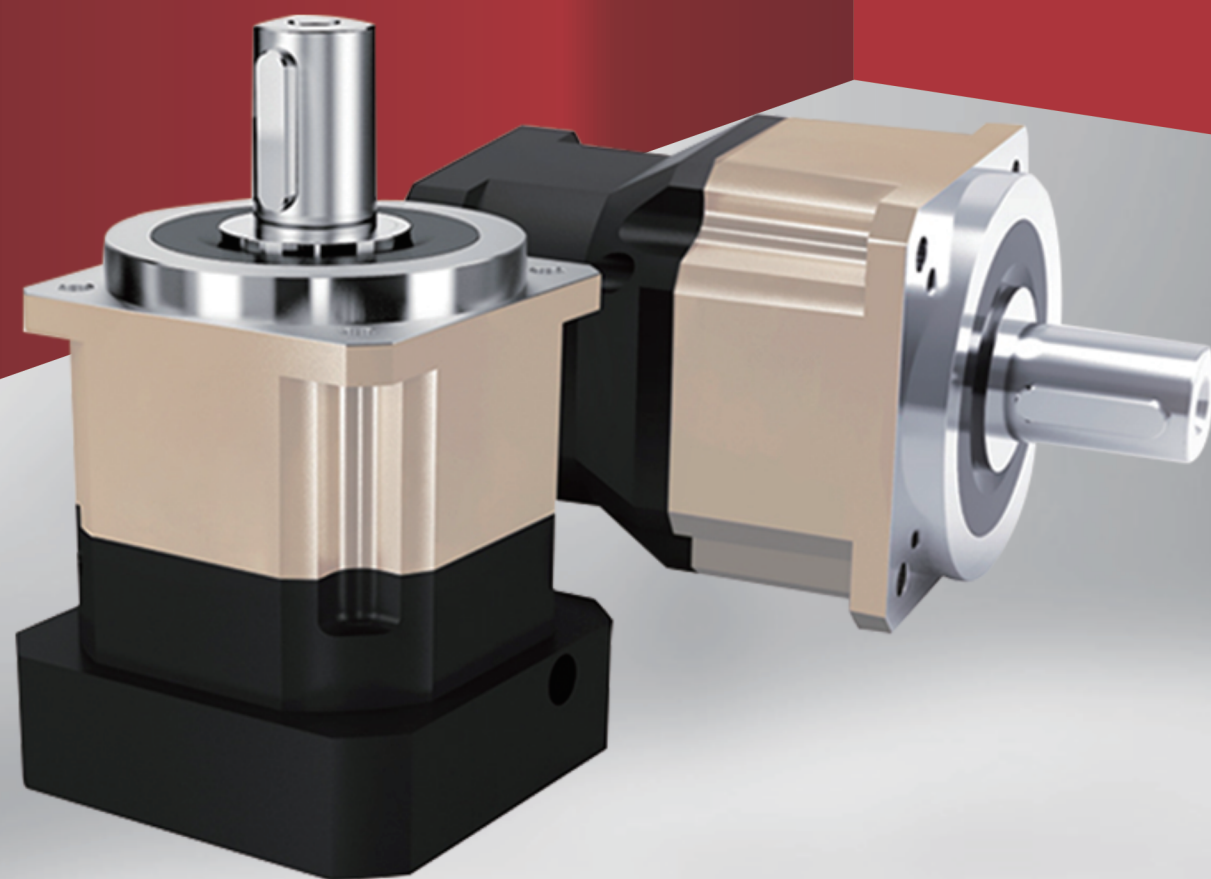


AB

High precision helical planetary reducer



GEAR BOX PERFORMANCE INFORMATION

Specification		series	Reduction ratio 1	AB042	AB060	AB090	AB115	AB142	AB180	AB220
Rated output torque T2N	Nm	1	3	20	55	130	208	342	588	1,140
			4	19	50	140	290	542	1,050	1,700
			5	22	60	160	330	650	1,200	2,000
			6	20	55	150	310	600	1,100	1,900
			7	19	35	140	300	550	1,100	1,800
			8	17	35	120	260	500	1,000	1,600
		2	10	14	23	48	140	370	520	1,220
			12	20	55	130	208	342	588	1,140
			15	20	55	130	208	342	588	1,140
			20	19	50	140	290	542	1,050	1,700
			25	22	60	160	330	650	1,200	2,000
			30	22	60	160	330	650	1,200	2,000
			35	22	60	160	330	650	1,200	2,000
			40	22	60	160	330	650	1,200	2,000
			50	22	60	160	330	650	1,200	2,000
			60	20	55	150	310	600	1,100	1,900
			70	19	35	140	300	550	1,100	1,800
			80	17	35	120	260	500	1,000	1,600
			100	14	23	48	140	370	520	1,220
Maximum output torque T _{2N}	Nm	1,2	3~100 3 times rated output cabinet							
Rated input speed n1	rpm	1,2	3~100	5,000	5,000	4,000	4,000	3,000	3,000	2,000
Maximum input speed n _m	rpm	1,2	3~100	10,000	10,000	8,000	8,000	6,000	6,000	4,000
Ultra-precision backlash P0	arcmin	1	3~10	—	—	≤1	≤1	≤1	≤1	≤1
		2	3~100	—	—	—	≤3	≤3	≤3	≤3
Precision backlash P1	arcmin	1	3~10	≤3	≤3	≤3	≤3	≤3	≤3	≤3
		2	12~100	≤5	≤5	≤5	≤5	≤5	≤5	≤5
Standard backlash P2	arcmin	1	3~10	≤3	≤3	≤3	≤3	≤3	≤3	≤3
		2	12~100	≤5	≤5	≤5	≤5	≤5	≤5	≤5
Torsional rigidity	Nm/arcmin	1,2	3~100	3	7	14	25	50	145	225
Permissible radial force F2rB2	N	1,2	3~100	780	1,530	3,250	6,700	9,400	14,500	50,000
Permissible radial force F2a1B2	N	1,2	3~100	350	630	1,300	3,000	4,000	6,200	35,000
Permissible radial force F2a2B2	N	1,2	3~100	390	765	1,625	3,350	4,700	7,250	25,000
Service life	hr	1,2	3~100	20,000*						
efficiencyη	%	1	3~10	≥97%						
		2	12~100	≥94%						
weight	kg	1	3~10	0.5	1.3	3.7	7.8	14.5	29	48
		2	12~100	0.8	1.9	41	9	17.5	33	60
Use temperature	℃	1,2	3~100	-10℃~+90℃						
lubricating		1,2	3~100	Synthetic Grease						
Protection level		1,2	3~100	IP65						
Installation direction		1,2	3~100	Any Direction						
Noise level (n _r =3000rpm)	dB	1,2	3~100	≤56	≤58	≤60	≤63	≤65	≤67	≤70

Reducer moment of inertia

Specification	series	Reduction ratio 1	AB042	AB060	AB090	AB115	AB142	AB180	AB220
Moment of inertia J, kg·cm ²	1	3	0.03	0.16	0.61	3.25	9.21	28.98	69.61
		4	0.03	0.14	0.48	2.74	7.54	23.67	54.37
		5	0.03	0.13	0.47	2.71	7.42	23.29	53.27
		6	0.03	0.13	0.45	2.65	7.25	22.75	51.72
		7	0.03	0.13	0.45	2.62	7.14	22.48	50.97
		8	0.03	0.13	0.44	2.58	7.07	22.59	50.84
	2	10	0.03	0.13	0.44	2.57	7.03	22.51	50.56
		12	0.03	0.13	0.13	0.47	2.71	7.42	23.29
		15	0.03	0.03	0.13	0.47	2.71	7.42	23.29
		20	0.03	0.03	0.13	0.47	2.71	7.42	23.29
		25	0.03	0.03	0.13	0.47	2.71	7.42	23.29
		30	0.03	0.03	0.13	0.47	2.71	7.42	23.29
		35	0.03	0.03	0.13	0.47	2.71	7.42	23.29
		40	0.03	0.03	0.13	0.47	2.71	7.42	23.29
		50	0.03	0.03	0.13	0.44	2.57	7.03	22.51
		60	0.03	0.03	0.13	0.44	2.57	7.03	22.51
		70	0.03	0.03	0.13	0.44	2.57	7.03	22.51
		80	0.03	0.03	0.13	0.44	2.57	7.03	22.51
		100	0.03	0.03	0.13	0.44	2.57	7.03	22.51

