



**ICON™ BACK SYSTEMS**  
**WITH VARILOCK™ HARDWARE**  
***Installation Instructions***



*This manual explains how to install, operate and maintain the Icon Back System.*

If you do not understand this instruction manual or if you have any questions, please contact VARILITE Customer Service at (800) 827-4548.



# **VARILITE®** *Installation Instructions*

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# **VARILITE®** Installation Instructions

## **ICON Back System Styles**

*These instructions are applicable to the following Icon Back System Styles*

**L o w**



**M i d**



**T a l l**



**D e e p**



# **VARILITE® Installation Instructions**

TO AVOID INJURY, read, understand and follow all instructions and warnings in this manual before using your *VARILITE* back support.

There are hazards associated with the use of wheelchairs and adaptive equipment. If you misuse your wheelchair or your back support you can be seriously injured.

## **WARNING**

Installation and adjustment of your *VARILITE* back support should be performed only by an authorized dealer or qualified therapist.

Failure to use the appropriate equipment for restraint in a vehicle can result in serious injury or death.

- Never use your *VARILITE* back support if any hardware is missing, malfunctioning, or broken. Seek qualified assistance with any repairs or adjustments.
- Never exceed the weight capacity of the back support.  
The maximum user weight for systems less than 22 in. (55 cm) wide is 300 lbs (136 kg). The maximum user weight for systems 22 in. (55 cm) or greater is 400 lbs (181 kg).
- Never exceed the weight capacity of the wheelchair as specified by the wheelchair manufacturer.
- Never perform weight training that causes you to exceed the weight capacity of the wheelchair.
- Do not exceed the weight capacity of the wheelchair during other activities of daily living.
- Never lift the wheelchair by the back support.
- Never use the back support without its cover. The cover is made with flame retardant materials. Using the back support without its cover increases the risk of flammability.
- Never modify your *VARILITE* back support or use it in a way not described by these instructions.

**Use in a Motor Vehicle**

**For ICON™ Back System Tall and ICON™ Back System Deep**

 **WARNING**

This seating system has been dynamically tested and meets requirements of ANSI WC20/Vol 4 and conforms to ISO 16840-4 for the safe use of seating devices for use in motor vehicles when used with a wheelchair base that complies with performance requirements of ANSI WC19 or ISO 7176-19.

A surrogate wheelchair base and Hybrid III Midsize Male ATD were used in the frontal impact test.

Any postural support devices and belts that have not been successfully tested in accordance with ANSI/RESNA WC18 or WC19 should not be relied upon as an occupant restraint in a vehicle.

Failure to use the appropriate equipment for restraint in a vehicle can result in serious injury or death.

For additional information regarding the use of seating systems in motor vehicles, refer to *Safe Use in a Motor Vehicle* provided with this system and at [www.varilite.com](http://www.varilite.com)

## **Wheelchair Compatibility**

### **WARNING**

VARILITE back systems are designed to be compatible with most wheelchairs, noting the following exceptions:

The system can be used only with wheelchairs with cane diameters equal to 1 in. (25 mm) or less.

The system can be used only with wheelchairs with round canes.

Wheelchairs are not required to have stabilizer bars, provided the canes can maintain their position.

Only use wheelchairs with round canes equal to 1 in. (25mm) or less in diameter.

Failure to use compatible equipment can result in equipment breakage and serious injury.

### **WARNING**

Do not leave the Slide Caps in the open position. Doing so may allow the Slide Brackets to disengage from the Holsters, causing the back support to accidentally fall out, which can result in serious injury. See page 8, Fig. 1 and Fig. 2.

**Wheelchair Compatibility**



*Fig. 1*



*Fig. 2*



**Wheelchair Compatibility**

 **WARNING**

Failure to install and use Cane Bracket Shims as instructed can result in equipment breakage and serious injury.

Cane Brackets are sized for 1 in. (25 mm) diameter wheelchair canes. Shims are provided for wheelchair canes that are less than 1 in. (25 mm) in diameter.

Attach Cane Bracket over shim at appropriate height. The Cane Bracket then attaches over shim. Use "Fitting Cane Bracket Shims" chart below to properly fit your wheelchair cane diameter.

