

EVL SERIES

A detailed close-up photograph of a precision-machined metal shaft and bearing assembly. The shaft is polished and passes through a bearing housing. The housing has a flange with several screws. The background is a soft, out-of-focus grey.

EVL series

EVL planetary gearbox with right angle

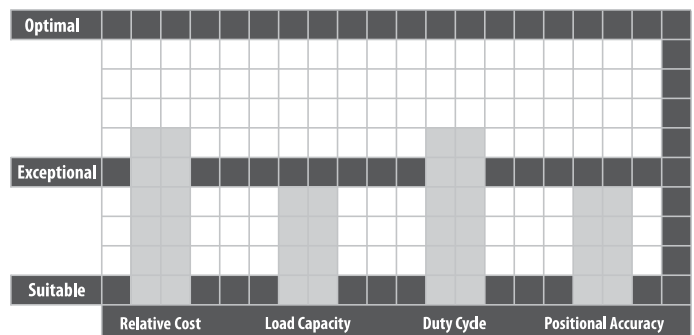
Reliability, complete product range

Description

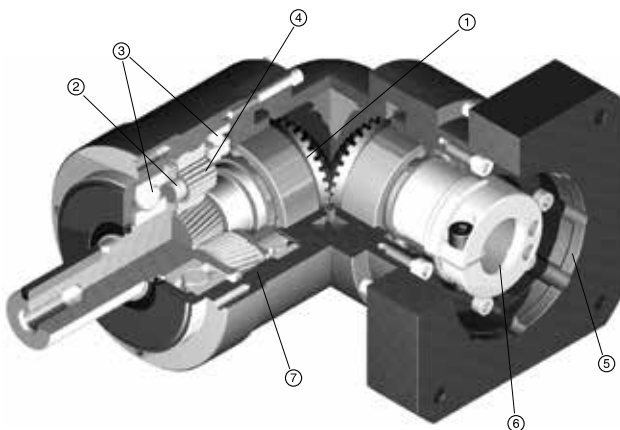
The right angle equivalent to the VRL series, the EVL provides our customers with an excellent solution when space and clearance are a serious limitation. Helical planetary gears team up with spiral bevel gears to provide a product with robust internal construction, smooth operation and high torque density. 6 arc-min backlash allows the VRL to be applied to a wide range of applications where accuracy and dynamics are in play, but cost is of concern.

The EVL is a solid choice for servo applications in packaging, handling and automation systems. A variety of standard wash down and food grade options are available, making it an attractive option for the toughest environments. We offer the broadest selection of frame sizes and ratios, giving our customers more flexibility than ever before. Industry standard mounting dimensions allow the EVL to be implemented in legacy machine designs, saving our customers valuable time.

- Compact, space-saving solution for mid to high end motion control applications
- The widest range of frame sizes and ratios available in the market
- Best-In-class backlash (≤ 6 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 mounting dimensions



Features



1 Right angle bevel gear configuration allows motor to be mounted at a 90 degree position from the gearbox, saving space

- Carburized helical gears with proprietary secondary finishing process for higher accuracy and smooth, quiet operation. 40% higher tooth surface area than the industry standard
- One piece output shaft and planet carrier with two bearings straddling the planet gears. Higher stiffness, torque capacity and safety factor, with guaranteed alignment of gearing
- Uncaged needle roller bearings provide excellent torque density and torsional rigidity. 43% larger bearing surface area compared to the rest of the industry
- Optimized mounting system with active centering on motor pilot diameter guarantees alignment of motor. Motor can be installed in any orientation
- True concentric motor shaft clamping connection, optimized for your specific motor. Reduced inertia for dynamic performance and balanced for high speed operation
- Ring gear machined directly into the housing, not welded or pressed in. Provides greater concentricity and elimination of speed fluctuation

Part Number	EVL -090 B -7 -K 6 -19HB16						
Model name - EVL series						Motor mounting code (*)	
Size: 070, 090, 120, 155, 205, 235						Backlash: 070, 090, 120, 155: 6-9 arc-min 205, 235: 8-11 arc-min	
Design version						Output mounting style: K: Keyed shaft - S: Smooth shaft	
						Ratio: 2-Stage: 3, 4, 5, 6, 7, 8, 9, 10 3-Stage: 15, 16, 20, 25, 28, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100	

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

EVL 070 2-Stage Specifications

Frame Size	070									
Stage	2-Stage									
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	430	470	510	540	570	600	620	640
Permitted Axial Load	[N]	*8	310	360	390	430	460	480	510	530
Maximum Radial Load	[N]	*9	1200							
Maximum Axial Load	[N]	*10	1100							
Moment of Inertia ($\leq \varnothing 8$)	[kgcm ²]	--	0.310	0.270	0.250	0.240	0.230	0.230	0.230	0.230
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	0.390	0.340	0.320	0.310	0.310	0.310	0.300	0.300
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	0.580	0.530	0.510	0.500	0.500	0.500	0.490	0.490
Efficiency	[%]	*11	93							
Torsional Rigidity	[Nm/arc-min]	*12	3							
Maximum Torsional Backlash	[arc-min]	--	≤ 6							
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							

- *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 SIT S.p.A. for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details
- *15) The weight may vary slightly between models

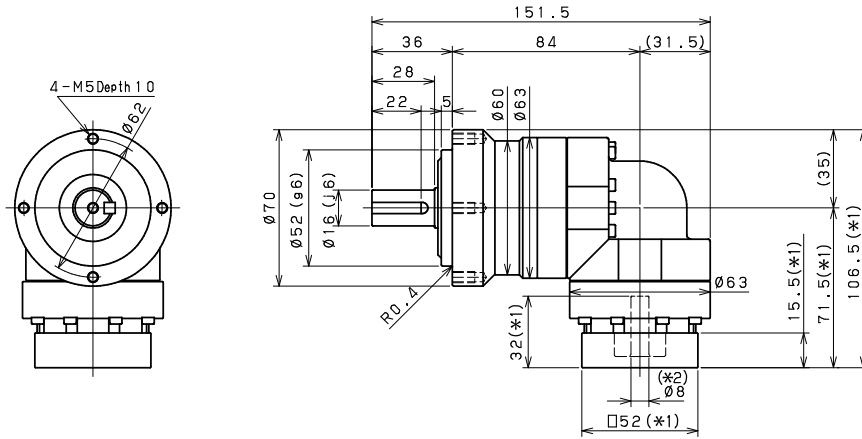
EVL 070 3-Stage Specifications

Frame Size	070									
Stage	3-Stage									
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	740	750	810	870	910	930	980	100
Permitted Axial Load	[N]	*8	630	650	720	790	830	860	920	970
Maximum Radial Load	[N]	*9	1200							
Maximum Axial Load	[N]	*10	1100							
Moment of Inertia ($\leq \varnothing 8$)	[kgcm ²]	--	0.073	0.079	0.071	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
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*12	3							
Maximum Torsional Backlash	[arc-min]	--	≤ 9							
Noise Level	dB [A]	*13	≤ 80							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	1.7							

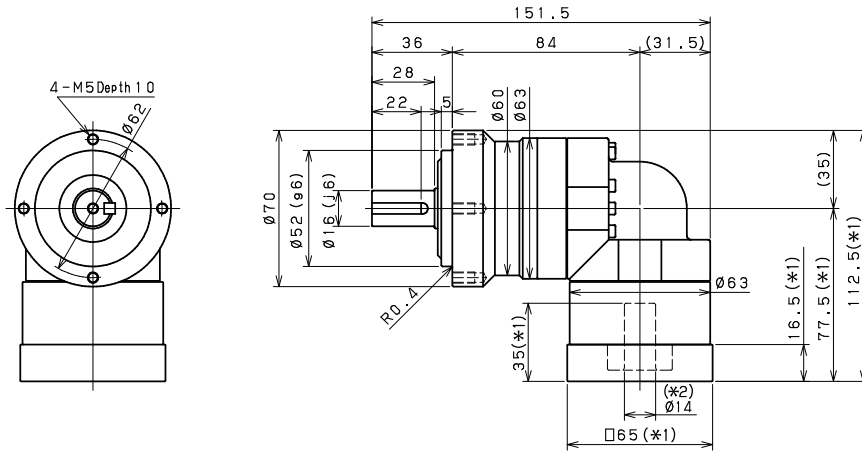
Frame Size	070									
Stage	3-Stage									
Ratio	Unit	Note	45	50	60	70	80	90	100	
Nominal Output Torque	[Nm]	*1	16	24	24	24	24	16	16	
Maximum Acceleration Torque	[Nm]	*2	32	45	45	45	45	32	32	
Emergency Stop Torque	[Nm]	*3	65	90	90	90	90	65	65	
Nominal Input Speed	[rpm]	*4	3000							
Maximum Input Speed	[rpm]	*5	6000							
No Load Running Torque	[Nm]	*6	0.20							
Permitted Radial Load	[N]	*7	1100	1100	1200	1200	1200	1200	1200	
Permitted Axial Load	[N]	*8	1000	1100	1100	1100	1100	1100	1100	
Maximum Radial Load	[N]	*9	1200							
Maximum Axial Load	[N]	*10	1100							
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	0.105	0.105	0.105	0.105	
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	--	--	--	--	--	--	--	
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*12	3							
Maximum Torsional Backlash	[arc-min]	--	≤ 9							
Noise Level	dB [A]	*13	≤ 80							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	1.7							

EVL 070 2-Stage Dimensions

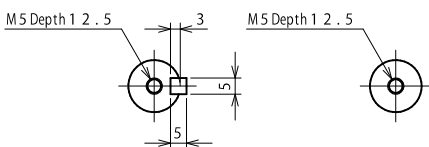
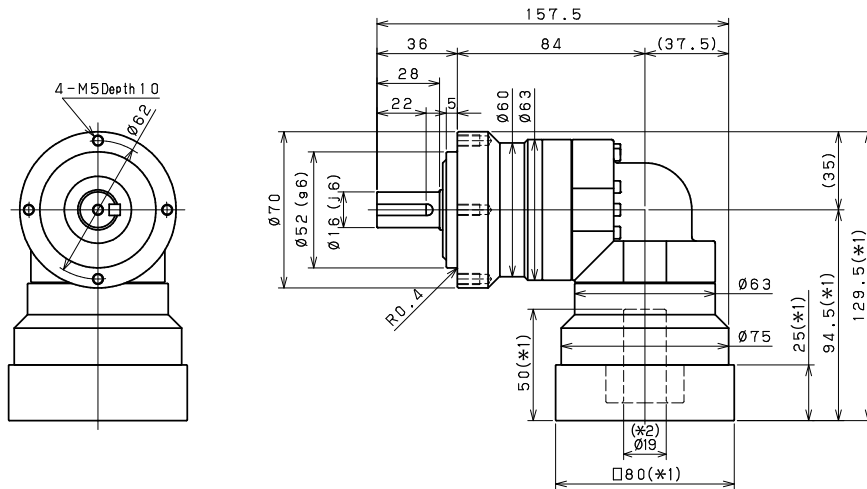
Input bore size $\leq \varnothing 8$ mm



Input bore size $\leq \varnothing 14$ mm



Input bore size $\leq \varnothing 19$ mm

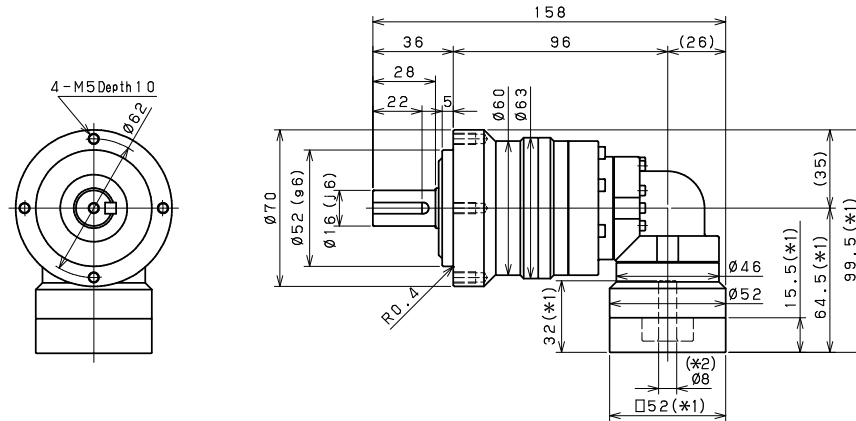


*1) Length will vary depending on motor

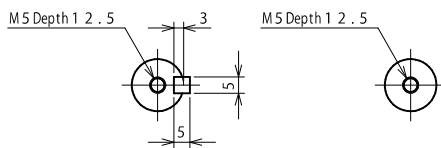
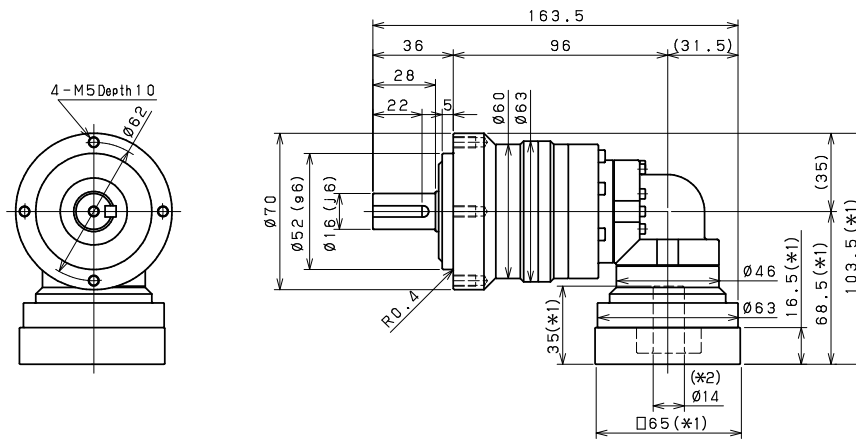
*2) Bushing will be inserted to adapt to motor shaft

EVL 070 3-Stage Dimensions

Input bore size $\leq \varnothing 8$ mm



Input bore size $\leq \varnothing 14$ mm



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

EVL 090 2-Stage Specifications

Frame Size	090											
Stage	2-Stage											
Ratio	Unit	Note	3	4	5	6	7	8	9	10		
Nominal Output Torque	[Nm]	*1	45	60	65	65	65	65	45	45		
Maximum Acceleration Torque	[Nm]	*2	65	90	90	90	90	90	65	65		
Emergency Stop Torque	[Nm]	*3	130	170	220	220	220	220	170	170		
Nominal Input Speed	[rpm]	*4	3000									
Maximum Input Speed	[rpm]	*5	6000									
No Load Running Torque	[Nm]	*6	1.13									
Permitted Radial Load	[N]	*7	810	890	960	1000	1100	1100	1200	1200		
Permitted Axial Load	[N]	*8	930	1100	1200	1300	1300	1400	1500	1600		
Maximum Radial Load	[N]	*9	2400									
Maximum Axial Load	[N]	*10	2200									
Moment of Inertia ($\leq \varnothing 8$)	[kgcm ²]	--	--	--	--	--	--	--	--	--		
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	2.120	1.890	1.800	1.760	1.730	1.710	1.700	1.690		
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	2.450	2.220	2.130	2.090	2.060	2.040	2.030	2.020		
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	4.570	4.350	4.260	4.210	4.180	4.170	4.160	4.150		
Efficiency	[%]	*11	93									
Torsional Rigidity	[Nm/arc-min]	*12	10									
Maximum Torsional Backlash	[arc-min]	--	≤ 6									
Noise Level	dB [A]	*13	≤ 80									
Protection Class	--	*14	IP54 (IP65)									
Ambient Temperature	[°C]	--	0-40									
Permitted Housing Temperature	[°C]	--	90									
Weight	[kg]	*15	4.9									

*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 SIT S.p.A. for the testing conditions and environment

*14) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details

*15) The weight may vary slightly between models

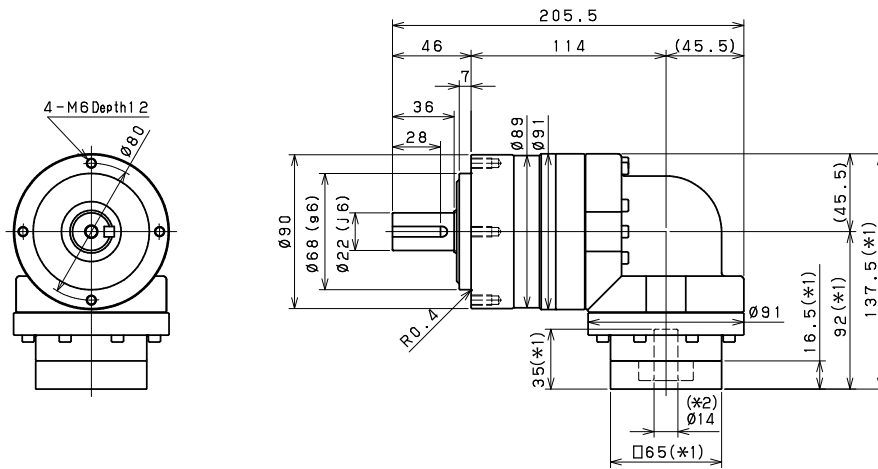
EVL 090 3-Stage Specifications

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

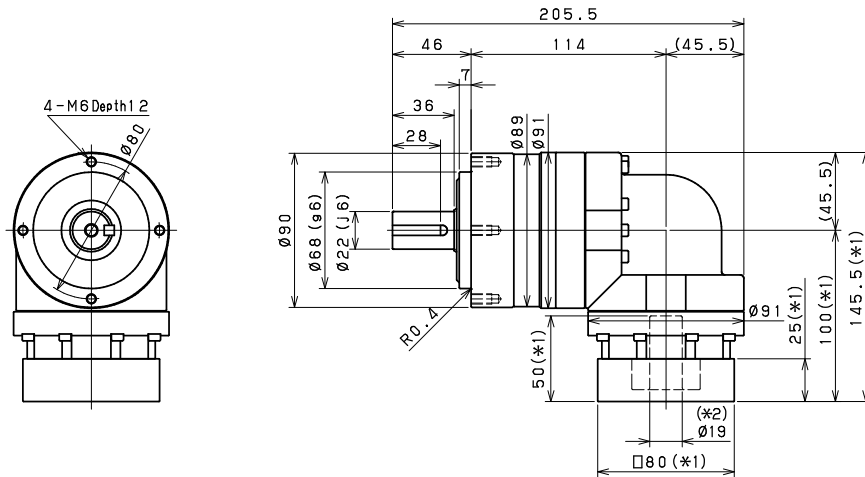
Frame Size	090									
Stage	3-Stage									
Ratio	Unit	Note	45	50	60	70	80	90	100	
Nominal Output Torque	[Nm]	*1	45	65	65	65	65	45	45	
Maximum Acceleration Torque	[Nm]	*2	65	110	110	110	110	65	65	
Emergency Stop Torque	[Nm]	*3	170	220	220	220	220	170	170	
Nominal Input Speed	[rpm]	*4	3000							
Maximum Input Speed	[rpm]	*5	6000							
No Load Running Torque	[Nm]	*6	0.55							
Permitted Radial Load	[N]	*7	2000	2100	2200	2300	2400	2400	2400	
Permitted Axial Load	[N]	*8	2200	2200	2200	2200	2200	2200	2200	
Maximum Radial Load	[N]	*9	2400							
Maximum Axial Load	[N]	*10	2200							
Moment of Inertia ($\leq \varnothing 8$)	[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	
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	--	--	--	--	--	--	--	
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*12	10							
Maximum Torsional Backlash	[arc-min]	--	≤ 9							
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							

EVL 090 2-Stage Dimensions

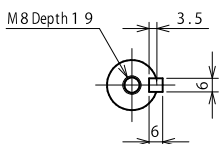
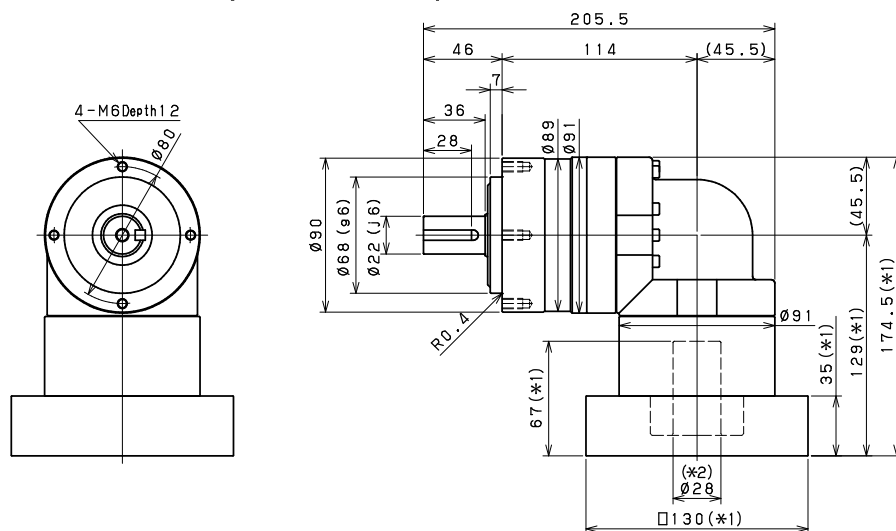
Input bore size $\leq \phi 14$ mm



Input bore size $\leq \phi 19$ mm



Input bore size $\leq \phi 28$ mm



Keyed shaft

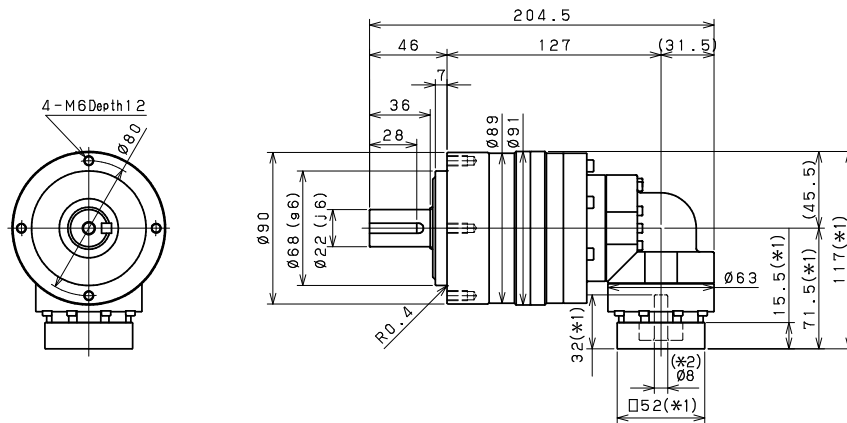
Smooth shaft

*1) Length will vary depending on motor.

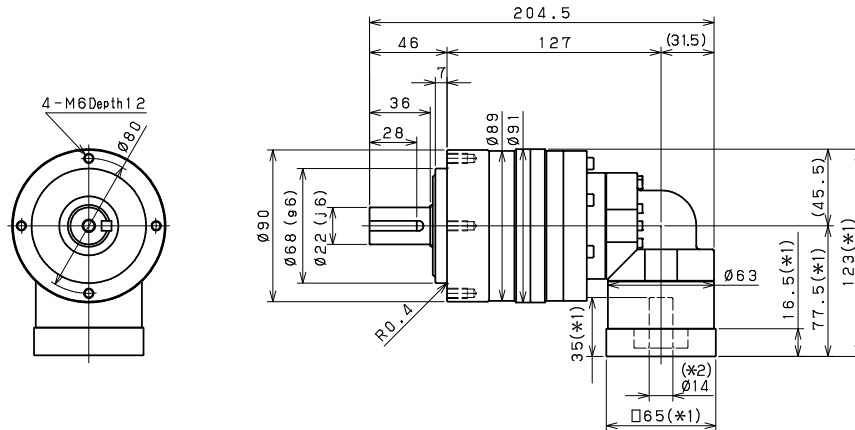
*2) Bushing will be inserted to adapt to motor shaft

EVL 090 3-Stage Dimensions

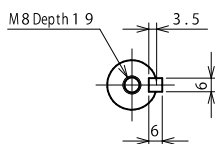
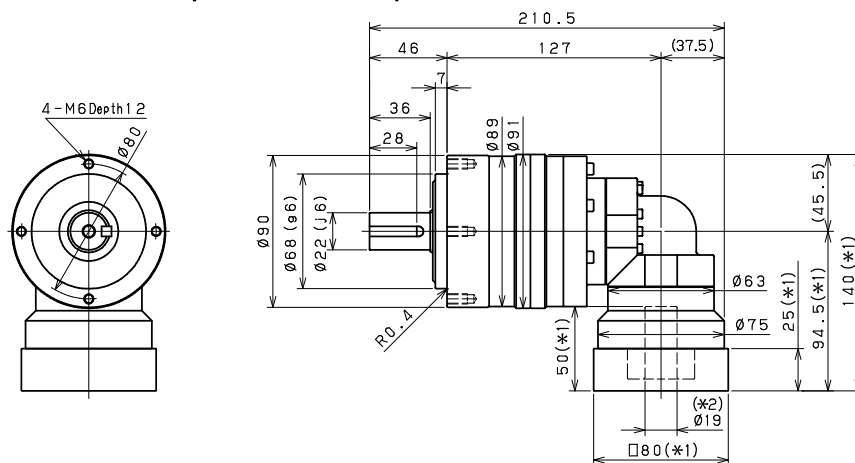
Input bore size $\leq \varnothing 8$ mm



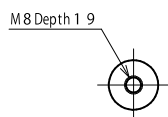
Input bore size $\leq \varnothing 14$ mm



Input bore size $\leq \varnothing 19$ mm



Keyed shaft



Smooth shaft

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

EVL 120 2-Stage Specifications

Frame Size	120									
Stage	2-Stage									
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	1300	1500	1600	1700	1800	1900	1900	2000
Permitted Axial Load	[N]	*8	1500	1700	1900	2000	2100	2300	2400	2500
Maximum Radial Load	[N]	*9	4300							
Maximum Axial Load	[N]	*10	3900							
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	6.740	5.490	5.020	4.770	4.650	4.550	4.490	4.460
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	8.340	7.080	6.610	6.360	6.240	6.140	6.080	6.050
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	15.410	14.150	13.690	13.430	13.310	13.220	13.160	13.120
Efficiency	[%]	*11	93							
Torsional Rigidity	[Nm/arc-min]	*12	31							
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	10.2							

*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 SIT S.p.A. for the testing conditions and environment

*14) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details

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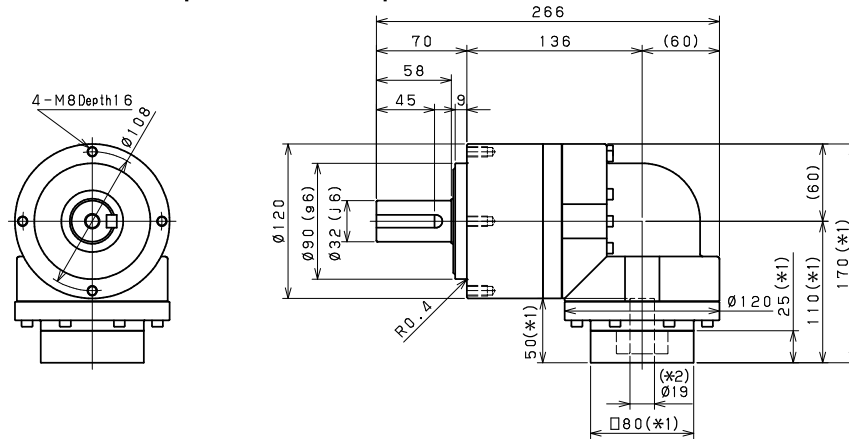
EVL 120 3-Stage Specifications

Frame Size	120									
Stage	3-Stage									
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	2300	2300	2500	2700	2800	2900	3000	3200
Permitted Axial Load	[N]	*8	3000	3100	3400	3700	3900	3900	3900	3900
Maximum Radial Load	[N]	*9	4300							
Maximum Axial Load	[N]	*10	3900							
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	2.250	2.460	2.200	2.180	2.400	1.870	2.160	1.860
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	2.580	2.790	2.530	2.510	2.730	2.200	2.490	2.190
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	4.700	4.910	4.650	4.640	4.860	4.330	4.620	4.320
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*12	31							
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	10							

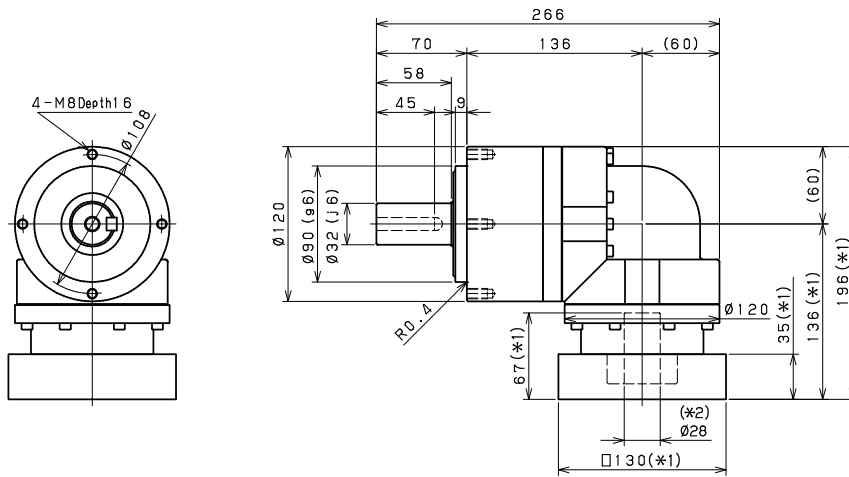
Frame Size	120									
Stage	3-Stage									
Ratio	Unit	Note	45	50	60	70	80	90	100	
Nominal Output Torque	[Nm]	*1	110	150	150	150	150	110	110	
Maximum Acceleration Torque	[Nm]	*2	200	300	300	300	300	200	200	
Emergency Stop Torque	[Nm]	*3	450	550	550	550	550	450	450	
Nominal Input Speed	[rpm]	*4	3000							
Maximum Input Speed	[rpm]	*5	6000							
No Load Running Torque	[Nm]	*6	1.11							
Permitted Radial Load	[N]	*7	3300	3400	3600	3800	4000	4200	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 ($\leq \varnothing 14$)	[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	
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	--	--	--	--	--	--	--	
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*12	31							
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	10							

EVL 120 2-Stage Dimensions

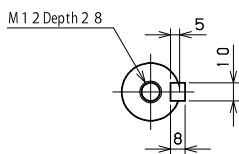
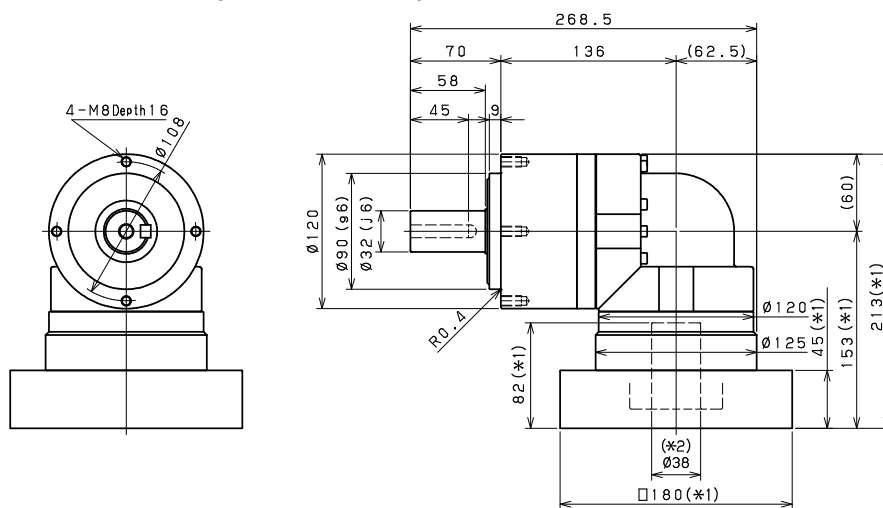
Input bore size $\leq \varnothing 19$ mm



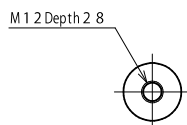
Input bore size $\leq \varnothing 28$ mm



