

# PRECISION INDEXING SOLUTIONS

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# ROLLER DIAL INDEX DRIVES

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## 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 kW [HP]
<b>425RD</b>	w/ R180 reducer & 0.25 [1/3] AC motor (220/440V)
<b>800RD</b>	w/ 7300C reducer & 1.49 [2] AC motor (220/440V)
<b>1301RD</b>	w/ 7350C reducer & 1.49 [2] AC motor (220/440V)
<b>1801RD</b>	w/ 7500C reducer & 2.24 [3] 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)

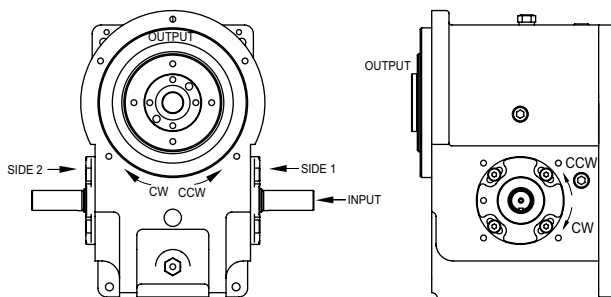
- A** **J**
- B** **K**
- C** **L**
- D** **M**
- E** **N**
- F** **P**
- G** **R**
- H** **S**

**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)



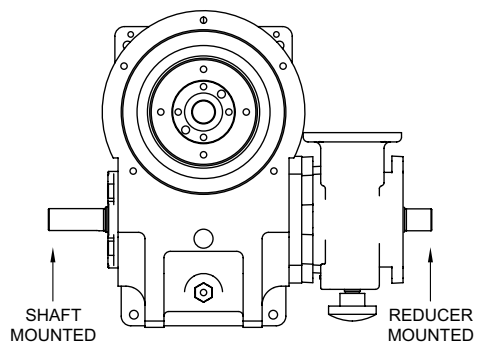
**Relative Rotation for Right Hand Cam:**

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

NOTE: Input can be driven in either direction

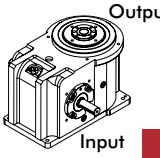
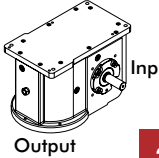
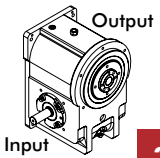
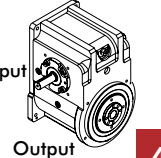
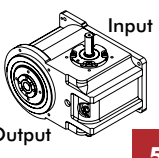
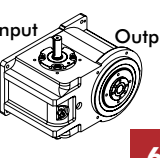


### Signal Switch Mounting Position (Figure 2)

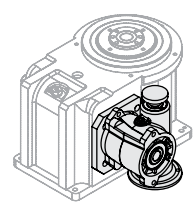
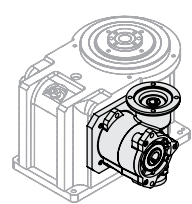
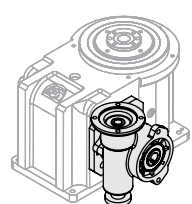
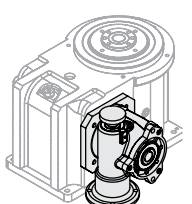
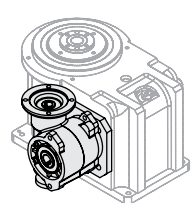
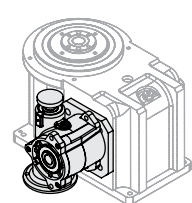
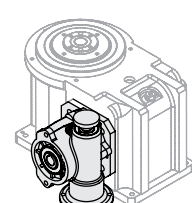
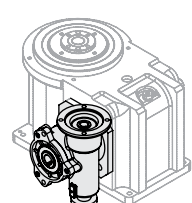
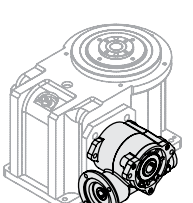
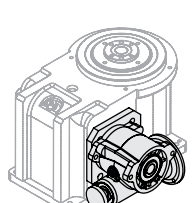
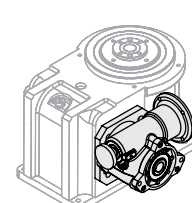
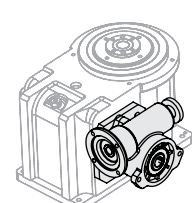
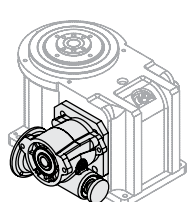
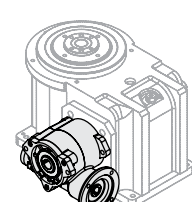
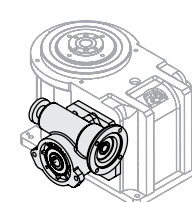
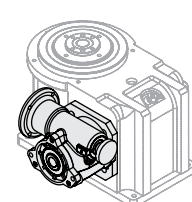


