



*Freedom Designs, Inc.*



**Seating & Positioning Catalogue**

May 2010



# Making More than Products ...Making a Difference!



Corporate office & manufacturing facility - Simi Valley, CA USA

Freedom Designs, Inc., a member of the Helixx Group, has designed and manufactured specialized wheelchair frames, custom seating and positioning systems, hardware, and accessories for over 26 years. Utilizing an in-house machine shop and highly specialized staff, Freedom Designs is able to offer functional, durable, and cost effective products – all manufactured in the U.S.A.

We are proud of many on-going industry contributions over the years. These include active involvement with seating/positioning and wheelchair code development for funding agencies, offering the first technical seminars for therapist/representative training, design and manufacture of the first folding tilt in space wheelchair (Libre/Gizmo), the first mid-wheel drive wheelchair (Tripod) and the Freedom CGX, the first cable-free, center of gravity, tilt in space wheelchair.

Major company goals have been, and continue to be, the provision of both innovation and high quality products complemented by a seasoned, knowledgeable and caring customer service and support staff.

The Freedom Designs' team wants to thank you for your interest and for giving us the opportunity to serve your needs.

## ***OUR QUALITY PLEDGE:***

***Freedom Designs makes the following commitments to our valued customers:***

- ✓ *To ensure order accuracy by thorough quality control and attention to detail.*
- ✓ *To deliver our products at the highest level of quality as well as maintaining and providing the highest professional standard.*
- ✓ *To provide excellent customer service by listening and assisting in a timely and thorough manner.*
- ✓ *To continue improving operations, providing for on-going growth and increased efficiencies for us and our customers.*



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# Terms & Conditions

## Warranty Terms & Conditions

### Standard INVACARE Terms

This is to certify that your product is warranted by **INVACARE** Ltd. for a period of 1 year for parts and 5 years for frames.

1. Only **INVACARE** products purchased at full price are warranted against defective workmanship and materials.
2. If a defect or fault is discovered the **INVACARE** representative from whom the product was obtained should be notified immediately.
3. The manufacturer will not accept responsibility for damage caused by misuse or non-observance of the instructions set out in the user manual.
4. During the period of the warranty any parts that have become defective, due to faulty workmanship or materials, will be renewed or repaired without charge by the **INVACARE** representative.
-  5. The warranty will be forfeited should any unauthorised alteration be made to the equipment.
6. The purchaser's statutory rights under the Consumer Protection Act are not affected.

### Limitation Of Liability

This warranty does not extend to the consequential costs from fault clearance, in particular freight and travel costs, loss of earnings, expenses, etc.

- Natural wear and tear.
- Inappropriate or incorrect use.
- Defective assembly or setting-up by the purchaser or third parties.
- Defective or neglectful treatment.
- Use of unsuitable spares.



# Solid Seats

Freedom Designs offers solid seats in two configurations:

1. Solid seat hinged to a solid back.
2. Solid seat stand alone with 4-point hardware.

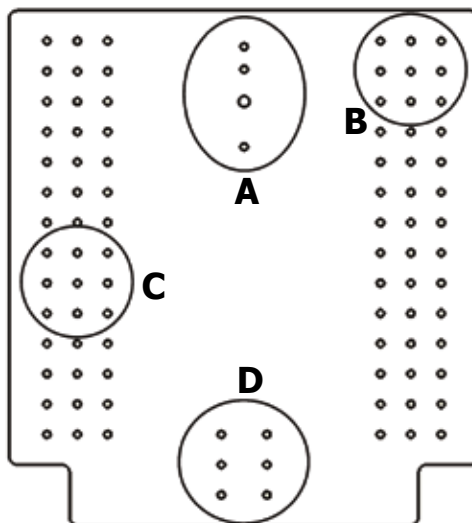
## Solid Seats Features:

- 1/2" marine grade plywood with 1 1/2" 4# high density foam
- Universal t-nut pattern for mounting hardware and components
- Zipper at rear of seat.
- Standard t-nuts for components.
- Numerous modifications available.
- Various upholstery options including: Reverse Dartex on contact surfaces and a choice of Lycra or Naugahyde on non-contact surfaces.

