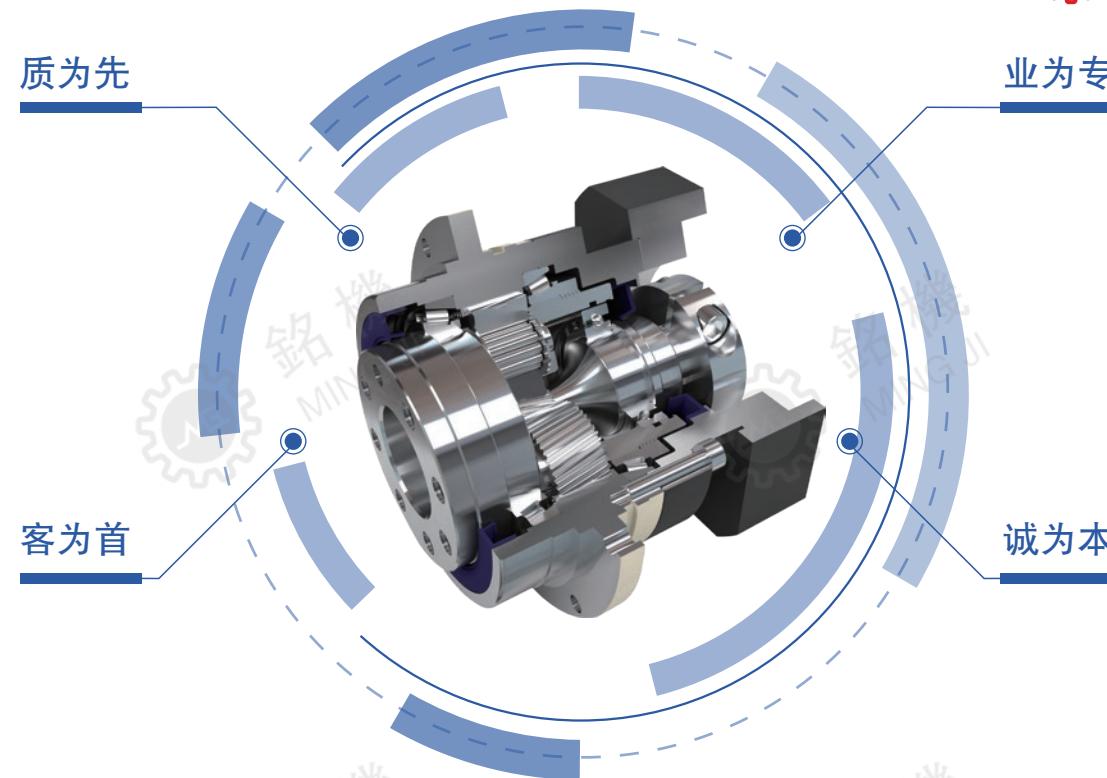


MKD系列—高度灵活
MKD SERIES—HIGHLY FLEXIBLE



MKD系列能够在设计、装配和应用上提供最大的灵活性。
其突出特点是功率密度高且回程间隙低，
特别适合需要高效率 and 扭转刚度的高精度应用。

The MKD series can provide maximum flexibility in design, assembly and application. Its outstanding characteristics are high power density and low backhaul clearance, especially suitable for high-precision applications requiring high efficiency and torsional rigidity.

技术参数* TECHNICAL PARAMETERS

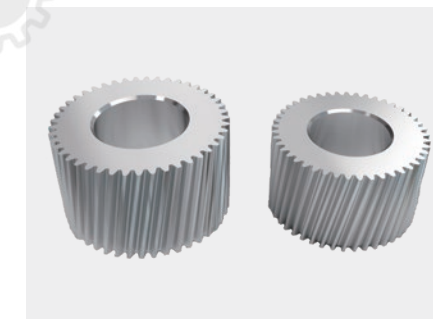
回程间隙 Return clearance	arcmin	1~7
速比 Speed ratio	i	4~100
额定输出力矩 Rated output torque	Nm	14~2000
使用温度℃ Using temperature℃	℃	-10~90
噪音 The noise	dB(A)	56~70
工作效率 The work efficiency	%	97
工作寿命 The working life	h	20000



MKD系列—高度灵活
MKD series-highly flexible



将太阳齿轮输出轴承直接设臂架内, 确保精度和同心度
The sun gear output bearing is directly set inside the arm frame to ensure accuracy and concentricity



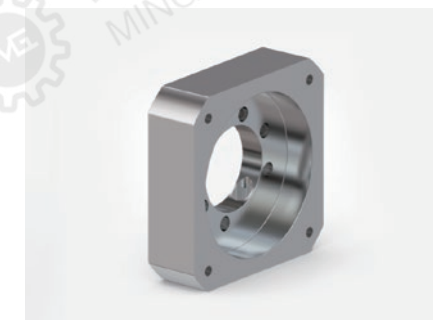
齿面宽, 参数做大, 实现高强度
The tooth surface is wide, the parameters are larger, and the high strength is achieved



太阳齿一体式设计, 确保同心度和扭转刚性
Integrated solar tooth design ensures concentricity and torsional rigidity



先进表面处理耐磨, 耐刮, 耐腐蚀
Advanced surface treatment wear-resistant, scratch-resistant, corrosion-resistant



一体化连接板设计, 与各种伺服, 马达完美配合
Integrated connection board design, perfect coordination with various servo and motors

MKD047				单级/One-stage							双级/Two-stage							
速比 ⁽¹⁾ Speed ratio		i		4	5	6	7	8	9	10	16	20	25	35	40	50	70	100
额定输出力矩(n _{1N}) Rated output torque		T _{2N}	Nm	19	22	20	19	17	14	14	19	19	22	19	17	22	19	14
紧急制动力矩 Emergency braking torque (在减速机工作寿命内允许1000次) (1000 times during the working life of the reducer)		T _{2NOT}	Nm	3倍额定输出力矩/3 Times rated output torque														
额定输入转速 (T _{2n} , 20℃环境温度) Rated input speed (T _{2n} , 20 °C ambient temperature)		n _{1N}	rpm	5000														
最大输入转速 Maximum input speed		n _{1max}	rpm	10000														
空载力矩 (n _l =3000rpm, 20℃环境温度) No-load torque (n _l =3000 RPM, 20℃ ambient temperature)		T ₀₁₂	Nm	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1
回程间隙PS Backlash PS		j _t	Arcmin	≤1							≤2							
回程间隙P0 Backlash P0		j _t	Arcmin	≤2							≤3							
回程间隙P1 Backlash P1		j _t	Arcmin	≤3							≤5							
回程间隙P2 Backlash P2		j _t	Arcmin	≤5							≤7							
扭转刚度 Torsional stiffness		C _{t21}	Nm/Arcmin	3														
最大轴向力 ⁽²⁾ Maximum axial force		F _{2AMax}	N	990														
最大倾侧力矩 Maximum bending torque		F _{2RMax}	Nm	43														
工作效率 Work efficiency		η	%	97							94							
工作寿命 ⁽³⁾ Service life		L _h	h	20000														
噪音 (i=10和n ₁ =3000rpm, 空载) Noise (i=10 and n _l =3000rpm, no load)		L _{PA}	DB(A)	≤56														
重量 Weight		m	Kg	0.6							0.8							
安装方向 Installation direction				任意方向/Any direction														
使用温度 ⁽⁴⁾ Operating temperature		℃		-10~90														
润滑方式 Lubrication method				终生润滑/Lifetime lubrication														
防护等级 Protection level				IP65														
转动惯量 Moment of inertia 按减速机输入直径(mm) Input diameter based on the reducer(mm)	8	J ₁	Kgcm ²	0.06	0.05	0.05	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02
	11	J ₁	Kgcm ²	0.13	0.12	0.12	0.12	0.11	0.07	0.06	0.1	0.08	0.08	0.07	0.07	0.06	0.06	0.05
	14	J ₁	Kgcm ²	0.16	0.15	0.14	0.13	0.12	0.09	0.08	0.12	0.11	0.1	0.1	0.09	0.09	0.07	0.06

