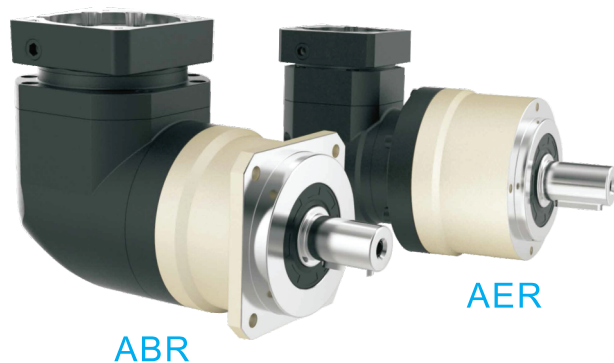


型号说明 / MODEL ILLUMINATION



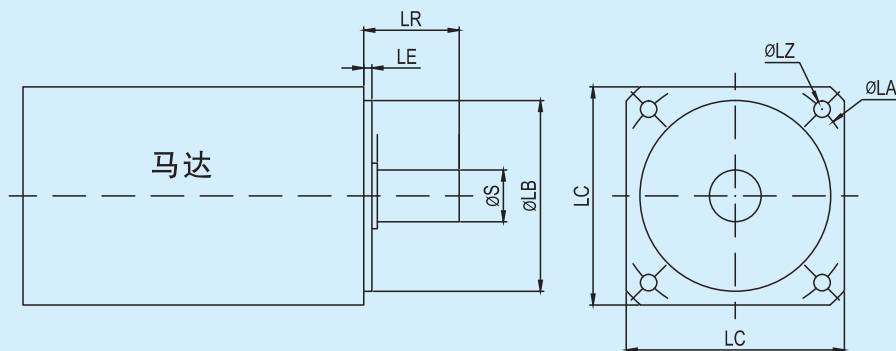
型号定义 / MODEL ILLUMINATE

ABR060	10	S□	马达
减速机型式：ABR060/AER070 ABR090/AER090 ABR115/AER120 ABR142/AER155		背隙：S2：标准背隙	马达型号： 1-马达制造商及型号 2-马达安装尺寸
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			

选用范例：ABR060-10-S□ MHMD-042G1U

型号定义② ABR060-10-S□-50*3/14*30/70/M4

LB*LE S*LR LA LZ





减速机性能资料 / GEAR BOX PERFORMANCE INFORMATION

规 格		级 数	减速比 ¹	ABR060 AER070	ABR090 AER090	ABR115 AER120	ABR142 AER155	ABR180	ABR220
额定输出力矩T _{2N}	Nm	1	3	55	130	208	342	588	1,140
			4	50	140	290	542	1,050	1,700
			5	60	160	330	650	1,200	2,000
			6	55	150	310	600	1,100	1,900
			7	50	140	300	550	1,100	1,800
			8	50	140	290	542	1,000	1,600
			10	60	160	330	650	520	1,220
			14	50	140	300	550	1,100	1,800
		定货时备注L1取	20	40	100	230	450		
		2	12	55	130	208	342	588	1,140
			15	55	130	208	342	588	1,140
			20	50	140	290	542	1,050	1,700
			25	60	160	330	650	1,200	2,000
			30	55	130	208	342	1,200	2,000
			35	60	160	330	650	1,200	2,000
			40	50	140	290	542	1,200	2,000
			50	60	160	330	650	1,200	2,000
			60	55	150	310	600	1,200	2,000
			70	60	160	330	650	1,200	2,000
			80	50	140	290	542	1,200	2,000
			100	60	160	330	650	1,200	2,000
			120	—	150	310	600	1,100	1,900
			140	—	140	300	550	1,100	1,800
			160	—	120	260	500	1,000	1,600
			200	—	100	230	450	520	1,220
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	3,000	2,000
最大输入转速n _{1B}	rpm	1,2	3~200	10,000	8,000	8,000	6,000	6,000	4,000
背隙S1	arcmin	1	3~20	≤7	≤7	≤7	≤7	≤7	≤7
		2	12~200	≤10	≤10	≤10	≤10	≤10	≤10
背隙S2	arcmin	1	3~20	≤10	≤10	≤10	≤10	≤10	≤10
		2	12~200	≤12	≤12	≤12	≤12	≤12	≤12
扭转刚性	Nm/arcmin	1,2	3~200	7	14	25	50	145	225
容许径向力F _{2aB} ²	N	1,2	3~200	1,530	3,250	6,700	9,400	14,500	50,000
容许轴向力F _{2a1B} ²	N	1,2	3~200	630	1,300	3,000	4,000	6,200	35,000
容许轴向力F _{2a2B} ²	N	1,2	3~200	765	1,625	3,350	4,700	7,250	25,000
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	51	83
		2	12~200	2.5	7.8	14.2	27.5	54	95
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	≤72	≤74

减速机转动惯量

规格	级数	减速比 ¹	ABR060 AER070	ABR090 AER090	ABR115 AER120	ABR142 AER155	ABR180	ABR220
转动惯量J ₁	1	3~7	0.35	2.25	6.84	23.4	68.9	135.4
		8~10	0.07	1.87	6.25	21.8	65.6	119.8
		14~20	0.07	1.87	6.25	21.8	65.6	119.8
	2	12~40	0.09	0.35	2.25	6.84	23.4	68.9
		50	0.09	0.31	1.87	6.25	21.8	65.6
		60	0.09	0.35	2.25	6.84	23.4	68.9
		70~100	0.09	0.31	1.87	6.25	21.8	65.6
		120~200	—	0.31	1.87	6.25	21.8	65.6

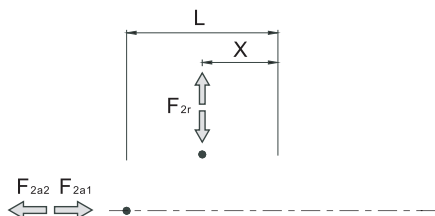
1.减速比 (i=N_{in}/N_{out})

* 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

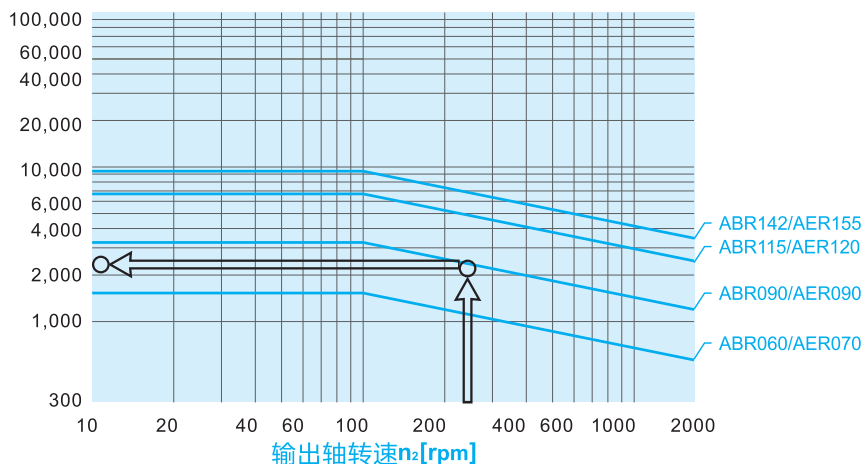


减速机输出轴所能承受之最大径向力及轴向力,端视内部支撑轴承之设计,减速机采用大尺寸的轴承及较大跨距的设计,其能承受更大的径向及轴向负荷。

F_{2r} 径向力

F_{2a} 轴向力

容许径向力 F_{2rB} [N] 施力于轴中心位置

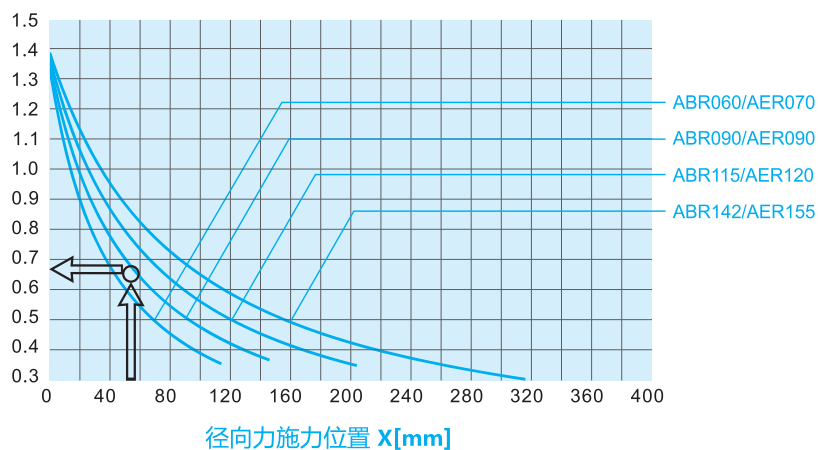


当径向力 F_{2r} 施力于轴中心位置即 $X=1/2 \times L$ 时, 不同规格之减速机在不同输出转速运用下使用寿命为 20,000hr* 时, 所能承受之容许径向力 F_{2rB} , 请参照左图, 而能承受之容许轴向力 F_{2aB} , 为

$$F_{2a1B} = 0.2 \times F_{2rB}$$

$$F_{2a2B} = 0.1 \times F_{2rB}$$

位置负荷系数 K_b



当径向力 F_{2r} 施力不在轴中心位置时, 越靠近减速机即 $X < 1/2 \times L$, 所能承受之容许径向力变大, 越远离减速机即 $X > 1/2 \times L$ 时, 所能承受之容许径向力则变小, 藉由左图, 依减速机规格及径向力施力位置 X , 查出位置负荷系数 K_b , 在代入下列公式, 求出容许径向力:

$$F'_{2rB} = K_b \times F_{2rB}$$

轴向力:

$$F'_{2a1B} = 0.2 \times F'_{2rB}$$

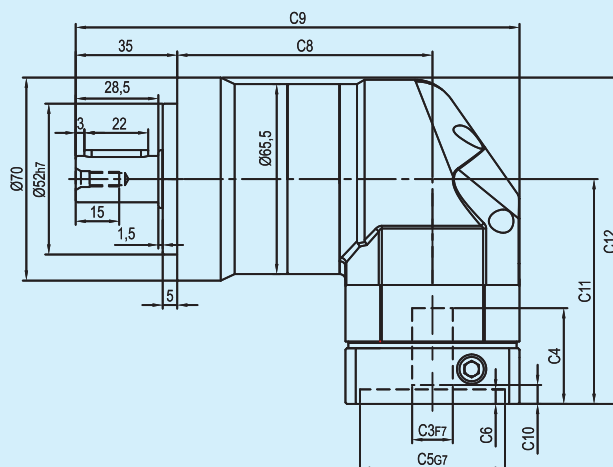
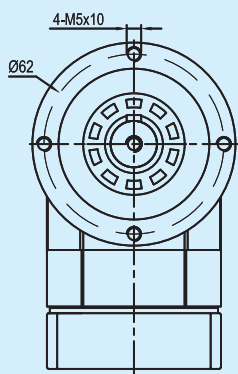
$$F'_{2a2B} = 0.1 \times F'_{2rB}$$

* 连续运转降低使用寿命二分之一。

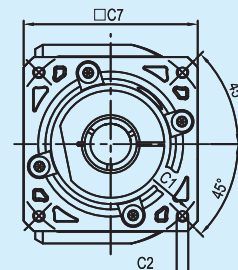
外形尺寸图表 / OUTLINE DIMENSION SHEET

AER070-L1

输出端 / OUTPUT

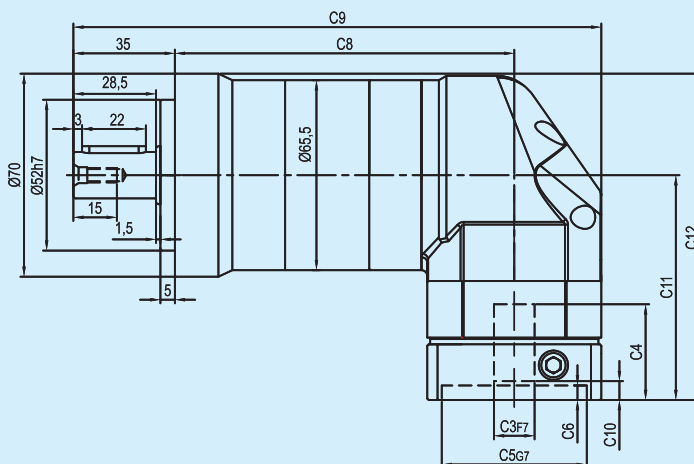
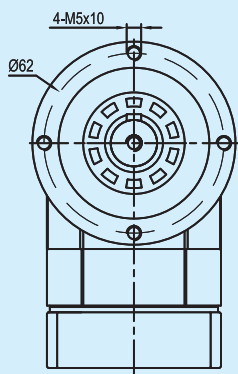


输入端 / INPUT

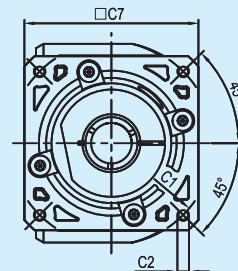


AER070-L2

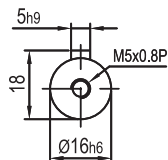
输出端 / OUTPUT



输入端 / INPUT



输出轴径/Output Diameter



轴型式

尺寸	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
AER070-L1	Ø66.7	4-M4x10	Ø8	33	Ø38.1	5	60	88	153	5.5	77.5	112.5
AER070-L2								117	182			
AER070-L1	Ø70	4-M4x10, 4-M5x12	Ø11, Ø14	33	Ø50	5	60	88	153	5.5	77.5	112.5
AER070-L2								117	182			
AER070-L1	Ø90	4-M5x12, 4-M6x14	Ø19	42.5	Ø70	6.5	80	88	163	12	87	122
AER070-L2								117	192			

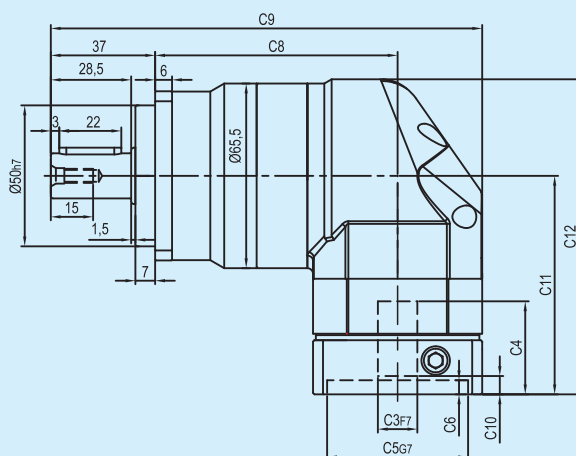
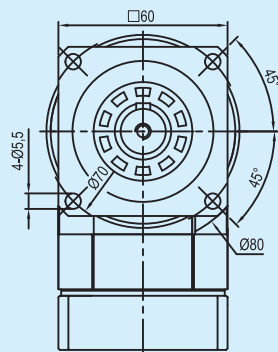
* C1~C7是公制标准马达连接板之尺寸,可根据客户要求单独定做。

* C1~C7are motor(metric standard) specific dimensions, which could be customised.

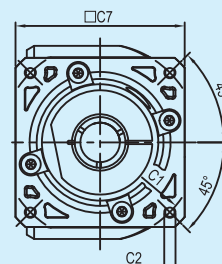
外形尺寸图表 / OUTLINE DIMENSION SHEET

ABR060-L1

输出端 / OUTPUT

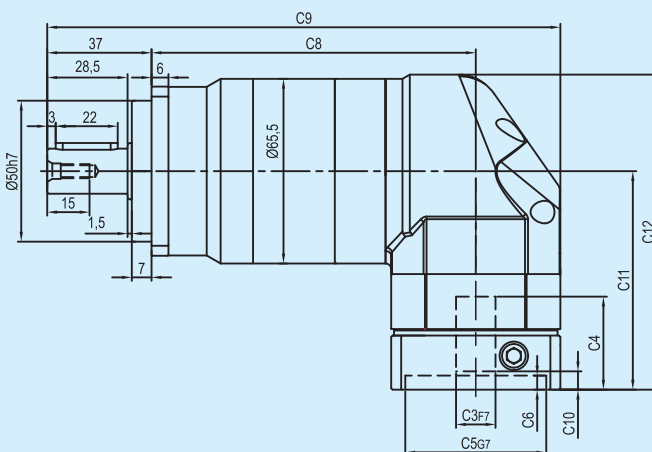
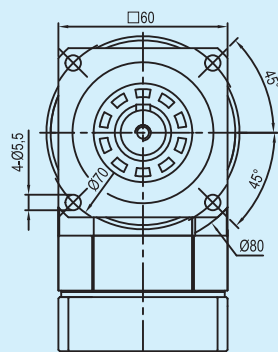


输入端 / INPUT

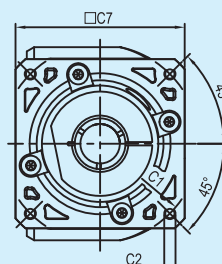


ABR060-L2

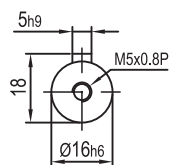
输出端 / OUTPUT



输入端 / INPUT



输出轴径/Output Diameter



轴型式

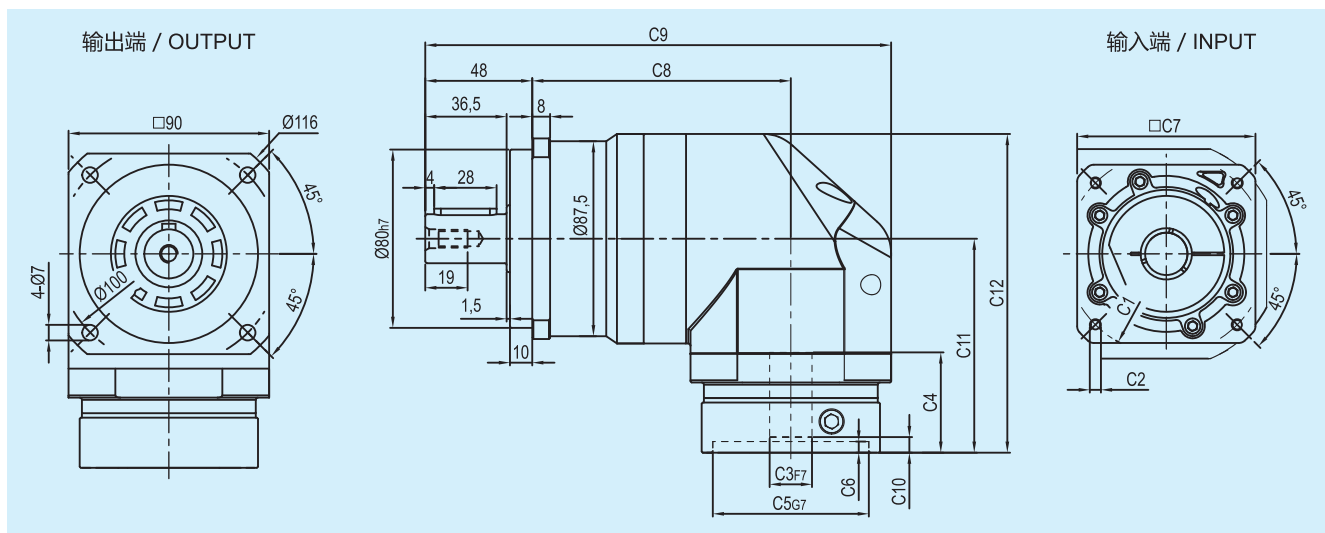
尺寸	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
ABR060-L1	Ø66.7	4-M4x10	Ø8	33	Ø38.1	5	60	86	153	5.5	77.5	111.75
ABR060-L2								115	182			
ABR060-L1	Ø70	4-M4x10, 4-M5x12	Ø11, Ø14	33	Ø50	5	60	86	153	5.5	77.5	111.75
ABR060-L2								115	182			
ABR060-L1	Ø90	4-M5x12, 4-M6x14	Ø19	42.5	Ø70	6.5	80	86	163	12	87	121.25
ABR060-L2								115	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。

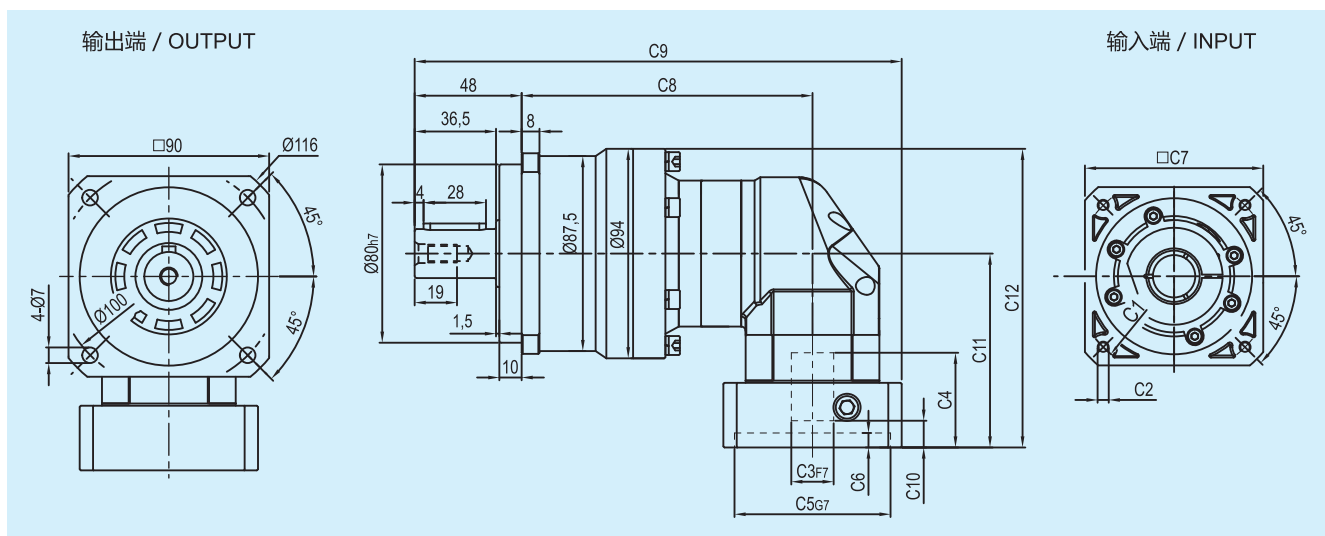
* C1~C7are motor(metric standard) specific dimensions, which could be customised.

外形尺寸图表 / OUTLINE DIMENSION SHEET

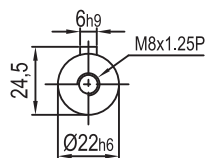
ABR090-L1



ABR090-L2



输出轴径/Output Diameter



轴型式

尺寸	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
ABR090-L1	$\varnothing 90$	4-M5x12,4-M6x14	$\varnothing 19$	45	$\varnothing 70$	6.5	80	116	209	7	96	143
	$\varnothing 100$	4-M6x14	$\varnothing 16$	45	$\varnothing 80$	6.5	86	116	209	6	96	143
	$\varnothing 115$	4-M8x20	$\varnothing 19, \varnothing 22$	56.5	$\varnothing 95$	8	100	116	214	16.5	117.5	164.5
	$\varnothing 145$	4-M8x20	$\varnothing 19, \varnothing 22, \varnothing 24$	59	$\varnothing 110$	11	130	116	229	19	120	167
ABR090-L2	$\varnothing 66.7$	4-M4x10	$\varnothing 8$	33	$\varnothing 38.1$	5	60	130.5	208.5	5.5	77.5	124.5
	$\varnothing 70$	4-M4x10,4-M5x12	$\varnothing 11, \varnothing 14$	33	$\varnothing 50$	5	60	130.5	208.5	5.5	77.5	124.5
	$\varnothing 90$	4-M5x12,4-M6x14	$\varnothing 19$	42.5	$\varnothing 70$	6.5	80	130.5	218.5	12	87	134
	$\varnothing 100$	4-M6x14	$\varnothing 16$	42.5	$\varnothing 80$	6.5	86	130.5	221.5	11	87	134

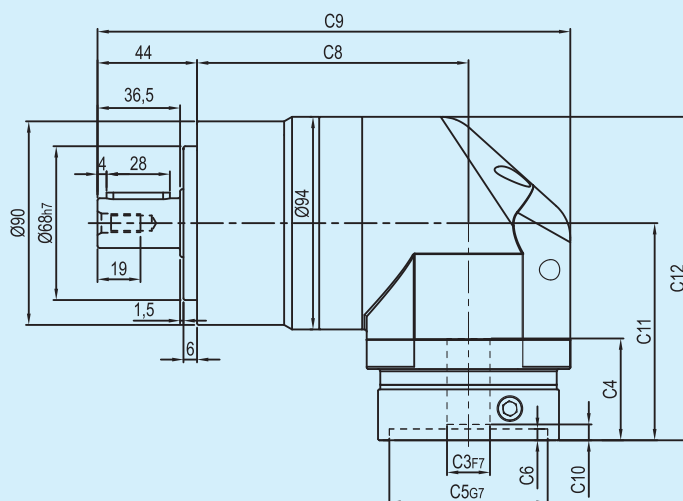
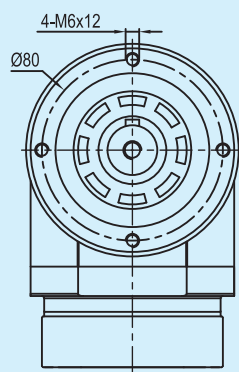
* C1~C7是公制标准马达连接板之尺寸,可根据客户要求单独定做。

* C1~C7are motor(metric standard) specific dimensions, which could be customised.

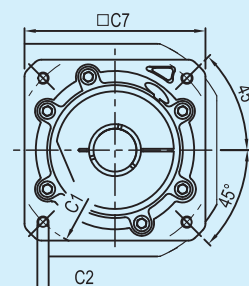
外形尺寸图表 / OUTLINE DIMENSION SHEET

AER090-L1

输出端 / OUTPUT

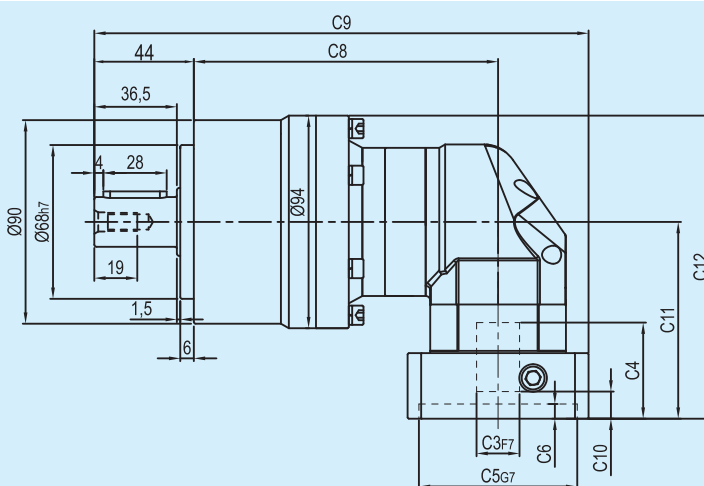
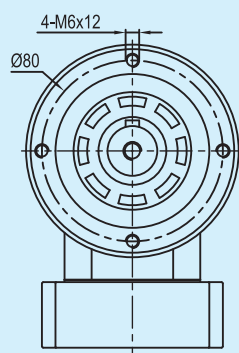


输入端 / INPUT

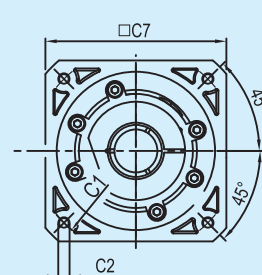


AER090-L2

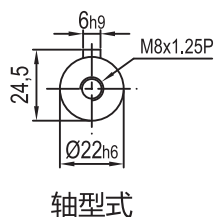
输出端 / OUTPUT



输入端 / INPUT



输出轴径/Output Diameter



尺寸	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
AER090-L1	Ø90	4-M5x12, 4-M6x14	Ø19	45	Ø70	6.5	80	120	209	7	96	143
	Ø100	4-M6x14	Ø16	45	Ø80	6.5	86	120	209	6	96	143
	Ø115	4-M8x20	Ø19, Ø22	56.5	Ø95	8	100	120	214	16.5	117.5	164.5
	Ø145	4-M8x20	Ø19, Ø22, Ø24	59	Ø110	11	130	120	229	19	120	167
AER090-L2	Ø66.7	4-M4x10	Ø8	33	Ø38.1	5	60	134.5	208.5	5.5	77.5	124.5
	Ø70	4-M4x10, 4-M5x12	Ø11, Ø14	33	Ø50	5	60	134.5	208.5	5.5	77.5	124.5
	Ø90	4-M5x12, 4-M6x14	Ø19	42.5	Ø70	6.5	80	134.5	218.5	12	87	134
	Ø100	4-M6x14	Ø16	42.5	Ø80	6.5	86	134.5	221.5	11	87	134

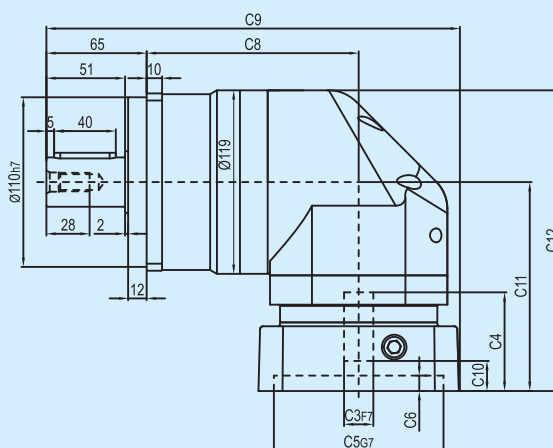
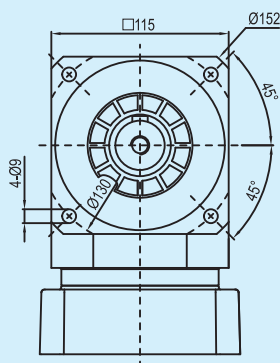
* C1~C7是公制标准马达连接板之尺寸,可根据客户要求单独定做。

* C1~C7are motor(metric standard) specific dimensions, which could be customised.

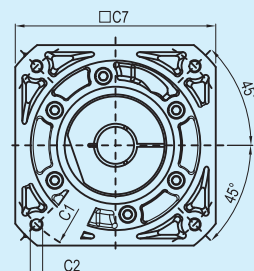
外形尺寸图表 / OUTLINE DIMENSION SHEET

ABR115-L1

输出端 / OUTPUT

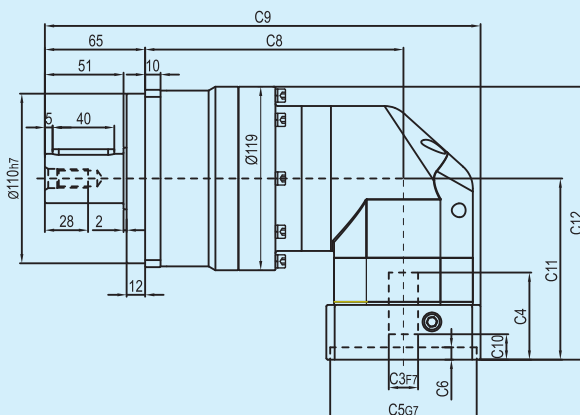
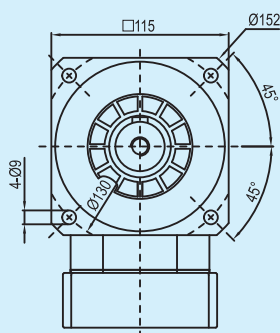


输入端 / INPUT

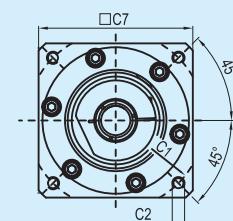


ABR115-L2

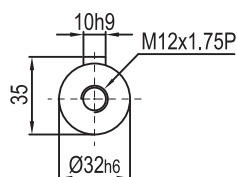
输出端 / OUTPUT



输入端 / INPUT



输出轴径/Output Diameter



轴型式

尺寸	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
ABR115-L1	Ø145	4-M8x20	Ø19, Ø22, Ø24	64	Ø110	10	130	137.5	267.5	19.5	135.5	195
	Ø200	4-M12x28	Ø35	81	Ø114.3	10	180	137.5	292.5	28	152.5	212
ABR115-L2	Ø90	4-M5x12, 4-M6x14	Ø19	45	Ø70	6.5	80	167.5	277.5	7	96	155.5
	Ø100	4-M6x14	Ø16	45	Ø80	6.5	86	167.5	277.5	6	96	155.5
	Ø115	4-M8x20	Ø19, Ø22	56.5	Ø95	8	100	167.5	282.5	16.5	117.5	177
	Ø145	4-M8x20	Ø19, Ø22, Ø24	59	Ø110	11	130	167.5	297.5	19	120	179.5

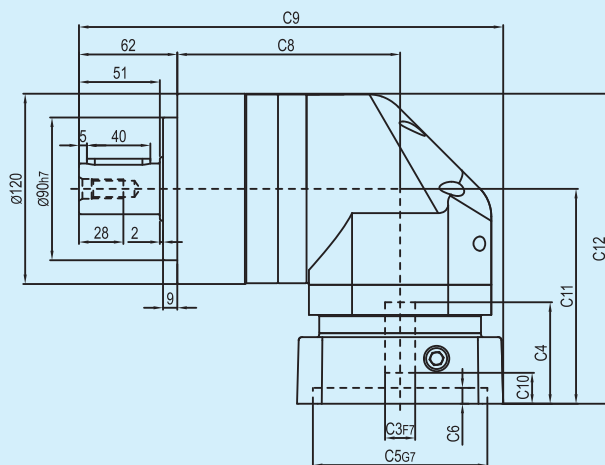
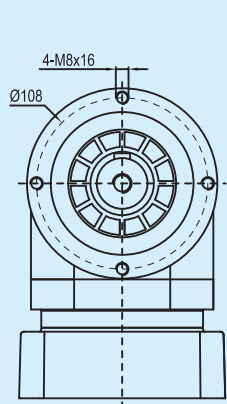
* C1~C7是公制标准马达连接板之尺寸,可根据客户要求单独定做。

* C1~C7are motor(metric standard) specific dimensions, which could be customised.

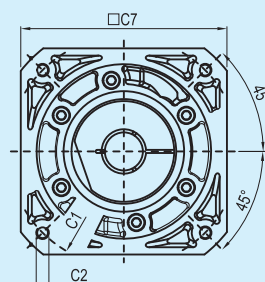
外形尺寸图表 / OUTLINE DIMENSION SHEET

AER120-L1

输出端 / OUTPUT

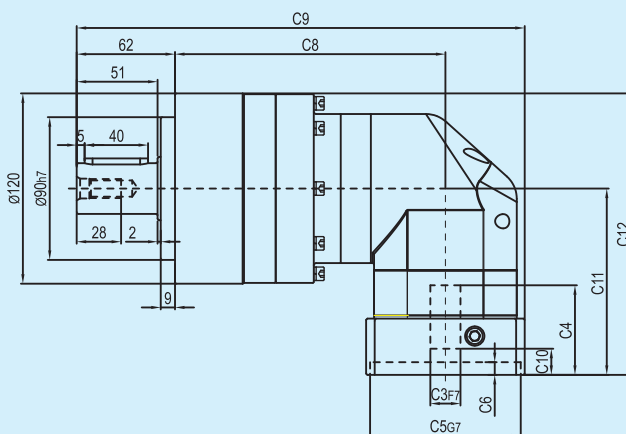
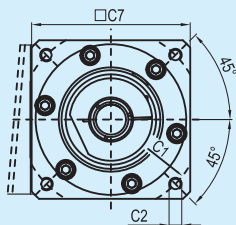


输入端 / INPUT

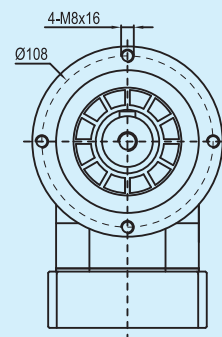


AER120-L2

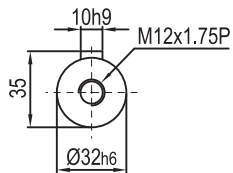
输入端 / INPUT



输出端 / OUTPUT



输出轴径/Output Diameter



轴型式

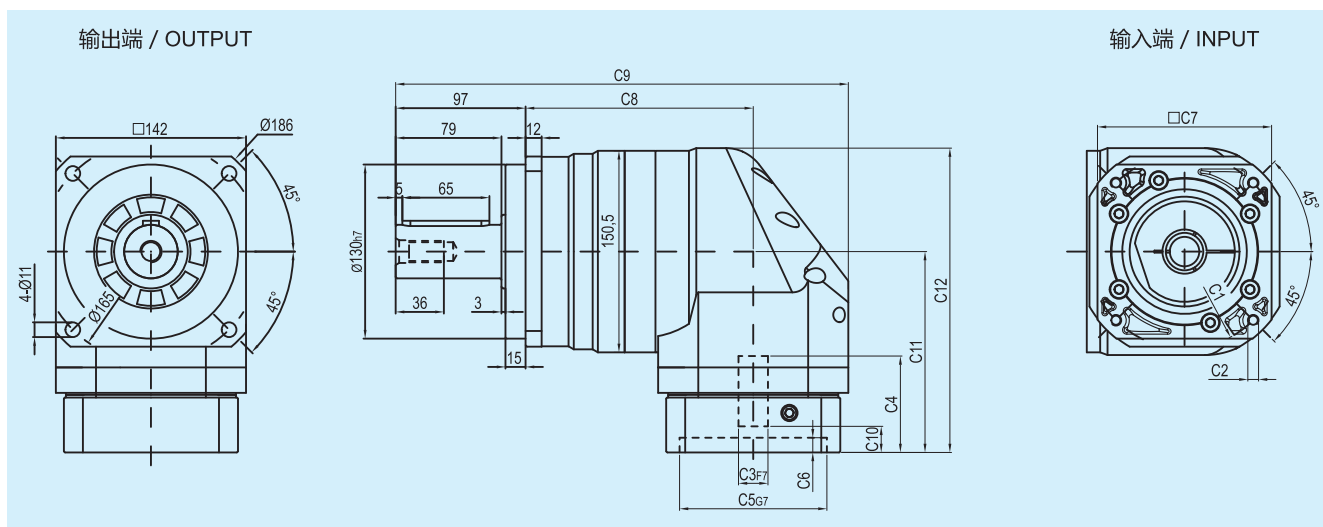
尺寸	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
AER120-L1	Ø145	4-M8x20	Ø19, Ø22, Ø24	64	Ø110	10	130	140.5	267.5	19.5	135.5	195.5
	Ø200	4-M12x28	Ø35	81	Ø114.3	10	180	140.5	292.5	28	152.5	212.5
AER120-L2	Ø90	4-M5x12, 4-M6x14	Ø19	45	Ø70	6.5	80	170.5	277.5	7	96	156
	Ø100	4-M6x14	Ø16	45	Ø80	6.5	86	170.5	277.5	6	96	156
	Ø115	4-M8x20	Ø19, Ø22	56.5	Ø95	8	100	170.5	282.5	16.5	117.5	177.5
	Ø145	4-M8x20	Ø19, Ø22, Ø24	59	Ø110	11	130	170.5	297.5	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。