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## T-Nut Patterns

### Standard Pattern



- A** - Abductor T-Nuts (1/4-20 & 3/8-16)
- B** - Hook Pattern T-Nuts (1/4-20)
- C** - Hip Pad Bracket T-Nuts (1/4-20)
- D** - Seat to Back Bracket T-Nuts (1/4-20)



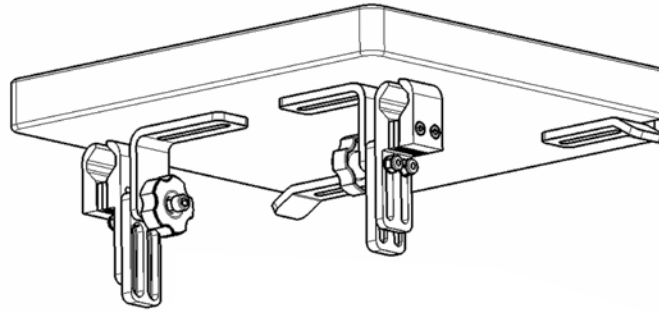


# Solid Seats

## 2 Point Hardware

(Seat bracket is included when 2 point seat is ordered with a 2 point back)

### EE1 Solid Seat w/ Econo EZE Hardware

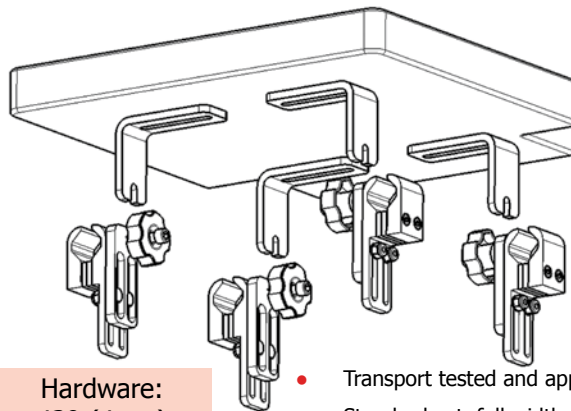


Hardware:  
436 (2 ea.)  
439 (2 ea.)  
462 (1 pr.)

- Standard cut - full width (between rails by request).
- Transport tested and approved.

## 4 Point Hardware

### 101-7500 Solid Seat w/ Econo - Eze Hardware



Hardware:  
439 (4 ea.)  
462 (2 pr.)

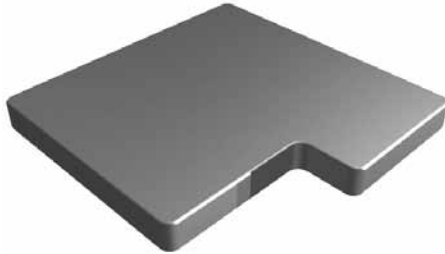
- Transport tested and approved.
- Standard cut, full width.
- Can be cut between the rails by request.



# Seat Modifications

Please choose a seat from previous pages to modify

## Mod-1C Asymmetrical Seat Front



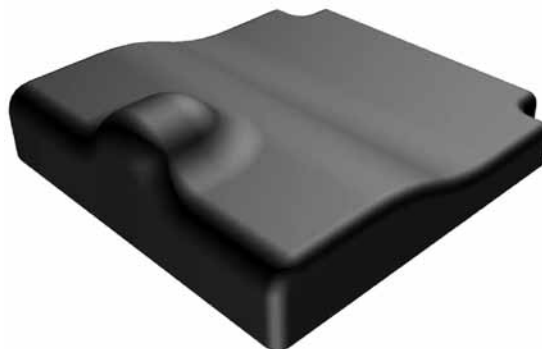
- Used to accommodate leg length discrepancies of 1-1/2" or more. Specify length on each side when ordering. **Mod-1CR** for long right or **Mod-1CL** for long left.
- If an abductor is required, please specify which side of the asymmetrical cut the abductor should be mounted. If not specified, the abductor mount will be on the short leg.

## Mod-1K Anti-Thrust Seat Foam



- Helps maintain ischial placement and pelvic positioning.
- Anti-thrust shelf is based on client's seat depth.

