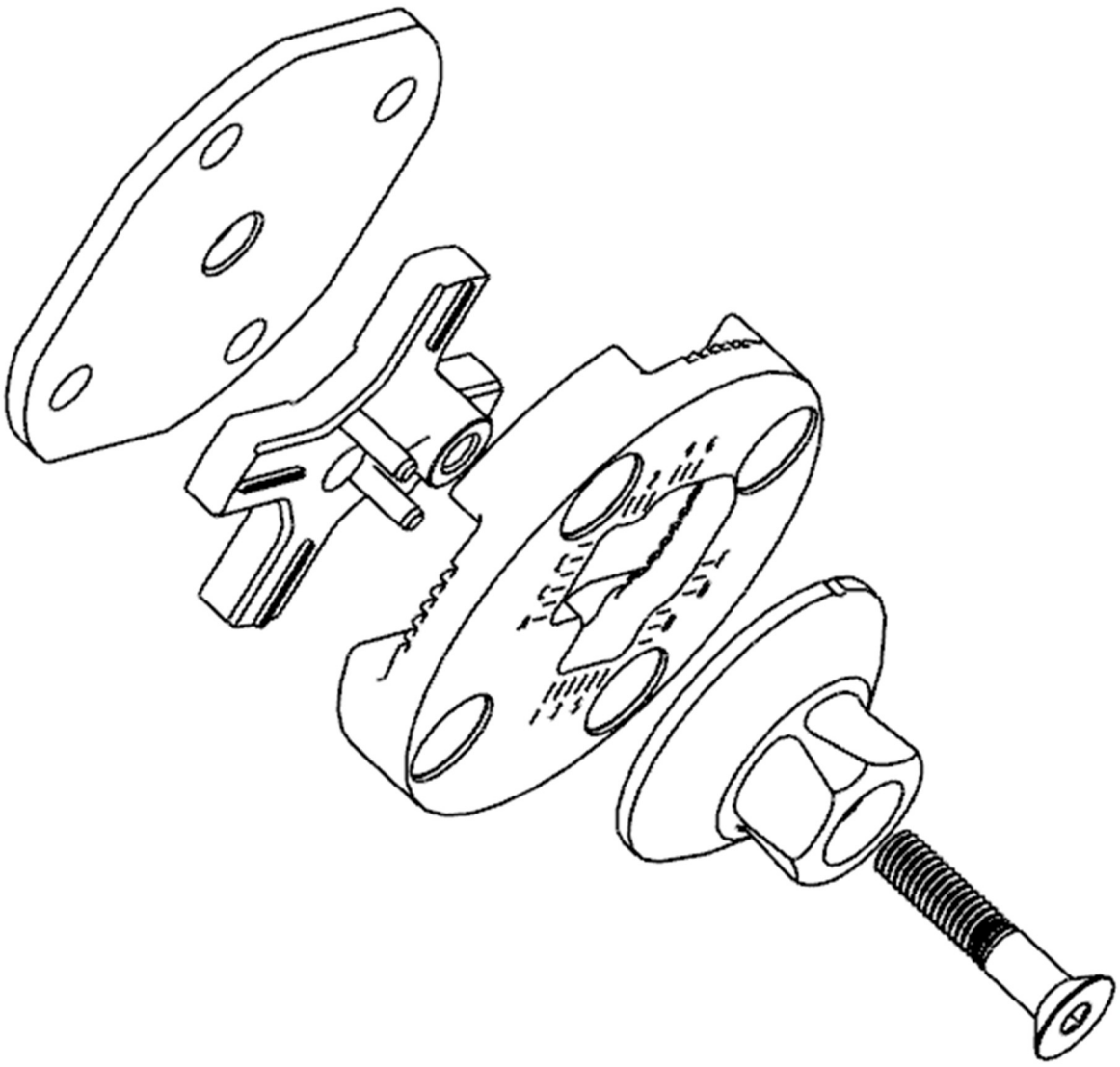
HitchFit L-35 Prototype

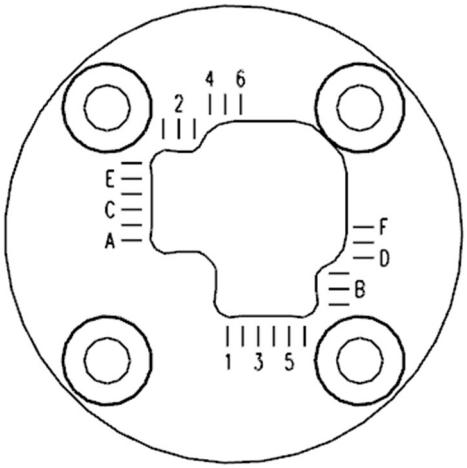
1) The HitchFit L-35 is a socket adapter system that allows adjustment in the Transverse Plane in two simultaneous directions. The adjustments are in set increments of 2.2 mm starting from zero in the two perpendicular directions of the quadrant chosen (see section 4.b for a complete description). This gives positions at 0.0, 2.2, 4.4, 6.6, 8.8, and 11.0mm in each axis except for the 11.0mm position in both axes. This would be the F6 position (see section 4.c.i for a complete description).

