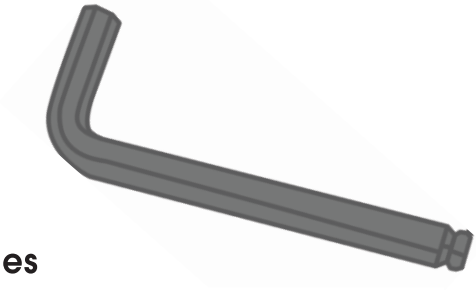
Swivellink®
INTELLIGENTLY DESIGNED

Conveyor Product Manual

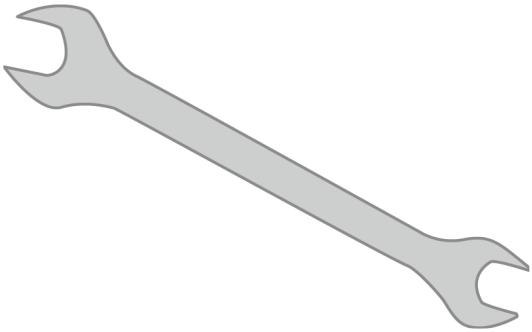
Table of Contents

TOOLS NEEDED FOR ASSEMBLY:

- **Hex Keys (ball end recommended)**
  - 1/4"
  - 3/16"
  - 1/8"
  - 7/64"
  - 5/64"



- **Open End Wrenches**
  - 7/16"
  - 1/4"



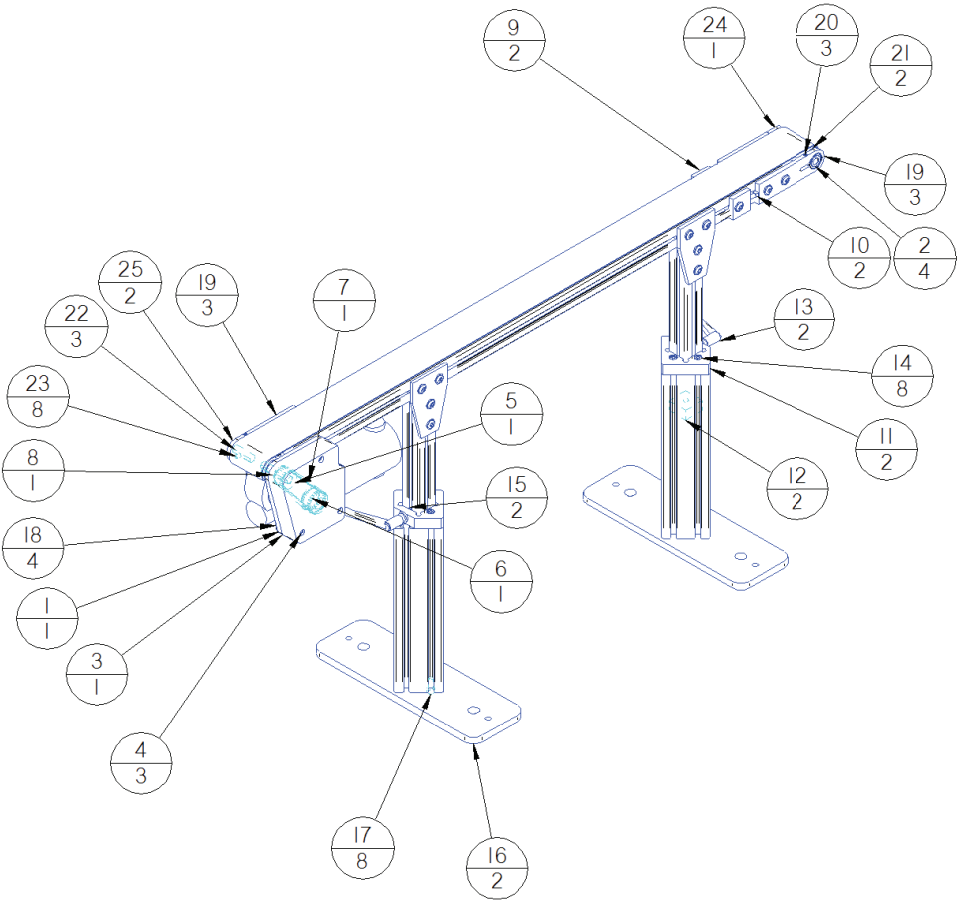
Page 3 - Master Parts List

* Some part numbers vary depending on type of kit ordered.

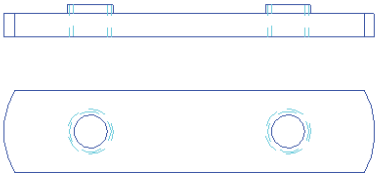
Detail	Part Number	Title	QTY
1	AFC-20	Motor Plate	1
2	99R8	Double Sealed Ball Bearing	4
3	AFC-21	Motor Cover	1
4	1/4-20 SHCS	1-1/4" Long	3
5	AFC-18	Roller Pulley	1
6	AFC-19	Motor Pulley	1
7	AFC-22 or -23	Timing Belt	1
9	AFC-10	Tensioner Block	2
10	1/4"-20 Square Head Screw	1" Long	2
11	AFC-7H w/handle	Stand Lock Plate	2
12	AFC-6	Stand Guide Block	2
13	6800	Brake Handle Kit	2
14	5/16-18 SHCS	1" Long	8
15	5/16-18 X 1 1/4" Carriage Bolt	5/16-18 X 1 1/4" Carriage Bolt	2
16	AFC-25	Stand Foot	2
17	5/16-18 SHCS	3/4" Long	8
18	1/4-20 Hex Head Bolt	5/8" Long	4
19	AFC-1	Bearing Block	3
20	#6 SHCS	1-1/4" Long	3
22	AFC-14V-15	Conveyor Roller	varies
23	1/4-20 Set Screw	3/8" Long	varies
24	AFC-15(-15,-30,-45,-60,-75,-90)	Idle End Axle	1
25	AFC-16(-15,-30,-45,-60,-75,-90)	Drive End Axle	1
Dual Bed	AFC-17	Bridge Plate (Dual bed only)	2
Optional	AFC-Caster 4	Caster Set	4
*	AFC-24	Oriental Motor Control Mount	1

* Included with Oriental Kit

Page 4 - Master Parts List Continued



Page 5 - Hardware Included (may vary with size)



Double plate nut (quantity 4)

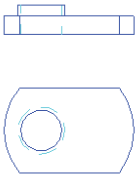
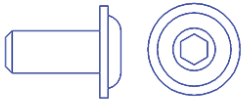


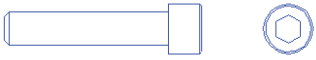
Plate nut (quantity 2)



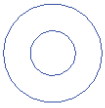
Attachment Bolt (quantity 10)

1/4-20 X 3/8 Set Screw
(quantity varies)

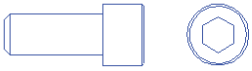
1/4-20 Hex Bolt 5/8" Long
(quantity 4)



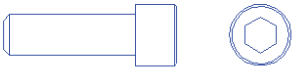
1/4-20 SHCS 1-1/4" Long
(quantity 3)



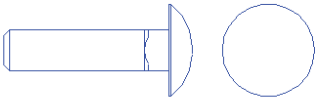
Washer (quantity 2)



5/16-18 SHCS 3/4" Long
(quantity 8)

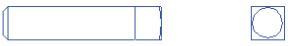


5/16-18 SHCS 1" Long
(quantity 8)



5/16-18 X 1 1/4" Carriage Bolt
(quantity 2)

#10-24 BHCS 3/8" Long
(quantity 2)
(based on options)

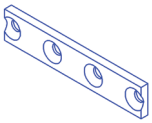


Tension screw
(quantity 2)

*Images not to scale

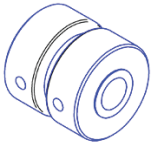
Page 6 - Parts Included (may vary with size)

* Some part numbers vary depending on type of kit ordered.

