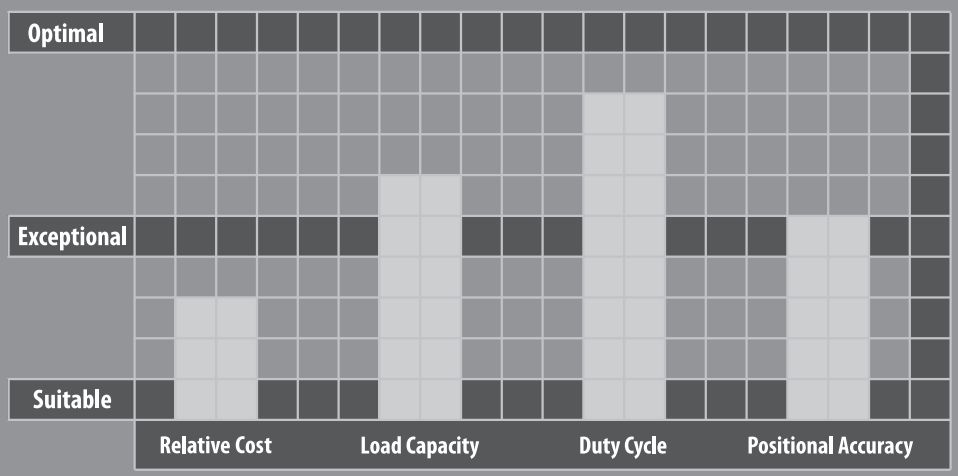
EVT SERIES

The EVT combines the compactness and performance of the VRT series with a right angle bevel system to provide the ultimate space saving solution for highly dynamic applications. The ISO flange interface allows for easy mounting of index tables, pinions, timing belt pulleys and other mechanical components without the need for a coupling.

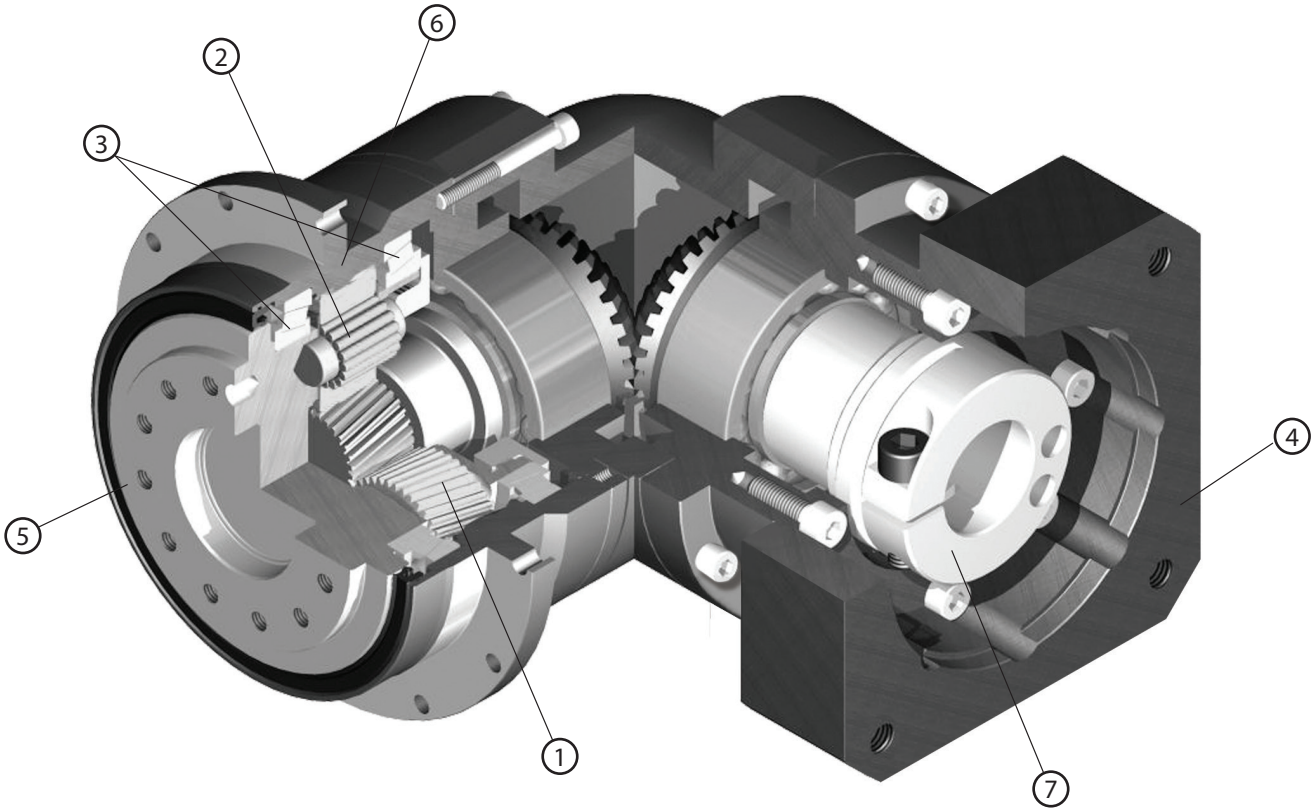
The EVT is advantageous in applications requiring high accuracy, torsional stiffness and moment loading. Oversized dual tapered roller bearings allow the EVT to handle larger radial and thrust forces found in applications within the machine tool, aerospace or robotics industries. Available ratios range from 3:1 to 100:1—a total of 20 ratio configurations, giving machine builders more design flexibility than ever before.



EVT SERIES

- The most compact and robust option for machine builders
- ISO robotics industry mounting interface allowing superior flexibility in mounting of pinions, pulleys and turntables
- Best-in-class backlash (≤4 arc-min)
- Space-saving design, when minimal envelope is required
- Exceptional torsional rigidity for high positional accuracy needs
- 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

EVT Series Features



1. Carburized helical gears with proprietary secondary finishing process for higher accuracy and smooth, quite operation
2. Uncaged needle roller bearings allow for higher rigidity and torque
3. One piece output shaft and planet carrier with two robust tapered bearings straddling the planet gears. Higher radial/axial load capacity, stiffness, torque density and safety factor, with guaranteed alignment of gearing
4. Optimized mounting system with active centering on motor pilot diameter guarantees alignment of motor. Motor can be installed in any orientation
5. ISO output flange allows easy mounting to indexing tables, pinions, timing belt pulleys and other mechanical components
6. Ring gear machined directly into the housing, not welded or pressed in. Greater concentricity and elimination of speed fluctuation
7. True concentric motor shaft clamping connection, optimized for your specific motor. Reduced inertia for dynamic performance and balanced for high speed operation

EVT Series Model Code

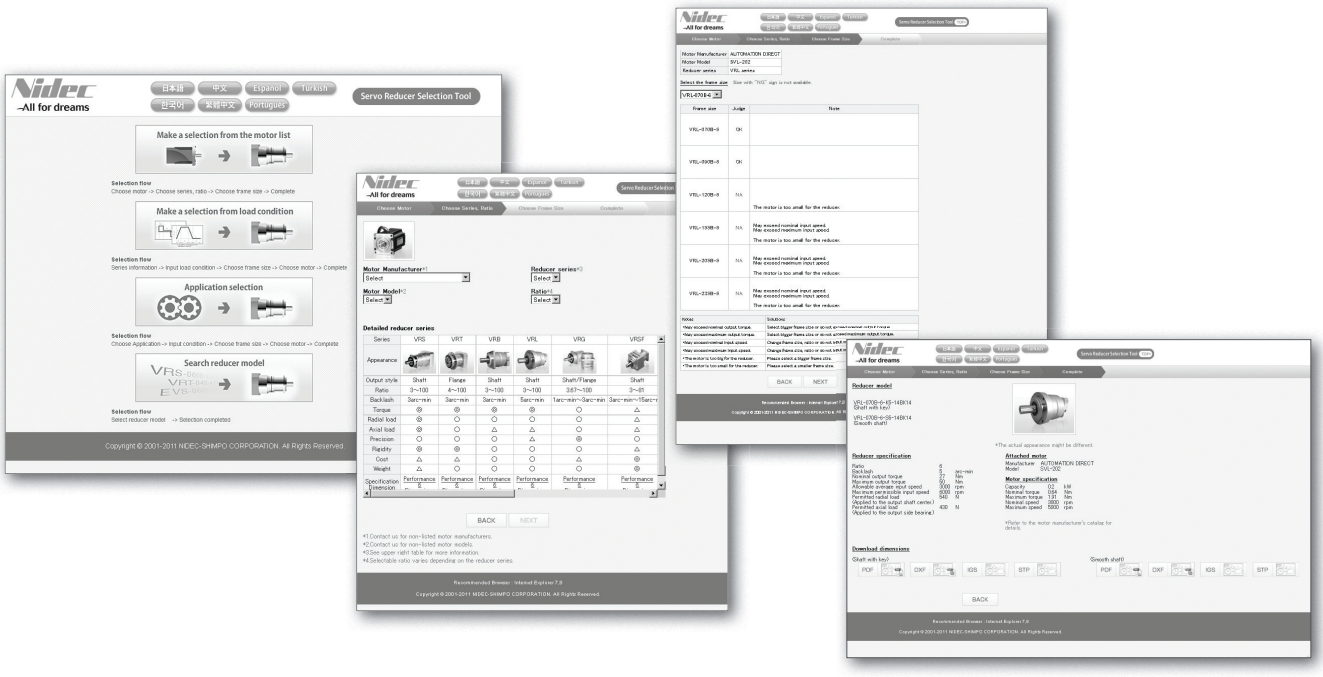
EVT – 090 B – 25 – F 4 – 14BK14

- 14BK14 — Motor mounting code (*1)
- 4 — Backlash: ≤4 -9 arc-min
- F — Output mounting style: F: Flanged
- 25 — Ratio: 2-Stage: 4, 5, 6, 7, 8, 9, 10; 3-Stage: 15, 20, 25, 28, 35, 40, 45, 50, 60, 70, 80, 90, 100
- B — Design version
- 090 — Frame size: 064, 090, 110, 140, 200, 255
- EVT — Series

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

EVT

Contact us for additional information or refer to our online gearbox selection tool.
Selection tool https://www.nidec-drivetechnology.co.jp/selection/all/



