

Operator's Manual



McElroy Manufacturing, Inc.

The Leader by Design



No.2LC & No.14
Fusion Machines



Introduction



Thank You for purchasing this McElroy product

The No.2LC (Locking Cam) and No.14 model fusion machines are designed to produce consistently high quality fusion of pipe as well as tees, ells and other fittings.

The No.2LC fuses 1/2" CTS to 2" IPS (20mm to 60mm).

The No.14 fuses 1" IPS through 4" IPS (32mm through 110mm) A four-wheel chassis is also available.

With reasonable care and maintenance, these machines will give years of satisfactory service.

Before operating this machine, please read this manual thoroughly, and keep a copy with the machine for future reference. This manual is to be considered part of your machine.



PH01647-5-15-99

TX01083-5-18-99

World Class Training

This manual is intended as a guide only and does not take the place of proper training by qualified instructors. The information in this manual is not all inclusive and can not encompass all possible situations that can be encountered during various operations.

McElroy Manufacturing, Inc., offers advanced training classes to enhance efficiency, productivity, safety and quality. Training is available at our facility or on-site at your location. Call (918) 836-8611

TX01315-4-7-97



PH00917-8-15-97



Warranty



LIMITED WARRANTY

McElroy Manufacturing, Inc. guarantees this product to the original purchaser against workmanship and material defects for **three (3) years** from date of shipment, with the exception of purchased items (such as electronic devices, pumps, switches, etc.), in which case that manufacturer's warranty applies. This warranty does not apply to any product or component which has been repaired or altered by anyone other than McElroy Manufacturing, Inc., or has become damaged due to misuse, negligence or casualty, or has not been operated or maintained according to McElroy Manufacturing, Inc.'s printed instructions and warnings.

Claims cannot be allowed until the questioned product has been received, freight prepaid, at the manufacturer's factory, with complete information and data regarding the failure. Materials returned to McElroy Manufacturing, Inc. for warranty work, repair, etc., **must have a Return Material Authorization (RMA) number**, and be so noted on the package at time of shipment. This number may be obtained by calling (918) 836-8611. If seller's review indicates that warranty applies, the defective product will be repaired or replaced and returned to purchaser F.O.B. Tulsa, Oklahoma.

McElroy Manufacturing, Inc. is not responsible or liable for loss of any sort including incidental and consequential damages.

McElroy Manufacturing, Inc. specifically disavows any other representations as to warranty or liability, related to the condition or use of the product.

For assistance, inquiries shall be directed to McElroy Manufacturing, Inc., P.O. Box 580550, 833 North Fulton, Tulsa, Oklahoma 74158-0550, (918) 836-8611, Fax No. (918) 831-9285

DISCLAIMER OF LIABILITY

McElroy Manufacturing, Inc. accepts no responsibility of liability for fusion joints. Operation and maintenance of the product is the responsibility of others. We recommend qualified joining procedures be followed when using McElroy fusion equipment.

McELROY MAKES NO OTHER WARRANTY OF ANY KIND WHATEVER, EXPRESS OR IMPLIED; AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE AFORESTATED OBLIGATION ARE HEREBY DISCLAIMED BY McELROY.

PRODUCT IMPROVEMENT

McElroy Manufacturing, Inc. reserves the right to make any changes in or improvements on its products without incurring any liability or obligation to update or change previously sold machines and/or the accessories thereto.

TERMS AND CONDITIONS

Net 30 Days - Subject to credit approval. A carrying charge of 1-1/2% per month computed from invoice date will apply to invoices not paid within 30 Day Terms.

McElroy Manufacturing, Inc. must be notified of any discrepancy in shipment, order, and/or invoice within 10 days after receipt.

Freight is F.O.B. Tulsa, Oklahoma - usually motor freight collect or UPS unless otherwise specified.

Prices are subject to change without notice.

Minimum order is \$50.00.

(Copy information listed on the Warranty Card for your records).

Model No. _____

Serial No. _____

Date Received _____

Distributor _____



Table of Contents



Equipment Safety

Safety Alerts	1-1
Read and Understand	1-1
General Safety	1-2
Wear Safety Equipment	1-2
Heater is Not Explosion Proof	1-2
Electric Motors are Not Explosion Proof	1-3
Electrical Safety	1-3
Facer Blades are Sharp	1-3
Heater is Hot	1-4
Fusion Procedures	1-4
Periodically Check Temperature	1-4
Do Not Tow Fusion Machine at Speeds Greater than 5 MPH	1-4
Positioning Fusion Machine	1-5
Transporting 2LC and 2CU Units	1-5

Overview

Theory of Heat Fusion	2-1
No.14 Chassis	2-2
Outrigger Pipe Supports	2-2
Electric Facer	2-3
Manual Facer	2-3
Cam Lock	2-3
Heater	2-4
Insulated Heater Stand	2-4

Operation

Read Before Operating	3-1
Prepare Heater	3-1
Install Clamping Inserts	3-1
Loading Pipe into Machine	3-2
Positioning Pipe in Machine	3-2
Facing the Pipe	3-2
Check Alignment of Pipe	3-2
Check Heater Temperature	3-3
Inserting Heater	3-3
Heating the Pipe	3-4
Fusing the Pipe	3-4
Removing Pipe	3-4

COPYRIGHT © 1999

McELROY MANUFACTURING, INC.

Tulsa, Oklahoma, USA

All rights reserved

All product names or trademarks are property of their respective owners. All information, illustrations and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.



Table of Contents



Maintenance

Preventative Maintenance	4-1
Cleaning the Machine	4-1
Clean and Lubricate Guide Rods	4-1
Pivot Pins and Shafts	4-1
Remove Dirt	4-2
Clean and Lubricate Bearings	4-2
Clean Eyebolt Threads	4-2
Fasteners Must be Tight.	4-2
Installing Butt Fusion Heater Adapters	4-3
Clean Heater Surfaces	4-3
Adjusting Heater Temperature	4-3
Facer and Blades.	4-4
Facer Guides	4-4

Machine Maintenance Checklist

Maintenance Checklist	5-1
---------------------------------	-----

Specifications

No.2LC, No.14 and No.14 Cart	6-1
--	-----




Fusion Equipment Safety



WR00051-1-30-92

Safety Alerts

This hazard alert sign  appears in this manual. When you see this sign, carefully read what it says. YOUR SAFETY IS AT STAKE.

You will see the hazard alert sign with these words: DANGER, WARNING, and CAUTION.



Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a hazardous situation which, if not avoided, may result in minor or moderate injury.

In this manual you should look for two other words: **NOTICE** and **IMPORTANT**.

