



JM系列膜片联轴器

SERIES JM DIAPHRAGM COUPLINGS

标准代号STANDARD (JB/T 9147-1999)

2005年3月版March .2005 Edition



新一代联轴器用于ZPMC制造的12台岸桥在美国长滩韩进码头 (2003年)

Novel couplings are used on 12 units of ZPMC post-panamax quayside container cranes at the Hanjin terminal , long beach, USA (2003)

上海振华港机（集团）宁波传动机械有限公司
ZPMC Ningbo Transmission Machinery Co.,Ltd.
（宁波伟隆传动机械有限公司）

一、概述

膜片联轴器是国内外广泛采用的新型联轴器。JM系列膜片联轴器是我公司早年与机械部上海材料研究所共同研制成功的新产品,通过十余年的推广应用及改进完善,使产品性能大大提高,并派生了多种系列规格,供不同需要的选择。

JM膜片联轴器属金属弹性元件挠性联轴器,主要依靠金属膜片来联接主、从动轴传递转矩,具有弹性减振、无噪声、不需润滑的优点,它能补偿主、从动轴之间由于制造误差、安装误差,承载变形以及温升变化的影响等所引起的轴向、径向、角向偏移,是当今替代齿式联轴器及一般联轴器的理想产品。

JM系列膜片联轴器具有如下特点:

具有明显减震作用,无噪声,无磨损。

传动效率高,可达99.86%,特别适用于中、高速大功率传动。

能补偿两轴线不对中的位置偏差,挠性大,允许两轴有一定的轴向、径向和角向位移。

适应在温差大(-80℃~+300℃)和恶劣环境中工作,并能在有冲击、振动条件下安全运行。

结构简单,重量轻,体积小,拆装维护方便,不必移动机器即可装拆(指带中间轴型式)。

能准确传递转速,运转无转差,可用于精密机械的传动。

JM系列膜片挠性联轴器被广泛应用于冶金、矿山、石油、化工、电力、船舶、起重运输、纺织、轻工、农机、印刷机械和水泵、风机、机床等行业的机械设备中传递动力。

目前,我公司生产五大系列上百个规格的膜片联轴器,欢迎广大新老用户选用,并希望您提出要求和反馈使用意见,我公司将竭诚为您服务。

I. General

Diaphragm(disc) coupling is a new type coupling to be widely used abroad. It is applied in many imported equipments in our country. JM series diaphragm coupling is a new product developed by Shanghai Material Research Institute and our company.

It can compensate for paralleled as well as angular misalignment between prime mover and driven machine caused by Deformation due to load and temperature vary. Belonging to the flexible coupling with metallic elastic element, JM series diaphragm couplings rely on the metallic diaphragm to connect prime mover and driven machine, and to transmit the torque. It contains some advantages such as flexibly relieving shock, no noise and no lubricating needed. It is good substitute product for gear couplings and other general couplings.

The main characteristics of JM series Diaphragm Coupling:

Obvious dampen shock and no noise, no wearing.

High transmitted efficiency and be available to high speed and superpower transfer motion.

Good ability for compensating the misalignment of two axes. The allowing angular displacement is two times as much as the gear couplings. Low reaction pressure and high flexibility as the radial shifting as well as permitting some axial, angular or radial deviation.

Operating safely under -80℃~300℃ and bad condition with shock and vibration.

Simple construction, light weight and small size. Easy assembly and disassemble without moving machine. As well as No maintenance required and lubricating.

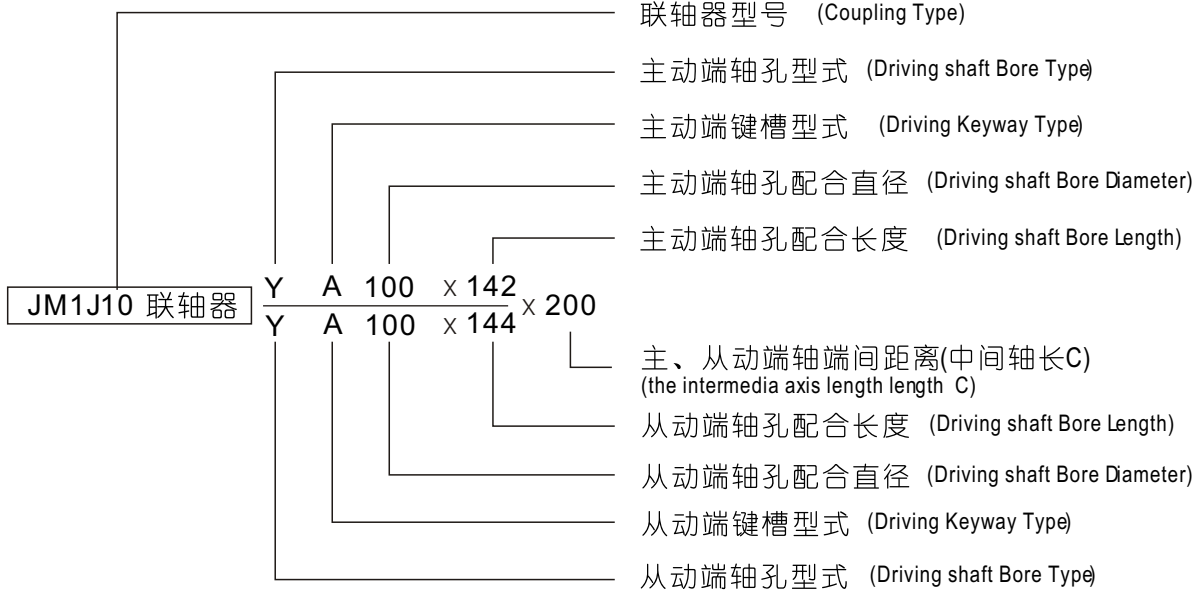
Accurate transmitting revolution and no slipping. It can be used on precision machinery.

JM series diaphragm coupling is widely used for transmitting power in various kinds of mechanical equipments such as metallurgy, mining, petroleum, chemical industry, agricultural machinery, printing machinery, pump, blower fan and machine too, etc.

At present, hundreds of specifications in five majors series diaphragm couplings are supplied by our company. The warm welcome will be given to the new and old customers for selecting them. further more, we are sincerely in hopes of gaining your feedback information and requirements, and we will try our best to give you the best service!

