

IS RANGE MULTI-TURN SPUR GEARBOXES SIZING CHART FOR MANUAL & MOTORISED DUTY

Issue 1 (13/12/2013)

Gearbox Type	Nominal Ratio	Exact Ratio	***Motorised Torque Nm	Manual Torque Nm	Mechanical Advantage	**Motorised Thrust KN	Manual Thrust KN	Stem Acceptance		Minimum (except on request)	Output Flange	Weight Kg with baseplate																					
								*Key mm	Screw mm			F07	F10	F12	F14	F16	F25	F30	F35	F40	F48	F60											
IS2	1	1.25	406	508	1.13	53	54	40	45		F10																						
	2	2			1.83																												
	3	3			2.70																												
IS3	1	1.25	406	508	1.13	177	178	52	55		F14																						
	2	2			1.83																												
	3	3			2.70																												
IS4	2	2.12	678	850	1.90	53	54	40	45		F10																						
	3	3			2.70																												
	4	4.1			3.69																												
	6	6			5.40																												
IS5	2	2.12	678	850	1.90	177	178	52	55		F14																						
	3	3			2.70																												
	4	4.1			3.69																												
	6	6			5.40																												
IS6	2	2	1,355	1,700	1.80	177	178	52	55		F14																						
	3	3			2.70																												
	4	4			3.60																												
	6	6			5.40																												
	8	8			7.20																												
IS7	2	2	1,355	1,700	1.80	266	356	68	73		F16																						
	3	3			2.70																												
	4	4			3.60																												
	6	6			5.40																												
	8	8			7.20																												
IS8	4	4.01	2,033	2,550	3.60	266	356	68	73		F16																						
	6	6.1			5.49																												
	8	7.95			7.16																												
	10	10.2			9.18																												
	12	12.26			11.03																												
IS9	4	4.01	2,033	2,550	3.60	355	445	76	86		F25																						
	6	6.1			5.49																												
	8	7.95			7.16																												
	10	10.2			9.18																												
	12	12.26			11.03																												
IS10	4	4.04	4,067	5,423	3.63	355	445	76	86		F25																						
	6	6.11			5.50																												
	8	7.81			7.03																												
	10	10.17			9.16																												
	12	12.11			10.90																												
IS11	4	4.04	4,067	5,423	3.63	500	670	96	100		F30																						
	6	6.11			5.50																												
	8	7.81			7.03																												
	10	10.17			9.16																												
	12	12.11			10.90																												
IS12	8	8.09	8,135	10,846	7.28	500	670	96	100		F30																						
	10	9.99			8.99																												
	12	11.83			10.65																												
	15	15.15			13.63																												
	8	8.09			7.28																												
IS13	10	9.99	8,135	10,846	8.99	834	1,112	121	127		F35																						
	12	11.83			10.65																												
	15	15.15			13.63																												
	8	8.09			7.28																												
	10	9.99			8.99																												
IS14	12	11.83	8,135	10,846	10.65	1,320	1,557	130	150	65	F40																						
	15	15.15			13.63																												
	10	9.86			8.87																												
	12	12			10.80																												
IS15	15	15	16,270	19,000	13.50	834	1,112	121	127		F35, F40																						
	10	9.86			8.87																												
	12	12			10.80																												
IS16	15	15	16,270	19,000	13.50	1,320	1,557	130	150	65	F40																						
	10	9.86			8.87																												
	12	12			10.80																												
IS17	6	6.11	40,800	43,385	5.50	834	1,112	121	127		F35																						
	8	8.11			7.30																												
	10	10			9.00																												
	12	12.03			10.82																												
	15	15.17			13.65																												
IS18	24	24.09	40,800	43,385	21.68	1,320	1,557	130	150	65	F40																						
	6	6.11			5.50																												
	8	8.11			7.30																												
	10	10			9.00																												
	12	12.03			10.82																												
IS19	15	15.17	40,800	43,385	13.65	1,668	2,224	170	190	75	F40, F48																						
	24	24.09			21.68											</																	

IS RANGE MULTI-TURN BEVEL GEARBOXES SIZING CHART FOR MANUAL & MOTORISED DUTY (US UNITS)

Issue 1 (13/12/2013)

