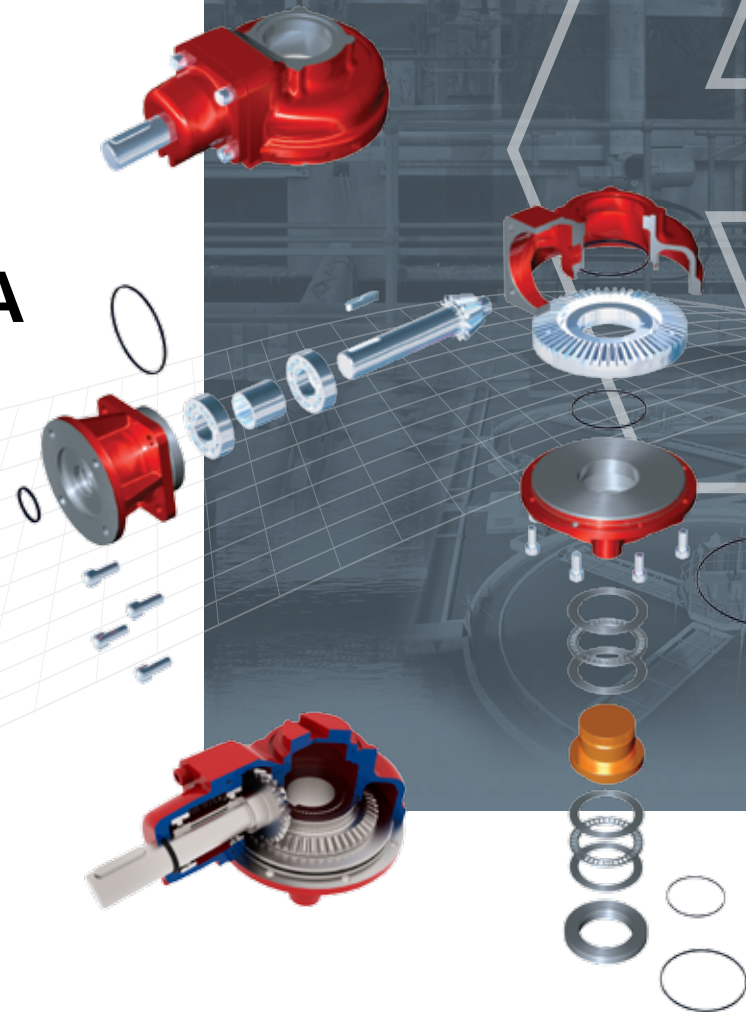


rotork®

Gears

IB Series **AWWA**

C560 and C561 Multi-turn
Gear Operator



IB AWWA Multi-turn Gearbox Series

The IB AWWA C560 and C561 series of multi-turn operators are suitable for manual actuation of AWWA C560 cast iron gate valves and C561 fabricated stainless steel gate valves. Designed with AWWA C560 and C561 specifications in mind, they are manufactured from high quality and reliable materials. Overload and life tests reports are available on request.

Standard operating temperature ranges from -40 to 250 °F, although other temperature ranges are available on request.

Output flanges are to MSS SP-102. However, equivalent standards such as ISO and DIN can be supplied.

Environmental Specification

Enclosure IP68 continuous submerged duty up to a maximum depth of 50 feet.

