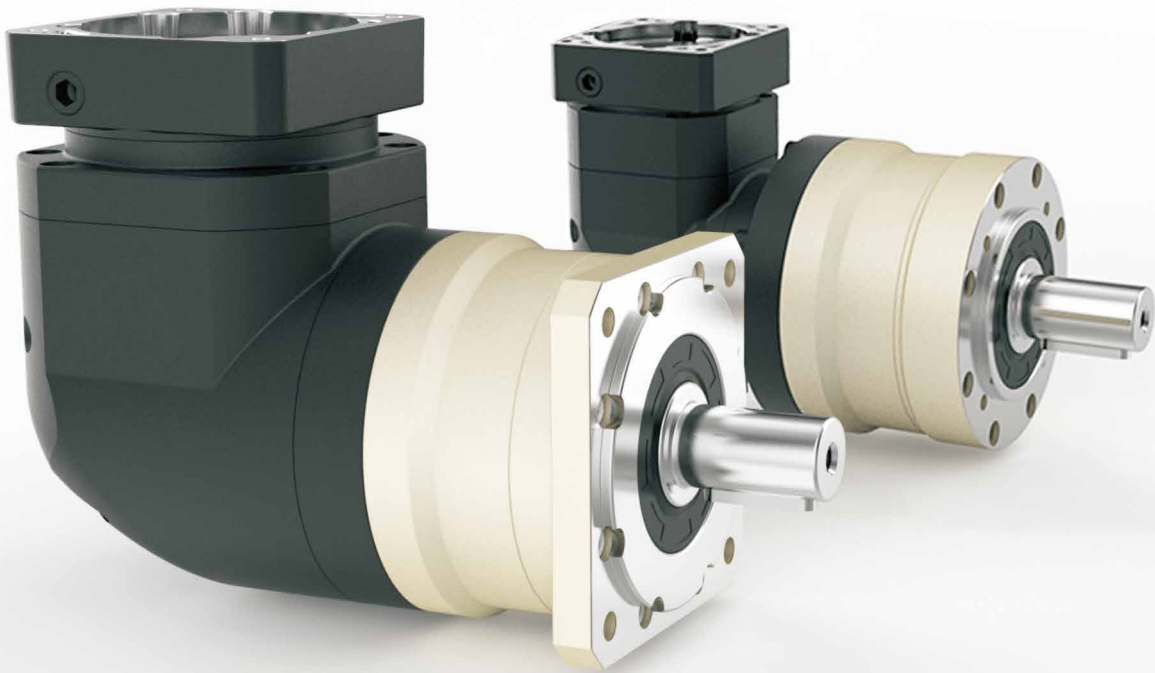


FGR/FGAR

SERIES



型号说明 / MODEL ILLUMINATE

FGR 080 — 10 / 马达

减速机型式：
FGR060/FGAR060/FGR080/FGAR080
FGR120/FGAR120/FGR160/FGAR160

减速比：单级(L1)：3,4,5,6,7,8,10,14,20
双级(L2)：12,15,20,25,30,35,
40,50,60,70,80,100,
120,140,160,200

马达型号：
马达制造及型号

选用范例：FGR080-10/MHMD-082G1U

减速机性能资料 / GEAR BOX PERFORMANCE INFORMATION

规 格		级 数	减速比 ¹	FGR060 FGAR060	FGR080 FGAR080	FGR120 FGAR120	FGR160 FGAR160
额定输出力矩T _{2N}	Nm	1	3	55	130	208	342
			4	50	140	290	542
			5	60	160	330	650
			6	55	150	310	600
			7	50	140	300	550
			8	50	140	290	542
			10	60	160	330	650
			14	50	140	300	550
			20	40	100	230	450
		2	12	55	130	208	342
			15	55	130	208	342
			20	50	140	290	542
			25	60	160	330	650
			30	55	130	208	342
			35	60	160	330	650
			40	50	140	290	542
			50	60	160	330	650
			60	55	150	310	600
			70	60	160	330	650
			80	50	140	290	542
			100	60	160	330	650
			120	—	150	310	600
			140	—	140	300	550
			160	—	120	260	500
			200	—	100	230	450
最大输出力矩T _{2B}	Nm	1,2	3~200	3倍额定输出力矩			
额定输入转速n ₁	rpm	1,2	3~200	5,000	4,000	4,000	3,000
最大输入转速n _{1B}	rpm	1,2	3~200	10,000	8,000	8,000	6,000
背隙	arcmin	1	3~20	≤13	≤13	≤13	≤13
		2	12~200	≤15	≤15	≤15	≤15
扭转刚性	Nm/arcmin	1,2	3~200	7	14	25	50
容许径向力F _{2rB} ²	N	1,2	3~200	1,530	3,250	6,700	9,400
容许轴向力F _{2a1B} ²	N	1,2	3~200	630	1,300	3,000	4,000
容许轴向力F _{2a2B} ²	N	1,2	3~200	765	1,625	3,350	4,700
使用寿命	hr	1,2	3~200	20,000*			
效率 η	%	1	3~20	≤95%			
		2	12~200	≤92%			
重量	kg	1	3~20	2.1	6.4	13	24.5
		2	12~200	2.5	7.8	14.2	27.5
使用温度	℃	1,2	3~200	-10℃~+90℃			
润滑		1,2	3~200	合成润滑油脂			
防护等级		1,2	3~200	IP65			
安装方向		1,2	3~200	任意方向			
噪音值 (n ₁ =3000rpm)	dB	1,2	3~200	≤63	≤65	≤68	≤70

