REACH® 瑞迪智驱
TOP 价值源于核心技术

联 轴 器

Couplings

成都瑞迪智驱科技股份有限公司
Reach Machinery Co., Ltd.

About REACH
关于瑞迪

成都瑞迪智驱科技股份有限公司创立于2009年，是一家致力于传动与制动系统关键零部件研发、生产与销售的高新技术企业。公司产品包括精密传动件、电磁制动器、谐波减速机等，广泛应用于机器人、自动化生产线、电梯、风电、数控设备、起重机、塔吊、电动叉车、自动化立体停车库、高空平台车等自动化设备和高端装备制造领域。产品面向国内外销售，与全球多个行业头部和标杆企业形成了长期稳定的战略合作关系。

瑞迪始终坚持以技术为先导的战略发展模式，坚持诚信的质量理念，不断打造以结果和责任为中心的高效管理 。瑞迪强调企业文化和核心价值观的影响力和渗透力，不断提高公司的凝聚力和市场的开拓能力。瑞迪的经营理念是通过向客户、市场、社会做出有价值的贡献，获得社会承认，通过技术、品质和管理的领先，赢得自身的发展和壮大。

REACH MACHINERY CO., LTD, founded in 2009, is a high-tech enterprise dedicated to the R & D, production and sales of key components of transmission and braking systems. REACH's products include precision transmission parts, electromagnetic brakes, harmonic reducers,etc., which are widely used in the manufacturing fields of automation equipment and high-end equipment, such as robots, automatic production lines, elevators, wind power, numerical control equipment, cranes, tower cranes, electric forklifts, automatic three-dimensional parking garages, high-altitude platform vehicles, etc. The products are sold at domestic and abroad, and established a formed long-term and stable strategic cooperative relations with many industry leaders and benchmark enterprises around the world.

REACH MACHINERY CO., LTD have been insisted on the strategic development mode with technology as the guide, devoted us to the quality concept of integrity, and constantly creates an efficient management centered on results and responsibility. REACH emphasizes the influence and penetration of corporate culture and core values, and continuously improves the company's cohesion and market development ability. REACH's business philosophy is to gain social recognition through creating valuable contributions to customers, the market and the society, and to win its own development and expansion through leading technology, quality and management.

联轴器
Couplings

1 瑞迪始终坚持以满足客户需求，持续为客户提供使用价值，并不断超越客户期望值为生存之本。瑞迪具有专业的研发和工艺设计团队，充分吸纳国外先进精益生产管理经验，通过严密的过程质量控制以及供应链配套能力，向国内外市场提供高性价比产品。

REACH always insists on meeting customer needs, continuing to provide customers with use value, and constantly exceeding customer expectations as the foundation of survival. REACH has a professional R&D and process design team, fully absorbs foreign advanced lean production management experience, and through strict process quality control and supply chain supporting capabilities,Provide cost-effective products to domestic and foreign markets.

2 瑞迪拥有完善的研发测试能力，制程在线检测能力。自主研发的弹性体以及膜片，均选用进口材料。

REACH has a perfect R & D capabilities as well as the production process online testing capabilities.The self-developed spider and diaphragm are made of imported materials.

3 瑞迪联轴器有超过二十年生产加工并出口海外市场的经验，拥有多项发明专利，具有外观精美、扭矩稳定、动力传递可靠、长寿命的特点。

REACH has more than 20 years of experience in coupling production, processing and exporting with a number of invention patents, and beautiful appearance, stable torque, reliable power transmission, and long life spans.

瑞迪的优势

Superiority

技术优势

- 专业的研发设计团队及多项联轴器专利，充分体现瑞迪在传动件领域的技术实力
- 以客户需求为导向的设计理念，可为客户提供定制解决方案
- 长期为多家行业知名客户提供优质产品，积累了大量行业和工况经验

Technical advantages

- The R&D team and a number of coupling patents fully reflect the technical strength of REACH in the field of transmission parts.
- Customer demand-oriented design concept, provide customized solutions
- Longtime cooperated with industrial top customers, accumulated a lot of industry and application experiences.

质量管理

- GB/T 19001-2016/ISO 9001:2015
- GB/T 24001-2016/ISO 14001:2015
- 推行六西格玛和TQM全面质量管理
- 独立的检测中心和齐全的检测设备
- 德国蔡司高精度三坐标测量中心
- 高精度轮廓检测仪
- 联轴器寿命综合测试系统
- 弹性体高低温扭矩测试平台
- 联轴器动平衡检测设备

Quality management

- GB/T 19001-2016/ISO9001:2015
- GB/T 24001-2016/ISO 14001:2015
- Implement Six Sigma and TQM
- Independent inspection center and complete inspection equipments
- High-precision Zeiss CMM import from Germany
- High precision contour tester
- Coupling-life comprehensive test system
- High and low temperature torque testing platform for elastomer
- Coupling dynamic balance testing equipment

CONTENTS 目录

REACH 星形弹性爪式联轴器 Reach resilient coupling with spider

星形弹性爪式联轴器（GR/GS）概述

星形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，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。

星形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 resilient coupling with spider Summary

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.

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、胀紧式、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	

产品结构代码 Structure Coding

标准型联轴器：A、B、C
Classic Type: A, B, C

法兰联轴器： FA、FB、FC、FD、FE、FF
Flange Coupling: FA, FB, FC, FD, FE, FF

单开槽式联轴器：DK
Coupling, Single–notching: DK

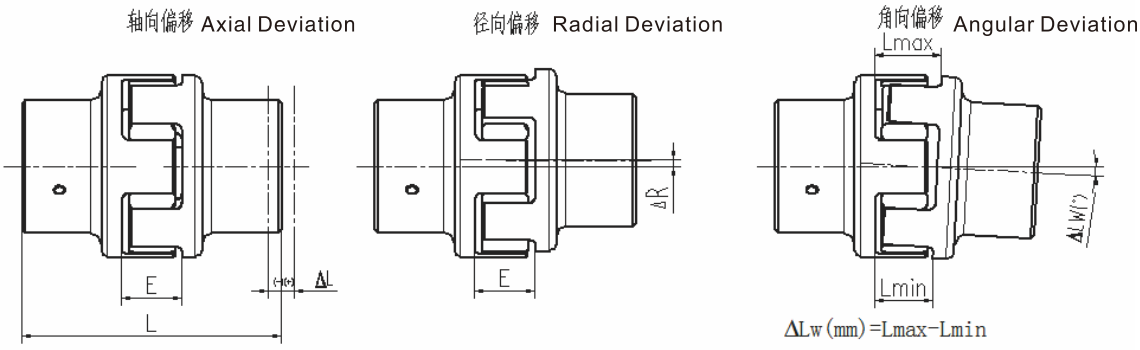
胀套式联轴器：ZT
Locking Coupling: ZT

制动式 联轴器：ZD
Braking Coupling: ZD

双开槽式联轴器：KC
Coupling, Double–notching: KC

双节联轴器：SJ
2–Section Coupling: SJ

爪式联轴器纠偏功能及参数
Function – Rectification & Parameters



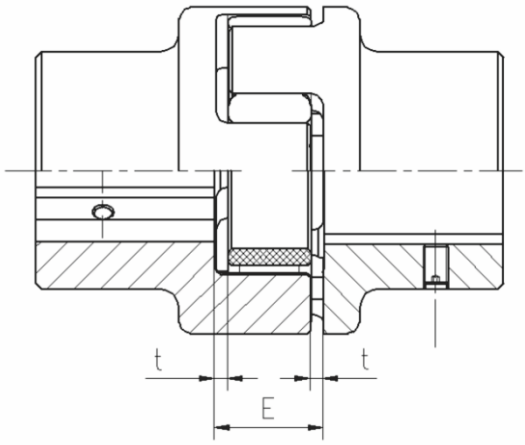
n=1500rpm时　when n=1500 rpm

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 △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△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△LW(°)	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△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 △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△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△LW(°)	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△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

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×P(KW)/n(rpm)

冲击扭矩产生的载荷校核

Examine & Verify load from impulsive torque

TKmax≥2.0×TN×MA×SA×SZ×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℃	-30℃ +30℃	+40℃	+50℃	+60℃	+70℃	+80℃	+90℃	+100℃	+110℃	+120℃
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-GR 联轴器 RGE-GR Coupling

弹性体技术参数 Elastomer Parameters

弹性体 Elastomer	最大速度 Maximum speed		弹性体扭矩 Torque（Nm）									扭转角 Torsional Angle			
型号 Model RGE-□□	V=35m/s 铸铁 Cast Iron	V=40m/s 钢 Steel	92SHA			98SHA			64SHD			92/98SHA		64SHD	
			额定 Rated	最大 Max.	交变 Alternating	额定 Rated	最大 Max.	交变 Alternating	额定 Rated	最大 Max.	交变 Alternating	TKN	Tkmax	TKN	Tkmax
14	22200	25400	7.5	15	2	12.5	25	3.3	16	32	4.2	6.4°	10°	4.5°	7°
19	16700	19000	10	20	2.6	17	34	4.4	21	42	5.5	3.2°	5°	2.5°	3.6°
24	12100	13800	35	70	9.1	60	120	16	75	150	19.5				
28	10100	11500	95	190	25	160	320	42	200	400	52				
38	8300	9500	190	380	49	325	650	85	405	810	105				
42	7000	8000	265	530	69	450	900	117	560	1120	146				
48	6350	7250	310	620	81	525	1050	137	655	1310	170				
55	5550	6350	410	820	107	685	1370	178	825	1650	215				
65	4950	5650	625	1250	163	940	1880	244	1175	2350	306				
75	4150	4750	1280	2560	333	1920	3840	499	2400	4800	624				
90	3300	3800	2400	4800	624	3600	7200	936	4500	9000	1170				
100	2950	3350	3300	6600	858	4950	9900	1287	6185	12370	1608				
110	2600	2950	4800	9600	1248	7200	14400	1872	9000	18000	2340				
125	2300	2600	6650	13300	1729	10000	20000	2600	12500	25000	3250				
140	2050	2350	8550	17100	2223	12800	25600	3328	16000	32000	4160				
160	1800	2050	12800	25600	3328	19200	38400	4992	24000	48000	6240				
180	1550	1800	18650	37300	4849	28000	56000	7280	35000	70000	9100				

对于圆周速度超过V=30m/s,需要做动平衡。对于圆周速度超过V=35m/s，建议使用中碳钢或者球墨铸铁轴套

For peripheral speed above V=30m/s, dyanmic balance is necessary. For peripheral speed above V=35m/s, we recommend steel or nodular cast iron shaft sleeve

标准弹性体
Standard Elastomer
硬度92SHA
Hardness: 92SHA
颜色：黄色
Color: Yellow
工作温度
Working Temperature:
–40~+80℃
瞬间高温
Instant Heat: 120℃

标准弹性体
Standard Elastomer
硬度98SHA
Hardness: 98SHA
颜色：红色
Color: Red
工作温度
Working Temperature:
–40~+110℃
瞬间高温
Instant Heat: 130℃

标准弹性体
Standard Elastomer
硬度:64SHD
Hardness: 64SHD
颜色：绿色
Color: Green
工作温度
Working Temperature:
–40~+110℃
瞬间高温
Instant Heat: 130℃

RGE-GR 标准型　　RGE-GR Standard series

产品特点

- 广泛应用于各种机械和液压领域
- 聚氨酯和钢的材料配合，免维护
- 可以补偿两轴相对偏移、缓冲、减振
- 具有良好的电绝缘性
- 轴向插入装配，安装方便
- 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:

- Widely used under mechanical and hydraulic pressure circumstances;
- No need to maintain by using steel in conjunction with polyurethane; Compensate relevant deviation, buffer and absorb vibration;
- Better insulate electricity;
- Easy mounting by inserting at axial direction;
- Aperture tolerance: ISO H7; Keyslot tolerance: DIN6885/1 Js9;
- Taper and inch bores are designed for option.

铝件 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	6–16	35	11	13	10	1.5	30	30	–	10	M4	5	1.5
19	A	6–19	66	25	16	12	2	41	32	20	18	M5	10	2
	B	19–24							41	–				
24	A	9–24	78	30	18	14	2	56	40	24	27	M5	10	2
	B	22–28							56	–				
28	A	10–28	90	35	20	15	2.5	66	48	28	30	M8	15	10
	B	28–38							66					
38	A	12–48	114	45	24	18	3	80	66	37	38	M8	15	10
	B	38–45							79					
42	A	14–42	126	50	26	20	3	95	75	40	46	M8	20	10
	B	42–55							94					
48	A	15–48	140	56	28	21	3.5	105	85	45	51	M8	20	10
	B	48–60							104					
55	A	20–55	160	65	30	22	4	120	98	52	60	M10	20	17
	B	55–70							118					

RGE-GR 标准型 RGE-GR Standard series

铸件 Cast Iron	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 Steel	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	–				

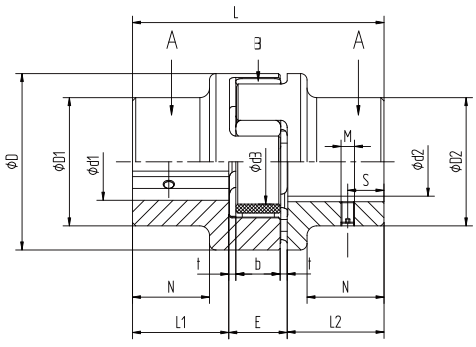
注：孔径 dH7(键槽DIN6885/1(GB/T1095-79)JS9、紧定螺钉GB77-85)从规格125起固定螺丝的尺寸按客户要求供货

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.

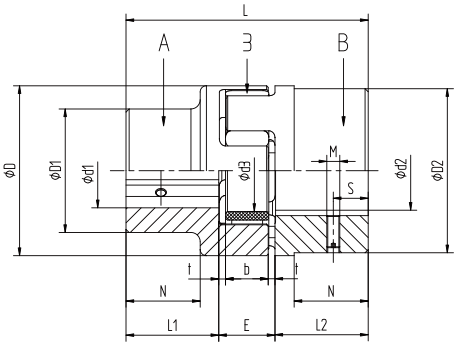
RGE-GR 标准型　　RGE-GR Standard series

选型举例：Example:

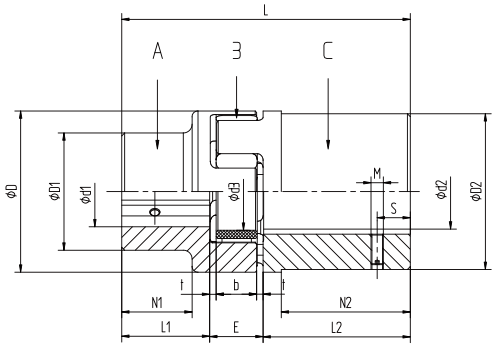
RGE28	C	AA	T	P	¢24	¢25	98
产品规格 Specification	铸件 Casting	结构 Structure	热处理调质 Tempering by heat treatment	表处磷化 Phosphate Coating	孔径 Aperture	孔径 Aperture	弹性体硬度 Elastomer hardness



标准型
Standard Type



标准加大型
Standard Oversized Type



Bz加长型
BZ Lengthen Type

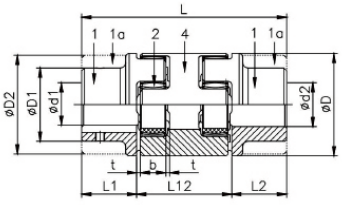
RGE-GR 双节型（SJ） RGE-GR 2 Section series

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.



Sj型
SJ Type

规格 Specification RGE-□□-SJ	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											
	92 SHA	98 SHA	径向Radial	角向Angular	轴向Axial（mm）	L	L1;L2	L12	b	t	D	D1	D2	d1· d2·
19	10	17	0.45	1°	+1.2/–1.0	92	25	42	12	2	40	参照标准型 See the standard type		
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

RGE-GR 法兰型（FL）　RGE-GR Flange series

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.

