

Original Language: English

AWARNING

Cancer and Reproductive Harm www.P65warnings.ca.gov

163361

This product and other products could be protected by patents or have patents pending. All the latest patent information is available at patent.mcelroy.com

Introduction

Thank you for purchasing this McElroy product.

The Polyhorse[®] is a pipe rack system designed to stage multiple sticks of plastic pipe at the proper height for feeding directly into a McElroy fusion machine. By doing this, the time consuming task of pipe loading into the fusion machine is greatly reduced increasing overall productivity.

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. A replacement manual can be obtained online at: www.mcelroy.com

Always return the manual to the literature compartment. TX02678-12-6-06

McElroy University

For more than 30 years, McElroy has been the only pipe fusion machine manufacturer to continuously offer advanced training. Course offerings are meant to enhance your efficiency, productivity and safety in the proper use of McElroy machines. McElroy University classes are structured so that the skills learned and the machines used in each class closely match the machines found on pipelining jobsites. We offer training at our facility or yours. Our uniquely qualified McElroy University course instructors offer years of industry experience.

Tuition for each course includes lunches, course materials and a certificate of completion. Online registration, as well as up-to-date course offerings and dates, is available at **www.mcelroy.com/university**

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.







MU2-03-13-14



LIMITED WARRANTY

McElroy Manufacturing, Inc. (McElroy) warrants all products manufactured, sold and repaired by it to be free from defects in materials and workmanship, its obligation under this warranty being limited to repairing or replacing at its factory and new products, within 5 years after shipment, with the exception of purchased items (such as electronic devices, pumps, switches, etc.), in which case that manufacturer's warranty applies. Warranty applies when returned freight is prepaid and which, upon examination, shall disclose to have been defective. This warranty does not apply to any product or component which has been repaired or altered by anyone other than McElroy or has become damaged due to misuse, negligence or casualty, or has not been operated or maintained according to McElroy's printed instructions and warnings. This warranty is expressly in lieu of all other warranties expressed or implied. The remedies of the Buyer are the exclusive and sole remedies available and Buyer shall not be entitled to receive any incidental or consequential damages. Buyer waives the benefit of any rule that disclaimer of warranty shall be construed against McElroy and agrees that such disclaimers herein shall be construed liberally in favor of McElroy.

RETURN OF GOODS

Buyer agrees not to return goods for any reason except upon the written consent of McElroy obtained in advance of such return, which consent, if given, shall specify the terms and conditions and charges upon which any such return may be made. Materials returned to McElroy, for warranty work, repair, etc., **must have a Return Material Authorization (RMA) number**, and be so noted on the package at time of shipment. For assistance, inquiry shall be directed to:

McElroy Manufacturing, Inc. P.O. Box 580550

833 North Fulton Street Tulsa, Oklahoma 74158-0550

PHONE: (918) 836–8611, FAX: (918) 831–9285. EMAIL: fusion@McElroy.com

Note: Certain repairs, warranty work, and inquiries may be directed, at McElroy's discretion, to an authorized service center or distributor.

DISCLAIMER OF LIABILITY

McElroy 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 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.

INFORMATION DISCLOSED

No information of knowledge heretofore or hereafter disclosed to McElroy in the performance of or in connection with the terms hereof, shall be deemed to be confidential or proprietary, unless otherwise expressly agreed to in writing by McElroy and any such information or knowledge shall be free from restrictions, other than a claim for patent infringement, is part of the consideration hereof.

PROPRIETARY RIGHTS

All proprietary rights pertaining to the equipment or the components of the equipment to be delivered by McElroy hereunder, and all patent rights therein, arising prior to, or in the course of, or as a result of the design or fabrication of the said product, are exclusively the property of McElroy.

LAW APPLICABLE

All sales shall be governed by the Uniform Commercial Code of Oklahoma, U.S.A.

Register your product online to activate your warranty: www.McElroy.com/fusion

(Copy information listed on the machine nameplate here for your records).

Model No._____

Serial No. _____

Date Received

Distributor_____

Equipment Safety

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time of publication. The right is reserved to make changes at any time with	out notice.

TX02679-10-13-09



Equipment Safety

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.

A DANGER

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

AWARNING 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



NR00051-11-30-92



Read and Understand

Do not operate this equipment until you have carefully read, and understand all the 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.





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.



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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.

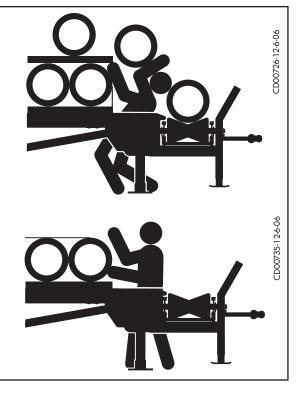


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Crush Hazard

A DANGER

Pipe can move and crush operator. Do not stand within bounds of racks while pipe is stacked or handling pipe. Failure to do so may result in serious injury or death.



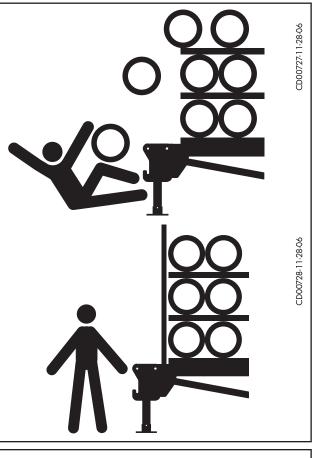


Equipment Safety

Use Stanchions

A DANGER

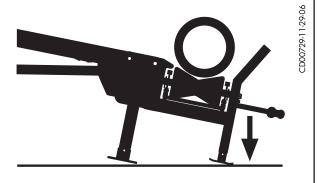
Use stanchions while pipe is on racks. Do not stack pipe above stanchion height. Failure to do so may result in serious injury or death.



