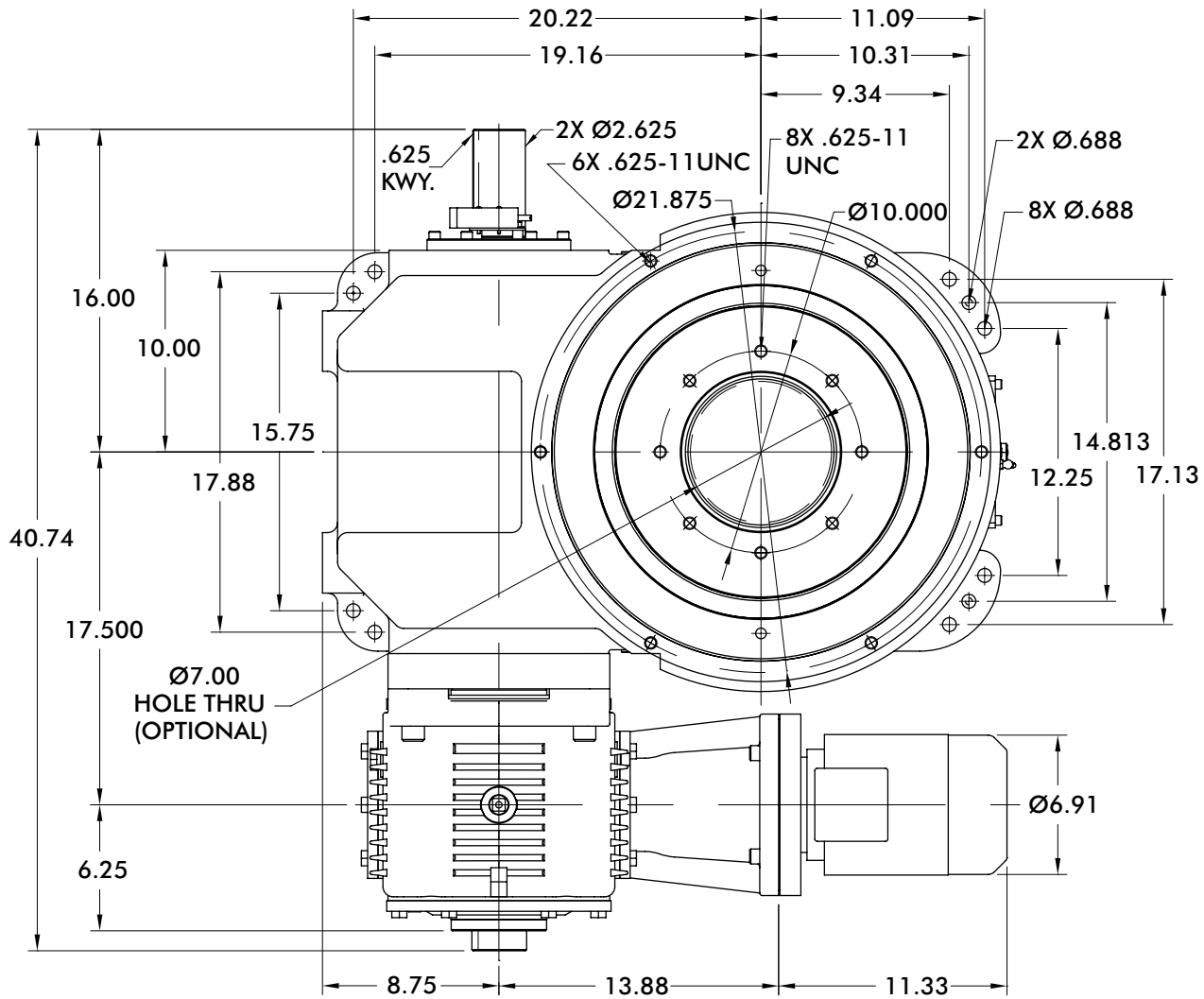
**Repeatability** ±10 arcsec / ±.0017" at 36" Radius



Unless otherwise noted, all dimensions are in inches.

# 1801RD SERIES

## Roller Dial Index Drives | Dimensions



Unless otherwise noted, all dimensions are in inches.



Maximum Inertia x 1000 [lb-in <sup>2</sup> ] for standard package							
Stops	Motion Time [seconds]						
	0.458	0.611	0.764	0.917	1.222	1.528	1.833
2	0	5	18	39	109	229	412
3	2	17	44	86	230	476	850
4	9	39	92	175	458	939	1,672
6	27	91	205	383	989	2,021	3,593
8	54	168	370	687	1,763	3,598	6,393
12	127	383	839	1,552	3,973	8,102	14,391
16	232	687	1,498	2,765	7,070	1,441	19,455
Reducer Ratio							
	15	20	25	30	40	50	60

### Features

- 7500C Reducer (Ratios from 15:1 to 60:1)
  - Double Extended Worm Shaft (Input)
  - Motor Adapter and Coupling
- Double Extended Camshaft (Input Shaft)
- 3 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
- Cycle Cam and Limit Switch Mounted to Camshaft
- Right Hand Cam

### Optional Accessories

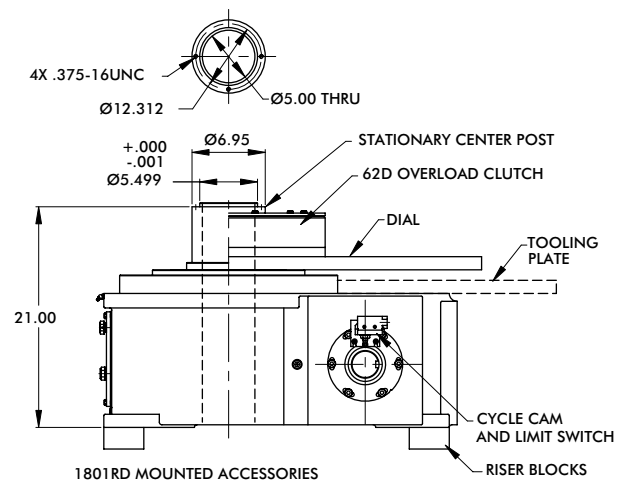
- 7600C or 7700C Reducer (Ratios from 5:1 to 60:1) with Motor Adapter and Coupling
- 3 hp DC Motor
- Output Overload Clutch model 62D
  - Available Settings (in-lbs): 23,000, 36,000, 44,000, 50,000, 60,000
- Center Thru Hole (7.00 in. Diameter)
- Stationary Center Post
- Dual Cam and Limit Switch
- Left Hand Cam
- Relief in Dwell for shot-pin applications
- Custom Dial Plate

### Output Load Capacity (loads carried during index):

Radial	14,800 lbs
Thrust/Axial	12,600 lbs
Moment	107,000 in-lbs

**Accuracy** ±27 arcsec / ±.0063" at 48" Radius




















**Repeatability** ±7 arcsec / ±.0016" at 48" Radius



Unless otherwise noted, all dimensions are in inches.

# INDEXING PRODUCTS

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	Double Contact Bearing HD Servo Positioner ..... IN-DSR		Rite-Link Conveyors ..... IN-RLC
	Parallel Gear Servo Positioner ..... IN-PGM		Table-Top Modular Conveyors ..... IN-TTC
	RSD Flexible Servo Drives .. IN-RSD		Heavy Duty Modular Conveyors ..... IN-HDC
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	RA Right Angle Drives ..... IN-RA		RPP Rotating Part Handlers .. IN-RPP
	RD HD Dial Indexers ..... IN-RD		Overload Clutches ..... IN-CLU
	<b>E-Series HD Drives</b> ..... IN-EHD		Custom Cams ..... IN-CAM
	MDE/HDE Indexers ..... IN-MDE		
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# HEAVY DUTY INDEX DRIVE

## Table of Contents



### Features:

The **CAMCO E-Series Heavy Duty Index Drive** is ideal for heavy-duty rotary dial applications with features including:

Large output mounting surface supported by a 4-point contact bearing providing superior thrust and moment capacity

Large center thru-hole to accommodate stationary center post, electrical wiring and air or hydraulic lines

Complete motorized drive package with reducer and AC inverter drive to suit most applications

Precision cam with preloaded cam followers for maximum accuracy

Durable welded steel housing

Preloaded “center rib” design for smooth acceleration and deceleration with precision positioning

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# E-SERIES

## Heavy Duty Index Drive | How To Order

**Base Model** Description

**750E** w/ KH87 reducer & 12.5 hp AC motor (220/440V)

**950E** w/ KH87 reducer & 15 hp AC motor (220/440V)

**1150E** w/ KH107 reducer & 25 hp AC motor (220/440V)

**1550E** w/ KH127 reducer & 30 hp AC motor (220/440V)

**Control** (only available with these models)

**1** 15 hp 240V 750E & 950E only

**2** 15 hp 440V 750E & 950E only

**3** 25 hp 240V 1150E only

**4** 25 hp 440V 1150E only

**5** 30 hp 240V 1550E only

**6** 30 hp 440V 1550E only

Motion	Stops	Index Period
<b>A</b>	2	330
<b>B</b>	3	330
<b>C</b>	4	330
<b>D</b>	6	330
<b>E</b>	8	330
<b>F</b>	12	330
<b>G</b>	16	330

Index Mounting	Reducer Ratio			
(See Figure 1)	750E	950E	1150E	1550E
<b>1</b>	<b>A</b>	14.50	29.00	40.19
<b>2</b>	<b>B</b>	19.95	42.33	54.07
<b>3</b>	<b>C</b>	24.92	49.90	70.95
<b>4</b>	<b>D</b>	31.39	52.17	81.98
<b>5</b>	<b>E</b>	44.02	66.52	89.89
<b>6</b>	<b>F</b>	49.16	73.30	110.18
	<b>G</b>	63.00	82.61	122.98

Reducer Mounting	Signal Switch	Signal Switch Side
(See Figure 3)		(See Figure 2)
<b>A</b>	<b>M</b> Mechanical	<b>S</b> Shaft
	<b>P</b> Proximity	

**Example: MS or PS**

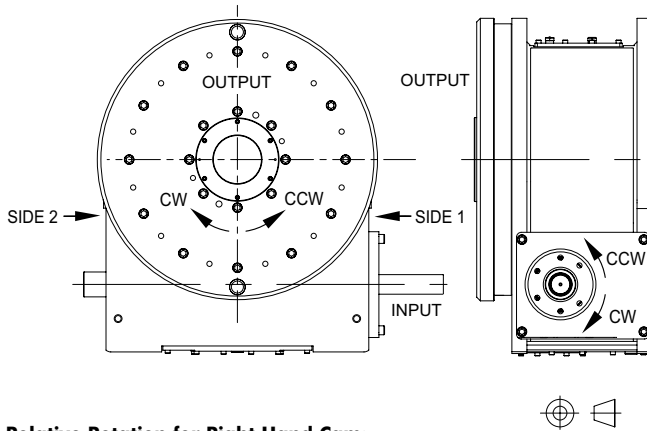
Note about signal switch options:

a) Mechanical is a single switch with cam.

b) Proximity option is a mounting bracket for 8 or 12 mm proximity switch. A proximity switch will not be supplied. Cam supplied as target.

Other Motions (stops and index periods) available. Contact your DESTACO sales representative for more information.

### Input Shaft Configuration/Rotations (Figure 1)

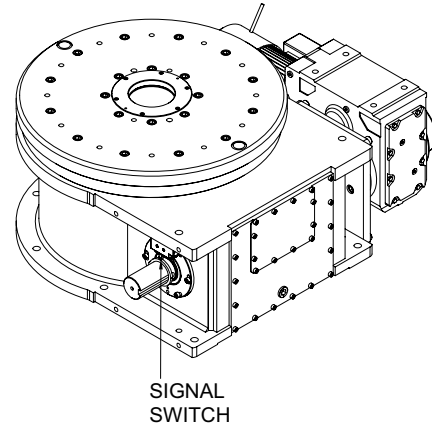


**Relative Rotation for Right Hand Cam:**

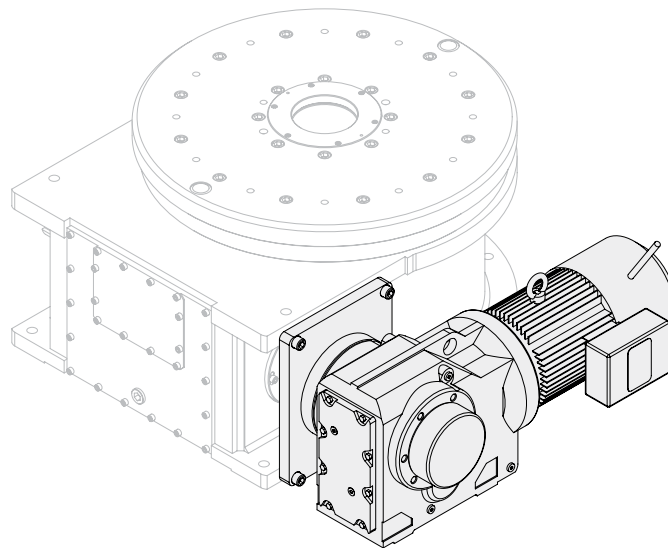
CW Input Side 1 CCW Output  
CCW Input Side 2 CW Output

NOTE: Input can be driven in either direction

### Signal Switch Mounting Position (Figure 2)

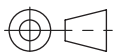
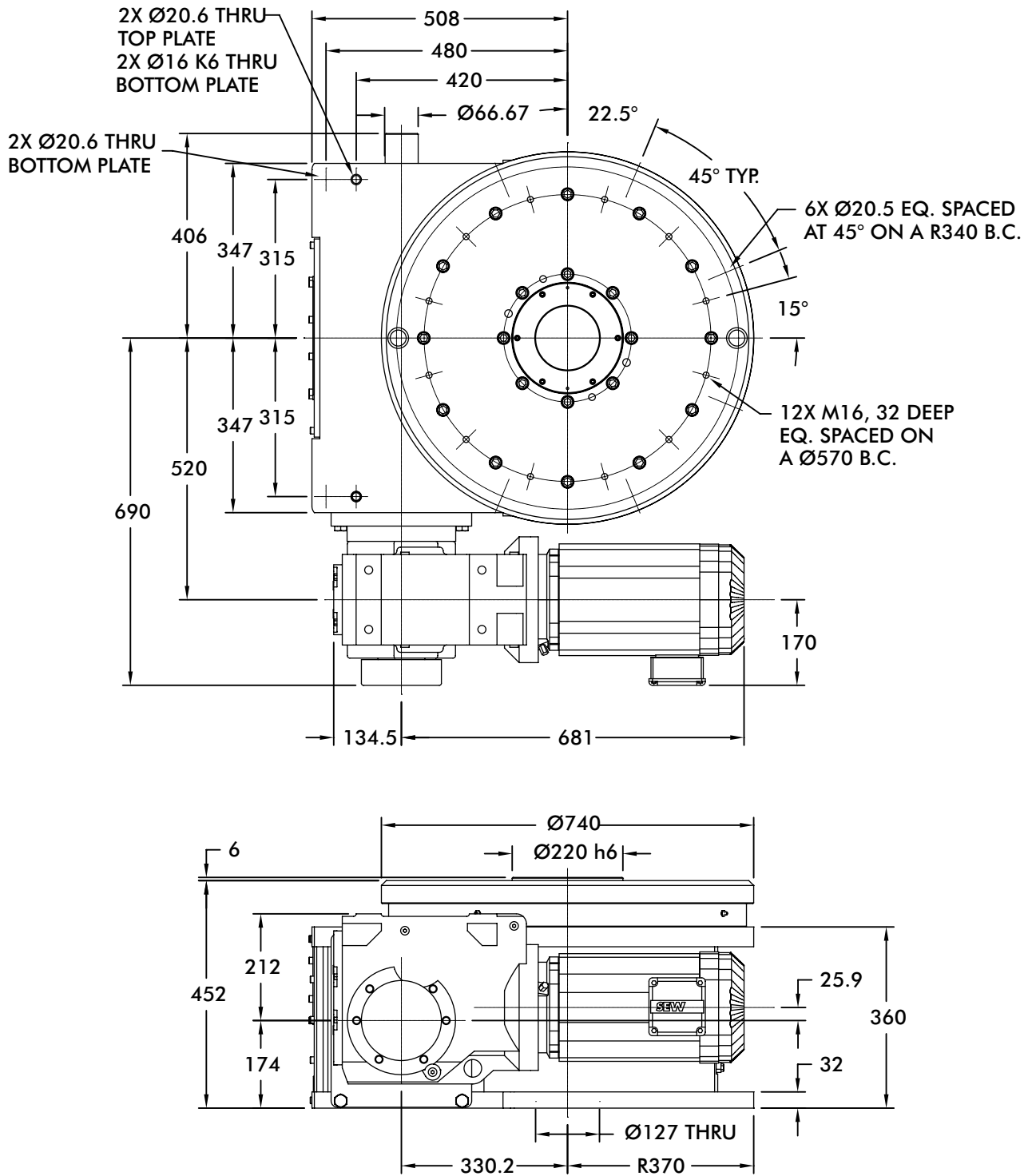


### Gear Reducer Mounting Position (Figure 3)



# 750E SERIES

## Heavy Duty Index Drive | Dimensions



Unless otherwise noted,  
all dimensions are in mm.

Maximum Inertia x 1,000 [lb-in <sup>2</sup> ] for standard package							
Stops	Motion Time [seconds]						
	0.44	0.59	0.76	0.96	1.35	1.50	1.93
2	0	27	105	254	751	987	1,647
3	14	98	257	562	1,577	2,058	3,407
4	67	231	542	1,140	3,128	4,072	6,714
6	191	542	1,209	2,491	6,756	8,781	14,447
8	372	931	1,677	2,841	5,587	6,968	11,444
12	886	2,291	4,840	8,195	16,116	20,100	33,010
16	1,351	2,717	4,837	8,254	16,263	20,283	33,311
Reducer Ratio							
	14.45	19.45	24.92	31.39	44.02	49.16	63.00

## Features

- KH87 Gear Reducer with Brake-motor
- Double Extended Camshaft (Input shaft)
- Center Thru Hole (127 mm)
- Cycle Cam and Limit Switch
- Right Hand Cam

## Optional Accessories

- Left Hand Cam
- Relief in Dwell for Shot-Pin applications
- Dual Cam & limit Switch
- KH97 Gear Reducer with Brake-motor
- Stationary Center Post
- Visual Disk Dwell Indicator

## Output Load Capacity (loads carried during index):

Radial	29,200 lbs
Thrust/Axial	42,000 lbs
Moment	414,500 in-lbs

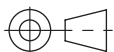
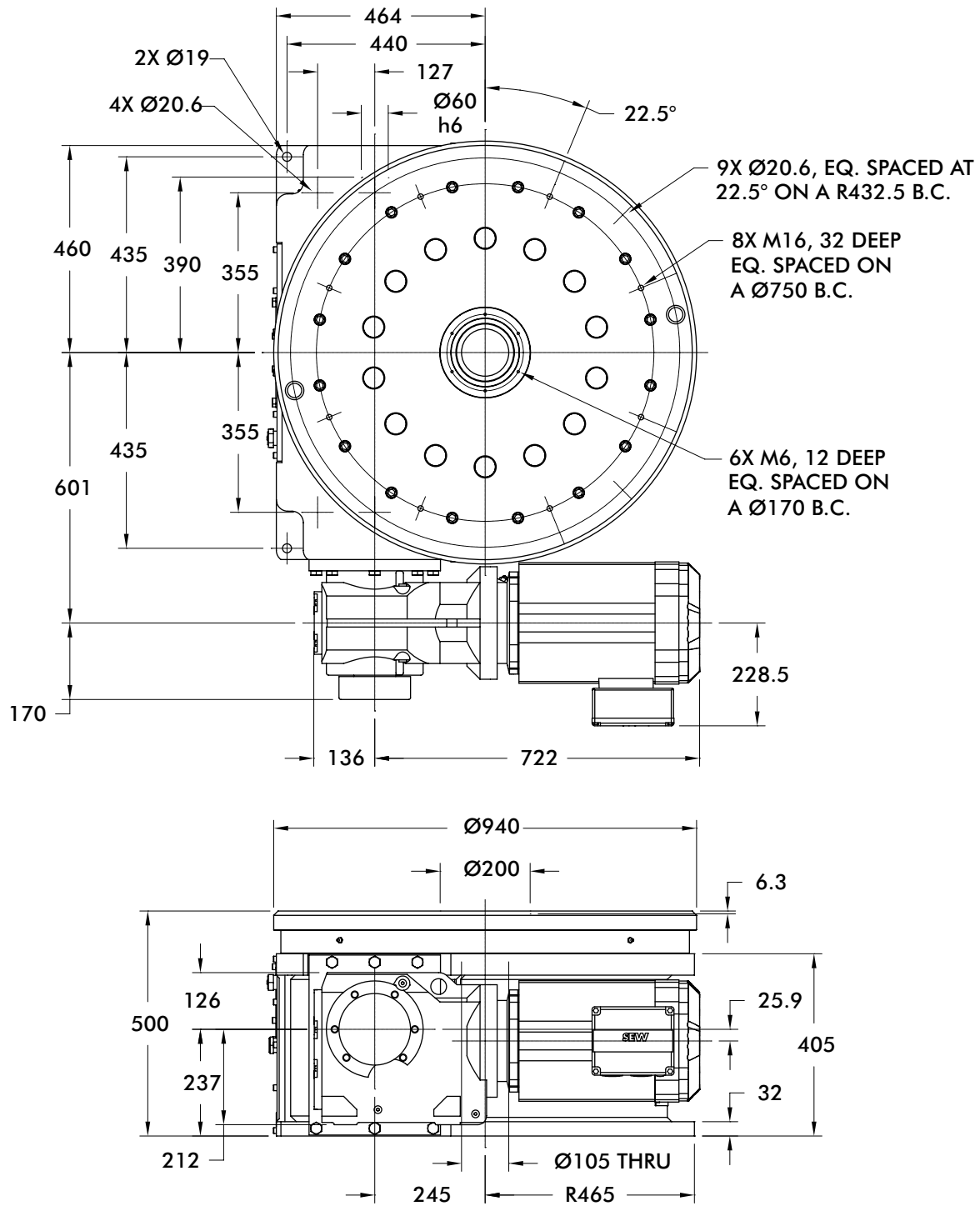
## Typical Application

<b>Dial Diameter:</b>	55 in. to 110 in.
<b>Accuracy</b>	±27 arcsec / ±.002" at 15" Radius
<b>Repeatability</b>	±7 arcsec / ±.0005" at 15" Radius



# 950E SERIES

## Heavy Duty Index Drive | Dimensions



Unless otherwise noted,  
all dimensions are in mm.

Maximum Inertia x 1,000 [lb-in <sup>2</sup> ] for standard package							
Stops	Motion Time [seconds]						
	0.44	0.59	0.76	0.96	1.35	1.50	1.93
2	0	0	61	224	619	833	1,433
3	0	59	250	619	1,507	1,989	3,337
4	16	205	564	1,252	2,911	3,810	6,329
6	187	634	1,479	3,102	7,013	9,135	15,073
8	412	1,169	2,603	5,287	11,478	14,315	23,511
12	1,025	2,729	5,956	10,793	23,621	30,484	53,172
16	1,290	2,647	4,753	8,147	17,305	21,582	35,445
Reducer Ratio							
	14.45	19.45	24.92	31.39	44.02	49.16	63.00

## Features

- KH87 Gear Reducer with Brake-motor
- Double Extended Camshaft (Input shaft)
- Center Thru Hole (105 mm)
- Cycle Cam and Limit Switch
- Right Hand Cam

## Optional Accessories

- Left Hand Cam
- Relief in Dwell for Shot-Pin applications
- Dual Cam & limit Switch
- KH97 Gear Reducer with Brake-motor
- Stationary Center Post
- Visual Disk Dwell Indicator

## Output Load Capacity (loads carried during index):

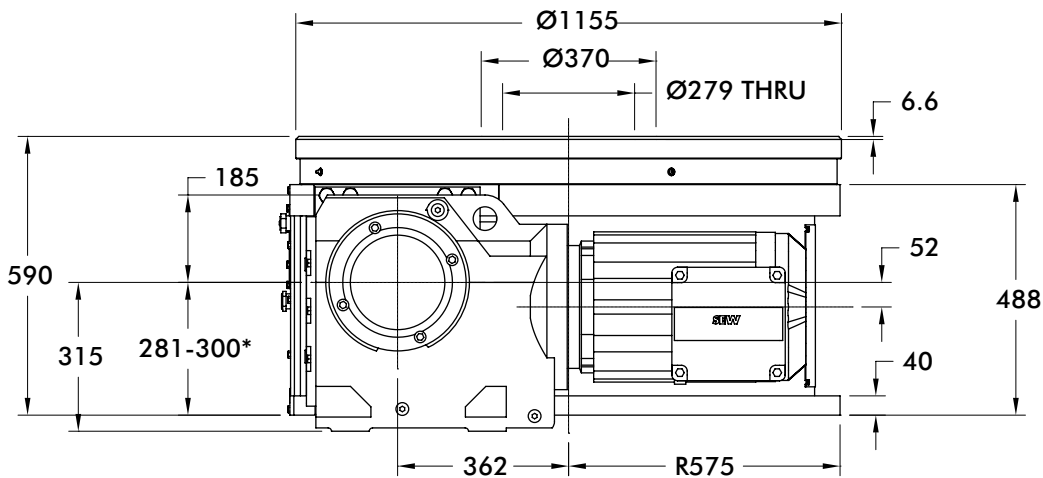
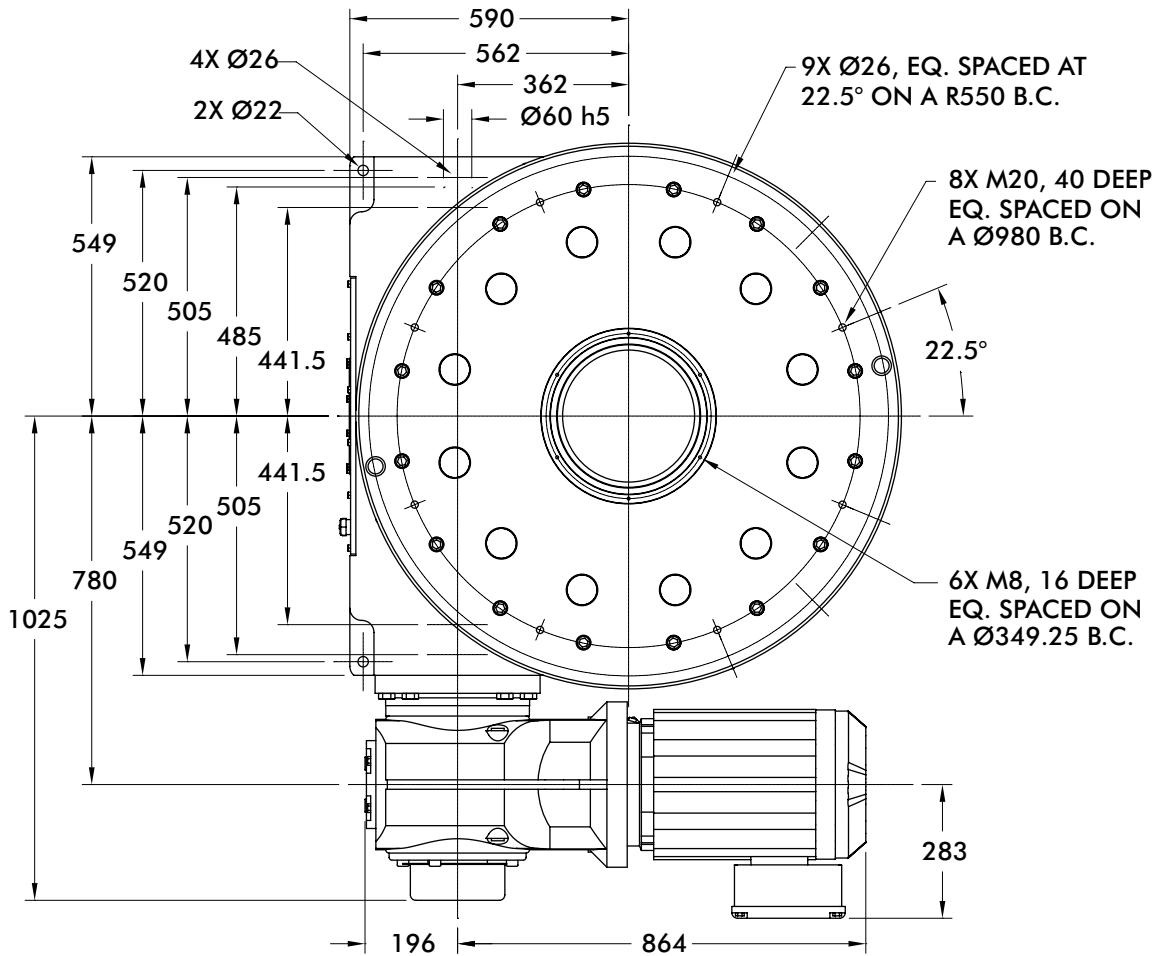
Radial	52,600 lbs
Thrust/Axial	75,850 lbs
Moment	977,500 in-lbs

## Typical Application

<b>Dial Diameter:</b>	70 in. to 140 in.
<b>Accuracy</b>	±29 arcsec / ±.0023" at 30" Radius
<b>Repeatability</b>	±6 arcsec / ±.0006" at 30" Radius

# 1150E SERIES

## Heavy Duty Index Drive | Dimensions



\*281 OR 300 DEPENDING ON CAM MOTION



Unless otherwise noted,  
all dimensions are in mm.

Maximum Inertia x 1,000 [lb-in <sup>2</sup> ] for standard package							
Stops	Motion Time [seconds]						
	0.89	1.29	1.52	1.75	2.03	2.24	2.52
2	134	1,141	2,093	3,329	4,746	5,835	7,501
3	698	2,965	5,108	7,887	11,077	13,526	17,275
4	1,445	5,474	9,284	14,225	19,896	24,249	30,915
6	3,780	12,845	21,419	32,537	45,296	55,090	70,088
8	6,581	21,959	36,502	54,381	73,624	89,397	113,548
12	15,621	50,221	82,944	123,772	167,569	203,468	258,436
16	27,975	61,083	84,884	111,420	150,846	183,162	232,645
Reducer Ratio							
	29.00	42.33	49.90	57.17	66.52	73.30	82.61

## Features

- KH107 Gear Reducer with Brake-motor
- Double Extended Camshaft (Input shaft)
- Center Thru Hole (278 mm)
- Cycle Cam & limit Switch
- Right Hand Cam

## Optional Accessories

- Left Hand Cam
- Relief in Dwell for Shot-Pin applications
- Dual Cam & limit Switch
- KH127 Gear Reducer with Brake-motor
- Stationary Center Post
- Visual Disk Dwell Indicator

## Output Load Capacity (loads carried during index):

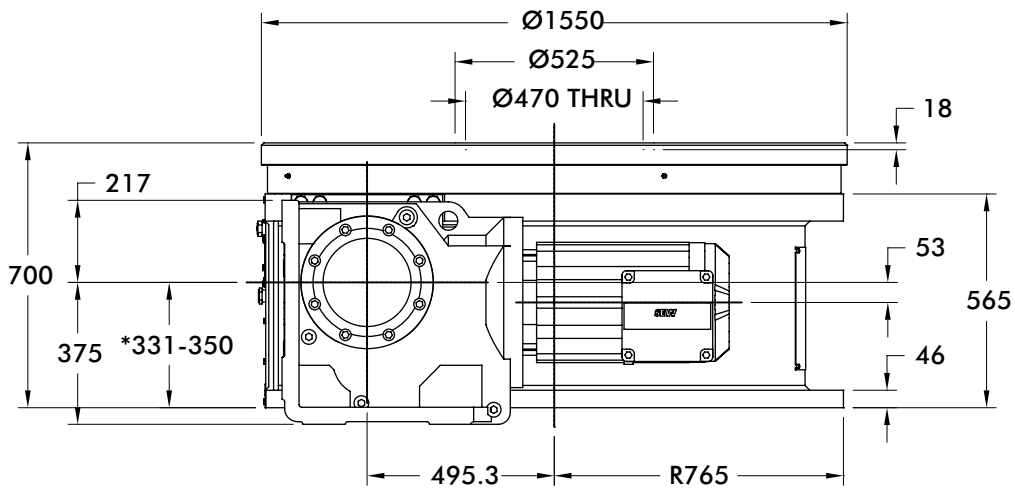
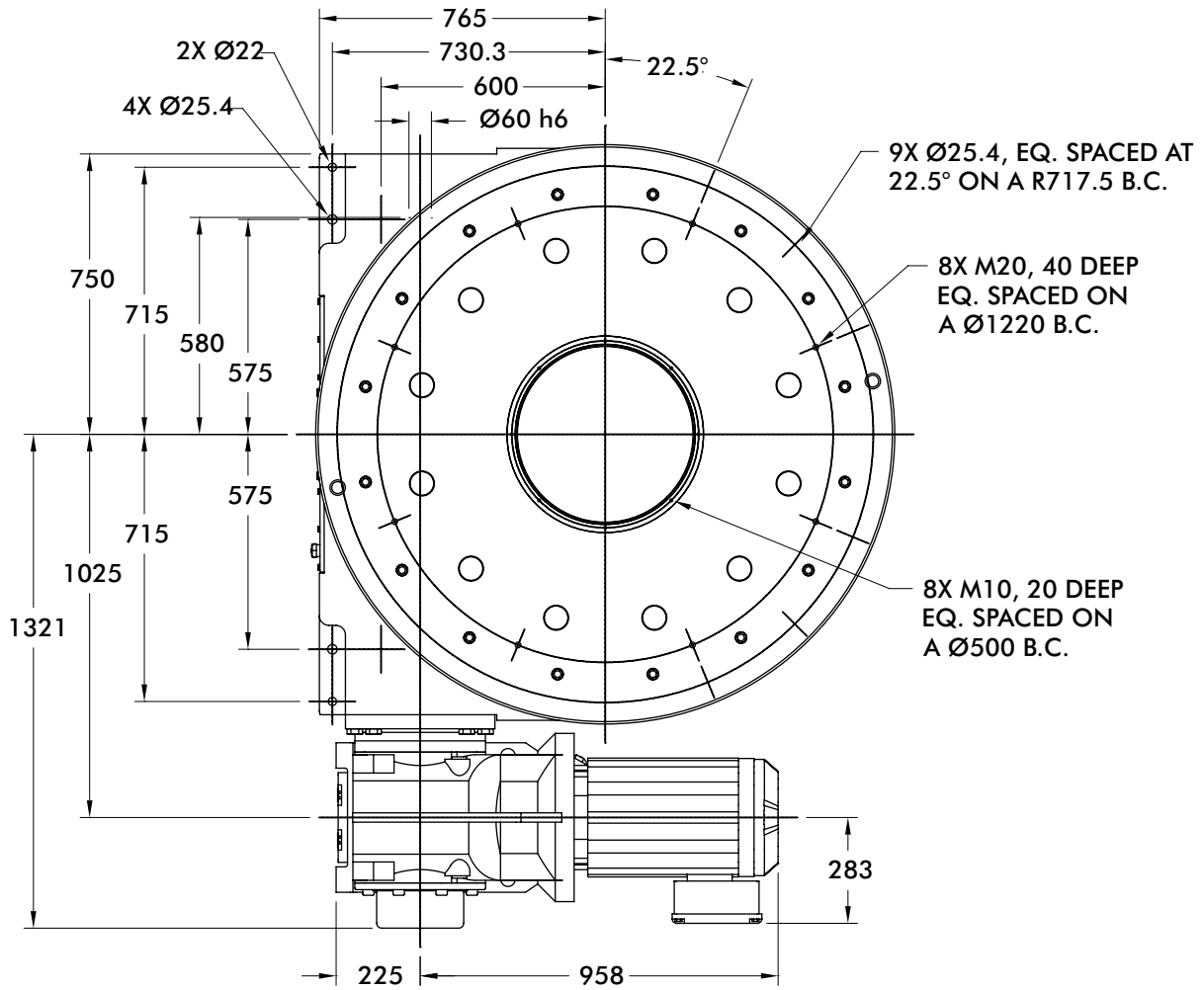
Radial	59,025 lbs
Thrust/Axial	85,470 lbs
Moment	1,469,000 in-lbs

## Typical Application

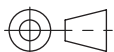
<b>Dial Diameter:</b>	90 in. to 180 in.
<b>Accuracy</b>	±16 arcsec / ±.002" at 25" Radius
<b>Repeatability</b>	±4 arcsec / ±.0005" at 25" Radius

# 1550E SERIES

## Heavy Duty Index Drive | Dimensions



\*331 OR 350 DEPENDING ON CAM MOTION



Unless otherwise noted,  
all dimensions are in mm.

Maximum Inertia x 1,000 [lb-in <sup>2</sup> ] for standard package							
Stops	Motion Time [seconds]						
	1.23	1.65	2.17	2.50	2.75	3.37	3.74
2	0	1,926	6,208	10,388	13,740	21,944	26,735
3	1,811	6,814	17,561	28,054	36,466	57,057	69,084
4	4,396	13,172	32,028	50,439	65,198	101,324	122,426
6	11,290	30,132	70,615	110,143	141,829	219,391	264,696
8	22,185	57,289	132,712	195,668	235,249	353,436	436,753
12	50,005	125,372	287,302	445,415	572,159	882,406	1,038,461
16	89,910	206,224	355,085	474,071	569,968	856,314	1,038,461
Reducer Ratio							
	40.19	54.07	70.95	81.98	89.89	110.18	122.48

### Features

- KH127 Gear Reducer with Brake-motor
- Double Extended Camshaft (Input shaft)
- Center Thru Hole (470 mm)
- Cycle Cam and Limit Switch
- Right Hand Cam

### Optional Accessories

- Left Hand Cam
- Relief in Dwell for Shot-Pin applications
- Dual Cam & limit Switch
- KH157 Gear Reducer with Brake-motor
- Stationary Center Post
- Visual Disk Dwell Indicator

### Output Load Capacity (loads carried during index):

Radial	82,600 lbs
Thrust/Axial	120,000 lbs
Moment	2,904,000 in-lbs

### Typical Application

<b>Dial Diameter:</b>	118 in. to 236 in.
<b>Accuracy</b>	±12 arcsec / ±.0017" at 30" Radius
<b>Repeatability</b>	±3 arcsec / ±.0004" at 30" Radius

# MDE/HDE SERIES

Mechanical and Servo Indexer | Features | Table of Contents



## Features:

**CAMCO® MDE and HDE** series maintenance free mechanical and servo-based indexers. Built for cost sensitive applications

- **Flex-Mount housing** to meet your application's height and width requirements
- **No oil changes or service required** for 5 years or 10,000 hours, whichever comes first
- **Quick access** field replaceable cam followers
- **Quick-stop** safe operation with industry leading E-stops times
- **Easy system integration** with SEW® and NORD® drive solutions
- **Zero backlash** for precision positioning

## Table of Contents

MDE600M.....	3
MDE700M.....	7
MDE900M.....	11
HDE1200M .....	15
HDE1200S .....	19



### Choosing the Right Indexer Option is Easy

MDE and HDE series Indexers make it easy to find the right reducer ratio and brake torque setting for your application requirements. The charts are designed to show the motion time between different stop configurations based on the indexer's maximum axial load. The number in each cell is the maximum inertia allowed with each configuration. The charts are also color coded to indicate which brake torque setting works best for your choice of reducer ratios. Look at the following example to see how to properly use the charts.

Indexer	Axial Load	Torque Rating*
MDE600M	3200 kg	10000 Nm
MDE700M	5700 kg	8400 Nm
MDE900M	6800 kg	16500 Nm
HDE1200M	14500 kg	27500 Nm
HDE1200S	14500 kg	17500 Nm

\*Ratings vary with indexer configuration

### Using Catalog Indexer Reducer Ratio Charts:

Selecting the proper indexer requires the following application data:

- Axial Load
- Number of stops (stations)
- Application motion (index) time: required time to move between stations
- Total inertia of moving parts

ND1 Gear Motor	Motion Time <sup>†</sup> [seconds]				
	1.36	1.50	1.69	2.06	2.35
Stops	Maximum Inertia* [Kgm <sup>2</sup> ]				
2	63	112	234	424	533
3	411	602	996	1643	2054
4	986	1397	2213	<b>3574</b>	4472
6	2400	3341	5170	8259	10344
8	4808	6594	10015	15874	19934
12	11729	14112	18098	21145	21145
16	14275	17764	21145	21145	21145
<b>Reducer Ratio Options</b>					
	A	B	C	<b>D</b>	E

#### Application Example

Payload: 7500 kg  
 Stops: 4  
 Move time 2.06 seconds  
 Application inertia: 3190 Kgm<sup>2</sup>

#### Notes:

- Axial load must be less than mass (axial load) used for chart.
- Move time must be greater than chart value.
- Inertia must be less than max inertia. Include work forces and overturning moments.

**Step 1:** Select Indexer with ratings that exceeds your payload weight

**Step 2:** Identify the indexer's gear motor option from the ordering information and locate the corresponding reducer ratio chart.

**Step 3:** Identify the row that matches the desired number of application stops.

**Step 4:** Identify the motion time column that is equal to or less than the application motion (index) time.

**Step 5:** The intersected chart value indicates reducer ratio Option **D**.

**Step 6:** Verify your application inertia is less than the maximum inertia indicated in the chart where the row and column intersect.

# MDE600M SERIES INDEXER

## Mechanical Indexer | How To Order



Motion	Number of Stops	Gear Motor Ratios				Gear Motor Mount (See Figure 1)	Dwell Sensor (See figure 2)	
		Reducer Ratio	ND1	ND2	SW1		SW2	
A	2	A	59.17	55.69	57.28	64.75	0	No Sensor
B	3	B	64.08	63.25	60.66	73.99	A	Bracket for M12 Sensor only
C	4	C	75.91	68.61	68.95	78.07	B	PNP N/O w/Bracket Qty:1
D	6	D	84.17	76.18	76.37	88.97	C	PNP N/O w/Bracket Qty:2
E	8	E	93.50	86.43	90.04	97.05	D	NPN N/O w/Bracket Qty:1
F	12	F	110.77	95.96			E	NPN N/O w/Bracket Qty:2
		G	117.70	117.79			F	PNP N/C w/Bracket Qty:1
		H	139.44	132.79			G	PNP N/C w/Bracket Qty:2
							H	NPN N/C w/Bracket Qty:1
							I	NPN N/C w/Bracket Qty:2

Base Model → **MDE600M** - **A** - **SW1** **A** - **A** - **B** - **1** - **D**

Gear Motor	Description	Motor Voltage	Description
ND1	NORD® 1.5 kW (2 hp)	A	400 VAC
ND2	NORD® 4.0 kW (5.4 hp)	B	460 VAC
SW1	SEW® 1.5 kW (2 hp)	C	575 VAC
SW2	SEW® 3 kW (4 hp)		

Brake	Gear Motor Brake Options*			
	ND1	ND2	SW1	SW2
A	AC 20 Nm	AC 28 Nm	AC 14 Nm	AC 28 Nm
B	AC 14 Nm	AC 20 Nm	AC 10 Nm	AC 20 Nm
C	DC 20 Nm	DC 28 Nm	DC 14 Nm	DC 28 Nm
D	DC 14 Nm	DC 20 Nm	DC 10 Nm	DC 20 Nm

\*AC = Uses same AC voltage as Motor  
(except 575 VAC requires 110 VAC for brake voltage)  
DC = Uses 24 VDC signal logic

Figure 1: Gear Motor Mounting Position

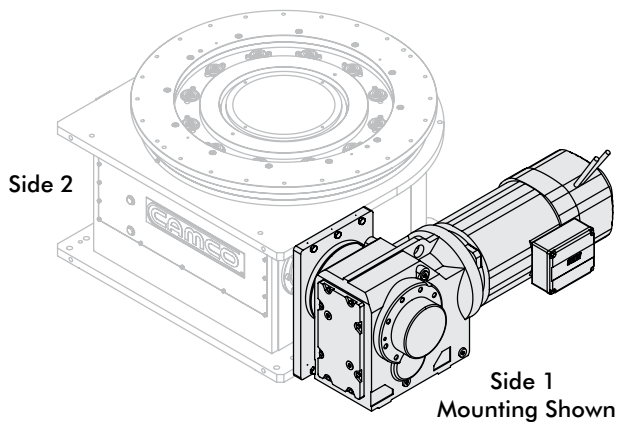
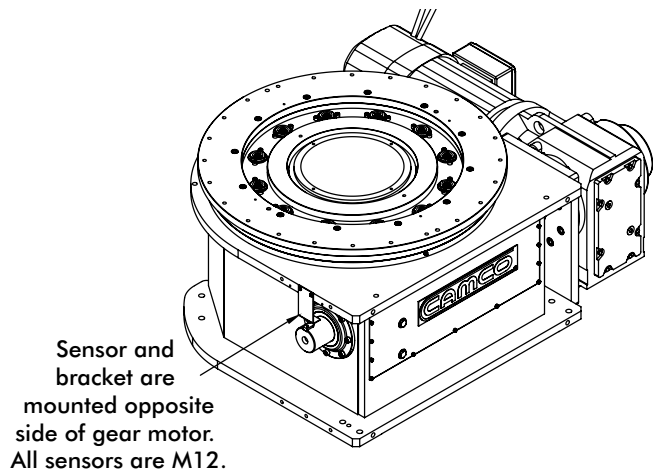


Figure 2: Sensor Mounting Position



# MDE600M SERIES INDEXER

Mechanical Indexer | Sizing Tables

ND1 Gear Motor	Motion Time <sup>†</sup> [seconds]							
		2.24	2.43	2.88	3.19	3.55	4.20	4.46
Stops	Maximum Inertia* [Kgm <sup>2</sup> ]							
2	67	94	181	265	385	688	764	764
3	246	333	615	764	764	764	764	764
4	492	655	764	764	764	764	764	764
6	764	764	764	764	764	764	764	764
8	764	764	764	764	764	764	764	764
12	764	764	764	764	764	764	764	764
Reducer Ratio Options								
	A	B	C	D	E	F	G	H

Gear Motor Brake Option	
A or C	20 Nm
B or D	14 Nm

ND2 Gear Motor	Motion Time <sup>†</sup> [seconds]							
		2.11	2.40	2.60	2.89	3.28	3.66	4.47
Stops	Maximum Inertia* [Kgm <sup>2</sup> ]							
2	186	242	285	353	455	569	764	764
3	764	764	764	764	764	764	764	764
4	764	764	764	764	764	764	764	764
6	764	764	764	764	764	764	764	764
8	764	764	764	764	764	764	764	764
12	764	764	764	764	764	764	764	764
Reducer Ratio Options								
	A	B	C	D	E	F	G	H

Gear Motor Brake Option	
A or C	28 Nm
B or D	20 Nm

SW1 Gear Motor	Motion Time <sup>†</sup> [seconds]				
		1.61	1.84	2.18	2.41
Stops	Maximum Inertia* [Kgm <sup>2</sup> ]				
2	58	74	125	171	240
3	217	269	434	587	764
4	438	538	764	764	764
6	764	764	764	764	764
8	764	764	764	764	764
12	764	764	764	764	764
Reducer Ratio Options					
	A	B	C	D	E

Gear Motor Brake Option	
A or C	14 Nm
B or D	10 Nm

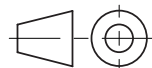
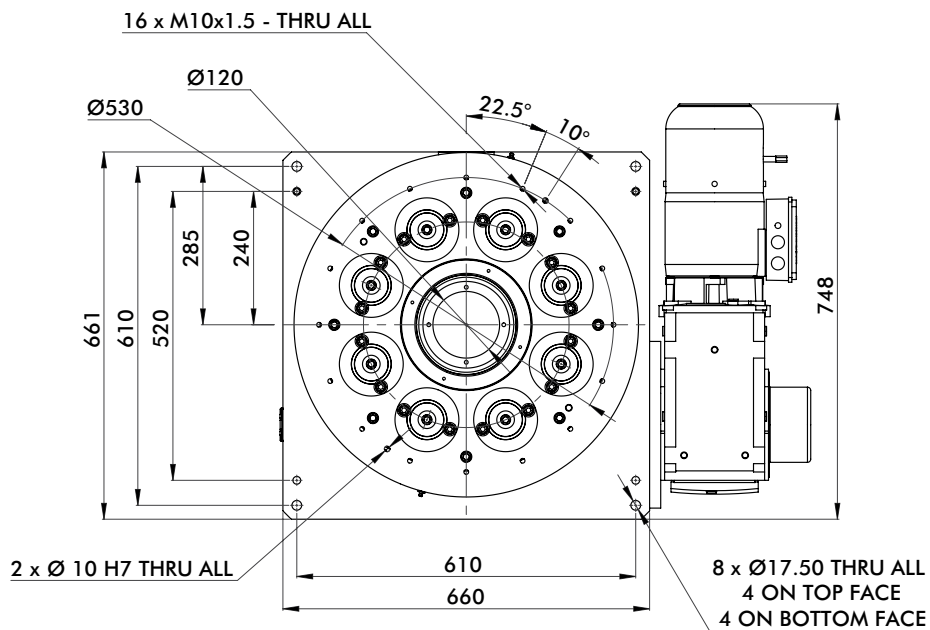
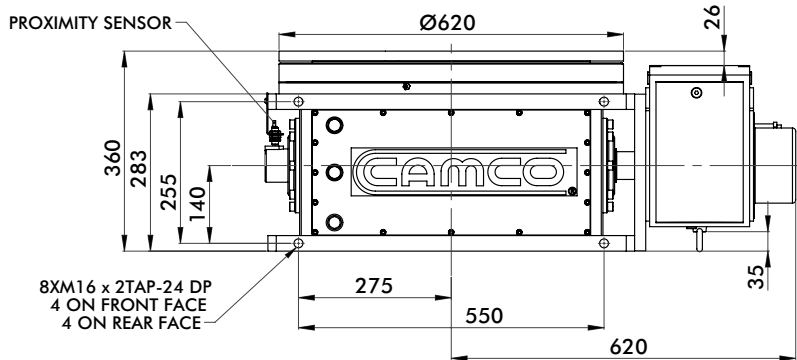
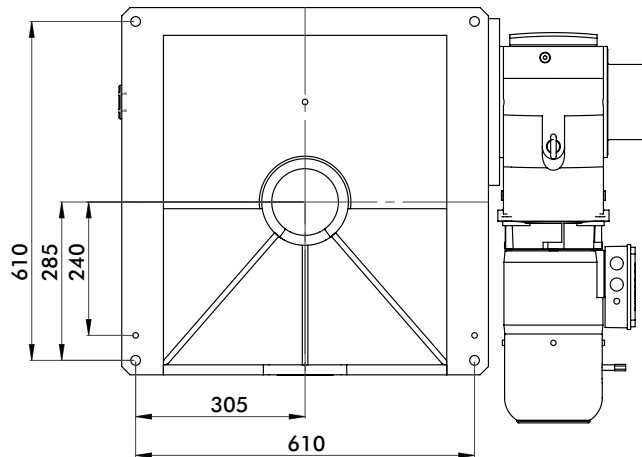
SW2 Gear Motor	Motion Time <sup>†</sup> [seconds]				
		2.45	2.80	2.95	3.36
Stops	Maximum Inertia* [Kgm <sup>2</sup> ]				
2	253	331	370	482	574
3	764	764	764	764	764
4	764	764	764	764	764
6	764	764	764	764	764
8	764	764	764	764	764
12	764	764	764	764	764
Reducer Ratio Options					
	A	B	C	D	E

Gear Motor Brake Option	
A or C	28 Nm
B or D	20 Nm

\*Maximum Mass (Axial Load) used for charts is = 3182 kg  
<sup>†</sup>All motion times in tables are based on rated motor speed at 50 Hz

# MDE600M SERIES INDEXER

## Mechanical Indexer | Dimensions



Visit our website to download the specific cad model for your application.

