



**RATED 220 LBS (100KG)
INSTRUCTIONS MUST BE FOLLOWED**

ALPSLock S498-P

U.S. PATENT 5,507,837



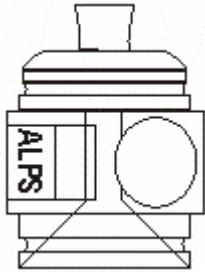
The AlpsLock S498-P is designed to be used in new socket fabrication in conjunction with the ALPS liners equipped with distal suspension attachments. The AlpsLock S498-P differs from the “496” models in that it includes an integrated alignment pyramid. The S498-P is a low profile, light weight device containing a smooth and uniform gear system. The smooth portion of the geared shaft rides in a one-way bearing, while the gear portion is engaged by serrations of the socket pin. The side mounted release button is a special feature of the S498P for it allows the patient to easily disengage the gear.

*******ATTENTION*******

WEIGHT LIMIT – 220 LBS ! – PER ISO A100

**FAILURE TO FOLLOW THE ENCLOSED INSTRUCTIONS
WHEN FABRICATING THE SOCKET WILL RENDER THE
WARRANTY NULL AND VOID**

Alps Lock S498-P



(1) BODY WITH INTEGRATED
PYRAMID
64mm X 43mm
LDB-899P



(1) LOCKING MECHANISM
(CLUTCH)
LDH-694A



(1) REDUCER HEX NUT
LDA-694



(1) STAINLESS STEEL SERRATED PIN
3/8" X 2-5/8" LONG
1/4-20 US STANDARD THREADS
LDP-695



(1) CLUTCH HOUSING DUMMY PLUG
LDD-694

(2) 3 FOOT LENGTHS OF KEVLAR THREAD

Application Instructions

The AlpsLock can only be used in Conventionally Laminated Sockets.

NOTE: The AlpsLock S498P can be used when fabricating an ENDOskeletal prosthesis. If you intend to fabricate an EXOskeletal prosthesis, it is suggested you use the AlpsLock S496W. If you intend to fabricate a thermoplastic socket the AlpsLock S496-T is recommended.

Do not use the S498P with thermoplastic sockets.

LAMINATED SOCKETS

Note: It is important that when fabricating a new socket with an AlpsLock, that the negative impression of the patient be made over the liner which will be used by the patient.

Modifying the Positive Model

- a. Prepare the positive model in the usual manner with the exception of the distal end. The liner will have left a protrusion during the casting stage.
- b. Rasp the protrusion to create a flat spot 1 ¾" in diameter. Again, this flat area must be perpendicular to the line of progression of the socket. Find the center of this area and drill a 3/8" hole approximately 1" deep.

Using the Alps Fabrication Kit

- a. Locate the Alignment Cone found in the ALPS Fabrication Kit FAB946.
- b. Scuff the flat bottom of the Alignment Cone with 80-100 grit sandpaper.
- c. Lightly coat the threads of the 5/16" x 3" Anchor Bolt with silicone grease and screw it into the Alignment Cone until it protrudes approximately ¼" beyond the flat surface. (figure 1)

- d. Using an instant adhesive, i.e. Superglue, secure the Alignment Cone to the distal end of the model.
- e. Once set, use plaster to blend the Cone into the Model. Remove any excess which may have fallen on the Alignment Cone.
- f. Remove the Anchor Bolt and smooth the model for lamination.

Pre-Fabrication

- a. Seal the positive and apply a PVA bag or casting balloon over the entire model. If the bag can be drawn in on the Alignment Cone, so the lock body covers the end of the PVA, then a PVA cap is not necessary. If this is not the case, you may have to cap the bag and make a small hole for the Anchor Bolt.
- b. Locate the Clutch housing Dummy Plug included with the AlpsLock Kit.
- c. Coat the threads of the Dummy Plug with silicone grease and screw it firmly into the side of the AlpsLock body.
- d. Protect the slot either with masking tape or by forcing a scrap piece of 5mm Pelite into the slot.
- e. Apply a bead of silicone grease inside the receiving cone of the AlpsLock body.
- f. Coat the threads of the 5/16" Anchor Bolt with silicone grease and anchor the AlpsLock body to the Alignment Cone.
- g. Wipe away any excess grease and fill the head of the bolt with clay or putty.
- h. Care should be taken so that resin does not seep through the Anchor Bolt hole. A silicone rubber lamination cap is useful in this situation. PVA tape will also provide moderate protection.

