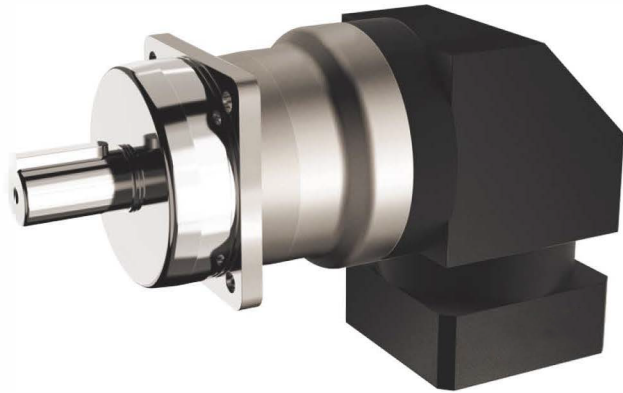


# European High Precision High Torque Right Angle Planetary Gearbox

## EVS

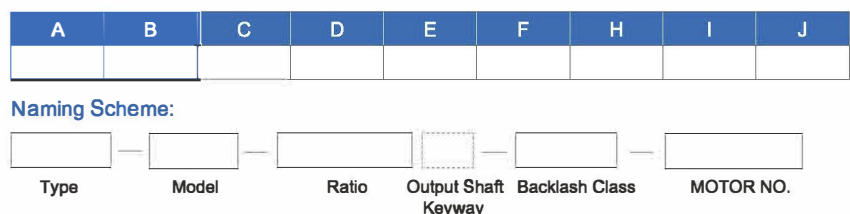
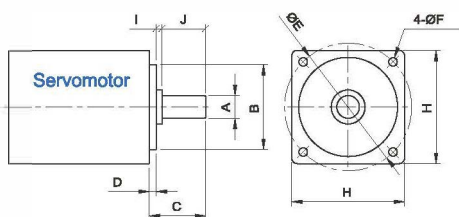


- **1.High precision**  
The backlash is less than 3 arcmin and the positioning is accurate.
- **2.High rigidity & torque**  
The use of integral ball bearings greatly improves the rigidity and torque.
- **3.High load capacity**  
The main output shaft adopts taper roller bearing to greater increase the radial and axial force.
- **4.Methods of flange and connector**  
It can be installed on any motor in the world.
- **5. No grease leakage**  
The use of grease with high viscosity which is not easy to separate effectively prevents the grease leakage.
- **6.Convenient maintenance**  
No need to replace the grease in the product life period , and the installation is more convenient.

### Model Selection of Speed Reducers

EVS Type								
EVS090	-	10	-	S1	-	P1	/	Motor
<b>Reducer Model</b> EVS062, EVS075, EVS100 EVS142, EVS180		<b>Output Shaft Keyway</b> S1: Solid Output Shaft No Keyway S2: Standard (Keyway) S3: Output for holes			<b>Motor Model</b> Motor Manufacturer & Model			
<b>Ratio</b> 1-stage: 3, 4, 5, 6, 7, 8, 9, 10,12, 14,16, 18, 20 2-stage: 15, 20, 25, 30, 35,40, 50, 60,70, 80 90, 100, 120, 140,160, 180, 200				<b>Backlash Grade</b> P0: High precision backlash P1: Precision backlash P2: Standard backlash				

The gearbox matching motor needs to be confirmed with following dimensions :



