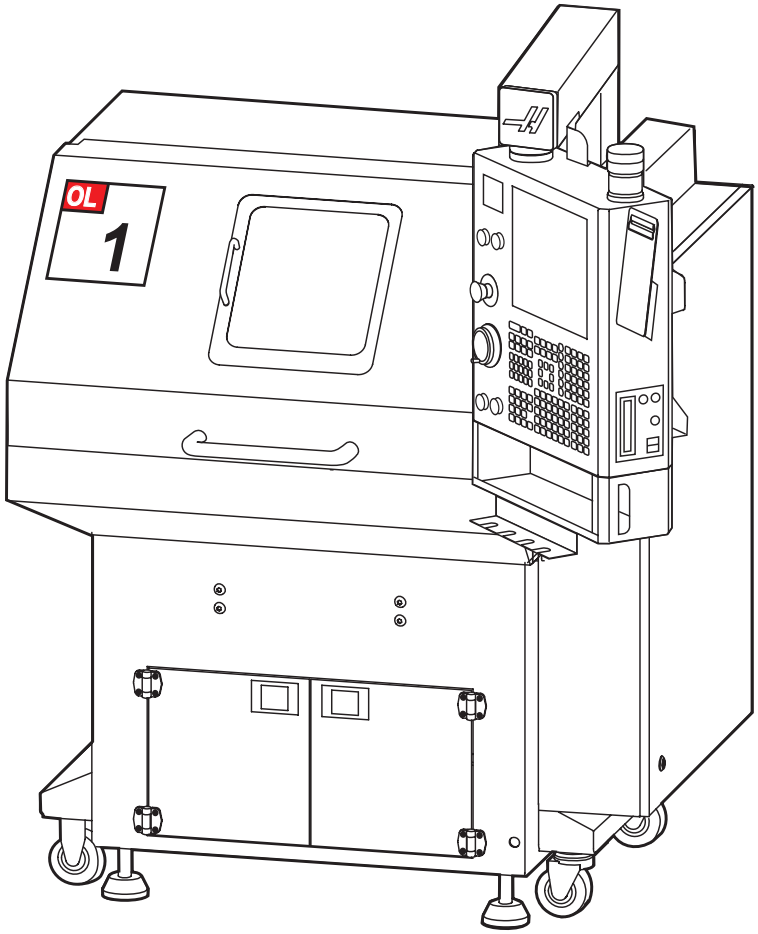
OFFICE LATHE
OPERATOR'S ADDENDUM



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Installation

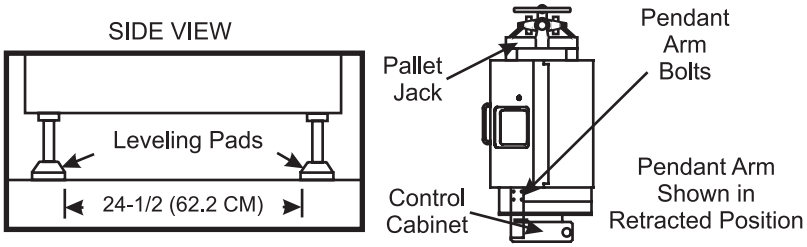
Move the Office Lathe

Warning

The Office Lathe has a high center of gravity. Move the machine slowly and carefully to prevent it from falling over.

Without an Optional Caster Kit

1. You will need a pallet jack that has at least 1500 lb capacity and forks that will fit in the space between the Office Lathe's leveling pads (24.5", 622 mm).
2. Lift the Office Lathe from the side opposite the control cabinet. Carefully move the Office Lathe to its operating location, then lower it onto the leveling pads.



Office Lathe Moving Through a Doorway

With an Optional Caster Kit

1. Raise the leveling screws high enough to remove the leveling pads. This lowers the Office Lathe onto the wheels.
2. Carefully move the lathe to its new position.
3. Put the leveling pads back under the leveling screws and raise the lathe to a position where all its weight is off the wheels.

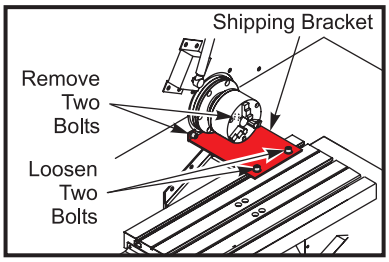
Position the Pendant Arm

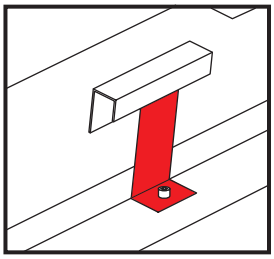
The Office Lathe arrives with the pendant arm in the shipping position. This position also allows the Office Lathe to fit through doorways. To change the pendant arm position:

1. Remove the four bolts on the top of the pendant arm.
2. Turn the arm into position. There is approximately 80° of movement between the shipping position and the operating position.
3. Install the four bolts back on top of the pendant arm.

