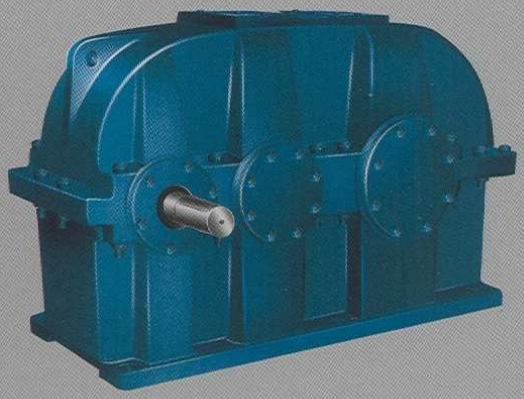
中国名牌 CHINA TOP BRAND
国家大型企业 NATIONAL LARGE ENTERPRISE





圆柱齿轮减速器

江苏泰隆机械集团
JIANGSU TAILONG MACHINERY GROUP COMPANY
江苏泰隆减速机股份有限公司
JIANGSU TAILONG DECELERATOR MACHINERY CO.,LTD.

公司简介

泰隆集团地处扬子江畔的泰兴市区，是泰兴人引以为豪的国家大型企业。集团在全国优秀企业家、江苏省劳动模范董事长殷根章的领导下，经过20多年的悉心经营，昂首迈进了中国机械工业500强，成为全国减变行业龙头老大。

集团现拥有总资产5.8亿元，固定资产3.6亿元，占地面积60万平方米，员工近2612人，专业工程技术人员896人，年销售额15亿元。从美国、德国、日本、俄罗斯等国家引进的大型数控磨齿机、蜗杆磨床、加工中心、碳氮共渗炉等一批高精尖的生产设备和检测设备占48%。建立了全国同行业中检测功能最全、检测功率最大、仪器最先进的测试中心，创建了省级工程技术中心。公司产品在原有的平面二次包络蜗杆减速器、9000系列摆线针轮减速机、圆柱齿轮减速器、行星齿轮减速器等十几个系列，几十万种规格的基础上，采用先进的模块化、点线等技术开发出了TL模块化齿轮减速电机；TXP行星模块化减速器、重载模块式减速器、点线啮合减速器。多年来，起重机用硬齿面、中硬齿面减速器一直在为用户提供最佳的传动方案，在风力发电、水力发电领域捷足先登，做出了不菲的业绩。重载齿轮箱在建材行业、冶金行业成功得到了应用，开发出了建材行业的立式磨机及边缘传动磨机齿轮箱，冶金行业的开卷、卷取齿轮箱、三环减速器、星轮减速器。另外公司还为用户提供榨糖机齿轮箱、螺杆升降机、电动滚筒及各类非标齿轮箱。公司荣获“全国首批守合同重信用企业”，“全国重点高新技术企业”、“全国机械工业质量效益型先进企业”、“全国机械工业质量管理奖”、“全国用户满意服务”等殊誉，在同行业中率先通过质量、环境、安全三位一体认证及ISO10012计量体系确认。

泰隆人将遵循自己一贯的质量承诺、服务承诺和信誉承诺，把顾客满意当作我们的最高追求！

Company Brief

Tailong Group is located in Taixing urban area at the border of Yangtse River and it is a state-owned large-sized enterprise boasted by Taixing people. Under the leadership of Mr. Yin genzhang, a nationwide excellent entrepreneur and a model worker of Jiangsu Province, after more than twenty years of operation with concentrated efforts, has proudly marched into the Top 500 enterprises in Chinese Mechanical Industry and has become the industry leader.

At present, the group owns a total assets of RMB 580m, and fixed of RMB 360m, and it covers an area of 600,000 square meters and owns almost 2,612 employees, including 896 technicians, the annual turnover surpasses 1b RMB. The introduced large-sized numerical controlled gear grinding machine, worm grinder, machining center and carbonitriding kiln and etc. advanced, precise and leading manufacturing facilities and inspection apparatus from USA, Germany, Japan and Russia has taken part 48% share in all. At the same time, the group has established a test center with the most complete test functions, the biggest test power, the most advanced instrument and the provincial science & technology park. At the basis of the primary secondary envelope, 9000 series cycloid pinwheel reducer, cylindrical gear, planetary reducer and so on, more than ten series, and several ten thousands specifications, adopting the advanced modularization, point-line technique, ultimately develop TL modular reducer, TXP planetary modular reducer, heavy load modular and point-line meshing decelerator. Along many years, harden-faced reducer for crane, moderate rigid reducer provide the best transmission project for customer all the times; On the other hand, at the wind and water power area, we have taken the swift-footed arrive first, and taken out outstanding success. The heavy load gearboxes has successfully applied in architecture, metallurgy industry, and developed vertical grinder, marginal transmission grinder gearbox which fit for architecture industry, open, convolute gearbox, three-ring, star reducer which special for metallurgy. In addition, the company also supply sugar mill gearbox, worm lifter, electrical roller and various non-standard gearboxes.

The company has been awarded successively with such honorable titles as “National first batch of enterprise honoring contracts and keeping promises”, “National key new & hi-tech enterprise”, “National mechanical industry quality & benefit type enterprise”, “National mechanical industry QC award” and “National customer satisfaction service”. It has taken the lead in passing the quality, environment and security three in one system certification and ISO10012 metering system certification.

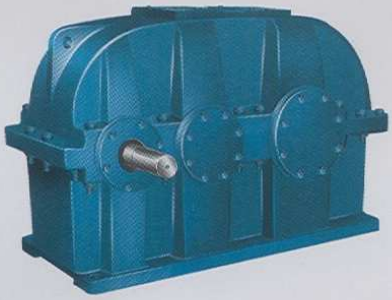
Tailong people will keep to its persistent quality guarantee, service guarantee and credit, satisfying customer as our topmost pursuit.

本册目录
Catalogue

一、 QJ 系列起重机减速器 1
QJ Series Staring Motor Decelerators
二、 QJ-L QJ-T 型起重机立式减速器 17
QJ-L QJ-T Starting Verticla Decelerators
三、 QJG-L QJG-T 型起重立式减速器 21
QJG-L QJG-T Starting Verticla Decelerators
四、 三合一减速器 31
THREE-IN-ONE Decelerators
五、 QSC 直式三合一减速器 35
Series QSC "Three-in -one" Decelerators
六、 ZQ(H)系列圆柱齿轮减速器 40
ZQ(H) Cylindrical Gear Decelerators
七、ZQA 系列减速器 46
ZQA Series Deceleraters
八、 ZQ 型大传动比圆柱齿轮减速器 53
ZQ Great Moveing Cylindrcal Decelerators
九、 ZD 和 ZDH 系列圆柱齿轮减速器 56
ZD and ZDH Cylindrical Gear Decelerators
十、 ZD80.ZD100 人字齿圆柱齿轮减速器 60
Herringbone Cylindrical Gear Decelerators
十一、ZL 系列 ZLH 系圆柱齿轮减速器 61
ZL and ZLH Cylindrical Gear Decelerators
十二、ZS 和 ZSH 系列圆柱齿轮减速器 64
ASand ZSH Cylindrical Gear Decelerators
十三、ZSC(L)型立式圆柱齿轮减速器 67
ZSC(L)Type Verlical Cylindrical Gear Decelerators
十四、ZSC(D)立式大速比减速器 69
ZSC(D) Vertical Large Ratio Deceleraters
十五、ZSC(A)型立式套装圆柱齿轮减速器 71
ZSC(A) Vertical suit-mounted Cylindrical Gear Decelerators
十六、YTC(JTC)系列齿轮减速电机 72
YTC(JTC) Series Gear Decelerators
十七、ZJ 型减速器 74
ZJ Decelerator
十八、A850、A1000、A1570 型减速器 79
A850、A1000、A1570 Decekerators

起重机减速器
Crane Decelerators

一、概述 Brief



QJ系列减速器适用于起重机各运行机构，也广泛用于运输、冶金、矿山、化工、轻工等各种机械设备的傳动机构中。

QJ series reducer is applicable for relative device of the crane, as well as for the driving gear of mechanical equipment used in transportation, metallurgy, chemical engineering, and light industry.

二、特点 Features

1.减速比范围宽，公称速比 10-200;

2.机械傳动效率高，二级达 96%, 三级达 94%;

3.运转平稳，噪音低;

4.由于采用 42CrMo、35CrMo 经锻造调质处理，分别制作齿轮轴和齿轮，所以使用寿命长，承载能力高;

5.易于拆检，易于安装。

1.Wide range of reduction ratio, nominal speed ratio 10-200%

2.High efficiency of mechanical drive with Class II up to 96% and class III up to 94%;

3.Running smoothly, low noise;

4.Gear wheel and gear shaft are made of 42CrMo,35 CrMo and treated with forging, hardening and tempering for long service life and high carrying capacity.

5.Easy for dismounting and inspection, easy for installation.

三、适用条件 Applicable conditions

1.齿轮圆周速度不大于 16m/s Circumferential speed of gear wheel ≤ 16m/s

2.高速轴转速不大于 1000r/min; Rotation speed of high-speed shaft ≤ 1000r/min;

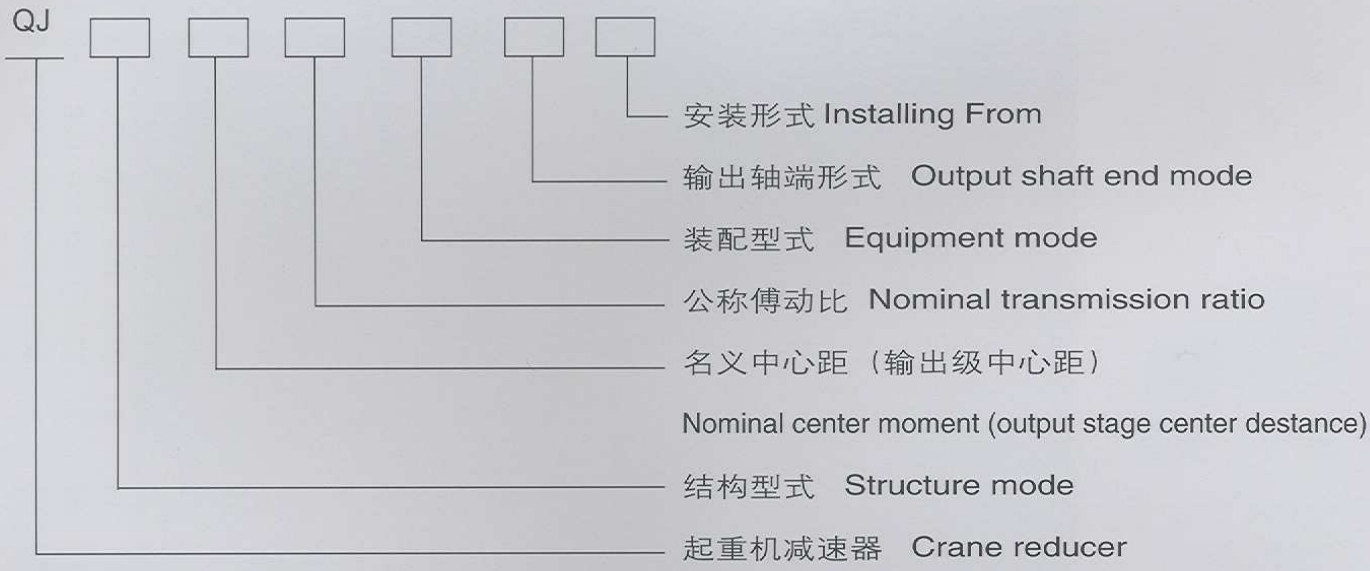
3.工作环境温度为 -40-45℃ Operating ambient temperature: -40-45℃

4.可正反两方向运转。 Operable both forward sand backwards.

四、型号及速比 Types and Speed Ratio

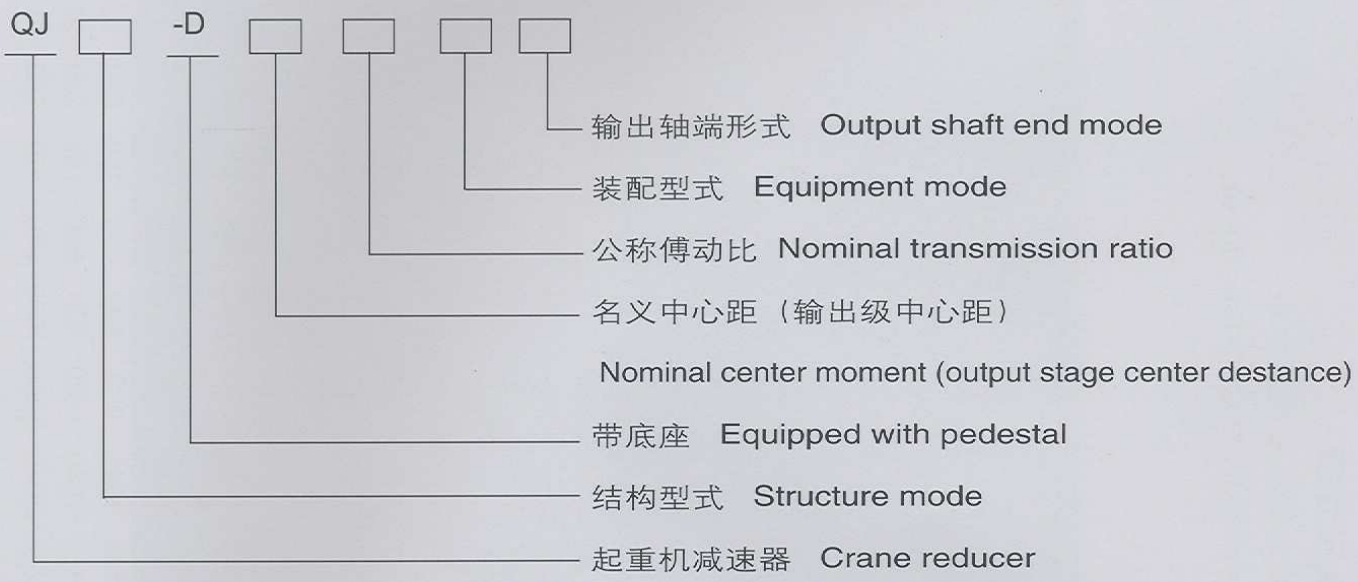
型号Type	速比 Speed Ratio							
QJR QJR-D	10	12.5	16	20	25	31.5		
QJS,QJRS QJS-D, QJRS-D	40	50	63	80	100	125	160	200

五、标记 Earmark



标记示例：起重机减速器三级傳动，名义中心距a_1=560mm，公称傳动比50，装配型式第III种，输出轴为齿轮轴端，卧式安装则标记为：减速器 QJS560-50- III -cw

Type sample:3 stage transmission of crame decelerator,nominal center moment a_1=560mm,nominal transmission ratio is 50,installing is No.III,output shaft locatss at the edge of gear shaft,the horizontal installation is:decelerator QJS560-50- III -cw.



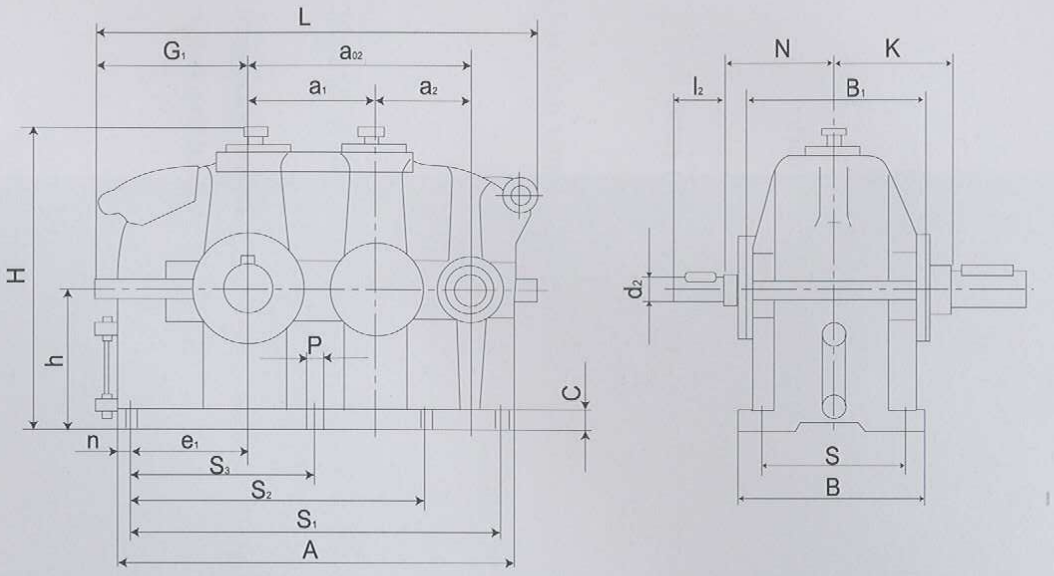
标记示例：起重机减速器二级傳动，名义中心距a_1=560mm，公称傳动比20，装配型式第VI种，轴端形式为 p 型、则标记为：减速器 QJR-D560-20-VIP

Type sample:if 2 stage transmission of crane decelerator,the nominal center moment a_1=560 m,nominal transmission ratio is 20,the installing form is VI,p type shaft edge,the type should be:decelerator QJR-D560-20-VIP.

六、减速器外形及尺寸表

QJR-D(QJB-D)减速器外形及尺寸表

Outlook and size of QJR-D(QJB-D)reducer



减速器外形及尺寸表 Outlook and size of reducer

名义中心距a_1 nominal center space	a_2	a_{02}	外形尺寸 size			中心高h center height	输入轴端 input axle size			地脚安装尺寸 lower margin installing size							A	B_1	n	G_1	e_1	重量kg weight
			L	H	B		N	d_2r6	l_2	S	S_1	S_2	S_3	C	P	孔数 hole (piece)						
140	100	240	494	305	220	140	120	22	50	175	380		190	22	18	6	430	190	25	172	115	110
170	118	288	577	365	250	170	135	28	60	205	460		230	25	18	6	513	215	27	197	138	170
200	140	340	664	425	270	200	180	32	80	230	550		275	25	18	6	600	250	25	222	165	230
236	170	406	796	497	330	236	210	38	80	280	660		330	28	23	6	716	300	30	265	195	310
280	200	480	925	585	360	280	235	48	110	310	780		390	30	23	6	845	340	33	303	230	415
335	236	571	1100	695	430	335	255	55	110	370	940		450	35	27	6	1006	400	35	362	280	840
400	280	680	1380	830	510	400	285	65	140	450	1100		550	40	27	6	1195	490	50	422	325	1014
450	315	765	1462	930	590	450	310	80	170	490	1240	1000	600	40	33	8	1350	550	55	481	370	1360
500	355	855	1622	1030	640	500	350	90	170	540	1390	1120	670	45	33	8	1510	620	60	531	415	2250
560	400	960	1822	1160	710	560	385	100	210	600	1550	1250	750	50	39	8	1690	690	70	596	460	3325
630	450	1080	2037	1300	770	630	425	110	210	650	1750	1410	850	55	39	8	1905	770	80	666	520	4370
710	500	1210	2278	1460	860	710	450	120	210	740	1960	1580	950	60	45	8	2130	868	85	744	585	6140
800	560	1360	2538	1640	980	800	490	130	250	830	2195	1770	1060	65	45	8	2390	980	100	824	650	7840
900	630	1530	2860	1840	1100	900	540	150	250	950	2480	2000	1200	70	52	8	2700	1130	110	930	740	11280
1000	710	1710	3200	2040	1200	1000	610	170	300	1050	2750	2220	1320	75	52	8	3020	1220	135	1040	815	16380

注： 输入轴配键按 GB/T1096-2003

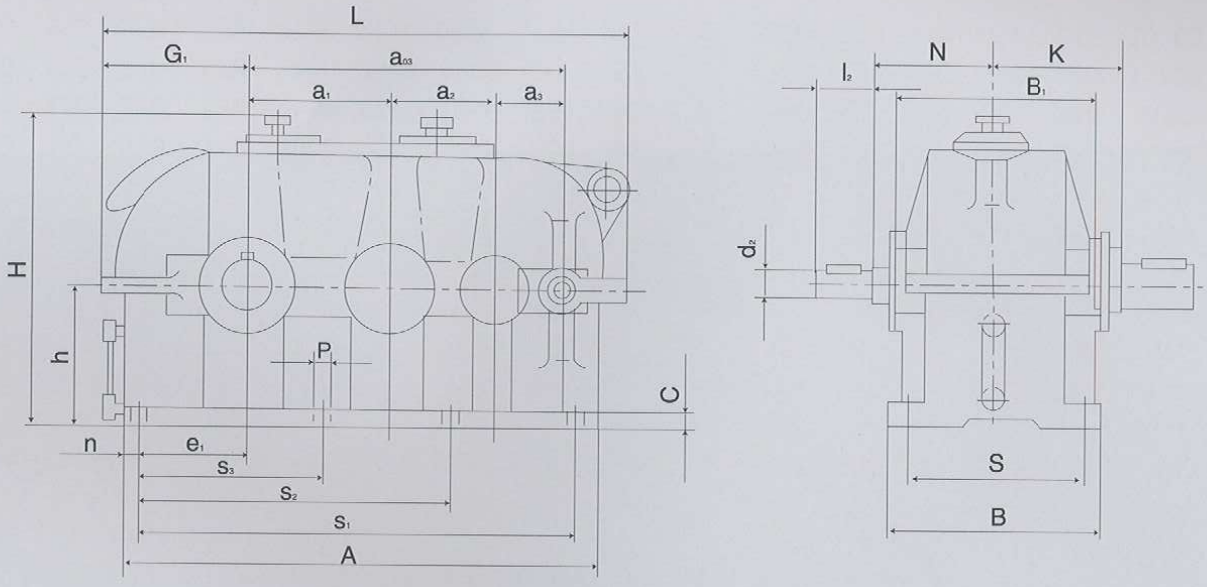
Note:The key on input shaft is auording to GB/T1096-2003

（二）QJS-D(QJC-D)

减速器外形及尺寸表

Outlook and size of

QJS-D(QJS-D)reducer



名义中心距a_1 nominal center space	a_1	a_3	a_{03}	外形尺寸 size			中心高h center height	输入轴端 input axle size			地脚安装尺寸 lower margin installing size												重量kg weight
				L	H	B		N	d_2r6	l_2	S	S_1	S_2	S_3	C	P	孔数 hole (piece)	A	B_1	n	G_1	e_1	
140	100	71	311	560	305	220	140	120	18	40	175	450		200	22	18	6	496	190	25	172	115	125
170	118	85	373	652	365	250	170	135	22	50	205	535		235	25	18	6	588	215	27	197	138	180
200	140	100	440	750	425	270	200	180	28	60	230	635		275	25	18	6	686	250	25	222	165	250
236	170	118	524	896	497	330	236	210	32	80	280	750		330	28	23	6	816	300	30	265	195	370
280	200	140	620	1045	585	360	280	235	38	80	310	900		390	30	23	6	965	340	33	303	230	650
335	236	170	741	1245	695	430	335	255	45	110	370	1050	750	450	35	27	8	1151	400	35	362	280	965
400	280	200	880	1461	830	510	400	285	50	110	450	1270	900	550	40	27	8	1367	490	50	422	325	1420
450	315	224	989	1651	930	590	450	310	55	110	490	1425	1000	600	40	33	8	1539	550	55	481	370	1520
500	355	250	1105	1832	1030	640	500	350	60	140	540	1600	1120	670	45	33	8	1720	620	60	531	415	2500
560	400	280	1240	2062	1160	710	560	385	70	140	600	1780	1250	750	50	39	8	1930	690	70	596	460	3300
630	450	315	1395	2307	1300	770	630	425	80	170	650	2010	1410	850	55	39	8	2175	770	80	666	520	4740
710	500	355	1565	2583	1460	860	710	450	90	170	740	2265	1580	950	60	45	8	2435	868	85	744	585	6240
800	560	400	1760	2883	1640	980	800	490	100	210	830	2535	1770	1060	65	45	8	2735	980	100	824	650	8730
900	630	450	1980	3240	1840	1100	900	540	110	210	950	2860	2000	1200	70	52	8	3080	1130	110	930	740	11970
1000	710	500	2210	3620	2040	1200	1000	610	130	250	1050	3170	2220	1320	75	52	8	3440	1220	135	1040	815	17000

注：输入轴配键按 GB/T1096-2003

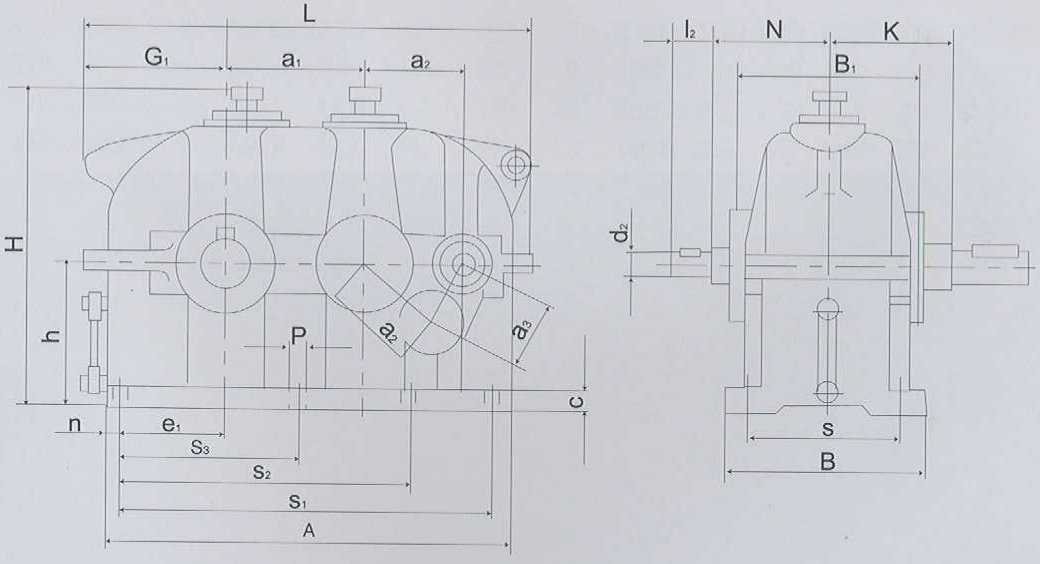
Note:The key on input shaft is auording to GB/T1096-2003

(三) QJRS-D(QJD-D)

减速器外形及尺寸表

Outlook and size of

QJRS-D(QJD-D) reducer



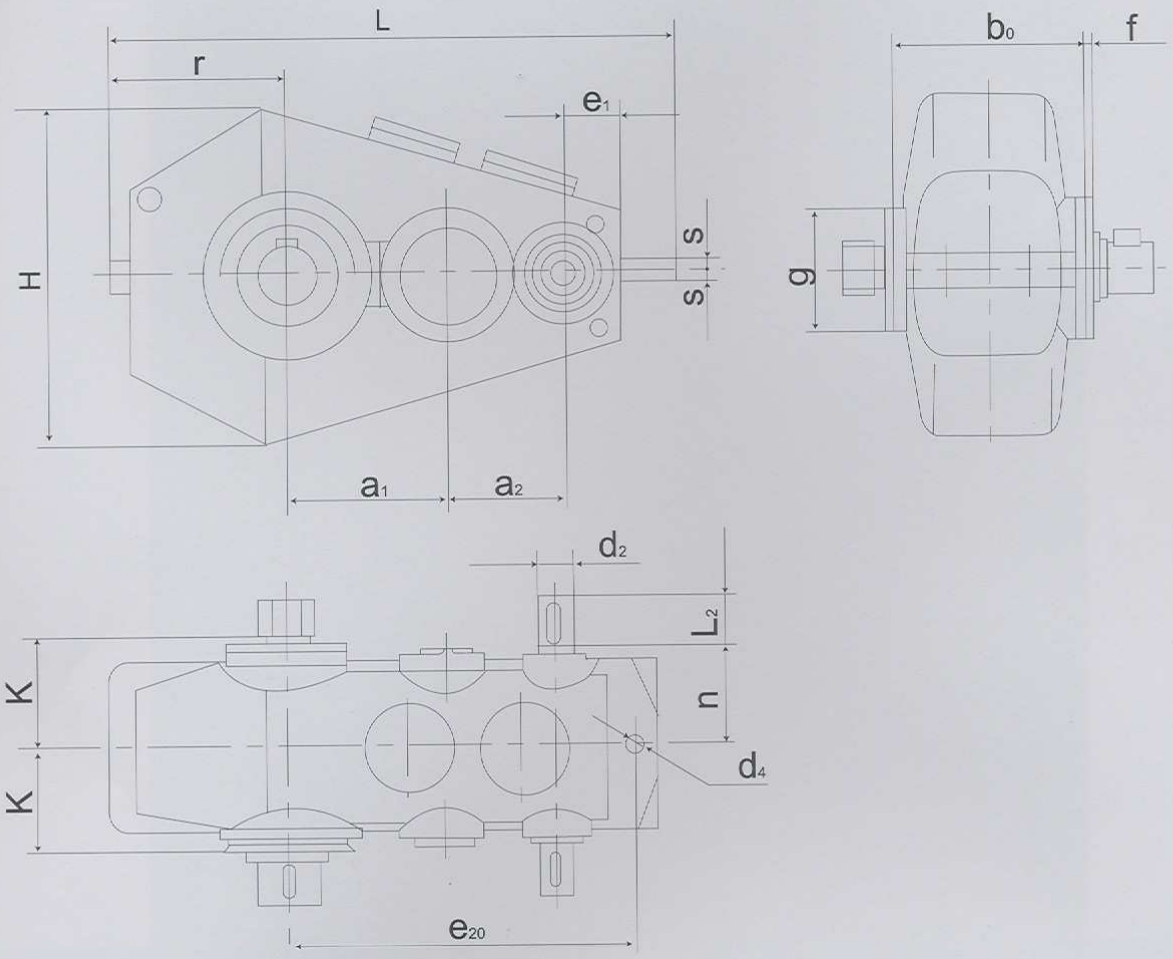
名义中心距a_1 nominal center space	a_2	a_3	外形尺寸 size			中心高h center height	输入轴端 input axle size			地脚安装尺寸 lower margin installing size						孔数 hole(piece)	A	B_1	n	G_1	e_1	重量kg weight
			L	H	B		N	d_2r6	l_2	S	S_1	S_2	S_3	C	P							
140	100	71	494	305	220	140	120	18	40	175	380		190	22	18	6	430	190	25	172	115	125
170	118	85	577	365	250	170	135	22	50	205	460		230	25	18	6	513	215	27	197	138	180
200	140	100	664	425	270	200	180	28	60	230	550		275	25	18	6	600	250	25	222	165	250
236	170	118	796	497	330	236	210	32	80	280	660		330	28	23	6	716	300	30	265	195	340
280	200	140	925	585	360	280	235	38	80	310	780		390	30	23	6	845	340	33	303	230	600
335	236	170	1100	695	430	335	255	45	110	370	940		450	35	27	6	1006	400	35	362	280	870
400	280	200	1289	830	510	400	285	50	110	450	1100		550	40	27	6	1195	490	50	422	325	1085
450	315	224	1462	930	590	450	310	55	110	490	1240	1000	600	40	33	8	1350	550	55	481	370	1420
500	355	250	1622	1030	640	500	350	60	140	540	1390	1120	670	45	33	8	1510	620	60	531	415	2380
560	400	280	1822	1160	710	560	385	70	140	600	1550	1250	750	50	39	8	1690	690	70	596	460	3511
630	450	315	2037	1300	770	630	425	80	170	650	1750	1410	850	55	39	8	1905	770	80	666	520	4740
710	500	355	2278	1460	860	710	450	90	170	740	1960	1580	950	60	45	8	2130	868	85	744	585	6240
800	560	400	2538	1640	980	800	490	100	210	830	2195	1770	1060	65	45	8	2390	980	100	824	650	8490
900	630	450	2860	1840	1100	900	540	110	210	950	2480	2000	1200	70	52	8	2700	1130	110	930	740	11700
1000	710	500	3200	2040	1200	1000	610	130	250	1050	2750	2220	1320	75	52	8	3020	1220	135	1040	815	16700

注：输入轴配键按 GB/T1096-2003

Note:The key on input shaft is auording to GB/T1096-2003

(四)QJR(QJB)减速器外形及尺寸表

Outlook and size of QJR(QJB) reducer



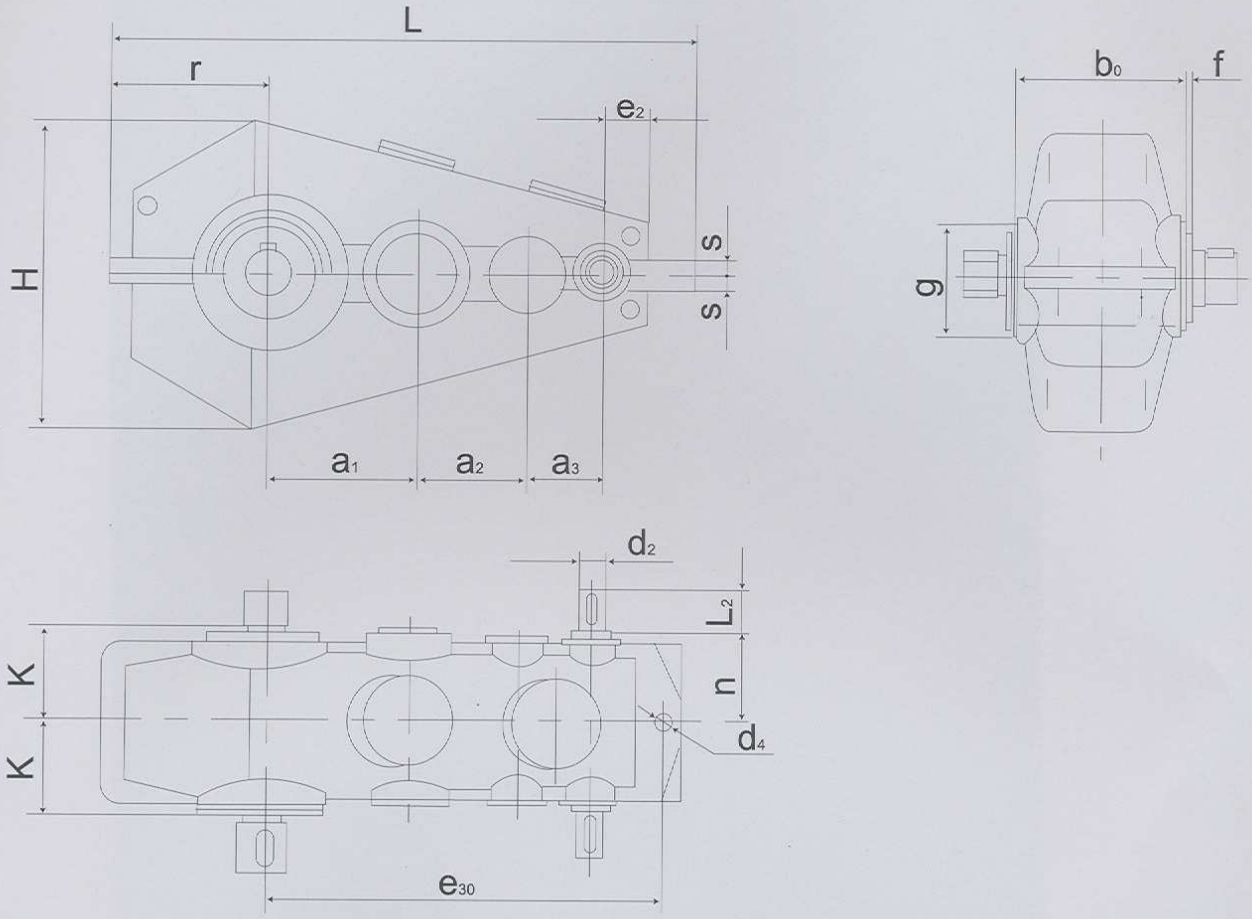
名义中心距a_1 nominal center space	a_2	输入轴端 input axle size		L	H	n	K	b0 0 -0.5	f +0.1 0	g h_9	d_4	e_{20}	S	r	e_1	重量kg weight
		d_2r6	L_2													
140	100	22	50	505	320	120	130	190	16	130	12	320	12	170	50	59
170	118	28	60	600	386	135	140	215	18	150	15	380	14	202	60	85
200	140	32	80	707	455	180	195	250	20	170	18	450	17	232	70	133
236	170	38	80	828	518	210	225	300	20	200	18	530	17	272	85	240
280	200	48	110	974	584	235	250	335	25	240	22	630	22	314	100	330
335	236	55	110	1156	735	255	280	400	25	270	26	750	27	375	120	590
400	280	65	140	1387	867	285	340	475	30	320	33	900	27	447	140	850
450	315	80	170	1547	990	310	365	530	30	360	33	1000	32	506	160	1300
500	355	90	170	1720	1130	350	410	600	40	400	39	1120	32	554	180	1760
560	400	100	210	1922	1270	385	445	670	40	430	39	1250	37	626	200	2600
630	450	110	210	2156	1380	425	495	750	40	480	45	1400	37	704	225	3550
710	500	120	210	2433	1540	450	565	850	50	530	45	1600	42	781	250	4900
800	560	130	250	2739	1712	490	615	950	50	580	52	1800	42	880	280	6600
900	630	150	250	3043	1910	540	670	1060	50	650	62	2000	47	978	320	9200
1000	710	170	300	3384	2150	610	740	1180	60	720	70	2240	55	1074	360	12000

注：输入轴配键按 GB/T1096-2003

Note:The key on input shaft is auording to GB/T1096-2003

（五）QJS(QJC)减速器外形及尺寸表

Outlook and size of QJS(QJC)reducer



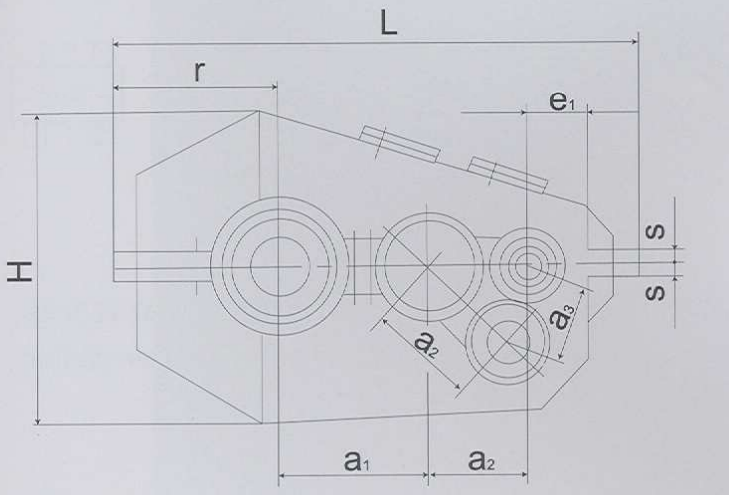
名义中心距a_1 nominal center space	a_2	a_3	输入轴端 input axle size		L	H	n	K	b0 0 -0.5	f +0.1 0	$g(h_9)$	d_4	e_{30}	S	r	e_2	重量kg weight
			d_2r6	L_2													
140	100	71	18	40	567	320	120	130	190	16	130	12	380	12	170	40	64
170	118	85	22	50	673	386	135	140	215	18	150	15	450	14	202	48	95
200	140	100	28	60	793	455	180	195	250	20	170	18	530	17	232	56	170
236	170	118	32	80	928	518	210	225	300	20	200	18	630	17	272	67	256
280	200	140	38	80	1024	584	235	250	335	25	240	22	750	22	314	80	350
335	236	170	45	110	1301	735	255	280	400	25	270	26	900	27	375	95	654
400	280	200	50	110	1559	867	285	340	475	30	320	33	1060	27	447	112	940
450	315	224	55	110	1736	990	310	365	530	30	360	33	1180	32	506	125	1400
500	355	250	60	140	1930	1130	350	410	600	40	400	39	1320	32	554	140	1850
560	400	280	70	140	2162	1270	385	445	670	40	430	39	1500	37	626	160	2800
630	450	315	80	170	2468	1380	425	495	750	40	480	45	1700	37	704	180	3500
710	500	355	90	170	2738	1540	450	565	850	50	530	45	1900	42	781	200	4700
800	560	400	100	210	3084	1712	490	615	950	50	580	52	2120	42	880	225	6400
900	630	450	110	210	3423	1910	540	670	1060	50	650	62	2360	47	987	250	9000
1000	710	500	130	250	3804	2150	610	740	1180	60	720	70	2650	55	1074	280	11700

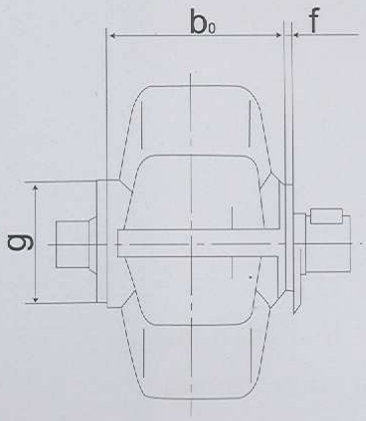
注：输入轴配键按 GB/T1096-2003

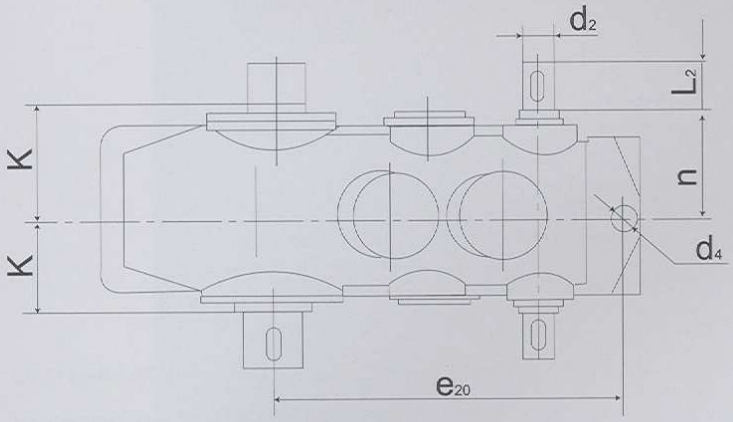
Note:The key on input shaft is auording to GB/T1096-2003

（六）QJRS(QJD)减速器外形及尺寸表

Outlook and size of QJRS(QJD)reducer







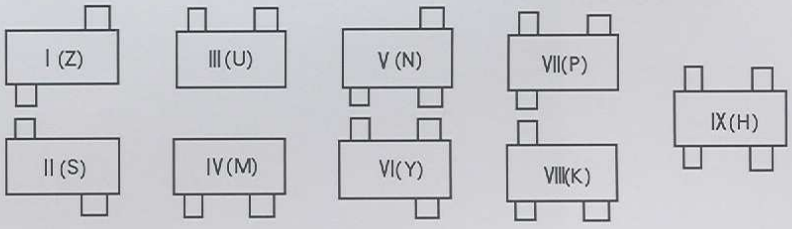
名义中心距a_1 nominal center space	a_2	a_3	输入轴端 input axle size		L	H	n	K	b0 0 -0.5	f +0.1 0	$g(h_9)$	d_4	e_{20}	S	r	e_1	重量kg weight
			d_2r6	L_2													
140	100	71	18	40	505	298	120	130	190	16	130	12	320	12	170	50	64
170	118	85	22	50	600	375	135	140	215	18	150	15	380	14	202	60	94
200	140	100	28	60	707	440	180	195	250	20	170	18	450	17	232	70	185
236	170	118	32	80	828	500	210	225	300	20	200	18	530	17	272	85	284
280	200	140	38	80	974	562	235	250	335	25	240	22	630	22	314	100	380
335	236	170	45	110	1156	710	255	280	400	25	270	26	750	27	375	120	650
400	280	200	50	110	1387	836	285	340	475	30	320	33	900	27	447	140	930
450	315	224	55	110	1547	980	310	365	530	30	360	33	1000	32	506	160	1410
500	355	250	60	140	1720	1060	350	410	600	40	400	39	1120	32	554	180	1820
560	400	280	70	140	1922	1240	385	445	670	40	430	39	1250	37	626	200	2890
630	450	315	80	170	2156	1370	425	495	750	40	480	45	1400	37	704	225	3550
710	500	355	90	170	2433	1530	450	565	850	50	530	45	1600	42	781	250	4900
800	560	400	100	210	2739	1691	490	615	950	50	580	52	1800	42	880	280	6600
900	630	450	110	210	3043	1900	540	670	1060	50	650	62	2000	47	978	320	9200
1000	710	500	130	250	3384	2070	610	740	1180	60	720	70	2240	55	1074	360	12000

注：输入轴配键按 GB/T1096-2003

Note:The key on input shaft is auording to GB/T1096-2003

七、装配型式及安装型式

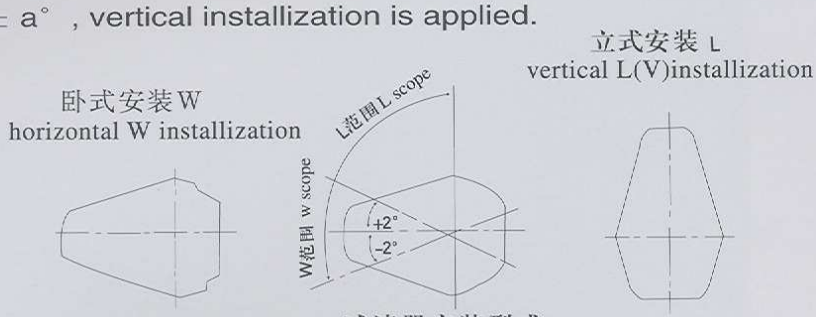
Installing and assembling form



减速器装配型式
instaling form of reducers

QJR、QJS、QJRS型安装形式：卧式W或立式L(V)在偏转角±a°范围内，为立式安装。

Installing forms of QJR, QJS,QJRS reducers are horizontal or vertica L(V)when deflection angle rangig from ± a° , vertical installization is applied.

