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SB SBD Series safety brakes

SB SBD系列 安全制动器

应用 Application

• SB、SBD系列液压安全(紧急)制动器,是一种使用在低速轴(卷筒轴)上的大功率制动装置,可广泛用于大中型起重机、港口装卸机械起升以及臂架俯仰机构低速轴的紧急安全制动,矿用卷扬机、提升机和大功率倾角式皮带运输机的工作制动和紧急安全制动,缆车和索缆起重机驱动机构的安全制动,铸造起重机等特种起重机起升机构低速轴的安全(紧急)制动。

APPLICATION

• SB, SBD series hydraulic safety (emergency) brakes are high-power braking devices, which can be widely used as emergency safety brake on low speed shafts for the lifting control and pitching mechanism of various large and middle crane and port handling machinery. They are also applied for the same purpose for mine winder, lifter, elevators, belt conveying machinery, cable cars, foundry and cable cranes and so on.

符合标准 Standards Compliant

• 安全制动器技术要求符合JB/T10917-2008标准。

STANDARDS COMPLIANT

• The technology requirements of safety brakes comply with JB/T10917-2008 standard.

主要特点 Main Feature

- 常闭式设计,安全可靠;特制碟簧施力制动,液压驱动释放。(液压站选型详见液压站样本)
- 动作灵敏,闭合(上闸)时间短。
- 可选配开闸限位开关和衬垫磨损极限限位开关,可进行联锁保护和故障显示。
- 高性能的无石棉硬质摩擦衬垫,摩擦系数稳定,不损伤制动盘并且对水介质和盐雾(海水)不敏感。
- 合理的密封结构设计和进口名牌密封件,效果好,寿命长。
- 安装位置灵活,使用、调整、维护简单。

MAIN FEATURE

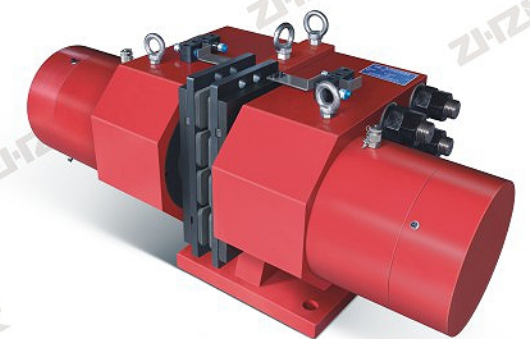
- Normally closed design, safe and reliable; specially-designed disc springs applied, hydraulic driving.
- Type selection of hydraulic power unit see "Manual for hydraulic power unit."
- Swift actions and short braking time.
- Be able to optionally equip with release limit and pad wear limit switch, which can realize signal indication and interlocking protection.
- Brake lining is made from non-asbestos hard material, high and stable friction performance, and it is insensitive to water, salt and other environmental agents.
- Excellent sealing ensure the brake long service life.
- Installing position is flexible, operation, adjustment and maintenance are easy.

使用条件 Operating Condition

- 环境温度: -20°C ~ +40°C
- 相对湿度: 空气相对湿度不大于90%
- 使用地点的海拔高度应符合GB755-2008标准。
- 可选配液压站(液压站选型详见液压站样本)
- 有特殊要求时,在订货时协商确定。

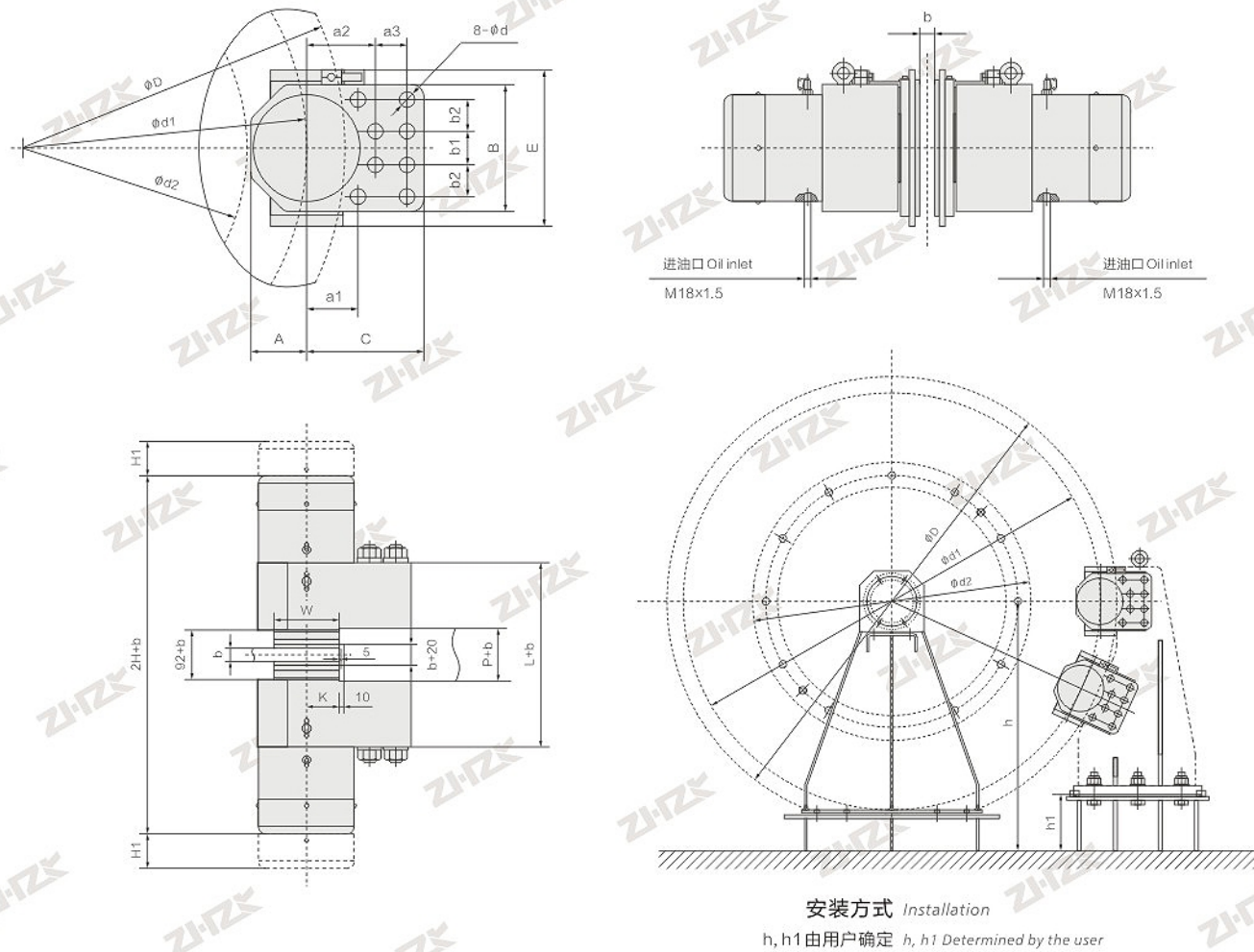
OPERATING CONDITION

- Ambient temperature: -20°C ~ +40°C
- Relative humidity: air relative humidity is not more than 90%
- The altitude of the place of use shall comply with GB755-2008 standard.
- Hydraulic power unit can be selected.
- Type selection of hydraulic power unit see Manual for hydraulic power unit.
- Special requirements can be discussed in order.

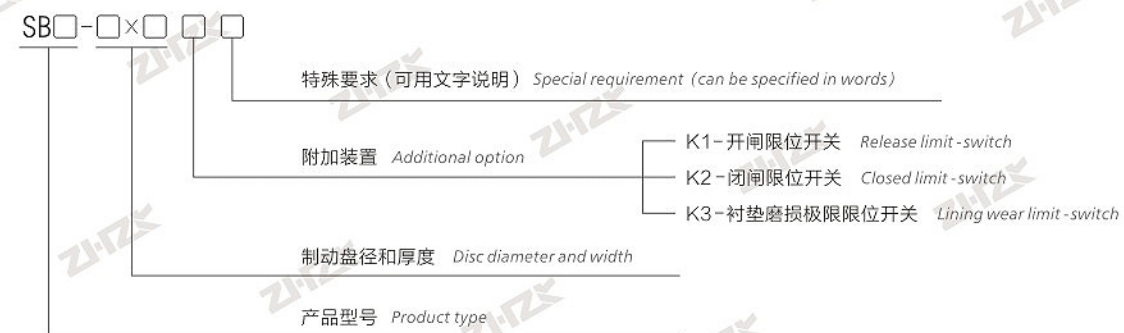


SB Series

安装及外形尺寸 Outline and installation dimensions



型号意义 Model Significance



订货示例 Order Example

- SB250-2200×40 RL 表示额定夹紧力为250kN, 制动盘直径为2200mm, 盘厚为40mm, 带开闸限位开关。
- SB250-2200×40 RL, Rated clamping force is 250kN, braking disc diameter is 2200mm, disc thickness is 40mm, with release limit switch.

SB系列安全制动器技术参数 Technical data of SB series safety brakes

表一

制动器型号 Brake type	夹紧力F Clamp force (kN)	释放压力 Release pressure (bar)	开闸油量 Release oil volume (ml)	退距 Clearance (mm)	摩擦系数μ Friction coefficient	安装螺栓/性能等级/安装扭矩 Requested bolts; performance class; Installation torque	不含支架重量 Weight bracket excluded (Kg)
SB50	50	110	30	1~2	0.36	8-M20、10.9、680	90
SB100	100	120	50	1~2	0.36	8-M24、10.9、1200	150
SB160	160	120	70	1~2	0.36	8-M30、10.9、2200	310
SB250	250	130	95	1~2	0.36	8-M36、10.9、3540	452
SB315	315	140	115	1~2	0.36	8-M36、10.9、3540	672
SB400	400	120	170	1~2	0.36	8-M48、10.9、7400	1100
SB500	500	140	170	1~2	0.36	8-M48、10.9、7400	1200

制动力矩 $Nm = F \times \mu \times d1$ Brake torque in $Nm = F \times \mu \times d1$

外形尺寸表 Outline dimensions table

表二

制动器型号 Brake type	安装及外形尺寸 Dimensions (mm)															
	A	a1	a2	a3	b1	b2	B	C	d	k	P	L	E	W	H	H1
SB50	77	77	90	38	38	38	154	150	20.5	56	102	300	240	110	310	80
SB100	95	95	105	45	55	45	190	180	25	71	102	348	286	140	360	85
SB160	110	120	135	65	70	65	260	235	31	87	106	412	370	170	410	95
SB250	130	120	160	75	80	75	300	275	37	87	106	456	370	170	470	110
SB315	140	175	205	85	90	82.5	335	330	37	137	106	476	410	270	500	110
SB400	170	180	220	120	110	110	440	420	50	137	142	602	546	270	560	115
SB500	170	180	220	120	110	110	440	420	50	137	142	682	542	270	600	115

与制动盘有关的尺寸 Relative dimensions of brake disc

表三

制动器型号 Brake type	安装及外形尺寸 Dimensions (mm)			
	b	D	d1	d2max
SB50	30	36	40	≥500
SB100	30	36	40	≥500
SB160	30	36	40	≥600
SB250	30	36	40	≥600
SB315	30	36	40	≥1200
SB400	30	36	40	≥1800
SB500	30	36	40	≥1800

• d1=理论摩擦直径 d1=The theoretical friction diameter.

• d2=允许最大的卷筒或联接毂外径 d2=max. Allowable drum or hub diameter.

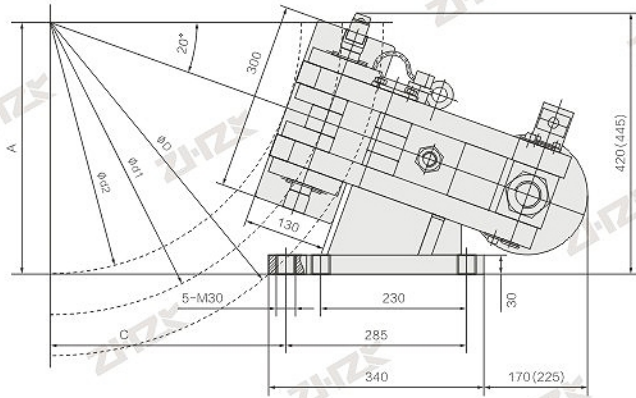
• D: 如为其它盘径, 请与我们联系。 D: For other disc diameters please contact us.

• 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.