**Fitting Cane Bracket Shims**

<b>Cane Size</b>	<b>Shim Size</b>	<b>Included with Hardware?</b>
7/8 in. (22 mm)	1/8 in. (3 mm)	Yes
3/4 in. (19 mm)	1/4 in. (6 mm)	Yes

 **WARNING**

Thoroughly clean canes before installing shims.

Grease, oil or other residue on the canes may result in shim slippage.

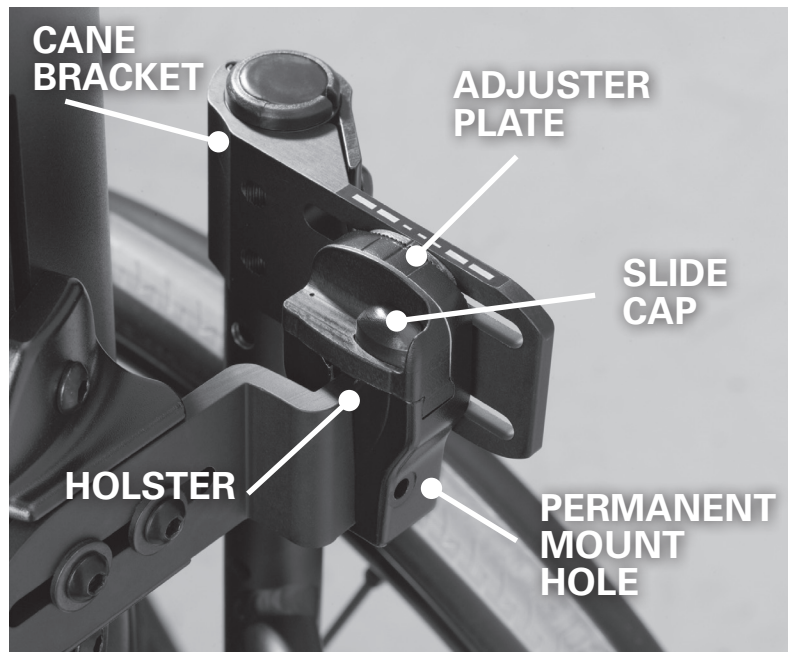
Shim slippage may result in equipment breakage and serious injury.

**ICON Back System Components**

*Please familiarize yourself with the parts of the back system before installation, adjustment or use.*

**Cane Hardware Components**

1. Cane Bracket
2. Holster
3. Adjuster Plate
4. Slide Cap
5. Permanent Mount Hole



**Shell Components**

1. Shell Bracket
2. Slide Bracket
3. Handle

# **VARILITE® Installation Instructions**

## **ICON Back System Components**

### **Self-Inflating Cushion and Valve**



### **Shell Interior**

### **Handle Flap and Handle Patch**

## **Assembly and Mounting Steps**

*Adjustment may be necessary to complete the installation and accommodate the width of the wheelchair, or for desired seat depth, angle and height.*

**The following steps must be done before the client is in the wheelchair:**

1. Determine the optimal height of the back on the wheelchair.
2. Attach Cane Brackets to each wheelchair cane, ensuring that the Holsters face each other and the Slide Caps open rearward.
3. Align the two Cane Brackets so they are parallel and level with each other. Tighten Cane Bracket Screws enough to hold the Cane Brackets lightly in place.
4. Loosen the Slide Bracket Screws.
5. Insert the back so that the Slide Brackets fit securely into the Holsters.
6. Tighten the screws on the Cane Brackets and Slide Brackets to 4.5 Newton Meters.
7. Slide left and right Slide Caps closed, towards the Shell.



## **Adjustment Steps**

*The following steps can be done with or without someone in the wheelchair:*

### **Depth and Angle Adjustments**

1. Loosen the two Cane Bracket Adjustment Screws and adjust for desired level of depth and angle. **Only loosen adjustment screws 3/4 of a turn to slide. Do not disconnect from the attached nut.**
2. Use reference marks on the top of the Holster to make incremental adjustments.
3. Adjust the hardware on both Cane Brackets before fully tightening the adjustment screws.
4. Tighten the two Cane Bracket Adjustment Screws to maintain the adjustment.



