

# DeZURIK MG MANUAL GEAR ACTUATORS TECHNICAL SPECIFICATIONS

## Design and Construction

DeZURIK Manual Gear Actuators are available in cast iron construction for use on BHP High-Performance Butterfly Valves, BOS-US Resilient Seated Butterfly Valves, RCV Rotary Control Valves, VPB V-Port Ball Valves and .5-3" Eccentric Plug Valves.

Manual gear cast iron actuators feature sintered bronze bearings on each end of the input shaft for durability and performance. The ductile iron gear provides strength for robust applications and a long service life without maintenance. Manual gear cast iron actuators are available with handwheel or chainwheel.

## Externally Adjustable Stops

Open and closed position stop screws are externally adjustable, permitting easy and quick adjustment of gear limit stop positions for the valve.

## Enclosed and Buried Service

The actuator is weatherproof as standard, and is sealed to prohibit entry of moisture and dirt. The operator is high-temperature grease filled.

## Easily Visible Indicator

Manual gear actuators feature an external, easy-to-read indicator that clearly indicates valve position.

## Safety Lockout

As an option, a convenient lockout may be ordered on handwheel actuators. The lockout allows the actuator to be padlocked in open, closed and various intermediate positions. The lockout may also be purchased separately for field conversion.

## Standardized Mounting

The actuator features tapped mounting holes which allow simple, external mounting of the actuator to the valve. The ISO bolt pattern permits interchangeability with other DeZURIK actuators and valve styles.

## Actuator Options

Manual gear actuators are available with a wide variety of options available on application.



# Actuator Weights

## Basic Actuator\*

Actuator Size	Weight lbs/kg
MG-7	8 4
MG-1012	10 5
MG-1216	25 11
MG-16	36 16
MG-64	56 25
MG-1250	49 23

## Handwheel Input\*

Actuator Size	Weight lbs/kg
HD8	8 4
HD12	11 5
HD16	18 8
HD20	22 10
HD24	26 12
HD28	31 15
HD30	33 15

## Chainwheel Input\*

Actuator Size	Weight lbs/kg
CW8	11 5
CW12	16 7
CW20	42 19
CW24	48 22
CW30	61 28

## Safety Lockout\*

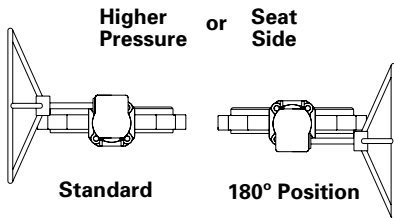
Actuator Size	Weight lbs/kg
MG-7	1 1
MG-1012	1 1
MG-1216	1 1
MG-16	1 1
MG-64	4 2

\*Add Basic Actuator Weight to Input Weight for total.  
\*\*Add Lockout Weight to Actuator and Input Weight for total.

## Mounting Positions

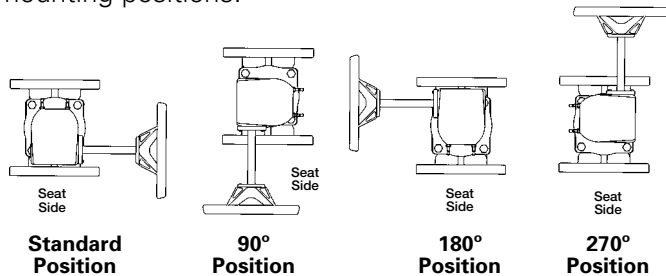
### BHP High Performance Butterfly Valves BOS-US Resilient Seated Butterfly Valves

Handwheel and chainwheel actuators can be mounted at standard and 180° mounting positions.



### .5"-3" PEC Eccentric Plug Valves

Handwheel and chainwheel actuators can be mounted at standard 90°, 180° and 270° mounting positions.

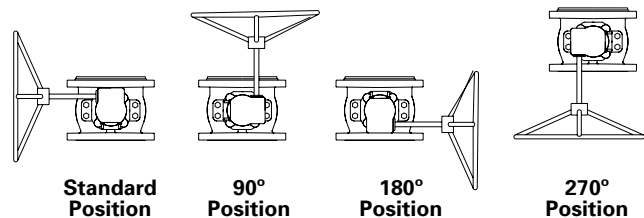


### VPB V-Port Ball Valves

On 1–16" (25–400mm) valves, handwheel and chainwheel actuators are available at standard, 90°, 180° and 270° mounting positions. On 18 & 20" (450 & 500mm) VPB valves, only standard and 180° positions are available.

