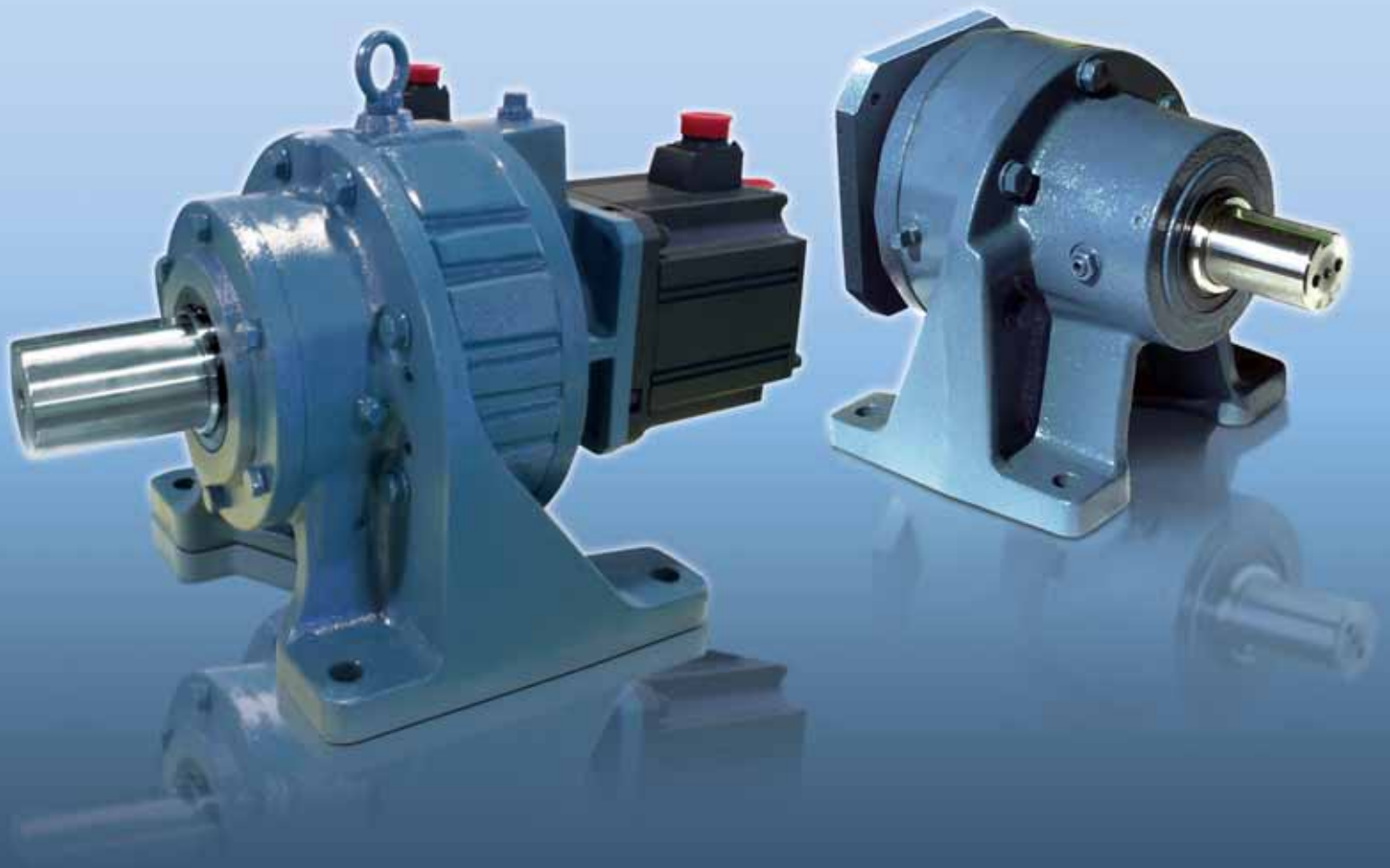


SHIMPO

High Precision Servo Reducers



Improving the Speed of Industry....

