# Dynamic Strut AFO

## Fabrication Instructions

***Made from Resilergy™***

CD207XS, CD207XSS, CD207S, CD207SS, CD207M, CD207MS, CD207R, CD207RS, CD207XR, CD207XRS, CD207FK

CE

EC REP

MD

Advena Limited
Tower Business Centre
2nd Flr, Tower Street
Swatar, BKR 4013
Malta

Weight limit: Depends on Strut

6-month warranty against manufacturer defects, excessive wear or breakage.

Strut.revA.03242025

EN | Instructions for Use
DE | Gebrauchsanweisung
FR | Notice d'utilisation
ES | Instrucciones para el uso
IT | Istruzioni per l'uso
NO | Bruksanvisning
DA | Brugsanvisning
SV | Bruksanvisning
NL | Gebruiksaanwijzing
PT | Instruções de Utilização
PL | Instrukcja użytkowania
CS | Návod k použití
TR | Kullanım Talimatları
RU | Инструкция по использованию

EL | Οδηγίες Χρήσης
FI | Käyttöohjeet
JA | 取扱説明書
ZH | 中文说明书
KO | 사용 설명서

www.coyote.us/instructions

## Need more product info?

Visit us at www.coyote.us for more information, videos, tips, and instructions.



## TABLE OF CONTENTS



## Parts included

Parts that are included with the strut kits:
CD207XS, CD207S, CD207M, CD207R, CD207XR


A. Dynamic Strut made from Resilergy™
(1) (*10.5 x 1.5*)
B. Included screws depending on strut flex (4)
CD207XS Top 6x20 (2), Bottom 6x22 (2)
CD207S Top 6x20 (2), Bottom 6x22 (2)
CD207M Top 6x20 (2), Bottom 6x22 (2)
CD207R Top 6x22 (2), Bottom 6x25 (2)
CD207XR Top 6x22 (2), Bottom 6x25 (2)
C. Black Screws depending on strut flex (4)
CD207XS, & 207S Black Screws 6x14 (4)
CD207M, 207R, & 207XR Black Screws 6x16 (4)
D. Washer (4)
E. AFO Mounting Plate (2)
*(1) Upper Mounting Plate - Short Posts*
*(1) Lower Mounting Plate - Tall Posts*
F. AFO Fab Tooling Pieces (2)
G. AFO Plate Foam (2)

## Replacement Struts

Replacement Struts are available (only the strut and screws are included)
Part Numbers: CD207XSS, CD207SS, CD207MS, CD207RS, CD207XRS


Screws included:
Top Mounting Plate 6x20 (2) for XS, S, M
6x22 (2) for R, XR
Bottom Mount Plate 6x22 (2) for XS, S, M
6x25 (2) for R, XR

## Shims

CD206FSP Flexion Shim Pair

CD206RSP Rotation Shim Pair

*For included screws and self leveling washers see pages 11 & 12.*

## CD207FK - Fitting Kit - Parts Included

The Fitting Kit is available for a deeply discounted price. The demo samples are to help decide the best flex option for the patient. The Fitting Kit is for trial only and are meant only for use in the clinic and replaced with definitive a Dynamic Strut upon delivery to the patient.


A. Dynamic Strut *10.5 x 1.5*
- CD207XSS Extra Soft Flex Strut (1)
- CD207SS Soft Flex Strut (1)
- CD207MS Medium Flex Strut (1)
- CD207RS Rigid Flex Strut (1)
- CD207XRS Extra Rigid Flex Strut (1)

B. Screws
- Top Mounting Plate 6x20 (4) for XS, S, M; 6x22 (4) for R, XR
- Bottom Mount Plate 6x22 (4) for XS, S, M; 6x25 (4) for R, XR

C. Black Screws 6x14 (8) For XS, S; 6x16 (8) for M, R, XR

D. Washer (4)

E. *Upper Mounting Plate - Short Posts (1)*
*Lower Mounting Plate - Tall Posts (1)*

F. AFO Fab Tooling Pieces (4)

G. AFO Plate Foam (4)

For Shims

H. Button Head Screws 6x20 (2) for XS, S, M; 6x22 (2) for R, XR

I. Button Head Screws 6x25 (2) for XS, S, M; 6x30 (2) for R, XR

J. Self Leveling Washers Bottom (4)

K. Self Leveling Washers Top (4)

L. Rotation Shims (2)

M. Flexion Shims (2)



## Installing AFO Dummy Plates

Coyote struts are designed for thermal plastic bracing using 1/4 inch thermal plastic Polypropylene or ProComp™ to make custom thermoplastic orthosis.