1. Reduction ratio (i=N_{in}/N_{out})

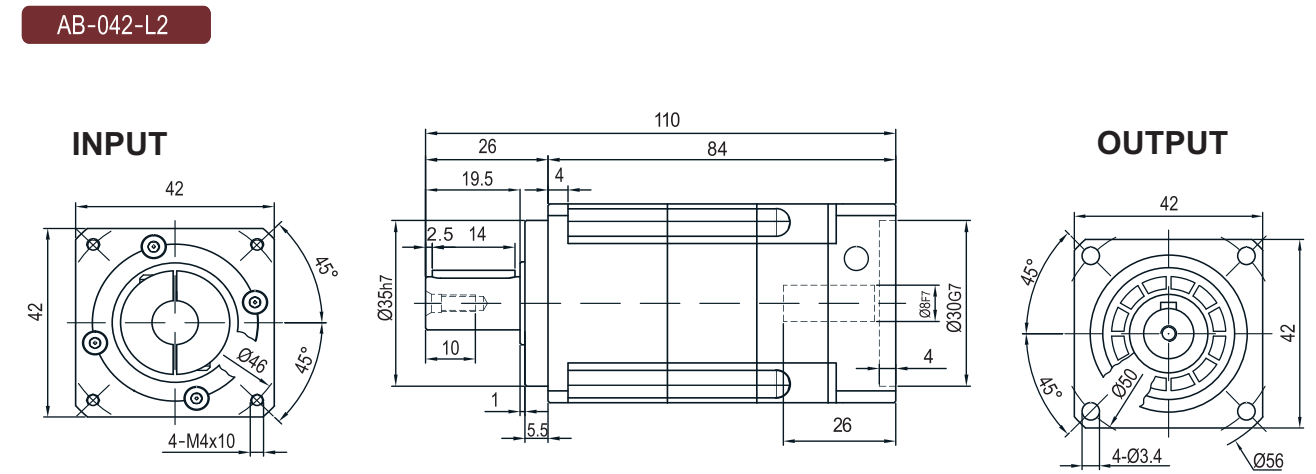
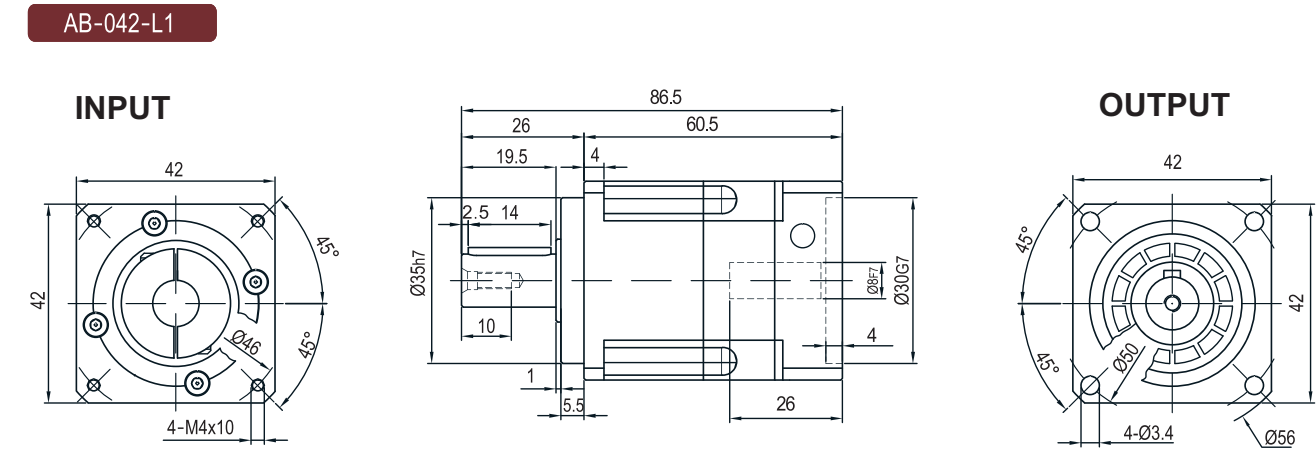
*Continuous operation reduces service life by half.

2. When the output speed is 100 rpm,

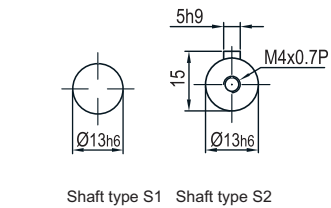
it acts on the center position of the output shaft.