Remove the Shipping Bracket

1. Remove the two bolts that attach the shipping bracket to the machine. Install the the screws back into place once the shipping bracket is removed.
2. Loosen the two bolts that attach the shipping bracket to the lathe's table. Slide the shipping bracket off the table and remove it from the machine.





Coolant Tank Bracket

Optional Coolant Tank Shipping Bracket
If your Office Lathe includes a coolant tank, there is a shipping bracked you need to remove from the tank.

1. Open the bottom front doors of the lathe.

2. Remove the bolt that attaches the coolant tank shipping bracket to the machine enclosure.

3. Move the bracket out from under the coolant tank handle.

4. Put the bolt back into place.

Level the Office Lathe

NOTE: Refer to the Lathe Reference Manual for machine leveling instructions.

Only rough leveling is necessary. Fine leveling will not affect the cutting performance of the Office Lathe and is not necessary. Use a machinist's level placed on the level table while rough-leveling the machine.

Connecting Electrical Power

Refer to local code requirements before wiring machines.

- The power source must be grounded
- Frequency range is 47-63 Hz
- Line voltage that does not fluctuate more than +/-5%

• Harmonic distortion is not to exceed 10% of the total RMS voltage
Voltage Requirement: 225-250 VAC, 1PH
Power Supply: 20 AMP
Haas Circuit Breaker: 20 AMP
If the service line run from the electrical panel is less than 100' use 12 GA wire. If the service line run from the electrical panel is more than 100' use 10 GA wire.

Connect only grounded input power to the machine. The machine will not function correctly on ungrounded power.

Transformer Tap
The Office Mill runs on single-phase power. It has a transformer in the control that connects to voltage that can range from 195V to 254V.

1. Measure voltage at the main circuit breaker and connect the main power cable to the appropriate tap on the transformer (taps available are 195-213V, 214-225V, and 226-254V).
2. The mill has a power cord with a L6-20P plug that can be plugged directly into power using a L6-20R connector. This connector has 2 power pins and a ground pin; the ground pin must be wired into the building's ground system.

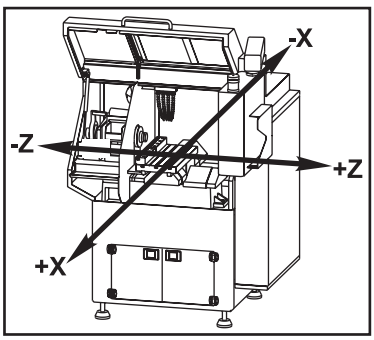
Connecting Air

IMPORTANT
The air pressure regulator is set at the factory. However, verify the pressure is set to 45 - 50 psi (310 - 345 kPa) before operating the machine.

WARNING!
Adjusting the air regulator above 45-50 psi may prematurely wear or break the Draw Bar Arm track rollers.

Operation

The advertised spindle speed may be limited with the addition of collet closers or chucks. Check the specifications for the accessory before running the lathe.

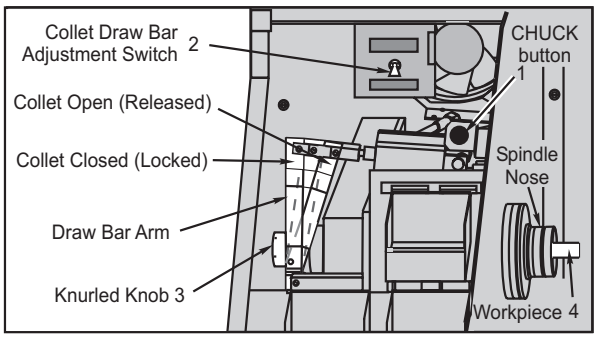


Axis Definitions

Workholding

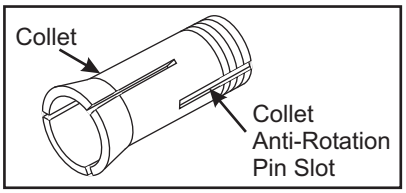
Installing a Collet

NOTE: The numbers in parentheses in the following set of instructions refer to the numbered parts listed in the following illustration.



