

## Features:

**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 trunion 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 How to Order

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

|          |    |
|----------|----|
| <b>A</b> | 15 |
| <b>B</b> | 20 |
| <b>C</b> | 25 |
| <b>D</b> | 30 |
| <b>E</b> | 40 |
| <b>F</b> | 50 |
| <b>G</b> | 60 |

**Reducer Mounting**  
(See Figure 4)

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

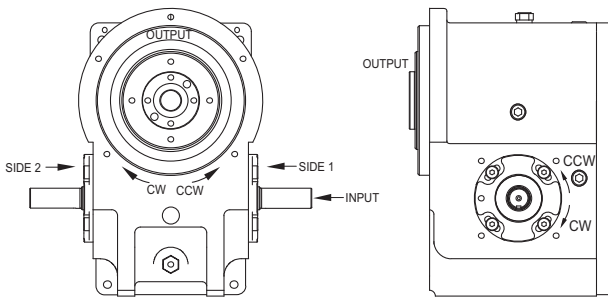
**Signal Switch** **Signal Switch Side**  
(See Figure 2)

**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 DE-STA-CO sales representative for more information.

Input Shaft Configuration/Rotation (Figure 1)



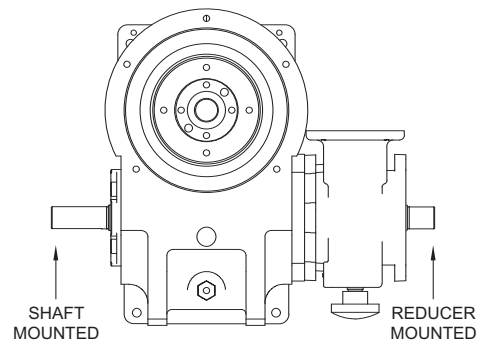
**Relative Rotation for Right Hand Cam:**



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

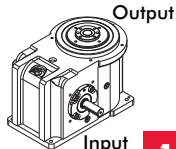
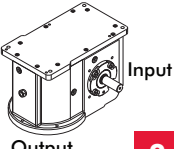
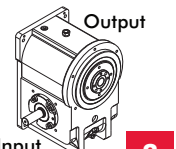

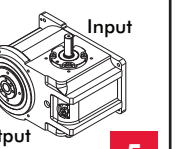
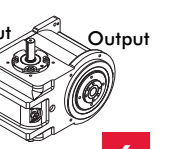
NOTE: Input can be driven in either direction

Signal Switch Mounting Position (Figure 2)

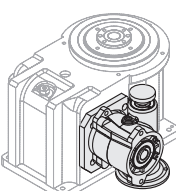
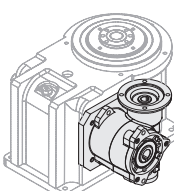
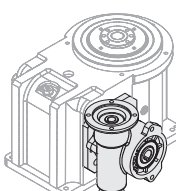
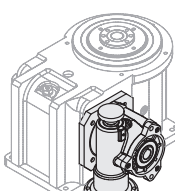
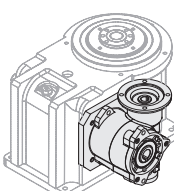
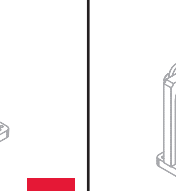
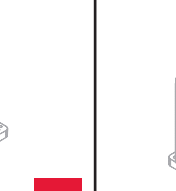

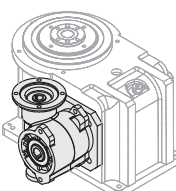
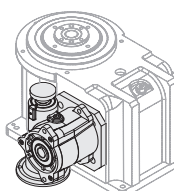
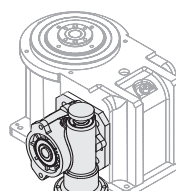
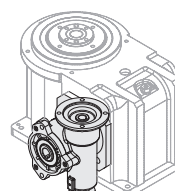
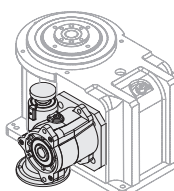
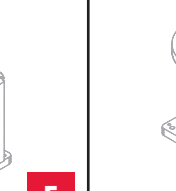
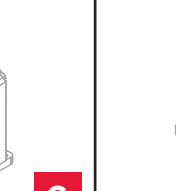

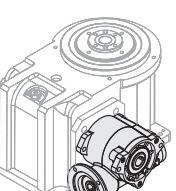
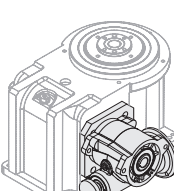
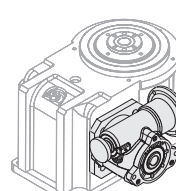
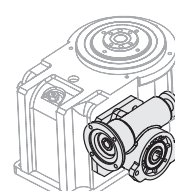
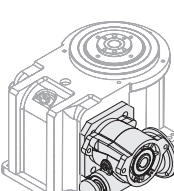
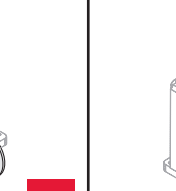