Unless otherwise noted, all dimensions are in mm.

# MDE600M SERIES INDEXER

Mechanical Indexer | Technical Information

## Specifications

### Main Dimensions

Output Flange Diameter	620 mm
Height (Mounting surface of output flange)	360 mm
Center Opening	120 mm
Approximate Weight (Indexer)	650 Kg

### Precision

Indexing Accuracy	$\pm 35$ arcsec
Indexing Repeatability	$\pm 6$ arcsec
Axial Runout on Output Flange	0.02 mm
Radial Runout on Output Flange	0.02 mm

### Load on Output Flange\*

Maximum Axial Force	31.3 kN
Maximum Radial Force	100 kN
Maximum Tilting Moment	6800 Nm
Maximum Output Torque (8-stop)	10000 Nm

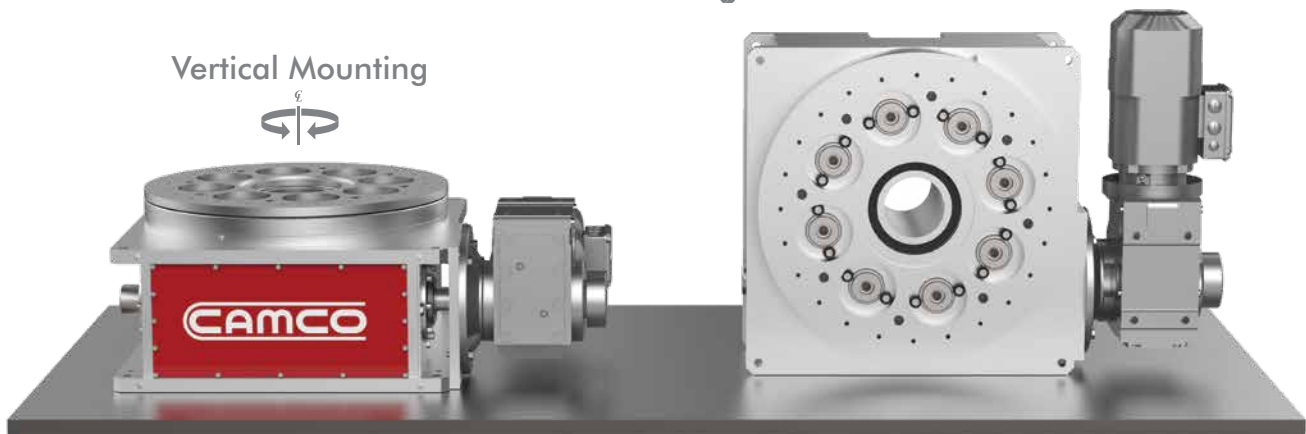
\*The specifications listed are simultaneous combined loading of maximum axial force, maximum radial force and maximum overturning moment.



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 Horizontal Mounting

Vertical Mounting



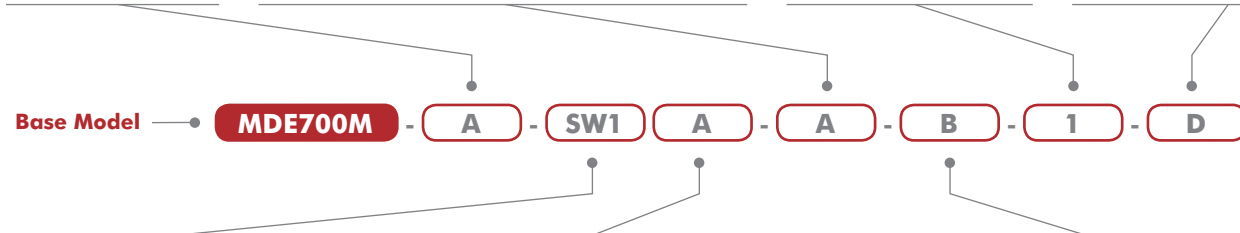
Consult DESTACO for horizontal mounting applications

# MDE700M SERIES INDEXER

Mechanical Indexer | How To Order



Motion	Number of Stops	Reducer Ratio	Gear Motor Ratios				Gear Motor Mount	Dwell Sensor
			ND1	ND2	SW1	SW2		
A	2	A	59.17	55.69	64.75	56.64	1 Side 1	0 No Sensor
B	3	B	64.08	63.25	73.99	63.00		A Bracket for M12 Sensor only
C	4	C	75.91	68.61	78.07	70.46	2 Side 2	B PNP N/O w/Bracket Qty:1
D	6	D	84.17	76.18	88.97	79.34		C PNP N/O w/Bracket Qty:2
E	8	E	93.50	86.43	97.05	86.34	D NPN N/O w/Bracket Qty:1	
F	12	F	110.77	95.96			E NPN N/O w/Bracket Qty:2	
G	16	G	117.70	117.79			F PNP N/C w/Bracket Qty:1	
		H	139.44	132.79			G PNP N/C w/Bracket Qty:2	
							H NPN N/C w/Bracket Qty:1	
							I NPN N/C w/Bracket Qty:2	



Gear Motor	Motor and Reducer	Motor Voltage	Description
ND1	NORD® 1.5 kW (2 hp)	A	400 VAC
ND2	NORD® 4.0 kW (5.4 hp)	B	460 VAC
SW1	SEW 3kW (4 hp)	C	575 VAC
SW2	SEW 5.6kW (7.5hp)		

Brake	Gear Motor Brake Options*			
	ND1	ND2	SW1	SW2
A	AC 20 Nm	AC 28 Nm	AC 28 Nm	AC 40 Nm
B	AC 14 Nm	AC 20 Nm	AC 20 Nm	AC 28 Nm
C	DC 20 Nm	DC 28 Nm	DC 28 Nm	DC 40 Nm
D	DC 14 Nm	DC 20 Nm	DC 20 Nm	DC 28 Nm

\*AC = Uses same AC voltage as Motor (except 575 VAC requires 110 VAC for brake voltage)  
DC = Uses 24 VDC signal logic

Figure 1: Gear Motor Mounting Position

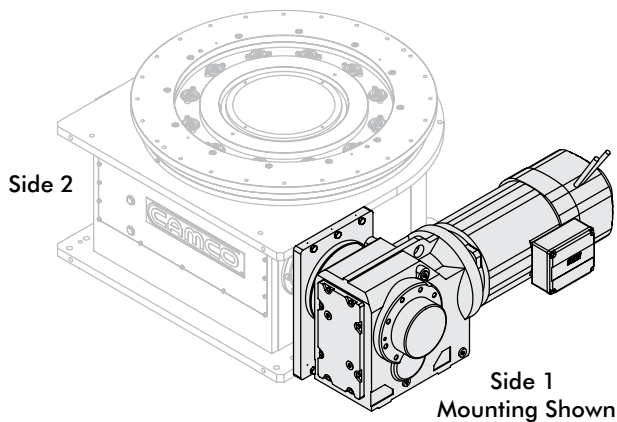
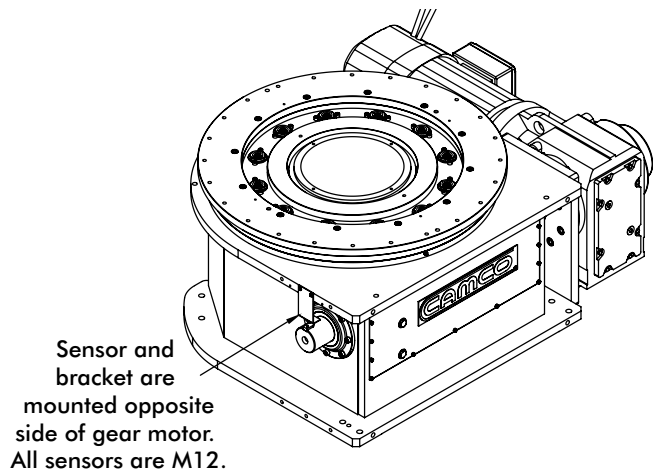


Figure 2: Sensor Mounting Position



# MDE700M SERIES INDEXER

Mechanical Indexer | Sizing Tables

ND1 Gear Motor	Motion Time <sup>†</sup> [seconds]							
	2.24	2.43	2.88	3.19	3.55	4.20	4.46	5.29
Stops	Maximum Inertia* [Kgm <sup>2</sup> ]							
2	8	25	85	148	241	487	616	962
3	100	150	320	486	728	1351	1673	1758
4	292	414	820	1214	1758	1758	1758	1758
6	752	1048	1758	1758	1758	1758	1758	1758
8	1590	1758	1758	1758	1758	1758	1758	1758
12	1758	1758	1758	1758	1758	1758	1758	1758
16	1758	1758	1758	1758	1758	1758	1758	1758
Reducer Ratio Options								
	A	B	C	D	E	F	G	H

Gear Motor Brake Option	
A or C	20 Nm
B or D	14 Nm

ND2 Gear Motor	Motion Time <sup>†</sup> [seconds]							
	2.11	2.40	2.60	2.89	3.28	3.66	4.47	5.04
Stops	Maximum Inertia* [Kgm <sup>2</sup> ]							
2	146	191	226	281	365	457	684	871
3	436	566	667	825	1065	1330	1758	1758
4	1225	1758	1758	1758	1758	1758	1758	1758
6	1758	1758	1758	1758	1758	1758	1758	1758
8	1758	1758	1758	1758	1758	1758	1758	1758
12	1758	1758	1758	1758	1758	1758	1758	1758
16	1758	1758	1758	1758	1758	1758	1758	1758
Reducer Ratio Options								
	A	B	C	D	E	F	G	H

Gear Motor Brake Option	
A or C	28 Nm
B or D	20 Nm

SW1 Gear Motor	Motion Time <sup>†</sup> [seconds]				
	2.45	2.80	2.95	3.36	3.67
Stops	Maximum Inertia* [Kgm <sup>2</sup> ]				
2	200	263	294	385	461
3	577	776	865	1127	1343
4	1372	1758	1758	1758	1758
6	1758	1758	1758	1758	1758
8	1758	1758	1758	1758	1758
12	1758	1758	1758	1758	1758
16	1758	1758	1758	1758	1758
Reducer Ratio Options					
	A	B	C	D	E

Gear Motor Brake Option	
A or C	28 Nm
B or D	20 Nm

SW2 Gear Motor	Motion Time <sup>†</sup> [seconds]				
	2.14	2.38	2.66	3.00	3.26
Stops	Maximum Inertia* [Kgm <sup>2</sup> ]				
2	151	187	237	304	362
3	452	559	702	894	1061
4	1645	1758	1758	1758	1758
6	1758	1758	1758	1758	1758
8	1758	1758	1758	1758	1758
12	1758	1758	1758	1758	1758
16	1758	1758	1758	1758	1758
Reducer Ratio Options					
	A	B	C	D	E

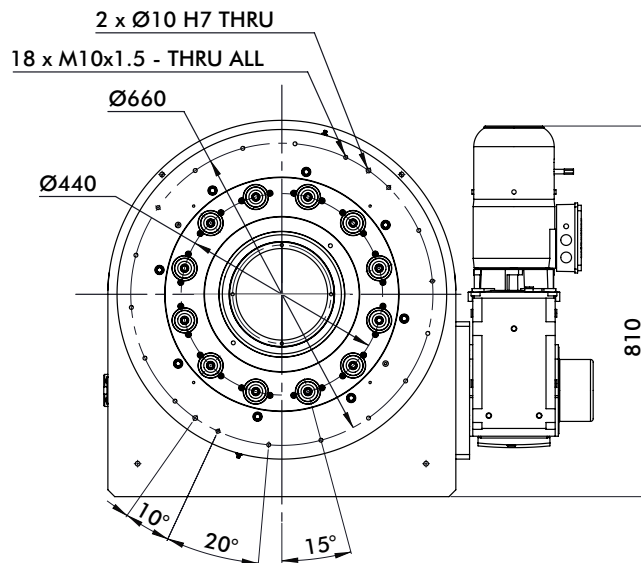
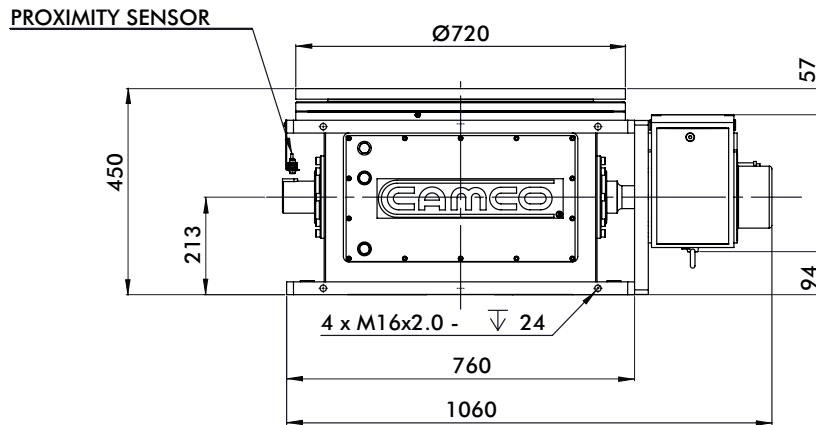
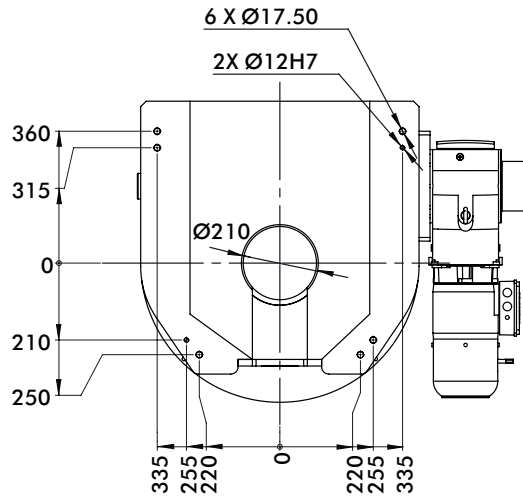
Gear Motor Brake Option	
A or C	40 Nm
B or D	28 Nm

\*Maximum Mass (Axial Load) used for charts is = 5682 kg  
<sup>†</sup>All motion times in tables are based on rated motor speed at 50 Hz

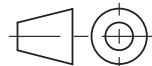


# MDE700M SERIES INDEXER

## Mechanical Indexer | Dimensions



Visit our website to download the specific cad model for your application.



Unless otherwise noted, all dimensions are in mm.

# MDE700M SERIES INDEXER

Mechanical Indexer | Technical Information

## Specifications

### Main Dimensions

Output Flange Diameter	720 mm
Height (Mounting surface of output flange)	450 mm
Center Opening	210 mm
Approximate Weight (Indexer)	820 Kg

### Precision

Indexing Accuracy	$\pm 27$ arcsec
Indexing Repeatability	$\pm 6$ arcsec
Axial Runout on Output Flange	0.02 mm
Radial Runout on Output Flange	0.02 mm

### Load on Output Flange\*

Maximum Axial Force	55.8 kN
Maximum Radial Force	100 kN
Maximum Tilting Moment	11.3 kNm
Maximum Output Torque (12-stop)	8400 Nm

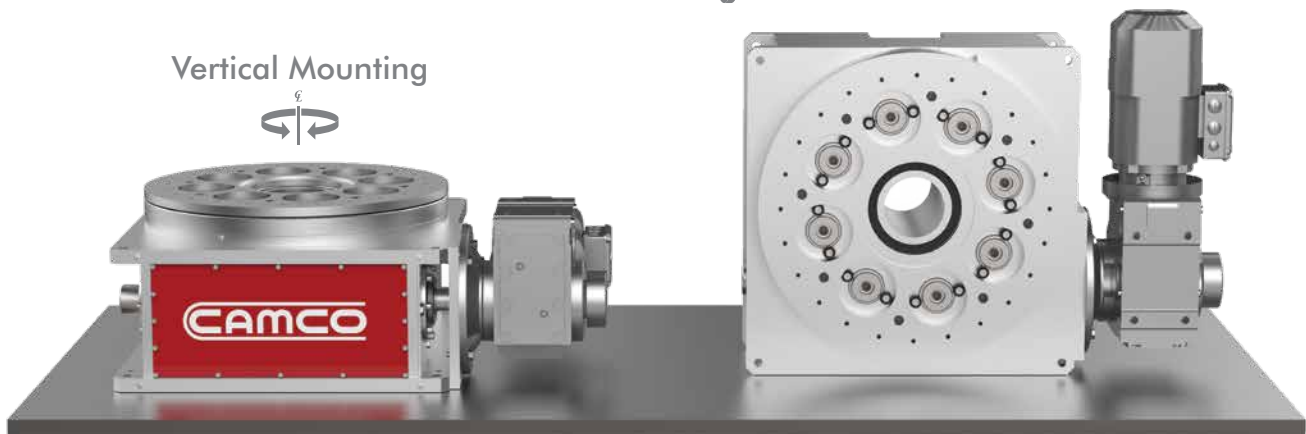
\*The specifications listed are simultaneous combined loading of maximum axial force, maximum radial force and maximum overturning moment.



Quick Access field replaceable cam followers

 Horizontal Mounting

Vertical Mounting



Consult DESTACO for horizontal mounting applications

# MDE900M SERIES INDEXER

## Mechanical Indexer | How To Order



Motion	Number of Stops	Reducer Ratio	Gear Motor Ratios				Gear Motor Mount	Dwell Sensor (See figure 2)
			ND1	ND2	SW1	SW2		
A	2	A	55.69	54.56	56.64	41.87	1	0 No Sensor
B	3	B	63.25	62.42	63.00	47.93	2	A Bracket for M12 Sensor only
C	4	C	68.61	72.24	70.46	56.55		B PNP N/O w/Bracket Qty:1
D	6	D	76.18	88.17	79.34	62.55		C PNP N/O w/Bracket Qty:2
E	8	E	86.43	102.40	86.34	70.54		D NPN N/O w/Bracket Qty:1
F	12	F	95.96					E NPN N/O w/Bracket Qty:2
G	16	G	117.79					F PNP N/C w/Bracket Qty:1
		H	132.79					G PNP N/C w/Bracket Qty:2
								H NPN N/C w/Bracket Qty:1
								I NPN N/C w/Bracket Qty:2

Base Model → **MDE900M** - **A** - **SW1** **A** - **A** - **B** - **1** - **D**

Gear Motor	Description	Motor Voltage	Description
ND1	NORD® 4 kW (5.4 hp)	A	400 VAC
ND2	NORD® 4 kW (5.4 hp)	B	460 VAC
SW1	SEW® 5.6 kW (7.5 hp)	C	575 VAC
SW2	SEW® 11 kW (14.8 hp)		

Brake	Gear Motor Brake Options*			
	ND1	ND2	SW1	SW2
A	AC 28 Nm	AC 40 Nm	AC 40 Nm	AC 110 Nm
B	AC 20 Nm	AC 28 Nm	AC 28 Nm	AC 80 Nm
C	DC 28 Nm	DC 40 Nm	DC 40 Nm	DC 110 Nm
D	DC 20 Nm	DC 28 Nm	DC 28 Nm	DC 80 Nm

\*AC = Uses same AC voltage as Motor (except 575 VAC requires 110 VAC for brake voltage)  
DC = Uses 24 VDC signal logic

Figure 1: Gear Motor Mounting Position

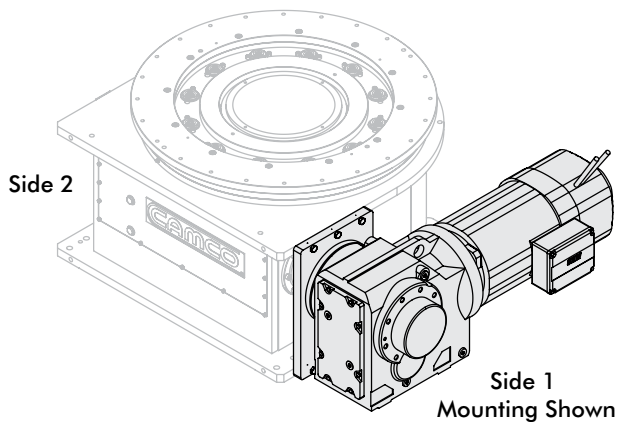
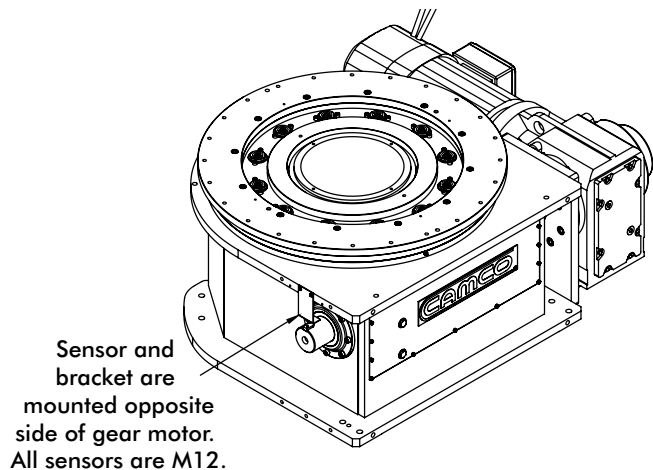


Figure 2: Sensor Mounting Position



# MDE900M SERIES INDEXER

Mechanical Indexer | Sizing Tables

ND1 Gear Motor	Motion Time <sup>†</sup> [seconds]							
	2.11	2.40	2.60	2.89	3.28	3.66	4.47	5.04
Stops	Maximum Inertia* [Kgm <sup>2</sup> ]							
2	116	210	256	323	425	538	817	1047
3	397	643	866	1258	1873	2346	3507	3886
4	1006	1583	2103	3008	3886	3886	3886	3886
6	2488	3878	3886	3886	3886	3886	3886	3886
8	3886	3886	3886	3886	3886	3886	3886	3886
12	3886	3886	3886	3886	3886	3886	3886	3886
16	3886	3886	3886	3886	3886	3886	3886	3886
Reducer Ratio Options								
	A	B	C	D	E	F	G	H

Gear Motor Brake Option	
A or C	28 Nm
B or D	20 Nm

ND2 Gear Motor	Motion Time <sup>†</sup> [seconds]				
	2.07	2.37	2.74	3.34	3.88
Stops	Maximum Inertia* [Kgm <sup>2</sup> ]				
2	104	198	287	443	609
3	366	611	1042	1950	2642
4	931	1509	2507	3886	3886
6	2316	3709	3886	3886	3886
8	3886	3886	3886	3886	3886
12	3886	3886	3886	3886	3886
16	3886	3886	3886	3886	3886
Reducer Ratio Options					
	A	B	C	D	E

Gear Motor Brake Option	
A or C	40 Nm
B or D	28 Nm

SW1 Gear Motor	Motion Time <sup>†</sup> [seconds]				
	2.18	2.42	2.71	3.05	3.32
Stops	Maximum Inertia* [Kgm <sup>2</sup> ]				
2	167	210	271	353	424
3	725	980	1234	1573	1869
4	1742	2486	3599	3886	3886
6	3886	3886	3886	3886	3886
8	3886	3886	3886	3886	3886
12	3886	3886	3886	3886	3886
16	3886	3886	3886	3886	3886
Reducer Ratio Options					
	A	B	C	D	E

Gear Motor Brake Option	
A or C	40 Nm
B or D	28 Nm

SW2 Gear Motor	Motion Time <sup>†</sup> [seconds]				
	1.55	1.78	2.10	2.32	2.62
Stops	Maximum Inertia* [Kgm <sup>2</sup> ]				
2	78	108	163	207	272
3	418	553	783	965	1237
4	1522	2356	3428	3886	3886
6	3679	3886	3886	3886	3886
8	3886	3886	3886	3886	3886
12	3886	3886	3886	3886	3886
16	3886	3886	3886	3886	3886
Reducer Ratio Options					
	A	B	C	D	E

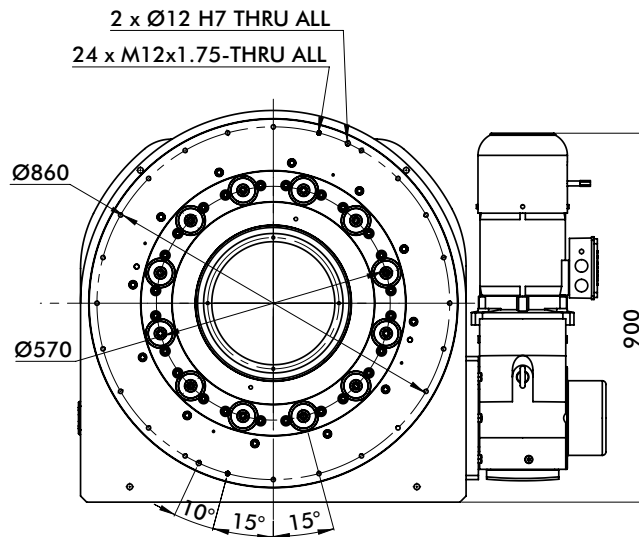
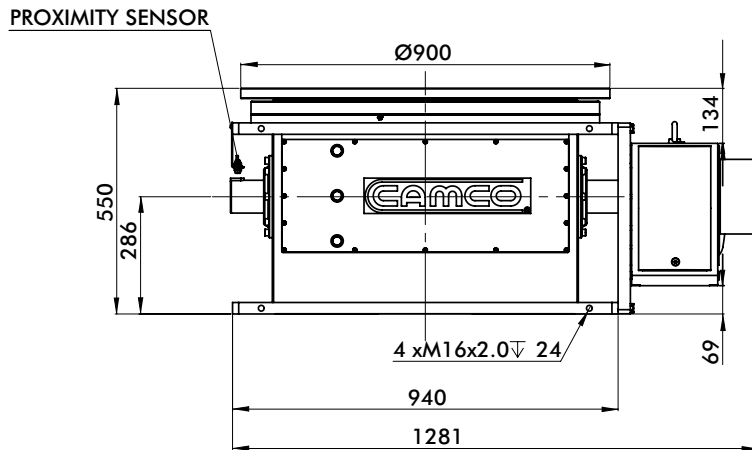
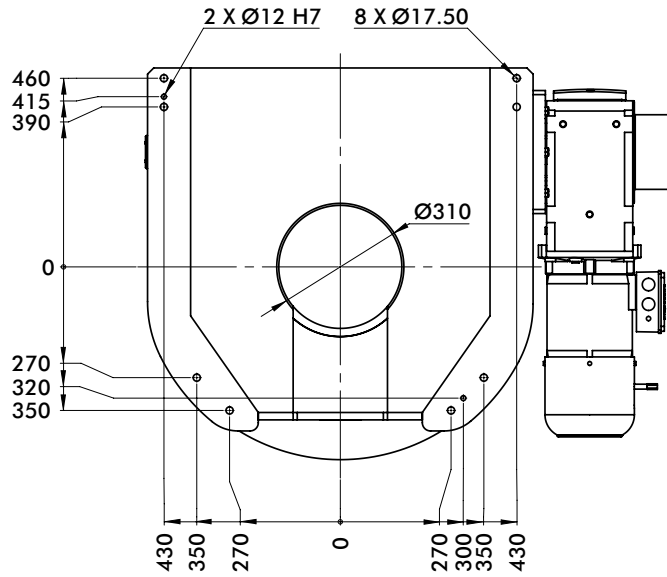
Gear Motor Brake Option	
A or C	110 Nm
B or D	80 Nm

\*Maximum Mass (Axial Load) used for charts is = 6818 kg

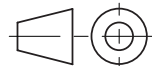
†All motion times in tables are based on rated motor speed at 50 Hz

# MDE900M SERIES INDEXER

## Mechanical Indexer | Dimensions



Visit our website to download the specific cad model for your application.



Unless otherwise noted, all dimensions are in mm.

# MDE900M SERIES INDEXER

Mechanical Indexer | Technical Information

## Specifications

### Main Dimensions

Output Flange Diameter	900 mm
Height (Mounting surface of output flange)	550 mm
Center Opening	300 mm
Approximate Weight (Indexer)	1300 Kg

### Precision

Indexing Accuracy	$\pm 18$ arcsec
Indexing Repeatability	$\pm 6$ arcsec
Axial Runout on Output Flange	0.02 mm
Radial Runout on Output Flange	0.02 mm

### Load on Output Flange\*

Maximum Axial Force	66.7 kN
Maximum Radial Force	100 kN
Maximum Tilting Moment	16.9 kNm
Maximum Output Torque (12-stop)	16500 Nm

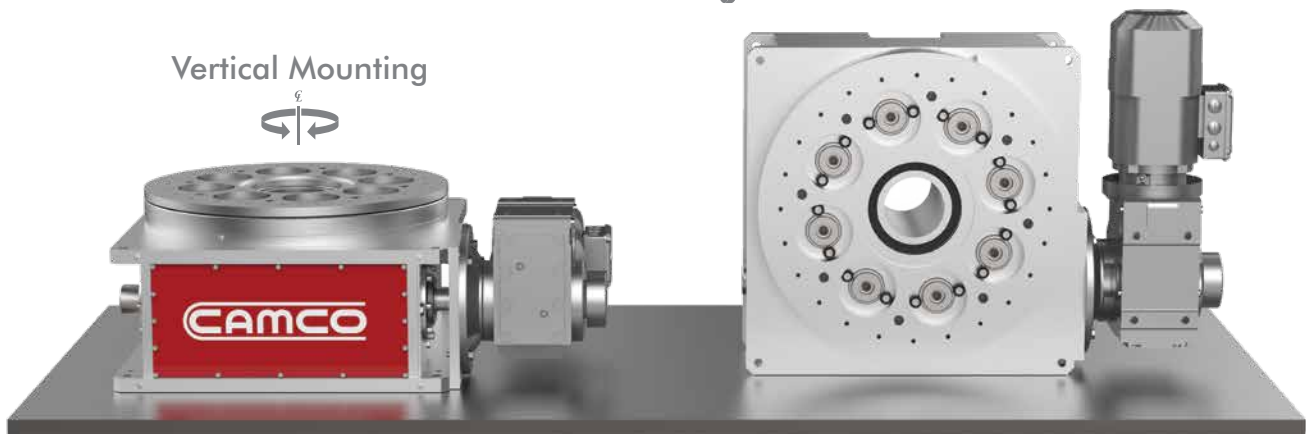
\*The specifications listed are simultaneous combined loading of maximum axial force, maximum radial force and maximum overturning moment.



Quick Access field replaceable cam followers

 Horizontal Mounting

Vertical Mounting



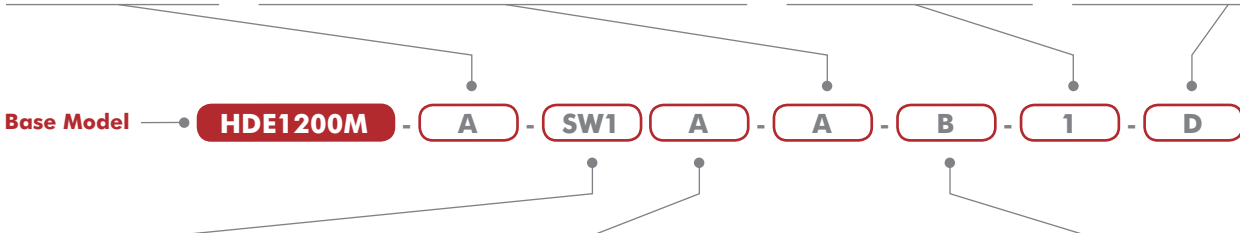
Consult DESTACO for horizontal mounting applications

# HDE1200M SERIES INDEXER

## Mechanical Indexer | How To Order



Motion	Steps	Reducer Ratio	Gear Motor Ratios				Mount	(See Figure 1)	Dwell Sensor (See figure 2)	
			ND1	ND2	SW1	SW2				
A	2	A	36.21	41.11	41.87	57.17	1	Side 1	0	No Sensor
B	3	B	39.72	44.81	47.93	66.52	2	Side 2	A	Bracket for M12 Sensor only
C	4	C	44.96	50.35	56.55	73.30			B	PNP N/O w/Bracket Qty:1
D	6	D	54.56	58.44	62.55	82.61			C	PNP N/O w/Bracket Qty:2
E	8	E	62.42	70.22	70.54	90.96			D	NPN N/O w/Bracket Qty:1
F	12	F							E	NPN N/O w/Bracket Qty:2
G	16	F							F	PNP N/C w/Bracket Qty:1
									G	PNP N/C w/Bracket Qty:2
									H	NPN N/C w/Bracket Qty:1
									I	NPN N/C w/Bracket Qty:2



Gear Motor	Motor and Reducer	Voltage	Motor Voltage
ND1	NORD 15kW (20.1 hp)	A	400VAC Motor
ND2	NORD 22kW (29.5 hp)	B	460VAC Motor
SW1	SEW 11kW (14.8 hp)	C	575VAC Motor
SW2	SEW 15kW (20.1 hp)		

Brake	Gear Motor Brake Options*			
	ND1	ND2	SW1	SW2
A	AC 150 Nm	AC 250 Nm	AC 110 Nm	AC 150 Nm
B	AC 85 Nm	AC 125 Nm	AC 80 Nm	AC 110 Nm
C	DC 150 Nm	DC 250 Nm	DC 110 Nm	DC 150 Nm
D	DC 85 Nm	DC 125 Nm	DC 80 Nm	DC 110 Nm

\*AC = Uses same AC voltage as Motor (except 575 VAC requires 110 VAC for brake voltage)  
DC = Uses 24 VDC signal logic

Figure 1: Gear Motor Mounting Position

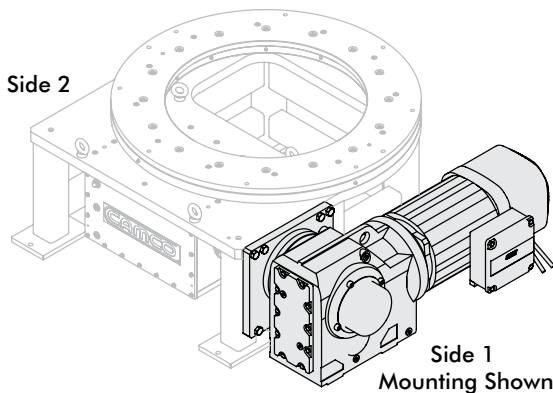
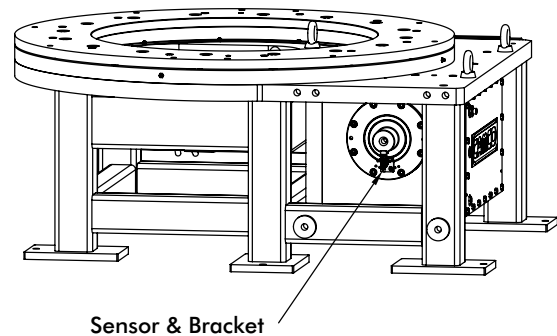


Figure 2: Sensor Mounting Position





# HDE1200M SERIES INDEXER

Mechanical Indexer | Sizing Tables

<b>ND1</b>		<b>Motion Time<sup>†</sup> [seconds]</b>				
<b>Gear Motor</b>		1.36	1.50	1.69	2.06	2.35
<b>Stops</b>	<b>Maximum Inertia* [Kgm<sup>2</sup>]</b>					
2	63	112	234	424	533	
3	411	602	996	1643	2054	
4	986	1397	2213	3574	4472	
6	2400	3341	5170	8259	10344	
8	4808	6594	10015	15874	19934	
12	11729	14112	18098	21145	21145	
16	14275	17764	21145	21145	21145	
<b>Reducer Ratio Options</b>						
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	

<b>Gear Motor Brake Option</b>	
<b>A or C</b>	150 Nm
<b>B or D</b>	85 Nm

<b>ND2</b>		<b>Motion Time<sup>†</sup> [seconds]</b>				
<b>Gear Motor</b>		1.55	1.69	1.90	2.20	2.65
<b>Stops</b>	<b>Maximum Inertia* [Kgm<sup>2</sup>]</b>					
2	226	282	389	544	813	
3	1341	1805	2698	3754	5447	
4	2843	3620	4796	6589	9541	
6	5860	7189	9450	12752	18439	
8	9170	11241	14570	19650	21145	
12	15133	17977	21145	21145	21145	
16	19284	21145	21145	21145	21145	
<b>Reducer Ratio Options</b>						
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	

<b>Gear Motor Brake Option</b>	
<b>A or C</b>	250 Nm
<b>B or D</b>	125 Nm

<b>SW1</b>		<b>Motion Time<sup>†</sup> [seconds]</b>				
<b>Gear Motor</b>		1.55	1.78	2.10	2.32	2.62
<b>Stops</b>	<b>Maximum Inertia* [Kgm<sup>2</sup>]</b>					
2	33	118	328	442	579	
3	378	699	1393	1798	2304	
4	966	1660	3109	3973	5070	
6	2432	4030	7297	9275	11813	
8	5035	8095	14249	18041	21145	
12	12910	20280	21145	21145	21145	
16	20138	21145	21145	21145	21145	
<b>Reducer Ratio Options</b>						
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	

<b>Gear Motor Brake Option</b>	
<b>A or C</b>	110 Nm
<b>B or D</b>	80 Nm

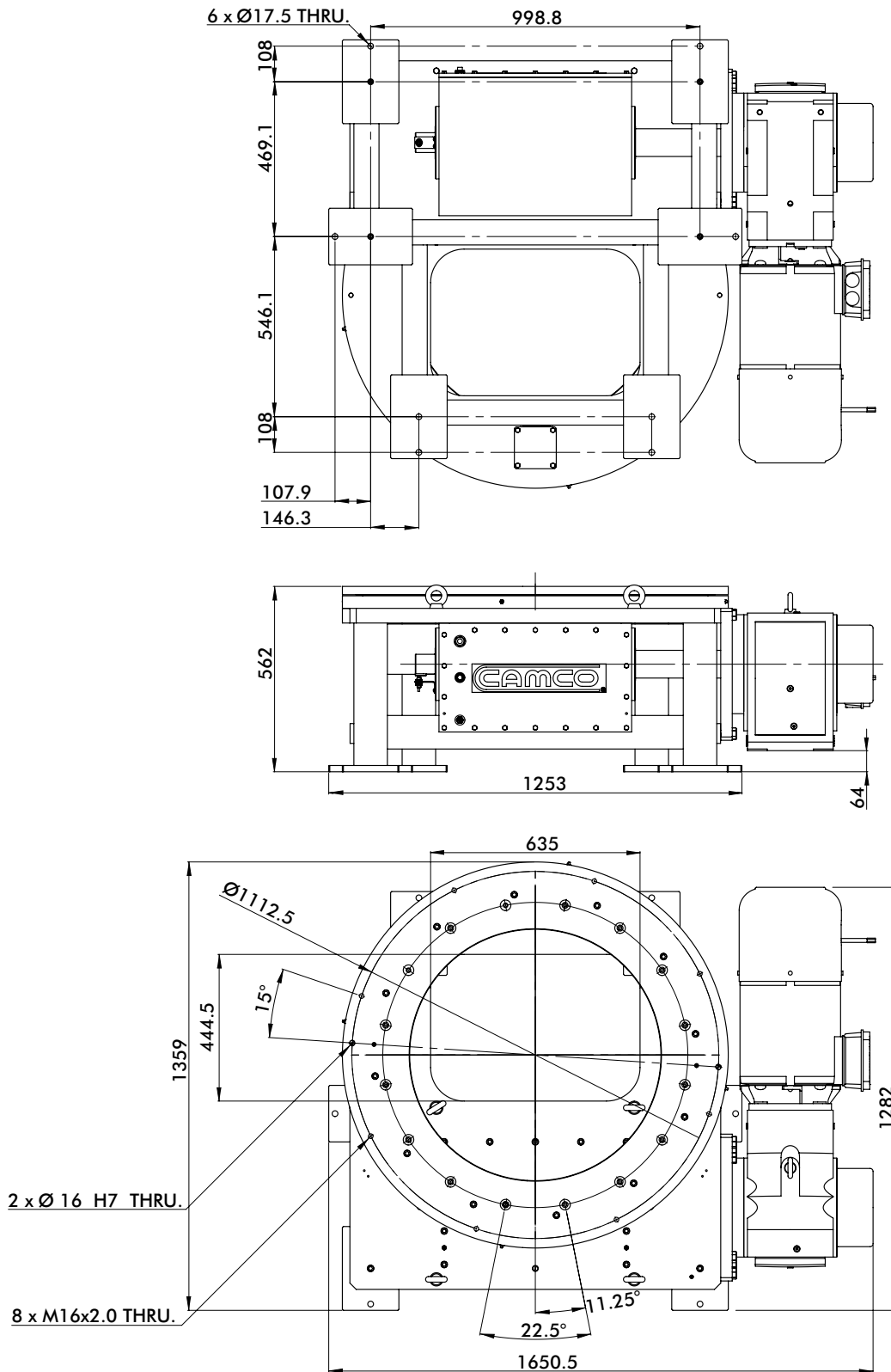
<b>SW2</b>		<b>Motion Time<sup>†</sup> [seconds]</b>					
<b>Gear Motor</b>		2.14	2.49	2.74	3.09	3.40	3.77
<b>Stops</b>	<b>Maximum Inertia* [Kgm<sup>2</sup>]</b>						
2	530	723	891	1148	1405	1737	
3	2441	4121	5676	7227	8775	10779	
4	5155	8556	10402	13229	16051	19707	
6	11691	16540	20097	21145	21145	21145	
8	18814	21145	21145	21145	21145	21145	
12	21145	21145	21145	21145	21145	21145	
16	21145	21145	21145	21145	21145	21145	
<b>Reducer Ratio Options</b>							
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	

<b>Gear Motor Brake Option</b>	
<b>A or C</b>	150 Nm
<b>B or D</b>	110 Nm

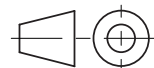
\*Maximum Mass (Axial Load) used for charts is = 14,091 kg  
<sup>†</sup>All motion times in tables are based on rated motor speed at 50 Hz

# HDE1200M SERIES INDEXER

## Mechanical Indexer | Dimensions



Visit our website to download the specific cad model for your application.



Unless otherwise noted, all dimensions are in mm.

# HDE1200M SERIES INDEXER

Mechanical Indexer | Technical Information

## Specifications

### Main Dimensions

Output Flange Diameter	1170 mm
Height (Mounting surface of output flange)	562 mm
Center Opening	445 x 635 mm
Approximate Weight (Indexer)	1790 Kg

### Precision

Indexing Accuracy	$\pm 11$ arcsec
Indexing Repeatability	$\pm 3$ arcsec
Axial Runout on Output Flange	0.02 mm
Radial Runout on Output Flange	0.02 mm

### Load on Output Flange\*

Maximum Axial Force	142.4 kN
Maximum Radial Force	240 kN
Maximum Tilting Moment	6.8 kNm
Maximum Output Torque (12-stop)	27500 Nm

\*The specifications listed are simultaneous combined loading of maximum axial force, maximum radial force and maximum overturning moment.

## Industry's First Flex-Mount Indexing Solution



**Flexible Mounting** for custom height and width requirements.

# HDE1200S SERIES SERVO

## Servo Indexer | How To Order



<b>Motion</b>	Indexer Gear Ratio	<b>Mount</b>	(See Figure 1)	<b>Adapter</b>	<b>ST1</b>	<b>ST2</b>	<b>SW1</b>	<b>SW2</b>
<b>B</b>	32:1	<b>1</b>	Side 1	<b>0</b>	NONE	NONE	NONE	NONE
		<b>2</b>	Side 2	<b>A</b>	ST	ST	SW	SW
				<b>B</b>	AB	AB	AB	AB
				<b>C</b>	SIEM	SIEM	SIEM	SIEM

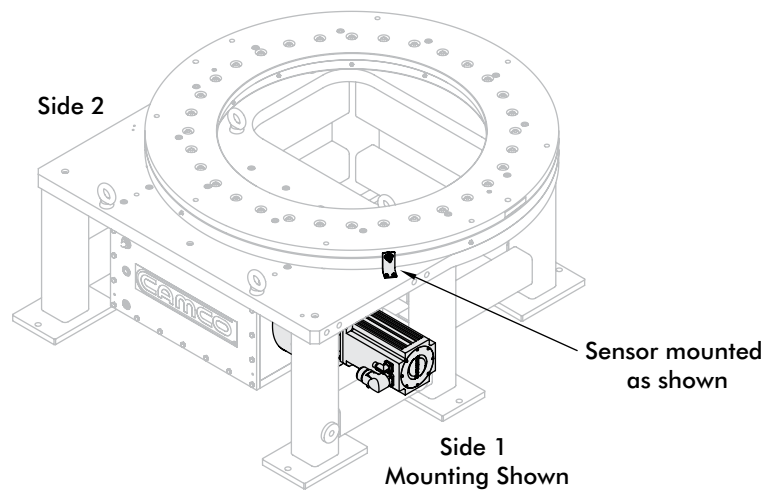
This adapter is a mounting plate attached to the planetary reducer that allows your choice of compatible servo motors.

**Base Model** → **HDE1200S** - **B** - **SW1** - **1** - **B** - **0**

<b>Planetary Reducer</b>	Description	<b>Home Sensor</b>	Description
<b>000</b>	No Planetary	<b>0</b>	No Sensor
<b>ST1</b>	STOBER 8:1 Ratio	<b>A</b>	Bracket for M12 Sensor
<b>ST2</b>	STOBER 16:1 Ratio	<b>B</b>	PNP N/O w/Bracket
<b>SW1</b>	SEW 7:1 Ratio	<b>C</b>	NPN N/O w/Bracket
<b>SW2</b>	SEW 16:1 Ratio	<b>D</b>	PNP N/C w/Bracket
		<b>E</b>	NPN N/C w/Bracket

Sensor mounted on flat non-rotating surface above and on same side as planetary.

## Gear Motor Mounting Position



# HDE1200S SERIES SERVO

## Servo Indexer | Sizing Tables

<b>ST1</b>		<b>Motion Time<sup>†</sup> [seconds]</b>			
<b>Planetary Reducer</b>		4	5	6	7
<b>Stops</b>		<b>Maximum Inertia* [Kgm<sup>2</sup>]</b>			
2		2034	3196	4630	6326
3		3077	4826	6978	9520

<b>ST2</b>		<b>Motion Time<sup>†</sup> [seconds]</b>			
<b>Planetary Reducer</b>		4	5	6	7
<b>Stops</b>		<b>Maximum Inertia* [Kgm<sup>2</sup>]</b>			
4		4120	6456	9325	12715
6		6207	9716	14019	19104
8		8293	12976	18713	21145
12		12466	19496	21145	21145
16		16638	21145	21145	21145

<b>SW1</b>		<b>Motion Time<sup>†</sup> [seconds]</b>			
<b>Planetary Reducer</b>		4	5	6	7
<b>Stops</b>		<b>Maximum Inertia* [Kgm<sup>2</sup>]</b>			
2		3342	5240	7574	10332
3		5040	7892	11393	15530

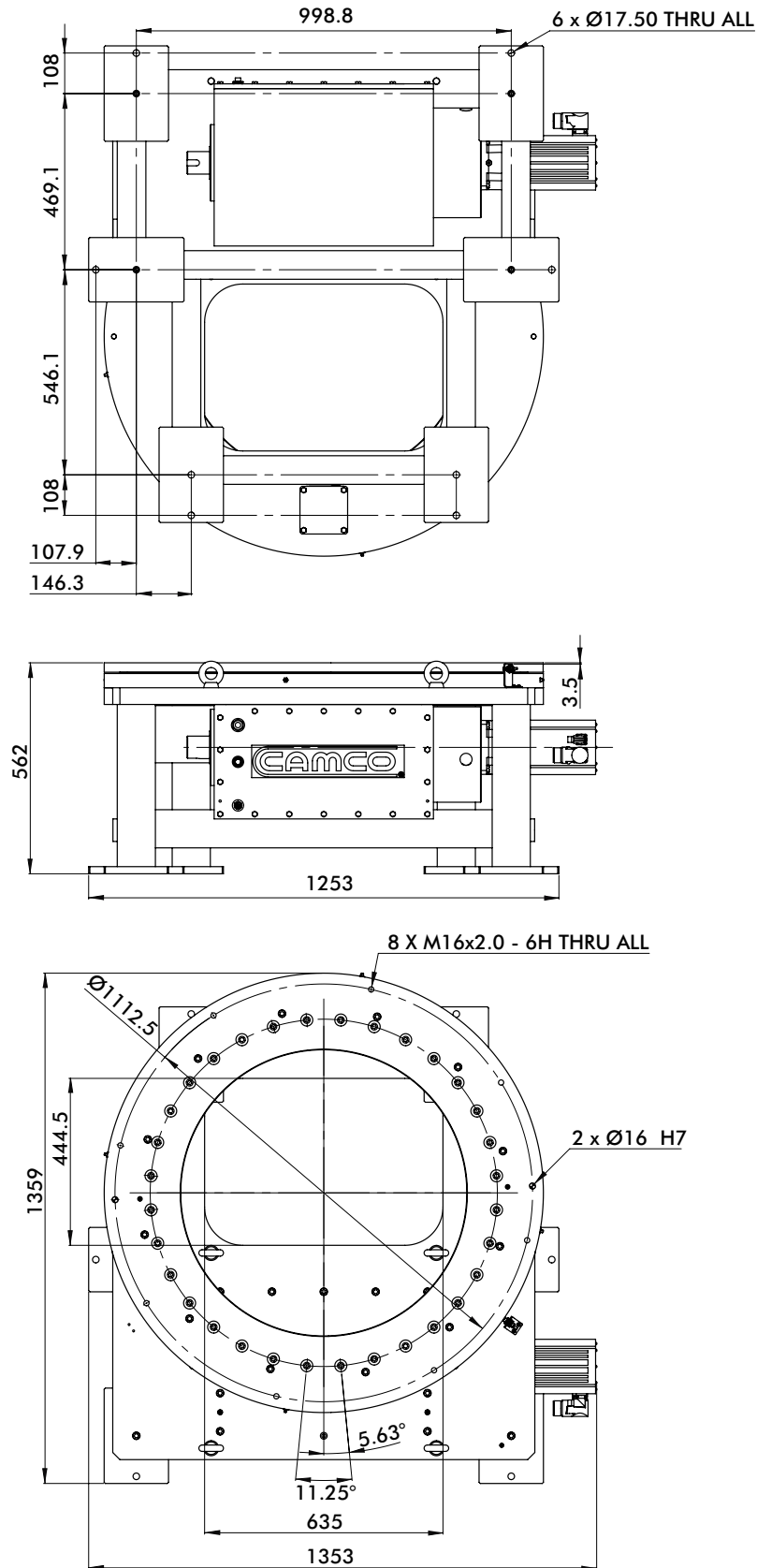
<b>SW2</b>		<b>Motion Time<sup>†</sup> [seconds]</b>			
<b>Planetary Reducer</b>		4	5	6	7
<b>Stops</b>		<b>Maximum Inertia* [Kgm<sup>2</sup>]</b>			
4		4120	6456	9325	12715
6		6207	9716	14019	19104
8		8293	12976	18713	21145
12		12466	19496	21145	21145
16		16638	21145	21145	21145

\*Based on 32:1 indexer gear ratio.

