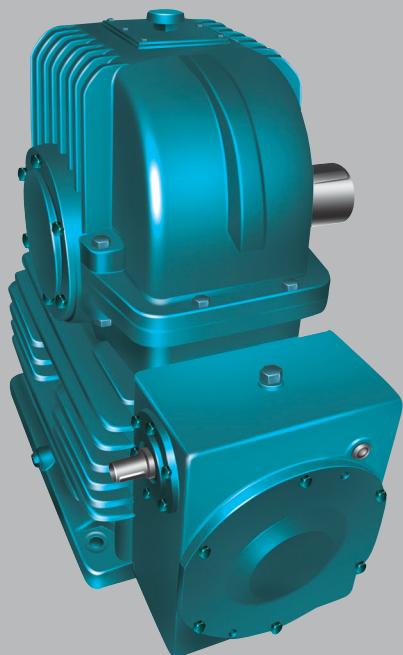


TAI LONG



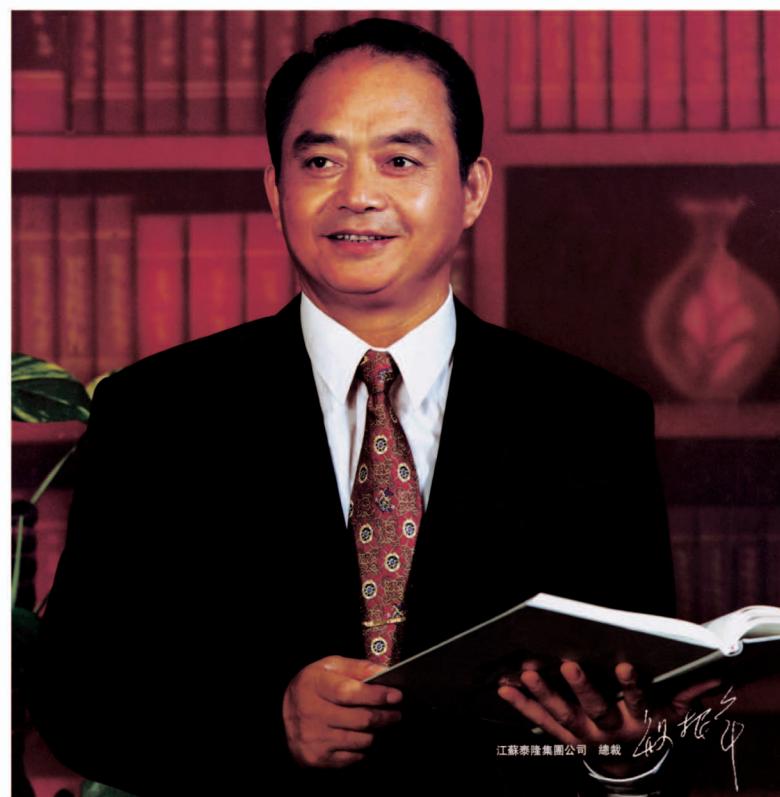
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圆弧圆柱双级蜗杆
及齿轮—蜗杆减速器

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.



Company Brief

Tailong Group is located in Taixing urban area at the border of Yangtze 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, TPB 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 "China top brand", "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". Tailong brand is recognized as "the Chinese famous brand" by national industrial and commercial bureau. 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.

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；TPB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“中国名牌”，“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，泰隆商标被评为“中国驰名商标”，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！

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圆弧圆柱双级 蜗杆及齿轮——蜗杆减速器概述

Round Cyclind Double Stage Worm And Gear-worm Decelerator

一、概述 Brief:

ZC1型双级蜗杆及齿轮——蜗杆减速器符合国家标准JB/T7008-93。

本减速器主要适用于冶金、矿山、起重、运输、化工、建筑、建材及轻工等行业。减速器输入轴转速不超过1500r/min。减速器工作环境温度为-40℃ ~ + 40℃，当工作环境温度低于0℃时，起动前润滑油必须加热到0℃以上，减速器可正、反向运转。

The ZC1 double stage worm and gear-worm decelerator conform to national standard JB/T008-93. The reducers are applied in metallurgy, mining, craning, transportation, chemical industry, building, construction and light industry. The input shaft rotating speed is less than 1500r/min and the ambient temperature is -40℃~40℃. please note the lubricating oil must be heated up to 0℃ if the temperature is below that.

The forward and backward are applicable.

二、型号、标记、基本参数、尺寸 Type,symbol,parameters and size

1、型号 Type

CCWU——低速级蜗杆在蜗轮之下的双级蜗杆减速器；

CCWU-double stage worm decelerator with low-speed worm under worm.

CCWS——低速级蜗杆在蜗轮之侧的双级蜗杆减速器；

CCWU-double stage worm decelerator with low-speed worm beside worm.

CCWO——低速级蜗杆在蜗轮之上的双级蜗杆减速器；

CCWU-double stage worm decelerator with low-speed worm on worm.

GCWU——低速级蜗杆在蜗轮之下的齿轮——蜗杆减速器；

GCWU-gear-worm decelerator with low-speed worm under worm.

GCWS——低速级蜗杆在蜗轮之侧的齿轮——蜗杆减速器；

GCWU-gear-worm decelerator with low-speed worm beside worm.

GCWO——低速级蜗杆在蜗轮之上的齿轮——蜗杆减速器；

GCWU-gear-worm decelerator with low-speed worm on worm.

字母的意义 Word meaning

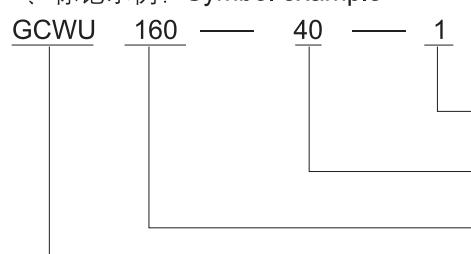
C——表示蜗杆类别为ZC1 C-type of worm ZC1

G——表示齿轮； G-gear

W——表示蜗杆减速器； W-Worm decelerator

U、S、O——分别表示低速级蜗杆位于蜗轮之下、之侧、之上。U、S、O-The low-speed worm under,beside and on the worm gear

2、标记示例 Symbol example



3、基本参数 Parameters

3.1 减速器高速级与低速级的中心距及组合见下表：

Center space and combination of high&low speed decelerator

mm

型号 Type		高速级及低速级中心距 Center space of high &low speed								
		GCWU	高速级high speed	63	80	100	125	160	200	250
CCWU	低速级low speed	100	125	160	200	250	315	355	400	450
GCWS	高速级high speed	63	80	100	125	160	200	250	300	350
CCWS	低速级low speed	100	125	160	200	250	315	355	400	450

型号 Type		高速级及低速级中心距 Center space of high &low speed							
		GCWO	高速级high speed	63	80	100	125	—	—
CCWO	低速级low speed	100	125	160	200	250	—	—	—

3.2 双级蜗杆减速器的公称传动比见下表： Table of double stage worm decelerator nominal transmission ratio

