

EVS SERIES Right-angle Planetary

EVS 180 2-Stage Specifications

Frame Size	180									
Stage	2-Stage									
Ratio	Units	Note	3	4	5	6	7	8	9	10
Nominal Output Torque	[Nm]	*1	400	575	600	600	600	600	400	400
Maximum Acceleration Torque	[Nm]	*2	575	770	960	1120	1120	1120	775	775
Emergency Stop Torque	[Nm]	*3	1300	1700	2000	2500	2500	2500	2000	2000
Nominal Input Speed	[rpm]	*4	1500							
Maximum Input Speed	[rpm]	*5	3000							
No Load Running Torque	[Nm]	*6	10.8							
Permitted Radial Load	[N]	*7	12000	13000	14000	15000	16000	17000	17000	18000
Permitted Axial Load	[N]	*8	16000	17000	17000	17000	17000	17000	17000	17000
Maximum Radial Load	[N]	*9	19000							
Maximum Axial Load	[N]	*10	17000							
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	92.00	76.72	71.23	68.28	66.08	65.00	64.38	64.10
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	126.9	111.6	106.1	103.1	100.9	99.86	99.25	98.97
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	212.5	197.2	191.7	188.7	186.6	185.5	184.9	184.6
Efficiency	[%]	*11	93							
Torsional Rigidity	[Nm/arcmin]	*12	175							
Maximum Torsional Backlash	[Arc-min]	--	≤ 6							
Noise Level	dB [A]	*13	≤ 85							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	52							

EVS 180 3-Stage Specifications

Frame Size	180									
Stage	3-Stage									
Ratio	Units	Note	15	16	20	25	28	30	35	40
Nominal Output Torque	[Nm]	*1	400	555	600	600	600	400	600	600
Maximum Acceleration Torque	[Nm]	*2	775	1120	1120	1120	1120	775	1120	1120
Emergency Stop Torque	[Nm]	*3	2000	2500	2500	2500	2500	2000	2500	2500
Nominal Input Speed	[rpm]	*4	1500							
Maximum Input Speed	[rpm]	*5	3000							
No Load Running Torque	[Nm]	*6	4.7							
Permitted Radial Load	[N]	*7	19000	19000	19000	19000	19000	19000	19000	19000
Permitted Axial Load	[N]	*8	17000	17000	17000	17000	17000	17000	17000	17000
Maximum Radial Load	[N]	*9	19000							
Maximum Axial Load	[N]	*10	17000							
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	11.42	12.03	11.11	10.96	11.57	10.31	10.82	10.23
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	20.21	20.82	19.90	19.74	20.36	19.10	19.60	19.02
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	25.03	25.64	24.72	24.56	25.18	23.92	24.42	23.84
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arcmin]	*12	175							
Maximum Torsional Backlash	[Arc-min]	--	≤ 9							
Noise Level	dB [A]	*13	≤ 85							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	39							

EVS 180 3-Stage Specifications

Frame Size	180										
Stage	3-Stage										
Ratio	Units	Note	45	50	60	70	80	90	100		
Nominal Output Torque	[Nm]	*1	400	600	600	600	600	400	400		
Maximum Acceleration Torque	[Nm]	*2	775	1120	1120	1120	1120	775	775		
Emergency Stop Torque	[Nm]	*3	2000	2500	2500	2500	2500	2000	2000		
Nominal Input Speed	[rpm]	*4	1500								
Maximum Input Speed	[rpm]	*5	3000								
No Load Running Torque	[Nm]	*6	4.7								
Permitted Radial Load	[N]	*7	19000	19000	19000	19000	19000	19000	19000		
Permitted Axial Load	[N]	*8	17000	17000	17000	17000	17000	17000	17000		
Maximum Radial Load	[N]	*9	19000								
Maximum Axial Load	[N]	*10	17000								
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	10.76	10.19	10.17	10.16	10.15	10.14	10.14		
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	19.54	18.98	18.96	18.94	18.94	18.93	18.93		
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	24.36	23.80	23.78	23.77	23.76	23.75	23.75		
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	--	--	--	--	--	--	--		
Efficiency	[%]	*11	88								
Torsional Rigidity	[Nm/arcmin]	*12	175								
Maximum Torsional Backlash	[Arc-min]	--	≤ 9								
Noise Level	dB [A]	*13	≤ 85								
Protection Class	--	*14	IP54 (IP65)								
Ambient Temperature	[°C]	--	0-40								
Permitted Housing Temperature	[°C]	--	90								
Weight	[kg]	*15	39								

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) Torque at no load applied to the input shaft at nominal input speed
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side shaft center)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output side bearing)
- *9) The maximum radial load that the gearbox can accept
- *10) The maximum axial load that the gearbox can accept
- *11) The efficiency at the nominal output torque rating
- *12) This does not include lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details
- *15) The weight may vary slightly between models