### **Horizontal Shell Bracket Adjustment**

1. Loosen the two Slide Bracket Screws.
2. Make lateral Shell adjustments.
3. Retighten the screws.

### **Vertical Shell Bracket Adjustment**

1. Loosen the two screws on each Shell Bracket.
2. Make vertical shell adjustments.
3. Retighten the screws.

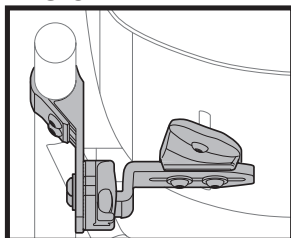


## Seat Depth Adjustment

*Seat depth adjustment varies according to the clinical application and the recline angle of the back. In most cases, Icon Back System hardware allows seat depth to be adjusted so that the back does not take up seat depth in front of the canes. Icon Back System hardware also may be installed anterior of the canes in situations where seat depth is desired for growth. Note: the Icon Back System can be mounted in a rotated position using the VariLock Slide Bracket Kit, ordered separately. This kit will allow the left or right Slide Brackets to be mounted in the anterior or posterior position, independently of one another.*

### Installation Type Configuration

#### BASIC



**Cane Bracket:** Posterior

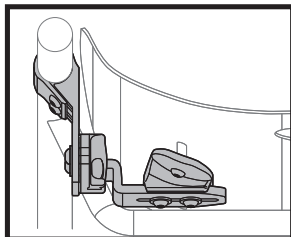
**Slide Bracket:** Anterior

**Trunk Support Surface Range:** 2.4 in. posterior of the canes to 0.9 in. posterior of the canes

Measured from front of canes to center of the Shell.

Cushion thickness ranges from 1.25 in to 2.75 in. depending on cushion inflation.

#### EXTRA DEPTH



**Cane Bracket:** Posterior

**Slide Bracket:** Posterior

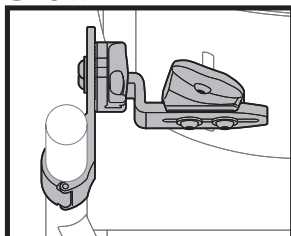
**Trunk Support Surface Range:** 3.9 in. posterior of the canes to 2.4 in. posterior of the canes

Measured from front of canes to center of the Shell.

Cushion thickness ranges from 1.25 in to 2.75 in. depending on cushion inflation.

From the BASIC installation, remove the left and right Slide Brackets from the Shell Brackets. Swap the left and right Slide Brackets and reattach them in the posterior position with the tabs facing up.

#### GROWTH



**Cane Bracket:** Anterior

**Slide Bracket:** Posterior

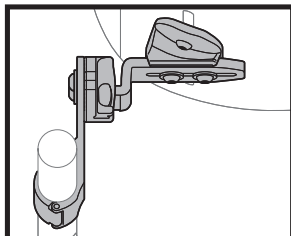
**Trunk Support Surface Range:** 0.3 in. anterior of the canes to 1.8 in. anterior of the canes

Measured from front of canes to center of the Shell.

Cushion thickness ranges from 1.25 in to 2.75 in. depending on cushion inflation.

From the BASIC installation, remove the Holsters from the Cane Brackets. Swap the left and right Cane Brackets and mount them on the wheelchair canes in the anterior position. Next, remove the left and right Slide Brackets from the Shell Brackets. Swap the left and right Slide Brackets and mount them in the posterior position with the tabs facing up. Mount the Holsters to the Cane Brackets ensuring that the Slide Caps open rearwards.

#### EXTRA GROWTH



**Cane Bracket:** Anterior

**Slide Bracket:** Anterior

**Trunk Support Surface Range:** 1.8 in. anterior of the canes to 3.3 in. anterior of the canes

Measured from front of canes to center of the Shell.

Cushion thickness ranges from 1.25 in to 2.75 in. depending on cushion inflation.

From the BASIC installation, remove the Holsters from the Cane Brackets. Swap the left and right Cane Brackets and mount them on the wheelchair canes in the anterior position. Mount the Holsters to the Cane Brackets ensuring that the Slide Caps open rearwards.

## ***Operating Instructions***

### **Removing the Icon Back System**

1. Depress buttons and slide the left and right Slide Caps open.
2. Grab the top of the shell and lift up until the Slide Bars clear the Holster.
3. Slide the left and right Slide Caps closed, towards the Shell.



### **Inserting the Icon Back System**

1. Depress buttons and slide the left and right Slide Caps open, away from the Shell.
2. Align the Slide Brackets above the track of the Holsters.
3. Insert the Slide Brackets into the Holsters.
4. Slide the left and right Slide Caps closed, towards the Shell.

