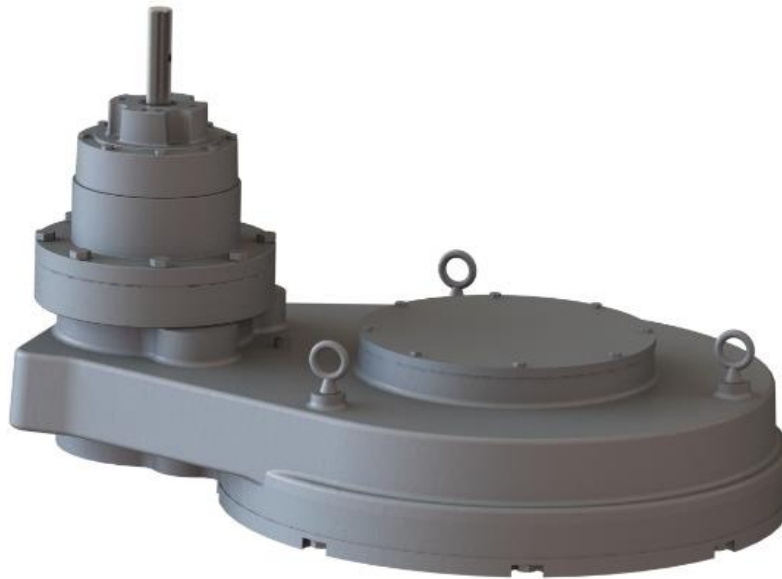


WedgeRock RSP PRODUCT SHEET

700191 Rev-01

HIGH PERFORMANCE SPUR GEARBOX



Features, Options & Configurability

- | | |
|--|--|
| <ul style="list-style-type: none"> • Self-Locking available • 90% filled, Greased for life, no maintenance • Elastomer seals at all ingress points, designed to IP68 • Input shaft projection Parallel or Perpendicular to output • Input lockout • Available Certifications: <ul style="list-style-type: none"> ○ Buy America Compliant ○ BABA Compliant ○ AWWA Compliant | <ul style="list-style-type: none"> • Modular design accommodates; <ul style="list-style-type: none"> ○ Multi-Turn ○ Rising Stem ○ Subsea <ul style="list-style-type: none"> ▪ Deep water ▪ Shallow water • Motorized and Manual input options • Buried service prep • Risers and Adaptors • Temperature range and materials configured per application • Machined for direct mount <ul style="list-style-type: none"> ○ Standard Flanges to MSS SP101/MSS SP102 & ISO 5211/ISO 5210 ○ Infinite Custom Bolt Pattern Options |
|--|--|

PURPOSE ENGINEERED - QUALITY MANUFACTURED - PERFORMANCE TESTED

The information in this document is subject to change without notice. Updated documents can be requested or obtained from our website.