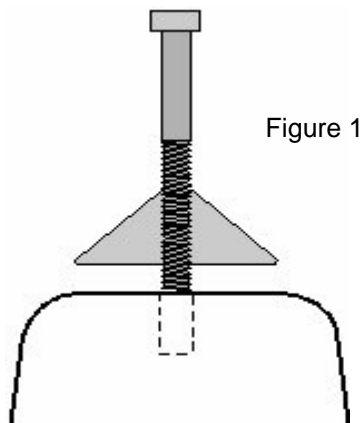


Figure 1

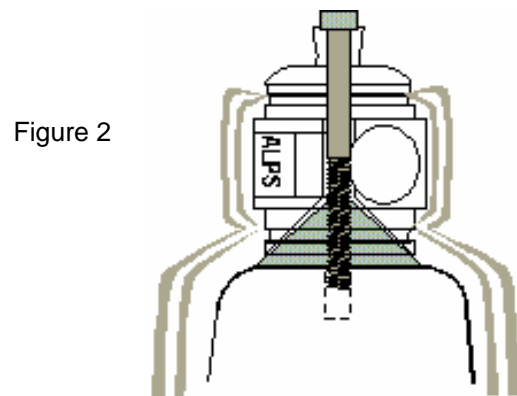


Figure 2

Fabrication

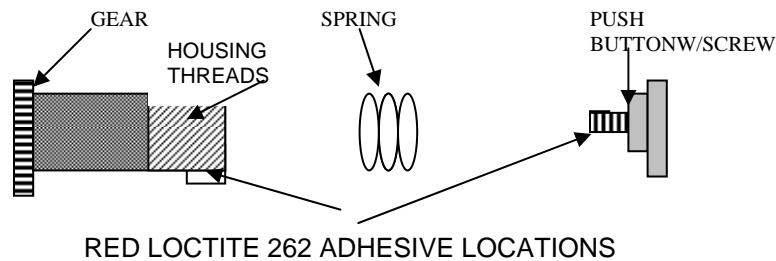
- a. The model is now ready for lay-up and lamination. Select the appropriate size of carbon tubular weave. Cut a piece 30" to 40" long (twice the socket length) and a piece 8" to 10" long. Apply the longer carbon weave to the cast. **Using the enclosed kevlar thread, tie the carbon into the steel groove of the pyramid (figure 2). Make sure that the carbon weave is pulled into the groove along the entire circumference. The kevlar thread is supplied in 3 foot lengths to allow you to wrap the ends around two handles, (Example: Two pieces of aluminum tube), in order to be able to apply**

- enough force to pull the carbon into the groove. Wrap the kevlar around the pyramid again and made a double knot.
- b. Apply the second piece of carbon and pull the carbon into the groove. Made a double knot and tie around again. Reflect the carbon up and inspect to make sure that you have in fact tied the carbon into the steel groove and not outside of the groove. Place a 16” wide strip of 1 ounce felt between the two layers of carbon and around the body of he lock. Tack the felt in place by melting the felt in 2 or 3 spots with the tip of a soldering iron. This will increase the strength of the socket around the body of the lock. Reflect the carbon and continue lamination procedure.

NOTE: Failure to follow these instructions properly may cause a failure of the interface between the socket and the lock.

- c. Once the lamination is complete, carefully remove any excess resin. Remove the Anchor Bolt and trim around the Clutch Housing Dummy Plug.
- d. Thoroughly clean the threads in the lock body and remove any resin which may have gotten into the lock body.
- e. Trim the socket proximally and remove it from your positive mold.
- f. Shape and finish the edges as you normally would and proceed with bench alignment.
- g. The lock mechanism should be installed with Red Loctite 262 thread locking compound prior to delivery.

