

**matrx**<sup>™</sup>  
SEATING SERIES



*Yes, you can.®*



## Installation/User Manual

**i DEALER:** This manual contains important safety, Installation and Set-up information specific to the Invacare Matrx Mx1 SuperLite Mount Back. This Manual MUST be given to the user of the product.

**BEFORE** using this product, please read through the instructions carefully and save for future reference.

 **This product complies with Directive 93/42/EEC concerning medical devices.  
The launch date of this product is stated in the CE declaration of conformity.**

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## 1.0 General

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### 1.1 Symbols

Installing your Invacare-Matrix Seating Series product safely depends upon your diligence in following the warnings, cautions and information provided in this Installation Manual.

Signal words are used in this manual and apply to hazards or unsafe practices which could result in personal injury or property damage. See the information below for definitions of the signal words.



#### **WARNING!**

- Warning indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



#### **CAUTION!**

- Caution indicates a potentially hazardous situation which, if not avoided, may result in property damage or minor injury or both.



#### **IMPORTANT!**

- Important information and/or instructions to remember when installing and/or adjusting your Invacare-Matrix Seating Series product .



#### **NOTE:**

- Notes indicate useful tips, recommendations and information for efficient, trouble-free use.



#### **Requirements:**

- This symbol identifies a list of various tools, components and items which you will need in order to carry out certain work.



#### **READ WELL BEFORE OPERATION!**

- This symbol advises you to read information carefully.

### 1.2 Overview

#### **Important Information**

The best way to avoid problems related to pressure sores is to understand their causes and your role in a skin management program.

Your therapist and physician should be consulted if you have questions regarding individual limitations and needs.

All cushions should be selected carefully. Working with your therapist and physician is the best way to assure that a cushion choice matches your individual needs.

As the needs of the individual become more complex, cushion evaluation becomes more important.

#### **Invacare Matrix MX1**

The Invacare Matrix MX1 back is contoured to provide precise orientation within the wheelchair for optimal postural support. The foam is oversized to provide extra comfort and protection.

The Invacare Matrix MX1 back includes a movable foam lumbar pad that can be installed/inserted behind the existing foam cushion to provide additional positioning capability. Refer to Section 6.1 for instructions on how to insert and adjust your lumbar support.

#### **Outer Cover**

The outer cover is made of a mesh material that is moisture resistant and breathable. Regular cleaning and inspection of the outer cover is recommended. Refer to Section 7.1 for Cleaning Instructions.

## 1.0 General

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### 1.3 Limited Warranty - North America

** PLEASE NOTE: THE WARRANTY BELOW HAS BEEN DRAFTED TO COMPLY WITH FEDERAL LAW APPLICABLE TO PRODUCTS MANUFACTURED AFTER JULY 4, 1975.**

This warranty is extended only to the original purchaser/user of our products.

This warranty gives you specific legal rights and you may also have other legal rights which vary from state to state.

Invacare/Motion Concepts warrants this product to be free from defects in materials and workmanship for two years of use by original purchaser. This warranty does not apply to punctures, tears or burns, nor to the removable cushion cover. If within such warranty period any such product shall be proven to be defective, such product shall be repaired or replaced, at Invacare's/Motion Concepts' option, with refurbished or new parts. This warranty does not include any labor or shipping charges incurred in replacement part installation or repair of any such product. Product repairs shall not extend this warranty - coverage for repaired product shall end when this limited warranty terminates. Invacare's/Motion Concepts' sole obligation and your exclusive remedy under this warranty shall be limited to such repair and/or replacement.

For warranty service, please contact the dealer from whom you purchased your Invacare/Motion Concepts product. In the event you do not receive satisfactory warranty service, please write directly to Invacare/Motion Concepts at the address on the back cover. Provide dealer's name, address, model number, the date of purchase, indicate nature of the defect and, if the product is serialized, indicate the serial number.

Invacare Corporation/Motion Concepts will issue a return authorization. The defective unit or parts must be returned for warranty inspection using the serial number, when applicable, as identification within thirty (30) days of return authorization date. DO NOT return products to our factory without our prior consent. C.O.D. shipments will be refused; please prepay shipping charges.

