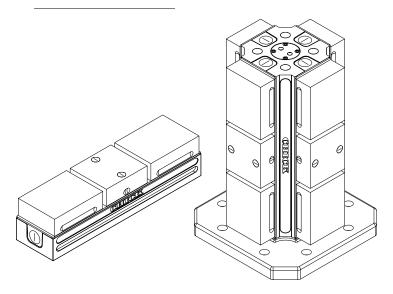


System 5 USER GUIDE

# Using Your CHICK Workholding Systems

VMC and HMC Models



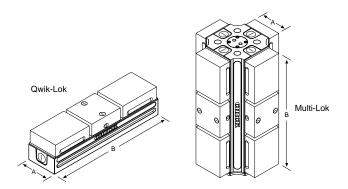


# **System Size**

How to determine the System Size of your Workholding System.

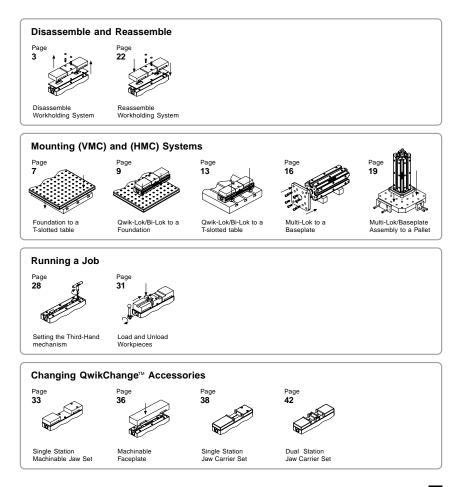
Throughout this manual we will list torque information according to System size. Refer to the chart below to determine your Workholding System's System size.

System Size	System Size A = B	
0520	50mm (2")	200mm (8")
0525	50mm (2")	250mm (10")
1030	100mm (4")	300mm (12")
1040	100mm (4")	400mm (16")
1540	150mm (6")	400mm (16")
1550	150mm (6")	500mm (20")



# User Guide

# **Table of Contents**



# How To...

#### Disassemble Your CHICK Workholding System

Why Disassemble your CHICK Workholding System?

There are four reasons to disassemble a Workholding System.

#### • Components

Disassembling gives you an opportunity to become familiar with the various components of your Chick Workholding System.

Mounting

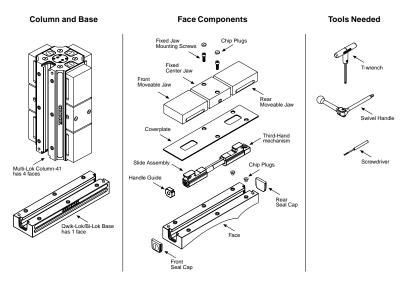
When mounting your Qwik-Lok, Bi-Lok, or Multi-Lok System to a Foundation, Nested Subplate, or baseplate, the system must be disassembled to reach the mounting holes.

• Third-Hand

To set the Third-Hand mechanism to hold your workpieces effectively, you must partially disassemble the Workholding System.

• Maintenance

Periodic cleaning and maintenance requires the Workholding System to be disassembled.







# How To...

#### Disassemble Your CHICK Workholding System

When working with a Qwik-Lok System, simply complete the following steps.

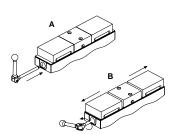
When working with a Multi-Lok System, you can perform all of the following steps on one face, then move to the next face, and so on; or you can perform **STEP 1** on every face, then perform **STEP 2** on every face, and so on.

Chick further recommends that you periodically disassemble and clean the workholding system to ensure optimum performance.

# STEP 1

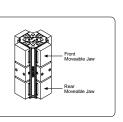
#### **Open the MOVEABLE JAWS**

- A. Insert the Swivel Handle through the slit in the Swivel Handle front Seal Cap until it engages the female hex of the Slide Assembly.
- B. Rotate the Swivel Handle counterclockwise. The Moveable Jaws open. Continue turning the Swivel Handle until both Moveable Jaws have opened to a clearance of at least 5mm (3/16").



IMPORTANT NOTE: For both the Qwik-Lok and the Multi-Lok Systems, the Moveable Jaw located closest to the Swivel Handle is referred to as the front Moveable Jaw, and the Moveable Jaw located farthest from the Swivel Handle is referred to as the rear Moveable Jaw.





#### System (5)

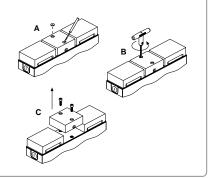
# How To...

#### Disassemble Your CHICK Workholding System

# STEP 2

#### Remove the FIXED CENTER JAW

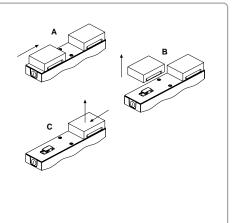
- A. Remove the red Chip Plugs covering the Mounting Screws.
- B. Insert the T-wrench into the head of the Fixed Jaw Mounting Screws and turn counterclockwise loosening each screw evenly until the screws clear the Workholding System.
- C. Lift the Fixed Center Jaw upwards to remove it from the Workholding System.



# STEP 3

#### Remove the MOVEABLE JAWS

- A. With the palm of your hand, push the first Moveable Jaw inward. The jaw will disengage from the Jaw Tower.
- B. Lift upwards on the disengaged Moveable Jaw to remove it from the Jaw Tower.
- C. Repeat steps a) and b) to remove the remaining Moveable Jaw.



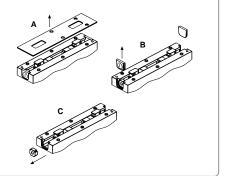
# How To...

#### Disassemble Your CHICK Workholding System

# STEP 4

# Remove the COVERPLATE, SEAL CAPS and HANDLE GUIDE

- A. Lift the Coverplate upwards to remove it from the Workholding System.
- IMPORTANT NOTE: If the front or rear surface of either Jaw Tower is in contact with the Coverplate, adjust the Slide Assembly with the Swivel Handle until the Jaw Tower clears the edge of the Coverplate.
- B. With the **Coverplate** removed, slide both the front and rear **Seal Caps** upwards until they are free of the system.
- C. Slide the Handle Guide out until it is free of the system.

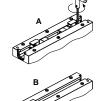


# STEP 5

#### Remove the SLIDE ASSEMBLY

- A. Insert the T-wrench into the head of the Third-Hand Screw, and turn counterclockwise just until the Slide Assembly is free floating.
- INPORTANT NOTE: The Third-Hand Screw provides resistance to the Slide Assembly by placing pressure against the Workholding System. To free the Slide Assembly, you DO NOT need to remove the screw completely.
- B. With the Third-Hand Screw loosened, slide the Slide Assembly out of the Workholding System from either end.

Your Chick Workholding System is now fully disassembled and ready to be mounted or cleaned!





For steps detailing how to mount your Qwik-Lok to a Foundation, see pages 9-12. For steps detailing how to mount your Multi-Lok to a Baseplate, see pages 16-18.