NOTICE: can keep you from doing something that might damage the machine or someone's property. It may also be used to alert against unsafe practices.

IMPORTANT: can help you do a better job or make your job easier in some way.

TX00030-12-1-92



Read and Understand

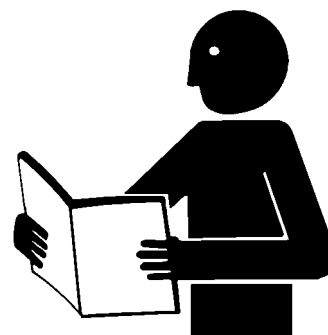
Do not operate this equipment until you have carefully read, and understand the "Safety" and "Operation" sections of this manual, and all other equipment manuals that will be used with it.

Your safety and the safety of others depends upon care and judgment in the operation of this equipment.

Follow all applicable federal, state, local, and industry specific regulations.

McElroy Manufacturing, Inc. cannot anticipate every possible circumstance that might involve a potential hazard. The warnings in this manual and on the machine are therefore not all inclusive. You must satisfy yourself that a procedure, tool, work method, or operating technique is safe for you and others. You should also ensure that the machine will not be damaged or made unsafe by the method of operation or maintenance you choose.

TX00031-12-8-92



WR00052-12-1-92



Fusion Equipment Safety



General Safety

Safety is important. Report anything unusual that you notice during set up or operation.

LISTEN for thumps, bumps, rattles, squeals, air leaks, or unusual sounds.

SMELL odors like burning insulation, hot metal, burning rubber, hot oil, or natural gas.

FEEL any changes in the way the equipment operates.

SEE problems with wiring and cables, hydraulic connections, or other equipment.

REPORT anything you see, feel, smell, or hear that is different from what you expect, or that you think may be unsafe.

TX00114-4-22-93



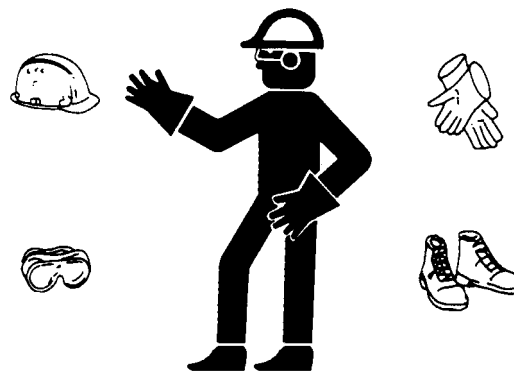
SAFE1ST-12-22-92

Wear Safety Equipment

Wear a hard hat, safety shoes, safety glasses, and other applicable personal protective equipment.

Remove jewelry and rings, and do not wear loose-fitting clothing or long hair that could catch on controls or moving machinery.

TX00032-4-7-93

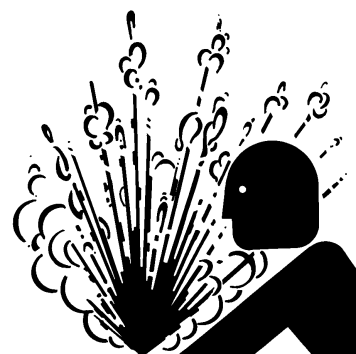


WR00053-12-2-92

Heater Is Not Explosion Proof

⚠ DANGER This heater is not explosion proof. Operation of heater in a hazardous environment without necessary safety precautions will result in explosion and death.

If operating in a hazardous environment, the heater should be brought up to temperature in a safe environment, then **unplugged before entering** the hazardous atmosphere for fusion.



WR00034-11-30-92

TX00100-9-16-94



Fusion Equipment Safety



Electric Motors are Not Explosion Proof



Electric motors are not explosion proof. Operation of these components in a hazardous environment without necessary safety precautions will result in explosion and death.



TX00873-2-7-96

WR00080-4-12-93

Electrical Safety



Always ensure power cords are properly grounded. It is important to remember that you are working in a wet environment with electrical devices. Proper ground connections help to minimize the chances of an electric shock.

Frequently inspect electrical cords and unit for damage. Have damaged components replaced and service performed by a qualified electrician.

Do not carry electrical devices by the cord.

NOTICE: Always connect units to the proper power source as listed on the unit, or in the owner's manual. On units with two power cords, plug each cord into separate power circuits. Do not plug into both outlets of one duplex receptacle.

NOTICE: Disconnect the machine from the power source before attempting any maintenance or adjustment.



TX00105-4-12-93

WR00055-4-7-93

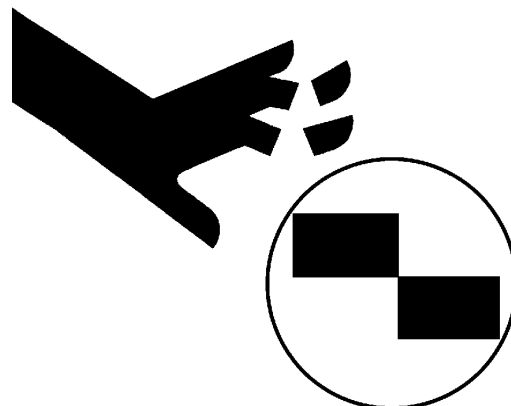
WR00025-11-30-92

Facer Blades Are Sharp



Facer blades are sharp and can cut. Never attempt to remove shavings while the facer is running, or is in the facing position between the jaws. Use care when operating the facer, and when handling the unit.

NOTICE: Disconnect power from the facer, and remove the facer blades before attempting any maintenance or adjustment.



TX00102-4-16-93

WR00073-4-6-93



Fusion Equipment Safety



Heater is Hot



The heater is hot and will burn clothing and skin. Keep the heater in its insulated heater stand or blanket when not in use, and use care when heating the pipe.

NOTICE: Use only a clean non-synthetic cloth such as a cotton cloth to clean the heater plates.

TX00104-8-12-94



WR00030-2-10-93

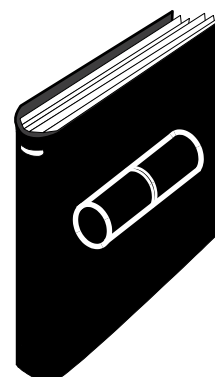
Fusion Procedures

Obtain a copy of the pipe manufacturer's procedures for the pipe being fused. Follow the procedure carefully, and adhere to all specified parameters.



Failure to follow pipe manufacturer's procedure could result in a bad joint. Always follow pipe manufacturer's procedures.

