

Parts Handlers



Features

IMC Parts Handlers are available in **Rotary, Linear and Walking Beam** configurations to meet your parts handling needs. They can be combined with IMC Index Drives and Precision Link Conveyors for a complete automated system.

- ◆ **RPP Cambot® Rotary Parts Handlers** (Page I-2) are designed for high precision and high capacity.
- ◆ **HD-LPP Heavy Duty Linear Parts Handlers** (Page I-15) offer smooth, controlled motions and high load capacities.
- ◆ **MR-LPP Mid-Range Linear Parts Handlers** (Page I-27) have side input shafts ideal for line shaft driven applications.
- ◆ **WBD Walking Beam Drives** (Page I-39) are an economic alternative to a short precision link conveyor.

Cambot® RPP Rotary Parts Handlers

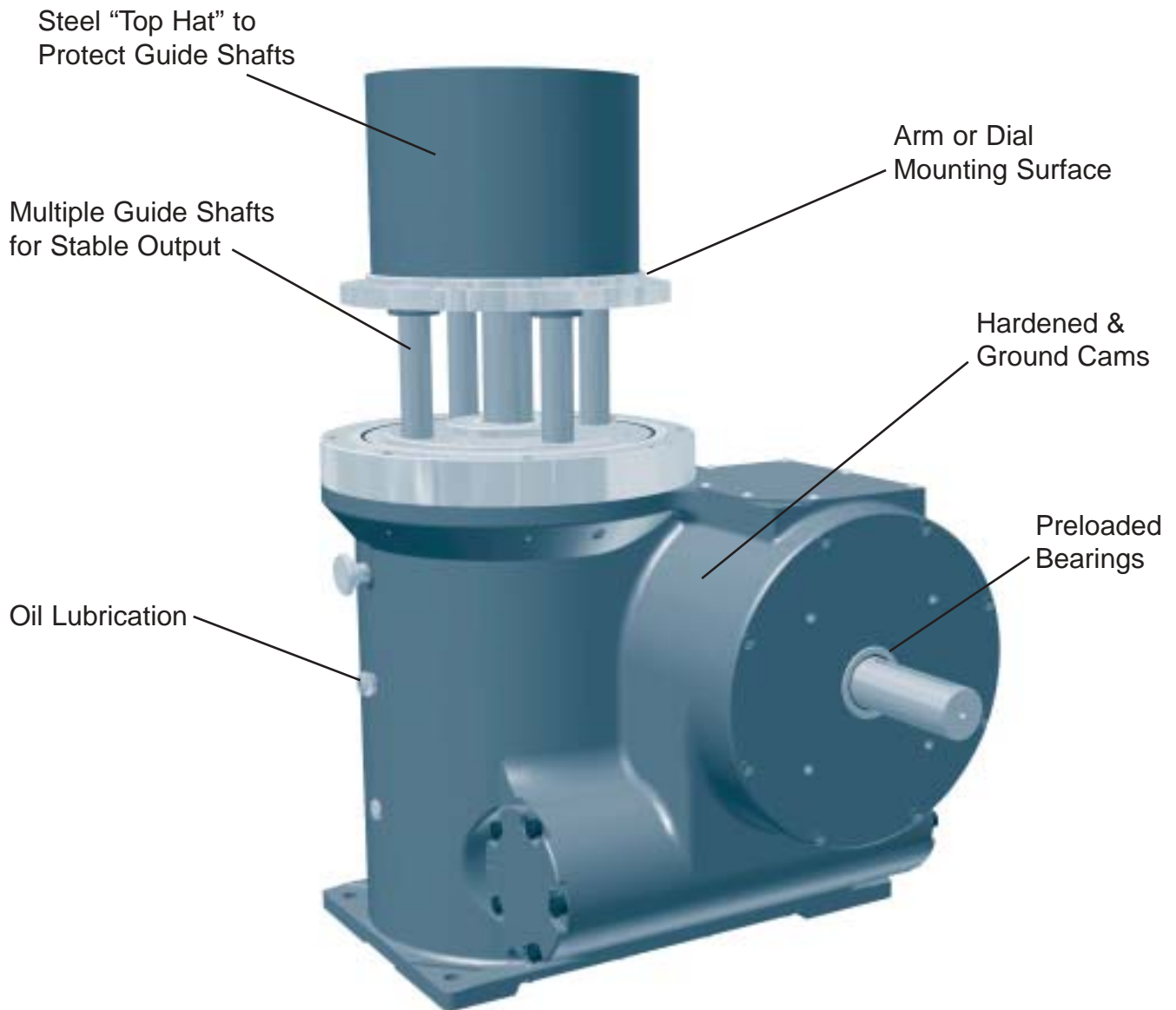


The IMC **RPP Cambot® Rotary Parts Handler** is designed for high precision and high capacity. This proven design can be used in a wide variety of industries including automotive, packaging and electronics among others. The RPP can be combined with other IMC products such as index drives and precision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

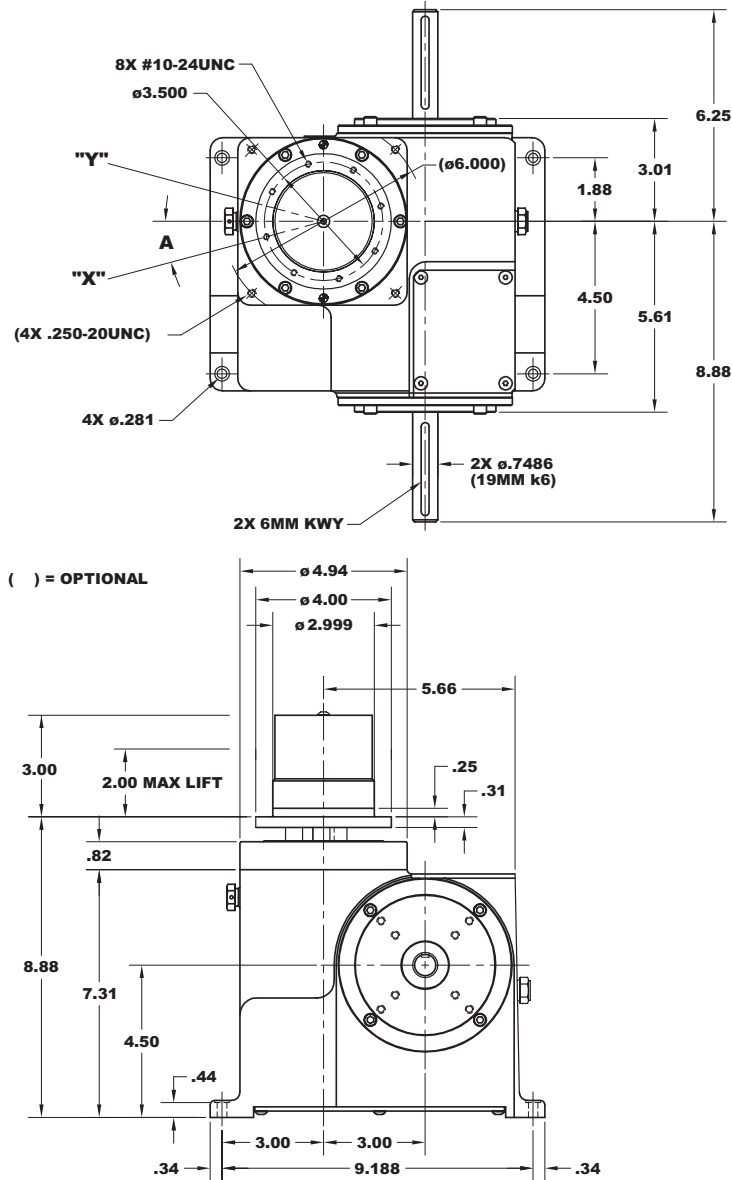
- ◆ Rugged and precise cam operated mechanisms engineered for a minimum of 8000 hours of maintenance-free life.
- ◆ Hardened and ground cams drive both the lift and rotary axes.
- ◆ Preloaded precision cam followers eliminate backlash and ensure smooth movement.
- ◆ Preloaded taper roller bearings on 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.

The RPP Cambot® can be made with custom motion sequences to synchronize with specific application requirements. An IMC Engineer can quickly evaluate possible sequences using IMC's sizing software.



150RPP



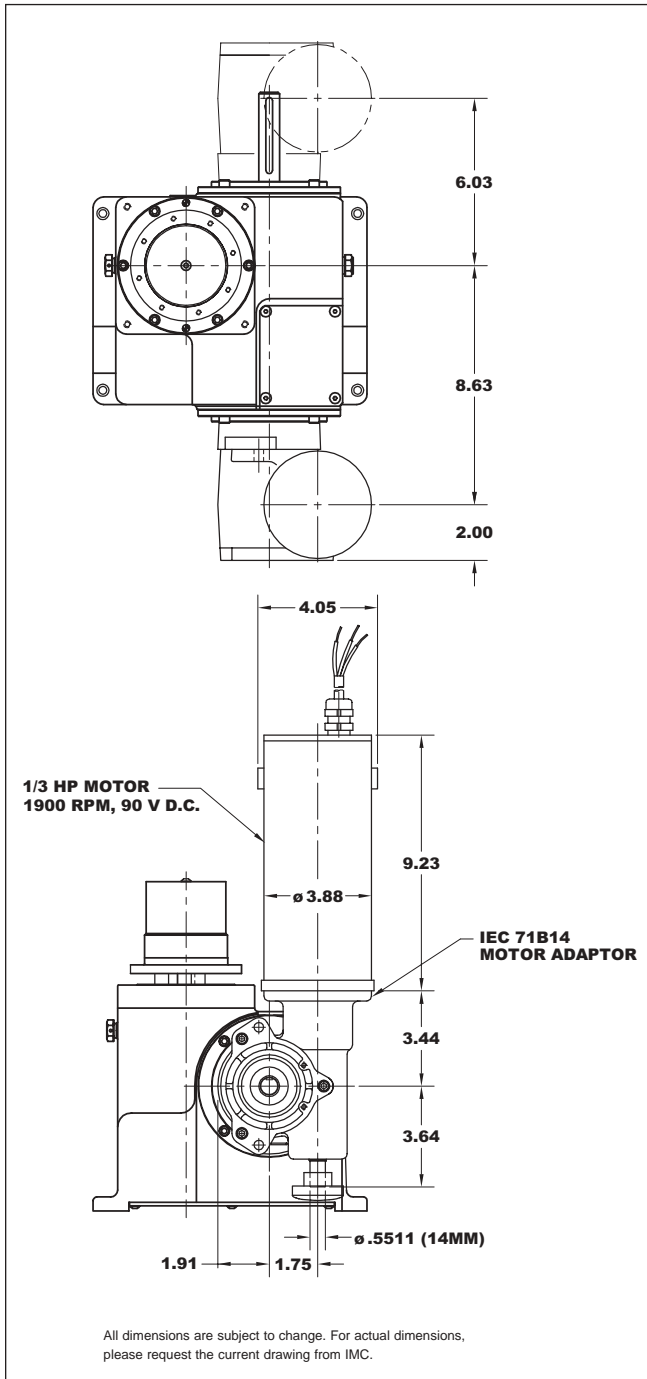
All dimensions are subject to change. For actual dimensions, please request the current drawing from IMC.

Oscillating Motion

Rotation	Angle A	Lift (in.)	Model
120°	0°	1.00	150RPP120H20-1H20
90°	15°	1.00	150RPP90H20-1H20
	15°	2.00	150RPP90H20-2H20
60°	0°	1.00	150RPP60H20-1H20
	0°	2.00	150RPP60H20-2H20
45°	22.5°	1.00	150RPP45H20-1H20
	22.5°	2.00	150RPP45H20-2H20

Indexing Motion

Rotation	Angle A	Lift (in.)	Model
180°	0°	1.00	150RPP2H20-1H20
	0°	2.00	150RPP2H20-2H20
120°	0°	1.00	150RPP3H20-1H20
	0°	2.00	150RPP3H20-2H20
90°	0°	1.00	150RPP4H20-1H20
	0°	2.00	150RPP4H20-2H20
60°	0°	1.00	150RPP6H20-1H20
	0°	2.00	150RPP6H20-2H20



Standard Package

150RPP with

- ◆ Standard Indexing or Oscillating Motion
- ◆ R180 Reducer (Ratios from 5:1 to 60:1)
 - Double Extended Worm Shaft (Input)
 - Worm Shaft Handwheel
- ◆ 1/3 hp DC Motor
- ◆ Varipak DC Motor Control (up to 30 cpm)

Optional Accessories

- ◆ 1/3 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
- ◆ Electric Clutch-Brake
- ◆ 180-IOC Input Overload Clutch
- ◆ Digi-Dog Digital Programmable Limit Switch
- ◆ Camtronics Rotary Limit Switch

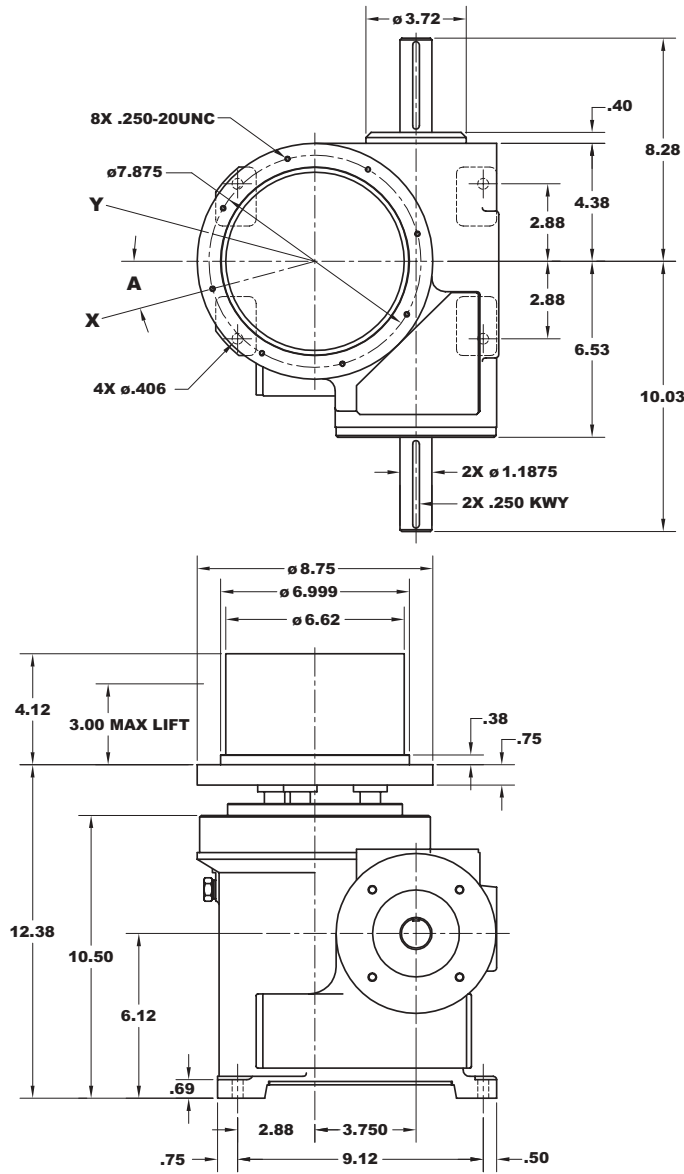
Capacity*

Maximum Mass: 50 lbs.

Maximum Inertia: 340 lb-in²

* **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 IMC Engineering.

300RPP



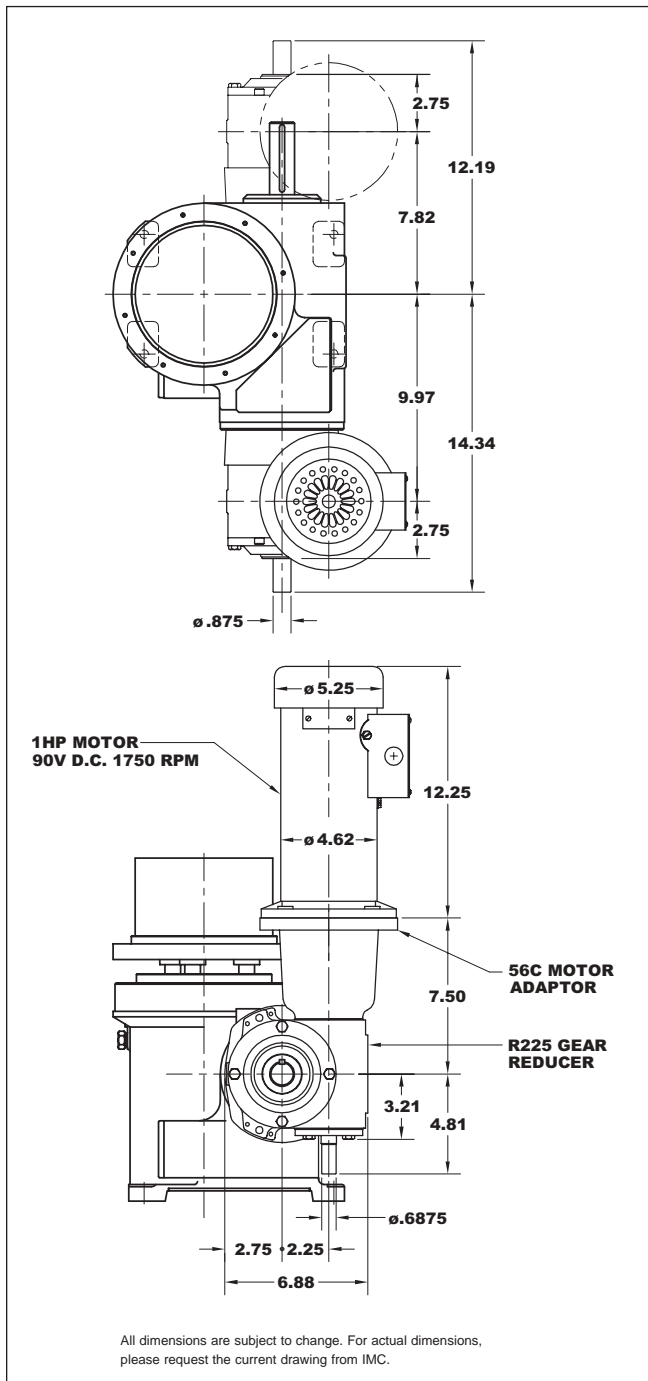
All dimensions are subject to change. For actual dimensions, please request the current drawing from IMC.

Oscillating Motion

Rotation	Angle A	Lift (in.)	Model
120°	0°	1.00	300RPP120H24-1H24
		2.00	300RPP120H24-2H24
90°	15°	1.00	300RPP90H24-1H24
		2.00	300RPP90H24-2H24
		3.00	300RPP90H24-3H24
60°	0°	1.00	300RPP60H24-1H24
		2.00	300RPP60H24-2H24
		3.00	300RPP60H24-3H24
45°	22.5°	1.00	300RPP45H24-1H24
		2.00	300RPP45H24-2H24
		3.00	300RPP45H24-3H24

Indexing Motion

Rotation	Angle A	Lift (in.)	Model
180°	0°	1.00	300RPP2H24-1H24
		2.00	300RPP2H24-2H24
		3.00	300RPP2H24-3H24
120°	0°	1.00	300RPP3H24-1H24
		2.00	300RPP3H24-2H24
		3.00	300RPP3H24-3H24
90°	0°	1.00	300RPP4H24-1H24
		2.00	300RPP4H24-2H24
		3.00	300RPP4H24-3H24
60°	0°	1.00	300RPP6H24-1H24
		2.00	300RPP6H24-2H24
		3.00	300RPP6H24-3H24



Standard Package

300RPP with

- ◆ Standard Indexing or Oscillating Motion
- ◆ R225 Reducer (Ratios from 5:1 to 60:1)
— 56C Motor Adapter and Coupling
- ◆ 1 hp DC Motor
- ◆ Varipak DC Motor Control (up to 30 cpm)

Optional Accessories

- ◆ 1 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
- ◆ Electric Clutch-Brake
- ◆ 225-IOC Input Overload Clutch
- ◆ Digi-Dog Digital Programmable Limit Switch
- ◆ Camtronics Rotary Limit Switch

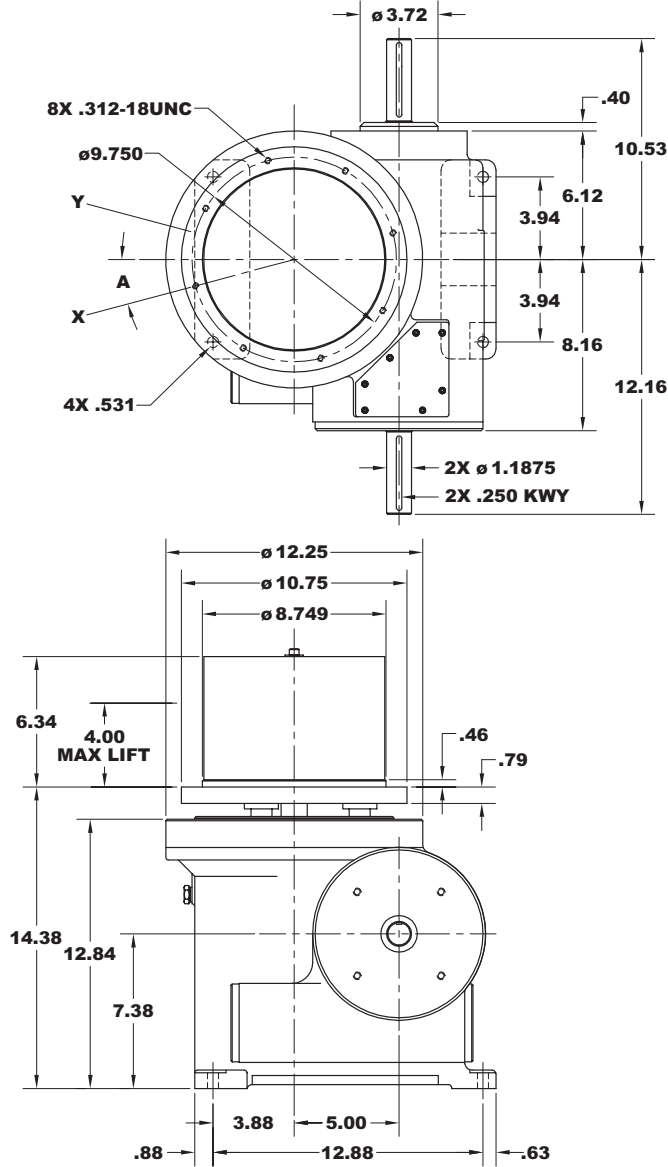
Capacity*

Maximum Mass: 150 lbs.

