



## RGE系列 RGE Series

REACH标准梅花形弹性联轴器  
REACH Standard Jaw Coupling



瑞迪爪式联轴器具有结构尺寸小、重量轻、传递扭矩高的特点，能有效改善机械的运行质量和稳定性，瑞迪爪式联轴器能使传动时的振动得到缓冲，并吸收由动力机的不均匀运转而产生的冲击。

瑞迪爪式联轴器是扭向弹性联轴器，有失效保护功能，能有效地阻尼和减少运行过程中所产生的振动和冲击，能有效地纠正轴向、径向和角向的安装偏差。弹性体的鼓形瓣能避免应力集中。

一般的弹性联轴器中间的弹性体承受弯曲力和压力，易磨损，而瑞迪爪式联轴器的弹性体仅受压力，因此能承受更大的负荷。任何规格的爪式联轴器的最大扭转角均能达到5°。既可水平安装，也可立式安装。

REACH Jaw Couplings are characterized by small dimension, low weight yet transmit high torques can effectively improve the running quality and stability with its character of small dimensions, low weight and high transmission torques

REACH Jaw Couplings are torsionally flexible products with failure-protection function. This could dampen and reduce the operational vibrations and shocks efficiently. The Couplings also compensate for axial, radial and angular displacements in the installation process. Plus, the concave claws are used to prevent the elastomer parts from being stress-concentrated.

The elastomer parts of general flexible couplings are subject to bending stress and wear. Instead of this, REACH Jaw Couplings are only subject to pressure. This allows that the elastomer parts being able to accept higher loads. The maximum torsional angle of any size couplings is upto 5°. They can be fitted both horizontally and vertically.



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### 产品特点

- 具有结构尺寸小、重量轻、传递扭矩高的特点，能有效改善机械的运动质量和稳定性，吸收由动力机的不均匀运转而产生的冲击。
- 有实效保护功能，能有效地阻尼和减少运动过程中所测试的振动和冲击，能有效地纠正轴向、径向和角向的安装偏差。
- 大于14规格的爪式联轴器的最大扭转角均能达到5°，可水平安装，也可以立式安装。

### Characteristics:

- Small and compact structure, low weight and large transmission torque altogether greatly improve mechanical movement in terms of quality and stability and absorb shock from uneven operation of power machine.
- Protect machine functioning, dampen and reduce vibrations and shock appearing in movement and correct deviation and axial, radial and angular mounting.
- Claw coupling 14 and beyond can be mounted horizontally or vertically with torsion angle reaches to 5° at maximum.

### 产品优点

- 经过多年的开发，为国内外众多行业顶尖公司大批量配套
- 金属零件批量化生产，弹性体自产，使用德国高品质TPU材料
- 通过防爆认证
- 瞬间超过最大扭矩值50%仍能满足传动要求
- 通过高低温寿命测试，在最大载荷下，仍能确保使用
- 完善的联轴器检测平台

### Merits:

- Realize massive production to support industrial leaders home and abroad after years of R&D;
- Introduce German qualified TPU to produce metal parts and manufacture elastomer in large volume on our own;
- Explosion prevention certified;
- Satisfy transmission requirement when the torque exceeds 50% of the maximum level instantaneously;
- Pass life test at high & low temperature and ensure service life even the load reaches to the maximum level;
- Improved test bench applied.

联轴器联接方式：夹紧式、涨紧式、带键槽夹紧式、不带键槽夹紧式  
Connection of Coupling: Clamping, locking, clamping with or without keyslot

爪式联轴器类型：有齿隙联轴器（GR）；无齿隙联轴器（GS）  
Types: Coupling with backlash (GR); Coupling without backlash (GS)

应用环境：GR用在通用传动行业  
GS用在精密传动、精密定位行业

Application: Industries of general transmission (GR)  
precision transmission and positioning (GS)

种类代码 Type	材料 Material	热处理 Heat Treating	表处 Surface Treatment	弹性体硬度 Elastomer Hardness
有齿隙：GR Backlash: GR	钢件：S Steel Part: S	调质：T Tempering: T	发黑：B Blackening: B	92SHA
无齿隙：GS No Backlash: GS	铸件：C Casting: C	退火：H Annealing: H	磷化：P Phosphate Coating: P	98SHA
	铝件：A Aluminum Part: A	正火：Z Normalizing: Z	光饰：G Polishing: G	64SHD
	不锈钢：X Stainless Steel: X	钝化：D Passivation: D	喷漆：Q Spray Paint: Q	
			阳极氧化：Y Anodic Oxidation: Y	



## RGE标准系列 RGE Standard Series

REACH爪式联轴器  
REACH Jaw Coupling

### 产品结构代码 Structure Coding

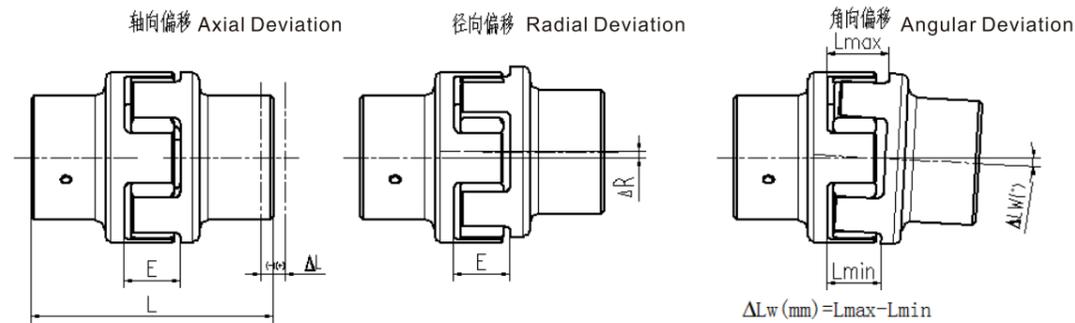
标准型联轴器: A、B、C  
Classic Type: A, B, C  
单开槽式联轴器: DK  
Coupling, Single-notching: DK  
双开槽式联轴器: KC  
Coupling, Double-notching: KC

法兰联轴器: FA、FB、FC、FD、FE、FF  
Flange Coupling: FA, FB, FC, FD, FE, FF  
胀套式联轴器: ZT  
Locking Coupling: ZT  
双节联轴器: SJ  
2-Section Coupling: SJ

制动式联轴器: ZD  
Braking Coupling: ZD

### 爪式联轴器纠偏功能及参数

#### Function – Rectification & Parameters



n=1500rpm时 n=1500 rpm/hour

92SHA\98SHA弹性体纠偏能力 Rectification by 92SHA/98SHA Elastomer																	
GR 规格 Type GR	14	19	24	28	38	42	48	55	65	75	90	100	110	125	140	160	180
最大的轴向偏差 Max. Axial Deviation $\Delta L(mm)$	-0.5 +0.1	-0.5 +1.2	-0.5 +1.4	-0.7 +1.5	-0.7 +1.8	-1.0 +2.0	-1.0 +2.1	-1.0 +2.2	-1.0 +2.6	-1.5 +3.0	-1.5 +3.4	-1.5 +3.8	-2.0 +4.2	-2.0 +4.6	-2.0 +5.0	-2.5 +5.7	-3.0 +6.4
最大的径向偏差 Max. Radial Deviation $\Delta R(mm)$	0.17	0.2	0.22	0.25	0.28	0.32	0.36	0.38	0.42	0.48	0.5	0.52	0.55	0.6	0.62	0.64	0.68
最大的角向偏差 Max. Angular Deviation $\Delta LW(^{\circ})$	1.2	1.2	0.9	0.9	1	1	1.1	1.1	1.2	1.2	1.2	1.2	1.3	1.3	1.2	1.2	1.2
较小偏差 Minor Deviation $\Delta LW(mm)$	0.67	0.82	0.85	1.05	1.35	1.7	2	2.3	2.7	3.3	4.3	4.8	5.6	6.5	6.6	7.6	9

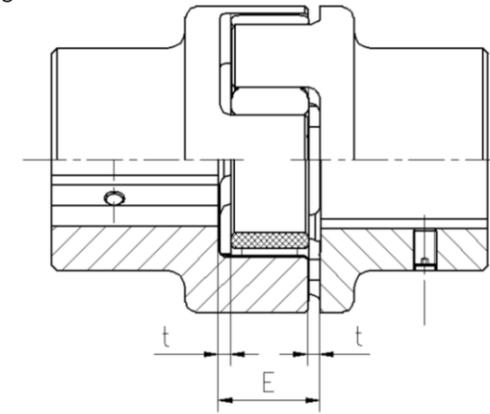
64SHD弹性体纠偏能力 Rectification by 64SHD Elastomer																	
GR 规格 Type GR	14	19	24	28	38	42	48	55	65	75	90	100	110	125	140	160	180
最大的轴向偏差 Max. Axial Deviation $\Delta L(mm)$	-0.5 +0.1	-0.5 +1.2	-0.5 +1.4	-0.7 +1.5	-0.7 +1.8	-1.0 +2.0	-1.0 +2.1	-1.0 +2.2	-1.0 +2.6	-1.5 +3.0	-1.5 +3.4	-1.5 +3.8	-2.0 +4.2	-2.0 +4.6	-2.0 +5.0	-2.5 +5.7	-3.0 +6.4
最大的径向偏差 Max. Radial Deviation $\Delta R(mm)$	0.11	0.13	0.15	0.18	0.21	0.23	0.25	0.27	0.3	0.34	0.36	0.37	0.4	0.43	0.45	0.46	0.49
最大的角向偏差 Max. Angular Deviation $\Delta LW(^{\circ})$	1.1	1.1	0.8	0.8	0.9	0.9	1	1	1.1	1.1	1.1	1.1	1.2	1.2	1.1	1.1	1.1
较小偏差 Minor Deviation $\Delta LW(mm)$	0.57	0.76	0.76	0.9	1.25	1.4	1.8	2	2.5	3	3.8	4.3	5.3	6	6.1	7.1	8



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### 安装尺寸 Mounting Dimensions



规格 Type	14	19	24	28	38	42	48	55	65	75	90	100	110	125	140	160	180
E	13	16	18	20	24	26	28	30	35	40	45	50	55	60	65	75	85
t	1.5	2	2	2.5	3	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	9	10.5

### 联轴器选型 Coupling – Selection

额定扭矩计算: Calculation of Rated Torque:

$$TN(Nm) = 9550 \cdot P(KW) / n(rpm)$$

冲击扭矩产生的载荷校核

Examine & Verify load from impulsive torque

$$TK_{max} \geq 2.0 \times TN \times MA \times SA \times SZ \times St$$

MA 主动端转动惯量系数 MA: Rotational inertia coefficient at the drive end

温度系数 St Temperature Coefficient St											
-50°C	-30°C	+30°C	+40°C	+50°C	+60°C	+70°C	+80°C	+90°C	+100°C	+110°C	+120°C
1.0	1.0	1.1	1.2	1.3	1.5	1.6	1.8	2.1	2.5	3.0	

启动频率系数 Sz Start Frequency Coefficient Sz				
启动频率次/小时 Frequency times/hour	100.0	200.0	400.0	800.0
Sz	1.0	1.2	1.4	1.6

冲击载荷系数 SA/SL Impulsive Load Coefficient SA/SL	
	SA/SL
轻微冲击载荷 Slight	1.5
一般冲击载荷 General	1.8
严重冲击载荷 Heavy	2.5

用户选型时请充分考虑以上工况系数, 所选联轴器最大扭矩 Tmax 应该大于 Tkmax

Please give careful consideration to parameters as mentioned above. For coupling selected, the maximum torque Tmax must exceed Tkmax.







