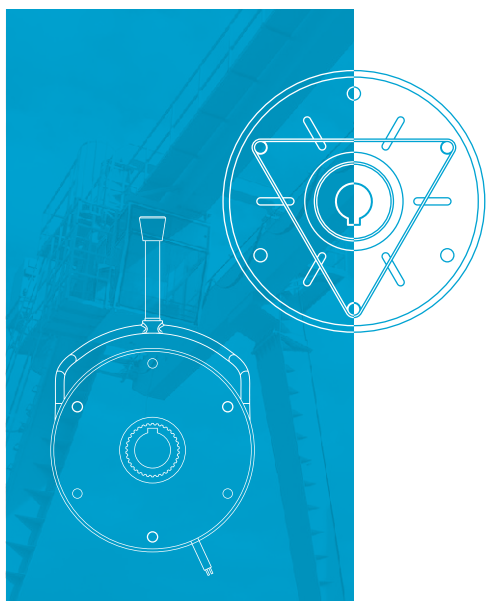




稳定的电磁制动器就选瑞迪

Need stable brakes choose REACH



起重起升电磁制动器

E/M Brakes for Cranes and Liftings



稳定的电磁制动器
就选瑞迪

Need stable brakes **choose REACH**

TABLE OF CONTENTS

目录

02

卓越瑞迪

EXCELLENT REACH

证书 ▶ P 03

CERTIFICATES

知识产权 ▶ P 04

INTELLECTUAL PROPERTY

荣誉 ▶ P 04

HONORS

01

品牌介绍

INTRODUCTION

关于瑞迪 ▶ P 01

ABOUT REACH

瑞迪优势 ▶ P 02

ADVANTAGES

03

技术路线

TECHNICAL ROUTE

起重设备电磁制动器 ▶ P 07

E/M Brakes for Cranes

建筑起升电磁制动器 ▶ P 14

E/M Brakes for Liftings

停车库电磁制动器 ▶ P 19

E/M Brakes for Mechanical Parking Garages

安装使用说明 ▶ P 21

Installation Instructions

配件说明 ▶ P 23

Accessories

整流器性能及安装尺寸图 ▶ P 24

Performance and Mounting Drawing



使命

MISSION

持续创新, 促进世界变得更好!

Keep innovating for a better world!



宗旨

Objective

聚焦智能制造

实现合作伙伴、员工与企业共赢!

Dedicated to achieving a win-win for partners, staff and the company!



愿景

VISION

成为全球客户首选品牌!

Become the top brand for global customers!



核心价值观

CORE VALUES

开放 品质 价值

Core values

Open Quality Value

About REACH

关于瑞迪

成都瑞迪智驱科技股份有限公司, 业务和技术源于1996年的瑞迪实业。我司致力于制动、减速、传动三大系统, 产品包括制动器、谐波减速机、胀套、联轴器、同步轮等。

瑞迪集研发、生产、销售于一体, 并控股瑞迪佳源、眉山瑞通、荷兰J.M.S.三家子公司。产品面向国内外销售, 远销欧、美、日等30多个发达国家和地区, 获得了客户广泛认可, 与全球多家知名企业建立了战略合作。

REACH MACHINERY CO., LTD. with its business and technology from REACH MACHINERY ENTERPRISE since 1996, is dedicated to the Braking System, Reducing System and Transmission System. Main products are brakes, harmonic reducers, locking devices and couplings, etc.

The company integrates R&D, manufacturing and sales, and holds three subsidiaries: REACH JIAYUAN, REACH RUITONG, and J.M.S. in the Netherlands. Our products are sold both at home and abroad, exported over 30 countries and regions such as Europe, the United States, and Japan, etc. and have gained extensive recognition from our customers. We have established strategic partnerships with many well-known companies around the world.



瑞迪优势

REACH ADVANTAGES

五大核心竞争力

Five core competitiveness

• 材料维度 Materials

自主研发核心摩擦材料，确保材料精准符合制动器的性能需求。

Independent-developed core friction materials accurately meet the performance requirements of the brakes.

• 品控维度 Quality Control

标准化作业，超过**100道**质量控制点，**14项**自动检测，确保产品质量稳定。

Standardized operations, with over 100 quality-control points and 14 automatic inspections to guarantee the stable quality.

• 工艺维度 Process

自动化生产和在线检测工艺，保障产品质量稳定。
Automatic production and online inspection processes to guarantee the stable quality.

• 试验维度 Testing

1000万次静态寿命测试，**1000次**急停测试，确保产品性能稳定。

10,000,000 times static lifetime test and 1,000 times emergency stop test to guarantee the stable performance.

• 产品维度 Product

每一种产品经过严格的型式实验和设计验证，确保产品的稳定。

Strict type-examination and design verification to guarantee product stability.

八大技术亮点

Eight technical highlights

电磁方案 设计技术

Electromagnetic solution design technology

精密机械 加工技术

Precision machining technology

摩擦片原材料配方的 自主研发和精密 制作技术

Independent-developed friction plate formula and precision production technology

保障客户稳定 运营的管理及 服务技术

Professional management and service to guarantee customer stable operations

性能测试技术

Performance testing technology

信息化管理技术

Information management technology

深入了解市场、客户 需求的管理技术

Experienced management for in-depth understanding of market and customer needs

对市场分析、趋势 洞察、研判的技术

Market analysis, trend insight and judgment technology

卓越瑞迪

EXCELLENT REACH

证书

CERTIFICATES

专注于为客户提供安全稳定的制动器，瑞迪智驱搭建了IATF16949、ISO9001、ISO14001体系。产品通过了CE、UL、RoHS和REACH等认证。

Focus on providing customers with safe and stable brakes, REACH MACHINERY CO., LTD. has established IATF16949, ISO9001, and ISO14001 management systems. The products have been certified with CE, UL, RoHS, REACH, etc.



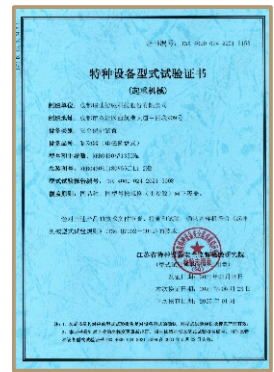
IATF 16949



ISO 9001



ISO 14001



起重机械认证



CE



UL



RoHS



REACH

知识产权

INTELLECTUAL
PROPERTY

13

授权发明专利

Authorized invention
patent

46

授权实用新型专利

Authorized utility model
patent

2

外观专利

Design patent

9

软件著作权

Software copyright

3

科技成果奖

Science and Technology
Achievement Award

截至2023年8月25日
As of August 25, 2023

荣誉

HONORS

- 专精特新“小巨人”企业
- 国家高新技术企业
- 国家“十二五”科技支撑项目
- 行业标杆大客户复购率达到90%以上
- National Specialized and Innovative “Little Giant” Enterprise
- National High-Tech Enterprise
- National Science & Technology “12th Five-Year Plan” Support Project
- Over 90% repurchase rate by industry benchmark customers

瑞迪智驱始终坚持以技术为驱动力，不断发展壮大。

REACH MACHINERY always adheres to technology as the driving force and continues to grow and expand.



技术路线

TECHNICAL ROUTE

起重起升电磁制动器

E/M Brakes for Cranes and Liftings

起重起升用电磁制动器是一种弹簧加压的干式摩擦电磁制动器（通电释放，断电制动）。常用于行驶与起升机构的停车和紧急制动，以及升降机的保持。

广泛应用于各种起重起升，包括高架移动桥、龙门架、起重臂和顶部回转起重机、环链和钢丝绳葫芦等。

The Brake for Cranes and Liftings is a type of spring-loaded dry friction electromagnetic brake (Release when power-on, Brake when power-off). It is used for parking and emergency braking of walking and lifting mechanisms, as well as holding for liftings.

Applications: Elevated mobile bridges, gantry cranes, top slewing lifting cranes, chain hoists and wire rope hoists, etc.

稳定的电磁制动器
就选瑞迪

Need stable brakes choose REACH



工作原理

WORKING PRINCIPLE

瑞迪弹簧加压电磁安全制动器是单片式制动器，有两个摩擦面，轴通过平键与花键套联接，花键套通过花键与转子联接。

当定子断电时，弹簧所产生的力作用在衔铁上，将轴带动旋转的转子紧紧夹在衔铁与盖板之间，从而产生制动力矩。此时，在衔铁与定子之间会产生一个间隙Z。

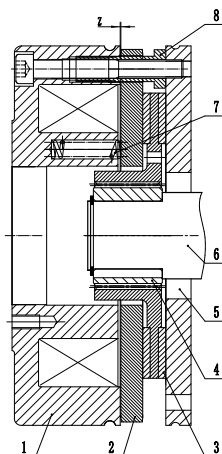
当需要放松制动时，定子接通直流电，所产生的磁场吸引衔铁向定子移动，衔铁移动时压缩弹簧，此时转子被松开，制动解除。

REACH spring-applied electromagnetic brake is a single-disk brake with two friction surfaces. The motor shaft is connected with the spline hub via flat key surfaces. The spline hub is connected with Rotor through spline.