# EVS Reducer Specifications

Model No.	Code	Unit	Ratio	EVS062	EVS075	EVS100	EVS142	EVS180
Rated Output Torque (Nominal output torque)	T <sub>2N</sub>	Nm	3	59	165	216	625	1,206
			4	51	146	208	555	1,069
			5	48	155	333	618	1,189
			6	45	150	315	583	1,118
			7	45	142	309	573	1,108
			8	44	141	305	553	1,070
			9	44	140	293	551	1,060
			10	43	138	291	549	1,059
			12	45	150	315	583	1,118
			14	45	142	309	573	1,108
			16	44	141	305	553	1,070
18	44	140	293	551	1,060			
20	43	138	291	549	1,059			
Max. Acceleration Torque	T <sub>2B</sub>	Nm	3~20	1.8 Times of Rated Output Torque				
Max. Output Torque Emergency Stop Torque	T <sub>2NOT</sub>	Nm	3~20	3 Times of Rated Output Torque				
Rated Input Speed	n <sub>1N</sub>	rpm	3~20	3,000	3,000	3,000	3,000	3,000
Max. Input Speed	n <sub>1B</sub>	rpm	3~20	6,000	6,000	6,000	5,000	4,000
Backlash P <sub>s</sub>		arcmin	3~20	-	≤2	≤2	≤2	≤2
Backlash P <sub>0</sub>		arcmin	3~20	≤4	≤4	≤4	≤4	≤4
Backlash P <sub>1</sub>		arcmin	3~20	≤6	≤6	≤6	≤6	≤6
Backlash P <sub>2</sub>		arcmin	3~20	≤8	≤8	≤8	≤8	≤8
Torsional Rigidity		Nm/arcmin	3~20	8	15	27	60	150
Max. Radial Force	F <sub>2rB</sub>	N	3~20	2,240	4,150	8,760	12,750	17,860
Max. Axial Force	F <sub>2aB</sub>	N	3~20	1,920	3,780	7,500	10,840	15,180
Service Life	L <sub>H</sub>	hr	3~20	S5 Cycle Operation: >30,000 (S1 Continuous Operation: >15,000 hrs)				
Efficiency	η	%	3~20	≥95				
Operating Temperature		°C	3~20	-25° C ~ +90° C				
Lubrication			3~20	Synthetic Grease				
Protection Class			3~20	IP65				
Mounting Position			3~20	Any				
Noise Level		dB	3~20	≤68	≤70	≤72	≤74	≤76
Weight ±3%		Kg	3~20	2.7	7.5	10.9	25.6	57.9

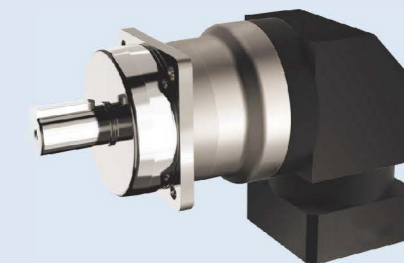
## Reducer Rotary Inertia

Ratio	EVS062	EVS075	EVS100	EVS142	EVS180
3	0.30	2.11	6.42	18.36	57.65
4	0.28	2.02	5.61	18.02	56.17
5	0.26	2.01	5.42	17.21	55.05
6	0.24	2.00	5.33	16.50	53.44
7	0.24	1.97	5.09	15.85	51.10
8	0.24	1.94	5.06	14.94	49.03
9	0.24	1.94	5.04	14.61	48.08
10	0.24	1.94	5.02	14.02	41.33
12	0.22	1.94	4.98	13.86	41.12
14	0.22	1.94	4.95	13.53	40.50
16	0.21	1.92	4.91	13.03	40.11
18	0.21	1.91	4.87	12.57	39.73
20	0.20	1.88	4.75	12.11	38.65

