

MTD MULTICLAMP

Operator's Manual



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NOTICE

Any operation involving work on pipe containing liquids or gases under pressure is potentially hazardous. To ensure a safe working environment, always follow proper procedures including those available from the equipment manufacturer and your company.

No person is authorized to make plastic pipe joints for natural gas service unless that person has been qualified through training, assembling, fusing and testing specimens in accordance with 49 CFR 192.285.

It is the responsibility of the operator to establish a method to determine that each person making joints in pipelines in their system is qualified to make those joints.

This manual does not serve to replace but should be used as a supplement to hands-on training. This manual is not intended to be used for system design purposes and does not take the place of the advice of a professional engineer.

Should any issue or difficulty arise while operating this equipment, contact ISCO Industries, Inc.



MTD

MTD MultiClamp
Operator's Manual

INTRODUCTION

Description

The MTD MultiClamp is a multi-functional clamping solution for polyethylene electrofusion fittings. It is capable of securing 90° elbows, 45° elbows, 22.5° elbows, 3-way tees, and couplings from 6"IPS through 16"IPS.

Safety

WARNING: Read this manual thoroughly before operating the MTD MultiClamp system. Under no circumstances should the factory recommended specifications be exceeded.

If the operator or other personnel have questions regarding the operation of this system, please contact ISCO. Always refer to and follow your company's safety procedures.

Protective Clothing

Gloves, flame retardant shirt, safety glasses, safety shoes, and hard hat are recommended. Do not wear jewelry, loose clothing or other items that could get caught in moving parts.

Warnings

WARNINGS in this manual indicate a potentially hazardous situation which, if not avoided, could result in death or serious injury, as well as damage to equipment. They may also be used to alert against unsafe procedures.

COMPONENT LIST



Multi-Clamp assembly (x2)



Hex Tool



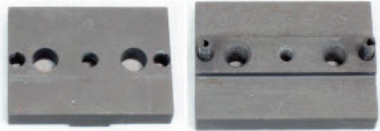
V Clamp (x4)



Multi-Angle Connector



Nylon Straps (x4)



Sliding V-Clamp Base (x4)

PROCEDURES

Step 1: Configuring the MTD MultiClamp

Before setting up the MTD MultiClamp, determine what type of fitting you will be clamping, and configure the clamping assemblies accordingly.

Note: Multi-Angle Connector is not required for some couplings. One of the clamping assemblies may be used as a bar-style clamp with two V-Clamps.



**Multi-Angle Connector
Configured for
22.5° Elbow**



**Multi-Angle Connector
Configured for
45° Elbow**



**Multi-Angle Connector
Configured for
90° Elbow**



**Multi-Angle Connector
Configured for
Coupling**

After determining the configuration, slide the clamping assemblies into the Multi-Angle Connector, and tighten clamping assembly bolts against the slots in the Multi-Angle Connector using the included hex tool.



**Slide clamping assembly into
Multi-Angle Connector**

**Tighten clamping
assembly bolts against
slots in Multi-Angle
Connector**

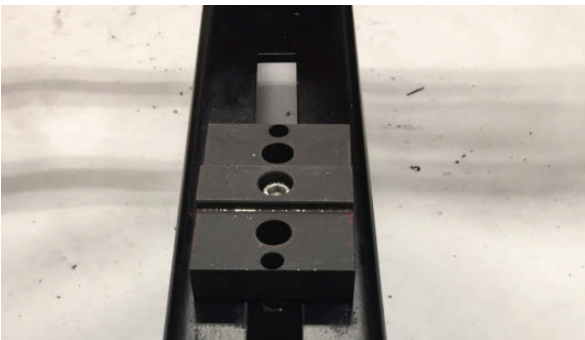
Step 2: Installing Sliding V-Clamp Base

In order to install the V-Clamps on the MTD MultiClamp assembly, first install the sliding V-Clamp bases. There are four bases provided, one for each V-Clamp.

To install a V-Clamp base, place the bottom half of the base beneath the assembly and push up through the slot, as pictured below.



Next, place the top half of the base onto the assembly from above so that it sits securely on the pegs of the bottom half. Supporting the base from the bottom, insert one of the provided hex screws into the base's center slot from above and tighten until the base is securely fastened to the assembly, as pictured below.



Repeat this process until you have installed enough bases for the V-Clamps you plan to use.

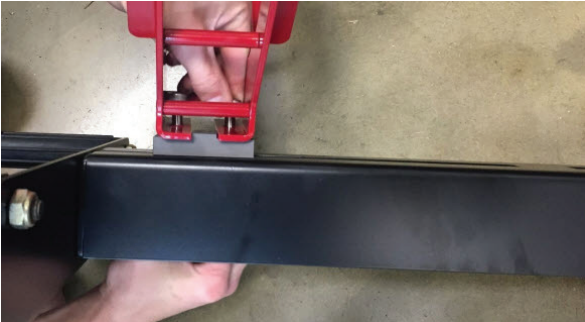
Step 3: Installing and Adjusting V-Clamps

Before placing fitting assembly into clamping assembly, determine the distance you will require for the V-Clamps to sit under the pipe and adjust the position of the bases accordingly.

