

PRODUCT NUMBER CODE - PRECISION PLANETARY GEARBOX PL SERIES

This diagram shows an exploded view of a planetary gearbox assembly. The components are numbered 1 through 11. The assembly includes a central input shaft (1) with a pin (2) and a planetary gear set (3, 4, 5, 6) mounted on a housing (7). The housing is supported by a base (8) and a top cover (11). A pin (9) is used to secure the housing to the base. A pin (10) is used to secure the planetary gear set to the housing.

- ①输出轴 Output shaft
- ②输出轴轴承 Bearing for the output shaft
- ③内齿轮 Internal gear
- ④行星轮 Planetary gear
- ⑤太阳轮 Sunwheel
- ⑥满针滚针轴承 Full complement needle bearing
- ⑦太阳轮轴承 Bearing for the sunwheel
- ⑧适配电机法兰 Appropriate motor flange
- ⑨精密装夹系统 Precision clamping system
- ⑩夹紧环 Clamping ring
- ⑪装配孔 mounting hole

80 PLE 40
 ① ② ③

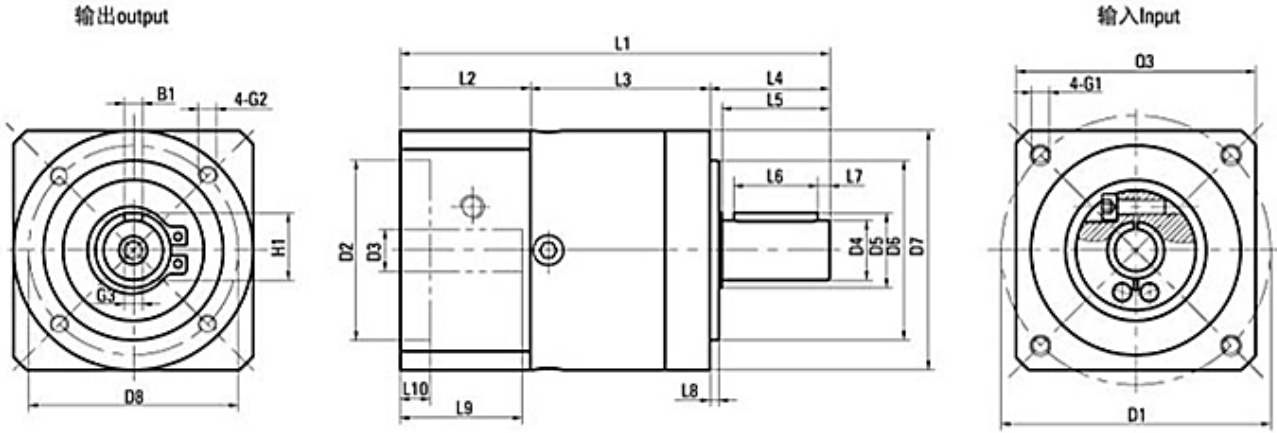
①	齿轮箱外径尺寸 Gearbox outline dimension 精密型系列transmission series 40:外径External diameter $\phi 40\text{mm}$ 60:外径External diameter $\phi 60\text{mm}$ 80:外径External diameter $\phi 80\text{mm}$ 120:外径External diameter $\phi 120\text{mm}$ 160:外径External diameter $\phi 160\text{mm}$
②	行星齿轮箱Planetary gearbox PLE:精密行星---圆形法兰输出 Precision planetary-round flange output PLF:精密行星---方形法兰输出 Precision planetary-square flange output WPLE:精密行星---直角圆形法兰输出 Precise planetary-right angle round flange output WPLF:精密行星---直角方形法兰输出 Precise planetary-right angle square flange output PLS:精密行星---高刚性, 低回差 Precise planetary-high rigidity, low back lash
③	减速比 Reduction ratio 40:减速比 Reduction ratio 1:40

Specifications:

