

伺服馬達專用

CBT減速機

BL-A Series



For servo motor
CBT REDUCER



高精度

背隙低於5分、定位精確

High precision

Standard backlash is 5 arc-min, ideal for precision control.

高剛性、高扭矩

使用整體式深溝球軸承，大大提高了剛性和扭矩。

High rigidity & torque

Using whole deep groove ball bearing, it greatly improves the rigidity and Torque.

連接器、軸套方式

可以安裝到世界上任何一臺馬達上。

Adapter-bushing connection

Can be attached to any motor all over the world.

無潤滑脂泄漏

使用高粘度、不易分離的潤滑脂，有效防止潤滑脂泄漏。

No grease leakage

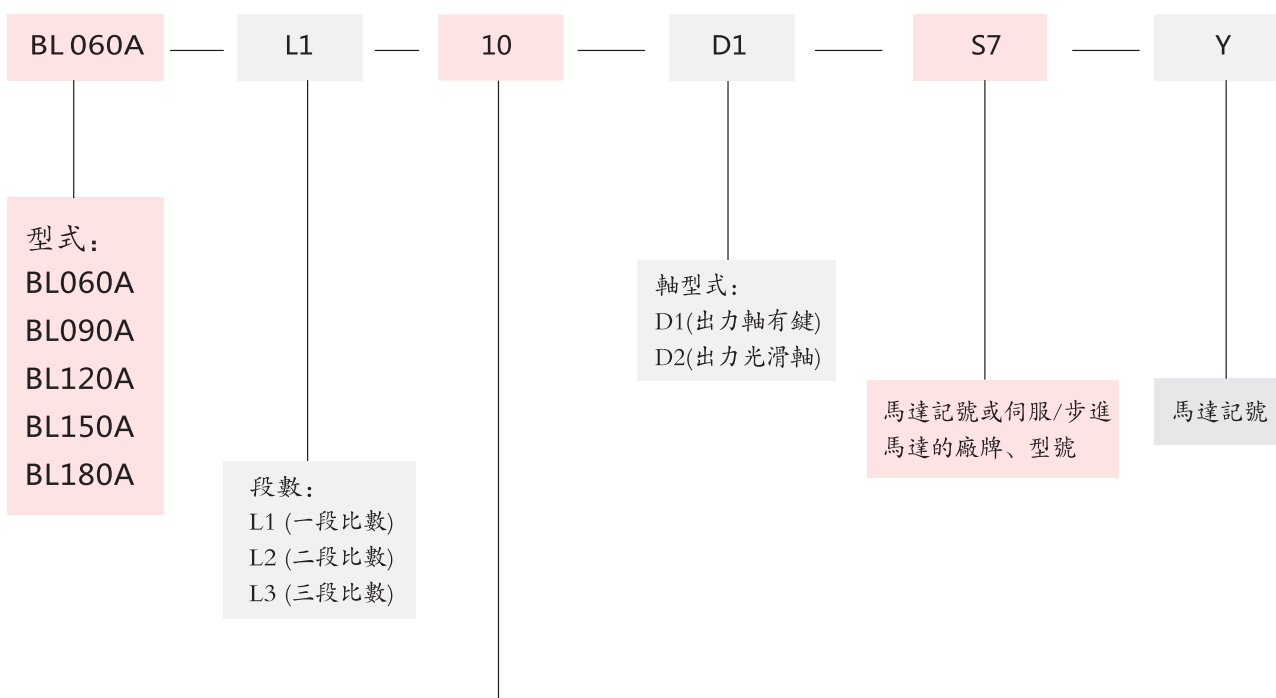
Perfect solution by high viscosity anti-separation grease.

維護方便

在產品壽命期內無需更換潤滑脂，安裝更便捷。

Maintenance-free

No need to replace the grease for the life time.
Can be attached in any position.



規格 Specifications	段數 Stage No	一段減速比數 Single Stage Ratio(L1)	二段減速比數 Double Stage Ratio(L2)	三段減速比數 Triple Stage Ratio(L3)
BL060A		3, 4, 5, 7, 10	12, 15, 16, 20, 25, 30, 35, 40, 50, 70, 100	120, 150, 160, 200, 250, 300, 350, 400, 500, 700, 1000
BL090A		3, 4, 5, 7, 10	12, 15, 16, 20, 25, 30, 35, 40, 50, 70, 100	120, 150, 160, 200, 250, 300, 350, 400, 500, 700, 1000
BL120A		3, 4, 5, 7, 10	12, 15, 16, 20, 25, 30, 35, 40, 50, 70, 100	120, 150, 160, 200, 250, 300, 350, 400, 500, 700, 1000
BL150A		3, 4, 5, 7, 10	12, 15, 16, 20, 25, 30, 35, 40, 50, 70, 100	120, 150, 160, 200, 250, 300, 350, 400, 500, 700, 1000
BL180A		3, 4, 5, 7, 10	12, 15, 16, 20, 25, 30, 35, 40, 50, 70, 100	120, 150, 160, 200, 250, 300, 350, 400, 500, 700, 1000



