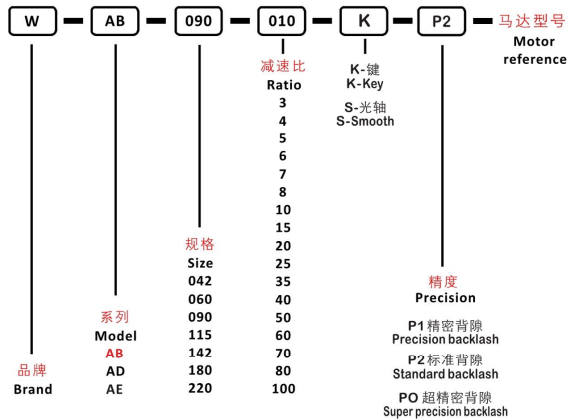




INDICATION FOR MODEL

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	WAB042	WAB060	WAB090	WAB115	WAB142	WAB180	WAB220	
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	
		3	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}	rpm	1,2	3 ~ 100	10000	10000	8000	8000	6000	6000	4000	
超精密背隙 /Super precision backlash P0	arcmin	1	3 ~ 10	-	≤2	≤2	≤2	≤2	≤2	≤2	
	2	15 ~ 100	-	≤3	≤3	≤3	≤3	≤3	≤3	≤3	
精密背隙 /Precision backlash P1	arcmin	1	3 ~ 10	-	≤3	≤3	≤3	≤3	≤3	≤3	
	2	15 ~ 100	-	≤5	≤5	≤5	≤5	≤5	≤5	≤5	
标准背隙 /Standard backlash P2	arcmin	1	3 ~ 10	≤12	≤5	≤5	≤5	≤5	≤5	≤5	
	2	15 ~ 100	≤16	≤8	≤8	≤8	≤8	≤8	≤8	≤8	
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	1.2	3.7	7.8	14.5	29	48	
	2	15 ~ 100	0.8	1.8	4.1	10.8	17.5	33	60		
使用温度 /Working temperature	°C	1,2	3 ~ 100	-10°C ~ 90°C							
润滑 /Lubricating		1,2	合成润滑油 /Synthetic lubricating grease								
防护等级 /IP Grade		1,2	3 ~ 100 IP65								
安装方向 /Installation direction		1,2	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

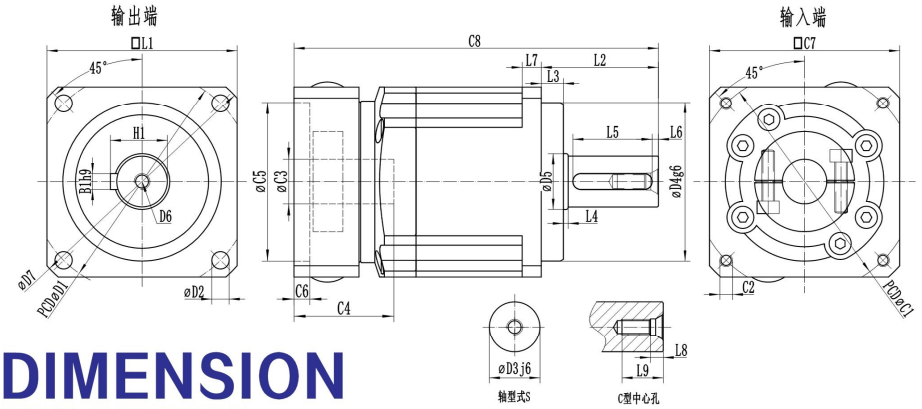
- 减速机转动惯量

规格 Specification	单位 Unit	节数 Stage	减速比 Ratio	WAB042	WAB060	WAB090	WAB115	WAB142	WAB180	WAB220
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
			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
		2	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 ($i=N_n/N_{out}$)
1. Ratio ($i=N_n/N_{out}$)

2. 最大加速力矩 $T_{2B}=60\%$ of T_{2NOT}
2. Maximum acceleration torque $T_{2B}=60\%$ of T_{2NOT}

