

EVB SERIES Right-angle Planetary

EVB 090 2-Stage Specifications

Frame Size	090									
Stage	2-Stage									
Ratio	Unit	Note	3	4	5	6	7	8	9	10
Nominal Output Torque	[Nm]	*1	45	60	65	65	65	65	45	45
Maximum Acceleration Torque	[Nm]	*2	65	90	90	90	90	90	65	65
Emergency Stop Torque	[Nm]	*3	130	170	220	220	220	220	170	170
Nominal Input Speed	[rpm]	*4	3000							
Maximum Input Speed	[rpm]	*5	6000							
No Load Running Torque	[Nm]	*6	1.13							
Permitted Radial Load	[N]	*7	810	890	960	1000	1100	1100	1200	1200
Permitted Axial Load	[N]	*8	930	1100	1200	1300	1300	1400	1500	1600
Maximum Radial Load	[N]	*9	2400							
Maximum Axial Load	[N]	*10	2200							
Moment of Inertia ($\leq \varnothing 8$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	2.120	1.890	1.800	1.760	1.730	1.710	1.700	1.690
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	2.450	2.220	2.130	2.090	2.060	2.040	2.030	2.020
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	4.570	4.350	4.260	4.210	4.180	4.170	4.160	4.150
Efficiency	[%]	*11	93							
Torsional Rigidity	[Nm/arc-min]	*12	10							
Maximum Torsional Backlash	[arc-min]	--	≤ 4							
Noise Level	dB [A]	*13	≤ 80							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	5.1							

EVB 090 3-Stage Specifications

Frame Size	090									
Stage	3-Stage									
Ratio	Unit	Note	15	16	20	25	28	30	35	40
Nominal Output Torque	[Nm]	*1	45	65	65	65	65	45	65	65
Maximum Acceleration Torque	[Nm]	*2	65	110	110	110	110	65	110	110
Emergency Stop Torque	[Nm]	*3	170	220	220	220	220	170	220	220
Nominal Input Speed	[rpm]	*4	3000							
Maximum Input Speed	[rpm]	*5	6000							
No Load Running Torque	[Nm]	*6	0.55							
Permitted Radial Load	[N]	*7	1400	1400	1500	1600	1700	1700	1800	1900
Permitted Axial Load	[N]	*8	1900	1900	2100	2200	2200	2200	2200	2200
Maximum Radial Load	[N]	*9	2400							
Maximum Axial Load	[N]	*10	2200							
Moment of Inertia ($\leq \varnothing 8$)	[kgcm ²]	--	0.340	0.380	0.330	0.320	0.370	0.250	0.320	0.250
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	0.410	0.460	0.400	0.400	0.450	0.330	0.400	0.320
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	0.600	0.650	0.590	0.590	0.640	0.510	0.590	0.510
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*12	10							
Maximum Torsional Backlash	[arc-min]	--	≤ 7							
Noise Level	dB [A]	*13	≤ 80							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	4.4							

EVB 090 3-Stage Specifications

Frame Size	090										
Stage	3-Stage										
Ratio	Unit	Note	45	50	60	70	80	90	100		
Nominal Output Torque	[Nm]	*1	45	65	65	65	65	45	45		
Maximum Acceleration Torque	[Nm]	*2	65	110	110	110	110	65	65		
Emergency Stop Torque	[Nm]	*3	170	220	220	220	220	170	170		
Nominal Input Speed	[rpm]	*4	3000								
Maximum Input Speed	[rpm]	*5	6000								
No Load Running Torque	[Nm]	*6	0.55								
Permitted Radial Load	[N]	*7	2000	2100	2200	2300	2400	2400	2400		
Permitted Axial Load	[N]	*8	2200	2200	2200	2200	2200	2200	2200		
Maximum Radial Load	[N]	*9	2400								
Maximum Axial Load	[N]	*10	2200								
Moment of Inertia (≤ Ø 8)	[kgcm ²]	--	0.320	0.250	0.250	0.250	0.250	0.250	0.250		
Moment of Inertia (≤ Ø 14)	[kgcm ²]	--	0.390	0.320	0.320	0.320	0.320	0.320	0.320		
Moment of Inertia (≤ Ø 19)	[kgcm ²]	--	0.580	0.510	0.510	0.510	0.510	0.510	0.510		
Moment of Inertia (≤ Ø 28)	[kgcm ²]	--	--	--	--	--	--	--	--		
Efficiency	[%]	*11	88								
Torsional Rigidity	[Nm/arc-min]	*12	10								
Maximum Torsional Backlash	[arc-min]	--	≤ 7								
Noise Level	dB [A]	*13	≤ 80								
Protection Class	--	*14	IP54 (IP65)								
Ambient Temperature	[°C]	--	0-40								
Permitted Housing Temperature	[°C]	--	90								
Weight	[kg]	*15	4.4								

- *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