减速机转动惯量

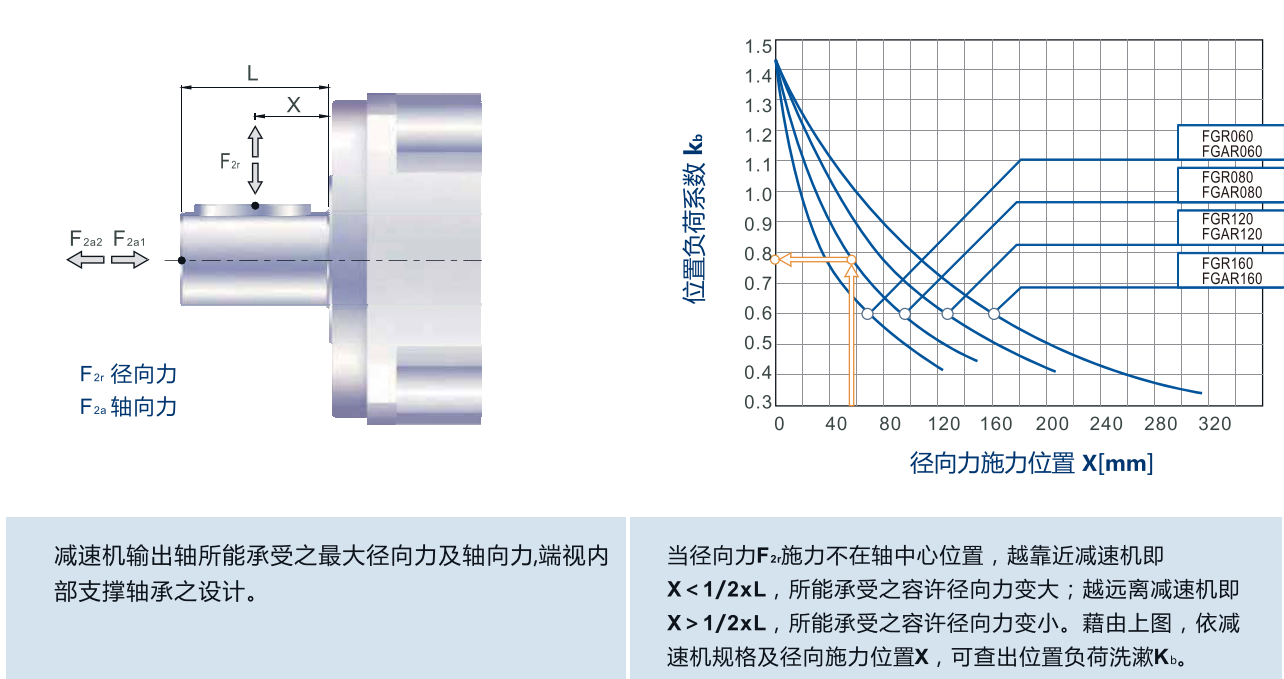
规 格		级 数	减速比 ¹	FGR060 FGAR060	FGR080 FGAR080	FGR120 FGAR120	FGR160 FGAR160
转动惯量J ₁	kg · cm ²	1	3~7	0.35	2.25	6.84	23.4
			8~10	0.07	1.87	6.25	21.8
			14~20	0.07	1.87	6.25	21.8
		2	12~40	0.09	0.35	2.25	6.84
			50	0.09	0.31	1.87	6.25
			60	0.09	0.35	2.25	6.84
			70~100	0.09	0.31	1.87	6.25
			120~200	—	0.31	1.87	6.25

1.减速比 (i=N_{in}/N_{out})
* 连续运转降低使用寿命二分之一。

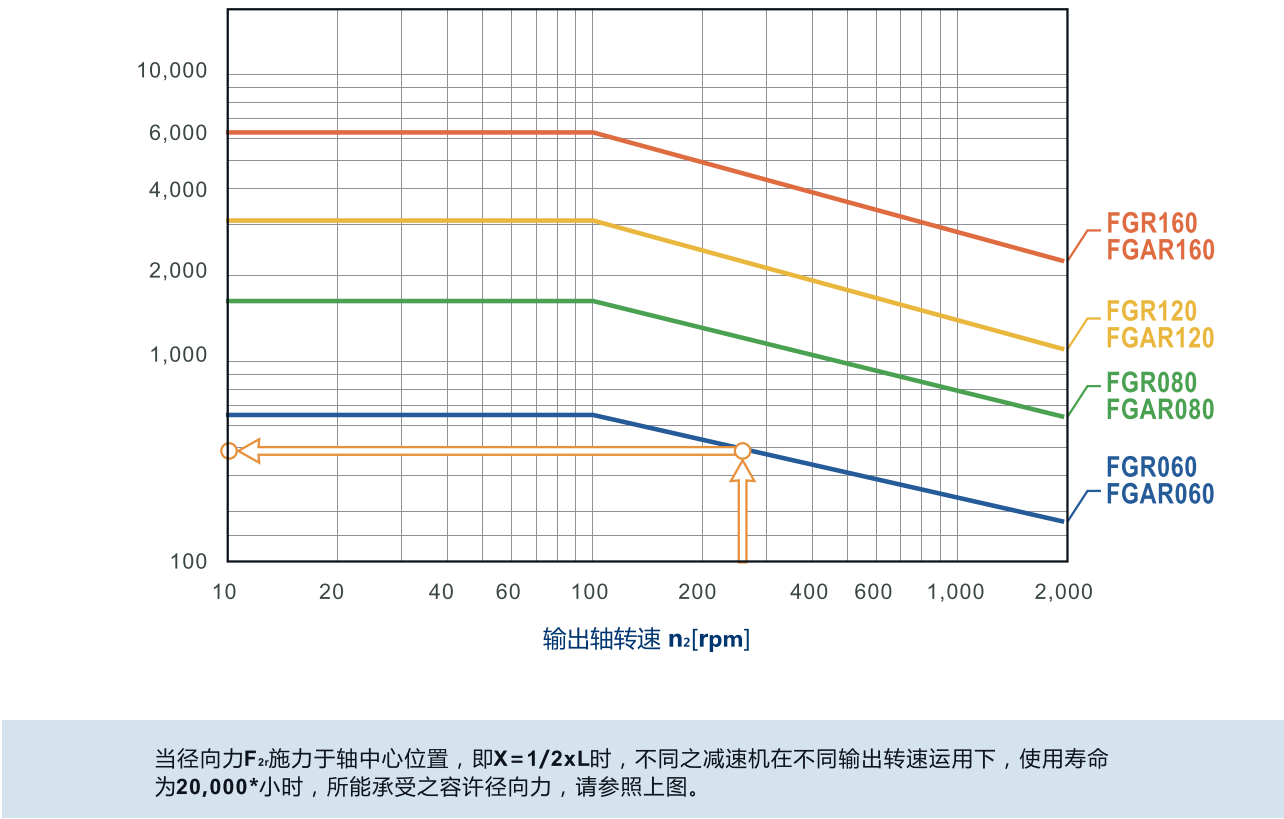
2.输出转数 100rpm 时，作用于输出轴中心位置。

减速机输出轴之容许径向力及轴向力

REDUCER OUTPUT SHAFT OF THE PERMISSIBLE RADIAL FORCE AND SHAFT AND FORCE



容许径向力 F_{2rB}[N] 施力于轴中心位置



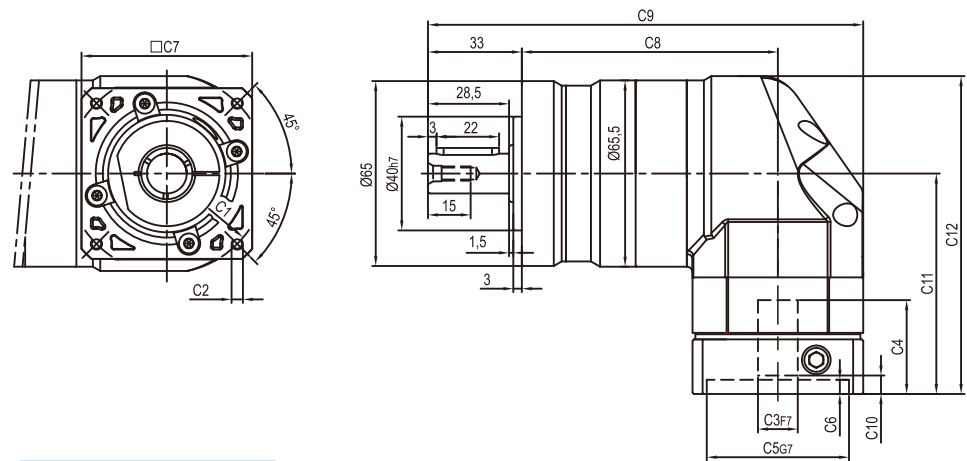
当径向力F_{2r}施力于轴中心位置，即**X = 1/2xL**时，不同之减速机在不同输出转速运用下，使用寿命为**20,000***小时，所能承受之容许径向力，请参照上图。

