

**ERGO-ARM II**

# ***Operation & Replacement Parts Manual***



- AEA-1212-A Pneumatic
- AEA-1212-M Mechanical

***AcraDyne***

A SUBSIDIARY OF **AIMCO**

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D.C Nutrunners • Torque Measurement & Audit Equipment • Articulating Arms • Assembly Systems

## INTRODUCTION

### CAUTION

Please read the following manual before assembling and operating your Ergo Arm II Tool Support System.

As in all cases, when electric or air lines come in close contact with moving parts or mechanisms, precautions should be taken. The person installing and operating the equipment should be sure that cords or hoses do not become entangled or damaged by moving parts.

Proper attention will prevent possible hazard or injury.

## RECOMMENDED TOOLS FOR ASSEMBLY AND ADJUSTMENTS

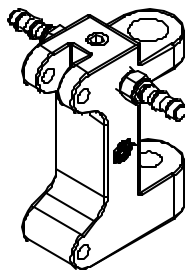
### *[NOT SUPPLIED]*

3/16" Allen Wrench.....	Used on items #3 and #4 [SCREW and COLLAR]
5/16" Allen Wrench.....	Used on item #9 [SCREW]
Flat Head Screwdriver/Needle Nose Pliers.....	Used on item #16 [E-CLIPS FOR PINS]
Channel Lock Pliers.....	Used on item # 21 or #22 [Snap-Grip Clamps]

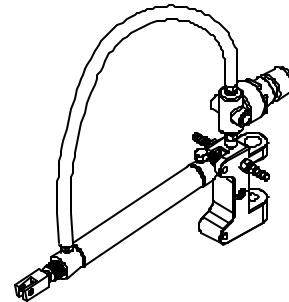
# INSTALLATION AND SET UP INSTRUCTIONS

## ALL MODELS

1. Remove the Base (item #1) from the box.
2. Bolt to work surface.
3. Insert Post (item #2) into Base, and tighten Set Screws (item #3).
4. Install Bushings (items #5 & #7) into Arm (item #6).
5. Slide Collar (item #4) onto Post (item #2) and tighten set screw securing collar in desired position.
6. Slide Arm onto Post resting in place on Collar.
7. A) **FOR MECHANICAL ERGO-ARM II- MODEL AEA-1212-M** [GO TO STEP 20]  
Items 8, 10, & 11 come pre-assembled. [SEE VIEW #1]
8. B) **FOR PNEUMATIC ERGO-ARM II – MODEL AEA-1212-A**  
Items 8, 10, 11, 12, 13, 14, 20, 24, & 26 come pre-assembled. [SEE VIEW #2]



**VIEW #1**



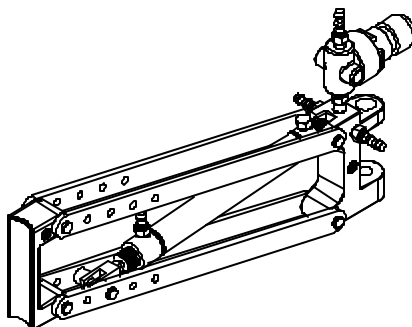
**VIEW #2**

9. **FOR STANDARD CONFIGURATION**

Attach Adjusting Arms (item #15) to Pivot Arm Assembly by placing Pin (item #16) through Arm and affixing E-Clip.

**Note: Air Cylinder holes must be in-line between the top holes of the Pivot Arm.**

10. When the Adjusting Arms are fastened to the Pivot Arm attach remaining end of Adjusting Arm to Tool Rest (item #18) by placing Pin (item #16) through Arm and affixing E-clip.
11. Attach Air Cylinder to Adjusting Arm at the desired travel length. Place Pin in one of the 4 adjustment holes available. Place Spacer (item # 19) between the yoke on Air Cylinder and the Adjusting Arm. Feed Pin through Adjusting Arm, Spacer, Yoke, Spacer, and Adjusting Arm on opposite side and fix E-clip. [SEE VIEW #3]  
[GO TO STEP 16]



