

# Top End® Paul Schulte Elite BB Chair

## Price List and Order Form

Effective January 15, 2007 Revised January 1, 2010

For accuracy of ordering, please fax order to Top End at 727-522-1007 or e-mail to TopEndOrders@invacare.com

For questions call 800-532-8677 or 727-522-8677.

To order Literature: 800-828-6282

www.topendwheelchair.com



Provider Name \_\_\_\_\_ Date \_\_\_\_\_ Top End Job Number \_\_\_\_\_  
 Account # \_\_\_\_\_ P.O. # \_\_\_\_\_ Phone # \_\_\_\_\_ Fax # \_\_\_\_\_  
 Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_  
 Customer Name \_\_\_\_\_ Email \_\_\_\_\_ Phone No \_\_\_\_\_  
 Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

Ship order to:  Provider  Customer Order will ship to Provider unless otherwise noted.

### KEY MEASUREMENT GUIDELINES PAGES 2 & 3

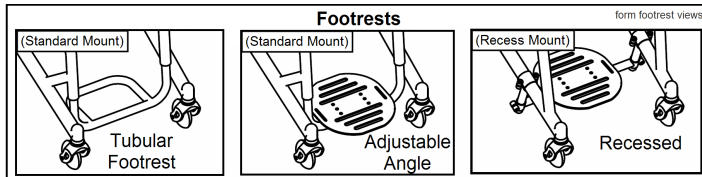
- PSSA** Top End Paul Schulte Elite Aluminum BB Chair ... \$2,495.00
- PSST** Top End Paul Schulte Elite Titanium BB Chair ..... 3,985.00
- TER61** Heavy Duty Option (weight limit 350lbs)..... 500.00
- TER118** Double Amp Option (Omit Footrest, see brochure) .... 100.00

1. SEAT WIDTH 14" 14.5" 15" 15.5" 16" 16.5" 17" 17.5"  
18" 18.5" 19" 19.5" 20" 20.5" 21"

**TER1** Tapered seat width ..... 125.00 <sup>1</sup>  
 Rear Seat Width: \_\_\_\_\_ Front Seat Width: \_\_\_\_\_

2. UPHOLSTERY SEAT DEPTH: 14" 15" 16" 17" 18"

3. EXTRA FRAME DEPTH: Standard = 0": 1" 1½" 2"



4. FOOTREST WIDTH: \_\_\_\_\_ Standard = Seat Width minus (-) 6" <sup>2</sup>

5. FOOTREST HEIGHT: (TOP) TO FLOOR: \_\_\_\_\_ <sup>3</sup>

6. FOOTREST TYPE: Standard: Tubular Footrest (Adjustable Height)

- TER86** Adjustable Angle Footplate (ht. and angle)..... 125.00  
 with risers  2"  4" (for desired Footrest Heights over 5" from floor)
- TER87** Recessed Footrest (Adj. ht, fore/aft & angle) .. 150.00 <sup>4</sup>

### 7. FOOTREST OPTIONS:

- TER10** Plastic footrest cover (standard footrest only)..... 75.00
- TER89** Carbon fiber footrest cover (standard footrest only)... 125.00

8. FRONT FRAME ANGLE: 80° 85° 90° 100°

9. SEAT HEIGHT FRONT: 14.5" 15" 15.5" 16" 16.5" 17" <sup>5</sup>  
17.5" 18" 18.5" 19" 19.5" 20" 20.5" 20-7/8" (53cm)

10. SEAT HEIGHT REAR: 14.5" 15" 15.5" 16" 16.5" 17" <sup>5</sup>  
17.5" 18" 18.5" 19" 19.5" 20" 20.5" 20-7/8" (53cm)

- TER31** Solid Seat w/ welded rigidizer bars for aluminum..... 175.00
- TERT13** Solid Seat w/ welded rigidizer bars for titanium..... 425.00

11. AXLE POSITION: "CENTER OF GRAVITY" (choose fixed or adj.): <sup>6</sup>

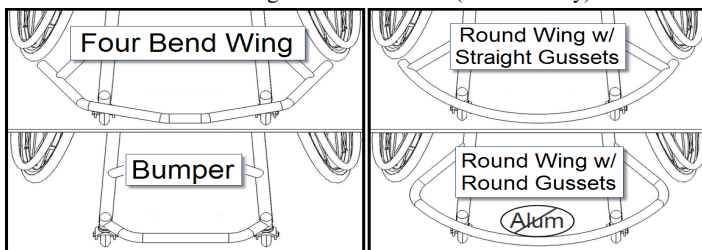
Fixed Axle Position: 3" 3.5" 4" 4.5" 5" 5.5" 6" Other \_\_\_\_\_  
 Adjustable Center of Gravity Range: 2" to 4" 3" to 5" (Std.) 4" to 6" <sup>7</sup>