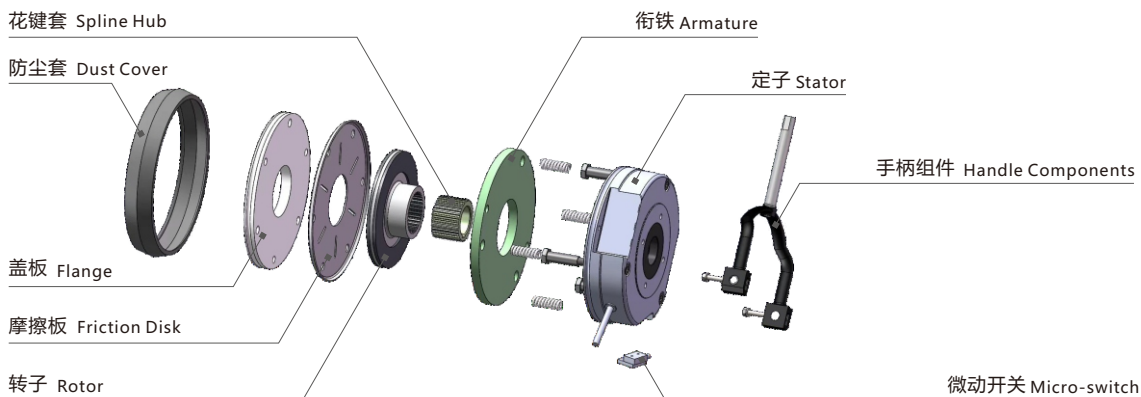
When stator is powered off, the spring generates forces upon armature, then the Rotor will be clamped between armature and flange to generate braking torque. At that time, a gap Z is created between armature and stator.

When brakes need to be released, the stator should be connected DC power, then the armature will move to the stator by electromagnetic force. At that time, the armature presses the spring while moving and the Rotor are released to disengage the brake.

- | | |
|--------|-----------------|
| 1 定子 | 1 Stator |
| 2 衔铁 | 2 Armature |
| 3 转子 | 3 Rotor |
| 4 花键套 | 4 Spline Hub |
| 5 盖板 | 5 Flange |
| 6 轴 | 6 Shaft |
| 7 弹簧 | 7 Spring |
| 8 空心螺钉 | 8 Hollow Screws |
| Z 间隙 | Z Air Gap |



产品模块说明 Product modulars



起重设备电磁制动器

E/M Brakes for Cranes

起重设备电磁制动器，主要应用于起重机，环链，钢丝绳葫芦，龙门架，舞台设备等
Applications: cranes, chains, wire rope hoists, gantry, stage equipment, etc.

REB04系列制动器 REB04 Series Brake

- ◉ 常用扭矩范围: 3~1500N.m
Common torque range: 3~1500N.m
- ◉ 适用温度: -10~+40°C (可定制)
Ambient temperature: -10~+40°C (customizable)
- ◉ 耐热等级: F级(155°C)
Heat resistance grade: F(155°C)
- ◉ 电压范围: 12V-270V
Voltage range: 12V-270V
- ◉ 防护等级: IP54
Protection Level: IP54
- ◉ 多种摩擦片方案适用不同的环境
Several friction materials for different environments
- ◉ 获得特种设备安全监督中心特种设备(起重机械)型式试验证书
Obtained Type-test certificate for special equipment(Lifting machinery) from the Special Equipment Safety Supervision Center

制动器扭矩选择表 Torque Selection 单位(Unit): N.m

机座号 Model	06	08	10	12	14	16	18	20	25	30
电机机座号 Frame Size	56,63,71	80	90	100	112	132	160	180	200	225
减速制动扭矩 Decelerating Bracke Torque	3	6	12	26	55	70	130	230	350	800
	4	8	16	32	65	85	150	260	400	900
	5	10	18	38	75	100	180	300	450	1000
保持制动扭矩 Holding Bracke Torque	6	12	22	45	85	110	200	350	500	1200
	7	14	26	55	95	130	250	400	650	1350
根据要求提供具体解决方案 Provide specific solutions upon request	8	16	32	60	110	150	300	450	800	1500

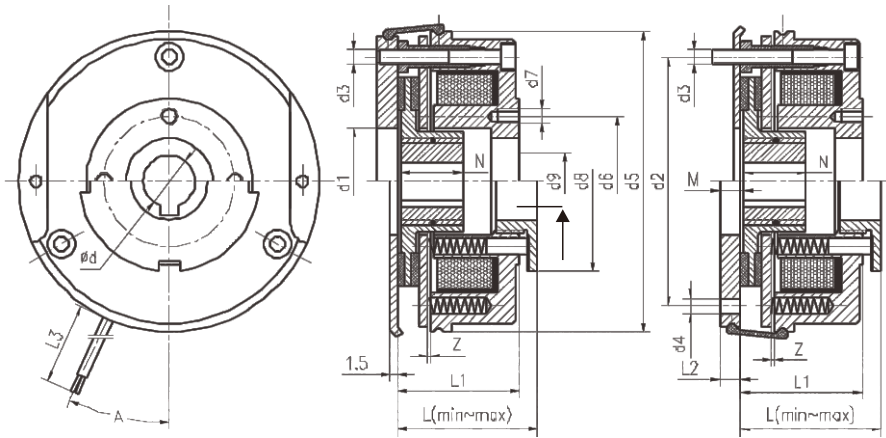
(特殊超大扭矩可定制: 可达: 3000N.m) (Torque customizable: Max.: 3000N.m)

制动器使用额定参数 Rated Data

机座号 Model	额定间隙z(+0.1/-0.05) (mm)	Zmax 保持制动 (mm)	Zmax 减速制动 (mm)	摩擦盘组件厚度(mm)		额定功率 20°C (W)	安装位置圆 (mm)	安装螺钉规格
				min	Max			
06	0.2	0.3	0.5	4.5	6	20	72	3×M4
08	0.2	0.3	0.5	5.5	7	25	90	3×M5
10	0.2	0.3	0.5	7.5	9	30	112	3×M6
12	0.3	0.45	0.75	8	10	40	132	3×M6
14	0.3	0.45	0.75	7.5	10	50	145	3×M8
16	0.3	0.45	0.75	8.5	11.5	55	170	3×M8
18	0.4	0.6	1	10	13	85	196	6×M8
20	0.4	0.6	1	12	16	100	230	6×M10
25	0.5	0.75	1.25	15.5	20	110	278	6×M10
30	0.6	1	1.2	18.5	23	200	325	6×M10

技术参数

Technical Data



单位(Unit): mm

机座号 Model	d	d1	d2	d3	d4	Lmin	Lmax	d5	d6	d7	d8	M	N	Z	A	L3	L2	L1	d9
06	11	31	72	3×M4	3×Φ4.5	39.5	43.5	87	37.7	4×M4	52	7	18	0.2	25°	400	6	36.3	25
08	15	41	90	3×M5	3×Φ5.5	47.7	51.7	105	49	4×M5	60	8.5	20	0.2	25°	400	7	42.8	32
10	15	45	112	3×M6	3×Φ6.5	52.5	56.5	130	54	4×M5	68	11	20	0.2	25°	400	9	48.4	42
12	20	52	132	3×M6	3×Φ6.5	59.9	64.9	150	64	4×M5	82	11	25	0.3	25°	400	9	54.9	50
14	25	55	145	3×M8	3×Φ9	72.5	78.5	165	75	4×M6	92	13	30	0.3	25°	1000	11	66.8	60
16	30	70	170	3×M8	3×Φ9	79.3	87.3	190	85	4×M6	102	13.25	30	0.3	25°	1000	11	74.5	68
18	40	77	196	6×M8	4×Φ9	91	99	217	95	4×M8	116	13.75	35	0.4	25°	1000	11	85.1	75
20	40	90	230	6×M10	4×Φ11	108.1	118.1	254	110	4×M10	135	14.5	40	0.4	25°	1000	11	99.6	85
25	50	120	278	6×M10	6×Φ11	117.2	129.2	302	140	4×M10	165	17	50	0.5	25°	1000	12.5	109	115
30	70	145	325	6×M10	6×Φ11	144	156	363	180	4×M10	200	25	75	0.6	25°	1000	20	136.5	140

⊙ 此安装尺寸可按客户需求定制

⊙ The mounting size can be ordered by the customers.

⊙ L3为产品的标准导线长度，可以根据客户的不同要求定制。

⊙ L3 represents standard lead length of the product and could also be ordered to satisfy customers' requirements.

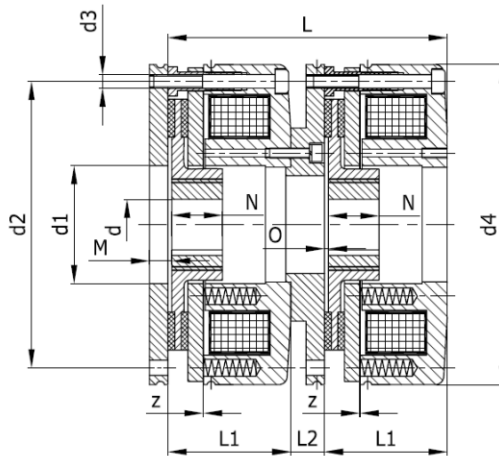
REB04双倍制动器 REB04 Series Double Brake

REB04系列的双倍制动器特别适用于对安全要求非常高的领域。

两个制动器可以独立控制，以确保各种机械可靠的保持或制动，具有很高的安全性。

REB04 series double brakes are particularly suitable for applications with very high safety requirements.

The two brakes are controlled independently to ensure reliable holding or braking for the machinery.



单位(Unit): mm

机座号 Model	d1	d2	d3	d4	M	N	O	L	L1	L2	z	L3
06	31	72	3×M4	87	7	18	1	84.6	36.3	12	0.2	400
08	41	90	3×M5	105	8.5	20	1.5	97.6	42.8	12	0.2	400
10	45	112	3×M6	130	11	20	2	109.8	48.4	13	0.2	400
12	52	132	3×M6	150	11	25	2	125.8	54.9	16	0.3	400
14	55	145	3×M8	165	13	30	2	148	65.5	17	0.3	1000
16	70	170	3×M8	190	13.25	30	2.25	165	72.5	20	0.3	1000
18	77	196	6×M8	217	13.75	35	2.75	186.2	83.1	20	0.4	1000
20	90	230	6×M10	254	14.5	40	3.5	215.2	97.6	20	0.4	1000
25	120	278	6×M10	302	17	50	4.5	236.4	105.7	25	0.5	1000
30	145	325	6×M10	363	25	75	5	304	134.5	35	0.6	1000

⊙ 表中L3为导线长度，特殊要求可以定制

⊙ 可根据需要选配手动释放手柄

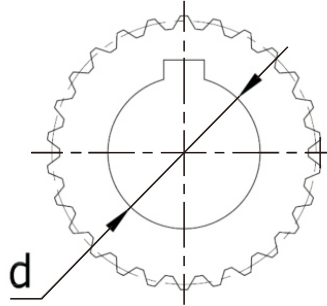
⊙ L3 represents standard lead length of the product and could be ordered to satisfy customers' requirements.

⊙ Customers are able to select manual release handle

花键套内孔可选安装尺寸 Spline hub sizes of the inner bore

安装孔公差为H7，键槽尺寸符合
DIN6885/1(GB/T1095-79)JS9，
其中加粗的孔径为基本尺寸。

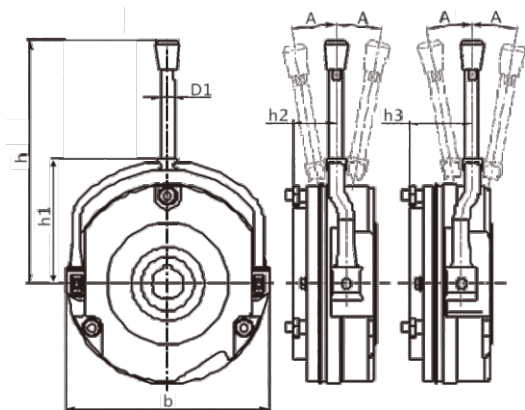
The mounting hole tolerance is H7.
The dimension of keyway satisfies
DIN6885/1(GB/T1095-79)JS9. The
apertures presented in bold letters
are basic dimensions.



机座号 Model	d
06	10/ 11 /12/14/15
08	11/12/14/ 15 /20
10	11/12/14/ 15 /20
12	15/17/ 20 /25/27
14	20/ 25 /30/31
16	25/ 30 /35/38
18	30/35/ 40 /45
20	35/ 40 /45/50
25	50 /55/60/65/70
30	65/70/75/80

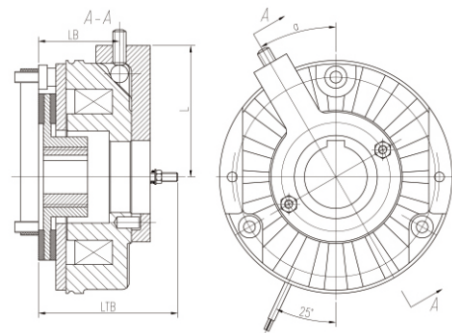
手动释放手柄安装尺寸 Mounting dimensions of hand-release

机座号 Model	h	b	h1	h2	h3	D1	A
06	107	88	56.3	15	32	8	12
08	116	107	65.0	16	41	8	10
10	133	132	77.8	27	42	10	9
12	162	152	88.5	29.1	47.1	10	10
14	197	169	101.5	32	49	12	12
16	242	195	115.0	36.4	55.6	12	12
18	282	222	128.5	41.5	59.5	14	11
20	321	258	149.5	48	69	14	10
25	444	302	182	60	91	16	15
30	832	362	226	67.4	124.6	20	14

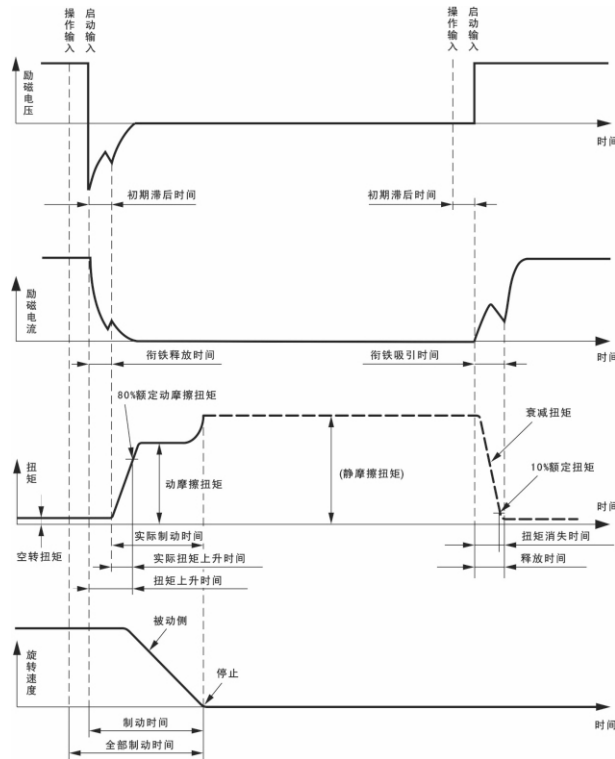


螺钉释放安装尺寸(自锁功能) Mounting dimensions of screw-release (self-locking)

机座号 Model	LTB	LB	L	a
06	50.5	22.1	50.25	30°
08	63	28.6	59.25	30°
10	65	34.2	72.25	30°
12	72.6	40.7	83	30°
14	89.5	50	92.75	30°
16	102.5	56.2	105	30°
18	111	65.7	119.5	30°
20	131	75.7	140	30°
25	143	85.2	166	30°
30	177	110.9	202	30°



动作时间 Operation time



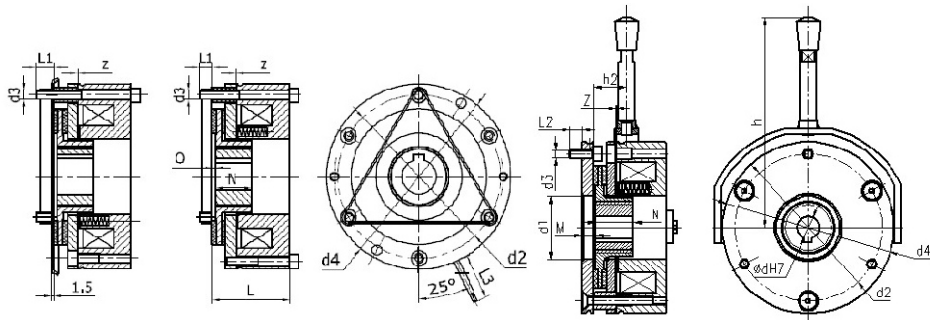
机座号 Model	额定扭矩T(Nm) Rated Torque 100rpm	功率 Power	制动时间 t_1 (ms) Braking time			释放时间 t_2 (ms) Release time
			t_{11}	t_{12}	t_1	
REB0406	4		15	15	30	40
REB0408	8		15	17	32	50
REB0410	16		25	20	45	69
REB0412	32		26	30	56	108
REB0414	60		27	30	57	190
REB0416	80		30	30	60	200
REB0418	150		35	43	78	260
REB0420	260		65	100	165	340
REB0425	400		110	120	230	390
REB0430	1000		200	180	380	420

- ⊙ T11 衔铁释放时间
- ⊙ T12 扭矩上升时间
- ⊙ T1制动时间
- ⊙ T2 释放时间 (衔铁吸合时间)
- ⊙ 以上所有时间参数均为直流侧控制所得参数
- ⊙ T11 Armature release time
- ⊙ T12 Rising Time of Braking Torque
- ⊙ T1 Braking Time
- ⊙ T2 Releasing Time(Armature Attracting Time)
- ⊙ All the above time-parameters are obtained through control at the DC side

REB05系列制动器 REB05 Series Brake

- ⊙ 常用扭矩范围: 3~150N.m
Common torque range: 3~150N.m
- ⊙ 电压范围: 12V-270V
Voltage range: 12V-270V
- ⊙ 获得特种设备安全监督中心特种设备(起重机械)型式试验证书
Obtained Type-test certificate for special equipment(Lifting machinery) from the Special Equipment Safety Supervision Center
- ⊙ 适用温度: -10~+40°C (可定制)
Ambient temperature: -10~+40°C (customizable)
- ⊙ 防护等级: IP54
Protection Level: IP54
- ⊙ 耐热等级: F级(155°C)
Heat resistance grade: F(155°C)
- ⊙ 多种摩擦片方案适用不同的环境
Several friction materials for different environments

技术参数 Technical Data



机座号 Model	制动扭矩 Braking Torque(N.m)	d	d1	d2	d3	d4	M	N	O	L	L1	L2	h	h2	z	L3
06	3/4/6/8	11	31	72	3×M4	84	7.5	18	1	35.3	9.7	6	102	15.8	0.2	400
08	6/8/10/12/16	15	42	90	3×M5	102	8.5	20	1.5	42.8	12.2	9	114	16.3	0.2	400
10	10/16/20/23/32	15	44	112	3×M6	130	10	20	2	48.4	11.2	12	129	27.4	0.2	400
12	23/32/40/46/55	20	52	132	3×M6	150	10	25	2	54.4	11	12	162	30	0.3	400
14	50/60/75/95/110	25	60	145	3×M8	165	13	30	2	66.3	14	14	201	33	0.3	1000
16	60/80/100/125/150	30	70	170	3×M8	190	13.3	30	2.25	72.5	12.5	14	250	37.4	0.3	1000

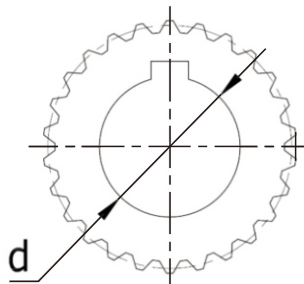
(特殊超大扭矩可定制: 可达: 800N.m) (Torque customizable: Max.: 800N.m)

- ⊙ 表中L3为导线长度, 特殊要求可以定制。
- ⊙ L3 listed in the Table represents the length of the conductor, which could be ordered.

花键套内孔可选安装尺寸 Spline hub sizes of the inner bore

安装孔公差为H7, 键槽尺寸符合DIN6885/1(GB/T1095-79)JS9, 其中加粗的孔径为基本尺寸。

The mounting hole tolerance is H7. The dimension of keyway satisfies DIN6885/1(GB/T1095-79)JS9. The apertures presented in bold letters are basic dimensions.



机座号 Model	d
06	11 /12/14/15
08	11/12/14/ 15 /20
10	15 /20
12	20 /25
14	20/ 25 /30
16	25/ 30 /35/38

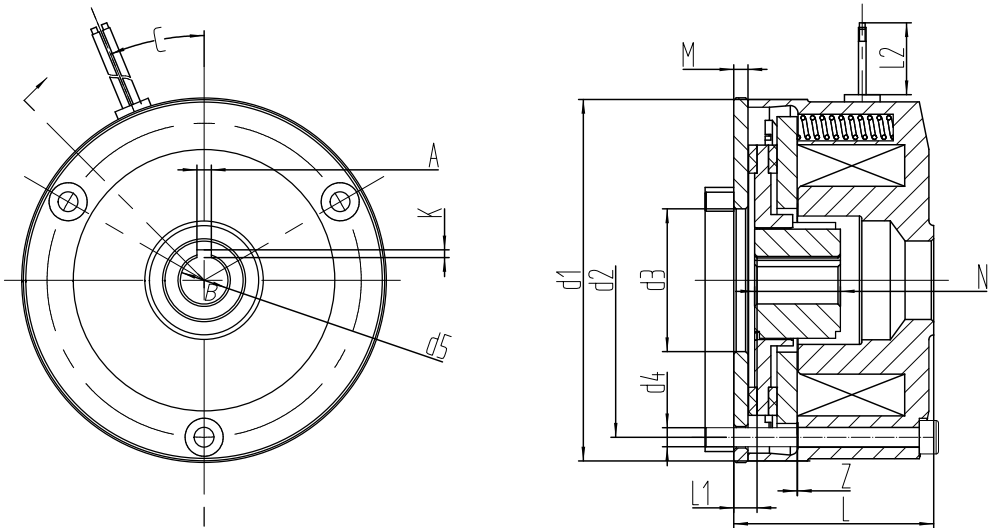
REB53系列制动器

REB53 Series Brake

技术参数 Technical Data

- ⦿ 电压: 24V~205V(DC)
Voltage: 24V~205V(DC)
- ⦿ 绝缘耐温等级F (155°C)
Insulation Temperature Resistance
Grade: F (155°C)
- ⦿ 多种摩擦片方案可选, 适用不同的适用环境
Several friction materials for different environments
- ⦿ 电网电压: 42~460V(AC)
Network Voltage: 42~46-V(AC)
- ⦿ 间隙免调试, 安装便捷
No air gap adjustment for easy assembly
- ⦿ 耐磨损摩擦片, 使用寿命长
Wear-resistant friction plate for long service life
- ⦿ 防护等级 IP55
Protection Level: IP55

主要应用: 起升设备的行走机构
Applications: Walking mechanism of lifting equipment



单位(Unit): mm

机座号 Model	扭矩 Torque(N.m)	A	K	d5	d1	d2	d3	d4	M	N	Z	L	L1	L2	C
REB5305	4	3	1.4	10	76.7	66	30	3-M4	3	18	0.2	42	4.4	400	22.5°
REB5308	8	5	2.3	15	103.5	90	40	3-M5	3	20	0.2	48.2	4.7	400	22.5°

建筑起升电磁制动器

E/M Brakes for Liftings

主要应用：各类建筑行业的起升设备，如塔机，施工升降机，吊篮等。

Applications: lifting equipment for various construction industries: towers, construction lifts, suspended platforms, etc.

REB04系列制动器 REB04 Series Brake

- 常用扭矩范围：100~1500N.m
Common torque range: 100~1500N.m
- 电压范围：12V-270V
Voltage range: 12V-270V
- 获得特种设备安全监督中心特种设备（起重机械）型式试验证书
Obtained Type-test certificate for special equipment(Lifting machinery) from the Special Equipment Safety Supervision Center
- 适用温度：-10~+40°C（可定制）
Ambient temperature: -10~+40°C (customizable)
- 防护等级：IP54
Protection Level: IP54
- 耐热等级：F级(155°C)
Heat resistance grade: F(155°C)
- 多种摩擦片方案适用不同的环境
Several friction materials for different environments

制动器扭矩选择表 Torque Selection 单位(Unit): N.m

机座号 Model	18	20	25	30
电机机座号 Frame Size	160	180	200	225
减速制动扭矩 Decelerating Brake Torque	130	230	350	800
	150	260	400	900
	180	300	450	1000
保持制动扭矩 Holding Brake Torque	200	350	500	1200
	250	400	650	1350
根据要求提供具体解决方案 Provide specific solutions upon request	300	450	800	1500

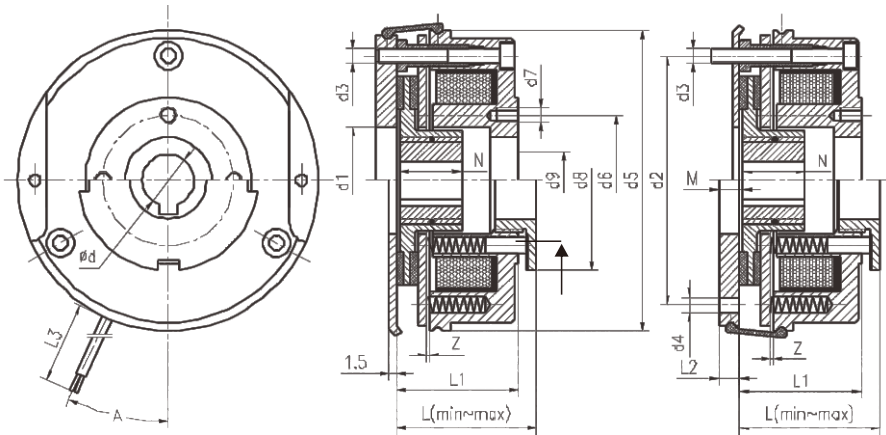
(特殊超大扭矩可定制: 可达: 3000N.m) (Torque customizable: Max.: 3000N.m)

制动器使用额定参数 Rated Data

机座号 Model	额定间隙z(+0.1/-0.05) (mm)	Zmax 保持制动 (mm)	Zmax 减速制动 (mm)	摩擦盘组件 厚度(mm)		额定功率 20°C (W)	安装 位置圆 (mm)	安装螺钉 规格
				min	Max			
18	0.4	0.6	1	10	13	85	196	6×M8
20	0.4	0.6	1	12	16	100	230	6×M10
25	0.5	0.75	1.25	15.5	20	110	278	6×M10
30	0.6	1	1.2	18.5	23	200	325	6×M10

技术参数

Technical Data



单位(Unit): mm

机座号 Model	d	d1	d2	d3	d4	Lmin	Lmax	d5	d6	d7	d8	M	N	Z	A	L3	L2	L1	d9
18	40	77	196	6×M8	4×Φ9	91	99	217	95	4×M8	116	13.75	35	0.4	25°	1000	11	85.1	75
20	40	90	230	6×M10	4×Φ11	108.1	118.1	254	110	4×M10	135	14.5	40	0.4	25°	1000	11	99.6	85
25	50	120	278	6×M10	6×Φ11	117.2	129.2	302	140	4×M10	165	17	50	0.5	25°	1000	12.5	109	115
30	70	145	325	6×M10	6×Φ11	144	156	363	180	4×M10	200	25	75	0.6	25°	1000	20	136.5	140

⊙ 此安装尺寸可按客户需求定制

⊙ The mounting size can be ordered by the customers.

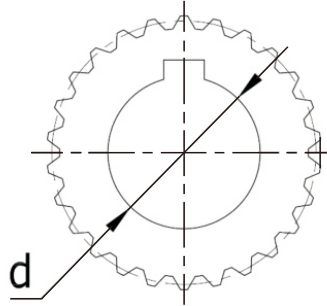
⊙ L3为产品的标准导线长度，可以根据客户的要求定制。

⊙ L3 represents standard lead length of the product and could also be ordered to satisfy customers' requirements.