EVT 064 2-Stage Specifications

Frame Size			**064**						
Ratio	Unit	Note	4	5	6	7	8	9	10
Nominal Output Torque	[Nm]	*1	16	22	24	24	24	19	19
Maximum Acceleration Torque	[Nm]	*2	38	48	54	54	54	38	38
Maximum Torque	[Nm]	*3	45	56	63	63	61	45	45
Emergency Stop Torque	[Nm]	*4	65	80	90	90	90	65	65
Nominal Input Speed	[rpm]	*5	3300						
Maximum Input Speed	[rpm]	*6	6000						
No Load Running Torque	[Nm]	*7	0.33						
Maximum Radial Load	[N]	*8	1500						
Maximum Axial Load	[N]	*9	750						
Maximum Tilting Moment	[Nm]	*10	58						
Moment of Inertia (≤ Ø 8)	[kgcm2]	--	0.305	0.273	0.256	0.246	0.240	0.236	0.233
Moment of Inertia (≤ Ø 14)	[kgcm2]	--	0.379	0.348	0.331	0.321	0.315	0.311	0.308
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	0.569	0.537	0.521	0.510	0.504	0.500	0.497
Efficiency	[%]	*11	93						
Torsional Rigidity	[Nm/arcmin]	*12	7.5						
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	1.9						

EVT 064 3-Stage Specifications

Frame Size			**064**						
Ratio	Unit	Note	16	20	25	28	35	40	45
Nominal Output Torque	[Nm]	*1	26	26	28	28	28	28	19
Maximum Acceleration Torque	[Nm]	*2	54	54	54	54	54	54	38
Maximum Torque	[Nm]	*3	54	54	54	54	54	54	38
Emergency Stop Torque	[Nm]	*4	90	90	90	90	90	90	65
Nominal Input Speed	[rpm]	*5	3800						
Maximum Input Speed	[rpm]	*6	6000						
No Load Running Torque	[Nm]	*7	0.2						
Maximum Radial Load	[N]	*8	1500						
Maximum Axial Load	[N]	*9	750						
Maximum Tilting Moment	[Nm]	*10	58						
Moment of Inertia (≤ Ø 8)	[kgcm2]	--	0.082	0.073	0.072	0.078	0.071	0.062	0.070
Moment of Inertia (≤ Ø 14)	[kgcm2]	--	0.126	0.118	0.116	0.123	0.115	0.106	0.115
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	88						
Torsional Rigidity	[Nm/arcmin]	*12	7.5						
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	1.6						

EVT 064 3-Stage Specifications

Frame Size	**064**							
Ratio	Unit	Note	50	60	70	80	90	100
Nominal Output Torque	[Nm]	*1	28	28	28	28	19	19
Maximum Acceleration Torque	[Nm]	*2	54	54	54	54	38	38
Maximum Torque	[Nm]	*3	54	54	54	54	38	38
Emergency Stop Torque	[Nm]	*4	90	90	90	90	65	65
Nominal Input Speed	[rpm]	*5	3800					
Maximum Input Speed	[rpm]	*6	6000					
No Load Running Torque	[Nm]	*7	0.2					
Maximum Radial Load	[N]	*8	1500					
Maximum Axial Load	[N]	*9	750					
Maximum Tilting Moment	[Nm]	*10	58					
Moment of Inertia (≤ Ø 8)	[kgcm2]	--	0.061	0.061	0.061	0.061	0.061	0.061
Moment of Inertia (≤ Ø 14)	[kgcm2]	--	0.106	0.106	0.106	0.106	0.106	0.105
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	--	--	--	--	--	--
Efficiency	[%]	*11	88					
Torsional Rigidity	[Nm/arcmin]	*12	7.5					
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	1.6					

*1) At nominal input speed, service life is 20,000 hours

*2) The maximum torque when starting or stopping operation. Apply Cycle Factor $\mathbf{f_0}$, 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 moment is the maximum load at output flange surface

*11) The efficiency at the nominal output torque rating

*12) This does not include lost motion

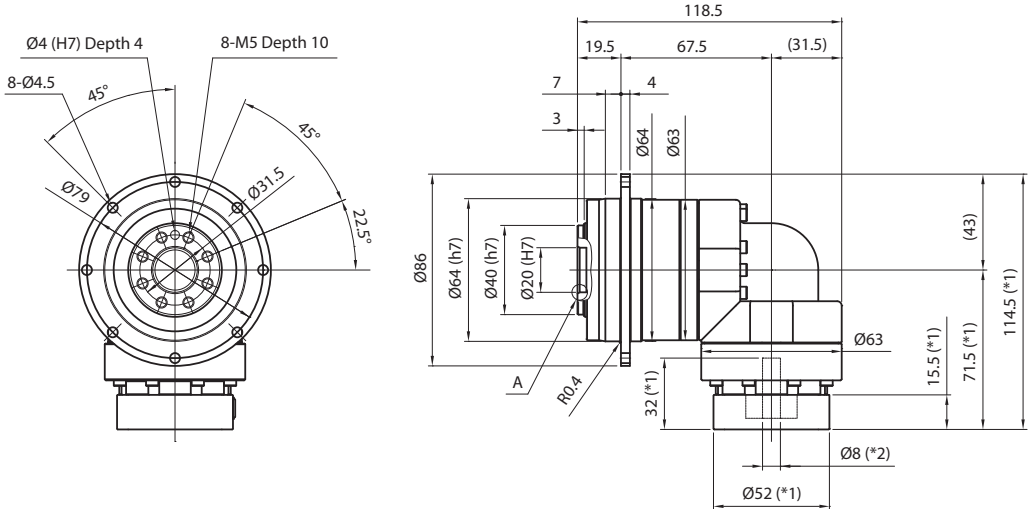
*13) Contact Nidec Drive Technology for the testing conditions and environment

*14) Various wash-down options are available. Contact Nidec Drive Technology for more details

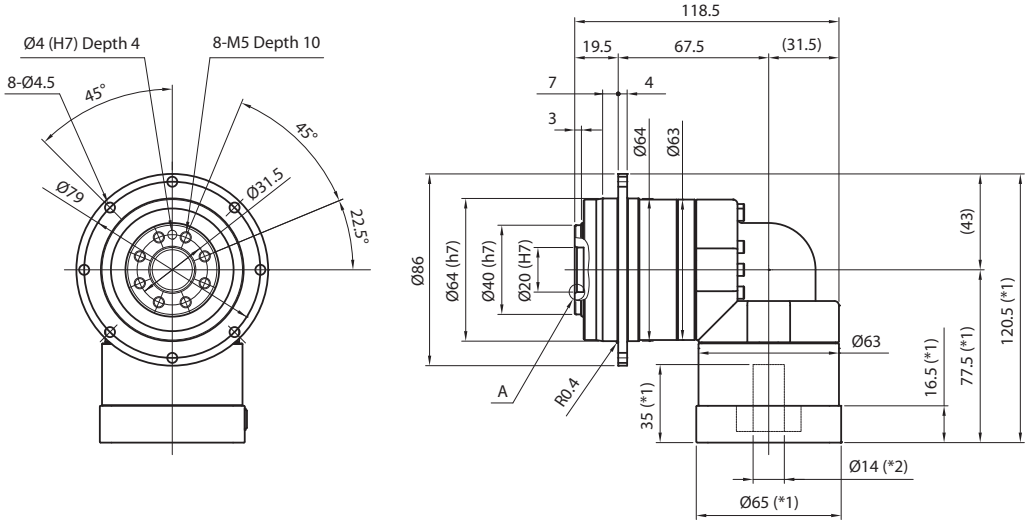
*15) Weight may vary slightly between models

