

# \*Q SERIES

## Q SERIES PLANETARY GEAR REDUCTOR Q系列行星齿轮减速机

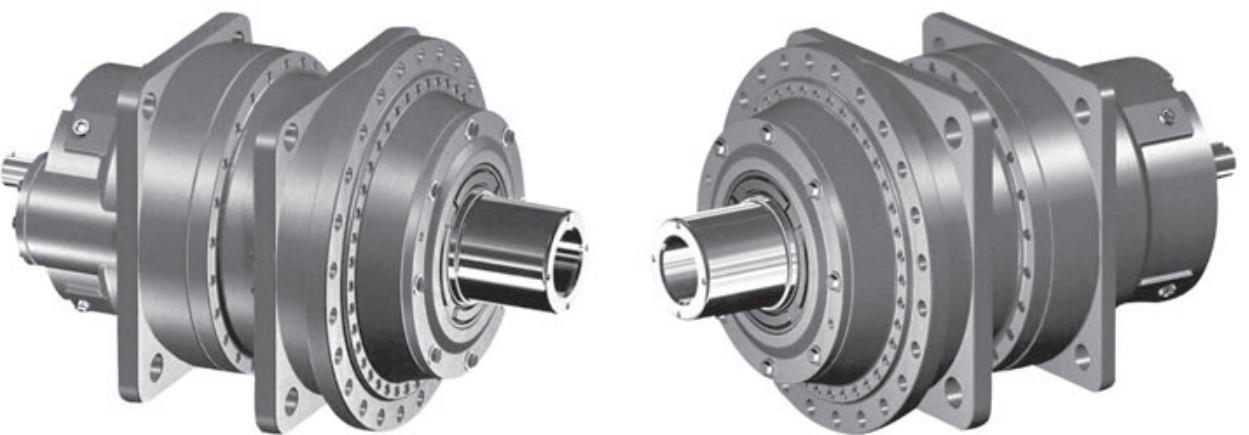
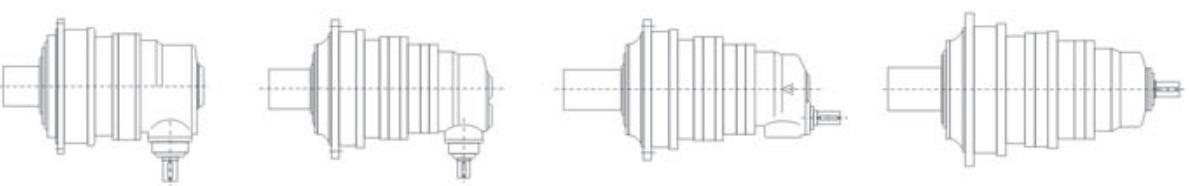




表1

输入原动机系数表( $f_1$ )				
输入方式	电机、液压马达、汽轮机		4-6缸活塞发动机	1-3缸活塞发动机
输入系数 $f_1$	1.0		1.25	1.5

表2

输出被驱动设备系数 ( $f_2$ )								
工作机	日工作小时数			工作机	日工作小时数			
	≤0.5h	0.5-10h	>10h		≤0.5h	0.5-10h	>10h	
浓缩器(中心传动)	-	-	1.2	金属 加工 设备	可逆式板坯机	-	2.5	2.5
压滤器	1.0	1.3	1.5		可逆式线材轧机	-	1.8	1.8
絮凝器	0.8	1.0	1.3		呆逆式薄板轧机	-	2.0	2.0
曝气机	-	1.8	2.0		可逆式中厚板轧机	-	1.8	1.8
接集设备	1.0	1.2	1.3		辊缝调节驱动装置	0.9	1.0	-
污水处理	纵向, 回转组合接集装置	1.0	1.3		斗式输送机	-	1.2	1.5
	预浓缩器	-	1.1		绞车	1.4	1.6	1.6
	螺杆泵	-	1.3		卷扬机		1.5	1.8
	水轮机	-	-		皮带输送机<150kw	1.0	1.2	1.3
	离心泵	1.0	1.2		皮带输送机≥150kw	1.1	1.3	1.5
	1个活塞容积式泵	1.3	1.4		货用电梯*	-	1.2	1.5
	>1个活塞容积式泵	1.2	1.4		客用电梯*		1.5	1.8
挖泥机	斗式运输机	-	1.6		刮板式输送机	-	1.2	1.5
	倾卸装置	-	1.3		自动扶梯		1.2	1.4
	Cartepillar 行走机构	1.2	1.6		轨道行走机构	-	1.5	-
	斗轮式挖掘机(用于捡拾)	-	1.7	输送 机械	变频装置	-	1.8	2.0
	斗轮式挖掘机(用于粗料)	-	2.2		往复式压缩机	-	1.8	1.9
	切碎机	-	2.2		回转机构*	1	1.4	1.8
	行走机构*		1.4		俯仰机构	1	1.25	1.5
	弯板机	-	1.0		行走机构	1.5	1.75	2
化学工业	挤压机	-	-	起重 机械	提升机构*	1	1.25	1.5
	调浆机	-	1.8		转臂式起重机*	1	1.25	1.6
	橡胶研光机	-	1.5		冷却塔风扇	-	-	2.0
	冷却圆筒	-	1.3		风机(轴流和离心式)	-	1.4	1.5
	混料机, 用于均匀介质	1.0	1.3		蔗糖切碎机*	-	-	1.7
	混料机, 用于非均匀介质	1.4	1.6		甘蔗碾磨机	-	-	1.7
	搅拌机, 用于密度均匀介质	1.0	1.3		甜菜绞碎机	-	-	1.2
	搅拌机, 用于密度均匀介质	1.2	1.4		榨取机、机械致冷机、蒸煮机	-	-	1.4
	搅拌机, 用于不均匀气体吸收	1.4	1.6		甜菜清洗机	-	-	1.5
	烘炉	1.0	1.3		甜菜切碎机	-	-	1.5
	离心机	1.0	1.2	造纸 机械	各种类型**	-	1.8	2.0
	翻板机	1.0	1.0		碎浆机驱动装置	2.0	2.0	2.0
	推钢机	1.0	1.2		离心式压缩机	-	1.4	1.5
	绕线机	-	1.6		索道	-	1.3	1.4
	冷床横移架	-	1.5		往返系统空中索道	-	1.6	1.8
	辊式矫直机	-	1.6		T型杆长升降机	-	1.3	1.4
	辊道(连续式)	-	1.5		连续索道	-	1.4	1.6
	辊道(间歇式)	-	2.0		混凝土搅拌器	-	1.5	1.5
	可逆式轧管机	-	1.8		破碎机*	-	1.2	1.4
	剪切机(连续式)*	-	1.5		回转窑	-	-	2.0
	剪切机(曲柄式)*	1.0	1.0	水泥 工业	管式磨机	-	-	2.0
	连铸机驱动装置	-	1.4		选粉机	-	1.6	1.6
	可逆式开坯机	-	2.5		辊压机	-	-	2.0

工作机额定功率 $P_2$ 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。

Table 1

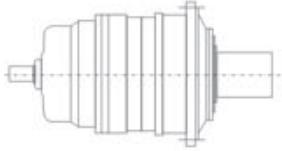
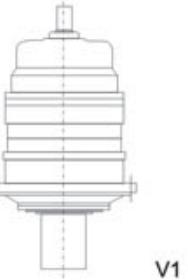
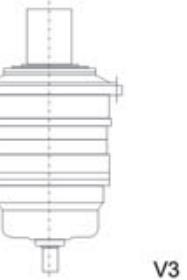
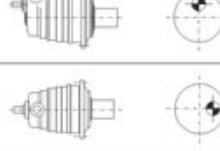
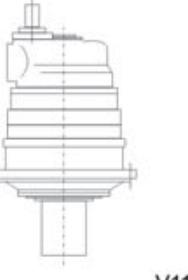
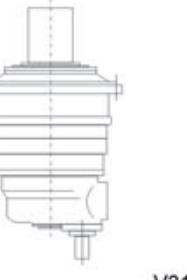
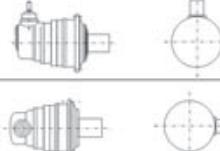
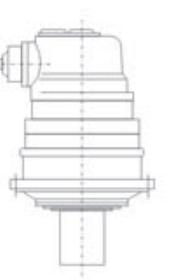
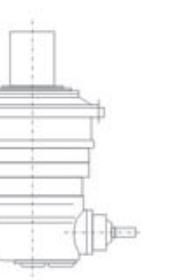
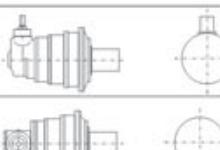
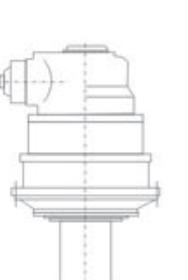
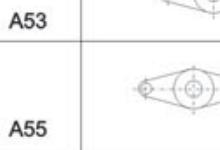
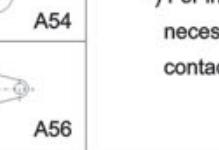
Coefficient table of input prime mover ( $f_1$ )				
Input mode	Electric motors,hydraulic motors,turbines		Piston engines 4-6 cylinders	Piston engines 1-3 cylinders
Input coefficient $f_1$	1.0		1.25	1.5

