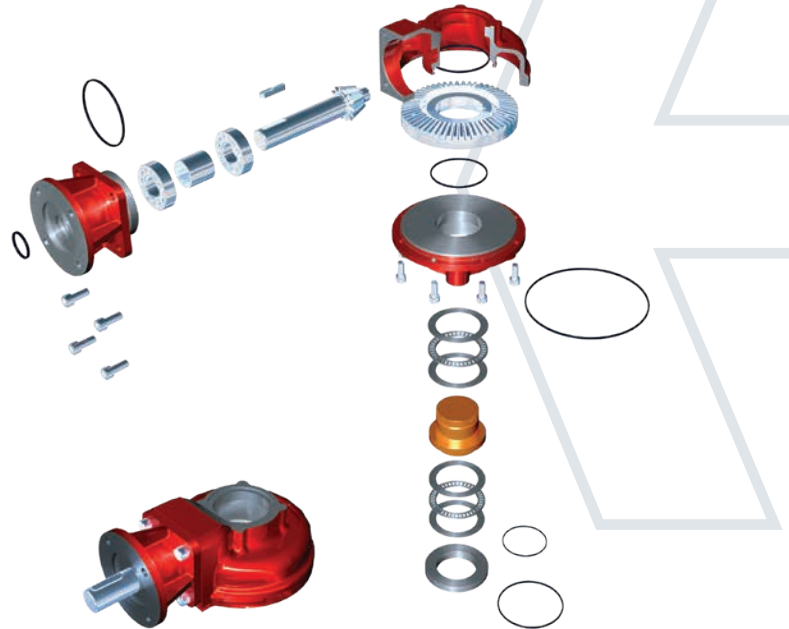




Keeping the World Flowing  
for Future Generations



### IB Multi-turn Gearbox Series

The IB Series of multi-turn operators has been designed with customer stocking in mind, and features a removable output sleeve to facilitate spindle machining.

Operating temperature normally ranges from -40 to +250 °F, although other temperature ranges are available on request.

Standard input and output flanges are to MSSP-102. However, equivalent standards such as ISO and DIN can be supplied.

#### Application

Rotork series IB operators are multi-turn devices intended for the operation of gate, globe, sluice and penstock valves. These gearboxes are designed for motorised applications.

#### Environmental Specification

Enclosure IP67 standard suitable for submerged duty up to a depth of 3 feet for 30 minutes.

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

### IB Multi-turn

#### Cast Iron Housing Gearboxes

#### Features

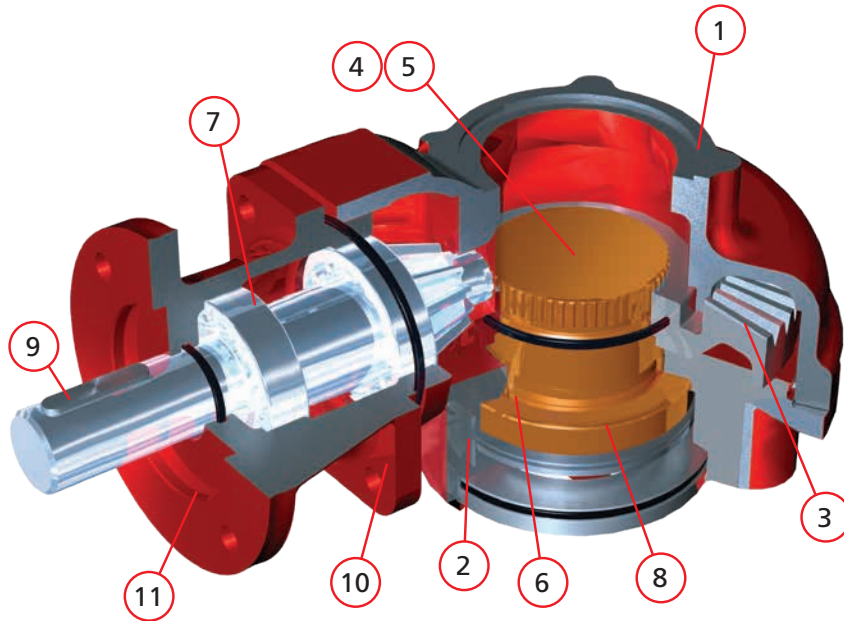
- Totally enclosed gearing
- Grease filled for life and fully sealed
- Comprehensive gear ratios
- Removable output sleeve
- Spur and bevel combinations available
- Input gear mounted on ball bearings
- Various input and output flanges to suit actuators and valves

#### Options

- Auxiliary spur / bevel input reducers
- High and low temperatures
- IP68, buried duty
- Flexible extensions
- Dual shaft bevel – 2 or 3 input shafts available at 90° and 180° to each other
- Firesafe to ISO 10497
- Interlock safety system
- Form A, B and C available

