CD103
Air-Lock
Fabrication Instructions

Weight limit: 265 lbs.

2-year warranty against manufacturer defects, excessive wear or breakage.

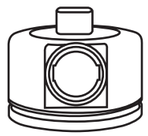
Patent No. 6334876 Made in U.S.A.
External Prosthetic Components

CD103.revG.121217

8 11576 02000 8

EC REP
Advena Ltd
Pure Offices Plato Close
Tachbrook Park
Warwick, CV34 6WE, UK

Parts Included



Housing

Release button

Lock plate

Valve body

8-click pin

Pin adaptor screw

Springs (3)

Anchor

Fabrication plug

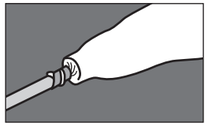
Pin spacers (3)

Manufactured by

419 N. Curtis Rd., Boise, Idaho 83706
(208) 429-0026 | www.coyotedesign.com

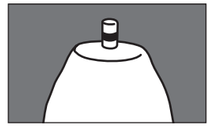
Installing Lock on Mold

If using casting handle, begin with Step 1.
If NOT using casting handle, skip to Step 4.



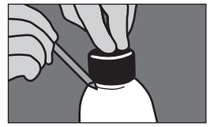
1 Cast limb with casting handle in place to create shape of lock in mold.

2 Insert anchor in cast handle of mold. Fill mold.



3 Mold and anchor are ready for fabrication.

4 Remove internal components from lock with a Coyote lock wrench or 13mm deep well socket. Be careful not to lose springs during removal. **Casting Handle users skip to step 11.**



5 Place lock on mold. Trace lock.

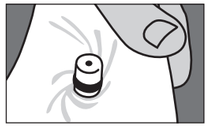
6 Flatten mold to fit to lock. Do not flatten beyond tracing of lock.

7 Drill 1/2" diameter hole. Angle hole to help anchor adhesive.

8 Place anchor in lock.

9 Fill hole with Coyote Quick Adhesive or fast-setting epoxy.

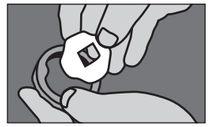
10 Place anchor and lock on mold. When glue sets, remove lock.



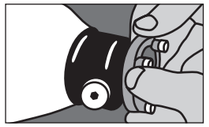
11 Apply nylon over mold. Reflect and twist nylon around tie-off ring of the anchor.

12 Install Fabrication Plug in lock.

13 Place lock on mold. Mark desired location of release button. (See Caution #1)



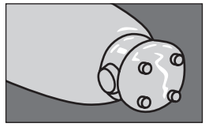
14 Install insert of choice in alignable connector.



15 Place adhesive foam on connector posts. Place connector offset or centered.

Drape Molding Check Socket

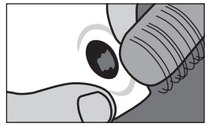
16 Drape mold and blister molding instructional videos are available at www.coyotedesign.com/air-lock.



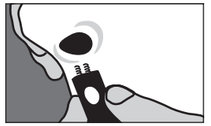
17 For extra strength, fold excess seam on distal end of connector.

18 Expose and remove small adhesive foam and fabrication plug. Grind distal end of socket flat. Take care not to sand metal posts. Foam can be left in place to act as a guide for flattening.

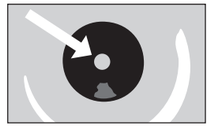
19 Remove socket in traditional fashion or with socket extractor.



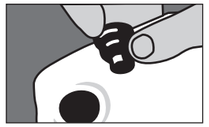
20 Carefully smooth inside of hole to allow for easy assembly of lock.



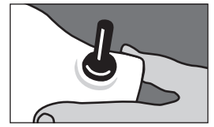
21 Slide lock plate into lock, springs first. It slides easily ONLY one way. Verify orientation first. (See Caution #3)



22 Place lock pin in lock to hold lock plate.



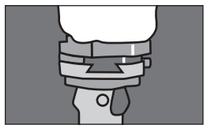
23 Add third spring. Slide release button into valve body.



