

# Ed系列电力液压推动器

## Ed Series electro-hydraulic thrusters

**应用：**Ed系列电力液压推动器是一种集电机，离心泵，油缸为一体的，结构非常紧凑的驱动控制装置，被广泛用作各种鼓式制动器和盘式制动器的驱动装置，还可用于各种工业阀门，闸门，定向摆动和转动(<90°)装置(机构)及夹紧装置的驱动控制。

### Application:

ED series electro-hydraulic thruster is a kind of drive control system, which is very compact in structure, and integrates electrical motor, centrifugal pump and oil cylinder. It is extensively used as drive mechanism of various drum and disc brakes, and as drive control control of various industrial valves, penstock, directional pendulum and steering (<90°) mechanism and clamping devices.

### 符合标准

#### Sandards compliant

- Ed系列符合DIN15430标准。
- ED series comply with DIN15430 standard,

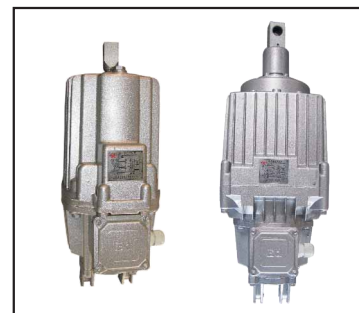
### 主要特点

#### Main Design Features

- 外壳为铸造铝合金，重量轻，外形美观。
- 电机为非浸油式结构，B级或F级绝缘(根据用户要求)，耐热性好，寿命长。
- 电机接线盒盖设有密封，采用电缆填料函进线，牢固可靠，电气外壳防护等级达IP55。
- 电机轴和推杆均表面特殊处理，使密封件寿命大大延长。
- 油缸壳体在一侧设有平衡气室，可使推动器在0~180°，任何方向安装，从而扩大其使用范围。
- 全部密封件和轴承采用世界名牌产品，密封可靠，寿命长。
- 紧固件为不锈钢材质，美观耐用。
- The casing is made by casting aluminum alloy, light and good-look.
- Electrical motor is of non-under-oil structure, B grade or F grade insulation (according to customer's requirements), durable and good heat resistance.
- Cover of junction box is tightly sealed. Cable stuffing box is adopted for inlet wire, which is firm and reliable. Electrical protection of casing reaches IP55 grade.
- The surface of motor axle and pusher is handled specially to make the sealing parts much more durable.
- Balancing air house is set at one side of oil cylinder casing, which can make the thruster to be installed at any direction within range of 0~180° and enlarge the using range.
- All sealing parts and bearing of Ed series are all world famous products. The sealing is reliable and durable.
- Fastening parts of Ed series are made of stainless steel, good-look and durable.



Ed系列 series



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## 附加装置

### Options

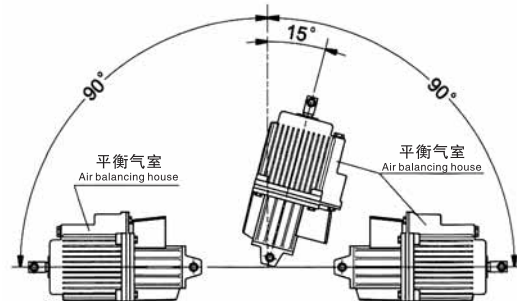
- 上位限位开关：可指示制动器是否打开，推杆是否推到规定位置等信息。
- 下位限位开关：可指示制动器是否正确闭合，推杆是否回到规定位置等信息，可同时设置上下限位开关。
- 增设内置式弹簧(仅短行程推动器可以)，弹簧力可由用户确定，但不得超过内置弹簧力(见参数表)。
- 增设加热器：在使用地点环境温度低于-25℃时，如用户需要，可增设加热器，加热器参数见附表1。
- 上升延时和下降延时阀或上升下降延时阀，可无级延长上升或下降时间，延时范围为额定动作时间至30秒，具体延时值可根据用户要求调定。
- *Up limit switch, which can indicate whether brake is open, or whether the thruster is at the right position.*
- *Down limit switch, which can indicate whether the brake is properly close, whether the thruster return to right position.*
- *Up and down limit switches can be set together.*
- *Build-in spring or release spring (only for short stroke thruster). Spring force can be decided by customers, but within the force limit of built-in spring (refer to parameter tables).*
- *Heater: Customers can require heaters in the place where ambient temperature is below -25℃. Parameters of heaters are attached.(refer to Tab. 1)*
- *Up delay valve, down delay valve, up/down delay valve, can prolong the lifting and falling time without limit, delay range from rated action time to 30 seconds, specific delay value can be set as customers' requirements.*