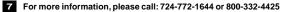


# How To...

# Mount a Foundation to a T-Slotted Table (VMC)

# STEP 1

# Herear enderine table for mounting A. Prepare the machine table surface by cleaning the T-slots, and by removing any high spots with a sharpening stone. Apply a thin film of grease (Lithium grease) to the table. B. Remove the Foundation from the crate. C. When mounting to a tapped hole pallet move on to step 2. When mounting to a T-slotted table, utilize a tape measure and position the F-nuts should be within 1.27mm (1/2") of proper location.



#### System (5)

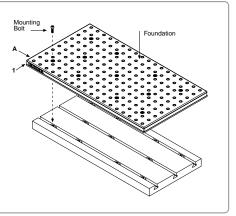
# How To...

# Mount a Foundation to a T-Slotted Table (VMC)

#### STEP 2

# Mounting the FOUNDATION to the machine

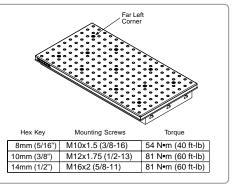
- A. Unless otherwise specified, position the plate in the center of the table. Make sure A and 1 on the Foundation is in the front left corner of the machine.
- NOTE: The Y-axis is determined by the location of where the bolts meet the T-nuts.
- B. Thread (Do Not Tighten!) the included bolts into the T-nuts to ensure proper alignment.



# STEP 3

#### Indicating the FOUNDATION

- A. Snug the bolt in the far left-hand corner.
- B. Using a dial indicator, indicate the grid pattern square to the machine axes. Reference the centers of two bushed holes at both extremes along the X-axis.
   (Do not reference the edges of the plate)
- **C**. Tighten all of the bolts incrementally to the corresponding torque.



#### User Guide

# How To...

# Mount a Qwik-Lok/Bi-Lok to a Foundation (VMC)

Easily mount your **Qwik-Lok** or **Bi-Lok** to a Foundation using the provided **Mounting Screws**.



Size 0520 - 0525 M8-1.25x25 1030 - 1040 M12-1.75x35 1540 - 1550 M12-1.75x70

System

See page 1 to determine your system size.

You will also need an additional Round and Diamond Pin Set (*MPIN12S*) for each system.

ATTENTION: When mounting a 50mm Qwik-Lok, an Adaptor (081-0900) is also required.

To order either of the above accessories, contact Chick.



# STEP 1

Access the MOUNTING HOLES of your WORKHOLDING SYSTEM

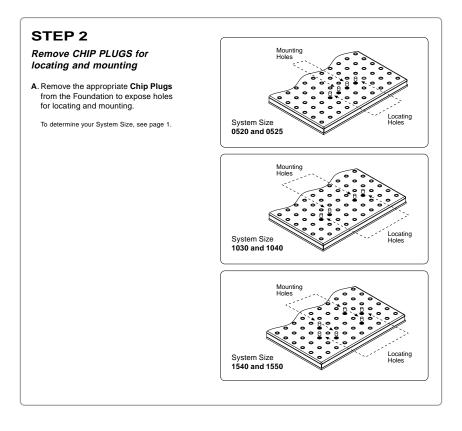
- A. Disassemble your Workholding System to access the Mounting Holes.
- IMPORTANT NOTE: Workholding Systems must be completely disassembled (see pages 3-6).



#### System (5)

# How To...

Mount a Qwik-Lok/Bi-Lok to a Foundation (VMC)



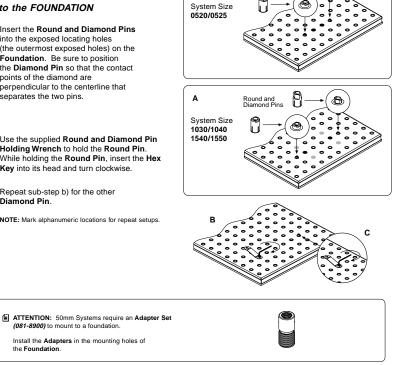
# How To...

Mount a Qwik-Lok/Bi-Lok to a Foundation (VMC)

#### STEP 3

#### Insert the Round and Diamond Pins into the FOUNDATION

- A. Insert the Round and Diamond Pins into the exposed locating holes (the outermost exposed holes) on the Foundation. Be sure to position the Diamond Pin so that the contact points of the diamond are perpendicular to the centerline that separates the two pins.
- B. Use the supplied Round and Diamond Pin Holding Wrench to hold the Round Pin. While holding the Round Pin, insert the Hex Key into its head and turn clockwise.
- C. Repeat sub-step b) for the other Diamond Pin.
- NOTE: Mark alphanumeric locations for repeat setups.



А

Round and Diamond Pins

# How To...

#### Mount a Qwik-Lok/Bi-Lok to a Foundation (VMC)

#### STEP 4

#### Mount the BASE to the FOUNDATION

- A. Inspect the underside of the Workholding System and the top of the Foundations mounting surface to ensure surfaces are free of chips, burs and debris.
- B. Looking through the Base, align the Mounting Holes of the Base with the Foundation's mounting holes. Carefully place the Base onto the Round and Diamond Pins and Mounting Adaptors when applicable.
- IMPORTANT NOTE: Dragging the Base across the Round and Diamond Pins or Mounting Adaptors may damage the Base or lessen the accuracy of the locating surfaces.
- C. Insert the Mounting Screws through the Base and into the exposed Foundation mounting holes. Use the appropriate hex key to evenly tighten the Mounting Screws to the following specifications:

#### **Recommended Torque Settings**

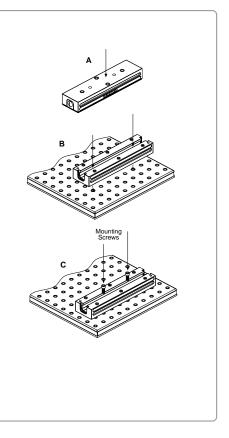
Use supplied swivel handle and screws. Torque System Torque

Size	(N•m)	(ft-lb)
0520 - 0525	27	20
1030 - 1040	81	60
1540 - 1550	81	60

See page 1 to determine your system size.

#### Your Workholding System is now mounted and ready to be reassembled!

For reassembly instructions, see pages 22-27.





# How To...

# Mount a Qwik-Lok/Bi-Lok to a T-Slotted Table (VMC)

Mount a Qwik-Lok/Bi-Lok directly to a T-slotted surface using a **005-0254** Toe Clamp Set.

For more information, contact Chick.



SYSTEM (5)

You will also need M12 or 1/2-13 socket-head cap screws, T-nuts, and a dial indicator to secure and square your System to the table.

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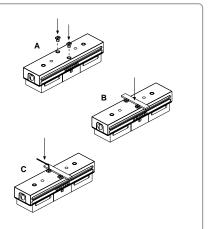
# How To...

# Mount a Qwik-Lok/Bi-Lok to a T-Slotted Table (VMC)

# STEP 2

#### Insert and Square the LOCATING KEYS

- IMPORTANT NOTE: While it is possible to align your Qwik-Lok System to a T-slotted table without Locating Keys, Chick highly recommends using them to ensure accurate locating. If choosing NOT to use Locating Keys, skip to STEP 3.
- A. Insert the Locating Keys into the Locating Holes on the bottom of the System.
- B. Slide a parallel against corresponding sides of both Locating Keys to square them to the System.
- C. Use a hex key to tighten the Locating Keys. To ensure even tightening, tighten both keys until they are almost secure. Return to the first key and tighten until it is completely secure, then tighten the remaining key until it is completely secure.