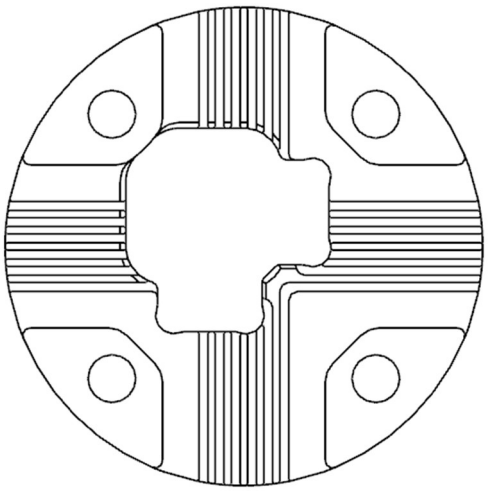
2) Parts provided for this assembly:
   a) Linear Base
   b) Linear Slide
   c) Mounting Plate
   d) Pyramid
   e) M6x1.0x30 Countersunk Screw

   Items a – e Exploded View:

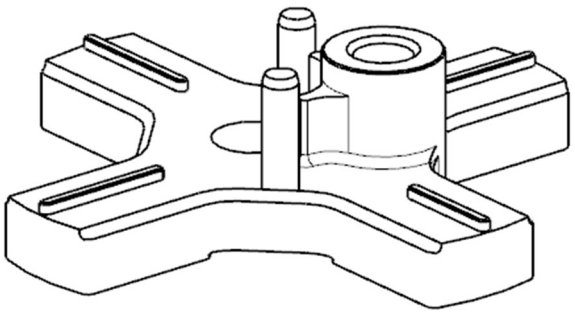


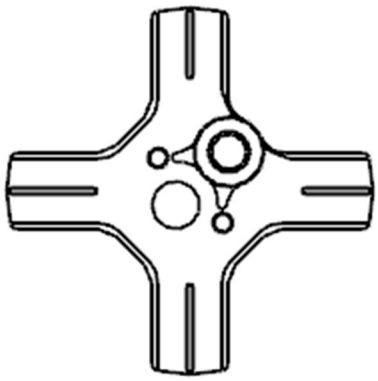
Item a: Linear Base – Bottom and Top View Shown



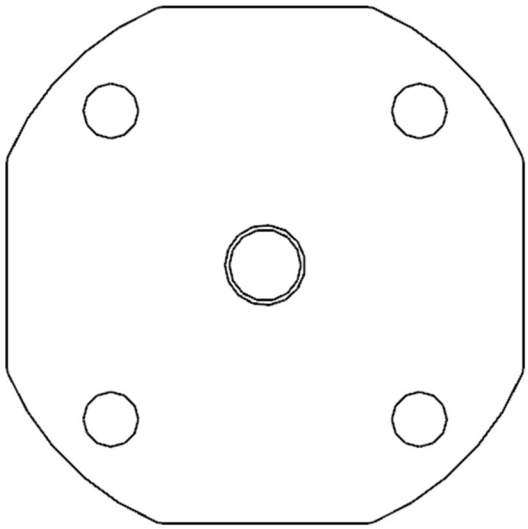


Item b: Linear Slide with clocking pins installed – Perspective and Top Views Shown