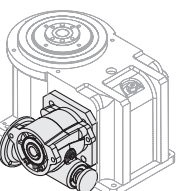
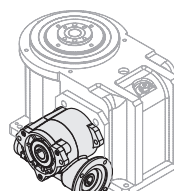
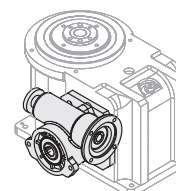
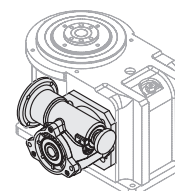
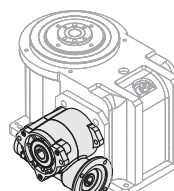
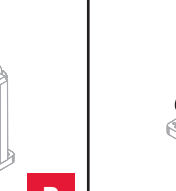
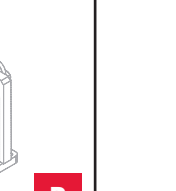



Dimensions and technical information are subject to change without notice.

Input/Output Orientation (Figure 3)

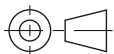
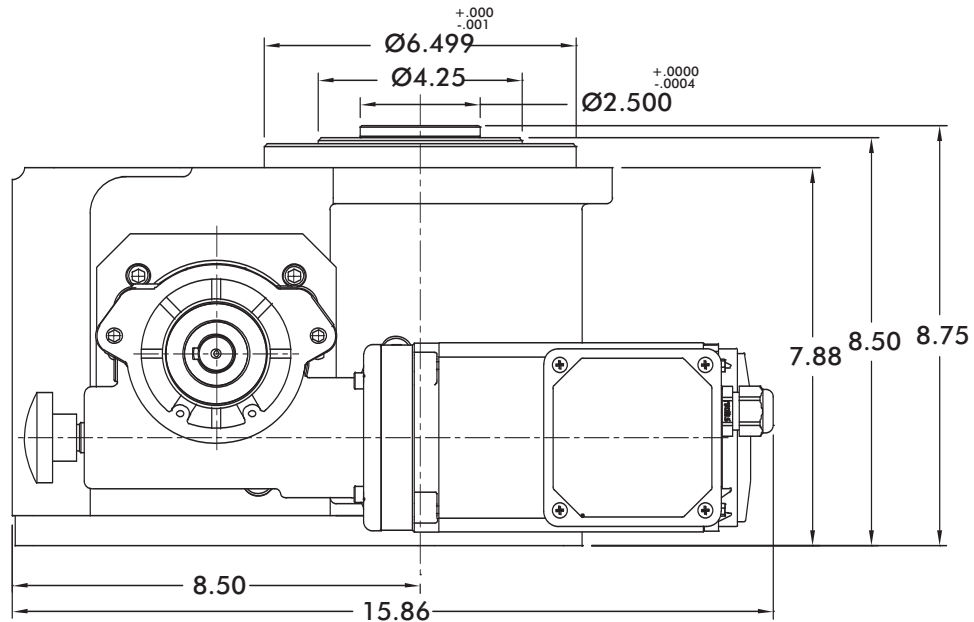
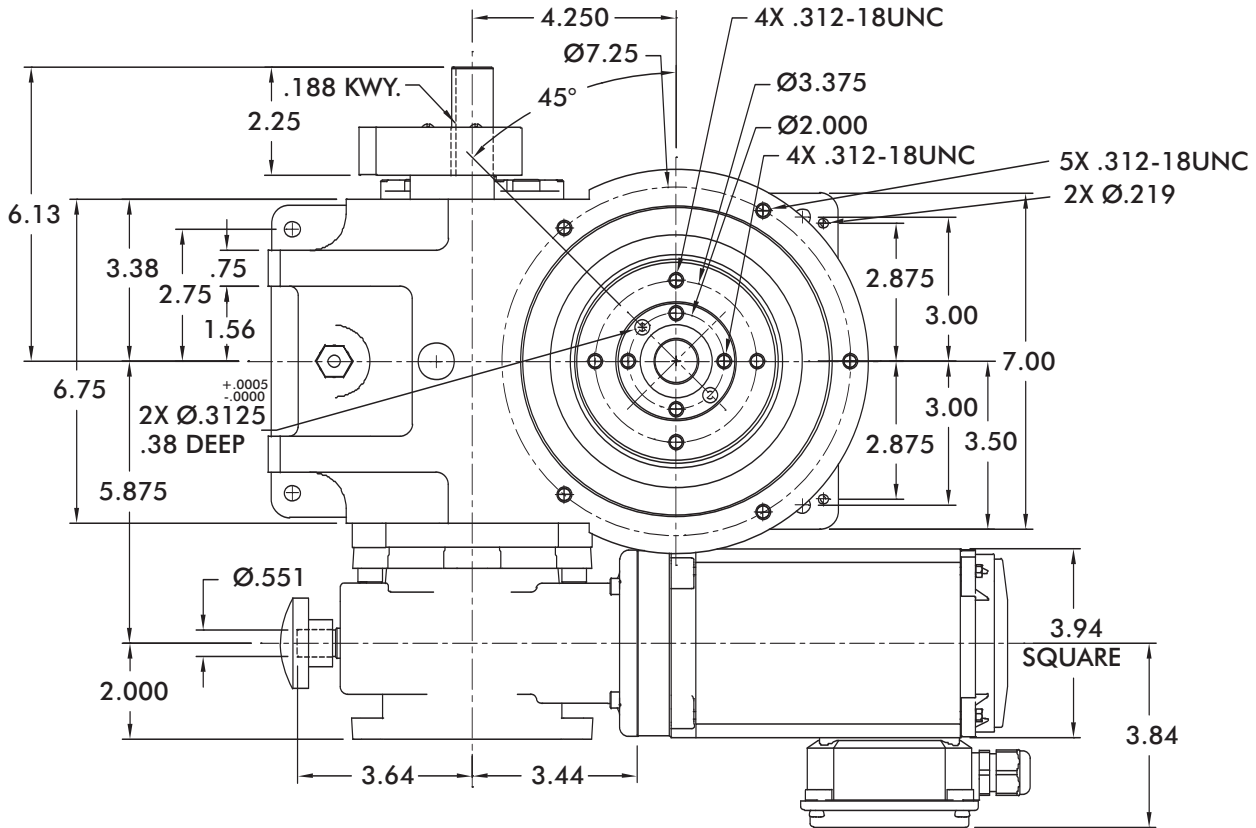
| <b>OVOI</b><br>(output vertical, over input)   | <b>OVUI</b><br>(output vertical, under input)  | <b>OHOI</b><br>(output horizontal, over input)   | <b>OHUI</b><br>(output horizontal, under input)   | <b>H-S1-UP</b><br>(output horizontal, side 1 up)   | <b>H-S2-UP</b><br>(output horizontal, side 2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