**VIEW #3**

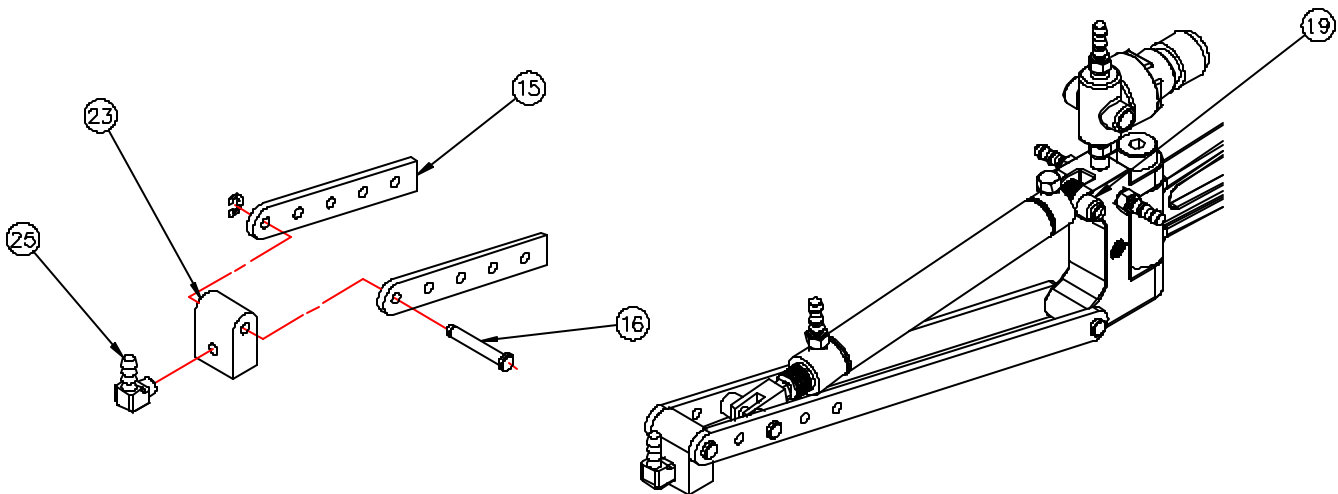
12. **FOR SINGLE ARM CONFIGURATION**

Attach Air Cylinder (item #14) to Pivot Arm by placing Pin (item # 16) through top of Pivot Arm and Cylinder hole, inserting Spacer (item #19) onto Pin and fastening E-Clip.

13. Attach Adjusting Arms (item #15) to Pivot Arm Assembly by placing Pin (item #16) through Arm and affixing E-Clip.

14. When the Adjusting Arms are fastened to the Pivot Arm, attach remaining end of Adjusting Arm to Manifold (item #23) by placing Pin (item #16) through Arm and affixing E-clip.

15. Attach Air Cylinder to Adjusting Arm at the desired travel length. Place Pin in one of the 4 adjustment holes available. Place Spacer (item # 19) between the yoke on Air Cylinder and the Adjusting Arm. Feed Pin through Adjusting Arm, Spacer, Yoke, Spacer, and Adjusting Arm on opposite side and fix E-clip.[SEE VIEW #4]



**SINGLE ARM CONFIGURATION**

VIEW #4

16. Place completed Pivot Arm Assembly onto Arm (item #6). Insert Screw (item # 9) and tighten.

17. Run Tubing through Base up Post and insert into Hose Barb on desired Side of Pivot Arm.

18. Fasten Tool to Tool Rest using Snap-Grip Clamps. Channel Lock type Pliers will be required for final tightening of Clamps.

19. Run Tubing from Tool to remaining Hose Barb. If the application does not require air to the driver i.e. electric tool], then replace Hose Barb with 1/8" N.P.T. Plug [item #27].

