Pneumatic Wire Thread Installation Tool Front End Assembly Instruction Manual

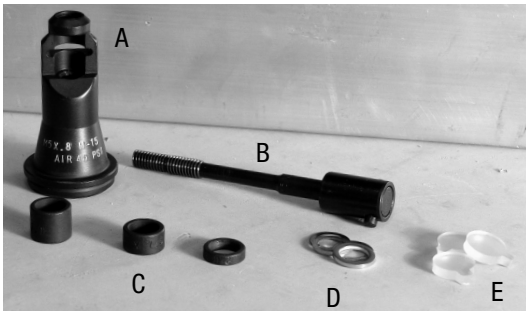
Introduction
This leaflet contains instructions for the correct use of Wire Thread pneumatic installation tool front end assemblies and should be read in its entirety prior to assembly and use.

Front-end assembly
The front-end assembly is used in conjunction with the pneumatic installation tool to aid the installation of Wire Thread Inserts. The front-end assembly winds a mandrel through the insert (1.0D, 1.5D or 2.0D) and through the pre-winder nozzle. When the insert emerges from the nozzle the diameter has been reduced (pre-wound) to facilitate easy entry into the prepared and threaded hole in the parent material. The front-end assembly consists of two main components

- Nozzle
- Mandrel

Check that the front-end assembly pack contains 2 or 3 thickness spacers (to suit different length inserts) and a least 3 shim washers. Wire Thread Inserts should be installed 3/4 to 1-1/2 pitches below the surface of a countersunk hole or 1/4 to 1/2 coil below the surface of a flush hole.

Separate mandrel from nozzle by rotating the mandrel anti-clockwise until the mandrel disengages. You can now assemble the correct combination of spacers and shims (if necessary) between the clutch seat and nozzle.



A Nozzle
B Mandrel
C Thickness spacers
D Shim washers
E Cushions **(for use in the adaptor of an ARO® brand pneumatic tool only)**

Identify the length of the insert to be installed and select spacers to adjust insertion depth eg: for 1.0D inserts select the longest spacer - the longer the insert the shorter the required spacer. Once the spacers (and shims if required) have been positioned on the shaft of the mandrel lubricate the mandrel thread with light machine oil and wind the mandrel through the nozzle. Locate the mandrel pin in the slot of the driving spline (inside the adaptor case) and slide the front end assembly into the case. Tighten the retaining ring (anti-clockwise) finger tight only - over tightening will restrict free movement of the mandrel, possibly resulting in damage. **The mandrel should always be wound through the nozzle so that the threaded section is fully disengaged prior to assembling the tool.**

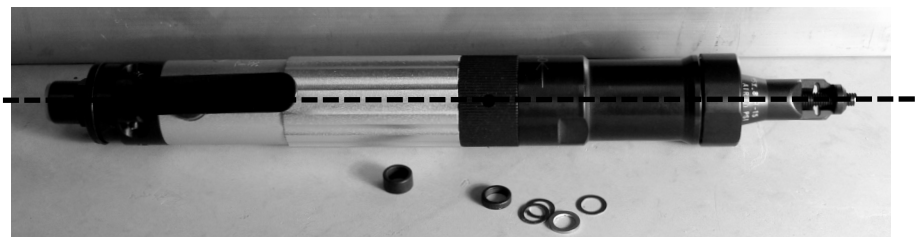
Fine adjustment of insert depth is achieved by adding shim washers (to reduce installation depth) or by removing shim washers (to increase installation depth) until the optimum depth is achieved. Wherever possible the installation depth should be checked and adjusted using a test block rather than by using a production component.


Front end assembly with longest spacer to suit 1.0D insert.


Front end assembly with longest spacer to suit 1.0D insert and shim washer.


Finished front end asembly with mandrel wound through the pre-winder nozzle.


Locate mandrel pin in the slot of the driving spline and slide the front end assembly into the case.


Ensure the front end assembly insert chamber opening is aligned with the trigger of the air motor. Final adjustments may still need to be made (using shim washers) to ensure that the inserts are installed to the optimum depth.

ALWAYS . . .

Ensure the mandrel is wound through the nozzle so that the threaded section is fully disengaged prior to assembling the tool, changing mandrels or adjusting the length.

Handle with care, keep clean and lubricate all moving parts.

It is generally best to initially selected the lowest suggested pressure and increase the pressure in incremental steps until the optimum air pressure is found. Excessive air pressure will shorten tool life.

IMPORTANT . . .

Front end assembly silicone cushions are only for use in the adaptor of an ARO® brand pneumatic tool.

For your safety

- keep clear of the front end assembly during operation to avoid contact with the sharp edge of the mandrel and rotating parts.
- Ensure long hair and loose clothing do not become entangled in moving parts.
- Air tools should not be held in close proximity to to the body or face whilst connected to an air supply.
- Ensure air lines are not a tripping hazard.
- Do not adjust or dismantle tool whilst connected to an air supply.
- Ensure tool is disconnected from the air supply and stored in clean dry conditions when not in use.
- Avoid operator fatigue by ensuring the tool is positioned to minimise stretching or reaching and that operators are seated when using tool for extended periods of time.
- Ensure that the front-end assembly is adjusted and secured to the air motor assembly prior to completing the air circuit.