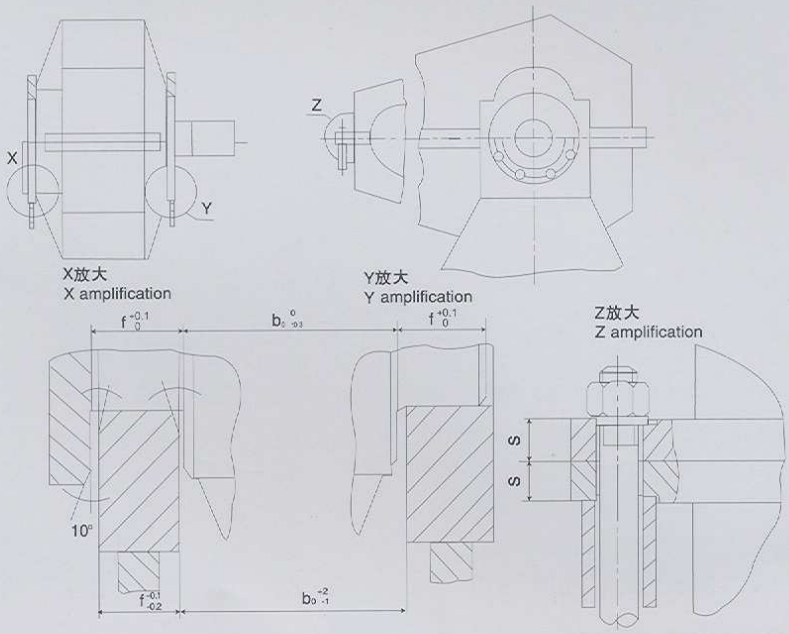


减速器安装型式
assembling form of reducers

注：a角的度数与传动比有关，当减速器倾a度时，应保证使中间级大齿轮沾油1-2个齿高深度。

QJR、QJS、QJRS型为三支点支承型式。

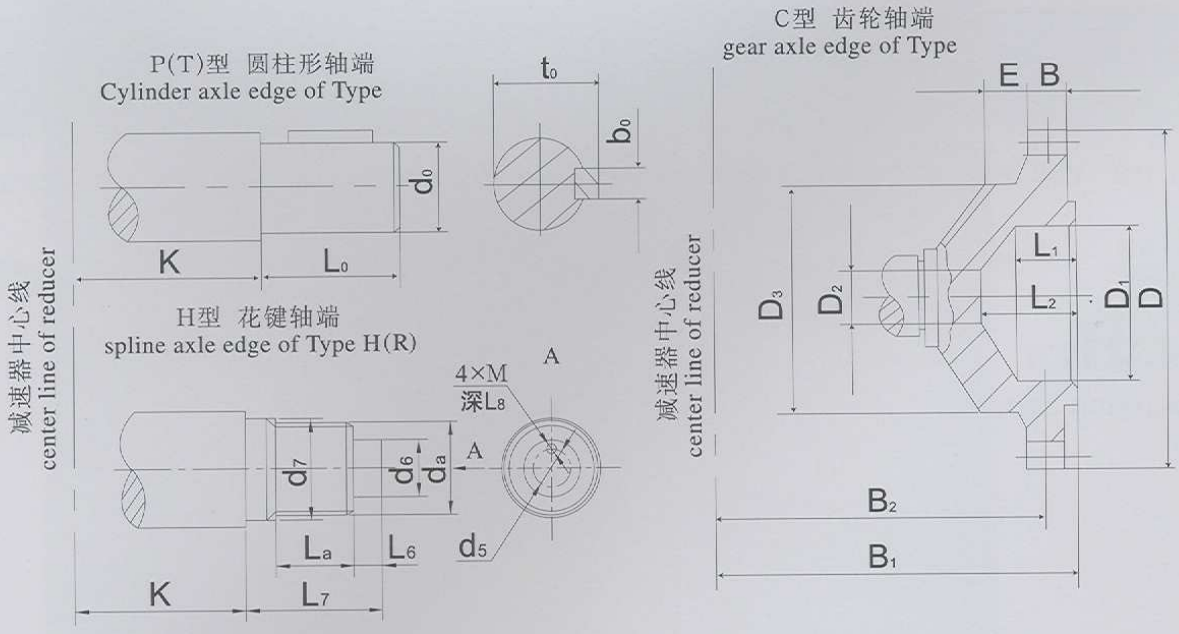
Annotation:the value of angle is velevant to the transmission ratio, It´ s necessary to guarantee one or two gear height into the oil of middle big gear when reducer has an angle of indication. The QJR,QJS,QJRS reducers are three-flucrum sustaining type.



减速器三支点支承型式 three-flucrum sustaining type reducer

八、输出轴端型式及尺寸表

Type and size of imput axle edge



名义中心距 nominal center space	P型 Type P				C型 Type C											H型 Type H								
a_2	d_0r6	L_0	b_0	t_0	MXZ	D	D_1(F8)	D_2	D_3	B_1	B_2	B	E	L_1	L_2	MXZ (h6)	da (h11)	La	d_6 (k_6)	L_6	d_7 (k_6)	L_7	d_5	M	L_8
140	48	82	14	51.5												3X15	48	35	40	23	50	78	25	6	12
170	55	82	16	59												3X18	57	35	50	27	60	82	30	6	12
200	65	105	18	69												3X22	69	40	60	30	70	90	40	8	16
236	80	130	22	85	3X56	174	90	40	135	279.5	253	25	25	45	60	3X27	84	45	70	30	85	95	50	8	16
280	90	130	25	95	4X56	232	120	40	170	302.5	271	35	25	50	75	5X18	95	55	80	35	100	125	60	8	16
335	110	165	28	116	4X56	232	120	40	170	339.5	308	35	25	50	75	5X22	115	60	100	40	120	135	70	10	20
400	130 (140)	200	32 (36)	137 (148)	6X56	348	170	45	260	402	370	40	32	76	100	5X26	135	75	120	45	140	155	90	10	20
450	150	200	36	158	6X56	348	170	45	260	429	397	40	32	76	100	5X30	155	80	140	50	160	165	100	12	25
500	170 (180)	240	40 (45)	179 (190)	8X54	448	200	105	260	482	442	50	32	78	100	5X34	175	90	160	55	180	180	120	12	25
560	190 (200)	280	45	200 (210)	10X48	500	200	105	280	570	505	60	35	78	110	5X38	195	100	180	55	200	190	140	12	25
630	220	280	50	231	10X54	560	250	140	380	620	550	65	40	80	120	8X26	216	110	190	60	222	205	160	12	25
710	250 (260)	330	56	262 (272)	12X48	600	270	150	420	700	620	75	45	95	130	8X30	248	125	220	60	254	220	180	16	32
800	280	380	63	292	12X54	672	290	170	480	776	696	75	45	95	130	8X34	280	140	250	60	286	235	200	16	32
900	320	380	70	334	12X58	720	310	180	560	850	770	85	60	105	140	8X38	312	155	280	70	318	260	220	20	40
1000	360	450	80	375	12X64	792	380	230	620	970	895	100	80	140	180	8X44	360	175	320	75	366	285	250	20	40

QJR、QJS、QJRS 与 QJR-D、QJS-D、QJRS-D 型 K 值对比表

Contrasting graph of valve K betwiin QJR、QJS、QJRS and QJR-D、QJS-D and QJRS-D reducers

K 中心距 center space / 型号 Type	140	170	200	236	280	335	400	450	500	560	630	710	800	900	1000
R.RS.S	130	140	195	225	250	280	340	365	410	445	495	565	615	670	740
R-D.RS-D.S-D	130	150	175	200	220	260	310	335	370	410	450	510	570	640	700

九、减速器输出轴端允许的最大径向载荷（当 n=950r/min）见表

Allowed maximum radial load for reducer output shaft end is shown in the table.

名义中心距 a1 Nominal center distance		140	170	200	236	280	335	400	450	500	560	630	710	800	900	1000
最大允许径向载荷 Allowable maximum radial load	R级	5000	7000	9000	15000	21000	28000	35000	55000	60000	75000	100000	107000	120000	150000	200000
	S级 RS级	5000	8000	10000	15000	30000	37000	55000	64000	93000	120000	150000	170000	200000	240000	270000

十、承载能力

Carrying capacity

（一）QJR、QJR-D 减速器的承载能力表

Allowed power and output torque of QJR, QJR-D reducer

工作级别 M_5

Operation level M_5

输入轴速度 r/min imput shaft speed	名义中心距 a1mm Nominal center distance	输出扭矩 Nm Output torque moment	公称传动比 Nominal transmission ratio					
			10	12.5	16	20	25	31.5
			高速轴许用功率KW Allowed power tor high-speed shaft					
	140	820	5.3	4.3	3.4	2.7	2.1	1.6
	170	1360	9.0	7.2	5.7	4.5	3.5	2.8
	200	2650	15.5	12.4	9.7	7.8	6.2	4.9
	236	4500	26.0	21.0	16.5	13.2	10.5	8.4
	280	7500	44.0	35.0	27.0	22.0	17.6	13.9
	335	12500	73.0	59.0	46.0	37.0	29.0	23.0
	400	21200	124.0	99.0	78.0	62.0	50.0	39.0
570	450	30000	176.0	141.0	110.0	88.0	70.0	56.0
	500	42500	249.0	199.0	155.0	124.0	100.0	79.0
	560	60000	351.0	281.0	220.0	176.0	141.0	112.0
	630	85000	497.0	398.0	311.0	249.0	199.0	158.0
	710	118000	691.0	552.0	432.0	345.0	276.0	219.0
	800	170000	995.0	796.0	622.0	497.0	398.0	316.0
	900	236000	1381.0	1105.0	863.0	691.0	552.0	438.0
	1000	335000	1961.0	1568.0	1225.0	980.0	784.0	622.0
	140	820	6.4	5.2	4.1	3.3	2.6	2.0
	170	1360	10.7	8.8	7.0	5.7	4.5	3.4
	200	2650	19.3	15.5	12.1	9.7	7.7	6.1
	236	4500	33.0	20.0	21.0	16.4	13.1	10.4
	280	7500	55.0	44.0	34.0	27.0	22.0	17.4
	335	12500	91.0	73.0	57.0	46.0	36.0	29.0
	400	21200	155.0	124.0	97.0	77.0	62.0	49.0
710	450	30000	219.0	175.0	137.0	109.0	88.0	69.0
	500	42500	310.0	248.0	194.0	155.0	124.0	98.0
	560	60000	437.0	350.0	274.0	219.0	175.0	139.0
	630	85000	620.0	496.0	387.0	310.0	248.0	197.0
	710	118000	860.0	688.0	538.0	430.0	344.0	273.0
	800	170000	1239.0	991.0	775.0	620.0	496.0	393.0
	900	236000	1720.0	1376.0	1075.0	860.0	688.0	546.0
	1000	335000	2442.0	1954.0	1526.0	1221.0	977.0	775.0
	140	820	7.9	6.5	5.2	4.2	3.3	2.6
	170	1360	13.2	10.9	8.7	7.1	5.7	4.4
	200	2650	26.0	21.0	16.2	12.9	10.3	8.2
	236	4500	44.0	35.0	27.0	22.0	17.6	13.9
	280	7500	73.0	59.0	46.0	37.0	29.0	23.0
	335	12500	122.0	98.0	76.0	61.0	49.0	39.0
	400	21200	207.0	165.0	129.0	103.0	83.0	66.0
950	450	30000	293.0	234.0	183.0	146.0	117.0	93.0
	500	42500	415.0	332.0	259.0	207.0	166.0	132.0
	560	60000	585.0	468.0	366.0	293.0	234.0	186.0
	630	85000	829.0	663.0	518.0	415.0	332.0	263.0
	710	118000	1151.0	921.0	719.0	576.0	460.0	365.0
	800	170000	1658.0	1327.0	1036.0	829.0	663.0	526.0
	900	236000	2302.0	1842.0	1439.0	1151.0	921.0	731.0
	1000	335000	3268.0	2614.0	2012.2	1634.0	1307.0	1037.0

连续工作型

Continuous operation type

输入轴速度 r/min imput shaft speed	名义中心距 a1mm Nominal center distance	输出扭矩 Nm Output torque moment	公称传动比 Nominal transmission ratio					
			10	12.5	16	20	25	31.5
			高速轴许用功率KW Allowed power tor high-speed shaft					
	140	410	2.7	2.2	1.7	1.4	1.1	0.8
	170	680	4.5	3.6	2.9	2.3	1.8	1.4
	200	1325	7.8	6.2	4.9	3.9	3.1	2.5
	236	225	13.0	10.5	8.3	6.6	5.3	4.
	280	3750	22.0	17.5	13.5	11.0	8.8	7.0
	335	6250	36.5	29.5	23.0	18.5	14.5	11.5
	400	10600	62.0	49.5	39.0	31.0	25.0	19.5
570	450	15000	88.0	70.5	55.0	44.0	35.0	28.0
	500	21250	124.5	99.5	77.5	62.0	50.0	39.5
	560	30000	175.5	140.5	110.0	88.0	70.5	56.0
	630	42500	248.5	199.0	155.5	124.5	99.5	79.5
	710	59000	345.5	276.0	216.0	172.5	138.0	109.0
	800	85000	497.5	398.0	311.0	248.5	199.0	158.0
	900	118000	690.5	552.5	431.5	345.5	276.0	219.0
	1000	167500	980.5	784.0	612.5	490.0	392.0	311.0
	140	410	3.2	2.6	2.1	1.7	1.3	1.0
	170	680	5.4	4.4	3.5	2.9	2.3	1.7
	200	1235	9.7	7.8	6.1	4.9	3.9	3.1
	236	2250	16.5	13.0	10.5	8.2	6.6	5.2
	280	3750	27.5	22.0	17.0	13.5	11.0	8.7
	335	6250	45.5	36.5	28.5	23.0	18.0	14.5
	400	10600	77.5	62.0	48.5	38.5	31.0	24.5
710	450	15000	109.5	87.5	68.5	54.5	44.	34.5
	500	21250	155.0	124.0	97.0	77.5	62.0	49.0
	560	30000	218.5	175.0	136.5	109.5	87.5	69.5
	630	42500	310.0	298.0	198.5	155.0	124.0	98.0
	710	59000	430.0	344.0	269.0	215.0	172.0	136.5
	800	85000	619.0	495.5	387.5	310.0	248.0	196.5
	900	118000	860.0	688.0	537.5	430.0	344.0	273.0
	1000	167500	1221.0	977.0	763.0	610.5	488.5	387.5
	140	410	3.9	3.2	2.6	2.1	1.6	1.3
	170	680	6.6	5.4	4.3	3.5	2.8	2.2
	200	1325	13.0	10.5	8.1	6.4	5.1	4.1
	236	2250	22.0	17.5	13.5	11.0	8.5	6.9
	280	3750	36.5	29.5	23.0	18.5	14.5	11.5
	335	6250	61.0	49.5	38.	30.5	24.5	19.5
	400	10000	103.5	82.5	64.5	51.5	41.5	33.0
950	450	15000	146.5	117.0	91.5	73.0	58.5	46.5
	500	21250	207.5	166.0	129.5	103.5	83.0	66.0
	560	30000	292.5	234.0	183.0	146.0	117.0	93.0
	630	42500	414.5	331.5	259.0	207.5	166.0	131.5
	710	59000	575.5	460.5	359.5	288.0	230.0	182.5
	800	85000	829.0	663.5	518.0	414.5	331.5	263.0
	900	118000	1151.0	921.0	719.5	575.5	460.5	365.5
	1000	167500	1634.0	1307.0	1021.0	817.0	653.5	518.5

（二）QJS、QJRS、QJS-D、QJRS-D 承载能力表

Allowed power and output torque of QJS、QJRS、QJS-D、QJRS-D　　工作级别 M_5

Operation level M_5

输入轴速度 r/min imput shaft speed	名义中心距 a1mm Nominal center distance	输出扭矩 Nm Output torque moment	公称传动比 Nominal transmission							
			40	50	63	80	100	125	160	200
			高速轴许用功率KW Allowed power tor high-speed shaft							
	140	820	1.5	1.4	1.0	0.8	0.6	0.5	0.4	0.3
	170	1360	2.5	2.1	1.6	1.3	1.0	0.8	0.6	0.5
	200	2650	3.9	3.1	2.5	1.9	1.6	1.2	1.0	0.8
	236	4500	6.6	5.3	4.2	3.3	2.6	2.1	1.7	1.3
	280	7500	11.0	8.8	7.0	5.5	4.4	3.5	2.7	2.2
	335	12500	18.3	14.6	11.6	9.1	7.3	5.9	4.6	3.7
	400	21200	31.0	25.0	19.7	15.5	12.4	9.9	7.8	6.7
570	450	30000	44.0	35.0	28.0	22.0	17.6	14.1	11.0	8.8
	500	42500	62.0	50.0	40.0	31.0	25.0	19.1	15.6	12.4
	560	60000	88.0	70.0	56.0	44.0	35.0	28.0	22.0	17.6
	630	85000	124.0	100.0	79.0	62.0	50.0	40.0	31.0	25.0
	710	118000	173.0	138.0	110.0	86.0	69.0	55.0	43.0	35.0
	800	170000	249.0	199.0	158.0	124.0	100.0	80.0	62.0	50.0
	900	236000	345.0	276.0	219.0	173.0	138.0	110.0	86.0	69.0
	1000	335000	490.0	392.0	311.0	245.0	196.0	157.0	123.0	98.0
	140	820	1.8	1.5	1.2	1.0	0.8	0.6	0.5	0.4
	170	1330	3.1	2.6	2.0	1.6	1.3	1.0	0.8	0.6
	200	2650	4.8	3.9	3.1	2.4	1.9	1.6	1.2	1.0
	236	4500	8.2	6.6	5.2	4.1	3.3	2.6	2.1	1.6
	280	7500	13.7	10.9	8.7	6.8	5.5	4.4	3.4	2.7
	335	12500	23.0	18.2	14.5	11.4	9.1	7.3	5.7	4.6
	400	21200	39.0	31.0	25.0	19.3	15.5	12.4	9.7	7.7
710	450	30000	55.0	44.0	35.0	27.0	22.0	17.5	13.7	10.9
	500	42500	78.0	62.0	49.0	39.0	31.0	25.0	19.4	15.5
	560	60000	109.0	88.0	69.0	55.0	44.0	35.0	27.0	22.0
	630	85000	155.0	124.0	98.0	78.0	62.0	50.0	39.0	31.0
	710	118000	215.0	172.0	137.0	108.0	86.0	69.0	54.0	43.0
	800	170000	310.0	248.0	197.0	155.0	124.	99.0	78.	62.0
	900	236000	430.0	344.0	273.0	215.0	172.0	138.0	108.0	86.0
	1000	335000	611.0	488.0	388.0	305.0	244.0	195.0	153.0	122.0
	140	820	2.3	1.9	1.5	1.2	1.0	0.8	0.6	0.5
	170	1360	3.9	3.2	2.6	2.1	1.7	1.3	1.0	0.8
	200	2650	6.5	5.2	4.1	3.2	2.6	2.1	1.6	1.3
	236	4500	110	8.8	7.0	5.5	10.4	3.5	2.7	2.2
	280	7500	18.3	14.6	11.6	9.1	7.3	5.9	4.2	3.7
	335	12500	31.0	24.0	19.4	15.2	12.2	9.8	7.6	6.1
	400	21200	52.0	41.0	33.0	26.0	21.0	16.5	12.9	10.3
950	450	30000	73.0	59.0	47.0	37.0	29.0	23.0	18.3	14.6
	500	42500	104.0	83.0	66.0	52.0	42.0	33.0	26.0	21.0
	560	60000	146.0	117.0	93.0	73.0	59.0	47.0	37.0	29.0
	630	85000	207.0	166.0	132.0	104.0	83.0	66.0	52.0	42.0
	710	118000	288.0	230.0	183.0	144.0	115.0	92.0	72.0	53.0
	800	170000	415.0	332.0	263.0	207.0	166.0	133.0	104.0	83.0
	900	236000	576.0	460.0	365.0	288.0	230.0	184.0	144.0	115.0
	1000	335000	817.0	654.0	519.0	408.0	237.0	261.0	204.0	163.0

连续工作型

Continuous operation type

输入轴速度 r/min imput shaft speed	名义中心距 a1mm Nominal center distance	输出扭矩 Nm Output torque moment	公称传动比 Nominal transmission							
			40	50	63	80	100	125	160	200
			高速轴许用功率KW Allowed power tor high-speed shaft							
	140	410	0.8	0.7	0.5	0.4	0.3	0.3	0.2	0.1
	170	680	1.3	1.1	0.8	0.7	0.5	0.4	0.3	0.2
	200	1325	2.0	1.6	1.3	1.0	0.8	0.6	0.5	0.4
	236	2250	3.3	2.7	2.1	1.7	1.3	1.1	0.9	0.7
	280	3750	5.5	4.4	3.5	2.8	2.2	1.8	1.4	1.1
	335	6250	9.2	7.3	5.8	4.6	3.7	3.0	2.3	1.9
	400	10600	15.5	12.5	9.9	7.8	6.2	5.0	3.9	3.4
570	450	15000	22.0	17.5	14.0	11.0	8.8	7.1	5.5	4.4
	500	21250	31.0	25.0	20.0	15.5	12.5	10.0	7.8	6.2
	560	30000	44.0	35.0	28.0	22.0	17.5	14.0	11.0	8.8
	630	42500	62.0	50.0	39.5	31.0	25.0	20.0	15.5	12.5
	710	59000	86.5	69.0	55.0	43.0	34.5	27.5	21.5	17.5
	800	85000	124.5	99.5	79.0	62.0	50.0	40.0	31.0	25.0
	900	118000	172.5	138.0	109.5	86.5	69.0	55.5	43.0	34.5
	1000	167500	245.0	196.0	155.5	122.5	98.0	78.0	61.5	49.0
	140	410	0.9	0.8	0.6	0.5	0.4	0.3	0.2	0.1
	170	680	1.6	1.3	1.0	0.8	0.7	0.5	0.4	0.3
	200	1325	2.4	2.0	1.6	1.2	1.0	0.8	0.6	0.5
	236	2250	4.1	3.3	2.6	2.1	1.7	1.3	1.1	0.8
	280	3750	6.9	5.5	4.4	3.4	2.8	2.2	1.7	1.3
	335	6250	11.5	9.1	7.3	5.7	4.6	3.7	2.9	2.3
	400	10600	19.5	15.5	12.5	9.7	7.8	6.2	4.9	3.9
710	450	15000	27.5	22.0	17.5	13.5	11.0	8.8	6.9	5.5
	500	21250	39.0	31.0	24.5	19.5	15.5	12.5	9.7	7.8
	560	30000	54.5	44.0	34.6	27.5	22.0	17.5	13.5	11.0
	630	42500	77.5	62.0	49.0	39.0	31.0	25.0	19.5	15.5
	710	59000	107.5	86.0	68.5	54.0	43.0	34.5	27.0	21.5
	800	85000	155.0	124.0	98.5	77.5	52.0	49.5	39.0	31.0
	900	118000	215.0	172.0	136.5	107.5	86.0	69.0	54.0	43.0
	1000	167500	305.5	244.0	194.0	152.5	122.0	97.5	76.5	61.0
	140	410	1.1	0.9	0.7	0.6	0.5	0.4	0.3	0.2
	170	680	1.9	1.6	1.3	1.0	0.8	0.6	0.5	0.4
	200	1325	3.2	2.6	2.0	1.6	1.3	1.0	0.8	0.6
	236	2250	5.5	4.4	3.5	2.7	2.2	1.7	1.3	1.1
	280	3750	9.1	7.3	5.8	4.5	3.6	2.9	2.3	1.8
	335	6250	15.5	12.0	9.7	7.6	6.1	4.9	3.8	3.0
	400	10600	26.0	20.5	16.5	13.0	10.5	8.2	6.4	5.1
950	450	15000	36.0	29.5	23.5	18.5	14.5	11.5	9.1	7.3
	500	21250	52.0	41.5	33.0	26.0	21.0	16.5	13.0	10.5
	560	30000	73.0	58.5	46.5	36.5	29.5	23.5	18.5	14.5
	630	42500	103.5	83.0	66.0	52.0	41.5	33.0	26.0	21.0
	710	59000	144.0	115.0	91.5	72.0	57.5	46.0	36.0	29.0
	800	85000	207.5	166.0	131.5	103.5	83.0	66.5	52.0	41.5
	900	118000	288.0	230.0	182.5	144.0	115.0	92.0	72.0	57.5
	1000	167500	408.5	327.0	259.5	204.0	163.5	130.5	102.0	81.5

十、减速器的选用及润滑Selection and Lubrication of Reducer

1.起重机各机构的工作级别分为八种，表列M5工作级别的功率值，若用在其它工作级别时，应按公式 $Pm_5=Pmi \times 1.12^{(i-5)}$ 换算。

There are 8 types of operation level available for each device of the crane. Power value for operation level M5 is listed in the table, and if it is used for other operation level, the proper conversion should be made with formula $Pm_5=Pmi \times 1.12^{(i-5)}$.

式中：Pm_5- 功率表中的数值；value in the power table, KW

i- 工作级别 1-8

Pmi- 相对 Mi 工作级功率值；power value corresponding to operation level Mi, KW.

选用时，可以根据起重机各机构疲劳计算基本载荷 Mmax=Ø. Mn，再与转速换算出功率值 $Pmi=\frac{Mmax.n}{9550}$

For the selection, the basic load is calculated according to each crane device fatigur: Mmax=Ø. Mn, which together with rotation speed may deduce power value: $Pmi=\frac{Mmax.n}{9550}$

2.选用时，亦可根据计算载荷除以下表系数K，再从相应表选用

For the selection, multiply calculated load by factor K, and then choose from the corresponding table:

减速器平均每天运转时间 h average runing time per day	~3	~1	3~6	1~3	~1	>6	3~6	1~3	>6	>3
平均负荷 Average load	轻 light	中 middle	轻 light	中 middle	额定 rated	轻 light	中 middle	额定 rated	中 middle	额定 rated
起重机状态载荷 Crane load status	Q_1		Q_2			Q_3			Q_4	
系数K Factor K	1.25		1			0.80			0.63	

3.起重机载荷状态Q,见下表 Crane load statues Q is shown in the table below:

载荷状态 Load status	名义载荷系数 Nominal load factor	说明 Remarks
Q_1–轻 light	0.125	很少起升额定负荷，一般起升微载荷 Seldom hoist rated load, usually hoist slight load
Q_2–中 middle	0.25	有时起升额定载荷，一般起升1/3额定载荷 Sometimes hoist rated load, usually hoist 1/3 rated load
Q_3–重 heavy	0.5	经常起升额定载荷，一般起升2/3额定载荷 Often hoist rated load, usually hoist 2/3 load
Q_4–特重 serious	1.0	频繁起升额定载荷 Frequent hoist rated load

4.减速器的润滑 Reducer lubrication

卧式减速器采用油池飞溅润滑，立式减速器应采用循环喷油润滑。润滑油选用GB/T5903中的L-CKC100、L-CKC150或L-CKC220.

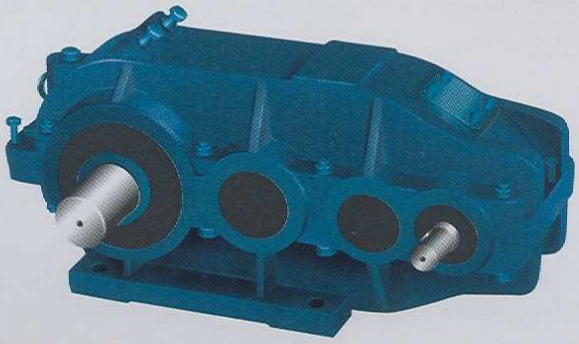
当环境温度低于0℃时，用户应有润滑油加热装置；采用油池飞溅润滑时，油温高于0℃时启动；采用喷油润滑时，油温应高于5℃时才能启动。

Oil sump slashing is used to lubricate horizontal reducer. L-CKC100, L-CKC150 or L-CKC220 is selected from GB/T5903 for lubrication.

When ambient temperature is below 0℃, lubricant heating device should be available for user. If oil sump splashing is used for lubrication, reducer is started only when oil temperature above 0℃. If oil spray is used for lubrication, reducer is started only when oil temperature is above 5℃.

QJ-L QJ-T 型起重机立式减速器
QJ-L QJ-T Crane Vertical Decelerators

一、概述 Brief

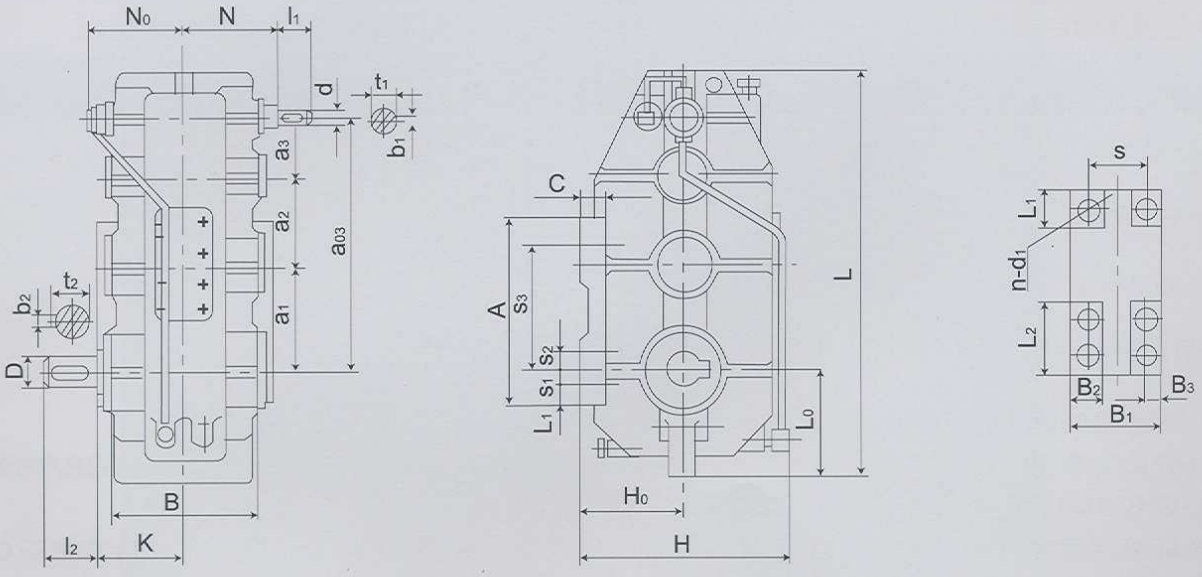


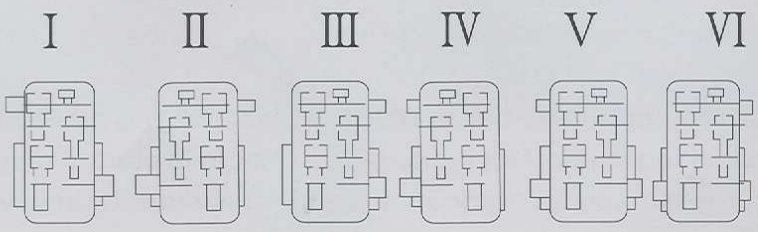
起重机立式减速器部分分为 QJ-L,QJ-T 两个系列，主要用于起重机运行机构，也可用于运输、冶金、矿山、化工、轻 工等各种机械设备的运行机构中。齿轮、齿轮轴采用中碳合金钢中硬齿面，具有结构紧凑、承载能力较高等优点，是我厂继 ZSC 型、ZSC(A)型减速器之后推出的又一代新产品。

The Crane verticl decelerators has two series, type QJ-L and type QJ-T. They are the operating mechanism of crane and other machinery in transportation, metallurgy, mining, chemical industry and light industry. The gear and axle are made of middl carben alloy steel and middle carbide-faced, which are fastened structure with high carrying capacity. Such kind of reducers are our updated decelerators after ZSC and ZSC(A) reducers.

二、QJ-L 型减速器外形、尺寸及装配型式

Outlook, assembling size and installing form of QJ-L reducer



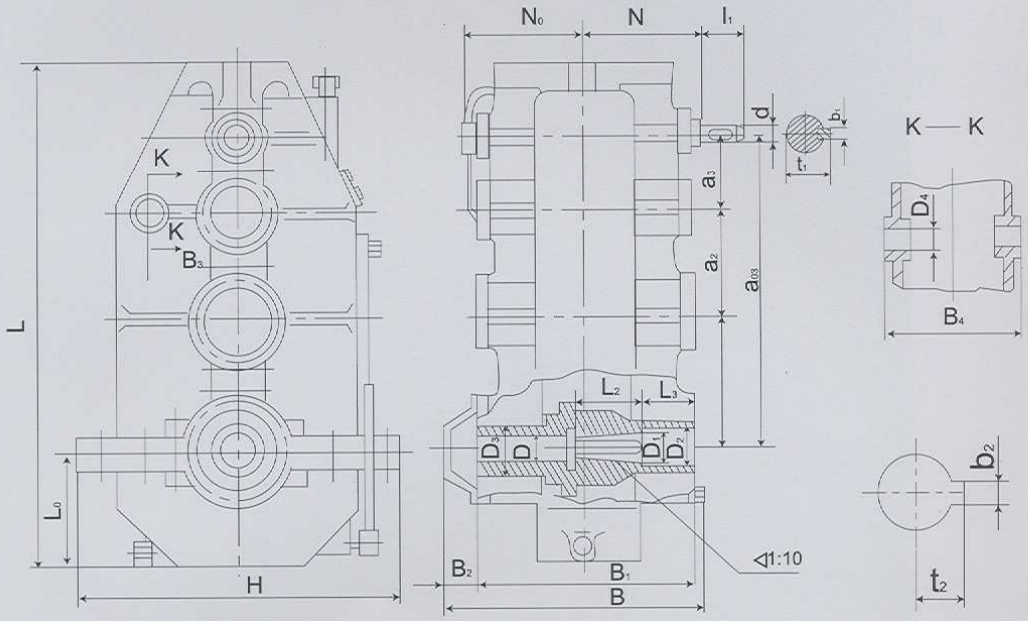


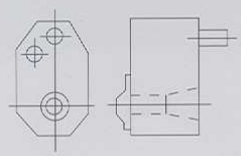
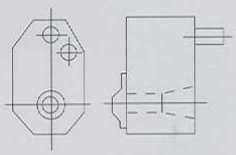
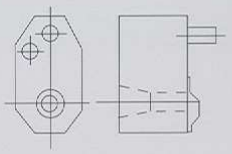
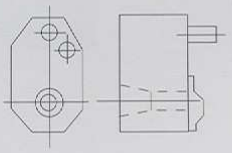
型号 type / 尺寸 size	中心距 center space				主动轴 driving shaft					被动轴 passive shaft					外形尺寸 Outer size				
	a_1	a_2	a_3	a_{03}	d	l_1	N	b_1	t_1	D	l_2	K	b_2	t_2	H	B	L	L_0	N_0
QJ-L140	140	100	71	311	20	52	115	6	22.5	48	112	92	14	51.5	296	180	560	167	143
QJ-L170	170	118	85	373	20	50	125	6	22.5	55	110	135	16	59	330	190	638	180	153
QJ-L200	200	140	100	440	25	60	140	8	28	65	140	150	18	69	370	215	735	205	165
QJ-L236	236	170	118	524	30	80	160	8	33	80	170	170	22	85	430	250	871	242	183
QJ-L280	280	200	140	620	35	80	175	10	38	90	170	185	25	95	505	275	1015	280	200
QJ-L335	335	236	170	741	45	110	200	14	48.5	110	210	215	28	116	605	325	1211	335	225
QJ-L400	400	280	200	880	50	110	240	14	53.5	130	250	250	32	137	710	395	1430	395	260

型号 type / 尺寸 size	安装尺寸 assembling size														重量(Kg) weight
	H_0	A	S	S_1	S_2	S_3	B_1	B_2	B_3	L_1	L_2	L_3	C	d_1	孔数nhole
QJ-L140	135	260	180	0	0	180	245	40	32.5	40	80	80	20	21	4	87
QJ-L170	160	290	195	35	0	205	255	60	30	25	110	110	25	21	4	117
QJ-L200	185	340	220	40	0	240	280	60	30	30	120	120	25	21	4	163
QJ-L236	215	405	235	55	55	290	305	70	35	30	185	110	30	21	6	231
QJ-L280	255	480	265	60	60	340	335	70	35	40	195	120	30	21	6	351
QJ-L335	315	550	365	60	60	410	445	80	40	40	200	120	35	25	6	592
QJ-L400	360	680	365	70	70	510	455	90	45	50	240	140	40	31	6	895

三、QJ-T 型减速器外形、安装尺寸及装配型式

Outlook,assembling size and installing form QJ-T reducer



I	II	III	IV
			

尺寸 size / 型号 type	中心距 center space				主动轴 driving shaft					被动轴 passive shaft							
	a_1	a_2	a_3	a_{03}	d	l_1	N	b_1	t_1	D	D_1	D_2	D_3	l_2	l_3	b_2	t_2
QJ-T140	140	100	71	311	20	52	115	6	22.5	35	39.5	47	60	82	50	10	21.25
QJ-T170	170	118	85	373	20	50	125	6	22.5	40	44.5	55	65	82	60	12	23.75
QJ-T200	200	140	100	440	25	60	140	8	28	55	64.5	75	90	105	65	16	34.18
QJ-T236	236	170	118	524	30	80	160	8	33	70	79.5	90	110	130	70	20	41.65
QJ-T280	280	200	140	620	35	80	175	10	38	80	89.5	100	120	130	75	22	47.15
QJ-T335	335	236	170	741	45	110	200	14	48.5	85	99.5	110	140	165	85	25	51.28
QJ-T400	400	280	200	880	50	110	240	14	53.5	105	119.5	135	160	165	100	28	62.28

尺寸 size / 型号 type	外形尺寸 Outer size						安装尺寸 assembling size				重量(Kg) weight
	H	B	B_1	L	L_0	N_0	B_2	B_3	B_4	D_4	
QJ-T140	310	252	194	513	127	143	50	85	120	25	82
QJ-T170	360	272	214	606	148	153	50	100	140	25	111
QJ-T200	410	303	243	703	173	165	50	125	170	25	155
QJ-T236	500	372	286	831	205	183	75	140	200	28	219
QJ-T280	560	397	311	975	240	200	75	180	225	28	333
QJ-T335	670	447	361	1164	288	225	75	220	265	32	572
QJ-T400	790	524	435	1374	339	265	75	275	315	40	850

四、QJ-L, QJ-T 型减速器承载能力表

Allowed power and output torque of QJ-L, QJ-T reducer

输入轴速度 r/min imput shaft speed	名义中心距 a1mm Nominal center distance	输出扭矩 Nm Output torque moment	公称传动比 Nominal transmission ratio																
			16	18	20	22.4	25	28	31.5	35.5	40	45	50	56	63	71	80	90	100
			高速轴许用功率KW Allowed power tor high-speed shaft																
	140	308	1.3	1.1	1.0	0.9	0.8	0.75	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.34	0.30	0.25	0.22
	170	510	2.2	1.9	1.7	1.5	1.4	1.2	1.1	1.0	0.9	0.8	0.75	0.65	0.6	0.55	0.5	0.4	0.4
	200	993	3.6	3.2	2.9	2.6	2.3	2.0	1.8	1.6	1.4	1.3	1.1	1.0	0.9	0.8	0.7	0.65	0.6
600	236	1686	6.1	5.4	4.8	4.3	3.8	3.4	3.1	2.7	2.4	2.1	1.9	1.7	1.5	1.3	1.2	1.0	0.9
	280	2813	10.1	9.0	8.0	7.2	6.4	5.7	5.1	4.5	4.1	3.6	3.3	2.9	2.6	2.3	2.0	1.8	1.6
	335	4688	16.9	15.1	13.5	12.0	10.7	9.6	8.6	7.6	6.8	6.1	5.4	4.8	4.3	3.8	3.4	3.0	2.7
	400	7950	28.7	25.6	22.9	20.4	18.2	16.3	14.5	13.0	11.6	10.3	9.3	8.3	7.3	6.5	5.8	5.1	4.6
	140	308	1.6	1.4	1.3	1.1	1.0	0.9	0.8	0.7	0.7	0.6	0.6	0.5	0.5	0.4	0.35	0.3	0.3
	170	510	2.8	2.5	2.2	2.0	1.8	1.6	1.4	1.3	1.2	1.0	0.9	0.85	0.75	0.65	0.6	0.55	0.5
	200	993	4.5	4.0	3.5	3.2	2.9	2.6	2.3	2.0	1.8	1.8	1.5	1.3	1.2	1.0	0.9	0.8	0.7
750	236	1686	7.6	6.8	6.0	5.4	4.8	4.3	3.9	3.4	3.1	2.7	2.5	2.2	1.9	1.8	1.5	1.3	1.2
	280	2813	12.6	11.2	10.1	9.0	8.0	7.2	6.4	5.7	5.1	4.6	4.1	3.6	3.3	2.9	2.6	2.3	2.1
	335	4688	21.3	19.0	17.0	15.2	13.6	12.1	10.8	9.7	8.6	7.7	6.8	6.1	5.4	4.8	4.3	3.8	3.4
	400	7950	36.1	32.3	28.8	25.8	23.0	20.5	18.3	16.4	14.6	13.	11.6	10.3	9.4	8.3	7.2	6.4	5.8
	140	308	2.1	1.9	1.7	1.5	1.3	1.2	1.1	1.0	0.9	0.8	0.7	0.6	0.55	0.5	0.45	0.4	0.4
	170	510	3.6	3.2	2.9	2.6	2.3	2.0	1.8	1.6	1.5	1.3	1.2	1.1	1.0	0.9	0.8	0.65	0.6
	200	993	5.9	5.3	4.8	4.3	3.8	3.4	3.0	2.7	2.4	2.1	1.9	1.7	1.5	1.3	1.2	1.1	1.0
1000	236	1686	10.1	9.1	8.1	7.2	6.5	5.8	5.2	4.6	4.1	3.8	3.3	2.9	2.6	2.3	2.1	1.8	1.6
	280	2813	17.0	15.2	13.6	12.1	10.8	9.7	8.6	7.7	6.9	6.1	5.5	4.9	4.3	3.9	3.4	3.1	2.7
	335	4688	28.7	25.7	22.9	20.5	18.3	16.3	14.6	13.0	11.6	10.3	9.0	8.0	7.3	6.5	5.7	5.1	4.6
	400	7950	48.3	43.1	38.5	34.4	30.7	27.4	24.5	21.8	19.5	17.4	15.4	13.7	12.4	10.9	9.8	8.7	7.8
	140	308	3.2	2.8	2.5	2.2	1.9	1.7	1.6	1.4	1.3	1.1	1.0	0.9	0.8	0.75	0.65	0.6	0.55
	170	510	5.3	4.8	4.3	3.8	3.4	3.0	2.7	2.4	2.1	1.9	1.8	1.6	1.4	1.3	1.1	0.95	0.9
	200	993	8.9	7.9	7.1	6.4	5.7	5.0	4.5	4.0	3.6	3.2	2.9	2.6	2.3	1.9	1.8	1.6	1.4
1500	236	1686	15.2	13.5	12.1	10.8	9.7	8.6	7.7	6.9	6.1	5.5	4.9	4.4	3.9	3.5	3.0	2.7	2.5
	280	2813	25.4	22.7	20.3	18.0	16.2	14.5	12.9	11.5	10.3	9.2	8.2	7.3	6.5	5.8	5.1	4.5	4.0
	335	4688	43.1	38.5	34.4	30.6	27.4	24.5	21.8	19.5	17.4	15.5	13.5	12.0	10.9	9.7	8.6	7.5	6.8
	400	7950	72.5	64.7	57.8	51.5	46.1	41.1	36.6	32.7	29.3	26.0	23.0	20.5	18.5	16.4	14.6	12.5	11.7

QJG-L 型起重机立式减速器
QJG-L type reducers

根据国家标准JB/T8905.3-1999生产QJG-L型减速器主要用于起重机的小车运行机构和部位门式起重机、装卸桥等大车运行机构中，也可用于其它需要立式安装的设备传动。

Whichare produced on basis of JB/T8905.3-1999,are mainly applied in craning,parts craning and Loading-unloading bridge.Also they can be applied in other vertical installing machines.