High-precision Helical Planetary Gear Reducer

OUTLINE DIMENSION SHEET

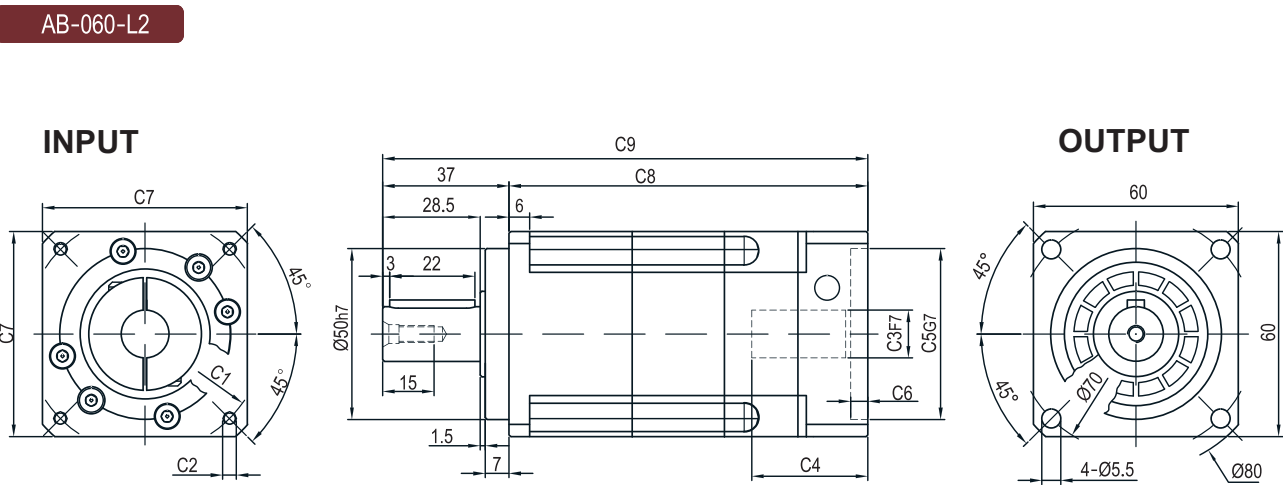
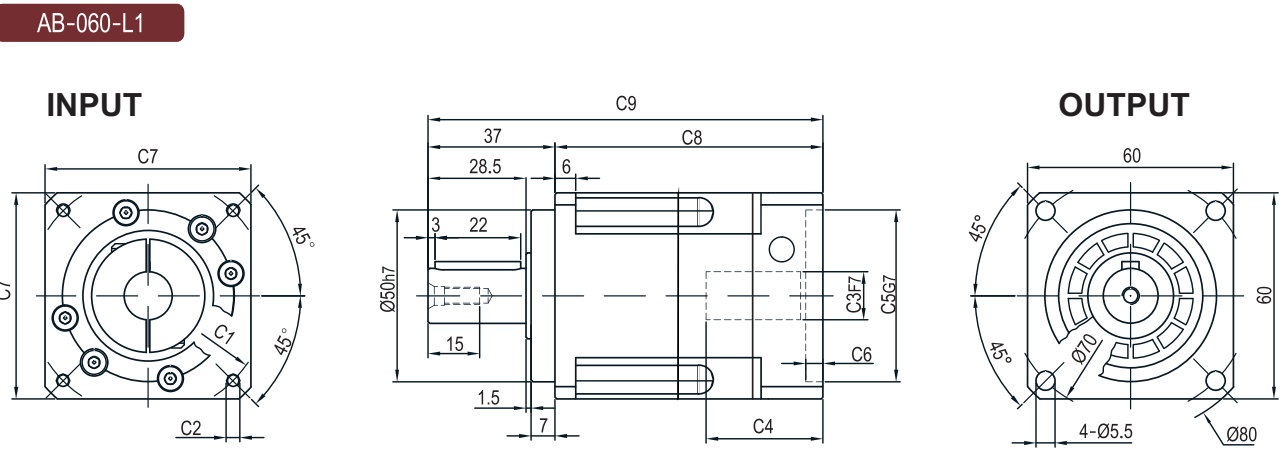


OUTPUT DIAMETER

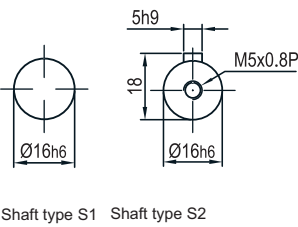


