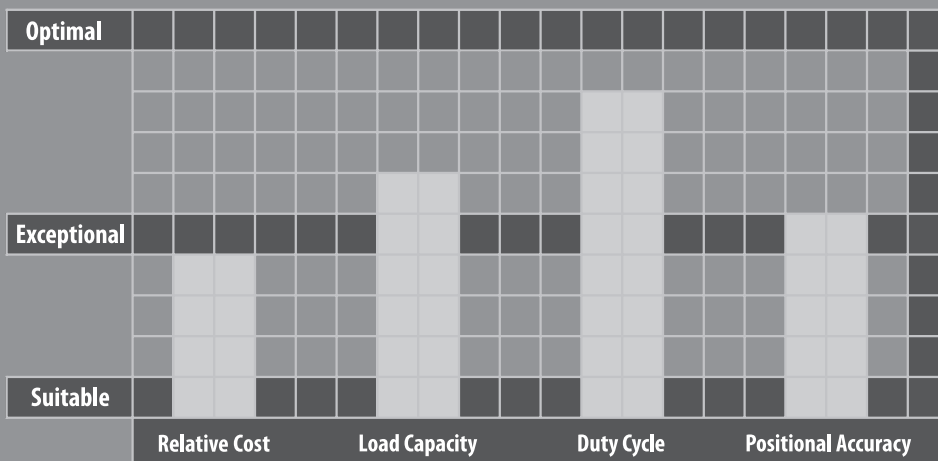
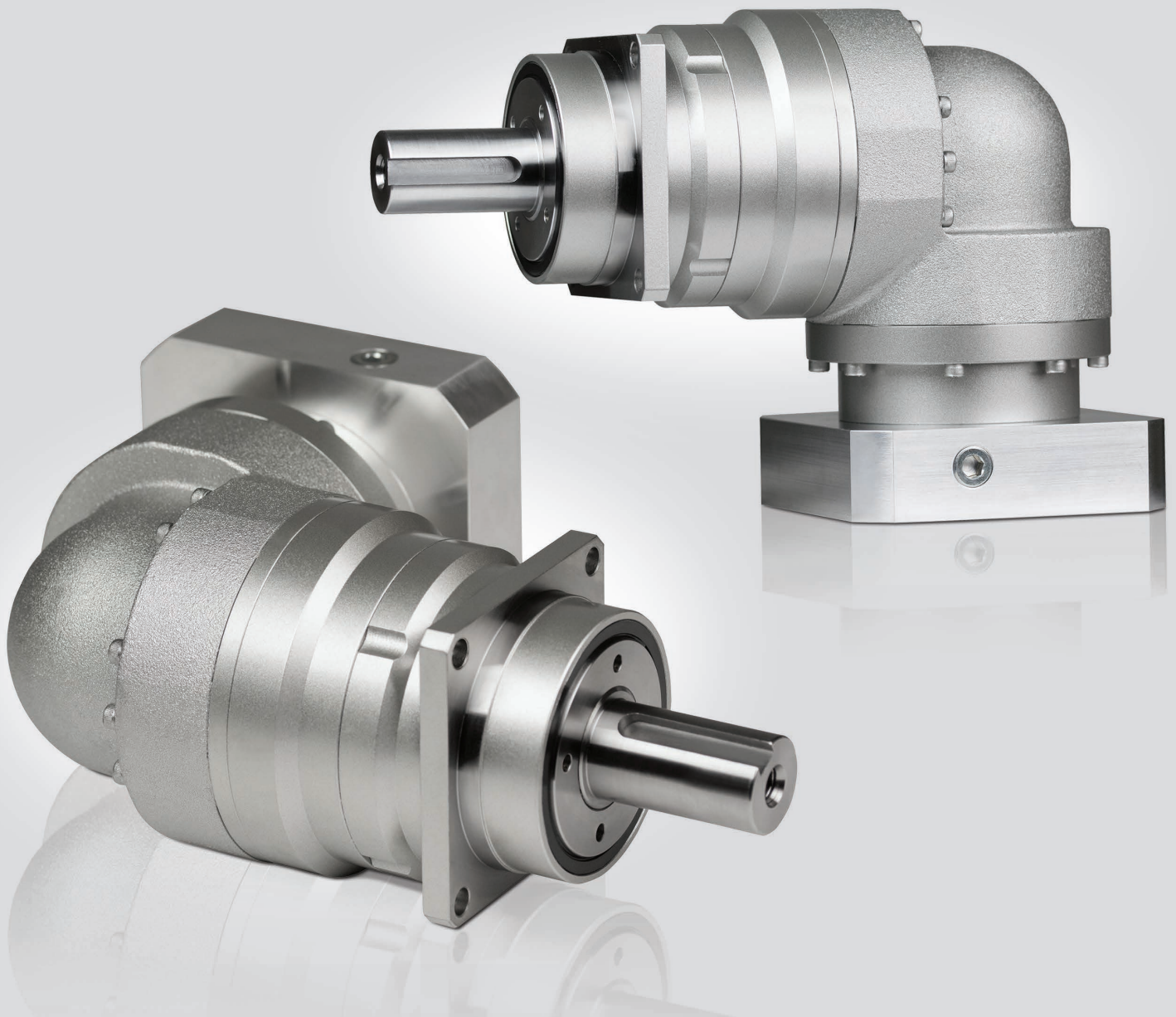


EVS SERIES

The EVS series is the right angle equivalent to the VRS. Compact and precise, the EVS is the ideal solution for demanding positioning accuracy and speed requirements. Equipped with two rows of robust tapered roller bearings, the EVS runs smoothly and quietly even with the most challenging dynamic and static forces.

The EVS comes with ≤ 4 arc-min backlash, to handle dynamic machine tool and robotic applications with ease. With maximum acceleration torques up to 2960Nm, this product is an excellent partner to higher capacity servomotor models. Our customers specify this product when the industry standard is simply not good enough.



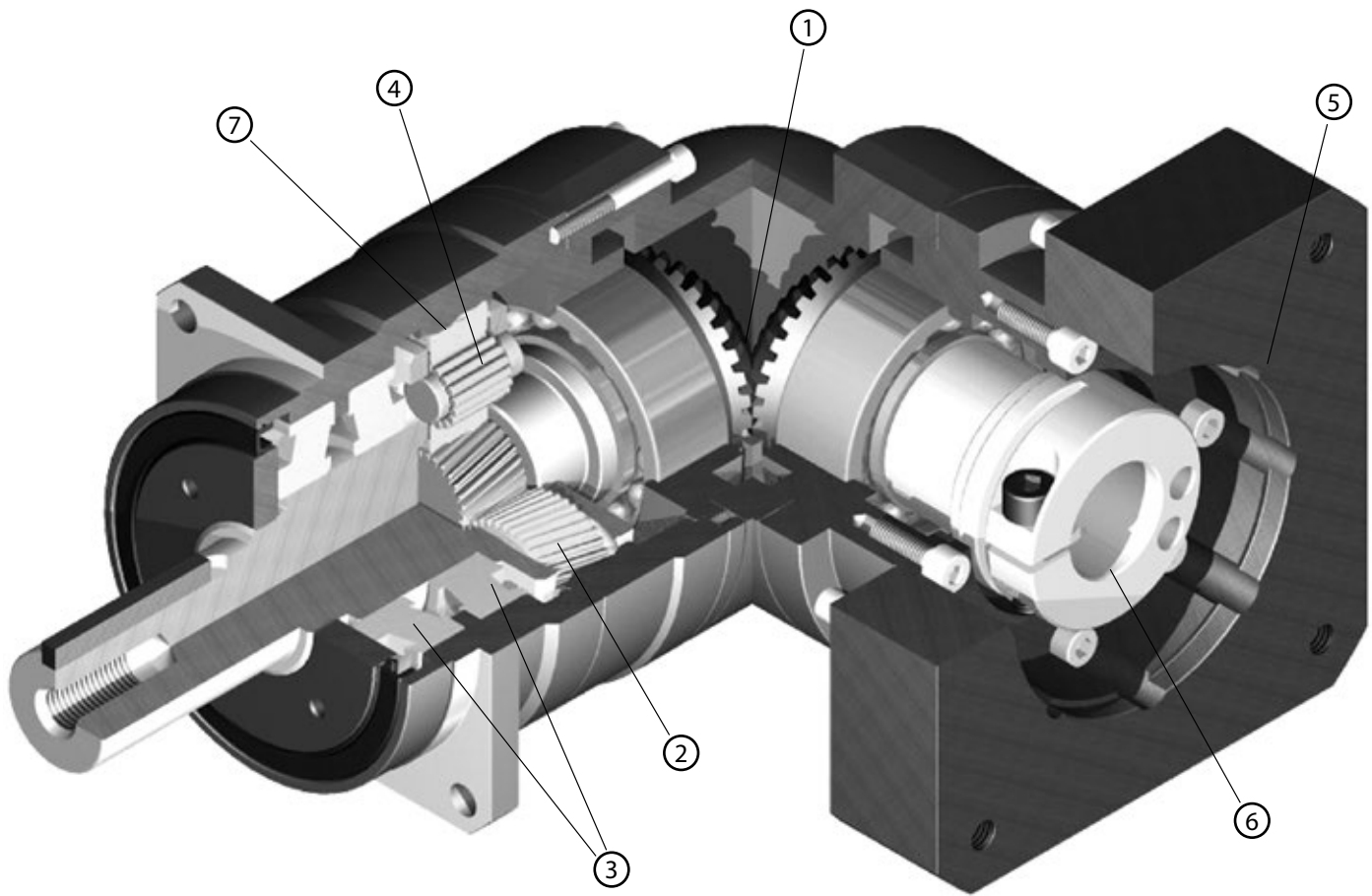


EVS SERIES

- Proven performer in high end motion control applications with demanding accuracy requirements
- Excellent fit for difficult overhung load situations with a limited space envelope
- The widest range of frame sizes and ratios available in the market
- Best-In-class standard backlash of ≤ 4 arc-min
- Broad range of mounting adapters offer a simple, precise attachment to any motor
- Maintenance-free solution that is lubricated for life. High performance grease allows flexible mounting in any orientation
- Industry standard through-bolt mounting style