花键套内孔可选安装尺寸 Spline hub sizes of the inner bore

安装孔公差为H7，键槽尺寸符合
DIN6885/1(GB/T1095-79)JS9，
其中加粗的孔径为基本尺寸。

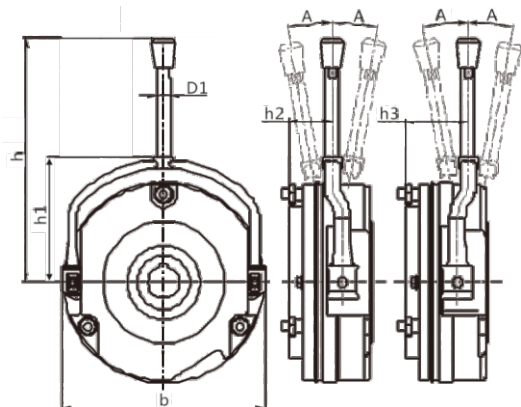
The mounting hole tolerance is H7.
The dimension of keyway satisfies
DIN6885/1(GB/T1095-79)JS9. The
apertures presented in bold letters
are basic dimensions.



机座号 Model	d
18	30/35/ 40 /45
20	35/ 40 /45/50
25	50 /55/60/65/70
30	65/70/75/80

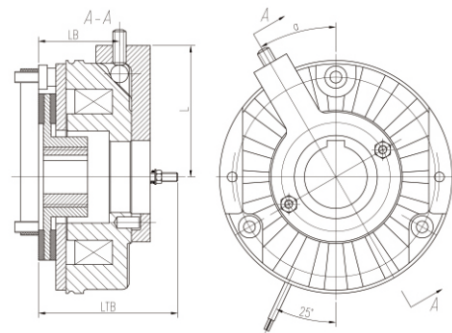
手动释放手柄安装尺寸 Mounting dimensions of hand-release

机座号 Model	h	b	h1	h2	h3	D1	A
18	282	222	128.5	41.5	59.5	14	11
20	321	258	149.5	48	69	14	10
25	444	302	182	60	91	16	15
30	832	362	226	67.4	124.6	20	14

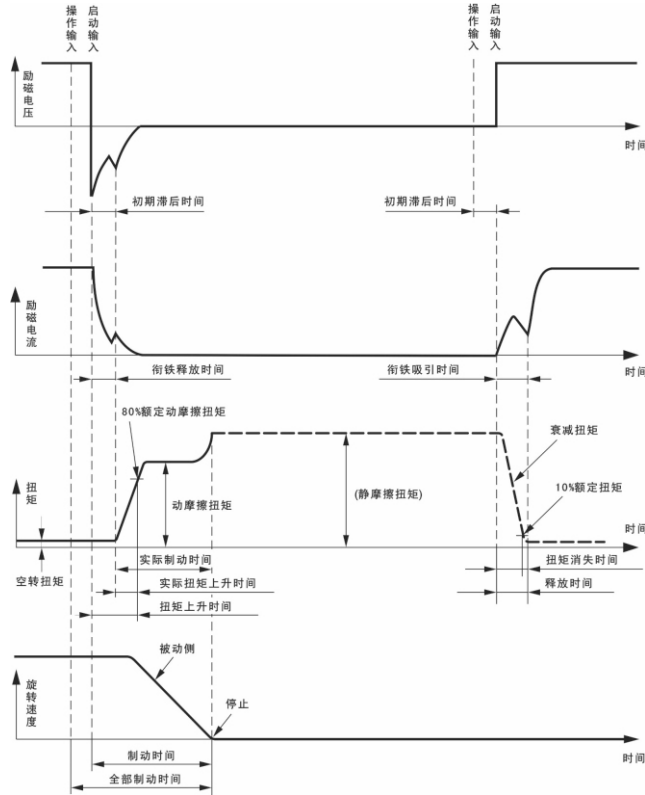


螺钉释放安装尺寸(自锁功能) Mounting dimensions of screw-release (self-locking)

机座号 Model	LTB	LB	L	a
18	111	65.7	119.5	30°
20	131	75.7	140	30°
25	143	85.2	166	30°
30	177	110.9	202	30°



动作时间 Operation time



机座号 Model	额定扭矩T(Nm) Rated Torque 100rpm	功率 Power	制动时间 t_1 (ms) Braking time			释放时间 t_2 (ms) Release time
			t_{11}	t_{12}	t_1	
REB0418	150		35	43	78	260
REB0420	260		65	100	165	340
REB0425	400		110	120	230	390
REB0430	1000		200	180	380	420

- ⊙ T11 衔铁释放时间
- ⊙ T12 扭矩上升时间
- ⊙ T1制动时间
- ⊙ T2 释放时间 (衔铁吸合时间)
- ⊙ 以上所有时间参数均为直流侧控制所得参数
- ⊙ T11 Armature release time
- ⊙ T12 Rising Time of Braking Torque
- ⊙ T1 Braking Time
- ⊙ T2 Releasing Time (Armature Attracting Time)
- ⊙ All the above time-parameters are obtained through control at the DC side

REB05F系列制动器

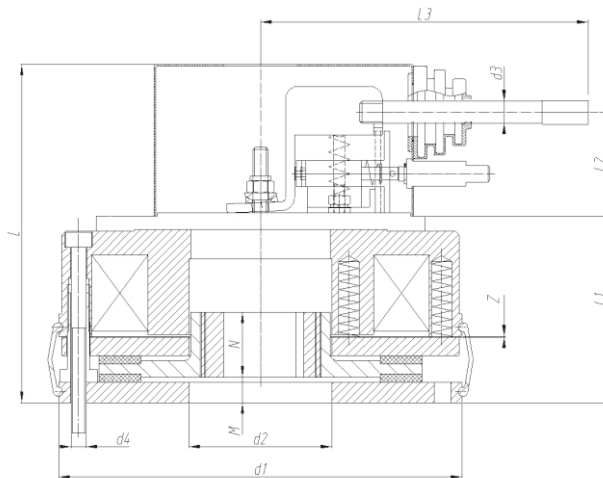
REB05F Series Brake

适应野外露天的恶劣工况

Adapt to harsh outdoor working conditions

- ⊙ 电压定制化设计
Customized Voltage
 - ⊙ 防护等级IP66
Protection Level: IP66
- ⊙ 结构简单，维护方便
Simple structure for easy maintenance
 - ⊙ 精度高，噪音低
High precision, low noise
- ⊙ 微动开关，温度传感器，编码器附件可选
Optional accessories: Micro switches, temperature sensors, encoders, etc.
 - ⊙ 进口摩擦材料，耐磨性高，环境适应性强，使用寿命长
Imported friction materials for higher wear-resistance, stronger environmental adaptability and longer service life.

技术参数 Technical Data



单位(Unit): mm

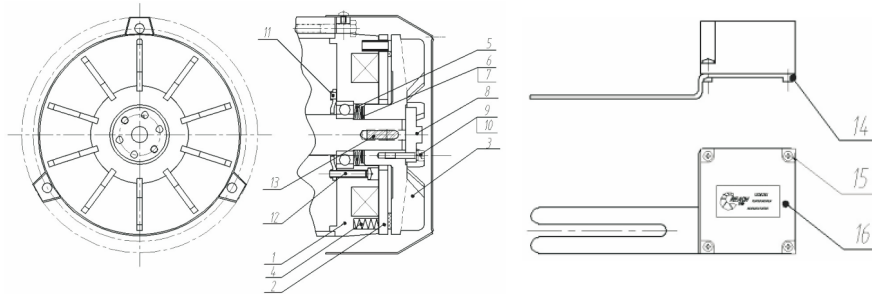
机座号 Model	制动扭矩 Braking Torque(N.m)	d1	d2	d3	d4	M	N	Z	L	L1	L2	L3
14	40/60	165	60	12	3-M8	12	30	0.8	170	86.5	56	177
16	60/80	190	62	12	3-M8	13.5	30	0.8	176	92.5	56	177
18	100/120/150	217	77	12	6-M8	13.5	35	1	183	100.5	56	200

停车库电磁制动器

E/M Brakes for Mechanical Parking Garages

REB08系列制动器

REB08 Series Brake



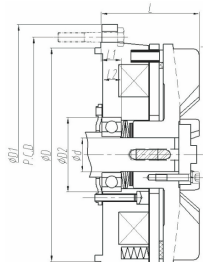
- 1.锁紧法兰
- 2.调整垫片
- 3.调整垫片
- 4.蝶形弹簧
- 5.压缩弹簧
- 6.转子
- 7.衔铁组件
- 8.定子

- 9.内六角圆柱头螺钉
- 10.弹簧垫圈
- 11.轴承压板
- 12..十字槽盘头螺钉
- 13.平键
- 14.电源安装支架
- 15.电源安装螺钉
- 16.整流器

- 1.Locking Flange
2. Adjustment Shim
- 3.Adjustment Shim
- 4.Disk Spring
- 5.Compression Spring
- 6.Rotor
- 7.Armature Assembly
- 8.Stator

- 9.Socket-head Cylindrical Screw
- 10.Spring Gasket
- 11.Bearing Pressing Plate
- 12.Plus Screw
- 13.Flat Key
- 14.Brace for Mounting Power Supply
- 15.Screw for Mounting Power Supply
- 16.Rectifier

功率 (4级)(KW) Power (Grade 4) (KW)	0.1	0.2	0.4	0.75	1.5	2.2	3.7	5.5	7.5	
机座号 Base #	56	63	71	80	90	100	112	132	132	
制动器规格 Brake Specification	REB0805	REB0806	REB0808	REB0810	REB0812	REB0814	REB0816	REB0818	REB0818	
额定力矩 (Nm) Rated Torque (Nm)	1	2	4	8	15	22	37	55	75	
励磁电压 DC(V) Excitation Voltage DC (V)	24 / 96 / 180									
吸引时间 (sec) Time of Attraction (sec)	0.03	0.03	0.03	0.06	0.09	0.09	0.08	0.05	0.05	
释放时间 (sec) Time of Releasing (sec)	0.08	0.08	0.1	0.12	0.14	0.15	0.1	0.12	0.12	
间隙 Gap	标准值(mm) Standard (mm)	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5
	极限值(mm) Limits (mm)	0.7	0.7	0.7	1	1	1	1.2	1.2	1.2