*The dimensions of the input motor connection plate can be customized according to customer requirements.

OUTLINE DIMENSION SHEET



OUTPUT DIAMETER

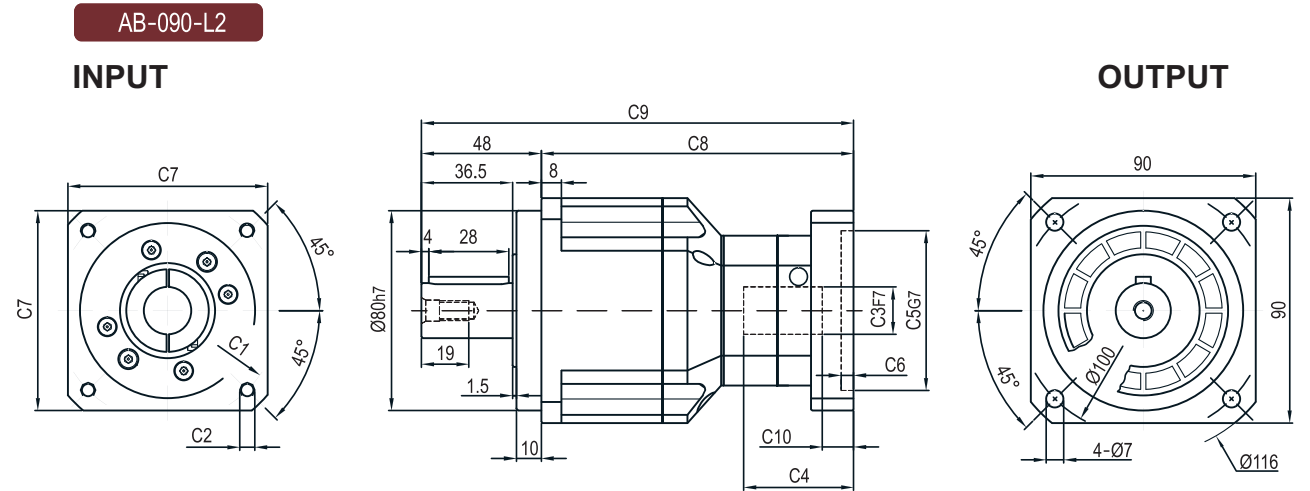
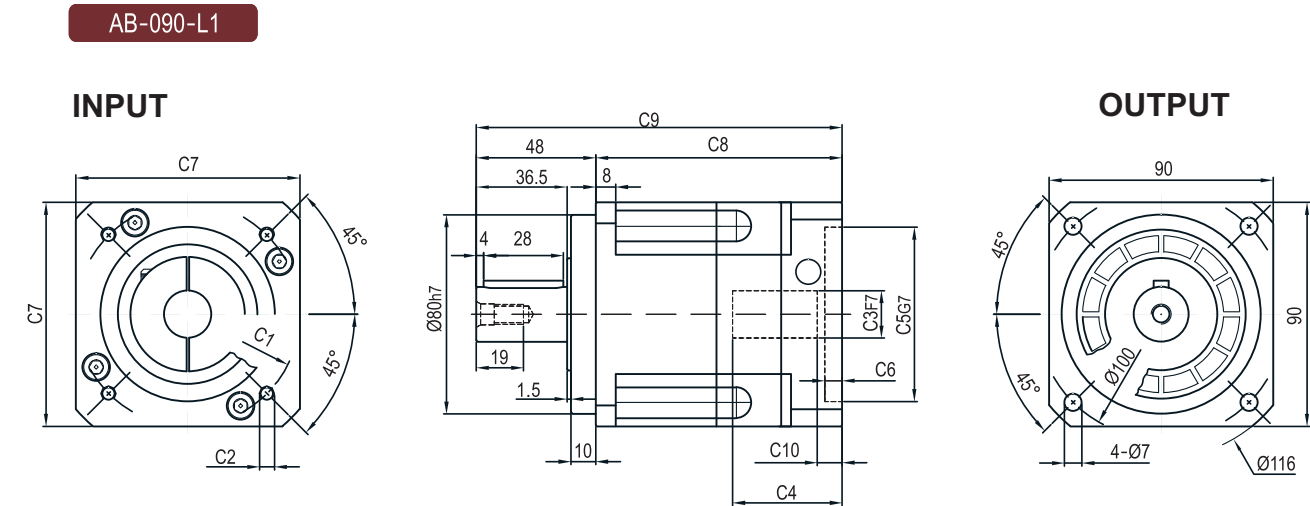