Gear Reducer Mounting Positions (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>B</b>   |  <b>C</b>    |  <b>D</b>   |                |
|               |  <b>B</b>   |  <b>C</b>   |  <b>D</b>   |  <b>E</b>   |                |
| <b>SIDE 2</b> |  <b>E</b> |  <b>F</b> |  <b>G</b>  |  <b>H</b> |                |
|               |  <b>F</b> |  <b>G</b> |  <b>H</b> |  <b>I</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>K</b> |  <b>L</b> |  <b>M</b> |  <b>N</b> |                |
| <b>SIDE 2</b> |  <b>N</b> |  <b>O</b> |  <b>P</b>  |  <b>Q</b> |                |
|               |  <b>O</b> |  <b>P</b> |  <b>Q</b> |  <b>R</b> |                |

Dimensions and technical information are subject to change without notice.

425RD Standard Dimensions



Unless otherwise noted, all dimensions are in inches.

Dimensions and technical information are subject to change without notice.



425RD Product Overview, Technical Information, Optional Accessories

| 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

Output Load Capacity (loads carried during index):

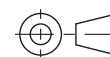
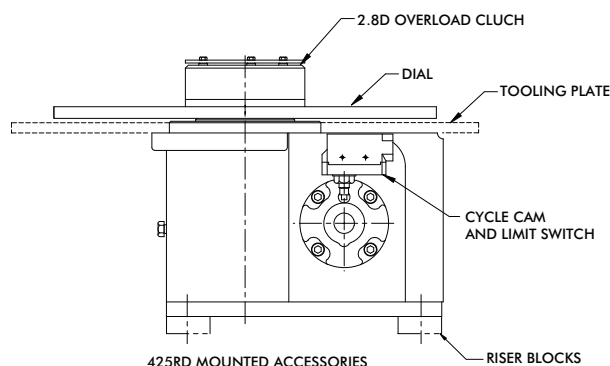
Radial 2,700 lbs  
 Thrust/Axial 1,600 lbs  
 Moment 5,800 in-lbs

