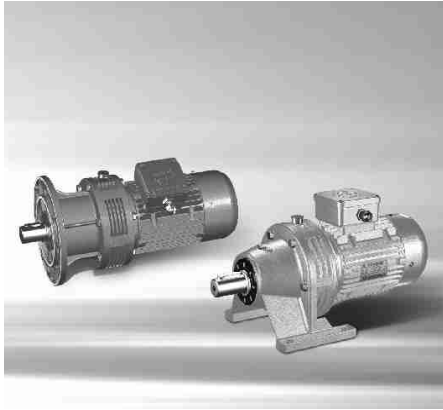


**WB系列**



**微型减速机特点 Features of Midget Reducer**

1、减速比大、效率高。本系列减速单级减速比有9-87，双级减速比有121-1849，若采用三级减速，其减速比更大，机械效率达90%以上。

2、由于采用行星传动结构。输入轴与输出轴在同一轴心线上，使机型尽可能获得最小尺寸，故结构紧凑、体积微小、重量极轻。

3、由于采用滚动接触，主要零件采用了高碳铬钢Gcr并经淬火处理，硬度达HRC58-65。所以经久耐用，使用可靠寿命长。

4、本系列减速器具有普通减速器的一切特点外，由于采用润滑脂润滑，不易漏油，同时实现了根据用户需要可在任何位置，任何角度方向安装使用。

1. Big reduction ratio, high efficiency. The single stage reduction ratio of the series of reducer is 9-87, the doublestage reduction ratio is 121-1849, the reduction ratio will be bigger if adopting the third-stage reduction ratio, and the machine efficiency can go to over 90%.

2. Adopting the structure planetary transmission that puts the input and output shafts on the same axis, the model can get the smallest size possible, so the model has compact structure, midget cubage and exceeding light weight.

3. Adopting scroll contact, high-carbon chrome steel Gcr and quencher treatment for the main parts, the rigidity can go to HRC58-65. So it has the dependable durability and long lift-span.

4. Adopting the grease and not easy to leak oil, this series reducer has all the features of common reducer, besides, it can be installed in any location and angle according to the user's need.



**微型减速机型号，减速比及其表示方法 Model of midget reducer, reduction ratio and the expressions**

1、机型及减速比:

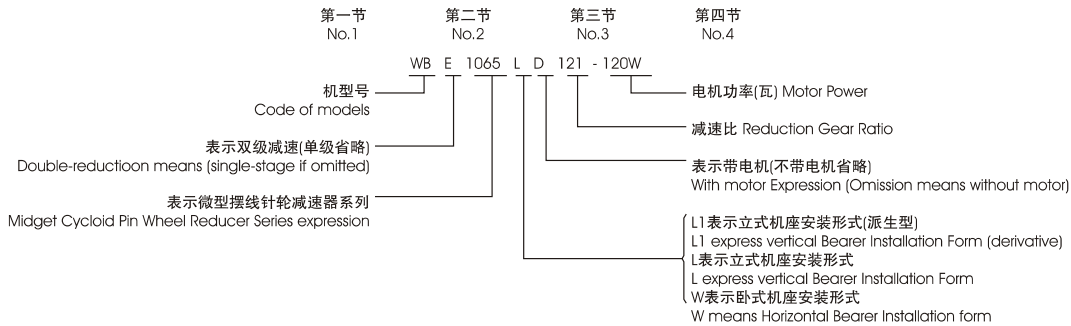
- a、单级减速比机型有WB65型、WB85型、WB100型、WB120型、WB150型。其减速比分别有9、11、17、23、29、35、43、59、71、87。
- b、双级减速比机型有WBE1065型、WBE1285型、WBE1510型。其减速比分别有：121、187、289、385、473、595、731、989、1225、1849。

1. Model and reduction ratio:

a. Model of single-stage reduction ratio: Model WB65, Model WB85, Model WB100, Model WB120, Model WB150, the reduction gear ratio: 9, 11, 17, 23, 29, 35, 43, 59, 71, 87.

b. Model of double-stage reduction ratio: Model WBE1065, Model WBE1285, Model WBE1510, the reduction gear ratio: 121, 187, 289, 385, 473, 595, 731, 989, 1225, 1849.