EVT 064 2-Stage Dimensions

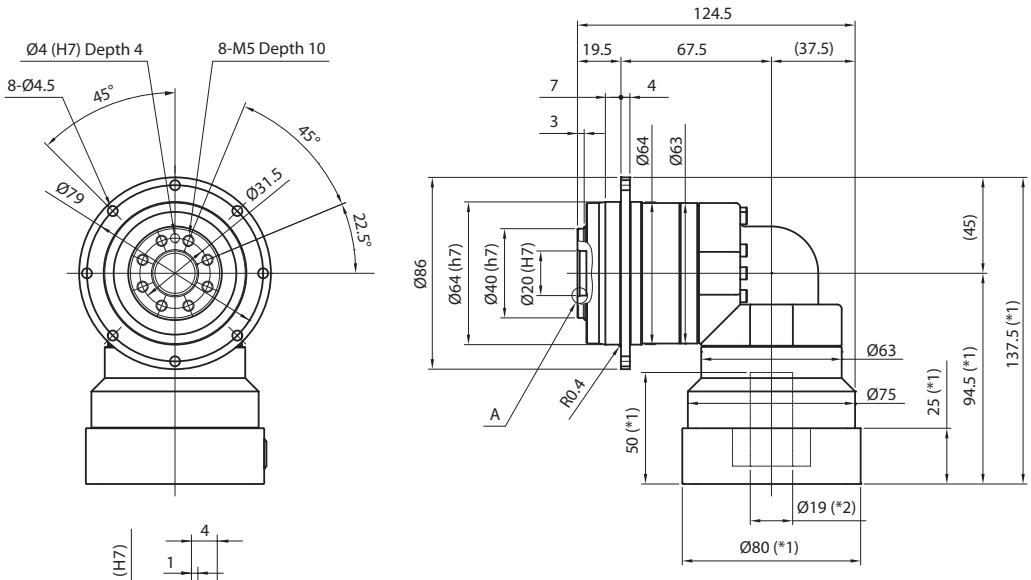
Input bore size ≤ø8mm

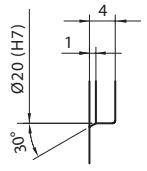


Input bore size ≤ø14mm



Input bore size ≤ø19mm





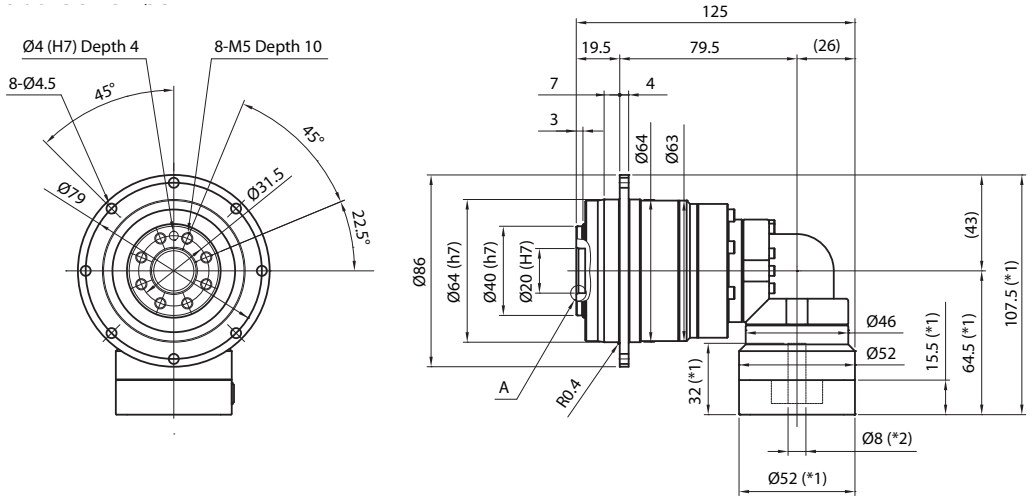
Enlarged detail A

*1) Length will vary depending on motor

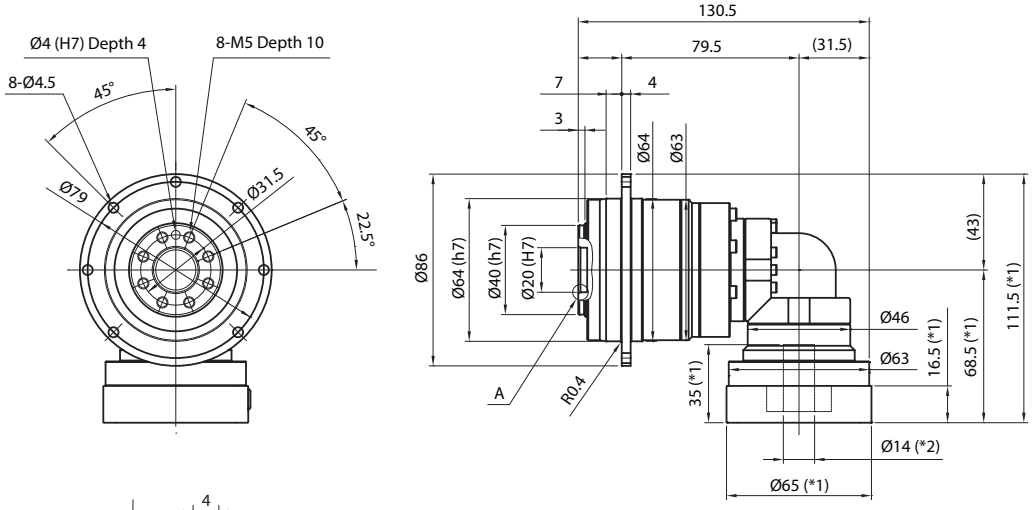
*2) Bushing will be inserted to adapt to motor shaft

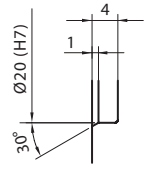
EVT 064 3-Stage Dimensions

Input bore size ≤ø8mm



Input bore size ≤ø14mm





Enlarged detail A

*1) Length will vary depending on motor

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

EVT 090 2-Stage Specifications

Frame Size			**090**						
Ratio	Unit	Note	4	5	6	7	8	9	10
Nominal Output Torque	[Nm]	*1	61	67	67	67	74	51	51
Maximum Acceleration Torque	[Nm]	*2	105	105	105	105	105	78	78
Maximum Torque	[Nm]	*3	121	121	119	119	117	93	93
Emergency Stop Torque	[Nm]	*4	170	220	220	220	220	170	170
Nominal Input Speed	[rpm]	*5	3000						
Maximum Input Speed	[rpm]	*6	6000						
No Load Running Torque	[Nm]	*7	1.13						
Maximum Radial Load	[N]	*8	3300						
Maximum Axial Load	[N]	*9	1700						
Maximum Tilting Moment	[Nm]	*10	170						
Moment of Inertia (≤ Ø 8)	[kgcm2]	--	--	--	--	--	--	--	--
Moment of Inertia (≤ Ø 14)	[kgcm2]	--	2.17	1.98	1.88	1.81	1.78	1.75	1.73
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	2.50	2.31	2.21	2.14	2.10	2.08	2.06
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	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]	--	≤ 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						

EVT 090 3-Stage Specifications

Frame Size			**090**						
Ratio	Unit	Note	16	20	25	28	35	40	45
Nominal Output Torque	[Nm]	*1	66	68	72	78	73	78	47
Maximum Acceleration Torque	[Nm]	*2	128	128	128	128	128	128	78
Maximum Torque	[Nm]	*3	128	128	128	128	128	128	78
Emergency Stop Torque	[Nm]	*4	220	220	220	220	220	220	170
Nominal Input Speed	[rpm]	*5	3300						
Maximum Input Speed	[rpm]	*6	6000						
No Load Running Torque	[Nm]	*7	0.55						
Maximum Radial Load	[N]	*8	3300						
Maximum Axial Load	[N]	*9	1700						
Maximum Tilting Moment	[Nm]	*10	170						
Moment of Inertia (≤ Ø 8)	[kgcm2]	--	0.40	0.34	0.33	0.38	0.32	0.25	0.32
Moment of Inertia (≤ Ø 14)	[kgcm2]	--	0.48	0.41	0.41	0.45	0.40	0.33	0.40
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	0.66	0.60	0.59	0.64	0.59	0.51	0.59
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	88						
Torsional Rigidity	[Nm/arcmin]	*12	22						
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	4.3						

EVT 090 3-Stage Specifications

Frame Size	**090**							
Ratio	Unit	Note	50	60	70	80	90	100
Nominal Output Torque	[Nm]	*1	73	73	73	78	52	52
Maximum Acceleration Torque	[Nm]	*2	128	128	128	128	78	78
Maximum Torque	[Nm]	*3	128	128	128	128	78	78
Emergency Stop Torque	[Nm]	*4	220	220	220	220	170	170
Nominal Input Speed	[rpm]	*5	3300					
Maximum Input Speed	[rpm]	*6	6000					
No Load Running Torque	[Nm]	*7	0.55					
Maximum Radial Load	[N]	*8	3300					
Maximum Axial Load	[N]	*9	1700					
Maximum Tilting Moment	[Nm]	*10	170					
Moment of Inertia (≤ Ø 8)	[kgcm2]	--	0.25	0.25	0.25	0.25	0.25	0.25
Moment of Inertia (≤ Ø 14)	[kgcm2]	--	0.32	0.32	0.32	0.32	0.32	0.32
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	0.51	0.51	0.51	0.51	0.51	0.51
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	--	--	--	--	--	--
Efficiency	[%]	*11	88					
Torsional Rigidity	[Nm/arcmin]	*12	22					
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	4.3					

*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 moment is the maximum load at output flange surface

*11) The efficiency at the nominal output torque rating

*12) This does not include lost motion

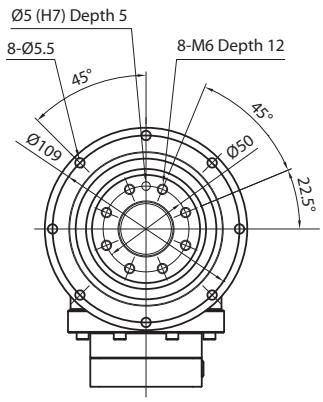
*13) Contact Nidec Drive Technology for the testing conditions and environment

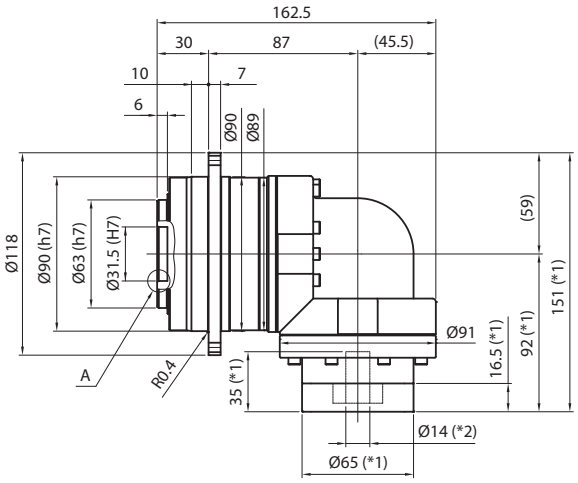
*14) Various wash-down options are available. Contact Nidec Drive Technology for more details

