

YPZ₂系列电力液压臂盘式制动器

YPZ₂ SERIES ELECTRO-HYDRAULIC DISC BRAKES

应用 Application

- 电力液压臂盘式制动器是一种高性能、多功能的先进产品。由于具有瓦块退距自动均等，衬垫磨损、自动补偿等先进功能，使用过程中维护非常便捷。通过增设各种限位开关，可给主机PLC提供所需的联锁保护信号。广泛用于现代化的大型专用装卸机械、冶金设备、起重运输机械、矿山设备及工程机械中各种机构的减速和维持（停车）制动。

主要特点 Main Feature

- 无石棉制动衬垫为插装式，更换方便快捷。
- 联锁退距均等装置和瓦块自动限位装置，使用过程中可始终保持两侧瓦块退距均等且无需调整，完全避免制动衬垫浮贴制动盘的现象。
- 主要摆动铰点均设有自润滑轴承，使用过程中无需润滑；传动效率高，动作灵敏，制动器闭合（上闸）时间为0.25~0.4s。
- 无级衬垫磨损自动补偿装置，可使瓦块退距和制动力矩在使用过程中保持恒定，免去经常调整的麻烦。
- 制动弹簧设在方管内布置并设有标尺，保护弹簧不受损坏和污染。
- 采用Ed系列推动器配套，动作灵敏，寿命长。
- 常闭式设计，（断电）弹簧制动，（通电）推动器释放。

使用条件 Operating Condition

- 环境温度：-20℃~+50℃
- 相对湿度：空气相对湿度不大于90%
- 电源电压：3相、交流380V、50Hz（根据需要也可生产60Hz或不同的电压，请订货时说明）
- 工作制：间歇性（S3-60%，1200次/小时）和连续（S1）
- 使用地点的海拔高度符合GB755-2019。当低于-20℃时，推动器工作油改用YH-10航空液压油或按要求带加热器，详情参考Ed推动器样本。
- 户外雨雪侵蚀或有腐蚀性气体和介质应采用防腐型产品。
- 有特殊要求时，在订货时协商确定。

APPLICATION

Electro-hydraulic disc brakes are advanced products with high performance and multiple functions. They are maintenance-friendly due to advanced functions applied to them such as automatic shoe clearance balancing and wear self-compensation device. Various limit switches can provide interlocking protection signal to main machinery PLC. They fit very well for decelerating and stop/braking large-scale modern machines such as loading and unloading machinery, lifting and transporting machinery, metallurgy equipment and mining equipment.

MAIN FEATURE

- Brake linings are plug-in style, which are easy to replace.
- Interlocking shoes clearance balancing device and shoe auto-aligning device, constantly equalize the clearance of brake shoes on both sides and no need to adjust, thus completely avoid one side of brake lining sticking to brake disc.
- Self-lubricating bearings are equipped at main hinge points, which bring high efficiency of transmission, long performance life and unnecessary to lubricate during the course of operation. The closing time is short (only 0.25-0.4s).
- Wear-self-compensation devices can realize self-compensation of shoes clearance and relatively constant brake torque. It avoids the trouble of adjusting.
- Enclosed spring tube protects spring from damage and contamination.
- The Ed series thrusters are characterized by flexible action and long operating life.
- Brake closes in case of power failure (Fail-Safe Principle). Braking by spring power. Lifting by thruster.

OPERATING CONDITION

- Ambient temperature: -20°C + 50°C
- Relative humidity: air relative humidity is not more than 90%
- Voltages: AC 3 phase 380V, 50Hz. Also produces 60Hz or different voltages as needed, please indicate when ordering.
- Operating duty: intermittent (S3-60%, 1200 times per hour) and continuous (S1)
- Altitude in accordance with GB755-2019 of the place of use. When lower than -20°C, promoting the YH-10 aviation hydraulic oil instead of oil or belt as required and heat exchanger, for details refer to the Ed driver samples.
- Outdoor rain and snow erosion or corrosive gases and media should use anti-corrosion products.
- Special requirements can be discussed before production.

符合标准 Standards Compliant

- YPZ₂I、II、III制动力矩参数符合德国DIN15433标准，YPZ₂IV、V、VI符合德国DIN15433标准和JB/T7020-2006标准。
- 配备符合DIN15430标准的Ed系列电力液压推动器。

STANDARDS COMPLIANT

- The braking torque parameters of YPZ₂I, II and III conform to the German standard DIN15433, while those of YPZ₂IV, V and VI conform to the German standard DIN15433 and JB/T7020-2006.
- They are equipped with Ed series thrusters which comply with DIN15430 standard.