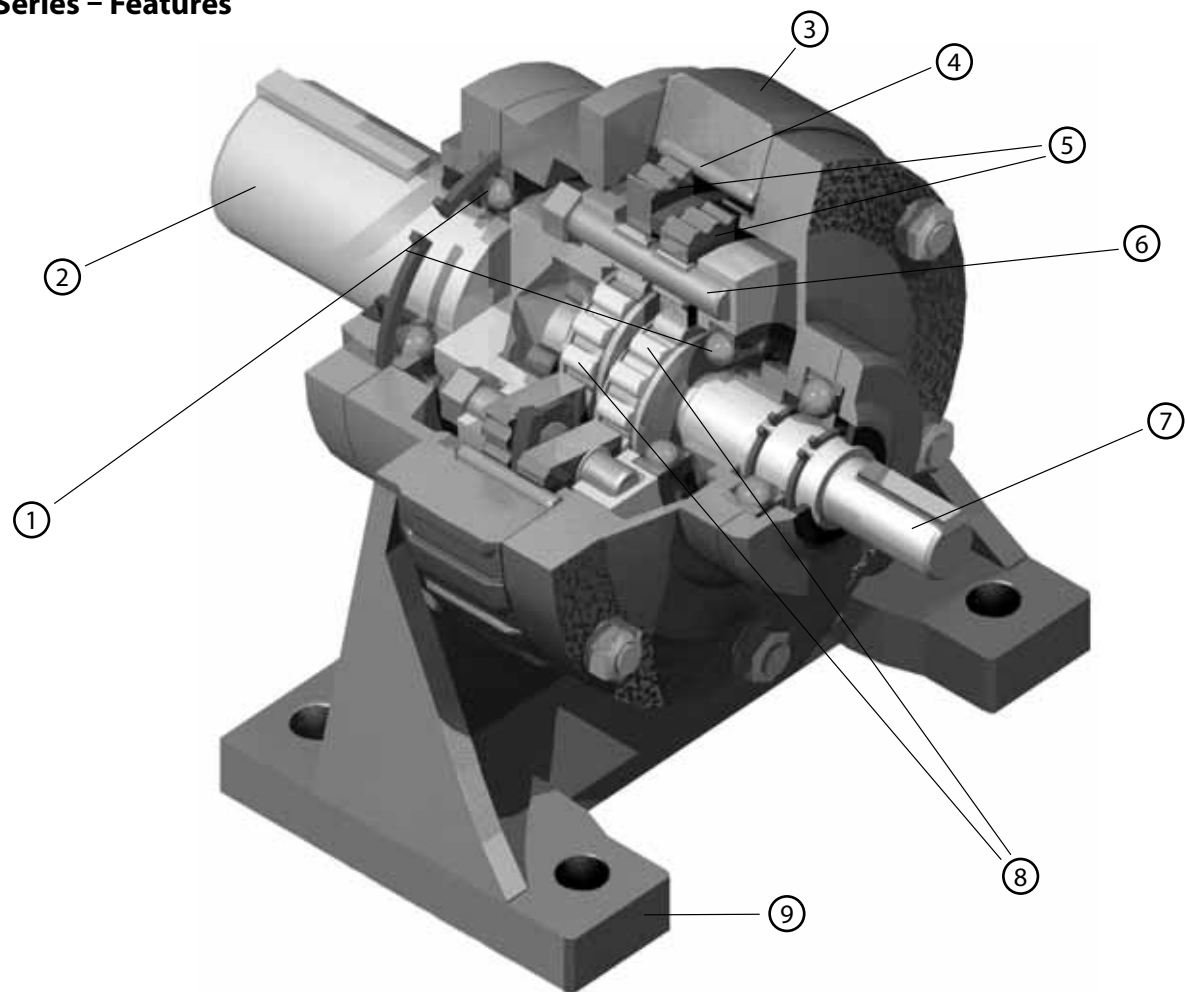


ER-SERIES

- High efficiency cycloidal reducer design
- Multiple inputs: NEMA C-Face, Servo Square Flange, Shaft Input, Shovel Base, Top Mount
- Straddle mount output shaft bearings (sizes D, E, F)
- Multiple mounting options: Base, flange, ring
- Readily available
- Assembled in the USA