1.可选其他减速比

2.输出轴中心点

3.连续运转时,使用寿命为10000h

4.对温度有特殊要求请与铭机联系

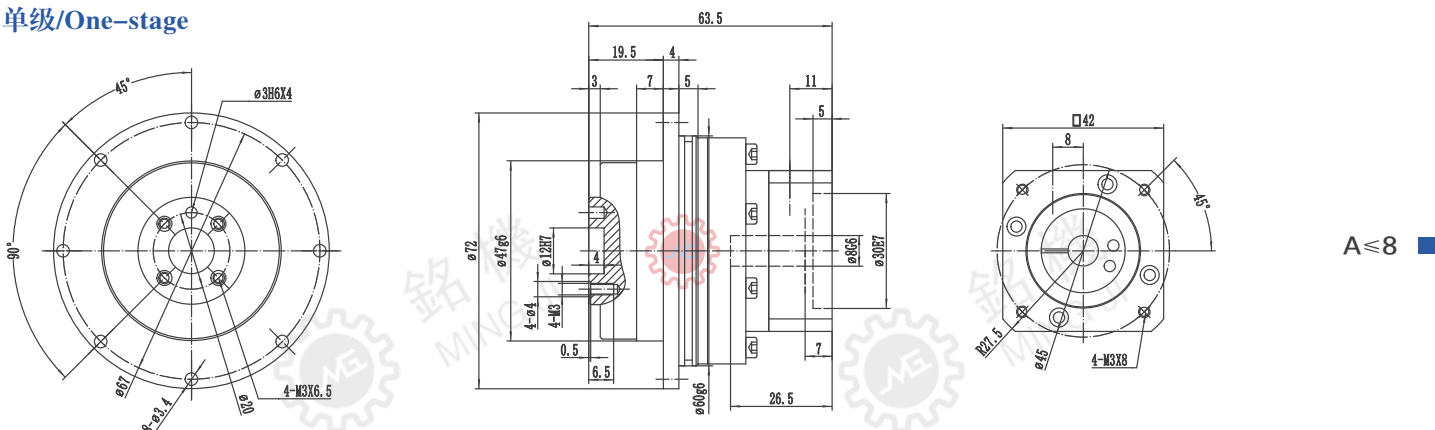
1. Optional other ratio

2.output shaft center point

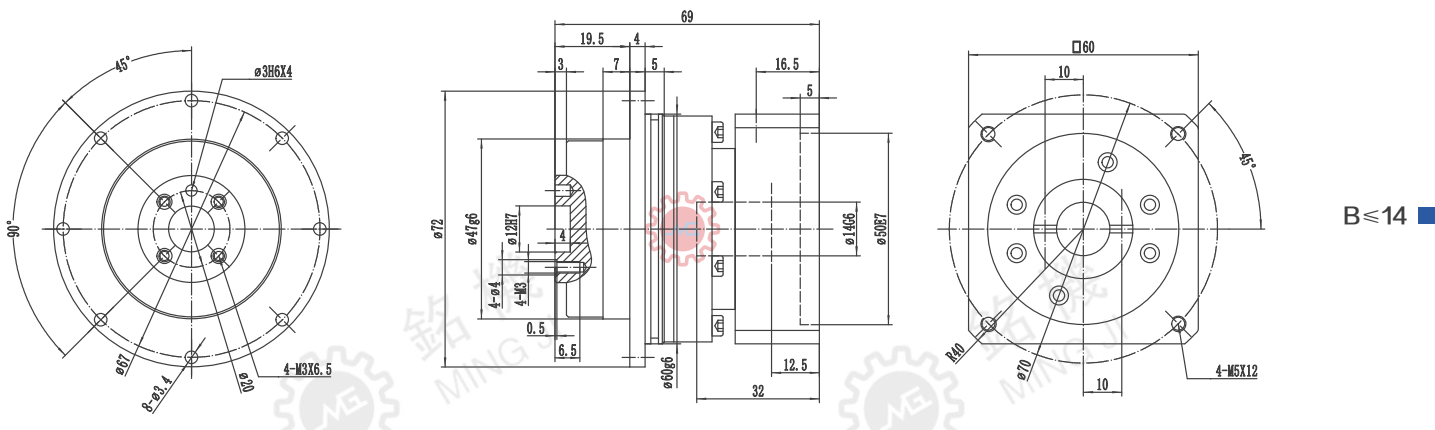
3. Service life of 10000h in continuous operation

