



Anthron

降落控制裝置

用戶手冊





警告

本说明书必须向使用者提供。管理和使用者必须阅读和理解这些说明书。如不能遵照说明将造成严重的伤亡。

■ 应用

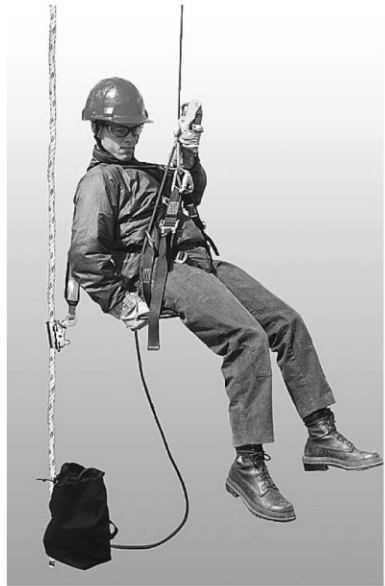
Anthron™下降控制系统是手动操作控制下降装置，最常用于悬吊工作定位。通常与悬吊椅，跌落保护带和适当的跌落制动系统一起使用，用于高层建筑的窗子清洗，外部维修，塔楼竖立和桥梁检查。本装置也可由经过培训的人员用于紧急情况下的撤离，或高空工作站降低伤亡事故的保护装置。

■ 功能

Anthron™下降控制系统设计使用本说明书中具体规定的经过认证的单根7/16英寸（11毫米）的绳索，使用者可以在绳索的任一点再移动并再安置本装置。绳索绕着一个提供摩擦力控制下降的凸轮组件运转。

本装置有足够的摩擦力限制负载的运动，直至控制杠杆被操控。在控制杆被移动时，绳索的摩擦力降低，负载将下降。如果控制杠杆在紧急情况下被压到底或全部放开，摩擦力增加，负载停止移动。

在某些应用情况，Anthron™操作者将绳索的一端连接在一个经认证的固定座上，配置经认证的安全带，悬吊椅或吊篮从装置上悬吊下降。Anthron™可以反向连接在固定座上。在此方向上，由一名救援者控制，可以降低伤亡。



■ 技术规格

MSA部件号:	SDSD25	MSA 认证的绳索	
(Anthron 型号SDSD30 将于08/01/01开始替代早期的Anthron型号SDSD25)		更换件部件号	SDC716000
		描述:	夹心绳 两头带尼龙
下降器		直径:	11毫米
描述:	铸铝 经单个验证测试	长度:	16米至90米
尺寸:	190毫米 × 76毫米 × 25毫米	总重量:	约10.6公斤/100米
总重量:	340克	额定强度:	带打结的夹心绳 2900公斤 (6000磅)
工作负载范围:	单人 150公斤		
速度:	2.5米/秒	方形锁扣 (2)	
最大下降长度:	100米	更换件部件号:	SRCC643
符合:	EN 341 A级	描述:	梨状自动锁扣
专利设计		材料/表面处理:	碳钢/镀锌
Anthron™通常与MSA认证的绳索一起提供。也有其他经认证的绳索可以与Anthron™下降器一起使用 (见认证绳索清单)。		开口宽度直径:	12毫米
		总重量:	275克
		额定强度:	35 KN (7850磅)

■ 经认证的绳索

注意：本列表中的绳索已经与Anthron™下降器一起在实验室条件下进行测试，并证明其性能良好。在现场条件下的磨损，污物，外部物质和其他因素可能影响Anthron™下降器的性能。按照说明使用，经过认证的绳索将实现其在实验室等同的性能。但是MSA并不对以下列表的绳索与用户的性能满意度进行担保：

制造商/经销商	名称	标称直径	强度磅	产品号码	结构	材料
Esprit Rope Inc	Suretyman	7/16" (11mm)	6000 (26.7KN)	SRP544000	夹心绳	尼龙
Bluewater Ltd. Carrollon.GA	Assault Line	7/16" (11mm)	6000 (26.7KN)	SRP508760	夹心绳	尼龙

如果你使用的绳索不在以上列表中，MSA可以免费对绳索进行测试。请提供6米长的样品绳索3根，同时提供制造商的绳索测试证书复印件一份。

■ 操作说明

使用前，使用者必须接受有资质的指导人员在令受训人感到畏惧的环境进行实际的训练。Anthron™下降控制器必须与有一个独立固定座的跌落制动系统，包括一套经认证的符合当地规定的全身安全带，一起使用。唯一的例外是系统由一名经过充分训练的使用者在紧急撤退时使用。

