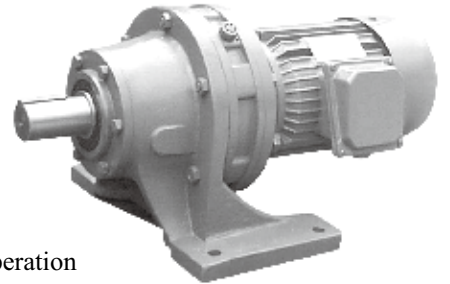




# X系列摆线针轮减速机 X SERIES CYCLOIDAL REDUCE



## 1. 特点

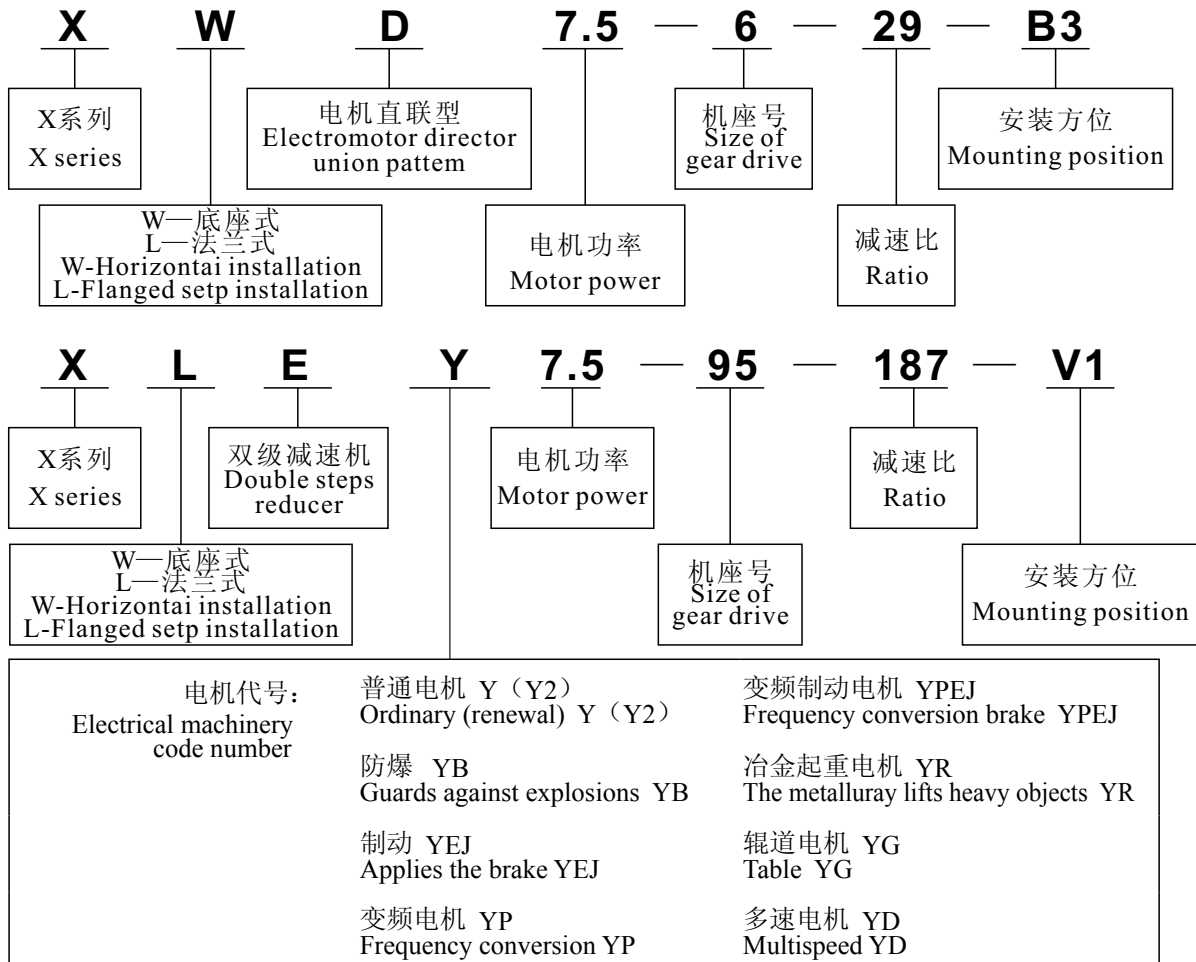
- 1.1 结构紧凑;
- 1.2 性能坚韧, 使用寿命长;
- 1.3 圆滑流畅的运转, 较低的噪声;
- 1.4 安装和维护十分方便;
- 1.5 效率高, 节省能源;
- 1.6 品种丰富, 广泛应用在各种领域中。

## 1. Characteristics

- 1.1 Compact in size
- 1.2 Tough and long-life
- 1.3 Smooth, low-noise operation
- 1.4 Easy installation, easy maintenance
- 1.5 High-efficiency and energy-saving
- 1.6 A rich range of variations, and it is playing an active part in practically all the marketplaces in the world

## 2. 型号规格表示方法举例:

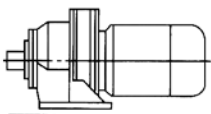
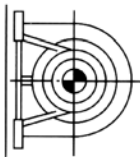
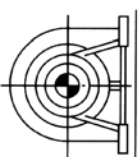
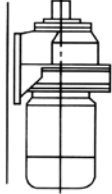
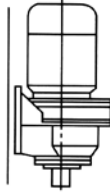
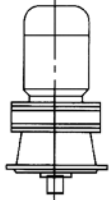
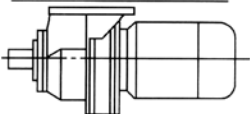
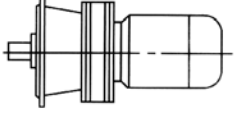
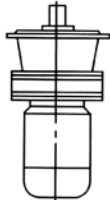
## 2. Model expressing example:





#### 4. 安装方位图

#### 4. Mounting positions

W-卧式安装 W-horizontal installation	脚板式左侧装 Baseboard type install on nearside	脚板式右侧装 Baseboard type install on starside	脚板式出轴向上侧装 Baseboard type spindle install upwards	脚板式出轴向下侧装 Baseboard type spindle install downwards
 B3	 B6	 B7	 V6	 V5
L-立式安装 L-step installation	脚板式仰装 Baseboard backstroke installation	法兰式水平装 Flanged horizontal installation	法兰式倒立装 Flanged converse step installation	
 V1	 B8	 B5	 V5	

