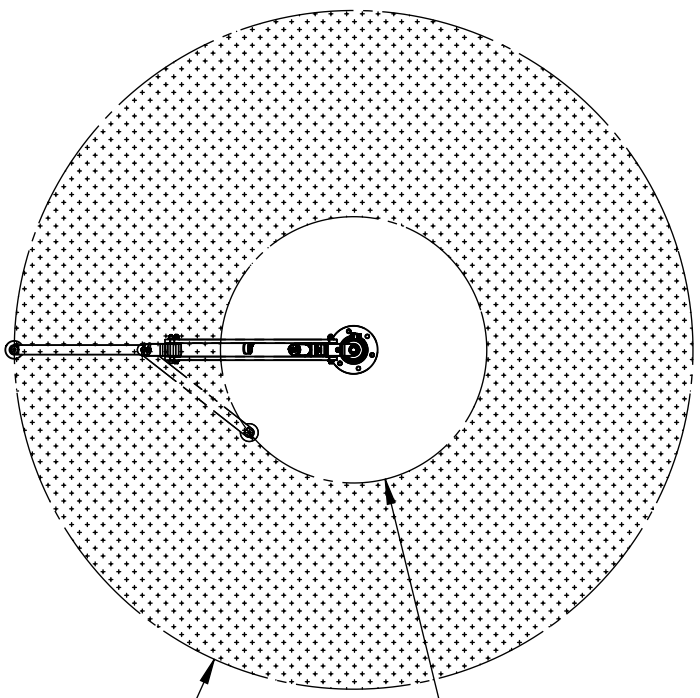

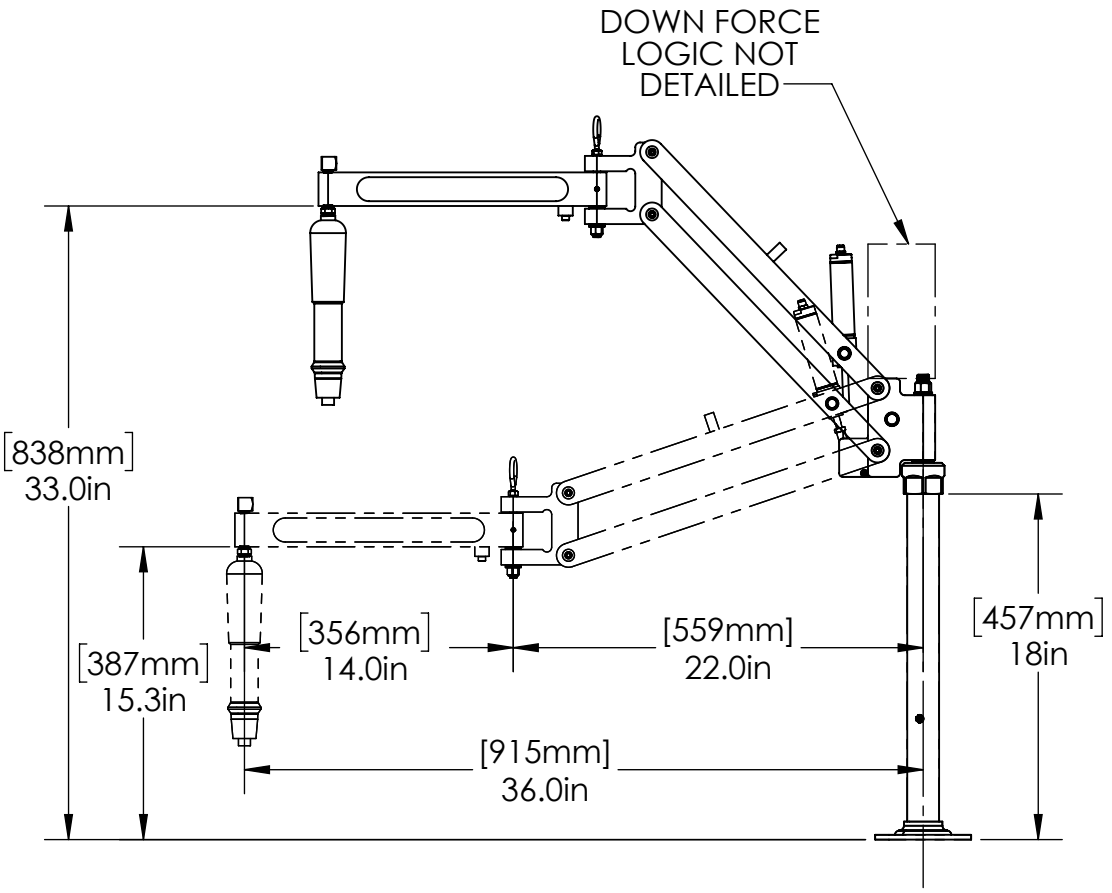

www.toolarms.com

Ergonomic Tool Arms, LLC

MODEL#: PA806-DF
1/4" NPT TOOL CONNECTION INCLUDED
For VERTICAL Fastening with customer's In-line Air Tool. Provides up to 15 Lbs of Downward Force during rundown.
MAX TORQUE: 800 in-lbs (90 N-m)
MAX. TOOLING WEIGHT: 6 LBS (2.7 KG)

For operations that require the assembly personnel to provide downward thrust to successfully drive screws, the ETA arms with DOWN FORCE ASSIST (DF Models) can transform the production process. Sometimes it can be very fatiguing to drive self-threading fasteners, self-drilling screws or fasteners with lock-patches or nylon inserts because it requires so much downward force to keep the driver bit engaged in the head of the screw.