Input bore size $\leq \varnothing 38$ mm



Keyed shaft

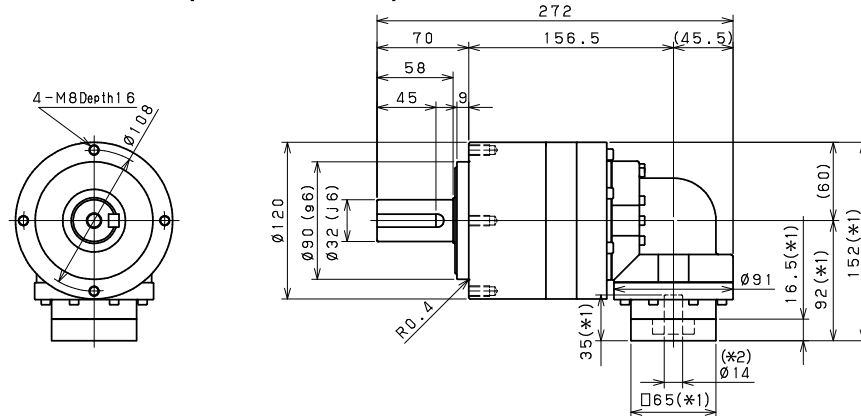


Smooth shaft

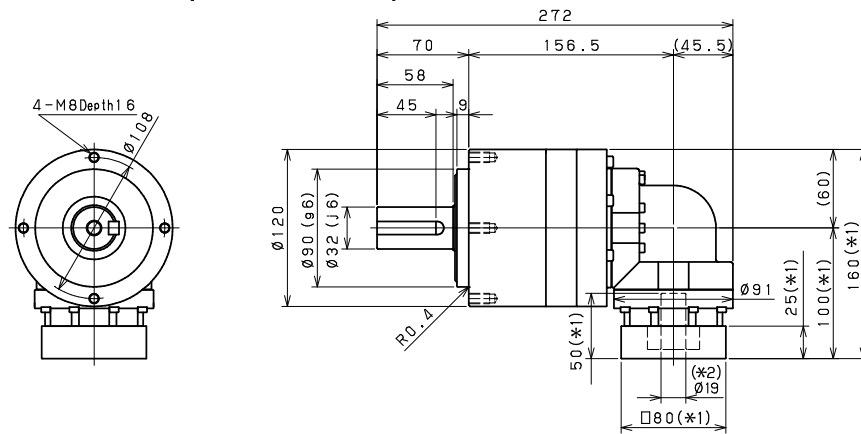
- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

EVL 120 3-Stage Dimensions

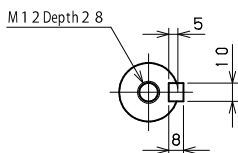
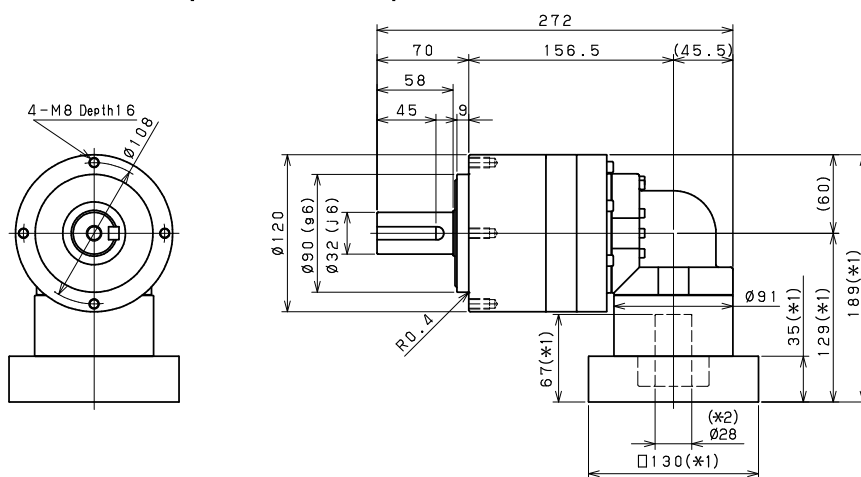
Input bore size $\leq \phi 14$ mm



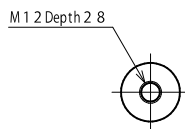
Input bore size $\leq \phi 19$ mm



Input bore size $\leq \phi 28$ mm



Keyed shaft



Smooth shaft

*1) Length will vary depending on motor

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

EVL 155 2-Stage Specifications

Frame Size	155									
Stage	2-Stage									
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	3200	3500	3800	4000	4200	4400	4600	4700
Permitted Axial Load	[N]	*8	2400	2700	3000	3300	3500	3700	3900	4100
Maximum Radial Load	[N]	*9	9100							
Maximum Axial Load	[N]	*10	8200							
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	23.130	18.570	16.910	16.010	15.580	15.230	14.770	14.660
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	27.500	22.940	21.280	20.380	19.950	19.610	19.410	19.030
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	40.730	36.170	34.510	33.610	33.180	32.840	32.370	32.260
Efficiency	[%]	*11	93							
Torsional Rigidity	[Nm/arc-min]	*12	60							
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	19.8							

*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 SIT S.p.A. for the testing conditions and environment

*14) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details

*15) The weight may vary slightly between models

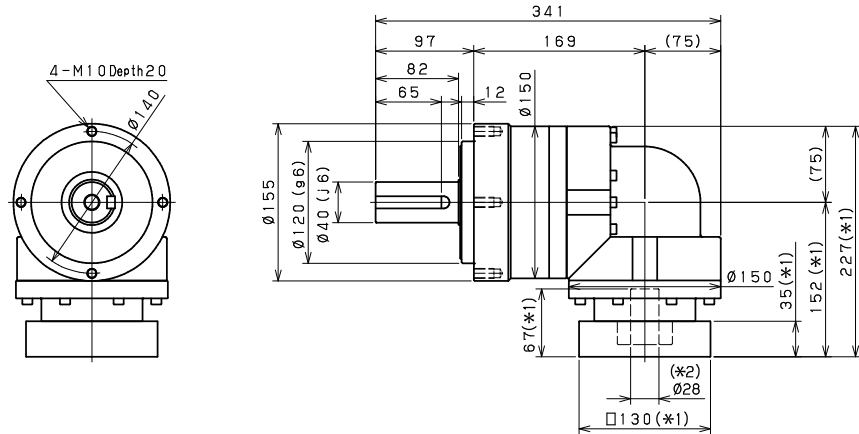
EVL 155 3-Stage Specifications

Frame Size	155									
Stage	3-Stage									
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	5400	5500	6000	6400	6700	6800	7200	7500
Permitted Axial Load	[N]	*8	4900	5000	5500	6100	6400	6600	7000	7500
Maximum Radial Load	[N]	*9	9100							
Maximum Axial Load	[N]	*10	8200							
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	6.400	7.290	6.220	6.150	7.090	4.990	6.090	4.950
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	8.000	8.880	7.810	7.750	8.680	6.580	7.690	6.540
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	15.070	15.960	14.890	14.820	15.760	13.660	14.760	13.610
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*12	60							
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	20.4							

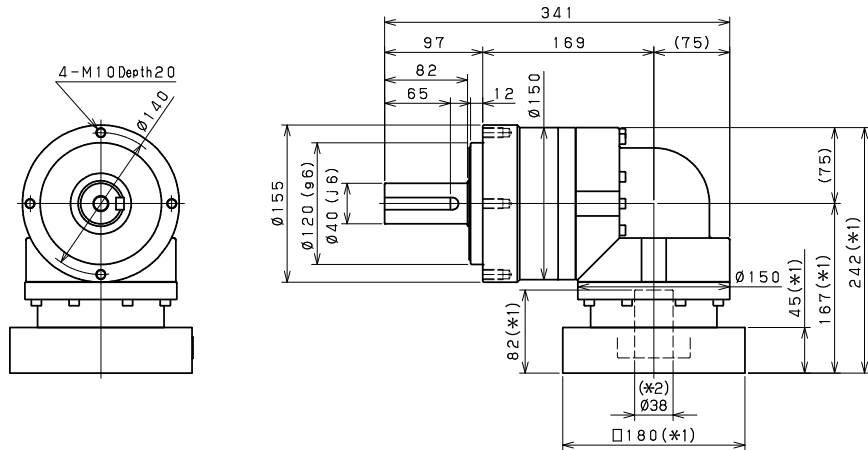
Frame Size	155									
Stage	3-Stage									
Ratio	Unit	Note	45	50	60	70	80	90	100	
Nominal Output Torque	[Nm]	*1	200	300	300	300	300	200	200	
Maximum Acceleration Torque	[Nm]	*2	400	600	600	600	600	400	400	
Emergency Stop Torque	[Nm]	*3	750	1100	1100	1100	1100	750	750	
Nominal Input Speed	[rpm]	*4	2000							
Maximum Input Speed	[rpm]	*5	4000							
No Load Running Torque	[Nm]	*6	2.56							
Permitted Radial Load	[N]	*7	7800	8100	8600	9100	9100	9100	9100	
Permitted Axial Load	[N]	*8	7900	8200	8200	8200	8200	8200	8200	
Maximum Radial Load	[N]	*9	9100							
Maximum Axial Load	[N]	*10	8200							
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]	--	14.740	13.590	13.590	13.580	13.580	13.570	13.570	
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	--	--	--	--	--	--	--	
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*12	60							
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	20.4							

EVL 155 2-Stage Dimensions

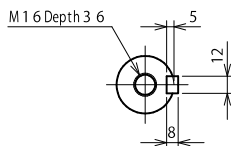
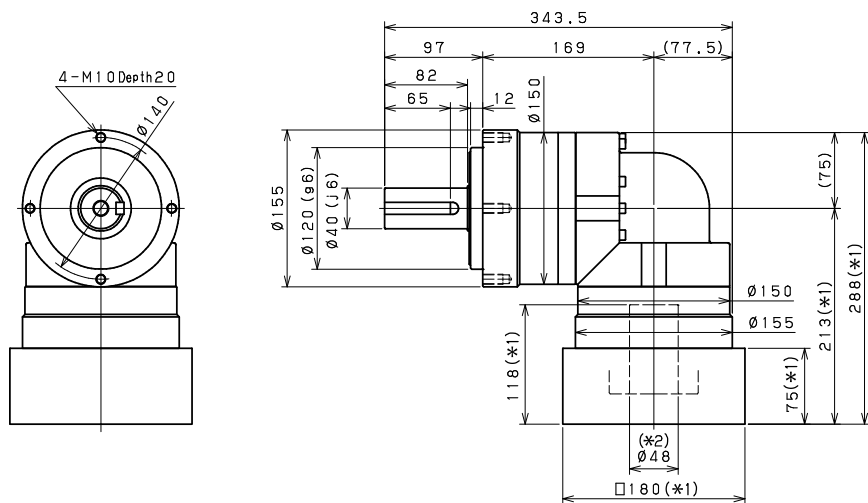
Input bore size $\leq \varnothing 28$ mm



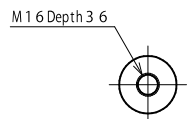
Input bore size $\leq \varnothing 38$ mm



Input bore size $\leq \varnothing 48$ mm



Keyed shaft



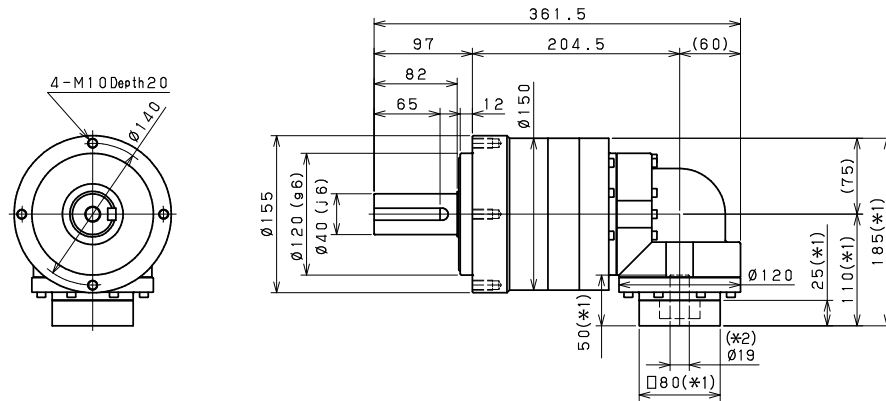
Smooth shaft

*1) Length will vary depending on motor.

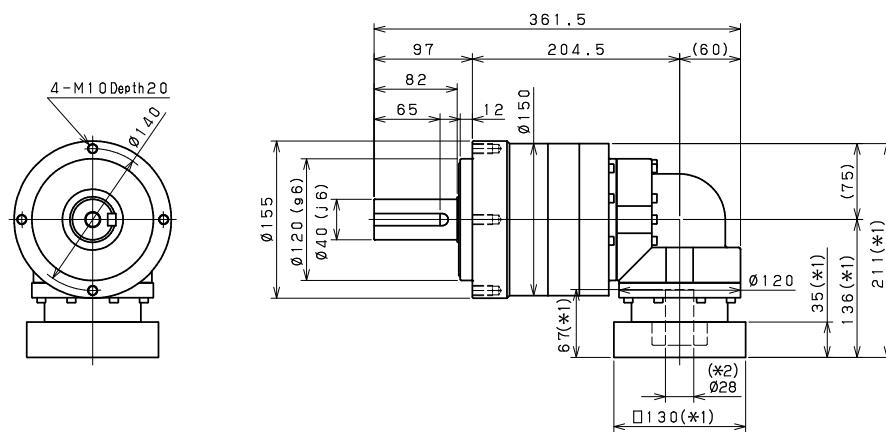
*2) Bushing will be inserted to adapt to motor shaft

EVL 155 3-Stage Dimensions

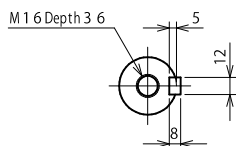
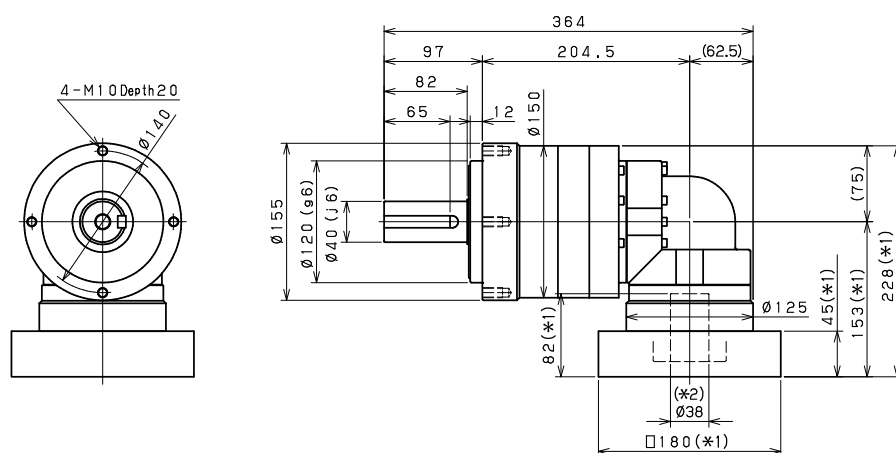
Input bore size $\leq \varnothing 19$ mm



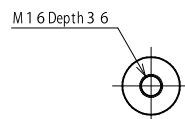
Input bore size $\leq \varnothing 28$ mm



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

EVL 205 2-Stage Specifications

Frame Size	205									
Stage	2-Stage									
Ratio	Units	Note	3	4	5	6	7	8	9	10
Nominal Output Torque	[Nm]	*1	400	575	600	600	600	600	400	400
Maximum Acceleration Torque	[Nm]	*2	575	770	960	1120	1120	1120	775	775
Emergency Stop Torque	[Nm]	*3	1300	1700	2000	2500	2500	2500	2000	2000
Nominal Input Speed	[rpm]	*4	1500							
Maximum Input Speed	[rpm]	*5	3000							
No Load Running Torque	[Nm]	*6	10.8							
Permitted Radial Load	[N]	*7	5600	6200	6700	7100	7400	7800	8100	8400
Permitted Axial Load	[N]	*8	4300	4900	5400	5800	6300	6600	7000	7300
Maximum Radial Load	[N]	*9	15000							
Maximum Axial Load	[N]	*10	14000							
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	93.71	77.72	71.89	68.74	66.43	65.27	64.60	64.28
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	128.6	112.6	106.8	103.6	101.3	100.1	99.46	99.14
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	214.2	198.2	192.4	189.2	186.9	185.7	185.1	184.7
Efficiency	[%]	*11	93							
Torsional Rigidity	[Nm/arc-min]	*12	175							
Maximum Torsional Backlash	[arc-min]	--	≤ 8							
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							

*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 SIT S.p.A. for the testing conditions and environment

*14) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details

*15) The weight may vary slightly between models

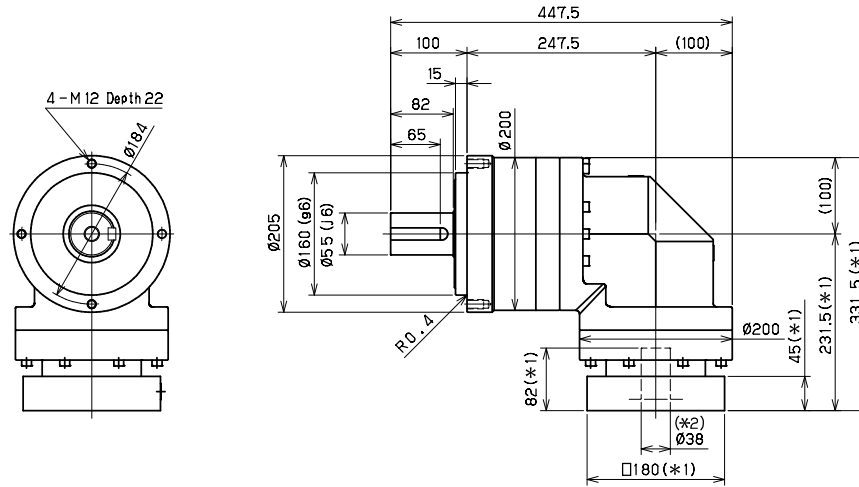
EVL 205 3-Stage Specifications

Frame Size	205									
Stage	3-Stage									
Ratio	Units	Note	15	16	20	25	28	30	35	40
Nominal Output Torque	[Nm]	*1	400	555	600	600	600	400	600	600
Maximum Acceleration Torque	[Nm]	*2	775	1120	1120	1120	1120	775	1120	1120
Emergency Stop Torque	[Nm]	*3	2000	2500	2500	2500	2500	2000	2500	2500
Nominal Input Speed	[rpm]	*4	1500							
Maximum Input Speed	[rpm]	*5	3000							
No Load Running Torque	[Nm]	*6	4.7							
Permitted Radial Load	[N]	*7	9600	9800	11000	11000	12000	12000	13000	13000
Permitted Axial Load	[N]	*8	8700	8900	9900	11000	11000	12000	13000	13000
Maximum Radial Load	[N]	*9	15000							
Maximum Axial Load	[N]	*10	14000							
Moment of Inertia ($\leq \emptyset 28$)	[kgcm ²]	--	11.49	12.09	11.15	10.98	11.59	10.33	10.83	10.24
Moment of Inertia ($\leq \emptyset 38$)	[kgcm ²]	--	20.28	20.88	19.94	19.77	20.38	19.11	19.62	19.03
Moment of Inertia ($\leq \emptyset 48$)	[kgcm ²]	--	25.10	25.70	24.76	24.59	25.20	23.94	24.44	23.85
Moment of Inertia ($\leq \emptyset 65$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*12	175							
Maximum Torsional Backlash	[arc-min]	--	≤ 11							
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							

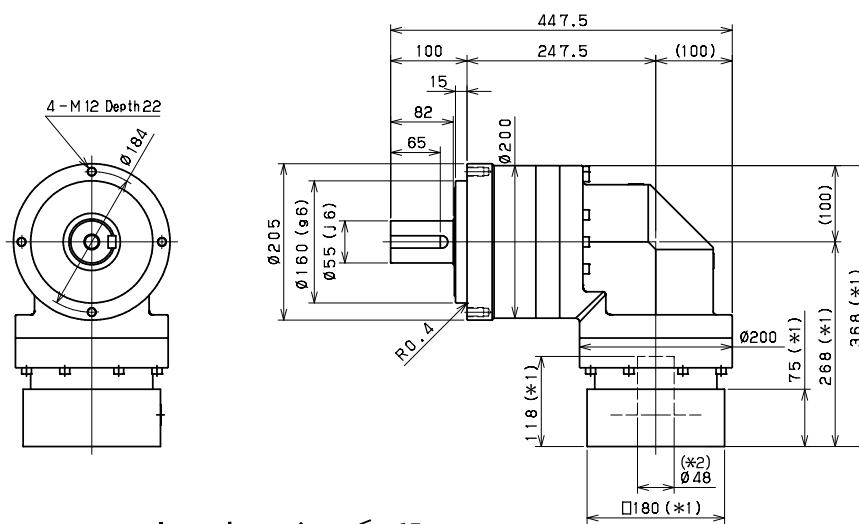
Frame Size	205									
Stage	3-Stage									
Ratio	Units	Note	45	50	60	70	80	90	100	
Nominal Output Torque	[Nm]	*1	400	600	600	600	600	400	400	
Maximum Acceleration Torque	[Nm]	*2	775	1120	1120	1120	1120	775	775	
Emergency Stop Torque	[Nm]	*3	2000	2500	2500	2500	2500	2000	2000	
Nominal Input Speed	[rpm]	*4	1500							
Maximum Input Speed	[rpm]	*5	3000							
No Load Running Torque	[Nm]	*6	4.7							
Permitted Radial Load	[N]	*7	14000	14000	15000	15000	15000	15000	15000	
Permitted Axial Load	[N]	*8	14000	14000	14000	14000	14000	14000	14000	
Maximum Radial Load	[N]	*9	15000							
Maximum Axial Load	[N]	*10	14000							
Moment of Inertia ($\leq \emptyset 28$)	[kgcm ²]	--	10.76	10.20	10.18	10.16	10.15	10.15	10.14	
Moment of Inertia ($\leq \emptyset 38$)	[kgcm ²]	--	19.55	18.99	18.96	18.95	18.94	18.93	18.93	
Moment of Inertia ($\leq \emptyset 48$)	[kgcm ²]	--	24.37	23.81	23.78	23.77	23.76	23.75	23.75	
Moment of Inertia ($\leq \emptyset 65$)	[kgcm ²]	--	--	--	--	--	--	--	--	
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*12	175							
Maximum Torsional Backlash	[arc-min]	--	≤ 11							
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							

EVL 205 2-Stage Dimensions

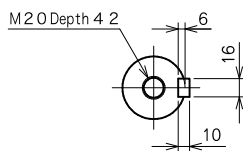
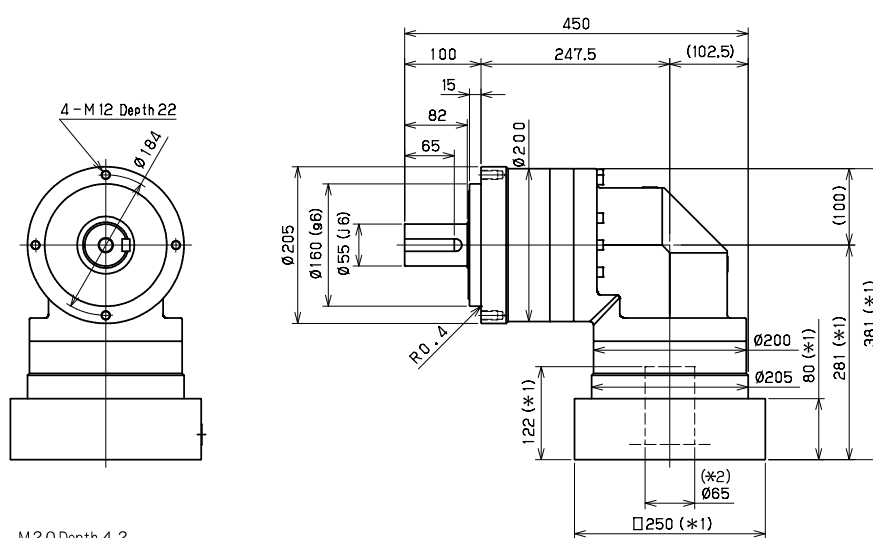
Input bore size $\leq \varnothing 38$ mm



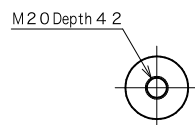
Input bore size $\leq \varnothing 48$ mm



Input bore size $\leq \varnothing 65$ mm



Keyed shaft



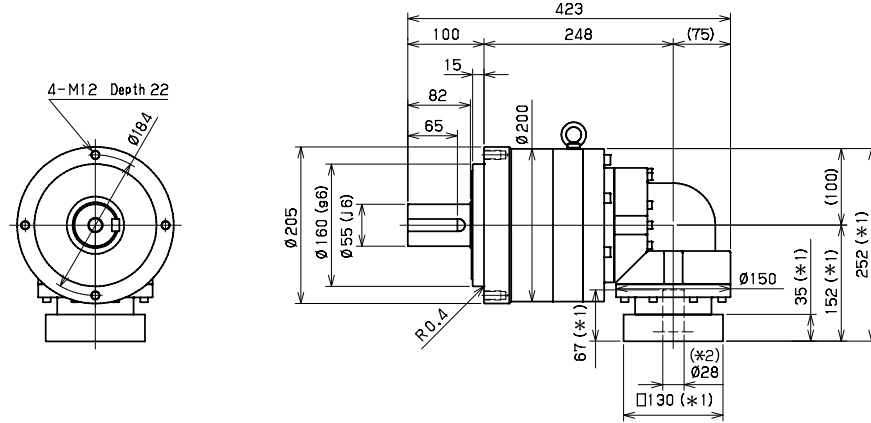
Smooth shaft

*1) Length will vary depending on motor.

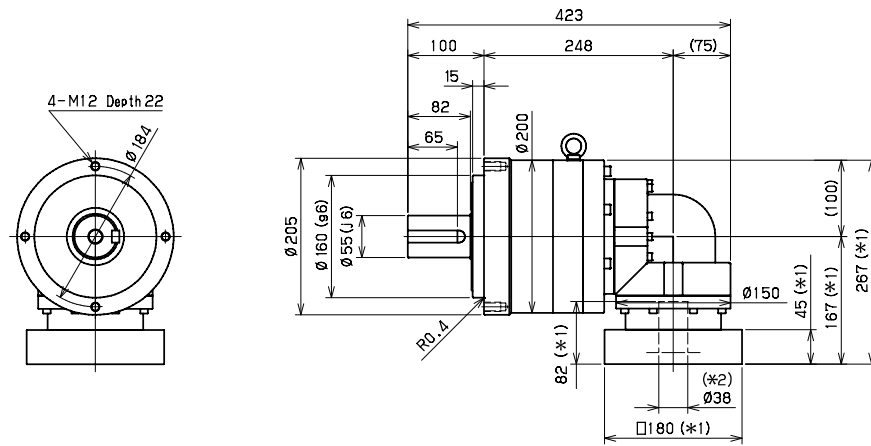
*2) Bushing will be inserted to adapt to motor shaft

EVL 205 3-Stage Dimensions

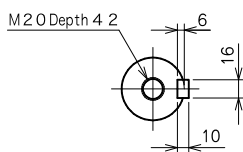
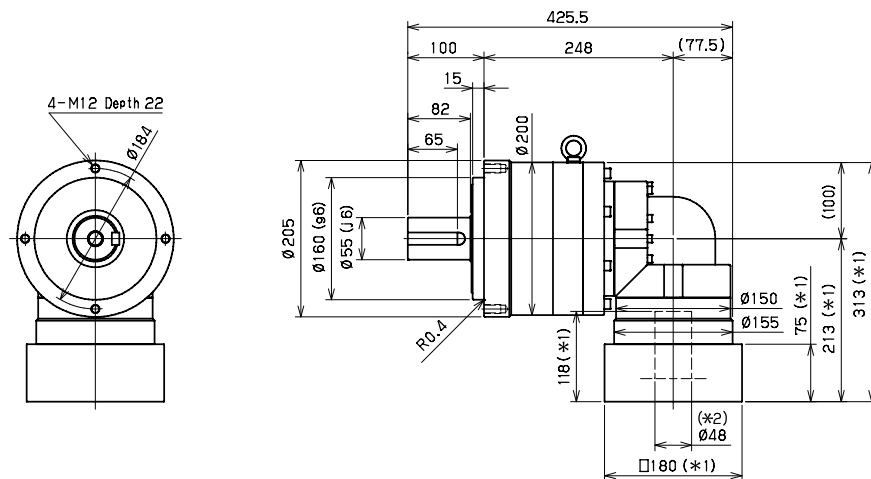
Input bore size $\leq \varnothing 28$ mm



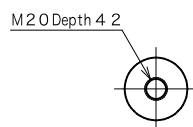
Input bore size $\leq \varnothing 38$ mm



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

EVL 235 2-Stage Specifications

Frame Size	235											
Stage	2-Stage											
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	5800	6400	6900	7300	7700	8000	8400	8700		
Permitted Axial Load	[N]	*8	6400	7200	7900	8600	9200	9700	10000	11000		
Maximum Radial Load	[N]	*9	15000									
Maximum Axial Load	[N]	*10	14000									
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	--	--	--	--	--	--	--	--		
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	148.00	122.90	113.30	108.10	104.70	102.70	101.60	101.00		
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	223.20	198.10	188.60	183.30	180.00	178.00	176.80	176.20		
Efficiency	[%]	*11	93									
Torsional Rigidity	[Nm/arc-min]	*12	400									
Maximum Torsional Backlash	[arc-min]	--	≤ 8									
Noise Level	dB [A]	*13	≤ 85									
Protection Class	--	*14	IP54 (IP65)									
Ambient Temperature	[°C]	--	0-40									
Permitted Housing Temperature	[°C]	--	90									
Weight	[kg]	*15	68									

- *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 SIT S.p.A. for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details
- *15) The weight may vary slightly between models

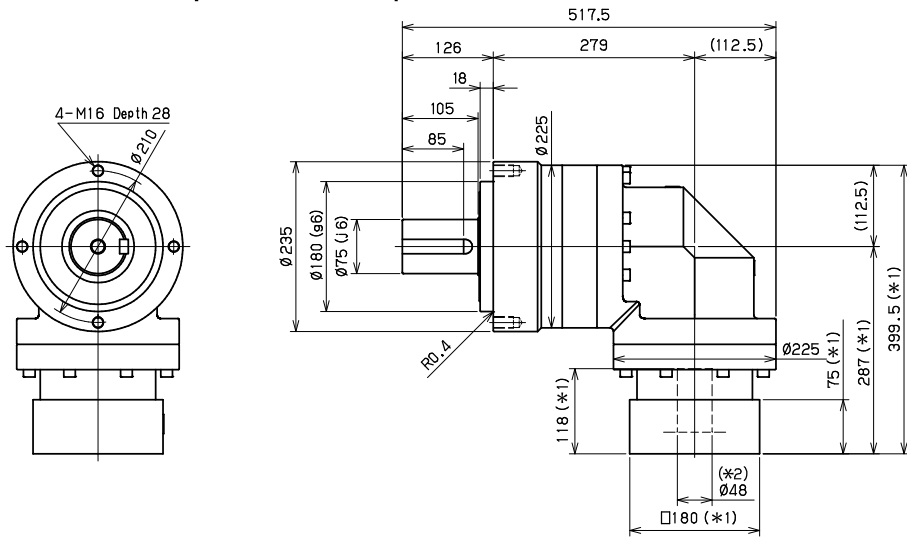
EVL 235 3-Stage Specifications

Frame Size	235									
Stage	3-Stage									
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	9900	10000	11000	12000	12000	13000	13000	14000
Permitted Axial Load	[N]	*8	13000	13000	14000	14000	14000	14000	14000	14000
Maximum Radial Load	[N]	*9	15000							
Maximum Axial Load	[N]	*10	14000							
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	36.32	37.24	35.75	35.47	36.39	34.39	35.21	34.25
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	66.14	67.06	65.57	65.28	66.21	64.21	65.03	64.07
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*12	400							
Maximum Torsional Backlash	[arc-min]	--	≤ 11							
Noise Level	dB [A]	*13	≤ 85							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	70							

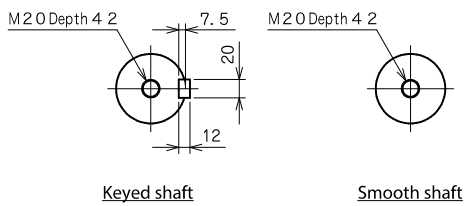
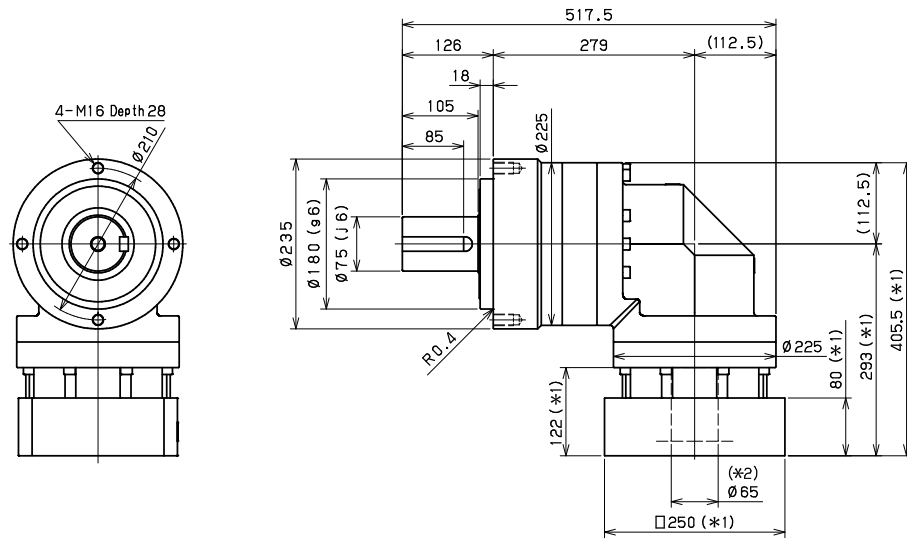
Frame Size	235									
Stage	3-Stage									
Ratio	Units	Note	45	50	60	70	80	90	100	
Nominal Output Torque	[Nm]	*1	800	1200	1200	1200	1200	800	800	
Maximum Acceleration Torque	[Nm]	*2	1040	1840	1840	1840	1440	1040	960	
Emergency Stop Torque	[Nm]	*3	3600	4500	4500	4500	4500	3600	3600	
Nominal Input Speed	[rpm]	*4	1000							
Maximum Input Speed	[rpm]	*5	2000							
No Load Running Torque	[Nm]	*6	10.2							
Permitted Radial Load	[N]	*7	14000	15000	15000	15000	15000	15000	15000	
Permitted Axial Load	[N]	*8	14000	14000	14000	14000	14000	14000	14000	
Maximum Radial Load	[N]	*9	15000							
Maximum Axial Load	[N]	*10	14000							
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	35.10	34.18	34.14	34.11	34.10	34.09	34.08	
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	64.92	63.99	63.95	63.93	63.91	63.90	63.90	
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	--	--	--	--	--	--	--	
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*12	400							
Maximum Torsional Backlash	[arc-min]	--	≤ 11							
Noise Level	dB [A]	*13	≤ 85							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	70							