# STEP 3

#### Position the SYSTEM on the T-Slotted Table

- A. If Locating Keys are in use, slide the keys into the T-slots on the table. If Locating Keys are not in use, position the System onto the T-Slotted table so that it is perpendicular to the channels.
- B. Place Toe Clamps into the channels of the T-slotted table and snug the Toe Clamps into the Toe Clamp Rails on both ends and both sides of the System.

B Toe Clamps T-Nut

For best results, mount Toe Clamps as close as possible to the through mounting holes on the base.

For more information, please call: 724-772-1644 or 800-332-4425 14

#### SYSTEM (5)

#### SYSTEM (5)

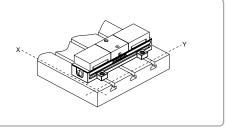
# How To...

Mount a Qwik-Lok/Bi-Lok to a T-Slotted Table (VMC)

#### STEP 4

Align the SYSTEM on the T-Slotted Table

- A. Use a dial indicator to square the Workholding System to the machine axis.
- IMPORTANT NOTE: Always indicate along the Base of the System; DO NOT reference from the Jaws or Coverplate.



# STEP 5

#### Secure the SYSTEM to the T-Slotted Table

A. Using a T-nut and socket-head cap screw, tighten the **Toe Clamps**.

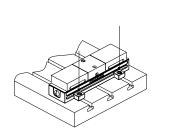
To ensure even tightening, tighten all **Toe Clamps** until almost secure. Tighten clamps on opposing corners of the **System** one half-turn of the hex wrench, then tighten the remaining two **Toe Clamps**. Continue tightening the **Toe Clamps** in this manner until they are completely secure.

B. Using the appropriate hex key, T-nut and socket-head cap screw, tighten the **Toe Clamps**.

#### **Recommended Torque Settings**

System Size	Torque (N•m)	Torque (ft-lb)
0520 - 0525	27	20
1030 - 1040	81	60
1540 - 1550	81	60

See page 1 to determine your system size.





# How To...

# Mount a Baseplate to a Multi-Lok (HMC)

#### Most Multi-Loks require mounting to a Baseplate before they can be securely attached to a Pallet.

Chick's standard Center Locating Baseplate mounts on JIS or DIN standard pallets. Center Locating Baseplates utilize the center hole of the pallet to center the Multi-Lok Column on the pallet.

#### Center Locating Baseplates are shipped with the following equipment:

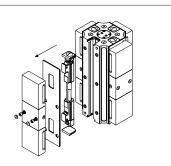


If your pallet does not have a center hole, or the center hole is not Ø 50mm, the Center Locating Baseplate will securely hold your Multi-Lok to the pallet, but will not accurately locate your Multi-Lok System. Chick recommends ordering a Custom Baseplate if your pallet does not have a Ø 50mm center hole. Custom Baseplates are designed to meet your specifications and accurately align your Multi-Lok System. To order a Custom Baseplate, contact Chick. Custom Baseplates are shipped with separate installation instructions.

# STEP 1

Disassemble each FACE of your WORKHOLDING SYSTEM

- A. Remove all Jaws, Coverplates, and Slide Assemblies from each System on the Multi-Lok Column (see pages 3-6).
- IMPORTANT NOTE: If your Multi-Lok Workholding System is attached to a baseplate, skip to How To Mount to a Pallet on pages 19-21.



#### User Guide

# How To...

Mount a Baseplate to a Multi-Lok (HMC)

# STEP 2

#### Secure the COLUMN

- A. Lay the stripped Multi-Lok Column on its side with the top of the column (the end with the engraved serial number) facing away from you. Chick recommends laying the Column on to parallels to avoid damage to high points such as the Coverplate Guides.
- IMPORTANT NOTE: Do not lay the Column on Coverplate Guide Pins.

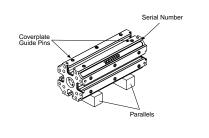
# STEP 3

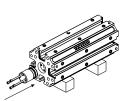
Attach the COLUMN PILOT PLUG to the COLUMN

- A. Insert the Column Pilot Plug into the Column Pilot Plug Hole located on the bottom of the column.
- B. Using a 5mm hex key, tighten the Column Pilot Plug to the Column. Tighten the Column Pilot Plug Mounting screws until hand tight. To draw the Pilot Plug into the Column evenly, continue tightening opposite screws one half-turn at a time until completely secure.

**Recommended Torque Settings** 14 N•m (10 ft-lb)

IMPORTANT NOTE: If you are using a Center Locating Baseplate to secure your Multi-Lok Column to a pallet without a center locating hole, you may skip this step. To ensure accurate locating, you may wish to contact Chick for information about ordering a custom baseplate.





#### User Guide

# How To...

Mount a Baseplate to a Multi-Lok (HMC)

# STEP 4

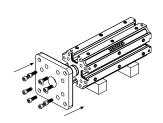
# Attach the COLUMN to the CENTER LOCATING BASEPLATE

- A. Slide the center hole of the Baseplate over the Column Pilot Plug.
- B. Visually square the Column to the Baseplate.
- C. Align the mounting holes on the **Baseplate** with the mounting holes on the **Column**.
- D. Insert the Mounting Screws through the Baseplate and into the Column.
- E. Tighten the Mounting Screws until hand tight.
- CAUTIONI: To avoid damaging the Baseplate or Column, do NOT tighten the screws in a circular pattern around the baseplate. Use a star pattern similar to the pattern used to change a tire. Slightly tighten opposite screws, then move to the screw farthest from the last screw tightened, then to the screw opposite from that one. Continue in this pattern until all screws have been tightened slightly. Repeat this pattern until all the screws are tightened with the proper torque.
- F. Using a 10mm hex key, continue tightening the Mounting Screws in a star pattern.

Recommended Torque Settings 81 N•m (60 ft-lb)

Your Multi-Lok Column is now secured to the baseplate and ready to be mounted to a pallet!

See pages 19-21 for pallet mounting instructions.





# How To...

# Mount a Multi-Lok/Baseplate Assembly to a Pallet (HMC)

Most Multi-Loks require mounting to a Baseplate before they can be securely attached to a Pallet.

After your Multi-Lok Column is secured to a Baseplate, it is easily mounted to a pallet using the included Baseplate mounting screws.

Four or Six Baseplate Mounting Screws M12-1.75X35 (1/2-13) M16-2x35 (5/8-11)

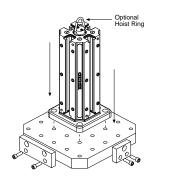


NOTE: Length of screws may vary depending on thickness of the Baseplate.

# STEP 1

Place the COLUMN/BASEPLATE ASSEMBLY on the Pallet

- A. With the **Baseplate** attached to the **Column** (see pages 16-18), align the **Pilot Plug** with the center hole of the pallet.
- B. Place the Column/Baseplate Assembly on the pallet making sure the Pilot Plug enters the center hole of the pallet.
- C. Align the Pallet Mounting Holes on the Baseplate with the proper mounting holes on the pallet.