Note: Some fittings will require removal of one of the two V-Clamps from each sliding base.

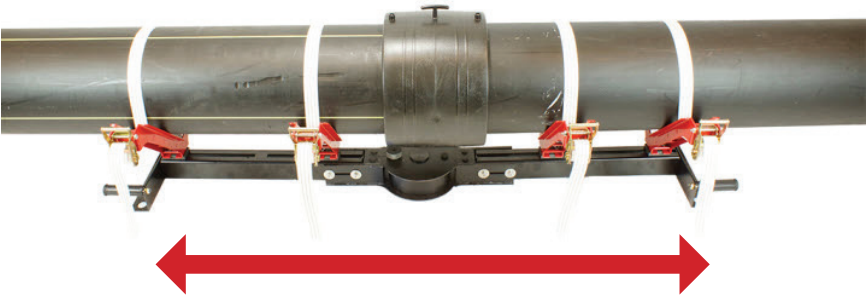
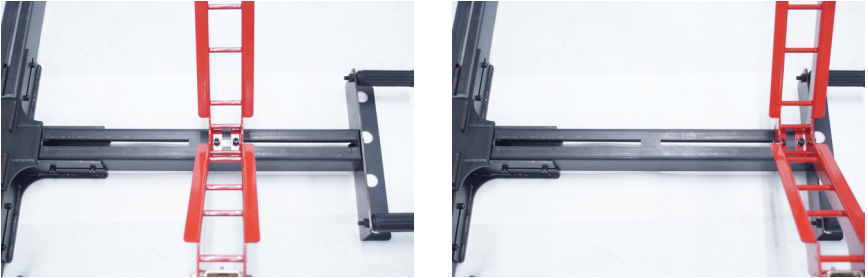
Note: V-Clamps should be clamped to the pipe rather than the fitting.

To install a V-Clamp, place it on the base installed in Step 2, and install the bolts to fasten clamp to base.



Once the bolts have been threaded, use the provided hex tool to tighten and fasten into place, as pictured below. If it is determined that clamps need to be adjusted after installation, use hex tool to loosen and adjust clamps as required.





Adjusting V-Clamps according to fitting

After adjusting the V-Clamps to desired positions, securely tighten them to the sliding V-Clamp base using the included hex tool so that there is no movement of the V-Clamp on the sliding base.



Assembled Multi-Clamp

Step 4: Place fitting assembly in MTD Multi-Clamp

Place fitting assembly to be fused in Multi-Clamp. Ensure that V-Clamps are supporting pipe rather than fittings themselves.



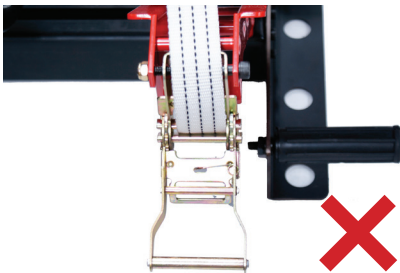
12" 90° Elbow assembly placed in MTD MultiClamp

Note: Some fittings may require support blocks. If this is necessary, wooden blocks may be used as support blocks.

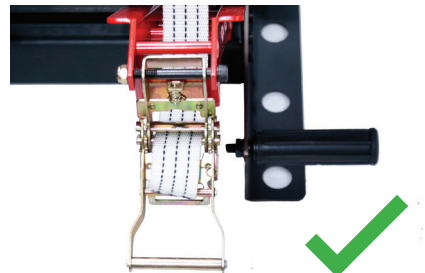
Step 5: Secure fitting assembly to MTD MultiClamp

After fitting assembly is properly situated in Multi-Clamp, install nylon straps on V-Clamps by passing one end of strap through ratchet mechanism slot and hooking the other end around the desired rung on the opposite side of the V-Clamp.

Note: Nylon strap must be passed through the ratchet mechanism from the underside rather than the top side.



Incorrect strap insertion through ratchet mechanism



Correct strap insertion through ratchet mechanism

After installing straps, tighten ratchet mechanisms on each V-Clamp to secure pipe and fitting to the clamp.