EVL 235 2-Stage Dimensions

Input bore size $\leq \varnothing 48$ mm



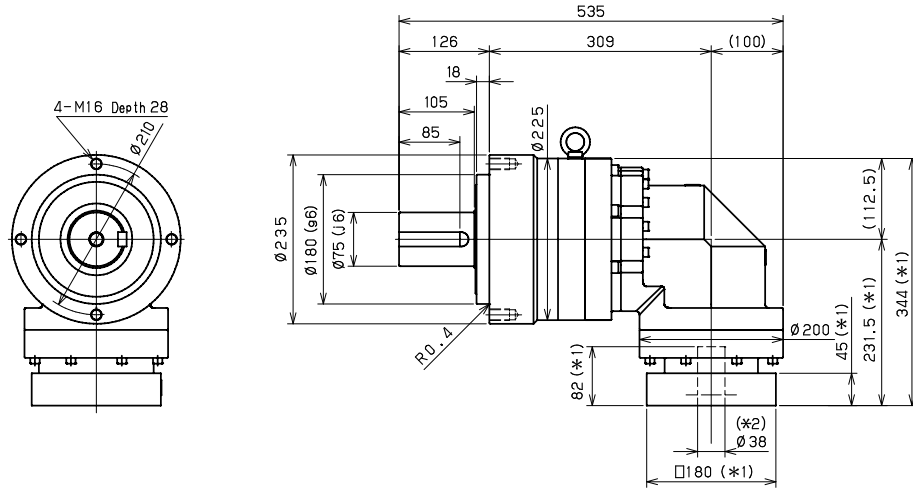
Input bore size $\leq \varnothing 65$ mm



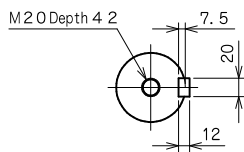
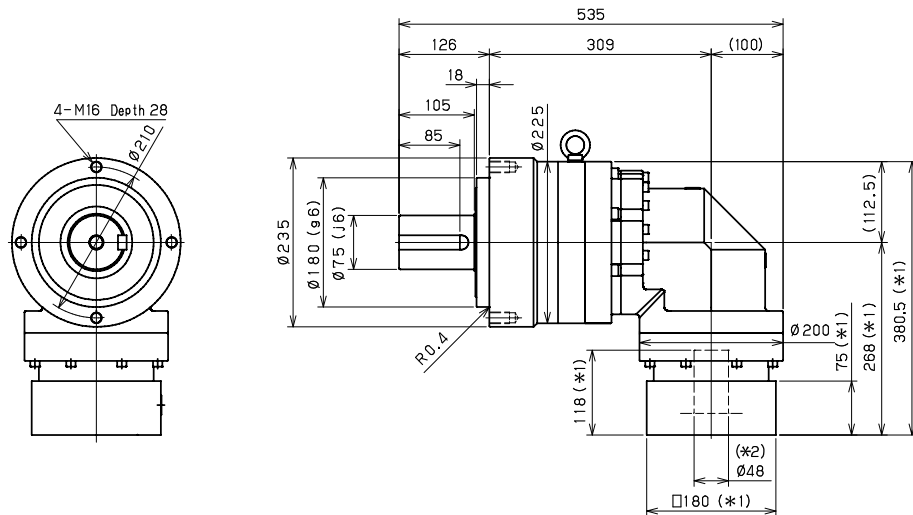
- *1) Length will vary depending on motor.
- *2) Bushing will be inserted to adapt to motor shaft

EVL 235 3-Stage Dimensions

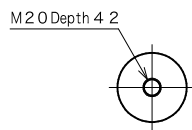
Input bore size $\leq \varnothing 38$ mm



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

EVB SERIES

The background of the lower half of the page features a high-quality photograph of several industrial components from the EVB series. These components are made of polished metal and are arranged in a way that shows different views and parts, including shafts, flanges, and housing units. The lighting is soft, highlighting the metallic textures and precise engineering of the parts.

EVB series

EVB planetary gearbox with right angle

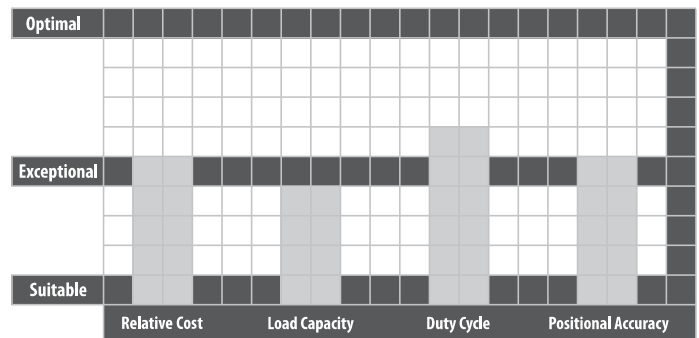
Precision, easy mounting by square flange

Description

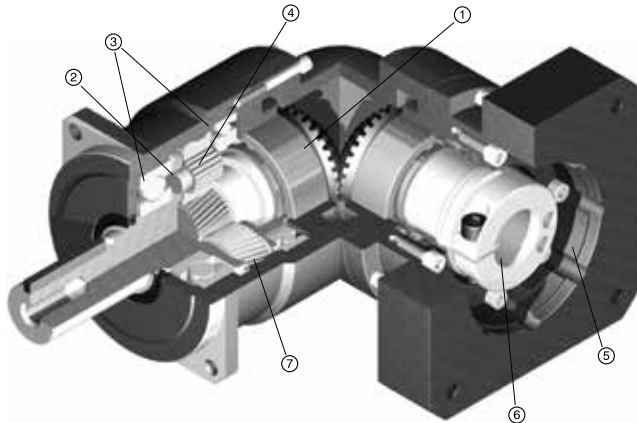
An excellent choice for applications requiring high positional accuracy and dynamic performance. The EVB is a ≤ 4 arc-min gearbox that offers a right angle design with a through hole mounting style, making it compact and easy to assemble onto various equipment. This product is an ideal fit for various belt drive and actuator applications found throughout the packaging and assembly cell automation markets.

Various standard wash down and food grade options are available, making the EVB an attractive choice for the toughest environments. We offer the broadest selection of frame sizes and ratios, with immediate availability on most configurations. Industry standard mounting dimensions allow the EVB to be employed in legacy equipment designs, saving our customers time and money.

- Compact, space-saving solution for mid to high end motion control applications
- The widest range of frame sizes and ratios available in the market
- Best-in-class backlash (≤ 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



Features



1 Right angle bevel gear configuration allows motor to be mounted at a 90 degree position from the gearbox, saving space

- 2 Carburized helical gears with proprietary secondary finishing process for higher accuracy and smooth, quiet operation. 40% higher tooth surface area than the industry standard
- 3 One piece output shaft and planet carrier with two bearings straddling the planet gears. Higher stiffness, torque capacity and safety factor, with guaranteed alignment of gearing
- 4 Uncaged needle roller bearings provide excellent torque density and torsional rigidity. 43% larger bearing surface area compared to the rest of the industry
- 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

Part Number	EVB -090 -7 -K 4 -19HB16			
Model name - EVB series				
Size: 060, 090, 115, 140, 180, 220				Motor mounting code (*)
Ratio: 2 stage: 3, 4, 5, 6, 7, 8, 9, 10 3 stage: 15, 16, 20, 25, 28, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100				Backlash: 060, 140 \leq 4-7 arc-min / 180, 220 \leq 8-11 arc-min
Output mounting style: K: Keyed shaft / S: Smooth shaft				

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

EVB 060 2-Stage Specifications

Frame Size	060									
Stage	2-Stage									
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	430	470	510	540	570	600	620	640
Permitted Axial Load	[N]	*8	310	360	390	430	460	480	510	530
Maximum Radial Load	[N]	*9	1200							
Maximum Axial Load	[N]	*10	1100							
Moment of Inertia ($\leq \varnothing 8$)	[kgcm ²]	--	0.310	0.270	0.250	0.240	0.230	0.230	0.230	0.230
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	0.390	0.340	0.320	0.310	0.310	0.310	0.300	0.300
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	0.580	0.530	0.510	0.500	0.500	0.500	0.490	0.490
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	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 SIT S.p.A. for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details
- *15) The weight may vary slightly between models

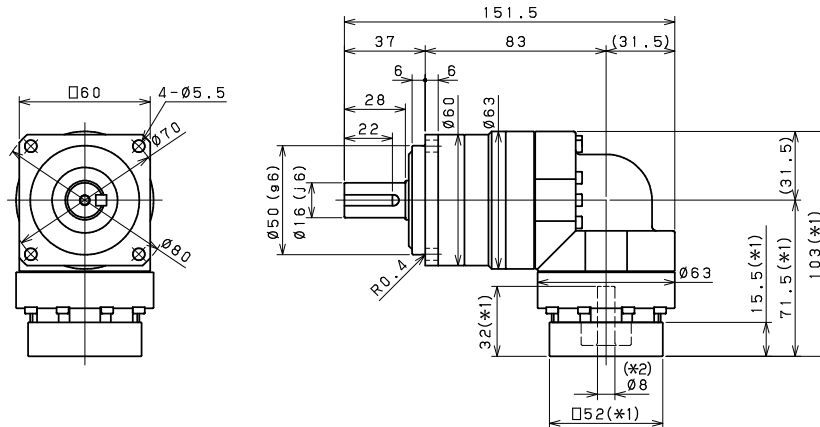
EVB 060 3-Stage Specifications

Frame Size	060									
Stage	3-Stage									
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	740	750	810	870	910	930	980	1000
Permitted Axial Load	[N]	*8	630	650	720	790	830	860	920	970
Maximum Radial Load	[N]	*9	1200							
Maximum Axial Load	[N]	*10	1100							
Moment of Inertia ($\leq \varnothing 8$)	[kgcm ²]	--	0.073	0.079	0.071	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
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
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	1.6							

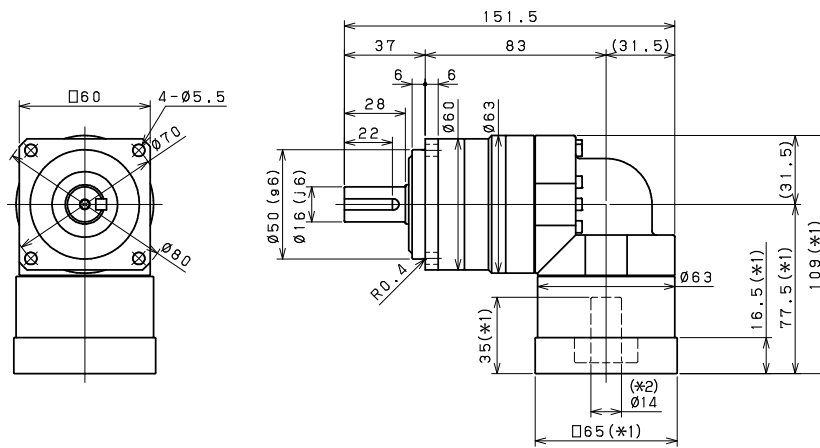
Frame Size	060									
Stage	3-Stage									
Ratio	Unit	Note	45	50	60	70	80	90	100	
Nominal Output Torque	[Nm]	*1	16	24	24	24	24	16	16	
Maximum Acceleration Torque	[Nm]	*2	32	45	45	45	45	32	32	
Emergency Stop Torque	[Nm]	*3	65	90	90	90	90	65	65	
Nominal Input Speed	[rpm]	*4	3000							
Maximum Input Speed	[rpm]	*5	6000							
No Load Running Torque	[Nm]	*6	0.20							
Permitted Radial Load	[N]	*7	1100	1100	1200	1200	1200	1200	1200	
Permitted Axial Load	[N]	*8	1000	1100	1100	1100	1100	1100	1100	
Maximum Radial Load	[N]	*9	1200							
Maximum Axial Load	[N]	*10	1100							
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	0.105	0.105	0.105	0.105	
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	--	--	--	--	--	--	--	
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	1.6							

EVB 060 2-Stage Dimensions

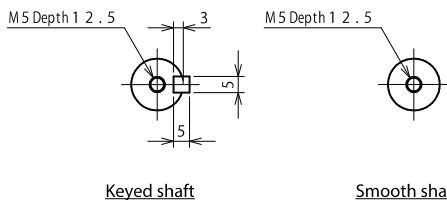
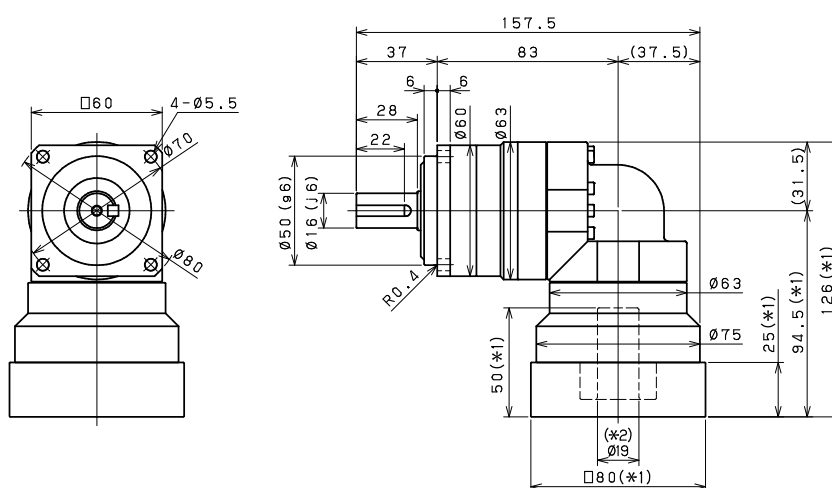
Input bore size $\leq \phi 8$ mm



Input bore size $\leq \phi 14$ mm



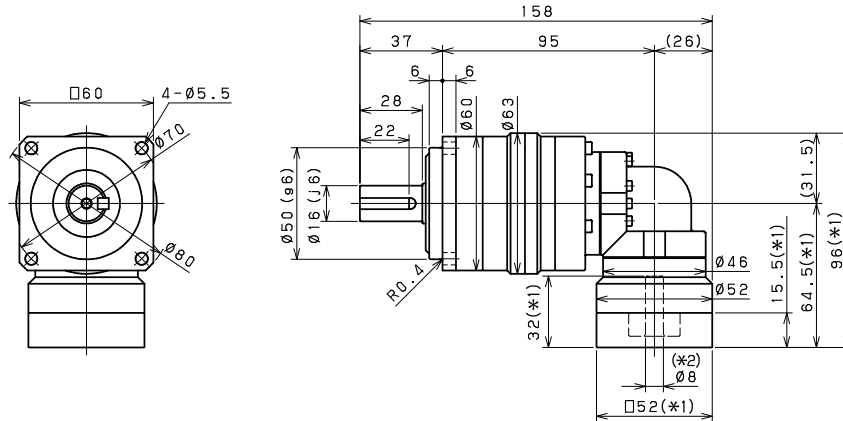
Input bore size $\leq \phi 19$ mm



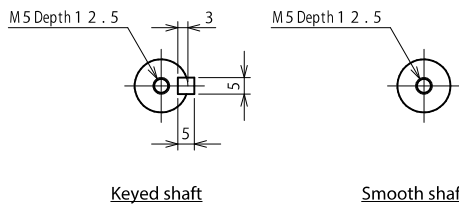
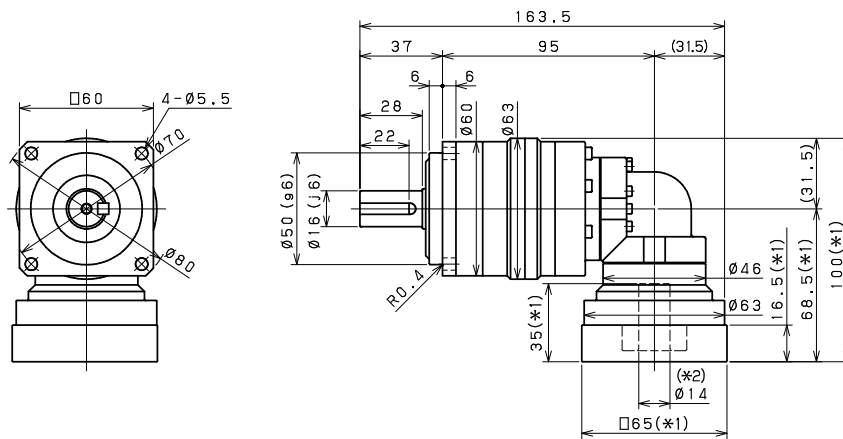
- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

EVB 060 3-Stage Dimensions

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



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



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

EVB 090 2-Stage Specifications

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

*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 SIT S.p.A. for the testing conditions and environment

*14) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details

*15) The weight may vary slightly between models

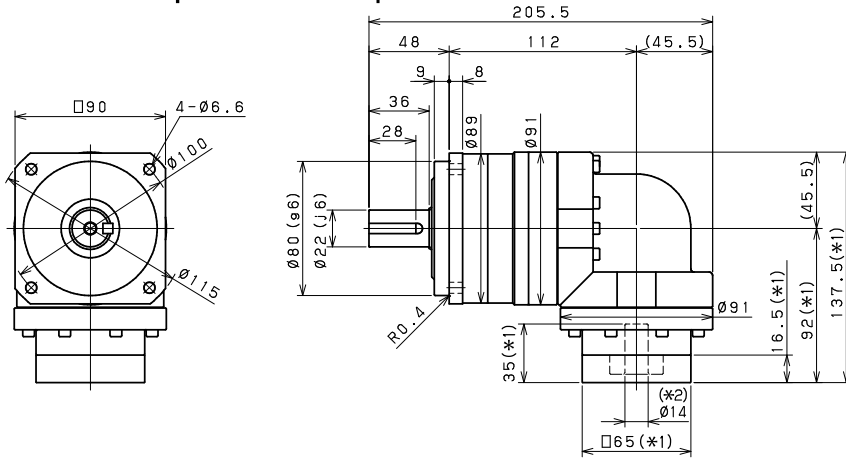
EVB 090 3-Stage Specifications

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

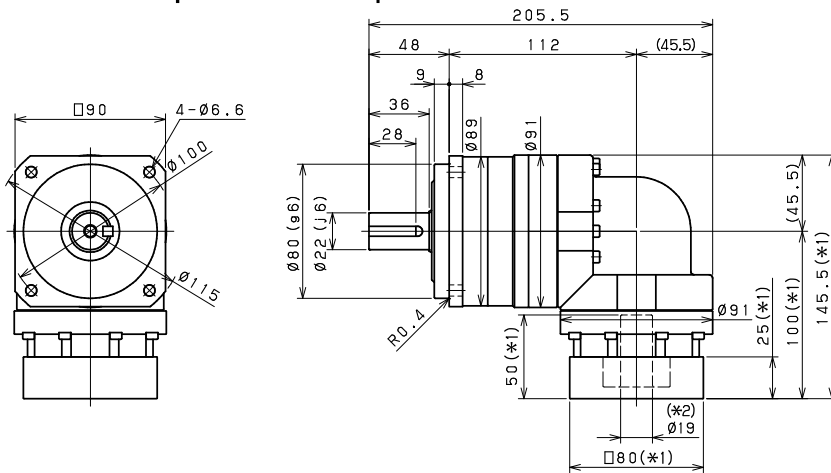
Frame Size	090									
Stage	3-Stage									
Ratio	Unit	Note	45	50	60	70	80	90	100	
Nominal Output Torque	[Nm]	*1	45	65	65	65	65	45	45	
Maximum Acceleration Torque	[Nm]	*2	65	110	110	110	110	65	65	
Emergency Stop Torque	[Nm]	*3	170	220	220	220	220	170	170	
Nominal Input Speed	[rpm]	*4	3000							
Maximum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

EVB 090 2-Stage Dimensions

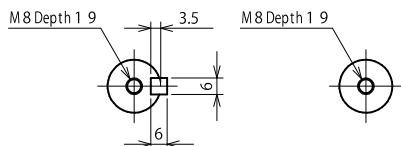
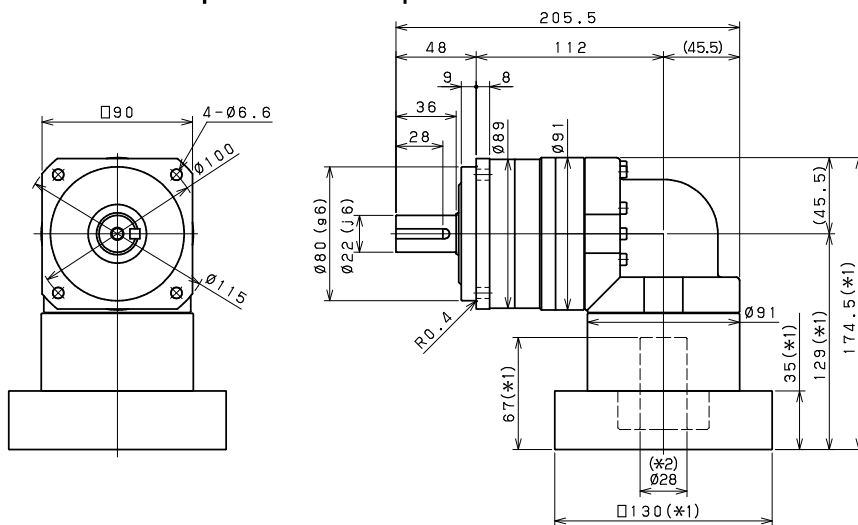
Input bore size $\leq \varnothing 14$ mm



Input bore size $\leq \varnothing 19$ mm



Input bore size $\leq \varnothing 28$ mm



Keyed shaft

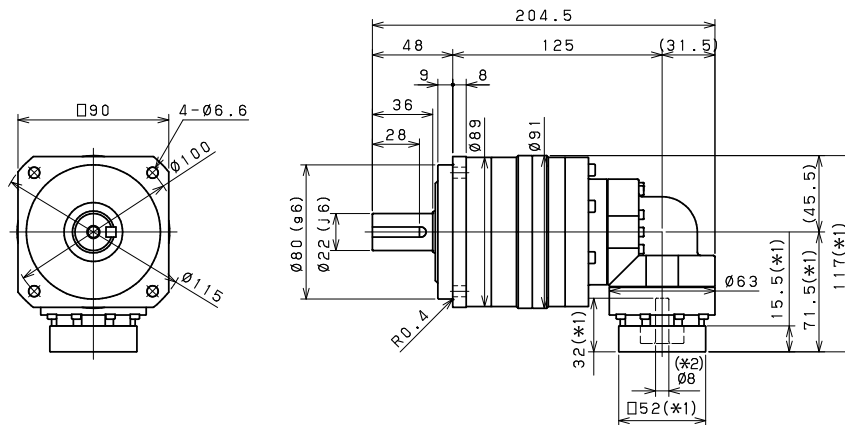
Smooth shaft

*1) Length will vary depending on motor

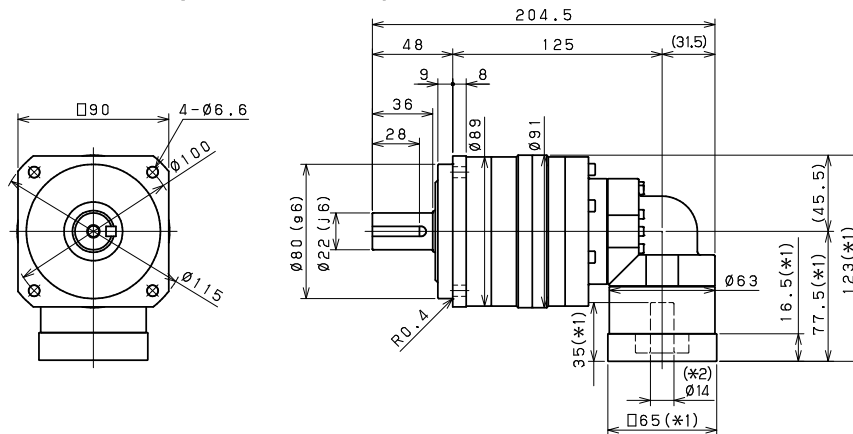
*2) Bushing will be inserted to adapt to motor shaft

EVB 090 3-Stage Dimensions

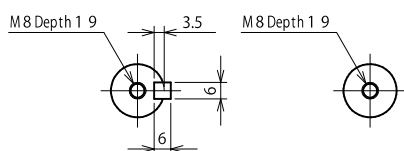
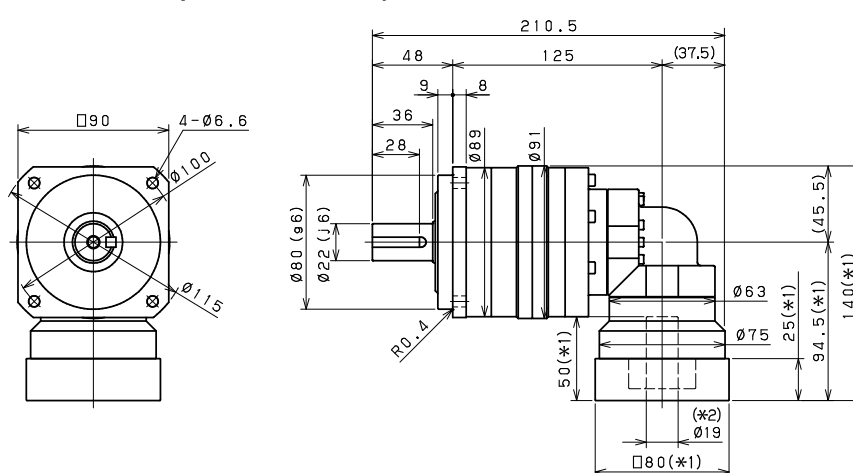
Input bore size $\leq \varnothing 8$ mm



Input bore size $\leq \varnothing 14$ mm



Input bore size $\leq \varnothing 19$ mm



Keyed shaft

Smooth shaft

*1) Length will vary depending on motor

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

EVB 115 2-Stage Specifications

Frame Size	115									
Stage	2-Stage									
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	1300	1500	1600	1700	1800	1900	1900	2000
Permitted Axial Load	[N]	*8	1500	1700	1900	2000	2100	2300	2400	2500
Maximum Radial Load	[N]	*9	4300							
Maximum Axial Load	[N]	*10	3900							
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	6.740	5.490	5.020	4.770	4.650	4.550	4.490	4.460
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	8.340	7.080	6.610	6.360	6.240	6.140	6.080	6.050
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	15.410	14.150	13.690	13.430	13.310	13.220	13.160	13.120
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	10.4							

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

*2) The maximum torque when starting or stopping operation

*3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)

*4) The average input speed

*5) The maximum intermittent input speed

*6) Torque at no load applied to the input shaft at nominal input speed

*7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side shaft center)

*8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output side bearing)

*9) The maximum radial load that the gearbox can accept

*10) The maximum axial load that the gearbox can accept

*11) The efficiency at the nominal output torque rating

*12) This does not include lost motion

*13) Contact SIT S.p.A. for the testing conditions and environment

*14) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details

*15) The weight may vary slightly between models

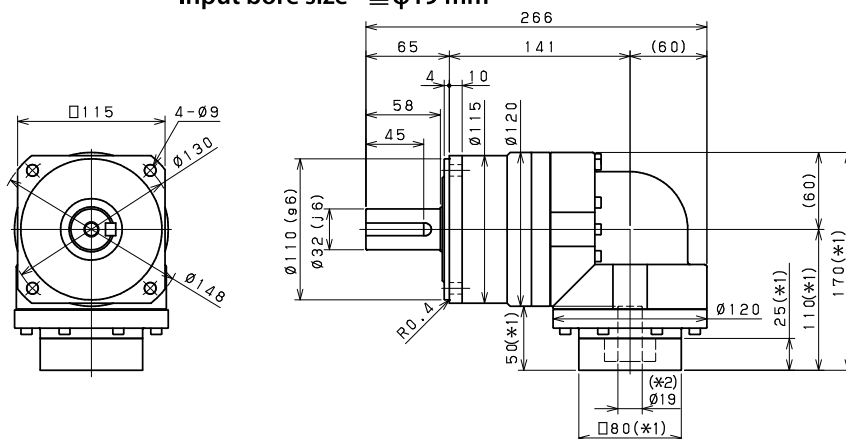
EVB 115 3-Stage Specifications

Frame Size	115									
Stage	3-Stage									
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	2300	2300	2500	2700	2800	2900	3000	3200
Permitted Axial Load	[N]	*8	3000	3100	3400	3700	3900	3900	3900	3900
Maximum Radial Load	[N]	*9	3900							
Maximum Axial Load	[N]	*10	3900							
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	2.250	2.460	2.200	2.180	2.400	1.870	2.160	1.860
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	2.580	2.790	2.530	2.510	2.730	2.200	2.490	2.190
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	4.700	4.910	4.650	4.640	4.860	4.330	4.620	4.320
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
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							

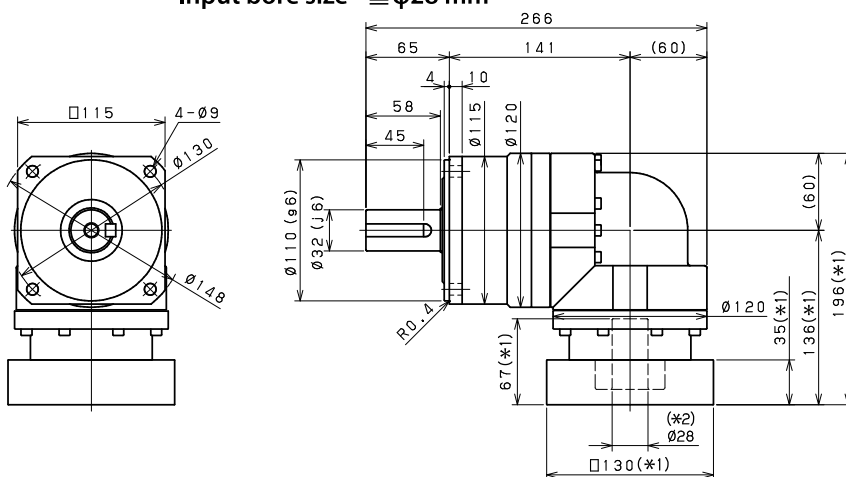
Frame Size	115									
Stage	3-Stage									
Ratio	Unit	Note	45	50	60	70	80	90	100	
Nominal Output Torque	[Nm]	*1	110	150	150	150	150	110	110	
Maximum Acceleration Torque	[Nm]	*2	200	300	300	300	300	200	200	
Emergency Stop Torque	[Nm]	*3	450	550	550	550	550	450	450	
Nominal Input Speed	[rpm]	*4	3000							
Maximum Input Speed	[rpm]	*5	6000							
No Load Running Torque	[Nm]	*6	1.11							
Permitted Radial Load	[N]	*7	3300	3400	3600	3800	4000	4200	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 ($\leq \varnothing 14$)	[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	
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	--	--	--	--	--	--	--	
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							

EVB 115 2-Stage Dimensions

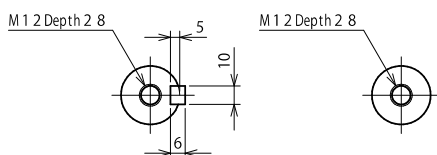
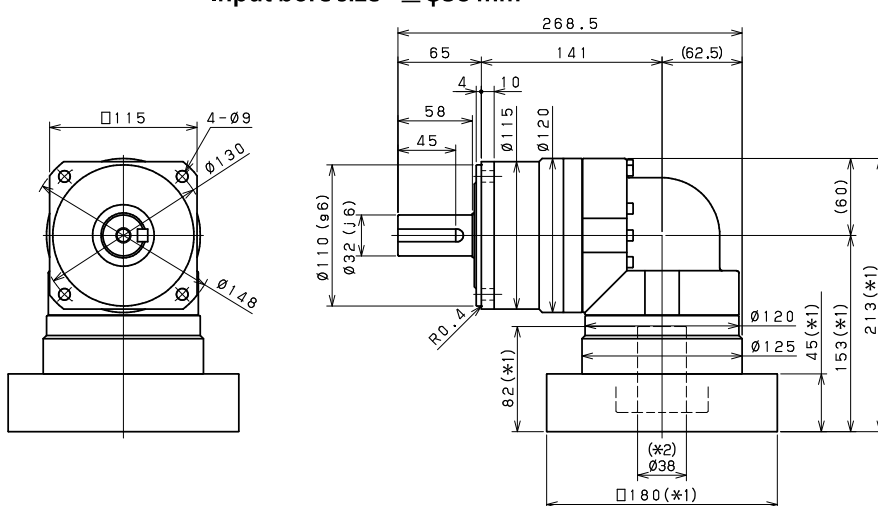
Input bore size $\leq \phi 19$ mm