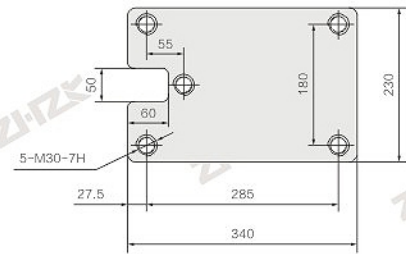
SBD-A Series safety brakes

SBD-A系列 安全制动器

安装及外形尺寸 Outline and installation dimensions



底板连接尺寸
Base plate connection dimensions

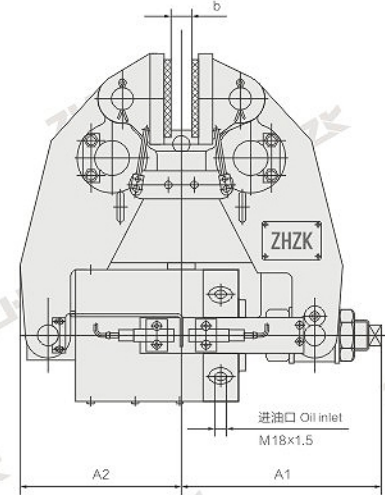
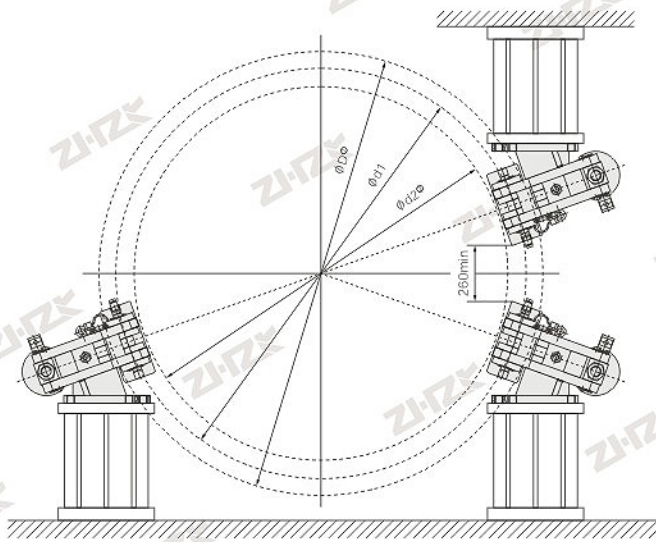


•注: 括号内的尺寸用于SBD315-A
Note: Dimensions in bracket are used in SBD315-A

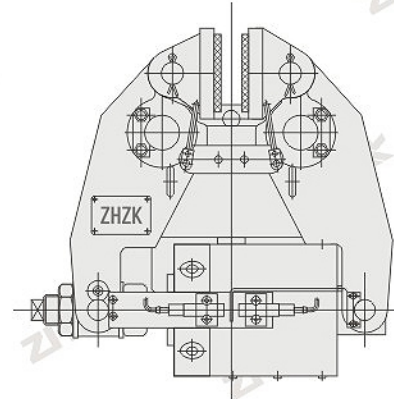
安装示意图 Installation Diagram

- 制动力矩: $M = \mu \times d1 \times F$ (Nm)
- 式中: μ -摩擦系数计算取值 $\mu = 0.36$
d1-制动盘计算摩擦直径, $d1 = D - 135$ (mm),
或 $D - 155$ (mm) (后者针对SBD315-A)
F-制动时总夹紧力 (KN)
- 注: 1) 制动盘直径用于 $\phi 800 \leq \phi D \leq 1800$ (mm)
2) d2-允许的最大卷筒或联接毂外径, $d2 = D - 270$ (mm)

- Braking torque: $M = \mu \times d1 \times F$ (Nm)
- In it: μ -the value of friction coefficient $\mu = 0.36$
d1-disc friction diameter $d1 = D - 135$ (mm)
or $D - 155$ (mm) (The latter is specially used in SBD315-A)
F-total clamp force (KN)
- Notes: 1) D-Brake disc diameter for $\phi 800 \leq \phi D \leq 1800$ (mm)
2) d2-max. allowable drum or hub diameter $d2 = D - 270$ (mm)

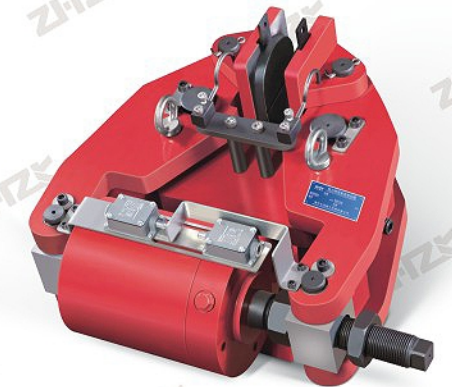
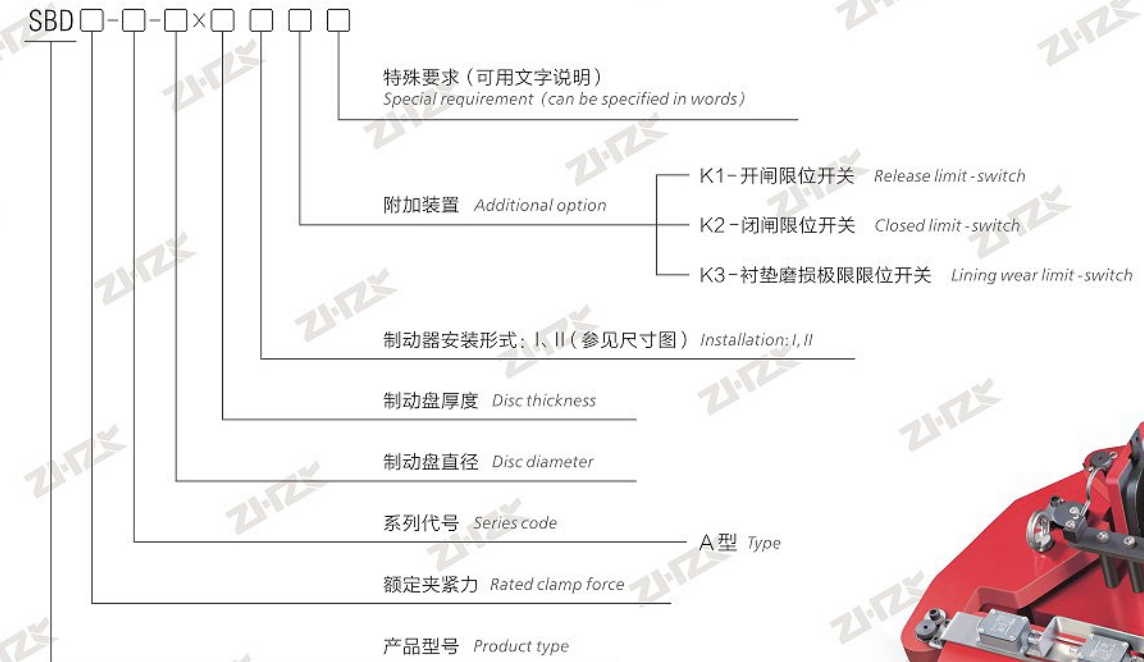


安装型式 Version: II型



安装型式 Version: I型

型号意义 Model Significance



SBD-A Series

订货示例 Order Example

- SBD250-A-1600×30 I RL 表示额定夹紧力为250KN, 带开闸限位开关, I型安装的A型安全制动器, 制动盘直径为1600mm, 盘厚为30mm。

ORDER EXAMPLE

- SBD250-A-1600×30 I RL means its rated clamping force is 250KN with release limit switch and A-type safety brake of I version installation. The brake disc diameter is 1600mm and the disc thickness is 30mm.

SBD-A系列安全制动器技术参数及安装尺寸 Technical data and dimensions of SBD-A series safety brakes

制动器型号 Brake type	总夹紧力 Total clamp force (KN)	制动力 Braking force (KN)	油缸工作压力 Cylinder pressure (bar)	开闸油量 Oil volume (ml)	开闸间隙 Released clearance (mm)	安装及外形尺寸 Dimensions (mm)						重量 Weight (kg)		
						A	C	d1	d2 max	D	A1		A2	b
SBD100-A	100	72	80	90	0.75~1.5	0.171×φD+220	0.470×φD-127	φD-135	φD-270	φ800≤φD≤1800	295	220	30 (25) (36)	195
SBD125-A	125	90	90	90	0.75~1.5						295	220		195
SBD160-A	160	115	110	75	0.75~1.25						315	235	195	
SBD200-A	200	144	100	120	0.75~1.5						315	235	235	
SBD250-A	250	180	120	100	0.75~1.25						350	258	235	
SBD315-A	315	220	110	160	0.75~1.25	0.171×φD+238	φD-155	φD-310	355	260	30(25)	280		

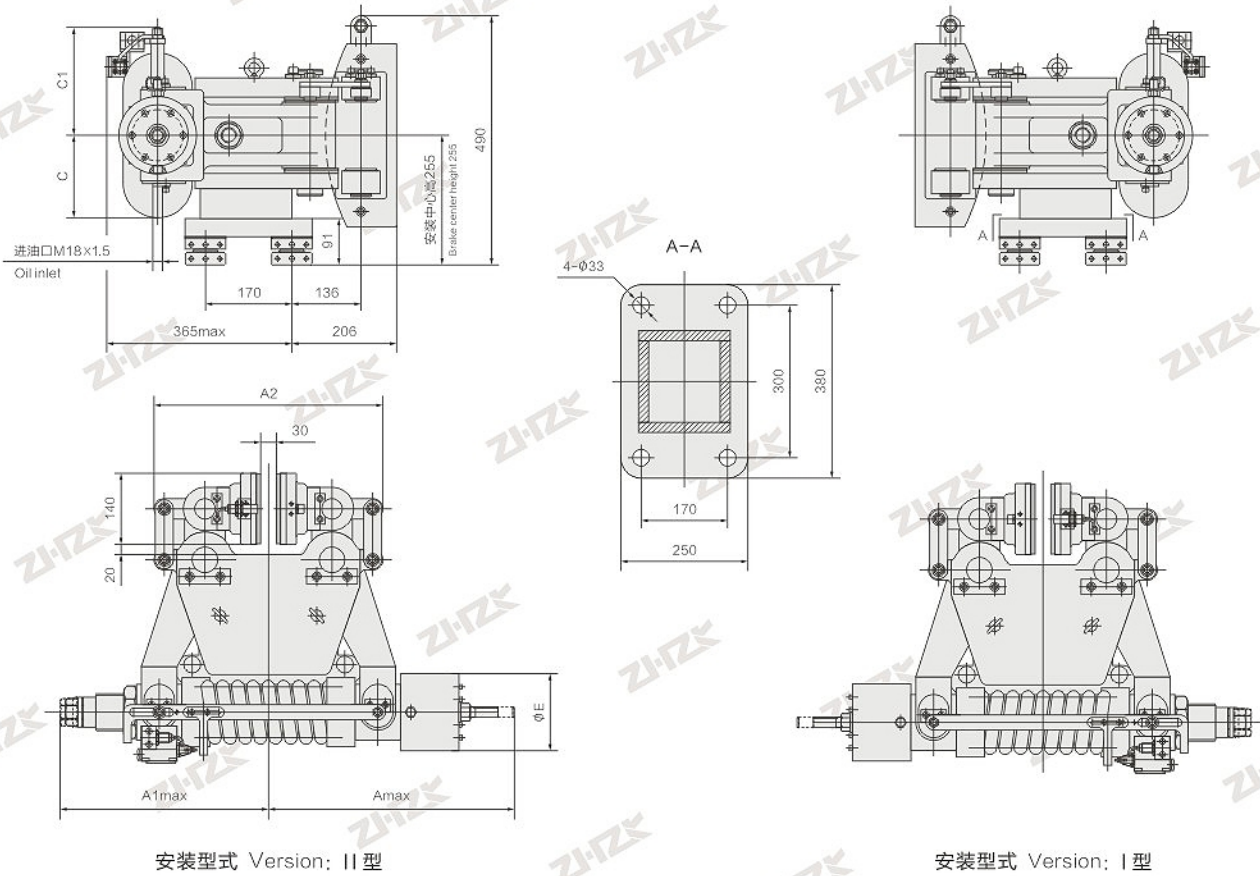
- 注: SBD-A系列安全制动器为原型号SBD系列安全制动器。
Note: The original types of SBD-A series safety brakes are SBD.