**1** Cast patients' lower leg in the desired position with a similar heel height as the shoe they will be wearing. Cast similar to a solid ankle AFO. Make sure you have enough length for the strut on the posterior side of the cast. **Cast to the MPT or popliteal space.**

**2** Assemble the AFO strut and tooling pieces with 6x14 mm (or 6x16 mm screws for Medium, Rigid and Extra Rigid struts). Slightly tighten the screws to the plastic tooling pieces; the plastic tooling pieces should be scuffed up on the side facing the cast to help the glue bond.

**3** Align your toe out, or your tibia angle, depending on what degree you are looking for.

### Want more Information?

Try our online instruction video at:
www.coyote.us/dynamicstrut

**4** Center the tooling piece in the center of the posterior calf distal to the apex of the fibular head.

**5** The lower tooling piece is approximately 4 inches from the base of the planter surface depending on shoe type.

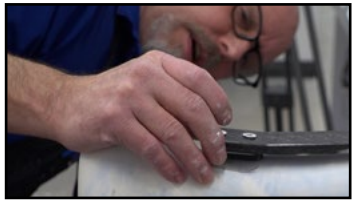
**6** Standard set up of composite strut is perpendicular to the foot plate and centered in the middle of the calf.

**10** Spread a little Coyote Quik Glue, or 5 minute epoxy, where the tooling pieces will go. Place the tooling pieces on the glue holding it in place until the glue sets.

**11** Once the adhesive is set up, fill in the void with more Quik Glue but not quite to the edge of the tooling piece.

**12** Once the glue is set, hold the strut in place and gently remove the screws.

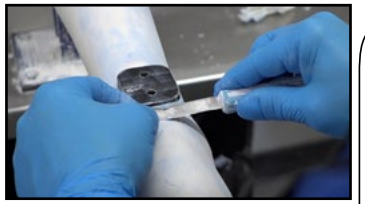
**7** Trace around your tooling pieces on the mold.
Use the four black screws to mount struts to tooling pieces. 6x14mm with XS, S struts. 6x16mm with M, R, XR struts.



**8** On the distal mount create an 1/8th of an inch lift, or more, depending on patients' calf shape so the strut clears the leg.

**9** Staples work well for setting tooling height.

**13** Smooth out the edges with plaster on the fabrication tooling pieces. All the tooling pieces edges should be clean of plaster and adhesive.



**14** The plaster should have a smooth transition to the cast to get a clean pull. Otherwise, the thermoformed plastic may undercut the edge of the tooling piece and be difficult to remove.

**Need assistance?**
**Call us, we would love to help.**
**(208) 429-0026**

## Pulling Plastic and Shaping AFO

**15** Use two vacuum nylons over your cast to help with wicking when pulling 1/4 polypropylene or ProComp™.

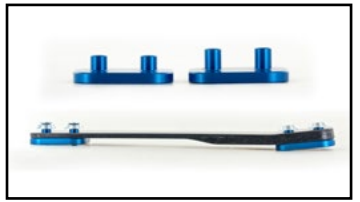
CURBELL PLASTICS We typically make our dynamic strut AFO using Curbell's ProComp™

**16** Make sure plastic draws tight around the tooling pieces and does not bridge from the heal to the lower tooling piece.

**17** Mark your trim lines and cut off in a traditional fashion.

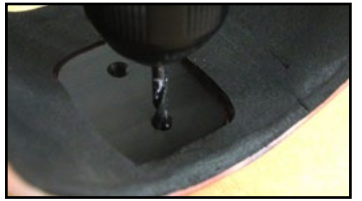
**21** Drill out your clearance holes with a 23/64th Drill bit and deburr the holes.

**22** Insert AFO Mounting Plates into the shell. The radius edge inserts flush against the plastic.



**23** The upper mounting plate has shorter stems. The lower mounting plate has longer stems.

**18** Finish edges of plastic in the usual manner.



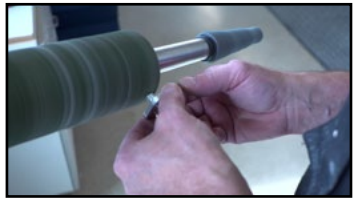
**19** Drill out the pilot holes from the **inside of the brace.** Use a 3/16th drill bit and use threaded holes in tooling piece as guides.