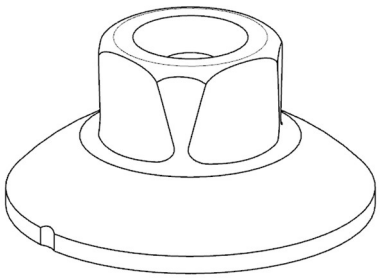




Item c: Mounting Plate – Top View Shown

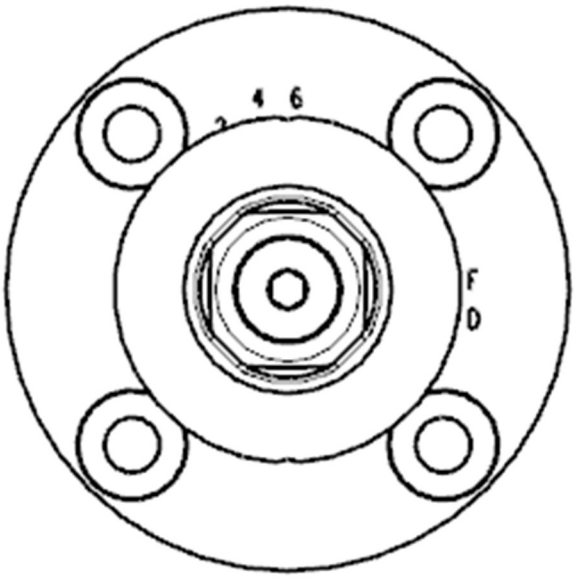


Item d: Pyramid – Perspective View Shown

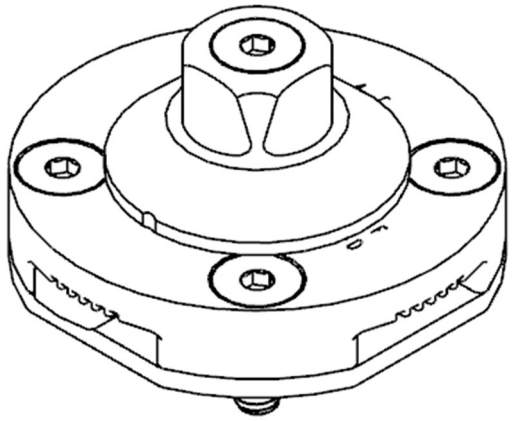


Item e: M6x1.0x30 Countersunk Screw – Perspective View Shown

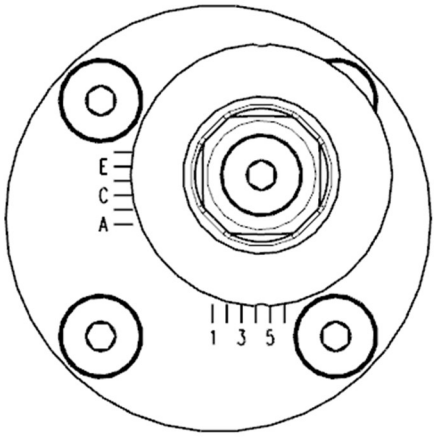
3) Additional parts needed:
   a) M6x1.00x? Countersunk Screw – Qty 4. Length to be determined by socket interface. Strength Class should be 10.9 or higher.
4) Assembly Instructions
   a) The completed assembly will include all the provided parts and the additional parts and will resemble these depictions:
      i) Shown looking from the foot toward the distal end of the socket with the adapter in the A1 position and M6x1.00 screws installed:

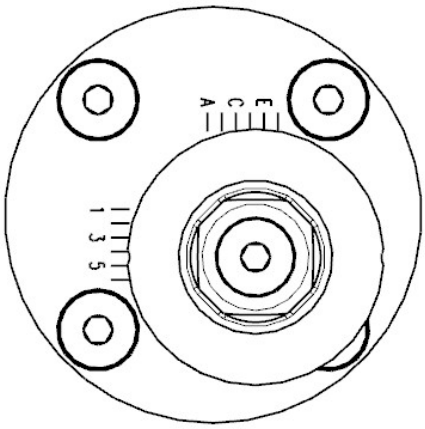


ii) Perspective view with all parts depicted shown in the A1 position (socket not shown):



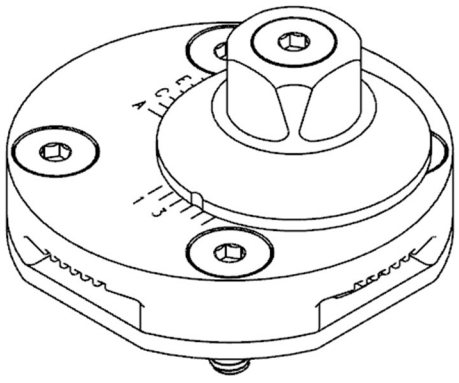
iii) Shown in Quadrants 1 and 4 looking from the foot toward the distal end of the socket with the adapter in the D4 position and M6x1.00 screws installed:





Note: The locking pins in the Linear Slide Assembly align with the position indicators. The center of the attachment feature (pyramid or receiver) does not coincide with the position indicators on the Linear Base. Take note of position of Linear Slide prior to installing pyramid or receiver. See Section 4.b.iii for complete instructions.

Shown in the perspective view with the adapter in the D4 position. Socket not shown.



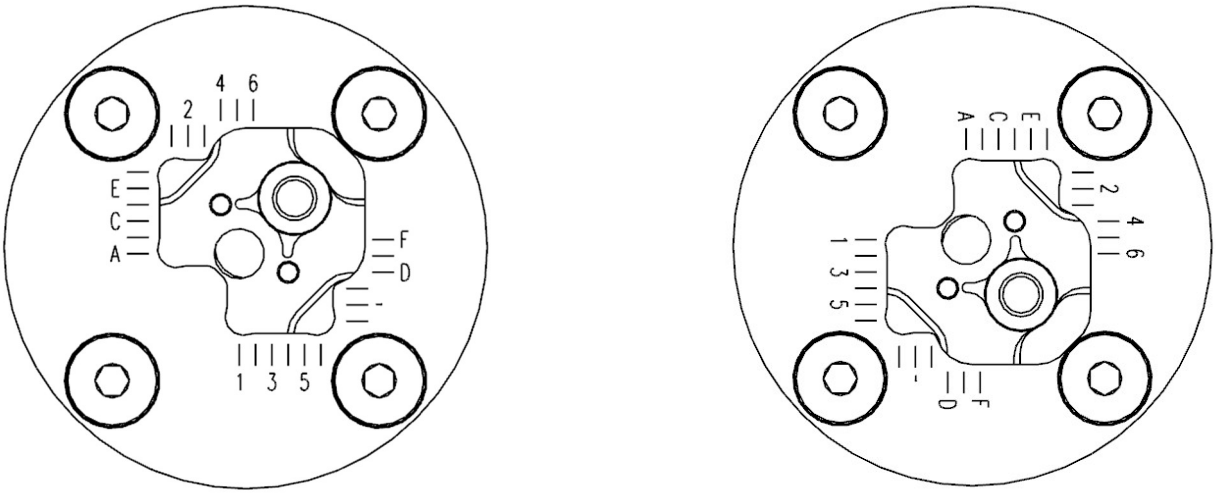
b) Orientations

i) The adapter assembly can be oriented in 4 positions on the distal end of the socket and can be used on either the right or left limb. There are two axes of motion in each orientation. Motion directions shown here are for the right limb. Motion can be in the anterior and/or medial directions (as shown in 4.a.iii and designated as Quadrant 1), rotated 90° Counterclockwise (CCW) to provide lateral and/or anterior adjustment (designated as Quadrant 2), then continuing by 90° increments CCW to provide posterior and/or lateral adjustment (Quadrant 3), and finally medial and/or posterior adjustment (Quadrant 4).