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

SBD-B Series safety brakes

SBD-B系列 安全制动器

安装及外形尺寸 Outline and installation dimensions

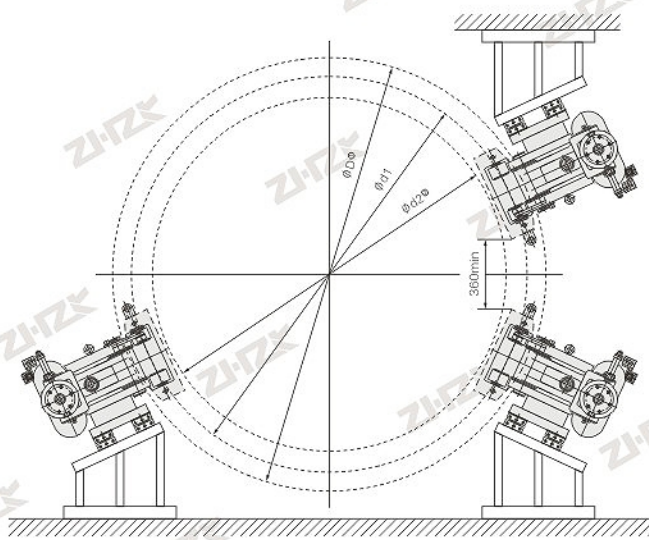


安装型式 Version: II型

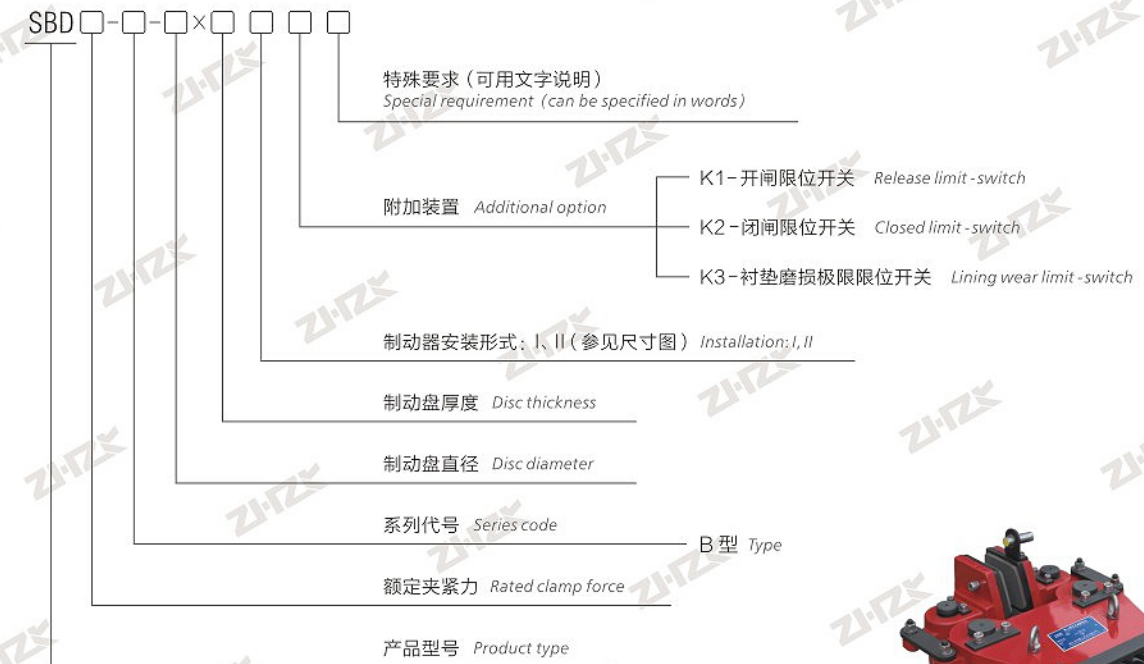
安装型式 Version: I型

安装示意图 Installation Diagram

- 制动力矩: $M = \mu \times d1 \times F$ (Nm)
- 式中: μ - 摩擦系数计算取值 $\mu = 0.36$
 $d1$ - 制动盘计算摩擦直径, $d1 = D - 150$ (mm)
 F - 制动时总夹紧力 (KN)
- 注: 1) 制动盘直径 $D \geq \phi 800$ (mm)
 2) $d2$ - 允许的最大卷筒或联接毂外径, $d2 = D - 360$ (mm)
- Braking torque: $M = \mu \times d1 \times F$ (Nm)
- In it: μ - the value of friction coefficient $\mu = 0.36$
 $d1$ - disc friction diameter $d1 = D - 150$ (mm)
 F - total clamp force (KN)
- Notes: 1) D - Brake disc diameter for $D \geq \phi 800$ (mm)
 2) $d2$ - max. allowable drum or hub diameter $d2 = D - 360$ (mm)



型号意义 Model Significance



SBD-B Series

订货示例 Order Example

- SBD80-B-1250×30 IRL 表示额定夹紧力为80KN, 带开闸限位开关, I型安装的B型安全制动器, 制动盘直径为1250mm, 盘厚为30mm。

ORDER EXAMPLE

- SBD80-B-1250×30 IRL means its rated clamping force is 80KN with release limit switch and B-type safety brake of I version installation. The brake disc diameter is 1250mm and the disc thickness is 30mm.

SBD-B系列安全制动器技术参数及安装尺寸 Technical data and dimensions of SBD-B series safety brakes

制动器型号 Brake type	额定夹紧力 Rated clamp force (KN)	制动力 Braking force (KN)	油缸工作压力 Cylinder pressure (bar)	开闸油量 Oil volume (ml)	开闸间隙 Released clearance (mm)	安装及外形尺寸 Dimensions (mm)							重量 Weight (kg)
						A max	A1 max	A2	C	C1	φE	D	
SBD80-B	80	57	95	55	1~2	470	390	450	115	150	120	≥φ800	270
SBD160-B	160	115	95	115	1~2	485	415	460	165	215	155	≥φ800	310

- 1) SBD-B系列安全制动器为原型号SBB系列安全制动器。
 1) The original types of SBD-B series safety brakes are SBB.

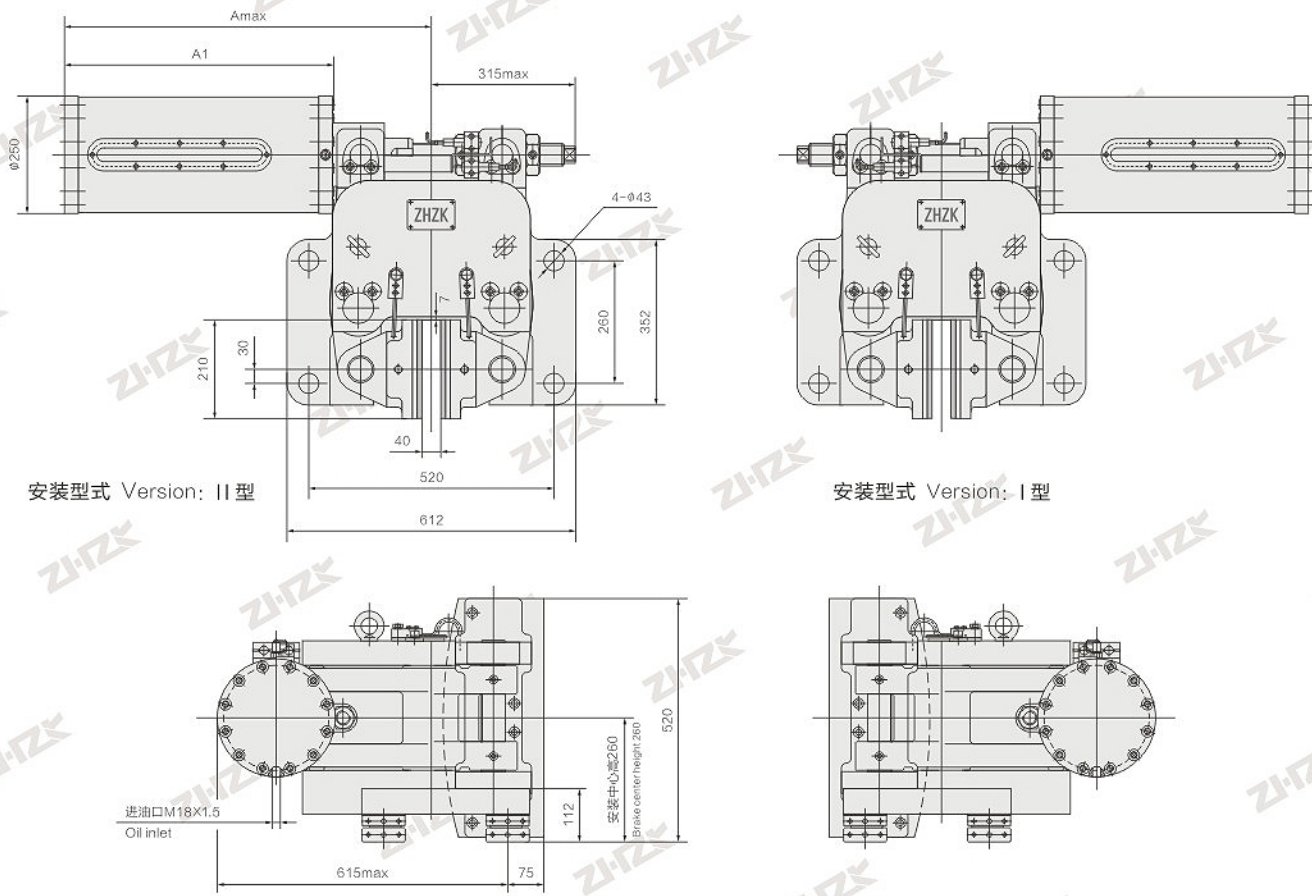
- 2) 摩擦系数: 静态0.4, 动态0.36。
 2) Friction coefficient: Static 0.4, dynamic 0.36.

- 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.

SBD-C Series safety brakes

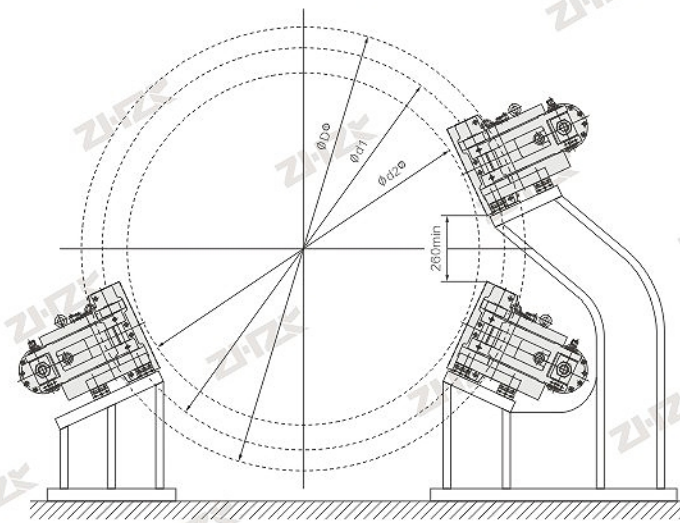
SBD-C系列 安全制动器

安装及外形尺寸 Outline and installation dimensions

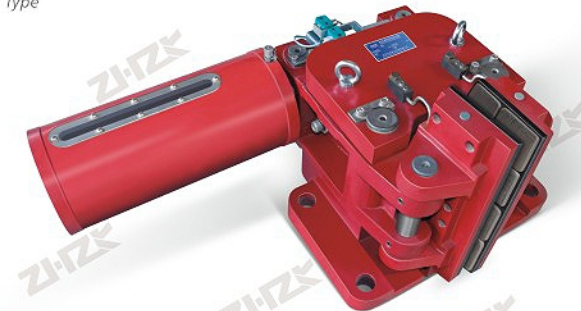
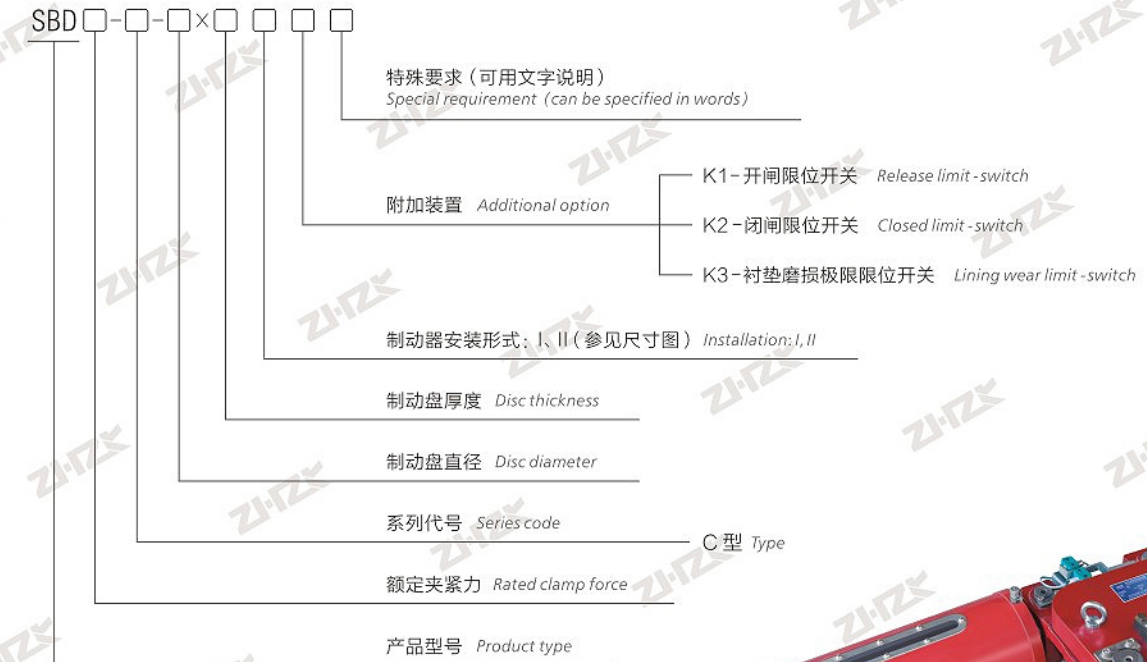


安装示意图 Installation Diagram

- 制动力矩: $M = \mu \times d1 \times F$ (Nm)
- 式中: μ - 摩擦系数计算取值 $\mu = 0.36$
 $d1$ - 制动盘计算摩擦直径, $d1 = D - 220$ (mm)
 F - 制动时总夹紧力 (KN)
- 注: 1) 制动盘直径 $D \geq \phi 1800$ (mm)
 2) $d2$ - 允许的最大卷筒或联接毂外径, $d2 = D - 500$ (mm)
- Braking torque: $M = \mu \times d1 \times F$ (Nm)
- In it: μ - the value of friction coefficient $\mu = 0.36$
 $d1$ - disc friction diameter $d1 = D - 220$ (mm)
 F - total clamp force (KN)
- Notes: 1) D - Brake disc diameter for $D \geq \phi 1800$ (mm)
 2) $d2$ - max. allowable drum or hub diameter $d2 = D - 500$ (mm)



型号意义 Model Significance



SBD-C Series

订货示例 Order Example

- SBD365-C-2200×40 IRL 表示额定夹紧力为365KN, 带开闸限位开关, I型安装的C型安全制动器, 制动盘直径为2200mm, 盘厚为40mm。

ORDER EXAMPLE

- SBD365-C-2200×40 IRL means its rated clamping force is 365KN with release limit switch and C-type safety brake of I version installation. The brake disc diameter is 2200mm and the disc thickness is 40mm.