**20** Remove the tooling pieces and nylon.

**24** Press Mounting Plates with a tool to get extra pressure to make flush.

**25** Place strut on mounting posts and make sure they are not sticking out past the strut surface.
**They must be below the strut surface.**

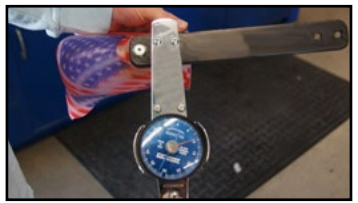
**26** Ensure mounting plate is fully seated in the plastic by attaching and tightening down the washers and screws.
**(2 - 6x20 for Top Plate for XS, S, M)**
**(2 - 6x22 for Bottom Plate for XS, S, M)**
**(2 - 6x22 for Top Plate for R, XR)**
**(2 - 6x25 for Bottom Plate for R, XR)**



**27** If the posts are sticking out past the face plate of the strut, remove the screws, strut, and grind post until it is flush with the strut surface. This may take a few tries.

**28** After grinding the post down, clean the edges of any burrs.

**29** Make sure the holes are clean and remount the strut. Make sure the strut is tight with brace. And the washer is flush and seats flat with the strut.



**33** Tighten the screws after a couple weeks of use, also at follow up appointments, re-Loctite if needed.

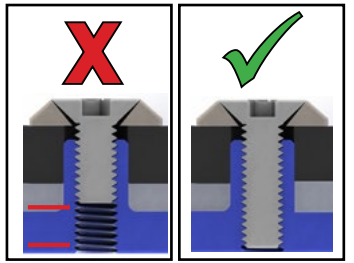
Always torque 5-8 Nm.

**Note:**
**Depending on plastic thickness steps 26 and 27 may need to be repeated.**

**Always, *LOCTITE®***
**and torque to manufacturer specifications.**

CURBELL PLASTICS We typically make our dynamic strut AFO using Curbell's ProComp™. This material gives us extra dynamic response in the toe while maintaining adjustability.
Exclusive ProComp™ Carbon Reinforced Polypropylene.






**30** Make sure the screws are all the way through the threaded post holes and flush with the inside of the plate.
*See Attention #4

**31** Take the brace apart and Loctite® the threads with blue 242 Loctite®. Torque 5-8 Nm.

**32** Skive or shape the AFO plate foam to be flush with the plastic, covering the AFO Mounting Plate.

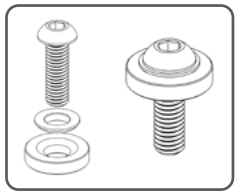
**ATTENTION**
**1.** The instructions for this device cover a very specific method of fabrication, and we understand that a multitude of methods could be used. The fabricated device is the sole responsibility of the fabricator.
**2.** Always use Loctite® Blue 242 on screw threads. Torque between 5 Nm and 8 Nm in even distribution.
**3.** Tighten the screws after a couple weeks of use, also at follow up appointments, re-Loctite® if needed.
**4.** Use the 6x20mm (top mounting plate) and 6x22mm (bottom mounting plate) screws provided with typical components for the (CD207XS, CD207XSS, CD207S, CD207SS, CD207M, CD207MS). Use the 6x22mm (top mounting plate) and 6x25mm (bottom mounting plate) screws provided with typical components for the (CD207R, CD207RS, CD207XR, CD207XRS). If the posts are sticking out past the face plate of the strut, remove the screws, strut, and grind post until it is flush with the strut surface. In atypical setups, longer screws may be needed. Always use screws class 10.9 or better.
Make sure the screw length fully seats into face plate not just the post, longer screws may be needed depending on the strut and brace thickness. *See example images on instruction #30.*
A 6 month limited warranty applies to the Dynamic Strut AFO (CD207XS, CD207XSS, CD207S, CD207SS, CD207M, CD207MS, CD207R, CD207RS, CD207XR, CD207XRS) go to www.coyote.us for details.

## CD206FSP Flexion Shim Pair


**Shims are designed to adjust planter flex or dorsiflex for Coyote® Dynamic Struts**

**Button Head**
**A** - Screws (2) 6 x25 for CD207XS, CD107XSS, CD207S, CD207SS, CD207M, CD207MS
**B** - Screws (2) 6 x20 for CD207XS, CD107XSS, CD207S, CD207SS, CD207M, CD207MS
**C** - Screws (2) 6x22 for CD207R, CD207RS, CD207XR, CD207XRS
**D** - Screws (2) 6x30 for CD207R, CD207RS, CD207XR, CD207XRS

**Self Leveling Washers**
**E** - Bottom (2)
**F** - Top (2)



**The Flexion shim is designed for planter flex and dorsiflex adjustment.**

1 Install the shims between the AFO shell and the strut to adjust the foot shell or cuff in a planter flex or dorsiflex direction.
2 The shims are not designed to be stacked.
3 Make sure the screws are all the way through the threaded post holes and flush with the inside of the plate.
4 Make sure the washers are flush and seat flat with the strut.
5 When all adjustments are made take the brace apart and Loctite® the threads with blue 242 Loctite®. Torque 5-8 Nm.
6 Tighten the screws after a couple weeks of use, also at follow up appointments, re-Loctite® if needed. Always torque 5-8 Nm.

