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恒久安全 值得信赖

Always Safe, Always Trusted

**阿萨特**





## ASAT中国：

恒久安全，值得信赖。

Always Safe, Always Trusted

ASAT中国，提供高空安全防护产品，恒久安全；

ASAT provides personal protective equipment, always safe.

ASAT中国，提供高空逃生、救援方案，值得信赖。

ASAT provides evacuation and rescue solutions, always trusted.

## ASAT产品研发 Research & Development:

ASAT研发团队以二十年的现场工作体验为基础，以科学理念为指导，综合考虑不同地区人员的体质特征及不同领域的工作特点，保证产品设计理念的先进与实用。

Based on almost twenty years of field work experiences and guided by scientific concepts, the ASAT R&D team comprehensively considers the physical characteristics of personnel in different areas and work characteristics in different fields to ensure the advancement and practicality of design concepts of the products.



## ASAT原材料控制 raw material control:

ASAT原材料选择苛刻，在全球范围内选用具有技术领先优势的原材料以确保质量。

ASAT raw materials are subject to a rigorous selection process, by which the raw materials with superiority of advanced technology are selected worldwide to ensure the quality.



## ASAT生产过程控制 production procedure control:

ASAT工厂严格执行ISO9001,ISO14000,ISO45001管理系统，控制每一个细节，严谨、科学、可靠。

ASAT factory implements ISO9001 quality management system,audited by ISO14000,ISO45001, to control every detail and ensure preciseness, scientificity and reliability.



## ASAT产品检测 product test:

ASAT工厂自身建立了完善的产品检测体系，同时与法国APAVE等认证机构合作，对ASAT产品进行第三方相关认证、检测。

ASAT establishes a comprehensive product test system, and cooperates with the certification authority APAVE (France) to perform related third party certification and inspection on the ASAT products.







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高空作业安全防护的基本原则:正确使用个人防护设备(Personal Protective Equipment),使人员保持在某一位置进行工作;将人员限制在一定(安全)区域内活动;使人员安全的悬挂于某一高度进行作业,从而保证人员在高处工作时的安全,防止发生坠落。

Basic principles of safety protection for working at heights include: risk assessment before work; correct usage of the personal protective equipment to keep the personnel at certain working positions; restriction of the personnel within a certain (safe) region for activity; and safe suspension of the personnel to perform operation at a certain height, to ensure the safety of the personnel working at height and fall protection.

1

**风险评估**——直接风险评估,包括工作环境、作业内容、安全装备、人员身体状况等;间接风险评估,包括周围环境、气温高低、风速大小、其他危险源等;降低风险的具体方案;发生危险的救援预案。

Risk assessment——direct risk assessment including work conditions, operation scopes, safety equipment and personnel physical condition; indirect risk assessment including the surrounding environment, temperature, wind speed and other risk sources; specific plans for risk reduction; rescue plans at risk.

2

**防坠系统**——与固定点连接的系统-用于防止人员在高空作业或行进中发生坠落,或在发生坠落后将作业人员安全悬挂。

Fall arrest system——a system connecting to the anchor device, used to prevent the personnel from falling during working or travelling at heights, or safely arrest the personnel after a fall occurs.



3

**工作限位系统**——通过围绕在固定构造物上的限位绳将人体固定在构造物附近,解放作业人员双手,可以进行其他操作。工作限位系统必须与防坠落系统同时使用。

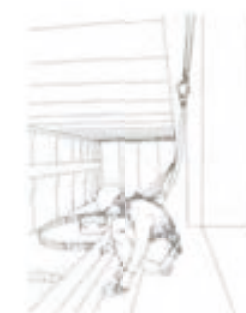
Work positioning system——secure the user's body near the structure by work positioning lanyard wound around a fixed structure, and let the hands of the personnel free to perform other operations. The work positioning system shall be used along with the fall arrest system at the same time.



4

**区域限制系统**——限制作业人员的活动范围,避免其到达可能发生坠落的区域。

Restraint system——restrict the activity zone of the personnel and prevent them from reaching an area where a fall may occur.



5

**悬挂作业系统**——将人员悬挂于某一高度进行作业,使人员的体重主要作用于安全带的腰带与腿带上。该系统常见于绳索技术作业领域。

Suspension system——suspend the personnel at a certain height to perform operation, allowing the weight of the personnel mainly supported by the waist belt and leg loops of the harness. The system is commonly used in the operation field with rope access.





高空作业安全防护装备使用原则：

Principles of using personal protective equipment for working at heights

## 防坠系统高挂低用

**Set the anchor point of fall arrest system at a higher position and attachment point used at a lower position, to mitigate impact force acting on the user in case of falling.**

1

在有坠落风险的区域，使用防坠落系统防止人员坠落。

In the area with risks of fall, a fall arrest system shall be used to arrest falling of the user.

防坠落系统通常被尽量要求高挂低用，以降低其坠落系数，从而减轻坠落时使用者受到的冲击力。

A fall arrest system is often required to be attached to a higher anchor point and used at a lower position as far as possible, to reduce the fall factor of the system, thereby to mitigate the impact force acting on the falling user.

坠落系数=坠落高度/有效绳长

Fall factor = fall height/working length of rope

防坠落系统使用的连接装置一定需要配备具有势能吸收功能的缓冲器。以确保在坠落发生时，作用于使用人员身上的冲击力小于6kN。

The connector used in the fall arrest system shall be equipped with the energy absorber that has the function of absorbing potential energy, to ensure that the impact force acting on the user is less than 6kN when a fall occurs.

坠落系数=坠落高度/有效绳长

Fall factor= fall height/working length of rope

$$F = mg + mg \sqrt{1 + \frac{2f}{mg}}$$

F: 冲击力

F: impact force

f: 坠落系数

f: fall factor

K: 绳索的杨氏模量X编织部分

K: spring constant of the rope

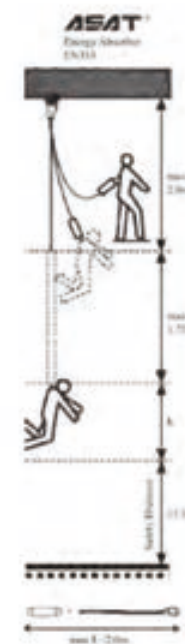
m: 质量

m: mass

g: 重力加速度

g: gravitational acceleration

2



## 留出足够净空距离

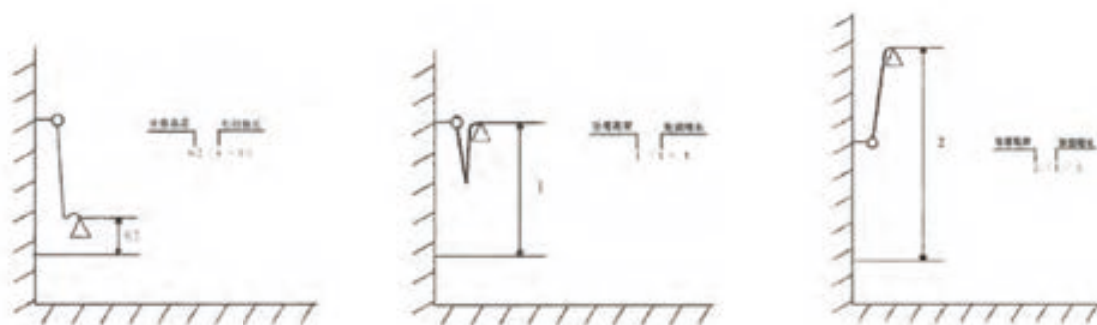
使用防坠落系统时，注意留出足够的净空距离，以防坠落发生时使用者撞到障碍物受到二次伤害。

净空距离=连接装置的长度+缓冲器打开后的长度+使用者的身高+安全高度+绳索可能的弹性延伸量。

## Clearance/ Safety distance

During use of the fall arrest system, attention shall be paid to leave enough clearance, so as to prevent the user from colliding with obstacles when a fall occurs and avoid consequent secondary injury to the user.

Clearance = the length of lanyard+tearing length of energy absorber +the distance between the feet of the user and the harness attachment point of the fall arrest system+safety margin +the rope's elasticity.





# 安快特升降器 Powered Ascending Device

安快特升降器，能够满足人员绳索作业中对于安全性和可靠性的要求。

安快特就像一部个人升降机，可以沿标准规格的绳索进行垂直上下、横渡、斜渡上下运送检查和维修人员安全、高效地到达工作地点。对于难以到达和用其他方式无法到达的地方，安快特是明智的选择。

安快特采用专用绳索，绳皮耐磨，绳芯强度高，适于机械配合，完成长距离垂直上下、横渡、斜渡上下作业。

使用安快特的工作人员，事先必须接受ASAT培训师或相同资质培训师的培训，具备基本的高空绳索作业技能。

安快特适用范围广，但工况不同，产品配置也不尽相同；尤其用于救援环境时，因为环境的苛刻，事态的紧急，配置必须合理才能发挥最大功效。

ASAT powered ascending device can satisfy all requirements of the personnel for ascending and descending velocity, safety and reliability.

ASAT ascending device powered by battery can be used in operations that require ascending and descending along the rope of standard specification as a set of personal lifter. By using the ASAT powered ascending device, the inspection and maintenance personnel can ascend and descend easily in a safe, efficient, and economic manner, which is the optimal choice for the places that are difficult and impossible to access in other manners.

ASAT specialized ropes with wear-resistance sheath and high-strength core are perfectly matched with the device and capable to go through long distance of ascending and descending required operations.

The users should have basic skills of rope access, and they are required to take the training program provided by ASAT trainers or the trainers with the equivalent qualification in advance.

The ASAT powered ascending device has a wide scope of application but the configuration is varies from different working conditions.

Especially when the devices are used for rescue, because of the severe conditions and urgent situations which require reasonable configuration, the ASAT powered ascending device can produce its maximum effects.



安快特升降器

安全带

连接装置

速降营救  
解决方案

限位工作绳

防坠落系统

止坠滑轮、  
防坠器

绳索、包

金属件

安全帽、  
头灯、担架



# 军警版安快特

Tactical powered ascending device

## ACE-11

军警版安快特升降器能够满足单兵作战、双人救援和遥控操作的要求。

军警版安快特升降器就像一部个人升降机沿标准规格的绳索进行垂直上升/下降、横渡、斜拉上升/下降操作。操作方便、简捷、可靠，即使仅靠一根工作绳也可实现安全操作。

军警，搜救和检查维护人员可以安全、快捷、方便的方式轻松上升和下降，采用这种方式对于要求快速到达和其他方式无法到达的地方是明智的选择。

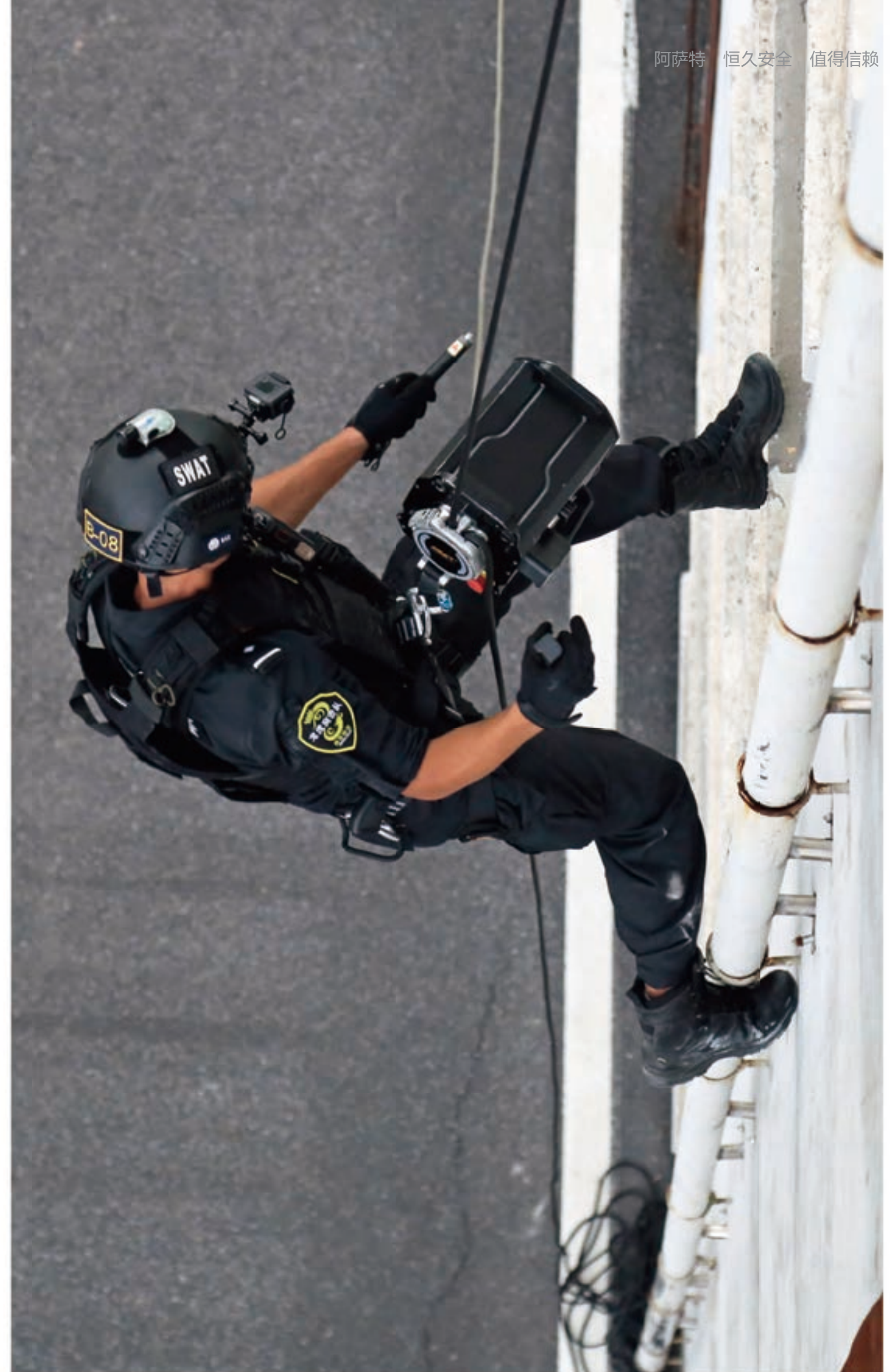
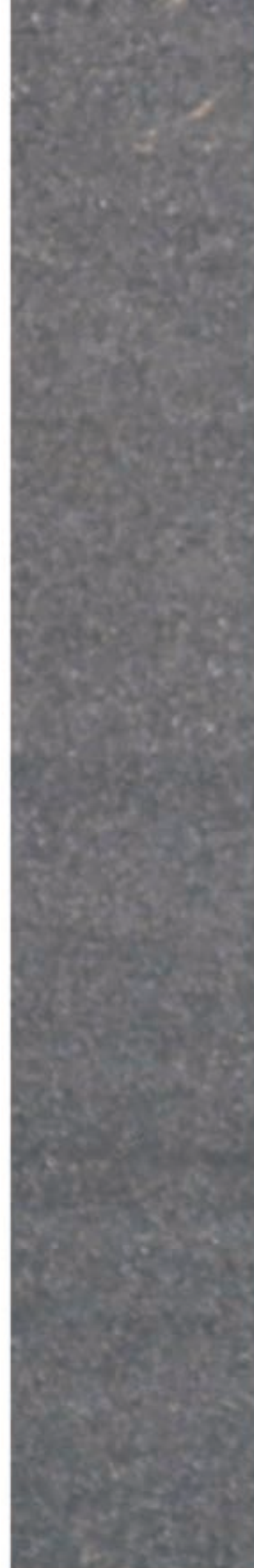
ASAT tactical powered ascending device can perform operations of vertical ascending, descending, and traversing along horizontal and inclined rope of standard specification as a set of personal lifter. The operation is convenient, simple, reliable and safe even a single rope is adopted only.

Military, police, urban rescuers and security personnel can easily ascend and descend in a safe, rapid and convenient manner by using the device, which is the optimal choice to access the positions quickly where is impossible to access in other manners.



**军警版安快特升降器可用于众多领域：**  
**Tactical Powered ascending device can be applied for many industries:**

- ◆ 反恐 Anti-terrorism action
- ◆ 消防救援 Fire rescue
- ◆ 山地搜救 Mountain search and city rescue
- ◆ 城市救援 Urban rescue







## 产品性能 Product performance

- ◆ 最大速度：上升 0-80m/min；横渡 0-80m/min；下降 0-100m/min  
Speed: ascent: 0-80m/min; traversing: 0-80m/min; descent: 0-100m/min
- ◆ 安全工作载荷160kg（用于紧急救援时可达200kg）  
Safe working load: 160kg (up to 200kg when used for emergency rescue).
- ◆ 可根据电池电量以及负载大小自动变换速度，以达到最佳运行效果  
According to the battery power and load weight, the speed of the device can be changed automatically to achieve the best operation effect.
- ◆ 电池续航能力强大：负载150kg可持续上下运行600m  
capable to power the device continuous travelling 600m with load of 150kg.
- ◆ 电池具有低温环境下自动保护功能，能克服电池在低温环境下电量输出低的缺点  
The battery has automatic heating function at low temperature to overcome the disadvantage of battery low output at low temperature environment.
- ◆ 体积轻巧、便于携带，含电池净重18kg  
Compact and portable, net weight of 18kg only.
- ◆ 外形尺寸：Size: 30cm\*23cm\*35cm.
- ◆ 操作简捷、无级变速，通过指拨器控制方向与速度  
Easy and convenient operation, stepless speed change, capable to control direction and speed by tumbler switch.
- ◆ 快速充电：1小时可充电完成 Fast charging time: 1 hour.
- ◆ 远程控制操作：可将军警版安快特设置在吊点处，远程遥控控制其速度和方向  
Remote control: capable to up ASAT tactical powered ascending device at an anchor point and control the speed and direction with the remote control.
- ◆ 遥控距离：0~150m(空旷环境) Remote Control: within the range of 0-150m
- ◆ 过热保护功能 Overheat protection.
- ◆ 手动下降：当电池没电的情况下，可拨动手柄进行手动下降  
Manual descent: capable of slowly descending by operating the manual descending lever in case the battery runs out.
- ◆ 绳索：符合EN1891A标准，直径为11mm的专用绳索  
Rope: specialized static rope of 11mm diameter, in accordance with EN1891A.
- ◆ 整机防护等级为IP56  
Degrees of protection provided by enclosures: IP 56.
- ◆ 符合CE标准 CE certification.

安快特升降器

安全带

连接装置

速降营救  
解决方案

限位工作绳

防坠落系统

止坠滑轮、  
防坠器

绳索、包

金属件

安全帽、  
头灯、担架



产品性能 Product performance

绳索 Rope	专用静态绳索 ( EN1891A 直径11mm ) Static rope Φ11mm EN1891A
额定载荷 Rated working load	160kg
最大载荷 Working load limit	200kg
运行方式 Operation mode	垂直上升/ 下降、横渡、斜拉上升/ 下降 vertical, horizontal and in any direction
上升速度 Ascending speed	0-80m/min ( 无级调速 Stepless speed )
横渡速度 Traversing speed	0-80m/min ( 无级调速 Stepless speed )
下降速度 Descending speed	0-100m/min ( 无级调速 Stepless speed )
紧急下降速度 Emergency descending speed	0-120m/min ( 无级调速 Stepless speed )
行程( 垂直运行时 ) Running distance(Vertical)	往复行程600m ( 150kg); 持续行程175m ( 150kg) 600m@150kg travel compacity of ascending and descending alternatively, 175m@150kg travel compacity of ascending continuously
充电时间 Charging time	60min
温度范围 Temperature range	-30℃~+60℃
过热保护 Overheat protection	√
电池低温保护 The battery has automatic heating function at low temperature	√
电池重量 Standard battery	3.4kg
本体重量 Weight	14.6kg ( 不含电池 without battery )
外型尺寸 Size	30×23×35cm
抗摔能力 Fall protection	0.5m ( 水泥地面 concrete ground )
遥控距离 Remote control	0~150m ( 空旷环境 vision environment )
手动下降功能 Manual descent	√
整机防护等级 Protection level	IP56
CE认证 CE certification	√



安全帽 HM1401



安全带 D-10503



绳索止跌扣 RG-10-12



牛尾绳 LDT-60



下降器 RD2



LS-02



手式上升器  
HAL-01 & HAR-01



机械静态绳索AR-TS系列



金属环 HS-0101



脚踏带 LFA-15



## MINI版安快特 Powered Ascending Device



### ACE-31

安快特MINI版,本体重量仅7kg,可装在背包里随身携带;  
最大负载160kg,无级变速,遥控距离180米;  
电池可拆卸,携带多块电池,不受续航里程限制;  
可以垂直、横渡、斜向运动;  
尺寸:26cm\*16cm\*24cm;  
拥有迷你版安快特,你将卸掉负重,轻装前进。  
MINI power ascender, gross weight of 7kg, which is compacted and can be stored in a backpack.  
Maximum load of 160kg, continuously variable speed, 180m remote control.  
Swappable battery.  
Running in any direction, including vertically, horizontally and in high angles.  
Size: 26cm\*16cm\*24cm.

可用于众多领域:

Applications:

- ◆ 风电叶片维修 Wind turbine blade maintenance
- ◆ 电网高空不带电作业 Power grid maintenance
- ◆ 电厂检修作业 Power plant maintenance
- ◆ 桥梁检查 Bridge inspection
- ◆ 高楼建筑维护 High buildings cleaning and maintenance



安快特升降器

安全带

连接装置

速降营救  
解决方案

限位工作绳

防坠落系统

止坠滑轮、  
防坠器

绳索、包

金属件

安全帽、  
头灯、担架





产品性能 Product performance

绳索 Rope	专用静态绳索 ( EN1891A 直径11mm ) Static rope Φ11mm EN1891A
额定载荷 Rated working load	120kg
最大载荷 Working load limit	160kg
工作方式 Operation mode	垂直上升/ 下降、横渡、斜拉上升/ 下降 Ascending and descending vertically/traversing horizontally/ traversing inclinedly
上升速度 Ascending speed	0-30m/min
下降速度 Descending speed	0-40m/min
可拆卸电池 Swappable battery	√
电池 Standard battery	2.0kg
本体重量 Weight	7.0kg ( 不含电池 without battery )
外型尺寸 Size	26×16×24cm
行程 ( 垂直运行时 ) Running distance (with standard battery)	往复行程400m ( 120kg); 持续行程160m ( 120kg) 400m@120kg travel compacity of ascending and descending alternatively, 160m@120kg travel compacity of ascending continuously
遥控距离 Remote control range(L)	0 ~ 180m ( 空旷环境 open space )
充电时间 Charging time	< 60min
整机防护等级 Ingress Protection	IP54
温度范围 Operating temperature range	-20℃~+60℃



安全帽 HM1401



安全带 D-10503



手式上升器  
HAL-01 & HAR-01



下降器 RD2



分力板  
HRP-0105



绳索止跌扣 RG-10-12



金属环 HS-0101



脚踏带 LFA-15



座板 DS-01



座椅 DSA-01

安快特升降器  
安全带  
连接装置  
速降营救  
解决方案  
限位工作绳  
防坠落系统  
止坠滑轮、  
防坠器  
绳索、包  
金属件  
安全绳、  
头灯、担架



# 电网版安快特 Powered Ascending Device



## ACE-32

电网版安快特,可用于电网检修中的等电位带电作业;  
等电位作业电压:1000kV;  
配备专用绝缘绳索,直径12mm,符合 GB/T13035-2008;  
本体重量仅7kg,可装在背包里随身携带;  
最大负载160kg,无级变速,遥控距离180 米;  
电池可拆卸,携带多块电池,不受续航里程限制;  
可以垂直、横渡、斜向运动;  
尺寸:26cm\*16cm\*24cm;  
Powered ascending device can be used for power grid maintenance of equal protential working.  
Equal protential working: 1000kV;  
Equipped with insulating rope of 12mm diameter, which is in accordance with GB/T13035-2008;  
Gross weight of 7kg, which is compact and can be stored in a backpack.  
Maximum load of 160kg, stepless speed regulation and remote control distance of 180m.  
Swappable battery.  
Running in any direction, including vertically, horizontally and in high angles.  
Size: 26cm\*16cm\*24cm.

