

## EVS-SERIES

For applications that require exceptional load handling capabilities in an optimum foot print, the EVS series is the performance leader. The right-angle equivalent to the VRS, the EVS internal design provides an extremely smooth running, quiet reducer even when challenging static forces are applied. The tapered roller bearings at the output side allow the EVS to handle larger radial and thrust load forces than the typical planetary gearbox.

The EVS series is a high precision right-angle gearhead having a maximum 4 arc-min backlash rating, while handling a peak output torque reaching 600 Nm. The series is commonly utilized in custom assembly applications or in robotic tooling. Very low backlash and off-set load handling capabilities are critical characteristics for these types of applications.

	Unit Cost	Load Capacity	Duty Cycle	Positional Accuracy	
Optimal					10
					9
					8
					7
					6
Exceptional					5
					4
					3
					2
Suitable					1

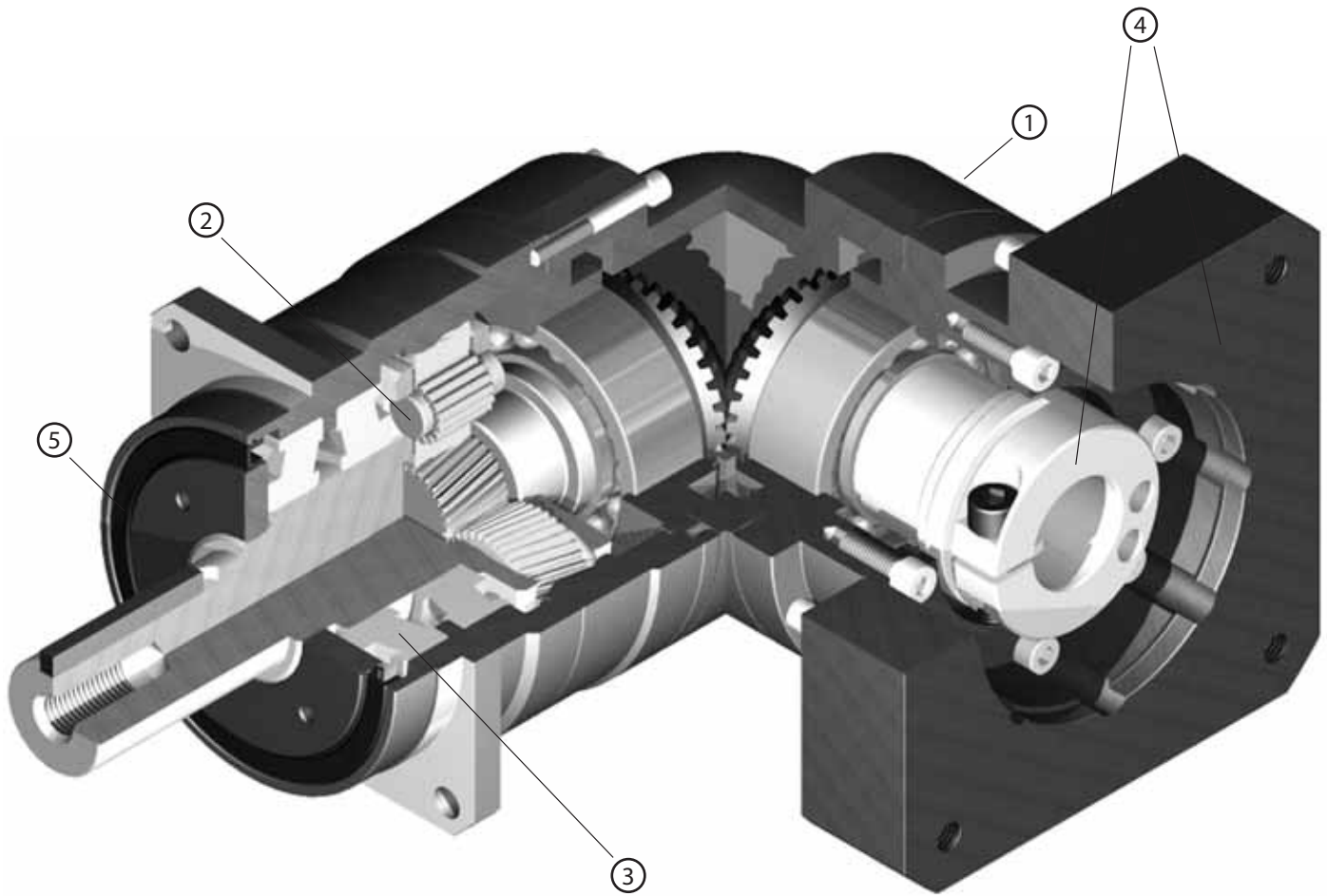


### **EVS-SERIES**

- Industry standard mounting dimensions
- Large variety of reduction ratios to choose from
- Thru-bolt mounting style
- Low backlash ( $\leq 4$  arc-min)
- Space-saving design, when minimal envelope available
- Highest radial and axial load ratings among right-angle options
- Readily available

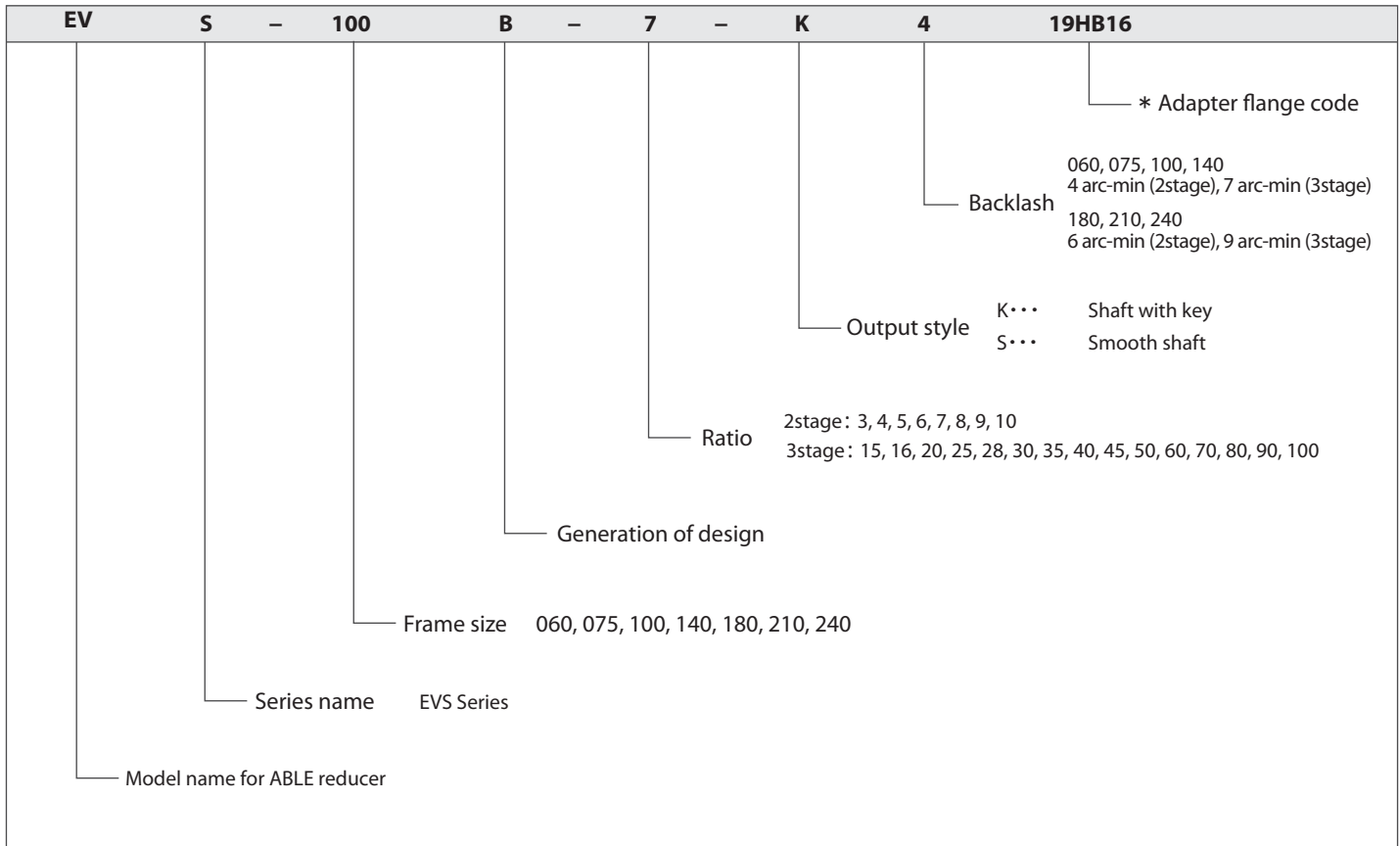
# EVS-SERIES Right-angle shaft

## EVS-Series – Features



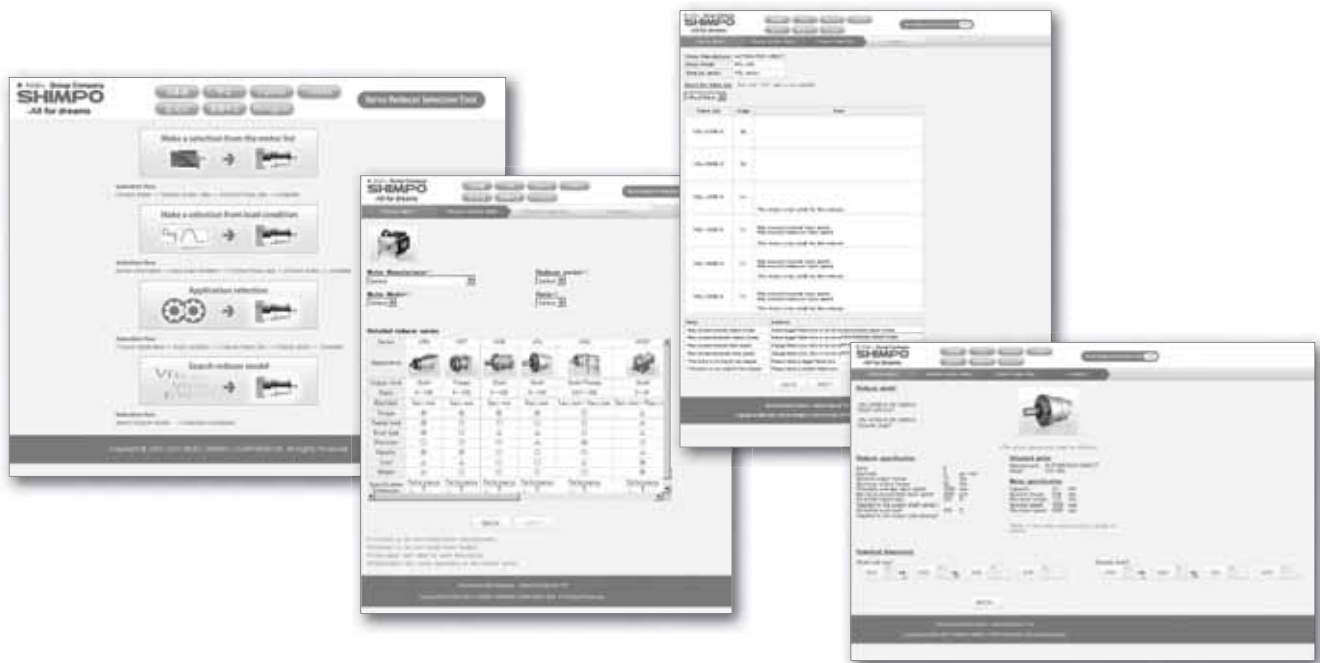
- ① Space-saving features; motor can be located at a 90 degree position from the reducer providing a more compact footprint
- ② High rigidity and torque capacity are achieved by using uncaged needle roller bearings
- ③ High load capacity: Tapered roller bearings were added to the output section to increase radial and axial load ratings
- ④ Adapter-bushing connection enable a simple, effective attachment to most servo motors
- ⑤ No leakage through the seal; high viscosity, anti-separation grease does not liquefy and does not migrate away from the gears
- ⑥ No need to replace the grease for the life of the unit. The reducer can be positioned in any orientation

## EVS-Series – Model Code



\*1) Adapter flange code  
 Adapter flange code varies depending on the motor.

**Contact us for additional information or refer to our online reducer selection tool.**  
 Selection tool [www.nidec-shimpo.co.jp/selection/eng](http://www.nidec-shimpo.co.jp/selection/eng)



# EVS-SERIES Right-angle shaft

## EVS-o6o – 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 ( $\leq \emptyset 8$ )	[kgcm <sup>2</sup> ]	--	0.320	0.271	0.251	0.242	0.235	0.232	0.229	0.228
Moment of Inertia ( $\leq \emptyset 14$ )	[kgcm <sup>2</sup> ]	--	0.395	0.346	0.326	0.317	0.310	0.307	0.304	0.303
Moment of Inertia ( $\leq \emptyset 19$ )	[kgcm <sup>2</sup> ]	--	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]	--	$\leq 4$							
Noise Level	[dB]	*13	80							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	2							

## EVS-o6o – 3-Stage Specifications

Frame Size	060									
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 ( $\leq \emptyset 8$ )	[kgcm <sup>2</sup> ]	--	0.074	0.079	0.072	0.071	0.077	0.062	0.070	0.061
Moment of Inertia ( $\leq \emptyset 14$ )	[kgcm <sup>2</sup> ]	--	0.118	0.124	0.116	0.115	0.122	0.106	0.115	0.106
Moment of Inertia ( $\leq \emptyset 19$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*12	3							
Maximum Torsional Backlash	[arc-min]	--	$\leq 7$							
Noise Level	[dB]	*13	80							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	1.8							

## EVS-o6o – 3-Stage Specifications

Frame Size	060										
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 <sup>2</sup> ]	--	0.070	0.061	0.061	0.061	0.061	0.061	0.061		
Moment of Inertia ( $\leq \varnothing 14$ )	[kgcm <sup>2</sup> ]	--	0.115	0.106	0.106	0.106	0.105	0.105	0.105		
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--	--	--	--		
Efficiency	[%]	*11	88								
Torsional Rigidity	[Nm/arc-min]	*12	3								
Maximum Torsional Backlash	[arc-min]	--	$\leq 7$								
Noise Level	[dB]	*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) This is the torque at no load applied on the input shaft. The input speed is 3000 rpm for EVSo6o

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

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

\*9) The maximum radial load that the reducer can accept

\*10) The maximum axial load that the reducer can accept

\*11) The efficiency at the nominal torque rating

\*12) This does not include the lost motion

\*13) Contact NIDEC-SHIMPO for the testing conditions and environment

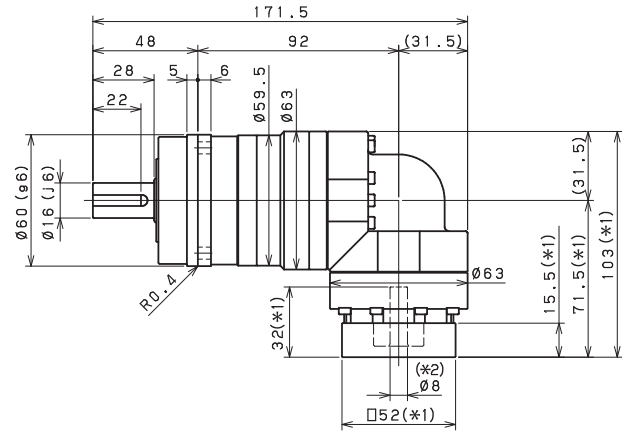
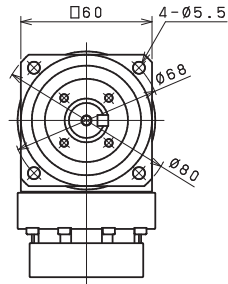
\*14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

