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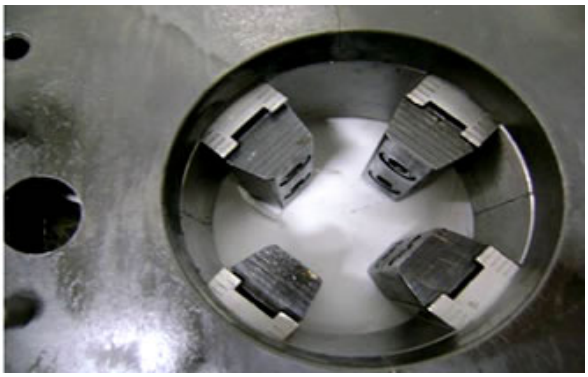
Maintenance Guide
Out-mounted Beveling Machines

Out-mounted Beveling Machine

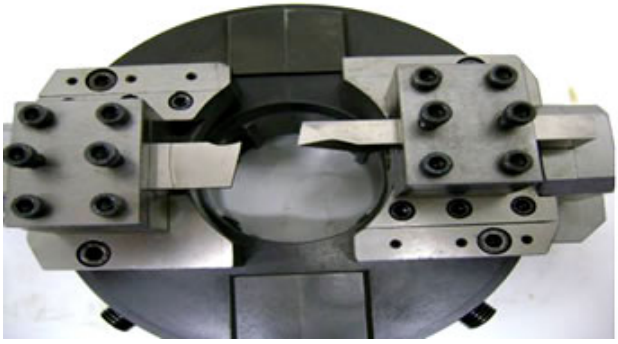
Keep equipment unplugged from power sources (compressed air, electricity (power outlet), servo-motor). Before maintenance or operation

Before any procedure, remove any installed bits from the machine. Then, measure the pipe to be beveled to see if the use of shims is necessary. If so, install them.



SPLITING THE PARTS: (if necessary)

To make splitting easier, remove toolboxes, releasing the hex screws located on the toolboxes.



Then, lock the set (turning part and fixed part), using the lock pins that must be inserted in 02 holes located on the side of the ring, under the toolboxes. This is necessary to keep both halves leveled and prevent parts from moving during the separation and assembly of the beveling machine on the pipe, avoiding damages and accidents.

Then, split the ring into two parts, realizing all six (06) hex screws which keep the halves together. They are located outside the ring - three (03) on each side

The halves will now be placed around the pipe to be cut or beveled. The half where

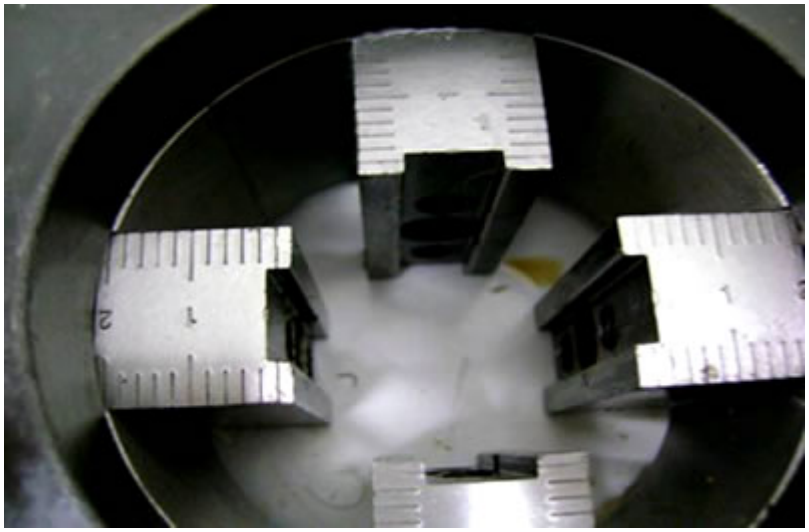
the pinion is located, must be placed on the top of the pipe and, the other half, under the pipe. Use the hex screws to put the parts together.

After the beveling machine is securely installed onto the pipe, remove the lock pins.

Place bits toolboxes back in place. Use the hex. screws to hold them.

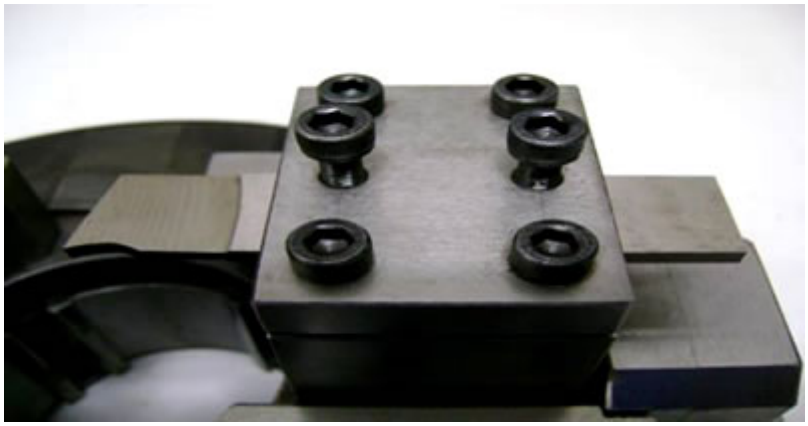
The toolboxes can be placed in 03 (three) different positions, according to the proximity of the pipe (observe perforations next to the guide pin). Place them as desired, adjusting the advance pin as well.

To begin cutting or beveling operation, the pipe must be centered in the inner diameter of the beveling machine. Regulate the shims for a first adjustment and observe the scale of the expansion block. Use one of the shims as reference and regulate it. Then, regulate the opposite shim to keep the same distance between the pipe and the inner wall of the beveling machine. Repeat the same procedure with the two remaining shims.