二、JM系列膜片联轴器的标记方法

订购联轴器时，应按以下示例的方法标注所需联轴器的型号和规格：



标记示例：

欲订购JM1J10型联轴器，中间轴长200；

已知：

主动端：Y型轴孔，A型键槽，

$$d_1 = 100 \text{ mm}, L_1 = 142 \text{ mm}$$

从动端：Y型轴孔，A型键槽，

$$d_2 = 110 \text{ mm}, L_2 = 144 \text{ mm},$$

标记为：

$$\text{JM1J10联轴器} \frac{\text{YA100} \times 142}{\text{YA110} \times 144} \times 200$$

订购时应完整地标注联轴器的型号、规格和尺寸

表 1 圆柱形轴孔与轴伸的配合(推荐)

Table 1: Fitting of the cylindrical bore and shaft extension (suggested)

直径 Diameter d(mm)	配合代号 Fitting code	
> 6—30	H7/j6	根据使用要求，也可选用如下配合 Can also be used depending on application requirement H7/n6 H7/p6 H7/r6
> 30—50	H7/k6	
> 50	H7/m6	

注：选用过盈大于表1中规定的配合时，应验算联轴器轮毂的强度。

II. The Mark Of JM Series Diaphragm Coupling

The following code should be used for ordering the specified type and size of curved tooth coupling:



Ordering example:

If a coupling of type JM1J10 is requested, and the intermediate axis length is 200 and the following data are known:

Driving end:

Shaft Bore Y type,

Key way is A type,

$$d_1 = 100 \text{ mm}, L_1 = 142 \text{ mm};$$

Driven end:

Bore Y type, Key way is A type,

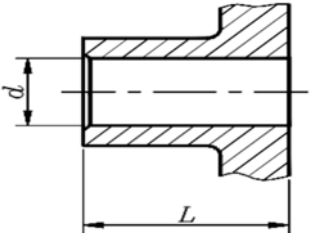
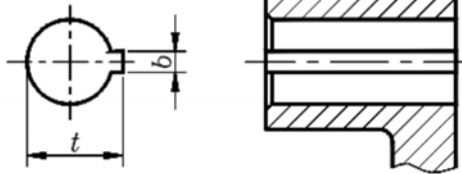
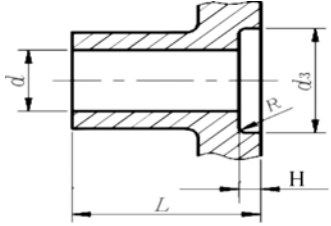
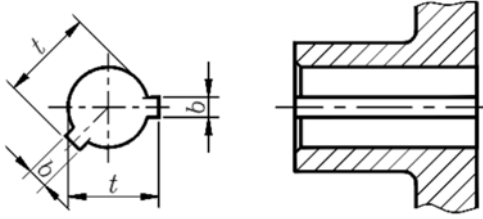
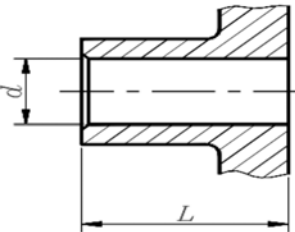
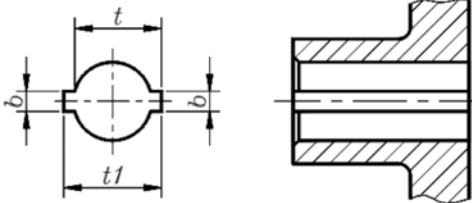
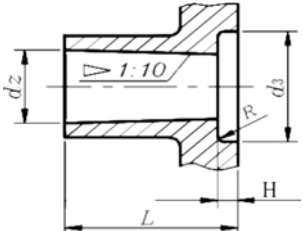
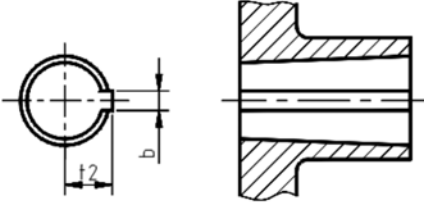
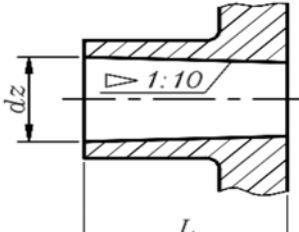
$$D_2 = 110 \text{ mm and } L_2 = 144 \text{ mm}.$$

should be labeled:

$$\text{COUPLING JM1J10} \frac{\text{YA100} \times 142}{\text{YA110} \times 144} \times 200$$

Please state out type, size, specifications of coupling completely when you are ordering

表2 联轴器轴孔及其联接的型式和代号 Table 2 Type and Code of Coupling Bore and its Connection

轴孔型式和代号 Shaft Bore Type & Code	键槽型式和代号 Connection Type and Code
 <p>Y型-长圆柱形轴孔 Type Y—Long Cylindrical Bore</p>	 <p>A型-平键单键槽 Type A—Flat Key, Single Keyway</p>
 <p>J型-有沉孔的短圆柱形轴孔 Type J—Short Cylindrical Bore with Counter Bore</p>	 <p>B型-120° 布置平键双键槽 Type B—Flat Key, Double Keyways Apart from 120° Each Other</p>
 <p>J₁型-无沉孔的短圆柱形轴孔 Type J₁—Short Cylindrical Bore without Counter Bore</p>	 <p>B₁型-180° 布置平键双键槽 Type B₁—Flat Key, Double Keyway Apart from 180° Each Other</p>
 <p>Z型-有沉孔的长圆锥形轴孔 Type Z—Long Tapered Bore with Counter Bore</p>	 <p>C型-圆锥形轴孔平键单键槽 Type C—Flat Key, Single Key way for Tapered Bore</p>
 <p>Z₁型-无沉孔的长圆锥形轴孔 Type Z₁—Long Tapered Bore without Counter Bore</p>	<p>矩形花键联接轴孔按GB/T 1444 圆柱直齿渐开线花键按GB/T3478.1 Square Splined Bore in accordance with GB/T 1444. Cylindrical Evolute Spline in accordance with GB/T 3478.1</p>

约定：圆柱形轴孔的尺寸精度为H7，键槽宽度b选用GB1095《平键 键槽的剖面尺寸》标准值，宽度b的尺寸精度为该标准规定的Js9。圆锥形轴孔的键槽型式和尺寸则按GB/T3852-1997《联轴器轴孔和联接型式及尺寸》的规定。若用户所需轴孔、键槽的尺寸和配合与上述约定不符，务必在订货时说明。