1. Open the large operator door.
2. Press the CHUCK button to unclamp the collet. The message “UNCLAMPED” appears on the control screen.
3. Set the Collet Draw Bar Adjustment switch (2) to the center position to adjust the collet drawbar.
4. Do one of the following to prevent the spindle turning while you install the collet:
   a. Later Office Lathe models feature a spindle lock pin. This is the recommended spindle lock method, if available. Push on the pin and turn the spindle by hand until the pin engages and the spindle can not turn.
   b. Set the C Axis to jog mode.
   c. Command M154 in MDI mode.
5. Turn the knurled knob (3) at the end of the drawbar assembly clockwise until you can insert the collet into the spindle nose. The spindle head contains a collet anti-rotation pin to align the collet for installation. Turn the collet in the spindle head until you feel the anti-rotation pin engage with the pin slot on the collet.

NOTE: Make sure the collet is correctly aligned with the anti-rotation pin. An incorrectly aligned collet can damage the spindle and the collet.



6. Turn the knurled knob to draw the collet into the spindle. You will feel the draw bar tighten on the collet threads.

Inserting a Workpiece

1. Put a part (4) into the open collet.
2. Turn the knurled knob clockwise until the the part is tight in the collet, then loosen the knob about one half-turn.
3. Press the CHUCK button and set the Collet Draw Bar Adjustment Switch (2) lever to the lower position. Make sure that the part is clamped in the collet.

WARNING!

If the part is in place, but the collet and the part are not tight, do not operate the spindle.

4. Next, find the correct clamping force for your stock:
   a. Press the CHUCK button (1) to unclamp the collet ('UNCLAMPED' will be displayed on the screen).
   b. Set collet draw bar adjustment switch (2) to the center position to release pressure on the piston.
   c. Turn the knurled knob (3) slightly; clockwise to tighten, counterclockwise to loosen.
   d. Set the collet draw bar adjustment switch (2) to the lowest position.
   e. Press the CHUCK button (1) to clamp the collet.

The part is properly clamped when the draw bar arm hesitates during clamping, then continues to the end of the piston stroke. The mechanism makes a distinct sound when it clamps.

WARNING!

If the arm does not go to full stroke, the collet has not properly clamped the part. The part can fly out at high speed and cause machine damage or bodily injury.

WARNING!

If the arm does not hesitate while the part is clamped, the part will not be clamped tightly and it may spin when the tool makes contact. The part may also come out, causing damage or injury.

5. Do a couple of test clamps to make sure the collet is set at the correct tension,

   NOTE: A standard 5C collet has a maximum adjustment range of only around 0.15". Part diameter variation or bar stock variations may therefore cause improper clamping. Good machining practices include regular inspection of bar stock diameter and/or adjustment of the collet.

6. Make sure to disengage the spindle lock pin before you try to operate the spindle.

Removing a Collet

1. Open the large operator door and press the CHUCK button to unclamp the collet.
2. Set the collet drawbar adjustment switch in the center position to adjust the collet drawbar.
3. Do one of the following to prevent the spindle turning while you remove the collet:
   a. Later Office Lathe models feature a spindle lock pin. This is the recommended spindle lock method, if available. Push on the pin and turn the spindle by hand until the pin engages and the spindle can not turn.
   b. Set the C Axis to jog mode.
   c. Command M154 in MDI mode.
4. Turn the knurled knob counterclockwise to begin loosening the collet. If there is bar stock in the collet, remove it from the collet as soon as it is loose enough.
5. Keep turning the knurled knob until the collet is loose, then remove the collet from the spindle.

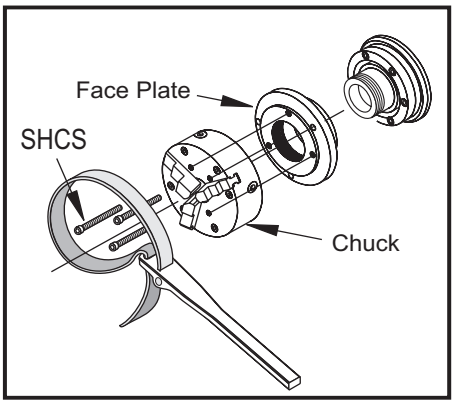
Collet Use Tips

- Some collets hold certain materials better than others, so make sure to choose the proper collet for the application (i.e., serrated vs. smooth).
- Standard collets pull back while they clamp material. If the part outer diameter (OD) varies, pullback (Z-distance) will vary.
- Because of their design, dead length (exact length) collets position parts more consistently.

  NOTE: Do not try to adjust the length of the draw bar arm air cylinder. Contact Haas Service for adjustment. If roller bearings spin while the spindle turns, contact Haas Service.