#### 5. 最大许用输出转矩(N.m)

#### 5. Allowed maximum torque (N.m)

一级型号	X0	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11
二级型号			X20	X31	X42	X53	X63	X74	X84	X95	X106	X117
许用扭矩(N.m)	60	120	150	250	500	1000	2000	2700	4500	7100	12000	20000

#### 6. X系列摆线针轮减速机同其它各部、行业系列对照表

#### 6. Contrast the X series cycloidal reducer with the others

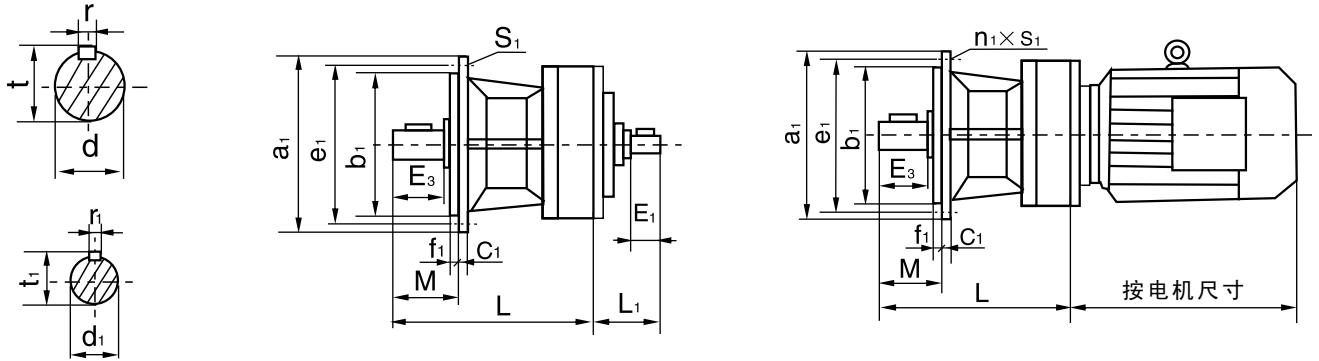
系列	单级机型											双级机型									
X	X0	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X42	X53	X63	X74	X84	X85	X95	X106	X117
B (化工部)				B1	B2	B3	B4		B5	B6	B7			B31	B41		B52	B53	B63	B74	
B (一机部)	(B85)	(B100)	(B120)	B15	B18	B22	B27		B33	B39	B45	B55		B2215	B2715		B3318	B3322	B3922	B4527	B6533
BJ (纺织行业)			BJ2	BJ3	BJ4	BJ5	BJ6	BJ7	BJ8	BJ9	BJ10		BJ42	BJ53	BJ63	BJ74	BJ84	BJ85	BJ95	BJ106	BJ117
B (上海)		B10A	B10	B11	B12	B13	B14		B15	B16	B17	B18		B131	B141			B153	B163	B174	
B (新上海)	79	80	81	83	84	86	87	88	89	90	91	92									





### 8.2 单级立式

### 8.2 Single grade vertical to wave line needle wheel moderate plane size form



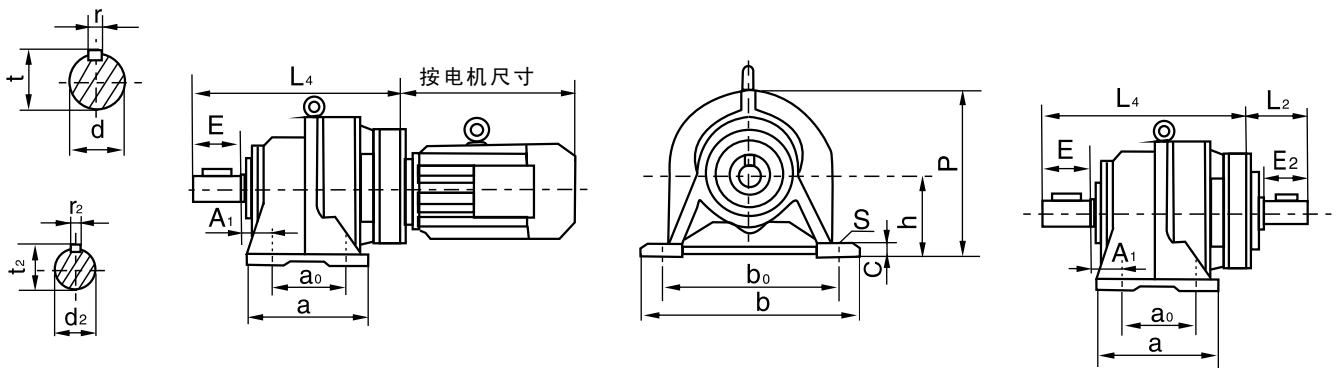
型号	a <sub>1</sub>	b <sub>1</sub>	c <sub>1</sub>	d	d <sub>1</sub>	E <sub>1</sub>	E <sub>3</sub>	e <sub>1</sub>	f <sub>1</sub>	L	L <sub>1</sub>	M	n <sub>1</sub>	r	r <sub>1</sub>	S <sub>1</sub>	t	t <sub>1</sub>
X0	140	85	10	14	10	16	24	120	2.5	112	38	28	4	5	3	7	16	11.1
X1	160	100	12	18	12	20	25	134	3	132	44	32	4	6	4	9	20.5	13.5
X2 X20	190	130	12	25	15	25	35	160	3	159	54	42	6	8	5	9	28	17
X3 X31	230	170	15	35	18	35	45	200	4	192	73	50	6	10	6	11	38	20.5
X4 X42	260	200	15	45	22	40	63	230	4	240	80	79	6	14	6	11	48.5	24.5
X5 X53	340	270	20	55	30	45	79	310	4	310	105	92	6	16	8	11	59	33
X6 X63	400	316	22	65	35	54	80	360	5	352	125	92	8	18	10	15	69	38
X7 X74	430	345	22	80	40	65	98	390	5	390	140	114	8	22	12	18	85	43
X8 X84	490	400	30	90	45	70	110	450	6	448	154	112	12	25	14	18	95	48.5
X9 X95	580	455	35	100	50	80	129	520	8	552	171	170	12	28	14	22	106	53.5
X10 X106	650	520	40	110	55	100	140	590	10	612	201	174	12	28	16	22	116	59
X11 X117	880	680	45	130	70	120	184	800	10	809	257	210	12	32	20	37	137	74.5

注：电机尺寸参照第300页。

Note: For Motor details, see page 300.