### RCV Rotary Control Valves

On 1–4" (25–100mm) valves, handwheel and chainwheel actuators are available at standard, 90°, 180° and 270° mounting positions. On 6–12" (100–300mm) valves, handwheel and chainwheel actuators are available at standard and 180° mounting positions.



# Ordering

To order manual gear actuators, select the model from the appropriate sizing charts in Bulletin 72.00-2. As a reference, the actuator model codes are defined below.

<b>Actuator Type</b> Give the actuator type code as follows:	
MG	= Manual Gear Actuator

<b>Actuator Size</b> Give the actuator size code as follows:	
7	= Manual Gear Size 7
1012	= Manual Gear Size 1012
1216	= Manual Gear Size 1216
16	= Manual Gear Size 16
64	= Manual Gear Size 64
1250	= Manual Gear Size 1250

<b>Input Type/Size</b> Give the input type/size code as follows:			
HD8	= 8" Handwheel	CW8	= 8" Chainwheel
HD12	= 12" Handwheel	CW12	= 12" Chainwheel
HD16	= 16" Handwheel	CW20	= 20" Chainwheel
HD20	= 20" Handwheel	CW24	= 24" Chainwheel
HD24	= 24" Handwheel	CW30	= 30" Chainwheel
HD28	= 28" Handwheel		
HD30	= 30" Handwheel		

<b>Actuator Mounting</b> Specify actuator mounting positions other than standard (90°, 180°, 270°) as second line information. (See limitations under mounting positions)
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**Ordering Example:**  
PEC,3,F1,CI,NBR,CR\*MG-7-HD8

## Accessories

### Manual Gear Safety Lockout

Shaft hubs allow the actuator to be padlocked in open, closed and in various intermediate positions. Available on handwheel units only. To order mounted, add LK after the actuator code.



**Ordering Example:**  
PEC,3,F1,CI,NBR,CR\*MG-7-HD8,LK

To order as a separate item, use the order code listed in the table.

Actuator Size	Order Code
MG-7, MG-1012	ACC*LK6
MG-1216, MG-16	ACC*LK7
MG-64	ACC*LK2

**Ordering Example:** ACC\*LK6

### Galvanized Chainwheel and Guide

Same as chainwheel actuator except chainwheel and guide are galvanized. To order, specify galvanized chainwheel and guide as second line information.

**Ordering Example:**  
PEC,3,F1,CI,NBR,CR\*MG-7-CW8  
Except chainwheel and chain guide to be galvanized.

### Memory/Open Position Stop

An adjustable memory stop for handwheel actuators allows return of the valve to a preset open position after shutoff. To order, add ST to the order code.

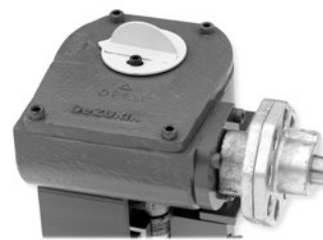
**Ordering Example:**  
PEC,3,F1,CI,NBR,CR\*MG-7-HD8-ST

### Chain for Chainwheel Actuators

Order as a separate item by giving code from the table below and required length of chain.

Order Code	Description
ACC*CN102	Standard 3/16
ACC*CN103	Galvanized 3/16
ACC*CN106	304 Stainless Steel 3/16

**Ordering Example:**  
ACC\*CN102  
Chain 10 feet (3048mm) long.



### Flag Indicator

A highly visible flag indicator, to show disc position. To order as part of a valve/actuator assembly, add FI to the actuator code. If ordered separately, specify ACC\*FI followed by the actuator size code.

**Ordering Example:**  
PEC,3,F1,CI,NBR,CR\*MG-7-HD8,F1

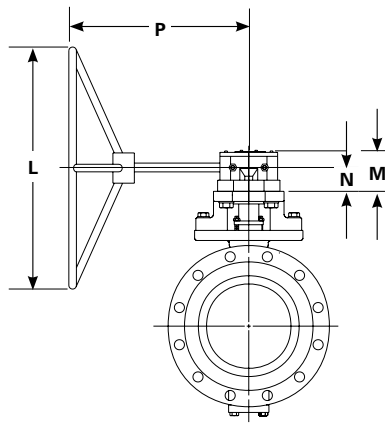
### Switches and Position Transmitters

DeZURIK position indicating switches can be ordered separately or combined with a position transmitter in one enclosure.

