

MATHEY DEARMAN

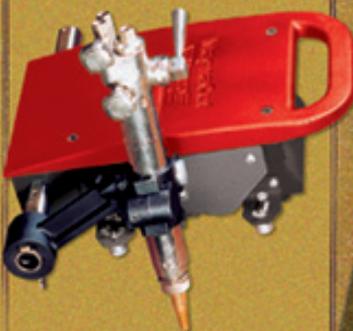
Tulsa, Ok USA



Saddle Machine



Portable
Accurate
Easy Set-Up



MagnaCut XM

MATHEY
DEARMAN



Pipe Cutting and Beveling Machines

April 2004

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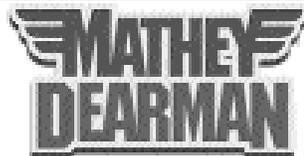
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**PIPE SIZES AND WALL
THICKNESS CHART**
(Inside Back Cover)

"Thanks so much for your help with my beveling machine. I am really impressed by your company's dedication to quality control and customer satisfaction."

James Binzer
C&H Constructors
Birmingham, AL

In Focus: Who uses Mathey Dearman Equipment?

Oil Refineries • Pipeline Companies • Tank Farms • Nuclear Power Plants • Steel Mills • Paper Mills • Utilities • Shipyards • Food Processing Plants • Construction Contractors • Chemical Plants • U.S. Military Installations • Offshore Drilling Platforms • Natural Gas Pump Stations

.....AND MANY OTHERS!

Mathey Dearman.
More Ways to Help Welders and Pipefitters.

SADDLE MACHINES

"Just a brief note to say I am very pleased with my Mathey Short Saddle Machine ... it is as old or older than I am and it has had new parts and pieces ... but it still performs very well and makes fast, accurate bevels. I keep it in a storage box when not in use, and always buckle it to a piece of pipe between cuts; so it has yet to be dropped by me!

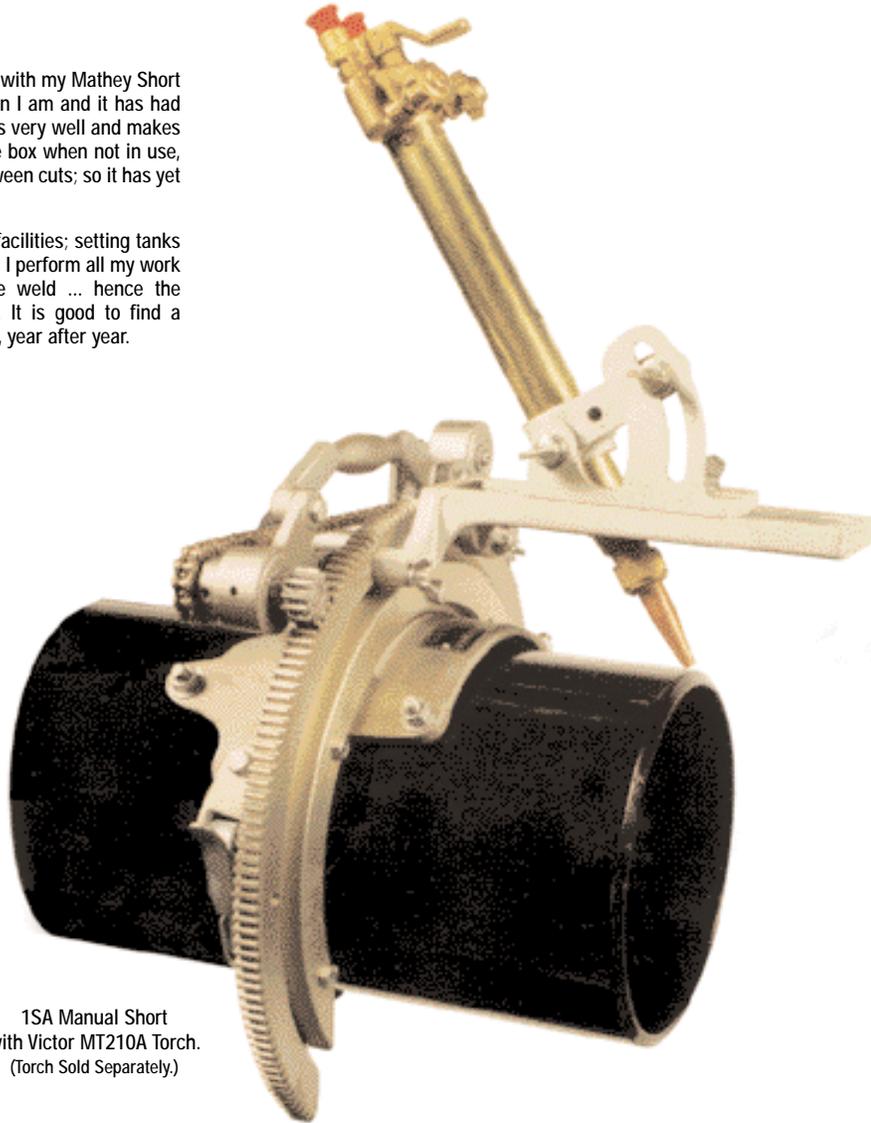
Most of my pipe work is bulk fuel storage facilities; setting tanks and piping them and the pumping systems. I perform all my work to ASME Code, and good fits in half the weld ... hence the importance of these great little bevelers. It is good to find a product that does what it is intended to do, year after year.

Keep up the good work!

Sean M. Tatham
NORTH COUNTRY WELDING & MACHINE

Saddle Machines Include:

- Base Machine.
- Torch Arm.
- Torch Carrier Assembly.
- Spacer Bolts listed for its range.
- Parts and Operating Manual.
- Cutting Torch NOT Included.
- 6SA and 8SA also includes Extension Plate and Spacers.



1SA Manual Short
with Victor MT210A Torch.
(Torch Sold Separately)

Dependable and tough, the Saddle Machine was specifically designed for critical pipe applications that require a high degree of cut quality and accuracy. The lightweight, durable machine has been known for more than 60 years as the standard in the industry for its long life, reliability and cutting accuracy. The inexperienced and experienced welder can improve their efficiency, accuracy and cut quality. Models available for pipe sizes 1 1/2" - 48" / 38-1219mm.

- **PORTABLE** - The Light Compact Unit is an excellent tool for shop or field applications.
- **ACCURATE** - The Spacer Bolts, located on either side of Saddle, gives the machine the accuracy required when cut quality and accuracy is critical.
- **EASY SET-UP** - Requires little or no operator skill or training to set up and achieve the accuracy of cutting required for quality fit-up.
- **PROVEN** - The Saddle, Ring Gear and Cap Ring are made of aluminum that is *hard anodized* to hold its accuracy and last longer.
- **ADAPTABLE** - Can be used with Oxy/fuel or Plasma Torch.
- **BUILT TO WITHSTAND** the construction and field environment.
- **80% FASTER** than hand cutting and grinding.

SADDLE MACHINES



MSA
Pipe Size Range
1.5" - 4" / 38mm-102mm



1SA
Pipe Size Range
3" - 8" / 76mm-203mm



2SA
Pipe Size Range
6" - 12" / 152mm-305mm



3SA
Pipe Size Range
12" - 20" / 305mm-508mm



4SA
Pipe Size Range
20" - 26" / 508mm-660mm



5SA
Pipe Size Range
24" - 30" / 610mm-762mm



6SA
Pipe Size Range
28" - 36" / 711mm-914mm



8SA
Pipe Size Range
40" - 48" / 1016mm-1219mm

Saddle Machine Quick Selection Chart

Machine Model		MSA	1SA	2SA	3SA	4SA	5SA	6SA	8SA
Manual with Spacer Bolts		03-0100-000	03-0101-000	03-0102-000	03-0103-000	03-0104-000	03-0105-000	03-0106-000	03-0108-000
Motorized with Spacer Bolts		03-0100-M00	03-0101-M00	03-0102-M00	03-0103-M00	03-0104-M00	03-0105-M00	03-0106-M00	03-0108-M00
Manual with Step Spacers		----	03-01S1-000	03-01S2-000	03-01S3-000	----	----	----	----
Motorized with Step Spacers		----	03-01S1-M00	03-01S2-M00	03-01S3-M00	----	----	----	----
Pipe Size	in/mm	1.5-4 / 38-102	3-8 / 76-203	6-12 / 152-305	12-20 / 305-508	20-26 / 508-660	24-30 / 610-762	28-36 / 711-914	40-48 / 1016-1219
Net Weight	lbs/kg	10 / 5	16 / 7	26 / 12	50 / 22	78 / 35	105 / 48	180 / 82	210 / 95
Estimated Shipping Weight	lbs/kg	12 / 5.4	24 / 11	34 / 15.5	73 / 33	190 / 86	200 / 91	290 / 132	415 / 188
Shipping Dimensions	in/mm	12 x 12 x 10 / 305 x 305 x 254	18 x 18 x 11 1/2 / 457 x 457 x 492	23 x 23 x 12 1/2 / 584 x 584 x 318	34 x 32 x 12 / 864 x 813 x 305	40 1/2 x 41 x 19 / 1029 x 1041 x 423	40 1/2 x 41 x 19 / 1029 x 1041 x 423	57 x 43 x 19 / 1488 x 1092 x 483	69 x 60 x 21 / 1753 x 1524 x 533
Max Speed (Motorized)	ipm*/mmm**	141 / 3581	71 / 1803	89 / 2261	47 / 1194	53 / 1346	34 / 864	35 / 889	36 / 914
Min. Speed (Motorized)	ipm*/mmm**	4 / 102	4 / 102	6 / 152	7 / 178	7 / 178	8 / 203	5 / 127	5 / 127
Includes Spacers to cut pipe sizes***		2", 3", 4" / 51, 76, 102mm	3", 4", 6", 8" / 76, 102, 152, 203mm	6", 8", 10", 12" / 152, 203, 254, 305mm	12", 14", 16", 18", 20" / 305, 356, 406, 457, 508mm	20", 22", 24", 26" / 508, 559, 610, 660mm	24", 26", 28", 30" / 610, 660, 711, 762mm	28", 30", 36" / 711, 762, 914mm	40", 42", 48" / 1016, 1067, 1219mm

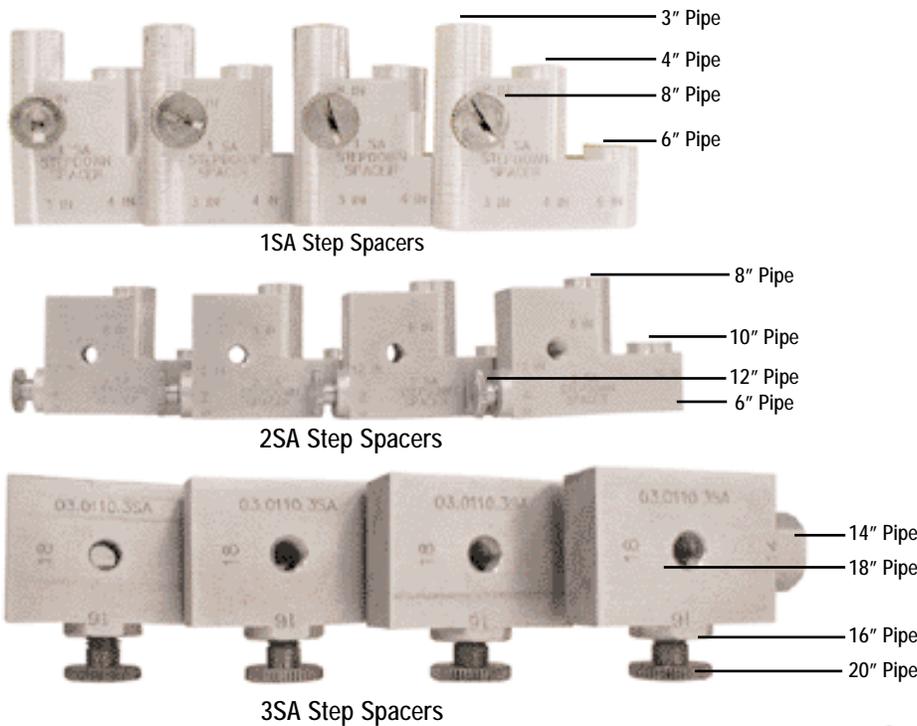
*Inches Per Minute **Millimeters Per Minute ***Optional spacers available to cut other pipe sizes

Saddle Machine Accessories

SELF-STORING STEP DOWN SPACER

Designed for the Single Piece Saddle, the Step Spacer eliminates lost or misplaced Spacer Bolts. Step Spacers are precision machined to the same tolerances as the Spacer Bolts. They are made from high quality aluminum alloy.

- **NO LOST OR MISPLACED SPACERS** as the Step Spacers are self-storing.
- **ACCURACY** - The Step Spacers give the Saddle Machine the same degree of accuracy as the Spacer Bolt.
- **ADAPTABLE** - The Step Spacers can be used with any **NEW or OLD** Mathey Saddle Machines.
- **NO CHANGING** - No Saddle changes or replacement required.



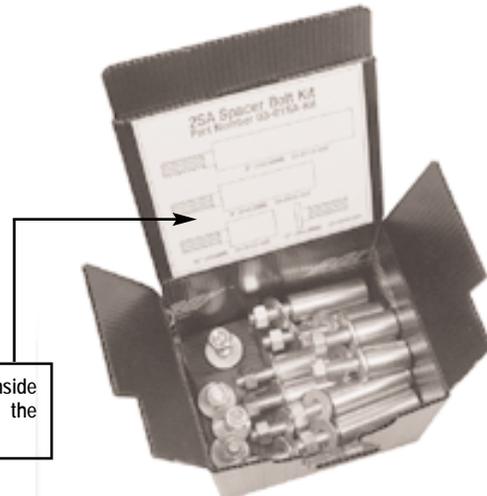
SADDLE MACHINE SPACER BOLTS

Spacer Bolts are now available in "Kit" Form.

The Mathey Dearman Spacer Bolt Kit includes the Spacer Bolts listed for the machine range and comes in a heavy-duty plastic storage box with label that illustrates each size of Spacer and the diameter of pipe that it will cut. All Spacer Bolts are precision machined to give the Saddle Machine the highest degree of cutting accuracy possible.

You can continue to order replacement Spacer Bolts singularly or in sets.

Actual size is depicted on inside box lid to help you identify the correct spacer.

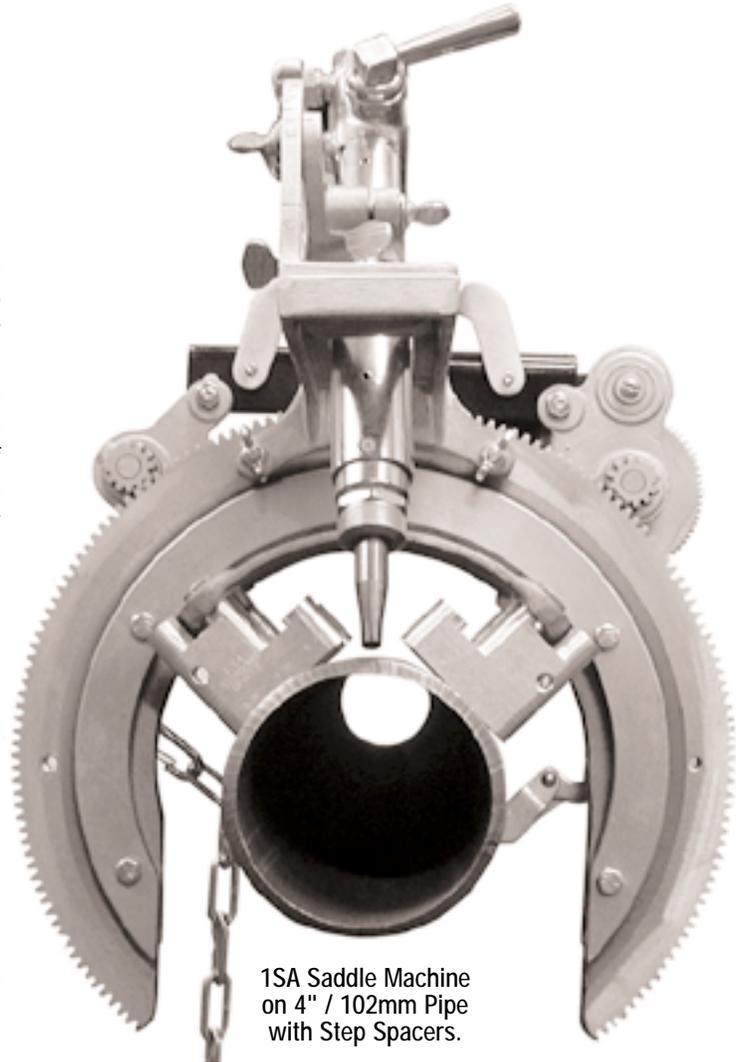


Saddle Machine Accessories

Saddle Machine with Step Down Spacers

Step Down Spacers

Mathey Dearman's *NEW* 1SA, 2SA and 3SA Self-Storing Step Spacer eliminates the need to purchase or identify lost Spacer Bolts. The 1SA, 2SA and 3SA Step Spacer can be used with any Saddle Machine without any modification to the machine. Spacers are manufactured to the same quality and dimensional standards as the Standard Mathey Dearman Spacer Bolt. Each step on the bolt represents a different pipe size and covers a range of Four (4) pipe sizes that eliminate the need to store Twelve (12) Spacer Bolts. The machine size is etched to identify the pipe size each step represents.



1SA Saddle Machine
on 4" / 102mm Pipe
with Step Spacers.