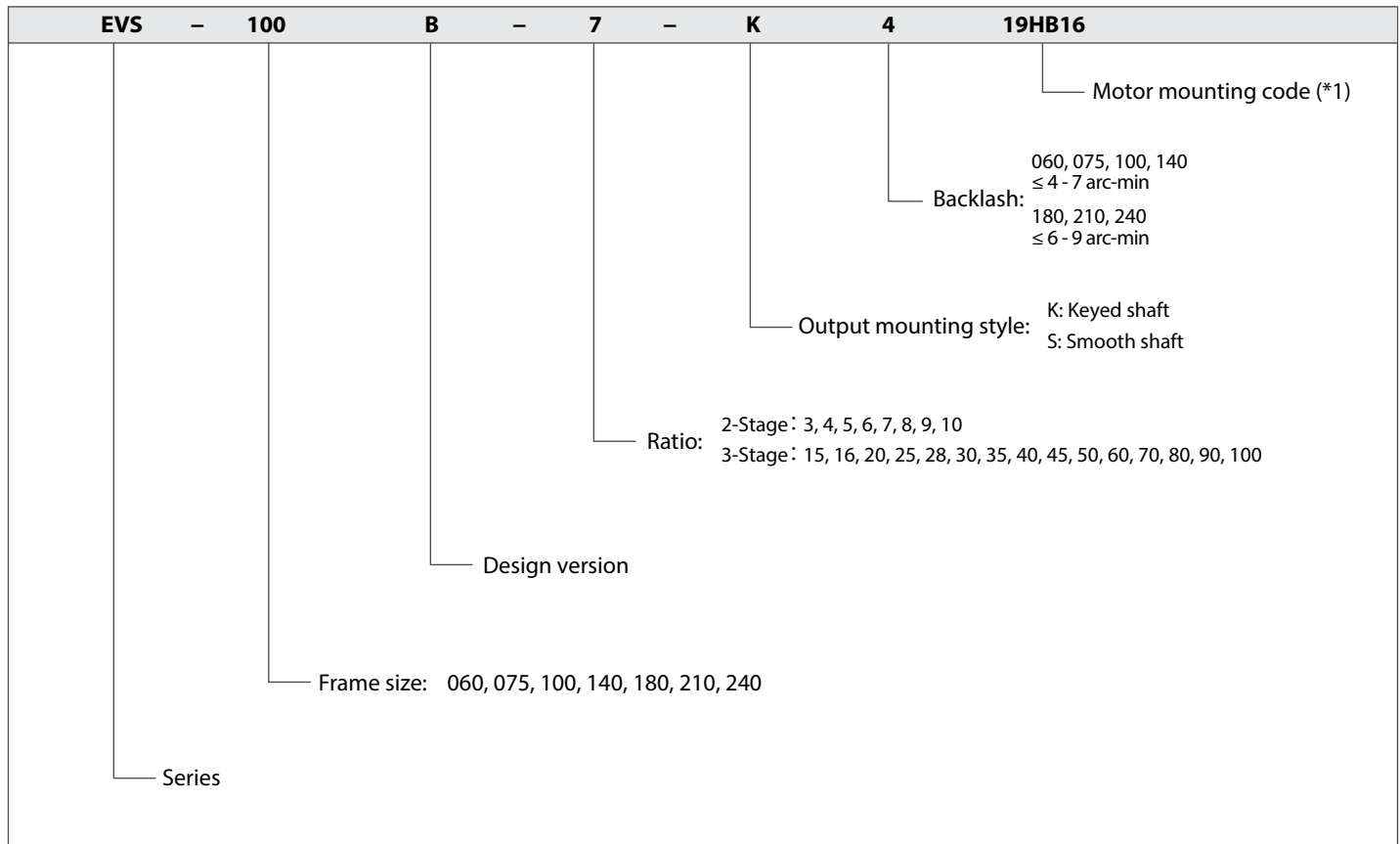
EVS SERIES Right-angle Planetary

EVS Series Features



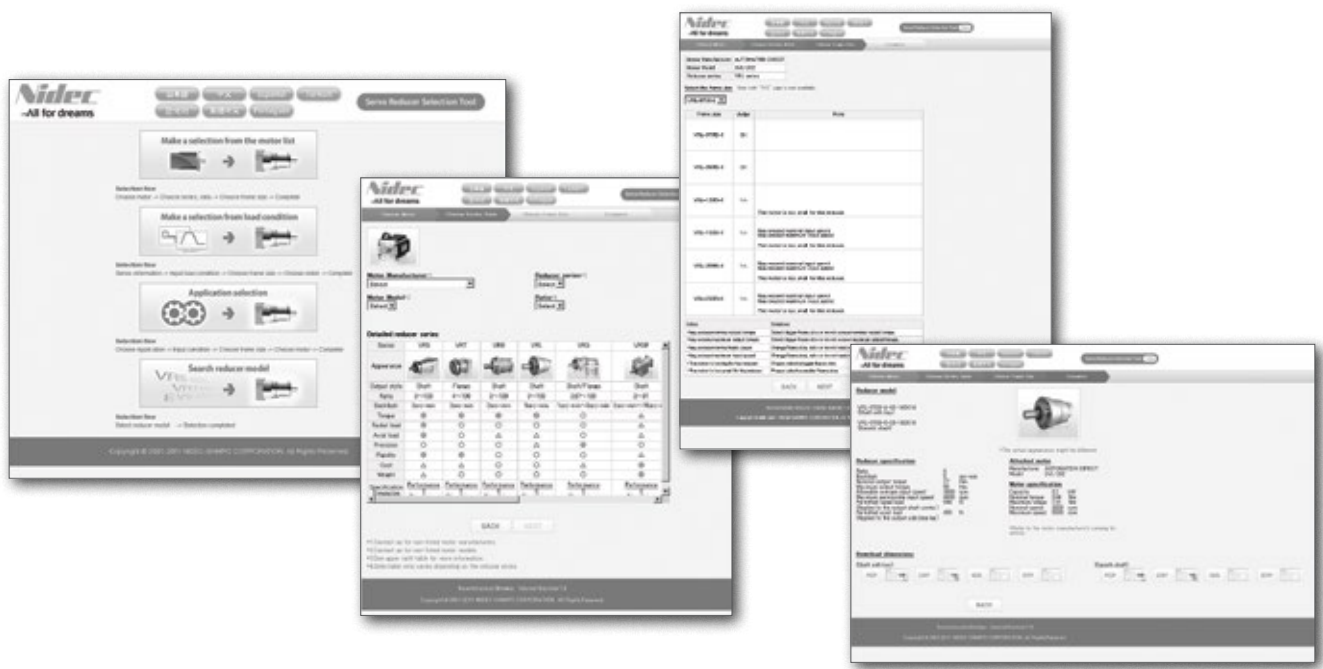
- ① Right angle bevel gear configuration allows motor to be mounted at a 90 degree position from the gear-box, saving space
- ② Carburized helical gears with proprietary secondary finishing process for higher accuracy and smooth, quiet operation
- ③ One piece output shaft and planet carrier with dual tapered roller bearings. Higher stiffness, torque capacity and safety factor, with guaranteed alignment of gearing
- ④ Uncaged needle roller bearings provide excellent torque density and torsional rigidity
- ⑤ Optimized mounting system with active centering on motor pilot diameter guarantees alignment of motor. Motor can be installed in any orientation
- ⑥ True concentric motor shaft clamping connection, optimized for your specific motor. Reduced inertia for dynamic performance and balanced for high speed operation
- ⑦ Ring gear machined directly into the housing, not welded or pressed in. Provides greater concentricity and elimination of speed fluctuation

EVS Series Model Code



*1) Motor mounting code varies depending on the motor. Use the selection tool link below to configure the code.