2、机型表示方法 Model expressions:



第一节表示微型摆线减速机单级减速还是双级减速及机型号；第二节表示机座安装形式是否带电机；第三节表示减速比；第四节表示电机功率，以瓦为单位。示例：WB100-WD-43-250表示微型摆线减速机，机型号100型，单级减速卧式安装带三相四级交流电机。减速比：1:43，电机功率250瓦。

WB85-W-35表示微型摆线针轮减速机，机型号85型，单级减速，卧式安装，不带电机，减速：1:35。

WBE1065-LD-121-120表示微型摆线减速机，机型号1065型，双级减速，立式机座安装形式，带三相四级交流电动机，减速比：1:121，电机功率120瓦。

The first para means whether the midget cycloid reducer is single-stage or double stage reduction and the code of model; the second para means whether there is the motor in the installation form or not; the third-stage para means the reduction ratio; the fourth-stagemeans the motor power, the unit is W.

Examples: WB100-WD-43-250 means midget cycloid reducer, code of model 100, single-stage reduction, horizontal installation, equipped with triphase quartemary alternating current dynamo, reduction ratio: 1:43, motor power: 250W.

WB85-W-35 means midget cycloid pin wheel reducer, code of model 85, single-stage reduction, horizontal installation, without motor, reduction gear ratio: 1:35.

WBE1065-LD-121-120 means midget cycloid reducer, code of model 1065, double-stage reduction, vertical bearer installation form, equipped with triphase quartemary alternating current, reduction ratio: 1:121, motor power: 120W.

**机型代号说明 Code of model Explanation**

本系列减速机单级机型65型、85型、100型、120型、150型的含义分别以针齿壳中心圆直径而确定。

双级机型的1065型是本系列的单级机型100型与65型的组合机型。

双级机型的1285型是本系列的单级机型120型与85型的组合机型。

双级机型的1510型是本系列的单级机型150型与100型的组合机型。

The signification of the reducer single-stage model 65, model 85, model 100, model 120, model 150 in this series are confirmed by their pin tooth shuck center round diameter.

The double-stage model 1065 is the combination model of the single-stage model 100 and model 65 in this series.

The double-stage model 1285 is the combination model of the single-stage model 120 and model 85 in this series.

The double-stage model 1510 is the combination model of the single-stage model 150 and model 100 in this series.



型号规格表选型说明 Explanations for Choice of Model Specifications

a、根据机型大小不同，在同一机型中的不同减速比所选用的电机功率也不同... b、表七、表八中已列有各机型输出轴的许用扭矩... c、表七、表八中电机栏中带“※”者为单相电容运转电动机... d、选取机型时，应注意使用电动机的启动扭矩大小...

a. Different motor powers selected for different speed reduction rate in accordance with differences in the size of the machines. The tables listed different speed reduction ratios for different motor powers of a model. "●" In table 7 and 8 means the full capacity of the motor can be used. Items marked with "○" means the power of the motor is less than the designed power of the reducer...

使用安装和维护 Installation and maintenance

- (一) 使用条件
1、本系列减速机可以在室内或室外各种场合使用，环境温度可在-15℃~+40℃范围内使用。
2、本系列减速机允许连续工作，同时允许正反转运转。
3、输入额定转速为1500r·P·m为宜，不宜过高。
4、本系列减速机允许在任何方向和角度位置安装使用。
(二) 安全注意事项
1、本系列减速器的输出轴不能承受较大的轴向和径向力，所以在输出轴加装联轴器及皮带轮等联接件时，不允许采用锤击方法，需用输出轴端螺孔将连接件压入。
(三) 润滑和维护
1、本系列减速机采用润滑油润滑，出厂时已在内部充满油脂，在初使用3个月后，由于在运转中会产生少量油脂损耗，应适量注入一些润滑油，建议采用二硫化钼或钙基润滑油。
2、注油时可旋开针壳上部的通气帽，即可注油。
I. Working conditions
1. Reducers of this series can be used indoors and outdoors with an environment temperature tolerance range between -15℃~+40℃.
2. This series of reducers allows continuous working and co-rotation and reversal rotation.
3. The input rated rotation is 1500r·P·m, which should be arbitrarily exceeded.
4. This series of reducers can be used in any direction and angle.
II. Safety Cautions
1. This series of reducers output shaft cannot withstand big axial radial force, therefore when installing the joint shaft coupling and band pulley to the output shaft, be careful not to use hammers. They should be fixed by pressing the joint part into spiral hole of the output shaft.
III. Lubrication and maintenance
1. This series of reducers use the grease lubrication. Grease has been applied to the reducers at ex-factory time. In the first three months of use, there will be a small loss of grease, therefore, grease should be added. It is advisable to use the molybdenum disulfide of the calcium base lubricant.
2. Please remove the air cap on top of the shell to fill grease.

工况系数K Coefficient of Operating Conditions

Table with 5 columns: 原动机种类 (Prime Type), 工作条件 (Operating conditions), 负荷性质 (Property of Load) with sub-columns for 稳定 (Smooth), 中等冲击 (Medium Impact), and 大的冲击 (Huge Impact). Rows include 电机驱动 (Motor drive) for different operating hours.

本系列减速机常用电机及电机外型尺寸一览表 -表九(-)- Schedule of motors and size of motors used with reducers of this series - Table 9(-)-

Table with 6 columns: 电机类别 (Motor type), 功率 (W) (Power), 转速 (r/min) (Rotation speed), 电压 (V) (Voltage), L2, D, 配置相应机型 (Corresponding model of motor). Rows include 三相异步电动机 (Three-phase asynchronous motor) and 单相异步电动机 (Single-phase asynchronous motor).

-表九(二)- - Table 9(二)-

Table with 6 columns: 电机类别 (Motor type), 功率 (W) (Power), 转速 (r/min) (Rotation speed), 电压 (V) (Voltage), L2, D, 配置相应机型 (Corresponding model of motor). Rows include 三相异步电动机 (Three-phase asynchronous motor) and 单相异步电动机 (Single-phase asynchronous motor).



**减速器型号规格及选型参考表 Specifications of Reducer Types and Reference List for Type Choices**

1. WB单级减速器型号规格 Model code of WB single grade reducer

—表七(一)—  
Table7 (一) —

机型 Code of Models	三相电动机 (W) Three-phase motor	单相电动机 (W) Single-phase motor	直流伺服电机 (W) DC servo motor	制动电动机 (W) Braking motor	减 速 比 Reduction Gear Ratio										低速轴 许用扭矩 (N·m) Allowable Output Torque(N·m)	
					9	11	17	23	29	35	43	59	71	87		
65	40	40※				○	○	○	○	○	○					25
	60	60※	50			○	○	○	○	○	●					
	90	90※				○	○	○	○	○	●	△				
	120					○	○	○	○	●	△	△				
85	90	90▲	80			○	○	○	○	○	○				60	
	120	120▲	123			○	○	○	○	○	●					
	180			200		○	○	○	○	○	●	△				
	250					○	○	○	○	○	●	△				
100	370	370★	355	400		○	○	○	○	○	○	○	○		120	
	180	180★	185	200		○	○	○	○	○	○	○	○			
	250	250★				○	○	○	○	○	○	○	○	○		
	370	370★				○	○	○	○	○	○	○	○	○		
120	750					○	○	○	○	○	○	○	○	○	150	
	370	370★	355	400		○	○	○	○	○	○	○	○	○		
	550	550★		500		○	○	○	○	○	○	○	○	○		
	750	750★		750		○	○	○	○	○	○	○	○	○		
150	1100					○	○	○	○	○	○	○	○	○	250	
	1500					○	○	○	○	○	○	○	○	○		
	550	550★				○	○	○	○	○	○	○	○	○		
	750	750★		750		○	○	○	○	○	○	○	○	○		
150	1100			1100		○	○	○	○	○	○	○	○	○	250	
	1500			1500		○	○	○	○	○	○	○	○	○		
	2200			2200		○	○	○	○	○	○	○	○	○		
	3000			3000		○	○	○	○	○	○	○	○	○		
输出轴转速 Output shaft rotation speed (r/min)	电机转速(1400r/min)时 Rotation Speed of motor(1400r/min)				155	127	82	60	48	40	32	23	20	17		
	电机转速(900r/min)时 Rotation Speed of motor(900r/min)				105	86	56	41	33	27	22	16	13	11		

WB

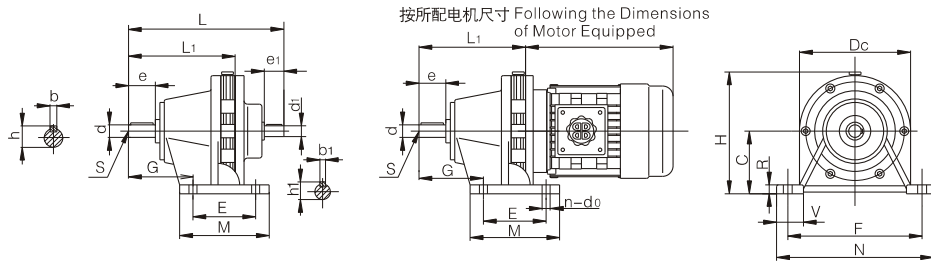
2. WBE双级减速器型号规格 Types and specifications of WBE double-grade reducer

—表八(一)—  
Table8 (一) —

机型 Code of Models	三相电动机 (W) Three-phase motor	单相电动机 (W) Single-phase motor	直流伺服电机 (W) DC servo motor	制动电动机 (W) Braking motor	减 速 比 Reduction Gear Ratio										低速轴 许用扭矩 (N·m) Allowable Output Torque(N·m)	
					(11×11) 121	(11×17) 187	(17×17) 289	(11×35) 385	(11×43) 473	(17×35) 595	(17×43) 731	(23×43) 989	(35×35) 1225	(43×43) 1849		
1065	40	40※			○	○	○	○	○	○	○	○	○	○	120	
	60	60※	50		○	○	○	○	○	○	○	○	○	○		
	90	90※			○	○	○	○	○	○	○	○	○	○		
	120				○	○	○	○	○	○	○	○	○	○		
1285	90	90▲	80		○	○	○	○	○	○	○	○	○	○	150	
	120	120▲	123		○	○	○	○	○	○	○	○	○	○		
	180			200	○	○	○	○	○	○	○	○	○	○		
	250				○	○	○	○	○	○	○	○	○	○		
1510	370	370★	355	400	○	○	○	○	○	○	○	○	○	○	250	
	180	180★	185	200	○	○	○	○	○	○	○	○	○	○		
	250	250★			○	○	○	○	○	○	○	○	○	○		
	370	370★			○	○	○	○	○	○	○	○	○	○		
当电机转速1400/min时其输出轴转速 Output shaft rotation speed when the rotation speed of motor is 1400r/min					11.5	7.5	4.8	3.6	3	2.3	1.9	1.4	1.1	0.7		