领域:  
Applications:  
◆ 电网等电位带电作业Power grid equipotential live work

## 产品性能 Product performance

绳索 Rope	专用绝缘绳索,直径12mm,符合 GB/T13035 2008 Insulating rope Φ 12mm GB/T13035 2008
额定载荷 Rated working load	120kg
最大载荷 Working load limit	160kg
工作方式 Operation mode	垂直上升/ 下降、横渡、斜拉上升/ 下降 Ascending and descending vertically/traversing horizontally/traversing inclinedly
上升速度 Ascending speed	0-30m/min
下降速度 Descending speed	0-40m/min
可拆卸电池 Swappable battery	√
电池 Standard battery	2.0kg
本体重量 Weight	7.0kg
外型尺寸 Size	26×16×24cm
行程( 垂直运行时 ) Running distance (with standard battery)	往复行程400m ( 120kg); 持续行程160m ( 120kg) 400m@120kg travel compacity of ascending and descending alternatively, 160m@120kg travel compacity of ascending continuously
遥控距离 Remote control range(L)	0~ 180m ( 空阔环境 open space )
充电时间 Charging time	< 60min
整机防护等级 Ingress Protection	IP54
温度范围 Operating temperature range	-20℃~+60℃
等电位作业电压 Equal protential working	1000kV



安全帽 HM1401



安全带 D-10503



手式上升器  
HAL-01 & HAR-01



下降器 RD2



绳索止跌扣 RG-10-12



绝缘绳索 AR-YC2-12



金属环 HS-0101



座椅 DSA-01



# 高速MINI版安快特 Powered Ascending Device



## ACE-33

高速MINI版安快特,为抢险、军警行业单人使用设计。  
携带方便,本体重量仅8kg,可装在背包里随身携带;  
最大负载120kg,无级变速,遥控距离180 米;  
速度快,可以高速接近目标。  
电池可拆卸,携带多块电池,不受续航里程限制;  
可以垂直、横渡、斜向运动;  
尺寸:26cm\*16cm\*24cm;  
High speed MINI power ascender designed for individual use by rescue, military and police.  
Gross weight of 8kg, which is compact and can be stored in a backpack.  
Maximum load of 120kg, stepless speed regulation, and remote control distance is greater than 180m.  
Approach the target at a high speed.  
Swappable battery.  
Running in any direction, including vertically, horizontally and in high angles.  
Size: 26cm\*16cm\*24cm.

- 领域:  
Applications:
- ◆ 抢险 Rescue
  - ◆ 军警快速单人 Individual use by military and police

## 产品性能 Product performance

绳索 Rope	专用静态绳索( EN1891A 直径11mm ) Static rope Φ11mm EN1891A
额定载荷 Rated working load	100kg
最大载荷 Working load limit	120kg
工作方式 Operation mode	垂直上升/ 下降、横渡、斜拉上升/ 下降 Ascending and descending vertically/traversing horizontally/ traversing inclinedly
上升速度 Ascending speed	0-70m/min
下降速度 Descending speed	0-100m/min
可拆卸电池 Swappable battery	√
电池 Standard battery	2.5kg
本体重量 Weight	8.0kg
外型尺寸 Size	26×16×24cm
行程( 垂直运行时 ) Running distance (with standard battery)	往复行程500m ( 100kg); 持续行程250m ( 100kg) 500m@100kg travel compacity of ascending and descending alternatively, 250m@100kg travel compacity of ascending continuously
遥控距离 Remote control range(L)	0 ~ 180m ( 空旷环境 open space )
充电时间 Charging time	< 60min
整机防护等级 Ingress Protection	IP54
温度范围 Operating temperature range	-20℃~+60℃



安全帽 HM1401



安全带 D-10503



手式上升器  
HAL-01 & HAR-01



下降器 RD2



绳索止跌扣 RG-10-12



牛尾绳 LDT-60



机械静态绳索AR-TS系列



金属环 HS-0101



吊带 LS-02





## 防水版安快特 Powered Ascending Device



### ACE-12

安快特防水版,防护等级IP68,电池可拆卸,可以实现水下换电池;  
水下10m正常工作;  
最大负载200kg;  
无极变速,最大上升速度80m/min,最大下降速度100m/min;  
遥控距离150m;  
在-20°C至+60°C环境下正常工作;  
左手操作,右手可以持枪或进行救援;  
可以垂直、横渡、斜向运动;  
适应全天候、海陆空环境操作。  
Waterproof power ascender  
IP68 with swappable battery, can replace the battery at a depth of 10m under water.  
Can be operated at a depth of 10m under water.  
Maximum load of 200kg  
Stepless speed regulation, maximum ascending speed of 80m/min, maximum descending speed of 100m/min  
Remote control distance over 150m  
Working environment temperature of -20°C~+60°C  
Left hand operation  
Running in any direction, including vertical, horizontal and high angle  
Adapt to all weather, marine, land and airforce operation.

#### 应用领域:

#### Application

- ◆ 消防救援 Firefighting rescue
- ◆ 海军部队水下突击 Navy force underwater operations



产品性能 Product performance

绳索 Rope	专用静态绳索 ( EN1891A 直径11mm ) Static rope Φ 11mm EN1891A
额定载荷 Rated working load	160kg
最大载荷 Working load limit	200kg
工作方式 Operation mode	垂直上升/ 下降、横渡、斜向上升/ 下降 Ascending and descending vertically/traversing horizontally/traversing inclinedly
上升速度 Ascending speed	0-80m/min
下降速度 Descending speed	0-100m/min
紧急下降 Emergency descending speed	0-120m/min
行程 ( 垂直运行时 ) Running distance	往复行程600m ( 150kg); 持续行程175m ( 150kg) 600m@150kg travel compacity of ascending and descending alternatively, 175m@150kg travel compacity of ascending continuously
重量 Weight	20kg
外型尺寸 Size	31 × 24 × 30cm
遥控距离 Remote control range(L)	0 ~ 150m ( 空旷环境 open space )
充电时间 Charging time	< 60min
温度范围 Operating temperature range	-20℃~+60℃
可拆卸电池 Swappable battery	✓
左手操作 Left hand operation	✓
整机防护等级 Ingress Protection	IP68 ( 水下10m, 10m depths underwater )



安全带 D-10503



手式上升器  
HAL-01 & HAR-01



金属环 HS-0101



下降器 RD2



吊带 LS-02



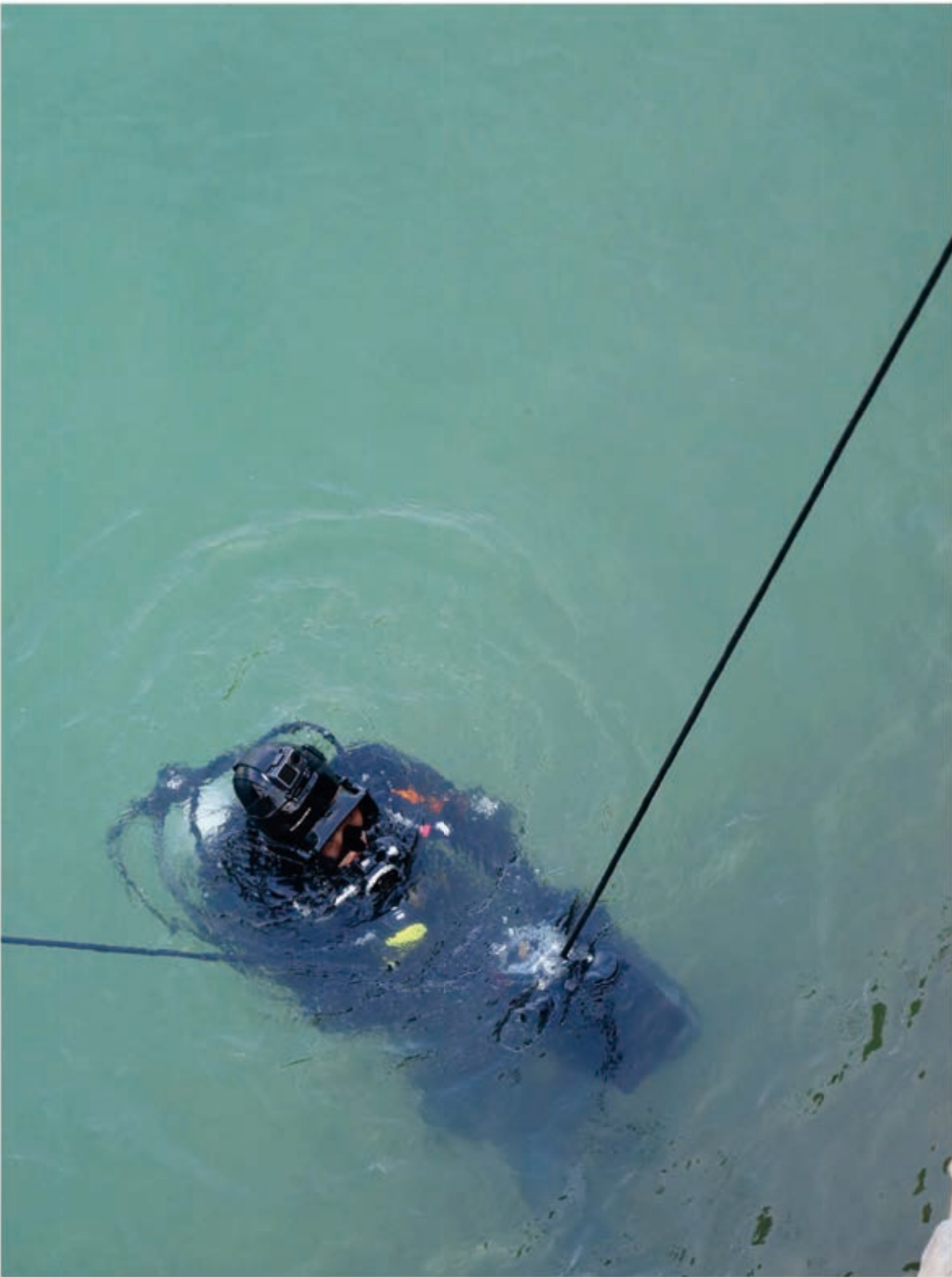
限位工作绳 PR-6010



绳索止跌扣 RG-10-12



脚踏带 LFA-15



- 安快特升降器
- 安全带
- 连接装置
- 速降营救  
解决方案
- 限位工作绳
- 防坠落系统
- 止坠滑轮、  
防坠器
- 绳索、包
- 金属件
- 安全帽、  
头灯、担架





## 通用版安快特 Powered Ascending Device

### ACE-01

负载大,行程长是其主要特点;  
能够满足大多数环境对于上升、下降、横渡、安全性和可靠性的需求。  
使用通用版安快特,检查和维修养护人员可以安全、高效、经济的方式,轻松上升、下降和横渡。

Heavy load and long running distance are the main features of this equipment;

Meet the needs of most environments for ascent, descent, in any direction, safety and reliability.

By using the ASAT powered ascending device, the inspection and maintenance personnel can ascend, descend or in any direction easily in a safe, efficient and economic manner, which is the optimal choice for the places difficult to access and impossible to access in other manners.

适用于众多工业领域:

Powered ascending device could be applied for many industries:

- ◆ 清洁能源行业 Renewable energy
- ◆ 电信和电力行业 Energy and network
- ◆ 检修行业 Inspection and maintenance
- ◆ 救援 Rescue
- ◆ 高楼清洁维护 Cleaning and maintenance of high buildings





产品性能 Product performance

绳索 Rope	专用静态绳索 ( EN1891A 直径11mm ) Static rope Φ 11mm EN1891A
额定载荷 Rated working load	200kg
最大载荷 Working load limit	280kg
上升速度 Ascending speed	0-30m/min ( 无级调速 Stepless speed )
下降速度 Descending speed	0-40m/min ( 无级调速 Stepless speed )
横渡速度 Traversing speed	0-30m/min ( 无级调速 Stepless speed )
行程 ( 垂直运行时 ) Running distance(Vertical)	往复行程700m ( 150kg); 持续行程300m ( 150kg) 700m@150kg travel compacity of ascending and descending alternatively, 300m@150kg travel compacity of ascending continuously
单次充电时间 Charging time	<60min
温度范围 Operating temperature range	-30℃~+60℃
过热保护 Overheat protection	√
本体重量 Weight	14.6kg
电池重量 Standard battery	3.4kg
外型尺寸 Size	30×23×35cm
抗摔能力 Fall protection	0.5m ( 水泥地面 concrete ground )
遥控距离 Remote control range(L)	0~150m ( 空旷环境 open space )
手动下降功能 Manual descending	√
可拆卸电池 Swappable battery	√
整机防护等级 Ingress Protection	IP56
CE认证 CE certification	√



安全带 D-10402



连接装置 LYD-3010



限位工作绳 PR-6010



缓冲器 LE-05



下降器 RD2



机械静态绳索 AR-TS系列



座板 DS-01



绳索止跌扣 RG-10-12



金属环 HS-0101



座椅 DSA-01





## 安全带 Harnesses

工业通用安全带  
General industrial  
Harnesses

### MASTER系列



D-10101



D-10102



D-10201



D-10202C (攀风)

### COMFUST系列



D-10402

### NOVO系列



D-10802 (炫风)

绳索技术安全带  
Rope access  
harnesses

### NOVO系列



D-10503 (威攀王)



## NOVO系列-绳索技术安全带D-10503威攀王 NOVO-Rope access harness D-10503

### 产品描述: Product description

内置胸式上升器，用于绳索技术作业；  
全身式安全带，五挂点设计，满足用于防坠、限位与悬挂的功能；  
胸前与背后挂点用于连接防坠落系统；  
腰部两侧挂点用于连接工作限位系统；  
腹部挂点用于连接悬挂系统；  
宽式半坚硬腰带给予使用者良好的支撑；  
人员穿着安全带处于悬空状态时，腰带、腿带均匀受力；  
肩带、腿带均采用快插扣设计，穿着方便、快捷（只有同时打开快插扣的两个锁扣才能将其打开，以避免误操作造成安全隐患）；  
肩带、腰带与腿带配备透气衬垫，增强使用舒适度；  
腰带配备挂物环，便于工具的携带和整理，可承载20kg；  
配备专用收纳袋。

符合CE标准 EN361 EN358 EN813



Full-body safety harness, five-point design, meeting the requirements for use in fall arrest, work positioning, suspension and rope access.

The chest and dorsal attachment points are used for connection to the fall arrest system.

The bilateral attachment points are used for connection to the work positioning system.

Integrated with chest ascender, D-10503 is an excellent rope access harness.

Wide and semi-rigid waist belt provides effective support to the user. When a person wearing the harness is suspended in the air, the stress is well distributed to the waist belt and leg loops.

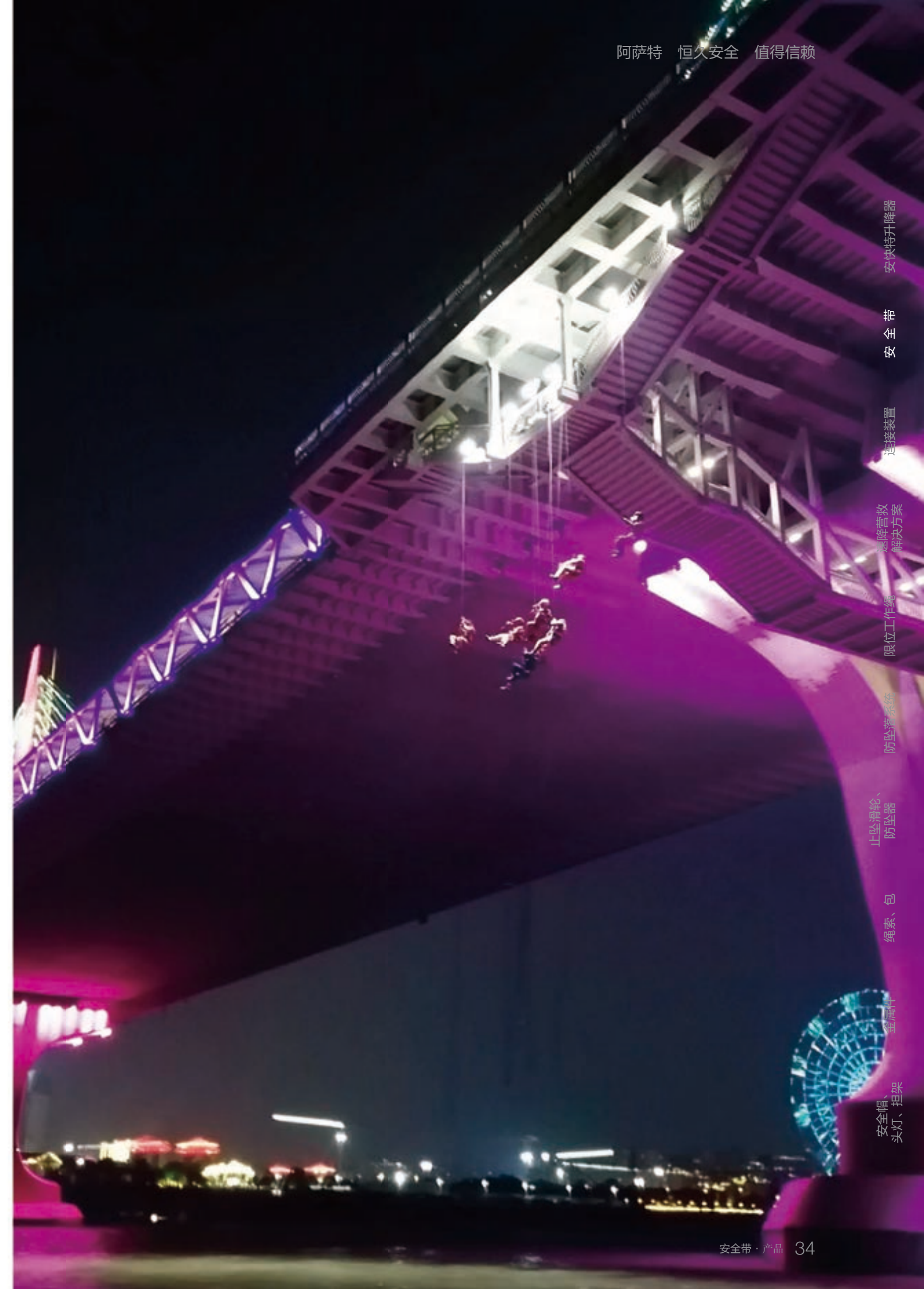
The shoulder straps, waist belt and leg loops, all adopting the CLICK buckles, which are easy and quick for buckling and adjustment.(CLICK buckles can be released only after two lock catches are unlocked at the same time, to avoid hazards caused by misoperation).

The shoulder straps, waist belt and leg loops offer great comfort to the user, thanks to the ventilated lining.

The waist belt is fitted with suspension loops used for carrying tools up to 20 kg.

EN361 EN358 EN813

符合CE标准 EN361 EN358 EN813



安快特升降器

安全带

连接装置

救援方案

限位工作绳

防坠落系统

止坠滑轮、防坠器

绳索、包

金属件

安全帽、头灯、担架





## NOVO系列-风电专用安全带D-10802 NOVO-Wind power harness

### 产品描述: Product description

全身式安全带，五挂点设计，满足用于防坠、限位与悬挂的功能；  
胸前与背后挂点用于连接防坠落系统；  
腰部两侧挂点用于连接工作限位系统；  
腹部挂点可配合助爬器、免爬器使用；  
宽式半坚硬腰带给予使用者良好的支撑；  
腰部耐磨背板 给使用者腰部以支撑，当使用者倚靠墙体或塔筒内壁时给予支撑，有效降低安全带腰部磨损，延长安全带使用寿命，背板可更换。  
人员穿着安全带处于悬空状态时，腰带、腿带均匀受力；  
肩带、腰带、腿带均采用快插扣结构，穿着方便、快捷，可从腰部打开，即便是在穿着厚重冬衣的情况下，仍可轻松穿戴安全带；  
肩带、腰带与腿带配备透气衬垫，增强使用舒适感；  
腰带配备挂物环，便于工具的携带和整理，可承载20kg。

符合CE标准 EN361 EN358 EN813

Full-body safety harness, five-point design, meeting the requirements for use in fall arrest, work positioning and suspension.

The chest and dorsal attachment points are used for connection to the fall arrest system.

The bilateral attachment points are used for connection to the work positioning system.

The ventral attachment point can be used in cooperation with the electric climbing aid or climbing auto device.

Wide and semi-rigid waist belt enables the user effective support.

Waist wear protector provides the support to the waist of the user and reduces the wear of the waist belt effectively during the user leans against the wall of wind towers. Waist wear protector is replaceable.

When a person wearing NOVO harness is suspended in the air, the stress is well distributed



to the waist belt and leg loops.

The shoulder straps, waist belt and leg loops, all adopting CLICK buckles, which are easy and quick for buckling and adjustment. The harness is easy to don even wearing heavy clothes.

The shoulder straps, waist belt and leg loops offer great comfort to the user, thanks to the ventilated lining.

The waist belt is fitted with suspension loops used for carrying tools up to 20 kg.

EN 361 EN 358 EN 813



## COMFUST系列-工业通用安全带 COMFUST-General industrial harness

COMFUST系列工业通用安全带设计用于防坠落、限位与悬挂作业。COMFUST general industrial harness is design for fall arrest, work positioning and suspension.



### · 风电特装 For wind energy

安全带D-10403, D-10402, 背部加装耐磨背板, 适合风电耐磨需求; 背部挂点均配备耐磨保护套, 以减轻塔筒内壁对背部挂点造成的磨损。

The ASAT harnesses D-10403 and D-10402 are fitted with dorsal and waist wear protector to extend the service life of the harness.

### · 耐腐蚀处理 Corrosion resistant

金属件具备耐腐蚀性, 通过48小时中性盐雾试验, 适用于严苛环境, 延长金属件使用寿命。

Hardware, passed 48 hours neutral salt spray test, are corrosion resistant, suitable for harsh environment, and have long service life.

### · 应用广泛 Multiple application

COMFUST系列全身式安全带采用五挂点设计, 可用于防坠、限位、区域限制和悬挂作业, 适用于各种工况环境。

COMFUST full-body harnesses with five-point design is applied for fall arrest, work positioning, restraint and suspension, meeting the requirements for different working conditions.



## D-10403

全身式安全带, 五挂点设计, 满足用于防坠、限位、悬挂功能;

胸前与背后挂点用于连接防坠落系统;

腰部两侧挂点用于连接工作限位系统;

腹部挂点可配合助爬器、免爬器使用;

宽式半坚硬腰带给予使用者良好的支撑;

加装耐磨背板, 攀爬塔筒时可倚靠塔筒壁, 节省体力, 减缓安全带磨损, 提升安全性;

肩带、腰带、腿带均采用快插扣结构, 穿着方便、快捷, 可从腰部打开, 即便是在穿着厚重冬衣的情况下, 仍可轻松穿戴安全带;

腰带备有挂物环、小型工具袋。

符合CE标准 EN361 EN358 EN813

Full-body safety harness, five-point design, meeting the requirements for use in fall arrest, work positioning and suspension. The chest and dorsal

attachment points are used for connection to the fall arrest system. The bilateral attachment points are used for connection to the work positioning system.