## Mod-1V Contour Seat Foam Abductor & Anti-Thrust

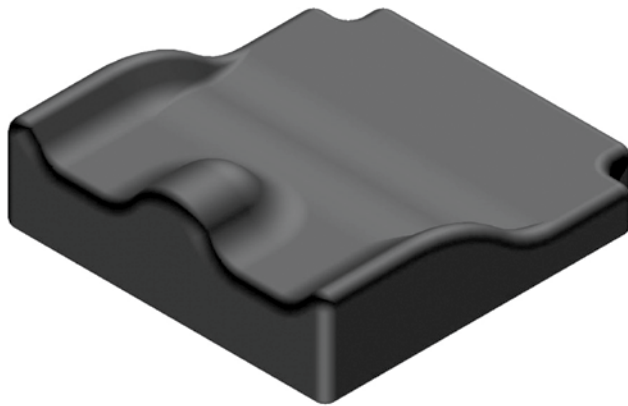


- Provides abductor build-up and anti-thrust ledge.
- Standard size is based on client seat depth and/or all dimensions can be specified.
- Anti-thrust is standard on all contours unless otherwise specified.



# Seat Modifications

## Mod-1Y Contour Seat Foam Adductor, Abductor, & Anti-Thrust



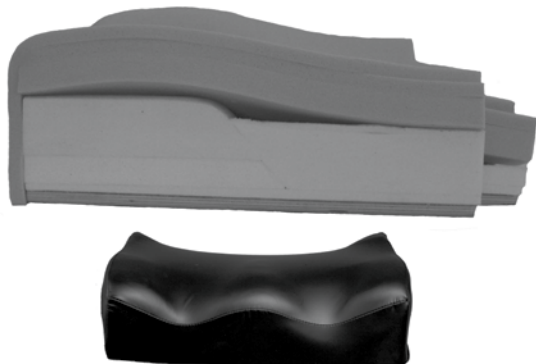
- Provides seat adductor/abductor build ups and anti-thrust ledge.
- Standard size is based on client seat depth and/or all dimensions can be specified.

## Mod-1DD Modular Seat Contour Cushion (Assessment Only)



- Features Eva foam blocks with the anti-thrust shelf cut in 1/2" increments.
- Includes hook & loop for multiple placement, layers of 1/2" medium Sunmate, and 1/2" 4# foam on top.
- Stretchable cover fabric is recommended.

## Mod-1UU Cut, Carve, Contour Modular Seat



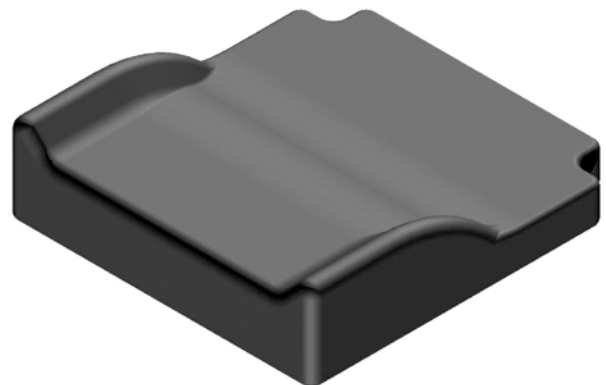
Foam Buildup:

MOD-1UU - Mild	1"
MOD-1UU - Moderate	2"
MOD-1UU - Maximum	3"

Represents an evolution in "cut and shape" modular seating technology.

- Pre-contoured Eva foam support for stability and intimate fit.
- Features a soft, stretchable moisture-resistant cover, zippered for easy access.
- Integrated solid seat for added stability.

## Mod-1W Contour Seat Foam Adductor & Anti-Thrust



- Provides adductor build up and anti-thrust ledge.
- Standard size is based on client seat depth and/or all dimensions can be specified.





# Solid Backs

Freedom Designs offers solid seats and backs in two configurations:

1. Solid Back hinged to seat
2. Solid Back with 4 point hardware

## Solid Backs Features:

- 1/2" marine grade plywood with 1" of medium density 4# foam.
- Various upholstery options including Reverse Dartex on contact surfaces and a choice of Lycra or Naugahyde on non-contact surfaces.
- Numerous modifications available.