Contact us for additional information or refer to our online gearbox selection tool.
 Selection tool www.nidec-shimpo.co.jp/selection/eng



EVS SERIES Right-angle Planetary

EVS o6o 2-Stage Specifications

Frame Size	060									
Ratio	Unit	Note	3	4	5	6	7	8	9	10
Nominal Output Torque	[Nm]	*1	12	16	22	24	24	24	16	16
Maximum Acceleration Torque	[Nm]	*2	24	32	40	45	45	45	32	32
Emergency Stop Torque	[Nm]	*3	50	65	80	90	90	90	65	65
Nominal Input Speed	[rpm]	*4	3000							
Maximum Input Speed	[rpm]	*5	6000							
No Load Running Torque	[Nm]	*6	0.33							
Permitted Radial Load	[N]	*7	1700	1900	2000	2100	2200	2300	2400	2400
Permitted Axial Load	[N]	*8	2300	2500	2700	2700	2700	2700	2700	2700
Maximum Radial Load	[N]	*9	3000							
Maximum Axial Load	[N]	*10	2700							
Moment of Inertia ($\leq \varnothing 8$)	[kgcm ²]	--	0.320	0.271	0.251	0.242	0.235	0.232	0.229	0.228
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	0.395	0.346	0.326	0.317	0.310	0.307	0.304	0.303
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	0.584	0.535	0.516	0.506	0.500	0.496	0.494	0.492
Efficiency	[%]	*11	93							
Torsional Rigidity	[Nm/arc-min]	*12	3							
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	2							

EVS o6o 3-Stage Specifications

Frame Size	060									
Ratio	Unit	Note	15	16	20	25	28	30	35	40
Nominal Output Torque	[Nm]	*1	16	24	24	24	24	16	24	24
Maximum Acceleration Torque	[Nm]	*2	32	45	45	45	45	32	45	45
Emergency Stop Torque	[Nm]	*3	65	90	90	90	90	65	90	90
Nominal Input Speed	[rpm]	*4	3000							
Maximum Input Speed	[rpm]	*5	6000							
No Load Running Torque	[Nm]	*6	0.20							
Permitted Radial Load	[N]	*7	2800	2800	3000	3000	3000	3000	3000	3000
Permitted Axial Load	[N]	*8	2700	2700	2700	2700	2700	2700	2700	2700
Maximum Radial Load	[N]	*9	3000							
Maximum Axial Load	[N]	*10	2700							
Moment of Inertia ($\leq \varnothing 8$)	[kgcm ²]	--	0.074	0.079	0.072	0.071	0.077	0.062	0.070	0.061
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	0.118	0.124	0.116	0.115	0.122	0.106	0.115	0.106
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*12	3							
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	1.8							

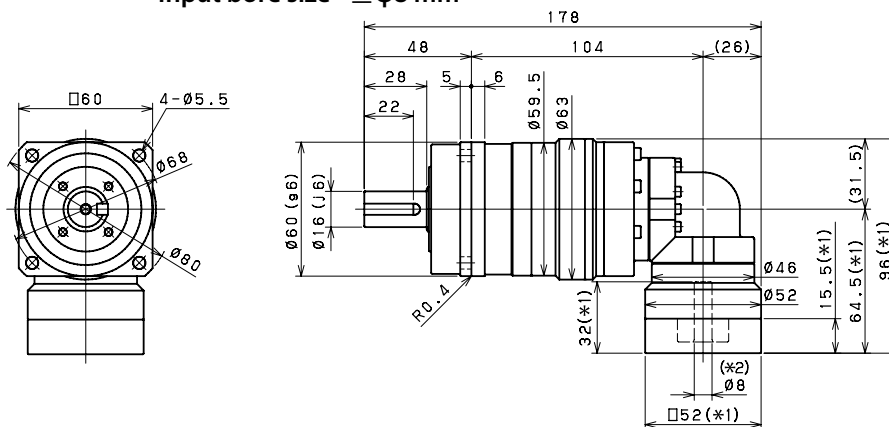
EVS o6o 3-Stage Specifications

Frame Size	060										
Ratio	Unit	Note	45	50	60	70	80	90	100		
Nominal Output Torque	[Nm]	*1	16	24	24	24	24	16	16		
Maximum Acceleration Torque	[Nm]	*2	32	45	45	45	45	32	32		
Emergency Stop Torque	[Nm]	*3	65	90	90	90	90	65	65		
Nominal Input Speed	[rpm]	*4	3000								
Maximum Input Speed	[rpm]	*5	6000								
No Load Running Torque	[Nm]	*6	0.20								
Permitted Radial Load	[N]	*7	3000	3000	3000	3000	3000	3000	3000		
Permitted Axial Load	[N]	*8	2700	2700	2700	2700	2700	2700	2700		
Maximum Radial Load	[N]	*9	3000								
Maximum Axial Load	[N]	*10	2700								
Moment of Inertia ($\leq \varnothing 8$)	[kgcm ²]	--	0.070	0.061	0.061	0.061	0.061	0.061	0.061		
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	0.115	0.106	0.106	0.106	0.105	0.105	0.105		
Efficiency	[%]	*11	88								
Torsional Rigidity	[Nm/arc-min]	*12	3								
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	1.8								

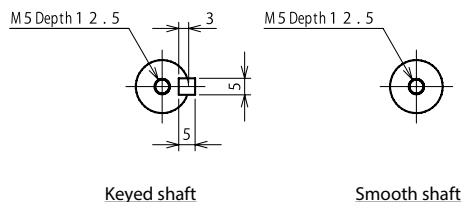
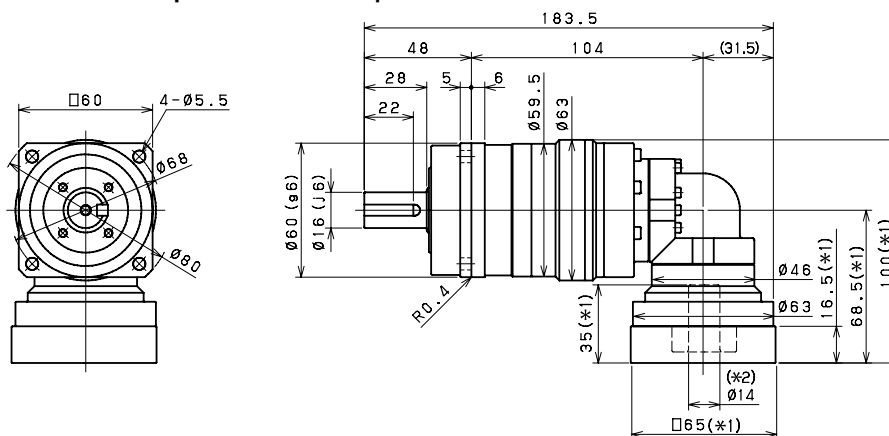
- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) 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

EVS o6o 3-Stage Dimensions

Input bore size $\leq \phi 8$ mm



Input bore size $\leq \phi 14$ mm



- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

EVS SERIES Right-angle Planetary

EVS 075 2-Stage Specifications

Frame Size	075									
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	2300	2500	2700	2800	3000	3100	3200	3300
Permitted Axial Load	[N]	*8	3400	3700	3900	3900	3900	3900	3900	3900
Maximum Radial Load	[N]	*9	4300							
Maximum Axial Load	[N]	*10	3900							
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	2.070	1.870	1.780	1.740	1.720	1.700	1.690	1.690
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	2.400	2.200	2.110	2.070	2.050	2.030	2.020	2.020
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	4.530	4.320	4.240	4.200	4.170	4.160	4.150	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	4.8							

EVS 075 3-Stage Specifications

Frame Size	075									
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	3700	3800	4000	4300	4300	4300	4300	4300
Permitted Axial Load	[N]	*8	3900	3900	3900	3900	3900	3900	3900	3900
Maximum Radial Load	[N]	*9	4300							
Maximum Axial Load	[N]	*10	3900							
Moment of Inertia ($\leq \varnothing 8$)	[kgcm ²]	--	0.330	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	0.320	0.400	0.320
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	0.600	0.650	0.590	0.590	0.640	0.510	0.580	0.510
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	4.1							

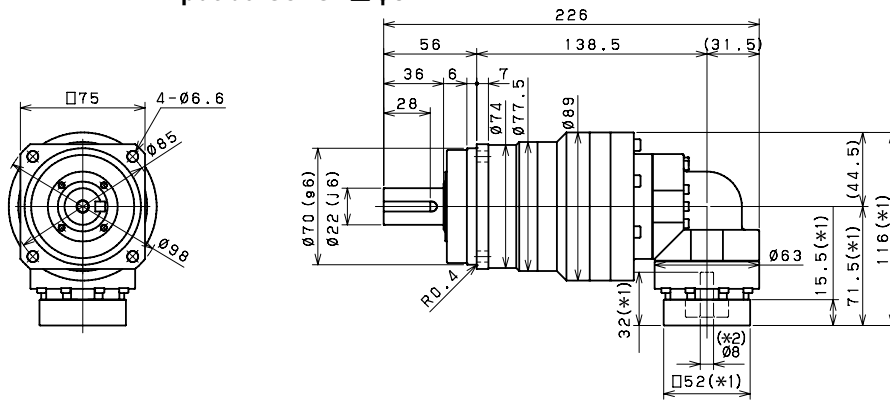
EVS 075 3-Stage Specifications

Frame Size	075										
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	4300	4300	4300	4300	4300	4300	4300		
Permitted Axial Load	[N]	*8	3900	3900	3900	3900	3900	3900	3900		
Maximum Radial Load	[N]	*9	4300								
Maximum Axial Load	[N]	*10	3900								
Moment of Inertia ($\leq \varnothing 8$)	[kgcm ²]	--	0.320	0.250	0.250	0.250	0.250	0.250	0.250		
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	0.390	0.320	0.320	0.320	0.320	0.320	0.320		
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	0.580	0.510	0.510	0.510	0.510	0.510	0.510		
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	4.1								

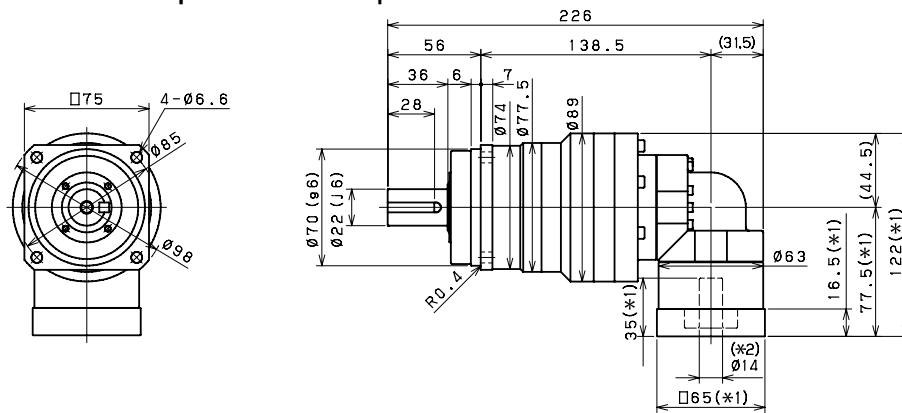
- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) 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