公称传动比 Nominal transmission	200	250	315	400	500	630	800
	1000	1250	1600	2000	2500	3150	3550

3.3 齿轮——蜗杆减速器的公称传动比见下表： Table of gear-worm decelerator nominal transmission ratio

公称传动比 Nominal transmission	35.5	40	45	50	56	63	71	80	90	100
	112	125	140	160	180	200	244	250	280	315

4. 减速器的主要尺寸 Main size

图1~6、表1~6列出了各种减速器的主要尺寸。Figure 1-6,Table1-6 list all main sizes of Rinds decelerators

4.1 CCWU型减速器主要尺寸见图1、表1。CCWU decelerator sizes are shown in Figure1,Table1

4.2 CCWS型减速器主要尺寸见图2、表2。CCWS decelerator sizes are shown in Figure2,Table2

4.3 CCWO型减速器主要尺寸见图3、表3。CCWO decelerator sizes are shown in Figure3,Table3

4.4 GCWU型减速器主要尺寸见图4、表4。GCWU decelerator sizes are shown in Figure4,Table4

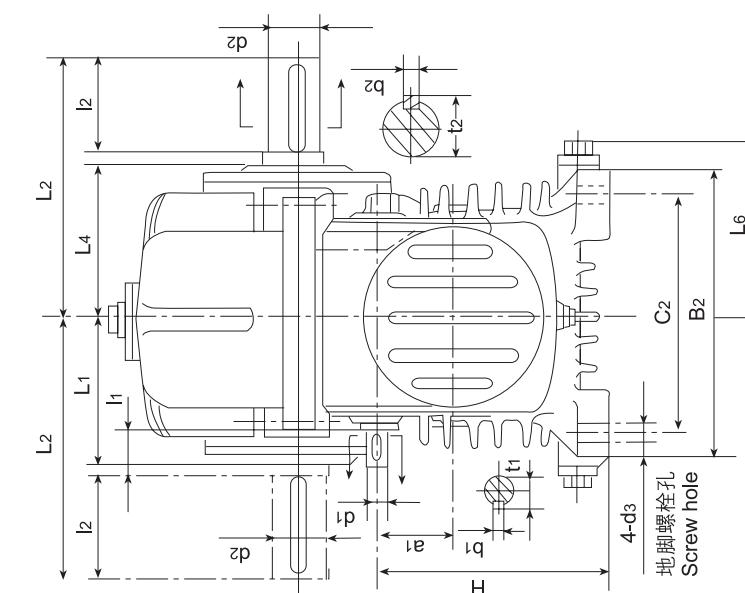
4.5 GCWS型减速器主要尺寸见图5、表5。GCWS decelerator sizes are shown in Figure5,Table5

4.1 GCWO型减速器主要尺寸见图6、表6。GCWO decelerator sizes are shown in Figure6,Table6

二、CCW外型和结构尺寸 External dimension of CCW Decelerator

表1 Table1

型 号 Type	尺 寸 Size	JB/T 7008-93															
		i≤400							i≥500								
a	a1	B1	B2	B3	C1	C2	d1	l1	b1	t1	L1	d1	l1	b1	t1	L1	
CCWU100	100	63	225	240	180	190	200	19j6	28	6	21.5	128	19j6	28	6	21.5	128
CCWU125	125	63	260	250	200	220	205	19j6	28	6	21.5	128	19j6	28	6	21.5	128
CCWU160	160	80	325	300	235	230	250	24j6	36	8	27	151	24j6	36	8	27	151
CCWU200	200	100	400	350	300	280	300	28j6	42	8	31	182	24j6	36	8	27	176
CCWU250	250	125	510	410	370	370	350	32k6	58	10	35	218	28j6	42	8	31	202
CCWU315	315	160	640	530	455	470	445	42k6	82	12	45	277	32k6	58	10	35	253
CCWU355	355	160	730	580	500	540	490	42k6	82	12	45	277	32k6	58	10	35	253
CCWU400	400	200	790	620	545	620	530	48k6	82	14	51.5	324	38k6	58	10	41	300
CCWU450	450	200	885	680	597	700	580	48k6	82	14	51.5	324	38k6	58	10	41	300
CCWU500	500	250	1015	750	695	760	640	55m6	82	16	59	380	42k6	82	12	45	380
型 号 Type	尺 寸 Size	d2	l2	b2	t2	L2	L3	L4	L5	L6	h	H	H1	H2	d3	重量 (不包括油重) Weigh(exclude the oil weight) kg	
CCWU100	48k6	82	14	51.5	212	250	121	133	139	25	175	340	212	14.5		70	
CCWU125	55m6	82	16	59	222	270	133	153	147	30	188	408	250	18.5		102	
CCWU160	65m6	105	18	69	270	317	156	186	172	35	240	510	320	18.5		160	
CCWU200	80m6	130	22	85	325	400	180	235	197	40	300	650	400	24		295	
CCWU250	100m6	165	28	106	385	485	209	285	228	45	350	785	475	28		445	
CCWU315	120m6	165	32	127	420	600	242	352	289	50	440	980	595	35		780	
CCWU355	130m6	200	32	137	470	645	255	397	315	55	460	1085	655	35		990	
CCWU400	150m6	200	36	158	490	705	277	429	335	60	515	1175	715	35		1350	
CCWU450	170m6	240	40	179	560	757	299	484	367	65	555	1310	805	42		1810	
CCWU500	190m6	280	45	200	640	890	343	549	403	80	650	1450	900	42		2580	



装配型式 (A向)
Installing form

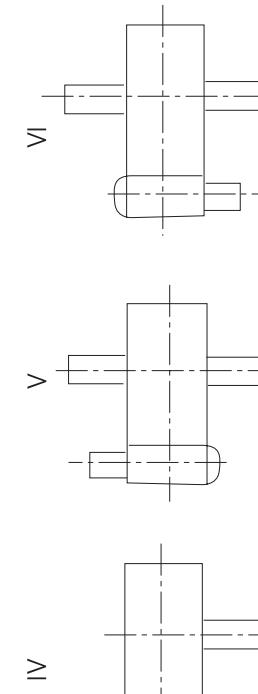
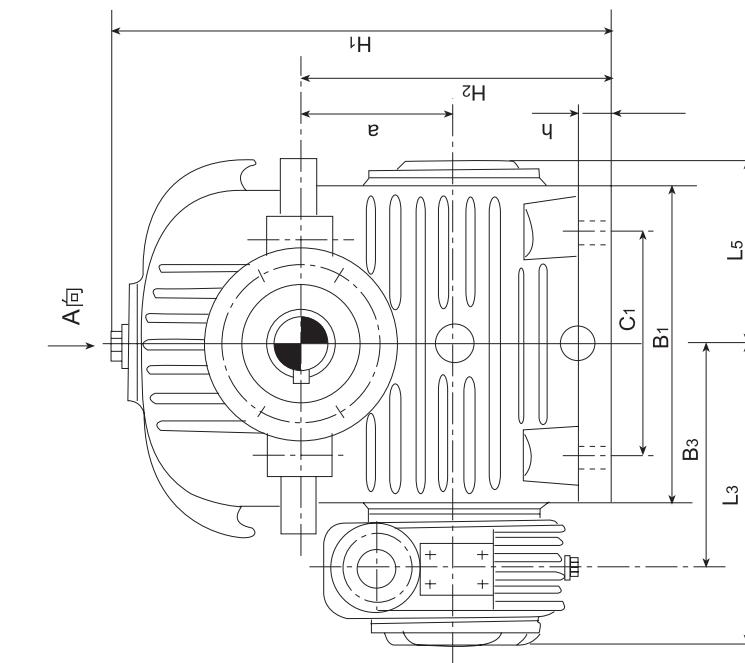