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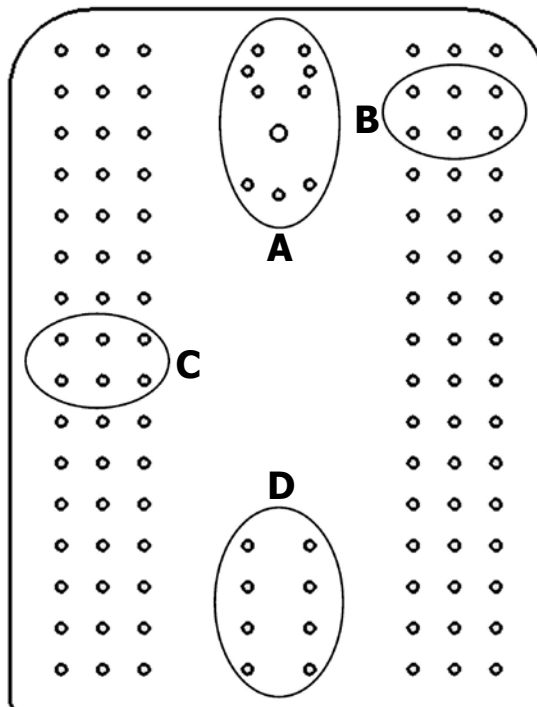
### Notes:

Backs ordered with Freedom Designs' hardware will have a universal t-nut pattern.

**Solid back inserts ordered without hardware will be t-nutted per customer instructions.**

## T-Nut Patterns

Standard Pattern



- A** - Headrest T-Nuts (1/4-20 & 3/8-16)
- B** - Mounting Hardware T-Nuts (1/4-20)
- C** - Lateral Bracket T-Nuts (1/4-20)
- D** - Seat to Back Bracket T-Nuts (1/4-20)

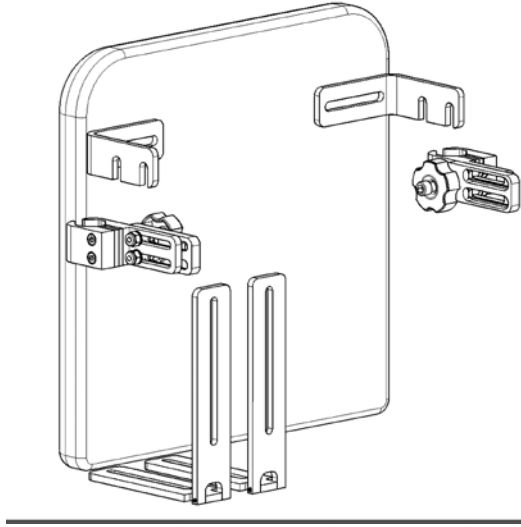


# Solid Backs

## 2 Point Hardware

### EE2

#### Solid Back w/Econo-Eze Hardware



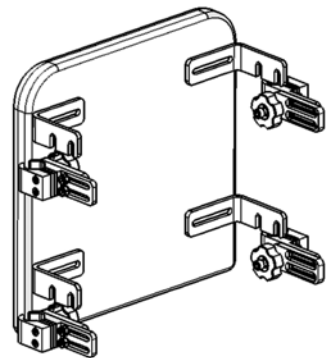
- Includes 2 each #462 frame clamps, 2 each #437A back mounting forks and 2 each #430 hinges.
- Frame clamp is universal for round tubing.
- Backs are cut to fit between the back posts, unless otherwise specified.
- Seat to back angle can be adjusted.

## 4 Point Hardware

### 102-7500

#### Solid Back w/Econo-Eze Hardware

- Includes 4 each #462 frame clamps and 4 each #437A back mount forks.
- Offers all the benefits of our knob release hardware with the ease of an independently mounted back.
- 4 knob release points secure the back to the frame.
- Clamps are designed to fit all 3 standard sizes of round tubing.
- Econo-Eze Hardware offers seat to back angle and depth adjustable hardware to fit a wide range of needs.
- Cut to fit between the back posts unless otherwise specified.





# Back Modifications

Please choose a back from previous pages to modify

## Mod-2H I Modification



- Cut in the shape of a capital "I" so trunk supports can be mounted close to chest width.
- The "I" allows for vertical adjustment of lateral trunk supports.
- Compatible with both types of mounting hardware.
- Standard sizes based on axilla height and chest width.

## Mod-2I Curved Wood Modification



- Backs can not exceed 22" in width or 32" in height.

## Mod-2J T Modification



- Cut in a "T" shape to allow for maximum adjustment of trunk supports.
- Compatible with any Freedom Designs seat and back combination where a hinge is used.
- Standard sizes based on axilla height and chest width.