EVS 075 3-Stage Dimensions

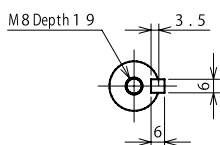
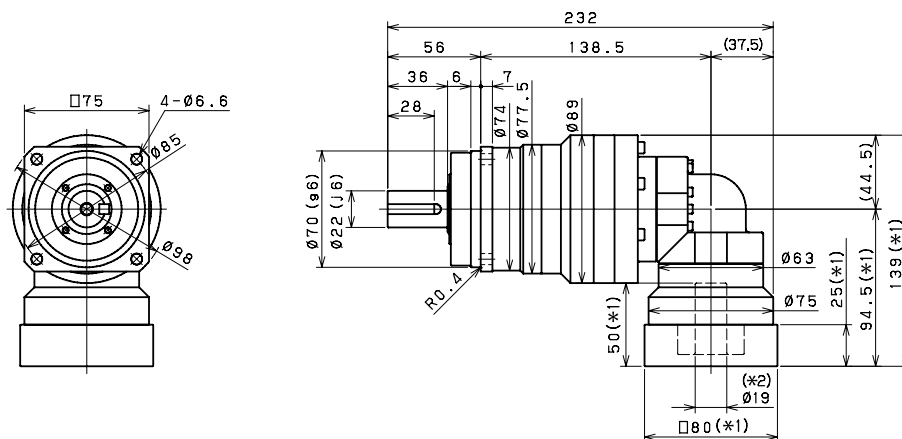
Input bore size $\leq \phi 8 \text{ mm}$



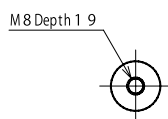
Input bore size $\leq \phi 14 \text{ mm}$



Input bore size $\leq \phi 19 \text{ mm}$



Keyed shaft



Smooth shaft

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

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	75	100	120	150	150	150	110	110
Maximum Acceleration Torque	[Nm]	*2	150	200	240	300	300	300	200	200
Emergency Stop Torque	[Nm]	*3	320	430	500	550	550	550	450	450
Nominal Input Speed	[rpm]	*4	3000							
Maximum Input Speed	[rpm]	*5	6000							
No Load Running Torque	[Nm]	*6	1.88							
Permitted Radial Load	[N]	*7	3400	3700	4000	4200	4400	4600	4800	4900
Permitted Axial Load	[N]	*8	4800	5200	5600	5900	6100	6300	6300	6300
Maximum Radial Load	[N]	*9	7000							
Maximum Axial Load	[N]	*10	6300							
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	6.610	5.410	4.970	4.730	4.620	4.530	4.470	4.450
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	8.210	7.010	6.570	6.330	6.220	6.120	6.070	6.040
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	15.280	14.080	13.640	13.400	13.290	13.200	13.140	13.110
Efficiency	[%]	*11	93							
Torsional Rigidity	[Nm/arc-min]	*12	31							
Maximum Torsional Backlash	[arc-min]	--	≤ 4							
Noise Level	dB [A]	*13	≤ 85							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	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	110	130	150	150	150	110	150	150
Maximum Acceleration Torque	[Nm]	*2	200	260	300	300	300	200	300	300
Emergency Stop Torque	[Nm]	*3	450	550	550	550	550	450	550	550
Nominal Input Speed	[rpm]	*4	3000							
Maximum Input Speed	[rpm]	*5	6000							
No Load Running Torque	[Nm]	*6	1.11							
Permitted Radial Load	[N]	*7	5600	5700	6100	6500	6700	6900	7000	7000
Permitted Axial Load	[N]	*8	6300	6300	6300	6300	6300	6300	6300	6300
Maximum Radial Load	[N]	*9	7000							
Maximum Axial Load	[N]	*10	6300							
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	2.240	2.450	2.190	2.180	2.400	1.870	2.160	1.860
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	2.570	2.780	2.520	2.510	2.730	2.200	2.490	2.190
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	4.700	4.910	4.650	4.630	4.860	4.330	4.620	4.320
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*12	31							
Maximum Torsional Backlash	[arc-min]	--	≤ 7							
Noise Level	dB [A]	*13	≤ 85							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	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	110	150	150	150	150	110	110		
Maximum Acceleration Torque	[Nm]	*2	200	300	300	300	300	200	200		
Emergency Stop Torque	[Nm]	*3	450	550	550	550	550	450	450		
Nominal Input Speed	[rpm]	*4	3000								
Maximum Input Speed	[rpm]	*5	6000								
No Load Running Torque	[Nm]	*6	1.11								
Permitted Radial Load	[N]	*7	7000	7000	7000	7000	7000	7000	7000		
Permitted Axial Load	[N]	*8	6300	6300	6300	6300	6300	6300	6300		
Maximum Radial Load	[N]	*9	7000								
Maximum Axial Load	[N]	*10	6300								
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	2.150	1.860	1.850	1.850	1.850	1.850	1.850		
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	2.480	2.190	2.180	2.180	2.180	2.180	2.180		
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	4.610	4.310	4.310	4.310	4.310	4.310	4.310		
Efficiency	[%]	*11	88								
Torsional Rigidity	[Nm/arc-min]	*12	31								
Maximum Torsional Backlash	[arc-min]	--	≤ 7								
Noise Level	dB [A]	*13	≤ 85								
Protection Class	--	*14	IP54 (IP65)								
Ambient Temperature	[°C]	--	0-40								
Permitted Housing Temperature	[°C]	--	90								
Weight	[kg]	*15	10.1								

*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

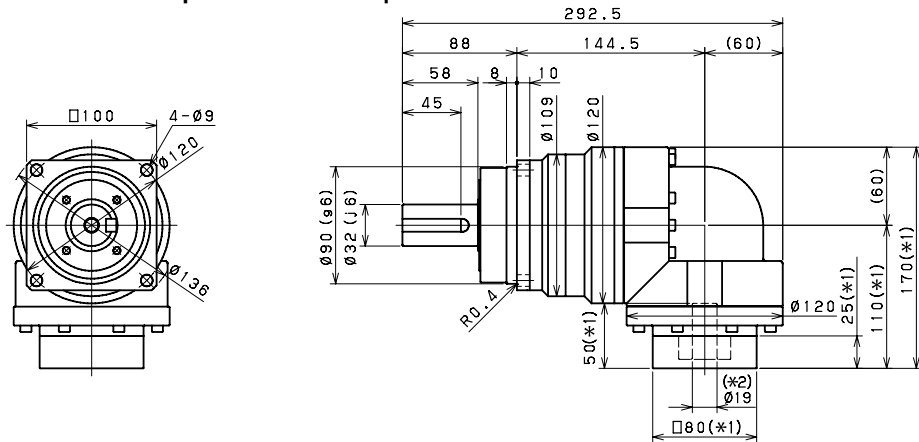
*14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details

*15) The weight may vary slightly between models

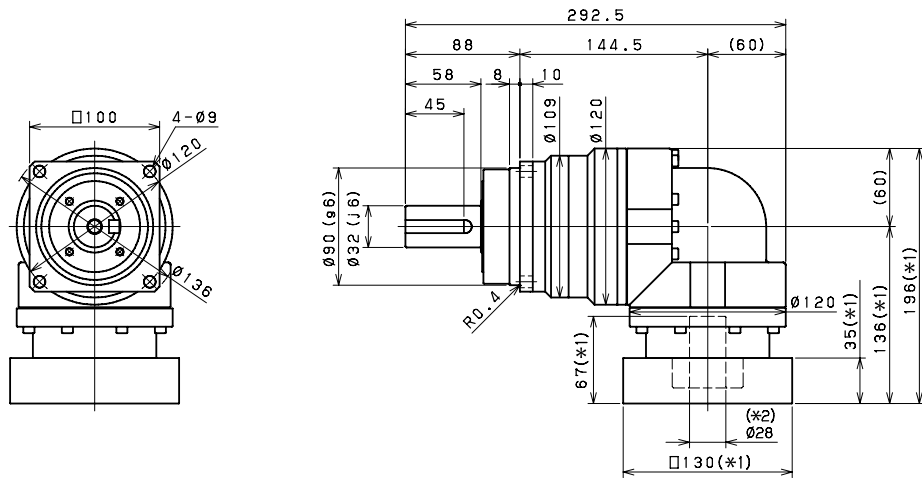
EVS SERIES Right-angle Planetary

EVS 100 2-Stage Dimensions

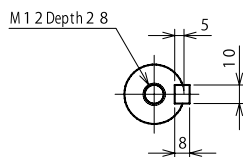
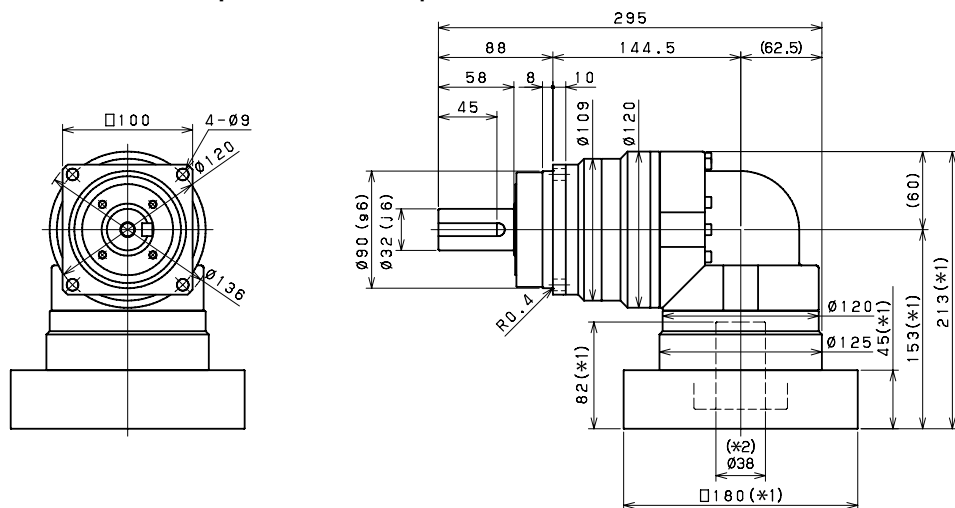
Input bore size $\leq \phi 19$ mm