†All motion times in tables are based on rated motor speed at 50 Hz.

# HDE1200S SERIES SERVO

## Servo Indexer | Dimensions



Visit our website to download the specific cad model for your application.



Unless otherwise noted, all dimensions are in mm.

# HDE1200S SERIES SERVO

Servo Indexer | Technical Information

## Specifications

### Main Dimensions

Output Flange Diameter	1170 mm
Height (Mounting surface of output flange)	562 mm
Center Opening	445 x 635 mm
Approximate Weight (Indexer)	1110 Kg

### Precision

Indexing Accuracy	$\pm 11$ arcsec
Indexing Repeatability	$\pm 3$ arcsec
Axial Runout on Output Flange	0.02 mm
Radial Runout on Output Flange	0.02 mm

### Load on Output Flange\*

Maximum Axial Force	142.4 kN
Maximum Radial Force	240 kN
Maximum Tilting Moment	6.8 kNm
Maximum Output Torque (32:1 ratio)	17500 Nm

\*The specifications listed are simultaneous combined loading of maximum axial force, maximum radial force and maximum overturning moment.

## Industry's First Flex-Mount Indexing Solution



**Flexible Mounting** for custom height and width requirements.



# PRECISION INDEXING SOLUTIONS

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Dial Indexers ..... IN-RNG



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HD Servo Positioner ..... IN-DSR



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Parallel Gear  
Servo Positioner ..... IN-PGM



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Conveyors ..... IN-TTC



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RA Right Angle Drives ..... IN-RA



RPP Rotating Part Handlers .. IN-RPP



RD HD Dial Indexers ..... IN-RD



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**Shaft/Flange Drives** ..... IN-RGS



Parallel Shaft/  
Flange Drives ..... IN-PAR

# ROLLER GEAR INDEX DRIVE

Precision Indexing | Table of Contents



## Features:

The **CAMCO Roller Gear Index Drives** are robust, versatile units suitable for a wide variety of applications.

Available with a flange (RGD) or shaft (RGS) output

All six surfaces are machined for universal mounting

Optional center thru-hole in flange version facilitates passage of electrical wiring, pneumatic lines or mechanical linkages

Short camshaft motion periods, due to oversized cam design, are well suited for continuous running applications or for special motion requirements such as oscillating motions

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# RGD/RGS SERIES

## Roller Gear Index Drive | How To Order

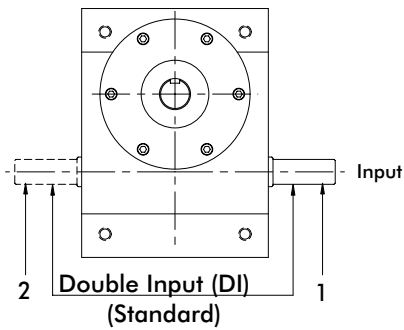
### Indexer Ordering Procedure

1. Model
  2. Input Shaft Configuration
    - Side 1
    - Side 2
    - Double Input – DI (Standard)
  3. Cam Lead (Helix)
    - Right Hand (Standard)
    - Left Hand
- NOTE: Input may rotate in either direction to achieve desired direction of output rotation.
4. Indexer Mounting Position: 1-6
  5. Indexer Housing Mounting Holes: Side 1-6 (more than one side can be selected)

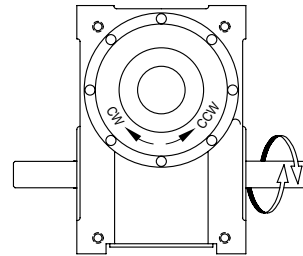
### Reducer Ordering Procedure

1. Model
2. Ratio
  - 10:1, 15:1, 20:1, 25:1, 30:1, 40:1, 50:1, 60:1
3. Motor Adapter
4. Reducer Input Shaft Extension
  - Single Input (SE) or Double Input (DE)
5. Mounting
  - Mounting Position A, B, C, or D
  - Mounted on Indexer Side 1 or Side 2
6. Input Shaft Orientation
  - Left or Right (See Diagram Below)

### Input Shaft Configuration (Top View)



### Input Shaft Rotation

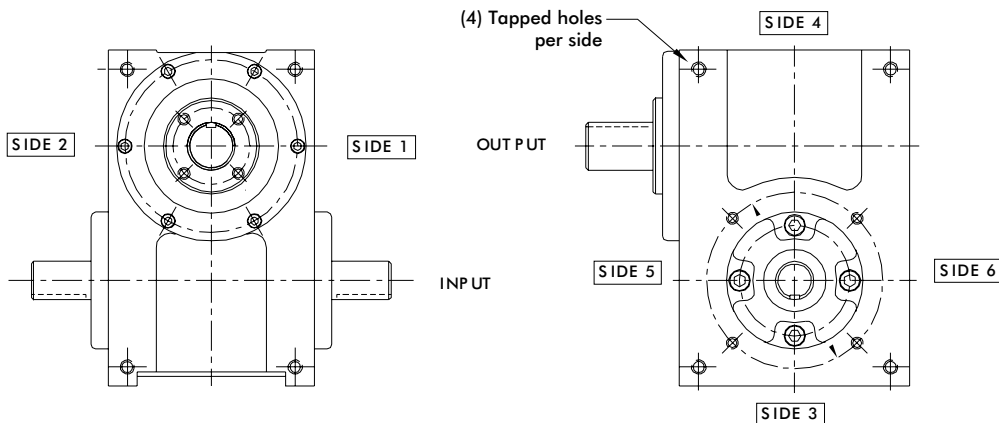


#### Relative Rotation for Right Hand Cam:

- CW Input Side 1 CCW Output
- CCW Input Side 2 CCW Output

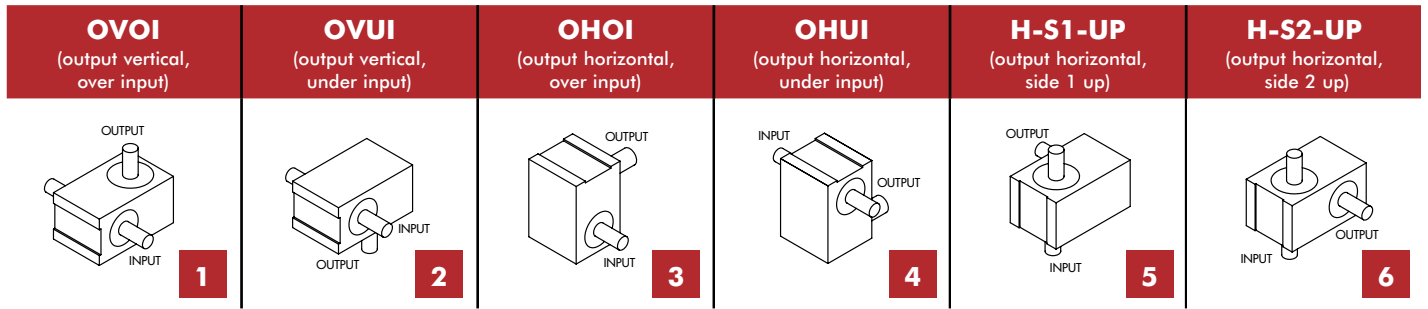
NOTE: Input can be driven in either direction

### Indexer Housing Mounting Holes

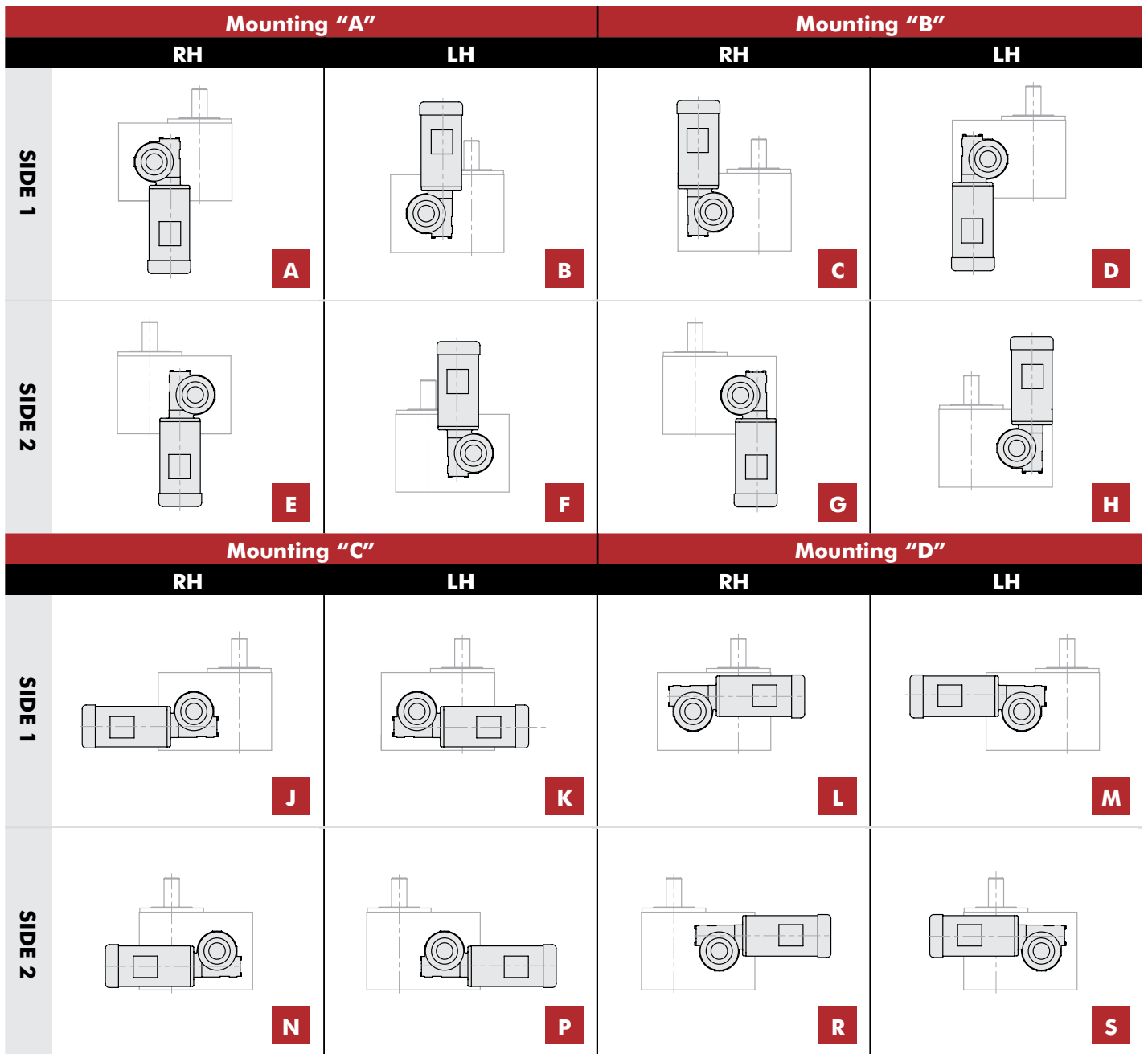


# RGD/RGS SERIES

## Roller Gear Index Drive | Indexer Mounting Position



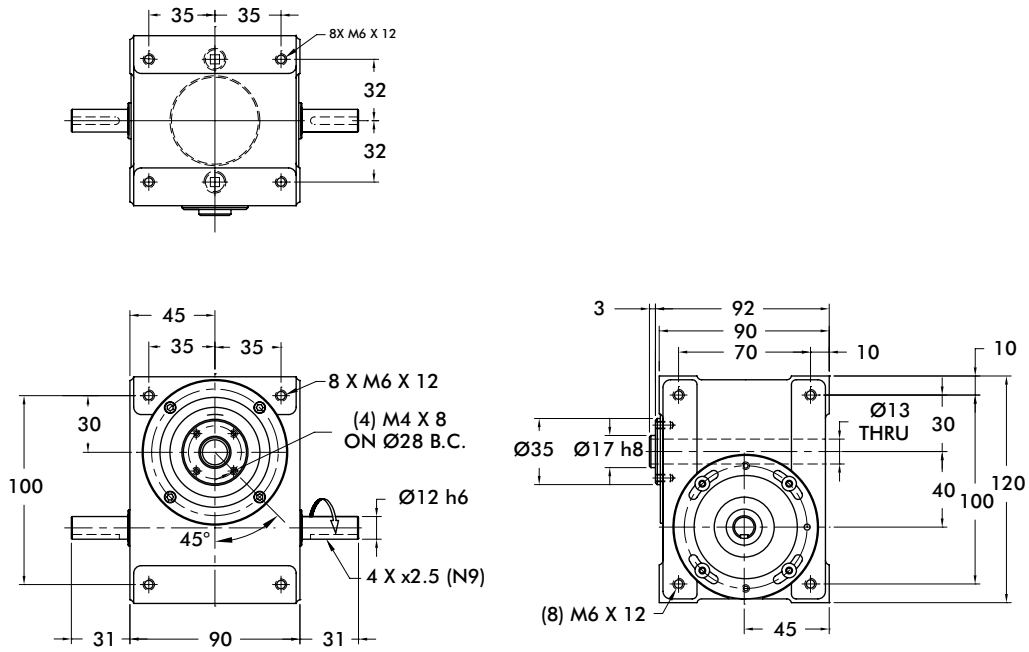
Gear Reducer Mounting Positions (Figure 4)



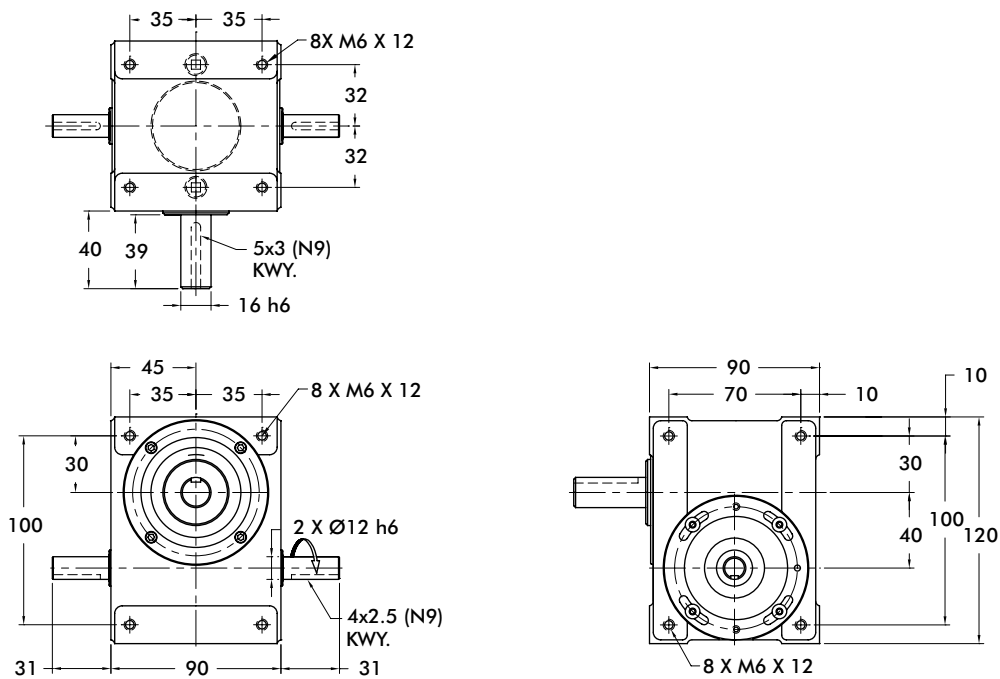
# 40RGD/40RGS SERIES

## Roller Gear Index Drive | Dimensions

### 40RGD



### 40RGS



Unless otherwise noted,  
all dimensions are in mm.

# 40RGD/40RGS SERIES

Roller Gear Index Drive | Features | Optional Accessories | Technical Information

40RGD/40RGS Indexer Capacities						
Stops	Index Period	Motion	B <sub>10</sub> Capacity at 50 RPM (in-lb)	RGD Internal Inertia (lb-in <sup>2</sup> )	RGS Internal Inertia (lb-in <sup>2</sup> )	Model
2	270	ms	150	0.3	0.4	40RG(D/S)2H12-270
3	270	ms	187	0.3	0.4	40RG(D/S)3H12-270
4	270	ms	214	0.4	0.4	40RG(D/S)4H12-270
	180	ms	225	0.4	0.4	40RG(D/S)4H12-180
6	270	ms	193	0.3	0.4	40RG(D/S)6H12-270
	90	ms	216	0.3	0.4	40RG(D/S)6H12-90
8	270	ms	216	0.4	0.4	40RG(D/S)8H12-270
	90	ms	249	0.4	0.4	40RG(D/S)8H12-90
12	270	ms	124	0.3	0.4	40RG(D/S)12H9-270
	90	ms	139	0.3	0.4	40RG(D/S)12H9-90
16	270	ms	254	0.4	0.4	40RG(D/S)16H12-270 II
	120	ms	312	0.4	0.4	40RG(D/S)16H12-120 II
24	180	ms	173	0.3	0.4	40RG(D/S)24H9-180 II
	120	ms	326	0.3	0.4	40RG(D/S)24H12-120 III

Other Motions (stops and index periods) available. Contact your DESTACO sales representative for more information.

## Features

- Fully Metric
- Universal Mounting: mounting holes on any of 6 sides
- Center Through Hole (.50 in./13 mm Diameter) in RGD model.
- Right Hand Cam

## Output Load Capacity (loads carried during index):

	RGD	RGS
Radial	1,107 lbs	206 lbs
Thrust/Axial	791 lbs	492 lbs
Moment	762 in-lb	405 in-lb

**Accuracy** ±90 arcsec / ±.0013" at 3" Radius

**Repeatability** ±22 arcsec / ±.0003" at 3" Radius

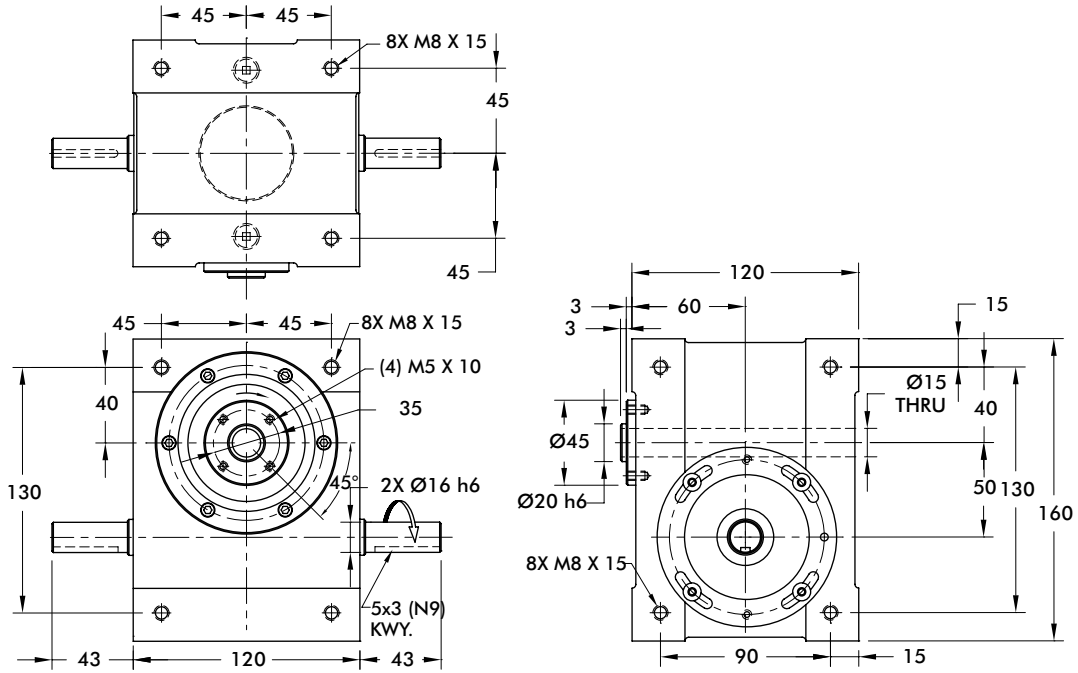
## Optional Accessories

- STM RMI28 Gear Reducer (ratios from 7:1 to 100:1) with
  - IEC56B14 Motor Adapter
  - 1/12 hp AC Motor and Inverter Drive (up to 60 cpm)
- Single or Dual Cycle Cam and Limit Switch
- Left Hand Cam
- Relief in Dwell for shot-pin applications

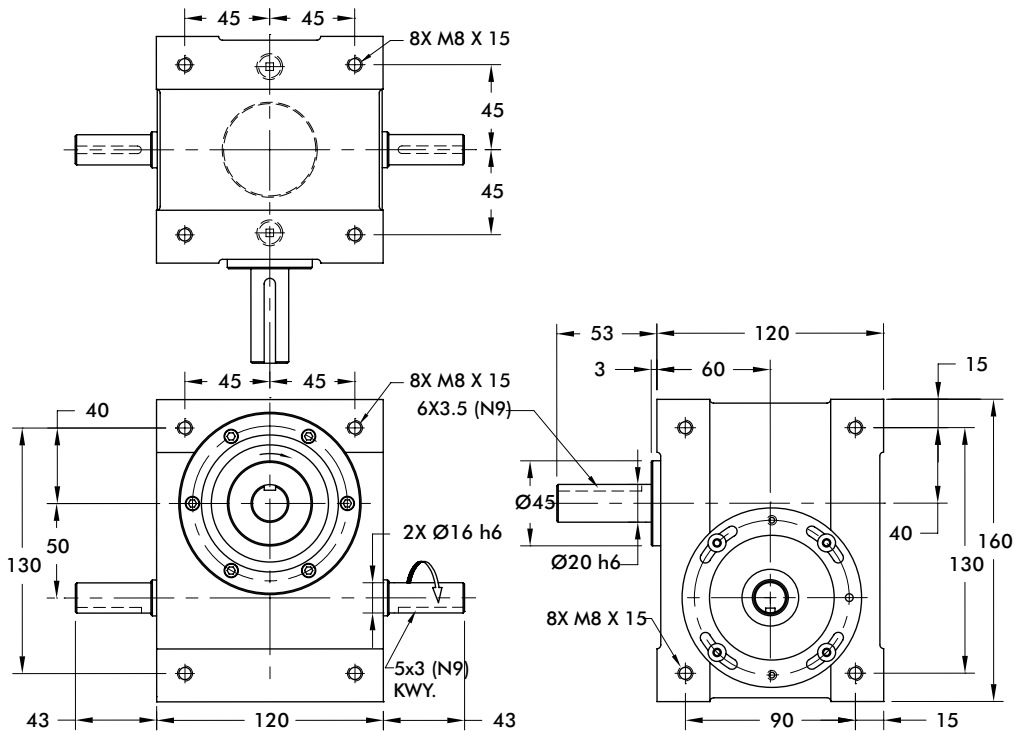
# 50RGD/50RGS SERIES

## Roller Gear Index Drive | Dimensions

50RGD



50RGS



Unless otherwise noted,  
all dimensions are in mm.



# 50RGD/50RGS SERIES

Roller Gear Index Drive | Features | Optional Accessories | Technical Information

50RGD/50RGS Indexer Capacities						
Stops	Index Period	Motion	B <sub>10</sub> Capacity at 50 RPM (in-lb)	RGD Internal Inertia (lb-in <sup>2</sup> )	RGS Internal Inertia (lb-in <sup>2</sup> )	Model
2	270	msc.50	621	1.4	1.6	50RG(D/S)2H18-270
3	270	ms	287	1.3	1.5	50RG(D/S)3H14-270
	180	ms	300	1.3	1.5	50RG(D/S)3H14-180
4	270	ms	326	1.4	1.5	50RG(D/S)4H14-270
	180	ms	351	1.4	1.5	50RG(D/S)4H14-180
6	270	ms	606	1.4	1.6	50RG(D/S)6H18-270
	90	ms	734	1.4	1.6	50RG(D/S)6H18-90
8	270	ms	336	1.4	1.5	50RG(D/S)8H14-270
	90	ms	403	1.4	1.5	50RG(D/S)8H14-90
12	270	ms	275	1.4	1.5	50RG(D/S)12H12-270
	90	ms	329	1.4	1.5	50RG(D/S)12H12-90
16	180	ms	447	1.4	1.5	50RG(D/S)16H14-180 II
24	180	ms	374	1.4	1.5	50RG(D/S)24H12-180 II
	120	ms	409	1.4	1.5	50RG(D/S)24H12-120 II

Other Motions (stops and index periods) available. Contact your DESTACO sales representative for more information.

## Features

- Fully Metric
- Universal Mounting: mounting holes on any of 6 sides
- Center Through Hole (.59 in./15 mm Diameter) in RGD model.
- Right Hand Cam

## Output Load Capacity (loads carried during index):

	RGD	RGS
Radial	1,775 lbs	379 lbs
Thrust/Axial	925 lbs	545 lbs
Moment	1,572 in-lb	791 in-lb

**Accuracy** ±73 arcsec / ±.0011" at 3" Radius

**Repeatability** ±18 arcsec / ±.0003" at 3" Radius

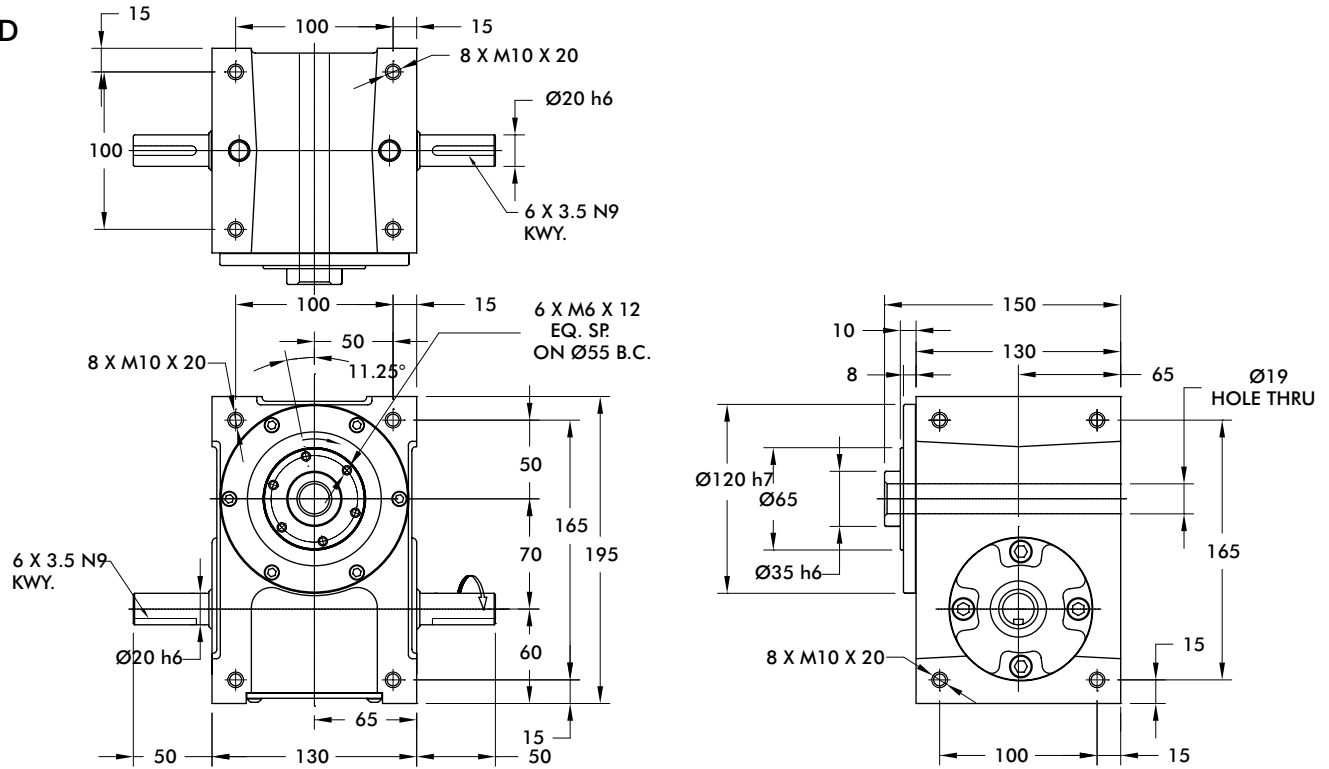
## Optional Accessories

- R180 Reducer (Ratios from 15:1 to 60:1)
  - Double Extended Worm Shaft (Input)
  - Worm Shaft Handwheel
- 1/3 hp AC Drive Package with Inverter Duty Motor and IM-pAC AC Drive (up to 60 cpm)
- Cycle Cam and Limit Switch Mounted to Camshaft
- Right Hand Cam
- Universal Mounting Capability

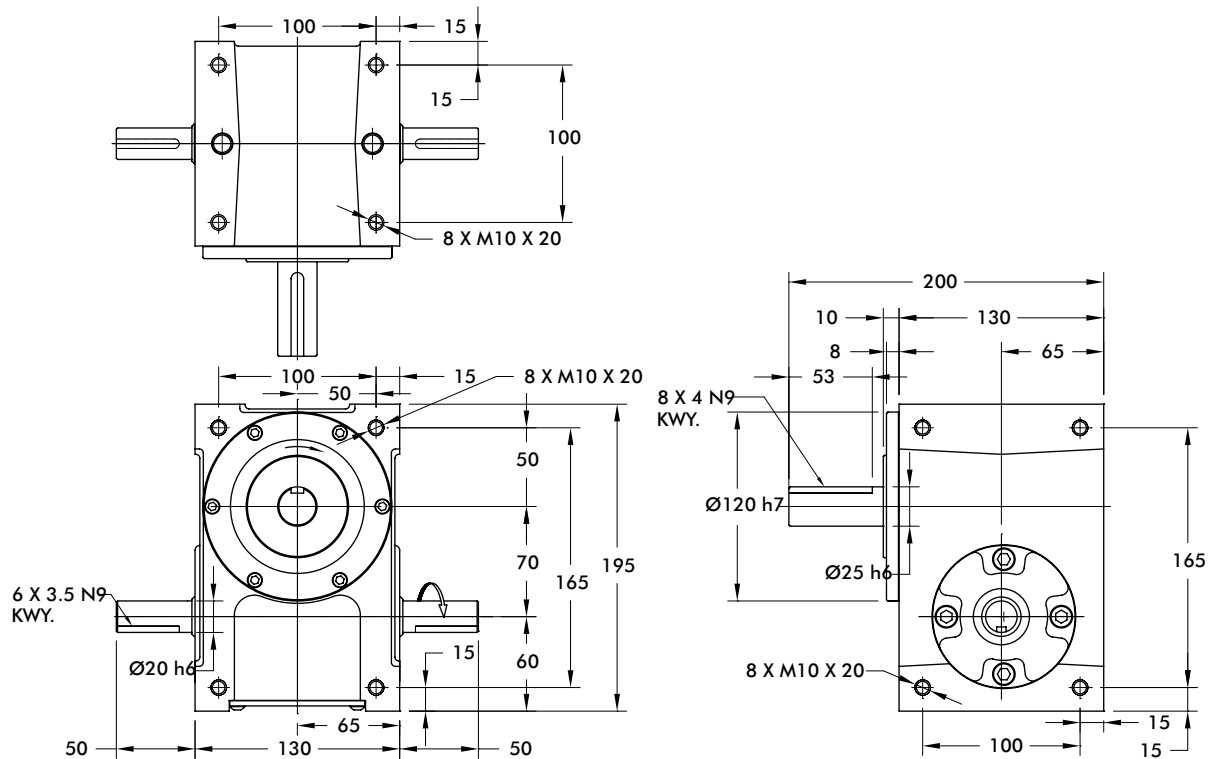
# 70RGD/70RGS SERIES

## Roller Gear Index Drive | Dimensions

### 70RGD



### 70RGS



### 70RGD/70RGS



Unless otherwise noted,  
all dimensions are in mm.

# 70RGD/70RGS SERIES

Roller Gear Index Drive | Features | Optional Accessories | Technical Information

70RGD/70RGS Indexer Capacities						
Stops	Index Period	Motion	B <sub>10</sub> Capacity at 50 RPM (in-lb)	RGD Internal Inertia (lb-in <sup>2</sup> )	RGS Internal Inertia (lb-in <sup>2</sup> )	Model
2	270	ms	585	7	8	70RG(D/S)2H20-270
	180	ms	562	7	8	70RG(D/S)2H18-180
3	270	ms	720	7	8	70RG(D/S)3H20-270
	180	ms	753	7	8	70RG(D/S)3H20-180
4	270	ms	821	9	10	70RG(D/S)4H20-270
	120	msc.33	1107	10	10	70RG(D/S)4H18-120
6	270	ms	1406	9	10	70RG(D/S)6H24-270
	90	msc.33	2110	9	10	70RG(D/S)6H24-90
8	270	ms	853	9	10	70RG(D/S)8H20-270
	90	ms	1063	9	10	70RG(D/S)8H20-90
12	270	ms	470	10	10	70RG(D/S)12H14-270
	90	ms	584	10	10	70RG(D/S)12H14-90
24	180	ms	635	10	10	70RG(D/S)24H14-180 II

Other Motions (stops and index periods) available. Contact your DESTACO sales representative for more information.

## Features

- Fully Metric
- Universal Mounting: mounting holes on any of 6 sides
- Center Through Hole (.75 in./19 mm Diameter) in RGD model.
- Right Hand Cam

## Output Load Capacity (loads carried during index):

	RGD	RGS
Radial	2,833 lbs	560 lbs
Thrust/Axial	2,224 lbs	802 lbs
Moment	3,626 in-lb	1,545 in-lb

**Accuracy** ±50 arcsec / ±.0008" at 3" Radius

**Repeatability** ±13 arcsec / ±.0002" at 3" Radius

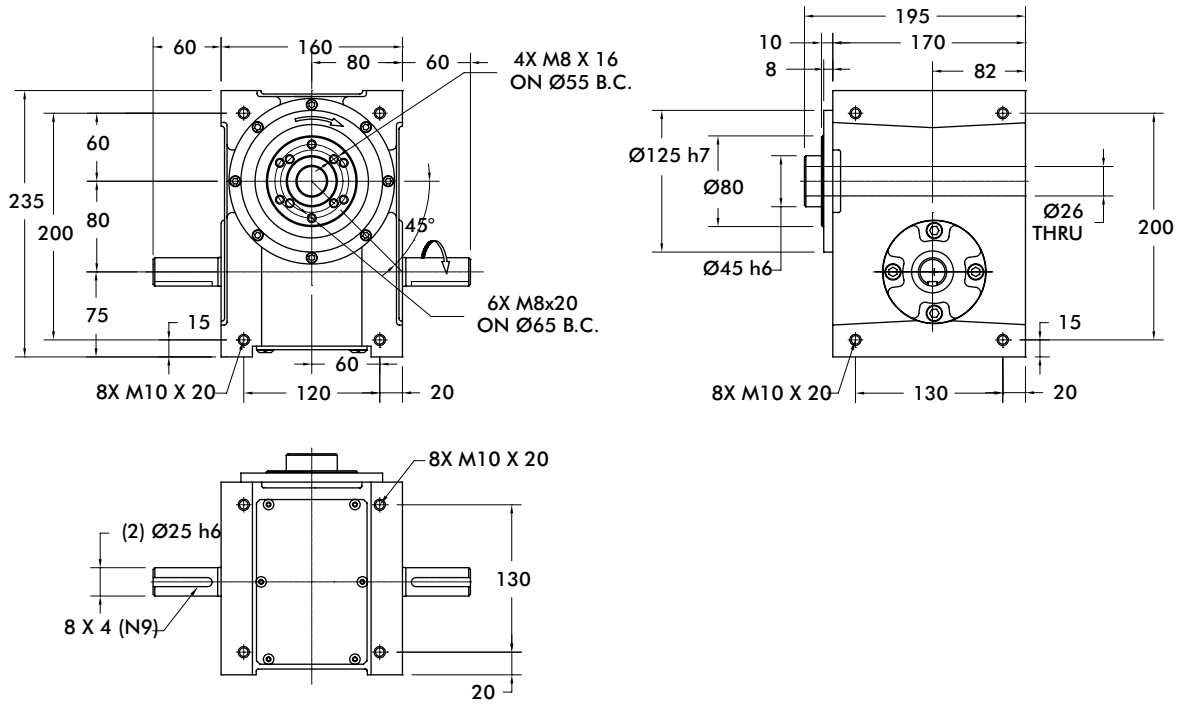
## Optional Accessories

- R180 Reducer (Ratios from 5:1 to 60:1)
- 1/3 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
- 1/3 hp DC Motor with Varipak DC Motor Control (up to 30 cpm)
- Single or Dual Cycle Cam and Limit Switch
- Left Hand Cam
- Relief in Dwell for shot-pin applications

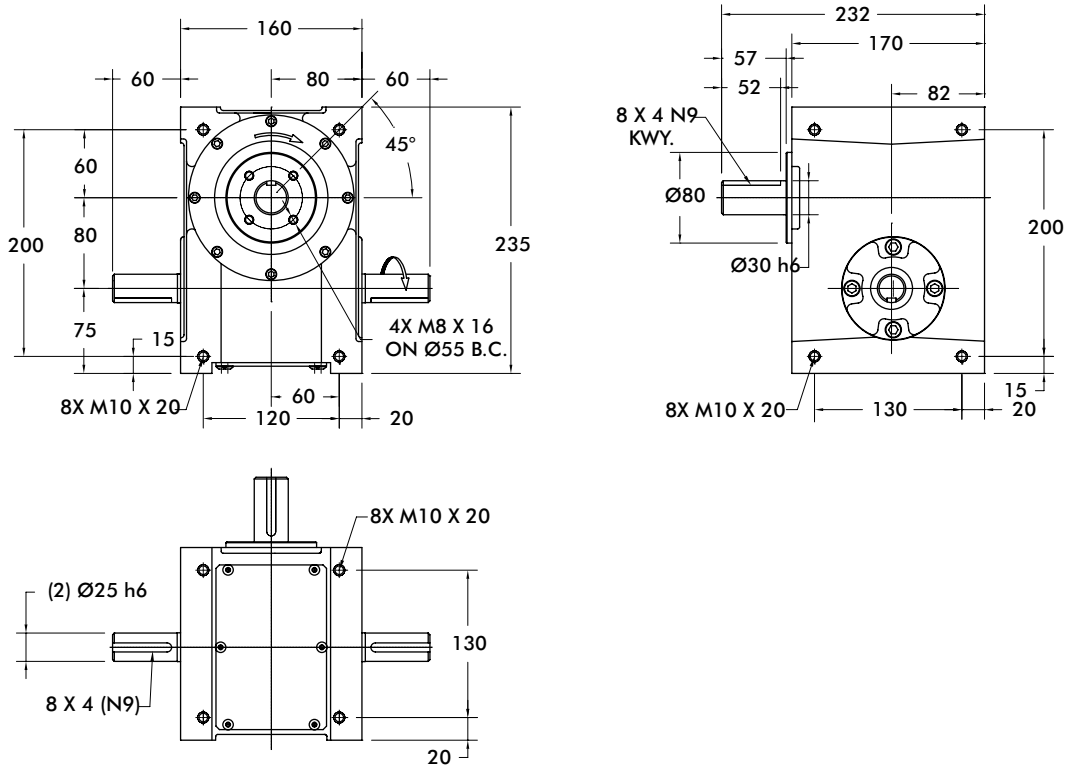
# 80RGD/80RGS SERIES

## Roller Gear Index Drive | Dimensions

### 80RGD



### 80RGS



Unless otherwise noted,  
all dimensions are in mm.

# 80RGD/80RGS SERIES

Roller Gear Index Drive | Features | Optional Accessories | Technical Information

80RGD/80RGS Indexer Capacities						
Stops	Index Period	Motion	B <sub>10</sub> Capacity at 50 RPM (in-lb)	RGD Internal Inertia (lb-in <sup>2</sup> )	RGS Internal Inertia (lb-in <sup>2</sup> )	Model
2	330	ms	1144	16	17	80RG(D/S)2H24-330
	270	msc.33	1388	16	17	80RG(D/S)2H24-270
3	270	ms	1422	16	17	80RG(D/S)3H24-270
	180	ms	1513	16	17	80RG(D/S)3H24-180
4	270	ms	1663	21	21	80RG(D/S)4H24-270
	180	msc.33	2377	21	21	80RG(D/S)4H24-180
6	270	ms	1524	18	19	80RG(D/S)6H28-270
	90	msc.50	2323	18	19	80RG(D/S)6H28-90
8	270	ms	1733	21	21	80RG(D/S)8H24-270
	90	msc.33	2937	21	21	80RG(D/S)8H24-90
12	270	ms	1011	20	20	80RG(D/S)12H18-270
	90	msc.60	1725	20	20	80RG(D/S)12H18-90

Other Motions (stops and index periods) available. Contact your DESTACO sales representative for more information.

## Features

- Fully Metric
- Universal Mounting: mounting holes on any of 6 sides
- Center Through Hole (1.02 in./26 mm Diameter) in RGD model.
- Right Hand Cam

## Output Load Capacity (loads carried during index):

	RGD	RGS
Radial	4,790 lbs	1,189 lbs
Thrust/Axial	3,470 lbs	1,246 lbs
Moment	7,544 in-lb	2,669 in-lb
<b>Accuracy</b>	±48 arcsec / ±.0007" at 3" Radius	
<b>Repeatability</b>	±12 arcsec / ±.0002" at 3" Radius	

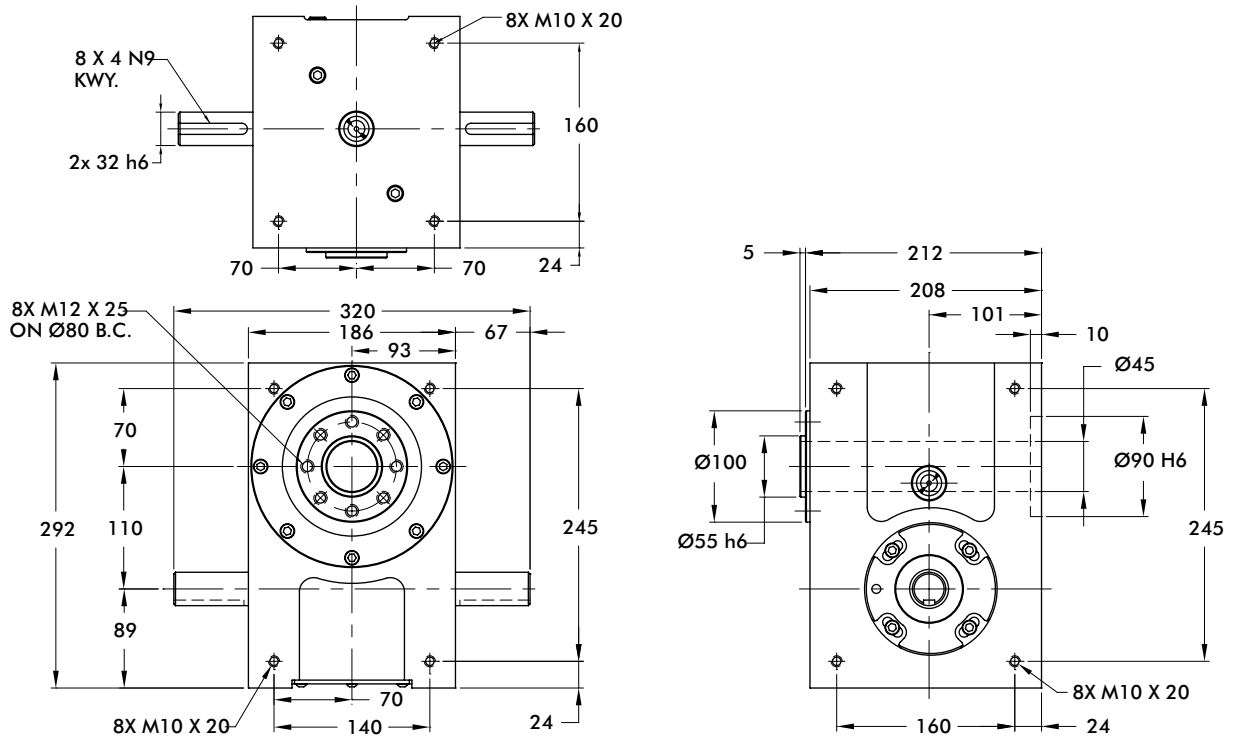
## Optional Accessories

- R180 Reducer (Ratios from 5:1 to 60:1)
- 1/3 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
- 1/3 hp DC Motor with Varipak DC Motor Control (up to 30 cpm)
- Single or Dual Cycle Cam and Limit Switch
- Left Hand Cam
- Relief in Dwell for shot-pin applications

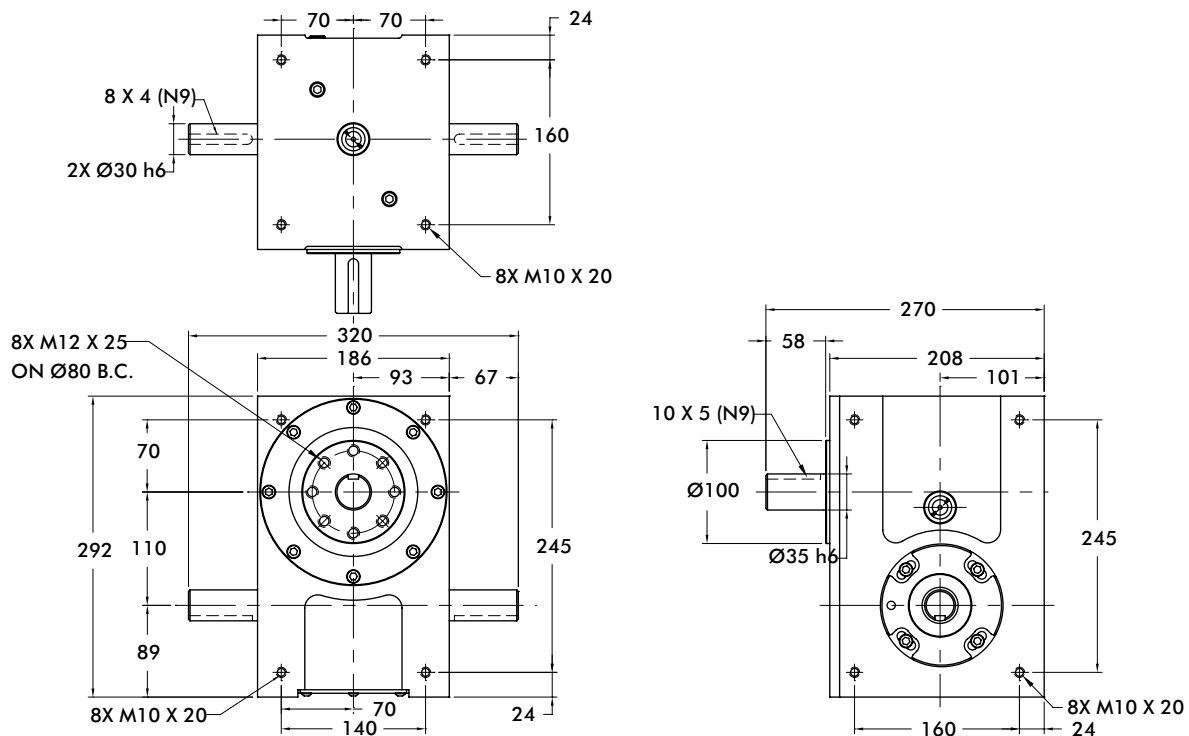
# 110RGD/110RGS SERIES

## Roller Gear Index Drive | Dimensions

### 110RGD



### 110RGS



Unless otherwise noted,  
all dimensions are in mm.

# 110RGD/110RGS SERIES

Roller Gear Index Drive | Features | Optional Accessories | Technical Information

110RGD/110RGS Indexer Capacities						
Stops	Index Period	Motion	B <sub>10</sub> Capacity at 50 RPM (in-lb)	RGD Internal Inertia (lb-in <sup>2</sup> )	RGS Internal Inertia (lb-in <sup>2</sup> )	Model
2	300	msc.33	5271	51	56	110RG(D/S)2H40-300
	270	msc.50	6126	51	56	110RG(D/S)2H40-270
3	270	ms	5609	51	56	110RG(D/S)3H40-270
	180	msc.50	7829	51	56	110RG(D/S)3H40-180
4	270	ms	3282	48	55	110RG(D/S)4H32-270
	180	msc.33	4147	48	55	110RG(D/S)4H32-180
6	270	ms	7378	52	70	110RG(D/S)6H48-270
	120	msc.33	8127	51	56	110RG(D/S)6H40-120
8	270	ms	3440	48	55	110RG(D/S)8H32-270
	120	ms	4149	48	55	110RG(D/S)8H32-120
12	270	ms	2815	47	55	110RG(D/S)12H28-270
	120	ms	3367	45	51	110RG(D/S)12H24-120
16	270	ms	1610	45	53	110RG(D/S)16H20-270
	120	ms	1992	45	53	110RG(D/S)16H20-120
24	270	ms	3650	45	51	110RG(D/S)24H24-270 II
	180	ms	4134	45	51	110RG(D/S)24H24-180 II

Other Motions (stops and index periods) available. Contact your DESTACO sales representative for more information.