SUGGESTION: If you handle your Multi-Lok often, Chick recommends purchasing an optional (027-0600) Hoist Ring.

The ring mounts to the end hub and provides an easy means of attaching the Multi-Lok Column to a hoist or crane.

To order a Hoist Ring, contact Chick.



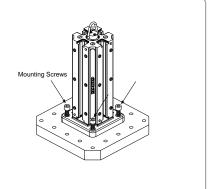
# How To...

Mount a Multi-Lok/Baseplate Assembly to a Pallet (HMC)

# **STEP 2**

Attach the COLUMN/BASEPLATE ASSEMBLY to the Pallet

- A. Insert the appropriate Mounting Screws for your pallet through the Pallet Mounting Holes on the Baseplate and into the pallet.
- B. Lightly tighten the **Pallet Mounting Screws** with the appropriate hex key. There is 0.1mm (.004") of clearance between the **Pilot Plug** and the center hole of the pallet to allow for alignment.

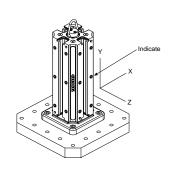


System(5)

# STEP 3

#### Align the COLUMN/BASEPLATE ASSEMBLY

A. Use a dial indicator to align the Column so that it is centered to the pallet and aligned with the machine's axis. Indicate along center fixed jaw position.



# How To...

# Mount a Multi-Lok/Baseplate Assembly to a Pallet (HMC)

# STEP 4

#### Secure the COLUMN/BASEPLATE ASSEMBLY to the Pallet

A. With the Column properly aligned, finish tightening the Pallet Mounting Screws.

To ensure even tightening, turn opposite screws one half-turn until the proper torque is achieved.

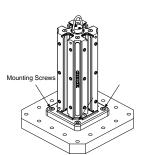
Using the appropriate hex key, tighten the Baseplate mounting screws to the corresponding torque listed below.

	Hex Key	Mounting Screws	Torque
ſ	10mm (3/8")	M12-1.75x35 (1/2-13)	81 N•m (60 ft-lb)
ſ	14mm (1/2")	M16-2x35 (5/8-11)	102 N•m (75 ft-lb)

B. Recheck the alignment of the Column/ Baseplate Assembly.

Your Multi-Lok System is now mounted and ready for reassembly!

For more information on reassembling each System, see pages 22-27.



# How To...

#### Reassemble Your CHICK Workholding System

When do you Reassemble your CHICK Workholding System?

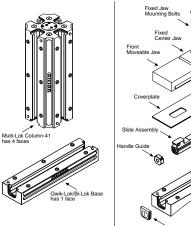
You will need to reassemble your Workholding System after...

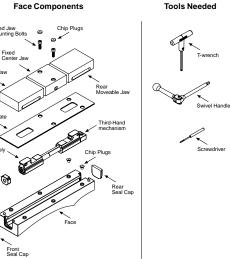
Components

Disassembling to become familiar with the individual components.

- Mounting Your Workholding System (Qwik-Lok, Bi-Lok or Multi-Lok) has been mounted.
- Third-Hand Setting the Third-Hand mechanism to hold your workpieces.
- Maintenance Disassembling for routine maintenance and cleaning.

#### Column and Base







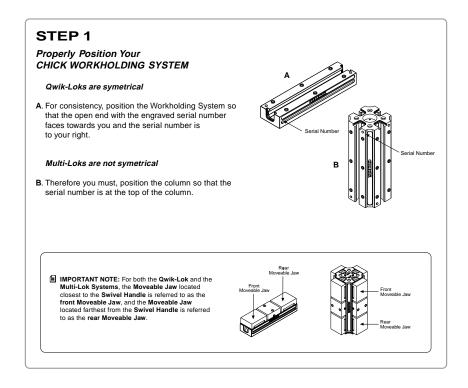


# How To...

#### Reassemble Your CHICK Workholding System

When working with a Qwik-Lok System, simply complete the following steps.

When working with a Multi-Lok System, you can perform all of the following steps on one face, then move to the next face, and so on; or you can perform **STEP 1** on every face, then perform **STEP 2** on every face, and so on.



# How To...

#### Reassemble Your CHICK Workholding System

# STEP 2

#### Insert the SLIDE ASSEMBLY

- A. Lightly grease both sides of the Slide Assembly's two rails and the face's slide channel with lithium grease.
- B. Position the Slide Assembly in the base or columns slide channel so that the female hex faces towards the front of the Workholding System and the Third-Hand Block Assembly is towards the rear of the Workholding System
- C. Slide the Slide Assembly into the Workholding System until the back of the rear Jaw Tower is even with the front of the rear Locating Holes.
- D. Using the T-wrench, tighten the Third-Hand Screw.

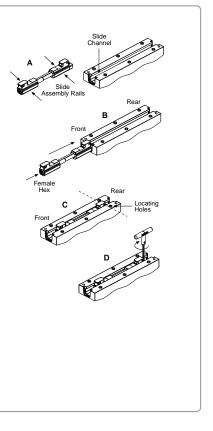
#### **Recommended Torque Settings**

Use supplied T-wrench and Third-Hand screw.

System Size	Torque (N•m)	Torque (ft-lb)
0520 - 0525	4	3
1030 - 1040	8	6
1540 - 1550	14	10

See page 1 to determine your system size.

- CAUTIONI: Do not use any tool other than the provided T-wrench to tighten the Third-Hand Screw.
- CAUTION: The Third-Hand Screw is NOT meant to fix the Third-Hand mechanism in the channel, only to provide resistance. To avoid damaging the Third-Hand mechanism, do not overtighten the Third-Hand Screw. Proper torque is achieved by tightening with the Twerench until finger tight.



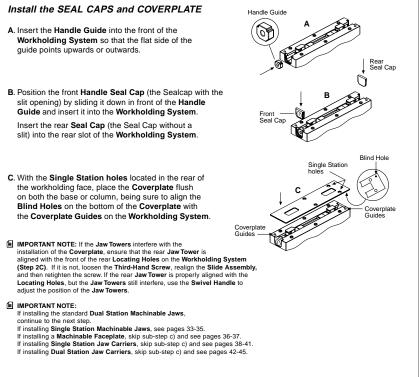
#### System (5)

#### User Guide

# How To...

#### Reassemble Your CHICK Workholding System

# STEP 3



#### User Guide

# How To...

#### Reassemble Your Workholding System

# **STEP 4**

#### Install the FIXED CENTER JAW

- IMPORTANT NOTE: If necessary, remove the red Chip Plugs from the Center Locating Holes of the Workholding System and place them in two of the Single Station Locating Holes at the rear of the Workholding System.
- A.Position the Fixed Center Jaw so that the Locating Bosses on the bottom of the jaw enter the Center Locating Holes on the Workholding System.
- B. Insert the Fixed Jaw Mounting Screws through the top of the Fixed Center Jaw and into the Center Locating Holes.
- C. Using the T-wrench, loosely secure the Mounting Screws. Continue to tighten the screws evenly by finger tightening each bolt one half-turn of the T-wrench, until the Fixed Center Jaw is flush with and secured to the base or column.