Maximum Inertia: 1700 lb-in²

* **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 IMC Engineering.

500RPP



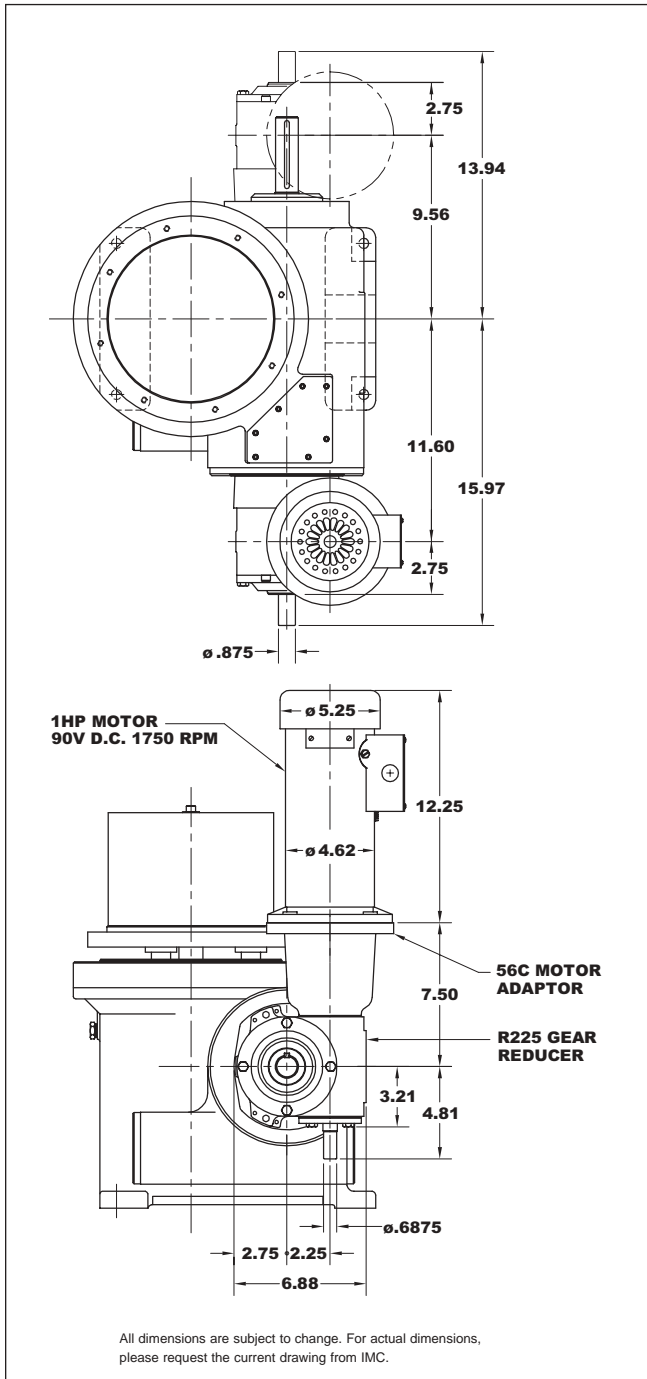
All dimensions are subject to change. For actual dimensions, please request the current drawing from IMC.

Oscillating Motion

Rotation	Angle A	Lift (in.)	Model
120°	0°	2.00	500RPP120H32-2H32
		3.00	500RPP120H32-3H32
90°	15°	2.00	500RPP90H32-2H32
		3.00	500RPP90H32-3H32
		4.00	500RPP90H32-4H32
60°	0°	2.00	500RPP60H32-2H32
		3.00	500RPP60H32-3H32
		4.00	500RPP60H32-4H32
45°	22.5°	2.00	500RPP45H32-2H32
		3.00	500RPP45H32-3H32
		4.00	500RPP45H32-4H32

Indexing Motion

Rotation	Angle A	Lift (in.)	Model
180°	0°	2.00	500RPP2H32-2H32
		3.00	500RPP2H32-3H32
		4.00	500RPP2H32-4H32
120°	0°	2.00	500RPP3H32-2H32
		3.00	500RPP3H32-3H32
90°	0°	2.00	500RPP4H32-2H32
		3.00	500RPP4H32-3H32
60°	0°	2.00	500RPP6H32-2H32
		3.00	500RPP6H32-3H32
		4.00	500RPP6H32-4H32



Standard Package

500RPP with

- ◆ Standard Indexing or Oscillating Motion
- ◆ R225 Reducer (Ratios from 5:1 to 60:1)
— 56C Motor Adapter and Coupling
- ◆ 1 hp DC Motor
- ◆ Varipak DC Motor Control (up to 30 cpm)

Optional Accessories

- ◆ 1 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
- ◆ R260 Reducer (Ratios from 5:1 to 60:1)
- ◆ Electric Clutch-Brake
- ◆ 225-IOC Input Overload Clutch
- ◆ Digi-Dog Digital Programmable Limit Switch
- ◆ Camtronics Rotary Limit Switch

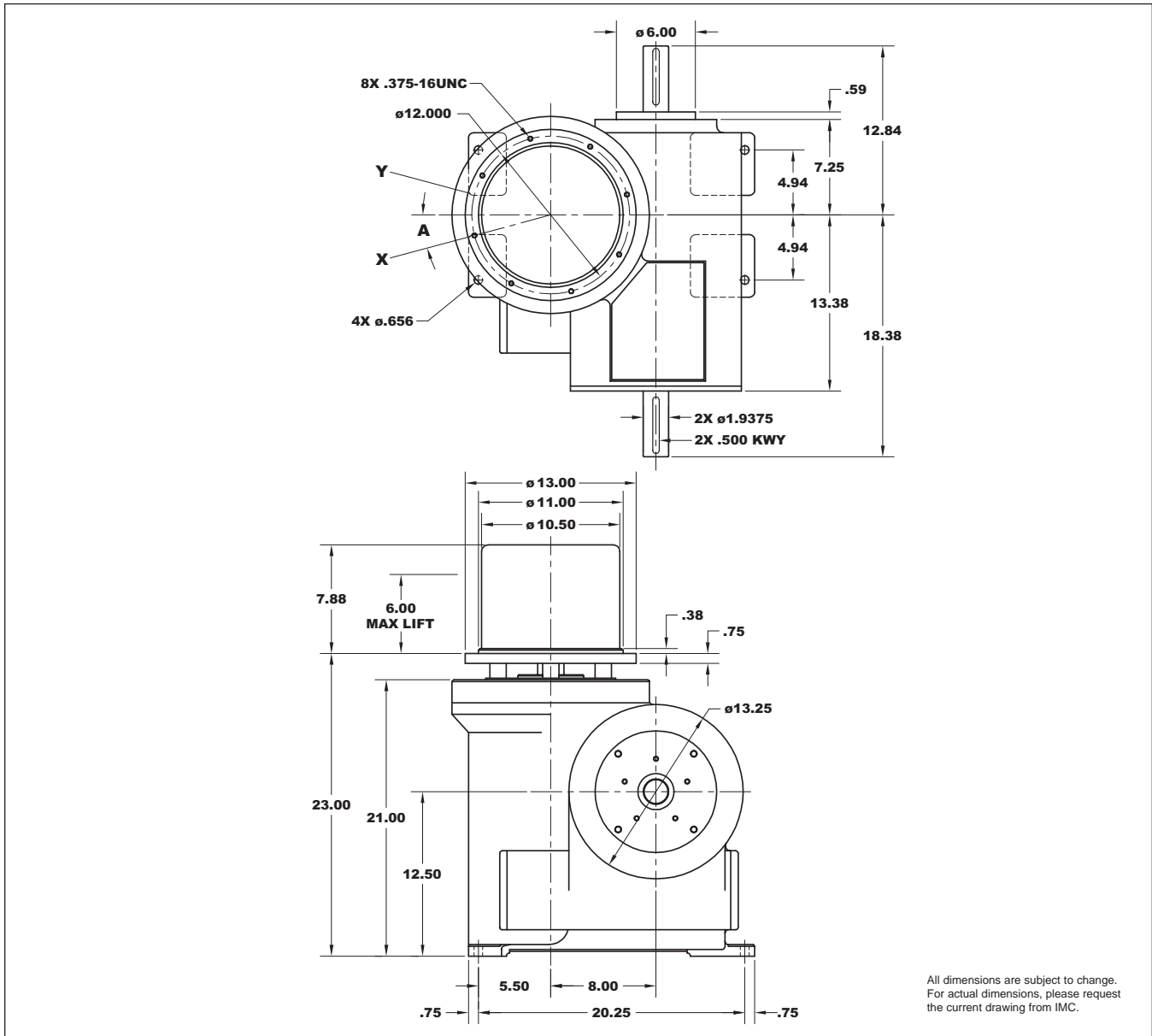
Capacity*

Maximum Mass: 180 lbs.

Maximum Inertia: 3415 lb-in²

* **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 IMC Engineering.

900RPP



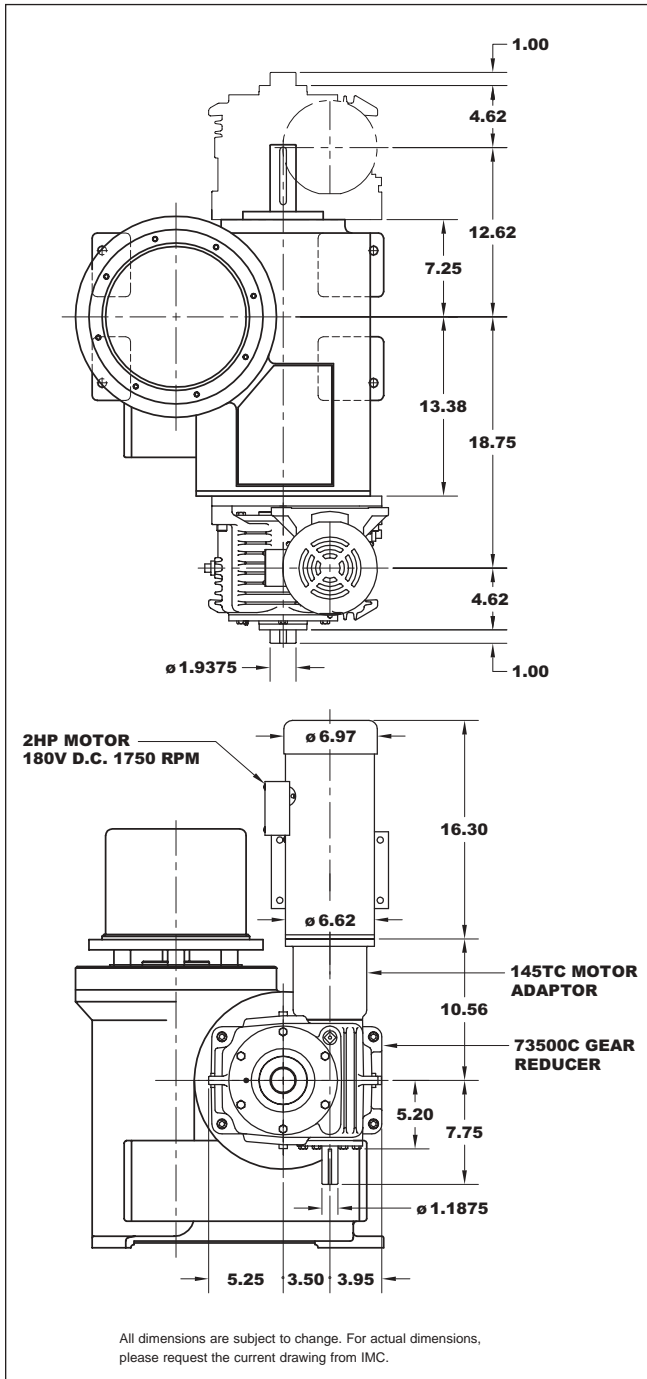
All dimensions are subject to change. For actual dimensions, please request the current drawing from IMC.

Oscillating Motion

Rotation	Angle A	Lift (in.)	Model
120°	0°	2.00	900RPP120H48-2H48
		4.00	900RPP120H48-4H48
90°	15°	2.00	900RPP90H48-2H48
		4.00	900RPP90H48-4H48
		6.00	900RPP90H48-6H48
60°	0°	2.00	900RPP60H48-2H48
		4.00	900RPP60H48-4H48
		6.00	900RPP60H48-6H48
45°	22.5°	2.00	900RPP45H48-2H48
		4.00	900RPP45H48-4H48
		6.00	900RPP45H48-6H48

Indexing Motion

Rotation	Angle A	Lift (in.)	Model
180°	0°	2.00	900RPP2H48-2H48
		4.00	900RPP2H48-4H48
		6.00	900RPP2H48-6H48
120°	0°	2.00	900RPP3H48-2H48
		4.00	900RPP3H48-4H48
		6.00	900RPP3H48-6H48
90°	0°	2.00	900RPP4H48-2H48
		4.00	900RPP4H48-4H48
		6.00	900RPP4H48-6H48
60°	0°	2.00	900RPP6H48-2H48
		4.00	900RPP6H48-4H48
		6.00	900RPP6H48-6H48



Standard Package

900RPP with

- ◆ Standard Indexing or Oscillating Motion
- ◆ 7350C Reducer (Ratios from 5:1 to 60:1)
 - 143TC Motor Adapter and Coupling
- ◆ 2 hp DC Motor
- ◆ Varipak DC Motor Control (up to 30 cpm)

Optional Accessories

- ◆ 2 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
- ◆ Electric Clutch-Brake
- ◆ 350-IOC Input Overload Clutch
- ◆ Digi-Dog Digital Programmable Limit Switch
- ◆ Camtronics Rotary Limit Switch

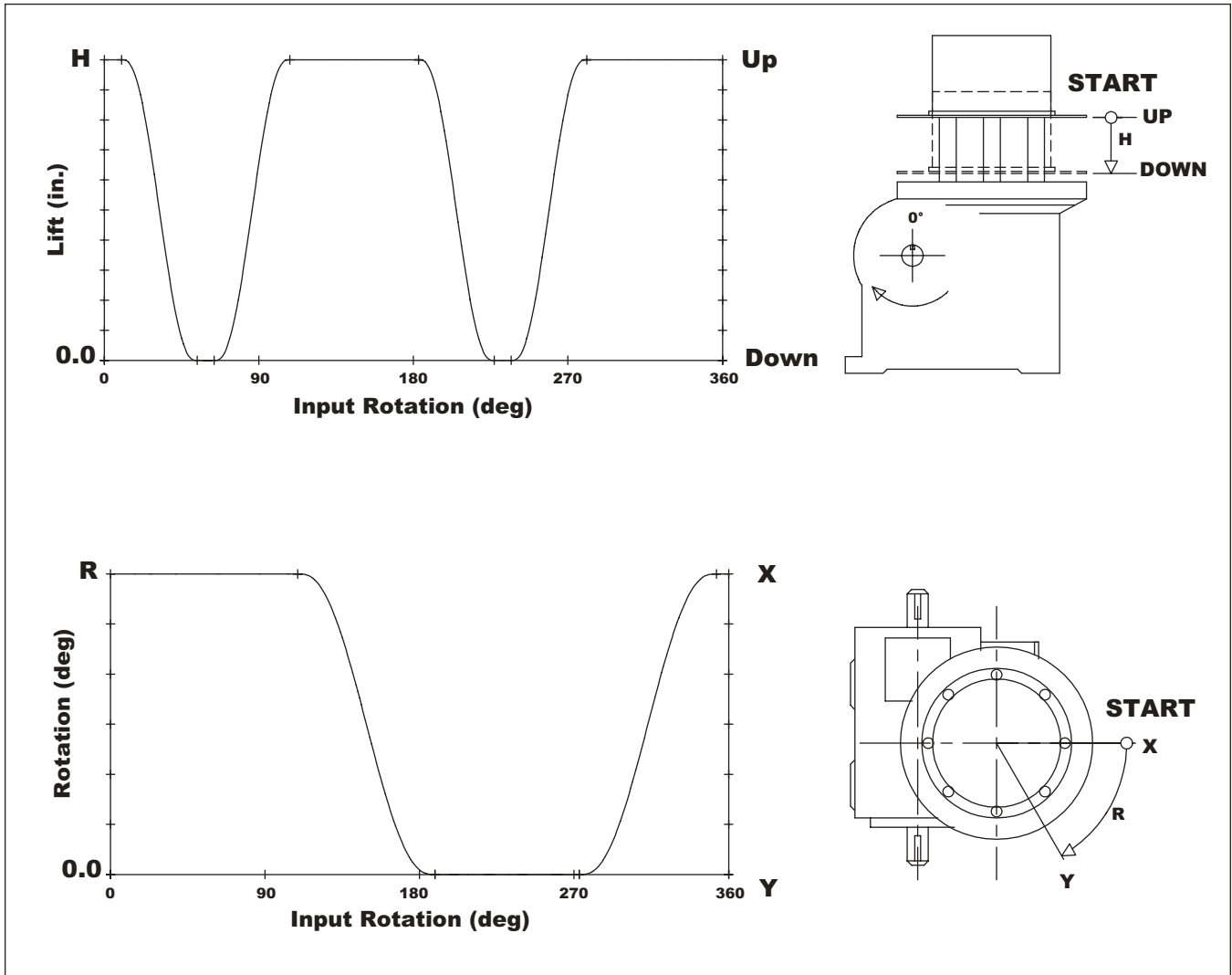
Capacity*

Maximum Mass: 500 lbs.

Maximum Inertia: 27,300 lb-in²

* **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 IMC Engineering.

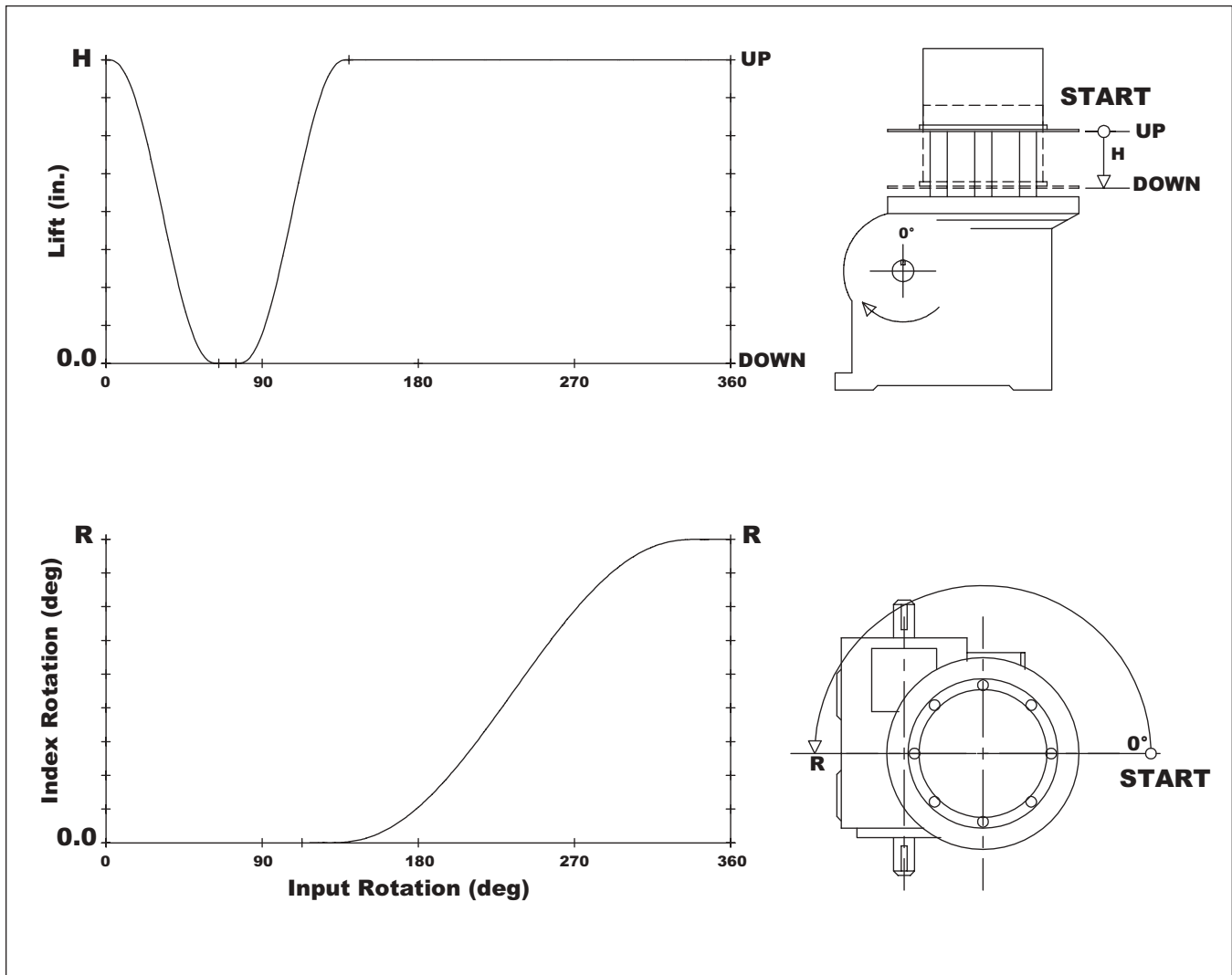
Timing Diagram – Oscillator



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

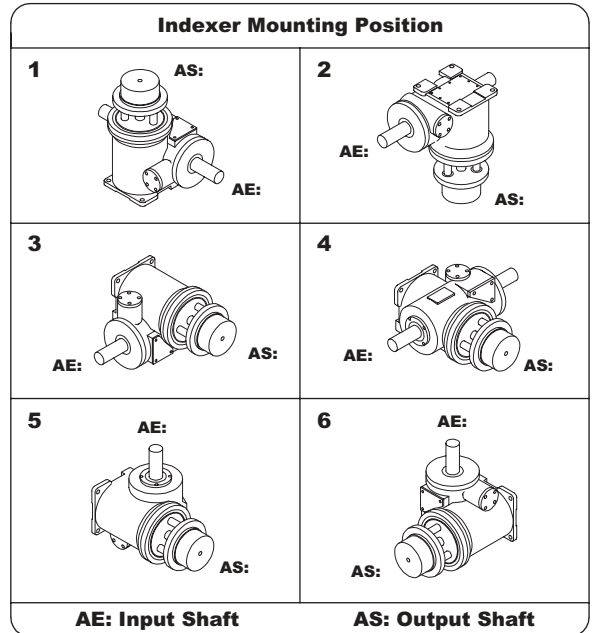
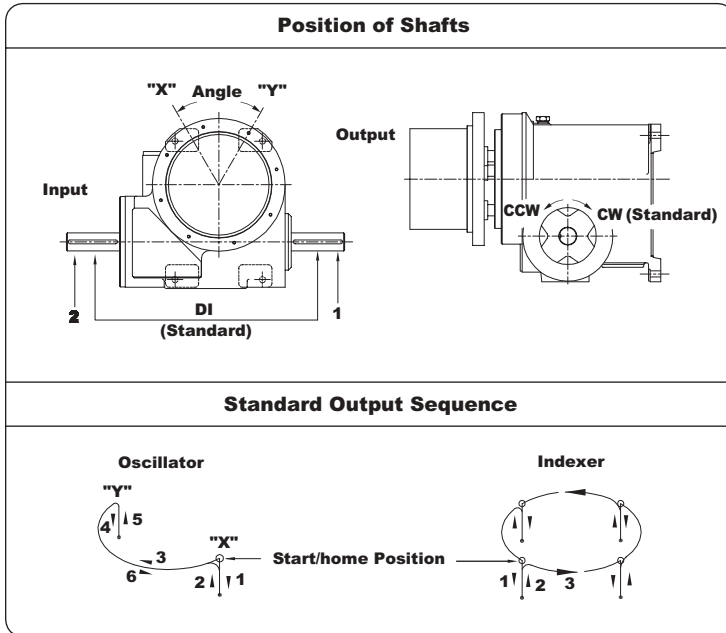