Input bore size $\leq \phi 28$ mm



Input bore size $\leq \phi 38$ mm



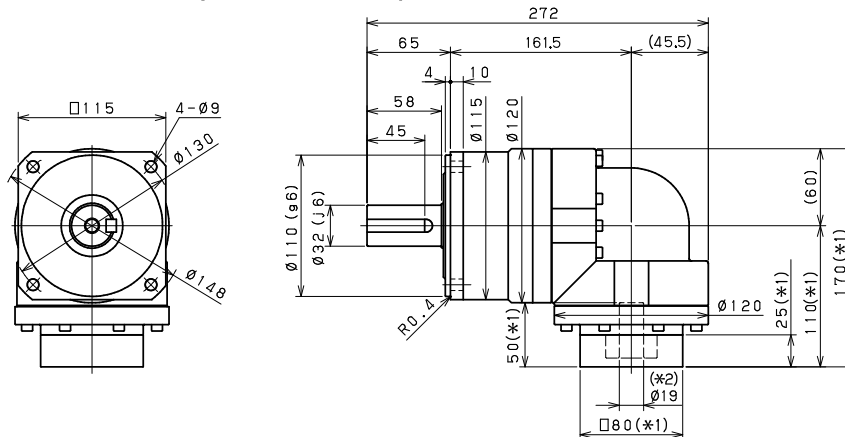
Keyed shaft

Smooth shaft

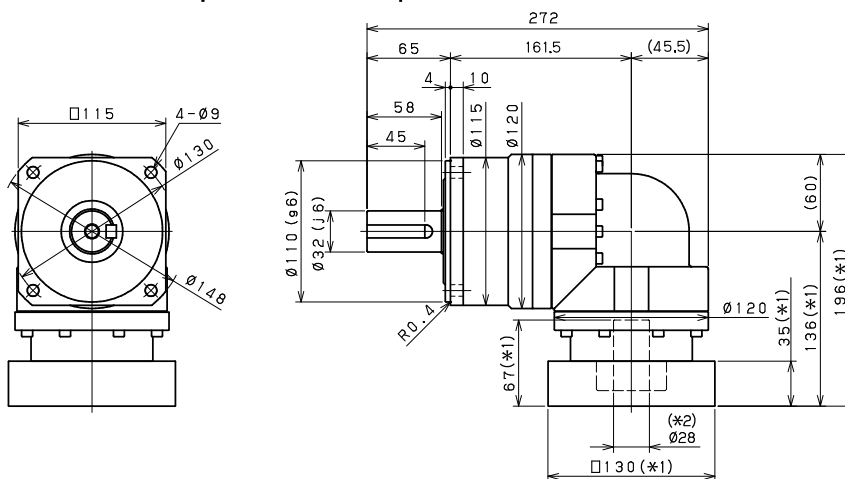
- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

EVB 115 3-Stage Dimensions

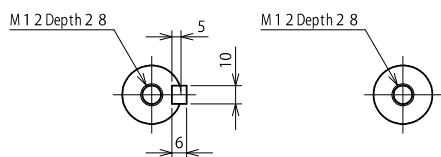
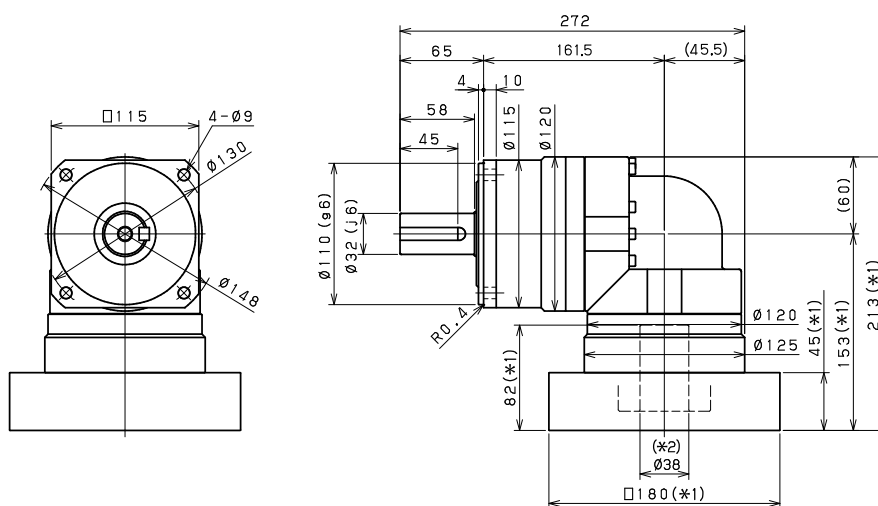
Input bore size $\leq \phi 14$ mm



Input bore size $\leq \phi 19$ mm



Input bore size $\leq \phi 28$ mm



Keyed shaft

Smooth shaft

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

EVB 140 2-Stage Specifications

Frame Size	140											
Stage	2-Stage											
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	3200	3500	3800	4000	4200	4400	4600	4700		
Permitted Axial Load	[N]	*8	2400	2700	3000	3300	3500	3700	3900	4100		
Maximum Radial Load	[N]	*9	9100									
Maximum Axial Load	[N]	*10	8200									
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	--	--	--	--	--	--	--	--		
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	23.130	18.570	16.910	16.010	15.580	15.230	14.770	14.660		
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	27.500	22.940	21.280	20.380	19.950	19.610	19.410	19.030		
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	40.730	36.170	34.510	33.610	33.180	32.840	32.370	32.260		
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	19.1									

*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 SIT S.p.A. for the testing conditions and environment

*14) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details

*15) The weight may vary slightly between models

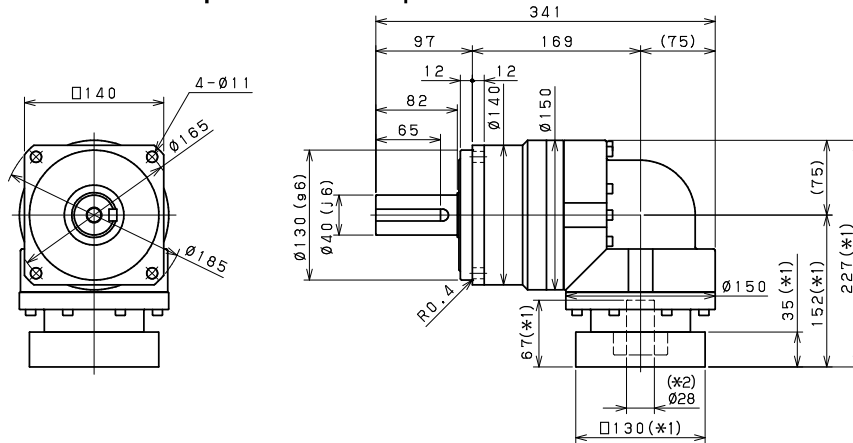
EVB 140 3-Stage Specifications

Frame Size	140									
Stage	3-Stage									
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	5400	5500	6000	6400	6700	6800	7200	7500
Permitted Axial Load	[N]	*8	4900	5000	5500	6100	6400	6600	7000	7500
Maximum Radial Load	[N]	*9	9100							
Maximum Axial Load	[N]	*10	8200							
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	6.400	7.290	6.220	6.150	7.090	4.990	6.090	4.950
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	8.000	8.880	7.810	7.750	8.680	6.580	7.690	6.540
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	15.070	15.960	14.890	14.820	15.760	13.660	14.760	13.610
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
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	19.6							

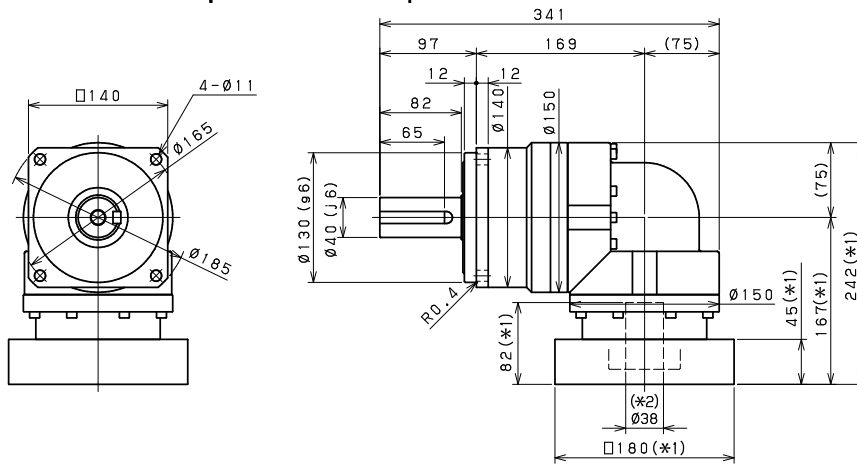
Frame Size	140									
Stage	3-Stage									
Ratio	Unit	Note	45	50	60	70	80	90	100	
Nominal Output Torque	[Nm]	*1	200	300	300	300	300	200	200	
Maximum Acceleration Torque	[Nm]	*2	400	600	600	600	600	400	400	
Emergency Stop Torque	[Nm]	*3	750	1100	1100	1100	1100	750	750	
Nominal Input Speed	[rpm]	*4	2000							
Maximum Input Speed	[rpm]	*5	4000							
No Load Running Torque	[Nm]	*6	2.56							
Permitted Radial Load	[N]	*7	7800	8100	8600	9100	9100	9100	9100	
Permitted Axial Load	[N]	*8	7900	8200	8200	8200	8200	8200	8200	
Maximum Radial Load	[N]	*9	9100							
Maximum Axial Load	[N]	*10	8200							
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]	--	14.740	13.590	13.590	13.580	13.580	13.570	13.570	
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	--	--	--	--	--	--	--	
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	19.6							

EVB 140 2-Stage Dimensions

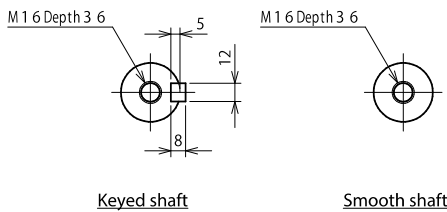
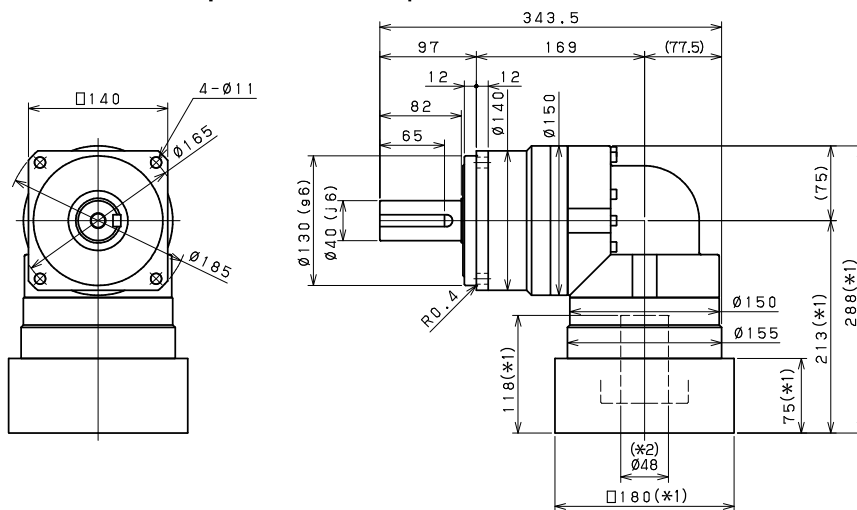
Input bore size $\leq \phi 28$ mm



Input bore size $\leq \phi 38$ mm



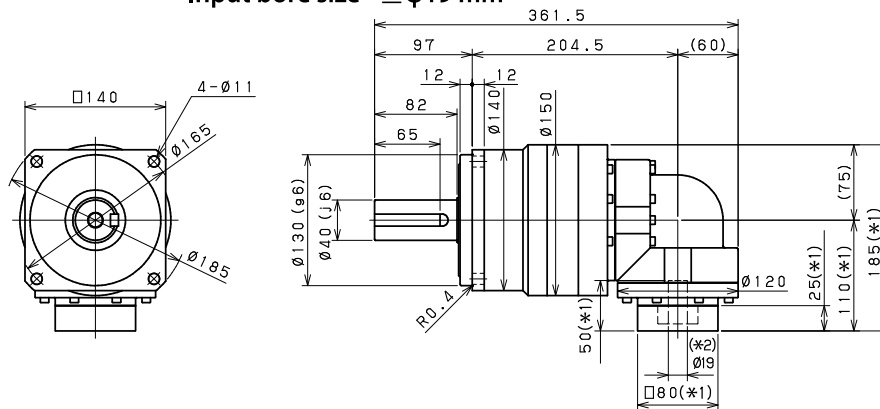
Input bore size $\leq \phi 48$ mm



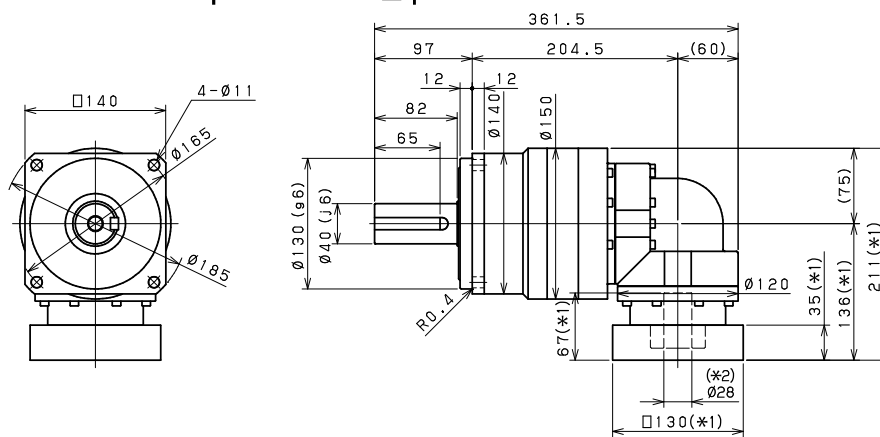
- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

EVB 140 3-Stage Dimensions

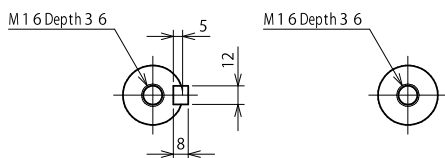
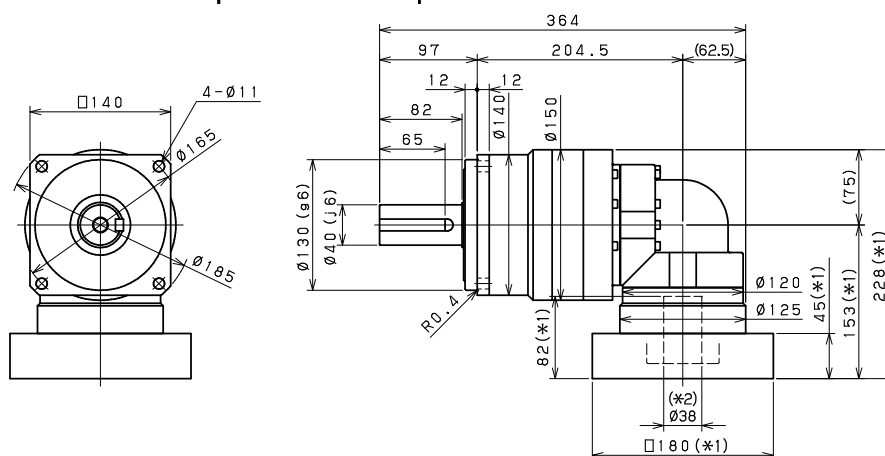
Input bore size $\leq \phi 19$ mm



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

EVB 180 2-Stage Specifications

Frame Size	180									
Stage	2-Stage									
Ratio	Units	Note	3	4	5	6	7	8	9	10
Nominal Output Torque	[Nm]	*1	400	575	600	600	600	600	400	400
Maximum Acceleration Torque	[Nm]	*2	575	770	960	1120	1120	1120	775	775
Emergency Stop Torque	[Nm]	*3	1300	1700	2000	2500	2500	2500	2000	2000
Nominal Input Speed	[rpm]	*4	1500							
Maximum Input Speed	[rpm]	*5	3000							
No Load Running Torque	[Nm]	*6	10.8							
Permitted Radial Load	[N]	*7	5600	6200	6700	7100	7400	7800	8100	8400
Permitted Axial Load	[N]	*8	4300	4900	5400	5800	6300	6600	7000	7300
Maximum Radial Load	[N]	*9	15000							
Maximum Axial Load	[N]	*10	14000							
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	93.71	77.72	71.89	68.74	66.43	65.27	64.60	64.28
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	128.6	112.6	106.8	103.6	101.3	100.1	99.46	99.14
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	214.2	198.2	192.4	189.2	186.9	185.7	185.1	184.7
Efficiency	[%]	*11	93							
Torsional Rigidity	[Nm/arc-min]	*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	49							

- *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 SIT S.p.A. for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details
- *15) The weight may vary slightly between models

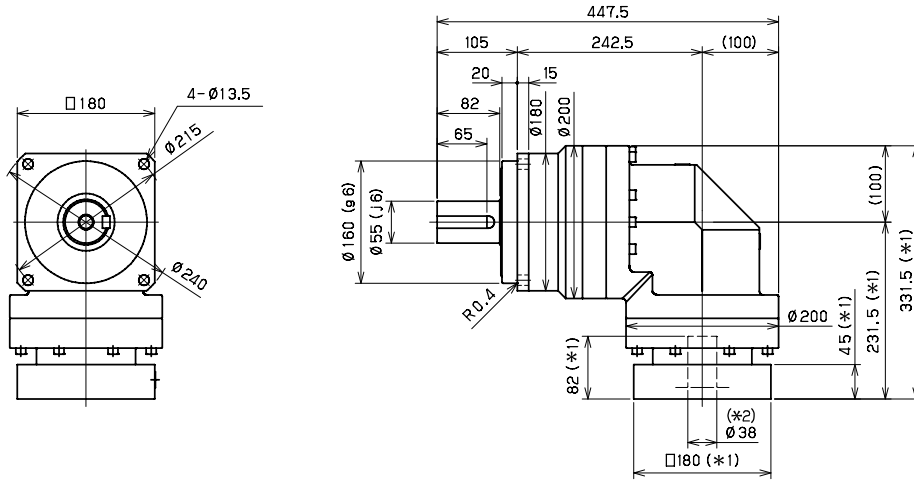
EVB 180 3-Stage Specifications

Frame Size	180									
Stage	3-Stage									
Ratio	Units	Note	15	16	20	25	28	30	35	40
Nominal Output Torque	[Nm]	*1	400	555	600	600	600	400	600	600
Maximum Acceleration Torque	[Nm]	*2	775	1120	1120	1120	1120	775	1120	1120
Emergency Stop Torque	[Nm]	*3	2000	2500	2500	2500	2500	2000	2500	2500
Nominal Input Speed	[rpm]	*4	1500							
Maximum Input Speed	[rpm]	*5	3000							
No Load Running Torque	[Nm]	*6	4.7							
Permitted Radial Load	[N]	*7	9600	9800	11000	11000	12000	12000	13000	13000
Permitted Axial Load	[N]	*8	8700	8900	9900	11000	11000	12000	13000	13000
Maximum Radial Load	[N]	*9	15000							
Maximum Axial Load	[N]	*10	14000							
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	11.49	12.09	11.15	10.98	11.59	10.33	10.83	10.24
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	20.28	20.88	19.94	19.77	20.38	19.11	19.62	19.03
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	25.10	25.70	24.76	24.59	25.20	23.94	24.44	23.85
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*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	36							

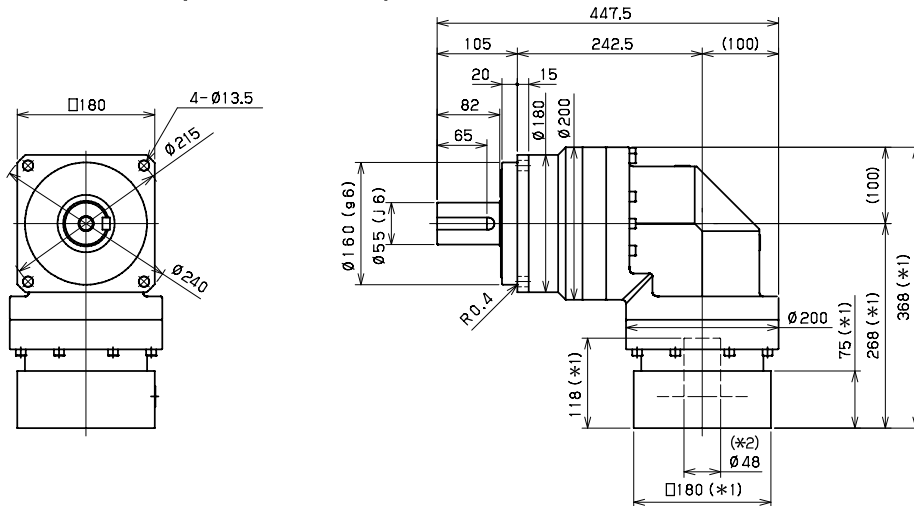
Frame Size	180									
Stage	3-Stage									
Ratio	Units	Note	45	50	60	70	80	90	100	
Nominal Output Torque	[Nm]	*1	400	600	600	600	600	400	400	
Maximum Acceleration Torque	[Nm]	*2	775	1120	1120	1120	1120	775	775	
Emergency Stop Torque	[Nm]	*3	2000	2500	2500	2500	2500	2000	2000	
Nominal Input Speed	[rpm]	*4	1500							
Maximum Input Speed	[rpm]	*5	3000							
No Load Running Torque	[Nm]	*6	4.7							
Permitted Radial Load	[N]	*7	14000	14000	15000	15000	15000	15000	15000	
Permitted Axial Load	[N]	*8	14000	14000	14000	14000	14000	14000	14000	
Maximum Radial Load	[N]	*9	15000							
Maximum Axial Load	[N]	*10	14000							
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	10.76	10.20	10.18	10.16	10.15	10.15	10.14	
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	19.55	18.99	18.96	18.95	18.94	18.93	18.93	
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	24.37	23.81	23.78	23.77	23.76	23.75	23.75	
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	--	--	--	--	--	--	--	
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*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	36							

EVB 180 2-Stage Dimensions

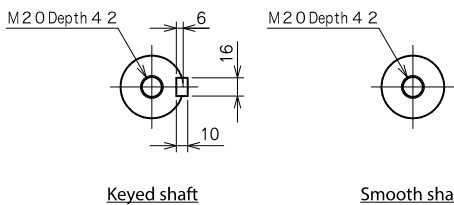
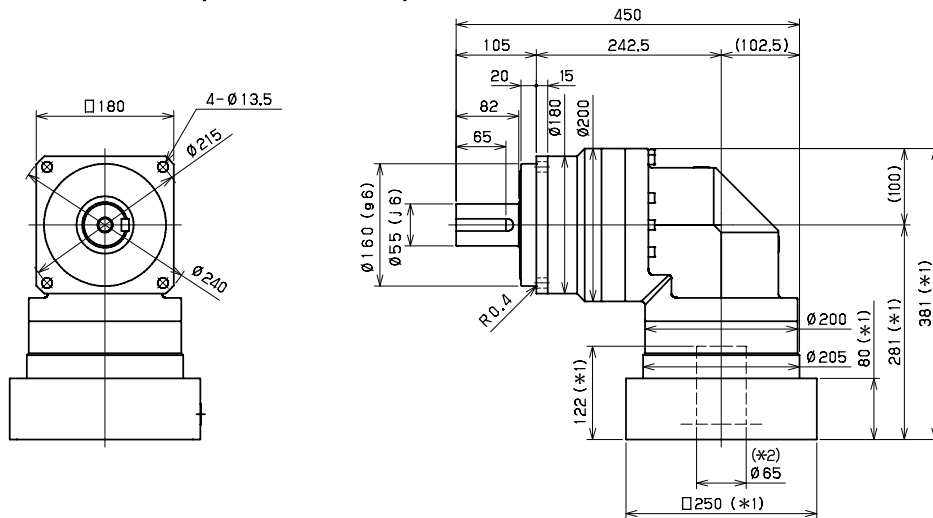
Input bore size $\leq \varnothing 38$ mm



Input bore size $\leq \varnothing 48$ mm



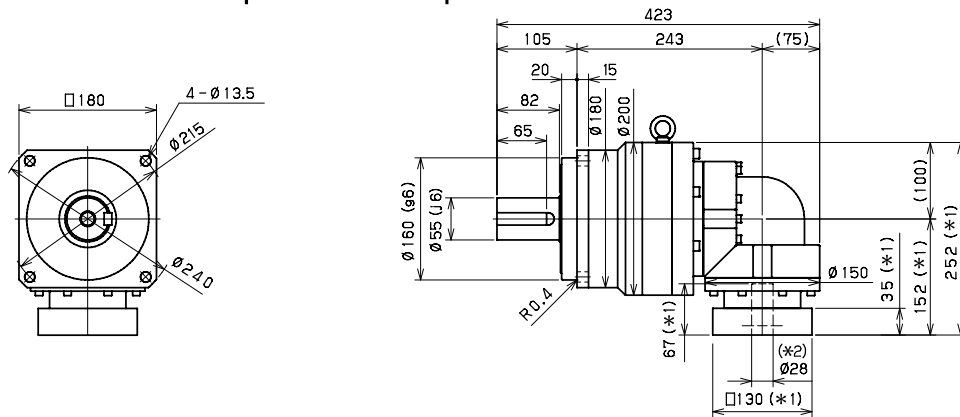
Input bore size $\leq \varnothing 65$ mm



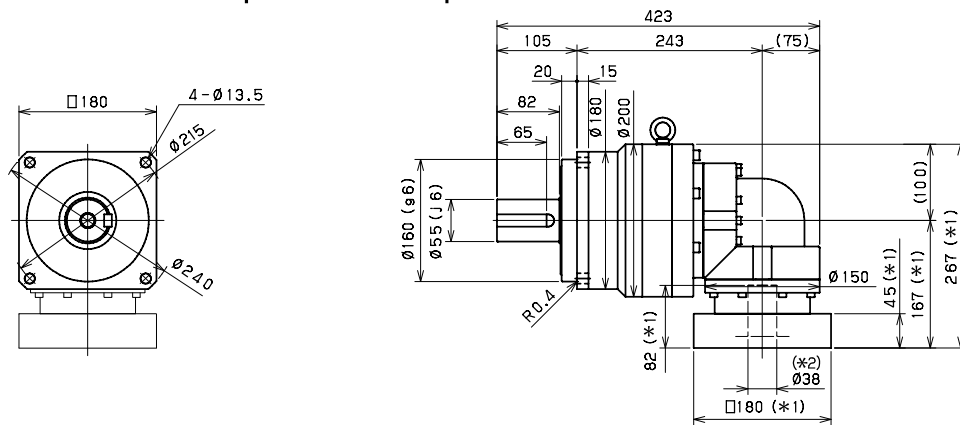
- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

EVB 180 3-Stage Dimensions

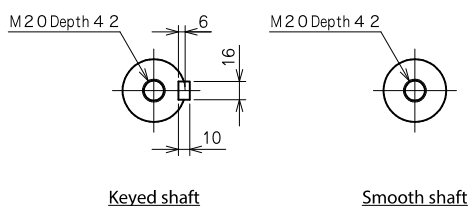
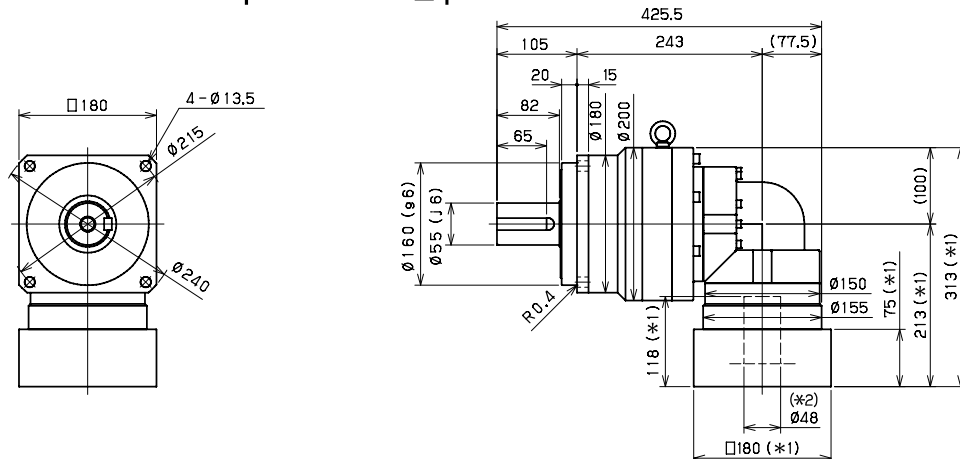
Input bore size $\cong \varnothing 28$ mm



Input bore size $\cong \varnothing 38$ mm



Input bore size $\cong \varnothing 48$ mm



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

EVB 220 2-Stage Specifications

Frame Size	220											
Stage	2-Stage											
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	5800	6400	6900	7300	7700	8000	8400	8700		
Permitted Axial Load	[N]	*8	6400	7200	7900	8600	9200	9700	10000	11000		
Maximum Radial Load	[N]	*9	15000									
Maximum Axial Load	[N]	*10	14000									
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	--	--	--	--	--	--	--	--		
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	148.0	122.9	113.3	108.1	104.7	102.7	101.6	101.0		
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	223.2	198.1	188.6	183.3	180.0	178.0	176.8	176.2		
Efficiency	[%]	*11	93									
Torsional Rigidity	[Nm/arc-min]	*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	66									

- *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 SIT S.p.A. for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details
- *15) The weight may vary slightly between models

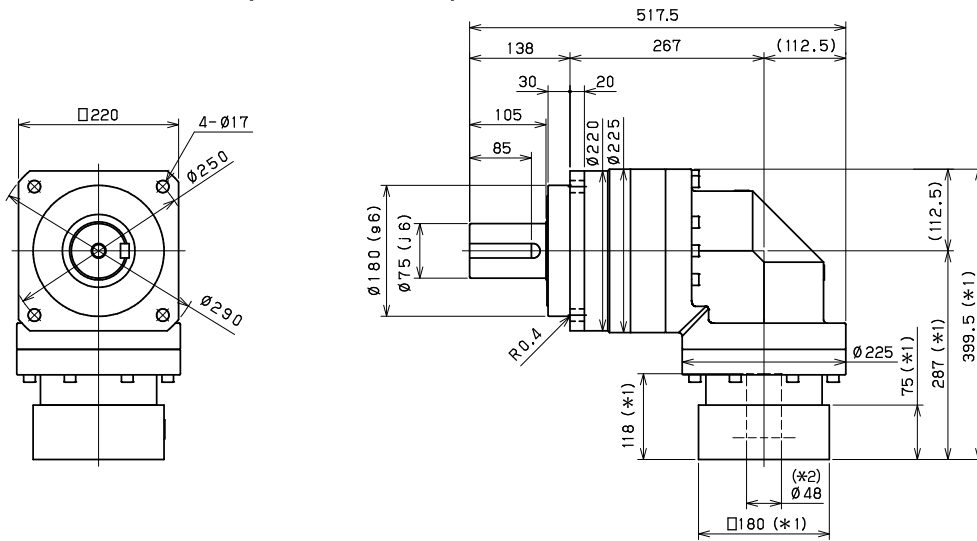
EVB 220 3-Stage Specifications

Frame Size	220									
Stage	3-Stage									
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	9900	10000	11000	12000	12000	13000	13000	14000
Permitted Axial Load	[N]	*8	13000	13000	14000	14000	14000	14000	14000	14000
Maximum Radial Load	[N]	*9	15000							
Maximum Axial Load	[N]	*10	14000							
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	36.32	37.24	35.75	35.47	36.39	34.39	35.21	34.25
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	66.14	67.06	65.57	65.28	66.21	64.21	65.03	64.07
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*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	67							

