

直交轴齿轮箱 Bevel-helical gear units  
逆止器 Backstops

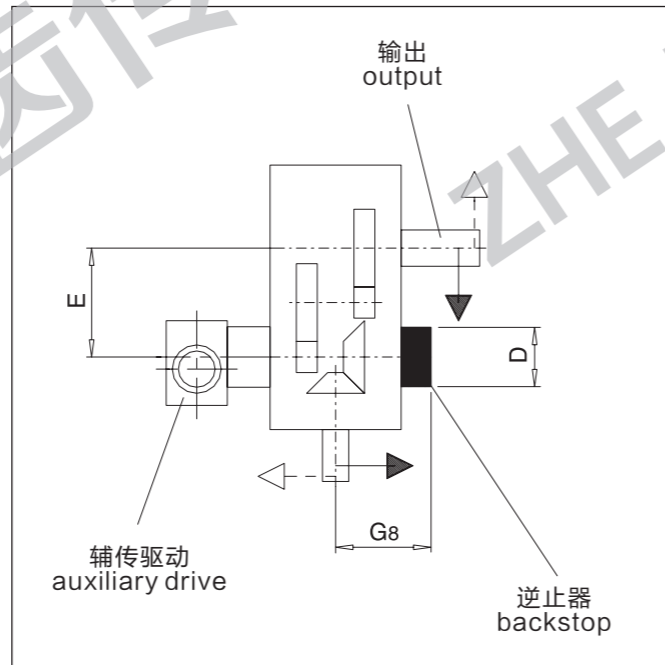
类型 TYPES EB3...  
规格 SIZES 4...18

标准逆止器布置及输入输出转向关系  
Standard backstop arrangement and dependence of direction of rotation

类型 Type	布置形式 Design	
	B	D
EB3SH		
EB3HH		
EB3DH		

型号/types EB3.H

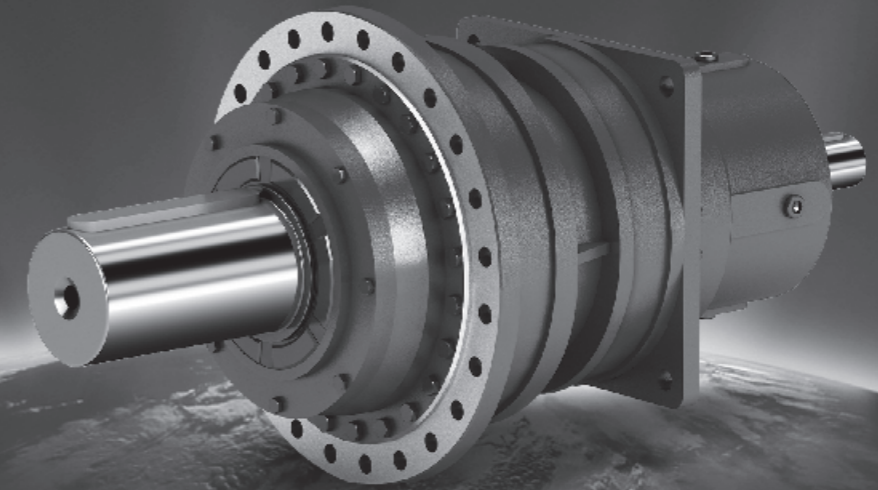
规格 Sizes	E mm	G8 mm	D mm	
4	270	193	188*	132 132*
5	315	218	213*	150 160*
6	350	218	213*	150 160*
7	385	273	266*	190 195*
8	430	273	266*	190 195*
9	450	347	327*	210 230*
10	500	347	327*	210 230*
11	545	397	342*	210 280*
12	615	397	342*	210 280*
13	635	453	433*	290 320*
14	705	453	433*	290 320*
15	762	500	476*	290 400*
16	808	500	476*	290 400*
17	860	532	508*	290 400*
18	920	532	508*	290 400*



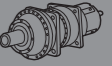
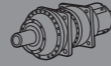
注：不带\*列为采用国产逆止器、超越离合器时尺寸，带\*列为选用国外逆止器、超越离合器时尺寸。  
Note: Without \* is the dimension using domestic backstop and overrunning clutch and with \* is the dimension using imported backstop and overrunning clutch.

# \*EQ Series

行星齿轮减速机  
Planetary Gear Reducer



EVERGEAR



1 概述  
Overview:

- EQ系列是一种具有一个或两个自由度轮系的齿轮减速机。
- 设计模块化, 可灵活变化组合类型。
- 体积小、重量轻、传动比范围大、效率高、工作平稳。
- 箱体采用高刚性及高抗震性的球墨铸铁材料。
- 输入方式: 同轴式、平行轴式、直交轴式、直交平行轴式。
- 输出方式: 胀紧盘空心轴渐开线花键空心轴 (DIN标准), 渐开线花键空心轴 (国标), 平键空心轴, 渐开线花键空心轴 (DIN标准), 渐开线花键空心轴 (国标)。

- EQ series is a kind of gear speed reducer with one or two free wheels.
- Combination types can be freely changed with Modulized Design.
- Small volume, light weight, large range of transmission ratio, high efficiency and stable operation.
- The tank body is made of ductile iron of high rigidity and high anti-shock performance.
- Input mode: coaxial type, parallel shaft type, right angle shaft type, right angle parallel shaft type.
- Output mode: expansion plate hollow shaft, involute spline hollow shaft(DIN standard), involute spline hollow shaft(national standard), flat key solid shaft, involute spline solid shaft(DIN standard), involute Spline solid shaft(national standard).

2 场所条件  
Working Environment:

- 环境温度-40℃-50℃。(0℃以下启动时润滑油需加热到0℃以上。)
- 海拔不超过1000米。
- 相对湿度85%以下。
- 输入转速不大于1800r/min。
- 可用于正反运转。
- 无行业限制。
- 其它条件下请与我们联系。

- Working temperature:-40℃-50℃(The lubrication should be heated until above 0℃ if the machine works below 0℃.)
- The working place should be lower than 1,000 meters above sea level.
- Relative humidity: less than 85%.
- The input rotational speed should not exceed 1800r/min.
- Suitable for normal-reverse rotation.
- Without industry limitation.
- Please consult us for other circumstances.

3 选型指南  
Instructions for Selection

EQ系列减速机的选用须从机械强度及热平衡容量两项内容进行校核。  
During the selection of EQ series speed reducer, verification to mechanical strength and thermal balance capacity shall be made.

1. 传动比计算  
Calculation of transmission ratio

$$i = \frac{n_1}{n_2}$$

式中  
In the formula

<b>i</b>	所需传动比 Required transmission ratio
<b>n<sub>1</sub></b>	输入转速r/min Input rotation speed r/min
<b>n<sub>2</sub></b>	输出转速r/min Output rotation speed r/min

2. 减速机规格确定  
Confirmation of speed reducer specification

a. 所需输入功率计算  
Calculation of required input power

$$P_1 = \frac{T_2 \times n_1}{9550 \times i \times \eta}$$

式中  
In the formula

<b>P<sub>1</sub></b>	所需输入功率 (kw) Required input power(kw)
<b>T<sub>2</sub></b>	所需输出转矩 (N·m) Output torque(N·m)
<b>η</b>	传动效率 Transmission efficiency

型号Type	EQ2N	EQ2L	EQ2S	EQ2K	EQ3N	EQ3S	EQ3K
传动效率(η)Transmission efficiency	94%	93%	93%	91%	92%	91%	89%

b. 所需输出转矩计算  
Calculation of required output torque

$$T_2 \leq \frac{T_{N2}}{f_1 \times f_2}$$

式中  
In the formula

<b>T<sub>N2</sub></b>	额定输出转矩 (N·m) Rated output torque (N·m)	<b>f<sub>1</sub></b>	输出被驱动设备系数 见表 2 Coefficient of output driven device See the table 2
<b>T<sub>2</sub></b>	所需输出转矩 (N·m) Required output torque (N·m)	<b>f<sub>2</sub></b>	输入原动机系数 见表 1 Coefficient of input prime mover See the table 1

c. 所需输入功率校核  
Verification of required input power

$$P_{N1} \geq P_1 \times f_1 \times f_2$$

式中  
In the formula

<b>P<sub>N1</sub></b>	额定输入功率 (kw) Rated input power (kw)
<b>P<sub>1</sub></b>	所需输入功率 (kw) Required input power (kw)

若  $3.33 \times P_1 \geq P_{N1}$ , 则符合要求, 反之则咨询我们。  
If  $3.33 \times P_1 \geq P_{N1}$ , the requirement is met. Otherwise, please consult us.

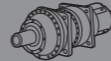
3. 峰值扭矩校核  
Check for maximum torque

$$T_{max} \leq \frac{P_1 \times 9550}{n_1 \times f_{max}}$$

式中  
In the formula

<b>T<sub>max</sub></b>	最大输入转矩 (N·m) Maximum input torque (N·m)
<b>f<sub>max</sub></b>	最大转矩系数见下表 Maximum torque coefficient See the table

载荷种类 Type of loading	最大转矩系数 Coefficient of maximum torque			
	每小时峰值负荷次数 Per hour maximum torque times			
单项载荷 Single direction load	1-5	6-30	31-100	> 100
交变载荷 Bending load	0.5	0.65	0.7	0.85
	0.7	0.95	1.1	1.25



4. 输出轴径向力校核 (F<sub>r</sub>)

Verification of radial force of output shaft(F<sub>r</sub>)

EQ 系列 F<sub>r2</sub>(N) 表:  
EQ series F<sub>r2</sub>(N) table:

n <sub>1</sub> (r/min)	n <sub>2N</sub>	i <sub>N</sub>	F <sub>r2</sub> (N)													
			9	10	11	12	13	14	16	17	18	19-20	21-22	23-24	25-26	27-28
1450	58.0	25	9538	23353	32518	42407	34737	41183	72297	64454	69713	70477	99136	99347	123583	126071
	51.8	28	9905	24252	33770	44039	36075	42768	75080	66935	72396	73190	102952	103171	128341	130925
	46.0	31.5	10302	25223	35122	45803	37519	44481	78086	69616	75295	76121	107075	107302	133480	136167
	40.8	35.5	10720	26249	36550	47665	39044	46289	81261	72446	78356	79215	111428	111665	138907	141703
	36.3	40	11155	27314	38033	49599	40629	48167	84559	75386	81536	82430	115950	116196	144544	147454
	32.2	45	11602	28408	39556	51585	42256	50096	87945	78404	84801	85731	120593	120849	150332	153358
	29.0	50	12017	29423	40970	53429	43766	51887	91088	81207	87832	88795	124903	125169	155705	158840
	25.9	56	12479	30556	42547	55486	45451	53884	94595	84333	91214	92214	129712	129988	161700	164955
	23.0	63	12979	31779	44251	57708	47271	56042	98383	87710	94866	95906	134906	135193	168175	171560
	20.4	71	13507	33071	46050	60054	49193	58320	102382	91276	98723	99805	140390	140689	175011	178534
	18.1	80	14055	34413	47919	62491	51189	60687	106537	94980	102729	103856	146088	146398	182114	185780
	16.1	90	14618	35791	49838	64993	53239	63117	110803	98783	106843	108014	151937	152260	189406	193219
	14.5	100	15140	37071	51619	67316	55142	65373	114764	102314	110662	111875	157368	157703	196176	200125
	12.9	112	15723	38498	53606	69908	57265	67890	119182	106253	114922	116182	163427	163774	203729	207830
	11.6	125	16309	39933	55605	72514	59400	70421	123626	110215	119207	120514	169520	169880	211325	215578
	10.4	140	16937	41471	57746	75306	61687	73132	128385	114458	123796	125153	176046	176420	219460	223878

备注: 各规格更低的输出转速按以上最大的F<sub>r2</sub>值。  
Note: If there is lower output speed, please choose the maximum F<sub>r2</sub> in above table.

5. 功率利用率计算  
Calculation of power utilization rate

式中  
In the formula

$$\text{功率利用率} \leq \frac{P_1}{P_{N1}} \times 100\%$$

Power utilization rate

$P_1$  所需输入功率 (kw)  
Required input power (kw)

$P_{N1}$  额定输入功率 (kw)  
Rated input power (kw)

6. 功率利用率系数确定 f<sub>P</sub>  
Confirmation coefficient of power utilization rate f<sub>P</sub>

功率利用率系数 Coefficient of power utilization rate	30%	40%	50%	60%	70%	80%	90%	100%
f <sub>P</sub>	0.66	0.77	0.83	0.90	0.90	0.95	1.0	1.0

7. 热功率校核  
Verification of thermal power

式中  
In the formula

$$P_1 \leq P_G$$

$$P_G = P_{G1} \times f_3 \times f_P$$

$P_1$  所需输入功率 (kw)  
Required input power (kw)

$P_G$  所需热功率 (kw)  
Required thermal power (kw)

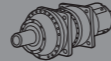
$P_{G1}$  额定热功率 (kw) 见热功率表  
Rated thermal power (kw) See the thermal power table

每小时工作周期 Working cycle per hour	环境温度 Ambient temperature					
	100%	10°C	20°C	30°C	40°C	50°C
环境温度系数 Ambient temperature factor (f <sub>3</sub> )	100%	1.14	1.00	0.87	0.71	0.55
	80%	1.20	1.06	0.93	0.75	0.58
	60%	1.32	1.16	1.00	0.82	0.64
	40%	1.54	1.35	1.18	0.96	0.74
	20%	2.04	1.79	1.56	1.27	0.98

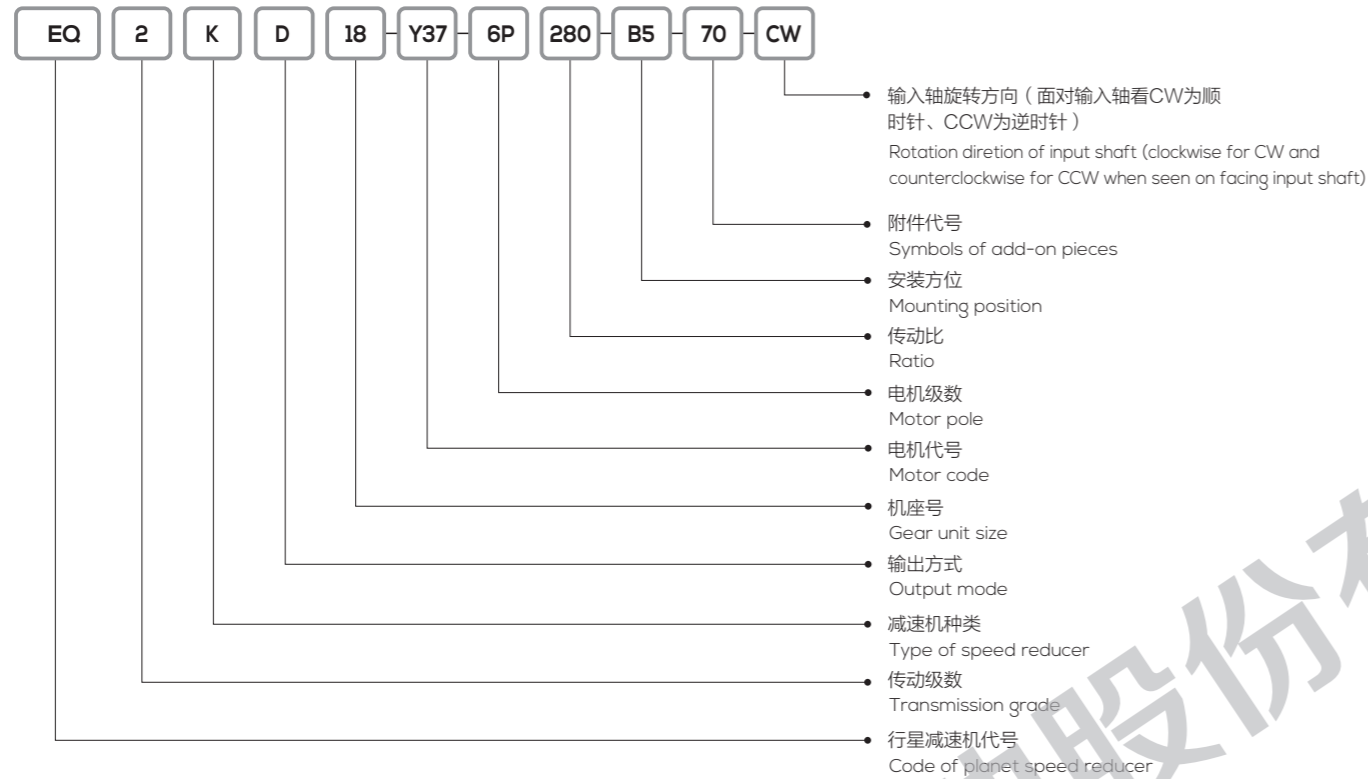
8. 最后根据输入、输出方式安装方位等内容确定准确型号。  
Finally confirm the accurate model according to such contents as input and output modes, and installation position.

9. 符号说明  
Symbol description

$T_{max}$	最大输入转矩 (N.m) Maximum input torque (N.m)	$i$	所需传动比 Required ratio
$F_{r2}$	允许径向力 (N) permissible radial forces (N)	$n_1$	输入转速 (r/min) Input speed (r/min)
$P_{G1}$	不带辅助冷却装置齿轮箱热功率 (kw) Thermal capacity for gear units without auxiliary cooling (kw)	$n_2$	输出转速 (r/min) Output speed (r/min)
$f_P$	设备功率利用率系数 Utilization factor	$P_1$	所需输入功率 (kw) Required input power (kw)
$f_3$	环境温度系数 Ambient temperature factor	$T_2$	所需输出转矩 (N.m) Required output torque (N.m)
$f_{max}$	最大扭矩系数 Maximum torque coefficient	$\eta$	传动效率 (%) Efficiency (%)
$f_2$	原动机系数 Driven factor	$T_{N2}$	额定输出转矩 (N.m) Nominal output torque (N.m)
$f_1$	被驱动设备系数 Driven machine factor	$P_{N1}$	额定输入功率 (kw) Nominal input power (kw)
$ED$	每小时工作周期 Working cycle per hour	$P_G$	所需热功率 (kw) Required thermal power (kw)



4 型号说明  
Model explanation



1. 传动级数: 2级或3级  
Transmission grade: level 2 or level 3

2. 减速机种类:  
Type of speed reducer:

<b>N</b>	同轴式 Coaxial type	<b>L</b>	直角轴式 Right angle shaft type
<b>S</b>	平行轴式 Parallel shaft type	<b>K</b>	直角、平行轴式 Right angle parallel shaft type

3. 输出方式:  
Output mode:

<b>D</b>	胀紧盘空心轴 Hollow shaft with shrink disk	<b>S</b>	平键实心轴 Flat key solid shaft
<b>KH</b>	渐开线花键空心轴 (DIN标准) Hollow shaft with involute spline (DIN standard)	<b>KS</b>	渐开线花键实心轴 (DIN标准) Involute spline solid shaft (DIN standard)
<b>KHG</b>	渐开线花键空心轴 (国标) Hollow shaft with involute spline (national standard)	<b>KSG</b>	渐开线花键实心轴 (国标) Involute spline solid shaft (national standard)

5 选型示例  
Example of model selection

已知一煤炭输送设备, 输入转速为1500r/min, 最大启动转矩为95N·m, 输出转矩为10500N·m, 输出转速为5.6r/min, 每天工作12小时, 每小时启动次数为8次, 每小时工作周期ED=60%, 环境温度为35℃, 通风大车间安装水平法兰安装, 偏心平行轴输入胀紧盘空心轴输出。

Known the coal conveying device with input rotation speed 1500r/min, maximum starting torque 95N·m, output torque 10500N·m, output rotation speed 5.6r/min, working hours per day 12 hours, starting times per hour 8 times, working cycle per hour ED=60%, ambient temperature 35℃, ventilating large workshop installation level, flange installation, eccentric parallel shaft input and expansion plate hollow shaft output.