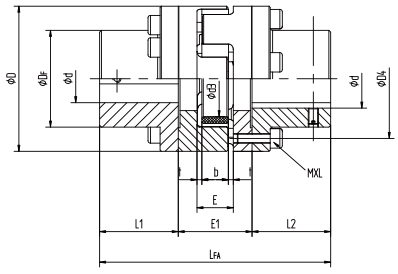
型号Model RGE-□□-FL	部件4N 半成品或成品孔 4N Semi-finished/finished Bore	基本尺寸 Fundamental Dimension												连接螺栓 Connecting Screw		
FA/FB型 FA/FB		D	DF	D4	d3	L1;L2	E	E1	t	b	L3;L4	LFA	LFB	MxL	数量Qty.	TANm
24	0-24	55	36	45	27	30	18	33	2	14	30.5	94	86	M5X16	8	10
28	0-28	65	42	54	30	35	20	39	2.5	15	35.5	110	100	M6X20	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-□□-FL	部件4N 半成品或成品孔 4N Semi-finished/finished Bore	基本尺寸Fundamental Dimension														FD/FE				
FC/FD FE/FF		D	d3	L1	E	t	b	L5	L7	DA	D3	D4	LFC	LFF	DN3	DN4	M	螺栓数量 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

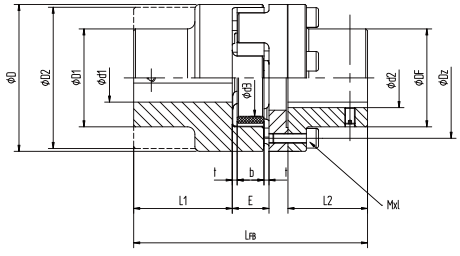
RGE-GR 法兰型（FL） RGE-GR Flange series

选型举例：Example:

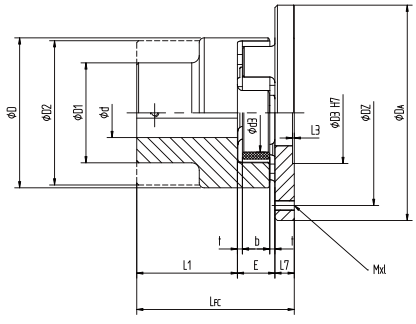
RGE28	C	FA	T	B	¢24	¢25	98
产品规格 Specification	铸件 Casting	结构 Structure	调质 Tempering	发黑 Blackening	孔径 Aperture	孔径 Aperture	弹性体硬度 Elastomer hardness



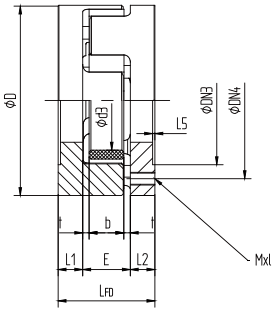
FA型/FA



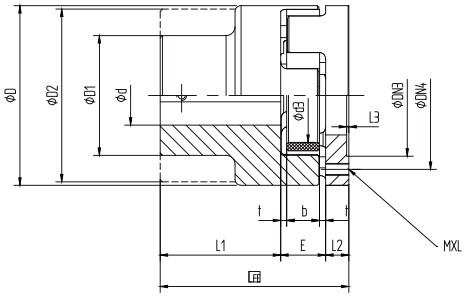
FB型/FB



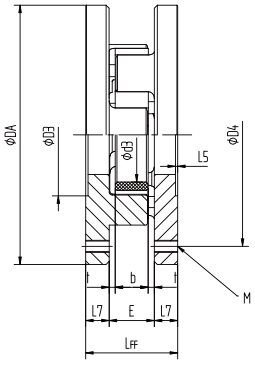
FC型/FC



FD型/FD



FE型/FE

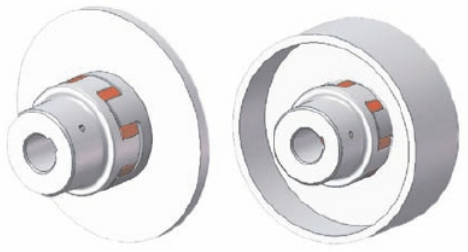


FF型/FF

RGE-GR 制动型（ZD）　RGE-GR Braking series

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



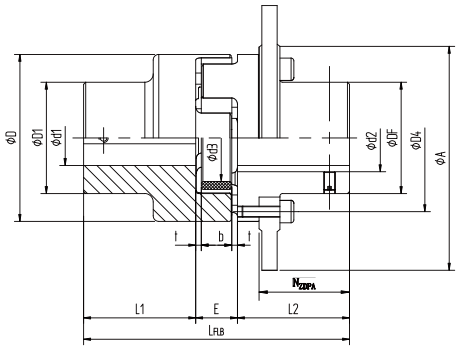
Characteristics:

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

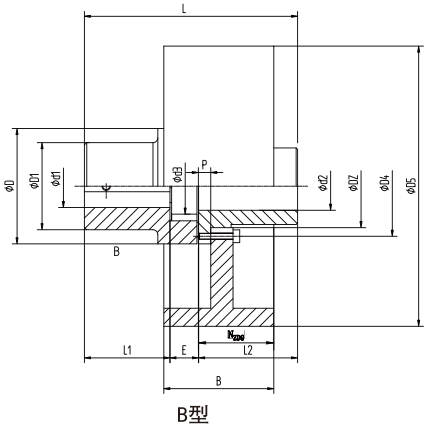
型号Model RGE-□□-ZD	弹性体额定力矩 Elastomer Rated Torque（Nm）			成品孔B Finished Bore B		尺寸 Dimension										
ZDG/ZDPA	92 SH A	98 SH A	64 SH D	铸件 Casting	钢件 Steel	D	DZ	D4	d3	L	L1;L2	E	P	Nzdg	Nzdpa	螺栓数量 Qty.
38	190	325	405	——	34	80	50	66	38	114	45	24	7.5	37.5	37.5	8
42	265	450	560	——	42	95	60	80	46	126	50	26	9.5	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:

GRE42	C	ZD	T	B	¢ 24	¢ 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



A型



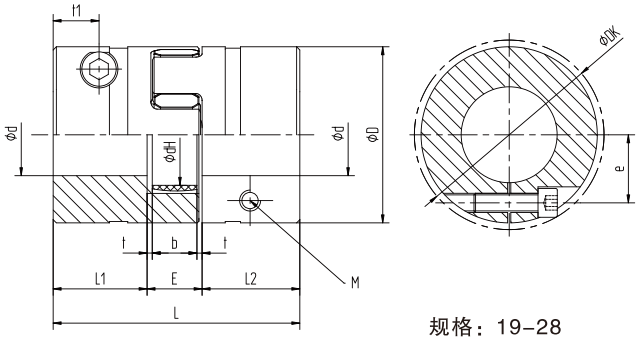
B型

RGE-GR 开槽型（DK） RGE-GR DK series

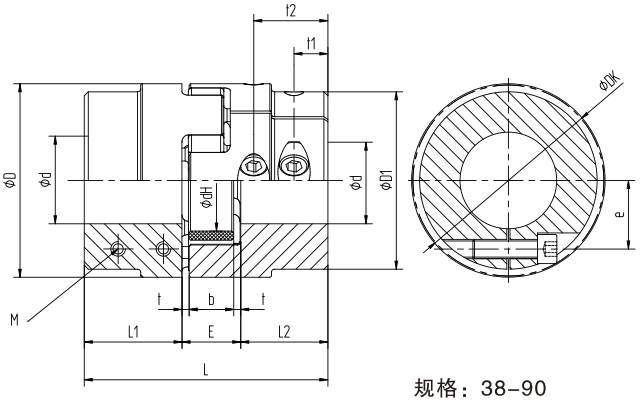
型号 Model RGE-□□-DK	成品孔 Finished Bore	尺寸 Dimension												
	dmax	L	L1;L2	E	b	t	D	d_H	D_k	t1	t2	e	M	T
19	20	66	25	16	12	2	40	18	46	12	–	14.5	M6	10.5
24	28	78	30	18	14	2	55	27	57.5	12	–	20	M6	10.5
28	38	90	35	20	15	2.5	65	30	73	14	–	25	M8	25
38	42	114	45	24	18	3	80	38	83.5	19	–	26.5	M8	25
42	50	126	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	Ø 24	Ø 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	



规格：19–28



规格：38–90

RGE-GS 无齿隙联轴器　　RGE-GS no backlash

GS 联轴器概述　GS Coupling Summary

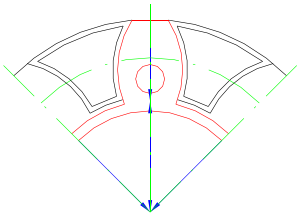
RGE–GS联轴器由三个部件组成，可方便地轴向安装。在预应力作用下保证了无齿隙的传动。同时其良好的刚性与优化的减振性能的完美组合，极大地改善了传动系统的动态特性。该结构型式使得安装极为方便，可节省安装时间。

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 Couping(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。

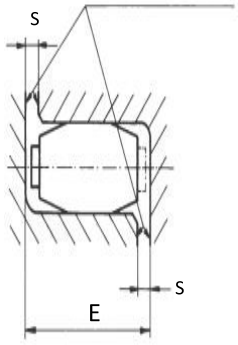
Straight–teeth type elastomer is installed with prestress, so the surface of the elastomer is applied by prestress, which can achieve better rigidity of the driving system. Elastic teeth can offset installation deviation, with the radial support of the built–in plates, the inside deformation will not be too much at high speed or accelarated rotation. The above characteristics can gurantee 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 teech 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 guranteed, then the correction ability of the coupling can be achieved.

RGE-GS 无齿隙联轴器 RGE-GS no backlash

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



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 gurantee the coupling's insulation, and extend usage life. This characteristic is critical to meet the encoder's high accuracy and electromagnetic compatibility requirements.

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 elastomesr 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 ℃		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	一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	一电子测量和控制系统的传动 Driving for electronic measurement and control system 一主轴传动 Spindle driving
98 Sh A		聚氨酯PU	–30 ~ +110	–40 ~ +130	9 ~ 90	一定位传动 Positioning driving 一主轴传动 Spindle driving 一高载荷 High load
64 Sh-D		聚氨酯PU	–20 ~ +110	–30 ~ +130	14 ~ 90	一机床主轴 Machine spindle driving 一更高载荷 Higher load 一更高扭转刚性 Higher torsional rigidity

RGE-GS 无齿隙联轴器　RGE-GS no backlash

典型运用　Typical Applications

测量和控制系统　Measurement and Control System

高扭转刚性的的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转间隙，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 无齿隙联轴器 RGE-GS no backlash

技术参数 Technical Parameters

规格 Type	弹性体硬度 Elastomer Hardness	肖氏硬度 Shore hardness	最高转速（rpm）轴套形式 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	扭矩 Torque（Nm） T_{KN}	$T_{k\,max}$	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） 单个轴套 Single sleeve	弹性体 Elastomer	转动惯量 Rotary inertia J（kgm^2） 单个轴套 Single sleeve	弹性体 Elastomer
5	80	A	38000	47700			0.3	0.6	3.15	10	82	0.001	0.2×10^{-3}	0.015×10^{-6}	0.002×10^{-6}
	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^{-3}	0.085×10^{-6}	0.01×10^{-6}
	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^{-3}	0.48×10^{-6}	0.085×10^{-6}
	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^{-3}	1.5×10^{-6}	0.139×10^{-6}
	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^{-3}	2.8×10^{-6}	0.509×10^{-6}
	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^{-3}	19.5×10^{-6}	1.35×10^{-5}
	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^{-6}	6.7×10^{-6}
	98	A					60	120	3640	5980	2560				
	64	D					75	150	5030	10896	3696				
28	92	A	5850	7350	15000	22000	95	190	4080	6745	1780	0.3	0.03	184.2×10^{-6}	14.85×10^{-6}
	98	A					160	320	6410	9920	3200				
	64	D					200	400	10260	20177	4348				
38	92	A	4750	5950	12000	17900	190	380	6525	11050	2350	0.6	0.05	542.7×10^{-6}	39.4×10^{-6}
	98	A					325	650	11800	17160	4400				
	64	D					405	810	26300	40335	6474				
42	92	A	4000	5000	10000	15000	265	530	10870	15680	2430	2.4	0.08	2802×10^{-6}	85×10^{-6}
	98	A					450	900	21594	37692	5570				
	64	D					560	1120	36860	69825	7270				
48	92	A	3600	4550	9100	13600	310	620	12968	18400	2580	3.3	0.09	4709×10^{-6}	135×10^{-6}
	98	A					525	1050	25759	45620	5930				
	64	D					655	1310	57630	99750	8274				
55	92	A	3150	3950		11900	410	820	15482	21375	2980	5.1	0.12	9460×10^{-6}	229×10^{-6}
	98	A					685	1370	42117	61550	6686				
	64	D					825	1650	105730	130200	9248				
65	98	A	2800	3500		11000	940	1880	48520	71660	6418	6.7	0.2	15143×10^{-6}	437×10^{-6}
	64	D					1175	2350	118510	189189	8870				
75	98	A	2350	2950		8950	1920	3840	79150	150450	8650	10.5	0.3	32750×10^{-6}	1179×10^{-6}
	64	D					2400	4800	182320	316377	11923				
90	98	A	1900	2380			3600	7200	204500	302900	10700	18.2	0.6	87099×10^{-6}	3362×10^{-6}
	64	D					4500	9000	429450	908700	14700				

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。TKN/TK max是对应弹性体的扭矩，轴和轴套的连接由客户校核。

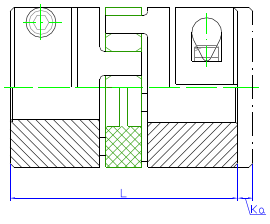
During any working situation, the transmitted torque must not be higher than allowed by the choosen coupling. TKN/TK max corresponding to the torque of elastomer, the connection of shaft and shaft sleeve should be checked by customer.

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.

軸向偏差



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。

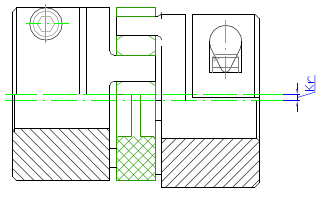
轴承通常不能承受过大的轴向力，因此联轴器需要补偿轴向偏差，以减小轴向力。

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。

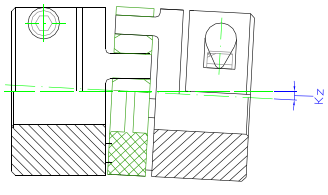
Due to different deviation arise out of centering and power sources are mounted on different surfaces, radial deviation is caused. The deviation will cause very big stress on the connecting pieces.

徑向偏差



Radial deviation

角度偏差



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.

RGE-GS 无齿隙联轴器 RGE-GS no backlash

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

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

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 TKN; rotation speed n=1500r/min; ambient temperature is 30℃.

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.

RGE-GS 标准型　　RGE-GS Standard series

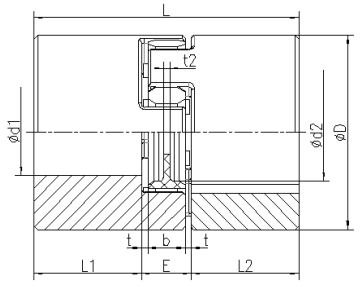
产品特点

- ●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

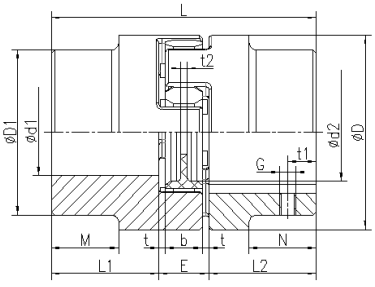
Characteristics:

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 ϕ6, JS9 for keyway.