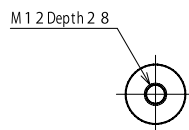
Input bore size $\leq \phi 28$ mm



Input bore size $\leq \phi 38$ mm



Keyed shaft



Smooth shaft

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

EVS SERIES Right-angle Planetary

EVS 140 2-Stage Specifications

Frame Size	140									
Ratio	Unit	Note	3	4	5	6	7	8	9	10
Nominal Output Torque	[Nm]	*1	130	170	200	260	300	300	200	200
Maximum Acceleration Torque	[Nm]	*2	260	340	400	520	600	600	400	400
Emergency Stop Torque	[Nm]	*3	700	950	1100	1100	1100	1100	750	750
Nominal Input Speed	[rpm]	*4	2000							
Maximum Input Speed	[rpm]	*5	4000							
No Load Running Torque	[Nm]	*6	3.26							
Permitted Radial Load	[N]	*7	6700	7400	7900	8300	8700	9100	9400	9700
Permitted Axial Load	[N]	*8	9000	9000	9000	9000	9000	9000	9000	9000
Maximum Radial Load	[N]	*9	10000							
Maximum Axial Load	[N]	*10	9000							
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	23.010	18.490	16.850	15.970	15.550	15.210	14.750	14.640
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	27.380	22.860	21.220	20.340	19.920	19.580	19.120	19.020
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	40.610	36.090	34.450	33.570	33.150	32.810	32.250	32.250
Efficiency	[%]	*11	93							
Torsional Rigidity	[Nm/arc-min]	*12	60							
Maximum Torsional Backlash	[arc-min]	--	≤ 4							
Noise Level	dB [A]	*13	≤ 85							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	20.6							

EVS 140 3-Stage Specifications

Frame Size	140									
Ratio	Unit	Note	15	16	20	25	28	30	35	40
Nominal Output Torque	[Nm]	*1	200	300	300	300	300	200	300	300
Maximum Acceleration Torque	[Nm]	*2	400	600	600	600	600	400	600	600
Emergency Stop Torque	[Nm]	*3	750	1100	1100	1100	1100	750	1100	1100
Nominal Input Speed	[rpm]	*4	2000							
Maximum Input Speed	[rpm]	*5	4000							
No Load Running Torque	[Nm]	*6	2.56							
Permitted Radial Load	[N]	*7	10000	10000	10000	10000	10000	10000	10000	10000
Permitted Axial Load	[N]	*8	9000	9000	9000	9000	9000	9000	9000	9000
Maximum Radial Load	[N]	*9	10000							
Maximum Axial Load	[N]	*10	9000							
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	6.400	7.290	6.220	6.150	7.090	4.990	6.090	4.940
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	7.990	8.880	7.810	7.750	8.680	6.580	7.680	6.540
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	15.060	15.950	14.880	14.820	15.750	13.660	14.760	13.610
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*12	60							
Maximum Torsional Backlash	[arc-min]	--	≤ 7							
Noise Level	dB [A]	*13	≤ 85							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	20.7							

EVS 140 3-Stage Specifications

Frame Size	140										
Ratio	Unit	Note	45	50	60	70	80	90	100		
Nominal Output Torque	[Nm]	*1	200	300	300	300	300	200	200		
Maximum Acceleration Torque	[Nm]	*2	400	600	600	600	600	400	400		
Emergency Stop Torque	[Nm]	*3	750	1100	1100	1100	1100	750	750		
Nominal Input Speed	[rpm]	*4	2000								
Maximum Input Speed	[rpm]	*5	4000								
No Load Running Torque	[Nm]	*6	2.56								
Permitted Radial Load	[N]	*7	10000	10000	10000	10000	10000	10000	10000		
Permitted Axial Load	[N]	*8	9000	9000	9000	9000	9000	9000	9000		
Maximum Radial Load	[N]	*9	10000								
Maximum Axial Load	[N]	*10	9000								
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	6.070	4.930	4.920	4.910	4.910	4.910	4.910		
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	7.660	6.520	6.510	6.510	6.500	6.500	6.500		
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	14.730	13.590	13.590	13.580	13.580	13.570	13.570		
Efficiency	[%]	*11	88								
Torsional Rigidity	[Nm/arc-min]	*12	60								
Maximum Torsional Backlash	[arc-min]	--	≤ 7								
Noise Level	dB [A]	*13	≤ 85								
Protection Class	--	*14	IP54 (IP65)								
Ambient Temperature	[°C]	--	0-40								
Permitted Housing Temperature	[°C]	--	90								
Weight	[kg]	*15	20.7								

*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

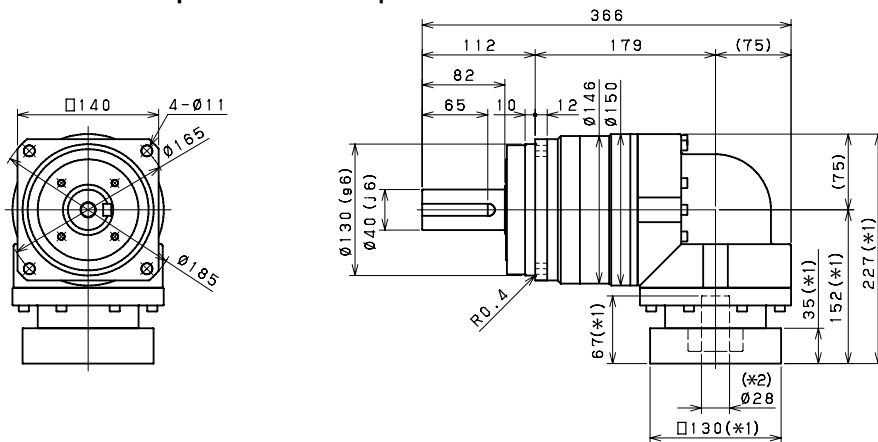
*14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details

*15) The weight may vary slightly between models

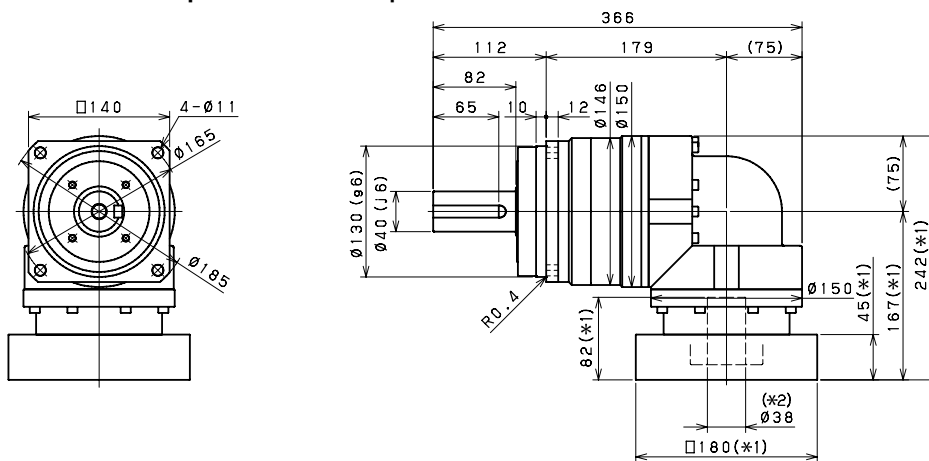
EVS SERIES Right-angle Planetary

EVS 140 2-Stage Dimensions

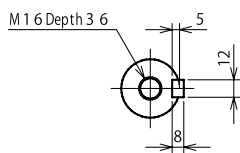
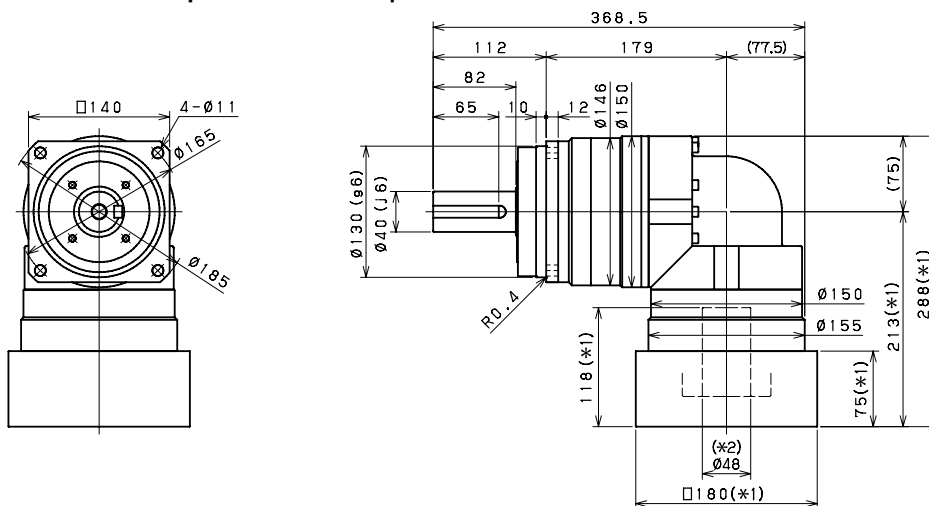
Input bore size $\leq \varnothing 28$ mm