特点 Property:

1.QJG-L 型减速器采用铸铁箱体，底座式侧面安装立式减速器；

2.三级传动，速比为 16-100；

3.该系列有 7 种规格，名义中心距为 140-400mm;

4.小规格减速器为油浴式润滑，280 以上的减速器采用集中喷油润滑。

其它特点同 QJ 型减速器。

1.Casting iron box is applied in QJG-L type decelerator and at side of pedestal the vertical decelerator is installed;

2.Three stage transmission with speed ratio of 16-100;

3.Seven rinds of specs for QJG-Lseries and nominal center space of 140-400mm;

4.Qil bathing lubrication for small size machines and central oil spuring lubrication for machines over 280.

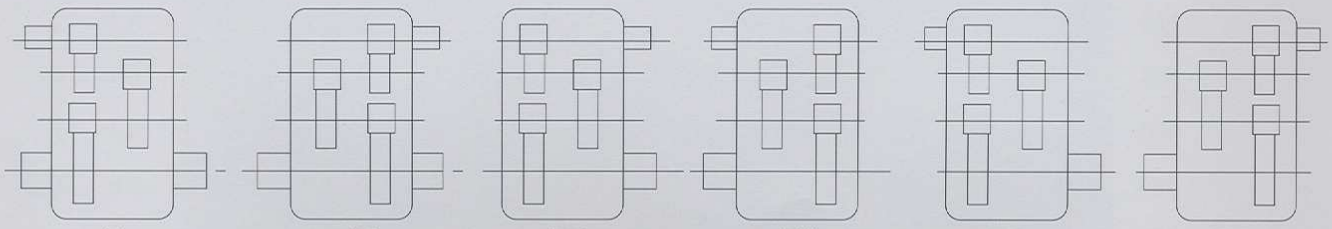
型式 Type

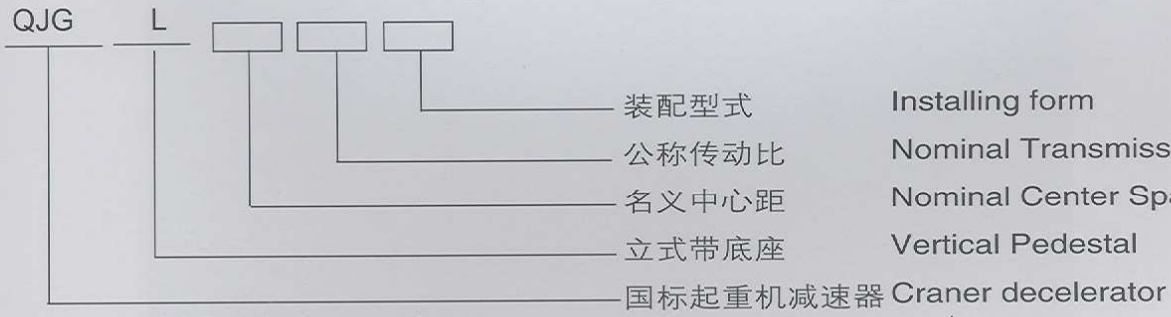
1.结构型式：QJG-L 型减速器为三级立式带底座减速器。

2.装配型式：QJG-L 型减速器共有六种装配形式，见图

1.Structure type:three stage vertical reducers with pedestal.

2.Installing type:There are six installing types for QJG-L type reducers which are showed below,





标记示例 Symboi example

起重机立式减速器，名义中心距为200mm，公称传动比为40，装配型式为第III种，标记为：减速器 QJG-L200-40- III

Vertical craner decelerator with nominal center space of 200mm,nominal transmission ratio of 40 and installing type of III,the symbol should be QJG-L200-40- III.

Main tech Data

主要技术参数 Main tech data

1.中心距 Center space QJG-L型减速器的中心距表 Chart of center space of QJG-L type decelerator

减速机型号 Type	QJG-L140	QJG-L170	QJG-L200	QJG-L236	QJG-L280	QJG-L335	QJG-L400
低速级 a_1 low speed	140	170	200	236	280	335	400
中速级 a_2 Middle speed	100	118	140	170	200	236	280
高速级 a_3 High speed	71	85	100	118	140	170	200
总中心距 a_{03} Total center space	311	373	440	524	620	740	880

2.传动比 QJG-L 型减速器的传 动比见表。其公称传动比与实际传动比的极限偏差为± 5%

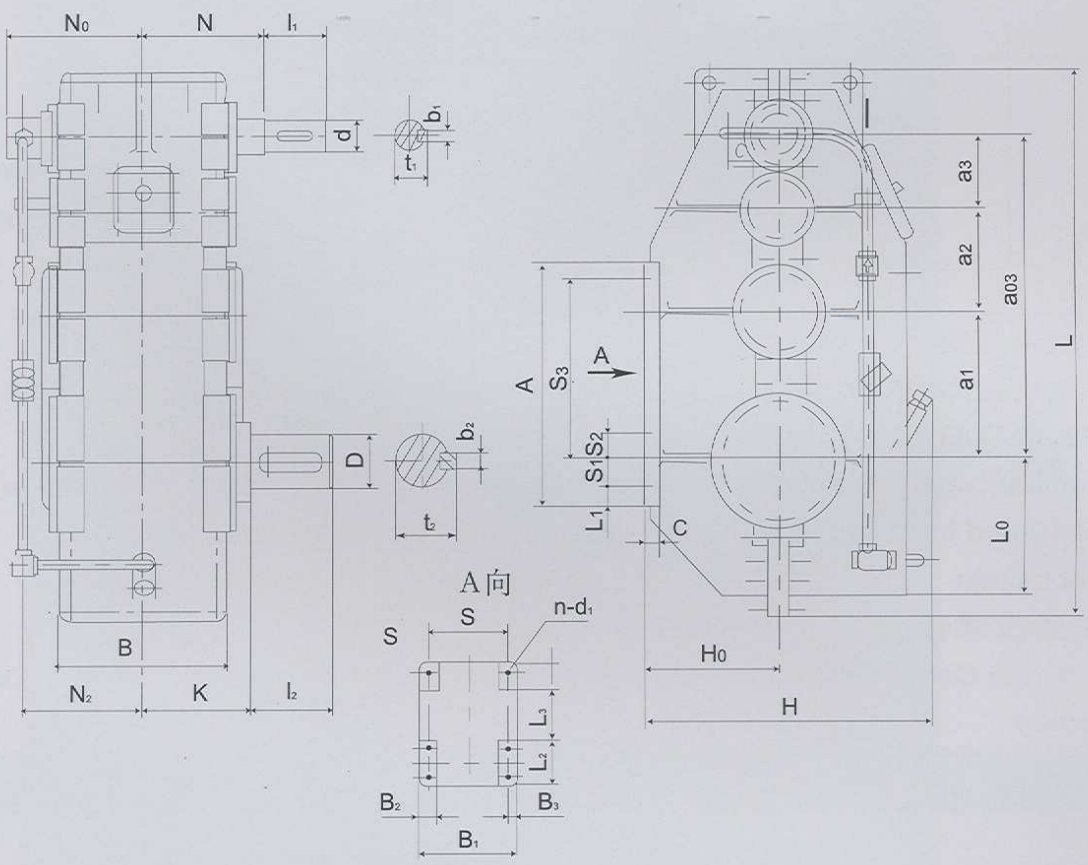
Transmission ratio; The transmission ratio of QJG-Ltype decelerator please see talbe.below avariation between nominal and aotual transmission ratio is ± 5%.

传动比规格 Specs	公称传动比 Nominal Transmission Ratio															
	16	18	20	22.4	25	28	31.5	35.5	40	45	50	56	63	71	80	90	100
	实际传动比 Actual Transmission Ratio															
140	15.57	17.92	19.96	23.13	24.46	28.59	32.15	35.83	40.30	45.72	49.26	55.20	63.09	68.25	78.00	90.88	103.87
170	15.82	17.86	19.95	22.64	25.44	27.78	31.45	35.22	39.87	43.34	49.21	56.39	64.04	72.06	81.82	89.29	101.39
200	15.78	18.10	20.22	22.23	24.98	27.57	31.21	35.99	40.75	44.03	49.95	55.73	63.22	68.12	77.28	86.10	97.67
236	15.68	18.07	20.21	22.28	25.09	27.77	31.53	34.37	41.13	43.95	50.21	53.36	64.92	71.00	81.11	85.83	98.05
280	16.51	18.19	20.26	22.39	23.69	27.72	31.18	34.83	39.15	44.41	50.76	53.69	61.36	71.84	82.11	90.04	102.91
335	15.70	17.98	20.20	22.18	25.11	27.64	31.58	35.76	40.00	45.70	48.76	58.43	62.35	72.82	83.19	93.75	100.04
400	15.78	18.10	20.22	22.23	24.98	27.57	31.21	36.00	40.75	44.03	49.95	55.73	63.22	68.12	77.28	86.10	97.67

外形及安装尺寸 Outlook and installing size

QJG-L 型减速器的外形及安装尺寸见图和表

The outlook and installing size of QJG-L type decelerator are shown in graph and chart below.



QJG-L 型减速器的外形及安装尺寸

Outlook and installing size of QJG-L type decelerator

尺寸 型号 Type	中心距 Center space				主动轴 drive shaft					被动轴 passive shaft					外型尺寸 Size					
	a_1	a_2	a_3	a_{03}	d	l_1	N	b_1	t_1	D	l_2	K	b_2	t_2	H	B	L	L_0	N_0	N_2
QJG-L140	140	100	71	311	20	50	120	6	22.5	48	82	130	14	51.5	300	190	558	167	103	107
QJG-L170	170	118	85	373	25	50	135	8	28	55	82	150	16	59	355	215	650	192	115	120
QJG-L200	200	140	100	440	28	60	180	8	31	65	105	175	18	69	405	250	747	217	133	137
QJG-L236	236	170	118	524	35	80	210	10	38	80	130	200	22	85	475	300	894	260	158	164
QJG-L280	280	200	140	620	40	110	235	12	43	90	130	220	25	95	557	340	1035	295	277	211
QJG-L335	335	236	170	741	45	110	255	14	48.5	110	165	260	28	116	654	400	1243	357	307	241
QJG-L400	400	280	200	880	55	110	285	16	59	130	200	310	32	137	778	490	1443	412	352	286

尺寸 型号 Type	安装尺寸 Installing Size															重量 Weight (Kg)
	H_0	A	S	S_1	S_2	S_3	B_1	B_2	B_3	L_1	L_2	L_3	C	d_1	孔数 Hole	
QJG-L140	138	260	185	30	0	170	245	60	30	30	80	80	20	21	4	77
QJG-L170	168	290	205	35	0	205	265	60	30	25	110	110	25	21	4	112
QJG-L200	193	340	235	40	0	240	295	60	30	30	120	120	25	21	4	165
QJG-L236	230	405	270	55	55	290	330	60	30	30	180	120	30	21	6	249
QJG-L280	265	480	320	60	60	340	400	80	40	40	195	120	30	25	6	364
QJG-L335	315	550	365	60	60	410	445	80	40	40	200	120	35	25	6	647
QJG-L400	380	680	430	70	70	510	520	90	45	50	240	140	40	31	6	1048

承载能力 Carrying Capacity

QJG-L 型减速器当工作级别为 M5 时的输出转矩和高速轴的许用功率见表

The output torque and high-speed shaft allowed power for QJG-L type decelerator under working stage of M5please check table below.

QJG-L 型减速器的输出转矩和高速轴许用功率（工作级别为 M5）

Output torque and high-speed shaft allowed power of QJG-L type decelerator(working stage of M5)

输入轴转速 imput shaft wheeling speed r/min	名义中心距 nominal center space a_1 mm	输出扭矩 output torque Nm	公称传动比 i Nominal Transmission Ratio															
			16.0	18.0	20.0	22.4	25.0	28.0	31.5	35.5	40.0	45.0	50.0	56.0	63.0	71.0	80.0	90.0	100.0
			高速轴许用功率 High-speed shaft allowed power KW															
600	140	820	3.1	2.7	2.5	2.2	2.0	1.8	1.6	1.4	1.2	1.1	0.98	0.87	0.78	0.69	0.61	0.54	0.52
	170	1360	5.1	4.5	4.1	3.6	3.3	2.9	2.6	2.3	2.0	1.8	1.6	1.5	1.3	1.1	1.1	0.90	0.81
	200	2650	9.9	8.8	7.9	7.1	6.3	5.7	5.0	4.5	4.0	3.5	3.2	2.8	2.5	2.2	2.0	1.8	1.6
	236	4500	16.7	14.9	13.4	11.9	10.7	9.5	8.5	7.5	6.7	5.9	5.3	4.8	4.2	3.7	3.3	2.9	2.6
	280	7500	27.9	24.8	22.3	19.9	17.9	15.9	14.2	12.6	11.1	9.9	8.9	7.9	7.1	6.3	5.6	4.9	4.4
	335	12500	46.6	41.4	37.3	33.3	29.8	26.6	23.6	21.0	18.6	16.5	14.9	13.3	11.8	10.5	9.3	8.8	7.4
	400	21200	79.0	70.3	63.2	56.4	50.6	45.2	40.1	35.6	31.6	28.1	25.3	22.6	20.0	17.8	15.8	14.0	12.6
750	140	820	3.8	3.4	3.1	2.7	2.4	2.2	1.9	1.7	1.5	1.4	1.2	1.1	0.97	0.86	0.76	0.68	0.61
	170	1360	6.3	5.6	5.1	4.5	4.0	3.6	3.2	2.9	2.5	2.3	2.0	1.8	1.6	1.4	1.3	1.1	1.0
	200	2650	12.3	11.0	9.9	8.8	7.9	7.0	6.3	5.6	4.9	4.4	3.9	3.5	3.1	2.8	2.5	2.2	2.0
	236	4500	20.9	18.5	16.7	14.9	13.3	11.9	10.6	9.4	8.3	7.4	6.6	5.9	5.3	4.7	4.1	3.7	3.3
	280	7500	34.8	30.9	27.8	24.9	22.3	19.9	17.7	15.7	13.9	12.3	11.1	9.9	8.8	7.8	6.9	6.5	5.5
	335	12500	58.0	51.6	46.4	41.4	37.1	31.1	29.5	26.1	23.2	20.6	18.5	16.6	14.7	13.0	11.6	10.3	9.2
	400	21200	98.5	87.5	78.8	70.3	63.0	56.3	50.0	44.4	39.4	35.0	31.5	28.1	25.0	22.2	19.7	17.5	15.7
1000	140	820	5.1	4.5	4.1	3.6	3.3	2.9	2.6	2.3	2.0	1.8	1.6	1.5	1.3	1.2	1.0	0.91	0.82
	170	1360	8.5	7.5	6.8	6.0	5.4	4.8	4.3	3.8	3.4	3.0	2.7	2.4	2.2	1.9	1.7	1.5	1.4
	200	2650	16.5	14.7	13.2	11.8	10.6	9.4	8.4	7.4	6.6	5.9	5.3	4.7	4.2	3.7	3.3	2.9	2.6
	236	4500	28.0	24.8	22.3	19.9	17.9	15.9	14.2	12.6	11.1	9.9	8.9	7.9	7.1	6.3	5.6	4.9	4.4
	280	7500	46.6	41.4	37.3	33.3	29.8	26.6	23.6	21.0	18.6	16.5	14.9	13.3	11.8	10.5	9.3	8.2	7.4
	335	12500	77.7	69.5	62.1	55.5	49.7	44.4	39.4	35.0	31.0	27.6	24.8	22.2	19.7	17.5	15.5	13.8	12.4
	400	21200	131.8	117.1	105.4	94.1	84.3	75.3	66.9	59.4	52.7	46.8	42.1	37.6	33.4	29.7	26.3	23.4	21.0
1500	140	820	7.5	6.7	6.0	5.4	4.8	4.3	3.8	3.4	3.0	2.7	2.7	2.4	2.3	2.1	1.8	1.6	1.4
	170	1360	12.5	11.1	10.0	8.9	8.0	7.1	6.3	5.6	5.0	4.4	4.0	3.8	3.4	3.0	2.6	2.4	2.1
	200	2650	24.3	21.6	19.4	17.3	15.5	13.9	12.3	10.9	9.7	8.6	7.8	7.0	6.6	5.8	5.2	4.6	4.2
	236	4500	41.2	36.6	32.9	29.4	26.3	23.5	20.9	18.5	16.4	14.6	13.2	11.7	10.4	9.2	8.2	7.3	6.6
	280	7500	68.7	61.0	54.9	49.0	43.9	39.2	34.9	30.9	27.4	24.4	21.9	19.6	17.4	15.4	13.7	12.2	11.0
	335	12500	114.5	101.8	91.6	81.8	73.3	65.4	58.1	51.6	45.8	40.7	36.6	32.7	29.0	25.8	22.9	20.3	18.3
	400	21200	194.2	172.6	155.4	138.7	124.3	111.0	98.6	87.5	77.7	69.0	62.1	55.5	49.3	43.7	38.8	34.5	31.0

QJG-L 型减速器为连续工作时的输出转矩和高速轴的许用功率 (见下页)

Output torque and high-speed shaft allowed power for continuous QJG-L type decelerator

减速器输出轴端的瞬时允许转矩为额定转矩的 2.7 倍。

The temperary allowed torque of output shaft edge is 2.7 tines of rated torque.

QJG-T 型起重机套装式减速器 QJG-T craning decelerator

QJG-T 型减速器是 QJG-L 型减速器的基础上派生的，主要用于起重机的运行机构，也可用于其它机械需要立式套装的传动中，用以代替 ZSC(A)型减速器。

QJG-T craning decelerator,derived fron QJG-L type decelerator,is mainly used in Craning and other machines with vertical set-installing operation to replace ZSC(A) type reducer.

特点： Property

QJG-T 型减速器的输出端为圆锥套，减速器就套在主机的被动轴上，将其端部固定，减速器的重量也支承在该轴上。在箱体上部设有安装孔，通过销轴固定在支架上。

With cypinder output edge,the QJG-L reducer is installed on passive shaft.The weight is there after sustained. the upper of case locates some holes to fastened onto shelf with screw shaft.

QJG-L 型减速器的输出转矩和高速轴许用功率（连续型）

Output torque and high-speed shaft allowed power of QJG-: reducer (continuous type)

输入轴转速 imput shaft wheeling speed r/min	名义中心距 nominal center space a_1 mm	输出扭矩 output torque Nm	公称传动比 i Nominal Transmission Ratio															
			16.0	18.0	20.0	22.4	25.0	28.0	31.5	35.5	40.0	45.0	50.0	56.0	63.0	71.0	80.0	90.0	100.0
			高速轴许用功率 High-speed shaft allowed power KW															
600	140	410	1.5	1.3	1.2	1.0	0.98	0.87	0.78	0.69	0.61	0.54	0.49	0.44	0.39	0.34	0.31	0.27	0.24
	170	680	2.5	2.2	2.0	1.8	1.6	1.4	1.2	1.1	1.0	0.90	0.81	0.72	0.64	0.57	0.51	0.45	0.41
	200	1325	4.9	4.3	3.9	3.5	3.1	2.8	2.5	2.2	1.9	1.7	1.5	1.4	1.2	1.1	0.99	0.88	0.79
	236	2250	8.3	7.4	6.7	6.0	5.3	4.8	4.2	3.7	3.3	2.9	2.6	2.4	2.1	1.8	1.6	1.4	1.3
	280	3750	13.9	12.4	11.1	9.9	8.9	7.9	7.1	6.3	5.6	4.9	4.4	4.0	3.5	3.1	2.8	2.4	2.2
	335	6250	23.3	20.7	18.6	16.6	14.9	13.3	11.8	10.5	9.3	8.2	7.4	6.6	5.9	5.2	4.6	4.1	3.7
	400	10600	39.5	35.1	31.6	28.2	25.3	22.6	20.0	17.8	15.8	14.0	12.6	11.3	10.0	8.9	7.9	7.0	6.3
750	140	410	1.9	1.6	1.5	1.3	1.2	1.0	0.97	0.86	0.76	0.68	0.61	0.54	0.48	0.43	0.38	0.34	0.30
	170	680	3.1	2.8	2.5	2.2	2.0	1.8	1.6	1.4	1.2	1.1	1.0	0.90	0.80	0.71	0.63	0.56	0.51
	200	1325	6.1	5.4	4.9	4.4	3.9	3.5	3.1	2.7	2.4	2.1	1.9	1.7	1.5	1.3	1.2	1.0	0.99
	236	2250	10.4	9.2	8.3	7.4	6.6	5.9	5.3	4.7	4.1	3.7	3.3	2.9	2.6	2.3	2.0	1.8	1.6
	280	3750	17.4	15.4	13.9	12.4	11.1	9.9	8.8	7.8	6.9	6.2	5.5	4.9	4.4	3.9	3.4	3.1	2.7
	335	6250	20.0	25.8	23.2	20.7	18.5	16.6	14.7	13.0	11.6	10.3	9.2	8.3	7.3	6.5	5.8	5.1	4.6
	400	10600	49.2	43.7	39.4	35.1	31.5	28.1	25.0	22.2	19.7	17.5	15.7	14.0	12.5	11.1	9.8	8.7	7.8
1000	140	410	2.5	2.2	2.0	1.8	1.6	1.4	1.2	1.1	1.0	0.91	0.82	0.73	0.65	0.57	0.51	0.45	0.41
	170	680	4.2	3.7	3.3	3.0	2.7	2.4	2.1	1.9	1.6	1.5	1.3	1.2	1.0	0.95	0.85	0.75	0.68
	200	1325	8.2	7.3	6.5	5.8	5.2	4.7	4.1	3.7	3.3	2.9	2.6	2.3	2.2	1.8	1.6	1.4	1.3
	236	2250	13.9	12.4	11.1	9.9	8.9	7.9	7.1	6.3	5.6	4.9	4.4	4.0	3.5	3.1	2.8	2.4	2.2
	280	3750	23.3	20.7	18.6	16.6	14.9	13.3	11.8	10.5	9.3	8.2	7.4	6.6	5.9	5.2	4.6	4.1	3.7
	335	6250	38.8	34.5	31.0	27.7	24.8	22.2	19.7	17.5	15.5	13.8	12.4	11.1	9.8	8.7	7.7	6.9	6.2
	400	10600	65.9	58.9	52.7	47.0	42.1	37.6	33.4	29.7	26.3	23.4	21.0	18.8	16.7	14.8	13.1	11.7	10.5
1500	140	410	3.7	3.3	3.0	2.6	2.4	2.1	1.9	1.6	1.5	1.3	1.2	1.0	0.95	0.85	0.75	0.67	0.60
	170	680	6.2	5.5	4.9	4.4	3.9	3.5	3.1	2.8	2.4	2.2	1.9	1.7	1.5	1.4	1.2	1.1	1.0
	200	1325	12.1	10.7	9.7	8.6	7.7	6.9	6.1	5.4	4.8	4.3	3.8	3.4	3.0	2.7	2.4	2.1	1.9
	236	2250	20.6	18.3	10.4	14.7	13.2	11.7	10.4	9.2	8.2	7.3	6.6	5.8	5.2	4.6	4.1	3.6	3.3
	280	3750	34.3	30.5	27.4	24.5	21.9	19.6	17.4	15.4	13.7	12.2	11.0	9.8	8.7	7.7	6.8	6.1	5.5
	335	6250	57.2	50.9	45.8	40.9	36.6	32.7	29.0	25.8	22.9	20.3	18.3	16.3	14.5	12.9	11.4	10.1	9.1
	400	10600	97.1	86.3	77.7	69.3	62.1	55.5	49.3	43.7	38.8	34.5	31.0	27.7	24.6	21.8	19.4	17.2	15.5

箱体分三部分，成“⊥”形，作立式减速器使用，下箱体油不易渗漏，输出轴中心线到下端极限位置尺寸比较小。其它特点同 QJG-L 型减速器。

The case is made up by three parts and some are shaed as vertical decelerator.The size between center line of output shaft and end position is rather small.other properties are the same as that of QJG-L reducers.

型式 Type

1.装配型式 QJG-T 型减速器的装配型式有四种，见图

2.轴端型式 高速轴采用圆柱形轴伸，平键联接，低速轴采用空心轴套，锥形轴孔，平键联接。

1.Installing type: There are four types for QJG-L type decelerator showed below,

2.Shaft edge type :Cylinder extension for high-speed shaft and shaft connection.

型号标记示例 Symboi example

起重机套装式减速器，名义中心距 a_1=200,公称传动比 i=40,装配型式第 III 种，标记为：减速 QJG-T200-40- III

Craning redueer,nominal center space a_1=200,nominal transmission ratio i=40,installing form is III,the sumbol is :reducer QJG-T200-40- III.

主要技术参数 Main tech data

QJG-T 型减速器的中心距和传动比与 QJG-L 型减速器相同。

Center space and transmission ratio of QJG-T reducer are the same as those of QJG-L reducers.

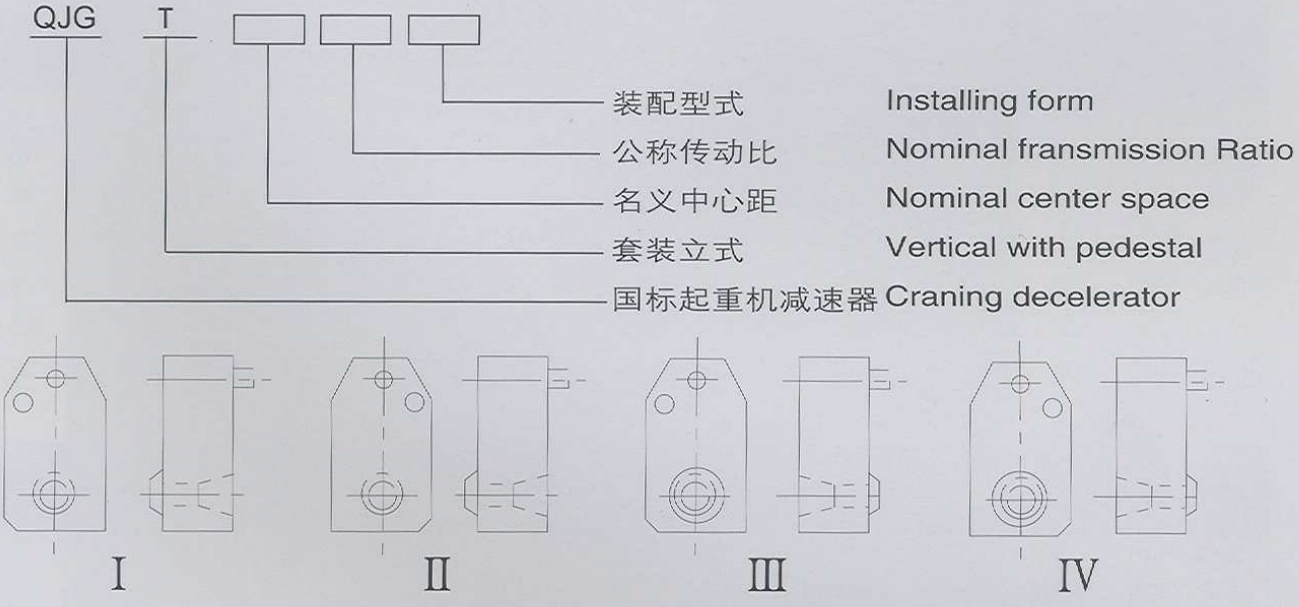


图 2-14 QJG-T 型减速器装配型式

Graph2-14 Installing form of QJG-T type decelerator

外形及安装尺寸 Contour and installing size

QJG － T 型减速器的外形及安装尺寸见表 2-15 和表 2-20。

The contour and installing size of QJG-T type decelerator are shown in table 2-15 and 2-20.

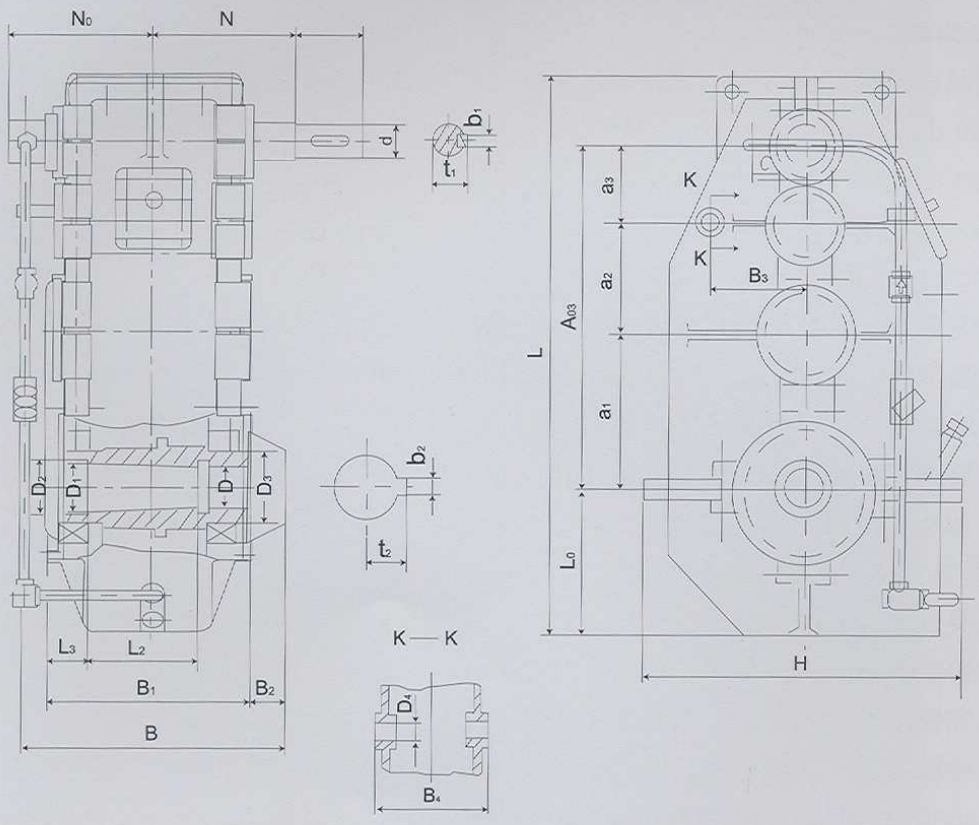


图 2-15QJG-T 型减速器外形及安装尺寸

Graph 2-15 Outlook and installing size of QJG-T type decelerator

尺寸型号 Type	中心距 Center Space				主动轴 drive shaft					被动轴 passive shaft							
	a_1	a_2	a_3	a_{03}	d	l_1	N	b_1	t_1	D	D_1	D_2	D_3	L_2	L_3	b_2	t_2
QJG-T140	140	100	71	311	20	50	120	6	22.5	40	50	55	70	105	50	14	26.2
QJG-T170	170	118	85	373	25	50	135	8	28	50	60	65	80	105	55	16	31.7
QJG-T200	200	140	100	440	28	60	180	8	31	55	65	70	90	105	60	18	34.3
QJG-T236	236	170	118	524	35	80	210	10	38	70	85	90	120	155	70	22	44
QJG-T280	280	200	140	620	40	110	235	12	43	75	95	100	130	205	75	22	47.8
QJG-T335	335	236	170	741	45	110	255	14	48.5	90	110	120	160	205	85	28	56.3
QJG-T400	400	280	200	880	55	110	285	16	59	100	120	130	180	255	105	28	60.03

尺寸型号 Type	外型尺寸 Size						安装尺寸 Installing size				重量 Weight (Kg)
	H	B	B_1	L	L_0	N_0	B_2	B_3	B_4	D_4	
QJG-T140	324	256	214	526	135	103	35	85	150	25	76
QJG-T170	376	281	239	618	160	115	35	105	170	25	108
QJG-T200	426	333	274	715	185	133	50	135	200	25	153
QJG-T236	510	387	328	854	220	158	50	155	245	28	247
QJG-T280	580	460	368	995	255	277	65	190	270	28	364
QJG-T335	689	524	436	1196	310	307	65	225	330	32	593
QJG-T400	807	624	526	1396	365	352	75	280	390	40	938

承载能力 Loading capacity

QJG－T型减速器的输出转矩和高速轴的许用功率与QJG－L型减速器相同.见表2-18QJG和表The output torque and high-speed shaft allowed power of QJG-Tdecelerator and QJG-L decelerator the related values art listed in table 2-18 QJG

选择方法 Selection method

选择原则 Selection principle

1)在选择减速器时，首先要满足工作条件。即高转速、最大齿轮圆周速度，环境温度和转向等。

2)满足机械强度的要求，如输入轴的功率（或输出轴的转矩）、轴伸的最大径向力和瞬时最大转矩等。对于连续使用的减速器还要满足热功率。

3)满足转速要求，根据原动机的转速 和工作机械的要求转速选择最接近的传动比（最好是减速器的实际传 动比，如果未给实际传动比用公称传动比代替），一般两者极限偏差2级为±4%，3级为±5%。如果特殊要求，我公司联系特殊配制。

4)根据主机要求减速器的安装位置，界限尺寸、联接部位、传动性能的要求，确定减速器的结构形式，安装型式和装配形式。

5)根据输入和输出的联接方式，选择轴端型式。

6)考虑使用维修方便，选择注油口，排油口的位置，润滑方式、散热等。

1) the operating condition must be qualified when select decelerator,for example,the high speed rotation,max gear circle velocity,ambient temperature and rotation.

2) To meet mechanical intensity .for example,the input shaft power (or output shaft torque),max radial force of shaft extension and intermittent max torque Aslo the heat power of continuous decelerator.

3) To meet rotationg speed .the most favorable transmission ratio should be selected according to the given rotating speed and required rotating speed (the actual transmission ratio,if not that,nominal transmission ration is favorable).Usually the defference bettween them is 4%for 2 stage,5%for 3 stage.If there´ s any special requirement,please contact us.

4)To determine structure mode, installing form and assembling type according to in stalling position,margin sizc,connecting place and driving property of decelerator.

5) To select connecting mode of input and output,to select shaft edge type.

6) To select oil inlet and outlet position ,lubricating mode and radiating.

选择计算 Selecting calculation

1)QJ型(包括QJ－D/QJG-T,QJ-L)以及ZQA型减速器，用于起重机各机构时，根据GB3811《起重机设计规范》（以下简《规范》的规定，起重机机构的工作级别分为M1-M8八种，本手册所列的承载能力为M5工作级别，要用在其它工作级别时应按公式进行折算

$$P_{M5}=P_{Mi}\times 1.12^{(i-5)}KW$$

式中 P_{M5} －减速器承载能力表中的高速轴许用功率值(KW);

P_{Mi} －相对Mi工作级别的功率值(KW)

i －工作级别数1-8

2)起重机各机构疲劳计算的基本载荷 Mmax

a)起升和非平衡变幅机构

1) when QJ decelerator (including QJ-DJG-T,QJ-L type)and ZQA decelerator are applied in craning equipments,according to GB3811<design stipulation of craning >,there are eight working series M1-M8, the enclised loading capacity is M5. if other series is applied ,the followed formula is applied,

Where, PMS －the hugg-speed sgaft akkiwed powed power in loading capacity table (Kw)

PMI － the powe of Mi series (KW)

I － the working series 1-8

2) the basic leak load of craning M_{max}

3) lofting and unbalanced structure

$Mmax=\varphi_6 M_N$ N_M $\varphi_6=1/2(1+\varphi_2)$

φ_6 —动载系数; φ_6-load factor

Mn －电动机额定转矩（Nm); M_n=motor rated torque (Nm)

φ_2 —起升载荷系数，φ_2=1-2 当起升速度高，系统刚度大，操作猛时，取值较大值。见＜规范＞附录B_0

φ_2 = lifting load factor, φ_2=1-2, If lifting speed is high, large ragidity and heavy strike, the larger value is preferable in <stipulation> appedix B.

b) 运行和回转机构 operation and back-turning mechanism

$Mmax=\varphi_5\times\varphi_8^{Mn}$

式中 Where $Ø_5$ －弹性振动增大系数 $Ø_5$=1.5-1.7 - stretching vibrant arising factor

Ø8 －刚性动载系数 Ø8=1.2-2.0 - rigid loading factor

Ø8 与电动机的驱动特性和计算零件两侧的转动量的比值有关。见《规范》附录 P_0 the value of 8is related to ratio between driving vharacter and moment of inertia.please see appendix P0.

平衡变幅机构 Balance changing structure

疲劳计算基本载荷取为该零件承受的等改幅静阻力矩，其它零 件取为电动机额定力矩传到该计算零件力矩的 1.3-1.4 倍。当瞬时最大转矩低于 2.7 倍的额定转矩时，可以进行静强度校核，当超过此值时，应验算零件强度，或者选大机座号的减速器。

In leak calculation the basic load is determined by loaded resistance torque of the parts, for other parts,the basic load is 1.3-1.4 times of torque from motor rated torque to this related parts.You can check under silent intensyty should be checked and larger type of decelerator should be selected.

3.根据疲劳计算基本载荷和转速可算出该工作级别的功率值 P_{Mi}

3.The related power of this series can be calculated according to basic leak load and torque.

$P_{Mi}=M_{max} \times n/9550(KW)$

式中 Where n －减速器输入轴转速 （r/min） n-input shaft rotating speed(r/min)

如果工作级别不是 M5，可安式(2-1） 换算至 M5 工作级别的功率 P_{M5}，然后再根据 P_{M5} 输入转 速 n 和公称传动比 i 选择减速器。

If the series is not M5,the series power Pmcan be calculated according to formula 2-1,and the decelerator can be selected on Pm, input rotating speed nand nominal transmission ratio i.

选用实例 Selecting example:

1)一台起重量为32t，跨度为25.5m的桥式起重机，其起升机构功率为60Kw，转速为750r/min，起升速度为 8m/min，机构的工作级 别为 M6，选择减速器（减速器的传动比为 40,要求第 III 种装配型式，齿轮轴端）。

1)bridge cranc with weight of 32ton and span of 25.5m, the lifting structure power is 60Kw, the rotating speed is 750r/min, the lifting speed is 8m/min, the working series in M6. the related decelerator should be selected (transmission ratio is 40, the third installing form, gear shaft edge).

电机的额定转矩 Rated torque: $Mn=9550p/n=9550 \times 60/750=764.8$ N*m

根据《规范》附录 B，起升载荷分配系数 $\varphi_2=1+0.71v=1+0.71 \times 8/60=1.1$ According to <stipulation>B,lift load factor $\varphi_2=1+0.71v=1+0.71 \times 8/6=1.1$

式中 where v- 起升速度(m/s) V-lifting speed (m/s)

动载系数: $\varphi_6=1/2(1+\varphi_2)=(1+1.1)=1.05$ loading factor $\varphi_6=1/2(1+\varphi_2)=(1+1.1)=1.05$

疲劳计算基本载荷 $M_{max}=\varphi_6 m_n=1.05 \times 764.8=803N.m$

相对 M6 工作级别的功率 M_6's power

$P_{MB}=M_{max} \times n/9550=8038750/9550=63Kw$

折算成 M_5 时的功率 related M_5power

$P_{M5} = P_{M5} \times 1.12^{(6-5)}=63 \times 1.12=70.65Kw$

查表 2-8，当 n=710r/min,i=40 时，高速轴许用功率为 78Kw,相对的减速器为：

Check table 2-8,if n=710r/min,i=40 the allowed high-speed shaft power is 78Kw,the related decelerator is :

QJS200-40IIIC 或 QJS-D500-40IIIC 型减速器。要求三支点用前者，要求带底座的用后者。

QJS500-40 III C or QTS-500-40 III C the former is for three-point sustaining and later is for machine with stand.

2)一台双梁门式起重机，其大车运行机构为两套，一套电动机的额定为 7.5Kw,转速 n=1000r/min,工作级别为 M7,选择起重机套装式减速器，(传动比为 i=35.5,第 II 种装配型式)。

2)a double-door crane,the operating structure is two sets,of which the motor power is 7.5Kw,the rotating speed is n=1000r/min,working series is M7, to select a craning set decelerator (transmission ratio of 35.5 the second installing form)

电动机的额定转矩 Motor rated torque

$M_n=9550p/n=9550 \times 7.5/1000=71.7$ N.m

疲劳计算基本转矩 basic leale torque

$M_{max}= \varphi_5 \cdot \varphi_8 \times M_n$

取 $\varphi_8=1.5$, 取 $\varphi_8=1.4$

$M_{max}=1.5 \times 1.4 \times 71.7=150.57$

相对 M7 工作级别的计算功率 calculated power for M7series

$P_{M7}=M_{max} \times n/9550=150.57 \times 1000/9550=15.75Kw$

折算成 M5 时的功率 related power for M5

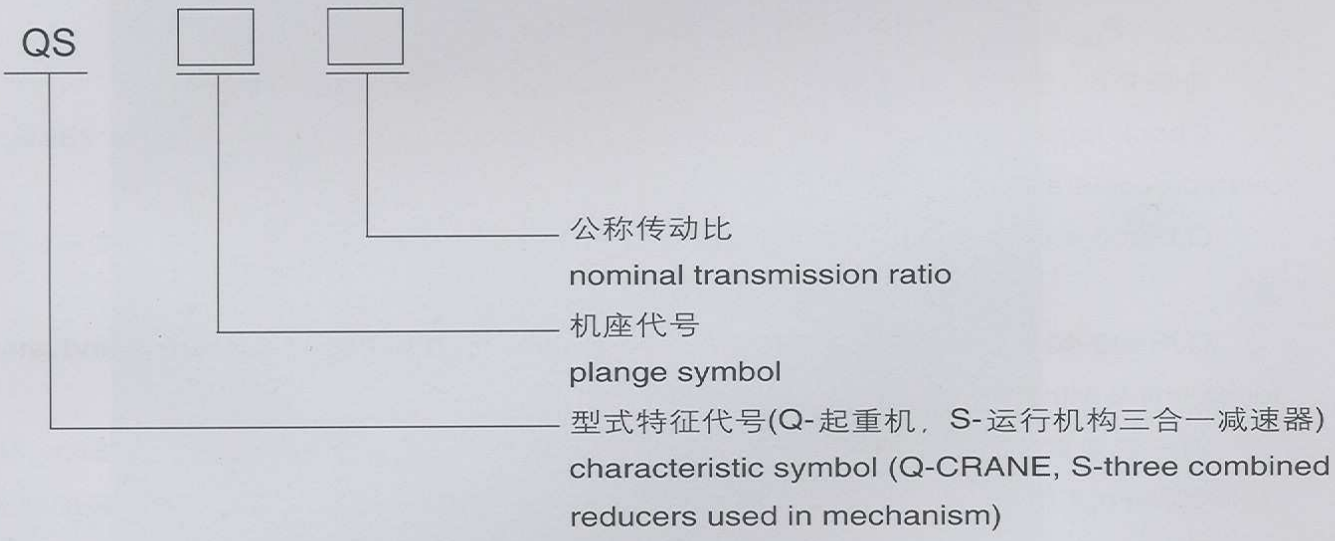
$P_{M5}=P_{M7} \times 1.12^{(7-5)}=15.75 \times 1.12^2=19.75Kw$

查表 2-18,当 n=1000r/min,i=35.5 时，高速轴的许用功率 $P_{M5}=21Kw$,相对应的减速 器为 QJG-T280-355II 满足要求.

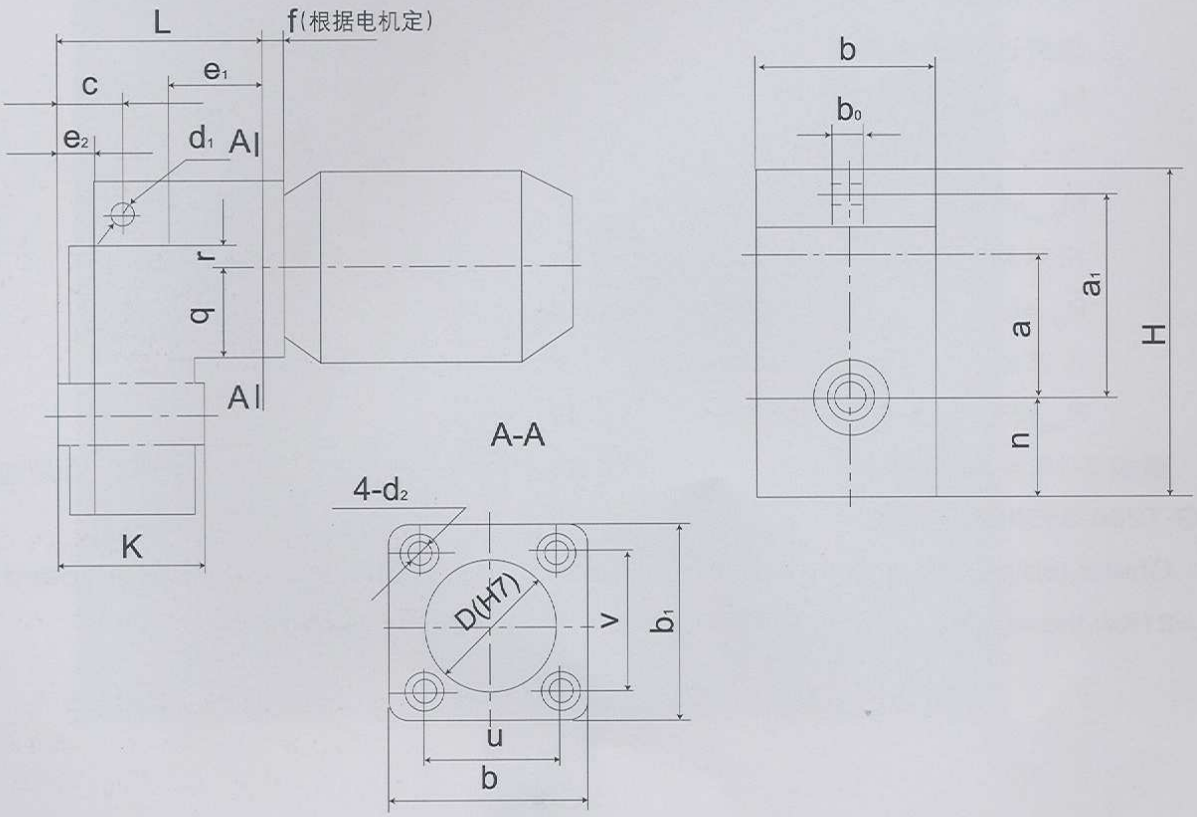
Check table 2-18,when n=1000/r/min,i=35.5, the allowed power of high-speed shaft $P_{m5}=21Kw$,the related reducer QJG-T285-355 II can meets demands.

三合一减速器
THREE-IN-ONE Decelerators

一、标注示例 Symbol sample

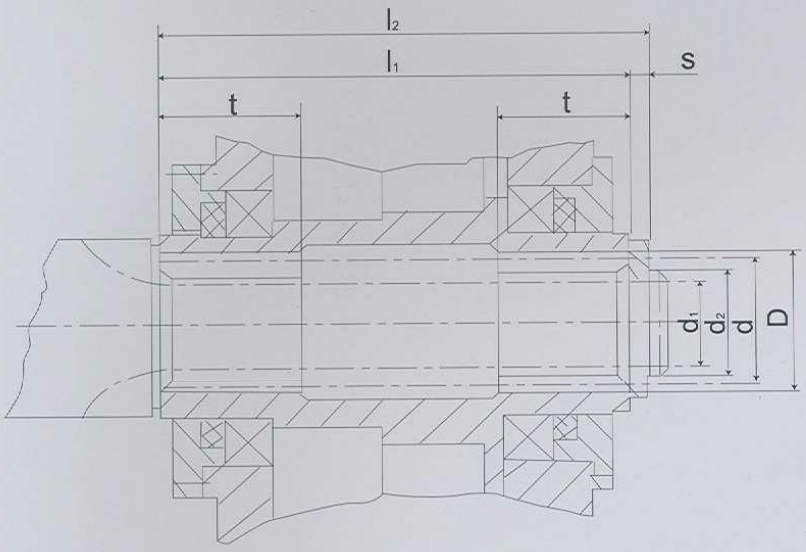


二、QS 型外形及安装尺寸表
Qutlook and installing size of reducer



机座代号 pedestal type	a	H	a_1	b	b_0	b_1	c	D (H7)	d_1	d_2	L	K	e_1	e_2	n	q	r	u	v	重量(Kg) weight
06	125	285	175	168	20	160	67	Ø148	Ø14	M10	215	161	42	80	80	70	29	128	120	27.1
08	160	358	230	210	20	200	82.75	Ø170	Ø20	M10	235.75	188	73.5	47.75	96	100	40	154	154	42.6
10	200	452	297	274	25	250	88	Ø226	Ø22	M12	261	208	84	53	127	125	51	210	186	72.8
12	250	566	360	346	30	312	92.25	Ø286	Ø22	M16	307.75	255	88	61.25	160	156	55	274	240	143.3
16	315	705	440	400	40	340	115.75	Ø280	Ø40	M16	331.25	264	100	65.75	220	170	75	320	260	210.0
20	400	820	525	500	50	340	127.75	Ø280	Ø40	M16	385.25	318	104	67.75	250	170	80	320	260	320
25	500	1050	667	620	70	560	137.75	Ø320	Ø40	M20	429.75	356.5	112	75.75	310	280	95	380	360	780

三、内花键轴及联接尺寸表
inner spline axle and connection size



机座代号 pedestal type	花键副 spline size	内花键大径D inner spline diameter	外花键大径d outer spline diameter	d1	d2	l1	l2	s	t
06	INT/EXT21Z x 2m x 30Px6H/6h GB3478.1-83	45	44	39	40	161	162.5	1.5	50
08	INT/EXT24Z x 2m x 30Px6H/6h GB3478.1-83	51	50	46.19	42	188	189.5	1.5	55
10	INT/EXT31Z x 2m x 30Px6H/6h GB3478.1-83	65	64	59	62	208	210	2	60
12	INT/EXT27Z x 3m x 30Px6H/6h GB3478.1-83	85.5	84	78.5	82	255	257.5	2.5	65
16 20 25	INT/EXT35Z x 3m x 30Px6H/6h GB3478.1-83	109.5	108.0	96.5	100	264 318 356.5	266.5 320.5 359	2.5	75

四、减速器的许用功率及输出扭矩表 allowing power and output torque of reducer

输入轴转速为 1400r/min, 工作级别 M_6 Annotation: imput velocity is 1400r/min, actuating type M_6.

机座代号 pelcle stal type	中心距 center space	公称传动比 nominal transmission ratio / 功率、扭矩 power turning moment	14	16	18	20	22.4	25	28	31.5	35.5	40	45	50	56	63	71	80	90	100
06	125	输入轴许用功率KW input axle allowing power	4.473	3.956	3.586	3.330	3.061	2.708	2.422	2.134	1.831	1.694	1.516	1.264	1.204	1.080	0.970	0.766	0.690	0.647
		输出扭矩N>M output turning moment	418	438	44	442	454	455	462	458	447	452	459	437	470	457	470	426	420	436
08	160	输入轴许用功率KW input axle allowing power	6.220	5.793	5.575	5.132	4.906	4.448	4.215	3.981	3.744	3.211	3.046	2.568	2.274	2.017	1.897	1.551	1.450	1.248
		输出扭矩N>M output turning moment	609	655	699	708	753	756	801	844	892	860	918	879	887	891	899	848	908	842
10	200	输入轴许用功率KW input axle allowing power	12.141	11.322	10.480	10.051	9.176	8.731	7.825	7.557	6.902	6.211	5.352	5.065	4.316	3.923	3.641	3.036	2.827	2.500
		输出扭矩N>M output turning moment	1145	1225	1307	1383	1391	1468	1461	1624	1687	1702	1650	1776	1695	1650	1722	1644	1749	1653
12	250	输入轴许用功率KW input axle allowing power	31.937	29.857	28.313	25.387	22.821	21.582	19.250	17.905	15.292	13.477	12.050	10.847	9.435	8.421	7.948	6.721	5.621	5.19
		输出扭矩N>M output turning moment	2980	3295	3482	3514	3573	3602	3598	3803	3707	3775	3645	3703	3647	3667	3696	3548	3386	3507
16	315	输入轴许用功率KW input axle allowing power	54.710	48.439	45.267	42.088	38.914	34.975	30.314	27.475	25.824	22.935	19.854	19.558	16.301	15.133	12.965	10.989	9.215	8.603
		输出扭矩N>M output turning moment	5288	5254	5503	5751	5973	6062	5955	6112	6165	6269	6117	6174	6275	6340	6168	5907	5742	5795
20	400	输入轴许用功率KW input axle allowing power	101.5	100	96	91	81	71	67	59	51	41	37	35	27	25	22	17	16	13
		输出扭矩N>M output turning moment	9684	9164	11549	12378	32401	12362	12386	12361	12235	12065	10888	11163	10498	10455	10622	9820	9797	8654
25	500	输入轴许用功率KW input axle allowing power	154	143	132	121	113	90	87	82	73	69	61	57	46	41	41	37	32	29
		输出扭矩N>M output turning moment	14700	15319	15925	16513	7304	16831	17270	17257	17593	18733	19066	19097	18146	18241	19526	20643	20014	20478

注：配套电机功率：Nn〈容许功率÷2-2.5。Notes: the mate motor power Nn (allowed power ÷ 2-2.5.)

输入轴转速为 1400r/min, 连续工作型。Annotation: imput axle velocity is 1400r/min for cotinous actuating type.

机座代号 pelcle stal type	中心距 center space	公称传动比 nominal transmission ratio / 功率、扭矩 power turning moment	14	16	18	20	22.4	25	28	31.5	35.5	40	45	50	56	63	71	80	90	100
06	125	输入轴许用功率KW input axle allowing power	3.17	2.78	2.49	2.29	2.08	1.82	1.62	1.41	1.19	1.10	0.97	0.83	0.80	0.67	0.60	0.47	0.42	0.39
		输出扭矩N>M output turning moment	296	307	308	305	309	306	309	302	291	29-4	293	277	296	283	289	260	259	262
08	160	输入轴许用功率KW input axle allowing power	4.39	4.06	3.85	3.50	3.32	2.99	2.81	2.60	2.45	2.07	1.94	1.63	1.43	1.26	1.18	0.95	0.88	0.75
		输出扭矩N>M output turning moment	430	459	482	483	510	509	533	522	583	555	586	556	558	557	557	522	550	506
10	200	输入轴许用功率KW input axle allowing power	8.63	7.91	7.29	6.96	6.28	5.89	5.26	5.19	4.55	4.04	3.44	3.21	2.71	2.43	2.24	1.85	1.70	1.49
		输出扭矩N>M output turning moment	814	856	910	967	951	991	982	1077	1112	1106	1059	1124	1064	1023	1059	1004	1053	985
12	250	输入轴许用功率KW input axle allowing power	23.28	21.50	20.07	17.82	15.84	15.18	13.05	11.53	10.18	8.88	7.83	7.00	6.01	5.23	4.95	4.13	3.89	3.13
		输出扭矩N>M output turning moment	2172	2372	2469	2467	2480	2471	2439	2548	2469	2488	2369	2388	2323	2318	2303	2178	2056	2118
16	315	输入轴许用功率KW input axle allowing power	33.90	34.05	31.46	28.91	23.68	23.57	20.13	18.16	16.99	15.10	12.91	12.06	10.43	9.56	8.08	6.85	5.74	5.24
		输出扭矩N>M output turning moment	3760	3694	3825	3951	4050	4086	3990	4040	4057	4125	3976	4013	4016	4007	3843	3717	3577	3529
20	400	输入轴许用功率KW input axle allowing power	60.83	60	57.6	54.6	48.6	42.6	40.2	35.4	30.6	24.6	22.2	21	16.2	15	13.2	10.2	9.6	7.8
		输出扭矩N>M output turning moment	5810	5498	6929	7426	7440	7417	7431	7416	7341	7239	6532	6698	6298	6273	6397	5352	5878	5192
25	500	输入轴许用功率KW input axle allowing power	92.4	85	79	72	67	57	52	49	43	41	36	34	27	24	24	22	19	17
		输出扭矩N>M output turning moment	8820	9191	9555	9907	10382	10098	10332	10354	10555	10239	11438	11458	10887	10944	11715	12385	12008	12288

注：配套电机功率：Nn〈容许功率÷2-2.5。Notes: the mate motor power Nn (allowed power ÷ 2-2.5.)

QSC 垂直式三合一减速器

QSC Series vertical "Three-in-one" Decelerators

QSC系列"三合一"减速机为垂直轴式减速机，主要用于门式起重机运行机构。两系列产品亦可用于运输、冶金、石油、化工、建筑、铁路、港口、国防工程、轻纺工业等各种机械设备中的传动机构。

The QSC series "THREE-IN-ONE" speed-damper machine is of the vertical-axis type in the operation unit of cranes. The products of QS and QSC can also be used as drive mechanism of machine in areas of transport, metallurgy, mining, petrolum, chimical industry, building, railing defence and textile industry.

一、适用条件 Specifications

1.齿轮圆周速度≤ 20m/s

2.高速轴转速≤ 1500mr/min

3.工作环境温度为 -40℃-+45℃

4.可正 / 反两方向运转

1.Gear circle velocity ≤ 20m/s

2. H igh speed shaft rotation velocity ≤ 1500mr/min

3.Enviromental temperature -40℃-+45℃

4.Progressive and retrogressive rotation.

二、主要特点 main features

1.配套功率范围大，减速范围广。

2.装配及调整快速简单。

3.输出轴可两面装配，用于单独驱动或集中驱动。

4.结构紧凑、美观、体积小、重量轻。

5.运转平稳、噪音低。

1.Big power and speed damping range.

2.Assemble and adjust easily.

3.The output shaft assimbles in two dircetions, and used to drive singles or units.

4.Compact structure and small volume with light weight.

5.Operate smoothly with low noise

型号说明

THREE-IN-ONE Decelerators

QS C XX XX

公称传动比代号
Nominal speed rate code
机座号
Machine base type
垂直式
Vertical type
"三合一" 减速机代号
"THREE-IN-ONG" speed-damper machine Code

外型及联接尺寸
shape and size of connection

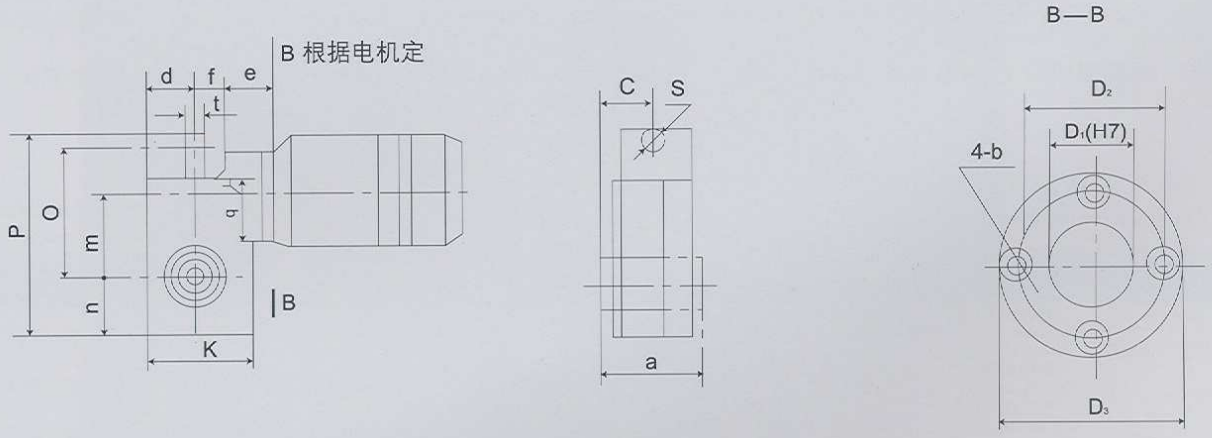


图 6 figure 6

机座号 Machine base type	a	c	d	f	k	m	n	o	p	q	r	s	t	D1 (H7)	D2	D3	b	重量 Weight kg
QSC10	208	104	137	125	274	225	127	325	490	86	56	Ø22	26	Ø132	Ø152	Ø172	M12	72.25
QSC12	255	127.5	173	150	346	280	160	406	612	101.5	70	Ø26	36	Ø160	Ø180	Ø203	M16	141.32
QSC16	264	132	200	180	400	355	220	485	760	104	85	Ø34	46	Ø160	Ø180	Ø208	M16	210
QSC20	318	159	250	220	500	470	250	625	930	140	100	Ø40	50	Ø210	Ø240	Ø280	M16	350
QSC25	356.5	178.25	310	275	620	580	310	777	1160	180	125	Ø40	70	Ø240	Ø280	Ø320	M20	820

四、输入轴容许功率及输出扭矩

Permissible Power of the imput shaft and the output torque

输入轴转速 1400r/min,工作级别为 M_5(可配 920r/min)

Rotation velocity of the input shaft is 1400r/min(or 920r/min),working status is M_5

容许功率：kW(Allowed Power)
输出扭矩：N.mThe output torque

机座代号 pelcie stal type	中心距 The diatance in the centra		22.4	25	28	31.5	35.5	40	45	50	56	63	71	80	90	100	114	128	144	160
QSC10	225	容许功率 permissfbie power the output torqe	9.176	8.371	7.825	7.825	6.902	6.211	5.353	5.065	4.316	3.923	3.641	3.036	2.827	2.500	2.28	1.89	1.76	1.50
		输出扭距 The output torque	1391	1468	1461	1624	1687	1651	1776	1695	1650	1722	1644	1749	1653	1571	1685	1576	1587	1556
QSC12	280	容许功率 permissfbie power the output torqe	22.821	21.58	19.25	17.90	15.29	13.47	12.05	10.84	9.43	8.42	7.04	6.72	5.62	5.19	4.96	4.20	3.51	3.24
		输出扭距 The output torque	3573	3602	3595	3803	3703	3775	3645	3703	3647	3667	3697	3550	3387	3507	3666	3485	3277	3361
QSC16	355	容许功率 permissfbie power the output torqe	38.91	34.97	30.31	27.41	25.82	22.95	19.85	19.55	16.30	15.13	12.96	10.98	9.21	8.60	8.10	6.86	5.76	5.38
		输出扭距 The output torque	5793	6.62	5955	6111	6165	6269	6117	6179	6275	6340	6168	5967	5742	5795	2987	5693	5377	5931
QSC20	470	容许功率 permissfbie power the output torqe	81	71	67	59	51	41	37	35	27	25	22	17	16	13	12	10.6	9.5	8.12
		输出扭距 The output torque	12001	12362	12386	12361	12235	12065	10888	11763	10498	10455	10662	8920	9797	8654	8963	8889	8963	8512
QSC25	580	容许功率 permissfbie power the output torqe	96	89	82	75	70	60	54	51	45	43	38	35	28	27	25	23	20	18
		输出扭距 The output torque	14100	15319	15925	16513	17304	15390	17220	17257	17393	18733	19088	19037	19648	18741	19523	20843	20014	20478

注：配套电机功率：Nn < 容许功率 ÷ 2-2.5　　Notes:the mate motor power Nn <allowed power/2-2.5

输入轴转速 1400r/min,连续工作型

Rotation velocity of imput shaft is 1400r/min,Continuous working type

容许功率：kW(Allowed Power)
输出扭矩：N.mThe output torque

机座代号 pelcie stal type	中心距 The diatance in the centra		22.4	25	28	31.5	35.5	40	45	50	56	63	71	80	90	100	114	128	144	160
QSC10	225	容许功率 permissfbie power the output torqe	6.28	5.89	5.26	5.19	4.55	4.04	3.44	3.21	2.71	2.43	2.24	1.85	1.70	1.49	1.40	1.16	1.06	0.93
		输出扭矩 The output torque	951	991	982	1077	1112	1106	1059	1124	1064	1023	1059	1004	1053	985	1034	962	989	984
QSC12	280	容许功率 permissfbie power the output torqe	15.84	15.18	13.05	11.53	10.18	8.88	7.83	7.00	6.01	5.32	4.95	4.13	3.89	3.13	3.09	2.58	2.43	1.96
		输出扭矩 The output torque	2480	2471	2439	3548	2469	2488	2369	2388	2323	2318	2303	2178	2065	2118	2283	2141	2268	2033
QSC16	355	容许功率 permissfbie power the output torqe	23.68	23.57	20.31	18.16	16.99	15.10	12.91	12.06	10.43	9.56	8.08	6.85	5.74	5.24	5.05	4.28	3.59	3.28
		输出扭矩 The output torque	4050	4086	3990	4040	4057	4125	3976	4013	4016	4007	3843	3717	3577	3529	3732	3552	3351	3402
QSC20	470	容许功率 permissfbie power the output torqe	48.6	42.6	40.2	35.4	30.6	24.6	22.2	21	16.2	15	13.2	10.2	9.6	7.8	7.2	6.36	5.7	4.87
		输出扭矩 The output torque	7440	7417	7431	7416	7341	7239	6532	6698	6298	6273	6397	5352	5878	5912	5373	5333	5377	5107
QSC25	580	容许功率 permissfbie power the output torqe	57.6	53.4	49.1	45	42	36	32.4	30.6	27	25.3	21.8	21	16.3	15	15	13.8	12	10.8
		输出扭矩 The output torque	8820	9198	9555	9907	10882	10068	10332	10354	10345	11239	11238	11439	10887	10944	11715	12853	12008	12288

注：配套电机功率：Nn < 容许功率 ÷ 2-2.5　　Notes:the mate motor power Nn <allowed power/2-2.5

输出花键轴的联接
The output-spline connection

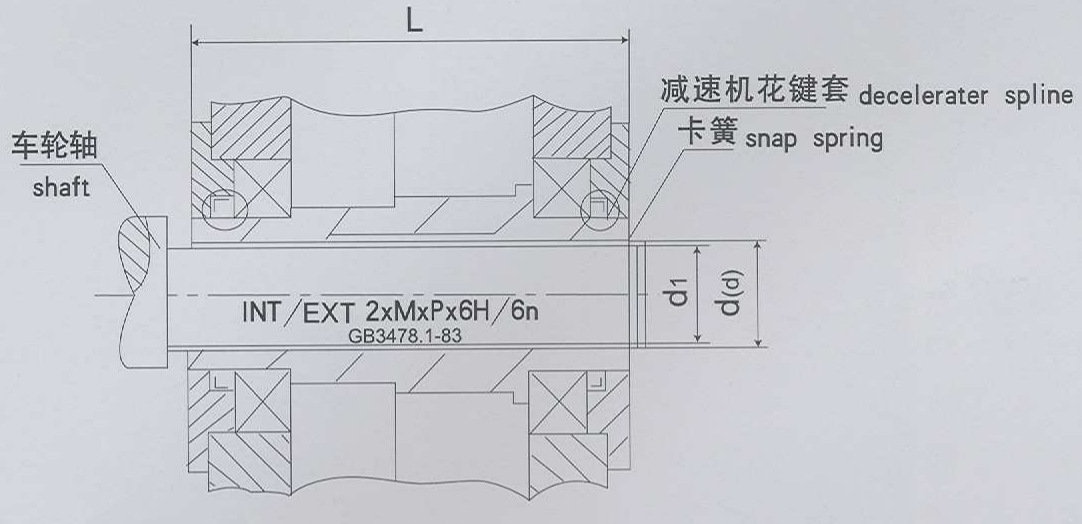


图 7 figure 7

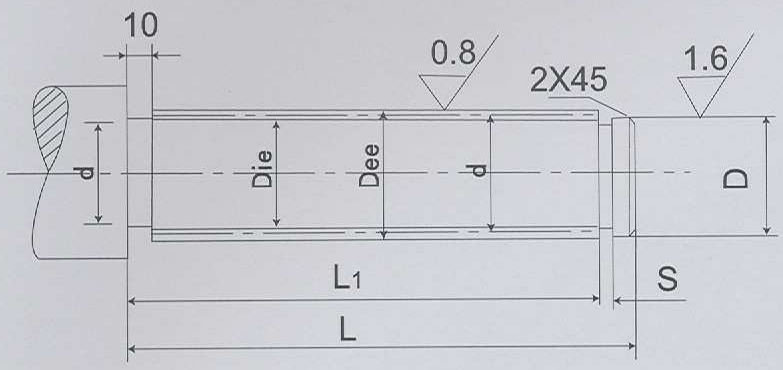


图 8 调质处理 HB245-280 材料 40Cr

figure 8 Heat treatment HB245-280 Materia140Cr

机座代号 pedestal type	花键副 spline size	外花键大径Dee The big diameter of out-splines	外花键小径Die The small diameter of out-splines	L	L1	d	s
QSC10	INT/EXT31Z x 2M x 30Px6H/6h GB3478.1-83	ø 64 -0.10 -0.20	ø 59 -0.10 -0.15	215	208	Ø57	2.2
QSC12	INT/EXT27Z x 3M x 30Px6H/6h GB3478.1-83	ø 84 -0.10 -0.25	ø 76.5 -0.10 -0.18	262	255	Ø75	2.7
QSC16	INT/EXT35Z x 3M x 30Px6H/6h GB3478.1-83			272	264		
QSC20	INT/EXT35Z x 3M x 30Px6H/6h GB3478.1-83	ø 108 -0.15 -0.30	ø 100.5 -0.10 -0.20	326	318	Ø96.5	2.7
QSC25	INT/EXT35Z x 3M x 30Px6H/6h GB3478.1-83			365	356.5		

QSC 系列“三合一”减速机配套电机主要技术参数

Specifications for the motors of the QSC serics “THREE-IN-ONE” Speed-damper machine

参数 Parameters / 型号 Model	功率 (kw) power	转速 (mim) Rotation speed	额定电流 (A) Rated electricity	最大转矩额定转矩 Max.tor-que Rated torque	效率 (n) Efficienc-ly	功率因素 Power factor	绝缘等级 Insulatio-n Grade	制动扭矩 (N.m) Brade torque	转子开路电压 (V) The open voltage of the rotator	转子电流 (A) Popor Durrent	基准工作制 (JC) Standard word rule	外形尺寸 DXL The measurement of the shape	注 Notes
ZDR12 4	1.5	1350	4.5	3	0.7	0.75	B	10.8	131	9.5	25%	218 X 488	
ZDR112 L_1 4	2.2	1350	5.6	3	0.79	0.8	F	15.7	131	12.0	40%	218 X 507.5	
ZDR112 L_2 4	3.0	1350	7.5	3	0.8	0.8	F	19.6	131	16.0	40%	218 X 507.5	
ZDR125 4	4.6	1380	13	2.5	0.73	0.64	F	35.2	175	18.0	40%	249 X 52.5	
ZDR140 4	8.0	1380	25.5	2.5	0.77	0.63	F	62.0	168	31.0	40%	274 X 297	
YZRE112 M_1 4	0.8	1400	2.4	2.5	0.65	0.78	F	27	100	8	40%	250 X 513	
YZRE112 M_2 4	1.5	1410	4.5	2.5	0.68	0.79	F	30	100	12.5	40%	250 X 513	
YZRE112 M_3 4	2.2	1410	6	2.5	0.72	0.76	F	30	132	12.6	40%	250 X 513	
YZRE132 M_1 4	3.7	1410	9.2	2.7	0.77	0.77	F	50	187	14.5	40%	300 X 548	
YZRE132 M_2 4	5.5	1410	15	2.7	0.77	0.78	F	50	139	25.7	40%	300 X 598	
YZRE132 M_3 4	7.5	1420	17	3	0.80	0.82	F	50	185	26.5	40%	300 X 618	
YZRE160 M_1 4	7.5	1420	17	3	0.80	0.82	F	80	185	26.5	40%	350 X 667	
YZRE160 M_1 4	11	1420	24.5	3	0.82	0.825	F	80	252	27.6	40%	350 X 712	
YZRE160 L 4	15	1420	33	3	0.85	0.825	F	80	218	46	40%	350 X 782	
ZDY,21 4	0.8	1380	2.4	2.51	0.7	0.72	B	8.036				217 X 329	
ZDY,22 4	1.5	1380	4.3	2.5	0.72	0.74	B	19.6				235 X 355	
YEJ80 4	0.75	1500	2.0		0.75	0.78	F	10				200 X 385	
YEJ90L 4	1.5	1500	3.6		0.78	0.82	F	20				200 X 425	
YEJ100L_2 4	3	1500	6.65		0.825	0.83	F	38				250 X 465	
YEJ112M 4	4	1500	8.6		0.84	0.84	F	50				250 X 495	
YEJ123S 4	5.5	1500	11.5		0.845	0.87	F	95				250 X 575	
YEJ132M 4	7.5	1500	15.5		0.865	0.86	F	95				300 X 620	
YEJ160M 4	11	1500	22		0.875	0.86	F	190				350 X 710	
YEJ160L 4	15	1500	30		0.88	086	F	190				350 X 755	

电阻器由用户选配 resistor to be selected by user

注：1.额定电压为 380 伏，频率 50 赫兹。 Note: 1. rated voltage is 380v and frequency 50HZ.

ZQ(H)系列圆柱齿轮减速器

ZQ(H)Cylindrical Gear Decelerators

ZQ(H)型减速器主要用于起重、矿山、通用化工、纺织、轻 工等行业，其适用条件如下：

减速器齿轮传 动圆周速度不大于 4 米 / 秒

减速器高速轴的转速不大于 1500 转 / 分

减速器用于正反两向运转。当带逆止器时，以正对输出轴端看的方向为准。

减速器工作环境温度为 -40℃到 + 40℃

减速器有九种传动比、九种配置型式和三种低速轴轴端型式。

The ZQ(H) type reducers are mainly applied to craning, mining, general chemistry. textiling and light industry. The applicable conditions are as follows.

The gear transmission circle velocity no more than 4m/s.

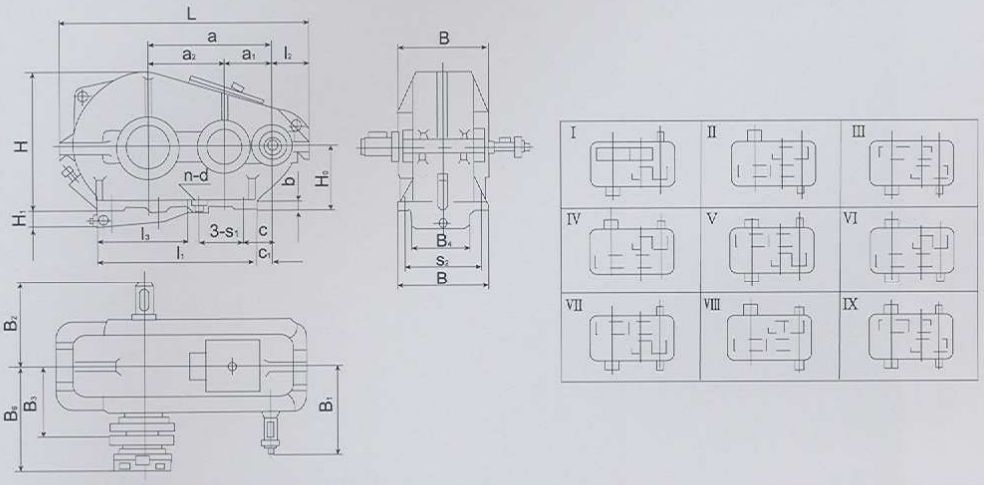
The wheeling speed of high-speed axle no more than 1500r.p.m.

The actuating termperature ranging from-40℃ to +40℃.

The reducer being applied to right and reverse direction 9transmission ratio, 9 installing modes and 3 low-speed axle edge types.

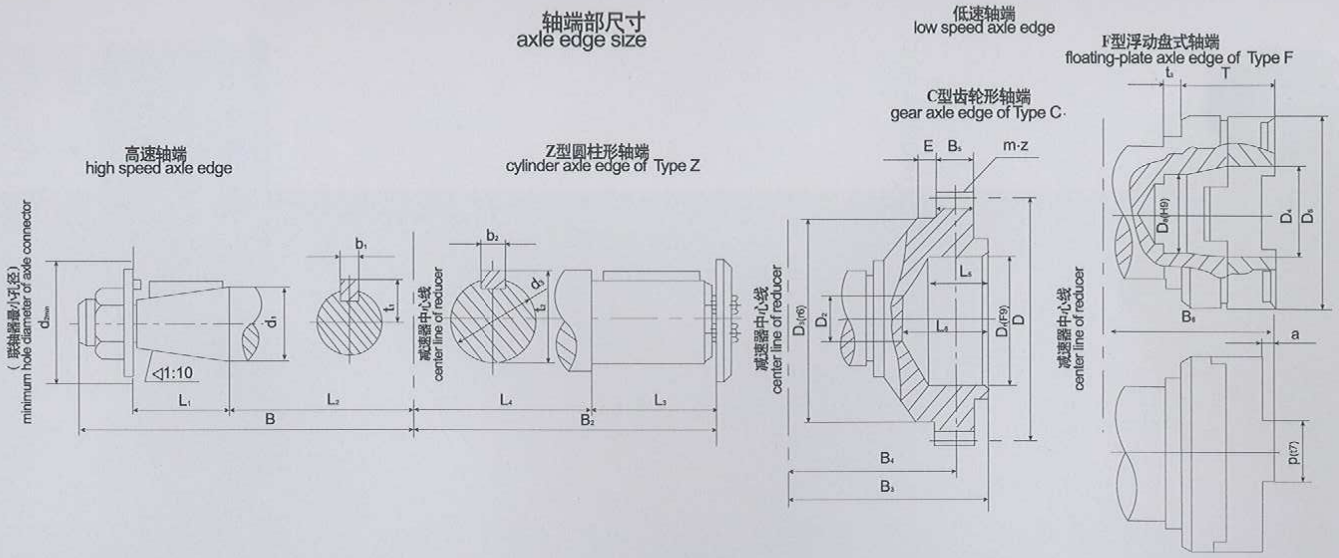
ZQ(H) 型减速器外形，尺寸及装配型式

Outlook assembling size and installing form ZQ(H) type reducers.



型号 Type	中心距 center space			中心高 center height	最大外形尺寸 maximum outer space			轴端尺寸 axle edge size				l_1	l_2	l_3	B_4	H_1	b	安装尺寸 assembling size						减速器最大质量KG maximum weight of reducer (kg)
	a	a_1	a_2	H_0	L	B	H	高速轴 high speed axle B_1	低速轴 low speed axle B_2	B_6	B_5							C	C_1	孔距 hole space S_1	S_2	孔径 hole diameter d	孔数 n hole n	
ZQH25 ZQ25	250	100	150	0 160-1.4	540	230	325	200	220	170	164.5	345	101	-	-	-	20	60	28	235	190	17	4	100
ZQH35 ZQ35	350	150	200	0 200-1.4	730	290	405	260	250	222	214	470	132	-	-	-	25	100	40	310	250	17	4	200
ZQH40 ZQ40	400	150	250	0 250-1.4	826	310	490	270	305	250	234	490	133	-	-	-	25	110	80	370	270	17	4	259
ZQH50 ZQ50	500	200	300	0 300-1.5	986	350	590	330	325	290	270	620	148	-	-	-	25	130	80	240	310	17	6	390
ZQH65 ZQ65	650	250	400	0 320-1.5	1278	470	700	430	430	370	342	830	183	495	318	95	35	160	85	215	410	25	8	880
ZQH75 ZQ75	750	300	450	0 320-1.5	1448	510	745	450	450	410	362	1020	207	620	362	130	35	155	55	275	450	25	8	1100
ZQH85 ZQ85	850	350	500	0 400-1.6	1632	580	875	510	525	480	403	1100	236	610	418	105	40	155	75	300	520	32	8	1500
ZQH100 ZQ100	1000	400	600	0 400-1.6	1896	660	965	550	605	495	507	1350	257	870	478	200	40	200	100	350	590	32	8	2230

轴端部尺寸
axle edge size



型号 Type		高速轴端 high speed axle edge							低速轴端 low speed axle edge																											
									Z型 Type Z						C型 Type C													F 型 Type F									
		d_1	L_1	L_2	B_1	$d_{2\,min}$	b_1	t_1	d_3	L_3	L_4	B_2	b_2	t_2	m	Z	D	D_1	D_2	D_3	B_3	B_4	B_5	E	L_5	L_6	D_4	D_5	D_6	P	a	B_6	T	t_2
ZQH25	ZQ25	30	60	120	200	55	8	16.5	55	85	135	220	16	59	3	40	120	65	40	100	164.5	154.5	20	24.5	35	40	100	50	40	25	10	170	50	25
ZQH35	ZQ35	40	85	150	260	75	12	21.5	55	85	165	250	16	59	3	48	144	90	40	110	214	189.5	25	27	45	60	120	60	45	30	20	222	72	30
ZQH40	ZQ40	40	85	160	270	75	12	21.5	80	125	180	305	24	85	3	56	168	90	40	140	234	207.5	25	35	45	60	150	60	45	35	15	250	90	30
ZQH50	ZQ50	50	85	220	330	85	16	28	80	125	200	325	24	85	4	56	224	120	40	170	270	238.5	35	25	50	75	200	80	60	50	20	290	110	40
ZQH65	ZQ65	60	110	290	430	110	18	32.5	110	165	265	430	32	117	6	56	336	170	45	260	342	310	40	32	68	95	250	110	70	60	25	370	130	45
ZQH75	ZQ75	60	110	310	450	110	18	32.5	110	165	285	450	32	117	6	56	336	170	45	260	362	330	40	32	68	95	275	110	75	75	25	410	150	50
ZQH85	ZQ85	90	135	340	510	150	24	49	130	200	325	525	36	138	8	54	432	200	105	260	403	363	50	22	78	95	300	120	75	75	25	480	180	50
ZQH100	ZQ100	90	135	380	550	150	24	49	150	240	365	605	40	159	10	48	480	200	105	320	507	442	60	45	98	126	325	130	80	80	30	495	180	60

注：1. 全国各厂生产的 ZQ 型、JZQ 型、PM 型今后统一为 ZQ 型；
2. ZQH 无 F 型出轴、齿轮出轴有 CA（无惰轮）、CB（带惰轮）两种，具体尺寸向制造商函索。
3. ZQ(H)与 JZQ 出轴键宽有差异，JZQ 键宽依次为 18、18、28、28、36、36、36、40。

Annotation: 1. We now unify the ZQ, JZQ and PM reducer produced in serious factonies in China as ZQ reducer.
2. There's now F type output axle for ZQH, and CA (no inert gear), CB (with inert gear) for gear output axle, please contact the producer for speaified sizes.
3. The are deviation of output axle key width between ZQ(H) and JZQ reducer. The key width of JZQ are 18, 18, 28, 36, 36, 36, 40.

ZQ(H)减速机的传动比 Transmission ratio of ZQ(H) reducer

公称传动比i nominal transmission	50	40	31.5	25.0	20	16	12.5	10	8
实际传动比i actual transmission ratio	48.57	40.17	31.50	23.34	20.49	15.75	12.64	10.35	8.23

ZQ、ZQH 型减速器容许输入功率

Allowed Imput Power for Type ZQ,ZQH Decelerator

转速 Rotate speed (r.p.m) / 传动比 Drive ratio	工作类型 Service type	ZQ-250				ZQ-350				ZQ-400					ZQ-500				
		750	1000	1250	1500	750	1000	1250	1500	600	750	1000	1250	1500	600	750	1000	1250	1500
		输入减速器功率 (kW) Input decelerator power kW																	
48.57	轻 Light	1.5	1.8	2.2	2.4	3.5	4.6	5.7	6.6	4.5	5.2	5.8	7.4	8.0	9.3	11.6	14.6	16.9	18.8
	中 Middle	1.3	1.6	1.9	2.1	3.0	4.0	4.9	5.8	3.9	4.5	5.0	6.4	7.0	8.1	10.1	12.7	14.7	16.3
	重 Havey	1.1	1.4	1.6	1.8	2.6	3.5	4.4	4.9	3.3	3.8	4.3	5.4	6.9	6.9	8.6	10.8	12.5	13.9
	超重 Overwdight	0.4	0.55	0.7	0.8	0.95	1.25	1.6	1.9	1.6	1.9	2.5	3.1	2.7	2.7	3.3	4.3	5.4	6.4
40.17	轻 Light	1.7	2.4	2.6	2.9	4.1	5.5	6.7	7.8	5.8	6.6	8.0	9.2	9.8	11.0	13.8	18.1	21.5	23.0
	中 Middle	1.5	2.1	2.3	2.5	3.6	4.8	5.8	6.8	5.0	5.7	7.0	9.0	8.6	9.7	12.0	15.0	18.5	20.0
	重 Havey	1.3	1.8	2.0	2.1	3.1	4.0	5.0	5.8	4.3	4.9	5.9	6.8	7.3	8.2	10.2	13.4	15.7	17.0
	超重 Overwdight	0.5	0.65	0.8	0.95	1.1	1.5	1.9	2.3	1.9	2.2	3.0	3.7	4.5	3.2	3.8	5.2	6.5	7.8
31.5	轻 Light	2.2	2.6	3.0	3.1	5.8	7.5	9.0	10.7	6.3	7.6	9.1	10.0	10.7	14.8	17.4	24.0	23.0	26.0
	中 Middle	1.9	2.3	2.6	2.7	5.0	6.5	7.8	9.3	5.5	6.6	7.9	8.7	9.4	12.9	15.1	18.120.5		22.5
	重 Havey	1.6	2.0	2.2	2.3	4.3	5.5	6.6	7.9	4.7	5.6	6.7	7.4	8.0	10.9	12.8	15.4	17.3	19.2
	超重 Overwdight	0.7	0.9	1.1	1.35	1.5	2.0	2.5	3.0	2.5	3.1	4.1	5.2	6.2	4.3	5.4	7.2	9.0	10.8
23.34	轻 Light	3.1	3.6	4.0	4.3	7.5	9.5	11.4	13.0	10.0	10.4	12.2	13.5	14.3	21.0	24.5	28.0	31.5	37.0
	中 Middle	2.7	3.1	3.5	3.7	6.5	8.3	9.9	11.3	8.1	9.1	10.6	11.8	13.0	17.6	21.0	24.5	27.5	32.0
	重 Havey	2.3	2.6	3.0	3.1	5.5	7.1	8.4	9.6	6.9	7.7	9.0	10.0	11.0	15.0	18.1	20.5	23.5	27.0
	超重 Overwdight	0.9	1.2	1.5	1.8	2.0	2.7	3.4	4.1	3.4	4.2	5.6	7.0	8.5	5.8	7.63	9.7	12.1	14.6
20.49	轻 Light	3.6	4.0	4.6	5.1	8.2	10.5	12.9	14.8	10.0	12.0	13.5	15.5	16.3	22.5	27.5	31.5	35.9	40.0
	中 Middle	3.1	3.5	4.0	4.4	7.1	9.2	11.2	12.9	9.3	10.4	11.7	13.5	14.7	19.8	24.0	27.5	31.0	34.5
	重 Havey	2.6	3.0	3.4	3.7	6.1	7.8	8.5	11.0	7.9	8.9	9.5	11.5	12.5	16.8	20.4	23.0	25.5	29.0
	超重 Overwdight	1.0	1.4	1.7	2.0	2.3	3.1	3.8	4.6	3.9	4.6	6.4	8.0	9.7	6.6	8.63	11.0	13.8	16.6
15.75	轻 Light	4.0	4.6	5.2	5.5	11.2	13.9	16.0	18.1	11.9	13.2	15.4	17.4	18.8	28.0	31.0	35.5	40.0	43.5
	中 Middle	3.5	4.0	4.5	4.8	9.7	12.1	14.0	15.7	10.4	11.5	13.4	15.2	16.4	24.5	27.0	31.0	35.0	38.0
	重 Havey	3.0	4.0	3.8	4.1	8.3	10.3	11.9	13.4	8.8	9.8	11.4	12.9	13.9	20.5	23.0	26.0	29.5	32.0
	超重 Overwdight	1.4	2.0	2.4	3.0	3.4	4.6	5.7	6.9	5.3	6.7	8.5	10.5	12.7	9.3	11.5	15.4	19.3	23.0
12.64	轻 Light	4.6	5.5	6.1	6.9	13.1	16.1	17.7	21.0	14.2	15.6	18.6	19.8	21.5	33.0	37.0	43.0	47.5	50
	中 Middle	4.0	4.8	5.3	5.5	11.4	14.0	15.4	18.2	12.4	13.6	16.2	17.2	18.6	29.0	32.0	37.5	41.5	43.5
	重 Havey	3.4	4.1	4.5	4.7	9.7	11.9	13.1	15.5	10.5	11.6	13.8	14.6	15.8	24.5	27.0	32.0	35.0	37
	超重 Overwdight	1.8	2.4	3.1	3.8	4.3	5.7	7.1	8.5	6.7	8.4	11.1	14.0	16.1	11.5	14.4	19.2	24.0	26
10.35	轻 Light	5.5	6.2	6.5	7.0	15.2	18.1	21.0	26.0	16.2	17.9	21.0	23.0	23.5	37.5	13.0	48.5	52.0	55.0
	中 Middle	4.8	5.4	5.7	6.1	13.2	15.7	18.1	21.0	14.1	15.6	18.3	19.8	20.5	33.0	37.0	42.0	44.5	47.5
	重 Havey	4.0	4.6	4.9	5.2	11.2	13.3	15.4	17.8	12.0	13.3	15.6	16.8	17.4	27.5	31.5	35.5	30.0	40.5
	超重 Overwdight	2.2	3.0	3.7	4.5	5.6	7.0	8.7	9.5	8.2	10.2	13.5	17.0	18.7	14.1	17.6	23.5	26.5	32
8.23	轻 Light	6.2	6.8	7.4	7.7	17.5	21.5	24.5	27.0	19.1	21.0	22.5	24.5	26.0	44	49	52.6	57.0	60.5
	中 Middle	5.4	5.9	6.4	6.7	15.2	18.6	21.5	23.5	16.6	18.3	19.7	21.5	22.5	38.0	42.5	46.0	49.5	52.5
	重 Havey	4.6	5.0	5.4	5.7	12.9	15.8	18.3	20.2	14.1	15.5	17.0	20.0	22.0	32.5	36.0	39.0	42.0	44.5
	超重 Overwdight	2.8	3.75	4.7	5.6	6.5	8.7	9.9	13.1	10.2	12.8	16.3	18.2	19.2	17.7	22.1	20.8	34.5	40

ZQ、ZQH 型减速器容许输入功率

Allowable Input Power for Type ZQ ,ZQH Decelerator

传动比 Drive ratio	工作类型 Service type	转速 Rotate speed (r.p.m)	ZQ-650					ZQ-750					ZQ-850				ZQ-1000			
			600	750	1000	1250	1500	600	750	1000	1250	1500	600	750	1000	1250	600	750	1000	1250
		输入减速器功率 (kW) Input decelerator power kW																		
48.57	轻 Light		20.5	23.5	28.5	33	36.5	32	40	51	58	65	44	55	73	89	75	94	117	140
	中 Middle		17.9	20.5	25	28.5	32	28	34.5	44	51	56	38.5	47.5	63	78	65	82	104	120
	重 Havey		15.8	17.4	21	24.5	27	23.5	29.5	37	43	48	32.5	40.5	54	66	56	69	88	102
	超重 Overwdight		6.7	7.7	10.1	12.7	15.2	9.5	11	14.5	18.1	21.5	13.1	15.2	21.3	24.6	22.5	26.1	34.5	43
40.17	轻 Light		26	30	36	41	44.5	38.5	47.5	62	73	79	53	66	86	105	91	112	146	170
	中 Middle		22.5	26	31.5	35.5	38.5	33.5	41	54	64	69	46	57	75	91	79	98	127	150
	重 Havey		19.2	22	26.5	30.5	33	28.35	35	64	54	59	39	48.5	64	77	67	83	108	127
	超重 Overwdight		7.7	9.2	12.3	15.5	18.4	11	13.1	17.5	22	26.5	14.7	17.9	24	30	26	31.5	41.5	52
31.5	轻 Light		29.5	33	40.5	45.5	48.5	51	60	72	80	86	73	88	115	127	121	144	170	190
	中 Middle		25.5	29	33.5	39.5	42	44	52	66	70	75	63	77	100	111	106	124	148	164
	重 Havey		21.5	24.5	30	33.5	36	37.5	44.5	53	59	63	54	65	85	95	89	105	126	139
	超重 Overwdight		10.3	12.8	17	21.5	25.5	14.5	18.2	23.8	30.5	36.5	20	25	33	41.5	35	43.5	58	72
23.34	轻 Light		42	47.5	55	61.5	69	70	84	97	109	120	94	116	148	172	166	196	235	255
	中 Middle		36.5	41	48	53.6	60	61	73	85	95	104	82	101	129	150	144	171	205	220
	重 Havey		31	35	40.5	46.5	51	52	62	72	80	89	69	86	110	128	122	145	173	189
	超重 Overwdight		13.8	17.4	23	29	34.5	19.5	24.5	35	41	19	27.5	33.5	45	56	47	58.5	78	98
20.49	轻 Light		48.5	55	64	73	70.5	78	95	108	123	135	108	131	162	196	185	225	255	
	中 Middle		42	47.5	56	63.5	80	68	83	94	108	118	94	114	141	171	161	196	220	
	重 Havey		35.5	40.5	47	54	60	58	70	80	92	100	80	97	120	145	137	166	188	
	超重 Overwdight		15.8	19.5	26.5	33	39.5	22.5	28	37.5	46.5	56	31	38.5	51	64	53	66	89	
15.75	轻 Light		55	60	69	79	85	96	107	122	138	150	144	174	193		225	255	290	
	中 Middle		47.5	53	60	68.5	74	84	93	106	120	130	125	151	168		198	220	150	
	重 Havey		40	44.5	51	58	53	71	79	90	102	111	106	128	143		168	188	215	
	超重 Overwdight		22	27.5	37	46	50	31.5	35	52	95	71	43	54	72		74	92	113	
12.64	轻 Light		65	71	85	92		115	127	149	162		172	200	236		270	305		
	中 Middle		57	62	73	80		100	110	130	142		150	174	205		235	260		
	重 Havey		48	52.5	62.5	68		85	94	110	120		127	148	174		200	220		
	超重 Overwdight		27.5	35	46	50		39	48.5	59	74		53.5	67	82		92	105		
10.35	轻 Light		75	84	95	102		129	147	168			202	236			305	350		
	中 Middle		65	73	83	87.5		112	128	146			176	205			265	305		
	重 Havey		35	62	70	74		95	109	124			149	174			225	260		
	超重 Overwdight		33.5	42	50.5	53.5		47.5	60	72			66	75			113	129		
8.23	轻 Light		86	95	106			151	168				242	264			355			
	中 Middle		75	83	90			131	146				210	230			310			
	重 Havey		63.5	70	76			111	124				178	195			260			
	超重 Overwdight		42	48	64			60	68				83	94			129			

ZQ、ZQH 型减速器轴端容许载荷

Allowed load for shaft end of type ZQ、ZQH decelerator

转速 Rotate speed (r.p.m) / 传动比 Drive ratio	工作类型 Service type	ZQ-250				ZQ-350				ZQ-400					ZQ-500				
		750	1000	1250	1500	750	1000	1250	1550	600	750	1000	1250	1500	600	750	1000	1250	1500
		输出轴上的最大短暂容许扭矩 Maximum allowable transient torque on output shaft (kg.m)																	
48.57	各种工作类型 Service type	340	340	340	340	800	790	780	770	1630	1620	1600	1580	1570	2700	2700	2600	2600	2550
40.17		340	340	330	330	790	780	770	740	1580	1570	1550	1530	1490	2590	2650	2600	2550	2500
31.5		330	320	320	320	760	750	740	710	1510	1490	1410	1350	1280	2550	2550	2500	2450	2500
23.34		320	320	310	310	740	730	710	690	1410	1350	1270	1200	1140	2500	2500	2400	2350	2300
20.49		320	310	310	310	730	720	700	680	1340	1290	1200	1130	1060	2500	2450	2400	2300	2200
15.75		310	300	300	290	700	680	660	640	1110	1060	995	920	860	2400	2350	2100	1950	1850
12.64		300	290	270	260	680	660	640	610	1010	965	885	820	760	2250	2100	1900	1700	1800
10.35		280	260	250	230	660	640	610	600	920	870	795	730	670	2050	1900	1700	1500	1400
8.23		250	230	220	200	640	610	580	540	815	775	690	630	590	1800	1650	1450	1300	
		输出轴端的最大容许径向载荷 Maximum allowable radial load for output shaft (kg)																	
48.57	轻-重 Light - Heavy	2200	2050	1900	1850	2250	2000	1850	1750	2700	2550	2250	2200	2100	2350	2200	1950	1800	1700
	超 重 Overwhight	1800	1650	1550	1450	1950	1750	1650	1550	2300	2150	1950	1850	1700	2350	2150	1850	1800	1700
40.17	轻-重 Light - Heavy	2150	1850	1750	1700	2100	1900	1750	1650	2500	2350	2150	2050	2000	2200	2050	1850	1700	1600
	超 重 Overwhight	1700	1550	1450	1350	1800	1650	1550	1450	2200	2000	1850	1700	1600	2100	1950	1750	1600	1550
31.58	轻-重 Light - Heavy	1950	1750	1650	1550	1800	1650	1500	1500	2350	2200	2000	1800	1800	1950	1850	1650	1550	1450
	超 重 Overwhight	1500	1400	1350	1250	1550	1500	1350	1300	2000	1950	1700	1500	1450	1900	1700	1600	1500	1400
23.34	轻-重 Light - Heavy	1750	1600	1500	1400	1700	1500	1400	1350	2050	1950	1800	1700	1650	1750	1650	1500	1350	1250
	超 重 Overwhight	1400	1300	1200	1150	1500	1350	1250	1200	1850	1650	1500	1400	1300	1550	1450	1350	1300	1200
20.49	轻-重 Light - Heavy	1650	1500	1400	1350	1600	1450	1350	1250	1950	1850	1750	1600	1550	1700	1550	1400	1300	1200
	超 重 Overwhight	1350	1250	1150	1100	1450	1300	1200	1150	1700	1600	1400	1300	1250	1450	1350	1300	1250	1200
15.75	轻-重 Light - Heavy	1500	1400	1300	1250	1450	1300	1200	1150	1800	1750	1600	1500	1450	1500	1350	1250	1200	1150
	超 重 Overwhight	1250	1100	1050	1000	1300	1150	1050	1000	1550	1400	1250	1150	1100	1300	1300	1250	1100	1000
12.64	轻-重 Light - Heavy	1450	1350	1250	1150	1350	1200	1150	1100	1700	1600	1500	1400	1350	1350	1250	1150	1100	1100
	超 重 Overwhight	1150	1050	1000	900	1200	1050	1000	950	1400	1300	1050	1000	1000	1200	1200	1100	1000	950
10.35	轻-重 Light - Heavy	1350	1250	1150	1100	1250	1150	1050	1000	1600	1550	1400	1350	1300	1250	1150	1100	1050	1000
	超 重 Overwhight	1050	1000	900	850	1100	1000	940	880	1300	1200	1100	1000	920	1200	1100	1000	900	870
8.23	轻-重 Light - Heavy	1250	1150	1100	1050	1150	1050	1000	880	1400	1400	1350	1250	1200	1150	1050	1050	1050	
	超 重 Overwhight	1000	900	850	800	1000	900	860	810	1200	1100	1000	930	860	1050	1050	900	850	

续表 Table continued

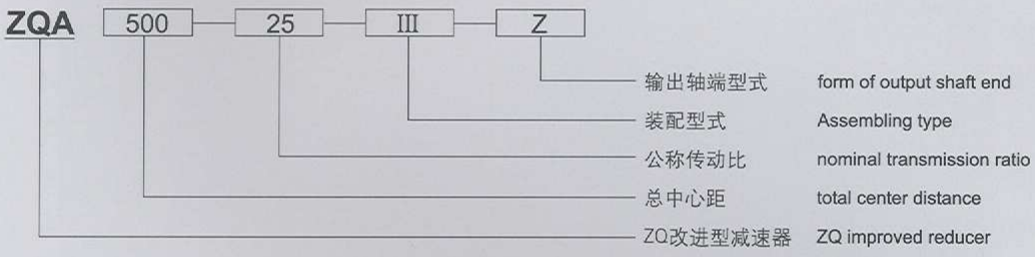
转速 Rotate speed (r.p.m) / 传动比 Drive ratio	工作类型 Service type	ZQ-650					ZQ-750					ZQ-850				ZQ-1000			
		600	750	1000	1250	1500	600	750	1000	1250	1500	600	750	1000	1250	600	750	1000	1250
		输出轴上的最大短暂容许扭矩 Maximum allowable transient torque on output shaft (kg.m)																	
48.57	各种工作类型 Service type	6350	6250	6200	6000	5900	9500	8900	8700	8500	8300	12280	12180	11840	11640	20900	20600	20000	19500
40.17		6250	6150	6050	5850	5750	8900	8800	8550	8300	8100	12200	12000	11640	11340	20500	20200	19300	18760
31.5		6000	5950	5700	5400	5250	8500	8400	8100	7900	7650	11680	11520	11040	10640	19600	19100	18200	17800
23.34		5900	5550	5500	4650	4300	8300	8100	7900	7500	6900	11340	10940	10560	10100	19000	18200	17200	15500
20.49		5650	5250	4600	3750	4000	8200	8000	7500	7000	6350	11140	10800	10300	9820	18600	18100	15900	
15.75		4600	4300	3850	3500	3200	7550	7000	7000	5600		10480	10120	9560		15000	14700	12900	
12.64		4100	3800	3400	3050		6750	6200	5600			10160	8260	9000		14200	12500		
10.35		3700	3400	2900	3200		6000	5450				8900	8100			12000	11000		
8.23		3350	2900	2700			5200	4700				7680	6900			10700	9540		
		输出轴端的最大容许径向载荷 Maximum allowable radial load for output shaft (kg)																	
48.57	轻-重 Light - Heavy	11400	11000	9600	9050	8650	10500	9750	8850	8150	7900	15000	13700	12400	11900	17600	16400	15000	13400
	超 重 Overwhight	8900	8900	7600	7100	6700	8750	8150	7500	6900	6550	12150	11300	10300	9650	14500	13700	12400	11700
40.17	轻-重 Light - Heavy	10600	10000	8950	8650	8200	9900	9100	8250	7850	7400	14100	13100	11900	11500	16700	15100	14100	13000
	超 重 Overwhight	8400	7950	7150	6800	6400	8250	7650	7000	6550	6150	11500	10800	9800	9200	13700	12700	11700	10800
31.5	轻-重 Light - Heavy	9700	9200	8500	7950	7500	9000	8300	7650	7400	6800	12500	11800	10800	10400	15100	14100	13100	12200
	超 重 Overwhight	7700	7250	6350	6150	5800	7550	7050	6400	5900	5650	10500	9600	8900	8350	12600	11700	10500	10000
23.34	轻-重 Light - Heavy	8800	8400	7650	7200	6800	8100	7550	6950	6500	6250	11500	10600	9800	9350	13500	12700	11600	11200
	超 重 Overwhight	7000	6550	6000	5600	5300	6850	6400	5850	6400	5100	9550	8950	8150	7600	11500	10700	9700	9000
20.49	轻-重 Light - Heavy	8600	8050	7350	6900	6550	7700	7200	6650	6200	5950	11000	10400	9400	9000	12800	12100	11100	
	超 重 Overwhight	6850	6350	5700	6400	5000	6600	6150	5600	5200	4900	9150	8600	7800	7250	10800	9700	9250	
15.75	轻-重 Light - Heavy	7850	7600	6800	6400	6200	7100	6700	6200	5800		1000	9300	8800		11500	11300	10500	
	超 重 Overwhight	6250	5700	5200	5150	4600	6000	5550	5050	4700		8350	7750	7100		10000	9150	8500	
12.64	轻-重 Light - Heavy	7300	6900	6350	5950		6600	6200	5750			9300	8700	8000		11200	10500		
	超 重 Overwhight	5750	5250	5050	4500		5600	5200	4700			7800	7250	6800		9100	8950		
10.35	轻-重 Light - Heavy	6900	6500	6000	5300		6250	5850	5450			8700	8400			10500	9800		
	超 重 Overwhight	5400	5200	4600	4250		5200	4850	4400			7300	6950			8700	8250		
8.23	轻-重 Light - Heavy	6450	6300	5800			5850	5500				8100	8000			10400			
	超 重 Overwhight	5000	4850	4250			4850	4500				6800	6500			8100			

ZQA 型减速器
ZQA type decelerator

ZQA 型减速器是在 ZQ 型减速器的基础上改进设计的，为提高齿轮承载能力，又便于替代 ZQ 型减速器，在外形、轴端和安装尺寸不变的情况下，改变齿轮齿轴材质，齿轮轴为 42CrMo,大齿轮为 ZG35CrMo.调质硬度齿轮轴为 291~323HB,大齿轮为 255~286HB。

ZQA type decelerator has improved and designed at the basis of ZQ tyoe,in order to enhance the load capacity and replace the old ZQ type.There are no change at contour.shaft end and installing sizes,but change materials of gear and gear shaft as following:the material of gear shaft is 42CrMo,big gear is ZG35CrMo,and the hardness of gear shaft is 291~323HB,big gear is 255~286HB.

1.型号 Type



标记示例

ZQ 改进型减速器总中心距 500mm，公称传动比 25，第 III 种装配型式，圆柱轴伸，标记为：减速器 ZQA500-25- III -z

2.传动比

ZQA型减速器的实际传动比is=23.34不同之外其余相同。(因为ZQ型的实际传动比与公称传动比的偏差不大于 4%),见表。

3.外形、轴端和安装尺寸

ZQA 型减速器的外形、轴端和安装尺寸与 ZQ 型减速器相同。

4.承载能力

ZQA 型减速器的输入许用功率和输出转矩工作级别为 M5 见表，连续型见表。

ZQA 型减速器的最大允许径向载荷见表。

Eeamark

ZQ improved decelerator's total center distance soomm,naminal transmission ratio is 25, the third assembling form,solid shaft extension,can marked:ZQA500-25- III -z

2.Transmission ratio

Actual transmission ratios of ZQA type are same except is=23.34(Because the deviation is less than 4% between ZQ type's autual transmission ratio and nominal ′ s),see table

3.Contour,shaft end and installing dimensions

The Contour,shaft end and installing dimensions of ZQA type are same to ZQ type

4.Load capacity

Get alloweld input power and duty M5 of output torgue of ZQA type decelerator intable,including continuous type.

Get max allowable radical load of ZQA type decelerator in table.

表 ZQA 型减速器传动比 Table:Transmission ratio of ZQA type decelerator

传动比代号 Transmission ratio symbol	1	2	3	4	5	6	7	8	9
公称传动比i Nominal ratio symbol i	50	40	31.5	25.0	20	15	12.5	10	8
实际传动比is Actual ratio symbol is	48.57	40.17	31.5	25.02	20.49	15.75	12.64	10.35	8.23

ZQA 型减速器的承载能力（工作级别 M5) Allowed carrying capacity of ZQA reducer(Working status is M5)

输入轴速度 r/min imput shaft speed	减速器型号 reducer type	输出扭距 Nm Output torque moment	公称传动比 Nominal transmission ratio								
			8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0
			高速轴许用功率 kW Allowed power tor high-speed shaft								
600	ZQA 250	564	5.3	4.5	3.8	3.0	2.2	1.7	1.0	.8	.6
	ZQA 350	2141	15.6	13.0	11.1	9.3	6.4	5.5	4.4	3.1	2.7
	ZQA 400	2623.9	23.1	19.3	16.6	13.7	9.5	7.3	4.7	3.9	2.9
	ZQA 500	6210.3	44.3	37.1	31.6	26.6	18.3	1.6	13.0	9.3	7.7
	ZQA 650	11381.9	118.4	98.5	82.7	58.1	46.7	31.4	20.7	17.0	12.7
	ZQA 750	21712.	175.0	145.3	123.5	109.8	72.6	61.4	37.8	32.4	25.0
	ZQA 850	34344.	246.7	205.0	174.4	145.4	102.6	87.0	66.5	49.9	41.2
	ZQA1000	59307.	442.5	368.7	313.6	285.1	185.3	167.1	107.0	89.4	67.4
750	ZQA 250	564.	6.6	5.6	4.8	3.7	2.7	2.1	1.3	1.0	.8
	ZQA 350	2141.	19.4	16.2	13.9	11.6	8.0	6.8	5.5	3.8	3.4
	ZQA 400	2623.9	28.7	24.1	20.6	17.1	11.8	9.1	5.9	4.9	3.6
	ZQA 500	6210.3	55.1	46.2	39.4	33.1	22.8	19.4	16.2	11.6	9.6
	ZQA 650	11381.9	147.5	122.7	103.0	72.4	58.2	39.1	25.7	21.2	15.8
	ZQA 750	21712	218.0	180.9	153.8	136.7	90.5	76.5	47.1	40.4	31.2
	ZQA 850	34344.	307.3	255.4	217.3	181.1	127.8	108.3	82.9	62.1	51.3
	ZQA1000	59307.	551.2	459.3	390.6	355.2	230.9	208.1	133.3	111.4	83.9
1000	ZQA 250	564.	8.9	7.5	6.4	4.9	3.6	2.8	1.7	1.4	1.0
	ZQA 350	2141.	25.9	21.7	18.6	15.6	10.7	9.1	7.4	5.1	4.5
	ZQA 400	2623.9	38.5	32.2	27.6	22.9	15.8	12.1	7.9	6.5	4.9
	ZQA 500	6210.3	73.8	61.8	52.7	44.3	30.5	26.0	21.7	15.5	12.8
	ZQA 650	11381.9	197.4	164.2	137.8	96.9	77.9	52.3	34.4	28.3	21.2
	ZQA 750	21712.	291.6	242.1	205.8	183.0	121.0	102.4	63.0	54.0	41.7
	ZQA 850	34344.	411.1	341.7	290.7	242.3	171.0	144.9	110.9	83.1	68.7
	ZQA1000	59307.	737.5	614.5	522.6	475.2	308.9	278.4	178.3	149.0	112.3
1500	ZQA 250	564.	13.1	11.0	9.4	7.3	5.4	4.1	2.5	2.1	1.5
	ZQA 350	2141.	38.2	32.0	27.4	23.0	15.7	13.4	10.8	7.5	6.6
	ZQA 400	2623.9	56.7	47.5	40.7	33.7	23.3	17.8	11.6	9.6	7.2
	ZQA 500	6210.3	108.7	91.1	77.6	65.2	44.9	38.3	31.9	22.9	18.8
	ZQA 650	11381.9	290.9	242.0	203.1	142.8	114.7	77.1	50.7	41.7	21.2
	ZQA 750	21712.	429.8	356.8	303.2	269.6	178.4	150.9	92.8	79.6	61.5
	ZQA 850	34344.	605.9	503.5	428.4	357.0	252.0	213.6	163.4	122.5	101.2
	ZQA1000	59307	1086.9	905.6	770.1	700.3	455.2	410.3	212.6	192.6	165.5

ZQA 型减速器的承载能力（连续工作类型) Allowed carrying capacity of ZQA reducer(Continuous working type)

输入轴速度 r/min imput shaft speed	减速器型号 reducer type	输出扭距 Nm Output torque moment	公称传动比 Nominal transmission ratio								
			8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0
			高速轴许用功率 kW Allowed power tor high-speed shaft								
600	ZQA 250	282.	2.7	2.2	1.9	1.5	1.1	.8	.5	.4	.3
	ZQA 350	1071.	7.8	6.5	5.6	4.7	3.2	2.7	2.2	1.5	1.3
	ZQA 400	1312.0	11.5	9.7	8.3	6.9	4.8	3.6	2.4	2.0	1.5
	ZQA 500	2105.2	22.1	18.5	15.8	13.3	9.1	7.8	6.5	4.7	3.8
	ZQA 650	5691.0	59.2	49.3	41.4	29.1	23.4	15.7	10.3	8.5	6.3
	ZQA 750	10856.	87.5	72.6	61.7	54.9	36.3	30.7	18.9	16.2	12.5
	ZQA 850	17172.	123.3	102.5	87.2	72.7	51.3	43.5	33.3	24.9	20.6
	ZQA1000	29654	221.3	184.4	156.8	142.6	92.7	83.5	53.5	44.7	33.7
750	ZQA 250	282.	3.3	2.8	2.4	1.8	1.4	1.1	.6	.5	.4
	ZQA 350	1071.	9.7	8.1	6.9	5.8	4.0	3.4	2.7	1.9	1.7
	ZQA 400	112.0	14.4	12.0	10.3	8.6	5.9	4.5	3.0	2.4	1.8
	ZQA 500	3105.2	27.6	23.1	19.7	16.5	11.4	9.7	8.1	5.8	4.8
	ZQA 650	5691.0	73.8	61.4	51.5	36.2	29.1	19.6	12.9	10.6	7.9
	ZQA 750	10856.	109.0	90.5	76.9	68.4	45.2	38.3	23.5	20.2	15.6
	ZQA 850	17172.	153.6	127.7	108.6	90.5	63.9	54.2	41.4	31.1	25.7
	ZQA1000	29654.	275.6	229.6	195.3	177.6	115.4	104.0	66.6	55.7	42.0
1000	ZQA 250	282.	4.4	3.7	3.2	2.5	1.8	1.4	.9	.7	.5
	ZQA 350	1071.	13.0	10.8	9.3	7.8	5.3	4.6	3.7	2.5	2.2
	ZQA 400	1312.0	19.2	16.1	13.8	11.4	7.9	6.1	4.0	3.3	2.4
	ZQA 500	3105.2	36.9	30.9	26.3	22.1	15.2	13.0	10.8	7.8	6.4
	ZQA 650	5691.0	98.7	82.1	68.9	48.4	38.9	26.2	17.2	14.2	10.6
	ZQA 750	10856.	145.8	121.1	102.9	91.5	60.5	51.2	31.5	27.0	20.9
	ZQA 850	17172.	205.6	170.8	145.4	121.1	85.5	72.5	55.4	41.6	34.3
	ZQA1000	29654.	368.8	307.3	261.3	237.6	154.5	139.2	89.2	74.5	56.1
1500	ZQA 250	282.	6.5	5.5	4.7	3.6	2.7	2.1	1.3	1.0	.8
	ZQA 350	1071.	19.1	16.0	13.7	11.5	6.7	6.7	5.4	3.8	3.3
	ZQA 400	1312.0	28.3	23.7	20.3	16.9	8.9	8.9	5.8	4.8	3.6
	ZQA 500	3105.2	54.4	45.5	38.8	32.6	19.2	19.2	16.0	11.5	9.4
	ZQA 650	5691.0	145.4	121.0	101.6	71.4	38.6	38.6	25.4	20.9	15.6
	ZQA 750	10856.	214.9	178.4	151.6	134.8	75.7	75.7	46.4	39.8	30.7
	ZQA 850	17172.	302.9	251.8	214.2	178.5	106.8	106.8	81.7	61.3	50.6
	ZQA1000	29654	543.4	452.8	385.1	350.2	205.2	205.2	131.4	101.8	82.7

ZQA 型减速器最大允许径向载荷 (KN) Max allowable radical load of ZQA type decelerator

总传动比 i Total transmission ratio i			48.57	40.17	31.5	25.02	20.49	15.75	12.64	10.35	8.23
转速 n_1 Rotate speed (r/min)	轴类 Shaft type	工作制度 Duty	ZQA 250 轴伸最大允许径向载荷 Max allowable radical load on shaft and of ZQA 250								
600	输入轴 Input shaft	≤ M5 连续型 Continuous	3.10	3.10	2.90	2.80	2.80	2.60	2.30	2.70	2.70
			2.80	2.80	2.70	2.70	2.60	2.50	2.50	2.50	2.40
	输出轴 Output shaft	≤ M5 连续型 Continuous	19.10	18.00	16.20	14.80	14.10	13.10	11.90	11.40	10.70
			15.40	14.60	13.40	12.40	12.20	10.70	9.90	9.30	8.60
750	输入轴 Input shaft	≤ M5 连续型 Continuous	2.90	2.90	2.70	2.60	2.60	2.60	2.50	2.50	2.50
			2.70	2.70	2.50	2.50	2.50	2.40	2.30	2.30	2.30
	输出轴 Output shaft	≤ M5 连续型 Continuous	17.60	16.40	15.10	13.50	12.80	11.90	11.20	10.40	9.90
			14.40	13.60	12.50	11.32	10.80	10.00	9.30	8.10	8.00
1000	输入轴 Input shaft	≤ M5 连续型 Continuous	2.60	2.50	2.50	2.40	2.40	2.40	2.40	2.40	2.50
			2.740	2.40	2.30	2.30	2.30	2.10	2.10	2.10	2.00
	输出轴 Output shaft	≤ M5 连续型 Continuous	16.00	14.80	13.50	12.5	11.90	11.00	10.30	9.80	9.20
			13.10	12.70	11.40	10.40	10.00	9.00	8.50	7.90	7.20
1250	输入轴 Input shaft	≤ M5 连续型 Continuous	2.40	2.40	2.30	2.30	2.30	2.20	2.30	2.30	2.40
			2.30	2.20	2.0	2.10	2.10	2.00	1.90	1.90	1.80
	输出轴 Output shaft	≤ M5 连续型 Continuous	15.00	13.90	13.10	11.80	11.30	10.50	9.80	9.30	8.80
			12.30	11.80	10.80	9.60	9.90	8.40	7.80	7.30	6.80
1500	输入轴 Input shaft	≤ M5 连续型 Continuous	2.40	2.30	2.30	2.20	2.20	2.20	2.20	2.30	2.30
			2.10	2.10	2.00	2.00	2.00	1.80	1.80	1.80	1.70
	输出轴 Output shaft	≤ M5 连续型 Continuous	14.20	13.40	12.50	11.10	10.70	10.00	9.40	8.90	8.30
			11.70	10.90	10.00	9.10	8.80	7.90	7.40	6.90	6.40
转速 n_1 Rotate speed (r/min)	轴 类 Shaft	工作制度 Duty	ZQA 350 轴伸最大允许径向载荷 Max allowable radical load on shaft end of ZQA350								
600	输入轴 Input shaft	≤ M5 连续型 Continuous	3.80	3.80	3.50	3.40	3.20	3.10	3.10	3.10	3.00
			3.70	3.70	3.30	3.30	2.80	2.80	2.80	2.70	2.70
	输出轴 Output shaft	≤ M5 连续型 Continuous	18.40	16.90	14.73	13.10	12.60	11.00	10.30	9.60	8.90
			15.80	14.90	13.60	12.40	12.10	10.70	9.80	9.20	8.50
750	输入轴 Input shaft	≤ M5 连续型 Continuous	3.50	3.40	3.20	3.20	3.10	2.90	2.90	2.80	2.80
			3.40	3.40	3.00	3.00	3.00	2.60	2.50	2.50	2.50
	输出轴 Output shaft	≤ M5 连续型 Continuous	18.90	15.76	13.90	12.60	11.80	10.30	9.20	9.10	8.80
			14.80	13.90	12.80	11.50	11.10	9.90	9.20	8.10	7.90
1000	输入轴 Input shaft	≤ M5 连续型 Continuous	3.10	3.10	2.90	2.80	2.80	2.60	2.60	2.50	2.40
			3.10	3.00	2.70	2.70	2.60	2.30	2.30	2.40	2.40
	输出轴 Output shaft	≤ M5 连续型 Continuous	16.00	14.10	12.50	11.10	10.70	9.30	8.80	8.50	7.90
			13.40	12.70	11.60	10.50	10.10	8.90	8.20	7.70	7.00
1250	输入轴 Input shaft	≤ M5 连续型 Continuous	2.90	2.80	2.70	2.60	2.60	2.40	2.30	2.30	2.20
			2.60	2.60	2.20	2.30	2.40	2.00	2.00	2.00	2.10
	输出轴 Output shaft	≤ M5 连续型 Continuous	14.00	13.00	11.60	10.40	10.10	8.80	8.40	8.10	7.40
			12.50	11.70	10.80	9.70	9.30	8.50	7.60	7.10	6.60
1500	输入轴 Input shaft	≤ M5 连续型 Continuous	2.90	2.80	2.50	2.40	2.40	2.20	2.20	2.10	2.20
			2.70	2.70	2.30	2.30	2.20	2.10	2.10	2.10	2.00
	输出轴 Output shaft	≤ M5 连续型 Continuous	13.70	12.90	11.50	10.2	9.90	9.00	8.40	7.90	7.60
			11.70	11.00	10.00	9.20	8.70	7.70	7.10	6.80	6.20

续表 Continued

总传动比 i Total transmission ratio i			48.57	40.17	31.5	25.02	20.49	15.75	12.64	10.35	8.23
转速 n_1 Rotate speed (r/min)	轴类 Shaft type	工作制度 Duty	ZQA 400 轴伸最大允许径向载荷 Max allowable radical load on shaft and of ZQA 400								
600	输入轴 Input shaft	≤ M5 连续型 Continuous	3.30	3.20	2.90	2.80	2.80	2.30	2.20	2.10	2.00
			2.80	2.60	2.50	2.10	2.00	1.90	1.90	2.00	2.00
	输出轴 Output shaft	≤ M5 连续型 Continuous	24.30	23.10	21.65	18.85	17.65	16.75	15.60	14.75	13.80
			21.80	20.40	18.65	16.75	15.90	14.10	13.10	12.40	11.20
750	输入轴 Input shaft	≤ M5 连续型 Continuous	3.00	3.00	2.70	2.60	2.50	2.10	2.00	1.90	2.00
			2.60	2.40	2.30	2.10	2.00	1.90	1.90	1.90	1.70
	输出轴 Output shaft	≤ M5 连续型 Continuous	23.60	21.60	20.10	17.90	16.99	15.55	14.45	14.00	13.15
			20.10	19.65	17.30	15.45	14.85	12.80	12.10	11.25	10.30
1000	输入轴 Input shaft	≤ M5 连续型 Continuous	2.70	2.60	2.40	2.20	2.20	2.00	1.90	2.00	2.10
			2.40	2.30	2.10	2.10	2.00	1.70	1.60	1.50	1.40
	输出轴 Output shaft	≤ M5 连续型 Continuous	21.65	19.90	18.70	16.65	15.90	14.85	13.35	13.05	12.40
			18.50	17.35	15.75	13.95	13.30	11.75	10.90	10.10	9.20
1250	输入轴 Input shaft	≤ M5 连续型 Continuous	2.50	2.40	2.10	2.00	2.00	1.70	1.70	1.90	2.00
			2.10	2.00	2.00	1.80	1.80	1.50	1.40	1.30	1.10
	输出轴 Output shaft	≤ M5 连续型 Continuous	20.25	18.80	17.75	15.8	15.00	14.00	13.10	12.40	11.75
			17.20	15.85	14.55	12.90	12.30	10.80	10.00	9.25	8.10
1500	输入轴 Input shaft	≤ M5 连续型 Continuous	2.30	2.20	2.10	2.00	1.90	1.90	2.00	2.10	2.00
			2.20	2.20	2.00	1.89	1.80	1.30	1.20	1.10	1.00
	输出轴 Output shaft	≤ M5 连续型 Continuous	20.10	17.90	16.95	15.00	14.40	13.40	12.60	12.05	11.40
			16.20	15.05	13.65	12.15	11.50	10.10	9.30	8.55	7.85
转速 n_1 Rotate speed (r/min)	轴类 Shaft	工作制度 Duty	ZQA 500 轴伸最大允许径向载荷 Max allowable radical load on shaft end of ZQA500								
600	输入轴 Input shaft	≤ M5 连续型 Continuous	4.30	4.30	3.90	3.80	3.80	3.20	3.10	3.00	2.80
			3.20	3.20	2.40	2.00	1.90	1.30	1.20	1.40	1.40
	输出轴 Output shaft	≤ M5 连续型 Continuous	21.30	19.80	17.65	15.90	15.10	13.10	12.05	11.35	10.22
			21.10	19.80	16.85	14.40	13.70	12.05	11.20	10.70	10.00
750	输入轴 Input shaft	≤ M5 连续型 Continuous	4.00	3.90	3.50	3.50	3.40	2.90	2.80	2.60	2.40
			2.80	2.00	2.10	1.70	1.80	1.50	1.60	1.50	1.60
	输出轴 Output shaft	≤ M5 连续型 Continuous	19.50	17.95	16.30	14.55	13.90	12.05	11.00	10.20	9.80
			19.60	17.85	14.05	13.35	12.40	11.90	11.00	10.20	9.20
1000	输入轴 Input shaft	≤ M5 连续型 Continuous	3.50	3.50	3.10	3.00	3.00	2.40	2.30	2.20	2.00
			2.40	2.30	2.00	1.80	1.80	1.70	1.60	1.70	2.00
	输出轴 Output shaft	≤ M5 连续型 Continuous	17.70	16.65	14.70	13.10	12.00	11.40	10.95	9.95	8.74
			16.65	15.80	14.70	12.63	12.00	10.70	9.80	9.00	8.10
1250	输入轴 Input shaft	≤ M5 连续型 Continuous	3.20	3.20	2.80	2.70	2.70	2.20	2.00	1.90	1.90
			2.10	1.80	1.80	1.60	1.70	1.40	1.40	1.70	1.70
	输出轴 Output shaft	≤ M5 连续型 Continuous	17.40	15.35	14.20	12.20	11.50	10.85	10.35	9.85	9.50
			16.40	14.55	13.50	12.00	11.15	9.75	8.90	8.15	7.30
1500	输入轴 Input shaft	≤ M5 连续型 Continuous	3.20	3.00	2.60	2.50	2.50	1.90	1.90	2.00	
			3.10	2.10	2.00	1.80	1.60	1.70	1.80	1.70	
	输出轴 Output shaft	≤ M5 连续型 Continuous	16.45	14.30	13.60	11.75	11.00	10.60	10.00	9.70	
			15.35	14.40	12.60	11.20	10.10	9.10	8.02	7.55	

续表 Continued

总传动比 i Total transmission ratio i			48.57	40.17	31.5	25.02	20.49	15.75	12.64	10.35	8.23
转速 n_1 Rotate speed (r/min)	轴类 Shaft type	工作制度 Duty	ZQA 650 轴伸最大允许径向载荷 Max allowable radical load on shaft and of ZQA 650								
600	输入轴 Input shaft	≤M5 连续型 Continuous	4.50	4.50	3.85	3.70	3.60	2.50	2.30	1.90	1.50
			1.80	1.30	1.00						
	输出轴 Output shaft	≤M5 连续型 Continuous	113.00	105.80	98.90	88.90	85.20	79.00	73.70	69.50	65.00
			91.00	86.20	79.25	77.25	69.20	83.60	58.80	56.40	51.15
750	输入轴 Input shaft	≤M5 连续型 Continuous	4.30	4.20	3.40	3.25	3.20	2.00	1.80	1.50	1.10
			1.90	1.50	1.00	0.40					
	输出轴 Output shaft	≤M5 连续型 Continuous	106.30	99.40	92.50	83.90	79.60	74.20	89.60	65.20	63.70
			85.40	80.20	74.00	87.20	64.0	9.30	54.00	51.20	47.60
1000	输入轴 Input shaft	≤M5 连续型 Continuous	3.80	3.75	2.90	2.70	2.60	1.50	1.30	1.00	1.00
			1.80	1.40	1.10	0.70	0.70	0.50	0.50	0.45	0.56
	输出轴 Output shaft	≤M5 连续型 Continuous	97.60	91.40	84.70	77.20	73.40	68.60	64.20	60.20	56.80
			78.20	73.30	67.30	61.60	58.80	54.00	50.00	48.90	43.50
1250	输入轴 Input shaft	≤M5 连续型 Continuous	3.30	8.50	2.45	2.30	2.25	1.10	0.90	1.10	
			1.70	5.60	1.20	0.90	0.75	0.65	0.70	0.55	
	输出轴 Output shaft	≤M5 连续型 Continuous	91.00	81.60	79.80	72.20	69.00	64.40	60.10	56.00	
			72.50	63.00	63.10	57.10	55.00	50.30	46.00	43.40	
1500	输入轴 Input shaft	≤M5 连续型 Continuous	3.10	3.05	2.20	2.00	1.95	0.95			
			1.70	1.25	1.30	1.10	0.95	0.80			
	输出轴 Output shaft	≤M5 连续型 Continuous	89.00	81.25	75.90	68.45	65.70	61.00			
			68.10	64.80	59.60	54.20	51.60	47.40			
转速 n_1 Rotate speed (r/min)	轴类 Shaft	工作制度 Duty	ZQA 750 轴伸最大允许径向载荷 Max allowable radical load on shaft and of ZQA 750								
600	输入轴 Input shaft	≤M5 连续型 Continuous	6.70	6.10	5.60	5.40	5.30	4.00	3.70	3.30	2.90
			3.00	2.90	0.75						
	输出轴 Output shaft	≤M5 连续型 Continuous	113.30	06.40	96.60	87.40	83.60	76.70	71.50	67.30	63.20
			93.20	87.70	80.80	73.60	70.40	64.10	55.80	57.00	52.0
750	输入轴 Input shaft	≤M5 连续型 Continuous	6.30	6.20	5.20	5.00	4.90	3.60	3.00	2.90	2.40
			2.30	2.30	0.60						
	输出轴 Output shaft	≤M5 连续型 Continuous	105.00	98.60	90.60	81.20	77.10	72.20	68.20	63.00	59.40
			86.70	82.00	76.80	68.60	66.00	99.70	55.40	52.00	48.10
1000	输入轴 Input shaft	≤M5 连续型 Continuous	3.50	5.40	4.40	4.20	4.10	2.70	2.50	2.10	
			1.80	1.50	0.80						
	输出轴 Output shaft	≤M5 连续型 Continuous	86.10	89.50	83.80	75.10	72.20	66.70	62.50	58.75	
			79.50	75.10	68.60	62.90	60.00	54.00	50.70	47.50	
1250	输入轴 Input shaft	≤M5 连续型 Continuous	5.00	5.00	3.90	3.80	3.60	2.30	59.10		
			1.80	1.30	1.20	0.70	0.45		46.90		
	输出轴 Output shaft	≤M5 连续型 Continuous	89.70	84.00	78.40	70.80	67.25	62.90			
			74.20	89.90	64.10	58.00	58.00	50.50			
1500	输入轴 Input shaft	≤M5 连续型 Continuous	1.90	4.50	3.50	3.30	3.20	3.00			
			1.60	1.60	1.50	0.90	0.70				
	输出轴 Output shaft	≤M5 连续型 Continuous	89.20	80.70	75.80	68.10	64.70	59.00			
			70.00	66.10	60.60	54.70	52.50	47.50			

续表 Continued

总传动比 i Total transmission ratio i			48.57	40.17	31.5	25.02	20.49	15.75	12.64	10.35	8.23
转速 n_1 Rotate speed (r/min)	轴类 Shaft type	工作制度 Duty	ZQA 850 轴伸最大允许径向载荷 Max allowable radical load on shaft and of ZQA 850								
600	输入轴 Input shaft	≤M5 连续型 Continuous	14.00	14.00	13.00	13.00	12.50	11.50	11.00	7.00	10.50
			12.50	12.50	10.00	10.00	9.90	7.60	7.20	11.00	6.70
	输出轴 Output shaft	≤M5 连续型 Continuous	163.20	153.00	144.00	125.90	120.80	109.30	101.80	95.60	88.80
			134.20	126.70	115.50	106.00	101.40	93.00	86.50	83.00	75.50
750	输入轴 Input shaft	≤M5 连续型 Continuous	11.50	11.50	8.40	9.20	9.00	7.80	7.30	6.80	9.00
			13.00	12.50	12.00	11.50	11.60	10.50	10.00	10.00	
	输出轴 Output shaft	≤M5 连续型 Continuous	152.20	142.30	129.70	117.60	112.20	101.80	95.60	88.80	83.25
			125.20	118.20	108.80	98.70	95.20	86.60	80.65	75.50	70.00
1000	输入轴 Input shaft	≤M5 连续型 Continuous	10.00	10.00	8.10	7.90	8.10	7.30	7.00		
			11.50	11.50	10.50	10.50	10.00	9.00	8.90		
	输出轴 Output shaft	≤M5 连续型 Continuous	137.80	192.60	117.40	106.90	103.00	94.50	85.70		
			114.80	108.20	98.70	90.50	86.60	79.60	73.60		
1250	输入轴 Input shaft	≤M5 连续型 Continuous	8.80	8.90	7.90	7.40	7.20	7.70			
			10.50	10.50	9.50	9.50	9.40	8.25			
	输出轴 Output shaft	≤M5 连续型 Continuous	127.80	120.50	111.20	100.00	95.50				
			107.00	101.00	92.60	84.00	80.70				
1500	输入轴 Input shaft	≤M5 连续型 Continuous	8.3	8.40	8.10	7.60					
			9.90	9.90	9.90	8.70					
	输出轴 Output shaft	≤M5 连续型 Continuous	124.40	113.50	113.50	106.00	95.20				
			101.00	95.25	95.25	87.10	79.20				
转速 n_1 Rotate speed (r/min)	轴类 Shaft	工作制度 Duty	ZQA 1000 轴伸最大允许径向载荷 Max allowable radical load on shaft and of ZQA 1000								
600	输入轴 Input shaft	≤M5 连续型 Continuous	9.10	8.80	5.50	4.60	4.60	2.30	2.30	2.80	2.80
			13.00	13.00	11.56	11.00	11.00	9.20	8.80	8.40	7.80
	输出轴 Output shaft	≤M5 连续型 Continuous	199.00	186.00	169.00	15.60	143.80	133.80	125.20	116.00	110.20
			163.90	154.40	141.20	129.00	123.20	112.30	104.70	100.00	91.20
750	输入轴 Input shaft	≤M5 连续型 Continuous	7.80	7.50	8.20	4.00	3.60	3.20	3.00		
			12.00	12.00	10.50	10.50	10.00	8.00	7.60		
	输出轴 Output shaft	≤M5 连续型 Continuous	184.30	173.00	158.20	142.30	135.20	126.20	118.40	110.80	
			152.20	143.50	132.00	119.60	114.90	104.90	97.35	91.40	
1000	输入轴 Input shaft	≤M5 连续型 Continuous	6.50	6.20	8.10	4.30	4.60	4.60			
			10.50	10.50	9.30	9.10	8.90	7.10			
	输出轴 Output shaft	≤M5 连续型 Continuous	168.20	157.00	145.20	131.20	126.10	117.20			
			139.70	132.00	120.12	109.30	104.60	95.40			
1250	输入轴 Input shaft	≤M5 连续型 Continuous	6.20	5.50	5.30	4.60					
			10.00	10.00	8.20	8.50					
	输出轴 Output shaft	≤M5 连续型 Continuous	157.00	147.00	137.20	123.00					
			130.20	122.50	112.50	101.70					
1500	输入轴 Input shaft	≤M5 连续型 Continuous	6.30	5.80	5.80						
			9.10	9.00	7.60						
	输出轴 Output shaft	≤M5 连续型 Continuous	154.00	140.00	131.10						
			122.40	115.90	105.80						

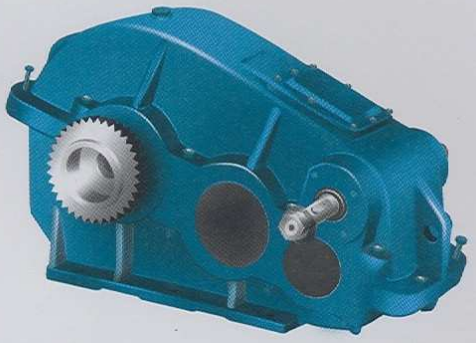
注：ZQA 型减速器的设计计算是按 QJ 型减速器的计算方法，其选用原则与选择计算可按 QJ 型减速器的方法进行，ZQ,ZQH 型减速器的设计计算是按前苏联的老齿轮强度工况标准计算的，其承载能力与 QJ 型减速器的承载能力不能类比。

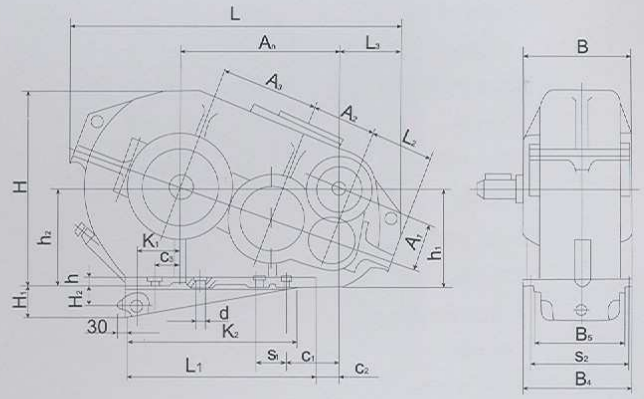
Note: The design of ZQA type decelerator is same to QJ type, so the selecting method and calcaulation can according to the QJ type too. The design of ZQ,ZQH type decelarator is according to old gear strength of Pre-Soviet Russia, so the load capacity is not analogy to QJ type.

ZQ 型大传动比圆柱齿轮减速器
ZQ Great Moweing Cylindrcal Gear Decelerators

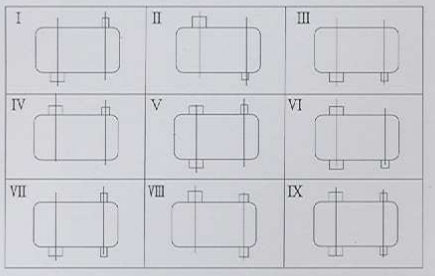
ZQ 型大传动比减速器是在 ZQ 型减速器基础上增加一级高速级的三级减速器，扩大了减速器的传动比。

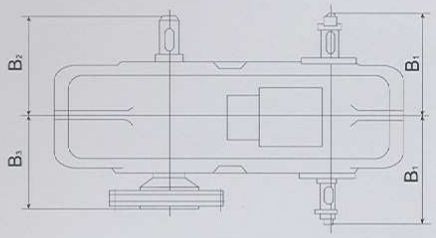
Type ZQ decelerator with high drive ratio mean that a high-speed class is added on type ZQ decelerator and Class 3 decelerator is obtained to increase decelerator drive ratio.





装配型式





尺寸 size / 型号 type	中心距 center space				中心高 center height		轮廓尺寸 axle outlook size			轴端尺寸 axle dege size					
	A_n	A_1	A_2	A_3	h_1	h_2	L	B	H	B_1	B_2	B_3	L_1	L_2	L_3
ZQ-350+100	≈ 365	100	150	200	210	200	≈ 758	320	400	250	285	-	470	158	≈ 137
ZQ-400+100	400	100	150	250	250	250	≈ 852	310	490	265	300	234	490	160	≈ 155
ZQ-500+150	≈ 522	150	200	300	295	300	≈ 1060	350	590	320	350	270	620	206	≈ 196
ZQ-650+150	650	150	250	400	320	320	≈ 1355	470	707	380	430	342	830	238	≈ 240
ZQ-850+250	850	250	350	500	400	400	≈ 1690	580	875	480	525	403	1100	327	≈ 290
ZQ-1000+250	≈ 1030	250	400	600	395	400	≈ 2000	660	975	530	605	507	1350	334	≈ 312

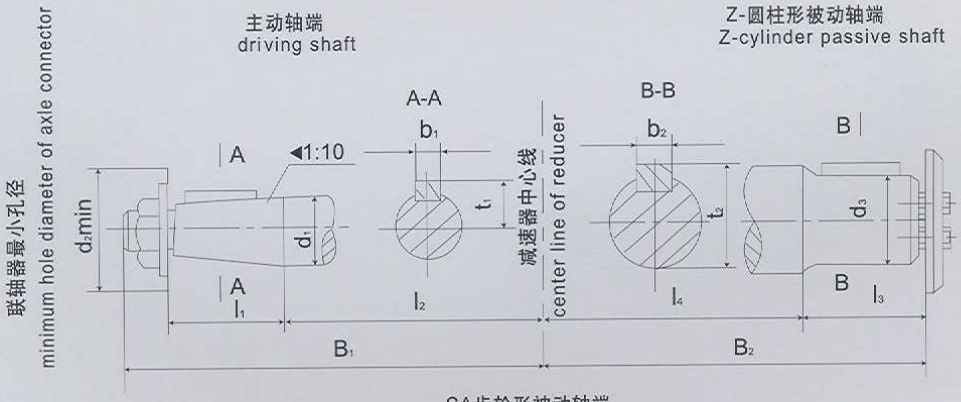
尺寸 size / 型号 type	K_1	K_2	B_4	B_5	H_1	H_2	h	安装尺寸 assembling size							重量 (kg) wight
								C_1	C_2	C_3	孔距 hole space		孔径d hole diameter	孔数 n hole	
											S_1	S_2			
ZQ-350+100	-	-	290	150	-	23°	25	≈ 95	≈ 55	80	350	250	17	4	195
ZQ-400+100	135	-	310	170	-	23°	25	110	≈ 55	80	370	270	17	4	262
ZQ-500+150	165	-	350	210	-	28°	25	≈ 152	≈ 102	110	240	310	17	6	490
ZQ-650+150	240	800	470	316	95	65	32	160	85	155	215	410	25	8	770
ZQ-850+250	295	≈ 1360	580	418	120	90	35	155	75	205	300	520	32	8	1485
ZQ-1000+250	420	≈ 1662	660	480	200	170	40	≈ 231	≈ 131	250	350	590	32	8	2189

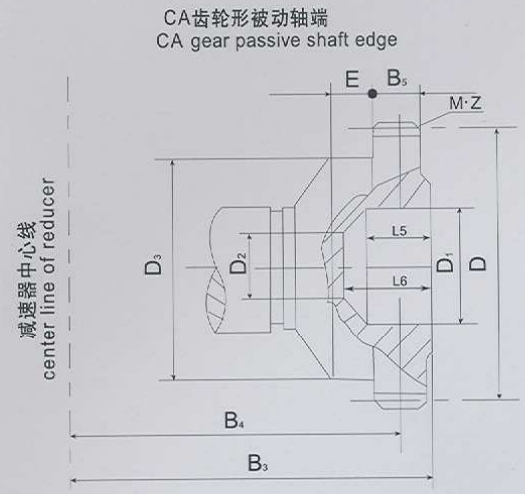
ZQ 型大传动比减速器的传动比 Transmission ration of ZQ large transmission-ratio reducer

传动比 no of transmission ratio	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
传动比 transmission ratio	317.28	291.19	265.71	243.86	223.80	191.22	163.38	141.73	121.10	92.21	81.70	65.54
公称传动比 nominal transmission ratio	315	300	280	250	224	200	160	140	125	90	80	63

ZQ 型大传动比减速器轴端尺寸

Axle edge size of ZQ type large tramsmission-ratio reducer





尺寸 size / 型号 type	主动轴 Driving shaft							圆柱形被动轴 "Z" 型 Z type cylinder passive axle						齿轮型被动轴 "CA" 型 CA type gear passive axle										
	d_1	l_1	l_2	B_1	d_{2mi-n}	b_1	t_1	d_3	l_3	l_4	B_2	b_2	t_2	m	z	D	D_1	D_2	D_3	B_3	B_4	B_5	E	l_5	l_6
ZQ-350+100	35	60	170	250	60	10	19.5	75 双端 85 单端	105 115	170 170	275 285	20 24	79.2 90												
ZQ-400+100	35	60	185	265	60	10	19.5	80 双端 90 单端	115 125	185 175	300 300	24 24	85 95	3	56	168	90	40	140	234	207.5	25	35	45	60
ZQ-500+150	45	85	210	320	75	14	24.5	95	145	205	350	28	100.7	4	56	224	120	40	170	270	238.5	35	25	45	75
ZQ-650+150	45	85	270	380	75	14	24.5	110	165	265	430	32	116.5	6	56	336	170	45	260	342	310	40	32	50	95
ZQ-850+250	60	110	340	480	110	18	32.5	140	200	325	525	36	147.2	8	54	432	200	105	260	403	363	50	22	68	100
ZQ-1000+250	70	110	390	530	120	20	38	160	240	365	605	40	168.5	10	48	480	200	90	320	507	442	60	45	7898	124

ZQ 型大传动比减速器容许输入最大功率(kW)

Bearing capacity of ZQ type large transmisson-reducer

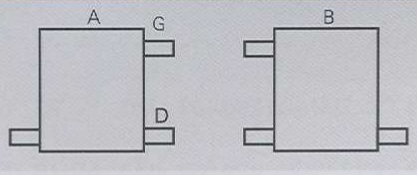
传动比 Transmission ratio		工作类型 Service type	ZQ-350+100型 Type ZQ-350+100		ZQ-400+100型 Type ZQ-400+100		ZQ-500+150型 Type ZQ-500+150		ZQ-650+150型 Type ZQ-650+150		ZQ-850+250型 Type ZQ-850+250		ZQ-1000+250型 Type ZQ-1000+250	
			转速（r/min） Wheeling speed（r/min）											
			1000	750	1000	750	1000	750	1000	750	1000	750	1000	75
I	317.28	轻级 light rank	-	-	1.56	1.35	4.75	4.10	6.1	5.5	17.7	15.3	26.5	26.0
		中级 middle rank	-	-	1.05	0.95	3.20	2.75	4.0	3.8	11.8	10.2	18.0	17.1
II	291.19	轻级 light rank	-	-	1.67	1.52	5.05	4.50	6.8	6.1	19.3	16.9	28.0	28.6
		中级 middle rank	-	-	1.12	1.02	3.35	3.00	4.5	4.0	12.9	11.3	18.6	18.2
III	265.71	轻级 light rank	-	-	1.92	1.72	5.05	4.50	7.6	6.7	21.2	17.8	30.0	30.0
		中级 middle rank	-	-	1.28	1.15	3.35	3.00	4.0	4.6	14.0	11.9	20.0	19.3
IV	243.86	轻级 light rank	1.80	1.82	1.92	1.72	5.50	4.86	8.2	7.25	24.8	21.2	31.5	31.0
		中级 middle rank	1.20	1.22	1.28	1.15	3.70	3.25	6.4	5.0	16.5	14.0	21.0	20.4
V	223.80	轻级 light rank	1.95	1.82	2.05	1.80	6.00	5.10	8.8	8.0	27.0	24.0	33.8	33.8
		中级 middle rank	1.30	1.22	1.38	1.26	4.00	3.40	5.9	5.5	18.1	16.0	22.5	22.4
VI	191.22	轻级 light rank	2.30	1.95	2.35	1.86	6.90	5.40	9.8	9.1	31.2	29.8	34.5	34.5
		中级 middle rank	1.55	1.30	1.60	1.25	4.60	3.60	6.6	6.3	20.9	19.8	23.0	23.1
VII	163.38	轻级 light rank	2.60	2.24	2.90	2.32	8.10	6.35	10.6	9.8	35.2	33.0	35.5	34.5
		中级 middle rank	1.74	1.50	2.00	1.56	5.40	4.26	7.1	6.8	23.6	22.2	23.6	23.1
VIII	141.73	轻级 light rank	3.00	2.45	3.10	2.65	9.40	7.60	14.5	12.8	36.8	34.2	39.0	38.0
		中级 middle rank	2.00	1.65	2.15	1.77	6.30	5.12	9.5	8.7	24.6	22.8	26.0	25.2
IX	121.10	轻级 light rank	3.30	2.55	3.25	2.65	11.50	9.60	16.0	14.5	44.2	40.5	45.0	44.0
		中级 middle rank	2.20	1.70	2.20	1.77	7.80	6.50	10.7	10.0	29.5	27.2	29.8	28.4
V	92.21	轻级 light rank	4.26	3.40	4.27	3.55	15.0	12.5	16.8	15.3	48.0	44.0	49.5	48.6
		中级 middle rank	2.85	2.30	2.85	2.40	10.50	8.58	11.2	10.6	32.0	29.5	33.0	31.5
VI	81.70	轻级 light rank	4.87	4.20	4.85	3.80	17.20	14.0	18.5	16.7	52.5	49.5	56.0	55.0
		中级 middle rank	3.25	2.80	3.25	2.55	11.60	9.35	12.3	11.6	35.0	33.2	37.5	35.6
VII	65.54	轻级 light rank	5.60	4.85	5.50	4.40	20.0	15.5	23.6	21.0	-	-	70.0	68.5
		中级 middle rank	3.75	3.25	3.75	2.98	13.5	10.5	15.5	14.5	-	-	46.6	44.2

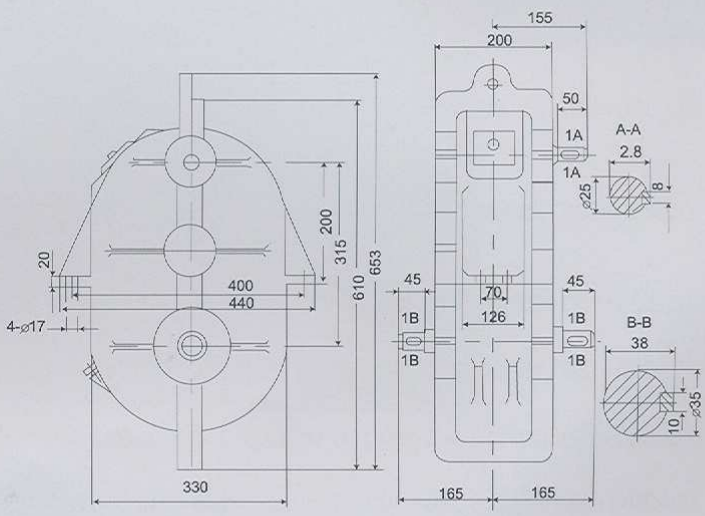
B315 型圆柱齿轮减速机外型及尺寸

Outlook and assembling size of B315 type cylinder gear reducer

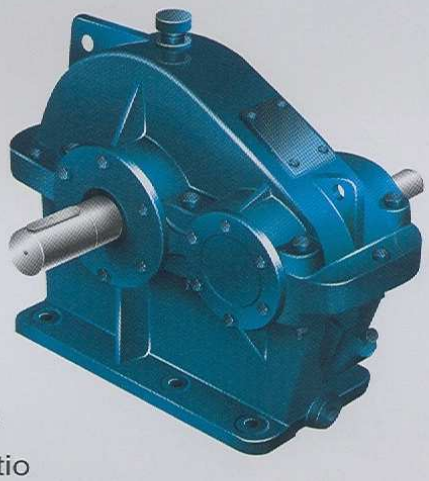
减速机型式表Modes of reducer			
编号No.	型式Type	速比Speed ratio	重量(kg)Weight
1	I	50.3	89
2	II	37.5	88
3	III	31.4	88
4	IV	24.6	87
5	V	21	87
6	VI	15	87

减速机型式表Modes of reducer



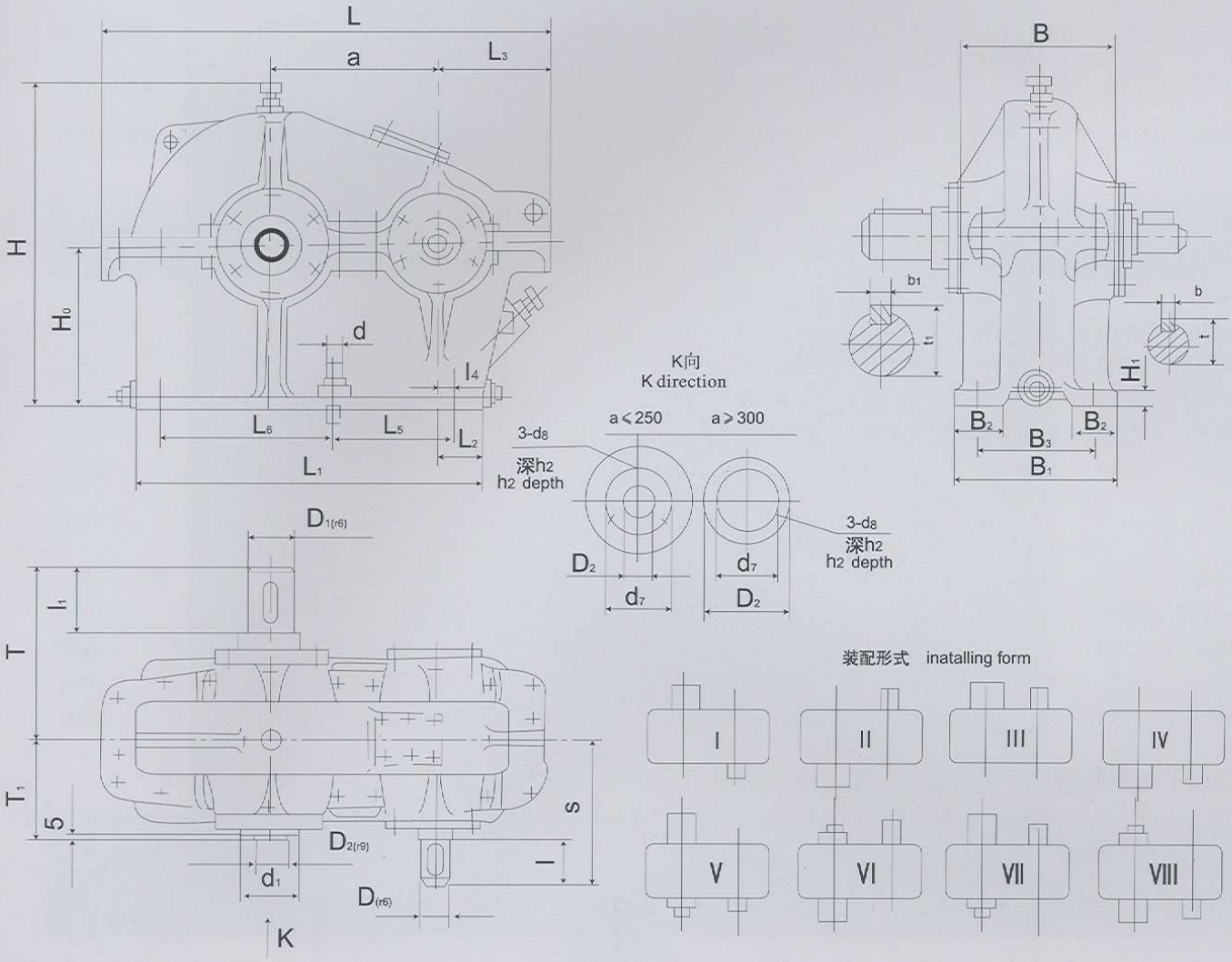


ZD 和 ZDH 系列圆柱齿轮减速器
ZD and ZDH Cylindrical Gear Decelerators



ZD(ZDH) 40 2.8 V

- V — 装配型式 Installing form
- 2.8 — 传动比 transmission ratio
- 40 — 总中心距 Wholly center space
- ZD(ZDH) — 减速机型号 Reducer type



外形及安装尺寸、装配型式
Outlook, assembling size and installing from

型号 Type		中心距 center space	中心高 center height	轮廓尺寸 axle size			B_1	B_2	L_1	L_2	L_3	H_1	地脚螺钉 lower margin screw					
		a	H_0	H	L	B							d	n	B_3	L_4	L_5	L_6
ZDH10	ZD10	100	0 130-0.5	240	335	140	150	48	245	35	95	16		4	110		-	195
ZDH15	ZD15	150	0 200-0.5	355	450	210	220	70	340	35	110	20	M16		160	10	80	200
ZDH20	ZD20	200	0 250-0.5	493	575	250	250	80	440	45	145	20			170		130	220
ZDH25	ZD25	250	0 300-0.5	593	710	270	290	90	545	50	165	25	M20		210		160	295
ZDH30	ZD30	300	0 350-0.5	683	835	300	320	100	650	64	195	30	M24		240		205	350
ZDH35	ZD35	350	0 400-0.5	778	955	350	360	110	750	68	215	30			280	20	250	400
ZDH40	ZD-40 6M	400	0 450-0.5	878	1085	390	400	120	850	67	240	32		6	310		280	470
	ZD-40 8M			820	1050	410	410		940	170	225	35	M30		320	120	380	460
ZDH45	ZD45	450	0 500-0.5	973	1210	430	450	130	970	92	265	40			340	35	325	525
ZDH50	ZD50	500	0 550-0.5	1106	1320	470	500	140	1070	97	275	40	M36		390	40	355	600
ZDH60	ZD60	600	0 650-1.0	1301	1550	540	540	145	1265	97	310	45			430		440	700
ZDH70	ZD70	700	0 750-1.0	1496	1820	580	610	150	1490	128	370	52	M42		500	55	550	790
ZDH80	ZD80	800	0 835-1.0	1653	2041	620	650	150	1715	163	405	54	M48		545		650	860

型号 Type		高速轴 high-speed axle				S	低速轴 low-speed axle				T	T_1	d_1	D_2	d_7	d_8	h_2	重量 kg weight
		l	D	b	t		l_1	D_1	b_1	t_1								
ZDH10	ZD10	55	25	8	27.5	155	55	30	8	32.5	155	95	35	14	24			32
ZDH15	ZD15	55	30	8	32.5	210	70	40	12	42.8	225	135	45		35	M6	15	85
ZDH20	ZD20	70	40	12	42.5	255	85	55	16	58.5	270	160	60	25	40			155
ZDH25	ZD25	85	50	16	53.5	280	105	70	20	74.5	315	170	75					260
ZDH30	ZD30	105	60	18	63.9	315	115	85	24	90	340	185	95					375
ZDH35	ZD35	105	70	20	74.2	355	125	100	28	105.7	380	215	110					530
ZDH40	ZD40 6M	125	80	24	85	400	140	110	32	116.5	415	255	120					735
	ZD40 8M	124					165				450	400						
ZDH45	ZD45	140	90	24	95	435	165	130	36	137.2	470	255	140	75	55	M8	20	950
ZDH50	ZD50	160	100	28	105.7	475	180	140	36	147.2	500	275	150					1345
ZDH60	ZD60	165	120	32	126.5	515	200	170	40	178.5	570	310	180					1915
ZDH70	ZD70	180	140	36	148	580	240	200	45	210	630	335	220					2700
ZDH80	ZD80	180	140	36	148	600	240	200	45	210	650	355	200					3500

ZD(H)减速器的传动比 Transmission ratio of ZD(H) reducer

传动比代号 No of transmission ratio	1	2	3	4	5	6	7	8	9	10	11
i	2	2.24	2.5	2.8	3.15	3.55	4	4.5	5	5.6	6.3

承载能力表
Bearing capacity

速比 speed ratio	电机转速	型号 Type / 工作类型 service type	ZD10		ZD15		ZD20		ZD25		ZD30		ZD35		ZD40		ZD45		ZD50		ZD60		ZD70	
			中型 middle sized	连续 continued	中型 middle sized	连续 continued	中型 middle sized	连续 continued	中型 middle sized	连续 continued	中型 middle sized	连续 continued	中型 middle sized	连续 continued	中型 middle sized	连续 continued	中型 middle sized	连续 continued	中型 middle sized	连续 continued	中型 middle sized	连续 continued	中型 middle sized	连续 continued
2	1000		8.91	7.23	29.2	23.7	67.5	54.7	128	104	216	175	365	296	530	430	736	597	984	798	-	-	-	-
	1500		11.7	10.5	38.1	34.2	86.8	77.9	178	160	295	265	-	-	-	-	-	-	-	-	-	-	-	-
2.24	1000		8.07	6.53	26.5	21.5	61.3	49.6	117	94.6	197	160	306	248	485	393	675	546	904	731	-	-	-	-
	1500		10.7	9.43	34.6	30.7	79.2	70.1	163	144	271	240	415	368	-	-	-	-	-	-	-	-	-	-
2.5	1000		7.26	5.88	23.9	19.4	55.4	44.8	106	85.6	179	145	278	225	406	328	615	498	825	667	1370	1110	-	-
	1500		9.61	8.40	31.3	27.4	71.8	62.7	136	119	247	216	379	331	548	479	-	-	-	-	-	-	-	-
2.8	1000		6.47	5.23	21.4	17.3	49.5	40.1	94.7	76.4	160	130	249	202	365	295	555	448	745	602	1240	1000	-	-
	1500		8.58	7.39	28.0	24.1	64.4	55.5	122	105	223	192	343	295	497	428	-	-	-	-	-	-	-	-
3.15	1000		5.69	4.56	18.8	15.1	43.7	35.0	83.8	67.1	142	114	221	177	342	260	453	363	665	532	1100	886	1690	1360
	1500		7.56	6.45	24.8	21.1	57.0	48.6	108	92.3	182	155	306	261	444	379	615	525	-	-	-	-	-	-
3.55	1000		4.96	3.91	16.4	13.0	38.2	30.2	73.3	57.9	124	98.2	194	153	285	225	399	315	538	425	979	772	1500	1190
	1500		6.60	5.62	21.7	18.5	50.0	42.6	95.1	81.0	160	137	270	230	393	335	546	165	730	622	-	-	-	-
4	1000		4.29	3.33	14.2	11.1	33.2	25.8	63.7	49.5	108	84.2	169	132	249	193	349	271	471	366	860	668	1320	1030
	1500		5.72	4.86	18.8	16.0	43.5	37.0	82.9	70.6	140	119	217	185	345	294	480	409	643	548	-	-	-	-
4.5	1000		3.58	2.76	11.9	9.18	27.8	21.4	53.4	41.2	90.9	70.2	142	110	209	162	294	227	397	307	668	516	1120	867
	1500		4.78	4.08	15.8	13.4	36.5	31.2	69.7	59.5	118	101	183	157	268	229	407	348	547	467	906	773	-	-
5	1000		3.11	2.37	10.4	7.89	24.2	18.4	46.6	35.5	79.4	60.5	124	94.8	183	140	258	196	349	266	587	447	990	775
	1500		4.16	3.51	13.7	11.6	31.9	26.9	61.1	51.5	103	87.2	161	136	236	199	330	278	483	407	802	677	-	-
5.6	1000		2.51	1.92	8.37	6.38	19.6	14.9	37.8	28.8	64.4	49.1	101	77.1	149	114	210	160	284	217	479	366	744	657
	1500		3.36	2.84	11.1	9.39	25.9	21.8	49.6	41.9	84.2	71.0	131	111	192	162	269	227	333	307	660	557	1010	854
6.3	1000		2.13	1.60	7.09	5.33	16.6	12.5	32.1	24.1	54.8	41.1	86.0	64.6	127	95.4	179	134	243	182	410	308	638	497
	1500		2.85	2.37	9.44	7.85	22.0	18.3	42.2	35.1	71.8	59.7	112	93.2	165	137	231	192	312	259	568	472	874	726

本表仅列出在两种不同的输入转速及工作类型的情况下，减速器高速轴的许用功率，其它转速、类型、负荷性质可近似地参考此表，但要注意，当每一循环的工作时间 $t_{工作}$ > 20 分钟时，应按连续型选用，有尖峰载荷的，要选比连续型大 2-3.5 倍。

This table lists allowable power for decelerator high-speed shaft under 2 different numbers of input revolution as well as service types. Other number of turns, type ,and nature of load may refer to this list. However, if service time of each circulation is $t_{service}$>20min, selection should be made according to continuous type; If peak load is applicable, the value 2-3.5 times bigger than that of continuous type should be selected.

ZD80, ZDH80 减速器承载能力表
Bearing capacity of ZD80, ZDH80 reducer

n1=500r/min

中型 middle-sized	2	2.24	2.5	2.8	3.15	3.55	4	4.5	5	5.6	6.3
重型 heavy-duty sized	2219	1981	1775	1585	1409	1250	1110	965	853	699	604
特重型 special heavy-duty sized	1655	1496	1332	1187	1057	938	823	686	596	484	410
连续型 continued sized	1628	1453	1302	1163	1034	913	789	664	574	471	397
连续型 continued sized	1625	1443	1290	1151	999	853	729	600	514	416	346

n1=750r/min

中型 middle-sized	-	-	-	2197	1953	1728	1497	1248	1085	879	759
重型 heavy-duty sized	-	-	-	1736	1543	1347	1162	973	845	686	579
特重型 special heavy-duty sized	-	-	-	1736	1543	1295	1119	939	815	669	566
连续型 continued sized	-	-	-	1711	1480	1269	1081	896	767	622	514

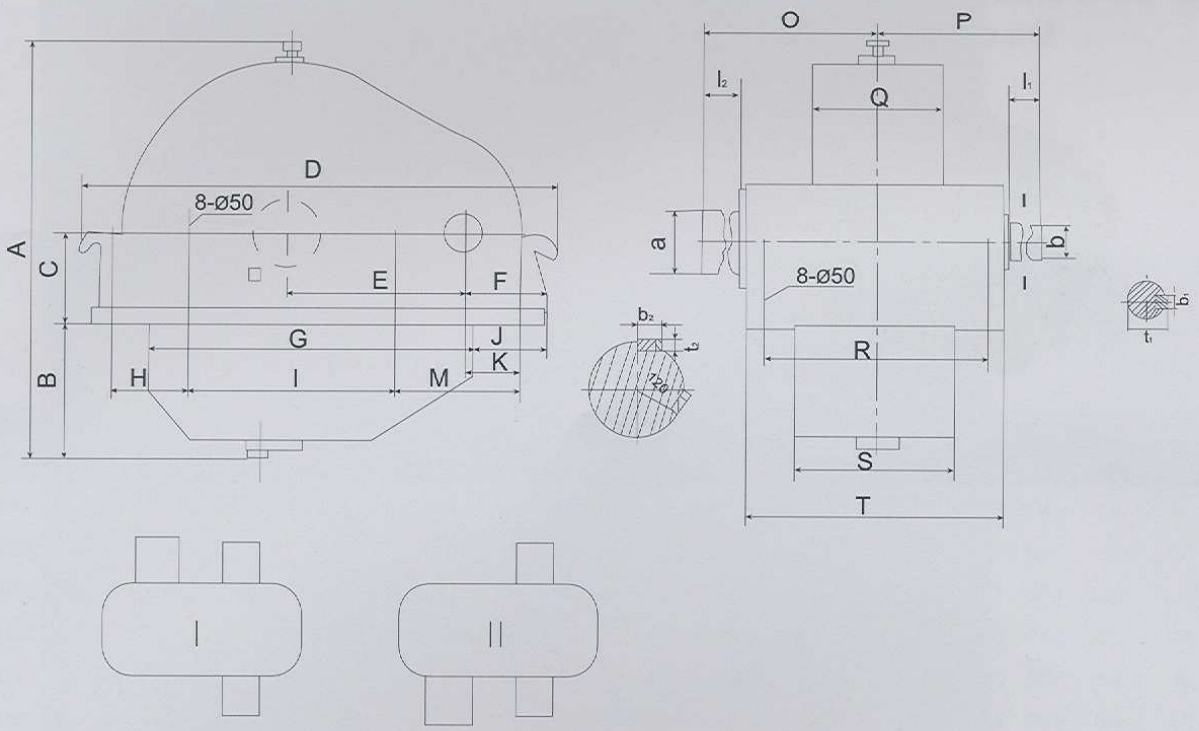
n1=1000r/min

中型 middle-sized	-	-	-	-	-	-	1795	1535	1334	1076	913
重型 heavy-duty sized	-	-	-	-	-	-	1473	1244	1081	879	742
特重型 special heavy-duty sized	-	-	-	-	-	-	1432	1201	1042	853	720
连续型 continued sized	-	-	-	-	-	-	1428	1184	1016	823	686

注：若用户需要，本系列减速器可选用铸钢箱体

Note: such series of reducer can adopt cast steel casing if necessary.

ZD80, ZD100 人字齿圆柱齿轮减速器
ZD80 ZD100 Herringbone Cylindrical Gear Decelerators



一、ZD80, ZD100 的外形尺寸及装配型式
Outer size and installing form of ZD80, ZD100 decelerator

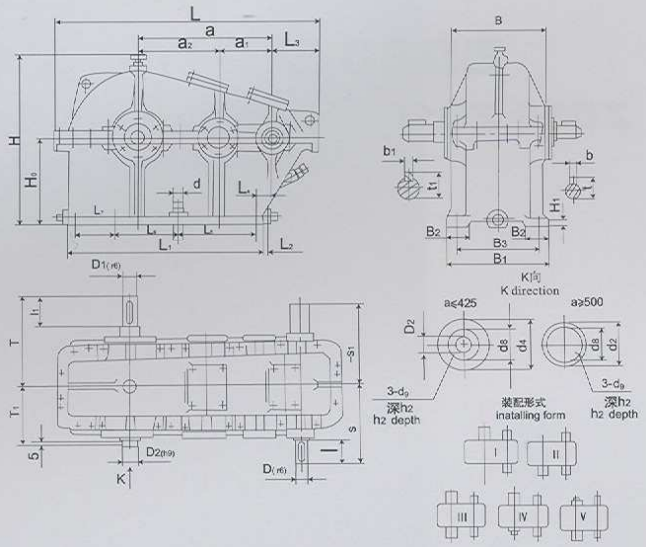
数值 Value / 代号 NO / 型号 Type	A	B	C	D	E	F	G	H	I	J	K	M	O	P	Q	R	S	T	a r6	b r6	l_1	b_1	t_1	l_2	b_2	t_3
ZD80	1853	582.5	400	2210	800	375	1570	300	950	310	280	610	905	815	590	1030	720	1200	220	120	160	32	129	240	66	22
ZD100	2540	790	500	2790	1000	480	1980	450	1150	480	350	780	1080	940	730	1220	880	1410	280	150	170	40	137	280	84	28

二、传动比 Transmission ratio

代号 NO.	传动比 Transmission ratio		
	公称 Nominal	实际 Actual	
		ZD80	ZD100
1	4.5	4.516	4.516
2	5.0	4.891	4.897
3	5.6	5.577	5.577
4	6.3	6.435	6.435
5	7.1	7.143	7.143
6	6.3	6.297	6.308

ZL 系列和 ZLH 系列圆柱齿轮减速器

ZL and ZLH Cylindrical Gear Decelerators



型号 Type		中心距 center space			中心高 center height	轮廓尺寸 axle size			B_1	B_2	L_1	L_2	L_3	H_1	地脚螺钉 lower margin screw						
		a	a_1	a_2	H_0	H	L	B							d	n	B_3	L4	L5	L6	L7
ZLH25	ZL25	250	100	150	$200^{0}_{-0.5}$	398	560	256	256	70	435	-35	120	20			210	-5	175	205	-
35	35	350	150	200	$250^{0}_{-0.5}$	493	720	316	316	80	585	-40	135	20	M20	6	260	0	255	255	-
42.5	42.5	425	175	250	$300^{0}_{-0.5}$	588	860	346	346	80	705	-39	149	25			280	10	275	335	-
50	50	500	200	300	$350^{0}_{-0.5}$	688	1035	400	400	90	850	-68	185	30	M24		330	30	290	275	150
60	60	600	250	350	$400^{0}_{-0.5}$	821	1185	460	460	100	945	-8	190	35			390	30	370	310	180
65	65	650	250	400	$450^{0}_{-0.5}$	916	1300	500	500	110	1025	8	205	38	M30		420	55	395	325	200
75	75	750	300	450	$500^{0}_{-0.5}$	1016	1460	570	570	120	1200	-18	214	40		8	480	25	485	370	240
85	85	850	350	500	$550^{0}_{-0.5}$	1116	1655	620	620	130	1320	12	251	45	M36		530	65	505	445	250
100	100	1000	400	600	$650^{0}_{-0.5}$	1306	1910	710	710	145	1550	22	265	50			610	75	595	510	320
115	115	1150	450	700	$750^{0}_{-0.5}$	1496	2190	785	785	145	1770	42	295	55	M42		700	105	655	595	380
130	130	1300	500	800	$850^{0}_{-0.5}$	1691	2460	845	845	150	2015	42	317	60			740	105	745	670	450

型号 Type		高速轴 high-speed axle				S	S_1	低速轴 low-speed axle				T	装配型式 IV-V installing form						最大重量 (kg) maximum weight
		l	D	b	t			l_1	D_1	b_1	t_1		T_1	D_2	d_4	d_8	d_9	h_2	
ZLH25	ZL25	55	25	8	28	235	245	70	40	12	43	250	160		45	35			135
35	35	55	30	8	33	265	275	85	55	16	59	305	190	25	60	40	M6	15	230
42.5	42.5	55	35	10	38	280	290	105	70	20	74.5	355	210		75				305
50	50	70	45	14	48.5	325	340	115	85	24	90.0	390	235		95				490
60	60	85	50	16	54	375	386	140	100	28	106	450	270		110				725
65	65	85	50	16	54	395	406	140	110	32	117	470	290		120				980
75	75	105	60	18	64	450	463	165	130	36	138	540	325	75	140	55	M8	20	1390
85	85	105	70	20	74.5	490	500	180	140	36	148	580	350		150				1910
100	100	125	80	24	85	560	567	200	170	40	179	655	395		180				2730
115	115	140	90	24	95	610	620	240	200	45	210	735	435		220				4000
130	130	160	100	28	106	660	670	280	220	50	231.0	805	465		240				5430

带负号的尺寸在高速轴轴心线的右侧。不带负号的尺寸位置与图示位置相同。

The negative size lies in the right part of the center line of high-speed axles. The positions of the general sizes are as per the graphs.

