



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, BRS Resilient Seated Butterfly Valves, RCV Rotary Control Valves and VPB V-Port Ball 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.

Buried service construction is an option on BRS Resilient Seated Butterfly Valves. Buried service construction includes stainless steel bolting.

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.

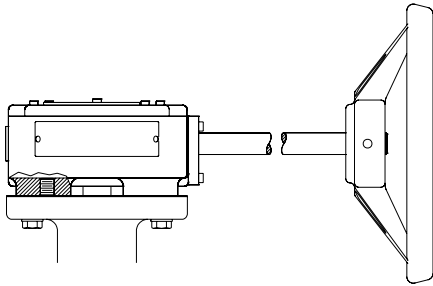
Standardized Mounting

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.

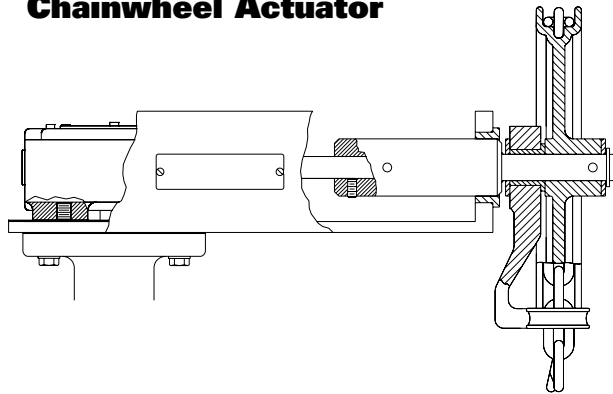
Actuator Options

Manual gear actuators are available with a wide variety of options including submersible units and other special options available on application.

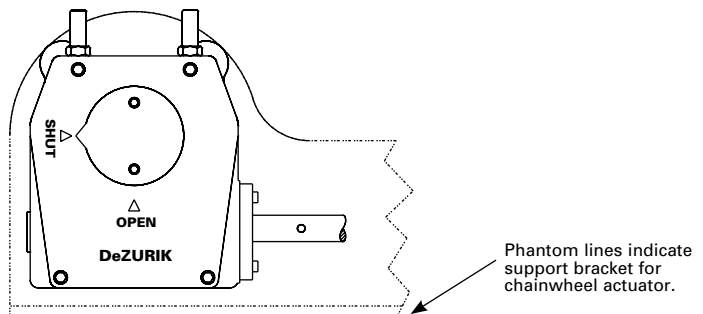
Handwheel Actuator



Chainwheel Actuator



Top View



Actuator Weights

Cast Iron 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

* Add input weights for total.

Input Weights* Handwheel

Handwheel Size	Weight lbs/kg
HD8	8 4
HD12	11 5
HD16	18 8
HD24	26 12
HD30	33 15

* Add input weights for total.

Chainwheel

Chainwheel Size	Weight lbs/kg
CW8	11 5
CW12	16 7
CW20	42 19
CW30	75 35

Safety Lockout*

Actuator Size	Weight lbs/kg
MG-7	1 .5
MG-1012	1 .5
MG-1213	1 .5
MG-16	1 .5
MG-64	4 2

* Add to actuator and input weights.

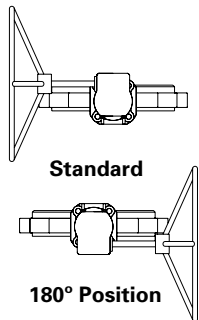
Mounting Positions

BHP, BRS

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

Handwheel and Chainwheel

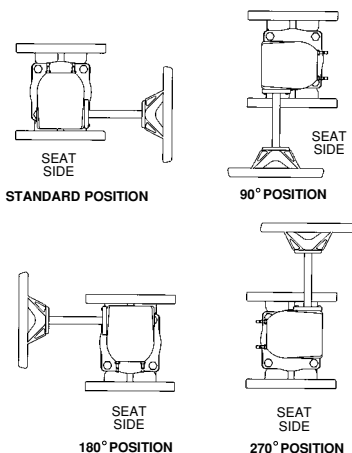
Higher or Seat Pressure Side



PEC

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

Handwheel and Chainwheel



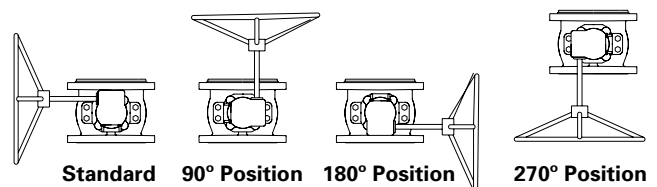
VPB

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

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.

Handwheel and Chainwheel



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.

Actuator Type	
Give the actuator type code as follows:	
MG	= Manual Gear Actuator

Actuator Size	
Give the actuator size code as follows:	
Cast Iron Units	
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

Input Type/Size			
Give the input type/size code as follows:			
HD8	= 8" Handwheel	HD30	= 30" Handwheel
HD12	= 12" Handwheel	CW8	= 8" Chainwheel
HD16	= 16" Handwheel	CW12	= 12" Chainwheel
HD18	= 18" Handwheel	CW20	= 20" Chainwheel
HD24	= 24" Handwheel	CW30	= 30" Chainwheel

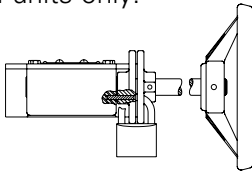
Actuator Mounting	
Specify actuator mounting positions other than standard (90°, 180°, 270°) as second line information. (See limitations on page 3.)	