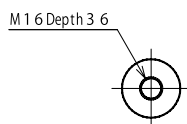
Input bore size $\leq \varnothing 38$ mm



Input bore size $\leq \varnothing 48$ mm



Keyed shaft



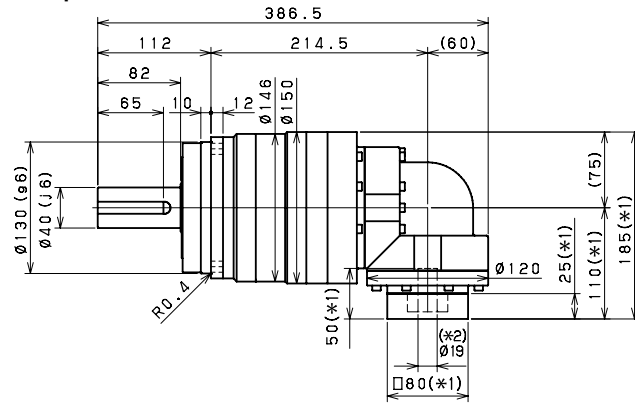
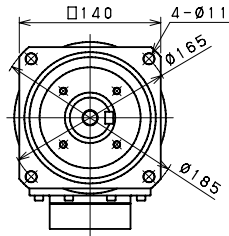
Smooth shaft

*1) Length will vary depending on motor

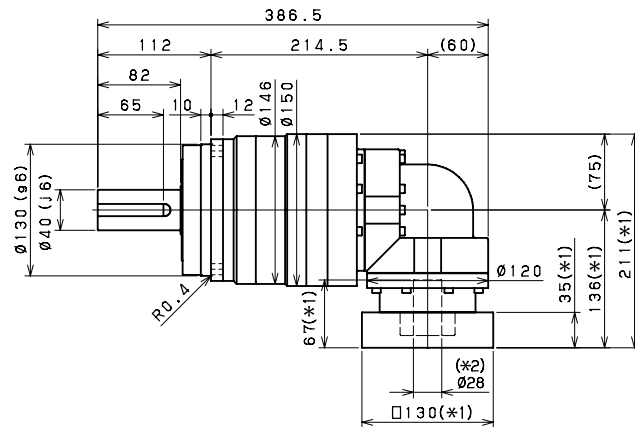
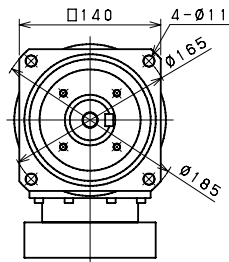
*2) Bushing will be inserted to adapt to motor shaft

EVS 140 3-Stage Dimensions

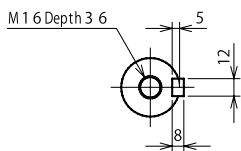
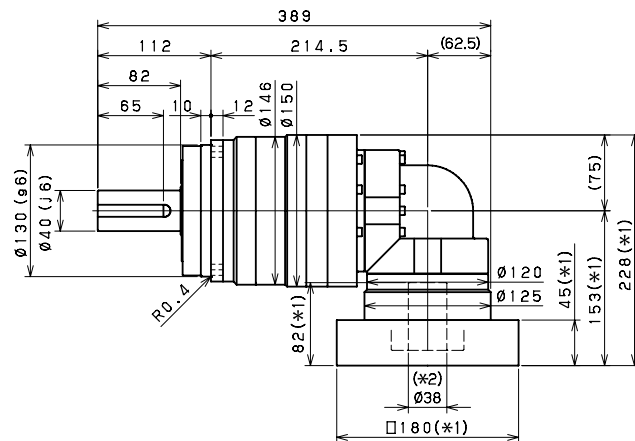
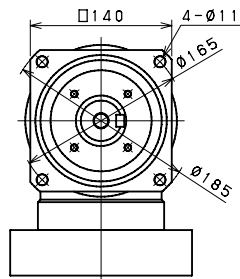
Input bore size $\leq \varnothing 19$ mm



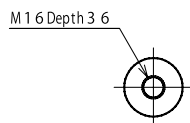
Input bore size $\leq \varnothing 28$ mm



Input bore size $\leq \varnothing 38$ mm



Keyed shaft



Smooth shaft

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

EVS SERIES Right-angle Planetary

EVS 180 2-Stage Specifications

Frame Size	180									
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 ($\leq \varnothing 38$)	[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									
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
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										
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 (≤Ø 28)	[kgcm ²]	--	10.76	10.19	10.17	10.16	10.15	10.14	10.14		
Moment of Inertia (≤Ø 38)	[kgcm ²]	--	19.54	18.98	18.96	18.94	18.94	18.93	18.93		
Moment of Inertia (≤Ø 48)	[kgcm ²]	--	24.36	23.80	23.78	23.77	23.76	23.75	23.75		
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

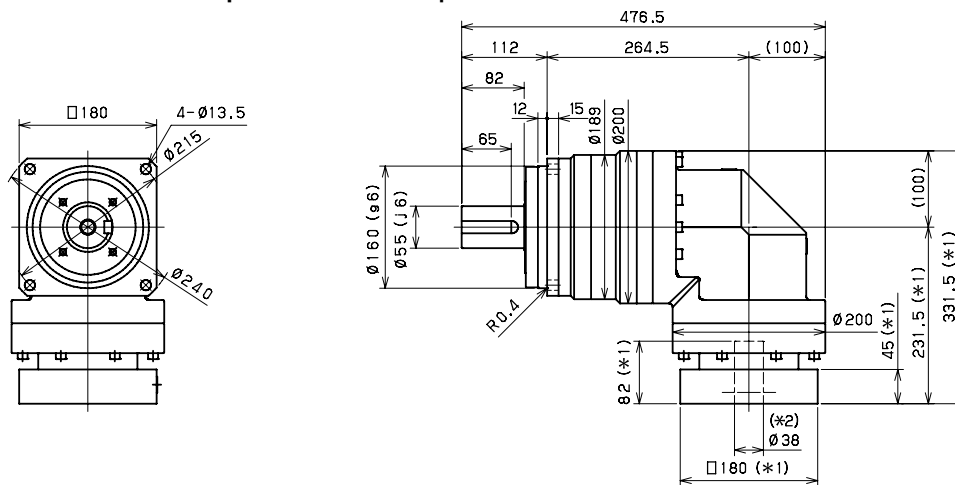
*14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details

*15) The weight may vary slightly between models

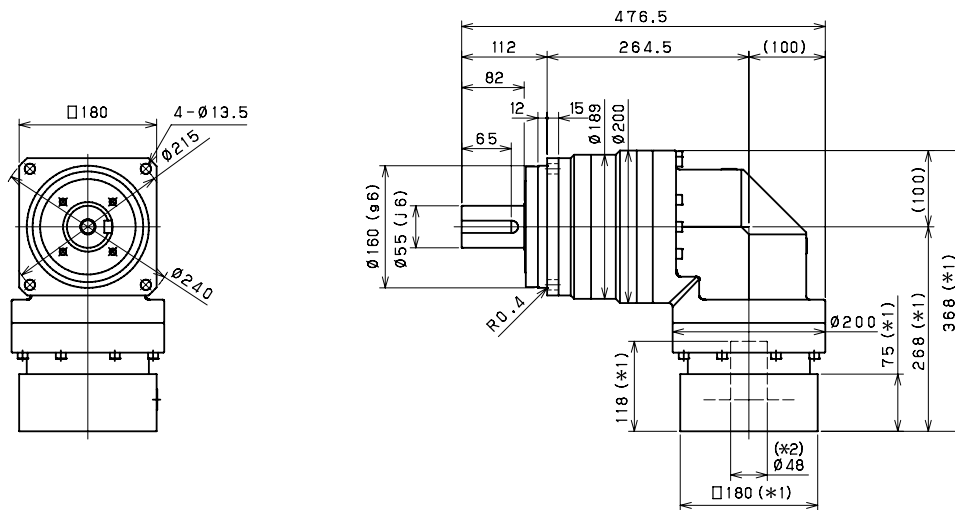
EVS SERIES Right-angle Planetary

EVS 180 2-Stage Dimensions

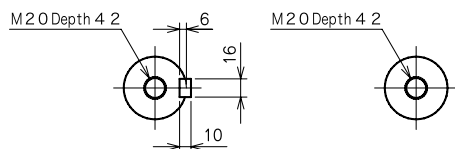
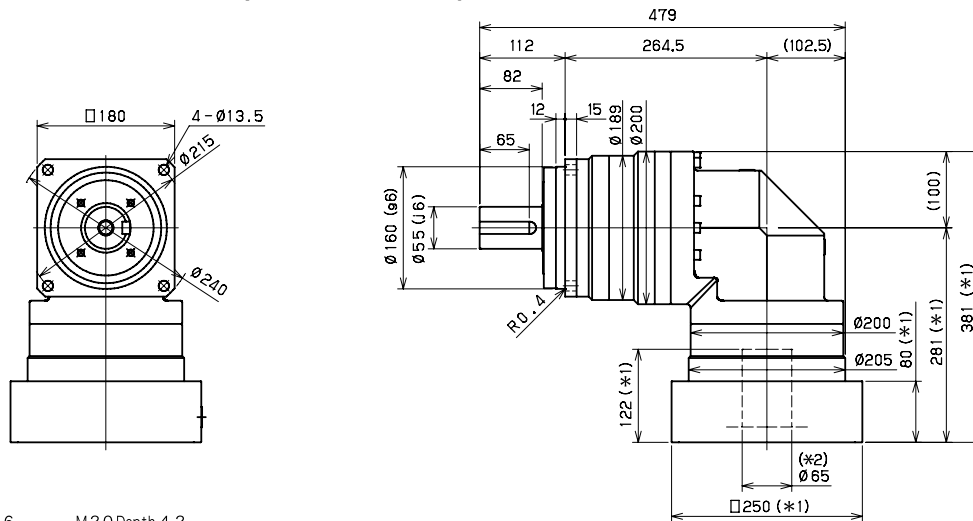
Input bore size $\cong \varnothing 38$ mm