24 Thread valve body into housing.

25 Hand-tighten valve body with Coyote lock wrench or 13mm deep well socket.

26 Typical Coyote® components use 6x18mm screws provided and Loctite® Blue 242 when attaching pyramid. Torque provided connector screws to 10 Nm. (See Caution #2 and #4)

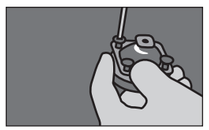


27 Use Coyote alignment coupler CD106 for alignment during fitting.

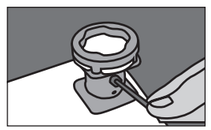
Transferring Alignment

When transferring, it is recommended to use a new lock or lock housing in the definitive socket. The lock in the test socket can be removed when time permits and reused in another test socket. This will also allow you to duplicate the alignment established in the test socket in the definitive.

28 Lube and install glue plate on alignable connector.

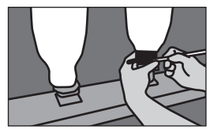


29 Attach a pyramid to Coyote alignable connector.



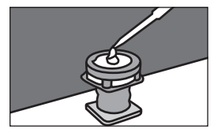
30 Install pyramid on adaptor.

31 Remove o-ring from housing. Install lock on mold in desired location, mark release. button location. (See Caution #1).



32 Rest mold and lock on alignable connector. Place test socket next to mold and compare alignments.

33 Take measurements for more accurate comparisions.



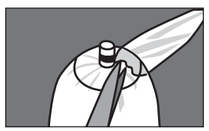
34 Separate lock from connector. Fill connector with Coyote Quick Adhesive or fast-setting epoxy.

35 Place mold and lock back into connector in desired location. Let set.

36 Remove pyramid from tube clamp then remove pyramid and glue plate.

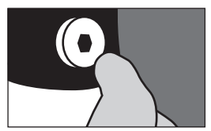
37 Remove all lock parts before laminating. Put wax or clean clay in fabrication plug hole.

38 Pull inner PVA bag over mold. Bag may be heated to help conform to distal end. Tie PVA to anchor in the tie-off ring.



39 Trim excess PVA material between tie-off groove and o-ring. Keep o-rings clear.

40 Run bead of Coyote Quick Adhesive or five minute epoxy around funnel of lock.



41 Place lock on anchor in desired location (see Caution #1). Clean excess glue.

⚠ CAUTION (page 1)

1. Do not position lock with release button pointing posterior or anterior. Typically release button is oriented medially.
2. Typical Coyote® components use 6x18mm screws. In atypical setups, longer screws may be needed. Always use screws class 10.9 or better.
3. Do not lubricate inside of lock, this will attract debris. If you have a noise issue, it is typically due to seating. Call for technical assistance.
4. Always use screws provided during lamination to ensure proper depth is created for attachment.

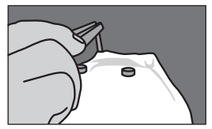
Need assistance?

Call us, we would love to help.
(208) 429-0026

Lay-up

42 Pull nylon stockinet or other materials over connector, lock and mold.

43 Twist and reflect material to leave a small open circle in center of connector.



44 Ensure holes of connector are exposed. A hot nail or awl can be used.

45 Pull first composite layer over mold. Cut top edges to fold around posts.

46 **Reinforce** with carbon tape between posts. Avoid extra material around fabrication plug for easier removal.

47 Lubricate screws and install five hole plate. (See Caution #4)

48 Tie second layer of composite under five hole plate, and reflect down over mold.

49 Pull bag and laminate as usual. Initially restrict flow to force lamination through the center hole on plate, forcing out air pockets.

50 Toward end of lamination, tape can be placed over five hole plate to squeeze excess resin out of lamination.

51 String can also be tied between fabrication plug and top of lock to ensure seal (see Caution #6).

Need more help?