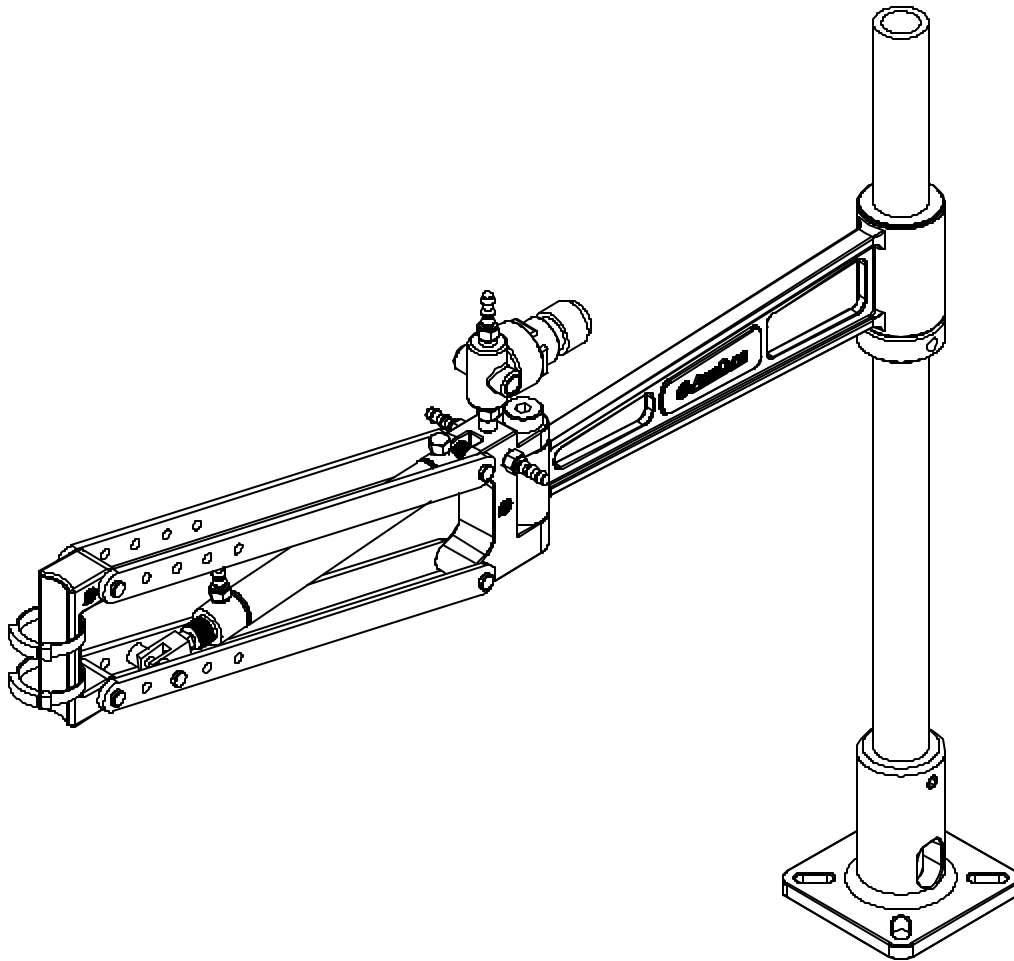
**WARNING:** Ensure Regulator is set at the lowest pressure setting before connecting air supply. Failure to do so could cause personal injury and/or damage to the ErgoArm II and/or Driver.

Do not remove tool from Ergo-Arm II with out first turning off air pressure. Follow the adjustment procedure below any time a tool is changed.

By turning the Regulator adjustment knob clockwise, air pressure is increased to the cylinder allowing the arm to have more resistance and increased weight holding capacity.

By turning the Regulator adjustment knob counter-clockwise, air pressure is decreased allowing the arm to have less resistance and decreased weight holding capacity.