型号意义 Model Significance

YPZ₂ - □ / □ / □ / □ / □

- 制动器附加功能代号（可用文字说明，当左式时不标，右式时标注）
Additional function code of brake
(It can be explained in words, not marked when the left type, marked when the right type)
- 推动器附加装置代号（optional device code of thruster）
Thruster thrust code
- 推动器代号：“E”为Ed普通型，“B”为隔爆型
Thruster: “E” is Ed common type, “B” is flameproof type.
- 制动器中心高及结构代号：I、II、III、IV、V、VI
Brake center height and structure code: I, II, III, IV, V, VI
- 制动盘直径（mm） Brake disc diameter (mm)
- 制动器型号 Brake type

订货示例 Order Example

- YPZ₂-630×30II/E121-L-MSK1

例：如盘直径为630mm，盘厚30mm，中心高280mm，带磨损自动补偿装置，开闸显示行程开关，手动装置，右式，推动器Ed121/6，其订货标记为：YPZ₂-630II/E121S-MK1S（右）。
Example: disc diameter is 630mm, the disc thickness is 30mm, the center high 280mm, with automatic wear compensation device, gate opening display limit switch, manual installation, the right type, driver Ed 121/6, marked as: YPZ₂-630II/E121S-MK1S(right).



YPZ₂I、II、III系列 Series



YPZ₂IV、V、VI系列 Series

BEd系列隔爆型电力液压推动器

BEd SERIES EXPLOSION PROTECTED ELECTRO-HYRAULIC THRUSTERS

应用 Application

- BEd系列隔爆型电力液压推动器，主要用途是作为电力液压鼓式制动器的驱动装置，也可通过杆杆机械完成往复、圆周、摆动等形式的快速运动，适用于起重、运输、冶金、矿山、港口、建筑等行业。
- 其隔爆性能符合GB3836.2-2010《爆炸性环境用防爆电气设备、隔爆型电气设备“D”》的规定，防爆标志为ExdI Mb、ExdII CT4，分别用于煤矿井下及II A、II B (II类A级、II类B级) 温度组别为T1-T4组可燃气体或蒸汽与空气形成的爆炸性混合物场所。

APPLICATION

- BEd series explosion protected electro-hydraulic thruster is mainly used as the driving device of electric hydraulic drum brake. It can also complete reciprocating, circular, swinging and other forms of rapid movement through lever machinery. It is suitable for lifting, transportation, metallurgy, mining, port, construction and other industries.
- Its explosion-proof performance conforms to GB3836.2-2010 "explosion-proof electrical equipment, explosion-proof electrical equipment "D" for explosive environment. The explosion-proof signs are ExdI Mb and ExdII CT4, which are respectively used in coal mines and places where the temperature groups of II A and II B (class II A and class II B) are T1-T4 combustible gas or explosive mixture formed by steam and air.



BEd系列 Series

BEd系列隔爆推动器技术参数 TECHNICAL DATA OF BEd SERIES EXPLOSION PROTECTED ELECTRO-HYRAULIC THRUSTERS

表一

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 Brake spring force (N)	功率 Power (W)		额定电流 Rated current (A)	工作频率 Operating frequency (1/h)	重量 Weight (kg)		动作时间 Action time (s)		额定电压 Rated voltage (V)
				d I	dII CT4			Exd I	ExdII CT4	d I	dII CT4	
短行程推动器 Short stroke propulsion system												
BEd 30/5	300	50	270	200	200	0.46	1500	36	36	0.37	0.36	380
BEd 50/6	500	60	460	330	330	1.2		52	52	0.62	0.61	
BEd 80/6	800		750	330	330	1.42		53	53	0.5	0.49	
BEd 121/6	1250	60	1200	365	365	1.44	1500	76	76	0.58	0.54	380
BEd 201/6	2000		1900	450	450	1.45		78	78	0.57	0.46	
BEd 301/6	3000		2700	550	550	1.46		79	79	0.74	0.44	
长行程推动器 Long-stroke propulsion system												
BEd 501/2	500	120	—	240	275	1.2	900	62	62	1.02	0.72	380
BEd 801/2	800		290	280	1.42	63		63	0.83	0.65		
BEd 121/12	1250	120	—	365	310	1.44	900	79	79	0.99	0.81	380
BEd 201/12	2000		—	375	385	1.45		81	81	1.10	0.65	
BEd 301/12	3000		—	445	470	1.46		83	83	1.31	0.64	

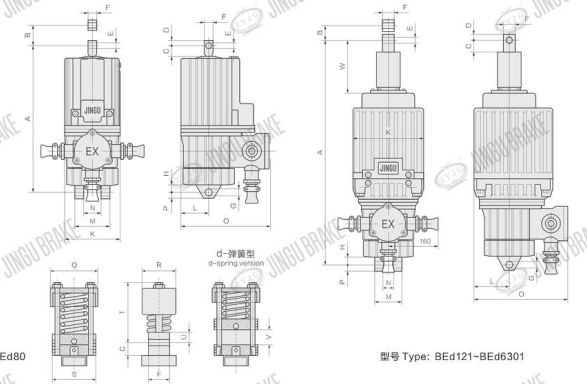
使用条件 Operating Condition

- 海拔高度不超过1000m
- 环境温度：-20℃~+40℃
- 安装地点最湿月的月平均最大相对湿度不超过90%
- 周围环境的污染等级允许为3级
- 电源电压：三相交流，额定电压为127V、220V、380V、660V、1140V、50Hz (60Hz)
- 有特殊要求时，在订货时协商确定。