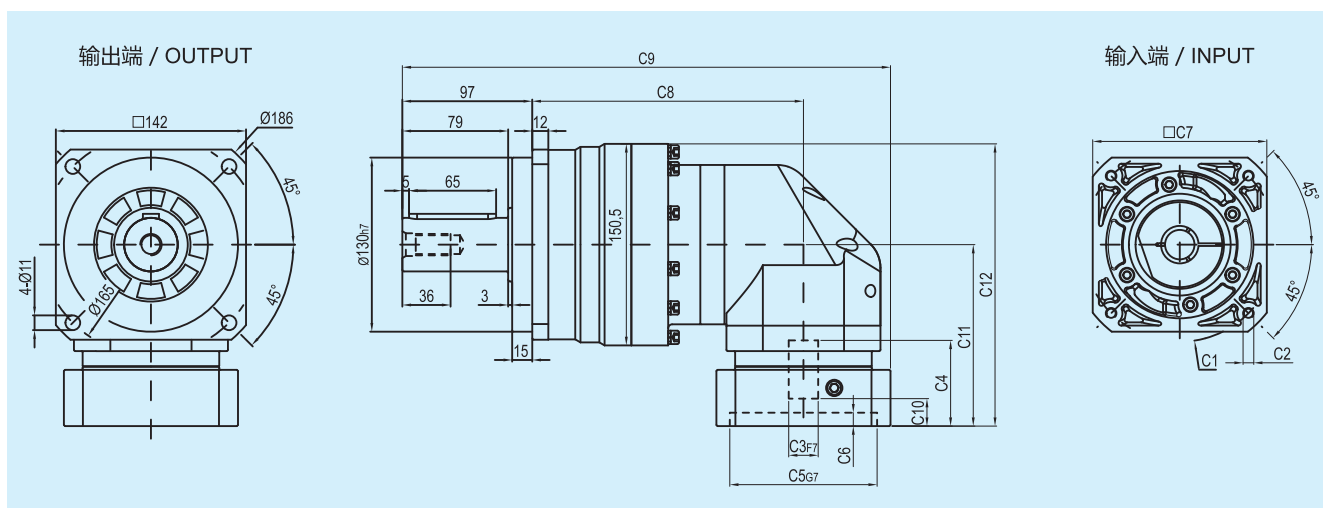
* C1~C7are motor(metric standard) specific dimensions, which could be customised.

外形尺寸图表 / OUTLINE DIMENSION SHEET

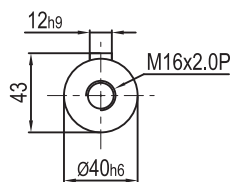
ABR142-L1



ABR142-L2



输出轴径/Output Diameter



轴型式

尺寸	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
ABR142-L1	Ø145	4-M8x20	Ø22,Ø24	72	Ø110	11	130	170	338	19.5	150	227.25
	Ø200	4-M12x28	Ø35	82	Ø114.3	8	180	170	357	25	160	237.25
ABR142-L2	Ø145	4-M8x20	Ø19,Ø22,Ø24	64	Ø110	10	130	202.5	364.5	19.5	135.5	210.75
	Ø200	4-M12x28	Ø35	81	Ø114.3	10	180	202.5	389.5	28	152.5	227.75

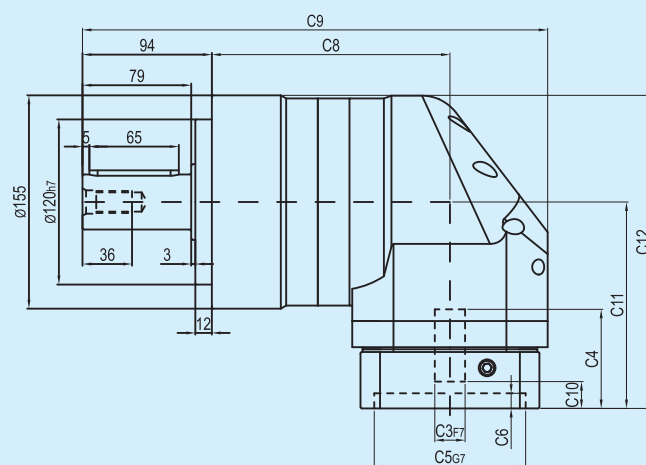
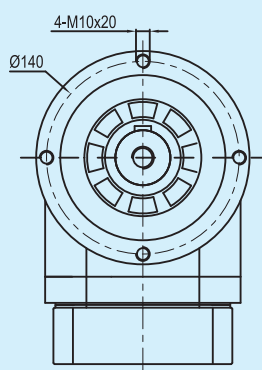
* C1~C7是公制标准马达连接板之尺寸,可根据客户要求单独定做。

* C1~C7are motor(metric standard) specific dimensions, which could be customised.

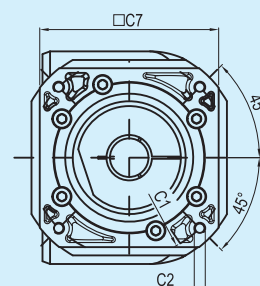
外形尺寸图表 / OUTLINE DIMENSION SHEET

AER155-L1

输出端 / OUTPUT

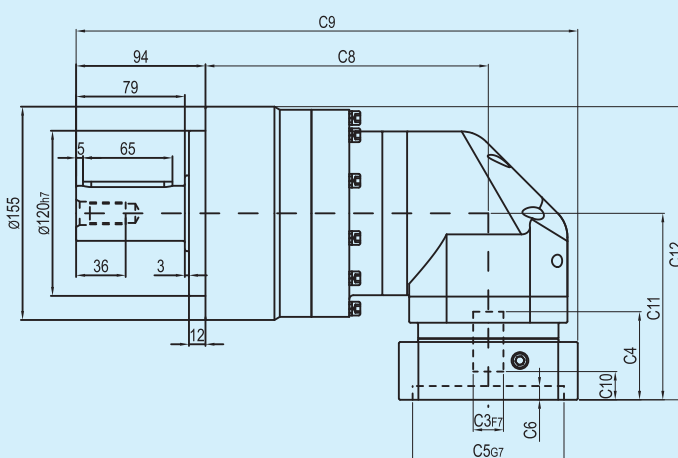
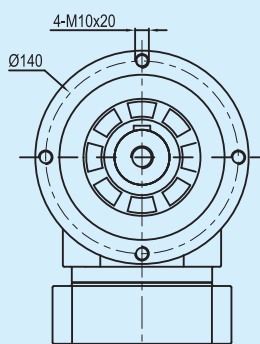


输入端 / INPUT

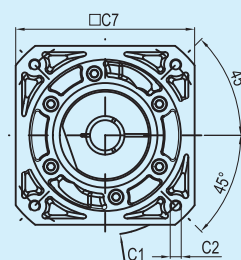


AER155-L2

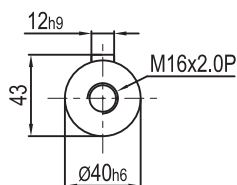
输出端 / OUTPUT



输入端 / INPUT



输出轴径/Output Diameter



轴型式

尺寸	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
AER155-L1	Ø145	4-M8x20	Ø22, Ø24	72	Ø110	11	130	173	338	19.5	150	227.5
	Ø200	4-M12x28	Ø35	82	Ø114.3	8	180	173	357	25	160	237.5
AER155-L2	Ø145	4-M8x20	Ø19, Ø22, Ø24	64	Ø110	10	130	205.5	364.5	19.5	135.5	213
	Ø200	4-M12x28	Ø35	81	Ø114.3	10	180	205.5	389.5	28	152.5	230