解 Solution

1. 传动比计算 Calculation of transmission ratio

$$i = \frac{n_1}{n_2} = \frac{1500}{5.6} = 267.86$$

则选类型为EQ3S i=280  
Then the model is selected as EQ3S i=280

2. 减速机规格确定 Confirmation of speed reducer specification

a. 所需输入功率计算 查表  $\eta=0.91$   
a. Calculation of required input power Check the table  $\eta=0.91$

$$P_1 = \frac{T_2 \times n_1}{9550 \times i \times \eta} = \frac{10500 \times 1500}{9550 \times 280 \times 0.91} = 6.47 \text{kw}$$

b. 所需输出转矩计算  
b. Calculation of required output torque

$$T_{N2} \geq T_2 \times f_2 \times f_1 = 10500 \times 1.5 \times 1 = 15.75 \text{kN·m}$$

c. 所需输入功率校核  
c. Verification of required input power

$$P_{N1} \geq P_1 \times f_2 \times f_1 = 6.47 \times 1.5 \times 1 = 9.7 \text{kw}$$

初选 EQ3SD9-280-B53  
Primary selection EQ3SD9-280-B53

$$3.3 \times P_1 = 3.3 \times 6.47 = 21.31 \text{kw} > P_{N1} = 13.5 \text{kw} \text{ 合格}$$

So qualified

3. 热功率校核 Verification of thermal power

$$\text{功率利用率} = \frac{P_1}{P_{N1}} \times 100\% = \frac{6.47}{13.5} \times 100\% = 47.9\%$$

则功率利用率系数  $f_p=0.77$  查  $f_3=1$   
Then the coefficient of power utilization rate  $f_p=0.77$  Check  $f_3=1$

减速机不带辅助冷却装置时  
When the speed reducer is not provided with auxiliary cooling device

$$P_G = P_{G1} \times f_3 \times f_p = 23 \times 0.77 \times 1 = 17.71 \text{kw} > P_1$$

故无须加装辅助冷却装置就可满足要求。  
So the requirement can be met without the need of adding auxiliary cooling device.

4. 润滑方式 Lubricating mode

飞溅润滑 Spattering lubrication

后选减速机型号为 Then select the model of the speed reducer as

$$\text{EQ3SD9} - \text{280} - \text{B53}$$

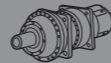


表1 工作机系数<sup>f<sub>1</sub></sup> Table 1 Factor for driven machine<sup>f<sub>1</sub></sup>

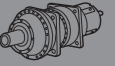
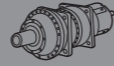
工作机	Driven machines	日带载运行时间 (小时)		
		≤0.5	>0.5-10	>10
污水处理	Waste water treatment			
浓缩器(中心传动)	Thickeners (central drive)	-	-	1.2
压滤机	Filter presses	1.0	1.3	1.5
絮凝器	Flocculation apparatus	0.8	1.0	1.3
曝气机	Aerators	-	1.8	2.0
捞集设备	Raking equipmen	1.0	1.2	1.3
纵向、回转组合式捞集装置	Combined longitudinal and rotary rakes	1.0	1.3	1.5
预浓缩器	Pre-thickeners	-	1.1	1.3
螺杆泵	Screw pumps	-	1.3	1.5
水轮机	Water turbines	-	-	2.0
泵	Pumps			
离心泵	Centrifugal pumps	1.0	1.2	1.3
容积式泵	Positive-displacement pumps			
1个活塞	1 piston	1.3	1.4	1.8
>1个活塞	>1 piston	1.2	1.4	1.5
挖泥机	Dredgers			
斗式输送机	Bucket conveyors	-	1.6	1.6
倾卸装置	Dumping devices	-	1.3	1.5
履带式行走机构	Caterpillar travel-ing gears	1.2	1.6	1.8
斗轮式挖掘机	Dredgers			
用于料堆捡拾	Bucket wheel excavators	-	1.7	1.7
用于原生岩土	As pick-up	-	2.2	2.2
采掘机机头	For primitive material Cutter heads	-	2.2	2.2
采掘臂回转*	Slewing gears*	-	1.4	1.8
弯板机*	Plate bending machines*	-	1.0	1.0
化学工业	Chemical industry			
挤出机	Extruders	-	-	1.6
调浆机	Dough mills	-	1.8	1.8
橡胶研光机	Rubber calendars	-	1.5	1.5
冷却圆筒	Gaoling drums	-	1.3	1.4
混匀机, 用于	Mixers for			
均匀介质	Uniform media	1.0	1.3	1.4
非均匀介质	Non-uniform media	1.4	1.6	1.7
搅拌机, 用于	Agitators for me-dia with			
均匀介质	Uniform density	1.0	1.3	1.5
非均匀介质	Non-uniform density	1.2	1.4	1.6
不均匀气体吸收	Non-uniform gas absorption	1.4	1.6	1.8
烘炉	Toasters	1.4	1.3	1.5
离心机	Centrifuges	1.0	1.2	1.3
金属加工设备	Metal working mills			
翻板机	Plate filter	1.0	1.0	1.2
推钢机	Ingot pushers	1.0	1.2	1.2
绕线机	Winding machines	-	1.6	1.6
冷床横移架	Cooling bed transfer frames	-	1.5	1.5
辊式矫直机	Roller straighteners	-	1.6	1.6
轨道	Roller tables			
连续式	Continuous	-	1.5	1.5
间歇式	Intermittent	-	2.0	2.0
可逆式轧管机	Reversing tube mills	-	1.8	1.8
剪切机	Shears			
连续式*	Continuous*	-	1.5	1.5
曲柄式*	Crank type*	1.0	1.0	1.0
连铸机驱动装置*	Continuous casting drivers*	-	1.4	1.4

工作机额定功率P2的确定: \*)按最大扭矩确定额定功率; \*\*)检验热功率是绝对必要的。

表2 输入原动机系数表<sup>f<sub>2</sub></sup> Table 2 Coefficient table of input prime mover<sup>f<sub>2</sub></sup>

输入方式 Input mode	电机、液压马达、汽轮机 Electric motors, hydraulic motors, turbines	4-6缸活塞发动机 Piston engines 4-6 cylinders	1-3缸活塞发动机 Piston engines 1-3 cylinders
输入系数f <sub>2</sub> Input coefficient f <sub>2</sub>	1.0	1.25	1.5

工作机	Driven machines	日带载运行时间 (小时)		
		≤0.5	>0.5-10	>10
轧机	Rolls			
可逆式开坯机	Reversing blooming mills	-	2.5	2.5
可逆式板坯轧机	Reversing slabbing mills	-	2.5	2.5
可逆式线材轧机	Reversing wire mills	-	1.8	1.8
可逆式薄板轧机	Reversing sheet mills	-	2.0	2.0
可逆式中厚板轧机	Reversing plate mills	-	1.8	1.8
辊缝调节驱动装置	Roll adjustment drives	0.9	1.0	-
输送机械	Conveyors			
斗式输送机	Bucket conveyors	-	1.4	1.5
绞车	Hauling winches	1.4	1.6	1.6
卷扬机	Hoists	-	1.5	1.8
皮带输送机 ≤ 150 kW	Belt conveyors ≤ 150 kW	1.0	1.2	1.3
皮带输送机 ≥ 150 kW	Belt conveyors ≥ 150 kW	1.1	1.3	1.4
货用电梯*	Goods lifts*	-	1.2	1.5
客用电梯*	Passenger lifts*	-	1.5	1.8
刮板式输送机	Apron conveyors	-	1.2	1.5
自动扶梯	Escalators	1.0	1.2	1.4
轨道行走机构	Frequency converters	-	1.5	-
柱塞式压缩机	Reciprocating compressors	-	1.8	1.9
起重机械	Cranes			
回转机构**	Slewing gears**	1.0	1.4	1.8
俯仰机构**	Luffing gears**	1.0	1.1	1.4
行走机构**	Travelling gears**	1.1	1.6	2.0
起升机构**	Hoisting gears**	1.0	1.1	1.4
转臂式起重机**	Derricking jib cranes**	1.0	1.2	1.6
冷却塔	Cooling towers			
冷却塔风扇	Cooling tower fans	-	-	2.0
风机(轴流和离心式)	Blowers (axial and radial)	-	1.4	1.5
蔗糖生产	Cane sugar production			
甘蔗切碎机	Cane knives	-	-	1.7
甘蔗碾磨机	Cane mills	-	-	1.7
甜菜糖生产	Beet sugar production			
甜菜绞碎机	Beet cossettes macerators	-	-	1.2
榨取机	Extraction plants	-	-	1.4
机械制冷机	Mechanical refrigerators	-	-	1.4
蒸煮机	Juice boilers	-	-	1.4
甜菜清洗机	Sugar beet washing machines,	-	-	1.4
甜菜切碎机	Sugar beet cutters	-	-	1.5
造纸机械	Paper machines			
各种类型	Of all kind	-	1.8	2.0
碎浆机驱动装置 (敬请垂询)	Pulper drives (on request)	-	2	2.25
离心式压缩机	Centrifugal compressors	-	1.4	1.5
索道缆车	Cableways			
运货索道	Material ropeways	-	1.3	1.4
往复式空中索道	To-and-fro system	-	1.6	1.8
拖牵式索道	Aerial ropeways	-	1.3	1.4
循环式索道	T-bar lifts ropeways	-	1.4	1.6
水泥工业	Cement industry			
混凝土搅拌机	Concrete mixers	-	1.5	1.5
破碎机	Breakers	-	1.2	1.4
回转窑	Rotary kilns	-	-	2.0
管式磨机	Tube mills	-	-	2.0
选粉机	Separators	-	1.6	1.6
辊压机	Roll crushers	-	-	2.0



安装方位

Identifications of shaft arrangements:

水平安装 Horizontal gear unit position		垂直安装 *) Vertical gear unit position	
同轴式 Coaxial	EQ.N.		
		B5	V1 V3
平行轴式 Parallel shaft type	EQ.S.	*)	
		B51	
		B52	
直交 平行轴式 Right angle parallel shaft type	EQ.K.	*)	
		B51	
		B52	
直交轴式 Right angle shaft type	EQ.L.	*)	
		B51	
		B52	
扭力臂安装 Install-ation of torque arm	EQ.L.		
		A51	
		A52	
		A53	
		A54	
		A55	
		A56	
		*) 对于B51、V1、V3、V11、V31安装方位时，需考虑齿轮箱的润滑，请与我们联系。 *) For installation positions of B51, V1, V3, V11, V31, if it is necessary to consider the lubrication of gear box, please contact us.	

附件

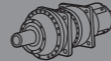
Add-on piece

代号 code	附件 Add-on piece		示例 Representation
99	无附件 Without add-on piece		
96	减速机底座 Gear housing base	见398页 See page 398	
70	电机钟形支座 Motor bell housing	见405-410页 See page 405-410	
71	电机托架 Motor bracket	见402页 See page 402	
72	电机支架 Motor bracket	见402页 See page 402	
73	摆动底座 Motor swing-base		
74	钟形支座(输出) Bell housing(output)		
75	扭矩支撑臂(一端) Torque reaction arm (on one sides)	见399页 See page 399	
76	扭矩支撑臂(二端) Torque reaction arm (on two sides)	见400页 See page 400	
77	扭力轴支撑 Torsion shaft support	见401页 See page 401	
87	立式安装补偿油箱 Oil Compensating Tank for Vertical Mounting Positionort	见403页 See page 403	









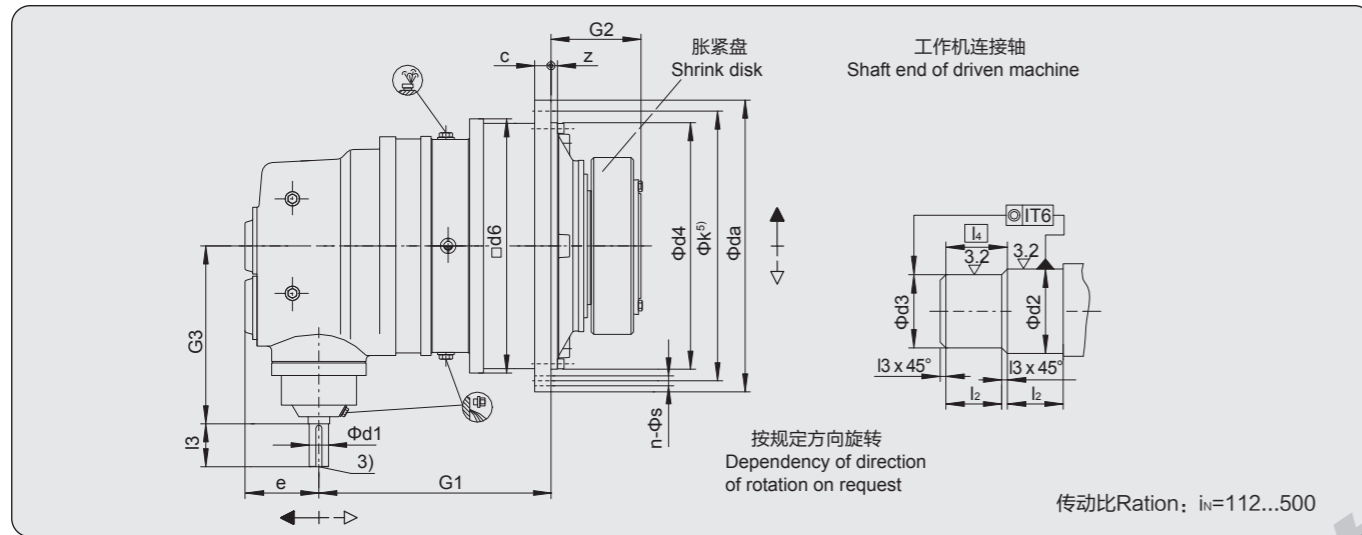
**EQ系列行星减速机外型尺寸图及传动能力表**  
EQ Series Planetary gear units outline dimension sheet and transmission capacity

类型 TYPES EQ2KD

规格 SIZES 9...20

类型 TYPES EQ2K.

规格 SIZES 9...20



EQ2KD 机座号 Size	额定输出 扭矩 T <sub>2N</sub> (N·m)	输入轴尺寸 Input shaft dimension				工作机连接轴 Shaft end of driven machine						c	d <sub>a</sub>	d <sub>4</sub> h7	d <sub>6</sub>	e	G <sub>1</sub>	G <sub>2</sub>	G <sub>3</sub>	k	z	法兰孔 Flange bolts		重量 Weight (kg)	油量 Oil quantity (l)
		i <sub>n</sub> ≤ 360		i <sub>n</sub> ≥ 400		d <sub>2</sub> <sup>5)</sup> g6	d <sub>3</sub> <sup>5)</sup> g6	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	孔径 Dia- meter S											数量 Qty. n			
		d <sub>1</sub> <sup>1)</sup>	l <sub>1</sub>	d <sub>1</sub> <sup>1)</sup>	l <sub>1</sub>																				
9	22000	30	70	25	60	120	115	65	2.5	67.5	24	428	350	356	119	339	165	320	388	6	18	24	165	6	
10	31000	30	70	25	60	130	125	70	2.5	72.5	28	472	394	400	119	359	174	320	436	8	18	28	227	8	
11	42000	35	80	28	60	140	135	82.5	2.5	85	32	525	425	436	137	419	204	375	485	8	22	20	320	12	
12	60000	35	80	28	60	160	155	90	2.5	92.5	34	605	495	510	137	433	224	375	555	9	26	20	484	16	
13	83000	45	100	35	80	180	175	95	2.5	97.5	39	645	535	554	172	518.5	241	445	595	11	26	24	618	20	
14	117000	45	100	35	80	210	205	105	2.5	107.5	42	720	610	629	172	541.5	278	445	665	9	26	32	927	32	
16	160000	55	110	40	100	230	225	110	2.5	112.5	44	770	660	680	194	632	285	520	715	10	26	36	1184	40	
17	202000	55	110	40	100	250	245	120	2.5	122.5	50	895	750	775	194	658	294	520	830	10	33	24	1700	56	
18	244000	70	135	50	110	260	255	120	2.5	122.5	50	930	785	815	240	741.5	303	615	865	10	33	32	2010	73	
19	295000	70	135	50	110	280	275	135	2.5	137.5	56	980	840	870	240	765	327.5	615	915	12	33	36	2470	82	
20	354000	70	135	50	110	300	295	135	2.5	137.5	56	980	840	870	240	765	327.5	615	915	12	33	36	2550	75	
21-26		根据用户要求供货 On request																							

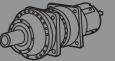
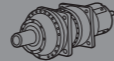
- 当d ≤ 50时公差为k6  
当50 < d ≤ 100时公差为m6  
当d > 100时公差为n6
- 不含胀紧盘与润滑油的重量
- 有关平键(符合GB/T1095-1979)与中心孔请参390页
- 孔的分布类型见389页
- 当尺寸 ≤ 160时公差为h6

i <sub>n</sub>	额定功率P <sub>N</sub>		Nominal power ratings (kW)										
	n <sub>1</sub>	n <sub>2</sub>	规格 Sizes										
	r/min		9	10	11	12	13	14	16	17	18	19	20
112	1500	13.4	30.9	43.6	59.0	84	117	164	225	284	343	415	498
	1000	8.9	20.6	29.0	39.4	56	78	110	150	189	229	276	332
	750	6.7	15.5	21.8	29.5	42	58	82	112	142	171	207	249
125	1500	12.0	27.7	39.0	52.9	76	105	147	201	254	307	372	446
	1000	8.0	18.5	26.0	35.3	50	70	98	134	170	205	248	297
	750	6.0	13.9	19.5	26.4	38	52	74	101	127	154	186	223
140	1500	10.7	24.7	34.9	47.2	67	93	132	180	227	274	332	398
	1000	7.1	16.5	23.2	31.5	45	62	88	120	151	183	221	265
	750	5.4	12.4	17.4	23.6	34	47	66	90	114	137	166	199
160	1500	9.4	21.6	30.5	41.3	59	82	115	157	199	240	290	348
	1000	6.3	14.4	20.3	27.5	39	54	77	105	132	160	193	232
	750	4.7	10.8	15.3	20.7	30	41	58	79	99	120	145	174
180	1500	8.3	19.2	27.1	36.7	52	73	102	140	177	213	258	310
	1000	5.6	12.8	18.1	24.5	35	48	68	93	118	142	172	206
	750	4.2	9.6	13.6	18.4	26	36	51	70	88	107	129	155
200	1500	7.5	17.3	24.4	33.1	47	65	92	126	159	192	232	279
	1000	5.0	11.5	16.3	22.0	31	44	61	84	106	128	155	186
	750	3.8	8.7	12.2	16.5	24	33	46	63	79	96	116	139
225	1500	6.7	15.4	21.7	29.4	42	58	82	112	141	171	206	248
	1000	4.4	10.3	14.5	19.6	28	39	55	75	94	114	138	165
	750	3.3	7.7	10.8	14.7	21	29	41	56	71	85	103	124
250	1500	6.0	13.9	19.5	26.4	38	52	74	101	127	154	186	223
	1000	4.0	9.2	13.0	17.6	25	35	49	67	85	102	124	149
	750	3.0	6.9	9.8	13.2	19	26	37	50	64	77	93	111
280	1500	5.4	12.4	17.4	23.6	34	47	66	90	114	137	166	199
	1000	3.6	8.2	11.6	15.7	22	31	44	60	76	91	111	133
	750	2.7	6.2	8.7	11.8	17	23	33	45	57	69	83	100
320	1500	4.7	10.8	15.3	20.7	30	41	58	79	99	120	145	174
	1000	3.1	7.2	10.2	13.8	20	27	38	52	66	80	97	116
	750	2.3	5.4	7.6	10.3	15	20	29	39	50	60	73	87
360	1500	4.2	9.6	13.6	18.4	26	36	51	70	88	107	129	155
	1000	2.8	6.4	9.0	12.2	17	24	34	47	59	71	86	103
	750	2.1	4.8	6.8	9.2	13	18	26	35	44	53	64	77
400	1500	3.8	8.7	12.2	16.5	24	33	46	63	79	96	116	139
	1000	2.5	5.8	8.1	11.0	16	22	31	42	53	64	77	93
	750	1.9	4.3	6.1	8.3	12	16	23	31	40	48	58	70
450	1500	3.3	7.7	10.8	14.7	21	29	41	56	71	85	103	124
	1000	2.2	5.1	7.2	9.8	14	19	27	37	47	57	69	83
	750	1.7	3.8	5.4	7.3	10	15	20	28	35	43	52	62
500	1500	3.0	6.9	9.8	13.2	19	26	37	50	64	77	93	111
	1000	2.0	4.6	6.5	8.8	13	17	25	34	42	51	62	74
	750	1.5	3.5	4.9	6.6	9	13	18	25	32	38	46	56
560	根据用户要求供货 On request												

安装类型 Settings	热功率P <sub>G1</sub> <sup>★)</sup> Thermal capacities P <sub>G1</sub> <sup>★)</sup> (kW)									
	规格 Sizes									
	9	10	11	12	13	14	16	17	18	19 / 20
狭小空间 <sup>1)</sup> Small confined spaces	12	15	18	24	28	38	44	53	58	69
室内大厅 <sup>2)</sup> 大车间 Large halls workshops	17	22	26	35	40	54	62	76	82	98
室外 <sup>3)</sup> In the open	23	29	35	47	54	73	83	102	111	133

- ★) 用于水平安装形式, 其它安装形式请与我们联系。  
 1) 风速 ≥ 0.5 m/s  
 2) 风速 ≥ 1.4 m/s  
 3) 风速 ≥ 3.7 m/s
- ★) Values apply to horizontal mounting position, for other mounting positions please refer to us.  
 1) Wind velocity ≥ 0.5 m/s  
 2) Wind velocity ≥ 1.4 m/s  
 3) Wind velocity ≥ 3.7 m/s





EQ系列行星减速机外型尺寸图及传动能力表

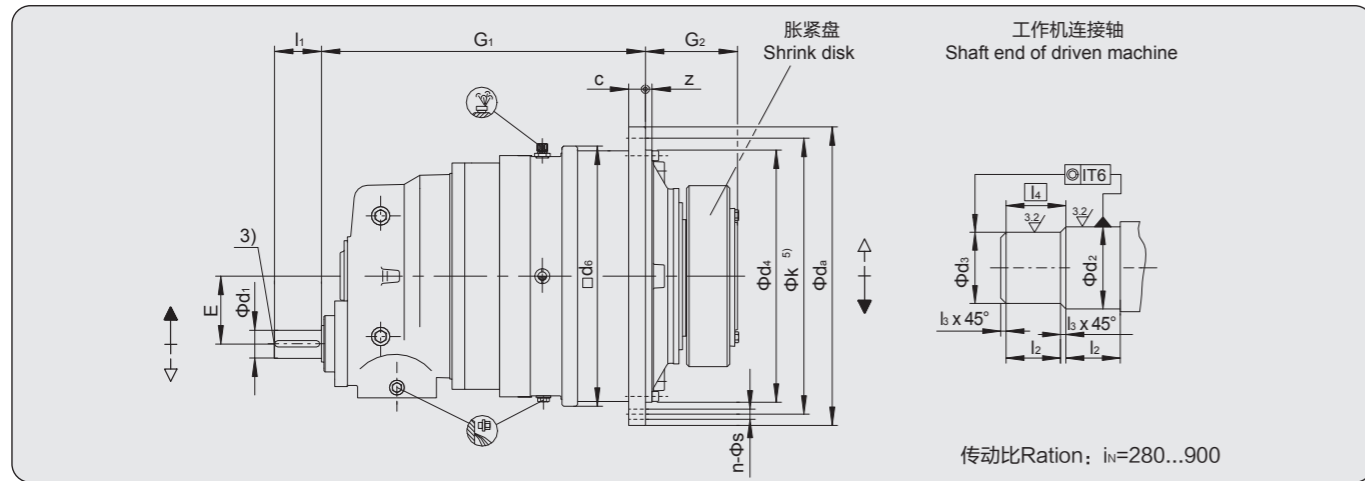
EQ Series Planetary gear units outline dimension sheet and transmission capacity

类型 TYPES EQ3SD

规格 SIZES 9...36

类型 TYPES EQ3S.