Motion Options

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

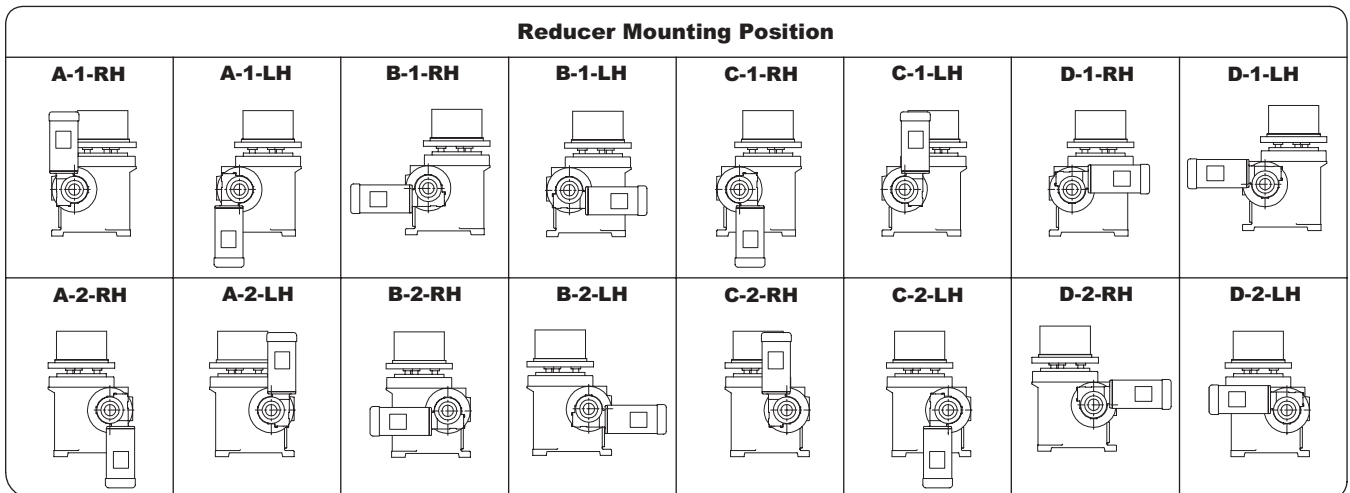
RPP Ordering Procedure

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

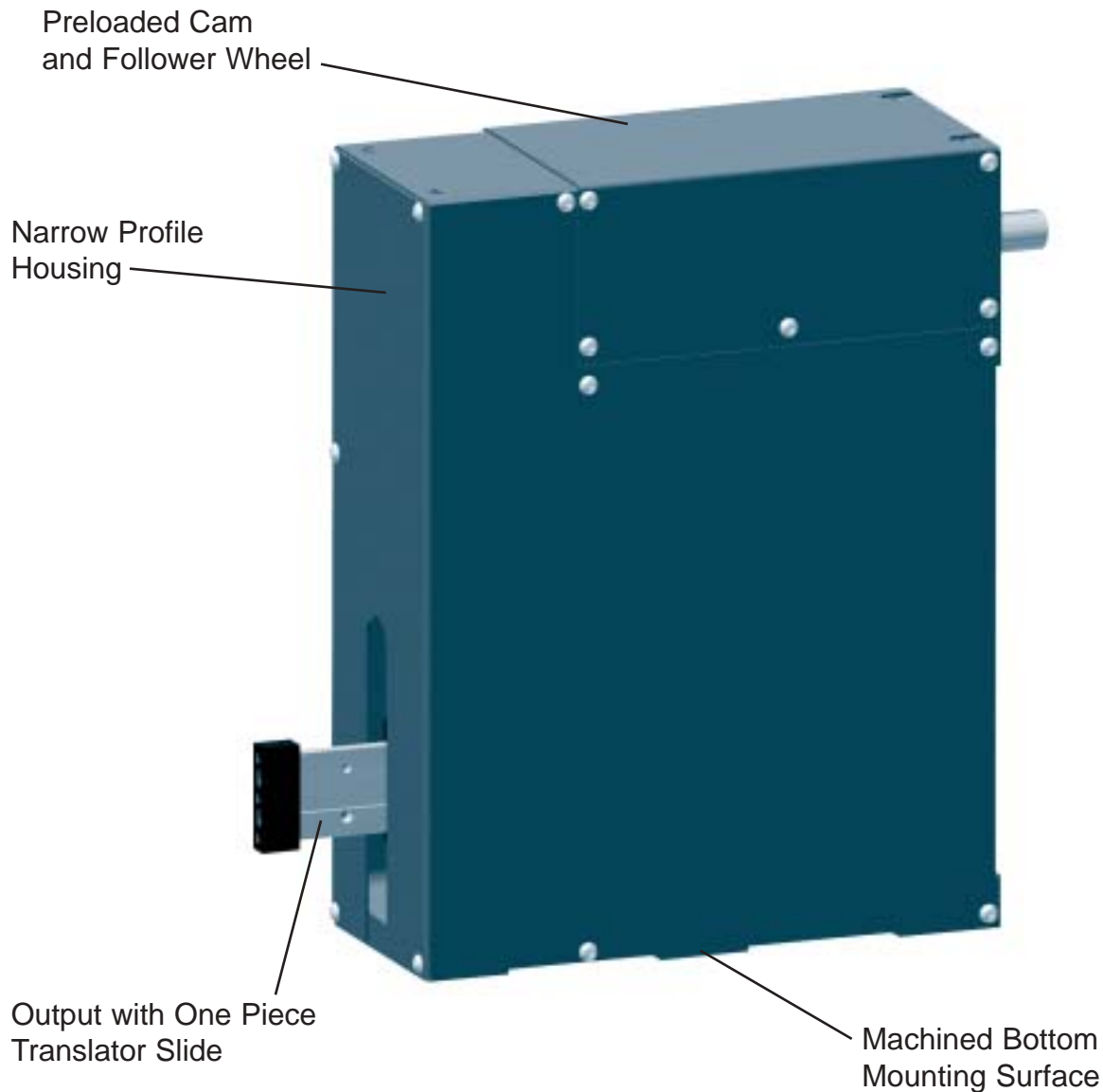


Reducer Ordering Procedure

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



HD-LPP Heavy-Duty Linear Parts Handlers



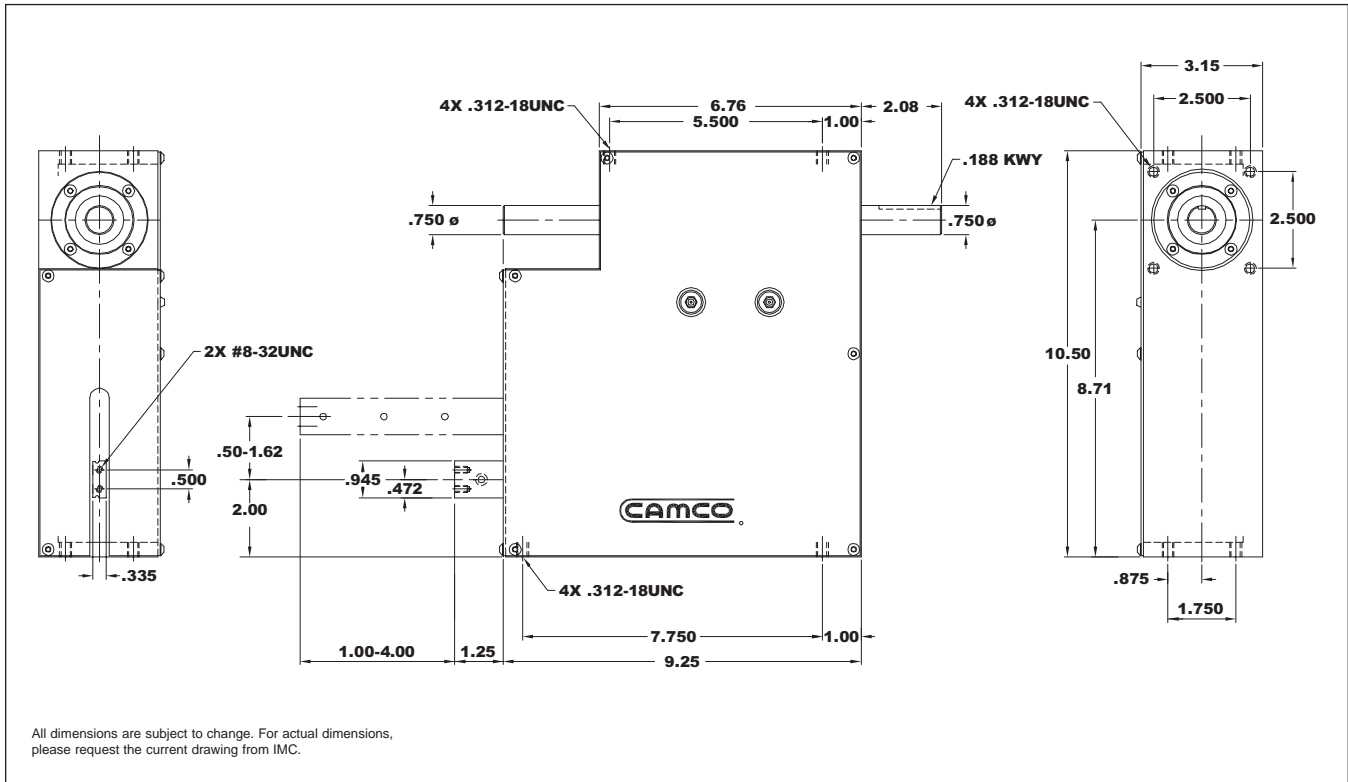
IMC **HD-LPP Heavy-Duty Linear Parts Handlers** offer smooth, controlled motions and high load capacities. The LPP can be combined with other IMC products such as index drives and precision conveyors for a complete automated system. The HD-LPP is ideal for linear pick and place applications with features including:

- ◆ High-speed capabilities – up to 60 cycles per minute
- ◆ Hardened and ground roller gear cams driving both axes.

- ◆ Fully preloaded roller gear cam and follower wheel design eliminates backlash and ensures smooth movement.
- ◆ Camshaft bearings are preloaded taper roller bearings.
- ◆ Compact design – small footprint
- ◆ Long-life grease lubrication

The roller gear cam and follower wheel provide for the greatest variety of motion sequences making the HD-LPP ideal for custom motion applications.

140LPP

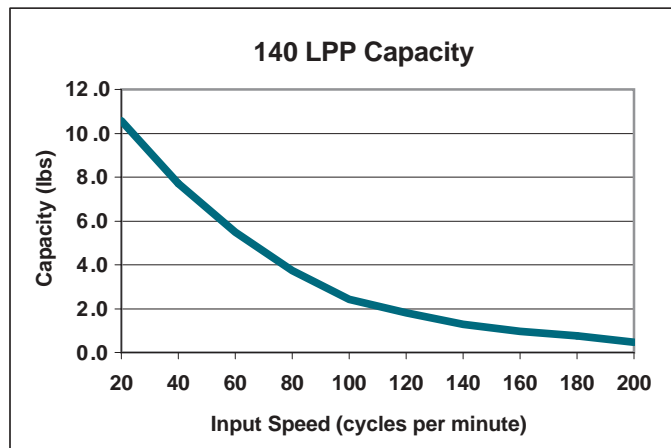


Standard Motions

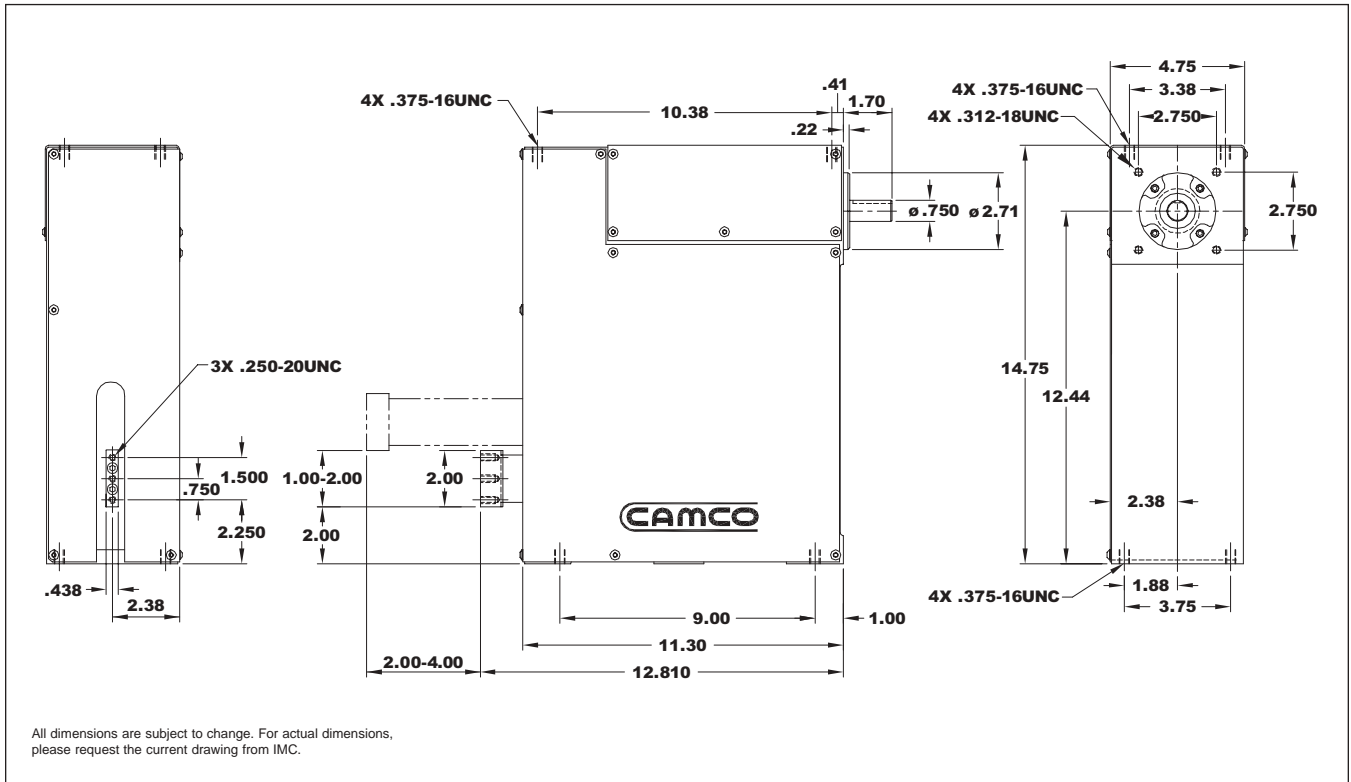
- ◆ .50" Lift x 1.00" Transfer
- ◆ 1.00" Lift x 2.00" Transfer
- ◆ 1.50" Lift x 3.00" Transfer
- ◆ 1.62" Lift x 4.00" Transfer

Technical Specifications

Lift Accuracy	± .010"
Lift Repeatability	± .002"
Transfer Accuracy	± .005"
Transfer Repeatability	± .002"



240LPP

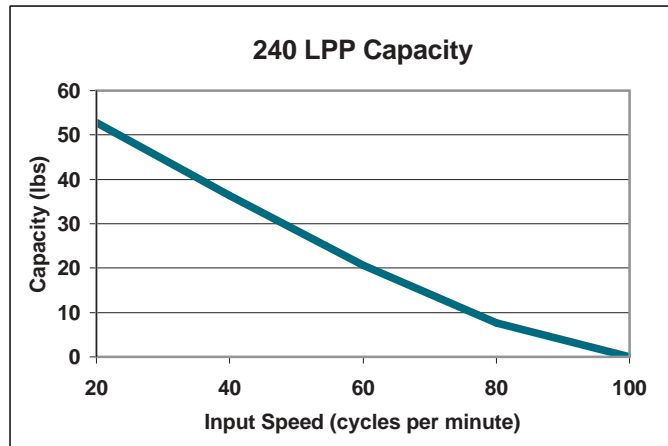


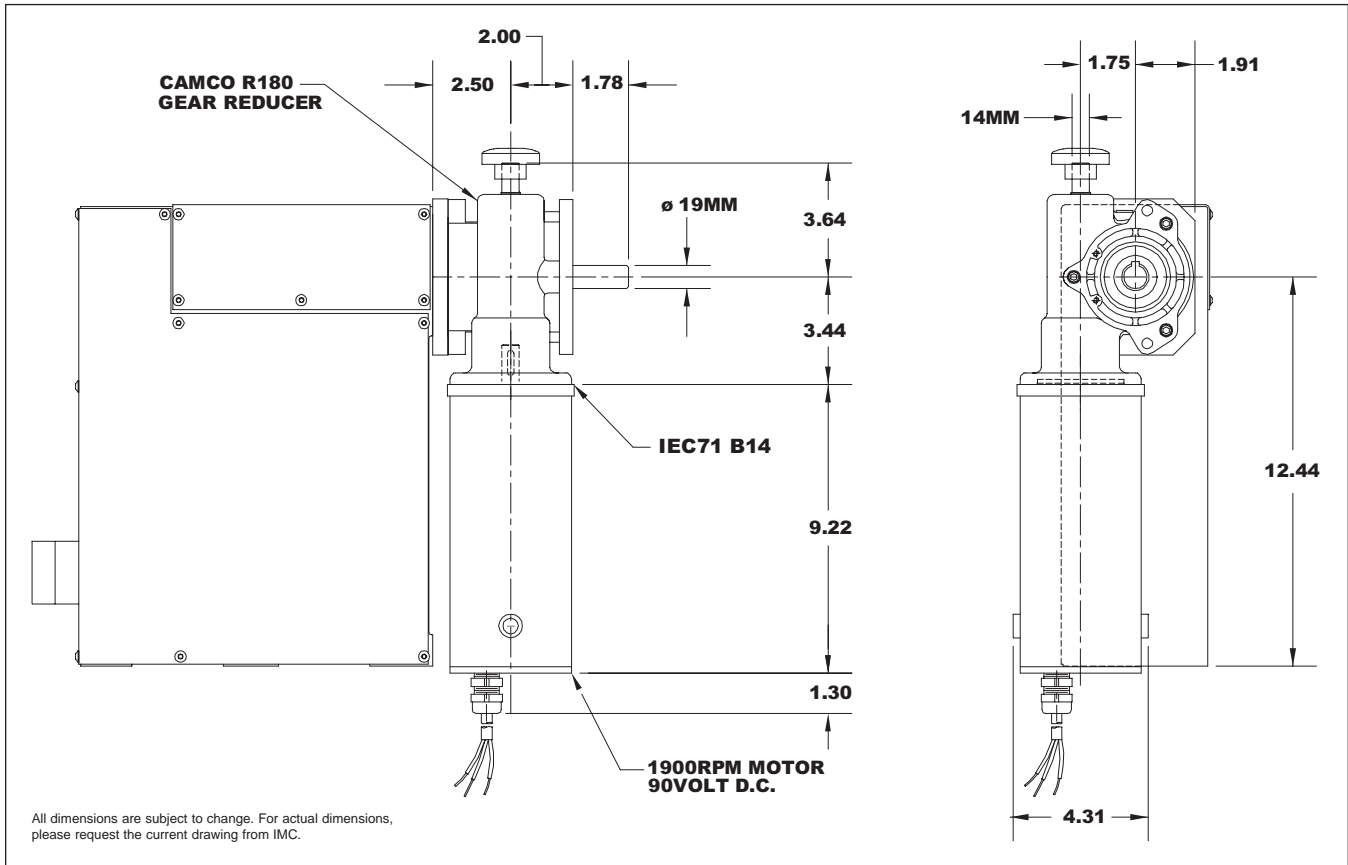
Standard Motions

Any combination of Lift and Transfer distances
Lift Distance (in.) 1.00, 1.50 or 2.00
Transfer Distance (in.) 2.00, 3.00 or 4.00