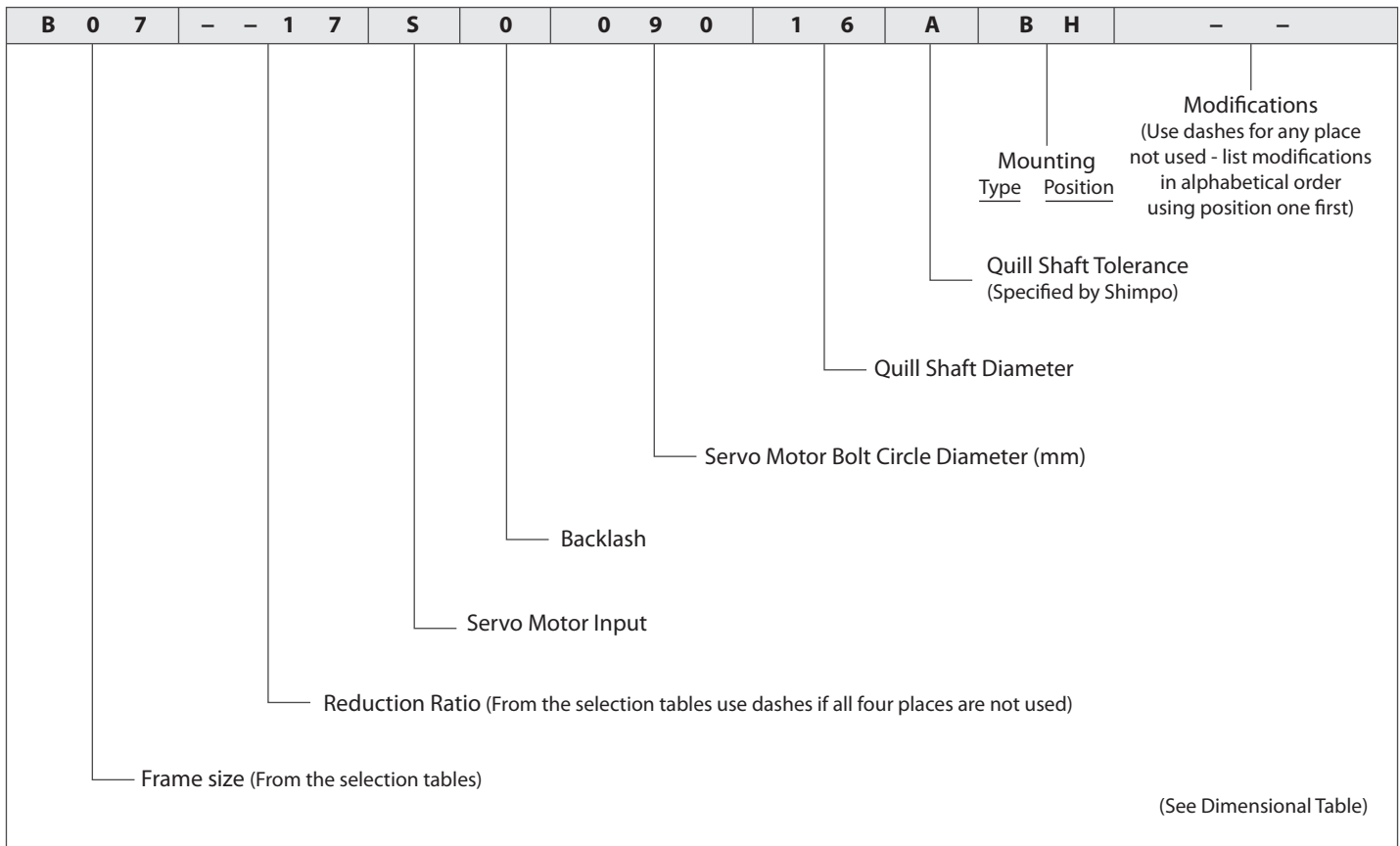
ER-SERIES Circulute 3000 cycloidal reducer

ER-Series – Features



- ① Output shaft bearings
- ② Output shaft
- ③ Internal pin housing
- ④ Internal pin
- ⑤ Wheels
- ⑥ Carrier pins
- ⑦ Input shaft
- ⑧ Eccentric roller bearings
- ⑨ Various mounting options

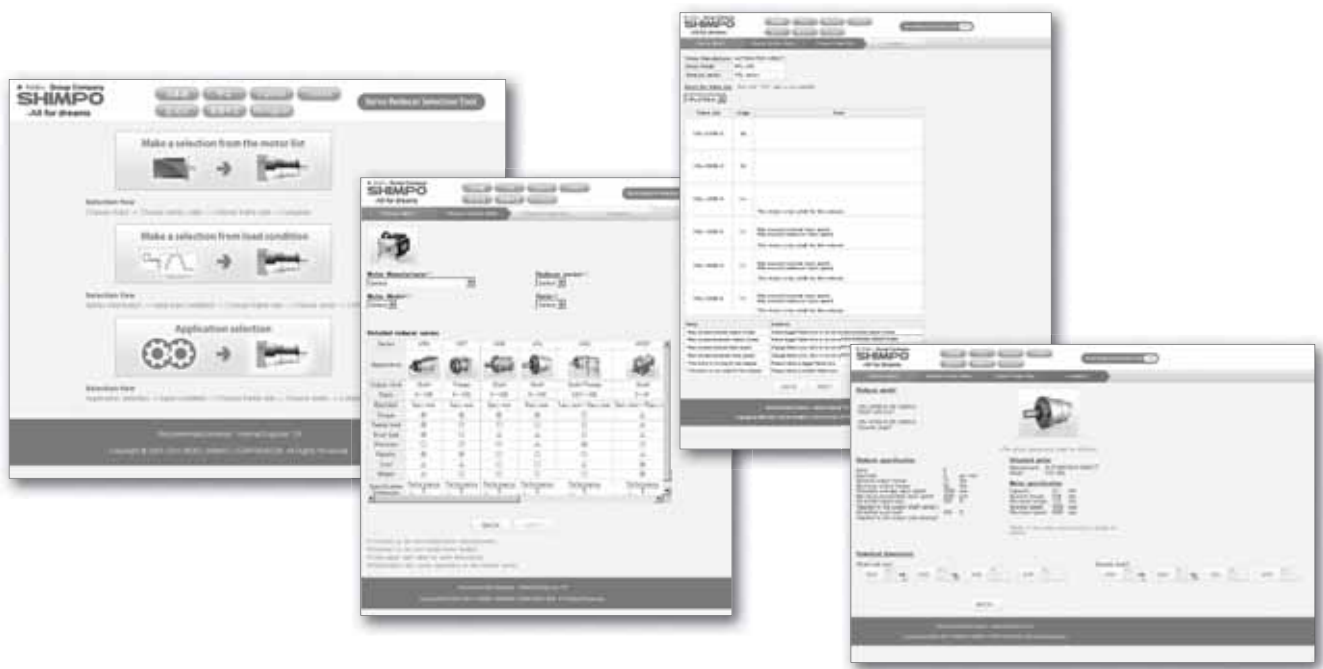
ER-Series – Model Number



Backlash

- *1) Standard Backlash: Approximately 60 arc-min - 0
- *2) Precision Backlash: Less than 6 arc-min - P

