SB、SBD系列
安全制动器
SB,SBD Series Safety Brakes

应用：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府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:

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

主要特点

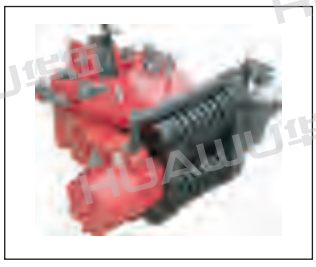
■常闭式设计，安全可靠；特制碟簧施力制动，液压驱动释放（液压站选型详见液压站样本）。
■动作灵敏，闭合（上闸）时间短。
■可选配开闸限位、衬垫磨损、极限限位等开关，进行信号显示或联锁保护。
■高性能无石棉硬质摩擦衬垫，摩擦系数稳定，不损伤制动盘且对水介质和盐雾（海水）不敏感。
■合理的密封结构设计和进口名牌密封件。效果好、寿命长。
■安装位置灵活，使用、调整、维护简单。

Main feature:

■*Normally closed design, safe and reliable; specially-designed disc springs applied. hydraulic driving release(type selection of hydraulic power unit see"Manual for hydraulic power unit").*
■*Swift actions and short braking time.*
■*Beable 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, which has high and stable friction performance, and it is insensitive to water, salt and other environmental agents.*
■*Excellent sealing ensure the brake long service life.*
■*Convenient of installation and ease of maintenance.*


SB系列 *Series*


SBD□–A系列 *Series*


SBD□–B系列 *Series*


SBD□–C系列 *Series*


SBD□–D系列 *Series*

HUAWU 华伍

SB系列安全制动器
SB Series Safety Brakes

08/2013

使用条件

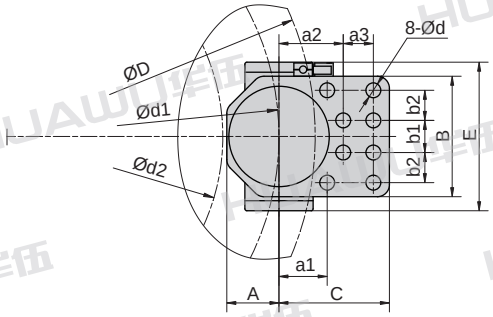
- 环境温度:-25~+50℃
- 相对湿度:<90%.

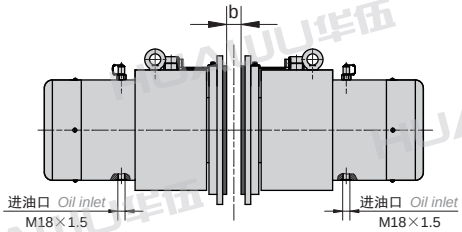
有特殊要求时在订货时协商确定

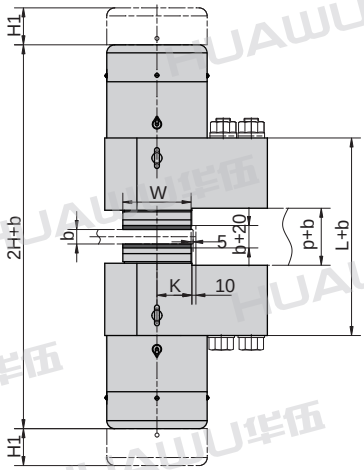
Operating conditions

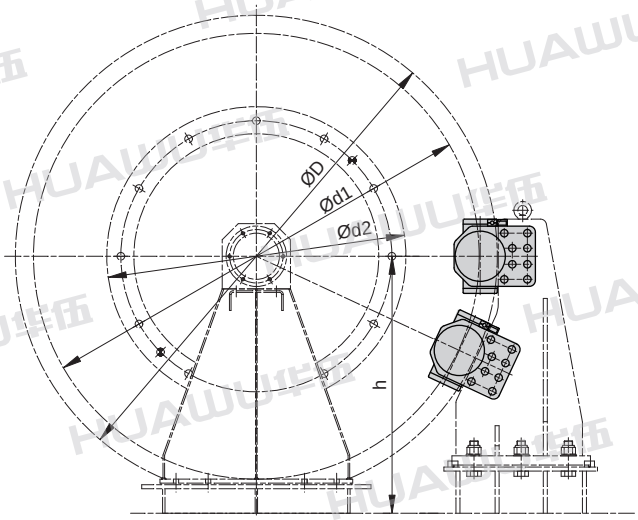
- *Ambient temperature:-25~+50℃.*
- *Relative humidity: <90%.*

Special requirements can be discussed in order.