# IB Multi-turn Cast Iron Housing Gearboxes

## DSB - Dual Shaft Bevel



180° version



90° version

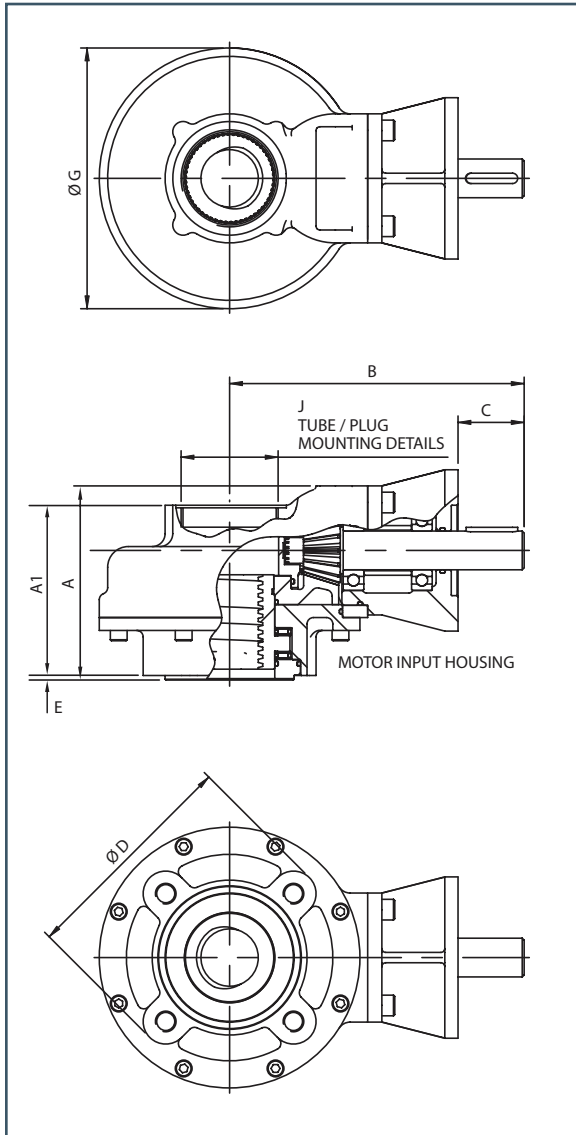
90° & 180° DSB available for IB4 to IB11.

180° DSB available for IB12 to IB14.

### Material Specification for Rotork IB 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 ASTM A536 65-45-12
2	Baseplate	SG Iron	ASTM A536 65-45-12
3	Gears	SG Iron Steel	AISI/SAE 1010 or 4340
4	Output Sleeve Form B	Steel	ASIS/SAE 1023
5	Output Sleeve Form A	Aluminium Bronze	ASTM B505 C95800
6	Seals	Nitrile Rubber	
7	Input Shaft bearings	Ball Bearings	
8	Output Thrust Bearings	Needle Roller Bearings (with the exception of output size 14 which has Roller Thrust Bearings)	
9	Input Shaft	Steel	AISI/SAE 4340
10	Fasteners	Steel	
11	Input Flange	Cast Iron or SG Iron	ASTM A48 35B/40B or ASTM A536 65-45-12
	Grease	Renolit CL-X2	
	Finish	PE3 Grey Primer (other finishes available on request)	

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

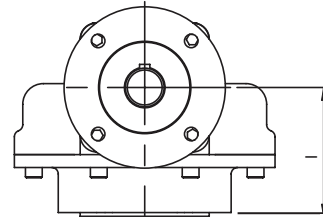


### Input Flange Details

Input	Flange Dia. & Thickness	Shaft Dia.	Key Details
F10 & FA10	Ø4.92 x 0.39	0.787 - 0.002	0.236 x 0.236 x 1.575
F14 & FA14	Ø6.89 x 0.59	1.181 - 0.002	0.315 x 0.276 x 1.575
F16 & FA16	Ø8.26 x 0.79	*1.575 - 0.002	**0.473 x 0.315 x 2.166
F25 & FA25	Ø1.18 x 0.79	1.969 - 0.002	0.551 x 0.354 x 2.166

\* 1.181 for IB6 & IB7.

\*\* 0.315 x 0.276 x 1.575 for IB6 & IB7.



MOTOR INPUT HOUSING

Gearbox	Max Bore ANSI B17.1		Max Acme Thread (Inch)	Weight (Lbs)
	Square	Rectangle		
IB2	1.5	1.625	1 3/4"	46
IB3	1.875	2	2 7/8"	55
IB4	1.5	1.625	1 3/4"	35
IB5	1.875	2	2 1/8"	44/**49
IB6	1.875	2	2 1/8"	62/**71
IB7	2.5	2.625	2 7/8"	77/**99
IB8	2.5	2.625	2 7/8"	121/**135
IB9	2.75	3	3 3/8"	154/**168
IB10	2.75	3	3 3/8"	231/**240
IB11	3.5	3.75	3 7/8"	276/**298
IB12	3.5	3.75	3 7/8"	379/**397
IB13	4.5	4.625	5"	441/**474
*IB14	4.625	5	5 7/8"	756

\*Cast bore 2.4 inch, optional 1.6 inch. \*\*Weight for larger output.