Size	C1	C2	C3	C4	C5	C6	C7	C8	C9
AB-060-L1	Ø70	4-M4x10,4-M5x12	Ø11,Ø14	34	Ø50	5	60	78	115
	Ø90	4-M5x12,4-M6x12	Ø19	44	Ø70	5	80	88	125
AB-060-L2	Ø70	4-M4x10,4-M5x12	Ø11,Ø14	34	Ø50	5	60	105	142

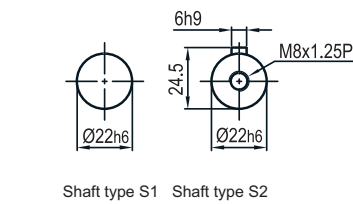
*C1~C7 are the dimensions of the metric standard motor connection plate, which can be customized according to customer requirements.

High-precision Helical Planetary Gear Reducer

OUTLINE DIMENSION SHEET



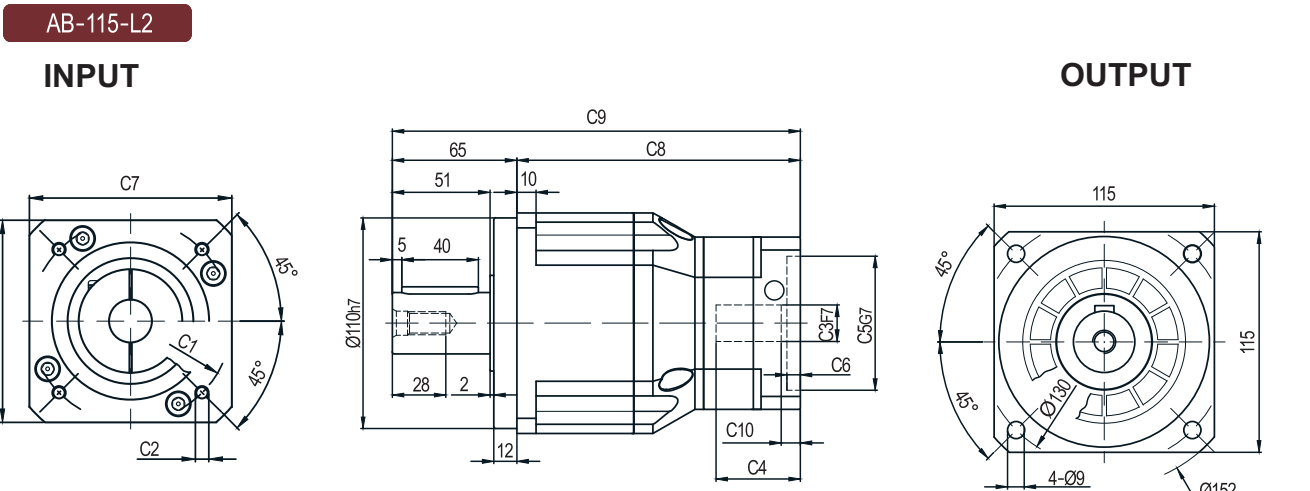
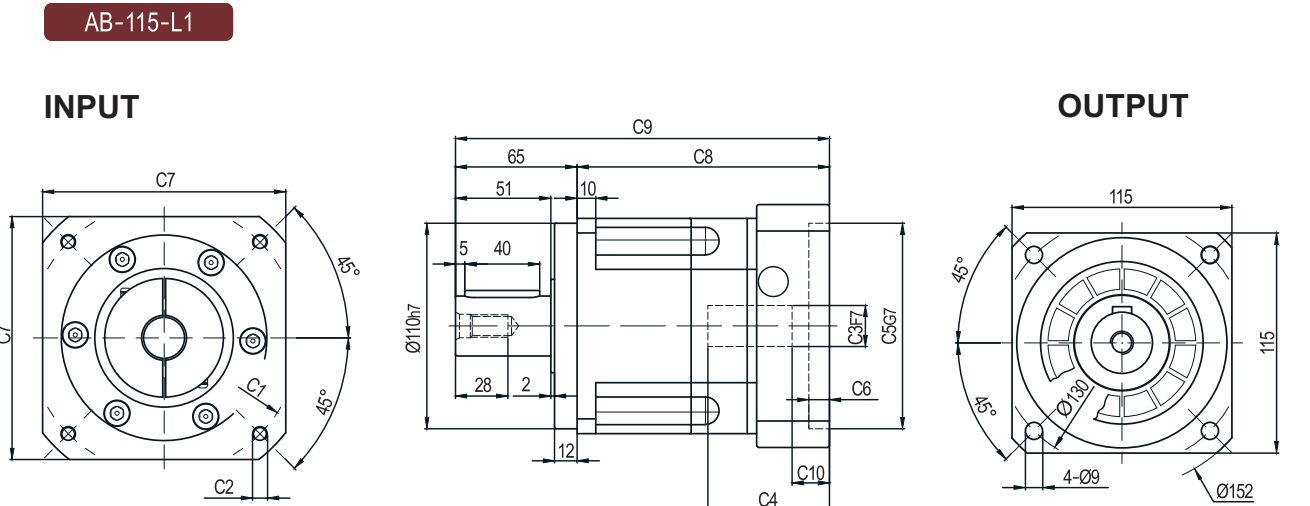
OUTPUT DIAMETER



