



MAE Series planetary gearbox 系列行星减速机

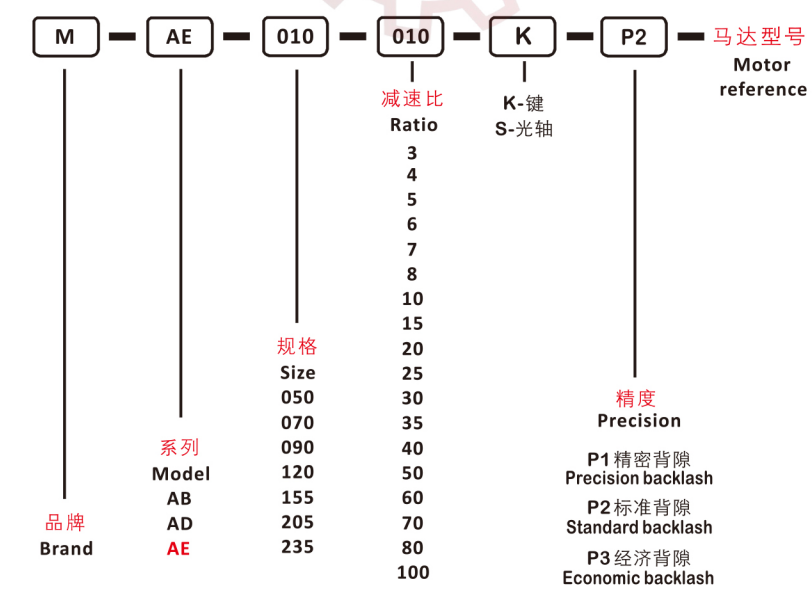
PRODUCT FEATURESS 产品特点

- ☆ 行星臂架与输出轴采用一体式结构设计，确保最大的扭转刚性。
- ☆ 行星轮采用满滚针设计，增加接触面积以提高结构刚性与输出扭矩。
- ☆ 齿轮采用低碳钢表面渗碳淬火到HRC62，以获得最佳的耐磨及冲击韧性。
- ☆ 齿形引用国外进口软件辅助设计，以获得最佳的齿形降低噪音。
- ☆ 输入端与马达轴连接采用双边抱紧方式，以获取最大的夹紧力和零背隙的动力传递。
- ☆ Planetary boom and output shaft are intergrated structure designed to ensure maximum torsional rigidity.
- ☆ Planetary wheel with full needle design,increase the contact area to improve the rigidity and output torque.
- ☆ The gears are carburized and quenched to the HRC62 with low carbon steel surface for optimum wear and impact toughness.
- ☆ Gears refer to foreign imported software-assisted design to obtain the best tooth shape to reduce noise.
- ☆ The input terminal is connected to the motor shaft in a double-tight manner to obtain the maximum clamping force and zero backlash power transmission.



INDICATION FOR MODEL SELECTION

● 机种型号表示



GENERAL NOTICES

● 订货须知

- 机种、型号、扭矩
- 减速比或出力轴转速
- 工况及连接方式
- 数量及安装的机械名称
- 入力方式和入力转速
- 马达厂牌型号或法兰及马达轴尺寸
- Type, model and torque
- Ratio or output speed
- Working conditions and connection methods
- Quantity and installed machine name
- Input mode and input speed
- Motor brand model or flange and motor shaft size