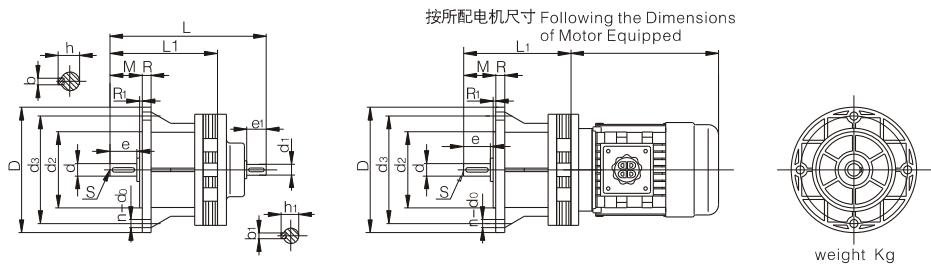
单级卧式W(D)外型安装联接尺寸 Shape and installation joint dimensions of single-stage horizontal type W(D)



机型 Model	外型尺寸 Dimensions				安装尺寸 Mounting Dimensions								输入端尺寸 Dimensions of Input End					输出端尺寸 Dimensions of Output End				重量 Weight (kg)			
	H	M	N	Dc	L	L1	C	G	R	E	F	S	V	n	d <sub>0</sub>	d <sub>1</sub>	b <sub>1</sub>	h <sub>1</sub>	e <sub>1</sub>	d	b	h	e	带D	不带D
WB65	120	90	150	110	135	95	60	45	8	60	130	M4	25	4	7	10	3	11	16	12	4	13.5	20	7	5
WB85	140	100	175	127	148	110	70	53	10	70	150	M5	30	4	9	12	3	13	16	14	5	16	23	9	6
WB100	155	110	185	145	174	130	80	63	12	80	160	M6	32	4	9	14	4	16.5	20	18	6	20.5	25	13	9
WB120	190	120	185	168	215	165	100	93	15	90	150	M8	35	4	11	15	5	17	22	30	8	33	35	18	14
WB150	235	160	250	210	260	200	120	115	18	120	210	M8	50	4	15	20	6	22.5	30	35	10	38.5	55	35	20

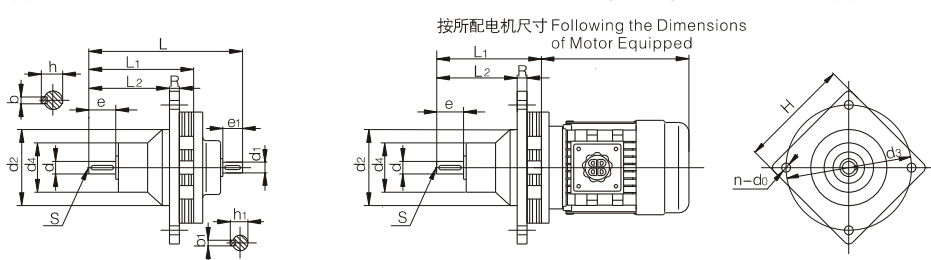
WB

单级立式L(D)外型安装联接尺寸 Shape and installation joint dimensions of single-stage vertical type L(D)



机型 Model	外型尺寸 Dimensions				安装尺寸 Mounting Dimensions								输入端尺寸 Dimensions of Input End				输出端尺寸 Dimensions of Output End				重量 Weight (kg)	
	D	L <sub>1</sub>	L	d <sub>2</sub>	d <sub>3</sub>	d <sub>0</sub>	n	R	R <sub>1</sub>	M	S	d <sub>1</sub>	b <sub>1</sub>	h <sub>1</sub>	e <sub>1</sub>	d	b	h	e	带D	不带D	
WB65	120	95	135	65	100	7	4	8	2.5	24	M4	10	3	11	16	12	4	13.5	20	6.5	4.5	
WB85	140	110	148	85	120	9	4	9	2.5	27	M5	12	3	13	16	14	5	16	23	8.5	4.5	
WB100	160	130	174	100	134	9	4	10	3	30	M6	14	4	16.5	20	18	6	20.5	25	12	8	
WB120	190	165	215	140	160	11	4	10	3	39	M8	15	5	17	22	30	8	33	35	17	13	
WB150	230	200	260	170	200	11	6	14	4	60	M8	20	6	22.5	30	35	10	38.5	55	35	20	