### 8.3 双级卧式

### 8.3 Each puts the line needle wheel moderating machine size form horizontally

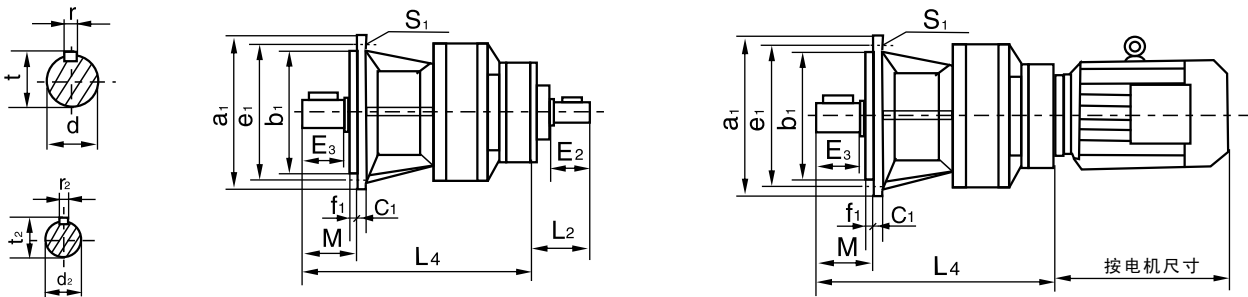


型号	A <sub>1</sub>	a	a <sub>0</sub>	b	b <sub>0</sub>	c	d	d <sub>2</sub>	E	E <sub>2</sub>	h	L <sub>2</sub>	L <sub>4</sub>	P	r	r <sub>2</sub>	s	t	t <sub>2</sub>
X0	31	100	70	175	150	10	14	/	24	/	70	/	/	140	5	/	9	16	/
X1	40	110	80	185	160	12	18	10	25	16	80	40	185	155	6	3	9	20.5	11
X2 X20	66	120	90	210	180	15	25	10	35	16	100	38	230	175	8	3	12	28	11.1
X3 X31	96	150	100	290	250	20	35	12	55	20	140	44	295	240	10	4	16	38	13.5
X4 X42	95	195	145	330	290	22	45	15	74	25	150	54	318	265	14	5	16	48.5	17
X5 X53	115	260	150	420	370	25	55	18	91	35	160	73	400	310	16	6	18	59	20.5
X6 X63	36	335	275	430	380	30	65	18	89	35	200	73	442	370	18	6	22	69	20.5
X7 X74	36	380	320	470	420	30	80	22	109	40	220	80	502	400	22	6	22	85	24.5
X8 X84	35	440	380	530	480	35	90	22	120	40	250	80	560	465	25	6	22	95	24.5
X9 X95	44	560	480	620	560	40	100	30	142	45	290	105	688	540	28	8	26	106	33
X10 X106	80	600	500	690	630	45	110	35	150	54	325	125	760	615	28	10	30	116	38
X11 X117	122	810	660	880	800	50	130	40	202	65	420	140	986	775	32	12	32	137	43



### 8.4 双级立式

### 8.4 Each puts the line needle wheel moderating machine size form vertically



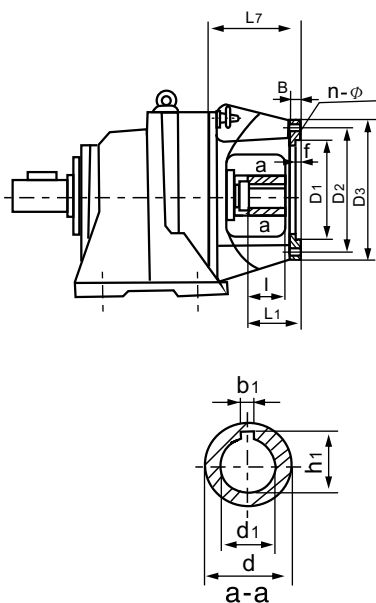
型号	a <sub>1</sub>	b <sub>1</sub>	c <sub>1</sub>	d	d <sub>2</sub>	E <sub>2</sub>	E <sub>3</sub>	e <sub>1</sub>	f <sub>1</sub>	L <sub>2</sub>	L <sub>4</sub>	M	r	r <sub>2</sub>	S <sub>1</sub>	t	t <sub>2</sub>	
X0	140	85	10	14	/	/	24	120	2.5	/	/	28	5	/	7	16	/	
X1	160	100	12	18	10	16	25	134	3	40	185	32	6	3	9	20.5	11	
X2	X20	190	130	12	25	10	16	35	160	3	38	230	42	8	3	9	28	11.1
X3	X31	230	170	15	35	12	20	45	200	4	44	295	50	10	4	11	38	13.5
X4	X42	260	200	15	45	15	25	63	230	4	54	318	79	14	5	11	48.5	17
X5	X53	340	270	20	55	18	35	79	310	4	73	400	92	16	6	11	59	20.5
X6	X63	400	316	22	65	18	35	80	360	5	73	442	92	18	6	15	69	20.5
X7	X74	430	345	22	80	22	40	98	390	5	80	502	114	22	6	18	85	24.5
X8	X84	490	400	30	90	22	40	110	450	6	80	560	112	25	6	18	95	24.5
X9	X95	580	455	35	100	30	45	129	520	8	105	688	170	28	8	22	106	33
X10	X106	650	520	40	110	35	54	140	590	10	125	760	174	28	10	22	116	38
X11	X117	880	680	45	130	40	65	184	800	10	140	986	210	32	12	37	137	43

注：电机尺寸参照第300页。

Note: For Motor details, see page 300.

