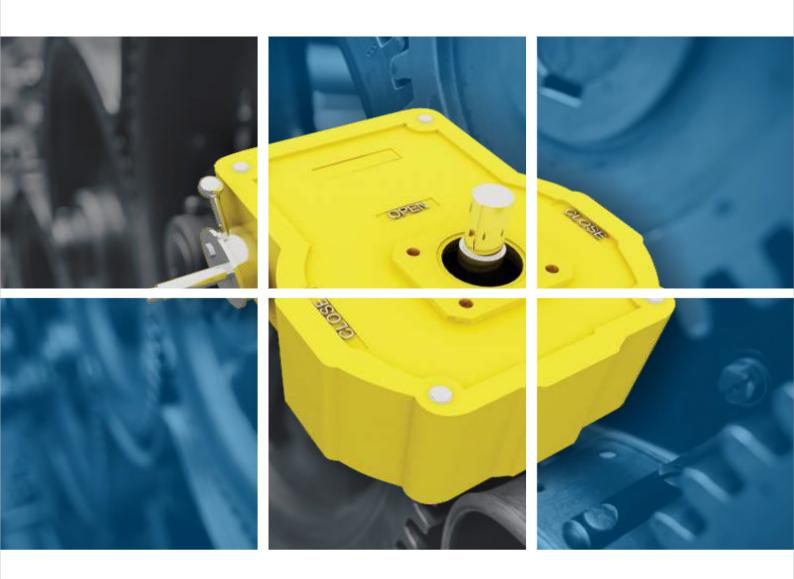


# MANUFACTURE OF VALVE OPERATORS

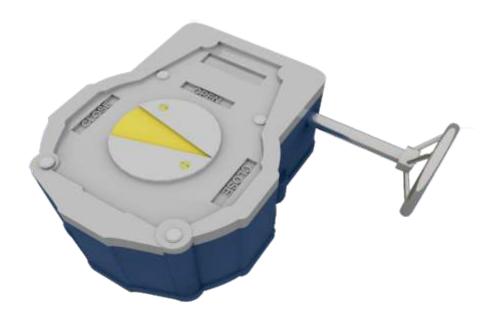
& Manual Overrides Actuators





# **VGM SERIES:** Quarter Turn Worm Gear Operators for Manual Operation





### Features:

- 19 models up to 1,00,000 Nm Output torque
- Alloy steel input shafts
- Rugged Design
- High performance axial bearings
- Epoxy Primer coating or powder coating
- Powder coated Hand wheels
   Stroke 0° to 90° (+ / 5°)

## GEARED FOR EXCELLENCE

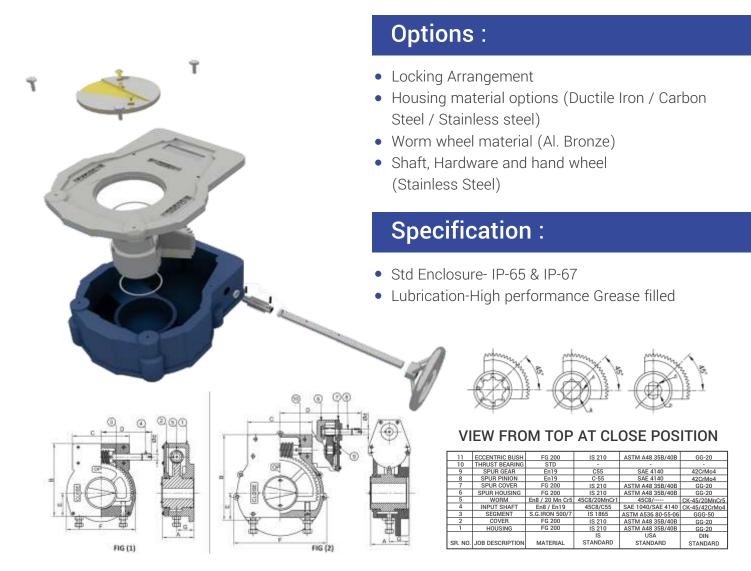
### About the VGM Series:

The VGM series gear boxes are quarter turn devices used To operate butterfly, ball, plug valves and dampers. All Model in this series are compact designed, epoxy Primer coated or powder coated and feature high Performance axial bearings.

These gear operators are well suited for chemical, power, oil and gas, waterworks, sewage, HVAC and other general industrial applications.



