



# Manual Worm Gear Operators

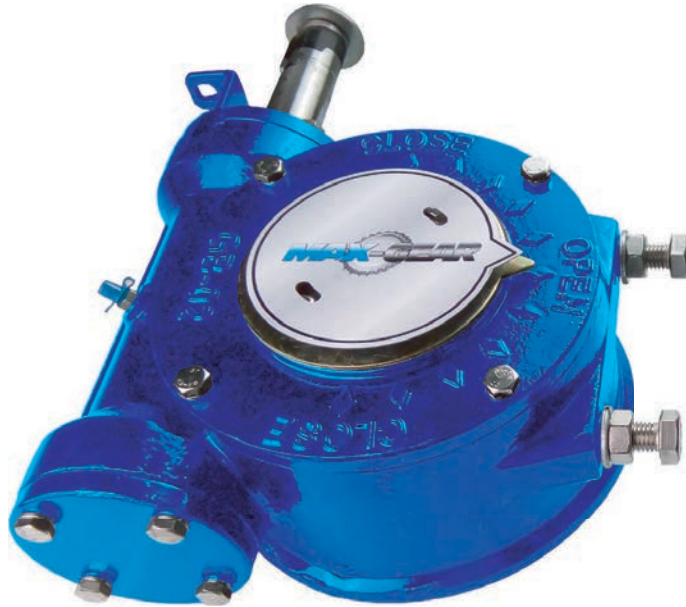


Max-Gear Series worm gear operators are designed to be used as quarter turn actuators. They are ideal for applications on Ball Valves, Butterfly Valves, Plug Valves, and Dampers requiring a Self-Locking Mechanism.

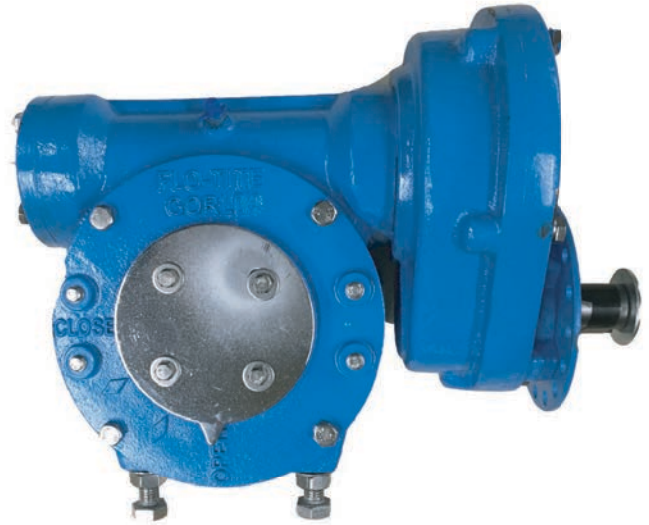


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**Torque Range: 2832 in-lb to 37173 in-lb**



**Gear Operator**  
Single Stage



**Gear Operator**  
Double Stage

## Design Features

- Fully Lubricated
- Long Life Reliability
- Precision Machining
- Locking Device
- Stainless Steel Bolting
- Epoxy Coated Housing
- Weather Proof Housing
- Grease Fittings Standard
- Large Diameter Input Shafts
- Mounting Dimensions to ISO 5211
- External Fully Adjustable End Stops
- Rugged Compact Heavy Duty Construction
- Namur Limit Switch Mounting