Table 2

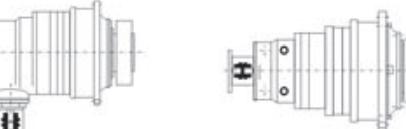
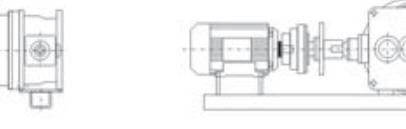
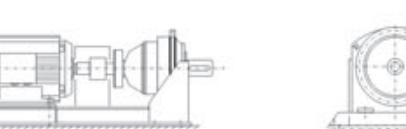
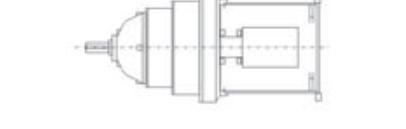
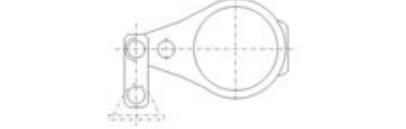
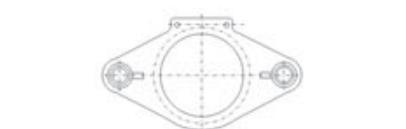
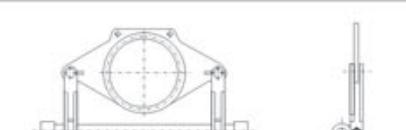
Coefficient of output driven device ( $f_2$ )								
Driven machines	Effective daily operating period under load in hours			Driven machines	Effective daily operating period under load in hours			
	≤0.5h	0.5-10h	>10h		≤0.5h	0.5-10h	>10h	
Thickeners(central drive)	-	-	1.2	Metal working mills	Reversing slabbing mills	-	2.5	2.5
Filter presses	1.0	1.3	1.5		Reversing wire mills	-	1.8	1.8
Flocculation apparatus	0.8	1.0	1.3		Reversing sheet mills	-	2.0	2.0
Aerators	-	1.8	2.0		Reversing plate mills	-	1.8	1.8
Raking equipment	1.0	1.2	1.3		Roll adjustment drives	0.9	1.0	-
Combined longitudinal and rotary rakes	1.0	1.3	1.5		Bucket conveyors	-	1.2	1.5
Pre-thickeners	-	1.1	1.3		Hauling winches	1.4	1.6	1.6
Screw pumps	-	1.3	1.5		Hoists		1.5	1.8
Water turbines	-	-	2.0		Belt conveyors<150kw	1.0	1.2	1.3
Centrifugal pumps	1.0	1.2	1.3		Belt conveyors≥151kw	1.1	1.3	1.5
1 piston positive-displacement pumps	1.3	1.4	1.8		Goods lifts*	-	1.2	1.5
>1 piston positive-displacement pumps	1.2	1.4	1.5		Passenger lifts*		1.5	1.8
Bucket conveyors	-	1.6	1.6		Apron conveyors	-	1.2	1.5
Dumping devices	-	1.3	1.5		Escalators		1.2	1.4
Caterpillar travelling gears	1.2	1.6	1.8		Rail travelling gears	-	1.5	-
Dredgers	Bucket wheel excavators as pick-up	-	1.7	Cranes	Frequency converters	-	1.8	2.0
	Bucket wheel excavators for primitive material	-	2.2		Reciprocating compressors	-	1.8	1.9
	Cutter heads	-	2.2		Slewing gears	1	1.4	1.8
	Traversing gears*		1.4		Luffing gears	1	1.25	1.5
	Plate bending machines	-	1.0		Travelling gears	1.5	1.75	2
	Extruders	-	-	Chemical industry	Hoisting gears	1	1.25	1.5
	Dough mills	-	1.8		Derrick jib cranes	1	1.25	1.6
	Rubber calenders	-	1.5		Cooling tower fans	-	-	2.0
	Cooling drums	-	1.3		Blowers(axial and radial)	-	1.4	1.5
	Mixers for uniform media	1.0	1.3		Cane knives *	-	-	1.7
Metal working mills	Mixers for non-uniform media	1.4	1.6		Cane mills	-	-	1.7
	Agitators for media with uniform density	1.0	1.3		Beet cossettes macerators	-	-	1.2
	Agitators for media with non-uniform density	1.2	1.4		Extraction plants,Mechanical refrigerators,Juice boilers	-		



安装方位 Identifications of shaft arrangements:

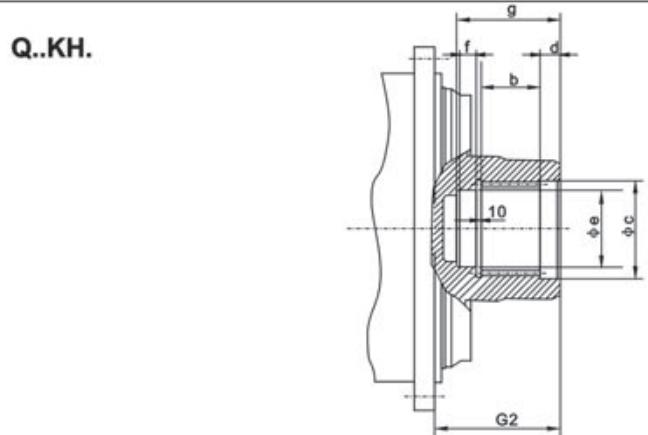
		水平安装 Horizontal gear unit position		垂直安装 *) Vertical gear unit position	
同轴式 Coaxial	0	Q.N.		 V5	 V1
平行轴式 Parallel shaft type	1	Q.S.	 B51	 V11	 V31
直交平行轴式 Right angle parallel shaft type	2	Q.K.	 B51	 V11	 V31
直交轴式 Right angle shaft type	3	Q.L.	 B51	 V11	 V31
扭力臂安装 Install-ation of torque arm	5		 A51  A52	*)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.	
			 A53  A54		
			 A55  A56		

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	减速器底座 Gear housing base	见336页 See page 336	
70	电机钟形支座 Motor bell housing	见343页 See page 343	
71	电机托架 Motor bracket	见341页 See page 341	
72	电机支架 Motor bracket	见341页 See page 341	
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337页 See page 337	
76	扭矩支撑臂(二端) Torque reaction arm (on two sides)	见338页 See page 338	
77	扭力轴支撑 Torsion shaft support	见339页 See page 339	



## 2、规格9...30 滚线花键空心输出轴 Sizes9...30 Hollow Output Shaft with Involute Splines

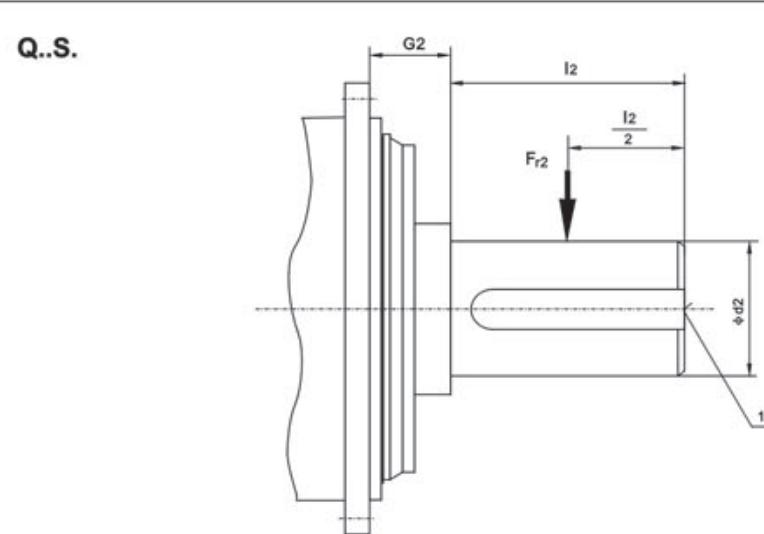


机座号 Size	输出扭矩 T2N(N.m)	滚线花键空心轴出轴 Hollow output shaft with involute splines							
		内花键规格 Involute splines acc. to DIN 5480	b	c H7	d	e H7	f	G2	
9	22000	120×5×30×22×9H	70	122	40	107	20	165	150
10	31000	130×5×30×24×9H	80	132	40	117	20	174	160
11	42000	140×5×30×26×9H	90	142	45	125	25	204	180
12	60000	160×5×30×30×9H	100	162	45	145	25	223	190
13	83000	180×5×30×34×9H	110	182	45	165	25	237	200
14	117000	210×5×30×40×9H	125	212	45	195	25	264	215
16	160000	240×8×30×28×9H	140	242	50	220	25	285	235
17	202000	250×8×30×30×9H	150	252	50	230	30	290	250
18	244000	260×8×30×31×9H	160	262	50	240	30	303	260
19	295000	280×8×30×34×9H	170	282	50	260	30	327.5	270
20	354000	300×8×30×36×9H	180	302	50	280	30	327.5	280
21	392000	310×8×30×37×9H	190	312	60	290	40	354	310
22	450000	330×8×30×40×9H	200	332	60	310	40	354	320
23	513000	340×8×30×41×9H	200	342	60	320	40	348	320
24	592000	360×8×30×44×9H	220	362	60	340	40	368	340
25	684000	380×8×30×46×9H	230	382	60	360	40	372	350
26	763000	400×8×30×48×9H	240	402	60	380	40	382	360
27	852000	440×8×30×54×9H	250	442	60	420	40	423	370
28	950000	450×8×30×55×9H	260	452	65	430	40	428	385
29	1060000	460×8×30×56×9H	270	462	65	440	45	433	400
30	1200000	480×8×30×58×9H	285	482	65	460	45	448	415

机座号 Size	输出扭矩 T2N(N.m)	滚线花键空心轴出轴 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	G2	
9	22000	22z×5m×30p×6H	70	122	40	105	20	165	150
10	31000	24z×5m×30p×6H	80	132	40	115	20	174	160
11	42000	26z×5m×30p×6H	90	142	45	125	25	204	180
12	60000	30z×5m×30p×6H	100	162	45	145	25	223	190
13	83000	34z×5m×30p×6H	110	182	45	165	25	237	200
14	117000	40z×5m×30p×6H	125	212	45	195	25	264	215
16	160000	28z×8m×30p×6H	140	242	50	215	25	285	235
17	202000	30z×8m×30p×6H	150	255	50	230	30	290	250
18	244000	31z×8m×30p×6H	160	262	50	240	30	303	260
19	295000	33z×8m×30p×6H	170	282	50	255	30	327.5	270
20	354000	36z×8m×30p×6H	180	302	50	280	30	327.5	280
21	392000	37z×8m×30p×6H	190	312	60	285	40	354	310
22	450000	40z×8m×30p×6H	200	335	60	310	40	354	320
23	513000	41z×8m×30p×6H	200	342	60	320	40	348	320
24	592000	43z×8m×30p×6H	220	362	60	335	40	368	340
25	684000	46z×8m×30p×6H	230	382	60	360	40	372	350
26	763000	48z×8m×30p×6H	240	402	60	375	40	382	360

