

EVS SERIES Right-angle Planetary

EVS 100 2-Stage Specifications

Frame Size	100									
Ratio	Unit	Note	3	4	5	6	7	8	9	10
Nominal Output Torque	[Nm]	*1	77	108	123	154	154	154	128	128
Maximum Acceleration Torque	[Nm]	*2	172	227	272	340	340	340	240	240
Maximum Torque	[Nm]	*3	205	271	325	401	401	401	288	288
Emergency Stop Torque	[Nm]	*4	320	430	500	550	550	550	450	450
Nominal Input Speed	[rpm]	*5	3000							
Maximum Input Speed	[rpm]	*6	6000							
No Load Running Torque	[Nm]	*7	1.88							
Maximum Radial Load	[N]	*8	7000							
Maximum Axial Load	[N]	*9	6300							
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	6.61	5.41	4.97	4.73	4.62	4.53	4.47	4.45
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	8.21	7.01	6.57	6.33	6.22	6.12	6.07	6.04
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	15.28	14.08	13.64	13.40	13.29	13.20	13.14	13.11
Efficiency	[%]	*10	93							
Torsional Rigidity	[Nm/arc-min]	*11	31							
Maximum Torsional Backlash	[arc-min]	--	≤ 4							
Noise Level	dB [A]	*12	≤ 85							
Protection Class	--	*13	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*14	10.5							

EVS 100 3-Stage Specifications

Frame Size	100									
Ratio	Unit	Note	15	16	20	25	28	30	35	40
Nominal Output Torque	[Nm]	*1	125	136	162	174	174	132	174	172
Maximum Acceleration Torque	[Nm]	*2	229	295	340	340	340	229	340	340
Maximum Torque	[Nm]	*3	229	295	340	340	340	229	340	340
Emergency Stop Torque	[Nm]	*4	450	550	550	550	550	450	550	550
Nominal Input Speed	[rpm]	*5	3100							
Maximum Input Speed	[rpm]	*6	6000							
No Load Running Torque	[Nm]	*7	1.11							
Maximum Radial Load	[N]	*8	7000							
Maximum Axial Load	[N]	*9	6300							
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	2.24	2.45	2.19	2.18	2.40	1.87	2.16	1.86
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	2.57	2.78	2.52	2.51	2.73	2.20	2.49	2.19
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	4.70	4.91	4.65	4.63	4.86	4.33	4.62	4.32
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*10	88							
Torsional Rigidity	[Nm/arc-min]	*11	31							
Maximum Torsional Backlash	[arc-min]	--	≤ 7							
Noise Level	dB [A]	*12	≤ 85							
Protection Class	--	*13	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*14	10.1							

EVS 100 3-Stage Specifications

Frame Size	100										
Ratio	Unit	Note	45	50	60	70	80	90	100		
Nominal Output Torque	[Nm]	*1	132	174	174	174	174	132	132		
Maximum Acceleration Torque	[Nm]	*2	240	340	340	340	340	240	240		
Maximum Torque	[Nm]	*3	240	340	340	340	340	240	240		
Emergency Stop Torque	[Nm]	*4	450	550	550	550	550	450	450		
Nominal Input Speed	[rpm]	*5	3100								
Maximum Input Speed	[rpm]	*6	6000								
No Load Running Torque	[Nm]	*7	1.11								
Maximum Radial Load	[N]	*8	7000								
Maximum Axial Load	[N]	*9	6300								
Moment of Inertia (≤ Ø 14)	[kgcm ²]	--	2.15	1.86	1.85	1.85	1.85	1.85	1.85		
Moment of Inertia (≤ Ø 19)	[kgcm ²]	--	2.48	2.19	2.18	2.18	2.18	2.18	2.18		
Moment of Inertia (≤ Ø 28)	[kgcm ²]	--	4.61	4.31	4.31	4.31	4.31	4.31	4.31		
Moment of Inertia (≤ Ø 38)	[kgcm ²]	--	--	--	--	--	--	--	--		
Efficiency	[%]	*10	88								
Torsional Rigidity	[Nm/arc-min]	*11	31								
Maximum Torsional Backlash	[arc-min]	--	≤ 7								
Noise Level	dB [A]	*12	≤ 85								
Protection Class	--	*13	IP54 (IP65)								
Ambient Temperature	[°C]	--	0-40								
Permitted Housing Temperature	[°C]	--	90								
Weight	[kg]	*14	10.1								

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation. Apply Cycle Factor f_0 , found on page 468, for higher duty cycle applications
- *3) Permitted 10,000 times during service life. Based on 10% of maximum radial load and smooth output shaft
- *4) The maximum torque allowed under a stress situation. Permitted 1,000 times during service life
- *5) The average input speed at nominal input torque. Maintain housing temperature below permitted value
- *6) The maximum intermittent input speed
- *7) Torque at no load applied to the input shaft at nominal input speed
- *8) The maximum radial load that the gearbox can accept
- *9) The maximum axial load that the gearbox can accept
- *10) The efficiency at the nominal output torque rating
- *11) This does not include lost motion
- *12) Contact NIDEC-SHIMPO for the testing conditions and environment
- *13) Various wash-down options are available. Contact NIDEC-SHIMPO for more details
- *14) Weight may vary slightly between models