*连续运转(S1)下之使用寿命降低50%。

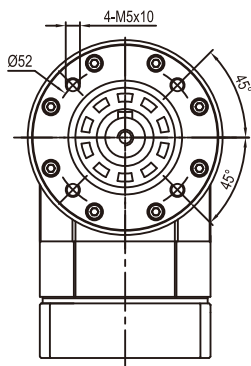
外形尺寸图表 / OUTLINE DIMENSION SHEET

FGR-060D(M1)-L1

输入端/INPUT

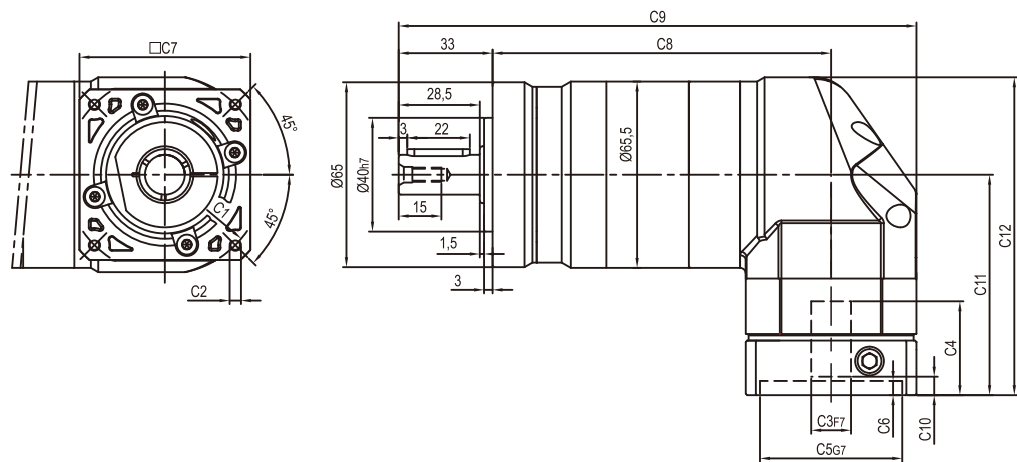


输出端/ OUTPUT

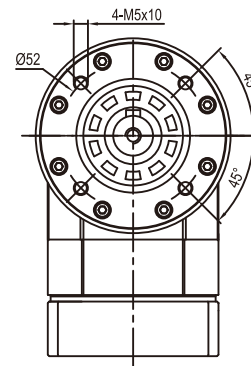


FGR-060D(M1)-L2

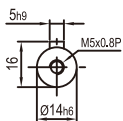
输入端/ INPUT



输出端 /OUTPUT



输出轴径/Output Diameter



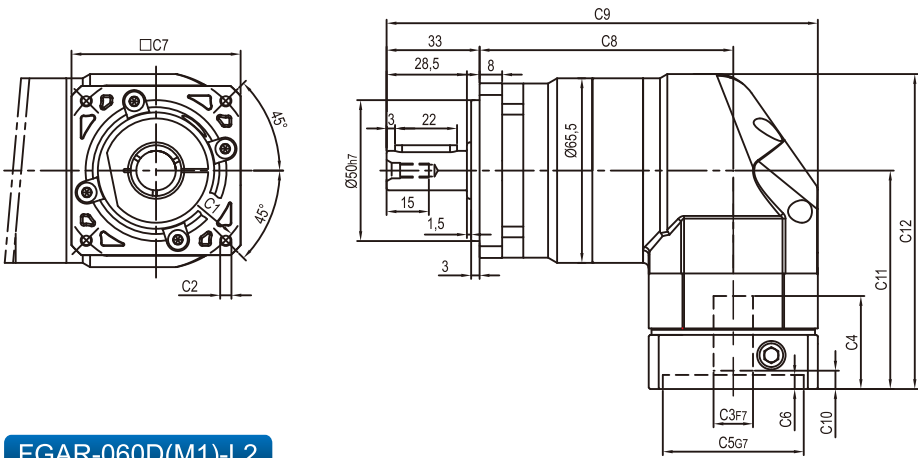
尺寸	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
FGR-060D-L1	Ø66.7	4-M4x10	Ø8	33	Ø38.1	5	60	90	153	5.5	77.5	111.75
FGR-060D-L2	Ø70	4-M4x10,4-M5x12	Ø11, Ø14	33	Ø50	5	60	119	182	5.5	77.5	111.75
FGR-060M1-L1	Ø90	4-M5x12,4-M6x14	Ø19	42.5	Ø70	6.5	80	90	163	12	87	121.25
FGR-060M1-L2								119	192			

* C1~C7是公制标准马达连接板之尺寸,可根据客户要求单独定做。
* C1~C7are motor(metric standard) specific dimensions, which could be customised.
* D:常规孔,M1:极限孔
* D: Conventional Hole, M1: Limit Hole