# Performance Specifications Of Quarter Turn Gear Operators (MANUAL OPERATION - VGM SERIES)



REFER FIG (1)FOR MODELS UPTO VGM 40 REFER FIG (2)FOR MODELS ABOVE VGM 40

| VGM Model | Rated out<br>put torque<br>(Nm) | Mech<br>Advantage<br>+/-10% | Ratio  | Turn to<br>close | ISO 5211<br>Mounting | Max Drive<br>Bore | Approx Unit<br>Weight (KG) | Recommended<br>Hand Wheel<br>(MM) |
|-----------|---------------------------------|-----------------------------|--------|------------------|----------------------|-------------------|----------------------------|-----------------------------------|
| VGM 2.5   | 250                             | 8                           | 33:1   | 8.25             | F05,F07              | 20                | 2.7                        | Ø 175/200                         |
| VGM 05    | 500                             | 10                          | 40:1   | 10               | F07, F10             | 30                | 5                          | Ø 200/250                         |
| VGM 07    | 700                             | 10                          | 40:1   | 10               | F07, F10, F12        | 32                | 7                          | Ø 300/350                         |
| VGM 10    | 1000                            | 12                          | 44:1   | 11               | F10, F12,F14         | 45                | 9.5                        | Ø 350/400                         |
| VGM 15    | 1500                            | 14                          | 48:1   | 12               | F10,F12, F14,F16     | 50                | 12                         | Ø 450/500                         |
| VGM 20    | 2000                            | 16                          | 60:1   | 15               | F10,F12, F14,F16     | 50                | 15                         | Ø 450/500                         |
| VCM 20    |                                 | 22                          | 80:1   | 20               | F12, F14,F16         | 60                | 30                         | Ø 450/500                         |
| VGM 30    | 3000                            | 22                          | 80:1   | 20               | F25                  | 80                | 35                         | Ø 450/500                         |
| VGM 35    | 3500                            | 20                          | 73:1   | 18.25            | F14,F16<br>F25       | 80                | 33<br>36.5                 | Ø 500/600                         |
| VGM 40    | 4000                            | 24                          | 90:1   | 22.5             | F16, F25             | 100               | 58                         | Ø 500/600                         |
| 1/014.45  | 4500                            |                             | 264.4  |                  | F12, F14,F16         | 60                | 38                         | ~ F00/500                         |
| VGM 45    | 4500                            | 50                          | 264:1  | 66               | F25                  | 80                | 43                         | Ø 500/600                         |
| VCMACE    | 6500                            |                             | 202.4  | 72               | F14, F16             | 00                | 41                         | ø 600                             |
| VGM 65    | 6300                            | 65                          | 292:1  | 73               | F25                  | 80                | 45                         | Ø 600                             |
| VGM 80    | 8000                            | 70                          | 300:1  | 75               | F16, F25             | 90                | 65                         | Ø 600/750                         |
| VGM 10K   | 10000                           | 75                          | 450:1  | 75               | F25, F30             | 100               | 74                         | Ø 600/750                         |
| VGM 15K   | 15000                           | 100                         | 456:1  | 112.5            | F25, F30             | 100               | 84                         | Ø 600/750                         |
| VGM 22K   | 22500                           | 120                         | 1150:1 | 114              | F25, F30,F35         | 110               | 136                        | Ø 600/750                         |
| VGM 35K   | 35000                           | 253                         | 1302:1 | 287.5            | F25, F30,F35         | 150               | 160                        | Ø 750/900                         |
| VGM 50K   | 50000                           | 287                         | 1302:1 | 325.5            | F30, F35, F40        | 150               | 380                        | ø 750/900                         |
| VGM 75K   | 75000                           | 400                         | 1788:1 | 447              | F40, F48             | 200               | 430                        | Ø 750/900                         |
| VGM 100K  | 100000                          | 600                         | 2624:1 | 656              | F40, F48             | 200               | 450                        | Ø 750/900                         |

# **EA SERIES:** Quarter Turn Worm Gear Operators for Electrical Actuation





### Features:

- 14 models up to 85,000 Nm output torque
- Heat treated worm shafts
- Surface hardened worm wheels
- High performance axial bearings
- Epoxy primer coating
- Stroke 0°to 90°(+/-5°)
- Compatible with all electrical actuators

GEARED FOR EXCELLENCE

### About the EA Series:

The EA series gear operators are quarter turn devices Suitable for electrical actuator to operate butterfly, ball, Plug valves and dampers. The EA series gear operators are similar to the VGM series

Gear operators but with higher grade material or surface Treatment of internals.