Gearbox	Ratio	A	A1	B	C	ØD	E	ØG	I	J	Input Options	Output Options
IB2	1:1	7.36	3.89	8.98	2.01	4.92	0.12	7.95	4.21	2.5"NPT	FA10 & FA14	FA07 / FA10
IB3	1:1	8.27	4.80	8.98	2.01	6.89	0.16	7.95	5.12	2.5"NPT	FA10 & FA14	FA14
IB4	2, 3, 4 & 6:1	4.88	4.21	8.98	2.01	4.92	0.12	7.95	2.91	2.5"NPT	FA10 & FA14	FA10
IB5	2, 3, 4 & 6:1	5.79	5.12	8.98	2.01	6.89/*8.27	0.16	7.95	3.82	2.5"NPT	FA10 & FA14	FA14, FA16
IB6	3, 4 & 6:1	5.98	5.55	9.88	2.01	6.89/*8.27	0.16/*0.19	10.24	4.01	3.5"NPT	FA10, FA14 & FA16	FA14, FA16
IB7	3, 4 & 6:1	6.69	6.26	9.88	2.01	8.27/*11.14	0.19	10.24/*10.51	4.72	3.5"NPT	FA10, FA14 & FA16	FA16, FA25
IB8	3, 4 & 6:1	7.52	7.52	13.07	2.36	8.27/*11.14	0.19	12.60	5.12	4"NPT	FA14, FA16 & FA25	FA16, FA25
IB9	3, 4 & 6:1	7.76	7.76	13.07	2.36	11.81/*13.78	0.19	12.60/*13.97	5.35	4"NPT	FA14, FA16 & FA25	FA25, FA30
IB10	4 & 6:1	8.50	8.50	14.84	2.36	11.81/*13.78	0.19	16.22	6.10	5"NPT	FA14, FA16 & FA25	FA25, FA30
IB11	4 & 6:1	9.33	9.33	14.84	2.36	13.78/*16.14	0.19	16.22	6.93	5"NPT	FA14, FA16 & FA25	FA30, FA35
IB12	6 & 8:1	9.37	9.37	17.01	2.36	13.78/*16.14	0.19	20.47	6.93	Ø7.67" Bore (4 x M10 on 8.66" PCD)	FA14, FA16 & FA25	FA30, FA35
IB13	6 & 8:1	10.00	10.00	17.01	2.36	16.14/*18.74	0.19/*0.32	20.47	7.55	Ø7.67" Bore (4 x M10 on 8.66" PCD)	FA14, FA16 & FA25	FA35, FA40
IB14	6 & 8:1	14.41	14.41	17.01	2.36	18.74	0.32	20.47	11.97	Ø7.67" Bore (4 x M10 on 8.66" PCD)	FA14, FA16 & FA25	FA40

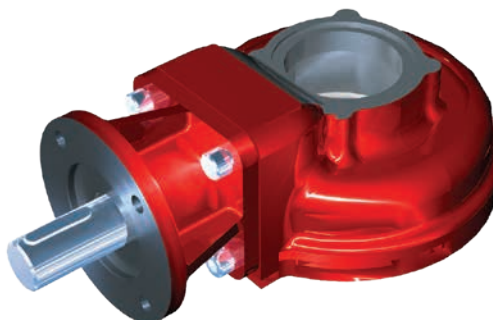
All dimensions in inches. \*Dimension for larger output.

### Gearbox Selection Chart

Gearbox	Nominal Ratio		Output Torque (ft-lb)	Max Thrust (lb x 1000)	Mechanical Advantage ±10%*	
IB2	1		225	12	0.85	
IB3	1		225	40	0.85	
IB4	2		225	12	1.70	
IB4	3	4	500	12	2.55	3.40
IB4	6		400	12	5.10	
IB5	2		225	40	1.70	
IB5	3	4	500	40	2.55	3.40
IB5	6		400	40	5.10	
IB6	3	4	1000	40	2.55	3.40
IB6	6		800	40	5.10	
IB7	3	4	1000	60	2.55	3.40
IB7	6		800	60	5.10	
IB8	3	4	1500	60	2.55	3.40
IB8	6		1200	60	5.10	
IB9	3	4	1500	80	2.55	3.40
IB9	6		1200	80	5.10	
IB10	4	6	3000	80	3.40	5.10
IB11	4	6	3000	112.5	3.40	5.10
IB12	6	8	6000	112.5	5.10	6.80
IB13	6	8	6000	187.5	5.10	6.80
IB14	6	8	6000	296.75	5.10	6.80

Static safety factor is 2.

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



A full listing of the Rotork sales and service network is available on our website.

[www.rotork.com](http://www.rotork.com)

Rotork plc  
Brassmill Lane, Bath, UK  
tel +44 (0)1225 733200  
email [mail@rotork.com](mailto:mail@rotork.com)

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