SBD-C系列安全制动器技术参数及安装尺寸 Technical data and dimensions of SBD-C series safety brakes

制动器型号 Brake type	额定夹紧力 Rated clamp force (KN)	制动力 Braking force (KN)	油缸工作压力 Cylinder pressure (bar)	开闸油量 Oil volume (ml)	开闸间隙 Released clearance (mm)	安装及外形尺寸 Dimensions (mm)			重量 Weight (kg)
						A max	A1	D	
SBD250-C	250	180	80	275	1-2	595	378	$\geq \phi 1800$	660
SBD365-C	365	262	80	275	1-2	790	570	$\geq \phi 1800$	720
SBD425-C	425	306	95	275	1-2	790	570	$\geq \phi 1800$	730

- 1) SBD-C系列安全制动器为原型号SBB系列安全制动器。
 1) The original types of SBD-C series safety brakes are SBB.

- 2) 摩擦系数: 静态0.4, 动态0.36。
 2) Friction coefficient: Static 0.4, dynamic 0.36.

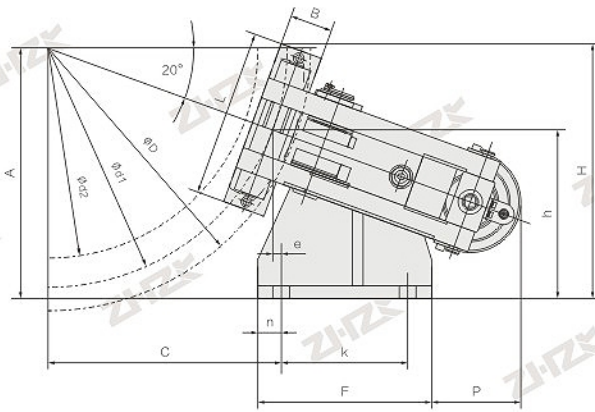
- 注: 具体型号, 结构及外形尺寸保留更改的权利。
 Note: The size of the specific type and structure should be retained.

SBD-D Series safety brakes SBD-D系列 安全制动器

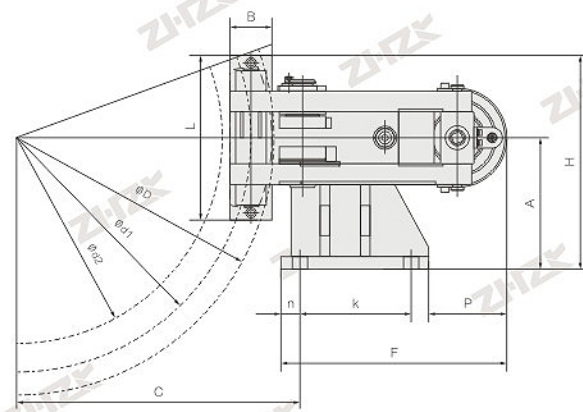
安装及外形尺寸 Outline and installation dimensions



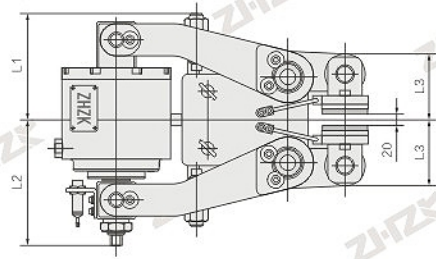
SBD50-D.100-D



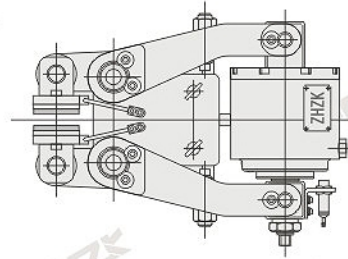
型号 Type: SBD80-D、SBD120-D、SBD240-D



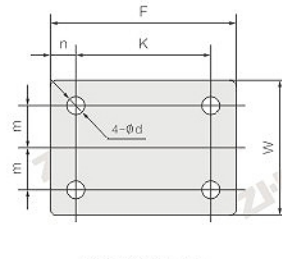
型号 Type: SBD50-D、SBD100-D



安装型式 Version: II型



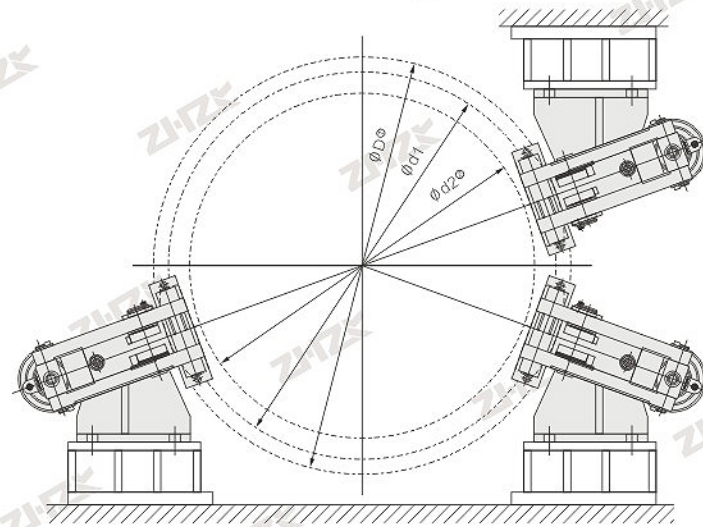
安装型式 Version: I型



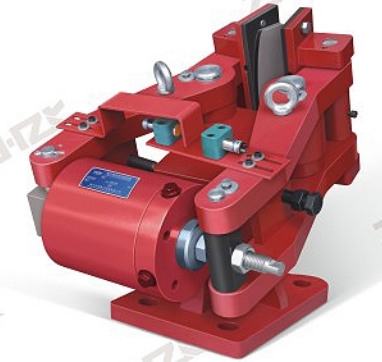
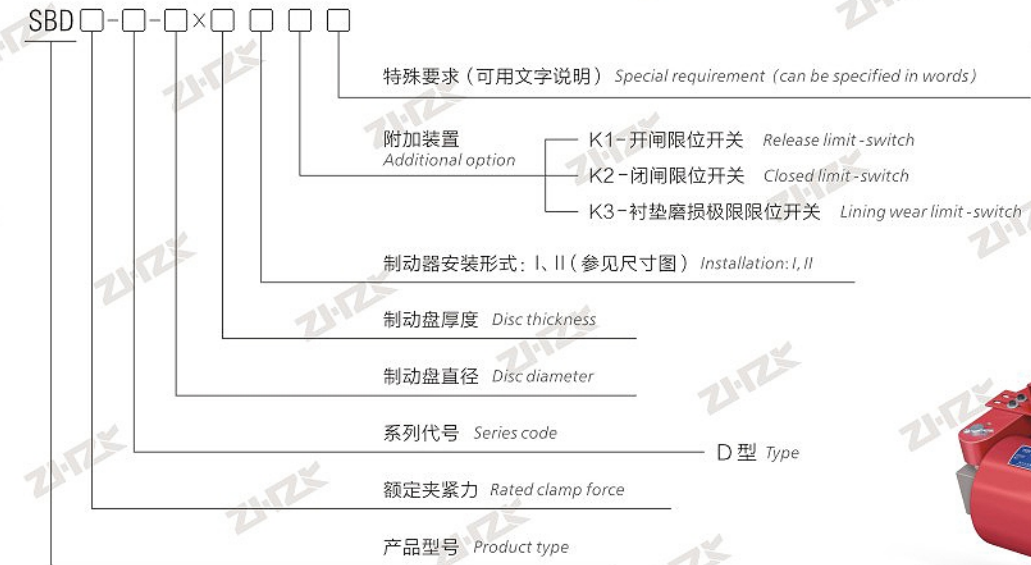
底板连接尺寸
Base plate connection dimensions

安装示意图 Installation Diagram

- 制动力矩: $M = \mu \times d1 \times F$ (Nm)
- 式中: μ - 摩擦系数计算取值 $\mu = 0.36$
d1 - 制动盘计算摩擦直径 (mm)
F - 制动时总夹紧力 (KN)
- 注: 1) 制动盘直径 $D \geq \phi 600$ (mm)
2) d2 - 允许的最大卷筒或联接毂外径 (mm)
- Braking torque: $M = \mu \times d1 \times F$ (Nm)
- In it: μ - the value of friction coefficient $\mu = 0.36$
d1 - disc friction diameter (mm)
F - total clamp force (KN)
- Notes: 1) D - Brake disc diameter for $D \geq \phi 600$ (mm)
2) d2 - max. allowable drum or hub diameter (mm)



型号意义 Model Significance



SBD80-D.120-D.240-D

订货示例 Order Example

- SBD240-D-900×20 IRL 表示额定夹紧力为240KN，带开闸限位开关，I型安装的D型安全制动器，制动盘直径为900mm，盘厚为20mm。
- SBD240-D-900×20 IRL means its rated clamping force is 240KN with release limit switch and D-type safety brake of I version installation. The brake disc diameter is 900mm and the disc thickness is 20mm.

SBD-D系列安全制动器技术参数 Technical data of SBD-D series safety brakes

表一

制动器型号 Brake type	额定夹紧力 Rated clamp force (KN)	制动力 Braking force (KN)	油缸工作压力 Cylinder pressure (bar)	开闸油量 Oil volume (ml)	开闸间隙 Released clearance (mm)	重量 Weight (kg)	安装及外形尺寸 Dimensions (mm)		
							A	C	D
SBD50-D	50	36	50	150	0.75~1.5	92	170	D/2+35	≥φ600
SBD80-D	80	57	80	125		185	$\sin 20^\circ(D/2-45)+320.5$	$\cos 20^\circ(D/2-45)+16.5$	
SBD100-D	100	72	80	150	0.75~1.25	180	200	D/2+55	≥φ600
SBD120-D	120	86	85	150	0.75~1.5	193	$\sin 20^\circ(D/2-45)+320.5$	$\cos 20^\circ(D/2-45)+16.5$	
SBD240-D	240	172	100	170			310	$\sin 20^\circ(D/2-45)+345$	$\cos 20^\circ(D/2-75)+20$

SBD-D系列安全制动器安装尺寸 Dimensions of SBD-D series safety brakes

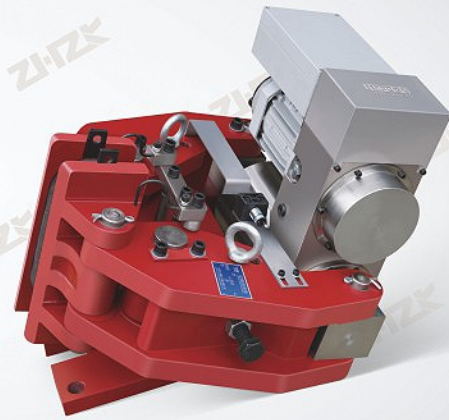
表二

制动器型号 Brake type	安装及外形尺寸 Dimensions (mm)																
	d1	d2 max	B	L	n	k	F	P	H	m	W	L1	L2	L3	d	h	e
SBD50-D	φ-90	φ-180	80	278	25	130	180	140	309	80	220	190	220	115	φ26	-	-
SBD80-D			320	45	240	330	170	485	75	240	φ32				320.5	16.5	
SBD100-D	φ-90	φ-180	80	320	45	240	330	195	460	75	240	190	220	115	φ32	-	-
SBD120-D								170	485							320.5	16.5
SBD240-D	φ-150	φ-300	140	400	60	300	420	190	560	120	360	225	255	160	φ38	345	20

- 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.

SBD-DY Series electro-hydraulic safety brakes

SBD-DY 系列电液安全制动器



SBD-DY Series

应用 Application

- SBD-DY系列电液安全制动器，主要用于起重、运输、冶金、矿山、港口、码头、建筑机械、电缆、吊索设备、风力发电机、纺织机械等行业的多种机械驱动配套的紧急安全制动。

APPLICATION

- SBD-DY series electro-hydraulic safety brakes are mainly used for emergency safety braking driven by a variety of machinery in various industries such as hoisting, transportation, metallurgy, mining, port, wharf, construction machinery, cable, sling equipment, wind turbine, textile machinery and so on.

使用条件 Operating Condition

- 环境温度：-20°C ~ +50°C
- 相对湿度：空气相对湿度不大于90%
- 使用地点的海拔高度应符合GB755-2008标准。
- 户外雨雪侵蚀或有腐蚀性气体和介质应采用防腐型产品。

OPERATING CONDITION

- Ambient temperature: -20°C ~ +50°C
- Relative humidity: air relative humidity is not more than 90%
- The altitude of the place of use shall comply with GB755-2008 standard.
- Outdoor rain and snow erosion or corrosive gases and media, anti-corrosion products shall be used.