# Performance Specifications Of Quarter Turn Gear Operators (ELECTRICAL ACTUATION - EA SERIES)

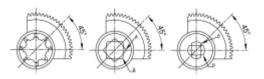


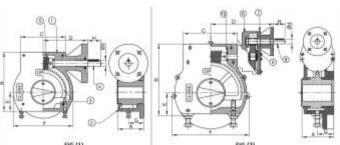
## Options:

- Housing material options (Ductile Iron / Carbon Steel / Stainless steel)
- Worm wheel material (Al. Bronze)
- Shaft, Hardware and handwheel (Stainless Steel)

## Specification:

- Std Enclosure- IP-65 & IP-67
- Lubrication-High performance Grease filled





#### VIEW FROM TOP AT CLOSE POSITION

| 11      | ECCENTRIC BUSH  | FG 200          | IS 210         | ASTM A48 35B/40B   | GG-20           |
|---------|-----------------|-----------------|----------------|--------------------|-----------------|
| 10      | THRUST BEARING  | STD             | -              | -                  | -               |
| 9       | SPUR GEAR       | En19            | C55            | SAE 4140           | 42CrMo4         |
| 8       | SPUR PINION     | En19            | C-55           | SAE 4140           | 42CrMo4         |
| 7       | SPUR COVER      | FG 200          | IS 210         | ASTM A48 35B/40B   | GG-20           |
| 6       | SPUR HOUSING    | FG 200          | IS 210         | ASTM A48 35B/40B   | GG-20           |
| 5       | WORM            | En8 / 20 Mn Cr5 | 45C8/20MnCr1   | 45C8/              | CK-45/20MnCr5   |
| 4       | INPUT SHAFT     | En8 / En19      | 45C8/C55       | SAE 1040/SAE 4140  | CK-45/42CrMo4   |
| 3       | SEGMENT         | S.G.IRON 500/7  | IS 1865        | ASTM A536 80-55-06 | GGG-50          |
| 2       | COVER           | FG 200          | IS 210         | ASTM A48 35B/40B   | GG-20           |
| 1       | HOUSING         | FG 200          | IS 210         | ASTM A48 35B/40B   | GG-20           |
| SR. NO. | JOB DESCRIPTION | MATERIAL        | IS<br>STANDARD | USA<br>STANDARD    | DIN<br>STANDARD |

## REFER FIG (1)FOR MODELS UPTO VGM 36 EA REFER FIG (2)FOR MODELS ABOVE VGM 36 EA

| VGM Model  | Rated Output<br>torque<br>(Nm) | Mech<br>Advantage<br>+/- 10% | Ratio  | Turns to<br>close | ISO 5211<br>Mounting | Max Drive<br>Bore | Approx Unit<br>Weight<br>(Kg) | Actuator<br>MTG<br>Flange |
|------------|--------------------------------|------------------------------|--------|-------------------|----------------------|-------------------|-------------------------------|---------------------------|
| VGM 07EA   | 700                            | 10                           | 40:1   | 10                | F07,F10              | 30                | 9                             | F10                       |
| VGM 20EA   | 2000                           | 16                           | 63:1   | 15.25             | F10, F12,F14         | 55                | 17                            | F10                       |
| VGM 30 EA  | 3000                           | 20                           | 73:1   | 18.25             | F14,F16<br>F25       | 80                | 40<br>48                      | F10                       |
| VGM 36 EA  | 3600                           | 23                           | 90:1   | 22.5              | F16, F25             | 90                | 66                            | F10                       |
|            | 4000                           |                              | 254.6  |                   | F12, F14,F16         | 60                | 36                            | 54.0                      |
| VGM 40 EA  | 4000                           | 50                           | 264:1  | 66                | F25                  | 80                | 41                            | F10                       |
| VGM 60 EA  | 6000                           | 65                           | 292:1  | 73                | F14,F16<br>F25       | 80                | 48<br>53                      | F10                       |
| VGM 75 EA  | 7500                           | 70                           | 300:1  | 75                | F16, F25             | 90                | 75                            | F10                       |
| VGM 10K EA | 10000                          | 75                           | 300:1  | 75                | F25, F30             | 100               | 78                            | F10                       |
| VGM 14K EA | 14000                          | 100                          | 450:1  | 112.5             | F25, F30             | 100               | 90                            | F14                       |
| VGM 20K EA | 20000                          | 120                          | 456:1  | 114               | F25, F30,F35         | 110               | 145                           | F14                       |
| VGM 30K EA | 30000                          | 253                          | 1150:1 | 287.5             | F25, F30,F35         | 150               | 175                           | F14                       |
| VGM 45K EA | 45000                          | 287                          | 1302:1 | 325.5             | F30, F35, F40        | 150               | 380                           | F14                       |
| VGM 65K EA | 65000                          | 400                          | 1788:1 | 447               | F40, F48             | 200               | 450                           | F16                       |
| VGM 85K EA | 85000                          | 600                          | 2624:1 | 656               | F40, F48             | 200               | 460                           | F16                       |

