Standard “Saddle-Type” Beveling Machine Operation Manual

I. Machine Preparation

1. Check to assure the machine is complete and not damaged from shipping. Please notify the distributor where the machine was purchased if a problem exists.

2. H&M machines are equipped with the patented Cuboid Spacers to accommodate standard pipe diameters. Special Cuboid Spacer Bolts for all models are available for pipe sizes other than standard.

NOTE: If your machine was manufactured before the Cuboid Spacer System was introduced, it utilizes separate spacers for each pipe size. Please call H&M at 918-582-9984 with any questions about upgrading your current equipment.

1. Bolt the four Cuboid Spacers under the saddle. Each side of the Cuboid Spacer is stamped with a pipe size. Bolt the Cuboid Spacers on with the pipe size to be cut facing down, making contact with the pipe to be cut. Spacers should be placed perpendicular to minimize contact.

2. Attach the standard torch arm and torch holder assembly, or the optional Model “C” Adjustable Torch Holder or the Model “C” Out-of-Round Attachment securely to the ring gear.

3. Position and secure a two-hose machine cutting torch in the torch holder. No pitch rack is required. The two-hose machine cutting torch should have an overall length of 15" to 16", or it will not reach the machine’s smallest pipe capacity on a 37.5-degree bevel angle.

Store the Cuboids on the back of the saddle.

II. Positioning On Pipe

1. Place the machine on the pipe to be cut. Adjust the boomer assembly by lengthening or shortening the boomer chain until the machine is securely attached to the pipe.
2. Set the torch to the desired degree of bevel angle by loosening the appropriate wing nuts on the standard torch holder. Position the torch to the desired bevel angle. Make sure to tighten the wing nuts securely after setting the bevel angle.

A. If using a Model “C” Adjustable Torch Holder or a Model “C” Out-of-Round Attachment, the bevel angle is set by loosening the “T” handle. See the operation manual for the Model “C” Adjustable Torch Holder or the Model “C” Out-of-Round Attachment for detailed instructions.

1. Vertical adjustment with a standard torch holder is achieved by loosening the thumbscrew on the torch holder and adjusting the torch tip to approximately 1/4" from the pipe.

A. The setting for the Model “C” Adjustable Torch Holder or the Model “C” Out-of-Round Attachment is obtained by turning the proper knob. See the operation manual for the Model “C” Adjustable Torch Holder or the Model “C” Out-of-Round Attachment for detailed instructions.

1. Horizontal adjustment with a standard torch holder is accomplished by loosening the appropriate wing nut on the torch holder, manually positioning the torch tip to the intended line of cut and securely tightening the wing nut.

A. The setting for the Model “C” Adjustable Torch Holder or the Model “C” Out-of-Round Attachment is obtained by turning the proper knob. See the operation manual for the Model “C” Adjustable Torch Holder or the Model “C” Out-of-Round Attachment for detailed instructions.

1. The standard beveling machines are manually driven. The operator turns the crank handle, generating travel to the torch during the cutting process.

2. For motorized machines set the speed control to a LOW setting. Plug into a 110- to 120-volt AC power source and check the power. If the power source is 220 volts the machine will be supplied with a 240/120 transformer.

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3. Light the torch and adjust to a neutral flame. When the metal has reached a proper temperature turn the high-pressure oxygen valve to the OPEN position, then start the cutting process. Start rotating the ring gear either manually or with an electric travel motor.
NOTE: If you are unfamiliar with the safe operation of an oxy-fuel cutting torch, ask your local welding distributor for training before using this equipment.

4. When the cut has been completed turn off the cutting oxygen and remove the machine from the pipe by releasing the boomer assembly.

III. Elimination Of The Blow Hole

Back-beveling, cutting a bevel toward the machine, can be accomplished in several ways:

1. When using a standard torch holder the only requirement is loosening the wing nut which secures the torch holder to the torch arm. remove the torch holder, rotate it 180 degrees and secure it to the torch arm. The torch is now reversed and angled back toward the machine.

2. Back-beveling can also be achieved by using and angle head attachment on the cutting torch. An angle head attachment allows the cutting tip to be positioned to different bevel angles independent of the torch. The torch remains vertical and the angle head attachment pivots the cutting tip to different angles.

3. If back-bevelin using a Model “C” Adjustable Torch Holder or a Model “C” Out-of-Round Attachment, set the desired degree of bevel angle on the protractor by loosening knob #3. Set the machine on the pipe as in normal cutting procedures and begin the back-beveling operation. See detailed instructions in the appropriate operation manual.

WARNING: Position the cutting tip as far back from the ring gear as possible when. Excess heat placed on the ring gear during back-beveling can damage the machine.