传动比代号 No of transmission ratio	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
总传动比i total transmission ratio	7.1	8	9	10	11.2	12.5	14	16	18	20	22.4	25	28	31.5	35.5	40	45

ZL(ZLH)减速器承载能力表 1

Table 1 of ZL(ZLH) Decelerator carrying capacity

速比 speed ratio	电机转速 motor rotate speed	尺寸 Size / 工作类型 service type	ZL25	ZL35	ZL42.5	ZL50	ZL60	ZL65	ZL75	ZL85	ZL100	ZL115	ZL130
			连续 continued	连续 continued	连续 continued	连续 continued	连续 continued	连续 continued	连续 continued	连续 continued	连续 continued	连续 continued	连续 continued
7.1	1000		6.24	14.6	28.3	48.5	76.3	93.9	158	216	367	538	719
	1500		9.22	21.6	41.5	70.8	111	144	230				
8	1000		5.31	12.5	24.2	41.4	65.2	90.9	136	185	315	492	719
	1500		7.86	18.4	35.5	60.5	94.9	140	197				
9	1000		4.75	11.2	21.7	37.1	58.5	85.3	123	167	284	445	655
	1500		7.04	16.5	31.9	54.5	85.5	126	178	241			
10	1000		4.27	10.0	19.5	33.4	52.7	77.2	111	151	257	403	594
	1500		6.34	14.9	28.7	49.2	77.3	107	161	291	371		
11.2	1000		3.82	9.00	17.5	30.0	47.3	69.1	99.4	136	231	363	536
	1500		5.68	13.3	25.8	44.2	69.5	94.7	145	197	335		
12.5	1000		3.40	8.02	15.6	26.8	42.3	61.0	88.9	121	207	326	481
	1500		5.06	11.9	23.1	39.5	62.2	83.3	130	177	301	471	
14	1000		2.88	6.79	13.2	22.7	35.9	53.3	75.5	103	176	277	410
	1500		4.29	10.1	19.6	33.5	52.9	78.3	111	151	257	402	
16	1000		2.56	6.04	11.7	20.2	31.9	47.5	67.3	91.9	157	248	367
	1500		3.81	8.98	17.4	29.9	47.2	70.0	99.0	135	230	361	532
18	1000		2.28	5.37	10.5	18.0	28.5	42.3	60.0	82.0	141	221	328
	1500		3.39	7.99	15.5	26.7	42.1	62.5	88.4	121	206	324	478
20	1000		2.03	4.78	9.31	16.0	25.4	37.7	53.5	73.2	126	198	288
	1500		3.02	7.12	13.8	23.	37.6	55.8	79.1	108	185	290	420
22.4	1000		1.73	4.10	7.98	13.7	21.8	32.4	45.9	62.8	108	170	252
	1500		2.59	6.11	11.9	20.4	32.3	47.9	67.9	92.7	159	250	369
25	1000		1.56	3.69	7.19	12.4	19.6	29.2	41.5	56.7	97.4	154	228
	1500		2.33	5.51	10.7	18.4	29.1	43.3	61.4	83.9	144	226	335
28	1000		1.40	3.30	6.43	11.1	17.6	26.1	37.1	50.8	87.3	138	205
	1500		2.09	4.93	9.59	16.5	26.1	38.8	55.1	75.2	129	203	294
31.5	1000		1.24	2.94	5.73	9.87	15.6	23.1	33.1	45.3	77.9	123	175
	1500		1.86	4.39	8.54	14.7	23.3	33.7	49.1	67.2	115	182	249
35.5	1000		1.02	2.42	4.72	8.15	12.9	19.2	27.3	37.4	64.3	102	151
	1500		1.53	3.62	7.05	12.1	19.2	28.6	40.6	55.5	95.3	150	223
40	1000		0.91	2.15	4.20	7.24	11.5	17.1	24.3	33.3	57.3	90.6	135
	1500		1.36	3.22	6.27	10.8	17.1	25.5	36.1	49.4	85.0	134	199
45	1000		0.76	1.79	3.49	6.03	9.55	14.2	20.2	27.2	47.7	75.5	112
	1500		1.13	2.68	5.22	9.00	14.2	21.2	30.1	41.2	70.9	112	166

ZL(ZLH)减速器承载能力表 2

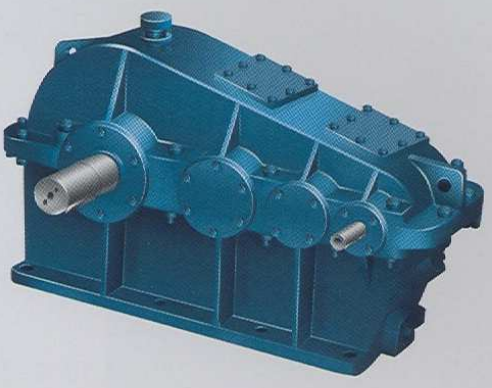
Table 2 of ZL(ZLH) Decelerator carrying capacity

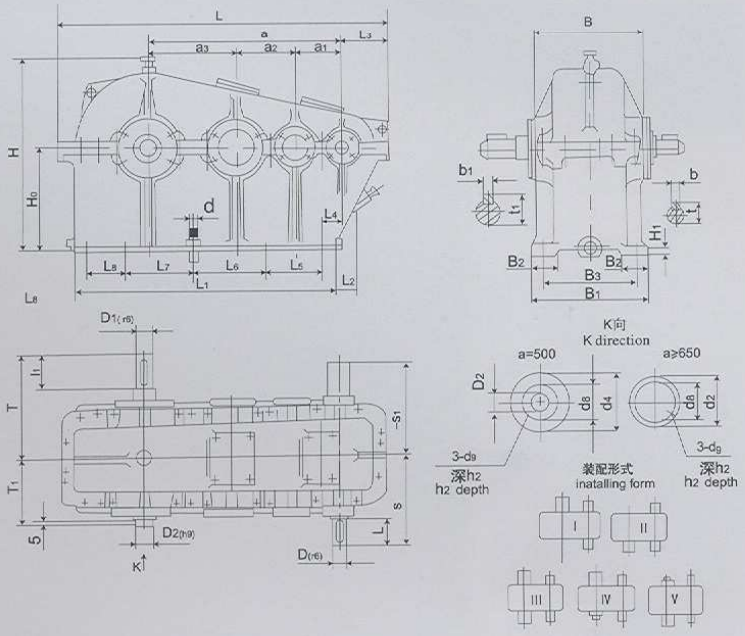
速比 speed ratio	电机转速 motor rotate speed	尺寸 Size / 工作类型 service type	ZL25	ZL35	ZL42.5	ZL50	ZL60	ZL65	ZL75	ZL85	ZL100	ZL115	ZL130
			中型 middle sized	中型 middle sized	中型 middle sized	中型 middle sized	中型 middle sized	中型 middle sized	中型 middle sized	中型 middle sized	中型 middle sized	中型 middle sized	中型 middle sized
7.1	1000		7.92	21.4	40.7	60.0	111	114	192	316	471	654	875
	1500		10.4	28.5	52.7	77.2	146	158	263				
8	1000		7.92	18.8	36.5	60.0	98.4	114	192	280	471	654	875
	1500		10.4	24.7	47.5	77.2	127	158	263				
9	1000		7.17	17.7	34.3	54.5	92.7	104	175	264	431	600	830
	1500		9.47	22.8	44.0	70.4	118	145	241	333			
10	1000		6.46	16.7	32.3	49.3	87.5	94.0	159	47	361	47	733
	1500		8.54	21.1	40.7	63.8	110	121	220	310	487		
11.2	1000		5.75	15.7	29.8	44.0	82.4	84.2	142	222	324	493	662
	1500		7.62	19.6	37.8	57.2	102	108	198	290	441		
12.5	1000		5.06	14.7	26.3	38.9	74.4	74.4	126	197	228	403	591
	1500		6.72	18.3	34.4	50.7	95.9	96.2	162	272	395	547	
14	1000		5.06	12.9	25.0	38.9	68.0	74.4	126	195	228	403	591
	1500		6.72	16.1	31.2	50.7	89.4	96.2	162	241	395	547	
16	1000		4.41	11.8	22.9	34.0	62.3	65.2	111	173	253	355	479
	1500		5.86	15.1	29.3	44.4	79.2	84.5	142	227	349	485	649
18	1000		3.8	10.5	19.9	29.5	55.5	56.6	96.3	150	221	310	419
	1500		5.08	14.1	26.2	38.7	73.7	73.7	124	193	307	427	572
20	1000		3.28	9.34	17.2	25.4	48.9	48.9	83.3	130	192	269	364
	1500		4.38	13.2	22.7	33.5	63.9	63.9	108	168	246	473	501
22.4	1000			8.00	15.6	25.4	42.5	48.9	83.3	123	192	269	364
	1500		4.38	11.7	22.7	33.5	62.0	63.9	108	168	246	373	501
25	1000		5	7.21	14.0	22.2	38.3	42.7	72.8	111	168	236	320
	1500		3.81	10.8	19.8	29.2	56.0	56.0	94.8	148	216	302	443
28	1000		2.38	6.46	12.5	18.5	34.3	35.7	60.9	95.6	141	198	269
	1500		3.18	9.62	16.1	24.5	46.9	46.9	79.6	124	182	255	344
31.5	1000		2.01	5.37	10.6	15.7	30.3	30.3	51.8	81.3	120	169	229
	1500		2.69	8.56	14.1	20.8	40.0	40.4	67.9	106	156	218	295
35.5	1000		1.95	4.70	9.16	17.5	25.0	30.3	51.8	72.5	120	169	229
	1500		2.69	7.02	13.7	20.8	37.3	40.4	67.9	106	156	218	295
40	1000		1.69	4.17	8.13	13.2	22.2	25.6	43.7	64.5	101	143	194
	1500		2.26	6.24	11.9	17.6	33.1	33.8	57.5	89.9	132	186	251
45	1000		1.47	3.47	6.77	11.7	18.5	25.6	39.2	53.7	92.5	143	194
	1500		2.20	5.1	10.1	17.4	27.6	33.8	57.5	79.9	132	186	251

表 1.2 仅列出两种不同的输入转速及工作类型情况下高速轴的许用功率，其他情况可近似地参考此表，但当每一工作循环时间 t_2>20 分种时，应按表 1 选用，有尖峰载荷时，要选此连续型大 2-3.5 倍。

Table 1 and 2 list allowed power for high-speed shaft under 2 different numbers of input revolution as well as service types. Other situations may refer to this list. However, if each service circulation time is t2> 20min, selection should be made according to Table 1; if peak load is applicable, the value 2-3.5 times bigger than that of continuous type should be selected.

ZS 和 ZSH 系列圆柱齿轮减速器
ZS and ZSH Cylindrical Gear Decelerators





型号 Type		中心距 center space				中心高 center height	轮廓尺寸 axle size			B_1	B_2	L_1	L_2	L_3	H_1	地脚螺钉 lower margin screw							
		a	a_1	a_2	a_3	H_0	H	L	B							d	n	B_3	L4	L5	L6	L7	L8
ZSH50	ZS50	500	100	150	250	300	588	910	346	346	90	760	-19	124	25	M20	8	280	15	150	240	300	-
65	65	650	150	200	300	350	688	1155	400	400	100	955	-13	155	30	M24		330	25	220	260	400	-
75	75	750	150	250	350	400	821	1305	460	460	105	1110	-23	160	35	M24		390	35	220	320	330	130
82.5	82.5	825	175	250	400	450	916	1450	500	500	110	1230	-22	180	38	M30		420	30	230	320	380	195
95	95	950	200	300	450	500	1016	1625	570	570	120	1360	21	180	40			480	70	280	350	380	250
110	110	1100	250	350	500	550	1116	1865	620	620	130	1582	0	211	45	M36	10	530	55	345	435	430	260
125	125	1250	250	400	600	650	1306	2115	710	710	145	1745	77	218	50			610	130	300	510	490	330
145	145	1450	300	450	700	750	1496	2440	785	785	145	2040	72	245	55	M42		700	135	365	585	570	390
165	165	1650	350	500	800	850	1691	2760	845	845	160	2305	102	267	60			740	165	415	640	650	460

型号 Type		高速轴 high-speed axle				S	S_1	低速轴 low-speed axle				T	装配型式 IV-V installing form						最大重量 (kg) maximum weight
		l	D	b	t			l_1	D_1	b_1	t_1		T_1	d_4	D_2	d_8	d_9	h_2	
ZSH50	ZS50	55	25	8	28	280	290	105	70	20	74.5	355	210	75	25	40	M6	15	325
65	65	55	30	8	33	305	317	115	85	24	90.0	390	235	95					580
75	75	55	30	8	33	335	347	140	100	28	106	450	270	110					825
82.5	82.5	55	35	10	38	355	367	140	110	32	117	470	290	120					1105
95	95	70	40	12	43	415	425	165	130	36	138	540	325	140	75	55	M8	20	1445
110	110	85	50	16	54	455	466	180	140	36	148	580	350	150					2100
125	125	85	50	16	54	500	511	200	170	40	179	655	395	180					2911
145	145	105	60	18	64	560	571	240	200	45	210	735	435	220					4020
165	165	105	70	20	74.5	605	613	280	220	50	231.0	805	465	240					5720

带负号的尺寸在高速轴轴心线的右侧。不带负号的尺寸位置与图示位置相同。

The negative size lies in the right part of the center line of high-speed axles. The positions of the general sizes are as per the graphs.

ZS(H)型减速器传动比　Transmission ratio of ZS(H) type decelerator

传动比代号 No of transmission ratio	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
总传动比i total transmission ratio	50	56	63	71	80	90	100	112	125	140	160	180	200	224	250	280

ZS(ZSH)减速器承载能力表

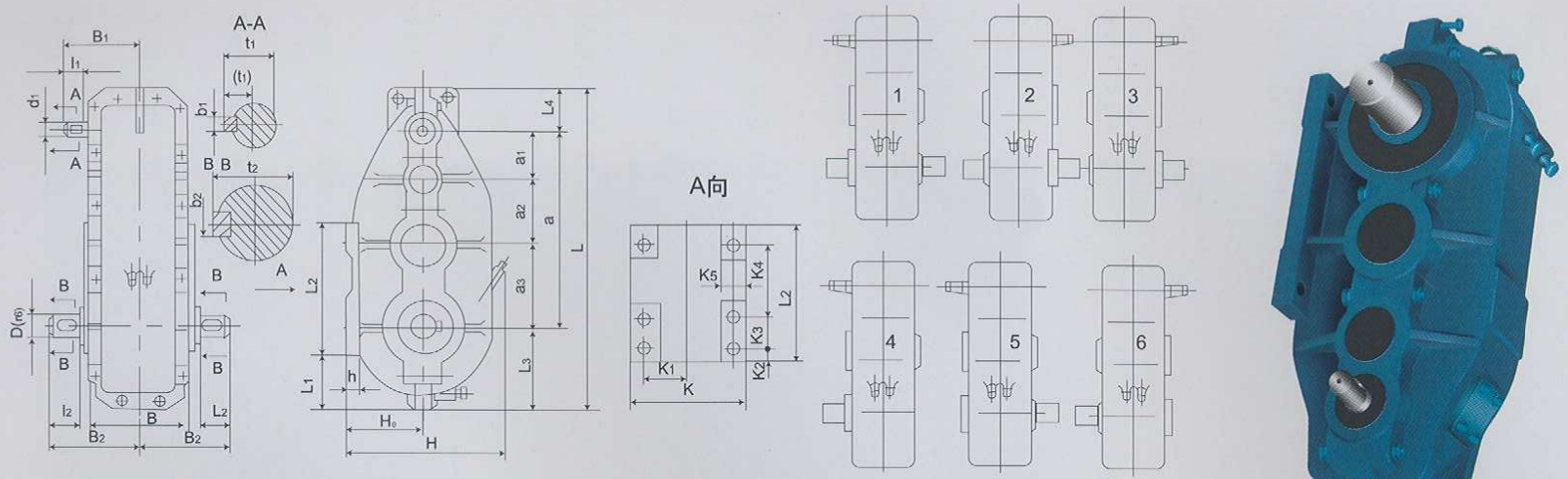
Table of ZS(ZSH) Decelerator carrying capacity

速比 speed ratio	工作类型 service type \ 电机转速 motor rotate speed \ 尺寸 Size	50	56	63	71	80	90	100	112	125	140	160	180	200	224	250	280
		n_1=1000 (转/分) turns/min															
ZS50	中型 middle type	6.46	5.75	5.06	5.06	4.41	3.81	3.28	2.85	2.65	2.37	2.12	1.89	1.67	1.39	1.24	1.10
	连续型 continuous type	3.70	3.30	2.96	2.65	2.32	2.06	1.86	1.66	1.37	1.23	1.09	0.973	0.864	0.718	0.637	0.567
ZS65	中型 middle type	12.5	11.1	9.98	8.92	7.81	6.95	6.25	5.59	4.58	4.10	3.66	3.26	2.89	2.40	2.13	1.90
	连续型 continuous type	6.38	5.70	5.11	4.57	4.00	3.56	3.20	2.86	2.36	2.12	1.89	1.68	1.49	1.24	1.10	0.979
ZS75	中型 middle type	19.7	17.6	15.8	14.1	12.4	11.0	9.92	8.86	7.26	6.51	5.81	5.17	4.59	3.82	3.39	3.10
	连续型 continuous type	10.1	9.04	8.11	7.25	6.35	5.65	5.09	4.54	3.75	3.36	3.00	2.67	2.37	1.97	1.75	155
ZS82.5	中型 middle type	29.4	26.3	23.6	21.1	18.5	16.4	14.8	13.2	10.8	9.71	8.67	7.71	6.85	5.70	5.06	4.49
	连续型 continuous type	15.1	13.5	12.1	10.8	9.47	8.42	7.58	6.78	5.59	5.01	4.47	3.98	3.53	2.94	2.61	2.32
ZS95	中型 middle type	41.8	37.4	33.6	30.0	26.3	23.4	21.1	18.8	15.4	13.8	12.3	11.0	9.75	8.11	7.20	6.40
	连续型 continuous type	21.4	19.2	17.2	15.4	13.5	12.0	10.8	9.64	7.95	7.13	6.37	5.66	5.03	4.18	3.71	3.30
ZS110	中型 middle type	57.3	51.3	46.0	41.1	36.0	32.1	28.9	25.8	21.1	18.9	16.9	15.1	13.4	11.1	9.87	8.77
	连续型 continuous type	29.4	26.3	23.6	21.1	18.5	16.4	14.8	13.2	10.9	9.78	8.73	7.77	6.90	5.73	5.09	4.53
ZS125	中型 middle type	94.0	84.2	74.4	70.9	62.1	55.3	48.9	42.7	36.5	32.7	29.2	26.0	23.1	19.2	17.0	15.2
	连续型 continuous type	50.6	45.3	40.6	36.3	31.8	28.3	25.5	22.8	18.8	16.9	15.1	13.4	11.9	9.90	8.79	7.82
ZS145	中型 middle type	156	140	126	112	98.5	87.7	79.0	70.6	57.8	51.9	46.4	41.2	36.6	30.5	27.0	24.1
	连续型 continuous type	80.1	71.7	64.4	57.6	50.5	44.9	40.5	36.2	29.8	26.8	23.9	21.3	18.9	15.7	14.0	12.4
ZS165	中型 middle type	233	208	187	167	147	131	118	105	86.2	77.4	69.1	61.5	54.6	45.4	40.3	35.9
	连续型 continuous type	119	107	95.8	85.7	75.2	66.9	60.3	53.9	44.5	39.9	35.7	31.7	28.2	23.4	20.8	18.5

速比 speed ratio	工作类型 service type	尺寸 Size / 电机转速 motor rotate speed	50	56	63	71	80	90	100	112	125	140	160	180	200	224	250	280
		n_1=1500 (转／分) turns/min																
ZS50	中型 middle type		8.54	7.62	6.72	6.72	5.86	5.08	4.38	3.81	3.81	3.56	3.18	2.69	2.51	2.09	1.85	1.65
	连续型 continuous type		5.53	4.94	4.43	3.96	3.47	3.09	2.78	2.48	2.05	1.84	1.64	1.46	1.29	1.08	0.955	0.849
ZS65	中型 middle type		18.6	16.6	14.9	13.3	11.7	10.4	9.36	8.36	6.85	6.14	5.49	4.88	4.33	3.60	3.20	2.84
	连续型 continuous type		9.53	8.52	7.64	6.83	5.99	5.32	4.80	4.29	3.53	3.17	2.83	2.52	2.23	1.86	1.65	1.47
ZS75	中型 middle type		27.8	24.9	22.0	21.1	18.5	16.5	14.4	12.6	10.9	9.75	8.71	7.74	6.87	5.72	5.08	4.51
	连续型 continuous type		15.1	13.5	12.1	10.8	9.49	8.45	7.61	6.80	5.61	5.03	4.49	4.00	3.55	2.95	2.62	2.33
ZS82.5	中型 middle type		40.7	37.8	34.4	31.2	27.6	24.6	22.1	19.8	16.2	14.5	13.0	11.6	10.3	8.53	7.57	6.73
	连续型 continuous type		22.5	20.1	18.1	16.1	14.1	12.6	11.3	10.1	8.36	7.50	6.70	5.96	5.29	4.40	3.91	3.47
ZS95	中型 middle type		62.3	55.8	50.1	44.8	39.3	34.9	31.5	28.1	23.1	20.7	18.5	16.4	14.6	12.1	10.8	9.59
	连续型 continuous type		31.9	28.6	25.7	22.9	20.1	17.9	16.1	14.4	11.9	10.7	9.53	8.48	7.53	6.26	5.56	4.95
ZS110	中型 middle type		85.3	76.4	68.6	61.3	53.8	47.9	43.1	38.6	31.6	28.3	25.3	22.5	20.0	16.6	14.8	13.1
	连续型 continuous type		43.7	39.1	35.1	31.4	27.6	24.5	22.1	19.8	16.3	14.6	13.1	11.6	10.3	8.59	7.63	6.78
ZS125	中型 middle type		121	108	96.2	96.2	84.5	73.7	63.9	56.0	54.5	48.9	43.7	38.9	34.5	28.7	25.5	22.7
	连续型 continuous type		75.2	67.3	60.5	54.1	47.6	42.3	38.1	34.1	28.1	25.2	22.6	20.1	17.8	14.8	13.2	11.7
ZS145	中型 middle type		220	198	162	162	142	124	108	94.8	86.4	77.5	69.3	61.7	54.8	45.6	40.5	36.0
	连续型 continuous type		119	107	95.7	85.7	75.2	67.0	60.4	54.0	44.6	40.0	35.8	31.8	28.3	23.5	20.9	18.6
ZS165	中型 middle type		310	290	272	241	218	193	168	140	129	116	103	91.9	81.7	68.0	60.4	53.7
	连续型 continuous type		177	158	142	127	122	99.7	90.0	80.5	66.4	59.6	53.3	47.4	42.1	35.1	31.1	27.7

ZSC(L)型立式圆柱齿轮减速器

ZSC(L) Type Vertical Cylindrical Gear Decelerators



注：主动轴之轴端只有 ZSC-750 是锥形其余均为圆柱形

Note: Only the driving shaft edge of ZSC-750 type decelerator is taper and others are cylilnder

型号 Type	中心距 center space				中心高 center height	轮廓尺寸 axle size			轴端尺寸 axle edge size										L_1	L_2	L_3	L_4	K	h	安装尺寸 assemibling size							重量 weght kg
	a	a_1	a_2	a_3	H_0	L	B	H	高速轴 high-speed axle					低速轴 low-speed axle												K_1	K_2	K_3	K_4	K_5	孔径 hole d	孔径 hole n	
									d_1	l_1	B_1	b_1	t_1	D	l_2	B_2	b_2	t_2														
ZSC-350	350	87	123	140	130	600	180	282	22	50	145	6	24.5	45	70	170	14	48.2	110	290	152	98	195	25	77.5	42		220	50	21	4	76
ZSC-400	400	90	140	170	150	670	210	330	30	55	170	8	33	65	85	205	18	69	100	340	180	90	230	25	95	25		280	60	21	4	170
ZSC-600	600	150	200	250	235	980	312	481	35	55	220	10	38	80	115	290	24	85	160	410	250	130	340	30	140	30	120	230	85	21	6	297
ZSC-750	750	200	250	300	335	1220	374	653	50 锥度 taper 1:10	110	342	16	(28)	95	145	350	28	101	236	580	336	134	400	35	165	35	120	380	85	25	6	452

传动比代号及参数 No. of transmission ratio and parameters.

传动比代号 No of transmission ratio	I	II	III	IV	V	VI	VII	VIII	IX
ZSC350	35.1	17.2							
ZSC400	22.4	16.4	37.33	49.86		27			
ZSC600	77.5	59	46.7	37.9	27.3	31.2	21.15	17.16	14.19
ZSC750	166.86	133.87	54.75	34.4	38.97				

ZSC 立式圆柱齿轮减速器承载能力表

Table of ZSCvertical type cylindrical gear decelerator carrying capacity

电机转速 motor rotate speed	工作级别 operation level	型号type / 传动代号 Ratio code / 传动比 Transmission Ratio	ZSC-350		ZSC-400						ZSC-600									ZSC-750				
			I	II	I	II	III	IV	V	VI	I	II	III	IV	V	VI	VII	VIII	IX	I	II	III	IV	V
			25.1	17.2	22.4	16.4	37.33	49.86	32.4	27	77.5	59	46.7	37.9	27.3	31.2	21.15	17.16	14.9	166.86	133.87	54.75	34.4	38.97
		M1-M3	1.2	2.5	3.5	5.0	2.1	1.5	2.31	2.73	4.1	5.4	6.9	8.5	12.0	9.78	14.4	17	21.2	2.6	3.3	8.4	10.0	10.0
600		M4-M5	1.0	2.2	1.9	2.0	1.4	1.2	1.54	1.82	4.1	5.4	6.9	8.5	12.0	9.78	14.4	17	21.2	2.6	3.3	8.4	10.0	10.0
		M6	0.6	1.1	1.3	1.4	0.9	0.8	99	1.17	2.2	2.8	3.2	3.6	4.7	4.14	6.12	7.2	9	2.0	2.5	5.3	7.5	6.6
		M1-M3	1.5	3.1	4.5	6.2	2.8	1.9	3.08	3.64	5.2	6.8	8.7	10.5	15.0	12.1	17.9	21	26.3	3.3	4.1	10.4	12.5	12.5
750		M4-M5	1.3	2.2	2.1	2.3	1.4	1.2	1.54	1.82	5.2	6.8	8.2	10.5	13.0	12.1	17.9	21	26.3	3.3	4.1	10.4	12.5	12.5
		M6	0.7	1.2	1.4	1.7	0.9	0.8	0.99	1.17	2.3	2.8	3.2	4.1	5.2	4.72	6.97	8.2	10.2	2.4	3.0	5.5	9.5	7.0
		M1-M3	2.1	4.2	6.0	8.4	3.8	2.5	4.18	4.93	7.0	9.2	11.5	14.4	20.0	16.6	24.5	28.8	36	4.4	5.6	14.0	16.8	16.8
1000		M4-M5	1.9	3.0	2.8	3.1	1.8	1.6	1.98	2.34	7.0	9.2	11.5	14.0	18.0	16.1	23.8	28.	35	4.4	5.6	14.0	16.8	16.8
		M6	0.9	1.5	1.9	2.1	1.2	1.0	1.32	1.56	3.3	3.8	4.6	5.4	7.0	6.21	9.17	10.8	13.5	3.2	4.0	7.6	10.0	9.5
		M1-M3	2.6	5.2	7.5	10.0	4.8	3.1	5.28	6.23	8.7	11.5	14.5	18.0	25.0	20.7	30.6	36	45	5.6	7.0	17.5	21.0	21.0
1250		M4-M5	2.2	3.5	3.3	3.7	2.4	1.8	2.64	3.12	8.7	11.5	14.0	16.0	21.0	18.4	27.2	32	40	5.6	7.0	17.5	21.0	21.0
		M6	1.1	1.7	2.2	2.6	1.4	1.7	1.54	1.82	3.7	4.6	5.4	6.5	8.3	7.48	11	13	16.2	4.0	4.7	8.7	12.2	11.3
		M1-M3	8.0	6.2	9.0	12.4	5.6	3.8	6.16	7.28	10.4	13.6	17.4	21.0	30.0	25.1	35.7	42	52.5	6.6	8.2	20.8	25.0	25.0
1500		M4-M5	2.6	4.4	4.2	4.6	2.8	2.4	3.08	3.64	10.4	13.6	16.2	21.0	26.0	25.1	35.7	42	52.5	6.6	8.2	20.8	25.0	25.0
		M6	2.4	2.4	2.8	3.4	1.8	1.6	1.98	2.34	4.6	5.6	6.4	8.2	10.4	9.42	13.9	16.4	20.5	4.8	6.0	11.0	15.0	14.0

订货时选用代号示图

Example of selecting model

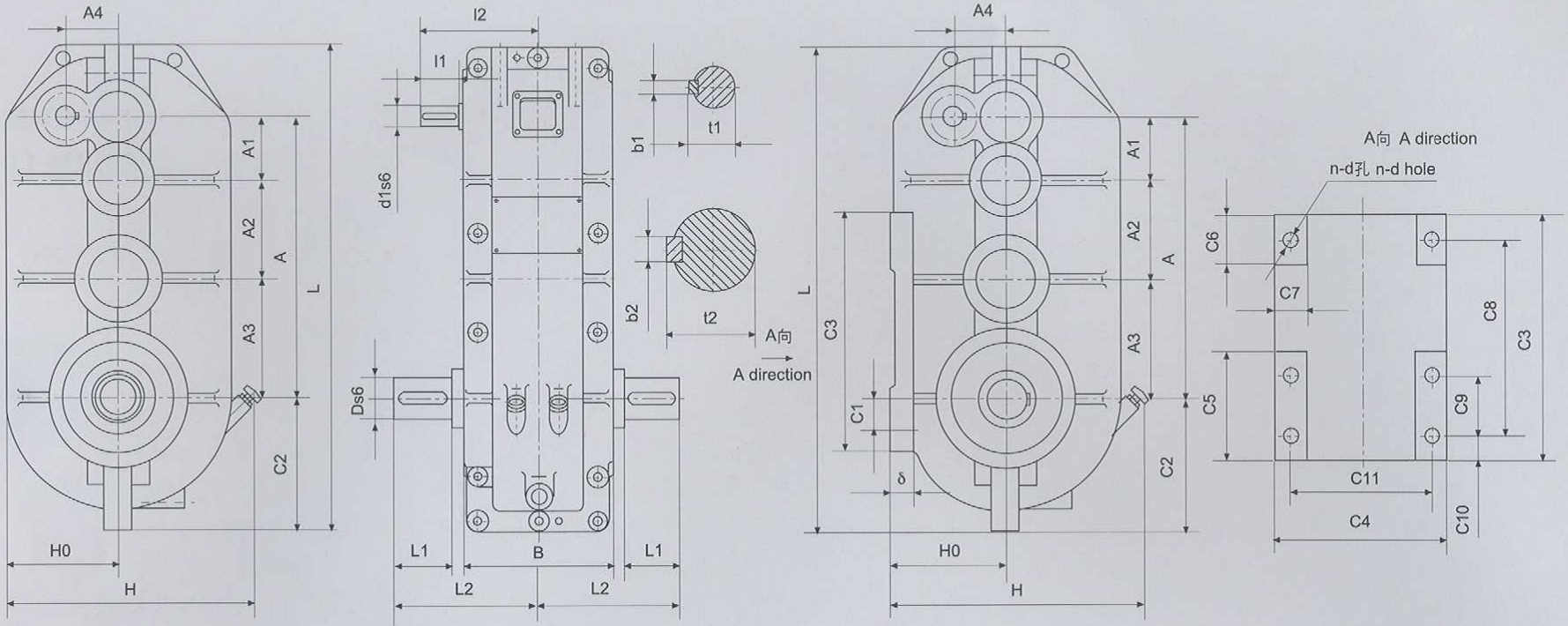
减速器
Reducers

ZSC -400 - II -2

- -2 装配型式 Installing form
- II 传动比代号 transmission ratio
- -400 规格 Specifications
- ZSC 型号 Type of reducer

ZSC(D)立式大速比减速器 Vertical big transmission ratio of ZSC(D) decelerator

一、外形图 Contour dia

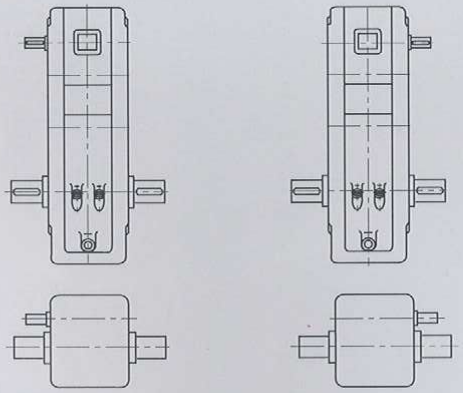


说明
Z101,Z102 减速器的被动轴为圆柱出轴
Explanination:Driven shaft of Z101,Z102 decelerator is silid shaft.

二、相关尺寸表格 Table of referring dimension

型号 Model	图号 Drawing no	中心距 Cenrerdistand					中心高 H0 Center height	轮廓尺寸 Dimension of contour			轴端尺寸 Dimension of shaft end												轴端尺寸 Dimension of shaft end				安装尺寸 Installing dimension										重量 Weight
											高速轴 Hight-speed shaft					低速轴 Low-speed shaft																					
		A	A1	A2	A3	A4		L	B	H	d1	l1	l2	b1	t1	D	D1	D2	L1	L2	B0	b2	t2	C1	C2	C3	δ	C4	C5	C6	C7	C8	C9	C10	C11	孔径d	孔数n	kg
ZSC(D)400+75.8	Z101	400	90	140	170	75.8	165	690	210	355	22	50	180	$6^{0}_{-0.03}$	24.5	65	/	/	105	225	/	$18^{0}_{-0.043}$	69	45	190	340	30	230	90	80	60	280	0	25	190	21	4	148
ZSC(D)600+125	Z102	600	150	200	250	125	235	1040	312	490	30	80	260	$8^{0}_{-0.036}$	33.5	80	/	/	130	305	/	$24^{0}_{-0.052}$	85	60	260	410	30	340	180	85	85	350	120	30	280	21	6	298

三、装配型式 Installing type/from



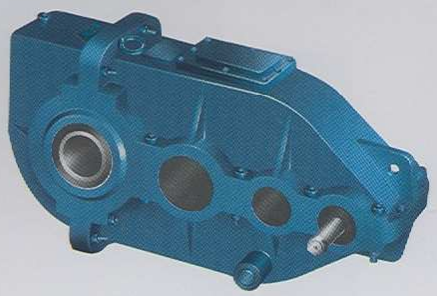
四、传动比表 Table of transmission ratio

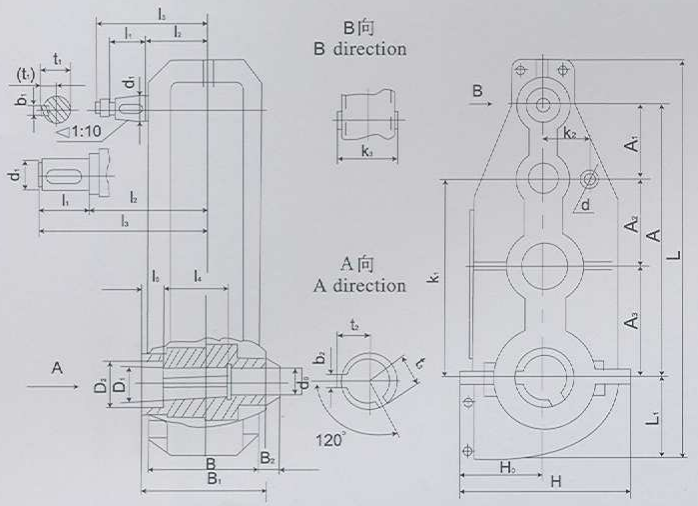
代号 symbol / i / 型号 Model	I	II	III	IV	V	VI	VII	VIII	IX	X
ZSC(D)400+75.8	300	276	254	228	208	192.07	150	120	100	79
ZSC(D)600+125	95.55	120	132.8	163.5	183.5	206.5	236.5	272.5	317	/

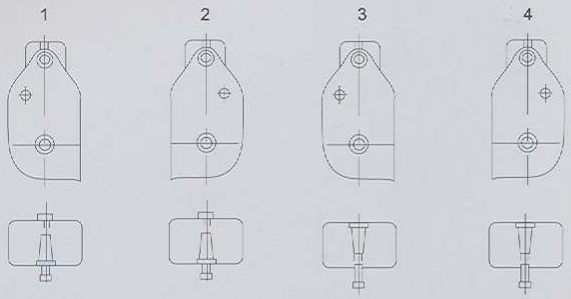
五、减速器输入功率 Input power of decelerator

型 号 Model	ZSC(D) 400+75.8										ZSC(D)600+125								
速 比 Transmission ratio	I	II	III	IV	V	VI	VII	VIII	IX	X	I	II	III	IV	V	VI	VII	VIII	IX
转速 Rotale speed / 功率 k w Power	300	276	254	228	208	192.07	150	120	100	79	95.55	120	132.8	163.5	183.5	206.5	236.5	271.5	317
600	0.3	0.33	0.36	0.4	0.42	0.51	0.6	0.72	0.84	1.08	4.15	3.2	3.05	2.35	2.1	2.05	1.7	1.45	1.26
	0258	0.282	0.306	0.34	0.36	0.435	0.51	0.615	0.72	0.92	3.45	2.75	2.64	2.04	1.8	1.75	1.45	1.26	1.08
	0.222	0.24	0.26	0.29	0.306	0.37	0.432	1.05	0.615	0.78	3.0	2.34	2.25	1.75	1.54	1.5	1.23	1.08	0.92
750	0.375	0.415	0.45	0.504	0.525	0.636	0.75	0.9	1.05	1.35	5.16	3.98	3.82	2.93	2.62	2.55	2.1	1.8	1.57
	0.322	0.354	0.382	0.43	0.45	0.545	0.636	0.765	0.9	1.15	4.42	3.45	3.3	2.55	2.25	2.18	1.8	1.57	1.35
	0.278	0.3	0.325	0.37	0.382	0.46	0.54	0.652	0.765	0.98	3.75	2.92	2.82	2.18	1.93	188	1.54	1.35	1.15
1000	0.5	0.55	0.6	0.67	0.7	0.85	1.0	1.2	1.4	1.8	6.9	5.3	5.1	3.9	3.5	3.4	2.8	2.4	2.1
	0.43	0.47	0.51	0.57	0.6	0.725	0.85	1.02	1.2	1.53	5.9	4.6	4.4	3.4	3.0	2.9	2.4	2.1	1.8
	0.37	0.4	0.434	0.485	0.51	0.615	0.72	0.81	1.02	1.3	5.0	3.9	3.75	2.9	2.55	2.5	2.05	1.8	1.53

ZSC(A)型立式套装圆柱齿轮减速器
ZSC(A) Vertical suit-mounted Cylindrical Gear Deceleratiors







减速器型号 Type of decererator	中心距 center space				主动轴 driving shaft						被动轴 passive axle						
	A	A_1	A_2	A_3	d_1	b_1	t_1	l_1	l_2	l_3	D_1	D_2	L_4	L_5	B_1	B_2	d_0
ZSC-320	320	84	106	130	直22	6	24.5	55	105	-	44.5	53	85	50	200	40	40
ZSC-400	400	105	130	165	直30	8	33	55	115	-	64.5	75	105	60	230	50	50
ZSC-500	500	100	150	250	锥35	10	(19.5)	60	152.5	232.5	79.5	95	130	65	303	72	66
ZSC-600	600	150	200	250	锥40	12	(21.5)	85	160	265	89.5	98	130	140	330	80	105
ZSC-650	650	150	200	300	锥40	12	(21.5)	85	185	295	99.5	112	165	65	380	72	85
ZSC-800	800	200	250	350	锥50	16	(28)	85	265	375	119.5	136	165	95	470	77	85

减速器型号 Type of decererator	d	K_1	K_2	K_3	L	H_0	H	L_1	t_2	t_3	b_2	B	P_2	质量(kg) weight	空心轴键个数
ZSC-320	25	240	90	120	525	150	300	120	24.7	-	14	175	52.5	63	1
ZSC-400	25	350	110	130	650	182.5	366	155	35.6	-	18	210	60	114	1
ZSC-500	28	400	140	205	822	255	511	225	44.2	-	24	285	81	253	1
ZSC-600	28	420	180	312	955	268	530	235	46.7	-	24	312	-	273	1
ZSC-650	32	470	200	270	1060	307(325)	614(632*)	277	54.2	54.2	28	360	82	435	2
ZSC-800	40	600	285	305	1340	400(430)	800(830*)	340	65.2	65.2	32	450	80	866	2

注：1.ZSC-320 和 ZSC-400 减速器的主动轴为圆柱形，其余为圆锥形。
2.ZSC-320,ZSC600,ZSC650 和 ZSC-800 减速器装配型式仅有 1.2 种。
3.表中星号数据为油管路的尺寸。

Noe:1.The driving shafts of ZSC-320, ZSC-400 decelerator are cylinder, while others are taper
2.The installing forms of ZSC-320,ZSC-600,ZSC-800 decelerators are only two types 1 and 2.
3.The values with " * " are the sizes fo oil tubes

传动比代号及参数
Symbol of transmission ratio and relevant parameters.