轴套形式　Shaft sleeve types



B型轴套
B type shaft sleeve
RGE-GS9~38



A型轴套
A type shaft sleeve
RGE-GS42~90

RGE-GS标准型，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 standard type, Size 5~38 in high-strength aluminum Alloy, Size42~90 in Steel

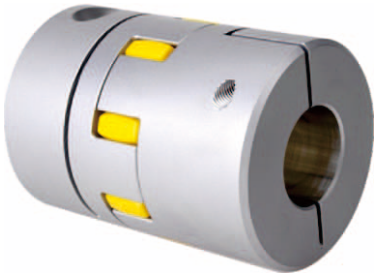
型号 Model RGE-GS	扭矩 Torque（Nm）			外形尺寸 Dimensions(mm)											定位螺丝标准型结构 Positioning screw Standard type	
	92sh-A	98sh-A	64sh-D	d1（max）	D1	D	d2	L	L1;L2	M;N	E	b	t	t2	G	t1
9	3	5	6	11	-	20	7.2	30	10	-	10	8	1	1.5	M4	5
12	5	9	12	12	-	25	8.5	34	11	-	12	10	1	3.5	M4	5
14	7.5	12.5	16	16	-	30	10.5	35	11	-	13	10	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
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

RGE-GS 开槽型（KC） RGE-GS Slotting Type (KC)

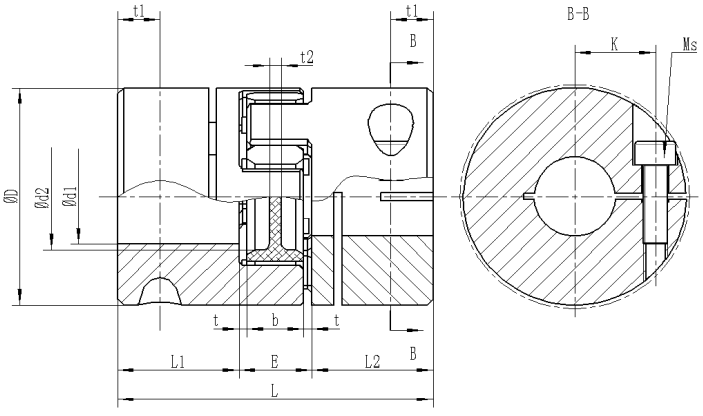
产品特点



- ●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，19~38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 19~38 in high-strength aluminum Alloy, Size42~90 in Steel

型号 Model RGE-GS-KC	扭矩 Torque（Nm）			外形尺寸 Dimensions(mm)											螺钉 Screws	锁紧力矩 Locking torque Nm
	92sh-A	98sh-A	64sh-D	D	d1 (min-max)	d2	L	L1;L2	E	k	b	t	t1	t2	M_s	T_A
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-YJ-KC

RGE-GS38	24	A/B	24	A/B	98	YJ	KC
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	阳极氧化 Anodic oxidation	结构形式 Structural style

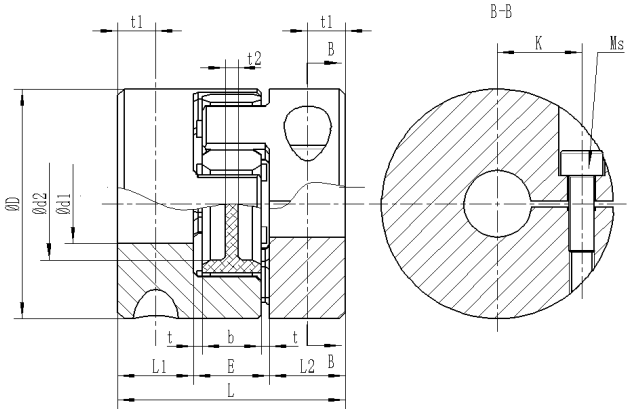
RGE-GS 开槽型（DK）　RGE-GS Slotting Type (DK)

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DIN6685/1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, DIN6685/1 for bore diameter above, JS9 for keyway.



RGE-GS-DK型，9~28规格轴套材质刚强度铝合金
RGE-GS-DK type, Size 9~28 in high-strength aluminum Alloy

型号 Model RGE-GS-DK	扭矩 Torque（Nm）			外形尺寸 Dimensions(mm)											螺钉 Screws	锁紧力矩 Locking torque Nm
	92sh-A	98sh-A	64sh-D	D	d1 (min-max)	d2	L	L1;L2	E	k	b	t	t1	t2	M_S	T_A
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-YJ-DK

RGE-GS28	24	A/B	24	A/B	98	YJ	DK
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	阳极氧化 Anodic oxidation	结构形式 Structural style

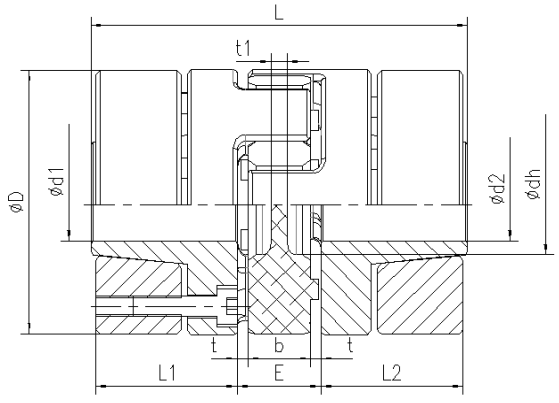
RGE-GS 胀紧套型（铝） RGE-GS Locking Device Type (AL)

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 m²）
	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^{-4}
19	10	17	21	10—20	41	18	66	25	16	12	3	M4	6	3	M4	0.077	0.19×10^{-4}
24	35	60	75	14—28	56	27	78	30	18	14	3	M5	4	6	M5	0.162	0.78×10^{-4}
28	95	160	200	15—38	66	30	90	35	20	15	4	M5	8	6	M5	0.24	1.70×10^{-4}
38	190	325	405	20—45	80	38	114	45	24	18	4	M6	8	10	M6	0.49	5.17×10^{-4}
42	265	450	560	25—50	95	46	126	50	26	20	4	M8	4	25	M8	0.772	11.17×10^{-4}
48	310	525	655	30—55	105	51	140	56	28	21	4	M10	4	49	M10	1,066	18.81×10^{-4}

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
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

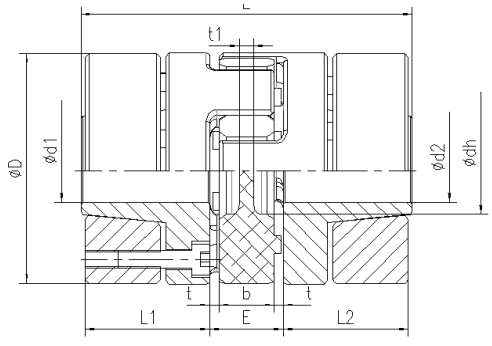
RGE-GS 胀紧套型（钢）　RGE-GS Locking Device Type (S)

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 ㎡）
	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^{-4}
24	60	75	14—28	56	27	78	30	18	14	3	M5	4	8.5	M5	0.399	1.91×10^{-4}
28	160	200	15—38	66	30	90	35	20	15	4	M5	8	8.5	M6	0.592	4.18×10^{-4}
38	325	405	20—45	80	38	114	45	24	18	4	M6	8	14	M6	1,225	12.9×10^{-4}
42	450	560	25—50	95	46	126	50	26	20	4	M8	4	35	M8	2.3	31.7×10^{-4}
48	525	655	30—55	105	51	140	56	28	21	4	M10	4	69	M10	3.08	52.0×10^{-4}
55	685	825	35—70	120	60	160	65	30	22	4.5	M10	4	69	M10	4.67	103.0×10^{-4}
65	940	1175	40—70	135	68	185	75	35	26	4.5	M12	4	120	M12	6.7	191.0×10^{-4}
75	1920	2400	42—80	160	80	210	85	40	30	5	M12	5	120	M12	9.9	396.8×10^{-4}
90	3600	4500	50—105	200	10	245	100	45	34	6.5	M16	5	295	M16	17.7	1136×10^{-4}

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。

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< ϕ55, G7/m6 for size≥ ϕ55.

选型举例：Example：RGE-GS28-ZT-20-24-98-S

RGE-GS28	ZT	20	24	98	S
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

REACH 膜片联轴器 REACH Diaphragm Coupling

1.膜片联轴器概述 Diaphragm Coupling Summarize

膜片联轴器是一种无齿隙免维护的联轴器，其膜片由不锈弹簧钢制成，强度高，扭向刚性好，补偿偏差能力强，回复力低，能承受高温。

Membrane coupling is of zero backlash and free maintenance. Its Membrane is made of stainless steel spring, which has the features as higher strength, better torsional stiffness, strong deviation compensation, smaller restoring force, better resistance to high temperature, etc…

2.防爆性能 Explosion-proof Performance

RIC\RDC系列联轴器适用于有防爆要求的场合

RIC/RDC couplings are designed for explosion–proof application

3.技术术语说明 Technical Term Description

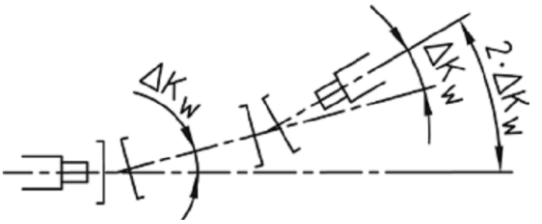
技术参数 Technical Parameters	符号 Symbol	说明 Note
联轴器许用额定扭矩 Allowable Rated Torque	T_{KN}	在允许的速度范围内连续运转所能传递对的扭矩 The torque transmitted by continuous running within the allowable speed.
联轴器许用交变扭矩 Allowable Alternative Torque	T_{KW}	在频率为10Hz,额定力矩T_N或动态载荷达到T_N时的允许交变扭矩的振动幅度 Vibration amplitude of allowable alternative torque under frequency of 10Hz, rated torque TN or dynamic load at TN
联轴器许用最大扭矩 Allowable Maximum Torque	T_{KMAX}	在联轴器整个工作寿命中传递大于10^5次动态载荷或5x10^4次交变载荷时的许用扭矩 Allowable torque transmitted by more than 10^5 dynamic load or 5x10^4 alternative load during the whole lifetime of the coupling.

3.1 允许偏差 Allowable Deviation

△Ka: 允许轴向偏差 Allowable Axial Deviation
△Kw: 允许角向偏差 Allowable Angular Deviation
△Kr: 允许径向偏差 Allowable Radial Deviation

膜片联轴器选型时每组膜片最大许用角向偏差为△Kw，因此双节式的膜片联轴器的最大许用角向偏差为2·△Kw，每组膜片的许用角向偏差参见“技术参数”。

Note: △Kw stands for max allowable angular deviation for each membrane set, and 2. Kw for max allowable angular deviation for 2 membranes. Pls refer to “technical parameter” for allowable angular deviation of each membrane.



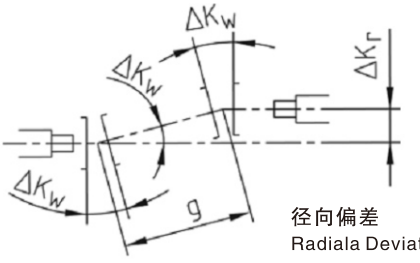
角向偏差
Angular Deviation

允许径向偏差△Kr与联轴器轴间距的关系为：
Relationship between allowable radial deviation △Kr and space of couplings (g):

$$\Delta K_r = g \cdot \tan(\Delta K_w)$$

在技术参数表中标出了各种规格相对应的允许径向偏差△Kr，以及各种规格和型号的允许最大角向偏差△Kw和轴向偏差△Ka，但三项偏差相互关联，当轴向偏差△Ka增大时，相应的角向偏差△Kw和径向偏差△Kr就会减小

△Kr(allowable radial deviation),△Kw(Max angular deviation) and△Ka(Axial deviation) can be found for each item/part in the table of technical parameter. They are interrelated, when△Ka(Axial deviation) increases,△Kr(allowable radial deviation),△Kw(Max angular deviation) will decrease accordingly.



径向偏差
Radiala Deviation

3.2 无交变扭矩的传递 Transmitted without Alternative Torque

联轴器选型时应考虑额定扭矩TKN和最大扭矩TKMAX,例如风机，压缩机等

TKN(rated torque) and Tkmax(Max torque) should be considered for a given coupling, e.g. blower, compressor, etc..

3.2.1 额定扭矩载荷 Rated Torque Loading

在考虑了工况系数SB,旋向系数SR和温度系数ST的影响后，联轴器的允许额定扭矩TKN需大于设备的额定扭矩TN

TKN (allowable rated torque of the coupling) should be over TN(rated torque of the equipment), for the influence of SB(working condition), SR(rotation coefficient) and ST(Temperature).

设备额定扭矩计算/Calculation of rated torque of equipment: TN(Nm) =9550.P(KW)/n(rpm)
联轴器额定扭矩TKN / Rated torque of coupling TKN
$T_{KN} \geqslant T_N \times S_B \times S_R \times S_T$

TN: 设备的工作扭矩 Operation torque of equipment
SB: 工况系数 Working conditions
SR：旋向系数 Rotation coefficient
SR=1.0,始终一个方向旋转 Rotate in one direction all the time
SR=1.7,正反转 Rotate clockwise and anticlockwise
ST: 温度系数 Temperature coefficient

工况系数 Working Conditions SB

应用 Application	SB
工程机械 Engineering Machinery	2.0
搅拌机 Stirring Mill	1.0–2.0
离心机 Centrifuge	1.5
输送设备 Conveying Equipment	2.0
起重机 Crane	2.0
鼓风机 Blower	1.5
发电机 Generator	1.0
冷却机 Cooler	2.0
破碎机 Crusher	2.5
纺织机械 Textile Machinery	2.0
轧钢设备 Rolling Equipment	2.5
木工设备 Wood Working Equipment	1.5

应用 Application	SB
搅拌机和注塑机 Stirring Machine & Injection Machine	2.0
冲压机 Punch	2.5
机床 Machine Tool	2.0
磨碎机 Grinding Mill	2.5
包装机械 Packing Machinery	1.0
轧辊驱动 “Roller Drive”	2.5
活塞泵 Piston pump	2.5
离心泵 Centrifugal pump	1.5
活塞压缩泵 Compression piston pump	2.5
蜗杆压缩泵 Worm compressor pump	2.0

温度系数 Temperature Coefficient ST

温度系数 Temperature Coefficient St						
℃	–30.0	0.0	150.0	200.0	230.0	270.0
ST	1.0	1.0	1.0	1.1	1.25	1.43

用户选型时请充分考虑以上工况系数

User selection should be fully considered the above conditions coefficient.

3.2.2 冲击载荷 Impulsive Load

在考虑了工况系数SB,温度系数ST和旋向系数SR的影响后，联轴器最大许用扭矩TKMAX必须大于设备的冲击扭矩Ts和额定扭矩TN之和。此种情况是考虑了设备运转时受到冲击载荷的影响。如果从动件的转动惯量较大，请与我司技术部门联系。

After considering the influence of working condition coefficient Sb, temperature coefficient St and rotation coefficient Sr, the maximum permissible torque of the coupling Tkmax must be greater than the sum of the impact torque Ts and the rated torque of the equipment Tn. In this case, the impact load is affected by the operation of the equipment. If the rotational inertia of the follower is larger, please contact our technical department.

$T_{KMAX} \geq (T_N + T_S) \times S_R \times S_T$

TN: 设备的工作扭矩 Operation torque of equipment

SB: 工况系数 Working conditions

SR：旋向系数 Rotation coefficient

SR=1.0,始终一个方向旋转 Rotate in one direction all the time

SR=1.7,正反转 Rotate clockwise and anticlockwise

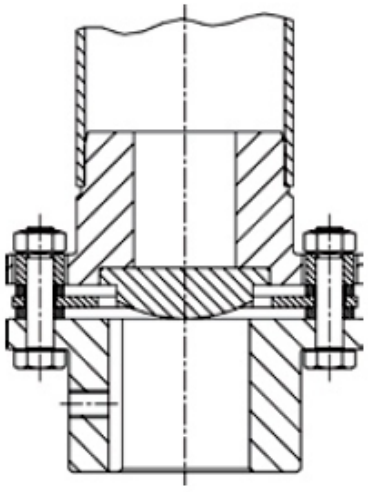
ST: 温度系数 Temperature coefficient

TS: 峰值力矩 Peak Torque

4.有交变扭矩传动 Transmission under Alternative Torque

对于存在高交变扭矩的传动，如柴油机，活塞式压缩机，柱塞泵，发电机等，必须进行扭振计算来确保运行安全。对于存在交变扭矩的运行场合，用户在选型时请与我司技术部门联系，以便帮您准确的选型。
such as diesel engine, piston compressor, plunger pump and generator, etc, it is necessary to calculate torsional oscillation for the purpose of operation safety. For transmis sion under alternative torque, Customers are recommended to contact our technology department to ensure appropriate selection.

5.技术准则 Technical Rules



5.1 安装操作 Mounting

安装时请保证膜片轴向无变形
Please ensure no deformation in axial direction occurs in mounting.

5.2 安装 Mounting Requirement

标准型RDC\RIC产品适合水平和垂直安装，有中间体的产品垂直安装时中间体必须有支撑。
RDC/RIC standard couplings are allowed to be mounted horizontally and vertically. If the product contains an intermediate, the part must be supported if mounted vertically.

5.3 动平衡 Dynamic Balance

可根据用户要求做动平衡，绝大多数情况下，不需要做动平衡。如有疑问可与我司技术部门联系。
We provide dynamic balance if customer requests, though it is not necessary in most cases. If you have any question, please contact our technical department.

6.安全准则 Safety Rules

1.选择联轴器时必须保证在任何工况下工作载荷不能超出联轴器的允许载荷。因此实际工作载荷与联轴器允许载荷必须做比较。
When select, the operation torque of coupling must not exceed the allowable torque in any working conditions. The actual working load must be compared to the allowable torque.
2.用户必须防止意外触碰旋转部件。
Customers must prevent rotating parts from being touched by accident.
3.为防止联轴器万一因过载造成断裂，应采取充分的保护措施。
Customers are recommended to take sufficient protection measures to prevent couplings from rupture in case of overload.