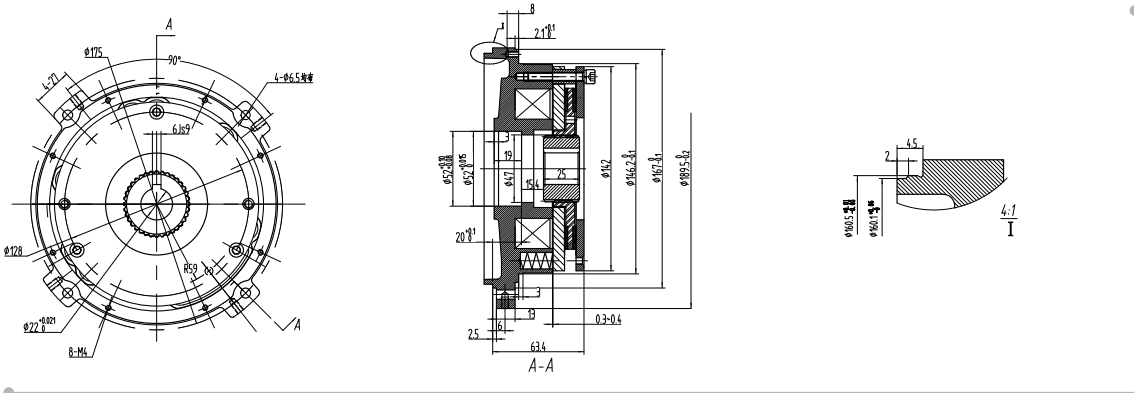


- D1 风罩安装尺寸
- P.C.D. 制动器安装位置圆
- D 制动器安装止口外径
- L1 安装面与轴承孔底距离
- d 安装轴伸直径
- D2 轴承型号

- D1 Mounting dimensions of wind cover
- P.C.D. Positioning circle for brake installation
- D Outer diameter of the stop for brake installation
- L1 Distance between the mounting face and the bottom of the bearing hole
- d Diameter of the mounting shaft
- D2 Model No.of the bearing

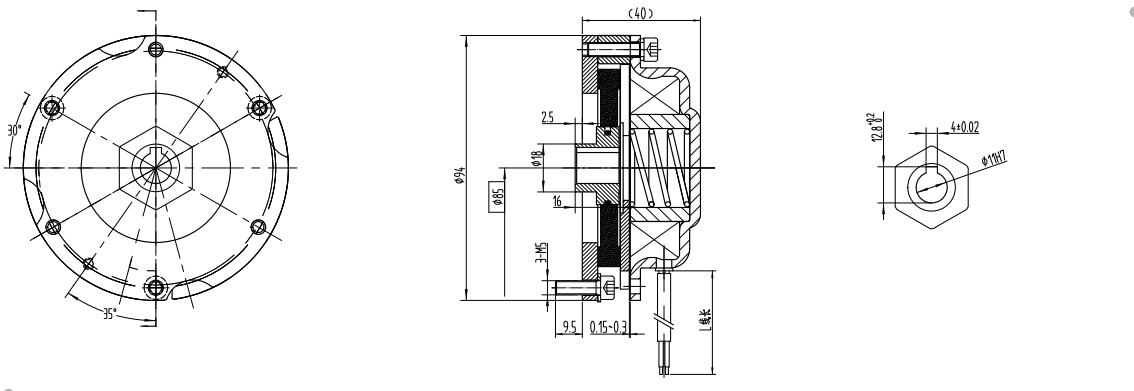
REB0214系列起升专用制动器 REB0214 Series Brake for Lifting

- 电压: 96VDC
Voltage: 96V(DC)
- 绝缘耐温等级F (155°C)
Insulation Temperature Resistance Grade: F (155°C)
- 安装孔径可选, 满足不同客户的需求
Optional installation hole diameter to meet different demand
- 额定静扭矩 > 44N.m
Rated Torque: > 44N.m
- 耐磨损摩擦片, 使用寿命长
Wear-resistant friction plate for long service life
- 一体化定制设计
One piece design for easy assembly



REB1173系列行走专用制动器 REB1173 Series Brake for Walking

- 电压: 96~170VDC
Voltage: 96V~170(DC)
- 绝缘耐温等级F (155°C)
Insulation Temperature Resistance Grade: F (155°C)
- 体积小, 结构紧凑, 满足安装空间有限的需求
Small size, compact structure to meet limited installation space requirements
- 额定扭矩3~5N.m
Rated Torque: 3~5N.m
- 防粘连摩擦片, 可在潮湿环境下长时间使用
Non-adhesive friction materials. Suitable for long time using in humid environment
- 间隙免调, 安装快捷
No air gap adjustment for easy assembly



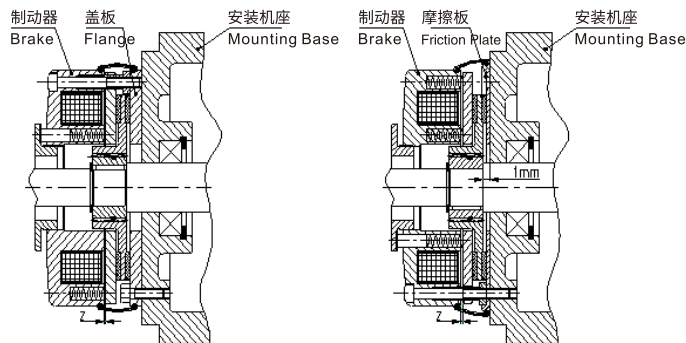
安装使用说明

Installation Instructions

安装事项 Installation Notes

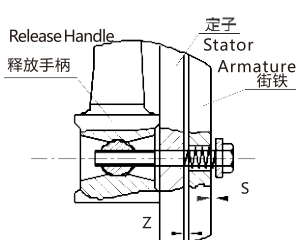
- 制动器的安装平面的粗糙度不超过Ra3.2，材料为铸铁或钢，安装端面对轴的垂直度不大于0.05mm
 - 摩擦面不能有锐利的尖角；若无合适的摩擦面时，可选用盖板或摩擦板。
 - REB04系列制动器的工作环境温度 $-10^{\circ}\text{C}\sim 40^{\circ}\text{C}$ ，应避免在极高的温度或湿度下存放与使用。海拔高度不超过2000m。防止润滑脂和润滑油沾染在摩擦面上。（如工作环境温度不在此范围，请与我司联系）。
 - 在湿气、雾气很重的情况下，请选用防尘套和防尘盖来密封制动器；防尘罩和防尘盖还可以防止铁屑、粉尘等可能进入间隙。
 - 在轴上用C形弹簧挡圈与轴肩固定花键套，花键套与安装面之间必须有大于1.0mm的间隙，避免花键套与制动器安装面接触（见制动器安装简图）。
 - 请勿强力敲击花键套或倾斜安装；固定花键套的键的长度尽量与花键套键槽的总长相同。
- The roughness of brake mounting surface should not exceed Ra3.2. The materials are cast steel or steel. The verticality of the mounting surface to the shaft is less than 0.05mm
 - There should be no sharp angle upon friction surface. The flange or friction board is applicable if there isn't any appropriate friction surface.
 - The working temperature of REB-04 Series Brakes is $-10^{\circ}\text{C}\sim 40^{\circ}\text{C}$. Please do not store or use the product under pretty high temperature or humid. Further, the altitude should not exceed 2000m. Don't stain the grease or lubricant upon the friction surface.
 - Use anti-dust wrapper or cap to seal the brakes if the environment is very humid or foggy; plus, these two parts can be applied to protect the air gap from iron chips and dust.
 - Fix the splined hub upon the shaft by C-shape spring collar and shoulder. To avoid contacting between splined hub and mounting surface, the air gap between these two should be larger than 1.0mm(Please see the Brake Installation Sketch).
 - Please do not knock the splined hub heavily or mount the products slantingly. The length of the key used to fix the splined hub and the total length of keyway of splined hub are as same as possible.

制动器安装简图 Brake Installation Sketch



释放手柄的安装 Hand release installation

释放手柄可由客户自由安装，安装结构参见右图。安装间隙S的调节必须是在额定扭矩和额定电压下，衔铁被吸引的情况下进行的。安装间隙S调节不当会阻碍衔铁正常释放，影响制动效果，尤其是在制动扭矩减小或定子在欠压下工作时。不同规格的S值见下表。



Customers are able to mount the release lever on their own..for the mounting structure,please see the right drawing .the fit air gap S should be adjusted at nominal torque and voltage,as well as the armature is attracted.inappropriate adjustment of air gap S will obstruct normal releasing of the armature and affect the braking,particularly in cases that the torque decreases or the voltage is not sufficient.for a value of different specification,please see the following table.

花键套的安装 Spline hub installation

花键套与安装面的距离通常为1mm以上，避免花键套与制动器安装面的摩擦干涉轴的正常转动。

The distance between the splined hub and mounting surface usually exceeds 1mm to avoid the interference generated by the friction between splined and mounting surface of the brake.

间隙的调节 Adjust the Gap

- 在制动器断电的情况下，通过调整空心螺钉，借助塞尺将间隙调节到额定值“z”，注意保证各个方向的间隙相同。
- While the brake is power-off, adjust the hollow screw and use feeler gauge to adjust the air gap to nominal value Z. Please pay attention to guarantee the air gaps at every direction are same.