**LIMITATIONS AND EXCLUSIONS: THE WARRANTY SHALL NOT APPLY TO PROBLEMS ARISING FROM NORMAL WEAR OR FAILURE TO ADHERE TO THE ENCLOSED INSTRUCTIONS. IN ADDITION, THE FOREGOING WARRANTY SHALL NOT APPLY TO SERIAL NUMBERED PRODUCTS IF THE SERIAL NUMBER HAS BEEN REMOVED OR DEFACED; PRODUCTS SUBJECTED TO NEGLIGENCE, ACCIDENT, IMPROPER OPERATION, MAINTENANCE OR STORAGE; OR PRODUCTS MODIFIED WITHOUT INVACARE'S/MOTION CONCEPTS' EXPRESS WRITTEN CONSENT INCLUDING, BUT NOT LIMITED TO: MODIFICATION THROUGH THE USE OF UNAUTHORIZED PARTS OR ATTACHMENTS; PRODUCTS DAMAGED BY REASON OF REPAIRS MADE TO ANY COMPONENT WITHOUT THE SPECIFIC CONSENT OF INVACARE/MOTION CONCEPTS; PRODUCTS DAMAGED BY CIRCUMSTANCES BEYOND INVACARE'S/MOTION CONCEPTS' CONTROL; PRODUCTS REPAIRED BY ANYONE OTHER THAN AN INVACARE/MOTION CONCEPTS DEALER, SUCH EVALUATION SHALL BE SOLELY DETERMINED BY INVACARE/MOTION CONCEPTS.**

**THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS WARRANTIES, IF ANY, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

**IT SHALL NOT EXTEND BEYOND THE DURATION OF THE EXPRESSED WARRANTY PROVIDED HEREIN AND THE REMEDY FOR VIOLATIONS OF ANY IMPLIED WARRANTY SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT PURSUANT TO THE TERMS CONTAINED HEREIN. INVACARE/MOTION CONCEPTS SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES WHATSOEVER. THIS WARRANTY SHALL BE EXTENDED TO COMPLY WITH STATE/PROVINCIAL LAWS AND REQUIREMENTS.**

## 2.0 Safety

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The Safety section contains important information for the safe operation and use of this product.

**i IMPORTANT!** Please refer to the Wheelchair Owners/ Operators Manual for additional safety information, warnings and cautions related to the operation of your wheelchair.

### 2.1 General Guidelines



**WARNING!**

DO NOT use this product or any available optional equipment without first completely reading and understanding these instructions and any additional instructional material such as owner's manuals, service manuals or instruction sheets supplied with this product or optional equipment. If you are unable to understand the warnings, cautions or instructions, contact a healthcare professional, dealer or technical personnel before attempting to use this equipment - otherwise, injury or damage may occur.



**ACCESSORIES WARNING!**

Invacare products are specifically designed and manufactured for use in conjunction with Invacare accessories. Accessories designed by other manufacturers have not been tested by Invacare and are not recommended for use with Invacare products.



**NOTICE**

THE INFORMATION CONTAINED IN THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE.

Check all parts for shipping damage before using. In case of damage, DO NOT use the equipment. Contact the Dealer for further instructions.

### 2.2 Intended Use

The Invacare Matrix MX1 SuperLite back is designed to provide precise orientation within the wheelchair for optimal postural support.

### 2.3 Installation Information



**WARNING**

The procedures in this manual should be performed by a qualified technician.

After any adjustments, repair or service and before use, make sure that all attaching component parts are secure.

DO NOT install the Invacare Matrix MX1 assembly onto back canes with an outside diameter greater than or less than 1-inch; Otherwise, injury or damage may occur.

The mounting position of the Invacare Matrix MX1 SuperLite back is directly related to the chair's stability. Use extreme caution when using a new seating position.

Ensure the Invacare Matrix MX1 SuperLite Back is properly secured to the wheelchair before using; Otherwise injury or damage may occur.

### 2.4 Operating Information



**WARNING!**

Skin condition should be checked very frequently after the installation of any new seating system.

Your therapist and physician should be consulted if you have any questions regarding individual limitations and needs. Working with your therapist, physician, and equipment supplier is the best way to assure that a seating choice matches your individual needs.

As the needs of the individual become more complex, the seating evaluation becomes more important.

