

---

INSTRUCTIONS FOR USE

---

**Descender Equipment**  
**AG 10 S**  
**EN 341**  
**CE 0158**

**Technical data:**

Manufacturer:	:	Christian Dalloz Holding Deutschland GmbH & Co. KG
Type	:	AG 10 S
Device class	:	A
Serial no. / Yr. of manufacture	:	...../.....
Permitted descent height	:	400 m max.
Max. descent load	:	150 kg
Desecent speed	:	0,7 m/s
Device weight	:	1.4 kg (without rope)
Rope length	:	.....
Examination departement	:	DMT Technologie Park 1 45307 Essen

SE 60

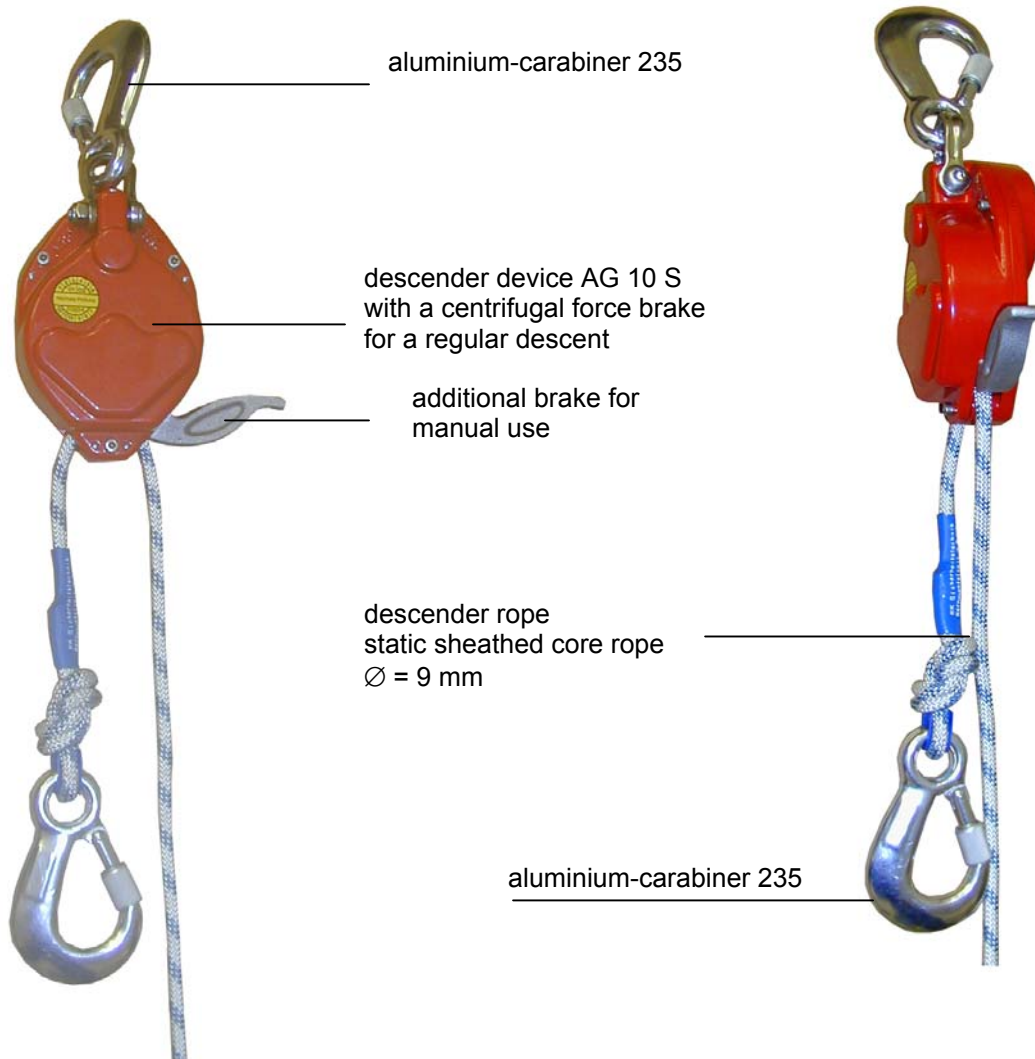
3<sup>rd</sup> issue  
1/2000

5<sup>th</sup> issue  
4/2004

### **Table of contents**

1. Description
2. Preparation
3. Descending
4. Storage and transportation
5. Cleaning
6. Maintenance
7. Inspection
8. Info sheet for visual inspection
9. Inspection book
10. Sheet for documentation of the abseiling work

Illustration of the AG 10 S



### 1. Description

The descender Device AG 10 S is used for the descending of persons from high work locations. The descender device AG 10 S is not a fall arresting system.

The temperature-dependent utilisation range of the descender equipment lies between ambient temperatures of -30°C to 60°C.

### 2. Preparation

The pre-assembled abseiling equipment is ready for use after its removal from the equipment bag or case and after making the visual examination. The abseiling device must be visually examined by the user prior to each use in order to confirm that the abseiling device and the rescue rope are in a fit-for-use condition. With determination of any damage at rope, equipment housing or safety snap hook the equipment the device is to be withdrawn immediately from use and is to be delivered the manufacturer or a person designated by the manufacturer for the examination.

The enclosed reference sheet of the manufacturer for the execution of the visual examination is to be considered.

An anchor point as per EN 795, with a minimum loadability of 1000 kg and at an adequate height (approx. 2.0 m measured from the floor), must be available for the securing of the descender device with the carabiner. The anchor point should - when possible - be at a position on the structure which allows a free descending without obstruction.

Avoid descending over sharp edges whenever possible and maintain an adequate distance from the wall (approx. 0.5 m) in order to make the descending process easier. An edge protection device should be placed under the rope to protect the rope when an adequate spacing distance cannot be maintained.