TX00113-4-12-93



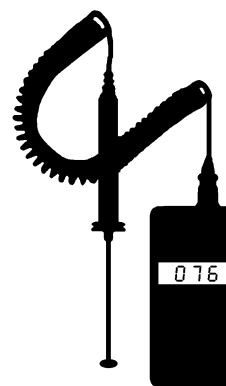
WR00079-1-24-96

Periodically Check Temperature

NOTICE: Incorrect heating temperature can result in bad fusion joints. Check heater plate surface temperature periodically with a properly calibrated pyrometer, and make necessary adjustments.

The thermometer on heaters indicates internal temperature, and should be used as a reference only.

TX00107-11-13-95



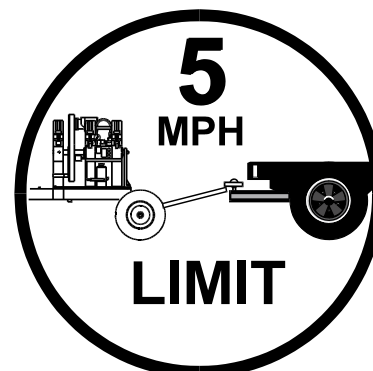
WR00077-4-16-93

Do Not Tow Fusion Machine at Speeds Greater than 5 MPH



The chassis is not designed for over-road towing. Towing at speeds greater than five miles per hour can result in machine damage as well as injury. Always transport the machine by flatbed truck or similar means, and make sure that unit is properly secured.

TX00101-4-12-93



CD00189-1-24-96



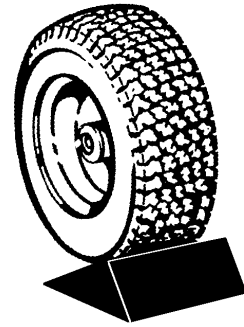
Fusion Equipment Safety



Positioning Fusion Machine

Place fusion machine on as level ground as possible, and set the brake on the rear wheel. If it is necessary to operate machine on unlevel grade, chock the wheels and block the unit to make it as stable as possible.

TX00112-9-15-94



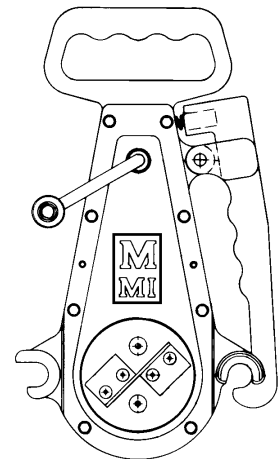
WR00076-4-7-93

Transporting 2LC and 2CU Units

On smaller machines it is easiest to carry the unit if the facer is securely installed and locked on the fusion unit. The facer has a handle that allows the unit to be firmly grasped and carried.

NOTICE: Do not carry unit by the lever handles because they can release or bend. Care must be used if the unit is grasped elsewhere because numerous pinch points exist.

TX00111-4-22-93



WR00081-4-22-93

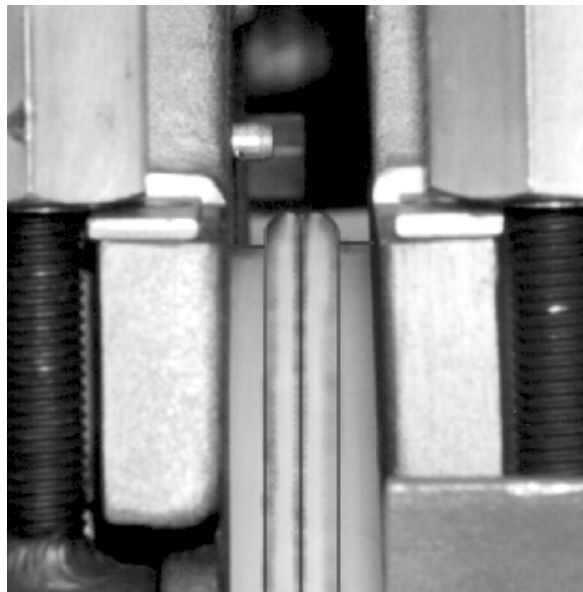
Theory of Heat Fusion

The principle of heat fusion is to heat two surfaces to a designated temperature, and then fuse them together by application of force. This pressure causes flow of the melted materials, which causes mixing and thus fusion. When the polyethylene pipe is heated, the molecular structure is transformed from a crystalline state into an amorphous condition. When fusion pressure is applied, the molecules from each pipe end mix. As the joint cools, the molecules return to their crystalline form, the original interfaces are gone, and the two pipes have become one homogeneous pipe. The joint area becomes stronger than the pipe itself in both tensile and pressure conditions.

The principle operations include:

- Clamping** The pipe pieces held axially to allow all subsequent operations to take place.
- Facing** The pipe ends must be faced to establish clean, parallel mating surfaces perpendicular to the centerline of the pipes.
- Alignment** The pipe ends must be aligned with each other to minimize mismatch or high-low of the pipe walls.
- Heating** A melt pattern that penetrates into the pipe must be formed around both pipe ends.
- Joining** The melt patterns must be joined with a specified force. The force must be constant around the interface area.
- Holding** The molten joint must be held immobile with a specified force until adequately cooled.

Each pipe manufacturer has a slightly different approach for fulfilling the heating, joining, and holding phases, but the end result is the same – a fusion joint that is as strong or stronger than the pipe itself.



PH00363B-1-496



Overview



No.14 Chassis

A No.14 carriage assembly can be mounted on a No.14 four wheel chassis for mobility and movement along the pipe line.

There is a clamping wheel lock on the left rear wheel to prevent rolling.

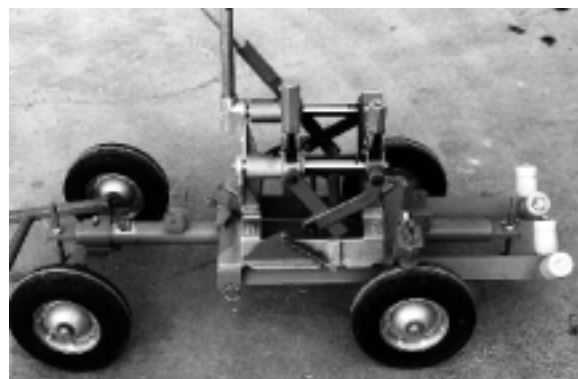


WARNING Towing at speeds greater than 5 mph can result in machine damage as well as injury. Always transport the machine by flatbed truck or similar means.

The tongue on the tow bar has a ring to slip over a ball hitch so the machine can be conveniently maneuvered at the job site.

The cart is not designed for over-road towing.

The cart has outrigger pipe supports that conveniently stow under the cart when not in use.