# RD SERIES

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

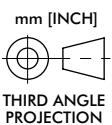
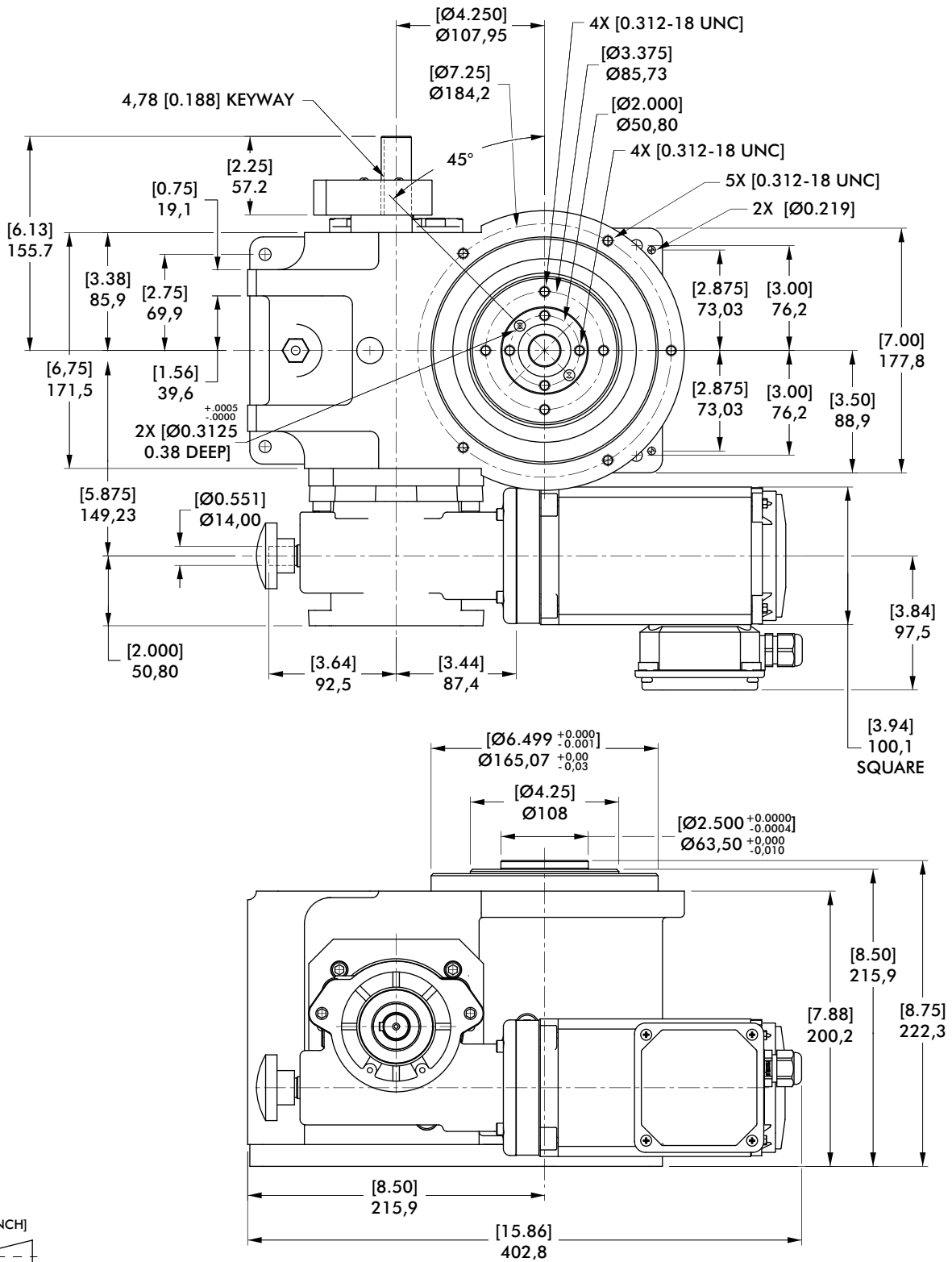
<b>OVOI</b> (output vertical, over input)	<b>OVUI</b> (output vertical, under input)	<b>OHOI</b> (output horizontal, over input)	<b>OHUI</b> (output horizontal, under input)	<b>H-S1-UP</b> (output horizontal, side 1 up)	<b>H-S2-UP</b> (output horizontal, side 2 up)
 <p>Output</p> <p>Input</p> <p><b>1</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>SIDE 2</b>		<b>E</b>		<b>F</b>		<b>G</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>K</b>		<b>L</b>		<b>M</b>
	<b>SIDE 2</b>		<b>N</b>		<b>P</b>		<b>R</b>	