# **MOR SERIES:** Quarter Turn Worm Gear Operators for Pneumatic Actuation





### Features:

- 6 models up to 5,000 Nm Output torque
- Alloy steel input shafts
- Rugged Design
- High performance axial bearings
- Epoxy Primer coating or powder coating
- Powder coated Hand wheels
- Stroke 0°to 90°(+/-5°)
- Smooth and easy CLUTCH DECLUTCH Mechanism

## GEARED FOR EXCELLENCE

### About the MOR Series:

The MOR series manual overrides are quarter turn devices Used to operate pneumatically actuated valves. The MOR series of quarter turn manual overrides are Robust industrial grade products manufactured with cast Iron housing components. All models in this series are compact designed, epoxy Primer coated and feature high performance axial bearings. The MOR series have optimum ratios for reduced effort During operation.



# Performance Specifications Of Quarter Turn Gear Operators (MOR SERIES)



## Options:

- Housing material options (Ductile Iron / Carbon Steel / Stainless steel)
- Worm wheel material (Al. Bronze)
- Shaft, Hardware and handwheel (Stainless Steel)

## Specification:

- Std Enclosure- IP-65 & IP-67
- Lubrication-High performance Grease filled

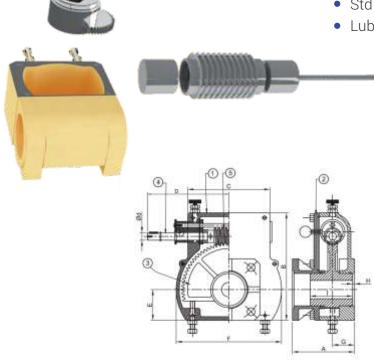


FIG (1)



### VIEW FROM TOP AT CLOSE POSITION

| 11      | ECCENTRIC BUSH  | FG 200          | IS 210         | ASTM A48 35B/40B   | GG-20           |
|---------|-----------------|-----------------|----------------|--------------------|-----------------|
| 10      | THRUST BEARING  | STD             | -              | -                  | -               |
| 9       | SPUR GEAR       | En19            | C55            | SAE 4140           | 42CrMo4         |
| 8       | SPUR PINION     | En19            | C-55           | SAE 4140           | 42CrMo4         |
| 7       | SPUR COVER      | FG 200          | IS 210         | ASTM A48 35B/40B   | GG-20           |
| 6       | SPUR HOUSING    | FG 200          | IS 210         | ASTM A48 35B/40B   | GG-20           |
| 5       | WORM            | En8 / 20 Mn Cr5 | 45C8/20MnCr1   | 45C8/              | CK-45/20MnCr5   |
| 4       | INPUT SHAFT     | En8 / En19      | 45C8/C55       | SAE 1040/SAE 4140  | CK-45/42CrMo4   |
| 3       | SEGMENT         | S.G.IRON 500/7  | IS 1865        | ASTM A536 80-55-06 | GGG-50          |
| 2       | COVER           | FG 200          | IS 210         | ASTM A48 35B/40B   | GG-20           |
| 1       | HOUSING         | FG 200          | IS 210         | ASTM A48 35B/40B   | GG-20           |
| SR. NO. | JOB DESCRIPTION | MATERIAL        | IS<br>STANDARD | USA<br>STANDARD    | DIN<br>STANDARD |