PH00651-1-4-96



PH00652-1-4-96

TX00833-1-5-96

Outrigger Pipe Supports

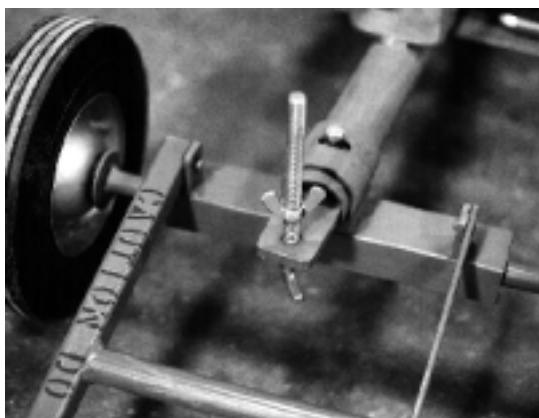
The No.14 cart comes equipped with two outrigger pipe supports that are fastened with pins under the cart.

To use the outriggers, simply remove attaching pins, pull outriggers out and reinstall on the top front and back of the cart with attaching pins.

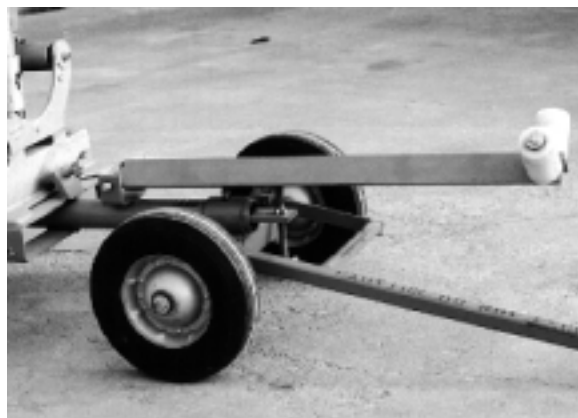
The outriggers rest on adjusting screws that can be adjusted up or down for proper pipe alignment. A wing nut on each adjusting screw locks the screw setting in place.



PH00653-1-4-96



PH00694-1-29-96



PH00654-1-4-96

Electric Facer

The facer is a McElroy Rotating Planer Block Design. The blade holders each contain two cutter blades. The block rotates on ball bearings and is chain driven (enclosed in lubricant) by a heavy duty drill motor. When operating in a hazardous environment, operate the facer manually.



DANGER

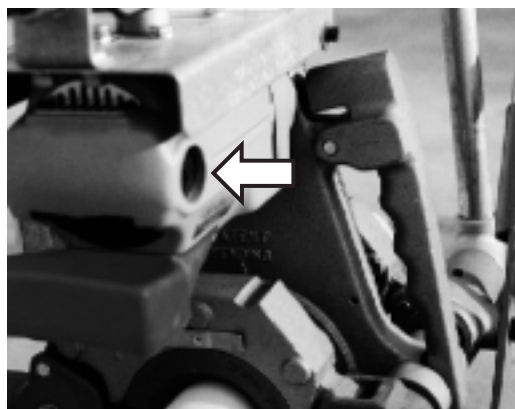
Electric motors are not explosion proof. Operation of these components in a hazardous environment will result in explosion and death.

The armature brushes must be removed from the electric motor when manually operating in a hazardous condition. Unscrew the brushes from both sides of the motor. (Both brushes must be removed). A 7/8" hex shaft allows for manual operation in hazardous conditions.

The facer has a handle that latches into place on a guide bar. The handle must be pulled out to unlatch and remove facer.



PH00655-1-4-96



PH00656-1-4-96

TX00835-1-5-96

Manual Facer

The manually operated facer has a hand powered crank. Turn the crank counterclockwise for facing.

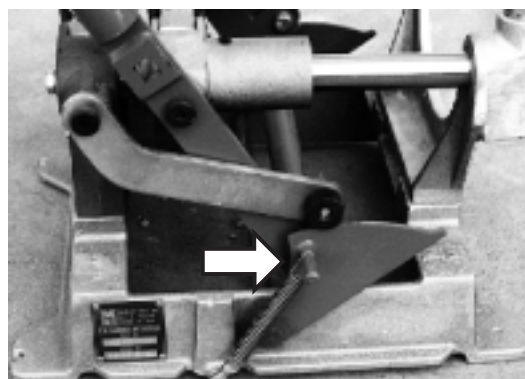


PH00657-1-4-96

TX00836-1-5-96

Cam Lock

A semi-automatic cam locking system locks the movable jaw during the cooling cycle.



PH00659-1-4-96

TX00837-1-5-96



Overview



Heater



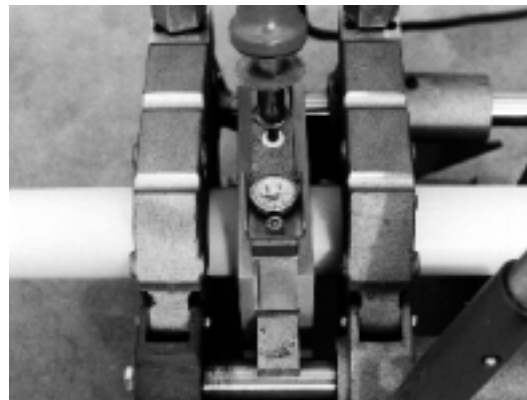
Heater is not explosion proof. Operation of heater in a hazardous environment without necessary safety precautions will result in explosion and death.

If operating in a hazardous environment, heater should be brought up to temperature in a safe environment, then **unplugged before entering** the hazardous atmosphere for fusion.

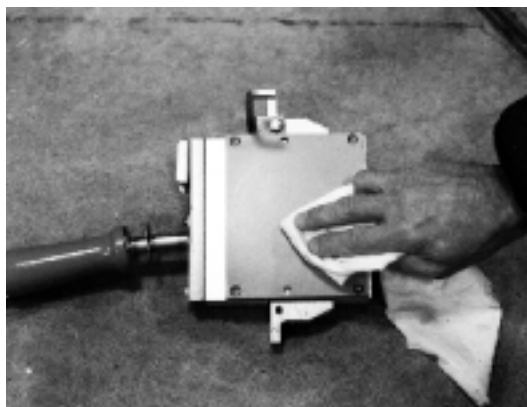
The heater is thermostatically controlled. The heater body is not coated. Coated butt fusion heater adapters are available for all butt fusion applications.

NOTICE: The heater should never be used without butt fusion heater adapters installed.

To prevent a build-up of plastic pipe residue from accumulating on the heater plates (loss of surface temperature and pipe sticking may result), the heater plates should be cleaned with a non-synthetic cloth before and after every fusion joint.



PH00658-1-4-96



PH00696-1-30-96

TX00360-9-22-94

Insulated Heater Stand

The heater should always be stored in the insulated heater stand or blanket for protection of the operator and to minimize heat loss and risk of mechanical damage.



PH00655-1-4-96

TX00363-9-15-94



Operation



Read before Operating

Before operating this machine, please read this manual thoroughly and keep a copy with the machine for future reference.



PH010542-20-97

TX00838-1-5-96

Prepare Heater



DANGER Heater Is Not Explosion Proof. Operation of heater in a hazardous environment without necessary safety precautions will result in explosion and death.

If operating in a hazardous environment, heater should be brought up to temperature in a safe environment, then unplugged before entering the hazardous atmosphere for fusion.

Install butt fusion heater adapters.

NOTICE: The heater should never be used without butt fusion heater adapters installed. Refer to the "Maintenance" section of this manual for installation procedure.

Place heater in insulated heater stand.

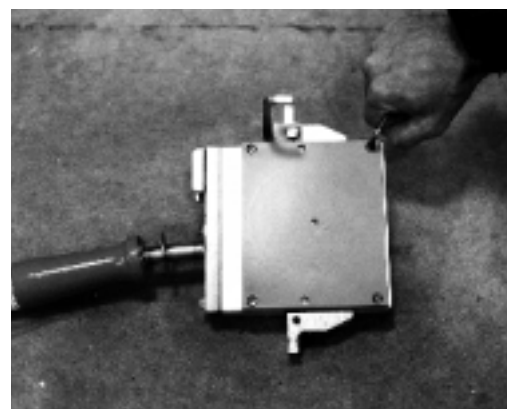
Plug heater into a proper power source.

Allow heater to warm-up to operating temperature.

Refer to the "Maintenance" section of this manual for instructions how to adjust heater temperature.



PH010572-20-97



PH010932-20-97

TX00366-9-16-94

Install Clamping Inserts

Select and install appropriate clamping inserts for the pipe that is being fused.



PH010332-20-97

TX00368-9-15-94



Operation

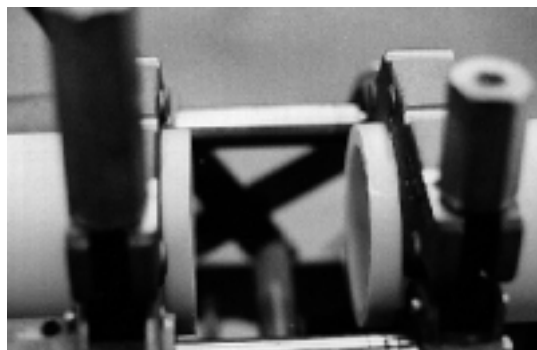


Loading Pipe Into Machine

Clean the inside and outside of pipe ends that are to be fused.

Open the upper jaws and insert pipe in each pair of jaws with applicable inserts installed. Let the ends of the pipe protrude about 1" past the face of the jaws.

TX00371-9-15-94



PH00709-2-12-96

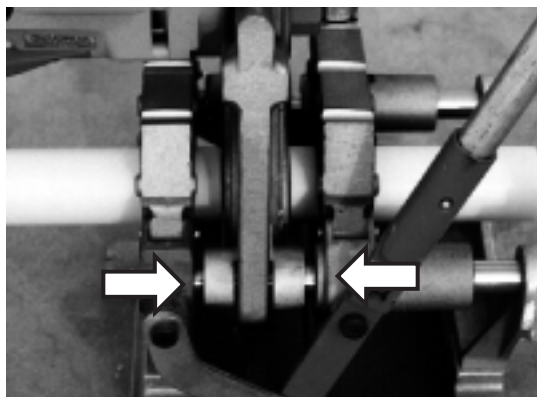
Positioning Pipe in Machine

Position the facer on the guide rods and lock into position. Using lever handle, bring pipe ends together against the facer, watching the gap between the facer stops and the pipe clamping jaws.

Leave enough **gap** so that proper face-off will be achieved when the facer stops are bottomed out against the clamps. Tighten the pipe clamp knobs until firm resistance is felt. Do not over-tighten.

NOTICE: Thoroughly clean all dirt and debris from pipe ends before facing.

TX00839-1-5-96



PH00661-1-8-96

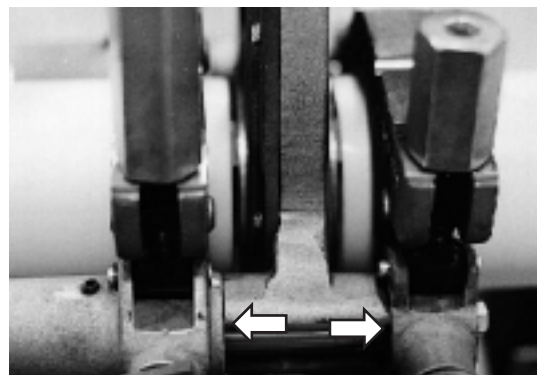
Facing the pipe

Turn facer handle counterclockwise and apply firm pressure on lever handle. Continue facing until facer stops have bottomed out against the clamping jaws. Stop rotation of facer.

Unlatch and remove facer. Remove shavings from pipe ends and machine. Do not touch faced pipe ends.

Inspect both pipe ends for complete face off. If the face off is incomplete, return to **Loading Pipe Into Machine**.

TX00840-12-11-96



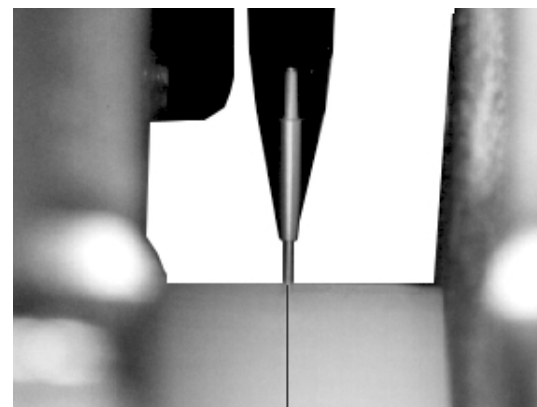
PH00710-2-12-96

Check Alignment of Pipe

Bring the pipe ends together and check for alignment. If high/low (misalignment) exists, adjust by tightening the high side clamp. When pipe is properly aligned, tighten both clamps simultaneously to ensure against pipe slippage.

NOTICE: When clamping, do not over-tighten the clamp knobs because machine damage can result. Check to see if there is space between the upper and lower jaws. If the two jaws are touching, do not continue to tighten. Bring the pipe ends together under fusion pressure to check for slippage. If slippage occurs, return to **Loading Pipe into Machine**.