# 425RD SERIES

## Roller Dial Index Drives | Dimensions



Maximum Inertia x 1000 kg-cm <sup>2</sup> [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]	3 [1]	6 [2]	12 [4]	32 [11]	47 [16]	64 [22]
3	3 [1]	6 [2]	18 [6]	32 [11]	73 [25]	108 [37]	146 [50]
4	3 [1]	15 [5]	29 [10]	56 [19]	129 [44]	193 [66]	263 [90]
6	12 [4]	32 [11]	70 [24]	129 [44]	293 [100]	439 [150]	457 [156]
8	20 [7]	59 [20]	126 [43]	231 [79]	457 [156]	457 [156]	457 [156]
12	47 [16]	132 [45]	260 [89]	398 [136]	430 [147]	430 [147]	430 [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):

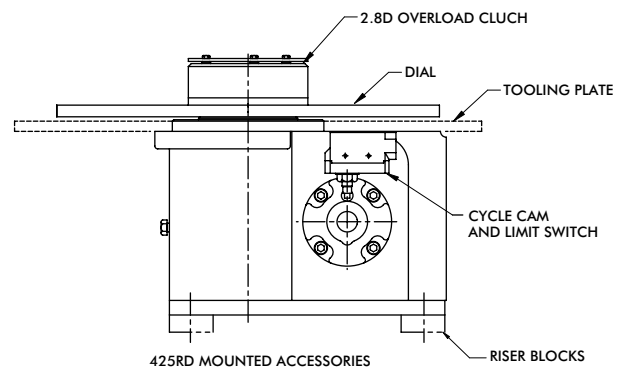
Radial	12010 N [2700 lbs]
Thrust/Axial	717 N [1600 lbs]
Moment	655 N-m [5800 in-lbs]

## Accuracy

±47 arcsec / ±0,025 mm [±.0027 in] at 304,8 mm [12 in] Radius

## Repeatability

±12 arcsec / ±0,018 mm [±.0007 in] at 304,8 mm [12 in] Radius



Unless otherwise noted, all dimensions are in inches.