Gearbox Type	Nominal Ratio	Exact Ratio	***Motorised Torque ft-lbf	Manual Torque ft-lbf	Mechanical Advantage	**Motorised Thrust lbf	Manual Thrust lbf	Stem Acceptance		Minimum (except on request)	Output Flange	Weight lb with baseplate																		
								*Key inch	Screw inch			FA07	FA10	FA12	FA14	FA16	FA25	FA30	FA35	FA40	FA48	FA60								
IS2	1	1.25	300	375	1.13	12,000	12,000	1.5	1.75		FA10		42																	
	2	2																												
	3	3																												
IS3	1	1.25	300	375	1.13	40,000	40,000	1.875	2.125		FA14				44															
	2	2																												
	3	3																												
IS4	2	2.12	500	625	1.90	12,000	12,000	1.5	1.75		FA10		55																	
	3	3																												
	4	4.1																												
	6	6																												
IS5	2	2.12	500	625	1.90	40,000	40,000	1.875	2.125		FA14					66														
	3	3																												
	4	4.1																												
	6	6																												
IS6	2	2	1,000	1,250	1.80	40,000	40,000	1.875	2.125		FA14					99														
	3	3																												
	4	4																												
	6	6																												
IS7	2	2	1,000	1,250	1.80	60,000	80,000	2.5	2.875		FA16					110														
	3	3																												
	4	4																												
	6	6																												
IS8	4	4.01	1,500	1,875	3.60	60,000	80,000	2.5	2.875		FA16					165														
	6	6.1																												
	8	7.95																												
	10	10.2																												
	12	12.26																												
	15	15.03																												
IS9	4	4.01	1,500	1,875	3.60	80,000	100,000	2.75	3.375		FA25					181														
	6	6.1																												
	8	7.95																												
	10	10.2																												
	12	12.26																												
	15	15.03																												
IS10	4	4.04	3,000	4,000	3.63	80,000	100,000	2.75	3.375		FA25					238														
	6	6.11																												
	8	7.81																												
	10	10.17																												
	12	12.11																												
IS11	4	4.04	3,000	4,000	3.63	112,500	150,000	3.5	3.875		FA30						269													
	6	6.11																												
	8	7.81																												
	10	10.17																												
	12	12.11																												
IS12	8	8.09	6,000	8,000	7.28	112,500	150,000	3.5	3.875		FA30						408													
	10	9.99																												
	12	11.83																												
	15	15.15																												
IS13	8	8.09	6,000	8,000	7.28	187,500	250,000	4.5	5		FA35							485												
	10	9.99																												
	12	11.83																												
	15	15.15																												
IS14	8	8.09	6,000	8,000	7.28	296,750	350,000	4.625	5.875	2.625	FA40									761										
	10	9.99																												
	12	11.83																												
	15	15.15																												
IS15	10	9.86	12,000	14,000	8.87	187,500	250,000	4.5	5		FA35, FA40								595	639										
	12	12																												
	15	15																												
IS16	10	9.86	12,000	14,000	8.87	296,750	350,000	4.625	5.875	2.625	FA40										882									
	12	12																												
	15	15																												
	6	6.11																												
IS17	8	8.11	30,000	32,000	7.30	187,500	250,000	4.5	5		FA35										1279									
	10	10																												
	12	12.03																												
	15	15.17																												
	24	24.09																												
IS18	6	6.11	30,000	32,000	5.50	296,750	350,000	4.625	5.875	2.625	FA40										1653									
	8	8.11																												
	10	10																												
	12	12.03																												
	15	15.17																												
IS19	6	6.11	30,000	32,000	5.50	375,000	500,000	6.125	7.375	3	FA40, FA48										1786									
	8	8.11																												
	10	10																												
	12	12.03																												
	15	15.17																												
IS20	6	6.11	30,000	32,000	5.50	500,000	750,000	7.5	8.75	3.75	FA48, FA60										2161									
	8	8.11																												
	10	10																												
	12	12.03																												
	15	15.17																												
IS21	6	6.11	30,000	32,000	5.50	652,000	978,000	7.5	8.75	4	FA60										2469									
	8	8.11																												
	10	10																												
	12	12.03																												
	15	15.17																												

Various combinations with spur and bevel gearboxes for further reductions are available

Note*: keyed stem acceptance assumes rectangular keyway to ANSI B17.1 with a steel output sleeve. For other keyway sizes, or acceptance for bronze sleeves, please consult Rotork Gears

Note**: The thrusts shown are the maximum loads that are permissible. It is possible that the stall load could be more than twice that of the maximum operating load and this must be accounted for when sizing the thrust requirement.

Note***: Torques shown assume 100 rpm input speed. Torque ratings for speeds other than 100 rpm should be obtained by multiplying by a factor from the chart below: