

七. JRTM 锥齿轮转向器

JRTM Bevel Steering Gear

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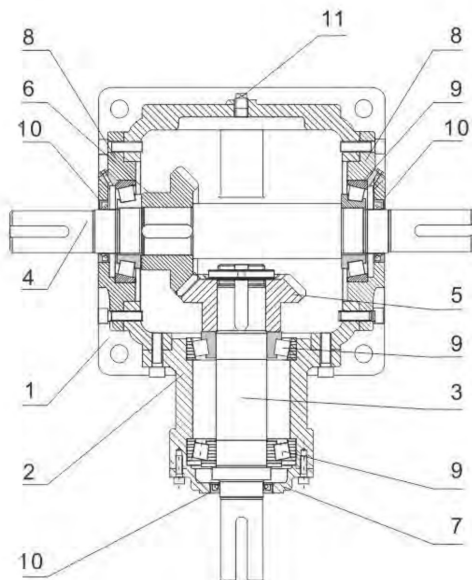
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1. 产品结构 Products Structure



1、机座	Housing
2、横轴座	Housing of input shaft
3、横轴	Input shaft
4、纵轴	Output shaft
5、横轴锥齿轮	Drive spiral bevel gear
6、纵轴锥齿轮	Driven spiral bevel gear
7、端盖	Bearing seat of input shaft
8、端盖	Bearing seat of output shaft
9、轴承	Bearing
10、油封	Oil Seal
11、油镜	Oil gauge

2. 型号说明 Model Description

J - RTM - 06 - 1:1 - I-LRO - B₃

1

2

3

4

5

6

1
企业代码
J-杰牌传动
Enterprise code
J-JIE Drive

2
产品代码
Product Code
RTM-锥齿轮转向器
RTM-bevel steering gear

3
规格
Specification

4
传动比
Transmission ratio
增速: 1: 2 减速: 2: 1
Multiplier:1:2 Reducer:2:1

5
轴配置
Shaft arrangement

6
安装方法
Mounting position

3. 产品说明

Product Description

杰牌JRTM锥齿轮转向器，拥有自主知识产权，产品采用铸铁箱体，具有坚固耐用、运转平稳、高效率 and 长寿命等亮点，包括JRTM通用型和JRTM+精密型等全系列产品。

杰牌JRTM锥齿轮转向器，通过完整产品策划与设计 and 全价值链精益生产最优方案实施，推进精益生产、建设智能工厂，实现研产供销服一体化，以满足客户对快速响应的需求。

杰牌JRTM锥齿轮转向器，遵循模块化和最优化设计理念。产品包括实心轴输入接口，实心轴输出模块，底脚安装、多面安装等输入接口、输出模块 and 安装型式，同时支持多台锥齿轮转向器、丝杆升降机和不同型号规格减速机的模块化组合与集成，并可根据客户需要提供整体升降方案。

杰牌为全球好客户做好产品！



JRTM bevel steering gear with independent intellectual property rights. The product uses the cast iron housing, which is durable and features smooth running, high efficiency and long service life. It includes JRTM universal and JRTM precision models.

JRTM bevel steering gear promotes lean production, builds intelligent factories, and realizes the integration of research, production, supply, marketing and service, so as to meet customers' demand for rapid response through complete product planning and design such as "core product-extreme technology, peripheral product-extreme service, external product-extreme experience" and the implementation of the optimal plan of lean production in the whole value chain such as "product planning, design validation, processing test, assembly test, warehouse logistics, sales service, information system, HR, operation plan, strategy planning".

JRTM bevel steering gear follows the concept of modular and optimized design. It includes solid shaft input interface, solid shaft output module, foot mounting, and multifaceted mounting. At the same time, it supports the modular combination and integration of multi-right angle bevel gear unit, screw jack and gear motors of different models and specifications. And it can provide an overall lifting solution according to customer needs.

JIE Drive provides great products for great clients across the world!

4. 选型说明

Selection Description

4.1 杰牌传动JRTM产品选型表

使用工况:

应用行业:

设备名称:

环境温度:

环境湿度:

海拔高度:

使用场地: ☐室内 ☐室外

起停频率:

运行时间:

负载时间: ☐15% ☐25% ☐40% ☐60% ☐100%

现用品牌:

现用型号:

存在问题:

需改进项:

产品信息:

包装附件类:

包装材质: ☐纸箱 ☐木箱 ☐纸箱+木箱箱贴唛头: ☐中文 ☐英文相关资料: ☐合格证 ☐出厂检验报告

外观标识类:

油漆颜色: ☐JMR-01 ☐JMG-01 ☐JGB-01 ☐RAL2002 ☐RAL5015 ☐RAL9003 ☐RAL7045 ☐RAL7031防腐等级: ☐标准 ☐JS1 ☐JS2 ☐JS3 ☐JS4铭牌要求: ☐中文 ☐英文

安装尺寸类:

产品类型: ☐JRTM安装方式: ☐B3 ☐B6 ☐B7 ☐B8 ☐V5 ☐V6 (见附图)轴配置及旋转方向: ☐I-LR ☐I-R ☐I-L ☐I-LR-O ☐I-R-O ☐I-L-O☐I-UD ☐I-U ☐I-D ☐I-UD-O ☐I-U-O ☐I-D-O☐U-LR ☐U-R ☐U-L ☐U-LR-O ☐U-R-O ☐U-L-O☐D-LR ☐D-R ☐D-L ☐D-LR-O ☐D-R-O ☐D-L-O☐I-I-LR ☐I-I-R ☐I-I-L ☐I-I-LR-O ☐I-I-R-O ☐I-I-L-O☐I-I-UD ☐I-I-U ☐I-I-D ☐I-I-UD-O ☐I-I-U-O ☐I-I-D-O☐U-D-LR ☐U-D-R ☐U-D-L ☐U-D-LR-O ☐U-D-R-O ☐U-D-L-O联动方式: ☐单台 ☐两台联动 ☐三台联动 ☐四台联

性能指标类:

传动比: $i =$ _____ 输出扭矩 (Nm): _____ 使用系数: _____输入转速: ☐1450r/min ☐1150r/min ☐870r/min ☐580r/min ☐400r/min ☐300r/min ☐200r/min☐100r/min ☐10/min