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

## 3、规格9...36 带平键实心输出轴 Sizes9..36 Solid Output Shaft with Parallel Key

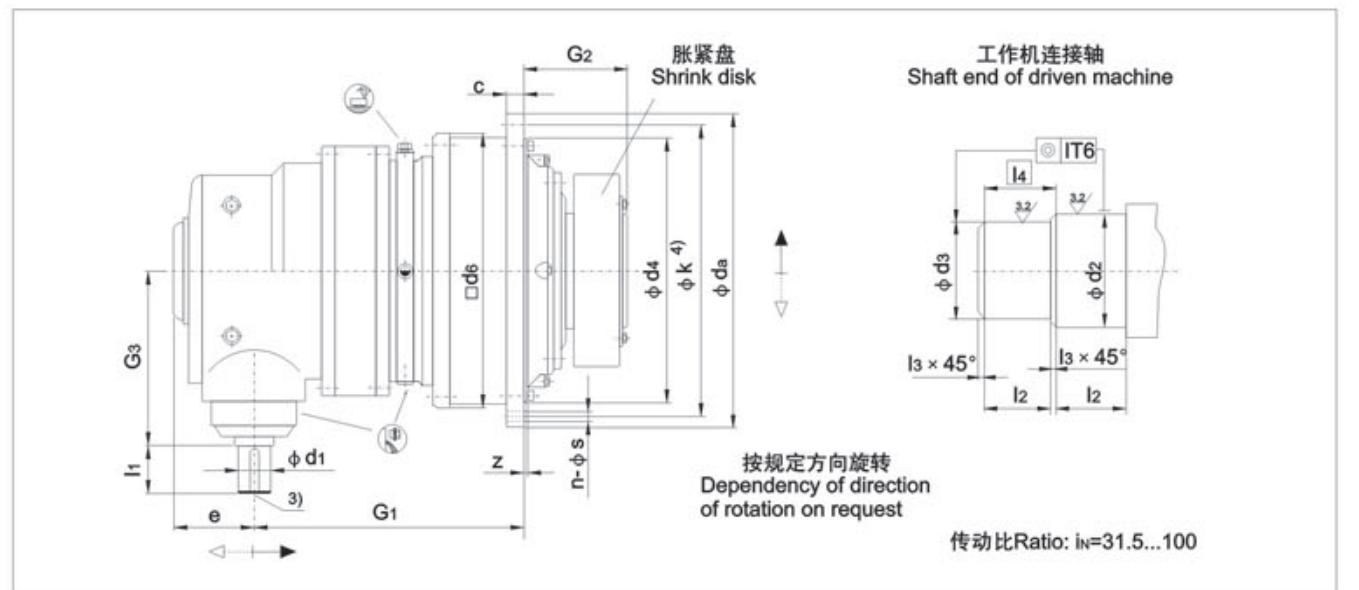


机座号 Size	输出扭矩 T2N(N.m)	实心轴 Solid shaft			
		d2 n6	l2	G2	F2
9	22000	120	210	95	
10	31000	130	210	95	
11	42000	150	240	109	
12	60000	160	270	112	
13	83000	180	310	118	
14	117000	210	350	139	
16	160000	230	350	142	
17	202000	250	400	139	
18	244000	260	400	142	
19	295000	280	450	148.5	
20	354000	300	500	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	1680000	530	900	251	
34	1920000	570	950	251	
35	2240000	600	1000	276	
36	2600000	640	1000	276	

1) 有关平键 (符合GB/T1095-1979) 与中心孔请参照328页 1) For parallel key (GB/T1095-1979) and centre hole see page 328

 见305页  
 See page 305

## 2. 型号Q2LD 规格9...36 Type Q2LD Sizes 9...36



Q2LD 机座号 Size	额定输出扭矩 output torque $T_{2N}$ (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> h <sub>7</sub>	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 quan- tity (l)		
		in ≤ 90 in ≥ 100		d <sub>2</sub> <sup>5)</sup> d <sub>1</sub> <sup>1)</sup>		d <sub>3</sub> <sup>5)</sup> g <sub>6</sub>		l <sub>2</sub>		l <sub>3</sub>		l <sub>4</sub>													
		in	l <sub>1</sub>	d <sub>1</sub> <sup>1)</sup>	l <sub>1</sub>	l <sub>1</sub>	l <sub>1</sub>	l <sub>1</sub>	l <sub>1</sub>	l <sub>1</sub>	l <sub>1</sub>	l <sub>1</sub>	l <sub>1</sub>	l <sub>1</sub>	l <sub>1</sub>	l <sub>1</sub>	l <sub>1</sub>	l <sub>1</sub>	l <sub>1</sub>	l <sub>1</sub>	l <sub>1</sub>	l <sub>1</sub>	l <sub>1</sub>	l <sub>1</sub>	
9	22000	45	100	35	80	120	115	65	2.5	67.5	24	428	350	356	185	425	165	305	388	6±1.5	18	24	260	6	
10	31000	45	100	35	80	130	125	70	2.5	72.5	28	472	394	400	185	445	174	305	436	8±1.5	18	28	310	8	
11	42000	55	110	40	100	140	135	82.5	2.5	85	32	525	425	436	210	501	204	350	485	8±1.5	22	20	380	12	
12	60000	55	110	40	100	160	155	90	2.5	92.5	34	605	495	510	210	515	224	350	555	9±1.5	26	20	520	16	
13	83000	70	135	50	110	180	175	95	2.5	97.5	39	645	535	554	250	619	241	415	595	11±1.5	26	26	650	20	
14	117000	70	135	50	110	210	205	105	2.5	107.5	42	720	610	628	250	278	415	665	9	26	32	910	32		
16	160000	80	165	60	140	230	225	110	2.5	112.5	44	770	660	680	295	705	285	490	715	10	26	36	1137	40	
17	202000	80	165	60	140	250	245	120	2.5	122.5	50	895	750	775	295	731	294	490	830	10	33	24	1660	56	
18	244000	90	165	70	140	260	255	120	2.5	122.5	50	930	785	815	350	882	303	605	865	10	33	32	2100	66	
19	295000	90	165	70	140	280	275	135	2.5	137.5	56	980	840	870	350	905.5	327.5	605	915	12	33	36	2200	82	
20	354000	90	165	70	140	300	295	135	2.5	137.5	56	980	840	870	350	905.5	327.5	605	915	12	33	36	2300	75	
21	392000	110	205	80	170	310	305	152	2.5	154.5	62	1115	935	960	400	996	354	700	1025	24	39	32	2930	110	
22	450000	110	205	80	170	330	325	152	2.5	154.5	62	1115	935	960	400	996	354	700	1025	24	39	32	3100	95	
23	513000	110	205	80	170	350	345	164	2.5	166.5	68	1210	1025	1056	400	1055	380	700	1120	28	39	36	3800	150	
24	592000	110	205	80	170	360	355	164	2.5	166.5	68	1210	1025	1056	400	1055	380	700	1120	28	39	36	4300	125	
31~36	根据用户要求供货 On request																								

 1) 当  $d_1 \leq 50$  时公差为 k6, 当  $d_1 > 50$  时公差为 m6

2) 不含胀紧盘与润滑油的重量

3) 有关平键(符合GB/T1095-1979)与中心孔请参见328页

4) 孔的分布类型见327页

 5) 当尺寸  $\leq 160$  时公差为 h6

 1) Shaft diameter  $d_1 \leq 50$ , tolerance k6 , shaft diameter  $d_1 > 50$ , tolerance m6

2) Weight without shrink disk and oil

3) For parallel key (GB/T1095-1979)and centre hole see page 328

4) For hole pattern, see page 327

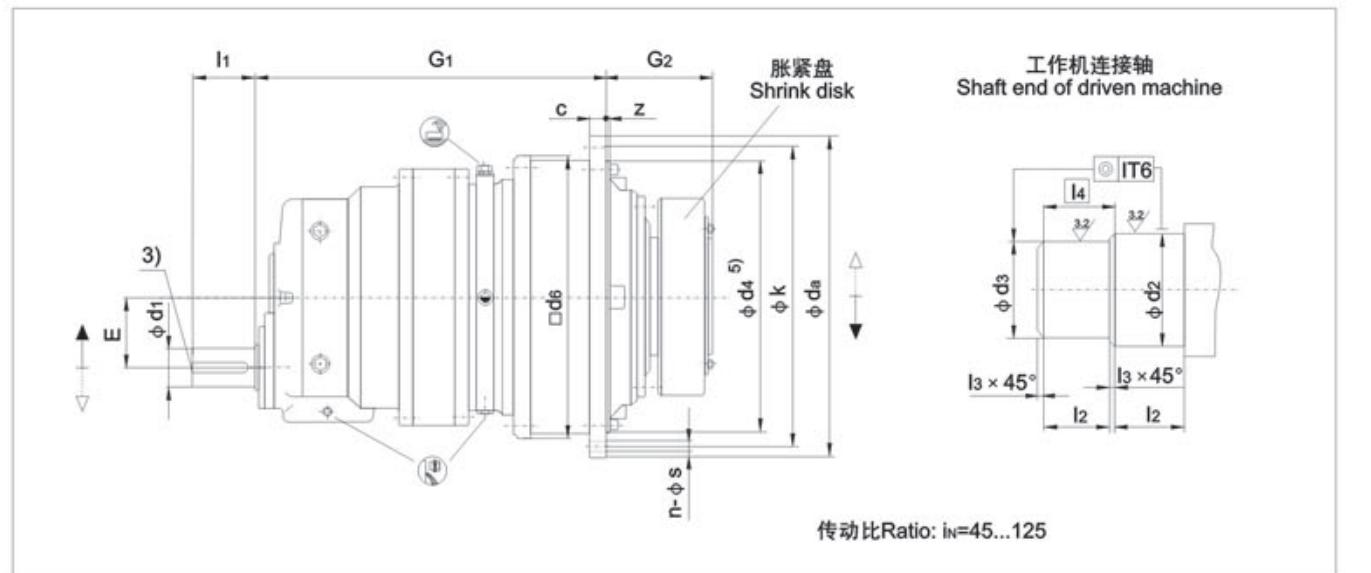
 5)  $\leq 160$  h6

## 型号Q2L. 规格9...36 Type Q2L. Sizes 9...36

in	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	r/min	9	10	11	12	13	14	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31-36
31.5	1500	47.6	111	156	212	302	418	510	806	865	1230*	1487*	1517*	1976*	2268*	—	—	—	—	—	—	—	
	1000	31.7	74	104	141	202	279	340	538	577	820	991	1011	1317	1512*	1724*	1989*	2298*	2564*	2863*	2937*	—	
	750	23.8	55	78	106	151	209	255	403	433	615	743	758	1134	1293	1492	1724	1923	2147	2203	—	—	
35.5	1500	42.3	98	139	188	268	345	487	716	858	109												