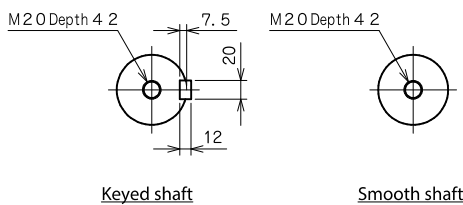
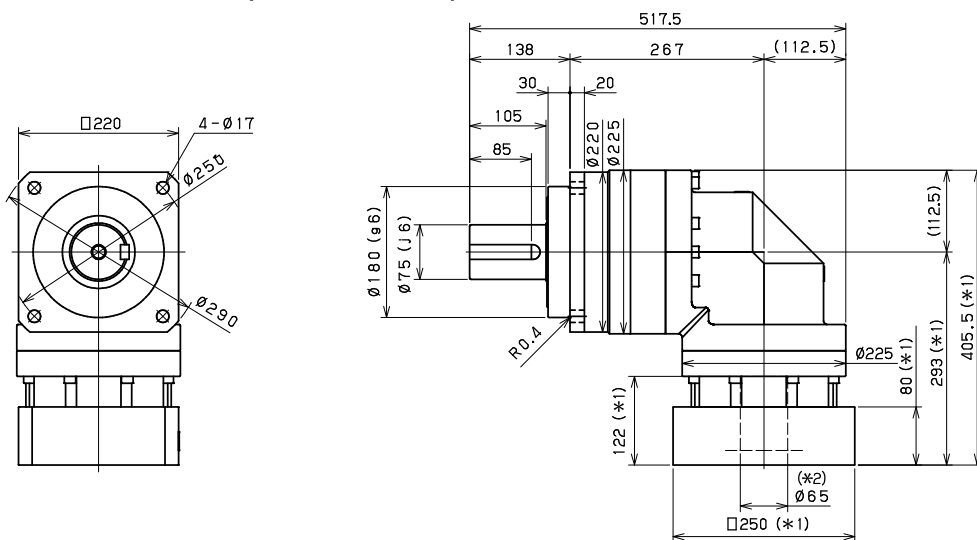
Frame Size	220									
Stage	3-Stage									
Ratio	Units	Note	45	50	60	70	80	90	100	
Nominal Output Torque	[Nm]	*1	800	1200	1200	1200	1200	800	800	
Maximum Acceleration Torque	[Nm]	*2	1040	1840	1840	1840	1440	1040	960	
Emergency Stop Torque	[Nm]	*3	3600	4500	4500	4500	4500	3600	3600	
Nominal Input Speed	[rpm]	*4	1000							
Maximum Input Speed	[rpm]	*5	2000							
No Load Running Torque	[Nm]	*6	10.2							
Permitted Radial Load	[N]	*7	14000	15000	15000	15000	15000	15000	15000	
Permitted Axial Load	[N]	*8	14000	14000	14000	14000	14000	14000	14000	
Maximum Radial Load	[N]	*9	15000							
Maximum Axial Load	[N]	*10	14000							
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	35.10	34.18	34.14	34.11	34.10	34.09	34.08	
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	64.92	63.99	63.95	63.93	63.91	63.90	63.90	
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	--	--	--	--	--	--	--	
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*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	67							

EVB 220 2-Stage Dimensions

Input bore size $\leq \varnothing 48$ mm



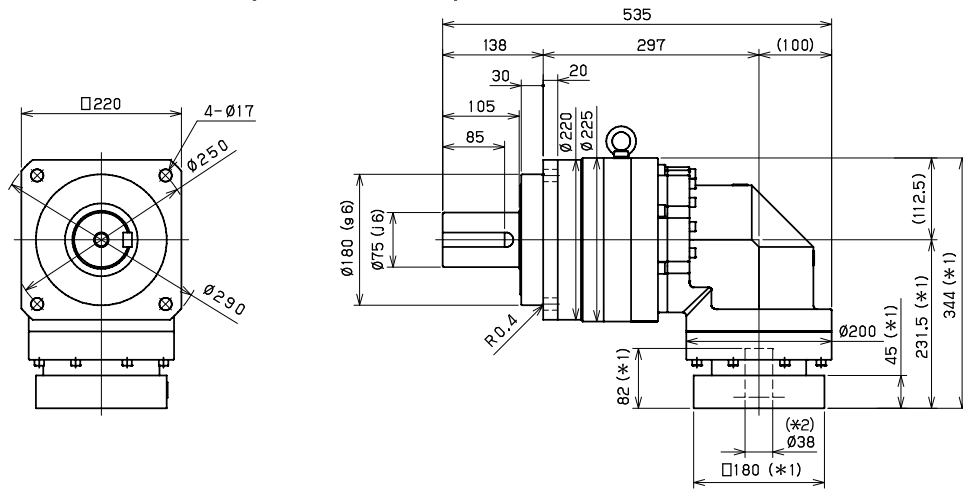
Input bore size $\leq \varnothing 65$ mm



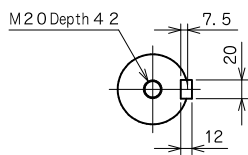
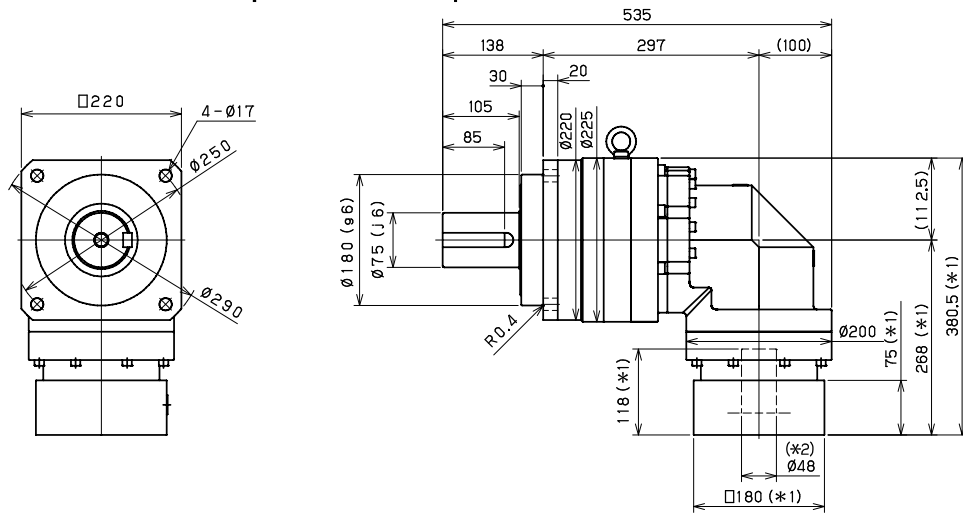
- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

EVB 220 3-Stage Dimensions

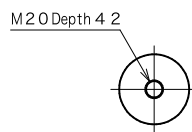
Input bore size $\leq \phi 38$ mm



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



EVS series



EVS planetary gearbox with right angle

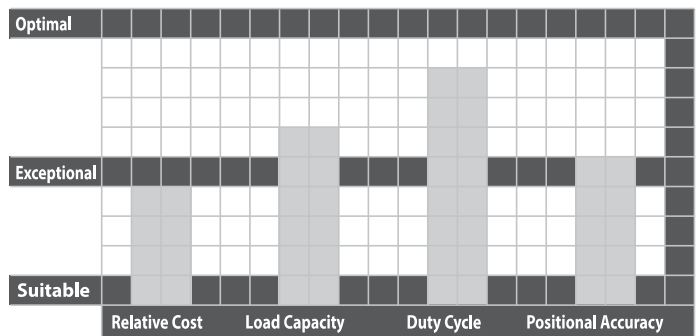
High precision, versatility and high radial and axial load

Description

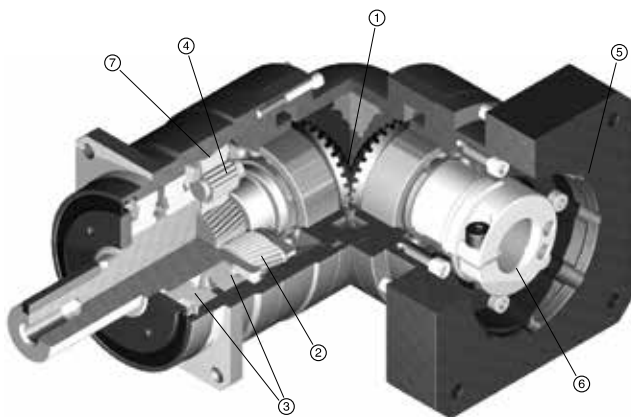
The EVS series is the right angle equivalent to the VRS. Compact and precise, the EVS is the ideal solution for demanding positioning accuracy and speed requirements. Equipped with two rows of robust tapered roller bearings, the EVS runs smoothly and quietly even with the most challenging dynamic and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

- 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



Features



- 1 Right angle bevel gear configuration allows motor to be mounted at a 90 degree position from the gearbox, 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

Part Number	EVS -100 B -7 -K 4 -19HB16
Model name - EVS series	Motor mounting code (*)
Size: 060, 075, 100, 140, 180, 210, 240	Backlash: 060, 075, 100, 140 $\leq 4 - 7$ arc-min / 180, 210, 240 $\leq 6 - 9$ arc-min
Design version	Output mounting style: K: Keyed shaft / S: Smooth shaft
Ratio: 2-Stage: 3, 4, 5, 6, 7, 8, 9, 10 3-Stage: 15, 16, 20, 25, 28, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100	

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

EVS 060 2-Stage Specifications

Frame Size	060									
Stage	2-Stage									
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							

- *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 SIT S.p.A. for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details
- *15) The weight may vary slightly between models

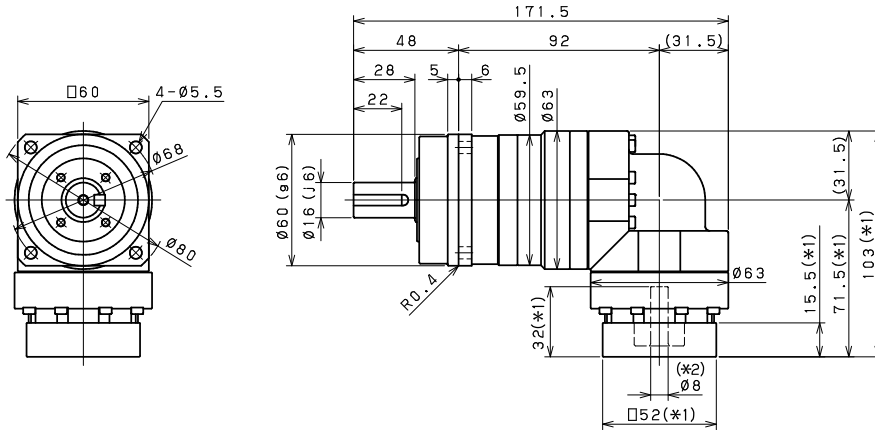
EVS 060 3-Stage Specifications

Frame Size	060									
Stage	3-Stage									
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
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
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							

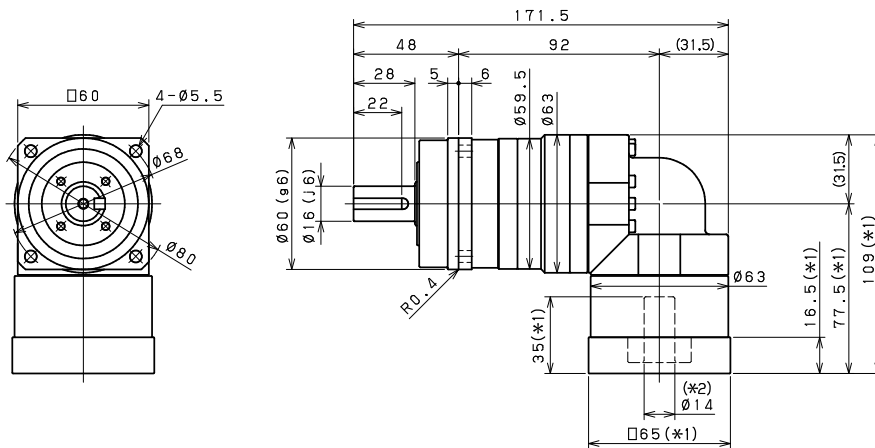
Frame Size	060									
Stage	3-Stage									
Ratio	Unit	Note	45	50	60	70	80	90	100	
Nominal Output Torque	[Nm]	*1	16	24	24	24	24	16	16	
Maximum Acceleration Torque	[Nm]	*2	32	45	45	45	45	32	32	
Emergency Stop Torque	[Nm]	*3	65	90	90	90	90	65	65	
Nominal Input Speed	[rpm]	*4	3000							
Maximum Input 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	
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	--	--	--	--	--	--	--	
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 060 2-Stage Dimensions

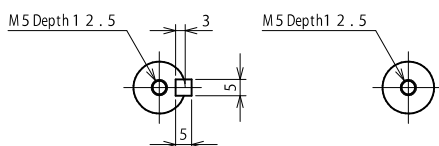
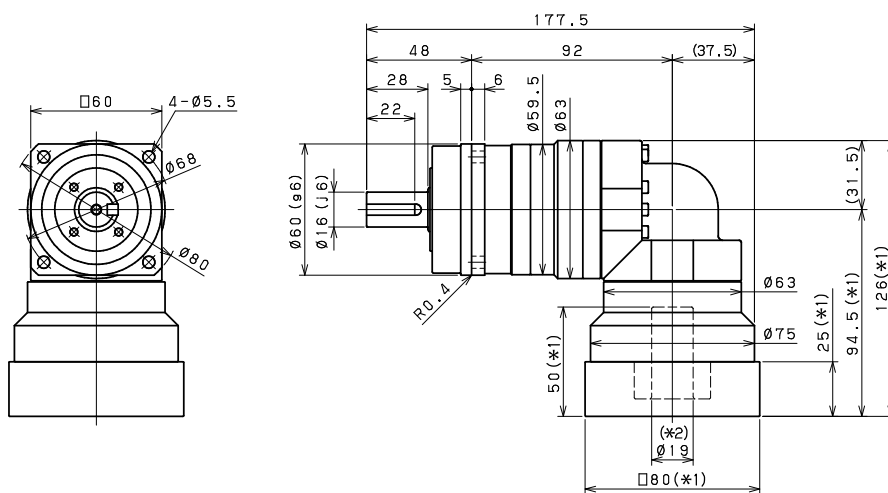
Input bore size $\leq \varnothing 8$ mm



Input bore size $\leq \varnothing 14$ mm



Input bore size $\leq \varnothing 19$ mm



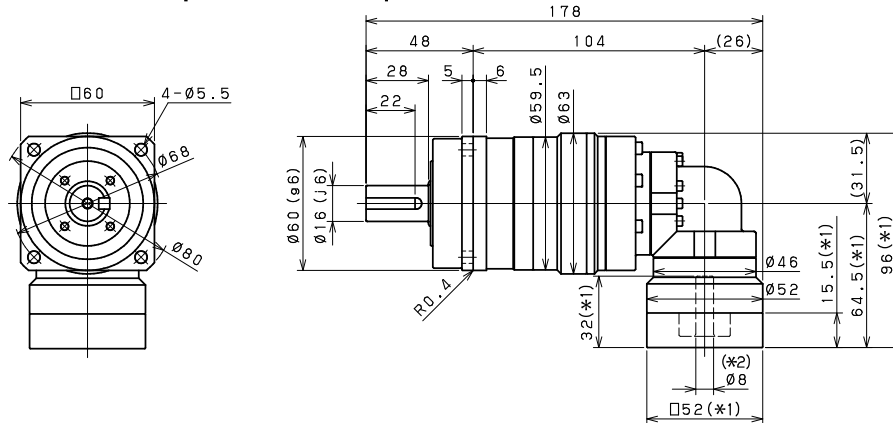
Keyed shaft

Smooth shaft

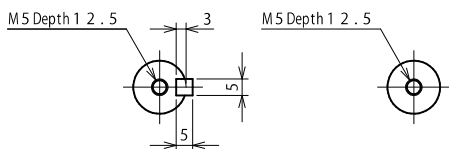
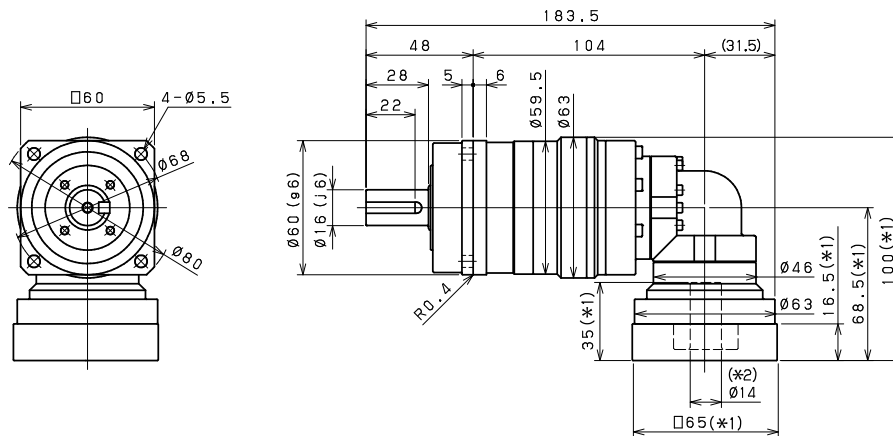
- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

EVS 060 3-Stage Dimensions

Input bore size $\leq \varnothing 8$ mm



Input bore size $\leq \varnothing 14$ mm



Keyed shaft

Smooth shaft

*1) Length will vary depending on motor

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

EVS 075 2-Stage Specifications

Frame Size	075											
Stage	2-Stage											
Ratio	Unit	Note	3	4	5	6	7	8	9	10		
Nominal Output Torque	[Nm]	*1	45	60	65	65	65	65	45	45		
Maximum Acceleration Torque	[Nm]	*2	65	90	90	90	90	90	65	65		
Emergency Stop Torque	[Nm]	*3	130	170	220	220	220	220	170	170		
Nominal Input Speed	[rpm]	*4	3000									
Maximum Input Speed	[rpm]	*5	6000									
No Load Running Torque	[Nm]	*6	1.13									
Permitted Radial Load	[N]	*7	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 ($\leq \varnothing 8$)	[kgcm ²]	--	--	--	--	--	--	--	--	--		
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									

*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 SIT S.p.A. for the testing conditions and environment

*14) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details

*15) The weight may vary slightly between models

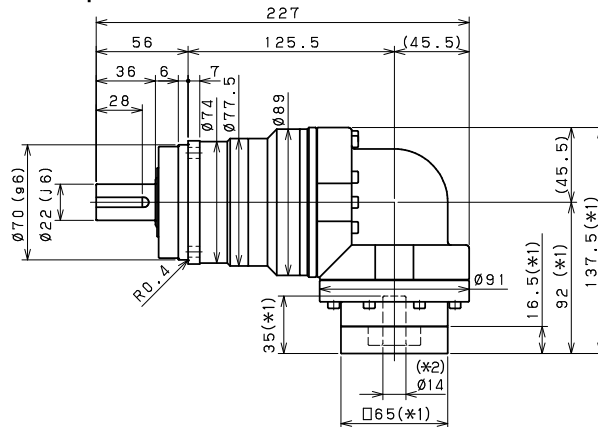
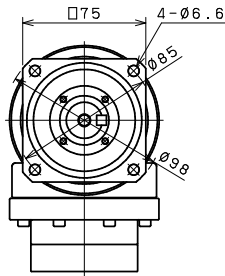
EVS 075 3-Stage Specifications

Frame Size	075									
Stage	3-Stage									
Ratio	Unit	Note	15	16	20	25	28	30	35	40
Nominal Output Torque	[Nm]	*1	45	65	65	65	65	45	65	65
Maximum Acceleration Torque	[Nm]	*2	65	110	110	110	110	65	110	110
Emergency Stop Torque	[Nm]	*3	170	220	220	220	220	170	220	220
Nominal Input Speed	[rpm]	*4	3000							
Maximum Input Speed	[rpm]	*5	6000							
No Load Running Torque	[Nm]	*6	0.55							
Permitted Radial Load	[N]	*7	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
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*12	10							
Maximum Torsional Backlash	[arc-min]	--	≤ 7							
Noise Level	dB [A]	*13	≤ 80							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	4.1							

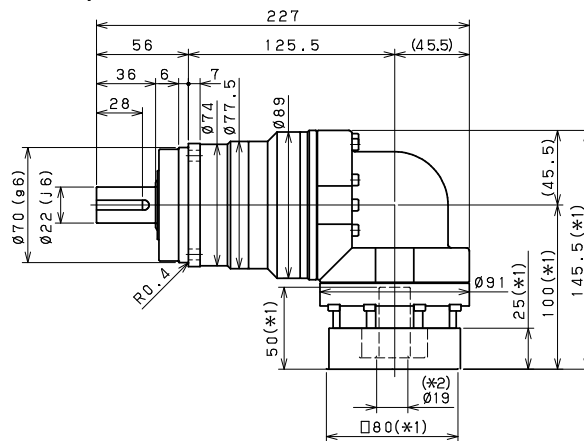
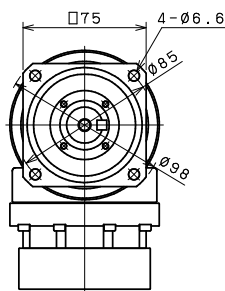
Frame Size	075									
Stage	3-Stage									
Ratio	Unit	Note	45	50	60	70	80	90	100	
Nominal Output Torque	[Nm]	*1	45	65	65	65	65	45	45	
Maximum Acceleration Torque	[Nm]	*2	65	110	110	110	110	65	65	
Emergency Stop Torque	[Nm]	*3	170	220	220	220	220	170	170	
Nominal Input Speed	[rpm]	*4	3000							
Maximum Input Speed	[rpm]	*5	6000							
No Load Running Torque	[Nm]	*6	0.55							
Permitted Radial Load	[N]	*7	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	
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	--	--	--	--	--	--	--	
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*12	10							
Maximum Torsional Backlash	[arc-min]	--	≤ 7							
Noise Level	dB [A]	*13	≤ 80							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	4.1							

EVS 075 2-Stage Dimensions

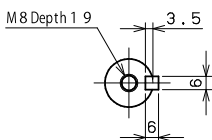
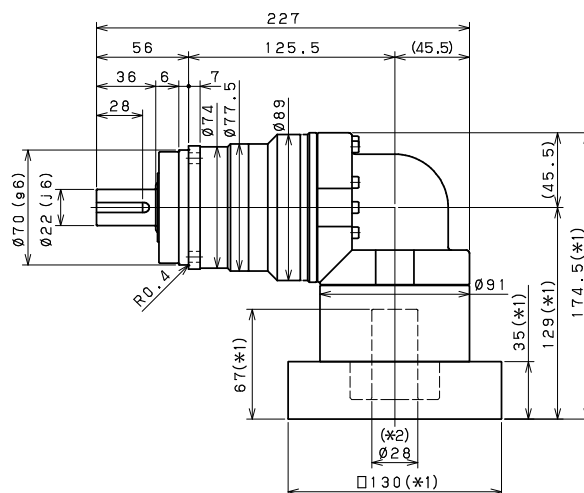
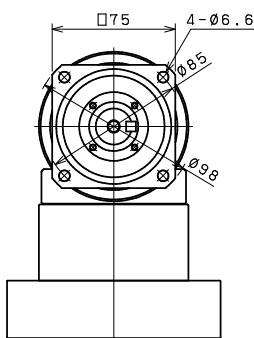
Input bore size $\leq \varnothing 14$ mm



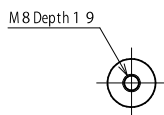
Input bore size $\leq \varnothing 19$ mm



Input bore size $\leq \varnothing 28$ mm



Keyed shaft



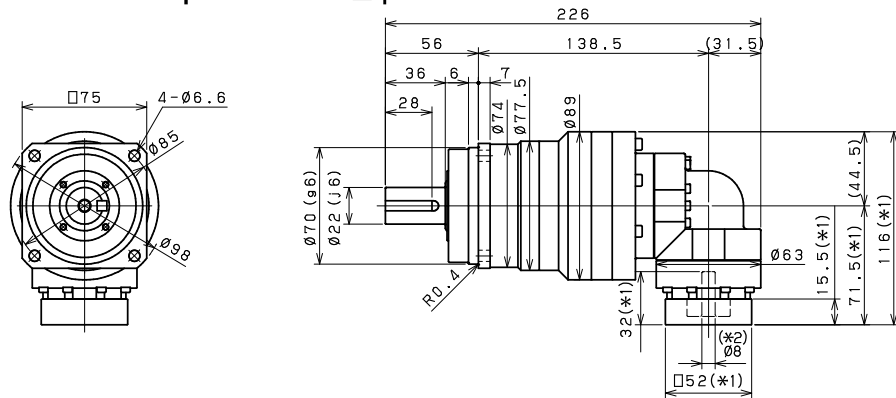
Smooth shaft

*1) Length will vary depending on motor

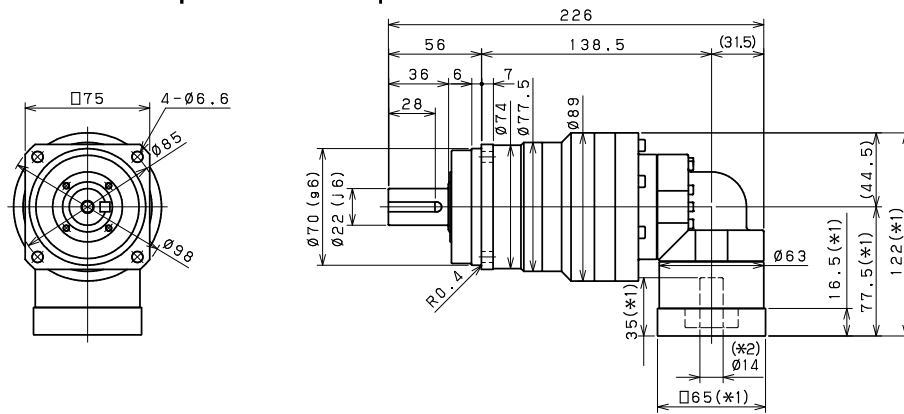
*2) Bushing will be inserted to adapt to motor shaft

EVS 075 3-Stage Dimensions

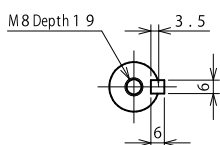
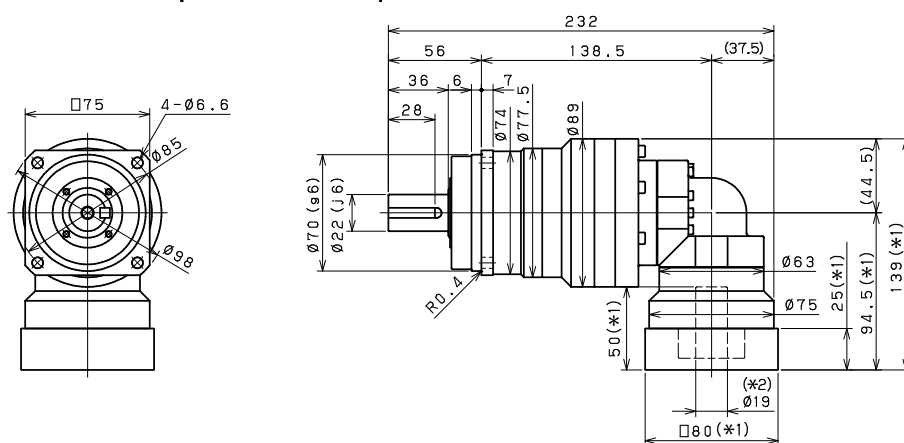
Input bore size $\leq \phi 8$ mm



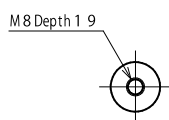
Input bore size $\leq \phi 14$ mm



Input bore size $\leq \phi 19$ mm



Keyed shaft



Smooth shaft

*1) Length will vary depending on motor

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

EVS 100 2-Stage Specifications

Frame Size	100									
Stage	2-Stage									
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 ($\leq \varnothing 14$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
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							

- *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 SIT S.p.A. for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details
- *15) The weight may vary slightly between models

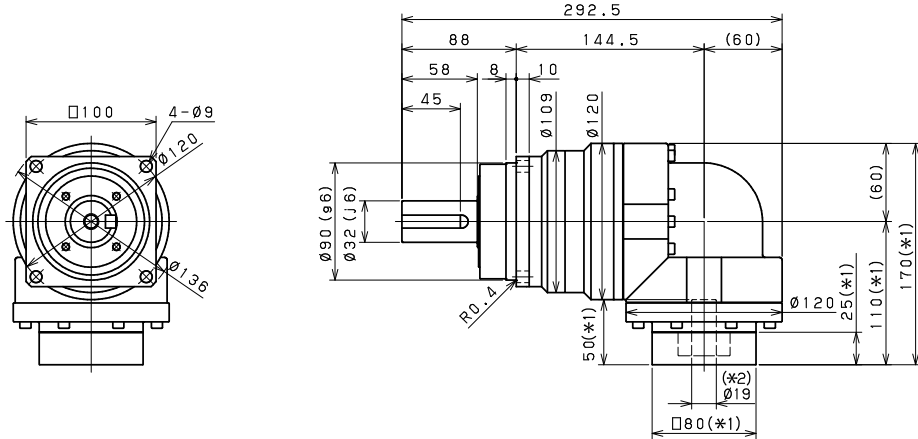
EVS 100 3-Stage Specifications

Frame Size	100									
Stage	3-Stage									
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
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
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							

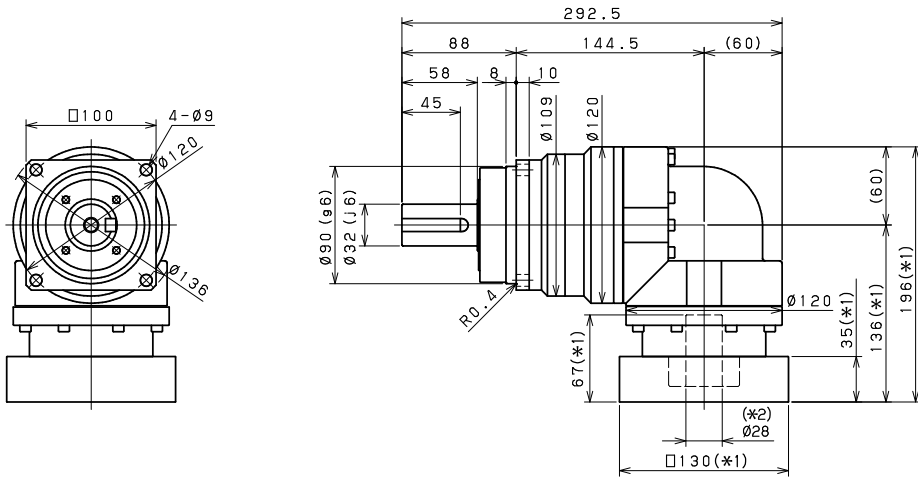
Frame Size	100									
Stage	3-Stage									
Ratio	Unit	Note	45	50	60	70	80	90	100	
Nominal Output Torque	[Nm]	*1	110	150	150	150	150	110	110	
Maximum Acceleration Torque	[Nm]	*2	200	300	300	300	300	200	200	
Emergency Stop Torque	[Nm]	*3	450	550	550	550	550	450	450	
Nominal Input Speed	[rpm]	*4	3000							
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	
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	--	--	--	--	--	--	--	
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 2-Stage Dimensions

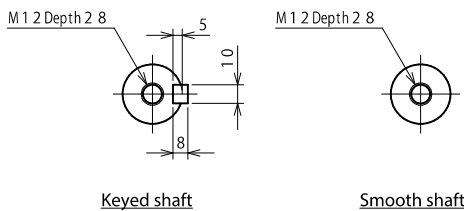
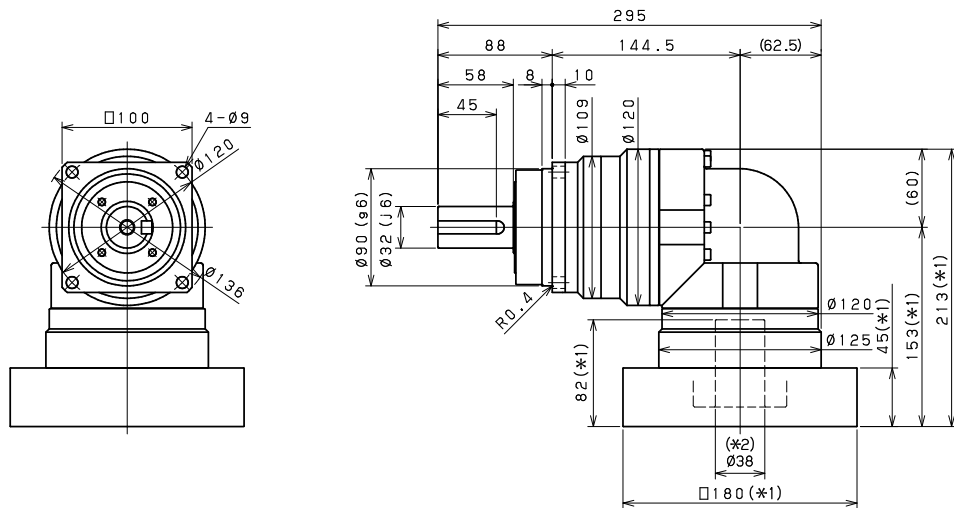
Input bore size $\leq \varnothing 19$ mm