LOCKING DEVICE HOUSING ASSEMBLY ADHESIVE PROCEDURE



Adhesive Procedure

Note
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It is recommended that thread-lock adhesive Red Loctite 262 be used on the housing because it is the only one that adheres to nylon adequately. This will allow the parts to be firmly glued, but should the necessity arise, the parts can be taken apart.

Full cure of adhesive is 24 hours.

1. Check the function of the completely assembled housing in the locking device.
2. Remove the housing from the body of the locking device. Lay out disassembled housing as shown above.
3. With gear in housing, install spring from the opposite end of the housing.
4. Place a drop of adhesive on the threads of the set screw.
5. Screw push button into gear shaft tightly.
6. Place ring of adhesive on the threads of the housing and screw in the locking device tightly.
7. Locking device is now functional and useable but full cure of adhesive is obtained in 24 hours.

Alps Satisfaction Guarantee

Alps offers a no hassle return policy within **30 days** from the date of purchase. If you are not 100% satisfied with the Alps S498P Lock, call the Alps Customer Service for a Return Authorization Number and return the purchase.

Warranty

Alps locks are warranted against manufacturing defects for 6 months from the date of purchase. Alps South warrants only that its products will meet its specifications. **THERE IS NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR USE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES.** The user's exclusive remedy and Alps South's sole liability is limited to the replacement of any product shown to be otherwise than as warranted. Alps South will not be liable for incidental or consequential damages of any kind.

To obtain an Alps Return Authorization Number (RAN#) call Alps Customer service between the hours of 8 am and 5 pm EST and provide Alps representative with the following information:

- 1. Customer ID Number**
- 2. Invoice Number**
- 3. Date of Invoice**
- 4. Nature of return**

*The RAN# must be displayed on the exterior of the returned item box or it will be refused at the dock.

Frequently Ask Questions

What parts of the Fabrication Kit are needed for the fabrication of the S498P?

The Fabrication Kit must be used if fabricating a lock into a laminated socket. The parts to use for the S498p are the Mounting Alignment Cone, Anchor Bolt and Flat washer. All other parts are to be used with the S496-T.

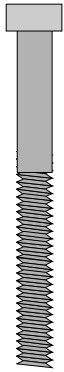
How to create a smooth transition from the side of the socket into the lock?

It is very important to blend the cone to the mold to you will create a smooth transition from the side of the socket into the lock.

How to properly seat the liner to the locking device?

You must be sure that the bottom side of the liner is touching (seated on) the edge of the locking device for maximum strength. If the two are not seated properly the pin and distal umbrella will be subjected to unusual side loads. The ALPS Locking Devices are recessed enough to allow proper seating of the liner and other silicone suction sockets. If you are using a locking device other than ALPS that exhibits a geometry that prevents proper seating of the socket, please install a spacer between the liner and the locking device.

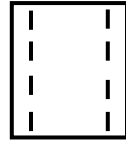
FABRICATION KIT (FAB 946) PARTS LIST



1
1 5/16" X
3"
Anchor
Bolt
FKB-16



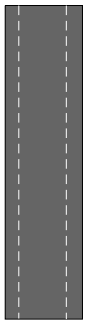
4
6mm X
35mm
Studs
FKS-16



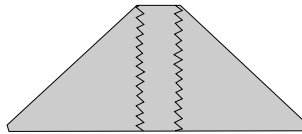
1
1 3/4" White
Sleeve
FKB-16A



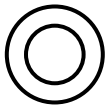
4
6mm Hex Nuts
FKN-16



1
1/4" ID x
2"
Plastic
Spacer
Material
FKS-16A



1
Alignment
Cone
FKA-16



4
1/4" Flat
Washers
FKW-16

1
Gear Extraction
Wrench
LDN694A



CE Marked

EC	REP
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CEpartner4U

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900003 Rev E, CAN#2457
S498P

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