The ventral attachment point can be used in cooperation with the electric climbing aid and climbing auto device.

Wide and semi-rigid waist belt provides the user effective support.

Waist wear protector provides the support to the waist of the user and reduces the wear of the waist belt effectively during the user leans against the wall of wind towers.

The shoulder straps, waist belt and leg loops, all adopting CLICK buckles, which are easy and quick for buckling and adjustment. The harness is easy to don even wearing heavy clothes.

The waist belt is fitted with suspension loops and workbag.

EN361 EN358 EN81



## D-10402

全身式安全带, 五挂点设计, 满足用于防坠、限位、悬挂功能;

胸前与背后挂点用于连接防坠落系统;

腰部两侧挂点用于连接工作限位系统;

腹部挂点可配合助爬器、免爬器使用;

宽式半坚硬腰带给予使用者良好的支撑;

加装耐磨背板, 攀爬塔筒时可倚靠塔筒壁, 节省体力, 减缓安全带磨损, 提升安全性;

肩带、腿带均采用快插扣结构, 穿着方便、快捷;

腰带备有挂物环、小型工具袋。

符合CE标准 EN361 EN358 EN813

Full-body safety harness, five-point design, meeting the requirements for use in fall arrest, work positioning and suspension.

The chest and dorsal attachment points are used for connection to the fall arrest system.

The ventral attachment point can be used in cooperation with the electric climbing aid and climbing auto device.

Wide and semi-rigid waist belt provides the user effective support.

Waist wear protector provides the support to the waist of the user and reduces the wear of the waist belt effectively during the user leans against the wall of wind towers.

The shoulder straps, waist belt and leg loops, all adopting CLICK buckles, which are easy and quick for buckling and adjustment.

The waist belt is fitted with suspension loops and workbag.

EN361 EN358 EN81





### D-10401

全身式安全带，五挂点设计，满足用于防坠、限位、悬挂功能；  
胸前与背后挂点用于连接防坠落系统；  
腰部两侧挂点用于连接工作限位系统；  
宽式半坚硬腰带给予使用者良好的支撑；  
肩带、腿带均采用快插扣结构，穿着方便、快捷；  
腰带备有挂物环、小型工具袋。  
符合CE标准 EN361 EN358 EN813  
Full-body safety harness, five-point design, meeting the requirements for use in fall arrest, work positioning and suspension.

The chest and dorsal attachment points are used for connection to the fall arrest system.  
The bilateral attachment points are used for connection to the work positioning system.  
Wide and semi-rigid waistbelt enables the user effective support.  
The shoulder straps, waist belt and leg loops, all adopting CLICK buckles, which are easy and quick for buckling and adjustment.  
The waist belt is fitted with suspension loops and workbag.  
EN361 EN358 EN81



### DS-01

宽式坚硬设计给予使用者良好支撑；  
两侧半坚硬设计避免使用者由于织带受力造成的不适；  
保证长时间悬挂的舒适性与稳定性。

Wide and rigid seat provides the user effective support.  
The bilateral semi-rigid design avoids the user's discomfort caused by the webbing stress and ensures the comfort and stability of suspension for long time.



### DSA-01

航空铝合金材质，质轻，便携；  
两步锁金属环，安全可靠；  
分力板中间金属环用于连接人身安全带胸部挂点；  
人体工学设计保证长时间悬挂的舒适性与稳定性。

With Aviation aluminum alloy material, which is light-weight and portable.  
Fitted with twist-lock carabiners, which is safe and reliable.  
The carabiner in the middle of the rigging plate connects to the chest attaching point of the harness.  
Ergonomic design ensures the comfort and stability of suspension for long time.



安快特升降器

安全带

连接装置

提升营救

限位方案

防坠落系统

上肢滑移

绳索、包

金属件

安全帽

头灯、担架



## MASTER系列—工业通用安全带 MASTER General industrial harnesses

MASTER系列工业通用安全带设计用于防坠落功能。

MASTER—General industrial harnesses is designed for fall arrest.



### · 风电特装 For wind energy

安全带D-10202C / LT, D-10202C, D-10202背部加装耐磨背板, 适合风电特殊耐磨需要。

The ASAT harnesses D-10202C / LT, D-10202C and D-10202 are fitted with waist wear protector to extend the service life of the harness.

### · 穿戴方便 Easy to don

MASTER系列安全带极易穿戴, 提起安全带背部挂点可通过肩带颜色区分安全带的穿戴方向。

MASTER series harnesses are easy to don. The front and back of the harness can be identified through the color of the shoulder straps.

### · 双V背带设计 Double -V dorsal straps design

背部采用双V背带设计, 使安全带的调节更加方便, 快捷。

With Double-V dorsal straps design, the harnesses can be adjusted more conveniently and quickly.

### · 适于攀爬 Suitable for climbing

MASTER系列全身式安全带采用防坠设计, 适合于攀爬的工况, 腿带设计给予人员攀爬时更大自由度, 攀爬起来更轻松更省力。

MASTER full-body harnesses are designed for fall arrest, suitable for climbing. The design of leg loops provides the user more freedom and labor-saving on climbing.



### D-10202C (攀风)

全身式安全带, 五挂点设计, 满足用于防坠、限位功能;

胸前与背后挂点用于连接防坠落系统;

腰部两侧挂点用于连接工作限位系统;

腹部挂点可配合助爬器、免爬器使用;

宽式半坚硬腰带给予使用者良好的支撑;

加装耐磨背板, 攀爬塔筒时可倚靠塔筒壁, 节省体力, 减缓安全带磨损, 提升安全性。

肩带、腰带、腿带均采用铝制快插扣设计, 穿着方便、快捷 (只有同时打开快插扣的两个锁扣才能将其打开, 以避免误操作造成危险隐患);

腰带配备挂物环, 便于工具的携带和整理, 可承载20kg。

符合CE标准 EN361 EN358

Full-body safety harness, five-point design, meeting the requirements for use in fall arrest and work positioning.

The chest and dorsal attachment points are used for connection to the fall arrest



### D-10202C-LT

腹部增加应急安全绳, 高空作业时可与附近锚点连接, 方便进行限位作业;

符合CE标准 EN361 EN358

The emergency lanyard connected with ventral attachment can be removed and then connected to the chest or dorsal attachment point, and is used in the fall arrest system;

EN361 EN358



### D-10202

全身式安全带, 五挂点设计, 满足用于防坠、限位功能;

宽式半坚硬腰带给予使用者良好的支撑;

采用铝制速脱安全扣, 轻松调节;

加装耐磨背板, 攀爬塔筒时可倚靠塔筒壁, 节省体力, 减缓安全带磨损, 提升安全性。

腰带备有挂物环、小型工具袋。

符合CE标准 EN361 EN358

Full-body safety harness, five-point design, meeting the requirements for use in fall arrest and work positioning.

Waist wear protector provides the support to the user and reduce the wear of the waist belt effectively when the user leans against the wall of wind towers, and prolongs the service life of the harness.

The waist belt is fitted with suspension loops and workbag.

EN361 EN358

安快特升降器

安全带

连接装置

速降营救  
解决方案

限位工作绳

防坠落系统

止坠滑轮、  
防坠器

绳索、包

金属件

安全帽、  
头灯、担架





### D-10201C

全身式安全带，五挂点设计，满足用于防坠、限位功能；  
胸前与背后挂点用于连接防坠落系统；  
腰部两侧挂点用于连接工作限位系统；  
腹部挂点用于区域限制系统；  
宽式半坚硬腰带给予使用者良好的支撑；  
肩带、腰带、腿带均采用铝制快插扣设计，穿着方便、快捷（只有同时打开快插扣的两个锁扣才能将其打开，以避免误操作造成安全隐患）；  
腰带备有挂物环、小型工具袋。  
符合CE标准 EN361 EN358  
Full-body safety harness, five-point design, meeting the requirements for use in fall arrest And work positioning.

The chest and dorsal attachment points are Used for connection to the fall arrest system.  
The ventral attachment point is used for connection to the restraint system.  
Wide and semi-rigid waist belt provides the user effective support.  
The shoulder straps, waist belt and leg loops, all adopting the CLICK buckles, which are easy and quick for buckling and adjustment. (CLICK buckles can be released only after two lock catches are unlocked at the same time, to avoid hazards caused by misoperation).  
The waist belt is fitted with suspension loops and workbag.  
EN361 EN358



### D-10101-W

全身式防坠落安全带  
配备救生衣，适用于海上高空作业；  
胸前与背后挂点用于连接防坠落系统。  
符合CE标准 EN361  
Full-body fall arrest safety harness.

Equipped with life vest, suitable for offshore working at heights.  
The chest and dorsal attachment points are used for connection to the fall arrest system.  
EN361



### D-10202CW

全身式防坠落安全带  
配备救生衣，适用于海上高空作业；  
胸前与背后挂点用于连接防坠落系统。  
救生衣和安全带可拆分单独使用。  
符合CE标准 EN361  
Full-body fall arrest safety harness.

Equipped with life vest, suitable for offshore working at heights.  
The chest and dorsal attachment points are used for connection to the fall arrest system.  
Life vest and harness can be used separately.  
EN361



### D-10201

全身式安全带，五挂点设计，满足用于防坠、限位功能；  
胸前与背后挂点用于连接防坠落系统；  
腰部两侧挂点用于连接工作限位系统；  
腹部挂点用于区域限制系统；  
宽式半坚硬腰带给予使用者良好的支撑；  
采用铝制速脱扣，轻松调节；  
腰带备有挂物环、小型工具袋。  
符合CE标准 EN361 EN358  
Full-body safety harness, five-point design, meeting the requirements for use in fall

arrest and work positioning.  
The chest and dorsal attachment points is used for connection to the fall arrest system.  
The bilateral attachment points are used for connection to the work positioning system.  
Wide and semi-rigid waistbelt enables the user effective support.  
Steel quick-release buckles adopted can be easily adjusted.  
The waist belt is fitted with suspension loops and workbag.  
EN361 EN358



### D-10101

全身式防坠落安全带  
胸前与背后挂点用于连接防坠落系统；  
质量轻、易穿戴。  
符合CE标准 EN361

Full-body fall arrest harness.  
The chest and dorsal attachment points are used for connection to the fall arrest system.  
Lightweight and easy to don.  
EN 361



### D-10102

全身式安全带，三挂点设计，满足用于防坠、井下救援；  
背后挂点用于连接防坠落系统；  
肩部挂点用于救援作业；  
可配合V型吊带DA-700一起使用，用于拖拽系统；  
质量轻、易穿戴。  
符合CE标准 EN361  
Full-body safety harness, three-point

design, meeting the requirements for use in fall arrest and down hole rescue.  
The dorsal attachment point are used for connection to the fall arrest system.  
The shoulder attachment points is designed for rescue.  
Can be used in the hauling system in cooperation with the V-type sling DA-700.  
Lightweight and easy to don.  
EN361



### D-10101/LS1.5

全身式防坠落安全带；  
背部缓冲安全绳与安全带合二为一，整体携带方便；  
两条环状胸部挂点可用于连接防坠落系统；  
质量轻，易穿戴。  
符合CE标准 EN361

The dorsal lanyard with energy absorber is integrated into the harness, convenient to carry; Two ring chest attachment points are used for connection to the fall arrest system;  
Lightweight and easy to don.  
EN361

安快特升降器

安全带

连接装置

速降营救  
解决方案

限位工作绳

防坠落系统

止坠滑轮、  
防坠器

绳索、包

金属件

安全帽、  
头灯、担架



安全带相关技术信息 Harnesses

					连接点 Attachment points				尺寸(cm) Sizes(cm)									重量(g) Weight(g)
名称 Product	系列 Series	型号 Model	认证 Certifications	背板 Waist wear protectors	背部 Dorsal	胸部 Sternal	腹部 Ventral	两侧 Side	大码身高 Large Height	大码腰带 Large Waistbelt	大码腿环 Large Leg loops	中码身高 Medium Height	中码腰带 Medium Waistbelt	中码腿环 Medium Leg loops	小码身高 Small Height	小码腰带 Small Waistbelt	小码腿环 Small Leg loops	
绳索技术安全带（威攀王） Rope access harness	NOVO	D-10503	EN813 EN361 EN358		✓	✓	✓	✓	175-200	85-140	65-90	160-185	80-130	50-80	150-175	70-120	45-65	2385
风电专用安全带（炫风） Wind power harness	NOVO	D-10802	EN813 EN361 EN358	✓	✓	✓	✓	✓	175-200	85-140	65-90	160-185	80-130	50-80	150-175	70-120	45-65	2295
风电专用安全带 Wind power harness	COMFUST	D-10403	EN813 EN361 EN358	✓	✓	✓	✓	✓				160-185	80-130	50-80				2400
风电专用安全带 Wind power harness	COMFUST	D-10402	EN813 EN361 EN358	✓	✓	✓	✓	✓	175-200	85-140	65-90	160-185	80-130	50-80	150-175	70-120	45-65	2345
工业通用安全带 General industrial harness	COMFUST	D-10401	EN813 EN361 EN358		✓	✓	✓	✓				160-185	80-130	50-80				2230
风电专用安全带（攀风） Wind power harness	MASTER	D-10202C	EN361 EN358	✓	✓	✓	✓	✓	175-200	85-140	65-90	160-185	80-130	50-80	150-175	70-120	45-65	2170
风电专用安全带 Wind power harness	MASTER	D-10202	EN361 EN358	✓	✓	✓	✓	✓	175-200	85-140	65-90	160-185	80-130	50-80	150-175	70-120	45-65	2740
风电专用安全带 Wind power harness	MASTER	D-10202C-LT	EN361 EN358	✓	✓	✓	✓	✓	175-200	85-140	65-90	160-185	80-130	50-80	150-175	70-120	45-65	2290
工业通用安全带 General industrial harness	NOVO	D-10801	EN813 EN361 EN358		✓	✓	✓	✓	175-200	85-140	65-90	160-185	80-130	50-80	150-175	70-120	45-65	2260
工业通用安全带 General industrial harness	MASTER	D-10201C	EN361 EN358		✓	✓	✓	✓				160-185	80-130	50-80				2065
工业通用安全带 General industrial harness	MASTER	D-10201	EN361 EN358		✓	✓	✓	✓	175-200	85-140	65-90	160-185	80-130	50-80	150-175	70-120	45-65	2625
工业通用安全带 General industrial harness	MASTER	D-10101	EN361		✓	✓						155-185	60-130	45-80				1565
工业通用安全带 General industrial harness	MASTER	D-10102	EN361		✓	✓						155-185	60-130	45-80				1645
工业通用安全带 General industrial harness	MASTER	D-10101-W	EN361		✓	✓						155-185	60-130	45-80				2930

安快特升降器
安全带
连接装置
速降营救 解决方案
限位工作绳
防坠落系统
止坠滑轮、 防坠器
绳索、包
金属件
安全帽、 头灯、担架





## 连接装置 Lanyards

一体式缓冲连接装置  
Integrated shock  
absorbing lanyards



LYD-5010



LYS-4020



LYS-4030

伸缩式连接装置  
Lanyards with  
elasticated arms



LTD-3010



LTD-3020



LTS-2010



LTS-2020

缓冲器式  
连接装置  
Lanyards  
with shock  
absorber  
pack



LYD-3010



LYS-2020

连接装置  
Restraint  
lanyards



LY-1020



LY-1030

移动式缓冲  
连接装置  
Mobile shock  
absorber  
lanyard



LYS-6010

缓冲器  
Shock  
absorber



LE-05



# 一体式连接装置

## Integrated energy absorbing lanyards

ASAT一体式缓冲连接装置，突破了传统缓冲连接装置的设计理念，整条缓冲连接装置都是减震器，若工作人员发生跌落，下坠冲击力会被均匀吸收，不会产生冲击力峰值载荷，避免人体受到伤害——作用在人体上的冲击力始终小于6kN。

一体式缓冲连接装置，外套保护套，所有减震及承载部件都封装在护套内，可用于锋利的棱边，耐脏，耐磨。

一体式缓冲连接装置，内置救援环，一旦发生跌落，救援环会自动脱出，便于对坠落人员进行救援。

ASAT integrated energy absorbing lanyard, which goes beyond the design concept of traditional lanyard with energy absorber, integrates energy absorbing elements into full length of the lanyard. In the event of a fall, the impact force of falling can be evenly absorbed by the absorbing elements and no peak of the impact load occurs, so as to minimize the impact force acting on users to less than 6 kN. The integrated energy absorbing lanyard is fitted with the protective sleeve outside. All energy absorbing and loadbearing components are enclosed in the protective sleeve, preventing against sharp edges, wear and dirt.

The integrated energy absorbing lanyard is equipped with a built-in rescue loop. In case of falling, the loop shall slip out automatically, facilitating the rescue to the casualty.

LYD-5010-1.5 LYD-5010-1.8

两端双铝钩配置，轻便耐用，适合严酷工作环境

大开口铝制安全钩最大开度60mm

长度：1.5m, 1.8m

EN355 EN354

Twin support energy absorbing lanyard, fitted with aluminum hooks on both

anchoring ends, is light weight, durable and applicable to the severe working conditions.

The maximum opening of aluminum hook is 60mm.

Length: 1.5m, 1.8m

EN355 EN354



LYD-5020-1.5 LYD-5020-1.8

两端双钢钩配置，坚固耐用，适合严酷工作环境。

大开口钢制安全钩最大开度60mm

长度：1.5m, 1.8m

EN355 EN354

Twin support energy absorbing lanyard,

fitted with steel hooks on both anchoring ends, is sturdy, durable and applicable to the severe working conditions. The maximum opening of steel hook is 60mm.

Length: 1.5m, 1.8m

EN355 EN354







LYD-5030-1.2 LYD-5030-1.5  
两端双铝钩配置，轻便耐用，适合严酷工作环境。  
大开口铝制安全钩最大开度110mm  
长度：1.2m, 1.5m  
EN355 EN354  
Twin support energy absorbing lanyard, fitted with aluminum hooks on both

anchoring ends, is lightweight, durable and applicable to the severe working conditions.  
The maximum opening of aluminum hook is 110mm.  
Length: 1.2m, 1.5m  
EN355 EN354



LYS-4010-1.5 LYS-4010-1.8  
LYS-4010-2  
两端单铝钩配置，质量轻，携带方便。  
大开口铝制安全钩最大开度60mm  
长度：1.5m, 1.8m, 2m  
EN355 EN354  
Single support energy absorbing lanyard, fitted with aluminum hooks on both ends, is lightweight, durable

and applicable to the severe working conditions.  
integrated shock absorbing lanyard is applicable to severe working environment.  
The maximum opening of aluminum hook is 60 mm.  
Length: 1.5m, 1.8m, 2m  
EN355 EN354



LYS-4020-1.5 LYS-4020-1.8  
两端单钢钩配置，坚固耐用，适合严酷工作环境  
大开口钢制安全钩最大开度60mm  
长度：1.5m, 1.8m  
EN355 EN354  
Single support energy absorbing

lanyard, fitted with steel hooks on both ends, is sturdy, durable and applicable to the severe working conditions.  
The maximum opening of steel hook is 60mm.  
Stretched Length: 1.5m, 1.8m  
EN355 EN354



LYS-4030-1.2 LYS-4030-1.5  
两端双铝钩配置，轻便耐用，适合严酷工作环境。  
大开口铝制安全钩最大开度110mm  
长度：1.2m, 1.5m  
EN355 EN354  
Twin support energy absorbing lanyard, fitted with aluminum hooks

on both anchoring ends, is lightweight, durable and applicable to the severe working conditions.  
The maximum opening of aluminum hook is 110mm.  
Stretched Length: 1.2m, 1.5m  
EN355 EN354

## 伸缩式连接装置 Lanyards with elasticated arms



### · 紧凑便携 Compact and easy to carry

伸缩式织带结构，有效缩短连接绳长度，便于使用和携带  
展开长度1.5m的连接装置长度仅为1m  
展开长度1.8m的连接装置长度仅为1.1m

The structure of elastic webbing shortens the connection length of the lanyard, convenient for use and carrying.

The lanyard with 1m of connection length can be stretched to 1.5 m.  
The lanyard with 1.1m of connection length can be stretched to 1.8 m.

### · 高强耐用 High strength and durability

伸缩式织带采用Dyneema（超高分子量聚乙烯纤维）材料，具备优异的耐磨性能  
防紫外线，适用于高原、海上作业等严酷环境  
强度高，织带破断强度不低于25kN

缓冲器配备尼龙保护套，保护缓冲器不暴露在外，经受磨损

Elastic webbing is made of Dyneema ( Ultra High Molecular Weight Polyethylene Fiber ) with excellent wear resistance.

The webbing is ultraviolet-proof, suitable for harsh environments such as on mountains and at sea.

High strength, the breaking strength is no less than 25kN.

The energy absorber is enclosed in the nylon jacket of wear resistance.

### · 净空距离 Clearance

LTD-3010/3020-1.5和LTS-2010/2020-1.5(1.5m)最大净空距离（坠落系数为1）：4.25m  
LTD-3010/3020-1.8和LTS-2010/2020-1.8(1.8m)最大净空距离（坠落系数为1）：4.55m  
The maximum clearance distance of LTD-3010/3020-1.5 and LTS-2010/2020-1.5(1.5m) ( when fall factor is 1 ) : 4.25m.

The maximum clearance distance of LTD-3010/3020-1.8 and LTS-2010/2020-1.8(1.8m) ( when fall factor is 1 ) : 4.55m





LTD-3010-1.5 LTD-3010-1.8  
两端双铝钩配置，质量轻、体积小，携带方便  
大开口铝制安全钩最大开度60mm  
伸展长度：1.5m, 1.8m

EN355 EN354

Twin support elastic lanyard, fitted with aluminum hooks on both anchoring ends, is lightweight, durable and applicable to the severe working conditions.

The maximum opening of aluminum hook is 60 mm.

Stretched Length: 1.5m, 1.8m

EN355 EN354



LTD-3020-1.5 LTD-3020-1.8  
两端双钢钩配置，坚固耐用，适合严酷工作环境  
大开口钢制安全钩最大开度60mm  
伸展长度：1.5m, 1.8m

EN355 EN354

Twin support elastic lanyard, fitted with steel hooks on both anchoring ends, is sturdy, durable and applicable to the severe working conditions.

The maximum opening of steel hook is 60mm.

Stretched Length: 1.5m, 1.8m

EN355 EN354



LTS-2010-1.5 LTS-2010-1.8  
两端单铝钩配置，质量轻、体积小，携带方便  
大开口铝制安全钩最大开度60mm  
伸展长度：1.5m, 1.8m

EN355 EN354

Single support elastic lanyard, fitted with aluminum hooks on both ends, is lightweight, durable and applicable to the severe working conditions.

The maximum opening of aluminum hook is 60mm.

Stretched Length: 1.5m, 1.8m

EN355 EN354



LTS-2020-1.5 LTS-2020-1.8  
两端单钢钩配置，坚固耐用，适合严酷工作环境  
大开口钢制安全钩最大开度60mm  
伸展长度：1.5m, 1.8m

EN355 EN354

Single support elastic lanyard, fitted with steel hooks on both ends, is sturdy, durable and applicable to the severe working conditions.

The maximum opening of steel hook is 60mm.

Stretched length: 1.5m, 1.8m

EN355 EN354

## 缓冲器式连接装置 Lanyards with shock absorber pack

- 由缓冲器、连接绳、端部挂钩三部分组成
  - 当使用人员发生坠落时，缓冲连接装置可以吸收坠落者的冲击力，保证作用在人身上的冲击力小于6kN
  - 使用缓冲连接装置需要注意必须有足够的净空距离
- Consists of shock absorber pack, lanyard and hooks at the ends.  
To minimise the impact force acting on users less than 6kN in case of falling.  
When using the lanyards with energy absorber pack pay attention to leave sufficient clearance.