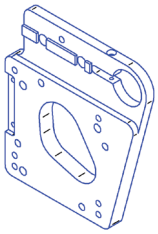


AFC-17

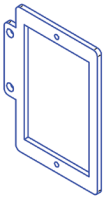
99R8 Bearing
(quantity 4)



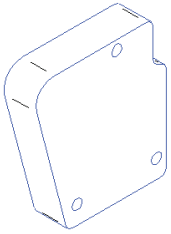
AFC-14V-15



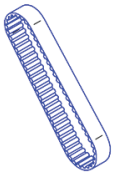
AFC-20



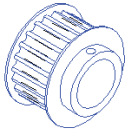
AFC-24



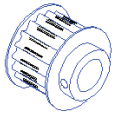
AFC-21



AFC-22*
AFC-23*



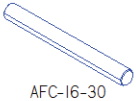
AFC-19



AFC-18

AFC-16-15

AFC-15-15



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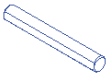

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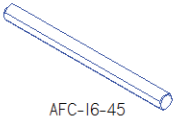

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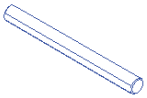

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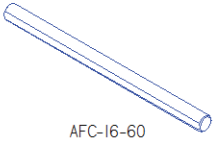
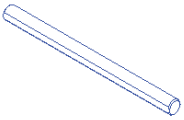


AFC-16-60



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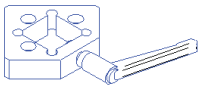
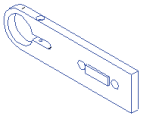


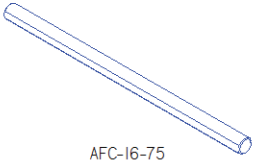
AFC-7
(quantity 2)



AFC-1
(quantity 3)

AFC-6
(quantity 2)

AFC-10
(quantity 2)



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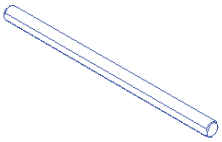

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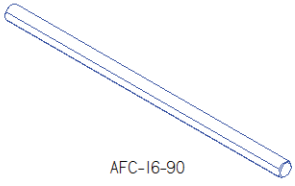

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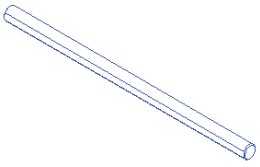
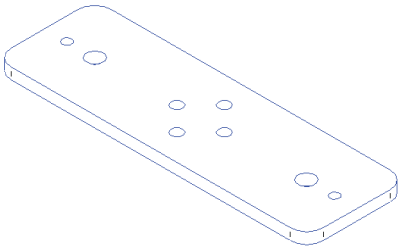


AFC-15-90



AFC-25
(quantity 2)

Page 7 - Material Selection and Sizing

In order to build a conveyor you will need the following:

T-Slot Extruded Aluminum Framing:

Extrusion Sizing Chart	
Designed for most 1.5" standard extrusion.	
Material	**Formula for cut length**
Bed	Overall length - 4.5 *see chart 8a
Stand Adjuster	Adjustment + 8.00 The stand adjustment dimension will allow the height to lower by this amount and raise an additional 2". *see chart 8b
Stand Base	Stand Height - (Adjustment + 7.75) *see chart 8b

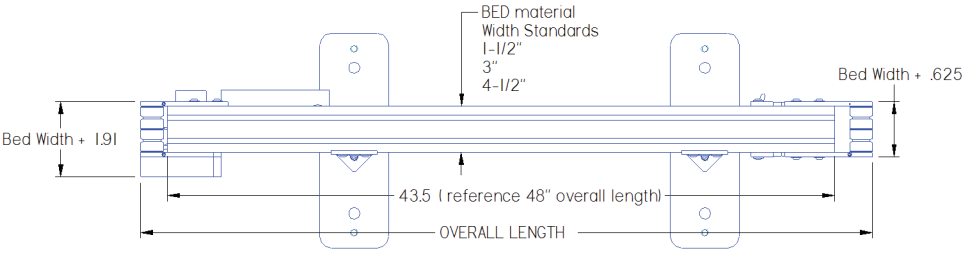
Belt:

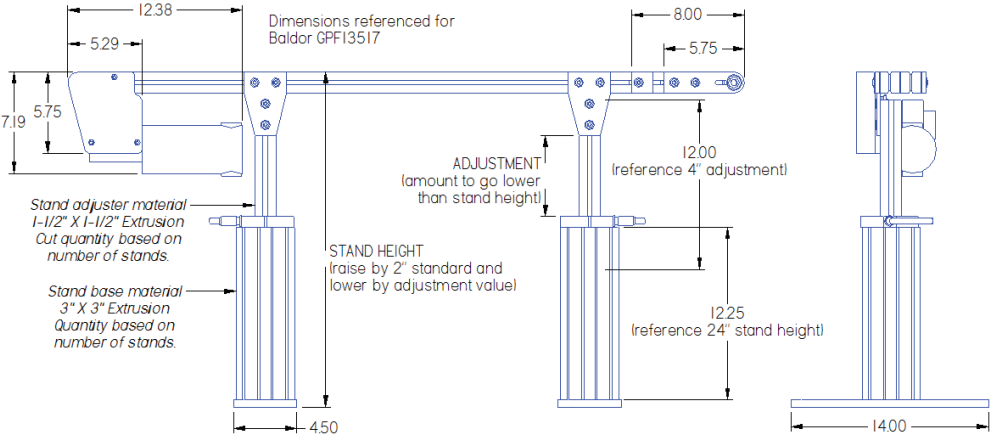
- Use conveyor belting approved for 1-1/2" diameter rollers
- Recommended use 6mm V-Belt guide on conveyor belts
- V-Belt guide centered on 1-1/2" and 4-1/2" conveyor widths (other widths: 7 1/2")
- V-Belt guide offset 3/4" on 3" conveyor width (other widths: 6", 9")
- Welded (endless) belt recommended
- Actual belt width should be slightly narrower than the conveyor bed width (example: use a 1-3/8" wide belt on a 1-1/2" wide conveyor bed)
- Belt length formula: Conveyor Length X 2 + 1.7 (example: 48" long conveyor needs a belt length of 97.7")
- Trico belt materials (others available; consult with belting suppliers): 3805, 4127, 4140

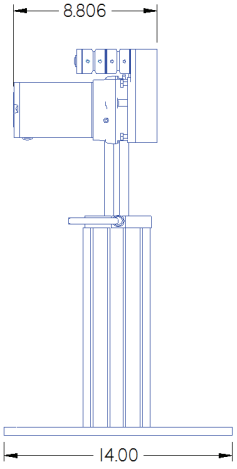
Gear-Motors:

- Baldor GCP24010 and GPF13517 motors, Oriental Series
- To calculate motor output RPM or Belt Speed: Belt speed (feet/minute)= motor output speed * .48 (example - 100 rpm motor = 48 feet/minute belt speed)
- See detailed custom motors/speed/torque at Swivellink.com