安装方式 *Installation*
h由用户确定 *h Determined by the user*

订货标记 Order Mark

SB□-□×□ □ □

- 特殊要求(可用文字说明) *Special requirement(can be specified in words)*
- 附加装置 *Additional option*
  - RL 开闸限位开关 *Release limit-switch*
  - WL 衬垫磨损极限限位开关 *Lining wear limit-switch*
  - CL 闭闸限位开关 *Closed limit-switch*
- 制动盘径和厚度 *Disc diameter and width*
- 产品型号 *Type*

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

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SB系列 Series
安 全 制 动 器
Safety Brakes

08/2013

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

产品型号 Type	夹紧力F Clamp force (KN)	释放压力 Release pressure (MPa)	开闸油量 Oil cylinder volume (ml)	退距 Clearance (mm)	摩擦系数 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)
					静态 Static	动态 Dynamic		
SB50	50	11	30	1-2	0.4	0.36	8-M20、10.9、680	90
SB100	100	12	50	1-2	0.4	0.36	8-M24、10.9、1200	150
SB160	160	12	70	1-2	0.4	0.36	8-M30、10.9、2200	310
SB250	250	13	95	1-2	0.4	0.36	8-M36、10.9、3540	452
SB315	315	14	115	1-2	0.4	0.36	8-M36、10.9、3540	672
SB400	400	12	170	1-2	0.4	0.36	8-M48、10.9、7400	1100
SB500	500	14	170	1-2	0.4	0.36	8-M48、10.9、7400	1200

制动力矩 *Nm=F×μ×d1 Torque in Nm=F×μ×d1*　　尺寸表 *Dimensions(mm)*

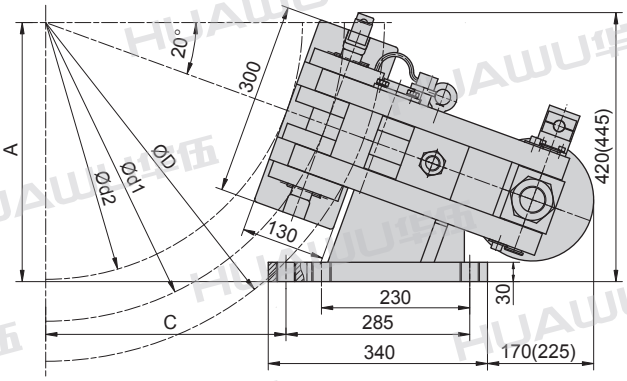
产品型号 Type	A	a1	a2	a3	b1	b2	B	C	d	k	P	L	E	W	H	H1
SB50	77	77	90	38	38	38	154	150	20.5	56	102	300	240	110	310	80
SB100	95	95	105	45	55	45	190	180	25	71	102	348	286	140	360	85
SB160	110	120	135	65	70	65	260	235	31	87	106	412	370	170	410	95
SB250	130	120	160	75	80	75	300	275	37	87	106	456	370	170	470	110
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

与制动盘有关尺寸 *Relative Dimensions of brake disc(mm)*

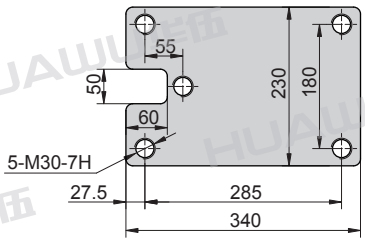
产品型号 Type	b			D	d1	d2 max
SB50	30	36	40	⩾500	D-120	D-300
SB100	30	36	40	⩾500	D-150	D-380
SB160	30	36	40	⩾600	D-180	D-440
SB250	30	36	40	⩾600	D-180	D-480
SB315	30	36	40	⩾1200	D-280	D-600
SB400	30	36	40	⩾1800	D-280	D-660
SB500	30	36	40	⩾1800	D-280	D-660