膜片联轴器 RIC系列 Diaphragm Coupling RIC Series

RIC系列概述 RIC series Summarize

・RIC主体联轴器材料采用轻质、高强度强力铝合金材料制造,膜片采用弹簧用高强度不锈钢片制造；使RIC膜片联轴器在实现高扭转刚性、高应答性的同时，具有极低转动惯量。

・RIC标准联轴器分为单膜片的RIC–□–O型和装有双膜片的RIC–□–T型.RIC

・应用：数控机床、纺织机械、印刷机以及其他要求转动惯量低，转速高，传递精度高的场合

RIC Couplings are made of light–weight and high–strength aluminum alloy.
The diaphgrams are made of high strength stainless steel sheets. .

RIC diaphgrams are characterized by high torsional stiffness and response with pretty low moment of inertia.
Couplings are divided into single–diaphgram RIC–□–o type and double–diaphgram RIC–□–T type.

Application: CNC machine tool ,Textile Machinery, Printing press,Printing presses and other requirements of low rotational inertia, high speed, high transmission accuracy occasion.

型号说明 Model Coding

RIC–060–T–A–15B–20B

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

① 从动轴连接方式(B—螺钉夹紧式)
② 孔径尺寸代码（从动轴）
③ 主动轴连接方式(B—螺钉夹紧式)
④ 孔径尺寸代码（主动轴）
⑤ 产品结构代码2（A/B/C）
⑥ 产品结构代码1(O/T)
⑦ 规格代码
⑧ 种类代码

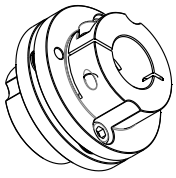
① Driven shaft’s connection type (B—bolt clamping)
② Hole diameter code (driven shaft)
③ Driving shaft’s connection type (B—bolt clamping)
④ Hole diameter code (driving shaft)
⑤ Product Structure code 2 (A/B/C)
⑥ Product Structure code 1(O/ T)
⑦ Model code
⑧ Category code

膜片联轴器 RIC系列 Diaphragm Coupling RIC Series

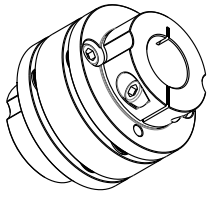
产品特点及应用场合 Product Feathers and Applications

产品概览 Product Overview

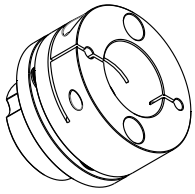
RIC-XXX-0-A



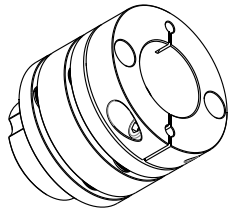
RIC-XXX-T-A



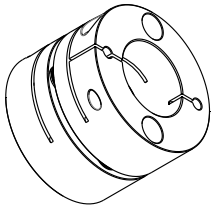
RIC-XXX-0-B



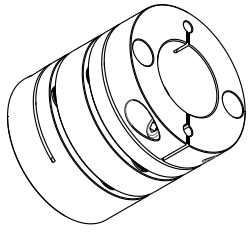
RIC-XXX-T-B



RIC-XXX-0-C



RIC-XXX-T-C



项目 Item		RIC-XXX-0单膜片联轴器 RIC-XXX-0 Single Diaphragm Coupling	RIC-XXX-T双膜片联轴器 RIC-XXX-T Double Diaphragm Coupling
容许扭矩 Allowable Torque（N·m）		0.6~250	0.6~250
孔加工直径范围 Hole Machining Diam-eter Range（mm）		3~45	3~45
使用温度 Operation Temperatur（℃）		-30~+100	-30~+100
最大容许误差 Max. Allowable Error	径向 Radial（mm）	0.02	0.05~0.44
	角向 Angular（°）	0.5~1	1~2
	轴向 Axial（mm）	±0.05~±0.74	±0.1~±1.48

膜片联轴器 RIC系列 Diaphragm Coupling RIC Series

产品特点及应用场合 Product Feathers and Applications

产品特点 Product Feathers

1、RIC系列膜片联轴器主体（半联轴节）采用高强度铝合金材料制造，在实现高扭转刚度和高响应速度的同时，具有极低的转动惯量。

2、采用不锈钢材料制作挠性部件（膜片），具有结构紧凑，无背隙的特点，且能吸收两轴角向、轴向、径向（此项仅双膜片具有）误差。

3、有刚性更高的RIC-XXX-0单膜片结构，也有更具挠性的RIC-XXX-T双膜片结构供选择使用。

4、孔径较小时可以选择A型或B型结构型式，将联轴器转动惯量降至更低，以更适合启动加速度高的场合。

5、产品出厂前采用专用冶具定心组装，确保了两端孔的同轴度

6、联轴器输入、输出轴均采用夹紧方式，使用户的安装、维护工作极易进行。

1. RIC series diaphragm coupling main body (half-coupling) is made of high strength aluminum alloy materials, it can realize high torsional rigidity and high response speed, in the mean time, the rotation inertia is very low.
2. The flexible component is made of stainless steel materials, the structure is compact and no back clearance, it can also absorb the errors in angular, axial, and radial (only for double diaphragm coupling) directions for the two shafts.
3. The RIC-XXX-0 single diaphragm structure has higher rigidity, the RIC-XXX-T double diaphragm structure has more flexibility, these are two options to be selected from.
4. When the hole size is relatively small, A Model or B Model structure form can be selected, which can reduce the coupling's rotation inertia even lower, so it is more suitable for high acceleration speed occasions.
5. Before delivery, the coupling is assembled with special jig machine, so as to ensure the holes' coaxiality
6. Both of the coupling's input and output shafts use clamping method, so as to ensure customers' convenience for installation and maintenance.

应用场合 Applications

本产品可广泛应用于：数控机床、药品机械、食品机械、各种自动化生产线及模组、滑台等要求转动惯量低、加减速快、传动精度高、防腐蚀、无污染场合。

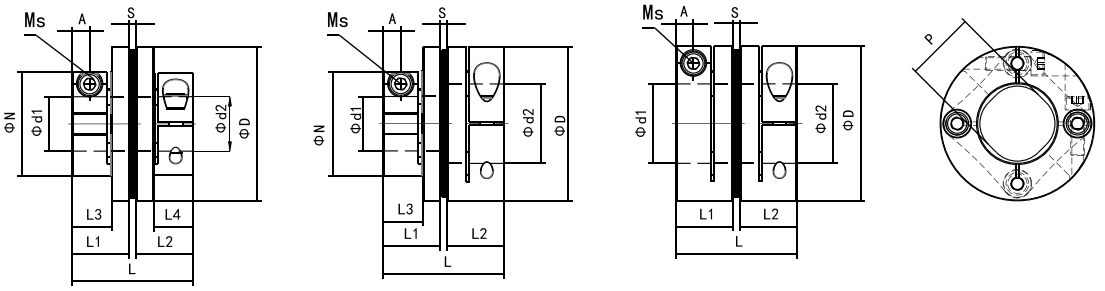
The products can be widely applied to: CNC, chemical machineries, food machineries, various automatic production lines and mould groups, moving tables etc. which require low rotation inertia, quick speed up and slow down, high transmission accuracy, anti-corrosion, non-pollution working conditions.

膜片联轴器 RIC系列　Diaphragm Coupling RIC Series

单膜片联轴器尺寸及技术参数 Technical Specification Form for Single Diaphragm Coupling

产品尺寸表 Technical Specification Form

RIC-XXX-0-A　RIC-XXX-0-B　RIC-XXX-0-C



注：产品实际装配方向与上图不尽相同，请以实际确认图为准。

Note: the product's actual assembling direction may not as same as above drawings, please follow actual confirmation drawings.

型号 Model	d1		d2		D	N	L	L1	L2	L3	L4	S	A	P	Ms	锁紧力矩 Locking Torque (N·m)
	min	max	min	max												
RIC-005-0-C	3	6	3	6	16	—	16.6	7.85	7.85	—	—	0.9	2.50	6.5	M2	0.4~0.5
RIC-010-0-C	3	8	3	8	19	—	19.2	9.15	9.15	—	—	0.9	3.15	8.5	M2	0.4~0.5
RIC-020-0-C	4	10	4	11	26	—	23.0	10.75	10.75	—	—	1.5	3.30	10.5	M2.5	1.0~1.1
RIC-025-0-C	5	14	5	14	29	—	23.3	10.75	10.75	—	—	1.8	3.30	14.5	M2.5	1.0~1.1
RIC-030-0-A	5	10	5	10	34	21.6	27.4	12.4	12.4	8.9	8.9	2.6	3.80	14.5	M3	1.5~1.9
RIC-030-0-B	5	10	5	16		21.6				8.9	—					
RIC-030-0-C	5	14	5	16		—				—	—					
RIC-035-0-C	6	16	6	18	39	—	34.2	15.5	15.5	—	—	3.2	4.50	17	M4	3.4~4.1
RIC-040-0-A	8	15	8	15	44	29.6	34.2	15.5	15.5	10.5	10.5	3.2	4.50	19.5	M4	3.4~4.1
RIC-040-0-B	8	15	8	22		29.6				10.5	—					
RIC-040-0-C	8	22	8	22		—				—	—					
RIC-050-0-A	8	19	8	19	56	38	43.4	20.5	20.5	14	14	2.4	6.00	26	M5	7.0~8.5
RIC-050-0-B	8	19	8	30		38				14	—					
RIC-050-0-C	8	25	8	30		—				—	—					
RIC-060-0-A	11	24	11	24	68	46	53.4	25.2	25.2	17.5	17.5	3	7.75	31	M6	14~15
RIC-060-0-B	11	24	11	35		46				17.5	—					
RIC-060-0-C	11	30	11	35		—				—	—					
RIC-080-0-C	18	35	18	40	82	—	68	30	30	—	—	8	9.00	38	M8	27~30
RIC-090-0-C	25	40	25	45	94	—	68.3	30	30	—	—	8.3	9.00	42	M8	27~30
RIC-100-0-C	32	45	32	45	104	—	69.8	30	30	—	—	9.8	9.00	48	M8	27~30

注：因结构形式的影响，两端孔的最大值并不能一样，尽请留意！

Note: due to structure form, the max. values for the holes at the two sides are not the same, please pay attention!

膜片联轴器 RIC系列 Diaphragm Coupling RIC Series

单膜片联轴器尺寸及技术参数 Technical Specification Form for Single Diaphragm Coupling

技术参数表 Technical Specification Form

型号 Model	容许扭矩 Allowable Torque Tkmax (N·m)	最高转速 Max. Rotating Speed (rpm)	扭转刚度 Torsional Rigidity (N·m/rad)	轴向刚度 Axial Rigidity (N/mm)	最大允许误差 Max. Allowable Error			转动惯量 Rotation Inertia (kg·m²)	质量 Mass (kg)
					径向 Radial (mm)	角向 Angular (°)	轴向 Axial (mm)		
RIC-005-0-C	0.6	10000	500	140	0.02	0.5	±0.05	0.27×10^{-6}	0.007
RIC-010-0-C	1	10000	1400	140	0.02	1	±0.1	0.6×10^{-6}	0.011
RIC-020-0-C	2	10000	3700	64	0.02	1	±0.15	2.47×10^{-6}	0.025
RIC-025-0-C	4	10000	5600	60	0.02	1	±0.19	3.78×10^{-6}	0.03
RIC-030-0-A	5	10000	8000	64	0.02	1	±0.2	4.18×10^{-6}	0.035
RIC-030-0-B								6.27×10^{-6}	0.041
RIC-030-0-C								8.44×10^{-6}	0.05
RIC-035-0-C	8	10000	18000	112	0.02	1	±0.25	19.12×10^{-6}	0.086
RIC-040-0-A	10	10000	20000	80	0.02	1	±0.3	17.19×10^{-6}	0.079
RIC-040-0-B								23.63×10^{-6}	0.09
RIC-040-0-C								30.49×10^{-6}	0.105
RIC-050-0-A	25	10000	32000	48	0.02	1	±0.4	57.71×10^{-6}	0.164
RIC-050-0-B								78.78×10^{-6}	0.182
RIC-050-0-C								102.1×10^{-6}	0.213
RIC-060-0-A	60	10000	70000	76	0.02	1	±0.45	147.2×10^{-6}	0.286
RIC-060-0-B								208.1×10^{-6}	0.331
RIC-060-0-C								273.6×10^{-6}	0.392
RIC-080-0-C	100	10000	140000	128	0.02	1	±0.55	733.7×10^{-6}	0.736
RIC-090-0-C	180	10000	100000	108	0.02	1	±0.65	1268×10^{-6}	0.973
RIC-100-0-C	250	10000	120000	111	0.02	1	±0.74	1937×10^{-6}	1.229

注：

1、表中转动惯量和质量为孔径最大时的理论值。

2、表中扭转刚度为膜片组扭转刚度的理论值。

3、最高转速为离心力、强度等因素校核所得，未考虑动平衡。

4、表中各向允许误差是相互关联的，不能同时达到最大值。如：角向误差和轴向误差同时存在，当角向误达到最大允许值的70%时，则轴向误差值不能超过最大允许值的30%

Note:

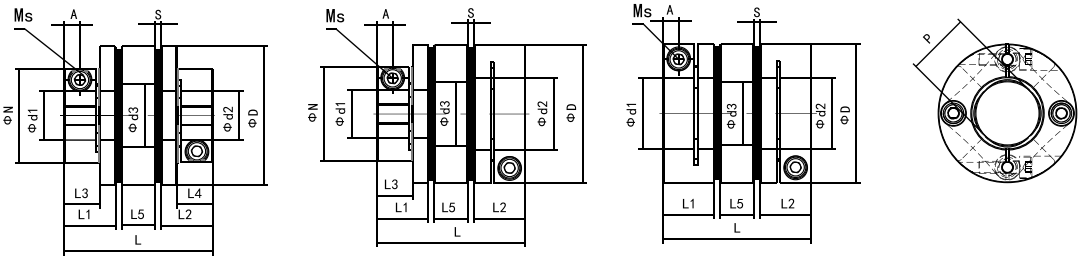
1. In the table, the values of rotational inertia and mass are theoretical ones measured when the hole diameter at one side is at its maximum.
2. In the table, the torsional rigidity is the diaphragm group’s theoretical value for torsional rigidity.
3. The maximum rotating speed has taken into consideration the factors such as centrifugal force, rigidity, etc., the dynamic balance is not considered.
4. In the table, the allowable errors in each direction are mutually relevant, they can not reach the maximum value at the same time. Example: the angular error and axial error can exist at the same time, when the angular value reaches 70% of the maximum allowable value, then the axial error is not allowed to go above 30% of the maximum allowable value.

膜片联轴器 RIC系列　Diaphragm Coupling RIC Series

双膜片联轴器尺寸及技术参数 Technical Specification Form for Double Diaphragm Coupling

产品尺寸表 Technical Specification Form

RIC-XXX-T-A　RIC-XXX-T-B　RIC-XXX-T-C



注：产品实际装配方向与上图不尽相同，请以实际确认图为准。

Note: the product's actual assembling direction may not as same as above drawings, please follow actual confirmation drawings.

型号 Model	d1		d2		d3	D	N	L	L1	L2	L3	L4	L5	S	A	P	Ms	锁紧力矩 Locking Torque (N·m)
	min	max	min	max														
RIC-005-T-C	3	6	3	6	6.5	16	—	23.6	7.85	7.85	—	—	6.1	0.9	2.50	6.5	M2	0.4~0.5
RIC-010-T-C	3	8	3	8	8.5	19	—	26.3	9.15	9.15	—	—	6.2	0.9	3.15	8.5	M2	0.4~0.5
RIC-020-T-C	4	10	4	11	11	26	—	33.6	10.75	10.8	—	—	9.1	1.5	3.30	10.5	M2.5	1.0~1.1
RIC-025-T-C	5	14	5	14	15	29	—	33.6	10.75	10.8	—	—	8.5	1.8	3.30	14.5	M2.5	1.0~1.1
RIC-030-T-A	5	10	5	10			21.6				8.9	8.9						
RIC-030-T-B	5	10	5	16	15	34	21.6	38	12.4	12.4	8.9	—	8	2.6	3.80	14.5	M3	1.5~1.9
RIC-030-T-C	5	14	5	16			—				—	—						
RIC-035-T-C	6	16	6	18	17	39	—	48.4	15.5	15.5	—	—	11	3.2	4.50	17	M4	3.4~4.1
RIC-040-T-A	8	15	8	15			29.6				10.5	10.5						
RIC-040-T-B	8	15	8	22	20	44	29.6	48.4	15.5	15.5	10.5	—	11	3.2	4.50	19.5	M4	3.4~4.1
RIC-040-T-C	8	22	8	22			—				—	—						
RIC-050-T-A	8	19	8	19			38				14	14						
RIC-050-T-B	8	19	8	30	26	56	38	59.8	20.5	20.5	14	—	14	2.4	6.00	26	M5	7.0~8.5
RIC-050-T-C	8	25	8	30			—				—	—						
RIC-060-T-A	11	24	11	24			46				17.5	17.5						
RIC-060-T-B	11	24	11	35	31	68	46	72.9	25.2	25.2	17.5	—	16.5	3	7.75	31	M6	14~15
RIC-060-T-C	11	30	11	35			—				—	—						
RIC-080-T-C	18	35	18	40	40	82	—	101	30	30	—	—	25	8	9.00	38	M8	27~30
RIC-090-T-C	25	40	25	45	47	94	—	101.6	30	30	—	—	25	8.3	9.00	42	M8	27~30
RIC-100-T-C	32	45	32	45	50	104	—	104.6	30	30	—	—	25	9.8	9.00	48	M8	27~30

注：因结构形式的影响，两端孔的最大值并不能一样，尽请留意！

Note: due to structure form, the max. values for the holes at the two sides are not the same, please pay attention!