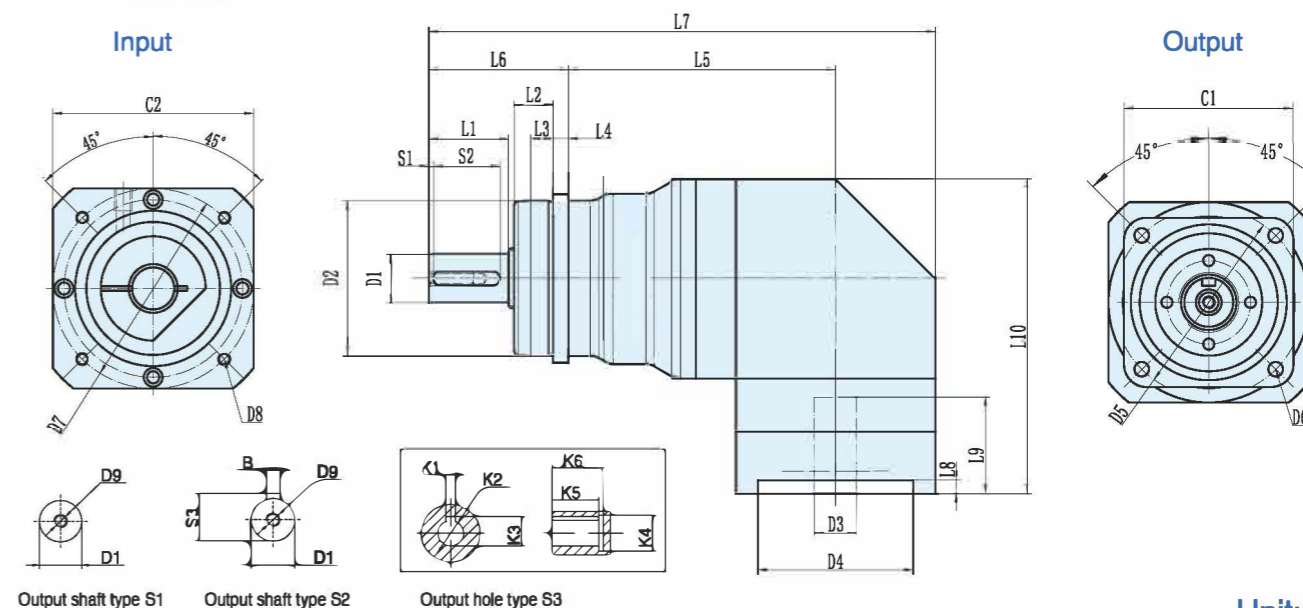
# MODEL: EVS

1-Stage

Ratio: 3, 4, 5, 6, 7, 8, 9, 10, 12, 14, 16, 18, 20



## Dimensions:



Unit:mm

Size	EVS062-L1	EVS075-L1	EVS100-L1	EVS142-L1	EVS180-L1
D1	φ 16	φ 22	φ 32	φ 40	φ 55
D2	φ 50	φ 70	φ 90	φ 130	φ 160
D3	φ 14 ( ≤19 )	φ 19 ( ≤24 )	φ 24 ( ≤35 )	φ 24 ( ≤42 )	φ 35 ( ≤42 )
D4	φ 50 ( ≤70 )	φ 70 ( ≤110 )	φ 110 ( ≤114.3 )	φ 110 ( ≤114.3 )	φ 114.3 ( ≤180 )
D5	φ 70	φ 85	φ 120	φ 165	φ 215
D6	4-φ 5.5	4-φ 6.6	4-φ 9	4-φ 11	4-φ 13
D7	φ 70 ( ≤130 )	φ 90 ( ≤145 )	φ 145 ( ≤200 )	φ 145 ( ≤200 )	φ 200 ( ≤300 )
D8	( 4-M4*10L )	( 4-M5*12.5L )	( 4-M8*20L )	( 4-M8*16L )	( 4-M12*30L )
D9	M5*12L	M6*15L	M12*25L	M16*36L	M20*42L
L1	28.5	36	56	82	82
L2	18	17.5	27	28	27
L3	10	10	15	10	15
L4	6	7	10	12	15
L5	87	120.5	143.5	163.5	117.5
L6	48	56	88	112	112
L7	171	228.5	299	347.5	394.5
L8	(4)	(6)	(14)	(19)	(10)
L9	(32.5)	(43.5)	(67.5)	(64.5)	(118)
L10	(98)	(142)	(185)	(220)	(276.5)
C1	□62	□76	□100	□140	□180
C2	( □60 )	( □90 )	( □130 )	( □130 )	( □180 )
S1		2	5	5	6
S2	25	30	40	68	70
S3	18	24.5	35.5	43	59
B	5	6	10	12	16
K1	4	6	8	10	14
K2	φ 11	φ 22	φ 28	φ 38	φ 50
K3	12.8	24.5	31.3	42	53.8
K4	φ 16	φ 32	φ 38	φ 48	φ 60
K5	15	20	27	35	43
K6	18	24	32	40	50

Note 1: Inside of ( ) is the optional range of sizes, outside of ( ) is the standard sizes.

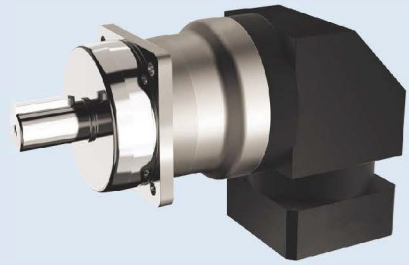
Note 2: The reducer output shaft size and length can be customized for customers.

Note 3: The input size can be changed according to the servomotor or stepper motor of each brand.