WedgeRock RSP SERIES

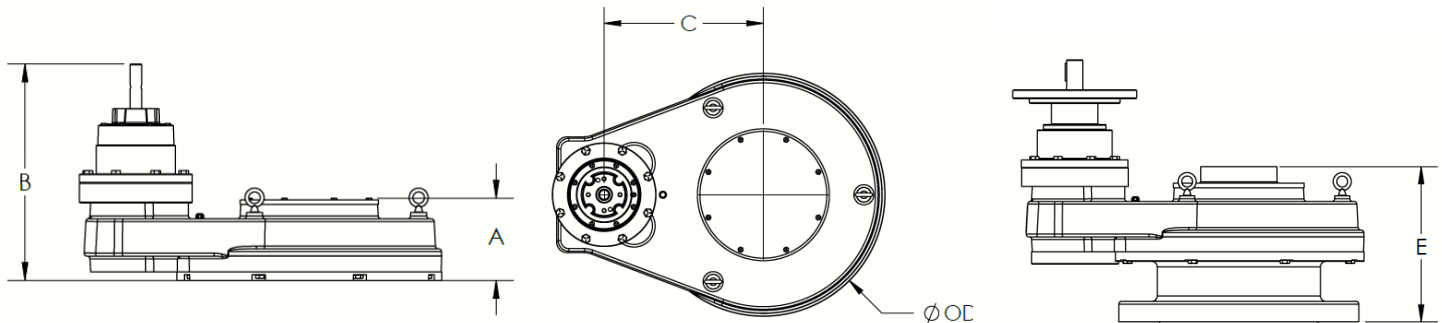


RSP DATA

MODEL	MULTI-TURN TORQUE RATING		OPTIONAL THRUST RATING	MAX BORE W/ SQUARE KEY PER ANSI B17.1	MAX THREAD DIAMETER	MAX STEM ENGAGEMENT	STANDARD FLANGE
	MANUAL 1,000 CYCLES	MOTORIZED 10,000 CYCLES					
	<i>IN-LBS (NM)</i>	<i>IN-LBS (NM)</i>					
RSP3	4,800 <i>(542)</i>	3,840 <i>(434)</i>	40,000 <i>(177,929)</i>	2.00 <i>(51)</i>	1.25 <i>(32)</i>	2.73 <i>(69)</i>	F-FA10 F-FA12
RSP6	8,400 <i>(949)</i>	6,720 <i>(759)</i>	40,000 <i>(177,929)</i>	2.50 <i>(64)</i>	1.75 <i>(44)</i>	3.75 <i>(95)</i>	F-FA10 F-FA16
RSP9	15,000 <i>(1,695)</i>	12,000 <i>(1,356)</i>	60,000 <i>(266,893)</i>	3.00 <i>(76)</i>	2.25 <i>(57)</i>	4.20 <i>(107)</i>	F-FA14 F-FA16
RSP12	45,000 <i>(5,085)</i>	36,000 <i>(4,068)</i>	100,000 <i>(444,822)</i>	4.00 <i>(102)</i>	3.00 <i>(76)</i>	5.00 <i>(127)</i>	F-FA16 F-FA25
RSP16	96,000 <i>(10,847)</i>	76,800 <i>(8,678)</i>	250,000 <i>(1,112,055)</i>	5.00 <i>(127)</i>	4.00 <i>(102)</i>	6.00 <i>(152)</i>	F-FA25 F-FA30
RSP20	225,000 <i>(25,424)</i>	180,000 <i>(20,339)</i>	550,000 <i>(2,446,521)</i>	6.00 <i>(152)</i>	5.00 <i>(127)</i>	6.80 <i>(173)</i>	F-FA25 F-FA48
RSP30	500,000 <i>(56,497)</i>	400,000 <i>(45,198)</i>	1,000,000 <i>(4,448,220)</i>	10.00 <i>(254)</i>	8.00 <i>(203)</i>	8.00 <i>(203)</i>	F-FA35 F-FA60

WedgeRock RSP SERIES

ENVELOPE DIMENSIONS



RSP ENVELOPE DIMENSIONS AND WEIGHT						+ THRUST BASE	
MODEL	A	B	C	OD	WEIGHT	E	WEIGHT
	IN (MM)	IN (MM)	IN (MM)	IN (MM)	LBS (KG)	IN (MM)	LBS (KG)
RSP3	3.5 (89)	6.8 (173)	3.0 (76)	5.9 (150)	38 (17)	5.0 (128)	60 (27)
RSP6	4.0 (101)	7.3 (186)	5.0 (127)	8.3 (210)	44 (20)	5.5 (140)	69 (31)
RSP9	4.8 (121)	8.6 (218)	6.5 (165)	11.0 (279)	85 (39)	6.3 (160)	133 (60)
RSP12	5.8 (146)	8.3 (211)	9.0 (229)	14.0 (356)	205 (93)	7.3 (185)	321 (146)
RSP12 + RP	5.8 (146)	11.5 (293)	9.0 (229)	14.0 (356)	215 (98)	7.3 (185)	331 (150)
RSP16	6.5 (165)	9.1 (230)	12.0 (305)	18.0 (457)	422 (191)	10.0 (255)	661 (300)
RSP16 + RP	6.5 (165)	12.3 (312)	12.0 (305)	18.0 (457)	447 (203)	10.0 (255)	686 (311)
RSP20	7.2 (182)	12.3 (312)	15.1 (382)	23.0 (583)	574 (260)	12.7 (323)	899 (408)
RSP20 + RP	7.2 (182)	18.8 (479)	15.1 (382)	23.0 (583)	618 (280)	12.7 (323)	943 (428)
RSP30	8.8 (222)	13.9 (352)	18.0 (457)	33.0 (838)	875 (397)	16.3 (414)	1370 (622)
RSP30 + RP	8.8 (222)	20.4 (519)	18.0 (457)	33.0 (838)	926 (420)	16.3 (414)	1421 (645)