# Dimensions

## Handwheel

Actuator Size	Dimensions		
	M	N	P
MG-7-HD8	<u>2.56</u> 65	<u>1.25</u> 32	<u>9.50</u> 241
MG-1012-HD8	<u>2.93</u> 74	<u>1.57</u> 40	<u>12.75</u> 324
MG-1012-HD12	<u>2.93</u> 74	<u>1.57</u> 40	<u>12.88</u> 324
MG-1216-HD16	<u>4.12</u> 105	<u>2.36</u> 60	<u>14.12</u> 359
MG-1216-HD20	<u>4.03</u> 102	<u>2.36</u> 60	<u>16.63</u> 422
MG-1216-HD24	<u>4.12</u> 105	<u>2.36</u> 60	<u>17.88</u> 454
MG-16-HD24	<u>4.12</u> 105	<u>2.00</u> 51	<u>19.00</u> 483
MG-16-HD30	<u>4.12</u> 105	<u>2.00</u> 51	<u>20.50</u> 521
MG-64-HD30	<u>3.75</u> 95	<u>1.87</u> 47	<u>20.50</u> 521
MG-1250-HD28	<u>4.01</u> 102	<u>2.01</u> 51	<u>13.62</u> 346

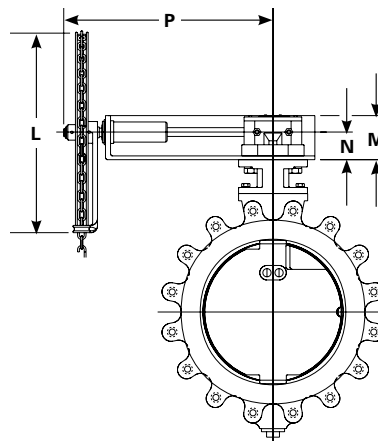


Handwheel Size	Dimensions L
HD8	<u>8.00</u> 203
HD12	<u>12.00</u> 305
HD16	<u>16.00</u> 406
HD20	<u>20.00</u> 508
HD24	<u>24.00</u> 610
HD28	<u>28.00</u> 711
HD30	<u>30.00</u> 762

Note: All dimensions are Inch  
Millimeter

## Chainwheel

Actuator Size	Dimensions		
	M	N	P
MG-7-CW8	<u>3.00</u> 76	<u>1.50</u> 38	<u>12.94</u> 329
MG-1012-CW8	<u>3.25</u> 83	<u>1.82</u> 46	<u>17.19</u> 437
MG-1012-CW12	<u>3.25</u> 83	<u>1.82</u> 46	<u>17.81</u> 452
MG-1216-CW12	<u>4.31</u> 109	<u>2.75</u> 70	<u>20.81</u> 529
MG-1216-CW20	<u>4.31</u> 109	<u>2.75</u> 70	<u>20.81</u> 529
MG-1216-CW30	<u>4.31</u> 109	<u>2.75</u> 70	<u>20.81</u> 529
MG-16-CW24	<u>4.19</u> 106	<u>2.38</u> 61	<u>21.44</u> 545
MG-16-CW30	<u>4.50</u> 114	<u>2.38</u> 60	<u>21.88</u> 556
MG-64-CW30	<u>4.12</u> 105	<u>2.25</u> 57	<u>21.31</u> 541
MG-1250-CW30	<u>4.01</u> 102	<u>1.89</u> 48	<u>21.44</u> 545



Chainwheel Size	Dimensions L
CW8	<u>9.19</u> 233
CW12	<u>12.75</u> 324
CW20	<u>20.06</u> 510
CW24	<u>23.50</u> 597
CW30	<u>29.75</u> 756

Note: All dimensions are Inch  
Millimeter

## Sales and Service

For information about our worldwide locations, approvals, certifications and local representative:

Web Site: [www.dezurik.com](http://www.dezurik.com) E-Mail: [info@dezurik.com](mailto:info@dezurik.com)



250 Riverside Ave. N. Sartell, Minnesota 56377 • Phone: 320-259-2000 • Fax: 320-259-2227

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