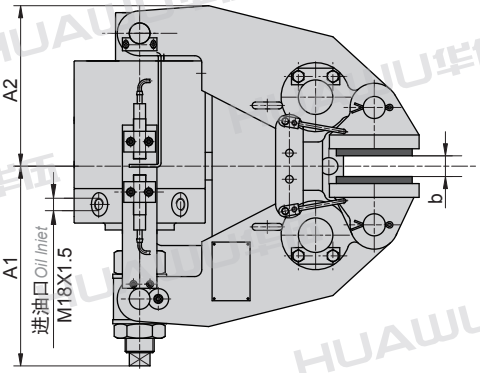
d1=理论摩擦直径 *d1=the theoretical friction diameter*
d2=允许最大的卷筒或联接毂外径 *d2=max .allowable drum or hub diameter*
D:如为其它盘径, 请与我们联系 *For other disc diameters please contact us*

安装及外形尺寸 Outline and installation dimension

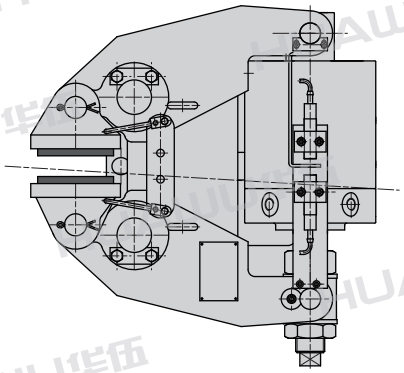


底板连接尺寸
Base plate connection dimensions





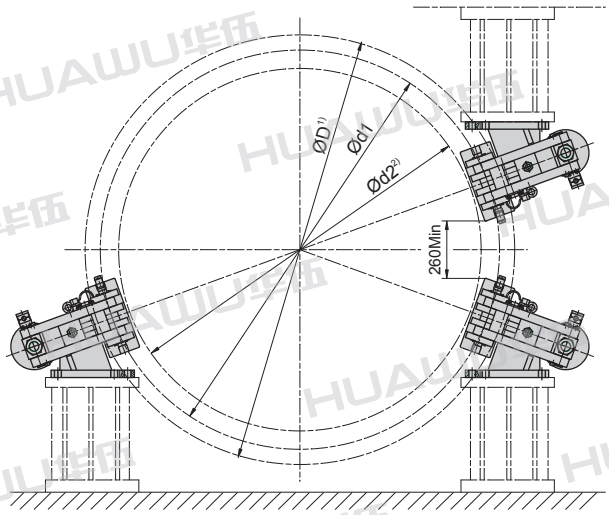
安装形式：Ⅱ型 *Version:Ⅱ*



安装形式：Ⅰ型 *Version:Ⅰ*

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=μ×d1×F(Nm)
式中：μ—摩擦系数计算取值：静态0.4，动态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）制动盘盘径用于Ø800≤ØD≤Ø1800，
如需其它盘径请与我们直接联系
2）d2—允许的最大卷筒或联接毂外径，d2=D-270(mm)

Braking torque: M=μ×d1×F(Nm)
In it:μ-the value of friction coefficient : Static 0.4，dynamic 0.36
d1-disc friction diameter d1=D-135(mm)
or D-15(mm)(the latter is spcially used in SBD315-A)
F-total clamp froce(KN)
Notes: 1)D-brake disc dia.for Ø800≤ØD≤Ø1800,
If you have other requirements,please contact with us.
2)d2-d2=max .allowable drum or hub diameter d2=D-270(mm)

SBD□-A系列安全制动器尺寸和技术参数 *Dimensions and technical data of SBD□-A series safety brakes*

产品型号 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 Releasesd clearance (mm)	A(mm)	C(mm)	d1(mm)	d2max (mm)	D(mm)	A1 (mm)	A2 (mm)	b (mm)	重量 Weight (kg)
SBD100-A	100	72	80	90	0.75~1.5	0.171×ØD+220	0.470×ØD-127	ØD-135	ØD-270	Ø800≤ØD≤Ø1800	295	220	30 (25) (36)	195
SBD125-A	125	90	90	90	0.75~1.5									195
SBD160-A	160	115	110	75	0.75~1.25									195
SBD200-A	200	144	100	120	0.75~1.5						315	235	30 (25) (36)	235
SBD250-A	250	180	120	100	0.75~1.25									235
SBD315-A	315	220	110	160	0.75~1.25	0.171×ØD+238		ØD-155	ØD-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 safty brakes are SBD.

