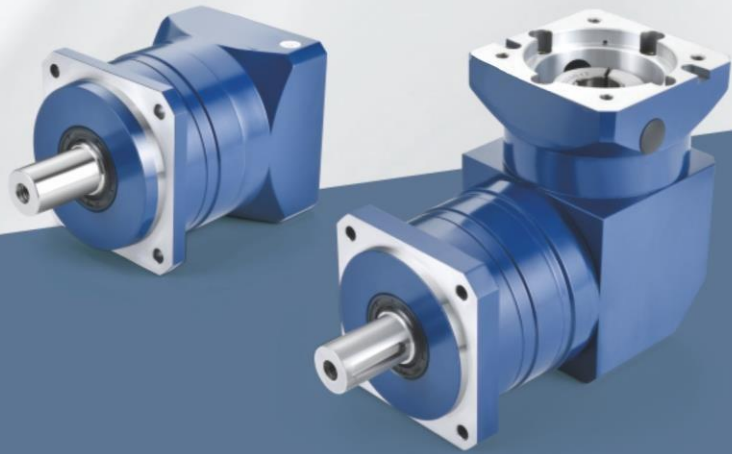




MACTROL-REFU

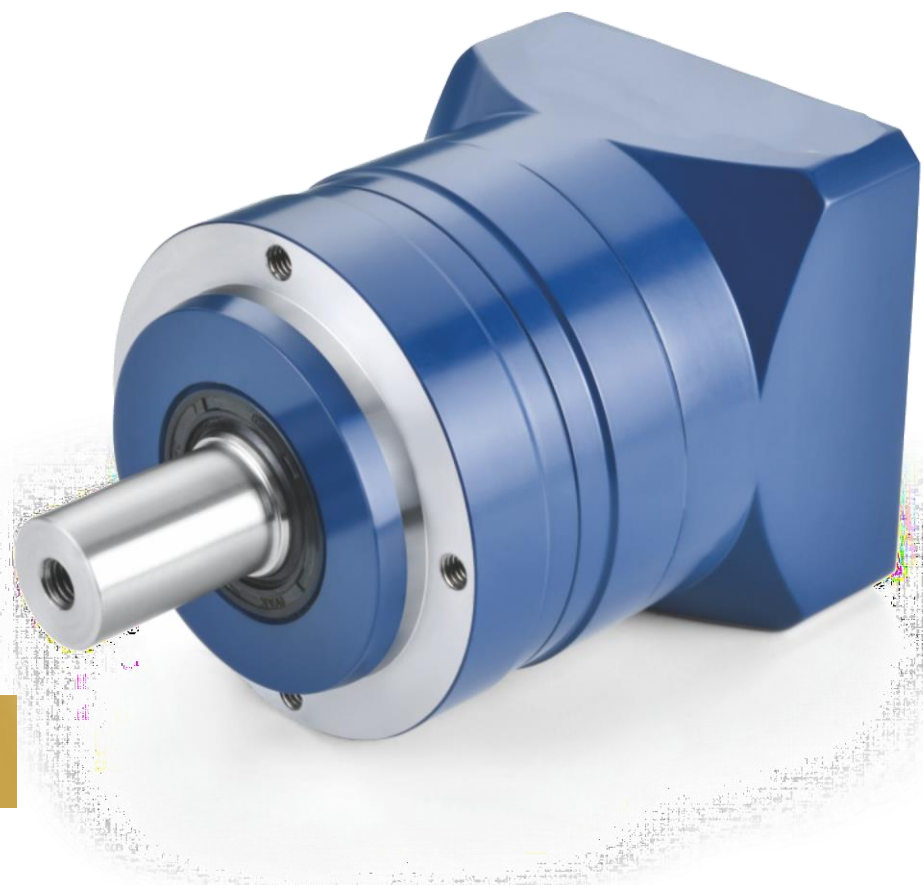
*INGENUITY CASTING PRECISION
TRANSMISSION PRODUCTS*



Mactrol-Refu Pvt. Ltd.

