

# EVT SERIES Right-angle Planetary

## EVT 090 2-Stage Specifications

Frame Size	090										
Stage	2-Stage										
Ratio	Unit	Note	4	5	6	7	8	9	10		
Nominal Output Torque	[Nm]	*1	60	65	65	65	65	45	45		
Maximum Acceleration Torque	[Nm]	*2	90	90	90	90	90	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	1.13								
Permitted Radial Load	[N]	*7	720	780	830	870	910	950	980		
Permitted Axial Load	[N]	*8	620	680	740	790	830	880	920		
Maximum Radial Load	[N]	*9	3300								
Maximum Axial Load	[N]	*10	1700								
Moment of Inertia ( $\leq \varnothing 8$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--	--	--	--		
Moment of Inertia ( $\leq \varnothing 14$ )	[kgcm <sup>2</sup> ]	--	2.17	1.98	1.88	1.81	1.78	1.75	1.73		
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	2.50	2.31	2.21	2.14	2.10	2.08	2.06		
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	4.63	4.43	4.33	4.27	4.23	4.21	4.19		
Efficiency	[%]	*11	93								
Torsional Rigidity	[Nm/arcmin]	*12	22								
Maximum Torsional Backlash	[Arc-min]	--	$\leq 4$								
Noise Level	dB [A]	*13	$\leq 80$								
Protection Class	--	*14	IP55 (IP65)								
Ambient Temperature	[°C]	--	0-40								
Permitted Housing Temperature	[°C]	--	90								
Weight	[kg]	*15	5.1								

## EVT 090 3-Stage Specifications

Frame Size	090										
Stage	3-Stage										
Ratio	Unit	Note	16	20	25	28	35	40	45		
Nominal Output Torque	[Nm]	*1	65	65	65	65	65	65	45		
Maximum Acceleration Torque	[Nm]	*2	110	110	110	110	110	110	65		
Emergency Stop Torque	[Nm]	*3	220	220	220	220	220	220	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	1200	1200	1300	1400	1500	1600	1600		
Permitted Axial Load	[N]	*8	1100	1200	1400	1400	1600	1700	1700		
Maximum Radial Load	[N]	*9	3300								
Maximum Axial Load	[N]	*10	1700								
Moment of Inertia ( $\leq \varnothing 8$ )	[kgcm <sup>2</sup> ]	--	0.40	0.34	0.33	0.38	0.32	0.25	0.32		
Moment of Inertia ( $\leq \varnothing 14$ )	[kgcm <sup>2</sup> ]	--	0.48	0.41	0.41	0.45	0.40	0.33	0.40		
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	0.66	0.60	0.59	0.64	0.59	0.51	0.59		
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--	--	--	--		
Efficiency	[%]	*11	88								
Torsional Rigidity	[Nm/arcmin]	*12	22								
Maximum Torsional Backlash	[Arc-min]	--	$\leq 7$								
Noise Level	dB [A]	*13	$\leq 80$								
Protection Class	--	*14	IP55 (IP65)								
Ambient Temperature	[°C]	--	0-40								
Permitted Housing Temperature	[°C]	--	90								
Weight	[kg]	*15	4.3								

## EVT 090 3-Stage Specifications

Frame Size	090								
Stage	3-Stage								
Ratio	Unit	Note	50	60	70	80	90	100	
Nominal Output Torque	[Nm]	*1	65	65	65	65	45	45	
Maximum Acceleration Torque	[Nm]	*2	110	110	110	110	65	65	
Emergency Stop Torque	[Nm]	*3	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	1700	1800	1900	2000	2000	2100	
Permitted Axial Load	[N]	*8	1700	1700	1700	1700	1700	1700	
Maximum Radial Load	[N]	*9	3300						
Maximum Axial Load	[N]	*10	1700						
Moment of Inertia ( $\leq \varnothing 8$ )	[kgcm <sup>2</sup> ]	--	0.25	0.25	0.25	0.25	0.25	0.25	
Moment of Inertia ( $\leq \varnothing 14$ )	[kgcm <sup>2</sup> ]	--	0.32	0.32	0.32	0.32	0.32	0.32	
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	0.51	0.51	0.51	0.51	0.51	0.51	
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--	--	--	
Efficiency	[%]	*11	88						
Torsional Rigidity	[Nm/arcmin]	*12	22						
Maximum Torsional Backlash	[Arc-min]	--	$\leq 7$						
Noise Level	dB [A]	*13	$\leq 80$						
Protection Class	--	*14	IP55 (IP65)						
Ambient Temperature	[°C]	--	0-40						
Permitted Housing Temperature	[°C]	--	90						
Weight	[kg]	*15	4.3						

- \*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