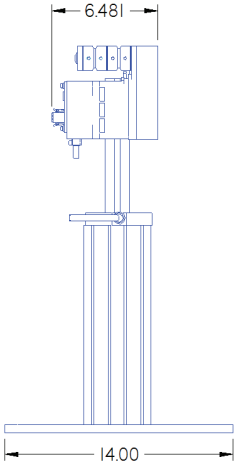
Page 8 - Material Sizing Continued



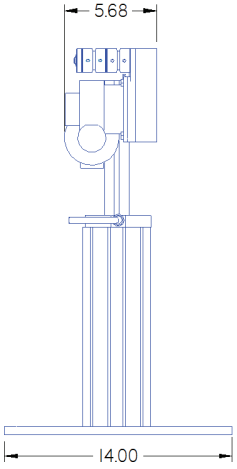




Baldor GCP24010



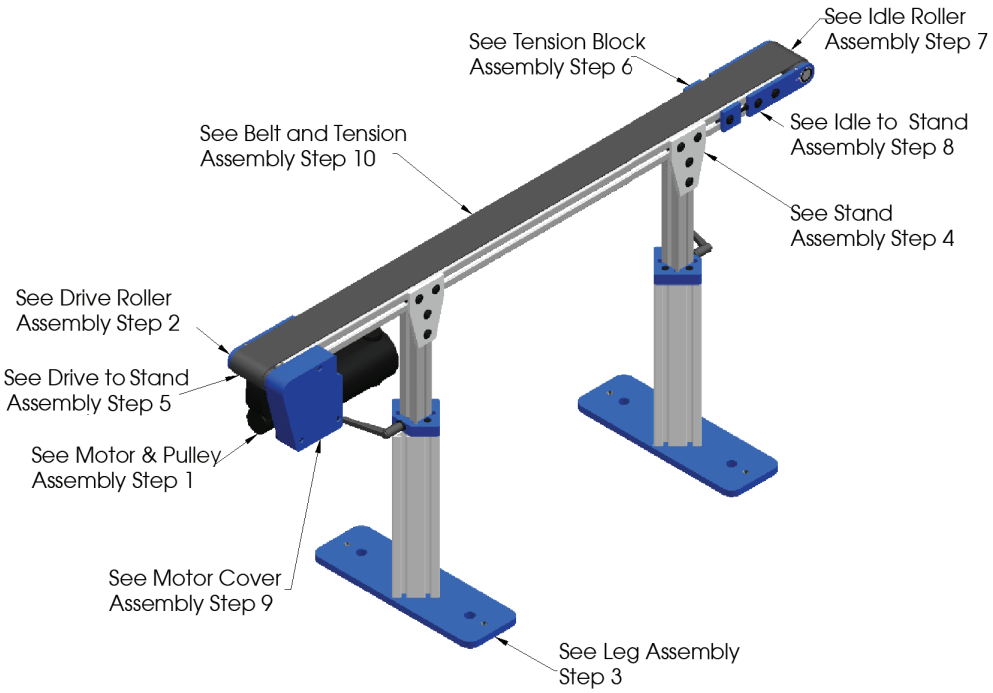
Oriental BMU5120A-20A



Baldor GPF13517

Assembly Instructions Overview		
Step	**Title**	**Page**
1	Motor & Pulley Assembly	11
2	Drive Roller & Axle Assembly	13
3	Leg Assembly	15
4	Stand Assembly	17
5	Optional: Dual Bed Conveyor Assembly	19
6	Drive Assembly to Stand Assembly	20
7	Tension Block Assembly	21
8	Idle Roller & Axle Assembly	22
9	Idle Assembly to Stand Assembly	23
10	Motor Cover Assembly	24
11	Belt & Tension Assembly	25

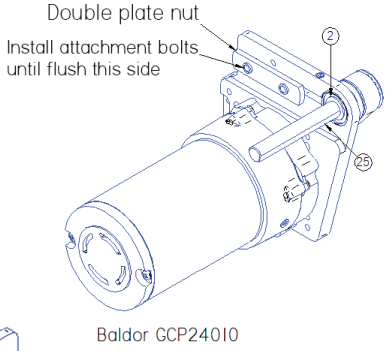
Page 10 - Assembly Instructions Overview Continued



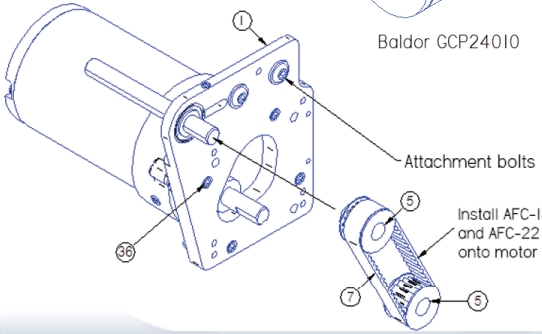
NOTE: Conveyor shown on this drawing is 48" overall length, 3" width belt, Stand height at 24" with 4" adjustment on stands.

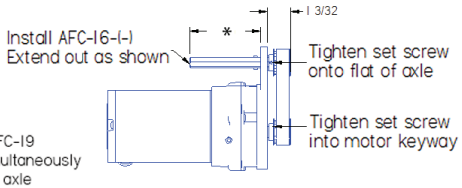
Page 11 - Step 1 - Motor & Pulley Assembly

Assembly Steps	
Step	**Description**
1	Install AFC-16-(*) (detail 8) into bearing (dimension shown). Installation will take slight press fit into bearing. Insure axle is perpendicular to bearing during installation. *Varies depending on width
2	Install motor to AFC-20 (detail 1) with 1/4-20 X 5/8 bolts, do not tighten bolts yet.
3	Hold AFC-19 or -18 motor pulley, AFC-18 roller pulley, and AFC-22 or -23 timing belt (details 5, 6 and 7) together and then install onto motor shaft and AFC-16-(-) simultaneously. Tighten set screws onto axle flat and motor keyway.
4	Tension timing belt and then tighten motor bolts.
5	Hand start attachment bolts and plate nut. Stop when threads of the bolts are flush with the plate nut.

