



Explorers reach the goal

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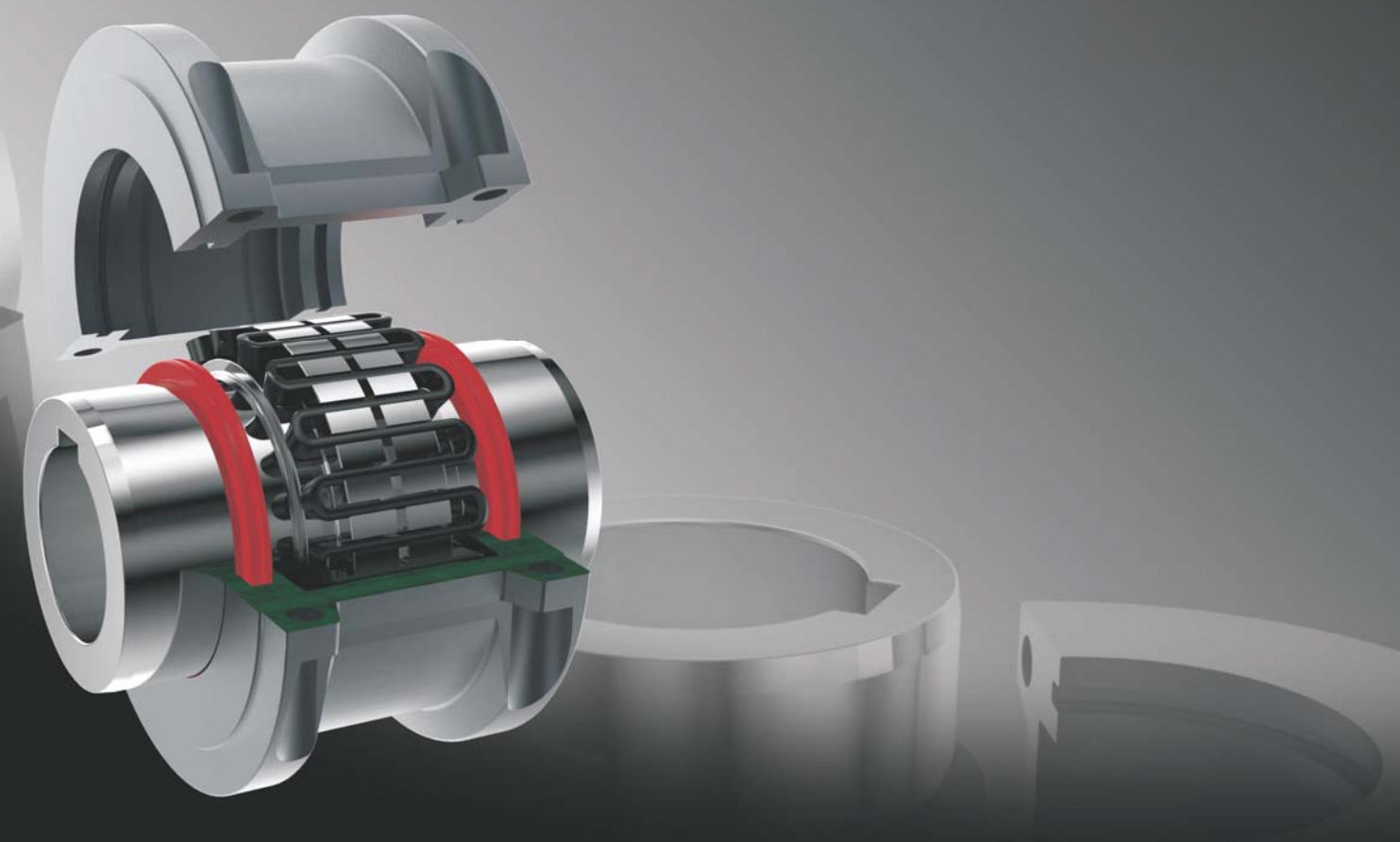
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SINCE 1996

Grid Couplings

蛇簧联轴器

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蛇簧联轴器结构特点及应用
The structural features and applications of the grid couplings

蛇簧联轴器如图1、图2所示，是由几组蛇簧绕在两半联轴器的齿间来传递运动和动力的。外部的封闭罩壳用以防止蛇簧在离心力的作用下甩出，壳体里存有润滑油，润滑蛇簧与齿面的接触处，避免干摩擦。

The grid couplings shown as figure 1, figure 2, Which is made up of several groups of serpentine spring around the two couplings halves tooth space to transfer movement and power. The external enclosed cover prevents the spring was thrown under the action of centrifugal force, shell exists lubricating oil, lubricating spring and the tooth surface contact, avoid dry friction.



图1
Figure 1

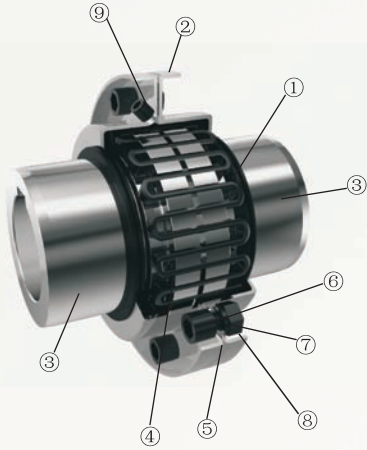


图2
Figure 2

- | | |
|-------|------------------|
| 1.密封圈 | 1、Seal ring |
| 2.外罩壳 | 2、Outer cover |
| 3.半联 | 3、Hub |
| 4.弹簧 | 4、Spring |
| 5.密封垫 | 5、Sealing gasket |
| 6.螺栓 | 6、Bolt |
| 7.螺母 | 7、Nut |
| 8.垫片 | 8、Spacer |
| 9.油塞 | 9、Oil plug |

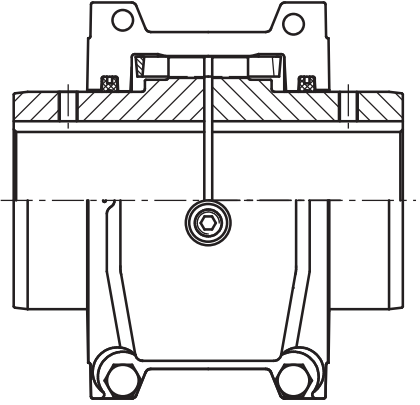
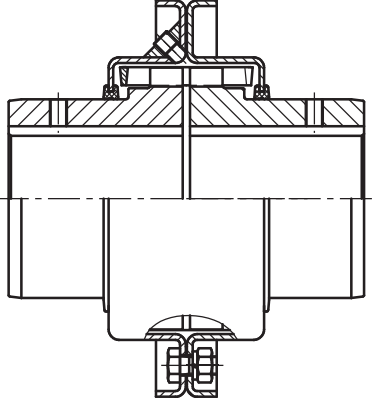
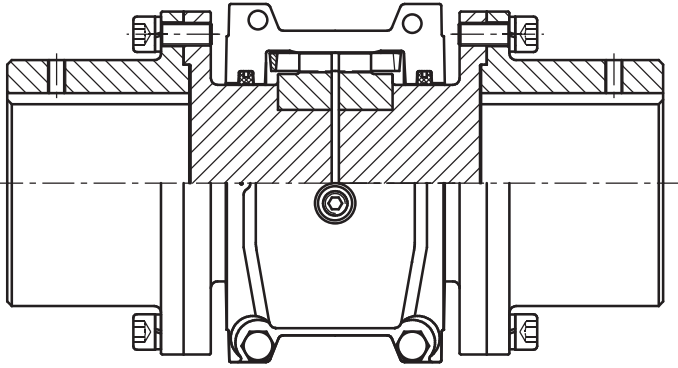
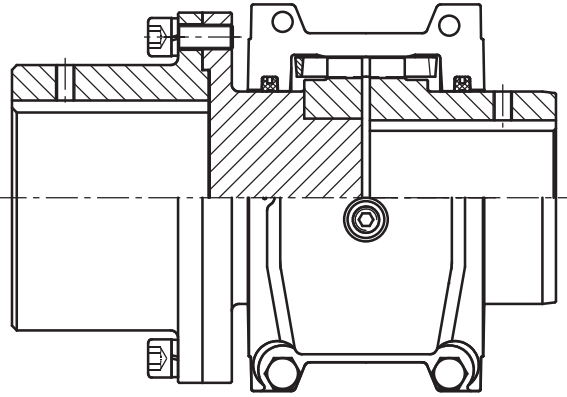
- ◆ 蛇簧联轴器的结构紧凑、外形尺寸小，工作可靠，适用于联接两同轴线的中、大功率的传动轴系。具有一定补偿两轴相对偏移和减震、缓冲性能。工作温度为-30℃~+150℃，传递公称转矩52~931000N·m。一般两轴相对的许用位移量：轴向为4~20mm；径向为0.5~3mm；角位移为1° 15'。蛇簧联轴器广泛应用于各工业领域。
- ◆ 索达蛇簧联轴器蛇簧半联齿面采用圆弧设计，当转矩增加时，蛇簧与齿面接触点的距离随转矩的增大而减小，蛇簧的刚度增大，尤其适合于转矩变化较大的场合。
- ◆ 索达蛇簧联轴器蛇簧半联圆弧齿面采用专利技术、专用设备、专用刀具制造。保证了工艺先进性和制造精度。
- ◆ 索达蛇簧联轴器蛇簧铝合金罩壳设计上有蛇簧定位结构，防止蛇簧轴向窜动；同时铝合金罩壳的安装孔从设计上避免了罩壳错装。
- ◆ 索达蛇簧联轴器蛇簧采用梯形截面设计，蛇簧与齿面能保持更好接触。吸收振动能力更强，并能缓冲冲击载荷，保护驱动和被驱动设备。
- ◆ 索达蛇簧联轴器有用于水平和垂直安装的罩壳。
- ◆ 索达蛇簧联轴器罩壳拆装容易，更换蛇簧方便，使用成本低。

蛇簧联轴器结构特点及应用
The structural features and applications of the grid couplings

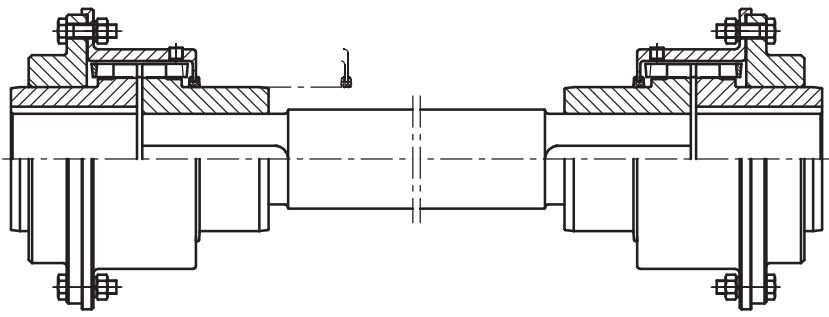
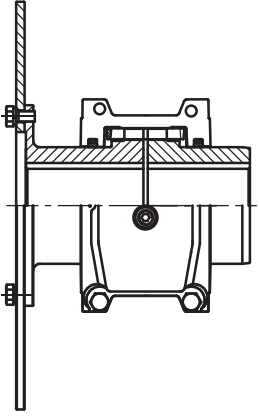
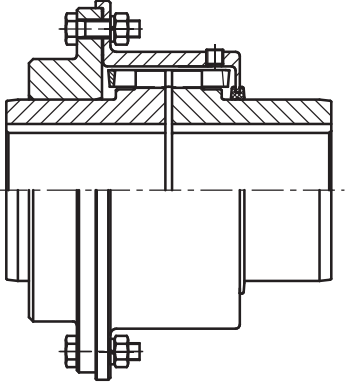
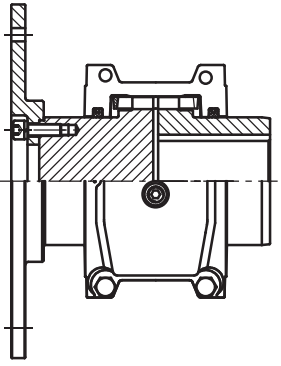
- ◆ 水平安装罩壳图1设计特点：空间小，铝合金罩壳、重量轻，转动惯量小、适合正反转的应用，易于更换蛇簧。
- ◆ 垂直安装罩壳图2设计特点：适用于高转速应用，高强度冲压钢制罩壳，重量轻，转动惯量小、易于更换蛇簧。
- ◆ 装配式水平安装罩壳设计特点：适用于泵应用，铝合金罩壳、重量轻，转动惯量小、易于更换蛇簧。

- ◆ The grid couplings of compact structure, small overall dimension, reliable work, is suitable for the connection of the two same axis line of medium or high-power transmission shafting. Possess some two-axis compensation relative offset and shock absorption, cushioning properties. Working temperature is -30 °C ~ + 150 °C, the nominal torque 52 ~ 931000 N·m. Generally two axis relative allowable displacement, the axial is 4 ~ 20 mm; the radial is 0.5 ~ 3 mm; the angular displacement is 1° 15'. The grid couplings are widely used in various industrial fields.
- ◆ The snake spring halves tooth surface of Suoda grid coupling adopts the design of circular arc. When the torque increased, the distance of snake spring and the tooth surface contact point will be decreased along with the increase of torque, the spring stiffness increased, is especially suitable for the occasions with large torque changes.
- ◆ The mechanical snake spring circle-arc tooth surface adopt patent technology and special equipment, special cutting tool manufacturing, to ensure the technology advancement and manufacturing precision.
- ◆ The snake spring aluminum alloy cover of Suoda are designed to have the snake spring positioning structure, prevent snake spring axial channeling move; Meanwhile the the design of the mounting holes in the aluminum alloy cover to avoid the wrong installing.
- ◆ The snake spring of Suoda grid couplings adopt trapezoidal cross-section design, and can keep better contact with tooth surface. Stronger vibration absorption ability and can buffer the impact load, to protect the actuator and driven equipment.
- ◆ Suoda grid couplings has the cover that used in vertical and horizontal installation.
- ◆ The cover of Suoda snake spring couplings is easy disassembly, Snake spring convenient replacement, the cost is low.
- ◆ Horizontally mounted see cover figure 1, the design features: the space is little, aluminum alloy cover, light weight, small moment of inertia, suitable for reversing applications, easy to replace the snake spring.
- ◆ Vertical mounted see cover figure 2, the design features: Suitable for high speed applications, High strength punching, steel cover, light weight, small moment of inertia, easy to replace the snake spring.
- ◆ Assembled style horizontally mounted cover of the design features of: Suitable for pump applications, aluminum cover, light weight, small moment of inertia, easy to replace snake spring.