## Mod-2QQ Easy Conforming Back Split Outer Wing



- Useful when more aggressive lateral trunk control is needed - especially with patient displaying increased chest depth due to mild rib rotation or spinal deformity. Also with differences in chest and hip width measurements.



# Medial Thigh Supports

## Medial Thigh Support Pads

Part Number

Hardware Number

### Medial Thigh Pad

#### Standard Sizes

Small:	3"L x 3"H x 3"-2" taper
Medium:	4"L x 3"H x 3"-2" taper
Large:	5"L x 4"H x 4'-2" taper
X-Large:	6"L x 5"H x 5"-3" taper



## Medial Thigh Support Pads

Part Number

Hardware Number

### Push Button Flip-Down Abductor

#### EE3S

- Flips completely under the cushion utilizing a spring-loaded release flip down mechanism.
- Height adjustable - alternative bracket sizes create flexibility for 1" to 5" ranges.
- Depth adjustable hardware.
- Hardware constructed of aluminum and stainless steel.



## Removable Medial Thigh Supports

### Medial Thigh Adjustable/Removable Support

#### EE3A

431

- Knob release hardware for easy slide or removal.
- Thin profile hardware permits mounting when cross tube or strut hinders other hardware.
- Extension brackets available for high profile cushions.





# Lateral Pelvic Supports (Hip Guides)

## Lateral Pelvic Supports Features:

- Fixed and removable hardware.
- Custom hardware sizes available at no upcharge.
- All lateral pelvic pad hardware mounts to solid seat.

## Pad Sizing

Please provide the following information when ordering:

Length x Height x Thickness.

Part Number

Hardware Number

Pads

### Standard Lateral Pad

#### Mod-4B (use this number when ordering pads only)

- For pads of 14" in length or more, we recommend an additional set of mounting brackets.
- Pads ordered with hardware come with t-nuts.
- Thin profile pads are available upon request at no additional charge. These pads are made with 1/4" ABS base and 1/4" neoprene foam.
- Standard pelvic/thigh support pads are constructed of 1/2" marine grade plywood with 1" of 4# foam.



### Custom Contour Lateral Pad

#### Mod-4A

- Use this pad when ordering an anti-thrust or wedge seat and you need the pads to match the contour of the seat.



## Hardware

### Lateral Pelvic Supports Solid Seat Mount (Pair)

**EE4A**

450A "L"

**EE4B**

442 1" o/s

443 2" o/s

442B 1" reverse o/s



- Specify all pad dimensions and desired offset. 1" offset is standard.
- Mounts to the bottom of the seat and features slotted L-brackets which allow for width adjustment.
- All t-nut spacing for the pad is on 1" centers.
- Extensions available for high profile cushions.



# Lateral Pelvic Supports (Hip Guides)

Part Number

Hardware Number

Hardware

## Hanger Mounted Knee Adductor (Pair)

**EE4D**

544

**EE4D-78**

544-78

- Multi-adjustable bracket and pad.
- Swing away functionality when mounted to a swing away hanger.
- Fits 7/8" & 1" diameter hanger tubes



## Lateral Pelvic/Thigh Support (Pair) with Height Adjustable Armrests

**EE4E**

450A "L"

442 1" o/s

443 2" o/s

512A "L"

- Specify all pad dimensions and desired offset.
- Mounts to the bottom of the seat and features slotted L-brackets which allow for width adjustment.
- Extensions available for high profile cushions.







# Lateral Thoracic Supports

(Trunk Supports)

## Standard Trunk Supports Features:

- Fixed, swing-away, quick release, or summer/winter hardware.
- All lateral thoracic hardware mount to solid back.

Standard Pad Sizes			
FLAT PADS		CURVED PADS	
SMALL	..... 4"L X 3"H	SMALL	..... 6"L X 3"H
MEDIUM	..... 5"L X 4"H	MEDIUM	..... 7"L X 4"H
LARGE	..... 6"L X 5"H	LARGE	..... 8"L X 5"H
X-LARGE	..... 7"L X 6"H	X-LARGE	..... 9.5" L X 6"H

Part Number

## Pads

### Standard Sizes

#### Flat Pads

Small: 4" Long x 3" High  
 Medium: 5" Long x 4" High

Large: 6" Long x 5" High  
 X-Large: 7" Long x 6" High

- Standard flat pads have a 1/2" marine grade plywood base with 1/2" of 4# foam (1" total average thickness)

#### Curved Pads

Small: 6" Long x 3" High  
 Medium: 7" Long x 4" High

Large: 8" Long x 5" High  
 X-Large: 9 1/2" Long x 6" High

- Standard curved pads have a Kydex base with 1/2" of 4# foam (not available on fixed hardware)

#### Thin Pads

### Mod-5K

- Thin profile pads are available upon request at no additional charge. These pads have a 1/4" Kydex base and 1/4" high density neoprene foam. Pads average 3/4" thickness.
- Thin profile pads may be ordered flat or curved. With all pads, foam is rolled over edges to ensure client comfort.