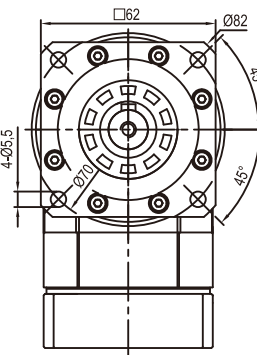
外形尺寸图表 / OUTLINE DIMENSION SHEET

FGAR-060D(M1)-L1

输入端 / INPUT

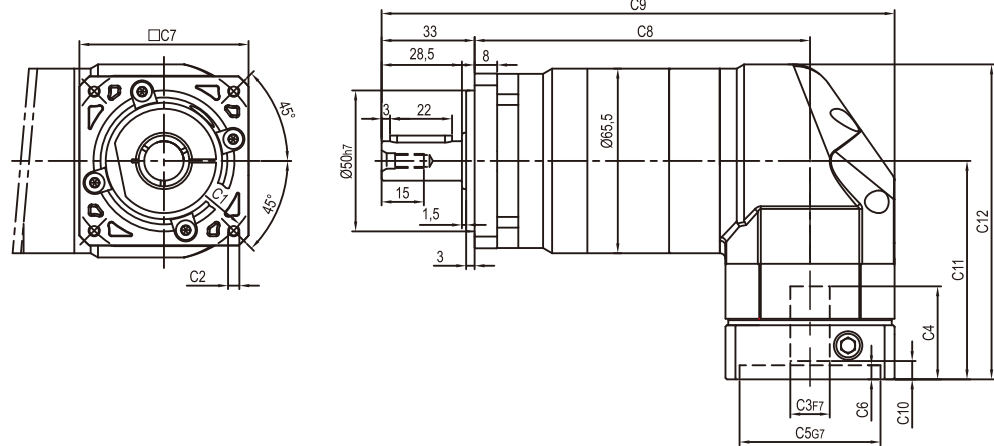


输出端 / OUTPUT

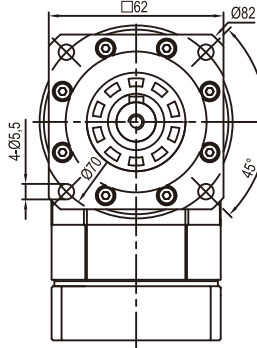


FGAR-060D(M1)-L2

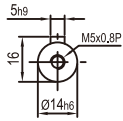
输入端 / INPUT



输出端 / OUTPUT



输出轴径/Output Diameter

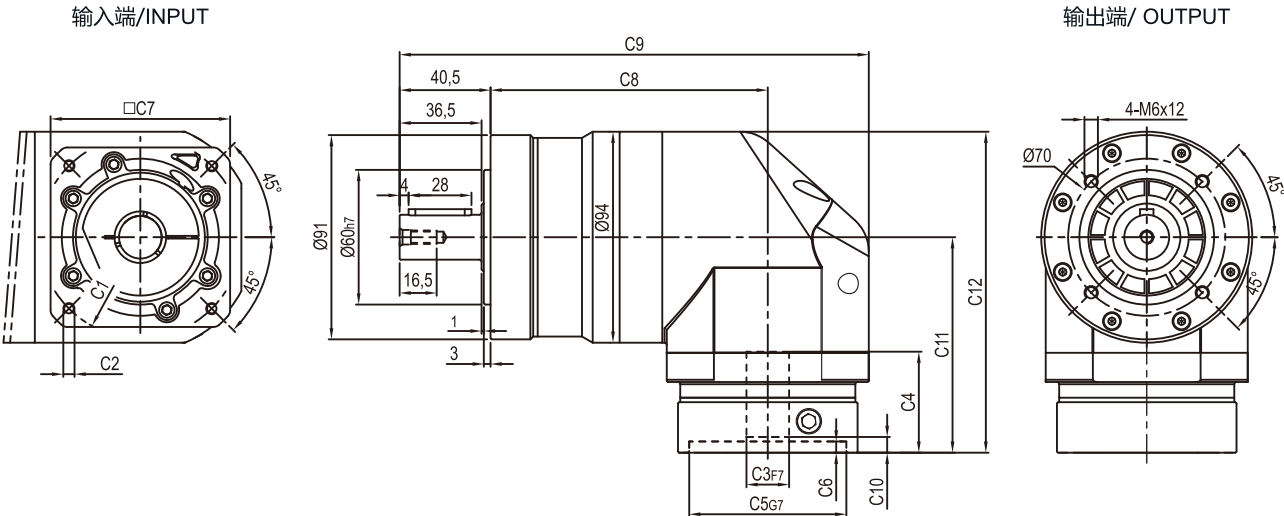


尺寸	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
FGAR-060D-L1	Ø66.7	4-M4x10	Ø8	33	Ø38.1	5	60	90	153	5.5	77.5	111.75
FGAR-060D-L2	Ø70	4-M4x10,4-M5x12	Ø11, Ø14	33	Ø50	5	60	119	182	5.5	77.5	111.75
FGAR-060M1-L1	Ø90	4-M5x12,4-M6x14	Ø19	42.5	Ø70	6.5	80	90	163	12	87	121.25
FGAR-060M1-L2								119	192			

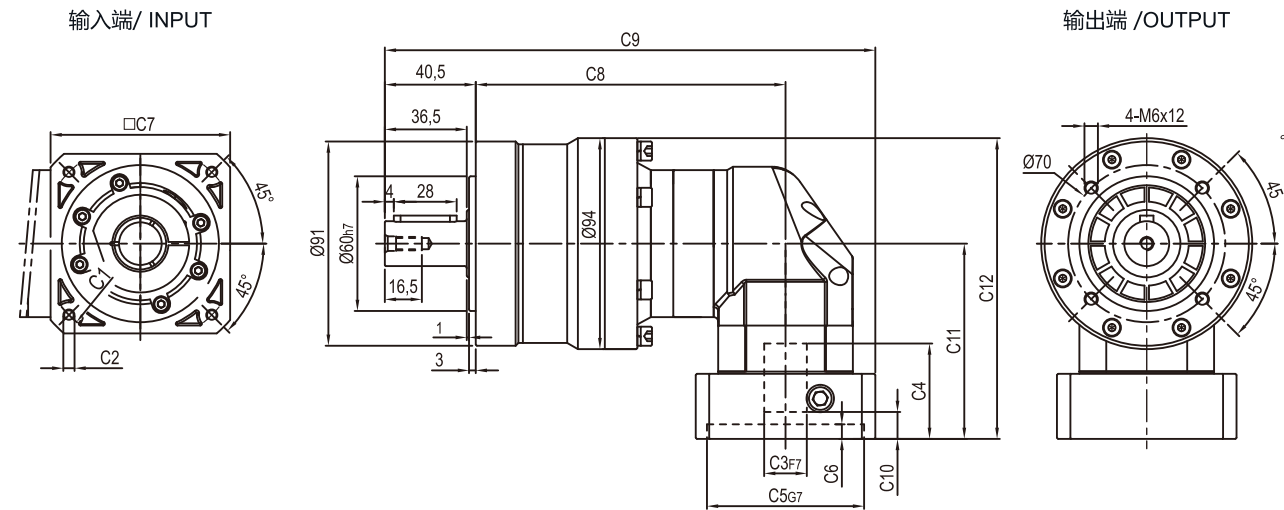
* C1~C7是公制标准马达连接板之尺寸,可根据客户要求单独定做。
* C1~C7are motor(metric standard) specific dimensions, which could be customised.
* D:常规孔,M1:极限孔
* D: Conventional Hole, M1: Limit Hole