订货标记 Order Mark

SBD□-□-□×□ □ □ □

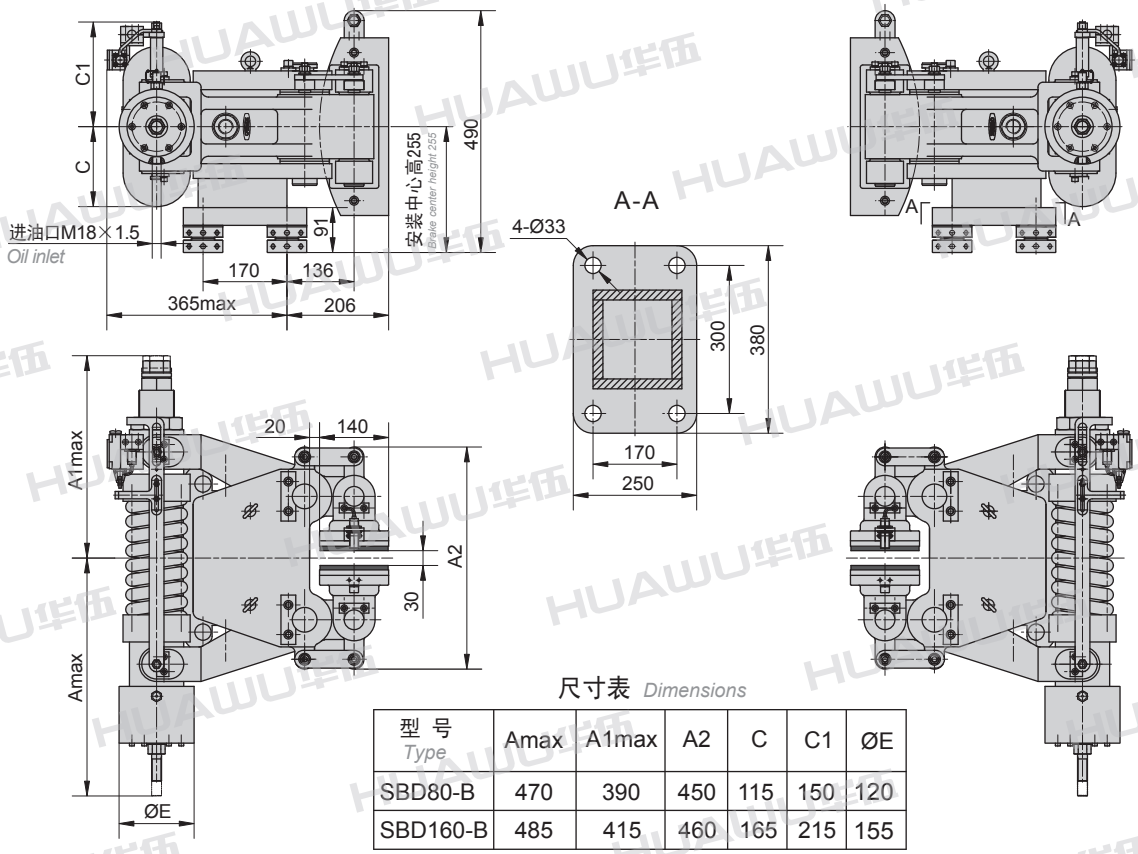
- 特殊要求（可用文字说明）*Special requirement(can be specified in words)*
- 附加装置 *Additional option*
  - RL 开闸限位开关 *Release limit-switch*
  - WL 衬垫磨损极限限位开关 *Lining wear limit-switch*
  - CL 闭闸限位开关 *Closed limit-switch*
- 制动器安装形式：Ⅰ、Ⅱ（参见尺寸图） *Installation: Ⅰ, Ⅱ*
- 制动盘厚度 *Disc thickness*
- 制动盘直径 *Disc diameter*
- A型 *Type*
  B型 *Type*
  C型 *Type*
  D型 *Type*
- 额定夹紧力 *Rated clamp force*
- 产品型号 *Type*

订货示例 Order Example

示例：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.

For example: SBD250-A-1600×30 Ⅰ RL means its rated clamp is 250KN with release limit switch and require type A safety brake of type installatio. The brake disc diameter is 1600mm and the disc thickness is 30mm.