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

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

Optional Accessories

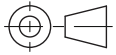
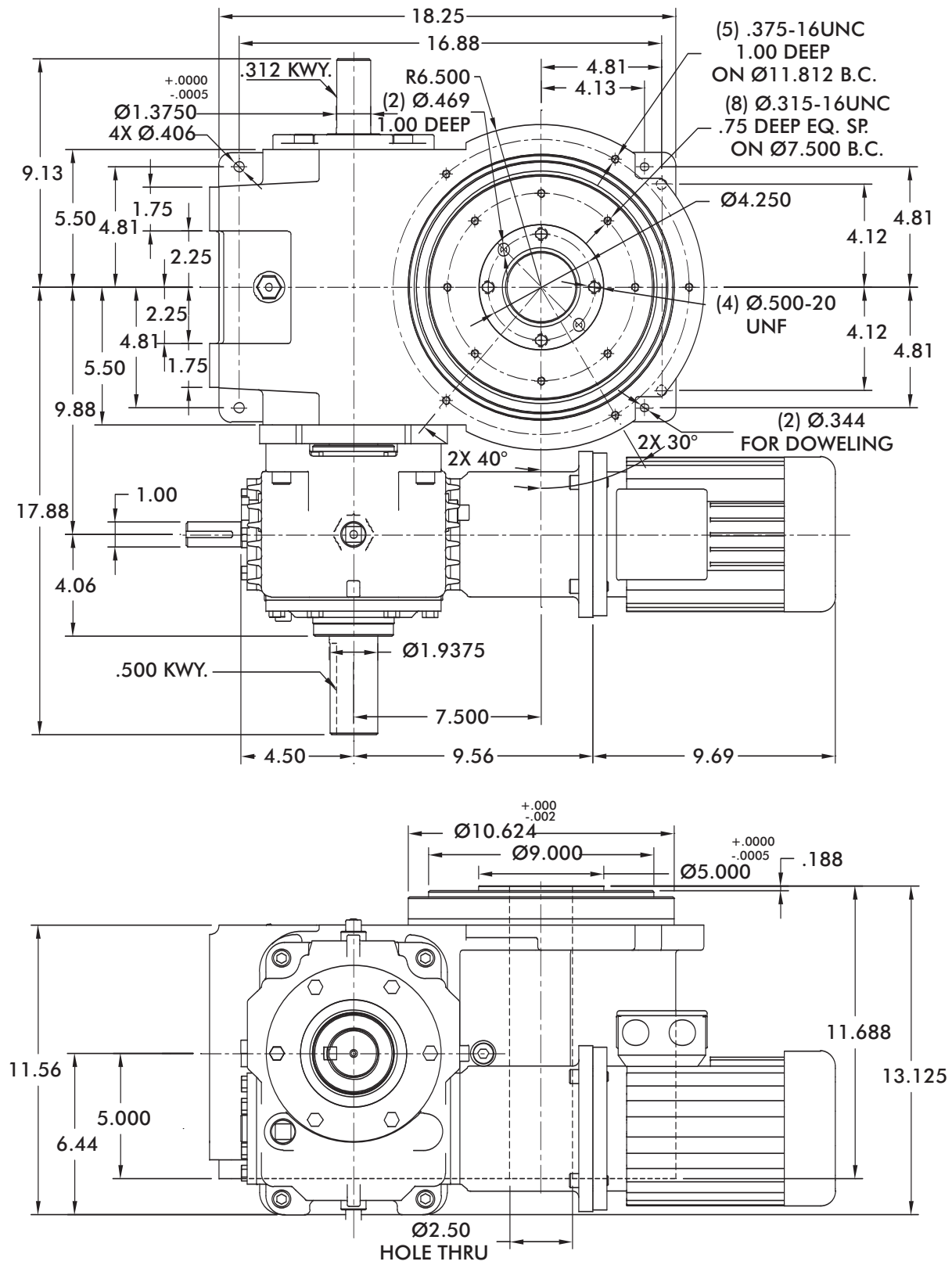
- 1/3 hp DC Motor
- Varipak DC Motor Control (up to 30 cpm)
- 2.8D Output Overload Clutch
  - Available Settings (in-lbs): 400, 480, 700, 850, 1100, 1300, 1800, 2200, 3100
- Center Thru Hole (0.81 in. Diameter)
- Stationary Center Post
- Dual Cam and Limit Switch
- Left Hand Cam
- Relief in Dwell for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



Unless otherwise noted, all dimensions are in inches.

Dimensions and technical information are subject to change without notice.

800RD Standard Dimensions



Unless otherwise noted, all dimensions are in inches.

Dimensions and technical information are subject to change without notice.