*15) Weight may vary slightly between models

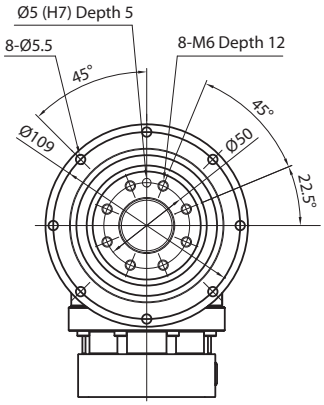
EVT 090 2-Stage Dimensions

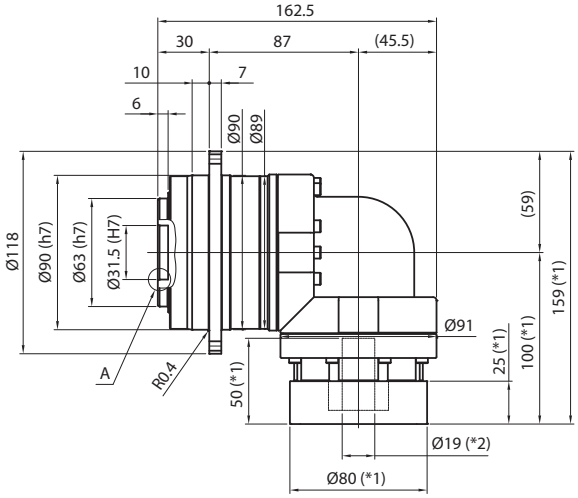
Input bore size ≤ø14mm



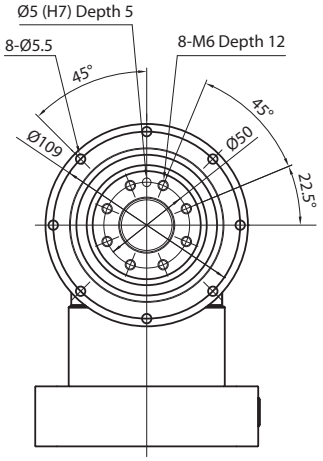


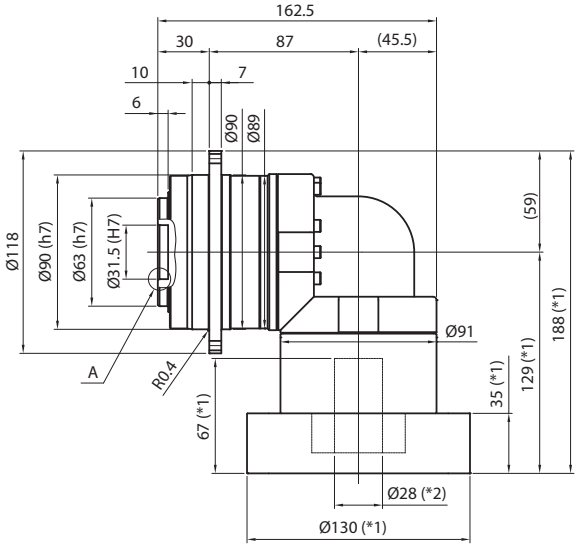
Input bore size ≤ø19mm

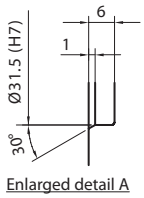




Input bore size ≤ø28mm







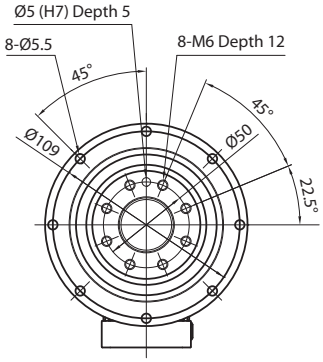
Enlarged detail A

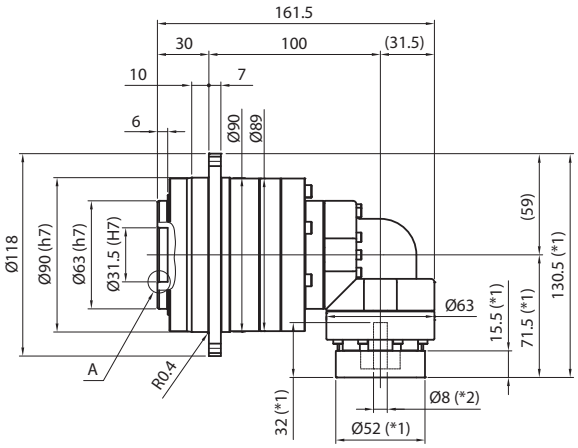
*1) Length will vary depending on motor

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

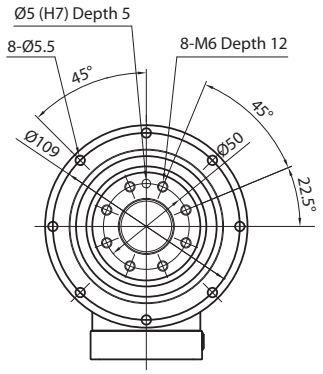
EVT 090 3-Stage Dimensions

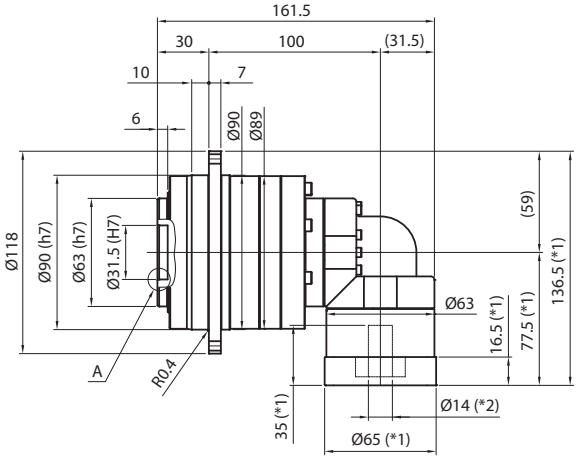
Input bore size ≤ø8mm



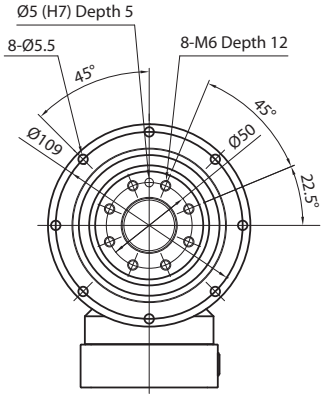


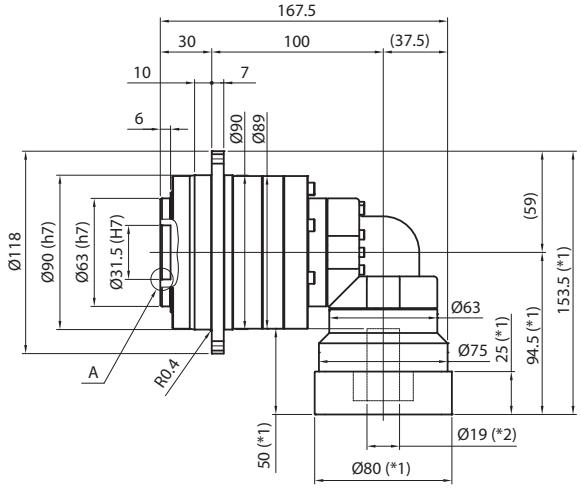
Input bore size ≤ø14mm

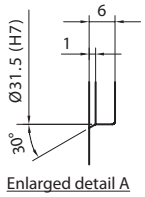




Input bore size ≤ø19mm







Enlarged detail A

*1) Length will vary depending on motor

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

EVT 110 2-Stage Specifications

Frame Size	**110**					
Ratio	Unit	Note	4	5	7	10
Nominal Output Torque	[Nm]	*1	108	123	154	128
Maximum Acceleration Torque	[Nm]	*2	227	272	340	240
Maximum Torque	[Nm]	*3	271	325	401	288
Emergency Stop Torque	[Nm]	*4	430	500	550	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	12000			
Maximum Axial Load	[N]	*9	8800			
Maximum Tilting Moment	[Nm]	*10	990			
Moment of Inertia (≤ Ø 14)	[kgcm2]	--	--	--	--	--
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	6.46	5.65	4.97	4.62
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	8.06	7.24	6.56	6.21
Moment of Inertia (≤ Ø 38)	[kgcm2]	--	15.13	14.31	13.63	13.28
Efficiency	[%]	*11	93			
Torsional Rigidity	[Nm/arcmin]	*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	9.5			

EVT 110 3-Stage Specifications

Frame Size	**110**					
Ratio	Unit	Note	16	20	25	28
Nominal Output Torque	[Nm]	*1	136	162	174	174
Maximum Acceleration Torque	[Nm]	*2	295	340	340	340
Maximum Torque	[Nm]	*3	295	340	340	340
Emergency Stop Torque	[Nm]	*4	550	550	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	12000			
Maximum Axial Load	[N]	*9	8800			
Maximum Tilting Moment	[Nm]	*10	990			
Moment of Inertia (≤ Ø 14)	[kgcm2]	--	2.52	2.24	2.20	2.42
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	2.85	2.57	2.53	2.75
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	4.98	4.69	4.66	4.88
Moment of Inertia (≤ Ø 38)	[kgcm2]	--	--	--	--	--
Efficiency	[%]	*11	88			
Torsional Rigidity	[Nm/arcmin]	*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	9			

EVT 110 3-Stage Specifications

Frame Size	**110**						
Ratio	Unit	Note	35	40	50	70	100
Nominal Output Torque	[Nm]	*1	174	172	174	174	132
Maximum Acceleration Torque	[Nm]	*2	340	340	340	340	240
Maximum Torque	[Nm]	*3	340	340	340	340	240
Emergency Stop Torque	[Nm]	*4	550	550	550	550	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	12000				
Maximum Axial Load	[N]	*9	8800				
Maximum Tilting Moment	[Nm]	*10	990				
Moment of Inertia (≤ Ø 14)	[kgcm2]	--	2.17	1.87	1.86	1.85	1.85
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	2.50	2.20	2.19	2.18	2.18
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	4.63	4.33	4.32	4.31	4.31
Moment of Inertia (≤ Ø 38)	[kgcm2]	--	--	--	--	--	--
Efficiency	[%]	*11	88				
Torsional Rigidity	[Nm/arcmin]	*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	9				

*1) At nominal input speed, service life is 20,000 hours

*2) The maximum torque when starting or stopping operation. Apply Cycle Factor $\mathbf{f_0}$, 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 moment is the maximum load at output flange surface

*11) The efficiency at the nominal output torque rating

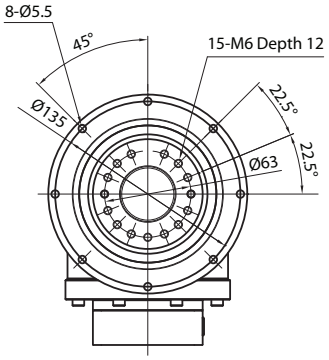
*12) This does not include lost motion

*13) Contact Nidec Drive Technology for the testing conditions and environment

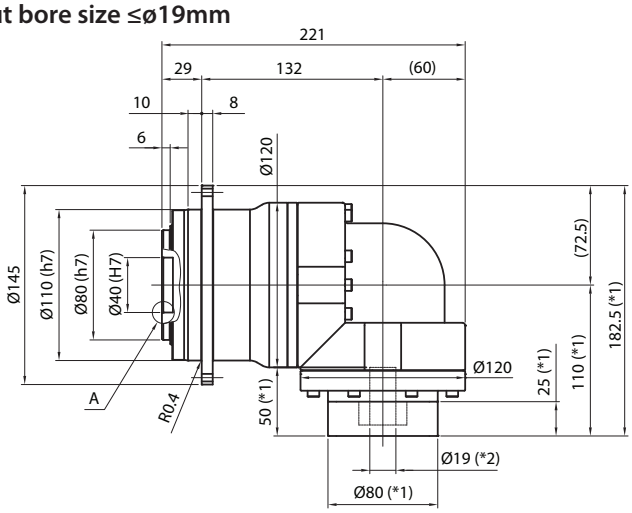
*14) Various wash-down options are available. Contact Nidec Drive Technology for more details

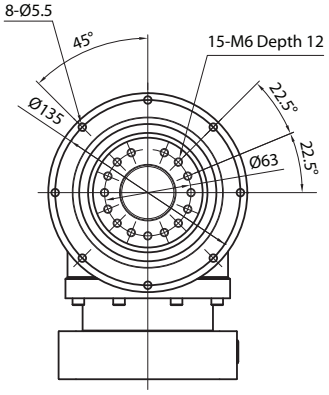
*15) Weight may vary slightly between models