LYD-3010-1.2 LYD-3010-1.5  
LYD-3010-1.8

两端双铝钩配置，质量轻，携带方便  
大开口铝制安全钩最大开度60mm  
长度：1.2m, 1.5m, 1.8m

EN355 EN354

Twin support elastic lanyard, fitted with

aluminum hooks on both anchoring ends, is lightweight, durable and applicable to the severe working conditions.

The maximum opening of aluminum hook is 60 mm.

Length: 1.2m 1.5m, 1.8m

EN355 EN354



LYD-3020-1.5 LYD-3020-1.8  
LYD-3020-2

两端双钢钩配置，坚固耐用，适合严酷工作环境  
大开口钢制安全钩最大开度60mm  
长度：1.5m, 1.8m, 2m

EN355 EN354

Twin support Y-shape lanyard, fitted

with steel hooks on both anchoring ends, is sturdy, durable and applicable to the severe working conditions.

The maximum opening of steel hook is 60mm.

Length: 1.5m, 1.8m, 2m

EN355 EN354



LYS-2010-1.5 LYS-2010-1.8  
LYS-2010-2

两端单铝钩配置，质量轻，携带方便  
大开口铝制安全钩最大开度60mm  
长度：1.5m, 1.8m, 2m

EN355 EN354

Single support lanyard, fitted with

aluminum hooks on both ends, is lightweight, durable and applicable to the severe working conditions.

The maximum opening of aluminum hook is 60mm.

Length: 1.5m, 1.8m, 2m

EN355 EN354



LYS-2020-1.5 LYS-2020-1.8  
两端单钢钩配制，适合严酷工作环境  
大开口钢制安全钩最大开度60mm  
长度：1.5m, 1.8m

EN355 EN354

Single support lanyard, fitted with steel hooks on both ends, is sturdy, durable

and applicable to the severe working conditions.

The maximum size of opening for the largeopening aluminum safety hook is 60 mm.

Length: 1.5m, 1.8m

EN355 EN354





## 连接装置 Restraint lanyards

- 连接装置由连接绳、端部挂钩两部分组成
- 标准配置单钩连接装置，双钩连接装置需要订制
- 适合冲坠距离小，固定挂点位于工作人员头顶的情况
- 使用连接装置需要注意必须有足够的净空距离

Consist of connecting lanyard and hooks at the ends.

The standard configuration is a single lanyard, twin lanyard is as optional.

Applicable to the conditions of restrained area, lower falling distance, and the anchor point is located high above the head of the user.

Pay attention to leave sufficient falling clearance.

LY-1020-1.5; LY-1020-1.8  
两端单钢钩配制，适合严酷工作环境  
大开口钢制安全钩最大开度60mm  
长度：1.5m, 1.8m

EN354

Single restraint lanyard, fitted with steel hooks on both ends, is sturdy, durable

and applicable to the severe working conditions.

The maximum opening of steel hook is 60mm.

Length: 1.5m, 1.8m

EN354



LY-1030-1.5  
两端单铝钩配制，适合严酷工作环境  
大开口铝制安全钩最大开度110mm  
长度：1.5m

EN354

Single restraint lanyard, fitted with aluminum hooks on both ends, is

lightweight, durable and applicable to the severe working conditions.

The maximum opening of aluminum hook is 110mm.

Length: 1.5m

EN354



## 移动式缓冲连接装置 Mobile shock absorber lanyard

移动式缓冲连接装置

LYS-6010-3 LYS-6010-4

专为电网设计，可以根据需要在连接装置上移动，确保人员安全，工作方便。

长度：3m, 4m

EN355 EN354

Designed especially for power grid application, the energy absorber pack moves following the user along the lanyard, extending the working area of the user.

EN355 EN354



## 缓冲器 Energy absorber

缓冲器用于吸收使用者发生

坠落时所产生的冲击力，从而减轻坠落对人员造成的影响

长度：10cm

EN355

Energy absorber is designed to mitigate the impact force to the user in case of falling.

Length: 10cm

EN355



LE-05





## 速降营救解决方案 Descent & rescue solution

ASAT高空速降器可以双方向使用，当一个人使用此设备降到地面后，在高处的人可以用另一端的三步锁与自己的安全带连接并速降，不用等待。

经过ASAT专业培训，可以利用高空救援速降设备实现任意高度停止、自控上升、双手离绳做营救等工作。

ASAT automatic descending/rescue device can be used bidirectionally. When a person has descended to the ground, another person at height can connect his harness with triple lock carabiner at the other end of the rope, descending in a constant speed without waiting.

After passing ASAT professional training, the user can use the automatic descending/rescue device to perform operations of stop, selfcontrolled ascent, rescue with both hands away from the rope, and so forth at any height.

高空速降器  
Automatic  
descending  
device



AEM-010

救援速降器  
Rescue  
descending  
device



AEM-060

救援型下降器  
Rescue  
descender



RD2

安快特升降器

安全带

连接装置

速降营救  
解决方案

限位工作绳

防坠落系统

止坠滑轮、  
防坠器

绳索、包

金属件

安全帽、  
头灯、担架



## 高空速降器 Automatic descending device

ASAT速降器AEM-010可用于高空速降，一次一人或两人匀速从高空工作面速降；

下降过程中操作人员可以控制上升端绳索速度控制下降速度。

当进行单次下降时：

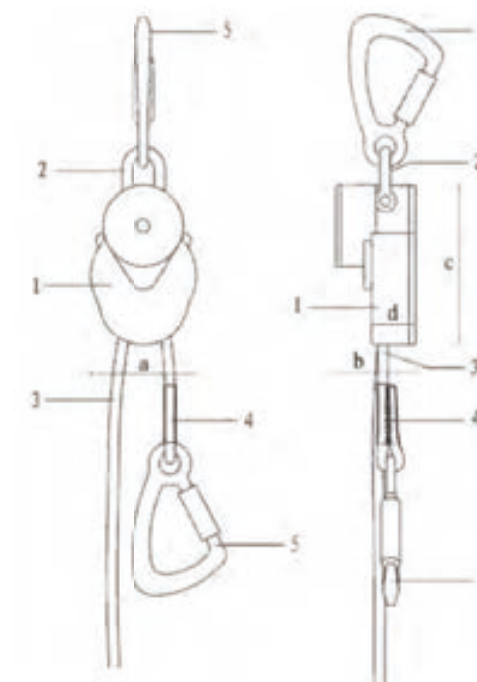
- ◆ 最大负载250kg
- ◆ 单人下降高度可达600米

ASAT automatic descending device AEM-010 can be used in the descent from heights for one person or two persons quickly to the ground at a constant speed of 0.85m/s each time.

During the process of descent, the personnel can control the speed of descent by controlling the rope speed on the ascending side.

Maximum descent load: 250kg

Maximum descent distance: 600m for single person



1: 壳体 2: 连接扣 3: 静态绳索 4: 缝合终端 5: 自锁挂钩  
a:98mm b:73.5mm c:147mm d:40.5mm

安快特升降器

安全带

连接装置

速降营救  
解决方案

限位工作绳

防坠落系统

止坠滑轮、  
防坠器

绳索、包

金属件

安全帽、  
头灯、担架



## 高空速降器 Automatic descending device

订货号: AEM-010

符合标准: EN341: 2011, Type 1\*, Class A\*\*,  
150kg

Model: AEM-010  
EN341

### 技术参数: Technical data

- ◆ 壳体材料: 高强航空铝
  - ◆ 下降速度: 0.85m/s
  - ◆ 绳索种类: A 类静态绳索
- 绳索直径: 9.6mm  
绳索强度: 25kN  
最大下降高度: 单人下降600米  
最大下降负荷: 双人 (250kg)  
本体重量: 1.9kg  
(要求锚点强度大于13kN)  
Casing: Aviation Aluminum  
Descending speed: 0.85m/s  
Static rope of type A  
Rope diameter: 9.6mm  
Rope breaking strength: 25kN  
Maximum descent distance: 600m for single person  
Maximum descent load: 250kg for double persons  
Weight of device: 1.9kg  
(Required strength of anchor point is no less than 13kN)

注:

Type 1\*: Automatic descender  
device (自动下降设备)

Class A\*\*: Descent energyW  
more than  $7,5 \times 10^6$  J  
(下降能量W大于 $7.5 \times 10^6$  J)

安快特升降器

安全带

连接装置

速降营救  
解决方案

限位工作绳

防坠落系统

止坠滑轮、  
防坠器

绳索、包

金属件

安全帽、  
头灯、担架



# 救援速降器 Rescue descent device

ASAT救援速降器AEM-060既可用于高空速降，也可以用于高空救援；

速降时，一次一人或两人匀速从高空工作面下降；

救援时ASAT速降器AEM-060可用于提起坠落后锁住的工作人员，提升速度约1米/分钟，解锁后把受伤人员放下至地面。

下降及救援过程中操作人员可以通过控制上升端绳索速度控制下降速度。

ASAT rescue descending device AEM-060 can be used both in quick descent at heights and rescue.

In emergency, one or two persons can quickly descend from the working position at height by the device.

For rescue, ASAT rescue descending device AEM-060 can be used to lift up the casualty secured on a fall arrester after falling at the lifting speed of about 1m/min and then to lower the casualty down to the ground after releasing from the fall arrester.

During the process of descent and rescue, the personnel can control the speed of descent by controlling the rope speed on the ascending side.

During each descent

Maximum descent load: 250kg

Maximum descent distance: 600m for single person

## 救援速降器 Automatic descending device

订货号：AEM-060

具有救援功能

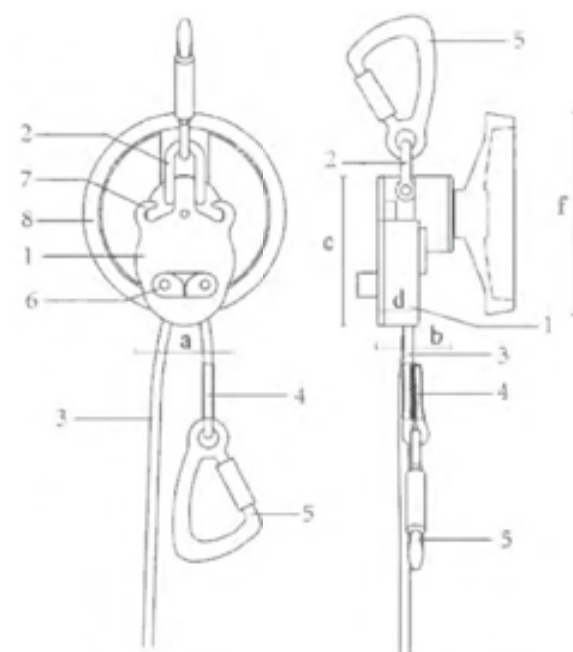
符合标准：EN341:2011, Type 1\*, Class A\*\*, 150kg

EN1496:2006, Class A\*\*\*, 150kg

Model: AEM-060

With rescue wheel

EN341 EN1496



1: 壳体 2: 连接扣 3: 静态绳索 4: 缝合终端  
5: 自锁挂钩 6: 锁绳器 7: 绳索导向器 8: 手轮  
a:98mm b:73.5mm c:147mm d:40.5mm f:200mm

## 技术参数： Technical data

- ◆ 壳体材料：高强航空铝
- ◆ 下降速度：0.85m/s
- ◆ 绳索种类：A 类静态绳索
- ◆ 绳索直径：9.6mm
- ◆ 绳索强度：25kN
- 最大下降高度：单人下降600米
- 最大下降负荷：最大双人（250kg）
- 额定提升负荷：150kg
- 最大提升重量：250kg
- 本体重量：2.4kg
- （要求锚点强度大于13kN）
- Casing: Aviation Aluminum
- Descending Speed: 0.85m/s
- Static rope of type A Rope
- Diameter: 9.6mm
- Rope breaking strength: 25kN
- Maximum descent distance: 600m for single person
- Maximum descent load: 250kg for double persons
- Rated load: 150kg
- Max rated load: 250kg
- Weight of device: 2.4kg
- (Required strength of anchor point is no less than 13kN)

注：

Type 1\*: Automatic descender device  
(自动下降设备)

Class A\*\*: Descent energy W up to  
 $7.5 \times 10^6$  J (下降能量W大于 $7.5 \times 10^6$  J)

Class A\*\*\*: The rescuer can lift a casualty or himself  
from a lower position to a higher position by the device  
(救援人员利用它从低处到高处来提升被救人员或者他自己)



# 救援型下降器

经过3年对RD1的优化，我们在2020年推出了RD2。它是一款内置高效滑轮的自动制停下降器。设计用于救援，和有经验的绳索作业使用者。

- 当作为有经验的作业者的个人下降器时，自动制停机构能快速精确地在绳索上进行定位。单向转动的滑轮能带来轻松顺滑的上升。
- 当在锚点上使用时，能在下放和提拉间快速转换，内置的高效滑轮能带来88%的1:1提拉效率。
- 副连接孔可以用于设置不同的高效提拉系统。
- 侧板的开关，可以让操作者不从系统上取下RD2，就能在RD2上进行绳索的安装或拆卸。
- 人体工程学手柄能进行舒适的控制，可用于双受力绳索系统。手柄上的孔可以连接辅绳进行远距离控制。
- 独特的结构可以让RD2作为单纯的单向滑轮在提拉时作为变向滑轮使用。可在下放时作为增加阻力的滑块。
- 未增加防恐慌功能，这样能在斜面或低重量使用时顺滑轻松地地下放。
- 高硬度钢制摩擦槽提高了耐用性。
- 两种颜色可选，红色和黑色。

After 3 years optimization on RD1, we introduced new RD2 in 2020. It is a self-braking descender with integrated high efficiency pulley. Designed for rescue, rope access work and experienced users.

For experienced workers used as a personal descender, the self-braking mechanism allows fast and precise positioning on rope. Easy and smooth ascending, thanks to one-way rotation pulley.

When used on the anchor, fast shift between lowering and hauling. The integrated high efficiency pulley provides up to 88% efficiency on 1:1 hauling.

The becket hole allows setting up different mechanical advantage system.

The safety-gate on side plate helps the user to install/uninstall the rope without removing the RD2 from the harness and anchor.

The ergonomic handle allows comfortable controlling and using on Twin Tension Rope Systems. The hole in the handle for distance control cord connection.

The unique frame structure allows RD2 to be used as a single one-way rotation pulley for change of direction on hauling. And a block pulley to add friction on lowering.

No anti-panic function, for a better and smooth lowering on inclined surface and light weight loading. Hardened steel wear groove improves durability.

Two colors available: red and black.

## RD2

### 功能参数

- 最大载荷：150kg  
The maximum load: 150kg
- 救援载荷：200kg (下降速度 $\leq 0.5\text{m/s}$ )  
WLL: 200kg, descent speed  $\leq 0.5\text{m/s}$
- 绳索种类：11mm，符合EN1891 A类的静态绳索  
Static ropes of 11mm diameter, in accordance with EN1891 Class A
- 重量：790g      Net weight: 790g
- 执行标准：EN12841      Executive standard: EN12841



RD2 (工业版)



RD2 (军警版)



## 限位工作绳 Work positioning ropes

限位工作绳  
Work positioning  
ropes

吊带  
Slings

动态连接绳  
Dynamic lanyards



PR-6010



PR-8010



LS-8



LS-02



LDT-60

安快特升降器

安全带

连接装置

速降营救  
解决方案

限位工作绳

防坠落系统

止坠滑轮、  
防坠器

绳索、包

金属件

安全帽、  
头灯、担架



## 限位工作绳 Work positioning ropes

PR-6010-1.5 PR-6010-1.8

配合符合EN358的安全带使用，通过安全带腰部对称挂点把工作人员固定在工作点，使工作人员能够解放双手进行操作。限位锁可以调节位置，从而调节限位工作绳长度。

与符合EN361标准的安全带挂点相连接，另一端与固定吊点相连，可以作为可调节安全绳使用。

特制绳索，适合于严酷的工业环境。

长度：1.5m，1.8m

EN358

Work positioning rope is used in cooperation with the harness in accordance with EN358, to secure the worker at the working position through the bilateral attachment points of the harness, so that the worker can leave both hands free to perform operation. Adjust the length of the work positioning rope by tensioning device.

Work positioning rope can be used as the adjustable lanyard, when connected to the attachment point of harness in accordance with EN361 at one end, and to an anchor point at the other end.

Specialized rope, applicable to severe industrial conditions.

Length: 1.5m, 1.8m

EN358

PR-6020-1.5 PR-6020-1.8 PR-6020-2

专为电网设计，增加了耐磨套，配合定位带使用。

配合符合EN358的安全带使用，通过安全带腰部对称挂点把工作人员固定在工作点，使工作人员能够解放双手进行操作。限位锁可以调节位置，从而调节限位工作绳长度。

特制绳索，适合于严酷的工业环境。

长度：1.5m，1.8m，2.0m

EN358

Designed for power grid by adding a wear-resistance sleeve, work positioning ropes is used in cooperation with the harness in accordance with EN358, to secure the worker at the working position through the bilateral attachment points of the harness, so that the worker can leave both hands free to perform operation. Adjust the length of the work positioning rope by tensioning device.

Specialized rope, applicable to severe industrial conditions.

Length: 1.5m, 1.8m, 2.0m

EN358



安快特升降器

安全带

连接装置

速降营救  
解决方案限位  
防坠落系统止坠滑轮、  
防坠器

绳索、包

金属件

安全帽、  
头灯、担架



## 定位带 Positioning waist belt

PS40

专利设计用于攀爬配电线路杆的定位保护带，与ASAT限位工作绳配合使用，除了具备腰式保护带的所有功能外，攀爬人员突然晕倒或出现严重操作失误（如脚扣脱落）时，可以将其牢牢的锁在电线杆上，防止出现二次伤害。

EN354

Positioning waist belt, with a patented design for pole climbing, is used in cooperation with work positioning rope. Apart from all functions of the protective waist belt, the climber can be secured on the pole in case of falling risks such as the faint or misoperation of the user, so as to prevent secondary injury.

EN354



## 出仓工作安全绳 Safety lanyard for working outside wind turbine

PR-8010-4 PR-8010-8 PR-8010-20

PR-8020-4 PR-8020-8 PR-8020-20

风电专用出仓工作安全绳，通过移动限位锁给出仓作业人员安全保护。端部特殊挂点设计，适合多种工况；绳索长度根据需要选择，完全满足风电出仓作业需求；特制绳索，直径16mm安全系数极高，操作舒适。长度：4m，8m，20m

EN358

The positioning rope for working outside wind turbine, which is specialized for wind power, provide safe protection for the personnel working outside wind turbine by means of moving the tensioning device. With special design of attachment points at the end, the positioning rope is applicable to multiple working conditions. Different lengths are available up to the choice of users.

Specialized rope of diameter of 16 mm with extremely high safety factor, comfortable for operation.

Length: 4m, 8m, 20m

EN358



## 吊带、牛尾绳 Slings, Dynamic lanyards

### 钢丝绳柔性吊点 Cable anchor sling

LS-8-1 LS-8-1.5

用于设置临时吊点，钢丝绳外部有一层护套，避免磨损钢丝绳及与钢丝绳接触的设备，增强钢丝绳弯曲弹性，护套为耐磨材质。

长度：1m，1.5m

EN354，EN795

Cable anchor sling is used to set up temporary anchor points. Coated with a protective sheath, the wire rope of cable anchor sling does not contact directly with the fixture, so as the friction and wear between them can be avoided. The protective sleeve is made of wear-resistant material.

Length: 1m, 1.5m

EN354，EN795



### 尼龙吊带 Nylon sling

用于设置临时吊点

LS-02-0.3 LS-02-0.6

LS-02-1 LS-02-1.5

最小破断力：30kN

长度：0.3m，0.6m，1m，1.5m

EN566，EN795，EN354



### 动态连接绳（牛尾绳） Dynamic lanyard (Cow' s tail)

LDT-60

符合标准：EN892 EN354

绳索类型：动态绳

长度：0.6m

直径：10.5mm

标准长度的动态连接绳（牛尾绳）适用于绳索作业的个人保护、工作点的定位、过结点的保护、手式上升器的连接等，与抓结配合使用，可组合成可调节动态连接绳（牛尾绳）。可以定制需求长度的动态连接绳（牛尾绳）。



LS-8A-1 LS-8A-1.5

不锈钢材质，可用于有防腐要求的地方。

长度：1m，1.5m

EN 354，EN795

Made of stainless steel, used in the cases where corrosion prevention is required.

Length: 1m, 1.5m

EN354，EN795

LS-9-1 LS-9-1.5

大吨位吊点，可用于平台等设备。

长度：1m，1.5m

EN 354，EN795

As the anchor points for heavy loads, can be used for the suspension of suspended platforms and other heavy equipment.

Length: 1m, 1.5m

EN354，EN795

Designed for setting up temporary anchor points.

LS-02-0.3 LS-02-0.6

LS-02-1 LS-02-1.5

Breaking strength: 30kN

Length: 0.3m, 0.6m, 1m, 1.5m

EN566，EN795，EN354

Type: dynamic rope

Length: 0.6m

Rope diameter: 10.5mm

The dynamic lanyard (Cow' s tail) of the standard length is applicable to personal fall protection, work positioning, passing knot protection, connection to manual ascender in rope access. Combined use with the prusik cord can form an adjustable dynamic lanyard. The customized length of the dynamic lanyard is available up on request.

EN892 EN354





## 防坠落系统 Fall protection system

ASAT高空坠落防护系统包括：垂直钢丝绳防坠系统、垂直轨道防坠系统、水平防坠系统、单跨水平防坠系统、屋面组合防坠系统，以及锚点系统。我们可以根据不同的工况提供差异化的坠落防护方案以及专业的高空作业技能培训。

ASAT fall protection system includes: vertical cable fall protection system, vertical rail fall protection system, horizontal fall protection system, single span horizontal fall protection system, roof fall protection system, and anchor system. ASAT provides different fall protection solutions and professional training on working at heights according to different working conditions.

### 垂直防坠系统 Vertical fall protection system

### 水平防坠系统 Horizontal fall protection system



Safly V/C



Sarail V/C

### 屋面防坠系统 Roof fall protection system



Safly RH



AFA-022

### 锚点 Anchor

安快特升降器

安全带

连接装置

速降营救  
解决方案

限位工作绳

防坠落系统

止坠滑轮、  
防坠器

绳索、包

金属件

安全帽、  
头灯、担架





# Safly V/C 系列 垂直防坠系统

## Safly V/C seriesvertical fall protection system

■ Safly V/C系列垂直防坠系统是一款垂直方向上无间断保护的绳索式防坠落装置，符合EN353-1标准。

■ Safly V/C系列垂直防坠系统可用于塔筒、塔架、压力容器、桥墩、桅杆、天线杆、建筑物。止跌扣安装在垂直钢丝绳上，并与工作人员的安全背带相连接。若发生跌落，止跌扣会锁止在垂直钢丝绳上，避免事故发生。该系统用于保护人员在高空或井下作业的安全。

The Safly V/C series vertical fall protection system is atype of cable system that provides continuous protection in the vertical direction, conforms to the EN353-1.

The Safly V/C series vertical fall protection system

is designed for climing the wind turbine towers, transmission towers, pressure vessels, piers, masts, antenna poles, and buildings. The vertical fall protection system is connected to the users with the fall arrester. Users move up and down easily and smoothly along the system. Once a fall occurs, the fall arrester will be rapidly locked onto the lifeline, the shock absorber of fall arrester will be opened, to minimise the impact force acted on the user. The system is designed for protecting the safety of persons working at heights and performing downhole operation.