#### **Recommended Torque Settings**

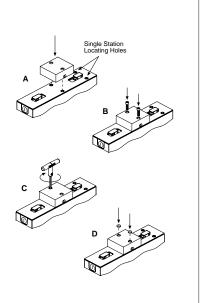
Use supplied T-wrench and Fixed Jaw Mounting screws.

System Size	Torque (N•m)	Torque (ft-lb)
0520 - 0525	7	5
1030 - 1040	14	10
1540 - 1550	20	15

See page 1 to determine your system size.

D. Install the Chip Plugs over the Mounting Screws.

The Fixed Center Jaw is now sealed.



#### User Guide

# How To...

#### Reassemble Your Workholding System

# STEP 5

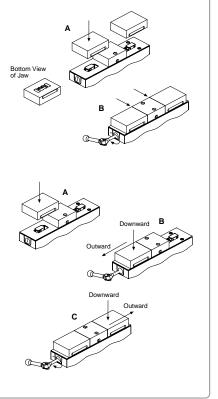
#### Install the MOVEABLE JAWS

#### **Common Method**

- A. Align the Jaw Pockets on the underside of both Moveable Jaws over the Jaw Towers.
- B. Use the Swivel Handle to close the system completely. You will hear a distinct popping noise as each Moveable Jaw secures to the Jaw Tower.
- CAUTION! : If you do not hear two distinct popping noises, open and then fully close the system a second time to ensure that both jaws are firmly secured to the Jaw Towers.

#### Alternate Method

- A. Align the Jaw Pocket on the underside of the front Moveable Jaw over the front Jaw Tower.
- B. With a downward and outward pressure, firmly pull the Moveable Jaw outwards until it engages with the Jaw Tower. You will feel the Moveable Jaw fully engage the Jaw Tower and hear a popping noise indicating that the Moveable Jaw is secured to the Jaw Tower.
- WARNINGI : DO NOT jerk the Moveable Jaw or pull it outwards without also maintaining a downward pressure. Doing so could result in the Moveable Jaw disengaging from the Workholding System entirely in a manner that could result in injury.
- C. Repeat steps a) and b) to install the rear Moveable Jaw.
- IMPORTANT NOTE: If the jaws are machined, be sure they are properly paired and oriented.





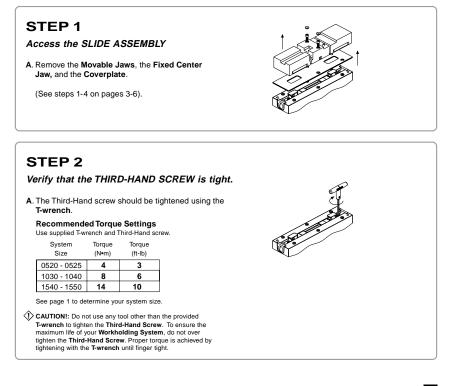
# How To...

#### Set the Third-Hand mechanism

#### What is the Third-Hand mechanism?

The Third-Hand mechanism allows an operator to change 2 workpieces independently with less than a half turn of the swivel handle.

Setting the Third-Hand mechanism saves time and reduces repetitive movements.



System (5)

# User Guide

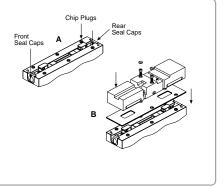
# How To...

#### Set the Third-Hand mechanism

# STEP 3

#### Reassemble the WORKHOLDING SYSTEM

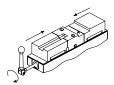
- A. Ensure all Seal Caps and Chip Plugs are in place to seal the system completely.
- B. Reassemble the system. For detailed instructions, see step 3-5 of Reassembling on pages 22-27.



# STEP 4

#### Close the MOVEABLE JAWS

- A. Insert the Swivel Handle and turn clockwise until both Moveable Jaws close completely. The rear Moveable Jaw might begin to close slightly. The front Moveable Jaw will close completely, then the rear Moveable Jaw will close completely.
- IMPORTANT NOTE: You will notice a slightly stiffer feel in the Swivel Handle as the second jaw closes. The stiffness is caused by resistance of the Third-Hand mechanism. If you do not notice a stiffer feel, then the Third-Hand screw is set incorrectly. Go to page 28 Step 2 to set the Third-Hand screw correctly.





# User Guide

# How To...

#### Set the Third-Hand mechanism

# STEP 5

#### Set the WORKHOLDING SYSTEM to Hold Your Workpieces

- A. Turn the Swivel Handle counterclockwise until the rear Moveable Jaw allows enough clearance to load a workpiece.
- WPORTANT NOTE: When opening the Workholding System, first the rear jaw opens approximately 12.7mm (.5"); then the front jaw begins to open. Continue opening until the it reaches its maximum travel and the rear jaw again begins to move.
- B. Insert a workpiece between the rear Moveable Jaw and the Fixed Center Jaw.
- C. Rotate the Swivel Handle an additional half-turn, or until there is approximately 1.5mm (.06")of clearance between the rear Moveable Jaw and the workpiece. Remove the workpiece.

IMPORTANT NOTE: For both the Qwik-Lok and the Multi-Lok Systems, the Moveable Jaw located closest to the Swivel Handle is referred to as the front Moveable Jaw, and the Moveable Jaw located farthest from the Swivel Handle is referred to as the rear Moveable Jaw. Front Moveable Jaw

Rear Moveable





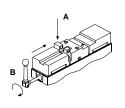
# How To...

#### Load and Unload Workpieces

# STEP 1

#### Load the FRONT WORKPIECE

- A. Load a workpiece between the front Moveable Jaw and the Fixed Center Jaw.
- B. Turn the Swivel Handle clockwise, just until the jaw grabs the workpiece (approximately one quarter-turn), then stop. At this point, the part is being held in place by the Jaws, but it is not tightly clamped.
- IMPORTANT NOTE: Do not continue to turn the Swivel Handle after jaws make contact with the loaded workpiece. Doing so may change the spacing for the rear Moveable Jaw and result in the Third-Hand mechanism needing to be reset.



# STEP 2

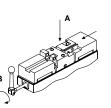
#### Load the REAR WORKPIECE

- A. Load the second workpiece between the rear Moveable Jaw and the Fixed Center Jaw.
- B. Turn the Swivel Handle clockwise until the rear Moveable Jaw contacts the workpiece (approximately one quarter-turn), then stop.
- IMPORTANT NOTE: If the part does not fit, you must Reset The Third-Hand. (pages 28-30).

Recommended Maximum Torque/Clamp Force Use supplied Swivel Handle.

System Size	Torque (N•m)	Clamping Force (kN)	Torque (ft-lb)	Clamping Force (lb)
0520 - 0525	19	11.2	14	2520
1030 - 1040	64	22.8	47	5029
1540 - 1550	79	40.3	58	9019

See page 1 to determine your system size.



#### User Guide

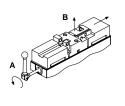
# How To...

#### Load and Unload Workpieces

#### STEP 3

#### Unload the REAR WORKPIECE

- A. Turn the Swivel Handle counterclockwise until the rear Moveable Jaw disengages from the workpiece (approximately one quarter-turn), then stop.
- B. Remove the workpiece from between the rear Moveable Jaw and the Fixed Center Jaw.