## RGE标准型系列 RGE Series

REACH梅花形弹性体爪式联轴器  
REACH Jaw Coupling with Quincunx Elastomer

铸件 Aluminum	部件 Part	基本参数 Fundamental Parameters 单位/Unit: mm												
		成品孔 Bore	尺寸 Dimension								固定螺丝 Fixing Screw			
型号 Model RGE-□□		d (min-max)	L	L1.L2	E	b	t	D	D1.D2	N	d3	M	S	T(Nm)
38	A	12-40	114	45	24	18	3	80	66	37	38	M8	15	10
	B	38-48							79					
	C	12-48	164	70	62									
42	A	14-45	126	50	26	20	3	95	75	40	46	M8	20	10
	B	42-55							94					
	C	14-55	176	75	65									
48	A	15-52	140	56	28	21	3.5	105	85	45	51	M8	20	10
	B	48-62							104					
	C	15-62	188	80	69									
55	A	20-60	160	65	30	22	4	120	98	52	60	M10	20	17
	B	55-74							118					
65	A	20-70	185	75	35	26	4.5	135	115	61	68	M10	20	17
75	A	30-80	210	85	40	30	5	160	135	69	80	M10	25	17
90	A	40-97	245	100	45	34	5.5	200	160	81	100	M12	30	40
100	A	50-115	270	110	50	38	6	225	180	89	113	M12	30	40
110	A	60-125	295	120	55	42	6.5	255	200	96	127	M16	35	80
125	A	60-145	340	140	60	46	7	290	230	112	147	M16	40	80
140	A	60-160	375	155	65	50	7.5	320	255	124	165	M20	45	140
160	A	80-185	425	175	75	57	9	370	290	140	192	M20	50	140
180	A	85-200	475	195	85	64	10.5	425	325	156	220	M20	50	140

注：订货没指明材料，计算和订货材料就按38到90规格为HT250，100到180为QT400

Note: If orders no material requirements, REACH will use HT250 for model 38 to 90, QT400 for model 100 to 180.

钢件 Aluminum	部件 Part	基本参数 Fundamental Parameters 单位/Unit: mm												
		成品孔 Bore	尺寸 Dimension								固定螺丝 Fixing Screw			
型号 Model RGE-□□		d (min-max)	L	L1.L2	E	b	t	D	D1.D2	N	d3	M	S	T(Nm)
14	B	0-16	35	11	13	10	1.5	30	30	-	10	M4	5	1.5
	C		50	18.5										
19	B	0-25	66	25	16	12	2	40	40	-	18	M5	10	2
	C		90	37										
24	B	0-35	78	30	18	14	2	55	55	-	27	M5	10	2
	C		118	50										
28	B	0-40	90	35	20	15	2.5	65	65	-	30	M8	15	10
	C		140	60										
38	A	0-48	114	45	24	18	3	80	70	27	38	M8	15	10
	C		164	70					80					
42	A	0-55	126	50	26	20	3	95	85	28	46	M8	20	10
	C		176	75					95					
48	A	0-62	140	56	28	21	3.5	105	95	32	51	M8	20	10
	C		188	80					105					
55	A	0-74	160	65	30	22	4	120	110	37	60	M10	20	17
	C		210	90					120					
65	A	0-80	185	75	35	26	4.5	135	115	47	68	M10	20	17
	C		235	100					135					
75	A	0-95	210	85	40	30	5	160	135	53	80	M10	25	17
	C		260	110					160					
90	A	0-110	245	100	45	34	5.5	200	160	62	100	M12	30	40
	C		295	125					200					

注：孔径DH7(键槽DIN6885/1(GB/T1095-79)JS9、紧定螺钉GB77-85)从规格125起固定螺丝的尺寸按客户要求供货

Note: Bore diameter DH7 (Keyway DIN6885/1(GB/T1095-79)JS9 and Tighten screw GB77-85); for specifications 15 and beyond, we will supply tighten screw at customer's request.

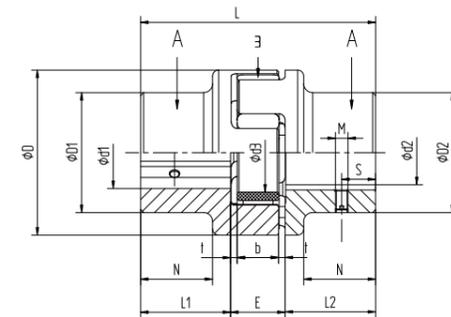


## RGE标准型系列 RGE Series

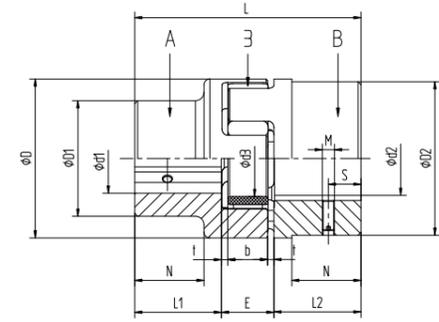
REACH梅花形弹性体爪式联轴器  
REACH Jaw Coupling with Quincunx Elastomer

选型举例：Example:

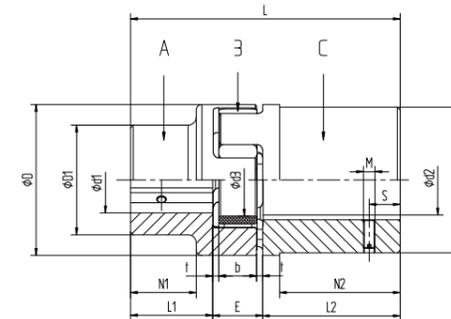
RGE28	C	AA	T	P	∅24	∅25	98	
产品规格 Specification	铸件 Casting	结构 Structure	热处理调质 Tempering by heat treatment	表处磷化 Phosphate Coating	孔径 Aperture	孔径 Aperture	弹性体硬度 Elastomer hardness	备注 Note



标准型  
Standard Type



标准加大型  
Standard Oversized Type



Bz加长型  
BZ Lengthen Type



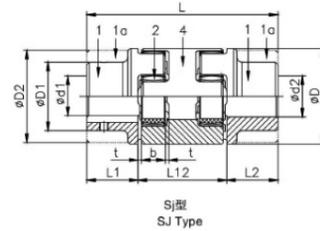
**RGE-SJ通用系列 RGE-SJ(for general application) REACH梅花形弹性体爪式联轴器 双节式**  
REACH (2-section) Jaw Coupling with Quincunx Elastomer

**产品特点**

- 可补偿很大的安装偏差
- 三部件双节式结构
- 阻尼振动降低噪音
- 具有良好的电绝缘性
- 偏差引起的回复力很小
- 延长相邻部件 (如轴承、密封等) 的工作寿命
- 成品孔径公差按照ISO标准H7, 键槽公差按照DIN6885/1标准JS9
- 另有锥孔和英制孔

**Characteristics:**

Compensate very large deviation in mounting;  
Structured in 2 sections of 3 parts;  
Reduce noise by dampening vibration;  
Better insulate electricity;  
Restoring force from deviation is very small;  
Extend service life of adjacent parts (bearing and sealing parts, etc);  
Aperture tolerance: ISO H7; Keyslot tolerance: N6885/1 Js9  
Taper and inch bores are designed for option.



规格 Specification RGE-□□-S	技术参数 Technical Parameters					外型尺寸 Appearance & Dimension									
	弹性体额定力矩 Rated Torque of Elastomer (Nm)		n=1500rad/min时的最大容许偏差 Max. permitted deviation when n = 1500 rad/min			L	L1;L2	L12	b	t	D	D1	D2	d1	d2
	92 SHA	98 SHA	径向Radial	角向Angular	轴向Axial (mm)										
19	10	17	0.45	1°	+1.2/-1.0	92	25	42	12	2	40				
24	35	60	0.59	1°	+1.4/-1.0	112	30	52	14	2	55				
28	95	160	0.66	1°	+1.5/-1.4	128	35	58	15	2.5	65				
38	190	325	0.77	1°	+1.8/-1.4	158	45	68	18	3	80				
42	265	450	0.84	1°	+2.0/-2.0	174	50	74	20	3	95				
48	310	525	0.91	1°	+2.1/-2.0	192	56	80	21	3.5	105				
55	410	685	1.01	1°	+2.2/-2.0	218	65	88	22	4	120				
65	625	940	1.17	1°	+2.6/-2.0	252	75	102	26	4.5	135				
75	1280	1920	1.33	1°	+3.0/-3.0	286	85	116	30	5	160				
90	2400	3600	1.48	1°	+3.4/-3.0	330	100	130	34	5.5	200				

注: 孔径DH7(键槽DIN6885/1(GB/T1095-79)JS9、紧定螺钉GB77-85)  
产品可以自由组合: A+A A+B B+B  
Note: for products with aperture Dh7 (keyslot DIN 6885/1 (GB/T1095-79) and fixing screw (GB77-85), customers can order any combination of them: A+A, A+B or B+B

选型举例: Example:

RGE28	S	SJ	T	B	∅ 24	∅ 25	98	
产品规格 Specification	钢件 Steel	结构 Structure	热处理 Heat treatment	表处 Surface treatment	孔径 Aperture	孔径 Aperture	弹性体硬度 Elastomer hardness	备注 Note



**RGE-FL通用系列 RGE-FL (for general application) REACH梅花形弹性体爪式联轴器 法兰型**  
REACH Flange-Jaw Coupling with Quincunx Elastomer

**产品特点**

- FLA与FLB结构适用于重型机械领域
- 拆下法兰, 径向安装, FL不移动主动端及从动端设备进行弹性体更换, 拆卸方便
- 材质: 部件4N钢 部件3Na 铸铁GGG-40
- 轴向插入装配, 非常方便
- 成品孔径公差按照ISO标准H7, 键槽公差按照DIN6885/1标准JS9
- 另有锥孔和英制孔

**Characteristics:**

Structure FLA and FLB are applied to heavy machinery industry;  
Easily dismantle: just remove flange for radial mounting and replace the spider without moving equipment at driving and driven ends;  
Materials: 4N Steel, 3Na Steel and GGG-40 cast iron;  
Easy assembly by inserting axially;  
Aperture tolerance: ISO H7; Keyslot tolerance: DIN6885/1 Js9;  
Taper or imperial bores are for option.