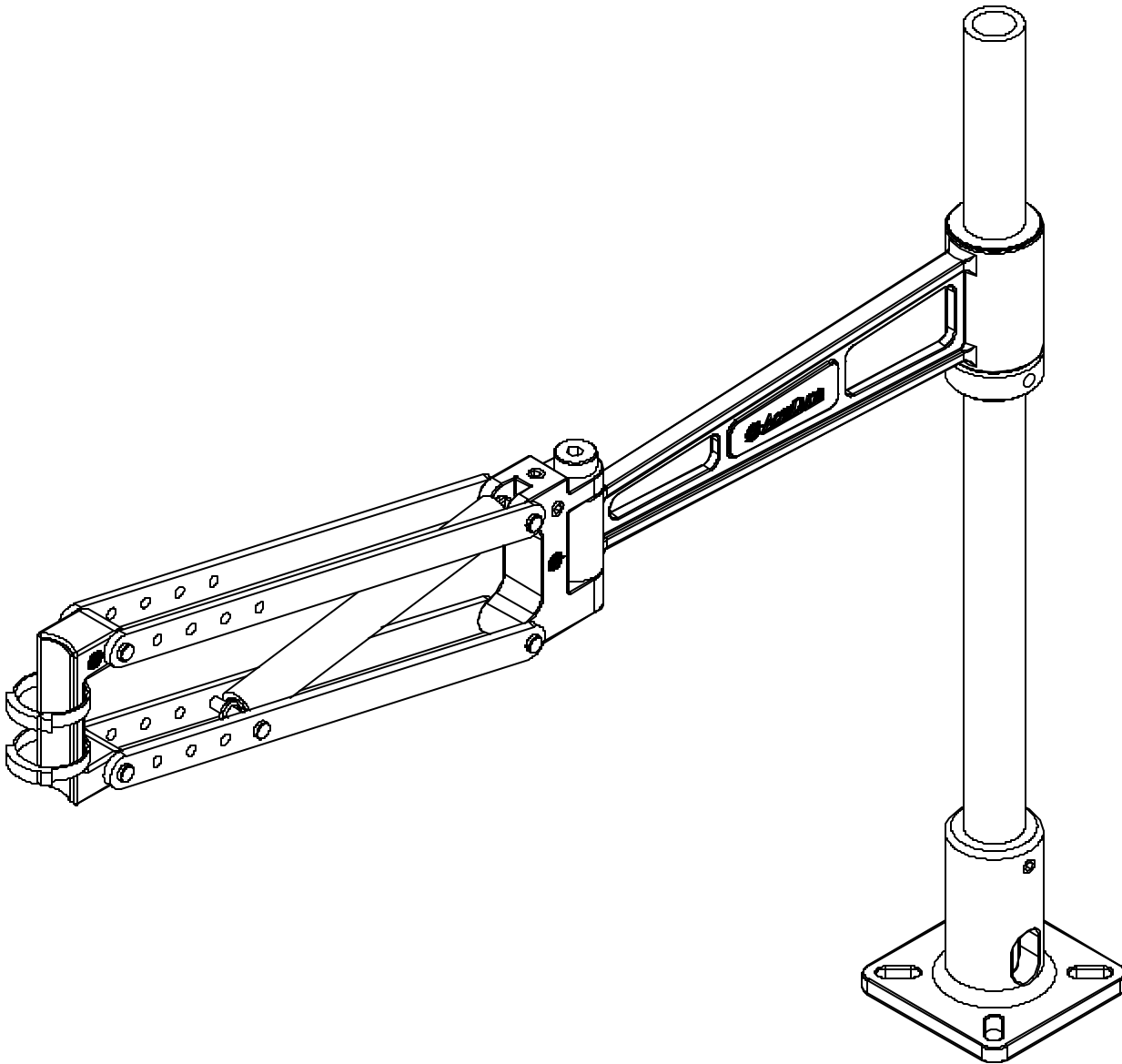
**Your Ergo-Arm is now ready for use.**

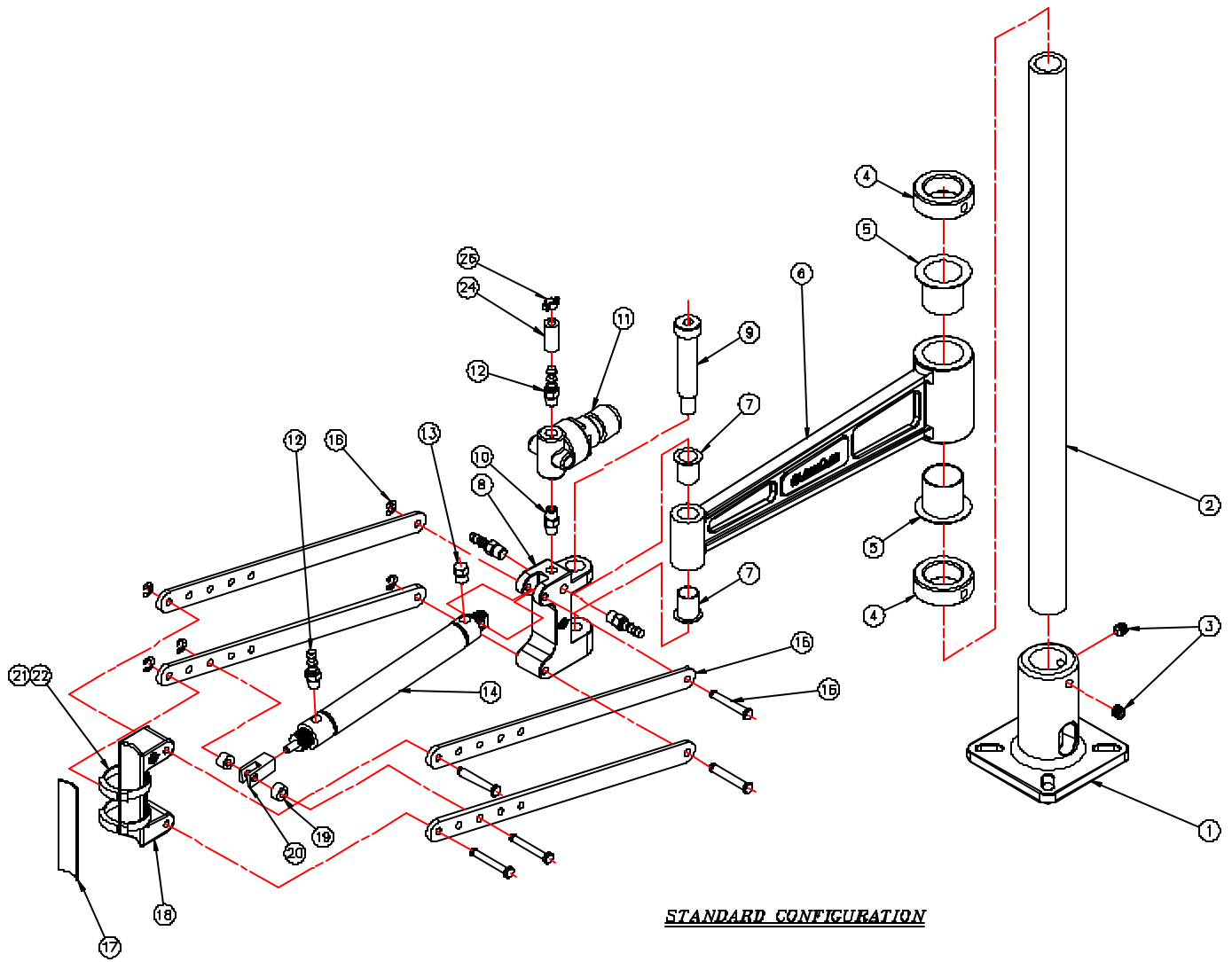




24. Place completed Pivot Arm Assembly onto Arm (item #6). Insert Screw (item # 9) and tighten.
25. Run Tubing through Base up Post and insert onto Hose Barb on desired Side of Pivot Arm.
26. Fasten Tool to Tool Rest using Snap-Grip Clamps. Channel Lock type Pliers will be required for tightening of Clamps.
27. Run Tubing from Tool to remaining Hose Barb. If the application does not require air to the driver [i.e. electric tool], then replace Hose Barb with 1/8" N.P.T. Plug [item #11].