1SA Saddle Machine
on 6" / 152mm Pipe



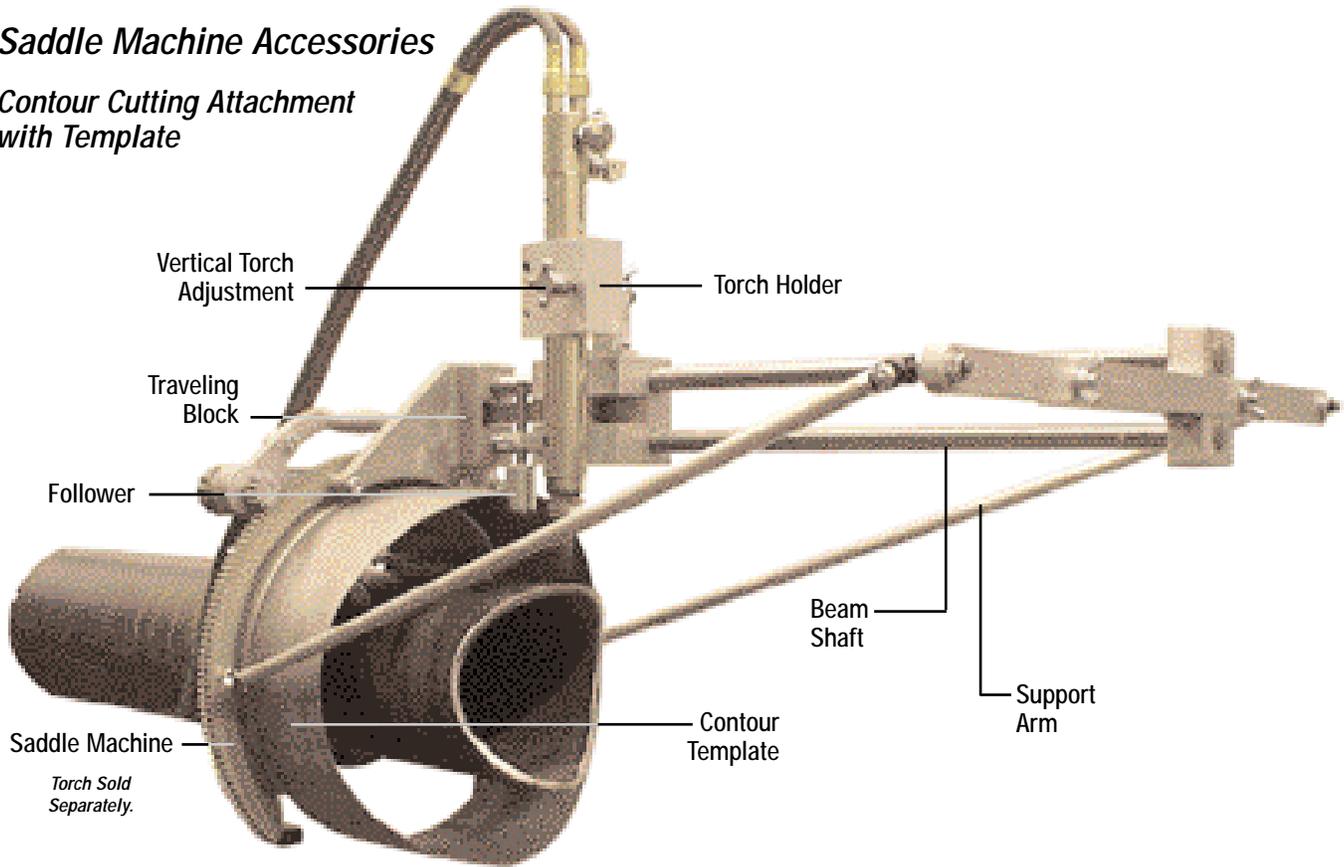
1SA Saddle Machine
on 3" / 76mm Pipe



1SA Saddle Machine
on 8" / 203mm Pipe

Saddle Machine Accessories

Contour Cutting Attachment with Template



Contour Cutting Attachment with Template

SADDLE AND MITER CUTTING

The Contour Cutting Attachment with Template, in combination with the Saddle Machine, enables the welder, regardless of experience, to produce perfect miter and saddle cuts time after time with little or no grinding. Simply change the template to change the pipe end saddle or miter configurations. The Contour Cutting Attachment provides lateral movement of the torch as it follows the template, while the Saddle Machine rotates the torch around the pipe. Contour Cutting Attachments and Templates are available for 1 1/2" – 48" / 38-1219mm pipe. *All Templates are tested to provide proven results.*

- **REDUCES LABOR** required to obtain the desired miter or saddle fit-up.
- **FAST ACCURATE** shapes are obtained with Oxy/Fuel or Plasma Torches.
- **MINIMUM GRINDING** is required when used with the Motorized Saddle Machine.
- The Contour Cutting Attachment and Templates are **MOUNTED** to the saddle machine **IN MINUTES**.



Mathey Dearman Custom Shape Templates

Saddle Machine Accessories

Determining Specifications for Shape Templates

Contour Cutting Attachment

Model	Part No.	Pipe Size Range in. / mm	Estimated Shipping Weight (lbs / kg)
MSA	03-0116-000	1.5 - 4 / 38 - 102	7 / 3
1SA	03-0116-002	3 - 8 / 76 - 203	7 / 3
2SA	03-0116-002	6 - 12 / 152 - 305	8 / 4
3SA	03-0116-003	12 - 20 / 305 - 508	9 / 4
4SA	03-0116-004	20 - 26 / 508 - 660	9 / 4
5SA	03-0116-005	24 - 30 / 610 - 762	11 / 5
6SA	03-0116-006	28 - 36 / 711 - 914	13 / 6
8SA	03-0116-008	40 - 48 / 1016 - 1219	16 / 7

Shape Templates

Model	Part Number	Pipe Size Range in. / mm	Estimated Shipping Weight (lbs / kg)
MSA	03-0115-m---	1.5 - 4 / 38 - 102	3.5 - 5 / 1.6 - 2.3
1SA	03-0115-1---	3 - 8 / 76 - 203	4.5 - 6 / 2 - 2.7
2SA	03-0115-2---	6 - 12 / 152 - 305	6 - 8 / 2.7 - 3.6
3SA	03-0115-3---	12 - 20 / 305 - 508	11 - 15 / 5 - 7
4SA	03-0115-4---	20 - 26 / 508 - 660	18 - 27 / 8 - 12
5SA	03-0115-5---	24 - 30 / 610 - 762	22 - 31 / 10 - 14
6SA	03-0115-6---	28 - 36 / 711 - 914	27 - 35 / 12 - 16
8SA	03-0115-8---	40 - 48 / 1016 - 1219	31 - 40 / 14 - 18

Saddle and Miter Cutting

- Specify Mathey Dearman Machine Model (Example: 2SA).
- Specify size/schedule (wall thickness) pipe branch to be cut. (Example: 8" / 203mm pipe-Schedule 80.)
- Specify size of main pipe to which the branch pipe will be fitted. (Example: 8" / 203mm pipe actual OD = 8 5/8" / 219mm.)
- Specify the angle of the cut and whether it is a Saddle or Miter. (Example: 45 degree miter) (See Figure 2.)
- Specify whether the joint is "Saddle In" or "Saddle On" (See Figure 1.)
- Specify if pipe is to be offset. If the answer is yes, specify how much the pipe is to be offset.

Please *copy* this sheet as a convenient reference. You can *fax* the completed form to us at 918-447-0188.

Please *include your contact information* so we can get in touch with you.

Figure 1

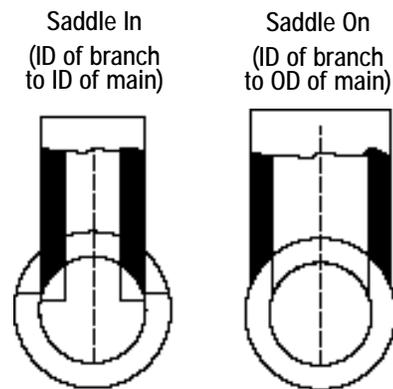
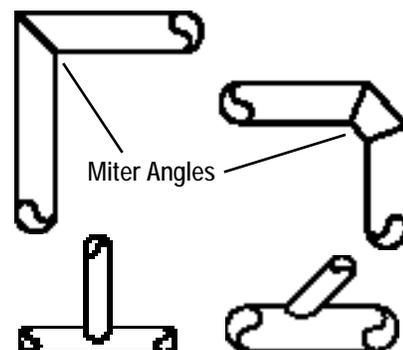


Figure 2



T-Joint Saddles

Diagonal Joint Saddles

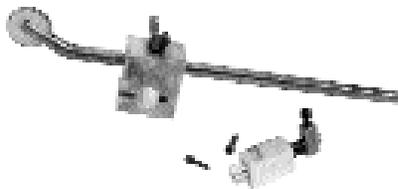
Saddle Machine Accessories

PRO Model Torch Arm

REQUIRING OUT-OF-ROUND ATTACHMENT

The PRO Model Torch with Out-of-Round used in conjunction with Saddle Machine compensates for oversize, undersize or out-of-round pipe. The Torch Arm permits the torch to be precisely adjusted horizontally and vertically by means of Racking Knobs.

- **NOTCHING OF PIPE IS MINIMIZED** due to the torch moving radially on the PRO Model Torch Arm as it crosses the pipe weld seam or surface imperfection.
- **PRECISE PIPE** to torch height is maintained to insure a smooth and accurate bevel on the pipe end.
- **VERSATILE** - The PRO Model Torch Arm can also be used with a customer supplied Torch Holder on over or undersized pipe.



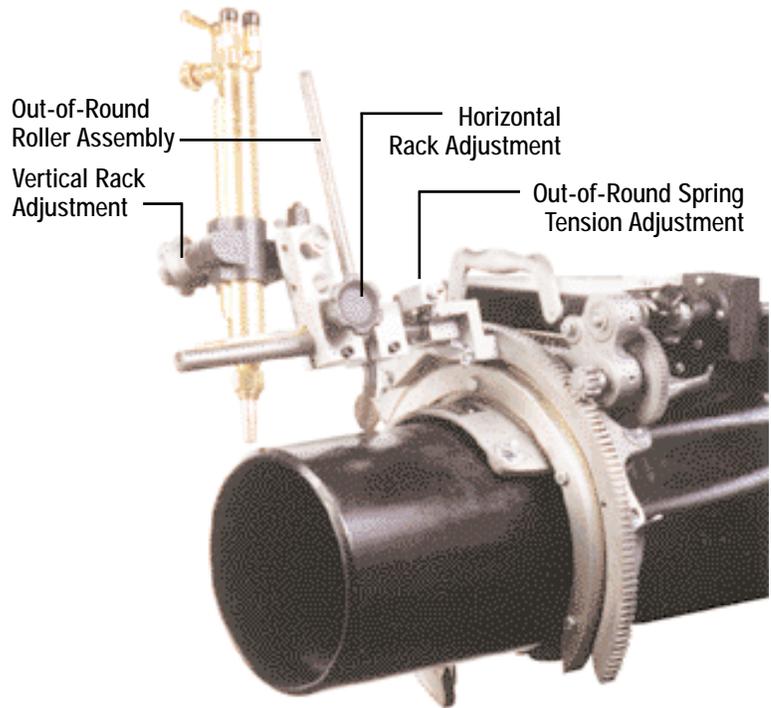
An Out-of-Round Kit can be added to the Base Unit for out-of-round pipe and permits the torch to be elevated over the seam weld with little or no notching of the pipe end.

Base Unit and Out-Of-Round

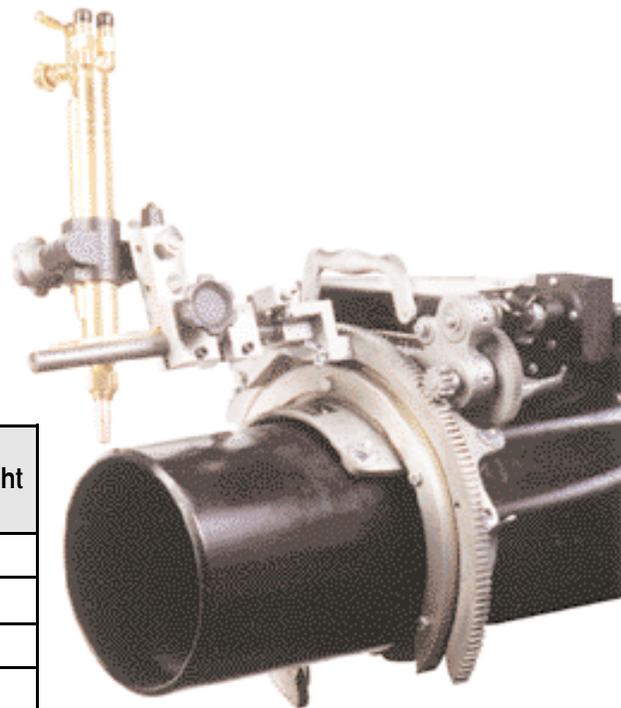
Model	Part Number	Estimated Shipping Weight (lbs./kg)
Pro Model with Out-of-Round	03-0209-000	9.5 / 4.3
Pro Model Base Unit	03-0209-001	7 / 3.2
Out-of-Round Kit	03-0209-003	2.5 / 1.1
Tracer Point	03-0209-012	1.8 / 0.8
Screw Kit	03-0209-022	.5 / .2

NOTE:

Back Beveling Not Recommended without the use of the Double Torch Arm.



PRO Model with Out-of-Round



The PRO Model with Base Unit, used in conjunction with the Motorized Saddle Machine, reduces grinding time by 85%.

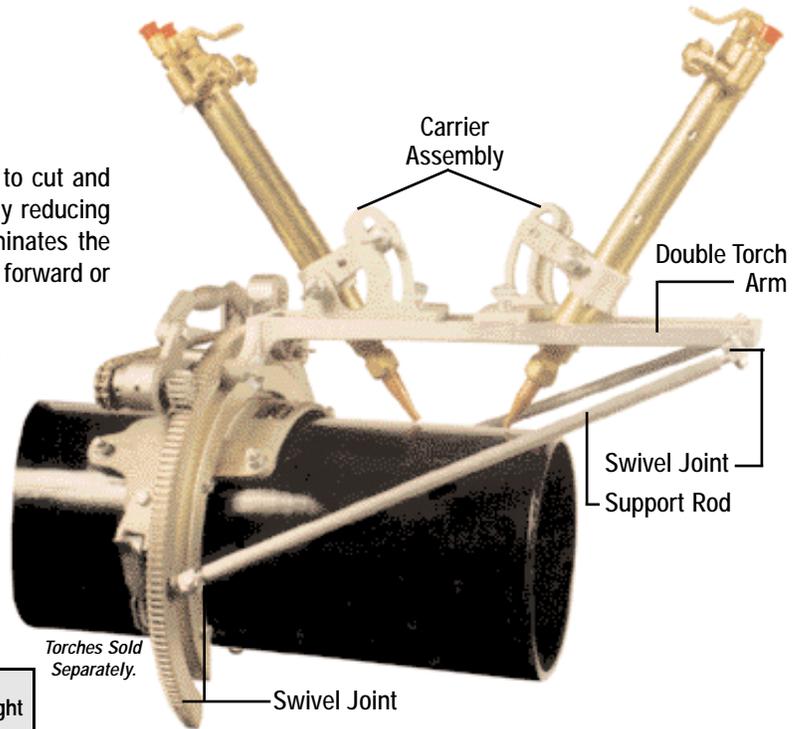
Saddle Machine Accessories

Double Torch Arm

The Double Torch enables the Saddle Machine to cut and bevel both sides of the cut line simultaneously reducing labor cost and time. The feature completely eliminates the need to move the torch *backward and forward* to forward or back bevel the pipe end.

The 1SA Saddle Machine, in combination with the Double Torch Arm, reduces cutting time by 50%.

- **REDUCES LABOR, TIME AND COST** because there is no need for a second cut.
- **ADAPTABLE** - Can be used with Oxy/Fuel or Plasma Torches.



Double Torch Arm Specifications

Model	With Torch Holder for 1 3/8" (35mm) Diameter Torch	Estimated Shipping Weight (lbs./kg)
1SA	03-0101-030	5 / 2.3
2SA	03-0102-015	5 / 2.3
3SA	03-0103-030	5 / 2.3
4SA	03-0104-021	5 / 2.3
5SA	03-0105-025	5 / 2.3
6SA	03-0106-018	5.5 / 2.5
8SA	03-0108-014	5.5 / 2.5

MSA, 1SA, & 2SA Storage Boxes



SADDLE MACHINE STORAGE BOX

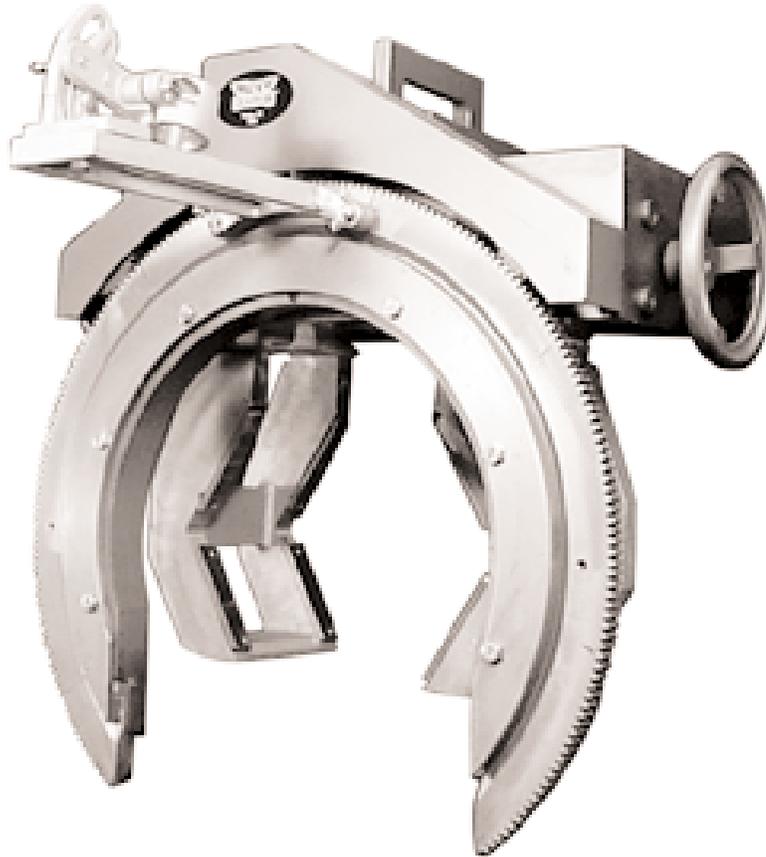
The Saddle Machine, Torch, Torch Arm, Torch Carrier and Spacer Bolts can be stored in the Storage Box preventing damage and reducing the risk of loss. The Heavy Duty Machine Boxes are made of 16 Gauge Sheetmetal that is spot welded together. The lid of the storage has extra heavy-duty hinges and adjustable latch. The MSA, 1SA and 2SA are light blue powder coated to resist the rigor of everyday use. Storage Boxes 3SA and larger are made from galvanized sheetmetal. MSA and 1SA Storage Boxes come with a lifting handle centered on the lid; all other boxes come with Two (2) lifting handles.

- **INCREASES MACHINE LIFE.**
- **REDUCES THE RISK OF ACCIDENTAL DAMAGE** to the Saddle Machine.
- **REDUCES RISK** of lost Spacer Bolts and other items necessary for operation.

Saddle Machine Storage Box

Model	Part Number	Dimensions (in./mm)	Estimated Shipping Weight (lbs./kg)
MSA	03-0100-BOX	17 x 17 x 17 / 432 x 432 x 432	23 / 11
1SA	03-0101-BOX	20 x 18 x 17 / 508 x 457 x 432	33 / 15
2SA	03-0102-BOX	25 x 22 x 18 / 635 x 559 x 457	41 / 19
3SA	03-0103-BOX	34 x 34 x 14 / 864 x 864 x 356	60 / 27
4SA	03-0104-BOX	40 x 38 x 14 / 1016 x 965 x 356	79 / 36
5SA	03-0105-BOX	42 x 40 x 14 / 1067 x 1016 x 356	84 / 38
6SA	03-0106-BOX	56 x 48 x 16 / 1422 x 1219 x 406	100 / 45
8SA	03-0108-BOX	70 x 56 x 19 / 1778 x 1422 x 483	125 / 57

Super II



Super II includes:

- Base Machine.
- Torch Arm.
- Torch Carrier Assembly.
- Parts and Operating Manual.
- Cutting Torch NOT Included.

Made from *aircraft quality aluminum*, the Super II was especially designed to handle most fabrication shop applications. The unique self-centering jaws of the Super II accurately center the machine on any tubing or pipe having a diameter of 2 3/8" – 12 3/4" / 60 – 324mm.

- **ACCURATE** – Maintains accuracy throughout entire cutting range.
- **SHOP USE** – The Super II can be mounted in a fixture for high volume shop production.
- **VERSATILITY** - Reduces the amount of options and accessories required to cut pipes 2" – 12" / 51 – 305mm in diameter.
- **CUTTING CAPACITY** of Three (3) Short Saddle Cutting and Beveling Machines.

- The Pads, attached to the Jaws that contact the pipe, are made of stainless steel to **AVOID CONTAMINATION**.
- **MOTORIZED IN MINUTES** for extremely even and precise cuts with little or no grinding.
- **80% FASTER** than hand cutting and grinding.
- Super II can be mounted, clamped and operated from either side of the pipe.
- Designed for use with all standard Short Saddle Machine Accessories.
- **VERSATILE** - Fits over 60% of pipe sizes sold without boomer spacers or dogs.



Super II 2" Spacer

Paddle Inserts broaden the cutting range of the Super II for cutting pipes or tubes with an outside diameter of 2 3/8" to 4" / 60mm to 102mm. Paddle Inserts enable the Super II to cover the range of Three (3) Saddle Machines. The Steel Paddle Inserts are manufactured to Mathey Dearman's stringent quality and dimensional standards.