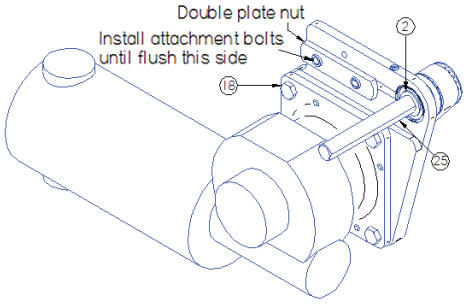


Baldor GCP24010

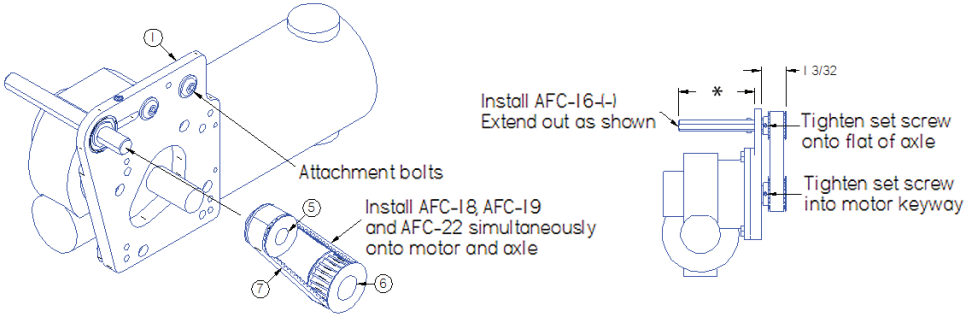


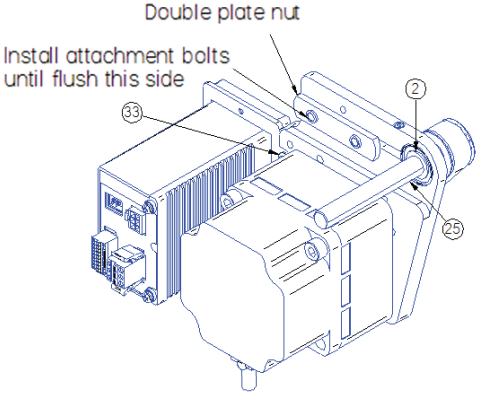


Page 12 - Step 1 - Motor & Pulley Assembly

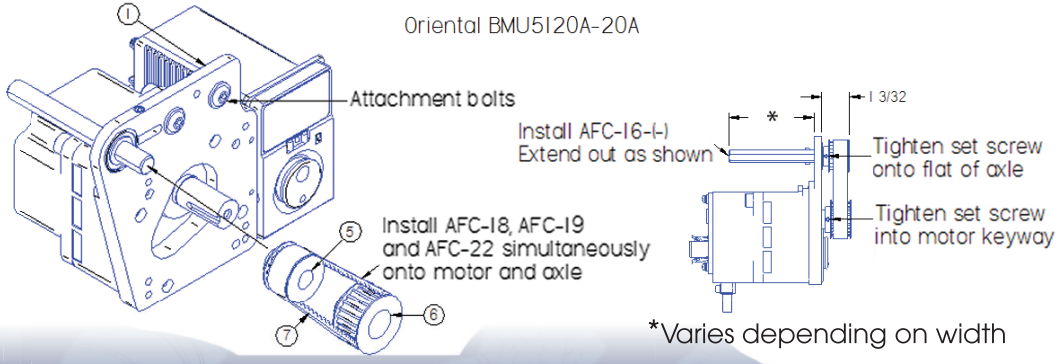


Baldor GPFI3517





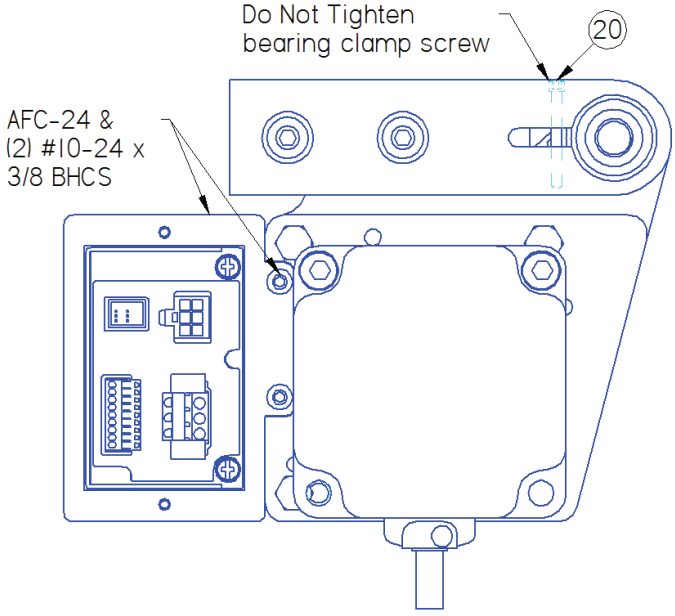
Oriental BMU5120A-20A



*Varies depending on width

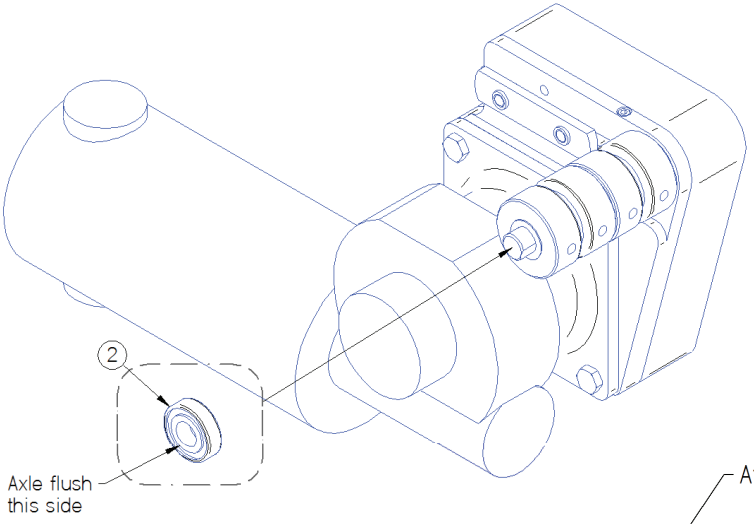
Page 13 - Step 2 - Drive Roller & Axle Assembly

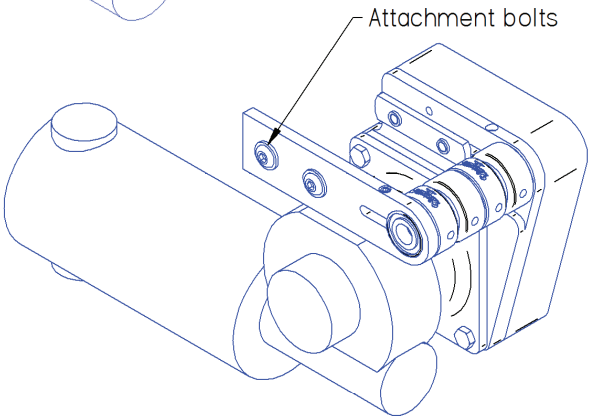
Assembly Steps	
Step	**Description**
1	Install AFC-14V-15 (Quantity per conveyor width) onto axle AFC-16-(-) with set screws over axle flat. Do not tighten set screws yet.
2	Install bearing onto axle end slight press fit.
3	Install AFC-1 (detail 19) onto bearing. May require light press fit onto bearing. Do not tighten bearing clamp screw.
4	Hand start attachment bolts and plate nut. Stop when threads of the bolts are flush with the plate nut.
5	*Note: If using oriental motor, you will need to attach the AFC-24 Oriental Motor Control Mount to the AFC-20 Motor Plate.

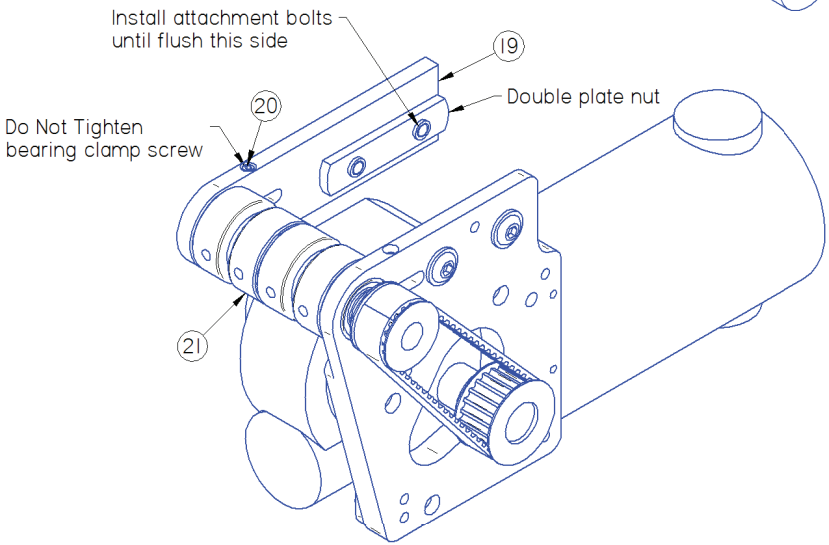


Oriental BMU5120A-20A

Page 14 - Step 2 - Drive Roller & Axle Assembly



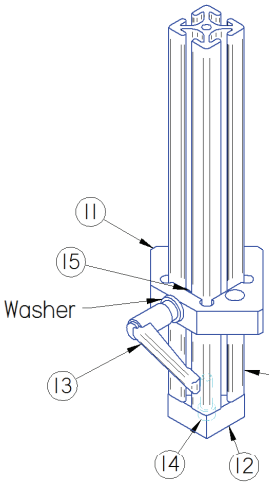




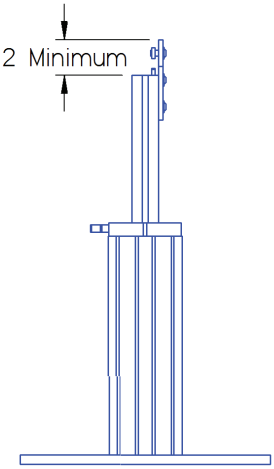
Assembly Steps	
Step	**Description**
1	Install AFC-6 (detail 12) onto end of stand adjuster extrusion, end of extrusion must be tapped.
2	Insert carriage bolt inside AFC-7 (detail 11) and then add washer and handle (detail 13).
3	Install adjuster extrusion with AFC-6 through bottom of AFC-7 lock plate aligning carriage bolt to slot in extrusion.
4	Install AFC-25 stand foot (detail 16) onto end of stand base extrusion. Ends of extrusion must be tapped.
5	Install upper portion of stand adjuster into top of stand base and foot.
6	Install bolts to AFC-7 to attach to the stand base assembly.
7	Install mounting plate (not with kit) as shown using proper hardware as needed. Note to leave a minimum of 2" to allow belt clearance as shown.