培训必须包括下列部件：

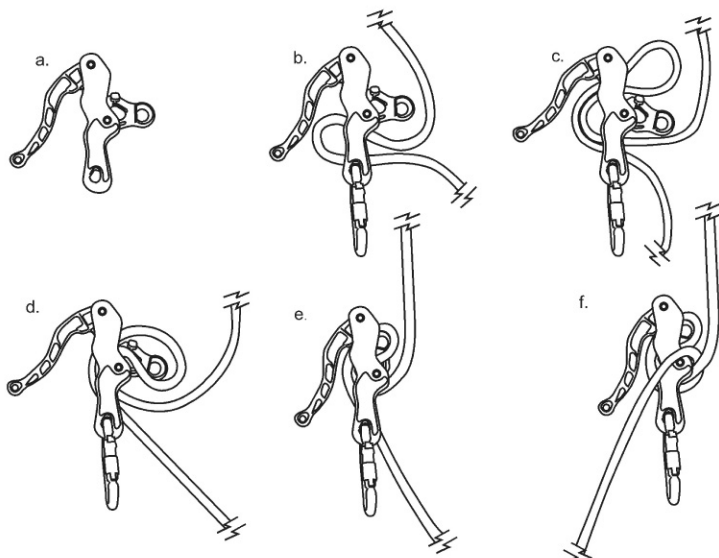
- 绳索
- 固定座的选择
- 方形锁扣的使用（见MSA方形锁扣的说明书）
- 备用的跌落制动设备的使用
- 下降技术
- 保养和检查

Anthron™下降控制器的绳索

一只手握住Anthron™下降控制器，另一只手将凸轮组件从主体（图a）中滑出。在方形锁扣和朝向控制杆（图b）的下凸轮之间插入一个40厘米的绳环。将绳环绕着下凸轮弯曲，在控制杆的旋转固定铆钉（图c）之间穿过。将剩余的绳环绕着上凸轮放，确保在上，下凸轮之间的导向栓位于两股绳之间。

如果装置的绳索连接正确（图d），固定座的绳索头应当绕在下凸轮上，向上朝向固定座。绳索的自由端应垂向地面（图e）。

为了双重锁定下降器，将下股绳绕在控制器体上并放在固定座的绳股和控制器之间（图f）。如放开双重锁定功能，只需反向操作锁定的程序。



固定座的选择：

雇员有责任确认固定座的点数符合当地的规定，并应在试图下降的地点适当的地方可以选用。在每一个下降位置，必须既有可供Anthron™系统（工作绳索）使用，也有供配合工作的跌落制动系统使用的固定座。工作绳索必须从平台或屋顶的起始点以外悬垂向下。如果悬垂点不符合当地有关固定座强度的要求，则工作绳索也必须固定在一个固定座上。

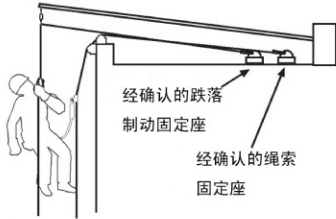


图9 工作绳索和单独的垂直救生索，安全带，和跌落制动器

跌落制动：

与Anthron™控制器一起使用的最适合的跌落制动设备是和全身安全系索和跌落制动器（图10）配套使用的垂直生命线系统。使用者必须熟悉这套设备的使用和它的限制性。在最坏的情况下，万一工作绳索和第一级固定座跌落，或Anthron™下降控制器的绳索连接不正确，跌落制动系统必须对操作者和任何从系统上悬吊下来的设备进行跌落制动。



图10 救生篮或安全带的Anthron™下降控制器附件

下降：

必须由有资质的教练人员进行实际演练和培训，教练人员应能够安全地悬吊受训人员，并能够在紧急情况下提供帮助。使用者必须在无监管的使用前，演示其合格的下降技术和正确的索具排布能力。

Anthron™下降控制器的设计与显示在经认证的绳索列表中的7/16英寸（11毫米）低强度（静态）的夹心绳一起使用。

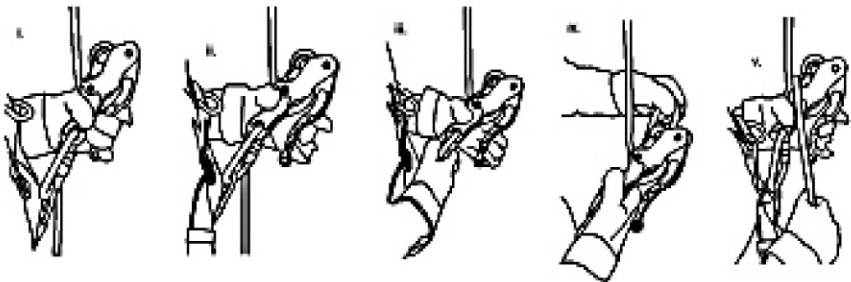
下降长度必须限制在最大工作负载的垂直运动距离不超过100米（320英尺）。对于超过长度限制的应用，请与MSA咨询指导。