Super II Accessories

OPTIONS:

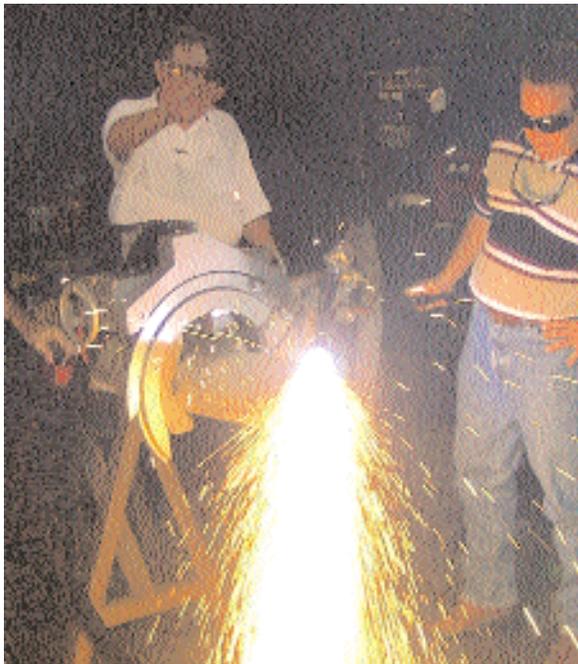
- Motorizing Kit with Variable Speed Control reduces grinding time by 90%.
- Step Down Transformer for 230vac operation.
- Cutting Insert. 2" Paddle Insert - Eight (8) required 2 3/8" to 4" / 60mm to 102mm.

ACCESSORIES:

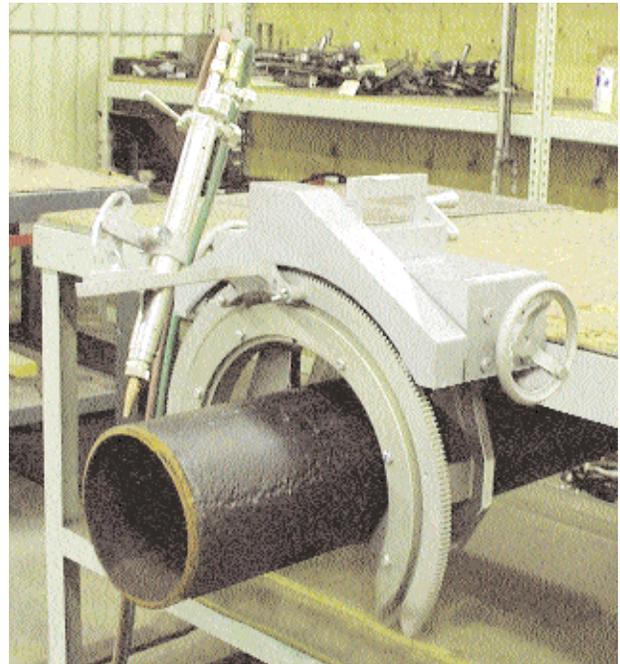
- PRO Model Rack Adjustable Torch Arm for out-of-round or oversize and undersize pipe.
- Contour Cutting Attachment permits precise saddle and miter cuts.
- Double Torch Arm enables Two (2) precision cuts to be made simultaneously.
- Torches and Tips available for all types of cutting gases.
- Torch Shut Off Valve to minimize adjustment of gas flow to the cutting torch.

Super II Machine

Model	Part Number	Pipe Size Range in./mm	Estimated Shipping Weight lbs./kg
Manual Super II	030-S102-000	4-12 / 102-305	90 / 41
Motorized Super II	030-S102-M00	4-12 / 102-305	99 / 45
Accessories			
2" Paddle Insert -Eight (8) required 2 3/8" to 4" / 60mm to 102mm	03-S102-041		.6 / .3
Electric Motorizing Kit* 115vac	03-S102-A01		16 / 7
Double Torch Arm Assembly	03-0102-015		5 / 2.3
Shape Cutting Attachment	03-0116-002		20 / 9
Shape Template for Shape Cutting Attachment	03-0115-2--		6-8 / 2.7-3.6
PRO Model Torch Arm	03-0209-000		8.5 / 4



Super II combined with the Pro Model Torch Arm and a Plasma System give the fabricator unequaled accuracy of cut and productivity.



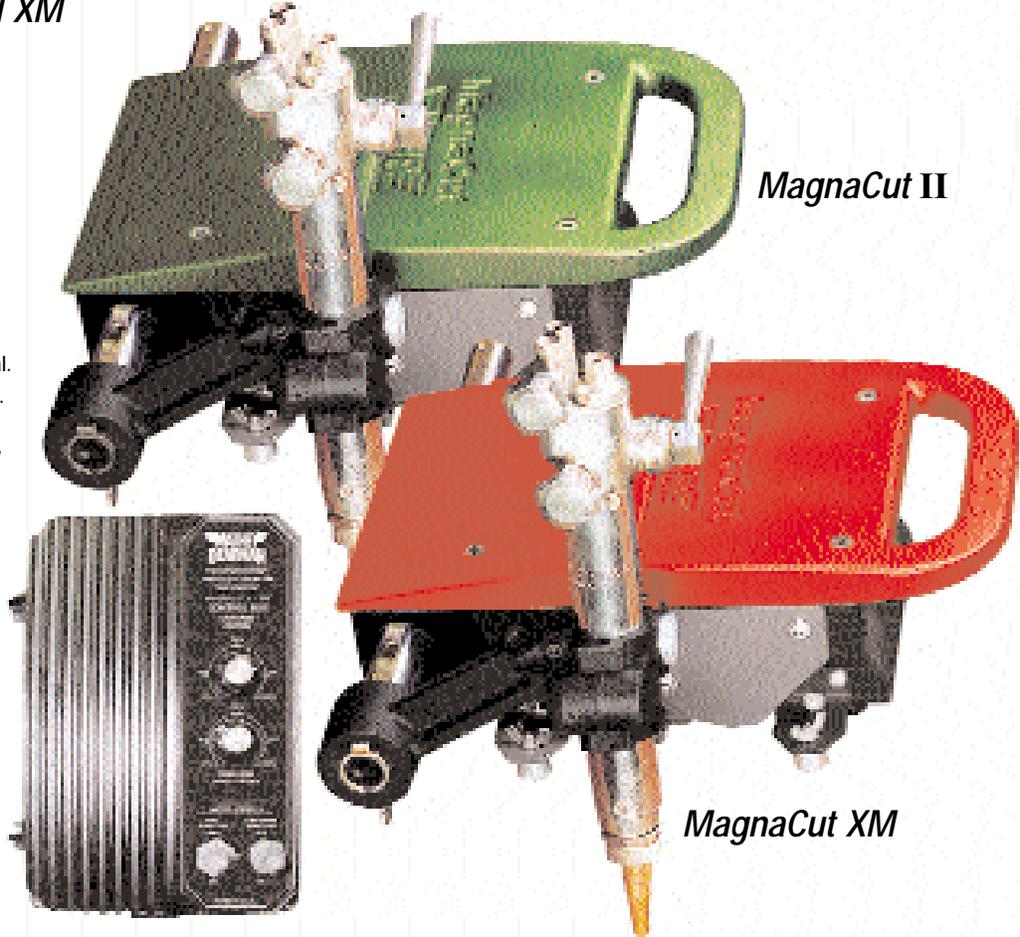
The Super II can be attached to a fixture or table and the pipe move through the jaws. The Super II is an excellent cutting machine for pipe yards—when used in conjunction with a Jib Crane or Forklift

MagnaCut II and XM

(PATENTED.)

MagnaCut includes:

- Base Machine.
- Torch Arm.
- Torch Carrier Assembly.
- Parts and Operating Manual.
- Cutting Torch NOT Included.
- 74" / 1880mm Long Safety Strap for up to 24" / 610mm pipe.
- Torch Support.
- Storage Box.
- Hose Support.
- Two (2) Snap Hooks.
- Service Keys.



MagnaCut II

MagnaCut XM

The MagnaCut II Pipe and Plate Cutting and Beveling Machine cuts 6" pipe and larger with a wall thickness of 3/8" / 10mm to 2" / 51mm and plate cleanly and quickly producing a quality cut requiring little or no grinding time. The MagnaCut XM has additional magnets so that its cutting range is larger - 3/8" / 10mm to 3" / 76mm. The MagnaCut with Remote Controlled Torch Arm combined with a Machine Fuel or Plasma Cutting Torch is an excellent choice when cutting a variety of sizes and thickness of pipe and plate. The cutting and beveling machine is ideal for hard to reach locations, such as overhead pipes, since it can be remotely operated from the Motor Control Box. MagnaCut II and XM will improve the productivity and cut quality of the apprentice or journeyman welder.

Magnet Options for MagnaCut XM

The MagnaCut XM is available with *increased magnetic strength* — 'Rare Earth Magnets' for extra holding power on larger and thicker coated pipe or for carrying larger cutting torch.

MagnaCut II and XM come standard with Guide Wheels that can be utilized along with a Guide Strip when *extreme accuracy* is required when cutting horizontal or vertical plate or pipe. A piece of 1" x 1" / 25mm x 25mm Angle Iron can be used as a Guide Strip for the MagnaCut on plate.

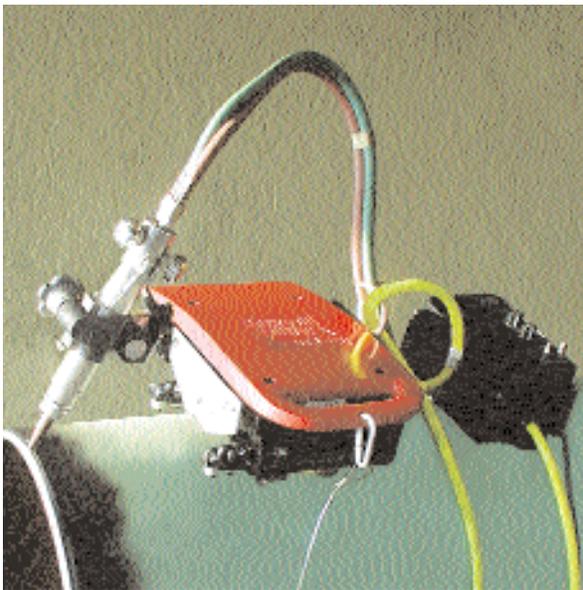
- **MINIMUM SET-UP TIME** involves only the adjustment of the cutting torch to the material height.
- **VERSATILITY** – Cut Pipe or Plate.
- **MAXIMUM SPEED** - Speed and direction of machine as well as Torch Arm Speed and Direction are remotely controlled from the Motor Control Box minimizing the risk of injury to the operator. It will cut pipe with a diameter of 6 5/8" / 168mm and larger. It can cut from the inside of pipe with an inside diameter of 24" / 610mm and larger.
- **80% FASTER** than hand cutting and grinding.
- MagnaCut II adheres to any magnetic receptive pipe or plate with coatings to 5 mils or .005" thick or less
- MagnaCut XM adheres to any magnetic receptive pipe or plate with coatings to 15 mils or .015" thick or less.

MagnaCut II and XM

(PATENTED.)

MagnaCut and Accessories

Model	Part Number	Estimated Shipping Weight lbs./kg
MagnaCut II, 110vac	05-0550-000N	60 / 28
MagnaCut II, 230vac	05-0550-000E	60 / 28
MagnaCut XM, 110vac	05-0550-000XM	60 / 28
MagnaCut XM, 230vac	05-0550-000XME	60 / 28



WARNING:

The MagnaCut II should not be used on heavy wall pipe or plate 2" / 51mm and thicker.

The MagnaCut XM should not be used on heavy wall pipe or plate 3" / 76mm and thicker coatings.

Always secure the machine to the pipe with a Safety Strap. Mathey Dearman should be contacted prior to attempting any special applications with MagnaCut.

Ask our Customer Service Representative for details.

WARNING:

Comes with "Safety Strap". Machine never to be used without Safety Strap.

MagnaCut Technical Specifications

Description	MagnaCut
Method of Attachment to Pipe or Plate	MagnaCut II - Permanent Magnet MagnaCut XM - Rare Earth Magnets
Magnetic Pull Per Wheel Assembly	MagnaCut II - 100 lbs. MagnaCut XM - 150 lbs.
Polyurethane, Carbo Zinc or Epoxy Coatings	MagnaCut II - up to 5mils or .005" thick MagnaCut XM - up to 15mils or .015" thick
Set Up Time	Two Minutes or less
Cutting Range (Pipe O.D.)	6 5/8" / 168mm and up
Cutting Range (Pipe I.D.)	24" / 610mm and up
Vertical Cutting Capability	Plate*
Horizontal Cutting Capability	Pipe or Plate
Diagonal Cutting Capability	Plate
Miter or Saddle Cutting Capability on Pipe	Shallow Miters or Saddles only
Minimum Speed	2" / 51mm per Minute
Maximum Speed	40" / 1016mm per Minute
Estimated Shipping Weight	37 lbs. / 16.7 kg
Dimensions	
Width (Torch Arm Extended)	21 3/4" / 553mm
Length	9 1/2" / 241mm
Height	5 1/4" / 133mm
Electrical Requirement	115vac or 230vac 50/60Hz

*A Guide Strip is required to cut vertical pipe or plate. Call Mathey Dearman, Inc. Sales Department for details.

NOTE:

*If making vertical cuts on vertical pipe or plate contact Mathey Dearman Sales prior to attempting the application.

MagnaCut II and XM

(PATENTED.)

OPTIONS:

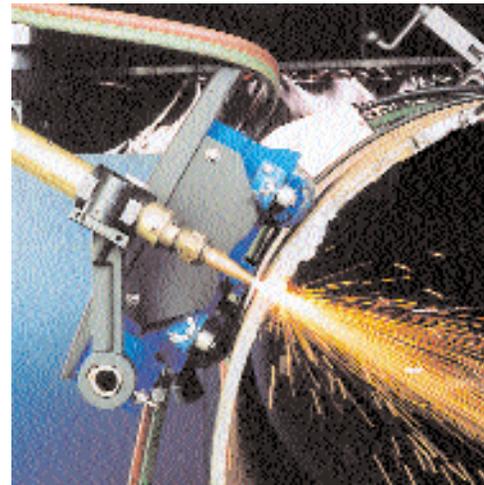
- Available in 115 or 230vac 50/60 Hertz Models.
- Available with Torch Holder for 1 3/8" / 35mm diameter torch with 24 pitch or metric torch rack.

ACCESSORIES:

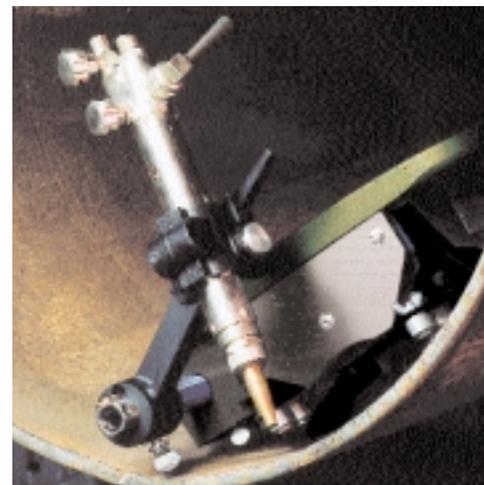
- 12' / 3.7M Extension Cord for pipe diameters larger than 36" / 914mm.
- Plasma Torch Adapter for plasma cutting.
- Torches and Tips available for all types of cutting gases.
- Torch Shut-Off Valve to minimize adjustment of cutting torch.



The MagnaCut speed and direction as well as torch speed and direction can be controlled from the Motor Control Box providing the *maximum safety* to the operator.



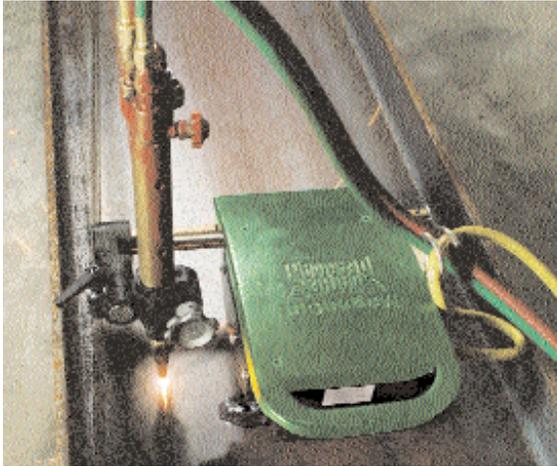
Cuts Outside Pipe



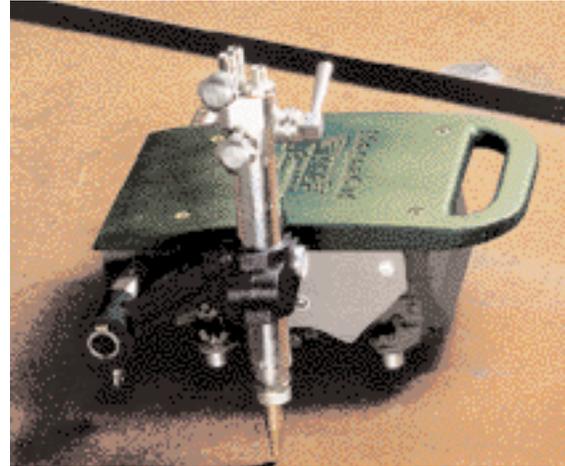
The MagnaCut cuts pipe from the inside.

MagnaCut

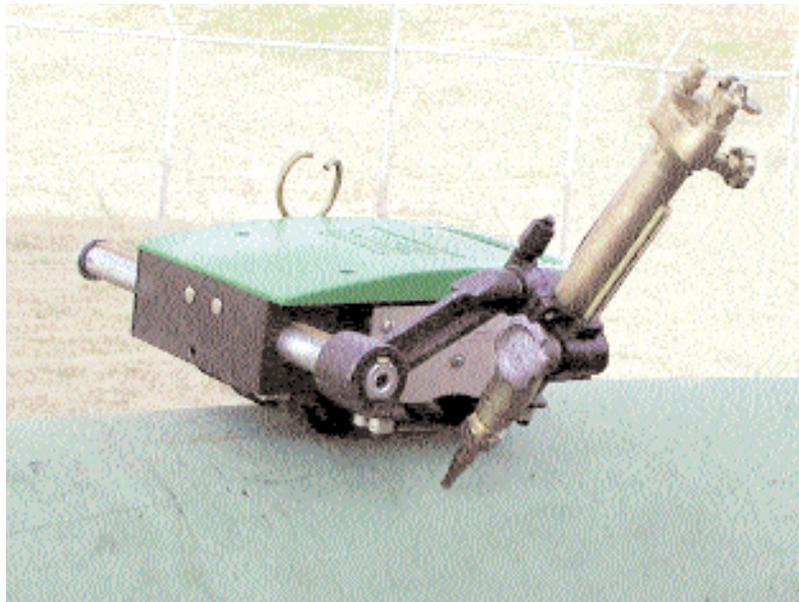
(PATENTED.)



Vertical or Horizontal I Beam 20" wide or wider can be precision cut with MagnaCut.



Vertical or Horizontal plate 12" / 305mm wide or wider can be precision cut with MagnaCut.



Pipe diameter 16" / 406mm and larger can be cut parallel to the pipe axis.

MagnaCut XM

(PATENTED.)



The MagnaCut XM enables the contractor to use one machine for any pipe size.

All of the spectacular features of the MagnaCut II plus 300 pounds of awesome magnetic force as measured on bare pipe. MagnaCut XM, 'Rare Earth Magnets' will adhere to any magnetic receptive pipe or plate with Carbo-Zinc, Polyurethane or Epoxy coatings to 15mils or .015mm thick with surface temperatures up to 200°F / 93°C.