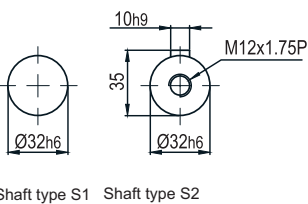
Size	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10
AB-090-L1	Ø90	4-M5x12,4-M6x12	Ø19	44	Ø70	7	90	99	147	8
	Ø100	4-M6x12	Ø16	44	Ø80	7	90	99	147	7
	Ø115	4-M8x20	Ø19,Ø22	50	Ø95	7	100	105	153	13
	Ø115	4-M8x25	Ø19,Ø22	60	Ø95	8	100	115	163	23
AB-090-L2	Ø145	4-M4x10,4-M5x12	Ø19,Ø22,Ø24	60	Ø110	8	130	115	163	23
	Ø70	4-M4x10,4-M5x12	Ø11,Ø14	34	Ø50	5	60	115	163	5.5
	Ø90	4-M5x12,4-M6x12	Ø19	44	Ø70	5	80	125	173	16.5
	Ø100	4M6x12	Ø16	38.5	Ø80	5	86	119.5	167.5	10

*C1~C7 are the dimensions of the metric standard motor connection plate, which can be customized according to customer requirements.

OUTLINE DIMENSION SHEET



OUTPUT DIAMETER



Size	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10
AB-115-L1	Ø145	4-M8x25	Ø19,Ø22,Ø24	65	Ø110	11	130	135	200	20
	Ø200	4-M12x28	Ø35	80.5	Ø114.3	6	180	150.5	215.5	36.5
AB-115-L2	Ø90	4-M5x12, 4-M6x12	Ø19	44	Ø70	7	90	148	213	8
	Ø100	4-M6x12	Ø16	44	Ø80	7	90	148	213	7
	Ø115	4-M8x20	Ø19,Ø22	50	Ø95	7	100	154	219	13
	Ø115	4-M8x25	Ø19,Ø22	60	Ø95	8	100	164	229	23
	Ø145	4-M8x25	Ø19,Ø22,Ø24	60	Ø110	8	130	164	229	23

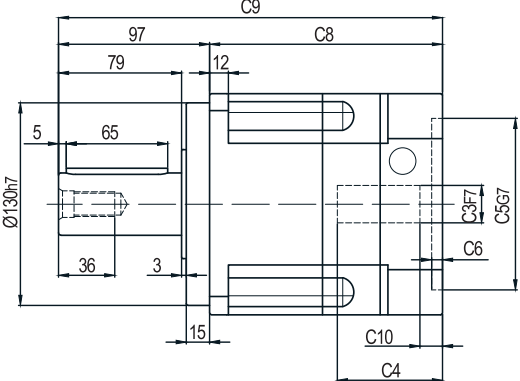
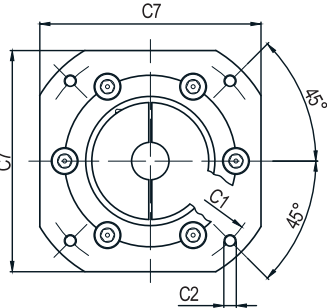
*C1~C7 are the dimensions of the metric standard motor connection plate, which can be customized according to customer requirements.