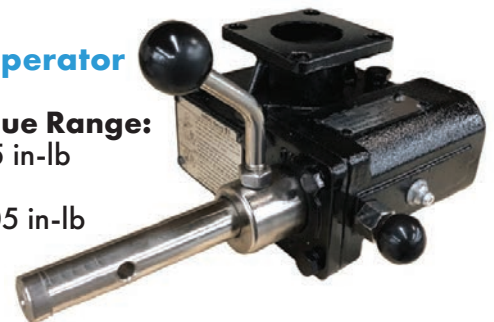
## Design Options

Shown with high visibility indicator



## Decutchable Gear Operator

**Torque Range:**  
2655 in-lb  
to  
53105 in-lb

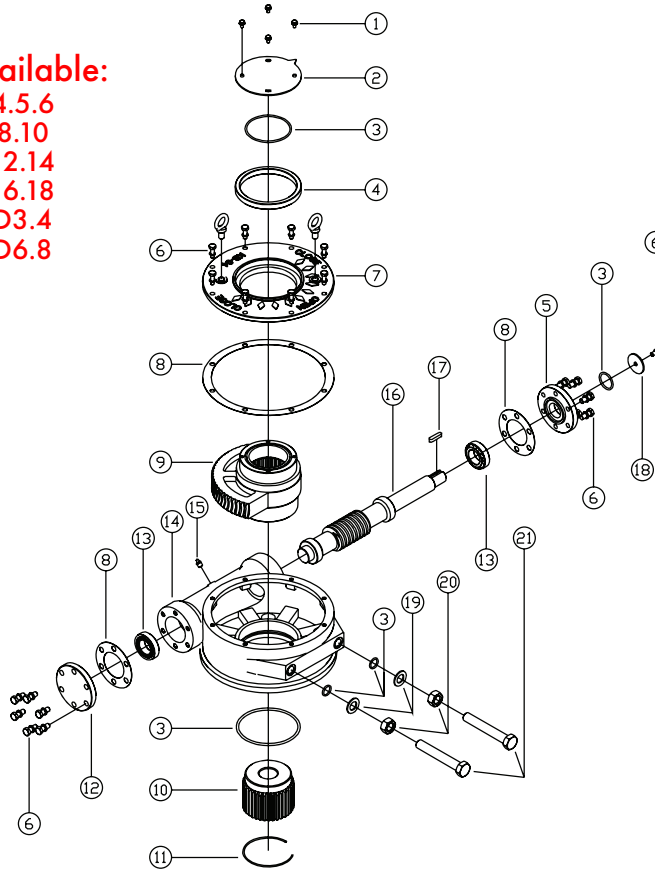


Max-Gear simplifies gear mounting, eliminates costly keyway machining, all sizes utilize **Double D drives** or ISO square drives.

# Manual Worm Gear Operators - without Reducer

Also Available:

- GO-4.5.6
- GO-8.10
- GO-12.14
- GO-16.18
- GO-D3.4
- GO-D6.8



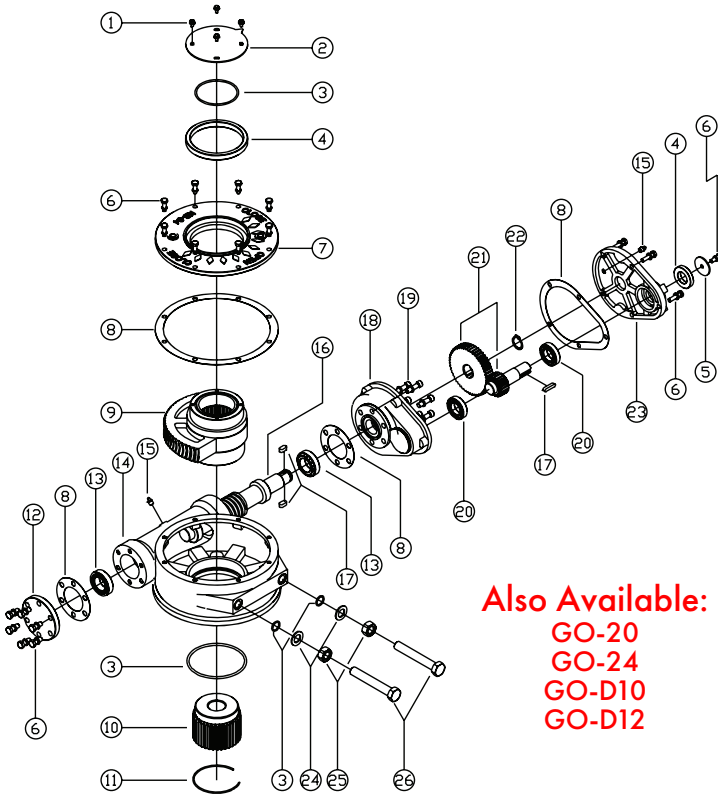
## Bill of Materials

No	Name	Material	Qty
1	Bolt	SS304	set
2	Indicator Plate	ASTM A29M-1020	1
3	O-Ring	NBR	set
4	Oil Seal	NBR	1
5	Gland Cover	ASTM A29M-1020	1
6	Bolts	SS304	set
7	Cover	ASTM A536 65-45-12	1
8	Sealing Gasket	Insulation Paper or Rubber	set
9	Worm Gear	ASTM A536 65-45-12	1
10	Stem Bush	ASTM A29M-1020	1
11	Snap Ring	ASTM A29-1566	1
12	End Cover	ASTM A29M-1020	1
13	Bearing	ASTM A295-52100	set
14	Body	ASTM A536 65-45-12	1
15	Grease Nipple	ASTM A29M-1020	1
16	Worm	ASTM A29M-1045	1
17	Key	ASTM A29M-1045	1
18	Handwheel Indicator	ASTM A29M-1020	1
19	Washer of Nuts	SS304	set
20	Adjusting Nuts	SS304	set
21	Adjusting Bolts	SS304	set

# Manual Worm Gear Operators - with Reducer

## Bill of Materials

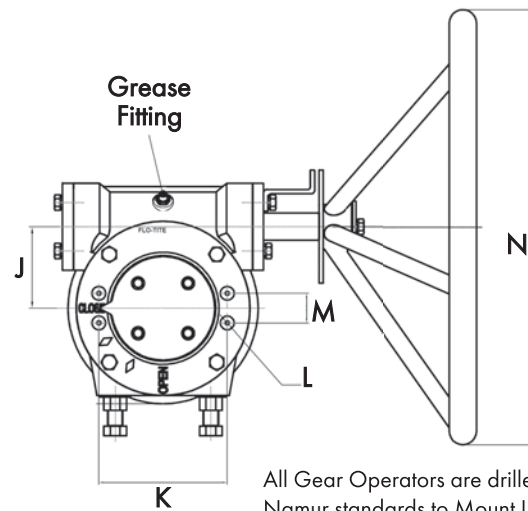
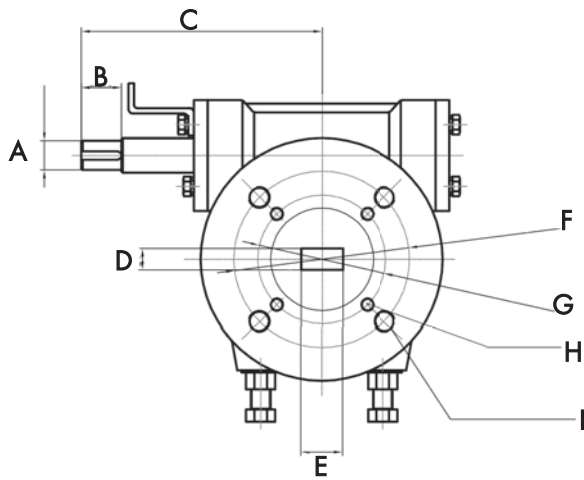
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1	Bolt	SS304	set
2	Indicator Plate	ASTM A29M-1020	1
3	O-Ring	NBR	set
4	Oil Seal	NBR	set
5	Handwheel Indicator	ASTM A29M-1020	1
6	Bolts	SS304	set
7	Cover	ASTM A536 65-45-12	1
8	Sealing Gasket	Insulation Paper or Rubber	set
9	Worm Gear	ASTM A536 65-45-12	1
10	Stem Bush	ASTM A29M-1020	1
11	Snap Ring	ASTM A29-1566	1
12	End Cover	ASTM A29M-1020	1
13	Bearing	ASTM A295-52100	set
14	Body	ASTM A536 65-45-12	1
15	Grease Nipple	ASTM A29M-1020	2
16	Worm	ASTM A29M-1045	1
17	Key	ASTM A29M-1045	set
18	Reduction Body	ASTM A536 65-45-12	1
19	Bolts	SS304	set
20	Bearing	ASTM A295-52100	set
21	Gears	ASTM A29M-1045	2
22	Snap Ring	ASTM A29-1566	1
23	Reduction Cover	ASTM A536 65-45-12	1
24	Washer of Nuts	SS304	2
25	Adjusting Nuts	SS304	set
26	Adjusting Bolts	SS304	set



Also Available:

- GO-20
- GO-24
- GO-D10
- GO-D12

# Max Gear Operators for Flo-Tite Ball Valves



All Gear Operators are drilled and tapped to Namur standards to Mount Limit Switches.