EVT 110 2-Stage Dimensions

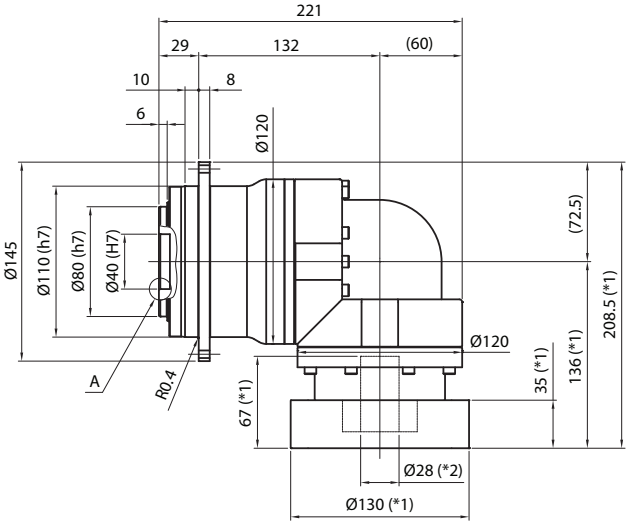


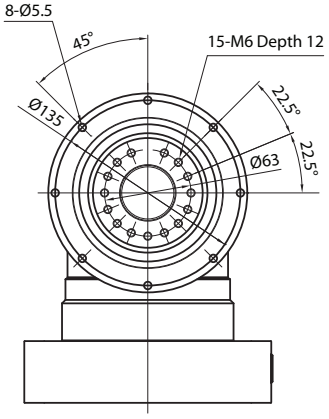
Input bore size ≤ø19mm



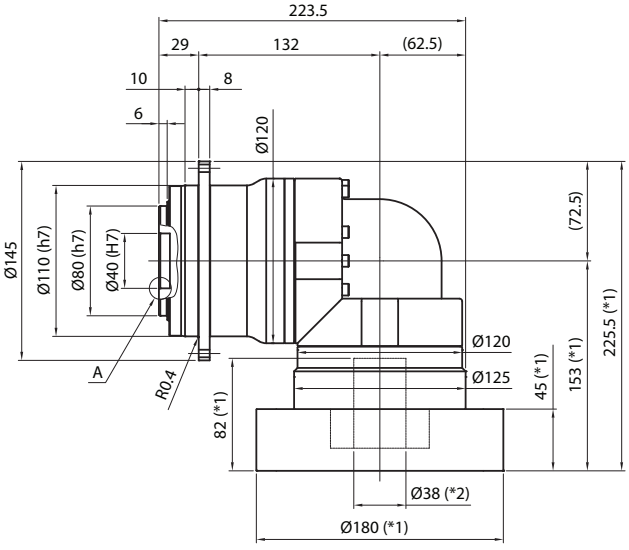


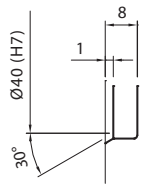
Input bore size ≤ø28mm





Input bore size ≤ø38mm





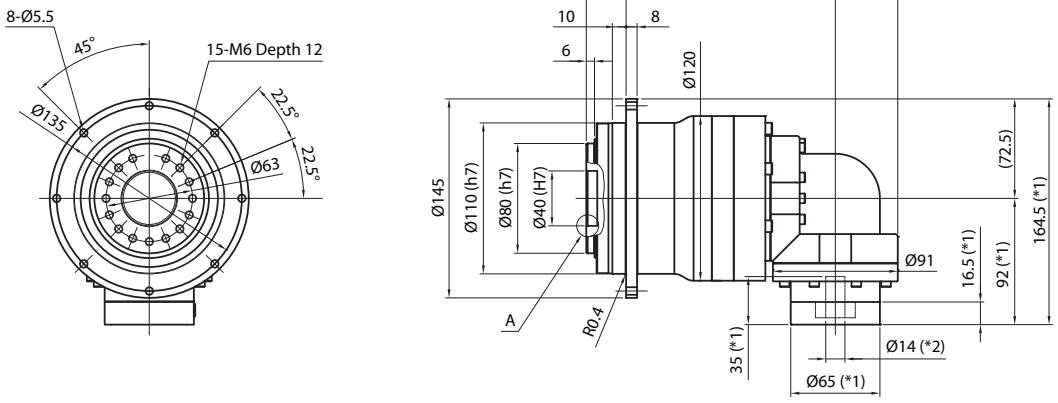
Enlarged detail A

*1) Length will vary depending on motor

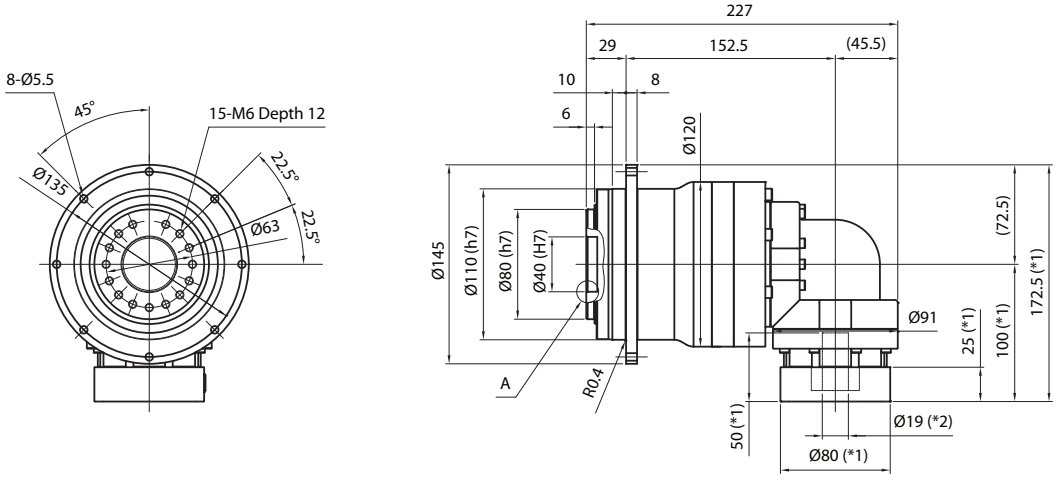
*2) Bushing will be inserted to adapt to motor shaft

EVT 110 3-Stage Dimensions

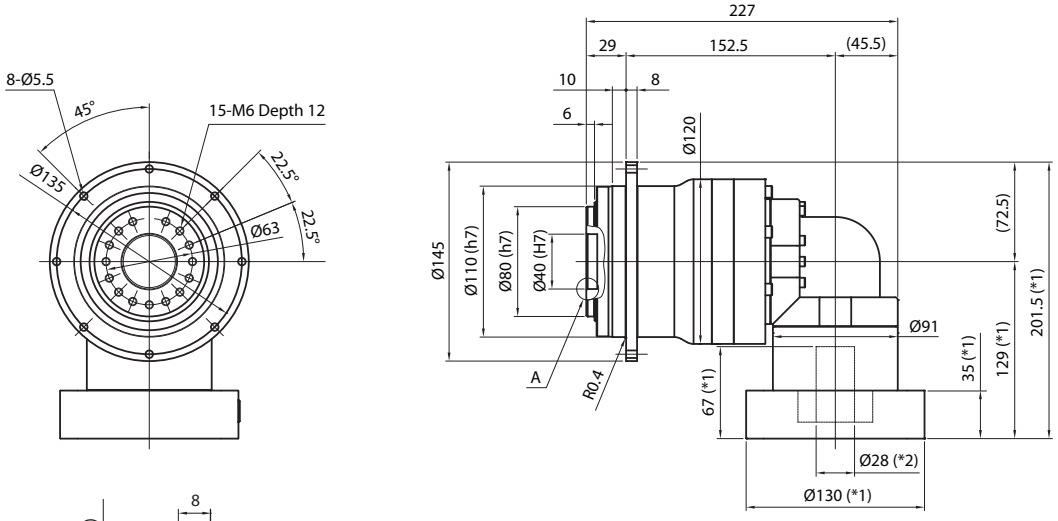
Input bore size ≤ø14mm

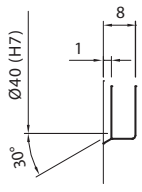


Input bore size ≤ø19mm



Input bore size ≤ø28mm





Enlarged detail A

*1) Length will vary depending on motor

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

EVT 140 2-Stage Specifications

Frame Size	**140**					
Ratio	Unit	Note	4	5	7	10
Nominal Output Torque	[Nm]	*1	181	205	307	233
Maximum Acceleration Torque	[Nm]	*2	389	458	687	480
Maximum Torque	[Nm]	*3	452	531	766	559
Emergency Stop Torque	[Nm]	*4	950	1100	1100	750
Nominal Input Speed	[rpm]	*5	2000			
Maximum Input Speed	[rpm]	*6	5000			
No Load Running Torque	[Nm]	*7	3.26			
Maximum Radial Load	[N]	*8	19000			
Maximum Axial Load	[N]	*9	14000			
Maximum Tilting Moment	[Nm]	*10	2000			
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	--	--	--	--
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	22.58	19.57	17.07	15.36
Moment of Inertia (≤ Ø 38)	[kgcm2]	--	26.96	23.94	21.45	19.73
Moment of Inertia (≤ Ø 48)	[kgcm2]	--	40.19	37.17	34.68	32.96
Efficiency	[%]	*11	93			
Torsional Rigidity	[Nm/arcmin]	*12	140			
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	17.4			

EVT 140 3-Stage Specifications

Frame Size	**140**					
Ratio	Unit	Note	16	20	25	28
Nominal Output Torque	[Nm]	*1	307	316	352	352
Maximum Acceleration Torque	[Nm]	*2	687	687	687	687
Maximum Torque	[Nm]	*3	687	687	687	687
Emergency Stop Torque	[Nm]	*4	1100	1100	1100	1100
Nominal Input Speed	[rpm]	*5	2300			
Maximum Input Speed	[rpm]	*6	5000			
No Load Running Torque	[Nm]	*7	2.56			
Maximum Radial Load	[N]	*8	19000			
Maximum Axial Load	[N]	*9	14000			
Maximum Tilting Moment	[Nm]	*10	2000			
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	7.24	6.21	6.09	6.89
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	8.83	7.80	7.69	8.48
Moment of Inertia (≤ Ø 38)	[kgcm2]	--	15.91	14.88	14.76	15.55
Moment of Inertia (≤ Ø 48)	[kgcm2]	--	--	--	--	--
Efficiency	[%]	*11	88			
Torsional Rigidity	[Nm/arcmin]	*12	140			
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	17.6			

EVT 140 3-Stage Specifications

Frame Size	**140**						
Ratio	Unit	Note	35	40	50	70	100
Nominal Output Torque	[Nm]	*1	352	337	352	352	240
Maximum Acceleration Torque	[Nm]	*2	687	687	687	687	480
Maximum Torque	[Nm]	*3	687	687	687	687	480
Emergency Stop Torque	[Nm]	*4	1100	1100	1100	1100	750
Nominal Input Speed	[rpm]	*5	2300				
Maximum Input Speed	[rpm]	*6	5000				
No Load Running Torque	[Nm]	*7	2.56				
Maximum Radial Load	[N]	*8	19000				
Maximum Axial Load	[N]	*9	14000				
Maximum Tilting Moment	[Nm]	*10	2000				
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	5.98	4.94	4.91	4.88	4.87
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	7.58	6.53	6.50	6.48	6.46
Moment of Inertia (≤ Ø 38)	[kgcm2]	--	14.65	13.60	13.58	13.55	13.54
Moment of Inertia (≤ Ø 48)	[kgcm2]	--	--	--	--	--	--
Efficiency	[%]	*11	88				
Torsional Rigidity	[Nm/arcmin]	*12	140				
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	17.6				

*1) At nominal input speed, service life is 20,000 hours

*2) The maximum torque when starting or stopping operation. Apply Cycle Factor $\mathbf{f_0}$, 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 moment is the maximum load at output flange surface