Figure 1

表2 Table2

型 号 Type	尺 寸 Size	JB/T 7008-93													$i \leq 400$			
															d ₁	l ₁	b ₁	t ₁
		a	a ₁	D	D ₁	D ₂	L ₃	L ₄	L ₅	L ₆	L ₇	h	h ₁					
CCWS100	100	63	190	240	270	105	133	180	250	122	28	5	19j6	28	6	21.5	128	
CCWS125	125	63	230	280	320	115	153	200	270	134	32	8	19j6	28	6	21.5	128	
CCWS160	160	80	300	365	400	138	186	235	317	157	32	8	24j6	36	8	27	151	
CCWS200	200	100	370	435	480	165	235	300	400	181	38	8	28j6	42	8	31	182	
CCWS250	250	125	470	540	600	191	285	370	485	210	40	8	32k6	58	10	35	218	
CCWS315	315	160	605	700	760	215	352	455	600	243	50	10	42k6	82	12	45	277	
CCWS355	355	160	700	805	880	217	397	500	645	256	55	10	42k6	82	12	45	277	
CCWS400	400	200	768	875	950	228	429	545	705	278	60	10	48k6	82	14	51.5	324	
CCWS450	450	200	875	990	1070	275	484	597	757	300	65	10	48k6	82	14	51.5	324	
CCWS500	500	250	1000	1100	1180	280	549	695	890	344	75	10	55m6	82	16	59	380	

型 号 Type	尺 寸 Size	$i \geq 500$					d ₂	l ₂	b ₂	t ₂	L ₂	l ₃	H	d ₃	重量 (不包括油重) Weigh(exclude the oil weight) kg		
		d ₁	l ₁	b ₁	t ₁	L ₁											
CCWS100	19j6	28	6	21.5	128	48k6	82	14	51.5	212	11	195	14.5			80	
CCWS125	19j6	28	6	21.5	128	55m6	82	16	59	222	14	195	14.5			105	
CCWS160	24j6	36	8	27	151	65m6	105	18	69	270	15	240	18.5			165	
CCWS200	24j6	36	8	27	176	80m6	130	22	85	325	17	290	18.5			305	
CCWS250	28j6	42	8	31	202	100m6	165	28	106	385	17	337	24			460	
CCWS315	32k6	58	10	35	253	120m6	165	32	127	420	17	410	28			830	
CCWS355	32k6	58	10	35	253	130m6	200	32	137	470	17	425	35			1010	
CCWS400	38k6	58	10	41	300	150m6	200	36	158	490	24	465	35			1350	
CCWS450	38k6	58	10	41	300	170m6	240	40	179	560	24	515	42			1800	
CCWS500	42k6	82	12	45	380	190m6	280	45	200	640	24	625	35			2440	