\*15) The weight may vary slightly between models

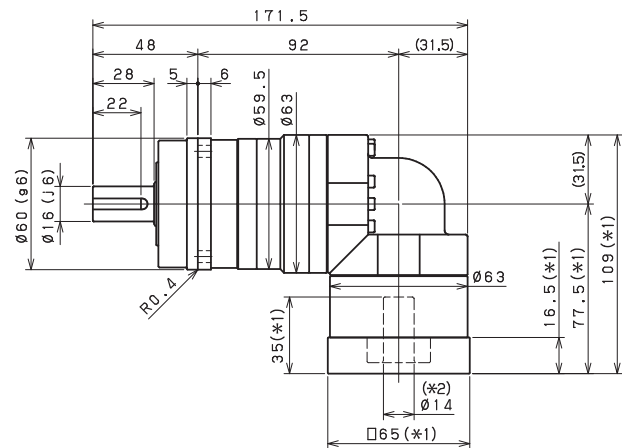
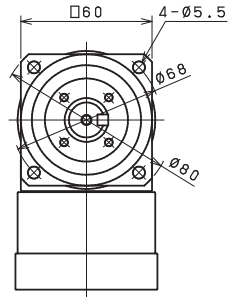
# EVS-SERIES Right-angle shaft

## EVS-o6o – 2-Stage Dimensions

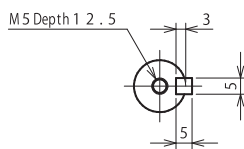
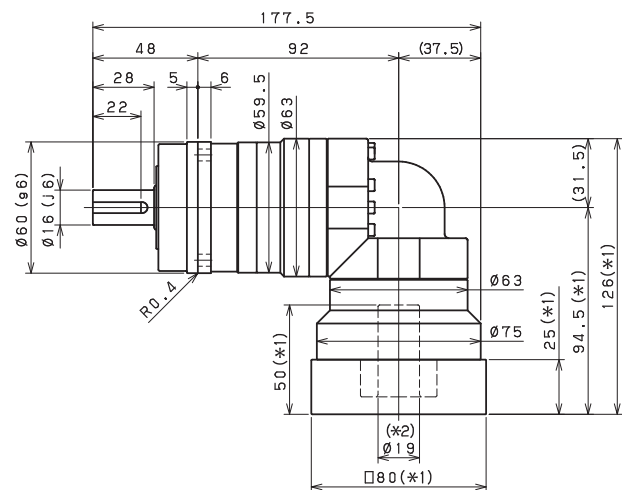
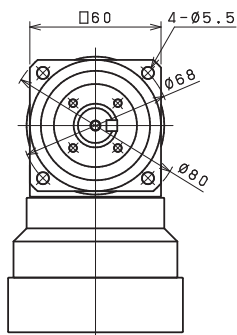
Input shaft bore  $\cong \varnothing 8$



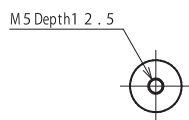
Input shaft bore  $\cong \varnothing 14$



Input shaft bore  $\cong \varnothing 19$



Shaft with key



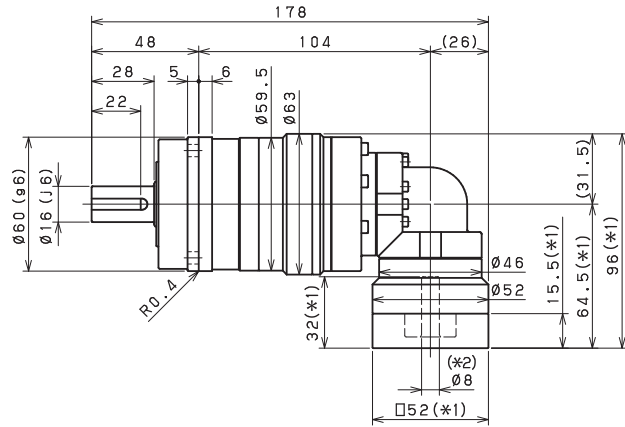
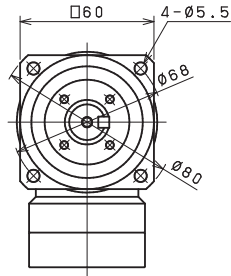
Smooth shaft

\*1) Length will vary depending on motor

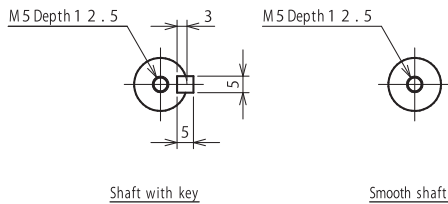
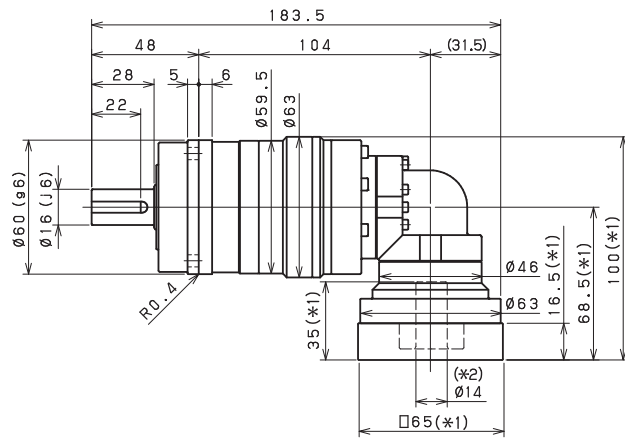
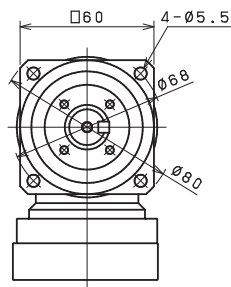
\*2) Bushing will be inserted to adapt to motor shaft

## EVS-o6o – 3-Stage Dimensions

Input shaft bore  $\leq \varnothing 8$



Input shaft bore  $\leq \varnothing 14$

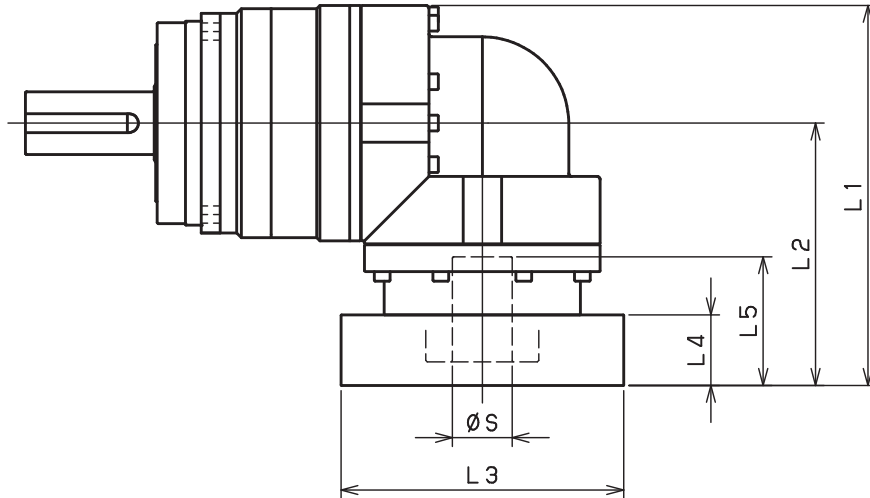


- \*1) Length will vary depending on motor
- \*2) Bushing will be inserted to adapt to motor shaft



# EVS-SERIES Right-angle shaft

## EVS-o6o – 2-Stage Adapter Dimensions



Model number	**: Adapter code	2-Stage				
		L1	L2	L3	L4	L5
EVS-060-□-□-8** (S ≤ 8)	AA·AC·AD·AF·AG·AL·AM·AN·AQ	103	71.5	□52	15.5	32
	AB·AE·AH·AJ·AK	108	76.5	□52	20.5	37
	BA·BB·BD·BE·BG·BH·BJ	103	71.5	□60	15.5	32
	BC·BF	108	76.5	□60	20.5	37
	CA	108	76.5	□70	20.5	37
EVS-060-□-□-14** (8 < S ≤ 14)	BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP	109	77.5	□65	16.5	35
	BC·BH·BM·BN	114	82.5	□65	21.5	40
	BL	119	87.5	□65	26.5	45
	CA·CC	109	77.5	□70	16.5	35
	CB	114	82.5	□70	21.5	40
	DA·DB·DC·DD·DF·DH·DJ	109	77.5	□80	16.5	35
	DE·DL	114	82.5	□80	21.5	40
	DG·DK	119	87.5	□80	26.5	45
	EA·EB·EC·EF·EG·EK·EL	109	77.5	□90	16.5	35
	EJ·EM	114	82.5	□90	21.5	40
	ED·EE·EH	119	87.5	□90	26.5	45
	FA	109	77.5	□100	16.5	35
	FB	119	87.5	□100	26.5	45
EVS-060-□-□-19** (14 < S ≤ 19)	DA·DB·DC	126	94.5	□80	25	50
	DD	136	104.5	□80	35	60
	DE	131	99.5	□80	30	55
	EA	131	99.5	□90	30	55
	EB·ED	126	94.5	□90	25	50
	EC	136	104.5	□90	35	60
	FA	126	94.5	□100	25	50
FB	136	104.5	□100	35	60	

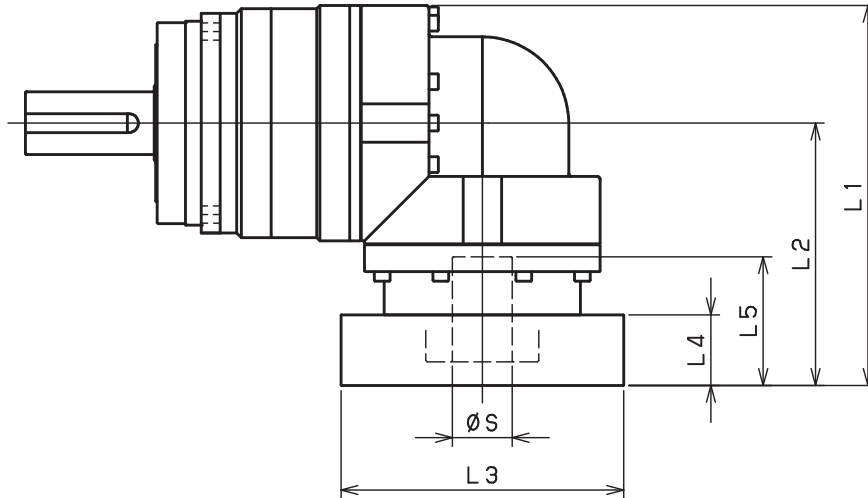
\*1) Double reduction : 1/3~ 1/10

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

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

## EVS-o6o – 3-Stage Adapter Dimensions



Model number	**: Adapter code	3-Stage				
		L1	L2	L3	L4	L5
EVS-060-□-□-8** (S ≤ 8)	AA·AC·AD·AF·AG·AL·AM·AN·AQ	96	64.5	□52	15.5	32
	AB·AE·AH·AJ·AK	101	69.5	□52	20.5	37
	BA·BB·BD·BE·BG·BH·BJ	96	64.5	□60	15.5	32
	BC·BF	101	69.5	□60	20.5	37
	CA	101	69.5	□70	20.5	37
EVS-060-□-□-14** (8 < S ≤ 14)	BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP	100	68.5	□65	16.5	35
	BC·BH·BM·BN	105	73.5	□65	21.5	40
	BL	110	78.5	□65	26.5	45
	CA·CC	100	68.5	□70	16.5	35
	CB	105	73.5	□70	21.5	40
	DA·DB·DC·DD·DF·DH·DJ	100	68.5	□80	16.5	35
	DE·DL	105	73.5	□80	21.5	40
	DG·DK	110	78.5	□80	26.5	45
	EA·EB·EC·EF·EG·EK·EL	100	68.5	□90	16.5	35
	EJ·EM	105	73.5	□90	21.5	40
	ED·EE·EH	110	78.5	□90	26.5	45
	FA	100	68.5	□100	16.5	35
	FB	110	78.5	□100	26.5	45
EVS-060-□-□-19** (14 < S ≤ 19)	DA·DB·DC	--	--	--	--	--
	DD	--	--	--	--	--
	DE	--	--	--	--	--
	EA	--	--	--	--	--
	EB·ED	--	--	--	--	--
	EC	--	--	--	--	--
	FB	--	--	--	--	--

\*1) Triple reduction : 1/15~ 1/100

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

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

# EVS-SERIES Right-angle 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 <sup>2</sup> ]	--	--	--	--	--	--	--	--	--
Moment of Inertia ( $\leq \varnothing 14$ )	[kgcm <sup>2</sup> ]	--	2.070	1.870	1.780	1.740	1.720	1.700	1.690	1.690
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	2.400	2.200	2.110	2.070	2.050	2.030	2.020	2.020
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	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]	--	$\leq 4$							
Noise Level	[dB]	*13	80							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	4.8							

## EVS-075 – 3-Stage Specifications

Frame Size	075									
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 <sup>2</sup> ]	--	0.330	0.380	0.330	0.320	0.370	0.250	0.320	0.250
Moment of Inertia ( $\leq \varnothing 14$ )	[kgcm <sup>2</sup> ]	--	0.410	0.460	0.400	0.400	0.450	0.320	0.400	0.320
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	0.600	0.650	0.590	0.590	0.640	0.510	0.580	0.510
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*12	10							
Maximum Torsional Backlash	[arc-min]	--	$\leq 7$							
Noise Level	[dB]	*13	80							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	4.1							

## EVS-075 – 3-Stage Specifications

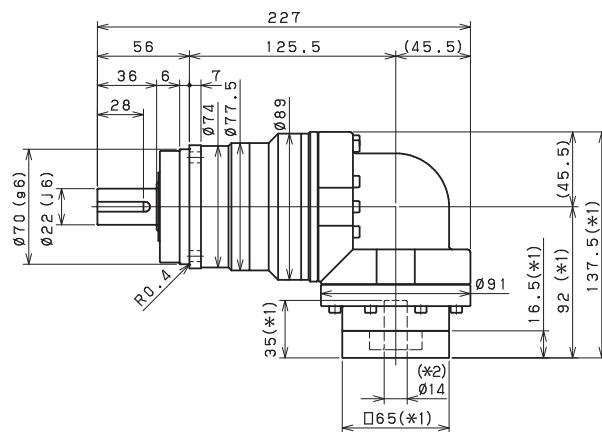
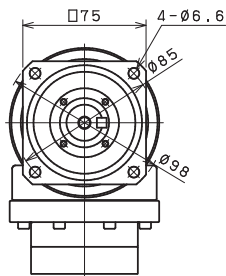
Frame Size	075										
Stage	3-Stage										
Ratio	Unit	Note	45	50	60	70	80	90	100		
Nominal Output Torque	[Nm]	*1	45	65	65	65	65	45	45		
Maximum Acceleration Torque	[Nm]	*2	65	110	110	110	110	65	65		
Emergency Stop Torque	[Nm]	*3	170	220	220	220	220	170	170		
Nominal Input Speed	[rpm]	*4	3000								
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 <sup>2</sup> ]	--	0.320	0.250	0.250	0.250	0.250	0.250	0.250		
Moment of Inertia ( $\leq \varnothing 14$ )	[kgcm <sup>2</sup> ]	--	0.390	0.320	0.320	0.320	0.320	0.320	0.320		
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	0.580	0.510	0.510	0.510	0.510	0.510	0.510		
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--	--	--	--		
Efficiency	[%]	*11	88								
Torsional Rigidity	[Nm/arc-min]	*12	10								
Maximum Torsional Backlash	[arc-min]	--	$\leq 7$								
Noise Level	[dB]	*13	80								
Protection Class	--	*14	IP54 (IP65)								
Ambient Temperature	[°C]	--	0-40								
Permitted Housing Temperature	[°C]	--	90								
Weight	[kg]	*15	4.1								