规格 SIZES 9...36



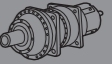
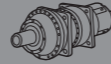
EQ3SD 机座号 Size	额定输出 扭矩 T <sub>2N</sub> (N·m)	输入轴尺寸 Input shaft dimension		工作机连接轴 Shaft end of driven machine					c	d <sub>a</sub>	d <sub>4</sub> h7	d <sub>6</sub>	E	G <sub>1</sub>	G <sub>2</sub>	k	z	法兰孔 Flange bolts		重量 Weight (kg)	油量 Oil quantity (l)
		d <sub>1</sub> <sup>1)</sup>	l <sub>1</sub>	d <sub>2</sub> <sup>4)</sup> g6	d <sub>3</sub> <sup>4)</sup> g6	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>										孔径 Dia- meter S	数量 Qty. n		
9	22000	38	60	120	115	65	2.5	67.5	24	428	350	356	90	565	165	388	6	18	24	170	7
10	31000	38	60	130	125	70	2.5	72.5	28	472	394	400	90	585	174	436	8	18	28	230	9
11	42000	38	60	140	135	82.5	2.5	85.0	32	525	425	436	90	616	204	485	8	22	20	310	13
12	60000	38	60	160	155	90	2.5	92.5	34	605	495	510	90	630	224	555	9	26	20	460	17
13	83000	38	60	180	175	95	2.5	97.5	39	645	535	554	90	688	241	595	11	26	24	584	21
14	117000	38	60	210	205	105	2.5	107.5	42	720	610	629	90	711	278	665	9	26	32	875	33
16	160000	55	90	230	225	110	2.5	112.5	44	770	660	680	115	853	285	715	10	26	36	1115	42
17	202000	55	90	250	245	120	2.5	122.5	50	895	750	775	115	879	294	830	10	33	24	1625	60
18	244000	70	120	260	255	120	2.5	122.5	50	930	785	815	140	1013	303	865	10	33	32	2060	70
19	295000	70	120	280	275	135	2.5	137.5	56	980	840	870	140	1036.5	327.5	915	12	33	36	2160	85
20	354000	70	120	300	295	135	2.5	137.5	56	980	840	870	140	1036.5	327.5	915	12	33	36	2260	75
21	392000	70	120	310	305	152	2.5	154.5	62	1115	935	960	140	1093	354	1025	24	39	32	2870	115
22	450000	70	120	330	325	152	2.5	154.5	62	1115	935	960	140	1093	354	1025	24	39	32	3040	105
23	513000	80	140	350	345	164	2.5	166.5	68	1210	1025	1056	170	1222	380	1120	28	39	36	3730	155
24	592000	80	140	360	355	164	2.5	166.5	68	1210	1025	1056	170	1222	380	1120	28	39	36	4220	135
25	684000	80	140	380	375	180	2.5	182.5	74	1320	1115	1150	170	1284.5	407	1220	29	45	36	5150	195
26	763000	80	140	400	395	180	2.5	182.5	74	1320	1115	1150	170	1284.5	407	1220	29	45	36	5560	170
27	852000	90	160	430	425	191	2.5	193.5	81	1460	1215	1248	200	1470	453	1345	31	52	32	6580	250
28	950000	90	160	450	445	191	2.5	193.5	81	1460	1215	1248	200	1470	453	1345	31	52	32	7080	220
29	1060000	90	160	460	450	197.5	5	202.5	87	1565	1320	1355	200	1517	483	1450	34	52	36	8400	310
30	1200000	90	160	480	470	197.5	5	202.5	87	1565	1320	1355	200	1517	483	1450	34	52	36	8970	280
31	1330000	100	180	480	470	232	5	237.0	94	1665	1400	1443	230	1615	538	1545	36	62	32	11000	390
32	1500000	100	180	510	500	232	5	237.0	94	1665	1400	1443	230	1615	538	1545	36	62	32	11500	360
33	1680000	120	210	530	520	242	5	247.0	100	1755	1495	1536	265	1735	573	1635	36	62	36	13300	470
34	1920000	120	210	570	560	242	5	247.0	100	1755	1495	1536	265	1735	573	1635	36	62	36	14200	430
35+36																					

- 当d≤50时公差为k6  
当50<d≤100时公差为m6  
当5d>100时公差为n6
- 不含胀紧盘与润滑油的重量
- 有关平键(符合GB/T 1095-1979)与中心孔请参390页
- 当尺寸≤160时公差为h6
- 孔的分布类型见389页

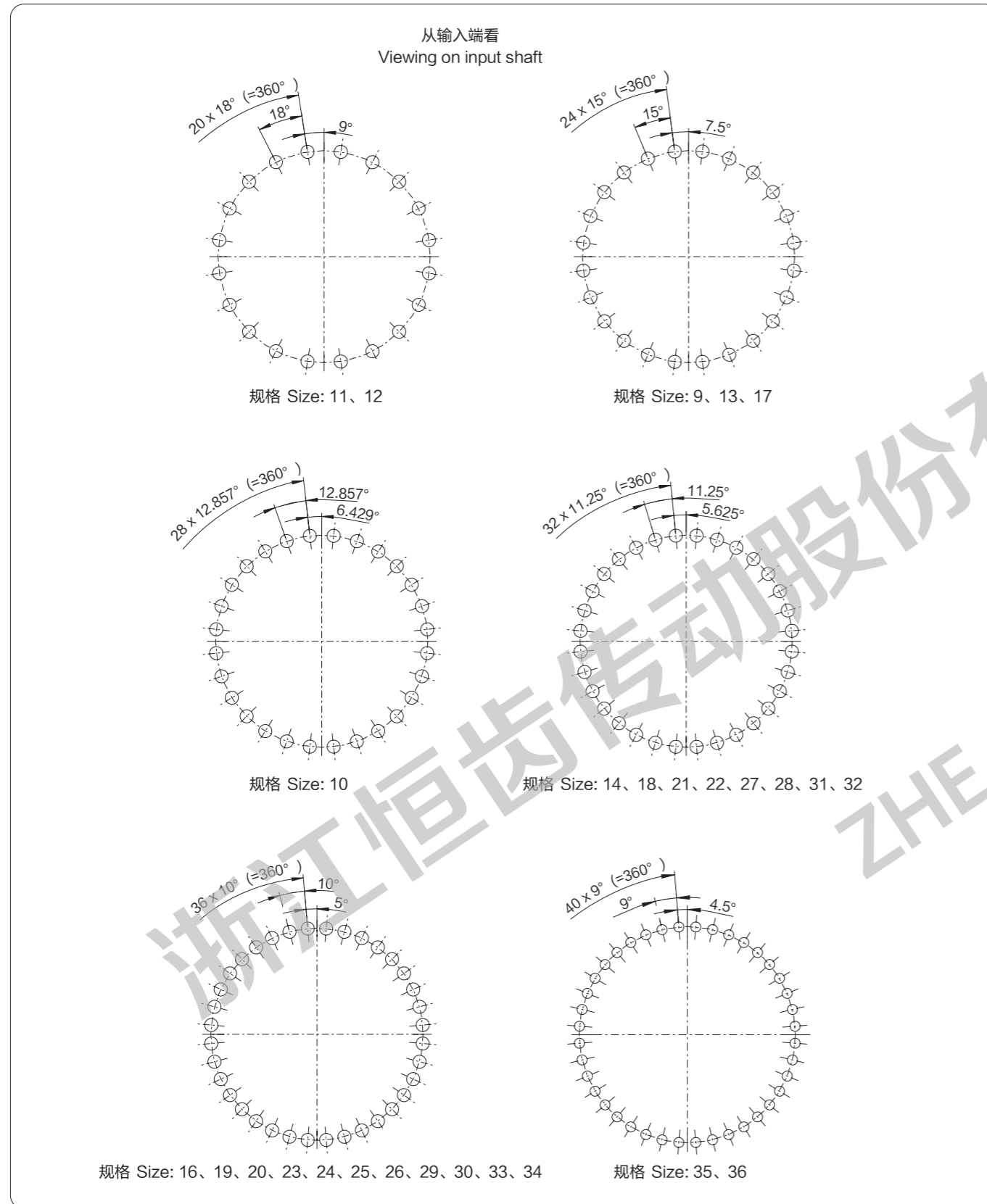
- When shaft diameter d≤50,tolerance is k6  
When shaft diameter 50<d≤100,tolerance is m6  
When shaft diameter 5d>100,tolerance is n6
- Weight without shrink disk and oil
- For parallel key (GB/T 1095-1979) and centre hole see page 390
- ≤160 h6
- For hole pattern, see page 389

		额定功率P <sub>N</sub>												Nominal power ratings												(kW)			
i <sub>N</sub>	n <sub>1</sub>	n <sub>2</sub>	规格 Sizes																										
			9	10	11	12	13	14	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
280	1500	5.4	13.5	17.6	24	34	47	67	91	115	139	168	202	223	256	292	337	389	434	485	541	603	683	757	854	956	1093	1275	1480
	1000	3.6	8.3	12	16	23	31	44	61	77	93	112	134	149	171	195	225	260	290	323	361	402	455	505	569	638	729	850	987
	750	2.7	6.3	8.8	12	17	24	33	46	57	69	84	101	112	128	146	168	195	217	242	270	302	342	379	427	478	546	638	740
315	1500	4.8	11	16	21	30	42	59	81	102	123	149	179	198	228	260	300	346	386	431	481	536	607	673	759	850	971	1133	1316
	1000	3.2	7.4	10.5	14	20	28	39	54	68	82	100	119	132	152	173	200	231	257	287	320	358	405	449	506	567	648	756	877
	750	2.4	5.6	7.8	11	15	21	30	40	51	62	75	90	99	114	130	150	173	193	216	240	268	304	336	379	425	486	567	658
355	1500	4.2	10	14	19	27	37	53	72	91	110	132	159	176	202	230	266	307	343	383	427	476	539	597	673	754	862	1006	1167
	1000	2.8	6.7	9.3	13	18	25	35	48	60	73	88	106	117	135	154	177	205	228	255	284	317	359	398	449	503	575	670	778
	750	2.1	5	7	9	13	19	26	36	45	55	66	79	88	101	115	133	154	171	191	213	238	269	299	337	377	431	503	584
400	1500	3.8	8.8	12.4	17	24	33	47	64	80	97	118	141	156	179	204	236	293	304	339	379	422	478	530	598	669	765	893	1036
	1000	2.5	5.8	8.2	11	16	22	31	43	54	65	78	94	104	120	136	157	182	203	226	252	282	319	353	398	446	510	595	691
	750	1.9	4.4	6.2	8	12	17	23	32	40	49	59	71	78	90	102	118	136	152	170	189	211	239	265	299	335	383	446	518
450	1500	3.3	7.8	11	15	21	29	41	57	72	86	104	125	139	159	182	210	242	270	302	336	375	425	471	531	595	680	793	921
	1000	2.2	5.2	7.3	10	14	20	28	38	48	58	70	84	93	106	121	140	162	180	201	224	250	283	314	354	397	453	529	614
	750	1.7	3.4	5.5	7.4	11	15	21	28	36	43	52	63	69	80	91	105	121	135	151	168	188	213	236	266	298	340	397	460
500	1500	3.0	7	10	13.4	19	26	37	51	64	78	94	113	125	143	164	189	218	243	272	303	338	382	424	478	536	612	714	829
	1000	2.0	4.7	6.6	8.9	13	18	25	34	43	52	63	75	83	96	109	126	145	162	181	202	225	255	283	319	357	408	476	553
	750	1.5	3.5	5	6.7	10	13	19	26	32	39	47	56	62	72	82	94	109	122	136	151	169	191	212	239	268	306	357	414
560	1500	2.7	6.3	8.8	12	17	24	33	46	57	69	84	101	112	128	146	168	195	217	242	270	302	342	379	427	478	546	638	740
	1000	1.8	4.2	6	8	11	16	22	30	38	46	56	67	74	85	97	112	130	145	162	180	201	228	252	285	319	364	425	493
	750	1.3	3.1	4.4	6	9	12	17	23	29	35	42	50	56	64	73	84	97	109	121	135	151	171	189	213	239	273	319	370
630	1500	2.4	5.6	7.8	10.6	15	21	30	40	51	62	75	90	99	114	130	150	173	193	216	240	268	304	336	379	425	486	567	658
	1000	1.6	3.7	5.2	7	10	14	20	27	34	41	50	60	66	76	87	100	115	129	144	160	179	202	224	253	283	324	378	439
	750	1.2	2.8	3.9	5.3	8	10	15	20	26	31	37	45	50	57	65	75	87	97	108	120	134	152	168	190	213	243	283	329
710	1500	2.1	4.5	7	9.4	13	19	26	36	45	55	66	79	88	101	115	133	154	171	191	213	238	269	299	337	377	431	503	584
	1000	1.4	3.3	4.5	6.3	9	12	18	24	30	37	44	53	59	67														





输出法兰孔布置形式  
Hole Patterns on Output Flange

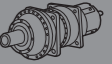
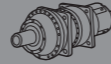


轴端螺纹孔、平键和键槽  
Centre Holes in Shaft Ends, Parallel Key and Keyway

轴径 $\phi d$ Diameter	轴端螺纹孔 Centre holes in shaft end										
	$\geq 16-21$	$> 21-24$	$> 24-30$	$> 30-38$	$> 38-50$	$> 50-85$	$> 85-130$	$> 130-225$	$> 225-320$	$> 320-500$	$> 500-710$
螺孔尺寸 Screw	M6	M8	M10	M12	M16	M20	M24	M30	M36	M42	M48

直径 Diameter $d$	平键和键槽 Paralle key and keyway			
	宽度 Width $b$	高度 Height $h$	轴键槽深度 Depth of keyway in shaft $t_1$	轮毂键槽深度 Depth of keyway in hub $d+t_2$
$> 8-10$	3	3	1.8	$d+1.4$
$> 10-12$	4	4	2.5	$d+1.8$
$> 12-17$	5	5	3	$d+2.3$
$> 17-22$	6	6	3.5	$d+2.8$
$> 22-30$	8	7	4	$d+3.3$
$> 30-38$	10	8	5	$d+3.3$
$> 38-44$	12	8	5	$d+3.3$
$> 44-50$	14	9	5.5	$d+3.8$
$> 50-58$	16	10	6	$d+4.3$
$> 58-65$	18	11	7	$d+4.4$
$> 65-75$	20	12	7.5	$d+4.9$
$> 75-85$	22	14	9	$d+5.4$
$> 85-95$	25	14	9	$d+5.4$
$> 95-110$	28	16	10	$d+6.4$
$> 110-130$	32	18	11	$d+7.4$
$> 130-150$	36	20	12	$d+8.4$
$> 150-170$	40	22	13	$d+9.4$
$> 170-200$	45	25	15	$d+10.4$
$> 200-230$	50	28	17	$d+11.4$
$> 230-260$	56	32	20	$d+12.4$
$> 260-290$	63	32	20	$d+12.4$
$> 290-330$	70	36	22	$d+14.4$
$> 330-380$	80	40	25	$d+15.4$
$> 380-440$	90	45	28	$d+17.4$
$> 440-500$	100	50	31	$d+19.5$

平键紧固采用无锥度联接  
平键和键槽根据GB/T1095-1979标准确定  
Drive type fastening without taper action.  
Paralle key and keyway acc. to GB/T1095-1979

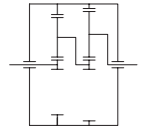


**EQ系列行星减速机实际传动比**  
EQ Series Planetary gear units actual ratios

**Actual Ratios for Types**  
EQ2N.and EQ2S.

规格 Size	实际传动比 Actual Ratios				
	25	28	31.5	35.5	40
9	25.634	28.058	31.142	35.201	40.781
10	25.634	28.058	31.142	35.201	40.781
11	25.875	28.233	31.207	35.072	40.301
12	24.983	27.260	30.130	33.863	38.912
13	24.958	27.318	30.321	34.272	39.706
14	24.958	27.318	30.321	34.272	39.706
16	24.750	27.090	30.068	33.987	39.375
17	24.750	27.090	30.068	33.987	39.375
18	24.958	27.318	30.321	34.272	39.706
19/20	26.622	29.139	32.342	36.557	42.353
21/22	26.622	29.139	32.342	36.557	42.353
23/24	26.872	29.321	32.409	36.424	41.855
25/26	26.872	29.321	32.409	36.424	41.855
27/28	26.622	29.139	32.342	36.557	42.353
29/30	26.622	29.139	32.342	36.557	42.353
31/32	26.872	29.321	32.409	36.424	41.855
33/34	26.622	29.139	32.342	36.557	42.353
35/36	26.872	29.321	32.409	36.424	41.855

EQ2N.



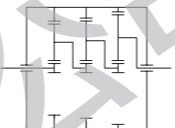
$i_n = 25 \dots 40$

**EQ系列行星减速机实际传动比**  
EQ Series Planetary gear units actual ratios

**Actual Ratios for Types**  
EQ3N. and EQ3S.

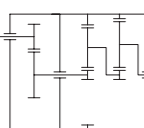
规格 Size	实际传动比 Actual Ratios						
	140	160	180	200	225	250	280
9	146.81	165.95	192.25	210.43	233.57	264.01	305.86
10	146.81	165.95	192.25	210.43	233.57	264.01	305.86
11	147.12	165.34	189.99	207.96	230.82	260.90	302.26
12	142.04	159.64	183.44	200.79	222.86	251.90	291.84
13	142.94	161.57	187.19	204.88	227.41	257.04	297.79
14	142.94	161.57	187.19	204.88	227.41	257.04	297.79
16	143.08	161.73	187.37	204.45	225.98	253.97	291.84
17	143.08	161.73	187.37	204.45	225.98	253.97	291.84
18	142.94	161.57	187.19	204.88	227.41	257.04	297.79
19/20	152.47	172.34	199.66	218.54	242.57	274.18	317.65
21/22	152.47	172.34	199.66	218.54	242.57	274.18	317.65
23/24	152.79	171.71	197.32	215.97	239.71	270.95	313.91
25/26	152.79	171.71	197.32	215.97	239.71	270.95	313.91
27/28	152.47	172.34	199.66	218.54	242.57	274.18	317.65
29/30	152.47	172.34	199.66	218.54	242.57	274.18	317.65
31/32	152.79	171.71	197.32	215.97	239.71	270.95	313.91
33/34	153.90	173.96	201.54	219.91	243.07	273.18	313.91
35/36	154.22	173.33	199.17	217.32	240.21	269.96	310.22

EQ3N.