外形及安装尺寸 Outline and installation dimension



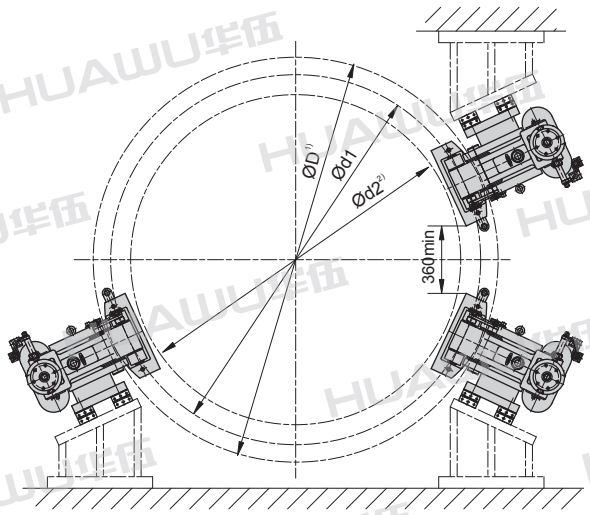
尺寸表 Dimensions

型 号 Type	Amax	A1max	A2	C	C1	ØE
SBD80-B	470	390	450	115	150	120
SBD160-B	485	415	460	165	215	155

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=μ×d1×F(Nm)

式中：μ—摩擦系数计算取值：静态0.4，动态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) D—制动盘盘径D≥800(mm)

2) d2—允许的最大卷筒或联接毂外径，d2=D-360(mm)

Braking torque: M=μ×d1×F(Nm)

In it:μ-the value of friction coefficient:Static 0.4, dynamic 0.36

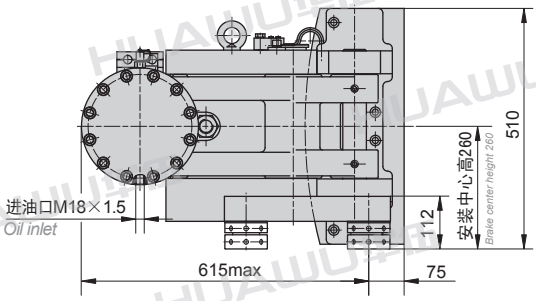
d1-disc friction diameter d1=D-150(mm)

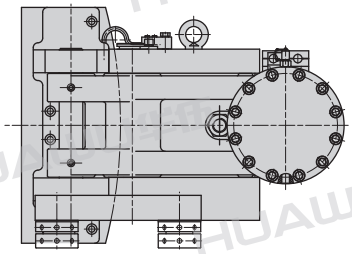
F-total clamp froce(KN)

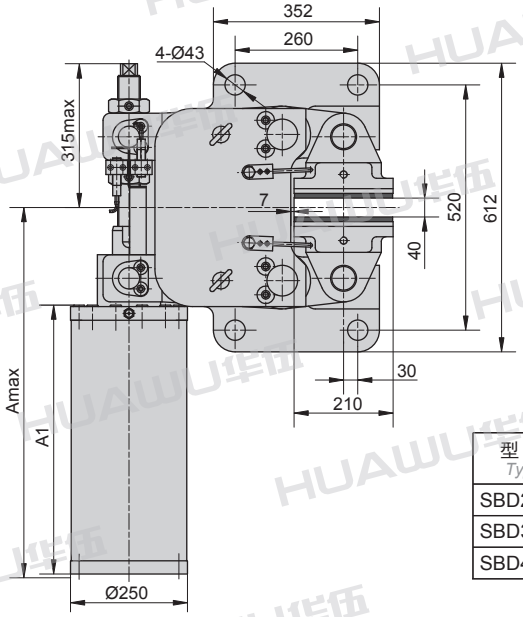
Notes: 1)D-disc diameterD≥800(mm)

2)d2-max .allowable drum or hub diameter d2=D-360(mm)