## 安装方式

### Mounting

除300N以下(含300N)规格，底座均可旋转90°安装(用户在订货时注明)，推杆头可360°任意旋转，全部推动器可垂直，倾斜(15°)安装，也可大于15°倾斜或水平安装，但平衡气室应朝上(如图1所示)：

*Except for type ≤300N, the foot lugs can be installed around 90° (please indicate at order), head of thruster can turn freely around 360° , all thrusters can be installed perpendicularly or horizontally, angularly(<15° or >15°), The balancing air house should be set upward(refer to figure 1).*



## 订货标记

### Order Mark

Ed□/□-□-□

特殊要求(可用文字说明)

*Special requirement (can be specified in words)*

电源频率和电压等级(50Hz,380V时不标)

*Power frequency and voltage(50Hz,380V unnecessary)*

附加装置 Additional option

产品型号 Type

F-防腐型 Anti-Corrosion

R-带加热器 Heater

E1-上位限位开关 Up limit-switch

E2-下限位开关 Down limit-switch

C-制动弹簧(C-弹簧) Brake spring(C-Spring)

H-上升延时阀 Lifting delay valve

S-下降延时阀 Falling delay valve

## 订货示例

### Order Example

Ed50/6-H.E1 60Hz/460V.F

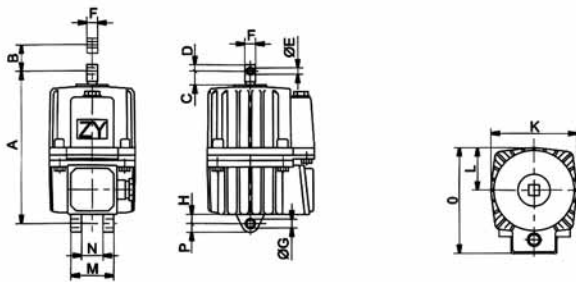
Ed50/6

## 使用条件

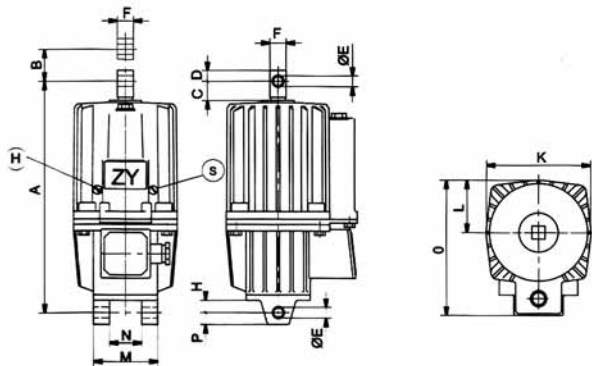
### Operating conditions

- 环境温度：-25~+50℃
- 相对湿度：≤90%，当用于湿热地区或腐蚀性大气（大气）的环境中时，应选用腐蚀型产品。
- 适应的工作制：断续(S3-60%)和连续(S1)工作制有特殊要求，在订货时协商确定

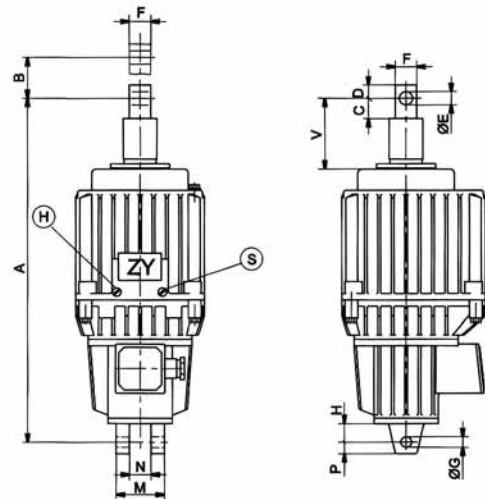
- Ambient temperature: -25~+50℃
- Relative humidity: ≤90%, anti-corrosive thrusters should be selected for damp and hot areas or corrosive environment.
- Operating duty: in remittent(S3i-60%) and continuous(S1). Special requirements can be discussed in order.