**Note:** It must be ensured that the persons involved in the rescue are always secured during the entire rescue process; i.e. if a railing is not available, the persons must be secured, for example, by way of a full-body harness as per EN 361, connecting devices as per EN 354 and energy absorbers as per EN 355.

It must be ensured that the rope travelling upwards during the abseiling process does not catch or hook on the structure and consequently interrupt the abseiling process.

Attention should be given to the avoidance of obstacles during the abseiling process.

### **3. Descending**

- **Self-lowering by descending with the AG 10 S**

Put on the full-body harness as per EN 361 or the rescue harness as per EN 1497 (observe the respective instructions for use).

Hook the carabiner located on the rope end into the available anchor point (as per EN 795) and secure with the swivel nut. The textile rope is lowered coil-free to the ground. It should be ensured that the rope entry and rope exit points of the abseiling device permit a smooth running of the rope through the device.

Hook the carabiner located on the AG 10 S into the chest eye of the rescue/full-body harness (and secure with the swivel nut) so that the descending person can manually operate the device during the descending process.

The AG 10 S has an additional manually-operated brake which allows an interruption of the descending process - e.g. to allow an obstruction to be evaded. The hand brake on the AG 10 S is normally in the 'Stop' position - indicating a condition where an descending is not possible. An descending process is not possible until the brake lever is manually placed (very low force required) and held in the 'Travel' position. The lever of the additional brake automatically returns to the 'Stop' position when the descending person releases it and the descending process is then interrupted.

This additional brake on the descender device enables the descending person to interrupt the descending process at a certain height and then have both hands free.

The descending speed will be controlled automatically by a centrifugal force brake (standard speed of approx. 0.7 m/s). It is also possible to interrupt the descend by braking (holding) the upward travelling rope with the hand.

- **Descending of a casualty by a second person**

Put on the full-body harness as per EN 361 or the rescue harness as per EN 1497 (observe the respective instructions for use).

