



Keeping the World Flowing  
for Future Generations



## HOB/MPR Series

### Hand Operated Bevel Gearbox

Rotork HOB/MPR gear operators are manufactured from high quality materials and life tested ensuring that maximum performance, quality and reliability are consistently maintained.

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

#### Application

Designed for manual applications, the HOB/MPR bevel gear operators are for use on gate valves, globe valves and penstocks.

#### Environmental Specification

- Sealed to IP67 for standard environment
- Optional IP68

#### Features

- Carefully chosen ratios to meet manual rim effort requirements
- Protected steel input shaft
- Totally enclosed gearing
- Cast iron gearcase
- Ductile iron baseplate
- Grease filled for life
- Maintenance free
- Protected fasteners
- Primed finish

#### Options

- High temperature to +302°F or +392°F
- Low temperature to -76°F
- Stainless steel input shaft
- Coating for aggressive environments
- Mechanical and electrical position indicators
- Fixed and flexible extensions
- Interlock safety system
- Padlockable handwheels
- Two speed input reducers
- 2 or 3 input shafts available at 90° and 180° to each other
- Form A, B & C available
- Gloss paint finish

# HOB/MPR Series

## Gearbox Selection Chart

Gearbox	Output Torque (ft-lb)	Max Thrust (lb x 1000)	Ratio*		Mechanical Advantage**	
HOB3	232	17	3:1		2.6	
HOB4	280	12	2:1		1.7	
HOB4	502	12	6:1		5.1	
HOB4	627	12	4:1	16.7:1	3.4	12.1
HOB5	502	40	6:1		5.1	
HOB5	627	40	4:1	16.7:1	3.4	12.1
HOB6	999	40	6:1		5.1	
HOB6	1254	40	16.7:1		12.1	
HOB7	999	80	6:1		5.1	
HOB7	1254	80	16.7:1		12.1	
HOB8	1499	80	25.1:1		18.1	
HOB8	1752	80	24:1		17.3	
HOB8	1881	80	40.5:1		29.3	
HOB9	1499	100	25.1:1		18.1	
HOB9	1752	100	24:1		17.3	
HOB9	1881	100	40.5:1		29.3	
HOB10	2628	100	36:1		26	
HOB10	4000	100	60.8:1		43.9	
HOB11	2628	150	36:1		26	
HOB11	4000	150	60.8:1		43.9	
HOB12	5914	150	81:1		58.5	
HOB12	8000	150	153.6:1		104.7	
HOB13	5914	225	81:1		58.5	
HOB13	8000	225	153.6:1		104.7	
HOB14	5914	350	81:1		58.5	
HOB14	8000	350	153.6:1		104.7	

\*Other ratios are possible. \*\*The published M.A. is achieved after a few cycles.

## DSB - Dual Shaft Bevel



180° version



90° version

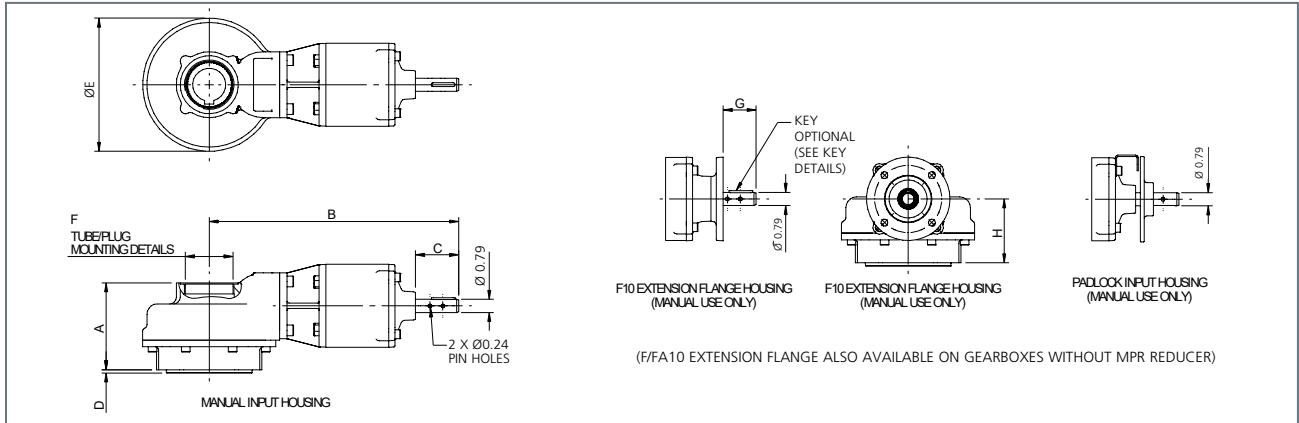
90° & 180° DSB available for HOB4 to HOB11.  
180° DSB available for HOB12 to HOB14.

## Material Specification

Description	Material	USA Standard
Gearcase & End Cap	Cast Iron or SG Iron	ASTM A48 35B/40B or ASTM A536 65-45-12
Baseplate	Ductile Iron	ASTM A536 65-45-12
Output Gear	Ductile Iron or Steel	ASTM A536 100-70-03 or ASTM A29 5140
Input Gear	Steel	AISI/SAE 4340
Input Shaft	Protected Steel	AISI/SAE 4340
Drive Sleeve Form B	Steel	AISI/SAE 1023
Drive Sleeve Form A	Aluminium Bronze	ASTM B505 C95800
Fixing Screws	HT Steel Metric	
O-Ring Seals		Nitrile
Thrust Bearings		Needle Roller Bearings (HOB14: Cylindrical roller bearings)
Grease		Renolit CL-X2
Planet Gear	Carbon Steel	ASTM A29 1045
Planet Carrier	Ductile Iron	ASTM A536 60-40-18
Planetary Gearcase	Ductile Iron	ASTM A536 60-40-18

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

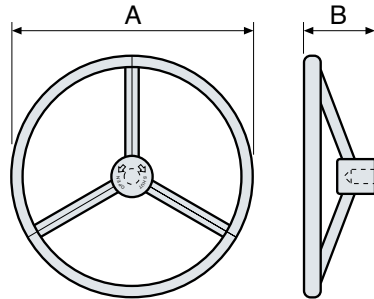
# HOB/MPR Series



Gearbox	Ratio	Output	A	B	C	D	ØE	Key Details	F	G	H	Max Bore ANSI B17.1		Max Thread (inch)	Weight (lb)
												Square	Rectangle		
HOB3	3:1	FA10/12	3.03	7.01	3.19	0.12	7.48	0.24 x 0.24 x 1.42	M52	1.97	2.79	1.125	1.25	19/16"	16
HOB3	3:1	FA14	3.03	7.01	3.19	0.16	7.48	0.24 x 0.24 x 1.42	M52	1.97	2.79	1.125	1.25	19/16"	18
HOB3	3:1	FA16*	3.43	7.01	3.19	0.20	7.87	0.24 x 0.24 x 1.42	M52	1.97	3.18	1.125	1.25	19/16"	23
HOB4	2:1, 4:1 & 6:1	FA10	4.29	8.98	4.17	0.12	7.95	0.24 x 0.24 x 1.57	2.5" NPT	2.00	2.91	1.5	1.625	13/4"	29
HOB4	16.7:1	FA10	4.29	14.92	2.60	0.12	7.95	0.24 x 0.24 x 1.42	2.5" NPT	1.97	2.91	1.5	1.625	13/4"	35
HOB5	4 & 6:1	FA14	5.20	8.98	4.17	0.16	7.95	0.24 x 0.24 x 1.57	2.5" NPT	2.00	3.82	1.875	2	2 1/8"	37
HOB5	4 & 6:1	FA16	5.20	8.98	4.17	0.20	7.95	0.24 x 0.24 x 1.57	2.5" NPT	2.00	3.82	1.875	2	2 1/8"	53
HOB5	16.7:1	FA14	5.20	14.92	2.60	0.16	7.95	0.24 x 0.24 x 1.42	2.5" NPT	1.97	3.82	1.875	2	2 1/8"	70
HOB5	16.7:1	FA16	5.20	14.92	2.60	0.20	7.95	0.24 x 0.24 x 1.42	2.5" NPT	1.97	3.82	1.875	2	2 1/8"	80
HOB6	6:1	FA14	5.55	9.88	2.60	0.16	10.24	0.24 x 0.24 x 1.57	3.5" NPT	2.00	4.01	1.875	2	2 1/8"	62
HOB6	6:1	FA16	5.55	9.88	2.60	0.20	10.24	0.24 x 0.24 x 1.57	3.5" NPT	2.00	4.01	1.875	2	2 1/8"	62
HOB6	16.7:1	FA14	5.55	15.83	2.60	0.16	10.24	0.24 x 0.24 x 1.42	3.5" NPT	1.97	4.01	1.875	2	2 1/8"	77
HOB6	16.7:1	FA16	5.55	15.83	2.60	0.20	10.24	0.24 x 0.24 x 1.42	3.5" NPT	1.97	4.01	1.875	2	2 1/8"	86
HOB7	6:1	FA16	6.26	9.88	2.60	0.20	10.24	0.24 x 0.24 x 1.57	3.5" NPT	2.00	4.72	2.5	2.625	2 1/8"	77
HOB7	6:1	FA25	6.26	9.88	2.60	0.20	10.51	0.24 x 0.24 x 1.57	3.5" NPT	2.00	4.72	2.5	2.625	2 1/8"	99
HOB7	16.7:1	FA16	6.26	15.83	2.60	0.20	10.24	0.24 x 0.24 x 1.42	3.5" NPT	1.97	4.72	2.5	2.625	2 1/8"	90
HOB7	16.7:1	FA25	6.26	15.83	2.60	0.20	10.51	0.24 x 0.24 x 1.42	3.5" NPT	1.97	4.72	2.5	2.625	2 1/8"	110
HOB8	25.1:1 & 24:1	FA16	7.52	18.66	2.60	0.20	12.60	0.24 x 0.24 x 1.42	4" NPT	1.97	5.12	2.5	2.625	2 1/8"	137
HOB8	40.5:1	FA16	7.52	16.06	2.60	0.20	12.60	0.24 x 0.24 x 1.42	4" NPT	1.97	5.12	2.5	2.625	2 1/8"	146
HOB8	25.1:1 & 24:1	FA25	7.52	18.66	2.60	0.20	12.60	0.24 x 0.24 x 1.42	4" NPT	1.97	5.12	2.5	2.625	2 1/8"	150
HOB8	40.5:1	FA25	7.52	16.06	2.60	0.20	12.60	0.24 x 0.24 x 1.42	4" NPT	1.97	5.12	2.5	2.625	2 1/8"	159
HOB9	25.1:1 & 24:1	FA25	7.76	18.66	2.60	0.20	12.60	0.24 x 0.24 x 1.42	4" NPT	1.97	5.35	2.75	3	3 3/8"	170
HOB9	40.5:1	FA25	7.76	16.06	2.60	0.20	12.60	0.24 x 0.24 x 1.42	4" NPT	1.97	5.35	2.75	3	3 3/8"	179
HOB9	25.1:1 & 24:1	FA30	7.76	18.66	2.60	0.20	13.98	0.24 x 0.24 x 1.42	4" NPT	1.97	5.35	2.75	3	3 3/8"	183
HOB9	40.5:1	FA30	7.76	16.06	2.60	0.20	13.98	0.24 x 0.24 x 1.42	4" NPT	1.97	5.35	2.75	3	3 3/8"	192
HOB10	36:1	FA25	8.50	20.43	2.60	0.20	16.22	0.24 x 0.24 x 1.42	5" NPT	1.97	6.10	2.75	3	3 3/8"	247
HOB10	60.8:1	FA25	8.50	20.43	2.60	0.20	16.22	0.24 x 0.24 x 1.42	5" NPT	1.97	6.10	2.75	3	3 3/8"	256
HOB10	36:1	FA30	8.50	20.43	2.60	0.20	16.22	0.24 x 0.24 x 1.42	5" NPT	1.97	6.10	2.75	3	3 3/8"	265
HOB10	60.8:1	FA30	8.50	20.43	2.60	0.20	16.22	0.24 x 0.24 x 1.42	5" NPT	1.97	6.10	2.75	3	3 3/8"	291
HOB11	36:1	FA30	9.33	20.43	2.60	0.20	16.22	0.24 x 0.24 x 1.42	5" NPT	1.97	6.93	3.5	3.75	3 1/8"	300
HOB11	60.8:1	FA30	9.33	20.43	2.60	0.20	16.22	0.24 x 0.24 x 1.42	5" NPT	1.97	6.93	3.5	3.75	3 1/8"	313
HOB11	36:1	FA35	9.33	20.43	2.60	0.20	16.22	0.24 x 0.24 x 1.42	5" NPT	1.97	6.93	3.5	3.75	3 1/8"	313
HOB11	60.8:1	FA35	9.33	20.43	2.60	0.20	16.22	0.24 x 0.24 x 1.42	5" NPT	1.97	6.93	3.5	3.75	3 1/8"	322
HOB12	81:1	FA30	9.37	22.60	2.60	0.20	20.47	0.24 x 0.24 x 1.42	Ø7.67" Bore (4 x M10 on 8.66" PCD)	1.97	6.93	3.5	3.75	3 1/8"	403
HOB12	81:1	FA35	9.37	22.60	2.60	0.20	20.47	0.24 x 0.24 x 1.42	Ø7.67" Bore (4 x M10 on 8.66" PCD)	1.97	6.93	3.5	3.75	3 1/8"	421
HOB12	153.6:1	FA30	9.37	24.17	2.60	0.20	20.47	0.24 x 0.24 x 1.42	Ø7.67" Bore (4 x M10 on 8.66" PCD)	1.97	6.93	3.5	3.75	3 1/8"	390
HOB12	153.6:1	FA35	9.37	24.17	2.60	0.20	20.47	0.24 x 0.24 x 1.42	Ø7.67" Bore (4 x M10 on 8.66" PCD)	1.97	6.93	3.5	3.75	3 1/8"	403
HOB13	81:1	FA35	10.00	22.60	2.60	0.20	20.47	0.24 x 0.24 x 1.42	Ø7.67" Bore (4 x M10 on 8.66" PCD)	1.97	7.55	4.5	4.625	5"	465
HOB13	81:1	FA40	10.00	22.60	2.60	0.20	20.47	0.24 x 0.24 x 1.42	Ø7.67" Bore (4 x M10 on 8.66" PCD)	1.97	7.55	4.5	4.625	5"	498
HOB13	153.6:1	FA35	10.00	24.17	2.60	0.20	20.47	0.24 x 0.24 x 1.42	Ø7.67" Bore (4 x M10 on 8.66" PCD)	1.97	7.55	4.5	4.625	5"	439
HOB13	153.6:1	FA40	10.00	24.17	2.60	0.20	20.47	0.24 x 0.24 x 1.42	Ø7.67" Bore (4 x M10 on 8.66" PCD)	1.97	7.55	4.5	4.625	5"	487
HOB14	81:1	FA40	14.41	22.60	2.60	0.31	20.47	0.24 x 0.24 x 1.42	Ø7.67" Bore (4 x M10 on 8.66" PCD)	1.97	11.97	4.625	5	5 1/8"	780
HOB14	153.6:1	FA40	14.41	24.17	2.60	0.31	20.47	0.24 x 0.24 x 1.42	Ø7.67" Bore (4 x M10 on 8.66" PCD)	1.97	11.97	4.625	5	5 1/8"	686

