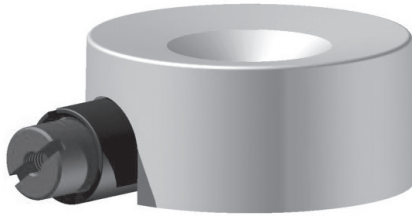


# Clutch Lock with Cylindrical 4-Hole Housing and Air Expulsion\*

140020 Clutch Lock with Cylindrical 4-Hole Housing w/o Plunger

- Rated to 300 lbs



## Clutch Lock Kit:

- |        |  |
|--------|--|
| 140020 | 4-Hole Cylindrical Clutch Lock Kit w/o Plunger |
| 140023 | 4-Hole Cylindrical Housing for Clutch Lock     |
| 140150 | Clutch Lock w/ Air Expulsion*                  |
| 140065 | Fabrication Kit for Clutch Lock                |

## Plungers:(sold separately)

- |        |   |
|--------|---|
| 140040 | 2" Clutch Lock Plunger, 1/4-20 Thread         |
| 140041 | 1 1/2" Clutch Lock Plunger, 1/4-20 Thread     |
| 140043 | 2" Clutch Lock Plunger, M10 Metric Thread     |
| 140044 | 1 1/2" Clutch Lock Plunger, M10 Metric Thread |

## Clutch Lock Cartridge:

- |        |                              |
|--------|------------------------------|
| 140150 | Clutch Lock w/ Air Expulsion |
| 140116 | Latch Button                 |
| 140113 | Air Expulsion Filter         |

## Fabrication Kit - Thermoforming and Lamination:

- |        |                                 |
|--------|---------------------------------|
| 140065 | Fabrication Kit                 |
| 140060 | Wrench                          |
| 140061 | Clutch Housing Dummy            |
| 140062 | Distal Attachment Dummy         |
| 880488 | 1/4-20x2" Socket Head Set Screw |
| 881351 | Brass Nail                      |

## Fabrication Dummy Kit - 4-Hole Cylindrical Housing:

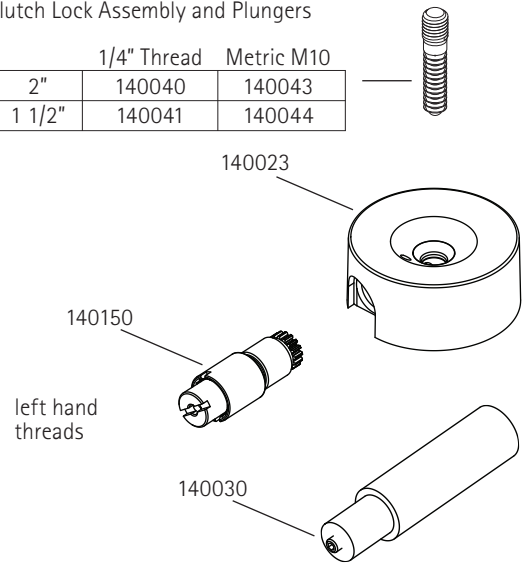
- |        |   |
|--------|---|
| 140070 | Fabrication Dummy Kit (sold separately)     |
| 140063 | Fabrication Dummy (Cylindrical Clutch Lock) |
| 880494 | 5/16"-18x3" Socket Head Set Screw           |
| 882610 | M6x1x10mm Socket Head Set Screw             |

## Push Button Extension:

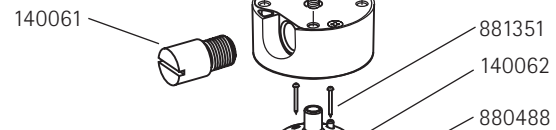
- |        |   |
|--------|---|
| 140030 | Push Button Extension (sold separately) |
|--------|---|

## Clutch Lock Assembly and Plungers

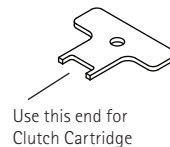
	1/4" Thread	Metric M10
2"	140040	140043
1 1/2"	140041	140044



## Fabrication Kit 140065



## Wrench 140060



\* Proper Fabrication  
Technique Required  
for Air Expulsion

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PM105/07-04/06-13-11



## Mold Preparation For All Clutch Lock Configurations

### Attach Assembly and Blend

The model should be prepared with a 1/4-20 x 2" set screw (P/N 880488) protruding 3/4" from the distal end with the hex socket inside the plaster.

**EXCEPTION:** When using the 4-Hole Cylindrical Dummy (P/N 140070) a 5/16 - 18x3" set screw (P/N 880494, included in kit) should be used with 1" of the set screw protruding and the hex socket exposed. Align the set screw with the centerline of the model as shown in Figure 1 and 2 for proper alignment.

### Prepare Model

#### • Foam Model

For foam models, apply a nylon hose and a PVA sleeve, tied off around the protruding set screw.