## 2.0 Safety

### 2.5 Weight Limitation and Model Numbers

Refer to the chart for the weight limitation and stock model numbers. (SL= SuperLite)

WIDTH	HEIGHT			WEIGHT CAPACITY
	9 in (23 cm)	12 in (30 cm)	16 in (41 cm)	
14 in (36 cm)	IMX11409-SL	IMX11412-SL	IMX11416-SL	250 lbs (113 kg)
15 in (38 cm)	IMX11509-SL	IMX11512-SL	IMX11516-SL	
16 in (41 cm)	IMX11609-SL	IMX11612-SL	IMX11616-SL	
17 in (43 cm)	IMX11709-SL	IMX11712-SL	IMX11716-SL	
18 in (46 cm)	IMX11809-SL	IMX11812-SL	IMX11816-SL	

## 3.0 Tools Required



4mm hex key (*provided*)  
Quick-Grip Clamps (x2) (*or similar*)  
Power Drill  
Fine Grit Sandpaper

Tape measure/ruler  
Grease Pen/Marker  
Drill Bits: 1/8" (3.0mm), 1/4" or 17/64" or 6.5mm

## 4.0 Installation Overview

**i Important!** Before beginning the installation process, please fully read through all the instructions to understand the steps and adjustments involved. If you have any questions or concerns during the installation process, please contact our Technical Service Department for assistance.

**Band Clamp Assembly**



## 5.0 Mx1 SuperLite Mount Installation

 Please read through all installation instructions before proceeding with the Mx1 SuperLite Back installation.

 **IMPORTANT!** The mounting hardware (band clamps) for Mx1 SuperLite Back are designed for installation onto 1" (26mm) back canes **only**.