800RD Product Overview, Technical Information, Optional Accessories

| 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

Output Load Capacity (loads carried during index):

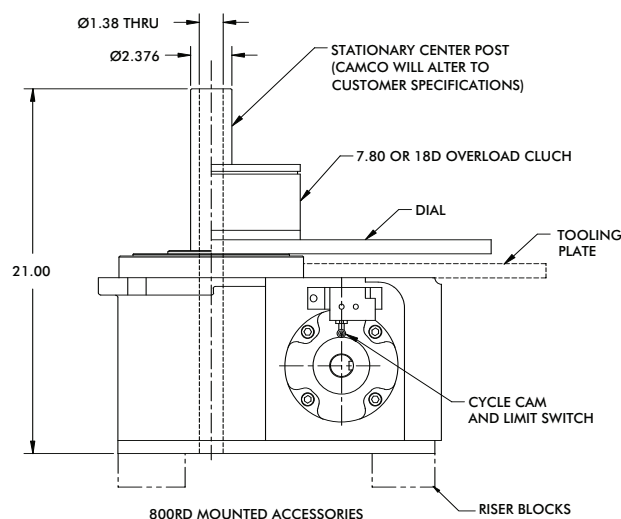
Radial 4,977 lbs  
 Thrust/Axial 3,561 lbs  
 Moment 22,398 in-lbs

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

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

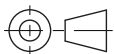
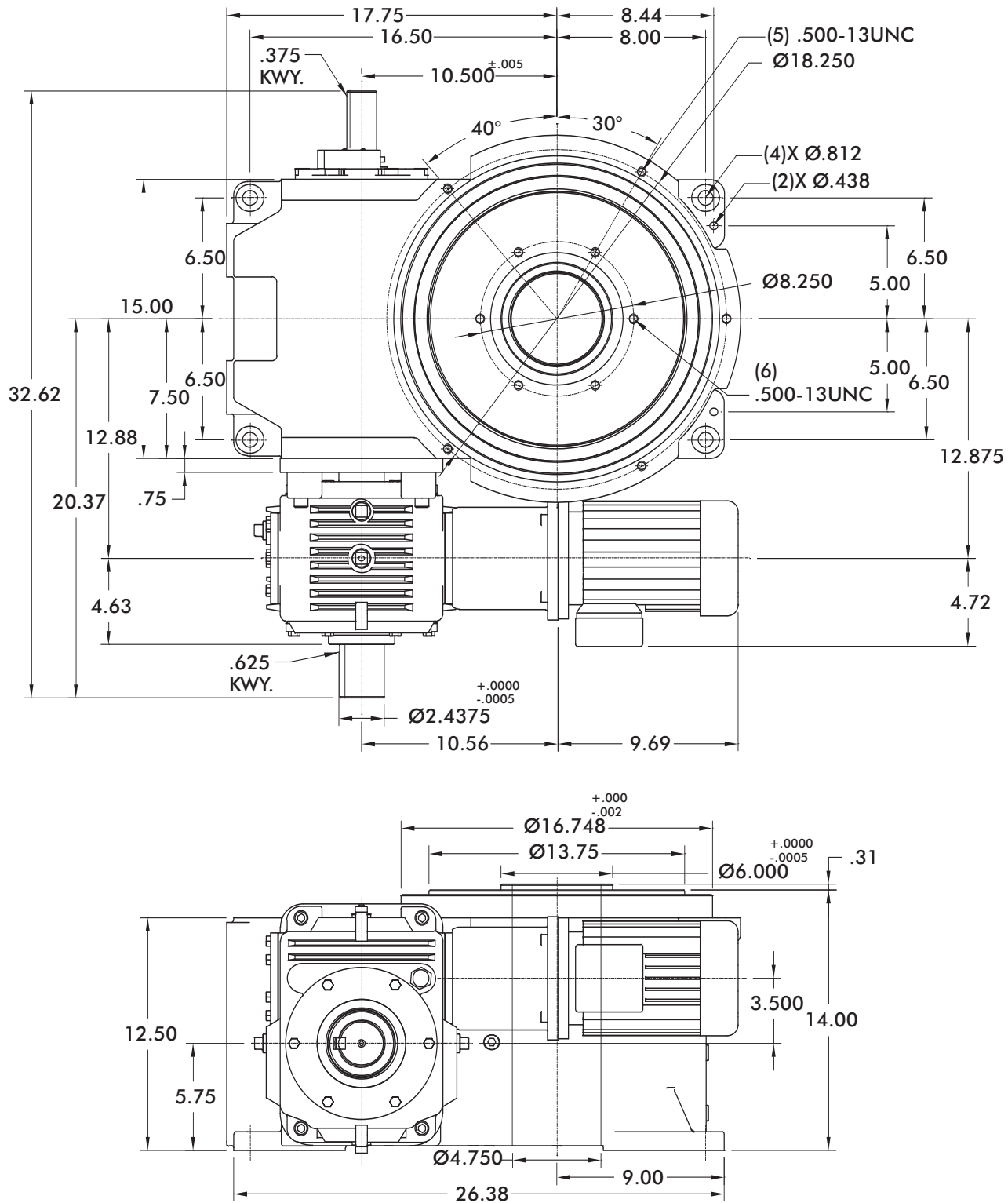
Optional Accessories

- 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



Unless otherwise noted, all dimensions are in inches.