OPERATING CONDITION

- Altitude not exceeding 1000m
- Ambient temperature: -20°C +40°C
- The monthly average maximum relative temperature of the wettest month in the installation site shall not exceed 90%.
- The pollution level is allowed to be 3.
- Voltages: three-phase AC, frequency is 50Hz, rated voltage is 127V, 220V, 380V, 660V, 1140V.
- Special requirements can be discussed before production.

安装及外形尺寸 Outline And Installation Dimension



型号 Type: BEd30-BEd80

型号 Type: BEd121-BEd6301

BEd系列隔爆推动器外形尺寸 DIMENSIONS OF BEd SERIES EXPLOSION PROTECTED ELECTRO-HYRAULIC THRUSTERS

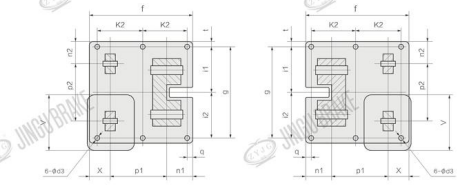
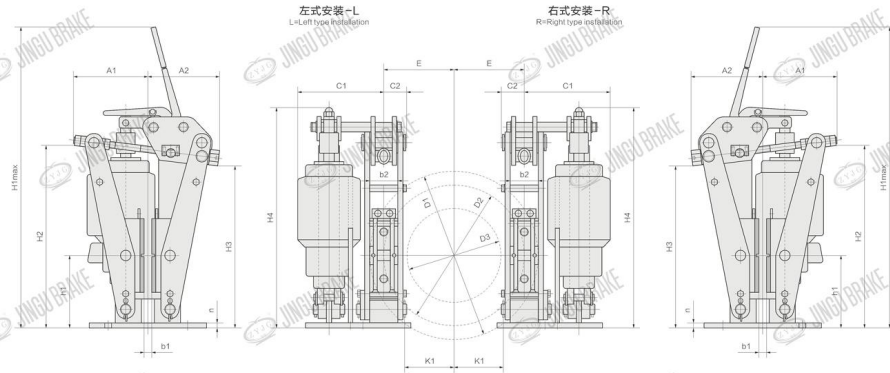
表二

推动器型号 Thruster type	安装及外形尺寸 Dimensions (mm)																					
	A	B	C	D	E	F	G	H	K	L	M	N	O	P	Q	R	S	T	U	V	W	
BEd 30/5	410	50	34	15	16	25	16	18	160	80	80	40	285	16	85	55	75	98	20	15	—	
BEd 50/6	490	60	36	18	20	30	20	23	190	95	120	60	308	20	85	55	75	100	22	15	—	
BEd 80/6																						
BEd 50/12	570	120	36	18	20	30	20	23	190	95	120	60	308	20	—	—	—	—	—	—	—	—
BEd 80/12																						
BEd 121/6																						
BEd 201/6	690	60	38	25	25	40	25	35	240	112	90	40	325	25	130	80	120	147	35	20	130	—
BEd 301/6																						
BEd 121/12	750	120	38	25	25	40	25	35	240	112	90	40	325	25	—	—	—	—	—	—	—	190
BEd 201/12																						
BEd 301/12																						
BEd 630/12	910	120	38	25	25	40	25	35	270	130	90	40	346	25	—	—	—	—	—	—	—	—

*注：具体型号，结构及外形尺寸保留更改的权利。 Note: The size of the specific type and structure should be retained.

YPZ₂ IV, V, VI 系列电力液压臂盘式制动器
YPZ₂ IV, V, VI SERIES ELECTRO-HYDRAULIC DISC BRAKES

安装及外形尺寸 Outline And Installation Dimension



制动器附加功能表 BRAKE ADDITIONAL MENU

附加功能代号 Function code	表示意义 Significance of
M	衬垫磨损补偿装置 Cushioning wear compensation device
K1	开闸限位行程开关 Gate opening limit switch limit switch
K2	闭闸限位行程开关 Closed-gate limit limit switch
K3	衬垫磨损极限限位开关 Pad wear limit limit switch
S	手动装置 Manual installation

YPZ₂ IV 系列臂盘式制动器尺寸和技术参数 DIMENSIONS AND TECHNICAL DATA OF YPZ₂ IV SERIES DISC BRAKES