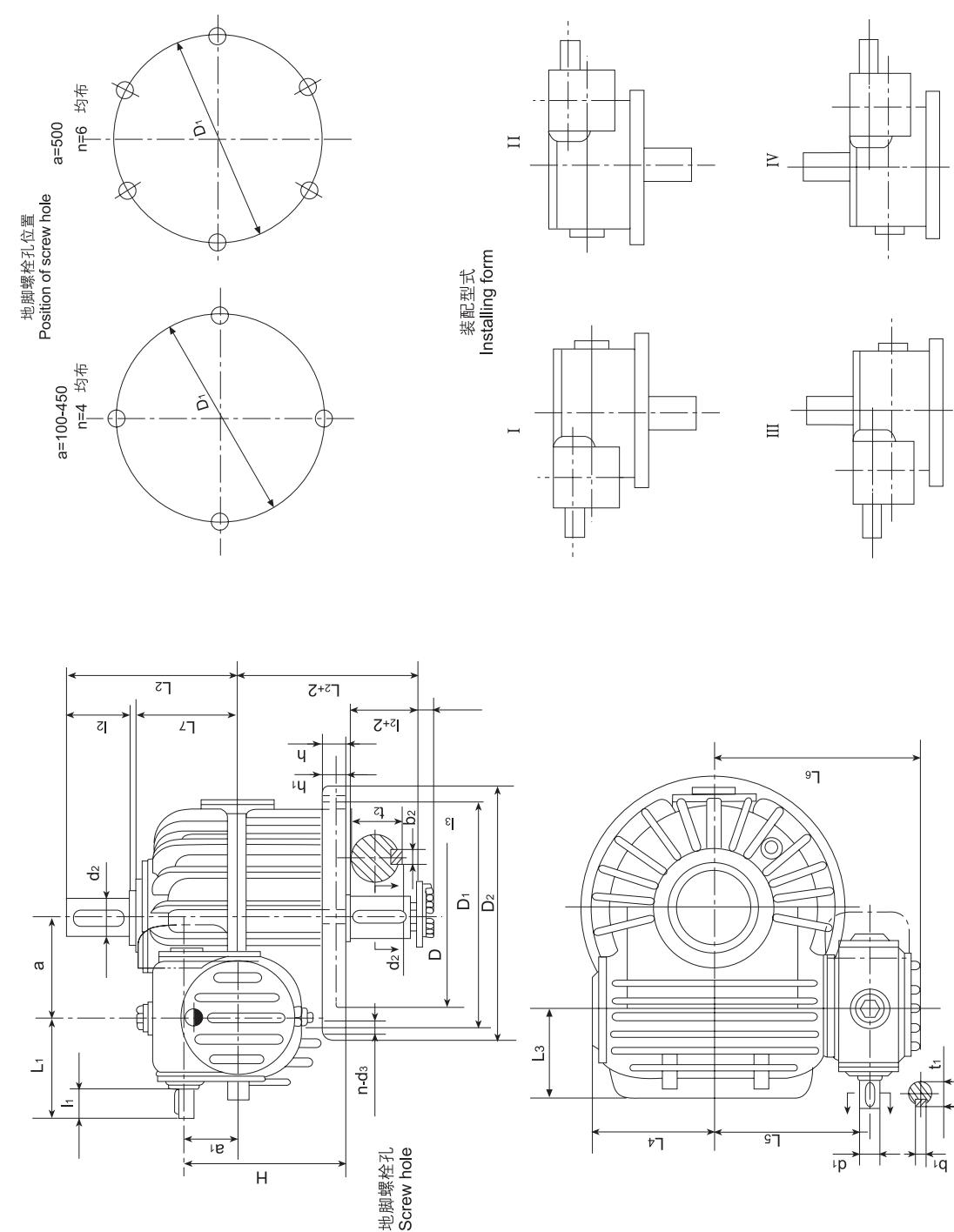
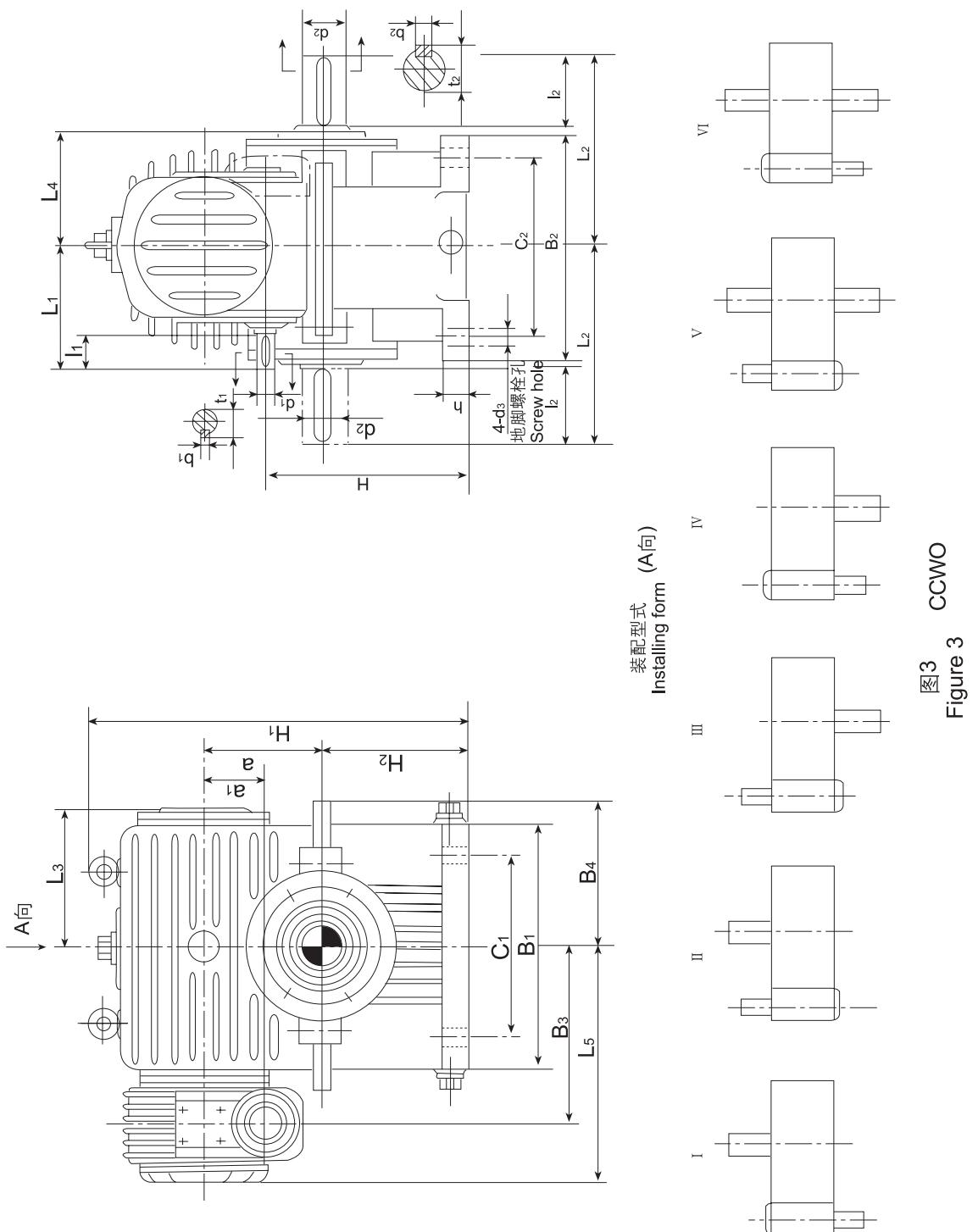


Figure 2 CCWS

表3 Table3

型 号 Type	尺 寸 Size	JB/T 7008-93															
		a	a1	B1	B2	B3	C1	C2	h	H	H1	H2	i≤400				
CCWO100		100	63	225	240	180	190	200	25	187	380	150	19j6	28	6	21.5	128
CCWO125		125	63	260	250	200	220	205	30	217	410	155	19j6	28	6	21.5	128
CCWO160		160	80	325	300	235	230	250	35	275	510	195	24j6	36	8	27	151
CCWO200		200	100	400	350	300	280	300	40	350	655	250	28j6	42	8	31	182
CCWO250		250	125	510	410	370	370	350	45	435	820	310	32k6	58	10	35	218

型 号 Type	i≥500					d ₂	l ₂	b ₂	t ₂	L ₂	L ₃	L ₄	L ₅	d ₃	重量 (不包括油重) Weigh(exclude the oil weight) kg	
	d ₁	l ₁	b ₁	t ₁	L ₁											
CCWO100	19j6	28	6	21.5	128	48k6	82	14	51.5	212	133	121	250	14.5	75	
CCWO125	19j6	28	6	21.5	128	55m6	82	16	59	222	153	133	270	18.5	108	
CCWO160	24j6	36	8	27	151	65m6	105	18	69	270	186	156	317	18.5	165	
CCWO200	24j6	36	8	27	176	80m6	130	22	85	325	235	188	400	24	305	
CCWO250	28j6	42	8	31	202	100m6	165	28	106	385	285	209	485	28	460	



GCW外型和结构尺寸 External dimension of CCW Decelerator

表4 Table4

型 号 Type	尺 寸 Size	JB/T 7008-93															
		a	a ₁	B ₁	B ₂	C ₁	C ₂	i=35.5~56、100、112					i=63~90、125~180				
								d ₁	l ₁	b ₁	t ₁	L ₁	d ₁	l ₁	b ₁	t ₁	L ₁
GCWU100	100	63	225	240	190	200	22j6	36	6	24.5	255	19j6	28	6	21.5	247	
GCWU125	125	63	260	250	220	205	22j6	36	6	24.5	273	19j6	28	6	21.5	265	
GCWU160	160	80	325	300	230	250	28j6	42	8	31	329	24j6	36	8	27	323	
GCWU200	200	100	400	350	280	300	42k6	82	12	45	443	28j6	42	8	31	403	
GCWU250	250	125	510	410	370	350	48k6	82	14	51.5	538	38k6	58	10	41	514	
GCWU315	315	160	640	530	470	445	65m6	105	18	69	635	48k6	82	14	51.5	612	
GCWU355	355	160	730	580	540	490	65m6	105	18	69	680	48k6	82	14	51.5	657	
GCWU400	400	200	790	620	620	530	80m6	130	22	85	785	60m6	105	18	64	760	
GCWU450	450	200	885	680	700	580	80m6	130	22	85	838	60m6	105	18	64	813	
GCWU500	500	250	1015	750	760	640	100m6	165	28	106	995	80m6	130	22	85	960	