Fabrication videos can also be viewed at www.coyotedesign.com/video

Finish

52 Expose edge and remove excess lamination.

53 Remove five hole plate.

54 Expose fabrication plug and remove.

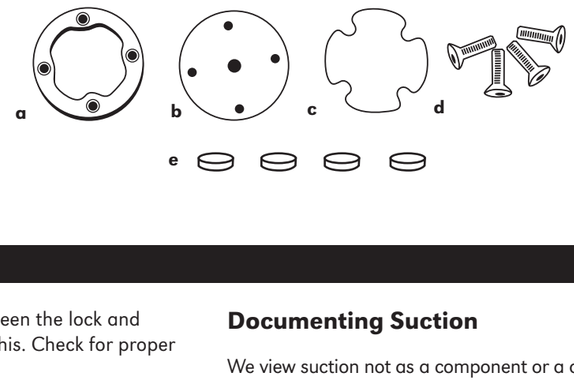
55 Smooth rough edges of distal end. Hole for valve body can be smoothed for easier install.

56 See steps 21-25 for lock assembly instructions. Use 6x18mm screws provided (see Caution #2 and #4) and Loctite® Blue 242 when attaching pyramid. Torque provided connector screws to 10 Nm.

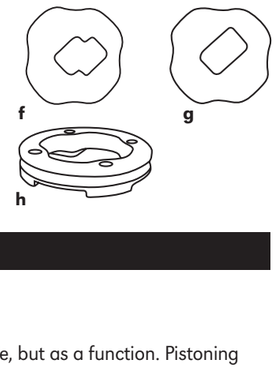
Parts Sold Separately

Connector Parts

- **a** Alignable Connector CD103AF
- **b** Five Hole Plate
- **c** Glue Plate
- **d** 6mm x18mm Screws
- **e** Small foam circles (4)

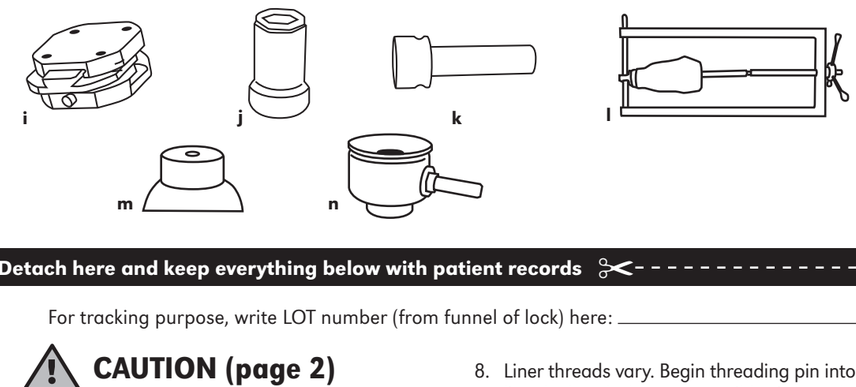


- **f** Multi-Direction Insert CD103MDI
- **g** Single-Direction Insert CD103SDI
- **h** One-Shot Connector CD111



Related Parts

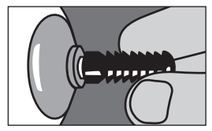
- **i** Alignment Coupler CD106
- **j** Lock Wrench CD103WH
- **k** Casting Handle CD316A
- **l** Extractor, Socket Removal Tool CD301
- **m** Fabrication dummy CD103FD (for flexible inner liners, NOT for drop-in system)
- **n** Fitting Lock (for pin spacing) CD103FL



Practitioner Instructions

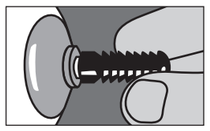
Poor lock pin spacing leads to premature wear. There should be no play between the lock and liner when fully engaged. You may need to add spacers to the pin to ensure this. Check for proper amount of play before putting lock into socket.

i Install pin on liner. Engage lock to check for play between lock and liner.

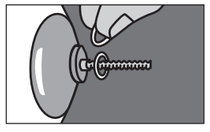


ii If there is play, loosen pin away from adaptor screw and liner.