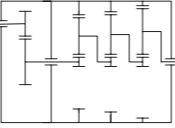
$i_n = 140 \dots 280$

EQ2S.



$i_n = 45 \dots 125$

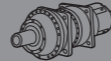
EQ3S.



$i_n = 280 \dots 900$

规格 Size	实际传动比 Actual Ratios									
	45	50	56	63	71	80	90	100	112	125
9	45.601	51.544	59.715	61.953	71.775	78.782	91.272	99.735	115.55	124.74
10	45.601	51.544	59.715	61.953	71.775	78.782	91.272	99.735	115.55	124.74
11	43.209	48.561	55.802	63.399	72.853	81.303	93.426	99.678	114.54	123.14
12	41.719	46.887	53.878	61.213	70.340	78.499	90.205	96.241	110.59	118.90
13	43.797	49.505	57.353	59.977	69.485	78.827	91.324	95.963	111.18	119.12
14	43.797	49.505	57.353	59.977	69.485	78.827	91.324	95.963	111.18	119.12
16	42.318	47.833	55.417	61.438	71.178	78.788	91.278	96.594	111.91	120.59
17	42.318	47.833	55.417	61.438	71.178	78.788	91.278	96.594	111.91	120.59
18	42.867	48.454	56.136	60.320	69.882	78.976	91.496	95.963	111.18	119.12
19/20	45.725	51.684	59.878	64.341	74.541	84.241	97.596	102.36	118.59	127.06
21/22	46.357	52.399	60.706	66.084	76.561	84.746	98.182	103.90	120.37	129.41
23/24	45.373	50.993	58.597	64.442	74.051	82.781	95.124	101.60	116.75	125.56
25/26	45.373	50.993	58.597	64.442	74.051	82.781	95.124	101.60	116.75	125.56
27/28	46.948	53.067	61.480	66.345	76.863	84.241	97.596	102.36	118.59	127.06
29/30	46.948	53.067	61.480	66.345	76.863	84.241	97.596	102.36	118.59	127.06
31/32	45.575	51.221	58.858	66.102	75.958	83.932	96.448	104.30	119.86	127.56
33/34	45.481	51.409	59.559	66.345	76.863	84.241	97.596	104.69	121.28	129.08
35/36	45.373	50.993	58.597	65.562	75.338	81.252	93.368	100.53	115.52	129.20

规格 Size	实际传动比 Actual Ratios										
	280	315	355	400	450	500	560	630	710	800	900
9	295.21	333.68	386.58	401.07	464.65	510.01	590.87	645.65	748.01	807.54	935.57
10	295.21	333.68	386.58	401.07	464.65	510.01	590.87	645.65	748.01	807.54	935.57
11	295.82	332.46	382.03	399.60	459.18	508.15	583.92	643.29	739.21	798.04	924.56
12	285.62	320.99	368.86	385.82	443.35	490.62	563.78	621.11	713.72	770.53	892.68
13	287.42	324.88	376.39	390.49	452.40	496.56	575.29	628.63	728.29	786.25	910.90
14	287.42	324.88	376.39	390.49	452.40	496.56	575.29	628.63	728.29	786.25	910.90
16	268.53	303.53	351.65	396.27	459.10	508.18	588.75	623.03	721.81	776.02	891.73
17	268.53	303.53	351.65	396.27	459.10	508.18	588.75	623.03	721.81	776.02	891.73
18	283.53	320.48	371.29	388.27	449.83	510.30	591.20	621.23	719.72	771.13	893.38
19/20	302.43	341.84	396.04	414.16	479.82	544.32	630.61	662.65	767.70	822.54	952.94
21/22	302.43	341.84	396.04	414.16	479.82	544.32	630.61	662.65	767.70	822.54	952.94
23/24	295.28	331.86	381.34	426.24	489.80	546.62	628.12	670.15	770.08	829.80	961.35
25/26	295.28	331.86	381.34	426.24	489.80	546.62	628.12	670.15	770.08	829.80	961.35
27/28	296.01	334.59	387.63	416.52	482.56	545.35	631.81	662.65	767.70	822.54	952.94
29/30	296.01	334.59	387.63	416.52	482.56	545.35	631.81	662.65	767.70	822.54	952.94
31/32	300.72	337.97	388.37	426.24	489.80	546.61	628.12	670.15	770.08	827.92	959.17
33/34	292.05	330.11	382.45	417.18	483.31	535.90	620.86	657.74	762.02	819.53	941.73
35/36	292.66	328.90	377.95	415.65	477.63	533.94	613.55	655.34	753.05	809.89	930.65



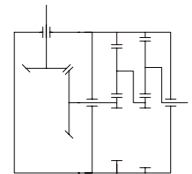
**EQ系列行星减速机实际传动比**  
EQ Series Planetary gear units actual ratios

**Actual Ratios for Types**  
EQ2L., EQ2K. and EQ3K.

**EQ系列行星减速机输出端尺寸**  
EQ Series Planetary gear units output terminal size

类型 TYPES EQ..D  
规格 SIZES 9...36

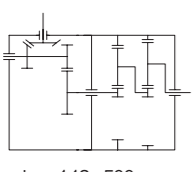
**EQ2L.**



$i_n = 31.5 \dots 100$

规格 Size	实际传动比 Actual Ratios											
	31.5	35.5	40	45	50	56	63	71	80	90	100	
9	32.5354	35.6114	39.5264	43.8820	50.4205	55.7279	60.4522	69.6116	79.0529	86.2395	98.2172	
10	32.5354	35.6114	39.5264	43.8820	50.4205	55.7279	60.4522	69.6116	79.0529	86.2395	98.2172	
11	32.8413	35.8344	39.6083	43.4178	50.5248	55.8432	60.5774	69.7558	79.9667	86.4181	98.4206	
12	31.7089	34.5987	38.2425	41.9206	48.7826	53.9176	58.4885	67.3504	77.2092	83.4381	95.0268	
13	31.6775	34.6724	38.4842	42.1855	49.0910	54.2584	62.3262	67.7760	77.6972	83.9655	95.6273	
14	31.6775	34.6724	38.4842	42.1855	49.0910	54.2584	62.3262	67.7760	77.6972	83.9655	95.6273	
16	31.4135	34.3835	38.1635	41.8340	48.6818	53.8062	61.8068	67.2113	77.0497	83.2657	94.8304	
17	31.4135	34.3835	38.1635	41.8340	48.6818	53.8062	61.8068	67.2113	77.0497	83.2657	94.8304	
18	31.4286	34.4000	38.1818	43.1490	49.0910	54.8663	62.3262	67.7760	77.6972	83.9655	95.6273	
19/20	33.5238	36.6933	40.7273	46.0255	52.3636	58.5241	66.4813	72.2944	82.8770	89.5631	102.0025	
21/22	33.5238	36.6933	40.7273	46.0255	52.3636	58.5241	66.4813	72.2944	82.8770	89.5631	102.0025	
23/24	33.8391	36.9231	40.8116	46.1208	52.4720	58.6452	66.6189	72.4441	83.0486	89.7486	102.2137	
25/26	33.8391	36.9231	40.8116	46.1208	52.4720	58.6452	66.6189	72.4441	83.0486	89.7486	102.2137	
27/28	33.5238	36.6933	40.7273	46.0255	52.0288	58.5241	66.4813	72.2944	82.8770	89.5631	102.0025	
29/30	33.5238	36.6933	40.7273	46.0255	52.0288	58.5241	66.4813	72.2944	82.8770	89.5631	102.0025	

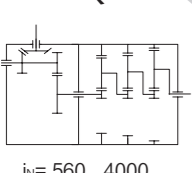
**EQ2K.**



$i_n = 112 \dots 500$

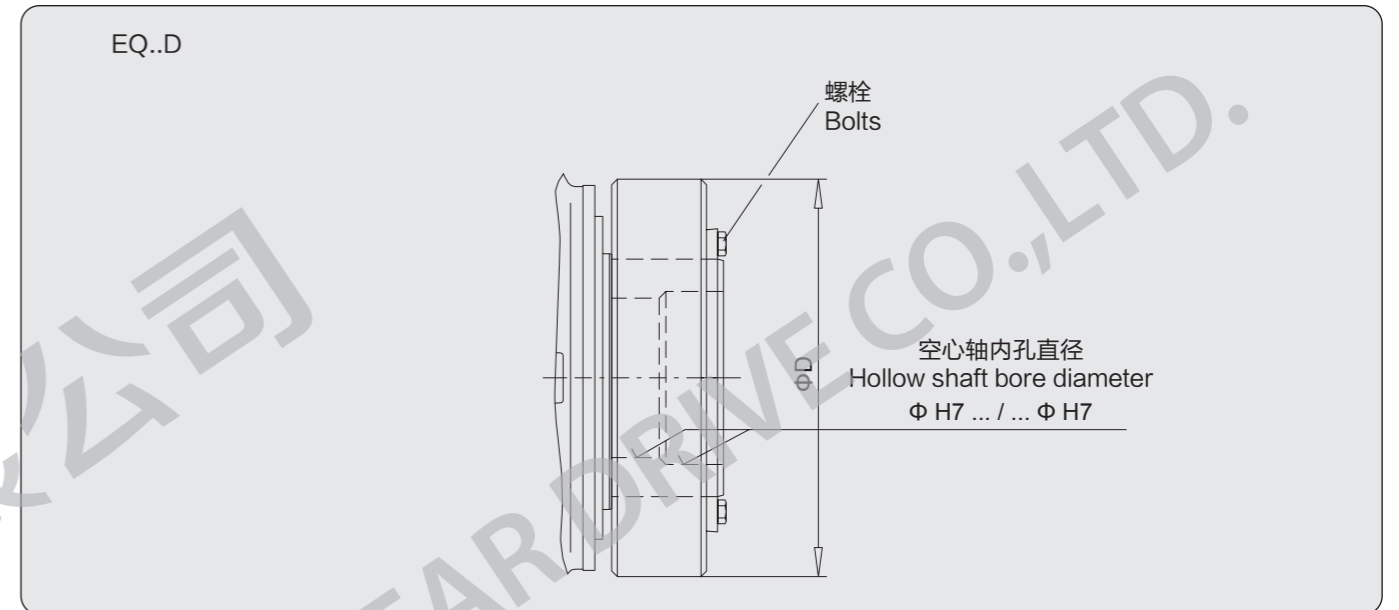
规格 Size	实际传动比 Actual Ratios													
	112	125	140	160	180	200	225	250	280	320	360	400	450	500
9	111.25	125.75	145.69	157.28	175.77	203.53	223.22	242.15	278.84	316.65	345.44	393.42	442.27	487.63
10	111.25	125.75	145.69	157.28	175.77	203.53	223.22	242.15	278.84	316.65	345.44	393.42	442.27	487.63
11	111.83	125.68	144.42	155.27	173.52	200.92	220.36	239.04	275.26	312.60	341.01	388.38	436.60	481.38
12	107.97	121.35	139.44	149.91	167.54	193.99	212.76	230.80	265.77	301.82	329.25	374.98	421.54	464.78
13	107.76	121.80	141.11	151.19	167.85	192.86	213.16	231.23	266.26	302.38	329.86	375.68	422.33	465.64
14	107.76	121.80	141.11	151.19	167.85	192.86	213.16	231.23	266.26	302.38	329.86	375.68	422.33	465.64
16	108.47	122.60	142.04	153.05	167.77	195.23	215.79	234.08	269.55	309.00	333.93	380.31	427.53	471.38
17	108.47	122.60	142.04	153.05	167.77	195.23	215.79	234.08	269.55	309.00	333.93	380.31	427.53	471.38
18	107.76	121.80	141.11	151.19	165.73	192.86	213.16	244.85	266.26	305.24	329.86	375.68	422.33	465.64
19/20	114.94	129.92	150.52	161.27	176.78	205.71	227.37	261.18	284.01	325.59	351.86	400.72	450.48	496.68

**EQ3K.**

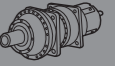
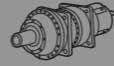


$i_n = 560 \dots 4000$

规格 Size	实际传动比 Actual Ratios																	
	560	630	710	800	900	1000	1120	1250	1400	1600	1800	2000	2240	2500	2800	3150	3550	4000
9	566.22	640.02	700.53	777.54	878.88	982.19	1137.3	1247.3	1353.1	1558.1	1769.4	1930.3	2198.4	2471.3	2724.8	3105.0	3597.2	4167.5
10	566.22	640.02	700.53	777.54	878.88	982.19	1137.3	1247.3	1353.1	1558.1	1769.4	1930.3	2198.4	2471.3	2724.8	3104.9	3597.2	4167.5
11	567.40	637.68	697.96	774.70	875.66	978.60	1133.1	1242.8	1348.1	1552.4	1762.9	1923.2	2190.3	2462.3	2714.8	3093.6	3584.1	4118.5
12	547.83	615.69	673.90	747.98	845.46	944.85	1094.0	1199.9	1301.6	1498.9	1702.1	1856.9	2114.8	2377.4	2621.2	2986.9	3460.5	3976.5
13	551.29	623.14	682.06	757.04	855.70	956.30	1107.3	1214.4	1317.4	1517.0	1722.8	1879.4	2140.4	2406.1	2652.9	3023.1	3502.4	4057.6
14	551.29	623.14	682.06	757.04	855.70	956.30	1107.3	1214.4	1317.4	1517.0	1722.8	1879.4	2140.4	2406.1	2652.9	3023.1	3502.4	4057.6
16	551.25	623.09	679.88	751.48	844.56	943.84	1092.9	1198.6	1300.2	1497.3	1700.3	1854.9	2112.5	2374.8	2618.4	2983.8	3428.7	3972.2
17	551.25	623.09	679.88	751.48	844.56	943.84	1092.9	1198.6	1300.2	1497.3	1700.3	1854.9	2112.5	2374.8	2618.4	2983.8	3428.7	3972.2
18	544.28	615.21	673.37	747.40	844.81	937.90	1077.6	1191.1	1292.1	1487.8	1689.6	1843.2	2099.2	2359.9	2601.9	2965.0	3435.0	3979.6
19/20	580.56	656.22	718.27	797.23	901.13	1000.4	1149.5	1270.5	1378.2	1587.0	1802.3	1966.1	2239.2	2517.2	2775.4	3162.6	3664.0	4244.9
21/22	580.56	656.22	718.27	797.23	901.13	1000.4	1149.5	1270.5	1378.2	1587.0	1802.3	1966.1	2239.2	2517.2	2775.4	3162.6	3664.0	4244.9
23/24	593.88	667.44	730.55	810.87	916.54	1004.7	1169.1	1292.2	1401.8	1614.2	1850.4	1999.7	2277.5	2560.2	2822.8	3216.7	3726.7	4282.4
25/26	593.88	667.44	730.55	810.87	916.54	1004.7	1169.1	1292.2	1401.8	1614.2	1850.4	1999.7	2277.5	2560.2	2822.8	3216.7	3726.7	4282.4
27/28	580.56	656.22	718.27	797.23	901.13	987.8	1149.5	1270.5	1459.4	1587.0	1819.3	1966.1	2239.2	2517.2	2775.4	3162.6	3664.0	4244.9
29/30	580.56	656.22	718.27	797.23	901.13	987.8	1149.5	1270.5	1459.4	1587.0	1819.3	1966.1	2239.2	2517.2	2775.4	3162.6	3664.0	4244.9



机座号 Size	输出扭矩 Output $T_{2N}$ (N.m)	胀紧盘 Shrink disk				重量 Weight (kg)
		内径 Size	D	螺栓 Bolts		
				型号 Size	拧紧力矩 (N.m) Tightening torque	
9	22000	155	263	M14	100	15.2
10	31000	165	290	M16	240	21.5
11	42000	175	320	M16		32.7
12	60000	210	370	M20		53
13	83000	230	405	M20	470	66
14	117000	270	460	M20		103
16	160000	290	485	M24		120
17	202000	310	520	M24	470	138
18	244000	330	570	M24		189
19	295000	350	590	M24		207
20	354000	380	640	M27		244
21	392000	390	650	M27		249
22	450000	420	670	M27	820	285
23	513000	440	720	M27		357
24	592000	460	770	M27		419
25	684000	480	800	M30		492
26	763000	500	850	M30		567
27	852000	530	910	M30		744
28	950000	560	940	M30	1210	776
29	1060000	560	940	M30		736
30	1200000	590	960	M30		845
31	1330000	590	960	M30		835
32	1500000	620	1020	M30		1064
33	1680000	660	1070	M33		1178
34	1920000	700	1140	M33	1640	1345
35	2240000	750	1150	M33		1346
36	2600000	800	1230	M33		1646

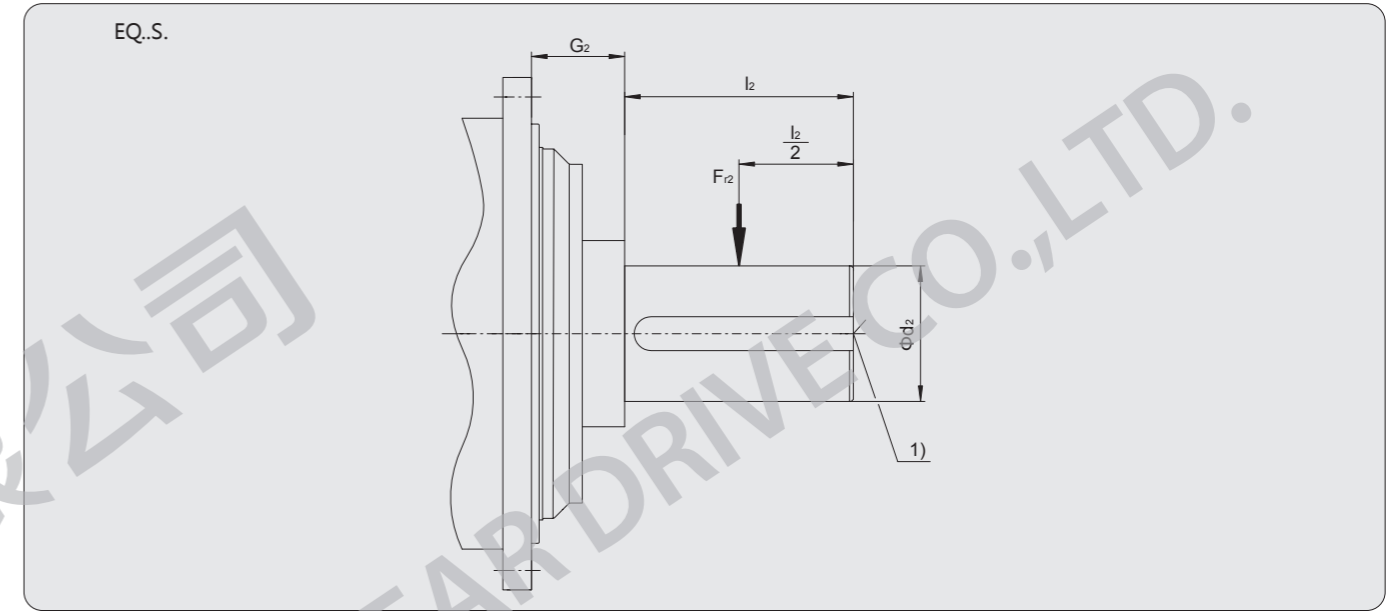
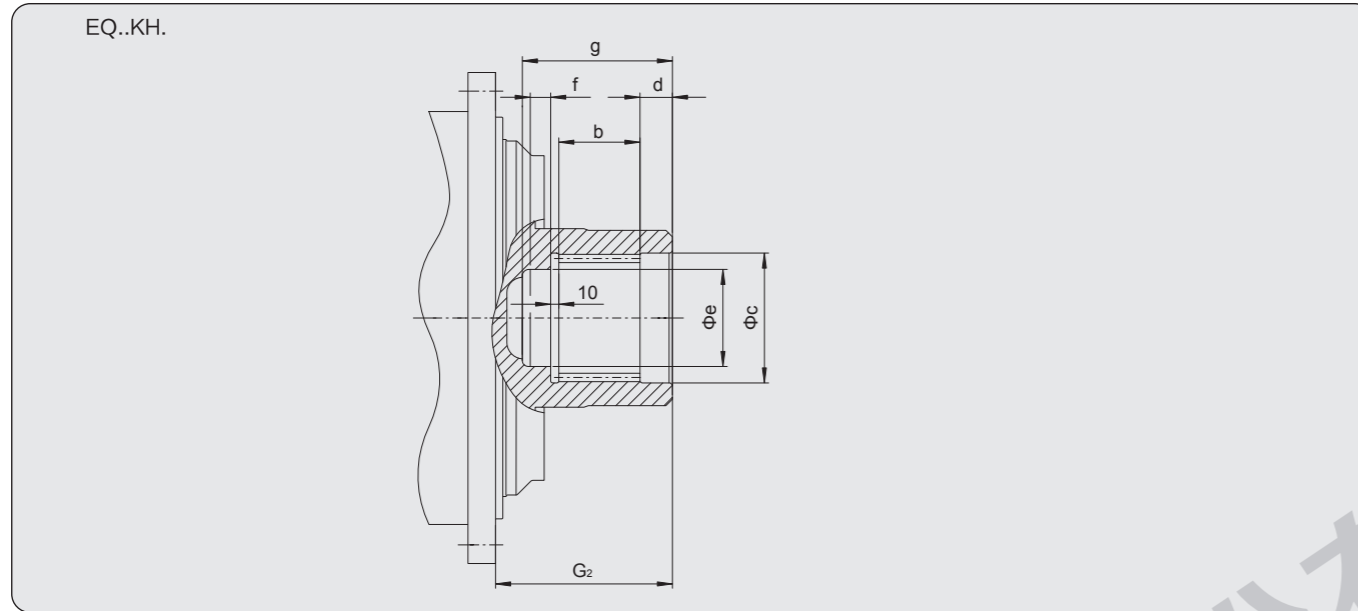