外形尺寸图表 / OUTLINE DIMENSION SHEET

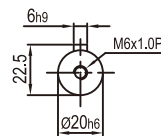
FGR-080D(M1)-L1



FGR-080D(M1)-L2



输出轴径/Output Diameter

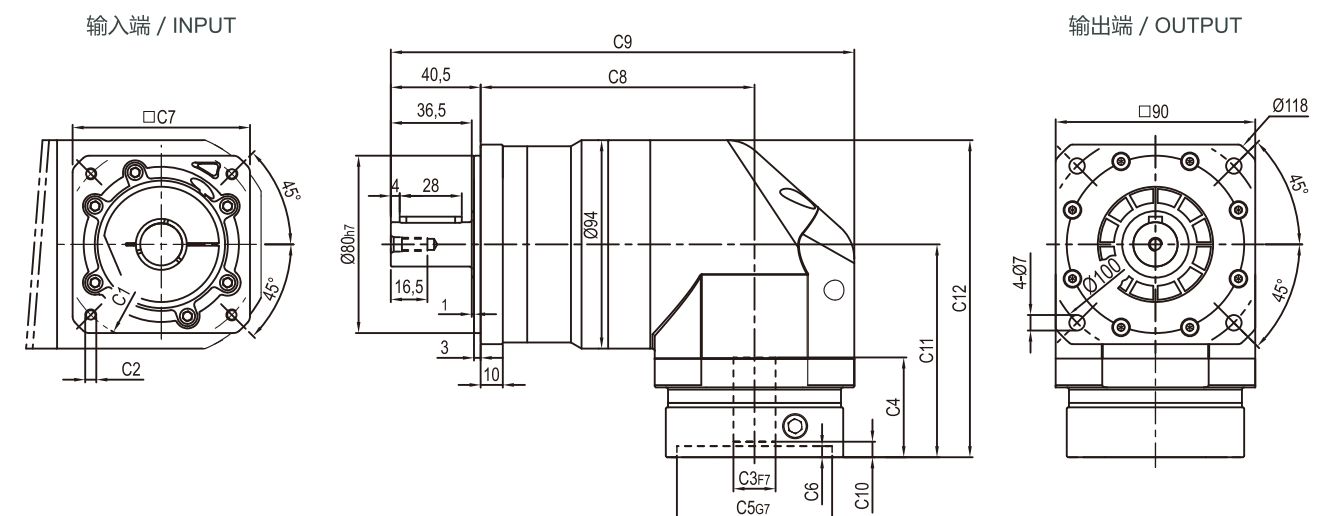


尺寸	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
FGR-080D-L1	Ø90	4-M5x12,4-M6x14	Ø19	45	Ø70	6.5	80	123.5	209	7	96	143
	Ø100	4-M6x14	Ø16	45	Ø80	6.5	86	123.5	209	6	96	143
FGR-080M1-L1	Ø115	4-M8x20	Ø19,Ø22	56.5	Ø95	8	100	123.5	214	16.5	117.5	164.5
	Ø145	4-M8x20	Ø19,Ø22,Ø24	59	Ø110	11	130	123.5	229	19	120	167
FGR-080D-L2	Ø66.7	4-M4x10	Ø8	33	Ø38.1	5	60	138	208.5	5.5	77.5	124.5
	Ø70	4-M4x10,4-M5x12	Ø11,Ø14	33	Ø50	5	60	138	208.5	5.5	77.5	124.5
FGR-080M1-L2	Ø90	4-M5x12,4-M6x14	Ø19	42.5	Ø70	6.5	80	138	218.5	12	87	134
	Ø100	4-M6x14	Ø16	42.5	Ø80	6.5	86	138	221.5	11	87	134

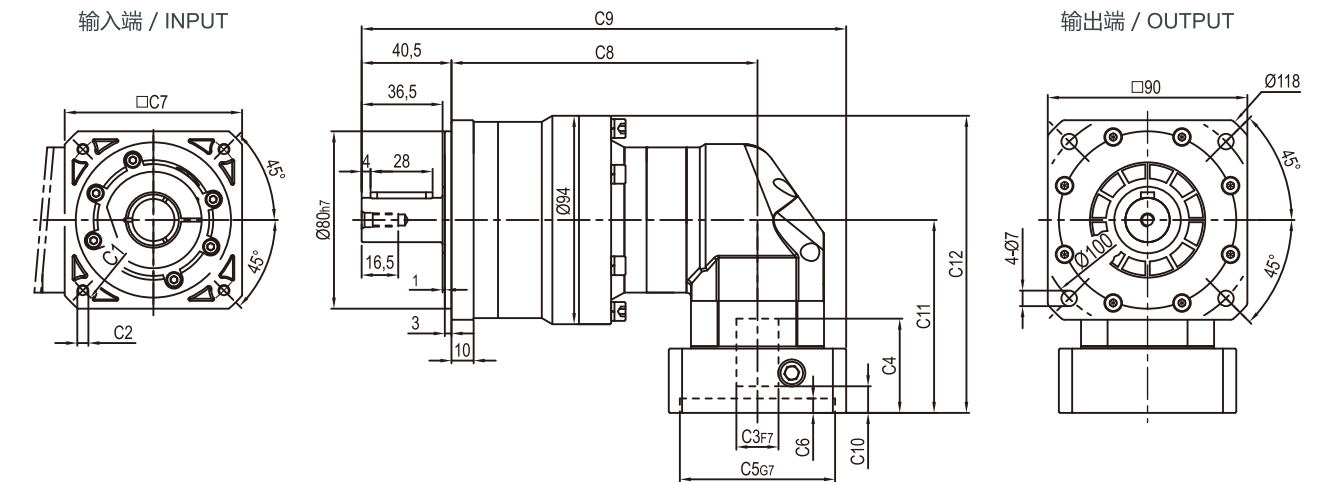
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外形尺寸图表 / OUTLINE DIMENSION SHEET

