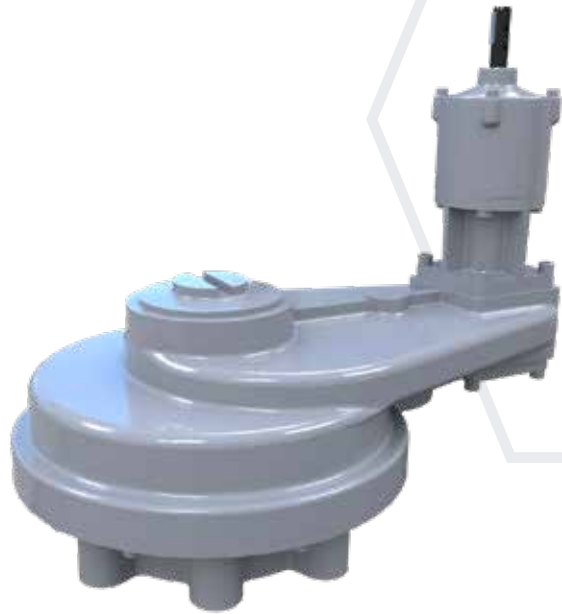




Keeping the World Flowing
for Future Generations



HOS/MPR Series

Hand Operated Spur Gearbox

Rotork HOS/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

HOS/MPR series operators are multi-turn devices intended for the operation of gate, globe, sluice and penstock valves. These gearboxes can be used above and underground with upward or downward input orientation.

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
- Ductile iron baseplate
- Grease filled for life
- Maintenance free
- Protected steel 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 & flexible extensions
- Interlock Safety System
- Padlockable handwheels
- Two speed input reducers
- Form A, B & C available
- Gloss paint finish

HOS/MPR Series

Gearbox Selection Chart

Gearbox	Output Torque (ft-lb)	Max Thrust (lb x 1000)	Ratio			Mechanical Advantage*		
HOS2	375	12	2:1	3:1		1.83	2.70	
HOS4	627	12	4:1	6:1	17.1:1	3.69	5.40	13.10
HOS5	627	40	4:1	6:1	17.1:1	3.69	5.40	13.10
HOS6	1254	40	8:1	16.7:1	25.1:1	7.20	12.80	19.20
HOS7	1254	80	8:1	16.7:1	25.1:1	7.20	12.80	19.20
HOS8	1881	80	15:1	25.5:1	33.2:1	13.52	19.50	25.40
HOS9	1881	100	15:1	25.5:1	33.2:1	13.52	19.50	25.40
HOS10	4000	100	50.6:1	61.3:1	88:1	38.8	46.90	67.30
HOS11	4000	150	61.3:1	88:1		46.90	67.30	
HOS12	4896	150	63.3:1			48.50		
HOS12	7025	150	90.9:1			69.50		
HOS12	8000	150	119.8:1			91.60		
HOS13	4896	225	63.3:1			48.50		
HOS13	7025	225	90.9:1			69.50		
HOS13	8000	225	119.8:1			91.60		
HOS15	11740	225	151.9:1			116.20		
HOS15	14014	225	230.4:1			166.30		
HOS16	11740	350	151.9:1			116.20		
HOS16	14014	350	230.4:1			166.30		
HOS17	34002	250	662.4:1			479.10		
HOS18	34002	350	662.4:1			479.10		
HOS19	34002	500	662.4:1			479.10		
HOS20	34002	751	662.4:1			479.10		
HOS21	34002	978	662.4:1			479.10		

Other ratios are possible.