- \*1) At nominal input speed, service life is 20,000 hours
- \*2) The maximum torque when starting or stopping operation
- \*3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- \*4) The average input speed
- \*5) The maximum intermittent input speed
- \*6) This is the torque at no load applied on the input shaft. The input speed is 3000 rpm for EVS075
- \*7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- \*8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- \*9) The maximum radial load that the reducer can accept
- \*10) The maximum axial load that the reducer can accept
- \*11) The efficiency at the nominal torque rating
- \*12) This does not include the lost motion
- \*13) Contact NIDEC-SHIMPO for the testing conditions and environment
- \*14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- \*15) The weight may vary slightly between models

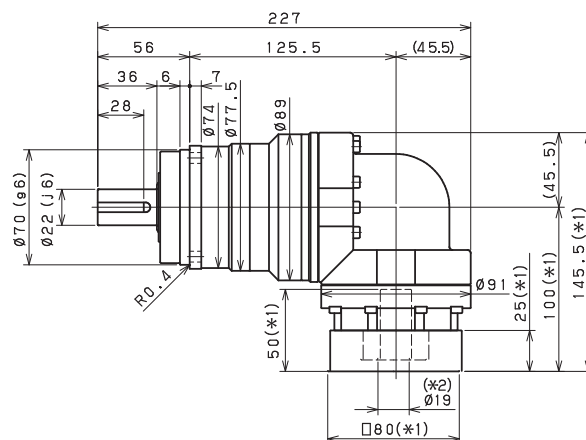
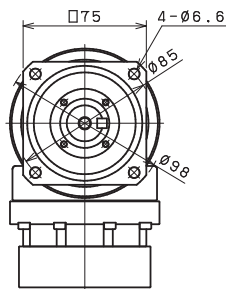
# EVS-SERIES Right-angle shaft

## EVS-075 – 2-Stage Dimensions

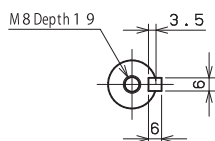
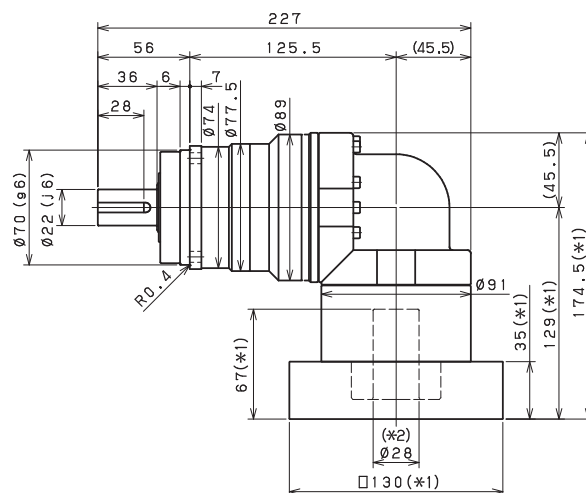
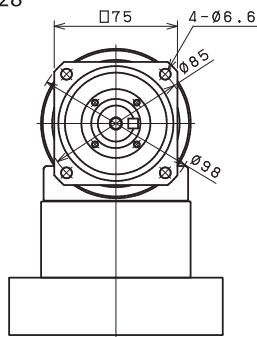
Input shaft bore  $\leq \varnothing 14$



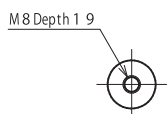
Input shaft bore  $\leq \varnothing 19$



Input shaft bore  $\leq \varnothing 28$



Shaft with key



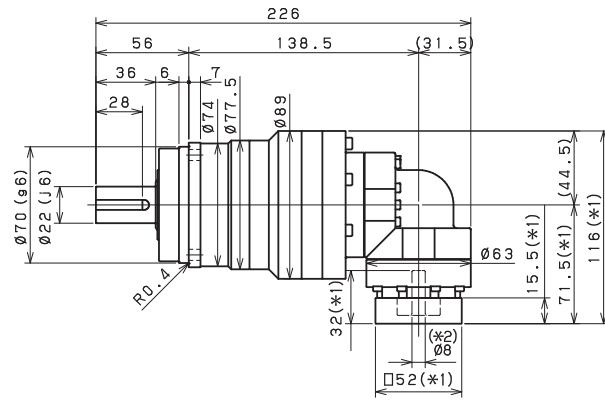
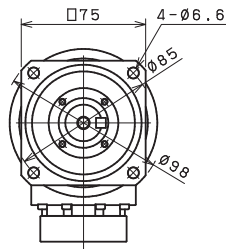
Smooth shaft

\*1) Length will vary depending on motor

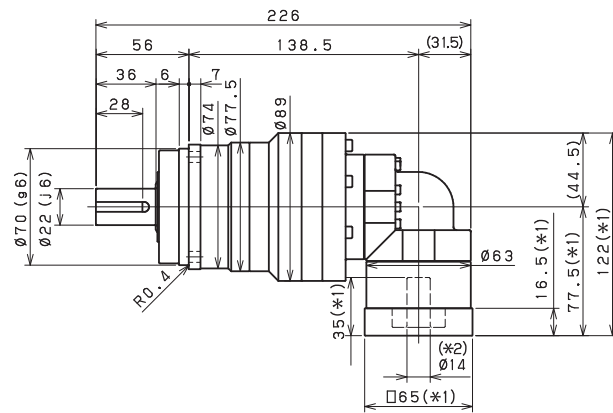
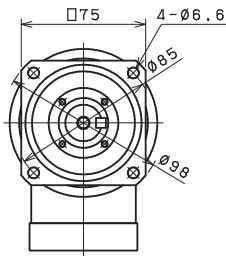
\*2) Bushing will be inserted to adapt to motor shaft

## EVS-075 – 3-Stage Dimensions

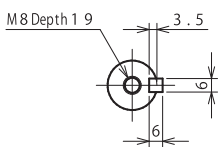
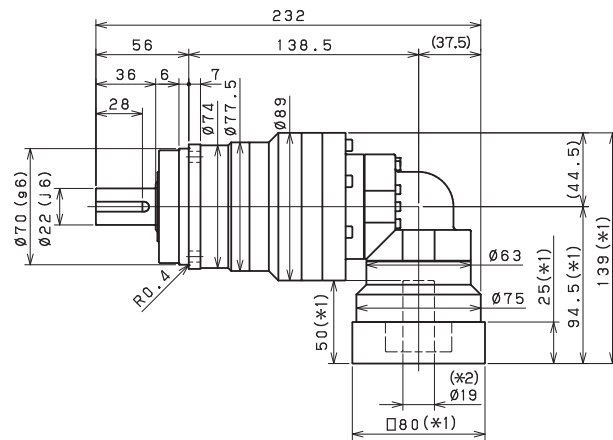
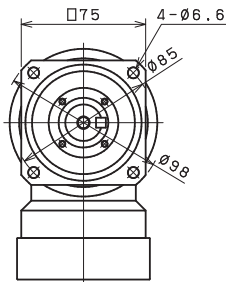
Input shaft bore  $\leq \phi 8$



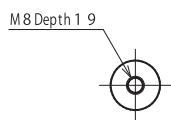
Input shaft bore  $\leq \phi 14$



Input shaft bore  $\leq \phi 19$



Shaft with key



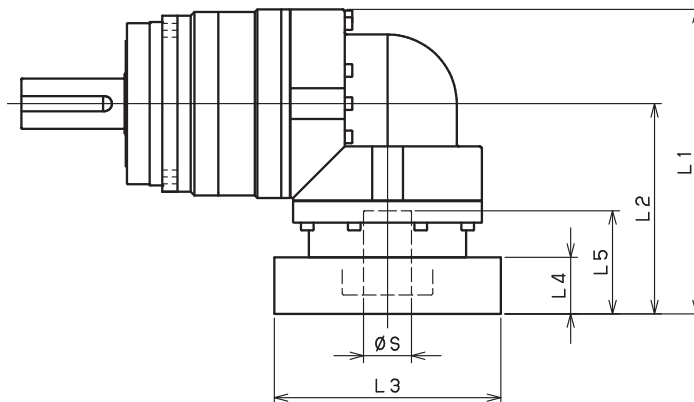
Smooth shaft

\*1) Length will vary depending on motor

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

# EVS-SERIES Right-angle shaft

## EVS-075 – 2-Stage Adapter Dimensions



Model number	**: Adapter code	2-Stage				
		L1	L2	L3	L4	L5
EVS-075-□-□-8** (S ≤ 8)	AA·AC·AD·AF·AG·AL·AM·AN·AQ	--	--	--	--	--
	AB·AE·AH·AJ·AK	--	--	--	--	--
	BA·BB·BD·BE·BG·BH·BJ	--	--	--	--	--
	CA	--	--	--	--	--
EVS-075-□-□-14** (8 < S ≤ 14)	BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP	137.5	92	□65	16.5	35
	BC·BH·BM·BN	142.5	97	□65	21.5	40
	CA·CC	137.5	92	□70	16.5	35
	DA·DB·DC·DD·DF·DH·DJ	137.5	92	□80	16.5	35
	EA·EB·EC·EF·EG·EK·EL	137.5	92	□90	16.5	35
	FA	137.5	92	□100	16.5	35
	FB	147.5	102	□100	26.5	45
EVS-075-□-□-19** (14 < S ≤ 19)	DA·DB·DC	145.5	100	□80	25	50
	EB·ED	145.5	100	□90	25	50
	FA	145.5	100	□100	25	50
	FB	155.5	110	□100	35	60
	GA·GC·GH	150.5	105	□115	30	55
	GB·GD·GJ	145.5	100	□115	25	50
	GE·GF	155.5	110	□115	35	60
	HA	145.5	100	□130	25	50
	HB	160.5	115	□130	40	65
	HC·HD·HE	150.5	105	□130	30	55
	JA	155.5	110	□150	35	60
EVS-075-□-□-28** (19 < S ≤ 28)	JB	160.5	115	□150	40	65
	FA·FB·FC	174.5	129	□100	35	67
	FD·FE	169.5	124	□100	30	62
	GA·GB·GC·GD·GE·GF·GG·GH	174.5	129	□115	35	67
	HA·HC·HD	174.5	129	□130	35	67
	HB	184.5	139	□130	45	77
	HE	189.5	144	□130	50	82
	HF	169.5	124	□130	30	62
	JA·JB·JC·JF	174.5	129	□150	35	67
JD	194.5	149	□150	55	87	
JE	184.5	139	□150	45	77	

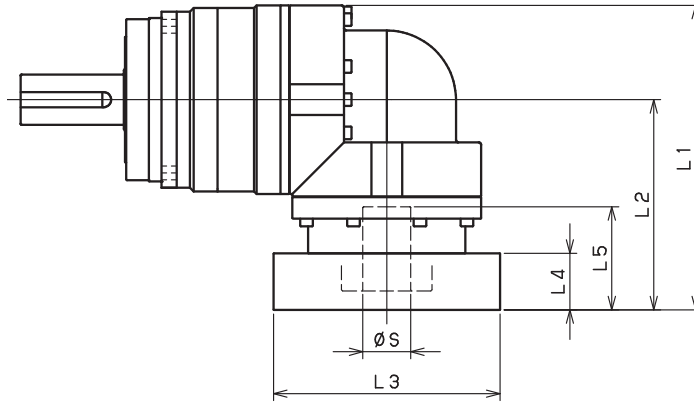
\*1) Double reduction : 1/3~ 1/10

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

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

EVS-075 – 3-Stage Adapter Dimensions



Model number	**: Adapter code	3-Stage				
		L1	L2	L3	L4	L5
EVS-075-□-□-8** (S ≤ 8)	AA·AC·AD·AF·AG·AL·AM·AN·AQ	116	71.5	□52	15.5	32
	AB·AE·AH·AJ·AK	121	76.5	□52	20.5	37
	BA·BB·BD·BE·BG·BH·BJ	116	71.5	□60	15.5	32
	CA	121	76.5	□70	20.5	37
EVS-075-□-□-14** (8 < S ≤ 14)	BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP	122	77.5	□65	16.5	35
	BC·BH·BM·BN	127	82.5	□65	21.5	40
	CA·CC	122	77.5	□70	16.5	35
	DA·DB·DC·DD·DF·DH·DJ	122	77.5	□80	16.5	35
	EA·EB·EC·EF·EG·EK·EL	122	77.5	□90	16.5	35
	FA	122	77.5	□100	16.5	35
	FB	132	87.5	□100	26.5	45
EVS-075-□-□-19** (14 < S ≤ 19)	DA·DB·DC	139	94.5	□80	25	50
	EB·ED	139	94.5	□90	25	50
	FA	139	94.5	□100	25	50
	FB	149	104.5	□100	35	60
	GA·GC·GH	144	99.5	□115	30	55
	GB·GD·GJ	139	94.5	□115	25	50
	GE·GF	149	104.5	□115	35	60
	HA	139	94.5	□130	25	50
	HB	154	109.5	□130	40	65
	HC·HD·HE	144	99.5	□130	30	55
	JA	149	104.5	□150	35	60
EVS-075-□-□-28** (19 < S ≤ 28)	FA·FB·FC	--	--	--	--	--
	FD·FE	--	--	--	--	--
	GA·GB·GC·GD·GE·GF·GG·GH	--	--	--	--	--
	HA·HC·HD	--	--	--	--	--
	HB	--	--	--	--	--
	HE	--	--	--	--	--
	HF	--	--	--	--	--
	JA·JB·JC·JF	--	--	--	--	--
	JD	--	--	--	--	--
JE	--	--	--	--	--	

\*1) Triple reduction : 1/15~ 1/100

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

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.