### 9. 法兰联接

### 9. Connection flange

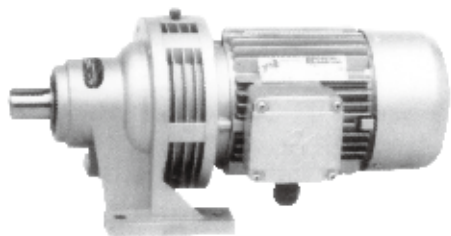


减速机 型号	电动机 型号	d	d <sub>1</sub>	b <sub>1</sub>	h <sub>1</sub>	l	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	f	B	n	φ	L <sub>1</sub>	L <sub>7</sub>
X42 X2	Y71	37	14	5	16.3	20	110	130	160	4	12	4	10	31	70
	Y80	37	19	6	22	26	130	165	200	4	12	4	12	38	77
X63 X53 X3	Y80	37	19	6	22	26	130	165	200	5	15	4	12	41	88
	Y90	47	24	8	27.3	30	130	165	200	5	15	4	12	46	95
X84 X74 X4	Y90	47	24	8	27.3	30	130	165	200	5	15	4	12	46	143
	Y100	55	28	8	32	40	180	215	250	6	18	4	15	55	112
	Y112														
Y132	65	38	10	41.5	56	230	265	300	5	17	4	15	78	141	
X95 X5	Y100	55	28	8	32	45	180	215	250	6	17	4	15	57	117
	Y112														
Y132	65	38	10	41.5	56	230	265	300	5	17	4	15	76	140	
X106 X6	Y132	65	38	10	41.5	62	230	265	300	6	18	4	15	80	142
	Y160	75	42	12	45.3	75	250	300	350	7	20	4	19	110	179
X117 X7	Y160	75	42	12	45.3	75	250	300	350	7	20	4	19	108	185
X8	Y160	80	42	12	45.3	85	250	300	350	7	22	4	19	104	193
	Y200	85	55	16	60	80	300	350	400	7	22	4	19	108	182
X9	Y160	85	42	12	45.3	83	250	300	350	7	25	4	19	103	187
X10	Y200	105	55	16	60	90	300	350	400	7	28	4	19	109	200
X11	Y200	105	55	16	60	90	300	350	400	7	30	4	19	121	256



# WB系列微型摆线针轮减速机

## WB SERIES MINI-CYCLOIDAL REDUCE



### 1. 前言

本公司设计制造的WB系列微型摆线针轮减速，采用高压压铸铝合金，采取新的加工工艺，提高了工件精度，产品内在质量更优，体积更小，重量更轻，外观更美。全部使用润滑脂润滑，不易漏油，用户可根据需要在任何角度，方向安装使用。

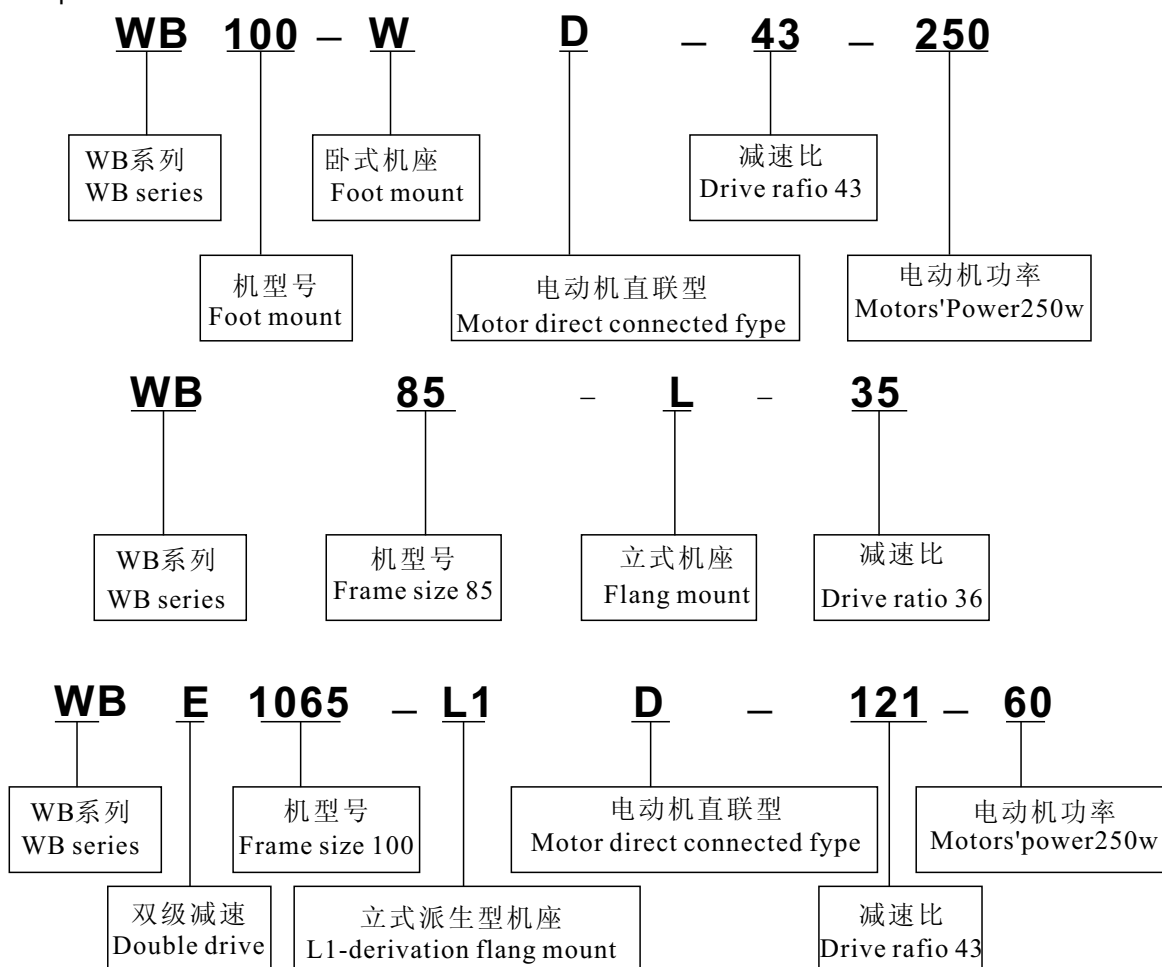
### 1. Preface

The WB series mini-cycloidal reducers, we design and make carefully, adopt aluminium alloy outside shell and new processing method. so it has better accuracy, greater quality, smaller volume, lighter weight and smarter shape. It is not apt to leak oil, because we use advanced grease, it can be installed at any place.