TX02681-05-30-14

Tipping Hazard

Never use pipe racks without drop foot properly in place. Failure to do so may cause racks to tip and injury may occur.

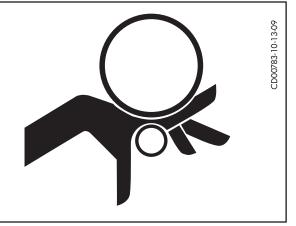


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Crush Hazard

ACAUTION

Moving parts may crush. Keep hands and feet away from moving parts. Failure to do so could result in injury.



TX03031-10-13-09

Cutting Pipe Bands

A DANGER Do not

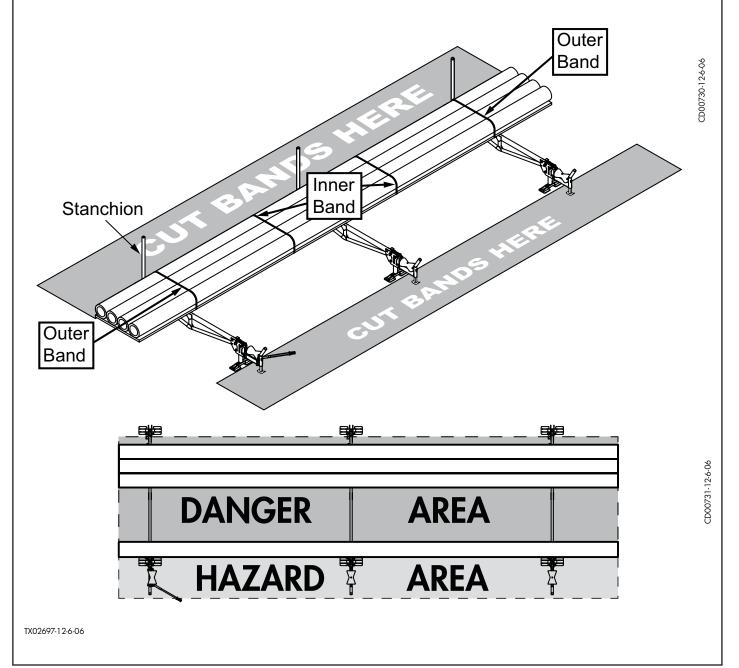
Do not stand within the danger area of the racks while pipe is on or being loaded on to racks.

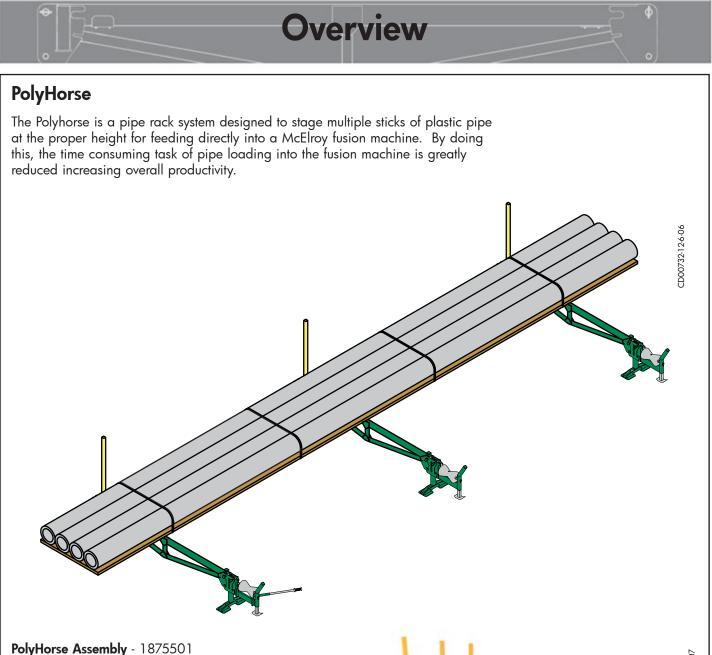
Always cut pipe bundle from the stanchion side of the PolyHorse with stanchions in place. Stanchions will prevent injury by not allowing pipe to roll towards the operator. If bundles cannot be reached from the rear then cut the bundles from the front of the PolyHorse standing outside of the roller assemblies.

NOTICE: Only single stack pipe bundles on the roller side of the PolyHorse.

Cut only single stacked bundles from the roller side of the PolyHorse, and only without pipe in the roller.

When it is necessary to cut bands from the roller side, cut all the inner banding on the pipe bundle then cut the outer two bands last. Use caution when cutting the last bands





The PolyHorse Assembly consists of 3 Truss Assemblies with

6 Screw Jack Assemblies. Attached to one side of Screw Jack Assemblies is a Pivot Roller Support Assembly and two Stationary Roller Support Assemblies. Three Stanchions fit opposite the roller assemblies. The PolyHorse can also be configured in other ways because of the modular construction (See Section - Additional Pipe Staging Options).

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PolyHorse (continued)

Truss Assembly - 1875601

The Truss Assembly is used with 2 Screw Jack Assemblies. Pipe is held across three Truss Assemblies to distribute the weight of the pipe. Additional Truss Assemblies can be used to provide room for additional pipe (See Section -Additional Pipe Staging Options).



The Screw Jack Assembly is used to support the Truss Assembly. The screw jack also allows the operator to level the PolyHorse on uneven terrain and control the roll of the pipe.

Pivot Roller Support Assembly - 1876301

The Pivot Roller Support Assembly is positioned on the truss that is closest to the fusion machine. It allows the operator to lift up the end of the pipe to position it in the jaws. The support has a drop down foot that is used to prevent tipping of the PolyHorse.