产品型号:



定制信息：

包装附件类：

外观标识类：

安装尺寸类：

性能指标类：

售后服务类：

服务信息：

售前服务：

培训咨询：☐选型培训 ☐应用培训 ☐使用维护

设计选型：☐参与设计 ☐设计校核 ☐产品选型

需求确认：☐工况确认 ☐产品确认 ☐服务确认

售中服务：☐驻厂全检 ☐过程抽检 ☐出厂检验

售后服务：☐安装调试 ☐检测维护 ☐备品备件

商务信息：

运输方式：

交付地点：

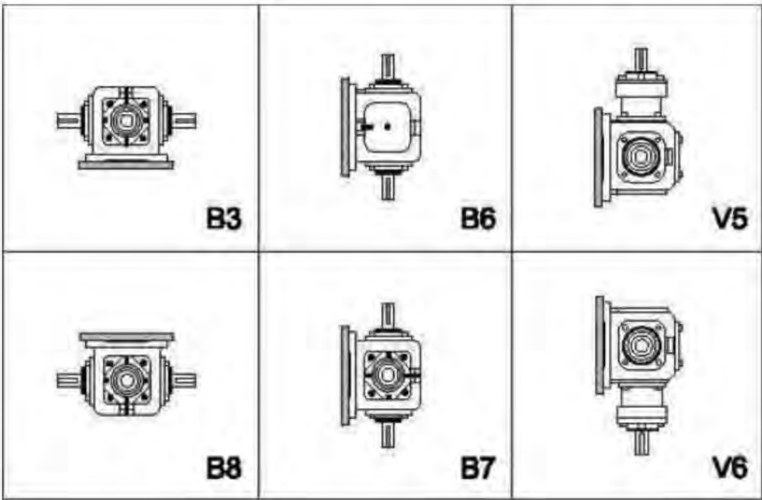
交付时间：

订单数量：

结算价格：

附图：

安装方式：



Selection Table of JIE JRTM Products

Conditions of use:

Application industry:

Equipment name:

Ambient temperature:

Ambient humidity:

Altitude:

Site of use: ☐indoor ☐outdoor

Start-stop frequency:

Running time:

Load time: ☐15% ☐25% ☐40% ☐60% ☐100%

Current brand:

Current model:

Existing problem:

Items needing improvement:

Product information:

Packing accessories:

Packaging material: ☐Carton ☐Wooden case ☐Carton + Wooden case Case mark: ☐Chinese ☐English

Relevant data: ☐Certificate of conformity ☐Ex-factory inspection report ☐Chinese operating instruction
☐English operating instruction

List of accessories: ☐Torque arm ☐Protective cover ☐Single output shaft ☐Double output shaft ☐Base

Appearance identification:

Paint color: ☐JMR-01 ☐JMG-01 ☐JGB-01 ☐RAL2002 ☐RAL5015 ☐RAL9003 ☐RAL7045 ☐RAL7031

Nameplate requirement: ☐Chinese ☐English

Installation dimension:

Product model: ☐JRTM

Mount position: ☐B3 ☐B6 ☐B7 ☐B8 ☐V5 ☐V6

Shaft configuration and Direction of rotation:

☐I-LR ☐I-R ☐I-L ☐I-LR-O ☐I-R-O ☐I-L-O

☐I-UD ☐I-U ☐I-D ☐I-UD-O ☐I-U-O ☐I-D-O

☐U-LR ☐U-R ☐U-L ☐U-LR-O ☐U-R-O ☐U-L-O

☐D-LR ☐D-R ☐D-L ☐D-LR-O ☐D-R-O ☐D-L-O

☐I-I-LR ☐I-I-R ☐I-I-L ☐I-I-LR-O ☐I-I-R-O ☐I-I-L-O

☐I-I-UD ☐I-I-U ☐I-I-D ☐I-I-UD-O ☐I-I-U-O ☐I-I-D-O

☐U-D-LR ☐U-D-R ☐U-D-L ☐U-D-LR-O ☐U-D-R-O ☐U-D-L-O

Linkage mode: ☐Single station ☐Two linkage ☐Three linkage ☐Four linkage

Performance indicators:

Transmission ratio: $i=$ _____ Output torque (Nm): _____ Service factor: _____

Input speed: ☐1450r/min ☐1150r/min ☐870r/min ☐580r/min ☐400r/min ☐300r/min ☐200r/min
☐100r/min ☐10/min

Product model:



Customized information:

Packaging:
Appearance:
Installation dimension:
Performance indicators:
After-sales service:

Service information:

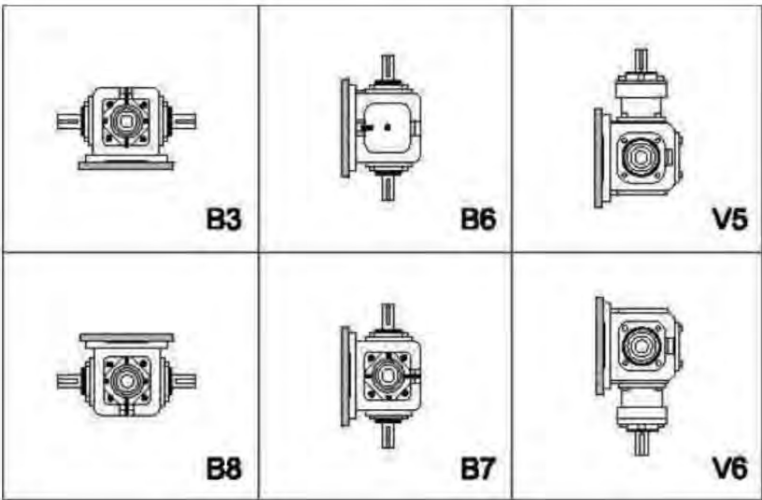
Pre-sales service:
Training consulting: ☐ Type selection training ☐ Application training ☐ Use and maintenance
Design selection: ☐ Participate in design ☐ Design verification ☐ Product selection
Demand confirmation: ☐ Working condition confirmation ☐ Product confirmation ☐ Service confirmation
In-sales service: ☐ On-site full inspection ☐ Process sampling ☐ Ex-factory inspection
After-sales service: ☐ Installation and commissioning ☐ Testing and maintenance ☐ Spare parts