# EVS-SERIES Right-angle 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 <sup>2</sup> ]	--	--	--	--	--	--	--	--	--
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	6.610	5.410	4.970	4.730	4.620	4.530	4.470	4.450
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	8.210	7.010	6.570	6.330	6.220	6.120	6.070	6.040
Moment of Inertia ( $\leq \varnothing 38$ )	[kgcm <sup>2</sup> ]	--	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]	--	$\leq 4$							
Noise Level	[dB]	*13	85							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	10.5							

## EVS-100 – 3-Stage Specifications

Frame Size	100									
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 <sup>2</sup> ]	--	2.240	2.450	2.190	2.180	2.400	1.870	2.160	1.860
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	2.570	2.780	2.520	2.510	2.730	2.200	2.490	2.190
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	4.700	4.910	4.650	4.630	4.860	4.330	4.620	4.320
Moment of Inertia ( $\leq \varnothing 38$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*12	31							
Maximum Torsional Backlash	[arc-min]	--	$\leq 7$							
Noise Level	[dB]	*13	85							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	10.1							

## EVS-100 – 3-Stage Specifications

Frame Size	100										
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 <sup>2</sup> ]	--	2.150	1.860	1.850	1.850	1.850	1.850	1.850		
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	2.480	2.190	2.180	2.180	2.180	2.180	2.180		
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	4.610	4.310	4.310	4.310	4.310	4.310	4.310		
Moment of Inertia ( $\leq \varnothing 38$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--	--	--	--		
Efficiency	[%]	*11	88								
Torsional Rigidity	[Nm/arc-min]	*12	31								
Maximum Torsional Backlash	[arc-min]	--	$\leq 7$								
Noise Level	[dB]	*13	85								
Protection Class	--	*14	IP54 (IP65)								
Ambient Temperature	[°C]	--	0-40								
Permitted Housing Temperature	[°C]	--	90								
Weight	[kg]	*15	10.1								

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

\*2) The maximum torque when starting or stopping operation

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

\*4) The average input speed

\*5) The maximum intermittent input speed

\*6) This is the torque at no load applied on the input shaft. The input speed is 3000 rpm for EVS100

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

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

\*9) The maximum radial load that the reducer can accept

\*10) The maximum axial load that the reducer can accept

\*11) The efficiency at the nominal torque rating

\*12) This does not include the lost motion

\*13) Contact NIDEC-SHIMPO for the testing conditions and environment

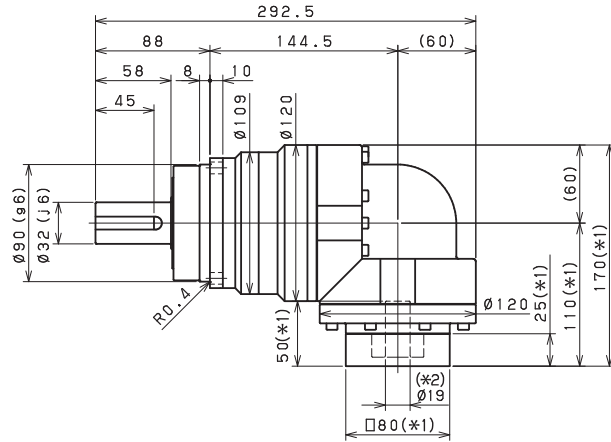
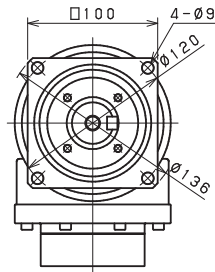
\*14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

\*15) The weight may vary slightly between models

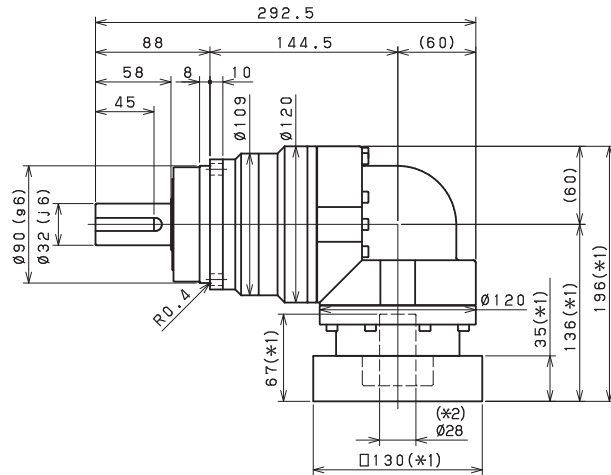
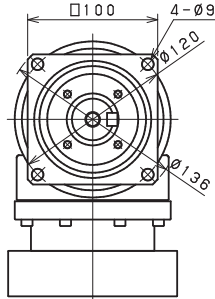
# EVS-SERIES Right-angle shaft

## EVS-100 – 2-Stage Dimensions

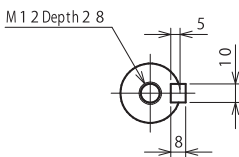
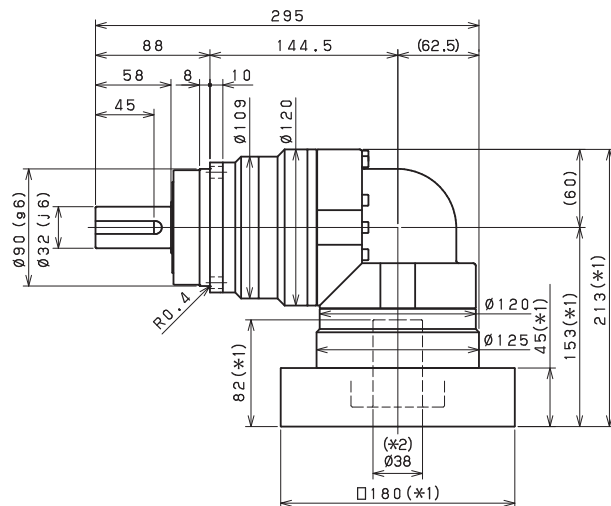
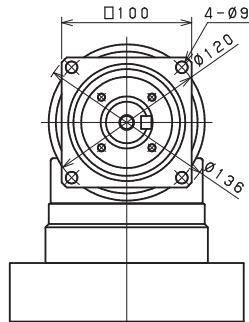
Input shaft bore  $\leq \phi 19$



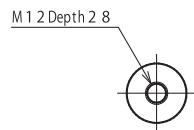
Input shaft bore  $\leq \phi 28$



Input shaft bore  $\leq \phi 38$



Shaft with key

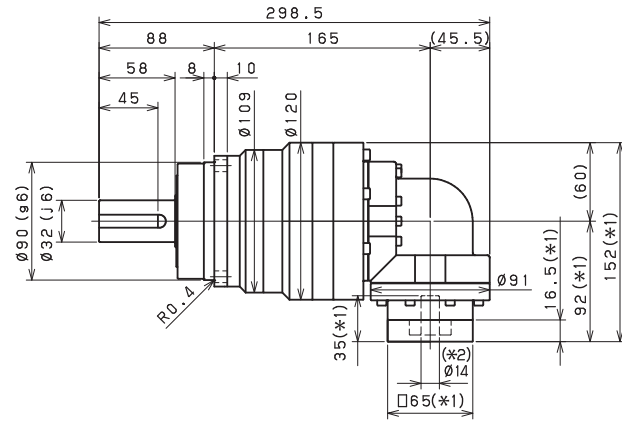
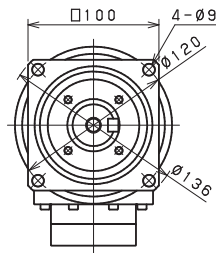


Smooth shaft

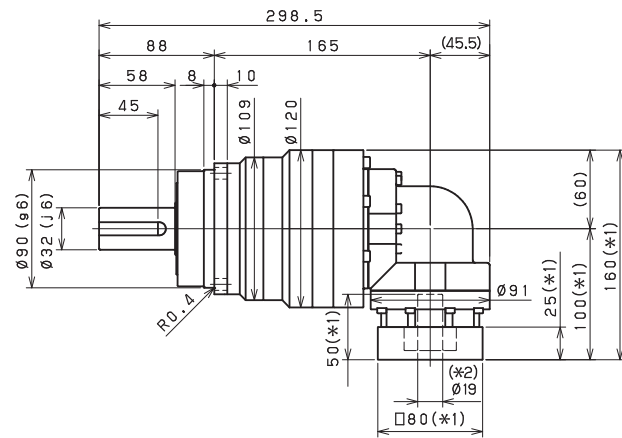
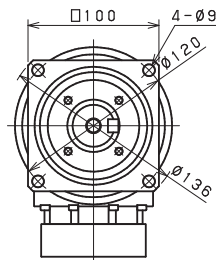
- \*1) Length will vary depending on motor
- \*2) Bushing will be inserted to adapt to motor shaft

## EVS-100 – 3-Stage Dimensions

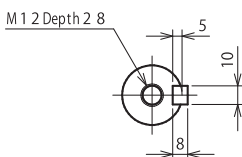
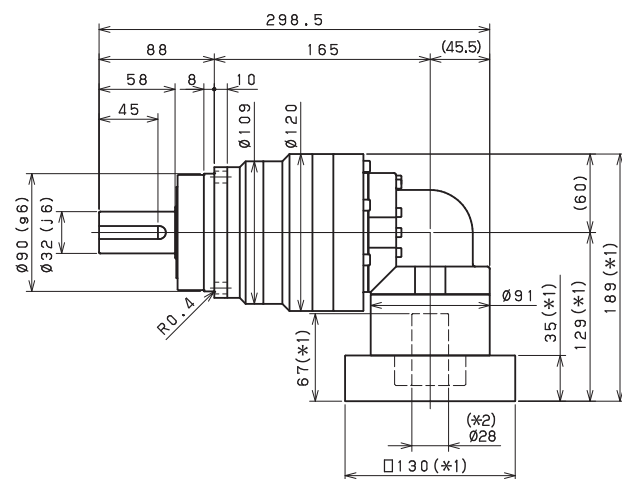
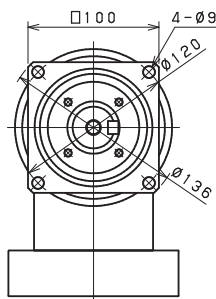
Input shaft bore  $\cong \phi 14$



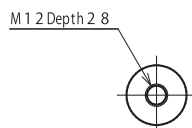
Input shaft bore  $\cong \phi 19$



Input shaft bore  $\cong \phi 28$



Shaft with key



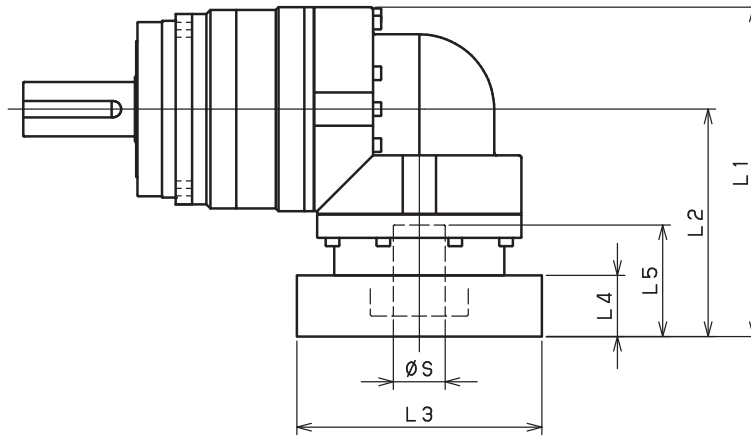
Smooth shaft

\*1) Length will vary depending on motor

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

# EVS-SERIES Right-angle shaft

## EVS-100 – 2-Stage Adapter Dimensions



Model number	**: Adapter code	2-Stage				
		L1	L2	L3	L4	L5
EVS-100-□-□-14** ( $S \leq 14$ )	BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP	--	--	--	--	--
	BC•BH•BM•BN	--	--	--	--	--
	CA•CC	--	--	--	--	--
	DA•DB•DC•DD•DF•DH•DJ	--	--	--	--	--
	EA•EB•EC•EF•EG•EK•EL	--	--	--	--	--
	FA	--	--	--	--	--
	FB	--	--	--	--	--
EVS-100-□-□-19** ( $14 < S \leq 19$ )	DA•DB•DC	170	110	□80	25	50
	EB•ED	170	110	□90	25	50
	FA	170	110	□100	25	50
	FB	180	120	□100	35	60
	GB•GD•GJ	170	110	□115	25	50
	HA	170	110	□130	25	50
	HB	185	125	□130	40	65
EVS-100-□-□-28** ( $19 < S \leq 28$ )	FA•FB•FC	196	136	□100	35	67
	FD•FE	191	131	□100	30	62
	GA•GB•GC•GD•GE•GF•GG•GH	196	136	□115	35	67
	HA•HC•HD	196	136	□130	35	67
	HB	206	146	□130	45	77
	HE	211	151	□130	50	82
	HF	191	131	□130	30	62
	JA•JB•JC•JF	196	136	□150	35	67
	JD	216	156	□150	55	87
	JE	206	146	□150	45	77
	KA•KB•KE	196	136	□180	35	67
EVS-100-□-□-38** ( $28 < S \leq 38$ )	HA	213	153	□130	45	82
	HB•HE	208	148	□130	40	77
	JA	213	153	□150	45	82
	KA•KB•KC	213	153	□180	45	82
	KD	248	188	□180	80	117
	KE	228	168	□180	60	97

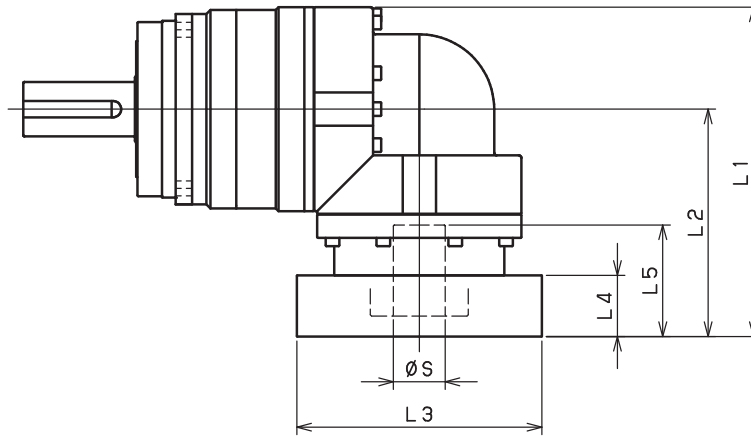
\*1) Double reduction : 1/3~ 1/10

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

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

## EVS-100 – 3-Stage Adapter Dimensions



Model number	**: Adapter code	3-Stage				
		L1	L2	L3	L4	L5
EVS-100-□-□-14** (S ≤ 14)	BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP	152	92	□65	16.5	35
	BC•BH•BM•BN	157	97	□65	21.5	40
	CA•CC	152	92	□70	16.5	35
	DA•DB•DC•DD•DF•DH•DJ	152	92	□80	16.5	35
	EA•EB•EC•EF•EG•EK•EL	152	92	□90	16.5	35
	FA	152	92	□100	16.5	35
	FB	162	102	□100	26.5	45
EVS-100-□-□-19** (14 < S ≤ 19)	DA•DB•DC	160	100	□80	25	50
	EB•ED	160	100	□90	25	50
	FA	160	100	□100	25	50
	FB	170	110	□100	35	60
	GB•GD•GJ	160	100	□115	25	50
	HA	160	100	□130	25	50
	HB	175	115	□130	40	65
EVS-100-□-□-28** (19 < S ≤ 28)	FA•FB•FC	189	129	□100	35	67
	FD•FE	184	124	□100	30	62
	GA•GB•GC•GD•GE•GF•GG•GH	189	129	□115	35	67
	HA•HC•HD	189	129	□130	35	67
	HB	199	139	□130	45	77
	HE	204	144	□130	50	82
	HF	184	124	□130	30	62
	JA•JB•JC•JF	189	129	□150	35	67
	JD	209	149	□150	55	87
	JE	199	139	□150	45	77
	KA•KB•KE	189	129	□180	35	67
EVS-100-□-□-38** (28 < S ≤ 38)	HA	--	--	--	--	--
	HB•HE	--	--	--	--	--
	JA	--	--	--	--	--
	KA•KB•KC	--	--	--	--	--
	KD	--	--	--	--	--
KE	--	--	--	--	--	