Type		PL40	PL60	PL80	PL120	PL160	Reduction ratio	No. of stage
Rated Output torque	Nm	4.5	12	40	80	400	3	1
		6	16	50	100	450	4	
		6	16	50	110	450	5	
		5	15	45	120	450	8	
		16.5	44	110	210	-----	9	2
		18	44	120	260	800	12	
		18	40	110	230	700	15	
		20	44	120	260	800	16	
		20	44	120	260	800	20	
		18	40	110	230	700	25	
		20	44	120	260	800	32	
		18	40	110	230	700	40	
		7.5	18	50	120	450	64	3
		20	44	120	260	800	60	
		20	44	120	260	800	80	
		20	44	120	260	800	100	
		18	40	110	230	700	120	
		20	44	120	260	800	160	
		18	40	110	230	700	200	
		20	44	120	260	800	256	
18	40	110	230	700	320			
7.5	18	50	120	450	512			
Max. radial torque		160	340	650				
Life	Hour	30,000						
Instant stop torque	Nm	Two times of output torque						

PLE精密行星减速机
PLE SERIES PRECISION PLANETARY GEAR MOTOR

机械参数 DIMENSIONS



单位Unit: mm

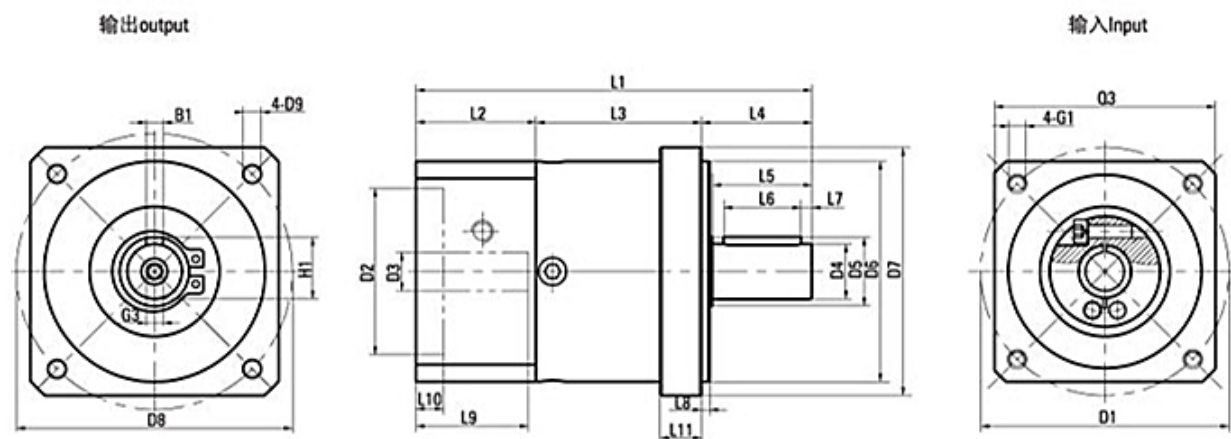
产品型号Product type	PLE40			PLE60			PLE80			PLE120			PLE160	
级数 Number of stage	1	2	3	1	2	3	1	2	3	1	2	3	1	2
L1箱体总长 L1 overall length	93.5	106.5	119	113	126	138.5	143.5	161.5	179	191.7	221.5	249	285.5	335
L3箱体长度 L3 body length	39	52	64	46.5	59.5	72	60	78	95.5	73.7	101.5	129	104	153.5
输出端 Output														
L4出轴长度 L4 output shaft length	26			35			40			55			87	
L5出轴长至轴肩 L5 output length to the shaft shoulder	24			30.5			36			50			82	
L6键长度 L6 key length	16			25			28			40			70	
L7键至轴末端长 L7 key length to the shaft end	2.5			2.5			4			5			5	
L8定位凸台长度 L8 spigot length	2			3			3			4			5	
D4出轴直径 D4 output shaft diameter	ø10 h7			ø14h7			ø20h7			ø25h7			ø40 h7	
D5轴肩直径 D5 shaft shoulder diameter	ø12			ø17			ø25			ø35			ø55	
D6定位凸台直径 D6 spigot diameter	ø26			ø40			ø60			ø80			ø130	
D7箱体直径 D7 body diameter	ø40			ø60			ø80			ø115			ø160	
D8安装孔分布圆 D8 hole circle	ø34			ø52			ø70			ø100			ø145	
B1键宽 B1 key width	3			5			6			8			12	
H1键高 H1 key height	11.2			16			22.5			28			43	
G2安装螺纹孔 G2 mounting screw hole	M4x6			M5x8			M6x10			M10x16			M12x20	
G3中心螺纹孔 G3 center screw hole	M3x9			M5x12			M6x16			M10x22			M12x25	
输入端 Input														
L2输入法兰长度 L2 input flange length	24.3			31.5			43.5			63			25	
L9电机轴长度 L9 motor shaft length	25			30			40			55			79	
L10定位凸台深度 L10 spigot depth	6			10			10			12			12	
D1安装孔分布圆 D1 mounting hole distribution circle	ø46			ø70			ø90			ø145			ø200	
D2定位凸台直径 D2 spigot diameter	ø30 H7			ø50H7			ø70H7			ø110H7			ø114.3	
D3输入轴轴径 D3 input shaft diameter	ø8			ø14			ø19			ø24			ø35	
G1安装螺纹孔 G1 mounting screw hole	M4x10			M5x15			M6x15			M8x22			M12x25	
O3输入法兰 O3 input flange	□40			□60			□80			□130			□175	