## Features

- Fully Metric
- Universal Mounting: mounting holes on any of 6 sides
- Center Through Hole (1.77 in./45 mm Diameter) in RGD model.
- Right Hand Cam

## Output Load Capacity (loads carried during index):

	RGD	RGS
Radial	5,613 lbs	1,856 lbs
Thrust/Axial	4,411 lbs	2,053 lbs
Moment	11,050 in-lb	4,238 in-lb

**Accuracy** ±30 arcsec / ±.0009" at 6" Radius

**Repeatability** ±8 arcsec / ±.0002" at 6" Radius

## Optional Accessories

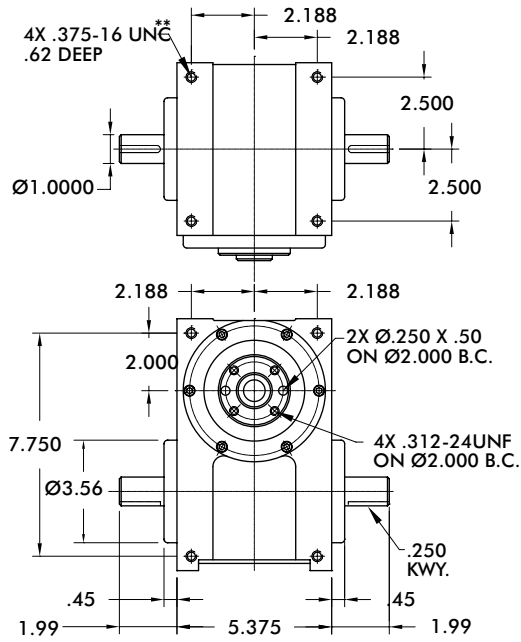
- KH37 Reducer
  - Ratios from 5.36:1 to 106.38:1 (consult factory for exact ratios available)
  - 1 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
- Single or Dual Cycle Cam and Limit Switch
- Left Hand Cam
- Relief in Dwell for shot-pin applications



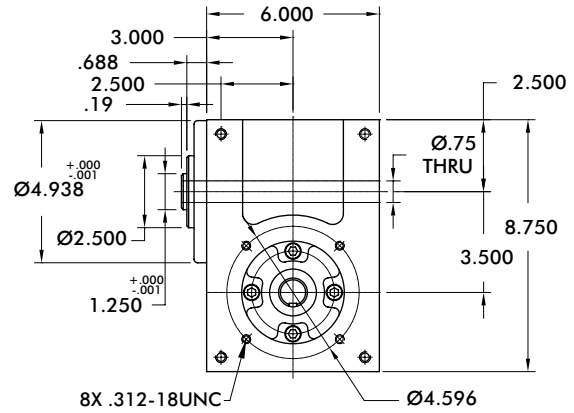
# 350RGD/350RGS SERIES

## Roller Gear Index Drive | Dimensions

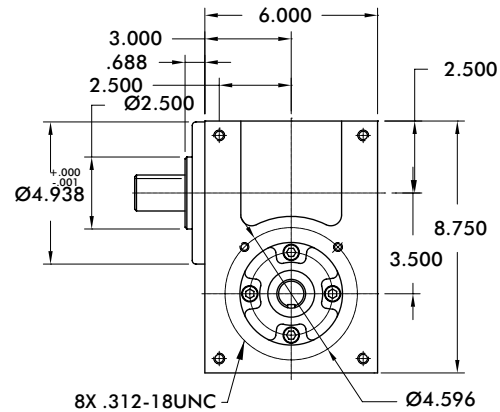
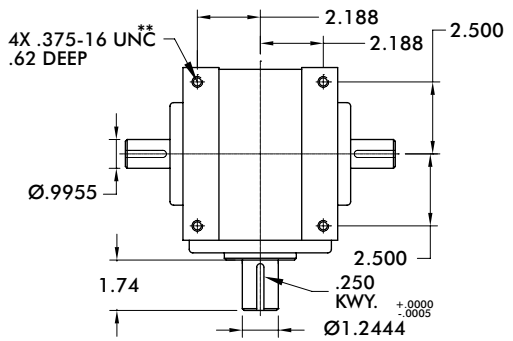
### 350RGD



\*\* 4 TAPPED MOUNTING HOLES IN ANY ONE OF SIX FINISHED SIDES, TO BE SPECIFIED BY CUSTOMER



### 350RGS



Unless otherwise noted,  
all dimensions are in mm.

# 350RGD/350RGS SERIES

Roller Gear Index Drive | Features | Optional Accessories | Technical Information

350RGD/350RGS Indexer Capacities						
Stops	Index Period	Motion	B <sub>70</sub> Capacity at 50 RPM (in-lb)	RGD Internal Inertia (lb-in <sup>2</sup> )	RGS Internal Inertia (lb-in <sup>2</sup> )	Model
1	330	msc.50	1774	7.7	9.7	350RG(D/S)1H24-330
2	270	ms	1244	7.7	9.7	350RG(D/S)2H24-270
	180	msc.67	2047	7.7	9.7	350RG(D/S)2H24-180
3	270	ms	1530	7.7	9.7	350RG(D/S)3H24-270
	180	ms	1601	7.7	9.7	350RG(D/S)3H24-180
4	300	ms	1701	8.1	10.1	350RG(D/S)4H24-300
	180	ms	2001	8.1	10.1	350RG(D/S)4H24-180
6	270	ms	1615	7.7	9.7	350RG(D/S)6H24-270
	90	ms	2063	7.7	9.7	350RG(D/S)6H24-90
8	270	ms	1840	8.1	10.1	350RG(D/S)8H24-270
	90	ms	2716	8.1	10.1	350RG(D/S)8H24-90
12	270	ms	1132	7.9	9.9	350RG(D/S)12H20-270
	90	ms	1476	7.9	9.9	350RG(D/S)12H20-90

Other Motions (stops and index periods) available. Contact your DESTACO sales representative for more information.

## Features

- Universal Mounting: mounting holes on any of 6 sides
- Center Through Hole (.75 in. Diameter) in RGD model.
- Right Hand Cam Standard

## Output Load Capacity (loads carried during index):

	RGD	RGS
Radial	1,935 lbs	1,808 lbs
Thrust/Axial	1,406 lbs	786 lbs
Moment	2,419 in-lb	3,164 in-lb

**Accuracy** ±41 arcsec / ±.0012" at 6" Radius

**Repeatability** ±10 arcsec / ±.0003" at 6" Radius

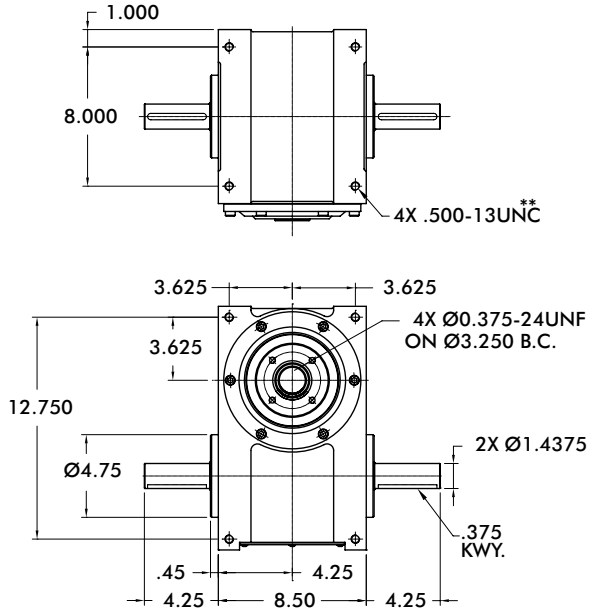
## Optional Accessories

- R180 Reducer (Ratios from 5:1 to 60:1)
  - 1/3 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
  - 1/3 hp DC Motor with Varipak DC Motor Control (up to 30 cpm)
- R225 Reducer (Ratios from 5:1 to 60:1)
  - 56C Motor Adapter and Coupling
  - 1 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
  - 1 hp DC Motor with Varipak DC Motor Control (up to 30 cpm)
- Single or Dual Cycle Cam and Limit Switch
- Relief in Dwell for shot-pin applications
- Left Hand Cam
- Relief in Dwell for shot-pin applications

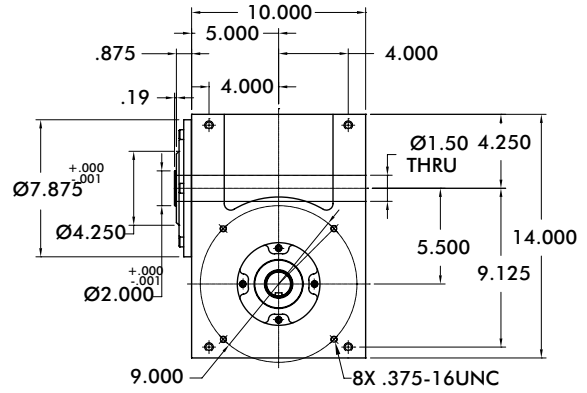
# 500RGD/500RGS SERIES

## Roller Gear Index Drive | Dimensions

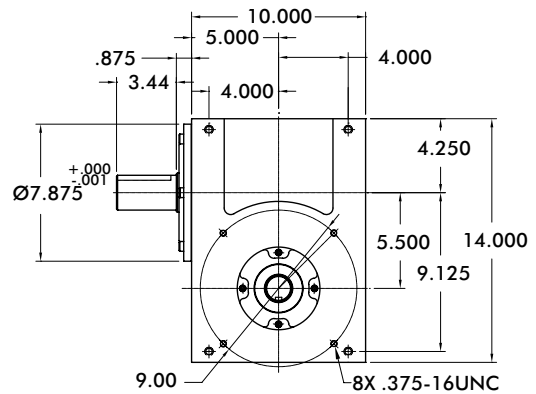
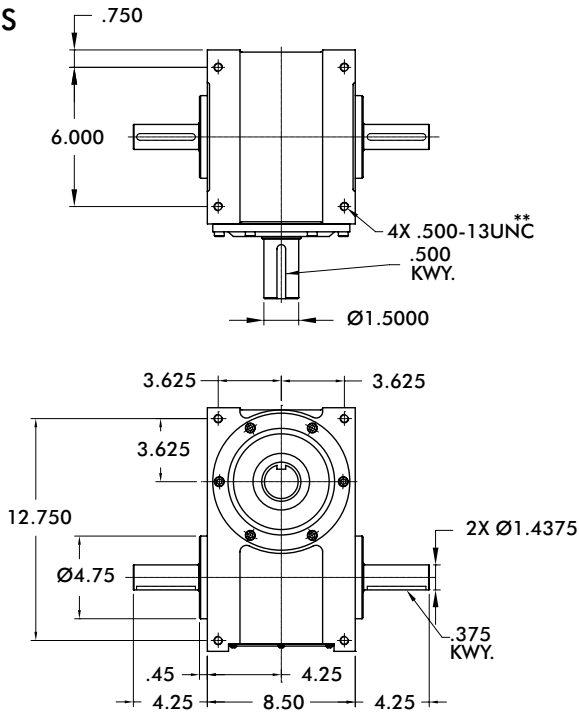
### 500RGD



\*\* 4 TAPPED MOUNTING HOLES IN ANY ONE OF SIX FINISHED SIDES, TO BE SPECIFIED BY CUSTOMER



### 500RGS



Unless otherwise noted,  
all dimensions are in mm.

# 500RGD/500RGS SERIES

Roller Gear Index Drive | Features | Optional Accessories | Technical Information

500RGD/500RGS Indexer Capacities						
Stops	Index Period	Motion	B <sub>10</sub> Capacity at 50 RPM (in-lb)	RGD Internal Inertia (lb-in <sup>2</sup> )	RGS Internal Inertia (lb-in <sup>2</sup> )	Model
1	330	msc.60	6767	62	45	500RG(D/S)1H40-330
2	270	ms	4400	62	45	500RG(D/S)2H40-270
3	270	ms	5265	62	45	500RG(D/S)3H40-270
	180	ms	5706	62	45	500RG(D/S)3H40-180
4	270	ms	6121	66	48	500RG(D/S)4H40-270
	120	msc.20	3892	60	42	500RG(D/S)4H32-120
6	270	ms	5464	62	45	500RG(D/S)6H40-270
	90	ms	6909	62	45	500RG(D/S)6H40-90
8	270	ms	6151	66	48	500RG(D/S)8H40-270
	90	ms	8219	66	48	500RG(D/S)8H40-90
12	270	ms	2616	58	40	500RG(D/S)12H28-270
	90	ms	3449	58	40	500RG(D/S)12H28-90

Other Motions (stops and index periods) available. Contact your DESTACO sales representative for more information.

## Features

- Universal Mounting: mounting holes on any of 6 sides
- Center Through Hole (1.50 in. Diameter) in RGD model.
- Right Hand Cam Standard

## Output Load Capacity (loads carried during index):

	RGD	RGS
Radial	4,004 lbs	3,767 lbs
Thrust/Axial	2,759 lbs	1,433 lbs
Moment	8,509 in-lb	12,959 in-lb

**Accuracy** ±29 arcsec / ±.0008" at 6" Radius

**Repeatability** ±7 arcsec / ±.0002" at 6" Radius

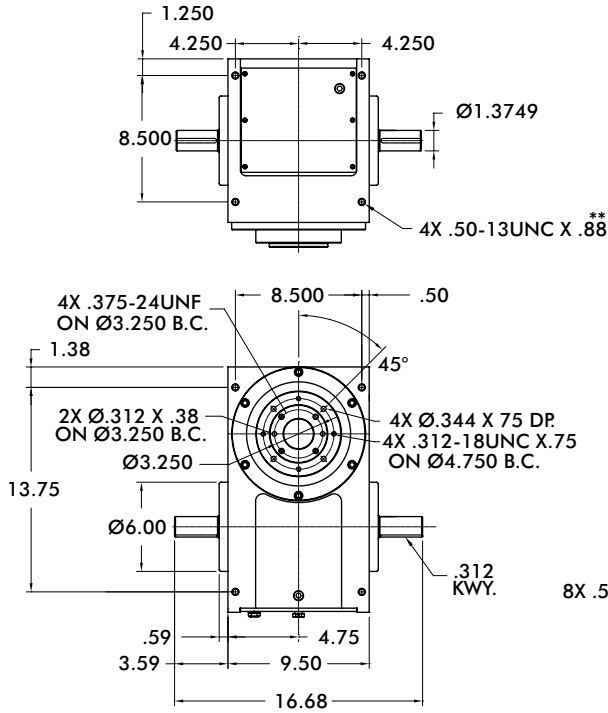
## Optional Accessories

- R225 Reducer (Ratios from 5:1 to 60:1)
  - 1 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
  - 1 hp DC Motor with Varipak DC Motor Control (up to 30 cpm)
- Single or Dual Cycle Cam and Limit Switch
- Output Overload Clutch Models: 11S, 11C, 11F, 11C-SD, 11S-SD, 11FC-SD
  - Available Settings (in-lbs): 2300, 4000, 6000, 8500, 11000
- Left Hand Cam
- Relief in Dwell for shot-pin applications
- Left Hand Cam

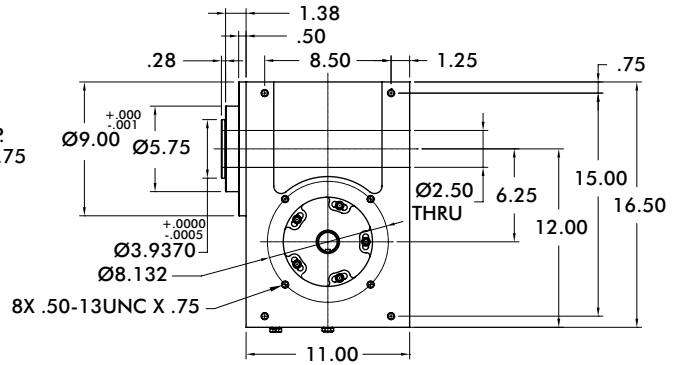
# 600RGD/600RGS SERIES

## Roller Gear Index Drive | Dimensions

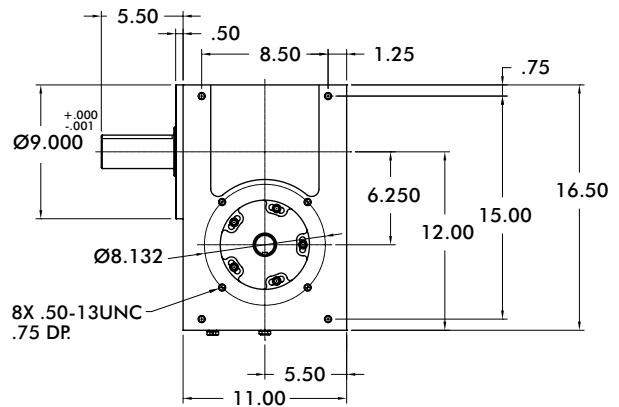
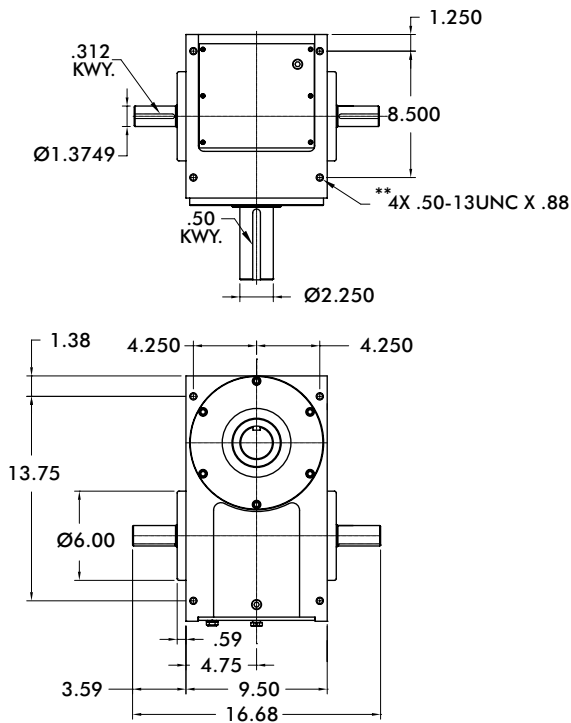
### 600RGD



\*\* 4 TAPPED MOUNTING HOLES IN ANY ONE OF SIX FINISHED SIDES, TO BE SPECIFIED BY CUSTOMER



### 600RGS



Unless otherwise noted,  
all dimensions are in mm.

# 600RGD/600RGS SERIES

Roller Gear Index Drive | Features | Optional Accessories | Technical Information

600RGD/600RGS Indexer Capacities						
Stops	Index Period	Motion	B <sub>10</sub> Capacity at 50 RPM (in-lb)	RGD Internal Inertia (lb-in <sup>2</sup> )	RGS Internal Inertia (lb-in <sup>2</sup> )	Model
2	300	ms	6516	256	137	600RG(D/S)2H48-300
3	270	ms	7955	256	137	600RG(D/S)3H48-270
	180	ms	8769	256	137	600RG(D/S)3H48-180
4	270	ms	6749	249	131	600RG(D/S)4H40-270
	180	ms	7477	249	131	600RG(D/S)4H40-180
6	270	ms	8286	256	137	600RG(D/S)6H48-270
	90	ms	10715	256	137	600RG(D/S)6H48-90
8	270	ms	6928	244	126	600RG(D/S)8H40-270
	90	ms	8936	244	126	600RG(D/S)8H40-90
12	270	ms	4091	244	126	600RG(D/S)12H32-270
	90	ms	5444	244	126	600RG(D/S)12H32-90
16	270	ms	9553	249	131	600RG(D/S)16H40-270 II
	90	ms	12224	249	131	600RG(D/S)16H40-90 II

Other Motions (stops and index periods) available. Contact your DESTACO sales representative for more information.

## Features

- Universal Mounting: mounting holes on any of 6 sides
- Center Through Hole (2.50 in. Diameter) in RGD model.
- Right Hand Cam Standard

## Output Load Capacity (loads carried during index):

	RGD	RGS
Radial	5,667 lbs	3,828 lbs
Thrust/Axial	3,528 lbs	3,529 lbs
Moment	16,292 in-lb	18,451 in-lb

**Accuracy** ±40 arcsec / ±.0011" at 6" Radius

**Repeatability** ±10 arcsec / ±.0003" at 6" Radius

## Optional Accessories

- 7300C or 7350C Reducer (Ratios from 5:1 to 60:1)
- 1 or 2 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
- 1 or 2 hp DC Motor with Varipak DC Motor Control (up to 30 cpm)
- Single or Dual Cycle Cam and Limit Switch
- Output Overload Clutch Models: 11FM, 11SM  
– Available Settings (in-lbs): 2300, 4000, 6000, 8500, 11000
- Left Hand Cam
- Relief in Dwell for shot-pin applications
- Left Hand Cam

# PRECISION INDEXING SOLUTIONS

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RA Right Angle Drives ..... IN-RA



RPP Rotating Part Handlers .. IN-RPP



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RGS/RGD  
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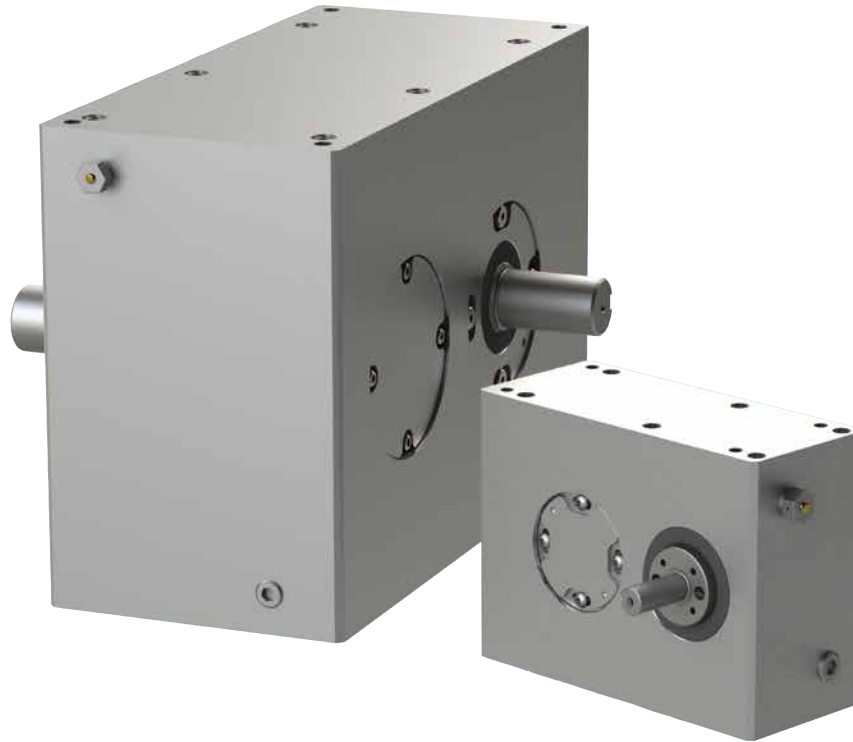


Parallel Shaft/  
Flange Drives ..... IN-PAR



# PARALLEL SHAFT/FLANGE DRIVES

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## Features:

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**CAMCO Parallel Index Drives** are ideal for high-speed applications or for actuation-type applications such as driving a linkage or a conveyor.

Hardened and ground conjugate cams

Yoke-mounted, preloaded cam followers are non-reversing for high capacity and speed capability

Whole or fractional stops, oscillating and complex custom motions are available

Long transfer distances achieved with simple linkages

Preloaded, tapered roller bearings for rigidity and backlash-free operation

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# P SERIES

## Parallel Shaft/Flange Drives | How To Order

### Indexer Ordering Procedure

1. Input Assembly: Right, Left or Double (DE)
2. Output Assembly: Right, Left or Double (DE).
  - Flanged output is primary output. For Double Output, specify whether flanged output is on right or left side.

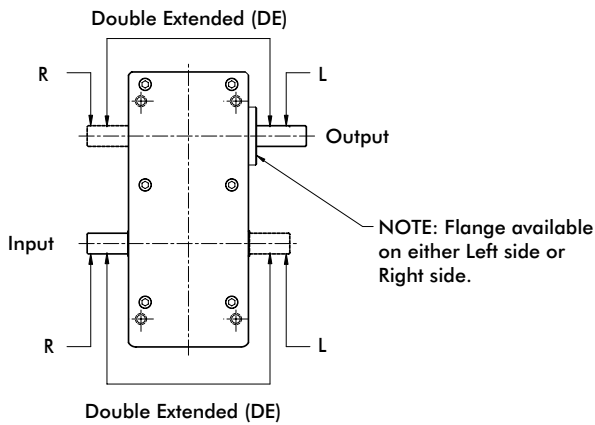
NOTE: Input may rotate in either direction to achieve desired direction of output rotation.

3. Mounting Position: 1-6

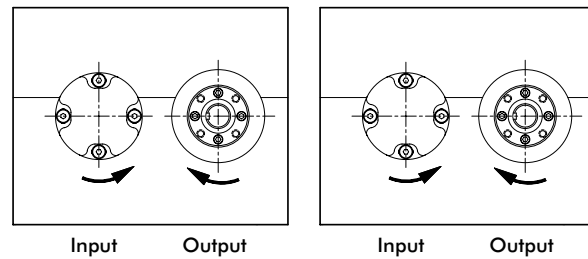
### Reducer Ordering Procedure

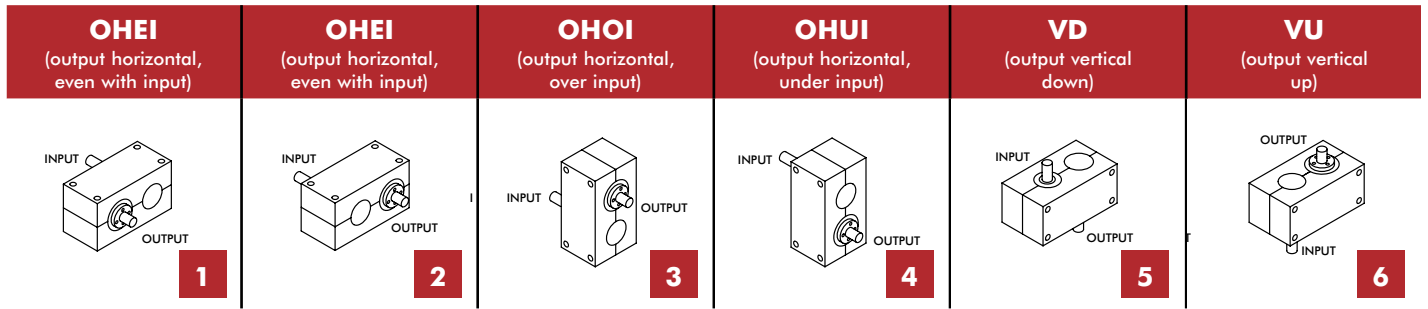
1. Model
2. Ratio: 5:1, 10:1, 15:1, 20:1, 25:1, 30:1, 40:1, 50:1, 60:1
3. Motor Adapter
4. Reducer Input Shaft Extension: Single Input (SE) or Double Input (DE)
5. Mounting (see diagram below)

### Position of Shafts (Top View)

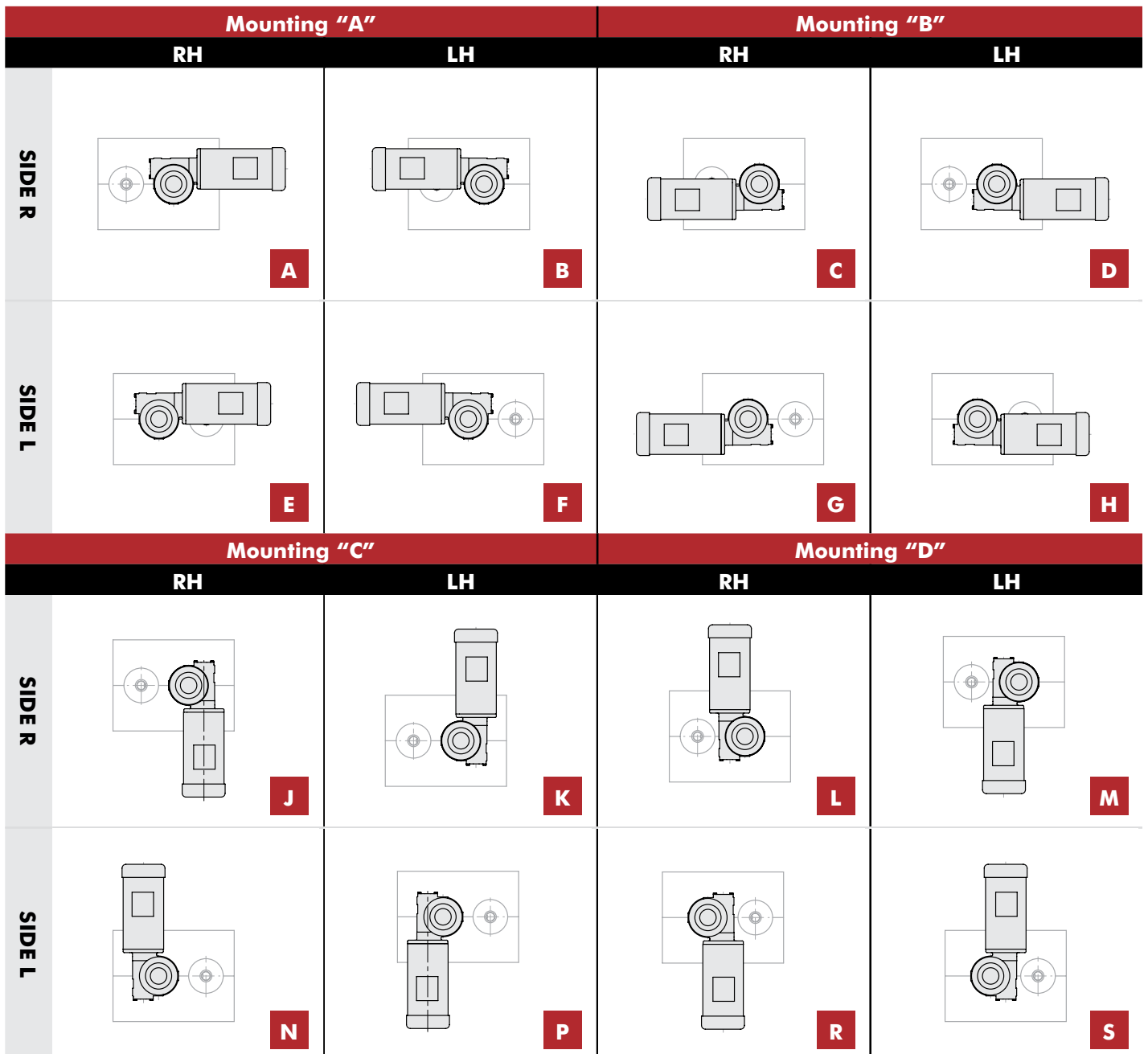


### Input/Output Shaft Rotation



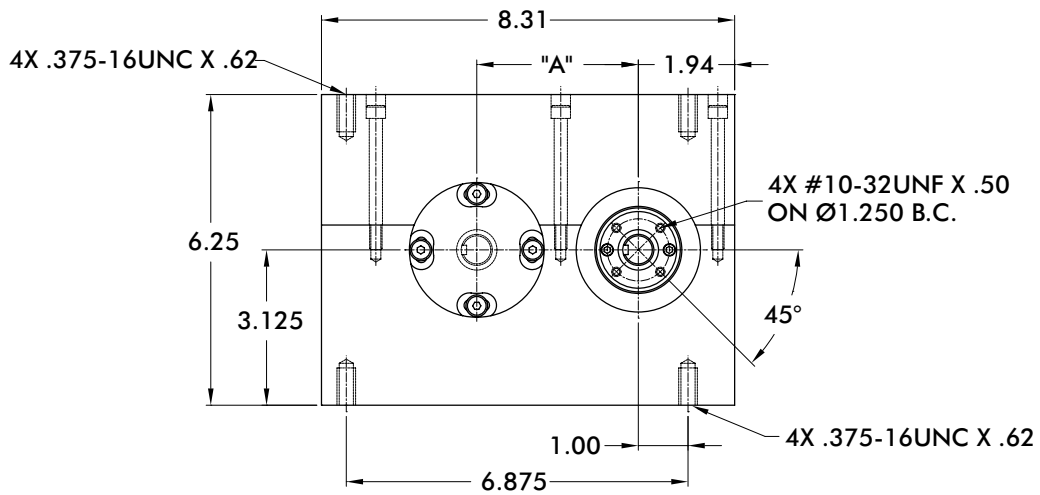
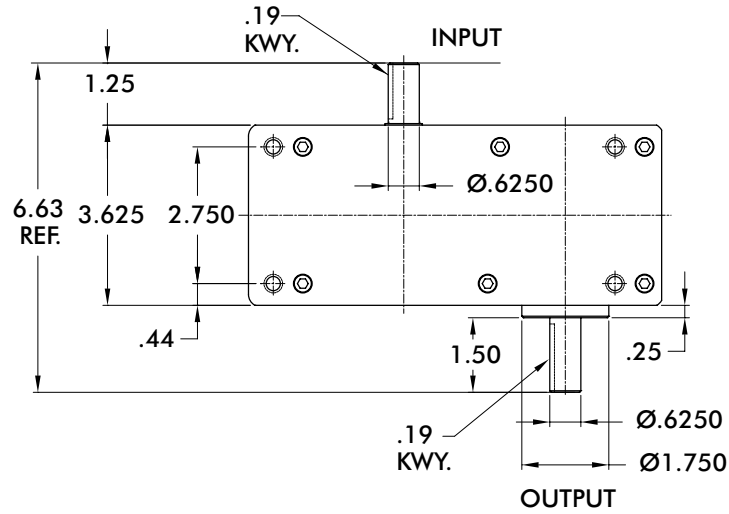


Gear Reducer Mounting Positions (Figure 4)



# 250P SERIES

## Parallel Shaft/Flange Drives | Dimensions



250P Indexer Capacities						
Stops	Index Period	Motion	B <sub>10</sub> Capacity at 50 RPM (in-lb)	Internal Inertia (lb-in <sup>2</sup> )	Model	"A" Center
1	300	msc.50	444	3	250P1H20-300	3.25
1.5	270	msc.33	481	2	250P1.5H20-270	3.25
2	270	ms	433	3	250P2H20-270	3.25
	180	msc.33	546	3	250P2H20-180	3.25
3	270	ms	582	2	250P3H20-270	2.75
	120	ms	653	2	250P3H20-120	3.25
4	270	ms	571	3	250P4H20-270	2.75
	90	msc.25	782	3	250P4H20-90	3.25
6	270	ms	888	2	250P6H20-270 II	2.75
	180	msc.33	2078	3	250P6H24-180 II	2.75
8	270	ms	843	3	250P8H20-270 II	2.75
	120	ms	993	3	250P8H20-120 II	3.25

Other Motions (stops and index periods) available. Contact your DESTACO sales representative for more information.

### Features

- Single Input Shaft and Single Output Shaft
- Output horizontal even with input Mounting
- R180 Reducer (ratios from 15:1 to 60:1)
  - Double Extended Worm (input) Shaft
  - Worm Shaft Handwheel
- 1/3 or 1 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
- Single Cycle Cam and Limit Switch

### Output Load Capacity (loads carried during index):

Radial	316 lbs
Thrust/Axial	314 lbs
Moment	395 in-lb

**Accuracy** ±77 arcsec / ±.0011" at 3" Radius

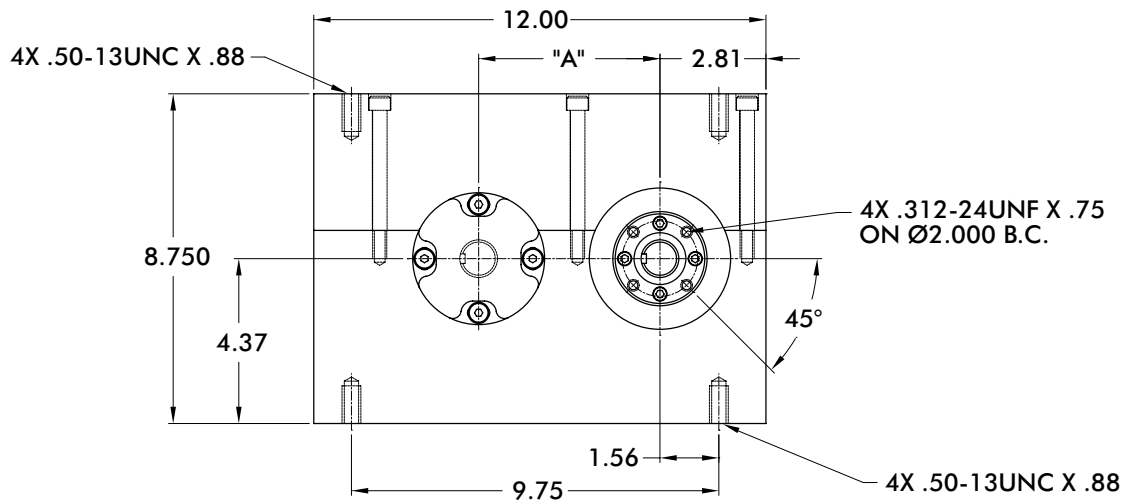
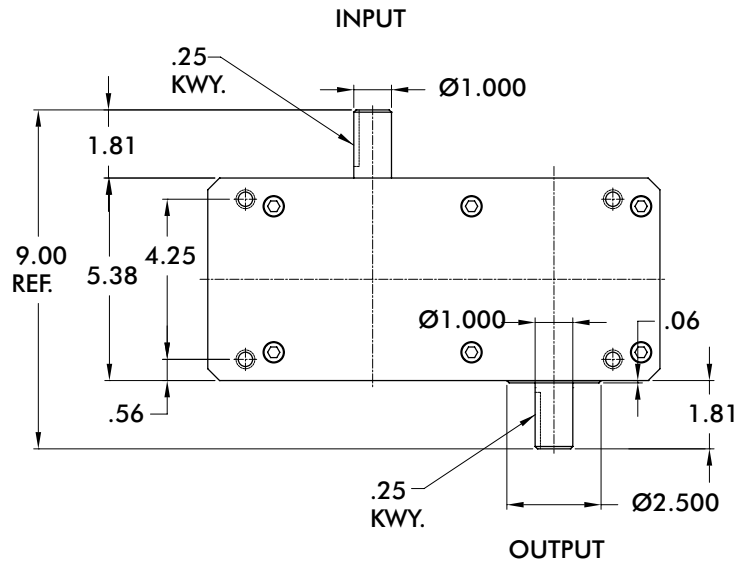
**Repeatability** ±19 arcsec / ±.0003" at 3" Radius

### Optional Accessories

- 1/3 hp DC motor
- Varipak DC Motor Control (up to 30 cpm)
- R225 Reducer (ratios from 10:1 to 60:1)
  - 1 hp AC or DC drive package
  - 56C Motor Adapter and Coupling
- Output Overload Clutch Models: .39F, .39FC, .39S and .39C, .39C-SD, .39FC-SD, .39S-SD
  - Available Settings (in-lb): 160, 210, 270, 320, 390
- Dual Cycle Cam and Limit Switch
- Oscillating motion
- Double Input Shaft
- Double Output Shaft
- Output and Input Vertical Mounting

# 387P SERIES

## Parallel Shaft/Flange Drives | Dimensions



387P Indexer Capacities						
Stops	Index Period	Motion	B <sub>10</sub> Capacity at 50 RPM (in-lb)	Internal Inertia (lb-in <sup>2</sup> )	Model	"A" Center
1	300	msc.66	1385	14	387P1H28-300	4.812
1.33	315	msc.10	1062	13	387P1.33H28-315	4.812
1.5	300	ms	1099	13	387P1.5H28-300	4.812
2	270	msc.33	1788	14	387P2H32-270	4.812
	180	msc.33	2095	14	387P2H32-180	4.812
2.67	270	msc.33	2171	14	387P2.67H28-270 II	4.812
3	270	ms	1601	13	387P3H28-270	4
	120	msc.33	2067	14	387P3H28-120	4.812
4	270	ms	1605	14	387P4H28-270	4
	90	msc.33	2214	14	387P4H28-90	4.812
6	270	ms	2445	13	387P6H28-270 II	4
	180	ms	2463	13	387P6H28-180 II	4.812
8	270	ms	2378	14	387P8H28-270 II	4

Other Motions (stops and index periods) available. Contact your DESTACO sales representative for more information.

### Features

- Single Input Shaft and Single Output Shaft
- Output horizontal even with input Mounting
- R225 Reducer (ratios from 10:1 to 60:1)
  - 56C Motor Adapter and Coupling
- 1 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
- Single Cycle Cam and Limit Switch

### Output Load Capacity (loads carried during index):

Radial	895 lbs
Thrust/Axial	577 lbs
Moment	1,620 in-lb

**Accuracy** ±50 arcsec / ±.0007" at 3" Radius

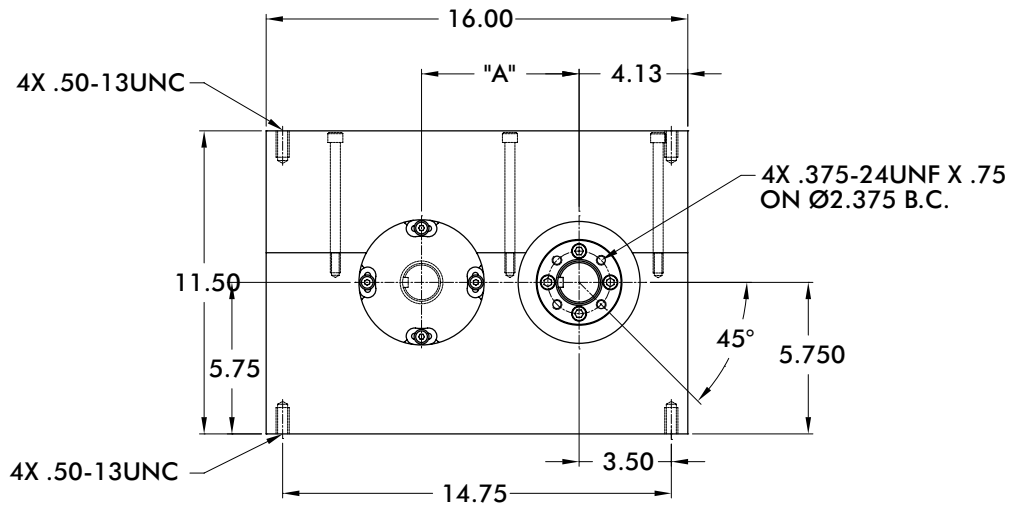
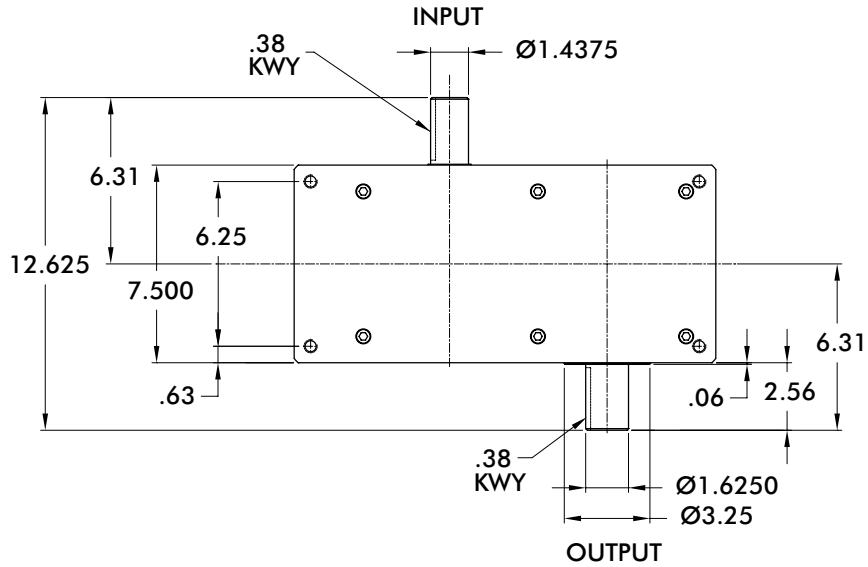
**Repeatability** ±12 arcsec / ±.0002" at 3" Radius

### Optional Accessories

- 1 hp DC motor
- Varipak DC Motor Control (up to 30 cpm)
- R260 Reducer (ratios from 5:1 to 60:1)
  - 1 hp AC or DC drive package
  - 56C Motor Adapter and Coupling
- Output Overload Clutch Models: 2.3F, 2.3FC, 2.3S and 2.3C, 2.3C-SD, 2.3FC-SD, 2.3S-SD
  - Available Settings (in-lb): 400, 600, 700, 850, 1000, 1300, 1800, 2000, 2300
- Dual Cycle Cam and Limit Switch
- Oscillating motion
- Double Input Shaft
- Double Output Shaft
- Output and Input Vertical Mounting

# 512P SERIES

## Parallel Shaft/Flange Drives | Dimensions





512P Indexer Capacities						
Stops	Index Period	Motion	B <sub>10</sub> Capacity at 50 RPM (in-lb)	Internal Inertia (lb-in <sup>2</sup> )	Model	"A" Center
1	330	msc.75	6441	63	512P1H48-330	5.979
1.33	330	msc.33	4928	61	512P1.33H48-330	5.979
1.5	330	ms	4860	63	512P1.5H48-330	5.979
	270	msc.33	4373	61	512P2H40-270	5.979
2	180	msc.50	5416	61	512P2H40-180	5.979
	120	msc.50	4131	61	512P2H40-120	5.979
3	300	msc.33	7116	61	512P2.67H40-300 II	5.979
	180	ms	5462	56	512P3H40-180	5.979
4	270	ms	5619	61	512P4H40-270	4.858
	120	ms	6252	61	512P4H40-120	5.979
6	270	ms	8315	56	512P6H40-270 II	4.858
	180	ms	8261	56	512P6H40-180 II	5.979
8	270	ms	8387	61	512P8H40-270 II	4.858
	180	ms	7894	61	512P8H40-180 II	5.979

Other Motions (stops and index periods) available. Contact your DESTACO sales representative for more information.

## Features

- Single Input Shaft and Single Output Shaft
- Output horizontal even with input Mounting
- R225 Reducer (ratios from 10:1 to 60:1)
  - 56C Motor Adapter and Coupling
- 1 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
- Single Cycle Cam and Limit Switch

## Output Load Capacity (loads carried during index):

Radial	2,715 lbs
Thrust/Axial	1,374 lbs
Moment	6,951 in-lb

**Accuracy** ±37 arcsec / ±.0005" at 3" Radius

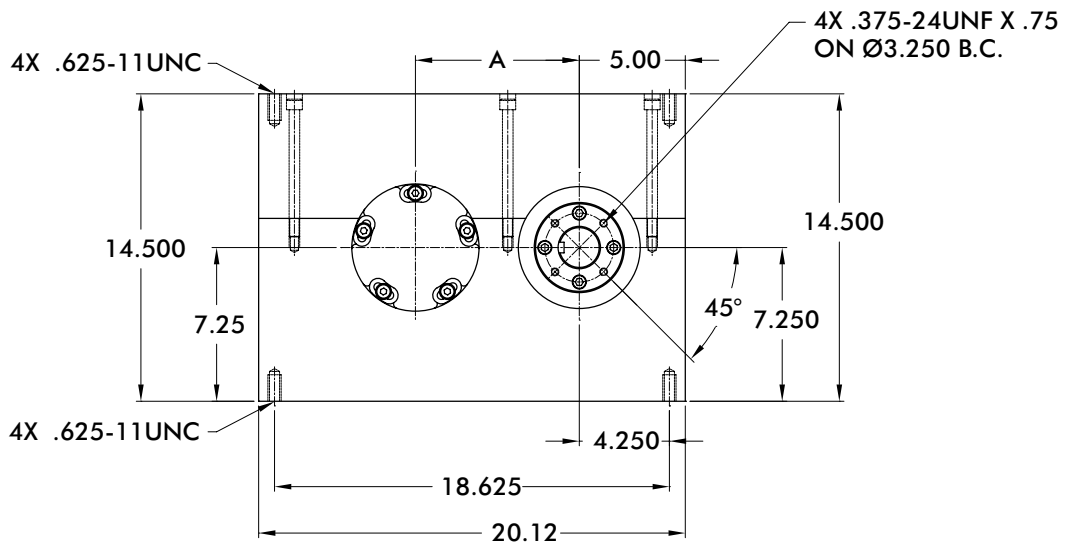
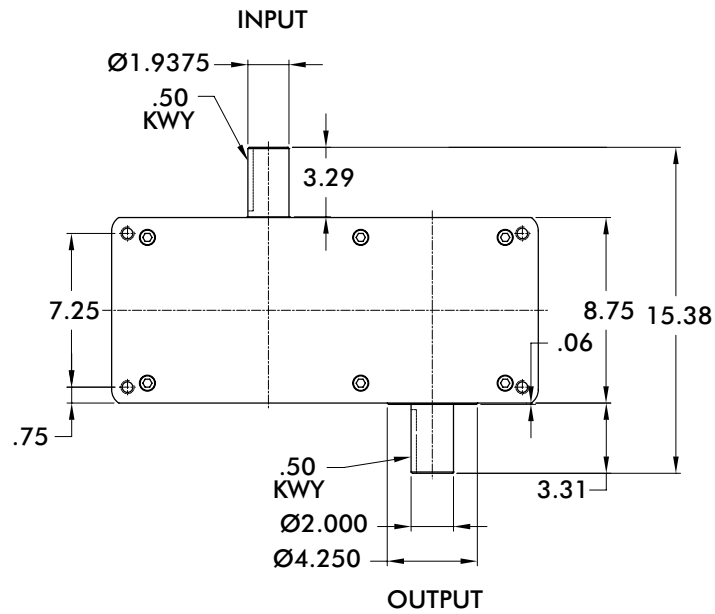
**Repeatability** ±9 arcsec / ±.0001" at 3" Radius

## Optional Accessories

- 1 hp DC motor
- Varipak DC Motor Control (up to 30 cpm)
- R260 Reducer (ratios from 5:1 to 60:1)
  - 1 hp AC or DC drive package
  - 56C Motor Adapter and Coupling
- Output Overload Clutch Models: 6.0F, 6.0FC, 6.0S and 6.0C, 6.0C-SD, 6.0FC-SD, 6.0S-SD
  - Available Settings (in-lb): 670, 825, 1100, 1400, 1700, 2000, 2300, 2500, 3000, 3800, 4000, 5000, 6000
- Dual Cycle Cam and Limit Switch
- Oscillating motion
- Double Input Shaft
- Double Output Shaft
- Output and Input Vertical Mounting

# 662P SERIES

## Parallel Shaft/Flange Drives | Dimensions



662P Indexer Capacities						
Stops	Index Period	Motion	B <sub>10</sub> Capacity at 50 RPM (in-lb)	Internal Inertia (lb-in <sup>2</sup> )	Model	"A" Center
1	330	msc.50	5824	138	662P1H48-330	7.729
1.33	330	msc.20	10368	332	662P1.33H64-330	7.729
1.5	270	msc.33	12617	306	662P1.5H64-270	7.729
2	270	msc.33	6811	181	662P2H48-270	7.729
	180	msc.50	11760	204	662P2H56-180	7.729
3	270	ms	8446	166	662P3H48-270	6.628
	180	ms	8506	166	662P3H48-180	7.729
4	270	ms	8752	181	662P4H48-270	6.628
	120	ms	9738	181	662P4H48-120	7.729
6	270	ms	12946	166	662P6H48-270 II	6.628
	180	ms	12863	166	662P6H48-180 II	7.729
8	270	ms	13060	181	662P8H48-270 II	6.628
	120	msc.33	15780	181	662P8H48-120	7.729

Other Motions (stops and index periods) available. Contact your DESTACO sales representative for more information.