蛇簧联轴器结构型式
The structural style of the grid couplings

	T10系列 1020T-1260T 转矩范围： 52-931000N·m T10 series 1020T-1260T Torque range: 52-931000N·m
	T20系列 1020T-1170T 转矩范围： 52-74500N·m T20 series 1020T-1170T Torque range: 52-74500N·m
	T31系列 1020T-1140T 转矩范围： 52-28500N·m T31 series 1020T-1140T Torque range: 52-28500N·m
	T35系列 1020T-1140T 转矩范围： 52-28500N·m T35 series 1020T-1140T Torque range: 52-28500N·m

蛇簧联轴器结构型式
The structural style of the grid couplings

	T50系列 1030T-1200T 转矩范围： 150-186000N·m T50 series 1030T-1200T Torque range: 150-186000N·m
	T63系列 1020T-1160T 制动转矩范围： 0.9-1411N·m T63 series 1020T-1160T Brake torque range: 0.9-1411N·m
	T70系列 1030T-1140T 转矩范围： 150-28500N·m T70 series 1030T-1140T Torque range: 150-28500N·m
	T90系列 1050T-1170T 转矩范围： 390-67740N·m T90 series 1050T-1170T Torque range: 390-67740N·m

蛇簧联轴器的选用
The selection and use of the grid couplings

选用蛇簧联轴器时，根据基本信息，计算转矩初步选定联轴器型号规格。再从标准中查出相应型号规格对应的最大孔径、最大径向尺寸（回转空间）、许用转速是否能满足联轴器的工作条件，以确定选用蛇簧联轴器型号规格。

When to select and use the grid couplings, according to the basic information and calculate the torque, preliminary select couplings model specification. Then from standard found the corresponding specifications corresponding to the maximum pore size, the maximum radial dimension (Rotary space) and the allowable speed whether can meet couplings working conditions to determine the selection and usage of grid couplings model specifications.

● 选用联轴器按以下步骤进行

According to the following steps to select and use couplings

1.1 选用基本信息 / The selection and use of the basic information

驱动机名称、驱动机数量、输入功率、工作转速、工作机名称、载荷类别、工作环境、工作性质、是否频繁启动、是否正反转、输入输出轴直径及长度

Drive machine names, drive machine quantity, input power, working speed, work machine name, load type, working environment, nature of work, whether frequent start, whether positive & negative, input and output shaft diameter and length.

基本信息见附表1
Basic information see table 1.

1.2 选用计算 / The selection&use and calculation

联轴器的主参数是公称转矩Tn，选用时各转矩间应符合以下关系：

The main parameter of the couplings is the nominal torque Tn, among various torque when selection should accord with the following relationship:

T < Tc ≤ Tn ≤ [T] < [Tmax] < Tmax

式中：
T—理论转矩，N·m
Tc—计算转矩，N·m
Tn—公称转矩，N·m
[T] —许用转矩，N·m
[Tmax] —许用最大转矩，N·m
Tmax—最大转矩，N·m

T < Tc ≤ Tn ≤ [T] < [Tmax] < Tmax

In the formula:
T— theoretical torque, N·m
Tc— calculated torque, N·m
Tn— nominal torque, N·m
T— allowable torque, N·m
[Tmax] — allowable maximum torque, N·m
Tmax— max torque, N·m

1.2.1 联轴器的理论转矩计算 / The theory torque calculation of the couplings

T=9550Pw/n

式中：
Pw—驱动功率，Kw
n—工作转速，r/min

T= 9550Pw/n

In the formula:
Pw— driving power, Kw
n— working speed, r/min

蛇簧联轴器的选用
The selection and use of the grid couplings

1.2.2 联轴器的计算转矩计算 / The torque calculation of the couplings

计算公式 Tc=T·Kw·K·Kz

式中：
Kw—动力机系数（见 表1）
K—工况系数（见 表1）
Kz—启动系数（见 表1）

Calculation formula Tc = T·Kw·K·Kz

In the formula:
Kw — Coefficient of engine (see table 1)
K — working condition coefficient (see table 1)
Kz — start coefficient (see Table 1)

表1 / Table 1

动力机系数Kw Coefficient of engine Kw	动力机名称 Engine name	启动系数Kz Start coefficient Kz	启动次数 Number of starts	工况系数K Working condition coefficient	载荷分类 Load type	工作机名称举例 Work machine names example
1.0	电动机、透平机 The motor and turbine	1.0	≤120	1	均匀载荷 Even load	鼓风机、泵、压缩机、液体搅拌设备、机纺织机械（印花机、浆纱机）、造纸设备、（漂白机、校平机）、均匀加载运输机 Blower, pump, compressor, liquid mixing equipment, textile machinery(printing machine, sizing machine), papermaking equipment, bleaching machine, leveling machine, uniform loading conveyor
1.2	四缸及四缸以上内燃机 Four and more than four cylinder internal combustion engine	1.3	> 120 ~ 240	1.5	轻冲击载荷 Light impact load	机纺织机械（压榨机、卷取机）、造纸设备（卷取机）、不均匀加载运输机、给料机、印刷机械 Textile machinery (squeezing machine, recoiling machine), papermaking equipment (recoiling machine), non-uniform loading conveyor, feeding machine, printing machine
1.4	两缸内燃机 Two cylinder internal combustion engine	由制造厂确定 Determined by the manufacturer	> 240	2	中等冲击载荷 Medium impact load	提升机械、起重机和卷扬机、旋转式粉碎机、轧制设备、石油机械、造纸设备（搅拌器和破碎机 卷筒装置、切断机） Lifting machinery, crane and windlass, rotary crusher, rolling equipment, oil machinery, papermaking equipment (agitator and crusher, cutter)
1.6	单缸内燃机 Single cylinder internal combustion engine			2.5	重冲击载荷 Heavy impact load	摆动运输机、碎矿机、碎石机、往复式给料机、橡胶机械 Swinging conveyor, crusher, stone crusher, reciprocating feeding machine, rubber machinery
				3	特重冲击载荷 Extra heavy impact load	可逆输送辊道、初轧机、中厚板轧机、机架辊、剪切机、冲压机 Reversible roller conveyer, blooming mill, plate mill, the breastroll, shearing machine, punching machine

1.2.3当存在下列情况时，应按以下方法计算选型 / When the presence of the following situation, it should be calculated and selection by the following method

①峰值载荷

②刹车制动（制动轮或制动盘为联轴器的一部分）

③高频率轴向窜动

High peak loads

Brake (brake wheel or brake disc is part of the couplings)

High frequency axial channeling move

蛇簧联轴器的选用
The selection and use of the grid couplings

峰值载荷: / Peak load

当电机功率大、有冲击载荷、频繁启动和制动、有间歇性运转等系统存在反复性峰值载荷时，联轴器额定转矩等于或大于根据下式计算出的选型转矩。

When the motor power is big, impact load, frequent starting and braking, intermittent operation and so on, such as when system exists repetitive peak load, the couplings torque rating equal or greater than selection torque calculated according to the following formula.

◆ a. 无反向峰值载荷 / No reverse peak load

选型转矩 (N·m) =系统峰值转矩
选型转矩 (N·m) =系统峰值功率 (Kw) x9550/转速 (rpm)
Selection torque (N·m) = system peak torque
Selection torque (N·m) = system peak power (Kw) × 9550 / rotate speed (rpm)

◆ b. 有反向峰值载荷 / Have reverse peak load

选型转矩 (N·m) =1.5x系统峰值转矩
选型转矩 (N·m) =1.5x系统峰值功率 (Kw) x9550/转速 (rpm)
Selection torque (N·m) = 1.5 × system peak torque
Selection torque (N·m) = 1.5 × system peak power (Kw) × 9550 / rotate speed (rpm)

◆ c. 偶然峰值载荷 (无反向) / Occasional peak load (no reverse)

在联轴器的预期寿命期间，如果系统峰值载荷出现次数少于1000次，使用下面公式：
选型转矩 (N·m) =0.5x系统峰值转矩
选型转矩 (N·m) =0.5x系统峰值功率 (Kw) x9550/转速 (rpm)
对于反向情况, 选用步骤b。
During the couplings of the expectation life, if the system peak load appeared a number less than 1000 times, using the following formula:
Selection torque (N·m) = 0.5 × system peak torque
Selection torque (N·m) = 0.5 × system peak power (Kw) × 9550 / rotate speed (rpm)
For reverse situation, selects the step b.

制动 / Brake

如果制动力矩超过电机转矩，根据下式计算选型转矩：
选型转矩 (N·m) =制动力矩x工况系数

If the braking torque exceed the motor torque, according to following formula to select model and torque :
Selection torque (N·m) = brake torque × application fac

高频率轴向窜动 / High frequency axial channeling shift

如果轴向窜动超过每小时5次，那么工况系数需增加0.25。
选型转矩 (N·m) =功率 (Kw) x9550x(工况系数+0.25)/转速 (rpm)
If the axial channeling move exceed more than 5 times per hour, so the working condition coefficient should be increased by 0.25.
Selection torque (N·m) =power (Kw) × 9550 × (application factor+0.25) / rotate speed (rpm)

蛇簧联轴器的选用
The selection and use of the grid couplings

1.3 初选联轴器型号规格 / The preliminary selection of the couplings model specifications

1.4 选型验证 / Selection validation

1.5 确定联轴器型号规格 / To determine the couplings model specifications

1.6 产品标记 / Product mark

● 选型示例 Selection example

2.1 基本信息 / General information

电机额定功率：3Kw	Rated motor power: 3Kw
输出转速：686rpm	Output speed: 686rpm
输入轴径d1：48mm	Input shaft diameter d1: 48mm
输出轴径d2：60mm	Output shaft diameter d2: 60mm
输入、输出端距离：3.2mm	Input and output end distance: 3.2mm
工作温度：-30 ℃ ~ 120 ℃	Working temperature: -30 ℃ ~ 120 ℃
载荷性质：中等冲击	Load properties: medium Impact
工作环境：有灰尘等	Working environment: such as dust etc
工作性质：连续	Nature of work: continuous

2.2 选用计算 / Select & use, calculation

根据基本信息， 本项目选用SD标准蛇簧联轴器。 选型计算 理论转矩计算 T=9550Pw/n=9550*3/686=41.8 (N·m) 计算转矩计算 计算公式 Tc=T·Kw·K·Kz 式中： Kw取1 / K取2 / Kz取1 Tc=41.8*1*2*1=83.6 (N·m)	According to the general information, this project should select and use the SD standard grid couplings. Selection & calculation Theoretical toque calculation T= 9550Pw/n= 9550*3/686= 41.8 (N·m) Calculated torque Computational formula Tc=T·Kw·K·Kz In this formula: Kw choose 1 / K choose 2 / Kz choose 1 Tc=41.8*1*2*1=83.6 (N·m)
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2.3 初选联轴器型号规格
/ The preliminary selection of the couplings model specifications

1030T10公称转矩 150 N·m
满足转矩要求 初选联轴器型号1030T10
The nominal torque of 1030T 150 N·m.
Meet the torque requirement. primary selection of 1030T10.