BL 060A																			
速比	Ratio		3	4	5	7	10	12	15	16	20	25	30	35	40	50	70	100	
額定輸出扭矩 T_{2N}	Nominal Output Torque T_{2N}	Nm	45	50	60	50	40	45	45	50	50	60	40	50	40	40	40	40	40
急停扭矩 T_{2NOT}	Emergency Stop Torque T_{2NOT}	Nm	3倍額定輸出扭矩																
額定輸入轉速 n_{1N}	Nominal input Speed n_{1N}	rpm	3000																
最高輸入轉速 n_{1B}	Maximum input Speed n_{1B}	rpm	6000																
扭轉剛性	Torsional Rigidity	Nm/arcmin	7																
容許徑向負荷 F_{2rB}	Permitted radial load F_{2rB}	N	1530																
容許軸向負荷 F_{2aB}	Permitted axial load F_{2aB}	N	630																
使用壽命	Service Life	hr	20000 (連續運轉壽命減半)																
噪音值	Noise	dB	≤ 65 (輸入轉速=3000rpm、空載、距離1m)																
使用溫度	Operating Temp	$^{\circ}\text{C}$	$-10 \sim +90^{\circ}\text{C}$																
防護等級	Degree of Gearbox Protection		IP65																
潤滑	Lubrication		合成潤滑油脂 (終身潤滑)																
轉動慣量 J_1	Mass Moments of inertia J_1	$\text{kg}\cdot\text{cm}^2$	0.18	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.03	0.03
重量	Weight	Kg	1.32								1.65								
標準背隙	Standard Backlash	arcmin	≤ 5								≤ 8								
效率 η	Efficiency η	%	$\geq 97\%$								$\geq 94\%$								

BL 090A																			
速比	Ratio		3	4	5	7	10	12	15	16	20	25	30	35	40	50	70	100	
額定輸出扭矩 T_{2N}	Nominal Output Torque T_{2N}	Nm	130	140	160	140	100	130	130	140	140	160	100	140	100	100	100	100	100
急停扭矩 T_{2NOT}	Emergency Stop Torque T_{2NOT}	Nm	3倍額定輸出扭矩																
額定輸入轉速 n_{1N}	Nominal input Speed n_{1N}	rpm	3000																
最高輸入轉速 n_{1B}	Maximum input Speed n_{1B}	rpm	6000																
扭轉剛性	Torsional Rigidity	Nm/arcmin	14																
容許徑向負荷 F_{2rB}	Permitted radial load F_{2rB}	N	3250																
容許軸向負荷 F_{2aB}	Permitted axial load F_{2aB}	N	1300																
使用壽命	Service Life	hr	20000 (連續運轉壽命減半)																
噪音值	Noise	dB	≤ 65 (輸入轉速=3000rpm、空載、距離1m)																
使用溫度	Operating Temp	$^{\circ}\text{C}$	$-10 \sim +90^{\circ}\text{C}$																
防護等級	Degree of Gearbox Protection		IP65																
潤滑	Lubrication		合成潤滑油脂 (終身潤滑)																
轉動慣量 J_1	Mass Moments of inertia J_1	$\text{kg}\cdot\text{cm}^2$	0.61	0.48	0.47	0.45	0.44	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.44	0.13	0.13	
重量	Weight	Kg	4								5.2								
標準背隙	Standard Backlash	arcmin	≤ 5								≤ 8								
效率 η	Efficiency η	%	$\geq 97\%$								$\geq 94\%$								



BL 120A

速比	Ratio		3	4	5	7	10	12	15	16	20	25	30	35	40	50	70	100
額定輸出扭矩 T_{2N}	Nominal Output Torque T_{2N}	Nm	235	290	330	300	230	235	235	290	290	330	230	300	230	230	230	230
急停扭矩 T_{2NOT}	Emergency Stop Torque T_{2NOT}	Nm	3倍額定輸出扭矩															
額定輸入轉速 n_{1N}	Nominal input Speed n_{1N}	rpm	3000															
最高輸入轉速 n_{1B}	Maximum input Speed n_{1B}	rpm	6000															
扭轉剛性	Torsional Rigidity	Nm/arcmin	25															
容許徑向負荷 F_{2rB}	Permitted radial load F_{2rB}	N	6700															
容許軸向負荷 F_{2tB}	Permitted axial load F_{2tB}	N	3000															
使用壽命	Service Life	hr	20000 (連續運轉壽命減半)															
噪音值	Noise	dB	≤65 (輸入轉速=3000rpm、空載、距離1m)															
使用溫度	Operating Temp	°C	-10 ~ +90°C															
防護等級	Degree of Gearbox Protection		IP65															
潤滑	Lubrication		合成潤滑油脂 (終身潤滑)															
轉動慣量 J_1	Mass Moments of inertia J_1	kg·cm ²	3.25	2.74	2.71	2.65	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	0.44	0.44
重量	Weight	Kg	8.6								11.2							
標準背隙	Standard Backlash	arcmin	≤5								≤8							
效率 η	Efficiency η	%	≥97%								≥94%							