4. For special requirements on temperature, please contact MG

单级/One-stage

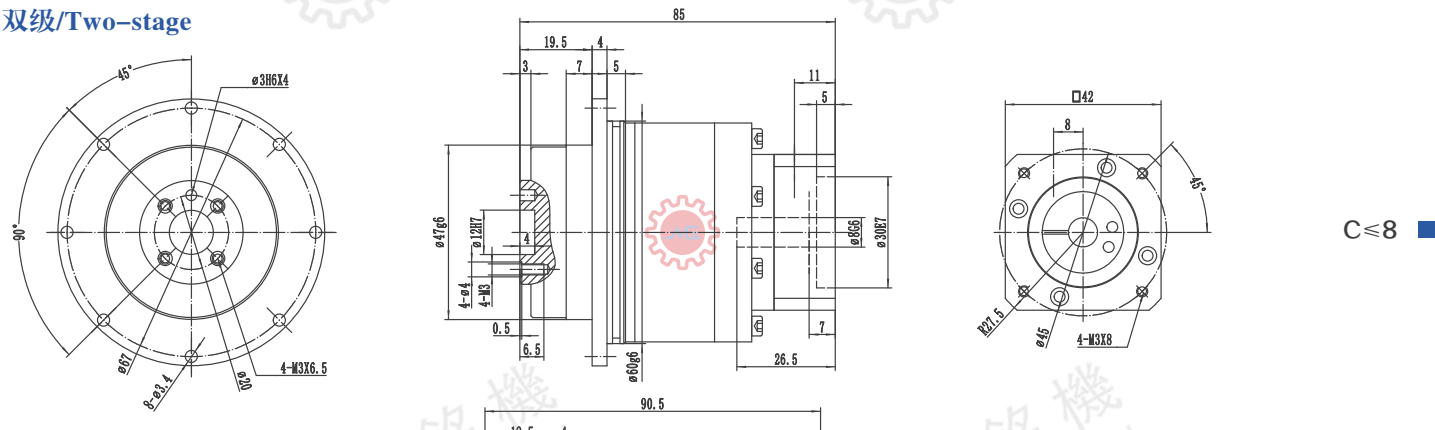


A ≤ 8

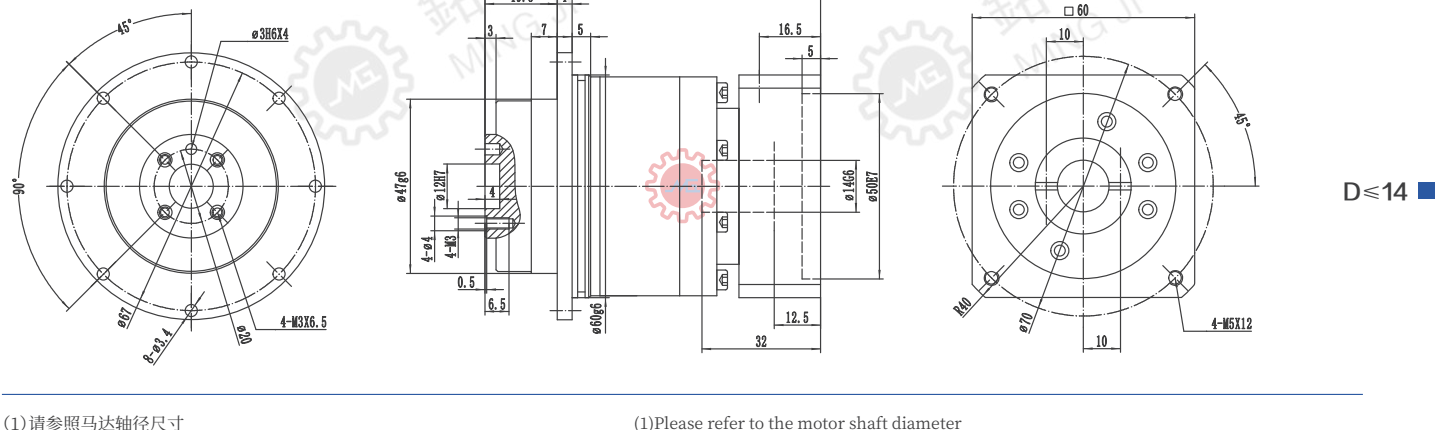


B ≤ 14

双级/Two-stage



C ≤ 8



D ≤ 14

(1) 请参照马达轴径尺寸

(2) 马达轴最长长度, 如有特殊的马达轴尺寸, 请与铭机联络

(3) 减速机输入端尺寸, 依马达的法兰面而定

*如无适合的尺寸, 请与铭机联系

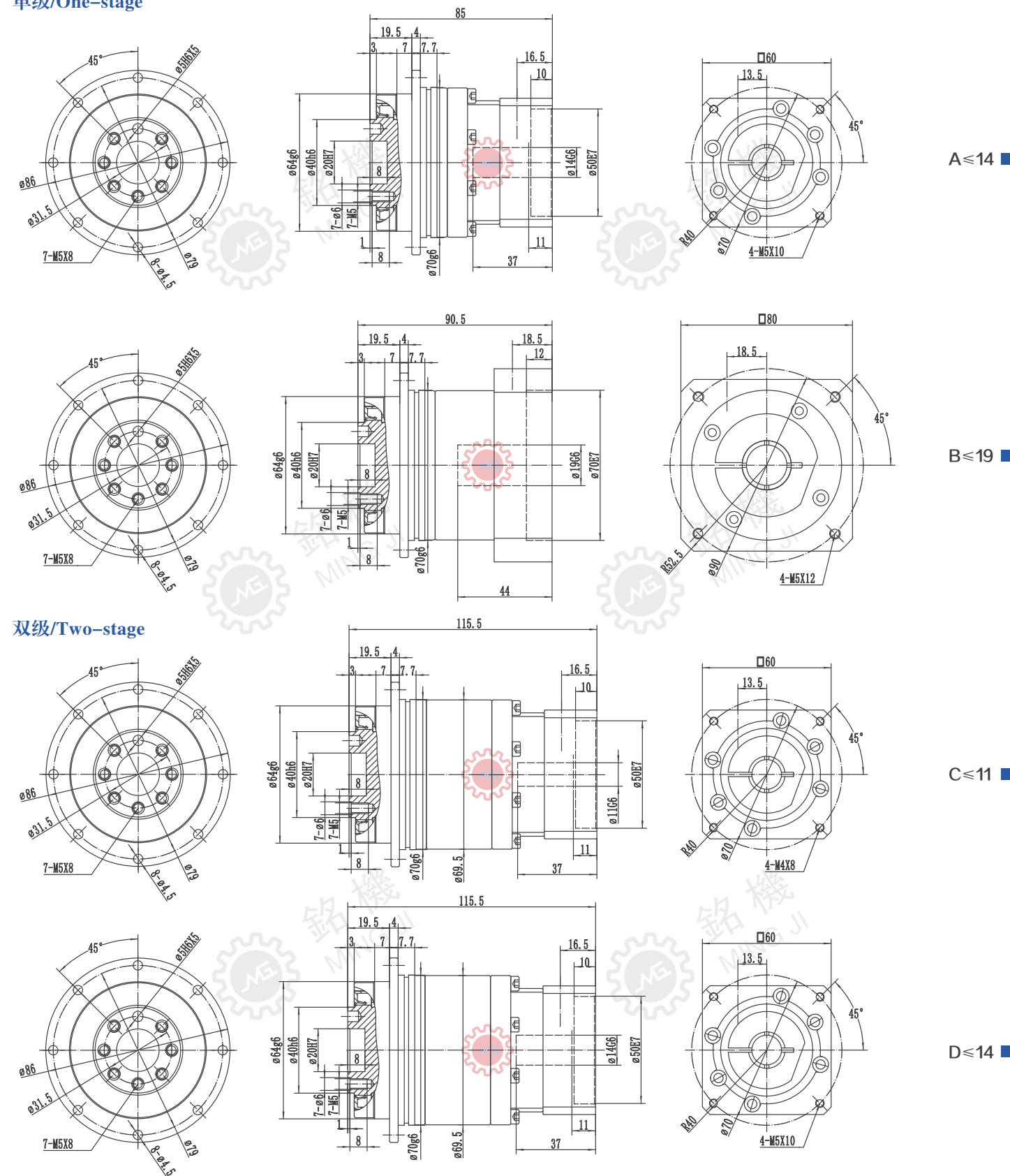
(1) Please refer to the motor shaft diameter