表四

推动器型号 Thrustor type	安装及外形尺寸 Dimensions (mm)																									
	H1	H2	H3	H4	b2	d3	f	g	h1	i1	i2	k2	A1	A2	n1	n2	p1	p2	V	q	n	C2	C1	X	t	
Ed23/5	612	400	340	500	56	14	230	270	160	80	150	100	208	198	52	40	133	130	200	197	14	15	60	215	80	20
Ed30/5																										

制动盘直径 D1 Disc diameter	b1	D2	D3	E	K1	S	配置推动器 Thrustor		制动盘直径 Disc diameter D1 (mm)						整机重量 Weight (kg)			
							推动器型号 Thrustor type	功率 Power (W)	额定电流 Rated current (A)	355	400	450	500	560		630		
250		200	110	98	61	0.9±0.2	Ed23/5	165	0.52	200	230	260	300	345	395	445	71	
280		230	140	113	76		Ed30/5	200	0.46	280	310	355	410	470	540	610	75	
315		260	170	130	93													
355	20	300	210	150	113													
400		345	255	173	135													
450		395	305	197	160													
500		445	355	222	185													

*注: D2-理论摩擦直径; D3-允许最大的联轴器外径; S-每侧瓦块退距。
Note: D2-Theoretical friction diameter, D3-Max. allowable coupling or hub diameter, S-Brake clearance.

YPZ₂ V 系列臂盘式制动器尺寸和技术参数 DIMENSIONS AND TECHNICAL DATA OF YPZ₂ V SERIES DISC BRAKES

表五

推动器型号 Thrustor type	安装及外形尺寸 Dimensions (mm)																									
	H1	H2	H3	H4	b2	d3	f	g	h1	i1	i2	k2	A1	A2	n1	n2	p1	p2	V	q	n	C2	C1	X	t	
Ed50/6	1100	537	474	645	75	18	330	360	230	145	145	130	275	228	90	110	165	177	254	25	18	80	260	95	35	
Ed80/6																										

制动盘直径 D1 Disc diameter	b1	D2	D3	E	K1	S	配置推动器 Thrustor		制动盘直径 Disc diameter D1 (mm)						整机重量 Weight (kg)		
							推动器型号 Thrustor type	功率 Power (W)	额定电流 Rated current (A)	355	400	450	500	560		630	
355		200	110	98	61	0.9±0.2	Ed50/6	210	0.48	935	1085	1255	1425	1630	1870	97	
400		230	140	113	76		Ed80/6	330	1.42	1600	1850	2100	2400	2750	104		
450		260	170	130	93												
500	20	300	210	150	113												
560		345	255	173	135												
630		395	305	197	160												

*注: D2-理论摩擦直径; D3-允许最大的联轴器外径; S-每侧瓦块退距。
Note: D2-Theoretical friction diameter, D3-Max. allowable coupling or hub diameter, S-Brake clearance.

YPZ₂ VI 系列臂盘式制动器尺寸和技术参数 DIMENSIONS AND TECHNICAL DATA OF YPZ₂ VI SERIES DISC BRAKES

表六

推动器型号 Thrustor type	安装及外形尺寸 Dimensions (mm)																									
	H1	H2	H3	H4	b2	d3	f	g	h1	i1	i2	k2	A1	A2	n1	n2	p1	p2	V	q	n	C2	C1	X	t	
Ed121/6	1500	699	636	835	108	27	390	430	280	180	180	160	285	265	102	140	210	195	260	22	20	108	330	120	35	
Ed201/6																										
Ed301/6																										

制动盘直径 D1 Disc diameter	b1	D2	D3	E	K1	S	配置推动器 Thrustor		制动盘直径 Disc diameter D1 (mm)						整机重量 Weight (kg)												
							推动器型号 Thrustor type	功率 Power (W)	额定电流 Rated current (A)	450	500	560	630	710		800	900	1000	1100								
450		350	170	175	95	0.9±0.2	Ed121/6	330	1.44	2700	3100	3650	4100	4700	5400	—	—	—	—	—	—	—	—	—	—	—	220
500		400	240	200	120		Ed201/6	450	1.45	4300	5000	5750	6600	7600	8800	—	—	—	—	—	—	—	—	—	—	—	220
560		460	300	230	150		Ed301/6	550	1.46	—	—	—	—	9700	11200	12800	14700	16500	18150	—	—	—	—	—	—	—	220
630		530	370	265	185																						
710	30	610	450	305	225																						
800		700	540	350	270																						
900		800	640	400	320																						
1000		900	740	450	370																						
1100		1000	840	500	420																						

*注: D2-理论摩擦直径; D3-允许最大的联轴器外径; S-每侧瓦块退距。
Note: D2-Theoretical friction diameter, D3-Max. allowable coupling or hub diameter, S-Brake clearance.