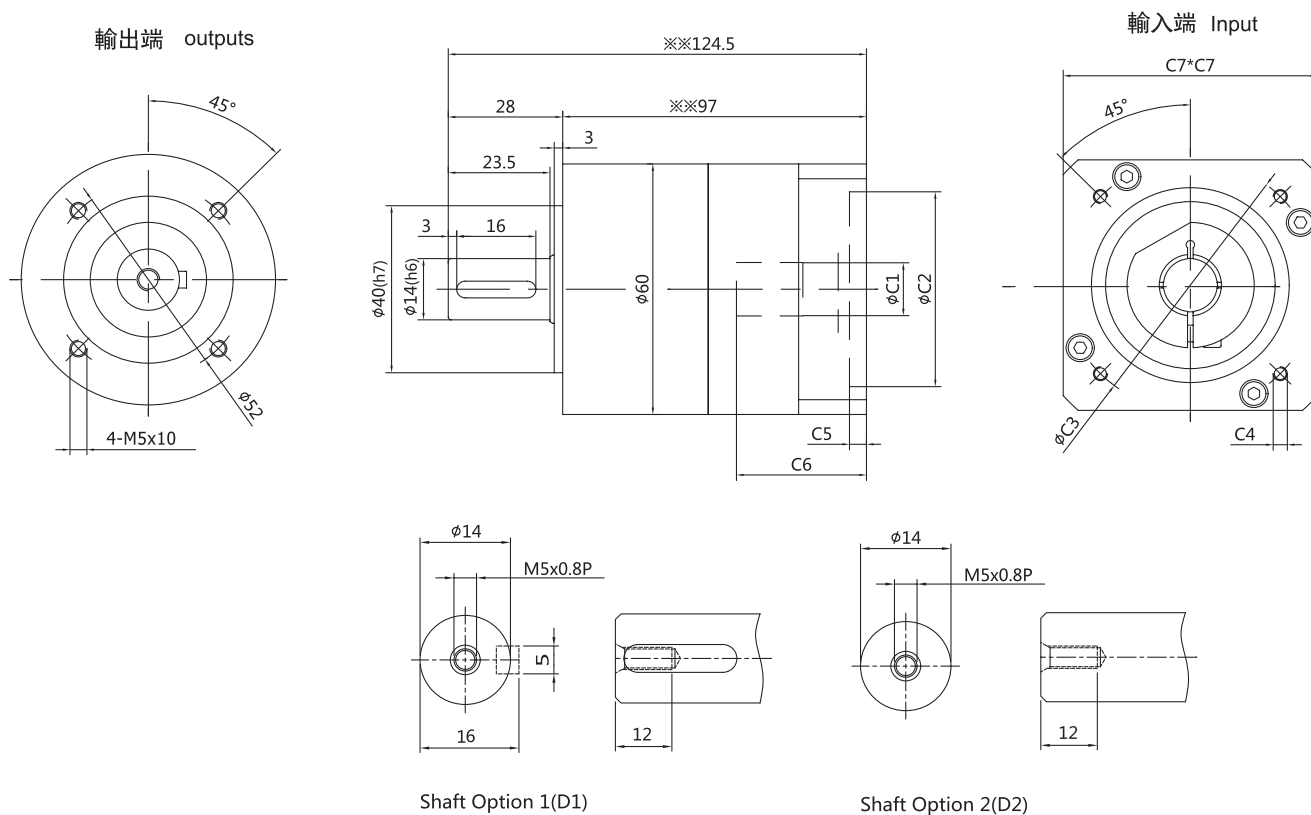
BL 150A

速比	Ratio		3	4	5	7	10	12	15	16	20	25	30	35	40	50	70	100
額定輸出扭矩 T_{2N}	Nominal Output Torque T_{2N}	Nm	420	542	650	550	450	420	420	542	542	650	420	550	450	450	450	450
急停扭矩 T_{2NOT}	Emergency Stop Torque T_{2NOT}	Nm	3倍額定輸出扭矩															
額定輸入轉速 n_{1N}	Nominal input Speed n_{1N}	rpm	3000															
最高輸入轉速 n_{1B}	Maximum input Speed n_{1B}	rpm	6000															
扭轉剛性	Torsional Rigidity	Nm/arcmin	50															
容許徑向負荷 F_{2rB}	Permitted radial load F_{2rB}	N	9400															
容許軸向負荷 F_{2tB}	Permitted axial load F_{2tB}	N	4700															
使用壽命	Service Life	hr	20000 (連續運轉壽命減半)															
噪音值	Noise	dB	≤65 (輸入轉速=3000rpm、空載、距離1m)															
使用溫度	Operating Temp	°C	-10 ~ +90°C															
防護等級	Degree of Gearbox Protection		IP65															
潤滑	Lubrication		合成潤滑油脂 (終身潤滑)															
轉動慣量 J_1	Mass Moments of inertia J_1	kg·cm ²	9.21	7.54	7.42	7.14	7.03	7.03	7.03	7.03	7.03	7.03	7.03	7.03	2.57	2.57	2.57	2.57
重量	Weight	Kg	15.2								19.6							
標準背隙	Standard Backlash	arcmin	≤5								≤8							
效率 η	Efficiency η	%	≥97%								≥94%							



BL 180A																		
速比	Ratio		3	4	5	7	10	12	15	16	20	25	30	35	40	50	70	100
額定輸出扭矩 T_{2N}	Nominal Output Torque T_{2N}	Nm	790	1050	1180	1000	900	790	790	1050	1050	1180	790	1000	900	900	900	900