型号Model RGE-□□-F	零件4N 半成品或 成品孔 4N Semi -finished finished Bore	基本尺寸 Fundamental Dimension												连接螺栓 Connecting Screw		
		D	DF	D4	d3	L1;L2	E	E1	t	b	L3;L4	LFA	LFB	MxL	数量Qty	TANm
24	0-24	55	36	45	27	30	18	33	2	14	30.5	94	86	M5X16	8	10
28	0-28	65	42	54	30	35	20	39	2.5	15	35.5	110	100	M6X20	8	17
38	0-38	80	52	66	38	45	24	43	3	18	45.5	134	124	M8X22	8	41
42	0-42	95	62	80	46	50	26	48	3	20	51	150	138	M8X25	12	41
48	0-48	105	70	90	51	56	28	50	3.5	21	57	164	152	M8X25	12	41
55	0-55	120	80	102	60	65	30	60	4	22	66	192	176	M10X30	8	83
65	0-65	135	94	116	68	75	35	65	4.5	26	76	217	201	M10X30	12	83
75	0-75	160	108	136	80	85	40	75	5	30	86.5	248	229	M12X40	15	120
90	0-100	200	142	172	100	100	45	82	5.5	34	101.5	285	265	M16X40	15	295
100	0-110	225	158	195	113	110	50	97	6	38	111.5	320	295	M16X50	15	295
110	0-125	255	178	218	127	120	55	103	6.5	42	122	347	321	M20X50	15	580
125	0-145	290	206	252	147	140	60	116	7	46	142	400	370	M20X60	15	580
140	0-165	320	235	282	165	155	65	128	7.5	50	157.5	443	409	M20X60	15	580
160	0-190	370	270	325	190	175	75	146	9	57	177.5	501	463	M24X70	15	1000
180	0-220	420	315	375	220	195	85	159	10.5	64	198	555	515	M24X80	18	1000

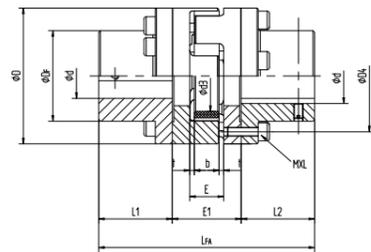
型号Model RGE-□□-F	零件4N 半成品或 成品孔 4N Semi -finished finished Bore	基本尺寸Fundamental Dimension														FD/FE				
		D	d3	L1	E	t	b	L5	L7	DA	D3	D4	LFC	LFF	DN3	DN4	M	螺母数量 Qty	LFE	LFD
24	0-35	55	27	30	18	2	14	1.5	8	80	55	65	56	34	36	45	M5	8	56	34
28	0-40	65	30	35	20	2.5	15	1.5	10	100	65	80	65	40	44	54	M6	8	65	40
38	0-48	80	38	45	24	3	18	1.5	10	115	80	95	79	44	54	66	M8	8	79	44
42	0-55	95	46	50	26	3	20	2	12	140	95	115	88	50	65	80	M8	12	88	50
48	0-62	105	51	56	28	3.5	21	2	12	150	105	125	96	52	75	90	M8	12	96	52
55	0-74	120	60	65	30	4	22	2	16	175	120	145	111	62	84	102	M10	8	111	62
65	0-80	135	68	75	35	4.5	26	2	16	190	135	160	126	67	96	116	M10	12	126	67
75	0-95	160	80	85	40	5	30	2.5	19	215	160	185	144	78	112	136	M12	15	144	78
90	0-110	200	100	100	45	5.5	34	3	20	260	200	225	165	85	145	172	M16	15	165	85
100	0-115	225	113	110	50	6	38	4	25	285	225	250	185	100	165	195	M16	15	185	100
110	0-125	255	127	120	55	6.5	42	4	26	330	255	290	201	107	180	218	M20	15	201	107
125	0-145	290	147	140	60	7	46	5	30	370	290	325	230	120	215	252	M20	15	230	120
140	0-160	320	165	155	65	7.5	50	5	34	410	320	360	254	133	245	282	M20	15	254	133



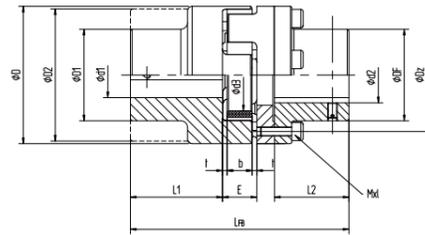
**RGE-FL通用系列** RGE-FL(for general application) **REACH梅花形弹性体爪式联轴器 法兰型**  
REACH (2-section) Jaw Couplingwith Quincunx Elastomer

选型举例: Example:

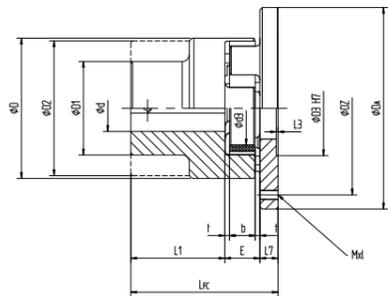
RGE28	C	FA	T	B	Ø 24	Ø 25	98	
产品规格 Specification	铸件 Casting	结构 Structure	调质 Tempering	发黑 Blackening	孔径 Aperture	孔径 Aperture	弹性体硬度 Elastomer hardness	备注 Note



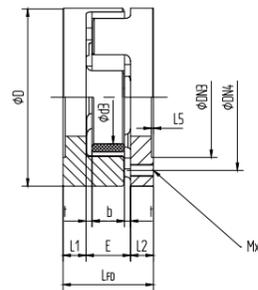
FA型/FA



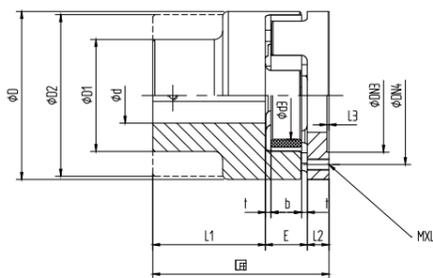
FB型/FB



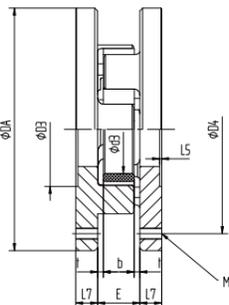
FC型/FC



FD型/FD



FE型/FE



FF型/FF



**RGE-ZD通用系列** RGE-ZD (for general application) **REACH爪式联轴器 制动鼓/制动式**  
REACH Flange-Jaw Couplingwith Brake Drum/Braking Type

产品特点

- 带制动鼓的轴联轴器结构
- 适用于两块外部制动鼓抱紧摩擦实现制动的场合
- 带制动盘的联轴器适用于钳式制动器
- 制动鼓或制动盘必须安装在转动惯量最大的轴端
- 最大的制动扭矩不能超过联轴器的最大扭矩
- 成品孔径公差按ISO标准为H7,键槽宽按照标准DIN 6885/1,公差为JS9



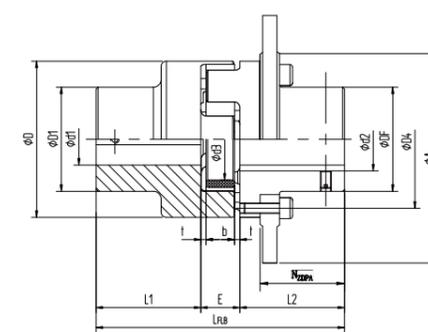
Characteristics:

Coupling with brake drum is designed to application where braking is realized by holding two external brake drums for friction;  
Coupling with brake disc is designed to caliper brake;  
Brake drum or disc should be mounted at the shaft end with largest moment of inertia;  
Max braking torque should not exceed max torque of the coupling;  
The maximum brake torque shall not exceed the maximum one of coupling;  
Aperture tolerance: ISO H7; keyslot width: DIN 6885/1, and tolerance JS9

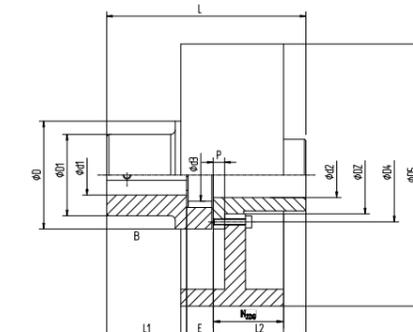
型号Model RGE-□-□-□	弹性体额定扭矩 Elastomer Rated Torque ( Nm )			成品孔B Finished Bore B		尺寸 Dimension											
	92 SH A	98 SH A	64 SH D	铸件 Casting	钢件 Steel	D	DZ	D4	d3	L	L1:L2	E	P	Nzdg	Nzdp	螺栓数量 Qty.	
38	190	325	405	—	34	80	50	66	38	114	45	24	7.5	37.5	37.5	8	
42	265	450	560	—	42	95	60	80	46	126	50	26	9.5	40.5	40.5	12	
48	310	525	655	—	48	105	68	90	51	140	56	28	10.5	45.5	45.5	12	
55	410	685	825	—	55	120	78	102	60	160	65	30	12.5	52.5	52.5	8	
65	625	940	1175	—	65	135	92	116	68	185	75	35	13.5	61.5	61.5	12	
75	1280	1920	2400	—	75	160	106	136	80	210	85	40	15.5	69.5	69.5	15	
90	2400	3600	4500	—	100	200	140	172	100	245	100	45	18.5	89.5	89.5	15	
100	3300	4950	6185	100	—	225	156	195	113	270	110	50	20.5	98.5	98.5	15	
110	4800	7200	9000	110	—	255	176	218	127	295	120	55	23.5	96.5	96.5	15	
125	6650	10000	12500	130	—	290	204	252	147	340	140	60	27.5	112.5	112.5	15	