Note: If there is no special indication fitting accuracy of cylindrical shaft bore is H7, the width "b" of the keyway is selected as standard value from GB1095<Section Dimensions of the key, and key way >, and the tolerance of width "b" is specified as Js9. The keyway type and dimensions of tapered bore is specified in GB/T3852-1997 <Type and Dimensions of shaft bore and connection of the coupling>. If the requested dimensions and fitting of shaft bore and keyway do not meet the above mentioned standards it must be noted when ordering

三、JM系列联轴器的选用方法

联轴器是根据负荷情况、计算转矩、轴孔直径、工作转速来选择的。
(选定联轴器的型号后应对轴和键的强度作校核计算)

计算转矩 T_c 由下式求出:

$$T_c = K_1 K_2 K_3 T = K_1 K_2 K_3 9550 \frac{P_w}{n} = K_1 K_2 K_3 7020 \frac{P_H}{n} \leq T_n$$

- 式中: T —— 理论转矩, $N \cdot m$;
 P_w —— 驱动功率, kw;
 n —— 工作转速, r/min;
 T_c —— 计算转矩, $N \cdot m$;
 T_n —— 公称转矩, $N \cdot m$;
 P_H —— 驱动功率, HP;
 K_1 —— 工况系数, 考虑传动系统由于载荷变化、冲击载荷、工作环境等因素对联轴器在实际传递转矩时的影响系数。
 K_2 —— 起动系数, 由起动频率而引起的附加载荷系数。
 K_3 —— 安装偏差系数, 考虑联轴器安装时的轴向偏差、角向偏差对转矩的影响, 详见第9页。

当根据最大计算转矩 T_c 选得的联轴器, 其允许最大轴孔不能满足轴伸尺寸的要求时, 应改选为能同时满足转矩和轴伸尺寸的联轴器规格。

K_1 —— 工况系数

原动机	工作机			
	I类	II类	III类	IV类
电动机, 汽轮机	1.3	1.5	2	3
4缸以上内燃机	1.5	2	2.5	3.5
1—3缸内燃机	3	3.5	4.5	5

K_2 —— 起动系数

每小时起动次数	<120	120~240	>240
K_2	1.0	1.3	1.6

工作机分类

I类: 转矩变化很小机械: 如离心泵、小型发电机、皮带输送机、通风机、液体搅拌机。

II类: 转矩变化中等机械: 如车床、轴流风机、链式输送机、锅炉给水泵、旋转式压缩机。

III类: 转矩变化和冲击载荷大机械: 往复泵、绞盘机、活塞式压缩机(四缸以上)、起重机、挖掘机、水泥搅拌机。

IV类: 转矩变化大并有强烈冲击载荷机械: 轧钢机传动装置、剪床、冲床、船用螺旋桨、破碎机。

III. Selection Method of JM Series Diaphragms

Selection of the type of coupling refer to load case, calculated torque T_c , bore diameter and the shaft speed.

Formula for finding T_c list below:

$$T_c = K_1 K_2 K_3 T = K_1 K_2 K_3 9550 \frac{P_w}{n} = K_1 K_2 K_3 7020 \frac{P_H}{n} \leq T_n$$

Where

- T —— Theoretical torque, in $N \cdot m$;
 P_w —— Driving power, in kw ;
 n —— Running speed, in r/min
 T_c —— Calculating torque, $N \cdot m$;
 T_n —— Nominal torque, $N \cdot m$;
 P_H —— Driving Power, HP;
 K_1 —— Working condition coefficient, considering transmission the effect coefficient of coupling transferring torque by loading verify, striking loading, working conditions;
 K_2 —— Starting coefficient, attachment loading produced by starting frequency.
 K_3 —— Installing deviation coefficient, considering the effect of the deviation of axial and angular to torque, see page 9 .

If the maximum allowable bore of the selected coupling with refer to the max T_c cannot meet the shaft length required, the type of coupling should be adjusted to meet the both requirements of the torque and shaftsize.

working condition coefficient K_1

Kind of prime mover	Driven machine			
	1	2	3	4
Motor Or Turbine	1.3	1.5	2	3
Engine (cylinders:4 Or More)	1.5	2	2.5	3.5
Engine(Cylinders: 3 Or Less)	3	3.5	4.5	5

Starting (braking, commutation) coefficient K_2

starting times every hour	<120	120~240	>240
K_2	1.0	1.3	1.6

Classification of driven machine

Kind 1:Slight variable for torque:

e.g: pump, small generator, belt conveyor, ventilation, liquid mixer.

kind 2: Medial variable for torque:

e.g: Machine tool, axial blower fan, chain conveyor, water pump for boiler, rotary compressor.

kind 3: Variable torque and large shock loads:

e.g: reciprocating pump, capstan machine, piston compressor (with more than 4 cylinders), crane excavator, cement mixer.

kind 4: Large variable torque and strong shock loads:

e.g: Driving device for mill, shearing machine, punch, marine propeller, crusher.

四、JM1J型膜片联轴器的结构型式、基本参数和尺寸

IV.Type JM1J diaphragm coupling's construction, basic parameters and dimensions

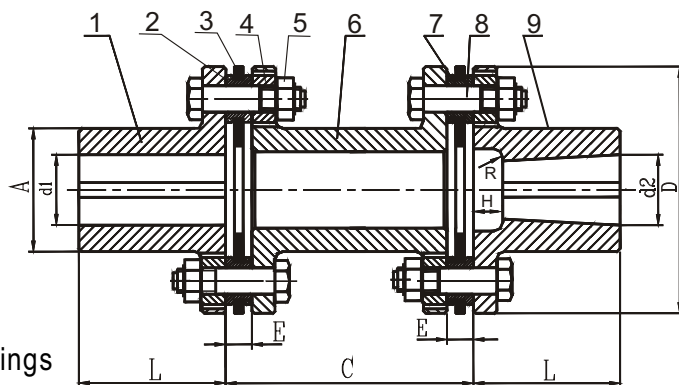


图1 JM1J型膜片联轴器结构图

Fig.1 Structure for Type JM1J Diaphragm couplings

1.半联轴器 2.压紧套 3.膜片 4.垫圈 5.螺母 6.中间轴 7.压紧圈 8.螺栓 9.半联轴器

1.haft-coupling 2.clamp 3.diaphragm 4.washers 5.nut 6.intermediary shaft 7.clamp ring 8.bolt 9.haft-coupling