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PH03499-10-22-07

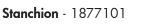


Overview

PolyHorse (continued)

Stationary Roller Support Assembly - 1876302

The Stationary Roller Support Assembly is positioned on the two farthest trusses from the fusion machine. It allows the operator to roll the pipe to position it in the jaws. The support has a drop down foot that is used to prevent tipping of the PolyHorse.



The Stanchion is an upright that is used on the rear portion of the PolyHorse to prevent pipe from rolling off the rear. There is one Stanchion used for each Truss Assembly. The Stanchion should always be in place when pipe is on the PolyHorse.

Speed Wrench Assembly - 1818501

The Speed Wrench Assembly is used to raise or lower each Screw Jack Assembly.



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PolyHorse Power Assist (Optional)

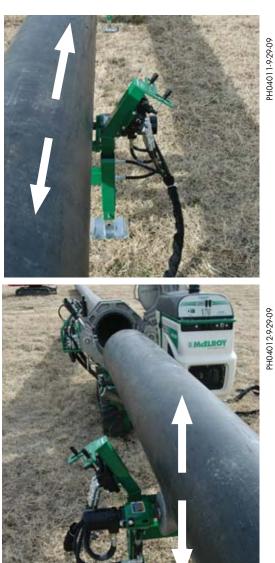
The optional PolyHorse Power Assist can be connected to the fusion machine's hydraulic system to power the front pipe roller on the PolyHorse. The Power Assist is used to aid in feeding pipe into the fusion machine by powering the front pipe roller and has controls to raise and lower the pipe.

The Power Assist roller can move the pipe in or out of the

The Power Assist roller can also lift the pipe up or down to position the pipe in the jaws.







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machine.

Truss Assembly

Insert bottom truss assembly shaft into the j-hook on screw jack assembly.

Align the upper holes and insert the detent pin.

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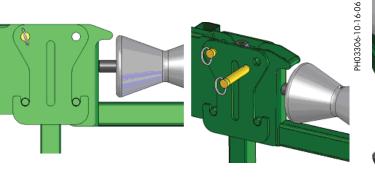
Roller Assembly

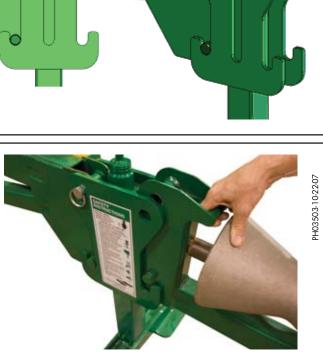
Insert bottom roller assembly shaft into the j-hook on screw jack assembly.

Align the upper holes and insert the detent pin.

Insert the handle into the pivot lift roller assembly.

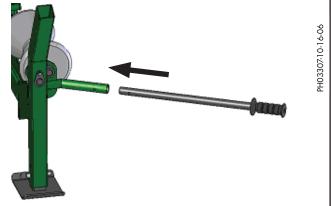
Be sure to line up and engage the handle detent. $\ensuremath{\mathsf{TX02686}\text{-}126\text{-}06}$





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PH03304-10-16-06



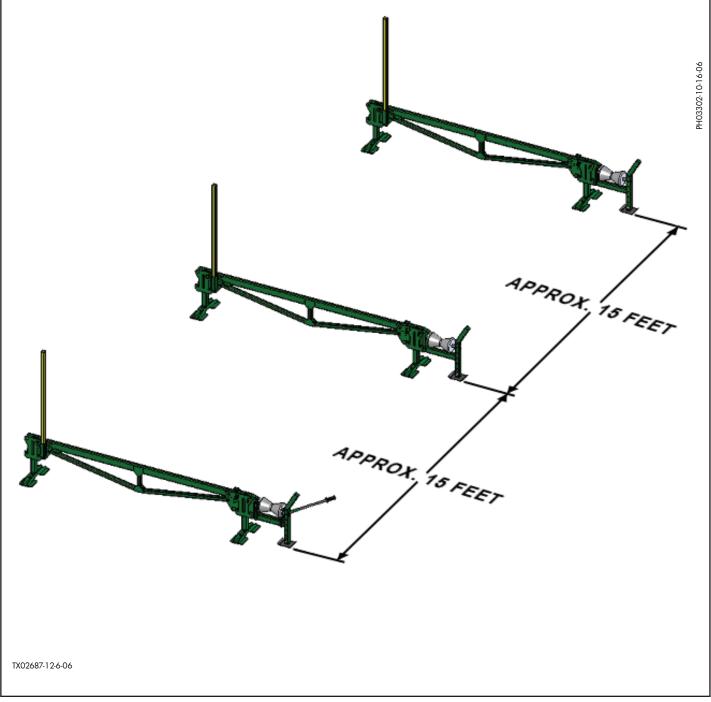
Truss Assembly Positioning

Position the truss assemblies with the pivot lift roller assembly on the left end.

Truss assemblies should be positioned approximately 15 feet apart for 50 to 40 foot lengths of pipe. For shorter lengths of pipe a closer spacing can be used.

Additional truss assemblies can be used to provide support if conditions warrant.

Set up on solid ground if possible. In soft ground conditions it may be necessary to place screw jack assemblies on a large base to spread out the load and help prevent Polyhorse from sinking into the ground when loaded with pipe.



Adjusting the Front Height

Before loading any pipe, adjust the height of each front screw jack using speed wrench.

The height of the pipe rollers should allow the pipe to be inline with the fusion machine jaws.

IMPORTANT: A string or a low cost laser level can be used to check the height of each roller to the height of the fusion machine jaws.