AL Series

- AL070
- AL090
- AL120
- AL155
- AL205



AL Series

The Core Characteristics of AL Series Reducer

- 1 Helical gear transmission, carburizing and quenching treatment, tooth profile modification treatment, to ensure low noise and smooth operation. The bearing capacity is 20% higher than that of straight teeth.
- 2 Integral output shaft and bearing support at both ends of planetary wheel to achieve high precision and strength.
- 3 The backlash clearance is small, and the precision single stage can achieve less than 3 arcmin.

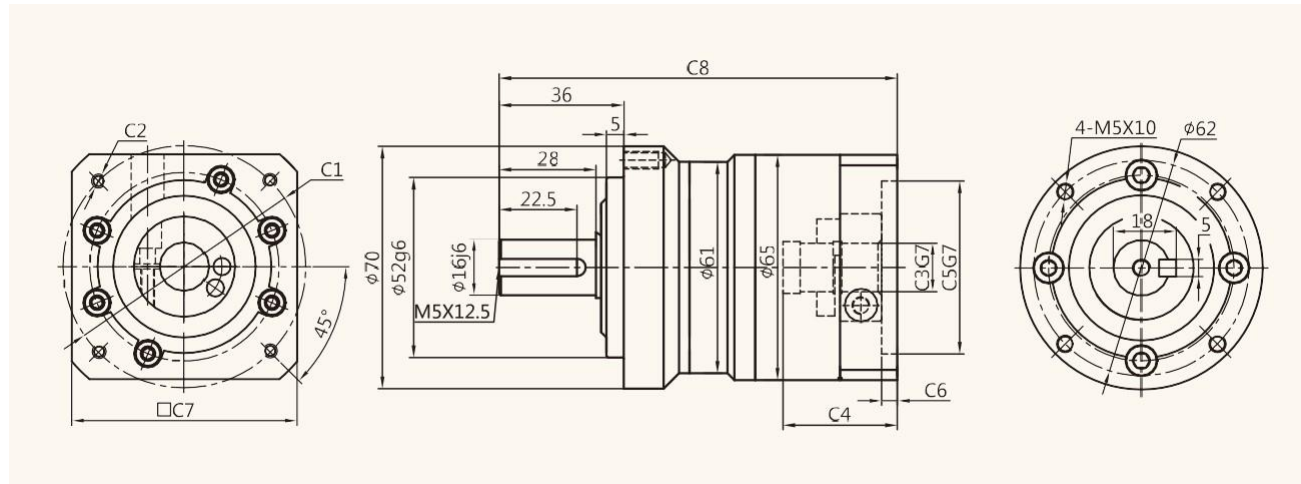
Gear box performance information

	Unit	AL070	AL090	AL120	AL155	AL205	Ratio	Stage		
额定输出扭矩 Rated output torque	N·m	18	50	120	240	600	3	1		
		27	75	180	360	750	5			
		18	50	120	240	500	10			
		37	96	230	450	1050	16	2		
		37	96	255	585	1000	25			
		27	87	180	360	800	30			
		37	96	230	564	1000	40			
		27	87	180	360	800	70			
		Emergency Stop torque	N·m	imes Rated output torque						
		Normal input speed	rmp							
Maximum Input Speed	rmp	6000	6000	6000	3500	3000				
Maximum radial force	N									
Maximum arial force	N	1100	2200	3900	8200	14000				
Efficiency	%									
Average lifetime	h	20000								
Weight	kg	1.7	4.0	8.7	19	45				
moment of inertia	kgcm ²	0.14	0.48	2.74	7.54	23.67	4	1		
		0.13	0.47	2.62	7.25	22.48	7			
		0.127	0.72	2.56	12.35	12.35	15			
		0.075	0.44	1.5	6.65	7.42	20	2		
		0.064	0.39	1.3	6.34	7.14	28			
		0.064	0.39	1.3	6.34	7.14	35			
		0.075	0.39	1.5	7.5	7.54	50			
		0.075	0.39	1.5	7.5	7.54	100			
		Backlash	arcmin	Precise[1]						
				≤ 5	≤ 5	≤ 5	≤ 5	≤ 5	Standard[1]	
Precise[2]										
Torsional rigidity	N·m/arc min	Standard[2]								
		≤ 7	≤ 7	≤ 7	≤ 7	≤ 7				
Noise	dB	60	62	62	68	70				
Lubricating		Syntetic grease lubrication								
Levels of protection		IP65								