在长距离下降之前，对每一个新绳索的下降速度和制动能力，改变的环境条件，Anthron™下降控制器的状况必须进行评估。

对于Anthron™的控制水平的不同位置的下降速度有相应的规定。下降的起始应无任何困难，制动的动作应立即发生。

程序：

- 1.根据制造商的建议，将绳索连接在跌落制动系统和经认证的跌落制动固定座上。
- 2.将装置上的绳索截取恰当足够的长度，将其连接在固定座上，以方便安全带的附加接入。
- 3.将绳索一端连接在固定座上，并将Anthron™下降控制器连接在全身安全带的前身连接点上，或通过建议的自动锁定方形锁扣连接在悬吊椅上。
- 4.在使系统受力之前，仔细检查所有的设备是否安全正确。采取所有有关的注意事项，试将绳包向下投掷到底。确认绳索有足够到达地面的长度，无缠绕或打结。
- 5.在建筑物房顶，框架，结构件或平台的边沿处，坐在全身安全系索或悬吊椅上，将工作位置调节舒适。如可能，脚踩在结构件上，稳定自己的始发姿势。
- 6.在一只手握住控制杆支撑绳索的自由端时，另一只手将控制杆充分压向控制器主体（图i）。慢慢放松压力，下降将开始（图ii）。如果控制杆放开，下降将停止。如果控制杆被全部压下，下降也将停止。控制杆的这种压力特点可使下降速度变化（图iii）。如需去掉Anthron™下降控制器上方的一些松弛的绳索，收紧上凸轮上方的绳索，拉出所想要的绳子的长度，然后拉住绳索的自由端，去除装置的松弛部分的绳子（图iv）。为了双重锁定下降器，将绳子的下股绕在控制器主体，以及固定座的绳股与控制器之间（图v）。为了放开双重锁定，只需反向操作锁定程序。



■ 设计陈述

1.应采取一切措施，避免使系统遭受震动负载。但是，控制器的设计可以使控制器在受到震动负载时，可以在绳索上滑动。当系统允许自由下落时，由于绳索是通过控制器被拉动的，其终结力以降低到可以接受的水平。在跌落之后，下降可以继续，但是绳索可能有损坏。经受过这种下落的绳索应被剔除，不可使用。

2.只可使用与本产品一起提供的，在本说明书中有描述的设备。如果使用者未遵守警告事项，则使用者及其管理者自负责任。

3.锋利的边沿，断齿，打结，不正确的储存，处置，或设计功能以外的使用都降低绳索的强度。如果其强度降低过多，则绳索将不能完成其功能。

4.绳索不可有扭结，编接，打结或严重散开之处。绳索上任何可能导致卡住，增加系统机制的摩擦力的东西都可能导致不能下落。如果凸轮上有焦油，即使使用干净的绳索，也可能导致下落失败。

5.Anthon（商标名）下降控制器当暴露于灰沙中时仍可安全操作，但建议在使用前用水冲洗控制器。

6.只有在“认证绳索列表”中的绳索经过测试，保证正确的操作。如果你想知道其他绳索的适用性，请联系MSA。可以将绳索的样品提供给MSA测试。

■ 检查

1. MSA Anthron™ 下降控制器系统在每一次安全前，都应由使用者进行检查，并在不超过一年的间隔时间内，由使用者之外的有资质人员再进行检查。绳索的检查应记录在“检查项目表”中。

2. 当绳索系统任何部件被检查出任何缺陷，损坏或不良保养时，有关部件必须被剔除，不得使用。当其被经过充分的纠正保养之后，才能返回使用。剔除部件的缺陷或损坏也可能导致一些部件的撤除或更换。

3. 如有下列情况，请将装置剔除使用：

- 标记（标签）不清晰或缺失。
- 绳索有迹象表明有过度的磨损或损坏
- 系统硬件有缺陷或损坏的迹象，如裂纹，锋利的边沿，变形，腐蚀，化学品侵害，过度受热，改动或过度磨损。
- 机械部件有不正确的使用，不正确的组配，或改动的迹象
- 有缺失的部件