Installing a Chuck

1. Engage the spindle lock pin or otherwise prevent the spindle from turning while you do this procedure (set the C Axis to jog mode or command an M154).
2. Attach the chuck to its back plate with the Socket Head Cap Screws (SHCS) supplied in the kit. Torque the SHCS to 25 ft-lbs.

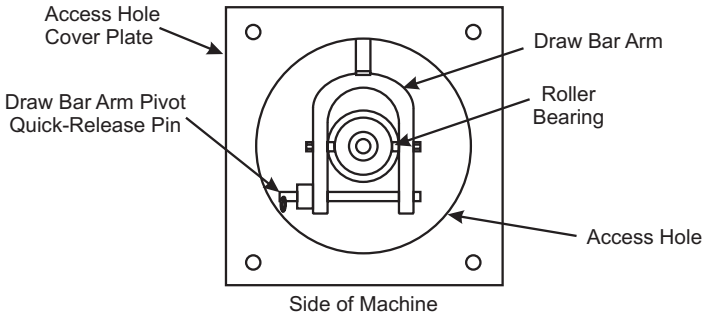


3. Gently turn the assembly onto the spindle nose until it seats against the spindle shoulder. Tighten the chuck with a strap wrench to approximately 70 ft-lbs.

Removing the Draw Bar

When you use a chuck instead of a collet in the Office Lathe, disconnect the collet draw bar arm assembly from the spindle and remove the draw bar. This prevents wear on draw bar arm parts when they are not needed.

1. Remove the cover from the access hole at the left side of the lathe enclosure.
2. Pull the the draw bar arm pivot quick-release pin toward the back of the machine.
3. Lift and rotate the draw bar arm away from moving parts.
4. Reach through the access hole and remove the draw bar from the spindle.
5. Install the access hole cover.
6. To prepare the spindle for collet use again, install the draw bar and engage the draw bar arm using the quick-release pin.



Chuck Alignment
Follow this procedure to eliminate runout in the chuck.

1. Place a precision test bar in the chuck.
2. Set a dial indicator against the test bar and rotate the chuck.
3. Use the chuck adjustment screws to align the chuck until the dial indicator reads zero

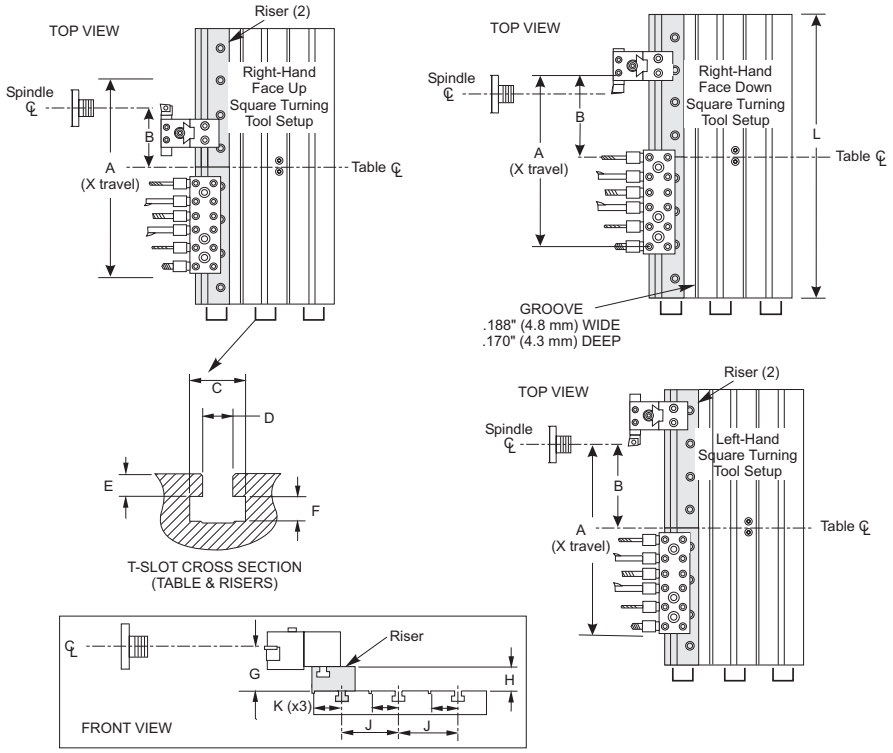
Chuck Removal

1. Engage the spindle lock pin or otherwise prevent the spindle from turning while you do this procedure (set the C Axis to jog mode or command an M154).
2. Use a strap wrench to unscrew the chuck. To avoid damaging the chuck, do not pry against the chuck jaws.