Business information:

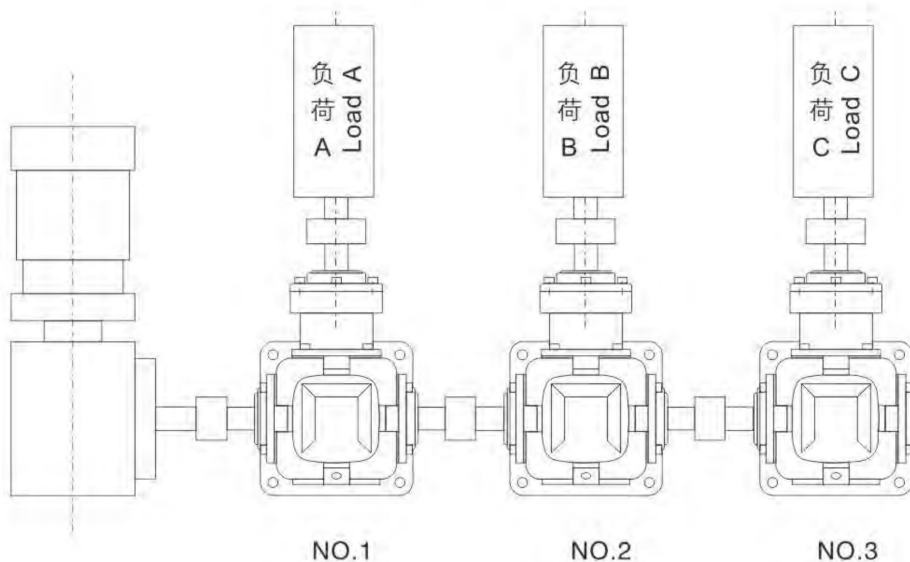
Transportation:
Delivery place:
Delivery time:
Order quantity:
Settlement price:

Attached figure:

Mount position:



4.2 选型要素 Selection points



3台负载全部为196Nm，一般冲击，每天连续工作8小时，即使用系数 $f_s=1.25$ ，斜齿轮输入轴转速300r/min，速比全部为1:1。

根据公式：每台转向器本身所需的负载 $MN_2 \geq M_2 \times f_s = 196 \times 1.25 = 245\text{Nm}$

※1号转向器

因1号转向器本身的负载为245Nm，而2号、3号转向器需通过1号转向器传递扭矩。

所以1号转向器应承担的负载为： $245\text{Nm} + 245\text{Nm} + 245\text{Nm} = 735\text{Nm}$ ，依据传动能力表，应选JRTM12。

※2号转向器

除本身的负载245Nm，还需传递3号转向器的扭矩。所以总负载应为 $245\text{Nm} + 245\text{Nm} = 490\text{Nm}$ ，依据传动能力表，应选JRTM10。

※3号转向器

由于仅一个负载C进行运转，即所需负载在245Nm 以上即可，依据传动能力表可选JRTM08。

Torque values of three gear reducers are 196Nm, uniform impulsire force, operate continuous for 8 hours per day, that is, useful factor $f_s=1.25$, input speed of 300rpm, ratio of 1:1.

Calculate according to formula:

Required torque of any of gearbox MN_2 is equal to 245Nm or larger.

No.1 gear reducer

No.1 gear reducer carry torque 245Nm, but No.2 and No.3 gear reducer need transfer torque through No.1, Consequently No.1 gear reducer should carry torque 735Nm($245\text{Nm} + 245\text{Nm} + 245\text{Nm}$), select J-RTM12. according to transmission capacity table.

No.2 gear reducer

No.3 gear reducer still transfers torque of No.3gear reducer besides torque of245Nm, so, the total torque is 490Nm ($245\text{Nm} + 245\text{Nm}$), select JRTM10 according to transmission capacity table.

No.3 gear reducer

Required torque is more than 245Nm because of only load C according to transmission capacity Table select JRTM 08.