选型举例: Example:

GER42	C	ZD	T	B	Ø 24	Ø 25	98	
产品规格 Specification	铸件 Casting	结构 Structure	调质 Tempering	发黑 Blackening	孔径 Aperture	孔径 Aperture	弹性体硬度 Elastomer hardness	备注 Note



A型



B型



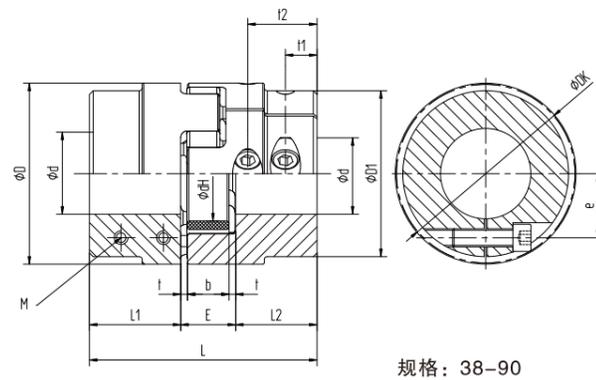
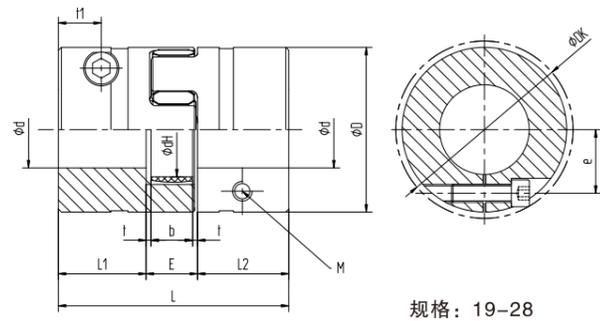
RGE-DK通用系列 RGE - DK (for general application)

REACH梅花形弹性体爪式联轴器  
REACH Jaw Coupling with Quincunx Elastomer

型号 Model RGE-□□-DK	成品孔 Finished Bore	尺寸 Dimension											M	T
	dmax	L	L1:L2	E	b	t	D	d <sub>ii</sub>	D <sub>i</sub>	t1	t2	e		
19	20	66	25	16	12	2	40	18	46	12	-	14.5	M6	10.5
24	28	78	30	18	14	2	55	27	57.5	12	-	20	M6	10.5
28	38	90	35	20	15	2.5	65	30	73	14	-	25	M8	25
38	42	114	45	24	18	3	80	38	83.5	19	-	26.5	M8	25
42	50	126	50	26	20	3	95	46	93.5	18	-	32	M10	69
48	55	140	56	28	21	3.5	105	51	105	21	-	36	M12	120
55	68	160	65	30	22	4	120	60	119.5	26	51	42.5	M12	120
65	70	185	75	35	26	4.5	135	68	124	33	61	50	M12	120
75	80	210	85	40	30	5	160	80	147.5	36	68	57	M16	295
90	90	245	100	45	34	5.5	200	104	192	40	80	72	M20	580

选型举例: Example:

RGE42	S	DK	T	B	∅24	∅25	98	平键 Flat Key	否 No	
产品规格 Specification	钢件 Steel	结构 Structure	调质 Tempering	发黑 Blackening	孔径 Aperture	孔径 Aperture	弹性体硬度 Elastomer hardness	键槽类型 Keyslot	是否做动平衡 Whether dynamic-balanced	备注 Note



RGE-GS梅花无齿隙联轴器 RGE-GS plum blossom no tooth gap coupling

概述 Overview

RGE-GS联轴器由三个部件组成,可方便地轴向安装。在预应力作用下保证了无齿隙的传动。同时其良好的刚性与优化的减振性能的完美组合,极大地改善了传动系统的动态特性。该结构型式使得安装极为方便,可节省安装时间。

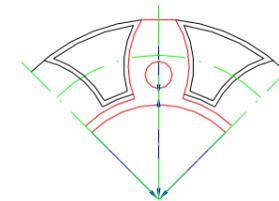
RGE-GS coupling comprises three components, and can be easily installed axially. With the function of prestress, driven without backlash can be guaranteed.

Meanwhile, good rigidity and optimized vibration control performance are combined, which has greatly improved the driving system's dynamic characteristics. This structure makes installation very convenient, and saves installation time.



RGE-GS联轴器 (直齿, 无齿隙)  
RGE-GS Coupling (Straight teeth, no backlash)

高速时凹形可避免弹性体由于离心力产生变形  
Deformation of elastomer caused by centrifugal force can be avoided by the concave at high speed



旋转轴向支撑  
Rotation axial support

直齿型弹性体在预应力下安装,使得弹性体表面承受一定的预压力,从而使联轴器系统的刚性更好。弹性齿可补偿安装偏差,在径向上由内置腹板支撑,从而避免了高速或者加速旋转时产生过大的内部变形。以上特点保证了联轴器的长期平稳运行。

Straight-teeth type elastomer is installed with prestress, so the surface of the elastomer is applied by prestress, which can achieve better rigidity of the driving system. Elastic teeth can offset installation deviation, with the radial support of the built-in plates, the inside deformation will not be too much at high speed or accelerated rotation. The above characteristics can guarantee long time and smooth performance of the coupling.

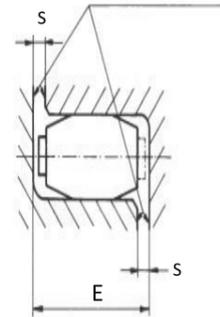
轴套的爪齿和弹性体的爪齿均有倒角,装配时便于“盲装”。弹性体齿侧上的小凸柱是为了减少弹性体齿侧与轴套的接触面积。安装时确保轴套间尺寸E,就可以确保联轴器的纠偏能力。

Both the claw teeth of the shaft sleeve and the elastomer have bevels, "blind installation" can be achieved during assembling. The small convex parts on the teeth of the elastomer is to reduce contact area between the elastomer teeth and the shaft sleeve. During assembling, if the dimension E between the sleeves can be guaranteed, then the correction ability of the coupling can be achieved.

右图所示间隙“S”确保了联轴器的电绝缘性，同时使用寿命更长。这一特点对于编码器的高精度要求以及电磁相容性要求非常重要。

The gap "S" indicated in the right image can guarantee the coupling's insulation, and extend usage life. This characteristic is critical to meet the encoder's high accuracy and electromagnetic compatibility requirements.

间隙“S”确保电气绝缘  
Gap "S" makes sure insulation



RGE-GS有四种以颜色区分的不同硬度的弹性体，材质由软到硬，因此可根据扭转刚性、减振等性能很容易选择，以适应于不同场合。受预压力大小取决于联轴器规格，弹性体，材质和插装配时的插入力大小取决于弹性体的硬度和受预压力的大小。

RGE-GS has 4 different rigidities of elastomers differentiated by the colours, the materials range from soft to hard, based on different occasions, it is easy to choose the materials to meet the requirements of torsional rigidity, vibration control etc.. The prestress is determined by the type of the coupling and the elastomer; the materials and the inserting force during assembling are determined by the hardness of the elastomer and the prestress.

弹性体硬度 Hardness of elastomer	颜色 Colour	材质 Material	允许工作温度℃ Allowable working temperature °C		可供规格 Available size	典型运用 Typical applications
			连续 Continuous	瞬间 Instant		
80 Sh-A		聚氨酯PU	-50 ~ +80	-60 ~ +120	9 ~ 24	— 电子测量系统的传动 Driving for electronic measurement system
92 Sh-A		聚氨酯PU	-40 ~ +90	-50 ~ +120	9 ~ 55	— 电子测量和控制系统的传动 Driving for electronic measurement and control system — 主轴传动 Spindle driving
98 Sh-A		聚氨酯PU	-30 ~ +90	-40 ~ +120	9 ~ 90	— 定位传动 Positioning driving — 主轴传动 Spindle driving — 高载荷 High load
64 Sh-D		聚氨酯PU	-20 ~ +110	-30 ~ +120	14 ~ 90	— 机床主轴 Machine spindle driving — 更高载荷 Higher load — 更高扭转刚性 Higher torsional rigidity

### 典型运用 Typical Applications

#### 测量和控制系统 Measurement and Control System

高扭转刚性的GS系列联轴器在测量和控制系统中能够提供准确的测量和控制服务。由于GS系列产品的弹性体时经预压状态安装的，在这种低扭力的运用场合中，无齿隙、扭转刚度的动力传动完全由弹性体的预应力实现。GS系列联轴器能够保证完全无回传间隙，高精度重复定位。为了将纠偏产生的径向力降至最小，对于这类应用场合，建议使用硬度较低的弹性体，比如80SHA-GS.主要结构形式：标准型、KC型、DK型。

The GS series couplings have high torsional rigidity, and can offer precise measurement and control service. Because the elastomer of the GS coupling is installed under prestress condition, in the application situation of low torsion, the driving of torsional rigidity without backlash is totally based on the realization of prestress of the elastomer. GS series coupling can guarantee completely no back rotation gap, high accuracy repeating positioning. To minimize the radial force caused by deviation correction, it is advised to use low hardness elastomer in such application situation, such as 80SHA-GS. Main structure types include: Standard type, KC type, DK type.



#### 伺服和定位传动 Servo and Positioning Driving

RGE-GS系列联轴器，与其他扭转刚性联轴器相比，有正反转无齿隙和吸收振动的优点。当传动系统存在比较大的振动时，过高的扭转刚性反而成了严重的缺点，可导致传动精度大幅度降低。因此RGE-GS联轴器是一种最好的选择，即使对于高动态的伺服传动系统，其与无齿隙、吸收振动和具有足够的刚度等优点，也能确保系统的传动精度。主要结构形式：KC型、DK型。



Compared to other torsional rigidity couplings, RGE-GS series couplings have the advantages of no teeth gap of back and forth rotation and vibration control. When there is too much vibration in the driving system, too high torsional rigidity becomes a serious disadvantage, which can make the driving accuracy drop drastically. So RGE-GS coupling is the best choice, even in the high dynamic servo driving system, the advantages of no teeth gap, vibration control and sufficient rigidity etc., it can guarantee the system's driving accuracy. Main Structure types: KC type, DK type.