\*1) Triple reduction : 1/15~ 1/100

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

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

# EVS-SERIES Right-angle 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 <sup>2</sup> ]	--	--	--	--	--	--	--	--	--
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	23.010	18.490	16.850	15.970	15.550	15.210	14.750	14.640
Moment of Inertia ( $\leq \varnothing 38$ )	[kgcm <sup>2</sup> ]	--	27.380	22.860	21.220	20.340	19.920	19.580	19.120	19.020
Moment of Inertia ( $\leq \varnothing 48$ )	[kgcm <sup>2</sup> ]	--	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]	--	$\leq 4$							
Noise Level	[dB]	*13	85							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	20.6							

## EVS-140 – 3-Stage Specifications

Frame Size	140									
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 <sup>2</sup> ]	--	6.400	7.290	6.220	6.150	7.090	4.990	6.090	4.940
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	7.990	8.880	7.810	7.750	8.680	6.580	7.680	6.540
Moment of Inertia ( $\leq \varnothing 38$ )	[kgcm <sup>2</sup> ]	--	15.060	15.950	14.880	14.820	15.750	13.660	14.760	13.610
Moment of Inertia ( $\leq \varnothing 48$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arc-min]	*12	60							
Maximum Torsional Backlash	[arc-min]	--	$\leq 7$							
Noise Level	[dB]	*13	85							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	20.7							

## EVS-140 – 3-Stage Specifications

Frame Size	140										
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 <sup>2</sup> ]	--	6.070	4.930	4.920	4.910	4.910	4.910	4.910		
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	7.660	6.520	6.510	6.510	6.500	6.500	6.500		
Moment of Inertia ( $\leq \varnothing 38$ )	[kgcm <sup>2</sup> ]	--	14.730	13.590	13.590	13.580	13.580	13.570	13.570		
Moment of Inertia ( $\leq \varnothing 48$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--	--	--	--		
Efficiency	[%]	*11	88								
Torsional Rigidity	[Nm/arc-min]	*12	60								
Maximum Torsional Backlash	[arc-min]	--	$\leq 7$								
Noise Level	[dB]	*13	85								
Protection Class	--	*14	IP54 (IP65)								
Ambient Temperature	[°C]	--	0-40								
Permitted Housing Temperature	[°C]	--	90								
Weight	[kg]	*15	20.7								

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

\*2) The maximum torque when starting or stopping operation

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

\*4) The average input speed

\*5) The maximum intermittent input speed

\*6) This is the torque at no load applied on the input shaft. The input speed is 2000 rpm for EVS140

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

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

\*9) The maximum radial load that the reducer can accept

\*10) The maximum axial load that the reducer can accept

\*11) The efficiency at the nominal torque rating

\*12) This does not include the lost motion

\*13) Contact NIDEC-SHIMPO for the testing conditions and environment

\*14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

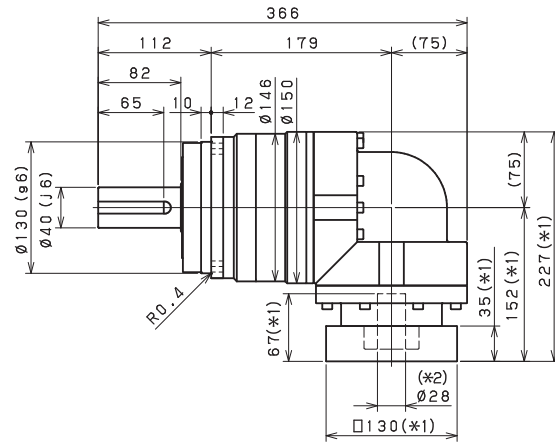
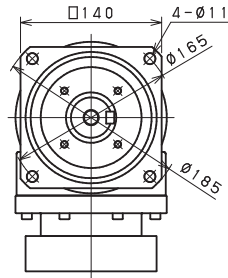
\*15) The weight may vary slightly between models



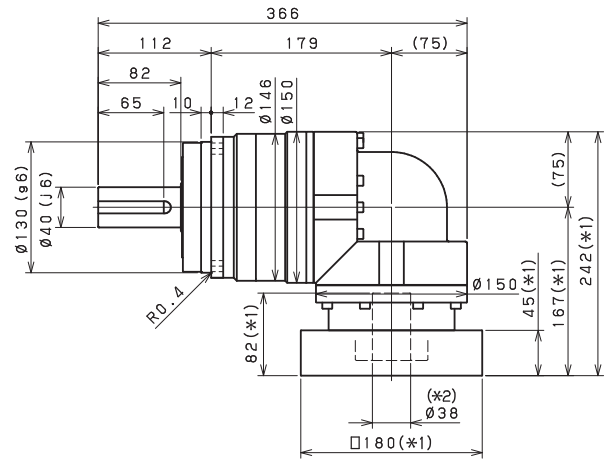
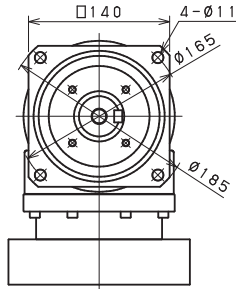
# EVS-SERIES Right-angle shaft

## EVS-140 – 2-Stage Dimensions

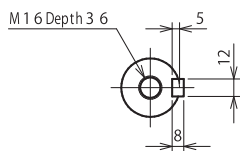
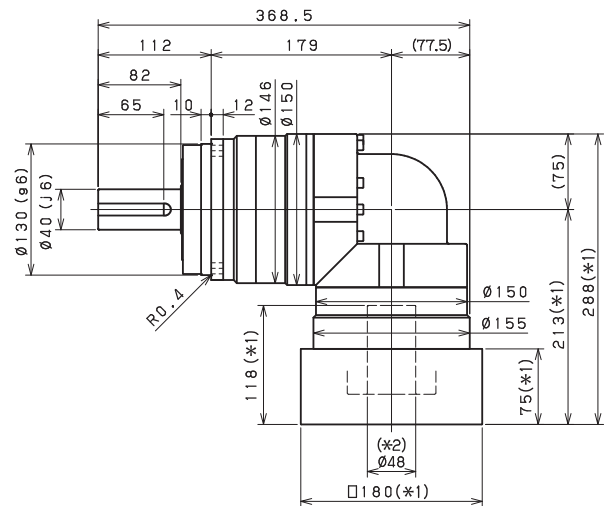
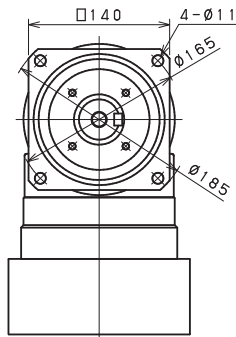
Input shaft bore  $\cong \varnothing 28$



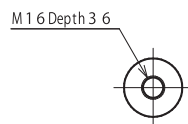
Input shaft bore  $\cong \varnothing 38$



Input shaft bore  $\cong \varnothing 48$



Shaft with key

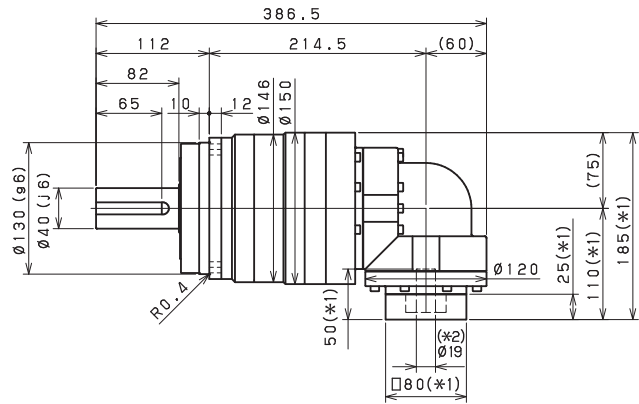
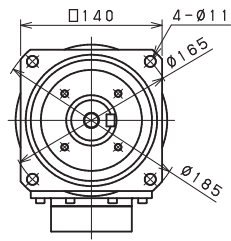


Smooth shaft

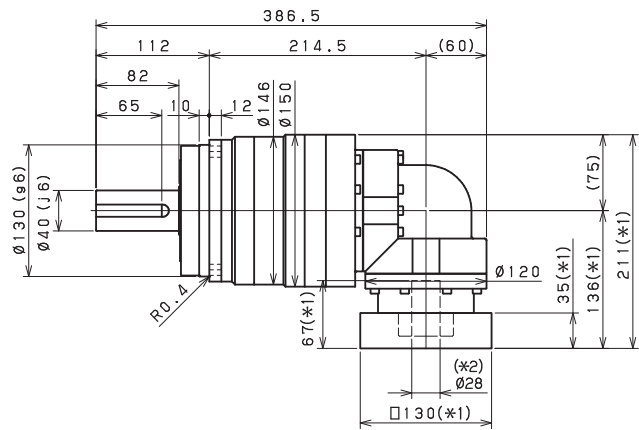
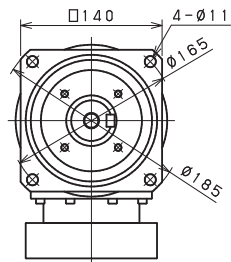
- \*1) Length will vary depending on motor
- \*2) Bushing will be inserted to adapt to motor shaft

## EVS-140 – 3-Stage Dimensions

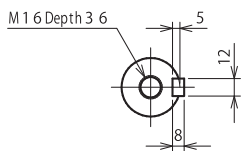
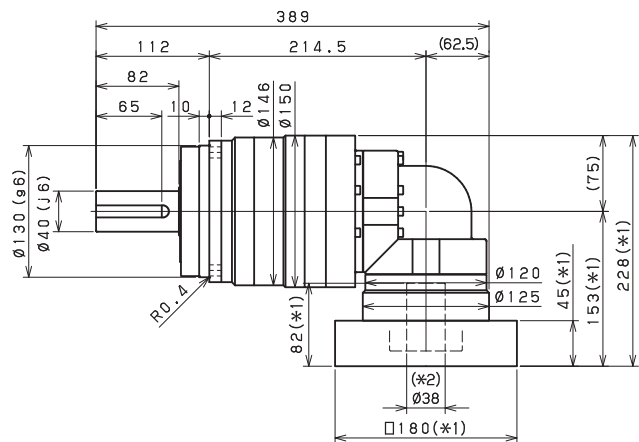
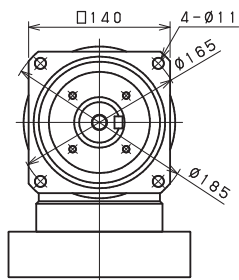
Input shaft bore  $\leq \phi 19$



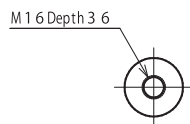
Input shaft bore  $\leq \phi 28$



Input shaft bore  $\leq \phi 38$



Shaft with key



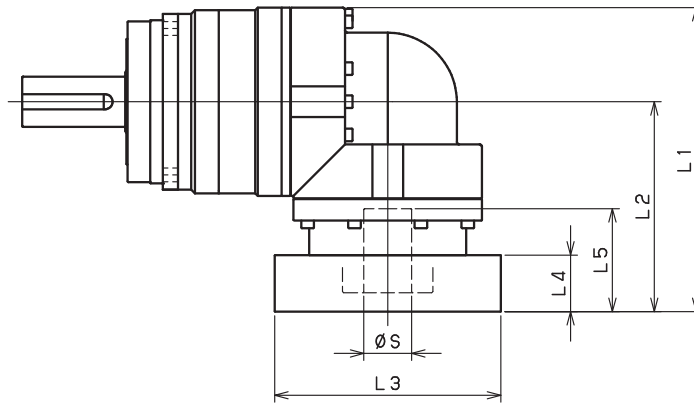
Smooth shaft

\*1) Length will vary depending on motor

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

# EVS-SERIES Right-angle shaft

## EVS-140 – 2-Stage Adapter Dimensions



Model number	**: Adapter code	2-Stage				
		L1	L2	L3	L4	L5
EVS-140-□-□-19** (S ≤ 19)	DA•DB•DC	--	--	--	--	--
	EB•ED	--	--	--	--	--
	FA	--	--	--	--	--
	FB	--	--	--	--	--
	GB•GD•GJ	--	--	--	--	--
	HA	--	--	--	--	--
	HB	--	--	--	--	--
	JA	--	--	--	--	--
EVS-140-□-□-28** (19 ≤ S ≤ 28)	FA•FB•FC	227	152	□100	35	67
	GA•GB•GC•GD•GE•GF•GG•GH	227	152	□115	35	67
	HA•HC•HD	227	152	□130	35	67
	HB	237	162	□130	45	77
	HF	222	147	□130	30	62
	JA•JB•JC•JF	227	152	□150	35	67
	KA•KB•KE	227	152	□180	35	67
	LA	227	152	□200	35	67
	LB	237	162	□200	45	77
	MA	227	152	□220	35	67
	MB	237	162	□220	45	77
EVS-140-□-□-38** (28 < S ≤ 38)	HA	242	167	□130	45	82
	HB•HE	237	162	□130	40	77
	JA	242	167	□150	45	82
	KA•KB•KC	242	167	□180	45	82
	KD	277	202	□180	80	117
	KE	257	182	□180	60	97
	LB	252	177	□200	55	92
	MA•MB	242	167	□220	45	82
	MC	257	182	□220	60	97
	MD	252	177	□220	55	92
EVS-140-□-□-48** (38 < S ≤ 48)	KA	288	213	□180	75	118
	KB•KC	268	193	□180	55	98
	LA	268	193	□200	55	98
	MA	268	193	□220	55	98
	MB	288	213	□220	75	118

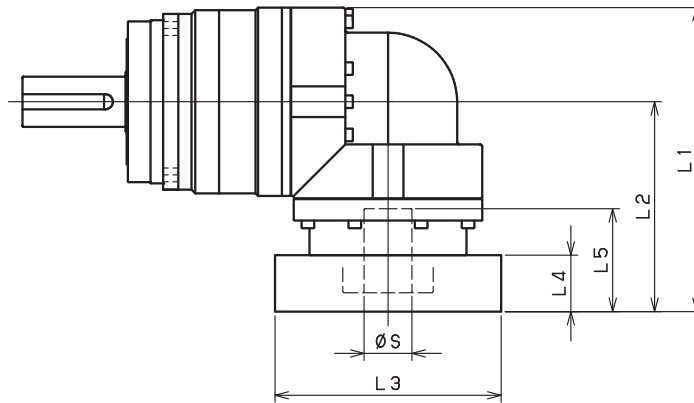
\*1) Double reduction : 1/3~ 1/10

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

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

EVS-140 – 3-Stage Adapter Dimensions



Model number	**: Adapter code	3-Stage				
		L1	L2	L3	L4	L5
EVS-140-□-□-19** (S ≤ 19)	DA•DB•DC	185	110	□80	25	50
	EB•ED	185	110	□90	25	50
	FA	185	110	□100	25	50
	FB	195	120	□100	35	60
	GB•GD•GJ	185	110	□115	25	50
	HA	185	110	□130	25	50
	HB	200	125	□130	40	65
	JA	195	120	□150	35	60
EVS-140-□-□-28** (19 ≤ S ≤ 28)	FA•FB•FC	211	136	□100	35	67
	GA•GB•GC•GD•GE•GF•GG•GH	211	136	□115	35	67
	HA•HC•HD	211	136	□130	35	67
	HB	221	146	□130	45	77
	HF	206	131	□130	30	62
	JA•JB•JC•JF	211	136	□150	35	67
	KA•KB•KE	211	136	□180	35	67
	LA	211	136	□200	35	67
	LB	221	146	□200	45	77
	MA	211	136	□220	35	67
	MB	221	146	□220	45	77
EVS-140-□-□-38** (28 < S ≤ 38)	HA	228	153	□130	45	82
	HB•HE	223	148	□130	40	77
	JA	228	153	□150	45	82
	KA•KB•KC	228	153	□180	45	82
	KD	263	188	□180	80	117
	KE	243	168	□180	60	97
	LB	238	163	□200	55	92
	MA•MB	228	153	□220	45	82
	MC	243	168	□220	60	97
	MD	238	163	□220	55	92
EVS-140-□-□-48** (38 < S ≤ 48)	KA	--	--	--	--	--
	KB•KC	--	--	--	--	--
	LA	--	--	--	--	--
	MA	--	--	--	--	--
	MB	--	--	--	--	--