## Hardware

Part Number

Hardware Number

### Fixed Hardware

### 1", 2" & 1" Reverse Offset Bracket (Pair)

#### EE5B

442 - 1" o/s  
 443 - 2" o/s  
 442B - 1" reverse o/s

- Slotted at both pad and back mounting locations.
- Flat pads are standard.





# Lateral Thoracic Supports (Trunk Supports)

## Hardware

Part Number

Hardware Number

### Fixed Hardware

#### Fixed Hardware with Summer/Winter Lateral Adjustment (Pair)

**EE5J**

442C  
443C - 1" o/s  
450C - 2" o/s

- Pull knob release width adjustment.
- Allows for removal of heavy clothing by enabling the pads to be returned to a more proximal position.
- Pads come curved unless otherwise specified.



#### Locking Swing Away Hardware with Summer/Winter Lateral Adjustment (Pair)

**EE5K**

497A  
497C - 1" offset  
497D - 2" offset

- Hardware lifts to swing away, aiding in ease of transfer and returning to the original position when locked in place.
- Designed with pull knob release width adjustment.
- Allows for removal of heavy clothing by enabling the pads to be returned to a more proximal position.
- Micro sizes have a single slotted connecting pad bracket.
- Pads come curved unless otherwise specified.



#### Locking Swing Away Hardware with Lever Release (Pair)

**EE5P**

510A  
510B - 1" o/s  
510C - 2" o/s

- Features a lever release on the underside of the hardware.
- Pads come curved unless otherwise specified.
- Dual slotted hardware allows for ample adjustment.





# Lateral Thoracic Supports

(Trunk Supports)

## Accessories and Modifications

### Tracks (Pair)

#### EE5I

Sizes: Single: 3", 5", 7", 9", 11"    Double: 9", 11"

- Can be added to solid backs or seats for infinite adjustability of lateral supports.
- Retrofit any solid back mount trunk supports or seat mounted lateral thigh supports.
- Dual tracks are available.



### Protective Boots (Pair)

#### MOD-5F

- Slip over the trunk support hardware to protect client from metal.
- Made of plush Lycra



# Headrests

## Headrest Pads

Part Number

### 7750

- Base constructed of 1/4" Kydex with 1" 5# foam.
- Width and height can be specified or standard sizes are available (ref below).

### Occipital Headrest Pad



Size:	Standard Pad Sizes			Standard Sizes:
	Outside Width:	Opening Width:	Height:	Circumference
Small	11"	5"	3-3/4"	Small: 18"
Medium	11"	6"	3-3/4"	Medium: 20"
Large	12"	6-1/2"	4"	Large: 23"
X-Large	12"	7-1/2"	4"	X-Large: 25"

### 7753

- Features 3 separate pads made up of 1/4" Kydex base with 1" 5# foam.
- Center pad has side pads attached with adjustable hinges.
- Pad designed to aid in control of ATNR and add support for poor head control.

### Tripad Headrest



Standard Pad Sizes		
Small:	4" x 4"	Medium: 4" x 5"
Large:	5" x 5"	

### 7756

- Constructed of 1/4" Kydex with 1" 10# base and 1" 4# foam on top.
- Standard upholstery is reverse Dartex. Naugahyde and nylon not available.

### Soft Headrest Pad



Standard Sizes:	
Small:	10"W x 4"H
Medium:	12"W x 5"H
Large:	13-1/2"W x 4-1/2"H

### 7760

- Features a 1/4" Kydex base with 1/2" foam
- Foam is rolled over edges of base for skin protection.
- Standard upholstery is reverse Dartex.
- Zipper allows access to the foam.

