

**RPP Series** Rotary Parts Handler



### **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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Dimensions and technical information are subject to change without notice.



### **RPP** Series How to Order

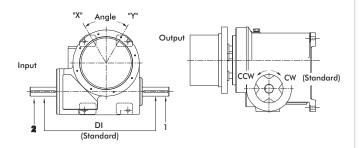
### **RPP Ordering Procedure**

- 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**

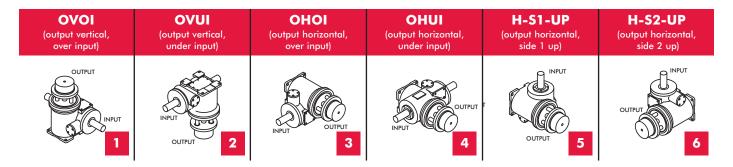


## Standard Output Sequence

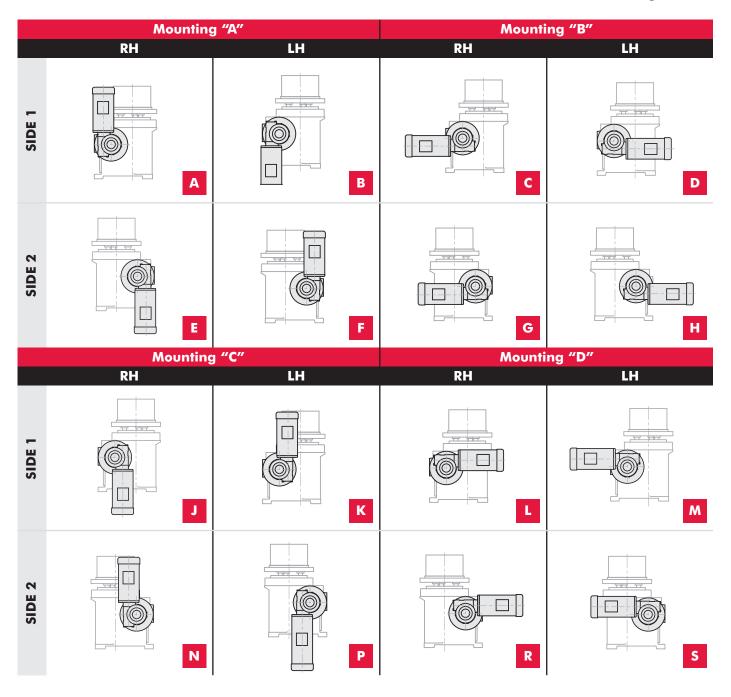




## **Mounting Position**



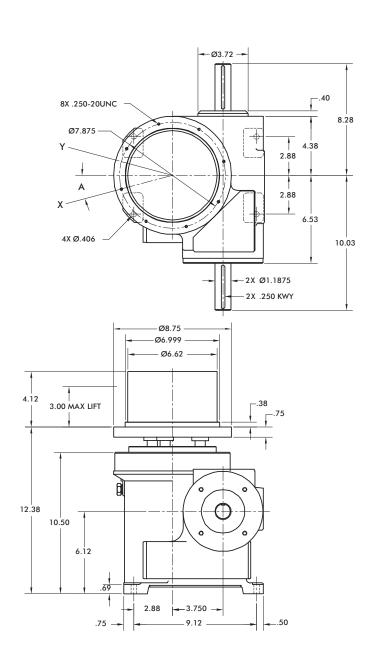
## **Gear Reducer Mounting Positions**

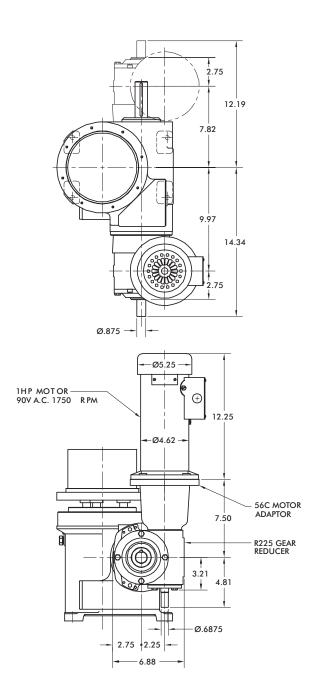


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## **300RPP** Standard Dimemsions