2.4 验证 / Verification

蛇簧联轴器的选用
The selection and use of the grid couplings

2.4.1 孔径 / Bore diameter

1030T10 最大孔径 35mm
不满足孔径要求，需调整联轴器型号规格
1070T10 最大孔径 64mm 满足孔径要求
调整后联轴器型号规格 1070T10

1030T10 The max bore diameter is 35mm.
If did not meet the requirements of bore diameter,
needs to adjust the couplings model and specifications.
1070T10 The max bore diameter is 64mm,
meets the requirements of bore diameter.
After adjusted the couplings type and specification is 1070T.

2.4.2 回转空间（与现场条件比较） / Rotary space (compared with on site conditions)

现场对联轴器最大外径没有限制
1070T10 满足回转空间要求

On work site, there is no limit for the max diameter of couplings.
1070T10 Meet the requirements of rotary space.

2.4.3 许用转速 / Allowable speed

1070T10 许用转速 4125rpm
联轴器实际输出转速 686rpm
1070T10 满足许用转速

1070T10 The allowable speed is 4125rpm.
The actual output speed of couplings is 686rpm.
1070T10 Meet the allowable rotate speed.

2.5 选定联轴器型号规格 / Selected couplings model specifications

因输入、输出端距离 3.2mm
选定联轴器型号规格如下：
两套1070T10 48*L/60*L C=3.2 加接轴

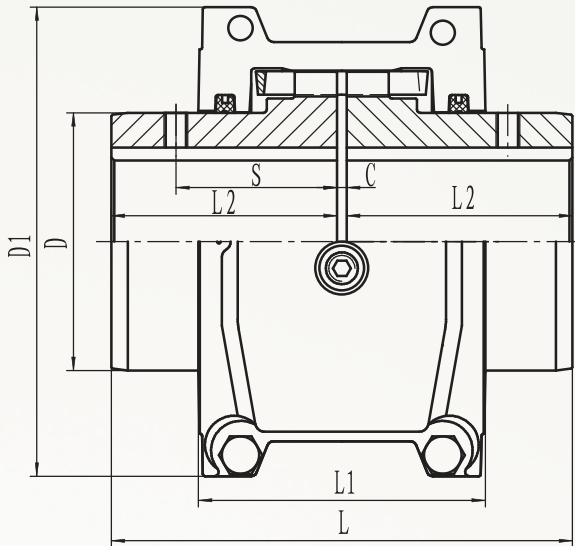
Because of the input and output end distance is 3.2mm,
the selection of the couplings model specifications as follow:
Two sets of 1070T10 48*L/60*L C=3.2 with connecting shaft.

2.6 标记示例 / Marking Example

1070 T10 蛇簧联轴器
输入端：J1 型轴孔，A型键槽，d=48mm, L=76mm
输出端：J1 型轴孔，B型键槽，d=60mm, L=76mm
1070 T10 联轴器 J1 A 48*76/ J1 B 60*76 间距C=3.2

1070 T10 Grid couplings
Input end: J1 type shaft hole, Type A keyway, d=48mm, L=76mm
Output end: J1 type shaft hole, Type B keyway, d=60mm, L=76mm
1070 T10 couplings J1 A 48*76/ J1 B 60*76 spacing C=3.2

蛇簧联轴器结构型式、基本参数和主要尺寸
The structural style, basic parameter and main dimensions of the grid couplings

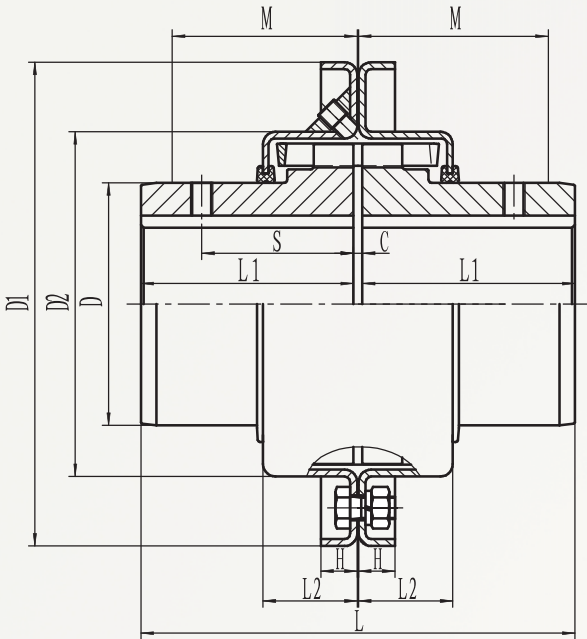


T10 型系列蛇簧联轴器
T10 Steelflex grid couplings

型号 Size	公称转矩 Nominal torque N·m	许用转速 Allowable speed rpm	孔径 bore diameter		重量 Wt Kg	注油量 Oil injection Kg	主要尺寸 Main Dimension mm							
			Max.	Min.			D1	L	L2	D	D2	L1	S	C
1020T	52	4500	29	13	1.91	0.027	97	99	48	40	/	67	39	3.2
1030T	150	4500	35	13	2.59	0.041	106	99	48	49	/	68	39	3.2
1040T	250	4500	41	13	3.36	0.054	114	105	51	57	/	70	40	3.2
1050T	435	4500	48	13	5.44	0.068	135	124	60	67	/	81	45	3.2
1060T	680	4350	54	19	7.26	0.086	148	130	64	76	/	93	52	3.2
1070T	990	4125	64	19	10.43	0.113	159	155	76	87	/	97	54	3.2
1080T	2050	3600	76	27	17.69	0.172	191	181	89	105	/	116	65	3.2
1090T	3700	3600	89	27	25.40	0.254	211	200	99	124	/	122	72	3.2
1100T	6300	2440	102	41	42.18	0.426	251	246	121	142	/	155	/	4.8
1110T	9300	2250	114	41	54.43	0.508	270	259	127	160	/	162	/	4.8
1120T	13600	2025	127	60	81.19	0.735	308	305	149	179	/	192	/	6.4
1130T	19800	1800	152	67	120.66	0.907	346	330	162	217	/	195	/	6.4
1140T	28500	1650	184	67	177.81	1.134	384	375	184	254	/	201	/	6.4
1150T	39700	1500	203	108	226.80	1.950	453	372	183	269	391	272	/	6.4
1160T	55800	1350	229	121	308.90	2.812	502	403	198	305	437	278	/	6.4
1170T	74500	1225	254	133	447.70	3.493	567	438	216	356	487	307	/	6.4
1180T	10300	1100	279	152	619.15	3.765	630	484	239	394	555	321	/	6.4
1190T	136000	1050	305	152	775.64	4.400	676	525	259	437	608	325	/	6.4
1200T	186000	900	330	178	1057.32	5.625	757	565	279	498	660	356	/	6.4
1210T	248000	820	356	178	1424.28	10.523	845	622	305	533	751	432	/	12.7
1220T	335000	730	381	203	1784.89	16.057	921	663	325	572	822	490	/	12.7
1230T	435000	680	406	203	2266.60	24.040	1003	704	345	610	905	546	/	12.7
1240T	558000	630	432	254	2950.16	33.793	1087	749	368	648	/	648	/	12.7
1250T	745000	580	470	254	3832.86	50.122	1181	815	401	711	/	699	/	12.7
1260T	931000	540	508	254	4681.98	67.177	1261	876	432	762	/	762	/	12.7

注：罩壳材料 1020—1180铝合金金铸件；1190—1230铝合金砂铸件；1240—1260钢结构件
Note: Cover material: 1020—1180 Aluminum alloy gold casting; 1190—1230 Aluminum sand casting; 1240—1260 steel structure

蛇簧联轴器结构型式、基本参数和主要尺寸
The structural style, basic parameter and main dimensions of the grid couplings

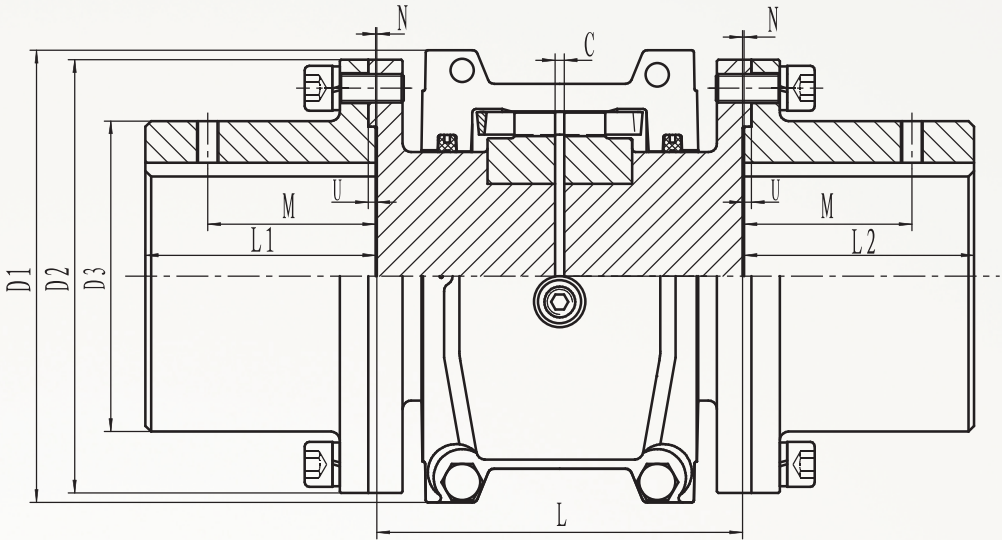


T20 型系列蛇簧联轴器
T20 Steelflex grid couplings

型号 Size	公称转矩 Nominal torque N·m	许用转速 Allowable speed rpm	孔径 bore diameter		重量 Wt Kg	注油量 Oil injection Kg	主要尺寸 Main Dimension mm									
			Max.	Min.			D1	L	L1	D	D2	H	L2	M	S	C
1020T	52	6000	29	13	1.95	0.027	112	99	48	40	64	10	24	48	39	3.2
1030T	150	6000	35	13	2.59	0.041	122	99	48	49	73	10	25	48	39	3.2
1040T	250	6000	41	13	3.36	0.054	130	105	51	57	83	10	26	51	40	3.2
1050T	435	6000	48	13	5.44	0.068	149	124	60	67	99	12	30	60	45	3.2
1060T	680	6000	54	19	6.80	0.086	163	130	64	76	111	13	32	64	52	3.2
1070T	990	5500	64	19	10.43	0.113	174	155	76	87	124	13	34	67	54	3.2
1080T	2050	4750	76	27	17.69	0.172	201	181	89	105	149	13	44	89	65	3.2
1090T	3700	4000	89	27	25.40	0.254	233	200	99	124	168	13	47	95	72	3.2
1100T	6300	3250	102	41	42.18	0.426	268	246	121	142	197	16	60	121	/	4.8
1110T	9300	3000	114	41	54.43	0.508	287	259	127	160	216	16	63	124	/	4.8
1120T	13600	2700	127	60	81.65	0.735	320	305	149	179	244	18	74	143	/	6.4
1130T	19800	2400	152	67	122.47	0.907	379	330	162	217	282	21	75	146	/	6.4
1140T	28500	2200	184	67	180.08	1.134	417	375	184	254	321	21	78	155	/	6.4
1150T	39700	2000	203	108	229.97	1.950	476	372	183	269	374	19	107	203	/	6.4
1160T	55800	1750	229	121	321.14	2.812	533	403	198	305	424	30	114	216	/	6.4
1170T	74500	1600	254	133	448.15	3.493	584	438	216	356	474	30	119	226	/	6.4

注： 罩壳材料 Q235钢板拉伸件。
Note: Cover material: 1020–1180 Aluminum alloy gold casting.