5. 技术参数

Technical Specifications

i_N	n1 (r/min)	JRTM02		JRTM04		JRTM06		JRTM07		JRTM08	
		MN ₂ (Nm)	PN ₁ (kW)	MN ₂ (Nm)	PN ₁ (kW)	MN ₂ (Nm)	PN ₁ (kW)	MN ₂ (Nm)	PN ₁ (kW)	MN ₂ (Nm)	PN ₁ (kW)
1:1	1450	11.6	1.79	31.9	4.94	96.0	14.9	142	22.0	294	45.6
	1150	11.7	1.43	34.1	4.19	103	12.7	150	18.4	305	37.5
	870	12.1	1.12	37.2	3.46	113	10.5	164	15.2	312	29.0
	580	12.1	0.747	39.5	2.45	119	7.35	184	11.4	319	19.8
	400	12.3	0.524	40.2	1.72	122	5.20	195	8.34	326	14.0
	300	12.3	0.396	40.5	1.30	123	3.93	198	6.35	331	10.6
	200	12.4	0.226	41.2	0.880	124	2.66	201	4.30	338	7.23
	100	12.7	0.136	41.9	0.448	127	1.36	206	2.20	346	3.70
1.5:1	1450	13.0	0.014	43.0	0.046	132	0.141	214	0.228	361	0.386
	1150					117	12.1	145	15.0	185	19.1
	870					122	9.96	147	12.0	188	15.4
	580					123	7.66	150	9.30	191	11.8
	400					126	5.23	153	6.32	197	8.14
	300					128	3.66	155	4.41	200	5.70
	200					129	2.77	157	3.35	203	4.34
	100					131	1.87	160	2.28	204	2.91
2:1	1450					134	0.957	163	1.16	210	1.49
	1150					139	0.099	169	0.12	218	0.155
	870	12.1	0.94	42.8	3.32	102	7.90	137	10.6	180	14.0
	580	12	0.74	43.4	2.67	104	6.39	139	8.55	183	11.3
	400	12	0.56	43.8	2.04	105	4.88	141	6.56	187	8.70
	300	11.9	0.37	44.4	1.38	108	3.34	144	4.47	191	5.92
	200	12.2	0.26	45.1	0.96	109	2.33	146	3.12	194	4.15
	100	11.9	0.19	45.5	0.73	110	1.76	148	2.37	196	3.14
2.5:1	1450	12.2	0.13	46.1	0.49	111	1.18	149	1.59	198	2.12
	1150	11.2	0.06	46.6	0.25	114	0.608	152	0.812	202	1.08
	870	28.1	0.015	48.5	0.026	116	0.062	157	0.084	209	0.112
	580					96.2	5.97	113	6.99	184	11.4
	400					97.2	4.78	115	5.64	185	9.11
	300					99.0	3.68	116	4.30	188	7.00
	200					100.0	2.48	118	2.92	192	4.76
	100					100.9	1.73	120	2.05	195	3.34
3:1	1450					102.9	1.32	121	1.55	197	2.53
	1150					103.9	0.888	123	1.05	200	1.71
	870					104.9	0.448	123	0.528	203	0.867
	580					107.8	0.046	126	0.054	208	0.089
	400					93.6	4.84	105	5.42	159	8.20
	300					94.8	3.88	106	4.34	160	6.55
	200					95.9	2.97	108	3.34	163	5.04
	100					97.6	2.02	109	2.25	166	3.42
4:1	1450					99.0	1.41	111	1.58	168	2.39
	1150					100	1.07	111	1.18	169	1.80
	870					100	0.712	113	0.803	171	1.22
	580					102	0.363	115	0.409	173	0.618
	400					104	0.037	118	0.042	179	0.064
	300					80.6	3.12	93.4	3.62	124	4.80
	200					81.5	2.50	94.3	2.90	125	3.83
	100					82.4	1.92	95.9	2.23	127	2.95
5:1	1450					84.1	1.30	96.9	1.50	129	2.00
	1150					85.1	0.91	98.7	1.05	131	1.40
	870					86.1	0.69	98.3	0.79	131	1.05
	580					86.0	0.46	101	0.54	134	0.71
	400					87.7	0.23	101	0.27	135	0.36
	300					89.3	0.02	101	0.03	140	0.04
	200					52.0	1.61	57.4	1.78	68.7	2.13
	100					52.5	1.29	58.0	1.43	69.2	1.70
5:1	1450					53.2	0.99	59.0	1.10	70.4	1.31
	1150					54.2	0.67	59.6	0.74	71.7	0.89
	870					54.9	0.47	60.7	0.52	72.6	0.62
	580					55.5	0.36	60.4	0.39	72.9	0.47
	400					55.4	0.24	61.7	0.26	74.1	0.32
	300					56.5	0.12	62.9	0.13	75.1	0.16
	200					57.6	0.01	64.5	0.01	77.8	0.02
	100										

1、横轴转速未达到10r/min时，请使用10r/min的数据。

2、 以上有灰色标识的规格定货，横轴输入转速超过1450r/min时，请咨询杰牌。





i_N	n1 (r/min)	JRTM10		JRTM12		JRTM16		JRTM20		JRTM25	
		MN2 (Nm)	PN ₁ (kW)	MN2 (Nm)	PN ₁ (kW)	MN2 (Nm)	PN ₁ (kW)	MN2 (Nm)	PN ₁ (kW)	MN2 (Nm)	PN ₁ (kW)
1:1	1450	421	65.3	619	96.0	1019	163				
	1150	453	55.7	665	81.1	1098	139	1842	234		
	870	479	44.6	726	67.5	1186	114	2009	193	3489	335
	580	493	30.6	802	49.7	1343	85.9	2274	145	3940	252
	400	504	21.5	821	35.1	1499	66.1	2538	112	4410	195
	300	513	16.4	835	26.8	1637	54.1	2744	90.8	4792	159
	200	521	11.1	852	18.2	1784	39.3	3126	69.0	5390	119
	100	535	5.72	875	9.36	1842	20.3	3205	35.3	5439	60.0
1.5:1	10	561	0.599	919	0.983	1940	2.14	3205	3.53	5713	6.30
	1450	374	38.7	564	58.3						
	1150	380	31.2	601	49.2						
	870	389	24.1	656	40.7						
	580	396	16.4	699	28.9						
	400	406	11.6	711	20.3						
	300	411	8.78	724	15.5						
	200	417	5.95	736	10.5						
2:1	100	426	3.04	754	5.37						
	10	443	0.316	785	0.56						
	1450	305	23.6	516	40.0	921	73.7	1578	126		
	1150	309	19.0	516	31.7	938	59.5	1607	102	3146	199
	870	315	14.6	516	24.0	958	46.0	1646	79.0	3224	155
	580	322	10.0	524	16.3	980	31.3	1695	54.2	3332	107
	400	328	7.02	538	11.5	1000	22.0	1725	38.0	3420	75.4
	300	332	5.33	543	8.71	1009	16.7	1754	29.0	3479	57.5
2.5:1	200	338	3.61	551	5.89	1029	11.3	1784	19.7	3557	39.2
	100	344	1.84	563	3.01	1058	5.84	1833	10.1	3646	20.1
	10	357	0.191	586	0.313	1098	0.605	1921	1.06	3822	2.11
	1450	293	18.2	507	31.4						
	1150	298	14.7	514	25.3						
	870	302	11.2	523	19.5						
	580	310	7.68	535	13.3						
	400	315	5.38	545	9.32						
3:1	300	317	4.06	552	7.08						
	200	321	2.75	560	4.79						
	100	326	1.40	568	2.43						
	10	336	0.144	588	0.251						
	1450	270	14.0	458	23.6	904	48.2	1529	82.3	2935	158
	1150	275	11.3	464	19.0	920	38.9	1561	66.6	3045	130
	870	279	8.66	469	14.6	940	30.1	1598	51.6	3135	101
	580	285	5.89	480	9.92	960	20.4	1644	35.4	3246	69.9
4:1	400	288	4.11	490	6.98	978	14.4	1672	24.8	3317	49.3
	300	291	3.11	495	5.29	990	10.9	1701	18.9	3372	37.6
	200	294	2.10	501	3.57	1005	7.38	1733	12.9	3449	25.6
	100	300	1.07	510	1.82	1038	3.82	1777	6.60	3537	13.1
	10	308	0.110	527	0.188	1076	0.40	1865	0.69	3713	1.4
	1450	241	9.35	434	16.8	850	34.3	1452	58.7	2798	113
	1150	246	7.54	441	13.5	865	27.7	1483	47.5	2892	92.6
	870	249	5.78	448	10.4	884	21.4	1518	36.8	2978	72.2
5:1	580	254	3.93	456	7.07	902	14.6	1562	25.2	3084	49.8
	400	257	2.74	465	4.97	919	10.2	1588	17.7	3151	35.1
	300	259	2.08	470	3.77	930	7.8	1616	13.5	3204	26.8
	200	262	1.40	476	2.54	944	5.3	1646	9.17	3276	18.2
	100	267	0.71	485	1.30	976	2.7	1688	4.70	3360	9.36
	10	275	0.07	501	0.13	1011	0.3	1772	0.49	3527	0.98
	1450	136	4.21	296	9.18	814	26.3	1391	44.9	2631	85.0
	1150	138	3.39	301	7.39	828	21.2	1420	36.4	2771	71.0
	870	140	2.60	305	5.68	847	16.4	1454	28.2	2853	55.3
	580	143	1.77	311	3.86	864	11.2	1496	19.3	2954	38.2
	400	144	1.23	318	2.72	881	7.85	1521	13.6	3018	26.9
	300	146	0.93	321	2.06	891	5.96	1548	10.3	3069	20.5
	200	148	0.63	325	1.39	905	4.03	1577	7.03	3138	14.0
	100	150	0.32	331	0.71	935	2.08	1617	3.60	3218	7.17
	10	155	0.03	342	0.07	969	0.22	1697	0.38	3378	0.75