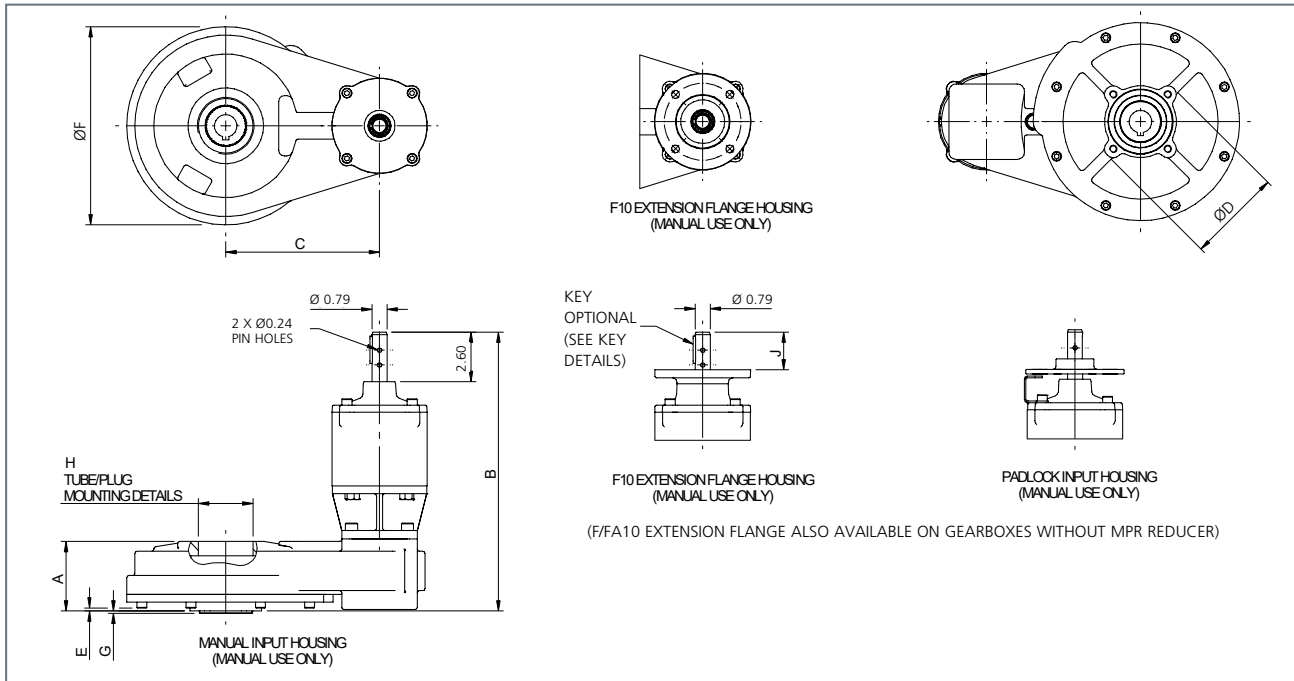
*The published M.A. is achieved after a few cycles.

Material Specification

Description	Material	USA Standard
Gearcase (HOS2 to HOS7 & HOS12/13)	Cast Iron	ASTM A48 35B/40B
Gearcase (HOS8 to HOS11 & HOS15 to 21)	SG Iron	ASTM A536 65-45-12
Baseplate	SG Iron	ASTM A536 65-45-12
Gears	SG Iron or Steel	ASTM A536 100-70-03 or AISI/SAE 4340
Output Sleeve B	Steel	AISI/SAE 1023
Output Sleeve A	Aluminium Bronze	ASTM B505 C95800
Seals		Nitrile Rubber
Input Shaft Bearings		Ball Bearings
Output Thrust Bearings		Needle Roller Bearings (except sizes 16, 18, 19, 20 & 21 which have roller thrust bearings)
Input Shaft	Steel	AISI/SAE 4340
Fasteners	Steel	
Input Housing	Cast Iron	ASTM A48 35B/40B
Grease		Renolit CL-X2
Finish		PE3 Grey Primer (other finishes available on request)
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.