## Dimensions

FLO-TITE MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M	N
<b>GORL-01</b>	Ø0.63	0.94	4.99	0.67	0.67	Ø4.01 (F10)	Ø2.76 (F07)	5/16 - 18UNC	3/8 - 16UNC	2.16	3.15	4-M5	1.18	Ø7.87
<b>GORL-02</b>	Ø0.91	1.25	7.51	0.67	1.29	Ø5.51 (F14)	Ø4.01 (F10)	3/8 - 16UNC	5/8 - 11UNC	3.24	5.12	4-M5	1.18	Ø15.75
<b>GORL-03</b>	Ø1.10	1.49	9.17	1.02	1.77	Ø5.51 (F14)	-	-	5/8 - 11UNC	3.62	6.30	4-M5	1.57	Ø19.68
<b>GORL-04</b>	Ø1.10	1.49	9.57	1.38	2.17	Ø5.51 (F14)	-	-	5/8 - 11UNC	3.62	6.30	4-M5	1.57	Ø19.68
<b>GORL-05</b>	Ø1.10	1.49	10.04	1.38	2.17	Ø5.51 (F14)	-	-	5/8 - 11UNC	-	6.30	4-M5	1.57	Ø19.68

## TECHNICAL DATA

FLO-TITE MODEL	BODY /COVER MATERIAL	MAX OUTPUT TORQUE	MECHANICAL EFFICIENCY	GEAR RATIO	ISO MOUNTING	WEIGHT
<b>GORL-01</b>	DUCTILE IRON	4425 in.lbs	11.3±10%	41:1	F07+F10	17.64 lbs
<b>GORL-02</b>	DUCTILE IRON	12389 in.lbs	13.8±10%	46:1	F10+F14	35.27 lbs
<b>GORL-03</b>	DUCTILE IRON	22124 in.lbs	14.7±10%	49:1	F14	57.32 lbs
<b>GORL-04</b>	DUCTILE IRON	26549 in.lbs	38.4±10%	129:1	F14	83.77 lbs
<b>GORL-05</b>	DUCTILE IRON	37168 in.lbs	40±10%	158:1	F14	90.39 lbs

All gear operators are supplied as standard with drilled and tapped holes to mount limit switches with SS bolting.

### Options

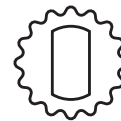
- Star Drive
- Locking Device
- Special Coatings
- Flow Plan Indicators for Multi-Port Valves
- Chain Wheel Operators
- Adjustable Memory Stops in Open Position 45°-90°

### Replaceable Drive Insert Design

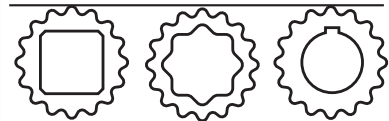
Standard gears are fitted with double D ISO Square insert, but a variety of other inserts such as key way and Star Drive are also available. Inserts can be easily replaced or re-machined as needed.