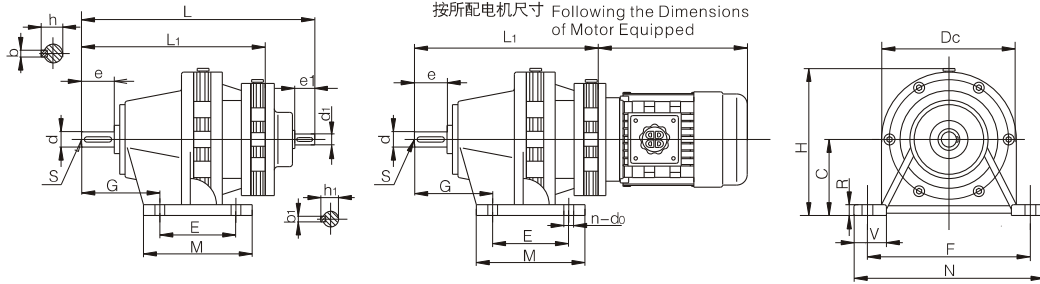
单级立式L1(D)外型安装联接尺寸 Shape and installation joint dimensions of single-stage vertical type L1(D)



机型 Model	外型尺寸 Dimensions				安装尺寸 Mounting Dimensions								输入端尺寸 Dimensions of Input End				输出端尺寸 Dimensions of Output End				重量 Weight (kg)	
	D	H	d <sub>4</sub>	L	L <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	d <sub>0</sub>	n	L <sub>2</sub>	R	S	d <sub>1</sub>	b <sub>1</sub>	h <sub>1</sub>	e <sub>1</sub>	d	b	h	e	带D	不带D
WB65	145	105	50	135	95	65	125	7	4	65	9	M4	10	3	11	16	12	4	13.5	20	6.5	4.5
WB85	165	125	55	148	110	85	140	9	4	82	10	M5	12	3	13	16	14	5	16	23	8.5	4.5
WB100	185	140	65	174	130	100	160	9	4	93	12	M6	14	4	16.5	20	18	6	20.5	25	12	8
WB120	210	160	85	215	165	120	185	11	4	118	12	M8	15	5	17	22	30	8	33	35	17	13
WB150	270	210	115	260	200	150	240	13	4	165	15	M8	20	6	22.5	30	35	10	38.5	55	35	20



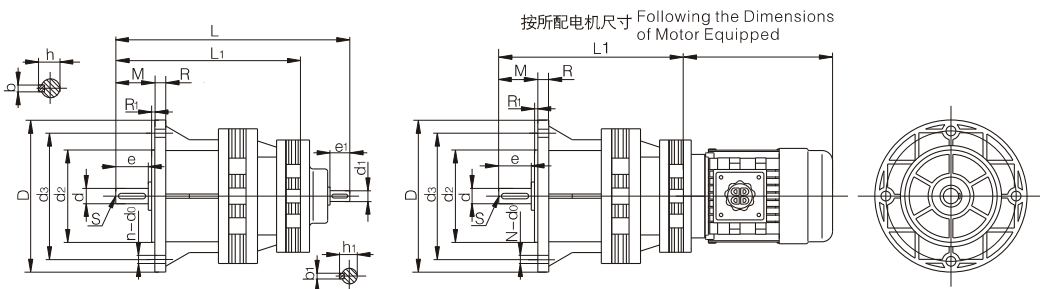
**双级卧式WE(D)外型安装联接尺寸** Shape and installation joint dimensions of double-stage horizontal type WE(D)