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

Options and Accessories

Manual Gear Safety Lockout

Shaft hubs allow the actuator to be padlocked in open, closed and in various intermediate positions. Lockouts are available on weatherproof handwheel units only.



To order mounted, add LK after the actuator code.

Actuator Size	Order Code
All	LK

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, 16	ACC*LK7
MG-64	ACC*LK2

Ordering Example: ACC*LK1

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.

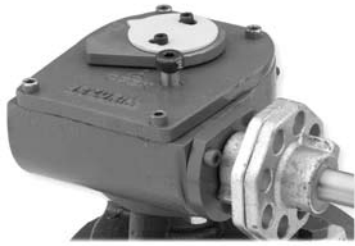
Chain for Chainwheel Actuators

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.

Options and Accessories (continued)

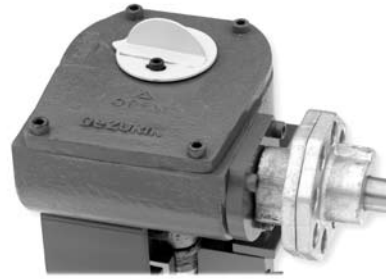


Memory/Open Position Stop

An adjustable memory stop is available on handwheel actuators. It allows return of the valve to a preset open position after shutoff. It is available on all actuators. To order as part of a valve/actuator assembly, add ST to the order code.

Ordering Example:

PEC,3,F1,CI,NBR,CR*MG-7-HD8-ST



Flag Indicator

A highly visible flag indicator, to show disc position, is available on handwheel actuated valves. 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

Dimensions

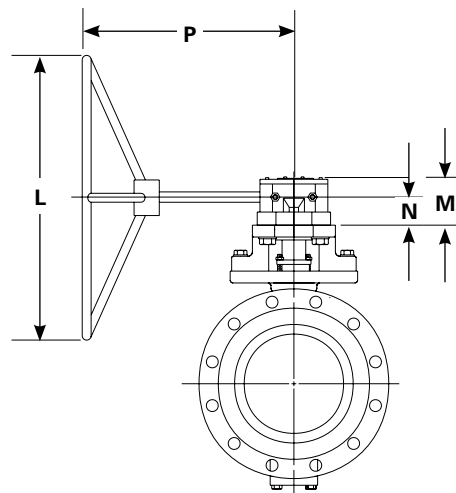
Handwheel

Actuator Size	Dimensions		
	M	N	P
MG-7-HD8	2.56 65	1.25 32	9.50 241
MG-1012-HD8	2.93 74	1.57 40	12.75 324
MG-1012-HD12	2.93 74	1.57 40	12.88 324
MG-1216-HD16	4.12 105	2.36 60	14.12 359
MG-1216-HD24	4.12 105	2.36 60	17.88 454
MG-16-HD24	4.12 105	2.00 51	19.00 483
MG-16-HD30	4.12 105	2.00 51	20.50 521
MG-64-HD30	3.75 95	1.87 47	20.50 521

Handwheel Size	Dimensions
	L
HD8	8.00 203
HD12	12.00 305
HD16	16.00 406
HD24	24.00 610
HD30	30.00 762

Note: All dimensions are Inch
Millimeter

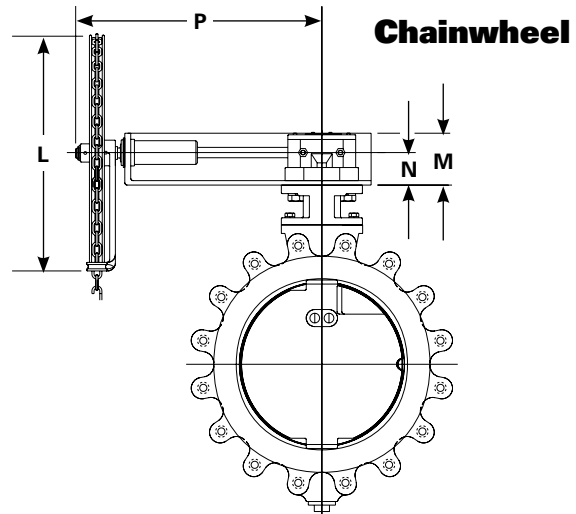
Handwheel



Dimensions (continued)

Chainwheel

Actuator Size	Dimensions		
	M	N	P
MG-7-CW8	3.00 76	1.50 38	12.94 329
MG-1012-CW8	3.25 83	1.82 46	17.19 437
MG-1012-CW12	3.25 83	1.82 46	17.81 452
MG-1216-CW20	4.31 109	2.75 70	20.81 529
MG-1216-CW30	4.31 109	2.75 70	20.81 529
MG-16-CW30	4.50 114	2.38 60	21.88 556
MG-64-CW30	4.12 105	2.25 57	21.31 541



Note: All dimensions are Inch
Millimeter

Chainwheel Size	Dimensions L
CW8	9.19 233
CW12	12.75 324
CW20	20.06 510
CW30	29.75 756

Sales and Service

For information about our worldwide locations, approvals, certifications and local representative:
Web Site: www.dezurik.com E-Mail: info@dezurik.com



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