#### 主轴传动 Spindle Driving

针对机床主轴传动场合，传递的扭矩较大，依靠弹性体的硬度可实现预压缩下的微小扭转和吸振功能，可减小传动的峰值力矩和冲击载荷，或者使共振区偏移至非工作转速区。

For machine spindle driving, the torque transmitted is relatively bigger, by the hardness of the elastomer, tiny rotation and vibration damping under prestress can be realized, and peak torque and impact load can be diminished, or resonance region can be transferred to non-operational rotating speed area.

当线速度大于等于40m/s时（联轴器外径处），建议使用带胀紧套的ZT型联轴器。

When linear speed is no less than 40m/s(Coupling outside diameter), ZT coupling is advised to be used.



RGE-GS梅花无齿隙联轴器 RGE-GS plum blossom no tooth gap coupling

技术参数 Technical Parameters

规格 Type	弹性体硬度 Elasto-mer Hardness	肖氏硬度 Shore hardness	最高转速 (rpm) 轴套形式				扭矩 Torque (Nm)		静态扭转刚度 Static torsional rigidity (Nm/rad)	动态扭转刚度 Dynamic torsional rigidity (Nm/rad)	径向刚度 Radial rigidity Cr (Nm/rad)	重量 Weight (kg)		转动惯量 Rotary inertia J (kgm²)	
			夹紧结构 Clamping structure KC-DK	标准结构 Standard structure	铝质胀紧套结构 Aluminum Locking Devices	钢质胀紧套结构 Steel Locking devices	T <sub>KN</sub>	T <sub>KNmax</sub>				单个轴套 Single sleeve	弹性体 Elasto-mer	单个轴套 Single sleeve	弹性体 Elasto-mer
5	80	A	38000	47700			0.3	0.6	3.15	10	82	0.001	0.2 × 10 <sup>-3</sup>	0.015 × 10 <sup>-6</sup>	0.002 × 10 <sup>-6</sup>
	92	A					0.5	1	5.16	16	154				
	98	A					0.9	1.7	8.3	25	296				
7	80	A	27000	34100			0.7	1.4	8.6	26	114	0.003	0.5 × 10 <sup>-3</sup>	0.085 × 10 <sup>-6</sup>	0.01 × 10 <sup>-6</sup>
	92	A					1.2	2.4	14.3	43	219				
	98	A					2	4	22.9	69	421				
	64	D					2.4	4.8	34.3	103	630				
9	80	A	19000	23800			1.8	3.6	17.2	52	125	0.01	1.7 × 10 <sup>-3</sup>	0.48 × 10 <sup>-6</sup>	0.085 × 10 <sup>-6</sup>
	92	A					3	6	31.5	95	262				
	98	A					5	10	51.6	155	518				
	64	D					6	12	74.6	224	739				
12	80	A	15200	19100			3	6	84.3	252	274	0.02	2.3 × 10 <sup>-3</sup>	1.5 × 10 <sup>-6</sup>	0.139 × 10 <sup>-6</sup>
	92	A					5	10	160.4	482	470				
	98	A					9	18	240.7	718	846				
	64	D					12	24	327.9	982	1198				
14	80	A	12700	15900	32000	47700	4	8	60.2	180	153	0.02	4.7 × 10 <sup>-3</sup>	2.8 × 10 <sup>-6</sup>	0.509 × 10 <sup>-6</sup>
	92	A					7.5	15	114.6	344	336				
	98	A					12.5	25	171.9	513	654				
	64	D					16	32	234.2	702	856				
19	80	A	9550	11900	24000	35800	4.9	9.8	618	1065	582	0.09	7 × 10 <sup>-3</sup>	19.5 × 10 <sup>-6</sup>	1.35 × 10 <sup>-6</sup>
	92	A					10	20	1090	1815	1120				
	98	A					17	34	1512	2540	2010				
	64	D					21	42	2560	3810	2930				
24	92	A	6950	8650	17000	26000	35	70	2280	4010	1480	0.2	0.02	81.9 × 10 <sup>-6</sup>	6.7 × 10 <sup>-6</sup>
	98	A					60	120	3640	5980	2560				
	64	D					75	150	5030	10896	3696				
	92	A					95	190	4080	6745	1780				
28	92	A	5850	7350	15000	22000	160	320	6410	9920	3200	0.3	0.03	184.2 × 10 <sup>-6</sup>	14.85 × 10 <sup>-6</sup>
	98	A					200	400	10260	20177	4348				
	64	D					190	380	6525	11050	2350				
	92	A					325	650	11800	17160	4400				
38	92	A	4750	5950	12000	17900	405	810	26300	40335	6474	0.6	0.05	542.7 × 10 <sup>-6</sup>	39.4 × 10 <sup>-6</sup>
	98	A					265	530	10870	15680	2430				
	64	D					450	900	21594	37692	5570				
	92	A					560	1120	36860	69825	7270				
42	92	A	4000	5000	10000	15000	310	620	12968	18400	2580	2.4	0.08	2802 × 10 <sup>-6</sup>	85 × 10 <sup>-6</sup>
	98	A					525	1050	25759	45620	5930				
	64	D					655	1310	57630	99750	8274				
	92	A					410	820	15482	21375	2980				
48	92	A	3600	4550	9100	13600	685	1370	42117	61550	6686	3.3	0.09	4709 × 10 <sup>-6</sup>	135 × 10 <sup>-6</sup>
	98	A					825	1650	105730	130200	9248				
	64	D					940	1880	48520	71660	6418				
	92	A					1175	2350	118510	189189	8870				
55	92	A	3150	3950		11900	1920	3840	79150	150450	8650	5.1	0.12	9460 × 10 <sup>-6</sup>	229 × 10 <sup>-6</sup>
	98	A					2400	4800	182320	316377	11923				
	64	D					3600	7200	204500	302900	10700				
	92	A					4500	9000	429450	908700	14700				
65	98	A	2800	3500		11000	3600	7200	204500	302900	10700	6.7	0.2	15143 × 10 <sup>-6</sup>	437 × 10 <sup>-6</sup>
	64	D					1175	2350	118510	189189	8870				
75	98	A	2350	2950		8950	2400	4800	182320	316377	11923	10.5	0.3	32750 × 10 <sup>-6</sup>	1179 × 10 <sup>-6</sup>
	64	D					3600	7200	204500	302900	10700				
90	98	A	1900	2380			4500	9000	429450	908700	14700	18.2	0.6	87099 × 10 <sup>-6</sup>	3362 × 10 <sup>-6</sup>
	64	D					3600	7200	204500	302900	10700				

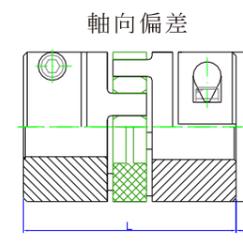
备注: Note:

动态扭转刚度为传递扭矩  $0.5 \times T_{KN}$   
 Dynamic torsional rigidity equals transmitted torque  $0.5 \times T_{KN}$ .  
 铝质胀紧套结构ZT型为高强度铝合金轴套, 钢质胀紧套结构ZT型是钢质轴套  
 Aluminum Locking Devices type uses high-strength aluminum alloy shaft sleeve; Steel Locking devices type uses steel shaft sleeve.  
 重量及转动惯量为标准型中等孔径  
 Weight and rotary inertia are measured with standard medium hole diameter.  
 任何工况下传递的扭矩值不得超过所选联轴器的许用值。  $T_{KN}/T_{KNmax}$  是对应弹性体的扭矩, 轴和轴套的连接由客户校核。  
 During any working situation, the transmitted torque must not be higher than allowed by the chosen coupling.  $T_{KN}/T_{KNmax}$  corresponding to the torque of elastomer, the connection of shaft and shaft sleeve should be checked by customer.

纠偏能力 Rectifying ability

RGE-GS联轴器的设计结构, 使得它能够补偿轴向、径向和角向的偏差, 同时不会造成弹性体的磨损和提前失效。由于弹性体仅受正压力, 长时间运转后仍可以保证无齿隙运动。

The design structure of RGE-GS coupling ensures it capable of compensating axial, radial and angular deviation, meanwhile, will not cause wearing and expedited failure of the elastomer. Because only positive pressure is applied on the elastomer, after long time rotation, no teeth gap rotation can still be kept after long time running.



Axial deviation

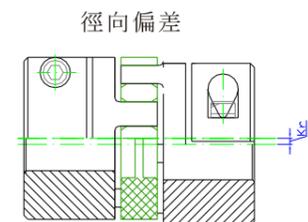
由于装配时连接件的公差不同, 或者由于温度的变化造成轴向长度的改变, 产生了轴向偏差。

轴承通常不能承受过大的轴向力, 因此联轴器需要补偿轴向偏差, 以减小轴向力。

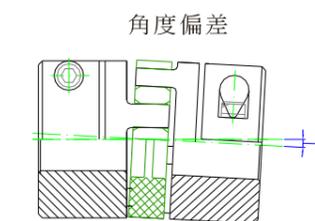
Due to different tolerance of connecting pieces during assembling, or axial length change caused by temperature change, axial deviation is caused. Normally, Bearing can not be applied with too much axial force, hence axial coupling needs to compensate axial deviation to reduce axial force.

由于安装对中的不同偏差或动力源安装在不同平面, 产生了径向偏差。这种偏差将会在连接部件上产生很大的应力。

Due to different deviation arise out of centering and power sources are mounted on different surfaces, radial deviation is caused. The deviation will cause very big stress on the connecting pieces.



Radial deviation



Angular deviation

产生角向偏差时, 传动轴的中心线在联轴器的中部相交。在一定范围内的偏差将由联轴器补偿, 同时不会存在应力集中的危险。

When angular deviation arises, the center line of the shaft will cross the coupling in the middle. within a certain level, the deviation can be compensated by the coupling, meanwhile the danger of accumulated stress will not arise.