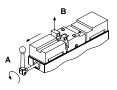
# STEP 4

#### Unload the FRONT WORKPIECE

- A. Turn the Swivel Handle counterclockwise until the front Moveable Jaw disengages from the second workpiece (approximately one quarter-turn), then stop.
- B. Remove the second workpiece from between the front Moveable Jaw and the Fixed Center Jaw.

Your Workholding System is ready to be reloaded for the next production run!

For more information, go to STEP 1.





# How To...

#### Convert to Single Station Machinable Jaws

To fixture larger workpieces, your Workholding System can be converted to a single station. To order a single station jaw set, which includes a Moveable Jaw and a Fixed Single Station Jaw, contact Chick.

**NOTE:** Single Station Extended Travel Coverplates provide a wider range of holding capacity. Contact Chick for more information.

When working with a Qwik-Lok System, simply complete the steps below.

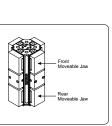
When working with a Multi-Lok System, you can perform all of the following steps on one face, then move to the next face, and so on; or you can perform **STEP 1** on every face, then perform **STEP 2** on every face, and so on.



#### Remove all JAWS from the WORKHOLDING SYSTEM

- A. For detailed instructions, see Steps 1 through 3 of Disassemble Your CHICK Workholding System on pages 3-5.
- IMPORTANT NOTE: If jaws are not machined, you may leave the front moveable jaw.
- B. Remove the Jaw-Locating Chip Plugs from the Single Station Fixed Jaw Location Holes of the Workholding System and place them in the Center Fixed Jaw Location Holes.
  - IMPORTANT NOTE: For both the Qwik-Lok and the Multi-Lok Systems, the Moveable Jaw located closest to the Swivel Handle is referred to as the front Moveable Jaw and the Moveable Jaw located farthest from the Swivel Handle is referred to as the rear Moveable Jaw





# How To...

#### Convert to Single Station Machinable Jaws

# STEP 2

#### Install the SINGLE STATION FIXED JAW

- IMPORTANT NOTE: Inspect the Coverplate to ensure it is properly located and free of chips, burs, and debris.
- A. Align the Single Station Jaw at the rear of the Workholding System so that the Round and Diamond Pins align with the Locating Holes and the Jaw Pocket aligns with the Jaw Tower.
- B. Insert the Fixed Jaw Mounting Screws through the Single Station Jaw and into the Locating Holes of the Workholding System.
- IMPORTANT NOTE: There is no need to push inward on the Single Station Jaw. Unlike the Moveable Jaw installation, the Single Station Jaw is held in place by the Mounting Screws.
- C. Using the T-wrench, evenly finger tighten the Fixed Jaw Mounting Screws until the Single Station Jaw is flush with and secured to the base or column.

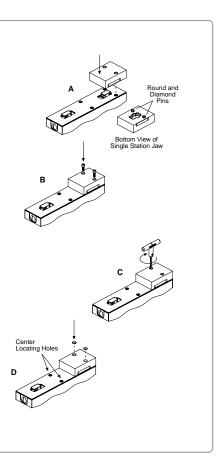
#### **Recommended Torque Settings**

Use supplied T-wrench and Fixed Jaw Mounting screws.

System Size	Torque (N•m)	Torque (ft-lb)
0520 - 0525	7	5
1030 - 1040	14	10
1540 - 1550	20	15

See page 1 to determine your system size.

D. Cover the Fixed Jaw Mounting Screws and the exposed Center Locating Holes with Chip Plugs to seal the system.



# How To...

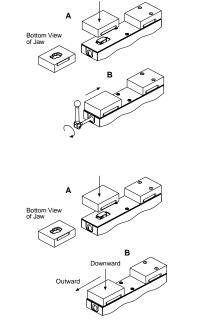
#### Convert to Single Station Machinable Jaws

# STEP 3

#### Install the MOVEABLE JAWS

#### **Common Method**

- A. Align the Jaw Pockets on the underside of the front Moveable Jaw over the Jaw Tower.
- B. Use the Swivel Handle to close the system completely. You will hear a distinct popping noise as each Moveable Jaw secures to the Jaw Tower.
- CAUTION! : If you do not hear two distinct popping noises, open and then fully close the system a second time to ensure that both jaws are firmly secured to the Jaw Towers.



B. With a downward and outward pressure, firmly pull the Moveable law outwards until it engages with

Alternate Method

the Moveable Jaw outwards until it engages with the Jaw Tower. You will feel the Moveable Jaw fully engage the Jaw Tower and hear a popping noise indicating that the Moveable Jaw is secured to the Jaw Tower.

A. Align the Jaw Pocket on the underside of the front

Moveable Jaw over the front Jaw Tower.

- WARNINGI : DO NOT jerk on the Moveable Jaw or pull it outwards without also maintaining a downward pressure. Doing so could result in the Moveable Jaw disengaging from the Workholding System entirely in a manner that could result in injury.
- IMPORTANT NOTE: If the jaws are machined, be sure they are properly paired and oriented.

35 For more information, please call: 724-772-1644 or 800-332-4425

SYSTEM (5)

## User Guide

# How To...

### Convert to a Faceplate

QwikChange Faceplates convert your Workholding System into a mini-pallet system. The Faceplate can be machined to locate and secure many small workpieces or workpieces that are difficult to clamp. By using two Faceplates, an operator can change out one set of workpieces while another set is being machined. To order QwikChange Faceplates, contact Chick.

When working with a Qwik-Lok System, simply complete the steps below.

When working with a Multi-Lok System, you can perform all of the following steps on one face, then move to the next face, and so on; or you can perform **STEP 1** on every face, then perform **STEP 2** on every face, and so on.

## STEP 1

Remove all JAWS and the COVERPLATE from the WORKHOLDING SYSTEM

A. For detailed instructions, see Steps 1 through 4 of Disassemble Your CHICK Workholding System on pages 3-6.

## User Guide

## How To...

Convert to a Faceplate

# STEP 2

Loosen the THIRD-HAND SCREW

- A. Loosen the Third-Hand Screw with the T-wrench by turning counterclockwise.
- B. If jaw locating **Chip Plugs** are in the single-station locating holes, move them to the dual-station locating holes.

# STEP 3

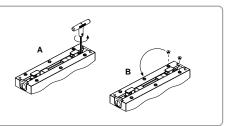
#### Install the FACEPLATE

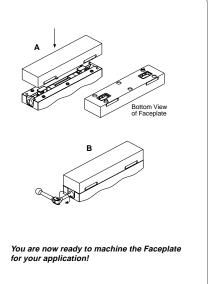
- A. Align the Faceplate so that the Round and Diamond Pins align with the Locating Holes on both ends of the Workholding System and the Jaw Pockets align with the Jaw Towers.
- IMPORTANT NOTE: The Jaw Towers may need to be adjusted to align with the Faceplate. To align the Jaw Towers, turn the Swivel Handle slightly.
- B. Tighten the Faceplate by turning the Swivel Handle clockwise until the Jaw Towers fully engage the Faceplate and the Faceplate sits flush with the Workholding System.

Recommended Maximum Torque/Clamp Force Use supplied Swivel Handle.