Technical Specifications

Lift Accuracy ±.010"
 Lift Repeatability ±.002"
 Transfer Accuracy ±.005"
 Transfer Repeatability ±.002"





Standard Package

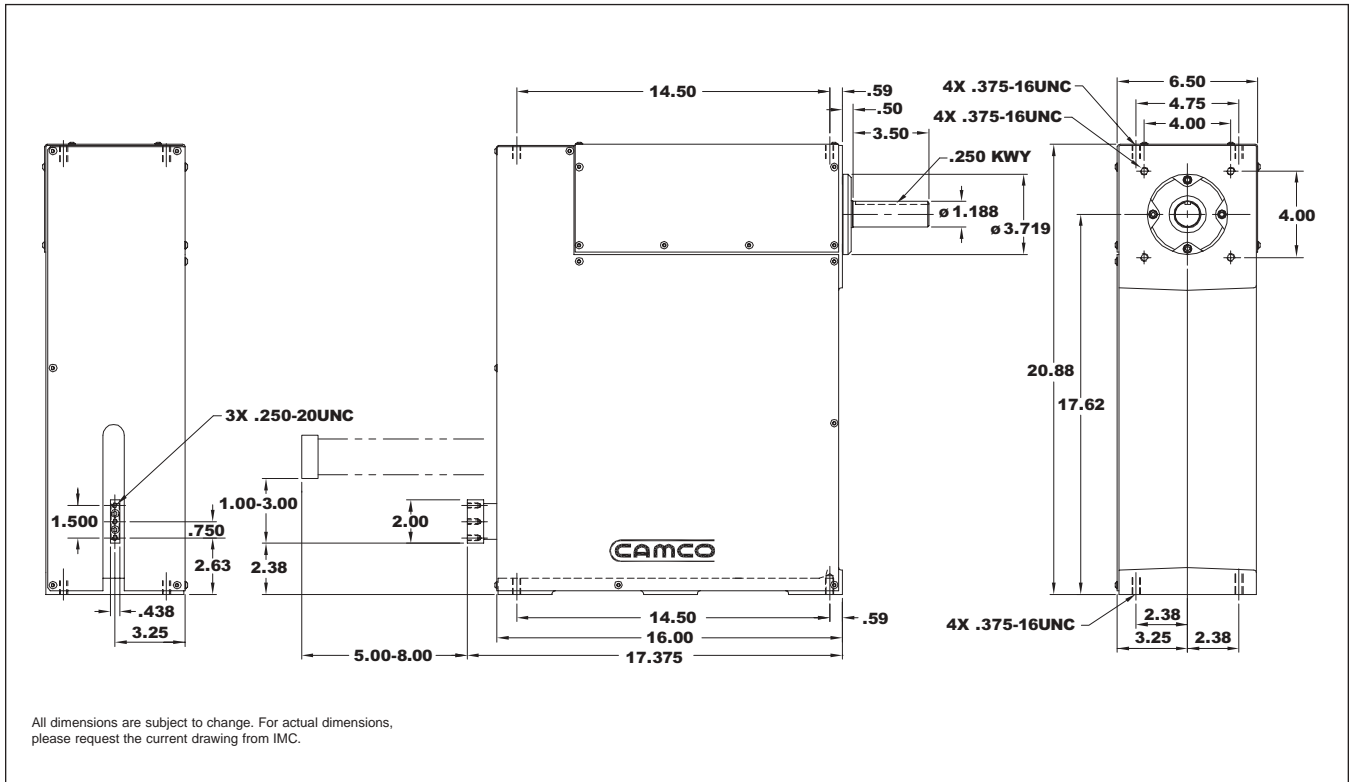
240LPP with

- ◆ Standard Motion Sequence
- ◆ R180 Reducer (Ratios from 5:1 to 60:1)
- ◆ 1/3 hp DC Motor
- ◆ Varipak DC Motor Control (up to 30 cpm)

Optional Accessories

- ◆ LF-RMI-40-F1 Reducer (1/7 to 1/100)
 - Optional Internal Overload Clutch
 - 1/4 hp Inverter Duty AC Brake Motor
- ◆ 1/3 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
- ◆ 180-IOC Input Overload Clutch
- ◆ Digi-Dog Digital Programmable Limit Switch
- ◆ Camtronics Rotary Limit Switch

380LPP

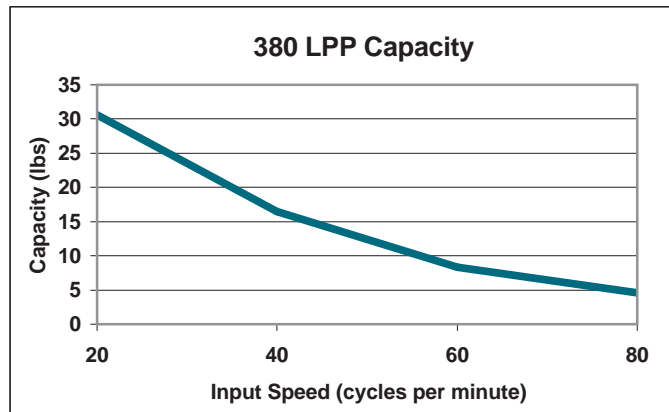


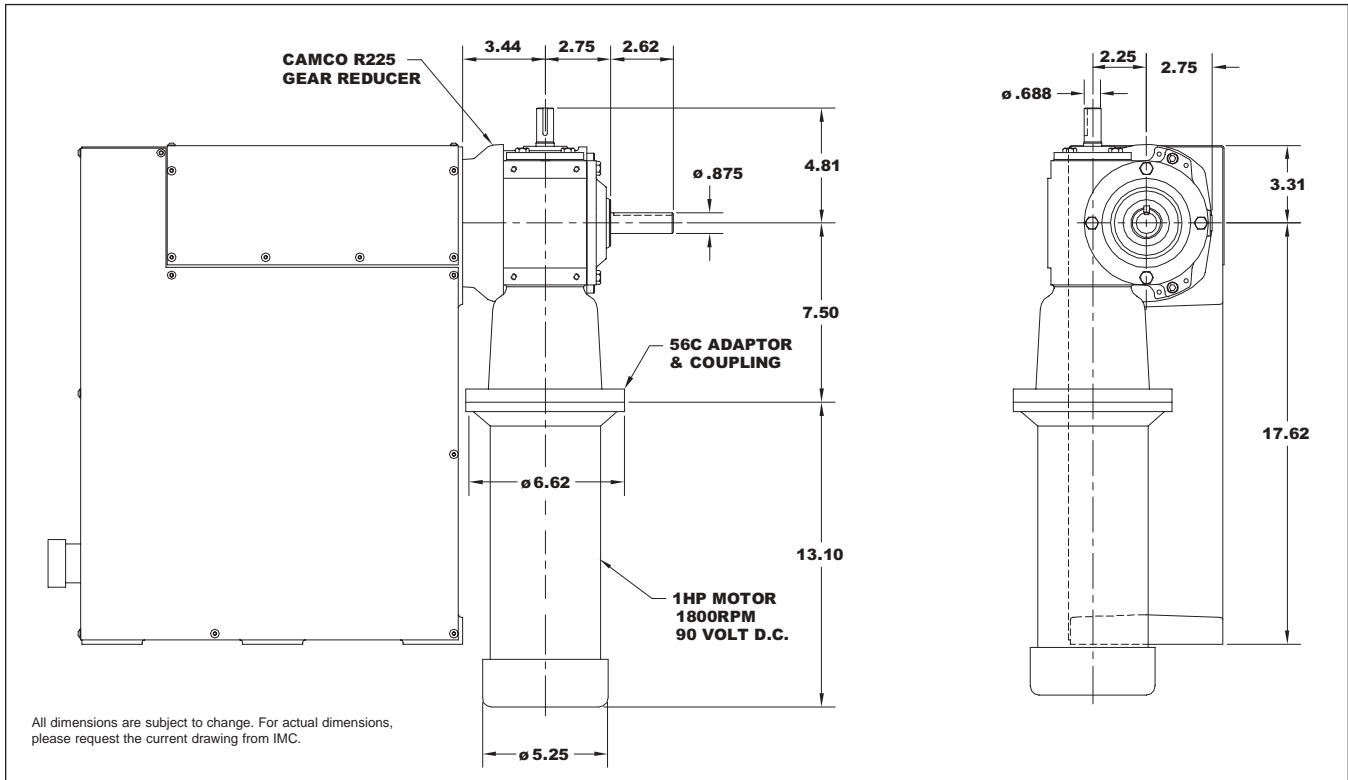
Standard Motions

Any combination of Lift and Transfer distances
Lift Distance (in.) 1.00, 2.00 or 3.00
Transfer Distance (in.) 5.00, 6.00, 7.00 or 8.00

Technical Specifications

Lift Accuracy $\pm .010''$
 Lift Repeatability $\pm .002''$
 Transfer Accuracy $\pm .005''$
 Transfer Repeatability $\pm .002''$





Standard Package

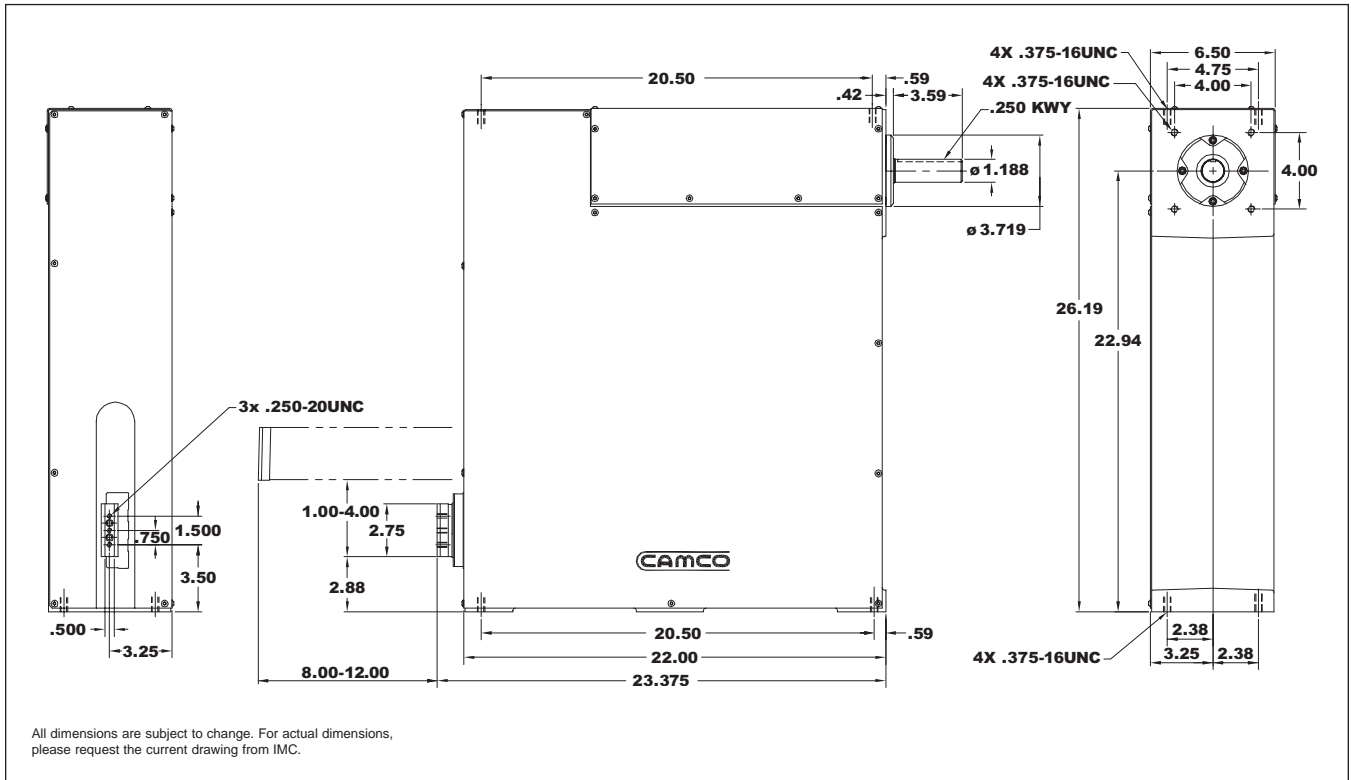
380LPP with

- ◆ Standard Motion Sequence
- ◆ R225 Reducer (Ratios from 5:1 to 60:1)
 - 56C Motor Adapter and Coupling
- ◆ 1 hp DC Motor
- ◆ Varipak DC Motor Control (up to 30 cpm)

Optional Accessories

- ◆ LF-RMI-50-F2 Reducer (1/7 to 1/100)
 - Optional Internal Overload Clutch
 - 1/2 hp Inverter Duty AC Brake Motor
- ◆ 1 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
- ◆ 225-IOC Input Overload Clutch
- ◆ Digi-Dog Digital Programmable Limit Switch
- ◆ Camtronics Rotary Limit Switch

4120LPP

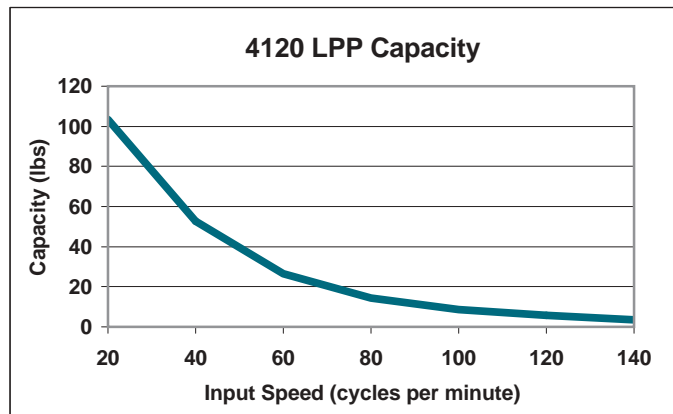


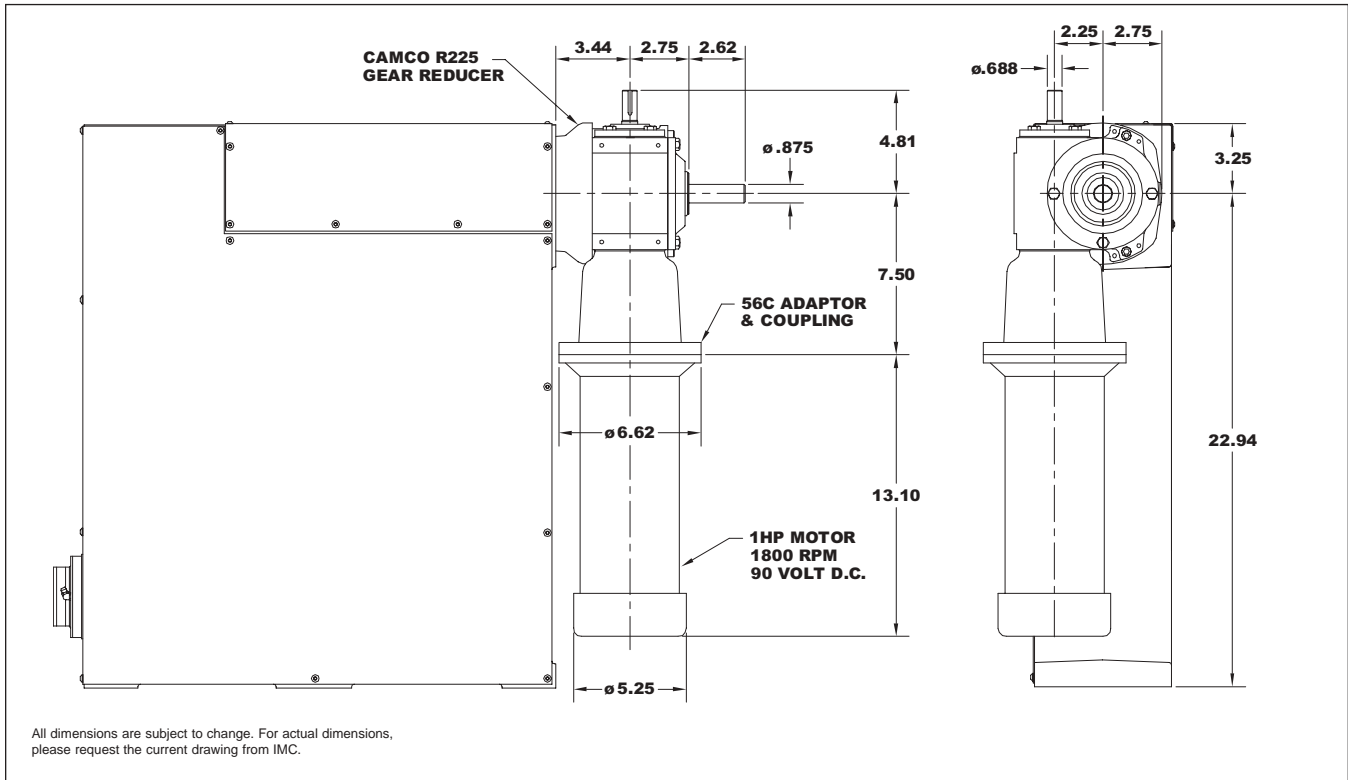
Standard Motions

Any combination of Lift and Transfer distances	
Lift Distance (in.)	1.00, 2.00, 3.00 or 4.00
Transfer Distance (in.)	8.00, 9.00, 10.00, 11.00 or 12.00

Technical Specifications

Lift Accuracy	$\pm .012''$
Lift Repeatability	$\pm .004''$
Transfer Accuracy	$\pm .007''$
Transfer Repeatability	$\pm .004''$





Standard Package

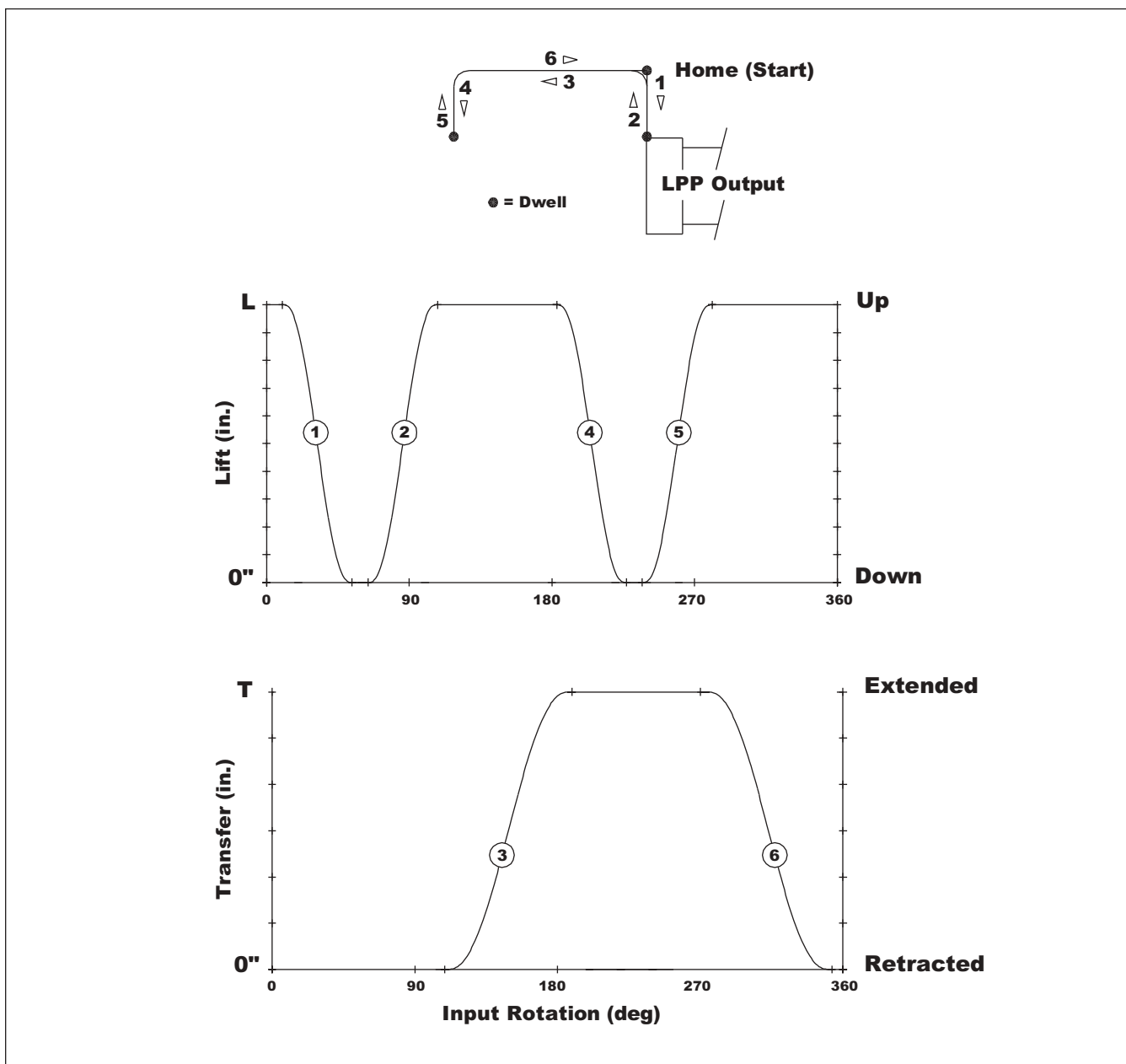
4120LPP with

- ◆ Standard Motion Sequence
- ◆ R225 Reducer (Ratios from 5:1 to 60:1)
 - 56C Motor Adapter and Coupling
- ◆ 1 hp DC Motor
- ◆ Varipak DC Motor Control (up to 30 cpm)

Optional Accessories

- ◆ LF-RMI-70-F3 Reducer (1/7 to 1/100)
 - Optional Internal Overload Clutch
 - 1 hp Inverter Duty AC Brake Motor
- ◆ 1 hp AC Drive Package with Inverter Duty Motor and Inverter Drive (up to 60 cpm)
- ◆ 225-IOC Input Overload Clutch
- ◆ Digi-Dog Digital Programmable Limit Switch
- ◆ Camtronics Rotary Limit Switch

Standard Motion Sequence



Motion Options

Standard starting position (home) at time 0 is at maximum lift (up) and fully retracted.