## 联轴器选型 Coupling Selection

规格 Type	弹性体硬度 Elastomer hardness	标准偏差 Standard deviation		
		(mm) 轴向 Axial ΔKa	(mm) 径向 Radial ΔKr	(°) 角向 Angular α
5	80Sh-A		0.12	1.1°
	92Sh-A	0.4	0.06	1.0°
	98Sh-A	-0.2	0.04	0.9°
7	80Sh-A		0.15	1.1°
	92Sh-A	0.6	0.1	1.0°
	98Sh-A	-0.3	0.06	0.9°
9	64Sh-D		0.04	0.8°
	80Sh-A		0.19	1.1°
	92Sh-A	0.8	0.13	1.0°
12	98Sh-A	-0.4	0.08	0.9°
	64Sh-D		0.05	0.8°
	80Sh-A		0.2	1.1°
14	92Sh-A	0.9	0.14	1.0°
	98Sh-A	-0.4	0.08	0.9°
	64Sh-D		0.05	0.8°
	80Sh-A		0.21	1.1°
19	92Sh-A	+1.0	0.15	1.0°
	98Sh-A	-0.5	0.09	0.9°
	64Sh-D		0.06	0.8°
	80Sh-A		0.15	1.1°
24	92Sh-A	+1.2	0.1	1.0°
	98Sh-A	-0.5	0.06	0.9°
	64Sh-D		0.04	0.8°
	80Sh-A		0.19	1.1°

规格 Type	弹性体硬度 Elastomer hardness	标准偏差 Standard deviation		
		(mm) 轴向 Axial ΔKa	(mm) 径向 Radial ΔKr	(°) 角向 Angular α
24	92Sh-A		0.14	1.0°
	98Sh-A	+1.4	0.1	0.9°
	64Sh-D	-0.5	0.07	0.8°
28	92Sh-A		0.15	1.0°
	98Sh-A	+1.5	0.11	0.9°
	64Sh-D	-0.7	0.08	0.8°
38	92Sh-A		0.17	1.0°
	98Sh-A	+1.8	0.12	0.9°
	64Sh-D	-0.7	0.09	0.8°
42	92Sh-A		0.19	1.0°
	98Sh-A	+2.0	0.14	0.9°
	64Sh-D	-1.0	0.1	0.8°
48	92Sh-A		0.23	1.0°
	98Sh-A	+2.1	0.16	0.9°
	64Sh-D	-1.0	0.11	0.8°
55	92Sh-A		0.24	1.0°
	98Sh-A	+2.2	0.17	0.9°
	64Sh-D	-1.0	0.12	0.8°
65	98Sh-A	+2.6	0.18	0.9°
	64Sh-D	-1.0	0.13	0.8°
75	98Sh-A	+3.0	0.21	0.9°
	64Sh-D	-1.5	0.15	0.8°
90	98Sh-A	+3.4	0.23	0.9°
	64Sh-D	-1.5	0.17	0.8°

上表所列的偏差补偿量为RGE-GS型联轴器的标准值，相应工况为：传递扭矩额定值 $T_{KN}$ ，转速 $n=1500r/min$ ；环境温度为 $30^{\circ}C$ 。

以上各偏差补偿量仅为单项补偿值，若三个方向均有偏差，各偏差值则需相应成比例递减。安装时连接轴的对中性越好，则联轴器的使用寿命越长。

Deviations shown in above table are standard values of RGE-GS couplings, corresponding working situations are: transmitted torque nominal value  $T_{KN}$ ; rotation speed  $n=1500r/min$ ; ambient temperature is  $30^{\circ}C$ .

The above deviation compensation value is only for each single deviation, if there are deviations in three directions at the same time, each single value needs to decrease proportionally. The better the centering of the connecting shaft during assembling, the longer the usage of the coupling.

### 1. 联轴器选型中的符号定义和系数说明

#### The definition of the symbols and coefficient description for coupling selection

$T_{KN}$	联轴器的额定扭矩 Coupling's rated torque (Nm) 在规定的转速范围内连续运转所允许传递的扭矩，应考虑工况系数 (St, Sd) Within designated rotation speed scope, allowable transmitted torque of continuous running should take into consideration of working condition coefficient (St, Sd)
$T_{kmax}$	联轴器的最大扭矩 (Nm) Coupling's max torque 在联轴器的整个使用寿命中传递大于 $10^5$ 次动态载荷或 $5 \times 10^4$ 次交变载荷的许用扭矩，应考虑工况系数 (St, Sd, SA) During the coupling's entire usage life, 100000 dyanmic loads or 50000 alternative loads allowable torques are transmitted, which should take into consideration of working condition coefficients (St, Sd, SA)
$T_R$	摩擦力矩 (Nm) 轴和轴套夹紧方式连接时所能传递的扭矩 The torque transmitted when friction torque(Nm) shaft and shaft sleeve are connected by clamping
$T_{AN}$	主动端的额定力矩 (Nm)，由功率和转速计算得到 Drive end's rated torque(Nm), calculated by power and rotation speed.
$T_{AS}$	最大驱动力矩 (Nm)，交流电机产生的峰值力矩，如电机启动或停机时产生的力矩 Max. driving torque(Nm), peak torque generated by AC motor, during start-up and stop of the motor
$T_S$	联轴器峰值力矩 (Nm)，根据最大驱动力矩 $T_{AS}$ 、转动惯量系数 $m_A$ 或 $m_L$ 和冲击系数 $S_A$ 或 $S_L$ 进行计算 Coupling peak torque(Nm), calculation based on max. driving torque $T_{AS}$ , rotation inertia coefficient $m_A$ and impact coefficient $S_A$ or $S_L$
$S_t$	温度系数，需考虑弹性体在受力时特别是高温情况下产生的变形。如果温度超过 $80^{\circ}C$ 请选用RIC型联轴器 Temperature coefficient, deformation arises when elastomer is under pressure especially at high temperature. if temperature is above $80^{\circ}C$ , advise to use RIC type coupling
$S_d$	扭转刚度系数，需考虑不同应用场合下对联轴器扭转刚度的不同要求，材料为铝的轴套，选用64-SHD材料的GS弹性体时应考虑伺服电机的扭转刚度 $S_d$ ，定位传动系统中随着对扭转刚度要求的增加，(例如低传动齿轮箱)我们推荐使用RIC型联轴器 Torsional rigidity coefficient, advise to consider different working conditions require different torsional rigidity, for aluminum shaft sleeve, when select GS elastomer of 64-SHD material, advise to consider servo motor's torsional rigidity $S_d$ , for positioning driving system, the requirement for torsional rigidity is higher.(eg. low drive gear box) we recommend RIC type coupling
$S_A$	冲击系数，在主动端或从动端受冲击时需要考虑的系数 Impact coefficient, which should be considered when the drive end or the driven is impacted
$m_{ALL}$	主动端(从动端)转动惯量系数，在主动端或从动端受冲击或振动时需考虑的质量分布系数 Drive end(driven end) rotation inertia coefficient, which is a quality distribution coefficient that should be considered when the drive end or the driven end is impacted or vibrating
$J_d/J_L$	联主动端的转动惯量/从动端的转动惯量 Rotation inertia of drive end/rotation inertia of driven end
$J_c/J_M/J_{SP}$	联轴器的转动惯量/电机的转动惯量/主轴的转动惯量 Coupling's rotation inertia/motor's rotation inertia/spindle's rotation inertia
$T_A$	螺丝拧紧力矩 Tightening torque of bolts

## 2. 工况系数 Working condition coefficient

温度系数 $S_t$ Temperature coefficient $S_t$				
	-30℃ +30℃	+40℃	+60℃	+80℃
St	1	1.2	1.4	1.8

温度系数 $S_t$ Temperature coefficient $S_t$						
	-30℃ +30℃	+40℃	+60℃	+80℃	+100℃	+120℃
St	1	1.2	1.4	1.6	2	2.8

扭转刚度系数 $S_d$ Torsional rigidity coefficient $S_d$		
机床主轴传动 Machine spindle driving	定位传动 Positioning driving shaft (x-y)轴	编码器 Encoder
2-5	3-8	10

冲击载荷系数 $S_A$ Impact load coefficient $S_A$		
机床主轴传动 Machine spindle driving	定位传动 Positioning driving	$S_A$
轻微冲击 Slight impact	$\leq 60$	1
一般冲击 regular impact	$\geq 60 \leq 300$	1.4
严重冲击 Severe impact	$\geq 300$	1.8

当使用64SHD弹性体时，系数至少为4  
When Spider with 64SHD is used, the coefficient should be at least 4.

启动次数/分钟  
Start-up times/minute

## 3. 计算公式 Computational formula

所选用的联轴器必须满足下列条件  
Coupling selected shall meet following conditions

$$T_{KN} \geq T_N \cdot S_t \cdot S_d \quad \text{和} \quad T_{KN} \geq T_s \cdot S_t \cdot S_d$$

最大扭矩 Max. torque $T_s$	主动端的冲击力矩 Impact torque of drive end $T_s = T_{AS} \cdot m_A \cdot S_A$	$m_A = J_i / (J_A + J_i)$
	主从动端的冲击力矩 Impact torque of driven end $T_s = T_{LS} \cdot m_L \cdot S_L$	$m_L = J_A / (J_A + J_i)$

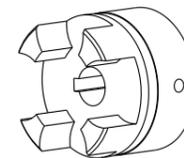
相关参数详见上表  
For details of relative parameters see above table

## 轴套形式 Shaft Sleeve Type

RGE-GS联轴器针对不同的安装工况，有多种不同型式的轴套可供选择。这些型式最大的不同在于由键来传递扭矩或由胀紧套的夹紧摩擦来传递扭矩。

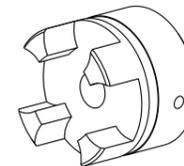
RGE-GS coupling has various type of shaft sleeve to be selected for different mounting conditions. The key difference is the way to transmit the torque, by keyway or clamping friction of the locking sleeves.

### RGE-GS标准型 带键槽和紧定螺钉 REG-GS standard Type with keyway and set screw



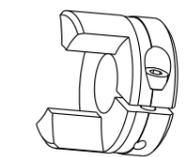
依靠键槽传动，许用力矩取决于键槽表面的许用压力。需注意该种结构不适用于要求无齿隙的重载荷正反转的场合。  
Driven by keyway. Allowable torque is determined by allowable stress on the surface of the keyway.  
Pls note this structure is not suitable for backlash-free heavy load with back&forth rotation.

### RGE-GS标准型 不带键槽带紧定螺钉 RGE-GS standard type with set screw, no keyway



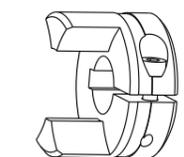
用于要求无间隙的微小力矩传递场合。  
Applied to slight torque transmission with zero backlash.