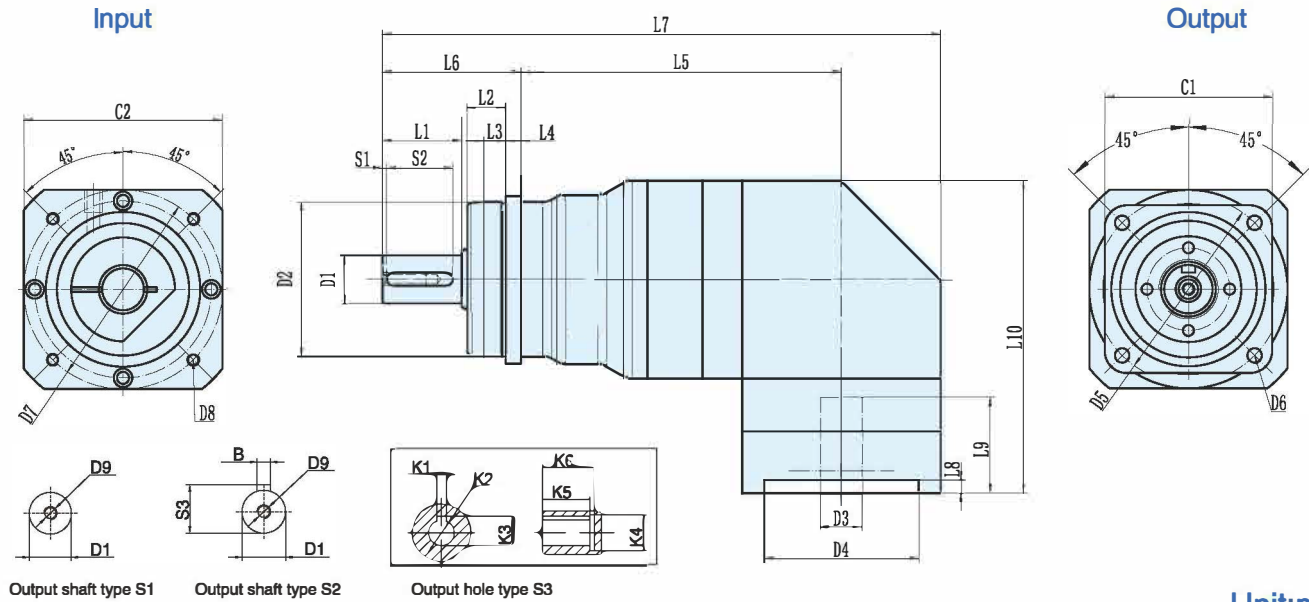
# MODEL: EVS

2-Stage

Ratio: 15, 20, 25, 30, 35, 40, 50, 60,70, 80,90  
100, 120, 140, 160, 180, 200



## Dimensions:



Unit:mm

Size	EVS062-L2	EVS075-L2	EVS100-L2	EVS142-L2	EVS180-L2
D1	φ 16	φ 22	φ 32	φ 40	φ 55
D2	φ 50	φ 70	φ 90	φ 130	φ 160
D3	φ 14 ( ≤19 )	φ 19 ( ≤24 )	φ 24 ( ≤35 )	φ 24 ( ≤35 )	φ 35 ( ≤55 )
D4	φ 50 ( ≤70 )	φ 70 ( ≤110 )	φ 110 ( ≤114.3 )	φ 110 ( ≤114.3 )	φ 114.3 ( ≤180 )
D5	φ 70	φ 85	φ 120	φ 165	φ 215
D6	4- φ 5.5	4- φ 6.6	4- φ 9	4- φ 11	4- φ 13
D7	φ 70 ( ≤130 )	φ 90 ( ≤145 )	φ 145 ( ≤200 )	φ 145 ( ≤200 )	φ 200 ( ≤300 )
D8	( 4-M4*10L )	( 4-M5*12.5L )	( 4-M8*20L )	( 4-M8*16L )	( 4-M12*30L )
D9	M5*12L	M6*15L	M12*25L	M16*36L	M20*42L
L1	28.5	36	56	82	82
L2	18	17.5	27	28	27
L3	10	10	15	10	15
L4	6	7	10	12	15
L5	103.5	148.5	174.5	194.5	217.5
L6	48	56	88	112	112
L7	187.5	256.5	330	378.5	434.5
L8	(4)	(6)	(14)	(6)	(10)
L9	(32.5)	(43.5)	(67.5)	(55.5)	(118)
L10	(98)	(142)	(185)	(196)	(276.5)
C1	□62	□76	□100	□140	□180
C2	( □60 )	( □90 )	( □130 )	( □130 )	( □180 )
S1		2	5	5	6
S2	25	30	40	68	70
S3	18	24.5	35.5	43	59
B	5	6	10	12	16
K1	4	6	8	10	14
K2	φ 11	φ 22	φ 28	φ 38	φ 50
K3	12.8	24.5	31.3	42	53.8
K4	φ 16	φ 32	φ 38	φ 48	φ 60
K5	15	20	27	35	43
K6	18	24	32	40	50

Note 1: Inside of ( ) is the optional range of sizes, outside of ( ) is the standard sizes.

Note 2: The reducer output shaft size and length can be customized for customers.

Note 3: The input size can be changed according to the servomotor or stepper motor of each brand.