Maximum Inertia x 1000 kg-cm <sup>2</sup> [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	6 [2]	23 [8]	50 [17]	94 [32]	161 [55]	243 [83]	334 [114]
3	20 [7]	56 [19]	117 [40]	211 [72]	366 [125]	547 [187]	755 [258]
4	38 [13]	102 [35]	211 [72]	380 [130]	653 [223]	977 [334]	1343 [459]
6	88 [30]	231 [79]	480 [164]	857 [293]	1475 [504]	2204 [753]	3026 [1034]
8	158 [54]	416 [142]	855 [292]	1525 [521]	2625 [897]	3605 [1232]	3605 [1232]
12	360 [123]	913 [312]	1528 [522]	2324 [794]	3383 [1156]	3383 [1156]	3383 [1156]
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):

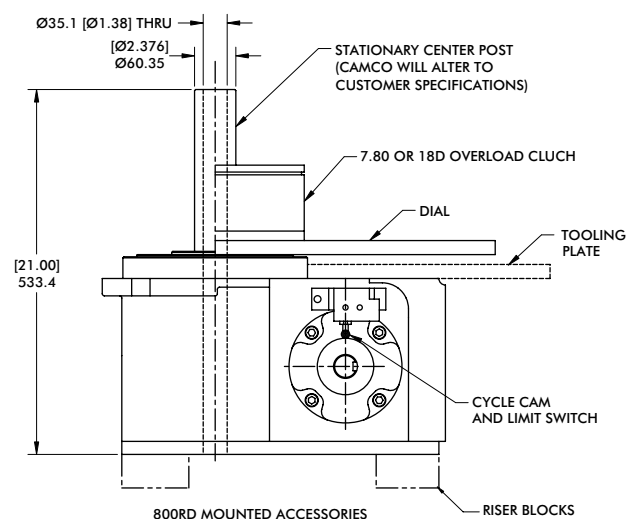
Radial	22139 N [4977 lbs]
Thrust/Axial	15840 N [3561 lbs]
Moment	2531 N-m [22398 in-lbs]