High-precision Helical Planetary Gear Reducer

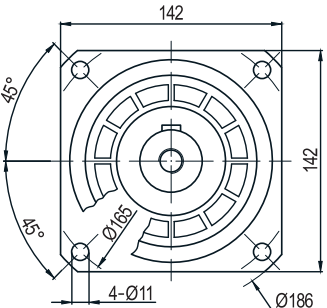
OUTLINE DIMENSION SHEET

AB-142-L1

INPUT

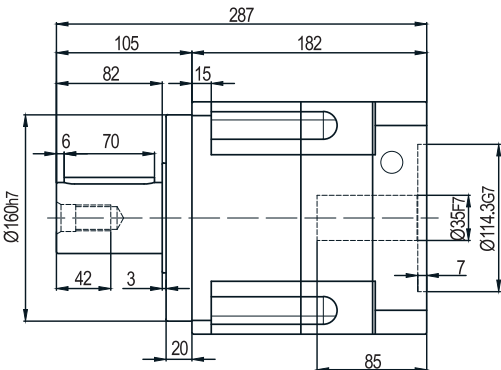
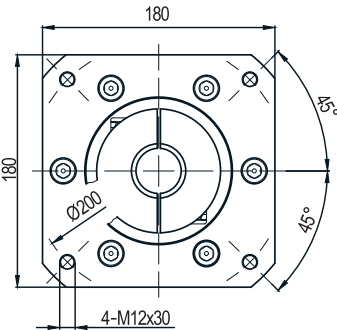


OUTPUT

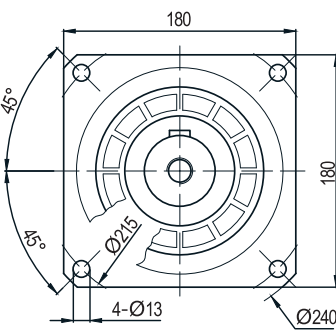


AB-180-L1

INPUT

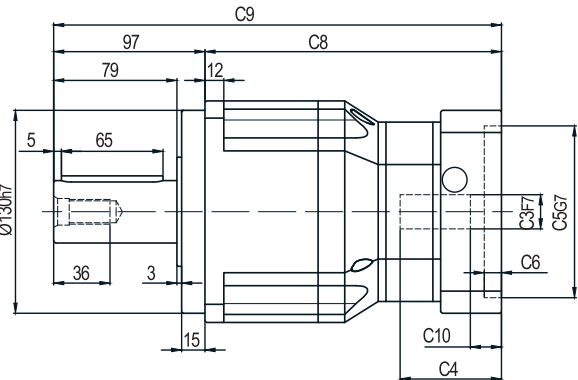
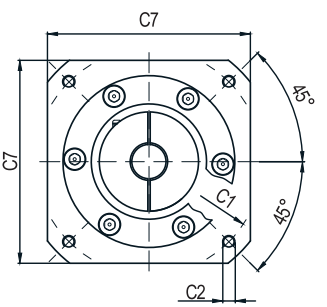


OUTPUT

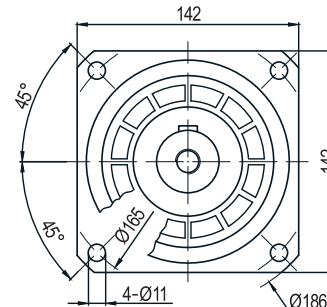


AB-142-L2

INPUT

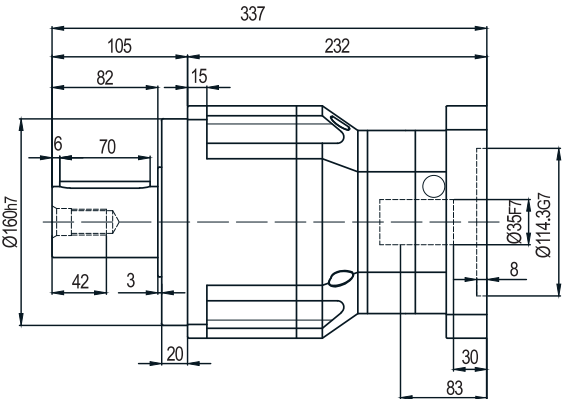
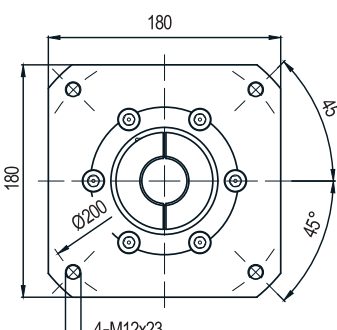