- ◆ The motion sequence can be mirrored in either the lift or transfer axes or in both axes.
 - The mirrored lift starts in the down position.
 - The mirrored transfer starts extended.
- ◆ Custom motion times are also available – consult your Sales Agent for more information.

HD-LPP Ordering Procedure

1. Model Number
2. Input Shaft Rotation: CW or CCW
3. Lift and Transfer Distances (in.)
4. Motion Sequence & Home Position
(standard is shown)

<p style="text-align: center;">Position of Shafts</p>	<p style="text-align: center;">Indexer Mounting Position</p> <table border="1"> <tr> <td data-bbox="906 520 1188 688"> <p style="text-align: center;">1</p> </td> <td data-bbox="1192 520 1474 688"> <p style="text-align: center;">2</p> </td> </tr> <tr> <td data-bbox="906 693 1188 861"> <p style="text-align: center;">3</p> </td> <td data-bbox="1192 693 1474 861"> <p style="text-align: center;">4</p> </td> </tr> <tr> <td data-bbox="906 865 1188 1033"> <p style="text-align: center;">5</p> </td> <td data-bbox="1192 865 1474 1033"> <p style="text-align: center;">6</p> </td> </tr> <tr> <td colspan="2" style="text-align: center;"> <p>AE: Input Shaft</p> </td> <td colspan="2" style="text-align: center;"> <p>AS: Output Shaft</p> </td> </tr> </table>		<p style="text-align: center;">1</p>	<p style="text-align: center;">2</p>	<p style="text-align: center;">3</p>	<p style="text-align: center;">4</p>	<p style="text-align: center;">5</p>	<p style="text-align: center;">6</p>	<p>AE: Input Shaft</p>		<p>AS: Output Shaft</p>	
<p style="text-align: center;">1</p>	<p style="text-align: center;">2</p>											
<p style="text-align: center;">3</p>	<p style="text-align: center;">4</p>											
<p style="text-align: center;">5</p>	<p style="text-align: center;">6</p>											
<p>AE: Input Shaft</p>		<p>AS: Output Shaft</p>										
<p style="text-align: center;">Standard Output Sequence</p> <p>● = Dwell</p>												

Drive Package Ordering Procedure

1. Reducer Model and Ratio
2. Reducer Mounting Position (A-H)
3. Motor Adaptor Model
4. Motor size

Reducer Mounting Position							
A-1-LH	B-1-LH	C-1-LH	D-1-LH	E-1-RH	F-1-RH	G-1-RH	H-1-RH

Mid-Range Linear Parts Handlers

Low Profile
Black Anodized
Aluminum Housing

Side Input Shaft
Ideal for Line
Shaft Applications



Linear Bearings

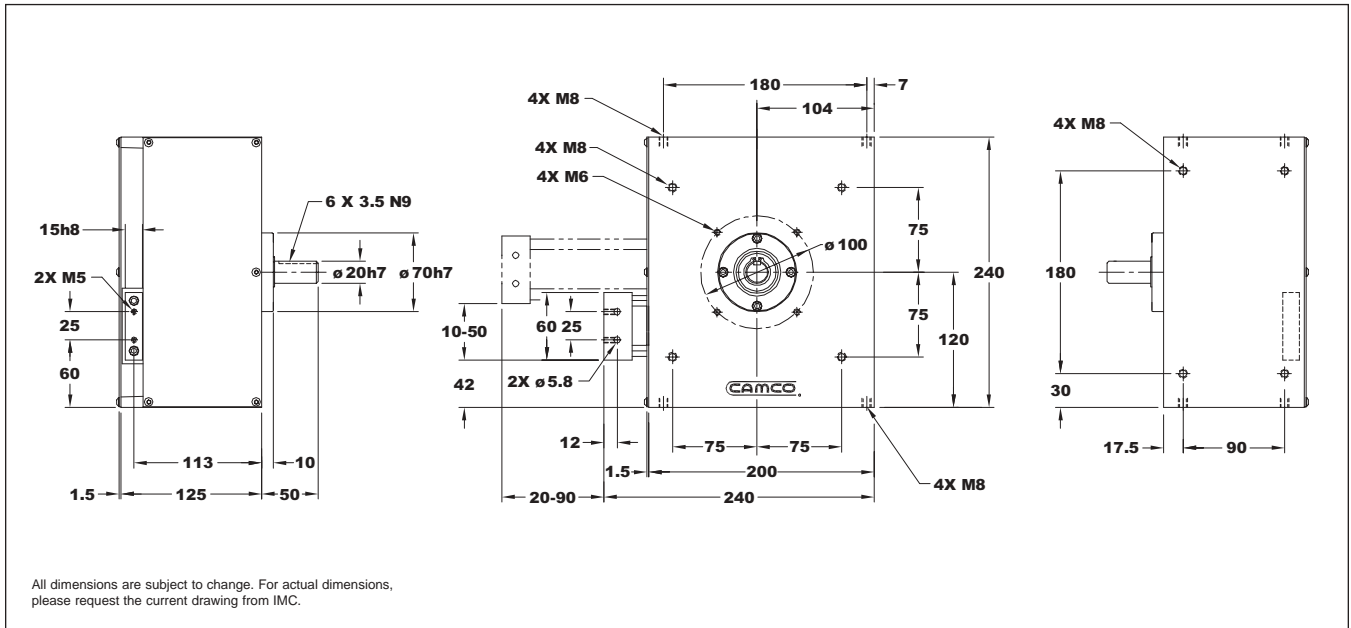
Large
Mounting
Surface

Black Oxide
Steel Cover

IMC Mid-Range Linear Parts Handlers (MR-LPP) are ideal for linear pick and place motions. With the input shaft extending from the side of the unit, multiple units can be placed side-by-side and line shaft driven with timing belts and pulleys.

- ◆ Lift and Transfer strokes can be adjusted in the field in 10 mm increments.
- ◆ Hardened and ground cams drive both axes.
- ◆ Preloaded, precision cam followers eliminate backlash and ensure smooth movement.
- ◆ Preloaded bushings (re-circulating ball type) support the internal carriage that drives the customer mounting surface. The ball bushings ride on hardened shafts providing stability and stiffness.
- ◆ Camshaft bearings are preloaded taper roller bearings.
- ◆ Compact Design
- ◆ Long-Life Grease Lubrication

LPP-101



I

Standard Motions

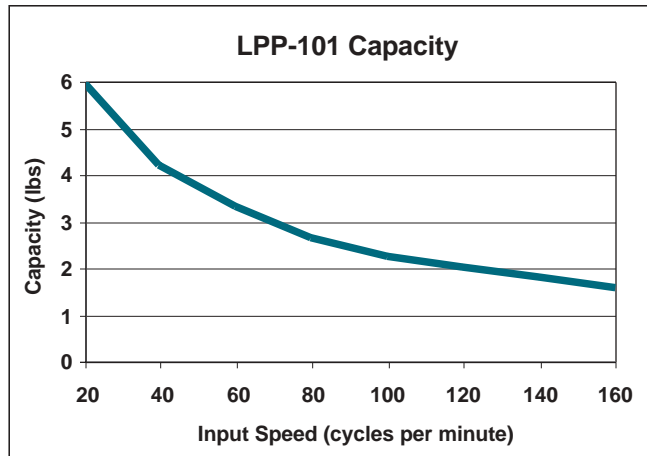
Any combination of Lift and Transfer distances

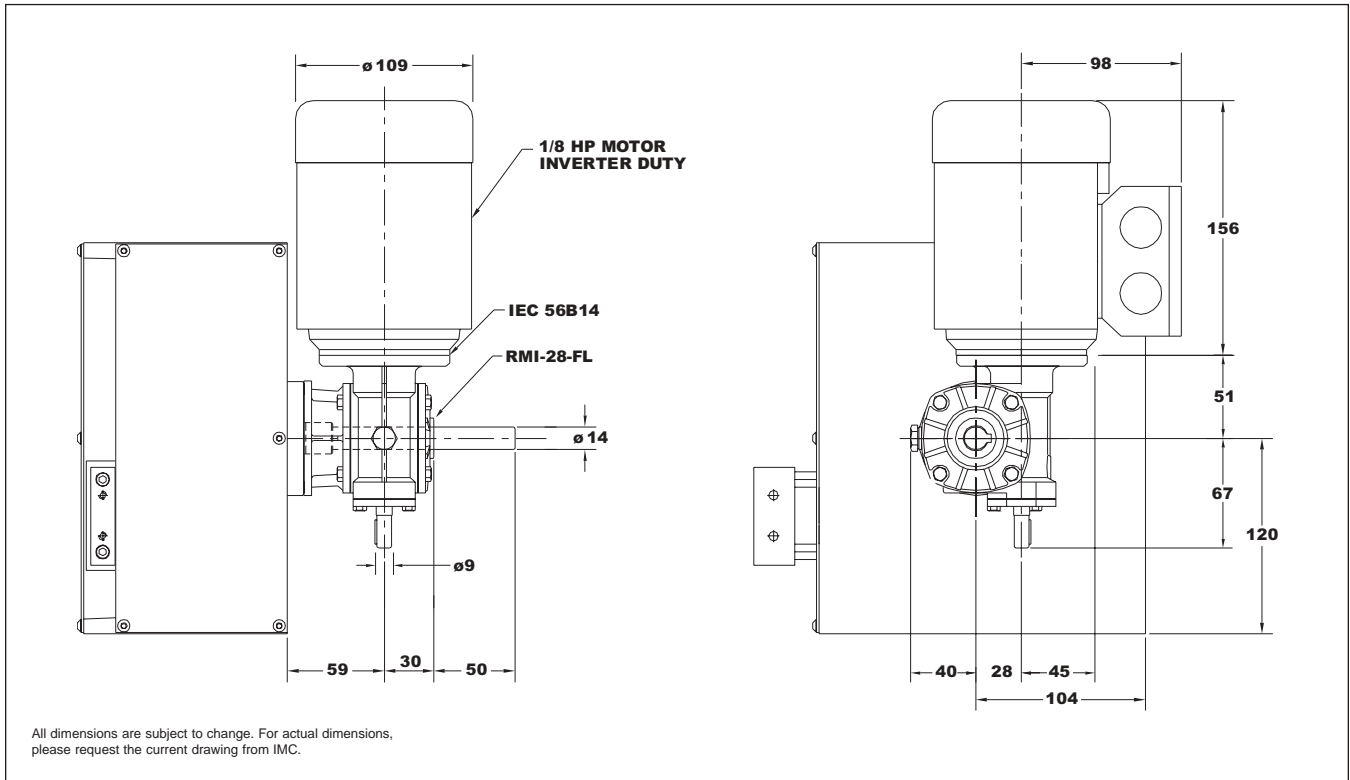
Lift Distance (mm) 10, 20, 30, 40, 50

Transfer Distance (mm) 20, 30, 40, 50, 60, 70, 80, 90

Technical Specifications

Lift Accuracy	±0.25mm
Lift Repeatability	±0.03mm
Transfer Accuracy	±0.64mm
Transfer Repeatability	±0.12mm





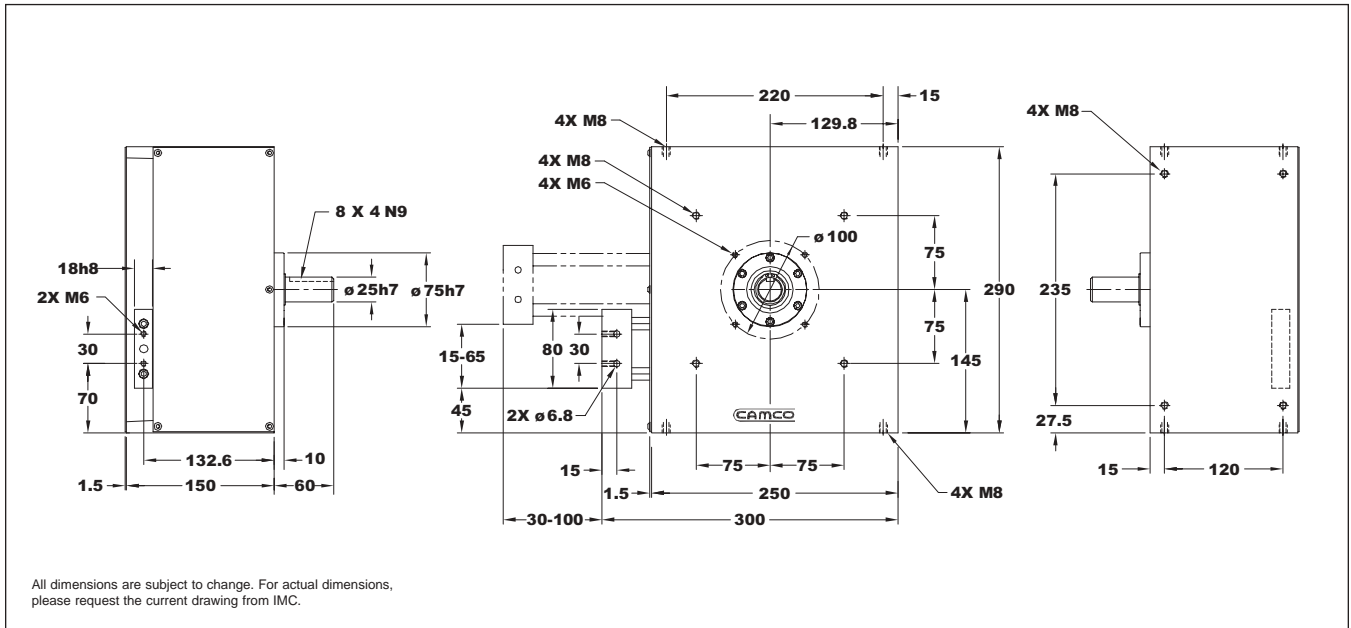
Standard Package

- ◆ RMI-28-FL Reducer
 - Ratios from 7:1 to 100:1
 - IEC 56B14 Adapter
- ◆ 1/8 hp Inverter Duty AC Motor

Optional Accessories

- ◆ AC Inverter Duty Motor with Inverter Drive (up to 60 cpm)
- ◆ Digi-Dog Digital Programmable Limit Switch
- ◆ Camtronics Rotary Limit Switch

LPP-201



I

Standard Motions

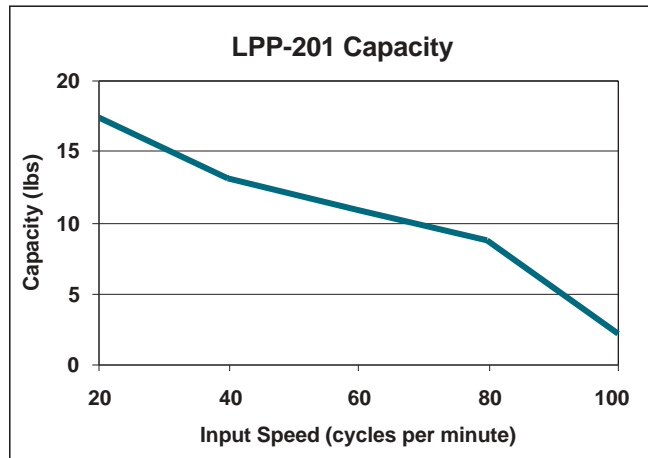
Any combination of Lift and Transfer distances

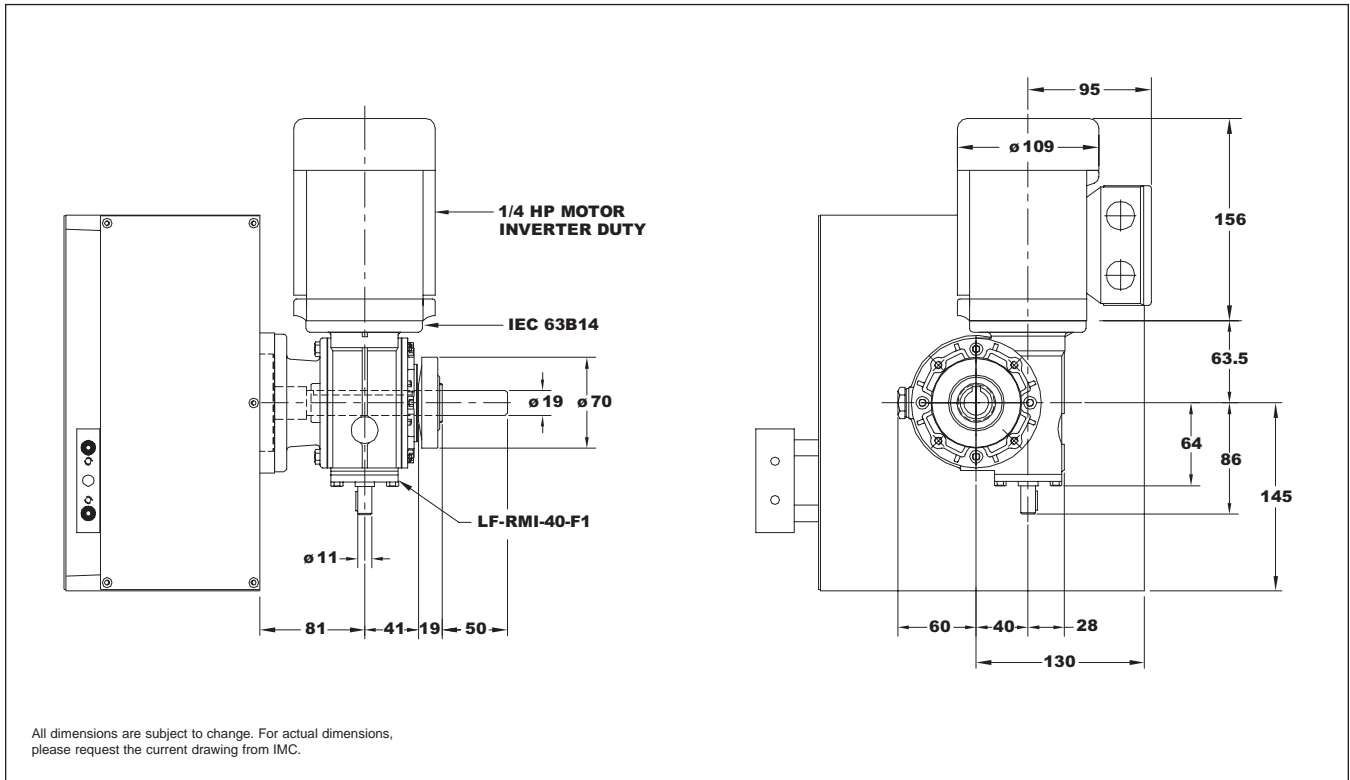
Lift Distance (mm) 15, 25, 35, 45, 55, 65

Transfer Distance (mm) 30, 40, 50, 60, 70, 80, 90, 100

Technical Specifications

Lift Accuracy	±0.25mm
Lift Repeatability	±0.03mm
Transfer Accuracy	±0.64mm
Transfer Repeatability	±0.12mm