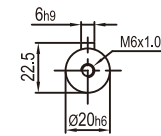
FGAR-080D(M1)-L1



FGAR-080D(M1)-L2



输出轴径/Output Diameter

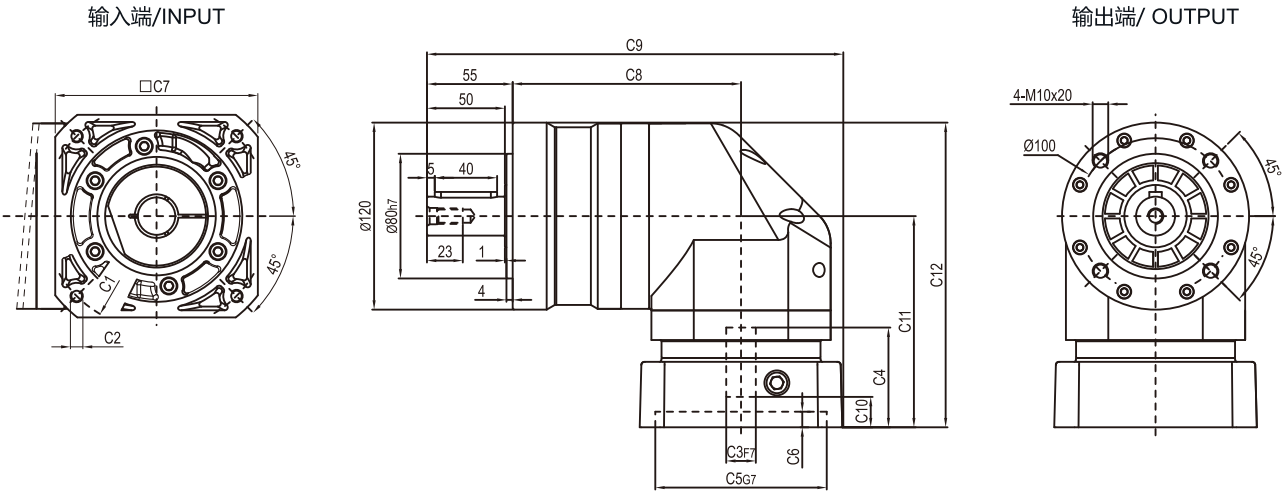


尺寸	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
FGAR-080D-L1	Ø90	4-M5x12,4-M6x14	Ø19	45	Ø70	6.5	80	123.5	209	7	96	143
	Ø100	4-M6x14	Ø16	45	Ø80	6.5	86	123.5	209	6	96	143
FGAR-080M1-L1	Ø115	4-M8x20	Ø19,Ø22	56.5	Ø95	8	100	123.5	214	16.5	117.5	164.5
	Ø145	4-M8x20	Ø19,Ø22,Ø24	59	Ø110	11	130	123.5	229	19	120	167
FGAR-080D-L2	Ø66.7	4-M4x10	Ø8	33	Ø38.1	5	60	138	208.5	5.5	77.5	124.5
	Ø70	4-M4x10,4-M5x12	Ø11,Ø14	33	Ø50	5	60	138	208.5	5.5	77.5	124.5
FGAR-080M1-L2	Ø90	4-M5x12,4-M6x14	Ø19	42.5	Ø70	6.5	80	138	218.5	12	87	134
	Ø100	4-M6x14	Ø16	42.5	Ø80	6.5	86	138	221.5	11	87	134

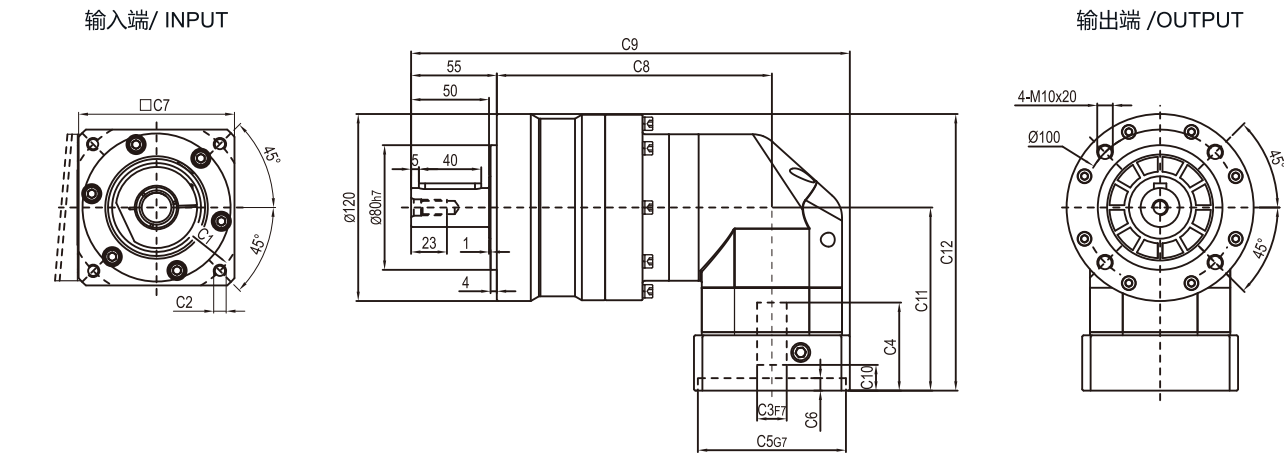
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外形尺寸图表 / OUTLINE DIMENSION SHEET

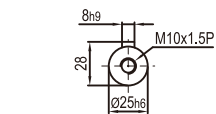
FGR-120D(M1)-L1



FGR-120D(M1)-L2



输出轴径/Output Diameter

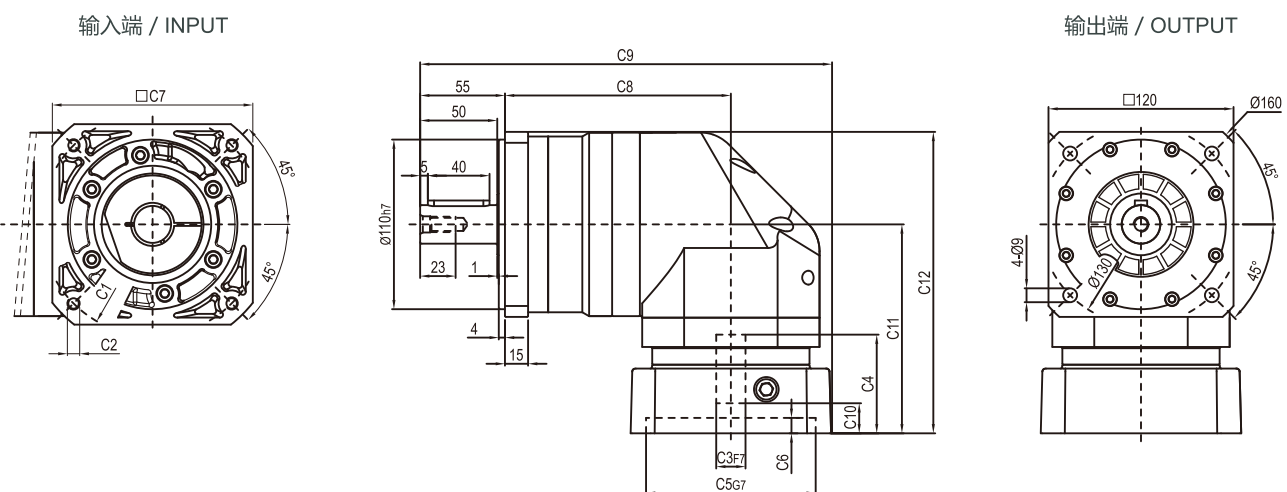


尺寸	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
FGR-120D-L1	Ø145	4-M8x20	Ø19,Ø22,Ø24	64	Ø110	10	130	146.5	266.5	19.5	135.5	195.5
FGR-120M1-L1	Ø200	4-M12x28	Ø35	81	Ø114.3	10	180	146.5	291.5	28	152.5	212.5
FGR-120D-L2	Ø90	4-M5x12,4-M6x14	Ø19	45	Ø70	6.5	80	176.5	276.5	7	96	156
	Ø100	4-M6x14	Ø16	45	Ø80	6.5	86	176.5	276.5	6	96	156
FGR-120M1-L2	Ø115	4-M8x20	Ø19,Ø22	56.5	Ø95	8	100	176.5	281.5	16.5	117.5	177.5
	Ø145	4-M8x20	Ø19,Ø22,Ø24	59	Ø110	11	130	176.5	296.5	19	120	180

