

## Freestyle 2 TSD

(*Therapeutic Swimming device*)

**Introduction.** The Freestyle 2 is a prosthetic accessory designed to provide persons missing a hand or hands with optimal and balanced swimming stroke power, while eliminating resistance during non-stroke actions. This reduction in resistance decreases fatigue and can increase performance. The Freestyle 2 is an excellent therapeutic aid for rehabilitating the arm and shoulder musculature. Applied to a patient with a traumatic hand amputation or one with a congenital hand absence, the device can provide therapeutic resistance exercise in the pool environment and encourage muscle hypertrophy and strength.

**Applications.** The Freestyle 2 is passive and does not use a cable. It is equipped with a 1/2 inch x 20 TPI stud that will thread into any standard wrist unit or accept any standard disconnect adapter. The Freestyle 2 can be used “as is” with specific adults or modified to accommodate smaller hand displacements for women, young adults and children. *Rotate* the device to find specific positions which give optimum performance for various strokes. *Experiment!*

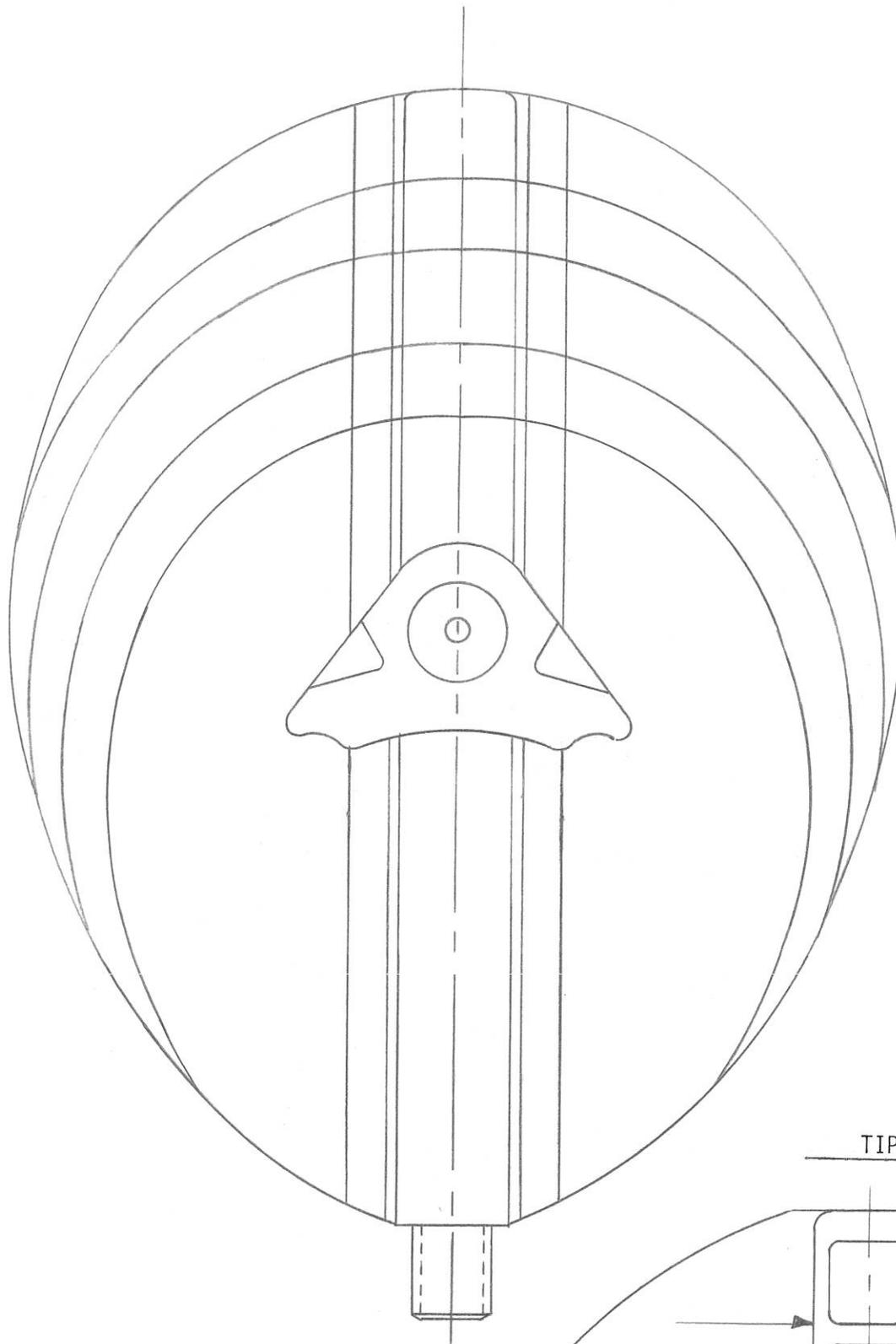
**Size Modifications/Wing Shapes.** The Freestyle 2 can be custom modified to match virtually any hand size from youth through adult. Refer to the template diagrams, which illustrate several size and shape options. When cutting down the unit, place the cut to preserve an entire cavity on the bottom of the unit, ie; the distal end of the Freestyle, after modification, should be a solid wall. We have illustrated conservative oval wing shapes, however, any number of shapes are possible to suit the aesthetic tastes of the patient/consumer.