AL

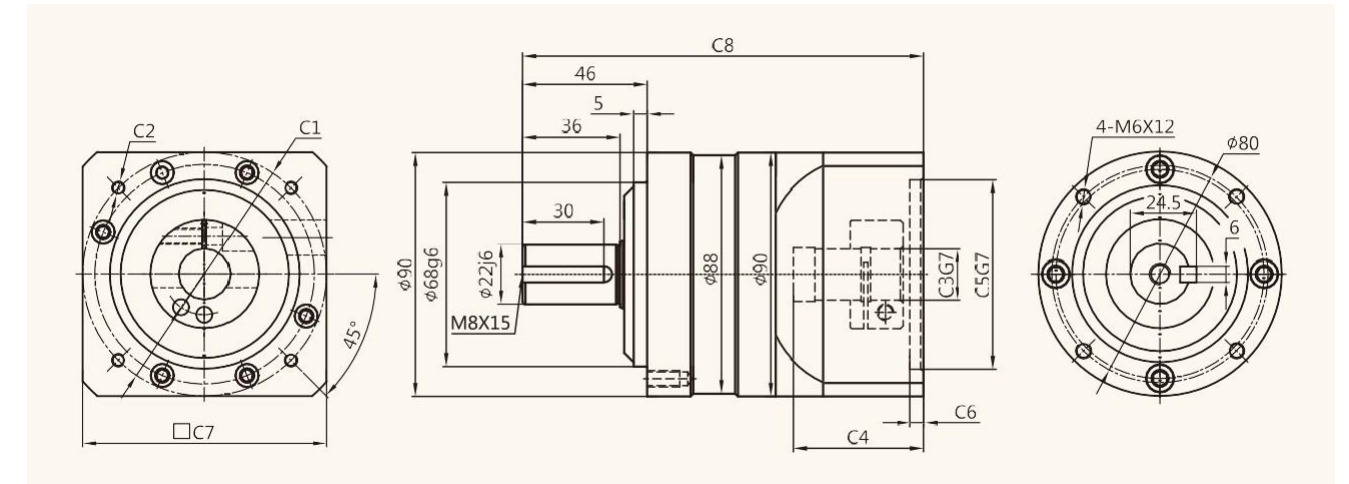
Outline Dimensional

AL070-L1[Single]