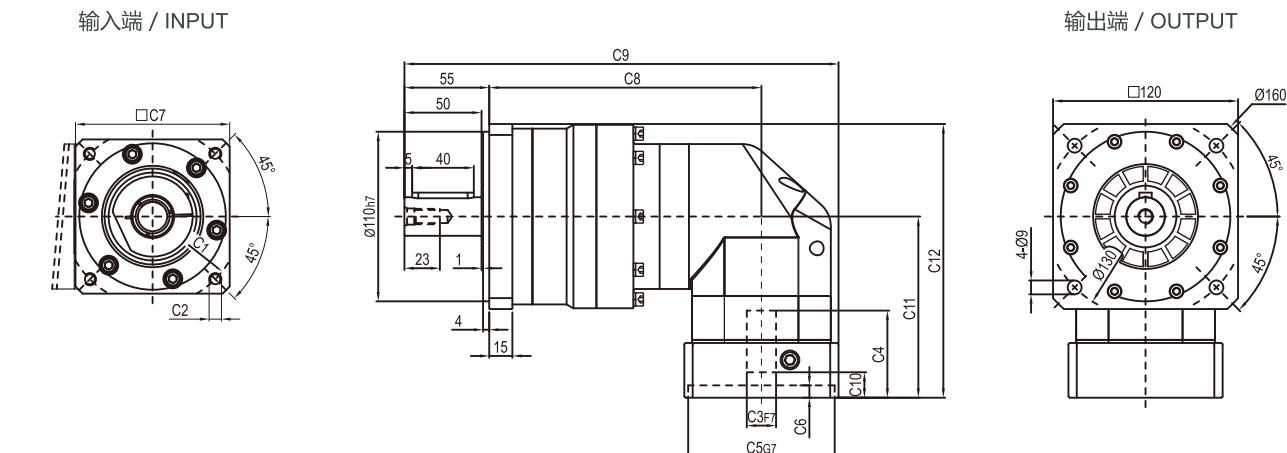
* C1~C7是公制标准马达连接板之尺寸,可根据客户要求单独定做。
* C1~C7are motor(metric standard) specific dimensions, which could be customised.
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* D: Conventional Hole, M1: Limit Hole

外形尺寸图表 / OUTLINE DIMENSION SHEET

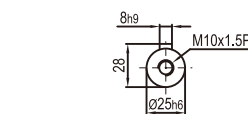
FGAR-120D(M1)-L1



FGAR-120D(M1)-L2



输出轴径/Output Diameter

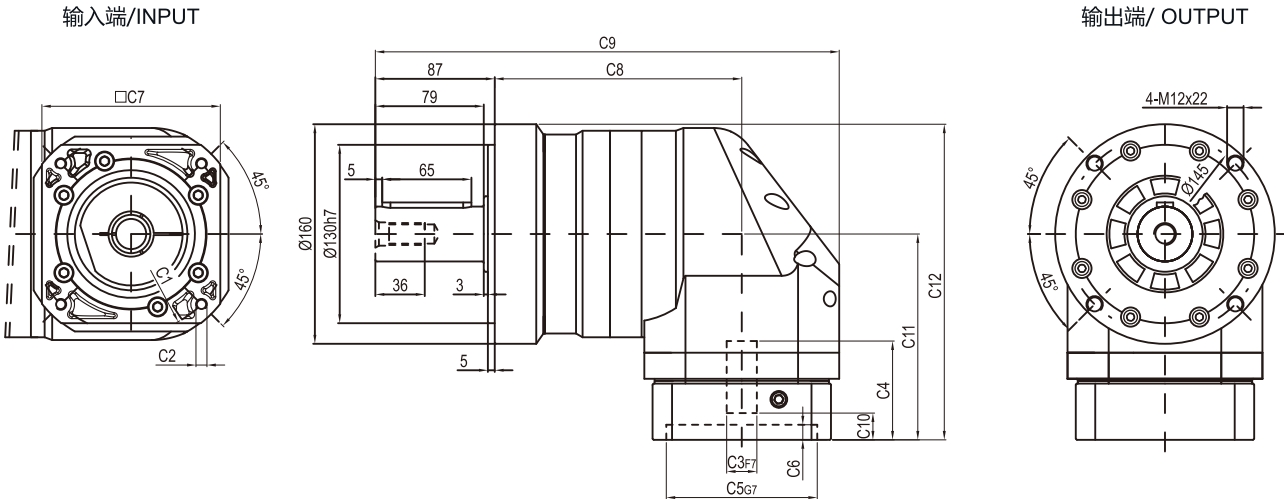


尺寸	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
FGAR-120D-L1	Ø145	4-M8x20	Ø19,Ø22,Ø24	64	Ø110	10	130	146.5	266.5	19.5	135.5	195.5
FGAR-120M1-L1	Ø200	4-M12x28	Ø35	81	Ø114.3	10	180	146.5	291.5	28	152.5	212.5
FGAR-120D-L2	Ø90	4-M5x12,4-M6x14	Ø19	45	Ø70	6.5	80	176.5	276.5	7	96	156
	Ø100	4-M6x14	Ø16	45	Ø80	6.5	86	176.5	276.5	6	96	156
FGAR-120M1-L2	Ø115	4-M8x20	Ø19,Ø22	56.5	Ø95	8	100	176.5	281.5	16.5	117.5	177.5
	Ø145	4-M8x20	Ø19,Ø22,Ø24	59	Ø110	11	130	176.5	296.5	19	120	180

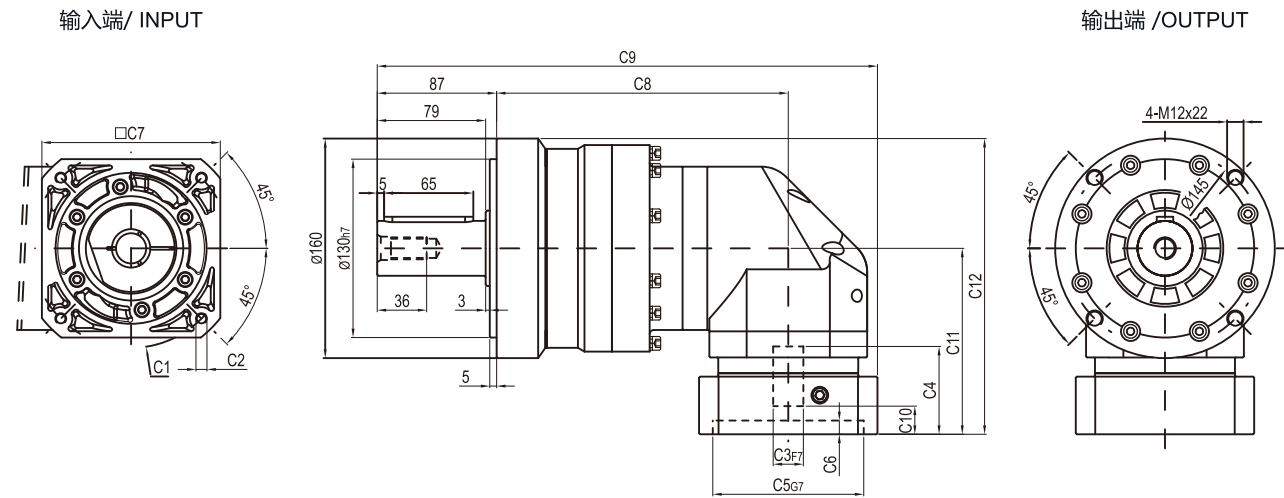
* C1~C7是公制标准马达连接板之尺寸,可根据客户要求单独定做。
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外形尺寸图表 / OUTLINE DIMENSION SHEET