### 2. 机型号及型号表现方式

示例 Example

### 2. Frama size and inplication





### 3. 型号规格表

### 3. Reducrame size

#### 3.1 单级减速机型号规格SELECTION TABLE OF SINFLE STAGE CYCLOIDAL REDUCERFRAME SIZE

机型号 Frome size	电动机功率 Motor's power(W)			减速比 Drive ratio										输出许用扭矩 N-m Max Output torque		
	交流三相电机 AC three- phase motor	交流单相电机 AC singie -phase motor	SZ型直流伺服电机 Type SZ DC servo motor	9	11	17	21	23	29	35	43	47	59		71	
WB65	60	40	50	○	○	○	○	○	●	●	●	●	×	×	25	
	90	60		○	○	○	○	○	●	●	●	●	×	×		
	120	90		●	●	●	●	●	●				×	×		
WB85	90	90	80	○	○	○	○	○	○	●	●	●	●	×	50	
	120	120	123	○	○	○	○	○	○	●	●	●	●	×		
	180		185	○	○	○	●	●	●	●				×		
	250			○	●	●	●	●	●					×		
WB100	180	180	185	○	○	○	○	○	○	○	●	●	●	●	×	100
	250	250		○	○	○	○	○	○	○	●	●	●	●	×	
	370	370	355	○	○	●	●	●	●	●	●	●			×	
	550	550		○	○	●	●	●	●	●					×	
	750			○	●	●	●	●							×	
输入转速r/min	输入转速1500r/min			167	136	88	71	65	52	43	35	32	25	21		
	输入转速1000r/min			111	90	59	48	43	34	29	23	31	17	14		

#### 3.2 单级减速机型号规格表

#### 3.2 Section table of single stage cycloidal reducer frame size

机型号 Frome size	电动机功率Motors'power(W)				减速比Drive ratio										输出许用扭矩 N-m Max Output torque
	交流三相电机 AC three -phase motor	交流单相电机 AC singie -phase motor	Z型直流电机 TypeZ DC motor	SZ型直流伺服电机 Type SZ DC servo motor	9	11	17	23	29	35	43	47	59	71	
120	370	370		355	○	○	○	○	○	○	●	●	●	●	150
	550	550			○	○	○	○	○	●	●				
	750				●	●	●	●	●						
150	750	750			○	○	○	○	○	○	●	●	●	●	250
	1100	1100			○	○	○	○	○	●	●				
	1500				●	●	●	●							
输出转速 Output speed r/min	输入转速 Input speed 1500r/min				167	136	88	65	52	43	35	32	25	21	
	输入转速 Input speed 1000r/min				111	91	59	43	34	29	23	21	17	14	

#### 3.3 双级减速机型号规格表

#### 3.2 Section table of double stage cycloidal reducer frame size

机型号 Frome size	电动机功率Motors'power(W)				减速比Drive ratio										输出许用扭矩 N-m Max Output torque
	交流三相电机 AC three -phase motor	交流单相电机 AC single -phase motor	Z型直流电机 TypeZ DC motor	SZ型直流伺服电机 Type SZ DC servo motor	121 (11×11)	187 (17×11)	289 (17×17)	385 (35×11)	473 (43×11)	595 (35×17)	731 (43×17)	989 (43×23)	1225 (35×35)	1849 (43×43)	
1065	60	60	50	50	○	○	○	○	●	△	△	△	△		150
	90	90			○	○	○	○	●	△	△	△			
	120	90		80	●	●	●	△	△	△					
1285	90	120		123	○	○	○	○	●	●	△	△	△	△	260
	120			185	○	○	○	○	●	●	△	△	△	△	
	180	180			○	●	●	△	△	△					
	250	250		185	●	●	△	△	△						
1510	180	370			○	○	○	○	●	●	△	△	△	△	300
	250	550		355	○	○	○	○	●	●	△	△	△	△	
	370				○	●	△	△	△						
	550				●	△	△	△							
输出转速 Output speed r/min	输入转速 Input speed 1500r/min				12.4	8	5.2	3.9	3.2	2.5	2	1.5	1.2	0.8	
	输入转速 Input speed 1000r/min				8.2	5.3	3.4	2.6	2.6	1.7	1.4	1	0.8	0.5	



### 3.4 选型说明

3.4.1 根据机型号大小不同，在同一机型中不同减速比所选用的电机功率也不同。表中列出了根据不同减速比所相应电机功率。

3.4.2 表中列有各机型号减速机输出许用扭矩。选用时，实际工作扭矩应小于本系列减速机许用扭矩，最大瞬时负荷和起动力应小于本系列减速机额定负荷的160%。

3.4.3 表中标“●”者，可以使用电机全容量。但使用起动力频繁或冲击大的负荷时，应选用标“○”者。标“△”者应在输出轴上装有卸荷安全装置，以防止减速机受力矩过大而损坏。

### 3.4 Selecting instruction

3.4.1 The cycloidal reducer is designed according to its maximal torque, even the types of machine are same, the machines which have different drive ratios should select different motor power, users can find in this table the relevant motor power according to different drive ratios.

3.4.2 The maximal output torque can be found in the table, when being selected, the practical torque should be less than the maximal output torque and starting load should be less than 160% of the maximal output torque.

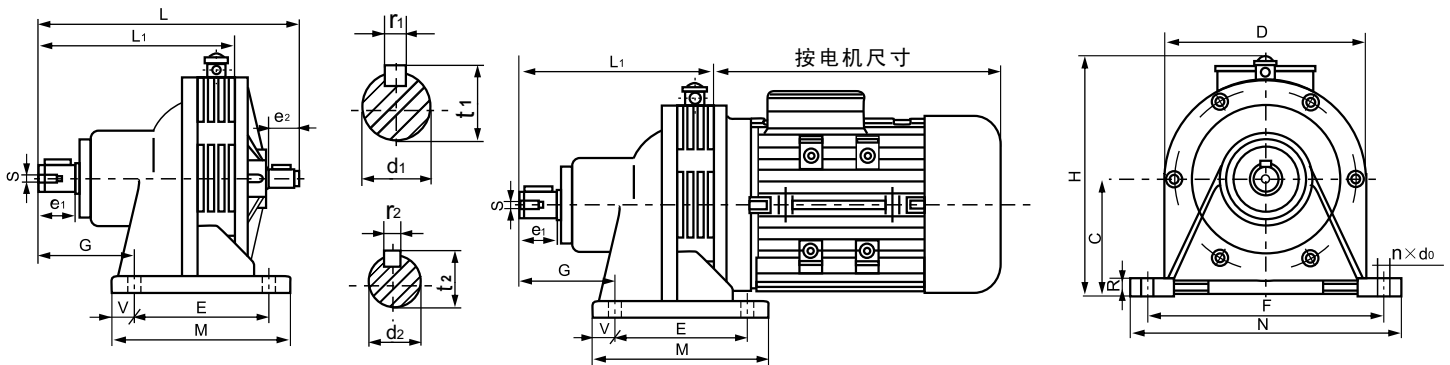
3.4.3 The machines which notes " ● " can be used in full capacity, but if there are any machines which start too frequently or cause too large stroke, we should select the machine " ○ ", the machine " △ " should be installed unloading gear on the output shaft in case of being damaged.