蛇簧联轴器结构型式、基本参数和主要尺寸
The structural style, basic parameter and main dimensions of the grid couplings

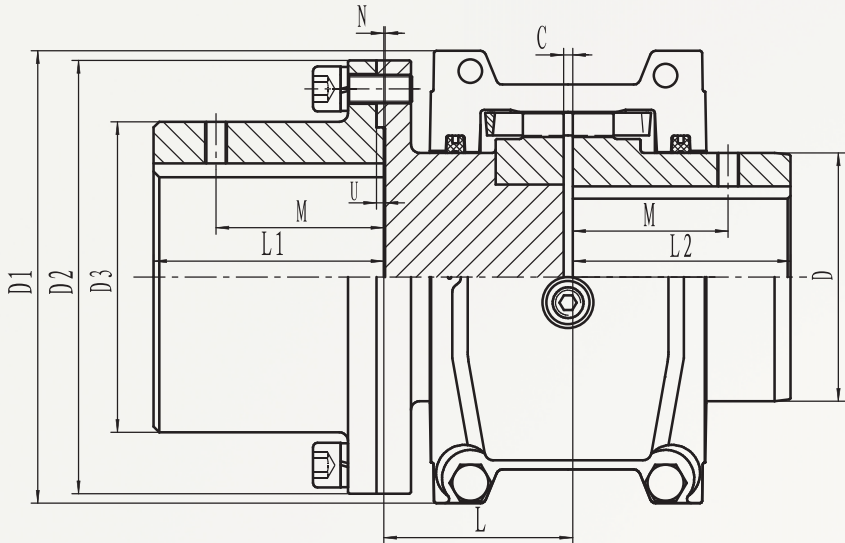


T31 系列蛇簧联轴器
T31 Steelflex grid couplings

型号 Size	公称转矩 Nominal torque N·m	许用转速 Allowable speed rpm	孔径 bore diameter		重量 Wt Kg	注油量 Oil injection Kg	主要尺寸 Main Dimension mm									
			Max.	Min.			D1	L1 L2	L Min.	Max.	D3	N	D2	M	U	C
1020T	52	3600	35	13	3.86	0.027	97	35	89	203	52	1	86	27	2	3.2
1030T	150	3600	41	13	5.22	0.041	106	41	89	216	59	1	94	31	2	3.2
1040T	250	3600	54	13	8.44	0.054	114	54	89	216	78	1	113	27	2	3.2
1050T	435	3600	60	13	12.79	0.068	135	60	111	216	87	1	125	41	2	3.2
1060T	680	3600	73	19	20.46	0.086	148	73	122	330	103	2	145	43	3	3.2
1070T	990	3600	79	19	24.77	0.113	159	79	127	330	109	2	152	47	3	3.2
1080T	2050	3600	89	27	39.96	0.172	191	89	155	406	122	2	178	50	3	3.2
1090T	3700	3600	102	27	59.87	0.254	211	102	164	406	143	2	210	57	3	3.2
1100T	6300	2440	121	38	90.26	0.426	251	90	203	406	171	2	251	/	3	4.8
1110T	9300	2250	140	51	118.39	0.508	270	104	210	406	197	2	276	/	3	4.8
1120T	13600	2025	159	64	177.81	0.735	308	119	246	406	226	2	319	/	4	6.4
1130T	19800	1800	178	76	236.78	0.907	346	135	257	406	238	2	346	/	4	6.4
1140T	28500	1650	203	89	326.59	1.134	384	152	267	406	267	2	386	/	4	6.4

注： 罩壳材料 铝合金金属铸件。
Note: Aluminum alloy gold casting.

蛇簧联轴器结构型式、基本参数和主要尺寸
The structural style, basic parameter and main dimensions of the grid couplings



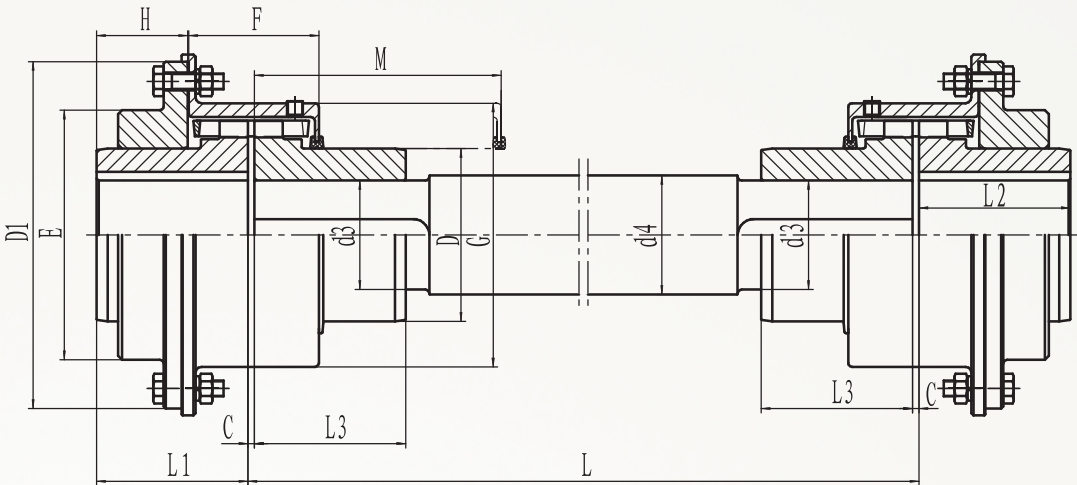
T35 型系列蛇簧联轴器
T35 Steelflex grid couplings

型号 Size	公称转矩 Nominal torque N·m	许用转速 Allowable speed rpm	最大孔径 Max bore diameter mm		孔径 Bore Min.	重量 Wt Kg	注油量 Oil injection Kg	主要尺寸 Main Dimension mm												
			Shaft	T				D1	L1	L		L2	D	D3	N	D2	M		U	C
										Min.	Max.						Shaft	T		
1020T	52	3600	35	29	13	2.90	0.027	97	35	45	102	48	40	52	1	86	27	39	2	3.2
1030T	150	3600	41	35	13	3.90	0.041	106	41	45	109	48	49	59	1	94	31	39	2	3.2
1040T	250	3600	54	41	13	5.90	0.054	114	54	45	109	51	57	78	1	113	27	40	2	3.2
1050T	435	3600	60	48	13	9.12	0.068	135	60	56	109	60	67	87	1	125	41	45	2	3.2
1060T	680	3600	73	54	19	13.93	0.086	148	73	62	166	64	76	103	2	145	43	52	3	3.2
1070T	990	3600	79	64	19	17.60	0.113	159	79	64	166	76	87	109	2	152	47	54	3	3.2
1080T	2050	3600	89	76	27	28.94	0.172	191	89	78	204	89	105	122	2	178	50	65	3	3.2
1090T	3700	3600	102	76	27	42.82	0.254	211	102	83	204	99	124	143	2	210	57	72	3	3.2
1100T	6300	2440	121	102	41*	66.22	0.426	251	90	103	205	121	142	171	2	251	/	/	3	4.8
1110T	9300	2250	140	114	41*	86.64	0.508	270	104	106	205	127	160	197	2	276	/	/	3	4.8
1120T	13600	2025	159	127	60*	129.27	0.735	308	119	125	205	149	179	226	2	319	/	/	4	6.4
1130T	19800	1800	178	152	67*	178.72	0.907	346	135	130	205	162	217	238	2	346	/	/	4	6.4
1140T	28500	1650	203	184	67*	252.20	1.134	130	152	135	205	184	254	267	2	386	/	/	4	6.4

注：①罩壳材料 铝合金铸件。
②*号标记的最小孔径尺寸为T半联的孔径尺寸，轴端半联的最小孔径尺寸分别为38.1、50.8、63.5、76.2、88.9。

Note: ①Cover material:1020–1180 Aluminum alloy gold casting.
②The minimum bore diameter size marked with * is the bore diameter size of half–couplings,
Shaft end half couplings min aperture size respectively is 38.1, 50.8, 63.5, 76.2, 88.9.

蛇簧联轴器结构型式、基本参数和主要尺寸
The structural style, basic parameter and main dimensions of the grid couplings



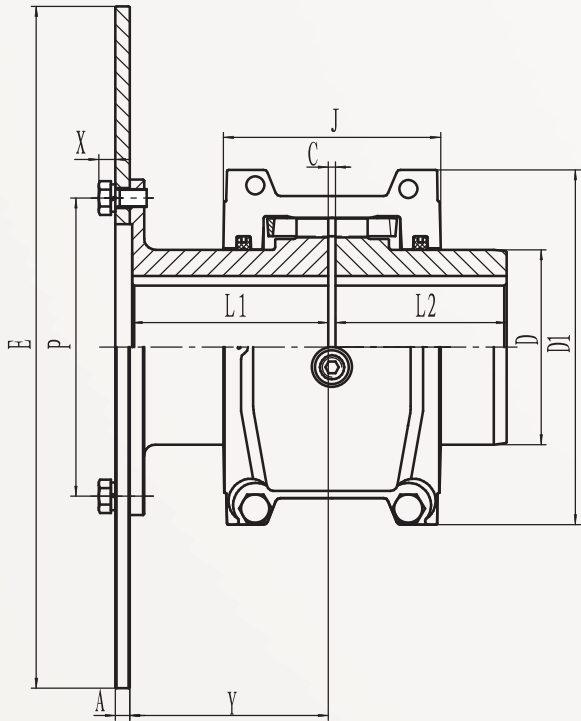
T50 型系列蛇簧联轴器
T50 Steelflex grid coupling

型号 Size	公称转矩 Nnominal torque N·m	孔径 bore diameter		重量 Wt Kg	注油量 Oil injection Kg	导向轴 套孔径 pilot hub bore	主要尺寸 Main Dimension mm											
		Max.	Min.				D1	Lmin	L1、 L2、 L3	D	E	G	F	M	H	d3	d4	C
1030T	150	35	13	3.90	0.041	27	116	162	48	49	84	81	50	78	27	27	28	3.2
1050T	435	48	13	8.85	0.068	37	157	195	60	67	105	105	59	94	36	37	38	3.2
1070T	990	64	19	15.60	0.113	49	183	213	76	87	126	129	65	103	50	49	51	3.2
1080T	2050	76	27	26.40	0.172	62	218	275	89	105	155	156	86	134	52	62	64	3.2
1090T	3700	89	27	37.19	0.254	75	245	294	99	124	180	176	92	144	58	75	76	3.2
1100T	6300	102	41	63.05	0.426	92	286	372	121	142	211	208	117	181	69	92	95	4.8
1110T	9300	114	41	83.46	0.508	102	324	391	127	160	245	229	122	191	74	102	105	4.8
1120T	13600	127	60	97.98	0.735	117	327	453	149	179	179	257	146	220	84	117	121	6.4
1130T	19800	152	67	140.16	0.907	133	365	463	162	217	217	295	149	225	95	133	137	6.4
1140T	28500	184	67	209.56	1.134	143	419	482	184	254	254	336	156	235	114	143	146	6.4
1150T	39700	203	108	276.69	1.950	162	478	549	183	271	269	391	177	268	102	162	165	6.4
1160T	55800	229	121	381.02	2.812	200	549	587	198	305	305	442	189	287	112	200	203	6.4
1170T	74500	254	133	518.91	3.493	200	605	622	216	356	356	494	201	305	124	200	203	6.4
1180T	10300	279	152	718.04	3.765	226	665	673	239	394	394	556	227	330	141	226	229	6.4
1190T	136000	305	152	897.66	4.400	251	709	711	259	437	437	599	242	350	157	251	254	6.4
1200T	186000	330	178	1205.19	5.625	276	782	744	279	498	498	663	252	366	173	276	279	6.4

注：①罩壳材料1030–1100圆钢；1110–1130锻件；1140–1200钢板或铸钢
②最大孔径为凸缘半联的孔径尺寸。

Note: ①Cover material:1030–1100 round steel; 1110–1130 forging; 1140–1200 Steel plate or cast steel
②Maximum pore diameter is the pore diameter of flange half couplings.