急停扭矩 T_{2NOT}	Emergency Stop Torque T_{2NOT}	Nm	3倍額定輸出扭矩															
額定輸入轉速 n_{1N}	Nominal input Speed n_{1N}	rpm	2500															
最高輸入轉速 n_{1B}	Maximum input Speed n_{1B}	rpm	5000															
扭轉剛性	Torsional Rigidity	Nm/arcmin	145															
容許徑向負荷 F_{2rB}	Permitted radial load F_{2rB}	N	14500															
容許軸向負荷 F_{2tB}	Permitted axial load F_{2tB}	N	7000															
使用壽命	Service Life	hr	20000 (連續運轉壽命減半)															
噪音值	Noise	dB	≤65 (輸入轉速=1500rpm、空載、距離1m)															
使用溫度	Operating Temp	°C	-10 ~ +90 °C															
防護等級	Degree of Gearbox Protection		IP65															
潤滑	Lubrication		合成潤滑油脂 (終身潤滑)															
轉動慣量 J_1	Mass Moments of inertia J_1	kg·cm ²	28.98	23.67	23.29	22.48	22.51	22.51	22.51	22.51	22.51	22.51	22.51	22.51	7.03	7.03	7.03	7.03
重量	Weight	Kg	29.8								34.6							
標準背隙	Standard Backlash	arcmin	≤5								≤8							
效率 η	Efficiency η	%	≥97%								≥94%							

● BL060A-L1 (一段)



單位: mm

馬達記號 Motor Mark	S1	S2	S3	S4	S5	S6	S7	S8
輸入端尺寸 Input Size								
※C1 (H)	8	8	11	14	14	14	14	6.35
※C2 (H)	30	30	50	50	50	70	70	38.1
※C3	45	46	70	70	70	90	90	66.7
※C4	M3	M4	M4	M4	M5	M5	M6	M4
※C5	3.5	3.5	6	6	6	6	6	3.5
※C6	32	32	32	32	32	40	40	32
※C7	60	60	60	60	60	80	80	60

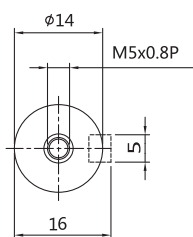
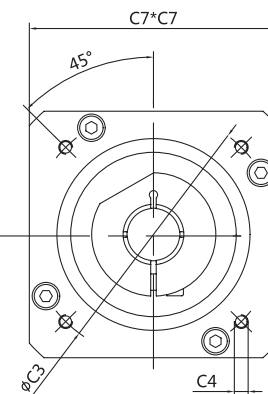
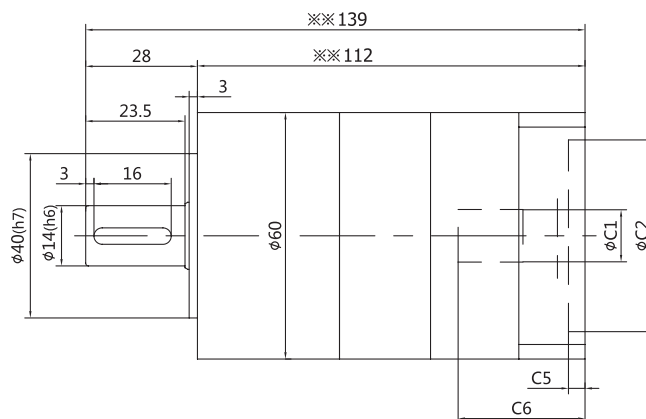
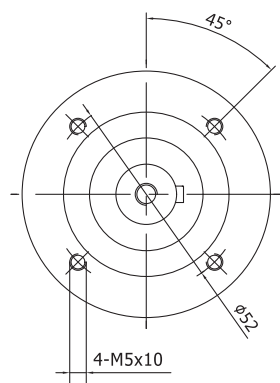
注:

1. 帶※尺寸可依據馬達實際尺寸定制, 如有需要請聯系我司。
2. 帶※※為最大尺寸, 隨安裝馬達的不同而尺寸會有所變化。

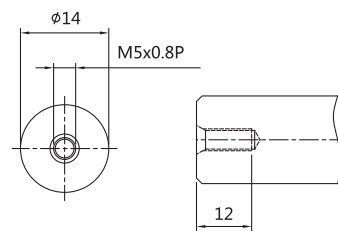
Note:

1. “※” The size can be customized according to the actual size of the motor. Please contact our company if necessary
2. “※※” For maximum size, the mounting motors vary in size.

輸出端 outputs



Shaft Option 1(D1)



Shaft Option 2(D2)

單位：mm

馬達記號 Motor Mark 輸入端尺寸 Input Size	S1	S2	S3	S4	S5	S6	S7	S8
※C1(H)	8	8	11	14	14	14	14	6.35
※C2(H)	30	30	50	50	50	70	70	38.1
※C3	45	46	70	70	70	90	90	66.7
※C4	M3	M4	M4	M4	M5	M5	M6	M4
※C5	3.5	3.5	6	6	6	6	6	3.5
※C6	32	32	32	32	32	40	40	32
※C7	60	60	60	60	60	80	80	60

注:

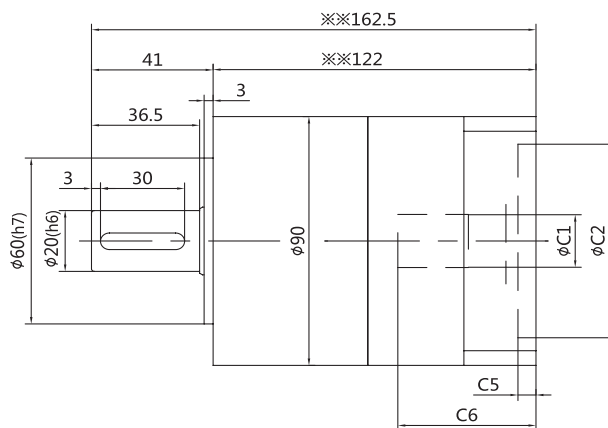
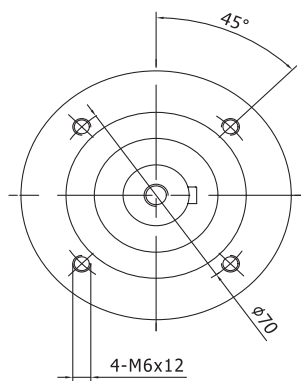
1. 帶※尺寸可依據馬達實際尺寸定制，如有需要請聯系我司。
2. 帶※※為最大尺寸，隨安裝馬達的不同而尺寸會有所變化。

Note:

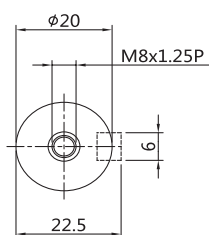
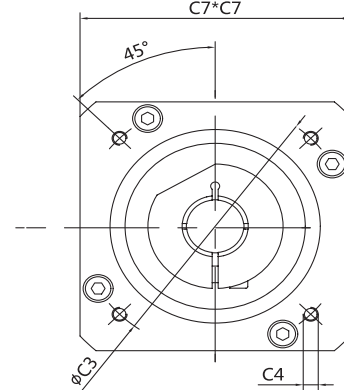
1. “※” The size can be customized according to the actual size of the motor. Please contact our company if necessary
2. “※※” For maximum size, the mounting motors vary in size.

● BL090A-L1 (一段)

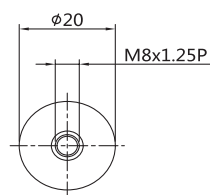
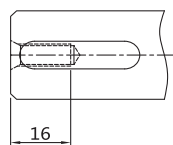
輸出端 outputs



輸入端 Input



Shaft Option 1(D1)



Shaft Option 2(D2)

單位: mm

馬達記號 Motor Mark	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
輸入端尺寸 Input Size										
※C1(H)	11	14	14	14	16	16	19	19	22	24
※C2(H)	50	50	50	70	70	80	70	110	110	110
※C3	70	70	70	90	90	100	90	145	145	145
※C4	M4	M4	M5	M6	M6	M6	M6	M8	M8	M8
※C5	3.5	3.5	3.5	6	6	6	6	10	10	10
※C6	32	32	32	45	45	45	45	60	60	60
※C7	60	60	60	90	90	90	90	130	130	130

注:

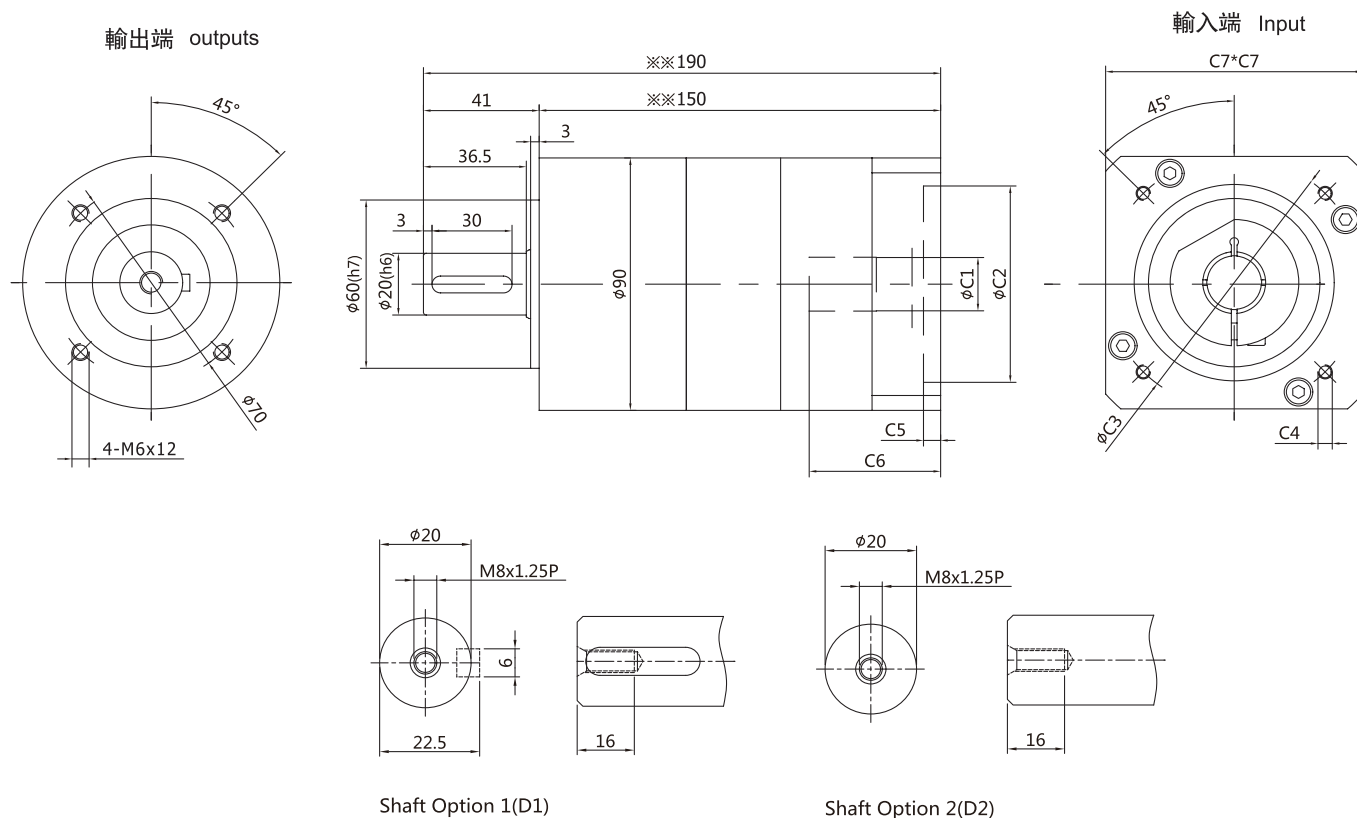
1. 帶※尺寸可依據馬達實際尺寸定制, 如有需要請聯系我司。
2. 帶※※為最大尺寸, 隨安裝馬達的不同而尺寸會有所變化。

Note:

1. "※" The size can be customized according to the actual size of the motor. Please contact our company if necessary
2. "※※" For maximum size, the mounting motors vary in size.



● BL090A-L2 (二段)



單位: mm

馬達記號 Motor Mark 輸入端尺寸 Input Size	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
※C1(H)	11	14	14	14	16	16	19	19	22	24
※C2(H)	50	50	50	70	70	80	70	110	110	110
※C3	70	70	70	90	90	100	90	145	145	145
※C4	M4	M4	M5	M6	M6	M6	M6	M8	M8	M8
※C5	3.5	3.5	3.5	6	6	6	6	10	10	10
※C6	32	32	32	45	45	45	45	60	60	60
※C7	60	60	60	90	90	90	90	130	130	130

注:

1. 帶※尺寸可依據馬達實際尺寸定制, 如有需要請聯系我司。
2. 帶※※為最大尺寸, 隨安裝馬達的不同而尺寸會有所變化。

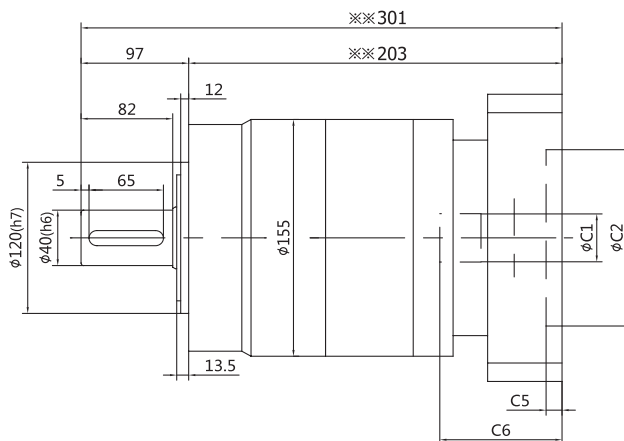
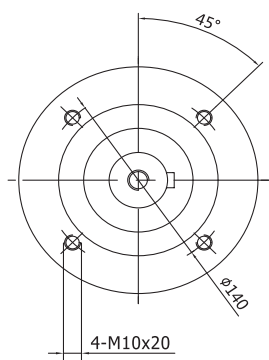
Note:

1. “※” The size can be customized according to the actual size of the motor. Please contact our company if necessary
2. “※※” For maximum size, the mounting motors vary in size.

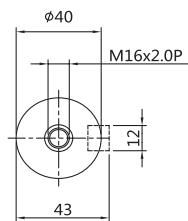
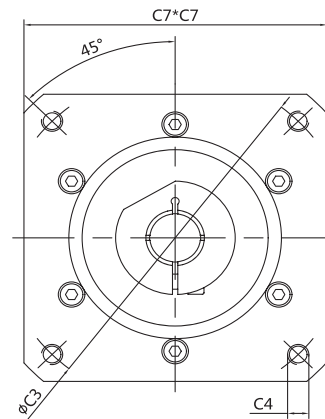


● BL150A-L2 (二段)

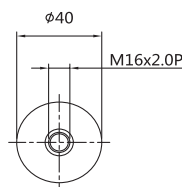
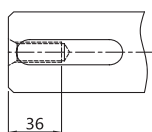
輸出端 outputs



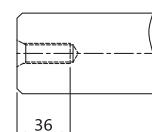
輸入端 Input



Shaft Option 1(D1)



Shaft Option 2(D2)



單位: mm

馬達記號 Motor Mark 輸入端尺寸 Input Size	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
※C1(H)	19	19	22	22	22	24	28	32	35	42
※C2(H)	95	110	95	110	110	110	110	130	114.3	114.3
※C3	115	145	115	130	145	145	145	165	200	200
※C4	M8	M8	M8	M8	M8	M8	M8	M10	M12	M12
※C5	8	8	8	8	8	8	8	8	8	8
※C6	74	74	74	74	74	74	74	82	82	82
※C7	130	130	130	130	130	130	130	180	180	180

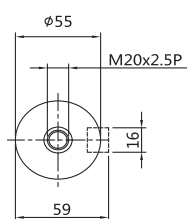
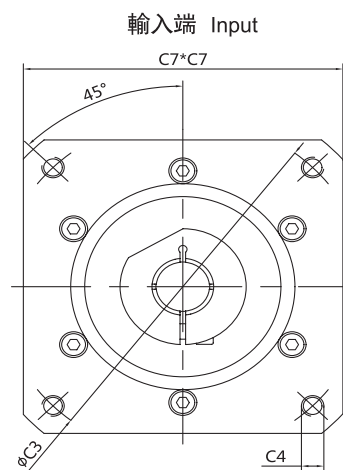
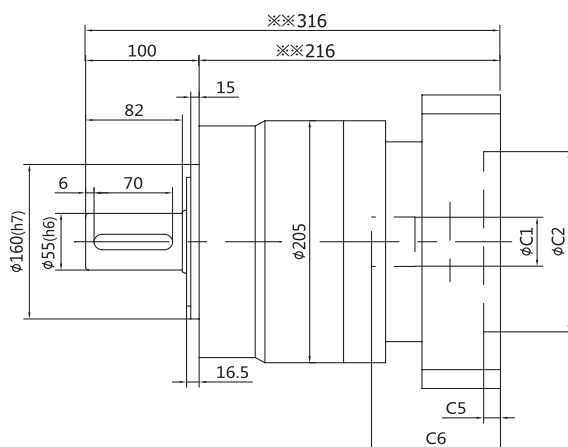
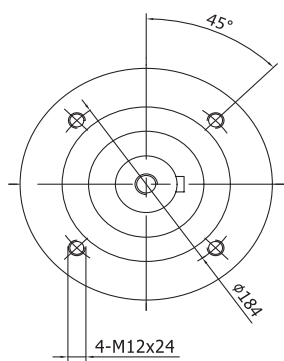
注:

1. 帶※尺寸可依據馬達實際尺寸定制, 如有需要請聯系我司。
2. 帶※※為最大尺寸, 隨安裝馬達的不同而尺寸會有所變化。

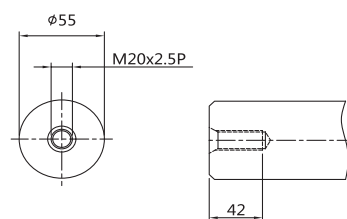
Note:

1. "※" The size can be customized according to the actual size of the motor. Please contact our company if necessary
2. "※※" For maximum size, the mounting motors vary in size.