### RGE-GS-DK开槽型 单开槽不带键槽 RGE-GS-DK Grooved type with single groove, no keyway



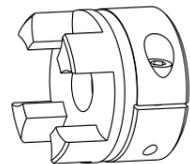
夹紧摩擦力连接传动，轴和轴套连接无齿隙。可传递的摩擦力矩取决于轴径。  
Torque transmitted by clamping friction, Zero backlash between shaft and shaft sleeve. Transmitted torque is determined by the shaft diameter.

### RGE-GS-DK开槽型 单开槽带键槽 RGE-GS-DK grooved type with single groove and keyway



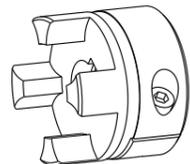
键和键槽传递扭矩，附加夹紧摩擦力传动，避免或者减少了反向间隙及键表面的接触压力。  
Torque transmitted by key and keyway, together with clamping friction. It could avoid or reduce the contact pressure between the backward gap and surface of the keyway.

RGE-GS-KC开槽型 双开槽不带键槽  
RGE-GS-KC grooved type with double groove, no keyway



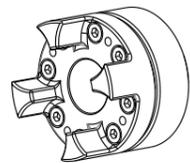
夹紧摩擦力连接传动，轴与轴套连接无齿隙。可传递摩擦力矩取决于轴径。  
Torque transmitted by clamping friction, Zero backlash between shaft and shaft sleeve. Transmitted torque is determined by the shaft diameter.

RGE-GS-KC开槽型 双开槽带键槽  
RGE-GS-DK grooved type with double groove and keyway



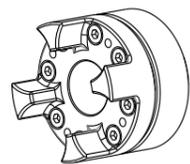
键和键槽传递扭矩，附加夹紧摩擦力传动，避免或减小了反向间隙及键表面的接触压力。  
Torque transmitted by key and keyway, together with clamping friction. It could avoid or reduce the contact pressure between the backward gap and surface of the keyway.

RGE-GS-ZT-AL铝质胀紧套型  
RGE-GS-ZT-AL Expansion sleeve type in Aluminum



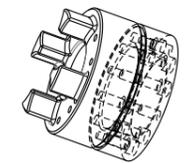
一体式胀紧轴套连接的传动，适用于高转速，低转动惯量的运用场合，材质为高强度铝合金。  
This integrated expansion sleeve, in high strength aluminum alloy, is designed for the application of high rotation speed and low rotation inertia.

RGE-GS-ZT-S钢质胀紧套型  
RGE-GS-ZT-S Expansion sleeve type in Steel



一体式胀紧轴套连接的传动，适用于更高的扭矩，胀紧螺丝置于弹性体侧，材质为钢。此型式适用于高速场合。  
This integrated expansion sleeve, in steel, is designed for the application of high rotation speed and high torque. The expansion screw is mounted at the side of spider.

特殊设计的胀紧套结构  
Special design for expansion sleeve type



与胀紧套结构ZT型，只是胀紧螺栓在外侧。  
The expansion screws are mounted outside, comparing with ZT type expansion sleeve.

RGE-GS 无齿隙标准型联轴器 RGE-GS backlash-free standard coupling

产品特点

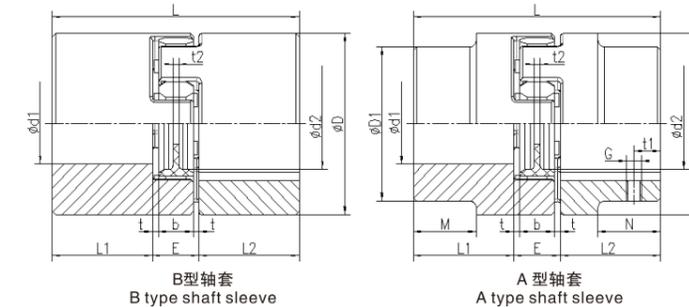
- 无齿隙的连接，用于小扭矩的测量传动
- 尺寸小，转动惯量小
- 免维护，便于目测检查
- 不同的弹性体硬度选择
- 成品孔公差按照ISO标准H7（夹紧式轴套除外）孔径Φ6以上按标准DIN6885/1，键槽宽JS9



Characteristics:

Backlash-free connection, small torque for measuring equipment  
Small size and small rotation inertia;  
Free maintenance and easy for visual check;  
Elastomer with different hardness for option;  
Finished bore tolerance respects ISO H7, excluding clamping shaft sleeve, DIN6885/1 for bore diameter above  $\phi 6$ , JS9 for keyway.

轴套形式 Shaft sleeve types



型号 Model RGE -GS	扭矩 Torque ( Nm )			外形尺寸 Dimensions(mm)											定位螺丝标准型结构 Positioning screw Standard type	
	92sh-A	98sh-A	64sh-D	d1 ( max )	D1	D	d2	L	L1:L2	M:N	E	b	t	12	G	t1
9	3	5	6	11	-	20	7.2	30	10	-	10	8	1	1.5	M4	5
12	5	9	12	12	-	25	8.5	34	11	-	12	10	1	3.5	M4	5
14	7.5	12.5	16	16	-	30	10.5	35	11	-	13	10	1.5	2	M4	5
19	10	17	21	24	-	41	18	66	25	-	16	12	2	3	M5	10
24	35	60	75	28	-	56	27	78	30	-	18	14	2	3	M5	10
28	95	160	200	38	-	66	30	90	35	-	20	15	2.5	4	M8	15
38	190	325	405	45	-	80	38	114	45	-	24	18	3	4	M8	15
42	265	450	560	55	85	95	46	126	50	28	26	20	3	4	M8	20
48	310	525	655	62	95	105	51	140	56	32	28	21	3.5	4	M8	20
55	410	685	825	74	110	120	60	160	65	37	30	22	4	4.5	M10	20
65	-	940	1175	80	115	135	68	185	75	47	35	26	4.5	4.5	M10	20
75	-	1920	2400	95	135	160	80	210	85	53	40	30	5	5	M10	25
90	-	3600	4500	110	160	200	104	245	100	62	45	34	5.5	6.5	M12	30

选型举例: Example: RGE-GS38-24B-24B-98-S-BL-J

RGE-GS38	24	A/B	24	A/B	98	S	BL	J	备注 Note
产品规格 Product specifications	孔径 Bore diameter	轴套形式 Shaft sleeve type	孔径 Hole diameter	轴套形式 Shaft sleeve type	弹性体硬度 Elastomer hardness	材料 Material	发黑 Black	键 Key	特殊要求 Special requirements

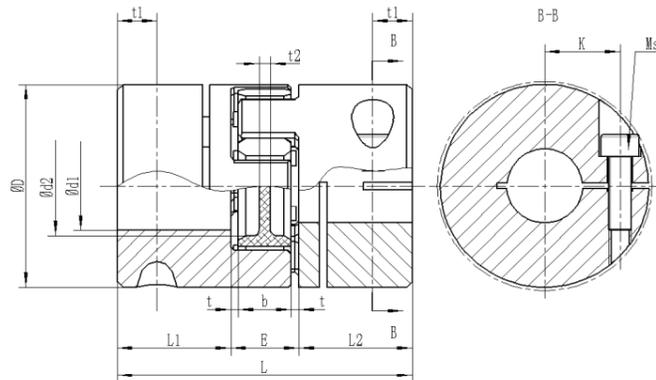
RGE-GS-KC无齿隙系列开槽型联轴器 RGE-GS-KC Backlash-free grooved coupling

产品特点

- 无齿隙连接，用于小扭矩的测量传动，升降平台和机床传动等
- 尺寸小，转动惯量小
- 开槽后利用螺钉抱紧，可消除轴孔间隙
- 可吸收振动，补偿轴向、径向、轴向偏差
- 不同硬度的弹性体可供选择
- 成品孔径公差按照ISO标准H7，键槽公差按照DIN6885/1标准JS9

Characteristics:

Backlash-free connection, small torque for measuring equipment, lifting platform and machining tools, etc..  
Small size and small rotation inertia;  
Clamped by screws after grooving, which can avoid the gap between shaft bores;  
Absorb vibration and compensate radial and axial deviation.  
Elastomer with different hardness for option;  
Finished bore tolerance respects ISO H7, DIN6885/1 and JS9 for keyway.



RGE-GS-KC型, 5-38规格轴套材质高强度铝合金, 42-90规格轴套材质钢 RGE-GS-KC type, Size 5-38 in high-strength aluminum Alloy, Size 42-90 in Steel																
型号 Model RGE -GS-KC	扭矩 Torque (Nm)			外形尺寸 Dimensions(mm)											螺钉 Screws M <sub>s</sub>	锁紧力矩 Locking torque Nm T <sub>s</sub>
	92sh-A	98sh-A	64sh-D	D	d1 (min-max)	d2	L	L1:L2	E	k	b	t	t1	t2		
19	10	17	21	41	8-22	18	66	25	16	14.5	12	2	11	3	M6	10.5
24	35	60	75	56	10-28	27	78	30	18	20	14	2	10.5	3	M6	10.5
28	95	160	200	66	14-38	30	90	35	20	25	15	2.5	11.5	4	M8	25
38	190	325	405	80	15-45	38	114	45	24	30	18	3	15.5	4	M8	25
42	265	450	560	95	20-50	46	126	50	26	32	20	3	18	4	M10	69
48	310	525	655	105	25-55	51	140	56	28	36	21	3.5	21	4	M12	120
55	410	685	825	120	32-65	60	160	65	30	42.5	22	4	26	4.5	M12	120
65	-	940	1175	135	35-70	68	185	75	35	45	26	4.5	33	4.5	M12	120
75	-	1920	2400	160	42-80	80	210	85	40	51	30	5	36	5	M16	295
90	-	3600	4500	200	42-90	104	245	100	45	60	34	5.5	40	6.5	M20	580

选型举例: Example: RGE-GS38-24B-24B-98-AL-YJ-KC

RGE-GS38	24	A/B	24	A/B	98	AL	YJ	KC	备注 Note
产品规格 Product specifications	孔径 Bore diameter	轴套形式 Shaft sleeve type	孔径 Hole diameter	轴套形式 Shaft sleeve type	弹性体硬度 Elastomer hardness	材料 Material	阳极氧化 Anodic oxidation	结构形式 Structural style	

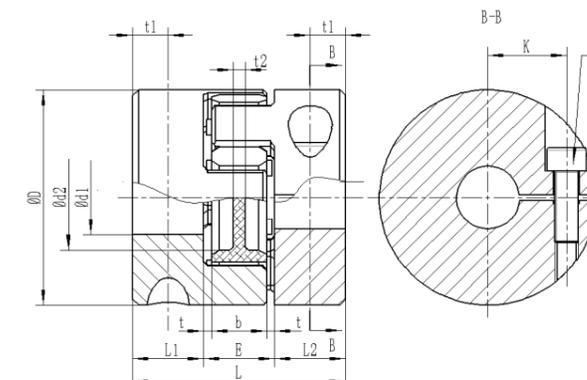
RGE-GS-DK无齿隙系列开槽型联轴器 RGE-GS-DK Backlash-free grooved coupling

产品特点

- 无齿隙连接，用于小扭矩的测量传动，升降平台和机床传动等
- 尺寸小，转动惯量小
- 开槽后利用螺钉抱紧，可消除轴孔间隙
- 可吸收振动，补偿轴向、径向、轴向偏差
- 不同硬度的弹性体可供选择
- 成品孔径公差按照ISO标准H7，键槽公差按照DIN6885/1标准JS9

Characteristics:

Backlash-free connection, small torque for measuring equipment  
Small size and small rotation inertia;  
Free maintenance and easy for visual check;  
Elastomer with different hardness for option;  
Finished bore tolerance respects ISO H7, excluding clamping shaft sleeve, DIN6885/1 for bore diameter above, JS9 for keyway.