表 3

table3 (mm)

型号 Type	公称 转矩 Tn N·m	许用 转速 Speed [n] r/min	轴孔 直径 Bore d1,d2 Max	轴孔 长度 Length of bore L 参考Ref.	主要尺寸 Primary Dimension						转动 惯量 Rotary Inertia I ≈kg·m ²	无孔 质量 Mass m ≈kg
					D	A	C (min)	E	H	R		
JM1J1	25	6000	28	52	84	42	80	9	25	1.5	0.001	3
JM1J2	63	5000	38	52	94	53	80	9	25	1.5	0.0015	4
JM1J3	160	4500	45	62	126	65	105	13	30	2	0.0056	8
JM1J4	315	4000	55	62	145	80	115	13	30	2	0.0204	12
JM1J5	500	3800	65	82	162	90	115	13	35	2.5	0.0585	17
JM1J6	800	3600	70	82	174	100	117	14	35	2.5	0.0945	20
JM1J7	1250	3400	75	112	194	110	125	14	40	2.5	0.1545	30
JM1J8	2000	3000	85	112	210	125	136	14	40	3	0.3675	39
JM1J9	2500	2800	90	112	230	140	150	16	45	3	0.4455	50
JM1J10	4000	2500	110	142	260	160	162	18	50	3	0.717	73
JM1J11	6300	2000	120	142	280	175	178	18	50	3	1.209	92
JM1J12	8000	1800	130	142	300	190	195	21	55	4	2.25	112
JM1J13	12500	1700	140	172	330	205	210	23	55	4	3.345	156
JM1J14	16000	1600	160	172	355	230	225	25	60	4	4.02	198
JM1J15	25000	1500	190	172	390	265	248	28	70	5	7.23	257
JM1J16	40000	1400	220	212	440	305	294	28	80	5	14.145	386
JM1J17	50000	1300	240	212	465	330	330	48	90	5	20.415	457
JM1J18	63000	1200	250	212	485	345	345	52	90	5	27.6	578
JM1J19	80000	1100	260	252	505	360	385	60	100	5	34.725	672
JM1J20	100000	1000	280	252	550	400	395	64	100	6	42.3	818
JM1J21	160000	950	320	302	600	450	435	70	110	6	99.87	1182
JM1J22	200000	900	360	302	670	500	470	76	110	6	113.58	1506
JM1J23	250000	840	370	352	732	520	520	76	120	6	128.4	1680
JM1J24	315000	780	380	352	796	560	600	80	120	8	165.45	2150
JM1J25	400000	740	400	410	875	600	630	80	130	8	228.15	2445
JM1J26	500000	700	420	410	915	640	700	86	130	8	420.75	3130
JM1J27	630000	660	450	470	965	710	750	86	140	8	514.05	3680
JM1J28	800000	630	480	470	1020	750	780	90	140	10	570.15	4754
JM1J29	1000000	600	500	550	1170	800	800	90	150	10	645.6	5529
JM1J30	1250000	570	530	550	1240	860	836	90	150	10	679.5	6800

注：1、用户有需要各种非标准轴孔、键槽、轴孔配合长度的，请在订货时标明，本厂均承接制造。
2、诚告用户：随着工艺与材料的改进，在保证各型号联轴器的主要性能参数和装配尺寸不变的情况下，今后产品尺寸会有修正，届时恕不另行通知。

Note: 1. If custom requires the different size of bore, keyway and fitting length, we will be pleasure to do it. But make description clearly in purchasing specification.
2. Notice: All details subject to parameter alterations without notice, adaption to new standard or new scientific knowledge.

五、JM型膜片联轴器的结构型式、基本参数和尺寸

V.Type JM diaphragm coupling's construction, basic parameters and dimensions

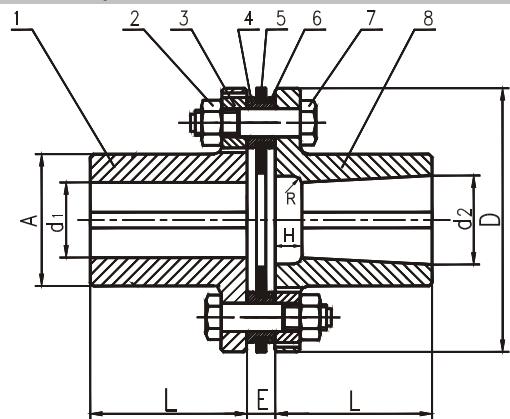


图2 JM型膜片联轴器结构图

Fig.2 Structure for Type JM Diaphragm couplings

1.半联轴器 2.螺母 3.垫圈 4.压紧座 5.膜片 6.压紧圈 7.螺栓 8半联轴器

1.haft-coupling 2.nut 3.washers 4.clamp 5.diaphragm 6.clampring 7.bolt 8.haft-coupling

表 4

table4

(mm)

型号 Type	公称 转矩 Nominal Torque T _n N·m	许用 转速 Speed [n] r/min	轴孔 直径 Bore d1,d2 Max	轴孔 长度 Length of bore L 参考Ref.	主要尺寸 Primary Dimension					转动 惯量 Rotary Inertia I ≈kg·m ²	无孔 质量 Mass m ≈ kg
					D	A	E	H	R		
JM1	25	6000	28	52	84	42	9	25	1.5	0.0007	2
JM2	63	5000	38	52	94	53	9	25	1.5	0.001	3
JM3	160	4500	45	62	126	65	13	30	2	0.0037	5
JM4	315	4000	55	62	145	80	13	30	2	0.0136	8
JM5	500	3800	65	82	162	90	13	35	2.5	0.039	12
JM6	800	3600	70	82	174	100	14	35	2.5	0.063	14
JM7	1250	3400	75	112	194	110	14	40	2.5	0.103	22
JM8	2000	3000	85	112	210	125	14	40	3	0.245	29
JM9	2500	2800	90	112	230	140	16	45	3	0.297	36
JM10	4000	2500	110	142	260	160	18	50	3	0.478	57
JM11	6300	2000	120	142	280	175	18	50	3	0.806	70
JM12	8000	1800	130	142	300	190	21	55	4	1.50	82
JM13	12500	1700	140	172	330	205	23	55	4	2.23	114
JM14	16000	1600	160	172	355	230	25	60	4	2.68	144
JM15	25000	1500	190	172	390	265	28	70	5	4.82	188
JM16	40000	1400	220	212	440	305	28	80	5	9.43	299
JM17	50000	1300	240	212	465	330	48	90	5	13.61	353
JM18	63000	1200	250	212	485	345	52	90	5	18.4	445
JM19	80000	1100	260	252	505	360	60	100	5	23.15	495
JM20	100000	1000	280	252	550	400	64	100	6	28.2	605
JM21	160000	950	320	302	600	450	70	110	6	66.58	889
JM22	200000	900	360	302	670	500	76	110	6	75.72	1115
JM23	250000	840	370	352	732	520	76	120	6	85.6	1291
JM24	315000	780	380	352	796	560	80	120	8	110.3	1656
JM25	400000	740	400	410	875	600	80	130	8	152.1	1881
JM26	500000	700	420	410	915	640	86	130	8	280.5	2410
JM27	630000	660	450	470	965	710	86	140	8	342.7	2831
JM28	800000	630	480	470	1020	750	90	140	10	380.1	3657
JM29	1000000	600	500	550	1170	800	90	150	10	430.4	4253
JM30	1250000	570	530	550	1240	860	90	150	10	465	5231