### Features

- Single Input Shaft and Single Output Shaft
- Output horizontal even with input Mounting
- R225 Reducer (ratios from 10:1 to 60:1)
  - 56C Motor Adapter and Coupling
- 1 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
- Single Cycle Cam and Limit Switch

### Output Load Capacity (loads carried during index):

Radial	3,915 lbs
Thrust/Axial	2,042 lbs
Moment	12,959 in-lb

**Accuracy** ±36 arcsec / ±.001" at 6" Radius

**Repeatability** ±9 arcsec / ±.0003" at 6" Radius

### Optional Accessories

- 7350C or 7400C Reducer (ratios from 5:1 to 60:1) with Motor Adapter and Coupling
- 1 hp DC Motor
- Output Overload Clutch Models: 11F, 11FC, 11FC-SD
  - Available Settings (in-lb): 2300, 4000, 6000, 8500, 11000
- Dual Cycle Cam and Limit Switch
- Electric Clutch-Brake
- Air Clutch-Brake
- Oscillating motion
- Double Input Shaft
- Double Output Shaft
- Output and Input Vertical Mounting

# PRECISION INDEXING SOLUTIONS

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Dial Indexers ..... IN-RNG



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HD Servo Positioner ..... IN-DSR



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Parallel Gear  
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RA Right Angle Drives ..... IN-RA



RPP Rotating Part Handlers .. IN-RPP



RD HD Dial Indexers ..... IN-RD



Overload Clutches ..... IN-CLU



E-Series HD Drives ..... IN-EHD



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MDE/HDE Indexers ..... IN-MDE



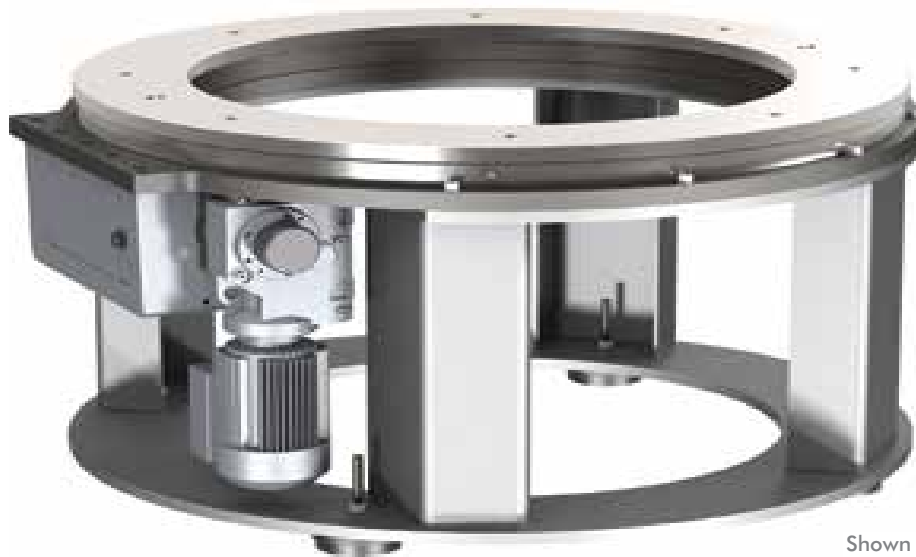
RGS/RGD  
Shaft/Flange Drives ..... IN-RGS



Parallel Shaft/  
Flange Drives ..... IN-PAR

# RING DRIVE DIAL INDEXER

Features | How To Order



Shown with optional base

## Work from Within

---

The **CAMCO Ring Drive** offers easy-to-integrate automation that fits easily into your operations.

Minimize machine footprint: Mount your equipment inside the through-hole of the CAMCO Ring Drive.

Easily tool the ring drive: Attach fixtures directly to the dial ring, eliminating the need for an additional dial plate.

Best technical support and service: Worldwide access to our global network.

## Applications

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Printing and decorating machines

Rotary automatic assembly machines

Ideal for assembly systems requiring a large number of tooling stations

The Ring Drive can replace a small conveyor

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Licensed under U.S. Patent No. 5,950,503

# RNG SERIES

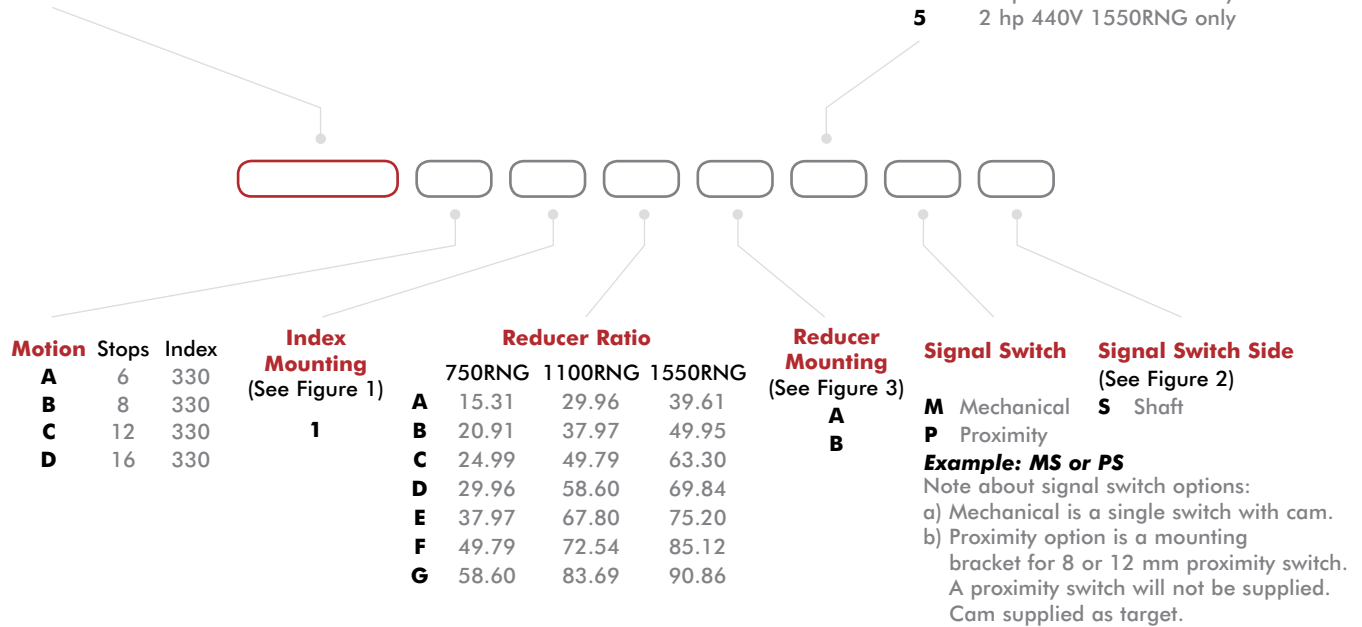
## Ring Drive Dial Indexer | Features and Benefits | How to Order

### Base Model Description

- 750RNG** w/ KH37 reducer & 1 hp AC motor (220/440V)
- 1100RNG** w/ KH37 reducer & 1 hp AC motor (220/440V)
- 1550RNG** w/ KH37 reducer & 1-1/2 hp AC motor (220/440V)

### Control Description

- 1** 1 hp 120V 750RNG & 1100RNG only
- 2** 1 hp 240V 750RNG & 1100RNG only
- 3** 1 hp 440V 750RNG & 1100RNG only
- 4** 2 hp 240V 1550RNG only
- 5** 2 hp 440V 1550RNG only



Motion	Stops	Index
<b>A</b>	6	330
<b>B</b>	8	330
<b>C</b>	12	330
<b>D</b>	16	330

Index Mounting (See Figure 1)
<b>1</b>

	Reducer Ratio		
	750RNG	1100RNG	1550RNG
<b>A</b>	15.31	29.96	39.61
<b>B</b>	20.91	37.97	49.95
<b>C</b>	24.99	49.79	63.30
<b>D</b>	29.96	58.60	69.84
<b>E</b>	37.97	67.80	75.20
<b>F</b>	49.79	72.54	85.12
<b>G</b>	58.60	83.69	90.86

Reducer Mounting (See Figure 3)
<b>A</b>
<b>B</b>

Signal Switch	Signal Switch Side (See Figure 2)
<b>M</b> Mechanical	<b>S</b> Shaft
<b>P</b> Proximity	

**Example: MS or PS**  
 Note about signal switch options:  
 a) Mechanical is a single switch with cam.  
 b) Proximity option is a mounting bracket for 8 or 12 mm proximity switch. A proximity switch will not be supplied. Cam supplied as target.

Other Motions (stops and index periods) available. Contact your DESTACO sales representative for more information.

## Ring Drive Features

### Great Design Flexibility

Available in three sizes: .75, 1.1 and 1.6 meter diameters

Complete motorized drive package with reducer and AC inverter drive to suit most applications

Dial Ring can be removed for machining to mounting your tooling and fixtures.

Large center through-hole to accommodate auxiliary equipment

60 station capability, ideal for multiple part automatic assembly machines

Steel Dial Ring or optional Aluminum Ring

Broad range of motions/drive packages

### Robust And Reliable

Superior accuracy, similar to a precision link conveyor - your work station is located over the cam for maximum accuracy.

High precision, hardened cams available in standard and special motions

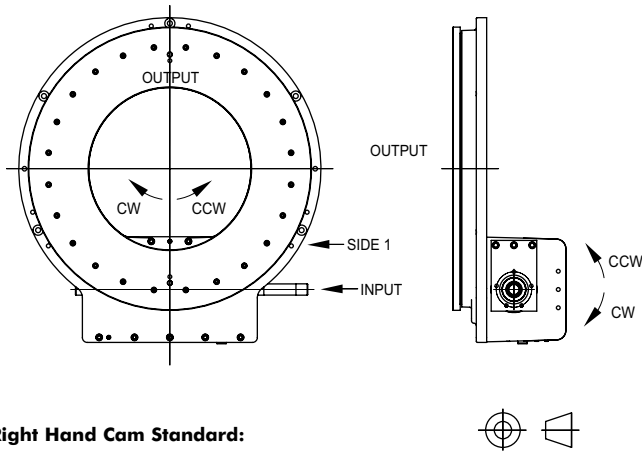
Sealed 4-point contact output bearing and large cam followers for superior accuracy and load capability (models 750RNG, 1100RNG and 1550RNG)

Modular shaft-mounted reducers for application flexibility and easy maintenance

Access to cam followers for easy inspection and replacement

Tapered roller bearings on camshaft

### Input Shaft Configuration/Rotations (Figure 1)

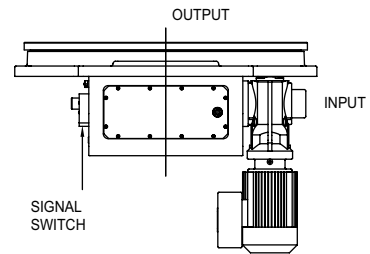


**Right Hand Cam Standard:**

CW Input Side 1, CCW Output  
 CCW Input Side 1, CW Output

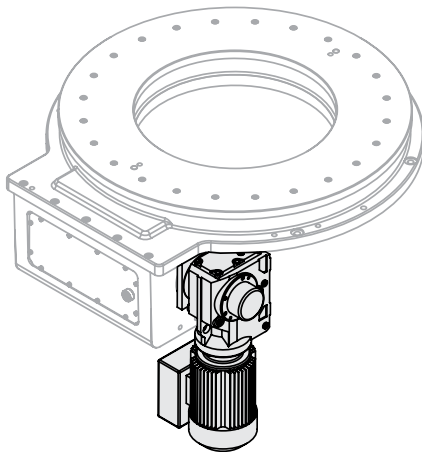
NOTE: Input can be driven in either direction

### Signal Switch Mounting Position (Figure 2)

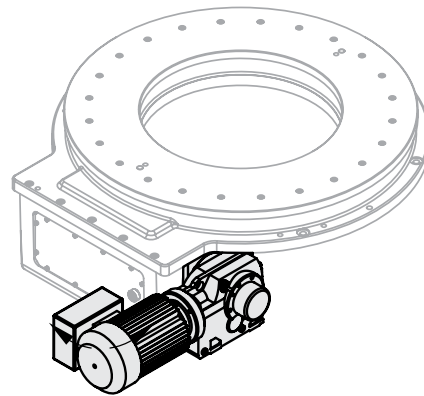


### Gear Reducer Mounting Positions (Figure 3)

MOUNTING "A"

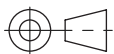
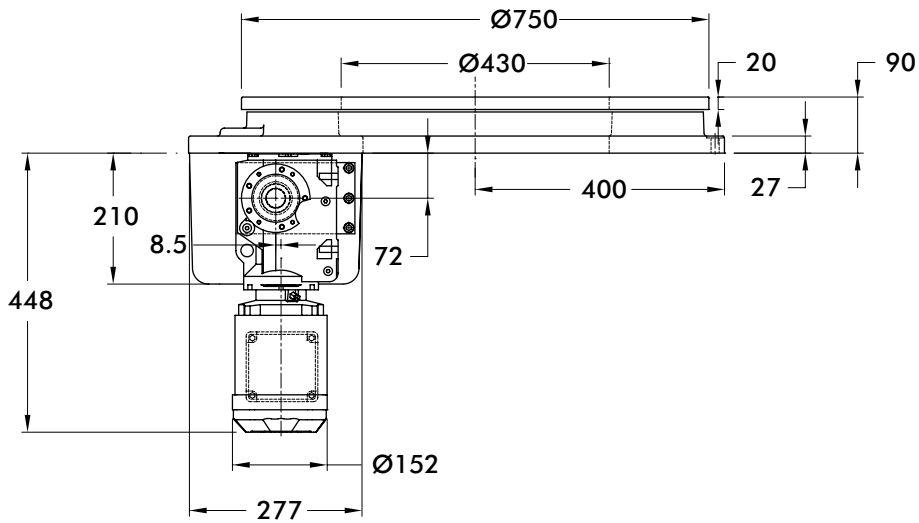
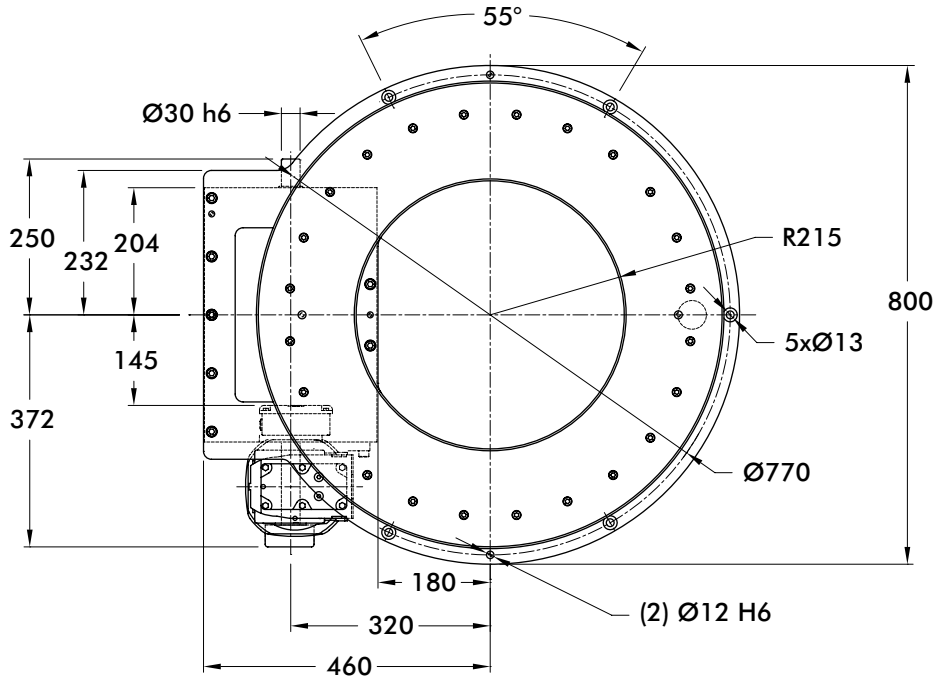


MOUNTING "B"



# 750RNG SERIES

## Ring Drive Dial Indexer | Dimensions



Unless otherwise noted,  
all dimensions are in mm.



Maximum Inertia x 1000 [lb-in <sup>2</sup> ] for standard package							
Stops	Motion Time [seconds]						
	0.468	0.617	0.764	0.915	1.160	1.521	1.791
6	0	17	58	124	292	565	791
8	3	47	121	238	537	1,022	1,424
12	36	134	300	564	1,237	2,328	3,233
16	81	255	550	1,019	2,217	4,156	5,765
Reducer Ratio							
	15.31	20.19	24.99	29.96	37.97	49.79	58.60

### Features

- KH37 Reducer (Ratios from 15.31:1 to 58.6:1)
- 1 hp AC Drive Package with Inverter Duty Motor and IM-pAC AC Drive (up to 60 cpm)
- Double Extended Camshaft (Input Shaft)
- Center Thru Hole (230 mm Diameter)
- Cycle Cam and Limit Switch Mounted to Camshaft
- Right Hand Cam

### Output Bearing Capacity (loads carried during index):

Radial	25,740 N [5,580 lbs]
Axial	64,020 N [14,550 lbs]
Moment	6,915 Nm [61,200 in-lbs]

**Accuracy** ±60 arcsec / ±.047 mm at 324 mm Radius  
±.0019" at 12.75" Radius

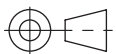
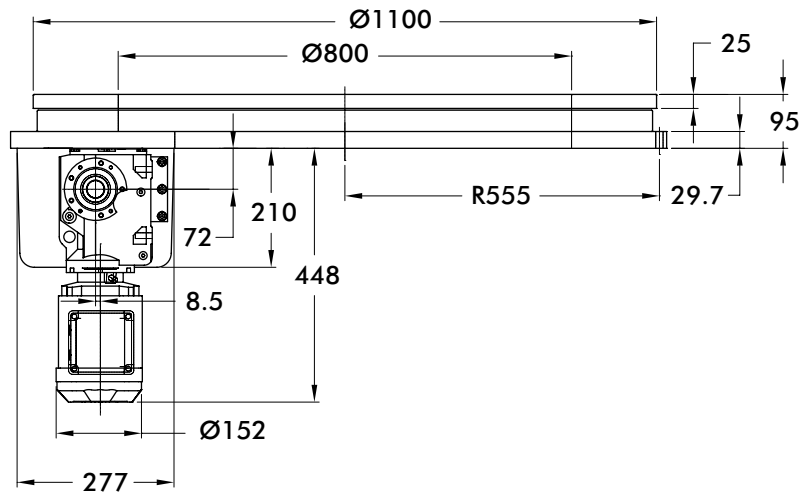
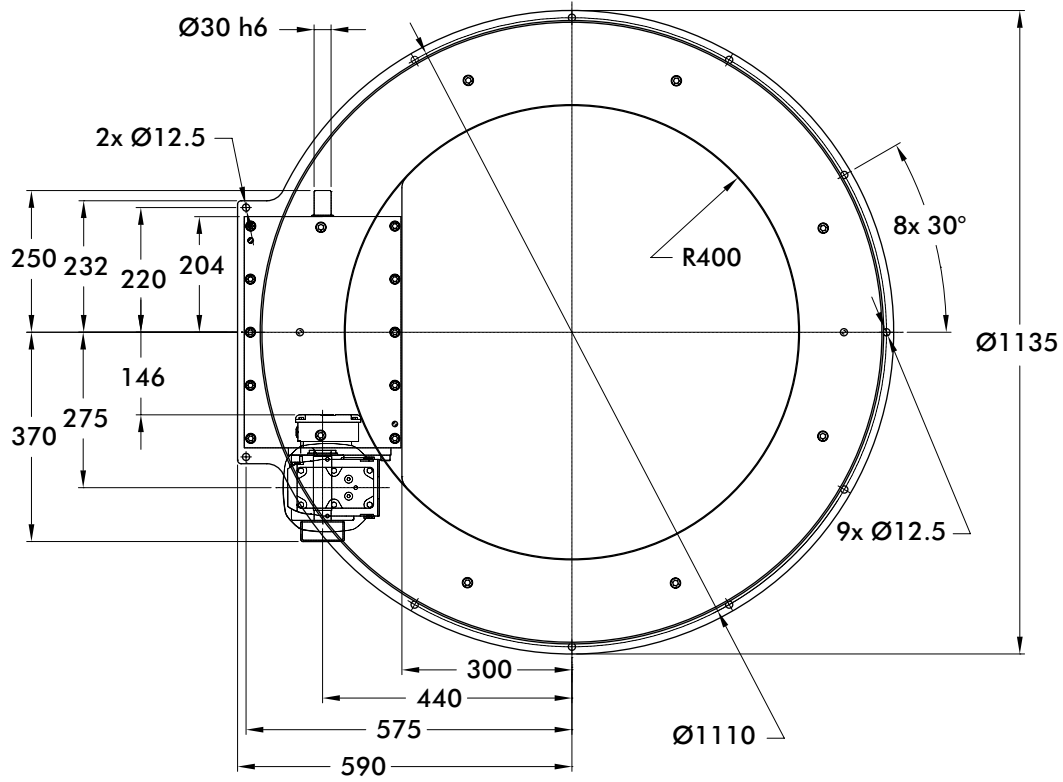
**Repeatability** ±15 arcsec / ±.012 mm at 324 mm Radius  
±.0005" at 12.75" Radius

### Optional Accessories

- KH47 Reducer
- 2 hp AC Drive Package with Inverter Duty Motor and Commander SK AC Drive (up to 60 cpm)
- Dual Cam and Limit Switch
- Left Hand Cam
- AC brake Motor
- Aluminum dial ring
- Servo motor drive package with precision planetary reducer for applications requiring flexibility or fewer than 6 stations
- Custom dials & tooling plates
- Machined bases (see cover)

# 1100RNG SERIES

## Ring Drive Dial Indexer | Dimensions



Unless otherwise noted,  
all dimensions are in mm.

Maximum Inertia x 1000 [lb-in <sup>2</sup> ] for standard package							
Stops	Motion Time [seconds]						
	0.915	1.359	1.521	1.791	2.072	2.217	2.557
6	56	378	497	724	999	1,157	1,570
8	170	743	954	1,357	1,847	2,127	2,861
12	496	1784	2,260	3,165	4,268	4,899	6,550
16	951	3,241	4,088	5,697	7,657	8,778	11,714
Reducer Ratio							
	29.96	37.97	49.79	58.60	67.80	72.54	83.69

### Features

- KH37 Reducer (Ratios from 29.96:1 to 83.69:1)
- 1 hp AC Drive Package with Inverter Duty Motor and IM-pAC AC Drive (up to 60 cpm)
- Double Extended Camshaft (Input Shaft)
- Center Thru Hole (800 mm Diameter)
- Cycle Cam and Limit Switch Mounted to Camshaft
- Right Hand Cam

### Output Bearing Capacity (loads carried during index):

Radial	159,940 N [36,350 lbs]
Axial	72,829 N [16,552 lbs]
Moment	16,879 Nm [149,376 in-lbs]

**Accuracy** ±35 arcsec / ±.038 mm at 448 mm Radius  
±.0015" at 17.65" Radius

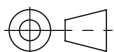
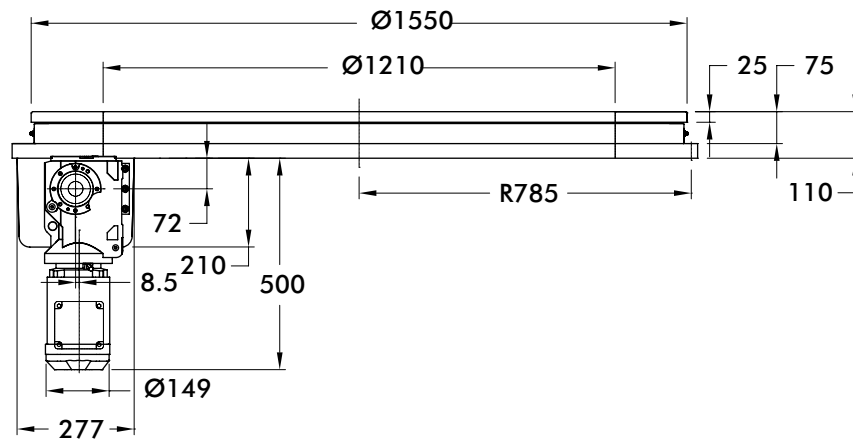
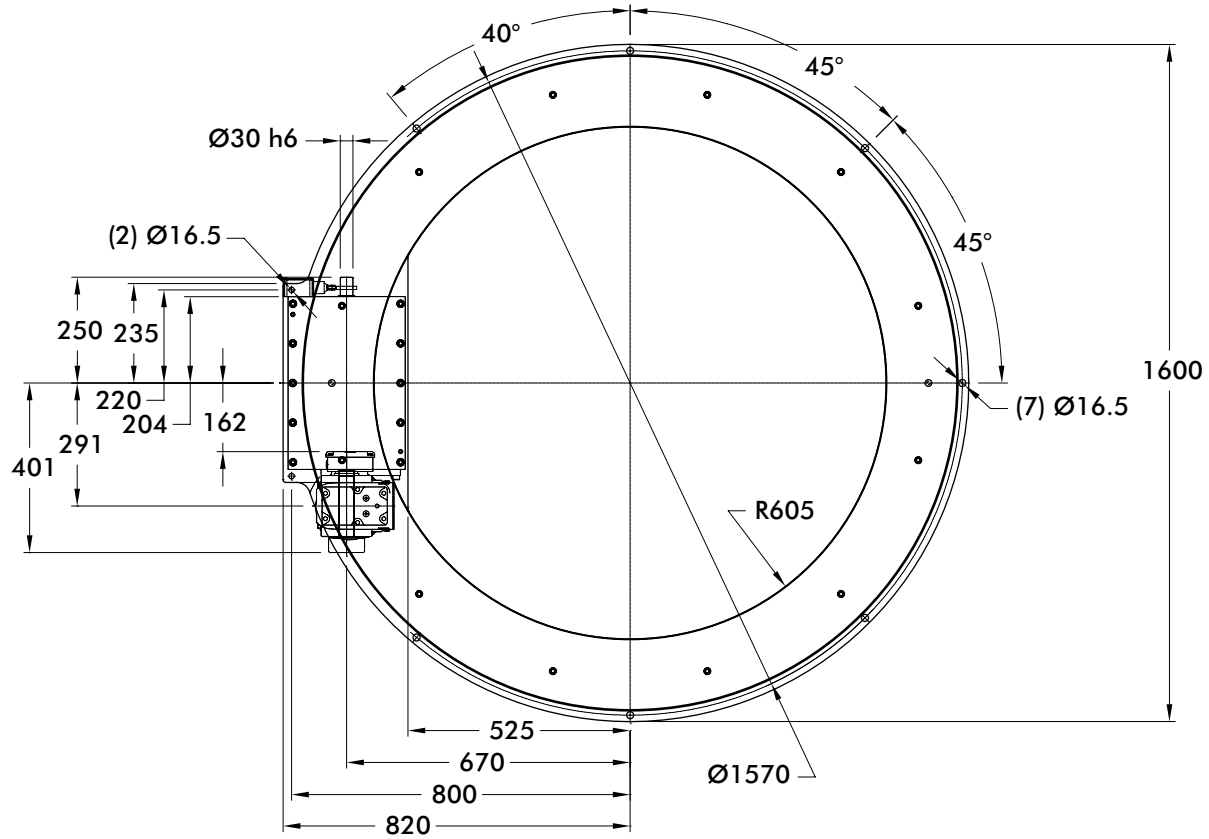
**Repeatability** ±9 arcsec / ±.010 mm at 448 mm Radius  
±.0004" at 17.65" Radius

### Optional Accessories

- KH47 Reducer
- 2 hp AC Drive Package with Inverter Duty Motor and Commander SK AC Drive (up to 60 cpm)
- Dual Cam and Limit Switch
- Left Hand Cam
- AC brake Motor
- Aluminum dial ring
- Servo motor drive package with precision planetary reducer for applications requiring flexibility or fewer than 6 stations
- Custom dials & tooling plates
- Machined bases (see cover)

# 1550RNG SERIES

## Ring Drive Dial Indexer | Dimensions



Unless otherwise noted,  
all dimensions are in mm.

Maximum Inertia x 1000 [lb-in <sup>2</sup> ] for standard package							
Stops	Motion Time [seconds]						
	1.210	1.496	1.934	2.134	2.298	2.601	2.776
6	232	766	1,730	2,180	2,582	3,405	3,928
8	678	1,628	3,342	4,142	4,857	6,320	7,248
12	1,954	4,091	7,946	9,748	11,356	14,647	16,737
16	3,743	7,542	14,395	17,598	20,458	26,307	30,023
Reducer Ratio							
	39.61	48.95	63.30	69.84	75.20	85.12	90.86

### Features

- KH47 Reducer (Ratios from 39.61:1 to 90.866:1)
- 2 hp AC Drive Package with Inverter Duty Motor and IM-pAC AC Drive (up to 60 cpm)
- Double Extended Camshaft (Input Shaft)
- Center Thru Hole (1210 mm Diameter)
- Cycle Cam and Limit Switch Mounted to Camshaft
- Right Hand Cam

### Output Bearing Capacity (loads carried during index):

Radial	239,052 N [54,330 lbs]
Axial	76,635 N [17,417 lbs]
Moment	25,720 Nm [227,622 in-lbs]

**Accuracy** ±25 arcsec / ±.039 mm at 648 mm Radius  
±.0015" at 25.51" Radius

**Repeatability** ±6 arcsec / ±.010 mm at 648 mm Radius  
±.0004" at 25.51" Radius

### Optional Accessories

- Dual Cam and Limit Switch
- Left Hand Cam
- AC brake Motor
- Aluminum dial ring
- Servo motor drive package with precision planetary reducer for applications requiring flexibility or fewer than 6 stations
- Custom dials & tooling plates
- Machined bases (see cover)

# RITE-LINK SERIES

## Features and Benefits

### Right Sized Conveying

The **CAMCO Rite-Link Conveyor** is a thin-profile, preassembled, precision link system offering maintenance free accuracy and durability for industrial conveying applications.

Precision positioning requiring higher precision or speed than roller chain can provide

Material conveying (industrial or medical): for example, narrow cleat or bucket conveyor for constant speed applications. The conveyor can be mounted for either over/under or carousel operation

### Features:

#### Assembly

- Fully designed, assembled and tested for your application
- Can be used in an over/under or carousel configuration

#### Size

- Slim, compact design with narrow links accommodates oversized tooling
- Easy to integrate
- Servo-friendly for flexible indexing with CAMCO RSD rotary servo drive

#### Accuracy

- Precision motion from the trusted industry leader
- More accurate and stable than roller chain

#### Operation

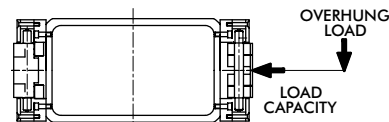
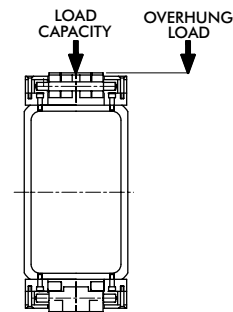
- High operation speeds
- No lubrication needed
- Energy efficient
- Cost Effective

**NEW**



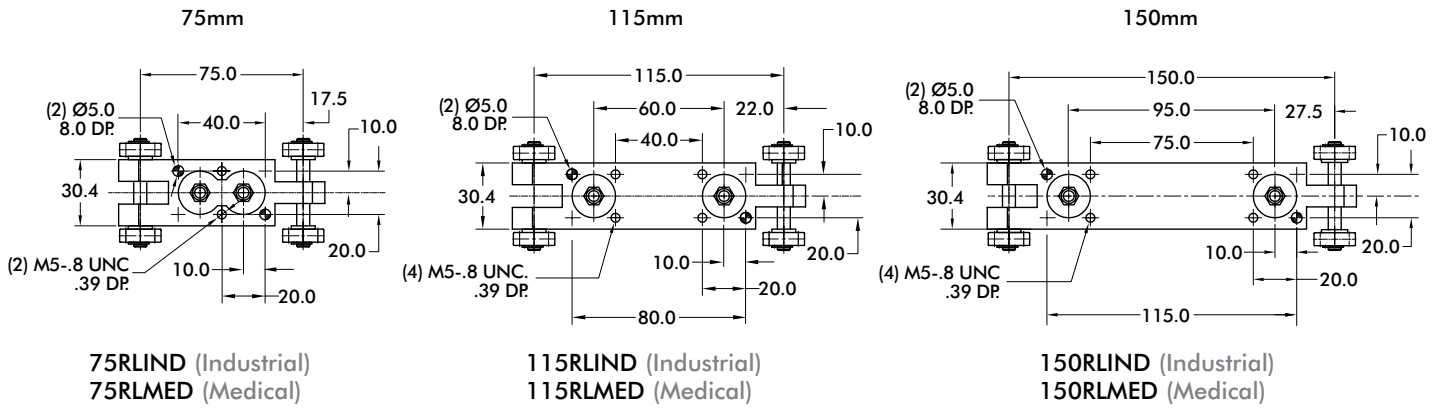
Maximum Load	Units	75RL...	115RL...	150RL...
Max Load per Link	kg	4	4	4
Max Overhung Load per Link	Nm	1.0	1.0	1.0

\* shipping/clearance dimensions

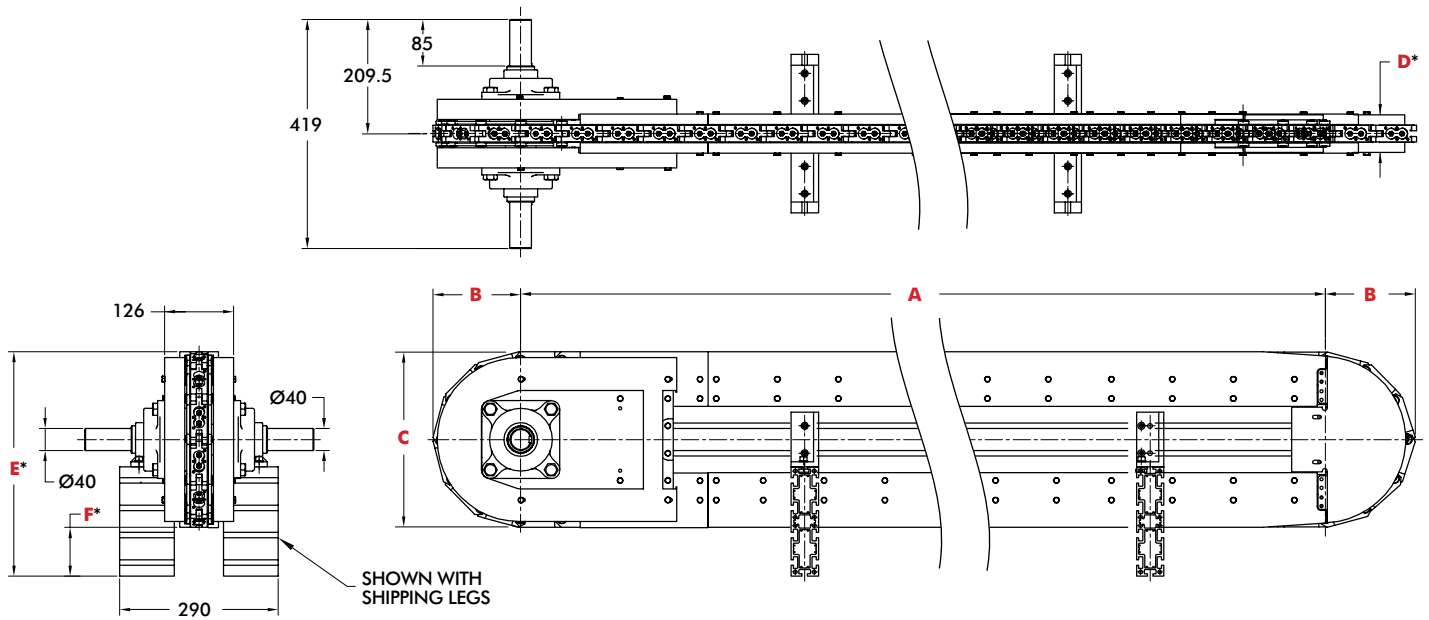


# RITE-LINK SERIES

## Link Dimensions



## Standard Centers Dimensions



## Technical Information

Dimensions	Units	75RL...	115RL...	150RL...
<b>A</b> Standard Center Distances				
Option 1	(meters)	1.20	1.38	1.20
Option 2		2.10	2.30	2.10
Option 3		3.00	3.22	3.00
Option 4		3.90	4.14	3.90
Option 5		4.80	5.06	4.80
<b>B</b>	mm	162.5	166	162.5
<b>C</b>	mm	320	332	332
<b>D*</b>	mm	78.1	78.1	78.1
<b>E*</b>	mm	411	466.2	416
<b>F*</b>	mm	89	133.8	84

\* shipping/clearance dimensions

# PRECISION INDEXING SOLUTIONS

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Servo Positioner  
Rotary Table ..... IN-GTB



RNG Easy Access  
Dial Indexers ..... IN-RNG



Double Contact Bearing  
HD Servo Positioner ..... IN-DSR



Rite-Link Conveyors ..... IN-RLC



Parallel Gear  
Servo Positioner ..... IN-PGM



Table-Top Modular  
Conveyors ..... IN-TTC



RSD Flexible Servo Drives .. IN-RSD



Heavy Duty  
Modular Conveyors ..... IN-HDC



RDM Dial Indexers ..... IN-RDM



LPP Linear Part Handles ..... IN-LPP



RA Right Angle Drives ..... IN-RA



RPP Rotating Part Handlers .. IN-RPP



RD HD Dial Indexers ..... IN-RD



Overload Clutches ..... IN-CLU



E-Series HD Drives ..... IN-EHD



Custom Cams ..... IN-CAM



MDE/HDE Indexers ..... IN-MDE



RGS/RGD  
Shaft/Flange Drives ..... IN-RGS

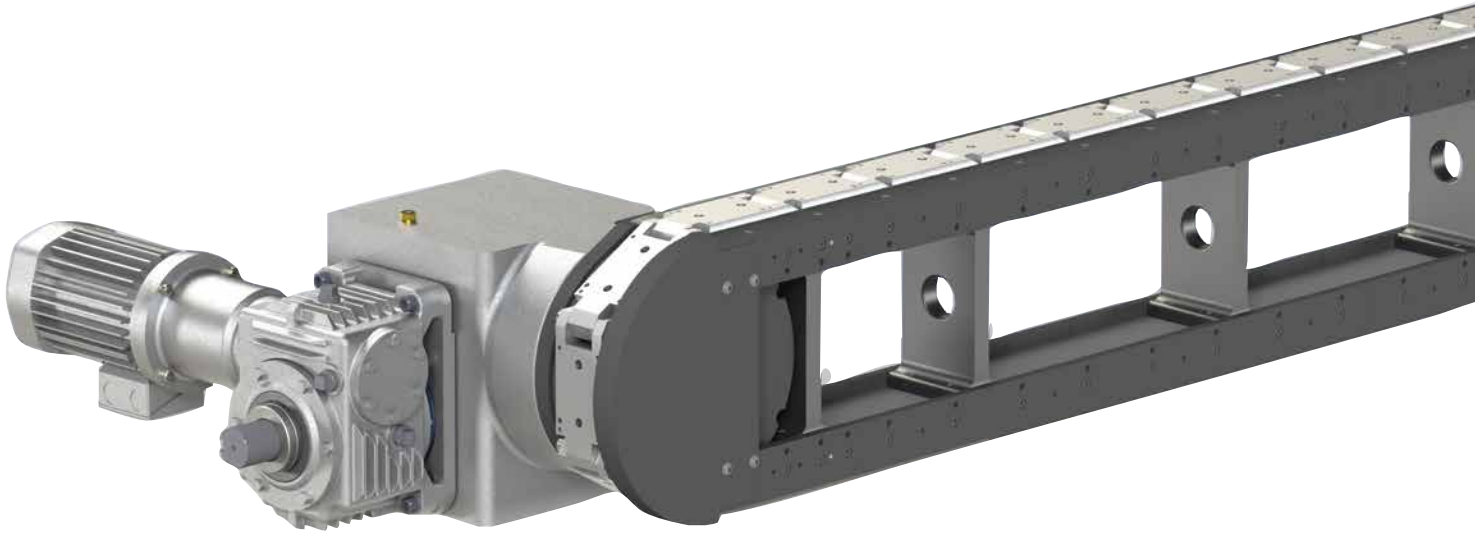


Parallel Shaft/  
Flange Drives ..... IN-PAR



# TABLE-TOP MODULAR CONVEYORS

Features | How To Order



## Features:

---

**CAMCO Modular Table Top Precision Link Conveyors** are ideal for linear transfer applications with features including:

Modular frame design in fixed increment lengths facilitates quick assembly and delivery.

Table-Top or Base mounted

Available in carousel or over-under style

Precision positioning of parts for assembly or manufacturing processes

High-speed station-to-station parts transfer

Precision links with roller bearing cam followers for smooth transfer and long life.

Link sizes (3-inch, 4.5-inch, 6-inch) to meet most application requirements

Open frame design for pass-through of belting, linkages, electric and air supply components.

Optional bases, line shafts & tooling plates

Complete with motorized index drive system including overload protection.

## Table of Contents

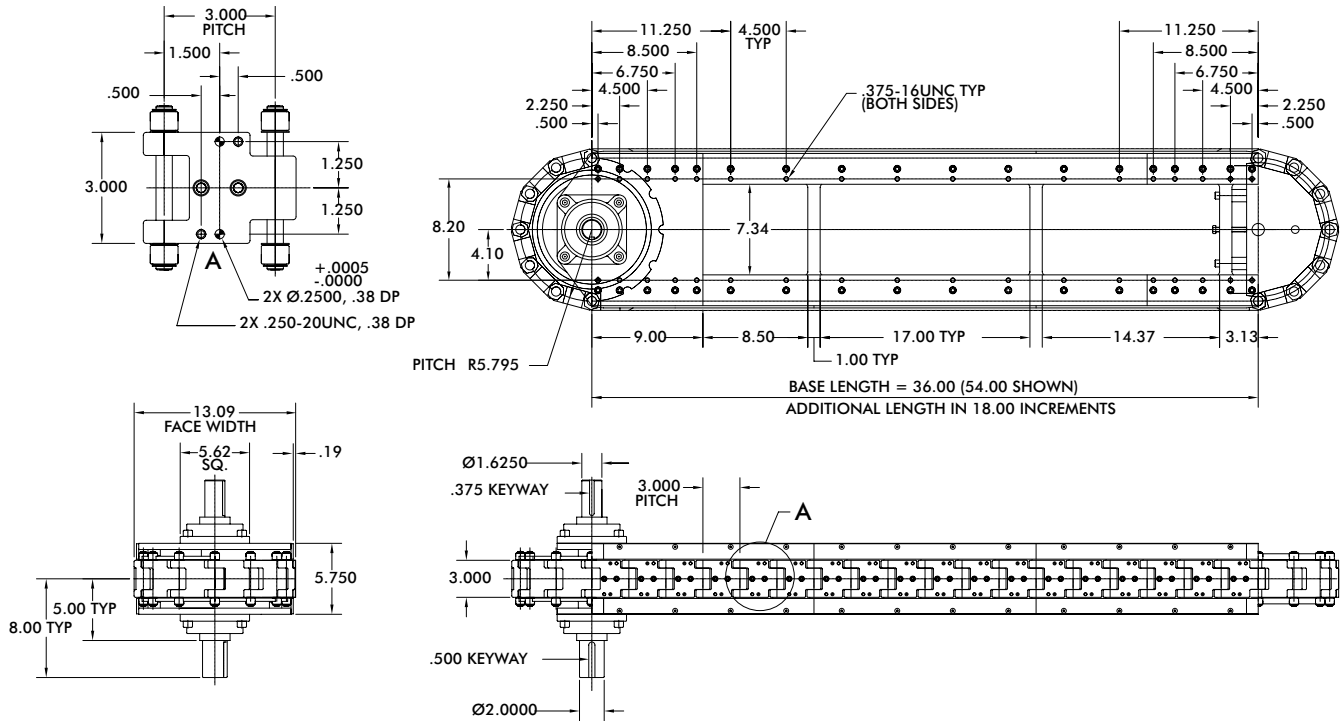
---

3.0 Inch .....	3
4.5 Inch .....	5
6.0 Inch .....	7
Conveyor Options .....	9

# 3.0 INCH SERIES

## Table-Top Modular Conveyors | Dimensions and Configurations

### Modular Conveyor (module only)



### Modular Conveyor (drive package)

#### Standard Drive Package

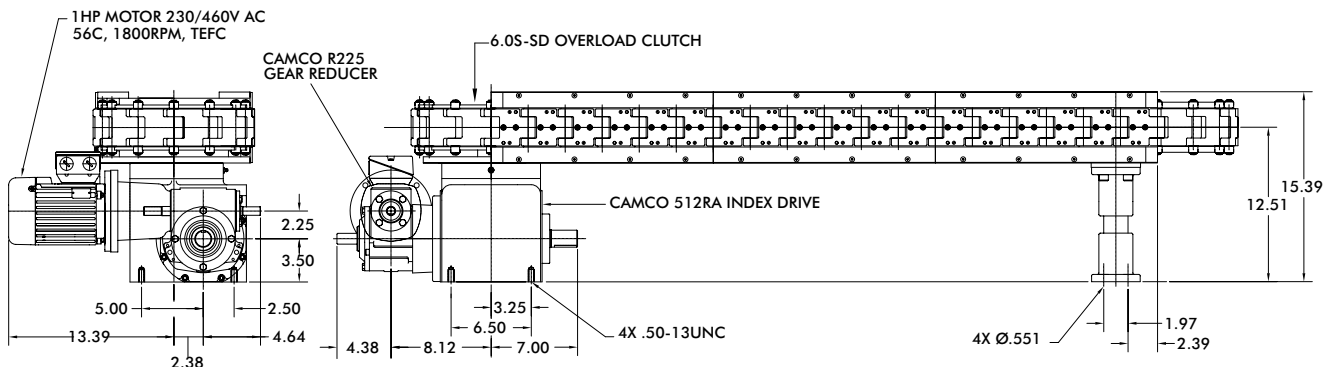
- 512RA Index Drive
- R225 Gear Reducer
- 6.0FC-SD Overload Clutch (Shaft Drive)
- 6.0S-SD Overload Clutch (Direct Drive)
- 1 hp high-cycling, performance AC Motor
- IM-pAC Motor Control

#### Heavy-Duty Drive Package

- 662RA Index Drive
- 7300C Gear Reducer
- 11FC-SD Overload Clutch (Shaft Drive)
- 6.0-SD Overload Clutch (Direct Drive)
- 1 hp high-cycling, performance AC Motor
- IM-pAC Motor Control