TX00976-6-11-96



PH00357-9-12-94

Check Heater Temperature

CAUTION

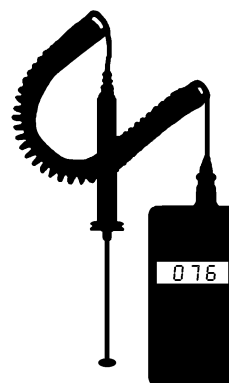
Incorrect heating temperature can result in questionable fusion joints. Check heater plates periodically with a pyrometer and make necessary adjustments.

Check heater surface temperature.

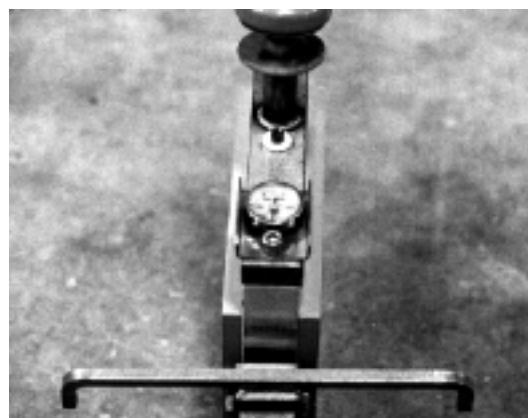
Refer to the pipe manufacturer's recommendations for proper heater temperature.

IMPORTANT: The dial thermometer on the heater indicates internal temperature which varies from the actual surface temperature.

The dial thermometer can be used as reference once the surface temperature has been verified.



WR00077-4-16-93



PH00699-2-8-96

TX00375-11-1-94

Inserting Heater

DANGER

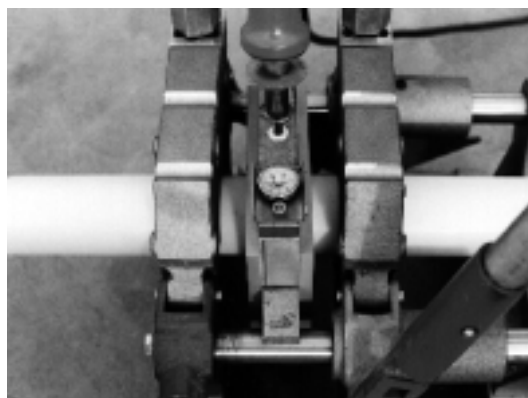
Heater Is Not Explosion Proof. This unit is not explosion proof. Operation of heater in a hazardous environment without necessary safety precautions will result in explosion and death.

If operating in a hazardous environment, heater should be brought up to temperature in a safe environment, then unplugged before entering the hazardous atmosphere for fusion.

Use a clean non-synthetic cloth to clean the butt fusion heater adapter surfaces.

Verify heater temperature by noting the reading on the dial thermometer.

Insert heater between the pipe ends.



PH00662-1-8-96

TX00377-9-15-94



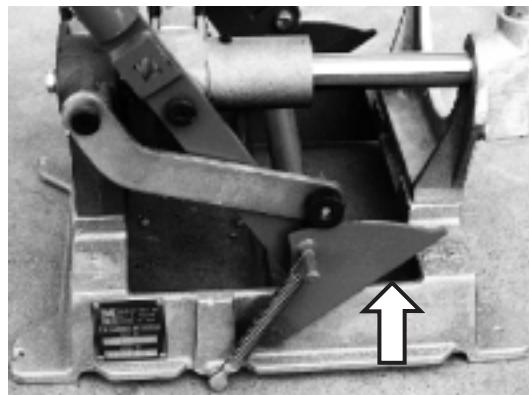
Operation



Heating the Pipe

With heater in position between the pipe ends, snap pipe ends sharply against the heater to ensure alignment. Follow the pipe manufacturer's recommendations for heating time and pressure. Raise the locking cam into the engaged position while in the heating cycle.

TX00842-1-8-96



PH00659-1-4-96

Fusing the Pipe

After the heating cycle is completed, remove the heater and quickly apply fusion force with the lever handle in accordance with the pipe manufacturer's recommended fusion procedure. A torque wrench can be used.

The locking cams will assist by holding force during the cooling cycle.

CAUTION Failure to follow pipe manufacturer's heating time, pressure and cooling time may result in a bad joint.



PH00885-7-8-96

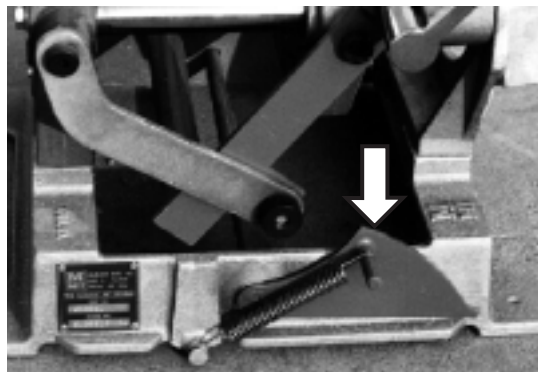
TX00843-1-8-96

Torque Wrench Reading (Ft Lb)	No.2LC Load Cell Reading (Lb)	No.14 Load Cell Reading (Lb)
10	70	80
20	135	165
30	200	238
40	260	307
50	320	397
60	400	488
70	480	585
80	550	637
90	635	713
100	690	788

Removing Pipe

After pipe has cooled sufficiently, apply force on the lever handle and push the locking cams down into the unlocked position.

TX00844-1-8-96



PH00664-1-8-96



Maintenance

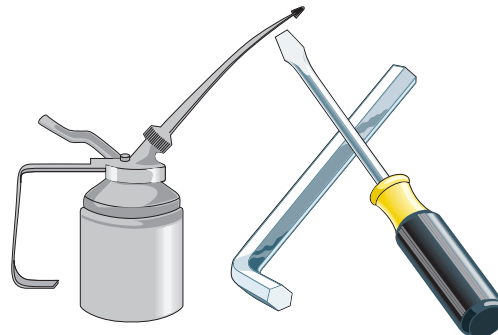


Preventative Maintenance

To insure optimum performance, the machine must be kept clean and well maintained.

With reasonable care, this machine will give years of service. Therefore, it is important that a regular schedule of preventive maintenance be kept.

Store machine inside, out of the weather, whenever possible.



CD00142-11:2-94

TX00428-8-10-95

Cleaning Machine

Clean the machine with a soap and water wash as needed. Remove the heater and facer from the spray area before cleaning.