*11) The efficiency at the nominal output torque rating

*12) This does not include lost motion

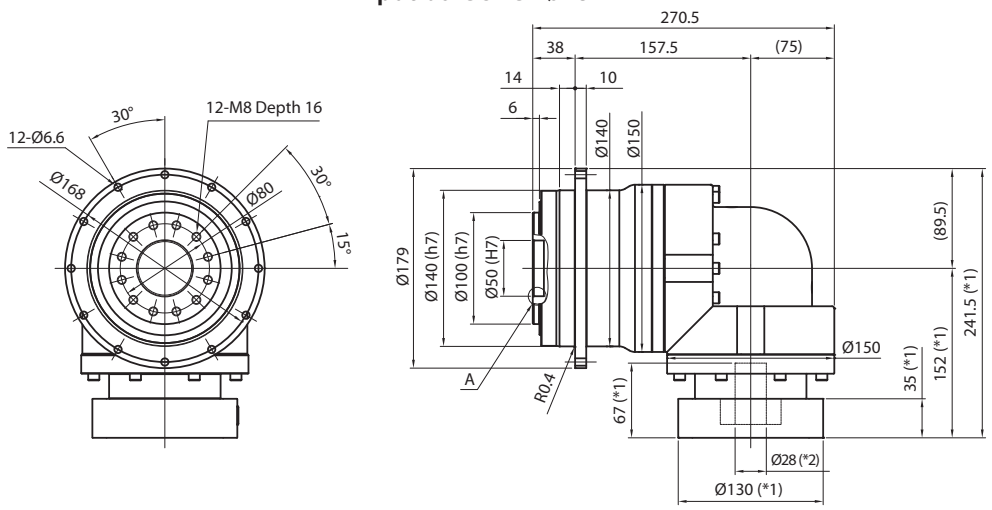
*13) Contact Nidec Drive Technology for the testing conditions and environment

*14) Various wash-down options are available. Contact Nidec Drive Technology for more details

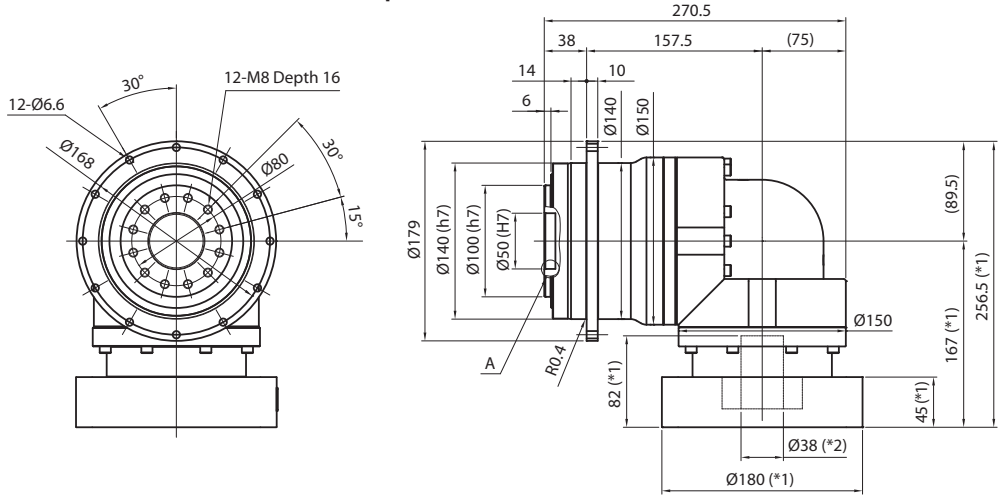
*15) Weight may vary slightly between models

EVT 140 2-Stage Dimensions

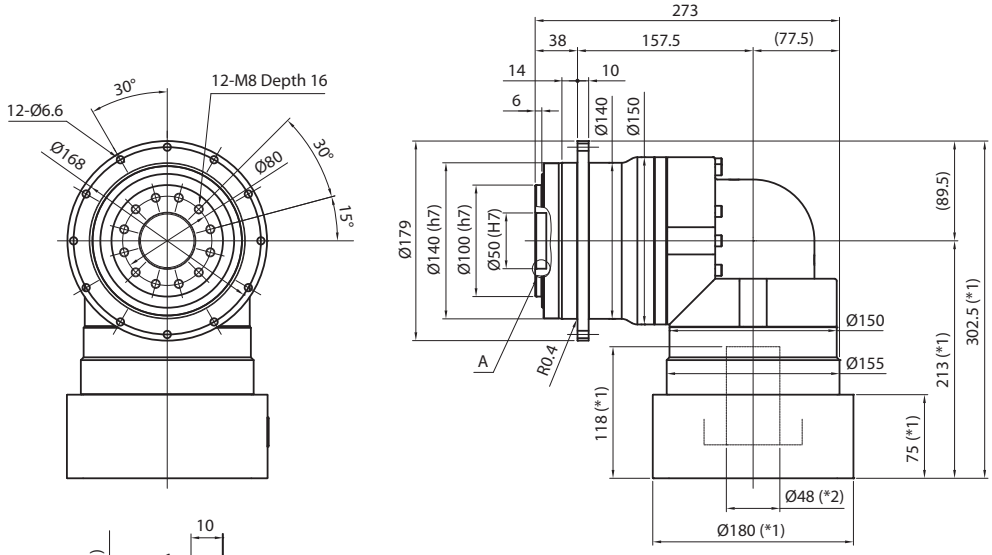
Input bore size ≤ø28mm

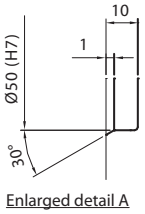


Input bore size ≤ø38mm



Input bore size ≤ø48mm





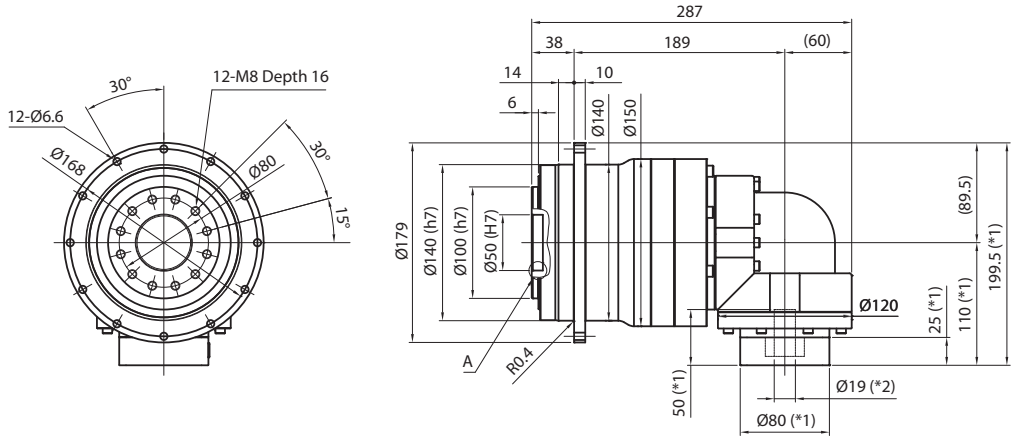
Enlarged detail A

*1) Length will vary depending on motor

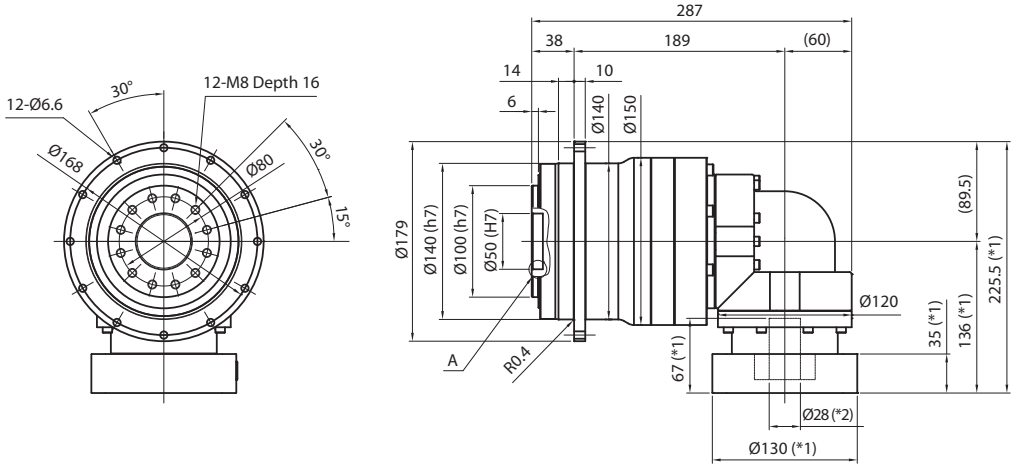
*2) Bushing will be inserted to adapt to motor shaft

EVT 140 3-Stage Dimensions

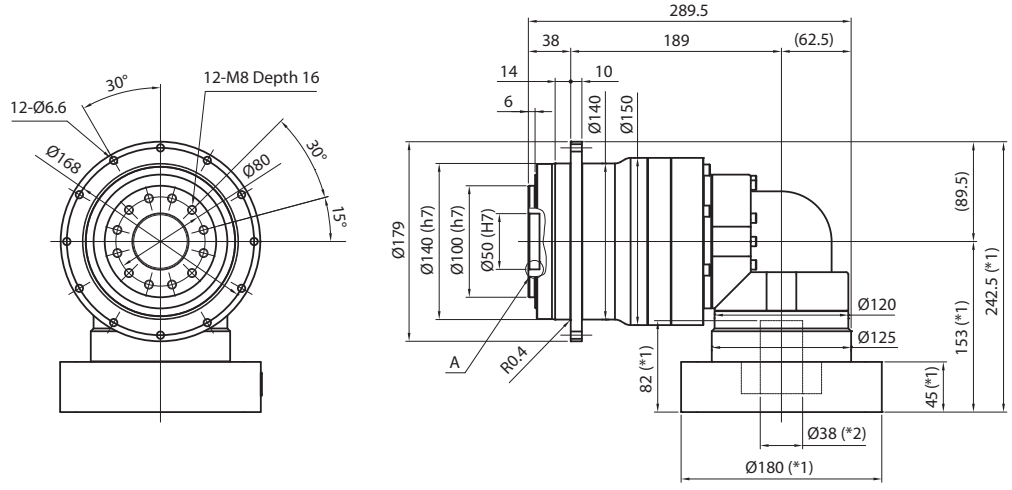
Input bore size ≤ø19mm

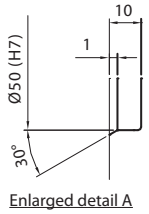


Input bore size ≤ø28mm



Input bore size ≤ø38mm





Enlarged detail A

*1) Length will vary depending on motor

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

EVT

EVT 200 2-Stage Specifications

Frame Size	**200**					
Ratio	Unit	Note	4	5	7	10
Nominal Output Torque	[Nm]	*1	604	646	646	478
Maximum Acceleration Torque	[Nm]	*2	904	1127	1315	931
Maximum Torque	[Nm]	*3	1064	1327	1498	1144
Emergency Stop Torque	[Nm]	*4	1700	2000	2500	2000
Nominal Input Speed	[rpm]	*5	1500			
Maximum Input Speed	[rpm]	*6	4000			
No Load Running Torque	[Nm]	*7	10.8			
Maximum Radial Load	[N]	*8	40000			
Maximum Axial Load	[N]	*9	30000			
Maximum Tilting Moment	[Nm]	*10	5300			
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	--	--	--	--
Moment of Inertia (≤ Ø 38)	[kgcm2]	--	93.44	81.86	71.47	66.72
Moment of Inertia (≤ Ø 48)	[kgcm2]	--	138.1	123.3	109.6	103.4
Moment of Inertia (≤ Ø 65)	[kgcm2]	--	223.7	208.9	195.2	189.0
Efficiency	[%]	*11	93			
Torsional Rigidity	[Nm/arcmin]	*12	320			
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	50			