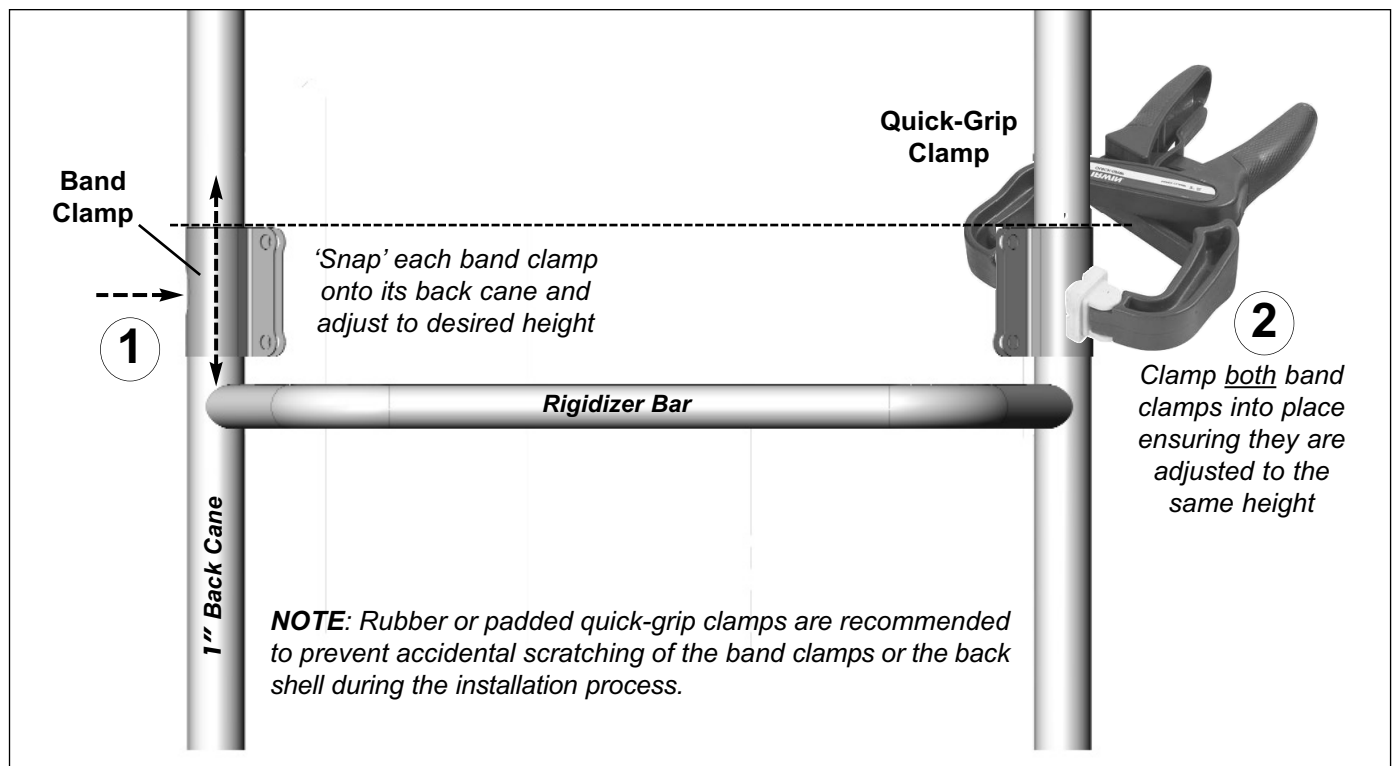
### **WARNING!**

- ◆ **DO NOT** install the Invacare Matrix MX1 assembly onto back canes with an outside diameter greater than or less than 1" (26mm); Otherwise, injury or damage may occur.
- ◆ Installation of the Mx1 SuperLite Back requires holes to be drilled into the back shell. We strongly recommend that the installation be completed by Qualified Technician.
- ◆ The Mx1 Back is designed for a one-time set-up only. Take care to ensure the accuracy of the hole locations prior to drilling.
- ◆ **NEVER** use/install a back that has had the holes modified or has been re-drilled (*i.e.; has more than 4 holes*).

### 5.1 Installation Instructions:

1. Remove the existing backrest and any existing mounting hardware from the wheelchair.
2. Install the band clamps on the wheelchair back canes (1) by snapping them onto the back cane tube as indicated in the image below.
3. Adjust (slide) each band clamp along the back cane to the desired (approximate) mounting height, and temporarily secure the band clamps into place\* using a set of quick-grip clamps or similar (2).

 **IMPORTANT!** \*Ensure that both band clamps are installed at the same height on the back canes. (Use a tape measure/ruler to measure the height from a fixed point on the wheelchair).



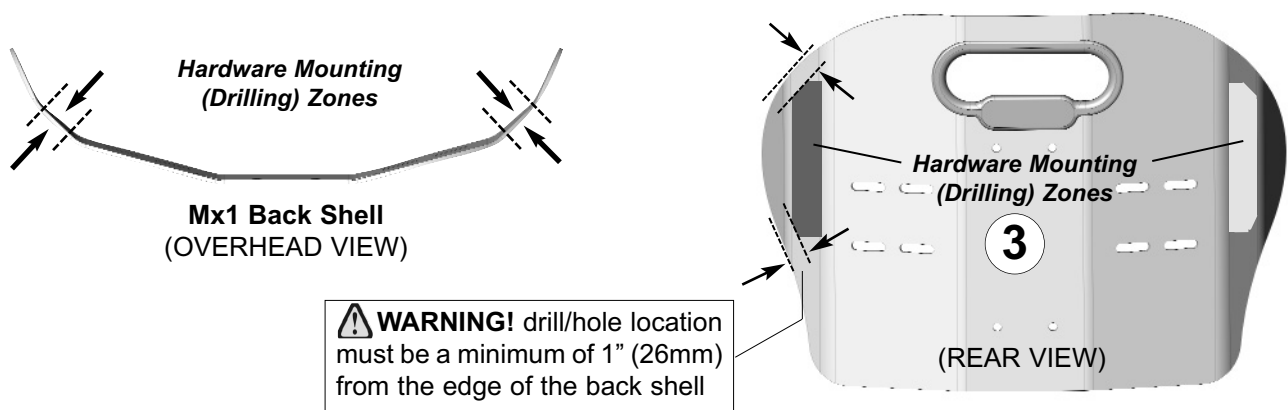


## 5.0 Mx1SuperLite Mount Installation

4. Remove the outer cushion cover from the back shell by carefully disengaging the velcro strips along the bottom and top of the back shell.
5. Carefully place the back shell up against the mounting clamps and adjust the back shell to the desired (approximate) height on the wheelchair.