3、型号Q2SD 规格9...36 Type Q2SD Sizes 9...36

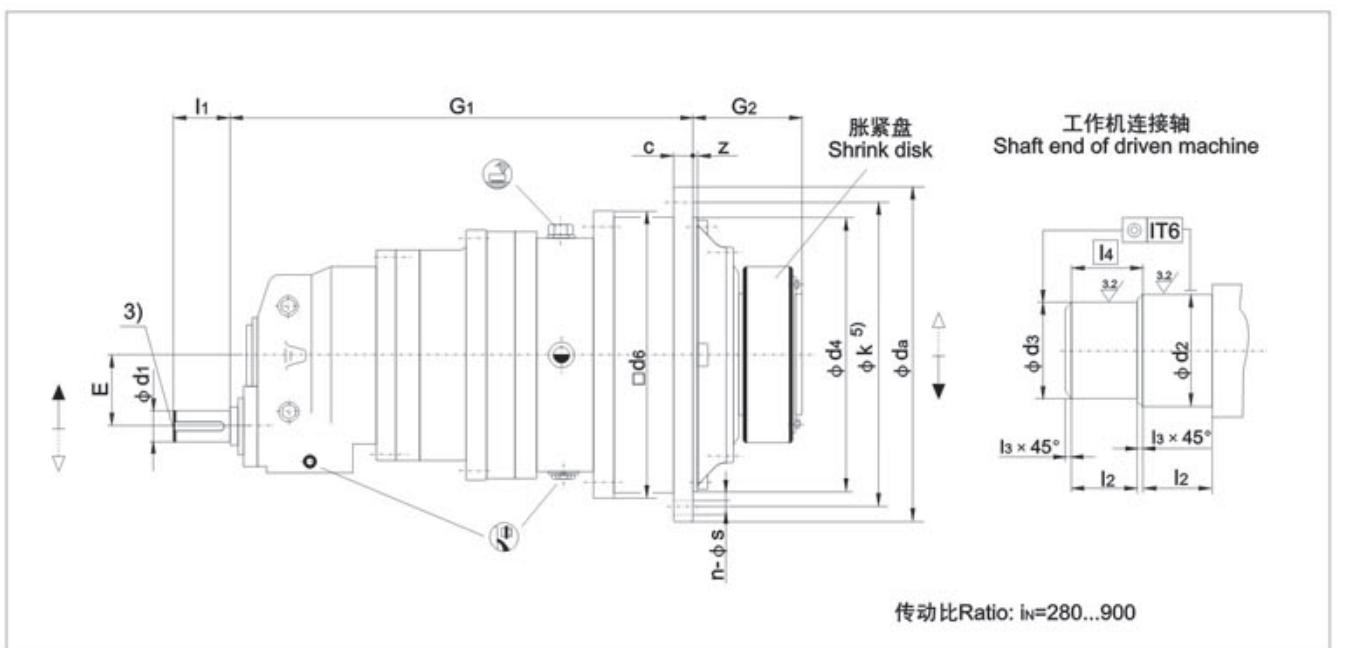


型号Q2S. 规格9...36 Type Q2S. Sizes 9...36

in	额定功率Pn Nominal power ratings (kW)		规格 Sizes																										
	n1	n2	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
45	1500	33.3	77	108	147	209	290	408	558	705	852	1030	1236	1368	1571	1790	2066	2387	2663	-	-	-	-	-	-	-	-	-	
	1000	22.2	51	72	98	140	193	272	372	470	568	686	824	912	1047	1194	1377	1592	1775	1982	2210	2466	2792	3095	3490	3909	4467	5212	6050
	750	16.7	38	54	73	105	145	204	279	353	426	515	618	684	785	895	1033	1194	1332	1487	1658	1850	2094	2321	2618	2932	3351	3909	4537
50	1500	30.0	69	97	132	188	261	368	503	635	766	927	1112	1231	1414	1611	1860	2149	2397	-	-	-	-	-	-	-	-	-	-
	1000	20.0	46	65	88	126	174	245	335	423	511	618	741	821	942	1074	1240	1432	1598	1784	1989	2220	2513	2785	3141	3518	4021	4691	5445
	750	15.0	35	49	66	94	130	184	251	317	383	463	556	616	707	806	930	1074	1198	1338	1492	1665	1885	2089	2356	2639	3016	3518	4084
56	1500	26.8	62	87	118	168	233	328	449	567	684	827	993	1099	1262	1439	1660	1918	2140	-	-	-	-	-	-	-	-	-	-
	1000	17.9	41	58	79	112	155	219	299	378	456	552	662	733	841	959	1107	1279	1427	1593	1776	1982	2244	2487	2805	3141	3590	4188	4861
	750	13.4	31	43	59	84	116	164	224	283	342	414	496	550	631	719	830	959	1070	1195	1332	1486	1683	1865	2103	2356	2692	3141	3646
63	1500	23.8	55	77	105	150	207	292	399	504	608	735	883	977	1122	1279	1476	1705	1902	-	-	-	-	-	-	-	-	-	-
	1000	15.9	37	52	70	100	138	194	266	336	406	490	588	651	748	853	984	1137	1268	1416	1579	1762	1994	2210	2493	2792	3191	3723	4321
	750	11.9	27	39	52	75	103	146	199	252	304	368	441	489	561	639	738	853	951	1062	1184	1321	1496	1658	1870	2094	2393	2792	3241
71	1500	21.1	49	69	93	133	184	259	354	447	540	653	783	867	995	1135	1310	1513	1688	-	-	-	-	-	-	-	-	-	-
	1000	14.1	32	46	62	88	122	173	236	298	360	435	522	578	664	757	873	1009	1125	1256	1401	1563	1770	1961	2212	2478	2831	3303	3834
	750	10.6	24	34	46	66	92	129	177	223	270	326	392	434	498	567	655	757	844	942	1051	1172	1327	1471	1659	1858	2124	2478	2876
80	1500	18.8	43	61	82	118	163	230	314	397	479	579	695	770	883	1007	1162	1343	1498	-	-	-	-	-	-	-	-	-	-
	1000	12.5	29	41	50	79	109	153	209	264	319	386	463	513	589	671	775	895	999	1115	1243	1387	1571	1741	1963	2199	2513	2932	3403
	750	9.4	22	30	41	59	81	115	157	198	240	290	347	385	442	504	581	671	749	836	933	1041	1178	1306	1472	1649	1885	2199	2552
90	1500	16.7	38	54	73	105	145	204	279	358	426	515	618	684	785	895	1033	1194	1332	-	-	-	-	-	-	-	-	-	-
	1000	11.1	26	36	49	70	97	136	186	235	284	343	412	456	524	597	689	796	888	991	1105	1233	1396	1547	1745	1954	2234	2606	3025
	750	8.3	19	27	37	52	72	102	140	176	213	257	309	342	448	517	597	666	743	829	925	1047	1160	1309	1466	1675	1954	2269	
100	1500	15.0	35	49	66	94	130	184	251	317	383	463	556	616	707	806	930	1074	1198	-	-	-	-	-	-	-	-	-	-
	1000	10.0	23	32	44	63	87	123	168	212	255	309	371	410	471	537	620	716	799	892	995	1110	1256	1393	1571	1759	2010	2345	2722
	750	7.5	17	24	33	47	65	92	126	159	192	232	278	308	353	403	465	537	599	669	746	832	942	1044	1178	1319	1508	1759	2042
112	1500	13.4	31	43	59	84	116	164	224	283	342	414	496	550	631	719	830	959	1070	-	-	-	-	-	-	-	-	-	-
	1000	8.9	21	29	39	56	78	109	150	189	228	276	331	366	421	480	553	639	713	797	888	991	1122	1243	1402	1571	1795	2094	2431
	750	6.7	15	22	29	42	58	82	112	142	171	207	248	275	316	360	415	480	535	597	666	743	841	933	1052	1178	1346	1571	1823
125	1500	12.0	28	39	53</																								



6、型号Q3SD 规格9..36 Type Q3SD Sizes 9..36



Q3SD 机座号 Size	额定输出扭矩 output torque 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 quan -tity (l)
		d <sub>1</sub> <sup>1)</sup>	I <sub>1</sub>	d <sub>2</sub> <sup>4)</sup> g6	d <sub>3</sub> <sup>4)</sup> g6	I <sub>2</sub>	I <sub>3</sub>	I <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±1.5	18	24	270	7
10	31000	38	60	130	125	70	2.5	72.5	28	472	394	400	90	585	174	436	8±1.5	18	28	320	9
11	42000	38	60	140	135	82.5	2.5	85.0	32	525	425	436	90	616	204	485	8±1.5	22	20	390	13
12	60000	38	60	160	155	90	2.5	92.5	34	605	495	510	90	630	224	555	9±1.5	26	20	540	17
13	83000	38	60	180	175	95	2.5	97.5	39	645	535	554	90	688	241	595	11±1.5	26	24	670	21
14	117000	38	60	210	205	105	2.5	107.5	42	720	610	629	90	711	278	665	9	26	32	930	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																					

根据用户要求供货 On request

1) 当d<sub>1</sub>≤100时公差为m6,当d<sub>1</sub>>100时公差为n6

2) 不含胀紧盘与润滑油的重量

3) 有关平键(符合GB/T1095-1979)与中心孔请参328页

4) 当尺寸≤160时公差为h6

5) 孔的分布类型见327页

1) Shaft diameter d<sub>1</sub>≤100, tolerance m6, shaft diameter d<sub>1</sub>>100, tolerance n6