Dimensions represent most common configurations. Other dimensional configurations possible.

Weight may vary with final configuration.

MANUAL

MODEL	Torque Rating In-Lbs/(Nm)	Gear Ratio						Mechanical Advantage +/- 10%						Input Torque Ft-lbs					
		-1.0	2.0	3.0				0.9	1.8	2.7				5333	2667	1778			
RSP3	4,800 (542)	-1.0	2.0	3.0				0.9	1.8	2.7				5333	2667	1778			
RSP6	8,400 (949)	2.0	3.0	4.0	6.0			1.8	2.7	3.6	5.4			4667	3111	2333	1556		
RSP9	15,000 (1695)	2.0	3.0	4.0	6.0	8.0		1.8	2.7	3.6	5.4	7.2		8333	5556	4167	2778	2083	
RSP12	45,000 (5085)	4.0	6.0	8.0				3.6	5.4	7.2				12500	8333	6250			
RSP12 + RP	45,000 (5085)	10	12	17	20	25	36	9.1	10	15	17	22	31	4956	4296	3068	2577	2036	1432
RSP16	96,000 (10847)	4.0	6.0	8.0				3.6	5.4	7.2				26667	17778	13333			
RSP16+RP	96,000 (10847)	21	24	34	40	51	72	18	21	29	35	44	63	5287	4582	3273	2749	2172	1527
RSP20	225,000 (25424)	5.0	6.0	7.0	8.0			4.5	5.4	6.3	7.2			50000	41667	35714	31250		
RSP20 + RP	225,000 (25424)	18	21	29	35	44	63	16	18	26	31	39	55	14161	12273	8766	7364	5817	4091
RSP20 + RP + RP	225,000 (25424)	91	105	147	175	222	315	77	89	124	148	188	267	2920	2531	1808	1518	1199	844
RSP30	500,000 (56497)	5.0	6.0	8.0				4.5	5.4	7.2				111111	92593	69444			
RSP30 + RP	500,000 (56497)	21	24	34	40	51	72	18	21	29	35	44	63	27535	23864	17046	14318	11310	7955
RSP30 + RP + RP	500,000 (56497)	104	120	168	200	253	360	88	102	142	169	214	305	5677	4920	3515	2952	2332	1640