### Slimline Headrest Pad



Size:	Width:	Height:	Depth:
Small	8"	4-1/2"	2-1/2"
Medium	10"	4-1/2"	2-1/2"
Large	12"	4-1/2"	2-1/2"
X-Large	14"	4-1/2"	2-1/2"



# Headrest Hardware

## Headrest Hardware

Part Number

### Rock & Roll Headrest Hardware

**7708**

- Features 2 knuckle joints that allow for multi-axial adjustment in the mid-sagittal plane.
- Reinforced with 2 bolts at each knuckle joint to prevent slippage.
- Hardware is mounted to a horizontal track allowing for incremental placement.



### Rock & Roll Flip Back Headrest Hardware

**7709**

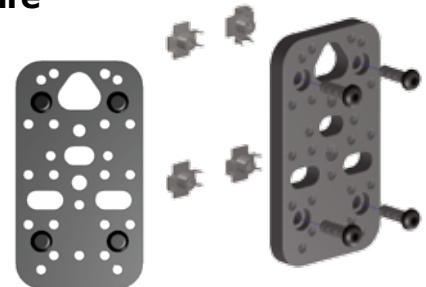
- Hardware features easy flip down release functionality and a self-locking re-engagement mechanism.
- Two knuckle joints allow for multi-axial adjustment in the mid-sagittal plane.
- Reinforced with 2 bolts at each knuckle joint to prevent slippage.
- Hardware is mounted to a vertical/horizontal track allowing for incremental placement.



### Headrest Adapt-A-Plate Hardware

**7733**

- Accepts all mainstream manufacturer's as well as Freedom Designs' headrest hardware.
- If ordered alone it will be shipped with bee stingers, if ordered with a back it will ship with t-nuts.

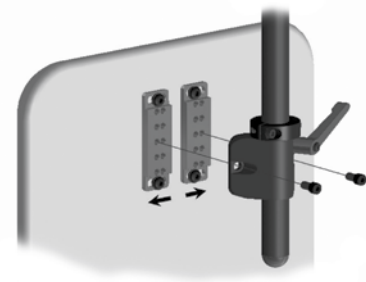


### Platemate

**77 Platemate**

- Adapts most manufacturer's (i.e. Whitmyer, Otto Bock, etc) headrests to Freedom Designs' seating systems.
- Mounts directly to the back and is adjustable in width from 3/4" to 2-1/4".

**No more custom T-nut patterns needed for headrests!**





# Extremity Supports

## Upper Extremity Supports

**09-4000**

**Arm Trough w/ T-Nuts (Each)**



Available lengths: 10", 12", 14", 16", 18"

- Constructed of 1/4" Kydex - strong yet lightweight.
- T-nuts are 1" increments.
- Curved to protect and keep the forearm in place.
- Elbow stop keeps the arm stationary while tilted or reclined.
- Padded wrist strap with hook and loop available
- Features a soft, durable Lycra covered neoprene liner which reduces shearing and draws away moisture for increased skin integrity management.

## Lower Extremity Supports

**EE9C**

**Shoe Holder with Buckles (Pair)**



Shoe Holder Foot Size Chart

	Outside Length:	Outside Width:	Inside Width:
Small:	5"	2-3/4"	3-1/2"
Small/Med:	5-3/4"	3"	3-3/4"
Medium:	6-1/2"	3-1/4"	4"
Med/Lrg:	7-1/4"	3-1/2"	4-1/4"
Large:	8"	4-5/16"	5"
XLrg:	10"	5-1/4"	4-1/2"

**EE9H**

**Foot & Ankle Positioner (Pair)**

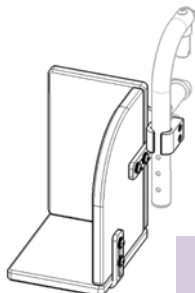
- Can be mounted directly to the footplate.
- Straps provide a range of adjustability.
- Slots for straps allow for accommodating various lower extremity deformities.

Small	4-1/2" x 7-1/2"
Medium	5" x 9"
Large	5-1/2" x 10"



**08-10000**

**Individual Leg Cradle (Each)**

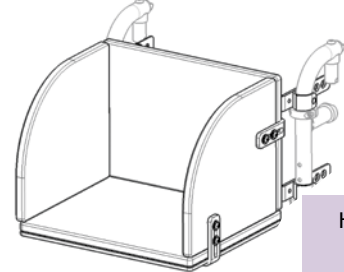


Hardware  
521

- A layer of 1/2" 4# foam is secured to the inside panels.
- No standard sizes - width is based on chair width. Cut to fit between the hangers. Please specify height and depth of cradles or box.
- Please indicate hanger mount, foot plate mount, or mounting under solid seat with L-brackets.