型 号 Type	尺 寸 Size	i=200~315					d ₂	l ₂	b ₂	t ₂	L ₂	L ₃	L ₄	L ₅	h	H	H ₁
		d ₁	l ₁	b ₁	t ₁	L ₁											
GCWU100	14j6	25	5	16	244	48k6	82	14	51.5	212	180	121	139	25	175	340	
GCWU125	14j6	25	5	16	262	55k6	82	16	59	222	202	133	147	30	188	408	
GCWU160	19j6	28	6	21.5	315	65m6	105	18	69	270	245	156	172	35	240	510	
GCWU200	22j6	36	6	24.5	397	80m6	130	22	85	325	295	180	197	40	300	650	
GCWU250	28j6	42	8	31	498	100m6	165	28	106	385	360	209	228	45	350	785	
GCWU315	38k6	58	10	41	588	120m6	165	32	127	420	430	242	289	50	440	980	
GCWU355	38k6	58	10	41	633	130m6	200	32	137	470	480	255	315	55	460	1085	
GCWU400	48k6	82	14	51.5	737	150m6	200	36	158	490	515	277	335	60	515	1175	
GCWU450	48k6	82	14	51.5	790	170m6	240	40	179	560	575	299	367	65	555	1310	
GCWU500	60m6	105	18	64	935	190m6	280	45	200	640	655	343	403	80	650	1450	

尺 寸 Size Type	H ₂	d ₃	重量 (不包括油重) Weigh(exclude the oil weight) kg
GCWU100	212	14.	69
GCWU125	250	518.5	101
GCWU160	320	18.5	160
GCWU200	400	24	283
GCWU250	475	28	425
GCWU315	595	35	750
GCWU355	655	35	960
GCWU400	715	35	1300
GCWU450	805	42	1760
GCWU500	900	42	2530