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



Rating Table - 3000 rpm Input, Single Reduction, Precision Backlash (less than 6 arc-min)

Frame Size	Ratio	Units	Notes	11	17	29	35	47	59	71
B03	Input	[kW]	--	1.430	1.160	0.710	0.560	0.390	0.320	0.250
	Nominal Output Torque	[Nm]	*1	45.000	56.300	59.200	56.600	52.800	54.000	51.400
	Emergency Stopping Torque	[Nm]	*2	112	141	148	141	132	135	128
	Torsional Rigidity	[Nm/arc-min]	--	3.000	4.700	5.000	5.400	5.400	5.400	5.400
	Moment of Inertia	[kg-cm ²]	--	0.716	0.969	0.927	0.927	0.927	0.927	0.927
B07	Input	[kW]	--	1.900	1.540	0.950	0.750	0.520	0.430	0.340
	Nominal Output Torque	[Nm]	*1	60.000	75.000	78.900	75.400	78.200	79.900	76.100
	Emergency Stopping Torque	[Nm]	*2	150	188	197	189	196	200	190
	Torsional Rigidity	[Nm/arc-min]	--	3.000	4.700	5.000	5.400	5.400	5.400	5.400
	Moment of Inertia	[kg-cm ²]	--	0.716	0.969	0.927	0.927	0.927	0.927	0.927
C03	Input	[kW]	--	2.910	2.690	1.690	1.550	1.080	0.860	0.710
	Nominal Output Torque	[Nm]	*1	91.700	131	140	155	145	145	144
	Emergency Stopping Torque	[Nm]	*2	229	328	350	388	362	362	361
	Torsional Rigidity	[Nm/arc-min]	--	6.200	11.200	11.900	12.600	12.600	12.600	12.600
	Moment of Inertia	[kg-cm ²]	--	3.118	3.412	4.171	4.129	4.086	4.086	4.086
C07	Input	[kW]	--	3.880	3.590	2.250	2.060	1.430	1.140	0.950
	Nominal Output Torque	[Nm]	*1	122	175	187	207	214	214	214
	Emergency Stopping Torque	[Nm]	*2	306	437	467	517	536	536	535
	Torsional Rigidity	[Nm/arc-min]	--	6.200	11.200	11.900	12.600	12.600	12.600	12.600
	Moment of Inertia	[kg-cm ²]	--	3.118	3.412	4.171	4.129	4.086	4.086	4.086
D03	Input	[kW]	--	6.830	5.380	3.400	3.010	2.240	1.720	1.360
	Nominal Output Torque	[Nm]	*1	215	262	282	302	302	290	277
	Emergency Stopping Torque	[Nm]	*2	538	654	705	754	754	725	693
	Torsional Rigidity	[Nm/arc-min]	--	17.800	23.000	25.200	27.400	27.400	27.400	27.400
	Moment of Inertia	[kg-cm ²]	--	7.752	10.996	12.007	11.754	11.754	11.754	11.501
D07	Input	[kW]	--	9.110	7.170	4.530	4.010	2.990	2.290	1.820
	Nominal Output Torque	[Nm]	*1	287	349	376	402	447	430	411
	Emergency Stopping Torque	[Nm]	*2	718	872	940	1,010	1,120	1,070	1,030
	Torsional Rigidity	[Nm/arc-min]	--	17.800	23.000	25.200	27.400	27.400	27.400	27.400
	Moment of Inertia	[kg-cm ²]	--	7.752	10.996	12.007	11.754	11.754	11.754	11.501

*1) The reducer can continuously sustain this torque value without overheating

*2) The reducer can sustain this torque value for 1000 cycles without failure

*3) Acceleration torque is 1.5 times the nominal output torque

Rating Table - 2000 rpm Input, Single Reduction, Precision Backlash (less than 6 arc-min)

