

## TOOL MAINTENANCE

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

## SAFETY

Always wear eye protection when working with KATO tools.

## PARTS REPLACEMENT

Replacement Pawls, Pawl Kits (which includes one pawl, two pins, and two springs), and Mandrels are available from KATO (see parts list below).

Follow the procedure below to replace a damaged Pawl or Mandrel.

1. Remove Mandrel from the Prewinder.
2. Push out the Pin. Be careful not to lose it.
3. Remove the Pawl from the Mandrel slot.
4. Remove the compression Spring from the Mandrel. Be careful not to lose it.

To Reassemble:

5. Insert the Spring into the Mandrel. The Spring goes into the hole closest to the pin hole.
6. Insert the Pawl into the Mandrel slot.
7. Line up the pin holes (Pawl and Mandrel) and press in the Pin.
8. Check for spring action and free movement of the Pawl in the Mandrel slot.
9. Thread the Mandrel back into the Prewinder.



Via degli Andreani, 9  
40037 Sasso Marconi (BO) ITALY  
Tel +39 051 735744  
info@tecnimetal-tm.com  
www.tecnimetal-tm.com  
www.tecnimetal-tm.eu

## PARTS LIST

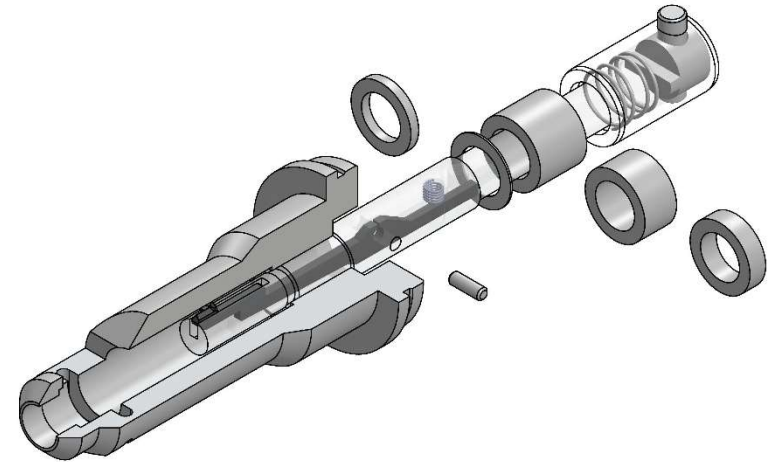
REPLACEMENT PARTS	KATO PART NUMBER
Pawl	2KIPX-XX
Pawl Kit (includes 1 pawl, 2 pins and 2 springs)	2KIPX-XXK
Mandrel Assembly (includes mandrel, pawl, spring and pin)	2KPAX-XXM

X-XX Signifies Thread Type & Size Designation. For example, 2KPAC-04M

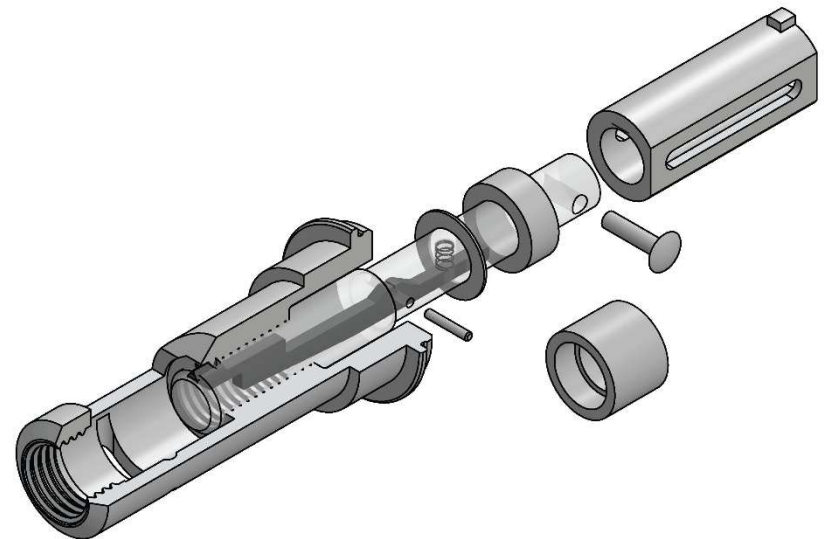
# KATO®

## INSTRUCTIONS FOR USING KATO TANGLESS® COILTHREAD® INSERT TOOLS

THE FOLLOWING INSTRUCTIONS ARE APPLICABLE TO THE  
KATO TANGLESS PREWINDER AIR INSTALLATION TOOL (2KPA 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 Tangless CoilThread inserts sizes 2-56, 4-40, M2.5, or M3, please replace the standard Drive Sleeve with the Clutch Drive (mandatory for these sizes), see Figure 1.
- A step by step instructional video can be found in the KATOpedia section of the KATO website [www.katofastening.com](http://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

