

rotork® Gears

300 Quarter-turn Stainless Steel Housing Gearboxes



300 Quarter-turn Gear Series

The Rotork Gears Series '300' quarter-turn gear operators are the first of their kind to use metal forming technology in their manufacture. This technology dramatically reduces manufacturing costs and allows the operator to be produced from stainless steel.

Application

Rotork Gears series '300' operators are quarter-turn devices intended for the operation of ball, plug and butterfly valves as well as power and process dampers. The unique sintered steel drive insert allows these gear operators to be fitted directly to most valve stems. The handwheels are available in a variety of sizes for smooth and easy operation.

The stainless steel operators are well suited for applications in highly corrosive environments as well as in breweries, pharmaceutical plants and sanitary facilities.

Features

- Stainless Steel housing
- Stainless Steel input shaft
- Three models up to 1000 Nm (8,860 lbf.in) output
- Rugged construction
- Sealed to IP65
- Light weight
- Replaceable stem drives (307-310)
- Patented, pressed-metal technology
- Optional Flexible Extensions
- Torque Range: 250 to 1000 Nm (2,200 to 8,860 lbf.in.)
- Temperature: -20 to +120 °C (-4 to +250 °F)

Materials

- Housing: 304 Stainless Steel
- Input shaft: 304 Stainless Steel
- Gear segment: Aluminium Bronze
- Stroke Adjusters: 304 Stainless Steel
- Indicator: 304 Stainless Steel
- Coating: None-100% 304 Stainless Steel (polished)

Performance specification

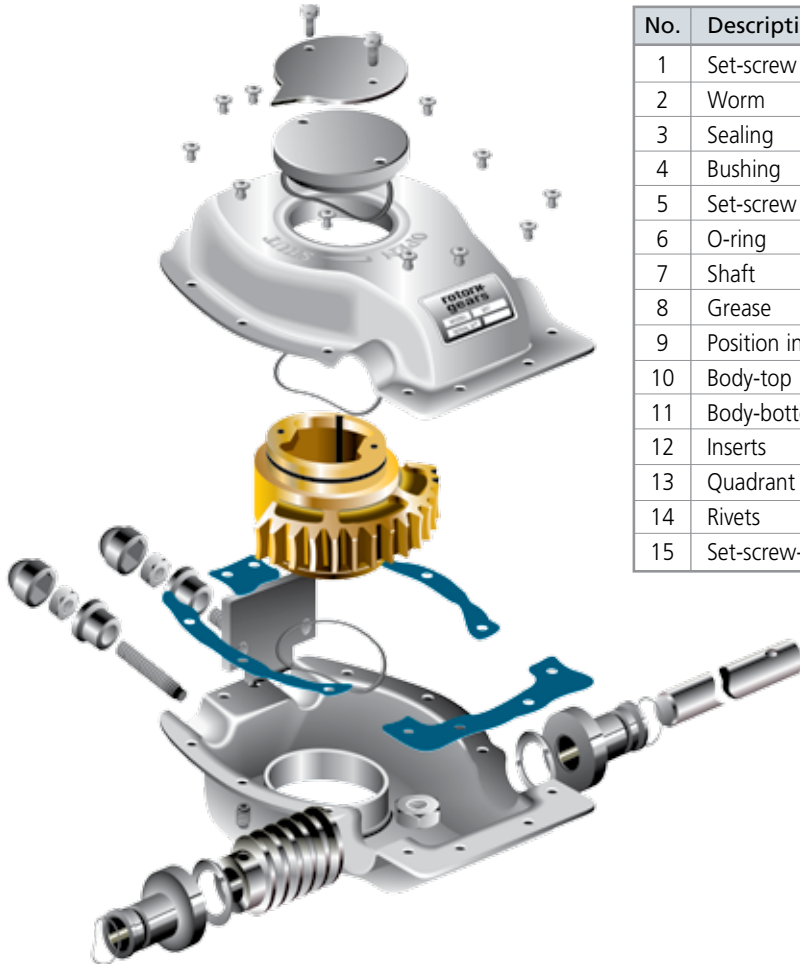
- Stroke: 0 - 90° (± 5° adjustable)
- Enclosure: Weatherproof to IP65
- No. of Models: 3