### Safly V系列垂直防坠系统

#### Safly V series vertical fall protection system

- 整套系统具有缓冲功能
  - 所有配件为镀锌钢或不锈钢，不易腐蚀，经久耐用，使用顺畅
  - 镀锌钢或不锈钢钢丝绳使整体结构不存在连接点，整体安全性高
  - 配合符合EN358、EN361、EN813标准的专用安全带，作用在工作者身体上的力不超过6kN，保证坠落者的安全
  - 配有自动张紧装置，不受温度的影响，钢丝绳始终处于拉紧状态
- The fall protection system is provided with shock absorbing function.
- All components are made of galvanized or stainless steel, to ensure that the system is corrosion resistance and durable.
- No joint is existed in whole length of the galvanized or stainless steel wire rope, to ensure high integrated safety.
- In cooperation with specialized harnesses in accordance with EN358, EN361 and EN813,the impact force acting on the user does not exceed 6 kN in case of falling, to ensure his safety.
- Equipped with an automatic tension regulator, the cable keeps tensioned as required against temperature affect.

### Safly V 系列垂直防坠系统选型表

#### Safly V vertical fall protection system

名 称 Product	型 号 Model	高 度 Height
Safly V 系列垂直防坠系统 Safly V vertical fall protection system	Safly V-15	15m
	Safly V-25	25m
	Safly V-40	40m
	Safly V-100	100m

### Safly C 系列风电专用垂直防坠系统选型表

#### Safly C vertical fall protection system dedicated for Wind Turbines

名 称 Product	型 号 Model	高 度 Height
Safly C 系列风电专用垂直防坠系统 Safly C vertical fall protection system (for Wind Turbines)	Safly C-15	15m
	Safly C-25	25m
	Safly C-40	40m
	Safly C-100	100m





## AFP Safly V智能坠落防护系统 AFP Safly V intelligent fall protection system

- AFP Safly V智能坠落防护系统是一款具备现场警报以及远程报警的多功能坠落防护系统。
- AFP Safly V智能坠落防护系统可用于风机塔筒、深井等工况，对于需要及时发现人员坠落的场合有极大帮助。
- 在攀爬过程中，工作人员一旦发生跌落，警报系统监测到冲击信号，现场声光警报器就会发出声光警报；同时物联网模块立即向设定好的联系人拨打电话、发送短信或微信推送通知，确保第一时间发现事故，以便及时组织救援。

AFP Safly V intelligent fall protection system is a multifunctional fall protection system with on-site alarm and remote alarm.

The AFP Safly V intelligent fall protection system can be used in wind tower, deep well and other working conditions, which is extremely helpful for occasions where people need to be found in time.

In the course of climbing, the user once the drop occurs, the impulse signal will be detected by alarm system,, there will be audible and visual alarm; while IOT module will make a phone call, send SMS and WeChat notifications to the preset contact, to ensure immediate detection of incidents in order to organize timely rescue.

## AFP Safly V智能坠落防护系统特点 Features

- 现场声光警报、拨打电话、发送短信或微信推送等多种警报方式相结合，可靠性更强；
- 外置增益天线，确保GSM通讯信号良好；
- 外接220V交流电源设计；
- 电话、短信、微信推送内容等可定制；
- 系统使用简单，无需复杂的设置和维护；

The combination of on-site sound and light alarms, dialing calls, sending text messages, and WeChat push notifications provides greater reliability.

External gain antenna to ensure good GSM connection.

External 220V AC power supply design.

Phone, SMS, WeChat push content can be customized.

The system is simple to use and does not require complicated settings and maintenance.

## Safly V/C 系列垂直防坠系统部件 Safly V/C series vertical fall protection system



垂直防坠系统



### 钢丝绳止跌扣：STG-1

- STG-1配合8-9mm钢丝绳使用
- 滑动顺畅，自动锁止灵敏。在钢丝绳上任意位置均可以根据需要拆装
- EN353-1: 2014 GB/T 24537-2009  
EN353-2:2002

Guided type fall arrester: STG-1

STG-1 is compatible with Ø8-9mm steel wire cable.

Can be easily and conveniently attached on the cable.

Smoothly sliding along the cable.

EN353-1: 2014 GB/T 24537-2009  
EN353-2:2002



### 钢丝绳止跌扣：STG-1A

- STG-1A配合8-10mm钢丝绳使用
- 滑动顺畅，自动锁止灵敏。在钢丝绳上任意位置均可以根据需要拆装
- EN353-1: 2014 GB/T 24537-2009  
EN353-2:2002

Guided type fall arrester: STG-1A

STG-1A is compatible with Ø8-10mm steel wire cable.

Can be easily and conveniently attached on the cable.

Smoothly sliding along the cable.

EN353-1: 2014 GB/T 24537-2009  
EN353-2:2002



## AFP-C01智能坠落报警装置 AFP-C01 intelligent fall protection device

具备现场报警以及远程报警功能；可用于风机塔筒、深井等工况，对于需要及时发现人员坠落的情况有极大帮助。可加装在现有垂直防坠系统上，实现对常规垂直防坠系统的智能化升级。

AFP-C01 intelligent fall protection device has the on-site alarm and remote alarm.

The AFP-C01 intelligent fall protection system can be used in wind tower, deep well and other working conditions, which is extremely helpful for occasions where people need to be found in time.

It can be set on the existing vertical fall protection system to realize the intelligent upgrade of the conventional system.



### 缓冲器

- 吸收冲击力，使其小于6kN
- 显示是否有坠落发生，若坠落指示线暴露，应关闭并检查系统  
Energy absorber  
To minimize the impact force to less than 6kN  
If the falling mark exposed it means that a fall has experienced. In the case, stop use of the system and ask a competent person to inspect.



### 自动张紧装置

- 根据温度变化自动调节系统内部张力
- 使钢丝绳始终处于适度张紧状态  
Automatic tension regulator  
Keep tension of the cable as required against the temperature affect



### 钢丝绳

- 直径8mm
- 最小破断强度40kN  
Steel wire cable  
Diameter: 8mm  
Breaking strength: 40kN



### T型锚点

- 最小破断强度50kN  
T anchor  
Breaking strength: 50kN

安快特升降器

安全带

连接装置

速降营救  
解决方案

限位工作绳

防坠落系统

止坠滑轮、  
防坠器

绳索、包

金属件

安全帽、  
头灯、担架



# Sarail V/C系列轨道垂直防坠系统

## Sarail V/C series vertical fall protection system

- Sarail V/C系列轨道垂直防坠系统是一款垂直方向上无间断保护的轨道式防坠落装置，符合EN353-1标准；
  - Sarail V/C系列轨道垂直防坠系统可用于风机塔筒、电网塔架、瞭望塔架、建筑物、桥梁、天线杆、井下以及各种铝合金及钢制爬梯。轨道垂直生命线固定在固定物上，用止跌扣将工作人员与轨道相连接。在攀爬过程中，工作人员可以自由顺畅地上行与下行，一旦发生跌落，止跌扣会迅速锁止在轨道上，同时打开止跌扣上的缓冲包，使作用在人体上的力减小到6kN。
- Sarail V/C series vertical fall protection system is a rail type system providing continuous protection for the users in vertical direction, in accordance with the

EN353-1.

Sarail V/C series fall protection system is designed to be mounted on various climbing ladders in wind towers, transmission towers, telecom towers, watchtowers, buildings, bridges, masts, antenna poles, shafts and etc. The vertical fall protection system is fixed onto fixtures and the user attach themselves to the rail with the fall arrester. Users can move up and down smoothly with the fall arrester. Once a fall occurs, the fall arrester will rapidly lock onto the rail and the energy absorber of fall arrester will be stretched to minimize the impact force acting on the user to less than 6kN.

安快特升降器

安全带

连接装置

速降营救  
解决方案

限位工作绳

防坠落系统

止坠滑轮、  
防坠器

绳索、包

金属件

安全帽、  
头灯、担架



Sarail V/C系列轨道垂直防坠系统部件  
Sarail V/C series vertical rail fall protection system



导轨截面

- 航空级铝合金，表面阳极化
- 特殊结构加固处理

Made of high-strength aviation aluminum with anodized surface treatment.  
Special reinforced structure



顶部限位套件  
Top limitng device

底部限位套件  
Bottom limiting device

- 铝合金材料表面玫瑰红着色处理，标记醒目
- 贯穿式螺栓，防止脱落

Made of aluminum with rose-colored coating and conspicuous marks;  
Adopting through bolting to prevent looseness.



导轨

轨道连接套件  
芯块

轨道连接

- 航空级铝合金材质
- 精密加工，与轨道完美配合
- 采用M8不锈钢法兰螺栓，强度高，不易回松

Made of high-strength aviation aluminum  
Precision machining, perfect matched with the rail;  
Fastened by M8 stainless steel bolts and locknuts in high class.



轨道止跌扣SRL-01

- 单只手即可轻松从轨道上取下，同时又有效地避免了由于误操作或磕碰造成的意外打开
- 本体采用航空级铝合金，表面着色处理
- 内部零件全部为不锈钢，防腐性能好
- 配备缓冲包，有效减小跌落时作用在人身上的力

EN353-1; 2014  
GB 24542-2009

The fall arrester can be easily removed from the rail with a single hand, and also unintended detaching of the fall arrester caused by misoperation or collision can be avoided effectively.

Made of high-strength aviation aluminum with anodized surface treatment and colored coating.  
All internal components are made of stainless steel with excellent corrosion resistance.  
Fitted with energy absorber pack, to effectively mitigate the impact force acting on the falling person.

EN353-1; 2014  
GB 24542-2009

Sarail V系列轨道垂直防坠系统选型表  
Sarail V vertical rail fall protection system

名 称 Product	型 号 Model	高 度 Length
Sarail V系列轨道垂直防坠系统 Sarail Vvertical rail fall protection system	Sarail V -15	15m
	Sarail V -25	25m
	Sarail V -40	40m
	Sarail V-100	100m

Sarail C系列轨道垂直防坠系统选型表  
Sarail C vertical rail fall protection System  
Dedicated for Wind Turbines

名 称 Item	型 号 Model	高 度 Length
Sarail C系列风电专用轨道垂直防坠系统 Sarail C vertical rail fall protection system dedicated for wind turbines	Sarail C -15	15m
	Sarail C -25	25m
	Sarail C -40	40m
	Sarail C-100	100m

Sarail V/C系列轨道垂直防坠系统随附安全产品标准配置  
Standard PPE configurations for Sarail V/C series vertical rail fall protection system

名 称 Name	型 号 Model	数 量 Height
全身式安全带 Harness	D-10802	3
双钩缓冲连接装置 Y-shape shock absorbing lanyard	LYD-3020-1.5	3
止跌扣 fall arrester	SRL-01	3



# Safly H系列水平防坠系统

## Safly H Horizontal fall protection system



### Safly H系列水平防坠系统

- Safly H系列水平防坠系统是一款双绳锚固系统，配合支撑座或支撑柱安装，是一种完善有效的安全防护系统，符合EN 795:2012 C类标准。
- Safly H系列水平防坠系统，可以安装在墙体上或建筑物表面；但安装时须校核墙体或建筑物表面强度以确保所设锚点安全。
- Safly H系列水平防坠系统，配备专用开口滑块，此款开口滑块可以在系统中自由滑行，可以在钢丝绳任何部位方便安装或取下。缓冲连接装置一端和人身上安全带挂点连接，另一端和开口滑块连接，在移动过程中，该专用开口滑块可以顺利通过系统的各个固定点。万一发生坠落，开口滑块会挂在钢丝绳上，缓冲连接装置起缓冲作用，保护人员，不会突然受到很大冲击力。
- Safly H系列水平防坠系统，可配备倒置滑块，专用于倒置使用工况中，例如屋顶或超高侧位安装的系统。倒置滑块配置4个滚动轮及2个过渡轴，在系统上运行顺畅，确保良好的行走舒适度。

The Safly H horizontal fall protection system is a double-cabletype anchoring system mounted on steel beam or concrete structures through the anchor kits.

It is an excellent and effective safety protection system, in accordance with EN795:2012 Type C.

The Safly H horizontal fall protection system can be mounted on the wall and roof of buildings, the strength of which should meet the requirements of anchorage to ensure safety.

Specialized slider runs smoothly with the movement of the user connected to through a lanyard with energy absorber along the cables in normal situations. The opening slider can be attached to and removed from the cables conveniently at any position of the system. In case of a fall, the slider will engage on the cables to prevent the falling of the user and energy absorber of the lanyard can mitigate the impact force acting on the user.

The Safly H horizontal fall protection system can be equipped with inverted sliders for the service, such as roof or ultra high side mounting system. The inverted slider is equipped with 4 rolling wheels and 2 transition shafts, which can run smoothly in the system and ensure the comfort.

### Safly H 系列水平防坠系统选型表

#### Safly H horizontal fall protection system

名 称 Product	型 号 Modle	长 度 Length
Safly H 系列水平防坠系统 Safly H horizontal fall protection system	Safly H-50	50m
	Safly H-100	100m
	Safly H-150	150m
	Safly H-200	200m





## AFP Safly H智能坠落防护系统 AFP Safly H intelligent fall protection system

- AFP Safly H智能坠落防护系统是一款具备现场警报以及远程报警的多功能坠落防护系统。
- AFP Safly H智能坠落防护系统可用于厂房桥机等工况，对于需要及时发现人员坠落的情况有极大帮助。
- 在行走或攀爬过程中，工作人员一旦发生跌落，警报系统监测到冲击信号，现场声光警报器就会发出声光警报；同时物联网模块立即向设定好的联系人拨打电话、发送短信或微信推送通知，确保第一时间发现事故，以便及时组织救援。

AFP Safly H intelligent fall protection system is a multifunctional fall protection system with on-site alarm and remote alarm.

The AFP Safly H intelligent fall protection system can be used in plant bridges and other working conditions, which is extremely helpful for occasions where people need to be found in time.

In the course of walking or climbing, the user once the drop occurs, the impulse signal will be detected by alarm system, there will be audible and visual alarm; while IOT module will make a phone call, send SMS and WeChat notifications to the preset contact, to ensure immediate detection of incidents in order to organize timely rescue.

## AFP Safly H智能坠落防护系统特点 Features

- 现场声光警报、拨打电话、发送短信或微信推送等多种警报方式相结合，可靠性更强；
- 外置增益天线，确保GSM通讯信号良好；
- 外接220V交流电源设计；
- 电话、短信、微信推送内容等可定制；
- 系统使用简单，无需复杂的设置和维护；

The combination of on-site sound and light alarms, dialing calls, sending text messages, and WeChat push notifications provides greater reliability.

External gain antenna to ensure good GSM connection.

External 220V AC power supply design.

Phone, SMS, WeChat push content can be customized.

The system is simple to use and does not require complicated settings and maintenance.



安快特升降器

安全带

连接装置

速降营救  
解决方案

限位工作绳

防坠落系统

止坠滑轮、  
防坠器

绳索、包

金属件

安全帽、  
头灯、担架



Safly HE系列水平防坠系统  
Safly HE horizontal fall protection system

- Safly HE水平防坠系统是一款专门针对短距离高空防坠工况的双绳锚固系统。特别适合在15m跨度以下的工况使用，符合EN795: 2012 C要求
- Safly HE采用与Safly H完全不同的缓冲原理，更适合于短距离水平防坠工况
- Safly HE水平防坠系统由缓冲吸能套件、端部制动套件、端部固定座、双线钢丝绳套件组成
- Safly HE水平防坠系统可以用高强度膨胀螺栓固定在建筑物的混凝土表面，也可以焊接在钢材机体上，使用更加灵活、方便
- Safly HE水平防坠系统滑块与Safly H水平系统滑块通用，也可以使用闭口滑块
- SHLB-01C 专用滑块，专门用于Safly HE水平生命线。全身不锈钢材质，可以水平、侧位、倒置，任意角度使用。15kN不发生变形。符合EN795: 2012标准

The Safly HE horizontal fall protection system is a double cable type anchoring system specifically for short distances in accordance with EN795:2012 Type C. It is especially suitable for the situations where the system length is less than 15m. Safly HE adopts different energy absorbing principle from that of Safly H, more suitable for a short distance of working conditions.

Safly HE consists of end anchor kits with stopper, shock absorbing rings and double steel wire cables.

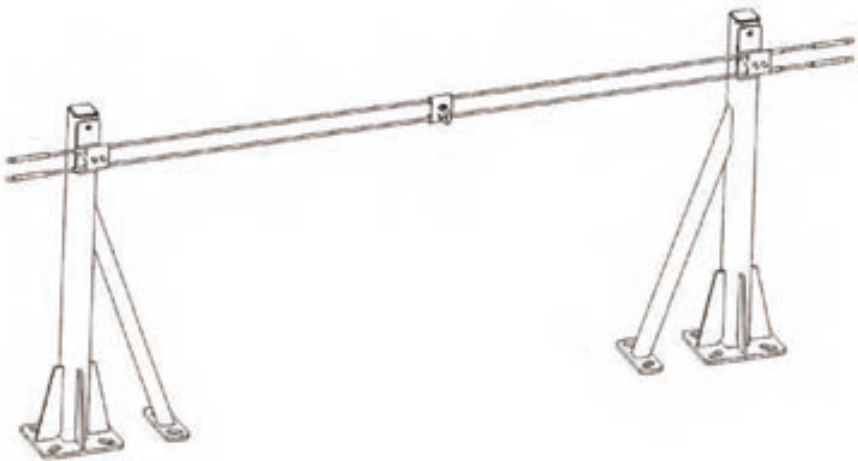
Safly HE horizontal fall protection can be mounted on the concrete surface of the buildings by anchor bolts or on steel structures by welding, more flexible and convenient.

The opening slider of Safly HE is the same as that of Safly H. Standard slider is also available up to the option of users.

SHLB-01C slider is specially designed for Safly HE horizontal lifeline. Stainless steel material, can be used horizontally, laterally, inverted, or at any angle. It can bear 15 kN. In accordance with EN795:2012 type C.

Safly HE水平防坠系统推荐配置  
Recommended configuration for Safly HE horizontal fall protection system

名 称 Item	型 号 Model	数 量 Qty	
Safly HE水平防坠系统 Safly HEhorizontal fall protection system	Safly HE-XX	1条	XX为长度，可订制 Length can be customized
全身式安全带 Harness	D-10401	3	
双钩缓冲连接装置 Y-shape shock absorbing lanyard	LYD-3020-1.5	3	
专用滑块 Runner	SHLB-01C	3	
开口滑块 Openin runer	SHLB-01A	3	选配 Optional
闭口滑块 Closed runner	SHLB-01B	3	选配 Optional





## Safly H 系列水平防坠系统

### 自动张紧集成 Self-tensioning assembly

- 张紧力指示装置集成了张紧力指示功能、张紧力调节功能  
Consist of end anchor, tension indicator, tensioning device and load distribution plate.



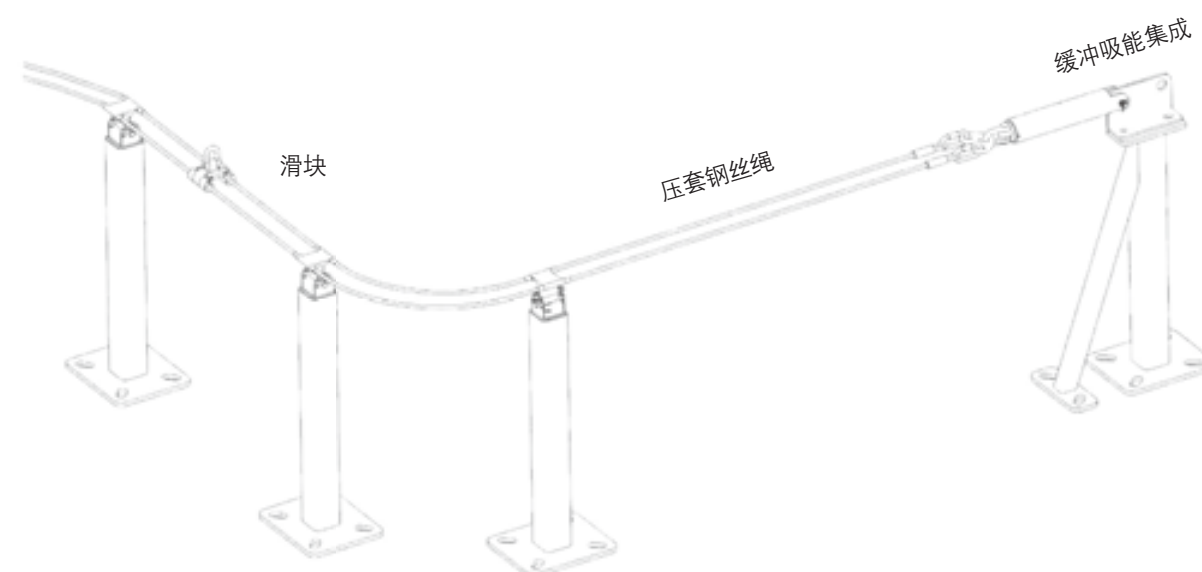
### 支撑柱 Support column

- 受力12kN的情况下，端部无明显偏移。  
Under the pulling force of 12kN in any direction, there is no significant deviation at the top end.



### AFP-S01智能坠落报警装置

### AFP-S01 intelligent fall protection device



### 缓冲吸能集成

### Energy absorption assembly

- 在系统中起到吸收冲击力、指示冲坠状态、固定钢丝绳等作用；
- 整体最小破断力50kN
- Function to mitigate the impact force of a fall, indicate the fall state and connect with the steel wire cables.
- Breaking strength: 50 kN.



倾斜防坠系统Safly S  
Inclined fall protection system Safly S

适应于工况倾角45°-90° ；  
采用免维护固定结构，只需每年年检，不需日常频繁维护；  
特殊设计的中间导向座，无需拆下止跌扣，可使止跌扣无间断通过整条生命线；  
端部支撑柱采用变角度设计，可以适应大范围倾角；

The system is suitable for the working conditions of inclined surfaces from 45 to 90 degrees.  
Maintenance-free configuration;  
The specially designed intermediate guides allow the fall arrester passing through the whole lifeline uninterrupted.  
The end support post with angle variable design adapts to the inclined surfaces of large range.



止跌扣  
Fall arrester

STG-3  
特殊设计的锁止结构，可实现在45°-90° 角度下的锁止；  
3个连续动作才能打开止跌扣，安全性更好；  
轻推活动板即可关闭止跌扣，并自动锁止；  
Patented locking mechanism The specially designed locking mechanism ensures locking at the angle of 45°-90°  
The fall arrester can be removed only by three consecutive actions, to ensure the safety.  
The fall arrester shall lock automatically by pushing the movable plate.



Safly S 倾斜防坠系统推荐配置  
Recommended configuration for Inclined fall protection system Safly S

名称 Item	型号 Model	数量 Qty	
Safly S 倾斜防坠系统Safly Inclined fall protection system Safly S	Safly S-XX	1条	XX为长度，可订制 Length can be customized
全身式安全带 Harness	D-10401	3	
双钩缓冲连接装置 Y-shape shock absorbing lanyard	LYD-3020-1.5	3	
工作安全绳 Working position rope	PR-8010-X	3	XX为长度，可订制 Length can be customized
钢丝绳止跌扣 Fall arrester	STG-3	3	Optional







## 轨道防坠系统 Rail fall protection system

SKR系统包括SKR-H水平防坠系统、SKR-V垂直防坠系统、SKR-C转向导轨。SKR系统是一款刚性导轨，可以直接与钢结构相连接，性能卓越的防坠系统。配合水平、垂直滑块，使工作人员能够自由顺畅的在刚性导轨上移动，实现顺畅行走；SKR-H水平防坠系统及SKR-V垂直防坠系统被广泛应用于保护人员在高空塔架或井下作业的安全。

SKR fall protection system includes: SKR-H horizontal fall protection system, SKR-V vertical

fall protection system and SKR-C rail deflector. The SKR fall protection system is a rigid rail type system with excellent performance, which can be connected with steel structure directly. With the horizontal and vertical sliders, the user can move freely and smoothly along the rigid rail. SKR-H horizontal fall protection system and SKR-V vertical fall protection system are widely used on towers and in shafts.