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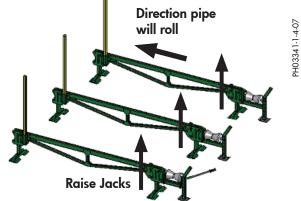
Adjusting the Rear Height

Adjust the height of each rear screw jack using speed wrench. The height of the pipe rollers should allow the pipe to be inline

with the fusion machine jaws.

When adjusting the height you can use the spirit levels to determine amount of incline away from the roller end.

NOTICE: Adjusting the three truss assemblies with a slight decline away from the roller end will help control the dispensing of the pipe.



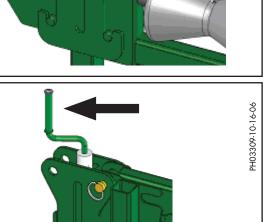
TX02689-12-6-06

Adjusting Roller Assembly Drop Foot Height

Remove the pin and allow the drop foot to touch the ground. Find the nearest holes that line up and insert the detent pin in that position.



Never use pipe racks without drop foot properly in place. Failure to do so may cause racks to tip and injury may occur.



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PH03311-10-16-06



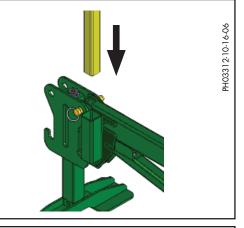
TX02690-12-6-06

Stanchions

Insert stanchions in the rear stanchion sockets on each of the truss assemblies.

DANGER

Use stanchions while pipe is on racks. Do not stack pipe above stanchion height. Failure to do so may result in serious injury or death.



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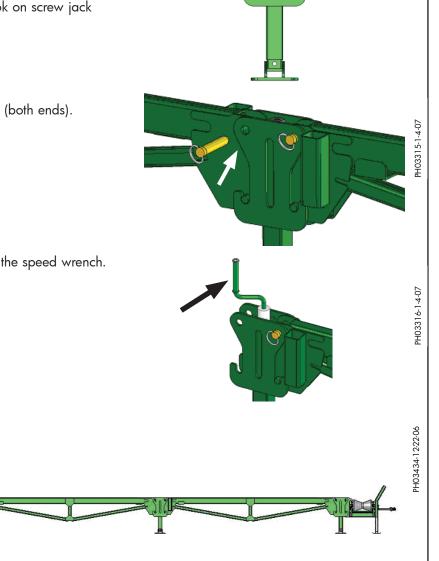
Additional Truss Assemblies

"Piggy-back" additional truss assemblies to the rear for additional pipe holding capacity.

Insert bottom truss assembly shaft into the j-hook on screw jack assembly (both ends).

Align the upper holes and insert the detent pin (both ends).

Adjust the height of the rear screw jacks using the speed wrench.



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Additional Roller Assemblies

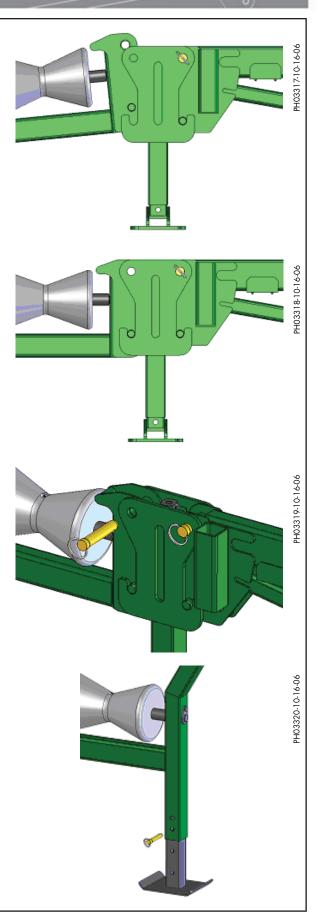
"Piggy-back" additional pipe roller assemblies to the rear for dual fusion machine operation (See Section - Additional Pipe Staging Options).

Insert bottom roller assembly shaft into the j-hook on screw jack assembly.

Align the upper holes and insert the detent pin.

Adjust the height of the roller assembly drop foot. Remove the pin and allow the drop foot to touch the

Find the nearest holes that line up and insert the detent pin



TX02693-12-6-06

ground.

in that position.

Position Fusion Machine

Position fusion machine to the left of the PolyHorse so the movable jaws are facing toward the pivot roller of the PolyHorse.

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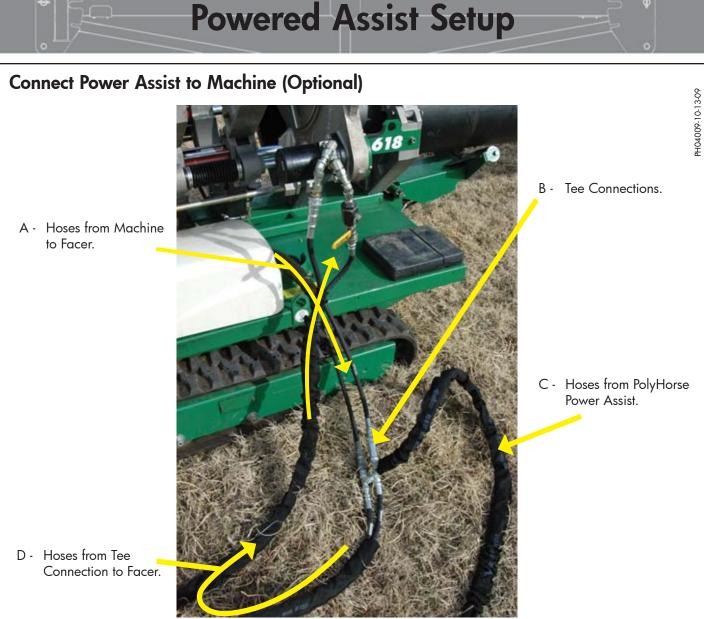
PH03322-10-16-06



Fusion machine should be in line with the PolyHorse pipe rollers.