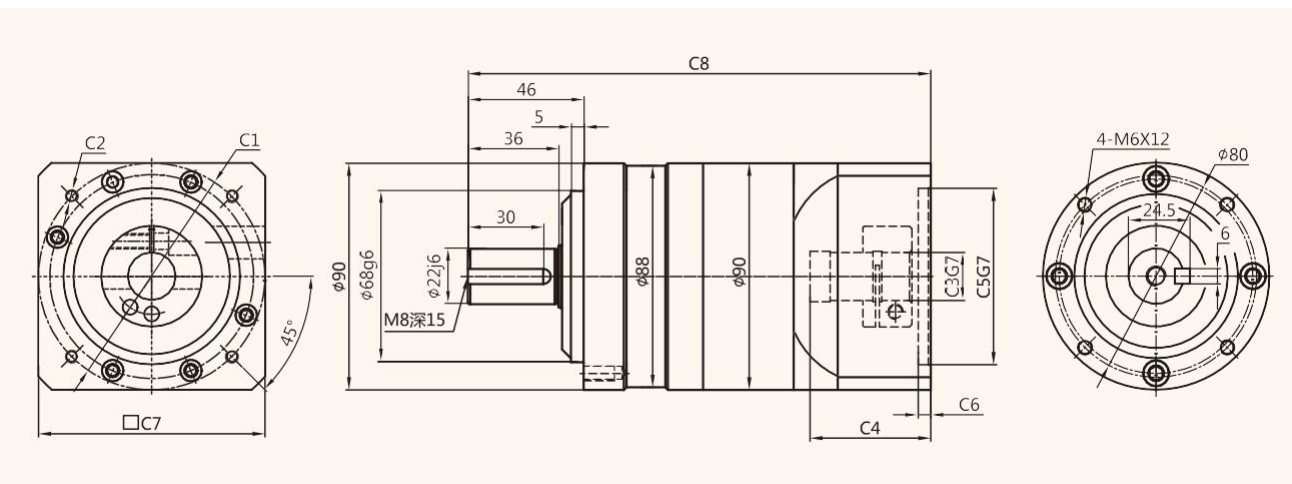


Outline Dimensional

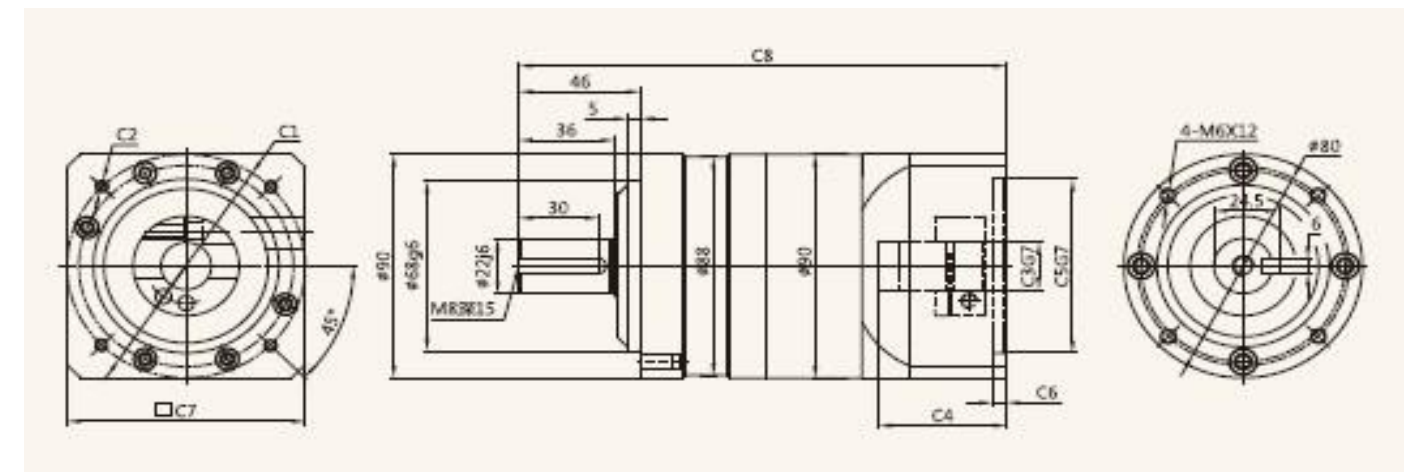
AL090-L1[Single]



AL070-L2[Double]



AL090-L2[Double]