1、If speed is less than 10rpm, please choose 10rpm.

2、 When order the model with ash sign or that input speed is more than 1450rpm. Please consult JIE for details.

JRST 锥齿轮转向器径向力Fr(N)表

JRST series Fr(N) table

i_N	n1 (r/min)	JRST02		JRST04		JRST06		JRST07		JRST08		JRST10		JRST12		JRST16		JRST20		JRST25	
		横轴 Input shaft	纵轴 Output shaft	横轴 Input shaft	纵轴 Output shaft	横轴 Input shaft	纵轴 Output shaft	横轴 Input shaft	纵轴 Output shaft	横轴 Input shaft	纵轴 Output shaft	横轴 Input shaft	纵轴 Output shaft	横轴 Input shaft	纵轴 Output shaft	横轴 Input shaft	纵轴 Output shaft	横轴 Input shaft	纵轴 Output shaft	横轴 Input shaft	纵轴 Output shaft
1:1	1450	265	216	833	951	1911	2450	2450	3136	3234	3381	4165	4508	5096	5586	10633	10976				
	1150	323	235	882	1029	2058	2597	2744	3234	3479	3626	4459	4851	5488	6076	11368	11760	15386	15608		
	870	402	255	960	1127	2205	2842	2989	3381	3773	3969	4851	5292	5880	6566	12446	12740	16660	17150	24794	25480
	580	549	314	1078	1323	2499	3185	3381	3822	4263	4459	5488	5880	6713	7301	14014	14504	18816	19404	28028	28910
	400	637	353	1372	1715	3185	3528	4018	4900	4851	5978	6272	7056	7742	8134	15680	16170	21070	21756	31360	32340
	300	696	392	1519	1960	3430	3528	4410	5537	5243	6958	6713	7987	8232	9065	17150	17640	23422	24108	34300	35280
	200	784	441	1911	1960	3430	3528	5096	6272	7889	8820	8575	9604	9261	10290	19600	19894	25970	26754	38612	39788
	100	980	588	1911	1960	3430	3528	5096	6272	8428	8820	9996	11760	11368	12593	22540	22540	28420	32928	39200	49000
	10	980	588	1911	1960	3430	3528	5096	6272	8428	8820	9996	11760	11858	14504	22540	22540	28420	33320	39200	49000
1.5:1	1450			1078	1960	2548	2842	3430	5390	4361	7987	5194	9212	5978	10486	5978	12152	7693	14602		
	1150			1078	1960	3038	3087	4067	5978	5096	8820	6174	10486	7252	12152	6419	13083	8771	17934	12985	24647
	870			1078	1960	3430	3332	4753	6076	6076	8820	7448	11760	8869	14504	6958	14210	9506	19453	13573	29400
2:1	580			1078	1960	3430	3528	5096	6174	7644	8820	9555	11760	11466	14504	7840	16072	10780	22001	15680	33222
2.5:1	400			1078	1960	3430	3528	5096	6272	8428	8820	9996	11760	11858	14504	8820	17934	12005	24598	17542	37142
	300			1078	1960	3430	3528	5096	6272	8428	8820	9996	11760	11858	14504	9604	19600	13132	27342	19159	40474
3:1	200			1078	1960	3430	3528	5096	6272	8428	8820	9996	11760	11858	14504	10829	22148	14798	30282	21658	45766
	100			1078	1960	3430	3528	5096	6272	8428	8820	9996	11760	11858	14504	13328	22540	18228	33320	26656	49000
	10			1078	1960	3430	3528	5096	6272	8428	8820	9996	11760	11858	14504	22540	22540	28420	33320	39200	49000

备注：各规格更低的输出转速按以上最大的Fr值。

Notes: If there is lower output speed, please choose the maximum Fr in the above table.