注：1、本系列联轴器的径向、角向补偿量相对较小，一般仅适用于精密机械的传动。
2、用户有需要各种非标准轴孔、键槽、轴孔配合长度的，请在订货时标明，本厂均承接制造。

Note: 1.The radial and angle compensation of series JM coupling is small, they are general suit for fine machinery transmission.
2. If customers require the different size of bore、keyway and fitting length, we will be pleasure to do it. But make description clearly in purchasing specification.

六、JMB型膜片联轴器的结构型式、基本参数和尺寸

VI. Type JMB diaphragm coupling's construction, basic parameters and dimensions

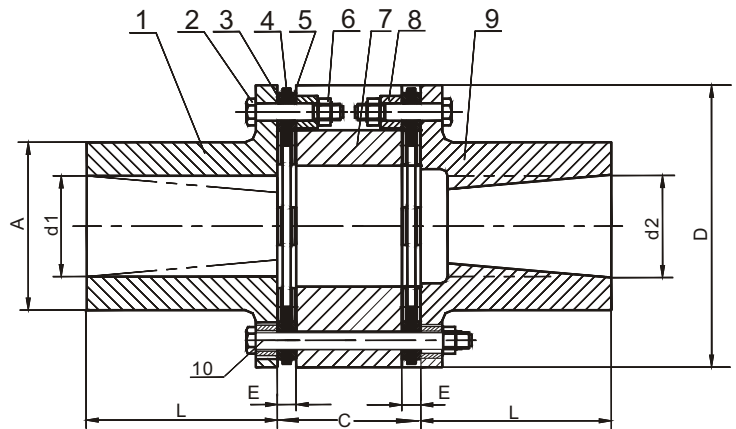


图3 JMB型膜片联轴器结构图
Fig.3 Structure for Type JM1J couplings

1.半联轴器 2.螺栓 3.压紧座 4.膜片 5.压紧圈 6.螺母 7.中间轴 8.垫圈 9.半联轴器 10.长螺栓
1.haft-coupling 2.bolt 3.clamp 4.diaphragm 5.clamp ring 6.nut 7.intermediary shaft 8.washers 9.haft-coupling 10.Long bolt

表 5

table5 (mm)

型号 Type	公称 转矩 Torque Tn N·m	许用 转速 Speed [n] r/min	轴孔 直径 Bore d1,d2 Max	轴孔 长度 Length of bore L 参考Ref.	主要尺寸 Primary Dimension						转动 惯量 Rotary Inertia I ≈kg·m ²	无孔 质量 Mass m ≈kg
					D	A	C (min)	E	H	R		
JMB 5	500	3800	65	82	162	90	64	13	35	2.5	0.039	12
JMB 6	800	3600	70	82	174	100	64	14	35	2.5	0.063	14
JMB 7	1250	3400	75	112	194	110	70	14	40	2.5	0.103	22
JMB 8	2000	3000	85	112	210	125	70	14	40	3	0.245	29
JMB 9	2500	2800	90	112	230	140	80	16	45	3	0.297	36
JMB 10	4000	2500	110	142	260	160	80	18	50	3	0.478	57
JMB 11	6300	2000	120	142	280	175	94	18	50	3	0.806	70
JMB 12	8000	1800	130	142	300	190	100	21	55	4	1.5	82
JMB 13	12500	1700	140	172	330	205	100	23	55	4	2.33	114
JMB 14	16000	1600	160	172	355	230	125	25	60	4	2.68	144
JMB 15	25000	1500	190	172	390	265	135	28	70	5	4.82	188
JMB 16	40000	1300	220	212	440	305	135	28	80	5	9.43	299
JMB 17	50000	1200	240	212	465	330	175	48	90	5	13.61	353
JMB 18	63000	1100	250	212	485	345	180	52	90	5	18.4	445
JMB 19	80000	1000	260	252	500	360	200	60	100	5	23.15	495
JMB 20	100000	940	280	252	550	400	205	64	100	6	28.2	605
JMB 21	160000	850	320	302	600	450	220	70	110	6	66.58	889
JMB 22	200000	800	360	302	670	500	230	76	110	6	75.72	1115
JMB 23	250000	760	370	352	732	520	240	76	120	6	85.6	1291
JMB 24	315000	740	380	352	796	560	250	80	120	8	110.3	1656
JMB 25	400000	700	400	410	875	600	250	80	130	8	152.1	1881
JMB 26	500000	660	420	410	915	640	260	86	130	8	280.5	2410
JMB 27	630000	620	450	470	965	710	265	86	140	8	342.7	2831
JMB 28	800000	600	480	470	1020	750	275	90	140	10	380.1	3657
JMB 29	1000000	560	500	550	1170	800	280	90	150	10	430.4	4253
JMB 30	1250000	540	530	550	1240	860	280	90	150	10	465	5231

注：1、用户有需要各种非标准轴孔、键槽、轴孔配合长度的，请在订货时标明，本厂均承接制造。
2、诚告用户：随着工艺与材料的改进，在保证各型号联轴器的主要性能参数和装配尺寸不变的情况下，今后产品尺寸会有修正，届时恕不另行通知。

Note: 1. If custom requires the different size of bore, keyway and fitting length, we will be pleasure to do it. But make description clearly in purchasing specification.
2. Notice: All details subject to parameter alterations without notice, adaption to newstandard or new scientific knowledge.