Input bore size $\leq \varnothing 28$ mm



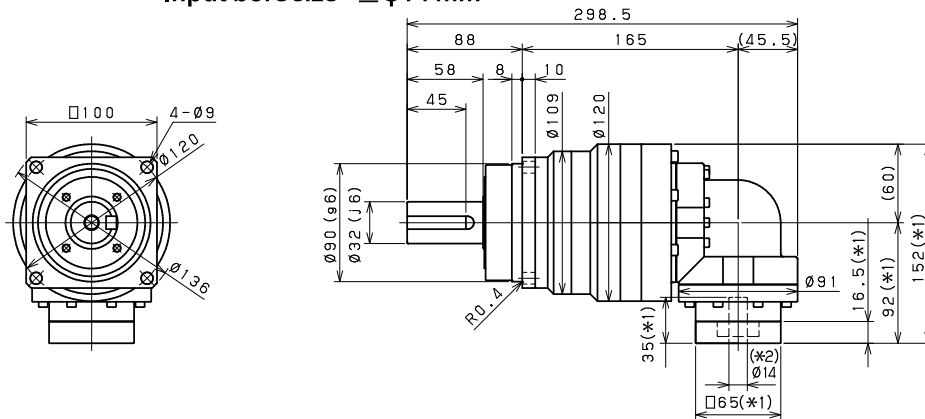
Input bore size $\leq \varnothing 38$ mm



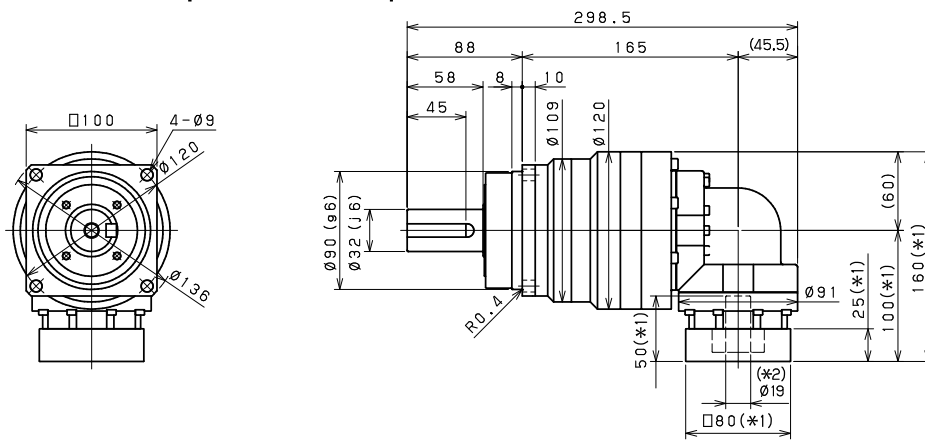
- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

EVS 100 3-Stage Dimensions

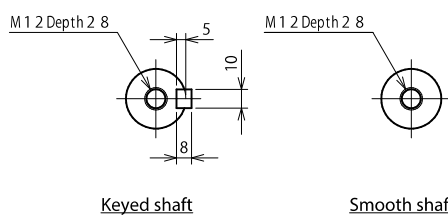
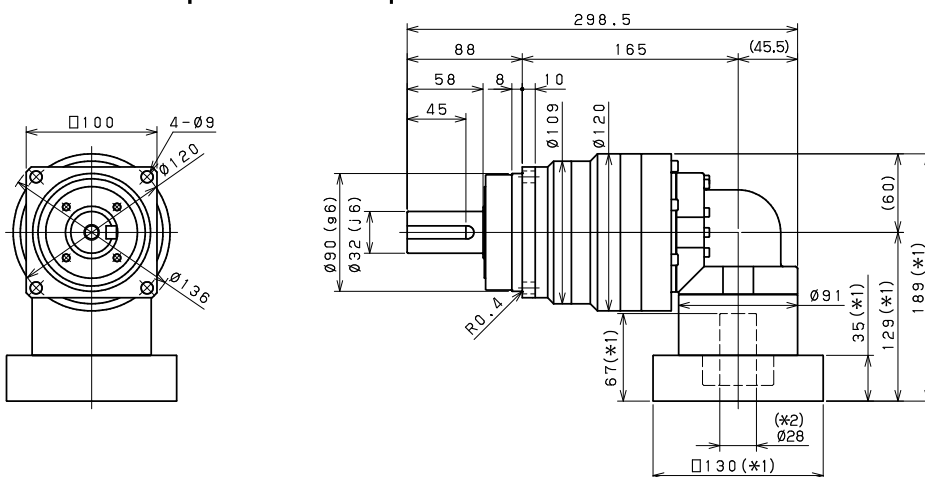
Input bore size $\leq \varnothing 14$ mm



Input bore size $\leq \varnothing 19$ mm



Input bore size $\leq \varnothing 28$ mm



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

EVS 140 2-Stage Specifications

Frame Size	140											
Stage	2-Stage											
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 ($\leq \varnothing 19$)	[kgcm ²]	--	--	--	--	--	--	--	--	--		
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									

*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 SIT S.p.A. for the testing conditions and environment

*14) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details

*15) The weight may vary slightly between models

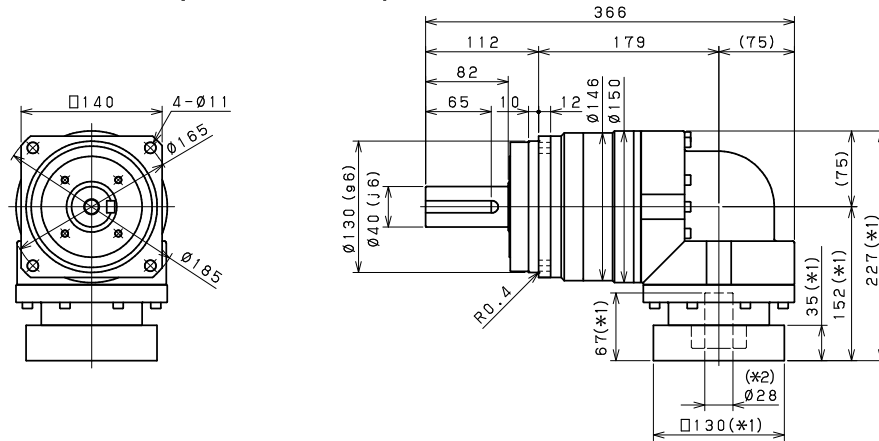
EVS 140 3-Stage Specifications

Frame Size	140									
Stage	3-Stage									
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
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
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							

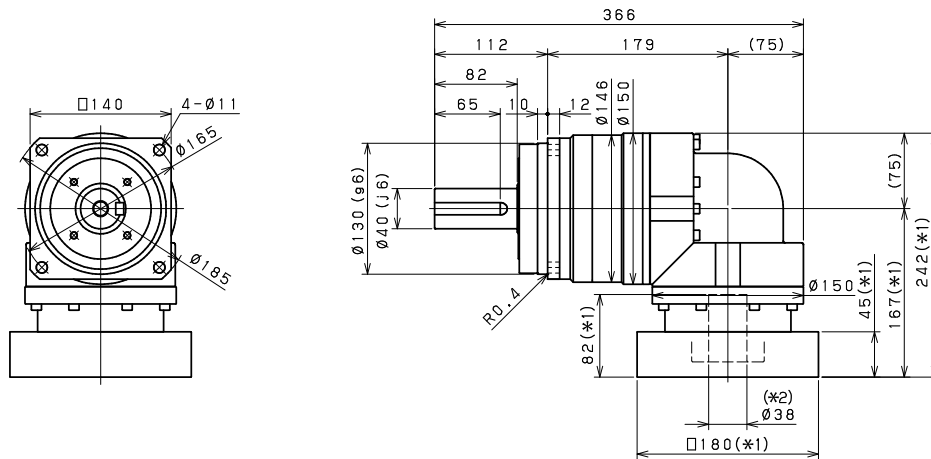
Frame Size	140									
Stage	3-Stage									
Ratio	Unit	Note	45	50	60	70	80	90	100	
Nominal Output Torque	[Nm]	*1	200	300	300	300	300	200	200	
Maximum Acceleration Torque	[Nm]	*2	400	600	600	600	600	400	400	
Emergency Stop Torque	[Nm]	*3	750	1100	1100	1100	1100	750	750	
Nominal Input Speed	[rpm]	*4	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	
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	--	--	--	--	--	--	--	
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 2-Stage Dimensions

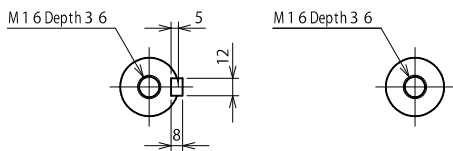
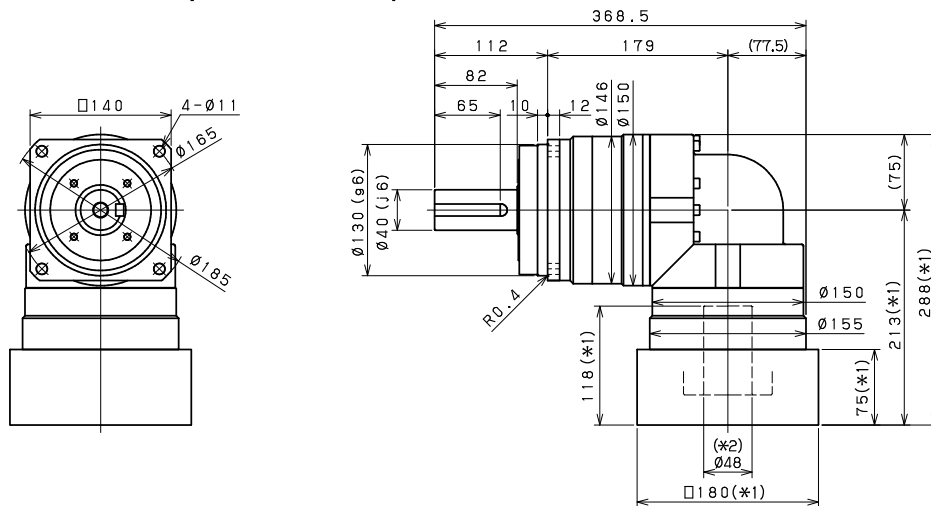
Input bore size $\leq \varnothing 28$ mm



Input bore size $\leq \varnothing 38$ mm



Input bore size $\leq \varnothing 48$ mm



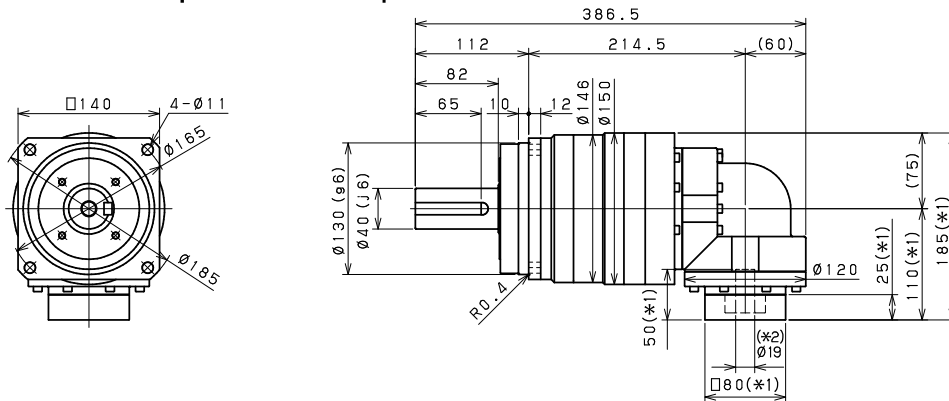
Keyed shaft

Smooth shaft

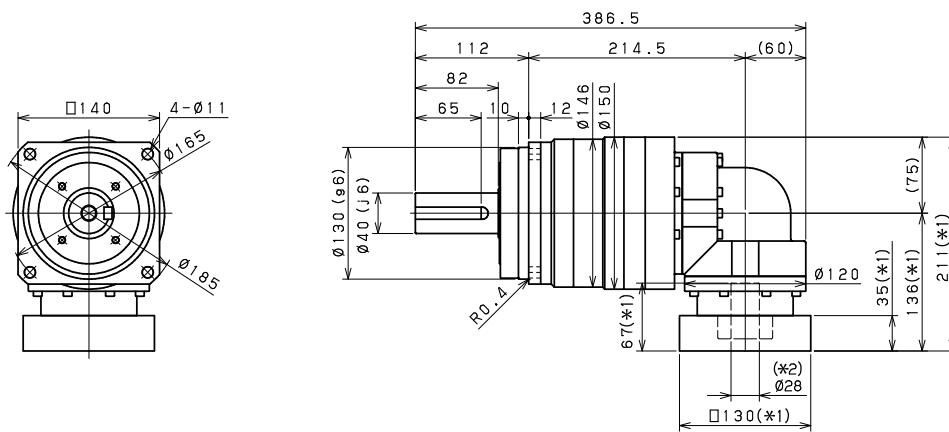
- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

EVS 140 3-Stage Dimensions

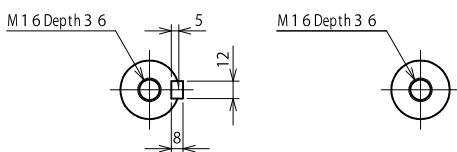
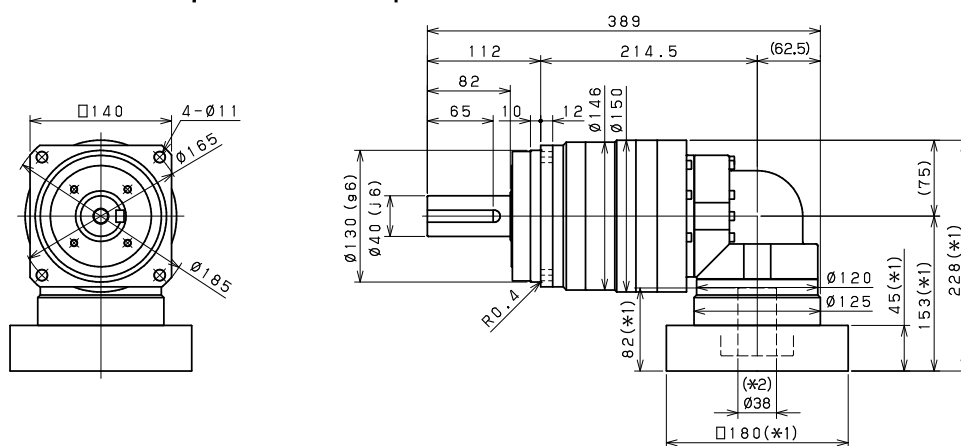
Input bore size $\leq \phi 19$ mm



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 180 2-Stage Specifications

Frame Size	180									
Stage	2-Stage									
Ratio	Units	Note	3	4	5	6	7	8	9	10
Nominal Output Torque	[Nm]	*1	400	575	600	600	600	600	400	400
Maximum Acceleration Torque	[Nm]	*2	575	770	960	1120	1120	1120	775	775
Emergency Stop Torque	[Nm]	*3	1300	1700	2000	2500	2500	2500	2000	2000
Nominal Input Speed	[rpm]	*4	1500							
Maximum Input Speed	[rpm]	*5	3000							
No Load Running Torque	[Nm]	*6	10.8							
Permitted Radial Load	[N]	*7	12000	13000	14000	15000	16000	17000	17000	18000
Permitted Axial Load	[N]	*8	16000	17000	17000	17000	17000	17000	17000	17000
Maximum Radial Load	[N]	*9	19000							
Maximum Axial Load	[N]	*10	17000							
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	92.00	76.72	71.23	68.28	66.08	65.00	64.38	64.10
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	126.9	111.6	106.1	103.1	100.9	99.86	99.25	98.97
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	212.5	197.2	191.7	188.7	186.6	185.5	184.9	184.6
Efficiency	[%]	*11	93							
Torsional Rigidity	[Nm/arc-min]	*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							

*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 SIT S.p.A. for the testing conditions and environment

*14) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details

*15) The weight may vary slightly between models

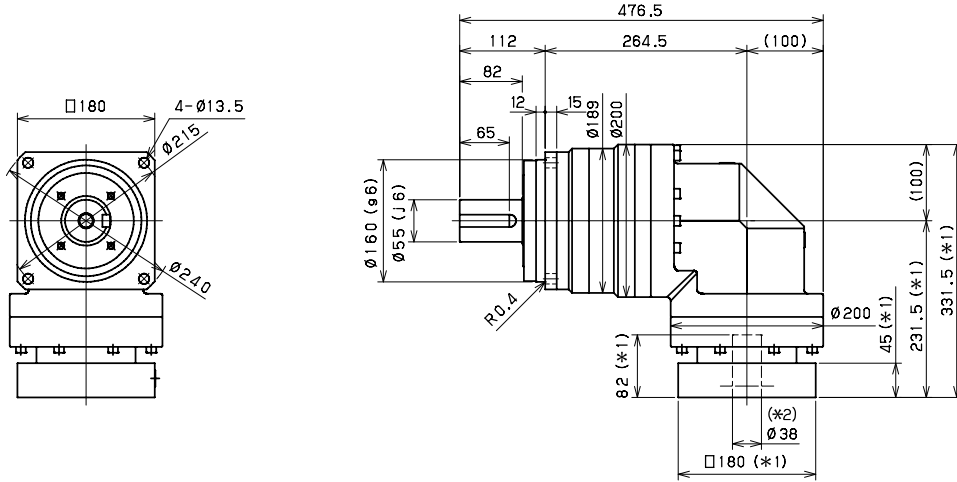
EVS 180 3-Stage Specifications

Frame Size	180									
Stage	3-Stage									
Ratio	Units	Note	15	16	20	25	28	30	35	40
Nominal Output Torque	[Nm]	*1	400	555	600	600	600	400	600	600
Maximum Acceleration Torque	[Nm]	*2	775	1120	1120	1120	1120	775	1120	1120
Emergency Stop Torque	[Nm]	*3	2000	2500	2500	2500	2500	2000	2500	2500
Nominal Input Speed	[rpm]	*4	1500							
Maximum Input Speed	[rpm]	*5	3000							
No Load Running Torque	[Nm]	*6	4.7							
Permitted Radial Load	[N]	*7	19000	19000	19000	19000	19000	19000	19000	19000
Permitted Axial Load	[N]	*8	17000	17000	17000	17000	17000	17000	17000	17000
Maximum Radial Load	[N]	*9	19000							
Maximum Axial Load	[N]	*10	17000							
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	11.42	12.03	11.11	10.96	11.57	10.31	10.82	10.23
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	20.21	20.82	19.90	19.74	20.36	19.10	19.60	19.02
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	25.03	25.64	24.72	24.56	25.18	23.92	24.42	23.84
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*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							

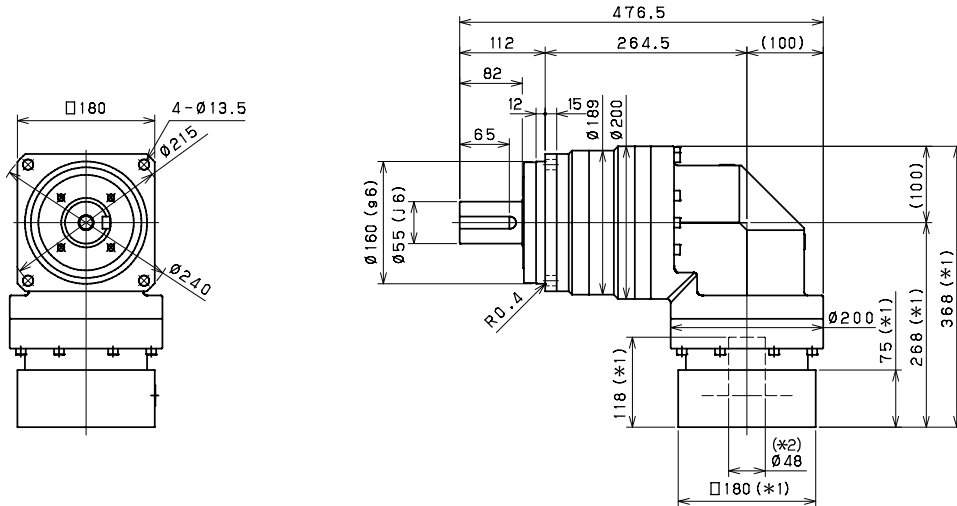
Frame Size	180									
Stage	3-Stage									
Ratio	Units	Note	45	50	60	70	80	90	100	
Nominal Output Torque	[Nm]	*1	400	600	600	600	600	400	400	
Maximum Acceleration Torque	[Nm]	*2	775	1120	1120	1120	1120	775	775	
Emergency Stop Torque	[Nm]	*3	2000	2500	2500	2500	2500	2000	2000	
Nominal Input Speed	[rpm]	*4	1500							
Maximum Input Speed	[rpm]	*5	3000							
No Load Running Torque	[Nm]	*6	4.7							
Permitted Radial Load	[N]	*7	19000	19000	19000	19000	19000	19000	19000	
Permitted Axial Load	[N]	*8	17000	17000	17000	17000	17000	17000	17000	
Maximum Radial Load	[N]	*9	19000							
Maximum Axial Load	[N]	*10	17000							
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	10.76	10.19	10.17	10.16	10.15	10.14	10.14	
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	19.54	18.98	18.96	18.94	18.94	18.93	18.93	
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	24.36	23.80	23.78	23.77	23.76	23.75	23.75	
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	--	--	--	--	--	--	--	
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*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 2-Stage Dimensions

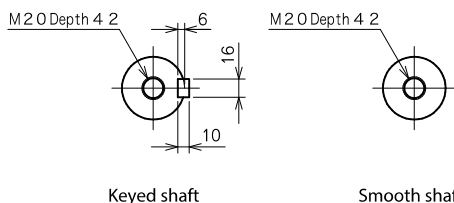
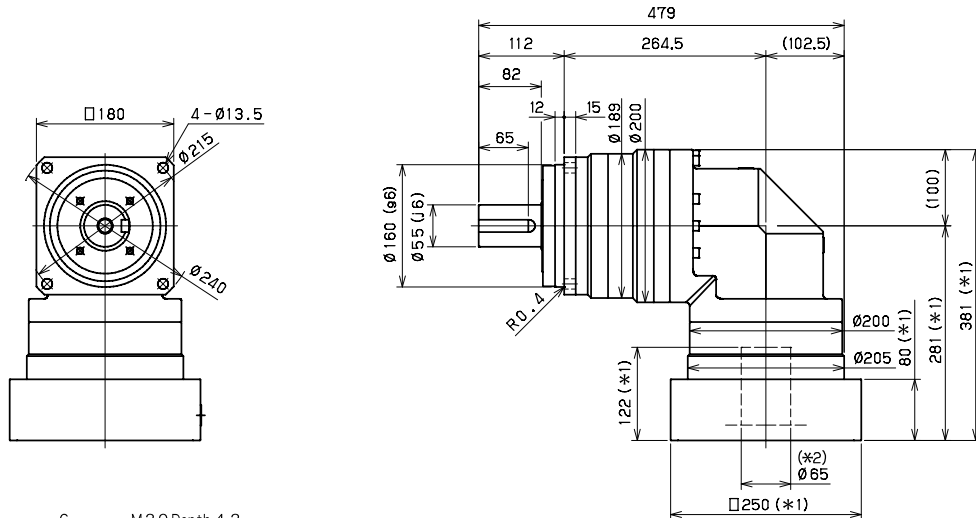
Input bore size $\geq \varnothing 38$ mm



Input bore size $\geq \varnothing 48$ mm



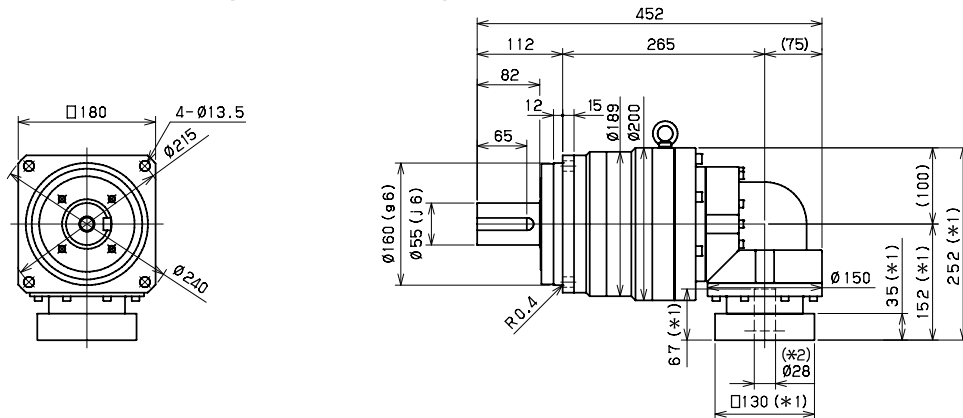
Input bore size $\geq \varnothing 65$ mm



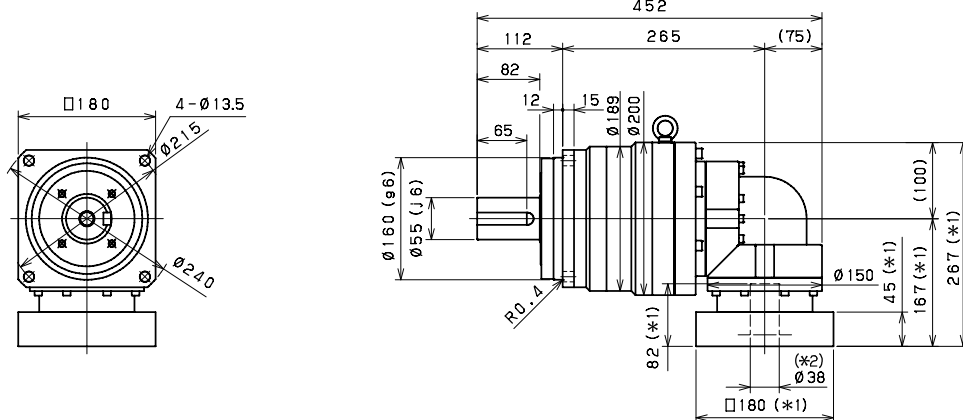
*1) Length will vary depending on motor
 *2) Bushing will be inserted to adapt to motor shaft

EVS 180 3-Stage Dimensions

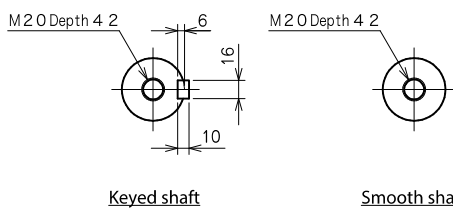
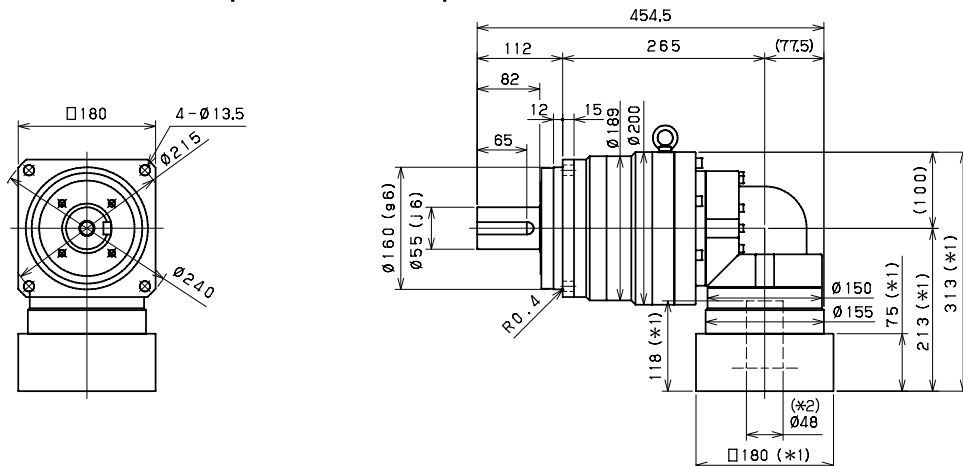
Input bore size $\cong \varnothing 28$ mm



Input bore size $\cong \varnothing 38$ mm



Input bore size $\cong \varnothing 48$ mm



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

EVS 210 2-Stage Specifications

Frame Size	210											
Stage	2-Stage											
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 ($\leq \varnothing 38$)	[kgcm ²]	--	--	--	--	--	--	--	--	--		
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/arc-min]	*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									

- *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 SIT S.p.A. for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details
- *15) The weight may vary slightly between models

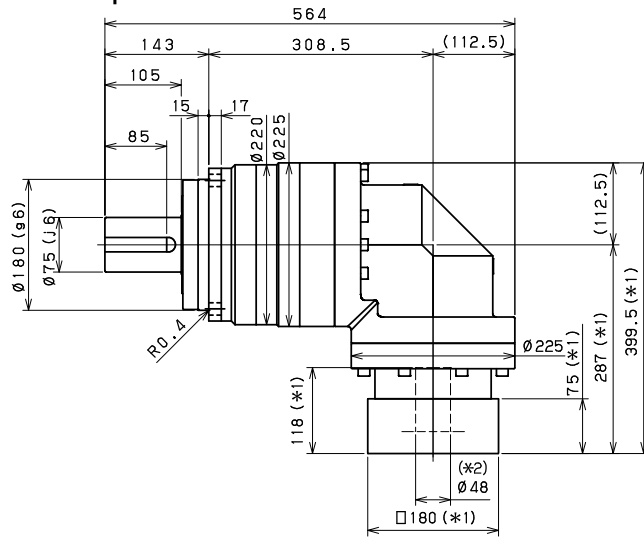
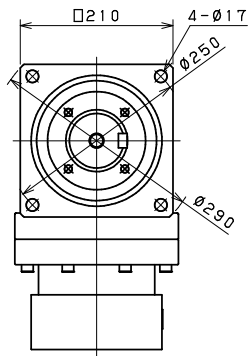
EVS 210 3-Stage Specifications

Frame Size	210									
Stage	3-Stage									
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
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*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							

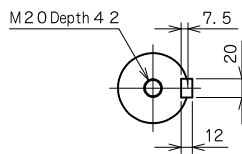
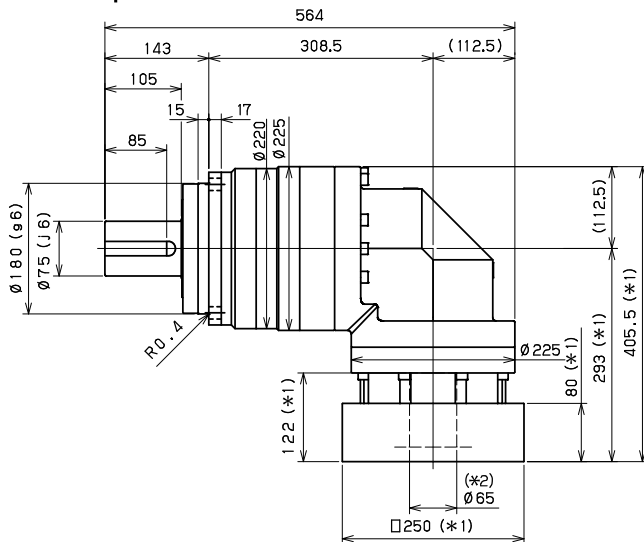
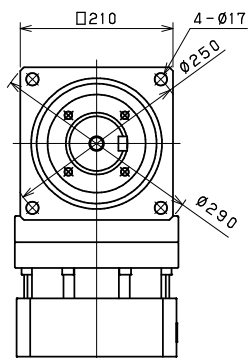
Frame Size	210									
Stage	3-Stage									
Ratio	Units	Note	45	50	60	70	80	90	100	
Nominal Output Torque	[Nm]	*1	800	1200	1200	1200	1200	800	800	
Maximum Acceleration Torque	[Nm]	*2	1040	1840	1840	1840	1440	1040	960	
Emergency Stop Torque	[Nm]	*3	3600	4500	4500	4500	4500	3600	3600	
Nominal Input 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	
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	--	--	--	--	--	--	--	
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*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 2-Stage Dimensions

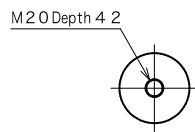
Input bore size $\leq \phi 48$ mm



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 240 2-Stage Specifications

Frame Size	240											
Stage	2-Stage											
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 ($\leq \varnothing 48$)	[kgcm ²]	--	--	--	--	--	--	--	--	--		
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/arc-min]	*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									

- *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 SIT S.p.A. for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details
- *15) The weight may vary slightly between models

EVS 240 3-Stage Specifications

Frame Size	240									
Stage	3-Stage									
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
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*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							

Frame Size	240									
Stage	3-Stage									
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	
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	--	--	--	--	--	--	--	
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*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							

EVT SERIES



EVT series

A detailed photograph of a silver-colored industrial motor, likely a synchronous motor, is shown from a three-quarter perspective. The motor has a cylindrical body with a flange at the front and a mounting base. The text 'EVT series' is overlaid on the image in a large, bold, green font, oriented vertically.