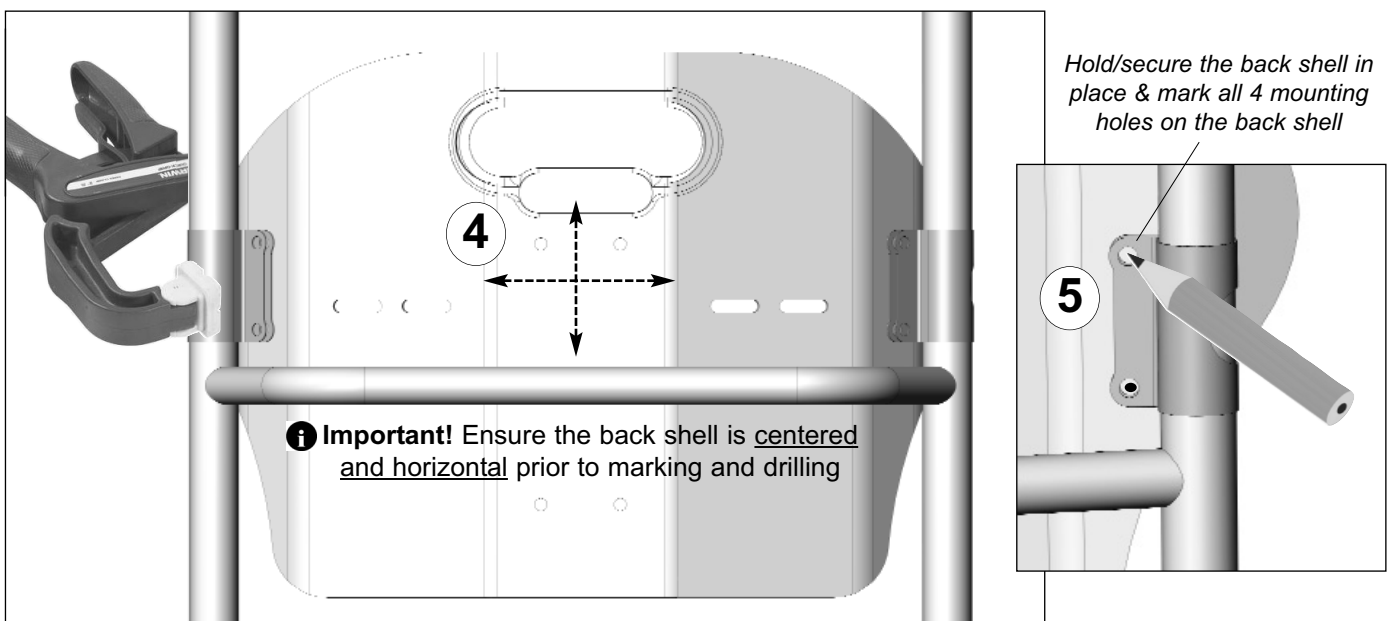
**i IMPORTANT!** The back height should be set as accurately as possible during the initial hardware installation. The overall height of the back rest can be re-adjusted following installation, however limitations may occur depending on the location of the rigidizer bar relative to the band clamps.

**! WARNING!** Prior to marking the back shell, ensure that all mounting holes are located a minimum of 1" (26mm) from the outer edge of the back shell and that the mounting holes are located on the bent face of the back (as indicated by the shaded area identified below (3)).



6. Make certain that the back shell is properly **centered between the back canes and level (horizontal) (4)**. Use the band clamps as a template, and accurately mark the mounting hole locations (x4) on the back shell using a grease pen or marker (5).

**i NOTE:** Quick-grip clamps may also be used to hold the back shell in position prior to marking the mounting hole locations; Alternatively a second person may be needed to ensure the back shell does not move/slip when marking the hole locations.



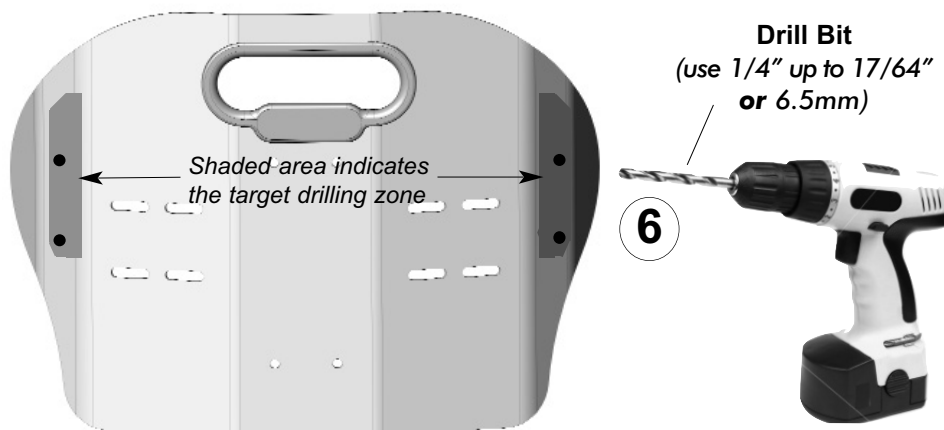
## 5.0 Mx1SuperLite Mount Installation

7. With the mounting holes clearly marked, remove the back shell from the wheelchair and carefully secure/stabilize the back shell so that the mounting holes can be safely drilled.
8. Using a power drill and a 1/8" (3.0mm) drill bit carefully drill a pilot hole at each of the 4 mounting locations marked on the MX1 back shell. All holes should be drilled perpendicular to the surface of the back shell.
9. Using a larger drill bit (in the range of 1/4" up to 17/64" or 6.5mm) drill out each of the 4 pilot holes to produce the final mounting locations (6).