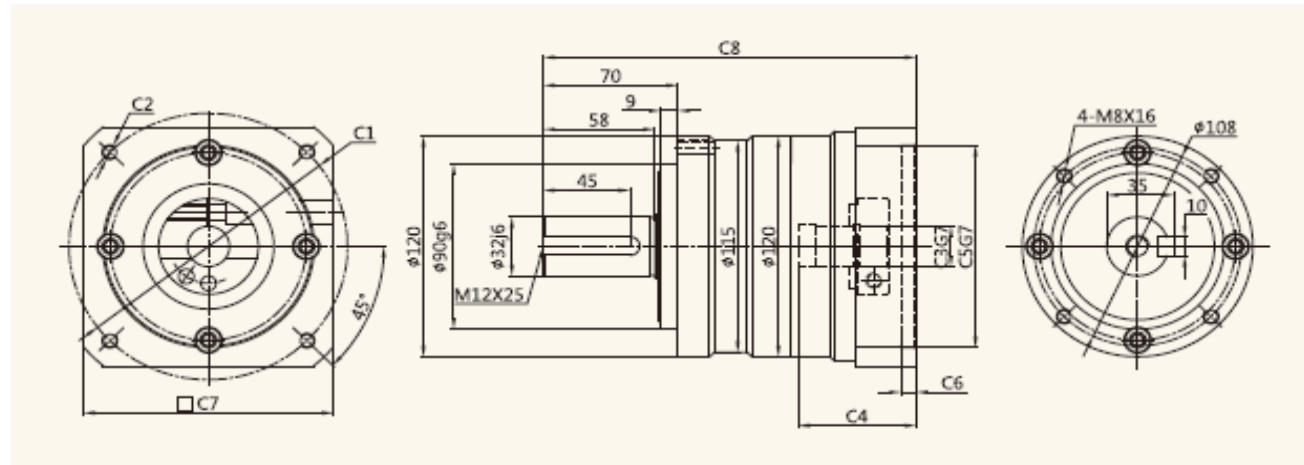
Adapter motor input interface size (The left end is the input size)

尺寸 Size	C1	C2	C3	C4	C5	C6	C7	C8
AL-070-L1	□47.14	4-M4	φ8	30	φ38.1	4.5	65	112
	φ46	4-M4	φ8	30	φ30	4.5	65	112
	φ45	4-M3	φ8	30	φ30	4.5	65	112
	φ70	4-M4/4-M5	φ14	34	φ50	4.5	65	115
AL-070-L2	□47.14	4-M4	φ8	30	φ38.1	4.5	65	136
	φ46	4-M4	φ8	30	φ30	4.5	65	136
	φ45	4-M3	φ8	30	φ30	4.5	65	136
	φ70	4-M4/4-M5	φ14	34	φ50	4.5	65	139

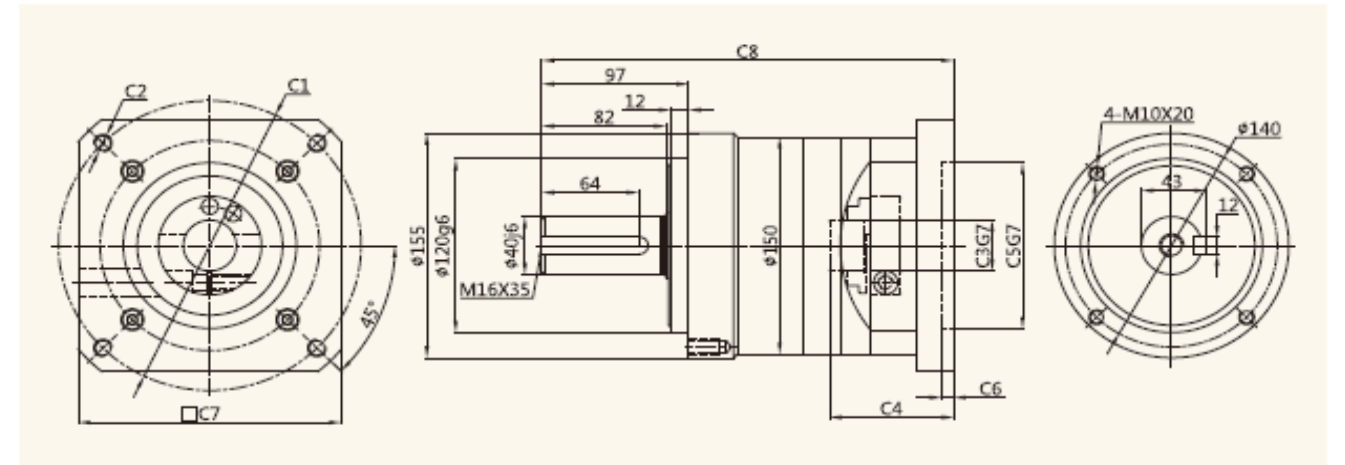
Adapter motor input interface size (The left end is the input size)