Whether you are a contractor, fabricator, or maintenance welder cutting coated pipe or plate— this is the machine for you. No need to worry about out-of-square cuts due to variance in pipe diameter or due to pipe coating thickness—the height of the torch remains constant.

The MagnaCut XM has all of the features of the MagnaCut II. The MagnaCut XM can achieve a maximum speed of 32" / 813mm per minute and a minimum cutting speed of 2 inches per minute. The MagnaCut XM is available for 115 or 220 VAC at 50/60 hertz.

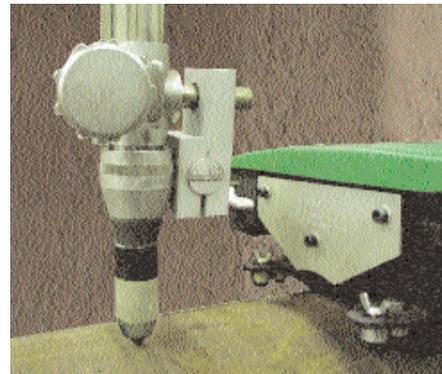
- **EXTRA HOLDING POWER** - 'Rare Earth Magnets' of the MagnaCut XM will adhere to any magnetic receptive pipe or plate with coatings to 15mils thick.
- **VERSATILE** – The MagnaCut XM is the Ideal machine for fuel or plasma operation.

Options:

- Available in 115 or 230vac 50/60 Hertz Models.
- Available with Torch Holder for 1 3/8" / 35mm diameter torch with 24 pitch or metric torch rack.

Accessories:

- 12' / 3.7M Extension Cord for pipe diameters larger than 36" / 914mm.
- Plasma Torch Adapter for plasma cutting.
- Torches and Tips available for all types of cutting gases.
- Torch Shut Off Valve to minimize adjustment of cutting torch.



Design to adapt customer supplied Torch Holder to MagnaCut.
Part No. : 05-0510-302



Designed to elevate the MagnaCut Torch Holder for use with Plasma Torch.
Part No. : 05-0510-301

MagnaCut II and MagnaCut XM

(PATENTED.)

MagnaCut II/ MagnaCut XM Spare Parts and Accessories

Description	Part Number	Estimated Shipping Weight (lbs./kg)
1 3/8" / 35mm Torch Holder with 32 Pitch Pinion	05-0510-117	.7 / .3
1 3/8" / 35mm Torch Holder with Metric Pinion	05-0510-117E	.7 / .3
115vac Motor Control Box	05-0550-110	7.7 / 3.5
230vac Motor Control Box	05-0550-240	7 / 3.2
12' (3.7m) Extension Cord*	05-0550-014	1.8 / .82
24vdc Torch Arm Motor	05-0550-055	.8 / .4
100vdc Drive Motor	05-0550-016	.9 / .4
Torch Arm Stop	05-0550-032	.3 / .1
Fuse, 1amp Time Delay	05-0550-038	-
Snap Hook, 1/4	05-0550-035	.1 / .1
Safety Cable, 16" Pipe	05-0550-052	1.8 / .82
Plasma Adapter, Customer Supplied Torch	05-0510-301	2 / 1
Plasma Adapter, Elevates MagnaCut Torch Holder	05-0510-302	4 / 2

When placing your order please specify if you are working with a cutting torch having a barrel diameter other than 1 3/8" / 35mm. (Torch Sold Separately.)

No more than 9' / 2.7M of the 12' / 3.7M Extension Cords should be connected together.

GUIDE STRIP

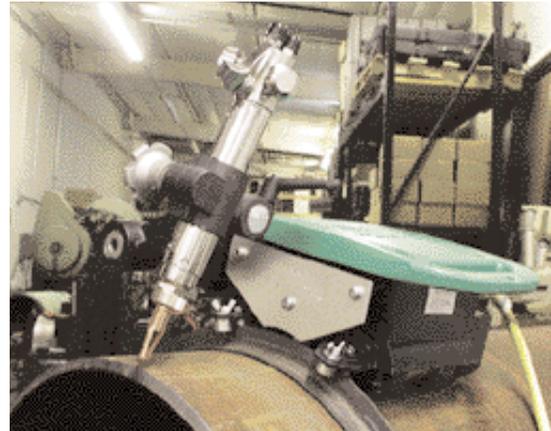
MagnaCut has been one of Mathey Dearman's most popular machines because no guide is required. If the user needs extra precision, Guide Strips may be used on pipe or plate!

A piece of 1" x 1" x 1/8" / 25mm x 25mm x 3mm thick angle iron can be used as a Guide Strip when extreme cutting accuracy is required when cutting horizontal or vertical plate. Guide Strips for pipe can be made by rolling angle iron to fit a specific diameter of pipe; cutting it into Two (2) sections and bolting it together to make a Guide Strip. Mathey Dearman produces Guide Strips upon request for 18" / 457mm and larger pipes.

NOTE: *If making vertical cuts on vertical pipe or plate contact Mathey Dearman Sales prior to attempting the application.

MagnaCut Guide Strips

Pipe Diameter	Part Number	Estimated Shipping Weights lbs / kg
18 / 457	05-0550-200	6 / 3
20 / 508	05-0550-204	7 / 3
24 / 610	05-0550-201	8 / 4
30 / 762	05-0550-205	9 / 4
32 / 813	05-0550-206	10 / 5
36 / 914	05-0550-202	11 / 5
42 / 1076	05-0550-207	13 / 6
48 / 1219	05-0550-203	15 / 7

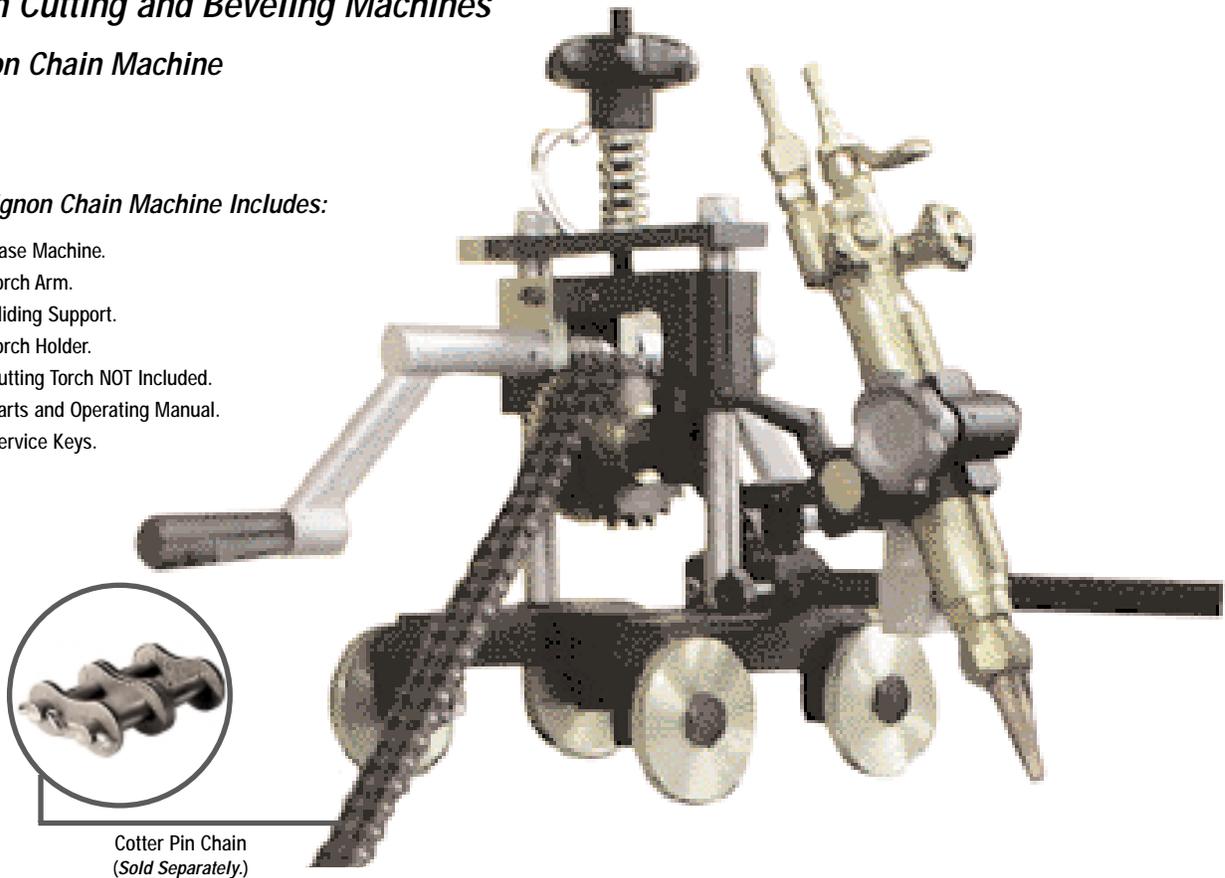


Chain Cutting and Beveling Machines

Mignon Chain Machine

Mignon Chain Machine Includes:

- Base Machine.
- Torch Arm.
- Sliding Support.
- Torch Holder.
- Cutting Torch NOT Included.
- Parts and Operating Manual.
- Service Keys.



Cotter Pin Chain
(Sold Separately.)

An excellent tool for the small shop, small maintenance facility and budget minded welder or hobbyist who is sporadically flame cutting random pipe sizes. The *compact and lightweight* Mignon can be easily carried to the job site. The machine's simple design makes it easy for the novice to master the art of cutting pipe. Cuts pipe diameters from 2 1/2" / 64mm to unlimited. *CE Approved.*

Mignon Chain Machine

Model	Part Number	Estimated Shipping Weight Lbs. / kg
Mignon Chain Machine	05-0530-000	30 / 14

(Chain Block with Pin Drive and Drive Chain ordered separately.)

- **LITTLE SKILL** - No operator training is required to set-up and operate, due to the simplicity of design.
- **PRODUCES A CONSISTENT CUT**- Makes a consistent cut on out-of-round pipes as it follows the surface of the pipe.
- **ADAPTABLE** - Can be adapted to any pipe diameter by changing the length of the chain.
- **50% FASTER** than hand cutting and grinding.
- The Rack Adjustable Torch Arm allows the torch to pierce the pipe away from the cut line and be moved to cut the cut line to reduce notching.
- Guide Strips available for accurate cutting and beveling larger diameter pipes.
- **ACCURATELY CUT** vertical pipe or vessels 18" / 257mm and larger when used with the Guide Strip.
- Individual Guide Strip sections can be removed or added for different diameters of pipe.

Chain Cutting and Beveling Machines

Mignon Chain Machine

Options:

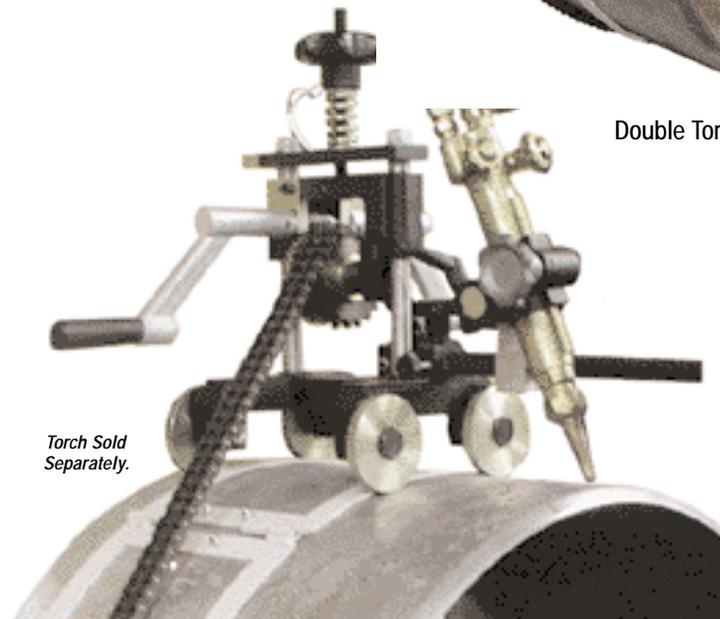
- Available with Torch Holder for 1 3/8" / 35mm diameter torch with 32 pitch or metric torch rack.
- Chain Kits available for all standard pipe and tubing sizes. *(Special sizes available on request.)*

Accessories:

- 2nd Torch Holder Support and Torch Holder available for dual torch operation.
- Guide Strips for fast set up and accurate cutting of larger pipe diameters. Individual sections can be purchased to extend the range of the Guide Strip.
- Torches and Tips available for all types of cutting gases.
- Torch Shut-Off Valve to minimize adjustment of the gas mixture of cutting torch.



Double Torch on Mignon



Torch Sold Separately.

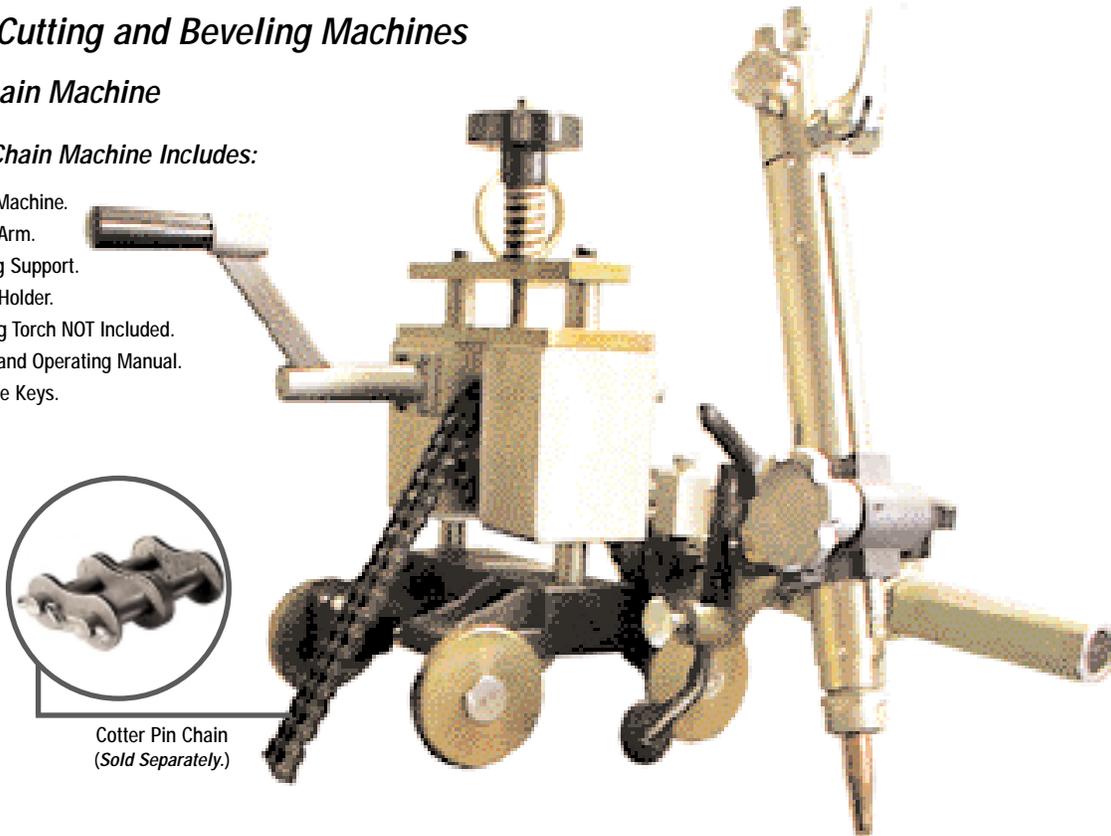
Mignon with Guide Strip
on 24" / 609mm or Larger Pipe

Chain Cutting and Beveling Machines

Mini Chain Machine

Mini Chain Machine Includes:

- Base Machine.
- Torch Arm.
- Sliding Support.
- Torch Holder.
- Cutting Torch NOT Included.
- Parts and Operating Manual.
- Service Keys.



Cotter Pin Chain
(Sold Separately.)

Most popular of the Chain Machines, the Lightweight Mini Chain Machine is recommended for cutting random lots of small or larger diameters of pipe. Easily adjustable from one pipe size to another, the Mini follows the pipe outside diameter to produce a consistent bevel. The *compact unit* reduces down time and maintenance cost. The Mini Chain Machine's unique design delivers exceptional performance and maximum results. Cuts pipe diameters from 2" / 51mm to unlimited. *CE Approved.*

- **BEST CHOICE** for a small shop or maintenance facility.
- **DURABLE** and **RUGGED** enough to withstand the rigor of construction.
- **VIRTUALLY ELIMINATES** the need for more than one machine regardless of the pipe diameter.
- **ACCURACY** of the Mini Chain Machine is attained through its two wheel positions and **DOUBLE** Mesh Chain.
- Vertical pipe or vessels 18 inches / 457mm and larger can be accurately cut when used with the Guide Strips.
- The Rack Adjustable Torch Support allows the torch to pierce the pipe away from the cut line and be moved back to the cut line to reduce notching of the weld bevel.
- **50% FASTER** than hand cutting and grinding.

Mini Chain Machines

Model	Part Number	Estimated Shipping Weight Lbs. / kg
Manual Mini Chain Machine	05-0520-000	34 / 15.4
Motorized Mini Chain Machine, 115vac	05-0520-M00	67 / 30.4
Motorized Mini Chain Machine, 2 outlets 230vac CE approved	05-0520-ME2	56 / 26
Motorized Mini Chain Machine, 3 outlets 230vac CE approved	05-0520-ME3	56 / 26

(Chain Block with Pin Drive and Drive Chain ordered separately.)

Highly precise cut can be achieved on horizontal or vertical pipe when the Mini is used with a Guide Strip.



Chain Cutting and Beveling Machines

Mini Chain Machine



New Mini Out-of-Round Attachment minimizes the notching of the pipe when crossing weld seam.

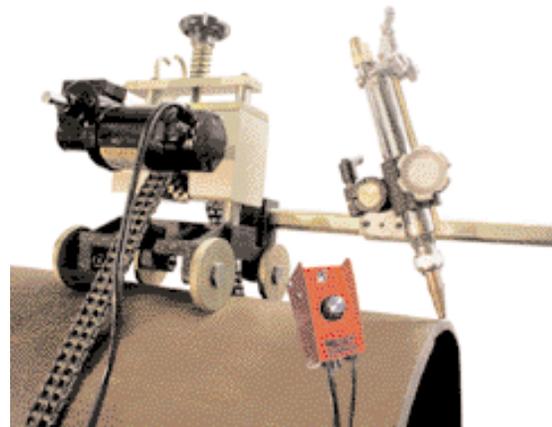
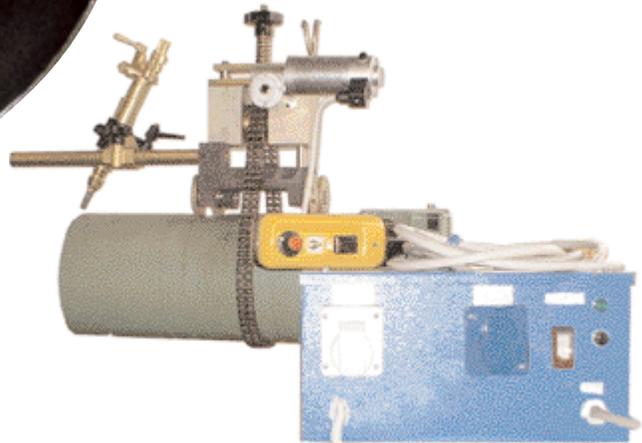
The CE Approved 230vac Motorized Mini Chain Machine has multiple outlets for operating powered hand tools.