### Standard



### Options

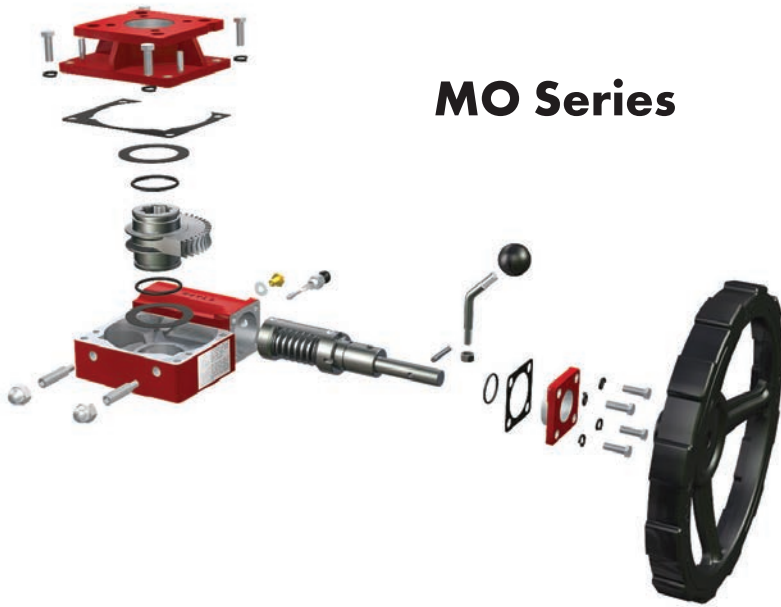


**FLO - TITE**  
4815 West 5th St.  
Lumberton, NC 28358

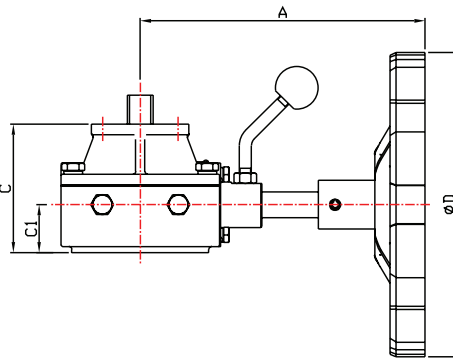
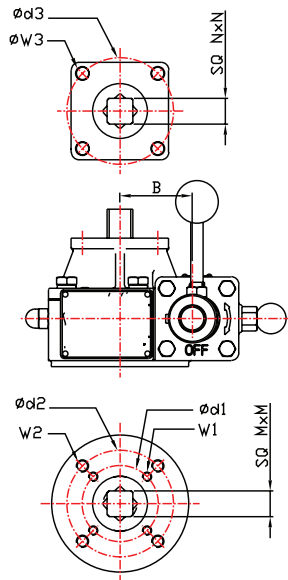
P.O. Box 1293  
Lumberton, NC 28359  
www.Flotype.com

910-738-8904  
sales@flotype.com

# Declutchable Gear Operators



## MO Series



## Bill of Materials (major parts)

No	Name	Material	Qty
1	Handlewheel	Steel	1
2	Off Center Sleeves	Carbon Steel ASTM A29M-1045	2
3	Small Cap	ASTM A216 WCB	1
4	Housing	ASTM A216 WCB	1
5	Worm	Carbon Steel ASTM A29M-1045	1
6	Worm Gear	Ductile Iron	1
7	Bracket Cap	ASTM A216 WCB	1
8	Worm Shaft	Carbon Steel ASTM A29M-1045	1

## Technical Data

Model	Gear Ratio	Efficiency %	Mechanical Advantage	Input Torque in-lb	Output Torque in-lb	Hand-wheel Dia. (mm)	Rim Pull lb
MO-J26	26:1	23	6	443	2655	200	112
				575	4868	200	146
MO-J38	38:1	23	8.74	620	5487	250	126
				708	6196	300	120
				664	8851	250	135
MO-J54	54:1	25	13.5	797	10621	300	135
				664	8851	250	135
MO-J80	80:1	26	20.8	841	17702	350	122
MO-J78	78:1	26	20.3	1416	28322	600	120
MO-J270	270:1	25	67.5	797	53105	500	81

## Dimensional Data

Model #	Ref. #	Gear Ratio	A	B	C	C1	D	M	N	Valve Side Mounting Pad			Actuator Side Mount Pad			Weight lbs
										d1	W1	ISO	d3	W3	ISO	
MO-J26	SLJ26	26:1	7.36	1.87	3.32	1.24	7.87	0.669	0.669	2.76	M8	F07	2.76	0.35	F07	10
MO-J38	SLJ38	38:1	8.98	2.46	3.36	1.12	9.84	1.063	1.063	4.02	M10	F10	4.02	0.47	F10	17
MO-J54	SLJ54	54:1	9.44	3.25	3.93	1.38	11.81	1.417	1.417	4.92	M12	F12	5.51	0.71	F14	26
MO-J80	SLJ80	80:1	11.44	4.72	4.49	1.77	13.78	1.811	1.811	5.51	M16	F14	6.50	0.87	F16	55
MO-J78	SLJ78	78:1	12.72	5.43	4.61	1.91	23.62	1.811	1.811	6.50	M20	F16	6.50	0.87	F16	68
MO-J270	SLJ270	270:1	14.41	3.75	7.40	2.58	19.69	2.362	2.362	6.50	M20	F16	6.50	0.87	F16	151

Model MO-J26 is equipped with an extra set of mounting pattern on valve side, d2=1.97", W2=M6; ISO F05

This brochure is general in nature and the manufacturer reserves the right to alter dimensions, materials, or to make design improvements.