Index Distance [in.]	Indexer Stops
3.00	12
6.00	6
9.00	4
12.00	3

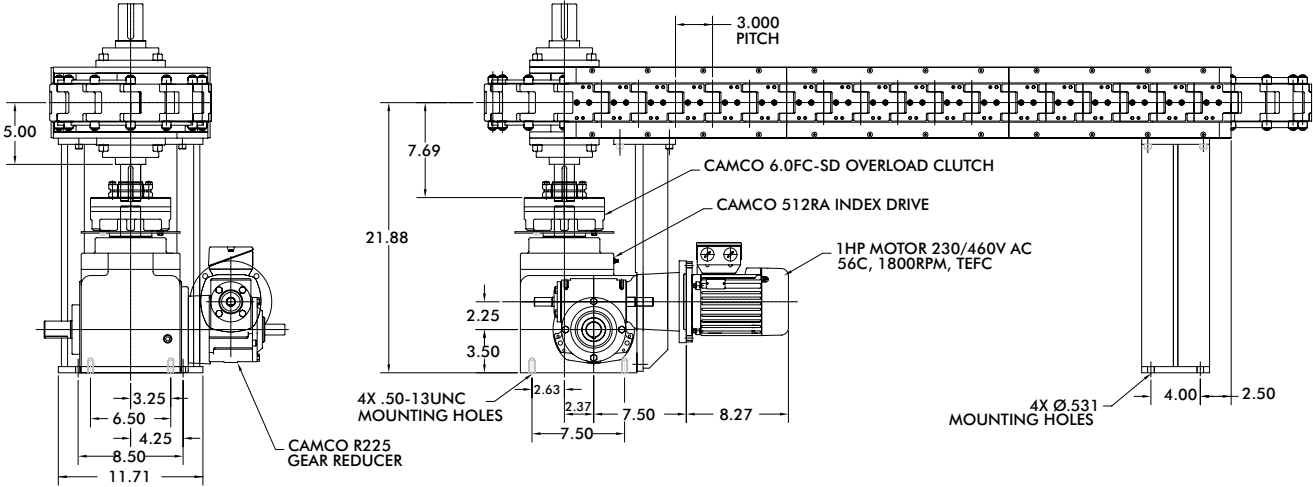
### Direct Drive Carousel



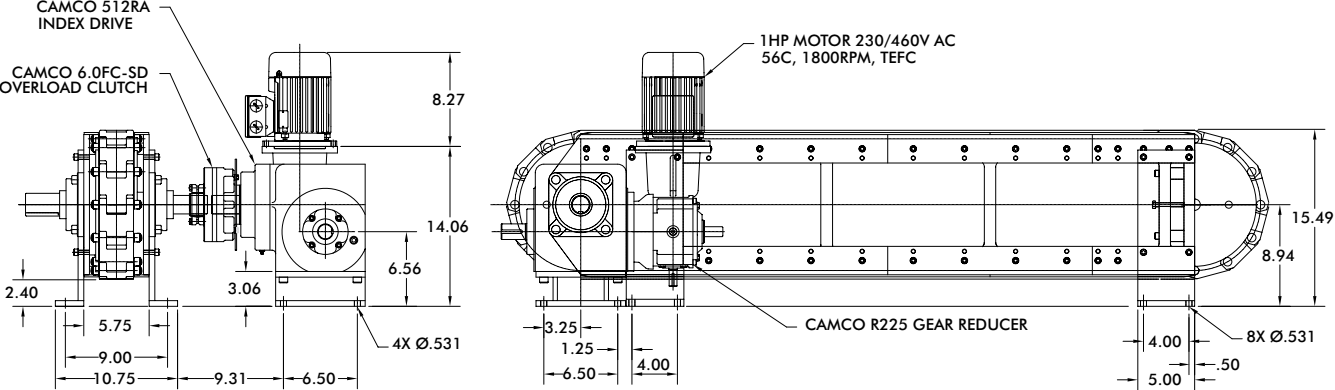
# 3.0 INCH SERIES

## Table-Top Modular Conveyors | Configurations

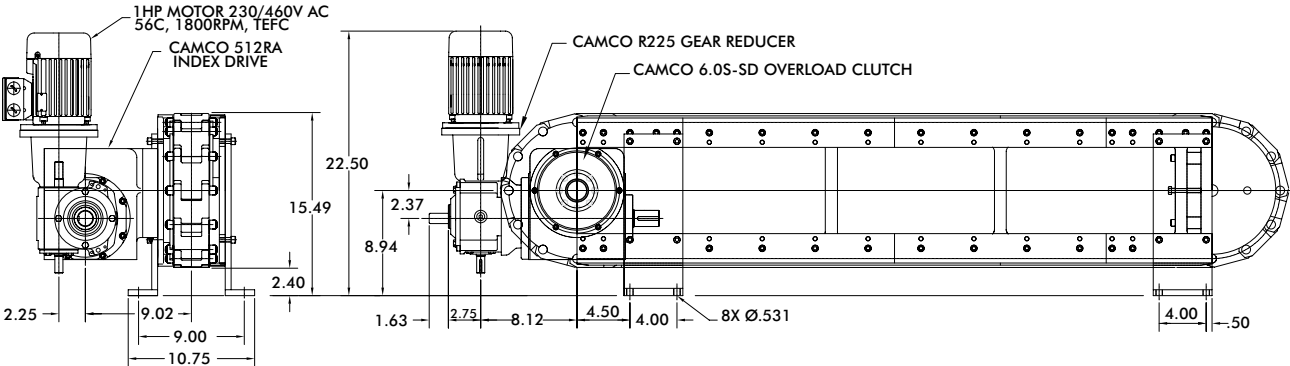
### Shaft Drive Carousel



### Shaft Drive Over/Under



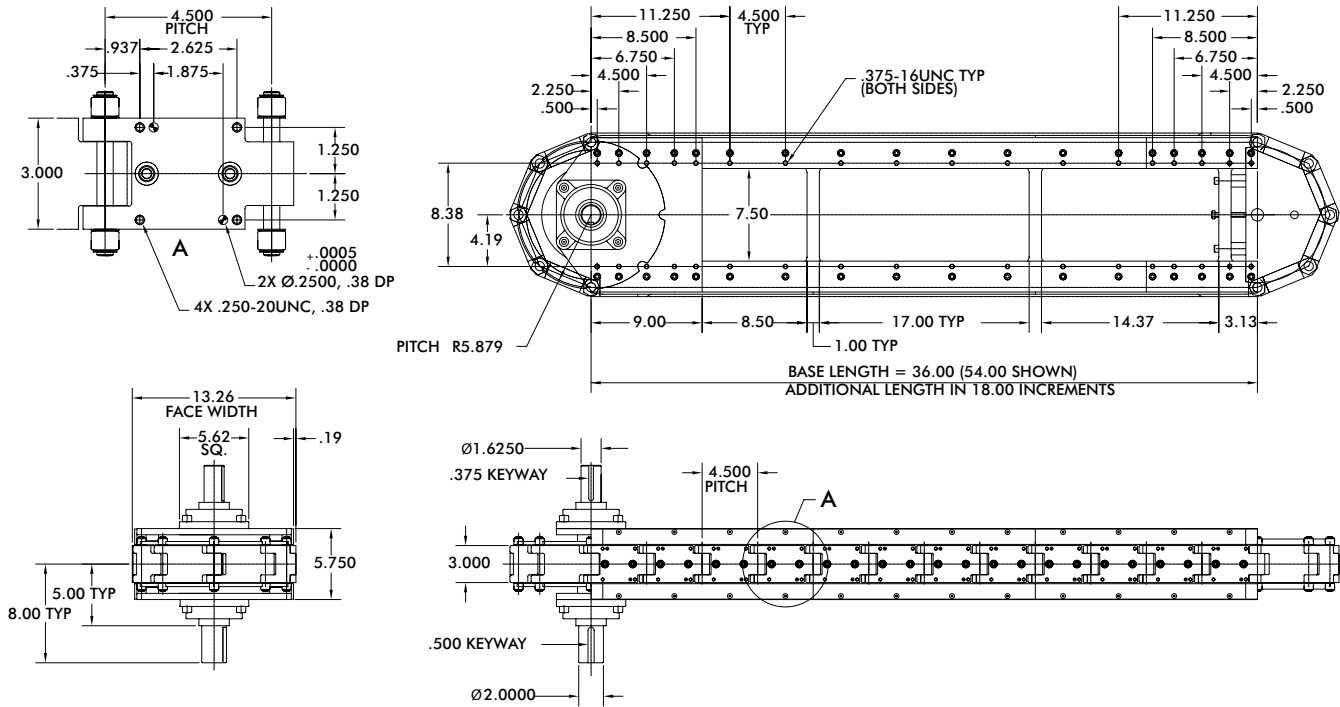
### Direct Drive Over/Under



# 4.5 INCH SERIES

## Table-Top Modular Conveyors | Dimensions and Configurations

### Modular Conveyor (module only)



### Modular Conveyor (drive package)

#### Standard Drive Package

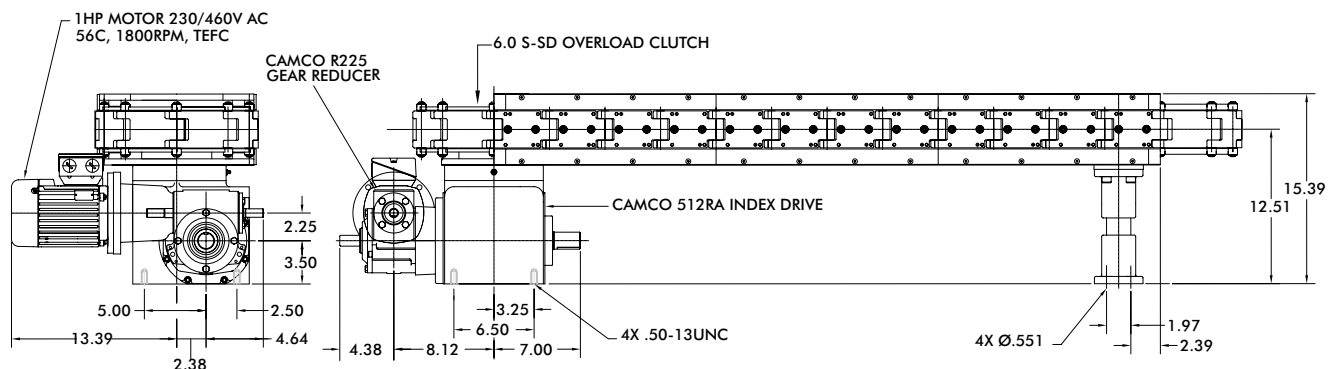
- 512RA Index Drive
- R225 Gear Reducer
- 6.0FC-SD Overload Clutch (Shaft Drive)
- 6.0S-SD Overload Clutch (Direct Drive)
- 1 hp high-cycling, performance AC Motor
- IM-pAC Motor Control

#### Heavy-Duty Drive Package

- 662RA Index Drive
- 7300C Gear Reducer
- 11FC-SD Overload Clutch (Shaft Drive)
- 6.0-SD Overload Clutch (Direct Drive)
- 1 hp high-cycling, performance AC Motor
- IM-pAC Motor Control

Index Distance [in.]	Indexer Stops
4.50	8
9.00	4
18.00	2

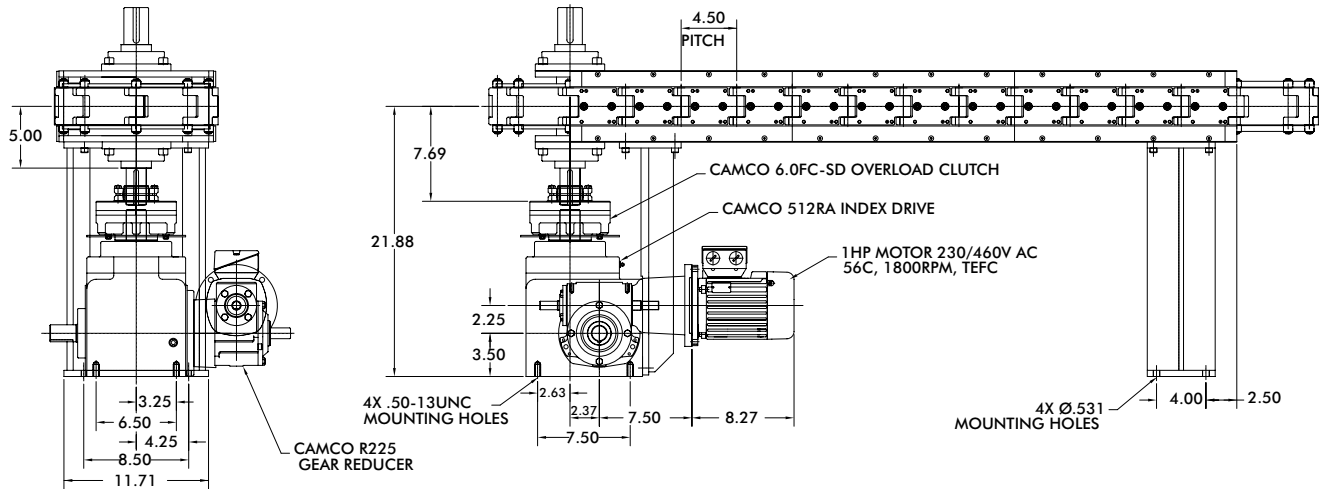
### Direct Drive Carousel



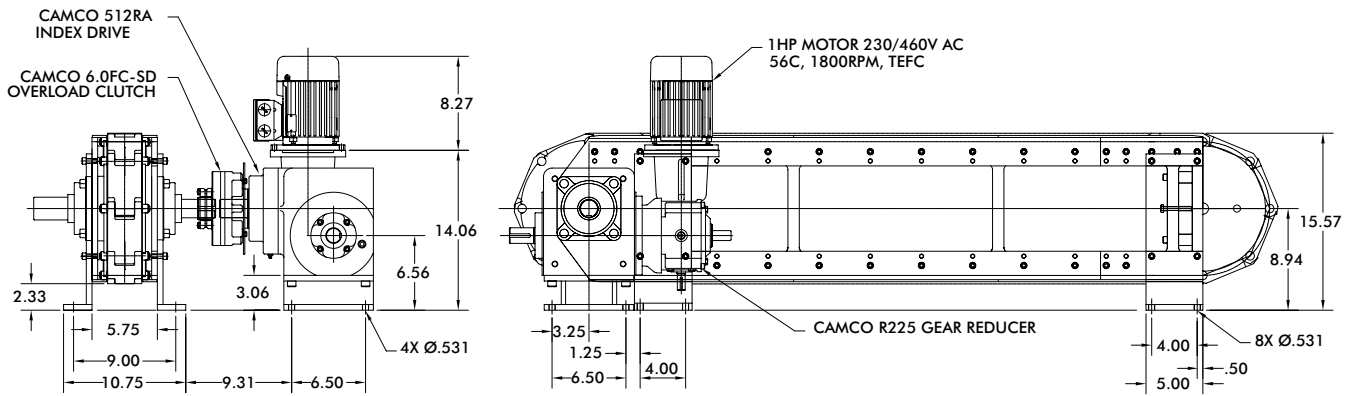
# 4.5 INCH SERIES

## Table-Top Modular Conveyors | Configurations

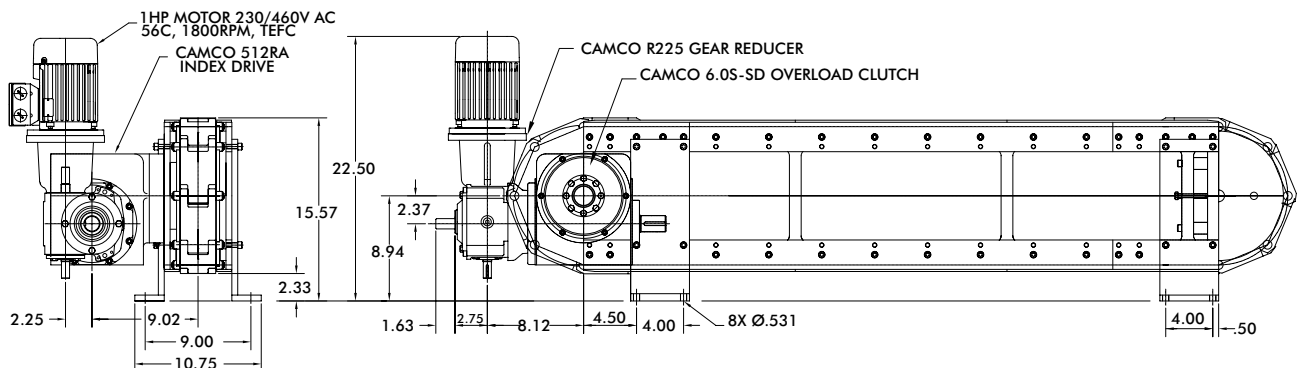
### Shaft Drive Carousel



### Shaft Drive Over/Under



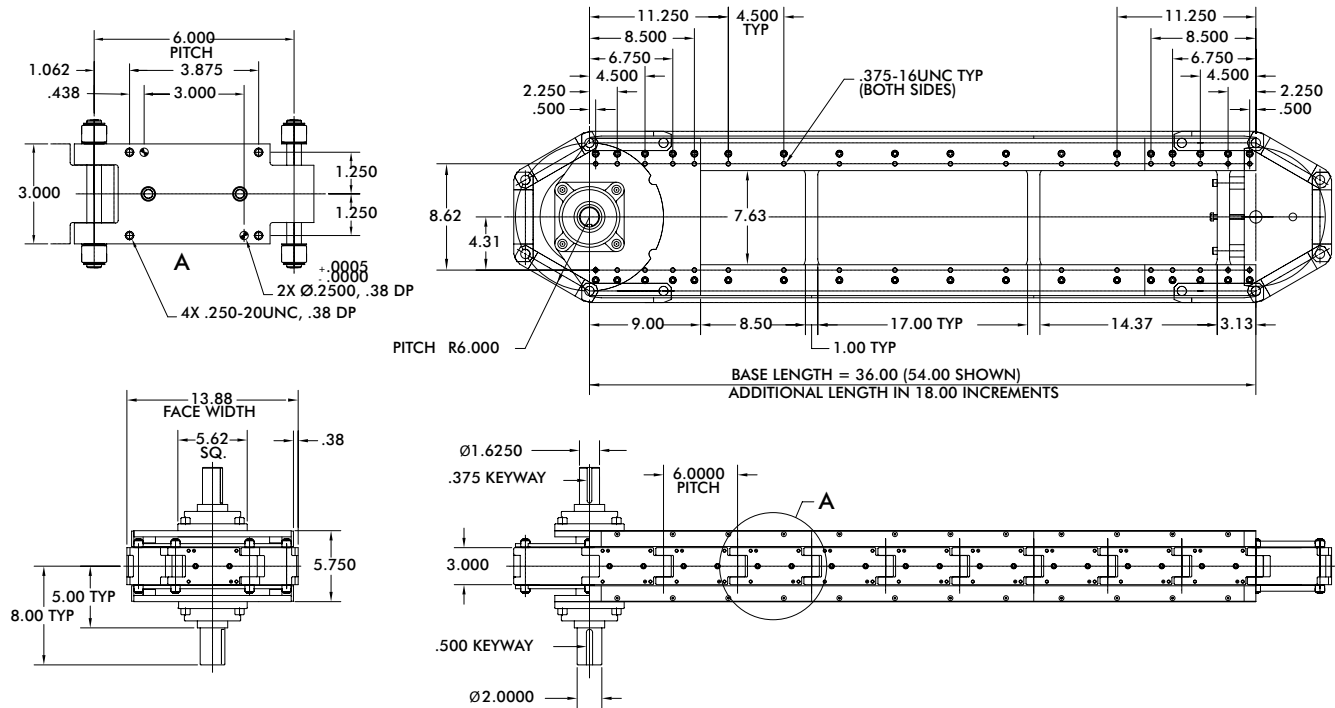
### Direct Drive Over/Under



# 6.0 INCH SERIES

## Table-Top Modular Conveyors | Dimensions and Configurations

### Modular Conveyor (module only)



### Modular Conveyor (drive package)

#### Standard Drive Package

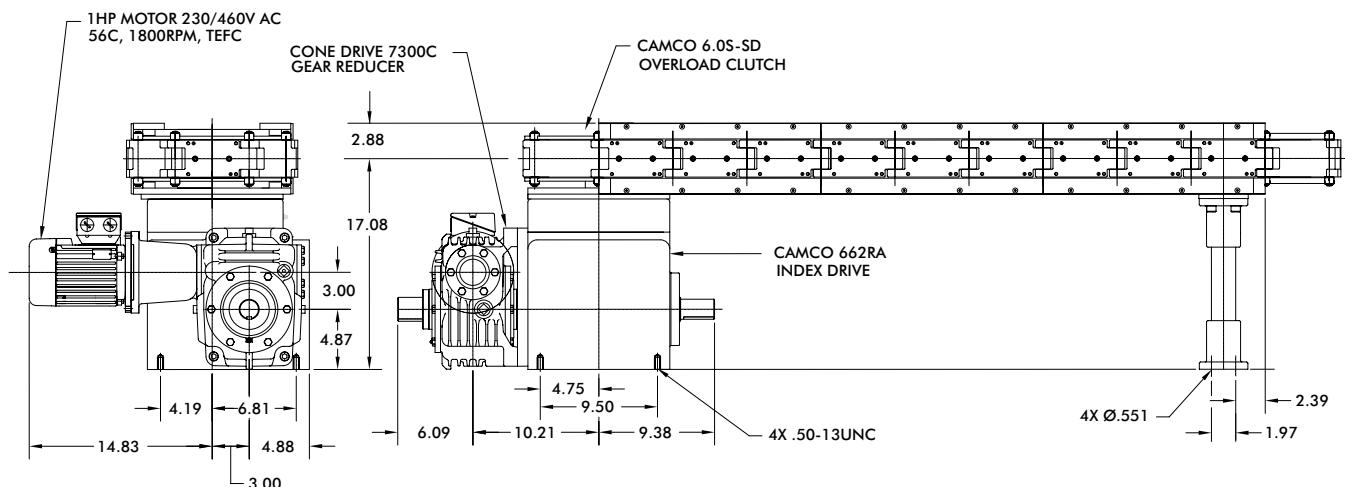
- 662RA Index Drive
- 7300C Gear Reducer
- 11FC-SD Overload Clutch (Shaft Drive)
- 6.0S-SD Overload Clutch (Direct Drive)
- 1 hp high-cycling, performance AC Motor
- IM-pAC Motor Control

#### Heavy-Duty Drive Package

- 800RD Index Drive
- 7300C Gear Reducer
- 25FC-SD Overload Clutch
- 1 hp high-cycling, performance AC Motor
- IM-pAC Motor Control

Index Distance [in.]	Indexer Stops
6.00	6
12.00	3
18.00	2

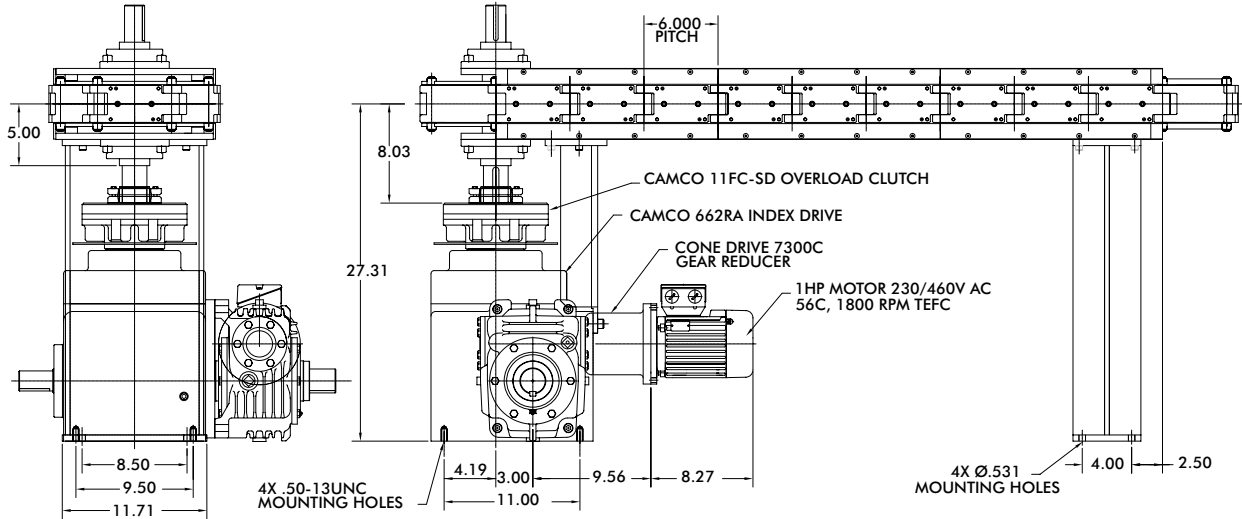
### Direct Drive Carousel



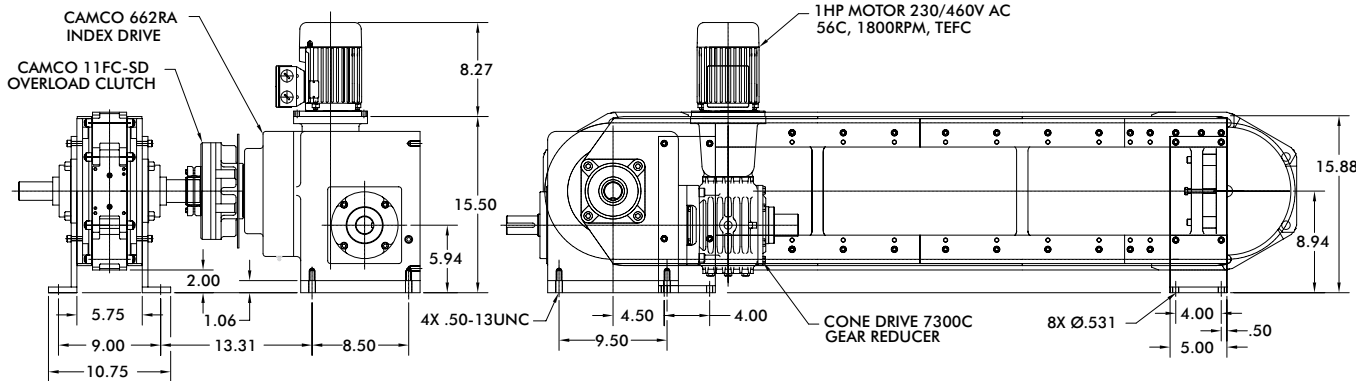
# 6.0 INCH SERIES

## Table-Top Modular Conveyors | Configurations

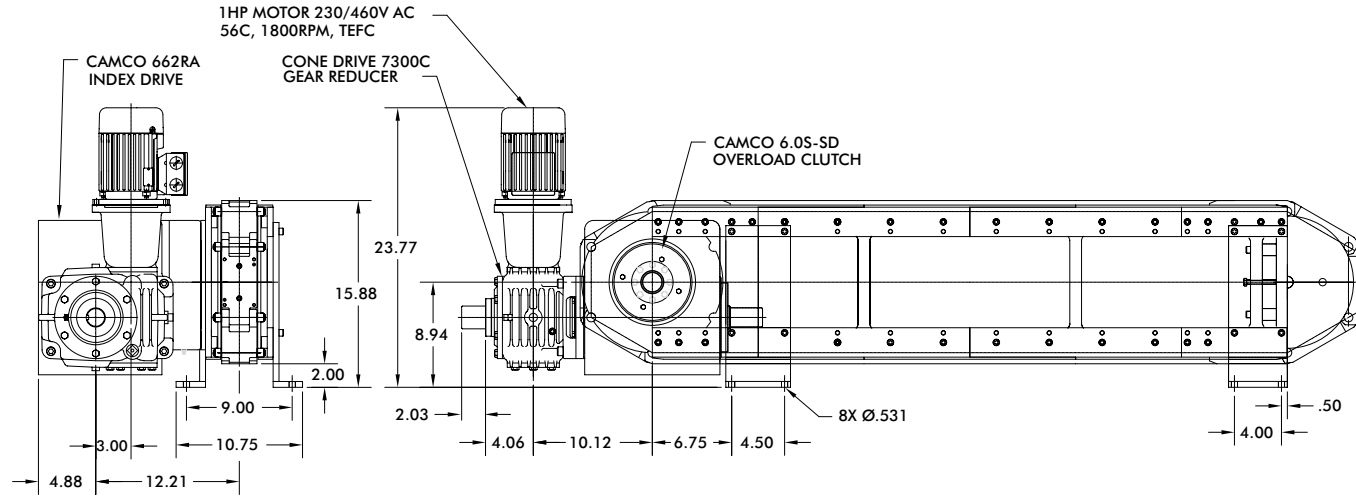
### Shaft Drive Carousel



### Shaft Drive Over/Under



### Direct Drive Over/Under

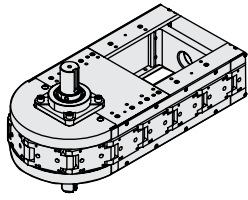


Dimensions and technical information are subject to change without notice

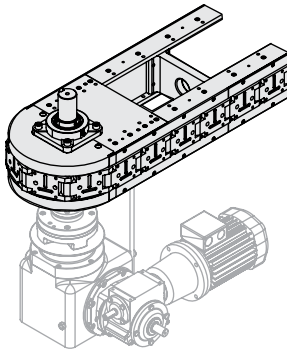


# TABLE-TOP MODULAR CONVEYORS

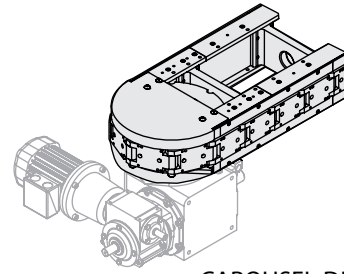
## Conveyor Types



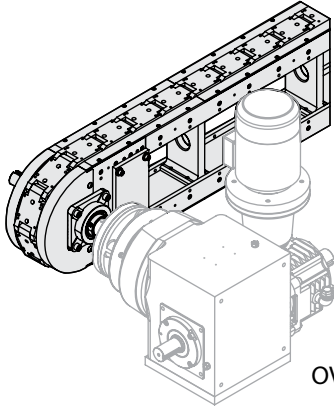
MODULE ONLY



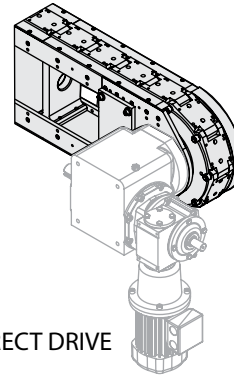
CAROUSEL-SHAFT DRIVEN



CAROUSEL-DIRECT DRIVEN

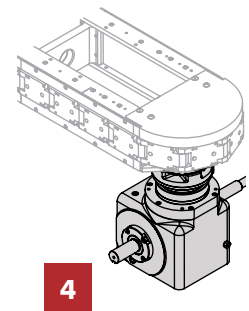
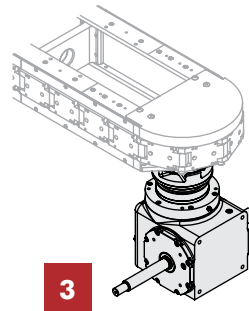
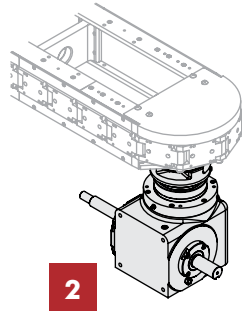
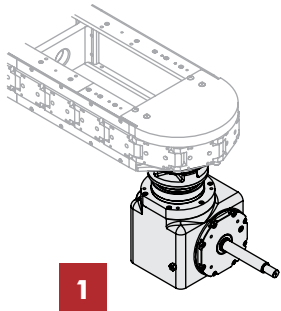


OVER-UNDER SHAFT DRIVEN

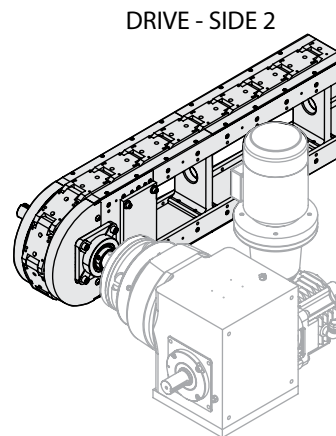
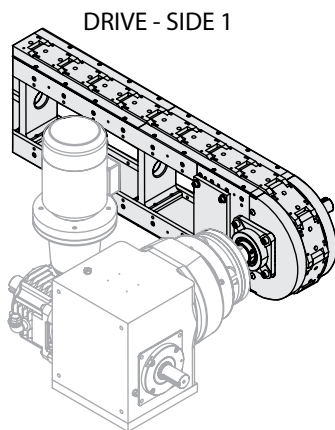


OVER-UNDER DIRECT DRIVE

## Carousel Indexer Position



## Over/Under Side

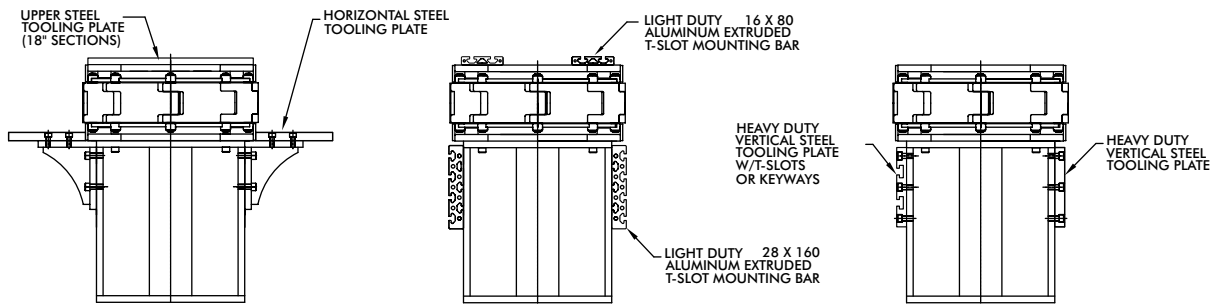




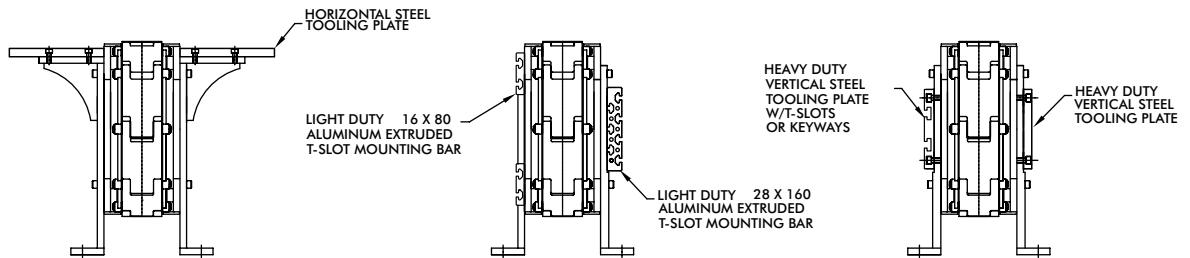
# TABLE-TOP MODULAR CONVEYORS

Options

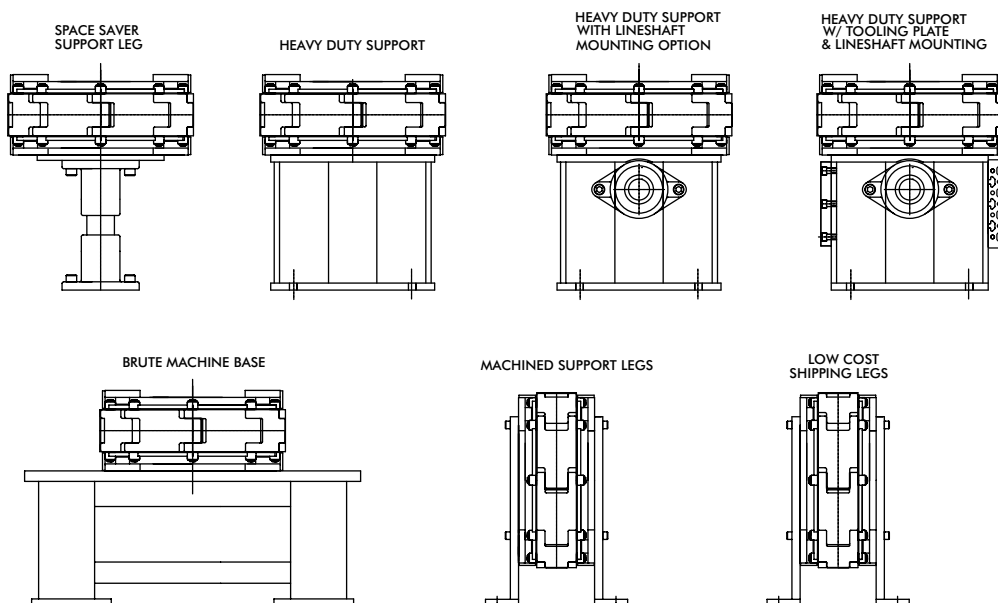
## Tooling Plate Options Carousel



## Tooling Plate Options Over/Under



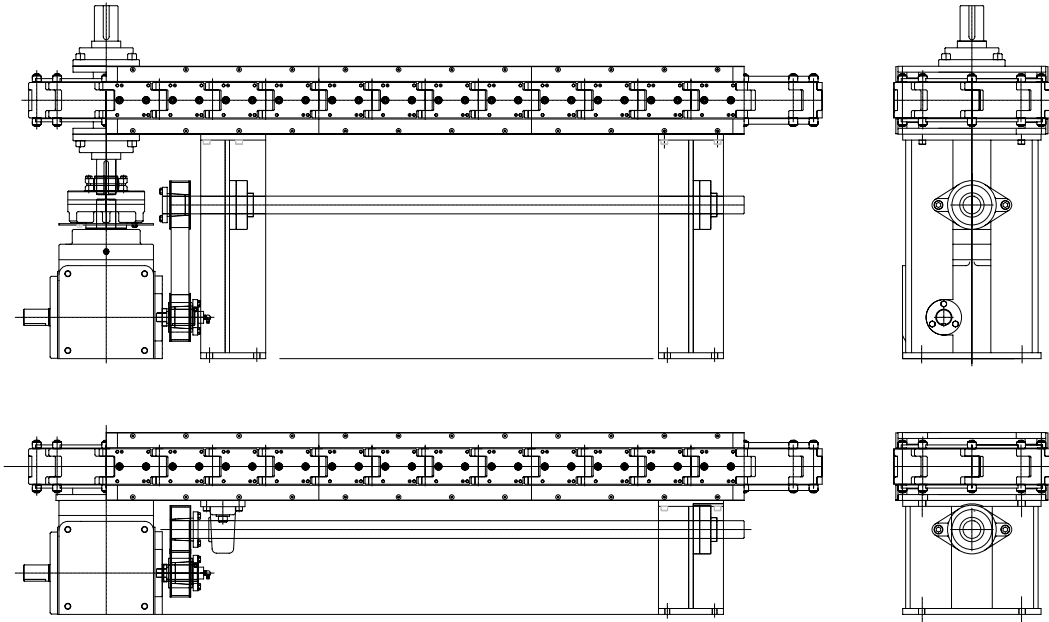
## Support Leg Options



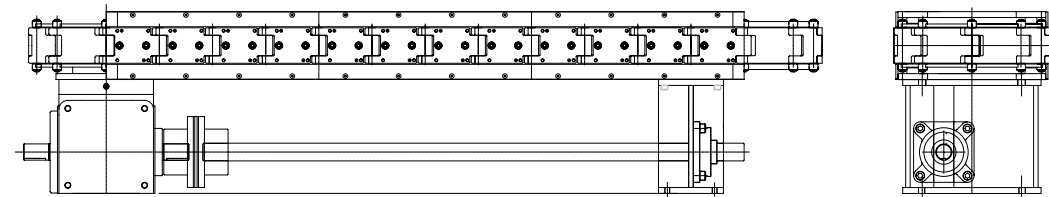
# TABLE-TOP MODULAR CONVEYORS

## Options

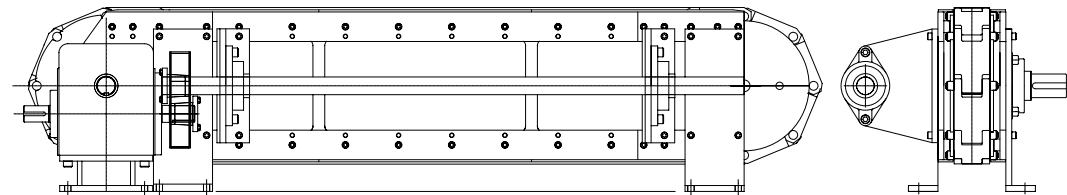
### Lower Lineshaft Options Belt Driven



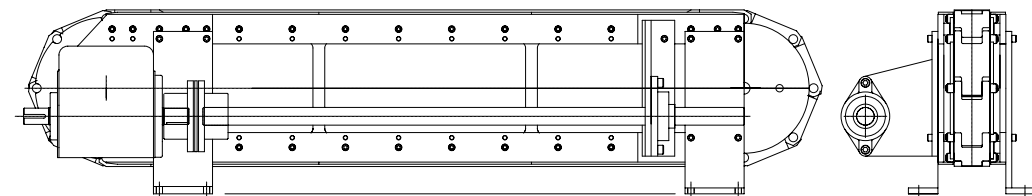
### Lower Lineshaft Options Direct Driven



### Drive Side Lineshaft Options Belt Driven



### Drive Side Lineshaft Options Direct Driven





# PRECISION INDEXING SOLUTIONS

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RNG Easy Access  
Dial Indexers ..... IN-RNG



Double Contact Bearing  
HD Servo Positioner ..... IN-DSR



Rite-Link Conveyors ..... IN-RLC



Parallel Gear  
Servo Positioner ..... IN-PGM



Table-Top Modular  
Conveyors ..... IN-TTC



RSD Flexible Servo Drives .. IN-RSD



Heavy Duty  
Modular Conveyors ..... IN-HDC



RDM Dial Indexers ..... IN-RDM



LPP Linear Part Handles ..... IN-LPP



RA Right Angle Drives ..... IN-RA



RPP Rotating Part Handlers .. IN-RPP



RD HD Dial Indexers ..... IN-RD



Overload Clutches ..... IN-CLU



E-Series HD Drives ..... IN-EHD



Custom Cams ..... IN-CAM



MDE/HDE Indexers ..... IN-MDE



RGS/RGD  
Shaft/Flange Drives ..... IN-RGS



Parallel Shaft/  
Flange Drives ..... IN-PAR

# HEAVY DUTY MODULAR CONVEYORS

Features | Table of Contents



## Features:

---

**CAMCO Heavy Duty Precision Link Conveyors** combine excellent accuracy with high load capacity to provide the versatility needed to meet virtually any automated assembly or manufacturing challenge.

Standard link lengths of 6.0", 9.0" and 12"

Over/Under and Carousel configurations

Precision links with roller bearing cam followers for smooth transfer and long life

Provided with heavy-duty legs and a precision machined base designed to hold large loads and maintain system accuracy

Available with adjustable soft machine mounts to accommodate inconsistent on-site flooring

Customize length and height and add optional line shafts or tooling plates to fit your application

## Table of Contents

---

How to Order .....	3
Conveyor Options .....	4
6.0 Inch Heavy Duty .....	5
9.0 Inch Heavy Duty .....	7
12.0 Inch Heavy Duty .....	9

# HEAVY DUTY MODULAR CONVEYORS

## How To Order

### Required Information

- **Link Size:** 1.5, 2.0, 3.0, 4.5, 6.0, 9.0 or 12.0
- **Type:** Table Top or Heavy Duty
- **Style:** Over/Under or Carousel
- **Length:** Standard per catalog or Custom, expressed as center distance, in inches
- **Height:** Standard per catalog or Custom, in inches

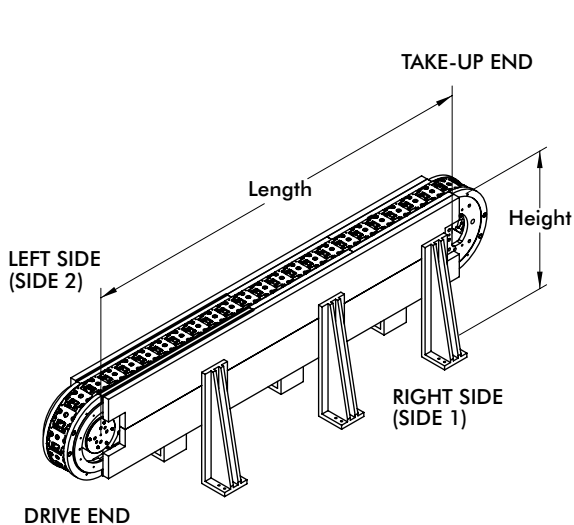
### Technical Assistance

All Precision Link Conveyor applications are verified by a IMC sales agent using the IMC Sizing Program.

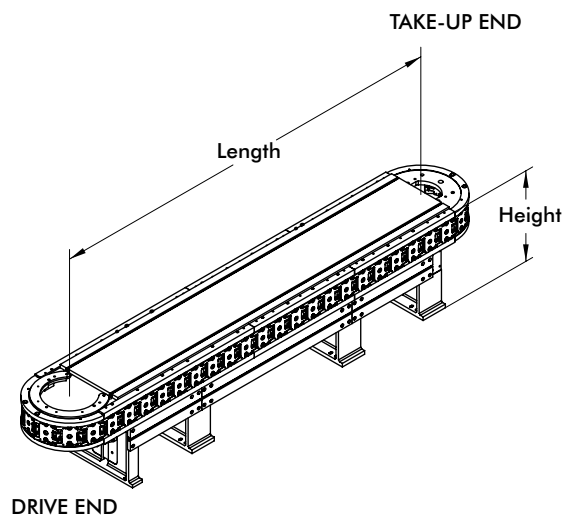
Your IMC agent is available to make all sizing calculations for you.

### Required Information when ordering Drive Package

- **Type:** Standard, Alternate, Heavy-Duty or Special
- **Drive Side:** 1 or 2 (for Over/Under)
- **Index Distance:** In inches
- **Indexer Model:** Specific model number or special



OVER/UNDER

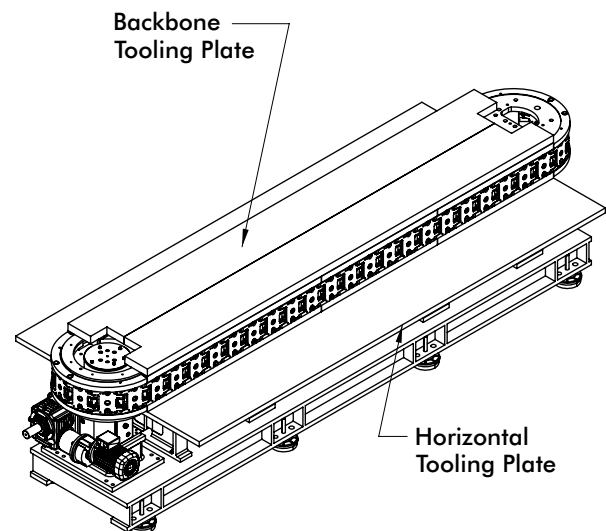
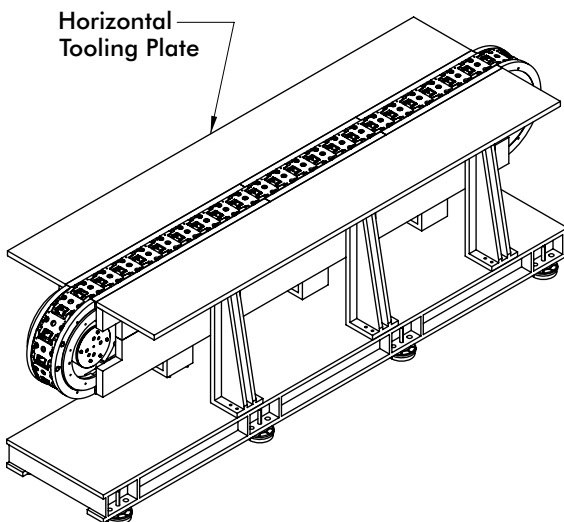
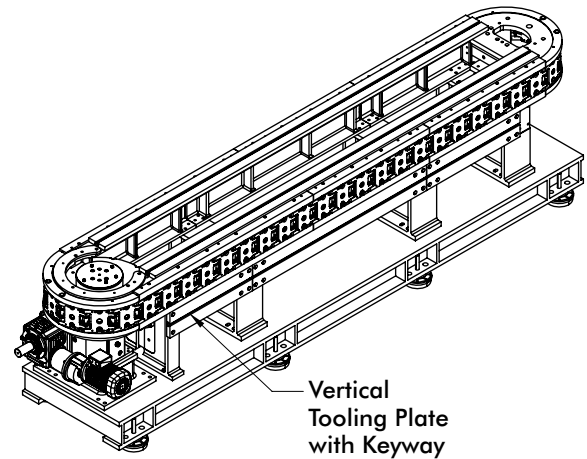
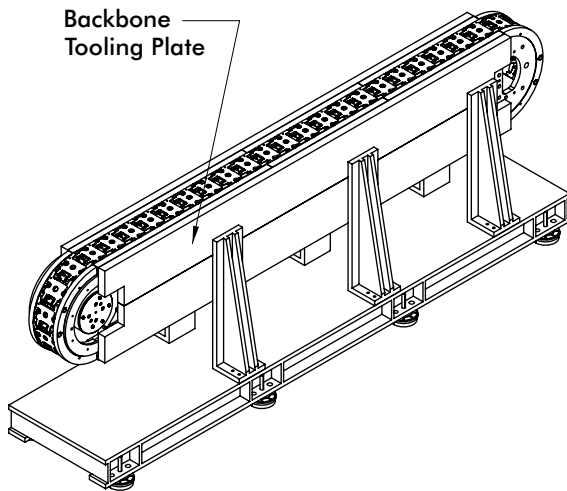


CAROUSEL

# HEAVY DUTY MODULAR CONVEYORS

## Options

CAMCO offers a wide variety of standard and custom options on all precision link conveyors. Tooling plates and conveyor mainframes can be ordered with custom hole configurations or burnouts. Other standard options include timing chains, timing belts and extended lineshafts. Standard drive package options include CAMCO indexers with AC motors and clutch-brakes, DC motors or servo motors. CAMCO's special Indexer output overload clutches are highly recommended to protect the indexer, link assembly and tooling.



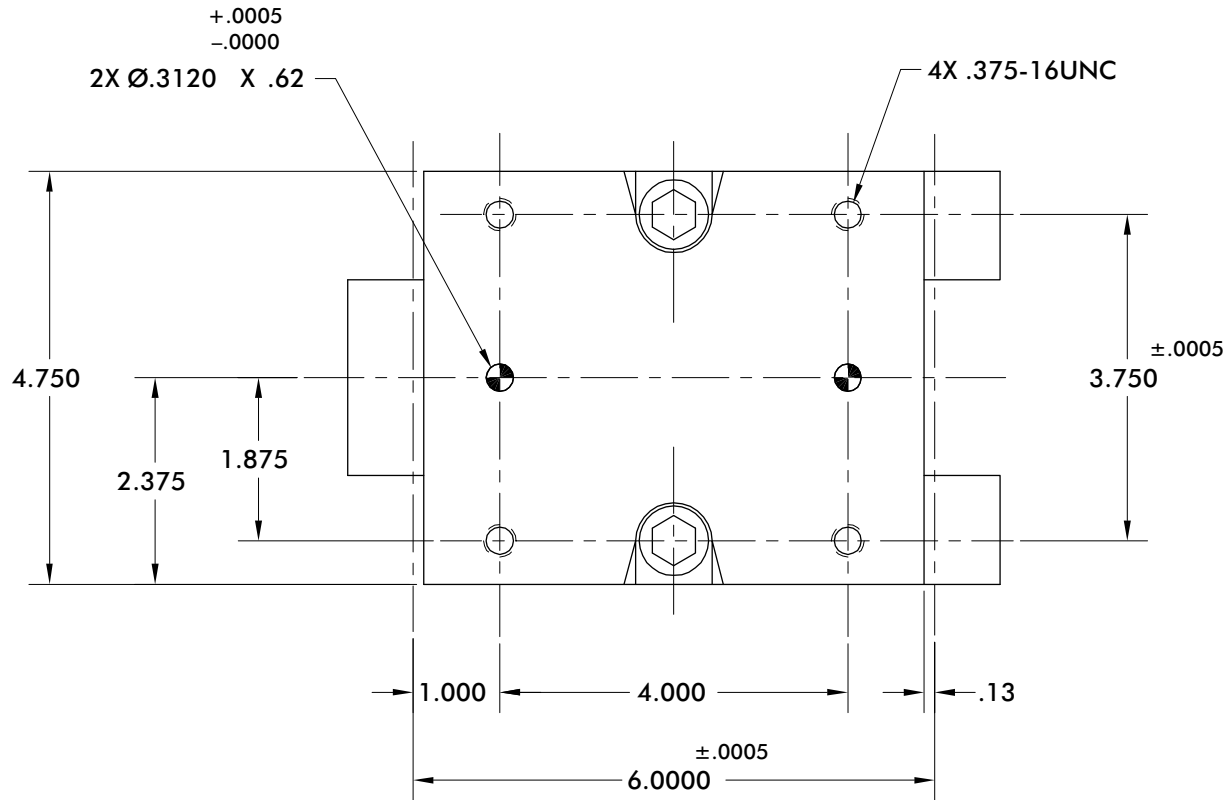
### Using Cambot Parts Handlers with Precision Link Conveyors

Cambot linear pick-and-place parts handlers have custom cam motions incorporated into each unit, providing complex synchronize timings for your application. They can be mounted onto the backbone tooling plates of the conveyor. Cambot linear pick-and-place parts handlers can be belt driven off a common line shaft for perfect synchronization. See the Rotary Parts Handler section (page 181) for other possible configurations, such as a rotary pick-and-place device loading parts from a continuous line conveyor to a CAMCO index drive conveyor.