蛇簧联轴器结构型式、基本参数和主要尺寸
The structural style, basic parameter and main dimensions of the grid couplings



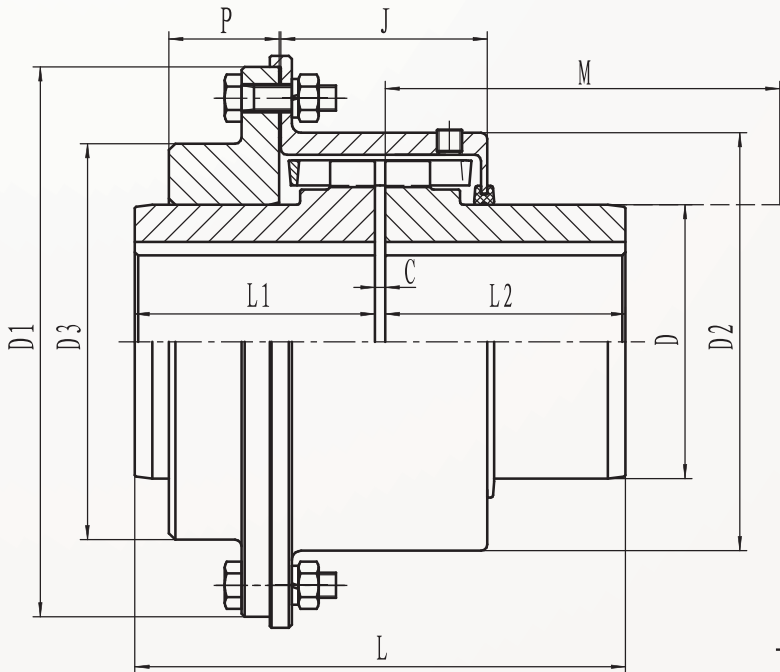
T63 型系列蛇簧联轴器
T63 Steelflex grid couplings

型号 Size	制动转矩 Braking torque N·m	制动盘尺寸 Brake disc size* thickness E × A	许用转速 Allowable speed rpm	孔径 bore diameter		重量 Wt Kg	注油量 Oil injection Kg	主要尺寸 Main Dimension mm									
				Max.	Min.			D1	L2	D	Y	J	P	L1	X	C	
20T	0.9	Φ203*6.4	4500	29	13	2.55	0.027	102	48	40	60	67	71	60	12	3.2	
30T	2.9	Φ254*6.4	4500	35	13	3.31	0.041	111	48	49	60	68	79	60	12	3.2	
40T	5.4	Φ254*6.4	4500	41	13	4.26	0.054	117	51	57	60	70	98	60	12	3.2	
50T	9.8	Φ254*6.4	4150	48	13	6.35	0.068	138	60	67	60	79	108	60	13	3.2	
60T	17.4	Φ305*6.4	3800	54	19	9.57	0.086	151	64	76	89	92	125	88	15	3.2	
70T	27.5	Φ305*6.4	3250	64	19	12.34	0.113	162	76	87	89	95	133	88	15	3.2	
80T	53	Φ305*6.4	2850	76	27	19.78	0.172	194	89	105	89	116	152	88	18	3.2	
90T	90	Φ406*12.7	2700	89	27	28.39	0.254	213	99	124	88	122	179	88	27	3.2	
100T	158	Φ406*12.7	2400	102	41	47.72	0.426	251	121	142	119	155	216	119	29	4.8	
110T	237	Φ457*12.7	2250	114	41	64.86	0.508	270	127	160	146	162	241	146	29	4.8	
120T	361	Φ508*12.7	2025	127	60	92.08	0.735	308	149	179	150	192	276	149	33	6.4	
130T	508	Φ559*12.7	1800	152	67	131.54	0.907	346	162	217	153	195	295	152	36	6.4	
140T	734	Φ610*12.7	1650	184	67	184.61	1.134	384	184	254	160	201	330	159	38	6.4	
150T	1016	Φ762*12.7	1500	203	108	253.10	1.905	453	183	269	180	271	368	183	31	6.4	
160T	1411	Φ914*12.7	1350	229	121	336.11	2.812	501	198	305	195	279	400	198	31	6.4	

注：①使用T10系列罩壳，罩壳材料 铝合金铸件。
②该型联轴器不能用于手扶电梯、升降机、起重机等人员运输制动。

Note: ①Cover material: Use T10 series cover, the material is aluminum alloy gold casting.
②This type of couplings can not be applied to escalators, elevator, cranes and other personnel transport braking.

蛇簧联轴器结构型式、基本参数和主要尺寸
The structural style, basic parameter and main dimensions of the grid couplings

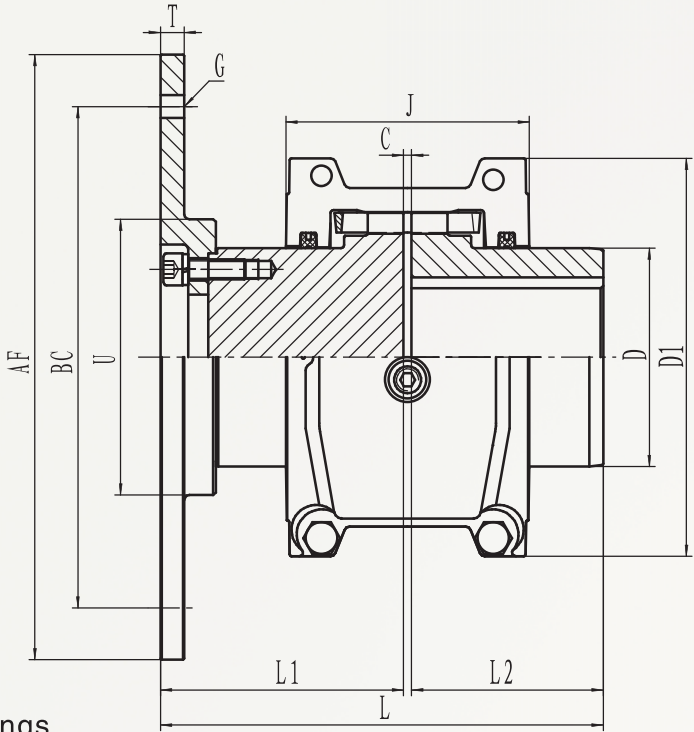


T70 型系列蛇簧联轴器
T70 Steelflex grid couplings

型号 Size	公称转矩 Nominal torque N·m	许用转速 Allowable speed rpm	孔径 bore diameter		重量 Wt Kg	注油量 Oil injection Kg	主要尺寸 Main Dimension mm									
			Max.	Min.			D1	L	L1 L2	D	D3	D2	J	M	P	C
1030T	150	10000	35	13	3.90	0.041	116	99	48	49	84	81	50	78	27	3.2
1050T	435	9000	48	13	8.85	0.068	157	124	60	67	105	105	59	94	36	3.2
1070T	990	8200	64	19	15.60	0.113	183	155	76	87	126	129	65	103	50	3.2
1080T	2050	7100	76	27	26.40	0.172	218	181	89	105	155	156	86	134	52	3.2
1090T	3700	6000	89	27	37.19	0.254	245	200	99	124	180	176	92	144	58	3.2
1100T	6300	4900	102	41	63.05	0.426	286	246	121	117	211	208	117	181	69	4.8
1110T	9300	4500	114	41	83.46	0.508	324	259	127	160	245	229	122	191	74	4.8
1120T	13600	4000	127	60	97.98	0.735	327	305	149	179	179	257	146	220	84	6.4
1130T	19800	3600	152	67	140.16	0.907	365	330	162	217	217	295	149	225	95	6.4
1140T	28500	3300	184	67	209.56	1.134	419	375	184	254	254	336	156	235	114	6.4

注：①罩壳材料 1030–1070圆钢；1080–1130锻件；1140铝合金金铸件
②1140最大孔径为HUB带矩形键槽时的孔径。
Note: ①Cover material is 1030–1070 round bar; 1080–1130 forging; 1140 aluminum alloy gold casting
②Max bore diameter of 1140 is the bore diameter of hub with rectangular keyway.

蛇簧联轴器结构型式、基本参数和主要尺寸
The structural style, basic parameter and main dimensions of the grid couplings



T90 型系列蛇簧联轴器
T90 Steelflex grid couplings

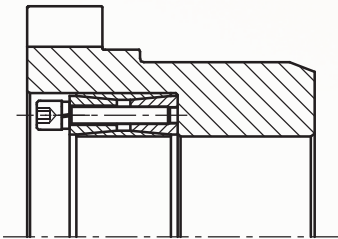
型号 Size	离合器 直径 Clutch Dia	主要尺寸 Main Dimension mm											公称转矩 Nominal torque N·m	许用转速 Allowable speed rpm	孔径 bore diameter		重量 Wt Kg
		AF	BC	G	T	D1	L	L2	D	J	L1	C			Max.	Min.	
1050T	165	216	200	6*9	10	138	142	60	67	79	78	3.2	390	3600	48	13	8.16
1060T					10	151	151	64	76	92	84	3.2	620	3600	54	19	10.43
1070T					10	162	176	76	87	95	97	3.2	900	3600	64	19	13.15
1050T	191	241	222	8*9	10	138	142	60	67	79	78	3.2	390	3600	48	13	9.07
1060T					10	151	151	64	76	92	84	3.2	620	3600	54	19	10.89
1070T					10	162	176	76	87	95	97	3.2	900	3600	64	19	13.61
1050T	203	264	244	6*10	10	138	142	60	67	79	78	3.2	390	3600	48	13	9.53
1060T					10	151	151	64	76	92	84	3.2	620	3600	54	19	11.79
1070T					10	162	176	76	87	95	97	3.2	900	3600	64	19	14.51
1080T					13	194	205	89	105	116	113	3.2	1860	3600	76	27	21.77
1080T	254	314	295	8*10	13	194	205	89	105	116	113	3.2	1860	3600	76	27	24.04
1090T	292	352	333	8*10	13	213	227	99	124	122	125	3.2	3380	3600	89	27	33.57
1100T	356	467	438	8*13	17	251	277	121	142	155	151	4.8	5700	2440	102	41	60.33
1110T					19	270	292	127	160	162	160	4.8	8460	2250	114	41	73.48
1100T	406	518	489	8*13	17	251	277	121	142	155	151	4.8	5700	2440	102	41	65.77
1110T					19	270	292	127	160	162	160	4.8	8460	2250	114	41	79.38
1110T	457	572	543	6*17	19	270	292	127	160	162	160	4.8	8460	2250	114	41	86.18
1120T					19	308	341	149	179	192	185	6.4	12400	2025	127	60	110.22
1130T					23	346	373	162	217	195	205	6.4	18000	1800	152	67	150.14

蛇簧联轴器快速冷装连接方法
The rapid cooling installation connection method of Grid coupling

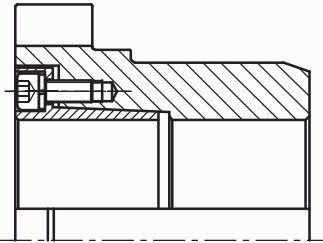
1130T	533	673	641	12*17	23	346	373	162	217	195	205	6.4	18000	1800	152	67	168.28
1140T					25	384	420	184	254	201	229	6.4	25900	1650	184*	67	216.82
1150T					25	453	421	183	269	271	231	6.4	36100	1500	203*	108	275.78
1130T	610	733	692	12*20	23	346	373	162	217	195	205	6.4	18000	1800	152	67	180.08
1140T					25	384	420	184	254	201	229	6.4	25900	1650	184*	67	229.97
1150T					25	453	421	183	269	272	231	6.4	36100	1500	203*	108	289.39
1160T	按客户要求加工 Processing according to the customer request				25	502	453	198	305	278	249	6.4	50800	1350	229*	121	297.56
1170T					32	567	495	216	356	307	273	6.4	67740	1225	254*	133	409.14

注：①罩壳材料 铝合金铸件。
②*号标记的最大孔径是HUB带矩形键槽时的孔径。
Note: ①Cover material: Aluminum alloy gold casting.
②The max bore diameter marked with * is the bore diameter of hub with rectangular keyway.

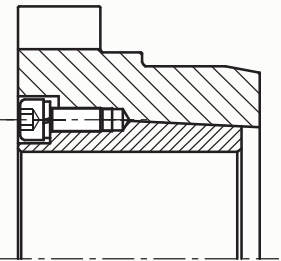
● 蛇簧联轴器快速冷装连接方法
The rapid cooling installation connection method of Grid coupling



连接胀套1
Connection of taper-lock 1



连接胀套2
Connection of taper-lock 2



连接胀套3
Connection of taper-lock 3

搬运与贮存
Carrying and storage

● 搬运 Carrying

- ◆ 木箱包装的产品需用叉车或其它现场搬运设备搬运到指定地点。吊运时绳索应兜挂木箱枕木外侧（见图3），要力求使木箱始终处于水平状态。同时注意搬运设备的承载能力应满足实际搬运重量的要求。
- ◆ Products by wooden box packaging needs to use forklift or other on-site handling equipment, carry to the specified place. When swinging, the ropes should be hanged on the wooden box's sleepers outboard (see figure 3), the wooden boxes should strive to be in horizontal position. At the same time pay attention to the bearing capacity of the handling equipment shall meet the requirement of the actual payload.

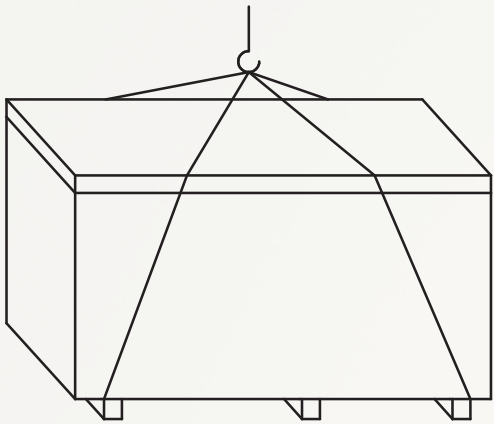


图3
Figure 3

- ◆ 开箱 开箱后按照装箱单检查产品及零件是否齐全，外观是否完好。如有情况及时与我公司联系。
- ◆ 起吊 蛇簧联轴器在半联外端面加工有起吊孔，方便用户现场起吊；注意：起吊T50系列带接轴的蛇簧联轴器时，将软起吊带置于产品接轴部分更方便操作。
- ◆ Unpacking When unpacking the case according to the packing list to check whether the products and parts are complete, appearance is intact. If there is any problem, timely contact with my company.
- ◆ Lifting There is a lifting hole on the grid couplings halves of the outer end face machining, make it easy for users to lifting at the scene. Note: When lifting the grid couplings of T50 series with the connecting shaft, put the soft lifting belt on the spindle parts products for more convenient operation.