PLANETARY GEARBOX

减速机性能资料/Performance

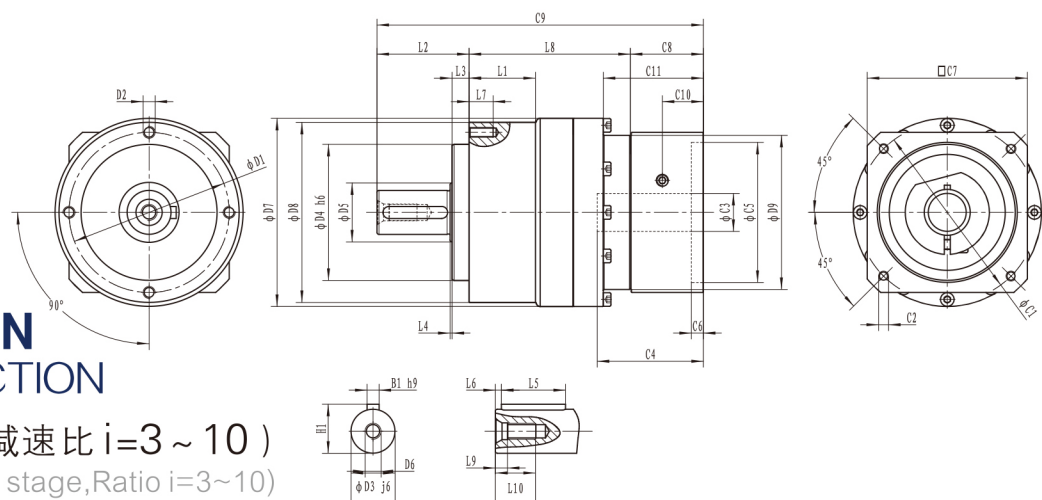
规格 Specification	单位 Unit	节数 Stage	减速比 Ratio	MAE050	MAE070	MAE090	MAE120	MAE155	MAE205	MAE235
额定输出力矩 Rated output torque T_{2N}	Nm	1	3	20	55	130	208	342	588	1140
			4	19	50	140	290	542	1050	1700
			5	22	60	160	330	650	1200	2000
			6	20	55	150	310	600	1100	1900
			7	19	50	140	300	550	1100	1800
			8	17	45	120	260	500	1000	1600
		2	10	14	40	100	230	450	900	1500
			15	20	55	130	208	342	588	1140
			20	19	50	140	290	542	1050	1700
			25	22	60	160	330	650	1200	2000
			30	20	55	150	310	600	1100	1900
			35	19	50	140	300	550	1100	1800
			40	17	45	120	260	500	1000	1600
			50	22	60	160	330	650	1200	2000
			60	20	55	150	310	600	1100	1900
			70	19	50	140	300	550	1100	1800
			80	17	45	120	260	500	1000	1600
			100	14	40	100	230	450	900	1500
急停扭矩/Emergency stop torque T_{2NOT}	Nm	1,2	3 ~ 100	三倍额定输出力矩/Triple rated output torque						
额定输入转速/Rated input speed n_{1N}	rpm	1,2	3 ~ 100	5000	5000	4000	4000	3000	3000	2000
最大输入转速/Maximum input speed n_{1B}		1,2	3 ~ 100	10000	10000	8000	8000	6000	6000	4000
精密背隙/Precision backlash P_1	arcmin	1	3 ~ 10	≤3	≤3	≤3	≤3	≤3	≤3	≤3
		2	15 ~ 100	≤5	≤5	≤5	≤5	≤5	≤5	≤5
标准背隙/Standard backlash P_2	arcmin	1	3 ~ 10	≤5	≤5	≤5	≤5	≤5	≤5	≤5
		2	15 ~ 100	≤8	≤8	≤8	≤8	≤8	≤8	≤8
经济背隙/Economic backlash P_3	arcmin	1	3 ~ 10	≤8	≤8	≤8	≤8	≤8	≤8	≤8
		1,2	15 ~ 100	≤12	≤12	≤12	≤12	≤12	≤12	≤12
扭转刚性/Torsional rigidity	Nm/arcmin	1,2	3 ~ 100	3	7	14	25	50	145	225
容许径向力/Allowable radial force F_{2aB}	N	1,2	3 ~ 100	780	1530	3250	6700	9400	14500	50000
容许轴向力/Allowable axial force F_{2aB}	N	1,2	3 ~ 100	390	765	1625	3350	4700	7250	25000
使用寿命 /Lifespan	hr	1,2	3 ~ 100	20000						
效率 /Efficiency	%	1	3 ~ 10	≥97%						
		2	15 ~ 100	≥94%						
重量 /Weight	kg	1	3 ~ 10	0.6	1.4	3.7	8	16	36	53
		2	15 ~ 100	0.7	1.6	4.2	8.9	17	37	54
使用温度 /Working temperature	℃	1,2	3 ~ 100	-10℃ ~ 90℃						
润滑 /Lubricating		1,2	合成润滑油脂 /Synthetic lubricating grease							
防护等级 /IP Grade		1,2	3 ~ 100	IP65						
安装方向 /Installation direction		1,2	3 ~ 100	任意方向 /In any direction						
噪音值(n1=3000rpm,无负载) Noise level (n1=3000rpm,off load)	dB(A)	1,2	3 ~ 100	≤56	≤58	≤60	≤63	≤65	≤67	≤70