膜片联轴器 RIC系列 Diaphragm Coupling RIC Series

双膜片联轴器尺寸及技术参数 Technical Specification Form for Double Diaphragm Coupling

技术参数表 Technical Specification Form

型号 Model	容许扭矩 Allowable Torque Tkmax (N·m)	最高转速 Max. Rotating Speed (rpm)	扭转刚度 Torsional Rigidity (N·m/rad)	轴向刚度 Axial Rigidity (N/mm)	最大允许误差 Max. Allowable Error			转动惯量 Rotation Inertia (kg·m²)	质量 Mass (kg)
					径向 Radial (mm)	角向 Angular (°)	轴向 Axial (mm)		
RIC-005-T-C	0.6	10000	250	70	0.05	1	±0.1	0.39×10^{-6}	0.011
RIC-010-T-C	1	10000	700	70	0.11	2	±0.2	0.84×10^{-6}	0.016
RIC-020-T-C	2	10000	1850	32	0.16	2	±0.3	3.72×10^{-6}	0.038
RIC-025-T-C	4	10000	2800	30	0.15	2	±0.38	5.58×10^{-6}	0.043
RIC-030-T-A	5	10000	4000	32	0.14	2	±0.4	7.65×10^{-6}	0.055
RIC-030-T-B								9.74×10^{-6}	0.062
RIC-030-T-C								11.91×10^{-6}	0.07
RIC-035-T-C	8	10000	9000	56	0.19	2	±0.55	27.92×10^{-6}	0.127
RIC-040-T-A	10	10000	10000	40	0.19	2	±0.65	30.89×10^{-6}	0.127
RIC-040-T-B								37.33×10^{-6}	0.139
RIC-040-T-C								44.19×10^{-6}	0.154
RIC-050-T-A	25	10000	16000	24	0.24	2	±0.8	102.1×10^{-6}	0.259
RIC-050-T-B								123.2×10^{-6}	0.277
RIC-050-T-C								146.5×10^{-6}	0.308
RIC-060-T-A	60	10000	35000	38	0.28	2	±0.9	258.3×10^{-6}	0.451
RIC-060-T-B								319.2×10^{-6}	0.495
RIC-060-T-C								384.7×10^{-6}	0.556
RIC-080-T-C	100	10000	70000	64	0.44	2	±1.1	1103×10^{-6}	1.102
RIC-090-T-C	180	10000	50000	54	0.44	2	±1.3	1895×10^{-6}	1.444
RIC-100-T-C	250	10000	60000	55.5	0.44	2	±1.48	2901×10^{-6}	1.827

注：

1、表中转动惯量和质量为孔径最大时的理论值。

2、表中扭转刚度为膜片组扭转刚度的理论值。

3、最高转速为离心力、强度等因素校核所得，未考虑动平衡。

4、表中各向允许误差是相互关联的，不能同时达到最大值。如：角向误差和轴向误差同时存在，当角向误达到最大允许值的70%时，则轴向误差值不能超过最大允许值的30%

Note:

1. In the table, the values of rotational inertia and mass are theoretical ones measured when the hole diameter at one side is at its maximum.
2. In the table, the torsional rigidity is the diaphragm group’s theoretical value for torsional rigidity.
3. The maximum rotating speed has taken into consideration the factors such as centrifugal force, rigidity, etc., the dynamic balance is not considered.
4. In the table, the allowable errors in each direction are mutually relevant, they can not reach the maximum value at the same time. Example: the angular error and axial error can exist at the same time, when the angular value reaches 70% of the maximum allowable value, then the axial error is not allowed to go above 30% of the maximum allowable value.

膜片联轴器 RIC系列　Diaphragm Coupling RIC Series

标准孔径及容许传递扭矩 Standard Hole Size and Allowable Transmission Torque

型号 Model	孔径范围 Hole Size Range	孔容许传递最大扭矩 Allowable Transmission Torque of the Hole Size （N·m）	3	4	5	6	6.35	7	8	9	9.525	10	11	12	14	15	16	17	18
RIC–005–0/T	d1		0.6	0.6	0.6	0.6													
	d2		0.6	0.6	0.6	0.6													
RIC–010–0/T	d1		1	1	1	1	1	1	1										
	d2		1	1	1	1	1	1	1										
RIC–020–0/T	d1			2	2	2	2	2	2	2	2	2							
	d2			2	2	2	2	2	2	2	2	2	2						
RIC–025–0/T	d1				2.1	4	4	4	4	4	4	4	4	4	4				
	d2				2.1	4	4	4	4	4	4	4	4	4	4				
RIC–030–0/T	d1				2.8	3.4	5	5	5	5	5	5	5	5	5				
	d2				2.8	3.4	5	5	5	5	5	5	5	5	5	5	5		
RIC–035–0/T	d1					5	5	6.6	8	8	8	8	8	8	8	8	8		
	d2					5	5	6.6	8	8	8	8	8	8	8	8	8	8	8

型号 Model	孔径范围 Hole Size Range	孔容许传递最大扭矩 Allowable Transmission Torque of the Hole Size （N·m）	8	9	9.525	10	11	12	14~17	18、19	20、22	24	25	28、30	32	35	38、40	42~45
RIC–040–0/T	d1		9	10	10	10	10	10	10	10								
	d2		9	10	10	10	10	10	10	10	10							
RIC–050–0/T	d1		18	20	22	22	25	25	25	25	25	25	25					
	d2		18	20	22	22	25	25	25	25	25	25	25	25				
RIC–060–0/T	d1						50	51	60	60	60	60	60	60				
	d2						50	51	60	60	60	60	60	60	60	60		
RIC–080–0/T	d1									100	100	100	100	100	100	100		
	d2									100	100	100	100	100	100	100	100	
RIC–090–0/T	d1												180	180	180	180	180	
	d2												180	180	180	180	180	180
RIC–100–0/T	d1														226	250	250	250
	d2														226	250	250	250

注：

1、受膜片组内孔尺寸的影响，两端孔径（d1、d2）并不能取同样的最大值。

2、上述扭矩值是在与联轴器配合的轴外径公差为 h7 时校核所得结果。

3、在上表所列的孔径范围内，我司可按客户要求特殊定制（如：加工英制尺寸孔径）。

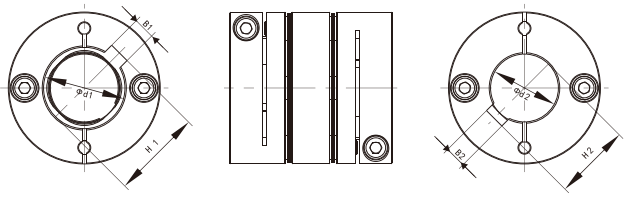
Note:

1. Because of the diaphragm group’s inner diameter, the hole sizes(D1, D2) at the two side can not be the same max. value.
2. The above torque is determined when the outer diameter of the conpling’s jointed shaft is h7.
3. In the hole size range specified in above table, our company can customize according to customers’ requirements. (for example, machining hole size in inch).

膜片联轴器 RIC系列 Diaphragm Coupling RIC Series

定制服务—键槽加工 Customized Service– Key Slot Machining

键槽尺寸图 Key Slot Dimension Drawing



键槽尺寸表 Key Slot Dimension Form

孔径Hole Size（φd1、φd2）	键槽宽 Key Slot Width (B1 、B2)	键槽高 Key Slot Height (H1 、H2)
8	2±0.012	$9^{+0.1}_{0}$
9	3±0.012	$10.4^{+0.1}_{0}$
10	3±0.012	$11.45^{+0.1}_{0}$
11	4±0.015	$12.8^{+0.1}_{0}$
12	4±0.015	$13.8^{+0.1}_{0}$
14	5±0.015	$16.3^{+0.1}_{0}$
15	5±0.015	$17.3^{+0.1}_{0}$
16	5±0.015	$18.3^{+0.1}_{0}$
17	5±0.015	$19.3^{+0.1}_{0}$
18	6±0.015	$20.8^{+0.2}_{0}$
19	6±0.015	$21.8^{+0.2}_{0}$
20	6±0.015	$22.8^{+0.2}_{0}$
22	6±0.015	$24.8^{+0.2}_{0}$
24	8±0.018	$27.3^{+0.2}_{0}$
25	8±0.018	$28.3^{+0.2}_{0}$
28	8±0.018	$31.3^{+0.2}_{0}$
30	8±0.018	$33.3^{+0.2}_{0}$
32	10±0.018	$35.3^{+0.2}_{0}$
35	10±0.018	$38.3^{+0.2}_{0}$
38	10±0.018	$41.3^{+0.2}_{0}$
40	12±0.021	$43.3^{+0.2}_{0}$
42	12±0.021	$45.3^{+0.2}_{0}$
45	14±0.021	$48.8^{+0.2}_{0}$

注意事项 Matters Needing Attention

一、RIC膜片联轴器依靠联轴器与轴之间夹紧时存在的摩擦力便能可靠的传递“容许扭矩”，孔内增加键槽并不是必须的设计。

二、用户需在孔内加工键槽时，请确认上图及左表中相关键槽的方向和尺寸公差；用户需确保所用键的宽度小于表中键槽宽度。

三、使用钩头键等压入安装的键时，可能造成联轴器在装配或使用过程中发生破损。

四、由于键槽与键的摩擦作用，联轴器在安装到轴上时，可能会对联轴器施加较大的轴向压缩力，请注意消除膜片上受到的压缩力。

五、如键过松，可能在使用中由于键的晃动而产生粉尘，同时键存在脱出的可能，请注意避免。

六、产品代码需相应更改（原孔径后“B”改为“BJ”），示例：RIC–060–T–C–15BJ–20BJ

Note:

1.The RIC diaphragm coupling transmits allowable torque relying on the friction force when the coupling tightly holds the shaft, the additional key slot in the hole is not necessary design.

2.Shall customers choose to machine key slot in the hole, please check the key slot’s direction and the dimensional tolerance shown in above drawing or left table, customers need to ensure that the width of the key used is less than the key slot width in the table.

3.When use keys such as gib–head taper stock key that press–in installation shall be employed, damage may be caused to the coupling during assembling and operation.

4.Due to friction between the key slot and the key, when the coupling is installed on the shaft, relatively high compressing force in axial direction may be applied onto the coupling, please take care to eliminate the compressing force applied onto the diaphragm.

5.If the key is loose, the key’s vibration may cause dust during operation, it is also possible the key will slip out, please avoid that.

6.The product code need to be changed(“B” to “BJ” behind the hole diameter), example: RIC–060–T–C–15BJ–20BJ

膜片联轴器 RIC系列　Diaphragm Coupling RIC Series

选型步骤 Model Selection Steps

1、伺服、步进、变频电机用RIC联轴器扭矩校核

①、确定伺服、步进、变频电机的最大扭矩Tm：

Tm一般为伺服、步进、变频电机额定扭矩的3倍

②、计算联轴器所需容许扭矩（Tn）

Tn=Tm・1.5

Tn— 联轴器所需容许扭矩，N・m

Tm— 伺服、步进、变频电机标称最大扭矩，N・m

③、依据Tn值初步确定联轴器基本规格，确保所选联轴器容许扭矩Tkmax≥Tn

2、普通电机或驱动设备用RIC联轴器扭矩校核

①、计算联轴器所需传递的扭矩（T）

T=9550・PW/n

T—联轴器需传递扭矩，N・m

PW—电机（或其他驱动机）额定功率，kW

n—电机（或其他驱动机）实际使用转速，r/min(rpm)

②、计算联轴器所需容许扭矩（Tn）

Tn=T・K

Tn— 联轴器所需容许扭矩，N・m

T—联轴器需传递扭矩，N・m

K—工况系数，①恒定载荷：K=1、②小变动载荷：K=1.25、③中等变动载荷：K=1.75、④大变动载荷：K=2.25

③、依据Tn值初步确定联轴器基本规格，确保所选联轴器容许扭矩Tkmax≥Tn

3、对于有高的交变扭矩存在的场合（如存在：柴汽油发动机、活塞式压缩机、柱塞泵、发电机等），请联系瑞迪工程师协助计算、选型。

4、确定安装、使用时联轴器的径向、角向、轴向偏差不超过《技术参数表》中的各项限定值，多种偏差同时存在时，允差应按比例减少。理论上单膜片联轴器不能承受径向偏差，如使用中有不可避免的径向偏差存在，请选择双膜片联轴器。

注：

上述Tkmax值请在《技术参数表》中查阅、获取。

1. Use RIC coupling to carry out torque checking for servo motor, stepping motor and variable frequency motor.

①. Determine the maximum torque Tm for servo motor, stepping motor and variable frequency motor:

Tm is usually 3 times of the rated torque of servo motor, stepping motor and variable frequency motor

②. Calculate the needed allowable torque for the coupling (Tn)

Tn=Tm・1.5

Tn—the needed allowable torque for the coupling, N・m

Tm—nominal maximum torque for servo motor, stepping motor and variable frequency motor

③. Based on Tn,the coupling's basic specification is primarily determined, which is to ensure the selected coupling's allowable torque Tkmax≥Tn

2. Use RIC coupling to carry out torque checking for common motors and driving devices.

①. Calculate the needed transmitted torque for the coupling (T)

T=9550・PW/n

T—the needed transmitted torque for the coupling, N・m

PW—the rated torque for motor(or other driving devices), kW

n—actual rotating speed for motor(or other driving devices), r/min (rpm)

②. Calculate the needed transmitted torque for the coupling (Tn)

Tn=T・K

Tn—the needed allowable torque for the coupling, N・m

T—the needed transmitted torque for the coupling, N・m

K—working condition coefficient, ① constant load: K=1, ②small fluctuating load: K=1.25, ③ moderate fluctuating load: K=1.75, ④ big fluctuating load: K=2.25

③ Based on Tn, the coupling's basic specification is primarily determined, which is to ensure the selected coupling's allowable torque Tkmax≥Tn

3. For the occasions with high alternate torque (for example: diesel fuel engine, piston compressor, plunger pump, generator, etc.), please contact the engineers of REACH for calculation and model selection.

4. During installation and operation of the coupling, ensure the errors in in radial, angular, and axial directions not go above every limiting value specified in the Technical Specification Form, when the errors exist at the same time, the allowable errors shall be reduced proportionally. In theory, the single diaphragm coupling can not sustain radial error, during operation, if there is unavoidable radial error, please select the double diaphragm coupling.

Note:

please refer to the Technical Specification Form for checking and obtaining the aforesaid Tkmax value.