### **Permanent Mount Installation**

1. Loosen the left and right Slide Bracket Screws.
2. Install the Permanent Mount Screw using the 3-32 in. hex key through the Permanent Mount Hole into the Slide Bracket.
3. Tighten the left and right Slide Bracket Screws.

## **Back Cushion Instructions**

### **Inflating Cushion**

1. To inflate cushion, remove load from cushion.
2. Open air valve by turning valve counterclockwise.
3. When cushion is fully inflated, close air valve by turning valve clockwise.

### **Adjusting Cushion**

1. To adjust the air level of the VARILITE back support, begin with the cushion fully inflated and the valve closed.
2. Position wheelchair user securely in wheelchair.
3. Turn the valve counterclockwise to open the valve and release air.
4. Close the valve when the air level that provides the support needed for the user's comfort and functionality is reached.

### **Removing Cushion**

1. Pull the cushion up to detach the cover from the Shell.
2. Detach the Handle Flap from the Handle Patch on the inside of the Shell and pull the Handle Flap through the slot in the Shell.
3. Remove the back cushion from the attached flap on the inside of the cover.

**Note:** Reverse the steps above to reattach the cushion.

## **Thoracic Supports Instructions**

Follow installation instructions provided with the Thoracic Support.

If you choose to mount an optional VARILITE PAL™ Swing-Away Lateral or Fixed thoracic support, you may use the existing slots and drill holes in the Shell.

**Note:** Although the VARILITE Icon Back System warranty permits drilling the Shell for attachment of thoracic, head or other ancillary supports, these should be installed only by qualified persons.



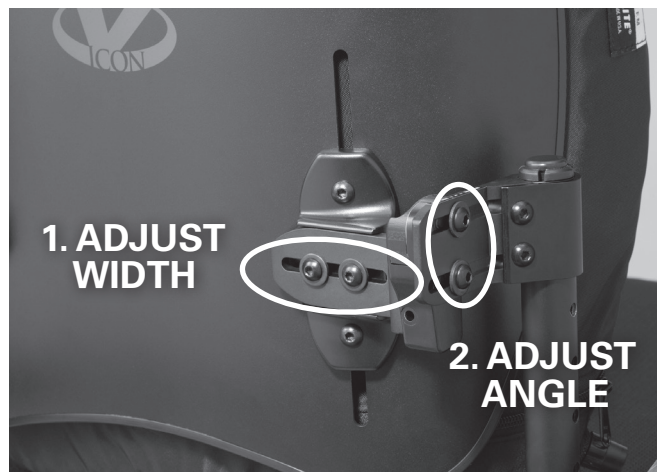


## **Troubleshooting**

The Icon Back System should operate smoothly. The back support should remove and insert without binding. If the back support binds or seems “sticky” during removal and insertion, quick and easy adjustments will correct the situation.

1. Check the back height. Ensure that the Cane Brackets are installed at the same height and are parallel.
2. Allow the Slide Brackets to self-center. Loosen the left and right Slide Bracket screws until the Slide Brackets fit loosely and self-center in the Holsters. Tighten the Slide Bracket Screws.

3. Check the depth adjustment. Ensure that the depth adjustment is the same on the left and right Holsters. Loosen the top and bottom Cane Bracket Adjustment Screws a three-quarter ( $\frac{3}{4}$ ) turn. While holding the back system at the appropriate depth, tighten the top and bottom adjustment screws.



4. Check the angle adjustment. Ensure that the angle adjustment is the same on the left and right Holsters. Loosen the top Cane Bracket Adjustment Screws a three-quarter ( $\frac{3}{4}$ ) turn. While holding the back support at the appropriate angle, tighten the top adjustment screw.

***Only loosen the Cane Bracket Screw three-quarter ( $\frac{3}{4}$ ) turn when making angle or depth adjustments.***

***Loosening the screw more than a three-quarter ( $\frac{3}{4}$ ) turn will cause it to disconnect from the nut inside the Holster.***

## Warranty

### LIMITED WARRANTY/LIMITATIONS OF REMEDIES AND LIABILITY U.S.A. and Canada

**Limited Warranty.** *VARILITE*, a division of Cascade Designs, Inc., to the original owner ("Owner"), under intended use and maintenance, warrants the enclosed product ("Product") to be free from defects in materials and workmanship for two years from date of purchase of the Product. No warranty against defects in materials and workmanship will apply if Product is: (i) altered in any way, except as specifically provided for in product instructions; (ii) used for purposes inconsistent with Product's intended purpose or design; or (iii) improperly maintained. Warranty will furthermore be voided where user: (i) failed to follow Product instructions or warnings; or (ii) subjected Product to misuse, abuse, or neglect.