Features

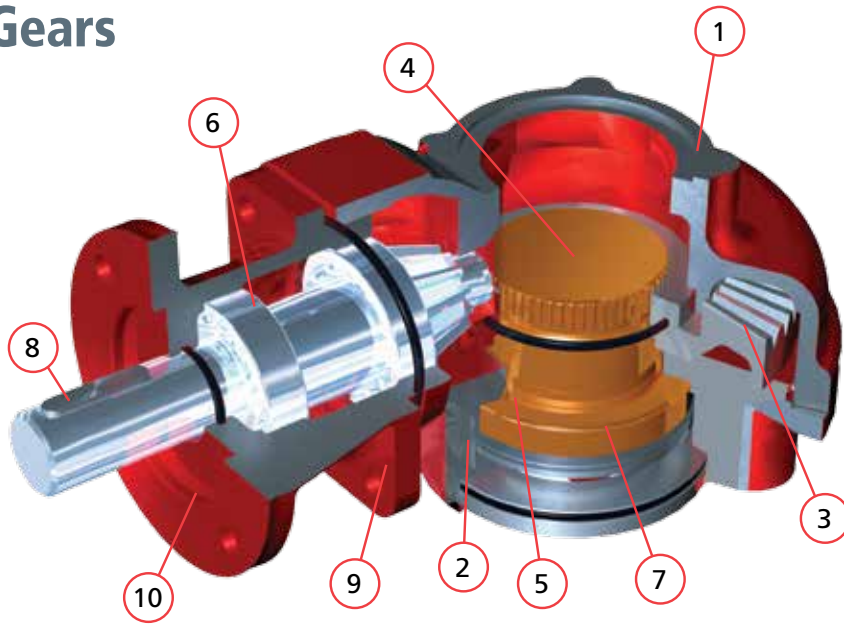
- Totally enclosed gearing
- Grease filled for life and fully sealed
- Grease zerk and relief fitting
- Comprehensive gear ratios
- Removable output sleeve
- Spur and bevel combinations available
- Input gear mounted on roller bearings
- Manual applications

Options

- Auxiliary spur / bevel input reducers
- Two speed input reducers
- High and low temperatures
- Padlockable handwheels
- Flexible extensions
- 2 or 3 input shafts available at 90° and 180° to each other
- Firesafe to ISO 10497
- Mechanical dial position indicator

Redefining Flow Control

rotork® Gears



Material Specification for Rotork Gears IB AWWA Series of BEVEL Gear Valve Operators

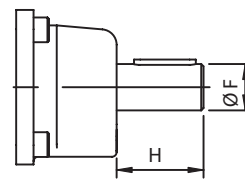
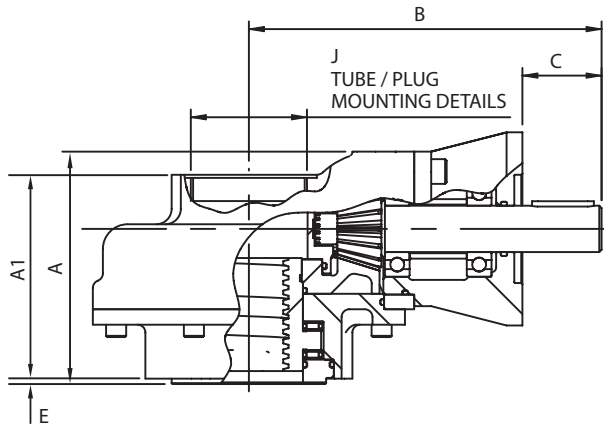
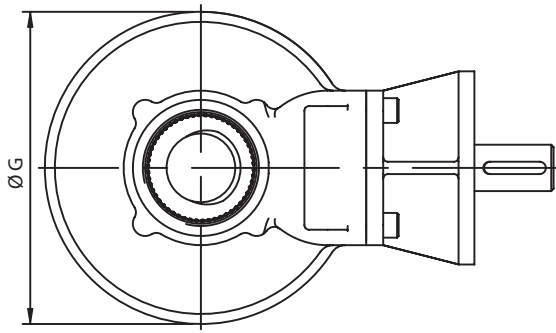
No.	Description	Material	USA Standard
1	Gearcase	IB2-IB9 Cast Iron IB10-IB14 SG Iron	ASTM A48 35B/40B
2	Baseplate	SG Iron	ASTM A536 65-45-12
3	Gears	SG Iron Steel	AISI/SAE 1010 or 4340
4	Output Sleeve A2	Aluminium Bronze	ASTM B505 C95800
5	Seals	Nitrile Rubber	
6	Input Shaft bearings	Roller Bearings	
7	Output Thrust Bearings	Output size 2-13 Needle Roller Bearings Output size 14 Roller Thrust Bearings	
8	Input Shaft	Stainless Steel	AISI/SAE 431
9	Fasteners	Stainless Steel 316	AISI/SAE 316
10	Input Housing	Cast Iron	ASTM A48 35B/40B
	Grease	Renolit CL-X2	
	Finish	Grey Primer (other finishes available on request)	

Note: Because of the company's policy of continuous improvement, Rotork Gears reserves the right to change specification details without prior notice.