### 系统特点 The characteristics of the SKR fall protection system

- 零部件的设计依据EN353-1和EN795的要求，发生坠落时能够可靠的将工作人员锁住。
- 整套系统组成能减少坠落时对人体冲击。发生跌落情况时，缓冲连接装置以及缓冲终端会起到缓冲吸能作用，保证作用在人身上的冲击力小于6kN，远小于人体所能够承受的冲击力。
- 导轨材质为高强度航空级铝合金，重量轻、强度高，便于安装。
- The components is designed conforming to there quirements of EN353-1 and EN795.In case of falling the user can be arrested reliably.
- The composition of the system can mitigate the impact on the falling person. Once a fall occurs, the lanyard with energy absorber pack and the end energy absorbing device will absorb energy caused by the falling to ensure the impact force acting on the user is less than 6kN, much less than that a human body can bear.
- The guide rail is made of high strength aviation aluminum with advantages of lightweight, high strength and easy to install.



# SKR-H 水平轨道系统 SKR-H Horizontal Rail System



## 系统组成: composition:

- 直线刚性导轨 Straight rail
- 转角刚性导轨 Curve rail
- 导轨水平滑块 Horizontal runner
- 缓冲连接装置 Lanyard with shock absorber pack
- 导轨连接件 Rail connector
- 基座连接件 Base connector
- 基座连接卡件 Base connection kit
- 弹性端部套件 Elastic end kit
- 固定端部套件 Fixed end kit
- 带固定锚点式抱箍 Hoop with fixed anchors

## 系统特点 The characteristics of the SKR-H Horizontal Rail System

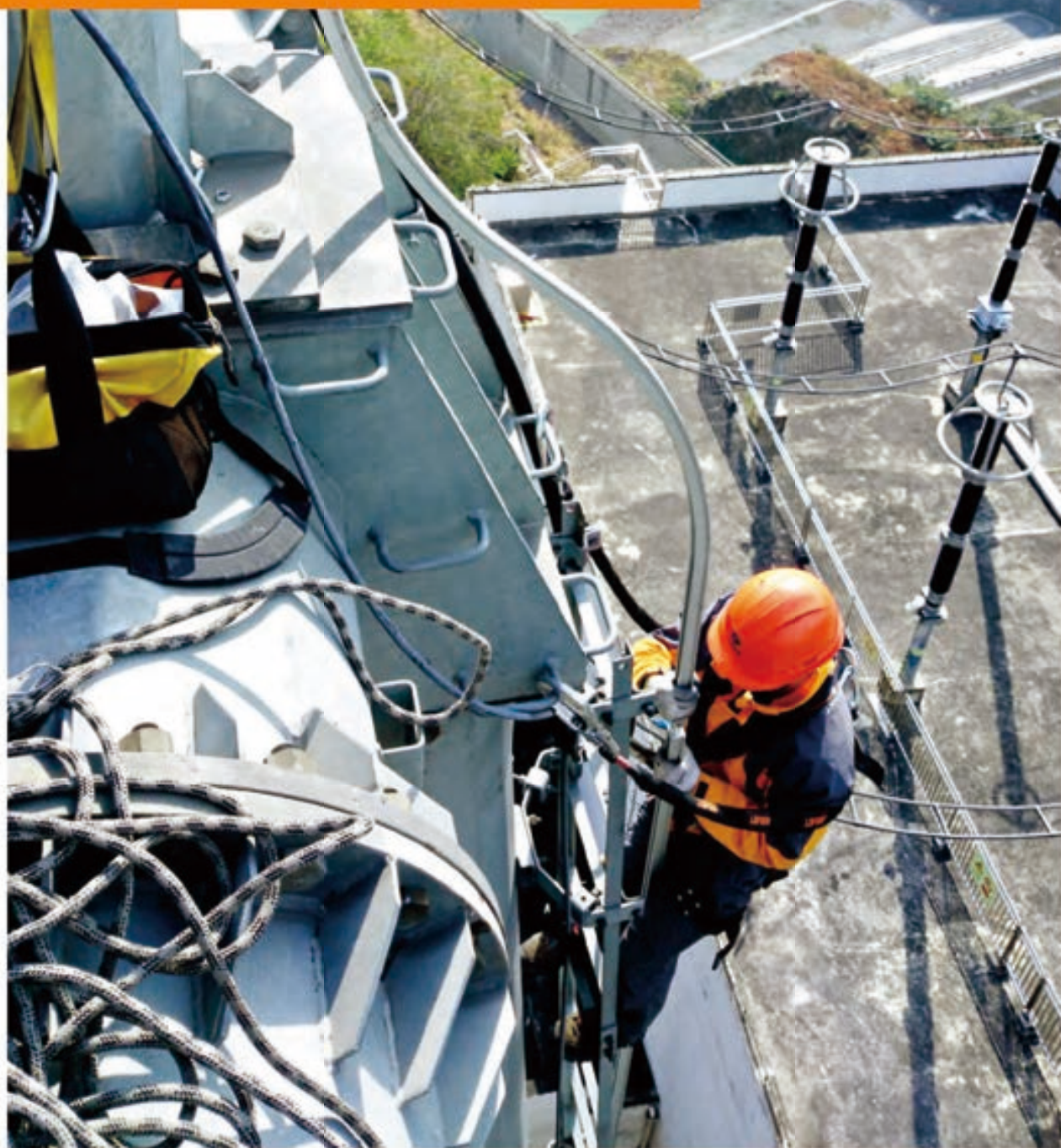
- 零部件的设计依据EN353-1和EN795的要求，发生坠落时能够可靠的将工作人员锁住。
- 整套系统组成能减少坠落时对人体冲击。发生跌落情况时，缓冲连接装置以及缓冲终端会起到缓冲吸能作用，保证作用在人身上的冲击力小于6kN，远小于人体能够承受的冲击力。
- 导轨材质为高强度航空级铝合金，重量轻、强度高，便于安装。
- The components is designed conforming to the requirements of EN353-1 and EN795. In case of falling the user can be arrested reliably.
- The composition of the system can mitigate the impact on the falling person. Once a fall occurs, the lanyard with energy absorber pack and the end energy absorbing device will absorb energy caused by the falling to ensure the impact force acting on the user is less than 6kN, much less than that a humanbody can bear.
- The guide rail is made of high strength aviation aluminum with advantages of lightweight, high strength and easy to install.

## SKR-H水平轨道系统推荐配置 Recommended configuration of SKR-H Horizontal Rail System

名称 Item	型号 Model	数量 Qty	
SKR-H水平轨道系统 SKR-H Horizontal Rail System	SKR-H-XX	1条	XX为长度，可订制 XX for length, can be customized.
全身式安全带 Harness	D-10401	3	
双钩缓冲连接装置 Y-shape shock absorbing lanyard	LYD-3020-1.5	3	
轨道水平滑块 Rail horizontal runner	SR-200	3	



# SKR-V 垂直轨道系统 SKR-V vertical rail system



## 系统组成: Composition:

- 直线刚性导轨 Straight rail
- 转角刚性导轨 Curve rail
- 导轨垂直滑块 Vertical runner
- 缓冲连接装置 Lanyard with shock absorber pack
- 导轨连接件 Rail connector
- 基座连接件 Base connector
- 基座连接卡件 Base connection kit
- 弹性端部套件 Elastic end kit
- 固定端部套件 Fixed end kit
- 带固定锚点式抱箍 Hoop with fixed anchors

## 系统特点 The characteristics of the SKR-V Vertical Rail System

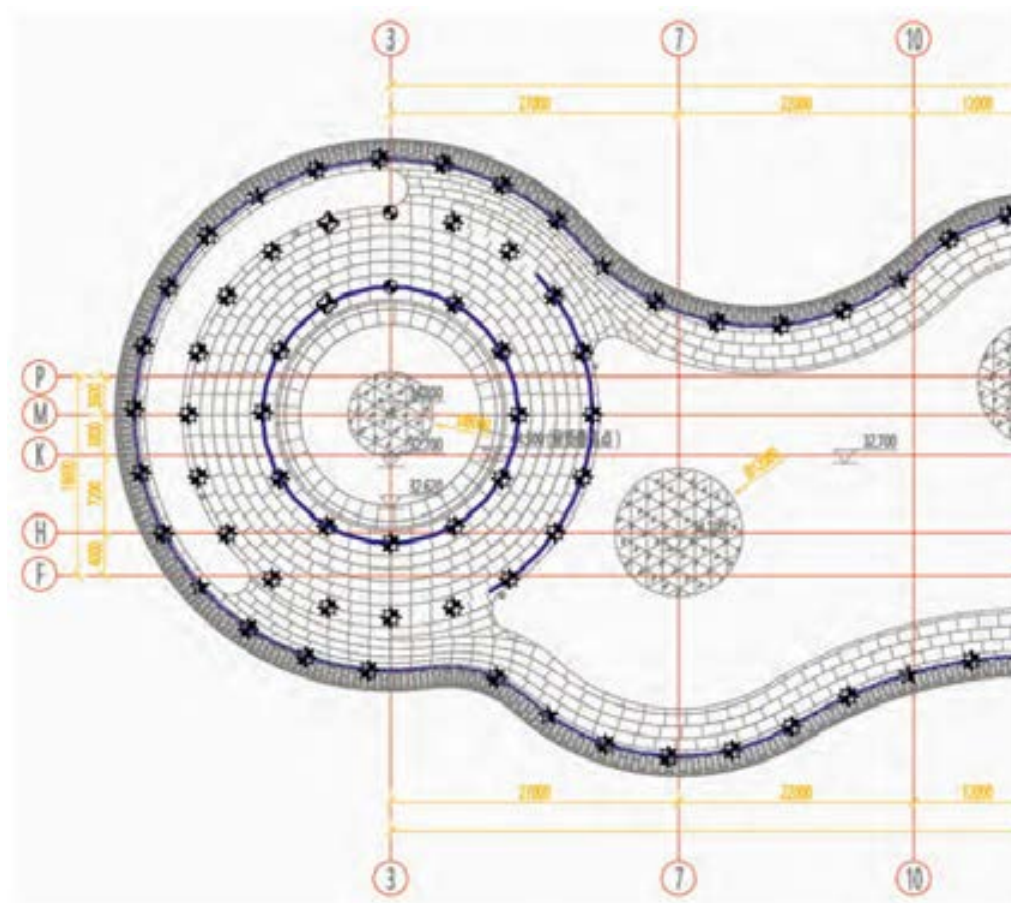
- 零部件的设计依据EN353-1和EN795的要求，发生坠落时能够可靠的将工作人员锁住。
- 整套系统组成能减少坠落时对人体冲击。发生跌落情况时，缓冲连接装置以及缓冲终端会起到缓冲吸能作用，保证作用在人身上的冲击力小于6kN，远小于人体能够承受的冲击力。
- 导轨材质为高强度航空级铝合金，重量轻、强度高，便于安装。
- The components is designed conforming to the requirements of EN353-1 and EN795. In case of falling the user can be arrested reliably.
- The composition of the system can mitigate the impact on the falling person. Once a fall occurs, the lanyard with energy absorber pack and the end energy absorbing device will absorb energy caused by the falling to ensure the impact force acting on the user is less than 6kN, much less than that a human body can bear.
- The guide rail is made of high strength aviation aluminum with advantages of lightweight, high strength and easy to install.

## SKR-V垂直轨道系统推荐配置 Recommended configuration of SKR-V Vertical Rail System

名称 Item	型号 Model	数量 Qty	
SKR-V垂直轨道系统 SKR-V Vertical Rail System	SKR-V-XX	1条	XX为长度，可订制 XX for length, can be customized.
全身式安全带 Harness	D-10401	3	
双钩缓冲连接装置 Y-shape shock absorbing lanyard	LYD-3020-1.5	3	
轨道垂直滑块 Rail vertical runner	SR-300	3	



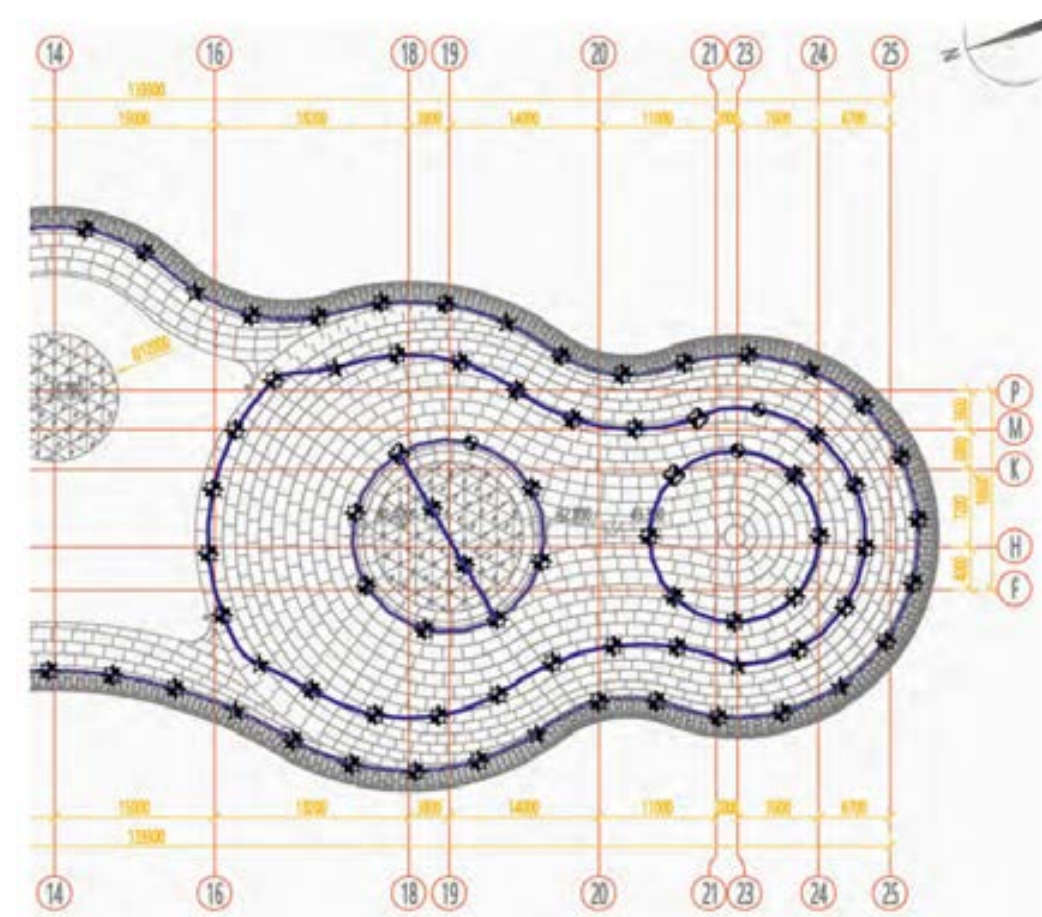
# 金属屋面防坠系统Safly RH



劉曉波

专门为金属屋面定制的不锈钢组合锚点，配合ASAT的Safly H水平防坠系统，可实现常规屋面以及小于15°的倾斜、弧形屋面的超长距离、超大区域的防坠。

Specialized Safly R anchor of ASAT Safly H horizontal fall protection system is suitable to be fixed on the metal roofs of horizontal, incline less than 15° and curve for the working conditions of super long distance and large area.



平面布置图 1:1

规格: Safly RH

材 料: 304、铝合金

锚点强度: 18kN

使用场合：屋面板（水平、斜坡、弧形）

倾斜角度：小于15°

布置方式：直线、转角、环形、蛇形、螺旋

系统长度：几米至数千米

系统组成：屋面锚点、缓冲吸能集成、双线不锈钢钢丝绳、中间支撑座、转向支撑套件、自动张紧集成、超长距离缓冲吸能组件

Model: Safly RH

Material: Stainless steel 304, aluminum

Anchor strength: 18kN

Application: metal roofs of horizontal, incline and

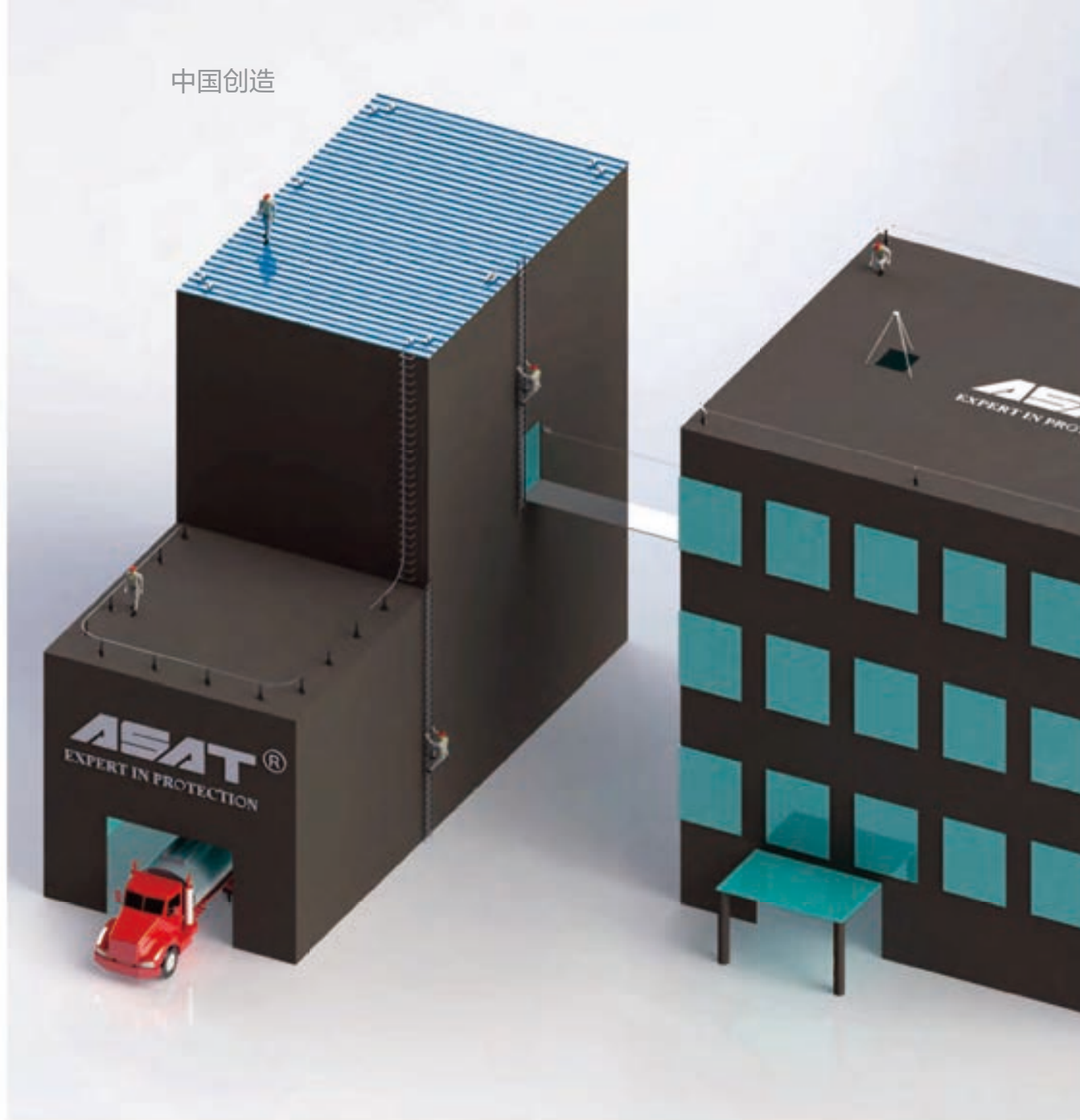
curve Incline angle: less than 15°

Arrangement: straight line, corner, circular, S-shaped, spiral

Length: customized

Composition of system: End anchor kit, energy absorption assembly, double stainless-steel cables, intermediate anchor, curved anchor kit, tensioning assembly and energy absorbing components for super long configuration.





## Safly RH水平屋面防坠系统

### Safly RH horizontal roof fall protection system

- 整套系统依靠螺栓紧固的方式将夹具装夹在屋面板的屋脊上，不需要预留固定物和在屋面板上打孔，不破坏屋面原有结构；  
The fall protection system is fixed on mental roof panels by the clamp-type anchors fastened with bolts. It needn't to set embedded parts or punch holes on the roof panel, avoiding to destroy the original roof structure.
- 采用订制铝合金夹具，可以与屋脊形状高度契合，配合单边合理的装夹最大长度，保证了整个系统对金属屋面板的压强小，能更好保护屋面板不受损伤；  
The customized aluminum clamp-type anchor can fit

- with the shape of roof panel, to ensure less pressure of the system on the metal roof panel and prevent the damage to it.
- 通过转向支撑套件，可以实现屋面防坠系统的直线、任意角度、环形、蛇形、螺旋，以及开放式、封闭式各种布置，全面保护操作人员的安全；  
The arrangement of the system can be realized through the curved anchor kits as the layouts of straight, angled, circular, S-shaped, spiral, open and closed shapes on metal roof panels, to ensure the safety of the users.
- 系统在端部设置了缓冲吸能集成，在人员跌落时，以

压溃的形式降低作用在人体上的力；

The arrangement of the system can be realized through the curved anchor kits as the layouts of straight, angled, circular, S-shaped, spiral, open and closed shapes on metal roof panels, to ensure the safety of the users.

Safly RH水平屋面防坠系统

- 在超长防坠系统中，系统每隔一定距离安装缓冲吸能套件，在人员跌落时，以滑移的形式降低作用在人体上的力；  
By slipping along cables, the energy absorbing components fitted in the system for super long distance at certain spans can mitigate the impact force acting on the user in case of falling.
- 系统在末端设置了自动张紧集成，可以保证整个防坠



首端 the head part



末端 the end part



中间支撑 intermediate supports



转向套件 steering kit



端部锚点 end anchors

系统保持张紧状态，不与屋面发生不必要的摩擦；

The tensioning assembly at an end of the system ensures the double cables keep tensioned to prevent them from friction with the roof panel.

- 整个防坠系统采用双绳布置，在人员跌落的瞬间，两根绳索非同时受力，增加了冲击时间，降低了冲击力；  
The fall protection system adopts a double-cables. In case of falling, the two cables with stand the load of the user unevenly at same time to mitigate the impact force to him.
- 整个系统采用不锈钢和铝合金材料，可以长时间暴露在户外环境中，耐腐蚀。  
The whole system is made of stainless steel and aluminum with corrosion resistant, suitable for the outdoor and corrosive environments.



Safly RH水平屋面防坠系统推荐配置  
Recommended configuration of Safly RH horizontal roof fall protection system

名 称 Item	型 号 Model	数 量 Qty	
Safly RH屋面防坠系统 Safly RH roof fall protection system	Safly RH-XX	1条	XX为长度， 可根据现场工况订制 XX for length, can be customized.
全身式安全带 Harness	D-10201	3	
双钩缓冲连接装置 Y-shape shock absorbing lanyard	LYD-3020-1.5	3	
开口滑块 Opened runner	SHLB-01A	3	
闭口滑块 Closed runner	SHLB-01B	3	选配 Optional

以上配置可供3人同时使用  
The configuration can be used for 3 people at the same time

Safly RV屋面垂直防坠系统  
Safly RV Roof vertical fall prevention system

介绍:

规格: Safly RV

材料: 304、铝合金

锚点强度: 18kN

使用场合: 屋面板（垂直、倾斜）

倾斜角度: 小于15°

布置方式: 直线

系统长度: 小于100m

系统组成: 屋面锚点、缓冲吸能集成、不锈钢钢丝绳、导向套件、自动张紧集成

Description:

Model: Safly RV

Material: Stainless steel 304, aluminum

Anchor strength: 18kN

Application: facade panel of vertical and incline

Incline angle: less than 15°

Arrangement: straight line

Length: less than 100m

Composition: End anchor kit, energy absorption assembly, stainless steel cable, curved anchor kit and tensioning assembly.