● 贮存 Storage

- ◆ 联轴器应存放在清洁、干燥、通风良好，避免日晒、雨淋的环境中。
- ◆ 联轴器出厂油封保养有效期为产品出厂后六个月。如产品需长期存放，须定期检查并采取有效的防护措施。
- ◆ Couplings should be stored in clean, dry, well ventilated, avoid the sun and rain environment.
- ◆ Couplings of the oil seal of the ex-works maintains is valid for six months after product ex-works. If the product requires long-term storage, to be checked regularly and to take effective protective measures.

蛇簧联轴器的安装、调整与润滑
The installation, adjustment and lubrication of the grid couplings

- ◆ 蛇簧联轴器较小规格轴孔与轴伸通常为间隙配合，有固定螺钉垂直于键槽固定；较大规格轴孔与轴伸通常为过盈配合，需要热装。
- ◆ 轴孔与轴伸间隙配合的联轴器安装前，先检查轮毂、轴、键各表面，不允许有毛刺、碰伤，再清洗所有零部件。在轮毂键槽底部涂适量密封胶，保证键槽处不漏油；轴孔与轴伸间隙配合，不允许加热间隙配合的轮毂。安装轮毂、轴、键，拧紧轴向固定螺钉。
- ◆ 轴孔与轴伸过盈配合的联轴器安装前，先检查轮毂、轴、键各表面，不允许有毛刺、碰伤，再清洗所有零部件。在轮毂键槽底部涂适量密封胶，保证键槽处不漏油；因轴孔与轴伸过盈配合，需要加热轮毂，加热轮毂可使用烤炉、喷灯、感应加热器或油池，如直接加热轮毂孔，需要保持恒定运动，以免使某一区域过热。
- ◆ For small specifications of the grid couplings which the shaft hole and shaft extension is usually a clearance fit, have a fixed screw is perpendicular to the keyway to fixed; And for bigger specification which the shaft hole and shaft extension is interference fit, usually need to hot charging.
- ◆ The couplings shaft hole and shaft extension of clearance fit, before installation to check each surface of the wheel hub, shaft, key, the burr, bumping is not allowed, and clean all the parts again. Apply proper amount of sealant at the bottom of the wheel hub keyway, guarantee the keyway is no oil leakage; The shaft hole and shaft extension is not allowed heating clearance fit of the wheel hub. Installing wheels hub, shafts, keys, tighten the axial fixed screw.
- ◆ The couplings shaft hole and shaft extension of interference fit before installation, check the each surfaces of the wheel hub, shaft, key, the burr, bumping is not allowed, clean all the parts again. Apply proper amount of sealant at the bottom of the wheel hub keyway, guarantee the keyway is no oil leakage; using oven, burner, induction heater or oil pool to heat wheel hub, such as direct heating wheel hub hole, need to maintain a constant movement, lest make some area is overheating.

注意：在安装或维护联轴器前，关闭启动开关，并卸去来自驱动装置的载荷。如使用油池加热，不可在易燃环境中或易燃物附近作业，且不可将轮毂直接放置在容器底部，应在容器底部放置一铁块，轮毂置于铁块上加热。

Note: before install or maintain the couplings, shut off the start switch, and removing the load from the driven device. Such as using the oil pool heating, can't be worked in a flammable environment or near flammable, and can't put the wheels hub in the bottom of the container directly, should place a piece of iron in the bottom of the container.

联轴器分解图 见图4

Couplings exploded view see figure 4

- | | |
|-------|------------------|
| 1.密封圈 | 1、Seal ring |
| 2.外壳 | 2、Cover |
| 3.半联 | 3、Hub |
| 4.弹簧 | 4、Grid |
| 5.密封垫 | 5、Sealing gasket |
| 6.螺栓 | 6、Bolt |
| 7.油塞 | 7、Oil plug |
| 8.垫片 | 8、Spacer |
| 9.螺母 | 9、Nut |

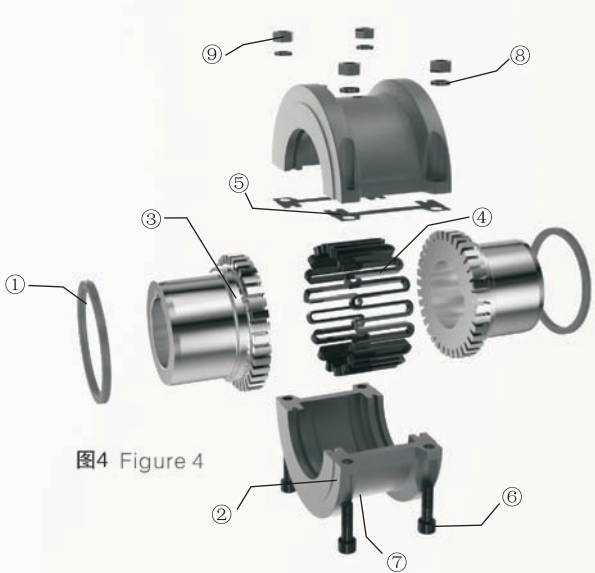


图4 Figure 4

蛇簧联轴器的安装、调整与润滑
The installation, adjustment and lubrication of the grid couplings

● 安装步骤 The installation steps

◆ 装配密封件和轮毂 见图5 Assembly the seal element and wheel hub, as shown in figure 5

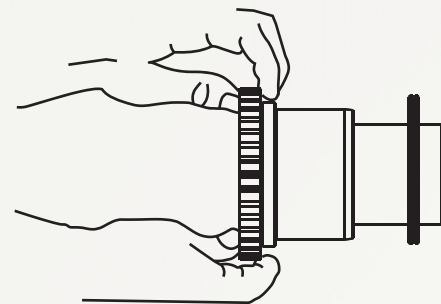


图5
Figure 5

首先，关闭启动开关，并卸去来自驱动装置的载荷。用不易燃的溶剂擦净所有的金属零件和需要被联接的两根轴，并在轴上需要装轮毂配合面上涂上润滑脂。然后轻轻地在密封圈上也涂一层润滑脂，在装配轮毂之前，把密封圈放在轴上。如果是间隙配合的，不需加热；如果是过盈配合的，根据前面的说明加热轮毂。然后分别把轮毂装到相应的轴上，除非另有其它说明，一般轮毂端面与轴端齐平。如果是间隙配合的，装完后需要拧紧固定螺钉。

First of all, close the start switch, removing the load from the driven device. Wipe all the metal parts with non-flammable solvent and also the two shafts which need to be connected. And to spread the grease on the mating surfaces which need install the wheel hub onto the shaft. After that gently to spread a layer of grease on the sealing ring, put the seal ring on the shaft before assembly of wheel hub assembly. If it is clearance fit, without heating; if it is interference fit, according to the previous description to heat the wheel hub, than installing wheels hub to the corresponding shaft, unless otherwise specified, generally the hub face is flush with the shaft end. If it is clearance fit, after installation need to tighten and fix the screws.

◆ 调整对中 见图6

Adjustment and alignment see figure 6.

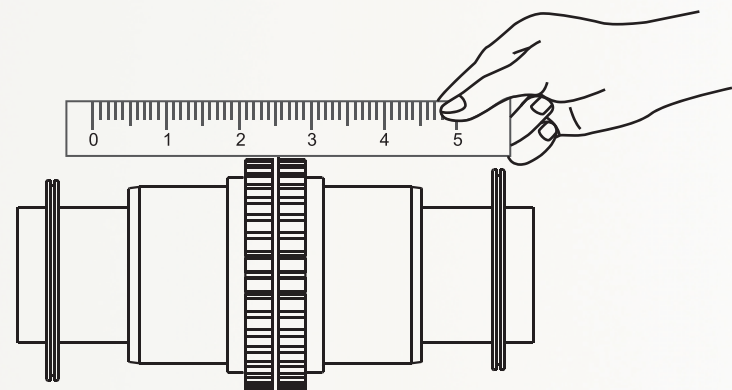


图6
Figure 6

为了保证联轴器正常运转，达到预定的工作性能和使用寿命，在安装联轴器时，必须进行适当的调整，以获得联轴器所联两轴具有较高的同轴度。两轴的相对位移，可以用各种量具进行测定，例如用直尺，厚薄规或千分表等。

蛇簧联轴器的安装、调整与润滑
The installation, adjustment and lubrication of the grid couplings

In order to guarantee the normal operation of the couplings, reach the expected working performance and service life, when installing the couplings, must be properly adjusted, in order to obtain a higher couplings of the concentricity of two shafts. The relative displacement of two axes can use all sorts of measuring tool to determine, for example with straightedge, feeler gauge or dial gauge etc.

图7所示是利用厚薄规和直尺测量联轴器的外缘和端面或轴伸。然后经过重复调整直至在两个互相垂直的平面内的偏移量都小于允许值为止。对于较大的联轴器一般先测量出两个互相垂直平面（水平面和垂直面）内的偏移量，通过计算确定相对位移的方向和大小，然后进行调整找正。对于图7(a)，角位移的近似值为 $\Delta \alpha = (\delta 2 - \delta 1) / D$ 。

As shown in figure 7, Using thickness gauge and ruler to measure the outer edge of the couplings and end face or shaft extension. Than after repeated adjustment until the two mutually perpendicular plane of the offset is less than the allowable values. For larger couplings, generally to measure the two mutually perpendicular plane first (horizontal plane and vertical plane) within the offset, through calculation to determine the direction of the relative displacement and size, and then adjust and alignment. For figure 7(a), the approximate value of angular displacement is $\Delta \alpha = (\delta 2 - \delta 1) / D$.

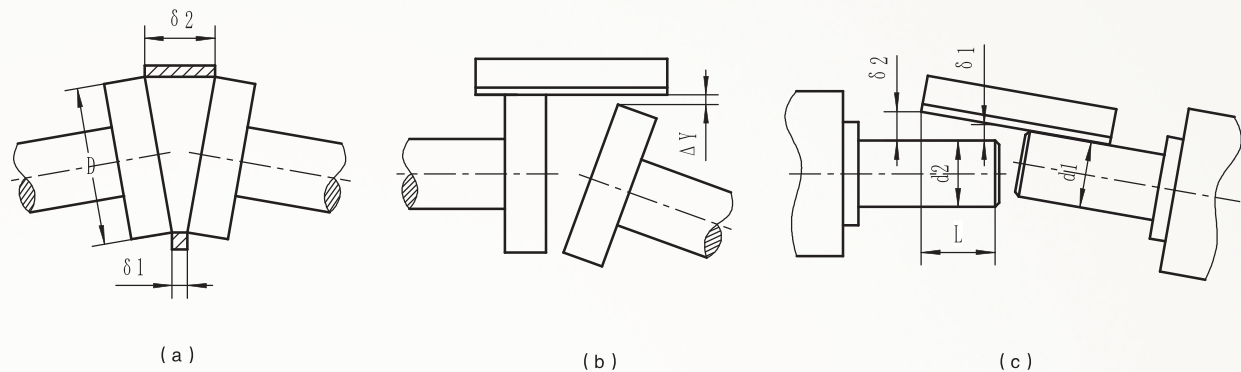


图7 用厚薄规和直尺测量两轴相对位移 (a) 用厚薄规测量 (b) 用直尺测量 (c) 用直尺测量轴伸

In figure 7, use a feeler gauge and ruler to measure the two axes relative displacement.

(a) Measured with a feeler gauge (b) Measured with a ruler (c) Using ruler measure shaft extension

对于图7 (b) 和图7(c)，两轴的相对径向位移和角位移为
 $\Delta Y = \delta 1 - 0.5(d 1 - d 2)$
 $\Delta \alpha = (\delta 2 - \delta 1) / L$

For figure 7 (b) and (c), The relative radial displacement and angular displacement of two axis is
 $\Delta Y = \delta 1 - 0.5(d 1 - d 2)$
 $\Delta \alpha = (\delta 2 - \delta 1) / L$

为了提高测量的精度，可以采用千分表测量。如同图8所示测量联轴器凸缘的外缘和端面的相对偏差量。

蛇簧联轴器的安装、调整与润滑
The installation, adjustment and lubrication of the grid couplings

In order to improve the accuracy of measurement, can use dial gauge to measure. As shown in figure 8, measuring the outer edge of the couplings flange and the end face of the relative deviation.