Frame Size	Ratio	Units	Notes	11	17	29	35	47	59	71
E03	Input	[kW]	--	13.100	11.600	9.710	8.050	5.390	4.430	3.420
	Nominal Output Torque	[Nm]	*1	618	849	1,210	1,210	1,090	1,120	1,040
	Emergency Stopping Torque	[Nm]	*2	1,540	2,120	3,030	3,030	2,730	2,800	2,600
	Torsional Rigidity	[Nm/arc-min]	--	54.800	70.400	85.200	85.200	85.200	85.200	85.200
	Moment of Inertia	[kg-cm ²]	--	31.512	52.661	49.291	48.869	48.448	48.448	48.027
E07	Input	[kW]	--	17.400	15.500	13.000	10.700	7.190	5.910	4.570
	Nominal Output Torque	[Nm]	*1	824	1,130	1,610	1,610	1,450	1,500	1,390
	Emergency Stopping Torque	[Nm]	*2	2,060	2,660	3,520	3,520	3,520	3,520	3,480
	Torsional Rigidity	[Nm/arc-min]	--	54.800	70.400	85.200	85.200	85.200	85.200	85.200
	Moment of Inertia	[kg-cm ²]	--	31.512	52.661	49.291	48.869	48.448	48.448	48.027
F03	Input	[kW]	--	20.200	19.900	17.000	14.800	10.800	8.170	6.790
	Nominal Output Torque	[Nm]	*1	953	1,450	2,120	2,230	2,180	2,070	2,070
	Emergency Stopping Torque	[Nm]	*2	2,380	3,630	5,300	5,580	5,450	5,180	5,180
	Torsional Rigidity	[Nm/arc-min]	--	116.700	122.300	133.400	133.400	133.400	133.400	133.400
	Moment of Inertia	[kg-cm ²]	--	87.628	74.989	130.178	127.650	127.650	127.650	125.122
F07	Input	[kW]	--	26.900	26.500	22.600	19.800	14.400	10.900	9.060
	Nominal Output Torque	[Nm]	*1	1,270	1,940	2,820	2,970	2,900	2,760	2,760
	Emergency Stopping Torque	[Nm]	*2	3,180	4,850	7,050	7,350	7,350	6,900	6,900
	Torsional Rigidity	[Nm/arc-min]	--	116.700	122.300	133.400	133.400	133.400	133.400	133.400
	Moment of Inertia	[kg-cm ²]	--	87.628	74.989	130.178	127.650	127.650	127.650	125.122

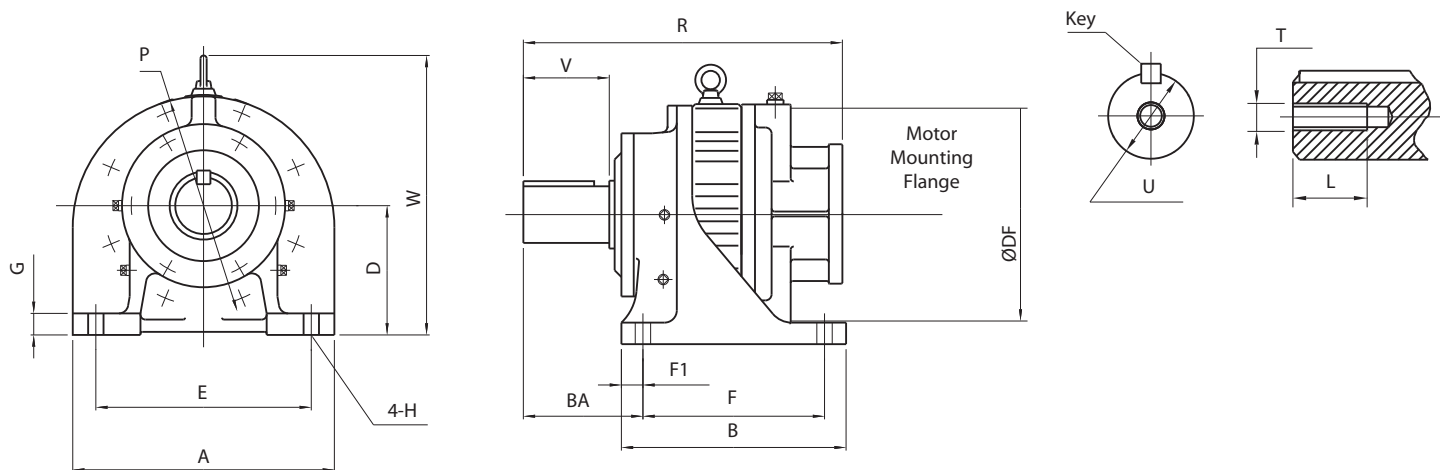
*1) The reducer can continuously sustain this torque value without overheating

*2) The reducer can sustain this torque value for 1000 cycles without failure

*3) Acceleration torque is 1.5 times the nominal output torque

ER-SERIES Circulute 3000 cycloidal reducer

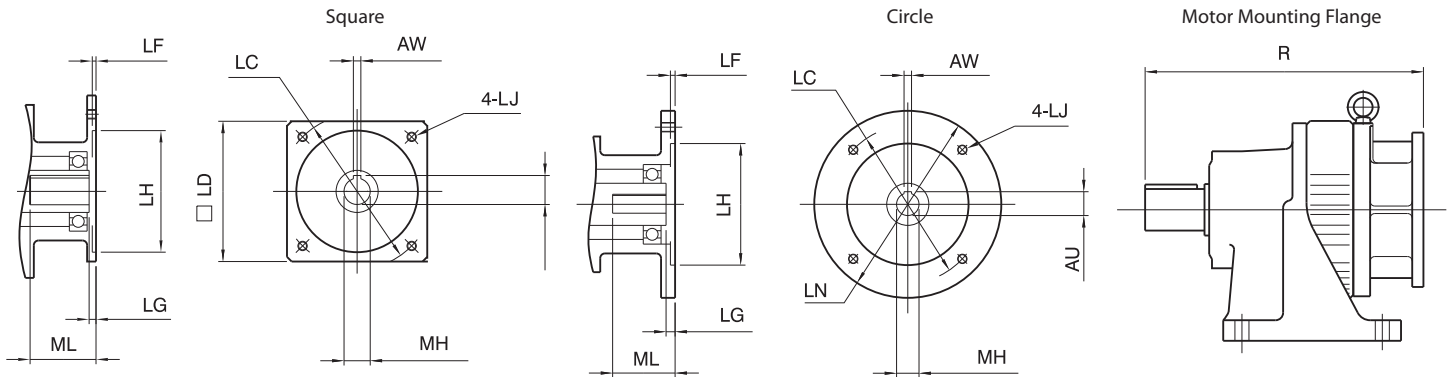
ER Common Dimensions – Single Stage Base Mount