NOTICE: Pipe should be positioned as shown, being careful not to hit the fusion machine



The optional PolyHorse Powered Assist can be connected to the fusion machine's hydraulic system to power the pipe roller on the PolyHorse. The Powered Assist is used to aid in moving pipe in and out of the fusion machine by powering the front pipe roller and has controls to raise and lower the pipe.

Connecting to Machine:

Ensure that there is no pipe on the PolyHorse.

NOTICE: Removing the support assemblies may cause the PolyHorse to tip with pipe on the PolyHorse.

Remove the Pivot Roller Support Assembly from the PolyHorse truss assembly.

Attach the Power Assist Roller to the front of the PolyHorse truss assembly closest to the fusion machine. The Power Assist Roller connects to the truss assembly in the same way as the Pivot Roller Support Assembly.

Ensure the fusion machine is off, disconnect the hydraulic hoses (A) from the fusion machine's facer

Connect the machine's facer hoses to the tee connections (B) at the end of the hoses (C) from the PolyHorse Power Assist.

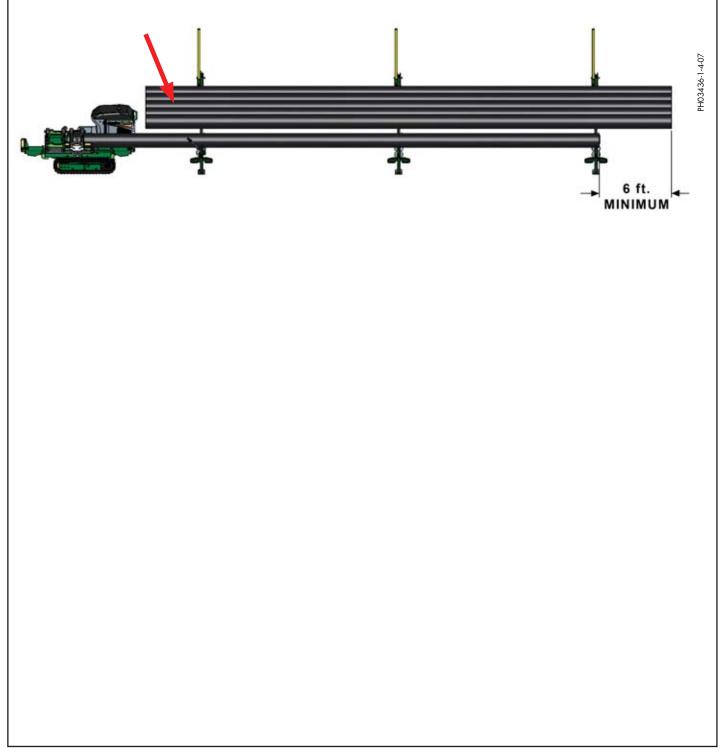
Connect the hoses from the tee connections (B) to the fusion machine's facer (D). $_{\rm TX03029:9:29:09}$

Loading Pipe onto the PolyHorse

NOTICE: Pipe should be positioned as shown, being careful not to come in contact with the fusion machine.

Pipe should be loaded to allow a minimum of 6 ft. of pipe at the end of the rack to extend past the last truss, so that when pipe is fed into the machine, the pipe is still supported by the last roller.

ACAUTION Use only proper lifting equipment and safety rigging when lifting and moving bundles of pipe.





Pipe Handling

Cutting Pipe Bands

A DANGER

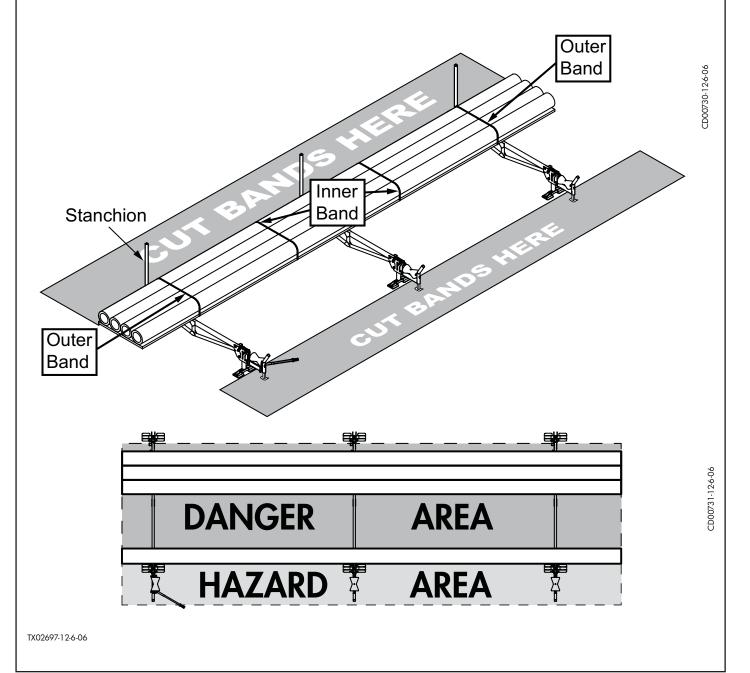
Do not stand within the danger area of the PolyHorse while pipe is on or being loaded on to PolyHorse.

Always cut pipe bundle from the stanchion side of the PolyHorse with stanchions in place. Stanchions will prevent injury by not allowing pipe to roll towards the operator. If bundles cannot be reached from the rear then cut the bundles from the front of the PolyHorse standing outside of the roller assemblies.