Redefining Flow Control

rotork®

Gears

Material Specification



No.	Description	Material	Notes
1	Set-screw	Stainless Steel	A2 / DIN 916
2	Worm	Carbon Steel	C45 / AISI 1045
3	Sealing	Polyurethan	PURAFLEX 2001
4	Bushing	Nylon	-
5	Set-screw	Carbon Steel	St. 45 H
6	O-ring	Nitrile	-
7	Shaft	Stainless Steel	AISI 303
8	Grease	Lithium-Calcium	Multipurpose EP-2
9	Position indicator	Stainless Steel	AISI 304
10	Body-top	Stainless Steel	AISI 304
11	Body-bottom	Stainless Steel	AISI 304
12	Inserts	Sintered Steel	-
13	Quadrant	Alu-Bronze	-
14	Rivets	Stainless Steel	-
15	Set-screw-plate	Steel	Steel 37.2

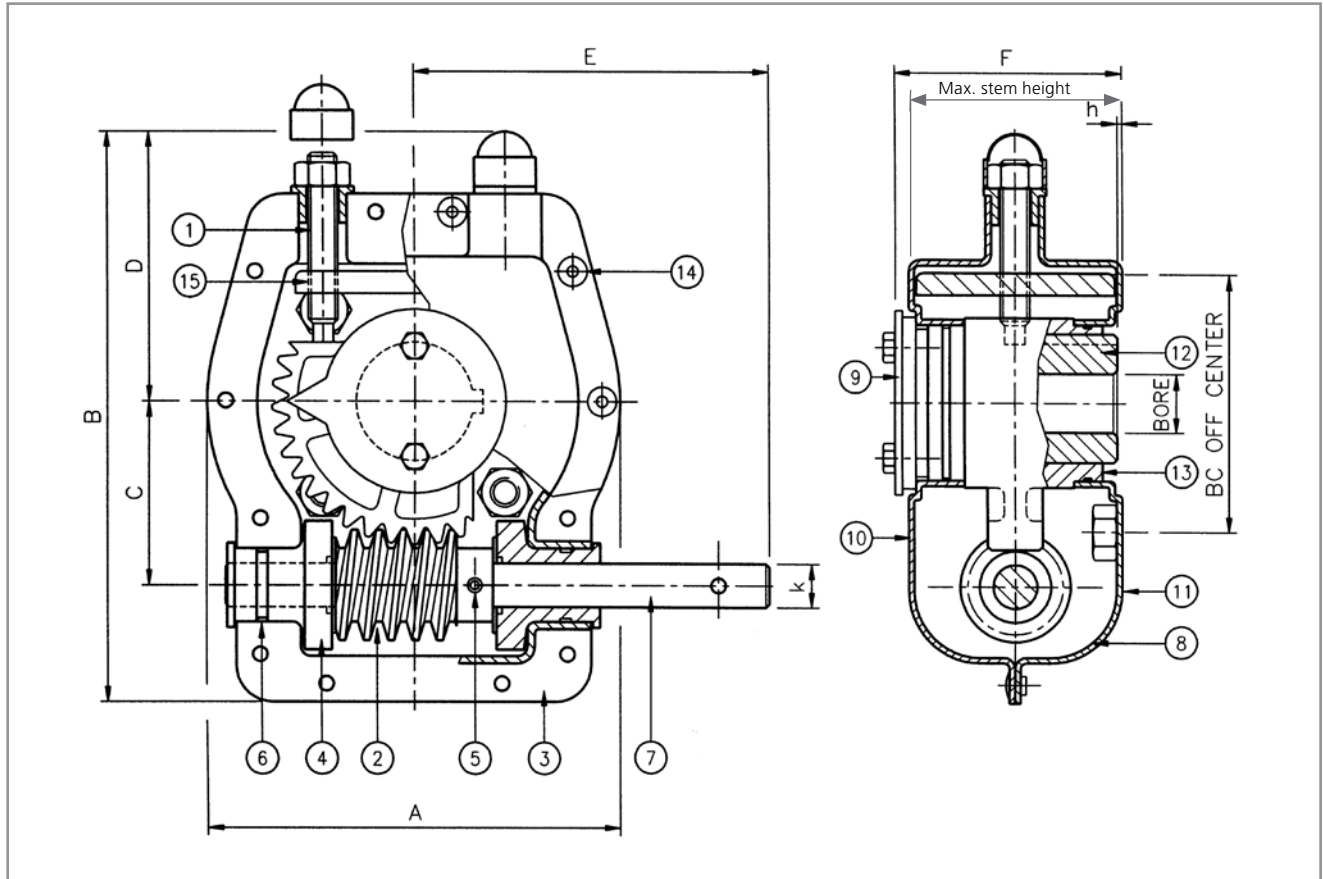
Type	A	B	C	D	E	F	øG	H	K	Bore Max.	Valve Connection ISO øBC 4x
307	113 (4.45)	155 (6.10)	50 (1.97)	71 (2.80)	119 (4.69)	68 (2.67)	32.15 (1.27)	1.3 (0.05)	12 (0.47)	20 (0.79)	F07 70 M8
310	151 (6.10)	185 (7.28)	60 (2.36)	90 (3.54)	180 (7.09)	84 (3.31)	45.3 (1.78)	1.8 (0.07)	15 (0.59)	30 (1.18)	F10 102 M10
312	188 (7.40)	236 (9.29)	80 (3.15)	102 (4.02)	167 (6.57)	87 (3.43)	-	5.5 (0.22)	20 (0.79)	55 (1.57)	F12 125 M12