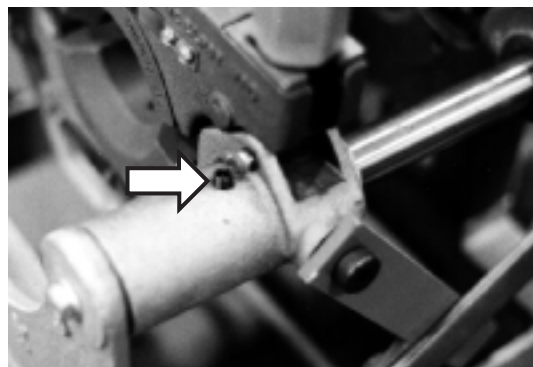
PH00723-2:2-1-96

TX00862-1-30-96

Clean and Lubricate Guide Rods

Remove oily dirt buildup from guide rods using WD-40® or similar solvent and wipe guide rods clean. Do not leave the cleaning agent on the guide rods.

Remove the 1/16" pipe plugs on each side of the moveable jaw. Lubricate guide rod bushings with SAE 10W-40 motor oil through the oil holes on the movable jaw. Replace the pipe plugs.

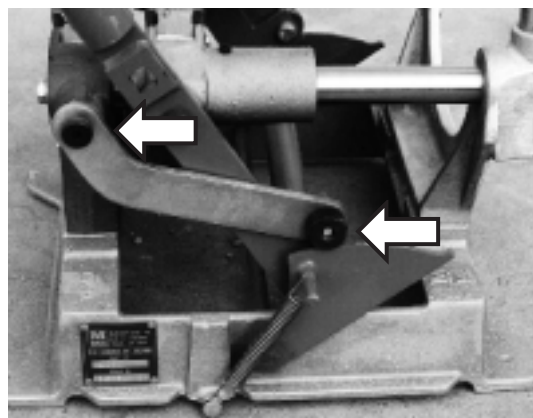


PH00700-1:30-96

TX00863-1-30-96

Pivot Pins and Shafts

Occasionally add a drop of oil to pivot pins and shafts.



PH00687-1:25-96

TX00864-1-30-96



Maintenance



Remove Dirt

Remove dirt from jaw and insert serrations and clamp knob eyebolts.

TX00865-1-30-96

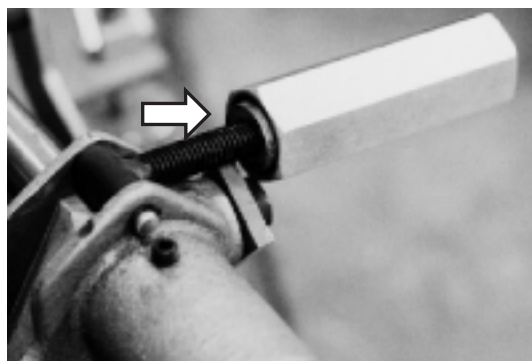


PH00724-2-21-96

Clean and Lubricate Bearings

All clamp knobs are equipped with thrust bearings to reduce friction and improve efficiency of the clamping screw. Keep these bearings clean by washing in kerosene or solvent. They should be lubricated with light machine oil. These bearings must be replaced if they become inoperative.

TX00866-1-30-96

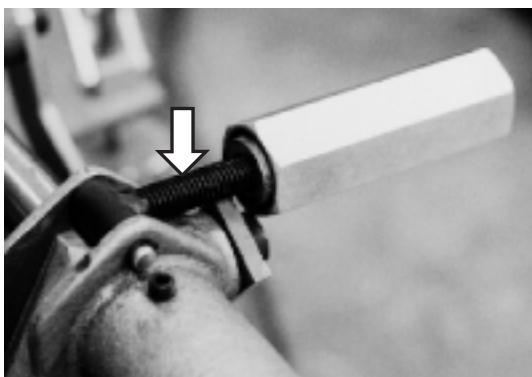


PH00701-1-30-96

Clean Eyebolt Threads

Keep the clamp knob eyebolt threads brushed clean.

TX00435-9-13-94

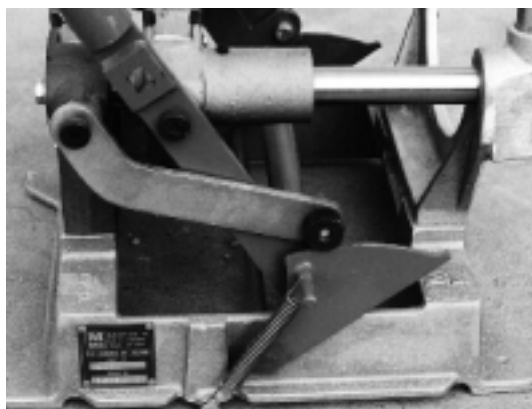


PH00701-1-30-96

Fasteners Must Be Tight

Check all nuts, bolts, and snap rings to make certain they are secure and in place.

TX00437-9-13-94



PH00687-1-25-96

Installing Butt Fusion Heater Adapters

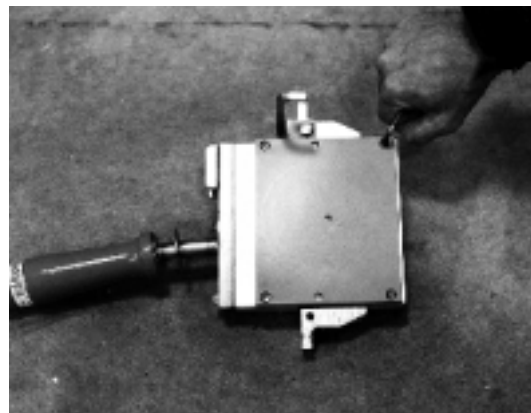
The heater body of this assembly is not coated. Coated butt fusion heater plates are available for all butt fusion applications.

Butt fusion heater adapters are installed with eight Stainless Steel Cap Screws.

Care should be taken to assure that the butt fusion heater adapters are seated on the heater body, and that there is no foreign matter trapped between these surfaces.

IMPORTANT: Do not over tighten the bolts.

The surface of the butt fusion heater adapters are coated with an antistick coating.



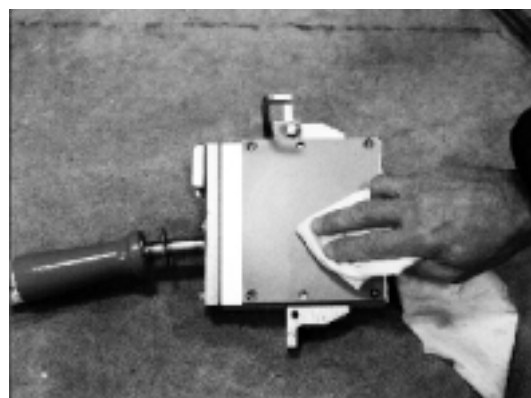
PH00697-1-30-96

TX00443-9-22-94

Clean Heater Surfaces

The heater adapters must be kept clean and free of any plastic build-up or contamination.