**⚠ CAUTION!** After drilling, use fine sandpaper or file to remove any rough edges or fibres around the holes.

**ⓘ NOTE:** the final mounting holes are intentionally oversized from the installation hardware (screws) in order to allow a small amount of tolerance around the drilled hole locations.

**ⓘ IMPORTANT!** To ensure a more accurate hole position, drill a **pilot hole** first, using a smaller 1/8" (3.0mm) drill bit, prior to drilling out the final mounting hole.



**⚠ WARNING!** Ensure the back shell is properly stabilized and keep hands and fingers clear of the drill bit when drilling to prevent injury.

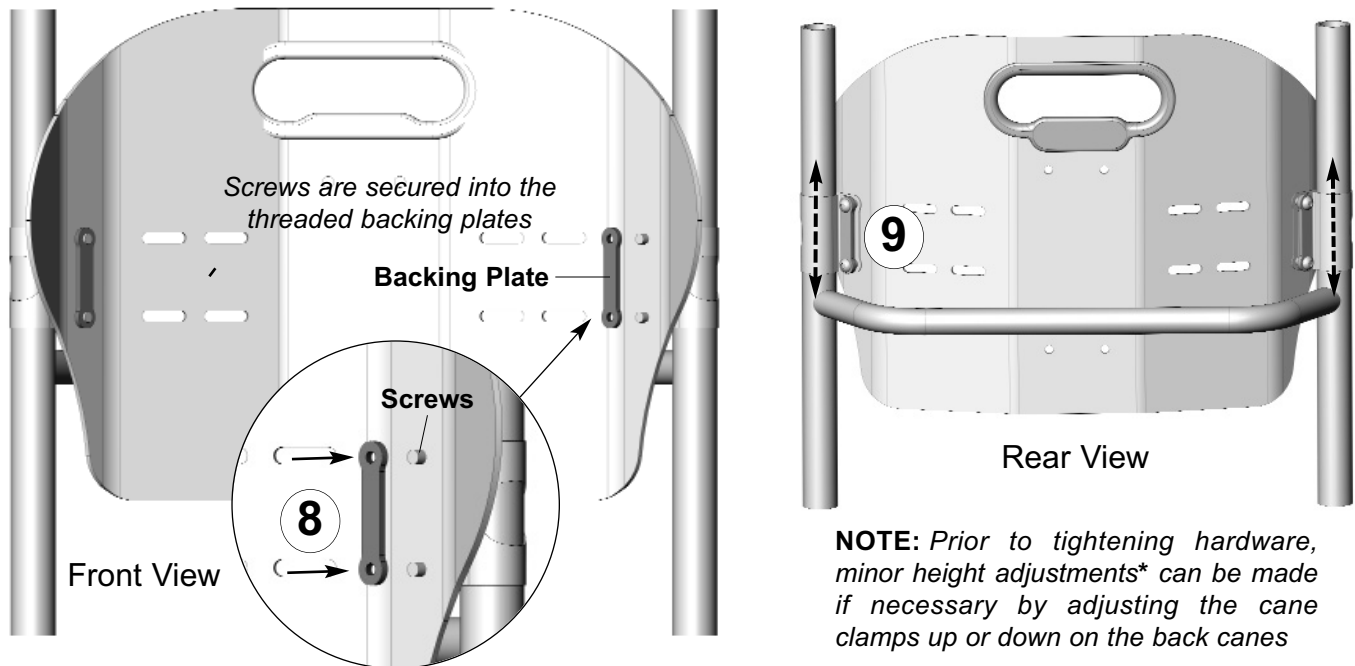
10. With all four (4) mounting holes drilled, re-align the back shell with the band clamps and install the mounting hardware (screws/washers/outer plates) through the band clamps and through the new mounting holes as indicated below (7).



## 5.0 Mx1 SuperLite Mount Installation

11. Working from the inside of the back pan, secure the mounting hardware (screws) into place via the threaded backing plates provided (8).

12. Fine tune height adjustments can be made prior to fully tightening the mounting screws, or by loosening the mounting screws and sliding the cane clamps up or down as needed along the back canes (9).



**NOTE:** Prior to tightening hardware, minor height adjustments\* can be made if necessary by adjusting the cane clamps up or down on the back canes

**i** \*NOTE: Height adjustments made post installation may be subject to limitations depending on the location of the rigidizer bar relative to the band clamps.