型号意义 Model Significance



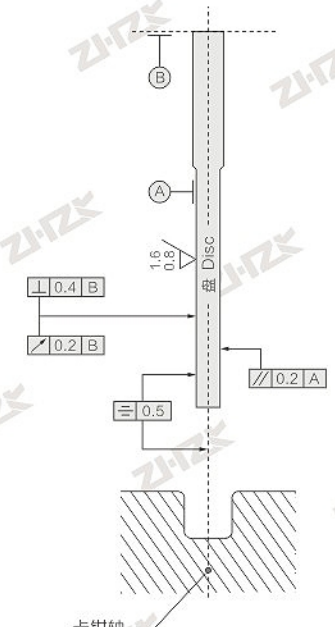
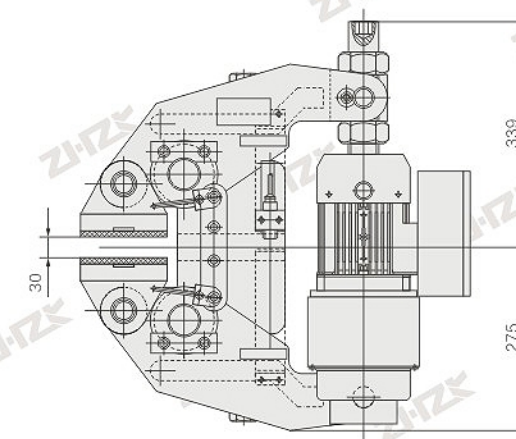
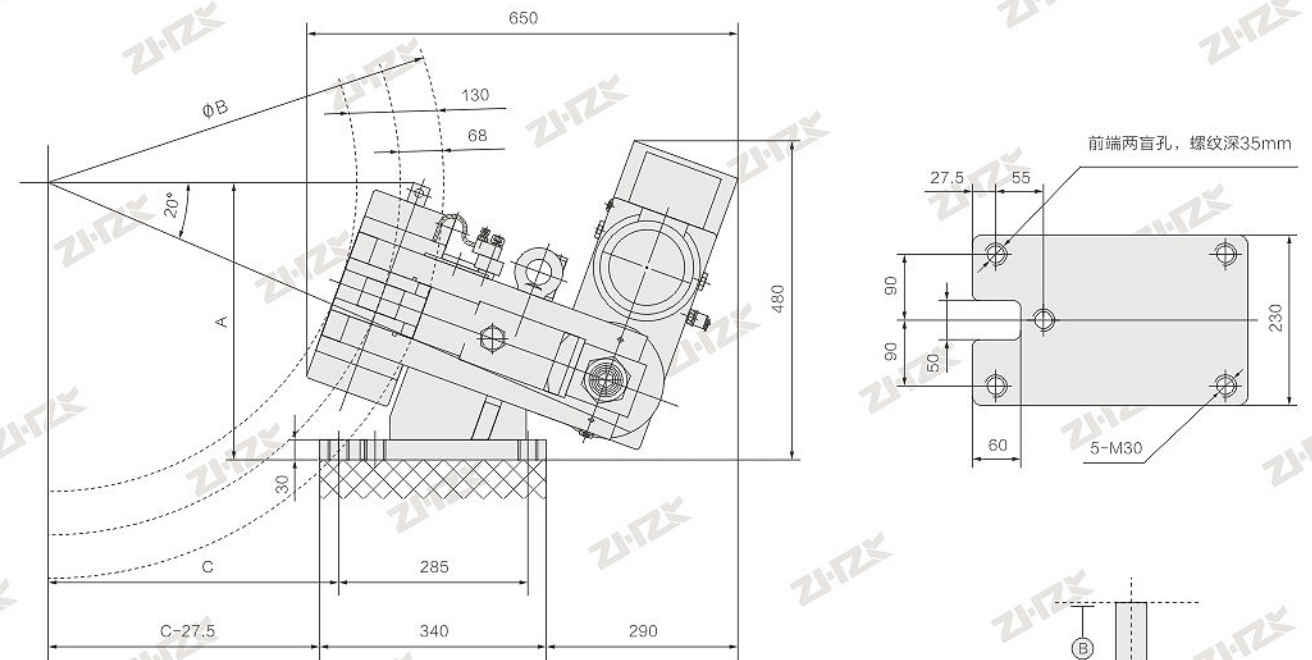
主要特点 Main Feature

- 具有体积小、重量轻、集成程度高等诸多优点。
- 联锁式退距均等装置，使用过程中始终保持两侧瓦块退距均等，避免因退距不均使一侧制动衬垫浮贴制动轮的现象。
- 主要摆动铰点均设有自润滑轴承，传动效率高，使用寿命长。
- SBD-DY电液轮边制动器，将电气控制系统、液压系统、制动油缸集成化设计，减少了管路布置，提高了安装维护效率。

MAIN FEATURE

- It has the advantages of small volume, light weight and high integration.
- The interlocking back distance equalizing device always keeps the back distance of tiles on both sides equal in use to avoid the phenomenon that one side of the brake pad floats against the brake wheel due to uneven back distance.
- The main swing hinge points are equipped with self-lubricating bearings with high transmission efficiency and long service life.
- The SBD-DY electro-hydraulic wheel side brake integrates the electrical control system, hydraulic system and brake cylinder, reduces the pipeline layout and improves the installation and maintenance efficiency.

安装及外形尺寸 Outline and installation dimensions



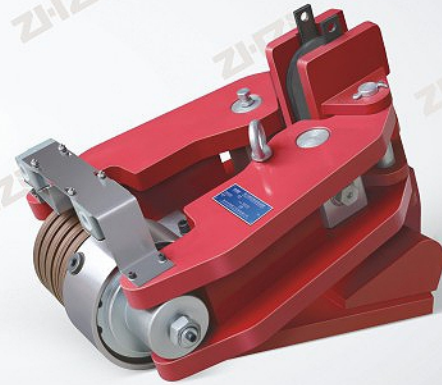
SBD-DY系列安全制动器技术参数及外形尺寸 Technical data and dimensions of SBD-DY series safety brakes

制动器型号 Brake type	额定夹紧力 Rated clamp force (KN)	额定制动力 Rated brake force (KN)	制动力矩公式 Braking torque formula (Nm)	开闸间隙 Release gap (mm)	开闸时间 Release time (S)	闭闸时间 Closing time (S)	工作电源 Working power supply	电机功率 Motor power (W)	尺寸 Dimensions (mm)		重量 Weight (kg)
									A	C	
SBD100-DY	100	76	制动力矩=制动力X(ΦB/2-68)	0.7-1	3-5	0.2	3PH AC380V 50Hz	550	A=0.171	A=0.470	225
SBD125-DY	125	95							225		
SBD160-DY	160	122							225		
SBD200-DY	200	152							265		
SBD250-DY	250	190							265		

*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.

SH Series hydraulic failure protection disc brakes

SH系列 液压失效保护盘式制动器



SH Series

应用 Application

- SH系列失效保护盘式制动器与鼓式制动器相比，具有结构紧凑、制动力大、安装方便等优点，它主要适用于起重、运输、冶金、矿山、港口、建筑机械、电缆、吊索设备、风力发电机、纺织机械等行业的多种机械驱动配套的机械制动或减速。

APPLICATION

- Compared with drum brake, SH series failure protection disc brake has the advantages of compact structure, large braking force and convenient installation. It is mainly suitable for mechanical braking or deceleration of various mechanical drives in various industries such as hoisting, transportation, metallurgy, mining, port, construction machinery, cable, sling equipment, wind turbine, textile machinery and so on.

主要特点 Main Feature

- 体积小，重量轻。无石棉制动衬垫，绿色环保，安装、更换方便快捷。
- 制动力大、维修费用低，带衬垫磨损自动补偿装置（制动力矩稳定），响应时间短。
- 安装公差大，制动盘端面跳动，最大值±0.2mm。底座相对于盘的垂直度偏差：最大值±4‰。
- 制动盘相对于底座的中心距偏差，最大值±2.5mm。

MAIN FEATURE

- Small size and light weight. Asbestos free brake pad, green and environmental protection, convenient and fast installation and replacement.
- Large braking torque, low maintenance cost, with automatic pad wear compensation device (stable braking torque) and short response time.
- The installation tolerance is large, and the maximum value of end face run out of brake disc is ±0.2mm. Perpendicularity deviation of base relative to disc: ±4‰.
- Center distance deviation of brake disc relative to base, maximum value ±2.5mm.

附加装置 Additional Devices

- 衬垫磨损显示：通过显示开关或衬垫里的磨损线实现。
- 特殊应用：用于盘温非常高时的烧结衬垫，特种衬垫，无火星等。
- 特殊盘：厚度、直径、材料等。

使用条件 Operating Condition

- 环境温度：-20℃~+50℃
- 周围工作环境中不得有易燃、易爆气体。
- 相对湿度：空气相对湿度不大于90%
- 使用地点的海拔高度应符合GB755-2008标准。
- 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。

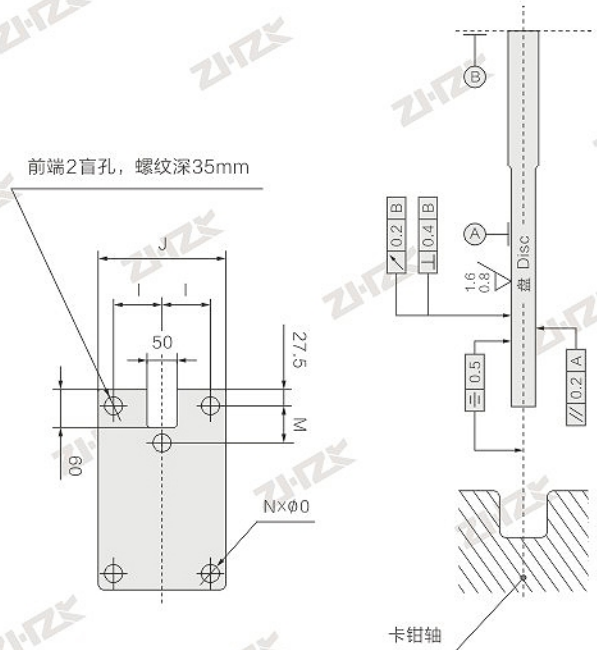
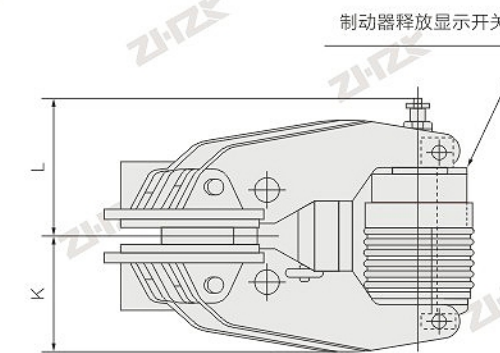
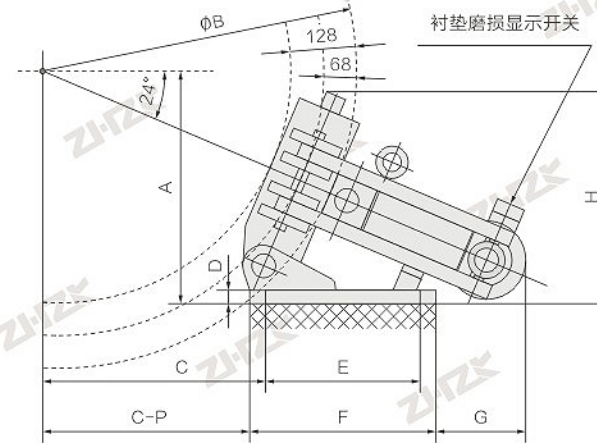
OPERATING CONDITION

- Ambient temperature: -20℃~+50℃
- There shall be no inflammable or explosive gas in the surrounding working environment.
- Relative humidity: air relative humidity is not more than 90%
- The altitude of the place of use shall comply with GB755-2008 standard.
- Outdoor rain and snow erosion or corrosive gases and media, anti-corrosion products shall be used.
- Special requirements can be discussed in order.

- 制动显示：通过显示开关实现。
- 手动释放显示：通过显示开关实现。
- 若有特殊需求，请与我们的技术人员联系协商订货。

ST1SH、ST2SH、ST3SH外形尺寸

弹簧制动-液压释放-适合盘厚: 30mm
Spring brake-hydraulic release-suitable for disc thickness: 30mm



ST1SH、ST2SH、ST3SH基本参数和尺寸

Technical data and dimensions of ST1SH, ST2SH, ST3SH

ΦB-单位: mm

制动力矩公式 Nm	制动力矩=制动力/1000×(ΦB/2-68)
响应时间 S	0.2
两侧退距 mm	0.7
释放压力 bar	100
ST1、2SH 匹配液压站	YZ1-10-10
ST3SH 匹配液压站	一拖一: YZ1-10-10 一拖四: YZ2-10-20
进油口尺寸"	Z1/4
基本参数	额定制动力 KN
	ST1SH: 35 (安全制动)/25 (工作制动)
	ST2SH: 70 (安全制动)/50 (工作制动)
夹紧力 KN	ST3SH: 147 (安全制动)/105 (工作制动)
	ST1SH: 50 (安全制动)/35 (工作制动)
	ST2SH: 100 (安全制动)/72 (工作制动)
ST3SH: 210 (安全制动)/150 (工作制动)	
完全释放位移容量 cm³	ST1SH: 18 ST2SH: 50 ST3SH: 135
总油缸容积 cm³	ST1SH: 34 ST2SH: 83 ST3SH: 227
重量 kg	ST1SH: 117 ST2SH: 117 ST3SH: 118
A	A=0.203×ΦB+211
C	C=0.456×ΦB-133
D	25
E	285
F	340
G	180
H	410
I	90
J	230
K	200
L	213.5
M	55
N	5
O	M30
P	27.5

•注：产品有更新，请注意最新版本。
Note: The product is updated, please pay attention to the latest version.