	System Size	Torque (N•m)	Clamping Force (kN)	Torque (ft-lb)	Clamping Force (lb)
	0520 - 0525	19	11.2	14	2520
	1030 - 1040	64	22.8	47	5029
ļ	1540 - 1550	79	40.3	58	9019

See page 1 to determine your system size.







# How To...

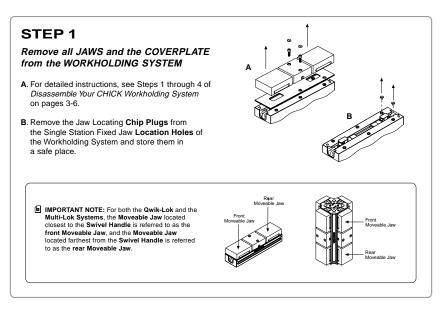
### Convert to Single Station Jaw Carriers

To fixture larger workpieces for a one-time setup, your Workholding System can be converted to a Single Station Jaw Carrier setup. To order a Single Station Jaw Carrier Set, which includes a Single Station Extended Travel Coverplate, a long Moveable Jaw Carrier and a Fixed Single-Station Jaw Carrier, or to order the Single Station Deluxe Jaw Carrier Set which includes everything from the Single Station Jaw Carrier Set plus a short Moveable Jaw to hold larger parts, contact Chick.

NOTE: Jaw Carriers require either standard vise hard jaws or soft jaws. If you do not have hard or soft jaws and would like to know more about how to order them, contact Chick.

When working with either a Bi-Lok or Qwik-Lok System, simply complete the steps below.

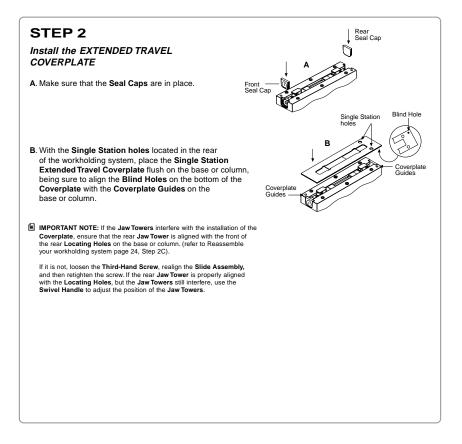
When working with a Multi-Lok System, you can perform all of the following steps on one face, then move to the next face, and so on; or you can perform **STEP 1** on every face, then perform **STEP 2** on every face, and so on.



## User Guide

## How To...

### Convert to Single Station Jaw Carriers



### User Guide

## How To...

#### Convert to Single Station Jaw Carriers

## STEP 3

#### Install the SINGLE STATION FIXED JAW Carrier

- IMPORTANT NOTE: Inspect the Coverplate to ensure it is properly located and free of chips, burs, and debris.
- A. Align the Single Station Jaw Carrier at the rear of the Workholding System so that the Round and Diamond Pins align with the Locating Holes and the Jaw Carrier Pocket aligns with the Jaw Carrier Tower.
- B. Insert the Fixed Jaw Mounting Screws through the Single Station Jaw Carrier and into the Locating Holes of the base or column.
- IMPORTANT NOTE: There is no need to push inward on the Single Station Jaw Carrier. Unlike the Moveable Jaw Carrier installation, the Single Station Jaw Carrier is held in place by the Mounting Screws.
- C. Using the T-wrench, evenly finger tighten the Fixed Jaw Carrier Mounting Screws until the Single Station Jaw Carrier is flush with and secured to the base or column.

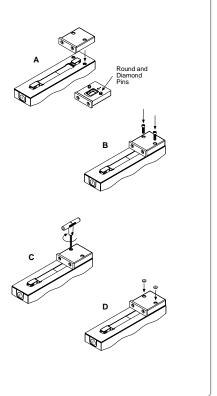
#### Recommended Torque Settings

Use supplied T-wrench and Fixed Jaw Mounting screws.

System Size		Torque (N•m)	Torque (ft-lb)	
	0520 - 0525	7	5	
	1030 - 1040	14	10	
	1540 - 1550	20	15	

See page 1 to determine your system size.

D. Cover the Fixed Jaw Mounting Screws with Chip Plugs to seal the system.



### SYSTEM 5

### User Guide

## How To...

### Convert to Single Station Jaw Carriers

## STEP 4

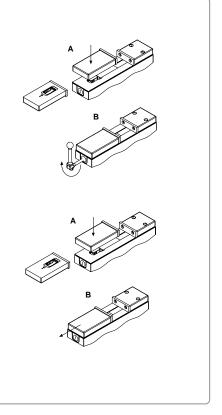
#### Install the MOVEABLE JAW Carrier (Long or Short)

#### **Common Method**

- A. Align the Jaw Carrier Pocket on the underside of the Moveable Jaw Carrier over the front Jaw Tower.
- B. Use the Swivel Handle to close the system completely. You will hear a distinct popping noise as the Moveable Jaw Carrier secures to the Jaw Tower.
- CAUTIONI : If you do not hear a distinct popping noise, open and then fully close the system a second time to ensure that the jaw carrier is firmly secured to the Jaw Tower.

#### Alternate Method

- A. Align the Jaw Carrier Pocket on the underside of the Moveable Jaw Carrier over the front Jaw Tower.
- B. With a downward and outward pressure, firmly pull the Moveable Jaw Carrier outwards until it engages with the Jaw Tower. You will feel the Moveable Jaw Carrier fully engage the Jaw Tower and hear a popping noise indicating that the Moveable Jaw Carrier is secured to the Jaw Tower.
- WARNINGI : DO NOT jerk the Moveable Jaw Carrier or pull it outwards without also maintaining a downward pressure. Doing so could result in the Moveable Jaw disengaging from the Workholding System entirely in a manner that could result in injury.





# How To...

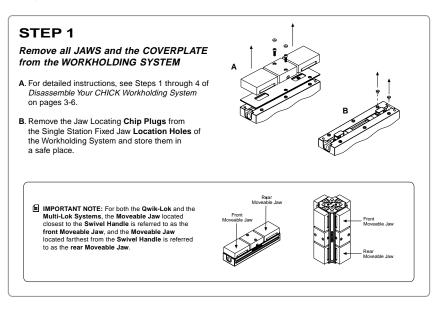
## Convert to Dual Station Jaw Carriers

To fixture two workpieces for a one-time setup, your Workholding System can be converted to a Dual Station Jaw Carrier setup. To order a Dual Station Jaw Carrier Set, which includes two Moveable Jaw Carriers, one fixed center Jaw Carrier and a Dual Station Extended Travel Coverplate, contact Chick.

NOTE: Jaw Carriers require either standard vise hard jaws or soft jaws. If you do not have hard or soft jaws and would like to know more about how to order them, contact Chick.

When working with either a Bi-Lok or Qwik-Lok System, simply complete the steps below.

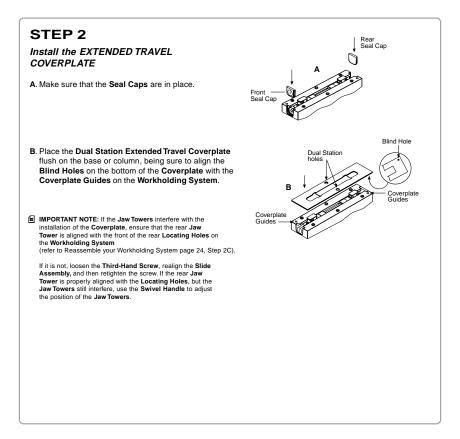
When working with a Multi-Lok System, you can perform all of the following steps on one face, then move to the next face, and so on; or you can perform **STEP 1** on every face, then perform **STEP 2** on every face, and so on.