Novel coupling bring you more benefits!

七、JMC、JMD、JMK型膜片联轴器的结构型式、基本参数和尺寸

VII. Type JMC, JMD, JMK diaphragm coupling and its construction, basic parameters and dimensions



图4 JMC型膜片联轴器结构图

Fig.5 Structure for Type JMC Diaphragm couplings

1.半联轴器 2.垫圈 3.铆钉 4.螺钉 5.中间轴 6.膜片 7.半联轴器

1.haft-coupling 2. washers 3.rivet 4.bolt 5.intermediaryshaft 6.diaphragm 7.haft-coupling

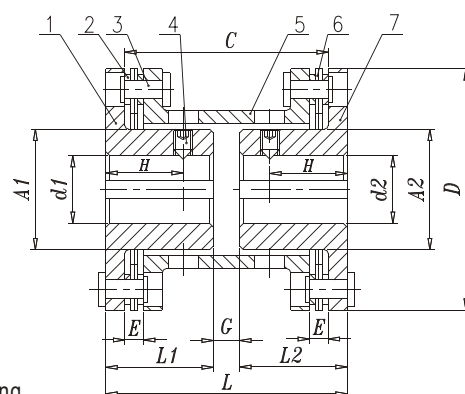


图5 JMD型膜片联轴器结构图

Fig.4 Structure for Type JMD couplings

1.半联轴器 2.螺钉 3.铆钉 4.垫圈 5.中间轴 6.膜片 7.半联轴器

1.haft-coupling 2. bolt 3.maoding 4.washers 5.intermediaryshaft 6.diaphragm 7.haft-coupling

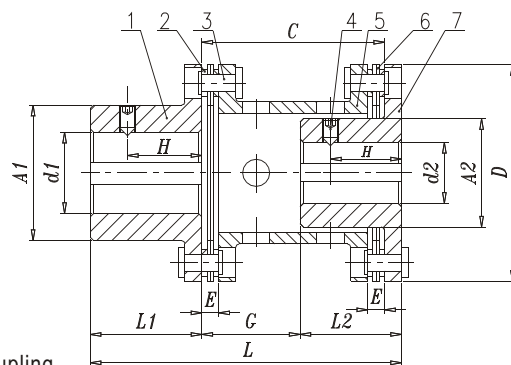


图5 JMK型膜片联轴器结构图

Fig.4 Structure for Type JMK couplings

1.半联轴器 2.螺钉 3.铆钉 4.垫圈 5.中间轴 6.膜片 7.半联轴器

1.haft-coupling 2. bolt 3.maoding 4.washers 5.intermediaryshaft 6.diaphragm 7.haft-coupling

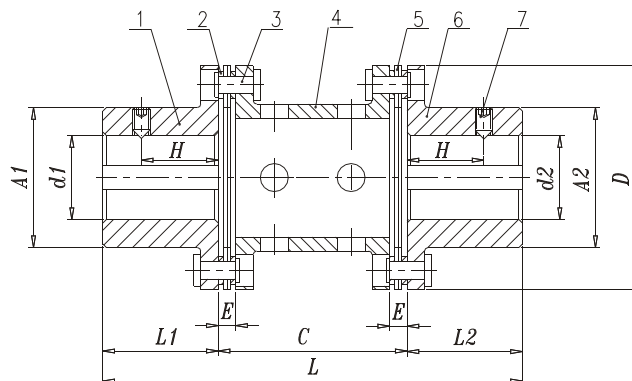


表 6

table6 (mm)

型号 Type	公称 转矩 Tn N·m	许用 转速 Speed [n] (r/min)	轴孔 直径 Diameter of Bore		轴孔 长度 Length of bore		主要尺寸 Primary Dimension							转动 惯量 Rotary Inertia I ≈kg·cm ²	无孔 质量 Mass m ≈kg	许用 径向 位移 permissible axial tolerance	许用 角向 位移 permissible angle tolerance
			d1,d2	L1, L2	D	L	A1	A2	C	E	G	H					
JMC01	6.3	5000	10	23	50	52	20	20	44	4	6	16	0.4	0.20	0.2	1°	
JMC02	10	4500	14	27	58	60	24	24	50	5	6	19	1	0.32	0.2	1°	
JMC03	16	4000	20	30	64	66	32	32	56	5	6	19	1.8	0.42	0.2	1°	
JMD01	6.3	5000	14 10	27 23	50	75	24	20	44	4	25	16	0.4	0.21	0.2	1°	
JMD02	10	4500	20 14	30 27	58	85	32	24	50	5	28	19	1	0.34	0.2	1°	
JMD03	16	4000	26 20	33 30	64	94	40	32	56	5	31	19	1.8	0.45	0.2	1°	
JMK01	6.3	5000	14	27	50	98	24	24	44	4		16	0.4	0.22	0.2	1°	
JMK02	10	4500	20	30	58	110	32	32	50	5		19	1	0.36	0.2	1°	
JMK03	16	4000	26	33	64	122	40	40	56	5		19	1.8	0.48	0.2	1°	

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七、JMC、JMD、JMK型膜片联轴器的结构型式、基本参数和尺寸

VII. Type JMC, JMD, JMK diaphragm coupling and its construction, basic parameters and dimensions

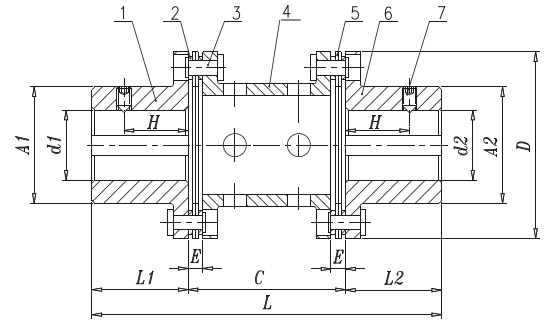
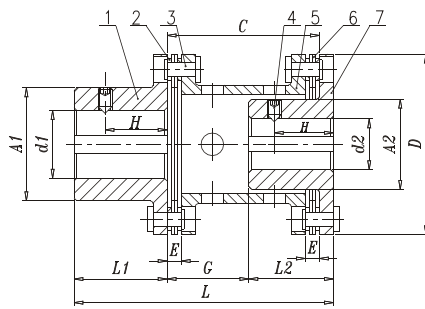
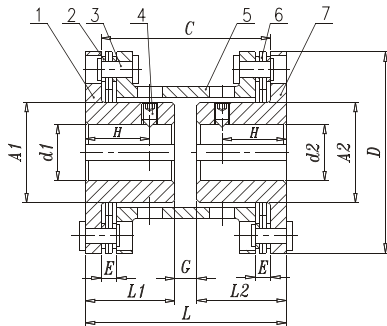