13. Verify that **all** mounting hardware is fully tightened, and re-attach the outer cushion/cover onto the back shell.

**If you have any questions or concerns when installing your Invacare Matrix Mx1 SuperLite Mount Back please contact our Technical Service Department for assistance:**

**Canada:** 800-680-4191

**USA:** 888-433-6818

## 6.0 Options

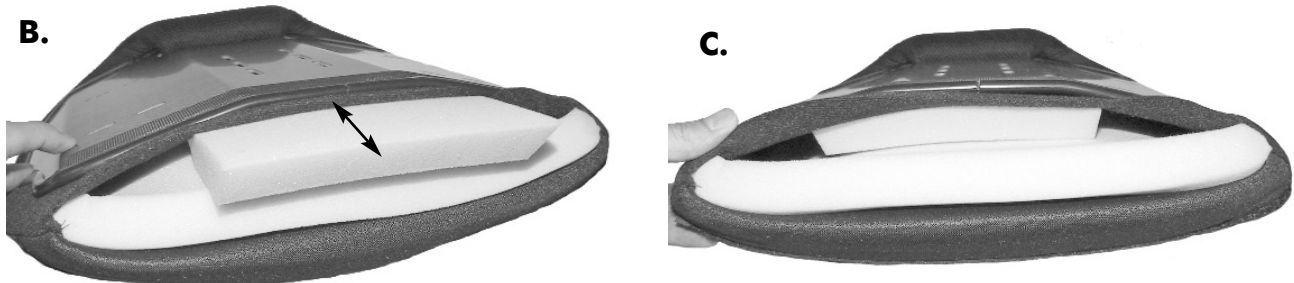
The optional **Lumbar Support** is a pre-fabricated foam insert that provides lower back support for additional comfort. The position of the lumbar insert can be adjusted inside the Mx1 cushion cover, or it may be removed if no lumbar support is desired.

### 6.1 Lumbar Support Installation/Adjustment:

1. To install or access the lumbar support, open the outer cover at the bottom rear of the back shell.



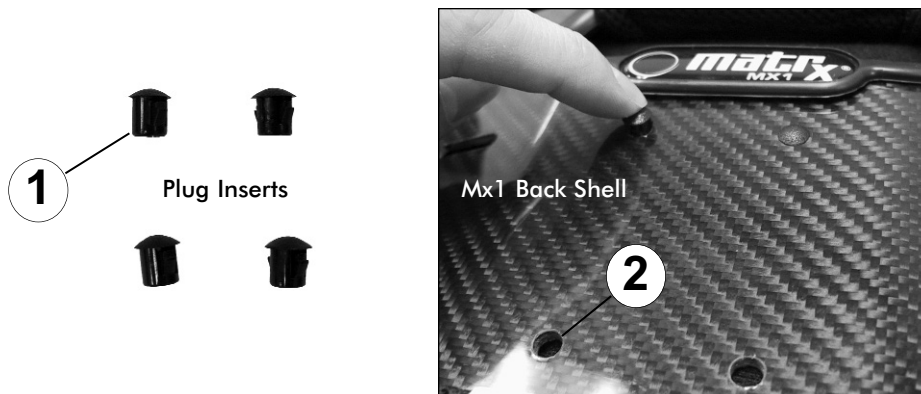
2. Install/adjust the foam lumbar support inside the Mx1 cover between the foam back cushion and the back shell (see image B. and C. below).
3. The lumbar support can be manually adjusted to any desired position, or it can be removed completely if no lumbar support is desired.



*Adjust lumbar foam as needed or remove completely*

### 6.2 Plug Inserts:

Optional plug inserts (Model DP-250) (1) may be used to fill unused mounting holes (2) on the Mx1 back shell.

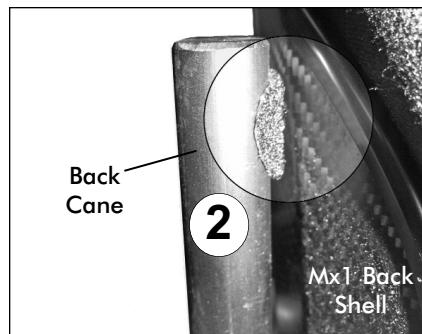
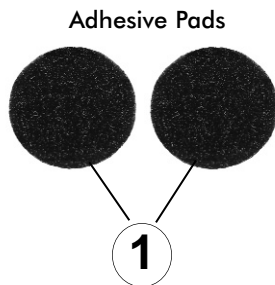


## 6.0 Options

### 6.3 Adhesive Pads

Adhesive pads (1) are available to protect the Mx1 back shell from scratches.