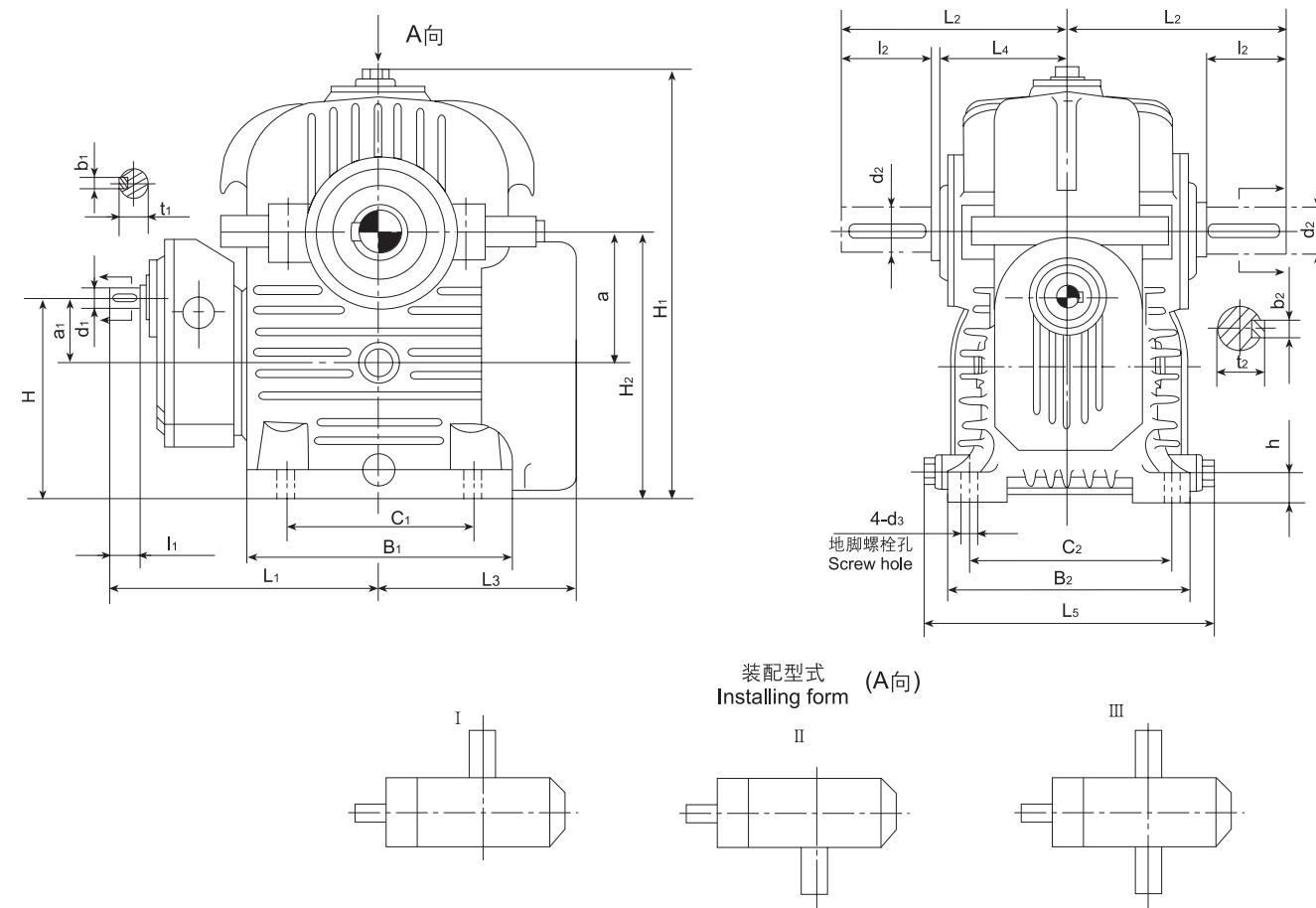


图4 Figure4 GCWU

表5 Table5

型 号 Type	尺 寸 Size	JB/T 7008-93														
		a	a ₁	D	D ₁	D ₂	L ₃	L ₄	L ₅	h	h ₁	i=35.5~56、100、112				
GCWS100		100	63	190	240	270	180	122	115	28	5	22j6	36	6	24.5	255
GCWS125		125	63	230	280	320	202	134	125	32	8	22j6	36	6	24.5	273
GCWS160		160	80	300	360	400	245	157	142	32	8	28j6	42	8	31	329
GCWS200		200	100	370	435	480	295	181	180	38	8	42k6	82	12	45	443
GCWS250		250	125	470	540	600	360	210	210	40	8	48k6	82	14	51.5	538
GCWS315		315	160	605	700	760	430	243	235	50	10	65m6	105	18	69	635
GCWS355		355	160	700	805	880	480	256	235	55	10	65m6	105	18	69	680
GCWS400		400	200	765	875	950	515	278	247	60	10	80m6	130	22	85	785
GCWS450		450	200	875	990	1070	565	300	275	65	10	80m6	130	22	85	838
GCWS500		500	250	1000	1100	1180	655	344	300	75	10	100m6	165	28	106	995
型 号 Type	尺 寸 Size	i=63~90、125~180					i=200~315					d ₂	l ₂	b ₂	t ₂	L ₂
		d ₁	l ₁	b ₁	t ₁	L ₁	d ₁	l ₁	b ₁	t ₁	L ₁					
GCWS100		19j6	28	6	21.5	247	14j6	25	5	16	244	48k6	82	14	51.5	212
GCWS125		19j6	28	6	21.5	265	14j6	25	5	16	262	55k6	82	16	59	222
GCWS160		24j6	36	8	27	323	19j6	28	6	21.5	315	65m6	105	18	69	270
GCWS200		28j6	42	8	31	403	22j6	36	6	24.5	397	80m6	130	22	85	325
GCWS250		38k6	58	10	41	514	28j6	42	8	31	498	100m6	165	28	106	385
GCWS315		48k6	82	14	51.5	612	38k6	58	10	41	588	120m6	165	32	127	420
GCWS355		48k6	82	14	51.5	657	38k6	58	10	41	633	130m6	200	32	137	470
GCWS400		60m6	105	18	64	760	48k6	82	14	51.5	737	150m6	200	36	158	490
GCWS450		60m6	105	18	64	813	48k6	82	14	51.5	790	170m6	240	40	179	560
GCWS500		80m6	130	22	85	960	60m6	105	18	64	935	190m6	280	45	200	640
型 号 Type	尺 寸 Size	l ₃			H			d ₃			重量 (不包括油重) Weigh(exclude the oil weight) kg					
GCWS100		11				132					14.5					79
GCWS125		14				132					14.5					104
GCWS160		15				160					18.5					162
GCWS200		17				190					18.5					293
GCWS250		17				212					24					440
GCWS315		17				250					28					800
GCWS355		17				265					35					980
GCWS400		24				265					35					1300
GCWS450		24				315					42					1750
GCWS500		24				375					35					2390

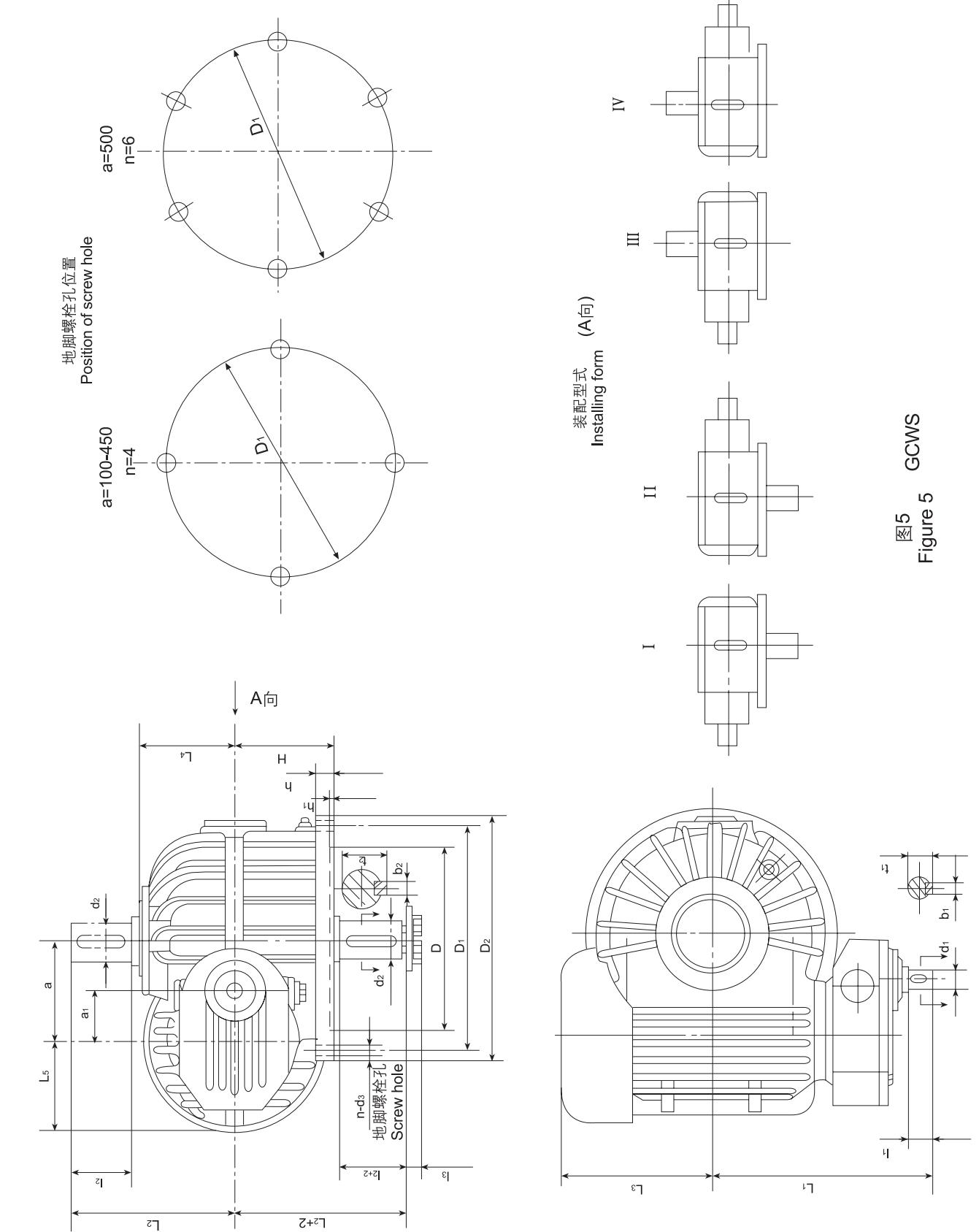


表6 Table6

型 号 Type	尺 寸 Size	a	a ₁	i=35.5~56、100、112					i=63~90、125~180				
				d ₁	l ₁	b ₁	t ₁	L ₁	d ₁	l ₁	b ₁	t ₁	L ₁
GCWO100		100	63	22j6	36	6	24.5	255	19j6	28	6	21.5	247
GCWO125		125	63	22j6	36	6	24.5	273	19j6	28	6	21.5	265
GCWO160		160	80	28j6	42	8	31	329	24j6	36	8	27	323
GCWO200		200	100	42k6	82	12	45	443	28j6	42	8	31	403
GCWO250		250	125	48k6	82	14	51.5	538	38k6	58	10	41	514