图4 JMC型膜片联轴器结构图

Fig.5 Structure for Type JMC Diaphragm couplings

图5 JMD型膜片联轴器结构图

Fig.4 Structure for Type JMD couplings

图5 JMK型膜片联轴器结构图

Fig.4 Structure for Type JMK couplings

1.半联轴器 2.垫圈 3.铆钉 4.螺钉 5.中间轴 6.膜片 7.半联轴器

1.haft-coupling 2. washers 3.rivet 4.bolt 5.intermediary shaft 6.diaphragm 7.haft-coupling

表 6

table6 (mm)

型号 Type	公称 转矩 Tn N·m	许用 转速 Speed [n] (r/min)	轴孔 直径 Diameter of Bore d1,d2		轴孔 长度 Length of bore L1、L2		主要尺寸 Primary Dimension						转动 惯量 Rotary Inertia ≈kg·cm ²	无孔 质量 Mass m ≈kg		
			D	L	A1	A2	C	E	G	H						
JMC01	6.3	5000	10	23	50	52	20	20	44	4	6	16	0.4	0.20		
JMC02	10	4500	14	27	58	60	24	24	50	5	6	19	1	0.32		
JMC03	16	4000	20	30	64	66	32	32	56	5	6	19	1.8	0.42		
JMD01	6.3	5000	14	10	27	23	50	75	24	20	44	4	25	16	0.4	0.21
JMD02	10	4500	20	14	30	27	58	85	32	24	50	5	28	19	1	0.34
JMD03	16	4000	26	20	33	30	64	94	40	32	56	5	31	19	1.8	0.45
JMK01	6.3	5000	14	27	50	98	24	24	44	4		16	0.4	0.22		
JMK02	10	4500	20	30	58	110	32	32	50	5		19	1	0.36		
JMK03	16	4000	26	33	64	122	40	40	56	5		19	1.8	0.48		

1. 本系列为轻转矩负荷的联轴器，传动无转差。通常用于从机械装置中获取控制信号的情况。
2. 联轴器的两个半联轴器配有双向紧定螺钉，同时配有键槽，安装方便。

1. This series coupling is suit for light torque load, no transmission rotary tolerance. It is generally used in place which getting control signal from mechanism.
2. Both of two half couplings are having screw, keyway, It is easy to install.

九、JM、JM1J系列膜片联轴器的安装偏差说明 IX. Installing deviations of series JM、JM1J coupling

自由状态 Free case		
角向偏差 Angular deviation θ		
轴向偏差 Axial deviation X		
径向偏差 Radial deviation Y		

说明:

本样本所列的各种规格膜片联轴器的许用轴向位移见附表1~附表4;许用角向位移见附表5~附表7。实际的安装偏差不能大于相应的许用值。

由角向位移形成的许用径向位移的计算: $Y=C \times \text{tg } \theta$

实际联轴器选用时须考虑各种安装偏差的综合因素,其计算转矩中的安装偏差系数: $K3=K4 \times K5$ (第4页)

K4—角向偏差系数,见图7;

K5—轴向偏差系数,见图8。

Note:

For all kinds of coupling in this manual, the permissible axial displacement see appendices A.table1~A.table4; the permissible angular displacement see A.table5~A.table7. the installing displacement must be less than the permissible value.

the relation between angular displacement to permissible radial displacement is the function as:

$$Y=C \times \text{tg } \theta$$

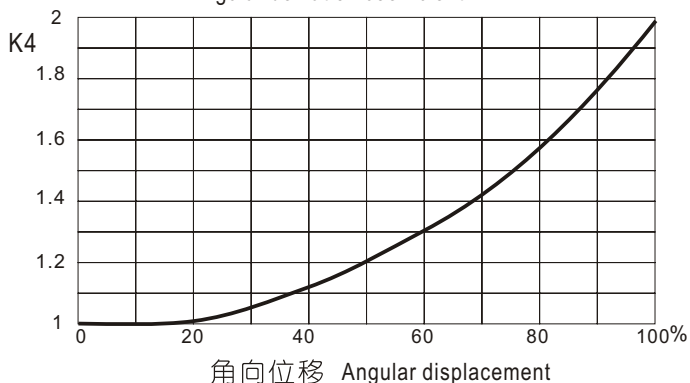
When selecting the coupling, the deviations have to be considered. when calculating torque T_c (page4), the install deviation coefficient need to be considering:

$$K3=K4 \times K5$$

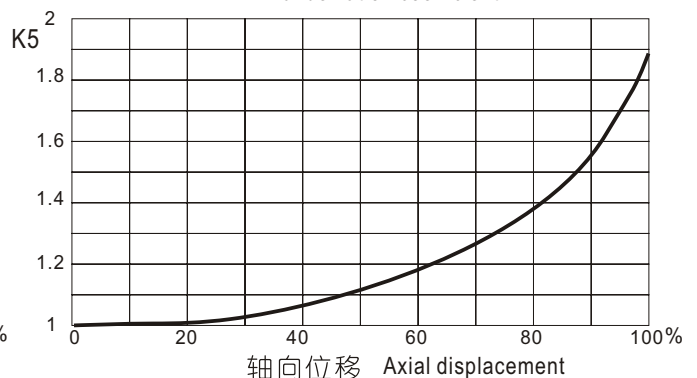
K4—angular deviation coefficient, see fig7;

K5—Axial deviation coefficient, see fig8.

图figure7 角向偏差系数 K4
Angular deviation coefficient



图figure8 轴向偏差系数 K5
Axial deviation coefficient



JM1J型膜片联轴器,所选用的中间轴长度大于10倍轴孔径时,工作转速必须低于临界转速,具体事项与企业技术部门联系。

To series JM1J coupling, when the diameter of intermediate sleeve is more than ten times of the diameter of the shaft bore, the working rotatory speed has to be less than the permissible speed. for detail please contact the company's technical department.