**Your Ergo-Arm is now ready for use.**

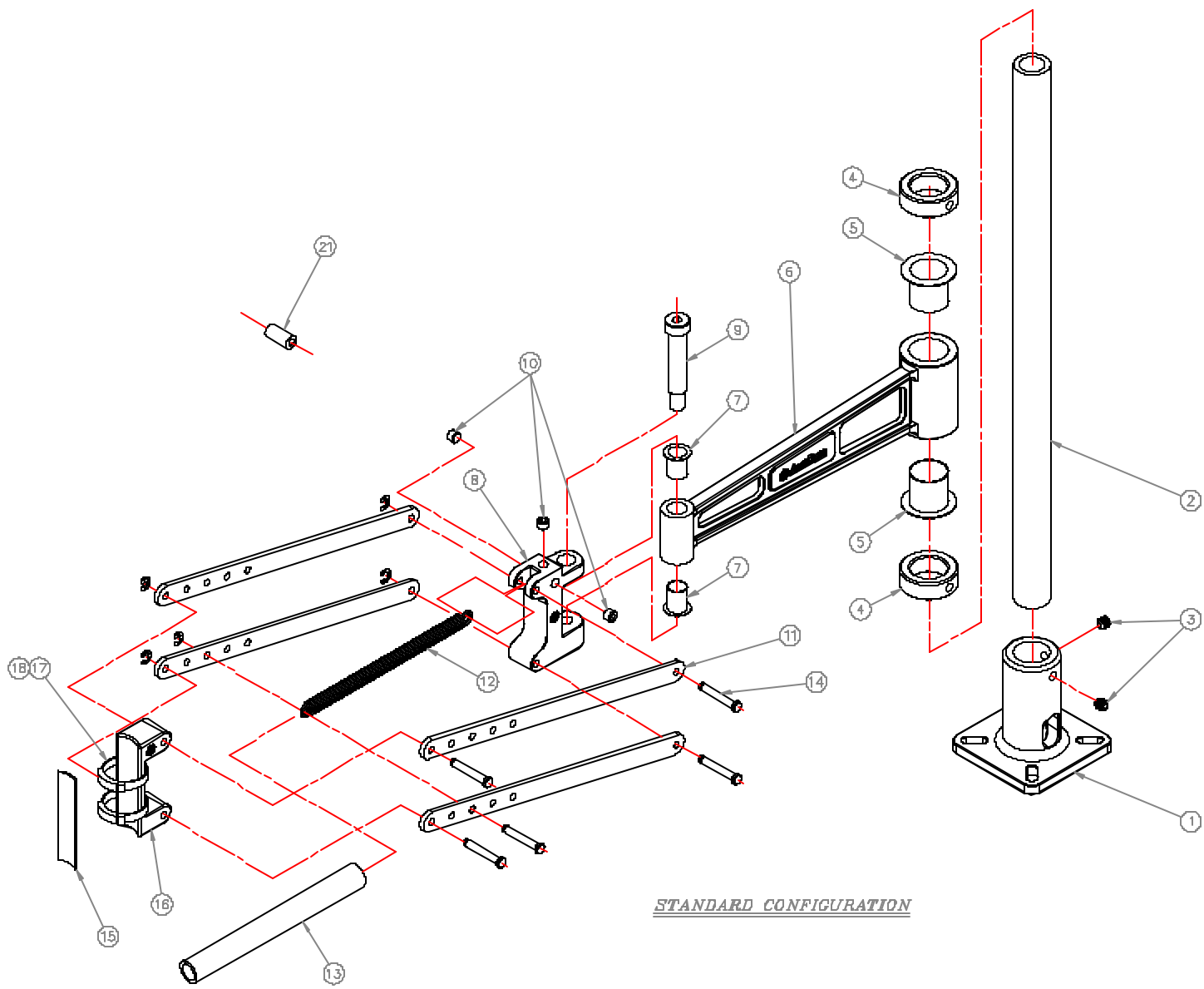




**STANDARD CONFIGURATION**

# AEA-1212-A PNEUMATIC

<b>BILL OF MATERIAL</b>			
<b>QTY</b>	<b>ITEM</b>	<b>PART NO.</b>	<b>DESCRIPTION / MATERIAL</b>
1	1	20251	BASE
1	2	20253	POST
2	3	20252	SCREW
2	4	20254	COLLAR
2	5	20255	BUSHING
1	6	20257	ARM
2	7	20256	BUSHING
1	8	20259	PIVOT ARM
1	9	20258	SCREW
1	10	20271	HEX NIPPLE
1	11	20261	REGULATOR
4	12	20272	HOSE BARB
1	13	20277	VENT
1	14	20262	AIR CYLINDER
4	15	20264	ADJUSTING ARM
5	16	20265	PIN
1	17	20554	RUBBER STRIP
1	18	20267	TOOL REST
3	19	20590	SPACER
1	20	20263	CLEVIS
2	21	20591	SNAP-GRIP CLAMP (LARGE)
2	22	20592	SNAP-GRIP CLAMP (SMALL)
1	23	20555	MANIFOLD
1	24	20287	TUBING
1	25	20286	90 DEG HOSE BARB
5	26	20627	HOSE CLAMP
1	27	20429	PLUG (NOT SHOWN)
1	28	20981	1/8-1/4 NPT ADAPTER (NOT SHOWN)



STANDARD CONFIGURATION

## AEA-1212-M MECHANICAL

QTY	ITEM	PART NO.	DESCRIPTION / MATERIAL
1	1	20251	BASE
1	2	20253	POST
2	3	20252	SCREW
2	4	20254	COLLAR
2	5	20255	BUSHING
1	6	20257	ARM
2	7	20256	BUSHING
1	8	20259	PIVOT ARM
1	9	20258	SCREW
3	10	20429	PLUG
4	11	20264	ADJUSTING ARM
1	12	20430	SPRING
1	13	20629	5/8 I.D. POLYURETHANE TUBING
5	14	20265	PIN
1	15	20554	NEOPRENE RUBBER STRIP
1	16	20267	TOOL REST
2	17	20591	SNAP-GRIP CLAMP (LARGE)
2	18	20592	SNAP-GRIP CLAMP (SMALL)
1	19	20555	MANIFOLD
1	20	20286	90 DEG. HOSE BARB
1	22	20590	SPACER
2	23	20627	HOSE CLAMP
1	24	20590	1/8-1/4 NPT ADAPTER (NOT SHOWN)