### COMPONENTS LIST

The 2KPA Series Front End Assembly includes the following parts:

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

### DEPTH ADJUSTMENT and TOOL ASSEMBLY

1. Remove the FEA Mandrel from the Prewinder by threading it completely out of the Prewinder body. Slide the appropriate depth control Spacer over the Mandrel. Use the tallest Spacer for the 1 Dia. insert, the medium Spacer for the 1.5 Dia. insert and the shortest Spacer for the 2 Dia. insert (for sizes above 1/4" & M6 a 2D spacer is not required, this is not applicable to 1/2").
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, M12, and 1/2", the Spacer must be installed from the opposite side of the threads. This will require removing and reinstalling the Drive Pin for the M6, or Slide Pin for the M12 & 1/2". When installing 1/2-20 x 1D & 1.5D inserts, the use of the 2D Spacer is also required.  
**Note: Inserts can vary ± 0.25 coil. KATO recommends that the installation depth of each lot be tested using a sample test block prior to installing inserts into production parts.**
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 (left-hand threads). Hand-tighten the Adapter.  
**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 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 and out of the exhaust vents.
9. Slide the plastic strip through the Strip Feed Slot or load the bulk insert into the Well. Tangless CoilThread inserts are bi-directional so there is no need to orient the inserts.

### INSTALLATION INSTRUCTIONS

1. Hold the tool perpendicular to the tapped hole and press the Lever. The Air Motor will begin to rotate the Mandrel clockwise, thread into the insert, engage the Drive Notch, continue through the Prewinder and install the insert into the tapped hole. 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.
2. 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.
3. 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; 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.

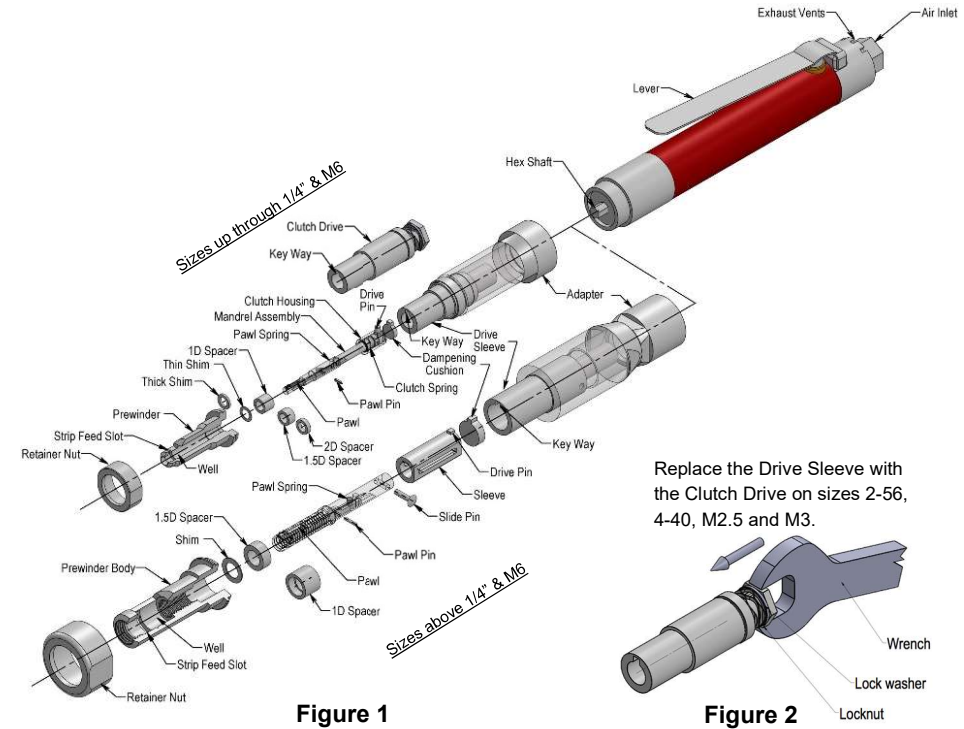


Figure 1

Replace the Drive Sleeve with the Clutch Drive on sizes 2-56, 4-40, M2.5 and M3.

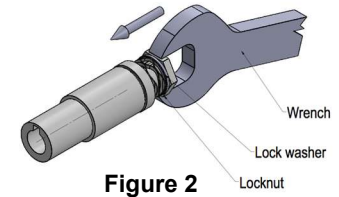


Figure 2

### 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 clockwise to decrease the torque. Use the minimum amount of torque that will install the inserts.

### 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.