## 4. 外形及安装图表

### 4.1 单级卧式减速机外型及安装尺寸

## 4. Contour and mounting dimension

### 4.1 Single stage foot mount reducer contour and dimension



机型号 Frame size	外形尺寸 Outline dimension						安装尺寸 Mounting dimension										输出轴尺寸 Output shaft dimension				输入轴尺寸 Input shaft dimension			
	H	M	N	L	L <sub>1</sub>	D	C	G	V	E	F	R	S	n	d <sub>0</sub>	r <sub>1</sub>	t <sub>1</sub>	d <sub>1</sub>	e <sub>1</sub>	r <sub>2</sub>	t <sub>2</sub>	d <sub>2</sub>	e <sub>2</sub>	
WB 65	120	90	136	135	95	110	60	45	15	60	120	10	M4	4	7	4	13.5	12	20	3	9	8	16	
WB 85	140	100	175	150	112	127	70	55	15	70	150	12	M5	4	9	5	16	14	24	3	11	10	16	
WB100	155	110	185	176	132	145	80	65	15	80	160	12	M6	4	9	6	20.5	18	25	4	13.5	12	20	
WB120	190	120	185	215	165	168	100	95	15	90	150	15	M8	4	11	8	33	30	35	5	17	15	22	
WB150	235	160	250	260	205	210	120	115	20	120	210	18	M8	4	15	10	38.5	35	55	6	22.5	20	30	

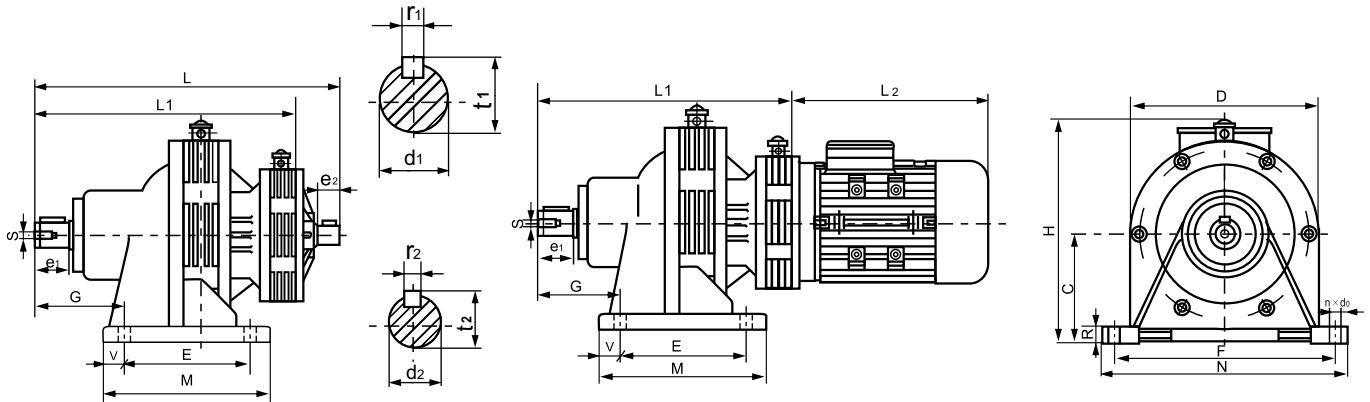
注：电机尺寸参照第221页。





4.2 双级卧式减速机外型及安装尺寸

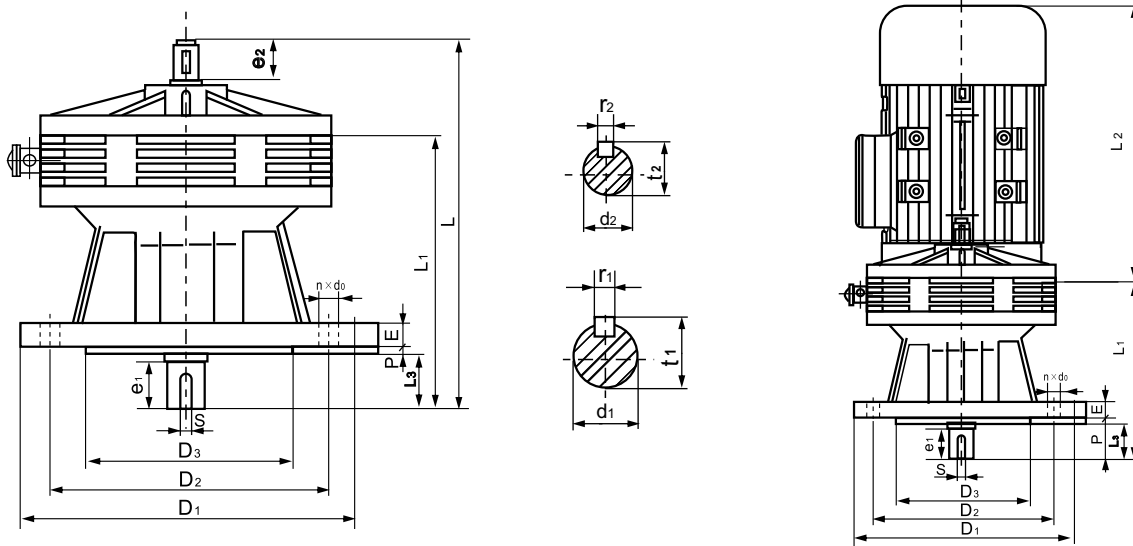
4.2 Double stage foot mount reducer contour and dimension



机型号 Frame size	外形尺寸 Outline dimension					安装尺寸 Mounting dimension										输出轴尺寸 Output shaft dimension				输入轴尺寸 Input shaft dimension			
	H	M	N	L	L <sub>1</sub>	D	C	G	V	E	F	R	S	n	d <sub>0</sub>	r <sub>1</sub>	t <sub>1</sub>	d <sub>1</sub>	e <sub>1</sub>	r <sub>2</sub>	t <sub>2</sub>	d <sub>2</sub>	e <sub>2</sub>
WB1065	155	110	185	225	185	145	80	65	15	80	160	12	M6	4	9	6	20.5	18	25	3	9	8	16
WB1285	190	120	185	270	230	168	100	95	15	90	150	15	M8	4	11	8	33	30	35	3	11	10	16
WB1510	235	160	250	325	295	210	120	115	20	120	210	18	M8	4	15	10	38.5	35	55	4	13.5	12	20