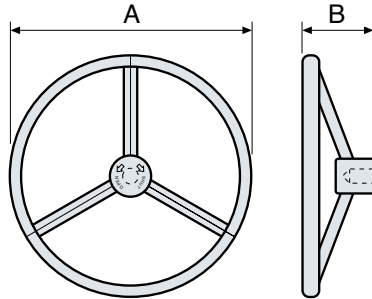
HOS/MPR Series



Gearbox	Ratio	Output	A	B	C	ØD	E	Key Details	ØF	G	H	J	Max Bore ANSI B17.1		Max Thread	Weight (lbs)
													Square	Rectangle		
HOS2	2:1 & 3:1	FA10	3.43	8.70	6.02	4.92	-0.20	0.24 x 0.24 x 1.57	6.77	0.12	2.5"NPT	-	1.5	1.625	1.75	33
HOS4	4:1 & 6:1	FA10	3.62	8.54	8.03	4.92	0.16	0.24 x 0.24 x 1.57	10.31	0.12	2.5"NPT	-	1.5	1.625	1.75	60
HOS4	17:1:1	FA10	3.62	14.45	8.03	4.92	0.16	0.24 x 0.24 x 1.42	10.31	0.12	2.5"NPT	1.97	1.5	1.625	1.75	79
HOS5	4:1 & 6:1	FA14	4.53	9.41	8.03	6.89	1.06	0.24 x 0.24 x 1.57	10.31	0.16	2.5"NPT	-	1.875	2	2.125	64
HOS5	17:1:1	FA14	4.53	15.35	8.03	6.89	1.06	0.24 x 0.24 x 1.42	10.31	0.16	2.5"NPT	1.97	1.875	2	2.125	84
HOS6	8:1	FA14	4.72	9.29	12.01	6.54	0.20	0.24 x 0.24 x 1.57	12.99	0.16	3.5"NPT	-	1.875	2	2.125	90
HOS6	16.7:1 & 25.1:1	FA14	4.72	15.24	12.01	6.54	0.20	0.24 x 0.24 x 1.42	12.99	0.16	3.5"NPT	1.97	1.875	2	2.125	110
HOS7	8:1	FA16	4.72	9.29	12.01	7.87	0.20	0.24 x 0.24 x 1.57	12.99	0.20	3.5"NPT	-	2.5	2.625	2.75	99
HOS7	16.7:1 & 25.1:1	FA16	4.72	15.24	12.01	7.87	0.20	0.24 x 0.24 x 1.42	12.99	0.20	3.5"NPT	1.97	2.5	2.625	2.75	119
HOS8	15:1	FA16	7.20	13.46	13.11	8.27	1.50	0.24 x 0.24 x 1.57	12.99	0.20	4"NPT	-	2.5	2.625	2.75	141
HOS8	25.5:1 & 33.2:1	FA16	7.20	19.06	13.11	8.27	1.50	0.24 x 0.24 x 1.42	12.99	0.20	4"NPT	1.97	2.5	2.625	2.75	161
HOS9	15:1	FA25	7.44	13.74	13.11	11.81	1.73	0.24 x 0.24 x 1.57	12.99	0.20	4"NPT	-	2.75	3	3.375	165
HOS9	25.5:1 & 33.2:1	FA25	7.44	19.33	13.11	11.81	1.73	0.24 x 0.24 x 1.42	12.99	0.20	4"NPT	1.97	2.75	3	3.375	185
HOS10	50.6:1, 61.3:1 & 88:1	FA25	8.82	20.47	14.02	11.81	1.61	0.24 x 0.24 x 1.42	16.22	0.20	5"NPT	1.97	2.75	3	3.375	245
HOS11	61.3:1 & 88:1	FA30	9.65	21.30	14.02	13.78	2.44	0.24 x 0.24 x 1.42	16.22	0.20	5"NPT	1.97	3.5	3.75	3.875	291
HOS12	63.3:1 & 90.9:1	FA30	11.10	22.87	16.02	13.78	2.44	0.24 x 0.24 x 1.42	20.47	0.20	Ø7.67*(4 x M10 on 8.66"PCD)	1.97	3.5	3.75	3.875	403
HOS12	119.8:1	FA30	11.10	22.80	16.02	13.78	2.44	0.24 x 0.24 x 1.42	20.47	0.20	Ø7.67*(4 x M10 on 8.66"PCD)	1.97	3.5	3.75	3.875	430
HOS13	63.3:1 & 90.9:1	FA35	11.73	23.43	16.02	16.14	3.07	0.24 x 0.24 x 1.42	20.47	0.20	Ø7.67*(4 x M10 on 8.66"PCD)	1.97	4.5	4.625	5	454
HOS13	119.8:1	FA35	11.73	23.43	16.02	16.14	3.07	0.24 x 0.24 x 1.42	20.47	0.20	Ø7.67*(4 x M10 on 8.66"PCD)	1.97	4.5	4.625	5	492
HOS15	151.9:1	FA35	16.26	27.80	17.87	16.14	2.83	0.24 x 0.24 x 1.42	20.47	0.20	Ø7.67*(4 x M10 on 8.66"PCD)	1.97	4.5	4.625	5	657
HOS15	151.9:1	FA40	16.26	27.80	17.87	18.74	2.83	0.24 x 0.24 x 1.42	20.47	0.31	Ø7.67*(4 x M10 on 8.66"PCD)	1.97	4.5	4.625	5	705
HOS15	230.4:1	FA35	16.26	29.41	17.87	16.14	2.83	0.24 x 0.24 x 1.42	20.47	0.20	Ø7.67*(4 x M10 on 8.66"PCD)	1.97	4.5	4.625	5	642
HOS15	230.4:1	FA40	16.26	29.41	17.87	18.74	2.83	0.24 x 0.24 x 1.42	20.47	0.31	Ø7.67*(4 x M10 on 8.66"PCD)	1.97	4.5	4.625	5	692
HOS16	151.9:1	FA40	20.67	32.20	17.87	18.74	7.24	0.24 x 0.24 x 1.42	20.47	0.31	Ø7.67*(4 x M10 on 8.66"PCD)	1.97	4.625	5	5.875	891
HOS16	230.4:1	FA40	20.67	33.82	17.87	18.74	7.24	0.24 x 0.24 x 1.42	20.47	0.31	Ø7.67*(4 x M10 on 8.66"PCD)	1.97	4.625	5	5.875	869
HOS17	662.4:1	FA35	19.53	22.17	24.02	16.14	2.83	0.24 x 0.24 x 1.42	27.76	0.20	Ø8.66*(4 x M10 on 10.43"PCD)	2.01	4.5	4.625	5	1254
HOS18	662.4:1	FA40	23.98	22.17	24.02	18.74	7.24	0.24 x 0.24 x 1.42	27.76	0.31	Ø8.66*(4 x M10 on 10.43"PCD)	2.01	4.625	5	5.875	1490
HOS19	662.4:1	FA40	26.02	22.17	24.02	18.74	9.29	0.24 x 0.24 x 1.42	27.76	0.31	Ø8.66*(4 x M10 on 10.43"PCD)	2.01	6.125	6.5	7.375	1620
HOS19	662.4:1	FA49	28.39	22.17	24.02	22.05	11.65	0.24 x 0.24 x 1.42	27.76	0.31	Ø8.66*(4 x M10 on 10.43"PCD)	2.01	6.125	6.5	7.375	1825
HOS20	662.4:1	FA48	28.46	22.17	24.02	21.85	11.77	0.24 x 0.24 x 1.42	27.76	0.31	Ø9.65*(4 x M10 on 11.02"PCD)	2.01	7.5	7.75	8.75	2127
HOS20	662.4:1	FA60	30.83	22.17	24.02	27.68	14.13	0.24 x 0.24 x 1.42	27.76	0.31	Ø9.65*(4 x M10 on 11.02"PCD)	2.01	7.5	7.75	8.75	2436
HOS21	662.4:1	FA60	31.22	22.17	24.02	26.69	14.53	0.24 x 0.24 x 1.42	27.76	0.31	Ø9.65*(4 x M10 on 11.02"PCD)	2.01	7.5	7.75	8.75	2403