膜片联轴器 RIC系列 Diaphragm Coupling RIC Series

安装维护说明 Installation and Maintenance Instructions

1、安装使用前，请确认以下内容：
①该产品是否与所订购产品一致；②该产品有无在运输过程中存在损伤
2、安全注意事项：
①、环境及相关装置
a、危险事项：
● 旋转的联轴器可能会对人体造成伤害，请为其设置安全罩，并在安全罩上设置打开急停保护装置
● 请勿将RIC产品应用于有易燃、易爆液体或气体存在或泄漏的地方
● 建议电机或其他驱动装置配置安全刹车装置
b、注意事项
● 请勿该类联轴器产品用于存在化学泄漏、高湿度、冷热温度变化大的场合
②、装配作业
a、危险事项：
● 螺钉的拧紧力矩对产品的使用性能和安全非常重要，请务必按《安装尺寸》表中规定力矩拧紧螺钉
● 安装、拆卸联轴器产品时，必须确保机器已经停转，并已确实切断相关电源
b、注意事项
● 安装联轴器前，请调整两端轴的同轴度，使同轴度误差小于0.02mm（使用RIC单膜片联轴器时）或小于0.05mm（使用RIC双膜片联轴器时）；同轴度误差过大，可能导致装置故障或损坏。
● 请使用本公司提供或与之性能等级相同的螺钉，以免造成产品损坏。
● 请配戴手套等必要的防护装备，以免在拆、装产品时造成人身伤害
● 在搬运、提升重物时，请使用必要的起重设备
③、使用
a、危险事项
● 请勿超出《技术参数表》中规定的最高转速使用联轴器产品，否则可能造成极大振动并损坏产品
● 请勿接触外露的旋转部件，以免造成人身伤害
● 请勿使联轴器两端轴的对中误差过大或超出产品《技术参数表》中允许值，以免使联轴器承受过大附加载荷并对联轴器及相关装置造成损害
b、注意事项
● 请勿使扭矩超过产品的允许值
● 当有异常的噪音或振动产生时，应检查、确认安装是否正确无误；长期的振动可能造成螺钉松动或失效，从

1. Before installation and operation, please confirm the following:
①. If the product is as same as the product ordered; ②. If there is any damage occurred to the product during transportation.
2. Safety precautions:
①. Ambient conditions and relevant devices
i, Hazard notes:
● Rotating couplings may cause harm to human being, please set up safety guard for the coupling, and set up starter on the safety guard for emergency stop protection
● Please avoid operating RIC products close to places with inflammable, explosive liquid or gas or leakage of such
● It is recommended that the motor or other driving devices are equipped with safety brake device
ii, matters needing attention
● This type of couplings are not allowed to operate under the conditions with chemical leakage, high humidity, or big temperature variation
②. Assembling work
I, Hazard notes:
● The bolt’s tightening torque is very important to the product’s performance and safety, please be sure the bolts are tightened according to the specified torques in the Mounting Dimensions
● When install or dismount the couplings, ensure the machine is already stopped, and relevant power sources are cut off
ii, Matters needing attention
● Before installing the coupling, please ensure the coaxiality error of the shafts on the two sides is less than 0.02mm(for RIC single diaphragm coupling) or less than 0.05mm(for RIC double diaphragm coupling); high coaxiality error can cause failure or damage to the devices.
● Please use bolts provided by REACH or of the same performance and grade, so as to avoid damage to the products.
● Please wear necessary protection devices such as gloves etc, so as to avoid any personal injury during dismounting and installation
● When haul or lift heavy objects, please use necessary hoisting equipment
③. Operation
i, Hazard notes:
● The couplings are not allowed to operate above the maximum rotating speed specified in the Technical Specification Form, so as to avoid over vibration and damage to the products
● Please touch exposed rotating parts, so as to avoid personal injury
Please prevent the centring error of the shafts on the two sides from being too big or going beyond the allowable value specified in the Technical Specification Form, so as to avoid too much additional load applied on the coupling and causing damage to relevant devices
ii, Matters needing attention
● Please do not make the torque go beyond the product’s allowable value
● when abnormal noise or vibration occurs, check and

安装维护说明 Installation and Maintenance Instructions

而导致整个装置故障。

● 在异常狭窄的场合，应考虑因散热不良引起的温升对产品性能的影响

④、其他

a、危险事项

● 请确保产品不被小孩碰到或玩耍

b、注意事项

● 禁止私自拆解我公司产品，其对产品造成的损坏我公司概不负责

● 报废的产品请交由专业回收机构回收处理

3、安装使用：

①、请确认夹紧螺栓已拧松，并去除轴及联轴器内孔的锈迹、灰尘和油渍等。（请用棉纱等擦拭油迹或根据需要进行除油作业。）

②、将联轴器插入轴时，请勿在元件上施加过大的压缩和拉伸力。特别是在把联轴器安装至电动机后将联轴器插入对方轴时，可能会因错误操作而施加过大的轴向压缩力，请特别注意。

③、在两颗夹紧螺栓处于松动状态下，请确认联轴器是否能轻松轴向移动和旋转。如果无法顺畅移动和旋转，请重新调整两轴的同轴度。（该方法用作两端轴的同轴度好坏的简易确认方法，如果无法使用此种确认方法，请使用打表找正或其他方法确认安装精度。）

④、在带有扁、槽的非圆轴上安装RIC联轴器时，请勿将轴上的扁、槽安装在联轴器开有径向槽的一侧。为获得足够的夹持力矩，建议使用圆轴。

⑤、确保轴插入联轴器的长度和《安装尺寸》表内L1、L2值一致，使轴与联轴器孔充分接触。

⑥、请将联轴器实际S尺寸控制在《安装尺寸》表中“S”值及轴向位移允许误差范围内。该轴向位移允许误差为假设偏心，偏角均为零时的允许值，请尽量调小该误差。

⑦、确认轴向无压缩，拉伸后，拧紧两夹紧螺栓。拧紧夹紧螺栓时，请使用经过校准的转矩扳手，并按《安装尺寸》表内“锁紧力矩”下所列的紧固力矩拧紧。

confirm if the installation is right; long time vibration may cause the bolts' loosening or failures, which leads to the whole equipment's failure.

● When operate in narrow space, is shall be considered that poor heat dissipation may cause the temperature to go up and influence the product's performance

④. Other matters

I, Hazard notes:

● Please ensure the products are not touched or played by children

ii, Matters needing attention

● Disassembling our company's products without permission is forbidden, otherwise, the company is not responsible to any damage to the products.

● The rejected materials shall be sent to special agency for recycling

3. Installation and operation:

①. First loose the coupling's clamp bolts, and remove the rust, dust or oil stains etc. on the shafts or inside the holes of the coupling. (Please use woven cotton etc. to remove oil stains or carry out oil removal work based on requirements)

②. When sleeve the coupling on the shaft, please do not apply too much compressing and pulling force on the components. Especially when sleeve the coupling on the motor shaft after the coupling is already installed into the motor, wrong operation may cause too much axial compressing force, please pay special attention.

③. When the two clamp bolts are loosened, please check if it is possible to easily move the coupling in axial direction or rotate it. If it can not be moved or rotated easily, please re-adjust the two shafts' coaxiality.(this is a easy method to confirm the two shafts' coaxiality, if the method can not be employed for confirmation, please use instrument or employ other methods for confirming installation accuracy)

④. When install the RIC coupling on the non-circular shaft which has flat slot, please do not install the shaft's flat slot on the side of the coupling with radial slot. For obtaining sufficient clamping torque, please use circular shaft.

⑤. Ensure the shaft inserted into the coupling is identical to L1 and L2 specified in the Installation Dimension Form, so the shaft and the coupling can fully contact with each other.

⑥. Please ensure the coupling's actual S dimension is within the S value specified in the Installation Dimension Form and the allowable error range in axial displacement. The allowable error range in axial displacement is based on the assumption that the eccentricity and the deflection are zero, please reduce the error through adjustment as much as possible.

⑦. When it is confirmed there is no compressing and pulling in axial direction, tighten the two clamp bolts. During tightening, please use torque wrench that has been calibrated, and follow the Locking Torque specified in the Installation Dimension Form for tightening.

膜片联轴器 REC系列 Diaphragm Coupling REC Series

REC系列概述 REC series Summarize

・REC膜片主体采用钢件制造，膜片采用弹簧用高强度不锈钢制造。使REC膜片联轴器在实现高扭矩、高刚性，具有低惯性。

・REC标准联轴器分为单膜片的REC–□–0型和装有双膜片的REC–□–T型。

・应用：数控机床主轴、伺服电机、步进电机以及正反转要求精度高的场合。

The main body of the REC diaphragm is made of steel, and the diaphragm is made of high-strength stainless steel for springs. The REC diaphragm coupling achieves high torque, high rigidity, and low inertia.

REC standard coupling is divided into REC-□-0 type with single diaphragm and REC-□-T type with double diaphragm.

Application: CNC machine tool spindles, servo motors, stepping motors, and occasions where high precision is required for forward and reverse rotation.

型号说明 Model Coding

REC–080–0–A–25Z–30Z

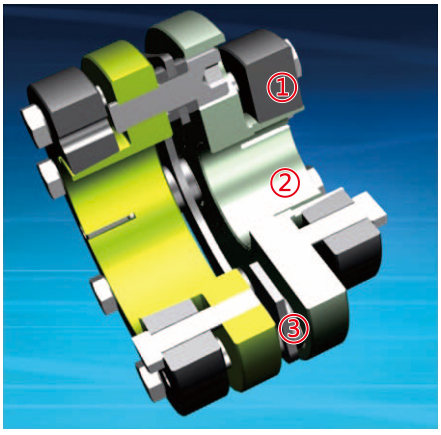
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

① 从动轴连接方式(胀紧)
② 孔径尺寸代码（从动轴）
③ 主动轴连接方式(胀紧)
④ 孔径尺寸代码（主动轴）
⑤ 产品结构系列（A小扭矩螺钉/B大扭矩铰制/C主轴型）
⑥ 产品结构代码1(0/T)
⑦ 规格代码
⑧ 种类代码

① Driven shaft’s connection type (cinching)
② Hole diameter code (bigger shaft)
③ Driving shaft’s connection type (cinching)
④ Hole diameter code (smaller shaft)
⑤ Product Structure code 2 (A/B/C)
⑥ Product Structure code 1(0: single diaphragm/T: double diaphragm)
⑦ Model code
⑧ Category code

膜片联轴器 REC系列　Diaphragm Coupling REC Series

产品概览　Product Overview



REC单膜片联轴器
REC Single Diaphragm Coupling

① 压环：采用优质结构钢，表面发黑处理；依据孔径不同，外径相应变化
Compression ring: high–quality structural steel is employed, the surface is blackening treated; based on different aperture, the outer diameter changes accordingly

② 半联轴节：采用优质结构钢，表面发黑处理；设计有锥套与压环配合抱紧传动轴
Half–coupling: high–quality structural steel is employed, the surface is blackening treated; taper sleeve and compression ring are designed to jointly hold the transmission shaft tightly

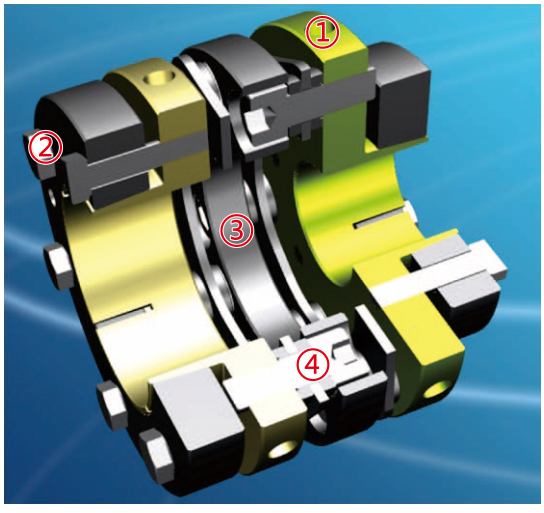
③ 膜片组：由若干优质不锈钢片通过垫圈、衬套等叠为一挠性组件，吸收轴安装误差，传递相应扭矩
Diaphragm group : the flexible component is stacked with a few high–quality stainless steel discs through washers and bush, etc., to absorb the shaft’s installation error, and transmit corresponding torque

① 法兰外圆止动销孔：用于拧紧胀紧螺栓时，插入销轴限制联轴器转动
Stopper pin hole on the flange excircle: when tightening cinch bolt, insert the pin into the hole for restricting the coupling’s rotation

② 胀紧螺栓：采用高强度经表面处理的螺栓，拧紧时需按规定扭矩交替锁紧（详见相关安装说明）
Cinch bolt: high strength bolts after surface treatment are used, during tightening, alternate locking should be carried out according to prescribed torque (see relevant installation instructions for details)

③ 中间体：双膜片联轴器独有部件，采用优质结构钢，表面发黑处理
Middle part: a unique part of double diaphragm coupling, high–quality structural steel is employed, the surface is blackening treated

④ 膜片组螺栓：采用高强度经表面处理的螺栓，出厂时已安装妥，请避免自行拆装
Bolt for diaphragm group: high strength bolts after surface treatment are used, installed before delivery, please do not install on your own



REC双膜片联轴器
REC Double Diaphragm Coupling

膜片联轴器 REC系列 Diaphragm Coupling REC Series

产品概览 Product Overview

项目 Item		REC 单膜片联轴器 REC Single Diaphragm Coupling	REC 双膜片联轴器 REC Double Diaphragm Coupling
容许扭矩 Allowable Torque （N·m）		70~300	70~300
孔加工直径范围 Hole Machining Diam- eter Range (mm)		18~60	18~60
使用温度 Operation Temperatur（℃）		-30~+120	-30~+120
最大容许误差 Max. Allowable Error	径向 Radial（mm）	0.02	0.25~0.3
	角向 Angular（°）	1	2
	轴向 Axial（mm）	±0.5~±0.7	±1~±1.4

产品特点及应用场合 Product Features And Applications

该类产品非常适合于各类数控车床、加工中心的进给轴丝杆与电机间的联接。产品具有如下特点：

1、超高刚性。为用于机床进给轴开发的型号，扭转刚性高，可进行准确的轴旋转和超精密控制。

2、支持大直径的摩擦连接。与以往型号的摩擦连接相比，可支持大轴径。

3、膜片组螺栓采用合金钢内六角圆柱头螺钉

4、与传动轴之间采用胀套式联接方式。轴结构简单，减少了槽孔等应力集中部位；结构对称，可在不经特定动平衡处理下达到较高的平衡要求。

5、采用不锈钢材料制作挠性部件（膜片），具有结构紧凑，无背隙的特点，且能吸收两轴角向、轴向、径向（此项仅双膜片具有）误差。

6、产品出厂前采用专用冶具定心组装，确保了两端孔的原始同轴度。

The products are very suitable for the connection between the feed shaft lead screw and the motor for various CNC and machining center. The products have feathers below:

1.Ultrahigh rigidity. This type is developed for machine tool’s feed shaft, with high torsional rigidity, accurate shaft rotation and ultra-precision control can be performed.

2.Big diameter frictional connection can be supported. Compared to previous types’ frictional connection, it can be used for big diameter shaft.

3.The diaphragm group’s bolts are alloy-steel hexagon cheese head screw bolts.

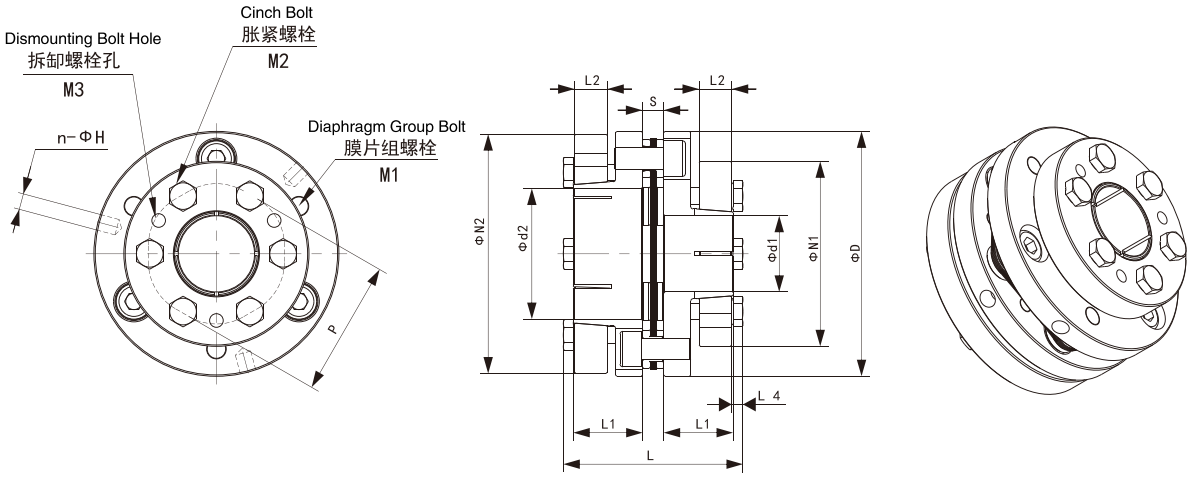
4.It is connected to the shaft with expansion sleeve. The shaft is simple in structure, which is to reduce stress concentration area on the slot; with symmetric structure, higher balance requirement can be met without special dynamic balance treatment.

5.The flexible component (diaphragms) are made of stainless steel material, with feathers such as compact structure, no back clearance, it can also absorb the two shafts’ errors in angular, axial and radial (only for double diaphragm) direction.

6.Before deliver, centering assembling with special jig machine is carried out, which ensures holes original coaxiality on the two sides.