4. 仅有MSA或经制造商书面授权的人员或单位可对设备进行修理。不允许未经授权的人员进行修理或改动。

检查程序

1. 全身安全系索应按照随产品提供的说明书进行检查。

2. 控制器的重复使用将导致一处或多处铝制表面的磨损。

3. 在每次使用前，以及每次将绳索移动至另一处新的固定座前，检查绳索。观察有否割伤，磨损，油脂，油迹，胶，焦油，或其他任何可能影响控制器的性能，或绳索强度的状况。如果绳索仍然可以使用，在使用前，应进行短距离（如10英尺）的下降演示，以确认其正常的下降操作功能。检查收缩密封和绳索两端的套环是否有损坏。如果收缩密封缺失，绳结有可能被改动过。如果绳索一端的绳结，套环或收缩密封缺失，绳索将短于原来的长度，对于需要的应用可能长度不够。

4. 如果绳索在任何时候经历过快速下降或长时间连续下降使用，请抛弃绳索。查看是否有任何融化，发亮，烧痕或过度磨损之处。

5. 任何时候绳索经过了对绳索可造成震动负载的跌落或掉落，请抛弃绳索。

6. 检查方形锁扣的门的闭合动作是否顺畅。如门被粘住，或门的开口不能正确闭合表示有变形或关门的机制有故障，请将锁扣剔除，不可使用（遵照方形锁扣说明书的检查程序）。

■ 保养和储存

1.用户的单位应按照MSA 的说明对设备进行保养和储存。如因使用条件的不同，有任何特殊情况产生，请向MSA说明。

2.需要或计划进行保养的设备，应加上“不可使用”的标牌，撤离服务区。


3.储存在清洁，干燥的区域，远离温度过高的热源，蒸汽，阳光，有害的烟雾，腐蚀剂和鼠类。


4.定期用轻质油润滑方形锁扣的门。除去多余的油以防止污染。


不要对设备进行任何维修或改动。请向MSA咨询特殊应用和使用。


警 告


本说明书必须向使用者提供。管理和使用者必须阅读和理解这些说明书。如不能遵照说明将造成严重的伤亡。


 缓慢并在控制中下降。长距离快速下降会使控制器发热，这可能损坏绳索。


 避免快速停止。快速的降速将对固定点产生过度的应力。


 除非是制造厂商对绳索的打结或密封，使用者不要在绳索的末端打结。绳结将降低绳索的强度，如结的不正确，绳结可能意外松开。

 绳索的全部长度都不可由焦油，胶，胶带，绳结，起球，卷曲或任何可能妨碍其通过控制器的运动。如果控制器被任何障碍物卡住，操作者将陷入困境，救援可能非常困难。

 系统仅可以使用经过认证的绳索。尺寸过小（太细）的绳索通过下降器时可能不能控制，或其制动动作可能不能预见。尺寸过大（太粗）的绳索可能不能通过凸轮组件区域。

 要保护绳索，避免碰到锋利或不平整的边沿。否则，绳索的强度会严重降低或可能断裂。

 使用经认证的固定座点，并符合当地政府的规定。

 如果使用的绳索两端没有套环，请在绳索末端打结，以防止绳索的意外滑脱。

■ 检查表

位置 _____

日期 _____

检查人 _____

数量	描述					
		完好	完好/缺陷/损坏	完好	完好/损坏	完好
长度	绳索					
2	收缩密封					
2	套环					
2	方形锁扣					
1	下降器					
	其它					

■ 质量保证条款

1、质量保证：

MSA保证：如果本产品及其附件（配件）是按照MSA的指示说明书和/或建议而使用和维护的话，自第一次使用之日起的一（1）年时间之内或是自发运日期起的18个月的时间之内（取两个日期中先发生的日期），本产品及其附件将不会有机械缺陷或制造工艺缺陷。更换件和修理的质保期为自产品的修理之日或更换件的销售之日起90天，两者取其先。

MSA将免除其在本保证书中的责任，如果对于本产品及其附件的修理或修改不是由MSA公司本身的人员或其授权（指定）的人员进行的，或者，如果对于本产品的索赔是由于（使用者）对本产品的实质上的滥用或误用而引起的。MSA的任何代理人，雇员或代表都无权强制要求MSA对本合同下销售的货物承担任何主张、要求或保证。MSA对于非卖方制造的部件不承担任何质量保证责任，而会将制造商的质量保证转给买方。