輸出端 outputs



Shaft Option 1(D1)



Shaft Option 2(D2)

單位：mm

<div>馬達記號 Motor Mark</div> <div>輸入端尺寸 Input Size</div>	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
※C1(H)	22	22	24	28	32	35	42	38	42	55
※C2(H)	110	110	110	110	130	114.3	114.3	180	200	200
※C3	130	145	145	145	165	200	200	215	235	235
※C4	M8	M8	M8	M8	M10	M12	M12	M12	M12	M12
※C5	8	8	8	8	8	8	8	8	8	8
※C6	74	74	74	74	82	82	82	117	117	117
※C7	130	130	130	130	180	180	180	225	225	225

注:

1. 帶※尺寸可依據馬達實際尺寸定制，如有需要請聯系我司。
2. 帶※※為最大尺寸，隨安裝馬達的不同而尺寸會有所變化。

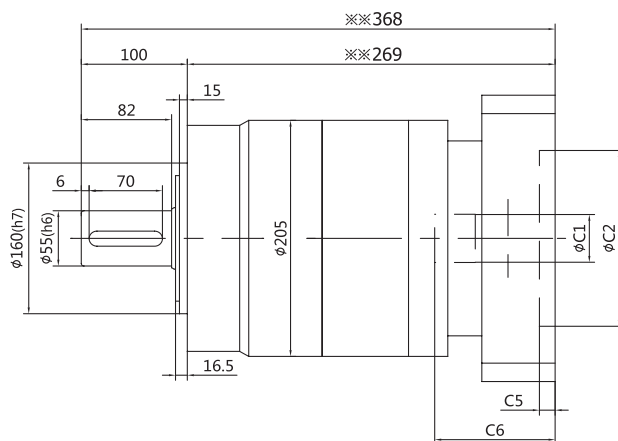
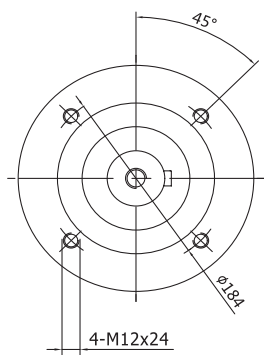
Note:

1. “※” The size can be customized according to the actual size of the motor. Please contact our company if necessary
2. “※※” For maximum size, the mounting motors vary in size.

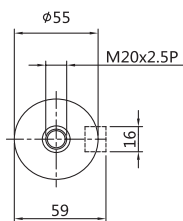
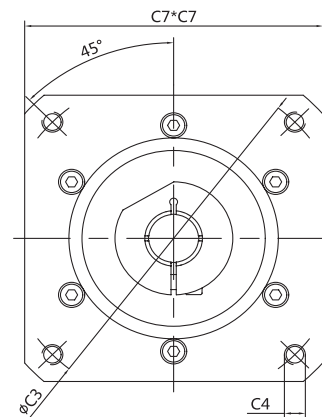


● BL180A-L2 (二段)

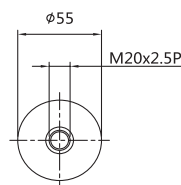
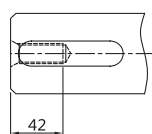
輸出端 outputs



輸入端 Input



Shaft Option 1(D1)



Shaft Option 2(D2)

單位: mm

馬達記號 Motor Mark 輸入端尺寸 Input Size	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
※C1 (H)	22	22	24	28	32	35	42	38	42	55
※C2 (H)	110	110	110	110	130	114.3	114.3	180	200	200
※C3	130	145	145	145	165	200	200	215	235	235
※C4	M8	M8	M8	M8	M10	M12	M12	M12	M12	M12
※C5	8	8	8	8	8	8	8	8	8	8
※C6	74	74	74	74	82	82	82	117	117	117
※C7	130	130	130	130	180	180	180	225	225	225

注:

1. 帶※尺寸可依據馬達實際尺寸定制, 如有需要請聯系我司。
2. 帶※※為最大尺寸, 隨安裝馬達的不同而尺寸會有所變化。

Note:

1. “※” The size can be customized according to the actual size of the motor. Please contact our company if necessary
2. “※※” For maximum size, the mounting motors vary in size.