※输入端尺寸可根据电机尺寸制作。
※Input size made according to motor size.

PLF精密行星减速机

PLF SERIES PRECISION PLANETARY GEAR MOTOR

机械参数 DIMENSIONS



■单位Unit: mm

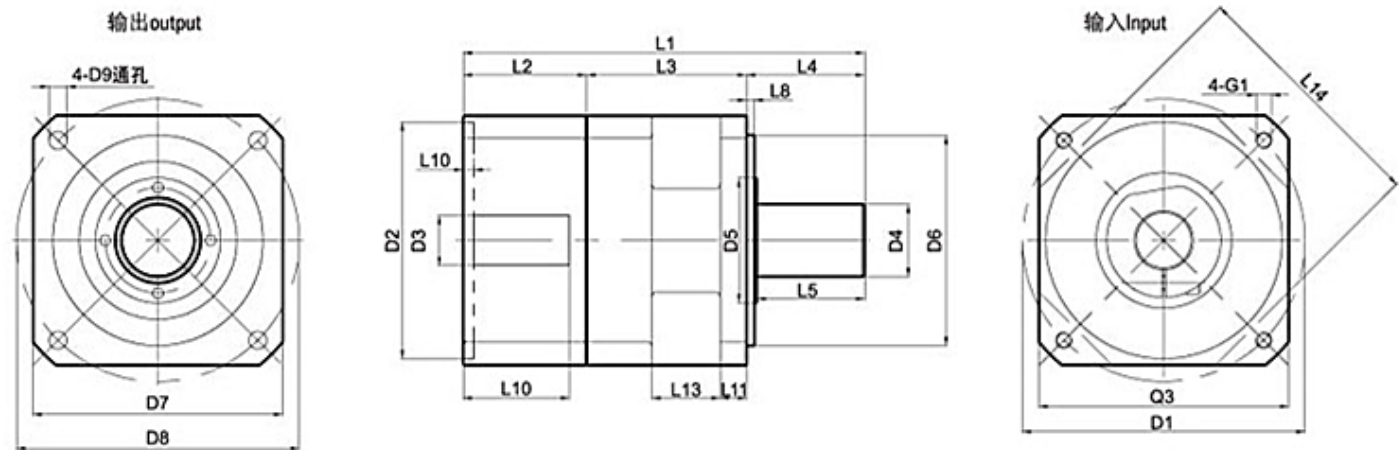
产品型号Product type	PLF40			PLF60			PLF80			PLF120			PLF160	
级数 Number of stage	1	2	3	1	2	3	1	2	3	1	2	3	1	2
L1箱体总长 L1 overall length	138.5	138.5	138.5	113	126	138.5	143.5	161.5	179	191.7	221.5	249	138.5	138.5
L3箱体长度 L3 body length				46.5	59.5	72	60	78	95.5	73.7	101.5	129		
输出端 Output														
L4出轴长度 L4 output shaft length	26			35			40			55			87	
L5出轴长至轴肩 L5 output length to the shaft shoulder	24			30.5			36			50			82	
L6键长度 L6 key length	16			25			28			40			70	
L7键至轴末端长 L7 key length to the shaft end	2.5			2.5			4			5			5	
L8定位凸台长度 L8 spigot length	2			3			3			4			5	
L11输出法兰厚度 L11 output flange thickness	6			8			10			15			15	
D4出轴直径 D4 output shaft diameter	φ10 h7			φ14h7			φ20h7			φ25h7			φ40 h7	
D5轴肩直径 D5 shaft shoulder diameter	φ12			φ17			φ25			φ35			φ55	
D6定位凸台直径 D6 spigot diameter	φ26			φ50			φ80			φ110			φ130	
D7输出法兰 D7 output flange	□45			□60			□90			□120			□175	
D8安装孔分布圆 D8 mounting hole distribution circle	φ50			φ70			φ100			φ130			φ185	
D9法兰安装孔 D9 mounting hole	φ3.5			φ5.5			φ6.5			φ8.5			φ11	
B1键宽 B1 key width	3			5			6			8			12	
H1键高 H1 key height	11.2			16			22.5			28			43	
G3中心螺纹孔 G3 center screw hole	M3x9			M5x12			M6x16			M10x22			M12x25	
输入端 Input														
L2输入法兰长度 L2 input flange length	24.3			31.5			43.5			63			25	
L9电机轴长度 L9 motor shaft length	25			30			40			55			79	
L10定位凸台深度 L10 spigot depth	6			10			10			12			12	
D1安装孔分布圆 D1 hole circle	46			φ70			φ90			φ145			φ200	
D2定位凸台直径 D2 spigot diameter	φ30 H7			φ50H7			φ70H7			φ110H7			φ114.3	
D3输入轴轴径 D3 input shaft diameter	φ8			φ14			φ19			φ24			φ35	
G1安装螺纹孔 G1 mounting screw hole	M4x10			M5x15			M6x15			M8x22			M12x25	
Q3输入法兰 Q3 input flange	□40			□60			□80			□130			□175	

