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00450 SHRINKSTATION OPERATIONS MANUAL

COMPLETE INSTALLATION AND TROUBLESHOOTING GUIDE

MADE IN USA

Techniks is a proud member of Techniks Tool Group.

CNC TOOLING SOLUTIONS FROM SPINDLE TO WORKPIECE

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IMPORTANT - CAUTIONS & WARNINGS

The Model 00450 has been constructed using the latest technology and are extremely safe and easy to operate. Despite that, there is still some danger if these units are operated incorrectly and/or by untrained personnel.

Pay particular attention to the following Cautions and Warnings marked with the "Attention" and "Danger" symbols. Failure to follow safe operating practices may cause injuries, death, or damage to the machine, and may void your manufacturers' warranties.

- Before attempting to use the unit you must have read and fully understood this Owners Manual. Keep this Owners Manual within easy reach of operating personnel.
- Visually inspect the unit, power cord, and accessory items for any signs of wear or damage before operating the unit. Do not use the unit if there is any sign of damage, or if the unit is not performing normally.
- Never operate the machine without the correct induction stop ring in place on the induction head. Do not allow any part of the induction head to contact the toolholder or cutting tool during operation or damage to the machine may occur.
- Do not wear rings, bracelets, or other metallic objects while operating the machine. Metallic objects may heat up very quickly when near the induction head during operation.
- Use the provided thermal insulated glove whenever handling tools or toolholders. Never try to handle hot tools or toolholders until the cooling cycle is complete.
- If the machine is moved from a cold environment to a warm one, wait two hours before operating to prevent condensation build-up from causing electronic system errors.
- Persons with heart pacemakers may not operate the machine, and must maintain a minimum safe distance of 6 feet (2 meters) from the machine at all times.
- Cutting tools have sharp edges. Handle with caution.

- The power cord provided must be plugged into the correct NEMA L16-20R outlet. Operating the unit while improperly connected or at the wrong voltage may damage the unit and could possibly cause death or injury.
- Position the power cord so it cannot be damaged by fork trucks or other equipment, or cause a tripping hazard for personnel.
- Do not operate the machine in a wet environment where exposure to coolant or spills are likely to occur. Electric shocks or damage to the machine may occur.
- Never operate the machine around flammable materials, or fumes. Do not use flammable liquids or aerosols to clean tool holders. Never expose the machine or hot tools to combustible materials.
- Never open the machine or attempt repairs or you will VOID the manufacturer's warranty. Dangerous residual voltage is inside that may cause death or injury.
- Unauthorized modifications or changes to the ShrinkSTATION machine will VOID your manufacturer's warranty. Do not try and service your unit yourself. Techniks can provide any necessary repairs or maintenance. Do not modify or disable the built-in safety features of the machine.
- Turn off the power switch and disconnect the power cord from the outlet before cleaning, servicing, or storing the unit.
- Do not operate this machine, if the EOT switches are not working properly.

Make sure you read, understand and follow these Cautions and Warnings, as well as the complete technical notes, setup and operation instructions before installing and using your machine.

IMPORTANT - TECHNICAL NOTES

POWER REQUIREMENTS & HEATING SPEEDS

Techniks Model 00450 operates on a 440-480 VAC, 20 amp, 3-phase power supply. Tool holders for smaller cutting tools require less power to heat, but must be heated to a higher temperature than larger tools to perform insertion and extraction.

NOTE: Do not activate the heat controls without a toolholder in position.

AUDIBLE FEEDBACK

During operation, ShrinkSTATION machines power source generates an audible feedback tone that changes frequency depending on the tool holder size and temperature. It is not unusual to hear a pitch change as the tool holder temperature increases. Do not be alarmed if you hear this tone as it is normal. If you are heating a large tool holder, it is unlikely that you will be able to hear the tone generated at all.

SHRINKFIT TOOLHOLDERS

Techniks ShrinkSTATION machines make it easy and safe to perform shrink fit tool changes without causing damage to the toolholder or cutting tool, as long as the machine is correctly installed and proper operating procedures are followed. ShrinkSTATION machines are designed to work best with Techniks shrink fit tool holders made from H13 tool steel with bore diameters from 1/8" to 1-1/4" (3mm to 32mm). They are designed for shrink fitting tools with carbide shanks. Tool shank diameter tolerance is critical. At least an H6 tolerance is advised for optimum performance.