RGE-GS-DK型, 5-28规格轴套材质高强度铝合金 RGE-GS-DK type, Size 5-28 in high-strength aluminum Alloy																
型号 Model RGE -GS-DK	扭矩 Torque (Nm)			外形尺寸 Dimensions(mm)											螺钉 Screws M <sub>s</sub>	锁紧力矩 Locking torque Nm T <sub>s</sub>
	92sh-A	98sh-A	64sh-D	D	d1 (min-max)	d2	L	L1:L2	E	k	b	t	t1	t2		
9	3	5	6	20	4-11	7.2	30	10	10	7.5	8	1	5	1.5	M2.5	0.76
12	5	9	12	25	5-12	8.5	34	11	12	9	10	1	5	3.5	M3	1.34
14	8	13	16	30	5-16	10.5	35	11	13	11.5	10	1.5	5	2	M3	1.34
19	10	17	21	41	8-24	18	50	17	16	14	12	2	6	3	M6	10.5
24	35	60	75	56	10-28	27	54	18	18	20	14	2	7	3	M6	10.5
28	95	160	200	66	14-38	30	62	21	20	23.8	15	2.5	9	4	M8	25

选型举例: Example: RGE-GS28-24B-24B-98-AL-YJ-DK

RGE-GS28	24	A/B	24	A/B	98	AL	YJ	DK	备注 Note
产品规格 Product specifications	孔径 Bore diameter	轴套形式 Shaft sleeve type	孔径 Hole diameter	轴套形式 Shaft sleeve type	弹性体硬度 Elastomer hardness	材料 Material	阳极氧化 Anodic oxidation	结构形式 Structural style	



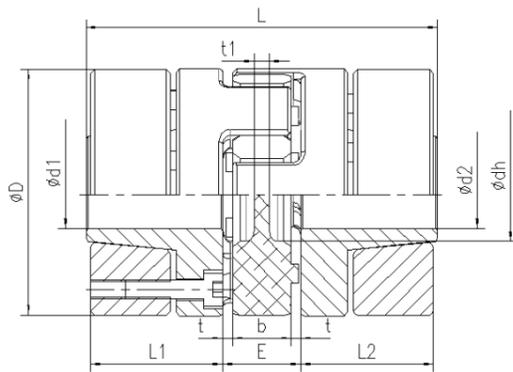
RGE-GS-ZT-AL 铝质胀紧套型联轴器 RGE-GS-ZT-AL Aluminum Expansion Type Coupling

产品特点

- 无齿隙、高精度的胀紧套一体化设计
- 如可使用在主轴传动，机床驱动和搬运设备等场合
- 高强度铝合金轴套，重量轻，转动惯量小
- 胀紧套一体化和内侧胀紧套螺栓使安装方便
- 摩擦力矩大

Characteristics:

Zero Backlash, Integrated design with high precision;  
Applied to spindle of machining tools and material handling equipment, etc..  
Designed by high strength Aluminum Alloy, Light and small moment of inertia;  
Integrated expansion sleeve and easy mounting by inner expansion and shrinking;  
Big friction torque



RGE-GS-ZT-AL 铝质胀紧式轴套，轴套与胀紧环材料高强度铝合金 RGE-GS-ZT-AL Aluminum locking shaft sleeve, the shaft sleeve and the guide roll are made of high-strength aluminum alloy																	
型号 Model RGE-GS-ZT-AL	扭矩 (Nm)			尺寸(mm)								胀紧螺栓			最大孔径时单个轴套的重量 (kg)	最大孔径时单个轴套的转动惯量 (kg·m <sup>2</sup> )	
	92sh-A	98sh-A	64sh-D	d1 (min-max)	D	dh	L	L1:L2	E	b	t1	M	螺栓数量Z	TA (Nm)			M1
14	7.5	12.5	16	6-14	30	10.5	50	18.5	13	10	2	M3	4	1.34	M3	0.032	0.04 × 10 <sup>-4</sup>
19	10	17	21	10-20	41	18	66	25	16	12	3	M4	6	3	M4	0.077	0.19 × 10 <sup>-4</sup>
24	35	60	75	14-28	56	27	78	30	18	14	3	M5	4	6	M5	0.162	0.78 × 10 <sup>-4</sup>
28	95	160	200	15-38	66	30	90	35	20	15	4	M5	8	6	M5	0.24	1.70 × 10 <sup>-4</sup>
38	190	325	405	20-45	80	38	114	45	24	18	4	M6	8	10	M6	0.49	5.17 × 10 <sup>-4</sup>
42	265	450	560	25-50	95	46	126	50	26	20	4	M8	4	25	M8	0.772	11.17 × 10 <sup>-4</sup>
48	310	525	655	30-55	105	51	140	56	28	21	4	M10	4	49	M10	1.066	18.81 × 10 <sup>-4</sup>

注：M1为拆卸螺纹，位于胀紧螺栓之间

Note: M1 stands for removing thread, which is between the expansion screws.

选型举例：Example: RGE-GS28-ZT-20-24-98-AL

RGE-GS28	ZT	20	24	98	AL	备注 Note
产品规格 Product specifications	结构形式 Structural style	孔径 Bore diameter	孔径 Hole diameter	弹性体硬度 Elastomer hardness	材料 Material	



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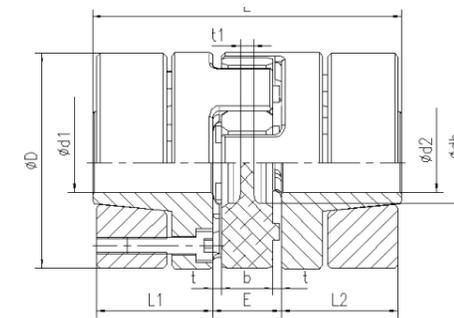
RGE-GS-ZT-S 钢质胀紧套型联轴器 Rge-gs-zt-s Steel Expansion Type Coupling

产品特点

- 无齿隙传动，一体式胀紧轴套
- 适用于机床主轴传动、压机轧辊传动
- 运转非常平稳，线速度可达50m/s
- 高响应速度，传递扭矩大，运转平稳
- 内侧的胀紧套螺栓更易拆装
- 正反转特性相同

Characteristics:

Zero Backlash, Integrated design  
Applied to spindle of machining tools and press roller, etc..  
Smooth operation, up to 50m/s for line speed.  
High responding speed, large transmission torque  
Easy mounting/removal for inner expansion screws  
Same features in positive and negative rotation



RGE-GS-ZT-S 钢质胀紧式轴套，轴套与胀紧环材质钢 RGE-GS-ZT-S Steel Locking Shaft Sleeve, the shaft sleeve and the guide roll is made of steel																
型号 Model RGE-GS-ZT-S	扭矩 (Nm)		尺寸(mm)								胀紧螺栓			最大孔径时单个轴套的重量 (kg)	最大孔径时单个轴套的转动惯量 (kg·m <sup>2</sup> )	
	98sh-A	64sh-D	d1 (min-max)	D	dh	L	L1:L2	E	b	t1	M	螺栓数量Z	TA (Nm)			M1
19	17	21	10-22	41	18	66	25	16	12	3	M4	6	4.1	M4	0.179	0.44 × 10 <sup>-4</sup>
24	60	75	14-28	56	27	78	30	18	14	3	M5	4	8.5	M5	0.399	1.91 × 10 <sup>-4</sup>
28	160	200	15-38	66	30	90	35	20	15	4	M5	8	8.5	M5	0.592	4.18 × 10 <sup>-4</sup>
38	325	405	20-45	80	38	114	45	24	18	4	M6	8	14	M6	1.225	12.9 × 10 <sup>-4</sup>
42	450	560	25-50	95	46	126	50	26	20	4	M8	4	35	M8	2.3	31.7 × 10 <sup>-4</sup>
48	525	655	30-55	105	51	140	56	28	21	4	M10	4	69	M10	3.08	52.0 × 10 <sup>-4</sup>
55	685	825	35-70	120	60	160	65	30	22	4.5	M10	4	69	M10	4.67	103.0 × 10 <sup>-4</sup>
65	940	1175	40-70	135	68	185	75	35	26	4.5	M12	4	120	M12	6.7	191.0 × 10 <sup>-4</sup>
75	1920	2400	42-80	160	80	210	85	40	30	5	M12	5	120	M12	9.9	396.8 × 10 <sup>-4</sup>
90	3600	4500	50-105	200	10	245	100	45	34	6.5	M16	5	295	M16	17.7	1136 × 10 <sup>-4</sup>

注：M1为拆卸螺纹，位于胀紧螺栓之间

注：Ø55以下的配合为H7/k6，Ø55以上（含Ø55）的配合为G7/m6时的最大间隙时的传递力矩如上表，如配合间隙增大，则传递力矩减小。

Note:

1.M1 stands for removing thread, which is between the expansion screws.

2.Max Transmission torque under max gap, see above table, H7/K6 for Size< φ 55, G7/m6 for size ≥ φ 55, if the gap is bigger, and transmission torque will be smaller;

选型举例：Example: RGE-GS28-ZT-20-24-98-S

RGE-GS28	ZT	20	24	98	S	备注 Note
产品规格 Product specifications	结构形式 Structural style	孔径 Bore diameter	孔径 Hole diameter	弹性体硬度 Elastomer hardness	材料 Material	