(2) Motor shaft length, for special motor shaft size, please contact MG

(3) Reducer input size, depending on the flange surface of the motor

*If no suitable size available, please contact MG

单级/One-stage



1. Optional other ratio
2. Output shaft center point
3. Service life of 10000h in continuous operation
4. For special requirements on temperature, please contact MG

(1) 请参照马达轴径尺寸
(2) 马达轴最长长度, 如有特殊的马达轴尺寸, 请与铭机联络
(3) 减速机输入端尺寸, 依马达的法兰面而定
*如无适合的尺寸, 请与铭机联系

(1)Please refer to the motor shaft diameter
(2)Motor shaft length,for special motor shaft size,please contact MG
(3)Reducer input size,depending on the flange surface of the motor
*If no suitable size available,please contact MG

MKD090				单级/One-stage							双级/Two-stage							
速比 ⁽¹⁾ Speed ratio	i			4	5	6	7	8	9	10	16	20	25	35	40	50	70	100
额定输出力矩(n _{1N}) Rated output torque	T _{2N}	Nm	140	160	140	140	120	100	100	140	140	160	140	140	160	120	100	
紧急制动力矩 Emergency braking torque (在减速机工作寿命内允许1000次) (1000 times during the working life of the reducer)	T _{2NOT}	Nm	3倍额定输出力矩/3 Times rated output torque															
额定输入转速 (T2n, 20℃环境温度) Rated input speed (T2n, 20℃ ambient temperature)	n _{1N}	rpm	3000															
最大输入转速 Maximum input speed	n _{1max}	rpm	6000															
空载力矩 (nl=3000rpm, 20℃环境温度) No-load torque (nl=3000 RPM, 20℃ ambient temperature)	T ₀₁₂	Nm	1.7	1.6	1.5	1.4	1.1	0.8	0.7	0.8	0.7	0.6	0.5	0.5	0.4	0.3	0.3	
回程间隙PS Backlash PS	j _t	Arcmin	≤1								≤2							
回程间隙P0 Backlash P0	j _t	Arcmin	≤2								≤3							
回程间隙P1 Backlash P1	j _t	Arcmin	≤3								≤5							
回程间隙P2 Backlash P2	j _t	Arcmin	≤5								≤7							
扭转刚度 Torsional stiffness	C _{t21}	Nm/Arcmin	14															
最大轴向力 ⁽²⁾ Maximum axial force	F _{2AMax}	N	2850															
最大倾侧力矩 Maximum bending torque	F _{2RMax}	Nm	235															
工作效率 Work efficiency	η	%	97								94							
工作寿命 ⁽³⁾ Service life	L _h	h	20000															
噪音 (i=10和n1=3000rpm, 空载) Noise (i=10 and nl=3000rpm, no load)	L _{PA}	DB(A)	≤60															
重量 Weight	m	Kg	3.9								4.6							
安装方向 Installation direction			任意方向/Any direction															
使用温度 ⁽⁴⁾ Operating temperature	℃		-10~90															
润滑方式 Lubrication method			终生润滑/Lifetime lubrication															
防护等级 Protection level			IP65															
转动惯量 Moment of inertia 按减速机输入直径(mm) Input diameter based on the reducer(mm)	19	J ₁	Kgcm ²	1.3	1.2	1.1	0.9	0.8	0.7	0.6	0.23	0.21	0.2	0.18	0.18	0.18	0.16	0.16
	22	J ₁	Kgcm ²	2.1	2	2	1.8	1.7	1.5	1.5	0.7	0.7	0.7	0.7	0.7	0.6	0.5	0.5
	24	J ₁	Kgcm ²	2.4	2.3	2.3	2.2	2.2	2.1	2.1	0.8	0.07	0.7	0.7	0.7	0.65	0.6	0.6

1.可选其他减速比

2.输出轴中心点

3.连续运转时,使用寿命为10000h

4.对温度有特殊要求请与铭机联系

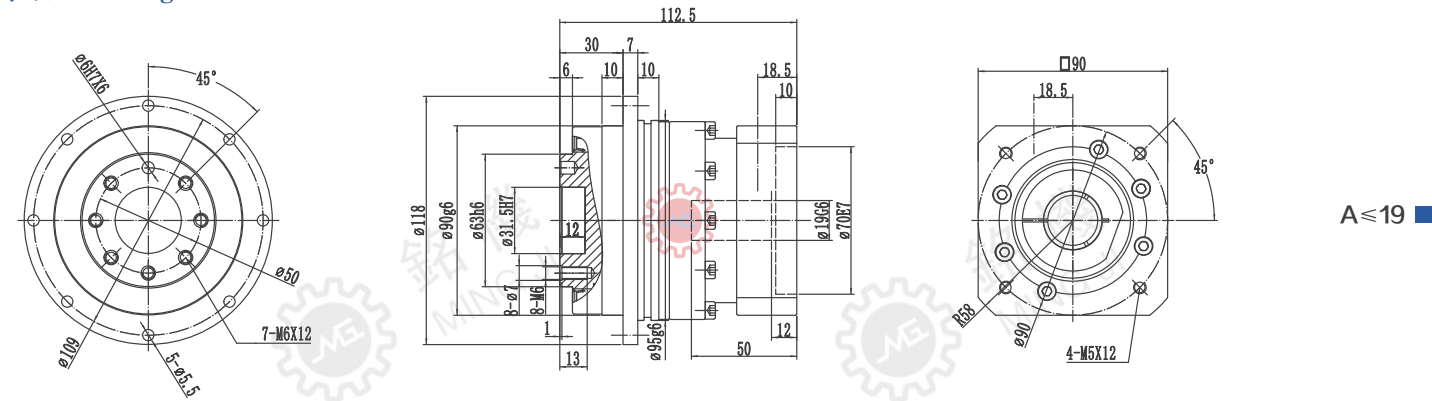
1. Optional other ratio

2.output shaft center point

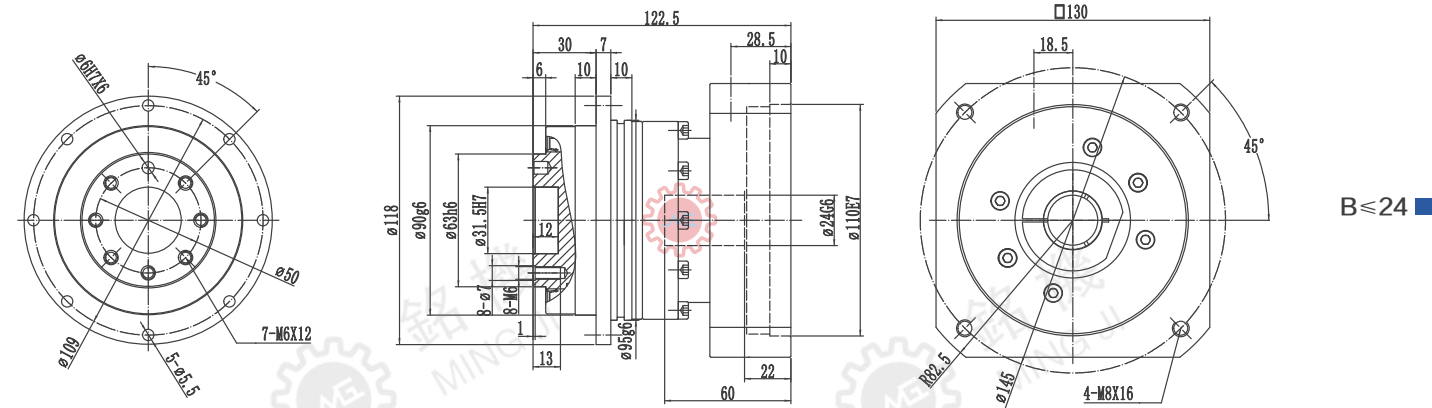
3. Service life of 10000h in continuous operation