Make sure toolholders are clean and free from defects before inserting the tool in the tool holder. If debris or a burr is inserted into the tool holder with the tool, tool life may be reduced. Damage to the tool or toolholder may also occur as the tool may be difficult or impossible to extract.

NOTE: Holders must be at room temperature before attempting to extract the cutting tool.

CUTTING TOOLS

Cutting tool shanks must be perfectly clean and free from burrs, scoring, or any damage. Any imperfections in the shank can cause the cutting tool to lodge permanently in the toolholder. Burnished shanks can slip in Shrink Fit holders under some conditions. Sand blasting the cutter shanks has improved the holding power.

Techniks ShrinkFIT holders are made of H13 tool steel, tempered at 1050˚F. Heating a tool holder to or above temper point will permanently damage the holding power of the tool holder. Never use an alternate heat source on shrink fit toolholders or damage to the toolholder and cutting tool may occur.

00450 PARTS IDENTIFICATION & MACHINE REQUIREMENTS

Model 00450 ShrinkSTATION
width 16" x depth 16" x height 22" - Weight: 60 lbs

Minimum Power Supply	Maximum Power Supply
440 VAC, 3-phase 20 amp	480 VAC, 3 phase, 20 amp

FEATURES

- Output power of 13kw
- Change 1/8" - 1-1/4" shanks in seconds
- Automatic cooling cycle by compressed air

NEMA L16-20P NEMA L16-20R

NEMA L16-20P plug comes installed on the power cord. Requires a NEMA L16-20R receptacle.

PRODUCT SPECS

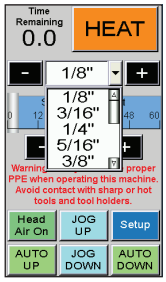
Part No.	Description	Tool Change	Rating	L x D x H	Ship Wt.
00450	ShrinkSTATION	6-8 sec.	3 phase, 480V, 20A	16"x 16"x 22"	60 lbs

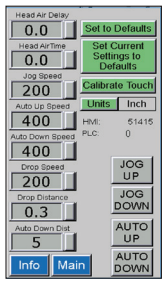
The ShrinkSTATION is an ideal solution for job shops or manufacturing facilities that need a reliable shrink fit machine that can handle practically all sizes and types of toolholders, and is affordable.

Every component of this machine from the industrial touch-screen interface, to the motor driven transport rail, and the heavy-duty stainless steel base, is designed for reliable performance and ease-of-use in demanding environments.

The ShrinkSTATION includes everything you need to perform shrink fit tool changes on CAT40, CAT50, BT30, BT40, ISO30, HSK40, 50, 63 and 100, C4, C5, C6 toolholders with gauge lengths up to 22" (560mm).

Reminder: This machine heats the cutting tool and toolholder assembly. All personnel should be clear of the machine before starting a tool change cycle. Wear the provided insulated glove to prevent accidental burns. Any glove used when operating this machine should be rated at 500°F (260°C) or higher.





TOUCH SCREEN CAPABILITIES

Jog Speed – The speed of the tool holder during manual movement.

Auto Up Speed – The speed of the tool holder during automated movement toward the induction head.

Auto Down Speed – The speed of the tool holder during automated movement away from the induction head.

Drop Speed – The speed of the tool holder during automated movement from induction ring to the drop point.

Drop Distance – The distance the tool holder travels to provide the optimum gap between the tool holder and the induction ring.

Auto Down Distance – The distance the tool holder travels to travel away from the induction head for easy removal of the tool holder.

Lower EOT – The "Lower End Of Travel" switch inhibits the tool holder movement away from the induction head, when the switch is not activated.

Upper EOT – The "Upper End Of Travel" switch inhibits the tool holder movement toward the induction head. If the induction ring is not in place, the switch should not be activated.