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十、JM系列联轴器的安装和维护

JM系列联轴器的安装与维护详见本公司《JM系列膜片式联轴器安装使用说明书》，该说明书在产品包装箱中提供。

X. Installation of and maintenance

For installation of and maintenance of JM couplings, please refer to the 《JM couplings installation and maintenance manual》 which is provided in the package boxes with the products.

附录表 Appendices

附表1 JM型膜片联轴器的许用轴向位移[X] (mm)
A.Tab.1 Axial compensating value of the Couplings Type JM

型号 Type	许用轴向位移[X] Axial compensating value
JM1 ~ JM3	1.0
JM4 ~ JM6	1.2
JM7 ~ JM9	1.5
JM10 ~ JM12	1.7
JM13 ~ JM15	2.0
JM16 ~ JM18	2.2
JM19 ~ JM24	2.5
JM25 ~ JM30	3.0

附表2 JM1J型膜片联轴器的许用轴向位移[X] (mm)
A.Tab.2 Axial compensating value of the Couplings Type JM1J

型号 Type	许用轴向位移[2X] Axial compensating value
JM1J1 ~ JM1J3	2.0
JM1J4 ~ JM1J6	2.5
JM1J7 ~ JM1J9	3.0
JM1J10 ~ JM1J12	3.5
JM1J13 ~ JM1J15	4.0
JM1J16 ~ JM1J18	4.5
JM1J19 ~ JM1J22	5.0
JM1J23 ~ JM1J26	5.5
JM1J27 ~ JM1J30	6.0

附表3 JMB型膜片联轴器的许用轴向位移[X] (mm)
A.Tab.3 Axial compensating value of the Couplings Type JMB

型号 Type	许用轴向位移[2X] Axial compensating value
JMB5 ~ JMB6	2.5
JMB7 ~ JMB9	3.0
JMB10 ~ JMB12	3.5
JMB13 ~ JMB15	4.0
JMB16 ~ JMB18	4.5
JMB19 ~ JMB22	5.0
JMB23 ~ JMB26	5.5
JMB27 ~ JMB30	6.0

附表4 JMD、JMC型膜片联轴器的许用轴向位移[X] (mm)
A.Tab.4 Axial compensating value of the Couplings Type JMD, JMC

型号 Type	JMD01 ~ JMD03	JMC01 ~ JMC03
许用轴向位移[2X] Axial compensating value	2.0	2.0

附表5 JM型膜片联轴器的许用角向位移[θ]
A.Tab.5 Angle compensating value of the Couplings Type JM

型号 Type	JM1 ~ JM6	JM7 ~ JM10	JM11 ~ JM30
许用角向位移(°) Angle compensating value	1°	45'	30'

附表6 JM1J、JMB型膜片联轴器的许用角向位移[θ]
A.Tab.6 Angle compensating value of the Couplings Type JM1J、JMB

型号 Type	许用角向位移(°) Angle compensating value
JM1J1 ~ JM1J5、JMB5	2°
JM1J6 ~ JM1J9、JMB6 ~ JMB9	1.5°
JM1J10 ~ JM1J30、JMB10 ~ JMB30	1°

附表7 JMD、JMC型膜片联轴器的许用角向位移[θ]
A.Tab.7 Angle compensating value of the Couplings Type JMD、JMC

型号 Type	许用角向位移(°) Angle compensating value
JMD01 ~ JMD03	2°
JMC01 ~ JMC03	2°

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DC卷筒用鼓形齿式联轴器
DC curved tooth drum coupling



ML、MLPK梅花形弹性联轴器
ML&MLPK jaw coupling



JM、JM1J膜片联轴器
JM&JM1J disc(diaphragm) coupling



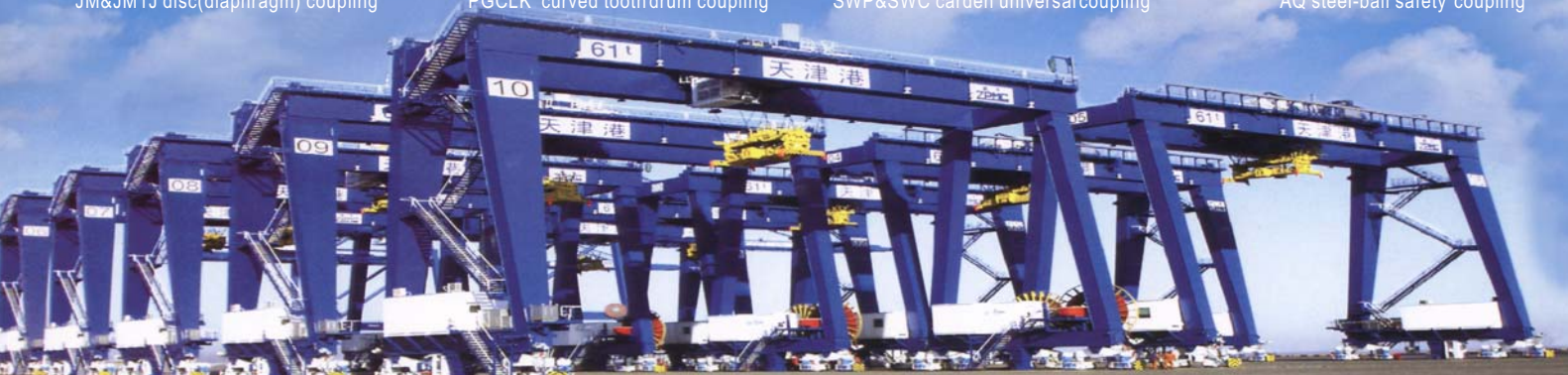
PGCLK鼓形齿式联轴器
PGCLK curved tooth drum coupling



SWP、SWC十字轴式万向联轴器
SWP&SWC carden universal coupling



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地址: 中国·宁波市东钱湖工业园区

电话: (86)574-88372266 88497976

传真: (86)574-88372264

邮编: 315121

电子信箱: wlme@mail.nbptt.zj.cn

公司网站: <http://www.weilongme.com.cn>

服务热线:(86)574-88373131

Addr: Industry Zone, Dongqianhu Tourism Zone,
Ningbo, China

Tel: (86)574-88372266 88497976

Fax: (86)574-88372264

P.C.: 315121

E-mail: wlme@mail.nbptt.zj.cn

Web-site: <http://www.weilongme.com.cn>

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