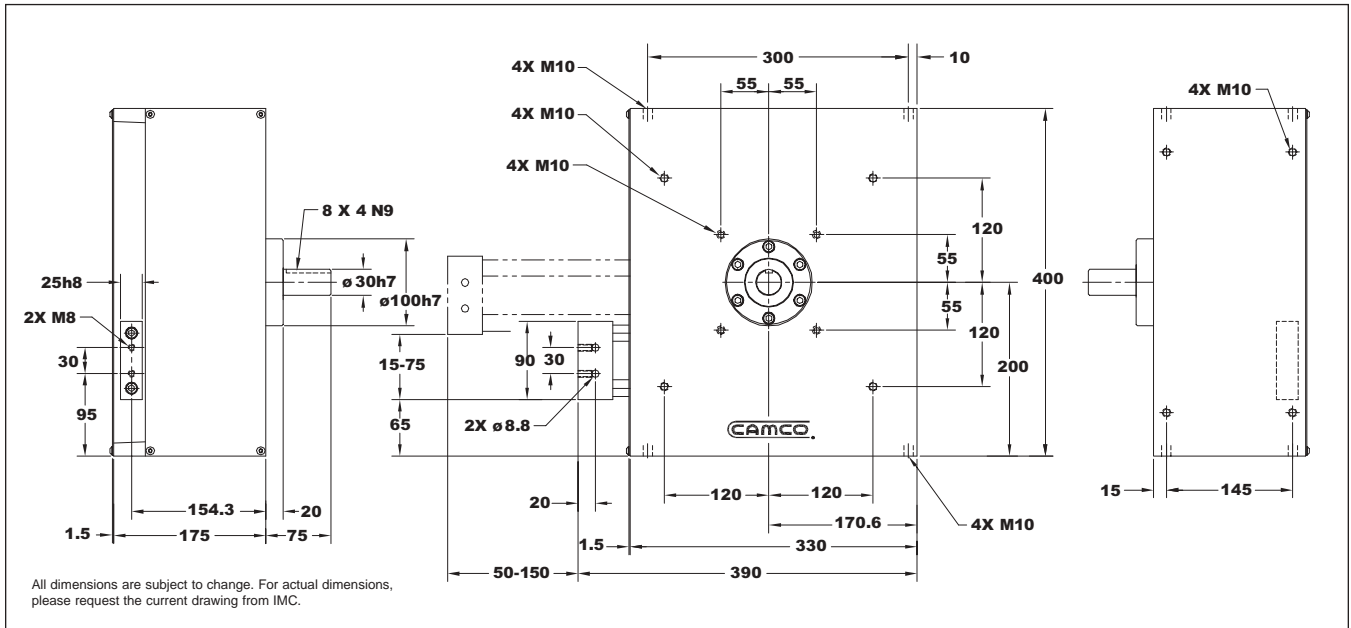
Standard Package

- ◆ RMI-40-F1 Reducer
 - Ratios from 7:1 to 100:1
 - IEC 63B5 Adapter
- ◆ 1/4 hp Inverter Duty AC Motor

Optional Accessories

- ◆ Internal Overload Clutch for Reducer
- ◆ AC Inverter Duty Motor with Inverter Drive (up to 60 cpm)
- ◆ Digi-Dog Digital Programmable Limit Switch
- ◆ Camtronics Rotary Limit Switch

LPP-301



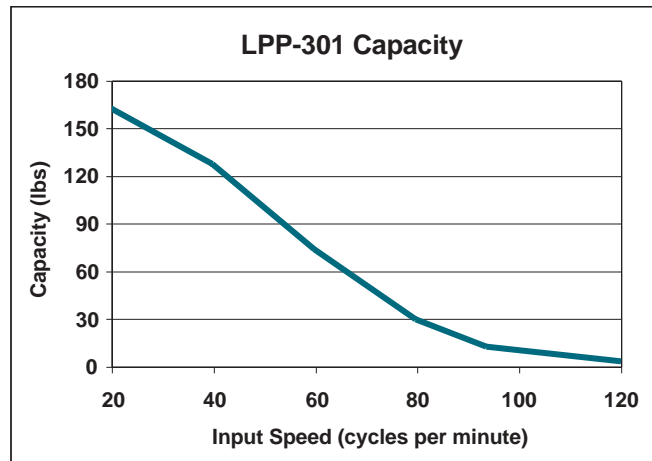
I

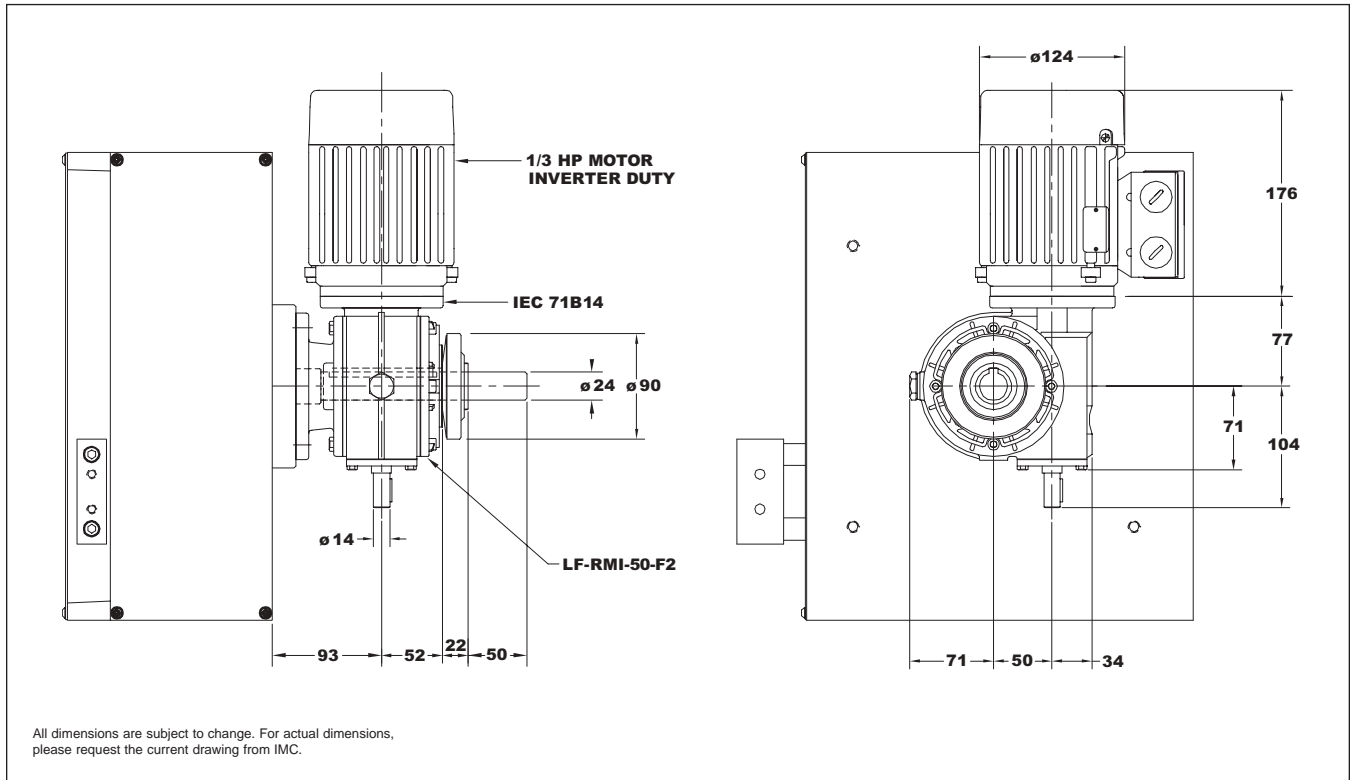
Standard Motions

Any combination of Lift and Transfer distances
Lift Distance (mm) 15, 25, 35, 45, 55, 65, 75
Transfer Distance (mm) 50, 70, 90, 110, 130, 150

Technical Specifications

Lift Accuracy	±0.25mm
Lift Repeatability	±0.03mm
Transfer Accuracy	±0.64mm
Transfer Repeatability	±0.12mm





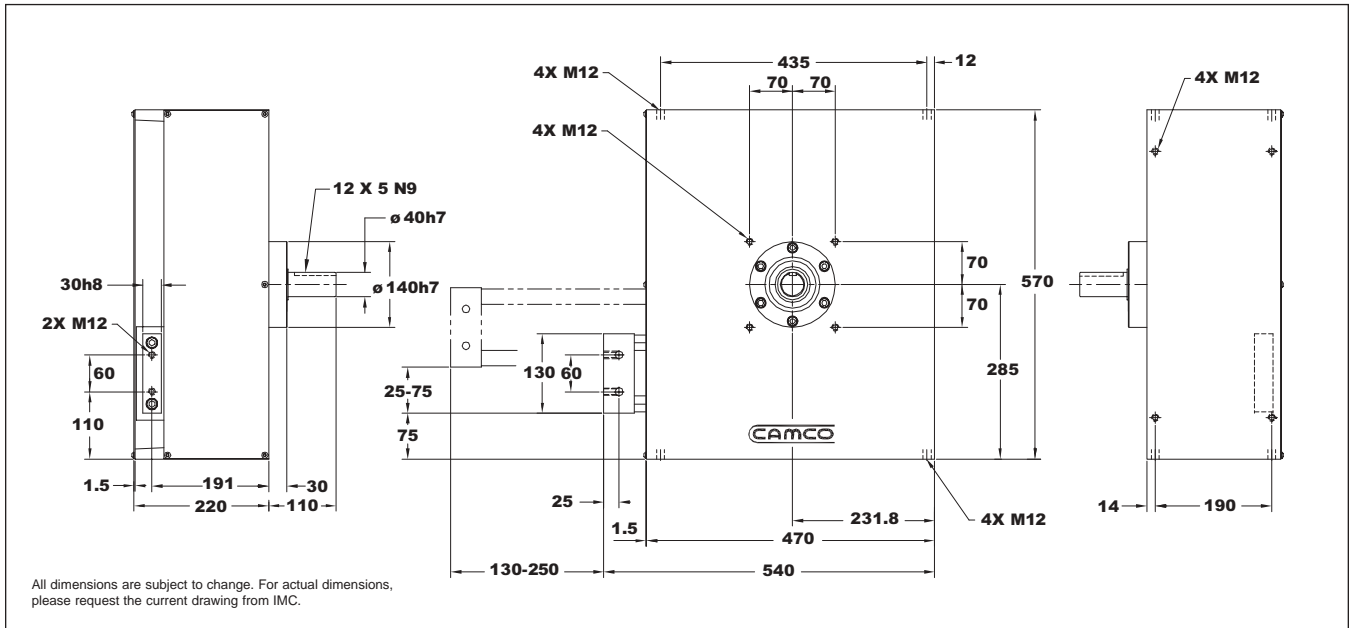
Standard Package

- ◆ RMI-50-F2 Reducer
 - Ratios from 7:1 to 100:1
 - IEC 71B5 Adapter
- ◆ 1/2 hp Inverter Duty AC Motor

Optional Accessories

- ◆ Internal Overload Clutch for Reducer
- ◆ AC Inverter Duty Motor with Inverter Drive (up to 60 cpm)
- ◆ Digi-Dog Digital Programmable Limit Switch
- ◆ Camtronics Rotary Limit Switch

LPP-401



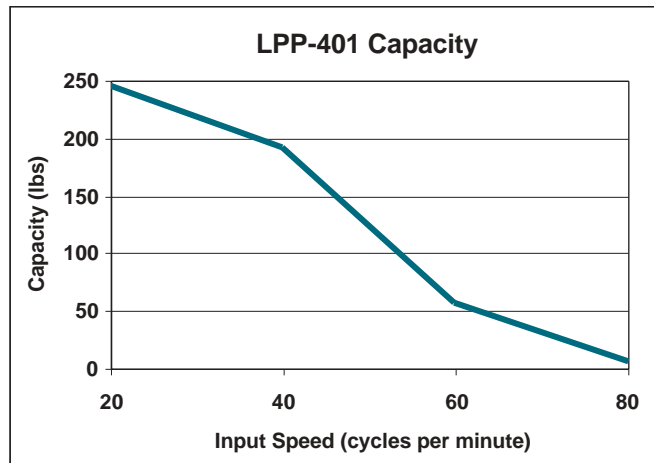
I

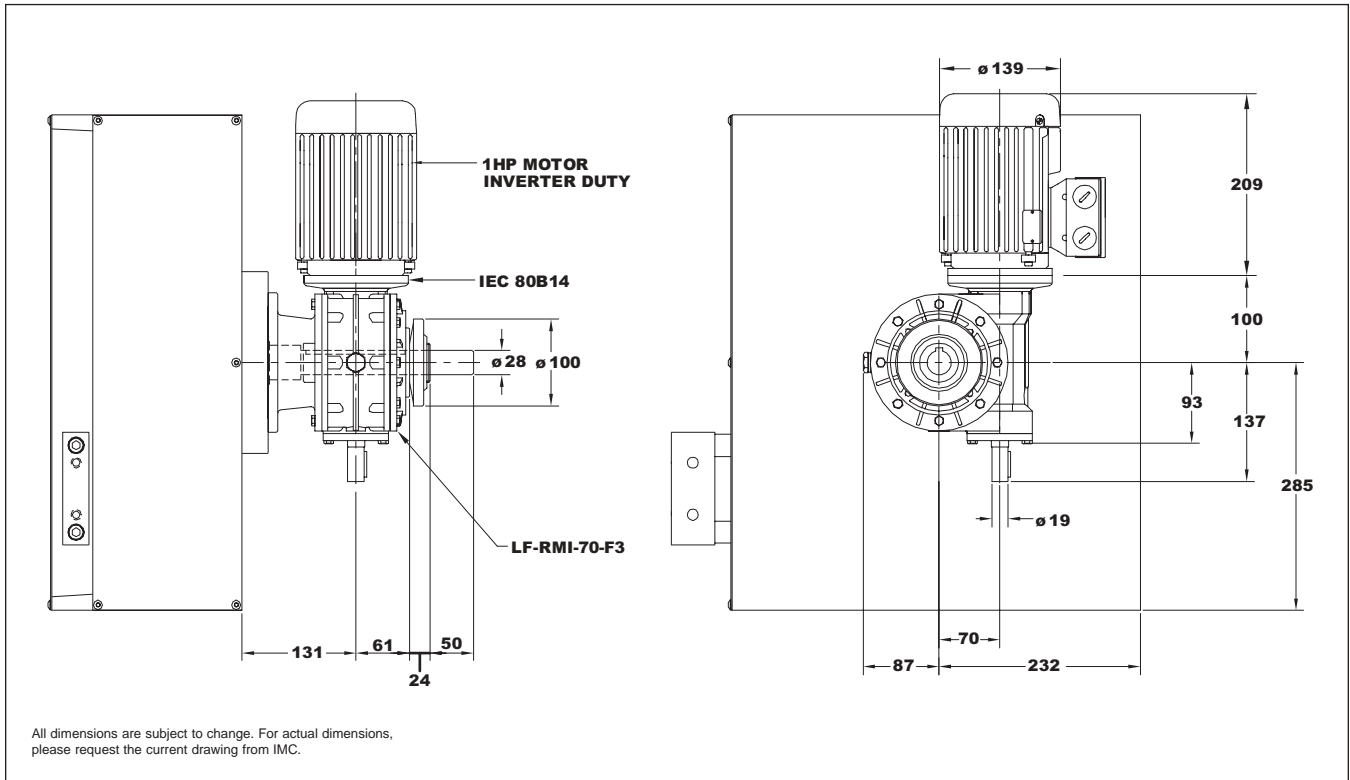
Standard Motions

Any combination of Lift and Transfer distances
Lift Distance (mm) 25, 35, 45, 55, 65, 75
Transfer Distance (mm) 130, 150, 170, 190, 210, 230, 250

Technical Specifications

Lift Accuracy	±0.25mm
Lift Repeatability	±0.03mm
Transfer Accuracy	±0.64mm
Transfer Repeatability	±0.12mm





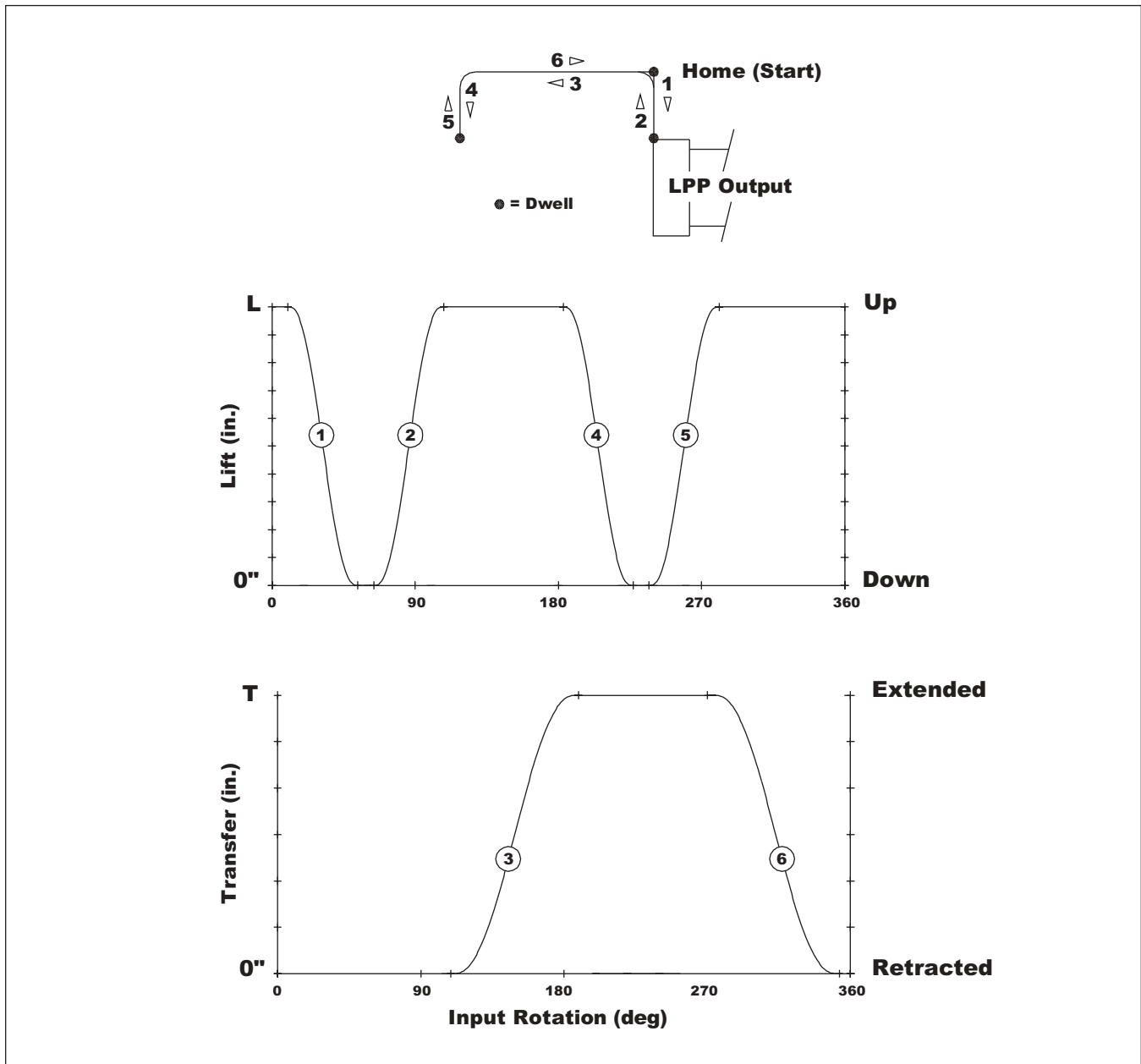
Standard Package

- ◆ RMI-50-F2 Reducer
 - Ratios from 7:1 to 100:1
 - IEC 71B5 Adapter
- ◆ 1/2 hp Inverter Duty AC Motor

Optional Accessories

- ◆ Internal Overload Clutch for Reducer
- ◆ AC Inverter Duty Motor with Inverter Drive (up to 60 cpm)
- ◆ Digi-Dog Digital Programmable Limit Switch
- ◆ Camtronics Rotary Limit Switch

Standard Motion Sequence



Motion Options

Standard starting position (home) at time 0 is at maximum lift (up) and fully retracted.

- ◆ The motion sequence can be mirrored in either the lift or transfer axes or in both axes.
 - The mirrored lift starts in the down position.
 - The mirrored transfer starts extended.
- ◆ Custom motion times are also available – consult your Sales Agent for more information.