## Accuracy

±30 arcsec / ±0,102 mm [±.004 in] at 609,6 mm [24 in] Radius

## Repeatability

±8 arcsec / ±0,023 mm [±.0009 in] at 609,6 mm [24 in] Radius

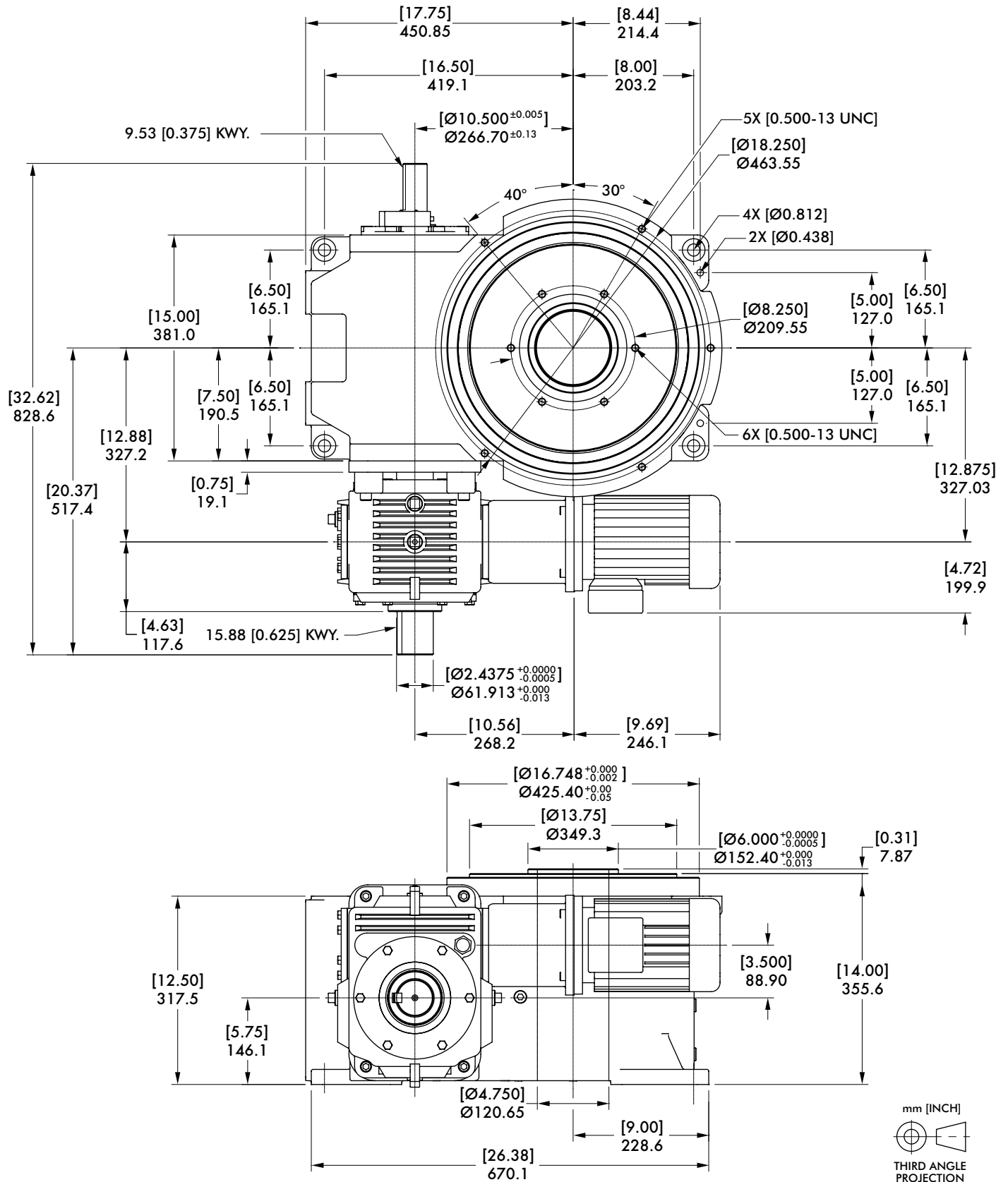


Unless otherwise noted, all dimensions are in inches.



# 1301RD SERIES

## Roller Dial Index Drives | Dimensions



Maximum Inertia x 1000 kg-cm <sup>2</sup> [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]	15 [5]	44 [15]	85 [29]	149 [51]	228 [78]	316 [108]
3	12 [4]	47 [16]	108 [37]	199 [68]	348 [119]	524 [179]	720 [246]
4	29 [10]	91 [31]	196 [67]	360 [123]	626 [214]	939 [321]	1288 [440]
6	76 [26]	214 [73]	454 [155]	822 [281]	1419 [485]	2122 [725]	2912 [995]
8	140 [48]	386 [132]	814 [278]	1472 [503]	2531 [865]	3778 [1291]	5183 [1771]
12	325 [111]	881 [301]	1844 [630]	3321 [1135]	5709 [1951]	8513 [2909]	11673 [3989]
16	588 [201]	1574 [538]	3283 [1122]	5911 [2020]	10158 [3471]	15141 [5174]	20757 [7093]
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

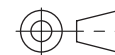
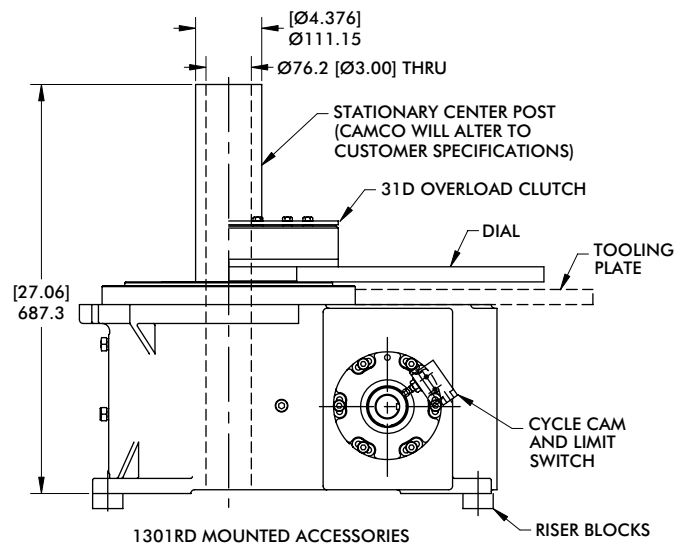
- 7400C Reducer (Ratios from 5:1 to 60:1) with Motor Adapter and Coupling
- 2 hp DC Motor
- Varipak DC Motor Control (up to 30 cpm)
- Output Overload Clutch model 31D
  - Available Settings (in-lbs): 8500, 13,000, 20,000, 31,000
- Center Thru Hole (4.75 in. Diameter)
- Stationary Center Post
- Dual Cam 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 70282 N [15800 lbs]  
 Thrust/Axial 48041N [10800 lbs]  
 Moment 12315 N-m [109000 in-lbs]