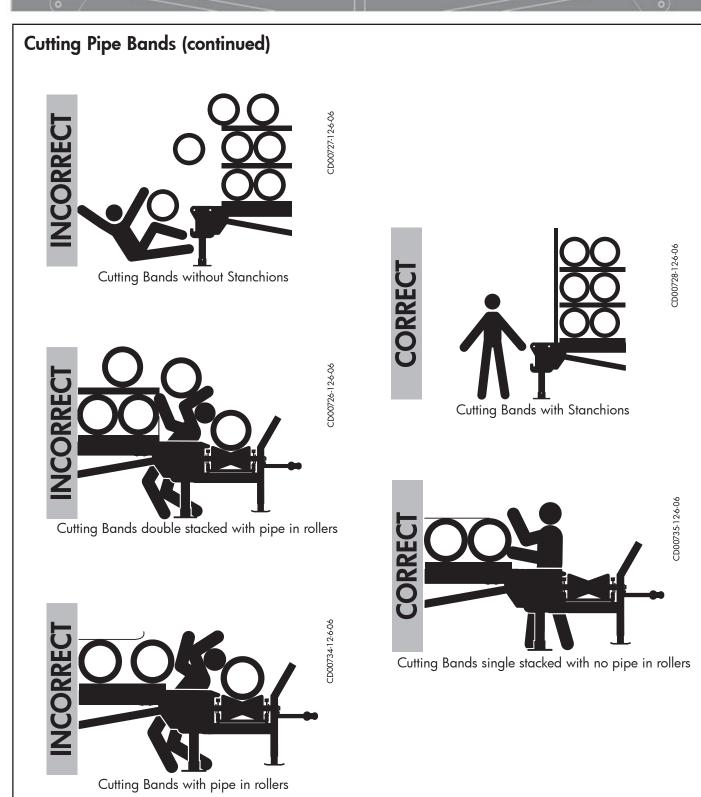
NOTICE: Only single stack pipe bundles on the roller side of the PolyHorse.

Cut only single stacked bundles from the roller side of the PolyHorse, and only without pipe in the roller.

When it is necessary to cut bands from the roller side, cut all the inner banding on the pipe bundle then cut the outer two bands last. Use caution when cutting the last bands



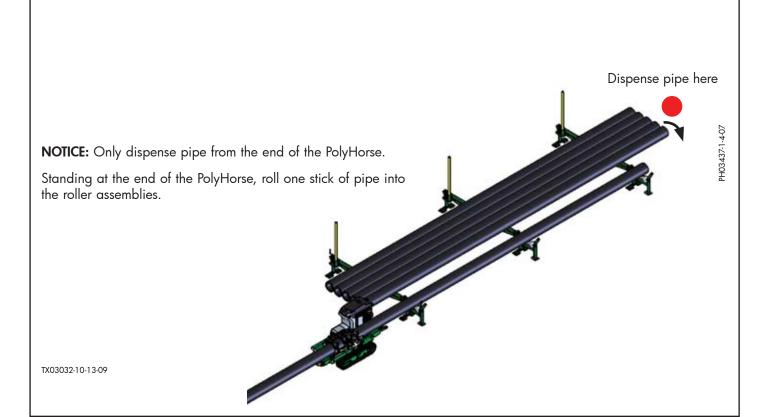
Pipe Handling





Loading Pipe into Rollers

When dispensing pipe on the PolyHorse, only dispense pipe from the highest bundles of pipe first working from front to back. Do not dispense pipe from bundles stacked higher than one level above the bundle to the front. In the example shown, dispense from bundle number 1 then 2 then 3.



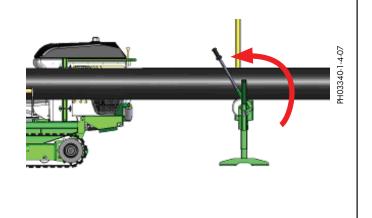
Pipe Pulling Procedure

Raise front of pipe using the pivot lift roller.

Pull pipe into the fusion machine.

Lower the pipe into the jaws using the pivot roller.

Clamp movable jaws onto pipe and follow normal fusion procedures.



12" IPS Bulk Pack

Pipe Handling

Power Assist Pipe Pulling Procedure (Optional)

Use the operator control to raise or lower the pipe and feed the pipe into the fusion machine.

IMPORTANT: If the pipe slips in the Power Assist Roller when moving the pipe, apply pressure to the top of the pipe as you move the pipe.

Once the pipe is positioned over the open jaws of the machine, lower the pipe onto the jaws.

Close the jaws and clamp the pipe in the fusion machine. Proceed with fusion procedures.





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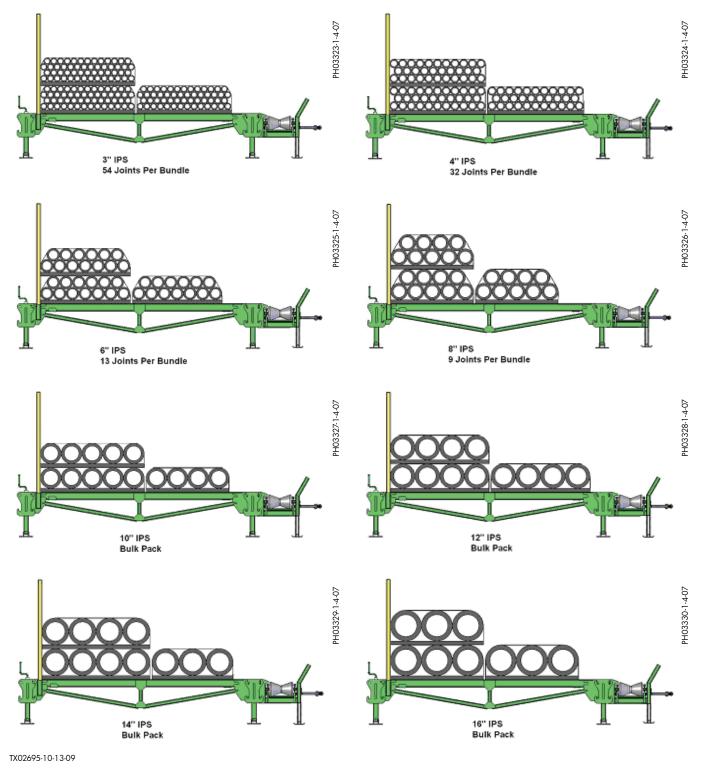


Maximum Loads

NOTICE: Do not exceed maximum pipe loads.