# 6.0 INCH HEAVY DUTY SERIES

## Heavy Duty Modular Conveyors | Dimension

Link



### Modular Conveyor (drive package)

#### Standard Drive Package

- 1301RD Intermittor
- 73500C Reducer
- 5 hp AC Motor
- MDB-1125 Air Clutch-Brake
- Cycle Cam & Limit Switch

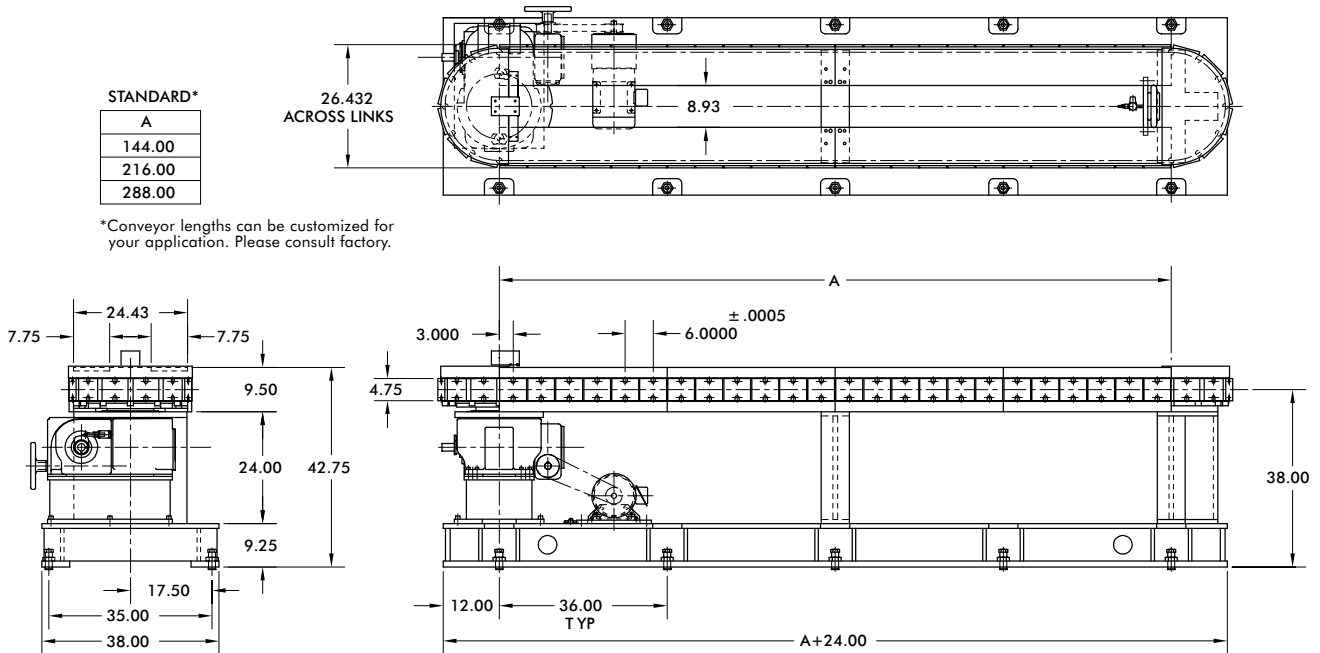
Index Distance [in.]	Indexer Stops
6.00	12
12.00	6
18.00	4
24.00	3



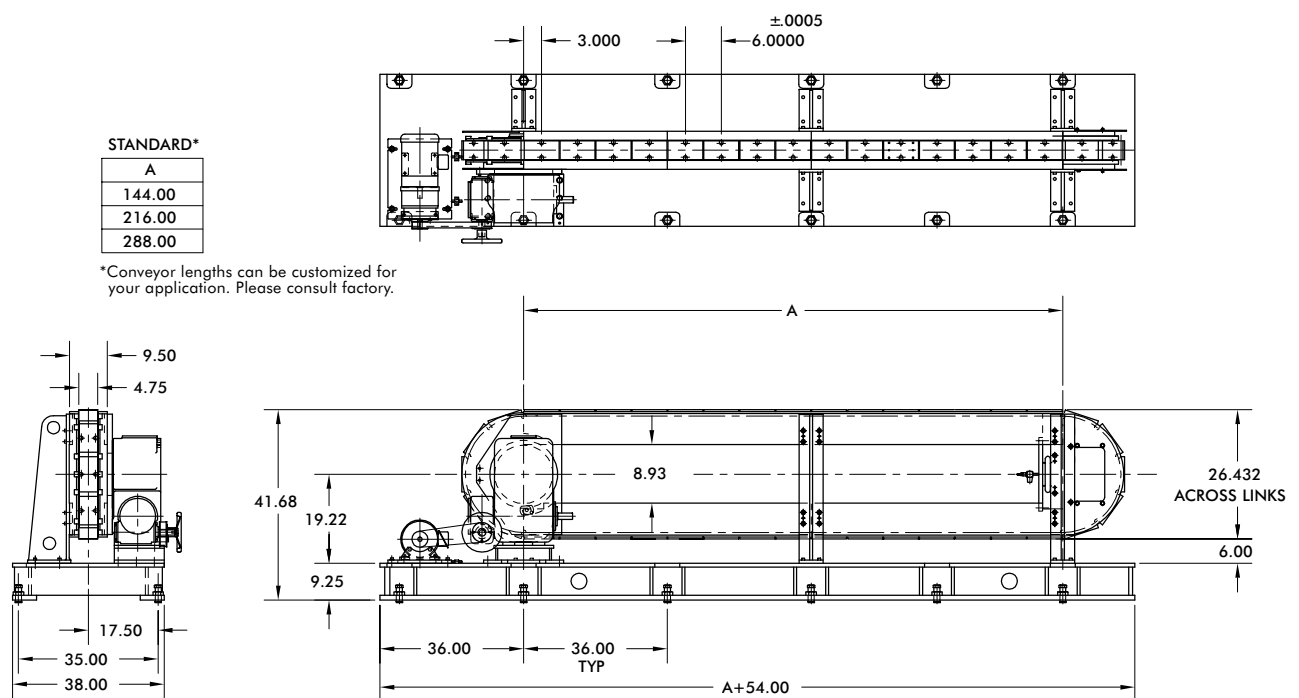
# 6.0 INCH HEAVY DUTY SERIES

## Heavy Duty Modular Conveyors | Configurations

### Carousel



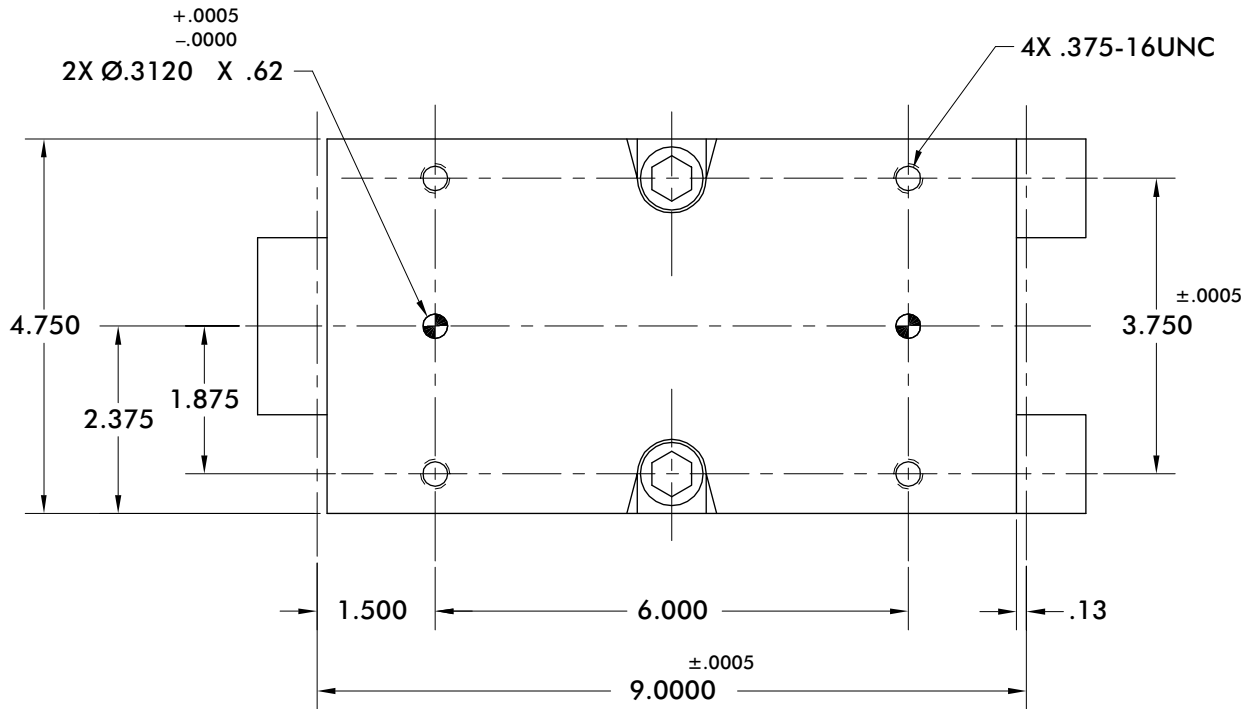
### Over/Under



# 9.0 INCH HEAVY DUTY SERIES

## Heavy Duty Modular Conveyors | Dimensions

Link



### Modular Conveyor (drive package)

#### Standard Drive Package

- 1301RD Intermittor
- 73500C Reducer
- 5 hp AC Motor
- MDB-1125 Air Clutch-Brake
- Cycle Cam & Limit Switch

Index Distance [in.]	Indexer Stops
9.00	12
18.00	6
27.00	4
36.00	3

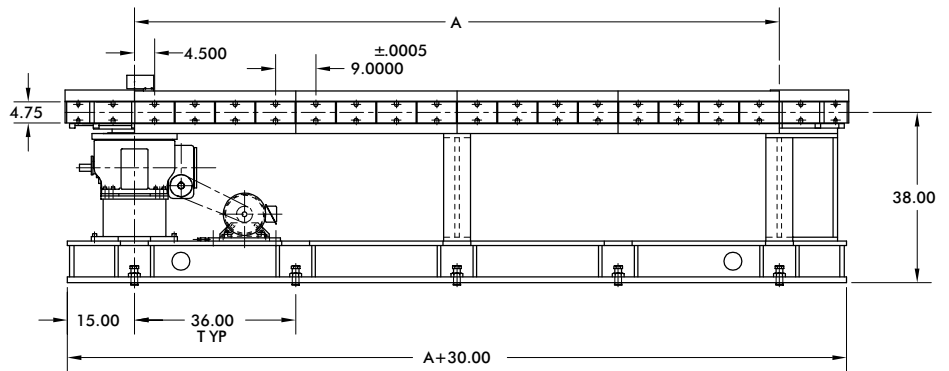
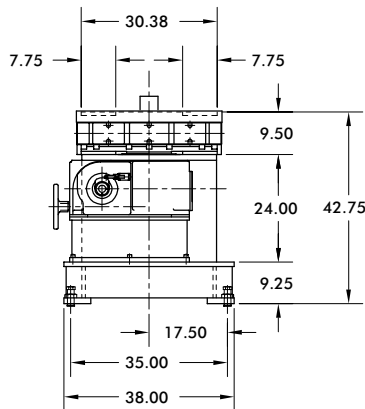
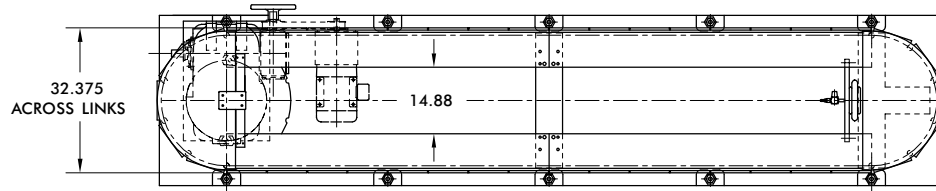
# 9.0 INCH HEAVY DUTY SERIES

## Heavy Duty Modular Conveyors | Configurations

### Carousel

STANDARD*	
A	
144.00	
216.00	
288.00	

\*Conveyor lengths can be customized for your application. Please consult factory.

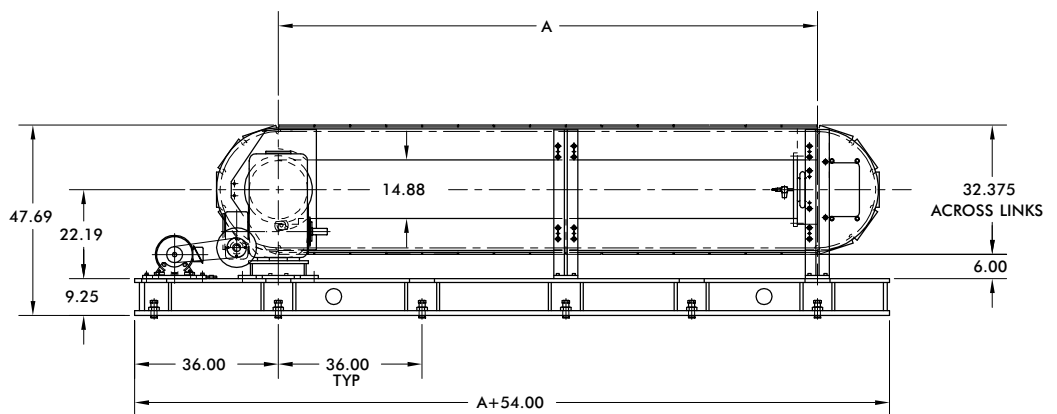
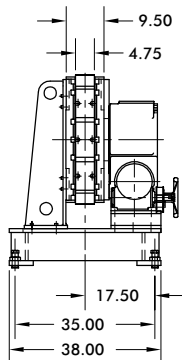
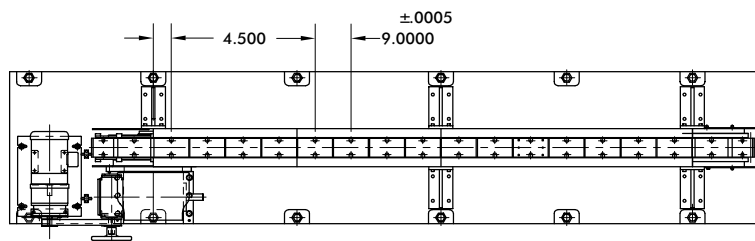


CONVEYOR SHOWN WITH 10-TOOTH SPROCKET

### Over/Under

STANDARD*	
A	
144.00	
216.00	
288.00	

\*Conveyor lengths can be customized for your application. Please consult factory.

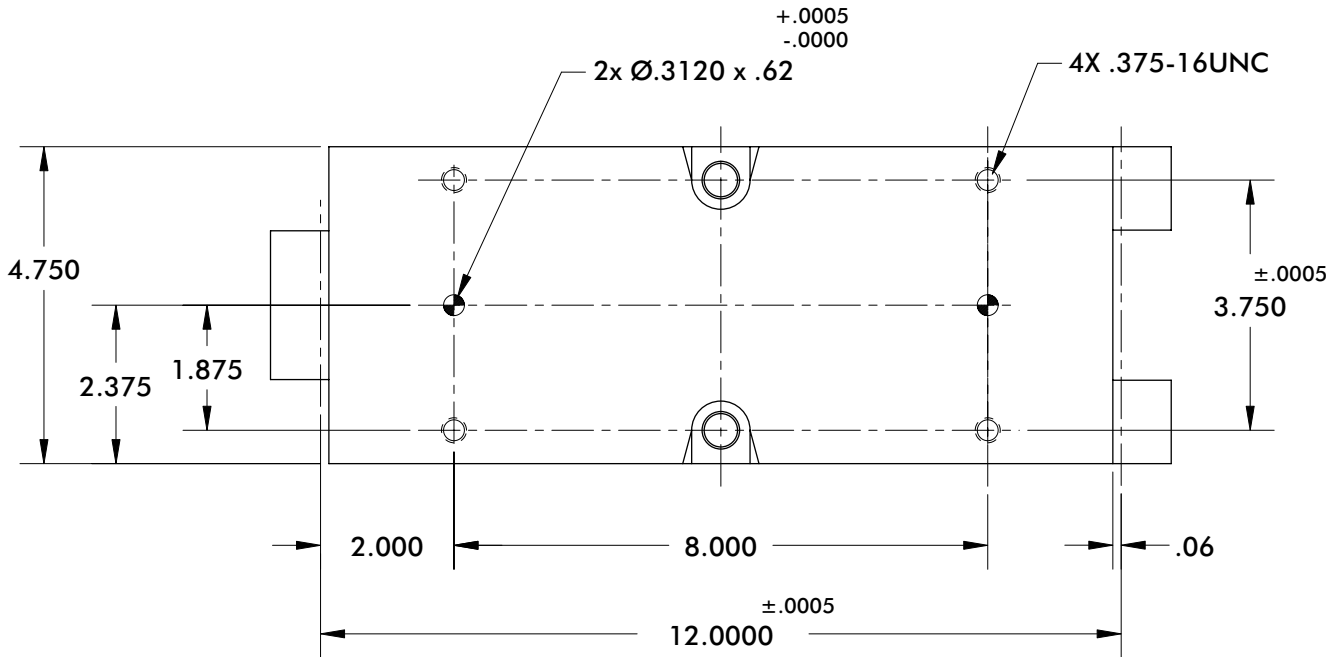


CONVEYOR SHOWN WITH 10-TOOTH SPROCKET

# 12.0 INCH HEAVY DUTY SERIES

## Heavy Duty Modular Conveyors | Dimensions

Link



### Modular Conveyor (drive package)

#### Standard Drive Package

- 1301RD Intermittor
- 7500C Reducer
- 5 hp AC Motor
- MDB-1125 Air Clutch-Brake
- Cycle Cam & Limit Switch

Index Distance [in.]	Indexer Stops	Sprocket
12.00	8, 10, 12	8T, 10T, 12T
24.00	4, 5, 6	8T, 10T, 12T
36.00	4	12T
48.00	2, 3	8T, 12T

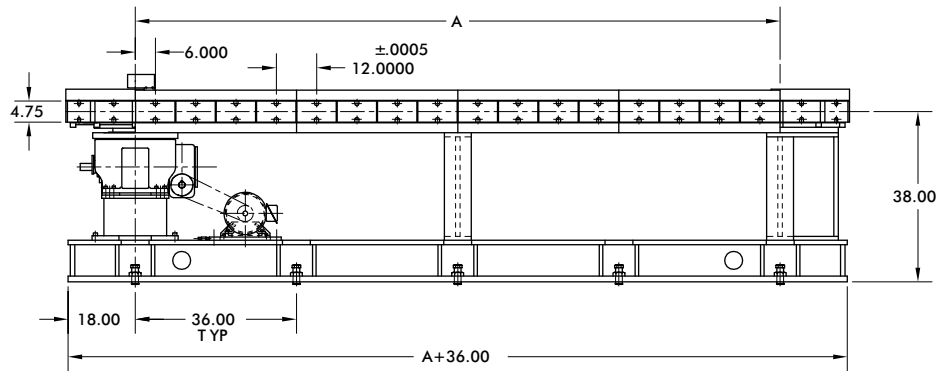
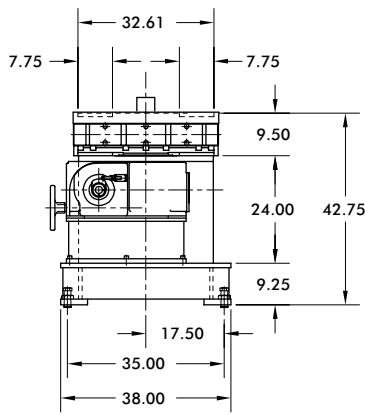
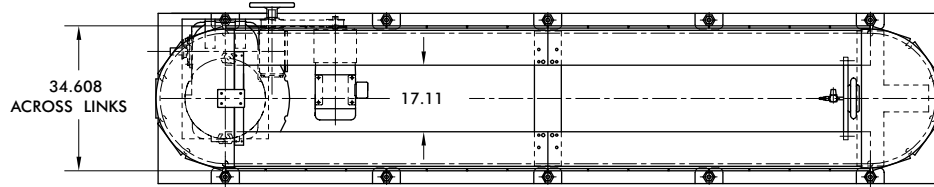
# 12.0 INCH HEAVY DUTY SERIES

## Heavy Duty Modular Conveyors | Configurations

### Carousel

STANDARD*	
A	
144.00	
216.00	
288.00	

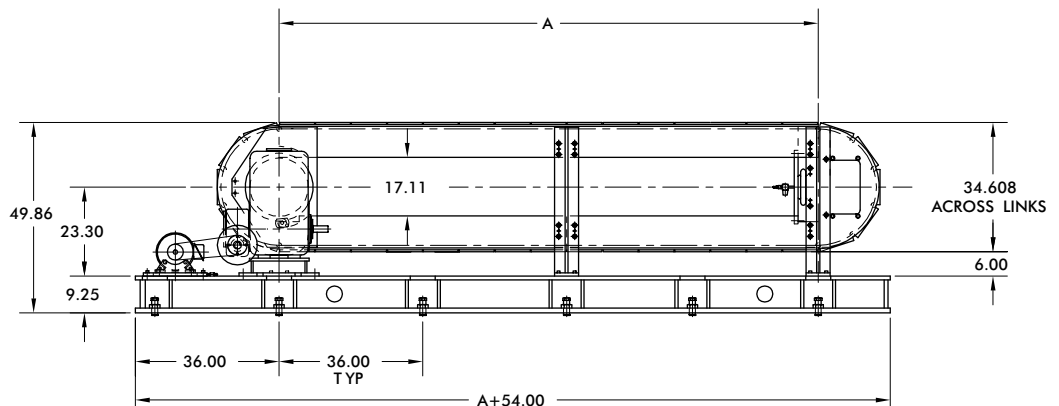
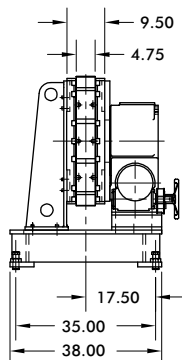
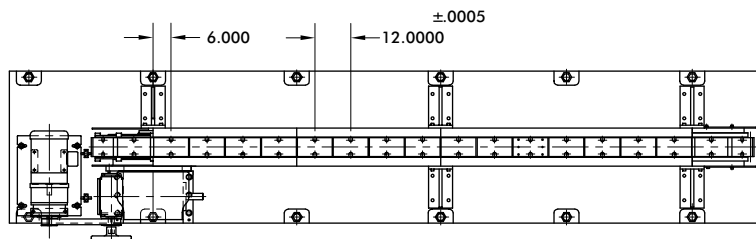
\*Conveyor lengths can be customized for your application. Please consult factory.



### Over/Under

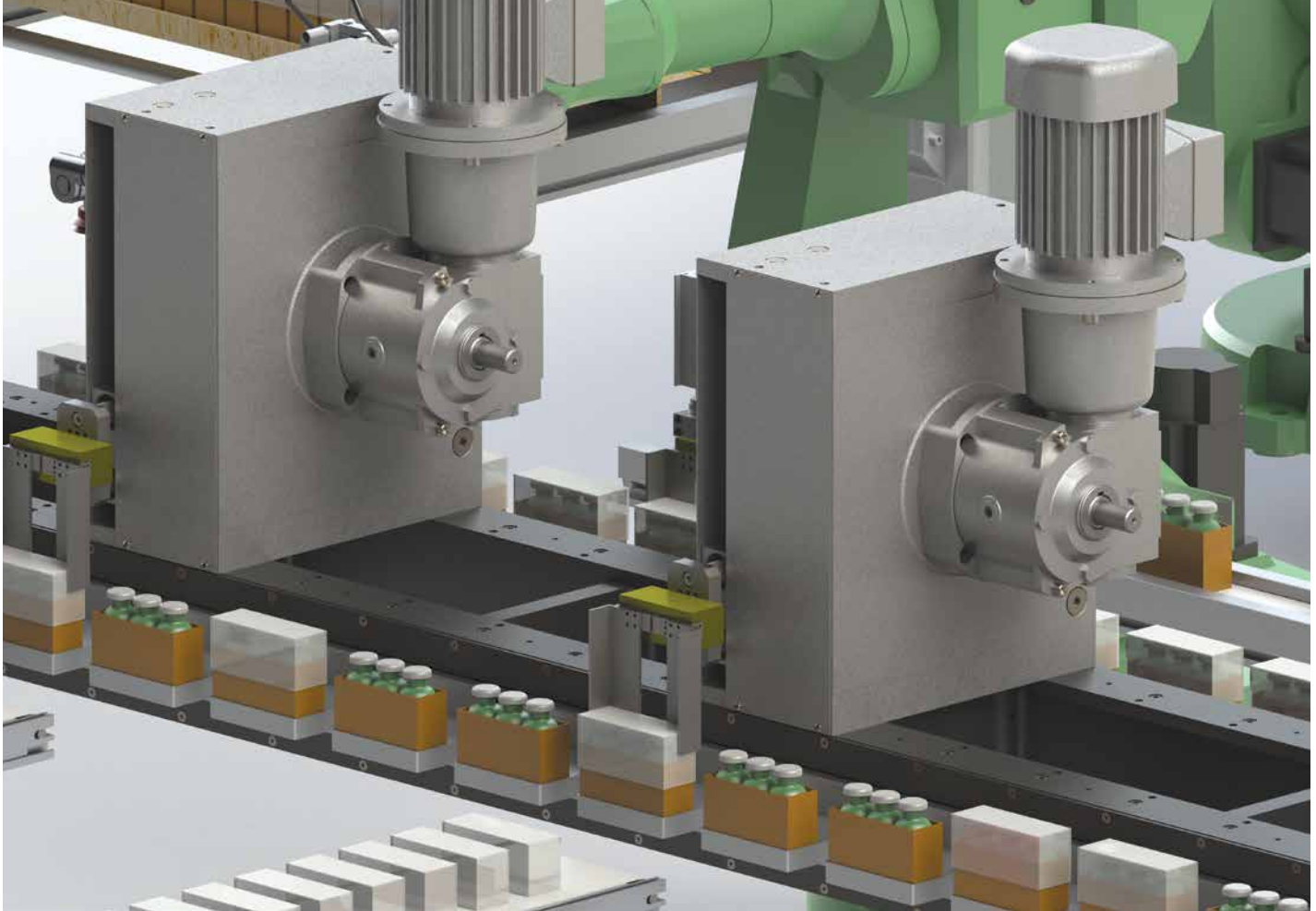
STANDARD*	
A	
144.00	
216.00	
288.00	

\*Conveyor lengths can be customized for your application. Please consult factory.



# LINEAR PART HANDLER

## Gripper Mounting Accessory



### Indexer driving a conveyor and Linear Part Handlers

- Operation can be asynchronous (cycle on demand) – a single index followed by a variable dwell time, or the operation can be continuous.
- Index motion time is changed by changing the motion profile of the servo motor.
- Dwell time is variable. Single axis servo or multiple axis servo controllers can be used.
- More than 60 cycles per minute – maximum cycle rate can be determined by your application engineer.

# LINEAR PART HANDLER

Features | Table of Contents



## Features:

---

**CAMCO Cambot® Linear Parts Handlers**, combined with other DESTACO products, offer a low maintenance, cost-effective solution for a complete parts handling package.

Cost effective design for low-cost operation

- Reliable CAMCO mechanical cam design
- Lubed for Life

Easy integration with other DESTACO products for one-stop shopping

- Camco Modular Precision Link Conveyors and Ring Drives
- DESTACO Vacuum products
- Robohand Direct Connect™ Grippers (no adapter plates) and E-Gripper

Customized for your application

- Input shaft available on either side for ease of integration
- Line shaft drive or gear reducer and motor drive package for synchronous or asynchronous operation

Standard or custom strokes and timing designed for your specific requirements

## Applications:

---

Automated production systems with small parts transfer such as consumer products, electronics, and medical device assembly and test.

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Gripper Mounting Block .....	6

# LINEAR PART HANDLER

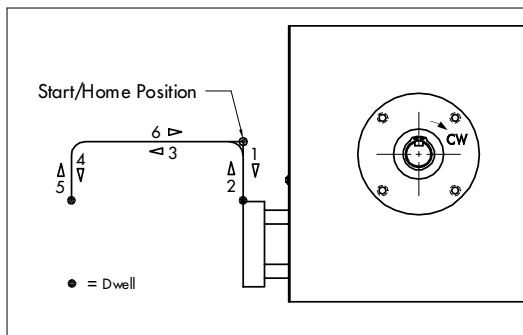
## How To Order

### LPP Ordering Procedure

1. Model
2. Lift (Vertical) Stroke
3. Transfer (Horizontal) Stroke

Standard Strokes: Lift (mm) x Transfer (mm)	
M100	M150
15 x 100	15 x 150
45 x 100	45 x 150
65 x 20	75 x 50
65 x 60	75 x 110
65 x 100	75 x 150

4. Output Sequence (Standard or Custom)



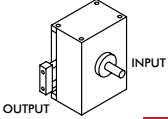
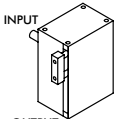
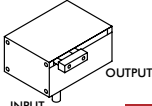
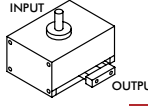
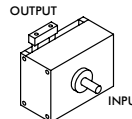
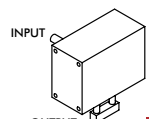
5. Drive Page including Gear Reducer, Motor, and AC Drive

Model	Gear Reducer	AC Motor	1 hp AC Drive Input Voltage (select 1)		
M100	R180	1/3 hp	120 VAC	240 VAC	480 VAC
M150	R225	3/4 hp	120 VAC	240 VAC	480 VAC

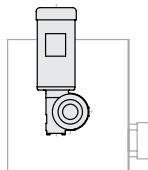
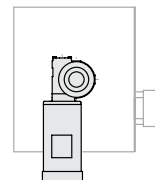
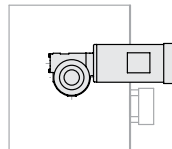
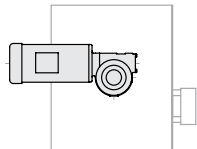
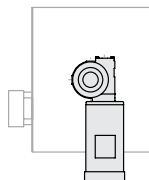
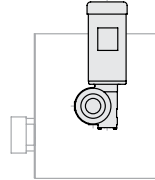
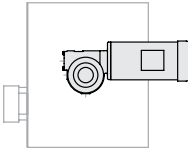
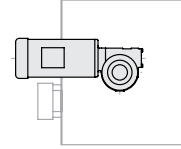
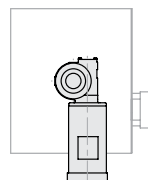
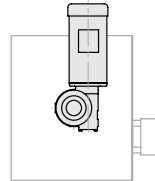
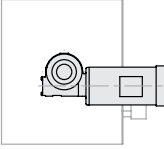
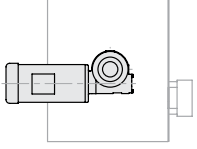
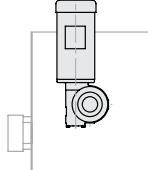
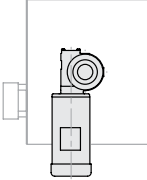
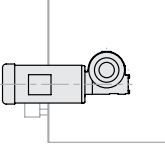
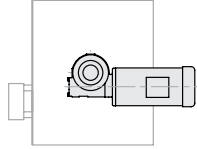


# LINEAR PART HANDLER

## Mounting Position

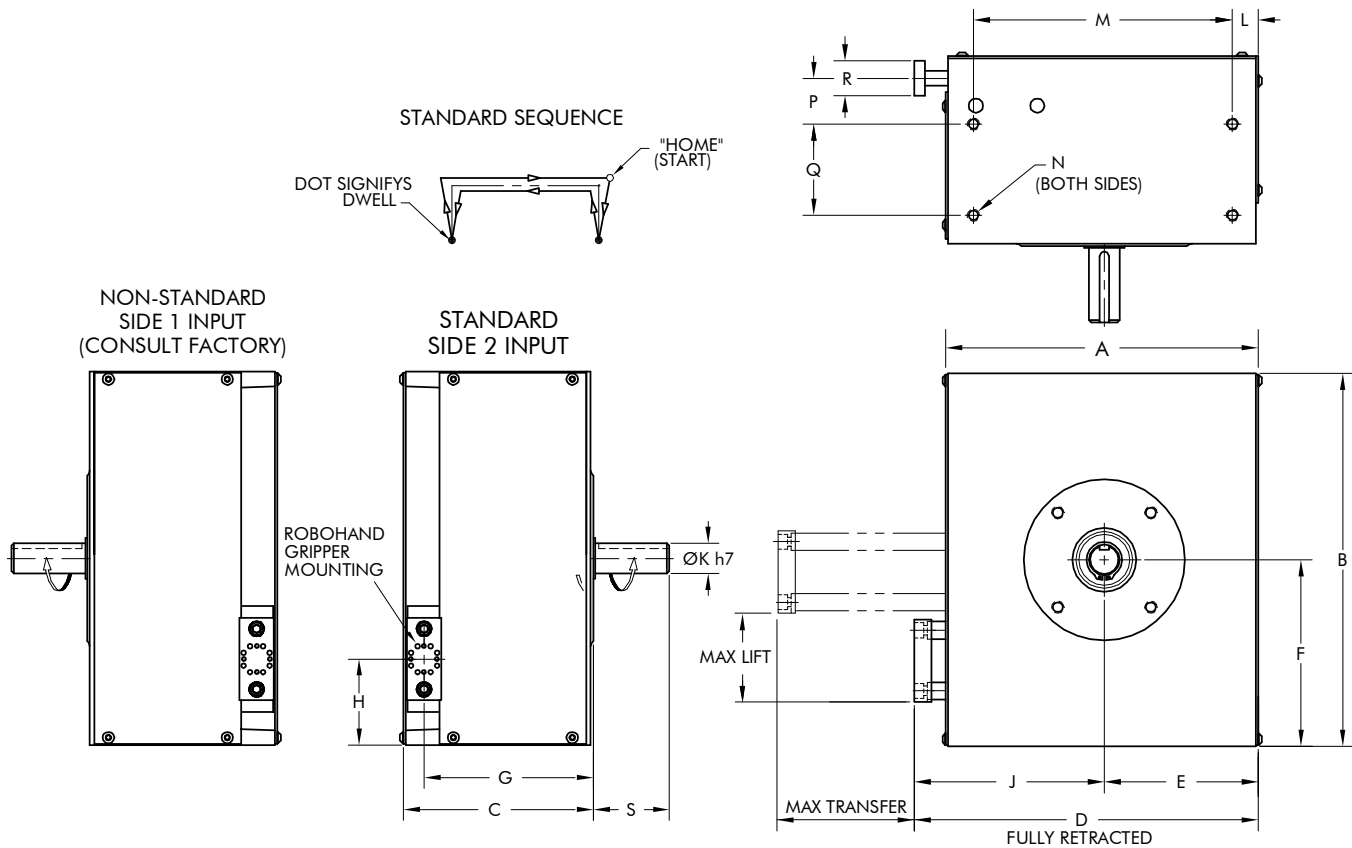
<b>OHUI</b> (output horizontal, under input)	<b>OHOI</b> (output horizontal, over input)	<b>OHID</b> (output horizontal, input down)	<b>OHIU</b> (output horizontal, input up)	<b>VU</b> (output vertical up)	<b>VD</b> (output vertical down)
 <b>1</b>	 <b>2</b>	 <b>3</b>	 <b>4</b>	 <b>5</b>	 <b>6</b>

## Gear Reducer Mounting Positions

		<b>Mounting "A"</b>		<b>Mounting "B"</b>	
		<b>RH</b>	<b>LH</b>	<b>RH</b>	<b>LH</b>
<b>SIDE 1</b>	 <b>A</b>	 <b>B</b>	 <b>C</b>	 <b>D</b>	
	<b>SIDE 2</b>	 <b>E</b>	 <b>F</b>	 <b>G</b>	 <b>H</b>
		<b>Mounting "C"</b>		<b>Mounting "D"</b>	
		<b>RH</b>	<b>LH</b>	<b>RH</b>	<b>LH</b>
<b>SIDE 1</b>	 <b>J</b>	 <b>K</b>	 <b>L</b>	 <b>M</b>	
	<b>SIDE 2</b>	 <b>N</b>	 <b>P</b>	 <b>R</b>	 <b>S</b>

# M100/M150 SERIES

## Linear Part Handler | Dimensions and Technical Information



Model	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S
M100	251	290	145	279.7	123	145	130	65	157	25	12	225	4 x M8	40	65	25.4	50
M150	332	400	170	366	160	200	148	90	206	30	15	300	4 x M10	40	80	51	55

### Technical Specifications

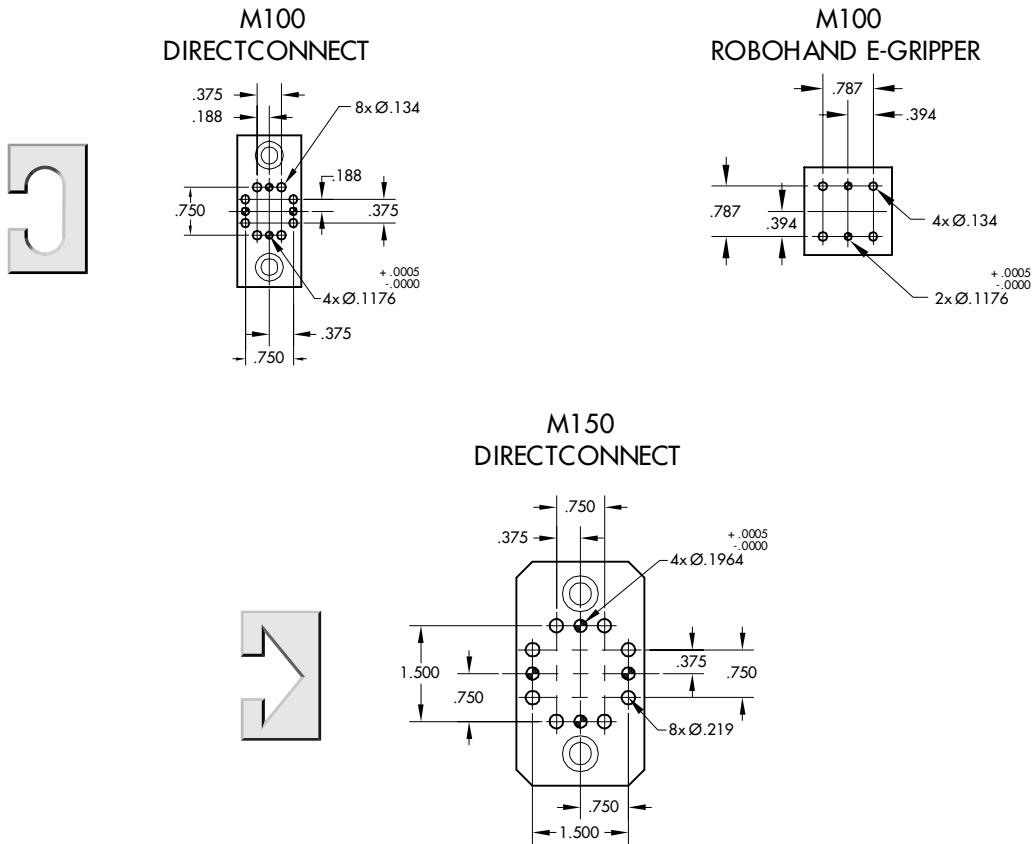
Model	Maximum Lift	Maximum Transfer	Capacity at 30 rpm	Capacity at 60 rpm
M100	65 mm	100 mm	8 kg (18 lbs)	3.6 kg (8 lbs)
M150	75 mm	150 mm	18 kg (40 lbs)	9 kg (20 lbs)

Model	Lift		Transfer	
	Accuracy	Repeatability	Accuracy	Repeatability
M100	±.13 mm (±.005")	±.03 mm (±.001")	±.08 mm (±.003")	±.03 mm (±.001")
M150	±.20 mm (±.008")	±.08 mm (±.003")	±.08 mm (±.003")	±.03 mm (±.001")

# M100/M150 SERIES

Linear Part Handler | Accessories

## Gripper Mounting Block



### RoboHand DirectConnect Grippers & Rotaries

Consult the DESTACO Automation Catalog or your local sales representative for information about these items.

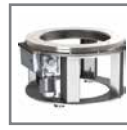
Model	E-Gripper	DPDS/DPDL	DPG	DPP	DPW	DCT	DRF
M100	RPE-100M RPE-101M	DPDS-047M DPDS-056M DPDL-047M DPDL-056M	N/A	DPP-10M-06 DPP-10M-12 DPP-14M-15 DPP-14M-25	DPW-250M-1 DPW-250M-2	DCT-12M DCT-16M DCT-20M	N/A
M150	N/A	DPDS-088M DPDS-125M DPDL-088M DPDL-125M	DPG-10M-1 DPG-10M-2 DPG-10M-3 DPG-10M-4	DPP-20M-25 DPP-20M-28 DPP-28M-31 DPP-28M-50	DPW-375M-1 DPW-375M-2 DPW-500M-1 DPW-500M-2	DCT-25M	DRF/DRG-075M DRF/DRG-094M DRF/DRG-106M

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Rite-Link Conveyors ..... IN-RLC



Parallel Gear  
Servo Positioner ..... IN-PGM



Table-Top Modular  
Conveyors ..... IN-TTC



RSD Flexible Servo Drives .. IN-RSD



Heavy Duty  
Modular Conveyors ..... IN-HDC



RDM Dial Indexers ..... IN-RDM



LPP Linear Part Handles ..... IN-LPP



RA Right Angle Drives ..... IN-RA



RPP Rotating Part Handlers .. IN-RPP



RD HD Dial Indexers ..... IN-RD



Overload Clutches ..... IN-CLU



E-Series HD Drives ..... IN-EHD



Custom Cams ..... IN-CAM



MDE/HDE Indexers ..... IN-MDE



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Parallel Shaft/  
Flange Drives ..... IN-PAR

# ROTARY PART HANDLER

Features | Table of Contents



## Features:

The **CAMCO RPP Cambot® Rotary Parts Handler** is designed for high precision and high capacity. This proven design can be used in a wide variety of industries including automotive, packaging and electronics among others. The RPP can be combined with other CAMCO products such as index drives and precision conveyors for a complete, automated system. The RPP is ideal for pick and place applications with features including:

Rugged and precise cam operated mechanisms engineered for a minimum of 8000 hours of maintenance-free life.

Hardened and ground cams drive both the lift and rotary axes.

Preloaded precision cam followers eliminate backlash and ensure smooth movement.

Preloaded taper roller bearings on the camshaft (Input Shaft).

Four-point contact preloaded roller bearing on the rotary axis.

All bearings are lubricated by an oil bath.

One-piece lift arm.

Ball bushings (recirculating-ball type) support the main lift shaft and turn the large output surface and ride on hardened shafts for stability and stiffness.

Manufactured in a fully integrated application, design, manufacturing and inspection environment.

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# ROTARY PART HANDLER

## How to Order

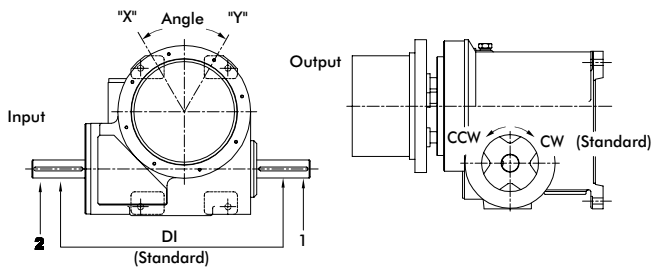
### RPP Ordering Procedure

1. Model
2. Rotary Motion (degrees)
  - Oscillator or indexer
  - Oscillator: Home at X or Y
  - Indexer: CW or CCW index
3. Lift (inches)
4. Input Shaft: Side 1, Side 2 or Double Input (DI)
5. Mounting Position: 1-6

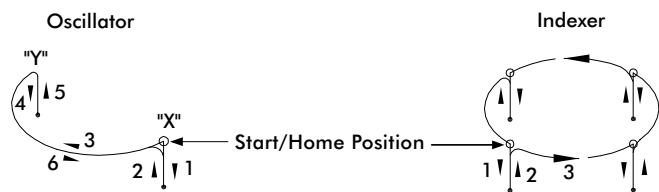
### Reducer Ordering Procedure

1. Reducer Model, Ratio and Mounting Position
2. Motor Adaptor Model
3. Motor size

## Input Shaft Configuration

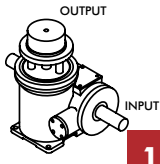
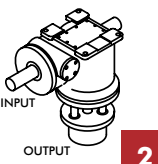
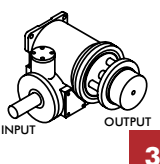
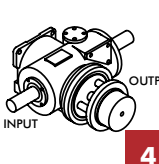
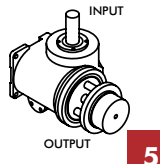
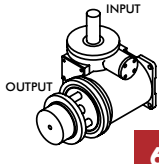


## Standard Output Sequence

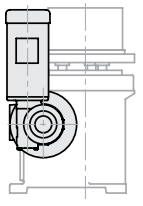
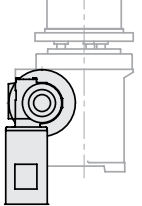
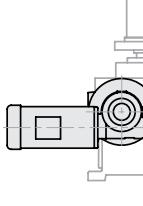
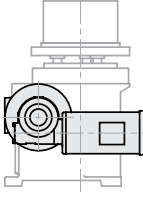
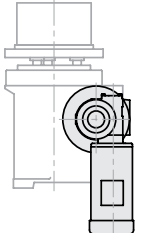
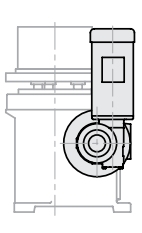
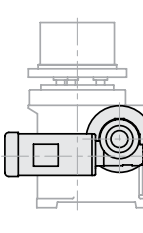
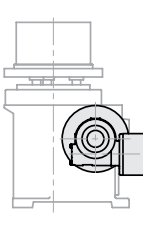
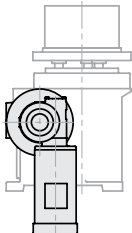
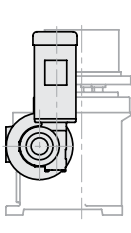
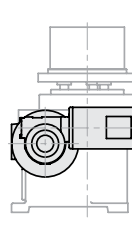
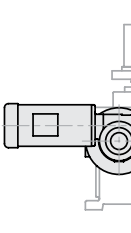
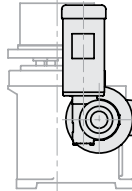
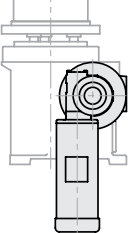
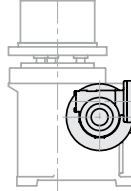
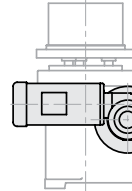


# ROTARY PART HANDLER

## Mounting Position

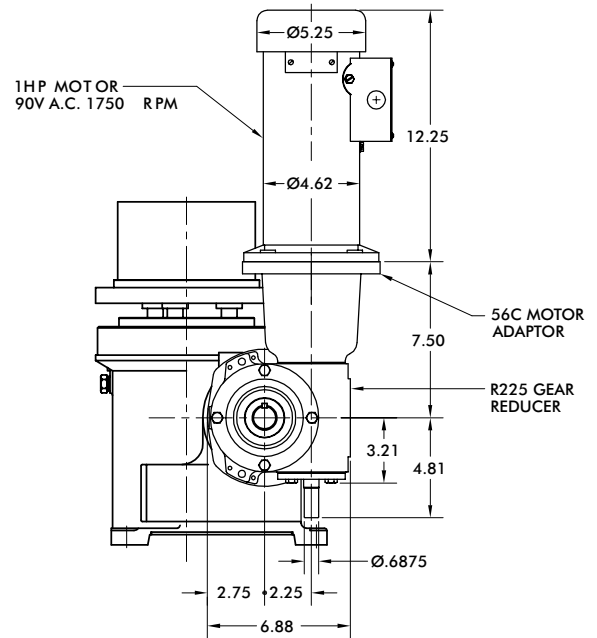
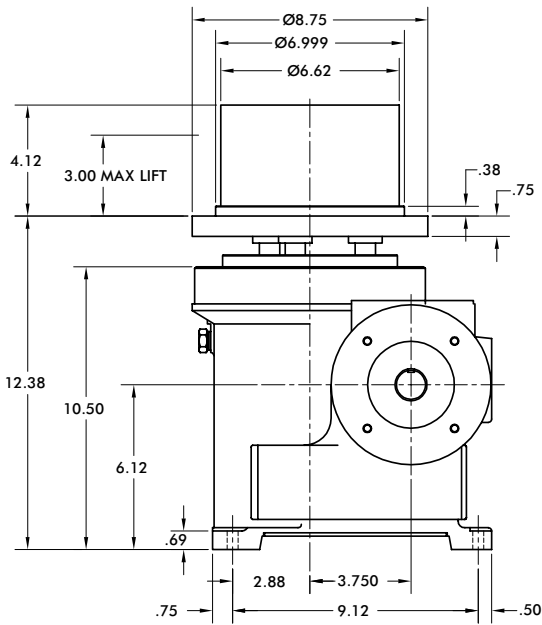
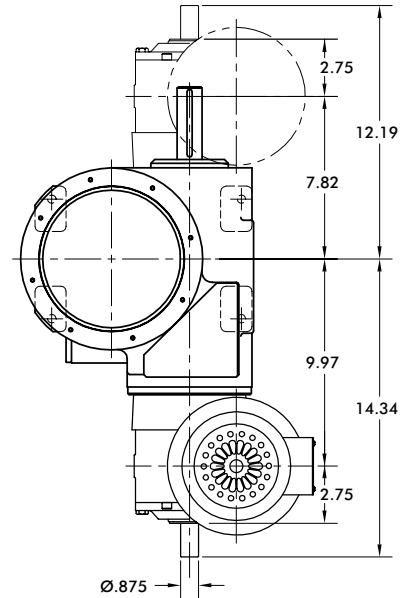
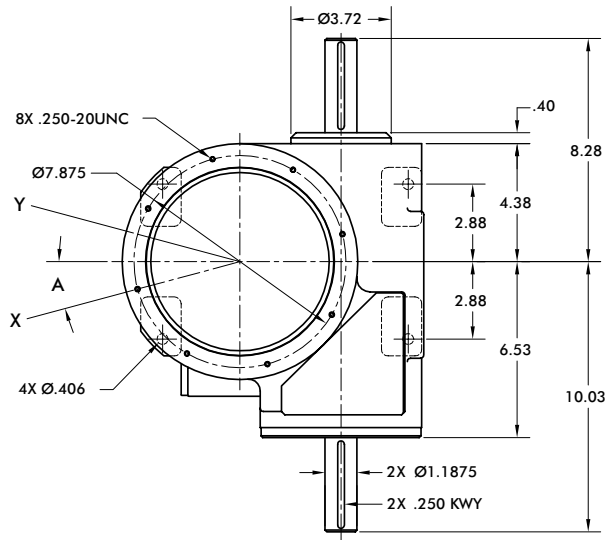
<b>OVOI</b> (output vertical, over input)	<b>OVUI</b> (output vertical, under input)	<b>OHOI</b> (output horizontal, over input)	<b>OHUI</b> (output horizontal, under input)	<b>H-S1-UP</b> (output horizontal, side 1 up)	<b>H-S2-UP</b> (output horizontal, side 2 up)
 <b>1</b>	 <b>2</b>	 <b>3</b>	 <b>4</b>	 <b>5</b>	 <b>6</b>