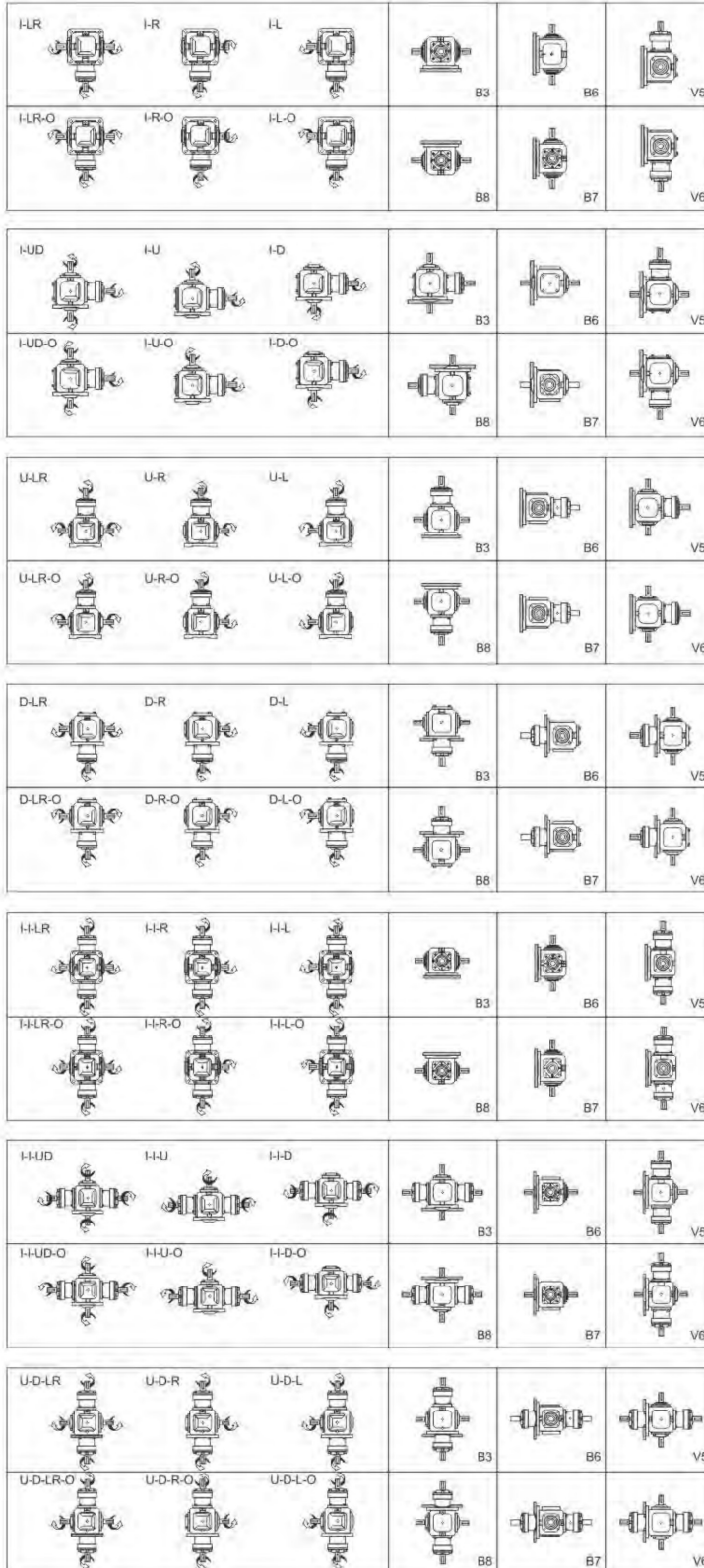
JRST 产品重量

JRST series weight table

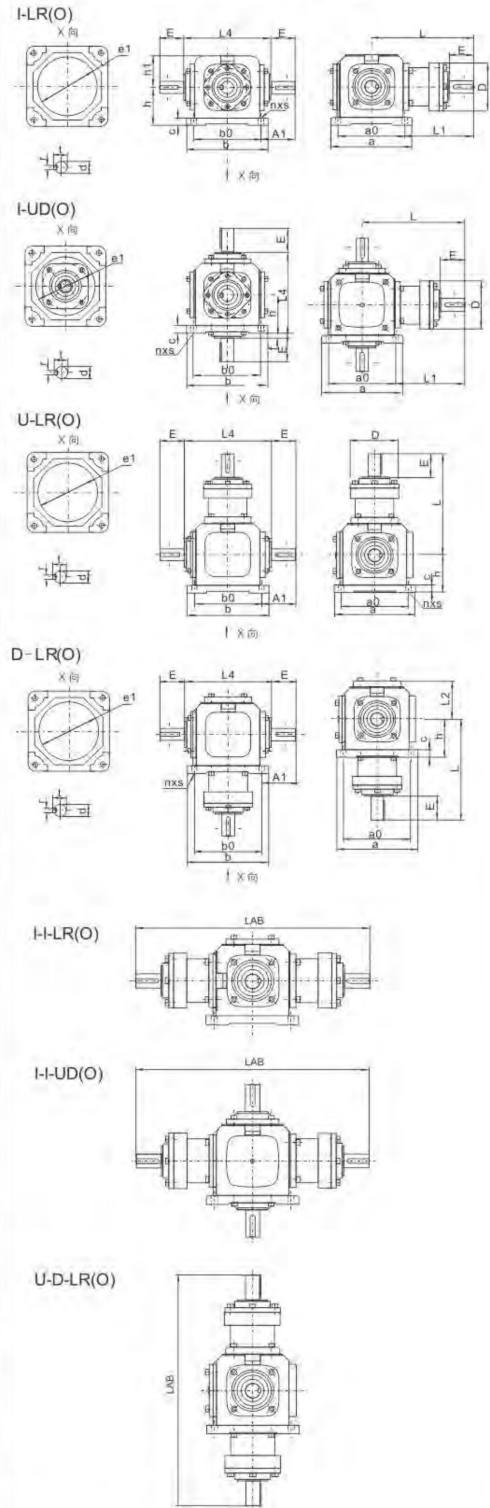
Type	JRST02	JRST04	JRST06	JRST07	JRST08	JRST10	JRST12	JRST16	JRST20	JRST25
m(kg)	2	11	22.5	34	51	80	125	195	302	500



6. 安装尺寸 Mounting Dimensions

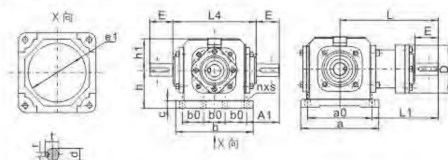


JRTM2-JRTM16

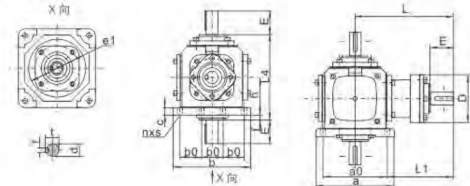


JRTM20-JRTM25

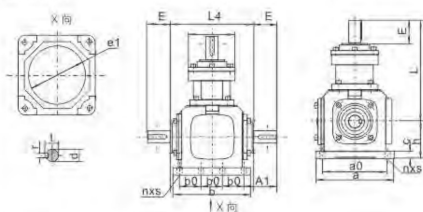
I-LR(O)