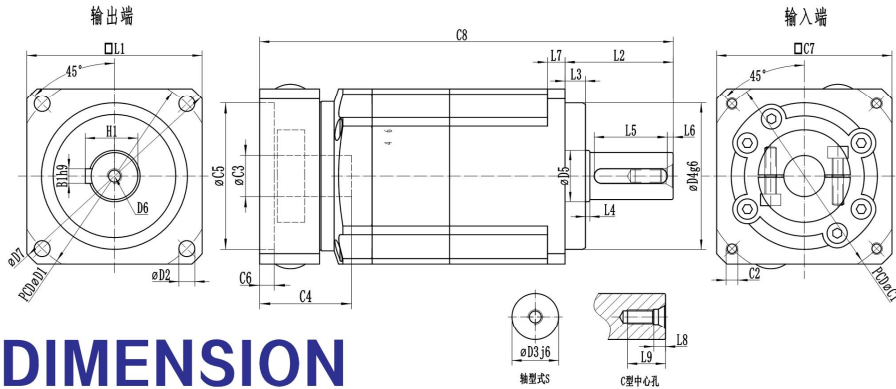
3. 输出转速 100rpm, 作用于输出轴中心位置
3. Output speed 100rpm, acting on the center of the output shaft



DIMENSION SINGLE SECTION

- 尺寸 (单节, 减速比 $i=3 \sim 10$)
Dimension (single stage, Ratio $i=3 \sim 10$)

尺寸/Dimension	WAB042	WAB060	WAB090	WAB115	WAB142	WAB180	WAB220
D1	50	70	100	130	165	215	250
D2	3.5	5.5	6.6	9	11	13	17
D3 j6	13	16	22	32	40	55	75
D4 g6	35	50	80	110	130	160	180
D5	15	18	30	40	50	70	85
D6	M4*0.7P	M5*0.8P	M8*1.25P	M12*1.75P	M16*2.0P	M20*2.5P	M20*2.5P
D7	56	80	116	152	185	240	292
L1	42	60	90	115	142	180	220
L2	26	37	48	65	97	105	138
L3	5.5	7	10	12	15	20	30
L4	1	1.5	1.5	2	3	3	3
L5	16	25	32	40	63	70	90
L6	2	2	3	5	5	6	7
L7	4	6	8	10	12	15	20
L8	4.5	4.8	7.2	10	12	15	15
L9	10	12.5	19	28	36	42	42
C1	46	70	90	90	145	145	200
C2	M4*0.7P	M4	M5	M5	M8	M8	M12
C3	8	≤14	≤19	≤19	≤24	≤24	≤35
C4	26	31.5	41	41	59	60	81
C5	30	50	70	70	110	110	114.3
C6	5	5	5	6	14	14	19
C7	42	60	80	80	130	130	180
C8	86	115	128	145	163	199.5	221.5
B1 h9	5	5	6	10	12	16	20
H1	15	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	WAB042	WAB060	WAB090	WAB115	WAB142	WAB180	WAB220				
D1	50	70	100	130	165	215	250				
D2	3.5	5.5	6.6	9	11	13	17				
D3 j6	13	16	22	32	40	55	75				
D4 g6	35	50	80	110	130	160	180				
D5	15	18	30	40	50	70	85				
D6	M4*0.7P	M5*0.8P	M8*1.25P	M12*1.75P	M16*2.0P	M20*2.5P	M20*2.5P				
D7	56	80	116	152	185	240	292				
L1	42	60	90	115	142	180	220				
L2	26	37	48	65	97	105	138				
L3	5.5	6	10	12	15	20	30				
L4	1	1.5	1.5	2	3	3	3				
L5	16	25	32	40	63	70	90				
L6	2	2	3	5	5	6	7				
L7	4	7	8	10	12	15	20				
L8	4.5	4.8	7.2	10	12	15	15				
L9	10	12.5	19	28	36	42	42				
C1	46	70	90	70	90	145	90	145	145	200	200
C2	M4*0.7P	M4	M5	M4	M5	M8	M5	M8	M8*1.25P	M12*1.75P	M12*1.75P
C3	8	≤14	≤19	≤14	≤19	≤24	≤19	≤24	≤24/≤28	≤35	≤42
C4	26	31.5	41	31.5	41	59	41	60	66	80	114
C5	30	50	70	50	70	110	70	110	110	114.3	114.3
C6	5	5	5	5	6	14	6	14	10	9	24
C7	42	60	80	60	80	130	80	130	130	180	180
C8	107	141.5	154.5	162.5	179	197	214	244.5	340	352.5	441.5
B1 h9	5	5	6	10	12	16	20				
H1	15	18	24.5	35	43	59	79.5				

WAD

Series planetary gearbox
系列行星减速机

FEATURES

产品特点

- » 行星臂架与输出轴采用一体式设计, 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.