EQ系列行星减速机输出端尺寸  
EQ Series Planetary gear units output terminal size

类型 TYPES EQ..KH.  
规格 SIZES 9...30

EQ系列行星减速机输出端尺寸  
EQ Series Planetary gear units output terminal size

类型 TYPES EQ..S.  
规格 SIZES 9...36



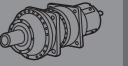
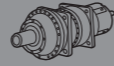
机座号 Size	输出扭矩 Output T <sub>2N</sub> (N.m)	渐开线花键空心轴输出轴 Hollow output shaft with involute splines							
		内花键规格 Involute splines acc.to DIN 5480	b	c H7	d	e H7	f	G <sub>2</sub>	g
9	22000	120 x 5 x 30 x 22 x 9H	70	122	40	107	20	165	150
10	31000	130 x 5 x 30 x 24 x 9H	80	132	40	117	20	174	160
11	42000	140 x 5 x 30 x 26 x 9H	90	142	45	125	25	204	180
12	60000	160 x 5 x 30 x 30 x 9H	100	162	45	145	25	223	190
13	83000	180 x 5 x 30 x 34 x 9H	110	182	45	165	25	237	200
14	117000	210 x 5 x 30 x 40 x 9H	125	212	45	195	25	264	215
16	160000	240 x 8 x 30 x 28 x 9H	140	242	50	220	25	285	235
17	202000	250 x 8 x 30 x 30 x 9H	150	252	50	230	30	290	250
18	244000	260 x 8 x 30 x 31 x 9H	160	262	50	240	30	303	260
19	295000	280 x 8 x 30 x 34 x 9H	170	282	50	260	30	327.5	270
20	354000	300 x 8 x 30 x 36 x 9H	180	302	50	280	30	327.5	280
21	392000	310 x 8 x 30 x 37 x 9H	190	312	60	290	40	354	310
22	450000	330 x 8 x 30 x 40 x 9H	200	332	60	310	40	354	320
23	513000	340 x 8 x 30 x 41 x 9H	200	342	60	320	40	348	320
24	592000	360 x 8 x 30 x 44 x 9H	220	362	60	340	40	368	340
25	684000	380 x 8 x 30 x 46 x 9H	230	382	60	360	40	372	350
26	763000	400 x 8 x 30 x 48 x 9H	240	402	60	380	40	382	360
27	852000	440 x 8 x 30 x 54 x 9H	250	442	60	420	40	423	370
28	950000	450 x 8 x 30 x 55 x 9H	260	452	65	430	40	428	385
29	1060000	460 x 8 x 30 x 56 x 9H	270	462	65	440	45	433	400
30	1200000	480 x 8 x 30 x 58 x 9H	285	482	65	460	45	448	415

机座号 Size	输出扭矩 Output T <sub>2N</sub> (N.m)	实心轴 Solid shaft			
		d <sub>2</sub> n <sub>6</sub>	l <sub>2</sub>	G <sub>2</sub>	F <sub>r2</sub>
9	22000	120	210	95	见367页 See page 367
10	31000	130	210	95	
11	42000	150	240	109	
12	60000	160	270	112	
13	83000	180	310	118	
14	117000	210	350	139	
16	160000	230	350	142	
17	202000	250	400	139	
18	244000	260	400	142	
19	295000	280	450	148.5	
20	354000	300	500	148.5	
21	392000	310	500	158	
22	450000	330	500	158	
23	513000	350	550	175	
24	592000	360	590	175	
25	684000	380	590	182	
26	763000	400	650	182	
27	852000	430	690	196.5	
28	950000	450	750	196.5	
29	1060000	460	750	209	
30	1200000	480	790	209	
31	1330000	500	790	232	
32	1500000	510	850	232	
33	1690000	530	900	251	
34	1920000	570	950	251	
35	2240000	600	1000	267	
36	2600000	640	1000	267	

机座号 Size	输出扭矩 Output T <sub>2N</sub> (N.m)	渐开线花键空心轴输出轴 Hollow output shaft with involute splines							
		内花键规格 Involute splines acc.to GB/T3478.1	b	c H7	d	e H7	f	G <sub>2</sub>	g
9	22000	22z x 5m x 30p x 6H	70	122	40	105	20	165	150
10	31000	24z x 5m x 30p x 6H	80	132	40	115	20	174	160
11	42000	26z x 5m x 30p x 6H	90	142	45	125	25	204	180
12	60000	30z x 5m x 30p x 6H	100	162	45	145	25	223	190
13	83000	34z x 5m x 30p x 6H	110	182	45	165	25	237	200
14	117000	40z x 5m x 30p x 6H	125	212	45	195	25	264	215
16	160000	28z x 8m x 30p x 6H	140	242	50	215	25	285	235
17	202000	30z x 8m x 30p x 6H	150	255	50	230	30	290	250
18	244000	31z x 8m x 30p x 6H	160	262	50	240	30	303	260
19	295000	33z x 8m x 30p x 6H	170	282	50	255	30	327.5	270
20	354000	36z x 8m x 30p x 6H	180	302	50	280	30	327.5	280
21	392000	37z x 8m x 30p x 6H	190	312	60	285	40	354	310
22	450000	40z x 8m x 30p x 6H	200	335	60	310	40	354	320
23	513000	41z x 8m x 30p x 6H	200	342	60	320	40	348	320
24	592000	43z x 8m x 30p x 6H	220	362	60	335	40	368	340
25	684000	46z x 8m x 30p x 6H	230	382	60	360	40	372	350
26	763000	48z x 8m x 30p x 6H	240	402	60	375	40	382	360

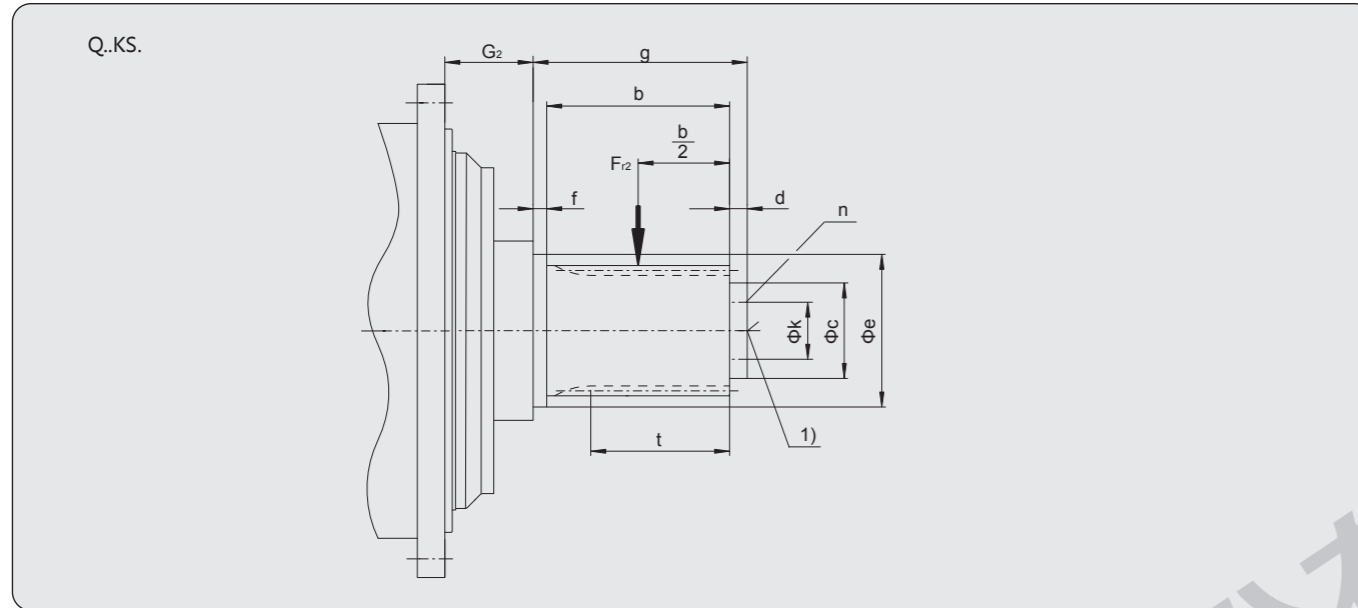
27-30 根据用户要求供货 Provided according to customer's requirements.

1)有关平键 (符合GB/T1095-1979) 与中心孔参照390页  
1)For parallel (GB/T1095-1979) and centre hole see page 390



EQ系列行星减速机输出端尺寸  
EQ Series Planetary gear units output terminal size

类型 TYPES EQ..KS.  
规格 SIZES 9...30



机座号 Size	输出扭矩 Output torque T <sub>2N</sub> (N.m)	渐开线花键实心轴输出 Hollow output shaft with involute splines												
		外花键规格 Involute splines acc.to		t	b	c k <sub>6</sub>	d	e k <sub>6</sub>	f	g	k	n	G <sub>2</sub>	F <sub>12</sub>
		DIN 5480	GB/T3478.1											
9	22000	130x5x30x24x8m	25z x 5m x 30p x 5h	70	80	110	20	132	20	120	80	3xM16x24	95	
10	31000	140x5x30x26x8m	27z x 5m x 30p x 5h	80	90	120	20	142	20	130	90	3xM16x24	95	
11	42000	160x5x30x30x8m	31z x 5m x 30p x 5h	90	100	140	25	162	25	150	110	3xM16x24	109	
12	60000	180x5x30x34x8m	35z x 5m x 30p x 5h	100	110	90	25	182	25	160	130	3xM16x24	112	
13	83000	200x5x30x38x8m	39z x 5m x 30p x 5h	110	120	100	30	202	25	175	140	3xM16x24	118	
14	117000	220x5x30x42x8m	43z x 5m x 30p x 5h	125	135	120	30	222	30	195	160	3xM16x24	139	
16	160000	250x8x30x30x8m	30z x 8m x 30p x 5h	140	155	140	35	252	30	220	185	3xM20x30	142	
17	202000	260x8x30x31x8m	31z x 8m x 30p x 5h	150	165	155	40	262	35	240	200	3xM20x30	139	
18	244000	280x8x30x34x8m	34z x 8m x 30p x 5h	160	175	170	40	282	35	250	215	3xM20x30	142	
19	295000	300x8x30x36x8m	36z x 8m x 30p x 5h	170	185	180	40	302	35	260	225	3xM20x30	148.5	
20	354000	310x8x30x37x8m	37z x 8m x 30p x 5h	180	195	190	40	312	35	270	235	6xM20x30	148.5	
21	392000	320x8x30x38x8m	39z x 8m x 30p x 5h	190	205	200	40	322	35	280	250	6xM20x30	158	
22	450000	340x8x30x41x8m	41z x 8m x 30p x 5h	200	215	210	40	342	35	290	265	6xM20x30	158	
23	513000	360x8x30x44x8m	44z x 8m x 30p x 5h	200	215	230	40	362	35	290	275	6xM20x30	175	
24	592000	380x8x30x46x8m	46z x 8m x 30p x 5h	220	235	245	40	382	35	310	290	6xM20x30	175	
25	684000	400x8x30x48x8m	49z x 8m x 30p x 5h	230	245	260	40	402	35	320	310	6xM24x36	182	
26	763000	420x8x30x51x8m	51z x 8m x 30p x 5h	240	255	280	40	422	35	330	330	6xM24x36	182	
27-30		根据用户要求供货 On request												

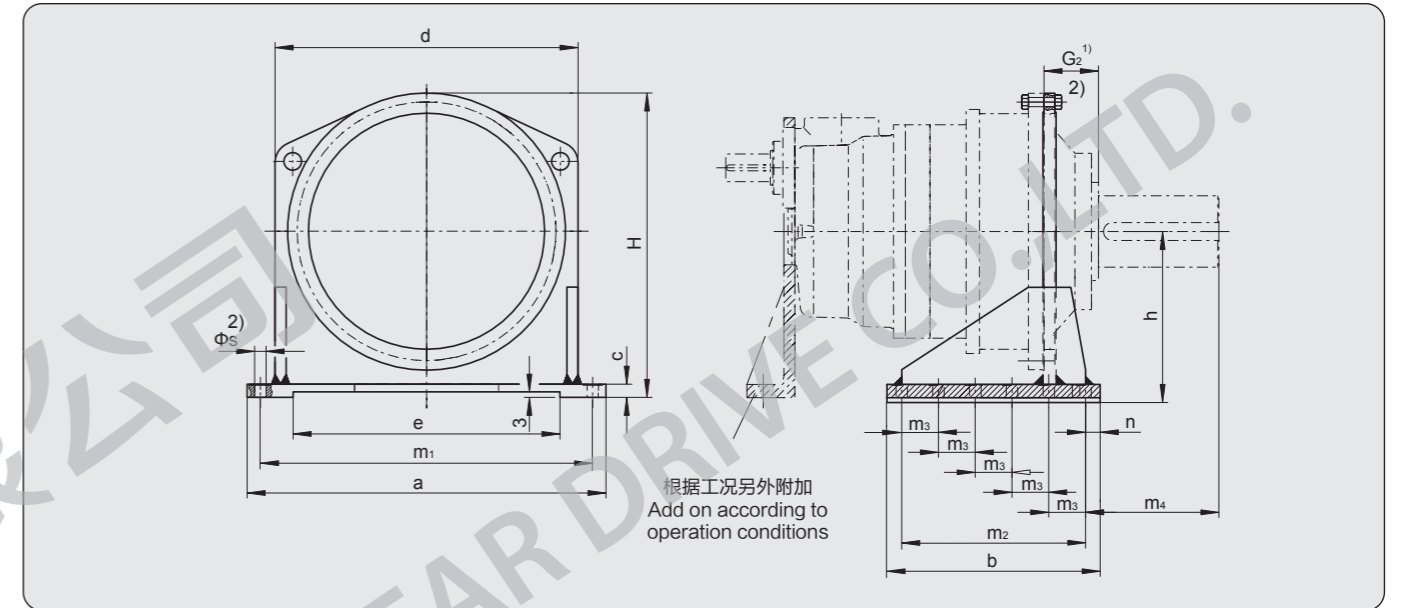
1)有关中心孔请参照390页  
1)For centre hole see page 390

见397页  
See page 367

EQ系列行星减速机附件  
EQ Series Planetary gear units Add-on Piece

1. 齿轮箱底座 Gear Housing Base

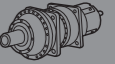
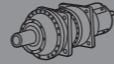
96



机座号 Size	尺寸 Dimensions													螺栓孔 Foundation bolt		重量 Weight (kg)
	a	b	c	d	e	h	H	m <sub>1</sub>	m <sub>2</sub>	m <sub>3</sub>	m <sub>4</sub>	n	Foundation bolt			
													S	数量 QTY		
9	580	330	20	450	380	260	480	520	260	130	240	35	26	2x3	56	
10	630	360	25	500	430	280	525	570	290	145	240	35	26	2x3	82	
11	680	400	30	550	480	315	585	620	330	110	274	35	26	2x4	122	
12	760	450	30	630	560	360	670	700	380	95	292	35	26	2x5	157	
13	820	490	35	680	610	390	720	750	420	105	334	35	26	2x5	213	
14	920	560	35	760	680	430	800	840	480	120	380	40	33	2x5	270	
16	980	580	40	820	700	470	865	900	500	125	374	40	33	2x5	350	
17	1130	670	45	940	810	540	998	1040	580	145	405	45	39	2x5	520	
18	1180	720	45	980	830	560	1035	1080	620	155	393	50	39	2x5	580	
19	1260	760	50	1050	880	590	1090	1160	640	160	450	60	45	2x5	720	
20	1260	760	50	1050	880	590	1090	1160	640	160	500	60	45	2x5	720	
21	1440	840	55	1170	1020	660	1228	1320	700	175	513	70	52	2x5	940	
22	1440	840	55	1170	1020	660	1228	1320	700	175	513	70	52	2x5	940	
23	1540	910	60	1270	1100	730	1345	1420	750	150	567	80	52	2x6	1275	
24	1540	910	60	1270	1100	730	1345	1420	750	150	607	80	52	2x6	1275	
25	1700	1000	65	1400	1240	795	1465	1550	860	215	574	70	62	2x5	1670	
26	1700	1000	65	1400	1240	795	1465	1550	860	215	634	70	62	2x5	1670	
27	1850	1100	70	1550	1370	870	1610	1700	950	190	664	75	62	2x6	2170	
28	1850	1100	70	1550	1370	870	1610	1700	950	190	724	75	62	2x6	2170	
29	1980	1180	75	1640	1460	925	1715	1820	1000	250	731	90	70	2x5	2650	
30	1980	1180	75	1640	1460	925	1715	1820	1000	250	771	90	70	2x5	2650	
31	2150	1300	75	1750	1570	1000	1845	1950	1100	220	773	100	70	2x6	3100	
32	2150	1300	75	1750	1570	1000	1845	1950	1100	220	833	100	70	2x6	3100	
33	2230	1350	85	1850	1630	1050	1940	2050	1150	230	883	100	78	2x6	3850	
34	2230	1350	85	1850	1630	1050	1940	2050	1150	230	933	100	78	2x6	3850	
35 + 36		根据用户要求供货 On request														

1) 输出轴的尺寸, 见396页  
2) 见404页

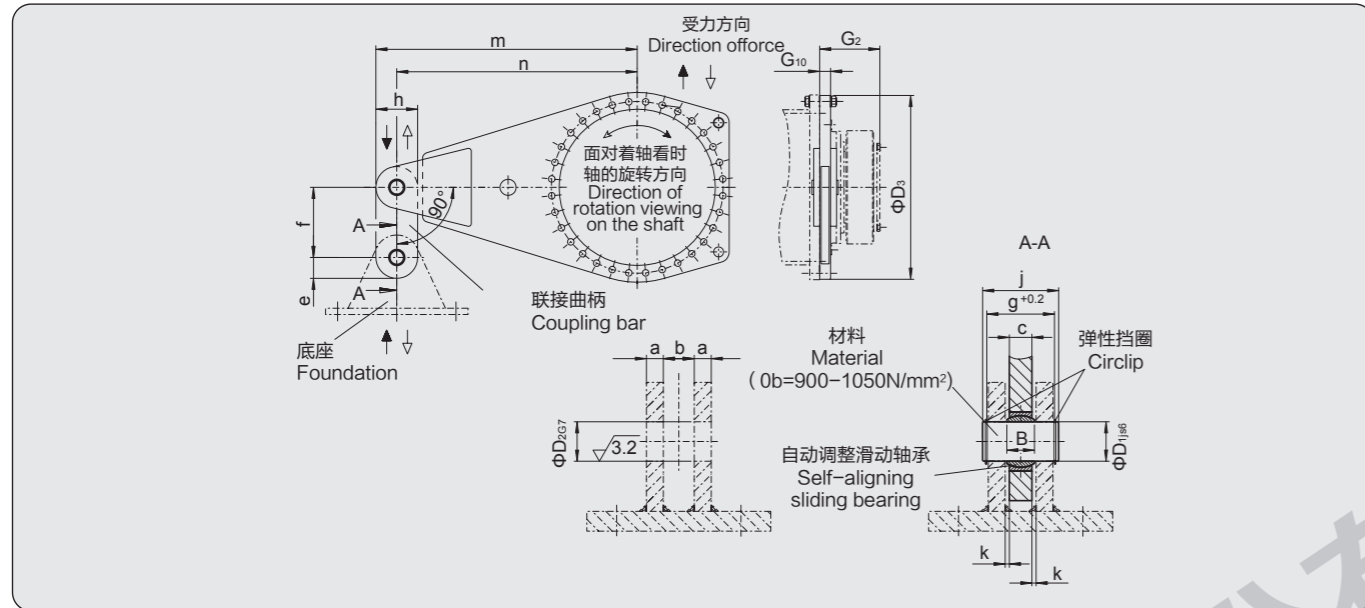
1) For output shaft dimensions, see page 396  
2) See page 404