All dimensions in millimetres. Contents subject to change without notice.

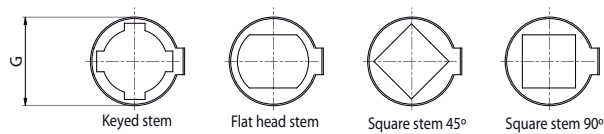
Redefining Flow Control

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Gearbox 300 Series



Inserts Valve Stem Variations



Type	Ratio	Torque Nm (lbf. inch)		M.A. ± 15%	Max. Stem Height mm (inch)	Weight Kg (lb)
		Output	Input			
307	37:1	250 (2200)	21 (184)	11.9	52 (2.05)	1.3 (2.9)
310	45:1	500 (4400)	39 (338)	12.8	73 (2.87)	2.8 (6.2)
312	40:1	1000 (8860)	100 (886)	12.5	78 (3.07)	7.0(15.4)

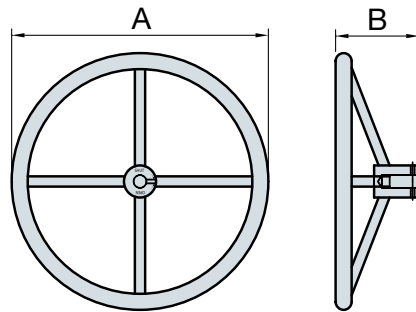
The static safety factor is 1.5.
The published M.A. is achieved after a few cycles.



Handwheel Selection Chart

Input Torque

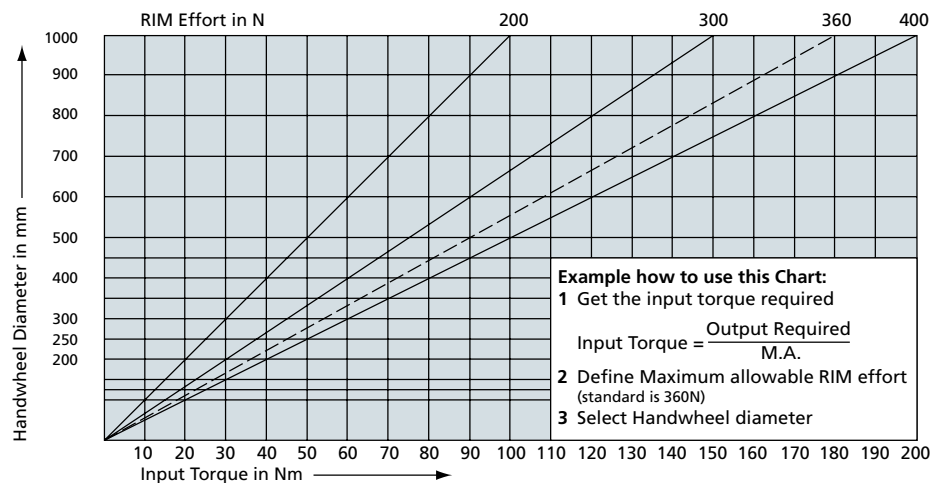
Type	M.A. ± 15%
307	11.9
310	12.8
312	12.5



300 Series 'S' type handwheel

Dimensions

Type	A	B
S150	Ø150	60
S200	Ø200	80
S350	Ø350	120



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