4. For special requirements on temperature, please contact MG

单级/One-stage

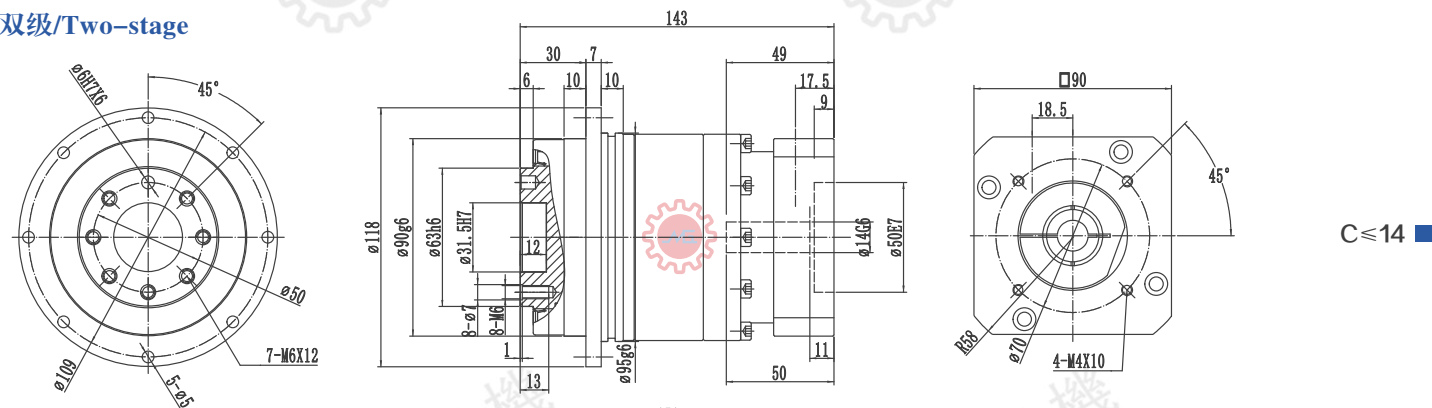


A≤19

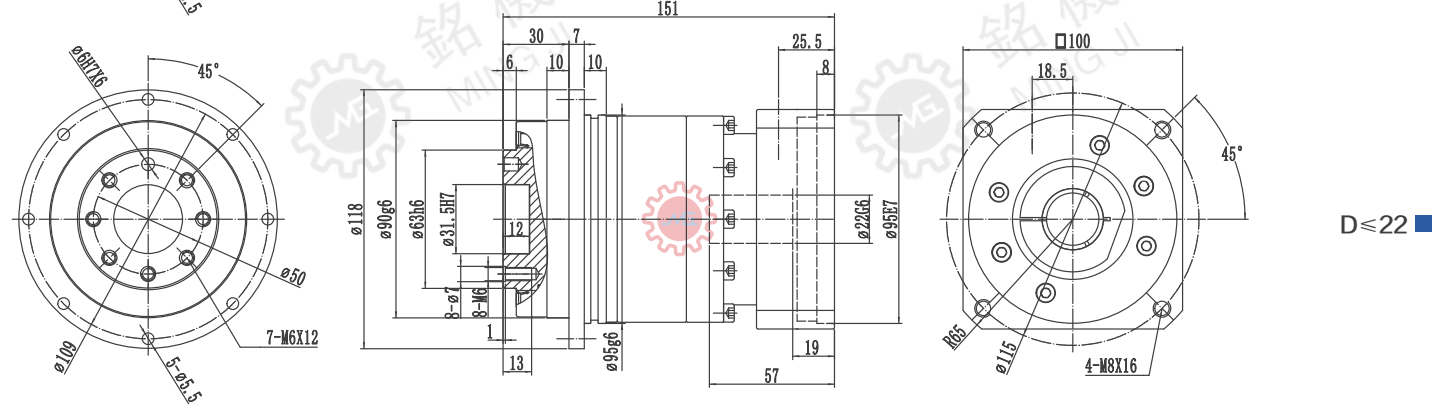


B≤24

双级/Two-stage



C≤14



D≤22

(1) 请参照马达轴径尺寸

(2) 马达轴最长长度, 如有特殊的马达轴尺寸, 请与铭机联络

(3) 减速机输入端尺寸, 依马达的法兰面而定

*如无适合的尺寸, 请与铭机联系

(1)Please refer to the motor shaft diameter

(2)Motor shaft length,for special motor shaft size,please contact MG

(3)Reducer input size,depending on the flange surface of the motor

*If no suitable size available,please contact MG

減速機性能資料 REDUCER PERFORMANCE DATA

双级/Two-stage

Technical drawings of three double-stage centrifugal pump models: 100D, 150D, and 200D. Each model is shown with three views: a front view (top left), a side view (top middle), and a rear view (top right). The front views show the pump's circular footprint with 12 mounting holes and a central shaft. The side views show the pump's profile with dimensions for mounting flange, shaft, and housing. The rear views show the pump's back with dimensions for mounting flange, shaft, and housing. The models are labeled 100D, 150D, and 200D at the bottom of each set of drawings.