本保证书代替所有其它的明白表示的、隐含的或法定的保证书，并且应严格地限于此处的条款。卖方明确地否认对任何为了某一特定目的可销性和适合性而承担质量保证。

2、排它性的补救措施：

下面这个排它性的（唯一的）补救措施是被明确地同意的了：

如果MSA违反了以上的保证，或任何侵权的做法，或任何其它的诉讼理由，则对于买方的唯一的补救措施，是在MSA对任何（可能有故障的）设备或部件在经过检验之后，证实是确有故障，由MSA决定（对有故障的部件）进行修理或更换。被更换的设备和/或部件将按照F.O.B.（离岸价格），免费提供给买方，运至买方指定目的地。如果卖方未能成功地修理不正常运行的产品，将不会导致在此已建立的补救措施实施其基本目的。

3、对间接损失的免责条款：

买方明确地理解并同意：无论在何种情况下，MSA对由于货物的操作问题的原因引起的在经济的、特殊的、偶然的或任何类型的间接的损害，或是损失，包括但不限于如买方对预期利润的损失以及任何其它的损失将不承担任何责任。以上条款适用于任何针对MSA的由于质保条款，侵权或其它诉讼条款而提起的索赔。

对于任何其它信息，请联系MSA售后服务部。



www.MSAafety.com
客户服务热线: 4006-090-888



梅思安（中国）安全设备有限公司
电话：0512-62898880
传真：0512-62952853

中国营销总部
电话：021-62375878
传真：021-62375876

产品技术不断改良
当前数据仅供参考
P/N:10114018 Rev.3



Anthron

Descend Control Kit

User's Manual





WARNING!

THESE INSTRUCTIONS MUST BE PROVIDED TO THE USER. MANAGEMENT AND USER MUST READ AND UNDERSTAND THESE INSTRUCTIONS; FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY OR DEATH.

■ Application

Anthron™ Descent Controller is a manually operated controlled descent Device which is most commonly used for suspended work positioning. In this application it is used with a bosun's chair, fully body harness and appropriate fall arrest system for window washing, exterior building maintenance, tower erection and bridge inspection. The device can also be used by trained personnel in an emergency situation for self-evacuation or to lower a casualty from an elevated work station.

■ Function

The Anthron™ Descent Controller is designed to be used on a single 7/16" (11 mm) approved rope as specified in these instructions. The operator can remove and reinstall the device at any point on the rope. The rope runs inline around a cam assembly which will provide friction to control the descent.

Until the control lever is manipulated, there is sufficient friction through the device to restrict movement of the load. As the control Lever is moved, friction on the rope decreases and the load will descend. If the control lever is fully pressed or fully released in a panic

Situation, the friction increase and the load stops.

In most applications, the Anthron™ operator descends by attaching the rope end to an approved anchor and descends suspended from the device in an approval harness, bosun's chair or cradle. the Anthron™ can be inverted and attached to anchor. In this orientation a casualty can be lowered while being controlled by a rescuer.



■ **Specifications**

MSA Part # :	SDSD25	MSA Approved Rope	
		Replacement Part #:	SDC716000
Descender		Description:	Kernmantle, with nylon thimbles both ends
Description:	Cast aluminum, individually proof tested	Diameter:	11 mm(7/16")
Dimension:	190 mm(7.5") x 76 mm(3") x 25 mm(1")	Length:	16 m(50')to 90 m(300')
Total weight:	340g (12 oz)	Total weight:	Approx.10.6 kg/100 m (7 lbs/100')
Working load range:	1 person, 150kg (330 lbs)	Rated strength:	With knotted termination, 2900kg (6000 lbs)
Speed:	2.5 m/s(8.2 ft/s)		
Maximum length of descent:	100 m (320 ft)	Carabiners(2)	
Meets:	EN 341 Class A	Replacement Part #:	SRCC643
		Description:	Pear shaped autolocking
Patented Design		Material/finish:	Carbon steel/zinc plated
Anthron™ is normally supplied with MSA approved rope. There are other ropes which are approved to use with the Anthron™ Descender (see approved rope list).		Jaw width dia.:	12 mm (1/2")
		Total weight:	275 g (9.7 oz.)
		Rated strength:	35 KN (7850 lbs)

■ Approved Rope List

NOTE: The rope on this list have been tested with the Anthron™ Descender under laboratory conditions and found to perform satisfactorily. Wear, dirt, foreign substances, and other factors can influence the performance of the Anthron™ Descender under field conditions. When used in accordance with the instructions, an approved rope should perform as observed in test conditions , however, MSA makes no warranty that the ropes listed below will perform satisfactorily for the user.