机型 Model	外型尺寸 Dimensions					安装尺寸 Mounting Dimensions								输入端尺寸 Dimensions of Input End					输出端尺寸 Dimensions of Output End				重量 Weight (kg)		
	H	M	N	Dc	L	L <sub>1</sub>	C	G	R	E	F	S	V	n	d <sub>0</sub>	d <sub>1</sub>	b <sub>1</sub>	h <sub>1</sub>	e <sub>1</sub>	d	b	h	e	带D	不带D
WB1065	155	110	185	145	225	185	80	63	12	80	160	M6	32	4	9	10	3	11	16	18	6	20.5	25	15.5	13.5
WB1285	190	120	185	168	268	230	100	93	15	90	150	M8	35	4	11	12	3	13	16	30	8	33	35	20	16
WB1510	235	160	250	210	325	295	120	115	18	120	210	M8	50	4	15	14	4	16.5	20	35	10	38.5	55	40	25

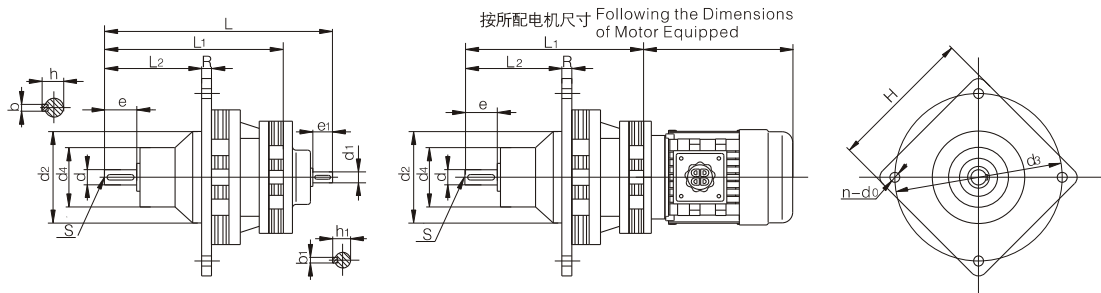
WB

**双级立式LE(D)外型安装联接尺寸** Shape and installation joint dimensions of double-stage vertical type LE(D)



机型 Model	外型尺寸 Dimensions			安装尺寸 Mounting Dimensions								输入端尺寸 Dimensions of Input End				输出端尺寸 Dimensions of Output End				重量 Weight (kg)	
	D	L <sub>1</sub>	L	d <sub>2</sub>	d <sub>3</sub>	d <sub>0</sub>	n	R	R <sub>1</sub>	M	S	d <sub>1</sub>	b <sub>1</sub>	h <sub>1</sub>	e <sub>1</sub>	d	b	h	e	带D	不带D
WB1065	160	185	220	100	134	9	4	10	3	30	M6	10	3	11	16	18	6	20.5	25	13.5	11.5
WB1285	190	230	268	140	160	11	4	10	3	39	M8	12	3	13	16	30	8	33	35	19.5	16.5
WB1510	230	295	325	170	200	11	6	14	4	60	M8	14	4	16.5	20	35	10	38	55	40	25

**双级立式L1E(D)外型安装联接尺寸** Shape and installation joint dimensions of double-stage vertical type L1E(D)



机型 Model	外型尺寸 Dimensions				安装尺寸 Mounting Dimensions								输入端尺寸 Dimensions of Input End				输出端尺寸 Dimensions of Output End				重量 Weight (kg)	
	D	H	d <sub>4</sub>	L	L <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	d <sub>0</sub>	n	L <sub>2</sub>	R	S	d <sub>1</sub>	b <sub>1</sub>	h <sub>1</sub>	e <sub>1</sub>	d	b	h	e	带D	不带D
WB1065	165	140	65	225	185	100	160	9	4	93	12	M6	10	3	11	16	18	6	20.5	25	13.5	11.5
WB1285	210	160	85	268	230	120	185	11	4	118	12	M8	12	3	13	16	30	8	33	35	19.5	16.5
WB1510	270	210	115	325	295	150	240	13	4	165	15	M8	14	4	16.5	20	35	10	38	55	40	25