

Building connections that last™

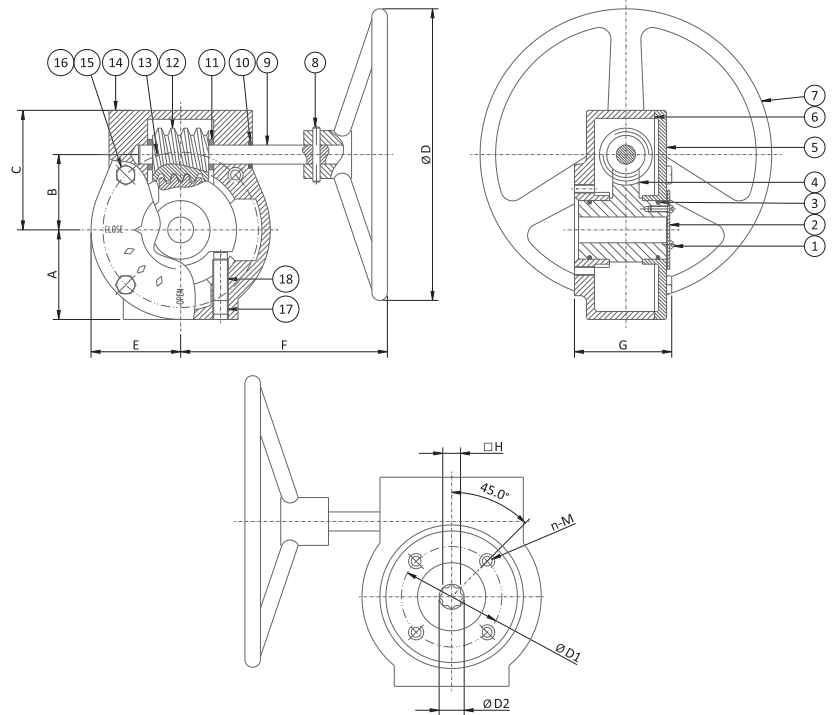


# Series SG

## Gear Operator Datasheet



**Gear Operator** SG-11 through SG-14



**Parts & Materials** SG-11 through SG-14

| Item | Quantity | Description and Material Code |
|------|----------|-------------------------------|
| 1    | 2        | Bolts, Steel                  |
| 2    | 1        | Indicator, Aluminum           |
| 3    | 2        | "O" Ring, ASTM D2000 NBR      |
| 4    | 1        | Worm Gear, ASTM A536 65-45-12 |
| 5    | 1        | Cover, ASTM A126 Class B      |
| 6    | 1        | Spacer Sheet                  |
| 7    | 1        | Hand Wheel, ASTM A126 Class B |
| 8    | 1        | Taper Pin, AISI 1045          |
| 9    | 1        | Shaft, AISI 1045              |

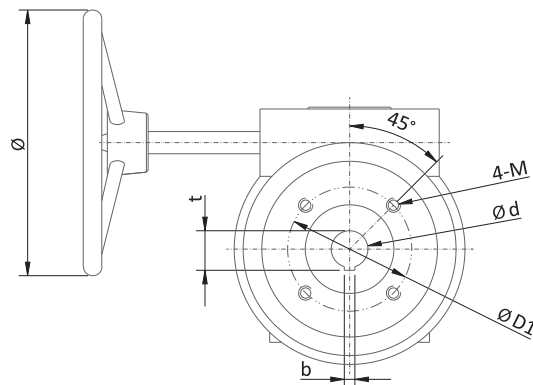
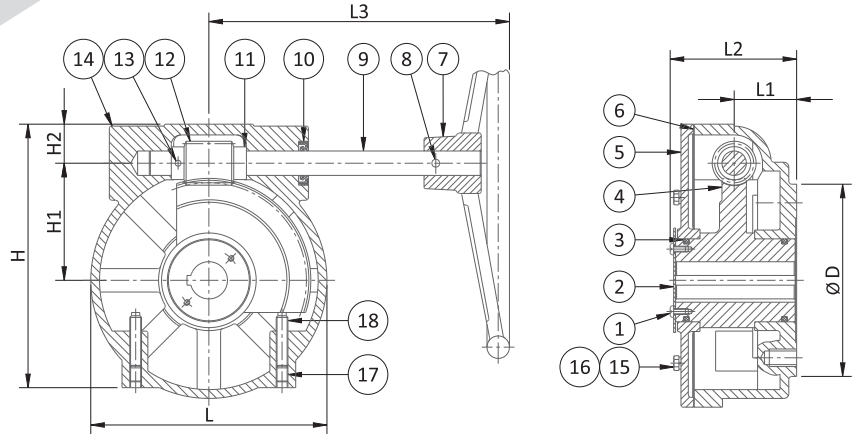
| Item | Quantity | Description and Material Code |
|------|----------|-------------------------------|
| 10   | 1        | Ring, ASTM D2000 NBR          |
| 11   | 2        | Baffle Ring, ASTM536 65-45-12 |
| 12   | 1        | Worm, AISI 1045               |
| 13   | 1        | Taper Pin, Steel              |
| 14   | 1        | Housing, AATM A126 Class B    |
| 15   | 4        | Bolts, Steel                  |
| 16   | 4        | Spring Spacer, AISI 1566      |
| 17   | 1        | Locking Screw, Steel          |
| 18   | 1        | Adjusting Screw, Steel        |