2) Weight without shrink disk and oil

3) For parallel key (GB/T1095-1979)and centre hole see page 328

4) ≤160 h6

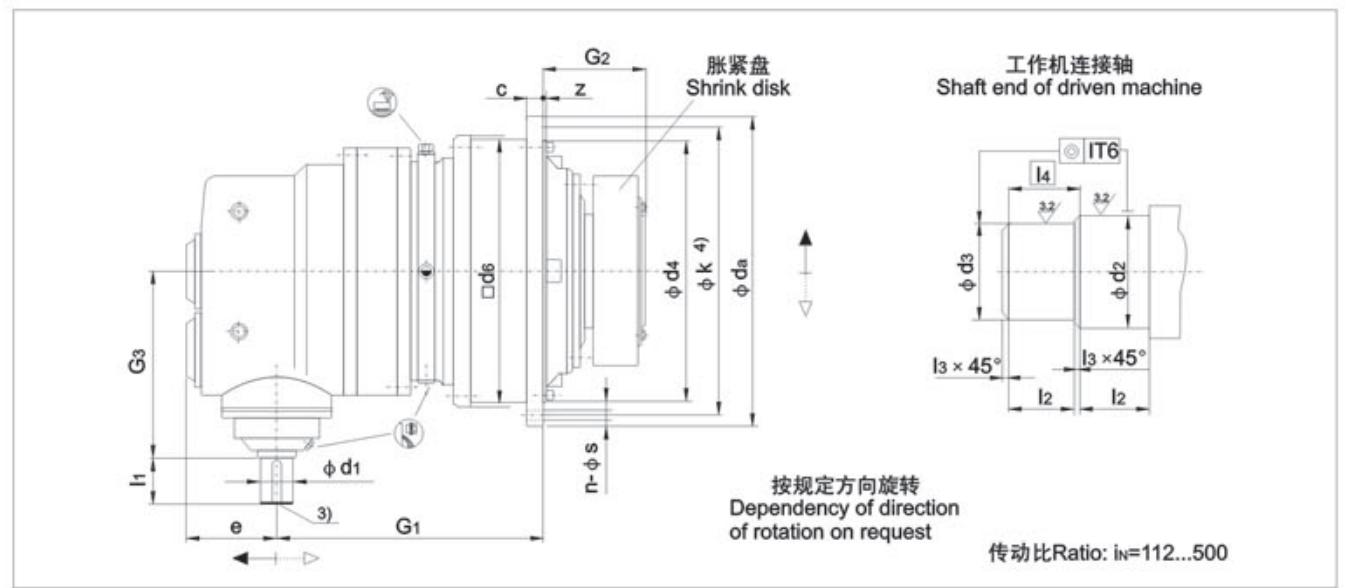
5) For hole pattern, see page 327

型号Q3S. 规格9..36 Type Q3S. Sizes 9..36

in	额定功率P <sub>N</sub>		Nominal power ratings		(kW)																			
	n <sub>1</sub>	n <sub>2</sub>	r/min	9	10	11	12	13	14	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30



4、型号Q2KD 规格9...20 Type Q2KD Sizes 9...20



Q2KD 机座号 Size	额定输出扭矩 output torque 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		2) 油量 Oil quantity (l)		
		IN≤360 IN≥400		d <sub>2</sub> <sup>5)</sup> d <sub>1</sub> <sup>1)</sup>	d <sub>3</sub> <sup>5)</sup> g <sub>6</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>																
		d <sub>1</sub> <sup>1)</sup>	l <sub>1</sub>	d <sub>1</sub> <sup>1)</sup>	l <sub>1</sub>	d <sub>2</sub> <sup>5)</sup>	d <sub>3</sub> <sup>5)</sup>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>														
9	22000	30	70	25	60	120	115	65	2.5	67.5	24	428	350	356	119	339	165	320	388	6±1.5	18	24	270	6
10	31000	30	70	25	60	130	125	70	2.5	72.5	28	472	394	400	119	359	174	320	436	8±1.5	18	28	320	8
11	42000	35	80	28	60	140	135	82.5	2.5	85.0	32	525	425	436	137	419	204	375	485	8±1.5	22	20	390	12
12	60000	35	80	28	60	160	155	90	2.5	92.5	34	605	495	510	137	433	224	375	555	9±1.5	26	20	540	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±1.5	26	24	690	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	950	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																							

1) 当d<sub>1</sub>≤ 50时公差为 k6,当d<sub>1</sub>> 50时公差为 m6

2) 不含胀紧盘与润滑油的重量

3) 有关平键(符合GB/T1095-1979)与中心孔请参见328页

4) 孔的分布类型见327页

5) 当尺寸≤160时公差为h6

1) Shaft diameter d<sub>1</sub>≤ 50, tolerance k6, shaft diameter d<sub>1</sub>> 50, tolerance m6

2) Weight without shrink disk and oil

3) For parallel key (GB/T1095-1979)and centre hole see page 328

4) For hole pattern, see page 327

5) ≤160 h6

型号Q2K. 规格9...20 Type Q2K. Sizes 9...20

in	n <sub>1</sub>		n <sub>2</sub>		额定功率P <sub>N</sub> Nominal power ratings (kW)																				
					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																				



7、型号Q3KD 规格9...30 Type Q3KD Sizes 9...30

Q3KD 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		2) 油量 Oil quan- tity (l)	重量 Weight (kg)	
		in n≤2000 in≥2240		d <sub>2</sub> <sup>5)</sup> d <sub>1</sub> <sup>1)</sup>	d <sub>3</sub> <sup>5)</sup> g <sub>6</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	孔径 Dia-meter S	数量 Qty. n															
9	22000	30	70	25	60	120	115	65	2.5	67.5	24	428	350	356	119	435	165	320	388	6±1.5	18	24	280	7	
10	31000	30	70	25	60	130	125	70	2.5	72.5	28	472	394	400	119	455	174	320	436	8±1.5	18	28	330	9	
11	42000	30	70	25	60	140	135	82.5	2.5	85	32	525	425	436	119	486	204	320	485	8±1.5	22	20	390	15	
12	60000	30	70	25	60	160	155	90	2.5	92.5	34	605	495	510	119	500	224	320	555	9±1.5	26	20	530	20	
13	83000	30	70	25	60	180	175	95	2.5	97.5	39	645	535	554	119	558	241	320	595	11±1.5	26	24	670	21	
14	117000	30	70	25	60	210	205	105	2.5	107.5	42	720	610	629	119	581	278	320	665	9	26	32	940	33	
16	160000	35	80	28	60	230	225	110	2.5	112.5	44	770	660	680	137	693	285	375	715	10	26	36	1137	42	
17	202000	35	80	28	60	250	245	120	2.5	122.5	50	895	750	775	137	719	294	375	830	10	33	24	1660	60	
18	244000	45	100	35	80	260	255	120	2.5	122.5	50	930	785	815	172	817.5	303	445	865	10	33	32	2100	70	
19	295000	45	100	35	80	280	275	135	2.5	137.5	56	980	840	870	172	841	327.5	445	915	12	33	36	2200	85	
20	354000	45	100	35	80	300	295	135	2.5	137.5	56	980	840	870	172	841	327.5	445	915	12	33	36	2300	75	
21	392000	45	100	35	80	310	305	152	2.5	154.5	62	1115	935	960	172	897.5	354	445	1025	24	39	32	2930	115	
22	450000	45	100	35	80	330	325	152	2.5	154.5	62	1115	935	960	172	897.5	354	445	1025	24	39	32	3100	105	
23	513000	55	110	40	100	350	345	164	2.5	166.5	68	1210	1025	1056	194	1003	380	520	1120	28	39	36	3800	155	
24	592000	55	110	40	100	360	355	164	2.5	166.5	68	1210	1025	1056	194	1003	380	520	1120	28	39	36	4300	135	
25	684000	55	110	40	100	380	375	180	2.5	182.5	74	1320	1115	1150	194	1065.5	407	520	1220	29	45	36	5250	195	
26	763000	55	110	40	100	400	395	180	2.5	182.5	74	1320	1115	1150	194	1065.5	407	520	1220	29	45	36	5660	170	
27	852000	70	135	50	110	430	425	191	2.5	193.5	81	1460	1215	1248	240	1205.5	453	615	1345	31	52	32	6680	250	
28	950000	70	135	50	110	450	445	191	2.5	193.5	81	1460	1215	1248	240	1205.5	453	615	1345	31	52	32	7180	220	
29	1060000	70	135	50	110	460	450	197.5	5	202.5	87	1565	1320	1355	240	1252.5	453	615	1450	34	52	36	8500	310	
30	1200000	70	135	50	110	480	470	197.5	5	202.5	87	1565	1320	1355	240	1252.5	483	615	1450	34	52	36	9070	280	
31-36		根据用户要求供货 On request																							

Q SERIES

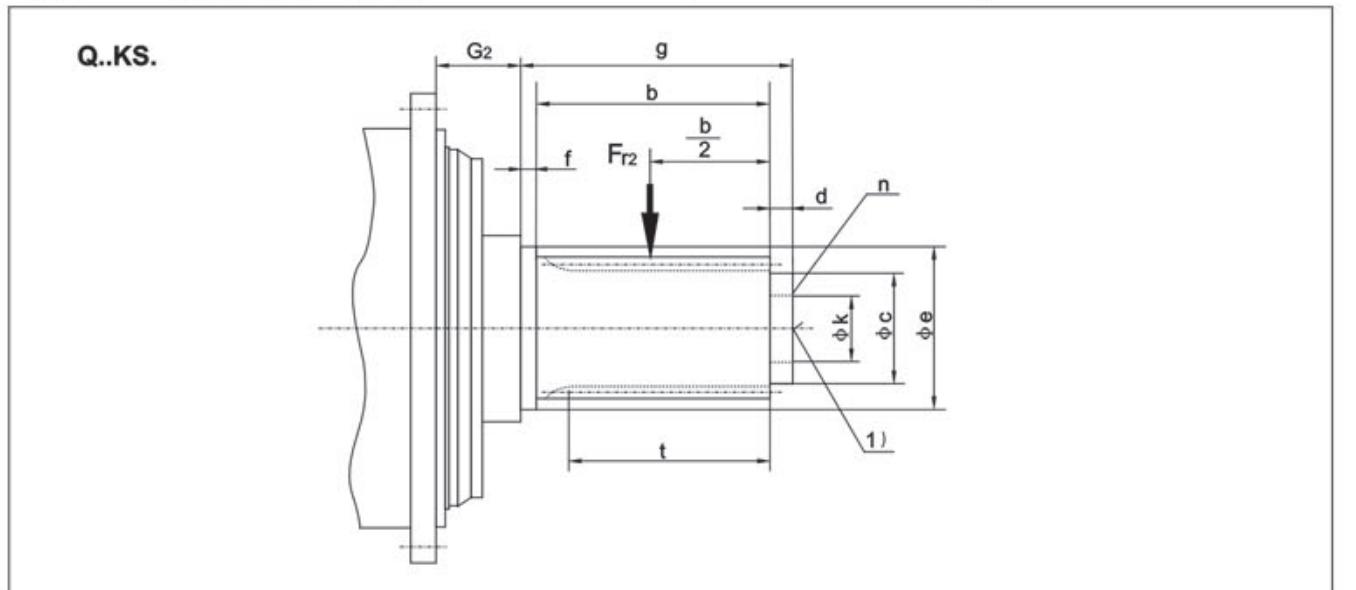
- 当 d<sub>1</sub>≤50 时公差为 k6, 当 d<sub>1</sub>>50 时公差为 m6
- 不含胀紧盘与润滑油的重量
- 有关平键(符合GB/T1095-1979)与中心孔请参见328页
- 孔的分布类型见327页
- 当尺寸≤160时公差为 h6