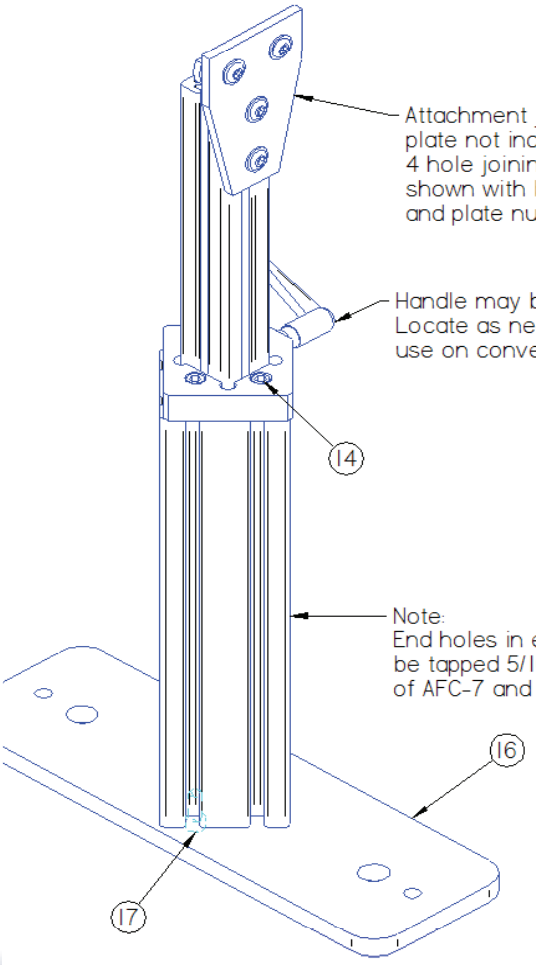
Page 16 - Step 3 - Leg Assembly

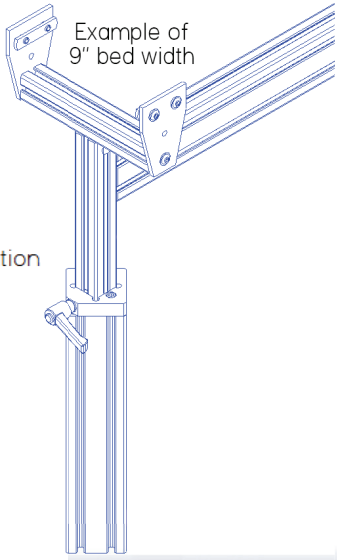
*Stand shown is typical for conveyors up to 4 1/2" wide



Note:
End hole in extrusion must be tapped 5/16"-18 for installation of AFC-6.





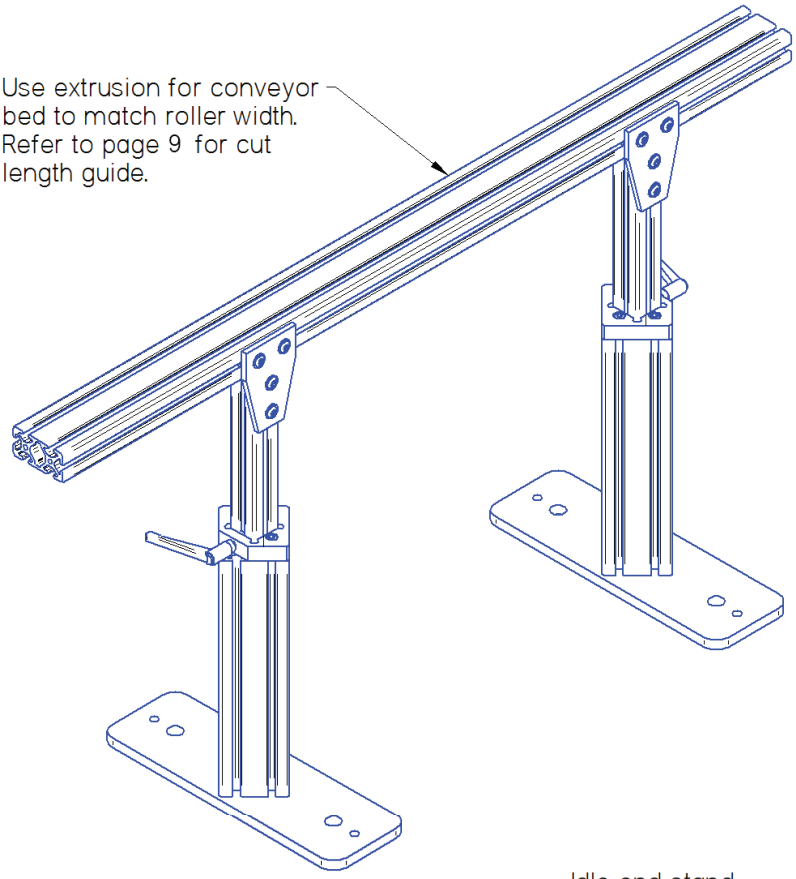


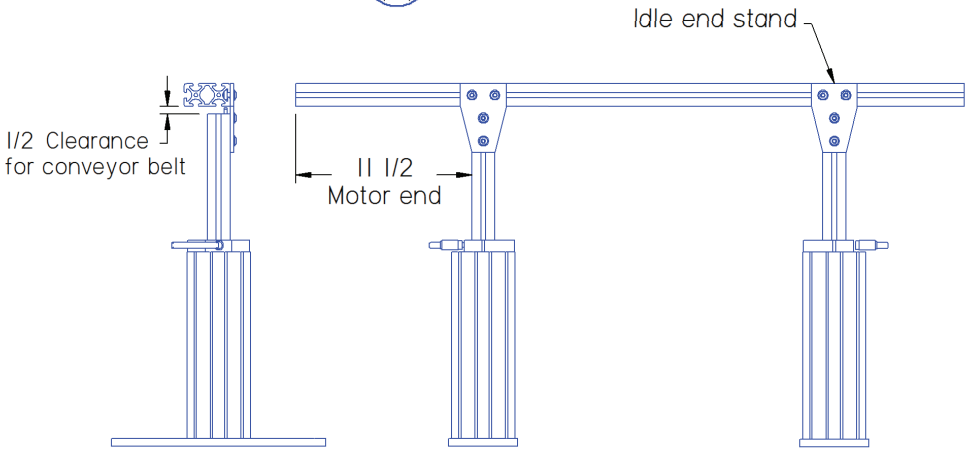
Assembly Steps	
Step	**Description**
1	Start with extrusion, per width required, cut to length per guide on page 9.
2	Install stand at motor end using joining plate and hardware. Note that stand must be installed at least 11-1/2" from end to clear the conveyor motor.*
3	Install stand at idle end.
4	Install stands to same side of conveyor bed to allow installation of the conveyor belt.
5	Check for clearance between the stand adjuster extrusion and the conveyor bed. Allow 1/2" clearance.

*If using Baldor GPF13517 type motor. Minimum 6" if using Oriental or Parallel motor. Stand may be placed further back if needed.