Manufacturer/ Distributor	Name	Nominal Diameter	Strength (lbs)	Product Number	Construction	Materials
Esprit Rope Inc	Suretyman	7/16" (11mm)	6000 (26.7KN)	SRP544000	Kernmantle	Nylon
Bluewater Ltd. Carrollon.GA	Assault Line	7/16" (11mm)	6000 (26.7KN)	SRP508760	Kernmantle	Nylon

If your rope is not listed, MSA will test the rope at on cost. Forward 3 rope samples of 6 m (20') to MSA along with a copy of the rope manufactory's test certificate.

■ Operation Instructions

Prior to use, the user must engage the practical training in a safe non-intimidating environment conducted by a qualified supervisor. The Anthron™ Descent Controller must be used with an independently anchored fall arrest system including an approved full body harness in accordance with the applicable local regulations. The only exception would be when the system is used by a fully trained user during an emergency evacuation.

Training must include the following components:

- roping ·anchor selection
- use of carabiners (see MSA instruction for carabiners)
- use of fall arrest equipment for backup
- descent technique ·maintenance and inspection

Roping the Anthron™ Descent Controller

While hold the Anthron™ Descent Controller in one hand, slide the cam assembly out of the main body (fig a). Insert a 40 cm(15.5") bight of rope between the carabiner and the lower cam towards the control lever(fig b), bend the bight up around the lower cam passing between the control lever swivel rivet(fig c). Place the remainder of the bight around the upper cam ensuring the guide pin between the upper and lower cam is positioned between the two rope strands.

When the device is roped properly (fig d) the anchored rope end should wrap around the lower cam and up towards the anchor, the free end of the rope should flow the towards the ground. (fig e)

To double lock the descender, bring the lower rope strand around the controller body and between the anchored rope strand and the controller (fig f). To release the double lock feature, simply reverse the locking procedure.

Anchor Selection

The employer is responsible for ensuring that anchor points meet the local requirements and are available in a location appropriate for the descent to be attempted. At each descent location, there must be anchor for the both the Anthron™ system(working rope) and accompanying fall arrest system. The working rope must be suspended away from the platform or roof starting point. If the suspension point does not meet the local requirements for anchor strengths the working rope must be anchored to an approved anchor as well (Fig .9).

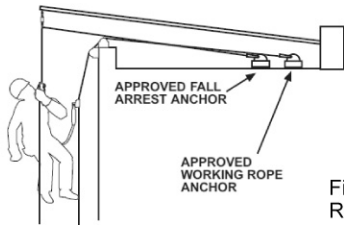


Figure 9
Rigging of a Working Rope
and Separate Vertical Lifeline, Harness ,
and Fall Arrester

Fall Arrest:

The most suitable fall arrest equipment for the Anthron™ Descend Controller is a vertical lifeline used with an integral lanyard and Fall arrest(Fig.10). The user must be familiar with the use of this equipment and it's limitations. In the unlikely event that the working rope primary anchor fails or the Anthron™ Descend Controller is Roped incorrectly, the fall arrest system must arrest the user and any equipment suspended from the system.

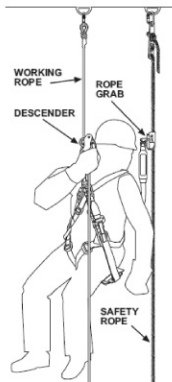


Figure 10
Attachment of Bosun's Chair
or Harness to Anthron™ Descend Controller

Descending

Practice or training sessions should be conducted by a qualified person who can safely supervise candidates and capable of providing assistance in the event of emergency. The users must demonstrate competent descent technique and proper re-rigging of the device prior to unsupervised use.

The Anthron™ Descent Controller is designed to use with a 7/16" (11 mm) low stretch (static) kernmantle ropes indicated on the approved rope list.

Descent length must be limited to a maximum of 100 m(320 ft) of total vertical distance traveled at maximum Working load. For applications involving longer lengths, contact MSA for guidance.