Frame Size	Units	A	B	BA	D	DF	E	F	F1	G	H	P
A03 - A07	[mm]	175.01	119.89	65.28	89.99	N/A	145.03	89.92	14.99	16.00	11.94	147.07
A190 - A195	[mm]	180.09	134.87	59.94	100.00	N/A	150.11	89.92	14.99	11.94	10.92	147.07
B01 - B07	[mm]	175.01	150.11	85.85	115.01	N/A	145.03	119.89	14.99	16.00	11.94	150.11
B195 - B105	[mm]	180.09	134.87	59.94	100.00	N/A	150.11	89.92	14.99	11.94	10.92	150.11
B20H	[mm]	180.09	134.87	59.94	119.99	N/A	150.11	89.92	14.99	11.94	10.92	150.11
C01 - C07	[mm]	219.96	189.99	103.38	140.00	N/A	180.09	150.11	20.07	22.10	14.99	189.99
C110 - C115	[mm]	230.12	154.94	82.04	119.99	N/A	189.99	115.06	20.07	14.99	13.97	189.99
C225	[mm]	230.12	154.94	82.04	140.00	N/A	189.99	115.06	20.07	14.99	13.97	189.99
D01 - D07	[mm]	275.08	230.12	135.38	165.00	N/A	225.04	180.09	24.89	25.91	19.05	234.95
D135	[mm]	330.20	195.07	100.08	149.99	N/A	290.07	145.03	24.89	22.10	18.03	234.95
D145	[mm]	330.20	195.07	119.89	149.99	N/A	290.07	145.03	24.89	22.10	18.03	234.95
D225	[mm]	330.20	195.07	119.89	159.99	N/A	290.07	145.03	24.89	22.10	18.03	233.68
E01 - E07	[mm]	359.92	299.97	150.88	184.99	312.93	299.97	249.94	24.89	29.97	22.10	299.97
E165	[mm]	409.96	238.00	138.94	159.99	312.93	369.82	150.11	43.94	24.89	18.03	299.97
E370 - E375	[mm]	430.02	335.03	124.97	200.00	312.93	379.98	275.08	29.97	29.97	22.10	414.02
F03 - F07	[mm]	424.94	365.00	194.82	210.01	368.05	350.01	294.89	35.05	35.05	24.89	359.92

*1) Sizes A through B do not have a lifting eye

ER Flange Dimensions – Single Stage Base Mount



Frame Size	LC	LD	LF	LG	LH	LN	LJ	MH	ML	R	Net Weight (kg)
A03 - A07	70	--	5	5	50	120	M5	14, 16	37	202.692	9.98
	90	--	5	7	70	120	M6	16, 19	57	212.60	9.98
	100	--	7	7	80	120	M6	16, 19	--	214.63	9.98
	115	100	7	7	95	--	M6	19, 24	57	212.60	9.98
	145	110	7	8	110	--	M8	22, 24	--	212.60	12.70
B03 - B07	70	--	5	5	50	120	M5	14, 16	37	238.00	16.33
	90	--	5	7	70	120	M6	16, 19	57	247.90	16.33
	100	--	7	7	80	120	M6	16, 19	--	249.94	16.33
	115	100	7	7	95	--	M6	19, 24	57	247.90	16.33
	145	110	7	8	110	--	M8	22, 24	--	247.90	17.23
C03 - C07	90	--	7	7	70	160	M6	16	--	293.88	30.84
	100	--	7	7	80	120	M6	16, 19	--	300.99	30.84
	115	130	7	7	95	--	M6	22, 24	--	293.88	30.84
	145	130	7	8	110	--	M8	24, 28	--	293.88	30.84
	200	176	7	7	114.3	--	M12	28, 35	--	328.93	38.55
D03 - D07	115	--	7	7	95	200	M6	22, 24	--	354.08	52.15
	145	130	8	8	110	--	M8	22, 24	--	349.00	52.15
	165	--	8	8	130	200	M10	24, 28	--	360.93	52.15
	200	176	10	7	114.3	--	M12	28, 35	--	378.97	56.69
	215	--	10	10	180	300	M12	35, 38	--	399.03	61.22
E03 - E07	145	--	10	7	110	250	M8	24, 28	--	409.96	111.56
	165	176	7	7	130	--	M12	24, 28	--	399.03	101.59
	200	176	7	6	114.3	--	M12	28, 35	--	399.03	101.59
	215	--	10	11	180	300	M12	35, 38	--	459.99	116.55
	235	--	8	11	200	350	M12	38, 42	--	494.03	129.71
F03 - F07	200	--	10	7	114.3	300	M12	28, 35	--	546.10	207.71
	215	--	10	8	180	300	M12	35, 38	--	546.10	207.71
	235	--	5	11	200	300	M12	38, 42	--	546.10	207.71
	265	--	5	11	230	400	M12	42, 48	--	564.90	219.50