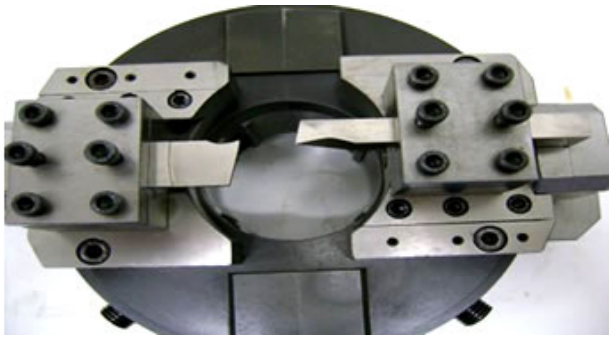
Use a square to check if the angle between the beveling machine and the pipe is 90o.

Install the cutting tool (bits) and use it to complete the adjust operation.

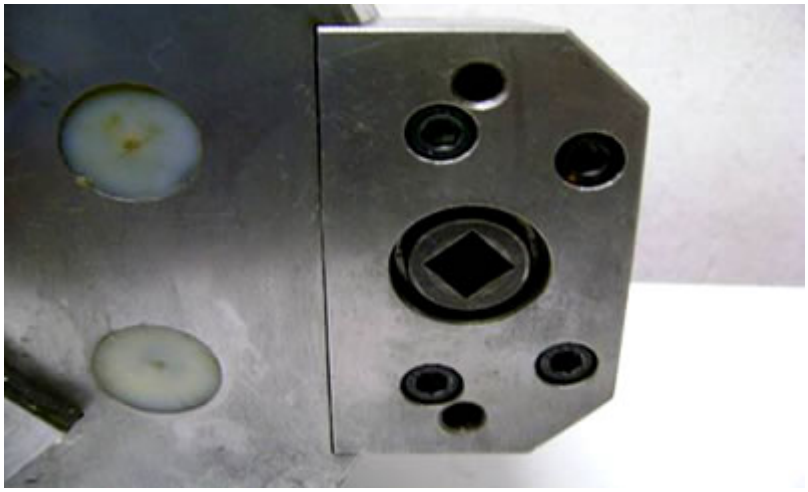


Place them at a convenient distance from the pipe and turn the beveling machine manually or use a T wrench, turning it clockwise. Check if bits are evenly passing around the pipe. Otherwise, regulate using the expansion blocks.

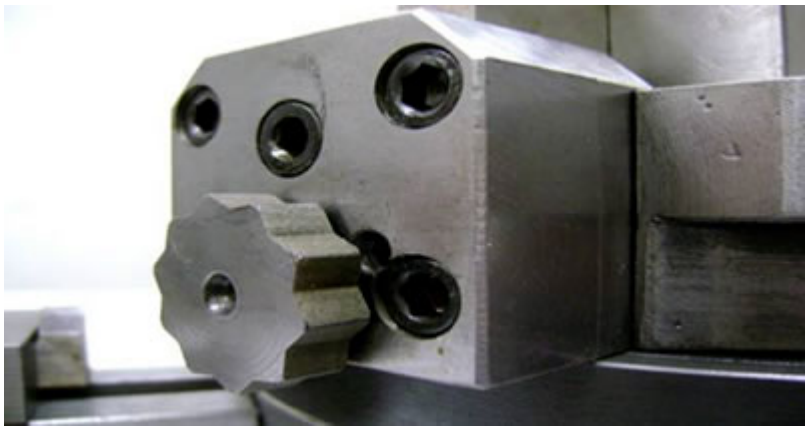
Next, regulate the bits as follows: the cutting blade must be approximately 2 mm from the pipe and the beveling blade, approximately 3 mm. Thus, the cutting blade will penetrate the pipe before the beveling blade.



Install the motor set, tightening the flange in two holes located in the back of the pinion. Use 02 (two) hex screws to tighten it.



Before cutting/beveling, make machine turn 03 or 04 times in low speed to check if there is any obstruction. Activate feed to check if feed wheels of the toolboxes are working properly.



If everything is working well, set to regular speed as required by the material to be cut or beveled.

Use the following table for reference: (carbon steel)

Model	ISF-150 ISD-150	ISF-300 ISD-300	ISF-450 ISD-450	ISF-600 ISD-600	ISF-750 ISD-750	ISF-900 ISD-900	ISF-1050 ISD-1050
Rotation per Minute	16 r/min	13 r/min	10 r/min	8 r/min	7 r/min	6 r/min	5 r/min

Maintenance Plan:

- Corrective maintenance: - Corrective maintenance is almost completely unnecessary then preventive maintenance is correctly applied.

- Preventive Maintenance:
  - Daily check if screws are tightened.
  - Check if advance wheel is working properly.
  - Clean and lubricate the complete set every day: fixed and moving parts, feed rings, etc.

- Production check list:
  - Check if screws are tight.
  - Check tool wiring.
  - Check type of material to be cut/beveled.
  - Check if bits are adequate for the type of material to be cut/beveled.
  - Use Oil Threader and/or cooling lubricant.

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
Equipment does not turn on.	It is disconnected from power source.	Check power cord.
Work piece moves during cutting.	Unlocked.	Check lock tighteness and tighten it.
Poor quality	Blind or damaged bit	Change bit
Bit is loose or stuck	Tool is unaligned (cut).	Change bit.
Tool won't advance.	Advance pin is broken.	Change pin

Drive Types (Motors)

ELÉTRICO

PNEUMÁTICO

SERVO MOTOR

→Use only original spare parts and always contact a Merax Authorized Assistance. Check list in our website: www.merax.com.br