4.3 单级立式减速机外型及安装尺寸

4.3 Single stage flange mount reducer contour and dimension



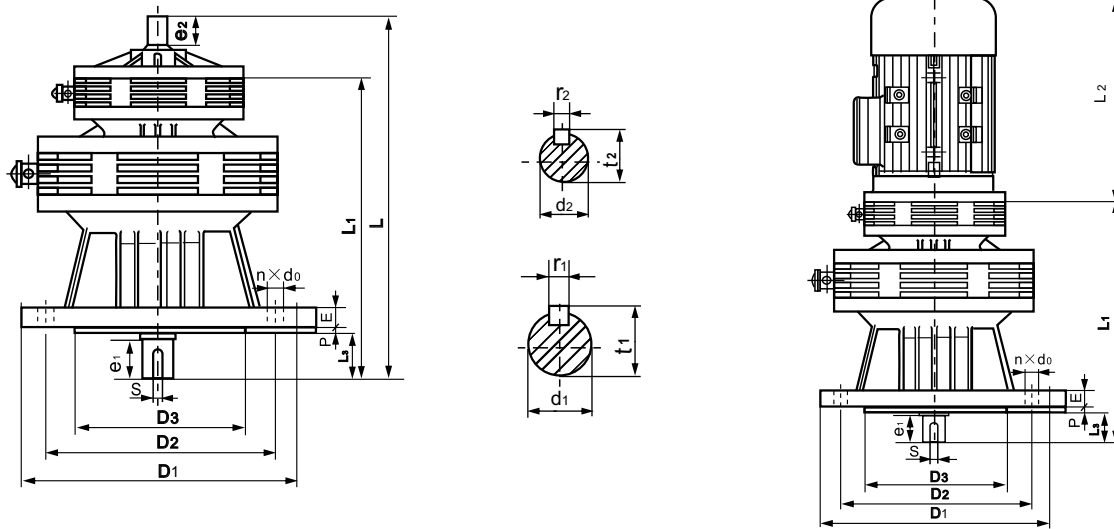
机型号 Frame size	外形尺寸 Outline dimension			安装尺寸 Mounting dimension								输出轴尺寸 Output shaft dimension				输入轴尺寸 Input shaft dimension			
	D <sub>1</sub>	L	L <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	E	L <sub>3</sub>	P	S	n	d <sub>0</sub>	r <sub>1</sub>	t <sub>1</sub>	d <sub>1</sub>	e <sub>1</sub>	r <sub>2</sub>	t <sub>2</sub>	d <sub>2</sub>	e <sub>2</sub>
WB65	120	135	95	100	65	10	24	2.5	M4	4	7	4	13.5	12	20	3	9	8	16
WB85	140	150	112	120	85	12	28	2.5	M5	4	7	5	16	14	24	3	11	10	16
WB100	160	176	132	134	100	12	32	3	M6	4	9	6	20.5	18	25	4	13.5	12	20
WB120	190	215	165	160	140	15	40	3	M8	4	11	8	33	30	35	5	17	15	22
WB150	230	265	205	200	170	15	60	4	M8	6	11	10	38.5	35	55	6	22.5	20	30

注：电机尺寸参照第221页。



#### 4.4 双级立式减速机外型及安装尺寸

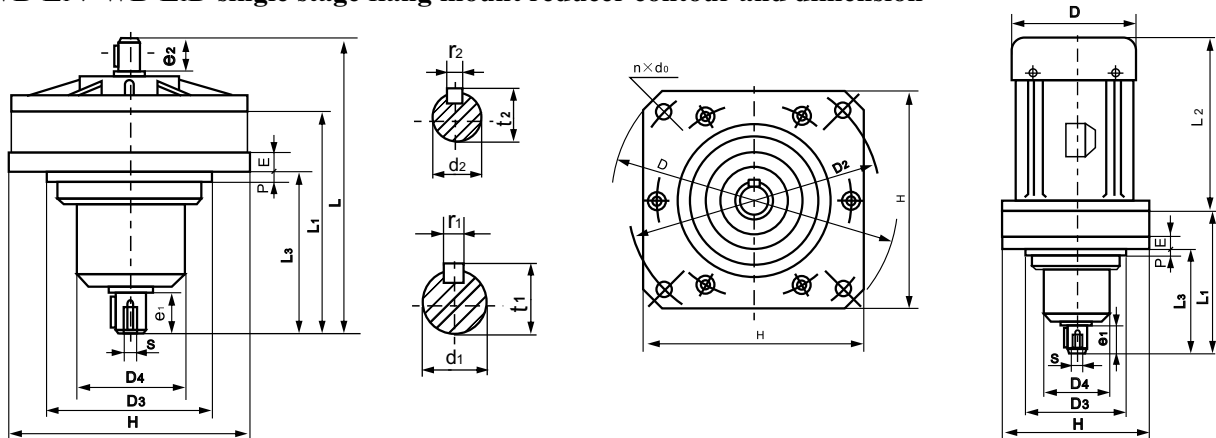
#### 4.4 Double stage flange mount reducer contour and dimension



机型号 Frame size	外形尺寸 Outline dimension			安装尺寸 Mounting dimension								输出轴尺寸 Output shaft dimension				输入轴尺寸 Input shaft dimension			
	D1	L	L1	D2	D3	E	L3	P	S	n	d0	r1	t1	d1	e1	r2	t2	d2	e2
WB1065	160	225	185	134	100	12	32	3	M6	4	9	6	20.5	18	25	3	9	8	16
WB1285	190	270	230	160	140	15	40	3	M8	4	11	8	33	30	35	3	11	10	16
WB1510	230	325	295	200	170	15	60	4	M8	6	11	10	38.5	35	55	4	13.5	12	20