During the warranty period, original Product parts determined by *VARILITE* to be defective in materials or workmanship will be repaired or replaced as Owner's sole remedy. *VARILITE* reserves the right to replace any discontinued product with a new product of comparable value and function. A returned product deemed irreparable becomes the property of *VARILITE*, and will not be returned.

EXCLUDING THE LIMITED WARRANTY PROVIDED ABOVE, *VARILITE*, ITS AFFILIATES AND THEIR SUPPLIERS, TO THE MAXIMUM EXTENT PERMITTED BY LAW, MAKE NO WARRANTIES, EXPRESSED OR IMPLIED, AND DISCLAIM ALL WARRANTIES, DUTIES AND CONDITIONS, WHETHER EXPRESSED, IMPLIED, OR STATUTORY, WITH RESPECT TO THE PRODUCT, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, AGAINST LATENT DEFECTS, FITNESS FOR A PARTICULAR PURPOSE, OR CORRESPONDENCE TO DESCRIPTION.

**Warranty Service** To obtain service under this warranty, the warranty-eligible Product must be presented to a *VARILITE* authorized dealer. In the United States and Canada, warranty service may also be obtained by calling (800) 827-4548, Monday through Friday 7:00 AM to 4:30 PM Pacific Standard Time. Owner is responsible for all costs associated with returning Product to *VARILITE* for service. Where at its sole discretion *VARILITE* deems Product eligible for warranty repair or replacement, *VARILITE* will pay the shipping and handling associated with returning repaired or replaced Product to Owner. In instances where *VARILITE* deems a returned product ineligible for warranty service, *VARILITE* will, if possible, repair product for a reasonable charge that includes return shipping and handling.

**Limitation of Remedies** Should a court of competent jurisdiction find the limited warranty set forth above breached, *VARILITE*'s only obligation will be to, at its option, either repair or replace Product. Should the aforementioned remedy fail of its essential purpose, *VARILITE* will, in exchange for return of Product, refund to Owner Product's original purchase price. THE FOREGOING REMEDY IS THE SOLE AND EXCLUSIVE REMEDY OF THE PURCHASER AGAINST *VARILITE*, ITS AFFILIATES AND THEIR SUPPLIERS, REGARDLESS OF LEGAL THEORY.

**Limitation of Liability** *VARILITE*'s, its affiliates' and their suppliers' maximum liability is limited to incidental damages not to exceed the original purchase price of the Product. *VARILITE*, ITS AFFILIATES AND THEIR SUPPLIERS HEREBY DISCLAIM AND EXCLUDE ANY LIABILITY FOR ANY CONSEQUENTIAL OR OTHER DAMAGES RESULTING FROM ANY REASON WHATSOEVER. THIS EXCLUSION AND LIMITATION APPLIES TO ALL LEGAL THEORIES UNDER WHICH DAMAGES MAY BE SOUGHT, AND WILL APPLY EVEN IF ANY REMEDY FAILS OF ITS ESSENTIAL PURPOSE.

This limited warranty gives you specific legal rights; you may have additional rights which vary state to state.

Always completely follow: safety, use, operation, and maintenance instructions for this or any other *VARILITE* product.

European Union customer statutory rights are not affected.

# **VARILITE®** *Installation Instructions*

## **Care and Maintenance**

- The aluminum Shell can be cleaned with soap and warm water. Do not saturate. Avoid getting water under the edge trim.
- The self-inflating cushion can be wiped with a damp cloth.
- The cushion cover can be removed and washed. Machine wash at 140° F (60° C). Air dry.
- Never store your back support in conditions of extreme heat or exposure to direct sunlight for long periods of time.
- Never store sharp or heavy objects on top of your back cushion.
- Once a week, leave valve open overnight, allowing cushion to fully inflate in an unloaded state.

## **Contact Information**

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