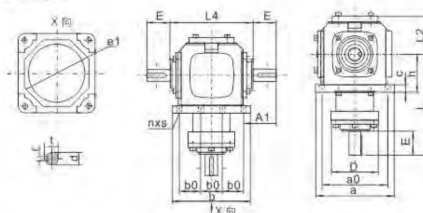
I-UD(O)



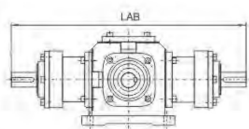
U-LR(O)



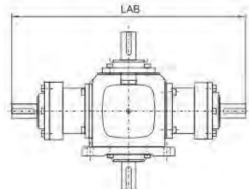
U-LR(O)



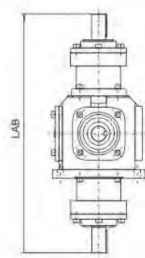
I-I-LR(O)



I-I-UD(O)



U-D-LR(O)



	JRTM2	JRTM4	JRTM6	JRTM7	JRTM8	JRTM10	JRTM12	JRTM16	JRTM20	JRTM25
A1	48	53.5	81	88	110.5	120	130	150	195	235
a	100	155	190	210	235	285	340	390	490	580
a0	84	125	152	174	195	240	290	330	430	520
b	100	155	190	210	235	285	340	390	410	480
b0	84	125	152	174	195	240	290	330	110	130
C	10	17	17	20	22	25	32	40	40	40
D	58	76	115	125	150	155	168	193	220	270
d(h7)	15	19	25	32	40	45	50	60	72	85
E	33	38	50	62	75	90	100	105	105	130
e1(H8)X深	94x3	155x5	190x5	220x5	250x5	305x5	370x5	420x7	360x10	430x10
f	5	2	17	13	18	10	0	10	10	10
h	52	76	90	100	115	140	175	200	245	290
h1	40	60	76	87	98	118	165	186	217	255
L	124	180	222	265	308	360	415	455	545	660
L1	82	117.5	146	178	210.5	240	270	290	330	400
L2	52	76	89.5	99	114.5	138	165	186	217	255
L4	114	156	214	226	266	300	350	420	510	600
LAB	/	360	444	530	616	720	830	/	/	/
n	4	4	4	4	4	4	4	4	8	8
r	5	6	8	10	12	14	14	18	20	22
s	9	10.5	14	14	14	16	21	21	21	24
t	17	21.5	28	35	43	48.5	53.5	64	76.5	90



7. 使用说明 Operating Instructions

7.1 安装注意事项

Notices of installation

7.1.1 减速机须安装在平整坚固的底座上，底脚螺栓必须紧固、防震。

The base-plate must be plane and stoutness, and the base-bolts must be screwed down and shockproof.

7.1.2 原动机 —— 减速机 —— 工作机的各联接轴伸，安装后必须互相准确对准轴线。

The connecting shafts of prime mover, reducer and operation device must be coaxial after installation.

7.1.3 减速机输入端及输出端轴伸外径尺寸公差均按 h6 制作，与之相配的联轴器、皮带轮、链轮等传动件内孔须按合适的尺寸公差配制，避免装配过紧损坏轴承，装配过松影响正常动力传递。

The diameter tolerance zone of input and output shafts is h6, the holes of fittings (such as couplings, belt-pulley, sprocket wheel and so on) must properly mate the shaft, which prevents bearing from breakage because of over-tight mate or avoid effecting normal power transmission because of over-loose mate.

7.1.4 链轮、齿轮等传动件装上轴伸时，应尽量靠近轴承，以减少轴伸弯曲应力。

Drivers such as sprocket wheel and gear must be fitted close to bearings in order to reduce bending stress of hanging shaft.



7.2 使用注意事项

Notices of usage

7.2.1 使用前应注意检查减速机型式结构、机座号、传动比、输入轴结构、输出轴结构、输入轴输出轴轴指向和回转方向是否符合使用要求。

Before using, please check carefully whether the reducer model, distance, transmission ratio, input connecting method, output shaft structure, input and output shaft direction and revolving direction accord with requirement.

7.2.2 出厂时减速机已加好润滑油，用户无须加油。首次运行500小时后请更换润滑油，以后每隔约2500小时或6个月这两者中较早的时间进行更换。

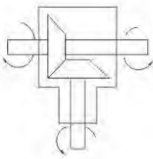
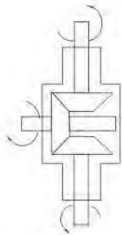
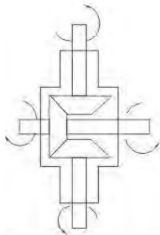
According to the requirement of "lubricant" in the product manual, please fill proper category and brand lubricant. And then screw on the vent-plug, uncork the small cone-plug of vent-plug. Only after doing these, reducer is ready for starting up running. The proper brand and adequate lubricant oil is required; replacing oil in time conforming to the request of product manual is also necessary, especially after using first 100 hours, it is required refilling new oil.

7.2.3 使用过程中发生不正常情况时，应及时停机检查，可参照“故障分析”表处理。（减速机的油温最高允许达到95℃，在此温度界限下，只要油温不再上升，可以放心使用）。

When abnormal circumstances occur, please stop and check reducer per "Malfunctions Analysis" (allowable highest oil temperature is 95℃, under this temperature limit, if oil temperature no more goes up, please let reducer continue running).