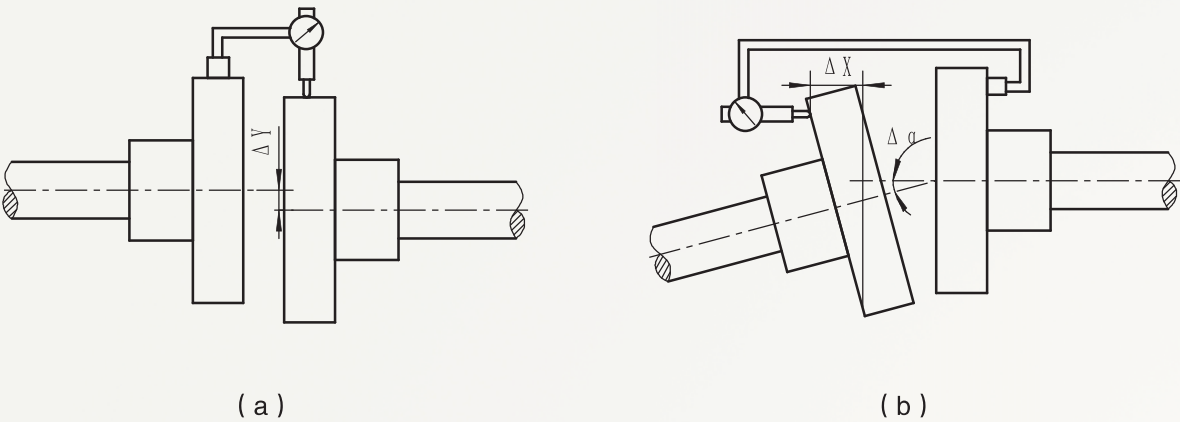


图8 用千分表测量两轴相对位移 (a) 测量外缘 (b) 测量端面

In figure 8, Using a dial indicator to measure the relative displacement of the two shafts.
(a) Measuring the outer edge (b) Measuring end face

调整两轴在垂直面内的相对径向位移，一般采用补偿垫圈，其厚度由一组0.05、0.1、0.2、0.4、0.8、...mm等组成，根据调整量需要选取相应厚度，为了调整可靠，提高调整精度，事先应将调整面清理干净，除去铁屑，毛刺，以增加接触面积。调整垂直面内的相对角位移应采用斜垫圈。

由于联轴器在工作过程因受热变形或受载变形各种原因，还会产生附加的相对位移。因此，调整后两轴之间存在的相对位移应小于联轴器的许用相对位移，一般应降低1~2倍。

联轴器调整后，为了保证调整精度，并使部件拆装后，不再重复进行调整，可采用定位销将部件间的相对位置固定下来。联轴器调整后两轴的对中精度见表2。

Adjust the two shafts of relative radial displacement within the vertical plane, generally use the compensation washers, its thickness consists of a set of 0.05, 0.1, 0.2, 0.4, 0.2,... Mm, etc. According to the adjustment amount, needs to choose relevant thickness, in order to adjust reliable and improve the adjustment accuracy, should clean up the adjusting surface in advance, and to remove scrap iron, burr, to increase the contact area. Coordinate the relative angular displacement in a vertical plane, should adopt bevel washer.

As during the process of work, the couplings deformation due to heat or load deformation etc and various reasons, but also generate additional relative displacement. So after adjusting the relative displacement between the two shafts should be less than the allowable relative displacement of couplings, general should reduce 1 to 2 times.

After finished the couplings adjustment, in order to ensure accuracy of adjustment and adjustment not be repeated, can adopt the positioning pin to fix the relative position between the components. After the adjustment of couplings, the accuracy of alignment of two shafts are shown in table 2.

蛇簧联轴器的安装、调整与润滑
The installation, adjustment and lubrication of the grid couplings

表2 联轴器调整后两轴的对中精度
In table 2, after the adjustment of couplings, the accuracy of alignment of two shafts

相对位移 Relative displacement	不用垫圈调整 Without washers to adjust	用垫圈调整 Use washer to adjust	
		一般精度 General precision	较高精度 High precision
径向位移 ΔY mm Radial displacement	0.7~1.4	0.3~0.7	0.05~0.15
角向位移 $\Delta \alpha$ mm/mm Angular displacement	0.6/100	0.6/100	(0.05~0.25)/100
轴向位移 ΔX mm Axial displacement	不需控制部件 的轴向位置 ± 3 Don't need the axial position of the control parts	需要控制部件的轴向位置 $\pm 0.1 - \pm 0.5$ Need the axial position of the control parts	

注： ①当联轴器尺寸较大时，调整精度低，表中系数取大值。
②实际上如果采用精密测量工具，并经细致调整，调整后的对中误差要比表中的值小的多。

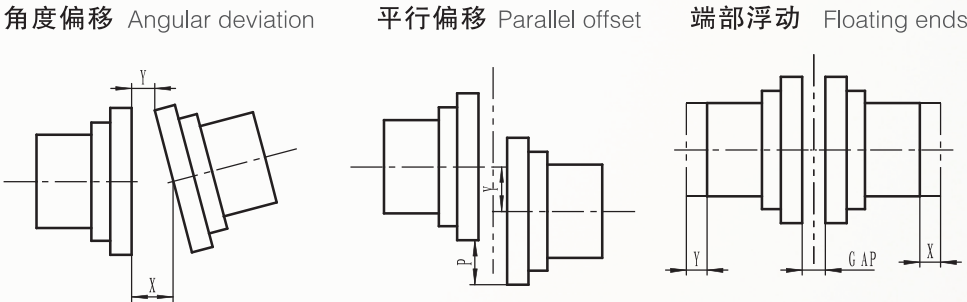
Note: ①When the size of the couplings is bigger, adjust the low accuracy, choose the maximum value of coefficient in the table.
②In fact, if adopt precision measuring tools, and after careful adjustment, the error of centralization after the adjustment is much smaller than the values in the table.

调整并确保这些尺寸都在联轴器安装允许的范围内。旋紧螺栓，固定基座后再检查对中。各规格产品安装允许的偏差详见表3。

Adjust and ensure that these dimensions are within the range of couplings installation allows. Tighten bolts, after fixed base, than check the alignment. Deviation allowed of each specification product installation, see table 3.

一般情况下，需要调整的数据有：
*角度偏差-----角度偏差具体体现由下图中的X尺寸减去Y尺寸。
*平行偏移-----平行偏差是下图中的P值，即两个轮毂中心线之间的距离
*端部浮动-----端部浮动就是轮毂在外壳内的轴向浮动距离。

In general, need to adjust the data are as follows:
*Angular deviation-----Angular deviation embodied in the figure below, the X dimension minus Y dimensions.
*Parallel Offset-----Parallel Offset is P value as below figure, namely the centerline distance between two wheel hubs.
*Floating ends-----Floating ends is the axial floating distance of wheel hub inside the outer shell.



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表3： 单位mm In table 3, the unit is mm

型号 Size	安装极限 Install Limit			工作极限 Install Limit			外壳螺栓 拧紧力矩 N·m shell bolt tightening torque	允许转速 rpm Allowable speed	润滑剂质量 Kg The quality of lubricant
	最大P Max. P	最大X-Y Max. X-Y	间隙 clearance	最大P Max. P	最大X-Y Max. X-Y	两边最大 浮动2XG On both sides of the largest floating			
1020	0.15	0.08	3	0.3	0.25	5.33	11	4500	0.03
1030	0.15	0.08	3	0.3	0.3	5.03	11	4500	0.04
1040	0.15	0.08	3	0.3	0.33	5.36	11	4500	0.05
1050	0.2	0.1	3	0.41	0.41	5.38	24	4500	0.07
1060	0.2	0.13	3	0.41	0.46	6.55	24	4350	0.09
1070	0.2	0.13	3	0.41	0.51	6.58	24	4125	0.11
1080	0.2	0.15	3	0.41	0.61	7.32	24	3600	0.17
1090	0.2	0.18	3	0.41	0.71	7.26	24	3600	0.25
1100	0.25	0.2	5	0.51	0.84	10.9	35	2440	0.43
1110	0.25	0.23	5	0.51	0.91	10.9	35	2250	0.51
1120	0.28	0.25	6	0.56	1.02	14.12	73	2025	0.74
1130	0.28	0.3	6	0.56	1.19	14	73	1800	0.91
1140	0.28	0.33	6	0.56	1.35	14.5	73	1650	1.14
1150	0.31	0.41	6	0.61	1.57	15.7	73	1500	1.95
1160	0.31	0.46	6	0.61	1.79	16.3	73	1350	2.81
1170	0.31	0.51	6	0.61	2.01	15.7	147	1225	3.49
1180	0.38	0.56	6	0.76	2.26	18.2	147	1100	3.76
1190	0.38	0.61	6	0.76	2.46	15.7	147	1050	4.4
1200	0.38	0.69	6	0.76	2.72	15.7	260	900	5.62
1210	0.46	0.74	13	0.91	3	25.9	260	820	10.5
1220	0.46	0.81	13	0.91	3.28	29.2	405	730	16.1
1230	0.46	0.81	13	0.91	3.28	29.2	405	680	24.04

◆ 蛇簧安装 见图9
The installation of grid couplings, see figure 9

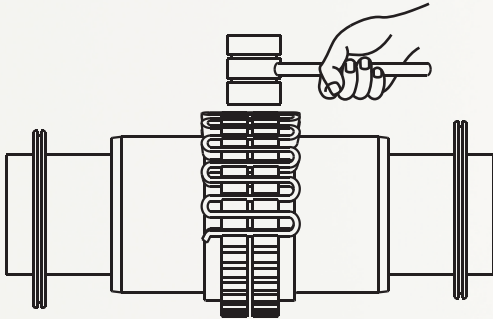


图9
Figure 9

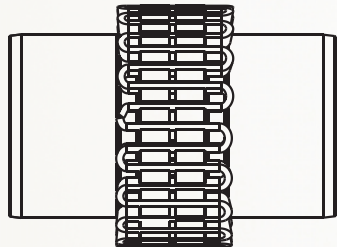


图10
Figure 10

蛇簧联轴器的安装、调整与润滑
The installation, adjustment and lubrication of the grid couplings

在安装蛇簧前，用2号锂基润滑脂填满轴毂间距和凹槽。
轻轻地把蛇簧扣入联轴器轴毂的牙槽内，用软木锤敲入。当蛇簧是由两段或更多段组成的，安装时要让所有的断口端都朝同一个方向见图10；这将可以保证蛇簧跟半外壳上的止转凸台正确接触。
将尽可能多的润滑脂填入蛇簧之间及周围的空间，并刮去溢出蛇簧厚度外的润滑脂。

Before installing the spring, use number 2 lithium grease filling the hub spacing and groove.
Gently buckle the spring into the tooth groove of couplings axle hub, knocked by cork hammer. When spring is made up of two or more section, to make all of the fracture ends toward in the same direction during the installation, as shown in figure 10.This will ensure the spring and a half shell turned convex platform contact correctly.
As much of the grease filled in the spring and space around, scrape off the grease which overflowed from the thickness of the spring.

◆ 外壳安装 见图11
Cover installation see figure 11

把密封圈置于轮毂上的合适位置处，然后嵌入下半个外壳上的凹槽内。
将密封垫片安放在两个半片外壳接口的地方，再将上半个外壳与下半个外壳合拢并使用螺栓拧紧装配好。

Place the seal ring on the appropriate location of the wheel hub, and then embedded in the groove on the half cover below.
Installing the sealing gasket in the place of the two halves of the cover interface, then the upper half shell and the lower half shell will be closed and using bolts tightened and assembled.

注意：两个半边外壳上相对应的配合标记（凸台）安装完毕后应在同一边。 见图12
Note:The corresponding match mark in the two half shell (bosses) after installation should be on the same side. See figure 12

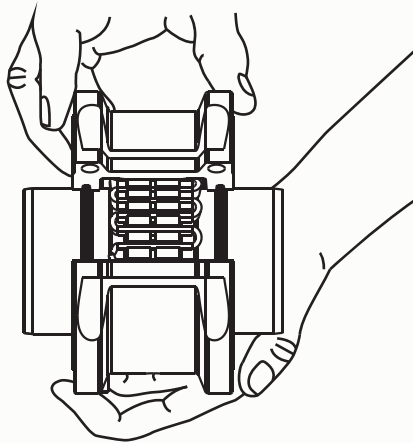


图11
Figure 11

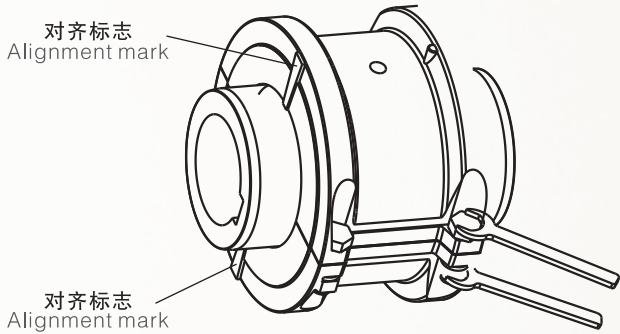


图12
Figure 12

蛇簧联轴器的安装、调整与润滑
The installation, adjustment and lubrication of the grid couplings

全部安装完毕后再次检查一下，在联轴器正式运转前确认所有部件均已正确安装，联轴器与设备轴联接紧密，注油孔内装上了油塞。

After all is being installed, check again. Before the formal operation of the couplings, make sure all parts have been installed correctly, closely connected with the couplings and the equipment shaft, install the oil plug to the inside of oiling hole.

