



MILINE

METRIC INTERCHANGEABLE

QUICK START GUIDE

V1.00

EC REP

Acorn Regulatory Consultancy Services Limited
Knockmorris Cahir Co. Tipperary Ireland
Postcode: E21 R766
P 012 4626 8456
F 012 4626 8648



 **BECKER**



635 Executive Dr. | Troy MI, 48083
P 800-521-2192 | 248-588-7480
BeckerOrthopedic.com | f t in

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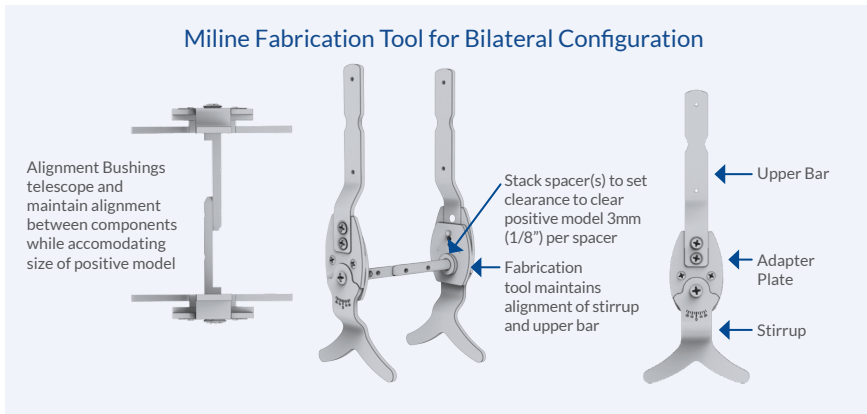
Step 1

Correct the cast prior to fabrication. Insert the 9.5mm (3/8") diameter alignment axis, included with the MILINE Fabrication Tool Kit, through the negative cast at the desired position of the ankle axis. Fill the mold with plaster and when cured, remove the alignment axis from the positive model and modify.

Step 2

Assemble the fabrication tool for unilateral or bilateral fabrication.

Attach the upright and stirrup to the MILINE fabrication tool using the appropriate size adapter plate. Set the desired clearance to the positive model using the included spacers. Note that each spacer gives 3mm (1/8") of clearance. For bilateral fabrication, insert both fab tool alignment bushings into the alignment hole so that they telescope until the spacers touch the positive model.

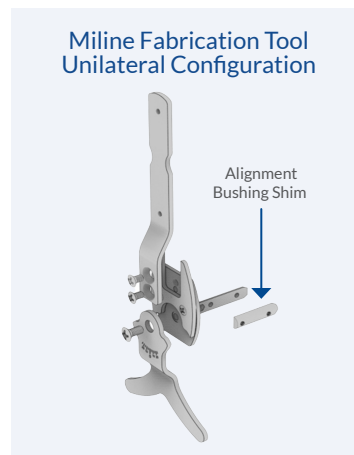


For unilateral fabrication using a single fabrication tool, install the shim on the alignment bushing before inserting into the alignment hole in the positive model.

Step 3

Contour the upper bar and stirrup to the desired shape.

Important: Do not mar or bend the stirrup or upper bar where they attach to the component (Figure 1). Best practice recommends using a smooth jaw vise to hold the bars by the component attachment points during contouring.



Step 4

After contouring, attach the upper bar(s) and stirrup(s) to the fabrication tool and insert into the positive model. Create the orthotic shell using the desired fabrication technique. If thermoforming, or fabricating open pocket laminated shells (with the bars under the PVA bag), back-fill the bars with plaster where they contact the positive model. If integrating the bars into a laminated shell, remove the adapter plate from the tool. Slide the inner PVA bag over the mold and apply vacuum. Place the adapter plate on the tool, over the PVA bag, and attach with screws going through the bag.

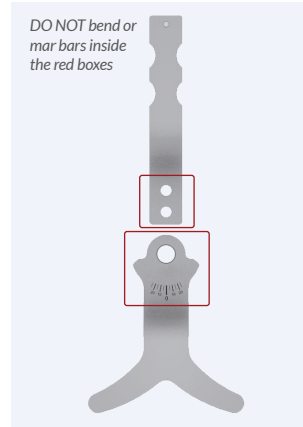


Figure 1

Step 5

After fabricating, remove the bars from the fabrication tool and wipe clean using a rag with solvent. DO NOT grind or blast the bars where they attach to the component. Protect the areas shown in red using tape before finishing the bars (Figure 1).

Step 6

Final Assembly

a. The upper bar must be fit to the component. Use a file, or fine sanding cone to fit the upper bar. The upper bar should require moderate pressure from a vise, or arbor press to seat the bar into the bar pocket. Failure to properly fit the upper bar may result in screw loosening. Apply a small drop of thread locking adhesive to the bar attachment screws (included) and tighten. Use a torque wrench to torque the bar attachment screws to the value shown in Table 1.

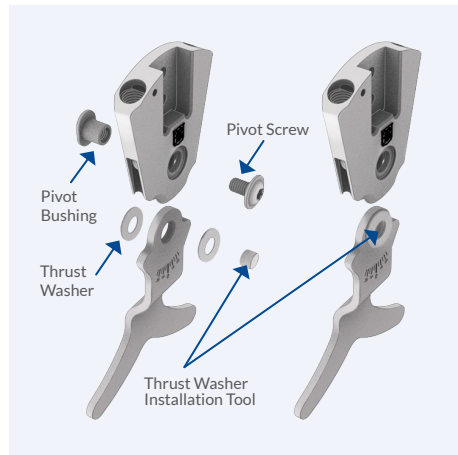


Figure 2

b. Install the MILINE stirrup with the selected thrust washers (included) to adjust the mediolateral play of the component to the desired stability. Refer to Table 2 for thrust washers included by component size. After selecting the desired washer thickness, use the thrust washer installation tool to hold the thrust washers in alignment with the stirrup as it is pushed into the component body (Figure 2). When the thrust washer installation tool is aligned with the pivot hole, install the pivot bushing, pushing the thrust washer installation tool out of the pivot hole. Apply a small drop of thread locking adhesive to the pivot screw and tighten. Use a torque wrench to torque the pivot screw to the value shown in Table 1.

(continued)

Table 1:

MILINE Screw Torque Specifications

MILINE Component Size	Drive Size (Torx)	Bar Attachment Screw Torque (N-m)	Pivot Screw Torque (N-m)
13mm	T20	2.5	2.5
16mm	T25	4	4
20mm	T30	7	7

Table 2:

Thrust Washers to Adjust ML Play (2-each included as shown)

MILINE Component Size	Thrust Washers Included mm [in]				
	0.25 [.010]	0.38 [.015]	0.50 [.020]	0.64 [.025]	0.76 [.030]
13mm	✓	✓	✓	✓	
16mm	✓	✓	✓	✓	✓
20mm	✓	✓	✓	✓	

Note: Different thicknesses of thrust washers may be combined.

Table 3:

Spring Options for MILINE Double Action & Dorsiflexion Assist Ankle Joints



MILINE Component Size		NB	B1*	B2	B3
		No Booster	Booster		
13mm	Stiffness	Low	Moderate	High	—
	Active ROM	15°	25°	12°	—
16mm	Stiffness	Moderate	Moderate	High	Very High
	Active ROM	20°	20°	10°	20°
20mm	Stiffness	Moderate/High	Moderate/High	Very High	Max Stiffness
	Active ROM	15°	15°	10°	15°

* Spacer used in spring configuration B1