**Accuracy** ±39 arcsec / ±0,173 mm [±.0068 in] at 914,4 mm [36 in] Radius

**Repeatability** ±10 arcsec / ±0,043 mm [±.0017 in] at 914,4 mm [36 in] Radius



Unless otherwise noted, all dimensions are in inches.



Maximum Inertia x 1000 kg-cm <sup>2</sup> [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]	15 [5]	53 [18]	114 [39]	319 [109]	670 [229]	1,206 [412]
3	6 [2]	50 [17]	129 [44]	252 [86]	673 [230]	1,393 [476]	2,487 [850]
4	26 [9]	114 [39]	269 [92]	512 [175]	1,340 [458]	2,748 [939]	4,893 [1,672]
6	79 [27]	266 [91]	600 [205]	1,121 [383]	2,894 [989]	5,914 [2,021]	10,515 [3,593]
8	158 [54]	492 [168]	1,083 [370]	2,010 [687]	5,159 [1,763]	10,529 [3,598]	18,708 [6,393]
12	372 [127]	1,121 [383]	2,455 [839]	4,542 [1,552]	11,627 [3,973]	23,710 [8,102]	42,114 [14,391]
16	679 [232]	2,010 [687]	4,384 [1,498]	8,091 [2,765]	20,690 [7,070]	42,17 [1,441]	56,933 [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

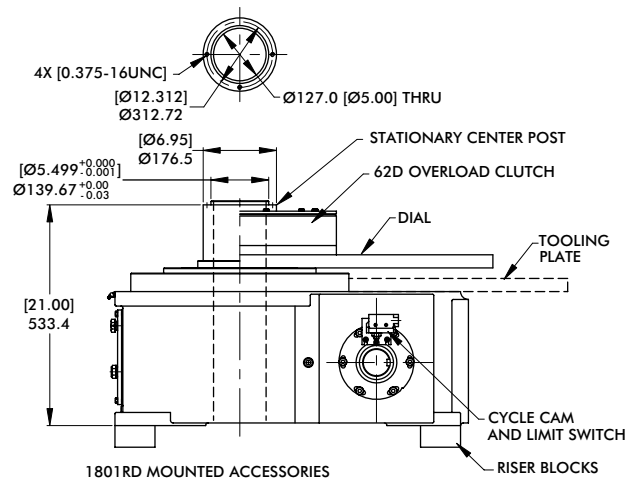
- 7600C or 7700C Reducer (Ratios from 5:1 to 60:1) with Motor Adapter and Coupling
- 3 hp DC Motor
- Output Overload Clutch model 62D
  - Available Settings (in-lbs): 23,000, 36,000, 44,000, 50,000, 60,000
- Center Thru Hole (7.00 in. Diameter)
- Stationary Center Post
- Dual Cam and Limit Switch
- Left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

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

Radial 65,834 N [14,800 lbs]  
 Thrust/Axial 56,048 N [12,600 lbs]  
 Moment 12,089 N-m [107,000 in-lbs]

**Accuracy** ±27 arcsec / ±.160 mm [±.0063 in] at 1,219.2 mm [48 in] Radius

**Repeatability** ±7 arcsec / ±.041 mm [±.0016 in] at 1,219.2 mm [48 in] Radius



Unless otherwise noted,  
all dimensions are in inches.