# OTHER ACRADYNE PRODUCTS



## Ti-3000 / Ti-2000 series nutrunners

Unmatched speed, performance and precision for controlled fastening applications. Ergonomics is maximized through the use of space age alloys for tool weight reduction, balance and comfort.

State-of-the art electronics, material and craftsmanship produce results that will exceed the expectations of the most demanding application and operator.



## Evolution Series System Controllers

Provide *Real/Time* control of critical torque, torque angle and yield control applications.

Operating from 110 VAC or 220, the controller runs the entire series of pistol, angle, and inline nutrunners.



## AcraJoint joint simulators

Allows for fully adjustable and repeatable joint rate simulation for the testing of continuous drive tools.



## "RT" Rotary Transducers

Can accurately measure the performance of all continuous drive tools and pulse tools.

The Magnetoelastic design utilizes permanent magnets and solid state electronics. With no brushes, slip rings, or strain gauges, the RT Series is extremely durable, trouble free, and accurate.

# **AcraDyne**

A SUBSIDIARY OF **AIMCO**

1204 E Maple Rd.  
Troy, MI 48083  
(248) 583-1180  
Fax (248) 583-7115

Revision 6/02/00

Corporate Headquarters  
10000 S.E. Pine St.  
Portland, OR 97216  
(503) 254-6600  
Fax (503) 255-2615  
www.aimco-global.com

Aramberri 804 Ote  
Monterrey NL CP 64000, Mexico  
52-83-406372  
Fax 52-83-406322