**Dimensions** (Inches)

| Model | Gear Ratio | D     | E    | F    | A    | C    | G    | B    | D1   | D2   | M   | n | h    | Output Torque (In / Lbs) | Weight (Lbs.) |
|-------|------------|-------|------|------|------|------|------|------|------|------|-----|---|------|--------------------------|---------------|
| SG-11 | 24:1       | 5.79  | 2.07 | 6.10 | 2.13 | 2.87 | 2.85 | 1.77 | 1.97 | .476 | M6  | 4 | .354 | 1,328                    | 8.82          |
| SG-12 | 24:1       | 5.79  | 2.07 | 6.10 | 2.13 | 2.87 | 2.85 | 1.77 | 2.76 | .713 | M8  | 4 | .551 | 1,328                    | 8.82          |
| SG-13 | 30:1       | 11.22 | 2.85 | 9.06 | 2.85 | 3.94 | 3.02 | 2.60 | 4.02 | 1.11 | M10 | 4 | .867 | 4,425                    | 17.2          |
| SG-14 | 50:1       | 11.22 | 3.09 | 8.74 | 3.19 | 4.26 | 3.18 | 3.05 | 4.02 | 1.11 | M10 | 4 | .867 | 10,621                   | 23.15         |

# Gear Operator Series SG

**Gear Operator** SG-15 through SG-17



## Parts & Materials SG-15 through SG-17

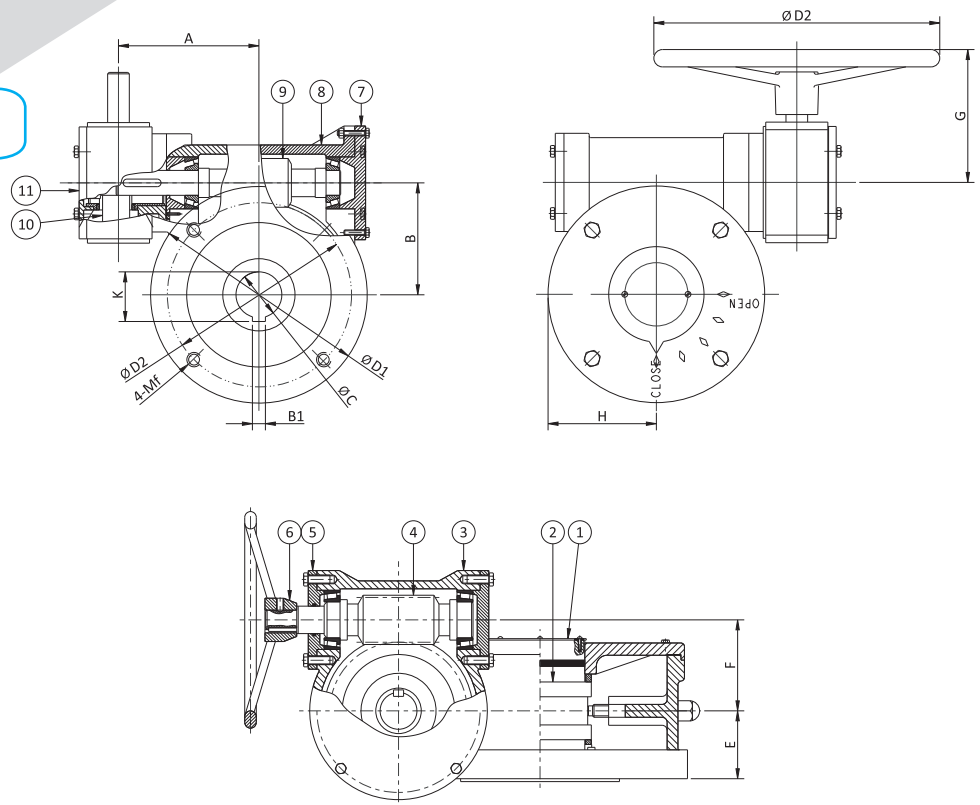
| Item | Quantity | Description and Material Code |
|------|----------|-------------------------------|
| 1    | 2        | Bolts, Steel                  |
| 2    | 1        | Indicator, Aluminum           |
| 3    | 2        | "O" Ring, ASTM D2000 NBR      |
| 4    | 1        | Worm Gear, ASTM A536 65-45-12 |
| 5    | 1        | Cover, ASTM A126 Class B      |
| 6    | 1        | Spacer Sheet                  |
| 7    | 1        | Hand Wheel, ASTM A126 Class B |
| 8    | 1        | Taper Pin, AISI 1045          |
| 9    | 1        | Shaft, AISI 1045              |

