

TOOL MAINTENANCE

- Installation tools should be periodically inspected for damage or wear. Tools should be kept clean so that foreign objects and debris (chips, oil, and dirt) will not clog the tool, and preventing the drive contour from fully engaging the insert. Operator misuse can contribute to premature wear and/or damage to the mandrel.
- Lubricate the front and rear prewinder assembly threads, the adapter drive sleeve, and key-way with minimal amount of grease for smoother operation and longer tool life.
- Use the lowest torque that will install the insert. This will also prolong the life of the tool.

SAFETY

Always wear eye protection when working with KATO tools.

PARTS REPLACEMENT

Replacement mandrels are available from KATO (see part list below).

FOR ASSISTANCE CONTACT THE KATO TECH GROUP AT

Phone: (757) 873-8980
Email: support@katofastening.com
or, visit us online www.katofastening.com

TO ELIMINATE THE TANG BREAK-OFF PROCESS COMPLETELY
SWITCH TO KATO TANGLESS INSERTS!

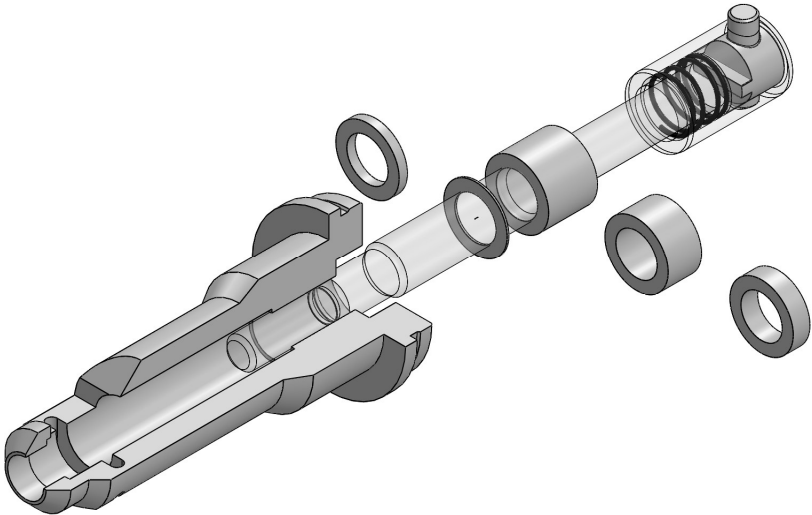


PARTS LIST	
REPLACEMENT PARTS	KATO PART NUMBER
Mandrel Assembly	KPAX-XXM
X-XX Signifies Thread Type & Size Designation. For example, KPAC-04M	

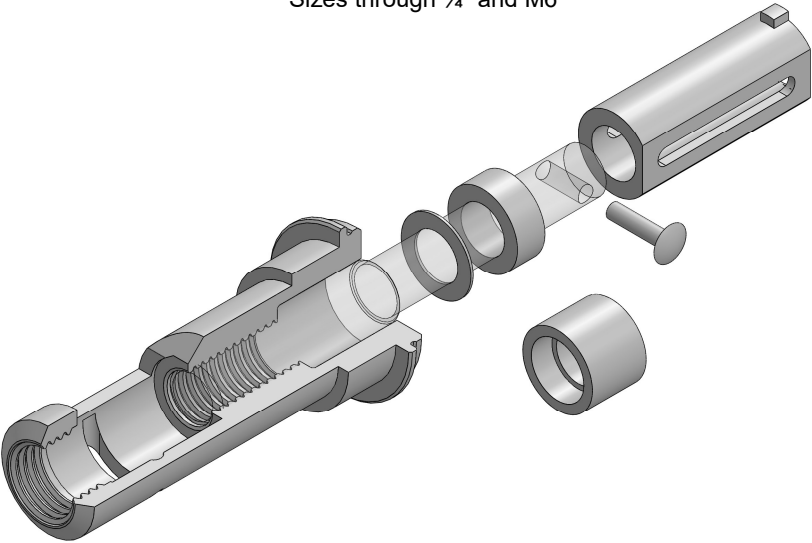


INSTRUCTIONS FOR USING KATO TANGED COILTHREAD® INSERT TOOLS

THE FOLLOWING INSTRUCTIONS ARE APPLICABLE TO THE
KATO TANGED PREWINDER AIR INSTALLATION TOOL (KPA Series)



Sizes through 1/4" and M6



Sizes Above 1/4" and M6

BEFORE YOU BEGIN PLEASE REVIEW:

- Proper hole preparation procedures.
- The Air Motor (CT25017) & Filter-Regulator Lubricator (2KFRL-1) instructions prior to use.
- The KATO Linear Arm (2KLRM-1 w/ 2KLRM-1A) to reduce operator fatigue and injury.

IMPORTANT NOTES

- If you are installing tanged CoilThread inserts sizes 2-56, 4-40, M2.5, or M3, KATO recommends using the torque limiting Clutch Drive (CT9602), see Figure 1.
- A step by step instructional video can be found in the KATOpedia section of the KATO website www.katofastening.com.
- The standard KATO prewinder air tool Front End Assembly (FEA) is designed to install 1D, 1.5D and 2D inserts only. For installing longer inserts (2.5D and 3D), please contact KATO.

REQUIRED COMPONENTS

The KATO Pneumatic Installation System requires:

- CT25017: Air Motor
- Air Motor Adapter: CT9605 for sizes up to 1/4" (M6) and CT9705 for sizes 5/16" to 1/2" (M12)
- 2KFRL-1: KATO Filter-Regulator Lubricator
- KATO Prewinder Air FEA (KPA Series)
- 2KLRM-1: KATO Linear Torque Arm (recommended)
- 2KLRM-1A: Air tool kit for the 2KLRM-1

COMPONENT LIST

The KPA Series Front End Assembly includes the following parts:

- 1 Prewinder
- 1 Mandrel Assembly
- 3 Spacers (1D, 1.5D, 2D) for sizes up through 1/4" and M6; 2 Spacers (1D, 1.5D) for sizes above 1/4" and M6.
- 4 Shims (3 thin shims and 1 thick shim) for sizes up through 1/4" and M6; 3 Shims for sizes above 1/4" and M6
- 3 Plastic Dampening Cushions, (see Figure 1)
- 3 Slide Pins for sizes above 1/4" and M6, (see Figure 1)

DEPTH ADJUSTMENT AND TOOL ASSEMBLY

1. Thread the Mandrel completely out of the Prewinder. Slide the appropriate depth control Spacer over the Mandrel. Use the tallest Spacer for a 1D insert, the medium Spacer for a 1.5D insert, and the shortest Spacer for the 2D insert (for sizes above 1/4" and M6 a 2D spacer is not required).
2. Thread the Mandrel back into the Prewinder body. If needed, Shims of various sizes are included to fine tune the installation depth (3/4 - 1 1/2 threads below the surface for a hole with a countersink; 1/4-1/2 threads below the surface for a hole without a countersink). **Important:** For sizes M6 and M12 the Spacer must be installed from the back of the mandrel (opposite end of threads). This will require removing and reinstalling the Drive Pin for the M6 or Slide Pin for the M12.
Note: Inserts can vary $\pm 1/4$ coil. KATO recommends that the installation depth of each lot be tested using a sample tapped hole prior to installing the inserts into the production part.
3. Slide the Adapter over the Air Motor lining up the Drive Sleeve with the Air Motor's Hex Shaft. Then thread the Adapter onto the Air Motor. Note that the threads on the adapter and the air motor are left hand threads. A good hand tightening is all that's needed.
Note: For size 5/16 and above, the Drive Sleeve cannot be removed from the Adapter. Align the Drive Sleeve with the Hex Shaft. Thread the Adapter on and hand-tighten.
4. Thread the Mandrel through the Prewinder until it disengages from the Prewinder's threads. This is critical to prevent damage to the Mandrel when the Retainer Nut is tightened.
5. Align the Drive Pin on the mandrel with the Key-Way inside the Drive Sleeve (or Clutch drive for smaller sizes) and slide the FEA into the Air Motor Adapter until it bottoms out.
6. Thread the Retainer Nut (left-hand threads) loosely; and rotate the Prewinder so the operator can easily and comfortably load the inserts into the Prewinder. Hand-tighten the Retainer Nut.
7. Connect the Air Motor to a Filter-Regulator Lubricator air supply and set it to the lowest pressure that will install the inserts. **Do not exceed the maximum pressure indicated on the Prewinder Body.** Exceeding the maximum air pressure may damage the Mandrel or shorten the life of the Front-End Assembly.
8. Once the air is connected, the Air Motor will begin to turn counterclockwise. Allow the Mandrel to retract into the Prewinder (it may be necessary to tap the end of the Mandrel to help it begin). Once the Mandrel fully retracts, it will stall the Air Motor. **However, air will continue to flow through the air motor, this is normal.**
9. Slide the plastic strip through the Prewinder slot or load the bulk insert into the well. Be sure to orient the inserts so the Tang will lead the insert into the hole.

INSTALLATION INSTRUCTIONS

1. Hold the tool perpendicular to the STI tapped hole and press the Lever. The Air Motor will rotate the Mandrel clockwise to drive the FEA Mandrel forward, through the insert and into the tapped hole.
2. Depending on the thread size, once the insert is fully installed, the Air Motor either will stall out or continue to spin making a clicking sound.
3. Release the Lever and the Mandrel will automatically begin to retract. Wait until the Mandrel exits the insert before lifting the tool from the hole. If you lift the tool early you may need to tap the mandrel to get it to retract.
4. Verify that the insert is installed to the correct depth (3/4 - 1 1/2 threads below the surface for a hole with a countersink, or 1/4 - 1/2 threads below the surface for a hole without a countersink). Any additional adjustments to the installation depth can be made by adding or removing shims.

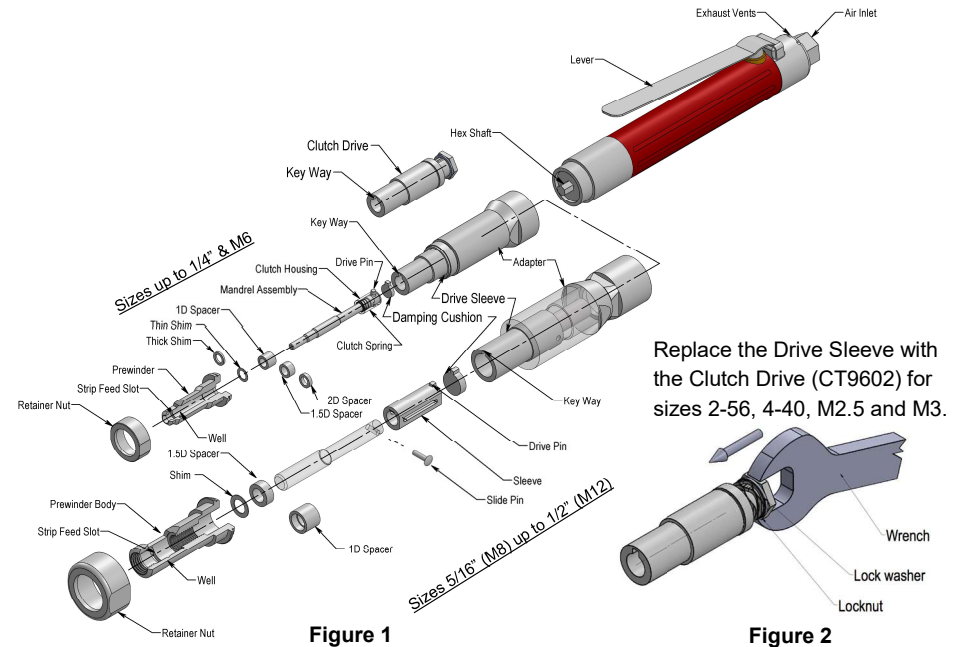
TORQUE ADJUSTMENT INSTRUCTIONS

To set the torque on the Clutch-Drive Assembly, use a 5/8" open end wrench. Push down (in the direction of the arrow) on the washer. Turn the locknut clockwise to increase the torque and counter clock-wise to decrease the torque. Use the minimum amount of torque that will install the inserts.

TANG REMOVAL

In accordance with NASM33537 Section 13.3 "The Tang should be removed from the insert after installation." For easy Tang removal KATO recommends the KTBT series.

TO ELIMINATE THE TANG BREAK-OFF PROCESS COMPLETELY SWITCH TO KATO TANGLESS INSERTS!



Replace the Drive Sleeve with the Clutch Drive (CT9602) for sizes 2-56, 4-40, M2.5 and M3.

TIPS & TRICKS

Having difficulty getting the insert started? Try one or more of these helpful tips:

- Do not apply downward pressure on the tool during installation. Let the weight of the tool rest over the tapped hole.
- Dipping the insert in Alcohol or other non-residual solution will provide lubrication and may help facilitate installation. **USING ALCOHOL ON LOCKING INSERTS WILL CAUSE THE RED DYE TO BLEED.**
- If the mandrel starts to stick inside the drive sleeve, replace the Dampening Cushion.