间隙的重调 RE-adjust the Air Gap

额定间隙z会因磨损而变大。为确保制动器有足够的制动扭矩，必须在间隙达到最大间隙值前重调间隙。间隙可以多次调节，当摩擦制动片的厚度达到允许的最小厚度时，必须更换摩擦制动盘。制动器的噪音与间隙值大小有关，在要求噪音最低的应用中，建议在间隙达最大值范围内重调间隙。（最大间隙值见制动器使用额定参数调整方法见使用说明书）

间隙超过最大间隙值，可能导致制动器无法释放、摩擦制动片烧坏、制动力或保持力减小，甚至导致重大事故。所以必须定期检查并重调间隙，注意必须断开设备的总电源。

The nominal air gap z will be larger because of wear, therefore, the air gap should be re-adjusted before reaching its maximum value to guarantee sufficient braking torque. The air gap is able to be adjusted several times, with friction disk of minimum thickness, the braking plate should be replaced. Further, the noise generated by brake is related to the air gap, please re-adjust the air gap within its maximum range while using in areas requiring pretty low noise (for the maximum air gap, please see the nominal parameters using in brakes in page 7 and instruction for adjustment.)

Please check and readjust the air gap regularly after cutting off the general power. Otherwise, the brakes might not be released, the friction disk might be burnt out, the braking or holding might be decreased and, even occurring worse serious accident.

机座号 Model No.	额定间隙 z(+0.1/-0.05) (mm) Rated Air Gap z(+0.1/-0.05)(mm)	安装间隙 S(+0.1/0) (mm) Installation Air Gap S(+0.1/0)(mm)	Z+S (mm)
06	0.2	0.6	0.8
08	0.2	0.6	0.8
10	0.2	0.6	0.8
12	0.3	0.7	1
14	0.3	0.7	1
16	0.3	0.7	1
18	0.4	0.8	1.2
20	0.4	0.8	1.2
25	0.5	0.8	1.3
30	0.6	1.4	2

制动扭矩与转速的关系及最高工作转速 Braking torques at relative speed of rotation

产品规格 Product Size	额定扭矩[%](转速100r/min) Rated Torque[%](Rotation Speed 100r/min)	制动力矩与转速的关系[%] Relationship between braking torque and rotation speed[%]			最高工作转速 (r/min) Maximum Rotation Speed in Working(r/min)
		1500	3000	max	
06	100%	86%	79%	74%	6000
08	100%	84%	77%	73%	5000
10	100%	82%	76%	73%	4000
12	100%	80%	74%	73%	3600
14	100%	79%	72%	70%	3600
16	100%	78%	71%	67%	3600
18	100%	76%	69%	67%	3600
20	100%	74%	67%	67%	3600
25	100%	72%	67%	67%	3000
30	100%	70%	67%	67%	3000

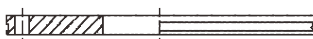
配件说明

Accessories

盖板 Flange

- 若安装机体上无合适的摩擦面可利用，可选盖板为摩擦面，盖板通过特殊表面处理，具有高防腐和高耐磨性

- If no suitable friction surface available, the flange can be selected as the friction surface, which is treated with a special surface and has high corrosion and wear resistance.



摩擦板 Friction Plate

- 若安装机体有平面度较好的平面，但因材质原因不能作为摩擦面，如：铝合金外壳的电机等，可以选择摩擦板为摩擦面，如右图所示，用于机座号为16及以下的产品。



- If the installation surface has good flatness but can't be used as friction surface due to the material constraints, such as in the case of a motor with an aluminum alloy housing, a friction plate can be chosen as the friction surface. As shown in the diagram on the right, this is applicable for model size below 16.

防尘套 Anti-dust Wrapper

- 防尘套可以有效地防止外部灰尘。水滴、湿气、污垢等其它异物进入制动器内部；使用防尘套时，应配有带环形凹槽的定子和盖板，防尘罩通过凹槽安装在制动器表面。

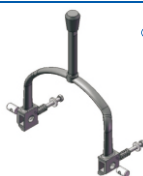
- The dust cover can effectively prevent the dust, water, moisture, dirt, etc., from entering the inside of the brake. When using the dust cover, a stator and flange with a ring groove should be fitted, and the dust cover should be mounted on brake surface through the ring groove.



机座号 Motor No.	D	B
06	90	17.6
08	110	21.4
10	136	25
12	158	30
14	174	33
16	198	34.5
18	225	38
20	253	42.4
25	304	48.5
30	372	69

释放手柄 Hand release

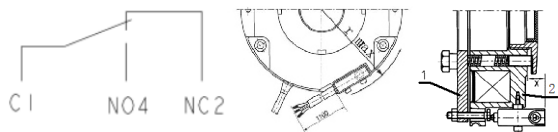
- 释放手柄用于安装调试制动器或设备出现故障时靠人工手动释放，拉动释放手柄可方便的解除制动；当开放释放手柄后，释放手柄可以自动回复到原来的位置，制动器恢复制动状态。



- The hand release is used to manually release the brake during installation and debugging or when the equipment fails. Pulling the hand-release can easily release the brake. When hand-release is released, it can automatically return to the original position, and the brake returns to braking state.

微动开关 Micro Switch

- 微动开关用于需要对间隙进行监控的场合，两种控制逻辑，寿命超过百万次。
- Micro-switch is used when the gap monitoring is required, with two control logics and over one million times lifespan.



- 当衔接1被定子2吸合时，制动器释放，微动开关感应到衔铁吸合，电机才由微动开关控制下启动；当间隙超过极限时，微动开关感应不到衔铁吸合，则电机不能启动。
- When armature 1 is engaged by stator 2, the brake is released, and the micro-switch detects the armature's engagement, allowing the motor to start under the control of the switch. When the gap exceeds the limit, the micro-switch can't detect the armature's engagement, the motor can't start.

电气附件

Electrical Accessories

- 制动器工作电源为直流电源，若外接交流电源可选用如下规格整流器
Electrical accessories are optional & meet the specific conditions. Please refer to the instructions.

产品特点 Characteristics

- 塑料外壳设计紧凑
Designed in a compact structure
- 可选的接线方式可以实现快速安装
Optional wiring methods to mount quickly
- 可选的交流侧和直流侧切换
Optional switching at AC and DC side
- 最大环境温度：70°C
Max. Ambient Temperature: 70°C

输入电压 (AC) Input Voltage (AC)	整流方式 Rectification Method	4线整流器型号 4-Wire Rectifier Model	6线整流器型号 6-Wire Rectifier Model	线圈电压 (DC) Coil Voltage (DC)
110V	全波 Full Wave	RZL141-170H	RZL162-170	103V
220V/230V/240V	全波 Full Wave	RZL141-170H	RZL162-170	205V
	半波 Half Wave	RZL241-170	RZL262-170/H	103V
	半波快速制动 Half Wave Fast Braking	RZLT145-96	RZL262-170K	
	快速吸合 Fast Pull-In	/	RKZL262-0.6S	103V
255V	全波 Full Wave	RZL141-170H	RZL162-170	225V
277V/290V	半波 Half Wave	RZL241-170	RZL262-170/H	127V
380V/400V/415V 420V/440V/460V	半波 Half Wave	RZL241-170	RZL262-170/H/K	170V/180V 190V/205V
	快速吸合 Fast Pull-In	/	RZL262-0.6S	
	快速制动 Fast Braking	/	RZL262-170K	

整流器性能及安装尺寸图

Performance and Mounting Drawing

4线半波或全波整流器 4-wire Half-/Full-wave Rectifier

序号 No.	产品型号 Model	产品特性 Property	特点 Features	适用行业 Applications
1	RZL141-170H	最大输入270VAC,全波 Max. input 270VAC, full wave	体积小巧, 接线快捷方便 Small volume, convenient wiring	对制动时间无特殊要求的行业 Industries with no special requirements for braking time
3	RZL241-170	最大输入555VAC,半波 Max. input 555VAC, half wave		
				黑色 Black

4线半波整流器
4-Wire Half-Wave Rectifier



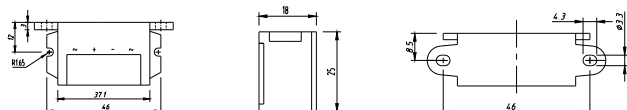
RZL241-170

4线全波整流器
4-Wire Full-Wave Rectifier

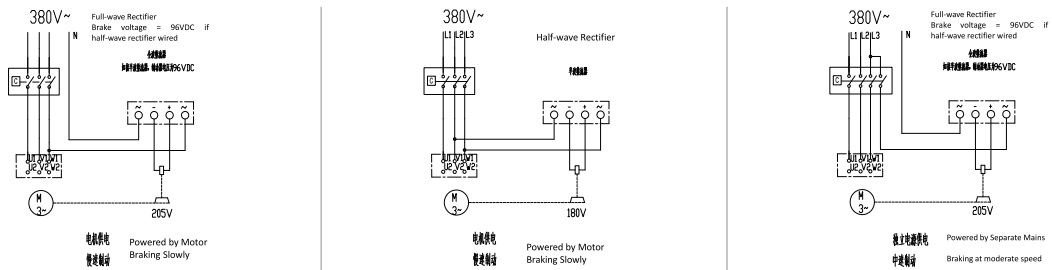


RZL141-170H

安装尺寸图 Mounting Drawing



接线图 Wiring diagram



6线半波或全波整流器 6-wire Half-/Full-wave Rectifier

序号 No.	产品型号 Model	产品特性 Property	特点 Features	适用行业 Applications
1	RZL162-170	最大输入270VAC, 全波 Max. input 270VAC, full wave	直流侧控制接线方式可实现快速制动 To achieve quick braking by controlling wiring at DC side	对制动时间有快速要求的行业 Industries with fast braking requirements
2	RZL262-170	最大输入460VAC, 半波 Max. input 460VAC, half wave		
3	RZL262-170H	最大输入电压575VAC, 半波 Max. input 575VAC, half wave		