The ETA DF models have Automatic Down Force Assistance to greatly reduce, or eliminate the human operator's need to exert burdensome effort when driving self-threading and self-drilling fasteners. By applying steady and consistent pressure on the driver bit, cam-out of driver at the screw head is virtually eliminated with ETA DF models. Fasteners that previously were difficult to drive can be quickly and efficiently driven with minimal effort and time. These arms prevent repetitive stress injuries associated with operators driving difficult fasteners on a regular basis.

IMPORTANT; IF YOU ARE CONSIDERING PURCHASING ETA DOWN FORCE ASSIST ARMS PLEASE READ ALL OF THE INFORMATION BELOW.

HOW IT WORKS ! On all ETA arm models, the cylinder is used to balance the tool and arm weight so that the tool feels almost weightless whether it is 2 lbs or 12 lbs.

The same is true of DF models, except that during the actual rundown these arms are different than all other ETA arms. With DF models, as soon as the air motor on your tool starts, our FLOW VALVE sends a pneumatic pilot signal to dump the float pressure temporarily and to apply air pressure to the other end of our FLOAT CYLINDER, forcing the arm and the attached air tool downward. This change happens in our 5 WAY CONTROL VALVE. But sometimes it is best for the driver tool to gently start the screw before the down force abruptly applies its force onto the screw driver tool. This also helps when the tooling includes a screw feeder with spring loaded jaws. For this reason, we have a .05 to 3 second ADJUSTABLE DELAY TIMER built into our DOWN FORCE LOGIC CONTROLS. So if you need to get a few turns on the screw to start it before the arm takes over on the thrust, we have that covered with the ADJUSTABLE DELAY TIMER. As soon as the fastener is driven and the tool shuts off, the arm automatically removes the Down Force and returns to the float mode. The float, amount of down force and length of delay (if any) are fully and independently adjustable on the back of the arm.

Because the thrust needed to drive the fastener is supplied by the tool arm and not the human operator, the addition of an add-on tool holder, like our UV-TH, is not advised on DF models. In most cases, mounting the inline air tool on the hardened pipe nipple included with the arm is the best practice. Please consult with your ETA distributor or contact us directly if you have questions about this.

Also because the down force is provided by our Float Cylinder and not the human operator the aluminum arm component flex enough that we do not usually recommend these DF arms for use in drilling operations. The few degrees of deflection during the down force do not negatively affect or influence fastener driving .

We can make these DF models as **Overhead Mount** but it requires certain considerations. Please consult your ETA Distributor or ETA for details.

We also make EL815-DF models for electric drivers needing Down Force Assistance. Due to considerations in control strategies and tool mounting, these EL815-DF models must be specifically engineered by ETA to fit your application. Contact us for more info.

KEEPING YOU SAFE !

Because the down force is actuated by the flow of air to your driver tool, we have to insist on some SAFETY GUIDELINES. First of all, we reserve the right to refuse to sell, through our authorized distributors, any DF model to any end user who plans on disregarding our SAFETY GUIDELINES and states that to us, and/or refuses to provide presale application details when they are asked for by our distributor or ETA personnel. If the guidelines below are followed, our field experience with these DF models proves they are completely safe and enhance the workplace safety by greatly reducing repetitive stress injuries.

SAFETY GUIDELINES FOR ETA DOWN FORCE MODELS.

1) Driver tool must be in contact with work-piece before the tool is triggered. If the tool and the down force are started in mid-air, the arm will come down very fast and very hard. Personal injury and/or damage to the tool arms could result.

2) There must be **TWO DELIBERATE ACTIONS** to start the Down Force. The absolute best way to satisfy this important requirement is to use an Inline Auto-Shut-Off, Adjustable Torque Driver that is "**Lever-Permit Start" .** Another name for this is **"Lever + Push-to-Start ".** This type of driver tool will not start if you just depress the lever. Nor will it start if you just push down on the driver bit. It will only start if you push down on the driver bit and depress the start lever at the same time. A "Lever Permit" tool that works as described above will satisfy the need for **TWO DELIBERATE ACTIONS**. Alternatively, if you have a Push-to-Start Tool or a Lever-Start Tool then you must add a second DELIBERATE ACTION to the controls, to insure the safety of the operator. See the list of options below. Please choose one.

ADD-ON SAFETY OPTIONS for DF MODELS

DF- PD, Foot Pedal – Can be used with either **Push-To-Start or Lever-Start Inline tools** to make the DF models safe. For more information see PD under *Toolarms.com/Accessories* .

DF- PB, Palm Button - Can be used with **Push-To-Start or Lever-Start Inline tools**. . For more information see PB under *Toolarms.com/Accessories* .

3) The end-user should provide DF arms with air supplied through a ***Soft Start Valve*** (also known as a *Pressure Buildup Valve*) to prevent false triggering of the DF logic when air is supplied to the arm at initial start up each day. This typically occurs in plants after air supply lines drain below 70 psi. overnight or even during periods of heavy use during production hours. When air supply is restored, a *Soft Start Valve* will build up the pressure to the arm and tool slowly over a period of seconds instead of a rapid inrush of air. A Soft Start Valve will prevent a rapid inrush of air, eliminating the chance of the ETA FLOW VALVE from being fooled into thinking the tool motor has started. See your ETA distributor or a pneumatic component supplier to purchase a Soft Start Valve.

4) If your air tool requires lubrication it must be introduced downstream (on the tool side) of the airstream. **Air tool oil can cause our DF Control Logic to malfunction due to trapped oil** in a small orifice and or the resultant collection of contaminants attracted to the oil in the tiny logic passageways.