ROTATIONAL INERTIA OF REDUCER

减速机转动惯量

规格 Specification	单位 Unit	节数 Stage	减速比 Ratio	MAE050	MAE070	MAE090	MAE120	MAE155	MAE205	MAE235
转动惯量J1 Rotational inertia J1	kg·cm ²	1	3	0.03	0.16	0.61	3.25	9.21	28.98	69.61
			4	0.03	0.14	0.48	2.74	7.54	23.67	54.37
			5	0.03	0.13	0.47	2.71	7.42	23.29	53.27
			6	0.03	0.13	0.45	2.65	7.25	22.75	51.72
			7	0.03	0.13	0.45	2.62	7.14	22.48	50.97
			8	0.03	0.13	0.44	2.58	7.07	22.59	50.84
		2	10	0.03	0.13	0.44	2.57	7.03	22.51	50.56
			15	0.03	0.03	0.13	0.47	2.71	7.42	23.29
			20	0.03	0.03	0.13	0.47	2.71	7.42	23.29
			25	0.03	0.03	0.13	0.47	2.71	7.42	23.29
			30	0.03	0.03	0.13	0.47	2.71	7.42	23.29
			35	0.03	0.03	0.13	0.47	2.71	7.42	23.29
			40	0.03	0.03	0.13	0.47	2.71	7.42	23.29
			50	0.03	0.03	0.13	0.44	2.57	7.03	22.51
			60	0.03	0.03	0.13	0.44	2.57	7.03	22.51
			70	0.03	0.03	0.13	0.44	2.57	7.03	22.51
			80	0.03	0.03	0.13	0.44	2.57	7.03	22.51
			100	0.03	0.03	0.13	0.44	2.57	7.03	22.51

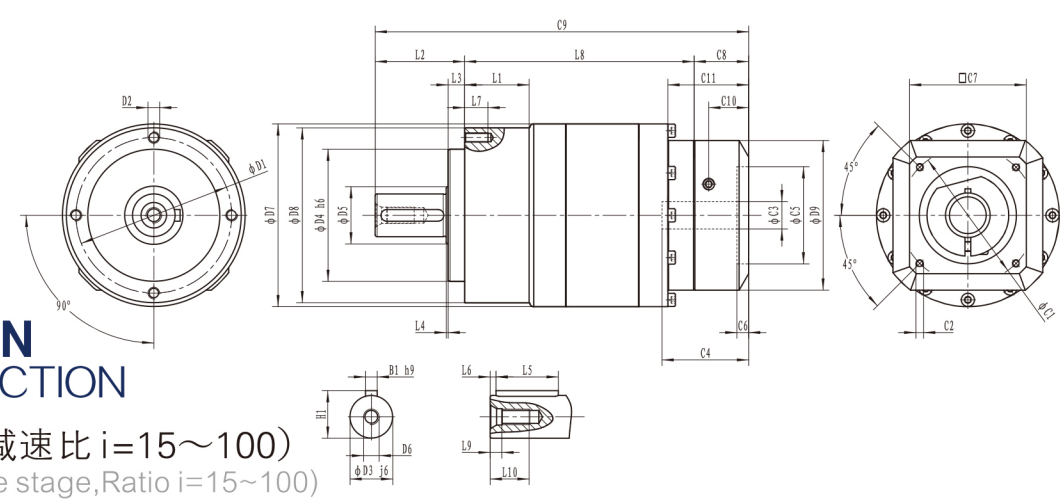
1. 减速比 (i=N_{in}/N_{out})
1. Ratio (i=N_{in}/N_{out})
2. 最大加速力矩 T_{2B} =60% of T_{2NOT}
2. Maximum acceleration torque T_{2B} =60% of T_{2NOT}
3. 输出转速 100rpm ,作用于输出轴中心位置
3. Output speed 100rpm ,acting on the center of the output shaft



DIMENSION
SINGLE SECTION

尺寸 (单节, 减速比*i*=3~10)
Dimension(single stage,Ratio *i*=3~10)