#### REFER FIG (1)FOR MODELS UPTO MOR 3.5 REFER FIG (2)FOR MODELS ABOVE MOR 3.5

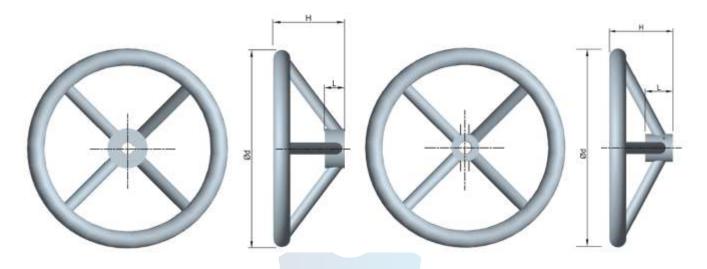
| VGM<br>Model | Rated out<br>put torque<br>(Nm) | Mech<br>Advantage<br>+/-10% | Ratio | Turn to<br>close | ISO 5211<br>Mounting | Max Drive<br>Bore | Approx Unit<br>Weight (KG) | Actuator MTG<br>Flange<br>ISO 5211 | Recommended<br>Handwheel<br>(MM) |
|--------------|---------------------------------|-----------------------------|-------|------------------|----------------------|-------------------|----------------------------|------------------------------------|----------------------------------|
| MOR 0.5      | 250                             | 9                           | 38:1  | 9.5              | F05, F07             | 25                | 5                          | F05, F07                           | ø 175                            |
| MOR 1        | 650                             | 9                           | 38:1  | 9.5              | F07, F10, F12        | 30                | 9                          | F07, F10, F12                      | ø 250                            |
| MOR 2        | 1500                            | 17                          | 70:1  | 17.5             | F10, F12, F14        | 50                | 25                         | F10, F12, F14                      | ø 400                            |
| MOR 2        | 1500                            | 17                          | 70:1  | 17.5             | F10, F12, F14        | 50                | 28                         | F16                                | ø 400                            |
| MOR 2.5      | 2500                            | 17                          | 80:1  | 20               | F12, F14, F16        | 60                | 31                         | F12, F14, F16                      | ø 500                            |
| MOR 3.5      | 3500                            | 22                          | 90:1  | 22.5             | F16, F25             | 80                | 60                         | F16<br>F25                         | Ø 500                            |
| MOR 5        | 5000                            | 50                          | 264:1 | 66               | F16, F25             | 80                | 70                         | F16<br>F25                         | ø 600                            |

### **ACCESSORIES**



#### 'K' Series Handwheel

#### 'H' Series Handwheel

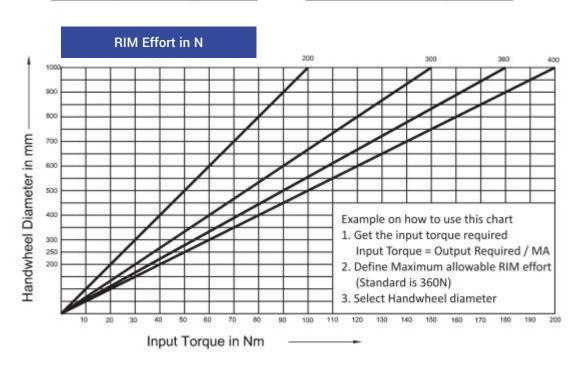


Handwheel with Keyway

Handwheel with Hole / Pin

| Ød   | н   | L  |
|------|-----|----|
| 175  | 60  | 19 |
| 250  | 90  | 25 |
| 350  | 110 | 30 |
| 400  | 130 | 30 |
| 500  | 110 | 30 |
| 600  | 130 | 30 |
| 750  | 160 | 30 |
| 900  | 180 | 30 |
| 1000 | 160 | 30 |

| Ød   | н   | L  |
|------|-----|----|
| 175  | 70  | 30 |
| 250  | 80  | 35 |
| 350  | 125 | 35 |
| 400  | 135 | 44 |
| 500  | 130 | 44 |
| 600  | 145 | 44 |
| 750  | 170 | 44 |
| 900  | 180 | 44 |
| 1000 | 180 | 44 |







## **MACHINES**









VMC- 2

VMC-3







CNC-2



CNC-3





CNC- 5



CNC- 6



## WORK



### CONVENTIONAL TURNING AREA









CNC AND VMC TURNING AREA





**VISTA GEAR MASTERS**Plot No. 185/F3 Rani Chennamma Nagar, 1st Stage, Belgaum - 590 006.

Work: Sy No. 123/2/3, Shinoli Bk., Tal: Chandgad Dist: Kolhapur 416 507.

**Cell**: +91 9881445606, +91 8080906335  $\textbf{Email:} \ in fo@vistage armasters.co. in$ 

Website: www.vistagearmasters.co.in