说明:

- 整套系统依靠螺栓紧固的方式将夹具装夹在屋面板的屋脊上，不需要预留固定物和在屋面板上打孔，不破坏屋面原有结构；
- 采用订制铝合金夹具，可以与屋脊形状高度契合，配合单边合理的装夹最大长度，保证了整个系统对金属屋面板的压强小，能更好保护屋面板不受损伤；
- 采用铝合金梯子安装垂直防坠系统，重量轻，上下攀爬舒适度高；
- 系统在顶部设置了缓冲吸能集成，在人员跌落时，以压溃的形式降低作用在人体上的力；
- 系统在末端设置了自动张紧集成，可以保证整个防坠系统保持张紧状态，不与屋面发生不必要的摩擦；
- 整个系统采用不锈钢和铝合金材料，可以长时间暴露在户外环境中，耐腐蚀。

Description:

- The fall protection system is fixed on metal facade panels by the clamp-type anchors

fastened with bolts. It needn't to set embedded parts or punch holes on the facade panel, avoiding to destroy the original roof structure.

- The customized aluminum clamp-type anchor can fit with the shape of facade panel, to ensure less pressure of the system on the metal facade panel and prevent the damage to it.
- The vertical protection system, mounted on aluminum ladders, is lightweight and does not hinder the climbing of the user.
- By crushing, the energy absorption assembly at the top end of the system can mitigate the impact force acting on the user in case of falling.
- The tensioning assembly at the bottom end of the system ensures the cable keep tensioned to prevent it from friction with the facade panel.
- The whole system is made of stainless steel and aluminum with corrosion resistant, suitable for the outdoor and corrosive environments.

Sarail RV垂直屋面防坠系统推荐配置  
Recommended configuration of Sarail RV vertical roof fall protection system

名 称 Item	型 号 Model	数 量 Qty	
Sarail RV垂直屋面防坠系统 Sarail RV vertical roof fall protection system	Sarail RV-XX	1条	XX为长度， 可根据现场工况订制 XX for length, can be customized.
全身式安全带 Harness	D-10201	3	
双钩缓冲连接装置 Y-shape shock absorbing lanyard	LYD-3020-1.5	3	
钢丝绳止跌扣 Steel wire cable fall arrester	STG-1	3	

以上配置可供3人同时使用  
The configuration can be used for 3 people at the same time





锚点 Anchor

类别 Category	产品图片 Product	名称 Name	材质 Material	重量 Weight	载荷 Load	执行标准 Standard	备注 Remarks
钢梁及轨道锚点 Steel girder and rail anchor		钢梁锚点AFA-021 Beam clamp anchor	铝合金 Aluminum	2.3kg	23kN	EN 795	适用工字梁宽度Applicable width of I-beam: 76~300mm
		滚动式钢梁锚点 AFA-022	铝合金 Aluminum	3.5kg	22.3kN	EN 795	适用工字梁宽度Applicable width of I-beam: 76~300mm
使用快插锁固销调整间距，以适应于不同规格的工字梁；用于工作范围相对固定的场合。 Adjust the span by the CLICK pin, suitable for different specifications of I-beam.							
通用锚点 Anchor		安全挂点 00011139	不锈钢 Stainless steel	0.98kg	44.4kN	ANSI/ASSE Z359.1-2007 AS/NZS 1891.4: 2009 ISO 14567: 1999 EN 795: 2012 TS 16415: 2013 GB 30862-2014	外轮廓尺寸Size: 122 × 100mm； 安装孔数量及孔径Qty&aperture: 3 × Φ17.5mm； 安装孔间距Spacing: 45+45mm；
		安全挂点 00036431	42CrMo	1.2kg	44.4kN	AS/NZS 1891.4: 2009 ISO 14567: 1999 EN 795: 2012 TS 16415: 2013 GB 30862-2014	外轮廓尺寸Size: 120 × 175mm； 安装孔数量及孔径Qty&aperture: 2 × Φ30mm； 安装孔间距Spacing: 60mm；
		安全挂点 00010565	42CrMo	1.6kg	44.4kN	AS/NZS 1891.4: 2009 ISO 14567: 1999 EN 795: 2012 TS 16415: 2013 GB 30862-2014	外轮廓尺寸Size: 146 × 186mm； 安装孔数量及孔径Qty&aperture: 2 × Φ39mm； 安装孔间距Spacing: 78.5mm；
		吊钩 00024515	Q235B	7.9kg	12kN	EN 795: 2012	外轮廓尺寸Size: 340 × 388mm； 安装孔数量及孔径Qty&aperture: 2 × Φ26mm； 安装孔间距Spacing: 100mm；



## 止坠滑轮 Locking pulley



### 止坠滑轮 Climb assist locking pulley

ALP-11

此款防坠器用于爬升及下降保护。可双方向使用，一旦跌落马上启动锁止功能。设备轻且坚固，顶部旋转连接环设计，用作连接固定点。

适用绳索：符合EN1891-A标准，直径为10.5-11mm的静态绳索。

承载人员数量：1人

重量：1.2kg

EN360 ANSI Z359

ALP-11 is used to provide protection bidirectionally for climbing upward and downward. It will lock on the rope in the event of a fall. The device is compact and sturdy, fitted with a swivel ring on the top for anchor connection.

Used with static rope of diameter of 11mm, in accordance with EN1891-A.

Load capacity: 1 person.

Weight: 1.2kg

EN360 ANSI Z359



### 止坠滑轮 Rescue locking pulley

ALH-11

此款防坠器设计用于救援、有限空间作业和悬吊作业系统。

具备限速锁止功能，发生跌落时使人员锁止并保持在空中。设备上的索环可与滑轮配合使用，形成一个3:1或5:1的滑轮组，提高系统效率。

适用绳索：符合EN1891-A标准，直径为11mm的静态绳索。

承载人员数量：2人

重量：1.2kg

CE ANSI Z359:4:2007

ALH-11 is designed for rescue, and operation in confined spaces and on suspension.

With over-speed protect function, ALH-11 will lock on the rope and arrest the user in the event of a fall. The carabiner on the device can connect with a pulley to configure a pulley block with ratio of 3:1 or 5:1, to enhance the working efficiency.

Used with static rope of diameter of 11mm, in accordance with EN1891-A.

Load capacity: 2 persons.

Weight: 1.2kg

CE ANSI Z359:4:2007

## 防坠器 Retractable fall arrester



### 防坠器 Retractable fall arrester

FAB0301

高强度铝合金外壳材质，自动伸缩式速差器，内置织带宽度25mm；

长度：3.5m；重量：1.5kg；

挂点处备有旋转头设计；

额定载荷：140kg

认证标准：EN360；2002

High strength aluminum alloy housing.

Automatically extends and retracts to allow freedom of movement. Built-in webbing width 25mm.

Length: 3.3m

Equipped with swivel connection system.

Rated load: 136kg

Weight: 1.1kg

EN360；2002



### 防坠器 Retractable fall arrester

FAB0302

高分子聚乙烯外壳，自动伸缩式速差器，内置镀锌钢丝直径4.8mm；

长度：6m；重量：4.8kg；

备有万向结连接系统；

额定载荷：140kg

认证标准：EN360；2002

High molecular polyethylene housing.

Automatically extends and retracts to allow freedom of movement. Built-in galvanized steel wire diameter 4.8mm. Length:6m

Equipped with swivel connection system.

Rated load: 140kg

Weight: 4.8kg

EN360；2002



### 防坠器 Retractable fall arrester

FAB0310

高分子聚乙烯外壳材质，自动伸缩式速差器，内置镀锌钢丝直径4.8mm；

长度：10m；重量：5.3kg；

备有万向结连接系统；

额定载荷：140kg

认证标准：EN360；2002

High molecular polyethylene housing.

Automatically extends and retracts to allow freedom of movement. Built-in galvanized steel wire diameter 4.8mm. Length:10m;

Equipped with swivel connection system

Rated load: 140kg

Weight: 5.3kg.

EN360；2002



### 防坠器 Retractable fall arrester

FAB0315

高分子聚乙烯外壳材质，自动伸缩式速差器，内置镀锌钢丝直径4.8mm；

长度：15m；重量：9.2kg；

备有万向结连接系统；

额定载荷：140kg

认证标准：EN360；2002

High molecular polyethylene housing.

Automatically extends and retracts to allow freedom of movement. Built-in galvanized steel wire diameter 4.8mm. Length:15m;

Equipped with swivel connection system

Rated load: 140kg

Weight:9.2kg.

EN360；2002



### 防坠器 Retractable fall arrester

FAB0320

高分子聚乙烯外壳材质，自动伸缩式速差器，内置镀锌钢丝直径4.8mm；

长度：20m；重量：9.3kg；

备有万向结连接系统；

额定载荷：140kg

认证标准：EN360；2002

High molecular polyethylene housing.

Automatically extends and retracts to allow freedom of movement. Built-in galvanized steel wire diameter 4.8mm. Length:20m;

Equipped with swivel connection system

Rated load: 140kg

Weight: 9.3kg.

EN360；2002





绳索、包  
Ropes & Bag

绳索

<p>静态绳索 Static rope</p>  <p>机械静态绳索AR-TS系列</p>	<p>水上救援绳索 Water rescue rope</p>  <p>AR-TT系列</p>	<p>绝缘绳索 Insulation rope</p>  <p>绝缘绳索AR-YC2-12系列</p>
<p>工业多用途绳索 Industrial general rope</p>  <p>AR-01系列</p>	<p>防火速降静态绳索 Thermal resistance abseil rope</p>  <p>AR-05系列</p>	

绳索保护套

<p>绳索保护套 Rope protective sleeves</p>  <p>RP-0140</p>
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包

 <p>BT-30040S Tool bagBT-30040S</p>	 <p>BT-302060 Waterproof tool bagBT-302060</p>	 <p>BD-30080 Waterproof backpackBD-30080</p>
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安快特升降器
安全带
连接装置
速降营救 解决方案
限位工作绳
防坠落系统
止坠滑轮、 防坠器
绳索、包
金属件
安全帽、 头灯、担架



# 绳索

## 静态绳索 Static rope

机械类静态绳索  
ASAT机械类静态绳索专为机械设备配合使用而设计；  
尤其适合与机械配合提供长距离下降或拖拽作业。  
高破断力，高耐磨性。  
良好的抓握性。

ASAT static ropes are perfect for use with the devices in accordance with EN341, suitable for long-distance descending or traversing operation.  
High breaking strength and wear resistance.  
Comfortable for handling.

## 绝缘绳索 Insulation rope

ASAT绝缘绳索符合GB/T13035-2008标准，直径12mm；交流耐压试验580kV，无闪络，无击穿，无过热；冲击耐压试验1050kV，无闪络，无击穿；ASAT绝缘绳索专用于电网带电作业，配合电网版安快特，检修输电线路，运输设备及人员；

ASAT insulation rope conforms to GB/T13035-2008, diameter 12mm; AC withstand voltage test 580kV, without flashover, breakdown and overheating; impact withstand voltage test 1050kV, without flashover and breakdown; ASAT insulated rope is specially used for power grid live operation, cooperate with powered ascending device ACE-32, overhaul transmission lines, transportation equipment and personnel;

## 工业多用途绳索 Industrial general rope

ASAT工业多用途绳索，破断力大，表皮耐磨，广泛用于工业领域及个人安全防护。  
ASAT industrial general rope is designed

for industry and personal protection, with high load capacity and excellent anticorrosion cover.

## 水上救援绳索 Water rescue rope






ASAT水上救援绳索专为水上迅速救援设计；破断力大；在水中可漂浮；特殊黄色设计保证高可视性；抓握性好，操作舒适。  
The water rescue ropes are specially

designed for swift-water rescue.  
The floating rope with High load capacity and high visibility yellow color.  
Good grip ability and comfort to operation.






## 防火速降静态绳索 Thermal resistance abseil rope

可耐500℃高温，消防专用速降绳索；非常好的抓握手感，耐磨，可靠。  
With stand temperature of up to 500℃,

abseil rope dedicated for fire fighting, with great grip ability, can be used in situations of extreme wear and tear.

产品图片 Picture	名称 Name	型号 Model	直径 Diameter (mm)	延展率 Elongation	重量 Weight (g/m)	破断负荷 Breaking load (kN)
	机械类静态绳索 Static ropes	AR-TS01-9.6	9.6	4%	61	25
		AR-TS02-10	10	3%	66	27
		AR-TS03-11	11	3%	75	32
	工业多用途绳索 Industrial general ropes	AR-01-16	16	3%	193	71
		AR-01-14	14	3%	155	59
		AR-01-12	12	3%	111	47
	水上救援绳索 Water rescue ropes	AR-01-8	8	3%	48	25
		AR-TT01	8	4%	29.8	12.2
	防火速降静态绳索 Thermal resistance abseil ropes	AR-TT02	11.5	4%	78.9	16.5
	绝缘绳索 Insulation ropes	AR-05-11	10.5	2.5%	74	43
		AR-YC2-12	12	符合GB/T13035-2008	95	符合GB/T13035-2008



类别 Category	产品图片 Product	名称 Name	型号 Model	长 (mm)	宽 (mm) /容量 (L)	高 (mm)	重量 (kg)	承重 (kg)
包 Bags		工具包 Tool bag	BT-30040S	300	-	400	0.63	-
		防水工具包 Waterproof tool bag	BT-302060	300	200mm/30L	600	0.83	50
		双肩背防水包 Waterproof backpack	BD-30080	300	50L	800	0.9	50
		吊装包 Lifting bag	BL-40085	-	400	850	1.6	50
		绳索保护套 Rope protective sleeves	RP-0140 RP-0180	400 800	柔性绳索保护套；耐用PVC材质可在绳索任意位置快速便捷安装固定 Made of high-quality PVC, flexible, used to protect a rope at any section conveniently.			





## 金属件

### 止跌扣 Fall arrester



STG-1

SRL-01

SRC-02

### 上升器 Ascenders



HAC-03

HAL-01

### 分力板 Rigging plates



HRP-0101

HRP-0103

HRP-0105

### 滑轮 Pulleys



HPA0101

HPA0301

HPA0401

### 金属环 Carabiners

铝制金属环 Aluminum carabiners

钢制金属环 Steel carabiners



HA-0201

HA-0203

HS-0101

HS-0104

## 金属件 Hardware

### 钢丝绳止跌扣 Guided type fall arrester for steel wire cable

STG-1  
STG-1配合8-9mm钢丝绳使用  
止跌扣产品本体采用不锈钢和铝合金，耐腐蚀，强度高。  
打开结构为联锁式两个操作步骤的打开结构，操作方便，安全可靠。  
产品包含缓冲包，能够保证对人体的冲坠力小于6kN。  
正常使用情况下，止跌扣沿钢丝绳上下行走顺畅。  
锁止距离短，锁止灵敏，保证人员的坠落距离小。  
连接结构长度合理，符合现场人员的使用习惯。  
止跌扣具有万向节，使用起来更方便。  
能够在垂直防坠系统上任意位置拆装。  
*EN353-1: 2014 GB/T 24537-2009*  
*EN353-2: 2002*  
STG-1 is compatible with 8-9mm steel wire cable.  
The body is made of stainless steel and aluminum alloy, corrosion resistance and

high strength.  
Opening requires two interlocking steps, which is easy to operate, safe and reliable. Consists of shock absorber pack, which can ensure that the impact force on the human body is less than 6kN.  
As long as the operation is reasonable, the device will sliding along the cable smoothly.  
The locking distance is short and the locking is sensitive, which minimise the impact force acted on the use in the event of fall.  
The connection structure is reasonable in length and meets the usage habits of field personnel.  
Equipped with Swivel, it is more convenient to use.  
Can be attached or removed conveniently at any position of the Vertical rail lifeline system.

### 钢丝绳止跌扣 Guided type fall arrester for steel wire cable

STG-1A  
与STG-1功能相同，配合8-10mm钢丝绳使用  
*EN353-1: 2014 GB/T 24537-2009*  
*EN353-2: 2002*

Same function as STG-1, compatible with 8-10mm steel wire cable.  
*EN353-1: 2014 GB/T 24537-2009*  
*EN353-2: 2002*

### 钢丝绳止跌扣 Guide type fall arrester for steel wire cable

STG-3  
特殊设计的锁止结构，可以实现在45° - 90° 角度下的锁止；  
3个连续动作才能打开止跌扣，安全性更好；  
轻推活动板即可关闭止跌扣，并自动锁止；  
STG-3  
Patented locking mechanism

The specially designed locking mechanism ensures locking at the angle of 45° -90.  
The fall arrester can be removed only by three consecutive actions, to ensure the safety.  
The fall arrester shall lock automatically by pushing the movable plate.



### 轨道止跌扣 Fall arrester

SRL-01

止跌扣产品本体采用高强度航空铝合金，耐腐蚀，强度高。  
打开结构为连续两动作的打开结构，操作方便，安全可靠。  
产品包含缓冲包，能够保证对人体的冲坠力小于6kN。  
正常使用情况下，止跌扣沿轨道上下行走顺畅。  
锁止距离短，锁止灵敏，保证人员的坠落距离小。  
连接结构长度合理，符合现场人员的使用习惯。  
止跌扣具有万向节，使用起来更方便。  
能够在垂直防坠系统上任意位置拆装。

EN353-1: 2014 GB 24542-2009

The body is made of stainless steel and aluminum alloy, corrosion resistance and high strength.

Two consecutive actions can open the

structure, which is easy to operate, safe and reliable. Consists of shock absorber pack, which can ensure that the impact force on the human body is less than 6kN.

As long as the operation is reasonable, the device will sliding along the cable smoothly.

The locking distance is short and the locking is sensitive, which minimise the impact force acted on the use in the event of fall.

The connection structure is reasonable in length and meets the usage habits of field personnel.

Equipped with Swivel, it is more convenient to use.

Can be attached or removed conveniently at any position of the Vertical rail lifeline system. EN353-1: 2014 GB 24542-2009

### 内卡式轨道止跌扣 Fall arrester

SRC-02

内卡式轨道止跌扣SRC-02 是一种配合C型导轨使用的轨道坠落防护装备。

本体采用高强度航空铝合金，质量轻强度高。

本体上设置多组导向轮，滑行顺畅，耐磨损。

包含缓冲包，正常使用能够保证对人体的冲坠力小于6kN。

正常使用情况下，内卡式轨道止跌扣SRC-02沿轨道上下行走顺畅。

锁止距离短，锁止灵敏保证人员的坠落距离小。

采用的材料都具有很好的耐腐蚀性。

连接结构长度合理，符合现场人员的使用习惯。

重量：745g

额定载荷：45~100kg

材质：铝合金、不锈钢

工作环境温度：-40℃~+60℃

EN 353-1: 2014, GB 24542-2009

SRC-02 guided type fall arrester is a rail fall arrest equipment that operates in conjunction with C series guide rail.

The main body of SRC-02 guided type fall arrester is made from high-strength

aerospace aluminum alloy, featuring light weight and high strength.

SRC-02 guided type fall arrester contains an energy absorber, guaranteeing that the falling impact force on human body is less than 6kN.

SRC-02 guided type fall arrester moves up and down smoothly along the rail, and no accidental sticking will occur.

Sensitive lock-up, the locking distance is less than 120mm, guaranteeing a reasonable falling distance of operators.

All materials used have good corrosion resistance.

The length of the connecting structure is reasonable, in line with the using habits of on-site personnel.

The safety hook has a universal joint, easy to use.

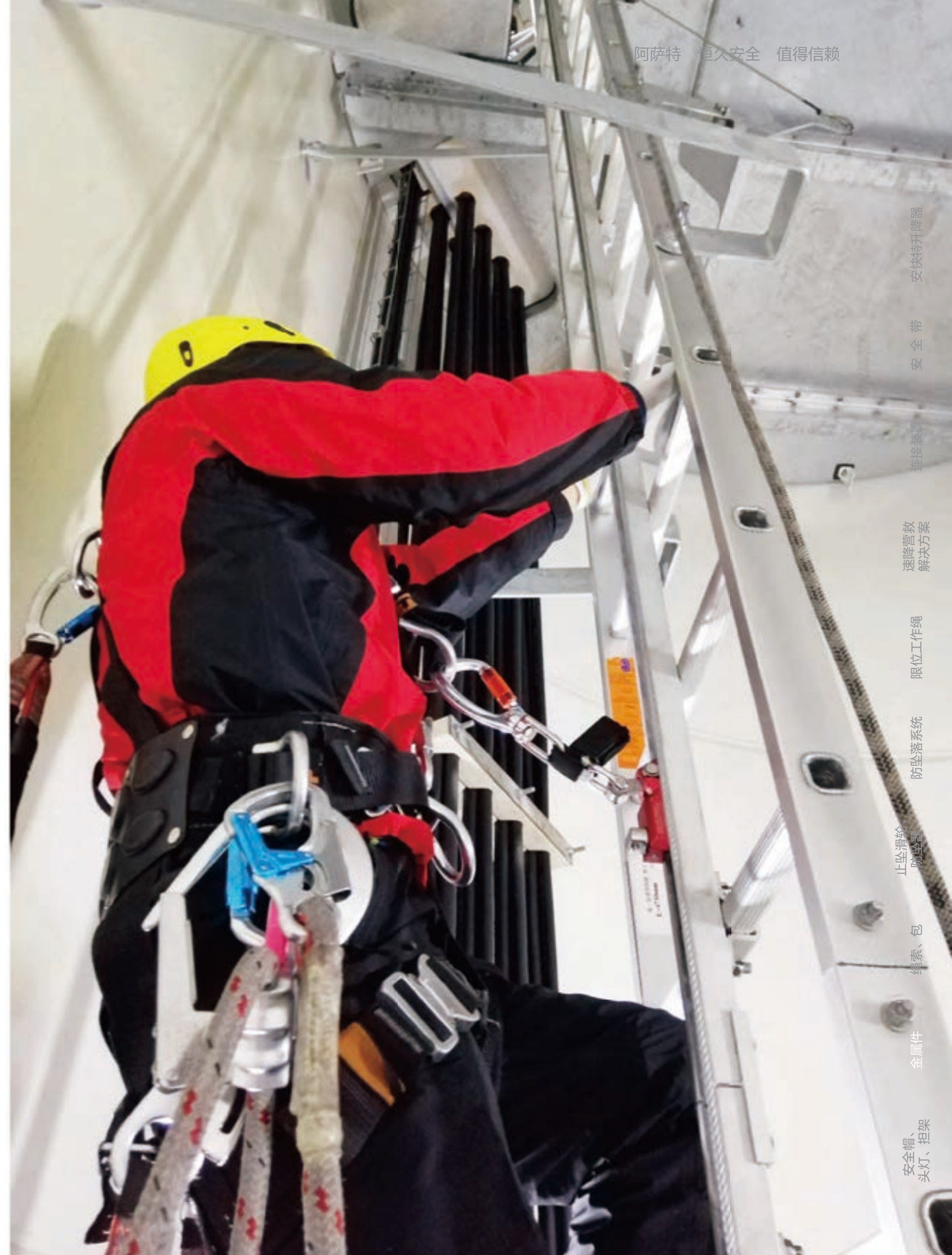
Weight: 745g

Rated load: 45~100kg

Material: mainly aluminum alloy, stainless steel

Temperature: -40℃~+60℃

EN 353-1: 2014, GB 24542-2009







### 开口滑块 Opening slider

SHLB-01A

适用于Sarail H和Sarail HE水平生命线  
可以在系统的任意位置接入和拆下，安全可靠

水平、侧位、倒置，任意角度使用

可以轻松滑过中间支撑座

全身不锈钢材质

15kN不发生变形

重量：640g

EN795: 2012

Applicable to Sarail H and Sarail HE

horizontal lifeline system.