型 号 Type	尺 寸 Size	i=200~315					d ₂	l ₂	b ₂	t ₂	L ₂	L ₃	L ₄
		d ₁	l ₁	b ₁	t ₁	L ₁							
GCWO100		14j6	25	5	16	244	48k6	82	14	51.5	212	180	121
GCWO125		14j6	25	5	16	262	55k6	82	16	59	222	202	133
GCWO160		19j6	28	6	21.5	315	65m6	105	18	69	270	245	156
GCWO200		22j6	36	6	24.5	397	80m6	130	22	85	325	295	188
GCWO250		28j6	42	8	31	498	100m6	165	28	106	385	360	209

型 号 Type	尺 寸 Size	B ₁	B ₂	C ₁	C ₂	h	H	H ₁	H ₂	d ₃	重量 (不包括油重) Weigh(exclude the oil weight) kg		
		B ₁	B ₂	C ₁	C ₂	h	H	H ₁	H ₂	d ₃			
GCWO100		225	240	190	200	25	213	380	150	14.5	74		
GCWO125		260	250	220	205	30	218	410	155	18.5	107		
GCWO160		325	300	230	250	35	275	510	195	18.5	162		
GCWO200		400	350	280	300	40	350	655	250	24	293		
GCWO250		510	410	370	350	45	435	820	310	28	440		

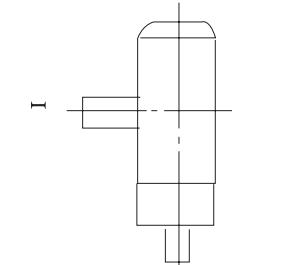
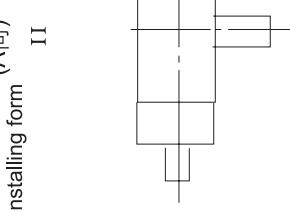
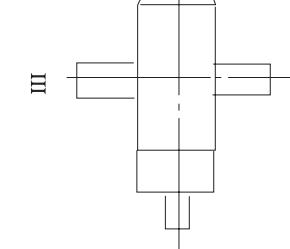
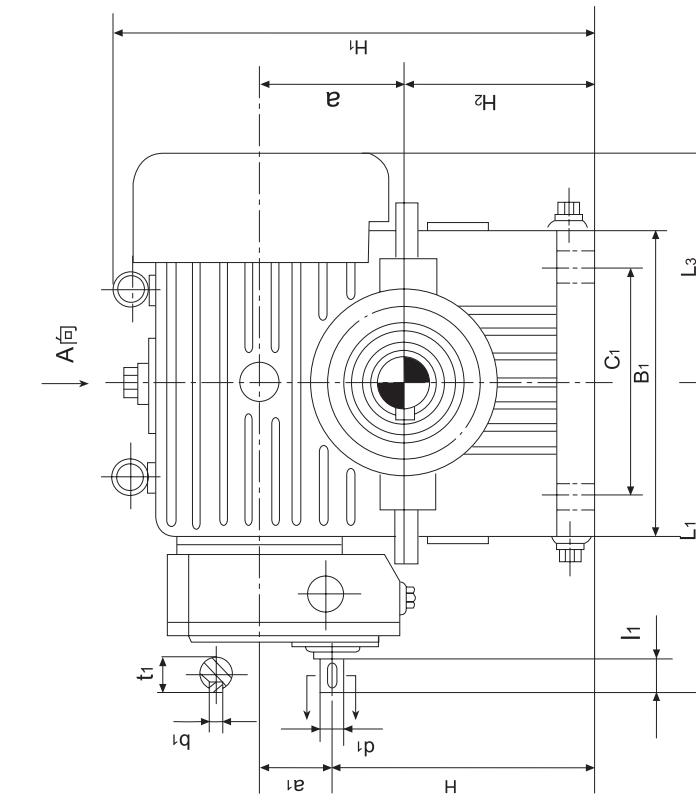
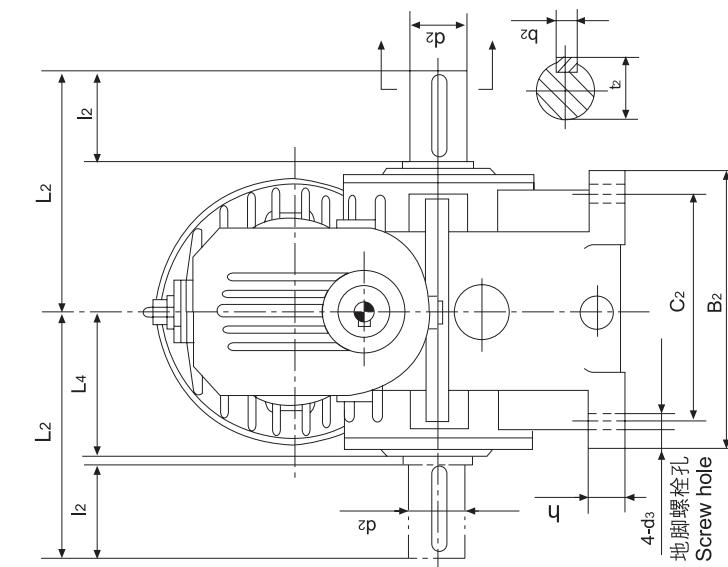


Figure 6

表12 Table12

环境温度 (°C) Ambient temperature	>0~10	>10~20	>20~30	>30~40	>40~50
f ₄	0.87	1	1.14	1.33	1.6

6 减速器的选用 Selection of decelerator

6.1 当已知条件与表7、表8规定的工作条件相同时，可直接在表7或表8中选取所需减速器的规格。

6.2 当已知条件与表7、表8规定的工作条件不同时，应按下列公式计算所需的输入功率P_{IJ}、P_{IR}或输出转矩T_{2J}、T_{2R}。

6.1 when the given condition are the same as those stipulated in table 7 and table 8,you can select the necessary specs in table 7 or table 8

6.2 when the given condition aren't the same as those stipulated in table 7 and table 8,the input power p_{ij},p_{iR} or output torque T_{2j},T_{2R} can be calculated by formula below.

$$P_{IJ}=P_1 \cdot f_1 \cdot f_2 \dots \quad (2)$$

$$P_{IR}=P_1 \cdot f_3 \cdot f_4 \dots \quad (3)$$

$$\text{或 } T_{2J}=T_2 \cdot f_1 \cdot f_2 \dots \quad (4)$$

$$T_{2R}=T_2 \cdot f_3 \cdot f_4 \dots \quad (5)$$

由公式(2)、(3)、(4)、(5)的计算结果中选择较大值，再按表7或表8选取承载能力相符或偏大的减速器。

From formula 2,3,4,5,you can select the larger value, and select the related decelerator with conformed loading capacity in table7 and table 8

6.3 减速器的最大尖峰负荷为额定承载能力的2.5倍。6.3 the max leak load is 2.5 time of the rated loading capacity