Page 18 - Step 4 - Stand Assembly

*Typical stand assembly for conveyor width up to 4 1/2"





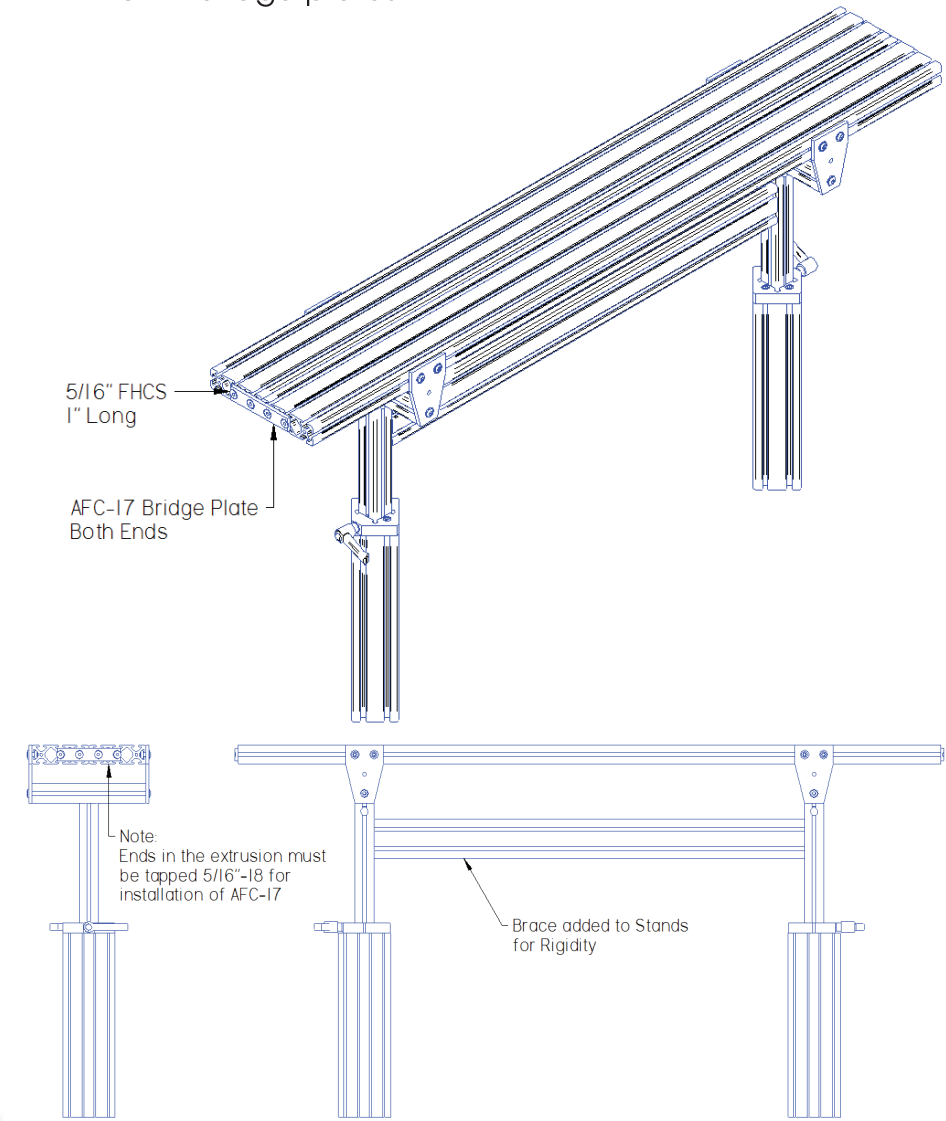
Page 19 - Step 5 - Optional: Dual Bed Conveyor Assembly

*** If assemblying a 4.5" width conveyor or smaller, skip to step 6.**

For belt/bed widths over 6" or as required due to loading conditions, it may be necessary to add extra bracing to the conveyor.

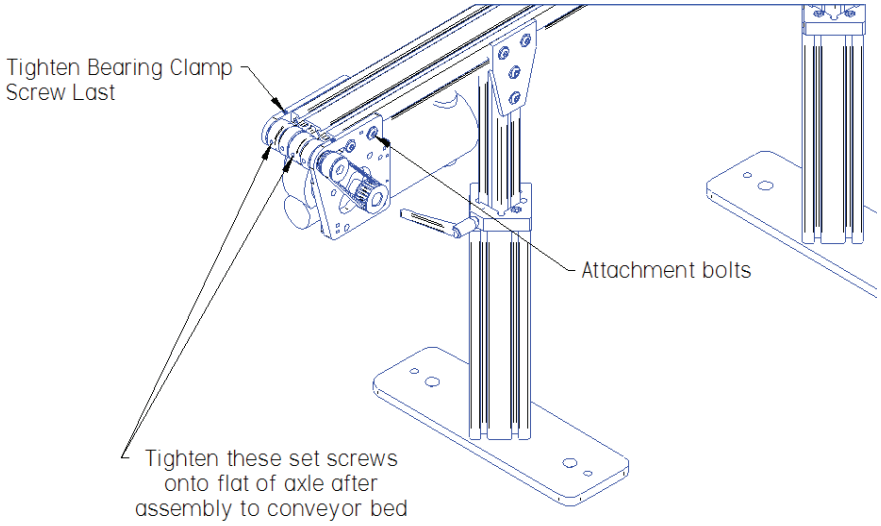
Following is an example of a 9" width conveyor constructed for heavy loads.

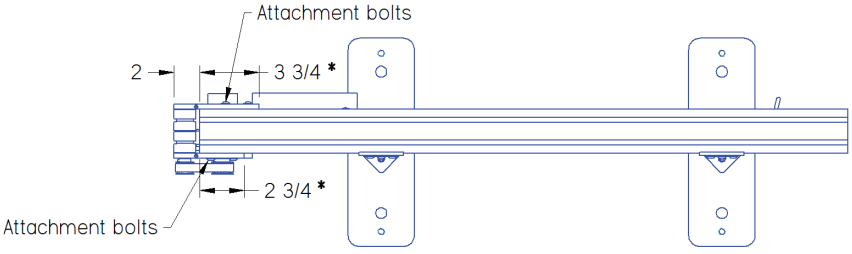
The bed consists of two 1 1/2" x 4 1/2" extrustions attached with AFC-17 bridge plates.



Page 20-Step 6 - Drive Assembly to Stand Assembly

Assembly Steps	
Step	**Description**
1	Install drive end assembly from page 12 onto drive end of the conveyor bed extrusion.
2	Set the bearing plate to 4" from the end of the extrusion as shown.
3	Tighten attachment bolts on AFC-20
4	Check dimension on AFC-1 bearing block and verify roller is running true.
5	Tighten attachement bolts on AFC-1 bearing block.
6	Tighten set screws on AFC-16-(-).
7	Tighten bearing clamp screw last.