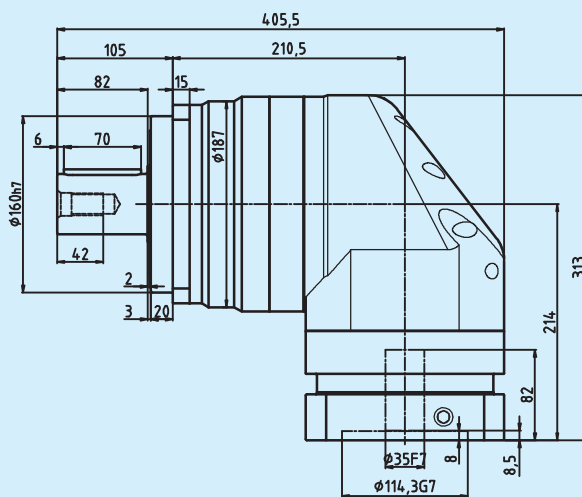
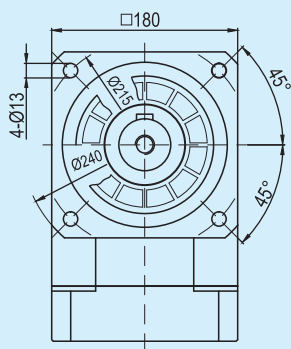
* C1~C7是公制标准马达连接板之尺寸,可根据客户要求单独定做。

* C1~C7are motor(metric standard) specific dimensions, which could be customised.

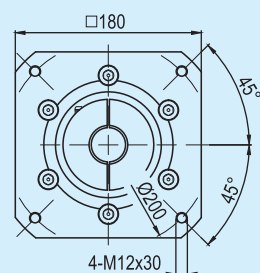
外形尺寸图表 / OUTLINE DIMENSION SHEET

ABR180-L1

输出端/OUTPUT

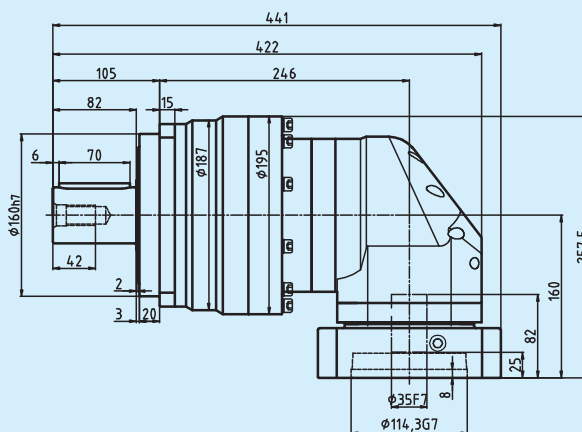
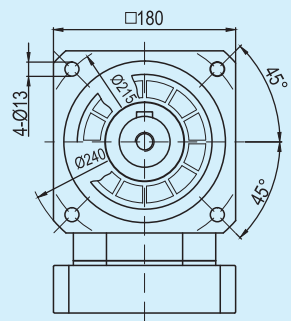


输入端/INPUT

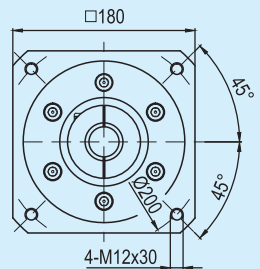


ABR180-L2

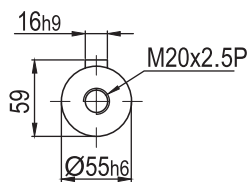
输出端/OUTPUT



输入端/INPUT



输出轴径/Output Diameter



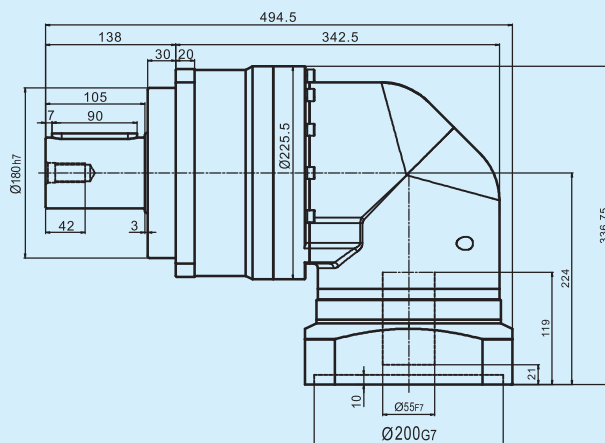
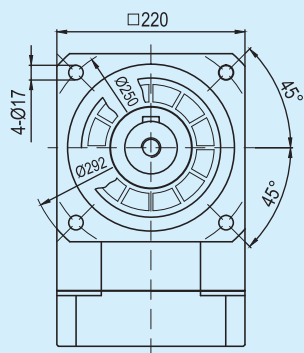
轴型式

*输入马达连接板之尺寸,可根据客户要求单独定做。
*The input motor specific dimensions could be customised.

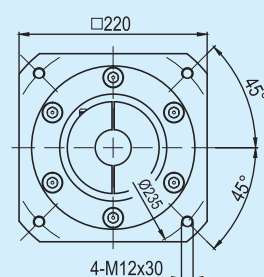
外形尺寸图表 / OUTLINE DIMENSION SHEET

ABR220-L1

输出端 / OUTPUT

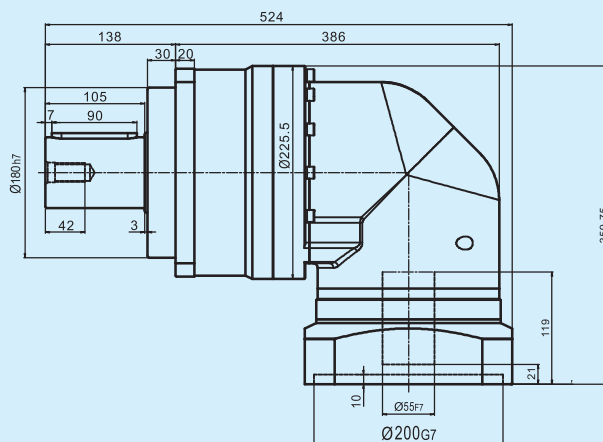
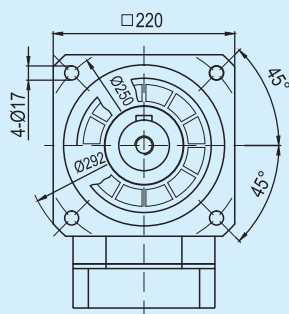


输入端 / INPUT

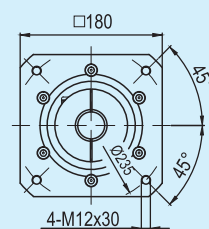


ABR220-L2

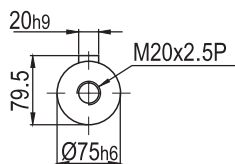
输出端 / OUTPUT



输入端 / INPUT



输出轴径 / Output Diameter



轴型式

*输入马达连接板之尺寸,可根据客户要求单独定做。

*The input motor specific dimensions could be customised.