12. WHEEL BASE: 15" 16" 17" 18" 19" Other \_\_\_\_\_

13. WING STYLE: Four Bend or Bumper (choose one) Standard

**TER200** Round Wing w/ Straight Gussets..... 100.00

**TER201** Round Wing w/ Round Gussets (titanium only) <sup>8,9</sup> 100.00



wing style pss oct08

14. CASTER CENTER TO CENTER (refer to notes) <sup>10</sup>

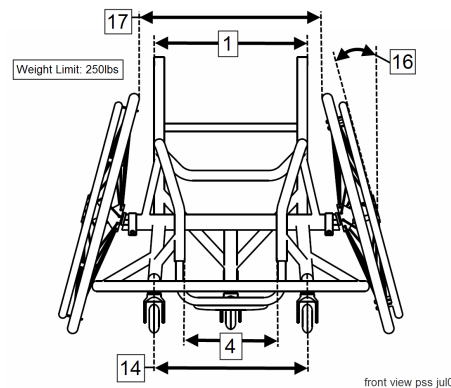
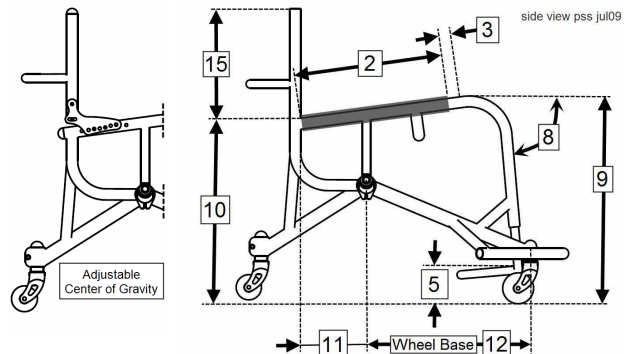
Standard Mount Footrest CtC = Footrest Width plus (+) 7"  Other \_\_\_\_\_

Recess Mount Footrest CtC = Seat Width minus (-) 1"  Other \_\_\_\_\_

15. ANTI-TIP/5<sup>TH</sup> WHEEL: Standard: Fixed Single Anti-tip (Swivel)

**TER115** Double Anti-tip fixed (swivel), aluminum..... 120.00

**TER116** Double Anti-tip fixed (swivel), titanium ..... 300.00



16. CAMBER: 12° 15° 18° 20° (no other camber available)

17. INSIDE WHEEL CLEARANCE (measured at top of tire):

Standard = Seat Width + 2.5"  Other \_\_\_\_\_

18. WHEEL TYPE: Build for:  Standard or  Spinegy

19. SUN@PERFORMANCE REAR WHEELS/ OPTIONS:

Rear Wheel Size: 24"(540) 25"(559) 26"(590) 700C

- TER131** Spinegy™ SLX (4mm) upgrade (24 spokes)..... 895.00  
 Spoke color: (choose one) Black Yellow White Red Blue
- TER67** Spinegy Spox (3mm) upgrade (24 spokes)..... 695.00  
 Spoke color: (choose one) Black Yellow White Red Blue
- TER6** Crossed Spoke Upgrade  
 (not available for Spinegy wheels)..... 125.00
- TER21** Spoke Guards:  Black or  Clear..... 75.00
- TER101** Kenda® Tires:  Red or  Yellow..... 75.00
- TER76** Titanium axles..... 150.00

RACE 101 Engineering Drawings ..... 100.00\*

# Top End® Schulte Elite BB Chair

## 20. . PUSHIRMS, ANODIZED (Aluminum):

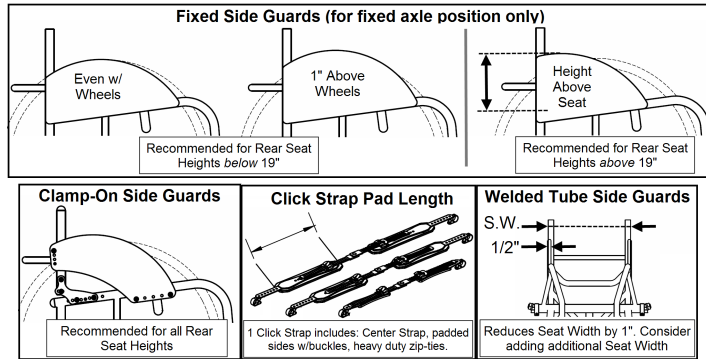
- Std. mount .....Standard
- Close mount .....NC
- TER40** Cut Tabs Aluminum pushrim..... 40.00
- TERTi40** Cut Tabs Titanium pushrim..... 80.00
- TER129** 12-Tab upgrade (Aluminum only)..... 150.00 <sup>11</sup>
- TER75** Titanium pushrims upgrade..... 600.00 <sup>11</sup>