型号 Type ED-30.40.50.70.80.100



型号 Type ED-30.40.50.70.80.100



型号 Type Ed 121.201.301.450

## 说明

- 1) H=上升阀(上升延时), S=下降阀(下降延时)(Ed23无此附加装置)。
- 2) Ed 23.30的底座与电机壳体是铸为一体的, 其余规格的底座与电机壳体是通过螺栓连接。
- 3) 推杆头可360°任意旋转。

## NOTE

- 1) H=Lifting valve(lifting delay)S=falling valve(falling delay)(not for Ed23).
- 2) The foot lugs of Ed 23.30 are minted together with their motor casing. Foot lugs and motor casings of other types are reconnected by bolt.
- 3) The thruster head can be revolved freely in 360°.

表1 Table 1

推动器型号 Thruster type		Ed23	Ed30	Ed40	Ed50	Ed70	Ed80	Ed100	Ed121	Ed201	Ed301	Ed450	Ed630
加热器 Heater	功率 Power(W)	40											
	电源 Power supply	AC 50/60Hz 110/120V											

电缆规格 Cable size		电缆进线管 Cable entry		限位开关 Limit switch		液压油 Hydraulic fluid	
主电源 Main power supply	加热器 Heater	主电源 Main power supply	加热器 Heater	电源 Power supply	电缆规格 Cable size	环境温度 Ambient temperature (°C)	液压油 Hydraulic fluid
4 × 2.5/1.5mm <sup>2</sup>	2 × 2.5/1.5mm <sup>2</sup>	M25 × 1.5		AC 40-60Hz ≤ 500V	2 × 1.5mm <sup>2</sup>	-10~+40° -25~+40°	DB-25(SY1351) HL10(DIN51524) C10(Shell tellus)

### Ed系列推动器技术参数 Technical date

推动器型号 Thruster type	额定推力 Rated Thrust (N)	额定行程 Rated Stroke (mm)	制动弹簧力 Braking spring force(c-spring)(N)	功率消耗 Power consumption (W)	额定电流 Rated Current (A)	额定电压 Rated Voltage (V)	最大操作频率 Max. operating Frequency (1/h)	重量 Weight (kg)
Ed23/5	220	50	180	165	0.52	380~400V	2000	10
Ed30/5	300	50	270	200	0.46	380~400V	2000	14
Ed40/4	400	40	270	200	0.46	380~400V	2000	14
Ed50/6	500	60	460	210	0.48	380~400V	2000	23
Ed70/5	700	50	460	210	0.50	380~400V	2000	24
Ed80/6	800	60	750	330	1.42	380~400V	2000	24
Ed100/6	1000	60	750	330	1.42	380~400V	2000	28
Ed121/6	1250	60	1200	330	1.44	380~400V	2000	39
Ed201/6	2000	60	1900	450	1.45	380~400V	2000	39
Ed301/6	3000	60	2700	550	1.46	380~400V	1500	40
Ed50/12	500	120		210	0.48	380~400V	1200	26
Ed80/12	800	120		330	1.42	380~400V	1200	27
Ed121/12	1250	120		330	1.44	380~400V	1200	39
Ed201/12	2000	120		450	1.45	380~400V	1200	39
Ed301/12	3000	120		550	1.46	380~400V	900	40
Ed450/12	4500	120		1100	2.56	380~400V	900	45
Ed630/12	6300	120		1100	2.40	380~400V	630	
Ed121/8	1250	80		550	1.52	380~400V	1200	39
Ed201/8	2000	80		750	1.98	380~400V	1200	39
Ed301/8	3000	80		900	2.21	380~400V	900	40
Ed450/8	4500	80		1100	2.56	380~400V	900	45

制动弹簧力为推动器推杆推起1/3额定行程时的力。

The value of braking force delivered by the spring applies to 1/3 of stroke.

注：具体型号、结构外形的尺寸保留更改的权利。

Note: Our company reserves the rights to change the actual type and overall dimensions of the structure.

**Ed系列推动器安装尺寸** *Dimensions of Ed series thruster*

单位: (mm)