EQ系列行星减速机附件  
EQ Series Planetary gear units Add-on Piece

2. 单侧扭矩支撑臂 Torque Reaction Arm on One Side

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机座号 Size	输出扭矩 Output T <sub>2N</sub> (N·m)	D <sub>1</sub> js6	D <sub>2</sub> G7	D <sub>3</sub>	G <sub>2</sub>	G <sub>10</sub>	a min	b	B 1)	c	e	f	g +0.2	h	j	间隙 Clearance k	m	n	滑动 轴承 内径 Sliding bearing	重量 Weight (kg)
9	22000	30	440	165	25	15	25	22	18	50	140	59.5	100	70	3.5	605	555	30	38	
10	31000	35	485	174	30	15	30	25	20	52.5	140	64.5	105	75	5	667.5	615	35	51	
11	42000	40	540	204	30	18	30	28	22	65	160	70.5	130	85	4	750	685	40	82	
12	60000	40	620	224	30	18	30	28	22	65	160	70.5	130	85	4	850	785	40	85	
13	83000	45	665	241	35	20	35	32	25	72.5	180	79.5	145	95	5	912.5	840	45	113	
14	117000	50	740	278	40	20	40	35	30	72.5	200	85	145	100	5	1012.5	940	50	145	
16	160000	60	790	285	50	25	50	44	35	77.5	240	105	155	120	7.5	1077.5	1000	60	206	
17	202000	60	915	294	50	25	50	44	35	85	240	105	170	120	7.5	1250	1165	60	274	
18	244000	70	955	303	55	30	55	49	40	105	280	120	210	135	7.5	1315	1210	70	365	
19	295000	80	1005	327.5	60	30	60	55	45	105	320	125	210	145	7.5	1405	1300	80	423	
20	354000	80	1005	327.5	60	30	60	55	45	105	320	125	210	145	7.5	1405	1300	80	423	
21	392000	80	1140	354	60	30	60	55	45	113	320	125	225	145	7.5	1562.5	1450	80	530	
22	450000	80	1140	354	60	30	60	55	45	113	320	125	225	145	7.5	1562.5	1450	80	530	
23	513000	90	1235	380	65	30	65	60	50	125	360	130	250	150	7.5	1700	1575	90	665	
24	592000	90	1235	380	65	30	65	60	50	125	360	130	250	150	7.5	1700	1575	90	665	
25	684000	100	1350	407	75	35	75	70	55	138	400	150	275	170	10	1857.5	1720	100	940	
26	763000	100	1350	407	75	35	75	70	55	138	400	150	275	170	10	1857.5	1720	100	940	
27	852000	110	1490	453	75	35	75	70	55	150	440	150	300	175	10	2050	1900	110	1120	
28	950000	110	1490	453	75	35	75	70	55	150	440	150	300	175	10	2050	1900	110	1120	
29	1060000	110	1600	483	75	35	75	70	55	158	440	150	315	175	10	2192.5	2035	110	1260	
30	1200000	110	1600	483	75	35	75	70	55	158	440	150	315	175	10	2192.5	2035	110	1260	
31-36	根据用户要求供货 On request																			

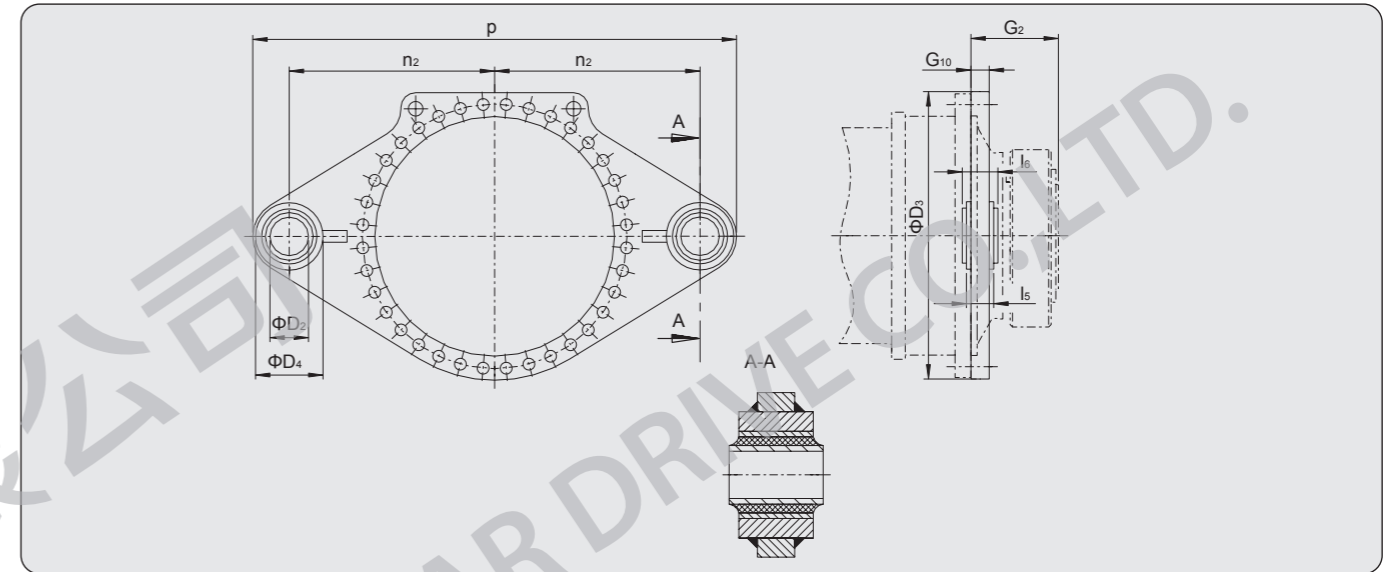
1) 公称尺寸B=22-35, 公差-0.12  
公称尺寸B=44-55, 公差-0.15  
公称尺寸B=60-70, 公差-0.20

1) Nominal size B=22-35, tolerance-0.12  
Nominal size B=44-55, tolerance-0.15  
Nominal size B=60-70, tolerance-0.20

EQ系列行星减速机附件  
EQ Series Planetary gear units Add-on Piece

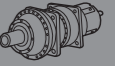
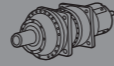
3. 带橡胶衬套的两侧扭矩支撑臂 Torque Reaction Arm on Two Sides with Rubber Bushes

76



机座号 Size	额定输出 扭矩 Output torque T <sub>2N</sub> (N·m)	*) D <sub>2</sub> H9	D <sub>3</sub>	D <sub>4</sub>	G <sub>2</sub>	G <sub>10</sub>	l <sub>5</sub>	l <sub>6</sub>	n <sub>2</sub>	P	重量 Weight (kg)
9	22000	50	440	115	165	30	100	110	500	1140	58
10	31000	50	485	115	174	30	100	110	550	1240	72
11	42000	100	540	180	204	30	110	120	575	1355	95
12	60000	100	620	180	224	35	110	120	625	1455	120
13	83000	110	665	210	241	35	170	180	600	1435	145
14	117000	110	740	210	278	40	170	180	650	1535	170
16	160000	124	790	240	285	40	220	230	700	1670	230
17	202000	124	915	240	288	40	220	230	750	1770	300
18	244000	124	955	240	303	50	220	230	900	2070	400

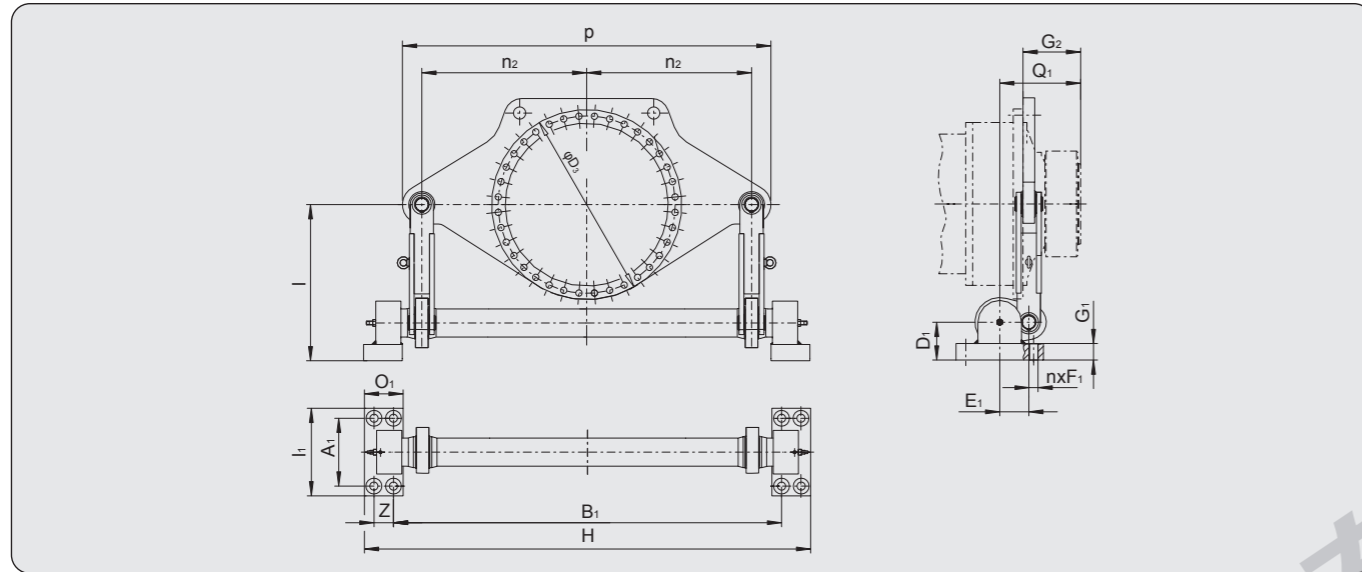
\*)销轴: Φ h8 \*)Pin: Φ h8



EQ系列行星减速机附件  
EQ Series Planetary gear units Add-on Piece

4. 扭力轴支撑架 Torsion Shaft Support

77



机座号 Size	额定输出 扭矩 Output torque T <sub>2N</sub> (N·m)	A1	B1	D3	D1	E1	F1 2)	数量 Qty n	G1	G2	H	I 1)	I1	n2	O1	P	Q1	Z	重量 Weight (kg)
9	22000	250	1414	610	120	105	33	8	48.5	165	1619	560	330	550	140	1230	247.5	65	300
10	31000	250	1414	610	120	105	33	8	48.5	174	1619	560	330	550	140	1230	256.5	65	300
11	42000	250	1414	610	120	105	33	8	48.5	204	1619	560	330	550	140	1230	286.5	65	300
12	60000	250	1414	610	120	105	33	8	48.5	224	1619	560	330	550	140	1230	306.5	65	300
13	83000	280	1604	775	155	145	39	8	68.5	241	1837	620	380	650	158	1450	358.5	75	600
14	117000	280	1604	775	155	145	39	8	68.5	278	1837	620	380	650	158	1450	395.5	75	600
16	160000	280	1604	775	155	145	39	8	68.5	285	1837	620	380	650	158	1450	402.5	75	600
17	202000	315	1777	955	170	165	39	8	73.5	294	2041	700	400	750	180	1680	431.5	84	900
18	244000	315	1777	955	170	165	39	8	73.5	303	2041	700	400	750	180	1680	440.5	84	900
19	295000	350	2000	985	195	175	45	8	83.5	328	2300	860	450	850	200	1900	470.5	100	1400
20	354000	350	2000	985	195	175	45	8	83.5	328	2300	860	450	850	200	1900	470.5	100	1400
21	392000	400	2254	1120	210	190	45	8	88.5	354	2591	900	530	950	225	2110	506.5	113	1700
22	450000	400	2254	1120	210	190	45	8	88.5	354	2591	900	530	950	225	2110	506.5	113	1700
23	513000	450	2496	1215	235	220	45	8	98.5	380	2871	1060	590	1063	250	2385	562.5	125	2150
24	592000	450	2496	1215	235	220	45	8	98.5	380	2871	1060	590	1063	250	2385	562.5	125	2150
25	684000	500	2816	1350	275	245	52	8	118.5	407	3236	1200	650	1150	280	2600	614.5	140	2700
26	763000	500	2816	1350	275	245	52	8	118.5	407	3236	1200	650	1150	280	2600	614.5	140	2700
27	852000	530	2887	1490	300	255	52	8	128.5	453	3327	1250	700	1250	290	2820	670.5	150	3400
28	950000	530	2887	1490	300	255	52	8	128.5	453	3327	1250	700	1250	290	2820	670.5	150	3400
29	1060000	560	3200	1565	300	280	62	8	128.5	483	3673	1350	750	1360	315	3080	718	158	4350
30	1200000	560	3200	1565	300	280	62	8	128.5	483	3673	1350	750	1360	315	3080	718	158	4350
31	1330000	590	3408	1695	340	300	70	8	148.5	538	3906	1400	790	1450	330	3260	788	168	5500
32	1500000	590	3408	1695	340	300	70	8	148.5	538	3906	1400	790	1450	330	3260	788	168	5500
33	1680000	620	3588	1785	375	320	70	8	158.5	573	4116	1500	840	1550	350	3520	840.5	178	7000
34	1920000	620	3588	1785	375	320	70	8	158.5	573	4116	1500	840	1550	350	3520	840.5	178	7000
35 - 36		根据用户要求供货 On request																	

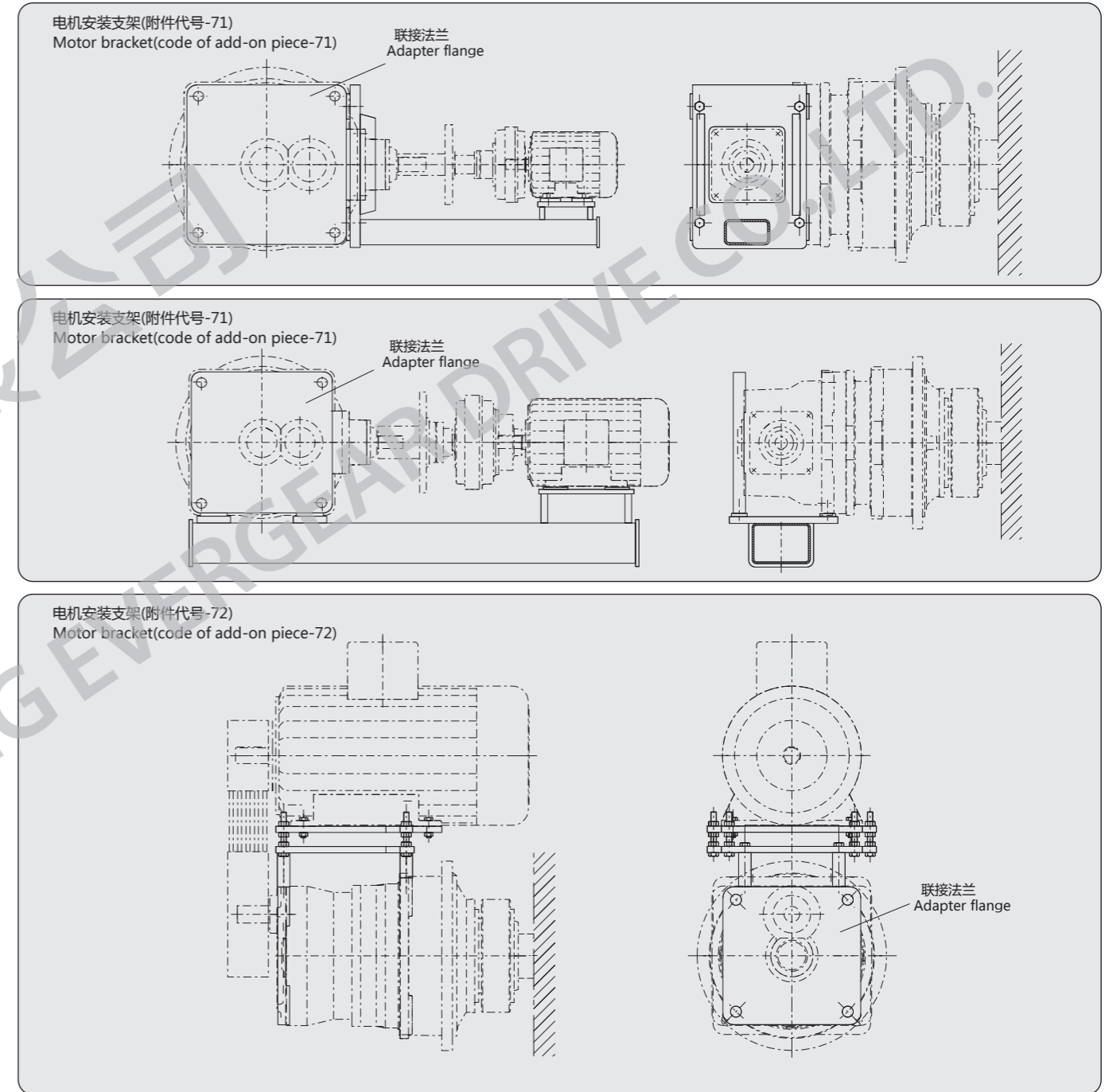
1) 标准尺寸, 整体高度可修正到2000mm  
2) 锁紧用螺栓强度不得低于6.8级

1) Standard dimension, overall height modifiable up to 2000mm  
2) The bolts used for lock are not lower than class 6.8

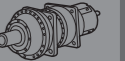
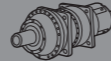
EQ系列行星减速机附件  
EQ Series Planetary gear units Add-on Piece

5. 电机安装支架 Motor bracket

71、72

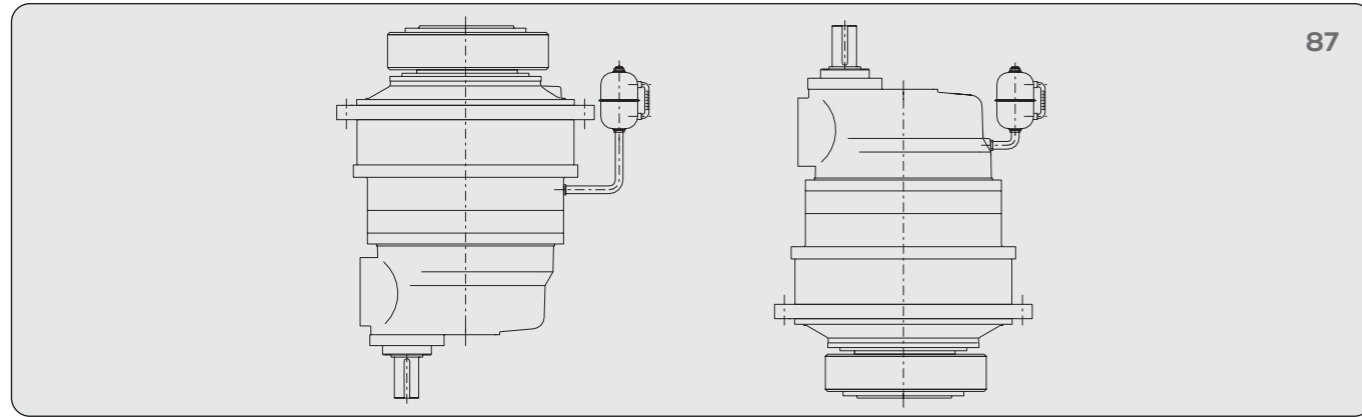


如果不用钟形电机支架, 可以采用法兰联接的电机支架, 如上图所示。  
In cases where no motor bell housings are provided we use an adapter flange to attach motor brackets, they are shown in the above drawings.