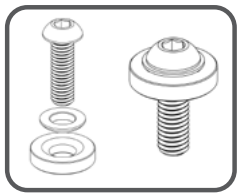


## CD206RSP Rotation Shim Pair


**Shims designed to adjust lateral or medial rotation for Coyote® Dynamic Struts**

**Button Head**
**A** - Screws (2) 6 x25 for CD207XS, CD107XSS, CD207S, CD207SS, CD207M, CD207MS
**B** - Screws (2) 6 x20 for CD207XS, CD107XSS, CD207S, CD207SS, CD207M, CD207MS
**C** - Screws (2) 6x22 for CD207R, CD207RS, CD207XR, CD207XRS
**D** - Screws (2) 6x30 for CD207R, CD207RS, CD207XR, CD207XRS

**Self Leveling Washers**
**E** - Bottom (2)
**F** - Top (2)



**The Rotation Shim is designed for 2.5 degree lateral or medial rotational adjustments.**

1 Install the shims between the AFO shell and the strut to adjust the foot shell or cuff's lateral or medial rotation.
2 The shims are not designed to be stacked.
3 Make sure the screws are all the way through the threaded post holes and flush with the inside of the plate.
4 Use the two piece adjustable washers and button head screws provided with the shims.
5 Make sure the large washers are flush and seat flat with the strut.
6 When all adjustments are made take the brace apart and Loctite® the threads with blue 242 Loctite®. Torque 5-8 Nm.
7 Tighten the screws after a couple weeks of use, also at follow up appointments, re-Loctite® if needed. Always torque 5-8 Nm.

Selection of the flex of the strut to be used is primarily based on patient preference. While most flex options can be used with a wide range of weights, it is possible that higher weight patients and higher activity patients will reduce the life of the strut, in the case of premature wear in either of these cases a different flex option may be required for warranty purposes For additional help in selecting the flex for a specific patient please contact customer service.

*Dynamic Struts made of Resilergy™ composite are available in:*

**CD207XS - Extra Soft Flex Kit** *Weight Range 70-150 lbs.*
**CD207S - Soft Flex Kit** *Weight Range 90-200 lbs.*
**CD207M - Medium Flex Kit** *Weight Range 125-225 lbs.*
**CD207R - Rigid Flex Kit** *Weight Range 200-280 lbs.*
**CD207XR - Extra Rigid Flex Kit** *Weight Range 260-350 lbs.*

*Replacement Parts:*

**CD207XSS - Extra Soft Flex Replacement Strut**
**CD207SS - Soft Flex Replacement Strut**
**CD207MS - Medium Flex Replacement Strut**
**CD207RS - Rigid Flex Replacement Strut**
**CD207XRS - Extra Rigid Flex Replacement Strut**

*Fitting Kit:*

**CD207FK - Fitting Kit of Dynamic Struts made of Resilergy™**
*Includes 5 struts - CD207XSS, CD207SS, CD207MS, CD207RS, CD207XRS*

*Additions:*

**CD206RSP - Rotation Shim Pair**
**CD206FSP - Flexion Shim Pair**
**CD206MP - Mounting Plate Kit**

**Fabrication Videos:**
www.coyote.us/dynamicstrut/
www.youtube.com/user/CoyoteDesignMfg

**Need assistance?**
Call us, we would love to help.
(208) 429-0026




Our dynamic strut design combines a unique combination of strength and flex that other posterior dynamic struts do not offer. The AFO combines the fit and comfort of a custom AFO with a posterior mounted dynamic strut for optimal ambulation. The strut is mounted to a custom thermoformed AFO.

*Narrow enough to give the right amount of dynamic flex and elastic potential energy to lift the toe.*

*Thick enough to give extra strength where it is needed.*


*Our unique varying thickness design creates a very comfortable natural gait.*

The strut is designed for average daily use; walking, working, hiking, biking, golf. Has not been tested with running.

Great for foot drop; the Dynamic Strut AFO also improves gait and is designed with custom thermoformed adjustability in mind.

Over time, the strut may wear out but is easy and inexpensive to replace.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Dynamic Strut AFO instruction videos and courses worth CE credits are available online.

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**www.opqschool.com**

**Check our websites events page for free AFO webinars.**

Coyote®

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