OUTPUT

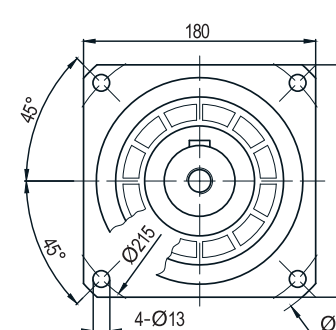


AB-180-L2

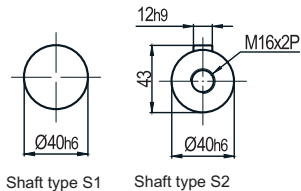
INPUT



OUTPUT



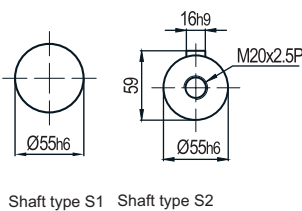
OUTPUT DIAMETER



Size	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10
AB-142-L1	Ø145	4-M8x25	Ø22,Ø24	72.5	Ø110	7	142	154.5	251.5	19.5
	Ø200	4-M12x23	Ø35	83	Ø114.3	8	180	165	262	30
AB-142-L2	Ø145	4-M8x25	Ø19,Ø22,Ø24	65	Ø110	11	130	190	287	20
	Ø200	4-M12x28	Ø35	80.5	Ø114.3	6	180	205.5	302.5	36.5

*C1-C7 are the dimensions of the metric standard motor connection plate, which can be customized according to customer requirements.

OUTPUT DIAMETER



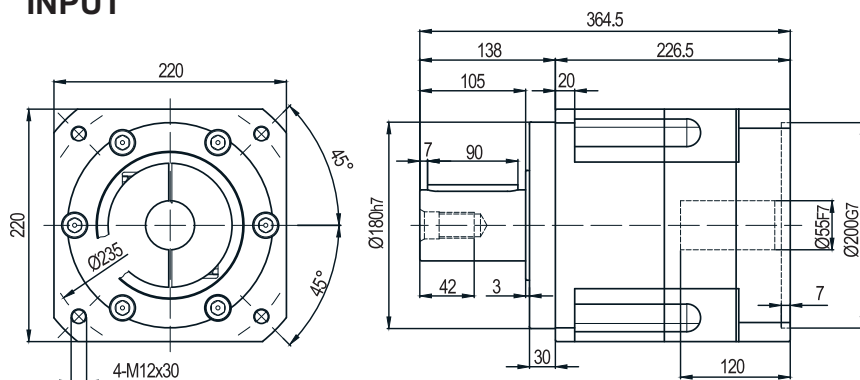
*The input motor connection plate dimensions can be customized according to customer requirements.

High-precision Helical Planetary Gear Reducer

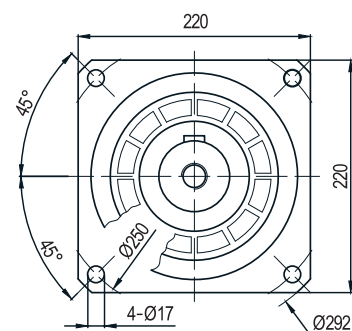
OUTLINE DIMENSION SHEET

AB-220-L1

INPUT

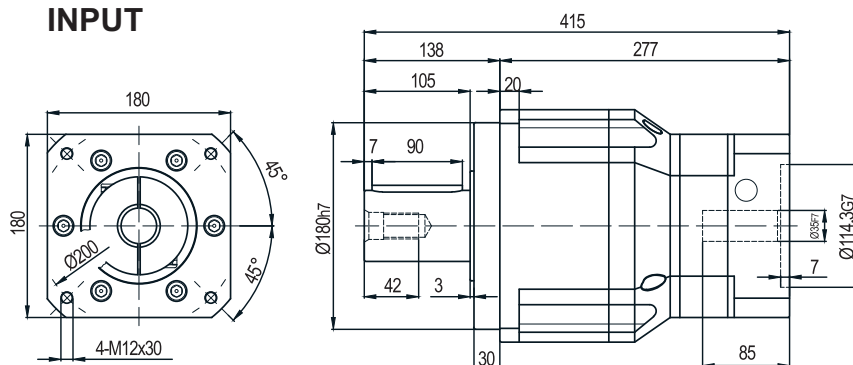


OUTPUT

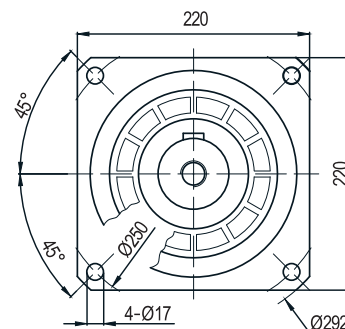


AB-220-L2

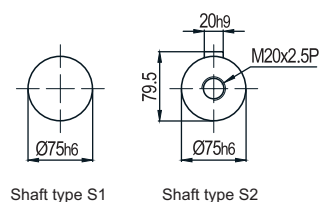
INPUT



OUTPUT



OUTPUT DIAMETER



*The input motor connection plate dimensions can be customized according to customer requirements.