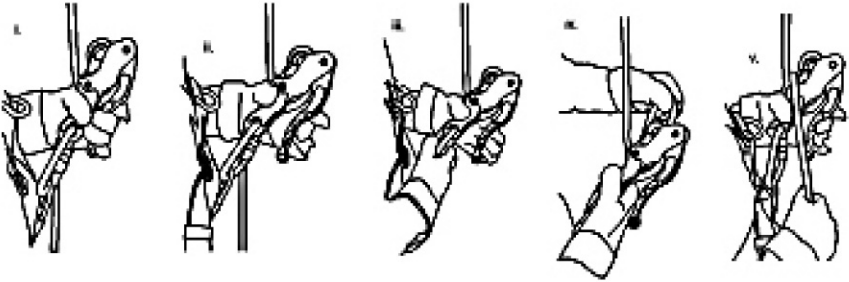
Descent speed and braking capability must be evaluated for each new rope, changing environmental conditions, condition of Anthron™ Descent Controller prior to long descents. This evaluation should be done no more than five feet off the ground.

Descent speed is regulated by varying position of the control lever of the Anthron™. Descent should be initiated without difficulty and braking action immediate.

Procedure

- 1.Connect to fall arrest system and approved fall arrest anchor according to manufacturers recommendations.
- 2.Rope the device with just enough rope from the device to the anchor to allow easy harness attachment.
- 3.Connect rope end to anchor and Anthron Descent Controller to front attachment point on harness or to bosun's chair with recommended autolock carabiners.
- 4.Check all equipment for correct installation before weighting system. Taking the appropriate, throw rope bag to bottom. Ensure that rope is long enough to reach the ground and is free of tangling and knots.
- 5.Sit in harness or bosun's chair adjusting for comfort at the edge of the building roof, framework, structure or platform. If possible, stabilize stance with feet up against structure.
- 6.While supporting the free end of the rope with one hand grasp the control lever with the other hand depress the control lever completely against the controller body (fig i). Slowly release pressure and descent will be initiated (fig ii). If the control lever is released the descent will stop, if the control lever is fully depressed the descent will stop. Thus feathering the pressure of the control lever will vary the speed of the descent (fig iii). Should there be a need to remove some slack above the Anthron.

Descent Controller pinch the rope above the upper cam and pull up the desired amount of rope then pull on the free end of the rope to remove the slack rope in the device (fig iv). To double lock the descender, bring the lower rope strand around the controller body and between the anchored rope strand and the controller (fig v). To release the double lock feature, simply reverse the locking procedure.



■ Design Statements

- Shock loading the system should be avoided at all costs, however, the controller has been designed to slip on the rope in the event of a shock load. In the event that a free fall is allowed on the system, the resulting force is reduced to acceptable levels as the rope is pulled through the controller. Descent can continue after the fall, however, damage to the rope is likely and rope subjected to such a fall should be removed from service.
- Use only equipment supplied with the product and described in these instructions. If the user disregards this warning, the user and users management accepts the liability.
- Reduction in rope strength can result from sharp edges, abrupt edges, knots, incorrect storage, handling or for uses other than it's intended function. Rope strength can be compromised sufficiently to cause rope failure.
- The rope must be free of kinks, splices, knots or heavily tarred sections. Anything on the rope which may get caught or increase friction in the mechanism may render the descent impossible. Tar on the cam surface even with a clean rope will have the same effect.
- The Antron™ Descend Controller will operate safely when exposed to sand and dust, however, it is recommended to rinse the controller with water prior to continued use.
- Only ropes on the .Approved Rope List. have been tested to ensure correct operation. If you have questions on the suitability of another rope contact MSA 1-800-672-2222. A sample of the rope in question can be supplied to MSA.

■ Inspection

1.The MSA Anthron. Descent Controller System shall be inspected by the user prior to each installation, and additionally by a competent person other than the user at intervals of not more than one year. Inspections of the rope must be recorded in the .Inspection Checklist.

2.When inspection reveals defects, damage, or inadequate maintenance of any component in the system, the component affected shall be removed from service and undergo adequate corrective maintenance before return to service. Removal from service may imply that defects or damage will result in retiring and replacing some components.

3.Remove a unit from service if:

markings (labels) are illegible or absent.

there is evidence of excessive wear or damage to the rope.

there is evidence of defects or damage to hardware elements including cracks, sharp edges, deformation, corrosion, chemical attack, excessive heating, alteration or excessive wear.

there is evidence of improper function, improper fit or alteration of any mechanical component;there are parts missing.

4. MSA or persons or entities authorized in writing by the manufacturer, shall make repairs to equipment. No unauthorized repairs and/or modifications are allowed.

Procedure

1.Harness should be inspected in accordance with instructions supplied with the product.

2.Repeated use of the controller will result in wear on one or more of the aluminum surfaces.