Dimensions and technical information are subject to change without notice.

**1301RD Standard Dimensions**

Unless otherwise noted,  
all dimensions are in inches.

Dimensions and technical information are subject to change without notice.





1301RD Product Overview, Technical Information, Optional Accessories

| 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

Output Load Capacity (loads carried during index):

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

Accuracy

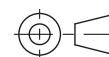
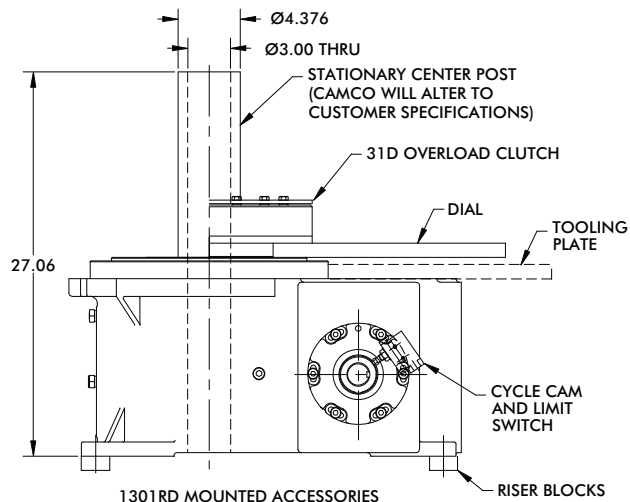
±39 arcsec / ±.0068" at 36" Radius