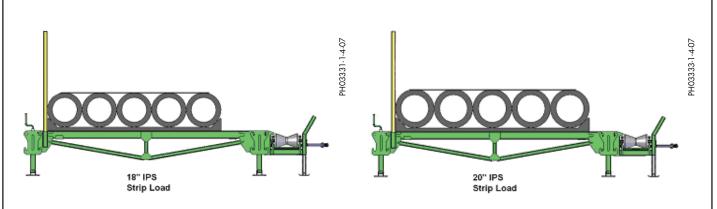
Maximum capacity 12,000 lbs. per truss assembly distributed evenly along length.

NOTICE: Only single stack pipe bundles on the roller side of the PolyHorse. Do not stack bundles greater than one level above the bundle to the front.



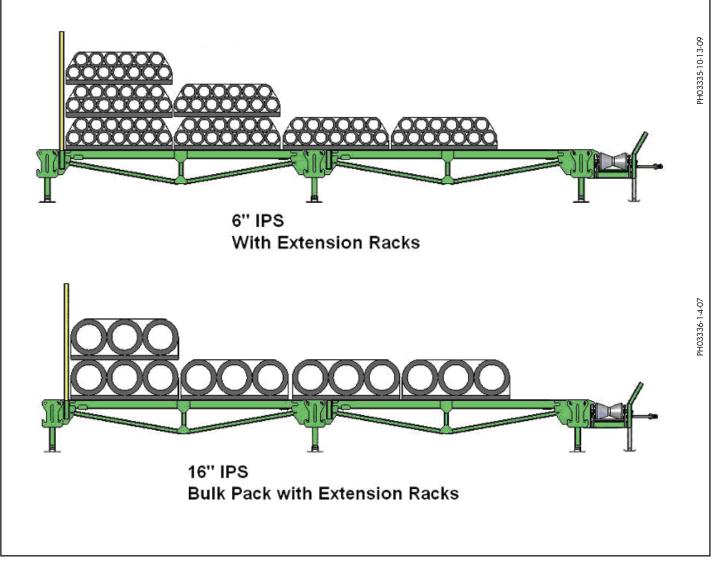
Pipe Staging

Maximum Loads (continued)



Additional Pipe Staging Options

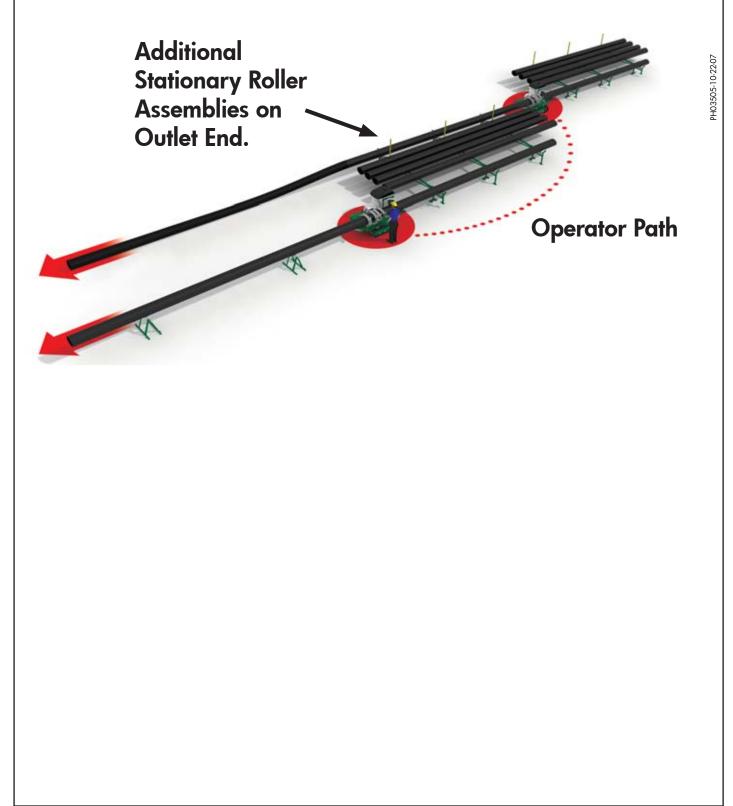
"Piggy-back" additional truss assemblies to the rear for additional pipe holding capacity.





Additional Pipe Staging Options (continued)

"Piggy-back" additional rollers to the rear for dual fusion machine operation. In this configuration, only one operator and one vehicle is needed. This will double production. While one joint is cooling, the joint in the other machine can be fused. Alternate the process between both pieces of equipment.