#### • Plaster Model

Vacuum holes may be needed with plaster models especially near the clutch housing. If the model is wet, use a casting balloon.

Once the model has been prepared, slide the Distal Attachment Dummy (P/N 140062) over the exposed set screw and line up the two alignment posts to the medial/lateral plane. Use the two brass nails (P/N 881351, included in kit) to affix the Dummy to the model to stop rotation. Blend the distal end of the model to the inner flair of the Dummy with a plaster slurry.

## Fabricating Clutch Lock with Cylindrical 4-Hole Housing

### Thermoforming

Any customary plastic may be used for definitive or check socket fitting. Standard drape or blister forming techniques may also be used with sufficient vacuum. Drape formed Durr-Plex is commonly used with a clear socket especially with the Socket Evaluation System. Special Care should be taken around the area of the clutch housing to prevent wrinkles especially when blister forming.

### Lamination Directly Over the Cylindrical Housing

Pack the 4-Hole Housing (P/N 140023) with stick wax (P/N 990035), add a wax coating to the Clutch Housing Dummy (P/N 140061) and screw it into the clutch hole in the Cylindrical Housing (dummy and clutch lock housing have a left hand thread), then fill the slot with either wax or silicone gel and insert four M6X12mm Socket Head Cap Screws (P/N 882613) into the threaded holes in the base along with silicone or wax to prevent resin from entering the housing cavity or the hex key socket. Next, add a silicone gel (P/N 741214) "O-Ring" to the distal attachment dummy before sliding the Cylindrical Housing onto the Distal Attachment Dummy.

The suggested fabric lay-up includes 1" carbon fiber tape (P/N 211144) laced over the housing body and extending up several inches fanning out over the distal end of the socket. Based on the size of the patient add appropriate stockinettes and strengthening fabrics.

The selected resin should be prepared and poured into the outer PVA sleeve and thoroughly saturated around the Cylindrical Housing body. After the resin has hardened, grind the excess from the distal end of the Cylindrical Housing until the top of the heads of the M6 screws are barely exposed and a flat surface has been created. Remove the M6 screws, the socket is ready for use.

### Lamination Over the Cylindrical Housing Dummy

Add a wax coating to the Clutch Housing Dummy (P/N 140061) and screw it into the clutch hole in the Cylindrical Housing Dummy (P/N 140063), then fill the slot with either wax or silicone gel and insert four M6X12mm Socket Head Cap Screws (P/N 882613) into

the threaded holes in the base along with silicone or wax to prevent resin from entering the threads or the hex key socket. The suggested fabric lay-up includes carbon fiber tape (P/N 211144) laced over the dummy body and extending up several inches fanning out over the distal end of the socket. Based on the patients weight & activity level, add appropriate stockinettes and strengthening fabrics.

Figure 1.  
Set Screw Insertion Showing Alignment to the Model Centerline.

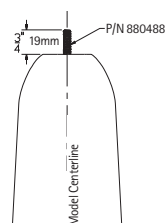


Figure 2.  
Rotational Alignment of the Distal Attachment Dummy to the Model.

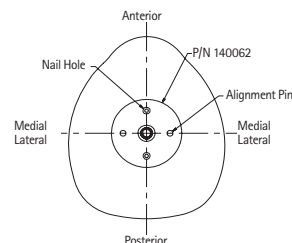
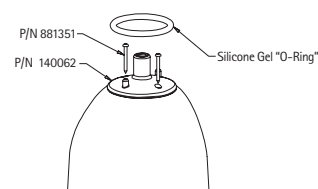


Figure 3.  
Attaching the Distal Attachment Dummy with Brass Nails. Silicone Gel "O-Ring" (#741214) Used to Seal Resin from entering the Clutch Lock Body.



## Fabrication Guidelines

- A trained technician must perform fabrication of the prosthesis.
- Do not modify the housing or the locking mechanism in any way.
- Use a thread locker to secure all threaded fasteners.
- A minimum of 3 serrations or rings must be engaged in the shuttle and clutch locks for safest operation.
- This device is intended for single patient use.

## Daily Care and Maintenance

*The Prosthetist should discuss the following inspection procedures and guidelines with the patient.*

- Check the locking mechanism for proper operation before each use. Discontinue use of prosthesis and contact your Prosthetist if locking mechanism is not performing as expected.
- Avoid bumping the button to prevent accidental un locking. This risk increases if the prosthesis is fabricated without a button shield.
- Keep the lock clean and free of debris for the best performance and proper lock engagement.
- Avoid humid or wet environments and always dry the components should they get wet. Prolonged exposure to moisture can cause metal components to corrode and fail prematurely.
- Should the lock malfunction in any way (e.g. accidentally disengage, fail to release, etc.), discontinue use of the lock immediately and contact your Prosthetist.
- Contact your Prosthetist should you have any questions or concerns.

**Failure to follow these guidelines will void any warranty.**