尺寸 Size	C1	C2	C3	C4	C5	C6	C7	C8
AL-090-L1	φ70	4-M4/4-M5	φ14	47	φ50	4.5	90	147
	□69.6	4-M6	φ14	48	φ73	4.5	90	148
	φ90	4-M5/4-M6	φ19	48	φ70	5.5	90	148
	φ115	4-M8	φ19/φ22	60	φ95	7.5	130	160
	φ130	4-M8	φ19/φ22	60	φ95	7.5	130	160
	φ145	4-M8	φ19/φ22/φ24	63	φ110	13	130	163.5
AL-090-L2	φ70	4-M4/4-M5	φ14	47	φ50	4.5	90	183
	□69.6	4-M6	φ14	48	φ73	4.5	90	184
	φ90	4-M5/4-M6	φ19	48	φ70	5.5	90	184

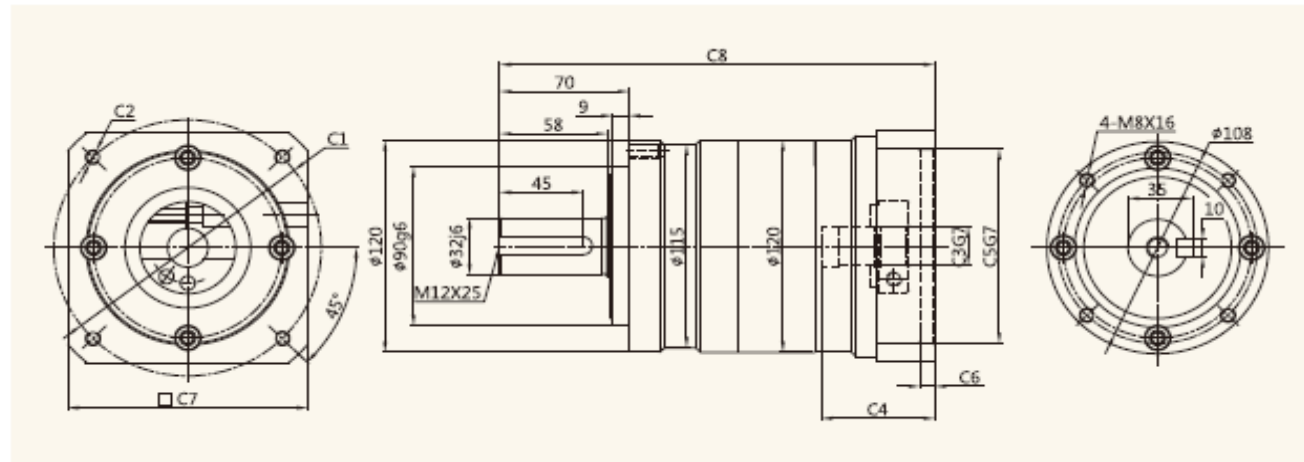
AL120-L1[Single]