推动器型号 <i>Thruster type</i>	A	B	C	D	E	F	G	H	K	L	M	N	O	P	V
Ed23/5	286	50	26	12	12	20	16	20	160	80	80	40	200	16	
Ed30/5	370	50	34	15	16	25	16	18	160	80	80	40	197	16	
Ed40/4	377	40	41	15	16	30	16	18	160	80	80	40	197	16	
Ed50/6	435	60	35	22	20	30	20	23	190	95	120	60	254	22	
Ed70/5	450	50	35	22	16	30	20	23	190	95	120	60	254	22	
Ed80/6	450	60	35	22	20	30	20	23	190	95	120	60	254	22	
Ed100/6	570	60	35	22	20	30	25	123	190	95	110	60	254	25	
Ed121/6	645	60	37	25	25	40	25	35	240	112	90	40	260	25	130
Ed201/6	645	60	37	25	25	40	25	35	240	112	90	40	260	25	130
Ed301/6	645	60	37	25	25	40	25	35	240	112	90	40	260	25	130
Ed50/12	515	120	35	20	20	30	20	23	190	97	120	60	254	22	
Ed80/12	530	120	35	20	20	30	20	23	190	97	120	60	254	22	
Ed121/12	705	120	37	25	25	40	25	35	240	112	90	40	260	25	190
Ed201/12	705	120	37	25	25	40	25	35	240	112	90	40	260	25	190
Ed301/12	705	120	37	25	25	40	25	35	240	112	90	40	260	25	190
Ed450/12	850	120	48	35	30	50	30	40	290	145	110	60	325	30	190
Ed630/12	865	120	38	25	25	50	25	40	270	127	110	60	327	25	
Ed121/8	665	80	37	25	25	40	25	35	240	112	90	40	260	25	150
Ed201/8	665	80	37	25	25	40	25	35	240	112	90	40	260	25	150
Ed301/8	665	80	37	25	25	40	25	35	240	112	90	40	260	25	150
Ed450/8	810	80	48	35	30	50	30	40	290	145	110	60	325	30	150

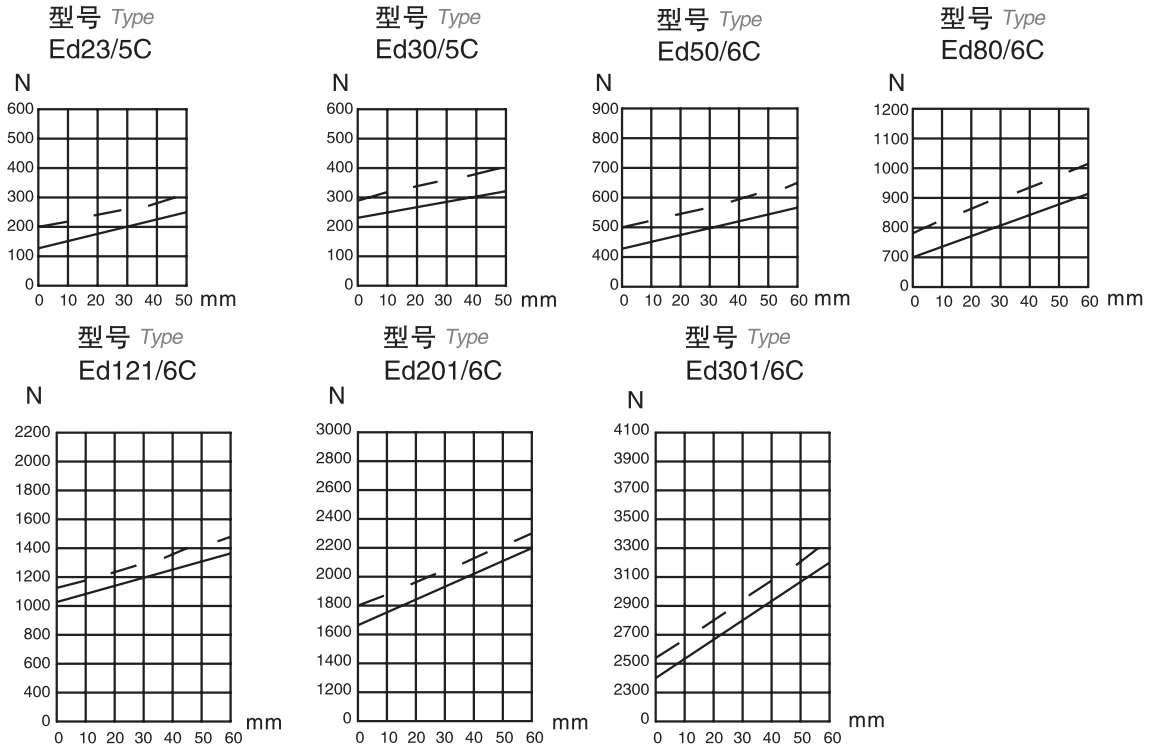
注: 具体型号、结构外形的尺寸保留更改的权利。

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### C-弹簧曲线 C-spring curve

--- 压缩C-弹簧所需的力 (制动力) The required C-spring compression force (braking force)

—— C-弹簧所产生的力 (制动力) Produced by C-spring force (braking force)



● 曲线实在20℃环境温度时测定的

### 行程--时间曲线 Travel-time curve