ii) Adjustment Directions

(1) Quadrant 1: A-F Anterior 1-6 Medial
(2) Quadrant 2: A-F Lateral 1-6 Anterior
(3) Quadrant 3: A-F Posterior 1-6 Lateral
(4) Quadrant 4: A-F Medial 1-6 Posterior

iii) Once a quadrant of adjustment has been chosen, it is recommended to loosely attach the adapter assembly to the socket using the 4 M6x1.00 screws. The Mounting Plate is in contact with the socket with the Linear Slide located between the Linear Base and Mounting Plate. It is important to note the location and orientation of the two clocking pins in the Linear Slide. Looking from the foot toward the distal end of the socket, the assembly in the D4 position in Quadrants 1 and 4 are shown:

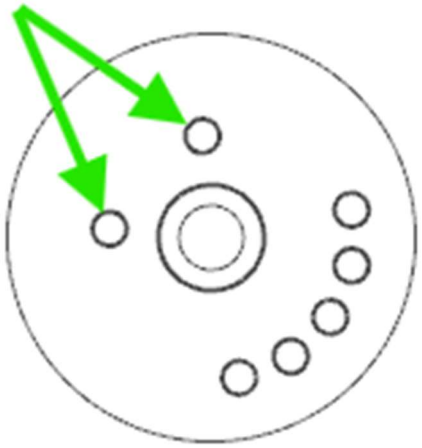


The locking pins provide the markers for position and offset of the center of the connecting attachment. (Pyramid or Receiver)

iv) The locking ribs are 1mm high. The M6x1.00 screws have a thread pitch of 1mm. To adjust the center post position, bring all 4 screws down to snug and then back all 4 screws off 1 ½ -2 rounds, allowing enough clearance to move the Linear Slide to the desired position. Ensure that all 4 locking ribs are engaged in the locking channels and the clocking pins line up with the desired position. Snug all 4 M6x1.00 screws into place. There are position indicators for each pin nearest their respective locations in the Linear Base for both alpha and numeric positions. Either pin can be used to determine the location of the Linear Slide Assembly. The separate markings allow for visual indication of the location of each pin closest to the position where the Linear Slider is currently located.

v) While testing various locations for the desired alignment, torque the 4 M6x1.00 screws to 10-12 Nm or to specifications from the fitting that is receiving the screws. When desired position is reached and the patient is leaving the clinic, ensure screws are torqued to 10-12 Nm or specifications from the fitting that is receiving the screws. LOCTITE® 243™ THREADLOCKER may be used if desired.

vi) Attach the desired connector (Pyramid or Receiver) using the provided M6x1.0x30 screw, making sure the two locking pins engage in the holes (indicated by green arrows) of the connector. (The other holes are for clocking with the HitchFit R-37.) Torque the M6x1.0x30 screw to 15-16 Nm. LOCTITE® 243™ THREADLOCKER may be used for the final configuration if desired.



c) Positions

i) Available offset positions for each quadrant are as shown in the following table:

	Linear Slide Center Post Offset Postitions Per Quadrant							
	mm							
F	11	F1	F2	F3	F4	F5		
E	8.8	E1	E2	E3	E4	E5	E6	
D	6.6	D1	D2	D3	D4	D5	D6	
C	4.4	C1	C2	C3	C4	C5	C6	
B	2.2	B1	B2	B3	B4	B5	B6	
A	0	A1	A2	A3	A4	A5	A6	
		0	2.2	4.4	6.6	8.8	11	mm
		1	2	3	4	5	6	

There are 35 positions for each quadrant, 29 of which are unique. The A1 through A6 positions will be repeated in the adjacent quadrant as the “A-F1” positions or vise-versa, depending on rotation direction. The offset values in this table are to be used in conjunction with the information in section 4.b.ii Adjustment Directions.