Before and after each fusion is made, the surface of the heater adapters must be wiped with a clean, non-synthetic cloth.



PH00696-1-30-96

TX00867-1-30-96

Adjusting Heater Temperature



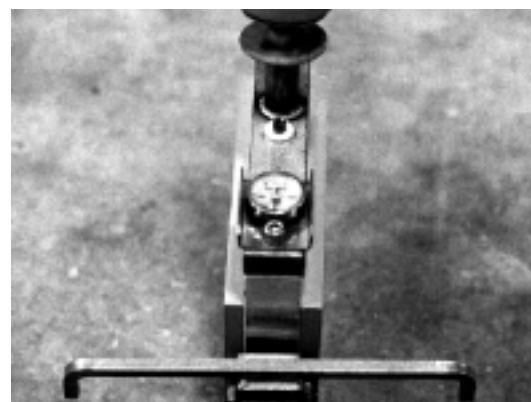
Incorrect adjustment can result in injury as well as machine damage. Follow these instructions carefully.

The heater thermoswitch adjustment shaft protrudes through the heater handle base.

Turn the adjustment shaft clockwise to lower temperature, counterclockwise to raise temperature.

Allow sufficient amount of time for unit to stabilize at the new temperature (5 to 10 minutes) after each adjustment.

One full turn equals approximately 100° F.



PH00699-1-30-96

TX00442-9-15-94



Maintenance

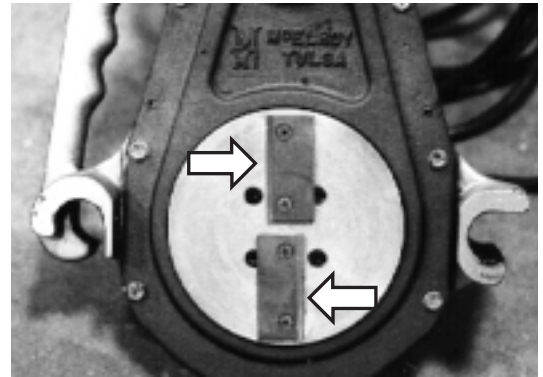


Facer and Blades

The facers are packed with a high temperature grease at assembly. The facer does not require repacking of grease.

Inspect the facer blades for damage and sharpness. If dullness or damage appears on one section of the blade, installing the blade on the opposite side of the blade holder will normally position a sharp edge in the facing zone. Chipped or dull blades must be replaced.

TX00868-1-30-96

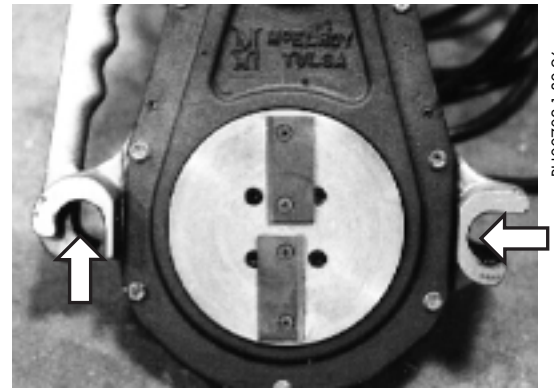


PH00702-1-30-96

Facer Guides

To minimize friction on the guide rods, spray surfaces of facer guides with Dow Corning® 557 Silicone Dry Film Lubricant, or equivalent, as required.

TX00874-2-9-96



PH00702-1-30-96



Maintenance Checklist



No.2LC and No.14 Fusion Machine Checklist

Item to Check	Satisfactory	Needs Repair	Repair Comments
UNIT			
Machine is clean			
Clamp knob bearings lubricated and move freely			
Moveable jaw lubricated and moves freely			
Locking cam works properly			
Guide rods are not damaged			
Clamping jaw and insert grooves are clean			
Spring clips work properly			
All nuts and bolts are tight			
Lever handles are with unit			
CHASSIS			
Brake and unit lockdown clamps are adjusted properly			
Outrigger adjusting screws work freely			
All nuts and bolts are tight			
FACER			
Check cord, plug and switch			
Check for play in blade holder			
Facer does not wobble when trapped between jaws			
Blades are in good condition			
Latch handle locks onto guide rod freely			
Facer moves on guide rods without excessive force			
Facer is clean and free of grease on blade holder surface			
HEATER			
Cord and plug are in good condition			
Heater surface is clean and in good condition			
Thermometer is in good working order			
Surface temperature checked with pyrometer			

TX00875-2-9-96



Specifications



Model No.2LC

Specification:

Designed for 1/2" CTS to 2" IPS pipe
(20mm to 60mm)

Dimensions:

Width: 14" (357mm)
Length: 13" (330mm)
Height: 15" (381mm)

Weight: 23 lbs. (10.4Kg)

Heater: 800 W, 120 VAC, 60 Hz
(220 V, 50 Hz)

Model No.14

Specifications:

Designed for 1" IPS to 4" IPS pipe
(32mm to 110mm)

Dimensions:

Width: 16.5" (419mm)
Length: 15" (381mm)
Height: 15.5" (394mm)

Weight: 35 lbs. (15.9Kg)

Heater: 1200 W, 120 VAC, 60 Hz
(220 V, 50 Hz)

Facer: 7 Amps @ 120 VAC (Running)
22 Amps @ 120 VAC (Stall)

No.14 Cart

Dimensions:

Width: 22" (559mm)
Length: 45" (1143mm)
Height: 15" (381mm)

Weight: 76 lbs. (34.4Kg)

About this manual . . .

McElroy Manufacturing continually strives to give customers the best quality products available. This manual is printed on Teslin®, a polyolefin plastic film made for durable applications and harsh environments.

This manual is waterproof, tear resistant, grease resistant, abrasion resistant and the bonding quality of the printing ensures a readable, durable product.

Teslin does not contain any cellulose based materials and does not contribute to the harvesting of our forests. Teslin is non-toxic and does not contain any ozone-depleting constituents. Teslin can be safely disposed of in a landfill and will not leach into ground water.

TX001597-2-15-99



McElroy Manufacturing, Inc.

The leader by design

P.O.Box 580550 • Tulsa, Oklahoma 74158-0550
(918) 836-8611 • Fax: (918) 831-9285