3.Inspect the rope prior to use and each time the system is moved to a new anchor location. Look for evidence of cuts, wear, fraying, grease, oil, glue, tar, or any other condition which could affect the performance of the controller or strength of the rope. If the rope is still serviceable, correct operation of Descender must be confirmed by performing a low level descent (ie 10 ft) prior to use. Inspect shrink seal and thimble on both ends of rope for damage. If shrink seal is missing, knot may have been tampered with. If knot, thimble and shrink seal is missing on either end of rope, rope is shorter than original length. It may not be long enough for application.

4.Discard rope any time there has been a fast or long continuous descent. Look for melting, glazing, burning, or excessive wear.

5.Discard the rope any time there has been a fall or drop which would place a shock load on the rope.

6.Inspect the carabiners for smooth gate action. A sticky gate or gate .aw which does not engage properly might be deformed or have a faulty gate mechanism and should be removed from service (follow inspection procedure in carabiner instructions).

■ Maintenance and Storage









1. Maintenance and storage of equipment shall be conducted by the user's organization in accordance with MSA instructions. Unique issues, which may arise due to conditions of use, shall be addressed with MSA.
2. Equipment which is in need of or scheduled for maintenance shall be tagged as .do not use. and removed from service.
3. Store in a clean dry area free from excessive heat, steam, sunlight, harmful fumes, corrosive agents and rodents.
4. Periodically lubricate carabiner gate with a light oil. Remove excess to avoid contamination.

Do not perform an. maintenance or make any modification to the device. Consult MSA for special applications and uses.



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-  Descend slowly and under control. Long rapid descents will heat the controller which may damage the rope.
-  Avoid quick stops. Rapid deceleration over stresses the anchor point.
-  Do not use knots for rope terminations unless tied and sealed by manufacturer. Knots will decrease the strength of the rope and may inadvertently release if not tied correctly.
-  The entire length of rope must be free of tar, glue, tape, knotting, pilling, twists or anything which may prevent it from moving through the controller. If the controller gets caught up on an obstruction, the operator will be stranded and rescue may be very difficult.
-  Use only approved rope with the system. Undersized rope may move through the Descender uncontrollably or the braking action may be unpredictable. Oversized rope will not fit through the cam assembly area.
-  Protect the rope from sharp or abrupt edges. Rope strength will be seriously reduced or rope may fail.
-  Use approved anchor points which meet local government regulations.
-  If the rope used does not have a thimble at both ends put a knot at the end of the rope to prevent accidentally falling off the rope.

■ Inspection Checklist

Location _____

Date _____

Inspected By _____

Good

Damaged, worn, altered

Missing

Remove from service

Quantity	Description					Comments
Length	ROPE					
2	SHRINK SEAL					
2	THIMBLE					
2	CARABINERS					
1	DESCENDER					
	OTHER					

■ WARRANTY

Express Warranty - MSA warrants that the product furnished is free from mechanical defects or faulty workmanship for a period of one (1) year from first use or eighteen (18) months from date of shipment, whichever occurs first, provided it is maintained and used in accordance with MSA's instructions and/or recommendations. Replacement parts and repairs are warranted for ninety (90) days from the date of repair of the product or sale of the replacement part, whichever occurs first. MSA shall be released from all obligations under this warranty in the event repairs or modifications are made by persons other than its own authorized service personnel or if the warranty claim results from misuse of the product. No agent, employee or representative of MSA may bind MSA to any affirmation, representation or modification of the warranty concerning the goods sold under this contract. MSA makes no warranty concerning components or accessories not manufactured by MSA, but will pass on to the Purchaser all warranties of manufacturers of such components.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, AND IS STRICTLY LIMITED TO THE TERMS HEREOF. MSA SPECIFICALLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Exclusive Remedy - It is expressly agreed that the Purchaser's sole and exclusive remedy for breach of the above warranty, for any tortious conduct of MSA, or for any other cause of action, shall be the repair and/or replacement, at MSA's option, of any equipment or parts thereof, that after examination by MSA are proven to be defective. Replacement equipment and/or parts will be provided at no cost to the Purchaser, F.O.B. Purchaser's named place of destination. Failure of MSA to successfully repair any nonconforming product shall not cause the remedy established hereby to fail of its essential purpose.

Exclusion of Consequential Damages - Purchaser specifically understands and agrees that under no circumstances will MSA be liable to Purchaser for economic, special, incidental, or consequential damages or losses of any kind whatsoever, including but not limited to, loss of anticipated profits and any other loss caused by reason of the non-operation of the goods. This exclusion is applicable to claims for breach of warranty, tortious conduct or any other cause of action against MSA.



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technology current data is
only for reference
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