\*1) Triple reduction : 1/15~ 1/100

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

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

# EVS-SERIES Right-angle 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 <sup>2</sup> ]	--	--	--	--	--	--	--	--	--
Moment of Inertia ( $\leq \varnothing 38$ )	[kgcm <sup>2</sup> ]	--	92.00	76.72	71.23	68.28	66.08	65.00	64.38	64.10
Moment of Inertia ( $\leq \varnothing 48$ )	[kgcm <sup>2</sup> ]	--	126.9	111.6	106.1	103.1	100.9	99.86	99.25	98.97
Moment of Inertia ( $\leq \varnothing 65$ )	[kgcm <sup>2</sup> ]	--	212.5	197.2	191.7	188.7	186.6	185.5	184.9	184.6
Efficiency	[%]	*11	93							
Torsional Rigidity	[Nm/arcmin]	*12	175							
Maximum Torsional Backlash	[Arc-min]	--	$\leq 6$							
Noise Level	[dB]	*13	$\leq 85$							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	52							

## EVS-180 – 3-Stage Specifications

Frame Size	180									
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 <sup>2</sup> ]	--	11.42	12.03	11.11	10.96	11.57	10.31	10.82	10.23
Moment of Inertia ( $\leq \varnothing 38$ )	[kgcm <sup>2</sup> ]	--	20.21	20.82	19.90	19.74	20.36	19.10	19.60	19.02
Moment of Inertia ( $\leq \varnothing 48$ )	[kgcm <sup>2</sup> ]	--	25.03	25.64	24.72	24.56	25.18	23.92	24.42	23.84
Moment of Inertia ( $\leq \varnothing 65$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arcmin]	*12	175							
Maximum Torsional Backlash	[Arc-min]	--	$\leq 9$							
Noise Level	[dB]	*13	$\leq 85$							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	39							

## EVS-180 – 3-Stage Specifications

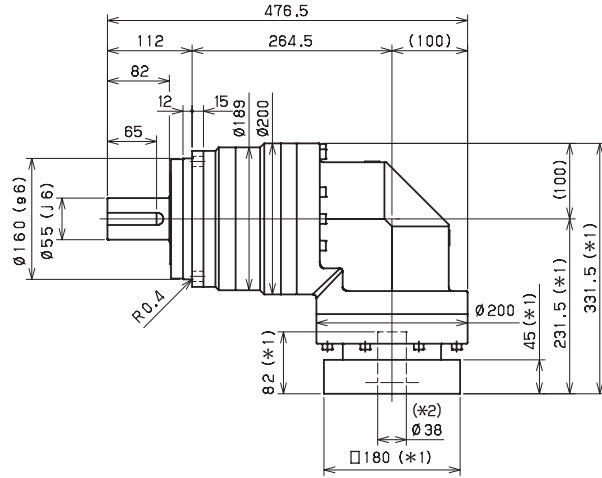
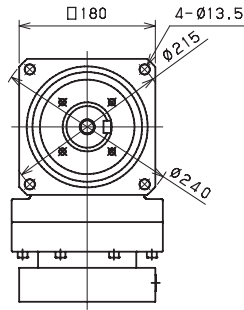
Frame Size	180										
Stage	3-Stage										
Ratio	Units	Note	45	50	60	70	80	90	100		
Nominal Output Torque	[Nm]	*1	400	600	600	600	600	400	400		
Maximum Acceleration Torque	[Nm]	*2	775	1120	1120	1120	1120	775	775		
Emergency Stop Torque	[Nm]	*3	2000	2500	2500	2500	2500	2000	2000		
Nominal Input 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 <sup>2</sup> ]	--	10.76	10.19	10.17	10.16	10.15	10.14	10.14		
Moment of Inertia ( $\leq \varnothing 38$ )	[kgcm <sup>2</sup> ]	--	19.54	18.98	18.96	18.94	18.94	18.93	18.93		
Moment of Inertia ( $\leq \varnothing 48$ )	[kgcm <sup>2</sup> ]	--	24.36	23.80	23.78	23.77	23.76	23.75	23.75		
Moment of Inertia ( $\leq \varnothing 65$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--	--	--	--		
Efficiency	[%]	*11	88								
Torsional Rigidity	[Nm/arcmin]	*12	175								
Maximum Torsional Backlash	[Arc-min]	--	$\leq 9$								
Noise Level	[dB]	*13	$\leq 85$								
Protection Class	--	*14	IP54 (IP65)								
Ambient Temperature	[°C]	--	0-40								
Permitted Housing Temperature	[°C]	--	90								
Weight	[kg]	*15	39								

- \*1) At nominal input speed, service life is 20,000 hours
- \*2) The maximum torque when starting or stopping operation
- \*3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- \*4) The average input speed
- \*5) The maximum intermittent input speed
- \*6) This is the torque at no load applied on the input shaft. The input speed is 1500 rpm for EVS180
- \*7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- \*8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- \*9) The maximum radial load that the reducer can accept
- \*10) The maximum axial load that the reducer can accept
- \*11) The efficiency at the nominal torque rating
- \*12) This does not include the lost motion
- \*13) Contact NIDEC-SHIMPO for the testing conditions and environment
- \*14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- \*15) The weight may vary slightly between models

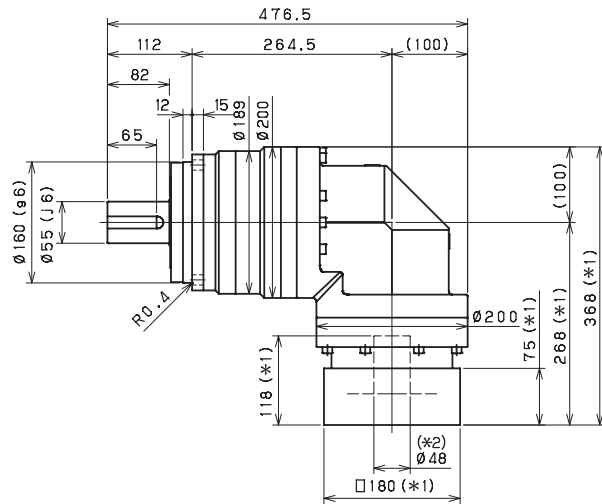
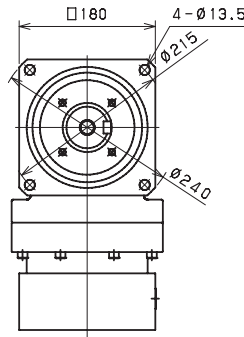
# EVS-SERIES Right-angle shaft

## EVS-180 – 2-Stage Dimensions

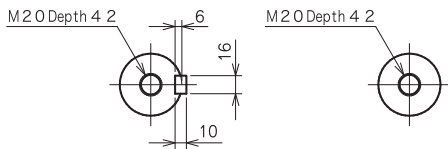
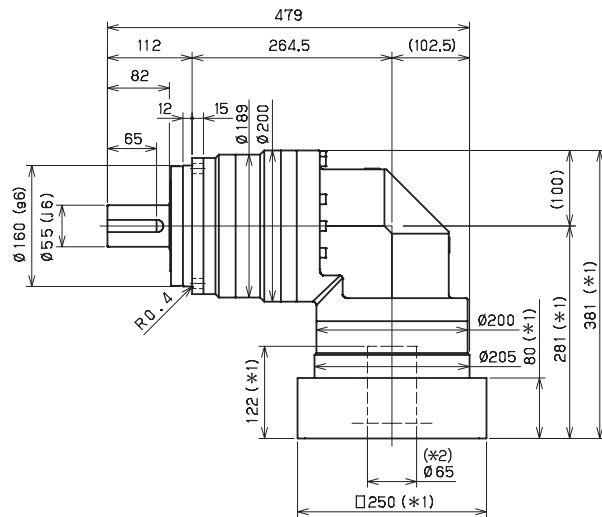
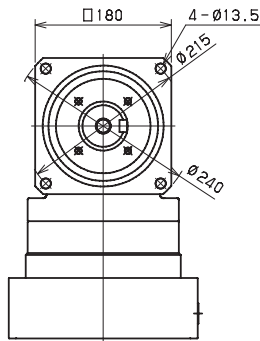
Input shaft bore  $\leq \phi 38$



Input shaft bore  $\leq \phi 48$



Input shaft bore  $\leq \phi 65$



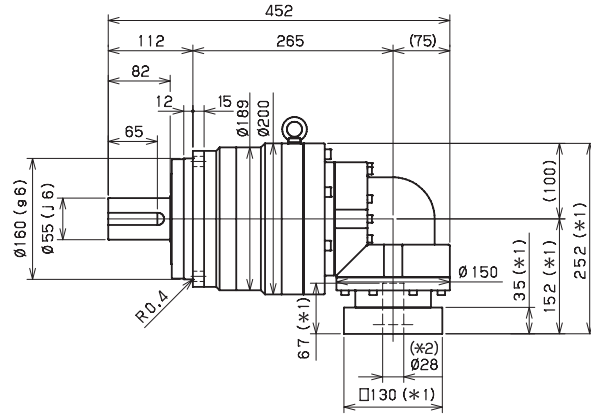
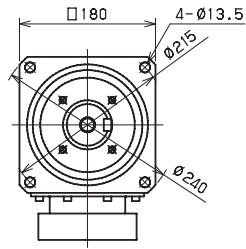
Shaft with key

Smooth shaft

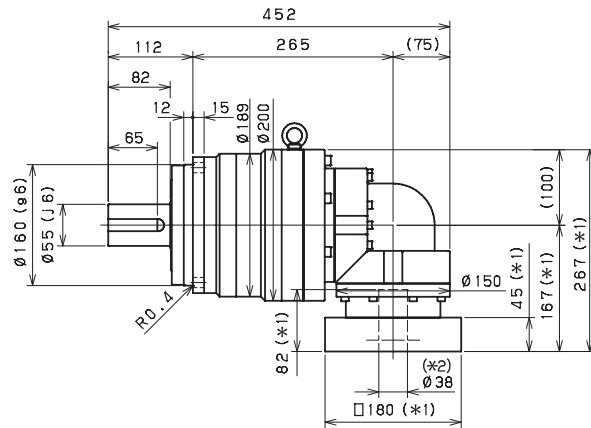
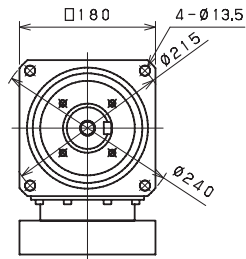
- \*1) Length will vary depending on motor
- \*2) Bushing will be inserted to adapt to motor shaft

## EVS-18o – 3-Stage Dimensions

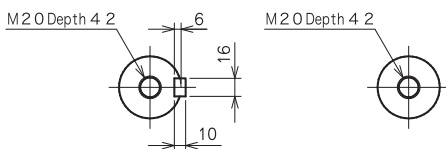
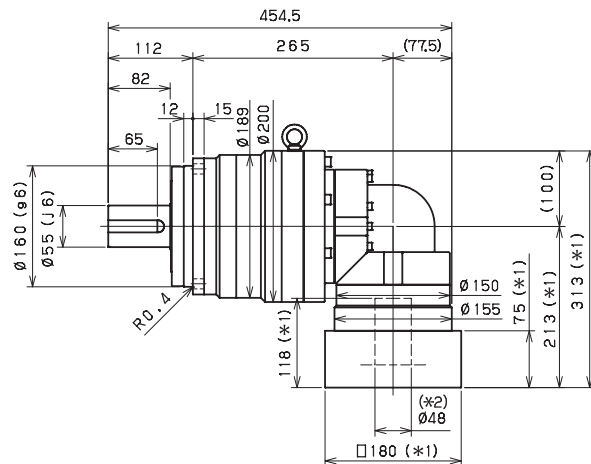
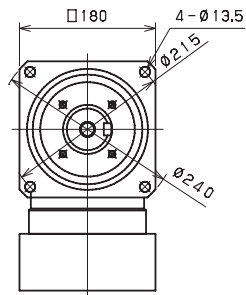
Input shaft bore  $\leq \phi 28$



Input shaft bore  $\leq \phi 38$



Input shaft bore  $\leq \phi 48$



Shaft with key

Smooth shaft

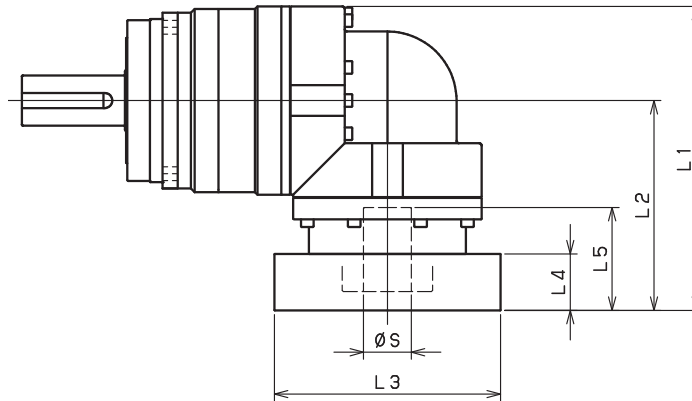
\*1) Length will vary depending on motor

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



# EVS-SERIES Right-angle shaft

## EVS-180 – 2-Stage Adapter Dimensions



Model number	**: Adapter code	2-Stage				
		L1	L2	L3	L4	L5
EVS-180-□-□-28** (S ≤ 28)	FA•FB•FC	--	--	--	--	--
	GA•GB•GC•GD•GE•GF•GG•GH	--	--	--	--	--
	HA•HC•HD	--	--	--	--	--
	HB	--	--	--	--	--
	HF	--	--	--	--	--
	JA•JB•JC•JF	--	--	--	--	--
	KA•KB•KE	--	--	--	--	--
	LA	--	--	--	--	--
	LB	--	--	--	--	--
	MA	--	--	--	--	--
EVS-180-□-□-38** (28 < S ≤ 38)	HA	331.5	231.5	□130	45	82
	HB•HE	326.5	226.5	□130	40	77
	JA	331.5	231.5	□150	45	82
	KA•KB•KC	331.5	231.5	□180	45	82
	KD	366.5	266.5	□180	80	117
	KE	346.5	246.5	□180	60	97
	LB	341.5	241.5	□200	55	92
	MA•MB	331.5	231.5	□220	45	82
	MC	346.5	246.5	□220	60	97
	MD	341.5	241.5	□220	55	92
NA	331.5	231.5	□250	45	82	
EVS-180-□-□-48** (38 < S ≤ 48)	KA	368	268	□180	75	118
	KB•KC	348	248	□180	55	98
	LA	348	248	□200	55	98
	MA	348	248	□220	55	98
	MB	368	268	□220	75	118
	NA	368	268	□250	75	118
EVS-180-□-□-65** (48 < S ≤ 65)	PA	368	268	□280	75	118
	MA•MB•MC•MD	381	281	□220	80	122
	NA•NC	381	281	□250	80	122
	NB•ND	411	311	□250	110	152
	PA	401	301	□280	100	142
PB	411	311	□280	110	152	