- | | |
|---------------------------------|---|
| (1) 请参照马达轴径尺寸 | (1) Please refer to the motor shaft diameter |
| (2) 马达轴最长长度, 如有特殊的马达轴尺寸, 请与铭机联络 | (2) Motor shaft length, for special motor shaft size, please contact MG |
| (3) 减速机输入端尺寸, 依马达的法兰面而定 | (3) Reducer input size, depending on the flange surface of the motor |
| *如无适合的尺寸, 请与铭机联系 | *If no suitable size available, please contact MG |

减速机性能资料 REDUCER PERFORMANCE DATA

MKD142				单级/One-stage							双级/Two-stage							
速比 ⁽¹⁾ Speed ratio		i		4	5	6	7	8	9	10	16	20	25	35	40	50	70	100
额定输出力矩(n _{1N}) Rated output torque		T _{2N}	Nm	542	650	550	550	500	450	450	542	542	650	550	542	650	550	450
紧急制动力矩 Emergency braking torque (在减速机工作寿命内允许1000次) (1000 times during the working life of the reducer)		T _{2NOT}	Nm	3倍额定输出力矩/3 Times rated output torque														
额定输入转速 (T _{2n} , 20℃环境温度) Rated input speed (T _{2n} , 20℃ ambient temperature)		n _{1N}	rpm	3000														
最大输入转速 Maximum input speed		n _{1max}	rpm	6000														
空载力矩 (n _l =3000rpm, 20℃环境温度) No-load torque (n _l =3000 RPM, 20℃ ambient temperature)		T ₀₁₂	Nm	6	4.7	4.5	3.5	2.5	2.5	2.5	2.8	2.6	2.2	2.0	1.9	1.8	1.6	1.5
回程间隙PS Backlash PS		j _t	Arcmin	≤1							≤2							
回程间隙P0 Backlash P0		j _t	Arcmin	≤2							≤3							
回程间隙P1 Backlash P1		j _t	Arcmin	≤3							≤5							
回程间隙P2 Backlash P2		j _t	Arcmin	≤5							≤7							
扭转刚度 Torsional stiffness		C _{t21}	Nm/Arcmin	50														
最大轴向力 ⁽²⁾ Maximum axial force		F _{2AMax}	N	10590														
最大倾侧力矩 Maximum bending torque		F _{2RMax}	Nm	1300														
工作效率 Work efficiency		η	%	97							94							
工作寿命 ⁽³⁾ Service life		L _h	h	20000														
噪音 (i=10和n _l =3000rpm, 空载) Noise (i=10 and n _l =3000rpm, no load)		L _{PA}	DB(A)	≤65														
重量 Weight		m	Kg	16							20							
安装方向 Installation direction				任意方向/Any direction														
使用温度 ⁽⁴⁾ Operating temperature		℃		-10~90														
润滑方式 Lubrication method				终生润滑/Lifetime lubrication														
防护等级 Protection level				IP65														
转动惯量 Moment of inertia 按减速机输入直径(mm) Input diameter based on the reducer(mm)	19	J ₁	Kgcm ²	8	8	7.2	7	6.5	5.8	5.5	2.2	2	1.7	1.7	1.6	14	14	14
	24	J ₁	Kgcm ²	12	11	10	10	9.5	9.5	9	3.2	3	2.9	2.7	2.5	2.3	2.2	2
	35	J ₁	Kgcm ²	25	24.5	24.1	23.5	23	22.5	22	12	11	10	10	9.5	9.5	9	9

1.可选其他减速比

2.输出轴中心点

3.连续运转时,使用寿命为10000h

4.对温度有特殊要求请与铭机联系

1. Optional other ratio

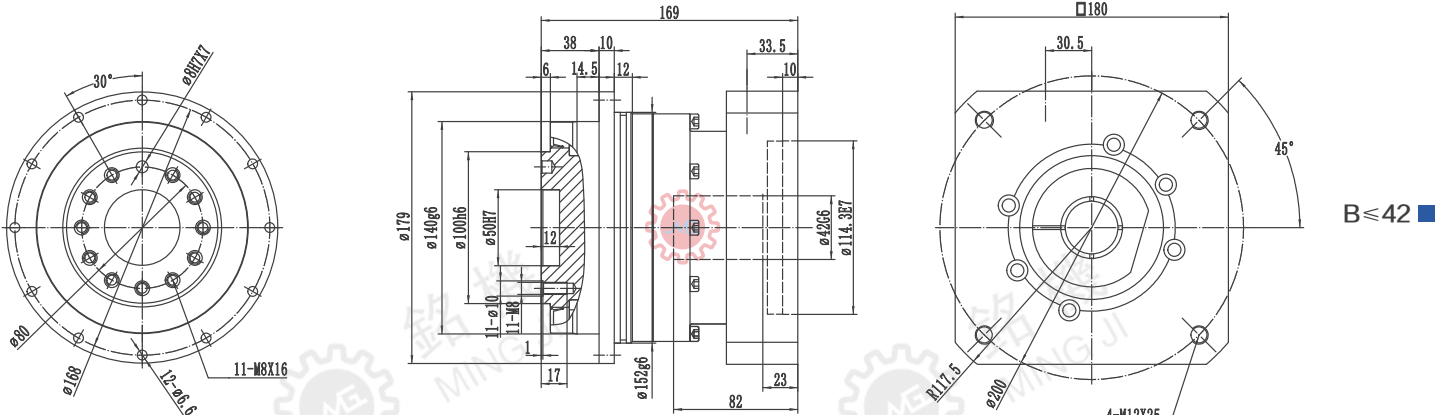
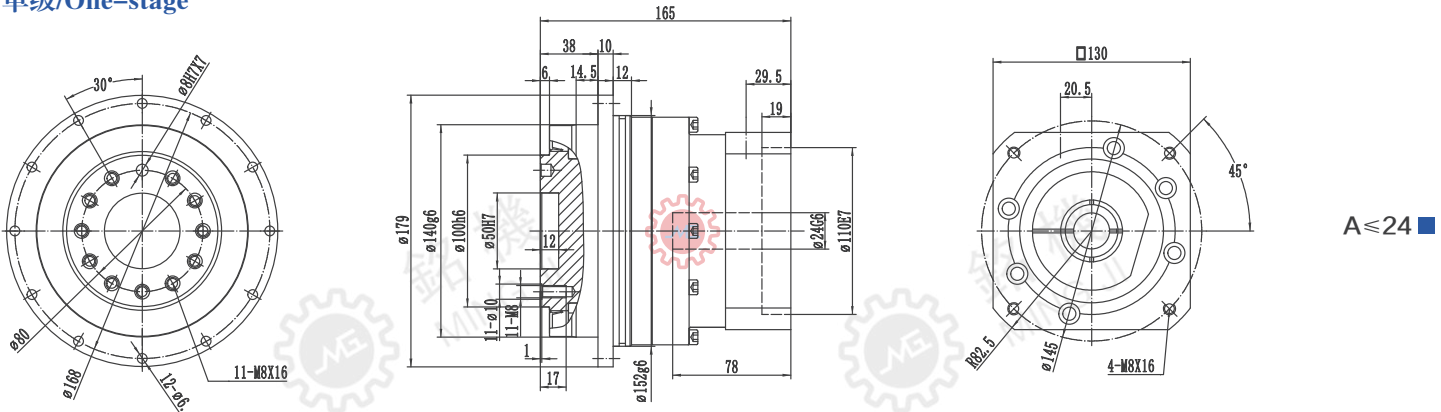
2. Output shaft center point