外形及安装尺寸 Outline and installation dimension

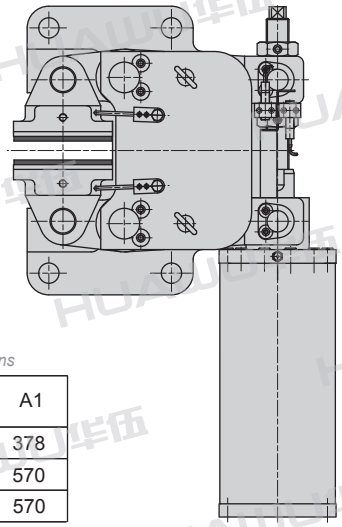






尺寸表 Dimensions

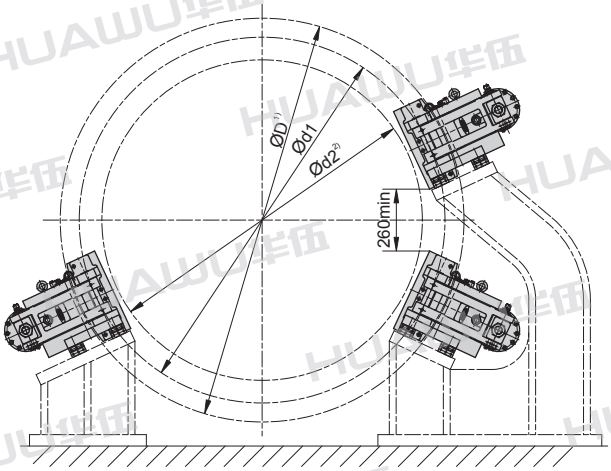
型 号 Type	Amax	A1
SBD250-C	595	378
SBD365-C	790	570
SBD425-C	790	570



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=μ×d1×F(Nm)
式中：μ—摩擦系数计算取值：静态0.4，动态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) D—制动盘盘径D ⩾ 1800(mm)
2)d2—允许的最大卷筒或联接毂外径，d2=D-500(mm)

Braking torque: M=μ×d1×F(Nm)
In it:μ-the value of friction coefficient:Static 0.4, dynamic 0.36
d1-disc friction diameter d1=D-220(mm)
F-total clamp froce(KN)
Notes: 1)D-disc diameter D⩾1800(mm)
2)d2-max .allowable drum or hub diameter d2=D-500(mm)

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

产品型号 *Type*	额定夹紧力 *Rated clamp force (KN)*	制动力 *Braking force (KN)*	单侧瓦块退距 *Single-side shoe clearance (mm)*	油缸工作压力 *Working pressure force of oil cylinder(MPa)*	油缸开闸油量 *Oil cylinder volume(ml)*	重量 *Weight (kg)*
SBD80-B	80	57	1~2	9.5	55	270
SBD160-B	160	115	1~2	9.5	115	310
SBD250-C	250	180	1~2	8	275	660
SBD365-C	365	262	1~2	8	275	720
SBD425-C	425	306	1~2	9.5	275	730

注：1)SBD80-B、SBD160-B、SBD250-C、SBD365-C、SBD425-C系列安全制动器为原型号SBB80、SBB160、SBB250、SBB365、SBB425系列安全制动器。

2)摩擦系数：静态0.4，动态0.36。

Note:1)The original types of SBD80-B, SBD160-B,SBD250-C, SBD365-C, SBD425-C series safty brakes are SBB80, SBB160,SBB250, SBB365,SBB425.

2)Kinetic friction coefficient: Static 0.4,dynamic 0.36

订货标记 Order Mark

SBD□-□-□×□ □ □ □

- 特殊要求（可用文字说明）*Special requirement(can be specified in words)*
- 附加装置 *Additional option*
  - RL 开闸限位开关 *Release limit-switch*
  - WL 衬垫磨损极限限位开关 *Lining wear limit-switch*
  - CL 闭闸限位开关 *Closed limit-switch*
- 制动器安装形式：Ⅰ、Ⅱ（参见尺寸图） *Installation: Ⅰ, Ⅱ*
- 制动盘厚度 *Disc thickness*
- 制动盘直径 *Disc diameter*
- A型 *Type*
- B型 *Type*
- C型 *Type*
- D型 *Type*
- 额定夹紧力 *Rated clamp force*
- 产品型号 *Type*

订货示例 Order Example

示例：SBD365－C－2200×40ⅠRL-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。

Sample: SBD365-C-2200×40ⅠRL means its rated clamp is 365KN with release limit switch and require Ⅰ type installation. The brake disc diameter is 2200mm and the disc thickness is 40mm.