Options:

- Variable Speed Motorizing Kit available for 115 or 230vac at 50 or 60 Hertz operation reduces grinding by 90%.
- Available with Torch Holder for 1 3/8 inch / 35mm diameter machine torch with 32 pitch or metric torch rack.
- Chain Kits available for all standard pipe and tubing sizes. *(Special sizes available on request.)*

Accessories:

- 2nd Torch Holder Support and Torch Holder available for Dual Torch Operation.
- Out-of-Round Compensating Device enables the machine to cut smoothly over pipe imperfections and weld seams.
- Guide Strips for fast set up and accurate cutting of larger pipe diameters. Individual sections can be purchased to extend the range of the Guide Strip.
- 9' / 2.7M or 14' / 4.3mm Flexible Drive Cable for remote operation.
- Torches and Tips available for all types of cutting gases.
- Torch Shut-Off Valve to minimize adjustment of gas mixture to the cutting torch.



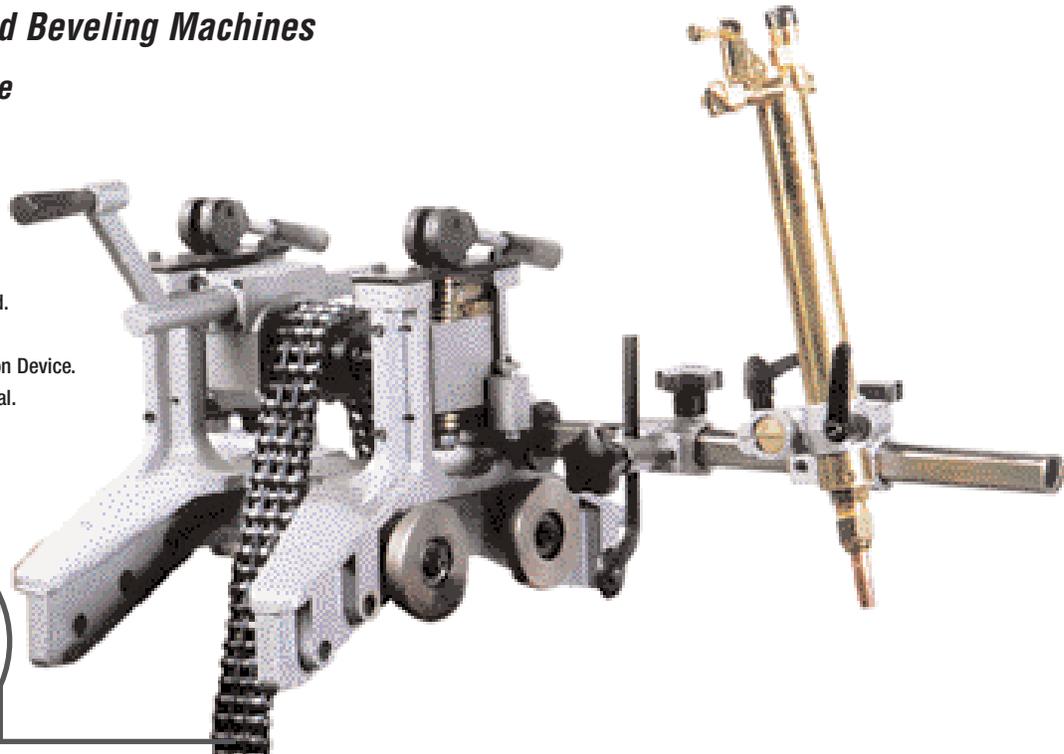
Accurate precise cuts can be made with the 115vac Motorized Mini Chain Machine that do not require grinding.

Chain Cutting and Beveling Machines

Maxi Chain Machine

Maxi Chain Machine Includes:

- Base Machine.
- Torch Arm.
- Cutting Torch NOT Included.
- Torch Carrier Assembly.
- Out of Round Compensation Device.
- Parts and Operating Manual.
- Service Keys.
- Sliding Support.
- Torch Holder.



Triple Width Chain
(Sold Separately.)

Whether you are cutting seam-welded, spiral-welded or out-of-round pipe, there are no challenges for the Maxi Chain Machine. The most durable and accurate of the Chain Machines', the Maxi is recommended for cutting a wide range of large diameter pipes. The combination of the Maxi Chain Machines Three (3) Wheel Positioning and Triple Width Chain makes it the **most accurate chain driven cutting and beveling machine on the market today**. The Maxi is a precision machine designed for the maximum cutting versatility. The Maxi Chain Machine, which cuts pipe diameters from 4" / 102mm to unlimited, is designed to provide many years of service. **CE Approved**.

- **MOST ACCURATE** of the chain machines because of its Triple Width Chain.
- Out-of-Round Compensating Device can be moved to any point to the Torch Arm.
- **VERSATILE** - Regardless of whether its round or out-of-round—the machine can be used to accurately cut seam welded, spiral welded and API Line Pipe.
- **50% FASTER** than hand cutting and grinding
- The Rack Adjustable Torch Support allows the piercing of the pipe away from the cut line and is moved to the cut line to reduce notching.
- **WILL CUT VERTICAL** pipe or vessels 18 inches / 457mm and larger when used with the Guide Strips.

Maxi Chain Machines

Model	Part Number	Net Weight Lbs. / kg
Manual Maxi Chain Machine	05-0510-008	34 / 15.4
Motorized Maxi Chain Machine, 110vac	05-0510-M00	42 / 19
Motorized Maxi Chain Machine, 2 outlets 230vac CE approved	05-0510-ME2	56 / 26
Motorized Maxi Chain Machine, 3 outlets 230vac CE approved	05-0510-ME3	56 / 26

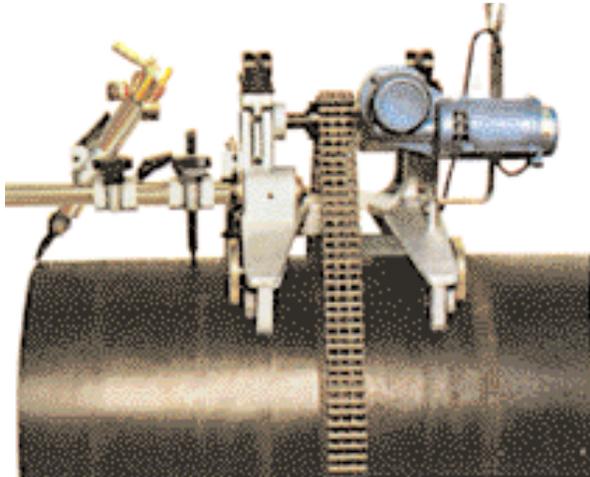
(Chain Block with Pin Drive and Drive Chain ordered separately.)

Options:

- Variable Speed Motorizing Kit available for 115 or 230vac at 50 or 60 Hertz operation reduces grinding by 90%.
- Available with Rack Adjustable Torch Holder for 1 3/8 inch / 35mm diameter machine torch with 32 pitch or metric torch rack.
- Chain Kits available for all standard pipe and tubing sizes. (Special sizes available on request.)

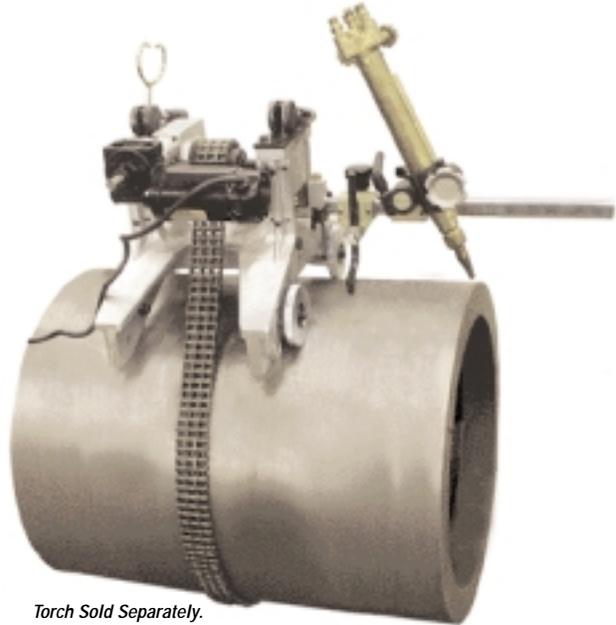
Chain Machine

Maxi Chain Machine



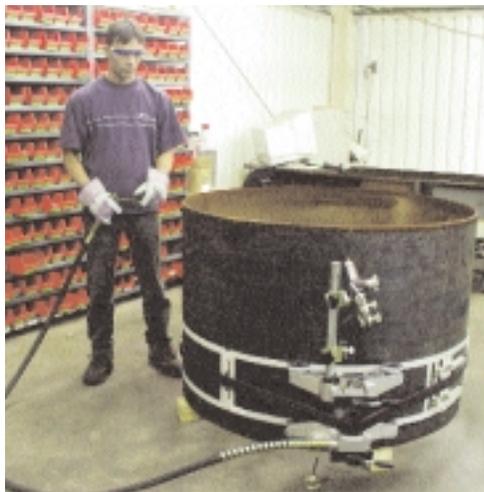
Torch Sold Separately.

The *CE Approved* 230vac Maxi Chain Machine will greatly enhance productivity of the inexperienced or experienced welder.



Torch Sold Separately.

The 115vac Motorized Maxi Chain Machine gives an extremely smooth and accurate cut. *CE Approved.*

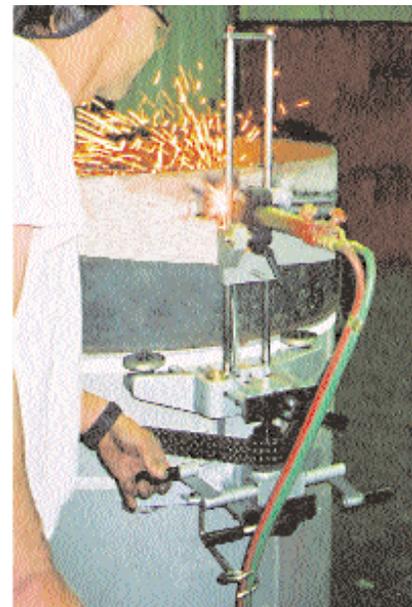


Maxi cutting on 48" / 1219mm pipe with Guide Strip and Cable Drive Assembly.

When cutting over water or in an extremely humid environment—the Maxi Chain Machine with Flexible Drive Cable is the best option.



The Coping Device when used with the the Maxi Chain Machine allows the operator to cut quality saddle and shallow miter angles consistently and securely with little or no grinding.



Accessories:

- 2nd Torch Holder Support and Torch Holder available for Dual Torch Operation.
- Out-of-Round Compensating Device enables the machine to cut smoothly over pipe imperfections and weld seams.
- Torches and Tips available for all types of cutting gases.
- Guide Strips for fast set up and accurate cutting of larger pipe diameters. Individual sections can be purchased to extend the range of the Guide Strip.
- 9' / 2.7M or 14' / 4.3mm Flexible Drive Cable for remote operation.
- Torch Shut-Off Valve to minimize adjustment of gas mixture to the cutting torch.

Chain Machine Accessories

Mignon, Mini and Maxi Accessories

Accessory Description	Part Number	Estimated Shipping Weight (lbs./kg)
Maxi/Mini Motorizing Kit 115vac	05-0510-A01	13 / 6
Maxi/Mini Motorizing Kit - 230vac/48vdc with 2 wall sockets - CE approved (European)	05-0510-A02	18 / 8
Maxi/Mini Motorizing Kit - 230vac/48vdc/48vac with 3 wall sockets - CE approved (European)	05-0510-A03	18 / 8
Sliding Support for 2nd Torch (Mini and Maxi Only)	05-0510-114	1 / .5
Support for 2nd Torch (Mignon Only)	05-0530-M102	1.3 / .6
1 3/8" / 35mm Torch Holder with 32 pitch Pinion	05-0510-117	.7 / .3
1 3/8" 35mm Torch Holder with metric Pinion	05-0510-117E	.7 / .3
9' (274cm) Flexible Drive Cable (Mini and Maxi Only)	05-0510-FDC	15 / 6.8
14' / 427cm Drive Cable (Mini and Maxi Only)	05-0510-FD14	12 / 5.4
Mini Out-of-Round Attachment	05-0520-300	6 / 2.7
Coping Device (Maxi Only)	05-0510-126	15 / 6.8
Coping Device Template*	05-0115-J---	15-35 / 7-16
Maxi and Mini Box (European)	05-0510-BOX	38 / 17.2
Mignon Storage Box (All Mignon Machines, US Maxi and Mini.)	05-0530-BOX	28 / 12.7
Grinding Tool Kit for US Grinder (Does not include Grinder.)	05-0510-148	2 / 1
Grinding Tool Kit for 48vac (Includes 4" / 102mm Right Angle Grinder.)	05-0510-148K	6 / 2.7
Grinding Tool Kit for 220vac (Includes 4" / 102mm Right Angle Grinder.)	05-0510-220K	6 / 2.7

* See Page 7: Fill out Saddle Machine Contour Template when ordering the Coping Device Template.

A Step Down Transformer is also available for European Voltages.

GRINDING ATTACHMENT

The Grinding Attachment when used with the Maxi or Mini and Guide Strip is a combination for refacing bevels or lands on pipe ends.



EUROPEAN MOTORIZING KITS

Maxi and Mini Chain Machine European Motorizing Kits come with 48 volt DC Right Drive Motor, Motor Adaptor, Motor Coupling, Remote Control Pendant and Power Supply Control Box. The Remote Control Pendant is attached to the Motor Control Box by means of an Eleven (11) Ft. / 3.5M Electrical Cord. Remote Control Pendant contains Indicator Lamp, Power Switch, Forward / Reverse Switch and Speed Rheostat.

There are Two (2) Models of the 230 volt AC/Single Phase/50/60Hz European Motorizing Kits. One (1) Model of the Motorizing Kit has a Power Supply Control Box with Two (2) Outlets and has an outlet available with an output of 115 or 230 volt AC/Single Phase 50/60Hz for operation of a welder or other power tool and a 48 volt DC outlet for the operation of DC Power Tools. The other model of the Motorizing Kit has a Power Supply Control Box with Three (3) Outlets and has an outlet available with an output of 115 or 230 volts AC/Single Phase/50/60Hz for operation of a welder or other power tool, a 48 volt AC Output for the operation of AC Power Tools. *CE Approved.*

SLIDING SUPPORT AND TORCH HOLDER

The combination of the Sliding Support and the Torch Holder gives the Chain Machine the ability to bevel both sides of the cut line simultaneously.



CABLE DRIVE

The Cable Drive Attachment enables the Maxi and Mini Chain Machine to be operated remotely when cutting large diameter pipe. Cable available in length of 9' / 2.7M and 14' / 4.3M.



HEAVY-DUTY STORAGE BOXES

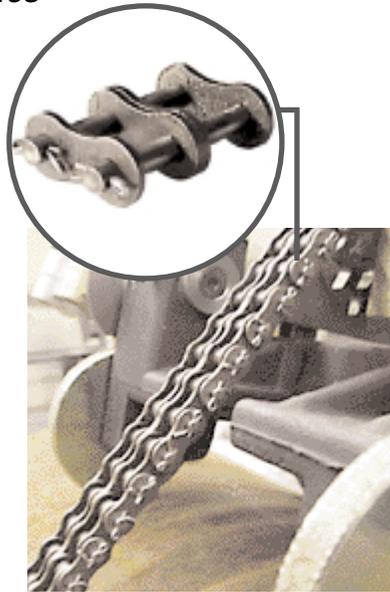
The Heavy-Duty Storage Box is made of steel with powder coated paint finish to resist the wear and tear of everyday shop use. Storage Boxes are available for American and European Model Chain Machines. The lid of the box is very durable and can be used as a worktable.



Chain Machine Accessories

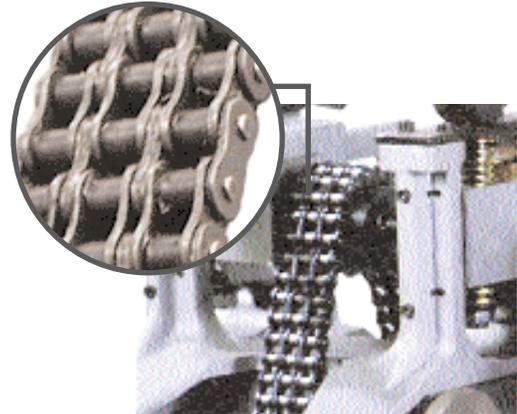
Cotter Roller Chain

The NEW Cotter Roller Chain makes the Mini and Mignon Chain Machine quick and easy to change from one pipe size to another. Simply remove the Cotter Pins from the end of the Chain Link and remove or add a section of chain. The Chain can be joined with a Cottered Chain Link or a Standard Connecting Link to identify a particular pipe diameter if additional chain links are needed.



Triple Link Chain

The Maxi Chain Machine is the most accurate of the chain machines because of its Triple Link Chain. The combination of the Three (3) Wheel Positioning and Triple Link Chain gives it versatility and precision.