MH	AU	AW	ML
14	16	5	32
16	18	5	37
19	21.5	6	42
22	25	8	57
24	27	8	67

MH	AU	AW	ML
28	31	8	67
35	38	10	67
38	41	10	88
42	45	12	118
48	51.5	14	118

*1) Other servo flanges and bore sizes are available. Contact Shimpo Drives Customer Service for additional information

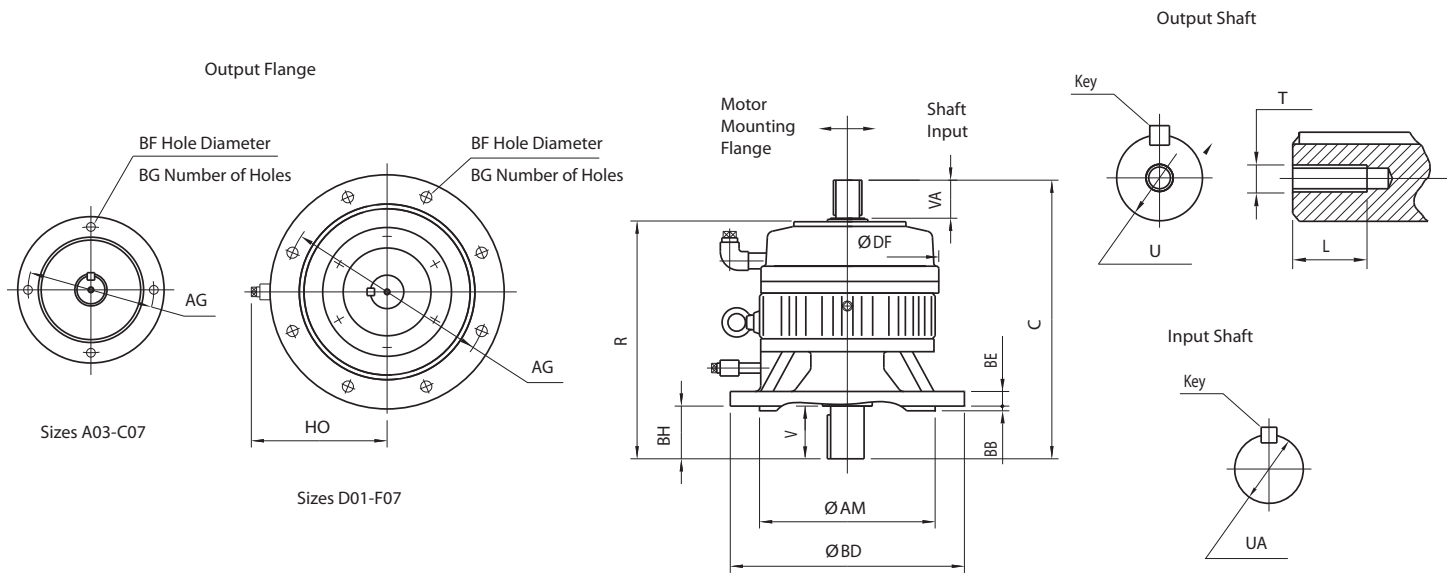
*2) All dimensions are in mm, except for «R» dimension, which is in inches

*3) To download CAD drawings, visit our website: www.shimpodrives.com

*4) The "R" dimension is the length from input flange face to output shaft end

ER-SERIES Circulute 3000 cycloidal reducer

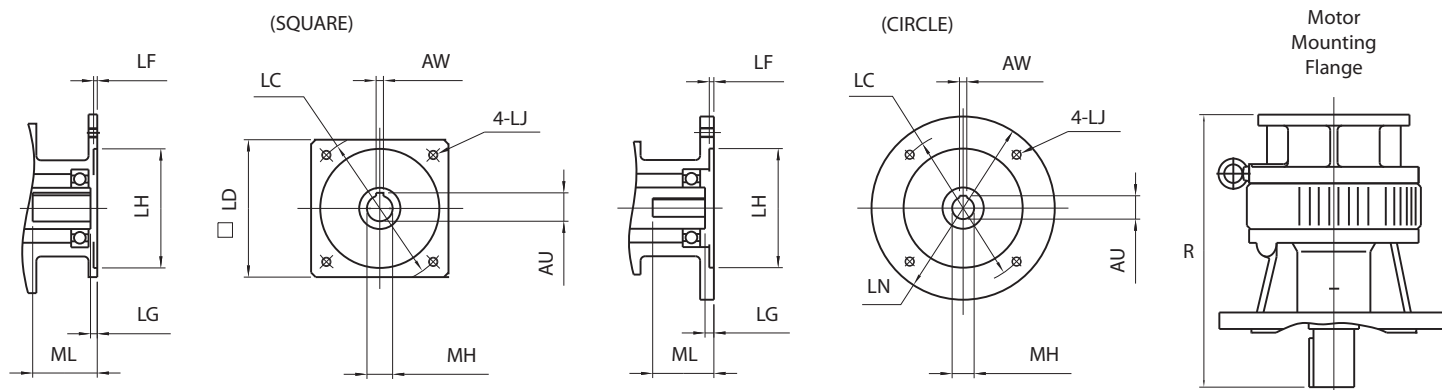
ER Common Dimensions – Single Stage Flange Mount