EQ系列行星减速机附件  
EQ Series Planetary gear units Add-on Piece

6.立式安装补偿油箱  
Oil Compensating Tank for Vertical Mounting Position

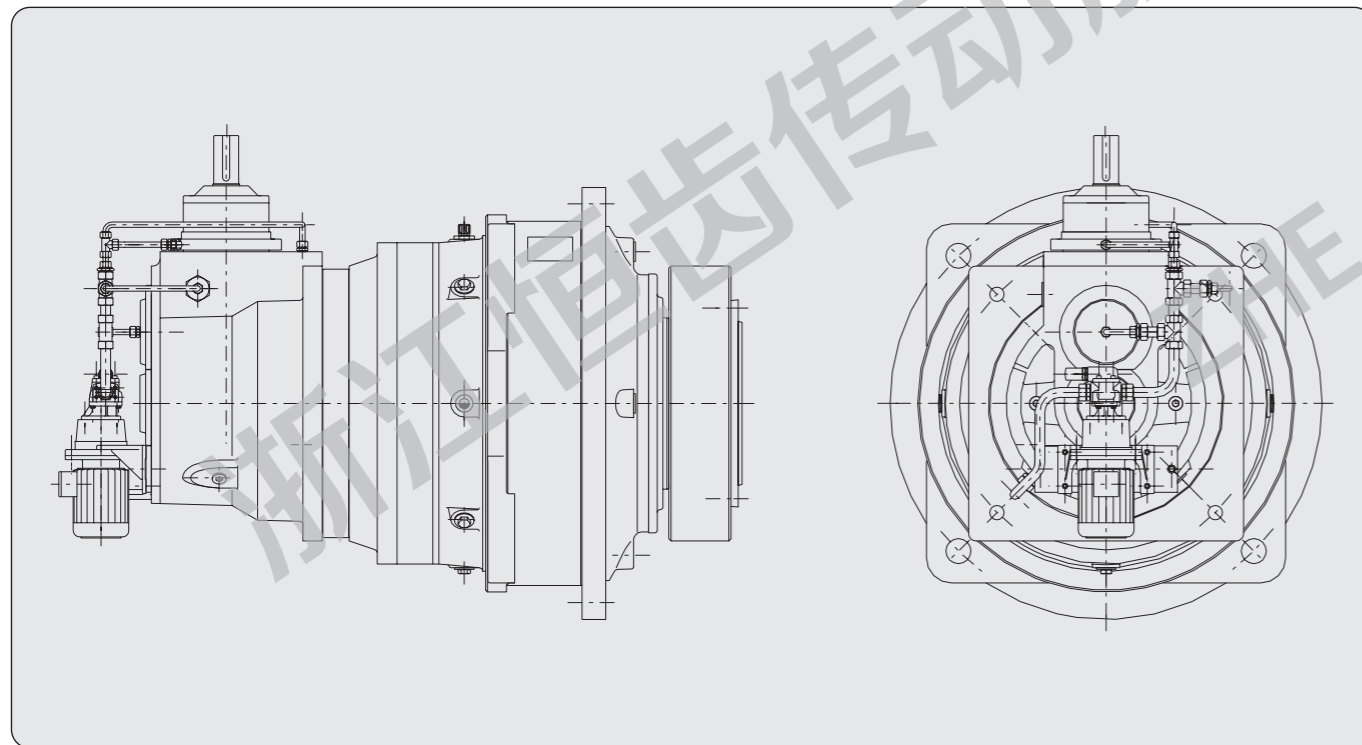


立式安装时，为保证上端的轴承得到可靠润滑必须相应的提高油位，油位通过家装的补偿油箱来加高和检查。补偿油箱上装有通气孔器，如上图所示。油箱可安装在减速器上，也可安装在客户的机器上。

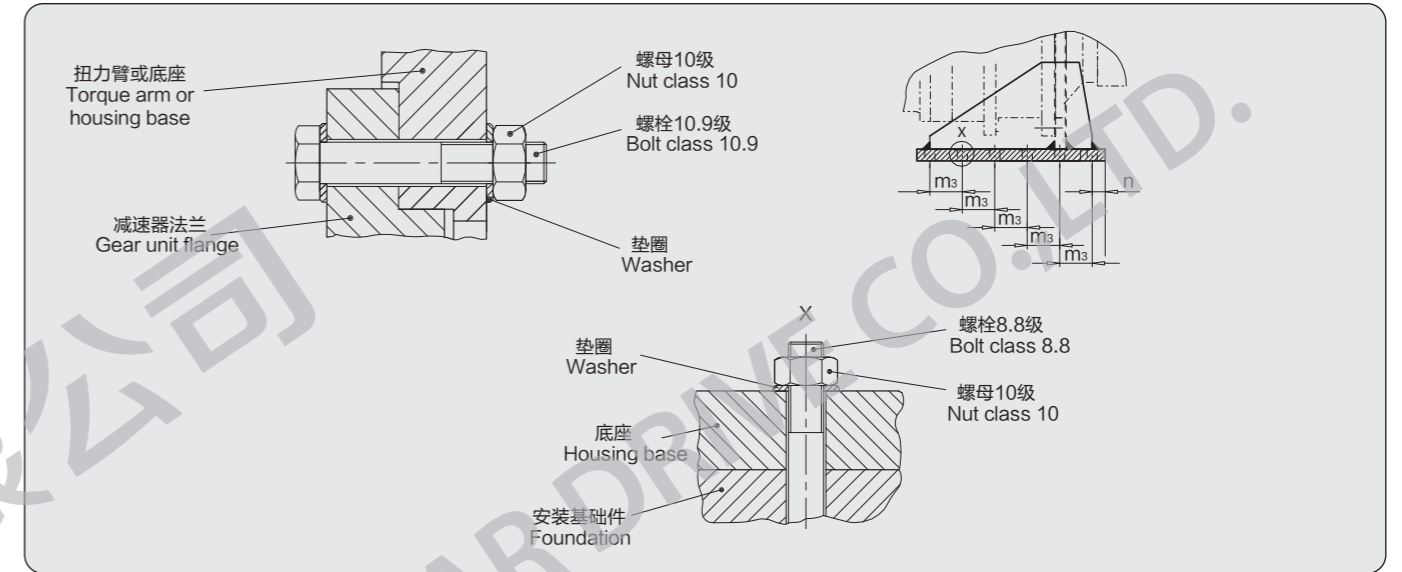
In case of vertical mounting position, to ensure the lubrication of the upper bearing, the oil level is increased accordingly, the oil level is increased and checked via an oil compensating tank fitted separately. The oil tank installs the breather valve, it's shown in the above drawings. The oil tank can be attached either to the gear units, or to the customer's machine frame.

EQS、EQK、EQL当安装布置方位为B51的卧式安装时需配备电动油泵强制润滑，如下图

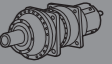
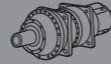
For EQS、EQK、EQL, in case of mounting positions B51 horizontal, it needs to mount the motor pumps for forced lubrication. Shown in the following drawings.



法兰联接及底座安装的螺母预紧扭矩  
Tightening Torques for Flange Connections and Foot-mounted Design

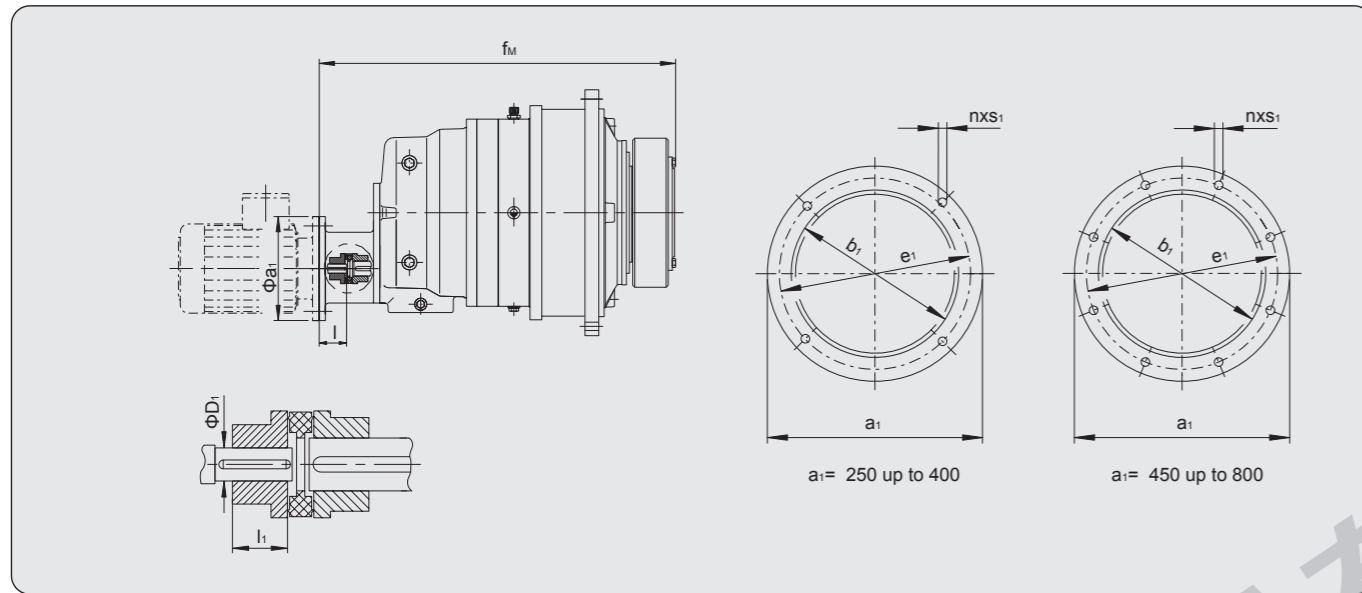


机座号 Size	法兰联接 Flange attachment		底座联接 Base attachment	
	螺栓 Thread (10.9)	预紧扭矩(N.m) Tightening torque	螺栓 Thread (8.8)	预紧扭矩(N.m) Tightening torque
9	M16	295	M24	710
10	M16	295	M24	710
11	M20	580	M24	710
12	M24	1000	M24	710
13	M24	1000	M24	710
14	M24	1000	M30	1450
16	M24	1000	M30	1450
17	M30	2000	M36	2530
18	M30	2000	M36	2530
19/20	M30	2000	M42	4070
21/22	M36	3560	M48	6140
23/24	M36	3560	M48	6140
25/26	M42	5720	M56	9840
27/28	M48	8640	M56	9840
29/30	M48	8640	M64	14300
31/32	M56	13850	M64	14300
33/34	M56	13850	M64	14300
35/36	M56	13850	M72x6	20800



EQ系列减速机带电机法兰输入  
Planetary gear units with motor flange and coupling

With Motor Bell Housing and Coupling Type  
Q2S



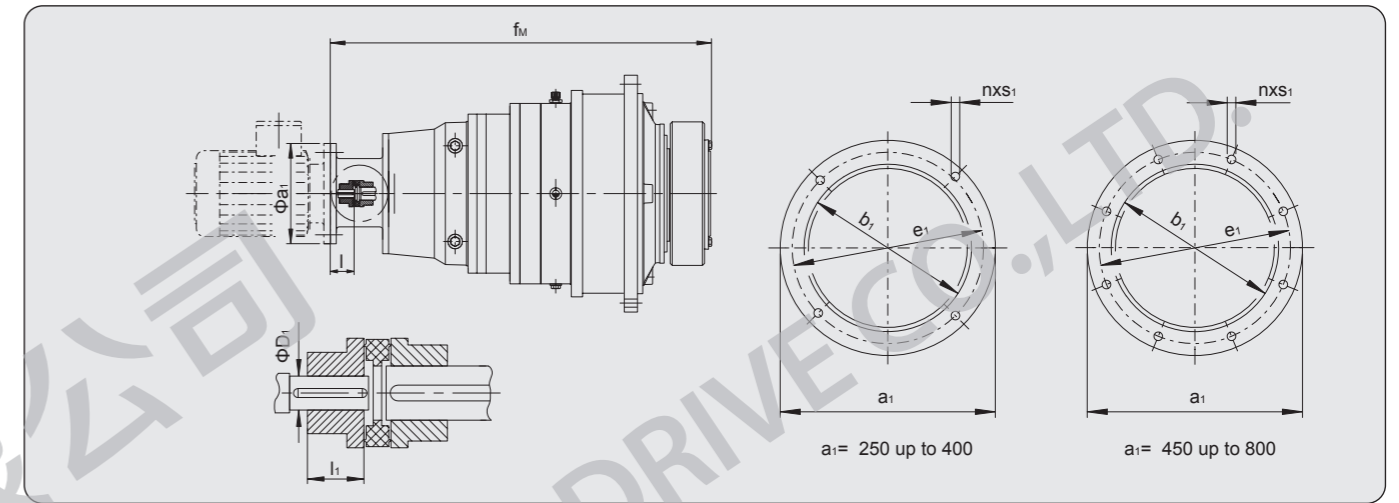
EQ2S	电机 Motor (Y)*	法兰 Flange (F)**	a <sub>1</sub>	b <sub>1</sub> (h <sub>7</sub> )	D <sub>1</sub>	e <sub>1</sub>	f <sub>m</sub>	l <sub>1</sub>	l	n	s <sub>1</sub>
9	160		350	250	42	300	827	50	85	4	M16
	180		350	250	48	300	827	50	85	4	M16
10	160		350	250	42	300	856	50	85	4	M16
	180		350	250	48	300	856	50	85	4	M16
11	160		350	250	42	300	995	60	95	4	M16
	180		350	250	48	300	995	60	95	4	M16
12	200		400	300	55	350	1007	75	110	4	M16
	160		350	250	42	300	1029	60	95	4	M16
12	180		350	250	48	300	1029	60	95	4	M16
	200		400	300	55	350	1041	75	110	4	M16
13	225		450	350	60	400	1243	80	130	8	M16
	250		550	450	65	500	1243	80	130	8	M16
14	225		450	350	60	400	1303	80	130	8	M16
	250		550	450	65	500	1303	80	130	8	M16
16	250		550	450	65	500	1432	80	120	8	M16
	280		550	450	75	500	1447	90	130	8	M16
17	250		550	450	65	500	1467	80	120	8	M16
	280		550	450	75	500	1482	90	130	8	M16
18	315		660	550	80	600	1660	90	120	8	M20
19, 20	315		660	550	80	600	1708	90	120	8	M20

注 :1) “\*” 所选直联电机机座号所对应的功率应满足传动能力表  
“\*\*” 表格中所示的法兰为标准型号的法兰, 如有异同请另咨询  
2) 侧面扭力臂组合, 请咨询

Note :1) “\*” Power of selected motor must meet transmissio table  
“\*\*” Indicate standard flange, if special dimension is needed, please consult us  
2) For combination with torque arm on one side, please refer to us

EQ系列减速机带电机法兰输入  
Planetary gear units with motor flange and coupling

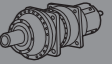
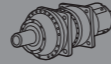
With Motor Bell Housing and Coupling Type  
EQ3N



EQ3N	电机 Motor (Y)*	法兰 Flange (F)**	a <sub>1</sub>	b <sub>1</sub> (h <sub>7</sub> )	D <sub>1</sub>	e <sub>1</sub>	f <sub>m</sub>	l <sub>1</sub>	l	n	s <sub>1</sub>
9	132		300	230	38	265	912	60	84	4	M12
	160		350	250	42	300	948	60	90	4	M16
	180		350	250	48	300	948	65	95	4	M16
10	132		300	230	38	265	941	60	84	4	M12
	160		350	250	42	300	977	60	90	4	M16
	180		350	250	48	300	977	65	95	4	M16
11	132		300	230	38	265	1002	60	84	4	M12
	160		350	250	42	300	1038	60	90	4	M16
11	180		350	250	48	300	1038	65	95	4	M16
	132		300	230	38	265	1036	60	84	4	M12
12	160		350	250	42	300	1072	60	90	4	M16
	180		350	250	48	300	1072	65	95	4	M16
13	160		350	250	42	300	1147	60	90	4	M16
	180		350	250	48	300	1147	65	95	4	M16
13	200		400	300	55	350	1159	75	105	4	M16
	160		350	250	42	300	1207	60	90	4	M16
14	180		350	250	48	300	1207	65	95	4	M16
	200		400	300	55	350	1219	75	105	4	M16
	200		400	300	55	350	1372	80	100	4	M16
16	225		450	350	60	400	1413	80	130	8	M16
	200		400	300	55	350	1407	80	100	4	M16
17	225		450	350	60	400	1448	80	130	8	M16
	250		500	450	65	500	1607	80	120	8	M16
18	280		550	450	75	500	1628	90	130	8	M16
	250		500	450	65	500	1665	80	120	8	M16
19, 20	280		550	450	75	500	1675	90	130	8	M16

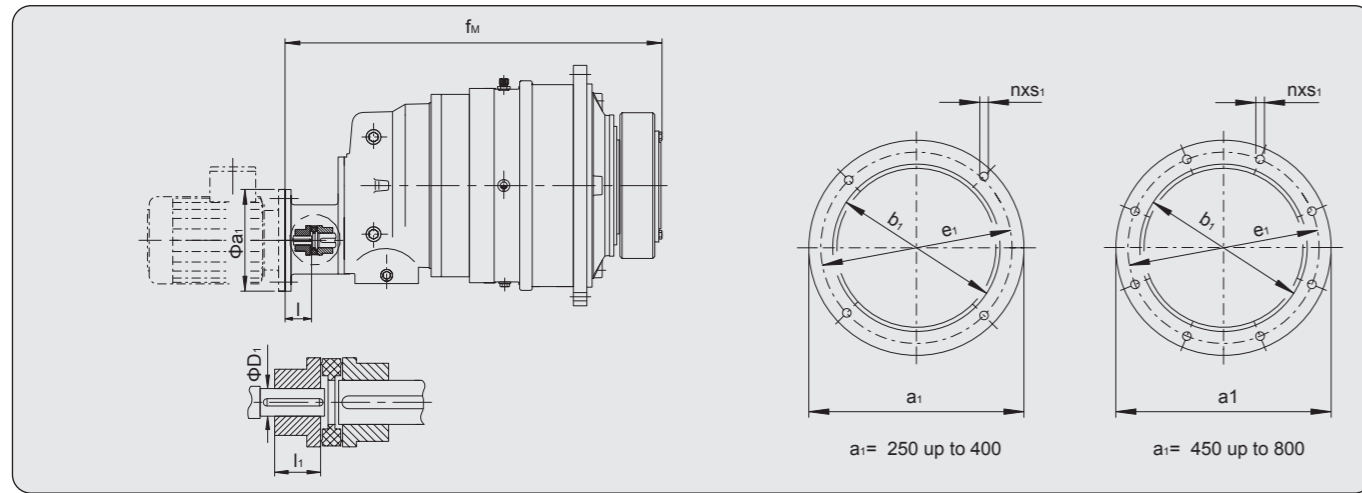
注 :1) “\*” 所选直联电机机座号所对应的功率应满足传动能力表  
“\*\*” 表格中所示的法兰为标准型号的法兰, 如有异同请另咨询  
2) 侧面扭力臂组合, 请咨询

Note : 1) “\*” Power of selected motor must meet transmissio table  
“\*\*” Indicate standard flange, if special dimension is needed, please consult us  
2) For combination with torque arm on one side, please refer to us