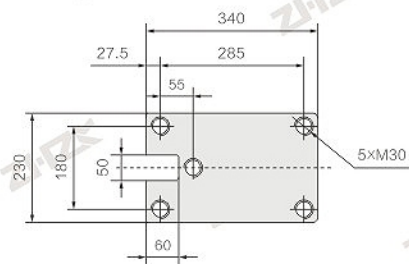
•若有特殊需求，请与我们的技术人员联系协商订货。
If you have special needs, please contact our technicians to negotiate and order.

SH Series hydraulic failure protection disc brakes

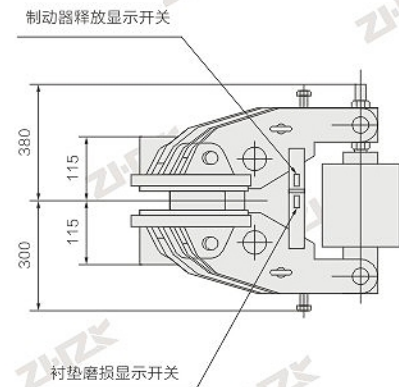
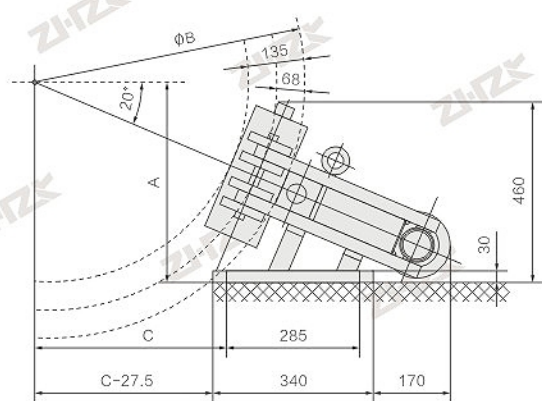
SH系列 液压失效保护盘式制动器

ST3SH-A外形尺寸 ST3SH-A Dimensions

弹簧制动-液压释放-适合盘厚: 30mm
Spring brake-hydraulic release-suitable for disc thickness: 30mm



- 制动力矩 (Nm) = 制动力/1000 × [($\phi B/2$)-68]
- 进油口: M18x1.5



ST3SH-A基本参数和尺寸 Technical data and dimensions of ST3SH-A

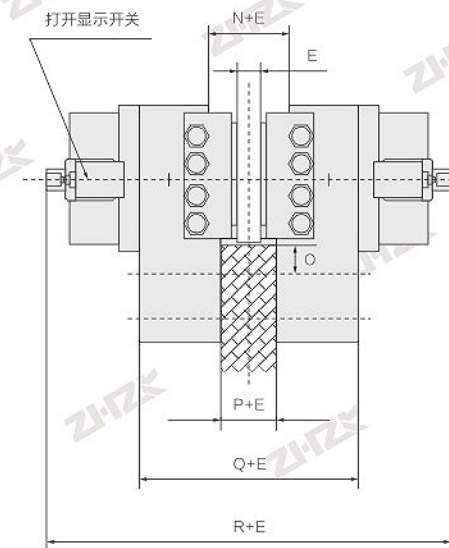
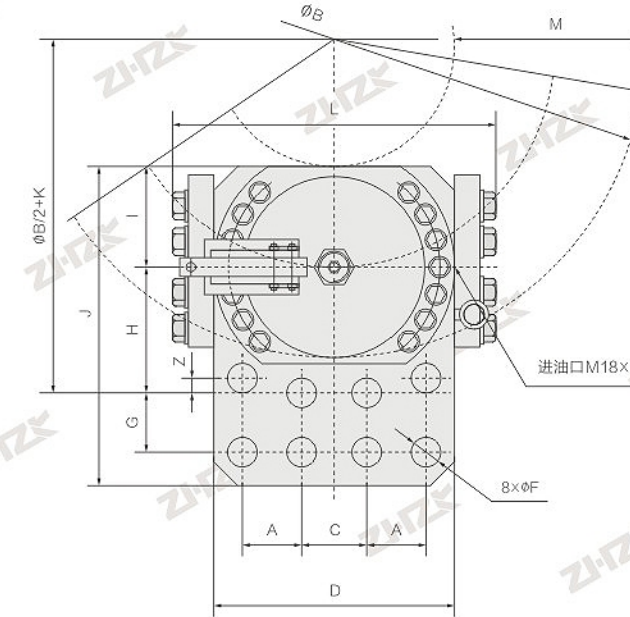
ϕB -单位: mm

制动力 Brake force	N	220000
释放压力 Release pressure	bar	110-120
完全释放的移位容量 Fully released shift capacity	cm ³	180
总油缸容积 Total cylinder volume	cm ³	310
响应时间 Response time	S	0.2
重量 Weight	kg	118
A	mm	$A = (0.171 \times \phi B) + 240$
C	mm	$C = (0.47 \times \phi B) - 120$
匹配液压站型号 Matching hydraulic station model		一拖一 一拖二: YZ1-20-10 一拖四: YZ2-20-20

• 注: 产品有更新, 请注意最新版本。 Note: The product is updated, please pay attention to the latest version.

ST10SH、ST16SH、ST25SH、ST40SH外形尺寸

弹簧制动-液压释放
Spring brake-hydraulic release



- ST10SH 连接件: 8个螺栓M24 等级: 12.9 上紧力矩: 1000Nm
- ST16SH 连接件: 8个螺栓M30 等级: 12.9 上紧力矩: 1350Nm
- ST25SH 连接件: 8个螺栓M30 等级: 12.9 上紧力矩: 1500Nm
- ST40SH 连接件: 8个螺栓M39 等级: 12.9 上紧力矩: 5000Nm

ST10SH、ST16SH、ST25SH、ST40SH基本参数和尺寸

Technical data and dimensions of ST10SH, ST16SH, ST25SH, ST40SH

ϕB -单位: mm

制动器型号	ST10SH	ST16SH	ST25SH	ST40SH
制动力矩公式 Nm	制动力矩=制动力 × ($\phi B/2 - M + I$)			
额定制动力 KN	81	150	200	288
夹紧力 KN	120	220	280	400
进油口尺寸	进油口均为 M18x1.5			
间隙 mm	2	1	2	
工作压力 MPa	13	15	19	
ST10SH 匹配液压站	YZ1-20-10			
ST16、25、40SH 匹配液压站	一拖一—拖二: YZ1-20-10 一拖四: YZ1-20-20			
油缸容积 ml	275	360	560	810
响应时间 S	0.2			
完全释放移位容量 ml	32	21	31	88
重量 kg	203	264	338	428
A	45	65	72	100
C	45	70	90	100
D	190	260	302	367
F	25	32	32	41
G	55	65	65	100
H	130	135	150	219
I	95	110	130	168
J	300	345	380	522
K	45	45	60	119
L	315	370	400	462
M	190	205	220	268
N	88	88	88	90
O	35	35	50	100
P	48	48	48	50
Q	288	288	288	306
R	648	600	650	630
Z	10	-	-	-

• 注: 产品有更新, 请注意最新版本。
Note: The product is updated, please pay attention to the latest version.

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If you have special needs, please contact our technicians to negotiate and order.

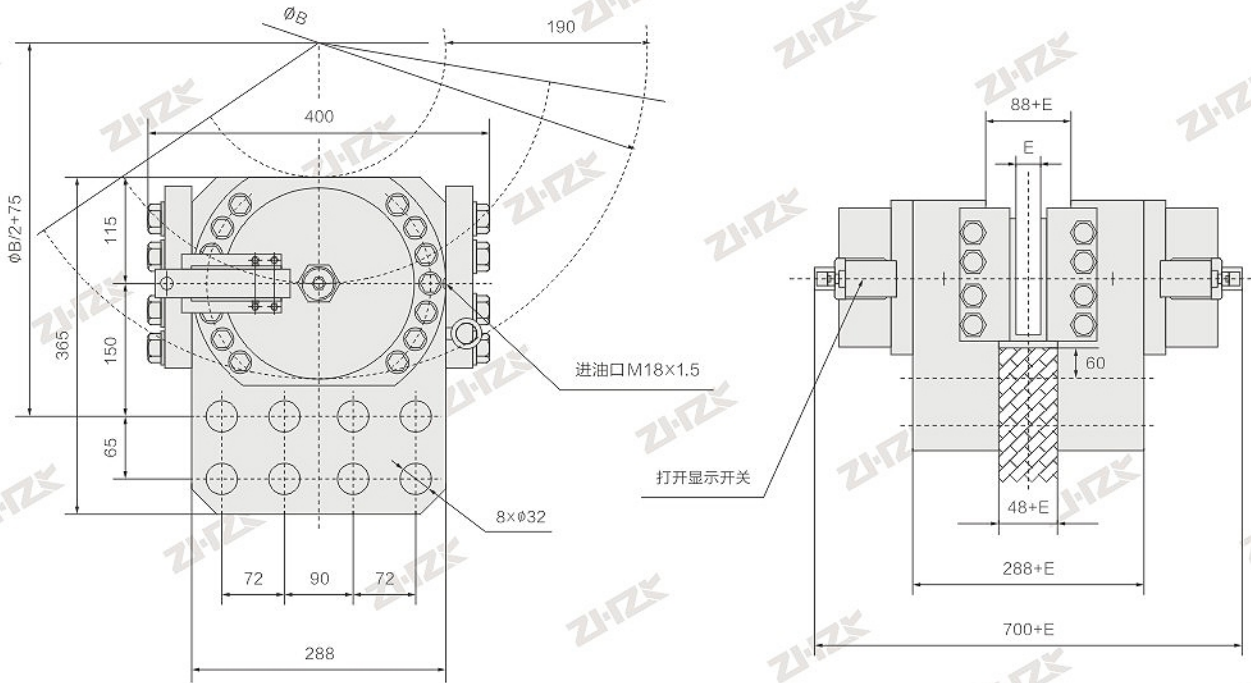
SH Series hydraulic failure protection disc brakes

SH系列 液压失效保护盘式制动器

ST25SH-A外形尺寸 ST25SH-A Dimensions

弹簧制动-液压释放
Spring brake-hydraulic release

- 连接件: 8个螺栓M30 等级12.9
- 上紧力矩: 1500Nm
- 制动力矩(Nm) = 制动力/1000x[($\phi B/2$)-75]

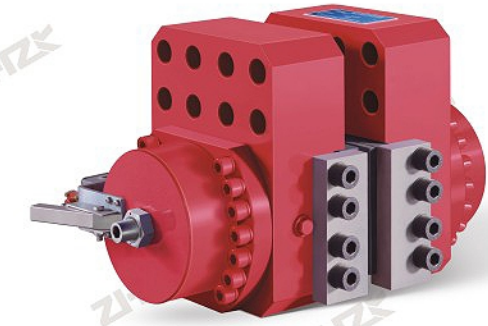


ST25SH-A基本参数和尺寸 Technical data and dimensions of ST25SH-A

ϕB -单位: mm

最大制动力 Maximum braking force	N	230000	200000	180000	150000
间隙 Clearance	mm	1.0	2.0	3.0	4.0
释放压力 Release pressure	bar	190			
完全释放的移位容量 Fully released shift capacity	ml	95			
油缸容积 Cylinder volume	ml	560			
响应时间 Response time	S	0.2			
重量 Weight	kg	280			
匹配液压站型号 Matching hydraulic station model		一拖一 一拖二: YZ1-20-10		一拖四: YZ2-20-20	

• 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.