6线水平安装半波整流器
6-Wire Half-Wave Rectifier,
Horizontally Mounted



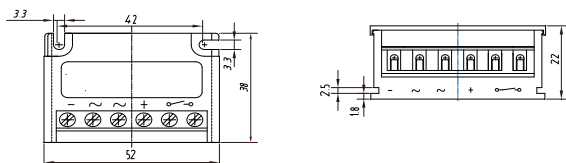
RZL262-170

6线水平安装全波整流器
6-Wire Full-Wave Rectifier,
Horizontally Mounted

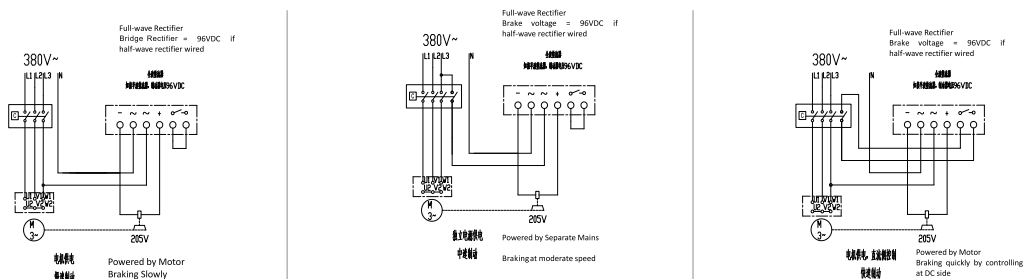


RZL162-170

安装尺寸图 Mounting Drawing



接线图 Wiring diagram



说明:6线半波整流器输入380VAC时接线请参考快速吸合整流器接线示意图

Note: for 6-wire half-wave rectifier (when input = 380VAC), please refer to the wire diagram of fast pull-in rectifier

快速吸合整流器 Fast Pull-in Rectifier

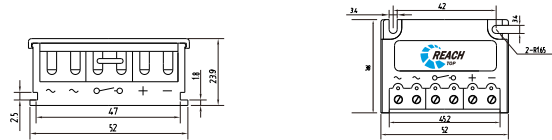
序号 No.	产品型号 Model	产品特性 Property	特点 Features	适用行业 Applications	
1	RKZL262-0.6S	最大输入575VAC的快速吸合整流器 Max. input 575VAC	缩短制动器吸合时间, 通过直流侧控制接线方式可实现快速制动 Shorten the pull-in time and achieve quick braking by controlling wiring at DC side	快速吸合 (高压电) 时间 0.6S (输入380VAC时) Fast Pull-in (high voltage) time 0.6s (when input=380VAC)	缓解电机堵转或需释放时间短的行业 Industries that relieve motor blocking or require short release times

快速吸合电源
Fast pull-in Power Supply

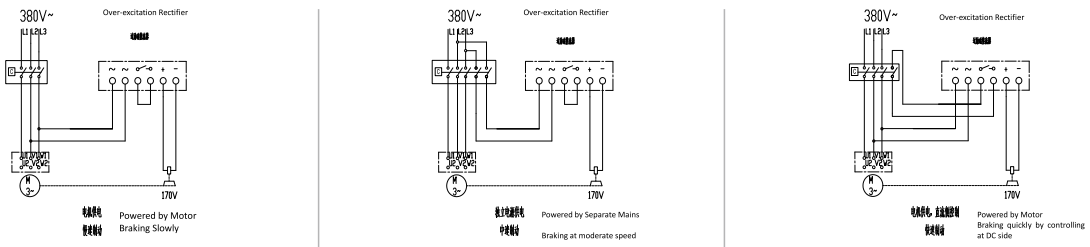


RKZL262-0.6S

安装尺寸图 Mounting Drawing



接线图 Wiring diagram



快速制动整流器 Fast Braking Rectifier

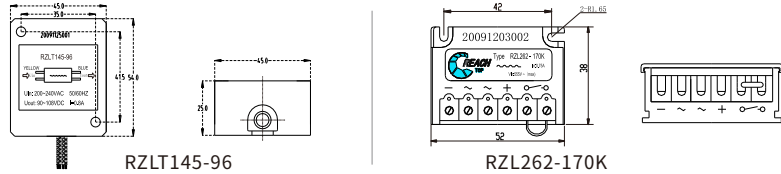
序号 No.	产品型号 Model	产品特性 Property	特点 Features	适用行业 Applications
1	RZLT145-96	输入电压:270VAC(max) 50/60Hz Input Voltage: 270VAC(max) 50/60Hz	结构紧凑、小巧; 独特电路设计, 不需要外部控制电路即可满足制动器的快速制动需求 Compact and small structure; unique circuit design, no external control circuit is required to meet the fast braking requirements	对制动时间有快速要求的行业 Industries with fast braking requirements
2	RZL262-170K	输入电压:555VAC(max) 50/60Hz Input Voltage: 555VAC(max) 50/60Hz		

快速制动整流器
Fast-braking Rectifier



RZLT145-96

安装尺寸图 Mounting Drawing



RZLT145-96

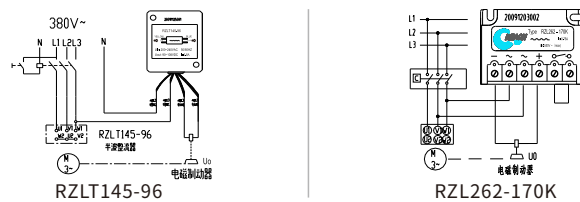
RZL262-170K

快速制动整流器
Fast-braking Rectifier



RZL262-170K

接线图
Wiring diagram



RZLT145-96

RZL262-170K

产品选型

Model Selection

保持负载所需的转矩分析 Analysis Of The Required Torque For Keeping The Load

$$T = T_{lmax} \times K \text{ [N} \cdot \text{m]}$$

- ⊙ T_{lmax} : 最大负载转矩 [N·m]
- ⊙ T_{lmax} : Max load torque [N·m]
- ⊙ K: 安全系数 (参阅下表)
- ⊙ K: Security coefficient (see table below)

负载状态 Load status	系数 Coefficient
低惯量·负载变动小 Low inertia. Low load change	1.5
普通惯量的一般使用 Normal inertia for normal use	2
大惯量·负载变动大 High inertia. High load change	>3

特殊尺寸 Special Size

- ⊙ 需要选择能使由上述算式计算出的转矩 T 满足以下算式的制动器尺寸。
- ⊙ Use the Torque T which is calculated based on above equation to meet the brake measurement in below equation.
- $TS > T \text{ [N} \cdot \text{m]}$
- ⊙ Ts: 制动器静摩擦转矩 [N·m]
- ⊙ Ts: the brake's static friction torque [N·m]

做功分析 Power Output Analysis

- 考虑以保持为目的的制动器时，制动仅限于紧急情况下。
- When considering brakes for holding, braking should be limited to emergency situations.
- 通过以下算式计算紧急制动 1 次的制动做功 E_b ，并确认该计算结果充分小。
- Calculate the brake work E_b for one emergency braking operation using the following formula, and confirm that the calculation result is sufficiently small
- 于所选制动器的允许制动做功 $E_{ba\ell}$ 。
- The allowable brake power output for the selected brake $E_{ba\ell}$.

$$E_b = \frac{J \times n^2}{182} \times \frac{T_b}{T_b \pm T_{\ell\max}} [J]$$

- J: 负载侧的转动惯量合计 [kg·m²]
- J: Rotation inertia sum on the load side [kg·m²]
- n: 转速 [min⁻¹]
- n: Rotation speed [min⁻¹]
- T_b: 制动器转矩 [N·m]
- T_b: Brake torque [N·m]
- T_{ℓmax}: 最大负载转矩 [N·m]
- T_{ℓmax}: Max. load torque [N·m]
- 最大负载转矩 T_{ℓmax} 的符号在负载朝帮助制动的方向动作时为 + (正)，朝妨碍的方向动作时为 - (负)。
- The symbol of the max. load torque T_{ℓmax} is + when the load is aiding the brake, - when the load is hindering the brake.

$$E_b \ll T_{ba\ell} [J]$$

动作次数分析 Brake Frequency Analysis

- 进行紧急制动时的总制动次数（寿命）L 通过以下算式计算，需要确认是否满足要求的规格。
- The total brake times(life) L can be calculated using below equation, need to check if the item can meet requirements.

$$L = \frac{E_T}{E_b} [\text{次}]$$

- ET: 总制动做功 [J]
- ET: Total brake power output [J]
- 虽然根据使用环境会有所不同，但紧急制动频率请控制在 1 分钟 1 次左右。1 次制动做功 E_b 超过允许制动做功 $E_{ba\ell}$ 的 70% 以上时，紧急制动后，请等待制动器充分冷却再使用。
- Though operation conditions may vary, the emergency brake should be less than about once per minute. if the one time brake power output E_b is bigger than 70% of $E_{ba\ell}$, then after emergency brake, the brake has to be fully cooling down before operation again.



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