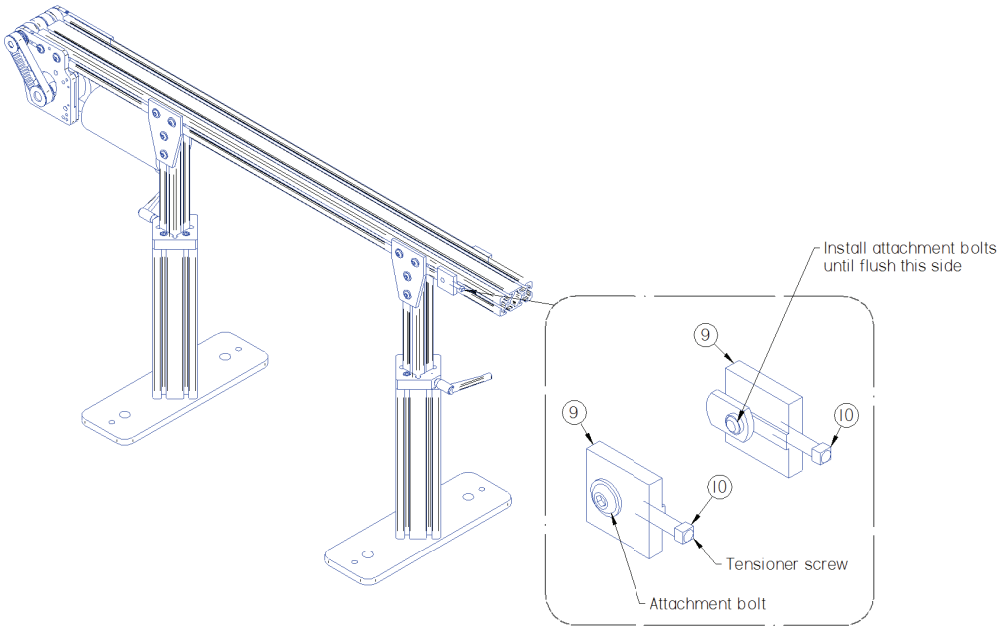




*Dimensions are different on wide conveyor

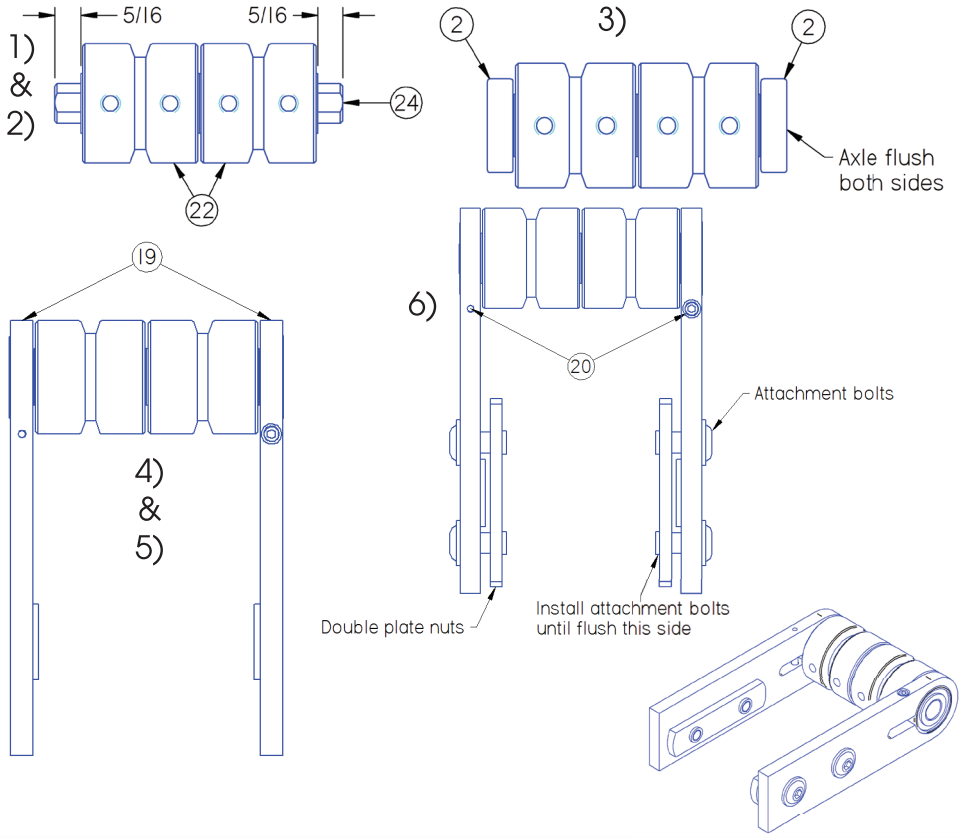
Page 21 - Step 7 - Tension Block Assembly

Assembly Steps	
Step	**Description**
1	Hand start attachment bolts and plate nut to each AFC-10 Tension block (detail 9). Stop when threads of the bolts are flush with the plate nut.
2	Hand start tensioner screws (detail 10) to each AFC-10 Tension block (detail 9).
3	Install two (2) AFC-10 tensioner blocks (detail 9) to the idle end of the conveyor bed. Do not tighten attachment bolts yet.



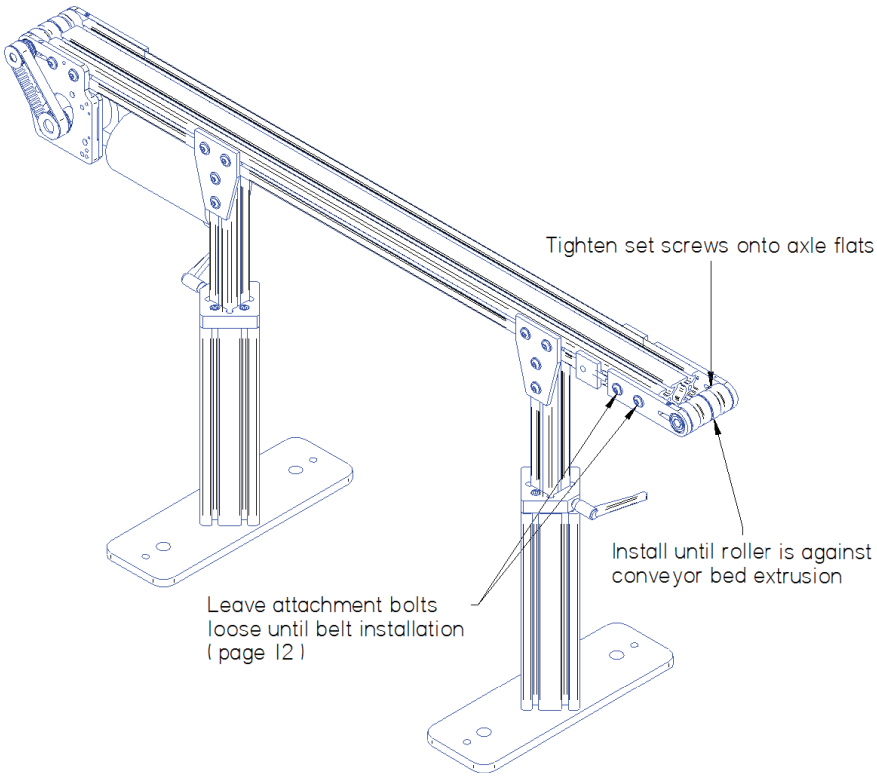
Page 22 - Step 8- Idle Roller & Axle Assembly

Assembly Steps	
Step	**Description**
1	Assemble rollers to axle.
2	Tighten set screws onto axel flat on one roller.
3	Install bearing onto axle. (light press fit)
4	Install AFC-1 (detail 19) onto bearing, two times. May require light press fit onto bearing. Do not tighten axle set screws yet.
5	Tighten bearing clamp screw in each AFC-1 bearing block.
6	Hand start attachment bolts and plate nut to each AFC-1 bearing block (detail 19). Stop when threads of the bolts are flush with the plate nut.