- Shaft diameter d<sub>1</sub>≤50 , tolerance k6 , shaft diameter d<sub>1</sub>>50 , tolerance m6
- Weight without shrink disk and oil
- For parallel key (GB/T1095-1979)and centre hole see page328
- For hole pattern, see page 327
- ≤160 h6

型号Q3K. 规格9...30 Type Q3K. Sizes 9...30

in n	额定功率P <sub>N</sub>		Nominal power ratings (kW)																			
	n1	n2	规格 Sizes																			
	r/min	9 10 11 12 13 14 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	31-36																			
560	1500	2.68	6.3	9	12	17	24	33	46	58	70	84	101	112</td								

## 4. 规格9...30 渐开线花键实心输出轴 Sizes 9..30 Solid Output Shaft with Involute Splines

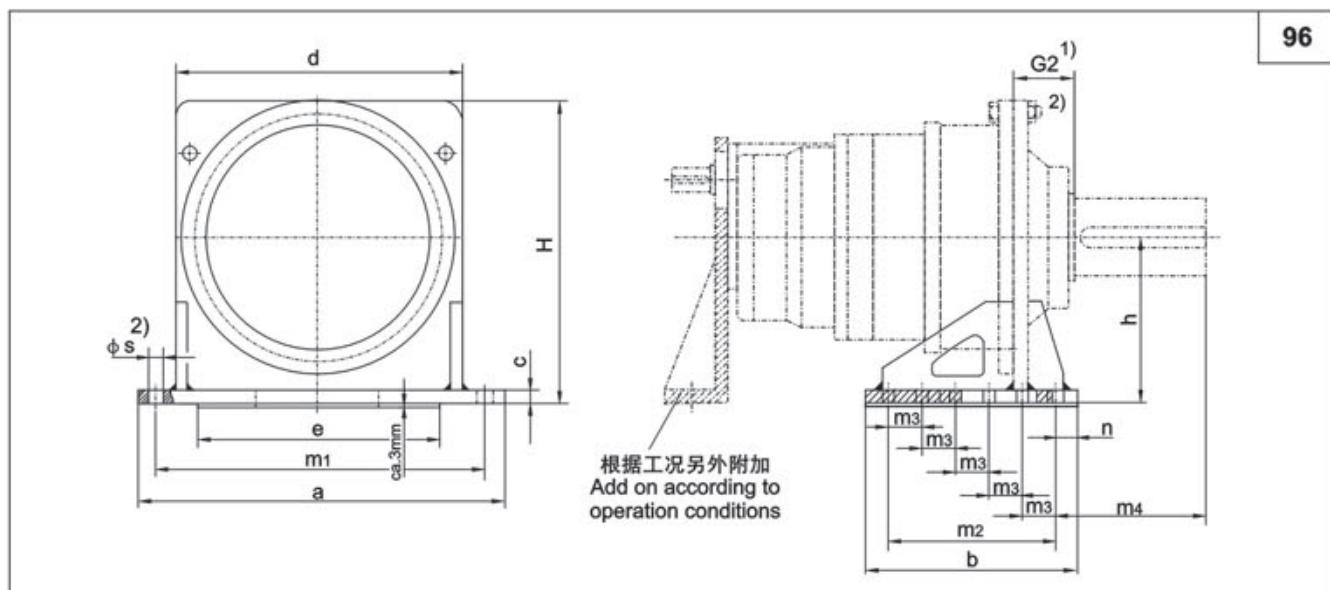


机座号 Size	输出扭矩 Output torque T2N(N.m)	渐开线花键实心输出轴 Solid output shaft with involute splines												
		外花键规格 Involute splines acc. to DIN 5480 GB/T3478.1		t	b	c k6	d	e k6	f	g	k	n	G2	Fr2
9	22000	130×5×30×24×8m	25z×5m×30p×5h	70	80	110	20	132	20	120	80	3×M16×24	95	
10	31000	140×5×30×26×8m	27z×5m×30p×5h	80	90	120	20	142	20	130	90	3×M16×24	95	
11	42000	160×5×30×30×8m	31z×5m×30p×5h	90	100	140	25	162	25	150	110	3×M16×24	109	
12	60000	180×5×30×34×8m	35z×5m×30p×5h	100	110	90	25	182	25	160	130	3×M16×24	112	
13	83000	200×5×30×38×8m	39z×5m×30p×5h	110	120	100	30	202	25	175	140	3×M16×24	118	
14	117000	220×5×30×42×8m	43z×5m×30p×5h	125	135	120	30	222	30	195	160	3×M16×24	139	
16	160000	250×8×30×30×8m	30z×8m×30p×5h	140	155	140	35	252	30	220	180	3×M20×30	142	
17	202000	260×8×30×31×8m	31z×8m×30p×5h	150	165	155	40	262	35	240	200	3×M20×30	139	
18	244000	280×8×30×34×8m	34z×8m×30p×5h	160	175	170	40	282	35	250	215	3×M20×30	142	见305页 See page 305
19	295000	300×8×30×36×8m	36z×8m×30p×5h	170	185	180	40	302	35	260	225	3×M20×30	148.5	
20	354000	310×8×30×37×8m	37z×8m×30p×5h	180	195	190	40	312	35	270	235	6×M20×30	148.5	
21	392000	320×8×30×38×8m	39z×8m×30p×5h	190	205	200	40	322	35	280	250	6×M20×30	158	
22	450000	340×8×30×41×8m	41z×8m×30p×5h	200	215	210	40	342	35	290	265	6×M20×30	158	
23	513000	360×8×30×44×8m	44z×8m×30p×5h	200	215	230	40	362	35	290	275	6×M20×30	175	
24	592000	380×8×30×46×8m	46z×8m×30p×5h	220	235	245	40	382	35	310	290	6×M20×30	175	
25	684000	400×8×30×48×8m	49z×8m×30p×5h	230	245	260	40	402	35	320	310	6×M24×36	182	
26	763000	420×8×30×51×8m	51z×8m×30p×5h	240	255	280	40	422	35	330	330	6×M24×36	182	
27-30		根据用户要求供货	On request											

1) 有关中心孔请参照328页 1) For centre hole see page 328

## 十、Q系列行星减速器附件 Q Series Planetary gear units Add-on Piece

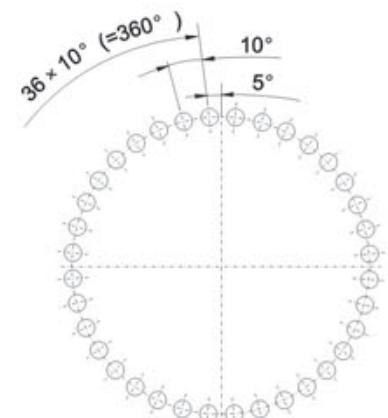
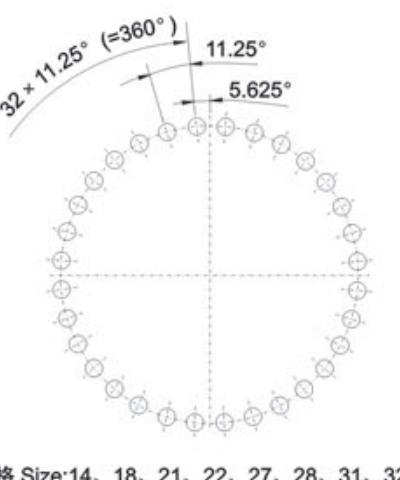
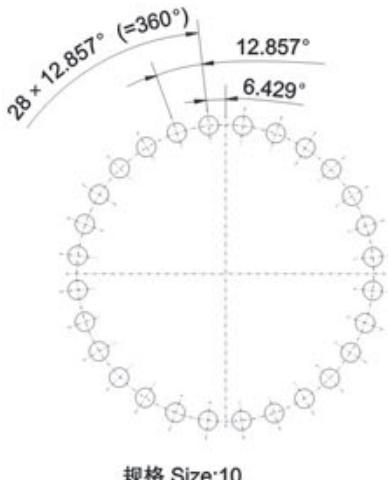
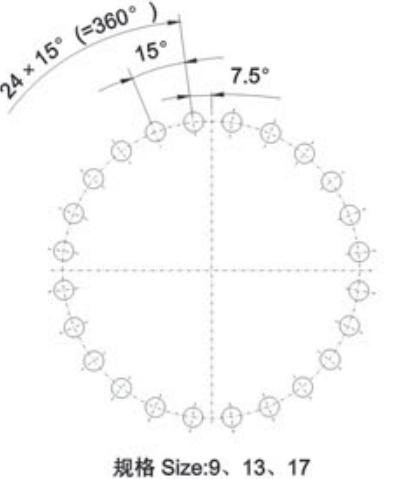
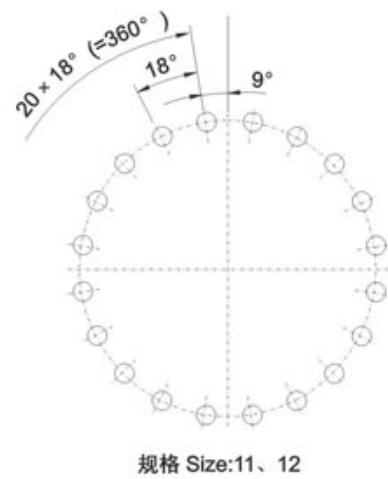
## 1、附件 Add-on Piece 96 齿轮箱底座 Gear Housing Base



