

# Directions for use

## Ambu<sup>®</sup> Perfit<sup>®</sup> ACE<sup>®</sup> Adjustable Collar for Extrication



CE

Ambu 

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	<b>SIZING LINE</b>		<b>Steps for adjustment</b> A. Pull up safety locks  B. Latches in  Latches out  C. Push down safety locks 
	<b>Perfit ACE</b> Adjustable Collar - Extrication Catalog No. 000 281 000 To be used only as directed by local EMS authorities Ambu Inc., Linthicum, MD USA U.S. patent No. 5,520,619		

**Steps for adjustment**

A. Pull up safety locks

B. Latches in  
Latches out

C. Push down safety locks

These directions for use may be updated without further notice.  
 Copies of the current version are available from the manufacturer.

## Description

The **Ambu® Perfit ACE®** collar is a one-piece rigid cervical spine immobilization device designed to assist the rescuer with the maintenance of neutral alignment, prevention of lateral (side-to-side) sway and anterior-posterior (forward and backward) flexion and extension of the cervical spine during transport and routine patient care or movement. The Ambu Perfit ACE is the only collar with 16 sizes for patient immobilization, the most accurate sizing for proper immobilization.

## Principles of Immobilization

Prevention and/or further extension of damage to the cervical spine and spinal cord is accomplished by maintaining the head and neck in a position of "neutral alignment." The head and neck should not be flexed forward, extended backward, or cocked to one side or the other. The neutral alignment position prevents damaged vertebrae or foreign bodies from rubbing and/or cutting the spinal cord. Additionally, the neutral alignment position prevents the spinal cord from being twisted or compressed causing physical and/or ischemic injury to the spinal cord.

## Warning

The Ambu Perfit ACE collar is intended for application by licensed health care practitioners as directed by a physician or other medical authority. Permanent injury may result from use other than as directed by a physician or other medical authority.

An extrication collar is only part of total patient immobilization.

It is important that practitioners are trained and practiced in the use and application of the device and that all instructions are read and understood prior to application of the collar.

All directions are to be considered as guidelines and not an attempt to define medical practice. Use the device only after review and approval from the supervising medical authority.

## Directions for Use

### STEP 1

Have one rescuer manually stabilize the head and neck, gently holding the head and neck in the neutral alignment position (*Figure 1*).

**Note:** If resistance is felt or an increase in patient discomfort is noted, follow your established protocols for immobilization of the cervical spine in the presence of known or suspected cervical dislocation.

### STEP 2

Once the head and neck are manually stabilized, a second rescuer should apply an Ambu Perfit ACE collar to the patient. Size the collar as determined below. Applied collar must not hyper-extend patient's neck.

### STEP 3

Measure the distance between an imaginary plane drawn horizontally and immediately below the patient's chin and second horizontal plane drawn immediately on top of the patient's shoulder (*Figure 2*).

### STEP 4

Compare this distance with the distance from the collar sizing line to the lower aspect of the plastic collar body (not the foam) (*Figure 3*).

### STEP 5 SIZING

The Perfit ACE collar is preset to Neckless Size 3. If a larger size collar is needed, disengage the safety locks by pulling UP on the safety buttons (*Figure 4*).

### STEP 6

Adjust the collar to the appropriate size: the Perfit ACE provides 16 ratchet settings between the traditional Neckless (Size 3) and Tall (Size 6).

Simply pull the collar apart until the distance between the sizing line and the plastic collar body equals your finger measurement (*Figure 5*).

### STEP 7

Engage the safety locks by pushing DOWN on the safety buttons (*Figure 6*).

### STEP 8

If the Perfit ACE needs to be resized, disengage the safety locks and pull "OUT" on the ratchet latches ("arrows") (*Figure 7, Figure 8*).

The Perfit ACE may now be adjusted to smaller sizes (*Figure 9*).

Reset the ratchet latches by pressing "IN" on the "arrows" (*Figure 10*).

Now engage the safety locks by pressing DOWN on the safety buttons (*Figure 11*).