Can be attached and removed at any position of the system, safe and reliable;

Can move smoothly with the user along double cables of the system arranged on floors, walls and under ceilings, passing through curves and intermediate anchors freely;

Materials: stainless steel

Load capacity: 15kN

Weight: 640g

EN795: 2012



### 闭口滑块 Closed slider

SHLB-01B

适用于Sarail H水平生命线系统

可以水平、侧位、倒置，任意角度使用

可以轻松滑过中间支撑座

全身不锈钢材质

15kN不发生变形

重量：620g

EN795: 2012

Applicable to Sarail horizontal lifeline

system

Can move smoothly with the user along double

cables of the system arranged on floors, walls and under ceilings, passing through curves and intermediate anchors freely;

Materials: stainless steel

Load capacity: 15kN

Weight: 620g

EN795: 2012



### 专用滑块 Specialized slider

SHLB-01C

专门用于Sarail HE水平生命线

可以水平、侧位、倒置，任意角度使用

全身不锈钢材质

15kN不发生变形

重量：445g

EN795: 2012

Can move smoothly with the user along

double cables of the system arranged on floors, walls and under ceilings, passing through curves and intermediate anchors freely;

Materials: stainless steel

Load capacity: 15kN

Weight: 445g

EN795: 2012



### 倒置滑块 Inverted slider

SHLB-01D

适用于Safly H和Safly HE系列水平生命线

永久倒置式安装在系统上

配置4个滚动轮及2个过渡轴，确保良好的行走舒适度

主体不锈钢材质

12kN载荷无变形

重量：967g

EN 795: 2012

Suitable for Safly H and Safly HE series horizontal lifelines

Permanently mounted upside down on the system

Equipped with 4 rolling wheels and 2 transition shafts to ensure the comfort.

Main stainless steel material

12kN load without deformation

Weight: 967g

EN 795:2012



连接装置

安全带

连接装置

连接装置

限位工作绳

防坠落系统

止坠滑轮、防坠器

绳索、包

金属件

安全绳、包





#### 轨道水平滑块

SR-200

专用于SKR-H水平生命线系统

全身不锈钢及铜材质

15kN不发生变形

重量: 635g

EN795: 2012

Applicable to SKR-H rail horizontal fall protection system

Materials: stainless steel and copper

Load capacity: 15kN

Weight: 635g

EN795: 2012



#### 尼龙绳止跌扣 Mobile fall arresters

RG-10-12 配合10.5-12.7mm直径, 符合EN1891A标准的A类静态绳使用; 滑动顺畅, 自动锁止灵敏。

EN353-2 EN356 EN12841-A

Compatible with static rope of  $\phi$  10.5-12.7mm, conforming to EN1891 A. Normally the fall arrester moves freely along the rope

with the user.

In case a fall or accelerated descent occurs, the fall arrester will lock on the rope to arrest the user.

Can be attached on or removed from the rope at any position.

EN353-2 EN356 EN12841-A



#### 尼龙绳止跌扣 Mobile fall arresters

RG02-11-13 配合10-13mm直径, 符合EN1891A标准的A类静态绳使用; 正常使用情况下, 无论是垂直或倾斜, 均能跟随使用者移动;

发生坠落、下滑或不受控制的下降时, 设备自动锁止并停止下坠。

重量: 295g

EN353-2 EN12841-A

RG02-11-13

Compatible with static rope of  $\phi$  10-

13mm, conforming to EN1891 A. Normally the fall arrester moves freely along the rope with the user.

In case a fall or accelerated descent occurs, the fall arrester will lock on the rope to arrest the user.

Can be attached on or removed from the rope at any position.

Weight: 295g

EN353-2 EN12841-A



#### 胸式上升器HAC-03(绳索作业专用)

#### Sternal ascent locking device HAC-03 (for rope access)

适用直径8-13mm的静态绳索

重量: 147g

EN567 EN12841 type B

Compatible with static rope of  $\phi$  8-13mm.

Weight: 147g.

EN567 EN12841 type B



#### 手式上升器 Ascent handle

HAL-01 HAR-01

轻巧、便捷的工业设计, 为使用人员提供舒适有力的抓握感。

备有左手及右手型号, 可供不同使用习惯的人员选择。

适用绳索尺寸: 8-13mm

重量: 210g

EN567

Light and convenient design, provide the user comfortable handling.

Left-hand and right-hand type sare available for option.

Compatible with rope of  $\phi$  8-13mm.

Weight: 210g

EN567



安全带升降器

安全带

连接装置

连接管

解决方案

防坠落系统

止坠滑轮

绳索、包

金属件

安全帽

头灯、担架



类别 Category	产品图片	名称	型号	材质 Material	适用绳索尺寸 Rope diameter(mm)	重量 Weight(g)	最小破断力 Min breaking load(kN)	执行标准 Standard
分力板 Rigging plate		分力板 Rigging plate	HRP-0101	航空铝合金 aluminum	-	70	36	UIAA 130
		分力板 Rigging plate	HRP-0103	航空铝合金 aluminum	-	210	40	UIAA 130
		分力板 Rigging plate	HRP-0105	航空铝合金 aluminum	-	467	46	UIAA 130
滑轮 Pulleys		开放式小滑轮 Ultra compact pulley	HPA0101	铝 aluminum	Max.13	158	35	EN12278
		多用途小滑轮 Versatile compact pulley	HPA0201	铝 aluminum	Max.13	88	28	EN12278
		运输滑轮 Traverses pulley	HPA0401	铝 aluminum	Max.13	870	40	
		双滑轮 Double pulley	HPA0301	铝 aluminum	Max.13	340	40	EN12278
万向节 Swivel		-	HSV-01	铝 aluminum	-	163	30	EN354

类型 Category	产品图片 Picture	名称 Name	型号 Model	认证 Certification	整体尺寸 Size(mm)	最大开度 Max gate pening(mm)	最小破断力 Min breaking load	重量 Weight(g)
铝制 金属环 Aluminum carabiners		三步锁 Triact-lock carabiner	HA-0201	EN12275:2013 EN362:2004	110x61	18	25	86
		三步锁 Triact-lock carabiner	HA-0202	EN362:2004	134x73	20	23	93
		三步锁 Triact-lock carabiner	HA-0203	EN12275:2013 EN362:2004	124x74	23	25	114
		大开口安全钩 Auto-locking connector with large gate opening	HA-0101	EN362:2004	长248	60	23	480
		超大开口安全钩 Auto-locking connector with extra large gate opening	HA-0110	EN362:2004	长350	110	23	930
		两步锁设计 Twist-lock carabiner	HA-0105	EN362:2004	142x73	26	23	119
		万向节设计 Screw-lock carabiners with swivel	HA-0103	EN362:2004 EN12275	178x79	24	22	207
钢制 金属环 Steel carabiners		螺纹锁设计 Screw-lock carabiner	HS-0101	EN362:2004	106x59	15	23	215
		两步锁设计 Twist-lock carabiner	HS-0104	EN362:2004	106x59	14	23	215
		大开口安全钩 Auto-locking connector with large gate opening	HS-0203	EN362:2004	227	65	23	594
		大开口安全钩 Auto-locking connector with large gate opening	HS-0106	EN362:2004	138x78	22	50	286
		三步锁设计 Triact-lock carabiner	HS-0102	EN362:2004	134x75	20	45	215
		不锈钢螺纹锁设计 Stainless steel screw-lock carabiner	HN-0101	EN362:2004	107x57	17	23	169

- 安快特升降器
- 安全带
- 连接装置
- 速降营救  
解决方案
- 限位工作绳
- 防坠落系统
- 止坠滑轮、  
防坠器
- 绳索、包
- 金属件
- 安全帽、  
头灯、担架



# 安全帽、头灯、担架 Helmets, Headlamps, Litter

## 安全帽 Helmets

### 工业专用安全帽 Industrial helmets



HM1401-R



HM1401-B



HM1401-W



HM1401-Y

### 安全帽防护面罩 Protective shields for helmet



GM-0102



GM0101

## 头灯 Headlamps



HL150050

## 担架 Litter



AS8



AS8-S

安快特升降器

安全带

连接装置

速降营救  
解决方案

限位工作绳

防坠落系统

止坠滑轮、  
防坠器

绳索、包

金属件

安全帽、  
头灯、担架





## 安全帽 Helmets

### 工业专用安全帽 Industrial helmets

六点式网格内衬，佩戴舒适；强力外壳具有一定弹性，发生冲击时，通过外壳形变以化解冲击力。

调节系统配有调节轮，可轻松调节，确保头盔位置并保持稳定；侧面预留听力保护器安装孔及头灯固定器；插接式下颚带可防止头盔脱落。

尺寸：53-63cm

重量：430g

标准：EN397

订货号：HM1401-R HM1401-B HM1401-W HM1401-Y

With six-point suspension, HM1401 helmet offers maximum comfort and can mitigate the impact force to the user's head by the deformation of the shell.

With multiple adjustment points users can fit the helmet to suit their own preferences, to ensure comfortable and stable. The accessories as goggles, earmuff, lamp holder can be clipped on the helmet. Adjust the ratchet knob of chinstrap to prevent the helmet off user's head.

Size: 53-63cm

Weight: 430g

EN397

Model: HM1401-R, HM1401-B, HM1401-W, HM1401-Y



## 头灯 Headlamp



HL150050

全铝合金一体成型灯身，更高的强度和更好的散热性能

采用CREE XM-L2 U2 LED，具有180度有效照明范围

高效率恒流电路，高达1000流明高亮度输出，最长680小时续航时间

五种亮度和3种特殊功能可选

自动报电压功能（精确到0.1V）

内置智能锂电池充电电路（Micro-USB通用充电接口）

Integration body lamp with aluminium alloy, great strength and great heat dissipation.

Employing CREE XM-L2 (T6), max brightness 180 degree. Sliding lever and single-handlely.

High efficiency constant current circuit, with 1000 lumens bright headlight output.

Max autonomy: 680 hours. Universal lighting design.

Five brightness and three functions are optional.

Automatic reporting function (accurate to 0.1V)

Intelligent charge (Micro-USB universal charging interface)



担架 Litter



AS8



AS8-S

此担架的构造着眼于急救的特殊性，如崎岖的山区、空中或海上救援；框架坚固耐用，简便可靠的装置让操作人员能够安全快捷的采取急救措施；悬钩能与飞机上挂钩连接，实现野外救援；担架配有可调节的脚步长度装置，安全带等；材质采用无毒无污染释放的材料，具有防火和耐磨损和防侵蚀的功能；AS8-S可拆分成两个部分从而便于携带。

Its reliable fittings enable first-aid personnel to operate rapidly and safely. With its special sling eauipment, the stretcher is ideal for lifting and transport by helicopter.

It has an adjustable feet-securing mechanism, safety belts and a mattres.

It is also designed for to be secured inside the helicopter.

All the materials used have dimensions suitable to work and they are fire-proof.

They don 't release any toxic or polluting substances and they a protected to obtain high resistance to wear and corrosion.

	展开尺寸 Open size	折叠尺寸 Folding size	自重 N.W
AS8	218*62*18cm	—	17kg
AS8-S	218*64*18cm	123*64*22cm	18kg

担架吊带套装置表 LST-0402-6  
Recommeded configuration for stretcher sling set LST-0402-6



名 称 Name	型 号 Model	数 量 Qty
尼龙吊带 Nylon sling	LS-04-0.6	2
尼龙吊带	LS-02-0.3	4
金属环 Carabiners	HS-0101	6
分力板 Rigging plates	HRP-0101	1

安快特升降器
安全带
连接装置
速降营救 解决方案
限位工作绳
防坠落系统
止坠滑轮、 防坠器
绳索、包
金属件
安全帽、 头灯、担架



# 风力发电应用 Wind power

工作人员攀爬塔筒、进行机舱内检查与出舱作业时，要保持与固定点相连，防止/阻止发生坠落。

与其他方式相比，在检测、清洁和维修风机叶片和塔筒时，安快特的使用与高空绳索解决方案的有机结合实现了低投入高产出。

风机从业人员需要接受风机逃生与救援训练，以具备相应技巧应对特殊情况。

When the workers climb on a tower to carry out inspection in the wind turbine or perform operation outside the wind turbine, they shall always attach themselves to the anchor points, to prevent/stop occurrence of falling.

Compared with other manners, during inspection, cleaning and maintenance of the blades and towers, combined use of ASAT powered ascending device and rope access solution achieves high working efficiency.

The wind turbine personnel shall take the training on evacuation and rescue in the field, to master corresponding skills for response to special circumstances.



炫风安全带 D-10802



攀风安全带 D-10202C



连接装置 LYD-5010-1.5



限位绳 PR-6010-1.5



止跌扣 STG-1



止跌扣 STG-1A



止跌扣 SRL-01



止跌扣 SRC-02



便携式升降器安快特 ACE-01



MINI版安快特 ACE-31



安全帽 HM1401



# 电网应用 Power Grid

工作人员攀爬电网塔架，在塔架及线路上检查与作业时，要随时保持与固定点相连，防止/阻止发生坠落。

人员需要使用限位系统，以允许空出双手工作。

电网塔架应设置永久生命线系统，以确保人员攀爬安全。

电网从业人员需接受逃生与救援训练，以具备相应技巧应对特殊情况。

电网从业人员需具备拖拉技巧，使用安快特、滑轮组等设备以提升效率。

When the workers climb on transmission tower to perform operation and inspection on the tower and grid lines, they shall keep attaching themselves to the anchor points at any time, to prevent/stop occurrence of falling. The workers shall use work positioning system to allow their hands free for operation.

A permanent fall protection system shall be set up on the grid tower, to ensure the safety of personnel during climbing.

The power grid personnel shall take the training on evacuation and rescue, to master corresponding skills for response to special circumstances.

The power grid personnel shall have hauling skills, and use the equipment such as powered ascending device and mechanical travel system to improve the working efficiency.



安全带 D-10401



安全带 D-10201



大开口连接装置 LY-1030



电网连接装置 LYD-5030



垂直防坠系统 Sarail V



轨道垂直防坠系统 Sarail V



限位工作绳 PR-6020



定位带 PS40



ACE-32



救援速降器 AEM-060



防坠器 ALH-11



防坠器 ALP-11



# 水电应用 Hydroelectricity

水电很多工况对防坠落系统有所依赖，垂直防坠落系统、水平防坠落系统的综合利用可以解决水电厂很多的坠落风险问题。

水电厂中很多井下工作空间狭小，缺乏自主前进的方法；坝体倾斜角度较大，这些场所需要安快特及绳索技术的结合来帮助工作人员顺利到达。

工作人员同时可能面临很多其他因素的限制：进入工作范围的深度、空气密度、温度等，工作中的风险需要ASAT工程师做出评估并制定系统解决方案。

Many working conditions of the hydropower plant rely on the fall protection system to some degree. Comprehensive utilization of the vertical and horizontal fall protection system can prevent fall hazards to great extent in hydropower plants.

In hydropower plants, many operations in shafts are restricted within narrow working space, where the workers are lack of independent moving methods along the dam body with a larger angle inclination. In such case, combined use of ASAT powered ascending device and rope access technique shall help the workers move successfully.

Meanwhile, the workers may face the restriction of many other factors, such as the depth, air density and temperature of the work site. ASAT engineers shall evaluate the risks existing in the work, and develop systematic solutions.



安全带 D-10401



安全带 D-10201



连接装置 LYD-3010



限位工作绳 PR-6010



便携式升降器安快特 ACE-01



MINI版安快特 ACE-31



吊带 LS-02



轨道垂直防坠系统 Sarail V



滑轮 HPA0301



绳索保护套 RP-0140



水平防坠系统 Sarail H



# 火电应用 Thermal power

火电厂锅炉喷燃器、水冷壁检查，炉膛除焦，是常见工作；  
喷燃器处于炉膛四角，距离地面高，横向工作面小，大型设备难以施展；

使用安快特升降器，从设备进厂，到完成四个喷燃器的检查及除焦，实践经验一天就可以完成。工作时，只需利用观火孔、人孔、长吹孔、短吹孔、测温孔、炉顶预留孔中合适的孔洞，将工作绳及保护绳引入炉膛即可开始工作。

安快特升降器配备专用安全带、工作绳、保护绳、工作坐板、副保装置等，使用安全、舒适、便捷。

The inspection of boiler burners and water wall, and decoking in boiler chamber are common tasks of boiler maintenance in thermal power plants.

The working position sare located in the four corners of the boiler chamber, where are quite high above ground with small lateral working surface and difficult to access by large-scale equipment.

It has been proved that the inspection and decoking of all burners on four corners of boiler can be completed within one day adopting ASAT powered ascending device. In this case, reeve the working and safety rope of ASAT powered ascending device into boiler chamber through applicable holes (such as fire viewing hole, manhole, long blow hole, short blow hole or reserved hole on top of boiler) and then the designated work can start. The application of ASAT powered ascending device, completed with specialized harness, working and safety rope, working seat and backup safety device, is safe, comfortable and convenient.



安全带 D-10401



安全带 D-10201



连接装置 LYD-3010



限位工作绳 PR-6010



便携式升降器安快特 ACE-01



MINI版安快特 ACE-31



绳索止跌扣 RG-10-12



吊带 LS-02



机械静态绳索AR-TS系列



绳索保护套 RP-0140



下降器 RD2



# 军警及应急救援 Military police and emergency rescue

军警及应急救援要求救援人员必须快速到达救援现场，使用安快特结合绳索技术可以使救援人员快速、安全到达现场。

军警及应急救援人员需要具备更高级别的绳索技巧，如使用机械滑轮组提升拯救伤员，使用横渡技巧疏散伤员。

军警及应急救援人员需要进行更高级别的绳索技术培训。

Military police and emergency rescue requires the rescuers to rapidly arrive at the rescue site. Use of powered ascending device combined with rope access technique can help the rescuers quickly and safely reach to the site.

Military policemen and emergency rescuers shall master rope access skills at a higher level, such as use of mechanical travel system to lift up and rescue the casualty, and application of traversing skills to evacuate the casualty.

Military policemen and emergency rescuers shall take the training on rope access at a higher level.



安全带 D-10503



手式上升器  
HAL-01 & HAR-01



分力板 HRP-0105



金属环 HS-0101



军警版安快特ACE-11



防水版安快特 ACE-12



ACE-33



便携式升降器安快特 ACE-01



下降器 RD2



绳索止跌扣 RG-10-12



滑轮 HPA0301



机械静态绳索AR-TS系列



# 智能安全监控系统

## Intelligent security monitoring system

智能安全监控系统，专为风电现场设计，集人员定位、坠落报警、历史追溯等功能于一身。致力于解决风机塔筒内由于通讯困难导致的救援延误、监控不到位等问题。整套系统的通讯与风电现场现有以太网网络有机结合，无外部网络环境下也可向中控室传递塔筒内人员实时状态。

The intelligent safety monitoring system is specially designed for wind farms, integrating personnel positioning, fall alarm, and history tracing functions. Committed to solving the problems of rescue delays and inadequate monitoring caused by communication difficulties in the wind turbine tower. The communication of the entire system is organically combined with the existing Ethernet at the wind power site, and the real-time status of the personnel in the tower can be transmitted to the central control room without an external network environment.

### 功能介绍



#### · 实时定位

通过中控室上位机画面，可实时查看穿着智能安全带人员的所处风机号及风机内高度。

*\*风机内高度：所显示高度为智能安全带距离风机通讯中转端的垂直距离*



#### · 坠落报警

当穿着智能安全带的人员发生坠落后，智能安全带发出坠落报警信息，安装在塔底的风机通讯中转端立即启动声光报警装置以通知风机内其他作业人员，同时向中控室上位机软件发送坠落人员姓名、风机编号、所处高度等必要信息。

SOS

#### · 手动求救

当作业人员遇到其他危险时（如身体不适），可通过智能安全带上的手动求救按钮触发报警，向位于塔基的同伴以及中控室人员发出求救信号。



#### · 历史位置追溯

上位机电脑可永久保存智能安全带传来的位置数据，可依据人员姓名、安全带编号、风机编号、时间等筛选条件追溯历史数据。



#### · 中控室语音播报

上位机软件可通过语音播报特定事件，例如人员进入某台风机、人员发生坠落、人员手动求救等。

### 系统组成及参数-智能安全带



#### · 安全带智能模块

每条安全带配备一个智能模块，可检测作业人员发生的自由落体事件，并通过内置算法实现坠落判定。

*\*自由落体指未悬挂保护装置的情况下所发生的坠落事件*

#### · 冲击力传感器

每条智能安全带配备两个冲击力传感器，分别安装于胸前及背部防坠挂点下。

当防坠挂点承受超过250kg的冲击力时，将触发冲击力传感器发出超阈值信号，智能模块接收到该超阈值信号后做出坠落判定。

*\*智能安全带一旦承受大于250kg的冲击力后，将不能继续使用。*

### 系统组成及参数-风机通讯中转端



#### · 风机通讯中转端

每台风机底部安装一台风机通讯中转端，用于实时监控本台风机内的智能安全带状态，并向中控室转发智能安全带状态信息。

一旦监测到坠落，风机通讯中转端将通过自身声光报警设备发出报警信号，以确保位于同一风机的作业人员能够立即知晓有人员发生坠落；同时风机通讯中转端通过自身以太网接口向中控室转发坠落数据包。

*\*一台风机通讯中转端最多可同时监控8条智能安全带的实时信息*

#### · 安全带智能模块主要参数

安全带智能模块	参数	风机通讯中转端	参数
外形尺寸	90×54×27mm	本体外形尺寸（不含天线及报警器）	227×105×55mm
重量	130g（含内置电池）	本体重量（不含天线及报警器）	695g
续航能力	可充电锂电池，单次满电续航7-14天（依安全带使用频次不同）	供电方式	220VAC或24V/DC
风机内与中转端最大通讯距离	150米	通讯方式（与中控室）	以太网+数字量IO
坠落检测方式	冲击力+自由落体	通讯方式（与安全带）	433Mhz+2.4Ghz



## 系统组成及参数-风机通讯中转端



### 全局概览

可快速查看风场内所有智能安全带、风机通讯中转端的在线、离线状态。  
另有滚动实时动态，方便查看风场内最新作业动态。

### 风机概览

可快速查看风场内的每台风机在线、离线状态，作业人数等信息。



### 人员概览

可快速查看风场内每名配备了智能安全带人员的在线、离线状态，所处风机号、高度等信息。



### 单人视图

详细查看某一名人员的基本信息，以及详细的历史作业轨迹，并可根据时间、风机号筛选相关历史信息。



## 系统组成及参数-上位机软件



### 单风机视图

可详细查看某一台风机的基本信息、当前作业人员信息，便于中控室人员对某台风机进行即时高精度监控。

### 历史状态查询

可通过安全带编号、员工姓名、风机编号、时间区间等多个维度进行历史信息筛选与查询。



### 坠落视图

一旦人员发生坠落，上位机软件自动切换并锁定至人员概览视图，并高亮显示坠落人员卡片。同时通过语音功能提示中控室人员。



### 数据接口

上位机软件除提供以上可视化的人机交互界面外，还可向用户现有监控系统提供数据接口，以使用户改造其现有的上位机监控软件。

\* 数据接口默认采用ModbusTCP协议