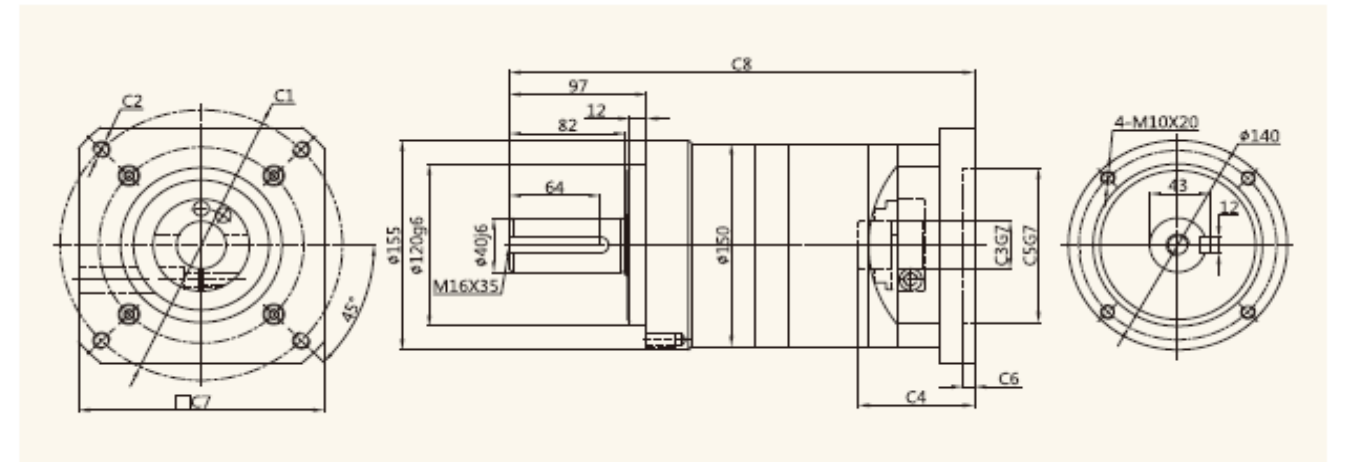
AL155-L1[Single]



AL120-L2[Double]



AL155-L2[Double]



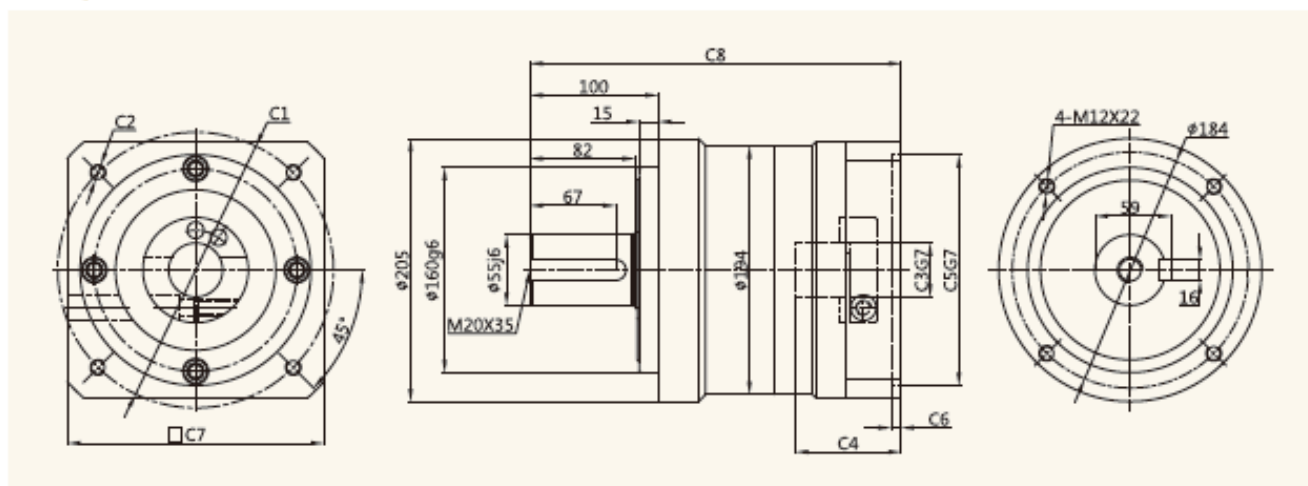
Adapter motor input interface size (The left end is the input size)

尺寸 Size	C1	C2	C3	C4	C5	C6	C7	C8
AL-120-L1	Φ115	4-M8	Φ19/Φ22	60	Φ95	7	130	194
	Φ130	4-M8	Φ19/Φ22	60	Φ95	7	130	194
	Φ145	4-M8	Φ19/Φ22/Φ24	62	Φ110	7	130	197
	Φ200	4-M12	Φ35	82	Φ114.3	7	180	215.5
AL-120-L2	Φ90	4-M5/4-M6	Φ19	55	Φ70	5.5	90	230.5
	Φ115	4-M8	Φ19/Φ22	60	Φ95	7	130	235.5
	Φ130	4-M8	Φ19/Φ22	60	Φ95	7	130	235.5
	Φ145	4-M8	Φ19/Φ22/Φ24	62	Φ110	7	180	238.5