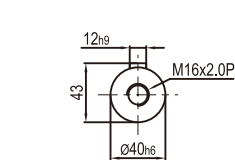
FGR-160D(M1)-L1



FGR-160D(M1)-L2



输出轴径/Output Diameter

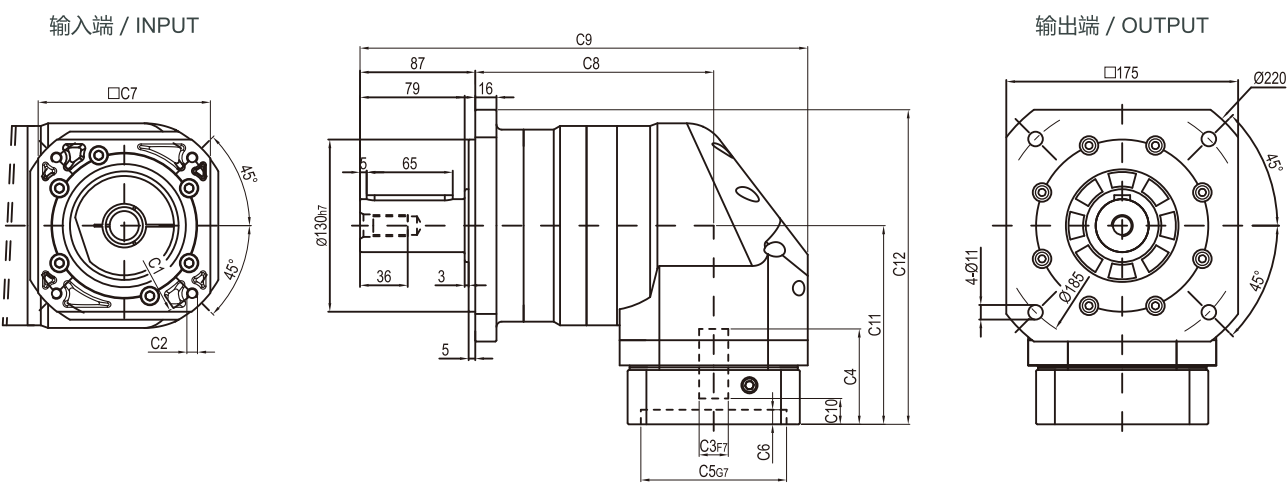


尺寸	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
FGR-160D-L1	Ø145	4-M8x20	Ø22,Ø24	72	Ø110	11	130	180	338	19.5	150	230
	Ø200	4-M12x28	Ø35	82	Ø114.3	8	180	180	357	25	160	240
FGR-160D-L2	Ø145	4-M8x20	Ø19,Ø22,Ø24	64	Ø110	10	130	212.5	364.5	19.5	135.5	215.5
FGR-160M1-L2	Ø200	4-M12x28	Ø35	81	Ø114.3	10	180	212.5	389.5	28	152.5	232.5

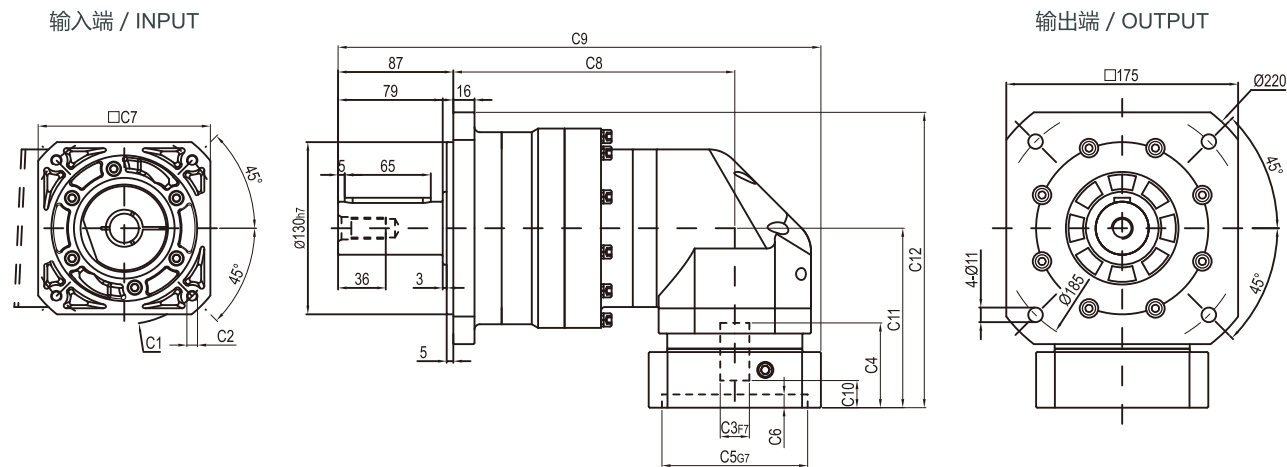
* C1~C7是公制标准马达连接板之尺寸,可根据客户要求单独定做。
* C1~C7are motor(metric standard) specific dimensions, which could be customised.
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* D: Conventional Hole, M1: Limit Hole

外形尺寸图表 / OUTLINE DIMENSION SHEET

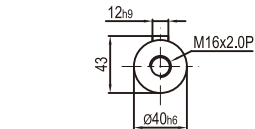
FGAR-160D(M1)-L1



FGAR-160D(M1)-L2



输出轴径/Output Diameter



尺寸	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
FGAR-160D-L1	Ø145	4-M8x20	Ø22,Ø24	72	Ø110	11	130	180	338	19.5	150	237.5
	Ø200	4-M12x28	Ø35	82	Ø114.3	8	180	180	357	25	160	247.5
FGAR-160D-L2	Ø145	4-M8x20	Ø19,Ø22,Ø24	64	Ø110	10	130	212.5	364.5	19.5	135.5	223
FGAR-160M1-L2	Ø200	4-M12x28	Ø35	81	Ø114.3	10	180	212.5	389.5	28	152.5	240

* C1~C7是公制标准马达连接板之尺寸,可根据客户要求单独定做。
* C1~C7are motor(metric standard) specific dimensions, which could be customised.
* D:常规孔,M1:极限孔
* D: Conventional Hole, M1: Limit Hole