# **300RPP** Product Overview and Technical Specifiations

Oscillating Motion				Indexing Motion				
Rotation	Angle A	Lift (in.)	Model	Rotation	Angle A	Lift (in.)	Model	
120°	0°	1	300RPP120H24-1H24	180°		1	300RPP2H24-1H24	
		2	300RPP120H24-2H24		0° 0°	2	300RPP2H24-2H24	
90°	15°	1	300RPP90H24-1H24			3	300RPP2H24-3H24	
		2	300RPP90H24-2H24	120°		1	300RPP3H24-1H24	
		3	300RPP90H24-3H24		0°	2	300RPP3H24-2H24	
60°	0°	1	300RPP60H24-1H24			3	300RPP3H24-3H24	
		2	300RPP60H24-2H24		0°	1	300RPP4H24-1H24	
		3	300RPP60H24-3H24	90°		2	300RPP4H24-2H24	
45°	22.5°	1	300RPP45H24-1H24				3	300RPP4H24-3H24
		2	300RPP45H24-2H24	60°	400	0°	1	300RPP6H24-1H24
		3	300RPP45H24-3H24		0	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**

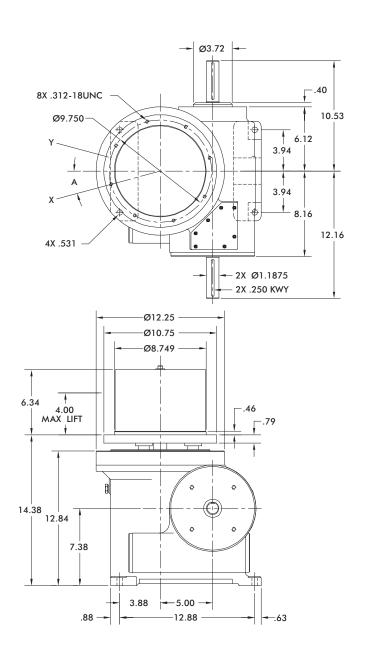
- 1 hp DC Motor
- Varipak DC Motor Control (up to 30 cpm)

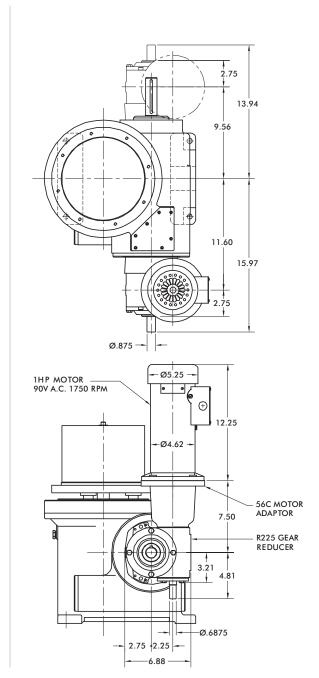
#### Capacity:\*

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** Standard Dimemsions







# **500RPP** Product Overview and Technical Specifiations

Oscillating Motion				Indexing Motion			
Rotation	Angle A	Lift (in.)	Model	Rotation	Angle A	Lift (in.)	Model
180°	O°	2	500RPP2H32-2H32	120°	0°	2	500RPP120H32-2H32
		3	500RPP2H32-3H32		"	3	500RPP120H32-3H32
		4	500RPP2H32-4H32	90°	15°	2	500RPP90H32-2H32
120°	O°	2	500RPP3H32-2H32			3	500RPP90H32-3H32
		3	500RPP3H32-3H32			4	500RPP90H32-4H32
		4	500RPP3H32-4H32	60°	0°	2	500RPP60H32-2H32
90°	0°	2	500RPP4H32-2H32			3	500RPP60H32-3H32
		3	500RPP4H32-3H32			4	500RPP60H32-4H32
		4	500RPP4H32-4H32	45°	22.5°	2	500RPP45H32-2H32
60°	0°	2	500RPP6H32-2H32			3	500RPP45H32-3H32
		3	500RPP6H32-3H32			4	500RPP45H32-4H32
		4	500RPP6H32-4H32		-	-	•

#### **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>

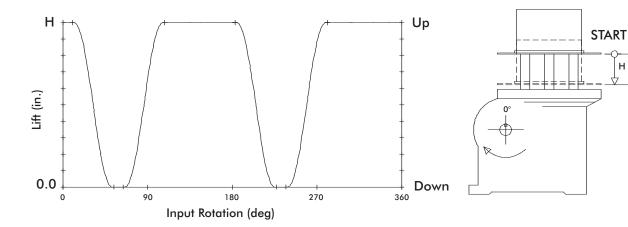
\* Note: These values are for speeds of less than 30 rpm, the minimum cam time for rise and rotation, and are for reference only. Each application must be reviewed and approved by CAMCO Engineering.