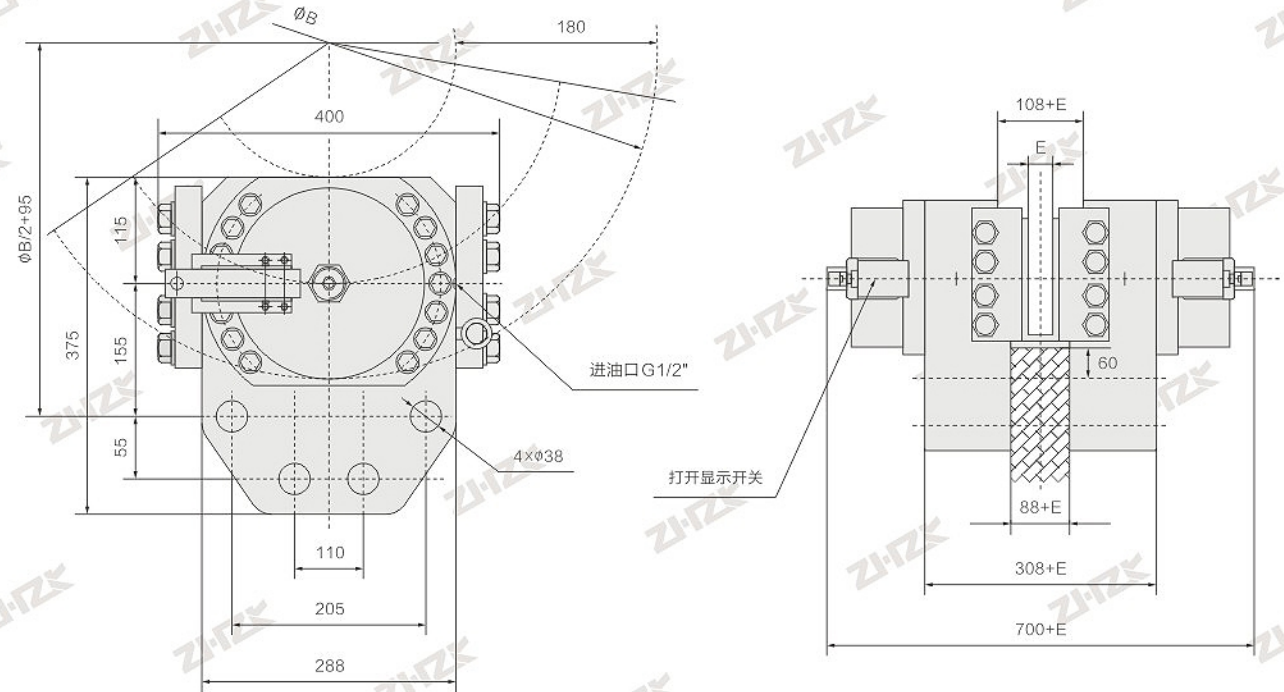


SH Series

ST25SH-C外形尺寸 ST25SH-C Dimensions

弹簧制动-液压释放
Spring brake-hydraulic release

- 连接件: 4个螺栓M36 等级12.9
- 上紧力矩: 4280Nm
- 制动力矩(Nm) = 制动力/1000x[($\phi B/2$)-60]



ST25SH-C基本参数和尺寸 Technical data and dimensions of ST25SH-C

ϕB -单位: mm

最大制动力 Maximum braking force	N	230000	200000	180000	150000
间隙 Clearance	mm	1.0	2.0	3.0	4.0
释放压力 Release pressure	bar	160			
完全释放的移位容量 Fully released shift capacity	ml	115			
油缸容积 Cylinder volume	ml	570			
响应时间 Response time	S	0.2			
重量 Weight	kg	280			
匹配液压站型号 Matching hydraulic station model		一拖一 一拖二: YZ1-20-10		一拖四: YZ2-20-20	

• 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.

SH Series hydraulic failure protection disc brakes

SH系列 液压失效保护盘式制动器

ST4SH、ST5SH基本参数和尺寸
Technical data and dimensions of ST4SH, ST5SH

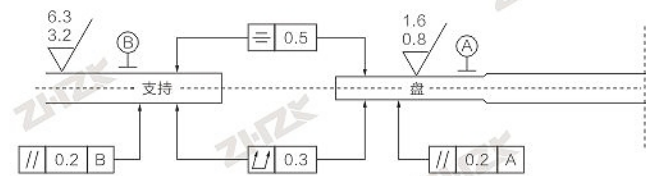
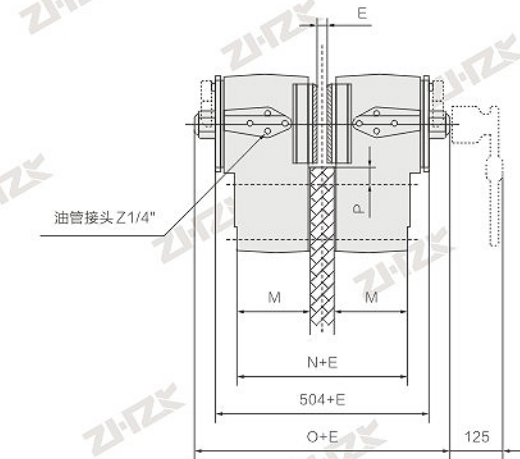
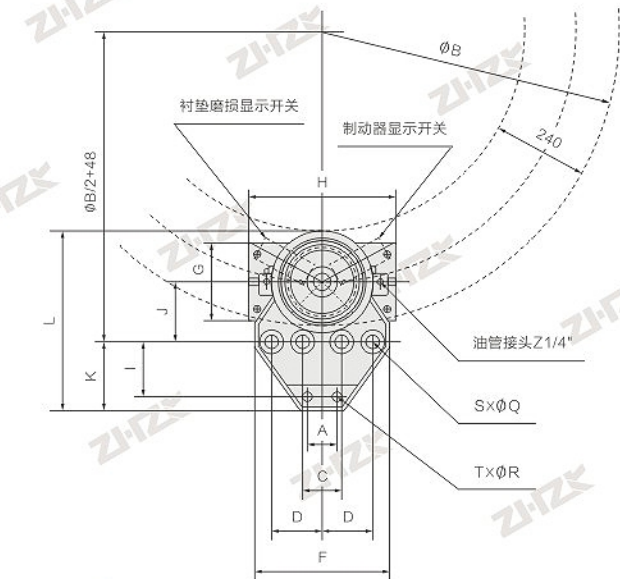
基本参数

制动力矩公式 Nm	制动力矩=制动力/1000 x (ΦB/2-108)
单侧退距 mm	1
释放压力 bar	ST4SH: 100 ST5SH: 190
进油口尺寸"	ST4SH: Z1/4 ST5SH: Z1/2
额定制动力 KN	ST4SH: 120 (安全制动)/90 (工作制动)
	ST5SH: 293 (安全制动)/220 (工作制动)
响应时间 S	0.2
完全释放位移容量 cm ³	ST4SH: 110 ST5SH: 120
总油缸容积 cm ³	ST4SH: 408 ST5SH: 678
ST4SH匹配液压站	一拖一拖二: YZ1-10-10 一拖四: YZ2-20-20
ST5SH匹配液压站	一拖一拖二: YZ1-20-10 一拖四: YZ2-20-20
重量 kg	ST4SH: 285 ST5SH: 440
外形尺寸 mm	
A	80
C	100
D	125
F	336
G	ST4SH: 200 ST5SH: 204
H	ST4SH: 355 ST5SH: 420
I	140
J	155
K	173
L	460
M	190
N	410
O	ST4SH: 617 ST5SH: 970
P	40
Q	34
R	25
S	ST4SH: 4 ST5SH: 6
T	ST4SH: 2 ST5SH: 0

ΦB-单位: mm

ST4SH、ST5SH外形尺寸

弹簧制动-液压释放 Spring brake-hydraulic release



- ST4SH: 连接件
4个螺丝钉M33: 等级10-9
上紧力矩: 685Nm
2个螺丝钉M24: 等级10-9
上紧力矩: 255Nm
- ST5SH: 连接件
6个螺丝钉M33: 等级10-9
上紧力矩: 1600Nm

•若有特殊需求, 请与我们的技术人员联系协商订货。
If you have special needs, please contact our technicians to negotiate and order.

主要特点 Main Feature

- 体积小, 重量轻。无石棉制动衬垫, 绿色环保, 安装、更换方便快捷。
- 制动力大、维修费用低, 带衬垫磨损自动补偿装置(制动力矩稳定), 响应时间短。
- 安装公差大, 制动盘端面跳动, 最大值±0.2mm。底座相对于盘的垂直度偏差: 最大值±4‰。
- 制动盘相对于底座的中心距偏差, 最大值±2.5mm。

MAIN FEATURE

- Small size and light weight. Asbestos free brake pad, green and environmental protection, convenient and fast installation and replacement.
- Large braking torque, low maintenance cost, with automatic pad wear compensation device (stable braking torque) and short response time.
- The installation tolerance is large, and the maximum value of end face run out of brake disc is ±0.2mm. Perpendicularity deviation of base relative to disc: ±4‰.
- Center distance deviation of brake disc relative to base, maximum value ±2.5mm.

使用条件 Operating Condition

- 环境温度: -20°C ~ +50°C
- 周围工作环境中不得有易燃、易爆气体。
- 相对湿度: 空气相对湿度不大于90%
- 使用地点的海拔高度应符合GB755-2008标准。
- 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。

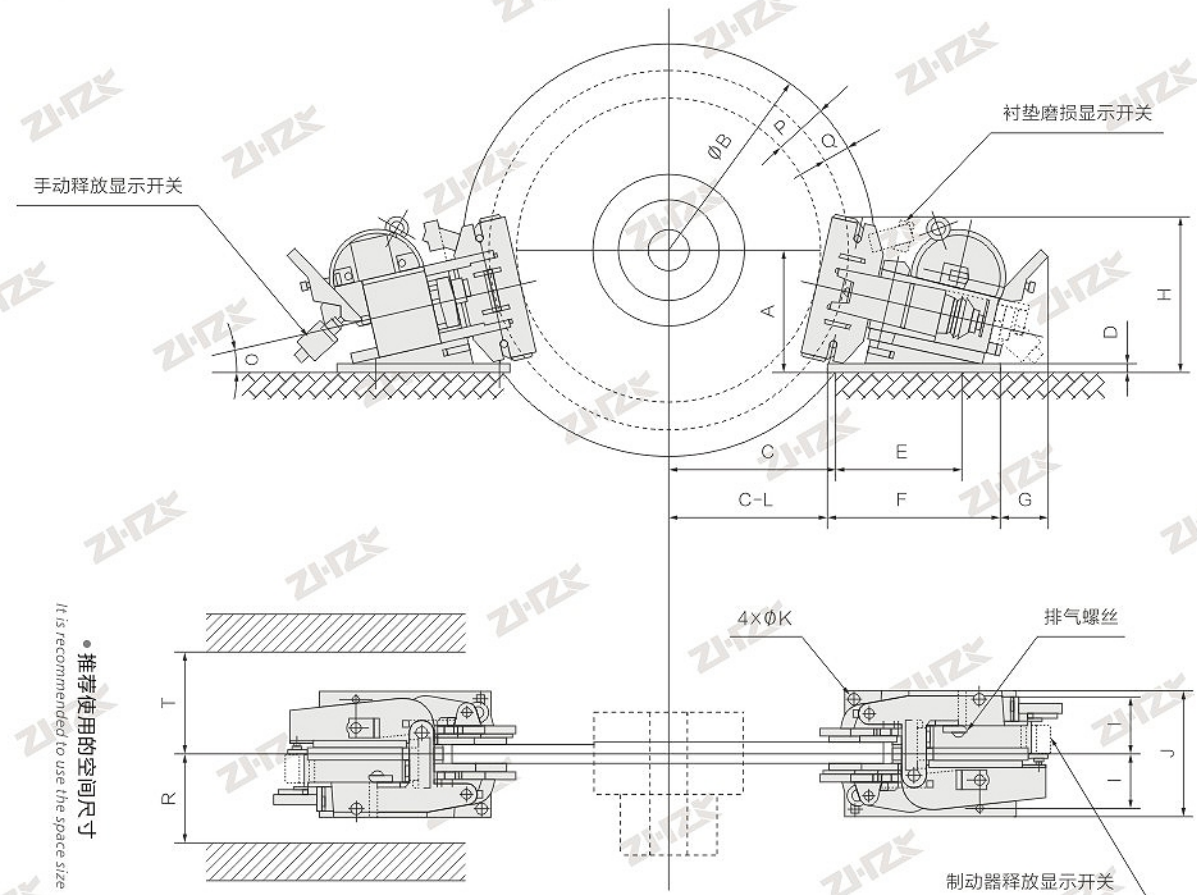
OPERATING CONDITION

- Ambient temperature: -20°C ~ +50°C
- There shall be no inflammable or explosive gas in the surrounding working environment.
- Relative humidity: air relative humidity is not more than 90%
- The altitude of the place of use shall comply with GB755-2008 standard.
- Outdoor rain and snow erosion or corrosive gases and media, anti-corrosion products shall be used.
- Special requirements can be discussed in order.