尺寸/Dimension	MAE050	MAE070	MAE090	MAE120	MAE155	MAE205	MAE235
D1	-	62	80	108	140	184	210
D2	-	M5*0.8P	M6*1.0P	M8*1.25P	M10*1.5P	M12*1.75P	M16*2.0P
D3 j6	-	16	22	32	40	55	75
D4 g6	-	52	68	90	120	160	180
D5	-	18	30	40	50	70	85
D6	-	M5*0.8P	M8*1.25P	M12*1.75P	M16*2.0P	M20*2.5P	M20*2.5P
D7	-	64	94	125	150	200	225
D8	-	70	90	120	155	205	235
D9	-	51	77	98	125	160	190
L1	-	20.5	33.5	38	50	52	63
L2	-	36	46	70	97	100	126
L3	-	6.5	8	17	15	15	18
L4	-	1	1	1.5	3	3	3
L5	-	25	32	40	63	70	90
L6	-	2	3	5	5	6	7
L7	-	10	12	16	20	22	28
L8	-	63.5	80.5	97	124.5	136.5	164.5
L9	-	4.8	7.2	10	12	15	15
L10	-	12.5	19	28	36	42	42
C1	-	70	90	145	200	200	235
C2	-	M4*0.7P	M5*0.8P	M8*1.25P	M12*1.75P	M12*1.75P	M12*1.75P
C3	-	≤14/≤16	≤19/≤24	≤28	≤35/≤42	≤42	≤42/≤55
C4	-	35	46.5	67	81	114	117
C5	-	50	70	110	114.3	114.3	200
C6	-	3.5	6	14	19	24	20
C7	-	60	80	130	180	180	220
C8	-	46	30	45.5	57.5	81.5	87.5
C9	-	122.5	156.5	212.5	279	318	377
C10	-	10.5	14.5	25.5	32	43.5	49.5
C11	-	36.5	43.5	65.5	83	111	116.5
B1 h9	-	5	6	10	12	16	20
H1	-	18	24.5	35	43	59	79.5



DIMENSION
DOUBLE SECTION

尺寸 (双节, 减速比*i*=15~100)
Dimension(double stage,Ratio *i*=15~100)

尺寸/Dimension	MAE050	MAE070	MAE090	MAE120	MAE155	MAE205	MAE235
D1	-	62	80	108	140	184	210
D2	-	M5*0.8P	M6*1.0P	M8*1.25P	M10*1.5P	M12*1.75P	M16*2.0P
D3 j6	-	16	22	32	40	55	75
D4 g6	-	52	68	90	120	160	180
D5	-	18	30	40	50	70	85
D6	-	M5*0.8P	M8*1.25P	M12*1.75P	M16*2.0P	M20*2.5P	M20*2.5P
D7	-	64	94	125	150	200	225
D8	-	70	90	120	155	205	235
D9	-	51	77	98	125	160	190
L1	-	20.5	33.5	38	50	52	63
L2	-	36	46	70	97	100	126
L3	-	6.5	8	17	15	15	18
L4	-	1	1	1.5	3	3	3
L5	-	25	32	40	63	70	90
L6	-	2	3	5	5	6	7
L7	-	10	12	16	20	22	28
L8	-	95.5	118	142	185.5	205	240.5
L9	-	4.8	7.2	10	12	15	15
L10	-	12.5	19	28	36	42	42
C1	-	70	90	145	145	200	200
C2	-	M4*0.7P	M5*0.8P	M8*1.25P	M8*1.25P	M12*1.75P	M12*1.75P
C3	-	≤14/≤16	≤16/≤19	≤19/≤24	≤24/≤28	≤35	≤42
C4	-	35	46.5	67	66	80	114
C5	-	50	70	110	110	114.3	114.3
C6	-	3.5	6	14	10	9	24
C7	-	60	80	130	130	180	180
C8	-	48	30	45.5	42.5	47.5	81.5
C9	-	154.5	194	257.5	325	352.5	441.5
C10	-	10.5	14.5	25.5	27	22.5	43.5
C11	-	36.5	41.5	65.5	68	77	111
B1 h9	-	5	6	10	12	16	20
H1	-	18	24.5	35	43	59	79.5