3. Service life of 10000h in continuous operation

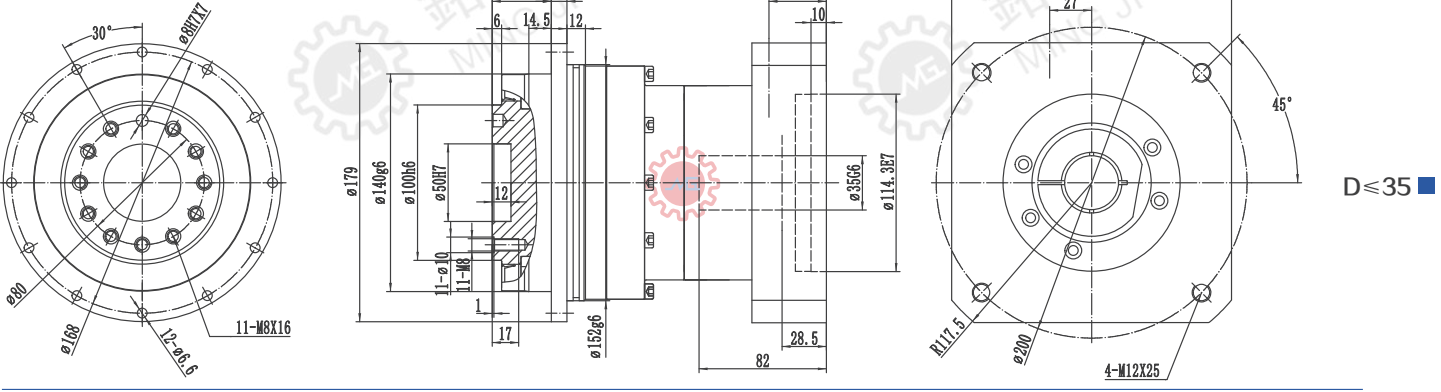
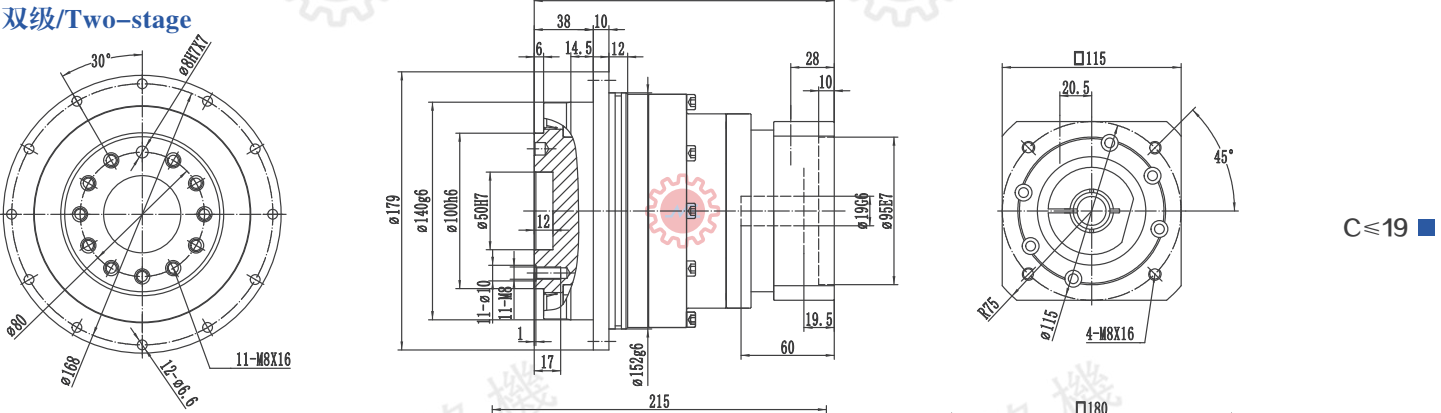
4. For special requirements on temperature, please contact MG

减速机性能资料 REDUCER PERFORMANCE DATA

单级/One-stage



双级/Two-stage



(1)请参照马达轴径尺寸

(2)马达轴最长长度, 如有特殊的马达轴尺寸, 请与铭机联络

(3)减速机输入端尺寸, 依马达的法兰面而定

*如无适合的尺寸, 请与铭机联系

(1)Please refer to the motor shaft diameter

(2)Motor shaft length, for special motor shaft size, please contact MG

(3)Reducer input size, depending on the flange surface of the motor

*If no suitable size available, please contact MG

減速機性能資料 REDUCER PERFORMANCE DATA

1.可选其他减速比	1. Optional other ratio
2.输出轴中心点	2.Output shaft center point
3.连续运转时,使用寿命为10000h	3. Service life of 10000h in continuous operation
4.对温度有特殊要求请与铭机联系	4. For special requirements on temperature, please contact MG

双级/Two-stage



减速机性能资料 REDUCER PERFORMANCE DATA

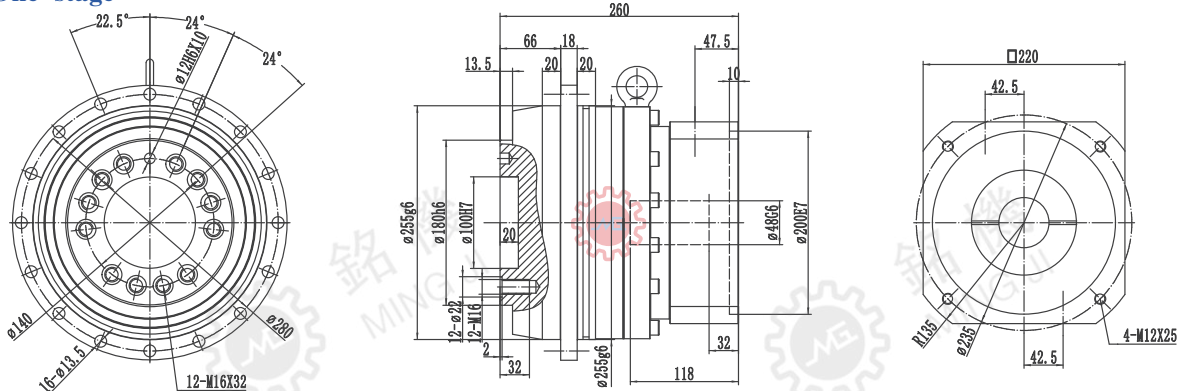
MKD255				单级/One-stage							双级/Two-stage							
速比 ⁽¹⁾ Speed ratio		i		4	5	6	7	8	9	10	16	20	25	35	40	50	70	100
额定输出力矩(n _{1N}) Rated output torque		T _{2N}	Nm	1700	2000	1800	1800	1600	1500	1500	1700	1700	2000	1800	1700	2000	1800	1500
紧急制动力矩 (在减速机工作寿命内允许1000次) (1000 times during the working life of the reducer)		T _{2NOT}	Nm	3倍额定输出力矩/3 Times rated output torque														
额定输入转速 (T2n, 20℃环境温度) Rated input speed (T2n,20℃ ambient temperature)		n _{1N}	rpm	2000														
最大输入转速 Maximum input speed		n _{1max}	rpm	4000														
空载力矩 (nl=3000rpm, 20℃环境温度) No-load torque (nl=3000 RPM,20℃ambient temperature)		T ₀₁₂	Nm	22	17	8	6	5	4.5	3.5	11	11	9	9	8	7	6.8	5
回程间隙PS Backlash PS		j _t	Arcmin	≤1							≤2							
回程间隙P0 Backlash P0		j _t	Arcmin	≤2							≤3							
回程间隙P1 Backlash P1		j _t	Arcmin	≤3							≤5							
回程间隙P2 Backlash P2		j _t	Arcmin	≤5							≤7							
扭转刚度 Torsional stiffness		C _{t21}	Nm/Arcmin	225														
最大轴向力 ⁽²⁾ Maximum axial force		F _{2AMax}	N	30000														
最大倾侧力矩 Maximum bending torque		F _{2RMax}	Nm	5900														
工作效率 Work efficiency		η	%	97							94							
工作寿命 ⁽³⁾ Service life		L _h	h	20000														
噪音 (i=10和n1=3000rpm, 空载) Noise (i=10 and nl=3000rpm, no load)		L _{PA}	DB(A)	≤70														
重量 Weight		m	Kg	48							62							
安装方向 Installation direction				任意方向/Any direction														
使用温度 ⁽⁴⁾ Operating temperature		℃		-10~90														
润滑方式 Lubrication method				终生润滑/Lifetime lubrication														
防护等级 Protection level				IP65														
转动惯量 Moment of inertia 按减速机输入直径(mm) Input diameter based on the reducer (mm)	42	J ₁	Kgcm ²	70	68	65	55	52	45	40	16	15.5	14	14	13	12	10.8	9.5
	55	J ₁	Kgcm ²	95	77	75	68	65	60	55	28	27	26.5	25.5	24	23	21	19.5