EACH SHRINKSTATION INCLUDES:

Part No.	Description
00600-00165	Induction Ring (3 - 5mm shanks)
00600-00166	Induction Ring (6 - 12mm shanks)
00600-00167	Induction Ring (14 - 20mm shanks)
00600-00168	Induction Ring (25 - 32mm shanks)
385-11878-2	Tool Holder Adapter – 40 taper & C6
385-11878-1	Tool Holder Adapter – 50 taper
385-11878-7	Tool Holder Adapter – HSK63
26139-L	Thermal Insulated Glove

ADDITIONAL OPTIONS AVAILABLE:

Part No.	Description
385-11878-9	Tool Holder Adapter – 30 taper
385-11878-6	Tool Holders Adapter – HSK40 & C4
385-11878-8	Tool Holder Adapter – HSK50 & C5
00400/00450-EP	Extension Pedestal for long tool holders

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MACHINE SETUP

- Machine requires a level, stable surface and good ventilation for proper operation. Keep the machine clean and dry at all times.
- Connect the machine to your power supply. The machine operates on 480V on a 3-phase 20 amp circuit.
- A NEMA L16-20P plug comes installed on the power cord. Requires NEMA L16-20R recepticle.
- Connect the source air line to machine's air inlet (90 psi required).

VERIFYING PROPER INSTALLATION

Induction stop ring

- Turn the power switch clockwise to turn on the machine. Wait as your machine powers up and displays the input screen.
- Touch the "Head Air On" button to test the Air connection. "Head Air Off" to cancel.
- Your ShrinkSTATION is now ready for use.

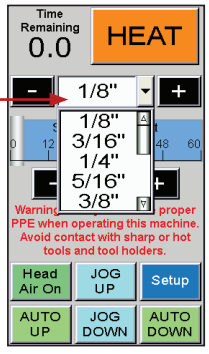
POWERING UP THE MACHINE

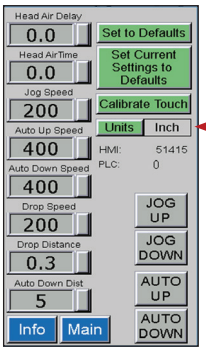
- Turn on the power switch located on the right side of the machine. Wait for the machine to display the input screen.
- You can press the Help button from any screen for more information about that screen's functions.

INSERTING YOUR CUTTING TOOL

- Choose the toolholder seat that corresponds with your toolholder. Place the seat over the pedestal hole and insert your toolholder.
- Choose the induction stop ring. Place the stop ring into the induction head, rotate it 90˚ to secure its position. Press the "Auto Up" button on the touch screen.
- From the main screen, select your tool shank size. You can switch between inch or millimeter using the setup screen.

Use the drop down menu to choose your shank size





Touch units to switch between inches or metric

Always inspect your cutting tool for any imperfections on the shank such as chips, burrs, or scarring. If you find any, do not use that cutting tool in a shrink-fit toolholder, or it may no be able to remove it. The ability to insert and remove tools is enhanced when cutting tools and holders are dry and clean.

HEATING CYCLE

- Heating duration is set by default based upon shank size. Use the gray slider bar on the touch screen to add or subtract time.
- Wearing the insulated glove on one hand, with your other hand, press and hold the red button located on the induction head.
- After 2–3 seconds attempt to insert the cutting tool into the toolholder. Continue holding the button until the cutting tool is successfully inserted into the toolholder. You can stop the heating cycle at any time by releasing the red button.

REMINDER: If the heat cycle ends before the cutting tool can be inserted, increase the duration by 10%. If the cutting tool is inserted before the cycle ends, you may reduce the duration for that shank size.

Note: Never allow any part of the induction head to contact the toolholder or cutting tool during the heating cycle or damage to the machine may occur.

COOLING CYCLE

- The cooling cycle automatically begins 5 seconds after the heating cycle ends. The cooling cycle automatically stops after 3 minutes.
- You can manually stop the cooling cycle after 30 seconds by touching the "Head Air Off" button. Touch the "Head Air On" buttons to restart.
- Once the toolholder has been adequately cooled, press the "Auto Down" button on the touch screen.