Repeatability

±10 arcsec / ±.0017" at 36" Radius

Optional Accessories

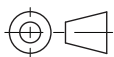
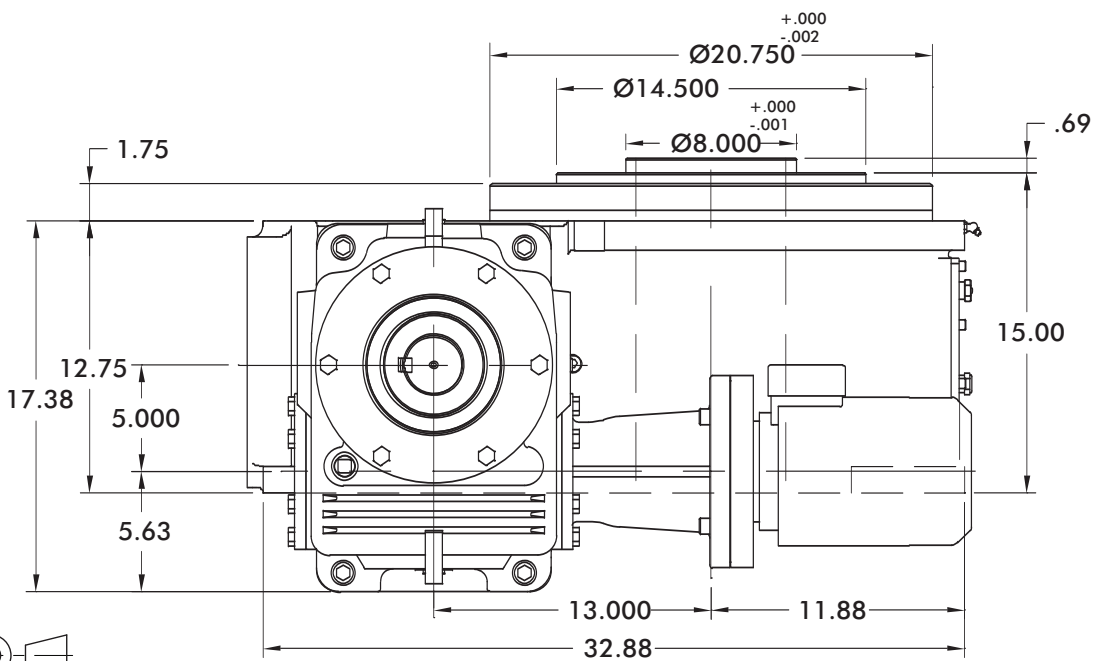
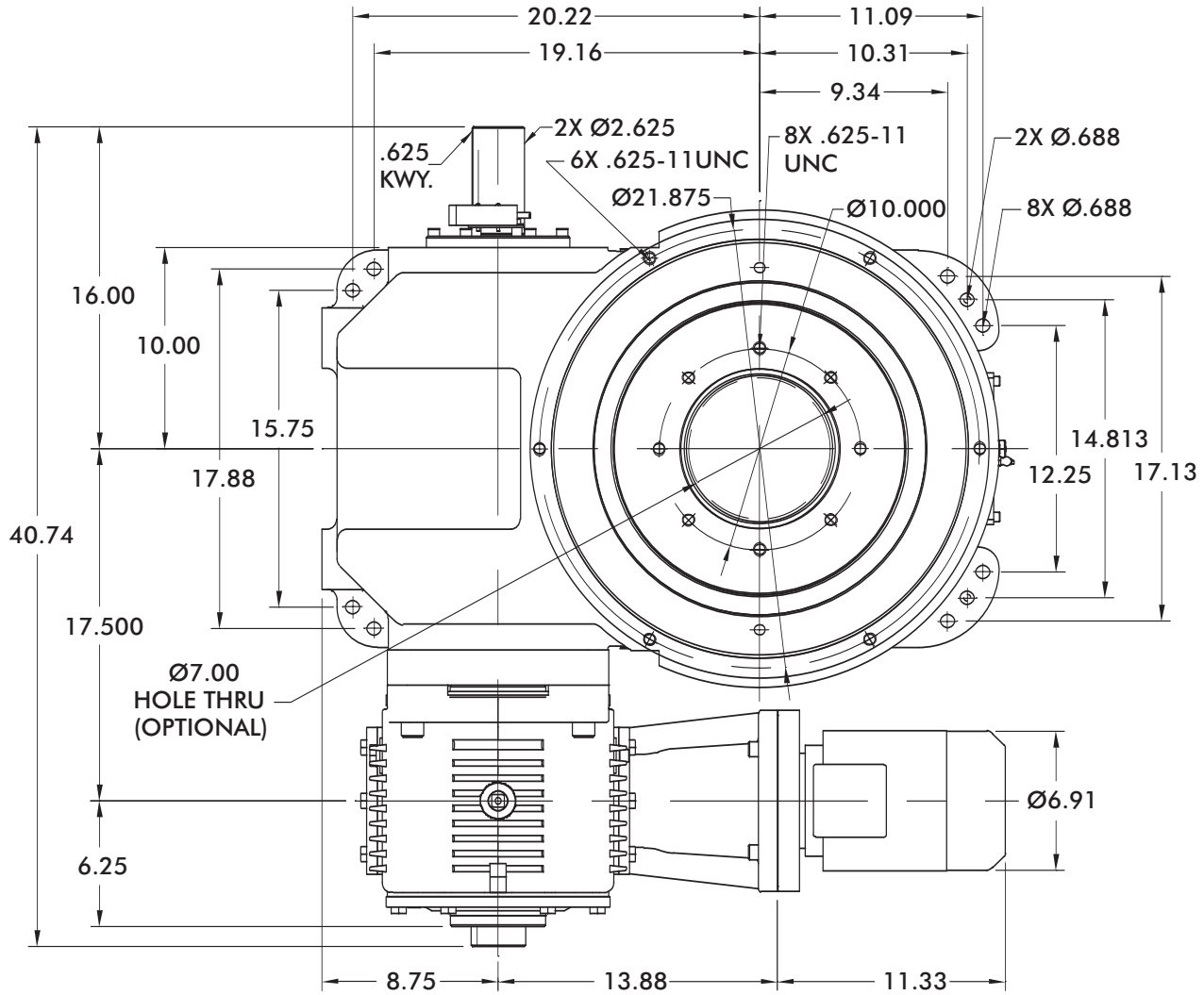
- 7400C Reducer (Ratios from 5:1 to 60:1) with Motor Adapter and Coupling
- 2 hp DC Motor
- Varipak DC Motor Control (up to 30 cpm)
- Output Overload Clutch model 31D
  - Available Settings (in-lbs): 8500, 13,000, 20,000, 31,000
- Center Thru Hole (4.75 in. Diameter)
- Stationary Center Post
- Dual Cam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



Unless otherwise noted, all dimensions are in inches.

Dimensions and technical information are subject to change without notice.

1801RD Standard Dimensions



Unless otherwise noted, all dimensions are in inches.

Dimensions and technical information are subject to change without notice.



