Frame Size	Units	Note	55	75	90	55	75	90
Ratio	i		5/8/10			15		
Nominal Output Torque	T2N [Nm]	*1	35	70	140	25	50	95
Maximum Acceleration Torque	T2B [Nm]	*2	53	105	210	38	75	143
Emergency Stop Torque	T2Not [Nm]	*3	70	140	280	50	100	190
Nominal Input Speed (Ratios 5/8)	n1N [rpm]	*4	3100	2400	2100	-	-	-
Nominal Input Speed (Ratios 10/15)	n1N [rpm]	*4	3800	2900	2600	3800	2900	2600
Maximum Input Speed	n1max [rpm]	*5	6000	6000	5000	6000	6000	5000
Maximum Radial Load	F2Rmax [N]	*6	2200	4050	6200	2200	4050	6200
Maximum Axial Load	F2Amax [N]	*7	1100	2025	3100	1100	2025	3100
Moment of Inertia (Ratio 5)	[kgcm^2]	-	0.44	1.07	3.70	-	-	-
Moment of Inertia (Ratio 8)	[kgcm^2]	-	0.37	0.89	3.00	-	-	-
Moment of Inertia (Ratio 10)	[kgcm^2]	-	0.35	0.84	2.90	-	-	-
Moment of Inertia (Ratio 15)	[kgcm^2]	-	-	-	-	0.33	0.79	2.70
Efficiency	h [%]	*8	> 96	> 96	> 96	> 93	> 93	> 93
Torsional Rigidity	Ct21 [Nm/arcmin]	*9	2.5	5	12	2.5	5	12
Maximum Torsional Backlash	jt [arcmin]	*10	≤ 7	≤ 7	≤ 6	≤ 7	≤ 7	≤ 6
Noise Level	LpA [dB(A)]	*11	< 66	< 66	< 68	< 66	< 66	< 68
Ambient Temperature	[°C]	-	-10 to 90					
Permitted Housing Temperature	[°C]	-	90					
Protection Class	-	-	IP64					
Lubrication	-	-	Synthetic Oil [ISO VG-Class 150]					
Service Life	SL [h]	*12	15,000					
Weight	m [kg]	-	2.6	4.5	9.0	2.6	4.5	9.0

*1) At nominal input speed, service life is 15,000 hours
*2) The maximum torque when starting or stopping operation. Permitted 1,000 cycles/hour
*3) The maximum torque allowed under a stress situation. Permitted 1,000 times during service life
*4) The average input speed at nominal input torque. Maintain housing temperature below permitted value
*5) The maximum intermittent input speed
*6) The maximum radial load the gearbox can accept. Measured at center of output shaft at 400rpm output
*7) The maximum axial load the gearbox can accept. Measured at center of output shaft at 400rpm output
*8) The efficiency at full load
*9) At nominal output torque. Does not include lost motion
*10) Measured at output, 2% load and max 10Nm
*11) Measured at 3,000 rpm input
*12) Based on S5 duty cycle <60% and <20 minute run time

Units and Symbols

Maximum Motor Acceleration Torque	T1BMot	Nm
Nominal Output Torque	T2N	Nm
Maximum Acceleration Torque	T2B	Nm
Emergency Stop Torque	T2Not	Nm
Nominal Input Speed	n1N	rpm
Maximum Input Speed	n1max	rpm
Maximum Input Radial Load	F1Rmax	N
Maximum Output Radial Load	F2Rmax	N
Maximum Input Axial Load	F1Amax	N
Maximum Output Axial Load	F2Amax	N
Mass Moment of Inertia	I1	kgcm²
Efficiency at Full Load	η	%
Torsional Rigidity	Ct21	Nm/arc-min
Maximum Torsional Backlash	jt	arc-min
Noise Level	LpA	dB(A)
Service Life	Lh	h
Run time	RT	min
Duty cycle	DC	%
Ambient Temperature	ta	°C
Thermal Performance Limit	Ptherm	kW
Performance	P	kW
Weight	m	kg