All dimensions in inches. \* FA16 does not meet ISO 5210 minimum thread engagement of 1.18 inch; HOB3 has 0.78 inch engagement.

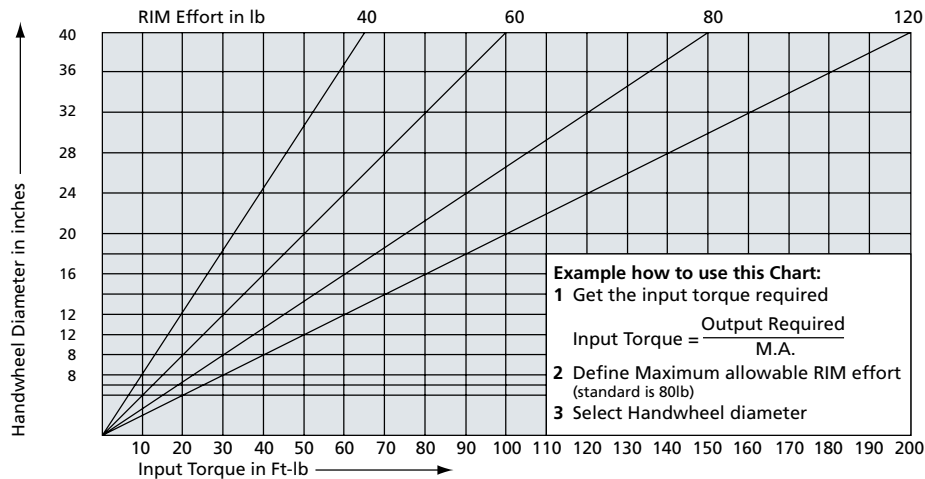
#### Handwheel Selection Chart



SG series handwheel

#### Handwheel Dimensions

Type	A	B
SG200	Ø 8"	3,15"
SG250	Ø 10"	4,33"
SG300	Ø 12"	4,53"
SG350	Ø 14"	4,72"
SG400	Ø 16"	5,12"
SG450	Ø 18"	5,91"
SG500	Ø 20"	5,91"
SG600	Ø 24"	5,91"
SG700	Ø 28"	5,91"
SG800	Ø 32"	5,91"
SG900	Ø 36"	6,30"
SG1000	Ø 40"	6,30"



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

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