| Item | Quantity | Description and Material Code |
|------|----------|-------------------------------|
| 10   | 1        | Ring, ASTM D2000 NBR          |
| 11   | 2        | Baffle Ring, ASTM536 65-45-12 |
| 12   | 1        | Worm, AISI 1045               |
| 13   | 1        | Taper Pin, Steel              |
| 14   | 1        | Housing, AATM A126 Class B    |
| 15   | 4        | Bolts, Steel                  |
| 16   | 4        | Spring Spacer, AISI 1566      |
| 17   | 1        | Locking Screw, Steel          |
| 18   | 1        | Adjusting Screw, Steel        |

## Dimensions (Inches)

| Model | Gear Ratio | L     | L1   | L2   | L3    | H     | H1   | H2   | D    | D1   | M   | Ø     | d    | b    | t    | Output Torque (In / Lbs) | Weight (Lbs.) |
|-------|------------|-------|------|------|-------|-------|------|------|------|------|-----|-------|------|------|------|--------------------------|---------------|
| SG-15 | 80:1       | 6.18  | 1.53 | 3.18 | 8.74  | 7.45  | 3.05 | 1.21 | 5.51 | 4.02 | M10 | 11.22 | 1.25 | .315 | 1.38 | 10,621                   | 23.15         |
| SG-16 | 80:1       | 10.04 | 2.32 | 4.72 | 11.10 | 11.12 | 4.72 | 1.38 | 7.76 | 5.51 | M16 | 15.75 | 1.31 | .394 | 1.42 | 22,127                   | 55.12         |
| SG-17 | 80:1       | 10.04 | 2.32 | 4.72 | 11.10 | 11.12 | 4.72 | 1.38 | 7.76 | 5.51 | M16 | 15.75 | 1.50 | .394 | 1.61 | 22,127                   | 55.12         |

**Gear Operator SG-18 and SG-19**



**Parts & Materials SG-18 and SG-19**

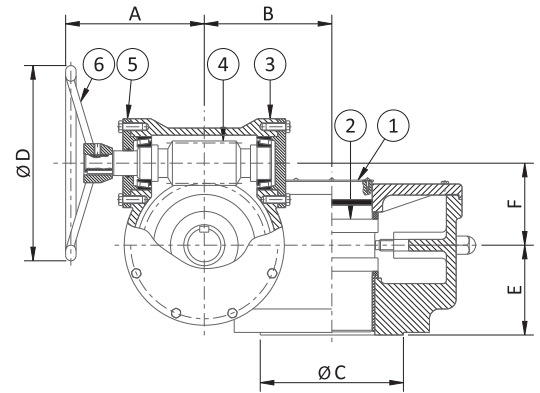
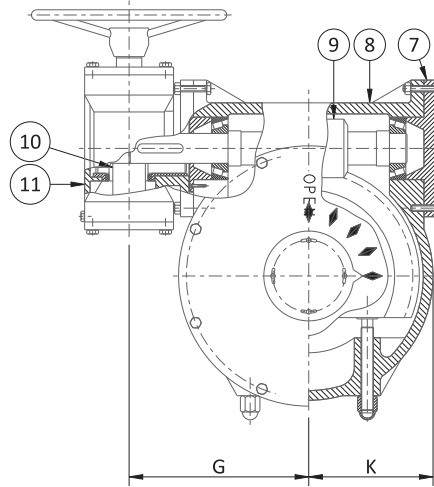
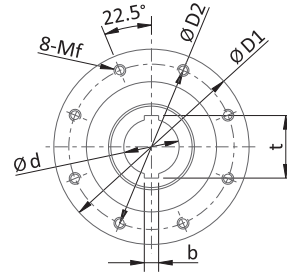
| Item | Quantity | Description and Material Code    |
|------|----------|----------------------------------|
| 1    | 1        | Indicator, Steel                 |
| 2    | 1        | Big Worm Gear, Ductile Iron      |
| 3    | 1        | Small Housing, ASTM A126 CL. B   |
| 4    | 1        | Small Worm, Steel                |
| 5    | 1        | Small End Cover, ASTM A126 CL. B |
| 6    | 1        | Hand Wheel, ASTM A126 CL. B      |
| 7    | 1        | Left End Cover, ASTM A126 CL.B   |
| 8    | 1        | Big Housing, ASTM A126 CL. B     |
| 9    | 1        | Big Worm, Steel                  |
| 10   | 1        | Small Worm Gear, Ductile Iron    |
| 11   | 1        | Small Cover, ASTM A126 CL. B     |