Hook the carabiner located on the descender device AG 10 S into the available anchor point as per EN 795 and secure with the swivel nut.

Hook the carabiner located on the rope end into the chest or back eye of the rescue/full-body harness of the casualty and secure with the swivel nut. The textile rope is lowered coil-free to the ground. It should be ensured that the rope entry and rope exit points of the abseiling device permit a smooth running of the rope through the device. The abseiling is also possible if the rope stock remains on the platform.

The rope between the abseiling device and the person to be lowered must not be a slack rope; the free rope on the other side must be pulled downwards and held with force.

The casualty can now be lowered under controlled travel from the start location by manually operating the AG 10 S.

The additional manually-operated brake on the AG 10 S is normally in the 'Stop' position - indicating a condition where an descending is not possible. An descending process is not possible until the rescuer manually places and holds the brake lever (very low force required) in the 'Travel' position. The lever of the additional brake automatically returns to the 'Stop' position when the rescuer releases it and the descending process is then interrupted.

This additional brake on the descender device enables the rescuer to control, and if necessary to interrupt, the descending process.

The descending speed is controlled automatically by a centrifugal force brake (standard speed of approx. 0.7 m/s)<sup>1</sup>.

## **4. Storage and transportation**

The descender equipment should be stored in a dry and cool room and protected from UV light.

Avoid contact with acids, caustic liquids and oils.

Rope which has been unavoidably wetted should only be dried in a natural way.

A strong equipment bag or equipment case should always be used for the transportation of the descender equipment in order to avoid a damage by external influences.

## **5. Cleaning**

A cleaning of the textile components of the descender equipment may only be carried out by the manufacturer.

---

<sup>1</sup> The specified abseiling speed of 0,7 m/s is valid in the case of available rope stock of the ground. If the rope stock is left on the place from which the avseiling process is running, the abseiling speed increases (approx. 10%).

## **6. Maintenance**

The abseiling equipment must be visually examined by the user prior to each use in order to confirm that the equipment is in a fit-for-use condition. The rescue equipment is to be withdrawn from use and subjected to an inspection by the manufacturer when damage to rope, carabiner or the abseiling device is ascertained.

A utilisation period of 6 years can be assumed for the textile ropes under normal conditions of use.

**Attention:** A modification or add-on to the abseiling device is not permitted.

## **7. Inspection**

### **a. use for rescue**

The rescue equipment must be inspected by the manufacturer or a qualified person at least 1 x year.

In the case of numerous use or greater stressing (e.g. environmental or industrial factors affecting the materials), the complete abseiling equipment should be subjected to inspection at an accordingly higher frequency.

The abseiling equipment must be inspected by the manufacturer after every use for rescue (not training).

### **b). use for training**

The rescue equipment must be inspected by the manufacturer or a qualified person at least 1 x year.

On account of the numerous equipment's applications in the training course the device must be inspected visual before every abseiling process by the trainer. The attached reference sheet of the manufacturer is to be considered for the visual inspection of the abseiling device.

In addition to the visual inspection it is necessary for the devices which are using for trianings to make a revision examination. The revision must be done in the following regular intervals by a competend person (e.g. trainer who was trained himself by the manufacturer). The done revision examination must be put down in the enclosed list for dokumentation the abseiling work.

### Service inspection intervals specified by the manufacturer

#### DESCENDING

Device usage	Service inspection interval	Rope inspection interval
Exclusively descending with one person, maximum descending load 110 kg <sup>2</sup> , maximum descending height 400 m	after 1000 m descending work	After 1000m of free descending, i.e. the rope does not run over an edge or similar.

**All stated limit values for the inspection intervals apply only for devices and ropes that do not show signs of wear. If there are noticeable signs of wear on the device or rope that do not make the withdrawal from use of the device/rope necessary, the inspection intervals must be shortened, i.e. all the stated guideline values (metre data) must be halved in this case.**

A general requirement is that the device must be inspected after every training unit on a day before the next use – even if the aforementioned limit values for the inspection intervals were not reached during the previous training unit.