#### 4.5 WB-L1、WB-L1D单级立式外型及安装尺寸

#### 4.5 WB-L1、WB-L1D single stage flange mount reducer contour and dimension



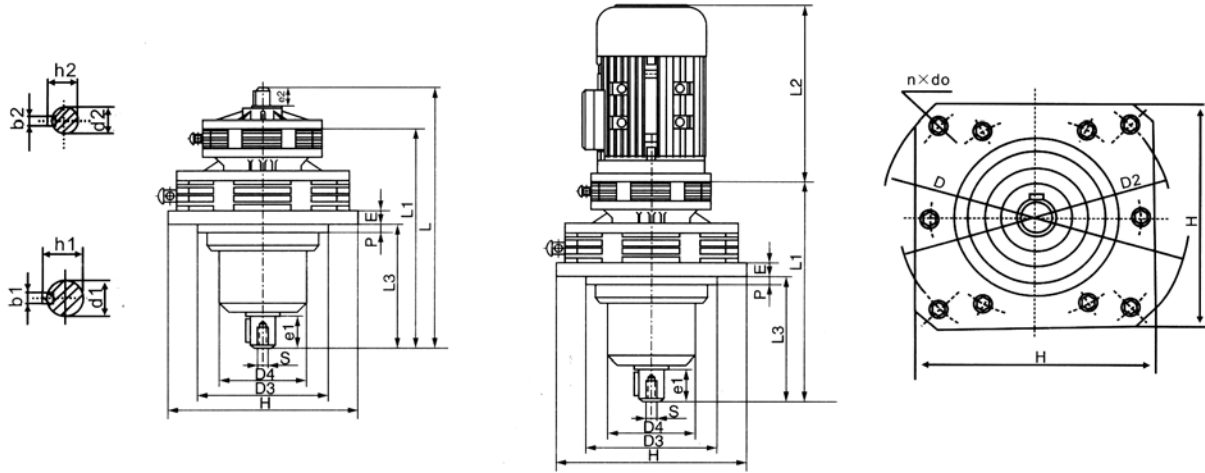
机型号 Frame size	外形尺寸 Outline dimension				安装尺寸 Mounting dimension							输出轴尺寸 Output shaft dimension				输入轴尺寸 Input shaft dimension			
	H	D4	L	L1	D3	L3	P	E	S	n	d0	r1	t1	d1	e1	r2	t2	d2	e2
WB65	105	50	135	95	65	65	4	9	M4	4	7	4	13.5	12	20	3	9	8	16
WB85	125	55	150	112	85	85	5	10	M5	4	9	5	16	14	29	3	11	10	16
WB100	140	65	176	132	100	95	5	12	M6	4	9	8	20.5	18	25	4	13.5	12	20
WB120	160	85	215	165	120	118	6	12	M8	4	11	8	33	30	35	5	17	15	22
WB150	210	115	265	205	150	165	6	15	M8	4	13	10	38.5	35	55	6	22.5	20	30

注：电机尺寸参照第221页。



4.6 WB-L<sub>1</sub>、WB-L<sub>1</sub>D双级立式外型及安装尺寸

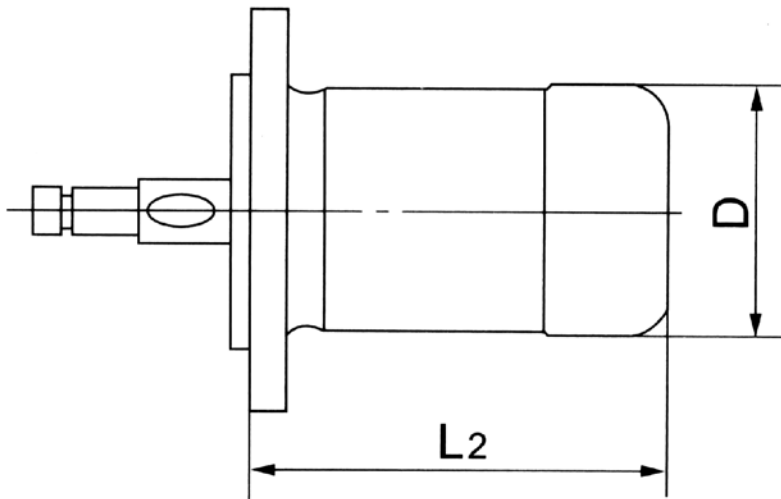
4.6 WB-L<sub>1</sub>、WB-L<sub>1</sub>D double stage flange mount reducer contour and dimension



机型号 Frame size	外形尺寸 Outline dimension					安装尺寸 Mounting dimension									输出轴尺寸 Output shaft dimension				输入轴尺寸 Input shaft dimension			
	H	D	D4	L	L1	D2	D3	L3	P	E	s	n	do	b1	h1	d1	e1	b2	h2	d2	e2	
WB1065	140	185	65	225	185	160	100	100	5	12	M6	4	9	6	20.5	18	25	3	9	8	16	
WB1285	160	210	85	270	230	185	120	120	6	15	M8	4	11	8	33	30	35	3	11	10	16	
WB1510	210	270	115	325	295	240	150	150	6	15	M8	4	13	10	38.5	35	55	4	13.5	12	20	

5. 电机尺寸一览表

5. Outline dimension for motor





电机类别 Motors	功率W Power(W)	转速r/in Potating speed	电压V Vitage(V)	L2	D	配置相应机型号 Equip with corresponding model of the machine	
三相异步电动机 AC three-phase mofor	60	1400	380	130	95	65 1065	
	90			170	115	65 85 1065 1285	
	120			170	115	65 85 1065 1285	
	180			190	130	85 100 1285	
	250			190	130	85 100 1285	
	370			225	150	85 100 1285	
	550			225	150	100 120 1510	
	750			225	150	100 120 1510	
	1100			260	175	120 150	
	1500			285	175	120 150	
	180			950	225	150	100 120 1510
	250				225	150	100 120 1510
	370	225			150	100 120 1510	
	550	225			150	100 120 1510	
	750	285			175	120 150	
	1100	285			175	120 150	
	1500	320			205	150	
	40	1400			220	120	95
60	170		115	65 85 1065 1285			
90	170		115	65 85 1065 1285			
180	225		150	100 120 1510			
250	225		150	100 120 1510			
370	225		150	100 120 1510			
单相电容转动电动机 AC single-phase mofor	550	1500	285	195		120 150	
	750		285	195		120 150	
	50		110 220	160		95	65 1065
	80			180		95	65 85 1065 1285
123	200	115		85 100 1285			
185	230	115		85 100 1285			
355	270	136		100 120 1510			
制动电动机 Brake mofor	550	380	375	165		120 150	
	750		375	165		120 150	
	1100		410	180		120 150	
	500		430	180		120 150	