Frame Size	Units	AG	AM	BB	BD	BE	BF	BG	BH	HO
A03 - A07	[mm]	130.05	110.01	4.06	160.02	13.97	11.94	101.60	29.97	N/A
B01 - B07	[mm]	165.10	130.00	4.06	199.90	13.97	11.94	101.60	40.13	N/A
C01 - C07	[mm]	214.88	180.01	4.06	249.94	18.03	14.99	101.60	55.12	N/A
D01 - D07	[mm]	264.92	230.00	5.08	299.97	22.10	14.99	203.20	70.10	184.91
E01 - E07	[mm]	350.01	300.00	7.87	400.05	24.89	19.05	203.20	89.92	230.12
F03 - F07	[mm]	400.05	350.01	7.87	450.09	24.89	19.05	203.20	109.98	260.10

Frame Size	Units	Output Shaft				
		U	V	Key	T	L
A03 - A07	[mm]	22.23	30.23	4.78x4.78x24.89	N/A	N/A
B01 - B07	[mm]	34.925	50.80	7.95x7.95x44.96	N/A	N/A
C01 - C07	[mm]	44.450	63.50	9.53x9.53x54.86	N/A	N/A
D01 - D07	[mm]	63.500	95.25	15.88x15.88x74.93	M10 x 1.5	18.03
E01 - E07	[mm]	73.025	111.00	19.05x19.05x95.00	M20 x 2.5	35.05
F03 - F07	[mm]	92.075	139.70	22.23x22.23x115.06	M20 x 2.5	35.05

ER Flange Dimensions – Single Stage Flange Mount



Frame Size	LC	LD	LF	LG	LH	LN	LJ	MH	ML	R	Net Weight (kg)
A03 - A07	70	--	5	5	50	120	M5	14, 16	37	202.69	9.98
	90	--	5	7	70	120	M6	16, 19	57	212.60	9.98
	100	--	7	7	80	120	M6	16, 19	--	214.63	9.98
	115	100	7	7	95	--	M6	19, 24	57	212.60	9.98
	145	110	7	8	110	--	M8	22, 24	--	212.60	12.70
B03 - B07	70	--	5	5	50	120	M5	14, 16	37	238.00	16.33
	90	--	5	7	70	120	M6	16, 19	57	247.90	16.33
	100	--	7	7	80	120	M6	16, 19	--	249.94	16.33
	115	100	7	7	95	--	M6	19, 24	57	247.90	16.33
	145	110	7	8	110	--	M8	22, 24	--	247.90	17.23
C03 - C07	90	--	7	7	70	160	M6	16	--	293.88	30.84
	100	--	7	7	80	120	M6	16, 19	--	300.99	30.84
	115	130	7	7	95	--	M6	22, 24	--	293.88	30.84
	145	130	7	8	110	--	M8	24, 28	--	293.88	30.84
	200	176	7	7	114.3	--	M12	28, 35	--	328.93	38.55
D03 - D07	115	--	7	7	95	200	M6	22, 24	--	354.08	52.15
	145	130	8	8	110	--	M8	22, 24	--	349.00	52.15
	165	--	8	8	130	200	M10	24, 28	--	360.93	52.15
	200	176	10	7	114.3	--	M12	28, 35	--	378.97	56.69
	215	--	10	10	180	300	M12	35, 38	--	399.03	61.22
E03 - E07	145	--	10	7	110	250	M8	24, 28	--	409.96	111.56
	165	176	7	7	130	--	M12	24, 28	--	399.03	101.59
	200	176	7	6	114.3	--	M12	28, 35	--	399.03	101.59
	215	--	10	11	180	300	M12	35, 38	--	459.99	116.55
	235	--	8	11	200	350	M12	38, 42	--	494.03	129.71
F03 - F07	200	--	10	7	114.3	300	M12	28, 35	--	546.10	207.71
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MH	AU	AW	ML
28	31	8	67
35	38	10	67
38	41	10	88
42	45	12	118
48	51.5	14	118

*1) Other servo flanges and bore sizes are available.

Contact Shimpo Drives Customer Service for additional information

*2) All dimensions are in mm, except for «R» dimension, which is in inches

*3) To download CAD drawings, visit our website: www.shimpodrives.com

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