All dimensions in inches, unless otherwise stated.

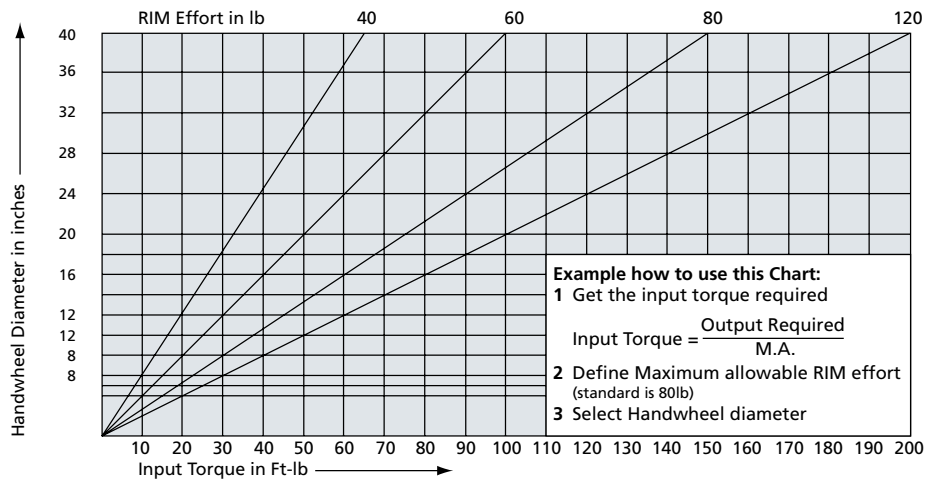
Handwheel Selection Chart



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"



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