7.3 转向功能

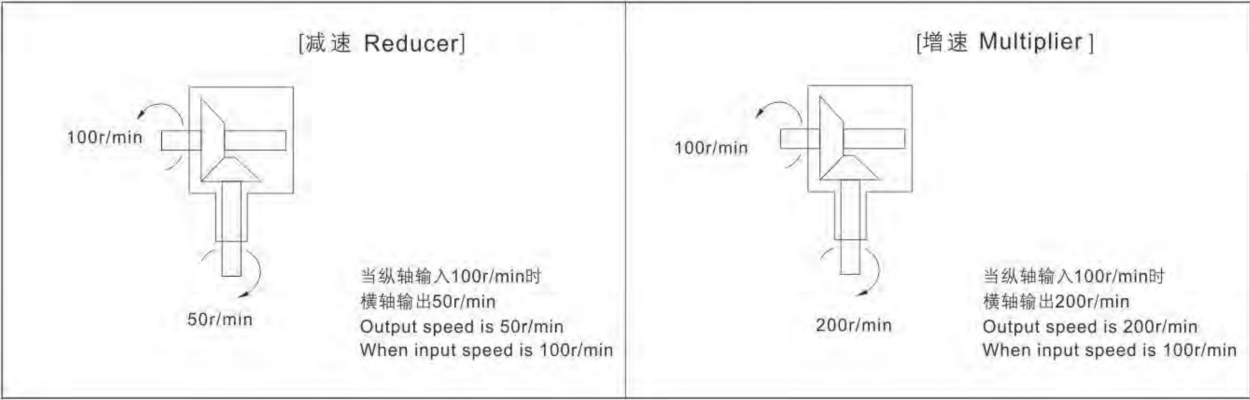
Function of rotation

1 横 轴 Input shaft		2 横 轴 Input shaft	
2轴2-extended shaft	3轴3-extended shaft	3轴3-extended shaft	4轴4-extended shaft
			

说明：当输入轴旋转方向改变，输出轴相应改变。

Specification: Direction of rotation of output shaft varies with that of input shaft.

7.4 转向功能注意事项(1:1传动比时无关系)
Pay attention to the ratio when fixing the input side
(there is nothing in case of ratio of 1:1)



8. 油品润滑
Lubricant

8.1 润滑油选用表
Lubricants for reducer used in can be chosen as the table below

横轴转速 Input shaft speed (r/min)	周围温度 Environment temperature		横轴转速 Input shaft speed (r/min)	周围温度 Environment temperature	
	-10℃~30℃	30℃~50℃		-10℃~30℃	30℃~50℃
200~1450	ISO VG150	ISO VG200	< 200	ISO VG220	ISO VG320

8.2 润滑油注油量(L)
Lubricants capacity(L)

规格 Size	JRTM02	JRTM04	JRTM06	JRTM07	JRTM08	JRTM10	JRTM12	JRTM16	JRTM20	JRTM25
注油量 Lubricant capacity	0.15	0.9	1.2	2	2.8	5.2	8.6	11	22	40

注：因安装方式不同，油量会存在不一致，注油时结合油镜查看是否注油充足。
Annotate:If other faults not listed above occur,please contact with us at any moment,we will supply thorough consultation and service.

9. 故障分析 Malfunctions Analysis

故障情况 Fault Description	故障原因 Reasons	解决办法 Solutions
过热 Overheating	原动机、减速机、工作机连接不当 Improper connection among prime mover, reducer and the operation device	调整至适当位置，使三者相联轴线同轴 Adjust to proper position
	超负荷运转 Overloading	适当调整负荷 Adjust to proper load
	油封过度摩擦 Over friction of oil seals	在油封唇口处滴润滑油 Drop lubricant at oil seal
	润滑油过少或过多 Lubricant oil overmuch or shortage	按油标指示点调整油量 Adjust to proper oil quantity as indication
	润滑油杂质多或润滑性差 Much impurity in oil or inferior oil	更换合适新油 Refill proper oil
振动 Vibration	原动机、减速机、工作机固定不良 Prime mover, reducer and the operation device mount badly	查出固定不良部位，正确固紧 Find out the bad place, tighten it
	锥齿轮副齿面磨损或损伤 Tooth surface of worm gear sets worn-out or damaged	更换锥齿轮副（需要时请咨询杰牌） Replace worm gear sets (we will cooperate with you when necessary)
	轴承磨损 Bearing worn-out	更换轴承 Replace Bearing
	螺栓松脱 Bolt loose	固紧螺栓 Tighten Screw
异响 Noise	轴承损伤或间隙过大 Bearing damaged or too large clearance	更换轴承 Replace Bearing
	锥齿轮副啮合不良 Worm gear sets mesh badly	修整齿面或更换锥齿轮副（需要时请咨询杰牌） Mend tooth surface or replace worm gear sets (please contact to us)
	润滑油不足 Lubricant oil shortage	按油标指示点补加润滑油 Fill in adequate oil as indication
	机体内有异物 Foreign object in box	倒净润滑油带出异物，重加清洁润滑油 Discharge all the oil in order to put out foreign object, and refill clean oil
漏油 Oil leakage	油封唇口磨损 Oil seal lip worn-out	更换油封 Replace oil seal
	油封档轴颈磨损 Shaft of oil seal area worn-out	更换输出轴或输入轴 Replace input or output shaft
	油量过多 Too much oil	按油标指示点调整油量 Discharge adequate oil as indication
	放油螺塞未旋紧 Oil screw plug loose	螺纹处加密封胶、旋紧螺塞 Tighten oil screw plug
	油标破损 Oil gauge damaged	更换油标 Replace oil gauge
锥齿轮副齿面 磨损过快 Tooth surface of worm gear sets abrade extra-quickly	超负荷运转 Overload	调整至适当负荷 Adjust to proper loading
	润滑油不符合要求 Lubricant oil not according with requirement	更换合适的润滑油 Replace proper lubricant oil
	润滑油不足 Lubricant oil shortage	按油标指示点加足润滑油 Fill adequate oil as indication
	未按规定适时换油，润滑油劣化 Not replacing lubricant oil in time according to requirement, oil deteriorates	按规定要求适时换油 Replacing oil in time according to requirement
	运转温度过高 Overheating while running	1. 按“过热”故障处理 2. 采取合适措施，降低环境温度 1. Deal with it as "Overheating" 2. Adopting proper measures to make environment temperature fall

注：如果发生其他故障无法解决时，请咨询杰牌。

Annotate: If other faults not listed above occur, please contact with us at any moment, we will supply thorough consultation and service.