**Prosthesis Design.** In some cases dependent upon the arm length and prosthesis construction and design, a standard prosthesis can be used with the Freestyle 2. However if a patient has a short trans-radial limb, a standard length prosthesis may be too long and create severe “leveraging” and “pistoning” on the arm, which could be unacceptable and prevent adequate control over the Freestyle 2.

A custom swimming/exercise/ sports prosthesis can solve the dilemma. Consider a prosthesis which allows the device to be mounted as close to the end of the stump as possible for the best control. A suspension sleeve over the prosthesis will help but the best prosthesis would employ a silicone, roll- on style inner socket for ultimate security and control. Also consider a minor flexion angle when installing the wrist to slightly tilt the Freestyle medially. A wrist which allows for rapid rotation repositioning is necessary but free unrestricted rotation is undesirable and negates the device's action.

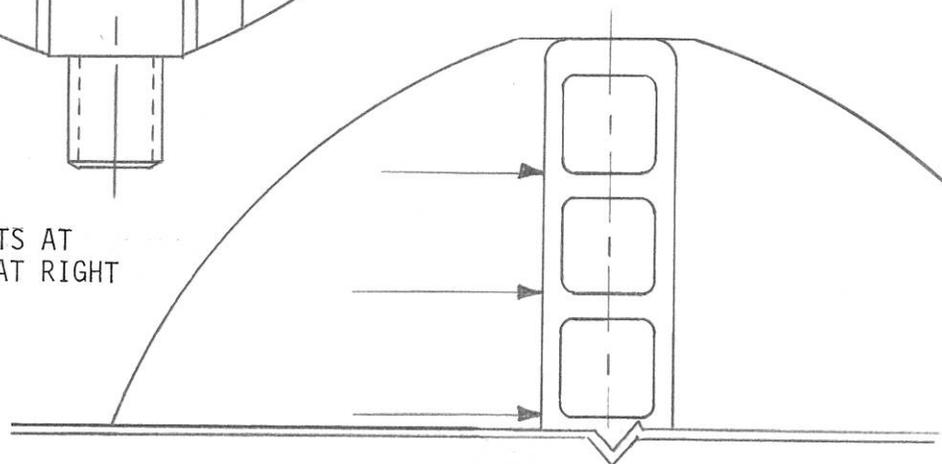
Maintenance. The Freestyle 2 requires very little maintenance. Avoid prolonged direct exposure to the sun, as it can deteriorate most plastics. Rinse thoroughly after use and if the Freestyle is used in salt water mild soap and water will help keep it in good condition, before it gets stored away.

Revised 2/5/02



MAKE CUTS AT  
ARROWS AT RIGHT

TIP DETAIL



Template of FREESTYLE 2 T.S.D. (Therapeutic Swimming Device)

Illustrated are four reduced size options and the original adult, full size.  
Dissassembly is suggested prior to modifying the unit.

*Revised 2/5/02*