EVT 200 3-Stage Specifications

Frame Size	**200**					
Ratio	Unit	Note	16	20	25	28
Nominal Output Torque	[Nm]	*1	583	646	683	710
Maximum Acceleration Torque	[Nm]	*2	1315	1315	1315	1315
Maximum Torque	[Nm]	*3	1315	1315	1315	1315
Emergency Stop Torque	[Nm]	*4	2500	2500	2500	2500
Nominal Input Speed	[rpm]	*5	2100			
Maximum Input Speed	[rpm]	*6	4000			
No Load Running Torque	[Nm]	*7	4.7			
Maximum Radial Load	[N]	*8	40000			
Maximum Axial Load	[N]	*9	30000			
Maximum Tilting Moment	[Nm]	*10	5300			
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	13.42	11.92	11.38	11.82
Moment of Inertia (≤ Ø 38)	[kgcm2]	--	22.20	20.71	20.17	20.61
Moment of Inertia (≤ Ø 48)	[kgcm2]	--	27.02	25.53	24.99	25.43
Moment of Inertia (≤ Ø 65)	[kgcm2]	--	--	--	--	--
Efficiency	[%]	*11	88			
Torsional Rigidity	[Nm/arcmin]	*12	320			
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	37			

EVT 200 3-Stage Specifications

Frame Size			**200**				
Ratio	Unit	Note	35	40	50	70	100
Nominal Output Torque	[Nm]	*1	710	465	710	710	480
Maximum Acceleration Torque	[Nm]	*2	1315	1315	1315	1315	931
Maximum Torque	[Nm]	*3	1315	1315	1315	1315	931
Emergency Stop Torque	[Nm]	*4	2500	2500	2500	2500	2000
Nominal Input Speed	[rpm]	*5	2100				
Maximum Input Speed	[rpm]	*6	4000				
No Load Running Torque	[Nm]	*7	4.7				
Maximum Radial Load	[N]	*8	40000				
Maximum Axial Load	[N]	*9	30000				
Maximum Tilting Moment	[Nm]	*10	5300				
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	10.9	10.5	10.3	10.2	10.2
Moment of Inertia (≤ Ø 38)	[kgcm2]	--	19.69	19.26	19.13	19.01	18.94
Moment of Inertia (≤ Ø 48)	[kgcm2]	--	24.51	24.08	23.95	23.83	23.77
Moment of Inertia (≤ Ø 65)	[kgcm2]	--	--	--	--	--	--
Efficiency	[%]	*11	88				
Torsional Rigidity	[Nm/arcmin]	*12	320				
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	37				

*1) At nominal input speed, service life is 20,000 hours

*2) The maximum torque when starting or stopping operation. Apply Cycle Factor $\mathbf{f_0}$, 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 moment is the maximum load at output flange surface

*11) The efficiency at the nominal output torque rating

*12) This does not include lost motion

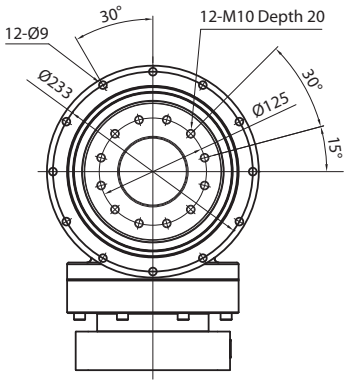
*13) Contact Nidec Drive Technology for the testing conditions and environment

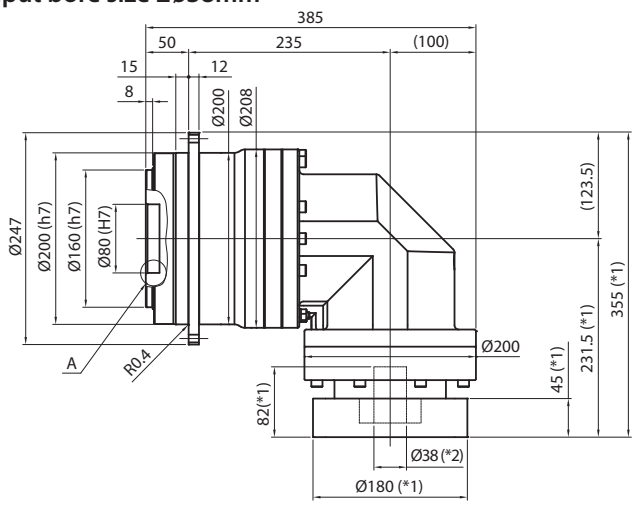
*14) Various wash-down options are available. Contact Nidec Drive Technology for more details