## 21. BACK HEIGHT (choose fixed or adjustable):

- Fixed Height:  8"  8.5"  9"  9.5"  10"  10.5"  11"  11.5"  
 12"  12.5"  13"  13.5"  14"  14.5"  15"  15.5"

### Adjustable Height Range:

- Short 9" to 11"  Low 11" to 14"  Med 14" to 18"



## 22. SIDE GUARDS:

- TER95** Clamp-On Fixed aluminum side guards ..... 125.00
- TER20** Fixed aluminum side guards..... 175.00 <sup>12</sup>
  - Even w/wheels  1" Above wheels  Height above seat \_\_\_\_\_
- TER83** Fixed carbon fiber side guards ..... 250.00 <sup>12, 13</sup>
  - Even w/wheels  1" Above wheels  Height above seat \_\_\_\_\_
- TER130** Welded aluminum tube side guards w/ welded aluminum panel <sup>12, 14</sup>
  - Even w/wheels  1" Above wheels  Height above seat \_\_\_\_\_
  - ..... \$500.00
- TERTi10** Welded titanium tube side guards w/ welded titanium panel <sup>12, 14</sup>
  - Even w/wheels  1" Above wheels  Height above seat \_\_\_\_\_
  - ..... \$1000.00

Special Instructions: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

specials pss jan09

## SAFETY AND COMFORT OPTIONS:

- Calf Strap / Frame protector – rear ..... Standard
- TER14** Cushion, soft  2"  3"..... 75.00
- TER33** Cushion, hard  2"  3"  4"..... 125.00
- TER37** Frame protectors – front ..... 40.00
- XLT33** Alignment gauge ..... 75.00
- TER126** Click strap large (pad length ~12") ..... 86.00
- TER125** Click strap medium (pad length ~10") ..... 80.00
- TER124** Click strap small (pad length ~8")..... 75.00
- TER128** D-Ring positioning belt..... 100.00
- RACE22** Top End T-Shirt,  L  XL..... 10.00\*

## FRAME COLOR AND UPHOLSTERY

UPHOLSTERY  Black std  UPHI Camouflage \$100.00

FRAME FINISH:  Bead Blast Finish for Titanium

### CONTEMPORARY COLORS

- Wet Black  Black Prism  White Snow
- Silver Metallic  Silver Vein  Copper Penny

### WAY COOL COLORS

- Electric Blue  Midnight Blue  Cosmic Blue
- Electric Teal  Emerald Green  Grasshopper Green

### TOO HOT COLORS

- Tangerine Red  Electric Red  Grape Madness
- Safety Yellow  Sunkissed Orange  Fruit Fusion

## ADVICE FROM PAUL SCHULTE:

“The most experienced athletes I know are *still* considering changes for their *next* sports product. Changes are exciting, and in some cases enhance the performance of the athlete. Too many changes at once, however, make it difficult for athletes to determine what helped and what did not. Athletes should be conservative in the number of changes made when ordering a new product, and patient when experiencing what they have ordered. I have made changes that I initially disliked, which eventually became the best things for me.”

-Paul Schulte, Gold Medalist, Top End Design Engineer

## KEY MEASUREMENT GUIDELINES:

This section consists of Footnotes (exclusions) and advice on filling out this order form. The section is intended for cases where users have either an existing sports wheelchair or are ordering a sports wheelchair for the first time. In either case, users and distributors will find *all* the information below helpful. It is recommended that the individual *filling out the order form* has read through this section prior to taking the measurements.

Symbols are as follows:

### GUIDELINE KEY

- Footnote # :** Footnotes (Exclusions) applicable to the measurement / option.  
**(A):** For user’s who have a sports wheelchair present during measurement.  
**(B):** For user’s who do not have a sports wheelchair present during measurement.

key pss jan09

## 1. Seat Width:

**Footnote #1:** When Tapered Seat Width is chosen, 4" is the maximum difference between Rear and Front Seat Widths. Footrest width will be 2" less than the specified Front Seat Width.