4. Tooling

Gang tooled lathes provide a fast and reliable tooling setup. Once placed in a holder, tools can be loaded and unloaded as a group with the tools still mounted. Different tool holders can be pre-configured to accommodate frequently repeated tasks.

NOTE: The 6-position tool holder shown below is configured the same for the following examples. The square turning tool is varied in type (LH/RH) and orientation (face up/face down and on opposite side of the spindle). The left-hand turning tool is located on the opposite side of the spindle centerline from the face up right-hand tool, and requires a change in spindle direction. The face down right-hand turning tool is also shown on the opposite side of the spindle, but does not require a change in spindle direction.



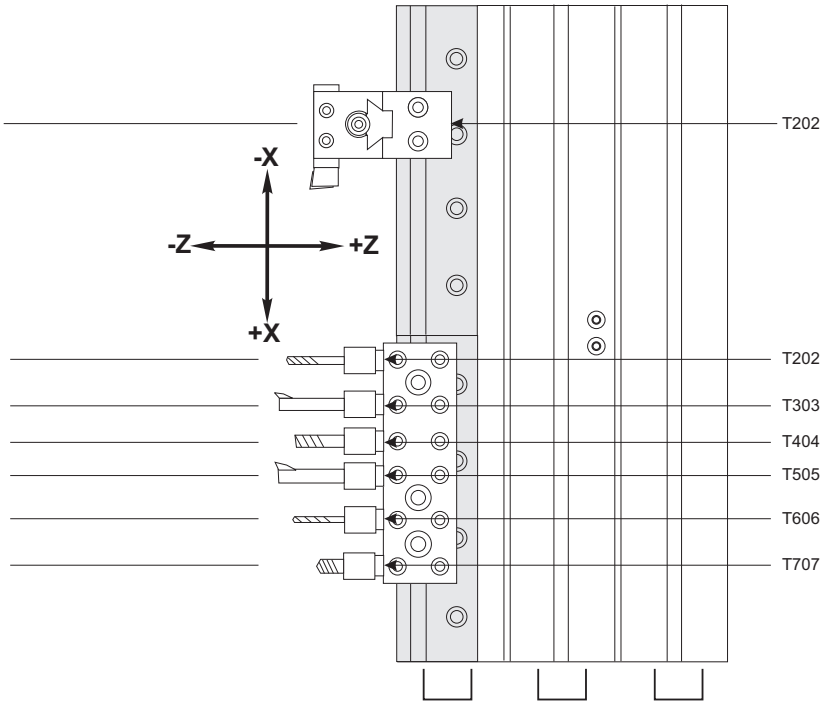
A	**12.00"**	**(305 mm)**	**F**	**0.33"**	**(008 mm)**
B	**6.00"**	**(152 mm)**	**G**	**2.50"**	**(64 mm)**
C	**0.78"**	**(020 mm)**	**H**	**1.75"**	**(44 mm)**
D	**0.44"**	**(011 mm)**	**J**	**3.38"**	**(86 mm)**
E	**0.30"**	**(008 mm)**	**K**	**1.625"**	**(41 mm)**
			L	**20.00"**	**(512 mm)**

The spindle must turn in different directions for the right- and left-hand tooling setups. Program M-Codes to control the spindle direction.

A right-hand tooling setup requires that the spindle move in the forward direction. This spindle movement is controlled by the M03 code.

A left-hand tooling setup requires that the spindle move in the reverse direction. This spindle movement is controlled by the M04 code.

Office Lathe Tool Setup



Description	Offsets X	Offsets Z	Description	Offsets X	Offsets Z
T101			T505		
T202			T606		
T303			T707		
T404					

Copy this page for use with future job set-ups.

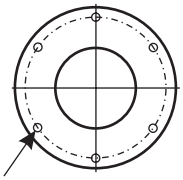
Options

3-Jaw Chuck – A three-jaw, manual scroll chuck for holding larger parts is available in 4” (102 mm) diameter with 1.02” (26 mm) ID bore. The option includes two pairs of solid jaws (ID and OD) and a mount plate.

Caster Kit – Bolt-on wheels used when moving the lathe. Once the caster kit is installed, simply lower the leveling screws to have the lathe rest on the wheels.

Coolant Tank – The coolant pump/tank will help with part finish and longer tool life.

Draw bar adapter dimensions:



6X 10-32 UNF-2B ↧.38
EQ. SP. ON Ø2.200 B.C.