EVT planetary gearbox with right angle

Compact design, extreme performance with ISO flange

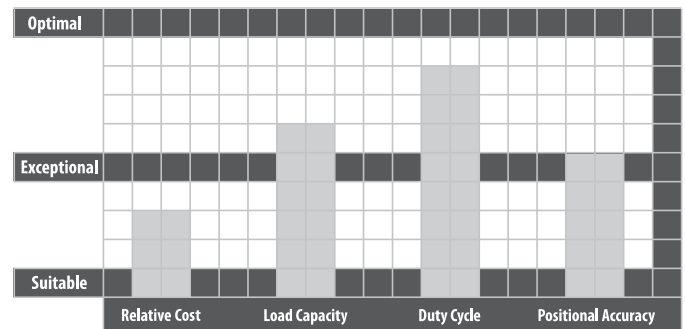
Description

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.

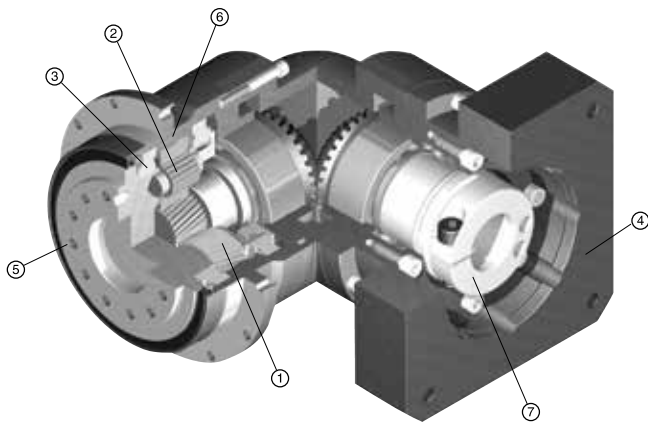
The EVT is advantageous in applications requiring high accuracy,

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.

- 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



Features



1 Carburized case hardened helical gear with proprietary secondary finishing process for higher accuracy and smooth, quiet 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

Part Number	EVT -090 B -25 -F 4 -14BK14
Model name - EVT series	Motor mounting code (*)
Size: 064, 090, 110, 140, 200, 255	Backlash: 4-9 arc-min
Design version	Output mounting style: F: Flanged
	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

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

EVT 064 2-Stage Specifications

Frame Size	064										
Stage	2-Stage										
Ratio	Unit	Note	4	5	6	7	8	9	10		
Nominal Output Torque	[Nm]	*1	16	22	24	24	24	16	16		
Maximum Acceleration Torque	[Nm]	*2	32	40	45	45	45	32	32		
Emergency Stop Torque	[Nm]	*3	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	370	400	420	440	460	480	500		
Permitted Axial Load	[N]	*8	360	390	430	460	480	510	530		
Maximum Radial Load	[N]	*9	1500								
Maximum Axial Load	[N]	*10	750								
Moment of Inertia ($\leq \varnothing 8$)	[kgcm ²]	--	0.305	0.273	0.256	0.246	0.240	0.236	0.233		
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	0.379	0.348	0.331	0.321	0.315	0.311	0.308		
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	0.569	0.537	0.521	0.510	0.504	0.500	0.497		
Efficiency	[%]	*11	93								
Torsional Rigidity	[Nm/arc-min]	*12	7.5								
Maximum Torsional Backlash	[arc-min]	--	≤ 4								
Noise Level	dB [A]	*13	≤ 80								
Protection Class	--	*14	IP55 (IP65)								
Ambient Temperature	[°C]	--	0-40								
Permitted Housing Temperature	[°C]	--	90								
Weight	[kg]	*15	1.9								

*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 SIT S.p.A. for the testing conditions and environment

*14) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details

*15) The weight may vary slightly between models

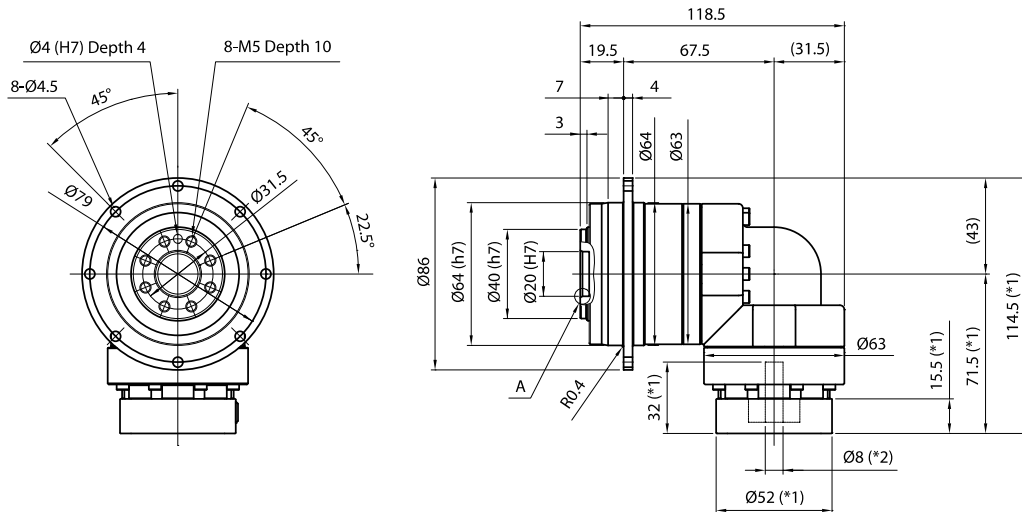
EVT 064 3-Stage Specifications

Frame Size	064										
Stage	3-Stage										
Ratio	Unit	Note	16	20	25	28	35	40	45		
Nominal Output Torque	[Nm]	*1	24	24	24	24	24	24	16		
Maximum Acceleration Torque	[Nm]	*2	45	45	45	45	45	45	32		
Emergency Stop Torque	[Nm]	*3	90	90	90	90	90	90	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	580	630	680	700	760	790	820		
Permitted Axial Load	[N]	*8	650	720	750	750	750	750	750		
Maximum Radial Load	[N]	*9	1500								
Maximum Axial Load	[N]	*10	750								
Moment of Inertia ($\leq \varnothing 8$)	[kgcm ²]	--	0.082	0.073	0.072	0.078	0.071	0.062	0.070		
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	0.126	0.118	0.116	0.123	0.115	0.106	0.115		
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	--	--	--	--	--	--	--		
Efficiency	[%]	*11	88								
Torsional Rigidity	[Nm/arc-min]	*12	7.5								
Maximum Torsional Backlash	[arc-min]	--	≤ 7								
Noise Level	dB [A]	*13	≤ 80								
Protection Class	--	*14	IP55 (IP65)								
Ambient Temperature	[°C]	--	0-40								
Permitted Housing Temperature	[°C]	--	90								
Weight	[kg]	*15	1.6								

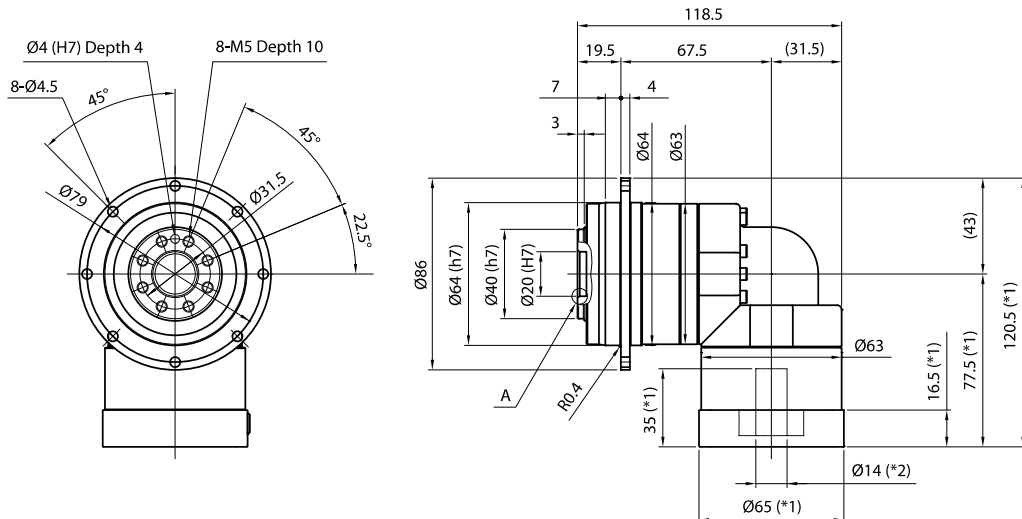
Frame Size	064										
Stage	3-Stage										
Ratio	Unit	Note	50	60	70	80	90	100	100		
Nominal Output Torque	[Nm]	*1	24	24	24	24	16	16	16		
Maximum Acceleration Torque	[Nm]	*2	45	45	45	45	32	32	32		
Emergency Stop Torque	[Nm]	*3	90	90	90	90	65	65	65		
Nominal Input Speed	[rpm]	*4	3000								
Maximum Input Speed	[rpm]	*5	6000								
No Load Running Torque	[Nm]	*6	0.20								
Permitted Radial Load	[N]	*7	850	910	950	1000	1000	1100	1100		
Permitted Axial Load	[N]	*8	750	750	750	750	750	750	750		
Maximum Radial Load	[N]	*9	1500								
Maximum Axial Load	[N]	*10	750								
Moment of Inertia ($\leq \varnothing 8$)	[kgcm ²]	--	0.061	0.061	0.061	0.061	0.061	0.061	0.061		
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	0.106	0.106	0.106	0.106	0.106	0.106	0.105		
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	--	--	--	--	--	--	--		
Efficiency	[%]	*11	88								
Torsional Rigidity	[Nm/arc-min]	*12	7.5								
Maximum Torsional Backlash	[arc-min]	--	≤ 7								
Noise Level	dB [A]	*13	≤ 80								
Protection Class	--	*14	IP55 (IP65)								
Ambient Temperature	[°C]	--	0-40								
Permitted Housing Temperature	[°C]	--	90								
Weight	[kg]	*15	1.6								

EVT 064 2-Stage Dimensions

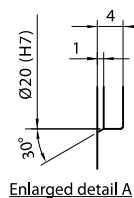
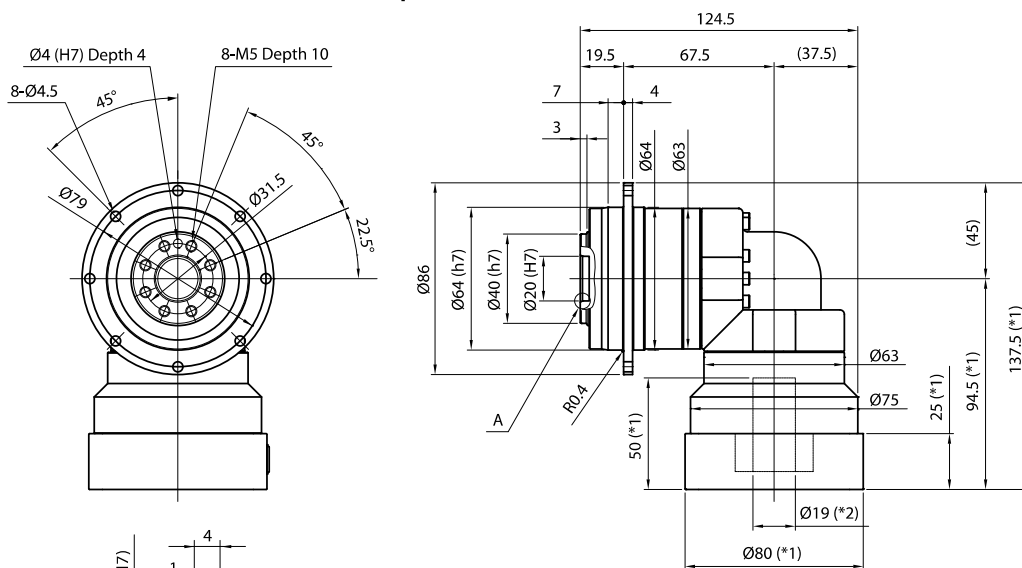
Input bore size ≤ø8mm



Input bore size ≤ø14mm



Input bore size ≤ø19mm

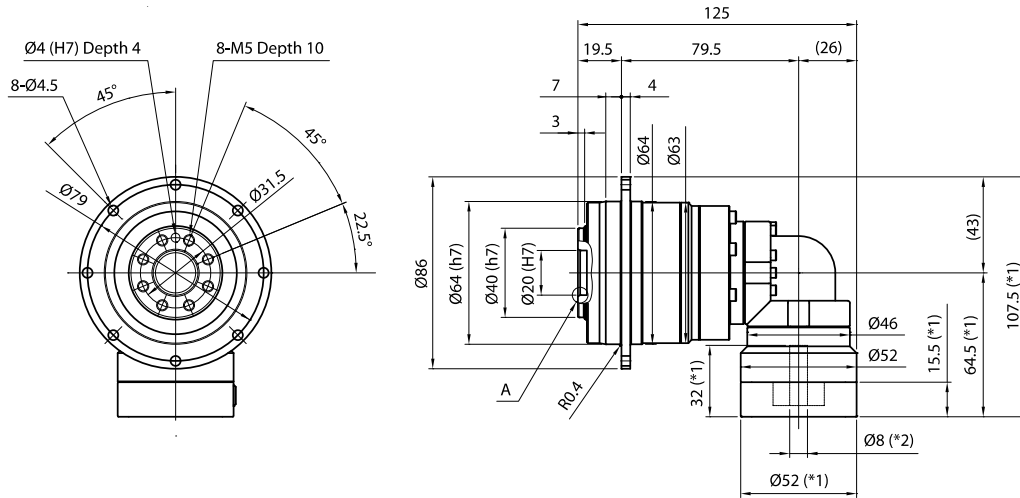


*1) Length will vary depending on motor

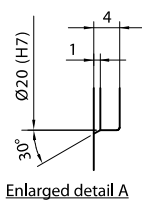
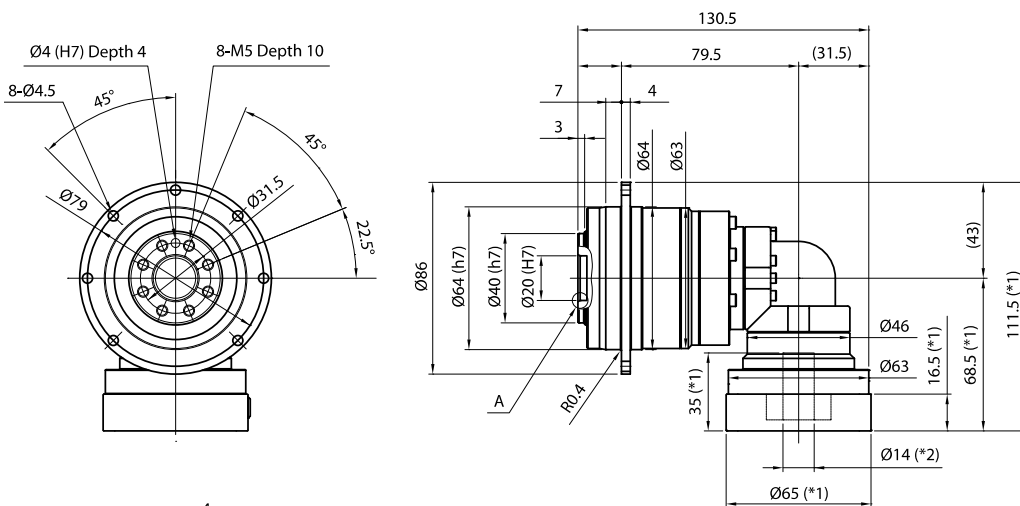
*2) Bushing will be inserted to adapt to motor shaft

EVT 064 3-Stage Dimensions

Input bore size ≤ø8mm



Input bore size ≤ø14mm



*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										
Stage	2-Stage										
Ratio	Unit	Note	4	5	6	7	8	9	10		
Nominal Output Torque	[Nm]	*1	60	65	65	65	65	45	45		
Maximum Acceleration Torque	[Nm]	*2	90	90	90	90	90	65	65		
Emergency Stop Torque	[Nm]	*3	170	220	220	220	220	170	170		
Nominal Input Speed	[rpm]	*4	3000								
Maximum Input Speed	[rpm]	*5	6000								
No Load Running Torque	[Nm]	*6	1.13								
Permitted Radial Load	[N]	*7	720	780	830	870	910	950	980		
Permitted Axial Load	[N]	*8	620	680	740	790	830	880	920		
Maximum Radial Load	[N]	*9	3300								
Maximum Axial Load	[N]	*10	1700								
Moment of Inertia ($\leq \varnothing 8$)	[kgcm ²]	--	--	--	--	--	--	--	--		
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	2.17	1.98	1.88	1.81	1.78	1.75	1.73		
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	2.50	2.31	2.21	2.14	2.10	2.08	2.06		
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	4.63	4.43	4.33	4.27	4.23	4.21	4.19		
Efficiency	[%]	*11	93								
Torsional Rigidity	[Nm/arc-min]	*12	22								
Maximum Torsional Backlash	[arc-min]	--	≤ 4								
Noise Level	dB [A]	*13	≤ 80								
Protection Class	--	*14	IP55 (IP65)								
Ambient Temperature	[°C]	--	0-40								
Permitted Housing Temperature	[°C]	--	90								
Weight	[kg]	*15	5.1								

*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 SIT S.p.A. for the testing conditions and environment

*14) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details

*15) The weight may vary slightly between models

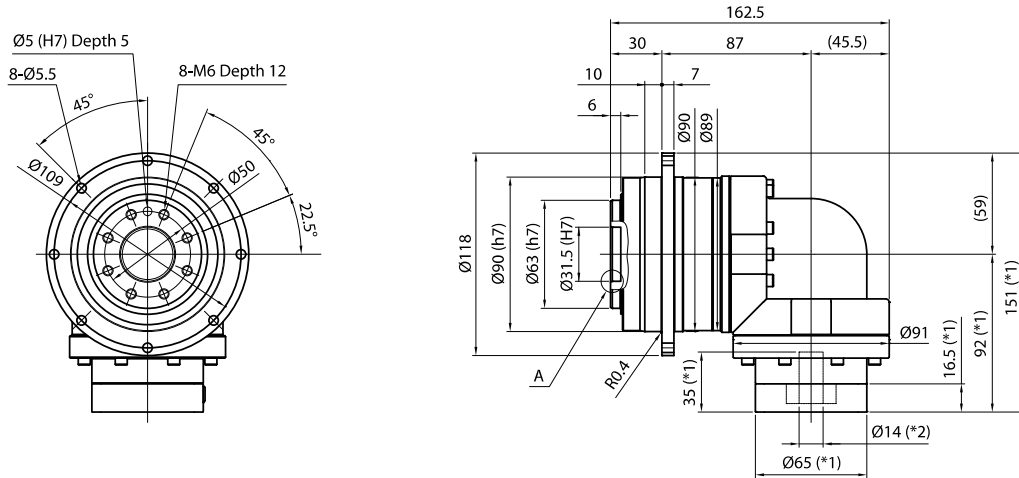
EVT 090 3-Stage Specifications

Frame Size	090										
Stage	3-Stage										
Ratio	Unit	Note	16	20	25	28	35	40	45		
Nominal Output Torque	[Nm]	*1	65	65	65	65	65	65	45		
Maximum Acceleration Torque	[Nm]	*2	110	110	110	110	110	110	65		
Emergency Stop Torque	[Nm]	*3	220	220	220	220	220	220	170		
Nominal Input Speed	[rpm]	*4	3000								
Maximum Input Speed	[rpm]	*5	6000								
No Load Running Torque	[Nm]	*6	0.55								
Permitted Radial Load	[N]	*7	1200	1200	1300	1400	1500	1600	1600		
Permitted Axial Load	[N]	*8	1100	1200	1400	1400	1600	1700	1700		
Maximum Radial Load	[N]	*9	3300								
Maximum Axial Load	[N]	*10	1700								
Moment of Inertia ($\leq \varnothing 8$)	[kgcm ²]	--	0.40	0.34	0.33	0.38	0.32	0.25	0.32		
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	0.48	0.41	0.41	0.45	0.40	0.33	0.40		
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	0.66	0.60	0.59	0.64	0.59	0.51	0.59		
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	--	--	--	--	--	--	--		
Efficiency	[%]	*11	88								
Torsional Rigidity	[Nm/arc-min]	*12	22								
Maximum Torsional Backlash	[arc-min]	--	≤ 7								
Noise Level	dB [A]	*13	≤ 80								
Protection Class	--	*14	IP55 (IP65)								
Ambient Temperature	[°C]	--	0-40								
Permitted Housing Temperature	[°C]	--	90								
Weight	[kg]	*15	4.3								

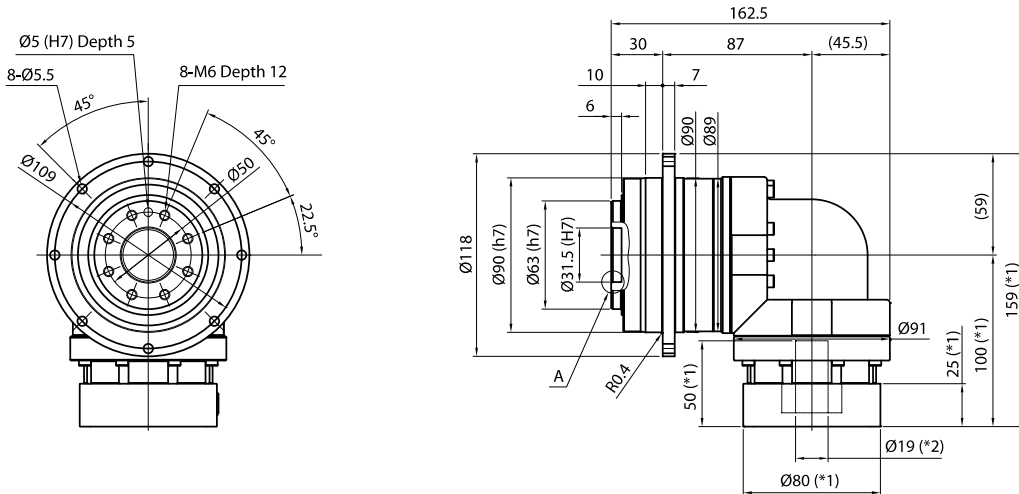
Frame Size	090										
Stage	3-Stage										
Ratio	Unit	Note	50	60	70	80	90	100			
Nominal Output Torque	[Nm]	*1	65	65	65	65	45	45			
Maximum Acceleration Torque	[Nm]	*2	110	110	110	110	65	65			
Emergency Stop Torque	[Nm]	*3	220	220	220	220	170	170			
Nominal Input Speed	[rpm]	*4	3000								
Maximum Input Speed	[rpm]	*5	6000								
No Load Running Torque	[Nm]	*6	0.55								
Permitted Radial Load	[N]	*7	1700	1800	1900	2000	2000	2100			
Permitted Axial Load	[N]	*8	1700	1700	1700	1700	1700	1700			
Maximum Radial Load	[N]	*9	3300								
Maximum Axial Load	[N]	*10	1700								
Moment of Inertia ($\leq \varnothing 8$)	[kgcm ²]	--	0.25	0.25	0.25	0.25	0.25	0.25			
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	0.32	0.32	0.32	0.32	0.32	0.32			
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	0.51	0.51	0.51	0.51	0.51	0.51			
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	--	--	--	--	--	--			
Efficiency	[%]	*11	88								
Torsional Rigidity	[Nm/arc-min]	*12	22								
Maximum Torsional Backlash	[arc-min]	--	≤ 7								
Noise Level	dB [A]	*13	≤ 80								
Protection Class	--	*14	IP55 (IP65)								
Ambient Temperature	[°C]	--	0-40								
Permitted Housing Temperature	[°C]	--	90								
Weight	[kg]	*15	4.3								

EVT 090 2-Stage Dimensions

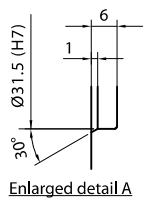
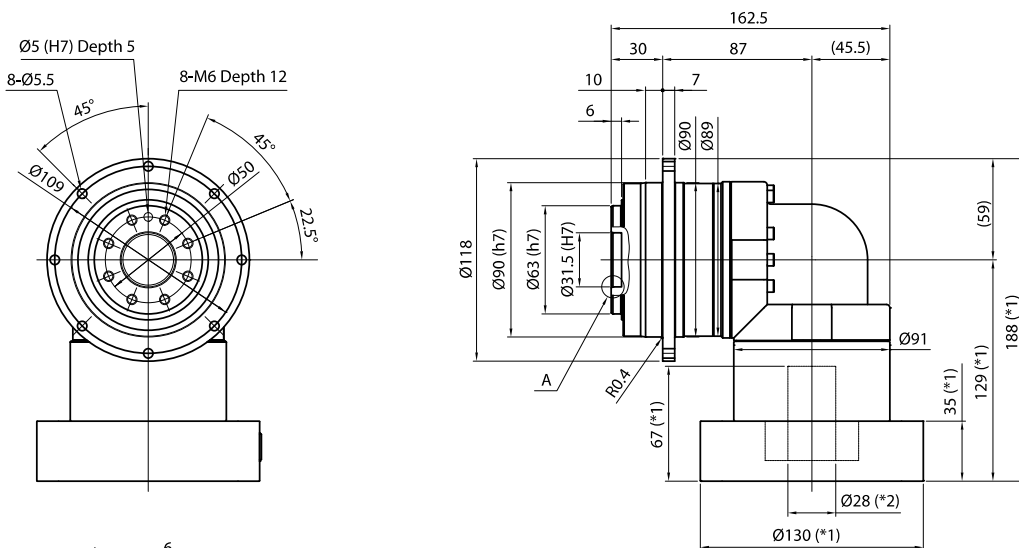
Input bore size $\leq \varnothing 14\text{mm}$



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



Input bore size $\leq \varnothing 28\text{mm}$



- *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					
Stage	2-Stage					
Ratio	Unit	Note	4	5	7	10
Nominal Output Torque	[Nm]	*1	100	120	150	110
Maximum Acceleration Torque	[Nm]	*2	200	240	300	200
Emergency Stop Torque	[Nm]	*3	430	500	550	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	4100	4400	4800	5400
Permitted Axial Load	[N]	*8	3500	3800	4200	4300
Maximum Radial Load	[N]	*9	8500			
Maximum Axial Load	[N]	*10	4300			
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	--	--	--	--
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	6.46	5.65	4.97	4.62
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	8.06	7.24	6.56	6.21
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	15.13	14.31	13.63	13.28
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	IP55 (IP65)			
Ambient Temperature	[°C]	--	0-40			
Permitted Housing Temperature	[°C]	--	90			
Weight	[kg]	*15	9.5			

*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 SIT S.p.A. for the testing conditions and environment

*14) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details

*15) The weight may vary slightly between models

EVT 110 3-Stage Specifications

Frame Size	110					
Stage	3-Stage					
Ratio	Unit	Note	16	20	25	28
Nominal Output Torque	[Nm]	*1	130	150	150	150
Maximum Acceleration Torque	[Nm]	*2	260	300	300	300
Emergency Stop Torque	[Nm]	*3	550	550	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	6200	6600	7100	7300
Permitted Axial Load	[N]	*8	4300	4300	4300	4300
Maximum Radial Load	[N]	*9	8500			
Maximum Axial Load	[N]	*10	4300			
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	2.52	2.24	2.20	2.42
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	2.85	2.57	2.53	2.75
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	4.98	4.69	4.66	4.88
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	--	--	--	--
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	IP55 (IP65)			
Ambient Temperature	[°C]	--	0-40			
Permitted Housing Temperature	[°C]	--	90			
Weight	[kg]	*15	9			

Frame Size	110						
Stage	3-Stage						
Ratio	Unit	Note	35	40	50	70	100
Nominal Output Torque	[Nm]	*1	150	150	150	150	110
Maximum Acceleration Torque	[Nm]	*2	300	300	300	300	200
Emergency Stop Torque	[Nm]	*3	550	550	550	550	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	7800	8200	8500	8500	8500
Permitted Axial Load	[N]	*8	4300	4300	4300	4300	4300
Maximum Radial Load	[N]	*9	8500				
Maximum Axial Load	[N]	*10	4300				
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	--	2.17	1.87	1.86	1.85	1.85
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	2.50	2.20	2.19	2.18	2.18
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	4.63	4.33	4.32	4.31	4.31
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	--	--	--	--	--
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	IP55 (IP65)				
Ambient Temperature	[°C]	--	0-40				
Permitted Housing Temperature	[°C]	--	90				
Weight	[kg]	*15	9				

EVT 140 2-Stage Specifications

Frame Size	140					
Stage	2-Stage					
Ratio	Unit	Note	4	5	7	10
Nominal Output Torque	[Nm]	*1	170	200	300	200
Maximum Acceleration Torque	[Nm]	*2	340	400	600	400
Emergency Stop Torque	[Nm]	*3	950	1100	1100	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	7200	7700	8500	9500
Permitted Axial Load	[N]	*8	5000	5300	5900	6500
Maximum Radial Load	[N]	*9	13000			
Maximum Axial Load	[N]	*10	6500			
Moment of Inertia (≤ Ø 19)	[kgcm ²]	--	--	--	--	--
Moment of Inertia (≤ Ø 28)	[kgcm ²]	--	22.58	19.57	17.07	15.36
Moment of Inertia (≤ Ø 38)	[kgcm ²]	--	26.96	23.94	21.45	19.73
Moment of Inertia (≤ Ø 48)	[kgcm ²]	--	40.19	37.17	34.68	32.96
Efficiency	[%]	*11	93			
Torsional Rigidity	[Nm/arc-min]	*12	140			
Maximum Torsional Backlash	[arc-min]	--	≤ 4			
Noise Level	dB [A]	*13	≤ 85			
Protection Class	--	*14	IP55 (IP65)			
Ambient Temperature	[°C]	--	0-40			
Permitted Housing Temperature	[°C]	--	90			
Weight	[kg]	*15	17.4			

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

*2) The maximum torque when starting or stopping operation

*3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)

*4) The average input speed

*5) The maximum intermittent input speed

*6) Torque at no load applied to the input shaft at nominal input speed

*7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side shaft center)

*8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output side bearing)

*9) The maximum radial load that the gearbox can accept

*10) The maximum axial load that the gearbox can accept

*11) The efficiency at the nominal output torque rating

*12) This does not include lost motion

*13) Contact SIT S.p.A. for the testing conditions and environment

*14) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details

*15) The weight may vary slightly between models

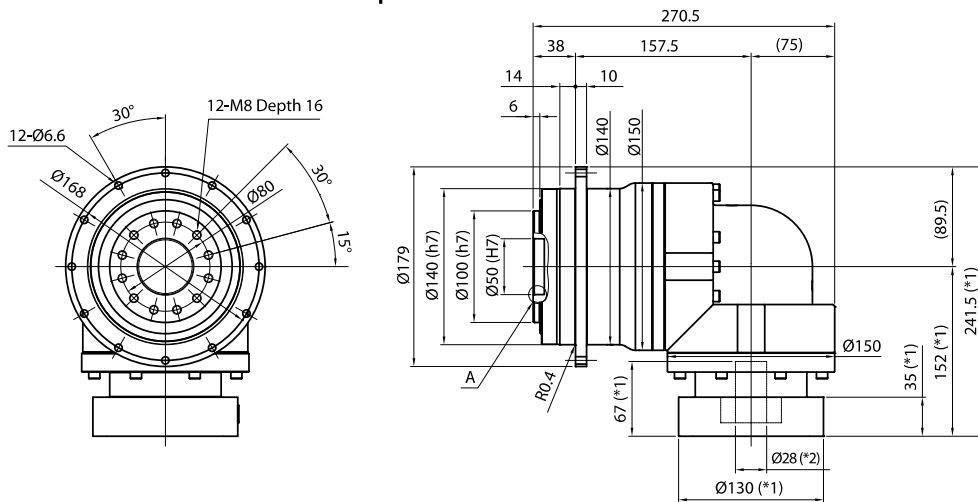
EVT 140 3-Stage Specifications

Frame Size	140					
Stage	3-Stage					
Ratio	Unit	Note	16	20	25	28
Nominal Output Torque	[Nm]	*1	300	300	300	300
Maximum Acceleration Torque	[Nm]	*2	600	600	600	600
Emergency Stop Torque	[Nm]	*3	1100	1100	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	11000	12000	12000	13000
Permitted Axial Load	[N]	*8	6500	6500	6500	6500
Maximum Radial Load	[N]	*9	13000			
Maximum Axial Load	[N]	*10	6500			
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	7.24	6.21	6.09	6.89
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	8.83	7.80	7.69	8.48
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	15.91	14.88	14.76	15.55
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	--	--	--	--
Efficiency	[%]	*11	88			
Torsional Rigidity	[Nm/arc-min]	*12	140			
Maximum Torsional Backlash	[arc-min]	--	≤ 7			
Noise Level	dB [A]	*13	≤ 85			
Protection Class	--	*14	IP55 (IP65)			
Ambient Temperature	[°C]	--	0-40			
Permitted Housing Temperature	[°C]	--	90			
Weight	[kg]	*15	17.6			