*15) Weight may vary slightly between models

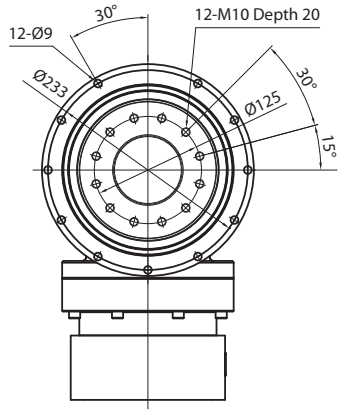
EVT 200 2-Stage Dimensions

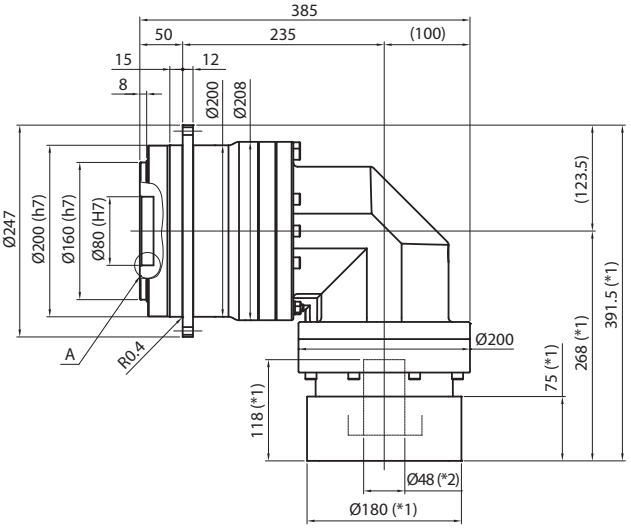
Input bore size ≤ø38mm



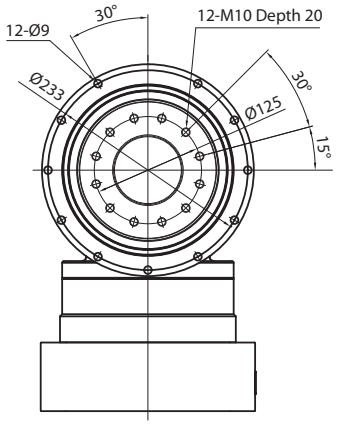


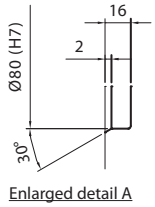
Input bore size ≤ø48mm



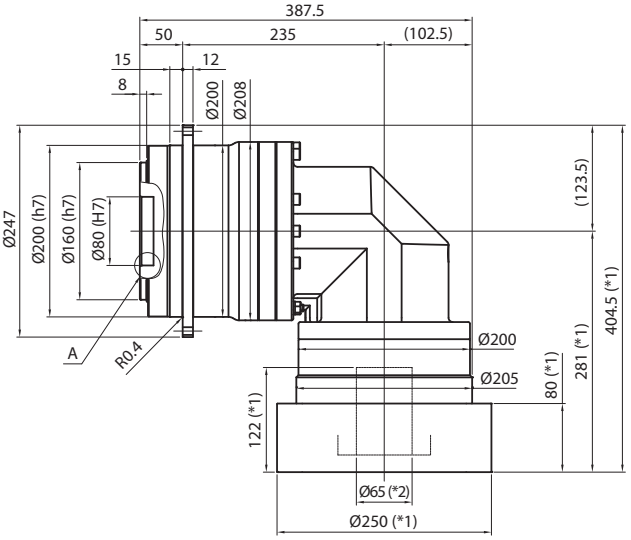


Input bore size ≤ø65mm





Enlarged detail A

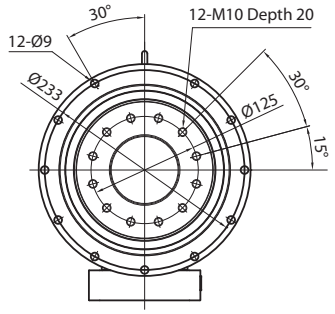


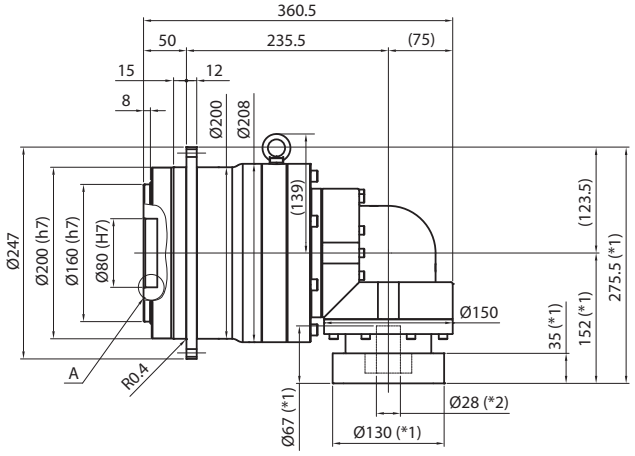
*1) Length will vary depending on motor

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

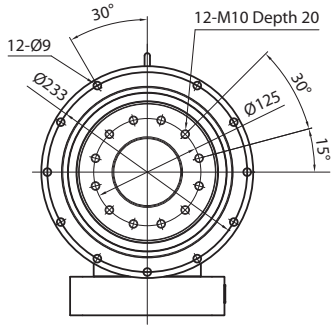
EVT 200 3-Stage Dimensions

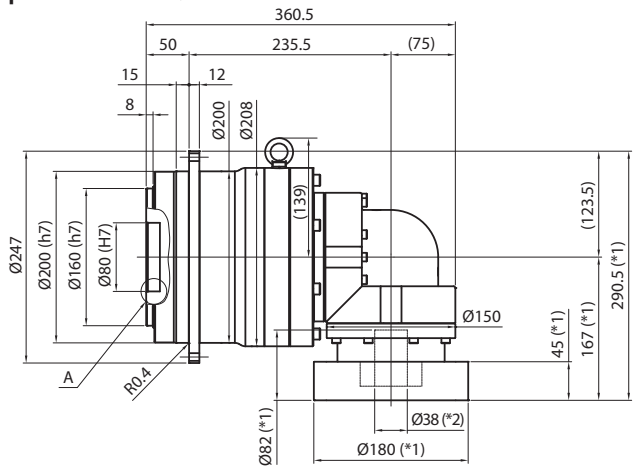
Input bore size ≤ø28mm



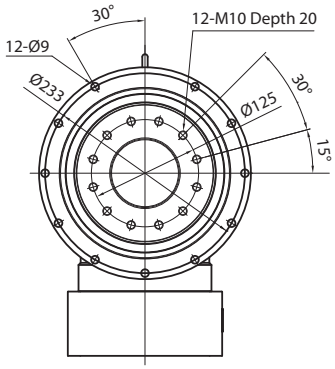


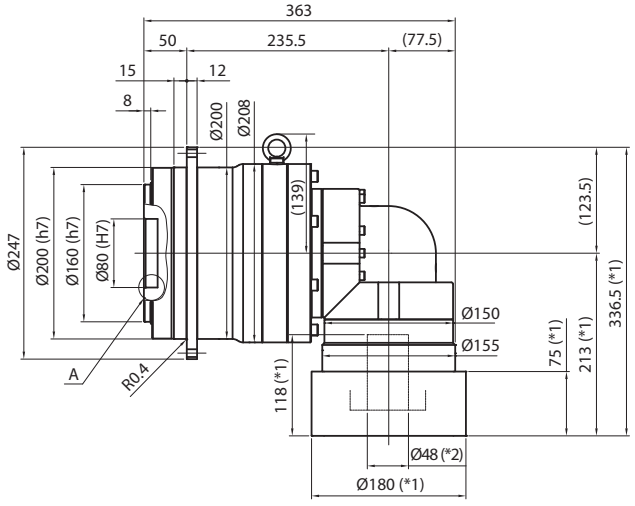
Input bore size ≤ø38mm

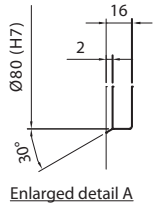




Input bore size ≤ø48mm







Enlarged detail A

*1) Length will vary depending on motor

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

EVT 255 2-Stage Specifications

Frame Size	**255**					
Ratio	Unit	Note	4	5	7	10
Nominal Output Torque	[Nm]	*1	1340	1680	2024	1534
Maximum Acceleration Torque	[Nm]	*2	3520	3520	3428	2478
Maximum Torque	[Nm]	*3	3891	3891	3809	2781
Emergency Stop Torque	[Nm]	*4	5400	6500	7200	5400
Nominal Input Speed	[rpm]	*5	1200			
Maximum Input Speed	[rpm]	*6	3000			
No Load Running Torque	[Nm]	*7	--			
Maximum Radial Load	[N]	*8	64000			
Maximum Axial Load	[N]	*9	48000			
Maximum Tilting Moment	[Nm]	*10	11000			
Moment of Inertia (≤ Ø 48)	[kgcm2]	--	--	--	--	--
Moment of Inertia (≤ Ø 65)	[kgcm2]	--	661.8	619.8	587.7	572.0
Efficiency	[%]	*11	93			
Torsional Rigidity	[Nm/arcmin]	*12	840			
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	110			

EVT 255 3-Stage Specifications

Frame Size	**255**					
Ratio	Unit	Note	16	20	25	28
Nominal Output Torque	[Nm]	*1	1920	1992	2154	2195
Maximum Acceleration Torque	[Nm]	*2	3520	3520	3520	3460
Maximum Torque	[Nm]	*3	3520	3520	3520	3460
Emergency Stop Torque	[Nm]	*4	7200	7200	7200	7200
Nominal Input Speed	[rpm]	*5	1500			
Maximum Input Speed	[rpm]	*6	3000			
No Load Running Torque	[Nm]	*7	--			
Maximum Radial Load	[N]	*8	64000			
Maximum Axial Load	[N]	*9	48000			
Maximum Tilting Moment	[Nm]	*10	11000			
Moment of Inertia (≤ Ø 48)	[kgcm2]	--	118.52	114.63	113.37	114.80
Moment of Inertia (≤ Ø 65)	[kgcm2]	--	--	--	--	--
Efficiency	[%]	*11	88			
Torsional Rigidity	[Nm/arcmin]	*12	840			
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	99			

EVT 255 3-Stage Specifications

Frame Size	**255**						
Ratio	Unit	Note	35	40	50	70	100
Nominal Output Torque	[Nm]	*1	2195	2195	2195	2195	1405
Maximum Acceleration Torque	[Nm]	*2	3460	3520	3520	3460	1718
Maximum Torque	[Nm]	*3	3460	3520	3520	3460	1718
Emergency Stop Torque	[Nm]	*4	7200	7200	7200	7200	5400
Nominal Input Speed	[rpm]	*5	1500				
Maximum Input Speed	[rpm]	*6	3000				
No Load Running Torque	[Nm]	*7	--				
Maximum Radial Load	[N]	*8	64000				
Maximum Axial Load	[N]	*9	48000				
Maximum Tilting Moment	[Nm]	*10	11000				
Moment of Inertia (≤ Ø 48)	[kgcm2]	--	112.25	109.37	109.05	108.77	108.62
Moment of Inertia (≤ Ø 65)	[kgcm2]	--	--	--	--	--	--
Efficiency	[%]	*11	88				
Torsional Rigidity	[Nm/arcmin]	*12	840				
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	99				

*1) At nominal input speed, service life is 20,000 hours

*2) The maximum torque when starting or stopping operation. Apply Cycle Factor $\mathbf{f_0}$, 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 moment is the maximum load at output flange surface

*11) The efficiency at the nominal output torque rating

*12) This does not include lost motion

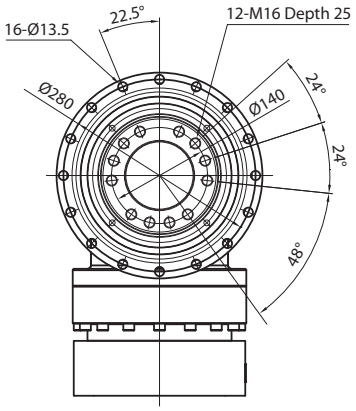
*13) Contact Nidec Drive Technology for the testing conditions and environment

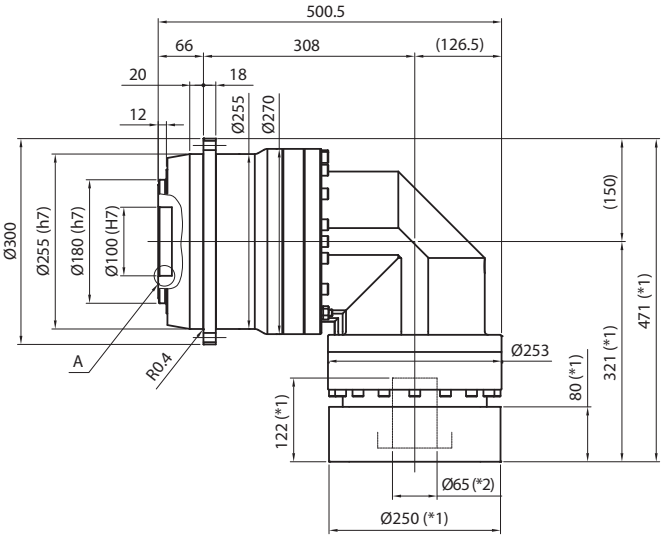
*14) Various wash-down options are available. Contact Nidec Drive Technology for more details

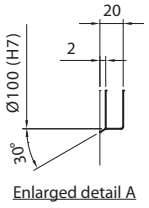
*15) Weight may vary slightly between models

EVT 255 2-Stage Dimensions

Input bore size ≤ø65mm







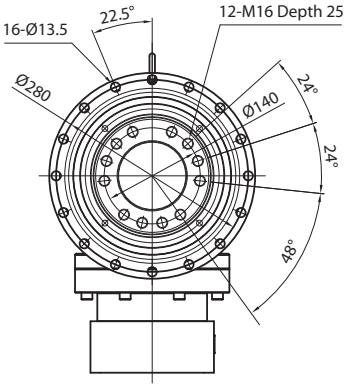
Enlarged detail A

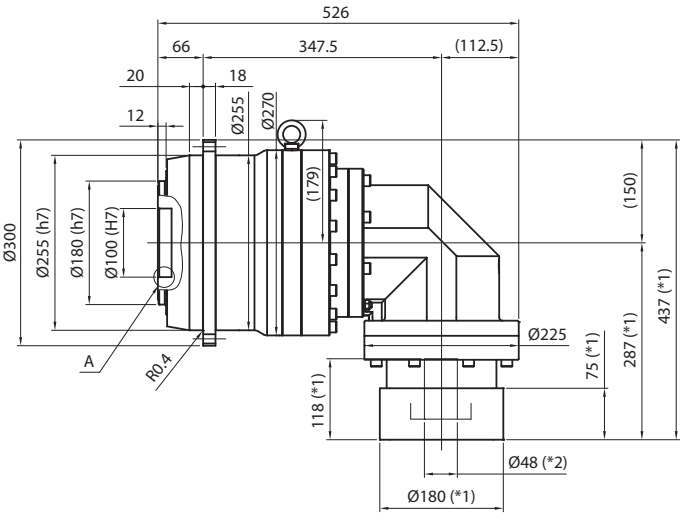
*1) Length will vary depending on motor

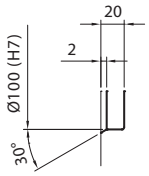
*2) Bushing will be inserted to adapt to motor shaft

EVT 255 3-Stage Dimensions

Input bore size ≤ø48mm







Enlarged detail A

*1) Length will vary depending on motor

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