Mignon Chain Kits

Description	Part Number	Estimated Shipping Weight lbs / kg
Chain Block with Pin Driver	05-0520-009	3 / 1.4
Chain Kit for 2 1/2" Pipe	01-0530-0025	2 / 1
Chain Kit for 4" Pipe	01-0530-004	2 / 1
Chain Kit for 6" Pipe	01-0530-006	3 / 1.4
Chain Kit for 8" Pipe	01-0530-008	4 / 1.8
Chain Kit for 10" Pipe	01-0530-010	4 / 1.8
Chain Kit for 12" Pipe	01-0530-012	5 / 2
Chain Kit for 16" Pipe	01-0530-016	6 / 2.7
Chain Kit for 18" Pipe	01-0530-018	6 / 2.7
Chain Kit for 20" Pipe	01-0530-020	7 / 3
Chain Kit for 24" Pipe	01-0530-024	8 / 3.6
Chain Kit for 28" Pipe	01-0530-028	9 / 4
Chain Kit for 30" Pipe	01-0530-030	9 / 4
Chain Kit for 32" Pipe	01-0530-032	10 / 4.5
Chain Kit for 36" Pipe	01-0530-036	11 / 5
Chain Kit for 40" Pipe	01-0530-040	12 / 5.4
Chain Kit for 42" Pipe	01-0530-042	13 / 5.9
Chain Kit for 48" Pipe	01-0530-048	14 / 6.4
Chain Kit for 50" Pipe	01-0530-050	15 / 6.8
Chain Kit for 52" Pipe	01-0530-052	15 / 6.8
Chain Kit for 56" Pipe	01-0530-056	17 / 7.7
Chain Kit for 60" Pipe	01-0530-060	18 / 8.2

Mini Chain Kits

Description	Part Number	Estimated Shipping Weight lbs / kg
Chain Block with Pin Driver	05-0520-009	3 / 1.4
Chain Kit for 2" Pipe	01-0520-002	2 / 1
Chain Kit for 3" Pipe	01-0520-003	2 / 1
Chain Kit for 4" Pipe	01-0520-004	2 / 1
Chain Kit for 6" Pipe	01-0520-006	3 / 1.4
Chain Kit for 8" Pipe	01-0520-008	4 / 1.8
Chain Kit for 10" Pipe	01-0520-010	4 / 1.8
Chain Kit for 12" Pipe	01-0520-012	5 / 2
Chain Kit for 16" Pipe	01-0520-016	6 / 2.7
Chain Kit for 18" Pipe	01-0520-018	6 / 2.7
Chain Kit for 20" Pipe	01-0520-020	7 / 3
Chain Kit for 24" Pipe	01-0520-024	8 / 3.6
Chain Kit for 28" Pipe	01-0520-028	9 / 4
Chain Kit for 30" Pipe	01-0520-030	9 / 4
Chain Kit for 32" Pipe	01-0520-032	10 / 4.5
Chain Kit for 36" Pipe	01-0520-036	11 / 5
Chain Kit for 40" Pipe	01-0520-040	12 / 5.4
Chain Kit for 42" Pipe	01-0520-042	13 / 5.9
Chain Kit for 48" Pipe	01-0520-048	14 / 6.4
Chain Kit for 50" Pipe	01-0520-050	15 / 6.8
Chain Kit for 52" Pipe	01-0520-052	15 / 6.8
Chain Kit for 56" Pipe	01-0520-056	17 / 7.7
Chain Kit for 60" Pipe	01-0520-060	18 / 8.2

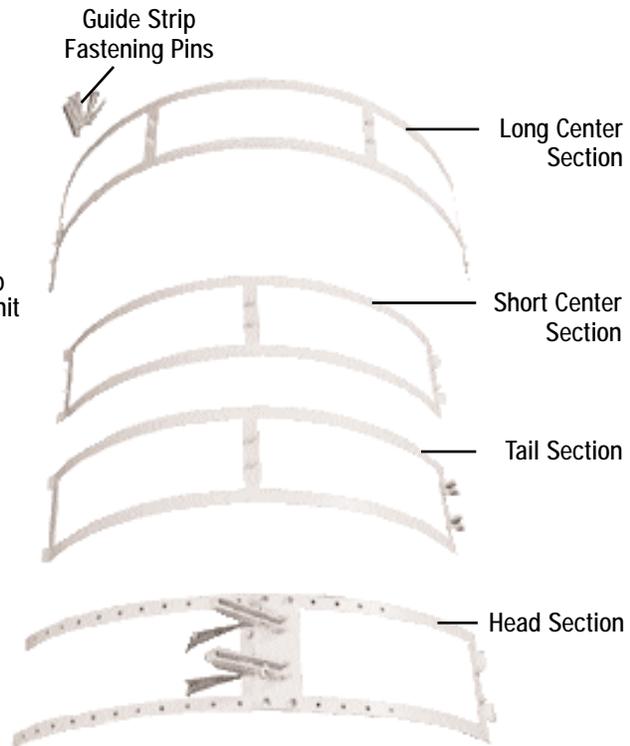
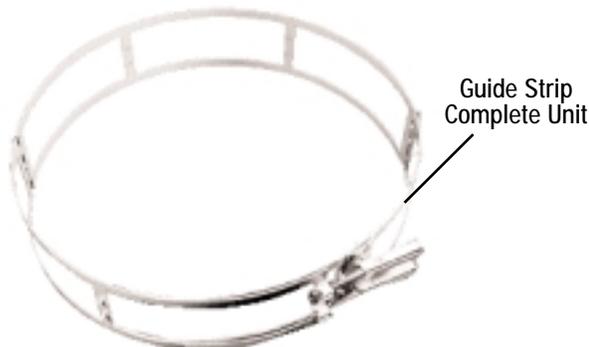
Maxi Chain Kits

Description	Wheel Position	Part Number	Estimated Shipping Weight lbs / kg
Chain Kit for 4" Pipe	1	01-0510-004	3 / 1.4
Chain Kit for 6" Pipe	2	01-0510-006	4 / 2
Chain Kit for 8" Pipe	2	01-0510-008	5 / 2.3
Chain Kit for 10" Pipe	2	01-0510-010	5 / 2.3
Chain Kit for 12" Pipe	2	01-0510-012	6 / 2.7
Chain Kit for 16" Pipe	2	01-0510-016	7 / 3
Chain Kit for 18" Pipe	2	01-0510-018	8 / 3.6
Chain Kit for 20" Pipe	2	01-0510-020	8 / 3.6
Chain Kit for 24" Pipe	2	01-0510-024	10 / 4.5
Chain Kit for 28" Pipe	2	01-0510-028	11 / 5
Chain Kit for 30" Pipe	2	01-0510-030	12 / 5.4
Chain Kit for 32" Pipe	2	01-0510-032	13 / 5.9
Chain Kit for 38" Pipe	2	01-0510-038	15 / 6.8
Chain Kit for 40" Pipe	3	01-0510-040	15 / 6.8
Chain Kit for 42" Pipe	3	01-0510-042	16 / 7.3
Chain Kit for 48" Pipe	3	01-0510-048	18 / 8.2
Chain Kit for 50" Pipe	3	01-0510-050	19 / 8.6
Chain Kit for 52" Pipe	3	01-0510-052	19 / 8.6
Chain Kit for 56" Pipe	3	01-0510-056	21 / 9.8
Chain Kit for 60" Pipe	3	01-0510-060	22 / 10

Chain Machine Accessories

Guide Strips

Guide Strip Selection Charts on following page.



Guide Strips - Extra Precision on Larger Pipe

For pipe sizes - above 18" / 457mm, the use of a Guide Strip is recommended. The Guide Strip allows for accurate tracking on even the largest diameter pipe. The Guide Strap reduces set-up time by 20%, as the Machine does not have to be rotated around the pipe to align the chain to the pipe.

NOTE:

Chain Machine Guide Strips are also sold in sections. There are Four (4) main sections:

1. Head Section
2. Long Center Section
3. Short Center Section
4. Tail Section

If ordered by section - each section includes Two (2) Pins and Two (2) Washers.

To order Guide Strips by section, for pipe sizes above 48" / 1219mm or extending the range of Guide Strips, refer to *Chain Guide Selection Charts located on the following pages.*

Guide Strip

Add or remove Guide Strip sections as needed when changing pipe diameters.



Guide Strip Part No. 05-520-013

Guide Strip insures a precise square cut on 18" / 457mm and larger pipes.

Chain Machine Accessories

Mignon Chain Machine

Guide Strip Selection Chart

Pipe Range in. / mm	Head Section 05-0530-013B	Tail Section 05-0530-013D	Short Center Section 05-0530-013C	Long Center Section 05-0530-013A
18 - 22 / 458-559	1	1		
18 - 32 / 610 - 813	1	1	1	
18 - 36 / 864 - 914	1	1		1
18 - 48 / 1118 - 1219	1	1	1	1
18 - 52 / 1270 - 1321	1	1		2
18 - 58 / 1372 - 1473	1	1	2	1
18 - 64 / 1524 - 1625	1	1	1	2
18 - 72 / 1674 - 1829	1	1	2	2

For pipe sizes above 72" / 1828mm contact Mathey Dearman, Inc. Sales Department for the number of sections needed.

Mini Chain Machine

Guide Strip Selection Chart

Pipe Range in. / mm	Head Section 05-0520-013B	Tail Section 05-0520-013D	Short Center Section 05-0520-013C	Long Center Section 05-0520-013A
18 - 22 / 458-559	1	1		
18 - 32 / 610 - 813	1	1	1	
18 - 36 / 864 - 914	1	1		1
18 - 48 / 1118 - 1219	1	1	1	1
18 - 52 / 1270 - 1321	1	1		2
18 - 58 / 1372 - 1473	1	1	2	1
18 - 64 / 1524 - 1625	1	1	1	2
18 - 72 / 1674 - 1829	1	1	2	2

For pipe sizes above 72" / 1828mm contact Mathey Dearman, Inc. Sales Department for the number of sections needed.

Maxi Chain Machine

Guide Strip Selection Chart

Pipe Range in. / mm	Head Section 05-0510-013B	Tail Section 05-0510-013D	Short Center Section 05-0510-013C	Long Center Section 05-0510-013A
18 - 22 / 458-559	1	1		
18 - 32 / 610 - 813	1	1	1	
18 - 36 / 864 - 914	1	1		1
18 - 48 / 1118 - 1219	1	1	1	1
18 - 52 / 1270 - 1321	1	1		2
18 - 58 / 1372 - 1473	1	1	2	1
18 - 64 / 1524 - 1625	1	1	1	2
18 - 72 / 1674 - 1829	1	1	2	2

For pipe sizes above 72" / 1828mm contact Mathey Dearman, Inc. Sales Department for the number of sections needed.

Guide Strip Chart

Description	Part Number	Estimated Shipping Weight (lbs./kg)
Mignon 18"-32" / 457mm-813mm Guide Strip	05-0530-012	12 / 5.4
Mignon 18"-48" / 457mm-1219mm Guide Strip	05-0530-013	17 / 7.3
Head Section	05-0530-013B	4.7 / 2
Tail Section	05-0530-013D	3.6 / 1.6
Short Center Section	05-0530-013C	3.2 / 1.5
Long Center Section	05-0530-013A	4.3 / 2

Guide Strip Chart

Description	Part Number	Estimated Shipping Weight (lbs./kg)
Mini 18"-32" / 457mm-813mm Guide Strip	05-0520-012	12 / 5.4
Mini 18"-48" / 457mm-1219mm Guide Strip	05-0520-013	15 / 6.8
Head Section	05-0520-013B	4.7 / 2
Tail Section	05-0520-013D	3.6 / 1.6
Short Center Section	05-0520-013C	3.2 / 1.5
Long Center Section	05-0520-013A	4.3 / 2

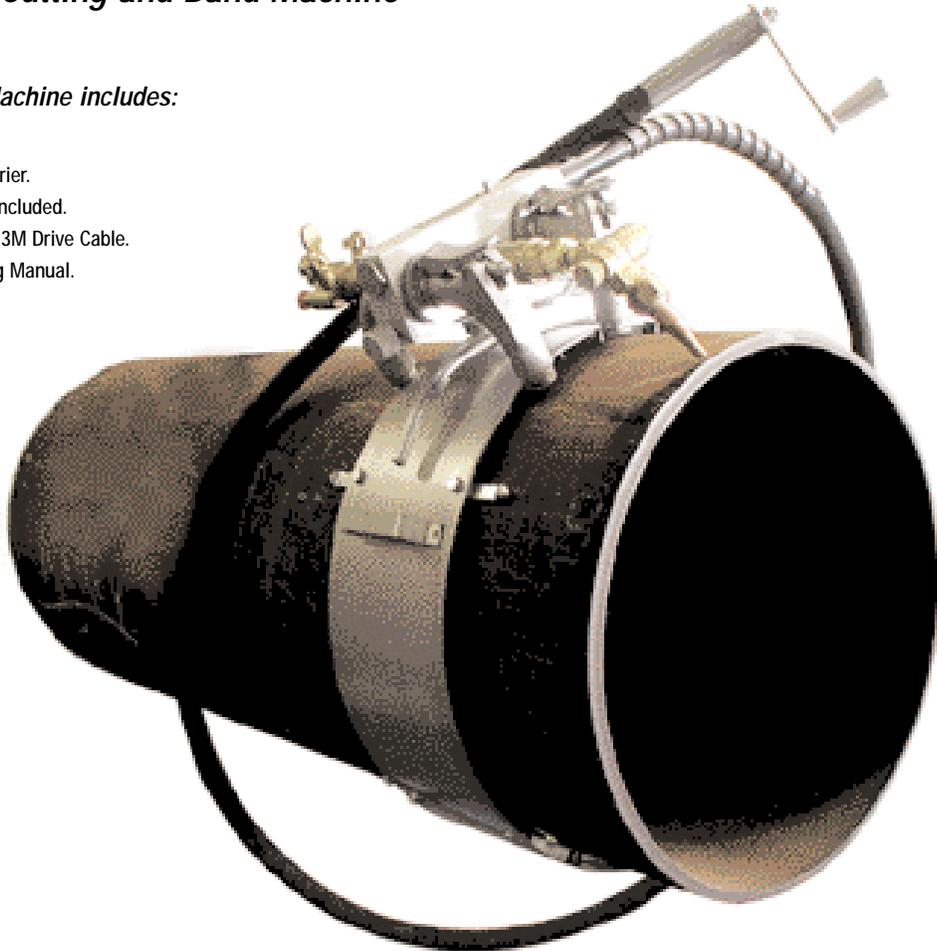
Guide Strip Chart

Description	Part Number	Estimated Shipping Weight (lbs./kg)
Maxi 18"-32" / 457-813mm	05-0510-012	12 / 5.4
Maxi 18"-48" / 457-1219mm Guide Strip	05-0510-013	15 / 6.8
Head Section	05-0110-013B	4.7 / 2
Tail Section	05-0110-013D	3.5 / 1.6
Short Center Section	05-0110-013C	3.2 / 1.5
Long Center Section	05-0110-013A	4.3 / 2

Monarch Pipe Cutting and Band Machine

Band Crawler Machine includes:

- Base Machine.
- Eccentric Torch Carrier.
- Cutting Torch NOT Included.
- 9' / 2.7M or 14' / 4.3M Drive Cable.
- Parts and Operating Manual.



Monarch Band with Band Crawler can be used in the trench or in a pipe run, when there is a minimum amount of clearance around the pipe. The Stainless Steel Band can be positioned in tight areas that need repair as it requires only 6" / 153mm clearance. The *light flexible Band* will allow the Band Crawler to give a consistent bevel on severely out-of-round pipe as the Band forms to the pipe shape. The lightweight Band Crawler enables one man operation on diameter as large as 60" (1524mm). Bands available for pipe sizes 6" to 60" / 152 to 1524mm and larger upon request.

Bands from 6" to 12" / 152 to 305mm are made from 14 Gauge Stainless Steel. Bands from 14" / 356mm and up are made from 12 Gauge Stainless Steel.

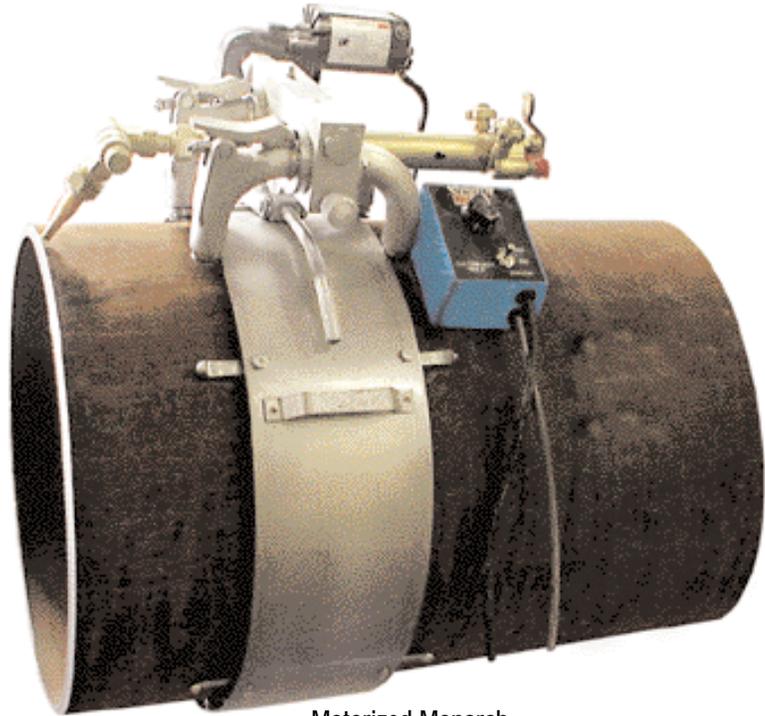
Band Machines

Model	Part Number	Estimated Shipping Weight Lbs. / kg
Band Machine with 9' / 2.7M Flex Drive Cable	05-0117-009	21 / 10
Band Machine with 14' / 4.3M Flex Drive Cable	05-0117-014	30 / 14
Motorized Band Machine, 115vac	05-0117-M00	21 / 10
Motorized Band Machine, 230vac	05-0117-M04	24 / 11
Motorized Band Machine, 90vdc	05-0117-M05	21 / 10
Pnuematic Crawler	05-0117-M06	12 / 37

Monarch Pipe Cutting and Band Machine Accessories

Motorized Monarch Band Machine

- **ONE MAN OPERATION** - one man can set-up and cut pipes as large as 48" / 1219mm.
- Band forms to the out-of-round condition of the pipe to keep the torch at a preset distance from the pipe wall.
- **EASE OF SET-UP** is realized when cutting horizontal or vertical pipes, because the Bands are lightweight design.
- **LOW PROFILE** of the Crawler only requires 6" / 152mm of radial clearance around the pipe when used with a Right Angle Drive Adapter.
- **60% FASTER** than hand cutting and grinding.
- Latching Mechanism allows **QUICK INSTALLATION** and **CLOSURE** of the band on the pipe.
- Alignment fingers on the end of the Band provide a **POSITIVE ALIGNMENT** of the band ends.
- One Band Crawler **FITS ALL BAND SIZES**, regardless of the range of pipe sizes to be cut or beveled.



Motorized Monarch Band Machine

When cutting large diameter pipes—operator efficiency can be improved with the Motorized Band Machine.

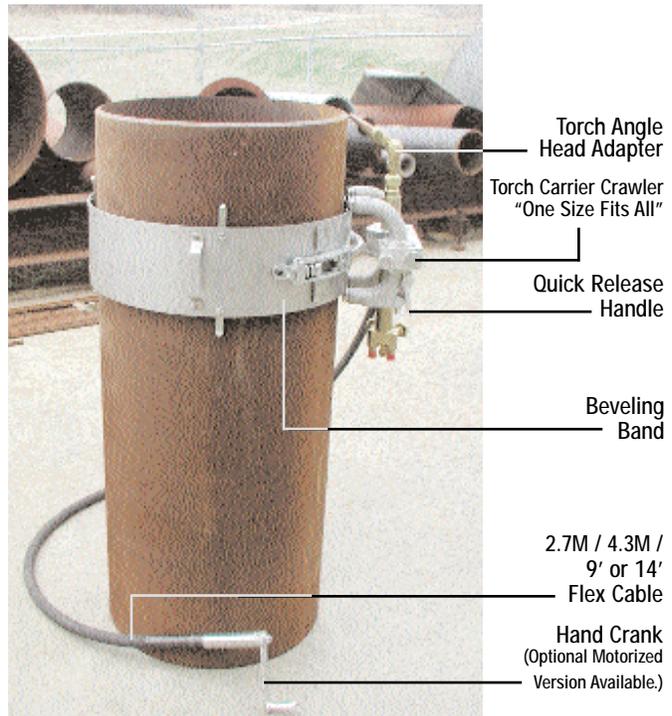
Options:

- Band Crawler is available with 9' / 2.7M or 14' / 4.3M Flexible Drive Cable for manual operation.
- 115vac, 230vac & 90vdc Variable Speed Motorizing Kits are available to reduce the amount of grinding time required.
- Bands for odd sizes of pipe available on request.

Accessories:

- Rack Adjustable Torch Arm permits horizontal movement of the torch parallel to the pipe axis.
- Double Torch Arm allows cuts or bevels to be made simultaneously.
- Torches and Tips available for all types of cutting gases.
- Torch Shut-Off Valve to minimize adjustment of gas mixture to the cutting torch.

The quickest and easiest tool to set up and operate when cutting vertical pipes.



Monarch Pipe Cutting and Band Machine Accessories

DOUBLE TORCH ARM

Beveling both sides of the cut simultaneously reducing manufacturing time and labor cost.



RACK ADJUSTABLE TORCH ARM

The Rack Adjustable Torch Arm permits the adaptation of a Plasma Torch to the Monarch Band Machine.



RIGHT ANGLE DRIVE ADAPTOR

The Right Angle Drive Adaptor permits the Flexible Drive Cable to pivot 180 degrees on the end of the Monarch Band Crawler Body. The Adaptor lowers the profile of the Crawler to 6" / 153mm.



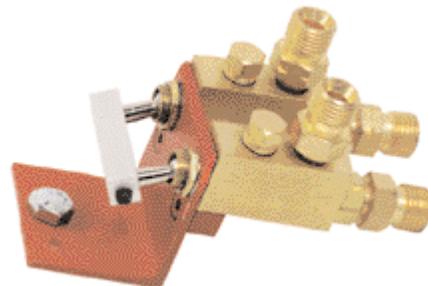
FLEX CABLE DRIVE

A 9' / 2.7M and 14' / 4.3M Flexible Drive Cable enables the Band Crawler to be operated remotely when cutting large diameter pipe.