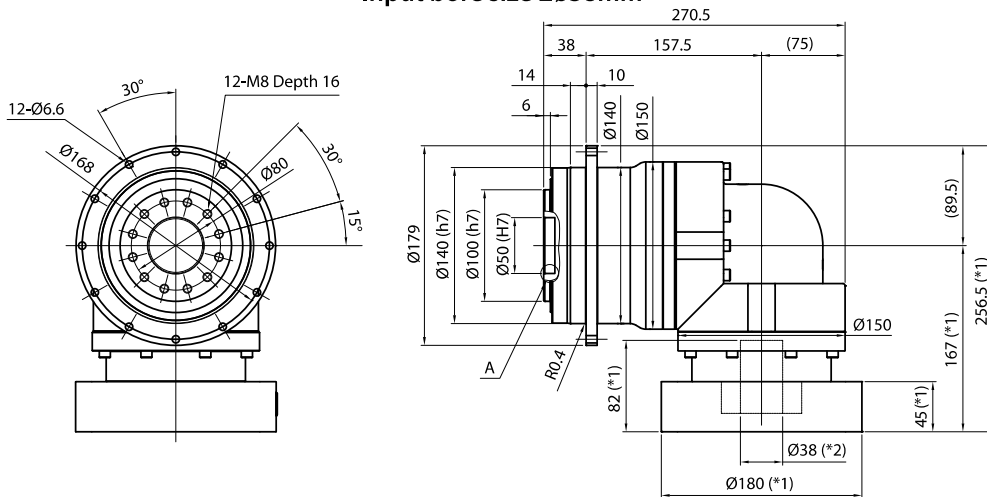
Frame Size	140						
Stage	3-Stage						
Ratio	Unit	Note	35	40	50	70	100
Nominal Output Torque	[Nm]	*1	300	300	300	300	200
Maximum Acceleration Torque	[Nm]	*2	600	600	600	600	400
Emergency Stop Torque	[Nm]	*3	1100	1100	1100	1100	750
Nominal Input Speed	[rpm]	*4	2000				
Maximum Input Speed	[rpm]	*5	4000				
No Load Running Torque	[Nm]	*6	2.56				
Permitted Radial Load	[N]	*7	13000	13000	13000	13000	13000
Permitted Axial Load	[N]	*8	6500	6500	6500	6500	6500
Maximum Radial Load	[N]	*9	13000				
Maximum Axial Load	[N]	*10	6500				
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	--	5.98	4.94	4.91	4.88	4.87
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	7.58	6.53	6.50	6.48	6.46
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	14.65	13.60	13.58	13.55	13.54
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	--	--	--	--	--
Efficiency	[%]	*11	88				
Torsional Rigidity	[Nm/arc-min]	*12	140				
Maximum Torsional Backlash	[arc-min]	--	≤ 7				
Noise Level	dB [A]	*13	≤ 85				
Protection Class	--	*14	IP55 (IP65)				
Ambient Temperature	[°C]	--	0-40				
Permitted Housing Temperature	[°C]	--	90				
Weight	[kg]	*15	17.6				

EVT 140 2-Stage Dimensions

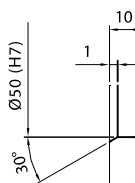
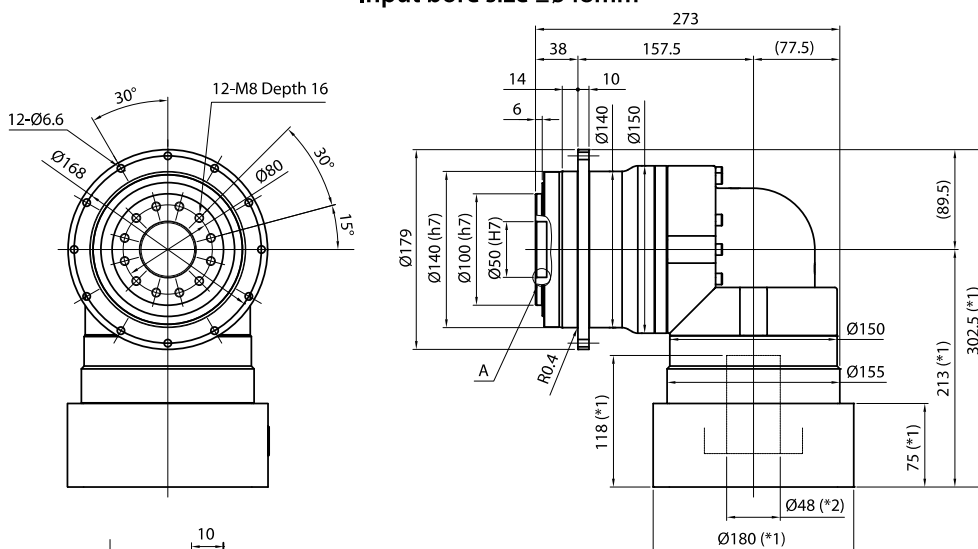
Input bore size $\leq \varnothing 28\text{mm}$



Input bore size $\leq \varnothing 38\text{mm}$



Input bore size $\leq \varnothing 48\text{mm}$



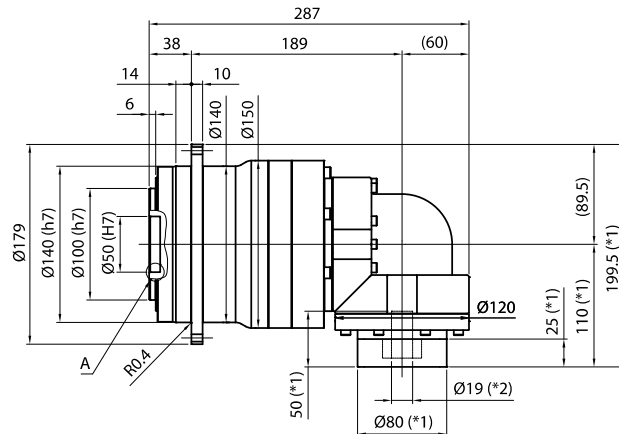
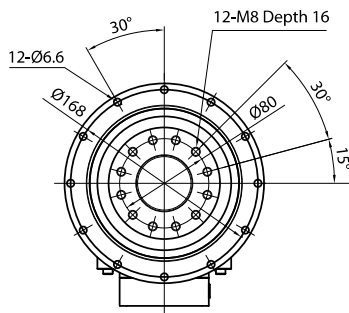
Enlarged detail A

*1) Length will vary depending on motor

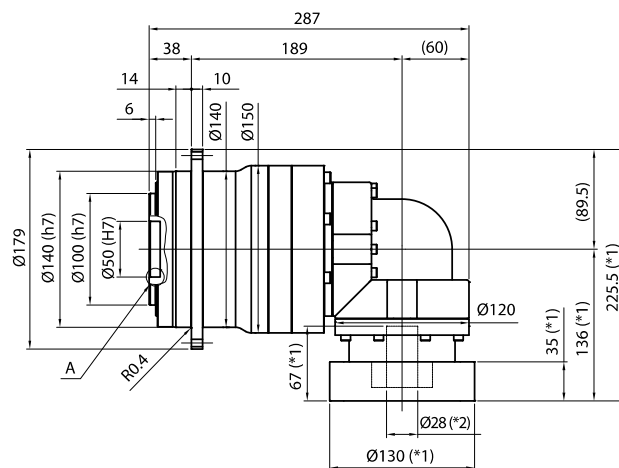
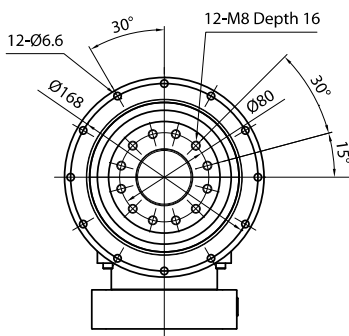
*2) Bushing will be inserted to adapt to motor shaft

EVT 140 3-Stage Dimensions

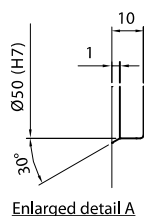
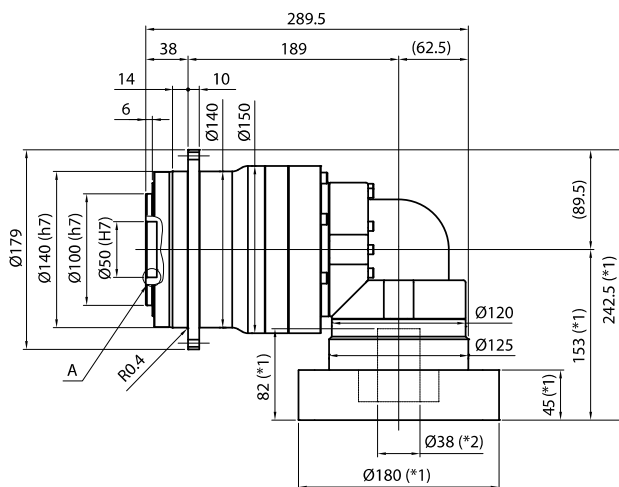
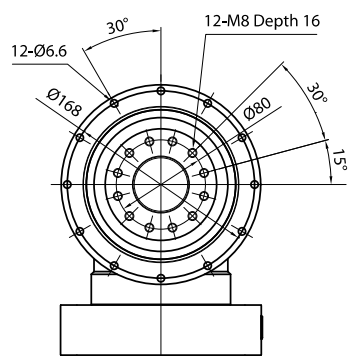
Input bore size $\leq \phi 19\text{mm}$



Input bore size $\leq \phi 28\text{mm}$



Input bore size $\leq \phi 38\text{mm}$



*1) Length will vary depending on motor

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

EVT 200 2-Stage Specifications

Frame Size	200					
Stage	2-Stage					
Ratio	Unit	Note	4	5	7	10
Nominal Output Torque	[Nm]	*1	575	600	600	400
Maximum Acceleration Torque	[Nm]	*2	770	960	1120	775
Emergency Stop Torque	[Nm]	*3	1700	2000	2500	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	15000	16000
Permitted Axial Load	[N]	*8	8300	8900	9800	11000
Maximum Radial Load	[N]	*9	25000			
Maximum Axial Load	[N]	*10	13000			
Moment of Inertia (≤ Ø 28)	[kgcm ²]	--	--	--	--	--
Moment of Inertia (≤ Ø 38)	[kgcm ²]	--	93.44	81.86	71.47	66.72
Moment of Inertia (≤ Ø 48)	[kgcm ²]	--	138.1	123.3	109.6	103.4
Moment of Inertia (≤ Ø 65)	[kgcm ²]	--	223.7	208.9	195.2	189.0
Efficiency	[%]	*11	93			
Torsional Rigidity	[Nm/arc-min]	*12	320			
Maximum Torsional Backlash	[arc-min]		≤ 6			
Noise Level	dB [A]	*13	≤ 85			
Protection Class	--	*14	IP55 (IP65)			
Ambient Temperature	[°C]	--	0-40			
Permitted Housing Temperature	[°C]	--	90			
Weight	[kg]	*15	50			

*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 SIT S.p.A. for the testing conditions and environment

*14) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details

*15) The weight may vary slightly between models

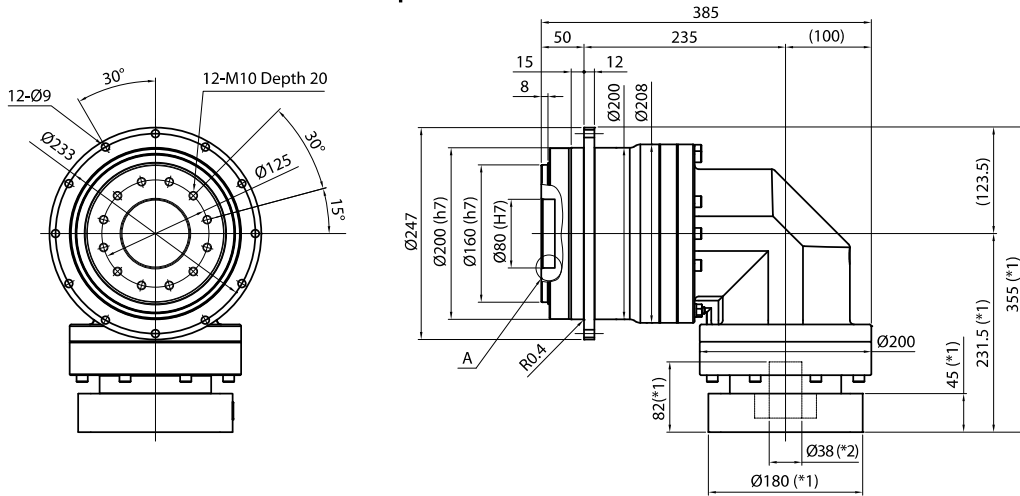
EVT 200 3-Stage Specifications

Frame Size	200					
Stage	3-Stage					
Ratio	Unit	Note	16	20	25	28
Nominal Output Torque	[Nm]	*1	555	600	600	600
Maximum Acceleration Torque	[Nm]	*2	1120	1120	1120	1120
Emergency Stop Torque	[Nm]	*3	2500	2500	2500	2500
Nominal Input Speed	[rpm]	*4	1500			
Maximum Input Speed	[rpm]	*5	3000			
No Load Running Torque	[Nm]	*6	4.70			
Permitted Radial Load	[N]	*7	19000	20000	21000	22000
Permitted Axial Load	[N]	*8	13000	13000	13000	13000
Maximum Radial Load	[N]	*9	25000			
Maximum Axial Load	[N]	*10	13000			
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	13.42	11.92	11.38	11.82
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	22.20	20.71	20.17	20.61
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	27.02	25.53	24.99	25.43
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	--	--	--	--
Efficiency	[%]	*11	88			
Torsional Rigidity	[Nm/arc-min]	*12	320			
Maximum Torsional Backlash	[arc-min]		≤ 9			
Noise Level	dB [A]	*13	≤ 85			
Protection Class	--	*14	IP55 (IP65)			
Ambient Temperature	[°C]	--	0-40			
Permitted Housing Temperature	[°C]	--	90			
Weight	[kg]	*15	37			

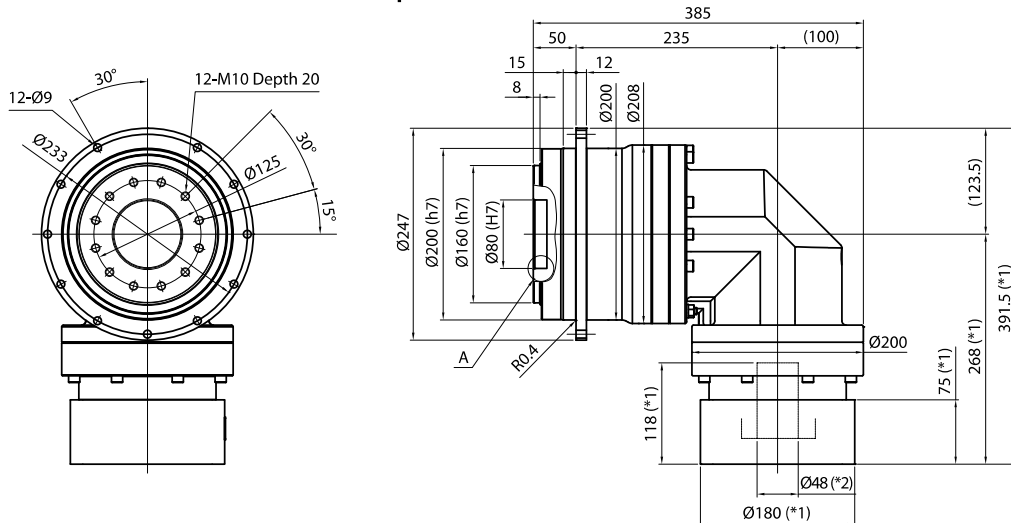
Frame Size	200						
Stage	3-Stage						
Ratio	Unit	Note	35	40	50	70	100
Nominal Output Torque	[Nm]	*1	600	600	600	600	400
Maximum Acceleration Torque	[Nm]	*2	1120	1120	1120	1120	775
Emergency Stop Torque	[Nm]	*3	2500	2500	2500	2500	2000
Nominal Input Speed	[rpm]	*4	1500				
Maximum Input Speed	[rpm]	*5	3000				
No Load Running Torque	[Nm]	*6	4.70				
Permitted Radial Load	[N]	*7	24000	25000	25000	25000	25000
Permitted Axial Load	[N]	*8	13000	13000	13000	13000	13000
Maximum Radial Load	[N]	*9	25000				
Maximum Axial Load	[N]	*10	13000				
Moment of Inertia ($\leq \varnothing 28$)	[kgcm ²]	--	10.9	10.5	10.3	10.2	10.2
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	19.69	19.26	19.13	19.01	18.94
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	24.51	24.08	23.95	23.83	23.77
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	--	--	--	--	--
Efficiency	[%]	*11	88				
Torsional Rigidity	[Nm/arc-min]	*12	320				
Maximum Torsional Backlash	[arc-min]		≤ 9				
Noise Level	dB [A]	*13	≤ 85				
Protection Class	--	*14	IP55 (IP65)				
Ambient Temperature	[°C]	--	0-40				
Permitted Housing Temperature	[°C]	--	90				
Weight	[kg]	*15	37				

EVT 200 2-Stage Dimensions

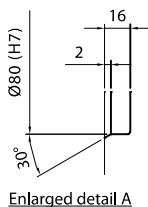
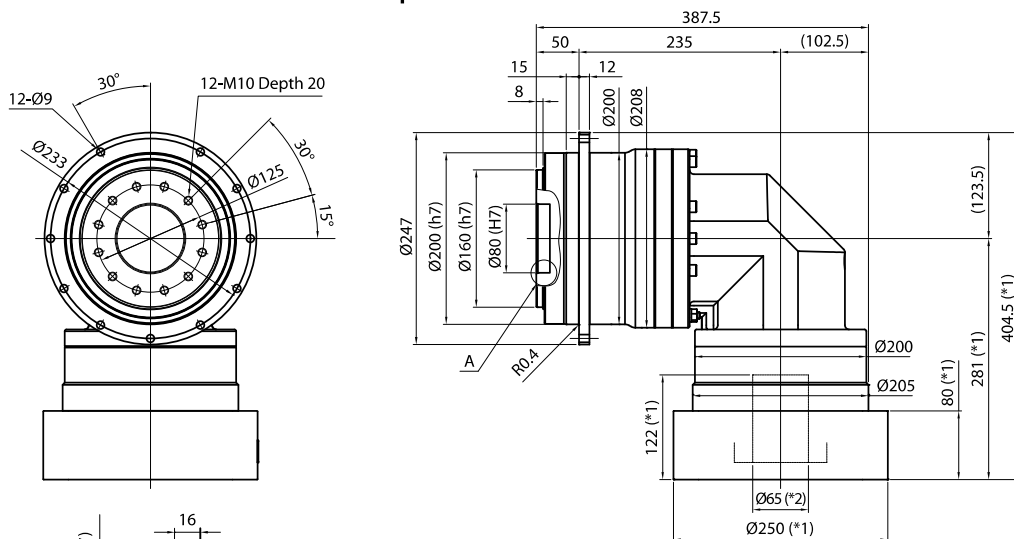
Input bore size $\leq \varnothing 38\text{mm}$



Input bore size $\leq \varnothing 48\text{mm}$



Input bore size $\leq \varnothing 65\text{mm}$

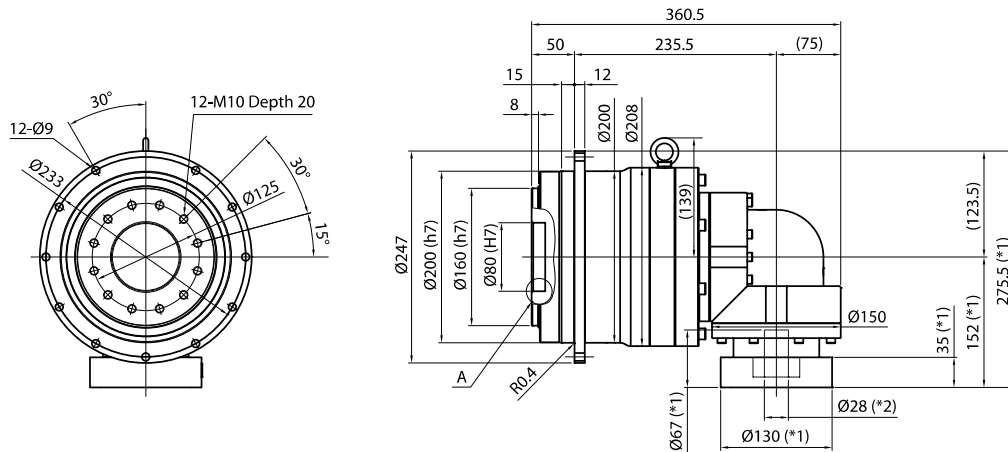


*1) Length will vary depending on motor

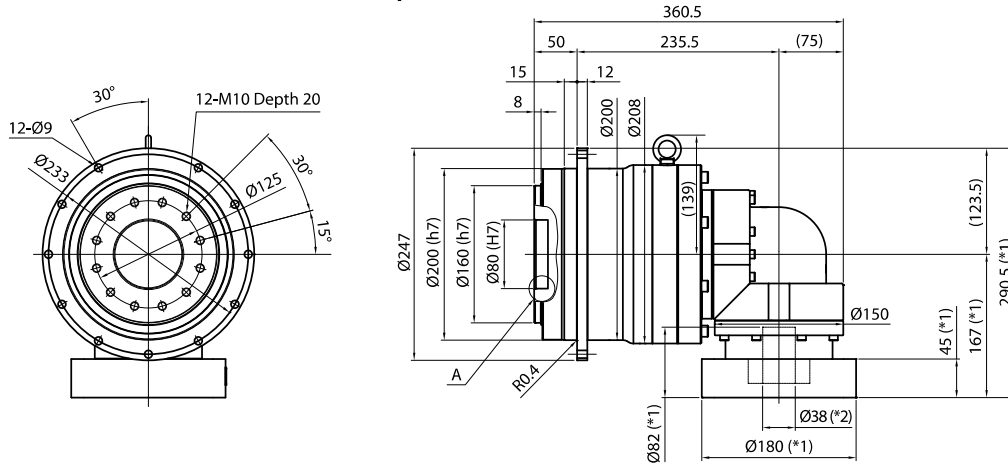
*2) Bushing will be inserted to adapt to motor shaft

EVT 200 3-Stage Dimensions

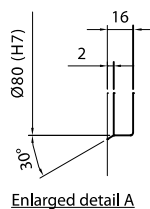
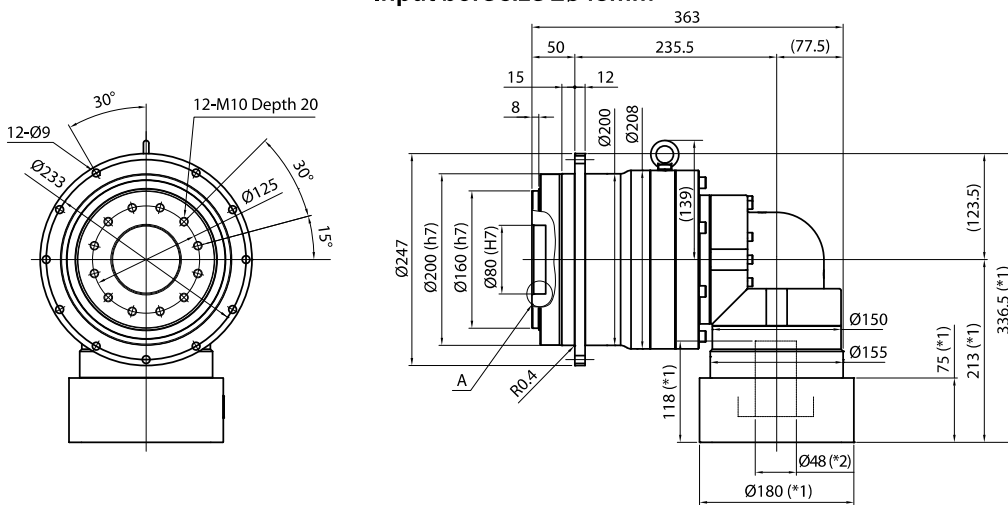
Input bore size $\leq \varnothing 28\text{mm}$



Input bore size $\leq \varnothing 38\text{mm}$



Input bore size $\leq \varnothing 48\text{mm}$



- *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					
Stage	2-Stage					
Ratio	Unit	Note	4	5	7	10
Nominal Output Torque	[Nm]	*1	1340	1680	1920	1280
Maximum Acceleration Torque	[Nm]	*2	2960	2960	2960	2080
Emergency Stop Torque	[Nm]	*3	5400	6500	7200	5400
Nominal Input Speed	[rpm]	*4	1000			
Maximum Input Speed	[rpm]	*5	2000			
No Load Running Torque	[Nm]	*6	--			
Permitted Radial Load	[N]	*7	19000	20000	23000	25000
Permitted Axial Load	[N]	*8	15000	16000	18000	20000
Maximum Radial Load	[N]	*9	40000			
Maximum Axial Load	[N]	*10	20000			
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	--	--	--	--
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	661.8	619.8	587.7	572.0
Efficiency	[%]	*11	93			
Torsional Rigidity	[Nm/arc-min]	*12	840			
Maximum Torsional Backlash	[arc-min]	--	≤ 6			
Noise Level	dB [A]	*13	≤ 85			
Protection Class	--	*14	IP55 (IP65)			
Ambient Temperature	[°C]	--	0-40			
Permitted Housing Temperature	[°C]	--	90			
Weight	[kg]	*15	110			

- *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 SIT S.p.A. for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details
- *15) The weight may vary slightly between models

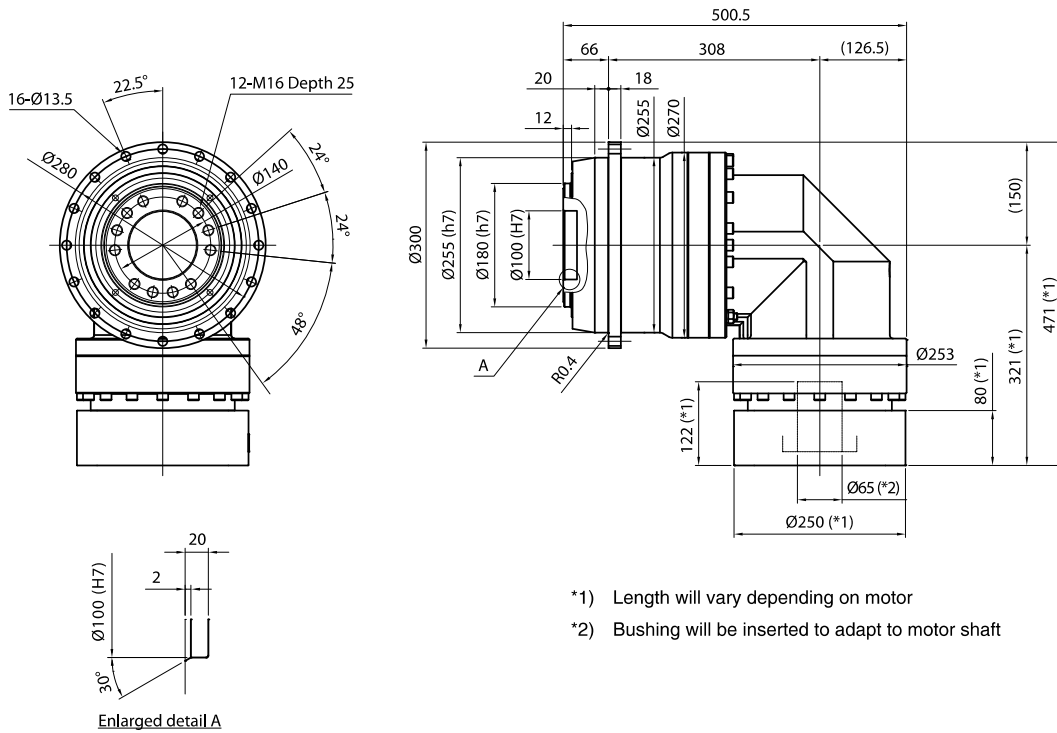
EVT 255 3-Stage Specifications

Frame Size	255					
Stage	3-Stage					
Ratio	Unit	Note	16	20	25	28
Nominal Output Torque	[Nm]	*1	1920	1920	1920	1920
Maximum Acceleration Torque	[Nm]	*2	2960	2960	2960	2960
Emergency Stop Torque	[Nm]	*3	7200	7200	7200	7200
Nominal Input Speed	[rpm]	*4	1000			
Maximum Input Speed	[rpm]	*5	2000			
No Load Running Torque	[Nm]	*6	--			
Permitted Radial Load	[N]	*7	29000	31000	33000	34000
Permitted Axial Load	[N]	*8	20000	20000	20000	20000
Maximum Radial Load	[N]	*9	40000			
Maximum Axial Load	[N]	*10	20000			
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	118.52	114.63	113.37	114.80
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	--	--	--	--
Efficiency	[%]	*11	88			
Torsional Rigidity	[Nm/arc-min]	*12	840			
Maximum Torsional Backlash	[arc-min]	--	≤ 9			
Noise Level	dB [A]	*13	≤ 85			
Protection Class	--	*14	IP55 (IP65)			
Ambient Temperature	[°C]	--	0-40			
Permitted Housing Temperature	[°C]	--	90			
Weight	[kg]	*15	99			

Frame Size	255						
Stage	3-Stage						
Ratio	Unit	Note	35	40	50	70	100
Nominal Output Torque	[Nm]	*1	1920	1920	1920	1920	1280
Maximum Acceleration Torque	[Nm]	*2	2960	2960	2960	2960	1440
Emergency Stop Torque	[Nm]	*3	7200	7200	7200	7200	5400
Nominal Input Speed	[rpm]	*4	1000				
Maximum Input Speed	[rpm]	*5	2000				
No Load Running Torque	[Nm]	*6	--				
Permitted Radial Load	[N]	*7	37000	38000	40000	40000	40000
Permitted Axial Load	[N]	*8	20000	20000	20000	20000	20000
Maximum Radial Load	[N]	*9	40000				
Maximum Axial Load	[N]	*10	20000				
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	112.25	109.37	109.05	108.77	108.62
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	--	--	--	--	--
Efficiency	[%]	*11	88				
Torsional Rigidity	[Nm/arc-min]	*12	840				
Maximum Torsional Backlash	[arc-min]	--	≤ 9				
Noise Level	dB [A]	*13	≤ 85				
Protection Class	--	*14	IP55 (IP65)				
Ambient Temperature	[°C]	--	0-40				
Permitted Housing Temperature	[°C]	--	90				
Weight	[kg]	*15	99				

EVT 255 2-Stage Dimensions

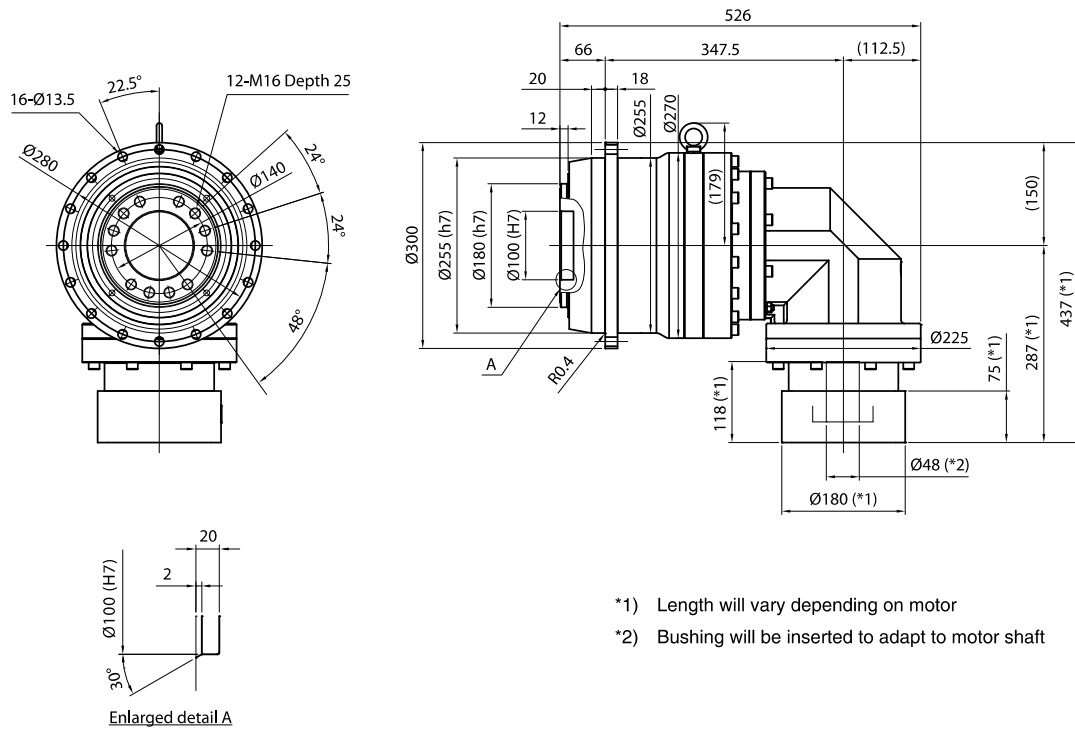
Input bore size $\leq \phi 65\text{mm}$



- *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 $\leq \phi 48\text{mm}$



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