## Gear Reducer Mounting Positions

		<b>Mounting "A"</b>		<b>Mounting "B"</b>	
		<b>RH</b>	<b>LH</b>	<b>RH</b>	<b>LH</b>
<b>SIDE 1</b>	 <b>A</b>	 <b>B</b>	 <b>C</b>	 <b>D</b>	
	<b>SIDE 2</b>	 <b>E</b>	 <b>F</b>	 <b>G</b>	 <b>H</b>
		<b>Mounting "C"</b>		<b>Mounting "D"</b>	
		<b>RH</b>	<b>LH</b>	<b>RH</b>	<b>LH</b>
<b>SIDE 1</b>	 <b>J</b>	 <b>K</b>	 <b>L</b>	 <b>M</b>	
	<b>SIDE 2</b>	 <b>N</b>	 <b>P</b>	 <b>R</b>	 <b>S</b>

# 300RPP SERIES

## Rotary Part Handler | Configurations





# 300RPP SERIES

## Rotary Part Handler | Features and Options | Technical Information

Indexing Motion			
Rotation	Angle A	Lift (in.)	Model
120°	0°	1	300RPP120H24-1H24
		2	300RPP120H24-2H24
90°	15°	1	300RPP90H24-1H24
		2	300RPP90H24-2H24
		3	300RPP90H24-3H24
60°	0°	1	300RPP60H24-1H24
		2	300RPP60H24-2H24
		3	300RPP60H24-3H24
45°	22.5°	1	300RPP45H24-1H24
		2	300RPP45H24-2H24
		3	300RPP45H24-3H24

Oscillating Motion			
Rotation	Angle A	Lift (in.)	Model
180°	0°	1	300RPP2H24-1H24
		2	300RPP2H24-2H24
		3	300RPP2H24-3H24
120°	0°	1	300RPP3H24-1H24
		2	300RPP3H24-2H24
		3	300RPP3H24-3H24
90°	0°	1	300RPP4H24-1H24
		2	300RPP4H24-2H24
		3	300RPP4H24-3H24
60°	0°	1	300RPP6H24-1H24
		2	300RPP6H24-2H24

### Features

- Standard Indexing or Oscillating Motion
- R225 Reducer (Ratios from 5:1 to 60:1)  
— 56C Motor Adapter and Coupling
- 1 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)

### Optional Accessories

- 1 hp DC Motor
- Varipak DC Motor Control (up to 30 cpm)

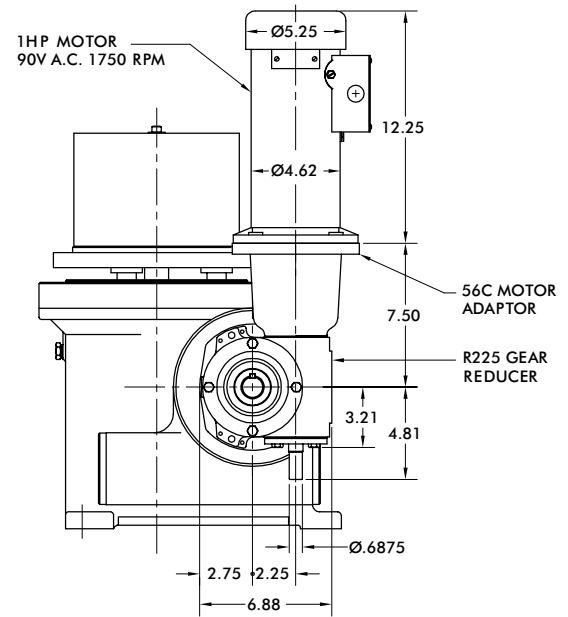
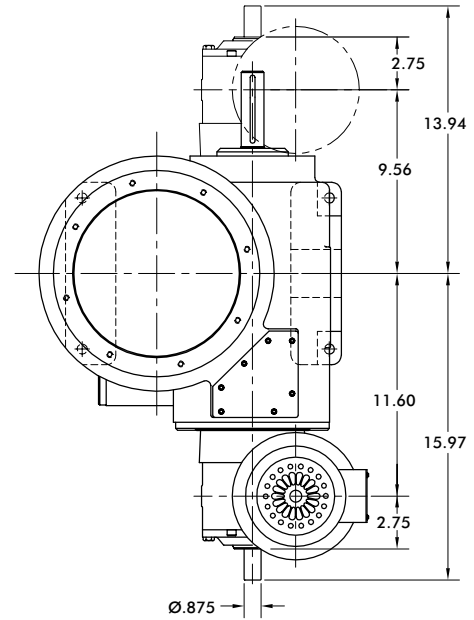
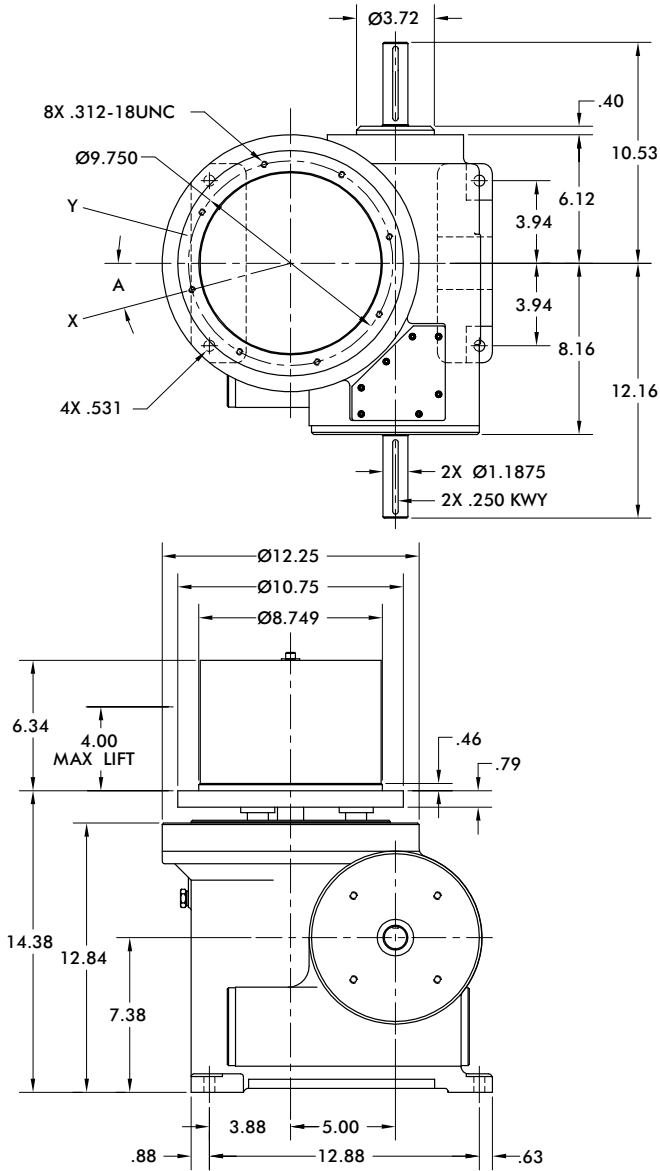
### Capacity:\*

Maximum Mass            150 lbs  
Maximum Inertia        1700 lb-in<sup>2</sup>

\* Note: These values are for speeds of less than 30 rpm, the minimum cam time for rise and rotation, and are for reference only. Each application must be reviewed and approved by CAMCO Engineering.

# 500RPP SERIES

## Rotary Part Handler | Configurations



# 500RPP SERIES

## Rotary Part Handler | Features and Options | Technical Information

Indexing Motion			
Rotation	Angle A	Lift (in.)	Model
180°	0°	2	500RPP2H32-2H32
		3	500RPP2H32-3H32
		4	500RPP2H32-4H32
120°	0°	2	500RPP3H32-2H32
		3	500RPP3H32-3H32
		4	500RPP3H32-4H32
90°	0°	2	500RPP4H32-2H32
		3	500RPP4H32-3H32
		4	500RPP4H32-4H32
60°	0°	2	500RPP6H32-2H32
		3	500RPP6H32-3H32
		4	500RPP6H32-4H32

Oscillating Motion			
Rotation	Angle A	Lift (in.)	Model
120°	0°	2	500RPP120H32-2H32
		3	500RPP120H32-3H32
90°	15°	2	500RPP90H32-2H32
		3	500RPP90H32-3H32
		4	500RPP90H32-4H32
60°	0°	2	500RPP60H32-2H32
		3	500RPP60H32-3H32
		4	500RPP60H32-4H32
45°	22.5°	2	500RPP45H32-2H32
		3	500RPP45H32-3H32
		4	500RPP45H32-4H32

### Features

- Standard Indexing or Oscillating Motion
- R225 Reducer (Ratios from 5:1 to 60:1)  
— 56C Motor Adapter and Coupling
- 1 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)

### Optional Accessories

- 1 hp DC Motor
- Varipak DC Motor Control (up to 30 cpm)

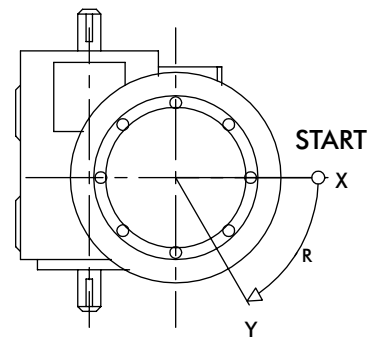
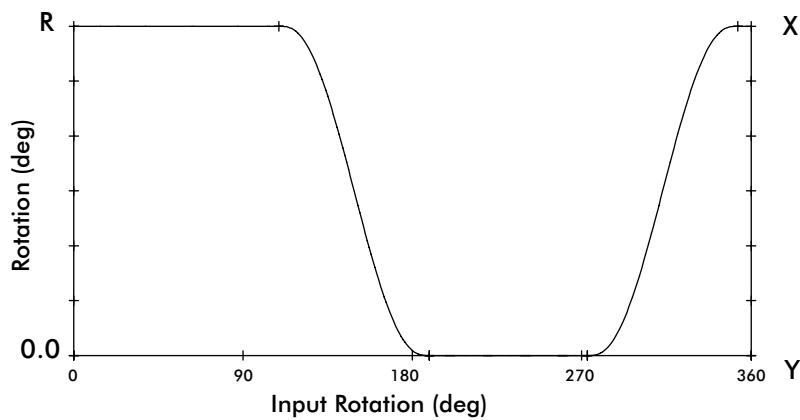
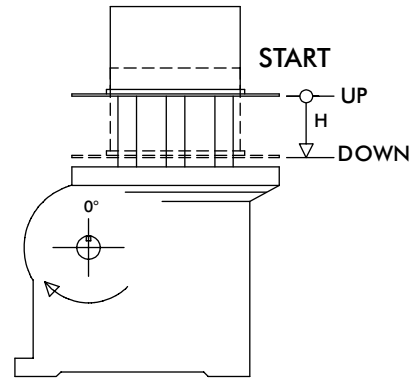
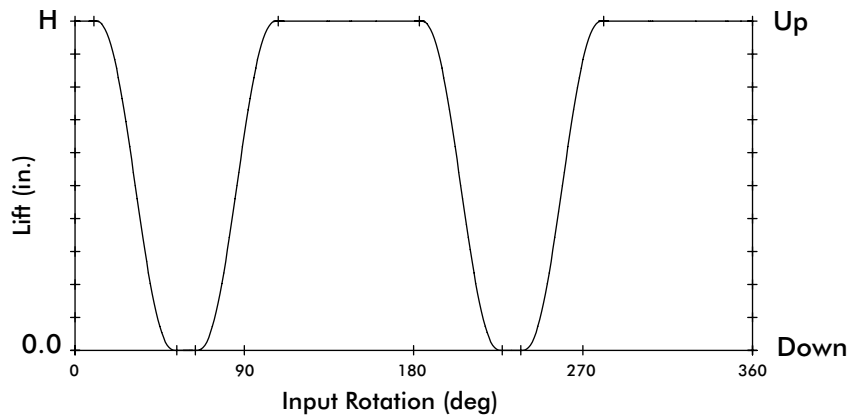
### Capacity:\*

Maximum Mass	180 lbs
Maximum Inertia	3415 lb-in <sup>2</sup>

\* Note: These values are for speeds of less than 30 rpm, the minimum cam time for rise and rotation, and are for reference only. Each application must be reviewed and approved by CAMCO Engineering.

# ROTARY PART HANDLER

## Oscillator Timing Diagram

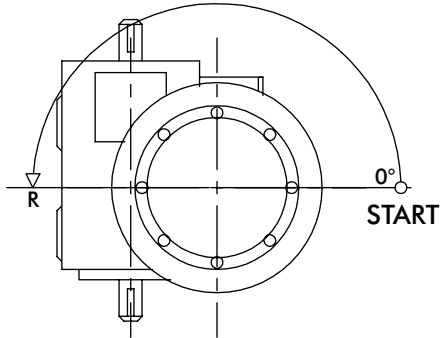
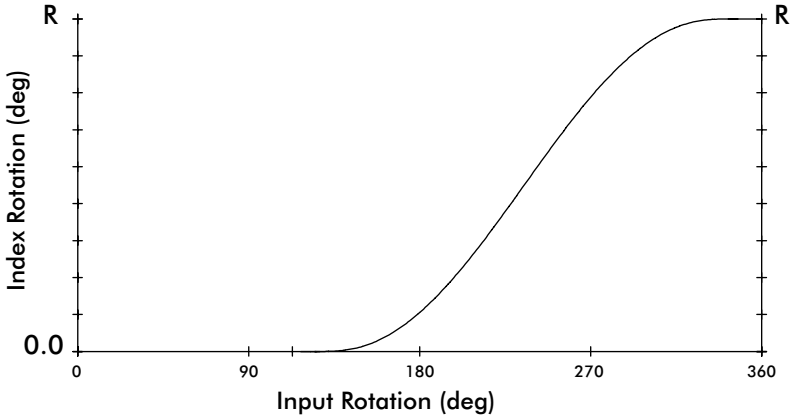
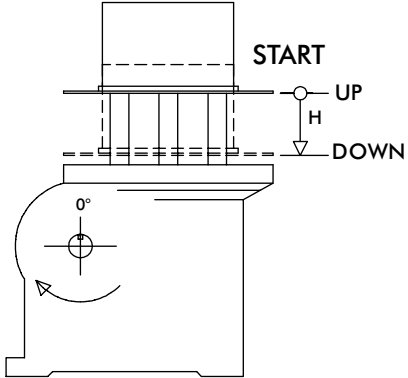
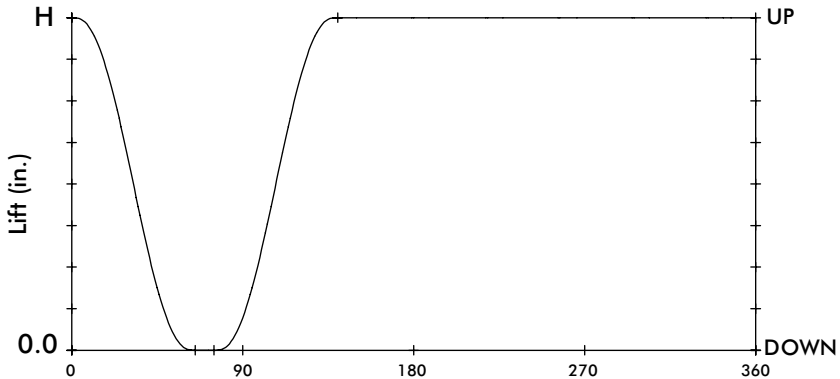


## Motion Options

- Standard starting position (home) at time 0 is at maximum rise (up) and at the X rotary position.
- The standard sequence can be mirrored in either the lift, rotary or both:
  - The mirrored lift starts in the zero elevation or down position
  - The mirrored rotary motion starts at Y.
- Custom motion times are also available – consult your Sales Agent for more information.

# ROTARY PART HANDLER

## Indexer Timing Diagram



### Motion Options

- Standard starting position (home) at time 0 is at maximum rise (up) and at the start of a counter-clockwise index (right-hand cam helix).
- The standard sequence can be mirrored in either the lift, rotary or both:
  - The mirrored lift starts in the zero elevation or down position
  - The mirrored rotary motion is a clockwise index (left-hand helix)
- Custom motion times are also available – consult your Sales Agent for more information.

# PRECISION INDEXING SOLUTIONS

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Dial Indexers ..... IN-RNG



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Parallel Gear  
Servo Positioner ..... IN-PGM



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RA Right Angle Drives ..... IN-RA



RPP Rotating Part Handlers .. IN-RPP



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Custom Cams ..... IN-CAM



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# OVERLOAD CLUTCHES

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## Features:

**CAMCO Output Overload Clutches** are designed to protect your indexing equipment from costly downtime due to overload or jam conditions by quickly disengaging the drive system.

Easily Mounted to CAMCO index drives

Single Position reset to maintain accuracy and machine timing

Precision hardened and ground plungers and drive plate

Overload Detector plate provides actuation for overload detector switch

Variety of Models for all applications

Standard & custom torque settings

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C-SD .....	12

# OVERLOAD CLUTCHES

## Mounting Overview

**CAMCO Output Overload Clutches** quickly disengage the drive system in overload or jam conditions, protecting indexers from costly downtime. A variety of models are available in standard and custom torque settings. An overload detector plate provides actuation for the overload detector switch, and the clutch's single-position reset function maintains accuracy and machine timing.

- Standard and custom torque settings
- Single-position reset maintains timing, accuracy
- Range of models for all applications
- Rigid, backlash-free design

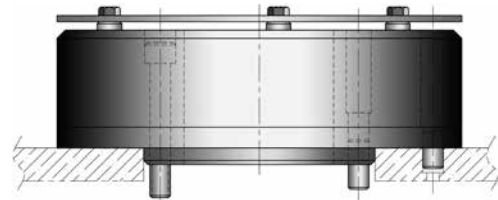


Indexer Type	Clutch Type
<b>RDM</b>	<b>D</b> (Flange Mounted Body)
<b>RD</b>	
<b>Roller Gear (RGS / RGD)</b> <b>Parallel (P)</b> <b>Right Angle (RA)</b>	<b>F</b> (Flange to Flange)
	<b>FC</b> (Flange to Shaft)
	<b>FC-SD</b> (Flange to Shaft, Shrink-Disk)
	<b>S</b> (Shaft to Flange)
	<b>S-SD</b> (Shaft to Flange, Shrink-Disk)
	<b>C</b> (Shaft to Shaft Mounting)
	<b>C-SD</b> (Shaft to Shaft, Shrink-Disk)

## CAMCO Output Overload Clutches

### **D Clutch: Flange-Mounted Body**

For CAMCO Index Drives with large dial mounting surfaces. The dial plate rests directly on the index drive output flange, providing stability and accuracy.





# OVERLOAD CLUTCHES

## Configurations

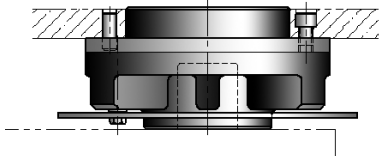
### CAMCO Output Overload Clutches

#### F Clutch: Flange-Mounted Body

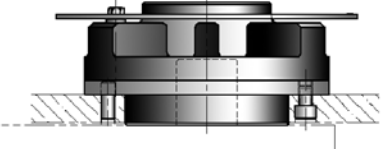
F clutches are designed to mount a dial/sprocket/flanged component to a shaft output CAMCO index drive. These clutches will flange mount to the output shaft, providing a rigid, compact, and accurate connection with the driven member.

F clutches may be mounted in two positions, "A" (right, top) or "B" (right, bottom). Mounting "B" provides greater rigidity and overhung loading and should be used whenever high loads are exerted on driven members.

A Mounting



B Mounting



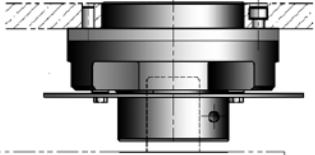
#### S & S-SD Clutch: Shaft to Flange

S clutches are designed to mount on CAMCO index drives without output flanges. The combination of key and clamped hub design provides a rigid and backlash-free connection.

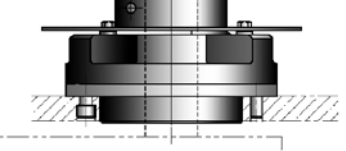
S clutches may be mounted two positions, "A" or "B." Mounting "B" provides greater rigidity and overhung loading and should be used whenever high loads are exerted on driven members.

The S-SD clutch employs a shrink disk to connect to the shaft.

A Mounting

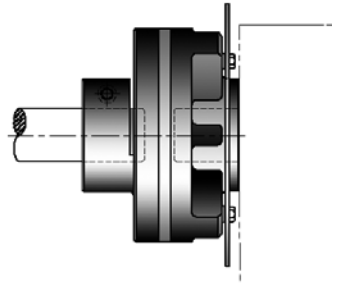


B Mounting



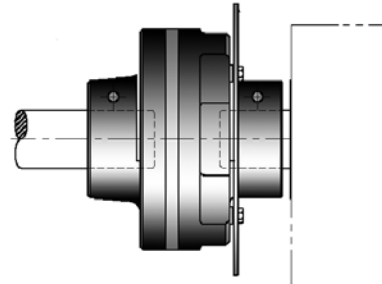
#### FC & FC-SD Clutch: Flange to Shaft

FC clutches are designed to mount on CAMCO index drives with flanged output shafts. These clutches will flange mount to the output shaft, providing a rigid, compact and accurate connection. The FC-SD clutch employs a shrink disk to connect to the shaft.



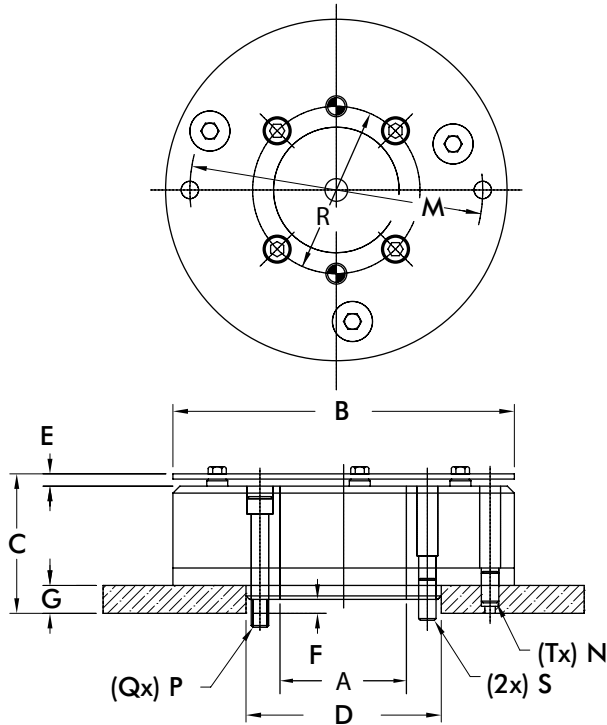
#### C Clutch: Shaft to Shaft

C clutches are designed to mount on CAMCO index drives without output flanges. These clutches are used whenever a positive connection is required between two shafts. The C-SD clutch employs shrink disks at both ends to connect to the shafts.



# D TYPE FLANGE-MOUNTED BODY

## Overload Clutches | Dimensions and Technical Information



"D" Type clutches are designed to mount on CAMCO Index Drives with large dial mounting surfaces. The dial plate rests directly on the index drive output flange, providing stability and accuracy.

### D Type Dimensions

Model	A	B	C	D	E	F	G	M	N	P	Q	R	S	T
<b>2.8D</b>	1.00	5.12	2.50	2.500	0.22	0.250	0.500	4.250	0.312	.312-18	4	2.00	0.31	2
<b>4.0D</b>	2.25	6.12	2.50	3.500	0.22	0.250	0.500	5.250	0.312	.312-18	4	3.00	0.31	2
<b>7.8D</b>	3.41	8.50	2.88	5.000	0.25	0.188	0.750	6.750	0.500	.500-20	4	4.25	0.50	2
<b>18D</b>	2.62	10.25	4.53	5.000	0.31	0.188	1.000	8.250	0.625	.500-20	4	4.25	0.50	2
<b>31D</b>	5.25	14.50	4.03	9.000	0.34	-	1.000	11.750	0.750	.500-20	6	8.25	0.50	4
<b>32D</b>	5.25	14.50	4.03	9.000	0.34	-	1.000	11.750	0.750	.500-13	6	8.25	0.50	4
<b>33D (mm)</b>	133	368	102	228.6	8.4***	-	25	298.5	20	M12	6	210	12	4
<b>61D</b>	7.25	18.38	5.40	11.000	0.34	-	1.250	16.000	0.750	.625-11	8	10.00	.625 (4)	4

\* Dimension increases .06 during overload

\*\* Dimension increases .09 during overload

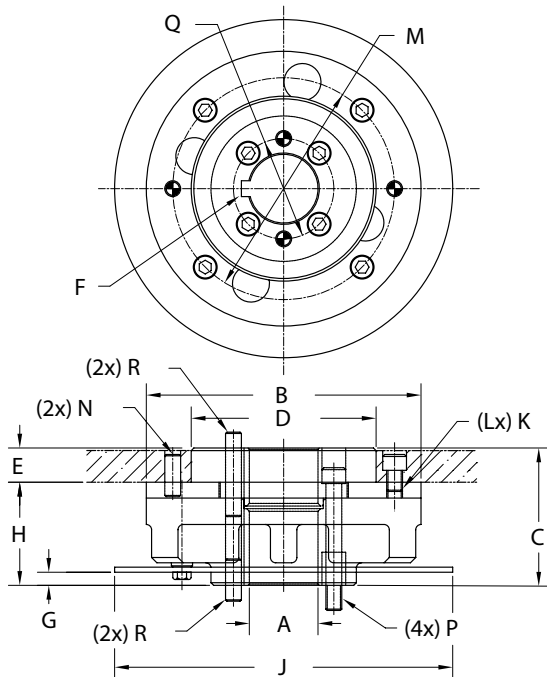
\*\*\* Dimension increases .12 during overload

### D Type Specifications

Model	Internal Inertia	Torque Setting	Index Drive
<b>2.8D</b>	29	400 480 700 850 1100 1300 1800 2200 3100	425RD
<b>4.0D</b>	69	420 620 750 1150 1750 2950 4000	601RDM
<b>7.8D</b>	266	1400 1700 2600 3200 4200 5000 7200 10000	902RDM 663RAD 900RAD
<b>18D</b>	743	5000 7000 7800 10,000 13000 15000 20000 25000	900RAD
<b>31D</b>	2910	8500 13000 20000 31000	1200RAD
<b>32D</b>	2910	8500 13000 20000 31000	1305RDM
<b>33D</b>	2910	8500 13000 20000 25500	1100RDM
<b>61D</b>	4900	23000 36000 44000 50000 60000	1800RDM

# F TYPE SHAFT TO FLANGE MOUNTING

## Overload Clutches | Dimensions and Technical Information



IMC "F" type clutches are designed to mount on IMC index drives. These clutches will flange mount to the output shaft, providing a rigid, compact, and accurate connection with the driven member.

### F Type Dimensions

Model	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
.39F	0.625	3.38	2.19	2.375	0.41	0.1875	.22†	1.78	4.75	10-32	4	2.875	0.25	10-32	1.25	0.25
2.3F	1.000*	5.12	2.78	3.5	0.56	0.25	.22†	2.22	6.5	5/16-24	4	4.25	0.312	5/16-24	2	0.31
6.0F	1.625	6.5	3.25	4.375	0.81	0.375	.31††	2.44	8	3/8-24	4	5.25	0.375	3/8-24	2.38	0.38
11F	2	8.5	3.72	5.75	0.81	0.5	.38††	2.91	10	3/8-24	4	6.75	0.5	3/8-24	3.25	0.5
25F	2.75	10.25	4.97	7.125	1.06	0.625	.38†††	3.91	12	1/2-13	6	8.25	0.625	1/2-20	4.25	0.63

\* Also 1.250

† Dimension decreases .06 during overload  
 †† Dimension decreases .09 during overload  
 ††† Dimension decreases .12 during overload  
 †††† Dimension decreases 1.5 mm during overload

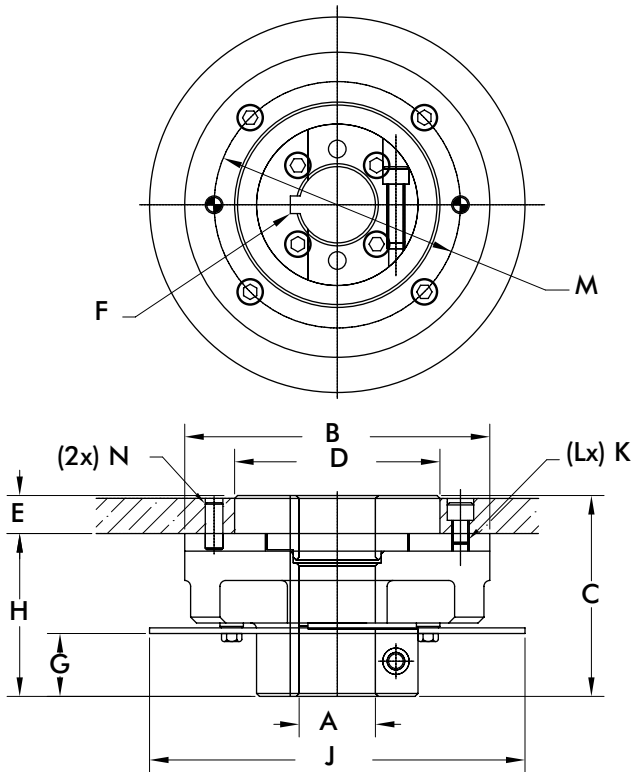
### F Type Specifications

Model	Internal Inertia	Torque Setting	Index Drive
.39F	5	160 210 270 320 390	250P
2.3F	32	400 600 700 850 1000 1300 1800 2000 230	387P 350RGS/RGD 400RA
6.0F	87	670 825 1100 1400 1700 2000 2300 2 500 3000 3800 4000 5000 6000	512P 512RA
11F	340	2300 4000 6000 8500 11000	662P 662RA
25F	842	5000 7000 10000 13000 15000 20000 25000	900P

# S TYPE SHAFT TO FLANGE MOUNTING SERIES

## Overload Clutches | Dimensions and Technical Information

IMC "S" type clutches are designed to mount on CAMCO index drives without output flanges. The combination of key and clamped hub design provides a rigid and backlash-free connection.



### S Type Dimensions

Model	A	B	C	D	E	F	G	H	J	K	L	M	N
.39S	0.6250	3.38	2.63	2.375	0.40	0.187	.66†	2.22	4.75	10-32	4	2.88	0.250
2.3S	1.0000**	5.12	3.31	3.500	0.56	0.250	.75†	2.75	6.50	5/16-24	4	4.25	0.312
6.0S	1.6250	6.50	4.28	4.375	0.81	0.375	1.34††	3.47	8.00	3/8-24	4	5.25	0.375
11S	2.0000	8.50	5.00	5.750	0.81	0.500	1.69††	4.19	10.00	3/8-24	4	6.75	0.500
25S	2.5000	10.25	6.25	7.125	1.06	0.625	1.66†††	5.19	12.00	1/2-13	6	8.25	0.625

\* Dimensions in millimeters

\*\* Also 1.2500

† Dimension decreases .06 during overload

†† Dimension decreases .09 during overload

††† Dimension decreases .12 during overload

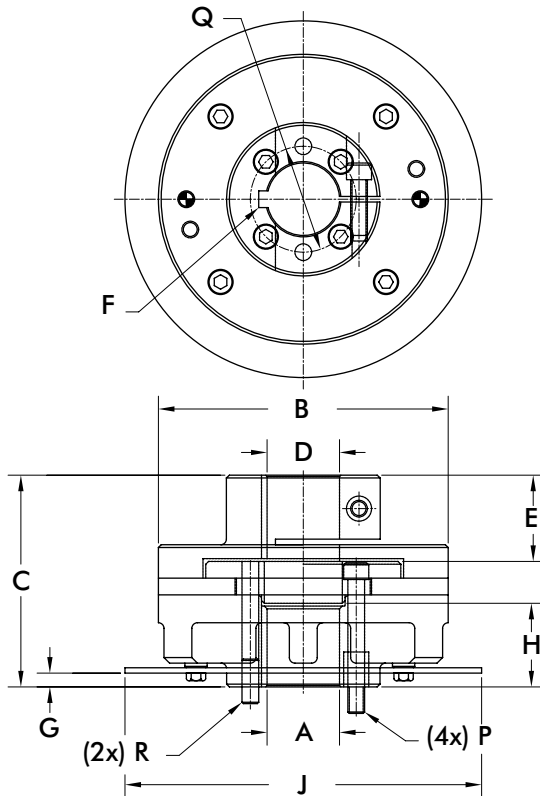
†††† Dimension decreases 1.5 mm during overload

### S Type Specifications

Model	Internal Inertia	Torque Setting	Index Drive
.39S	5	160 210 270 320 390	250P
2.3S	31	400 600 700 850 1000 1300 1800 2000 2300	387P 350RGS/RGD 400RA
6.0S	83	670 825 1100 1400 1700 2000 2300 2500 3000 3800 4000 5000 6000	512P 512RA
11S	320	2300 4000 6000 8500 11000	500RGD/RGS 662RA 662P
25S	803	5000 7000 10000 13000 15000 20000 25000	700RGS

# FC TYPE FLANGE TO SHAFT MOUNTING SERIES

## Overload Clutches | Dimensions and Technical Information



"FC" type clutches are designed to mount on CAMCO index drives. These clutches will flange mount to the output shaft, providing a rigid, compact and accurate connection.

### FC Type Dimensions

Model	A	B	C	D	E	F	G	H	J	P	Q	R
.39FC	0.6250	3.38	3.03	0.625	1.06	0.187	.22†	1.41	4.75	10-32	1.25	0.25
2.3FC	1.0000**	5.12	3.81	1.000	1.28	0.250	.22†	1.75	6.50	5/16-24	2.00	0.31
6.0FC	1.6250	6.50	4.75	1.625	1.94	0.375	.31††	1.88	8.00	3/8-24	2.38	0.38
11FC	2.0000	8.50	5.72	2.000	2.38	0.500	.38††	2.25	10.00	3/8-24	3.25	0.38

\* Dimensions in millimeters

\*\* Also 1.2500

† Dimension decreases .06 during overload

†† Dimension decreases .09 during overload

††† Dimension decreases .12 during overload

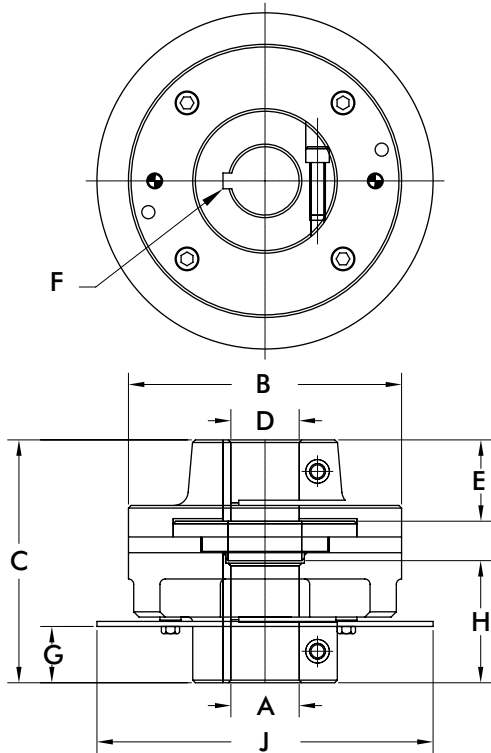
†††† Dimension decreases 1.5 mm during overload

### FC Type Specifications

Model	Internal Inertia	Torque Setting	Index Drive
.39FC	7	160 210 270 320 390	250P
2.3FC	43	400 600 700 850 1000 1300 1800 2000 2300	387P 350RGS/RGD 400RA
6.0FC	118	670 825 1100 1400 1700 2000 2300 2500 3000 3800 4000 5000 6000	512P 512RA
11FC	456	2300 4000 6000 8500 11000	662P 662RA

# C TYPE SHAFT TO SHAFT MOUNTING SERIES

## Overload Clutches | Dimensions and Technical Information



"C" type clutches are designed to mount on CAMCO index drives without output flanges. These clutches are used whenever a positive connection is required between two shafts.

### C Type Dimensions

Model	A	B	C	D	E	F	G	H	J	P	Q	R
.39C	0.6250	3.38	3.03	0.625	1.06	0.187	.22†	1.41	4.75	10-32	1.25	0.25
2.3C	1.0000**	5.12	3.81	1.000	1.28	0.250	.22†	1.75	6.50	5/16-24	2.00	0.31
6.0C	1.6250	6.50	4.75	1.625	1.94	0.375	.31††	1.88	8.00	3/8-24	2.38	0.38
11C	2.0000	8.50	5.72	2.000	2.38	0.500	.38††	2.25	10.00	3/8-24	3.25	0.38

\* Dimensions in millimeters  
 \*\* Also 1.2500

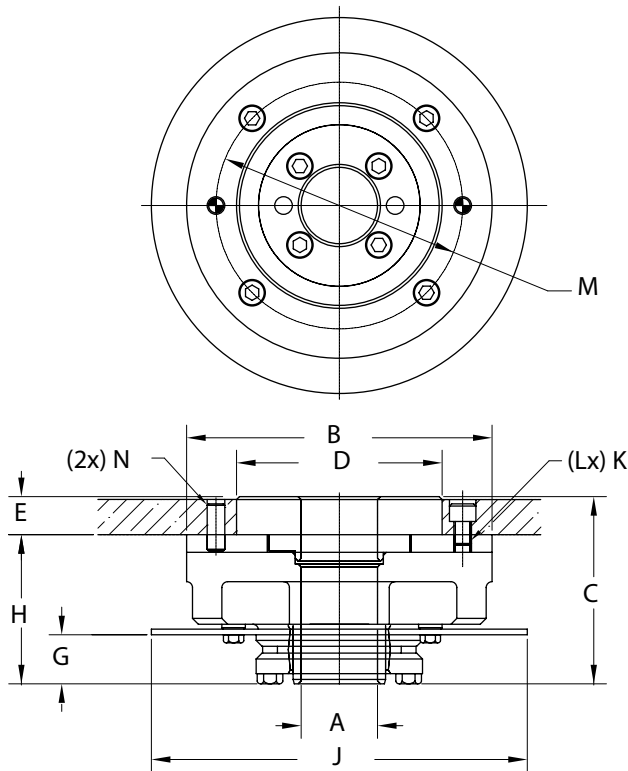
† Dimension decreases .06 during overload  
 †† Dimension decreases .09 during overload  
 ††† Dimension decreases .12 during overload  
 †††† Dimension decreases 1.5 mm during overload

### C Type Specifications

Model	Internal Inertia	Torque Setting	Index Drive
.39C	7	160 210 270 320 390	250P
2.3C	44	400 600 700 850 1000 1300 1800 2000 2300	387P 350RGS/RGD 400RA
6.0C	122	670 825 1100 1400 1700 2000 2300 2500 3000 3800 4000 5000 6000	512P 512RA
11C	476	2300 4000 6000 8500 11000	500RGD/RGS 662P

# S-SD TYPE SHAFT TO FLANGE, SHRINK-DISK MOUNTING SERIES

Overload Clutches | Dimensions and Technical Information



"S-SD" type clutches are designed to mount on CAMCO index drives without output flanges. The shrink disk design converts clamp loads from multiple high strength locking screws to radial gripping force through the use of circular wedges, providing the highest capacity mechanical interference connection available.

## S-SD Type Dimensions

Model	A	B	C	D	E	F	G	H	J	K	L	N
.39-SD	0.6250	3.38	2.62	2.375	0.40	.66†	2.22	4.75	10-32	4	2.88	0.250
2.3-SD	1.0000	5.12	3.31	3.500	0.56	.75†	2.75	6.50	5/16-24	4	4.25	0.312
6.0-SD	1.6250	6.50	3.98	4.375	0.81	1.04††	3.17	8.00	3/8-24	4	5.25	0.375
11-SD	2.0000	8.50	4.38	5.750	0.82	1.06††	3.56	10.00	3/8-24	4	6.75	0.500

\* Dimensions in millimeters

† Dimension decreases .06 during overload

†† Dimension decreases .09 during overload

††† Dimension decreases .12 during overload

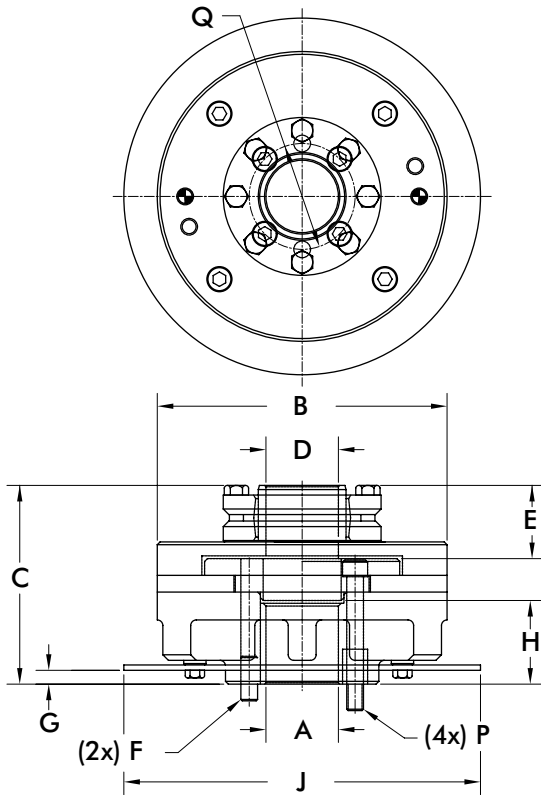
†††† Dimension decreases 1.5 mm during overload

## S-SD Type Specifications

Model	Internal Inertia	Torque Setting	Index Drive
.39-SD	5	160 210 270 320 390	250P
2.3-SD	32	400 600 700 850 1000 1300 1800 2000 2300	387P 350RGS/RGD 400RA
6.0-SD	87	670 825 1100 1400 1700 2000 2300 2500 3000 3800 4000 5000 6000	512P 512RA
11-SD	340	2300 4000 6000 8500 11000	500RGD/RGS 662P

# FC-SD TYPE FLANGE TO SHAFT, SHRINK-DISK MOUNTING SERIES

## Overload Clutches | Dimensions and Technical Information



“FC-SD” type clutches are designed to mount on CAMCO index drives with output flanges. The shrink disk design converts clamp loads from multiple high strength locking screws to radial gripping force through the use of circular wedges, providing the highest capacity mechanical interference connection available.

### FC-SD Type Dimensions

Model	A	B	C	D	E	F	G	H	J	P	Q
.39FC-SD	0.6250	3.38	3.00	0.625	1.03	0.25	.22†	1.41	4.75	10-32	1.25
2.3FC-SD	1.0000	5.12	3.81	1.000	1.27	0.31	.22†	1.75	6.50	5/16-24	2.00
6.0FC-SD	1.6250	6.50	4.46	1.625	1.64	0.38	.31††	1.88	8.00	3/8-24	2.38
11FC-SD	2.0000	8.50	5.06	2.000	1.75	0.38	.38††	2.25	10.00	3/8-24	3.25

\* Dimensions in millimeters

† Dimension decreases .06 during overload

†† Dimension decreases .09 during overload

††† Dimension decreases .12 during overload

†††† Dimension decreases 1.5 mm during overload

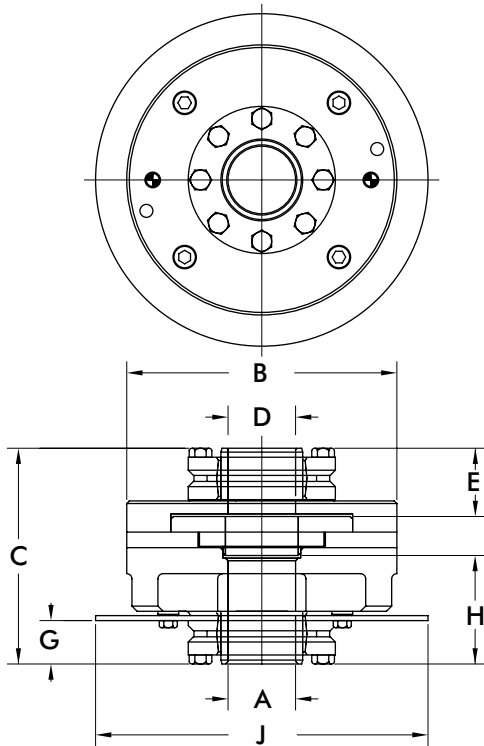
### FC-SD Type Specifications

Model	Internal Inertia	Torque Setting	Index Drive
.39FC-SD	7	160 210 270 320 390	250P
2.3FC-SD	34	400 600 700 850 1000 1300 1800 2000 2300	387P 350RGS/RGD 400RA
6.0FC-SD	118	670 825 1100 1400 1700 2000 2300 2500 3000 3800 4000 5000 6000	512P 512RA
11FC-SD	456	2300 4000 6000 8500 11000	500RGD/RGS 662P 662RA



# C-SD TYPE SHAFT TO SHAFT, SHRINK-DISK MOUNTING SERIES

Overload Clutches | Dimensions and Technical Information



“C-SD” type clutches are designed to mount on CAMCO index drives without output flanges. The shrink disk design converts clamp loads from multiple high strength locking screws to radial gripping force through the use of circular wedges, providing the highest capacity mechanical interference connection available.

## C-SD Type Dimensions

Model	A	B	C	D	E	G	H	J
<b>.39C-SD</b>	0.6250	3.38	3.44	0.625	1.03	.66†	1.84	4.75
<b>2.3C-SD</b>	1.0000	5.12	4.34	1.000	1.28	.75†	2.28	6.50
<b>6.0C-SD</b>	1.6250	6.50	5.19	1.625	1.64	1.04††	2.61	8.00
<b>11C-SD</b>	2.0000	8.50	5.75	2.000	1.75	1.06††	2.93	10.00

\* Dimensions in millimeters

† Dimension decreases .06 during overload

†† Dimension decreases .09 during overload

††† Dimension decreases .12 during overload

†††† Dimension decreases 1.5 mm during overload

## C-SD Type Specifications

Model	Internal Inertia	Torque Setting	Index Drive
<b>.39C-SD</b>	7	160 210 270 320 390	250P
<b>2.3C-SD</b>	44	400 600 700 850 1000 1300 1800 2000 2300	387P 350RGS/RGD 400RA
<b>6.0C-SD</b>	122	670 825 1100 1400 1700 2000 2300 2500 3000 3800 4000 5000 6000	512P 512RA
<b>11C-SD</b>	476	2300 4000 6000 8500 11000	500RGD/RGS 662P 662RA

# CUSTOM CAMS

## Product Overview








**CAMCO Custom Cams** serve as an economical alternative to “in house” cam design, engineering and manufacturing. Backed by over 100 years of experience, we offer cams in a comprehensive range of configurations, tolerances and materials.

Our designers employ the most advanced computer technology available for detailed kinematic studies and dynamic analysis. In addition to common dimensional inspection, we perform computerized contour measurements with sophisticated, unique inspection equipment in both 2D and 3D.

Our commitment to applied engineering allows us to respond quickly to complicated manufacturing issues with specialized solutions that are precise, economical and engineered to your exacting specifications. Alternative materials, milling, and grinding techniques are explored to provide the best solution for your application at the most economical price.

To assist in your in-house cam design, you can download Clyde H. Moon’s “Cam Design Manual for Engineers, Designers, and Draftsman” from the DESTACO website, [www.destaco.com](http://www.destaco.com).

**Custom Cams are available in a variety of styles:**

<p><b>Plate Cams</b> Popular, economical design used in low speed applications.</p>	
<p><b>Globoidal Cams</b> Complex, tapered rib globoidal cams, commonly known as roller gear cams, are the heart of IMC's indexers. Controlled follower preloads increase follower life, speeds and accuracy for the ultimate solution in motion control.</p>	
<p><b>Face-Grooved Cams</b> Medium speed cams using a groove slightly larger than the follower diameter providing minimal running clearance and reduced backlash.</p>	
<p><b>Conjugate Cams</b> Dual cams controlling preloaded followers which provide higher speed capabilities and better accuracy.</p>	
<p><b>Barrel Cams</b> Cylindrical cams which can be provided as an end cam, grooved type with minimal follower clearance or as a ribbed type utilizing preloaded followers for increased life and accuracy.</p>	



# OUR PORTFOLIO OF PRODUCTS



## End Effectors (EE)

- Tool Changers
- End-of-Arm Tooling
- Vacuum Products
- Palletizing Solutions



## Indexers (IN)

- Precision Conveyors
- Dial Indexers
- Shaft and Flange Indexers
- Part Handlers



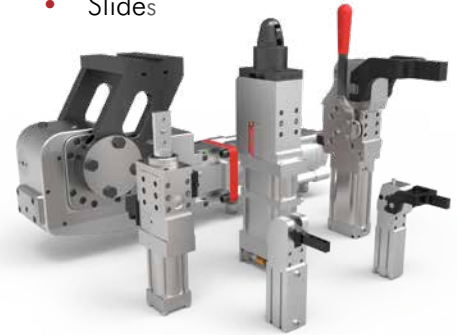
## Manual Clamps (MC)

- Hold Down
- Squeeze Action
- Plunger, Hook and Latch
- Pneumatic Toggle and Swing



## Grippers (GR)

- Electric Grippers
- Pneumatic and Sheet Metal Grippers
- Rotates
- Slides



## Power Clamps (PC)

- Power Clamps
- Pin Clamps and Packages
- Pivot Units
- Power Cylinders



## Sheet Metal Grippers (SG)

- Accelerate® Press Room
- Cam Type
- Toggle Lock



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