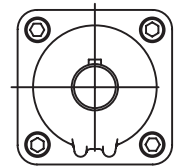
Redefining Flow Control

IB Series AWWA

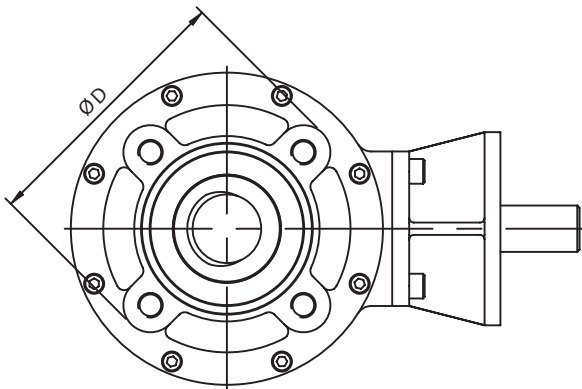
C560 and C561 Multi-turn
Gear Operator



MANUAL INPUT HOUSING



MANUAL INPUT HOUSING



Gearbox	Max Acme Thread (Inch)	Weight (lbs)
IB2	1 3/4"	46
IB3	2 7/8"	55
IB4	1 3/4"	35
IB5	2 1/8"	44/**49
IB6	2 1/8"	62/**71
IB7	2 7/8"	77/**99
IB8	2 7/8"	121/**135
IB9	3 3/8"	54/**168
IB10	3 3/8"	231/**240
IB11	3 7/8"	276/**298
IB12	3 7/8"	379/**397
IB13	5"	441/**474
IB14	5 7/8"	756

**Weight for larger output.

Gearbox	Ratio	A	A1	B	C	ØD	E	ØF	ØG	H	J	Output Options
IB2	1:1	7.36	3.89	8.98	2.01	4.92	0.12	1.18	7.95	2.20	2.5" NPT	FA07 / FA10
IB3	1:1	8.27	4.80	8.98	2.01	6.89	0.16	1.18	7.95	2.20	2.5" NPT	FA14
IB4	2,3,4 & 6:1	4.88	4.21	8.98	2.01	4.92	0.12	1.18	7.95	2.20	2.5" NPT	FA10
IB5	2,3,4 & 6:1	5.79	5.12	8.98	2.01	6.89/*8.27	0.16	1.18	7.95	2.20	2.5" NPT	FA14, FA16
IB6	3,4 & 6:1	5.98	5.55	9.88	2.01	6.89/*8.27	0.16/*0.19	1.18	10.24	2.20	3.5" NPT	FA14, FA16
IB7	3,4 & 6:1	6.69	6.26	9.88	2.01	8.27/*11.14	0.19	1.18	10.24/*10.51	2.20	3.5" NPT	FA16, FA25
IB8	3,4 & 6:1	7.52	7.52	13.07	2.36	8.27/*11.14	0.19	1.18	12.60	2.56	4" NPT	FA16, FA25
IB9	3,4 & 6:1	7.76	7.76	13.07	2.36	11.81/*13.78	0.19	1.18	12.60/*13.97	2.56	4" NPT	FA25, FA30
IB10	4 & 6:1	8.50	8.50	14.84	2.36	11.81/*13.78	0.19	1.18	16.22	2.56	5" NPT	FA25, FA30
IB11	4 & 6:1	9.33	9.33	14.84	2.36	13.78/*16.14	0.19	1.18	16.22	2.56	5" NPT	FA30, FA35
IB12	6 & 8:1	9.37	9.37	17.01	2.36	13.78/*16.14	0.19	1.97	20.47	2.56	-	FA30, FA35
IB13	6 & 8:1	10.00	10.00	17.01	2.36	16.14/*18.74	0.19/*0.32	1.97	20.47	2.56	-	FA35, FA40
IB14	6 & 8:1	14.41	14.41	17.01	2.36	18.74	0.32	1.97	20.47	2.56	-	FA40