## User Guide

## How To...

#### Convert to Dual Station Jaw Carriers





## How To...

## **Convert to Dual Station Jaw Carriers**

## STEP 3

#### Install the FIXED CENTER JAW CARRIER

- INPORTANT NOTE: Inspect the Coverplate to ensure it is properly located and free of chips, burs, and debris. If necessary, remove the red Chip Plugs from the Center Locating Holes of the Workholding System and place them in two of the Single Station Locating Holes at the rear of the Workholding System.
- A. Position the Fixed Center Jaw Carrier so that the Locating Bosses on the bottom of the jaw carrier enter the Center Locating Holes on the base or column.
- B. Insert the Fixed Jaw Carrier Mounting Bolts through the top of the Fixed Center Jaw Carrier and into the Center Locating Holes.
- C. Using the T-wrench, loosely secure the Fixed Jaw Mounting Screws. Continue to tighten the screws evenly by tightening each screw one half-turn of the T-Wrench, until each is secured.

#### **Recommended Torque Settings**

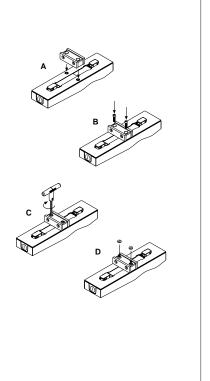
Use supplied T-wrench and Fixed Jaw Mounting screws.

System Size	Torque (N•m)	Torque (ft-lb)	
0520 - 0525	7	5	
1030 - 1040	14	10	
1540 - 1550	20	15	

See page 1 to determine your system size.

D. Install the Chip Plugs over the Fixed Jaw Mounting Bolts.

The Fixed Center Jaw Carrier is now sealed.



## How To...

### **Convert to Dual Station Jaw Carriers**

## STEP 4

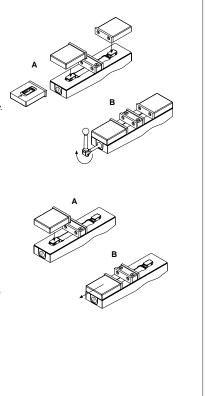
#### Install the MOVEABLE JAWS CARRIERS

#### **Common Method**

- A. Align the Jaw Carrier Pockets on the underside of both Moveable Jaw Carriers over the Jaw Towers.
- B. Use the Swivel Handle to close the system completely. You will hear a distinct popping noise as each Moveable Jaw Carrier secures to the Jaw Tower.
- CAUTION! : If you do not hear two distinct popping noises, open and then fully close the system a second time to ensure that both jaws are firmly secured to the Jaw Towers.

#### Alternate Method

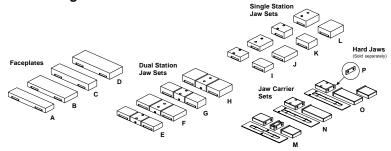
- A. Align the Jaw Pocket on the underside of the front Moveable Jaw Carrier over the front Jaw Tower.
- B. With a downward and outward pressure, firmly pull the Moveable Jaw Carrier outwards until it engages with the Jaw Tower. You will feel the Moveable Jaw Carrier fully engage the Jaw Tower and hear a popping noise indicating that the Moveable Jaw Carrier is secured to the Jaw Tower.
- WARNINGI : DO NOT jerk the Moveable Jaw Carrier or pull it outwards without also maintaining a downward pressure. Doing so could result in the Moveable Jaw Carrier disengaging from the Workholding System entirely in a manner that could result in injury.
- C. Repeat Steps A) and B) to install the rear Moveable Jaw Carrier



45 For more information, please call: 724-772-1644 or 800-332-4425

System (5)

## CHICK provides the following QwikChange<sup>™</sup> Accessories



Select the order number whick corresponds to your CHICK Workholding System Size Refer to page 1 to determine your Workholding System Size.

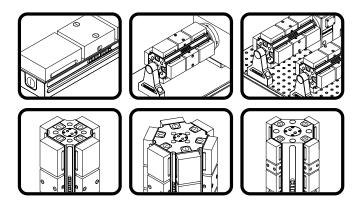
1	0520 and 0525		<b>1030</b> ar	nd <b>1040</b>	<b>1540</b> ar	nd <b>1550</b>
	Order Numbers	Order Numbers	Order Numbers	Order Numbers	Order Numbers	Order Numbers
A	080-2621	080-2625	5FP1030-10-40	5FP1040-10-40	5FP1540-15-50	5FP1550-15-50
в	Use item D	Use item D	5FP1030-15-40	5FP1040-15-40	5FP1540-20-50	5FP1550-20-50
c	Use item D	Use item D	5FP1030-10-55	5FP1040-10-55	5FP1540-15-70	5FP1550-15-70
D	080-2622	080-2626	5FP1030-15-55	5FP1040-15-55	5FP1540-20-70	5FP1550-20-70
Е	080-2500	080-2505	5DS1030-10-40	5DS1040-10-40	5DS1540-15-50	5DS1550-15-50
F	Use item H	Use item H	5DS1030-15-40	5DS1040-15-40	5DS1540-20-50	5DS1550-20-50
G	Use item H	Use item H	5DS1030-10-55	5DS1040-10-55	5DS1540-15-70	5DS1550-15-70
H I	080-2502	080-2506	5DS1030-15-55	5DS1040-15-55	5DS1540-20-70	5DS1550-20-70
	000-2002			0001040-10-00		0001000-20-70
- 1	080-2580	080-2580	<u>5\$\$1030-10-40</u>	5SS1040-10-40	<u>5\$\$1540-15-50</u>	5SS1550-15-50
J	Use item L	Use item L	<u>5\$\$1030-15-40</u>	5SS1040-15-40	5SS1540-20-50	5SS1550-20-50
ĸ	Use item L	Use item L	5SS1030-10-55	5SS1040-10-55	5SS1540-15-70	5SS1550-15-70
L	080-2582	080-2582	5SS1030-15-55	5SS1040-15-55	5SS1540-20-70	5SS1550-20-70
м*	Not applicable	Not applicable	Not applicable	5JC1040-DS-IN	Not applicable	5JC1550-DS-IN
N*	for this	for this	for this	5JC1040-SS-IN	for this	5JC1550-SS-IN
o∗	System	System	System	5JC1550-XS-IN	System	5JC1550-XS-IN
P	Size.	Size.	Size.	JH4STD	Size.	JH6STD
ļ			J		J	

\* Metric Jaw Carrier Sets are also available, for details contact CHICK.



# **Need more information?**

Visit us at www.chick-workholding.com





www.chick-workholding.com 500 Keystone Drive Warrendale, PA 15086 USA Phone: (724) 772-1644 • Fax: (724) 772-1633 (800) 33-CHICK • (800) 332-4425 Made in the USA © Copyright 2003

800-0242 April 2003