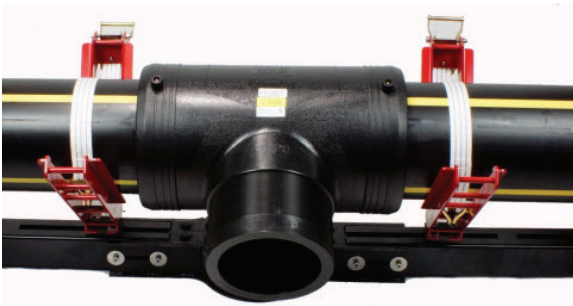
Placing hook end around rung on V-Brace

Step 6: Fuse fitting assembly

After tightening all straps, ensure that the fitting assembly cannot move in the clamp. If all pipe and fittings are secured, you can now fuse the assembly.

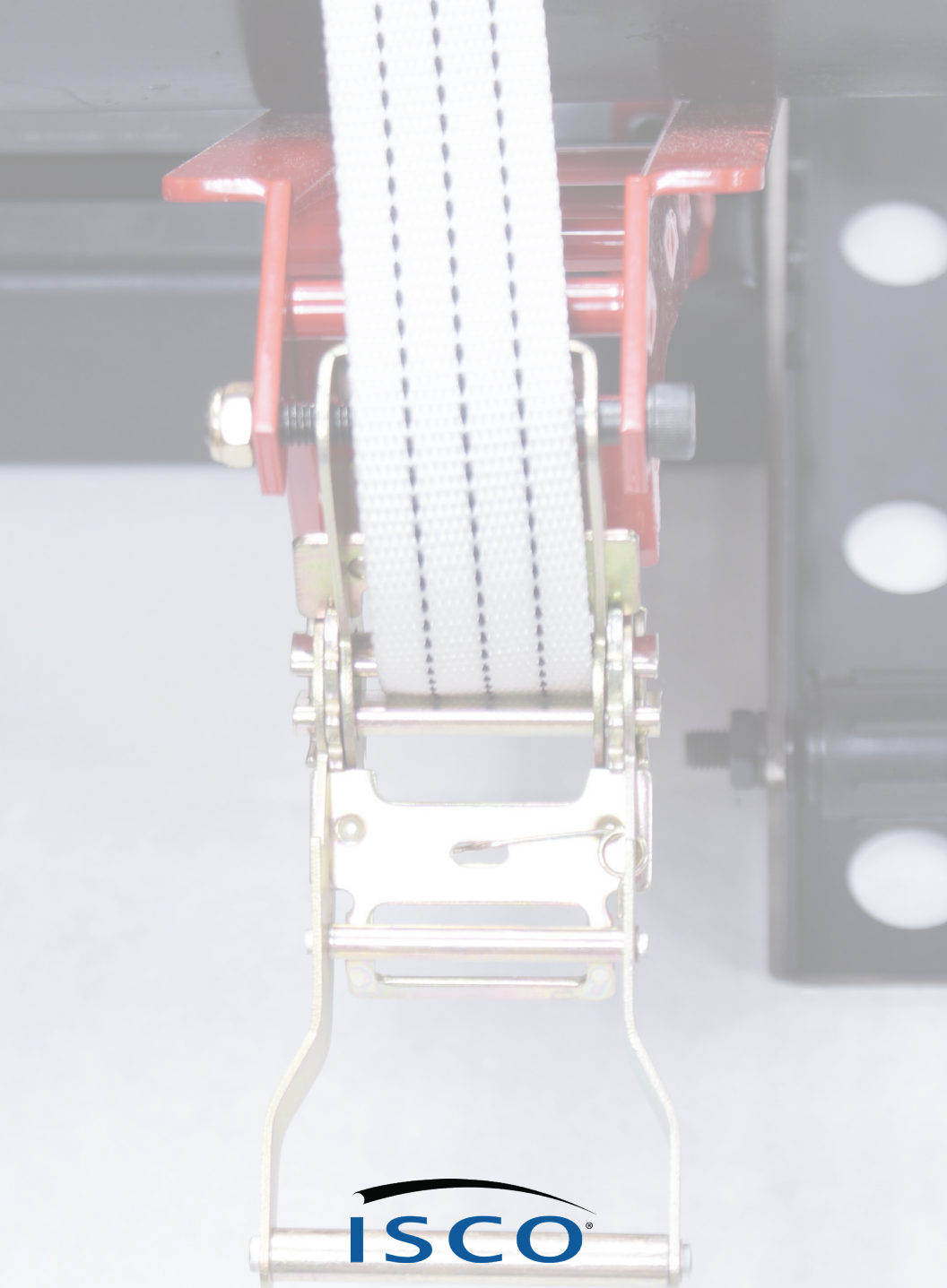


If fusing a three-way tee, put Multi-Clamp in straightened position first and fuse the two ends as pictured below.



Once the two ends have been fused, unstrap the pipe, remove it from the Multi-Clamp, and change the clamp to the 90° position. Reinstall the pipe on the Multi-Clamp, along with the coupling and third piece of pipe to be fused. Use blocks or another approved solution to support the unclamped piece of pipe. Once all pipe and fittings are secured, you can now fuse the assembly.





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