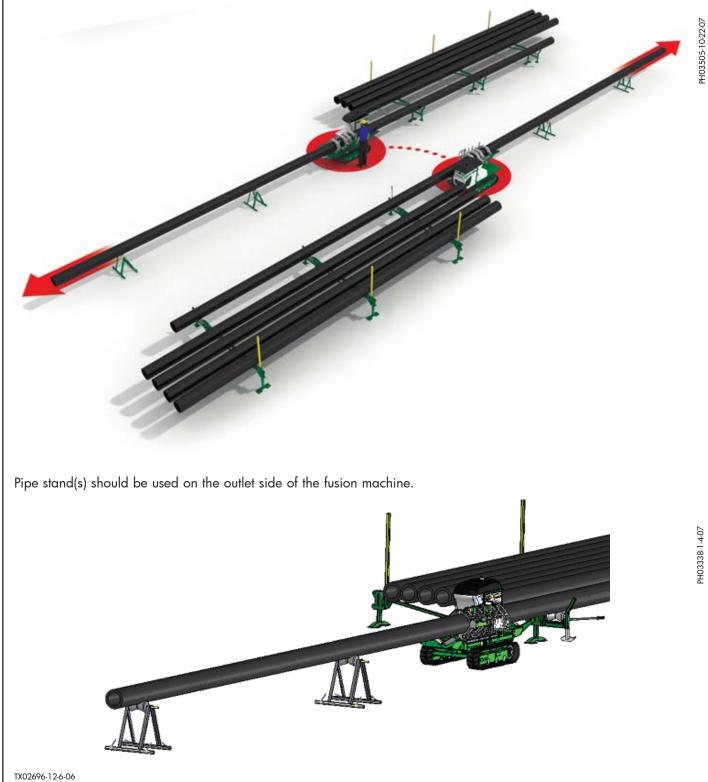


7 - 3



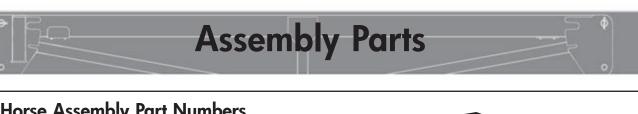
Additional Pipe Staging Options (continued)

Use additional PolyHorses for opposite direction dual fusion machine operation. In this configuration, only one operator and two pipe pulling vehicles are needed. This will double production. While one joint is cooling, the joint in the other machine can be fused. Alternate the process between both pieces of equipment.



7 - 4

Assembly Parts PolyHorse Assembly Part Numbers PH03498-10-22-07 PH03497-10-22-07 1875501 - PolyHorse Assembly 1875601 - Truss Assembly PH03499-10-22-07 PH04015-10-1-09 PH04008-9-29-08 1875901 - Screw Jack Assembly 1876301 - Pivot Roller 1874401 - Power Assist Support Assembly Roller Assembly (Optional) PH03501-10-22-07 PH03502-10-22-07 PH03347-1-4-07 1877101 - Stanchion 1876302 - Stationary Roller 1818501 - Speed Wrench Assembly Support Assembly



PolyHorse Assembly Part Numbers

If any safety label is damaged or missing, replace the label.

SCREW JACK ASSEMBLY:

Safety Instruction Label

Crush Hazard Label 1877404

STATIONARY AND PIVOT ROLLER SUPPORT ASSEMBLIES

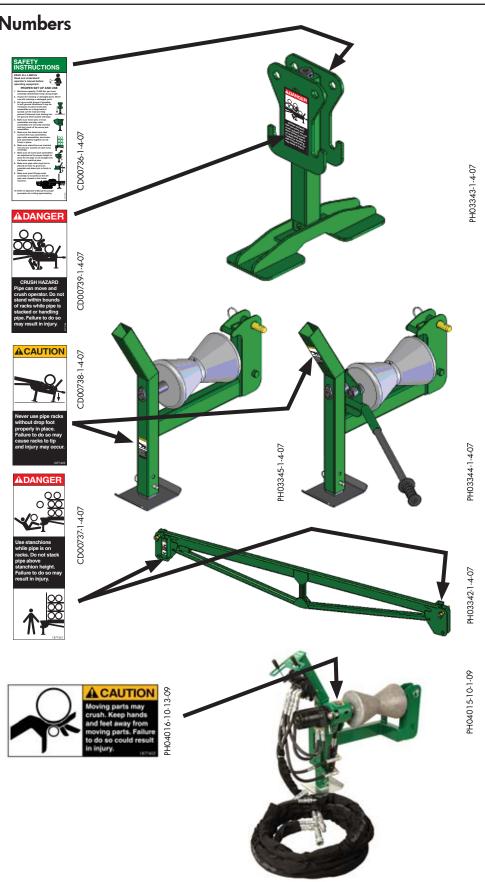
Rack Tip Label 1877403

TRUSS ASSEMBLY

Stanchion Label 1877401

POWER ASSIST ROLLER ASSEMBLY

Crush Label 1877405



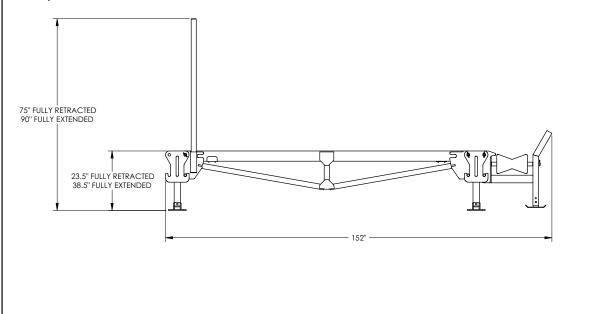


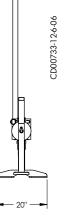
Specifications

PolyHorse

Total Weight (1875501 assembly): 1000 lbs. Total Weight with Power Assist Roller: 1,200 lbs. Maximum capacity for each individual truss assembly: 12,000 lbs. distributed evenly along length of truss.

Example: 3 truss assemblies - 36,000 lbs.





TX02699-10-13-09

About this manual . .

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

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