6.4 选用示例 6.4 selection example

例：电机驱动的塑料挤压机用双级蜗杆减速器，中等冲击负荷，每日工作8h，连续运转，输入转速n₁=1500r/min，公称传动比i=1000，输出轴转矩T₂=2500N·m，工作环境温度最高为30°C。要求采用CCWU型减速器的第1种装配型式。

由于给定条件与表7规定的工作条件不一致，故应按6.2中有关公式计算T_{2J}及T_{2R}，然后再由表7选择所需减速器的规格。

根据已知条件可首先查得f₁=1.25，f₂=1，f₃=1，f₄=1.14按式(4)、(5)则

Example: a double stage worm decelerator for plastic grinder with motor, middle load,8h/day, continuous operation, input rotating speed n₁=1500r/min, nominal transmission ration i=1000, the output shaft torque T₂=2500N.M, the max ambient temperature of 30°C , the first installing form for CCWU type is applied. The formula of 6.2 must be applied to calculate the T_{2j} and T_{2R} for the difference of given condition and stipulation in table 7.later the spec of decelerator can be decided according to table 7. From the give condition we can get f₁=1.25,f₂=1 f₃=1,f₄=1.14 for formula4, and 5,we get:

$$T_{2J}=T_2 \cdot f_1 \cdot f_2$$

$$=2500 \times 1.25 \times 1$$

$$=3125 \text{ N} \cdot \text{m}$$

$$T_{2R}=T_2 \cdot f_3 \cdot f_4$$

$$=2500 \times 1 \times 1.14$$

$$=2850 \text{ N} \cdot \text{m}$$

由于T_{2J}>T_{2R}，故应按T_{2J}=3125N·m进行选择。

由表7查得最接近的减速器为CCWU160，T₂=3650N·m，大于要求值。

由于本例未给出轴端及尖峰负荷，故不进行校核。

因此最终选定的减速器规格为：CCWU160-1000I JB/T 7008-93

Since T_{2J}>T_{2R} ,we can select spec according to T_{2j}=3650N.m.

From table 7, we get the proper decelerator of CCWU160,T₂=3650N.M is more than the required value.

We needn't check since the output shaft edge and leak load haven't been provided.

The final result is CCWU 160-1000I JB/T 7008-93

CCW、GCW减速器的实际传动比 Actual Transmission Ratio of CCW, GCW Decelerator

A1 Table A1 Lists Actual Transmission Ratio Of Double Stage Worm Decelerator

表A1 TableA1

速比分配 Gear ratio distribution	公称传动比i nominal transmission ratio										11	12	13	14
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
低速级 center space low-speed stage center space	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	3550
速比分配 Gear ratio distribution	12.5X16	16X16	10X31.5	12.5X31.5	16X31.5	21X31.5	25X31.5	31.5X31.5	31.5X40	31.5X50	40X50	50X50	50X63	63X63
100	196.33	240.25	320.23	392.77	480.50	604.5	759.5	961	1209	1519	1950	2450	2940	-
125	196.33	240.25	309.90	380.10	465	585	735	930	1170	1470	1950	2450	2891	-
160	191.12	240.25	320.23	382.23	480.50	635.50	790.50	961	1271	1581	2050	2550	3111	3599
200	191.12	240.25	320.23	382.23	480.50	635.50	759.50	961	1271	1550	2050	2500	3000	3600
250	191.12	240.25	320.23	382.23	480.50	635.50	790.50	930	1271	1550	2050	2500	2950	3481
315	191.12	240.25	320.23	382.23	480.50	635.50	759.50	961	1271	1550	2050	2500	2950	3599
355	191.12	240.25	320.23	382.23	480.50	635.50	759.50	961	1271	1550	2091	2550	2900	3538
400	196.33	240.25	320.23	392.77	480.50	635.50	790.50	961	1271	1550	2091	2550	2950	3540
450	196.33	242.83	330.56	405.44	496	656	816	992	1312	1600	2132	2600	2950	3540
500	191.12	242.83	340.89	406.89	511.50	676.50	841.50	1023	1353	1650	2091	2550	2950	3481

齿轮——蜗杆减速器的实际传动比见表A2

Table A2 lists actual transmission ratio of gear-worm decelerator

表A2 TableA2

低速级 中心距a mm low-speed stage center space	公称传动比i nominal transmission ratio									
	1	2	3	4	5	6	7	8	9	10
35.5	40	45	50	56	63	71	80	90	100	
实际传动比i Actual transmission ratio										
速比分配	1.8×20	2×20	2.25×20	2.5×20	2.8×20	3.15×20	3.55×20	4×20	4.5×20	2.5×40
100	37.20	40.24	45.10	50.80	56.00	65.95	74.19	84.15	89.97	101.68
125	36.75	40.24	45.92	50.80	55.91	63.55	74.19	84.15	89.97	101.608
160	37.20	41.82	47.24	50.32	57.40	66.06	71.15	80.05	90.63	100.64
200	37.20	41.82	47.24	50.32	58.22	65.07	73.21	83.08	95.27	100.64
250	37.34	41.79	46.98	50.81	56.62	64.74	73.21	83.08	95.27	101.61
315	37.20	41.82	45.56	50.84	57.05	64.43	73.37	84.42	90.63	101.68
355	35.39	39.78	43.33	48.36	54.27	61.29	69.79	80.30	86.21	96.72
400	37.21	41.82	46.52	52.11	58.71	65.07	73.21	83.09	94.05	104.22
450	37.21	41.82	46.52	52.11	58.71	65.07	73.21	83.09	94.05	104.22
500	37.34	41.79	45.10	50.81	57.60	65.07	72.24	83.08	89.97	101.61

续表A2 TableA2

低速级 中心距a mm low-speed stage center space	公称传动比i nominal transmission ratio									
	11	12	13	14	15	16	17	18	19	20
112	125	140	160	180	200	224	250	280	315	
实际传动比i Actual transmission ratio										
速比分配	2.8×40	3.15×40	3.55×40	4×40	4.5×40	5×40	5.6×40	5×50	5.6×50	5.6×63
100	111.97	131.90	148.38	168.31	179.95	209.10	224.43	255.00	273.7	-
125	111.82	127.10	148.38	168.32	179.94	209.10	224.42	255.00	273.7	-
160	114.80	132.11	142.30	160.10	181.27	207.41	225.50	252.94	275.00	335.50
200	116.44	130.13	146.43	166.17	190.53	207.56	225.50	253.13	275.00	330.00
250	113.24	129.47	146.43	166.16	190.53	209.10	232.34	255.00	283.34	334.34
315	114.10	128.86	146.74	168.84	181.26	207.42	222.96	252.95	271.9	320.84
355	108.54	122.58	139.58	160.60	172.42	193.30	212.08	253.01	277.34	315.40
400	117.42	130.13	146.41	166.17	188.11	209.55	224.31	260.66	279.02	322.79
450	117.42	130.13	146.41	166.17	188.11	209.55	224.31	265.77	284.09	322.79
500	115.19	130.13	144.48	166.16	179.95	202.72	230.63	252.16	286.88	331.88

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