膜片联轴器 REC系列　Diaphragm Coupling REC Series

单膜片联轴器尺寸表 Dimension Form for Single Diaphragm Coupling



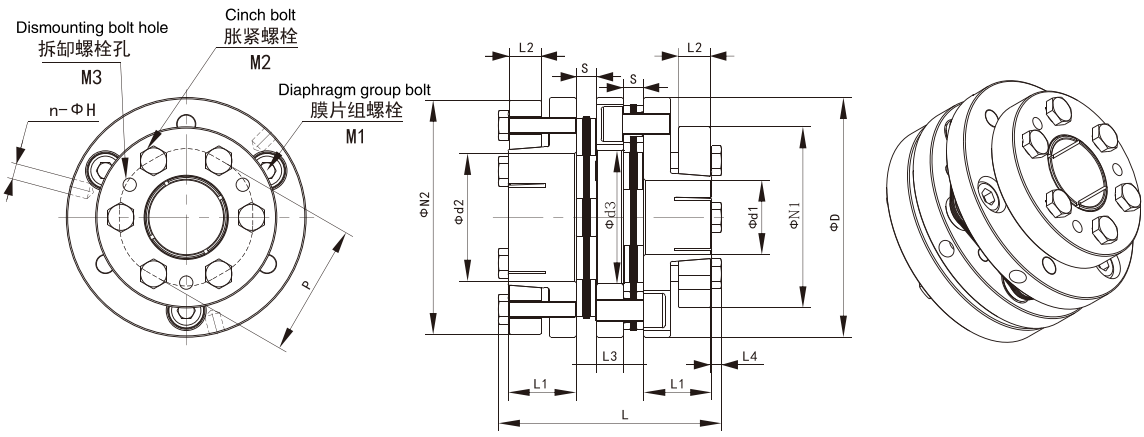
型号 Model	D	L	d1/d2	N1/N2	L1	L2	L4	S	P	n-ΦH	M1	M1锁紧力矩 Locking Torque	M2	M2锁紧力矩 Locking Torque	M3
REC-070-0-A	70	60.5	18、19	53	23.5	12	4	6.5	31	4-φ5.1	M6	14	4-M6	12	2-M6
			20、22、24、25	58											
			28、30	63											
			32、35	68											
REC-080-0-A	80	66.3	22、24、25	58	25.5	12	4	8.3	37	4-φ5.1	M8	34	4-M6	12	2-M6
			28、30	63											
			32、35	68											
REC-090-0-A	90	66	28	68	25.5	12	4	7.7	50	3-φ6.5	M8	34	6-M6	12	3-M6
			30、32、35	73											
			38、40	78											
			42、45	83											
			48	88											
REC-100-0-A	100	66	32、35	73	25.5	12	4	8	58	3-φ6.5	M8	34	6-M6	12	3-M6
			38、40	78											
			42、45	83											
			48、50、52	88											
			55	93											
			60	98											

注：1、表中各螺栓数量为单侧数量；
　　2、 表中锁紧力矩，依据：M1为12.9级螺钉、M2为10.9级螺栓核定。

Note:
1. The bolts' quantity in the form only refer to the bolts on one side;
2. The locking torque, determination basis: M1 is Grade 12.9 bolt, M2 is Grade 10.9 bolt

膜片联轴器 REC系列 Diaphragm Coupling REC Series

双膜片联轴器尺寸表 Dimension Form for Double Diaphragm Coupling



型号 Model	D	L	d1/d2	N1/N2	L1	L2	L3	d3	L4	S	P	n-ΦH	M1	M1锁紧力矩 Locking Torque	M2	M2锁紧力矩 Locking Torque	M3
REC-070-T-A	70	75	18、19	53	23.5	12	8	35	4	6.5	31	4-φ5.1	M6	14	4-M6	12	2-M6
			20、22、24、25	58													
			28、30	63													
			32、35	68													
REC-080-T-A	80	84.6	22、24、25	58	25.5	12	10	40	4	8.3	37	4-φ5.1	M8	34	4-M6	12	2-M6
			28、30	63													
			32、35	68													
REC-090-T-A	90	83.4	28	68	25.5	12	10	50	4	7.7	50	3-φ6.5	M8	34	6-M6	12	3-M6
			30、32、35	73													
			38、40	78													
			42、45	83													
			48	88													
REC-100-T-A	100	84	32、35	73	25.5	12	10	60	4	8	58	3-φ6.5	M8	34	6-M6	12	3-M6
			38、40	78													
			42、45	83													
			48、50、52	88													
			55	93													
			60	98													

注：1、表中各螺栓数量为单侧数量；
2、 表中锁紧力矩，依据：M1为12.9级螺钉、M2为10.9级螺栓核定。

Note:
1. The bolts' quantity in the form only refer to the bolts on one side;
2. The locking torque, determination basis: M1 is Grade 12.9 bolt, M2 is Grade 10.9 bolt

膜片联轴器 REC系列　Diaphragm Coupling REC Series

单膜片联轴器技术参数表 Technical Specification Form for Single Diaphragm Coupling

型号 Model	容许扭矩 Allowable Torque Tkmax (N·m)	最高转速 Max. Rotating Speed (rpm)	扭转刚度 Torsional Rigidity (N·m/rad)	轴向刚度 Axial Rigidity (N/mm)	最大允许误差 Max. Allowable Error			转动惯量 Rotating Inertia (kg·m²)	质量 Mass (kg)
					径向 (mm)	角向 (°)	轴向 (mm)		
REC–070–0–A	70	18000	60000	105	0.02	1	±0.5	0.55×10^{-3}	0.88
REC–080–0–A	130	17000	64000	96	0.02	1	±0.5	0.93×10^{-3}	1.20
REC–090–0–A	200	15000	140000	320	0.02	1	±0.6	1.73×10^{-3}	1.57
REC–100–0–A	300	13000	160000	360	0.02	1	±0.7	2.52×10^{-3}	1.78

注：

1、表中转动惯量和质量是在一端孔径为最大值，一端孔径为最小值时的值。

2、表中扭转刚度为膜片组扭转刚度的理论值。

3、最高转速为离心力、强度等因素校核所得，未考虑动平衡。

4、表中各向允许误差是相互关联的，不能同时达到最大值。如：角向误差和轴向误差同时存在，当角向误达到最大允许值的70%时，则轴向误差值不能超过最大允许值的30%

Note:

1. In the table, the values of rotational inertia and mass are measured when the hole diameter at one side is at its maximum, and the other side at its minimum.
2. In the table, the torsional rigidity is the diaphragm group's theoretical value for torsional rigidity.
3. The maximum rotating speed has taken into consideration the factors such as centrifugal force, rigidity, etc., the dynamic balance is not considered.
4. In the table, the allowable errors in each direction are mutually relevant, they can not reach the maximum value at the same time. Example: the angular error and axial error can exist at the same time, when the angular value reaches 70% of the maximum allowable value, then the axial error is not allowed to go above 30% of the maximum allowable value.

双膜片联轴器技术参数表 Technical Specification Form for Double Diaphragm Coupling

型号 Model	容许扭矩 Allowable Torque Tkmax (N·m)	最高转速 Max. Rotating Speed (rpm)	扭转刚度 Torsional Rigidity (N·m/rad)	轴向刚度 Axial Rigidity (N/mm)	最大允许误差 Max. Allowable Error			转动惯量 Rotating Inertia (kg·m²)	质量 Mass (kg)
					径向 (mm)	角向 (°)	轴向 (mm)		
REC–070–T–A	70	14000	30000	55	0.25	2	±1	0.70×10^{-3}	1.08
REC–080–T–A	130	13000	32000	50	0.3	2	±1	1.26×10^{-3}	1.54
REC–090–T–A	200	12000	70000	160	0.3	2	±1.2	2.26×10^{-3}	1.98
REC–100–T–A	300	10000	80000	180	0.3	2	±1.4	3.28×10^{-3}	2.26

注：

1、表中转动惯量和质量是在一端孔径为最大值，一端孔径为最小值时的值。

2、表中扭转刚度为膜片组扭转刚度的理论值。

3、最高转速为离心力、强度等因素校核所得，未考虑动平衡。

4、表中各向允许误差是相互关联的，不能同时达到最大值。如：角向误差和轴向误差同时存在，当角向误达到最大允许值的70%时，则轴向误差值不能超过最大允许值的30%

Note:

1. In the table, the values of rotational inertia and mass are measured when the hole diameter at one side is at its maximum, and the other side at its minimum.
2. In the table, the torsional rigidity is the diaphragm group's theoretical value for torsional rigidity.
3. The maximum rotating speed has taken into consideration the factors such as centrifugal force, rigidity, etc., the dynamic balance is not considered.
4. In the table, the allowable errors in each direction are mutually relevant, they can not reach the maximum value at the same time. Example: the angular error and axial error can exist at the same time, when the angular value reaches 70% of the maximum allowable value, then the axial error is not allowed to go above 30% of the maximum allowable value.

膜片联轴器 REC系列 Diaphragm Coupling REC Series

选型步骤 Model Selection Steps

1、伺服、步进、变频电机用REC联轴器扭矩校核

①、确定伺服、步进、变频电机的最大扭矩Tm：

Tm一般为伺服、步进、变频电机额定扭矩的3倍

②、计算联轴器所需容许扭矩（Tn）

Tn=Tm・1.5

Tn— 联轴器所需容许扭矩，N・m

Tm— 伺服、步进、变频电机标称最大扭矩，N・m

③、依据Tn值初步确定联轴器基本规格，确保所选联轴器容许扭矩Tkmax≥Tn

2、普通电机或驱动设备用REC联轴器扭矩校核

①、计算联轴器所需传递的扭矩（T）

T=9550・PW/n

T— 联轴器需传递扭矩，N・m

PW— 电机（或其他驱动机）额定功率，kW

n— 电机（或其他驱动机）实际使用转速，r/min(rpm)

②、计算联轴器所需容许扭矩（Tn）

Tn=T・K

Tn—联轴器所需容许扭矩，N・m

T—联轴器需传递扭矩，N・m

K—工况系数，①恒定载荷：K=1、②小变动载荷：K=1.25、③中等变动载荷：K=1.75、④大变动载荷：K=2.25

③、依据Tn值初步确定联轴器基本规格，确保所选联轴器容许扭矩Tkmax≥Tn

3、对于有高的交变扭矩存在的场合（如存在：柴汽油发动机、活塞式压缩机、柱塞泵、发电机等），请联系瑞迪工程师协助计算、选型。

4、确定安装、使用时联轴器的径向、角向、轴向偏差不超过《技术参数表》中的各项限定值，多种偏差同时存在时，允差应按比例减少。理论上单膜片联轴器不能承受径向偏差，如使用中有不可避免的径向偏差存在，请选择双膜片联轴器。

注：

上述Tkmax值请在《技术参数表》中查阅、获取。

1. Use REC coupling to carry out torque checking for servo motor, stepping motor and variable frequency motor.

①. Determine the maximum torque Tm for servo motor, stepping motor and variable frequency motor:
Tm is usually 3 times of the rated torque of servo motor, stepping motor and variable frequency motor

②. Calculate the needed allowable torque for the coupling（Tn）
Tn=Tm・1.5
Tn—the needed allowable torque for the coupling, N・m
Tm—nominal maximum torque for servo motor, stepping motor and variable frequency motor

③. Based on Tn,the coupling's basic specification is primarily determined, which is to ensure the selected coupling's allowable torque Tkmax≥Tn

2. Use REC coupling to carry out torque checking for common motors and driving devices.①. Calculate the needed transmitted torque for the coupling（T）
T=9550・PW/n
T—the needed transmitted torque for the coupling, N・m
PW—the rated torque for motor(or other driving devices), kW
n—actual rotating speed for motor(or other driving devices), r/min（rpm）

②. Calculate the needed transmitted torque for the coupling（Tn）
Tn=T・K
Tn—the needed allowable torque for the coupling, N・m
T—the needed transmitted torque for the coupling, N・m
K— working condition coefficient, ① constant load: K=1, ②small fluctuating load: K=1.25, ③ moderate fluctuating load: K=1.75, ④ big fluctuating load: K=2.25

③ Based on Tn, the coupling's basic specification is primarily determined, which is to ensure the selected coupling's allowable torque Tkmax≥Tn

3. For the occasions with high alternate torque (for example: diesel fuel engine, piston compressor, plunger pump, generator, etc.), please contact the engineers of REACH for calculation and model selection.

4. During installation and operation of the coupling, ensure the errors in in radial, angular, and axial directions not go above every limiting value specified in the Technical Specification Form, when the errors exist at the same time, the allowable errors shall be reduced proportionally. In theory, the single diaphragm coupling can not sustain radial error, during operation, if there is unavoidable radial error, please select the double diaphragm coupling.

Note:

please refer to the Technical Specification Form for checking and obtaining the aforesaid Tkmax value.

膜片联轴器 REC系列 Diaphragm Coupling REC Series

安装维护说明 Installation and Maintenance Instructions

1、安装使用前，请确认以下内容：
①该产品是否与所订购产品一致；
②该产品有无在运输过程中存在损伤
2、安全注意事项：
①、环境及相关装置
a、危险事项：
● 旋转的联轴器可能会对人体造成伤害，请为其设置安全罩，并在安全罩上设置打开急停保护装置
● 请勿将RIC产品应用于有易燃、易爆液体或气体存在或泄漏的地方
● 建议电机或其他驱动装置配置安全刹车装置
b、注意事项
● 请勿该类联轴器产品用于存在化学泄漏、高湿度、冷热温度变化大的场合
②、装配作业
a、危险事项：
● 螺钉的拧紧力矩对产品的使用性能和安全非常重要，请务必按《安装尺寸》表中规定力矩拧紧螺钉
● 安装、拆卸联轴器产品时，必须确保机器已经停转，并已确实切断相关电源
b、注意事项
● 安装联轴器前，请调整两端轴的同轴度，使同轴度误差小于0.02mm（使用RIC单膜片联轴器时）或小于0.05mm（使用RIC双膜片联轴器时）；同轴度误差过大，可能导致装置故障或损坏。
● 请使用本公司提供或与之性能等级相同的螺钉，以免造成产品损坏。
● 请配戴手套等必要的防护装备，以免在拆、装产品时造成人身伤害
● 在搬运、提升重物时，请使用必要的起重设备
③、使用
a、危险事项
● 请勿超出《技术参数表》中规定的最高转速使用联轴器产品，否则可能造成极大振动并损坏产品
● 请勿接触外露的旋转部件，以免造成人身伤害
● 请勿使联轴器两端轴的对中误差过大或超出产品《技术参数表》中允许值，以免使联轴器承受过大附加载荷并对联轴器及相关装置造成损害
b、注意事项
● 请勿使扭矩超过产品的允许值
● 当有异常的噪音或振动产生时，应检查、确认安装是否正确无误；长期的振动可能造成螺钉松动或失效，从而导致整个装置故障。
● 在异常狭窄的场合，应考虑因散热不良引起的温升对产品性能的影响
④、其他
a、危险事项
● 请确保产品不被小孩碰到或玩耍
b、注意事项
● 禁止私自拆解我公司产品，废弃物交专门机构回收

1. Before installation and operation, please confirm the following:
①. If the product is as same as the product ordered;
②. If there is any damage occurred to the product during transportation.
2. Safety precautions:
①. Ambient conditions and relevant devices
i, Hazard notes:
● Rotating couplings may cause harm to human being, please set up safety guard for the coupling, and set up starter on the safety guard for emergency stop protection
● Please avoid operating RIC products close to places with inflammable, explosive liquid or gas or leakage of such
● It is recommended that the motor or other driving devices are equipped with safety brake device
ii, matters needing attention
● This type of couplings are not allowed to operate under the conditions with chemical leakage, high humidity, or big temperature variation
②. Assembling work
i, Hazard notes:
● The bolt's tightening torque is very important to the product's performance and safety, please be sure the bolts are tightened according to the specified torques in the Mounting Dimensions
● When install or dismount the couplings, ensure the machine is already stopped, and relevant power sources are cut off
ii, Matters needing attention
● Before installing the coupling, please ensure the coaxiality error of the shafts on the two sides is less than 0.02mm(for RIC single diaphragm coupling) or less than 0.05mm(for RIC double diaphragm coupling); high coaxiality error can cause failure or damage to the devices.
● Please use bolts provided by REACH or of the same performance and grade, so as to avoid damage to the products.
● Please wear necessary protection devices such as gloves etc, so as to avoid any personal injury during dismounting and installation
● When haul or lift heavy objects, please use necessary hoisting equipment
③. Operation
i, Hazard notes:
● The couplings are not allowed to operate above the maximum rotating speed specified in the Technical Specification Form, so as to avoid over vibration and damage to the products
● Please touch exposed rotating parts, so as to avoid personal injury
● Please prevent the centring error of the shafts on the two sides from being too big or going beyond the allowable value specified in the Technical Specification Form, so as to avoid too much additional load applied on the coupling and causing damage to relevant devices
ii, Matters needing attention
● Please do not make the torque go beyond the product's allowable value
● when abnormal noise or vibration occurs, check and confirm if the installation is right; long time vibration may cause the bolts' loosening or failures, which leads to the whole equipment's failure.
● When operate in narrow space, is shall be considered that poor heat dissipation may cause the temperature to go up and influence the product's performance
④. Other matters
i, Hazard notes:
● Please ensure the products are not touched or played by children
ii, Matters needing attention
● Disassembling our company's products without permission is forbidden, rejected materials shall be sent to special agency for recycling