机座号 Size	a	b	c	d	e	h	H	m1	m2	m3	m4	n	尺寸 Dimensions		
													螺栓孔 Foundation bolt	重量 Weight	
9	580	330	20	450	380	260	480	520	260	130	240	35	26	2×3	56
10	630	360	25	500	430	280	525	570	290	145	240	35	26	2×3	82
11	680	400	30	550	480	315	585	620	330	110	274	35	26	2×4	122
12	760	450	30	630	560	360	670	700	380	95	292	35	26	2×5	157
13	820	490	35	680	610	390	720	750	420	105	334	35	26	2×5	213
14	920	560	35	760	680	430	800	840	480	120	380	40	33	2×5	270
16	980	580	40	820	700	470	865	900	500	125	374	40	33	2×5	350
17	1130	670	45	940	810	540	998	1040	580	145	405	45	39	2×5	520
18	1180	720	45	980	830	560	1035	1080	620	155	393	50	39	2×5	580
19	1260	760	50	1050	880	590	1090	1160	640	160	450	60	45	2×5	720
20	1260	760	50	1050	880	590	1090	1160	640	160	500	60	45	2×5	720
21	1440	840	55	1170	1020	660	1228	1320	700	175	513	70	52	2×5	940
22	1440	840	55	1170	1020	660	1228	1320	700	175	513	70	52	2×5	940
23	1540	910	60	1270	1100	730	1345	1420	750	150	567	80	52	2×6	1275
24	1540	910	60	1270	1100	730	1345	1420	750	150	607	80	52	2×6	1275
25	1700	1000	65	1400	1240	795	1465	1550	860	215	574	70	62	2×5	1670
26	1700	1000	65	1400	1240	795	1465	1550	860	215	634	70	62	2×5	1670
27	1850	1100	70	1550	1370	870	1610	1700	950	190	664	75	62	2×6	2170
28	1850	1100	70	1550	1370	870	1610	1700	950	190	724	75	62	2×6	2170
29	1980	1180	75	1640	1460	925	1715	1820	1000	250	731	90	70	2×5	2650
30	1980	1180	75	1640	1460	925	1715	1820	1000	250	771	90	70	2×5	

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

从输入端看  
Viewing on input shaft

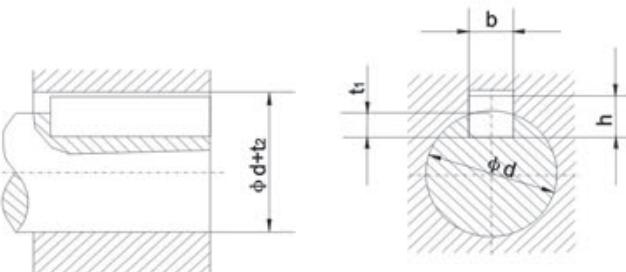


规格 Size: 35、36

## 八、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										mm
	$\geq 16-21$	$>21-24$	$>24-30$	$>30-38$	$>38-50$	$>50-85$	$>85-130$	$>130-225$	$>225-320$	$>320-500$	
螺孔尺寸 Screw	M6	M8	M10	M12	M16	M20	M24	M30	M36	M42	M48

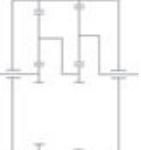
平键和键槽 Parallel key and keyway					mm
直径 Diameter $d$	宽度 Width $b$	高度 Height $h$	轴键槽深度 Depth of keyway in shaft $t_1$	轮毂键槽深度 Depth of key way in hub $d+t_2$	
$>8-10$	3	3	1.8	$d+1.4$	
$>10-12$	4	4	2.5	$d+1.8$	
$>12-17$	5	5	3	$d+2.3$	
$>17-22$	6	6	3.5	$d+2.8$	
$>22-30$	8	7	4	$d+3.3$	
$>30-38$	10	8	5	$d+3.3$	
$>38-44$	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	$d+19.5$	



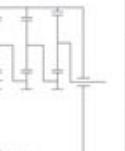


九、Q系列行星减速器实际传动比 Q Series Planetary gear units actual ratios

1、型号Q2N.Q2S. 实际传动比 Types Q2N.Q2S. Actual ratios

规格Size Q2N.	实际传动比 Actual Ratios					
	25	28	31.5	35.5	40	
Q2N.  i <sub>N</sub> =25...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	40.302
	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

2、型号Q3N.Q3S. 实际传动比 Types Q3N.Q3S. Actual ratios

规格Size Q3N.	实际传动比 Actual Ratios							
	140	160	180	200	225	250	280	
Q3N.  i <sub>N</sub> =140...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	269.69	310.22

规格Size Q2S.	实际传动比 Actual Ratios										
	45	50	56	63	71	80	90	100	112	125	
Q2S.  i <sub>N</sub> =45...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

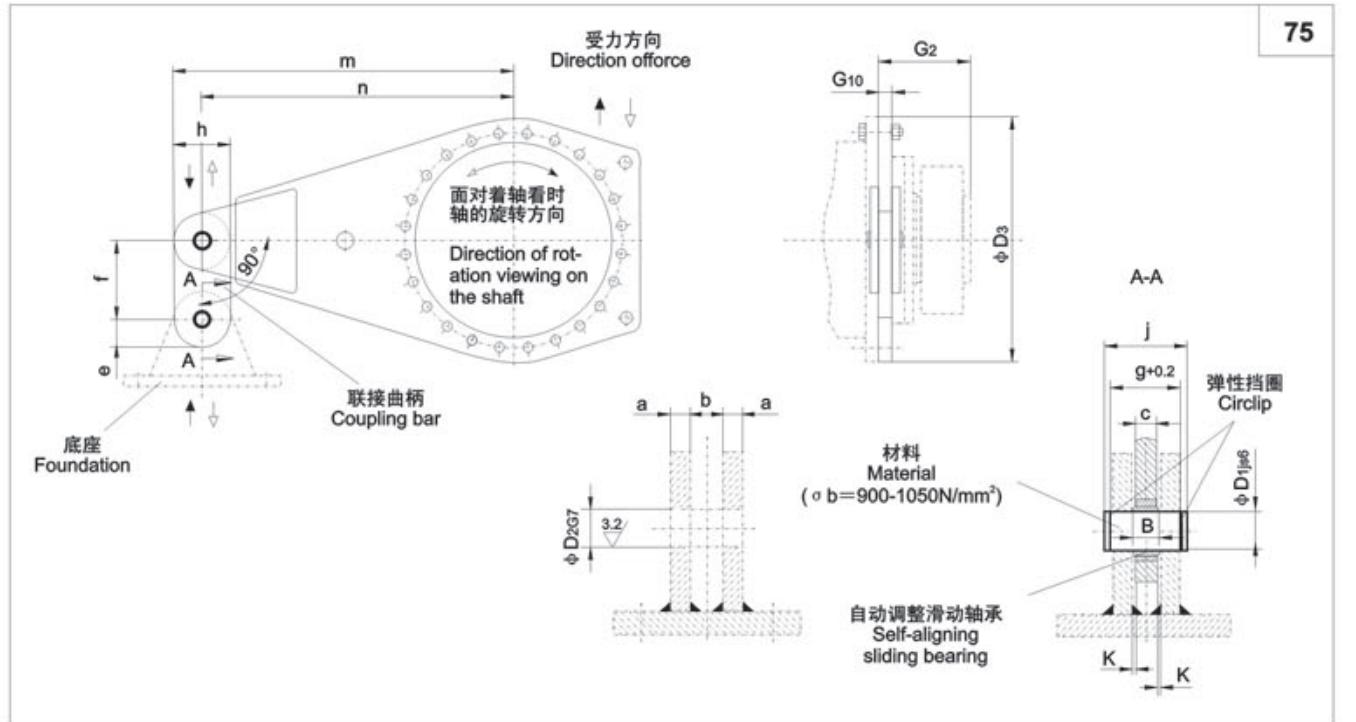
规格Size Q3S.	实际传动比 Actual Ratios										
280	315	355	400	450	500	560	630	710	800	900	



</tbl

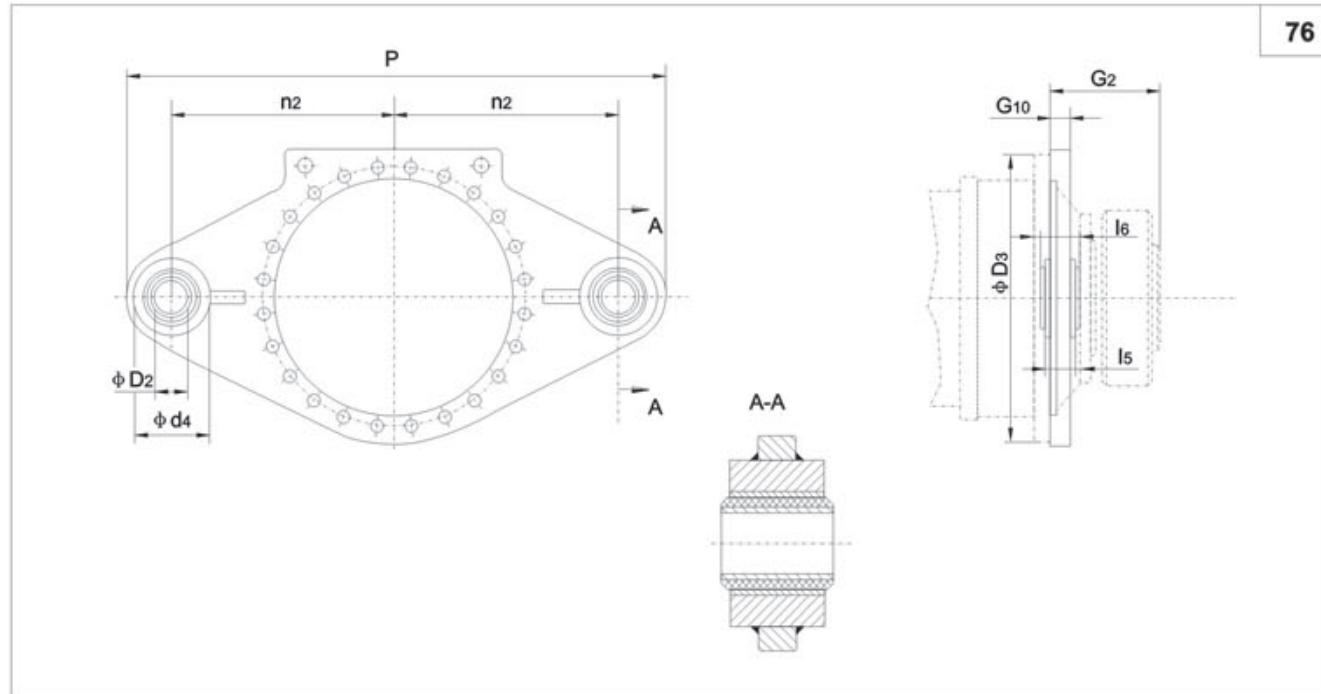
2、附件 Add-on Piece 75

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



3、附件 Add-on Piece 76

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



机座号 Size	输出扭矩 Output torque $T_{2N}$ (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	
		D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	G <sub>2</sub>																		
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