TORCH SHUT-OFF VALVE

The Torch Shut Off Valve allows the operator to shut off the flow of oxygen and fuel to the cutting torch without disturbing the oxygen and fuel settings. To shut off or open the flow of oxygen and fuel to torch is only a matter of flipping the switch. The port of the Shut-Off Valve are only available in 9/16" - 18 hose threads.



Monarch Pipe Cutting and Band Machine Accessories

Monarch Bands

Item/ Assembly Description	Part No.	Estimated Shipping Weights Lbs. / kgs.
6" (152mm) Band	05-0104-006	5 / 2
8" (203mm) Band	05-0104-008	6 / 3
10" (254mm) Band	05-0104-010	7 / 3
12" (304mm) Band	05-0104-012	7 / 3
14" (356mm) Band	05-0104-014	11 / 5
16" (406mm) Band	05-0104-016	12 / 5
18" (457mm) Band	05-0104-018	13 / 6
20" (508mm) Band	05-0104-020	14 / 6
22" (559mm) Band	05-0104-022	15 / 7
24" (610mm) Band	05-0104-024	24 / 11
26" (660mm) Band	05-0104-026	25 / 11
28" (711mm) Band	05-0104-028	25 / 11
30" (762mm) Band	05-0104-030	25 / 11
32" (813mm) Band	05-0104-032	26 / 12
34" (864mm) Band	05-0104-034	27 / 12
36" (914mm) Band	05-0104-036	29 / 13
38" (965mm) Band	05-0104-038	31 / 14
40" (1016mm) Band	05-0104-040	33 / 15
42" (1067mm) Band	05-0104-042	36 / 16
44" (1118mm) Band	05-0104-044	39 / 18
46" (1168mm) Band	05-0104-046	43 / 20
48" (1219mm) Band	05-0104-048	90 / 41
50" (1270mm) Band	05-0104-050	92 / 42
52" (1321mm) Band	05-0104-052	96 / 44
54" (1372mm) Band	05-0104-054	100 / 45
56" (1422mm) Band	05-0104-056	106 / 48
58" (1473mm) Band	05-0104-058	110 / 50
60" (1524mm) Band	05-0104-060	115 / 52

NOTE:

Bands from 6" to 12" / 152 to 305mm are made from 14 Gauge Stainless Steel. Bands from 14" / 356mm and up are made from 12 Gauge Stainless Steel.

ANGLE ANGLE HEAD ADAPTOR

The Torch Angle Head Adaptor attachment lets the torch tips be adjusted for any angle from a square cut (no bevel), to a bevel angle up to 90 degrees V-Groove. It also permits adjustments for a lead or lag angle of the torch. Part No. 05-0200-003



Monarch Band Machine Accessories

Item/Assembly Description	Part No.	Estimated Shipping Weight lbs./kgs.
Electric Motorizing Retrofit Kit, 115VAC	05-0117-A01	10 / 5
Electric Motorizing Retrofit Kit, 230VAC	05-0117-A02	20 / 9
Electric Motorizing Retrofit Kit, 90vdc	05-0117-A04	10 / 5
Pneumatic Motorizing Retrofit Kit	05-0117-A03	15 / 7
Rack Adjustable Torch Arm	05-0117-032	7 / 3
Double Torch Arm	05-0117-039	9 / 4
Right Angle Drive Adaptor (For Flexible Drive Cable)	05-0117-030	1 / .5
Angle Head Torch Adaptor	05-0200-0003	1.2 / .5

Monarch Band and Band Parts

Item/ Assembly Description	Part No.	Estimated Shipping Weight Lbs. / Kg
Standard Latch		
Band Latch Assembly, 6" to 12" / 153 to 305mm	05-0103-100	1.5 / .68
Band Latch Assembly, 14" and up / 356mm and up	05-0103-102	1.7 / .77
Crawler Parts		
Grease Zerk	01-0469-003	.1 / .05
Worm Gear Shaft Assembly	05-0117-002	.3 / .14
Worm Gear Shaft Bearing	05-0117-003	.1 / .05
Drive Wheel Assembly (4 Req.)	05-0117-005	.15 / .07
Crank Handle Assembly	05-0117-006	.3 / .14
Torch Holder Eccentric	05-0117-008	.4 / .18
Set Screw	05-0117-011	.25 / .11
Connector	05-0117-012	.15 / .07
End Plug	05-0117-021	.15 / .07
Flexible Drive Cable, 9' / 2.7M	05-0117-022	26 / 11.8
Flexible Drive Cable, 14' / 4.3M	05-0117-031	30 / 13.6

Torches and Accessories

TORCHES

Mathey Dearman recognizes the need for quality accessories. Mathey Dearman offers Torches with a 1 3/8" / 35mm barrel diameter with and without rack. All torches sold in the USA come with a Check Valve. Torch and Tips are available for most fuel gases.

(Please refer to chart on next page for Torches and Accessories.)

Machine Torch Selection is dependent on the machine type and diameter to be cut. The chart below will help to choose the **BEST TORCH** to use for covering the diameters and torch bevel angles that the machine will cut.

When using any of the above machines with their accessories, contact Mathey Dearman Sales Department for the correct Machine Torch to use with that accessory.



Machine Torch Selection Chart

Model	05-0200-001 Victor MT204A 8" Machine Torch	05-0200-002 Victor MT210A 10" Machine Torch	05-0200-003 Victor Torch Angle Adaptor	05-0300-001 Harris 10M Machine Torch With 32 Pitch Rack	05-0300-002 Harris 10M Machine Torch Less 32 Pitch Rack	05-0300-003 Harris 10M Machine Torch Angle Head Adaptor	05-0400-001 Smith SC770 8" Machine Torch	05-0400-003 Smith SC772A 10" Machine Torch	05-0400-005 Smith SC771 - 15-1/2" Machine Torch	05-0400-007 Smith Torch Angle Adaptor	05-0300-005 8" Mathey Torchless Rack	05-0300-008 8" Mathey Torch with Rack
MSA	4" / 102mm Only	1-1/2" to 4" / 38 to 102mm			1-1/2" to 4" / 38 to 102mm		4" / 102mm Only	1-1/2" to 4" / 38 to 102mm			4" / 102mm Only	4" / 102mm Only
1SA	8" / 203mm Only	3" to 8" / 76 to 203mm			3" to 8" / 76 to 203mm		8" / 203mm Only	3" to 8" / 76 to 203mm	Required when cut 3" / 76mm at 37 1/2 Degrees		8" / 203mm Only	8" / 203mm Only
2SA	12" / 305mm Only	6" to 12" / 152 to 305mm			6" to 12" / 152 to 305mm		12" / 305mm Only	6" to 12" / 152 to 305mm	Required when cut 6" / 152mm at 37 1/2 Degrees		12" / 305mm Only	12" / 305mm Only
3SA		12" to 20" / 305 to 508mm			12" to 20" / 305 to 508mm			12" to 20" / 305 to 508mm	Required when cut 12" / 305mm at 37 1/2 Degrees			
4SA		20" to 26" / 508 to 660mm			20" to 26" / 508 to 660mm			20" to 26" / 508 to 660mm	20" to 26" / 508 to 660mm			
5SA		24" to 30" / 610 to 762mm			24" to 30" / 610 to 762mm			24" to 30" / 610 to 762mm	24" to 30" / 610 to 762mm			
6SA		24" to 36" / 711 to 914mm			24" to 36" / 711 to 914mm			24" to 36" / 711 to 914mm	24" to 36" / 711 to 914mm			
8SA		40" to 48" / 1016 to 1219mm			40" to 48" / 1016 to 1219mm			40" to 48" / 1016 to 1219mm	40" to 48" / 1016 to 1219mm			
Super II		6" to 12" / 152 to 305mm			6" to 12" / 152 to 305mm			6" to 12" / 152 to 305mm	2" to 6" / 50 to 152mm			
MagnaCut II MagnaCut XM	All Diameters and Angles to 20 Degrees	All Diameters with Bevel Angles to 37 1/2 Degrees		All Diameters with Bevel Angles to 37 1/2 Degrees	All Diameters with Bevel Angles to 37 1/2 Degrees		All Diameters with Bevel Angles to 15 Degrees	All Diameters with Bevel Angles to 37 1/2 Degrees				
Mignon	All Diameters with Bevel Angles to 30 Degrees	All Diameters with Bevel Angles to 37 1/2 Degrees		All Diameters with Bevel Angles to 37 1/2 Degrees	All Diameters with Bevel Angles to 37 1/2 Degrees		All Diameters with Bevel Angles to 10 Degrees	All Diameters and Angles to 45 Degrees			All Diameters with Bevel Angles to 37 1/2 Degrees	All Diameters with Bevel Angles to 37 1/2 Degrees
Mini	All Diameters with Bevel Angles to 30 Degrees	All Diameters with Bevel Angles to 37 1/2 Degrees		All Diameters with Bevel Angles to 37 1/2 Degrees	All Diameters with Bevel Angles to 37 1/2 Degrees		All Diameters with Bevel Angles to 10 Degrees	All Diameters and Angles to 45 Degrees			All Diameters with Bevel Angles to 37 1/2 Degrees	All Diameters with Bevel Angles to 37 1/2 Degrees
Maxi	All Diameters with Bevel Angles to 30 Degrees	All Diameters with Bevel Angles to 37 1/2 Degrees		All Diameters with Bevel Angles to 37 1/2 Degrees	All Diameters with Bevel Angles to 37 1/2 Degrees		All Diameters with Bevel Angles to 10 Degrees	All Diameters and Angles to 45 Degrees			All Diameters with Bevel Angles to 37 1/2 Degrees	All Diameters with Bevel Angles to 37 1/2 Degrees
Monarch Band Machine		All Diameters	All Diameters		All Diameters	All Diameters		All Diameters	All Diameters	All Diameters		



Torches and Accessories

Torches

Description	Part Number	Gas	Barrel Diameter (in./mm)	Barrel Length (in./mm)	Cutting Capacity (in./mm)	Estimated Shipping Weight Lbs / Kg
Torches						
Victor MT204A 8" Machine Cutting Torch**	05-0200-001	Act*	1 3/8 / 35	4 1/2 / 104	7 / 178	3.4 / 1.54
Victor M1210A 10" Machine Cutting Torch	05-0200-002	Act*	1 3/8 / 35	10 / 254	7 / 178	4 / 1.8
Victor BHA Torch Angle Head Adapter	05-0200-003	All	N/A	N/A	N/A	1.3 / .59
32 Pitch Rack for Victor 0319-0054 Machine Torch**	05-0200-004	N/A	N/A	N/A	N/A	.15 / .07
Smith SC770 - 8" Machine Cutting Torch	05-0400-001	All	1 3/8 / 35	4 1/2 / 104	12 / 305	3.4 / 1.54
32 Pitch Rack, 8" Torch	05-0400-002	N/A	N/A	N/A	N/A	.15 / .07
Smith SC722A - 10" Machine Cutting Torch	05-0400-003	All	1 3/8 / 35	10 / 254	12 / 305	4 / 1.8
32 Pitch Rack, 10" Torch	05-0400-006	N/A	N/A	N/A	N/A	.15 / .07
Smith SC771 15 1/2" Machine Cutting Torch	05-0400-005	All	1 3/8 / 35	15 1/2	12 / 305	12 / 305
32 Pitch Rack, 15 1/2" Torch	05-0400-004	N/A	N/A	N/A	N/A	.15 / .07
Smith Torch Angle Head Adapter (SC290)	05-0400-007	All	N/A	N/A	N/A	2.6 / 1.2
Harris 98-6E Machine Torch	05-0300-002	Act*	1 3/8 / 35	10 / 254	8 / 203	3.8 / 1.7
Harris 98-6ER-32 Machine Torch with 32 Pitch Rack	05-0300-001	Act*	1 3/8 / 35	10 / 254	8 / 203	3.8 / 1.7
Harris S-98-C Torch Angle Head Adapter	05-0300-003	All	N/A	N/A	N/A	1.3 / .59
Machine Torch less Rack, Mathey	05-0300-005	Act*	1 3/8 / 35	10 / 254	8 / 203	3.8 / 1.7
Machine Torch with Rack, Mathey	05-0300-008	Act*	1 3/8 / 35	10 / 254	8 / 203	3.8 / 1.7
Torch Shut-Off Valve						
Torch Manifold Block	05-0200-014	All	N/A	N/A	N/A	.95 / .43
Oxygen Valve	05-0200-018	All	N/A	N/A	N/A	.4 / .18
Fuel Gas Valve	05-0200-019	All	N/A	N/A	N/A	.4 / .18
Y connector	05-0200-015	All	N/A	N/A	N/A	.3 / .14
Oxygen Hose	05-0200-016	All	N/A	N/A	N/A	.4 / .18
Fuel Gas Hose	05-0200-017	All	N/A	N/A	N/A	.4 / .18

*May also be used on other pressurized fuel gases.

**Torch Rack (PN. 05-0200-024) can not be used with Torch (PN. 05-0200-001).

Victor Torch Tip



Smith Torch Tip



Harris Torch Tip



Mathey Torch Tip



Cutting Tips

Description	Part Number	Gas	Tip Length (in./mm)	Max Cutting Capacity (in./mm)	Estimated Shipping Weight Lbs / Kg
Victor Cutting Tip	05-0201-001	Act	3 / 76.2	3/4 / 19	.2 / .09
Victor Cutting Tip	05-0201-002	Act	3 / 76.2	1 / 25	.2 / .09
Victor Cutting Tip Button	05-0201-003	Act	3/4 / 19	3/4 / 19	.15 / .07
Victor Cutting Tip	05-0201-013	P/NG	3 / 76.2	3/4 / 19	.2 / .09
Victor Cutting Tip	05-0201-014	P/NG	3 / 76.2	1 / 25	.2 / .09
Smith Cutting Tip (SC12-1)	05-0401-001	ACT	2 / 51	5/8 / 16	.3 / .14
Smith Cutting Tip (SC12-2)	05-0401-002	ACT	2 / 51	1 1/4 / 32	.3 / .14
Smith Cutting Tip (SC81-1)	05-0401-003	ACT	3/4 / 19	5/8 / 16	.2 / .09
Smith Cutting Tip (SC40-1)	05-0401-004	P	2 / 51	5/8 / 16	.3 / .14
Smith Cutting Tip (SC40-2)	05-0401-005	P	2 / 51	1 1/4 / 32	.3 / .14
Harris Acetylene Cutting Tip	05-0301-001	Act	3 / 76.2	1 / 25	.15 / .07
Harris Acetylene Cutting Tip	05-0301-002	Act	3 / 76.2	2 / 51	.15 / .07
No. 1 Act. Cutting Tip, Mathey	05-0301-015	Act	3 / 76.2	1 1/4 / 32	.15 / .07
No. 2 Act. Cutting Tip, Mathey	05-0301-016	Act	3 / 76.2	2 / 51	.15 / .07
No. 3 Act. Cutting Tip, Mathey	05-0301-017	Act	3 / 76.2	1 / 25	.15 / .07
No. 1 Propane Cutting Tip, Mathey	05-0301-018	P	3 / 76.2	2 / 51	.15 / .07
No. 1 Propane Cutting Tip, Mathey	05-0301-019	P	3 / 76.2	2 / 51	.15 / .07
No. 1 Propane Cutting Tip, Mathey	05-0301-020	P	3 / 76.2	2 / 51	.15 / .07

Torch Tip Selection

A rule of thumb for selecting the cutting tip for cutting a particular torch bevel angle is:

Act	Acetylene
P	Propane
All	Can be used with all gases.
NG	Natural Gas

15" Bevel Angle is 1 times the pipe wall thickness.

30 Degree Bevel Angle is 1.2 times the pipe wall thickness.

37 1/2 Degree Bevel Angle is 1.3 times the pipe wall thickness.

45 Degree Bevel Angle is 1.4 times the pipe wall thickness.

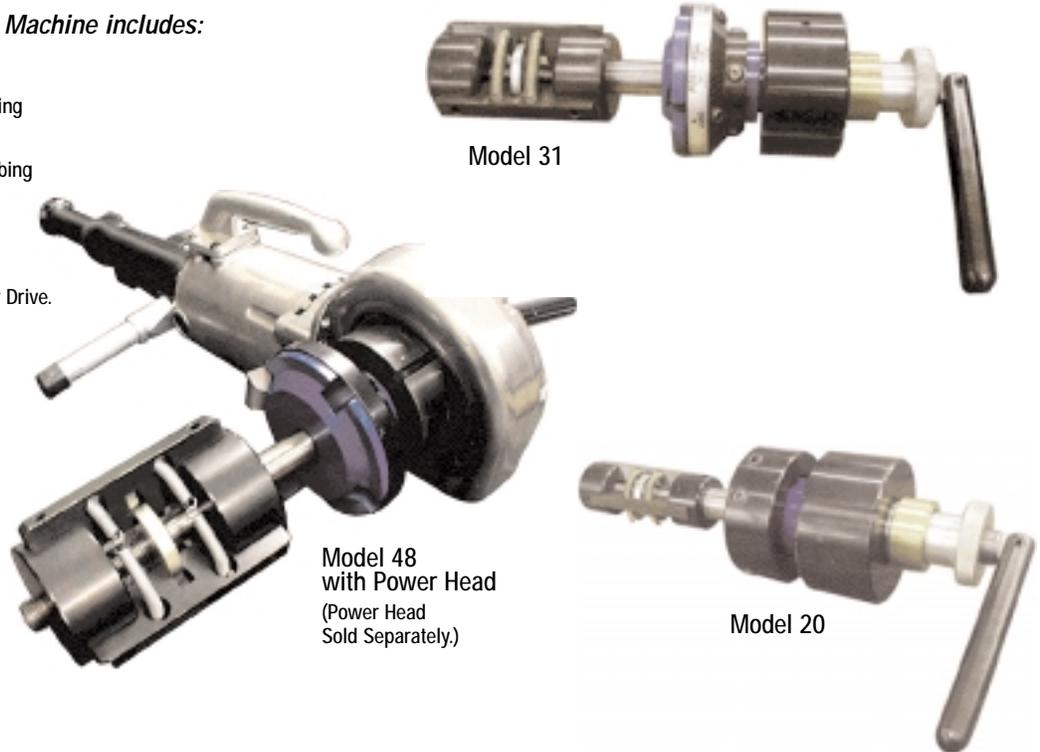
Example: 8" - Schedule 80 has a wall thickness of .500" / 12.7mm.

To Calculate the material thickness to be cut at torch bevel angle of 37 1/2 Degrees—multiply .500" / 12.7mm x 1.3 = .650" / 16.5mm.

Porta-Mill ID Mounted End Prep Machine

Porta-Mill End Prep Machine includes:

- Base Machine.
- Mandrels for pipe or tubing sizes within its range.
- Face Tools for pipe or tubing sizes within its range.
- Rugged Storage Case.
- Torque Bar.
- Does NOT include Power Drive.



Rugged and portable, the Porta-Mill End Prep is used to bevel, face or counterbore pipe ends. The Steel Mandrel Assembly of the Porta-Mill expands against the inside diameter of the pipe providing a solid mounting for smoother extremely accurate bevels. Inexperienced welders and pipefitters with little or no training can achieve precise bevels and lands in minutes. Porta-Mill's superior design makes it an exceptional performer having the utmost durability. Models are available for inside diameter from 1.6" / 41mm to 8.125" / 206mm.