1.可选其他减速比
2.输出轴中心点
3.连续运转时,使用寿命为10000h
4.对温度有特殊要求请与铭机联系

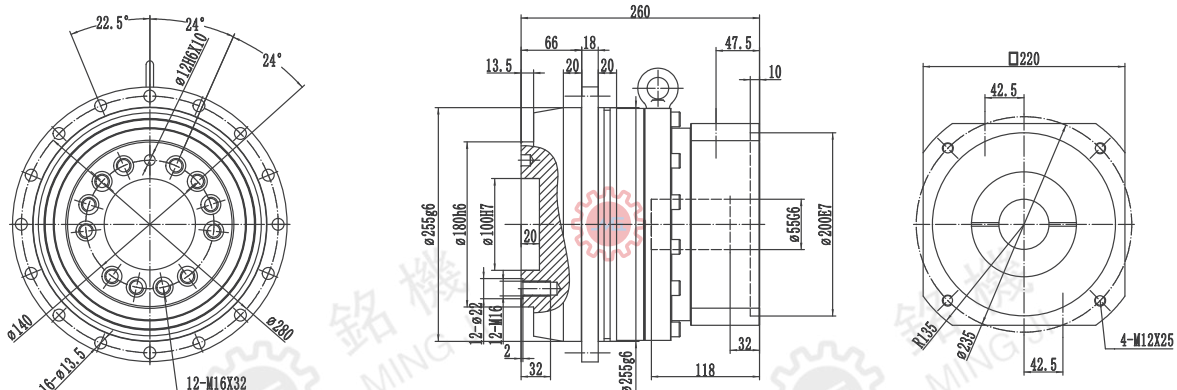
1. Optional other ratio
2.output shaft center point
3. Service life of 10000h in continuous operation
4. For special requirements on temperature, please contact MG

减速机性能资料 REDUCER PERFORMANCE DATA

单级/One-stage

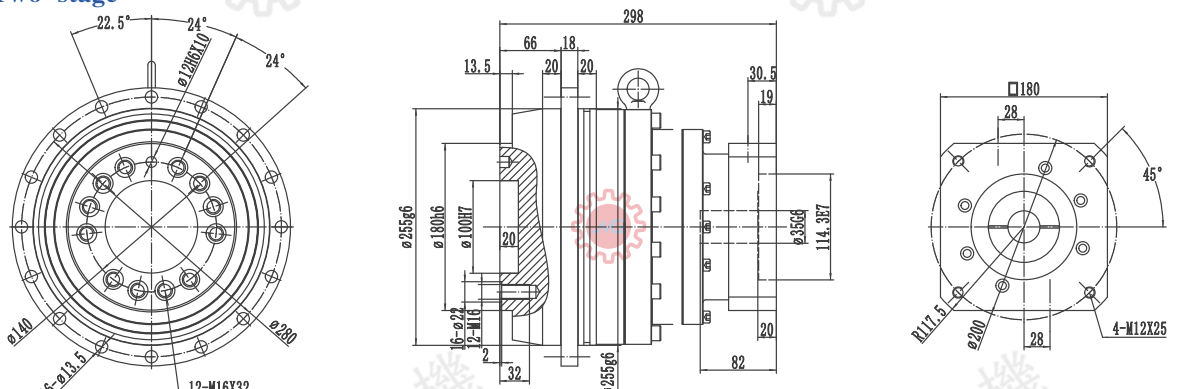


A≤48

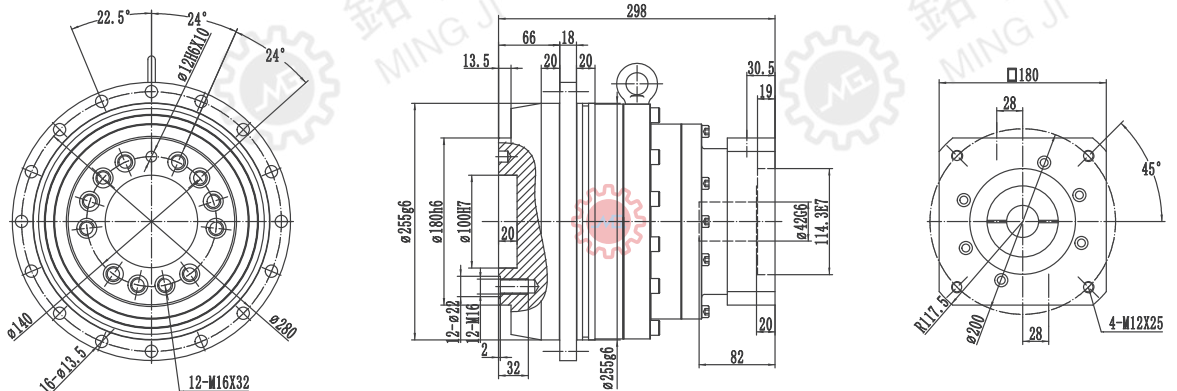


B≤55

双级/Two-stage



C≤35



D≤42

(1) 请参照马达轴径尺寸
(2) 马达轴最长长度, 如有特殊的马达轴尺寸, 请与铭机联络
(3) 减速机输入端尺寸, 依马达的法兰面而定
*如无适合的尺寸, 请与铭机联系

(1)Please refer to the motor shaft diameter
(2)Motor shaft length,for special motor shaft size,please contact MG
(3)Reducer input size,depending on the flange surface of the motor
*If no suitable size available,please contact MG