螺栓拧紧力矩 见附表2

Bolt tightening torque as shown in table 2

◆ 如何拆换联轴器

How to remove and replace the couplings

每当需要拆换联轴器或是蛇簧时，首先须拆卸螺栓并移开外壳，用一个平口螺丝刀，从一段蛇簧的断口端开始，把平口螺丝刀插入蛇簧，慢慢地把蛇簧呈放射状地撬出来，从一边到另一边交替进行，即可将蛇簧卸除。见图13

Whenever need remove and replace the couplings or spring, firstly, must disassembly the bolts and remove the cover. Start from a spring of the fracture end with a flat mouth screwdriver and insert the flat mouth screwdriver into the spring, to pry the spring out in the form of radial slowly, alternately from side to side, the snake spring can be removed. See figure 13

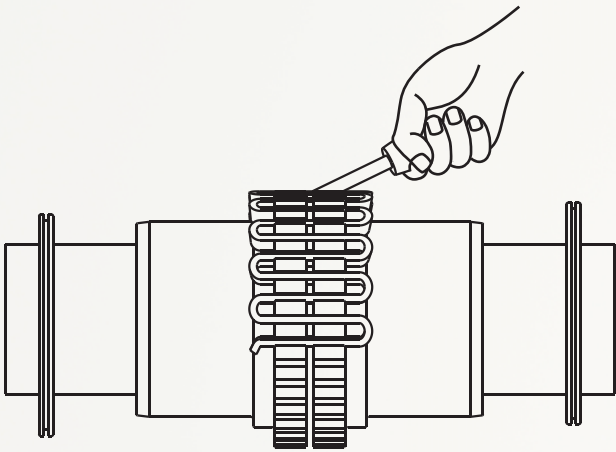


图13
Figure 13

蛇簧联轴器的使用、维护、保养
The use, maintenance, preservation of the grid couplings

- ◆ 蛇簧联轴器应进行润滑，特别是在高速下运转时，更应重视润滑，保持良好润滑状态。
- ◆ 蛇簧联轴器润滑脂选用2号锂基润滑脂ZL-4。每半年换一次润滑脂。每月检查二次，发现不足及时补充。
- ◆ 加润滑脂的时候，旋开外壳上注油孔的油塞，插入注油装置。加入润滑脂直至从对面的油孔中有过剩的润滑脂溢出。
- ◆ 蛇簧联轴器的蛇簧为易损件，更换蛇簧时先拆卸罩壳、蛇簧、去毛刺、清洗各零件后，按蛇簧联轴器的安装与调整步骤进行。

- ◆ The grid couplings should be lubricated, especially when under high speed operation, should pay more attention to lubrication, maintain good lubrication condition.
- ◆ The grid couplings should adopt number 2 lithium grease ZL – 4. Change the grease once every half a year. Monthly check twice, found insufficient to replenish timely.
- ◆ When adding the grease, unscrew the lubricating oil plug hole on the cover, insert the oiling device. Add grease until to have excess grease from the opposite oil hole overflow.
- ◆ The spring of the grid couplings is wearing parts. When replacing the snake spring, firstly dismount the cover, the snake spring, remove the burr, after cleaning the parts, conduct according to the step of the grid couplings installation and adjustment.

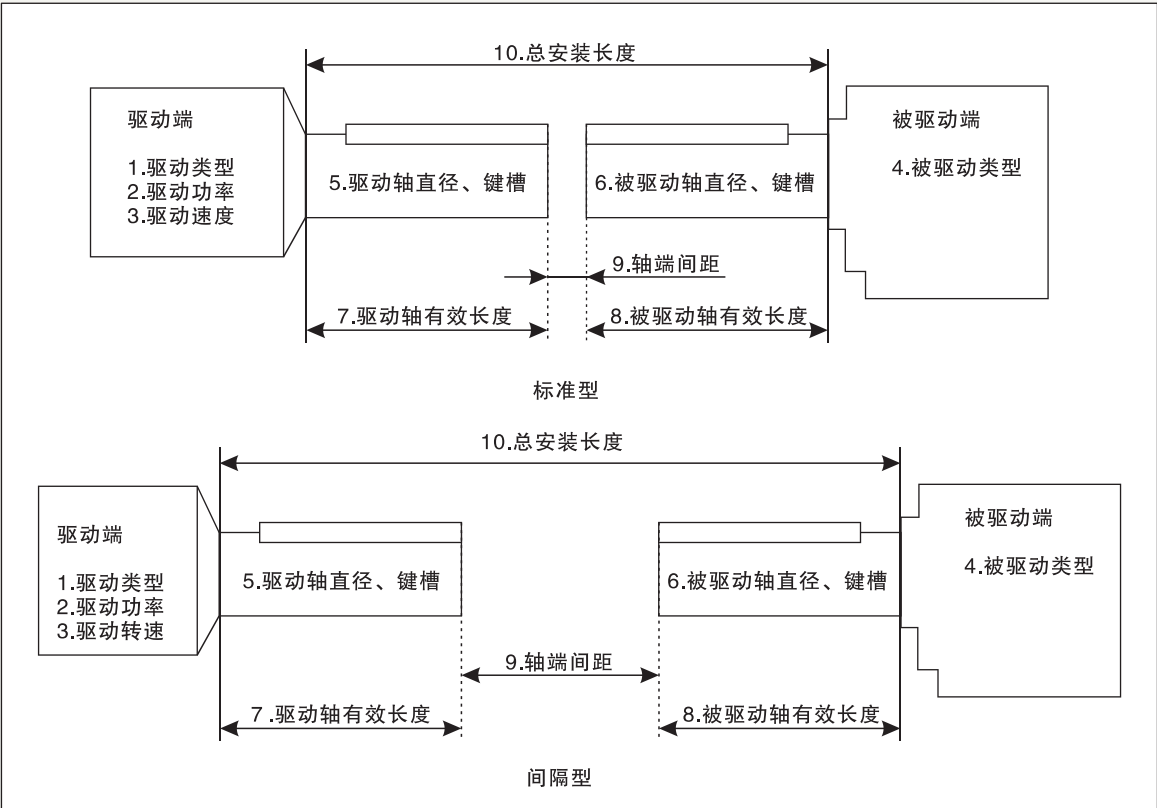
注意：加油后所有的油塞都一定要盖上旋紧。

Note: after oiled, all the oil plugs must be covered and tightened.

附表
Attached list

● 附表1 Attached list 1

索达公司选型基本信息表
Suoda company basic information table selection

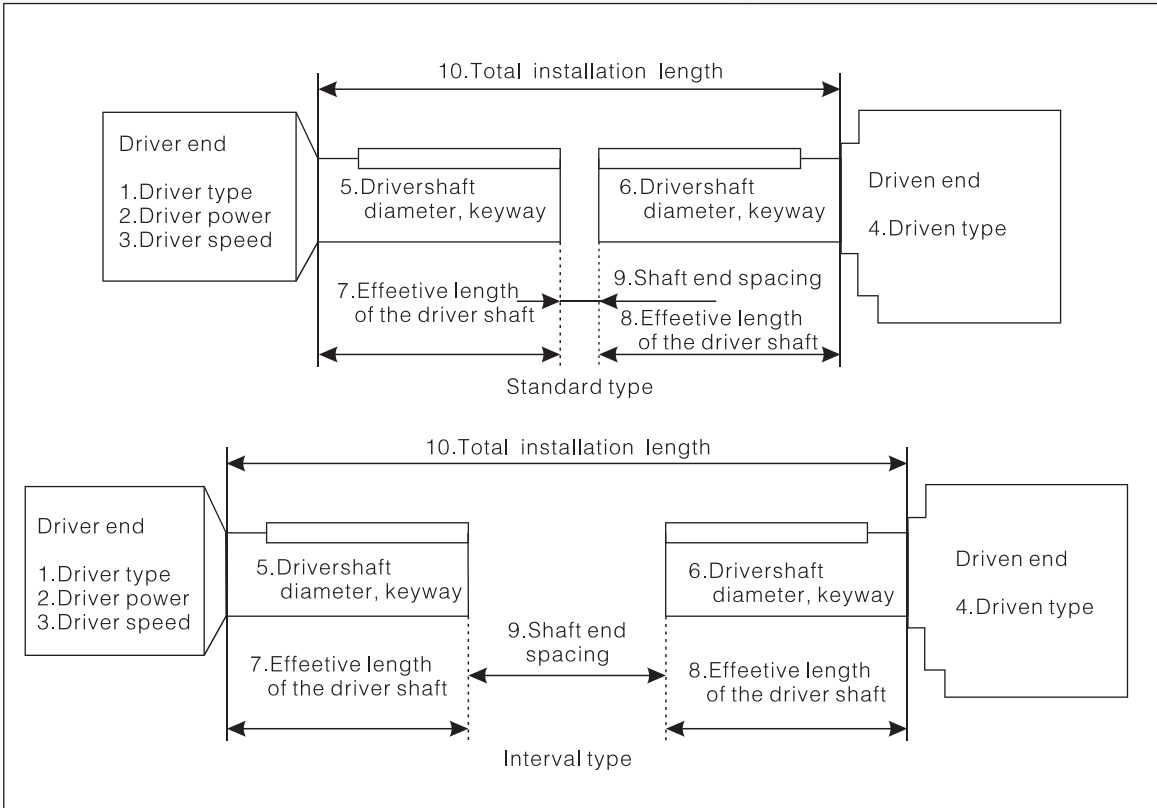


1. 驱动类型: ☐电动机 ☐透平机 ☐内燃机—内燃机汽缸数: _____
载荷类别: ☐均匀 ☐轻冲击 ☐中冲击 ☐重冲击 ☐特重冲击
启动频率(次数): _____
2. 驱动功率(Kw): _____ 3. 驱动转速(rpm): _____
4. 被驱动设备类型: _____
5. 驱动轴直径(mm): _____ 键槽(mm): _____
6. 被驱动直径(mm): _____ 键槽(mm): _____
7. 驱动轴有效长度(mm): _____
8. 被驱动轴有效长度(mm): _____
9. 轴间距(mm): _____ 10.总安装长度(mm): _____
- 11.轴向补偿(mm): _____ 12.径向补偿(mm): _____
- 13.角向补偿(°): _____
- 14.工作环境: ☐室内 ☐室外 ☐灰尘 ☐水 ☐油 ☐腐蚀 ☐其他 _____
- 15.工作温度(℃): _____
- 16.允许回转空间(mm): _____
- 17.其他: _____

附表
Attached list

● 附表1 Attached list 1

索达公司选型基本信息表
Suoda company basic information table selection



1. Driver Type: ☐Electric motor ☐Turbine ☐ Internal combustion engines, internal combustion engine cylinder number: _____
Load Type: ☐Uniform ☐Light impact ☐Medium impact ☐Heavy impact ☐Extra heavy impact
Start frequency : _____
2. Driving power (Kw): _____ 3. Motor speed (rpm): _____
4. Driven device type: _____
5. Driver shaft diameter(mm): _____ Keyway size (mm): _____
6. Driven shaft diameter (mm): _____ Keyway size(mm): _____
7. Effective length of the drive shaft (mm): _____
8. Effective length of the driven shaft (mm): _____
9. Axle Base (mm): _____ 10.The total length of installation(mm): _____
- 11.Axial compensation (mm): _____ 12.12.Radial compensation (mm): _____
- 13.Angular compensation(°): _____
- 14.Working environment: ☐Indoor ☐Outdoor ☐Dusty ☐Water ☐Oil ☐Corrosion ☐Other _____
- 15.Working temperature (℃): _____
- 16.Allows rotary space(mm): _____
- 17.Other: _____

附表
Attached list

● 附表2 Attached list 2

螺栓拧紧力矩
Bolt tightening torque

性能等级8.8级 Performance level 8.8 螺栓拧紧力矩 Bolt tightening torque										
螺栓公称直径(mm) Bolt nominal diameter	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24
拧紧力矩 (N·m) Tightening torque	9-12	22-30	45-59	78-104	124-165	193-257	264-354	376-502	512-683	651-868

Certification & Approvals

认证证书