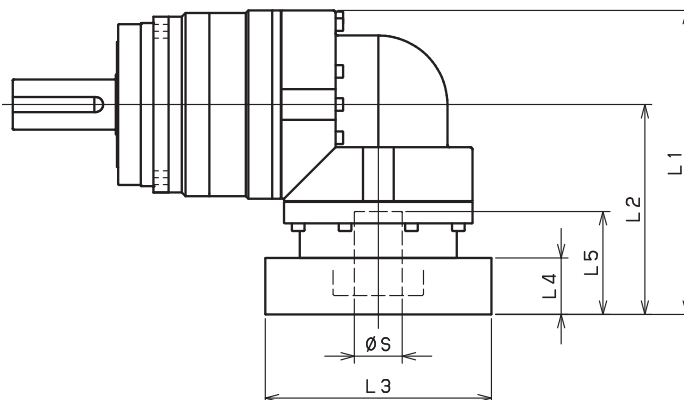
\*1) Double reduction : 1/3~ 1/10

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

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

## EVS-180 – 3-Stage Adapter Dimensions



Model number	**: Adapter code	3-Stage				
		L1	L2	L3	L4	L5
EVS-180-□-□-28** (S ≤ 28)	FA•FB•FC	252	152	□100	35	67
	GA•GB•GC•GD•GE•GF•GG•GH	252	152	□115	35	67
	HA•HC•HD	252	152	□130	35	67
	HB	262	162	□130	45	77
	HF	247	147	□130	30	62
	JA•JB•JC•JF	252	152	□150	35	67
	KA•KB•KE	252	152	□180	35	67
	LA	252	152	□200	35	67
	LB	262	162	□200	45	77
	MA	252	152	□220	35	67
	MB	262	162	□220	45	77
EVS-180-□-□-38** (28 < S ≤ 38)	HA	267	167	□130	45	82
	HB•HE	262	162	□130	40	77
	JA	267	167	□150	45	82
	KA•KB•KC	267	167	□180	45	82
	KD	302	202	□180	80	117
	KE	282	182	□180	60	97
	LB	277	177	□200	55	92
	MA•MB	267	167	□220	45	82
	MC	282	182	□220	60	97
	MD	277	177	□220	55	92
NA	267	167	□250	45	82	
EVS-180-□-□-48** (38 < S ≤ 48)	KA	313	213	□180	75	118
	KB•KC	293	193	□180	55	98
	LA	293	193	□200	55	98
	MA	293	193	□220	55	98
	MB	313	213	□220	75	118
	NA	313	213	□250	75	118
	PA	313	213	□280	75	118
EVS-180-□-□-65** (48 < S ≤ 65)	MA•MB•MC•MD	--	--	--	--	--
	NA•NC	--	--	--	--	--
	NB•ND	--	--	--	--	--
	PA	--	--	--	--	--
	PB	--	--	--	--	--

\*1) Triple reduction : 1/15~ 1/100

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

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

# EVS-SERIES Right-angle 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 <sup>2</sup> ]	--	--	--	--	--	--	--	--	--
Moment of Inertia ( $\leq \varnothing 48$ )	[kgcm <sup>2</sup> ]	--	149.7	123.8	113.9	108.5	105.0	103.0	101.7	101.1
Moment of Inertia ( $\leq \varnothing 65$ )	[kgcm <sup>2</sup> ]	--	224.9	199.0	189.1	183.7	180.3	178.2	176.9	176.3
Efficiency	[%]	*11	93							
Torsional Rigidity	[Nm/arcmin]	*12	400							
Maximum Torsional Backlash	[Arc-min]	--	$\leq 6$							
Noise Level	[dB]	*13	$\leq 85$							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	71							

## EVS-210 – 3-Stage Specifications

Frame Size	210									
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 <sup>2</sup> ]	--	36.39	37.30	35.79	35.49	36.41	34.41	35.22	34.26
Moment of Inertia ( $\leq \varnothing 48$ )	[kgcm <sup>2</sup> ]	--	66.21	67.12	65.61	65.31	66.23	64.23	65.04	64.08
Moment of Inertia ( $\leq \varnothing 65$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arcmin]	*12	400							
Maximum Torsional Backlash	[Arc-min]	--	$\leq 9$							
Noise Level	[dB]	*13	$\leq 85$							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	73							

## EVS-210 – 3-Stage Specifications

Frame Size	210										
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 <sup>2</sup> ]	--	35.11	34.18	34.14	34.12	34.10	34.09	34.08		
Moment of Inertia ( $\leq \varnothing 48$ )	[kgcm <sup>2</sup> ]	--	64.92	64.00	63.96	63.93	63.92	63.90	63.90		
Moment of Inertia ( $\leq \varnothing 65$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--	--	--	--		
Efficiency	[%]	*11	88								
Torsional Rigidity	[Nm/arcmin]	*12	400								
Maximum Torsional Backlash	[Arc-min]	--	$\leq 9$								
Noise Level	[dB]	*13	$\leq 85$								
Protection Class	--	*14	IP54 (IP65)								
Ambient Temperature	[°C]	--	0-40								
Permitted Housing Temperature	[°C]	--	90								
Weight	[kg]	*15	73								

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

\*2) The maximum torque when starting or stopping operation

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

\*4) The average input speed

\*5) The maximum intermittent input speed

\*6) This is the torque at no load applied on the input shaft. The input speed is 1000 rpm for EVS210

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

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

\*9) The maximum radial load that the reducer can accept

\*10) The maximum axial load that the reducer can accept

\*11) The efficiency at the nominal torque rating

\*12) This does not include the lost motion

\*13) Contact NIDEC-SHIMPO for the testing conditions and environment

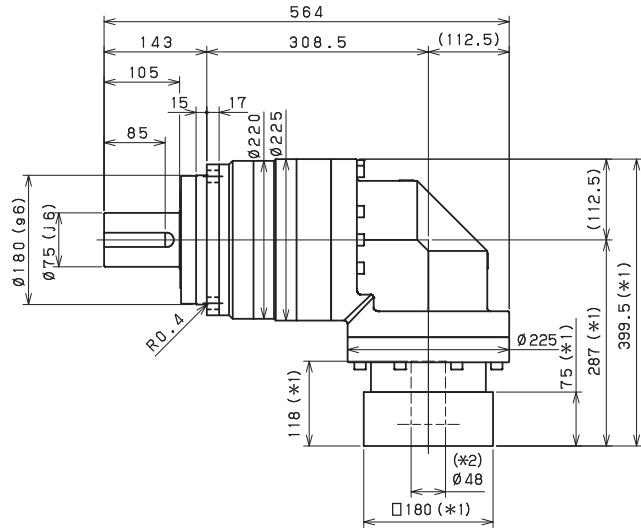
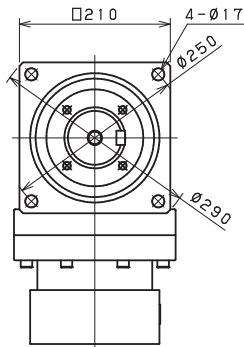
\*14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

\*15) The weight may vary slightly between models

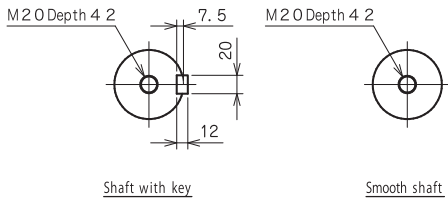
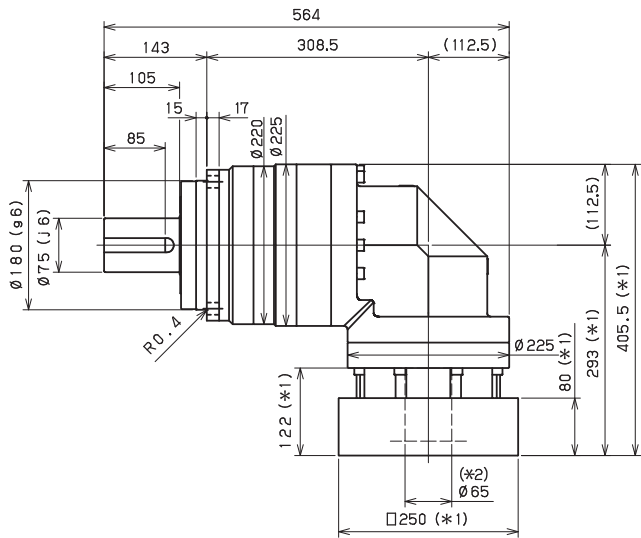
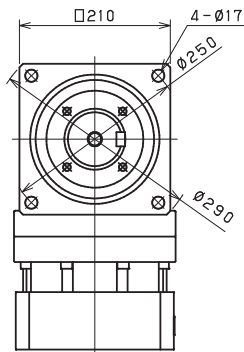
# EVS-SERIES Right-angle shaft

## EVS-210 – 2-Stage Dimensions

Input shaft bore  $\leq \phi 48$



Input shaft bore  $\leq \phi 65$



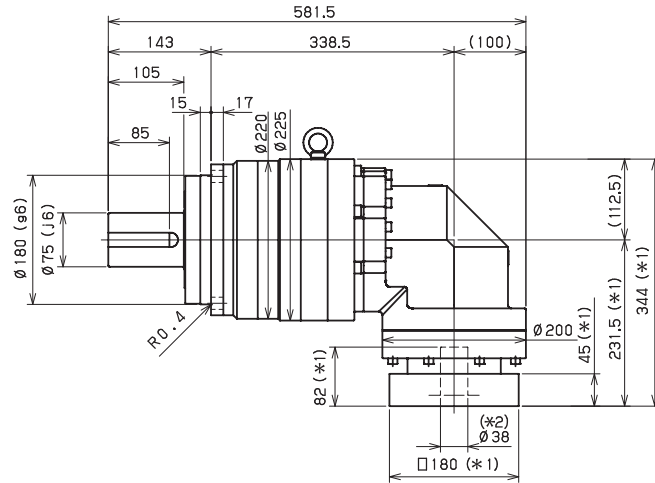
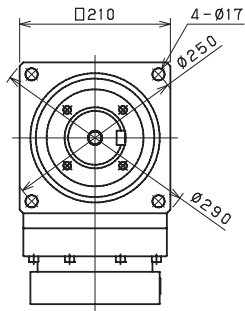
Shaft with key

Smooth shaft

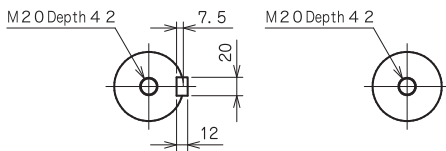
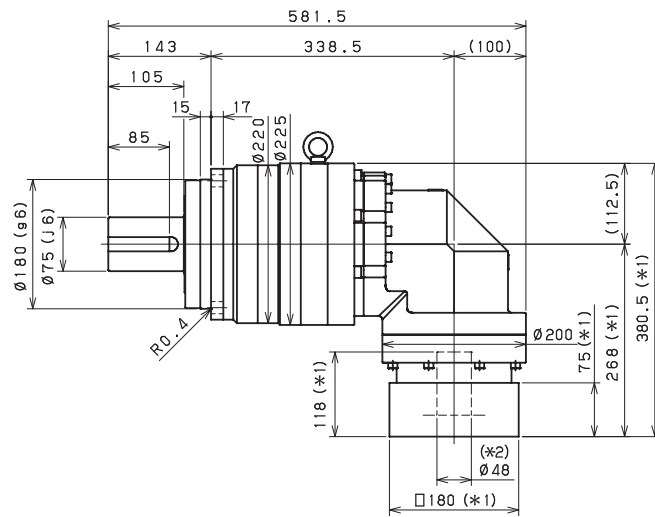
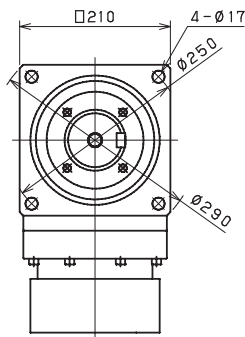
- \*1) Length will vary depending on motor
- \*2) Bushing will be inserted to adapt to motor shaft

## EVS-210 – 3-Stage Dimensions

Input shaft bore  $\leq \varnothing 38$



Input shaft bore  $\leq \varnothing 48$



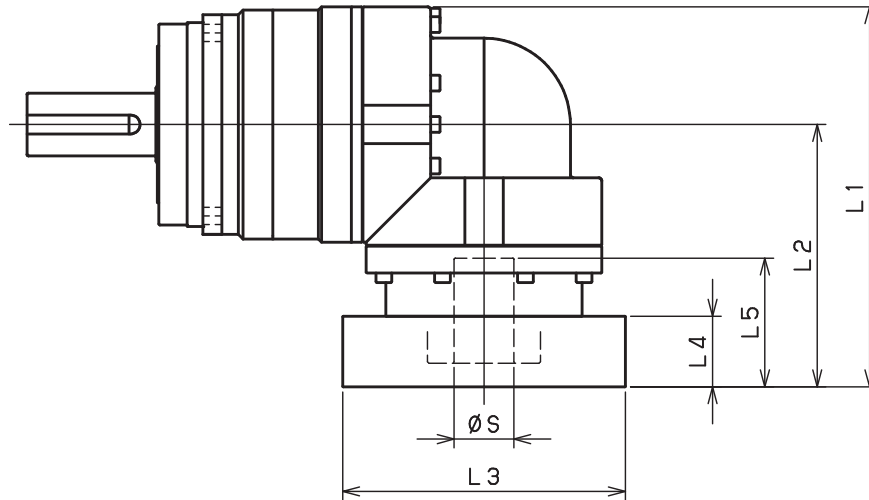
Shaft with key

Smooth shaft

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

# EVS-SERIES Right-angle shaft

## EVS-210 – 2-Stage Adapter Dimensions



Model number	**: Adapter code	2-Stage				
		L1	L2	L3	L4	L5
EVS-210-□-□-38** (S ≤ 38)	HA	--	--	--	--	--
	HB-HE	--	--	--	--	--
	JA	--	--	--	--	--
	KA-KB-KC	--	--	--	--	--
	KD	--	--	--	--	--
	KE	--	--	--	--	--
	LA	--	--	--	--	--
	LB	--	--	--	--	--
	MA-MB	--	--	--	--	--
	MC	--	--	--	--	--
	MD	--	--	--	--	--
NA	--	--	--	--	--	
EVS-210-□-□-48** (38 < S ≤ 48)	KA	399.5	287	□180	75	118
	KB-KC	379.5	267	□180	55	98
	LA	379.5	267	□200	55	98
	MA	379.5	267	□220	55	98
	MB	399.5	287	□220	75	118
	NA	399.5	287	□250	75	118
	PA	399.5	287	□280	75	118
EVS-210-□-□-65** (48 < S ≤ 65)	MA-MB-MC-MD	405.5	293	□220	80	122
	NA-NC	405.5	293	□250	80	122
	NB-ND	435.5	323	□250	110	152
	PA	425.5	313	□280	100	142
	PB	435.5	323	□280	110	152
	QA-QB	425.5	313	□320	100	142

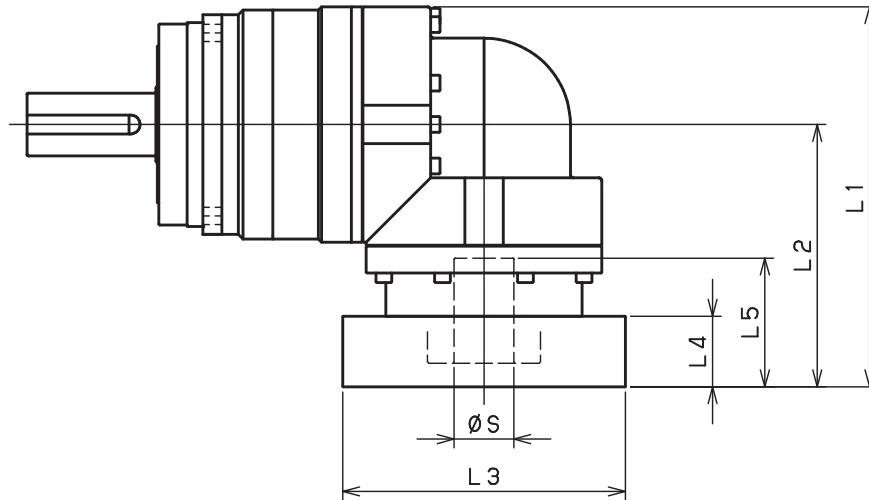
\*1) Double reduction : 1/3~ 1/10

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

For an explanation on the Adapter Flange Code, please turn to page 422.