※输入端尺寸可根据电机尺寸制作。

※Input size made according to motor size.

PLS精密行星减速机
PLS SERIES PRECISION PLANETARY GEAR MOTOR

机械参数 DIMENSIONS



单位Unit: mm

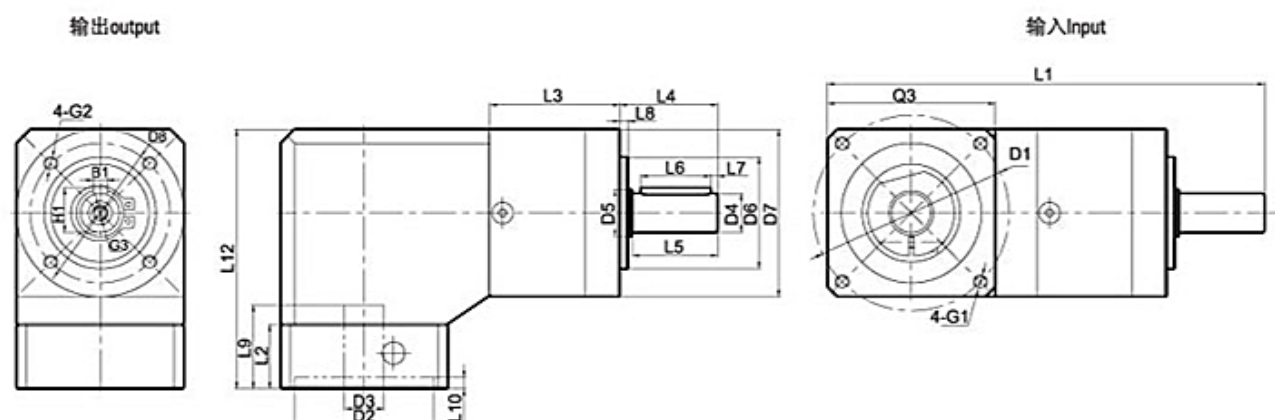
产品型号Product type	PLS70		PLS90		PLS115		PLS142		PLS190	
级数 Number of stage	1	2	1	2	1	2	1	2	1	2
L1箱体总长 L1 overall length	124	147.5	155.5	184	193	226.5	269	318.5	305.5	353
L3箱体长度 L3 body length	62.5	86	69	97.5	77.5	111	102	151.5	121.5	169
输出端 Output										
L4出轴长度 L4 output shaft length	32		41.5		64.5		87		90	
L5出轴长至轴肩 L5 output length to the shaft shoulder	28		36		58		80		82	
L8定位凸台长度 L8 spigot length	3		3		4		5		6	
D4出轴直径 D4 output shaft diameter	φ19 h7		φ22 h7		φ32 h7		φ40 h7		φ55 h7	
D5轴肩直径 D5 shaft shoulder diameter	φ35		φ40		φ45		φ65		φ95	
D6定位凸台直径 D6 spigot diameter	φ60 h7		φ80 h7		φ110 h7		φ130 h7		φ160 h7	
D7输出法兰 D7 output flange	□70		□90		□115		□142		□190	
D8安装孔分布圆 D8 mounting hole distribution circle	φ75		φ100		φ130		Φ 165		φ215	
D9法兰安装孔 D9 mounting hole	φ5.5		φ6.5		φ8.5		Φ 11		φ13.5	
L13工艺槽宽度 L13 groove width	23		30		34		52		52	
L14工艺槽 L14 groove	□64		□87		□115		□140		□190	
输入端 Input										
L2输入法兰长度 L2 input flange length	29.5		45		51		80		94	
L9电机轴长度 L9 motor shaft length	23		35		45		67		81	
L10定位凸台深 L10 motor spigot depth	3		3.5		3.5		6		6	
D1安装孔分布圆 D1 hole circle	φ75		φ100		φ115		φ165		φ215	
D2定位凸台直径 D2 spigot diameter	φ50 H7		φ80 H7		φ95 H7		φ130 H7		φ180 H7	
D3输入轴轴径 D3 input shaft diameter	φ11 H7		φ16 H7		φ19 H7		φ35 H7		φ38 H7	
G1安装螺纹孔x深度 G1 mounting screw hole x depth	M5x12		M6x15		M8x22		M10x25		M12x25	
Q3输入法兰 Q3 input flange	□70		□90		□115		□142		□190	