The manufacturer's Inspection Lists for the performance of the service inspection and the relevant Instructions for Use must be observed.

The performed descending work must be entered into the attached list for documentation purposes.

#### **NOTE: Authorization for the execution of training courses and exercises**

Application training courses may be implemented only by persons who were trained by the manufacturer or a competent person named by the manufacturer and who have a certificate of the training.

Exercises may take place only under supervision of a person, who participated on application training course by the manufacturer or a competent person named by the manufacturer and is competent and can verify this by a certificate.

The manufacturer or a direct representative of the manufacturer trains trainers / coaches. The training to the coach contains at the same time the training to experts. The trained coach is entitled to carry out application training courses as well as expert training courses. The coach is not entitled to accomplish training courses for coaches.

---

<sup>2</sup> The reduction of the maximum descending load for one person from 150 kg to 110 kg and the reduction of the maximum hoisting load from 150 kg to 110 kg are due to the permanent stressing in training use, in contrast to the one-off device use in a rescue use case.

## **8. Info sheet for visual inspection of abseiling and abseiling-rescue hoist**

### **Inspection of the device housing**

#### **Inspection of the rope entry and exit points**

The wear at the rope entry/exit point must be checked. The rope entry/exit point must not show a wear greater than 2 mm. The device must be withdrawn from use if the wear is greater.

The material in the wear area has a polished, smooth, bright surface. The wear shows a severe trough formation on the material.

#### **Inspection of the device housing**

*1. The housing halves must be checked for corrosion, mechanical damage, deformation and cracks.*

This check is carried out visually. The device must be withdrawn from use and sent to the manufacturer for inspection if it shows cracks, deformation, corrosion or mechanical damage.

*2. Inspection of the cylinder head screws for completeness and tightness.*

A visual inspection for the presence of all cylinder head screws must be carried out. The insertion depth of the screws shows if a screw is loose. Screws found to be loose during the inspection must be tightened with the corresponding spanner (accessory set). The device must be withdrawn from use if not all the screws are present.

### **Inspection of the safety carabiner and the shackle**

The safety carabiner and the shackle must be visually inspected for corrosion, mechanical damage, deformation and cracking. The equipment must be withdrawn from use if damage is present.

The correct functioning of the catch of the safety carabiner and the rivet on the safety carabiner must also be checked. The catch of the safety carabiner must return to its rest position automatically after it has been pressed in by hand. The coupling nut must allow an easy opening and closing.

### Inspection of the sheathed core rope



The rope must be visually/manually checked along its entire length for the following wear appearance /defects / damage:  
Cuts, fibre breaks  
thickening, loops  
kinks, knots  
rot, burns  
severe wear/abrasion

open, loosened termination sheath displacement.



It is sensible to look for such rope properties (above items) during descending when the rope is sliding through the hand.

The device must be withdrawn from use if it shows one of the aforementioned

properties. The rope must be replaced by the manufacturer or a person authorised by the manufacturer.

Fig. 2: Severe rope wear, wear with rope thickening



#### Note:

The brake dust produced by the braking action is transported out of the housing via the rope (through the rope entry and exit points) due to the open position of the brake unit in the device housing. The material wear on the device housing (aluminium dust) occurring during the use of the device is also transported out of the housing in this manner.

This results in a discolouration of the rope (blackening) but does not have a detrimental effect on the rope properties.

Fig.3: Blackening of the rope due to brake dust

### **Inspection of the brake lever**

The brake lever must be visually inspected for corrosion, mechanical damage, deformation and cracking. The equipment must be withdrawn from use if damage is present. The equipment must be withdrawn from use if damage is present.

Additional you must make a function controll by pulling downwards the rope in the normally the 'Stop' position of the descender device. The rope is not allowed toslipping through the device; the brake lever is on 'Stop' in the normal postion.