All dimensions in inches. * Dimension for larger output

Gearbox Selection Chart

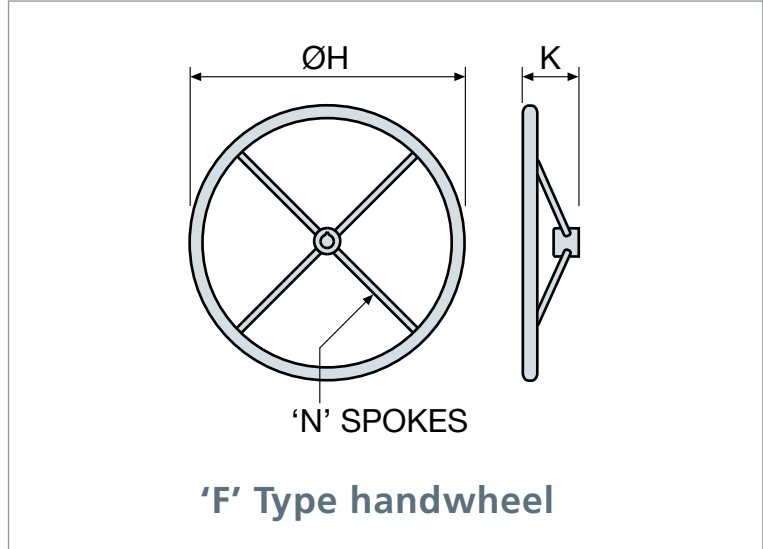
Gearbox	Nominal Ratio	Output Torque (lb.ft)	Max Thrust (lbf x 1000)	Mechanical Advantage $\pm 10\%*$
IB2	1	280	12	0.85
IB3	1	280	40	0.85
IB4	2	280	12	1.70
IB4	3	625	12	2.55 3.40
IB4	6	500	12	5.10
IB5	2	280	40	1.70
IB5	3	625	40	2.55 3.40
IB5	6	500	40	5.10
IB6	3	1250	40	2.55 3.40
IB6	6	1000	40	5.10
IB7	3	1250	80	2.55 3.40
IB7	6	1000	80	5.10
IB8	3	1875	80	2.55 3.40
IB8	6	1500	80	5.10
IB9	3	1875	100	2.55 3.40
IB9	6	1500	100	5.10
IB10	4	4000	100	3.40 5.10
IB11	4	4000	150	3.40 5.10
IB12	6	8000	150	5.10 6.80
IB13	6	8000	225	5.10 6.80
IB14	6	8000	350	5.10 6.80

For manual torque the static safety factor is 1.5.

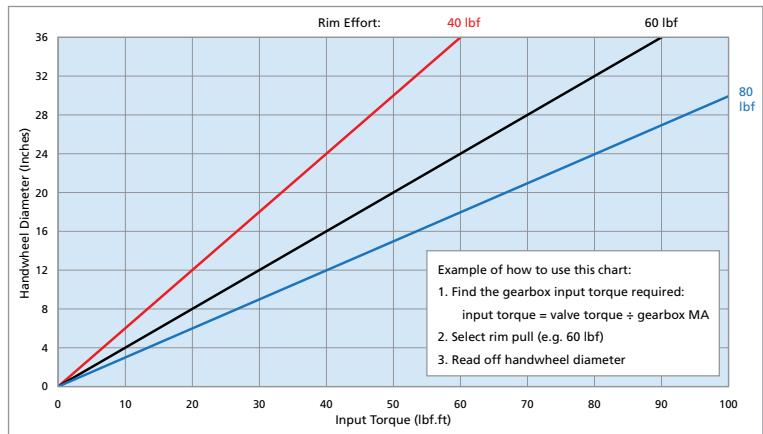
*The published M.A. is achieved after a few cycles.

Dimensions

Type	ØH	K	N
F200	8	2.97	3
F300	12	3.96	3
F400	16	3.96	4
F500	20	3.96	4
F600	24	3.96	4
F700	28	3.96	6



Handwheel Size Selection Chart



A full listing of our worldwide sales and service network is available on our website at