Input bore size $\cong \varnothing 48$ mm



Input bore size $\cong \varnothing 65$ mm



Keyed shaft

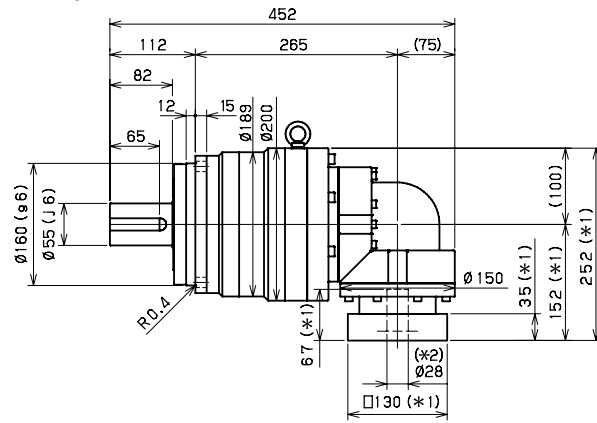
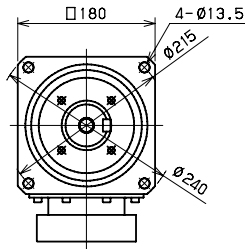
Smooth shaft

*1) Length will vary depending on motor

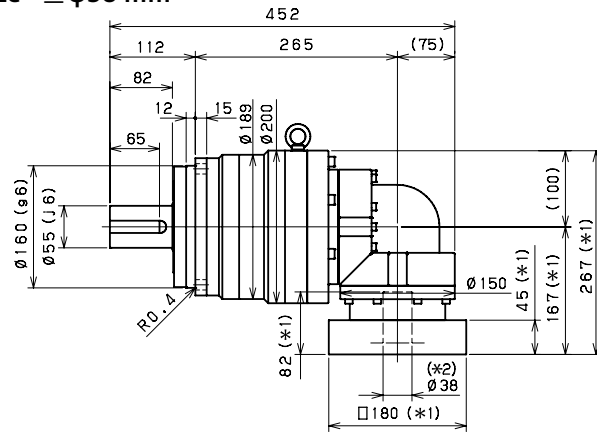
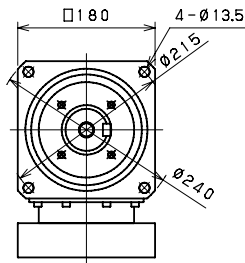
*2) Bushing will be inserted to adapt to motor shaft

EVS 180 3-Stage Dimensions

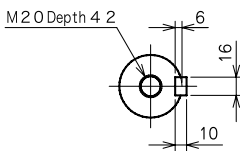
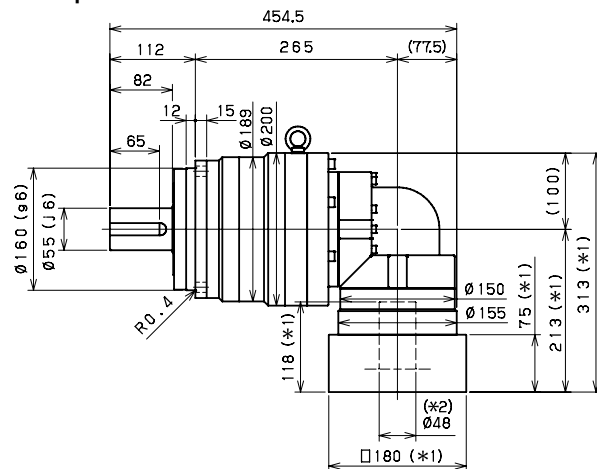
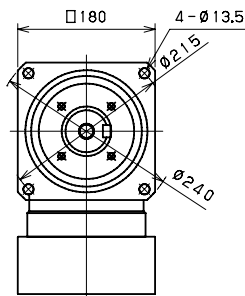
Input bore size $\leq \phi 28$ mm



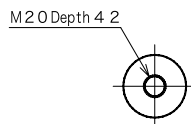
Input bore size $\leq \phi 38$ mm



Input bore size $\leq \phi 48$ mm



Keyed shaft



Smooth shaft

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

EVS SERIES Right-angle Planetary

EVS 210 2-Stage Specifications

Frame Size	210									
Ratio	Units	Note	3	4	5	6	7	8	9	10
Nominal Output Torque	[Nm]	*1	575	765	960	1150	1200	1200	800	800
Maximum Acceleration Torque	[Nm]	*2	1015	1355	1695	1840	1840	1760	1520	1280
Emergency Stop Torque	[Nm]	*3	2500	3300	4000	4500	4500	4500	3600	3600
Nominal Input Speed	[rpm]	*4	1000							
Maximum Input Speed	[rpm]	*5	2000							
No Load Running Torque	[Nm]	*6	14.5							
Permitted Radial Load	[N]	*7	17000	18000	20000	21000	22000	23000	24000	24000
Permitted Axial Load	[N]	*8	22000	22000	22000	22000	22000	22000	22000	22000
Maximum Radial Load	[N]	*9	24000							
Maximum Axial Load	[N]	*10	22000							
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	149.7	123.8	113.9	108.5	105.0	103.0	101.7	101.1
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	224.9	199.0	189.1	183.7	180.3	178.2	176.9	176.3
Efficiency	[%]	*11	93							
Torsional Rigidity	[Nm/arcmin]	*12	400							
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	71							

EVS 210 3-Stage Specifications

Frame Size	210									
Ratio	Units	Note	15	16	20	25	28	30	35	40
Nominal Output Torque	[Nm]	*1	800	1200	1200	1200	1200	800	1200	1200
Maximum Acceleration Torque	[Nm]	*2	1280	1840	1840	1840	1840	1280	1840	1840
Emergency Stop Torque	[Nm]	*3	3600	4500	4500	4500	4500	3600	4500	4500
Nominal Input Speed	[rpm]	*4	1000							
Maximum Input Speed	[rpm]	*5	2000							
No Load Running Torque	[Nm]	*6	10.2							
Permitted Radial Load	[N]	*7	24000	24000	24000	24000	24000	24000	24000	24000
Permitted Axial Load	[N]	*8	22000	22000	22000	22000	22000	22000	22000	22000
Maximum Radial Load	[N]	*9	24000							
Maximum Axial Load	[N]	*10	22000							
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	36.39	37.30	35.79	35.49	36.41	34.41	35.22	34.26
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	66.21	67.12	65.61	65.31	66.23	64.23	65.04	64.08
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arcmin]	*12	400							
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	73							

EVS 210 3-Stage Specifications

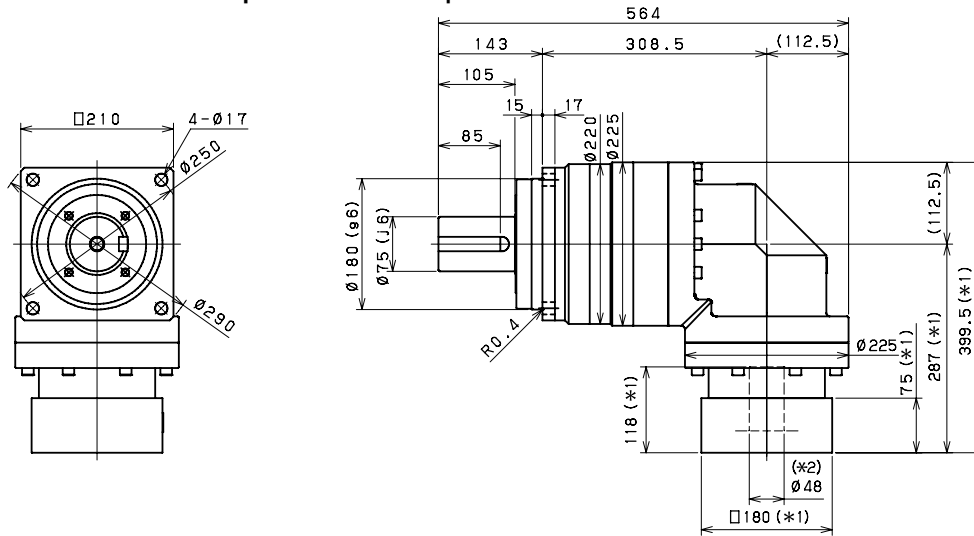
Frame Size	210										
Ratio	Units	Note	45	50	60	70	80	90	100		
Nominal Output Torque	[Nm]	*1	800	1200	1200	1200	1200	800	800		
Maximum Acceleration Torque	[Nm]	*2	1040	1840	1840	1840	1440	1040	960		
Emergency Stop Torque	[Nm]	*3	3600	4500	4500	4500	4500	3600	3600		
Nominal Input Speed	[rpm]	*4	1000								
Maximum Input Speed	[rpm]	*5	2000								
No Load Running Torque	[Nm]	*6	10.2								
Permitted Radial Load	[N]	*7	24000	24000	24000	24000	24000	24000	24000		
Permitted Axial Load	[N]	*8	22000	22000	22000	22000	22000	22000	22000		
Maximum Radial Load	[N]	*9	24000								
Maximum Axial Load	[N]	*10	22000								
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	35.11	34.18	34.14	34.12	34.10	34.09	34.08		
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	64.92	64.00	63.96	63.93	63.92	63.90	63.90		
Efficiency	[%]	*11	88								
Torsional Rigidity	[Nm/arcmin]	*12	400								
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	73								