**EQ系列减速机带电机法兰输入**  
Planetary gear units with motor flange and coupling

With Motor Bell Housing and Coupling **Type**  
Q3S



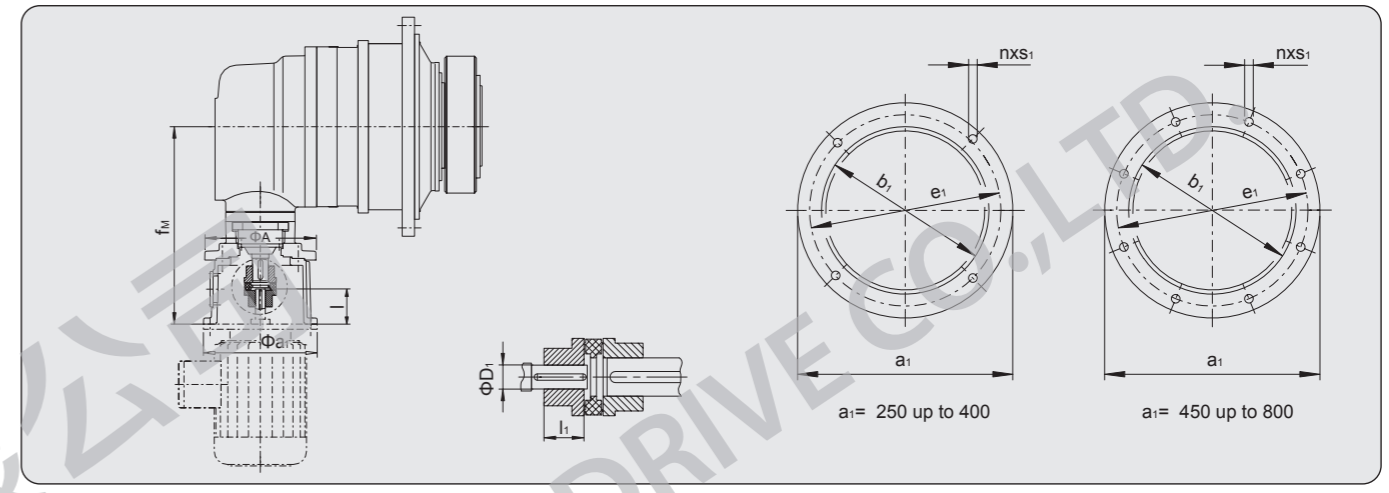
EQ3S	电机 Motor (Y)*	法兰 Flange (F)**	a <sub>1</sub>	b <sub>1</sub>	D <sub>1</sub>	e <sub>1</sub>	f <sub>m</sub>	l <sub>1</sub>	l	n	s <sub>1</sub>
9	100		250	180	28	215	855	50	65	4	M12
	112		250	180	28	215	855	50	65	4	M12
	132		300	230	38	265	887	50	60	4	M12
	160		350	250	42	300	923	50	85	4	M16
10	100		250	180	28	215	884	50	65	4	M12
	112		250	180	28	215	884	50	65	4	M12
	132		300	230	38	265	916	50	60	4	M12
	160		350	250	42	300	952	50	85	4	M16
11	112		250	180	28	215	945	50	65	4	M12
	132		300	230	38	265	977	50	60	4	M12
	160		350	250	42	300	1013	50	85	4	M16
	180		350	250	48	300	1013	50	85	4	M16
12	112		250	180	28	215	979	50	65	4	M12
	132		300	230	38	265	1011	50	60	4	M12
	160		350	250	42	300	1047	50	85	4	M16
	180		350	250	48	300	1047	50	85	4	M16
13	132		300	230	38	265	1086	50	60	4	M12
	160		350	250	42	300	1122	50	85	4	M16
	180		350	250	48	300	1122	50	85	4	M16
	132		300	230	38	265	1146	50	60	4	M12
14	160		350	250	42	300	1182	50	85	4	M16
	180		350	250	48	300	1182	50	85	4	M16
	160		350	250	42	300	1350	60	95	4	M16
	180		350	250	48	300	1350	65	100	4	M16
16	200		400	300	55	350	1362	75	110	4	M16
	160		350	250	42	300	1385	60	95	4	M16
	180		350	250	48	300	1385	65	100	4	M16
	200		400	300	55	350	1397	75	110	4	M16
17	180		350	250	48	300	1552	80	100	4	M16
	200		400	300	55	350	1564	80	100	4	M16
	225		450	350	60	400	1605	80	100	8	M16
	250		550	450	65	500	1605	80	100	8	M16
18	180		350	250	48	300	1599	80	100	4	M16
	200		400	300	55	350	1611	80	100	4	M16
	225		450	350	60	400	1652	80	100	8	M16
	250		550	450	65	500	1652	80	100	8	M16
19, 20	180		350	250	48	300	1599	80	100	4	M16
	200		400	300	55	350	1611	80	100	4	M16
	225		450	350	60	400	1652	80	100	8	M16
	250		550	450	65	500	1652	80	100	8	M16

注 : 1) “\*” 所选直联电机机座号所对应的功率应满足传动能力表  
“\*\*” 表格中所示的法兰为标准型号的法兰, 如有异同请另咨询  
2) 侧面扭力臂组合, 请咨询

Note : 1) “\*” Power of selected motor must meet transmissio table  
“\*\*” Indicate standard flange, if special dimension is needed,  
please consult us  
2) For combination with torque arm on one side, please refer to us

**EQ系列减速机带电机法兰输入**  
Planetary gear units with motor flange and coupling

With Motor Bell Housing and Coupling **Type**  
EQ2K



EQ2K	电机 Motor (Y)*	法兰 Flange (F)**	a <sub>1</sub>	A	b <sub>1</sub>	D <sub>1</sub>	e <sub>1</sub>	f <sub>m</sub>	l	l <sub>1</sub>	n	s <sub>1</sub>
9, 10	132		300	250	230	38	265	475	45	35	4	M12
	160		350	250	250	42	300	502.5	75	40	4	M16
11, 12	160		350	300	250	42	300	570	75	40	4	M16
	180		350	350	250	48	300	570	75	50	4	M16
	200		400	350	300	55	350	582.5	95	60	4	M16
13, 14	160		350	440	250	42	300	658.5	75	40	4	M16
	180		350	440	250	48	300	658.5	85	50	4	M16
	200		400	440	300	55	350	664.5	95	60	4	M16
	225		450	440	350	60	400	690.5	125	65	8	M16
	250		550	440	450	65	500	695	120	65	8	M16
16, 17	200		400	440	300	55	350	754.5	90	60	4	M16
	225		450	440	350	60	400	795.5	125	65	8	M16
	250		550	440	450	65	500	797	120	65	8	M16
	280		550	440	450	75	500	796	130	75	8	M16
18, 19, 20	225		450	440	350	60	400	898.5	125	65	8	M16
	250		550	440	450	65	500	898.5	120	65	8	M16
	280		550	440	450	75	500	899	130	75	8	M16
	315*		660	440	550	80	600	921	150	80	8	M20

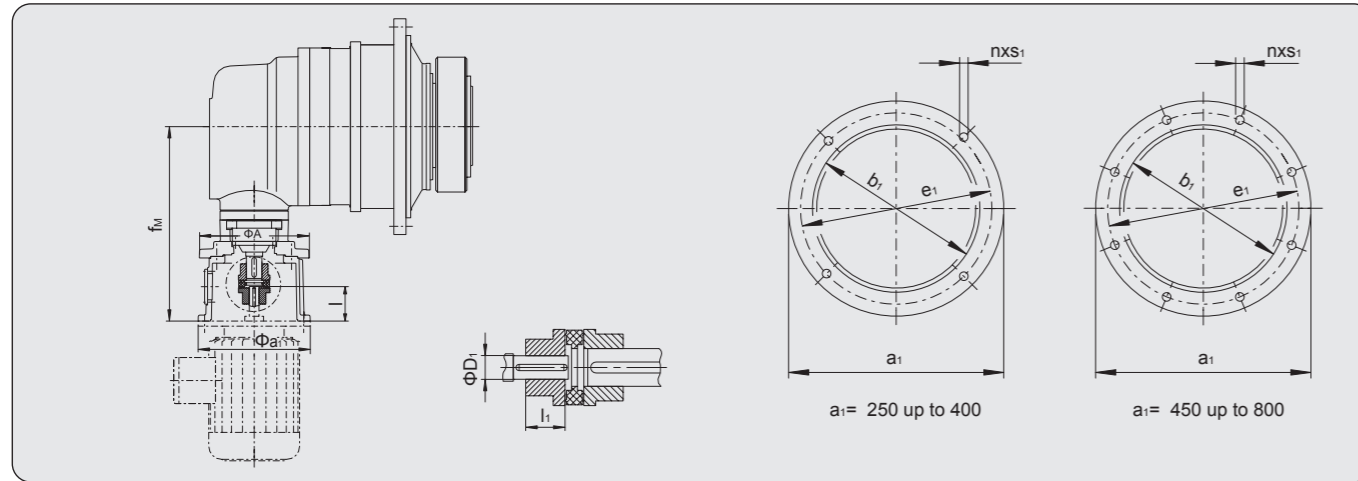
注 : 1) “\*” 所选直联电机机座号所对应的功率应满足传动能力表  
“\*\*” 表格中所示的法兰为标准型号的法兰, 如有异同请另咨询  
2) 侧面扭力臂组合, 请咨询

Note : 1) “\*” Power of selected motor must meet transmissio table  
“\*\*” Indicate standard flange, if special dimension is needed,  
please consult us  
2) For combination with torque arm on one side, please refer to us



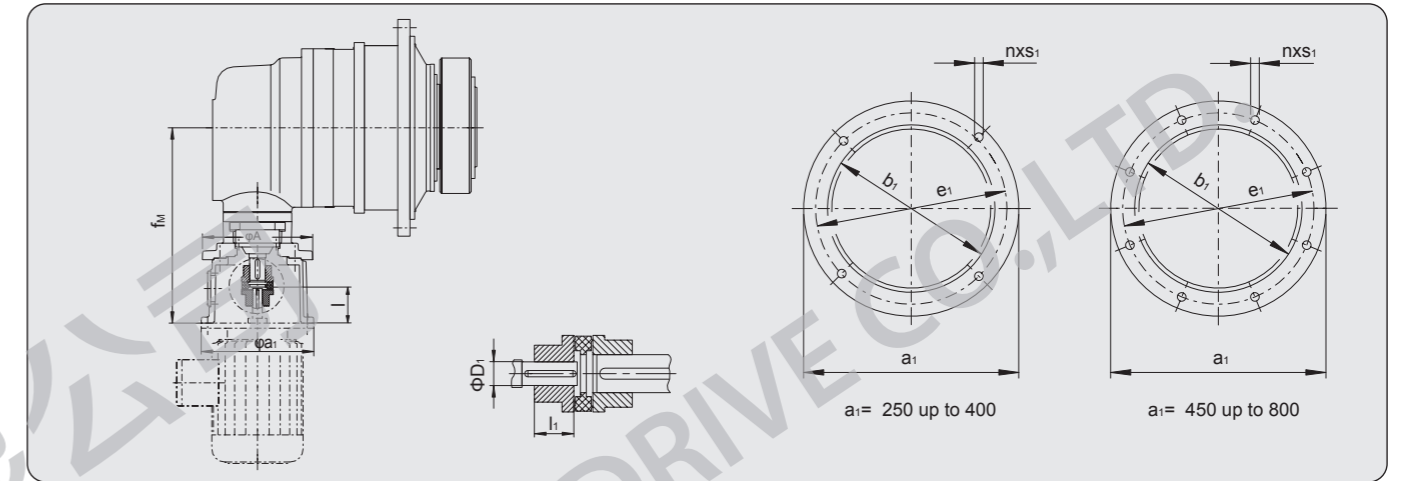
EQ系列减速机带电机法兰输入  
Planetary gear units with motor flange and coupling

With Motor Bell Housing and Coupling Type  
EQ2L



EQ系列减速机带电机法兰输入  
Planetary gear units with motor flange and coupling

With Motor Bell Housing and Coupling Type  
EQ3K



EQ2L	电机 Motor (Y)*	法兰 Flange (F)**	a <sub>1</sub>	A	b <sub>1</sub>	D <sub>1</sub>	e <sub>1</sub>	f <sub>m</sub>	l	l <sub>1</sub>	n	s <sub>1</sub>
9, 10	160		350	440	250	42	300	518.5	75	40	4	M16
	180		350	440	250	48	300	518.5	85	50	4	M16
	200		400	440	300	55	350	524.5	95	60	4	M16
	225		450	440	350	60	400	550.5	125	65	8	M16
11, 12	200		400	440	300	55	350	584.5	95	60	4	M16
	225		450	440	350	60	400	625.5	125	65	8	M16
	250		550	440	450	65	500	627	120	65	8	M16
13, 14	225		450	440	350	60	400	698.5	120	65	8	M16
	250		550	440	450	65	500	698.5	120	65	8	M16
	280		550	440	450	75	500	699	130	75	8	M16
16, 17	280		550	600	450	75	500	808	115	75	8	M16
	315*		660	650	550	80	600	825	150	80	8	M20
	315MC		660	650	550	80	600	825	160	90	8	M20
	315MD		660	650	550	80	600	825	160	90	8	M20
	315LB		660	650	550	80	600	825	170	100	8	M20
18, 19, 20	315*		660	650	550	80	600	938	150	80	8	M20
	315MC		660	650	550	80	600	938	160	90	8	M20
	315MD		660	650	550	80	600	938	160	90	8	M20
	315LB		660	650	550	80	600	938	170	100	8	M20
21, 22, 23, 24	315MC		660	650	550	80	600	1085	135	90	8	M20
	315MD		660	650	550	80	600	1085	135	90	8	M20
	315LB		660	650	550	80	600	1085	145	100	8	M20
	355MB		800	650	680	95	740	1087	145	100	8	M20
	355LB		800	650	680	95	740	1087	155	110	8	M20

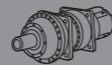
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"\*\*\*" 表格中所示的法兰为标准型号的法兰, 如有异同请另咨询  
2) 侧面扭力臂组合, 请咨询

Note :1) "\*" Power of selected motor must meet transmissio table  
"\*\*\*" Indicate standard flange, if special dimension is needed, please consult us  
2) For combination with torque arm on one side, please refer to us

EQ3K	电机 Motor (Y)*	法兰 Flange (F)**	a <sub>1</sub>	A	b <sub>1</sub>	D <sub>1</sub>	e <sub>1</sub>	f <sub>m</sub>	l	l <sub>1</sub>	n	s <sub>1</sub>
9, 10, 11, 12, 13, 14	132		300	250	230	38	265	475	45	35	4	M12
	160		350	250	250	42	300	502.5	75	40	4	M16
	180		350	250	250	48	300	502.5	75	40	4	M16
	160		350	350	250	42	300	571.5	75	40	4	M16
16, 17	180		350	350	250	40	300	571.5	85	50	4	M16
	200		400	350	300	55	350	582.5	95	60	4	M16
	160		350	440	250	42	300	658.5	75	40	4	M16
18, 19, 20, 21, 22	180		350	440	250	48	300	658.5	85	50	4	M16
	200		400	440	300	35	350	664.5	95	60	4	M16
	225		450	440	350	60	400	690.5	125	65	8	M16
	250		550	440	450	65	500	690.5	120	65	8	M16
23, 24, 25, 26	200		400	440	300	55	350	754.5	90	60	4	M16
	225		450	440	350	60	400	795.5	125	65	8	M16
	250		550	440	450	52	500	797	120	65	8	M16
	280		550	440	450	75	500	796	130	75	8	M16
27, 28, 29, 30	225		450	440	350	60	400	898.5	120	65	8	M16
	250		550	440	450	65	500	898.5	120	65	8	M16
	280		550	440	450	75	500	884	130	75	8	M16
	315*		660	440	550	80	600	921	150	80	8	M20

注 :1) "\*" 所选直联电机机座号所对应的功率应满足传动能力表  
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2) 侧面扭力臂组合, 请咨询

Note :1) "\*" Power of selected motor must meet transmissio table  
"\*\*\*" Indicate standard flange, if special dimension is needed, please consult us  
2) For combination with torque arm on one side, please refer to us



**EQ系列行星减速机**  
EQ Series Planetary gear units

**减速器润滑**

润滑油种类选择

减速器使用工况	润滑油种类
冶金轧钢、井下采掘、高温有冲击、含水等	L-CKD重载荷工业齿轮油 (GB5903-1995)
其余工况	L-CKC中载荷工业齿轮油 (GB5903-1995)

注 若选用合成齿轮油则更具有良好的抗老化性能，可有效地提高减速器的机械效率。

润滑油粘度

条件	润滑油粘度等级 40℃温度下的ISO-VG 粘度mm <sup>2</sup> /s(cst)
高速圆周速度v < 2.5m/s, 或环境温度在35-50℃之间	VG320(或VG460)
高速级齿轮圆周速度v > 2.5m/s, 或环境温度在35℃以下, 或采用循环油润滑	VG220

浸油润滑润滑油的工作温度

润滑油种类	工作温度/℃
中载荷工业齿轮油L-CKC	-8℃至+90℃ (瞬间可达100℃)
重载荷工业齿轮油L-CKD	-5℃至+100℃ (瞬间可达110℃)

注意 :如果减速器的工作温度高于或低于表中规定极限值则应重新确定合适的润滑油。当环境温度低于0℃时启动前油温需加热到0℃以上。

强制润滑润滑油允许的极限温度

40℃温度下的ISO-VG 粘度mm <sup>2</sup> /s(cst)	强制润滑允许的极限温度/℃	
	矿物油	合成油
VG220	10-80	0-90
VG320	15-90	5-100
VG460	20-95	10-105

注意 :当油温低于表中所示数值时, 必须提供浸油润滑方式, 或对润滑油加热。

**Gear Units Lubrication**

Lubricant selection

Operating conditions of Gear units	Lubricant specification
Steel rolling, excavating, high temperature with shock, moisture, etc.	L-CKD heavy load industrial gear oil (GB5903-1995)
Others	L-CKC moderate load industrial gear oil (GB5903-1995)

Note It adopts the synthetic oil which has the better performance of anti-ageing so that improves the mechanical efficiency effectively.

Lubricant viscosity

Conditions	Lubricant viscosity classification Viscosity ISO-VG at 40℃ in mm <sup>2</sup> /s(cst)
Rotation velocity of high speed stage v < 2.5m/s, or ambient temperature between 35-50℃	VG320(or VG460)
Rotation velocity of high speed stage v > 2.5m/s, or ambient temperature at 35℃, or lubrication with circulating oil	VG220

Lubricant viscosity

Lubricant specification	Working temperature/℃
L-CKC moderate load industrial gear oil	From -8℃ to +90℃ (up to 100℃ moment)
L-CKD heavy load industrial gear oil	From -5℃ to +100℃ (up to 110℃ moment)

Notes :If the temperatures of gear units are above to below the values as listed in table, it determines the proper oil again, If the ambient temperatures are below 0℃, the oil has to be heated above 0℃.

Permissible temperature limit for forced feed lubrication

Viscosity ISO-VG at 40℃ in mm <sup>2</sup> /s(cst)	Permissible temperature limit for forced feed lubrication/℃	
	Mineral oil	Synthetic oil
VG220	10-80	0-90
VG320	15-90	5-100
VG460	20-95	10-105

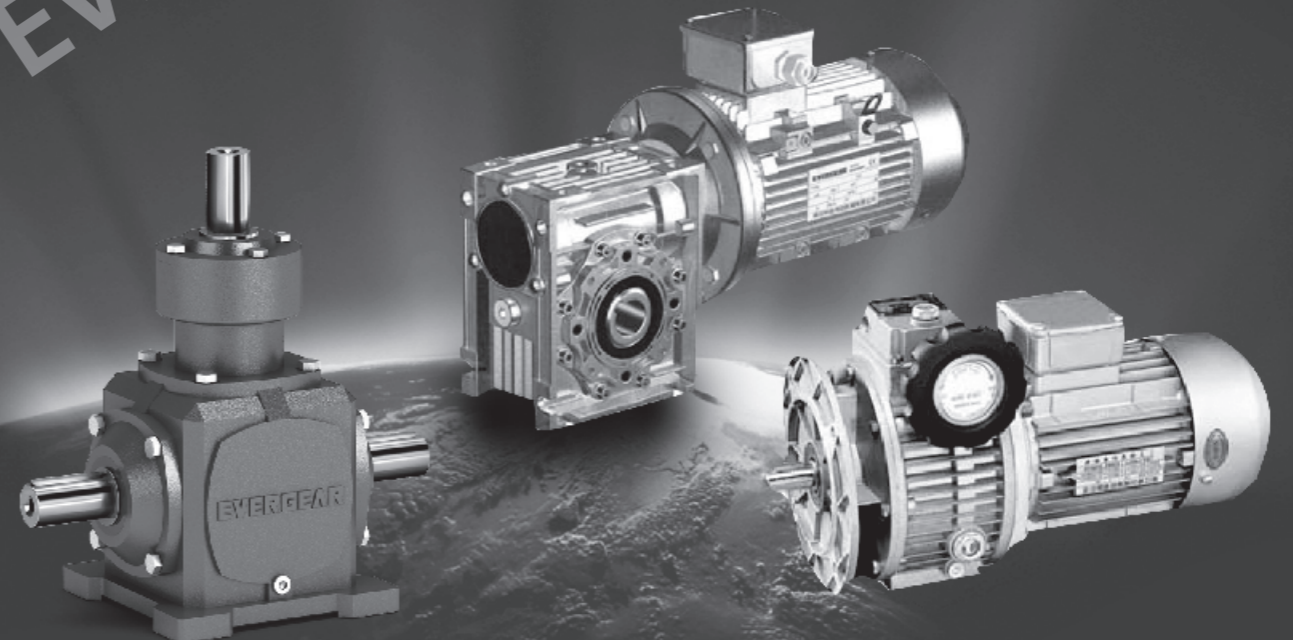
Notes :If the temperatures are below the values as listed in table, dip lubrication has to be provided or the oil must be heated.

**OTHER Series**

**EZ系列弧齿锥齿轮减速机**  
EZ Series Spiral Bevel Gear Reducer

**MB无级变速器**  
MB Variable Speed Machine

**NMRV蜗轮减速机**  
NMRV Worm Wheel Reducer



**EVERGEAR**