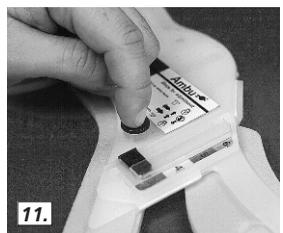
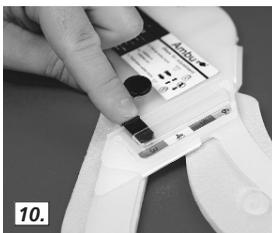
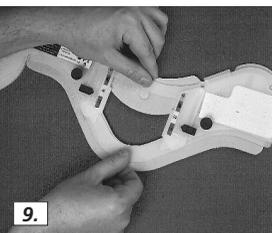
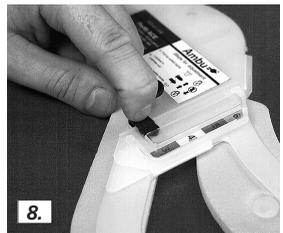
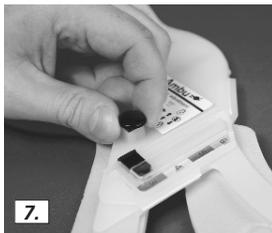
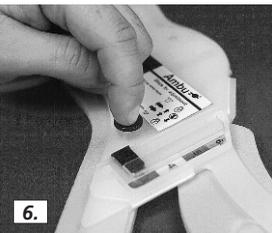
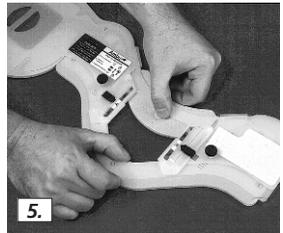
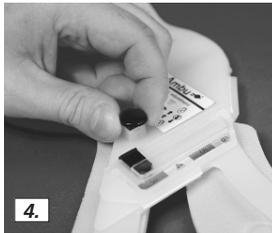
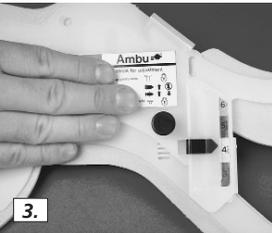
### PRESETTING TO FOUR STANDARD ADULT POSITIONS

The collar can be sized to four standard settings (neckless - size 3, short - size 4, regular - size 5 and tall - size 6) by simply bringing the guide arrow in line with the middle of the number marked (3, 4, 5 and 6) on four color label.

**Note:** The Perfit ACE collar is preset to Neckless Size 3.

Reset ratchet latches (guide arrow) and safety buttons as described earlier.

• **Figure**



## Collar Assembly

The collar is assembled as follows:

Hold the collar near the tracheal opening with one hand. Place the index finger on the foam side of the chin piece (on the center rivet) and the thumb on the plastic side of the chin piece (on the center rivet) and simply flip the chin piece from the back of the collar to the front of the collar (*Figure 13 and 14*).

This automatically forms the chin piece and places it in the position of function.

## Application

Proper application of any extrication collar requires two individuals. The first rescuer should maintain stabilization and neutral alignment of the head and neck by grasping the head with a spread finger technique (*Figure 15*).

1. The second rescuer should slide the front of the collar along the patient's chest and position the chin piece. The collar body should rest on the top of the patient's shoulder and against the sternum without gaps (*Figure 16*). The patient's chin must rest securely in the chin piece in neutral alignment position (*Figure 17*).
2. While holding the front of the collar in place, wrap the back of the collar around the back of the patient's head and neck and secure to the front of the collar with the velcro tab (*Figure 17*).
3. Adjust the velcro tab as necessary by holding the front cutout of the collar and tightening the velcro tab (*Figure 18*).
4. Adjustment of the size of the collar may be done on the patient as per your local protocol.

## Warning

Maintain neutral head and neck alignment during the entire procedure. Once the collar is properly applied and the patient is immobilized, the head should not be released. Further immobilize the head and neck with head blocks or a head immobilizer and secure the patient to the backboard with appropriate retention straps.

## Supine Application

If the patient is supine, slide the back portion of the collar directly behind the patient's neck (*Figure 19 or 20*).

The collar may be applied from either side. Once the back portion of the collar is evenly positioned behind the head, the front portion of the collar can be positioned under the chin (*Figure 21*). While maintaining the proper positioning of the collar with one hand, attach the velcro with the other hand (*Figure 22*). Ensure that the loop velcro tab is firmly attached and parallel to the fixed hook velcro tab on the front of the collar.

## Warning

Maintain neutral head and neck alignment during the entire procedure. Once the collar is properly applied and the patient is immobilized, the head should not be released (*Figure 23*). Further immobilize the head and neck with head blocks or a head immobilizer and secure the patient to the backboard with appropriate retention straps.

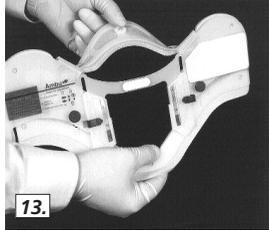
## Warranty/Guarantee

Ambu warrants its products to be free from defects in workmanship and materials when purchased through Ambu or its authorized channels of distribution and used in accordance with recommended procedures. Should any product be found to be defective when unpacked, obtain a return authorization number from Ambu before sending it back. Repair or replacement will be made at no charge.

• **Figure**

SIZING LINE		Ambu <sup>+</sup>	
<b>Perfit ACE</b>		Steps for adjustment	
Adjustable Collar - Extinction		A. Pull up safety locks	
Catalog No. 000 281 000		B. Latches in	
To be used only as directed		C. Latches out	
by local EMS authorities			
Ambu Inc., Linthicum, MD USA			
U.S. patent No. 6,320,618			

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**Ambu® Perfit ACE®** is in conformity with Council Directive 93/42/EEC concerning Medical Devices.



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