MOTORIZED

MODEL	Torque Rating In-Lbs/(Nm)	Gear Ratio						Mechanical Advantage +/- 10%						Input Torque Ft-lbs					
		-1.0	2.0	3.0				0.9	1.8	2.7				4267	2133	1422			
RSP3	3,840 (434)	-1.0	2.0	3.0				0.9	1.8	2.7				4267	2133	1422			
RSP6	6,720 (759)	2.0	3.0	4.0	6.0			1.8	2.7	3.6	5.4			3733	2489	1867	1244		
RSP9	12,000 (1356)	2.0	3.0	4.0	6.0	8.0		1.8	2.7	3.6	5.4	7.2		6667	4444	3333	2222	1667	
RSP12	36,000 (4068)	4.0	6.0	8.0				3.6	5.4	7.2				10000	6667	5000			
RSP12 + RP	36,000 (4068)	10	12	17	20	25	36	9.1	10	15	17	22	31	3965	3436	2455	2062	1629	1145
RSP16	76,800 (8678)	4.0	6.0	8.0				3.6	5.4	7.2				21333	14222	10667			
RSP16+RP	76,800 (8678)	10	12	17	20	25	36	9.1	10	15	17	22	31	8459	7331	5236	4399	3474	2444
RSP20	180,000 (20339)	5.0	6.0	7.0	8.0			4.5	5.4	6.3	7.2			40000	33333	28571	25000		
RSP20 + RP	180,000 (20339)	18	21	29	35	44	63	16	18	26	31	39	55	11329	9818	7013	5891	4653	3273
RSP30	400,000 (45198)	5.0	6.0	8.0				4.5	5.4	7.2				88889	74074	55556			
RSP30 + RP	400,000 (45198)	21	24	34	40	51	72	18	21	29	35	44	63	22028	19091	13637	11455	9048	6364

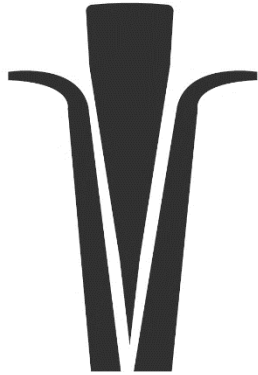
- Notes:
- Mechanical advantage can fall short of published value by 10% until gearbox has worn in. Wear in should occur within 10 cycles.
 - More ratios available if required.

WedgeRock

MATERIALS OF CONSTRUCTION

STANDARD COMPONENT MATERIAL SELECTION FOR SPECIFIED ENVIRONMENTS			
COMPONENT	SERVICE CONDITION		
	STANDARD PIPELINE		OFFSHORE
	TOPSIDE	BURIED	PLATFORM
HOUSING/BASEPLATE	DUCTILE IRON	DUCTILE IRON	DUCTILE IRON
OUTPUT GEAR	DUCTILE IRON	DUCTILE IRON	DUCTILE IRON
INPUT AND IDLER GEARS	ALLOY STEEL	ALLOY STEEL	ALLOY STEEL
INPUT SHAFT	QPQ COATED STEEL OR STAINLESS	QPQ COATED STEEL OR STAINLESS	QPQ COATED STEEL OR STAINLESS
STEM COVER (RISING STEM)	STEEL	STEEL	STEEL
DRIVE NUT (RISING STEM)	BRONZE	BRONZE	BRONZE
OUTPUT DRIVER (NON RISING STEM)	STEEL	STEEL	STEEL
FASTENERS¹	STEEL	STEEL	316SS
SEALS²	BUNA	BUNA	BUNA
LUBRICATION³	GREASE	GREASE	GREASE
FINISH⁴	EPOXY PRIMER	EPOXY PRIMER	EPOXY PRIMER
<i>1) Standard fasteners for application. Option to use Grade 5, 316SS, B7(M), L7(M), Monel, or other materials per project specification. Grade 5 is zinc plated.</i>			
<i>2) Standard seals for application unless otherwise specified. Refer to temperature service</i>			
<i>3) Lubrication per temperature condition. Refer to temperature service condition table.</i>			
<i>4) Standard finish unless otherwise specified. Standard epoxy 7-10 mils dft.</i>			

ABOUT WEDGEROCK



The WedgeRock name and logo symbolize the elegance of a simple and effective design and the grit, focus, and determination required to make things happen – the work required to get big things moving. Pragmatism and hard work are central to our culture and reflected in everything we do.

Don't let our dirty hands and old school approach fool you. WedgeRock brings industry leading innovation to your engineered projects in standard lead times.

With a focused approach, WedgeRock provides solutions for the most demanding torque and thrust application. Whether you need to operate valves thousands of meters below the ocean surface, or a purpose designed gear operator for your valve line, give us a call or send an email to get the partnership started.

OUR MISSION

WedgeRock provides performance engineered actuation solutions for demanding applications.