**08-11000**

**One Piece Double Leg Foot Box (Each)**



Hardware  
415A  
403  
450A

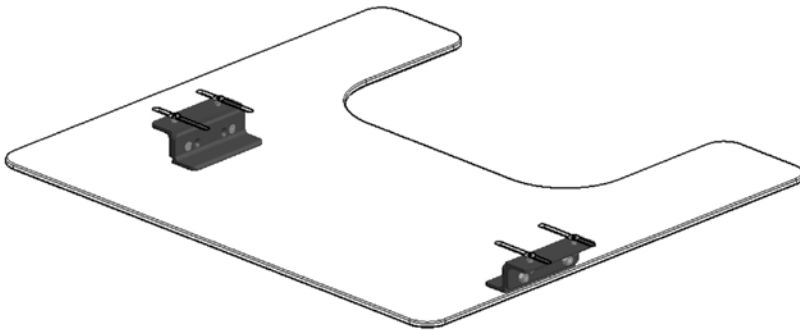


Part Number

## EZ-Lite Lexan Tray

### 08-12000

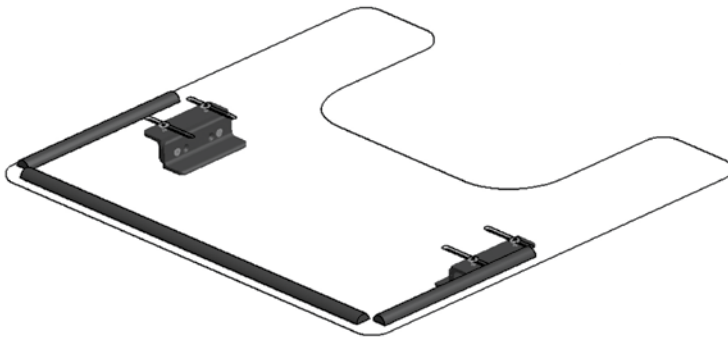
- A lightweight tray made of 1/4" thick lexan with aluminum channels designed to fit on either padded or foam grip style armrests.



## Lexan Tray with Rib

### 08-13000

- Same as the standard 08-12000 EZ-Lite Tray except it features ribs on the leading edges and front 2/3 of the tray's sides.



Chair Width:	Tray Size:	Body Cut Out:
10"	20" W x 18" D	11" W x 7" D
11"	21" W x 18" D	12" W x 7" D
12"	22" W x 20" D	13" W x 7" D
13"	23" W x 20" D	14" W x 8" D
14"	24" W x 22" D	15" W x 9" D
15"	25" W x 23" D	16" W x 9" D
16"	26" W x 24" D	17" W x 10" D
17"	27" W x 24" D	18" W x 10" D
18"	28" W x 24" D	19" W x 10" D
19"	29" W x 24" D	20" W x 10" D
20"	30" W x 24" D	21" W x 10" D



# Upholstery Fabrics/Colours

**No LATEX is present in any Freedom Designs' fabric.**

Number	Name	Number	Name	Number	Name
--------	------	--------	------	--------	------

## Lycra (L Series)

L-05	BLACK	L-06	SILVER	L-13	ROYAL BLUE
L-14	BRIGHT RED	L-15	TURQUOISE	L-18	BRIGHT PURPLE
L-19	BURGUNDY	L-20	DARK BLUE	L-23	FORREST GREEN

## Multi Stretch PU (D Series)

DT-2R	MULTI STRETCH PU BLACK REVERSE				

## Naugahyde (F & K Series)

Number	Name	Number	Name	Number	Name
K-09	BRIGHT YELLOW	F-28	BRIGHT RED	F-117	ORANGE SIZZLE
F-09	ROYAL BLUE	F-36	PURPLE	F-118	LIME PUNCH
K-10	BRIGHT GREEN	F-38	TURQUOISE	F-119	ROSALEE
K-16	SPARKLE RED	F-75	SPACE BLUE	F-124	SHIMMER
K-17	SPARKLE PURPLE	F-112	PURPLE PASSION		





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