MR-LPP Ordering Procedure

1. Model Number
2. Lift and Transfer Distances (mm)
3. Motion Sequence & Home Position
(standard is shown)

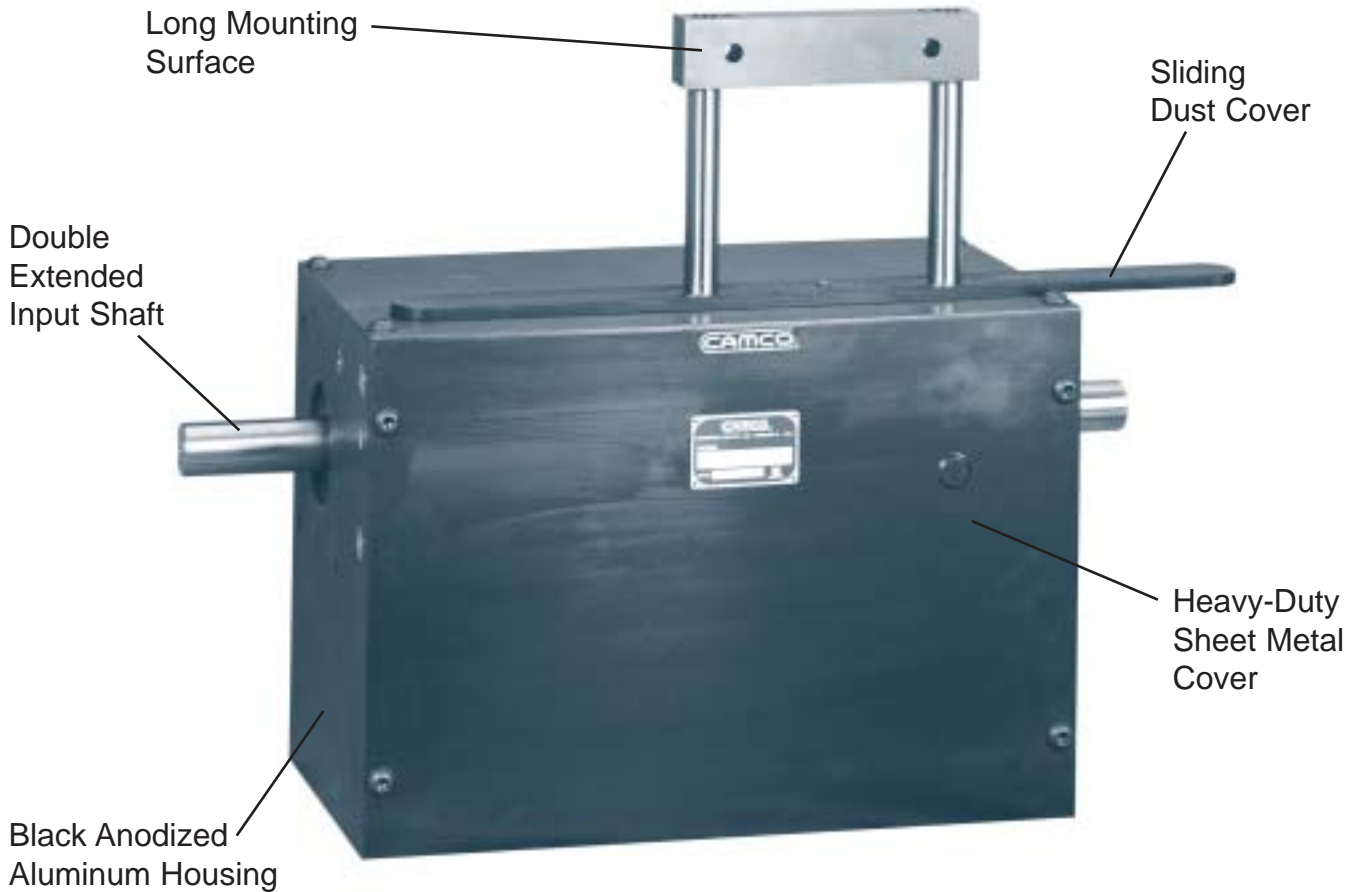
Position of Shafts		Indexer Mounting Position	
		1 	2
Standard Output Sequence <p>● = Dwell</p>		3 	4
		5 	6
		AE: Input Shaft	AS: Output Shaft

Drive Package Ordering Procedure

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

Reducer Mounting Position							
A-1-RH 	A-1-LH 	B-1-RH 	B-1-LH 	D-1-RH 	D-1-LH 	E-1-RH 	E-1-LH
A-2-RH 	A-2-LH 	B-2-RH 	B-2-LH 	D-2-RH 	D-2-LH 	E-2-RH 	E-2-LH

WBD Walking Beam Drives



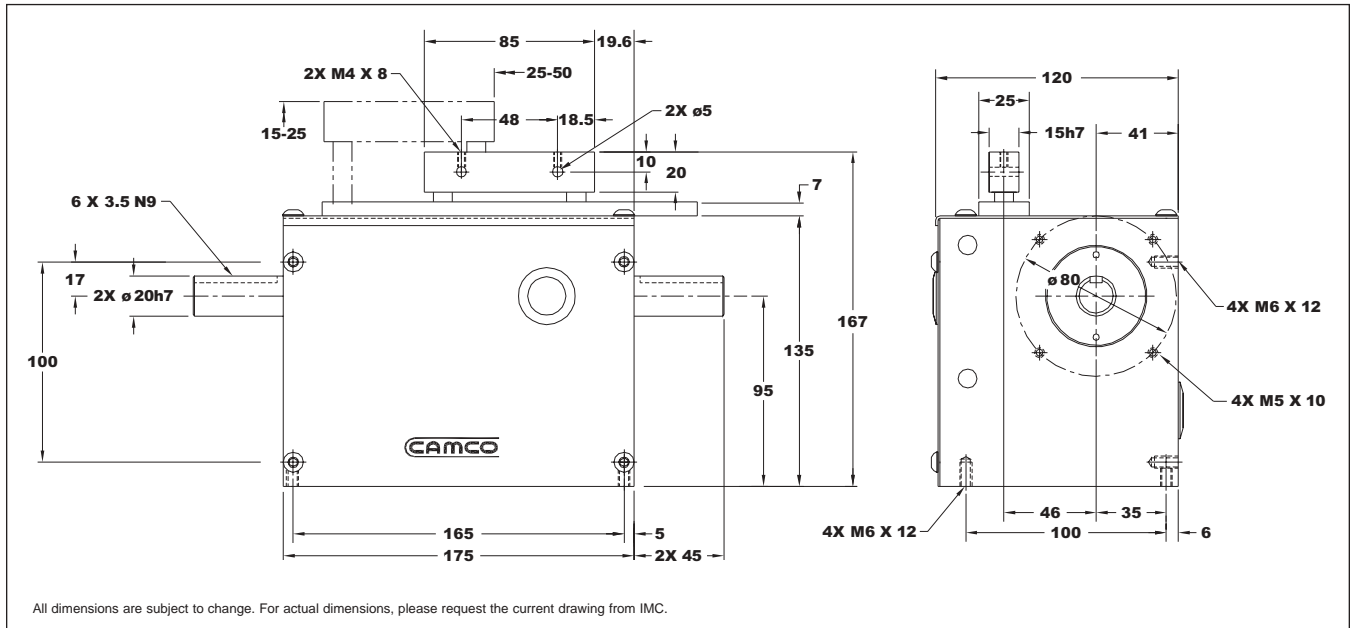
The IMC **Walking Beam Drive (WBD)** part handlers are rugged and precise cam operated mechanisms engineered for a minimum of 8000 hours of maintenance free life. A proven global design, there are several thousand drives used in automotive, packaging, electronics and many other industries.

IMC Walking Beam Drives provide the basis for highly accurate linear motion. The WBD is an economical alternative to a short precision link conveyor. It can also be used as a linear parts handler or a single axis actuator. Other features include:

- ◆ Hardened and ground cams drive both axes.
- ◆ Preloaded, precision cam followers eliminate backlash and ensure smooth movement.

- ◆ Preloaded bushings (re-circulating ball type) support the internal carriage that drives the customer mounting surface. The ball bushings ride on hardened shafts providing stability and stiffness.
- ◆ Preloaded taper roller bearings on Camshaft.
- ◆ Compact Design
- ◆ Long-Life Grease Lubrication
- ◆ Preloaded dust cover and shaft seals keep the internal mechanism clean.

WBD-101



I

Standard Motions

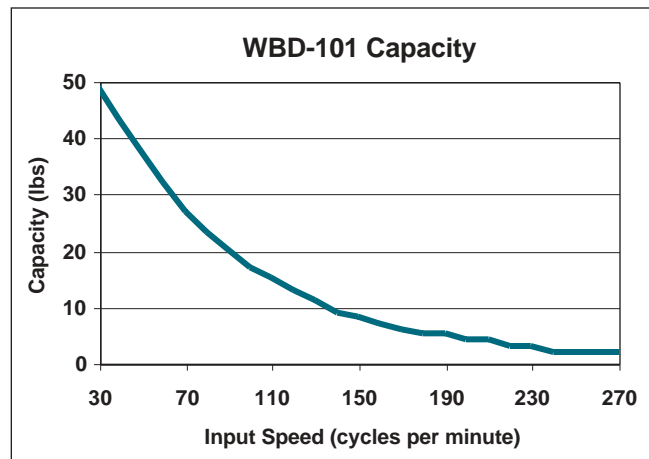
Any combination of Lift and Transfer distances

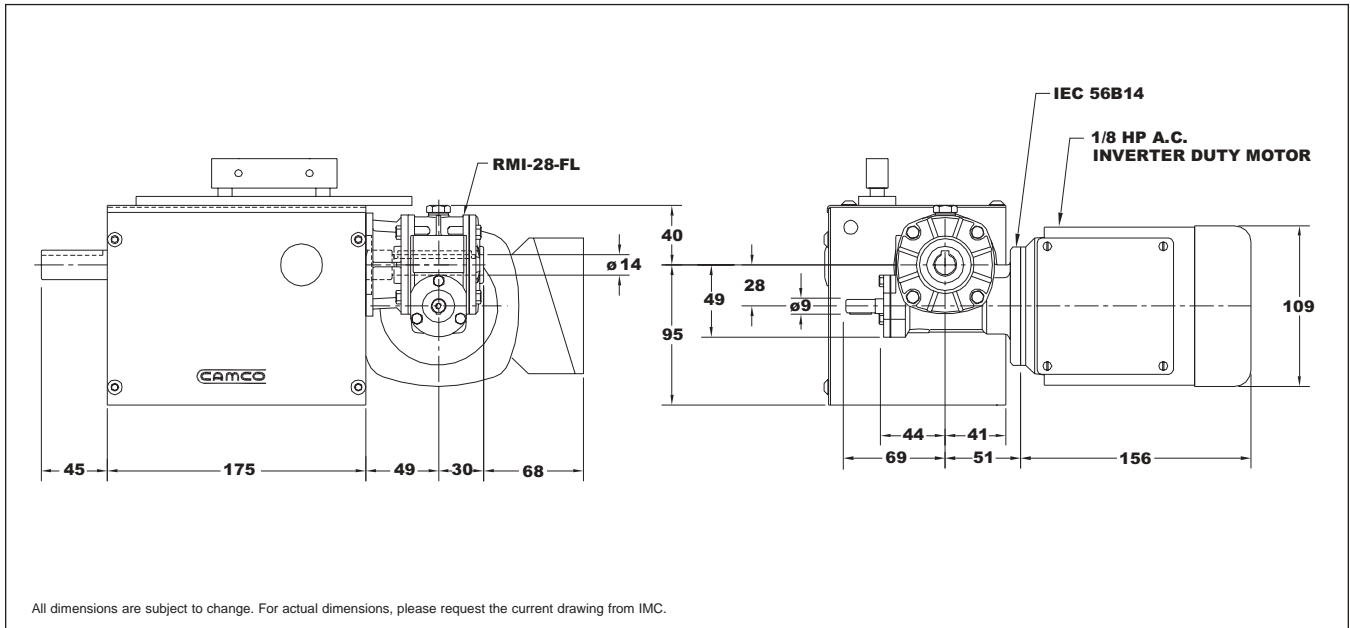
Lift Distance (mm) 15, 20, 25

Transfer Distance (mm) 25, 38, 50

Technical Specifications

Lift Accuracy	$\pm 0.25\text{mm}$
Lift Repeatability	$\pm 0.05\text{mm}$
Transfer Accuracy	$\pm 0.13\text{mm}$
Transfer Repeatability	$\pm 0.05\text{mm}$





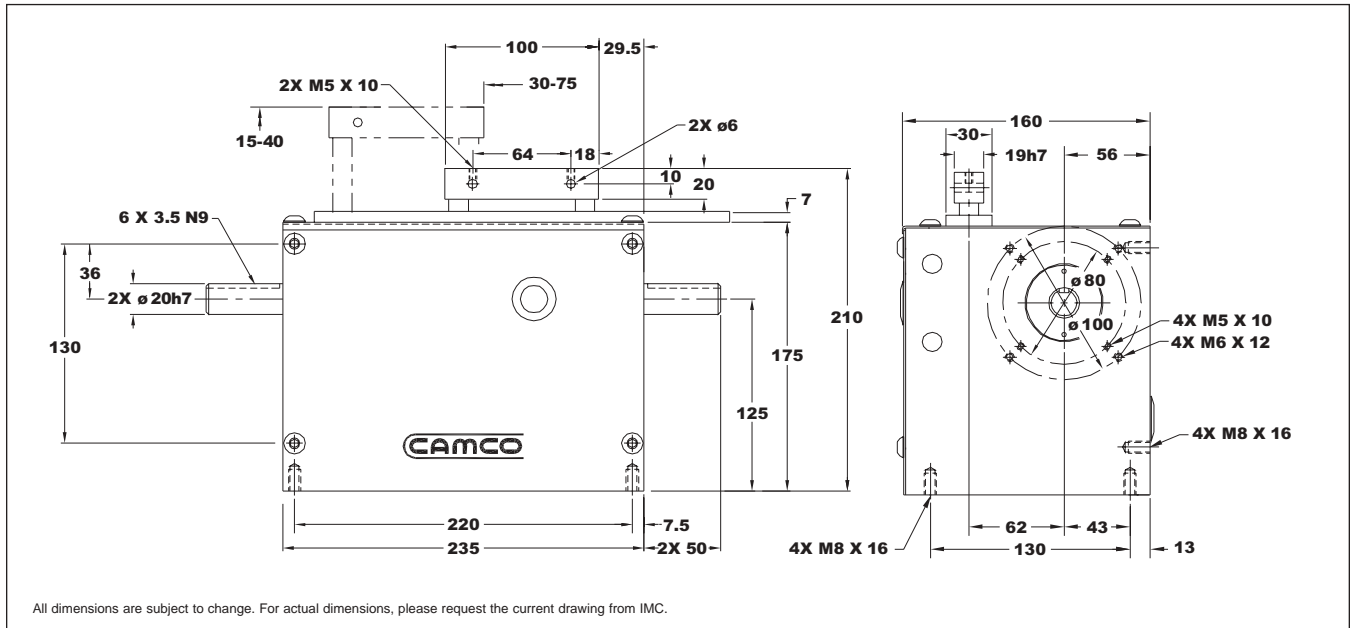
Standard Package

- ◆ RMI-28-FL reducer
 - Ratios from 7:1 to 100:1
 - IEC 56B14 adapter
- ◆ 1/8 hp Inverter Duty AC Motor
- ◆ Cycle Cam and Limit Switch

Optional Accessories

- ◆ AC Inverter Duty Motor with Inverter Drive (up to 60 cpm)
- ◆ Digi-Dog Digital Programmable Limit Switch
- ◆ Camtronics Rotary Limit Switch

WBD-201

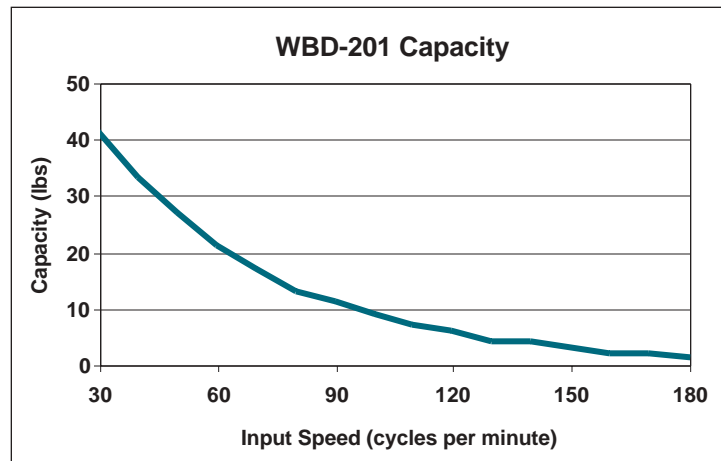


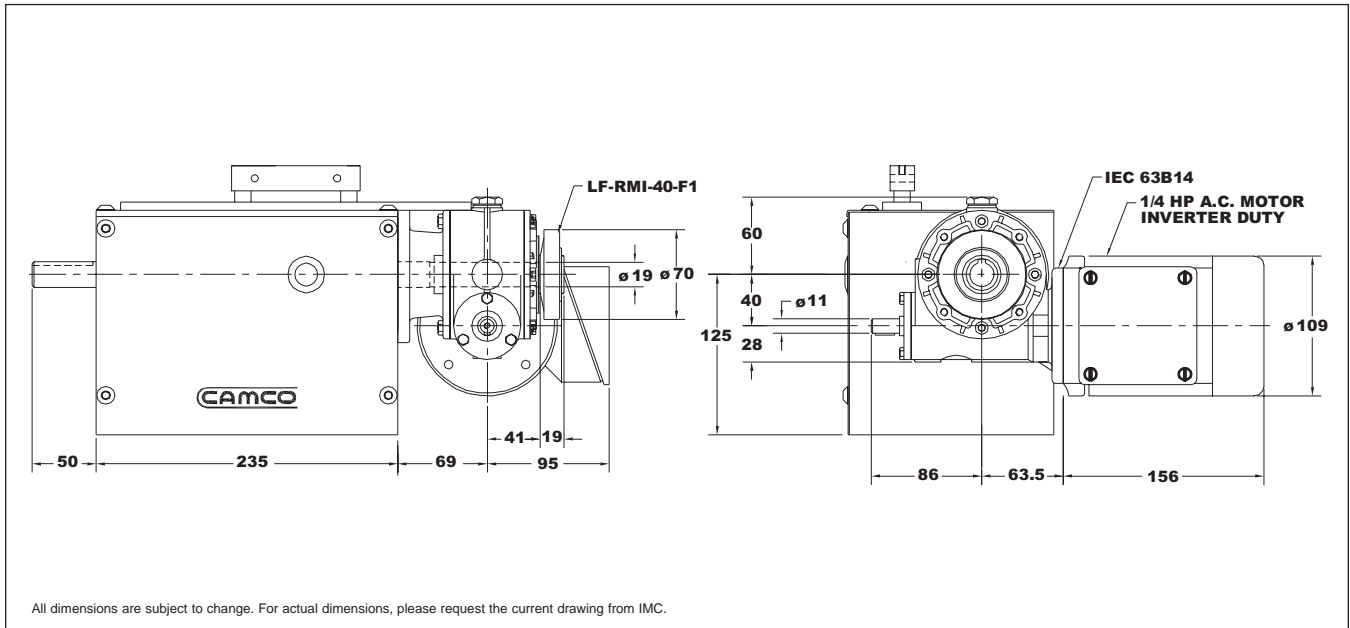
I Standard Motions (Lift x Transfer)

- 15mm x 30mm
- 20mm x 40mm
- 25mm x 50mm
- 35mm x 65mm
- 40mm x 75mm

Technical Specifications

Lift Accuracy	±0.25mm
Lift Repeatability	±0.05mm
Transfer Accuracy	±0.13mm
Transfer Repeatability	±0.05mm





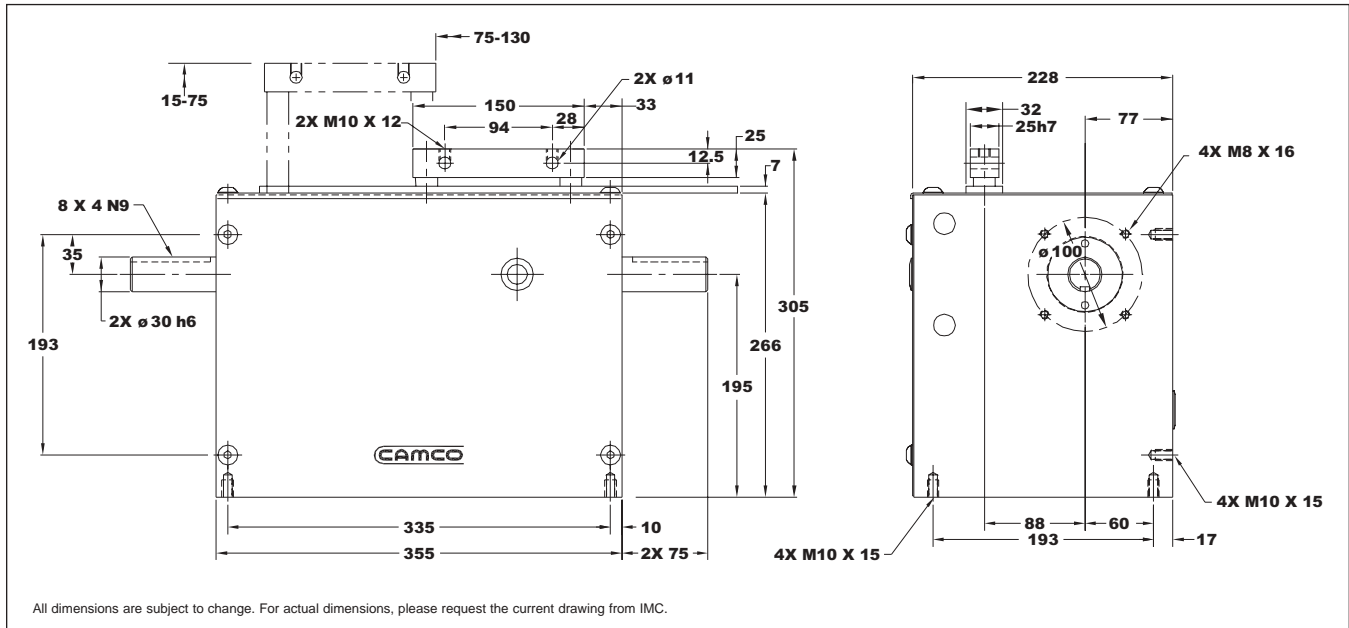
Standard Package

- ◆ RMI-40-F1 reducer
 - Ratios from 7:1 to 100:1
 - IEC 63B5 adapter
- ◆ 1/4 hp Inverter Duty AC Motor
- ◆ Cycle Cam and Limit Switch

Optional Accessories

- ◆ Internal Overload Clutch for Reducer
- ◆ AC Inverter Duty Motor with Inverter Drive (up to 60 cpm)
- ◆ Digi-Dog Digital Programmable Limit Switch
- ◆ Camtronics Rotary Limit Switch