**Dimensions (Inches)**

| Model | Gear Ratio | A     | B    | C    | D     | E    | F    | G    | H    | D1    | D2   | B1   | K    | Mf  | Output Torque (In / Lbs) | Weight (Lbs.) |
|-------|------------|-------|------|------|-------|------|------|------|------|-------|------|------|------|-----|--------------------------|---------------|
| SG-18 | 560:1      | 11.34 | 4.09 | 1.63 | 9.84  | 2.52 | 2.60 | 7.17 | 4.31 | 7.76  | 5.51 | .394 | 1.74 | M16 | 22,127                   | 79.4          |
| SG-19 | 640:1      | 12.28 | 4.92 | 2.00 | 11.81 | 2.36 | 2.60 | 7.17 | 5.20 | 10.87 | 6.50 | .630 | 2.22 | M20 | 35,403                   | 98.5          |

**Gear Operator** SG-20 through SG-23



**Parts & Materials** SG-20 through SG-23

| Item | Quantity | Description and Material Code    |
|------|----------|----------------------------------|
| 1    | 1        | Indicator, Steel                 |
| 2    | 1        | Big Worm Gear, Ductile Iron      |
| 3    | 1        | Small Housing, ASTM A126 CL. B   |
| 4    | 1        | Small Worm, Steel                |
| 5    | 1        | Small End Cover, ASTM A126 CL. B |
| 6    | 1        | Hand Wheel, ASTM A126 CL. B      |
| 7    | 1        | Left End Cover, ASTM A126 CL. B  |
| 8    | 1        | Big Housing, ASTM A126 CL. B     |
| 9    | 1        | Big Worm, Steel                  |
| 10   | 1        | Small Worm Gear, Ductile Iron    |
| 11   | 1        | Small Cover, ASTM A126 CL. B     |



**Dimensions** (Inches)

| Model | Gear Ratio | A    | B    | C    | D     | E    | F    | G     | K    | D1    | D2    | b    | t    | Mf  | d    | Output Torque (In / Lbs) | Weight (Lbs.) |
|-------|------------|------|------|------|-------|------|------|-------|------|-------|-------|------|------|-----|------|--------------------------|---------------|
| SG-20 | 704:1      | 7.68 | 5.51 | 7.87 | 15.75 | 3.15 | 3.46 | 9.57  | 5.91 | 11.81 | 10.0  | .713 | 2.84 | M16 | 2.50 | 70,806                   | 165           |
| SG-21 | 704:1      | 8.74 | 7.72 | 7.87 | 17.72 | 3.66 | 3.90 | 11.10 | 8.70 | 11.81 | 10.0  | .791 | 3.34 | M16 | 2.96 | 132,761                  | 298           |
| SG-22 | 704:1      | 8.74 | 7.72 | 7.87 | 17.72 | 3.66 | 3.90 | 11.10 | 8.70 | 11.81 | 10.0  | .870 | 3.77 | M16 | 3.35 | 132,761                  | 298           |
| SG-23 | 704:1      | 8.74 | 9.29 | 9.06 | 17.72 | 5.20 | 3.90 | 12.44 | 9.84 | 13.78 | 11.73 | .988 | 4.17 | M20 | 3.75 | 221,268                  | 365           |

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