膜片联轴器 REC系列 Diaphragm Coupling REC Series

安装维护说明 Installation and Maintenance Instructions

3、安装使用：

(1) 先旋松联轴器的胀紧螺栓，并清除干净轴及联轴器孔内的锈迹、灰尘和油渍等。

(2) 将联轴器套入动力输入轴（数控机床为伺服电机轴）。套入时，请勿在联轴器上施加过大的拉、压力。

(3) 联轴器套入电机轴的长度为半联轴节的全长（L1尺寸），且不得与膜片组及另一边的轴干涉。

(4) 保持联轴器位置不动，轻轻拧紧各胀紧螺栓（建议直接用手拧紧）。

(5) 将千分表表座固定在基础上，千分表表针与电机轴一侧的联轴器法兰外圆或端面接触，在用手缓慢旋转电动机轴的同时，通过锤击等方法调整使千分表跳动尽可能接近零。

(6) 锤击调整的同时按顺序拧紧胀紧螺栓，最后使用经过校准的扭矩扳手交替拧紧胀紧螺栓至《尺寸表》中M2锁紧力矩的规定值。拧紧时可利用法兰外圆的孔限制联轴器的转动。

(7) 再次确认联轴器电动机轴端的胀紧螺栓已按规定的转矩拧紧，且跳动值接近0。

(8) 将联轴器另一端孔套入动力输出轴，套入长度为L1，且不得与膜片组及另一边的轴干涉。再将千分表表座固定在电机轴上，千分表表针与输出轴接触，调整电机轴或输出轴相对位置，同时缓慢转动电机轴，使表针跳动接近0，之后固定电机座和输出轴。

(9) 移动输出轴侧半联轴节，调整《尺寸表》中S尺寸，使实际值与S值的偏差在《技术参数表》允许的轴向误差范围内。（当有偏心、偏角误差存在时，此轴向误差允许值应按比例减少。通常应将此轴向误差尽量调小。）

(10) 按电动机轴一侧胀紧螺栓锁紧的方法（第（4）~（7））, 同样的将输出轴侧的胀紧螺栓锁紧。

(11) 为防止胀紧螺栓在使用过程中产生松动，建议运行一段时间后，再次按规定扭矩、正确的顺序拧紧各胀紧螺栓。

4、拆卸

(1) 联轴器只有在未承受转矩以及轴向负载的情况下进行拆卸。使用安全离合器或制动器时，请确认这些装置未处于工作状态，以确保联轴器未承受转矩。

(2) 将所有的胀紧螺栓拧松，直至螺栓头与压环间的间隙约为2mm左右。

(3) 取下(2) 中松开的胀紧螺栓中的2~3 根，拧入压环上的拆卸螺栓孔内，按顺序慢慢地拧紧直至胀紧连接解除。（轴向没有螺栓插入空间时，可用一字螺丝刀的前端等扁平状工具插入压环与法兰之间，轴向敲击或利用杠杆原理解除胀紧连接。）

3. Installation and operation:

(1) First loose the coupling's cinch bolts, and remove the rust, dust or oil stains etc. on the shafts or inside the holes of the coupling.

(2) Sleeve the coupling on the power input shaft(servo motor shaft for CNC). During sleeving, do not pull or push the coupling too hard.

(3) The length of coupling sleeved on the motor shaft is the whole length of the half-coupling(L1 dimension), and it shall not interfere with the diaphragm group and the shaft on the other side.

(4) Keep the coupling still, gently tighten every cinch bolt(direct hand tightening is recommended).

(5) Fix the dial indicator's stand on the base, the dial indicator's hand touches the flange's excircle or end face of the coupling on the side of the motor shaft, rotate slowly the motor shaft with hands, in the mean time, use methods such as hammer striking to make the dial indicator' beating close to 0 as much as possible.

(6) During adjustment by hammer striking, tighten the cinch bolts in order, finally use calibrated torque wrench to alternately tighten the cinch bolts to the specified values of M2 locking torque in the Dimension Form. During tightening, the hole on the flange's excircle can be used to restrict the coupling's rotation.

(7) Confirm again that the coupling's cinch bolts on the motor shaft side have been tightened according to specified torques, and the jumping value is close to 0.

(8) Sleeve the coupling's other side on the power output shaft, the sleeving length is L1, and it shall not interfere with the diaphragm group and the shaft on the other side. Then fix the dial indicator's stand on the motor shaft, the dial indicator's hand touches the output shaft, adjust the motor shaft or output shaft's opposite position, in the mean time, slowly rotate the motor shaft, make the dial indicator hand's jumping close to 0, then fix the motor base and the output shaft.

(9) Move the half-coupling on the output shaft side, adjust S dimension in Dimension Form, make the difference of the actual value and the S value in the axial error scope provided in the Technical Specification Form. (when eccentricity or deflection exists, the axial error shall be reduced proportionally. Usually the axial error shall be adjusted as small as possible.)

(10) In the same way as the cinch bolts on the motor shaft side are tightened(from (4) to (7)), tighten the cinch bolts on the output shaft side.

(11) To avoid the cinch bolts' loosening during operation, it is recommended that, after operation for some time, re-tighten the cinch bolts according to specified torques and in right order.

4. Dismounting

(1) The coupling can only be dismounted without sustaining torque or axial load. When using safety clutch or brake, please make sure the devices are not in working status, so as to make sure the coupling is not bearing any torque.

(2) Loosen all the cinch bolts, until the gap between the bolt head and the compression ring is about 2mm.

(3) Take down 2 to 3 pieces of cinch bolts already loosened, screw into the dismounting bolt holes on the compression ring, slowly tighten the bolts in order until the connection is disengaged. (if not space for screwing in the bolt in axial direction, the front end of the slot type screwdriver or other similar tools can be inserted in between the compression ring and the flange, strike in axial direction or disengage the connection in lever principle.)

膜片联轴器 RDC系列　Diaphragm Coupling RDC Series

RDC系列概述　RDC series Summarize

・RDC主体联轴器材料采用碳钢材料制造,膜片采用弹簧用高强度不锈钢片制造；使RDC膜片联轴器具有超高扭转刚性特点,非常适用于精密传动。

・RDC标准联轴器有单、双膜片多种结构，详见 44~50页。

・应用：压缩机、泵、搅拌机、混合机以及其他负载较大的场合

RDC Couplings and diaphgrams are made of carbon steel materials and high-strength stainless steel sheets respectively. All these make the couplings perfect for the precision transmission because of high torsional stiffness.

RDC Standard Couplings are designed with single and double diaphgrams. For more details, please refer to page 44 to page 50.

Application: Compressor, pump, mixer and other load larger occasions.

型号说明 Model Coding

RDC-038-A-24J-24J

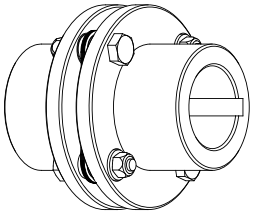
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

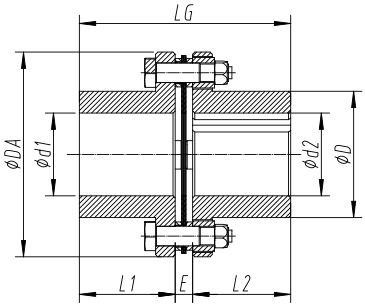
① 从动轴连接方式（J-键连接）
② 孔径尺寸代码（从动轴）
③ 主动轴连接方式（J-键连接）
④ 孔径尺寸代码（主动轴）
⑤ 产品结构代码（A/B）
⑥ 规格代码
⑦ 种类代码

① Driven Shaft Connection Method (J-Keyway connection)
② Bore Dimension Code(Driven Shaft)
③ Driving Shaft Connection Method (J-Keyway connection)
④ Bore Dimension Code(Driving Shaft)
⑤ Product Structure Code(A/B)
⑥ Size Code
⑦ Series Code

膜片联轴器 RDC系列 Diaphragm Coupling RDC Series

- 单节式结构
- 具有角向和轴向纠偏能力
- 扭向刚性好
- 结构紧凑
- Single-section structure
- Angular and anxial deviation correction functions
- High torsional stiffness
- Compact structure





A型结构尺寸表 单位：mm Dimension Table of A-type Unit: mm

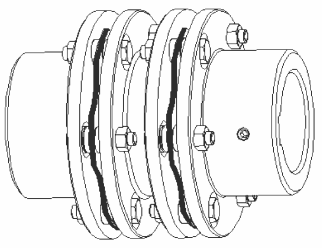
规 格 Size	d1 max	d2 max	DA	D	LG	L1	E	L2
20	20	20	56	32	45	20	5	20
25	25	25	68	40	56	25	6	25
35	35	35	82	54	86	40	6	40
38	38	38	94	58	98	45	8	45
42	42	42	104	68	100	45	10	45
50	50	50	126	78	121	55	11	55
60	60	60	138	88	121	55	11	55
70	70	70	156	102	141	65	11	65
80	80	80	179	117	164	75	14	75
85	85	85	191	123	175	80	15	80
90	90	90	210	132	175	80	15	80
105	105	105	225	147	200	90	20	90
115	115	115	265	163	223	100	23	100

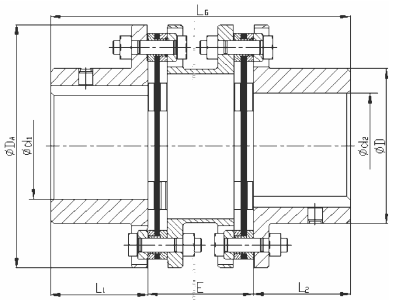
A型性能参数 Performance Parameters of A-type

规 格 Size	额定扭矩 Rated Torque (Nm)	最高转速 Max. Rotation Speed (r/min)	角向偏差 (度) Angular Deviation(°)	轴向偏差 Axial Deviation (mm)	径向偏差 Radial Deviation (mm)	转动惯量 Moment of Inertia (kg.m^2)	膜片扭向性刚度 Tornisional Stiffness of Diaphragm (10^6 Nm/rad)
20	15	20000	1.0	0.6	—	0.0001	0.017
25	30	16000	1.0	0.8	—	0.00026	0.028
35	60	13000	1.0	1.0	—	0.0008	0.092
38	120	12000	1.0	1.2	—	0.0016	0.198
42	180	10000	1.0	1.4	—	0.0027	0.282
50	330	8000	1.0	1.6	—	0.0061	0.501
60	690	6700	1.3	1.0	—	0.0082	0.56
70	1100	5900	1.3	1.1	—	0.0152	0.90
80	1500	5100	1.3	1.3	—	0.029	1.14
85	2400	4750	1.3	1.3	—	0.042	1.52
90	4500	4300	1.0	1.0	—	0.064	1.94
105	5100	4000	1.0	1.2	—	0.093	2.54
115	9000	3400	1.0	1.4	—	0.199	3.48

膜片联轴器 RDC系列　Diaphragm Coupling RDC Series

1 紧凑的双节式结构
2 纠偏能力强
3 可替换曲面齿连轴器
1 Compact double-section structure
2 Strong deviation correction function
3 Able to replace curved-tooth couplings





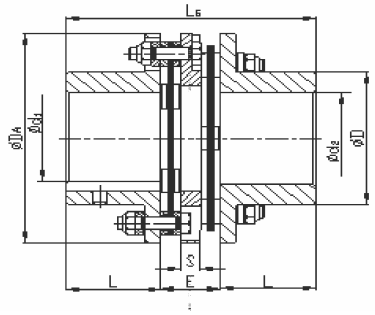
B型结构尺寸表 单位：mm Dimension Table of B-type Unit: mm

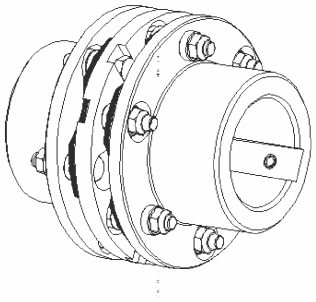
规格Size	d1 max	d2 max	DA	D	LG	L1	E	L2
20	20	20	56	32	—	20	—	20
25	25	25	68	40	—	25	—	25
35	35	35	82	54	—	40	—	40
38	38	38	94	58	—	45	—	45
42	42	42	104	68	—	45	—	45
50	50	50	126	78	—	55	—	55
60	60	60	138	88	170	55	60	55
70	70	70	156	102	200	65	70	65
80	80	80	179	117	233	75	83	75
85	85	85	191	123	246	80	86	80
90	90	90	210	132	251	80	91	80
105	105	105	225	147	281	90	101	90
115	115	115	265	163	309	100	109	100

B型性能参数Performance Parameters of B-type

规 格 Size	额定扭矩 Rated Torque (Nm)	最高转速 Max. Rotation Speed (r/min)	角向偏差 (度) Angular Deviation(o)	轴向偏差 Axial Deviation (mm)	径向偏差 Radial Deviation (mm)	转动惯量 Moment of Inertia (kg.m^2)	膜片扭向性刚度 Tornisional Stiffness of Diaphragm (10^6 Nm/rad)
20	15	20000	1.0	1.2	0.1	—	0.0085
25	30	16000	1.0	1.6	0.2	—	0.014
35	60	13000	1.0	2.0	0.2	—	0.046
38	120	12000	1.0	2.4	0.3	—	0.099
42	180	10000	1.0	2.8	0.3	—	0.141
50	330	8000	1.0	3.2	0.4	—	0.2505
60	690	6700	1.3	2.0	1.0	0.012	0.28
70	1100	5900	1.3	2.2	1.2	0.022	0.45
80	1500	5100	1.3	2.6	1.5	0.042	0.57
85	2400	4750	1.3	2.3	1.5	0.064	0.76
90	4500	4300	1.0	2.0	1.4	0.103	0.97
105	5100	4000	1.0	2.4	1.6	0.143	1.27
115	9000	3400	1.0	2.8	1.3	0.333	1.74

膜片联轴器 RDC系列 Diaphragm Coupling RDC Series





- 紧凑的双节式结构
- 纠偏能力强
- 可替换曲面齿连轴器

- Compact double-section structure
- Strong deviation correction function
- Can be used to replace curved-tooth couplings

C型结构尺寸表 单位：mm Dimension Table of C-type Unit: mm

规格Size	d1 max	d2 max	DA	D	LG	L1	E	L2	S
20	20	20	56	32	55	20	15	20	5
25	25	25	68	40	68	25	18	25	6
35	35	35	82	54	98	40	18	40	6
38	38	38	94	58	114	45	24	45	8
42	42	42	104	68	118	45	28	45	8
50	50	50	126	78	142	55	32	55	10
60	60	60	138	88	144	55	34	55	12
70	70	70	156	102	164	65	34	65	12

C型性能参数 Performance Parameters of C-type

规 格 Size	额定扭矩 Rated Torque (Nm)	最高转速 Max. Rotation Speed (r/min)	角向偏差 (度) Angular Deviation(o)	轴向偏差 Axial Deviation (mm)	径向偏差 Radial Deviation (mm)	转动惯量 Moment of Inertia (kg.m^2)	膜片扭向性刚度 Torsional Stiffness of Diaphragm (10^6 Nm/rad)
20	15	20000	1.0	1.2	0.1	0.0001	0.0085
25	30	16000	1.0	1.6	0.2	0.00025	0.014
35	60	13000	1.0	2.0	0.2	0.0085	0.046
38	120	12000	1.0	2.4	0.3	0.0015	0.099
42	180	10000	1.0	2.8	0.3	0.0024	0.141
50	330	8000	1.0	3.2	0.4	0.008	0.2505
60	690	6700	1.3	2.0	1.0	0.01	0.28
70	1100	5900	1.3	2.2	1.2	0.02	0.45

定货号码示例Order Example: RDC-35-A-35Jx28J

RDC-35-A	35J	28J
REACH膜片联轴器 35规格A型 REACH Diaphragm Couplings Size 35 A-type	轴套孔直径为35,键槽连接形式 The diameter of bore in the hub is 35 Connected by keyway	轴套孔直径为35,键槽连接形式 The diameter of bore in the hub is 35 Keyway Connection

连接形式说明: J 表示键槽连接形式 Z 表示键槽胀套连接形式
Explanation of the Connection:"J"means the keyway connection and, "z"refers to the connection between the keyway and locking devices

REACH® 瑞迪智驱

TOP 价值源于核心技术

Phone: 400-090-7210

Site: www.reachgroup.cn

Add：四川省成都市双流区西航港大道中四段909号

Add: NO.909 Middle Section 4, West AirportAve, Southwest Airport Economic Development Zone, Shuangliu Region, Chengdu, Sichuan Province China

版本号: ZH-20210810