WBD-301



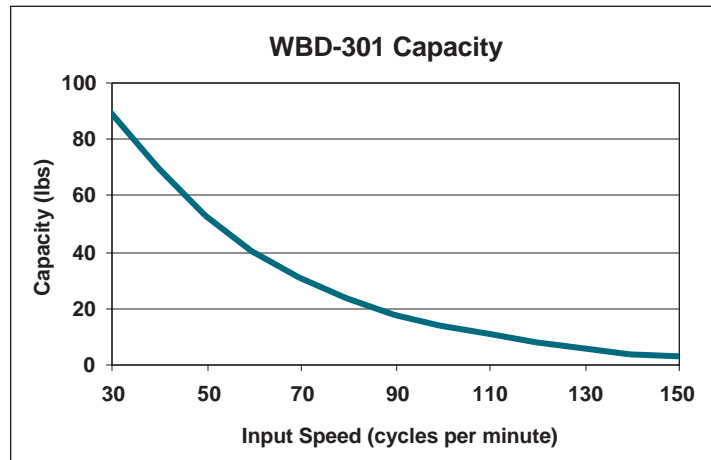
I

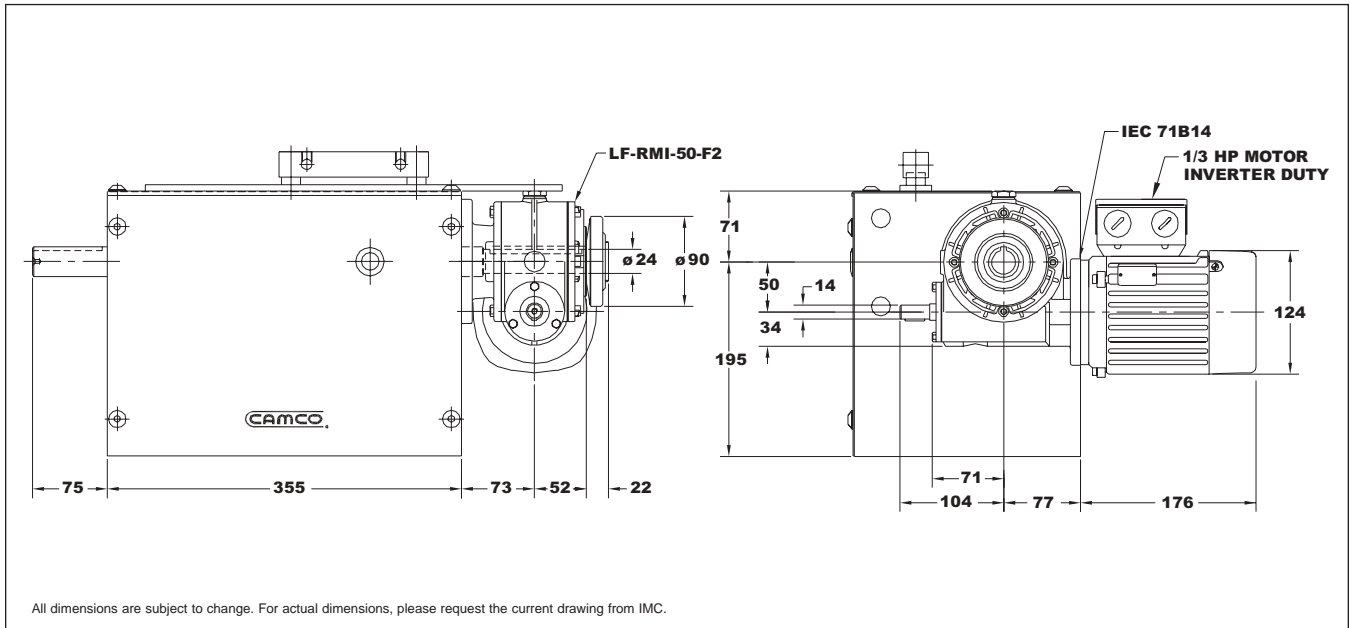
Standard Motions (Lift x Transfer)

50mm x 75mm	15mm x 130mm
15mm x 100mm	25mm x 130mm
25mm x 100mm	40mm x 130mm
40mm x 100mm	50mm x 130mm
50mm x 100mm	75mm x 130mm
75mm x 100mm	

Technical Specifications

Lift Accuracy	$\pm 0.25\text{mm}$
Lift Repeatability	$\pm 0.05\text{mm}$
Transfer Accuracy	$\pm 0.13\text{mm}$
Transfer Repeatability	$\pm 0.05\text{mm}$





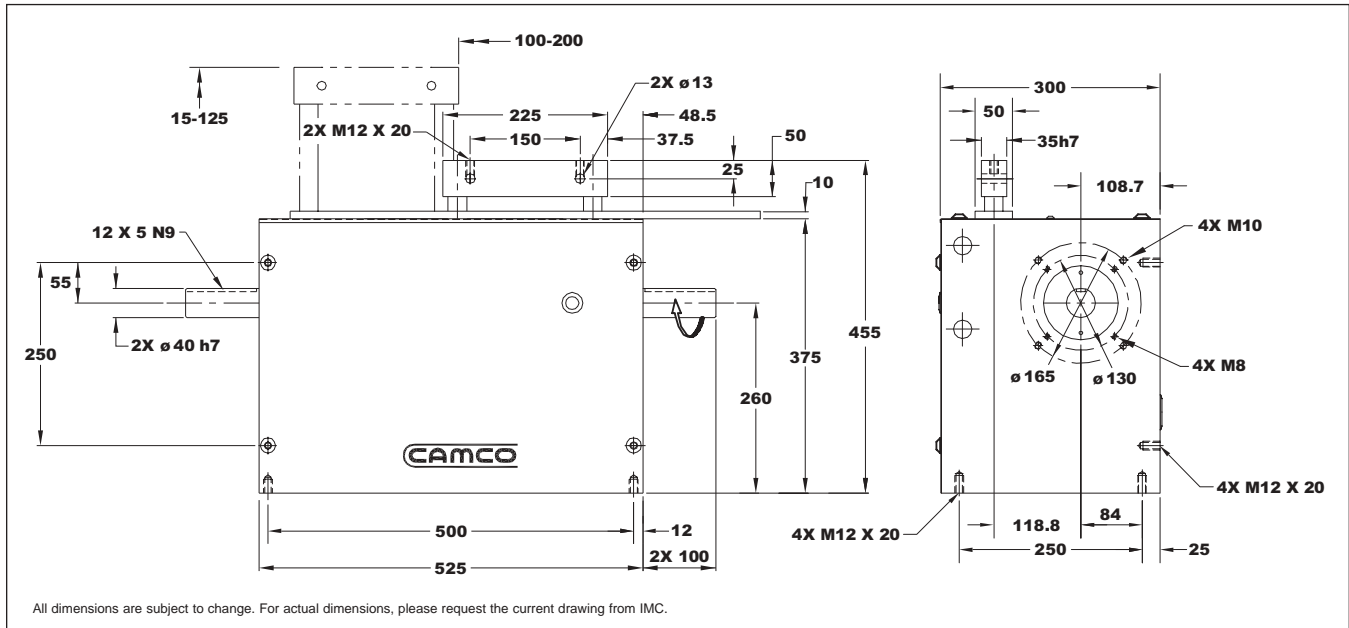
Standard Package

- ◆ RMI-50-F2 reducer
 - Ratios from 7:1 to 100:1
 - IEC 71B5 adapter
- ◆ 1/2 hp Inverter Duty AC Motor
- ◆ Cycle Cam and Limit Switch

Optional Accessories

- ◆ Internal Overload Clutch for Reducer
- ◆ AC Inverter Duty Motor with Inverter Drive (up to 60 cpm)
- ◆ Digi-Dog Digital Programmable Limit Switch
- ◆ Camtronics Rotary Limit Switch

WBD-401



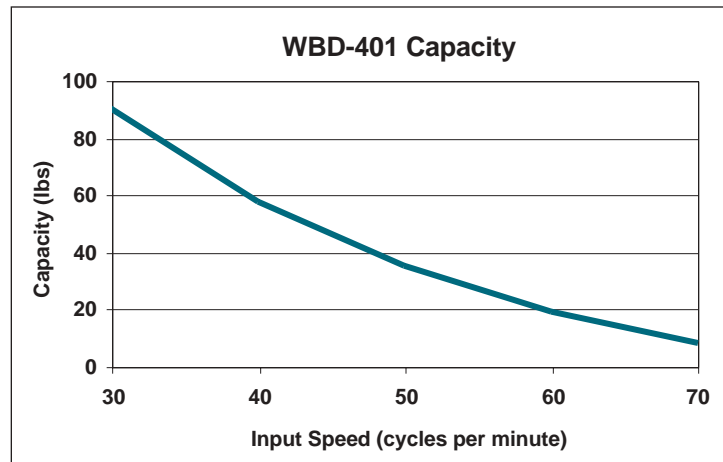
I

Standard Motions

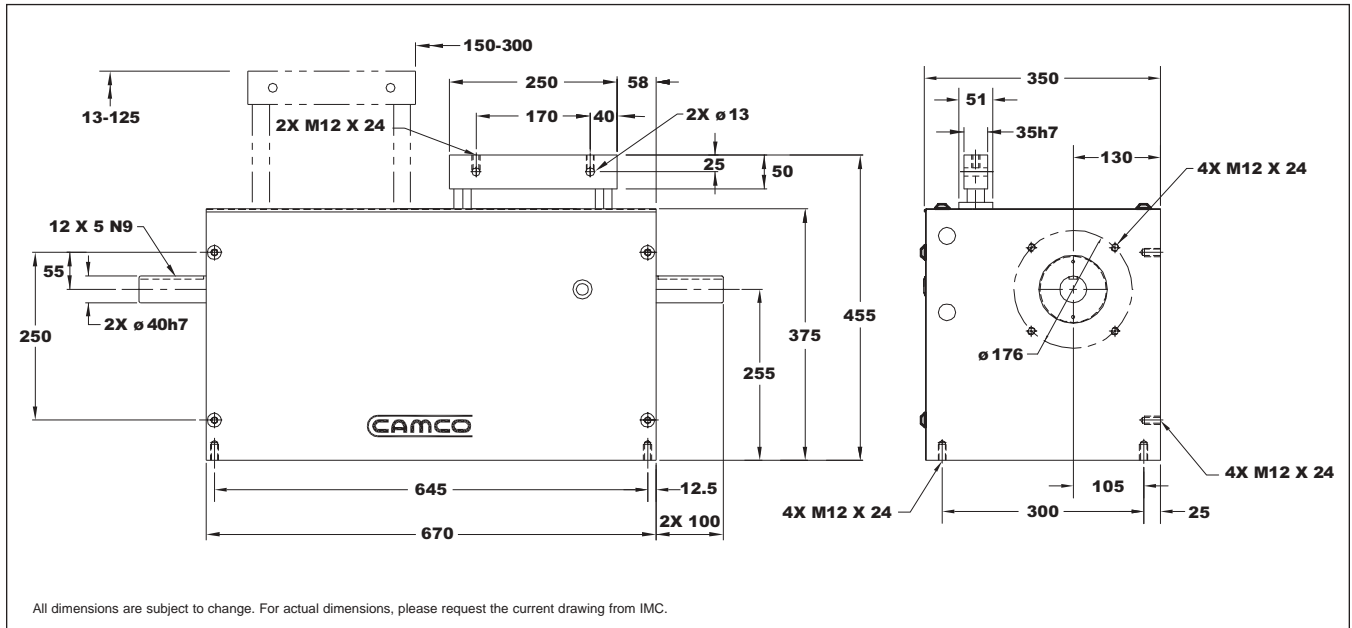
Any combination of Lift and Transfer distances
Lift Distance (mm) 15, 25, 40, 50, 75, 100, 125
Transfer Distance (mm) 100, 125, 150, 200

Technical Specifications

Lift Accuracy	$\pm 0.25\text{mm}$
Lift Repeatability	$\pm 0.05\text{mm}$
Transfer Accuracy	$\pm 0.13\text{mm}$
Transfer Repeatability	$\pm 0.05\text{mm}$



WBD-501



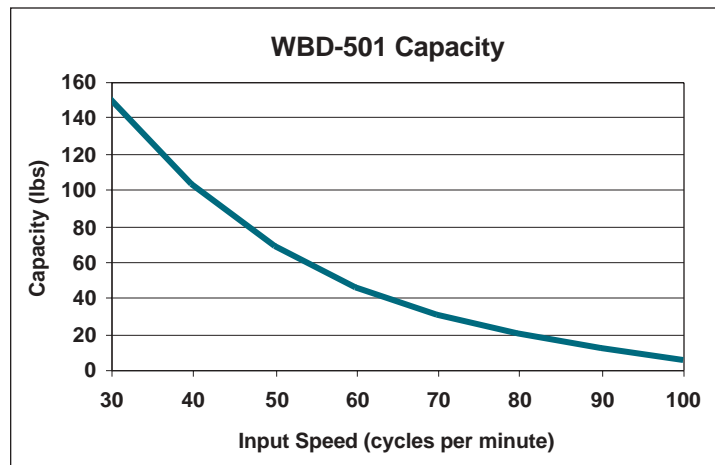
I

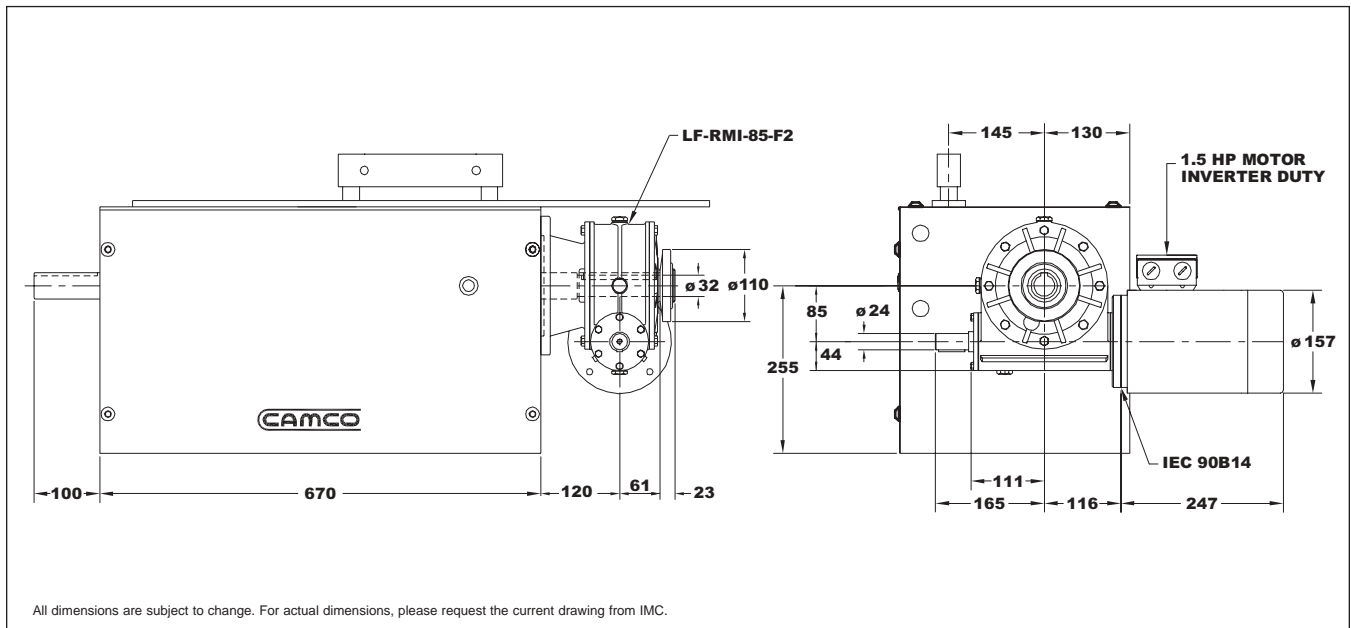
Standard Motions

Any combination of Lift and Transfer distances
Lift Distance (mm) 13, 25, 38, 50, 75, 100, 125
Transfer Distance (mm) 150, 200, 250, 300

Technical Specifications

Lift Accuracy	±0.30mm
Lift Repeatability	±0.10mm
Transfer Accuracy	±0.18mm
Transfer Repeatability	±0.10mm





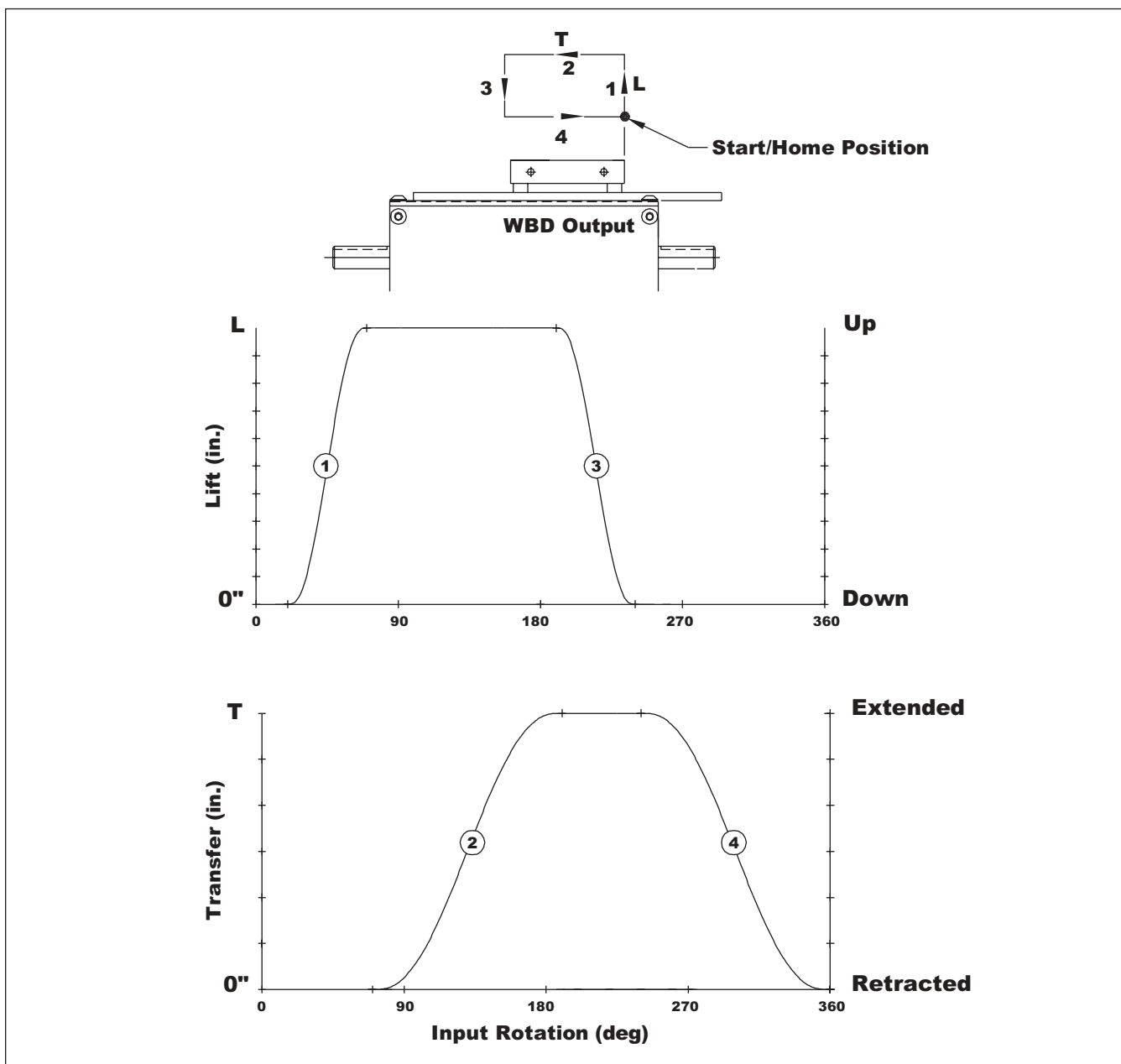
Standard Package

- ◆ RMI-70-F3 reducer
 - Ratios from 7:1 to 100:1
 - IEC 80B5 adapter
- ◆ 1 hp Inverter Duty AC Motor
- ◆ Cycle Cam and Limit Switch

Optional Accessories

- ◆ Internal Overload Clutch for Reducer
- ◆ AC Inverter Duty Motor with Inverter Drive (up to 60 cpm)
- ◆ Digi-Dog Digital Programmable Limit Switch
- ◆ Camtronics Rotary Limit Switch

Standard Motion Sequence



Motion Options

Standard starting position (home) at time 0° is down and fully retracted.

- ◆ The motion sequence can be mirrored in either the lift or transfer axes or in both axes.
 - The mirrored lift starts in the up position.
 - The mirrored transfer starts extended.
- ◆ Custom motion times are also available – consult your Sales Agent for more information.

WBD Ordering Procedure

1. Model Number
2. Lift and Transfer Distances (mm)
3. Motion Sequence & Home Position
(standard is shown)

<p align="center">Position of Shafts</p>											
<p align="center">Standard Output Sequence</p>											
<p align="center">Indexer Mounting Position</p> <table border="1"> <tr> <td> <p align="center">1</p> </td> <td> <p align="center">2</p> </td> </tr> <tr> <td> <p align="center">3</p> </td> <td> <p align="center">4</p> </td> </tr> <tr> <td> <p align="center">5</p> </td> <td> <p align="center">6</p> </td> </tr> <tr> <td align="center" colspan="2"> <p>AE: Input Shaft</p> </td> <td align="center" colspan="2"> <p>AS: Output Shaft</p> </td> </tr> </table>		<p align="center">1</p>	<p align="center">2</p>	<p align="center">3</p>	<p align="center">4</p>	<p align="center">5</p>	<p align="center">6</p>	<p>AE: Input Shaft</p>		<p>AS: Output Shaft</p>	
<p align="center">1</p>	<p align="center">2</p>										
<p align="center">3</p>	<p align="center">4</p>										
<p align="center">5</p>	<p align="center">6</p>										
<p>AE: Input Shaft</p>		<p>AS: Output Shaft</p>									

I

Drive Package Ordering Procedure

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

Reducer Mounting Position							
A-1-RH	A-1-LH	B-1-RH	B-1-LH	C-1-RH	C-1-LH	D-1-RH	D-1-LH
A-2-RH	A-2-LH	B-2-RH	B-2-LH	C-2-RH	C-2-LH	D-2-RH	D-2-LH



I