※输入端尺寸可根据电机尺寸制作。
※Input size made according to motor size.

WPLE精密行星减速机

WPLE SERIES PRECISION PLANETARY GEAR MOTOR

机械参数 DIMENSIONS



■单位Unit: mm

产品型号Product type	WPLE40			WPLE60			WPLE80			WPLE120		
级数 Number of stage	1	2	3	1	2	3	1	2	3	1	2	3
L1箱体总长 L1 overall length	119.5	132.5	144.5	156.5	169.5	182	194	212	229.5	258.7	286.5	314
L3箱体长度 L3 body length	38.5	51.5	63.5	46.5	59.5	72	60	78	95.5	73.7	101.5	129
L12总高 L12 overall height	68			93			109.5			145.5		
输出端 Output												
L4出轴长度 L4 output shaft length	26			35			40			55		
L5出轴长至轴肩 L5 output length to the shaft shoulder	24			30.5			36			50		
L6键长度 L6 key length	16			25			28			40		
L7键至轴末端长 L7 key length to the shaft end	2.5			2.5			4			5		
L8定位凸台长度 L8 spigot length	2			3			3			4		
D4出轴直径 D4 output shaft diameter	ø10 h7			ø14h7			ø20h7			ø25h7		
D5轴肩直径 D5 shaft shoulder diameter	ø12			ø17			ø25			ø35		
D6定位凸台直径 D6 spigot diameter	ø26			ø40			ø60			ø80		
D7齿轮箱端面 gear box section	ø40			ø60			ø80			ø115		
D8安装孔分布圆 D8 mounting hole distribution circle	ø34			ø52			ø70			ø100		
B1键宽 B1 key width	3			5			6			8		
H1键高 H1 key height	11.2			16			22.5			28		
G2安装螺纹孔x深度 G2 mounting screw hole x depth	M4x6			M5x8			M6x10			M10x16		
G3中心螺纹孔 G3 center screw hole	M3x9			M5x12			M6x16			M10x22		
输入端 Input												
L2输入法兰长度 L2 input flange length	19			23			26.5			27		
L9电机轴长度 L9 motor shaft length	25			30			35			45		
L10定位凸台深度 L10 spigot depth	3			2.5			3.5			3.5		
D1安装孔分布圆 D1 hole circle	ø46			ø70			ø100			ø115		
D2定位凸台直径 D2 spigot diameter	ø30 H7			ø50H7			ø80 H7			ø95 H7		
D3输入轴直径 D3 input shaft diameter	ø8 H7			ø14 H7			ø16 H7			ø19 H7		
G1安装螺纹孔 G1 mounting screw hole	M4x10			M5x12			M6x15			M8x20		
Q3输入法兰 Q3 input flange	□40			□60			□90			□115		