传动比代号 No of transmission ratio	I	II	III	IV	V	VI
ZSC320	21.6					
ZSC400	12.45	24.9	45.8	32.8	9.58	
ZSC500	16.18	24.08	33.1	44.1		
ZSC600	77.5	59	46.7	37.9	27.3	21.5
ZSC650	96.5	81.9	62.4	51.7	37.6	
ZSC800	31.6	37.4	48.9	62.5		

订货时选用代号示图

Example of selecting model

减速器：ZSC -400 - Ⅱ -2

Reducers

- -2 装配型式 Installing form
- - Ⅱ 传动比代号 transmission ratio
- -400 规格 Specifications
- ZSC 型号 Type of reducer

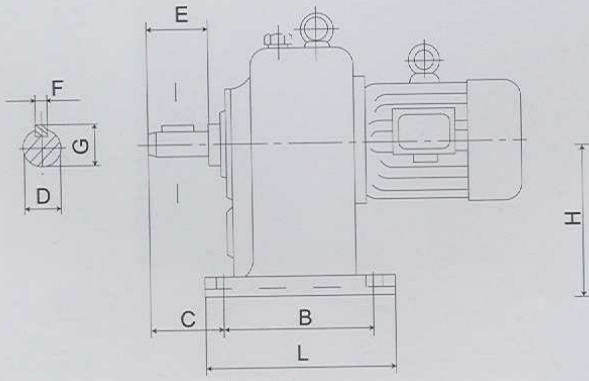
高速轴容许功率 P(kW)

Allowed power for high-speed shaft P(kW)

尺寸 Size / 输出转速 rpm / 速比 speed ratio / 工作类别 service type		ZSC-320	ZSC-400					ZSC-500				ZSC-600						ZSC-650						ZSC-800			
		I	I	II	III	IV	V	I	II	III	IV	I	II	III	IV	V	VI	I	II	III	IV	V	VI	I	II	III	IV
		24.6	12.-45	24.9	45.8	32.8	9.58	16.18	24.08	33.1	44.5	77.5	59	46.7	37.9	27.3	21.15	96.5	81.9	62.4	51.7	37.6	24.03	31.6	37.4	48.9	62.5
600	轻级 Light Duty	2.02	4.1	3.0	2.16	2.45	9.27	6.02	5.56	5.4	4.3	4.1	5.4	6.9	8.5	12.0	15	7.1	8.1	8.8	9.7	11.4		18.5	15.7	12	9.2
	中级 Middle Duty	1.76	3.65	2.61	1.88	2.13	4.92	5.24	4.9	4.68	3.72	4.1	5.4	6.9	8.5	12.0	14	6.19	7	7.6	8.4	9.85	14.4	16.1	13.6	10.4	8
	重级 Heavy Duty	1.3	2.9	2.1	1.62	1.65	3.01	4.45	4.16	4.0	3.16	2.2	2.8	3.2	3.6	4.7	6	5.26	5.95	6.5	7.15	8.5		13.7	11.5	8.8	6.8
750	轻级 Light Duty	2.53	5.15	3.76	2.7	3.06	10.6	7.5	7.1	6.74	5.35	5.2	6.8	8.7	10.5	15	18.5	8.9	10.2	10.9	12.1	13		23	19.5	15	11.5
	中级 Middle Duty	2.2	4.46	6.26	2.35	2.66	5.66	6.54	6.15	5.85	4.6	5.2	6.8	8.2	10.5	13	16	7.74	8.8	9.45	10.5	12.3	18	20.1	17	13	10
	重级 Heavy Duty	1.6	3.6	2.6	2.02	2.06	3.96	5.53	5.2	5	3.95	2.3	2.8	3.2	4.1	5.2	6.5	6.56	7.5	8.1	8.55	10.5		17	14.5	11	8.5
10-00	轻级 Light Duty	3.4	6.85	5.0	3.6	4.1	13.15	10	9.45	9	7.15	7.0	9.2	11.5	14.4	20	24	11.8	13.5	14.5	16.2	19		31	26.1	20	15.4
	中级 Middle Duty	2.34	5.95	4.35	3.14	3.55	6.08	8.72	8.2	7.8	6.2	7.0	9.2	11.5	14	18	21	10.3	11.7	12.6	14	16.	24	26.8	22.7	17.3	13.3
	重级 Heavy Duty	2.1	4.8	3.45	2.68	2.75	4.72	7.4	7.0	6.6	5.26	3.3	3.8	4.6	5.4	7	9	8.75	10	10.7	12	14		22.8	19.3	14.7	11.3

YTC(JTC)系列齿轮减速电机

YTC(JTC)Series Gear Decelerators



外形尺寸 Outer size

机座号 Pedesal No.	A	B	C	D	E	F	G	H	K	b	h	L	重量 Weight (kg)
501	310	250	100	35	80	10	38	250	19	370	30	310	90
502	310	250	100	35	80	10	38	250	19	370	30	310	95
561	370	300	121	50	110	16	54	280	19	430	35	368	130
562	370	300	121	50	110	16	54	280	19	430	35	368	140
751	500	360	147	60	140	18	64	375	24	580	45	446	260
752	500	360	147	60	140	18	64	375	24	580	45	446	275
902	550	360	155	70	140	20	74.5	450	24	640	50	450	385
903	550	360	155	70	140	20	74.5	450	24	640	50	450	455

技术参数 Teehnical Data

型号 Type	额定数据 Rated data				起动电流 Initial current	起动转矩 Initial turning	最大转矩 Maximum turning moment
	功率/极数 (kW) Power	电压 (v) Voltage	电流 (A) Current	转速 (r/min) Wheeling speed	额定电流 (A) Rated current	额定转矩 Rated turning moment	额定转矩 Rated turning moment
YTC501	0.75/6P	380	2.3	31.35.39.44	6.0	2.0	2.0
501	1.1/4P	380	2.7	48.53.59.67.75.88.97.102 114.129.140.164.180.196.219	6.5	2.2	2.2
502	1.1/6P	380	3.2	31.35.39.44	6.0	2.0	2.0
502	1.5/4P	380	3.7	48.53.59.67.75.88.97.102.114. 129.150. 164.171.184.219	6.5	2.2	2.2
561	1 5/6P	380	4.0	31.35.39.44	6.0	2.0	2.0
561	2.2/4P	380	5.0	48.53.59.67.75.88.97.102.114. 129.150. 164.171.184.219	7.0	2.2	2.2
562	2.2/6P	380	5.6	31.35.39.44	6.0	2.0	2.0
562	3/4P	380	6.8	48.53.59.67.75.88.97.102.114. 129.150. 164.171.184.219	7.0	2.2	2.2
751	4/6P	380	9.4	31.35.39.44	6.5	2.0	2.0
751	5.5/4P	380	11.6	48.53.59.67.75	7.0	2.2	2.2
752	5.5/6P	380	12.6	31.35.39.44	6.5	2.0	2.0
752	7.5/4P	380	15.4	48.53.59.67.75	7.0	2.2	2.2
902	7 5/6P	380	17	33	6.5	2.0	2.0
902	11/4P	380	22.6	50.59	7.0	2.2	2.2
903	11/6P	380	24.6	33	6.5	2.0	2.0
903	15/4P	380	30.3	50.59	7.0	2.2	2.2

ZJ 型减速器

ZJ decelerator

ZJ 型减速器是平行轴成折线布置，二级圆柱中硬齿面齿轮传动，是采用涨圈无键联接和接触式楔块逆止器等结构的套装式减速器。

ZJ 型减速器主要用于固定式输送机，特别在斗式提升机中得到广泛应用，也运用于其它多种机械传动中。

ZJ decelerator is a set decelerator with equql shaft diagonal in stallation,two stage hard tooth gear driving,up ring no-shaft connection and tangent model arrester.

ZJ decelerator is applied in fitting transporter,especially in lifter.

工作条件 working condition

输入轴转速不大于 1500r/min;

工作环境温度为 -20℃～+45℃，当环境温度低于 0℃时，必须采用润滑油加热装置，使油温超过 0℃时才能启动。

可正反两向运转。

The input shaft rotating speed in no more than 1500r/min

The ambient temperature is ,the lubricating oil must be heated up to 0℃ when it is below that.

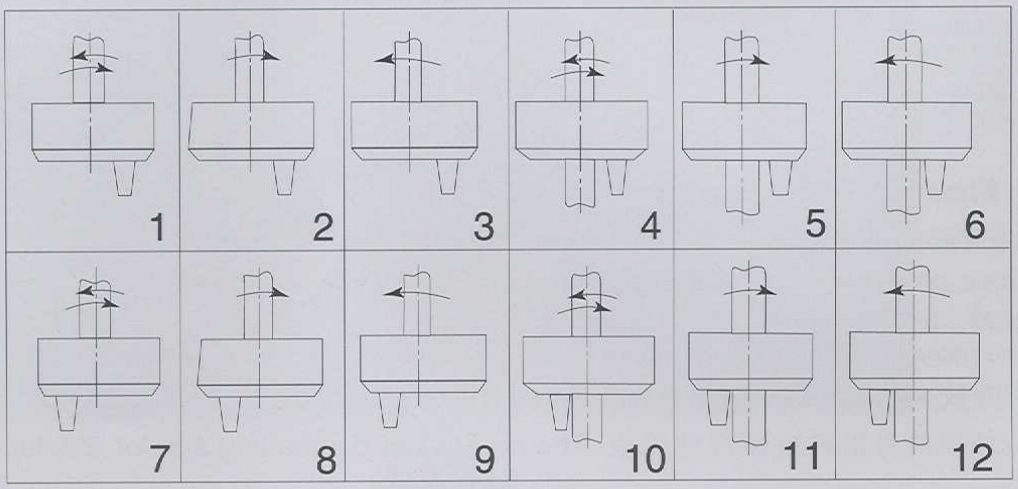
Both forward and backward operation are applied.

型式 Type

装配型式 ZJ型减速器按空心输出轴端分为闷盖 (m) 和通盖 (T)，输出端的旋转方向有双向（L),顺时针单向（S），逆时针单向（N）；按输入轴装配型式分为右（Ⅰ）装和左装（Ⅱ）。减速器共有 12 种装配型式。

Installing form

The hollow shaft edge of ZJdecelerator has type,hole edge and close edge.The rotating direction are double direction(L),"S" clockwise direction,"N" ---anticlockwise and single direction. the shaft installing form are left and right installation.there are totally 12 installing form below.



编号 No.	1	2	3	4	5	6	7	8	9	10	11	12
旋转方向代号 Rotating direction symbol	L	S	N	L	S	N	L	S	N	L	S	N
空心输出轴端盖型式代号 Type of hollow output shaft edge		M			T			M			T	
输入轴装配型式代号 Type of input shaft installing form			I						II			

安装型式 Imstalling Form

ZJ 型减速器的输出端套装在被动轴上，一般采用直立工作位置。在有些特殊情况下，也可采用水平、倾斜、甚至倒置的工作位置。在箱体的一端装有双螺纹拉杆装置。

The output shaft of ZJreducer is installed on passive shaft.usually the vertical position is applied.Under special circumstance,the level,slope and reverse position are applied.the other edge of box is installed double worm pole fitting.

型号 Type

ZJ 160 10 S T I

- I：输入轴装配形式 "I" 右装，"II" 左装
  input shaft installing form, "I" means right installation and "II" means left installation.
- T：空心输出轴端盖形式，分带通孔盖 "T"（双端）和闷盖 "M"（单端）
  Hollow output shaft edge type.Hole edge "T" and close edge "M"
- S：旋转方向代号："L" 双向，"S" 顺时针单向，"N" 逆时针单向
  Rotating direction mode: "L"-double direction, "S" clockwise and single direction, "N" anticlockwise and single direction.
- 10：公称传动比，分 10.16 两种
  nominal transmission ratio, 10 and 16
- 160：额定输出扭矩的 1/10(N.M)
  1/10 of rated output torque (N.M)
- ZJ：轴装式减速器
  shaft fitting decelerator

型号 基本参数 Type	ZJ63		ZJ100		ZJ160		ZJ250		ZJ400		ZJ630	
额定输出转矩(Nm) Roted output torque	630		1000		1600		2500		4000		6300	
公称传动比 nominal transmissior ratio	10	16	10	16	10	16	10	16	10	16	10	16
额定逆止力矩(Nm) rated arrested torque	1000		1600		2500		4000		6300		10000	
质 量(kg) weight	78		108		163		230		320		470	

基本参数 Basic Parameter

ZJ 型减速器的基本参数见表

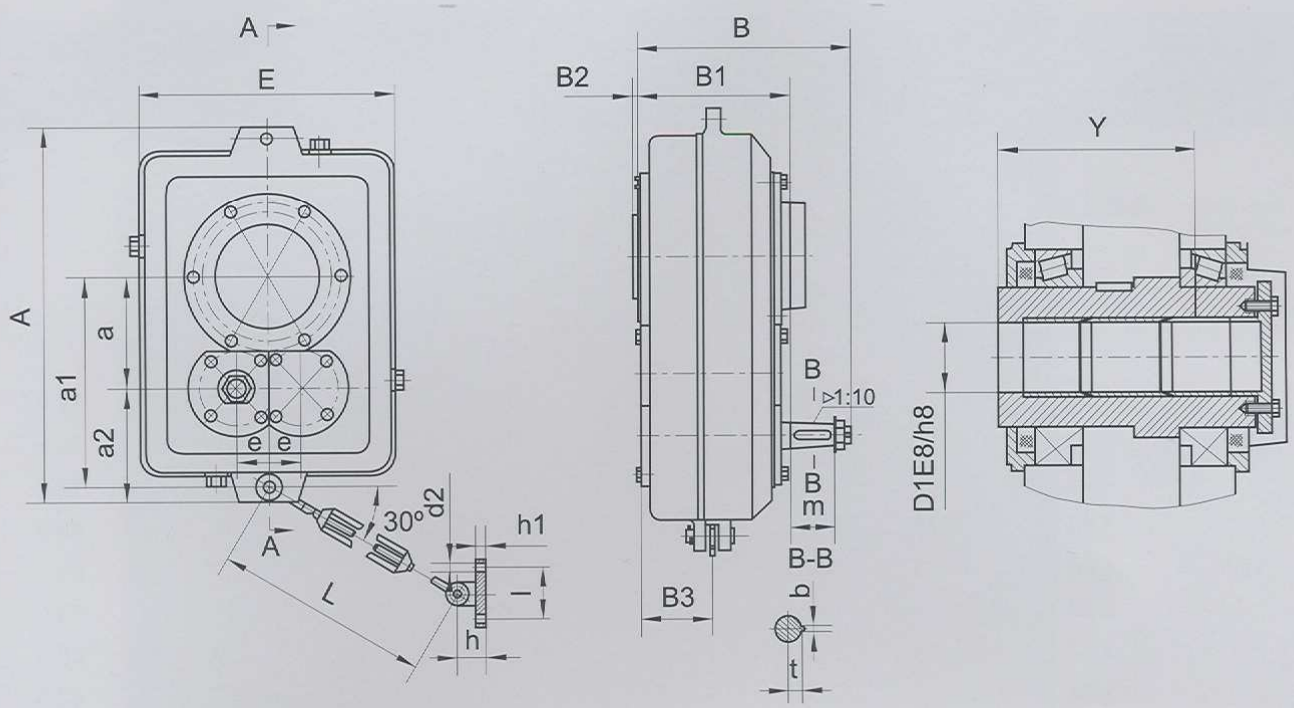
The basic parameters of ZJdecelerator are losted below

注：额定输出扭矩为平衡负荷、连续工作时的值。

Note: The pated ouput torque is the valaeif of balanced load of continuous operation.

外形和安装尺寸 Contour and installing size

ZJ型减速器的外形和安装尺寸见表 The contour and installing size of ZJ decelerator are listed below



ZJ 型减速器的外形安装尺寸

Installing size of ZJtype decelerator

代号 型号 Type	A	a	a_1	a_2	B	B_1	B_2	B_3 ±2	E	e	D_1	Y max	Y min	D_2	b	t	m	d1	d2	L max	L min	l	h	h_1
ZJ63	495	149	280	151	288	205	0	86	335	42	55	205	138	35	6	18.5	60	16	13	416	310	88	38	12
ZJ100	552	174	315	161	334	222	2	90	385	47	70	215	155	40	10	20.9	85	16	13	416	310	88	38	12
ZJ160	679	198	395	219	348	238	1	100	465	58	70	230	165	45	12	23.4	85	20	20	582	390	100	45	12
ZJ250	755	223	420	222	382	272	2	116	530	63	90	260	180	50	12	25.9	85	22	20	582	390	100	45	12
ZJ400	900	274	495	251	449	309	3	128	620	73	110	265	185	60	12	31.4	110	25	24	690	470	125	52	16
ZJ630	995	298	545	282	487	347	3	141	680	84	110	275	195	65	16	33.9	110	25	24	690	470	125	52	16

承载能力 Carrying Capacity

ZJ 型减速器的额定输出功率，当公称传动比为 10 时，见表；当公称传动比为 16 时，见表减速机允许随短期超负荷能力为额定输出转矩的 2.5 倍。

When nominal transmission ratio is 10,rated output power of ZJ decelerator is showed on graph, when the ratio is 16,the allowed capacity is 2.5 times of rated output torque.

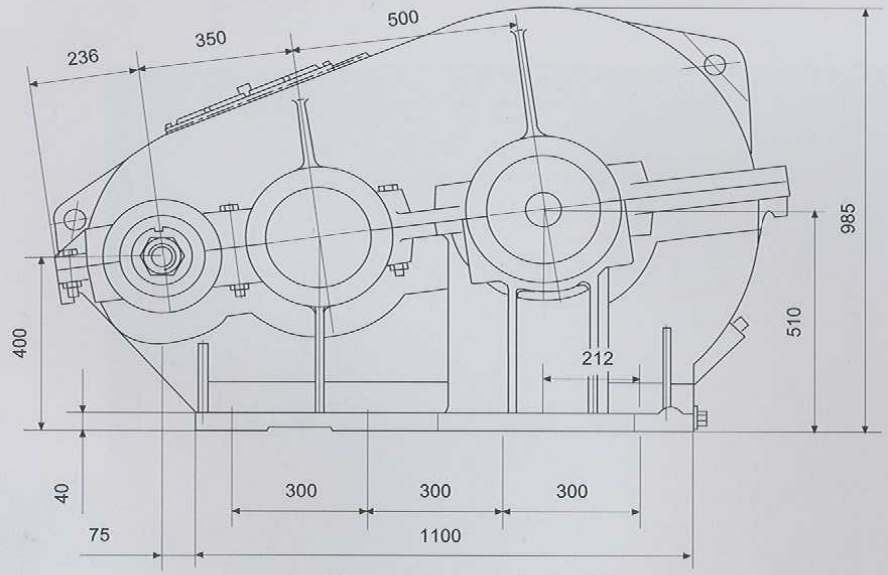
减速器型号 Type			ZJ63-10	ZJ100-10	ZJ160-10	ZJ250-10	ZJ400-10	ZJ630-10
电机转速 motor wheeling speed (r/min)	带传动速比 belt transmission speed ratio	输出轴转速 output shaft wheeling speed (r/min)	额定输出功率 Rated output power (KW)					
1500	1.00	147.00	9.7	15.4	24.6	38.5	61.6	97.0
	1.12	131.25	8.7	13.7	22.0	34.4	55.0	86.6
	1.25	118.55	7.8	12.4	19.9	31.5	49.7	78.2
	1.40	105.00	6.9	11.0	17.6	27.5	44.0	69.3
	1.60	91.88	6.1	9.6	15.4	24.1	38.5	60.6
	1.80	81.67	5.4	8.6	13.7	21.4	34.2	53.9
	2.00	73.50	4.8	7.7	12.3	19.2	30.8	48.5
	2.24	65.63	4.3	6.9	11.0	17.2	27.5	43.3
	2.50	58.80	3.9	6.2	9.9	15.4	24.6	38.8
1000	1.00	98.00	6.5	10.3	16.4	25.7	41.0	64.6
	1.12	87.50	5.8	9.2	14.7	22.9	36.6	57.7
	1.25	78.4	5.2	8.2	13.1	20.5	32.8	51.7
	1.40	70.00	4.6	7.3	11.7	18.3	29.3	46.2
	1.60	61.25	4.0	6.4	10.3	16.0	25.7	40.4
	1.80	54.44	3.6	5.7	9.1	14.3	22.8	35.9
	2.00	49.00	3.2	5.1	8.2	12.8	20.5	32.3
	2.24	43.75	2.9	4.6	7.3	11.5	18.32	28.9
	2.50	39.20	2.6	4.1	6.6	10.3	16.4	25.9
750	1.00	73.50	4.8	7.7	12.3	19.2	30.8	48.5
	1.12	65.63	4.3	6.9	11.0	17.2	27.5	43.3
	1.25	58.80	3.9	6.2	9.9	15.4	24.6	38.8
	1.40	52.50	3.5	5.5	8.8	13.7	22.0	34.6
	1.6	45.94	3.0	4.8	7.7	12.0	19.2	30.3
	1.80	40.83	2.7	4.3	6.8	10.7	17.1	26.9
	2.00	36.75	2.4	3.8	6.2	9.6	15.4	24.2
	2.24	32.81	2.2	3.4	5.5	8.6	13.7	21.6
	2.50	29.40	1.9	3.1	4.9	7.7	12.3	19.3

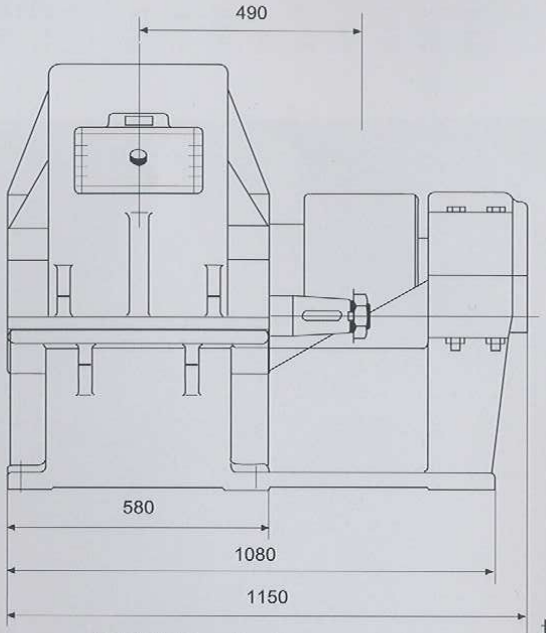
注： 1.本表是按减速器实际传动比 i=9.82 计算编制的。
2.输出轴转速是按线绳结构的三角带计算即选取弹性滑动系数 e=0.02

Note: 1.The graph above is designed under aetual transmission ratio i=9.82.
2.The output shaft wheeling speed is calulated under temperary factor e=0.02.

减速器型号 Type			ZJ63-16	ZJ100-16	ZJ160-16	ZJ250-16	ZJ400-16	ZJ630-16
电机转速 motor wheeling speed (r/min)	带传动速比 belt tromsmission wheel speed	输出轴转速 output shaft wheeling speed (r/min)	额定输出功率 Rated output power (KW)					
1500	1.00	93.67	6.2	9.8	15.7	24.5	39.2	61.8
	1.12	83.65	5.5	8.8	14.0	21.9	30.5	55.2
	1.25	74.95	4.9	7.8	12.6	19.6	31.4	49.0
	1.40	66.92	4.4	7.0	11.2	17.5	28.0	44.1
	1.60	58.56	3.9	6.1	9.8	15.3	24.5	38.6
	1.80	52.05	3.4	5.5	8.7	13.6	21.8	34.3
	2.00	46.85	3.1	4.9	7.8	12.3	19.6	30.9
	2.24	41.83	2.8	4.4	7.0	10.9	17.5	27.6
	2.50	37.48	2.5	3.9	6.3	9.8	15.7	24.7
1000	1.00	62.46	4.1	6.5	10.5	16.4	26.2	41.2
	1.12	55.77	3.7	5.8	9.3	14.6	23.4	36.8
	1.25	49.97	3.3	5.2	8.4	13.1	20.9	33.0
	1.40	44.61	2.9	4.6	7.5	11.7	18.7	29.4
	1.60	39.04	2.6	4.1	6.5	10.2	16.4	25.8
	1.80	34.70	2.3	3.6	5.8	9.1	14.5	22.9
	2.00	31.23	2.1	3.3	5.2	8.2	13.1	20.6
	2.24	27.88	1.8	2.9	4.7	7.3	11.7	18.4
	2.50	25.0	1.6	2.6	4.2	6.5	10.5	16.48
750	1.00	46.85	3.1	4.9	7.8	12.3	19.6	30.9
	1.12	41.83	2.8	4.4	7.0	10.9	17.5	27.6
	1.25	37.48	2.5	3.9	6.3	9.8	15.7	24.7
	1.40	33.46	2.2	3.5	5.6	8.8	14.0	22.1
	1.60	29.28	1.9	3.1	4.9	7.7	123	19.3
	1.80	26.03	1.7	2.7	4.4	6.8	10.9	17.2
	2.00	23.42	1.5	2.5	3.9	6.1	9.8	15.5
	2.24	20.91	1.4	2.2	3.5	5.5	8.8	13.8
	2.50	18.74	1.2	2.0	3.1	4.9	7.8	12.4

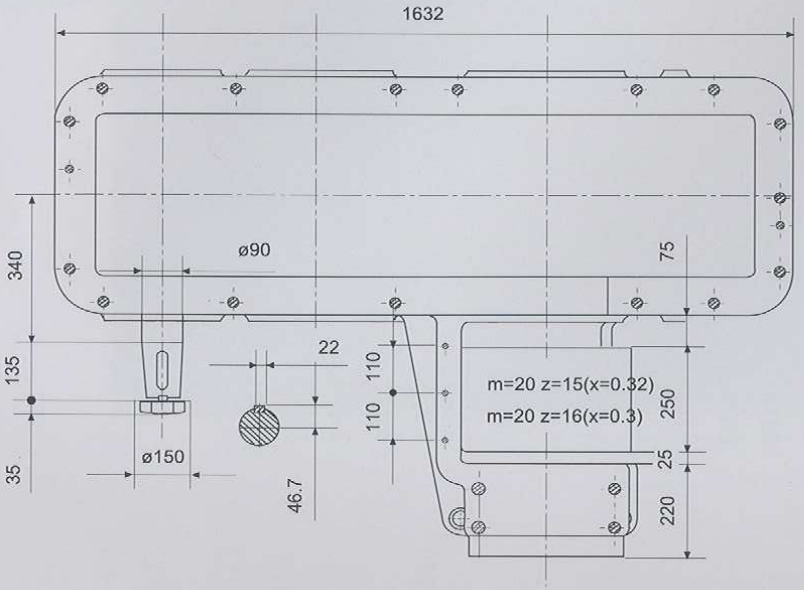
A850带开式齿轮减速器 A850 decelerator with open gear



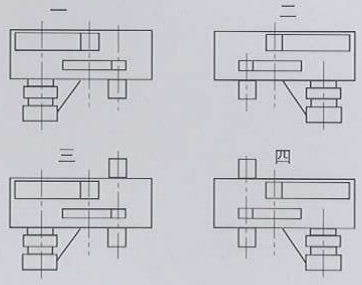


传动比表

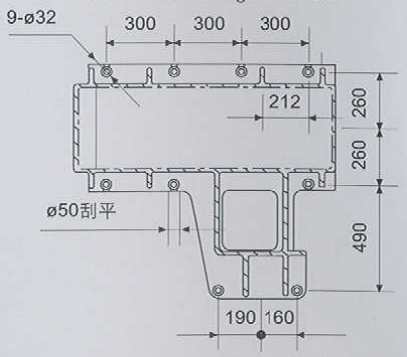
传动比代号 Transmission ratio symbol	i
I	48.57
II	40.17
III	31.5
IV	23.34
V	20.49
VI	15.75
VII	12.64
VIII	10.35
IX	8.23



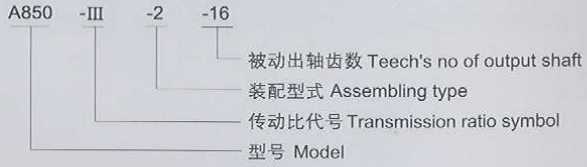
装配型式 Installing form



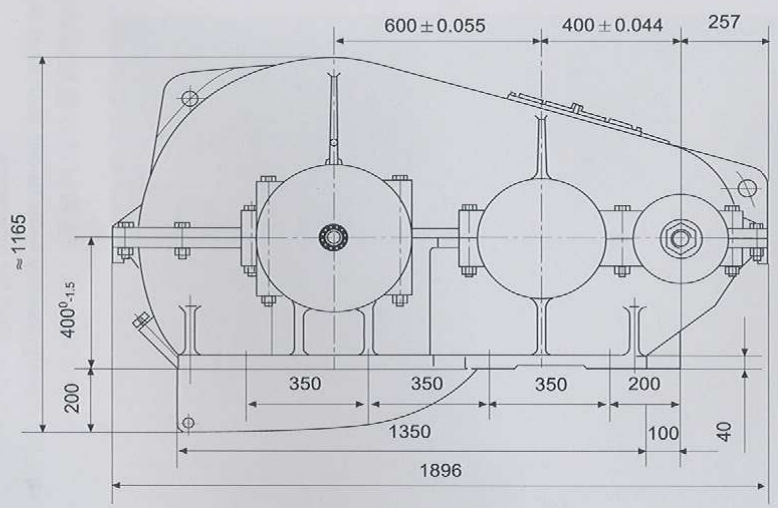
地脚螺栓孔布置
Collocation of holding down hole

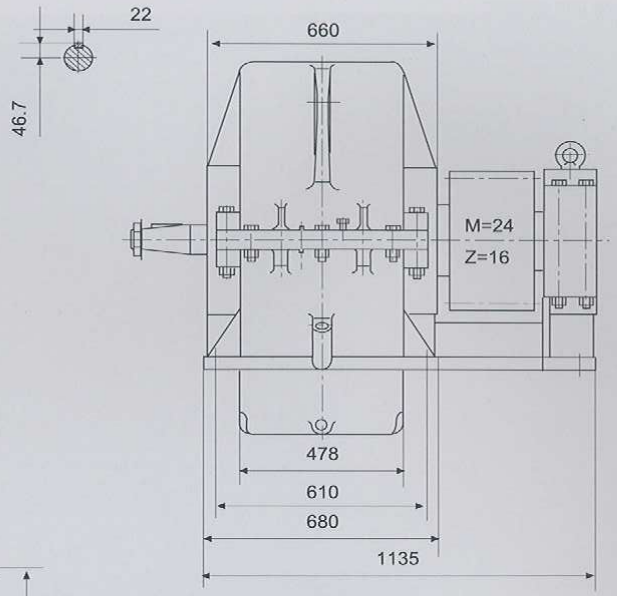


标记方法示例 Earmark

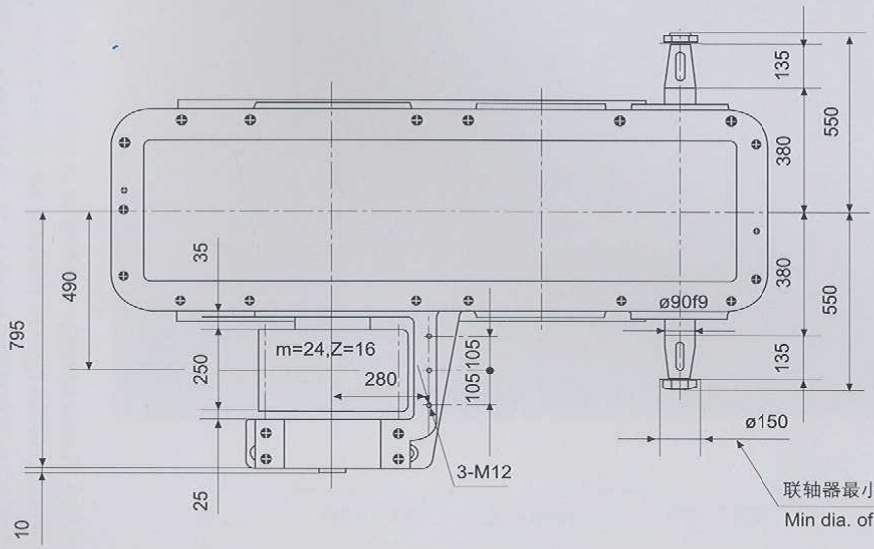


A1000带开式齿轮减速器 A1000 decelerator with open gear

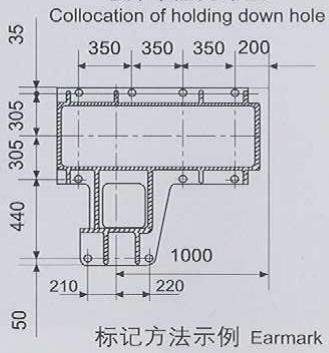




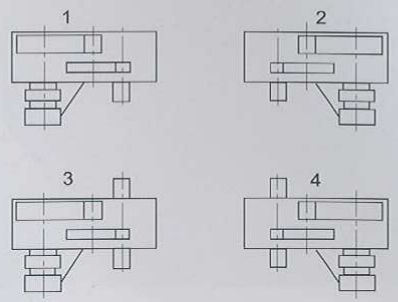
传动比代号 Transmission ratio symbol	$\frac{z2}{z1}\times\frac{z4}{z3}$	i
I	$\frac{88}{11}\times\frac{85}{14}$	48.57
II	$\frac{86}{13}\times\frac{85}{14}$	40.17
III	$\frac{85}{14}\times\frac{83}{16}$	31.5
IV	$\frac{81}{18}\times\frac{83}{16}$	23.34
V	$\frac{79}{20}\times\frac{83}{16}$	20.49
VI	$\frac{77}{22}\times\frac{81}{18}$	15.75
VII	$\frac{73}{26}\times\frac{81}{18}$	12.64
VIII	$\frac{69}{30}\times\frac{81}{18}$	10.35
IX	$\frac{64}{35}\times\frac{81}{18}$	8.23



地脚螺栓孔布置
Collocation of holding down hole



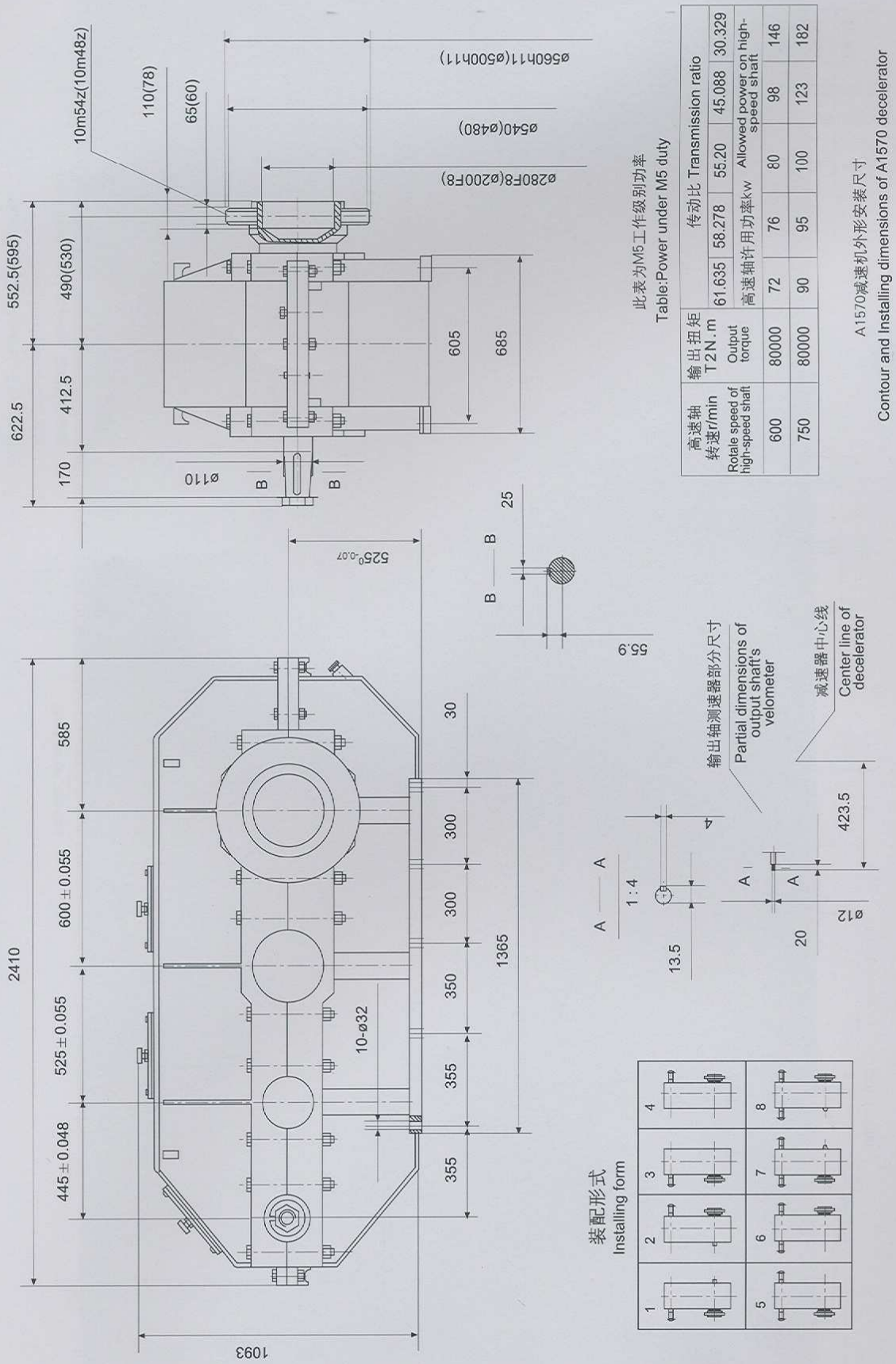
装配型式
Installing type



标记方法示例 Earmark

A1000 -III -2 -16

-16 被动出轴齿数 Teech's no of output shaft
-2 装配型式 Assembling type
-III 传动比代号 Transmission ratio symbol
A1000 型号 Model

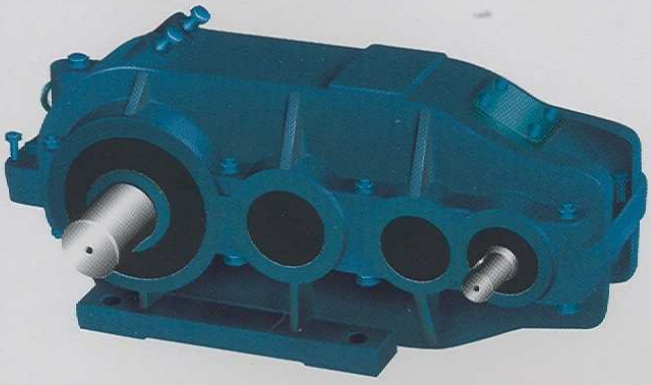


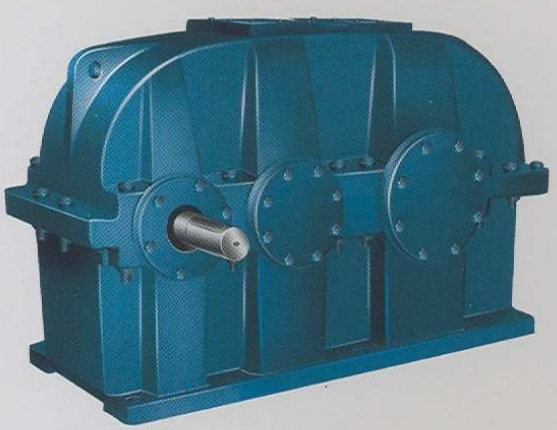
此表为M5工作级别功率
Table:Power under M5 duty

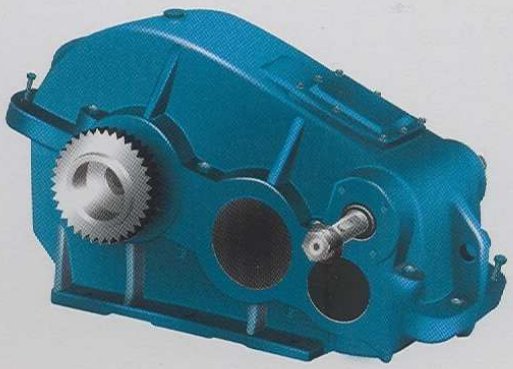
高速轴转速r/min Rotale speed of high-speed shaft	输出扭矩 T2N.m Output torque	传动比 Transmission ratio			
		61.635	58.278	55.20	45.088	30.329
		高速轴许用功率kw Allowed power on high-speed shaft			
600	80000	72	76	80	98	146
750	80000	90	95	100	123	182

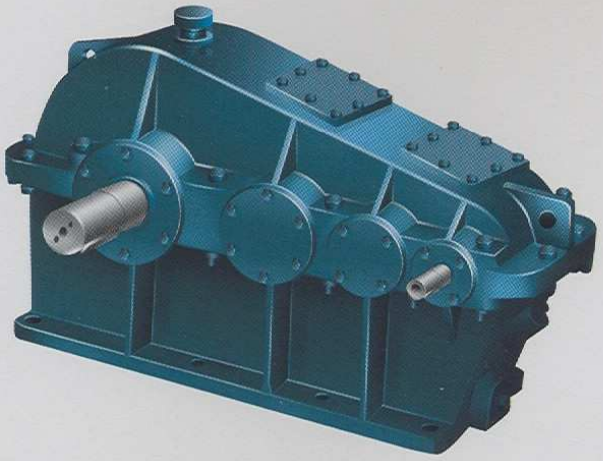
A1570减速机外形安装尺寸
Contour and Installing dimensions of A1570 decelerator

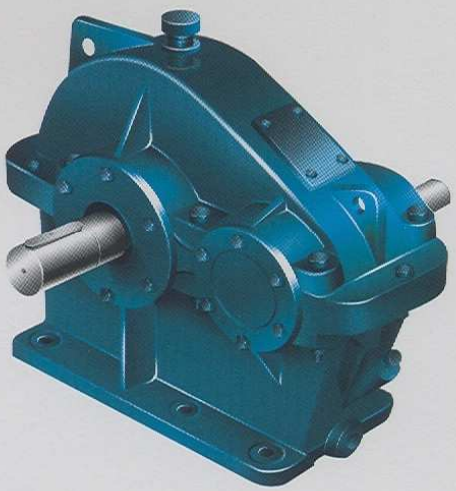
本厂拥有对本说明书的解释权，若有疑问请与本厂技术部门联系。一般每年一版，选用时请以最新版本为准。
The manufacturer has the right to interpret this instruction book, and any questions may refer to our technical department. This instruction book is updated every year, so the latest edition should be identified for reference.

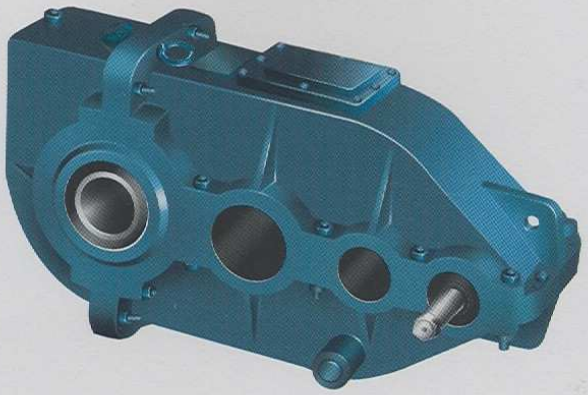


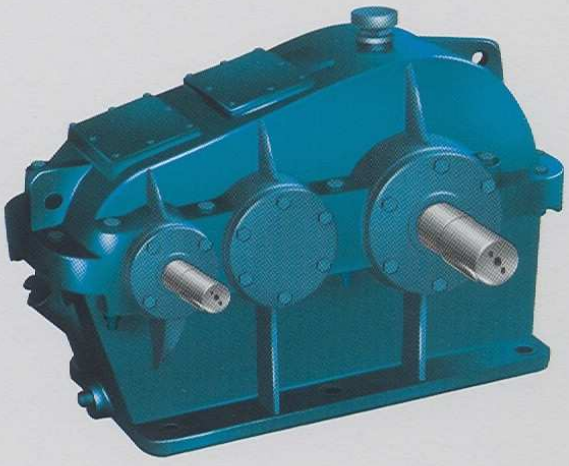












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