1801RD Product Overview, Technical Information, Optional Accessories

| 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

Output Load Capacity (loads carried during index):

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

Accuracy

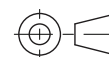
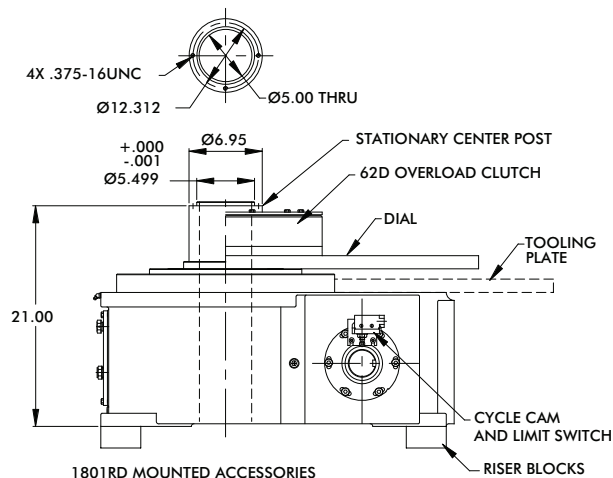
±27 arcsec / ±.0063" at 48" Radius

Repeatability

±7 arcsec / ±.0016" at 48" Radius

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

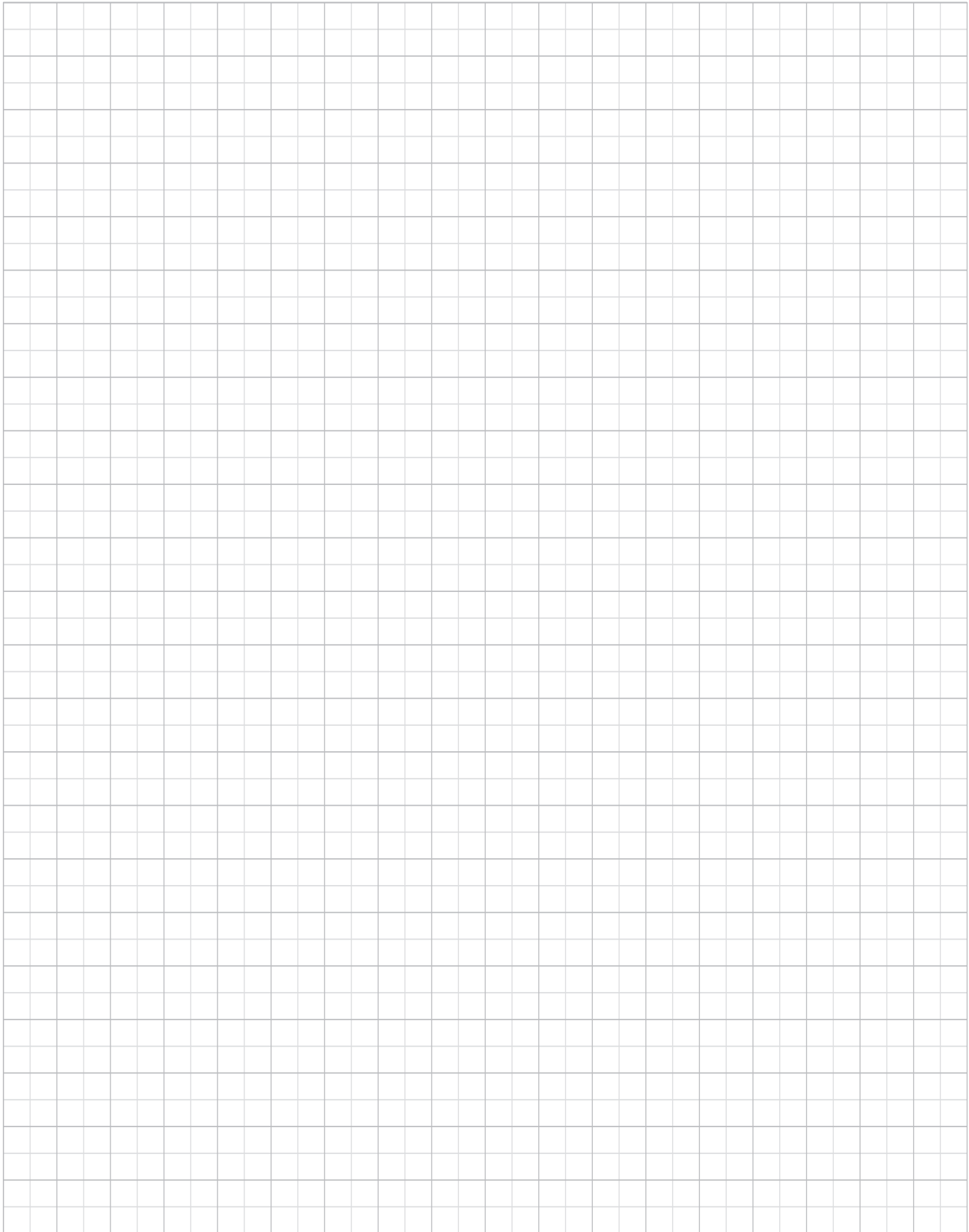


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Notes



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