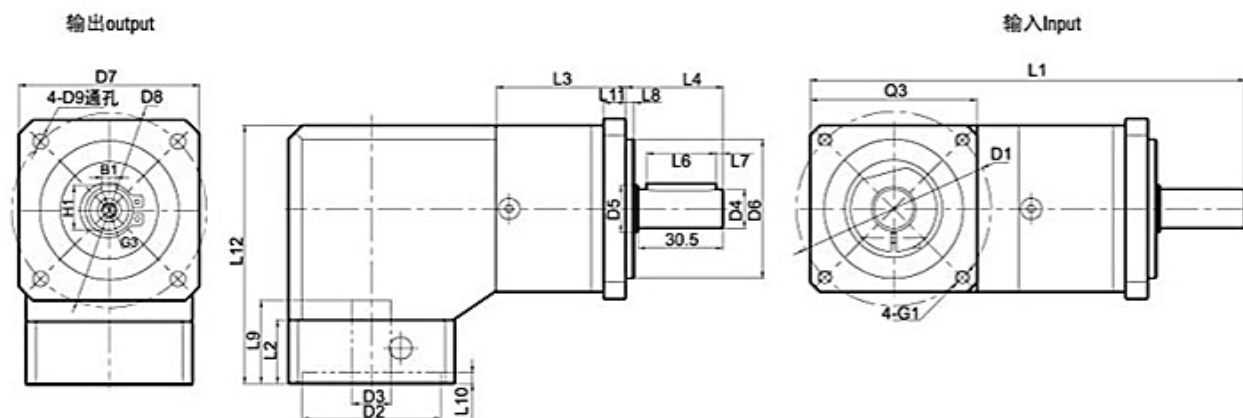
※输入端尺寸可根据电机尺寸制作。

※Input size made according to motor size.

WPLF精密行星减速机

WPLF SERIES PRECISION PLANETARY GEAR MOTOR

机械参数 DIMENSIONS



■单位Unit: mm

产品型号Product type	WPLF40			WPLF60			WPLF80			WPLF120		
级数 Number of stage	1	2	3	1	2	3	1	2	3	1	2	3
L1箱体总长 L1 overall length	119.5	132.5	144.5	156.5	169.5	182	194	212	229.5	258.7	286.5	314
L3箱体长度 L3 body length	38.5	51.5	63.5	46.5	59.5	72	60	78	95.5	73.7	101.5	129
L12总高 L12 overall height	68			93			109.5			145.5		
输出端 Output												
L4出轴长度 L4 output shaft length	26			35			40			55		
L5出轴长至轴肩 L5 output length to the shaft shoulder	24			30.5			36			50		
L6键长度 L6 key length	16			25			28			40		
L7键至轴末端长 L7 key length to the shaft end	2.5			2.5			4			5		
L8定位凸台长度 L8 spigot length	2			3			3			4		
L11法兰厚度 L11 flange thickness	6			8			10			15		
D4出轴直径 D4 output shaft diameter	ø10 h7			ø14h7			ø20h7			ø25h7		
D5轴肩直径 D5 shaft shoulder diameter	ø12			ø17			ø25			ø35		
D6定位凸台直径 D6 spigot diameter	ø26			ø50			ø80			ø110		
D7齿轮箱端面 gear box section	□45			□60			□90			ø120		
D8安装孔分布圆 D8 mounting hole distribution circle	ø50			ø70			ø100			ø130		
D9法兰安装孔 D9 flange mounting hole	ø3.5			ø5.5			ø6.5			ø8.5		
B1键宽 B1 key width	3			5			6			8		
H1键高 H1 key height	11.2			16			22.5			28		
G3中心螺纹孔 G3 center screw hole	M3x9			M5x12			M6x16			M10x22		
输入端 Input												
L2输入法兰长度 L2 input flange length	19			23			26.5			27		
L9电机轴长度 L9 motor shaft length	25			30			35			45		
L10定位凸台深度 L10 spigot depth	3			2.5			3.5			3.5		
D1安装孔分布圆 D1 hole circle	ø46			ø70			ø100			ø115		
D2定位凸台直径 D2 spigot diameter	ø30 H7			ø50 H7			ø80 H7			ø95 H7		
D3输入轴直径 D3 input shaft diameter	ø8 H7			ø14 H7			ø16 H7			ø19 H7		
G1安装螺纹孔x深度 G1 mounting screw hole x depth	M4x10			M5x12			M6x15			M8x20		
Q3输入法兰 Q3 input flange	□40			□60			□90			□115		

※输入端尺寸可根据电机尺寸制作。

※Input size made according to motor size.