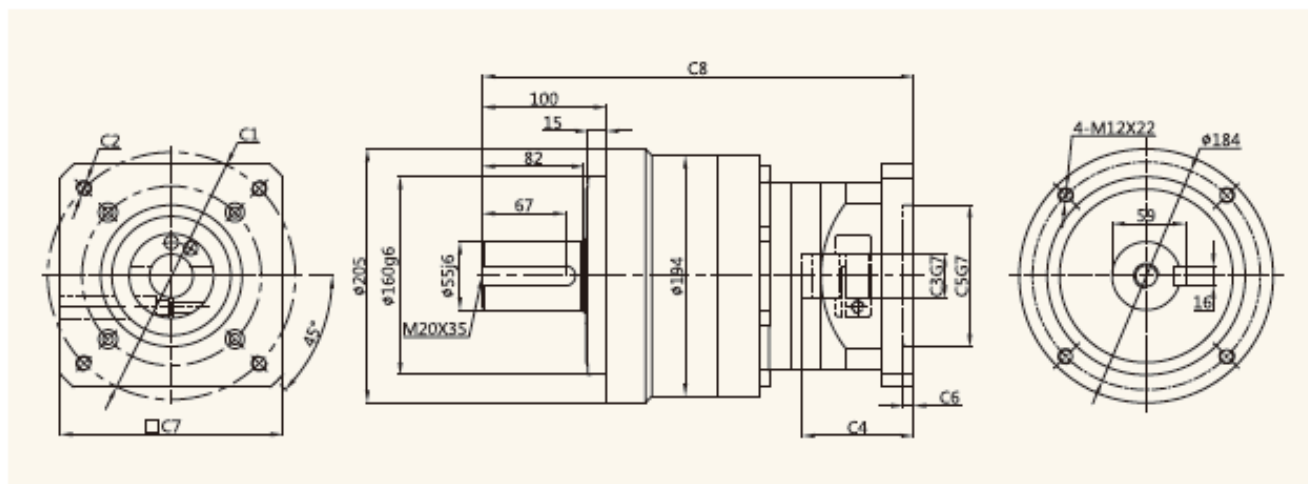
Adapter motor input interface size (The left end is the input size)

尺寸 Size	C1	C2	C3	C4	C5	C6	C7	C8
AL-155-L1	Φ130	4-M8	Φ22	65	Φ95	7	150	247.5
	Φ145	4-M8	Φ22/Φ24	65	Φ110	7	150	247.5
	Φ165	4-M10	Φ32	90	Φ130	7	150	272.5
	Φ200	4-M12	Φ35	90	Φ114.3	7	180	272.5
	Φ200	4-M12	Φ35	115	Φ114.3	7	180	297.5
	Φ215	4-M12	Φ38/Φ42	90	Φ180	7	190	272.5
AL-155-L2	Φ130	4-M8	Φ22	65	Φ95	7	150	309.5
	Φ145	4-M8	Φ22/Φ24	65	Φ110	7	150	309.5
	Φ200	4-M12	Φ35	90	Φ114.3	7	180	334.5

AL205-L1[Single]



AL205-L2[Double]



Adapter motor input interface size (The left end is the input size)

尺寸 Size	C1	C2	C3	C4	C5	C6	C7	C8
AL-205-L1	Φ200	4-M12	Φ35	83	Φ114.3	7	180	289.5
	Φ215	4-M12	Φ42	83	Φ180	7	190	289.5
AL-205-L2	Φ145	4-M8	Φ22/Φ24	65	Φ110	7	130	323
	Φ200	4-M12	Φ35	90	Φ114.3	7	180	348
	Φ200	4-M12	Φ35	115	Φ114.3	7	180	373
	Φ215	4-M12	Φ42	90	Φ180	7	190	348