**(A)** Measure existing Seat Width (shown in front view page 1). Determine if you desire more or less. Use a tape measure to estimate the amount of change desired. ½" sizes are acceptable. The Tapered Seat Width option divides the seat into a Rear Seat Width and a Front Seat Width. A small amount of taper would be 1 to 2 inches, more common for single leg amputees. A larger amount of taper would be 3 to 4 inches and would be common for legs with significant atrophy. (See footnote #1)

**(B)** The only major mistake one can make with Seat Width is to order it too narrow. 15" and 16" are the two most common Seat Widths. If no chair is available, measure the distance by pressing two books to the outsides of one’s hips and measuring the distance between them. (See footnote #1)

## 4. Footrest Width:

**Footnote #2:** Does not apply to Recessed Footrest.

**(A)** Measure existing Footrest Width (shown in front view page 1). Determine if you desire more or less room. Use a tape measure to estimate the amount of change desired. ½" sizes are acceptable. Recessed Footrest widths are dependant on Caster Center to Center and are normally conservative. Tubular style footrest widths are typically equal to Seat Width – 6". (See footnote #2).

**(B)** Place your sports shoes side by side and measure them at the widest point. Add 2" to that measurement for a typical footrest width measurement. For this measurement, the only major mistake one can make is specifying a Footrest Width that is too narrow. (See footnote #2).

## 5. Footrest Height: (Top) to Floor:

**Footnote #3:** 1" – 5" Std. For additional height select TER86 Adj. Angle footplate with riser option.

**(A)** Measure existing Footrest Height (shown in side view page 1). All footrests shown are adjustable in height. This measurement assists Top End in recognizing user needs. If possible, Top End will ship the product already adjusted to the requested height. ½" sizes are acceptable. (See footnote #3).

**(B)** All footrests shown are adjustable in height. When possible, use the person’s everyday footrest height measurement. This measurement assists Top End in recognizing user needs. If possible, Top End will ship the product already adjusted to the requested height. 3" is conservative. (See footnote #3).

\*No discount item

## Top End® Schulte Elite BB Chair

Axle Position + Wheel Base + 4"(titanium) = Overall Length  
(See footnotes #8 & 9)

(B) For new users, a Four Bend Wing is recommended. When an existing sports wheelchair is not present, a conservative Wheel Base measurement can be determined using the conversion chart:

WHEEL BASE CONVERSION CHART				
REAR SEAT TO FLOOR RANGE	SEAT DEPTH		CONSTANT	WHEEL BASE
21 - 19.5 TALL		+	3	=
19 - 17 MED		+	2	=
16.5 - 15 LOW		+	1	=

assuming 'Adjustable Center of Gravity' Range 3" to 5" is selected      pss caster position table

### 14. Caster Center to Center:

**Footnote #10:** For Tubular Style footrests, Caster Center to Center must be at least 5" greater than the Footrest Width. For Recessed Style footrest, Caster Center to Centers are not recommended to be less than 13".

(A) & (B) Use the defaults specified on page 1. (See footnote #10)

### 15. Anti-tip/5<sup>th</sup> Wheel:

(A) The Double Anti-tip option offers the greatest amount of stability. Anti-tip material must be the same as the frame material.

(B) Single Anti-tip comes standard with this product.

### 16. Camber:

(A) & (B) 15° is a conservative camber and makes for a thinner overall chair base. Taller players find this advantageous when trying to fit through tight spaces on the court. 18° and 20° create a wider overall chair base, and are advantageous for fast players.

### 19. Rear Wheel Size, Options:

(A) Existing Wheel size can be determined by reading the side-wall of the tire currently used or comparison with a wheel whose size is known. Wheel size is a player preference. Larger sizes may provide faster overall speed, but slower starts. Smaller size wheels may provide faster starts, but slower overall speed. Choosing the end user's existing wheel size is the most conservative choice.

(B) Using the Chart above: For Tall seat heights, 26"(590)'s are recommended. For Medium, 25"(559)'s are recommended. And for Low, 24"(540)'s are recommended. Tip: If the end user has an everyday chair, it may be convenient to choose the same size wheels on the new sports chair.

### 20. Pushrims:

**Footnote #11:** Titanium pushrims not available in 700C. 12 Tab pushrims available with Spinergy wheels only.

(A) Std. mount vs. Close mount is a personal preference item. If Close mount is desired, users can check the 'Cut Tabs' box to have the excess of the Tabs removed. The conservative choice is to order what the user has currently. (See footnote #11)

(B) Standard mount is a conservative choice.