1. Peel the protective paper off of the back of the adhesive pad.
2. Install the adhesive pad between the Mx1 back shell and the back cane (2), or other wheelchair component, that may rub against the back shell.



### 6.4 Installing Optional Privacy Flap

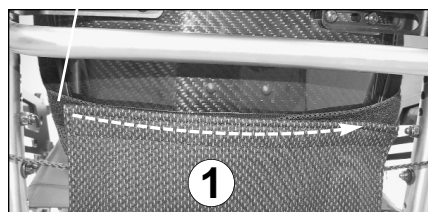
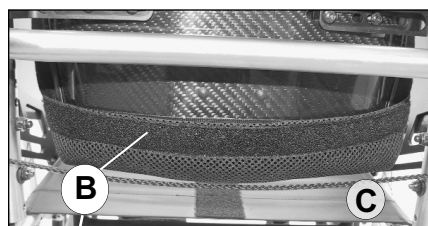
Privacy flaps (1) are available (sold separately) for use with all standard sized MX1 backs. All standard sized backs come with a pre-sewn loop strip across the bottom rear of the cushion cover (B) for installation of the privacy flap.

Refer to the chart for proper sizing of the privacy flap for the MX1 back:

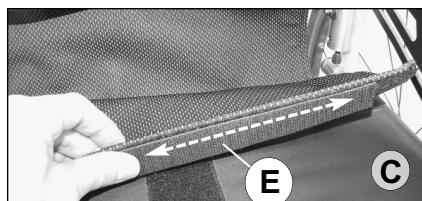
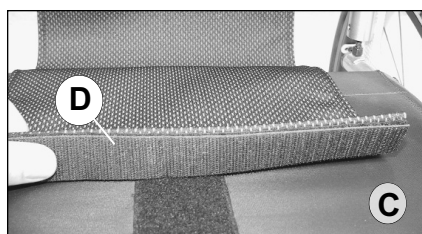
WIDTH	PRIVACY FLAP
14 in (36 cm)	PFLAP-XS 10" x 16" (26 cm x 41 cm)
15 in (38 cm)	PFLAP-S
16 in (41 cm)	13" x 16" (33 cm x 41 cm)
17 in (43 cm)	PFLAP-M
18 in (46 cm)	15" x 16" (38 cm x 41 cm)



1. If installed, remove the seat cushion.
2. Ensure the back is adjusted to the desired height. (Refer to section 5.1, **Installation Instructions**)
3. Position the wheelchair in front of you so the back is facing you.
4. Align the hook strip (A) on the privacy flap with the loop strip sewn on to the bottom rear of the back cover (B).
5. Pull the opposite end of the privacy flap through the gap between the back and the wheelchair seat (C).
6. Secure the loop strip (D) on the opposite end of the privacy flap to the fastening strip on the wheelchair seat.



REAR VIEW



FRONT VIEW

**NOTE:** The fastening strip pre-installed on the wheelchair seat pan or sling upholstery may be either a hook strip or a loop strip. It may be necessary to install the the double sided hook strip (E) onto the privacy flap to secure it to the seat.

## 7.0 Maintenance

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### 7.1 Cleaning

#### General Cleaning

1. Wipe the outer cover with a damp cloth when necessary.

#### Laundering

1. Release the hook and loop fasteners securing the back cushion cover. The hook and loop fasteners are located on the top and bottom edge and inside of the back shell.
2. Remove the foam cushion.
3. Remove the lumbar support. Refer to Installing/Adjusting the Lumbar Support on page 28.
4. Remove the cover from the back shell.
5. Follow the washing instructions on the cover.
6. Allow the cover to fully dry.
7. Insert the foam cushion into the cover.
8. Ensure the foam cushion is fully inserted and the perimeter of the foam is aligned with the cover seams.
9. Install the cover onto the back shell.
10. Install the lumbar support. Refer to Installing/Adjusting the Lumbar Support on section 6.1.

### 7.2 Inspection

Visually inspect parts including hardware, brackets, upholstery materials, foams (if accessible), and plastics, for deformation, corrosion, breakage, wear or compression.



#### **WARNING!**

Check ALL fasteners weekly to ensure that mechanical connections and attaching hardware are tightened securely - otherwise injury or damage may occur.

DO NOT continue to use this product if problems are discovered. Corrective maintenance can be performed at or arranged through your equipment supplier.

### 7.3 Reuse



#### **WARNING! Risk of Injury**

Always have a dealer inspect the product for damage before transferring the product to a different user. If any damage is found, DO NOT use the product. Otherwise injury may occur.

**NOTES:**



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