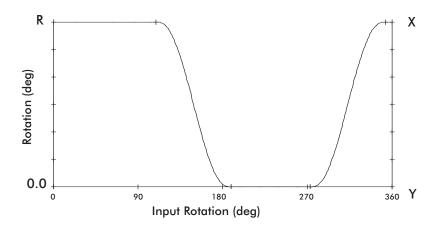


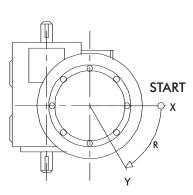
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# **Timing Diagram** Oscillator







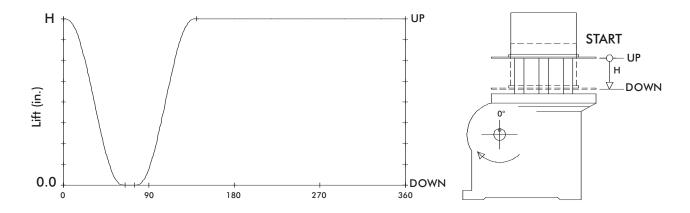
## **Motion Options**

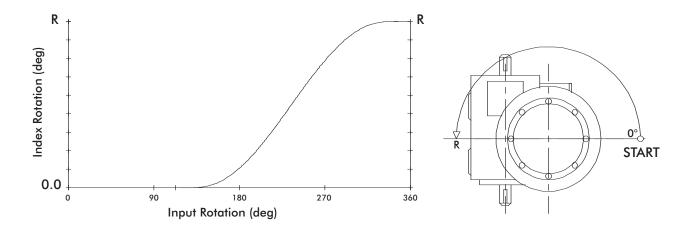
- Standard starting position (home) at time 0 is at maximum rise (up) and at the X rotary position.
- The standard sequence can be mirrored in either the lift, rotary or both:
  - The mirrored lift starts in the zero elevation or down position
  - The mirrored rotary motion starts at Y.
- · Custom motion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





## **Timing Diagram** Indexer

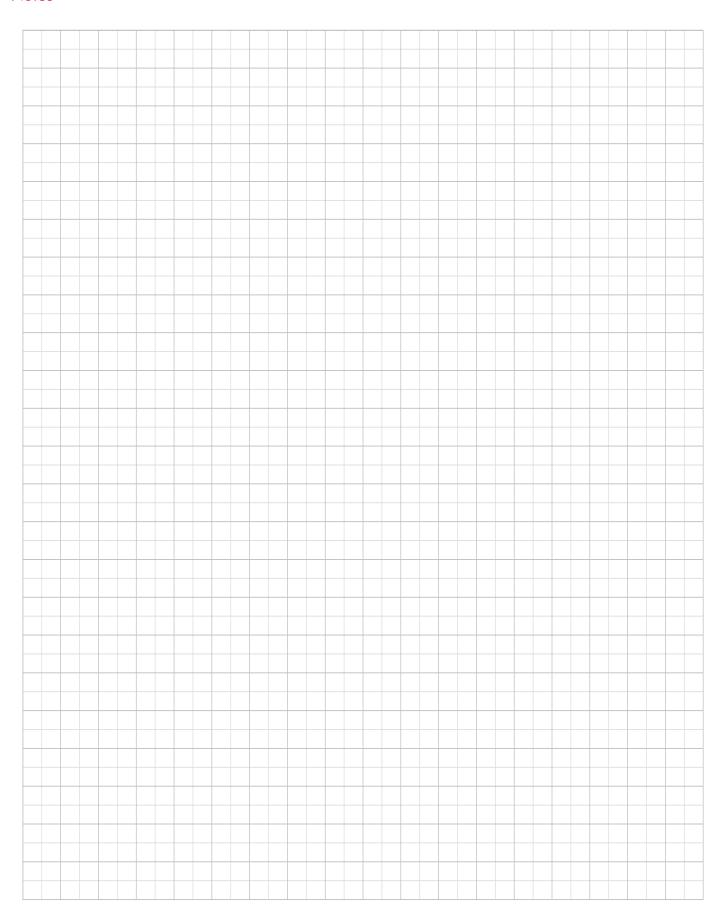




## **Motion Options**

- Standard starting position (home) at time 0 is at maximum rise (up) and at the start of a counterclockwise 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.

### **Notes**



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