### 22. Side Guards: (refer to diagrams)

**Footnote #12:** When Fixed Axle position chosen, all Side Guards are available. When Adjustable Center of Gravity chosen, Clamp-on Fixed Style are the **only** available side guards.

**Footnote #13:** Carbon Fiber Side Guards not available with Tapered Seat Widths.

**Footnote #14:** Welded tube Side Guards will reduce Seat Widths by ½" each side.

(A) If Side Guards are desired, measure the height of the existing Side Guards from top of seat frame (See footnotes #12, 13 & 14)

(B) Side Guards are common for sports wheelchairs. All Non-Welded Side Guards are removable. If the end user is not comfortable with the side guards, they can always be taken off. Welded Side Guards are permanent, and are intended for the advanced user. For Rear Seat heights above 19", 7" above the seat frame is a conservative Side Guard height. (See footnotes #12, 13 & 14)

### 6. Footrest Type:

**Footnote #4:** Recessed Footrest is also known as X-Terminator BB Style. Footrest Width is approximately Seat Width minus (-) 4".

(A) Tubular Footrest is standard. If angle adjustment is desired choose TER86 Adjustable Angle Footplate. If angle adjustment *and* front to rear adjustment are desired, choose TER87 Recessed Footrest. See footnote.

(B) For an individual's first sports wheelchair, the Recessed Footrest provides the most adjustability. (See footnote #4)

### 8. Front Frame Angle:

(A) Examine the end user's existing chair. Selecting 90° will position the Front Frame/ Footrest vertical. Selecting 85° will angle the Front Frame /Footrest towards the front of the chair. Selecting 100° will angle the Front Frame/ Footrest towards the rear of the chair.

(B) 85° is a conservative selection.

### 9 & 10. Seat Height Front / Rear:

**Footnote #5:** Rear Seat Height: 13" available with 24" wheels only.

(A) Measure the Front and Rear Seat Heights as shown in side view page 1. Use a tape measure to estimate the amount of change desired. 20-7/8" (53cm) is the recommended limit for Seat Heights used in International and USA basketball competitions. Measured Seat Heights may be affected by tire pressure, wheel size, after-market tires, and axle receiver position. Players whose classifications are higher (who have more ability) commonly prefer higher Rear Seat Heights (greater than 19"). Players whose classifications are lower (who have less ability) commonly prefer lower Rear Seat Heights. (less than 18"). Typically, players who desire maximum Seat Height choose the appropriate 'Solid Seat' option. (See footnote #5)

(B) Rear Seat Height typically plays a more significant role in chair performance than Front Seat Height. It is recommended for inexperienced end users to try existing wheelchairs to understand the difference between Rear Seat Heights. Taller Rear Seat Heights enable users to reach higher, but in most cases reduce their mobility. Likewise, shorter Rear Seat Heights reduce the user's reach, while improving their mobility. (See footnote #5)

### 11. Axle Position (Center of Gravity):

**Footnote #6:** Measure the user's existing chair from the *Front* of the Backpost, horizontally (as shown in side view pg 1), to the center of the rear axle.

**Footnote #7:** Adjustable Center of Gravity: Non-folding, angle adjustable backrest. If side guards are desired, Clamp-on style is the only compatible option.

(A) The two *largest* contributors to the responsiveness of a sports wheelchair are the frame's Axle Position and the "sag" in the upholstery. Both of these contributors determine where the user's body is positioned relative to the rear wheels. When a Fixed (welded in this case) Axle Position is chosen, the upholstery can be expected to provide roughly 1" to 1½" of adjustment. If more adjustment is found to be required, additional width back upholstery can be purchased through Top End customer service. Choosing an Adjustable Center of Gravity range (shown on pg.1), adds an additional 2" of adjustment to the upholstery (1"- 1½"). There are more side guard options currently available with a fixed Axle position. (See footnote #6 & 7)

(B) Choosing an Adjustable Center of Gravity of 3" to 5" provides a good range for new users. (This is what Paul Schulte uses on his wheelchair) (See footnotes #6 & 7)

### 12 & 13. Wheel Base / Wing Style:

**Footnote #8:** Round Wings available with 'Wheel Base' measurement **only**.

**Footnote #9:** Round Wing w/ Round gussets not available in Aluminum. Titanium only.

(A) It is recommended to select a Four Bend Wing. Obtain the user's existing Wheel Base by measuring horizontally from the center of the axle to the center of the headtube. This is shown on the side view of page 1. Overall frame length from the front of the backrest can be determined by the following formula:

Axle Position + Wheel Base + 3"(aluminum)= Overall Length.

Invacare Corporation

www.invacare.com

TOP END

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