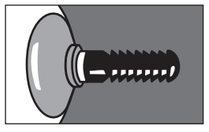
iii Reengage lock to check for play. Repeat until lock seats completely. Remove lock.



iv Gap is created between pin and liner.



v Based on the gap created by loosening pin, install appropriate number of pin spacers on adaptor (see Caution #2).



vi Replace pin on adaptor, making sure base fits snugly on pin spacers.

vii After installing pin spacers, re-engage lock to be sure there is no play.

viii Apply Loctite® Blue 242 to threads of lock pin. Pin may need to be tightened with a 7/16" or 11 mm wrench. (See Caution #4, #5, #12)

Documenting Suction

We view suction not as a component or a code, but as a function. Pistoning and milking can be reduced by maintaining a suction socket when using this lock.

- The suction feature of the lock can be demonstrated and documented very simply.
- Have the amputee step into the lock and seat completely.
- Using the lock wrench, remove the valve body, release button, and outer spring from the lock. The amputee is still locked into the socket, but air is now allowed to flow into the bottom of the socket like a traditional pin.
- Walk the patient normally.
- Amputee may experience a difference in how the socket feels immediately, after some ambulation, or after reinstalling the valve body, release button and outer spring. Patient feedback should be documented.

Call for more information on coding of the Air-Lock: (208) 429-0026.

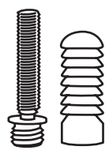
* It is the practitioner's responsibility to demonstrate, document, and

Air-Lock with P8 Pin

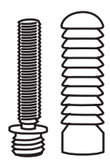
Liner	Size	Spacers used	No. of clicks
Alpha Original	M	1	5
Alpha Select	M	0	5
Ossur	26.5	1	6
Alps	26	1	5

(Chart is a guideline, NOT a guarantee of seating. Verify seating.)

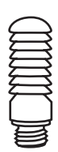
Additional Pins



CD103P8
8-Click Pin
1.3" long, includes 3 pin spacers.



CD103P11
11-Click Long Pin
1.65" long, includes 3 pin spacers.



CD103P8H
8-Click Brass Pin
1.3" long, includes 3 pin spacers.

CD103P11H
11-Click Brass Long Pin
1.65" long, includes 3 pin spacers.

Detach here and keep everything below with patient records

For tracking purpose, write LOT number (from funnel of lock) here: _____

⚠ CAUTION (page 2)

1. Do not position lock with release button pointing posterior or anterior. Typically release button is oriented medially.
2. Typical Coyote® components use the 6x18mm screws. In atypical setups, longer screws may be needed. Always use screws class 10.9 or better.
3. Do not lubricate inside of lock, this will attract debris. If you have a noise issue, it is typically due to seating. Call for technical assistance.
4. Always use screws provided during lamination to ensure proper depth is created for attachment.
5. Never exceed 3 pin spacers.
6. Lay-up instructions are helpful hints on how to work with the lock and connector. Actual lay-ups are responsibility of the technician and/or practitioner.
7. Note number of clicks for engagement. There should be at least 2 to 3 clicks engagement prior to any ambulation and more clicks should occur after a few steps. 5 to 6 clicks (depending on liner) are required for full/proper seating and engagement.
8. Liner threads vary. Begin threading pin into liner by hand whenever possible. A wrench will be needed in cases of tight threads.
9. Regardless of threading, always use Loctite® Blue 242 on lock pin threads. If installing into a plastic distal adaptor Loctite® Blue 242 should also be used.
10. The CD103P11 is the longer pin for the Air-Lock. However, with most liners this longer pin will bottom out in the lock. If a long pin is needed, call Coyote for information on extending the depth of the lock to allow for use with the longer pin, or for a deeper lock option.
11. If using a flexible inner liner, do not leave plastic over lock housing, this can cause air leakage and other issues. You should laminate directly over housing. Contact Coyote for more information, or visit the video gallery at coyotedesign.com.
12. If you have a pin you cannot install, even with a wrench, contact Coyote for a replacement.