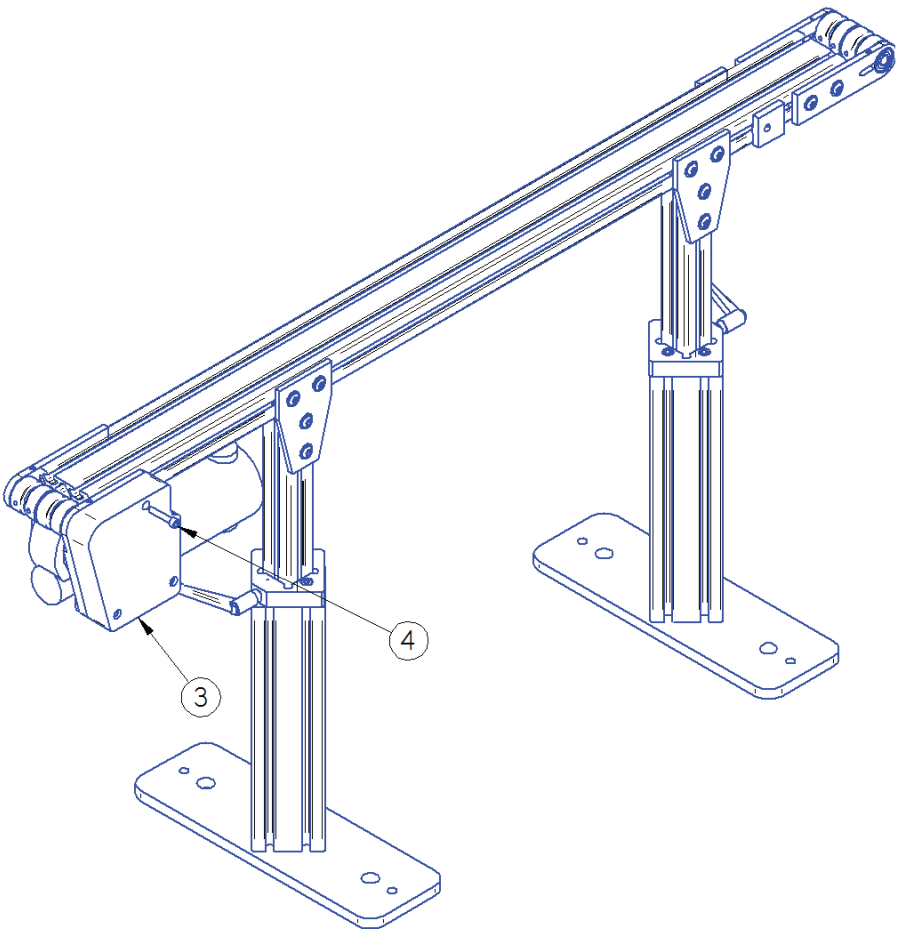
Page 23 - Step 9 - Idle Assembly to Stand Assembly

Assembly Steps	
Step	**Description**
1	Install idle roller assembly onto conveyor bed.
2	Temporarily tighten attachment bolts.
3	Tighten set screws in roller onto axle flats.
4	Loosen attachment bolts and slide idle roller against conveyor bed for belt installation (page 12).



Page 24 - Step 10 - Motor Cover Assembly

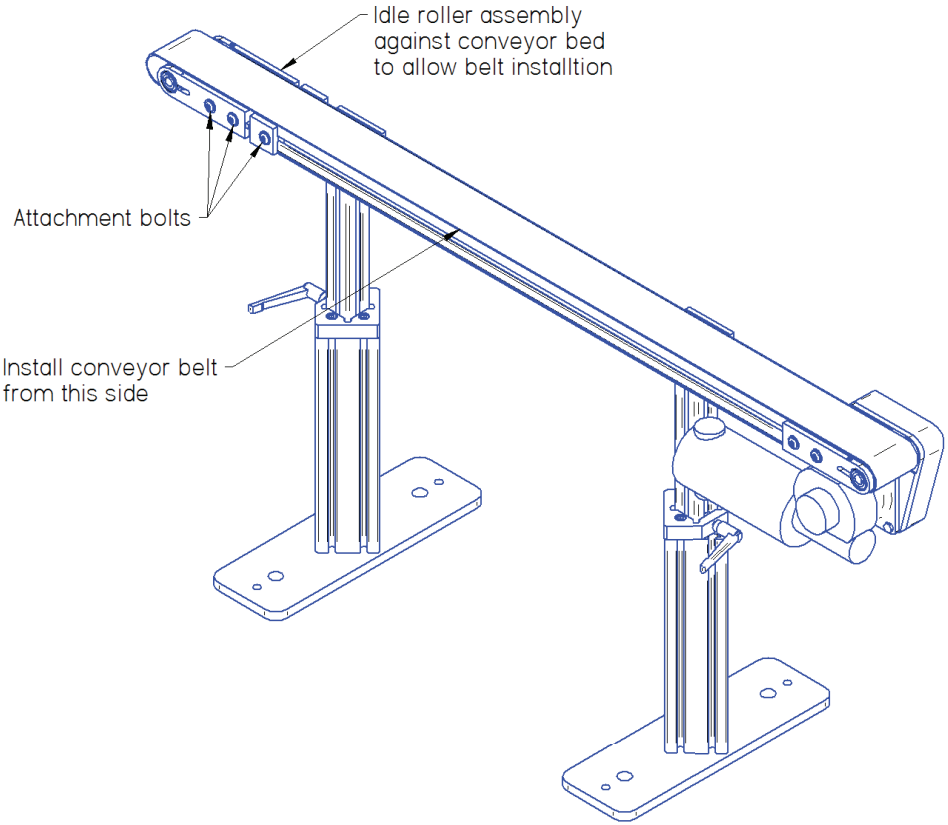
Assembly Steps	
Step	**Description**
1	Install AFC-20 Belt cover (detail 3).
2	Tighten three (3) 1/4-20 X 1-1/4" long SHCS (detail 4).

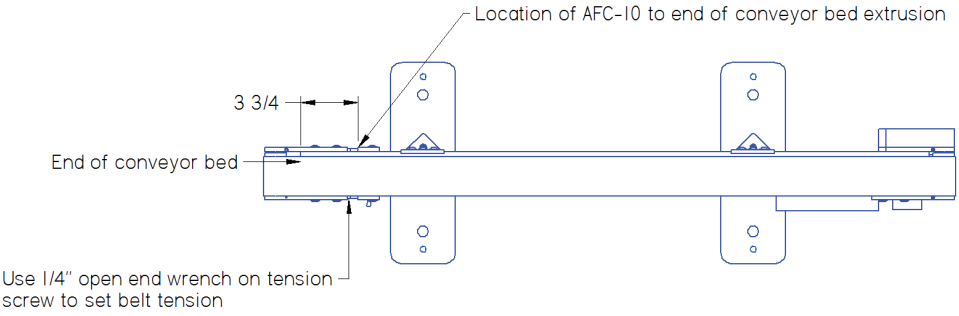


Page 25 - Step 11 - Belt & Tension Assembly

Assembly Steps	
Step	**Description**
1	Install conveyor belt over bed and rollers.
2	Align conveyor belt V guide into roller V grooves.
3	Pull idle roller assembly to conveyor belt then tighten attachment bolts temporarily.
4	Slide AFC-10 tensioners (detail 9) against AFC-1 bearing blocks (detail 19). Tighten attachment bolts.
5	Loosen attachment bolts on AFC-1 bearing blocks (detail 19).
6	Use 1/4" open end wrench in tension screws to set conveyor belt tension.
7	Check roller alignment and belt tension.

Page 26 - Step 11 - Belt & Tension Assembly





The Swivellink® product was originally designed to provide an ergonomic and robust way to put operator start buttons onto custom built industrial machinery. The goal was to protect the expensive button and route the quick disconnect cable internally, because a simple wire break or damaged button can cause hours of costly production down time. The truth is, we never developed the product to sell, but to solve a problem on our own production lines. The product was so unique that it took off and sold without much effort.

Once the product gained traction in the market, we found new and creative ways to solve problems. We added solutions for cameras, sensors, smaller and lighter cameras (XS series), monitor mounting, table base for quick mounting to workbenches and tables, and robotic end of arm tooling. Today, we've converted our entire mounting line of products to Metric in addition to Imperial.

As Swivellink® sets out to provide creative automation products, other automation solutions have been developed. Swivellink® Conveyor has been introduced as a modular conveyor option. We are able to sell a conveyor-in-a-box at a fraction of the cost, ship worldwide, and let you build the conveyor.

Additionally, the Swivellink® guarding system will solve a problem that machine guarding/fencing is not always rigid enough for industrial environment and takes too long to manufacture. Our modular guarding system is sold in sections and easily links together, allowing the end user to buy an off-the-shelf solution that appears like it was built custom. It is strong enough to be considered the major player in industrial guarding and fencing products.

Now distributed worldwide, the Swivellink® product line has been used for hundreds of different applications in all types of industries. Our goal is to intelligently design a flexible product line that will solve automation problems. The possibilities are endless for your automation product solutions.

Swivellink®
INTELLIGENTLY DESIGNED

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