1) Nominal size B=22-35, tolerance -0.12

公称尺寸B=44-55, 公差-0.15

Nominal size B=44-55, tolerance -0.15

公称尺寸B=60-70, 公差-0.20

Nominal size B=60-70, tolerance -0.20

机座号 Size	输出扭矩 Output torque $T_{2N}$ (N.m)	<sup>*)</sup> D <sub>2</sub> H9	D <sub>3</sub>	D <sub>4</sub>	G <sub>2</sub>	G <sub>10</sub>	I <sub>5</sub>	I <sub>6</sub>	n <sub>2</sub>	P	重量 Weight
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	320	40	220	230	700	1670	230
17	202000	124	915	240	320	40	220	230	750	1770	300
18	244000	124	955	280	320	40	220	230	900	2070	400

<sup>\*)</sup> 销轴:  $\phi h8$  <sup>\*)</sup> Pin:  $\phi h8$



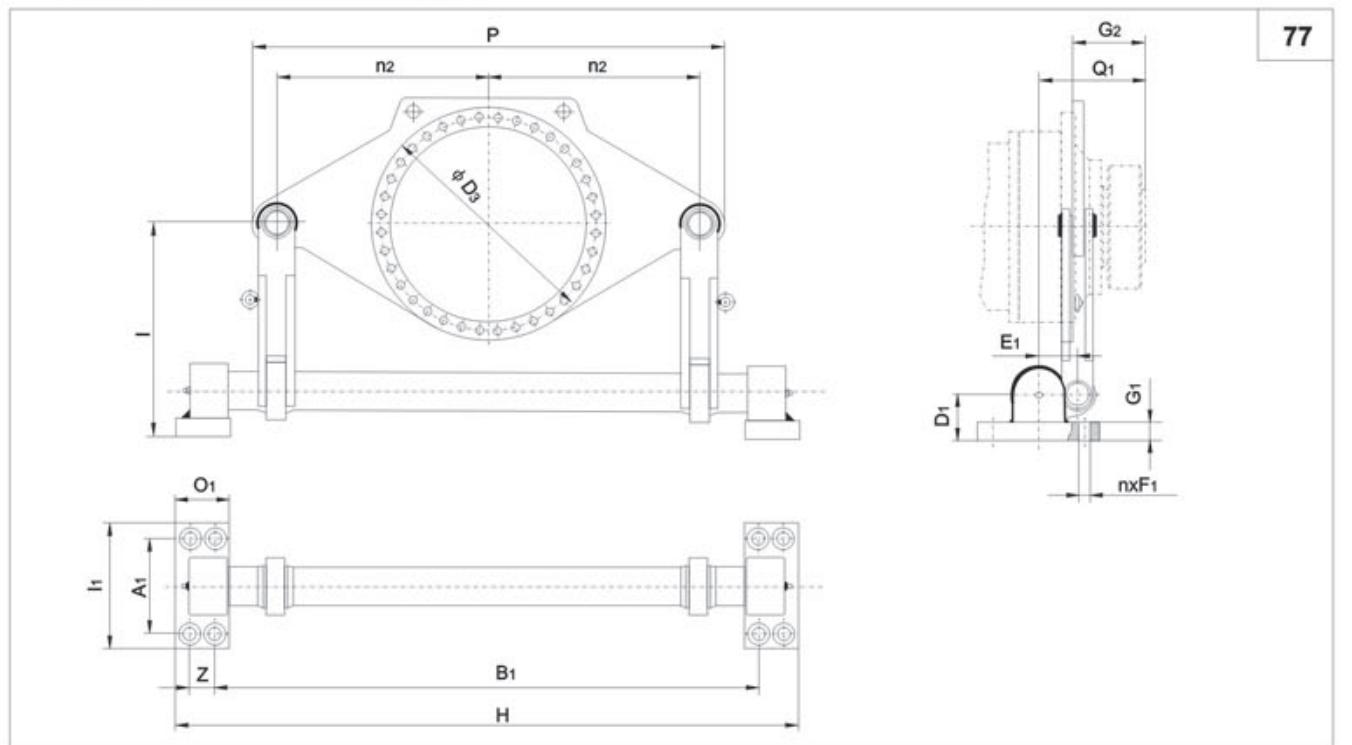
3、型号Q2L.Q2K.Q3K. 实际传动比 Types Q2L.Q2K.Q3K. Actual ratios

规格Size Q2L.	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	36.3933	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	52.1366	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

规格Size Q2K.	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	436.6	481.38
12	107.76	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

规格Size Q3K.	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		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		1137.3	1247.3	1353.1	1558.1	1769.4	1930.3	2198.4	2471.3	2724.8	3105.0	3597.2	4167.5
11	567.40	637.68	697.96	774.70	875.66		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		1094.0	1199.9	1301.6	1498.9	1702.1	1856.9	2114.8	2377.4	2621.2	2987.0	3460.5	3976.5
13	551.29	623.14	682.06	757.04	855.70	956.29	1107.3	1214.4	1317.4	1517.0	1722.8	1879.4	2140.4	2406.2	2652.9	3023.1	3502.4	4057.6
14	551.29	623.14	682.06	757.04	855.70	956.29	1107.3	1214.4	1317.4	1517.0	1722.8	1897.4	2140.4	2406.2	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											

4、附件/Add-on Piece 77  
扭力轴支撑架 Torsion Shaft Support

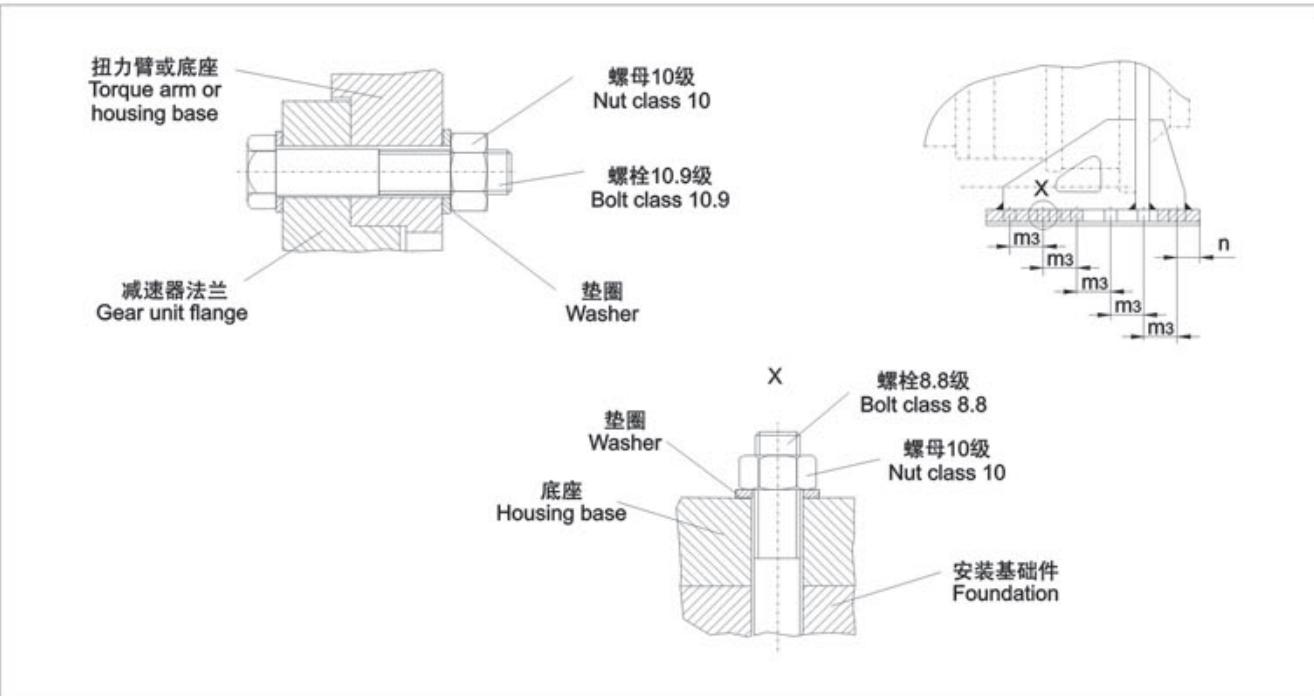


机座号 Size	输出扭矩 Output torque $T_{2N}$ (N.m)	A1	B1	D3	D1	E1	F1 (2)	数量 Qty n	G1	G2	H	I (1)	l1	n2	O1	P	Q1	Z	重量 Weight
9	22000	250	1414	610	120	105	33	8	48.5	165	1619	560	330	550	140	1230	247.5	65	300
10	31000	250	1414	610	120	105	33	8	48.5	174	1619	560	330	550	140	1230	256.5	65	300
11	42000	250	1414	610	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	1150	350	3520	840.5	178	7000

根据用户要求供货 On request

1) 标准尺寸, 整体高度可修正到2000mm 1) Standard dimension, overall height modifiable up to 2000mm  
2) 锁紧用螺栓强度不得低于6.8级 2) The bolts used for lock are not lower than class 6.8

5、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	5720	M48	6140
25/26	M42	5720	M56	9840
27/28	M48	8640	M56	9840
29/30	M48	8640	M64	14300
31/32	M56	13580	M64	14300
33/34	M56	13580	M64	14300
35/36	M56	13580	M72×6	20800