5SH、450SH、4SH、3SH外形尺寸 5SH, 450SH, 4SH, 3SH Dimensions

弹簧制动-液压释放-适合盘厚: 15或30mm

Spring brake-hydraulic release-suitable for disc thickness: 15 or 30mm



•推荐使用的空间尺寸
It is recommended to use the space size

5SH、450SH、4SH、3SH基本参数和尺寸 Technical data and dimensions of 5SH, 450SH, 4SH, 3SH

基本参数 Basic parameters		安装外形尺寸 Dimensions (mm)													匹配液压站						
直径ΦB mm	额定制动力 N	额定制动力矩 Nm	最大制动力 N	A	C	D	E	F	G	H	I	J	K	L	O	P	Q	R	T	重量 (kg)	Y21-10-10
315	5SH	190	55H	159	99	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	28
	450SH	380	55H	159	99	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	
355	5SH	220	55H	165	119	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	28
	450SH	450	55H	165	119	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	
400	5SH	260	55H	172	142	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	28
	450SH	510	55H	172	142	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	
450	5SH	300	55H	179	167	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	28
	450SH	600	55H	179	167	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	
500	5SH	950	55H	225	133	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	28
	450SH	1650	55H	225	133	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	
560	5SH	340	55H	187	192	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	28
	450SH	680	55H	187	192	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	
630	5SH	1820	55H	295	127	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	28
	450SH	3340	55H	295	127	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	
710	5SH	390	55H	195	223	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	28
	450SH	770	55H	195	223	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	
800	5SH	1270	55H	241	185	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	28
	450SH	2100	55H	241	185	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	
	5SH	460	55H	305	155	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	28
	450SH	900	55H	305	155	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	
	5SH	1500	55H	206	258	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	28
	450SH	3350	55H	206	258	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	
	5SH	2500	55H	251	218	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	28
	450SH	5170	55H	251	218	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	
	5SH	1030	55H	317	188	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	28
	450SH	2170	55H	317	188	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	
	5SH	1750	55H	262	256	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	28
	450SH	3665	55H	262	256	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	
	5SH	2900	55H	331	226	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	28
	450SH	6180	55H	331	226	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	
	5SH	2000	55H	274	299	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	28
	450SH	4350	55H	274	299	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	
	5SH	3350	55H	346	269	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	28
	450SH	7170	55H	346	269	15	200	245	155	280	87.5	200	15	15	13°	90	42	120	175	27	

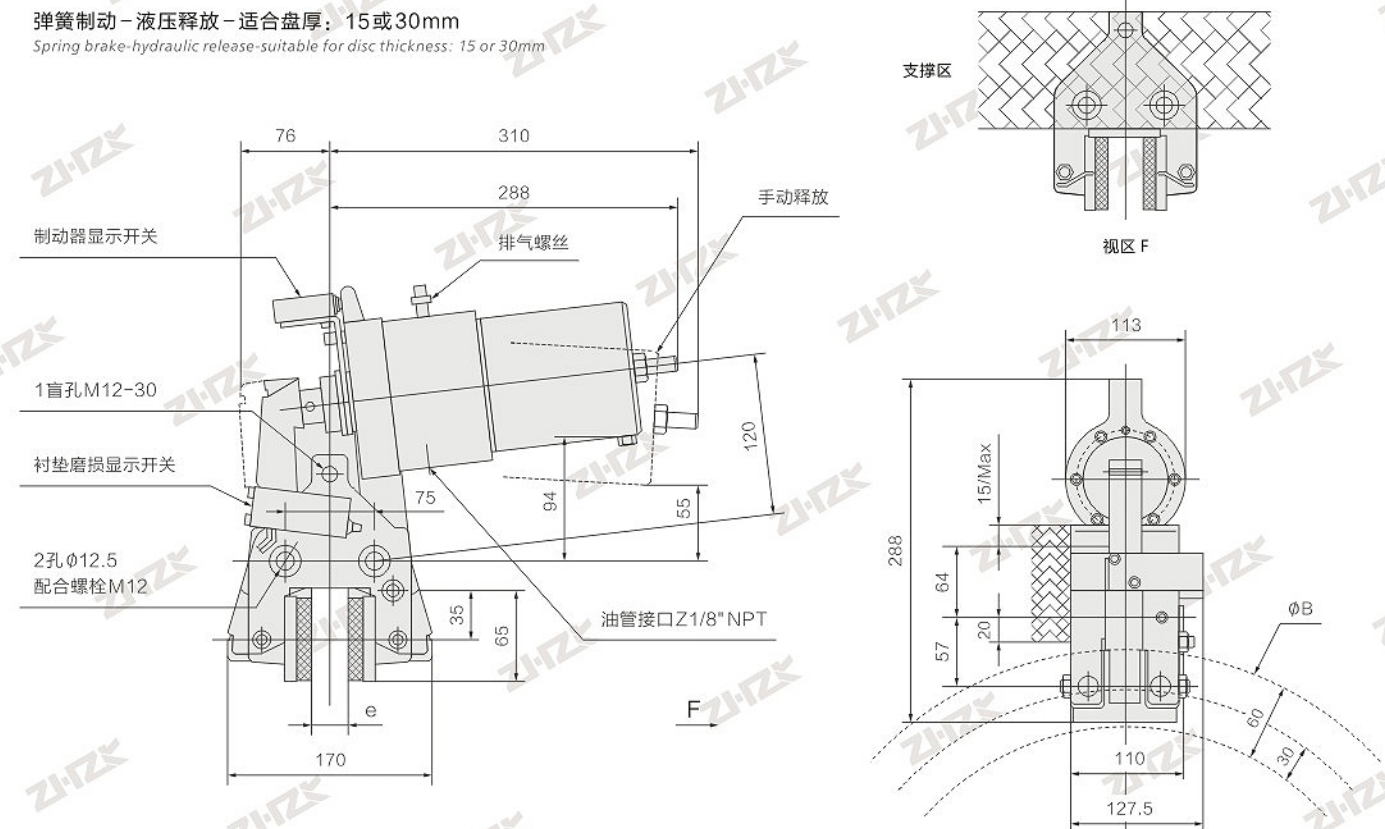
注：产品有更新，请注意最新版本。 Note: The product is updated, please pay attention to the latest version.

SH Series hydraulic failure protection disc brakes

SH系列 液压失效保护盘式制动器

904SH外形尺寸 904SH Dimensions

弹簧制动-液压释放-适合盘厚: 15或30mm
Spring brake-hydraulic release-suitable for disc thickness: 15 or 30mm



- 连接件: 1个螺丝钉M12-30+2个M12; 等级10-9
- 上紧力矩: 50Nm
- 制动力矩 (Nm) = 制动力/1000x[(ΦB/2)-30]

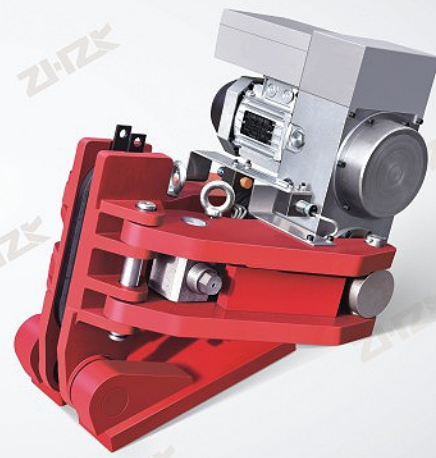
904SH基本参数 Technical data of 904SH

用于紧急制动时最大动力 Maximum braking force for emergency braking	N	20000 (衬垫A)	904-A
用于工作制动时最大动力 Maximum braking force for service braking	N	15000 (衬垫M)	904-M
释放压力 Release pressure	bar	60	
完全释放的移位容量 Fully released shift capacity	cm ³	33	
总油缸容积 Total cylinder volume	cm ³	98	
响应时间 Response time	s	0.3	
重量 Weight	kg	28	
匹配液压站型号 Matching hydraulic station model		一拖一: YZ1-10-10	一拖四: YZ2-20-20

注：产品有更新，请注意最新版本。 Note: The product is updated, please pay attention to the latest version.

SH-DY Series electro-hydraulic safety brakes

SH-DY系列电液安全制动器



SH-DY Series

应用 Application

- SH-DY系列电液安全制动器，主要用于起重、运输、冶金、矿山、港口、码头、建筑机械、电缆、吊索设备、风力发电机、纺织机械等行业的多种机械驱动配套的紧急安全制动。

APPLICATION

- SH-DY series electro-hydraulic safety brakes are mainly used for emergency safety braking driven by a variety of machinery in various industries such as hoisting, transportation, metallurgy, mining, port, wharf, construction machinery, cable, sling equipment, wind turbine, textile machinery and so on.

使用条件 Operating Condition

- 环境温度: $-20^{\circ}\text{C} \sim +50^{\circ}\text{C}$
- 相对湿度: 空气相对湿度不大于90%
- 使用地点的海拔高度应符合GB755-2008标准。
- 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。
- Ambient temperature: $-20^{\circ}\text{C} \sim +50^{\circ}\text{C}$
- Relative humidity: air relative humidity is not more than 90%
- The altitude of the place of use shall comply with GB755-2008 standard.
- Outdoor rain and snow erosion or corrosive gases and media, anti-corrosion products shall be used.
- Special requirements can be discussed in order.

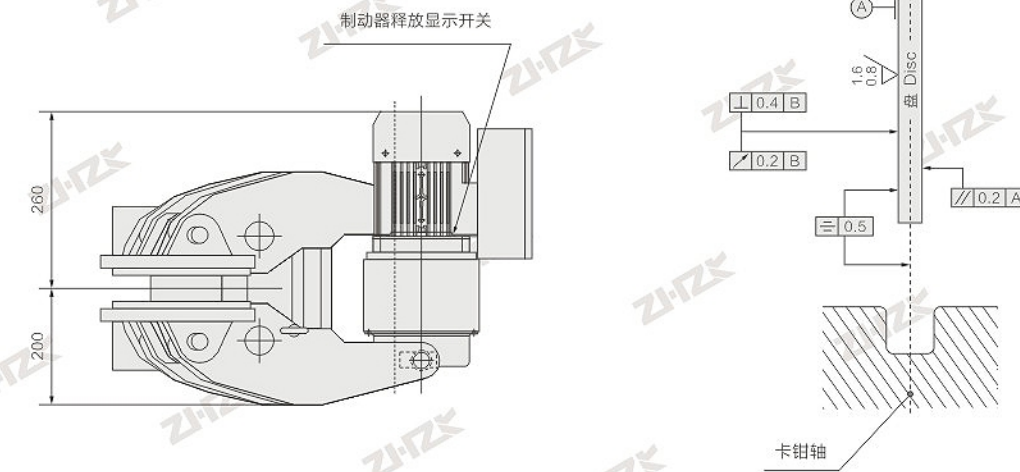
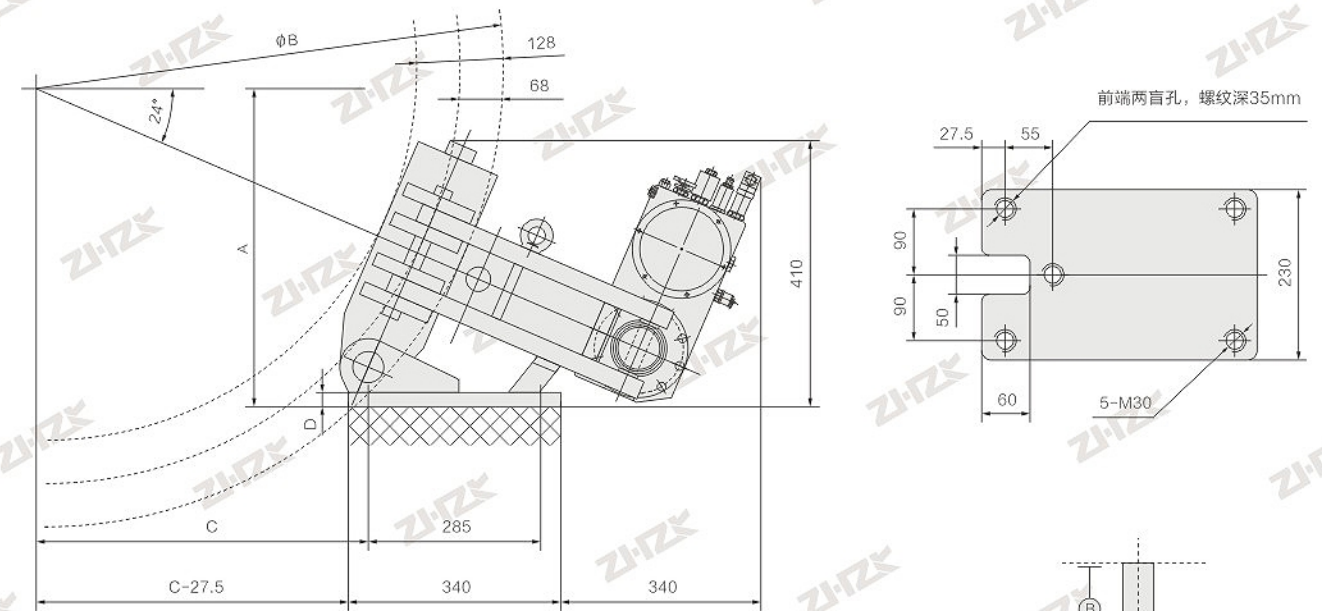
主要特点 Main Feature

- 具有体积小、重量轻、集成程度高等诸多优点。
- 联锁式退距均等装置, 使用过程中始终保持两侧瓦块退距均等, 避免因退距不均使一侧制动衬垫浮贴制动轮的现象。
- 主要摆动铰点均设有自润滑轴承, 传动效率高, 使用寿命长。
- SH-DY电液轮边制动器, 将电气控制系统、液压系统、制动油缸集成化设计, 减少了管路布置, 提高了安装维护效率。
- It has the advantages of small volume, light weight and high integration.
- The interlocking back distance equalizing device always keeps the back distance of tiles on both sides equal in use to avoid the phenomenon that one side of the brake pad floats against the brake wheel due to uneven back distance.
- The main swing hinge points are equipped with self-lubricating bearings with high transmission efficiency and long service life.
- The SH-DY electro-hydraulic wheel side brake integrates the electrical control system, hydraulic system and brake cylinder, reduces the pipeline layout and improves the installation and maintenance efficiency.

型号意义 Model Significance



安装及外形尺寸 Outline and installation dimensions



- 若有特殊需求, 请与我们的技术人员联系协商订货。
If you have special needs, please contact our technicians to negotiate and order.

SH-DY系列安全制动器技术参数及外形尺寸 Technical data and dimensions of SH-DY series safety brakes

制动器型号 Brake type	额定制动力 Rated brake force (KN)	制动力矩公式 Braking torque formula (Nm)	开闸间隙 Release gap (mm)	开闸时间 Release time (S)	闭闸时间 Closing time (S)	工作电源 Working power supply	电机功率 Motor power (W)	尺寸 Dimensions (mm)		重量 Weight (kg)
								A	C	
ST1SH-DY	37	制动力矩=制动力X(ΦB/2-68)	0.7-1	2-3	0.2	3PH AC380V 50Hz	550	A=0.203	A=0.456	150
ST2SH-DY	70							XΦB+211	XΦB-133	150
ST3SH-DY	147									151

- 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.