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## EVS-210 – 3-Stage Adapter Dimensions



Model number	**: Adapter code	3-Stage				
		L1	L2	L3	L4	L5
EVS-210-□-□-38** (S ≤ 38)	HA	344	231.5	□130	45	82
	HB-HE	339	226.5	□130	40	77
	JA	344	231.5	□150	45	82
	KA-KB-KC	344	231.5	□180	45	82
	KD	379	266.5	□180	80	117
	KE	359	246.5	□180	60	97
	LA	344	231.5	□200	45	82
	LB	354	241.5	□200	55	92
	MA-MB	344	231.5	□220	45	82
	MC	359	246.5	□220	60	97
	MD	354	241.5	□220	55	92
NA	344	231.5	□250	45	82	
EVS-210-□-□-48** (38 < S ≤ 48)	KA	380.5	268	□180	75	118
	KB-KC	360.5	248	□180	55	98
	LA	360.5	248	□200	55	98
	MA	360.5	248	□220	55	98
	MB	380.5	268	□220	75	118
	NA	380.5	268	□250	75	118
EVS-210-□-□-65** (48 < S ≤ 65)	PA	380.5	268	□280	75	118
	MA-MB-MC-MD	--	--	--	--	--
	NA-NC	--	--	--	--	--
	NB-ND	--	--	--	--	--
	PA	--	--	--	--	--
	PB	--	--	--	--	--
QA-QB	--	--	--	--	--	

\*1) Triple reduction : 1/15~ 1/100

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

For an explanation on the Adapter Flange Code, please turn to page 422.

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# EVS-SERIES Right-angle 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 <sup>2</sup> ]	--	--	--	--	--	--	--	--	--
Moment of Inertia ( $\leq \varnothing 65$ )	[kgcm <sup>2</sup> ]	--	217.5	156.7	134.5	122.4	112.9	108.3	105.5	104.0
Efficiency	[%]	*11	93							
Torsional Rigidity	[Nm/arcmin]	*12	550							
Maximum Torsional Backlash	[Arc-min]	--	$\leq 6$							
Noise Level	[dB]	*13	$\leq 85$							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	122							

## EVS-240 – 3-Stage Specifications

Frame Size	240									
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 <sup>2</sup> ]	--	40.47	42.59	39.21	38.59	40.73	35.09	38.02	34.78
Moment of Inertia ( $\leq \varnothing 65$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	88							
Torsional Rigidity	[Nm/arcmin]	*12	550							
Maximum Torsional Backlash	[Arc-min]	--	$\leq 9$							
Noise Level	[dB]	*13	$\leq 85$							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	113							

## EVS-240 – 3-Stage Specifications

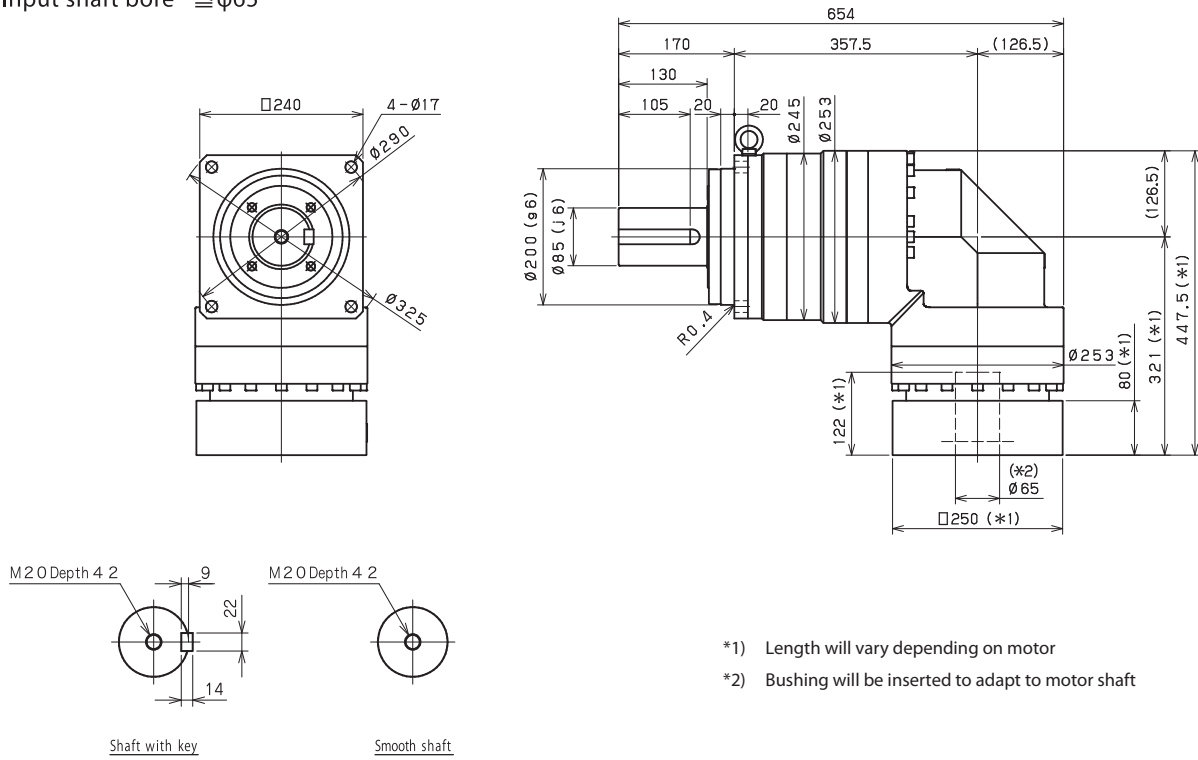
Frame Size	240										
Stage	3-Stage										
Ratio	Units	Note	45	50	60	70	80	90	100		
Nominal Output Torque	[Nm]	*1	1280	1920	1920	1920	1920	1280	1280		
Maximum Acceleration Torque	[Nm]	*2	1680	2960	2960	2960	2160	1680	1440		
Emergency Stop Torque	[Nm]	*3	5400	7200	7200	7200	7200	5400	5400		
Nominal 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 <sup>2</sup> ]	--	37.78	34.62	34.53	34.48	34.45	34.42	34.41		
Moment of Inertia ( $\leq \varnothing 65$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--	--	--	--		
Efficiency	[%]	*11	88								
Torsional Rigidity	[Nm/arcmin]	*12	550								
Maximum Torsional Backlash	[Arc-min]	--	$\leq 9$								
Noise Level	[dB]	*13	$\leq 85$								
Protection Class	--	*14	IP54 (IP65)								
Ambient Temperature	[°C]	--	0-40								
Permitted Housing Temperature	[°C]	--	90								
Weight	[kg]	*15	113								

- \*1) At nominal input speed, service life is 20,000 hours
- \*2) The maximum torque when starting or stopping operation
- \*3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- \*4) The average input speed
- \*5) The maximum intermittent input speed
- \*6) This is the torque at no load applied on the input shaft. The input speed is 1000 rpm for EVS210
- \*7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- \*8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- \*9) The maximum radial load that the reducer can accept
- \*10) The maximum axial load that the reducer can accept
- \*11) The efficiency at the nominal torque rating
- \*12) This does not include the lost motion
- \*13) Contact NIDEC-SHIMPO for the testing conditions and environment
- \*14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- \*15) The weight may vary slightly between models

# EVS-SERIES Right-angle shaft

## EVS-240 – 2-Stage Dimensions

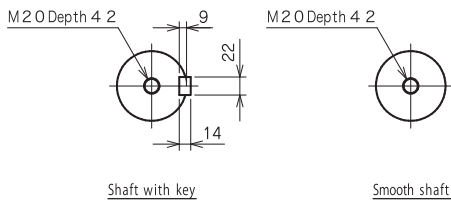
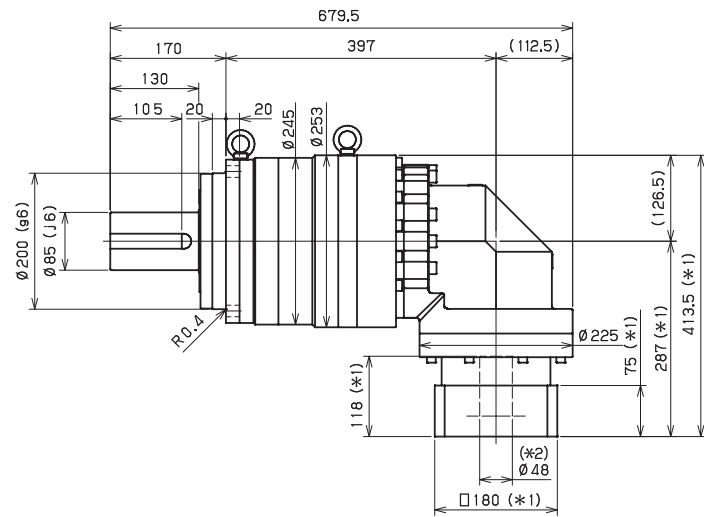
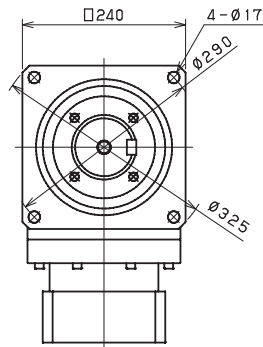
Input shaft bore  $\leq \phi 65$



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

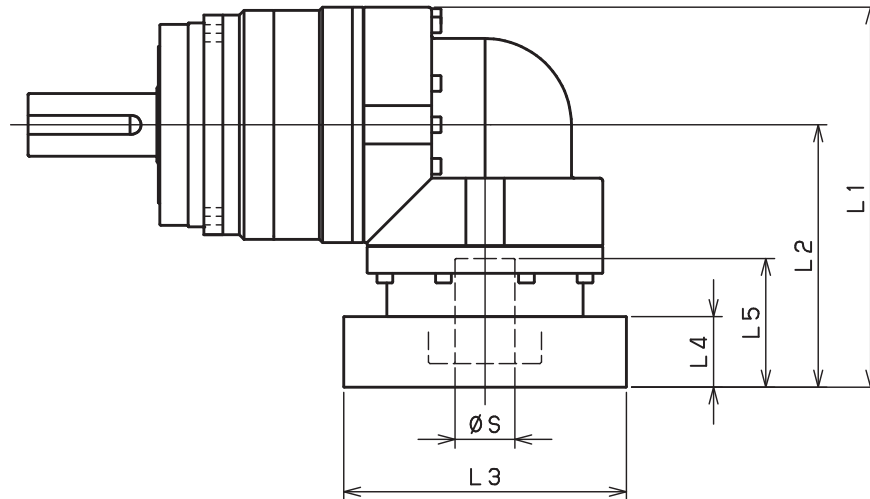
## EVS-240 – 3-Stage Dimensions

Input shaft bore  $\cong \varnothing 48$



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

## EVS-240 – 2-Stage Adapter Dimensions



Model number	**: Adapter code	2-Stage				
		L1	L2	L3	L4	L5
EVS-240-□-□-48** (S ≤ 48)	KA	--	--	--	--	--
	KB-KC	--	--	--	--	--
	LA	--	--	--	--	--
	MA	--	--	--	--	--
	MB	--	--	--	--	--
	NA	--	--	--	--	--
	PA	--	--	--	--	--
EVS-240-□-□-65** (48 < S ≤ 65)	MA-MB-MC-MD	447.5	321	□220	80	122
	NA-NC	447.5	321	□250	80	122
	NB-ND	477.5	351	□250	110	152
	PA	467.5	341	□280	100	142
	PB	477.5	351	□280	110	152
	QA-QB	467.5	341	□320	100	142

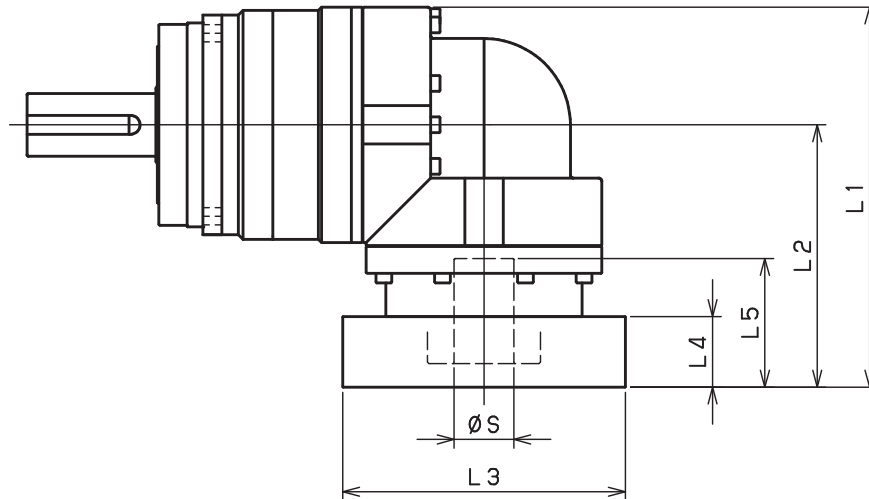
\*1) Double reduction : 1/3~ 1/10

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

For an explanation on the Adapter Flange Code, please turn to page 422.

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## EVS-240 – 3-Stage Adapter Dimensions



Model number	**: Adapter code	3-Stage				
		L1	L2	L3	L4	L5
EVS-240-□-□-48** (S ≤ 48)	KA	413.5	287	□180	75	118
	KB-KC	393.5	267	□180	55	98
	LA	393.5	267	□200	55	98
	MA	393.5	267	□220	55	98
	MB	413.5	287	□220	75	118
	NA	413.5	287	□250	75	118
	PA	413.5	287	□280	75	118
EVS-240-□-□-65** (48 < S ≤ 65)	MA-MB-MC-MD	--	--	--	--	--
	NA-NC	--	--	--	--	--
	NB-ND	--	--	--	--	--
	PA	--	--	--	--	--
	PB	--	--	--	--	--
	QA-QB	--	--	--	--	--

\*1) Triple reduction : 1/15~ 1/100

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

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