- *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

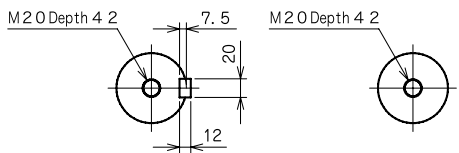
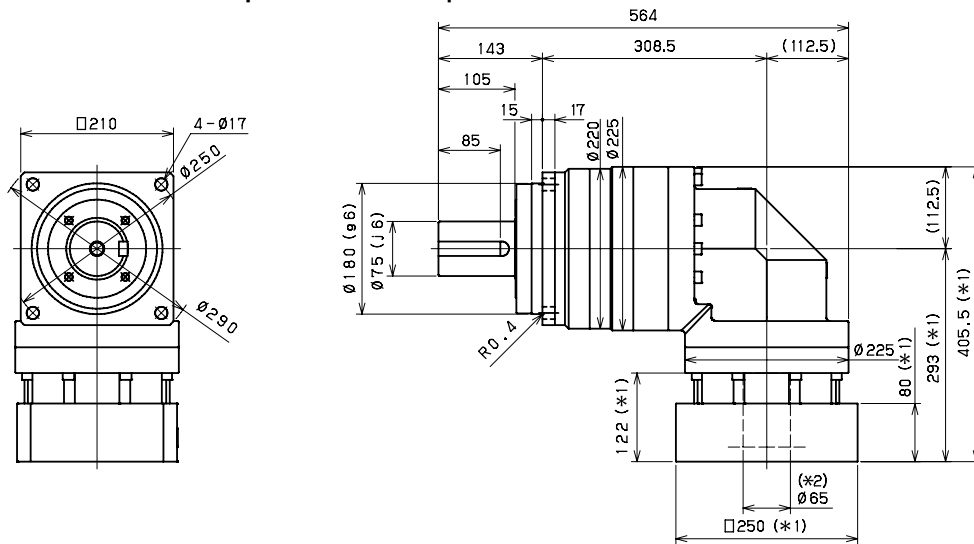
EVS SERIES Right-angle Planetary

EVS 210 2-Stage Dimensions

Input bore size $\leq \phi 48$ mm



Input bore size $\leq \phi 65$ mm



Keyed shaft

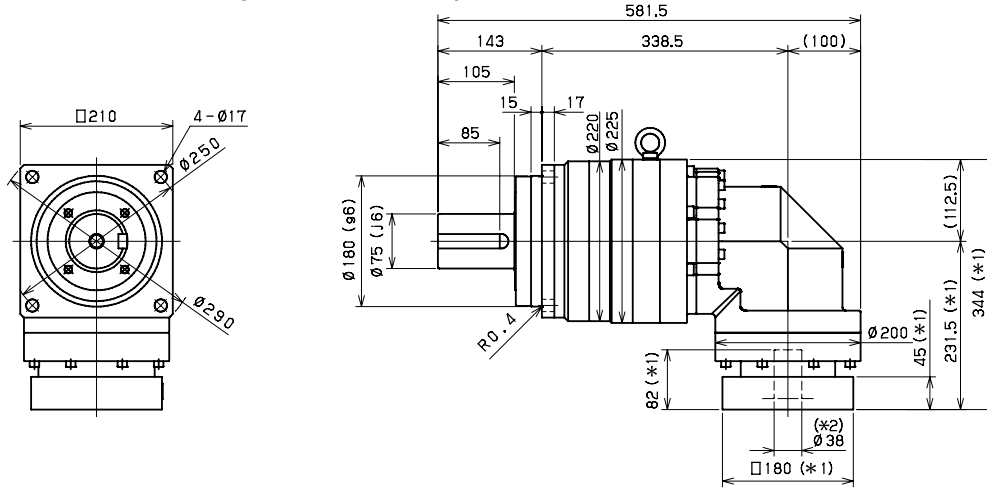
Smooth shaft

*1) Length will vary depending on motor

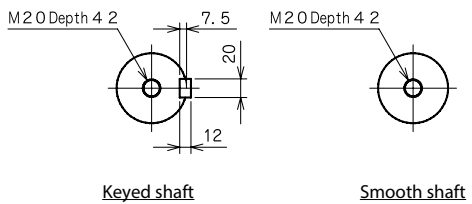
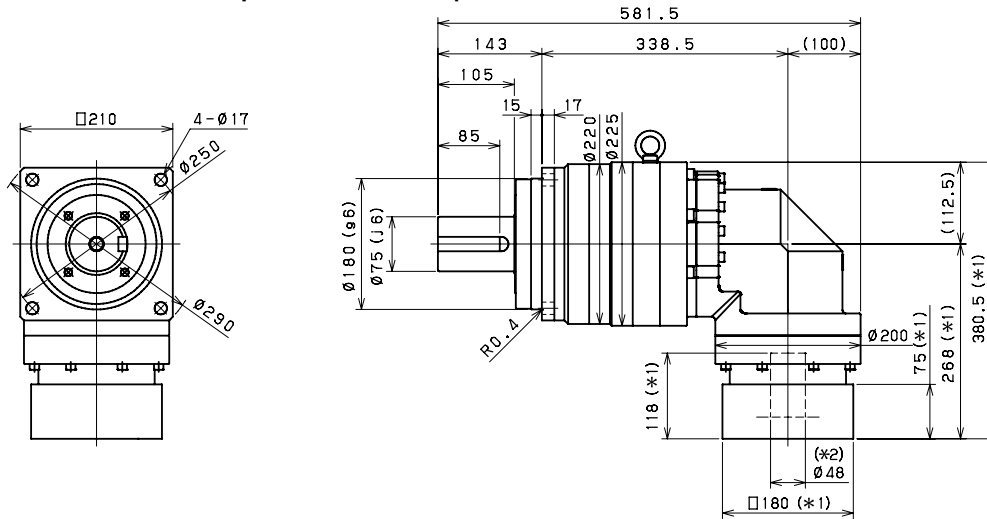
*2) Bushing will be inserted to adapt to motor shaft

EVS 210 3-Stage Dimensions

Input bore size $\leq \phi 38$ mm



Input bore size $\leq \phi 48$ mm



- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

EVS SERIES Right-angle Planetary

EVS 240 2-Stage Specifications

Frame Size	240									
Ratio	Units	Note	3	4	5	6	7	8	9	10
Nominal Output Torque	[Nm]	*1	1005	1340	1680	1920	1920	1920	1280	1280
Maximum Acceleration Torque	[Nm]	*2	2000	2960	2960	2960	2960	2880	2400	2080
Emergency Stop Torque	[Nm]	*3	4000	5400	6500	7200	7200	7200	5400	5400
Nominal Input Speed	[rpm]	*4	1000							
Maximum Input Speed	[rpm]	*5	2000							
No Load Running Torque	[Nm]	*6	25.3							
Permitted Radial Load	[N]	*7	21000	22000	24000	25000	26000	28000	29000	29000
Permitted Axial Load	[N]	*8	27000	27000	27000	27000	27000	27000	27000	27000
Maximum Radial Load	[N]	*9	30000							
Maximum Axial Load	[N]	*10	27000							
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	217.5	156.7	134.5	122.4	112.9	108.3	105.5	104.0
Efficiency	[%]	*11	93							
Torsional Rigidity	[Nm/arcmin]	*12	550							
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	122							

EVS 240 3-Stage Specifications

Frame Size	240									
Ratio	Units	Note	15	16	20	25	28	30	35	40
Nominal Output Torque	[Nm]	*1	1280	1920	1920	1920	1920	1280	1920	1920
Maximum Acceleration Torque	[Nm]	*2	2000	2960	2960	2960	2960	2000	2960	2960
Emergency Stop Torque	[Nm]	*3	5400	7200	7200	7200	7200	5400	7200	7200
Nominal Input Speed	[rpm]	*4	1000							
Maximum Input Speed	[rpm]	*5	2000							
No Load Running Torque	[Nm]	*6	16.4							
Permitted Radial Load	[N]	*7	30000	30000	30000	30000	30000	30000	30000	30000
Permitted Axial Load	[N]	*8	27000	27000	27000	27000	27000	27000	27000	27000
Maximum Radial Load	[N]	*9	30000							
Maximum Axial Load	[N]	*10	27000							
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	40.47	42.59	39.21	38.59	40.73	35.09	38.02	34.78
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arcmin]	*12	550							
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	113							

EVS 240 3-Stage Specifications

Frame Size	240										
Ratio	Units	Note	45	50	60	70	80	90	100		
Nominal Output Torque	[Nm]	*1	1280	1920	1920	1920	1920	1280	1280		
Maximum Acceleration Torque	[Nm]	*2	1680	2960	2960	2960	2160	1680	1440		
Emergency Stop Torque	[Nm]	*3	5400	7200	7200	7200	7200	5400	5400		
Nominal Input Speed	[rpm]	*4	1000								
Maximum Input Speed	[rpm]	*5	2000								
No Load Running Torque	[Nm]	*6	16.4								
Permitted Radial Load	[N]	*7	30000	30000	30000	30000	30000	30000	30000		
Permitted Axial Load	[N]	*8	27000	27000	27000	27000	27000	27000	27000		
Maximum Radial Load	[N]	*9	30000								
Maximum Axial Load	[N]	*10	27000								
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	37.78	34.62	34.53	34.48	34.45	34.42	34.41		
Efficiency	[%]	*11	88								
Torsional Rigidity	[Nm/arcmin]	*12	550								
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	113								

*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