EXTRACTING YOUR CUTTING TOOL

- Toolholders must be at room temperature before attempting to extract the cutting tool. Repeat the steps listed on the previous page for choosing the toolholder seat and stop ring which correspond with your toolholder.
- Press "Auto Up" Button. Never allow any part of the induction head to contact the tool holder or cutting tool during the heating cycle or damage to the machine may occur.
- Begin heating procedure: Wearing the insulated glove on one hand, with the other hand, press and hold the "Heat" button located on the induction head. Continue holding the "Heat" button throughout the heating cycle.
- Approximately 2 or 3 seconds before the heating cycle ends attempt to remove the cutting tool from the toolholder with the gloved hand. If the tool cannot be extracted on the first try, cool the tool to room temperature and increase the heating duration by 10% and try again.
- The heating cycle will stop automatically at the end of the set duration.

MORE SHRINKFIT MACHINES TO MEET YOUR NEEDS

00600 SHRINKPRO

FEATURES

- Induction coil technology enables tool changes in 3-6 seconds
- Easy to use touch screen design
- Heating time is automatically set by tool diameter
- Cooling cycle uses shop air

EASY-TO-USE TOUCHSCREEN

Select your shank size and ShrinkPRO sets heating duration

PRODUCT SPECS

Part No.	Tool Diameters	Power	L x D x H	Ship Wt.
00600	1/8" -1-1/4"	480V, 20A, 3 phase	20" x 20" x 37"	84 lbs

00500 SHRINKPRO QUENCHER

FEATURES

- Induction coil technology enables tool changes in 3-6 seconds
- Easy to use touch screen design
- Heating time is automatically set by tool diameter
- Coolant bath and air-drying system cools tools in under 30 seconds

EASY-TO-USE TOUCHSCREEN

Select your shank size and ShrinkPRO sets heating duration

Quencher features a liquid cooling cycle that is 250% FASTER than air-cooled units.

PRODUCT SPECS

Part No.	Tool Diameters	Power	L x D x H	Ship Wt.
00500	1/8" -1-1/4"	480V, 20A, 3 phase	37" x 24" x 71"	660 lbs

EACH SHRINKPRO AND QUENCHER SHIPS WITH:

Part No.	Description
00600-00165	Induction Ring (3 - 5mm shanks)
00600-00166	Induction Ring (6 - 12mm shanks)
00600-00167	Induction Ring (14 - 20mm shanks)
00600-00168	Induction Ring (25 - 32mm shanks)
00600-9006	Tool Holder Adapter – HSK63/HSK100
00600-9002	Tool Holder Adapter – 40 taper
00600-9003	Tool Holder Adapter – HSK40
00600-9004	Tool Holder Adapter – HSK50
00600-9005	Tool Holder Adapter – 30 taper
00600-9006	Tool Holder Adapter – PSC6
26139-L	Thermal Insulated Glove

EACH QUENCHER SHIPS WITH:

Part No.	Description
00500-C	1 Gallon Quencher Coolant

"NEVER DOWN" GUARANTEE

We stand behind our products 100% and expect them to out-perform the competition. Purchase any Techniks ShrinkFIT machine with confidence knowing that we can provide a backup if yours should ever need servicing!

Replacement machine is on loan until original is repaired and back in service. Replacement machines are limited to standard configuration. Power requirements may vary from original machine. Replacements are subject to availability. Extended Warranties are also available.

IT'S NOT JUST SHRINKFIT, IT'S SHRINKLOCKED!

SHRINK LOCKED™
WITH FORMULA TTG 594

Enjoy the peace of mind knowing your tool will never slip, even in the most aggressive applications.

ShrinkLOCKED tool holders are enhanced with our patented TTG-594 compound for 6X the gripping force of standard shrink fit holders.

SHRINK LOCKED™
WITH FORMULA TTG 594

Why Try ShrinkLOCKED?

- Run harder – higher speeds and feeds.
- Never spin or pull out a cutting tool.
- No modification to your tool shank required.
- No impact to accuracy or tool changes.
- Locked drive on standard carbide round shanks.