- **SAVE TIME** – The Porta-Mill precisely machines the pipe end assuring a better and faster fit-up.
- **BEVELS MOST MACHINEABLE MATERIALS** such as carbon steel, stainless steel, ductile iron, cast iron and most other alloys without spark or flame.
- **FAST AND EASY SET-UP.**
- **VERSATILE** - Can be used with Ridgid, Rothenburger, Amigo or Reed powered threading tool drives.
- An excellent tool for the maintenance department or the small job shop to bevel pipe **WITHOUT SPARK OR FLAME.**
- Completely **ELIMINATES NEED FOR GRINDING.**
- **DESIGNED** to withstand the abuse encountered during fabrication.
- **ECONOMICAL ALTERNATIVE** to the more expensive end prep machine.
- **NO WAITING** for costly cutting inserts as Porta Mill utilizes standard carbide tipped brazed tool, which can be purchased from most industrial supplies.

Port-Mill ID End Prep Machine

Model	Part Number	Cutting Range Minimum – Maximum (in/mm)	Estimated Shipping Weight Lbs. / kg
Model 20	05-2000-000	1.6 / 41 – 2.25 / 57	37 / 17
Model 31	05-3000-000	2.25 / 57 – 4.25 / 128	40 / 18
Model 48	05-4800-000	3.375 / 86 – 8.125 / 206	46 / 21

Porta-Mill ID Mounted End Prep Machine

Accessories:

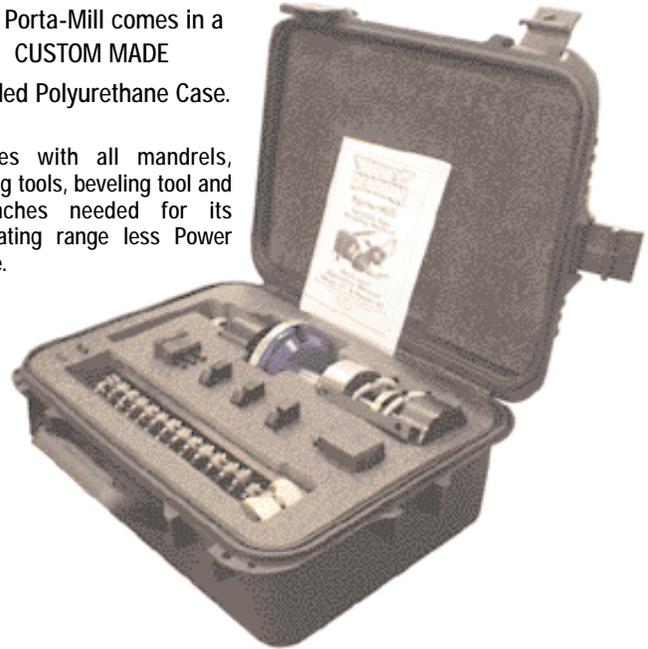
- Beveling Tools for 30° Beveling Tool available upon request.
- "J" Prep Beveling Tools available on request.
- Counterbore Tools for most configurations available on request.

Power Drives:

- 115vac, 230vac and Pneumatic Power Drive Available.

The Porta-Mill comes in a
CUSTOM MADE
Molded Polyurethane Case.

Comes with all mandrels,
facing tools, beveling tool and
wrenches needed for its
operating range less Power
Drive.

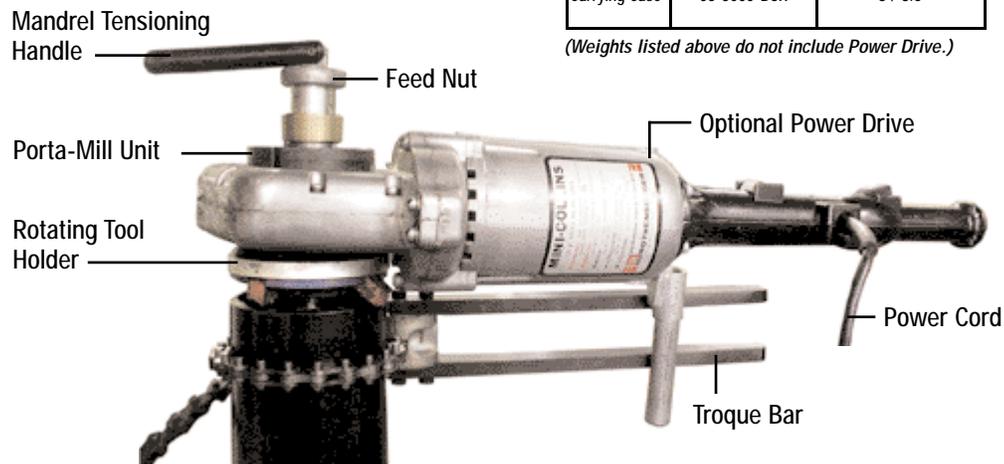


Ideal for fast set-up and facing and beveling
of stainless steel and other nonferrous pipes.

Power Drives and Accessories

Model	Part Number	Estimated Shipping Weight Lbs. / kg
Power Drive, 115vac	05-5000-000	26 / 12
Power Drive, 230vac	05-5000-230	26 / 12
Power Drive, Pneumatic	05-5000-00A	29 / 13
Carrying Case	05-5000-BOX	8 / 3.6

(Weights listed above do not include Power Drive.)

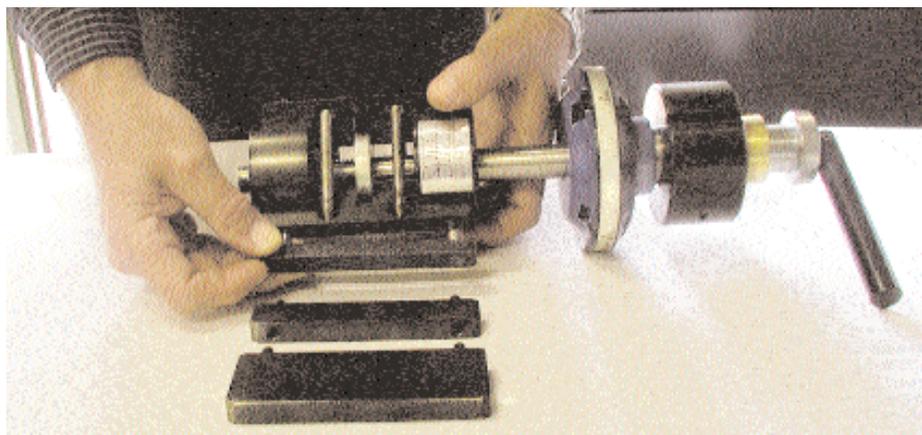


Available with Pneumatic Power
for Operation in Standing Water.

Porta-Mill ID Mounted End Prep Machine

Porta-Mill Selection Chart

Item	in./mm	in./mm	in./mm	in./mm	in./mm	in./mm	in./mm	in./mm	in./mm	in./mm	in./mm
Nominal Pipe Diameter	1 1/2 / 38	2 / 51	2 1/2 / 64	3 / 76	3 1/2 / 89	4 / 102	4 1/2 / 114	5 / 127	6 / 152.4	7 / 177.8	8 / 203
Actual Pipe Outside Diameter	1.90 / 48	3 3/8 / 85.7	2 7/8 / 73	3 1/2 / 89	4 / 102	4 1/2 / 114.3	5 / 127	5 9/16 / 141.3	6 5/8 / 168.3	7 5/8 / 193.7	8 5/8 / 219
Pipe Schedule	Pipe Inside Diameter (inches /mm)										
5	1.770 / 45	2.245 / 57	2.709 / 68.8	3.334 / 84.7	3.834 / 97.4	4.334 / 110.1	---	5.345 / 135.8	---	6.407 / 162.7	8.407 / 213.5
10	1.682 / 2.7	2.157 / 54.8	2.635 / 67	3.260 / 82.8	3.760 / 95.5	4.260 / 108.2	---	5.295 / 134.5	---	6.357 / 161.5	8.329 / 211.6
40	1.610 / 40.9	2.067 / 52.5	2.469 / 62.7	3.068 / 78	3.548 / 90	4.026 / 102.3	---	5.047 / 128.2	---	6.065 / 154.1	7.981 / 202.7
Std.	1.610 / 40.9	2.067 / 52.5	2.469 / 62.7	3.068 / 78	3.548 / 90	4.026 / 102.3	4.506 / 114.5	5.047 / 128.2	7.023 / 178.4	6.065 / 154.1	7.813 / 198.5
80	1.500 / 38.1	1.939 / 49.3	2.323 / 59	2.900 / 73.7	3.364 / 85.4	3.826 / 97.2	---	4.813 / 122.3	---	5.761 / 146.3	7.625 / 193.7
E.H.	1.500 / 38.1	1.939 / 49.3	2.323 / 59	2.900 / 73.7	3.364 / 85.4	3.826 / 97.2	---	4.813 / 122.3	---	---	7.625 / 193.7
120	---	---	---	---	---	3.624 / 92	---	4.563 / 116	---	5.501 / 139.7	7.187 / 182.5
160	1.338 / 34	1.687 / 42.8	2.125 / 54	2.624 / 66.6	---	3.438 / 87.3	---	4.313 / 109.6	---	5.187 / 131.7	6.813 / 173
XX	1.1 / 28	1.503 / 38	1.771 / 45	2.3 / 58.4	2.728 / 69.3	3.152 / 80	3.58 / 91	4.063 / 103.2	5.875 / 149.2	4.897 / 124.4	6.875 / 174.6
	Model 20										
	Model 31										
	Model 48										
	Model 31 or Model 48										



Porta-Mill is easily and quickly changed from one pipe to another by changing the Mandrel Leg.

Porta-Mill Accessories

Cutting Tools

Porta-Mill Facing Tool



Model	Pipe Inside Diameter (in./mm)	Part Number	Estimated Shipping Weight Lbs / Kg
20	1.6-2.25 / 41-57	03-2000-009	.2 / .09
31	3 / 76	03-3100-009	.2 / .09
	4 / 102	03-4800-009	.25 / .11
48	4 / 102	03-4800-009	.25 / .11
	6" (152)	03-4800-011	.3 / .14
	8" (203)	03-4800-013	.4 / .18

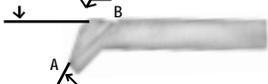
37 1/2° Porta-Mill Beveling Tool



Model	Pipe Inside Diameter (in./mm)	Part Number	Estimated Shipping Weight Lbs. / Kg
20	1.6" - 2.25" (41mm - 57mm)	03-2000-008	.2 / .09
31	3" (76mm)	03-3100-008	.2 / .09
	4" (102mm)	03-4800-008	.25 / .11
48	4" (102mm)	03-04800-008	.25 / .11
	6" (152mm)	03-4800-010	.3 / .14
	8" (203mm)	03-4800-012	.4 / .18

Porta-Mill Counter Bore Tool

Please check the desired Transition Angle and Radius.



Model	Pipe Inside Diameter (in./mm)	Transition Angle (A)	Radius at Transition (B)
20	1.6-2.25 / 41-57	5	.015
		10	.020
		15	.030
31	3 / 76	5	.015
	4 / 102	10	.020
		15	.030
48	4 / 102	5	.015
	6 / 152	10	.020
	8 / 203	15	.030

Porta-Mill "J" Prep Tool

Please check the desired Transition Angle and Radius.



Model	Pipe Inside Diameter (in./mm)	Length of Land (in./mm)	Transition Angle (A)	Radius at Transition (B)
20	1.6-2.25 / 41-57	.032 / .8	5	.015
		.063 / 1.6	10	.020
		.094 / 2.4	15	.030
31	3 / 76	.032 / .8	5	.015
	4 / 102	.094 / 2.4	10	.020
		.032 / .8	15	.030
48	4 / 102	.032 / .8	5	.015
	6 / 152	.094 / 2.4	10	.020
	8 / 203	.032 / .8	15	.030

ORDERING INFORMATION

<i>J</i> Prep Beveling Blades
1. Length of Land _____
2. Bevel Angle _____
3. Radius at Point Land Meets Beveling Angle _____

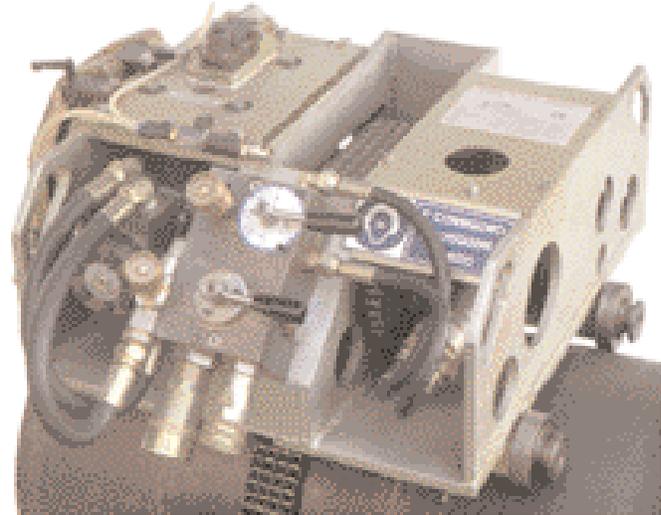
Beveling Blades - if other than 30° or 37 1/2°
1. Pipe Outside Diameter _____
2. Pipe Wall Thickness _____
3. Bevel Angle _____
4. 2nd Bevel Angle if Compound Bevel _____
5. Height of Second Bevel _____

Counter Boring Tools
1. Length of Land _____
2. Bevel Angle _____
3. Radius at Point Land Meets Beveling Angle _____

CGM-1



CGM-1 "A"
Air Driven Model



CGM-1 "O"
Hydraulically Driven

CGM Cold Cutting and Beveling Machine Includes:

- Base Cold Cutting Machine.
- Blade Guard.
- Quadruple Width (4-mesh) Chain for 6" diameter pipe.
- Service Wrenches.
- Blade Shut-Off Device.
- Crank for lowering and raising the Cutting Blade.
- Torque Wrench for Chain Tensioning.
- Rugged Steel Storage Case.
- Parts and Operating Manual.

The CGM-1 Heavy-Duty Chain Driven Cold Cutting System is available in Pneumatic ("A") or Hydraulic ("O"). CGM-1 will cut and bevel most machineable materials such as carbon steel, stainless steel, ductile iron, cast iron and most other alloys without spark or flame. The *rugged and powerful CGM-1* is ideal for new construction, fabrication, tear down or removal of piping components for replacement.

The CGM-2 will cut or simultaneously cut and bevel horizontal or vertical pipes 6" to 72" / 153 - 1829mm in diameter with a wall thickness of 1/4" to 2 15/16" / 6-60mm. The machine is held to the pipe by its Tension Drive Chain as it crawls around the pipe. The chain can be shortened or lengthened to accommodate any pipe or vessel size between 6" to 72" / 153 - 1829mm. The CGM-1 comes in a Steel Box that can also double as a Work Bench. An Air or Hydraulic Power Source is available for the CGM-1.

The frame of the CGM-1 is zinc plated and has Six (6) Wheel Positions to fit the contour of the pipe giving the machine better tracking on the surface.

A cut that is machinelike in appearance with typical tolerances up to 1/16" closure is normal on small diameter

pipe. Special Grooved Wheels for use with a Guide Strip can be added to CGM-1 to cut vertical pipe, maintain critical tolerance or when multiple passes are needed to sever extra heavy wall pipe.

The Heavy-Duty Chain Tensioning Mechanism, encased in the welded steel frame, provides the necessary rigidity and strength for cutting pipe at the highest travel speed possible. The CGM-1 Drive System provides *positive chain drive* under all types of environments for a smooth precise cut. No out-of-round compensation is needed as the machine follows the pipe outside diameter producing an even and consistent cut. The chain can be shortened or lengthened to accommodate 6" to 72" / 153-1829mm pipe or vessels with just one (1) machine.

The *extremely tough* Gearbox of the Blade Drive System is designed to take heavy, sustained, cutting loads encountered in a continuous operation. The Severing Blade and Right and Left Beveling Blades can be changed without removing the machine from the pipe. Right and Left Beveling Blades are available in 30°, 37 1/2°, "J" Prep and Multiple Angle "J" Prep Configurations for heavier wall thickness.

CGM-1

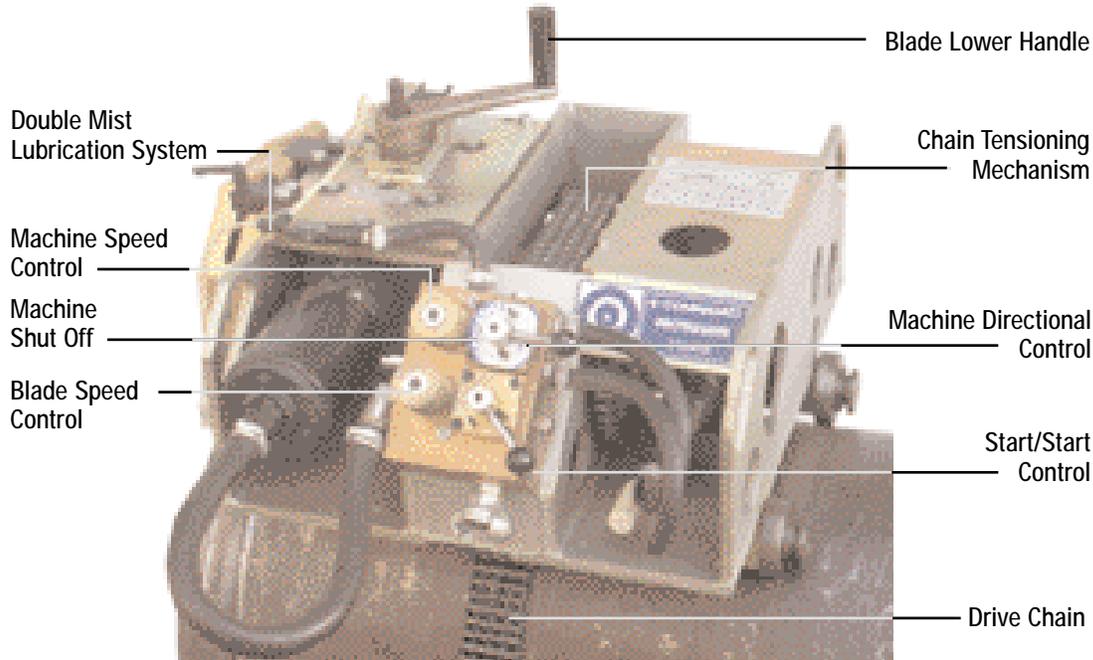
Hydraulic / Pneumatic Driven Cold Cutting Machines

Model	Part Number	Estimated Shipping Weight lbs. / kgs.
CGM-1 "A" Pneumatic Chain Driven Cold Cutting Machine with Blade Shut-Off Device Cutting Range: 6" - 72" / 152-1826mm	05-5500-559	265 / 120
CGM-1 "O" Hydraulic Chain Driven Cold Cutting Machine with Blade Shut-Off Device Cutting Range: 6" - 72" / 152-1826mm	05-5500-560	265 / 120

CGM-1 Cold Cutting Machine – Specifications

Description	CGM-1 "A" Air Version with Pneumatic Motors	CGM-1 "O" Oil Version with Hydraulic Motors
Cutting System	3 5/8HP / 2.76Kw Governed Air Motor Coupled with Gearbox	5 3/8HP / 4.0Kw Governed Hydraulic Motor Coupled with Gearbox
Drive System	7/16HP / 0.33Kw Air Motor with Gearbox	1 5/16HP / 1.0Kw Hydraulic Motor with Gearbox
Forwarding of the Machine	By 1/2" Special 4-Mesh Chain	By 1/2" Special 4-Mesh Chain
Service Pressure	116PSI / 8Bar	1,450PSI / 100 Bar Adjustable 435-1450PSI 30 ÷ 100 Bar
Cutter Rotating Speed	70 RPM - Adjustable 20/70 RPM	70 RPM - Adjustable 20/70 RPM
Forward Speed	Adjustable 4.9-9.8 Feet Per Hour / 1.5 ÷ 3.0m/h max. (To cut alloy steel, use lower speed.)	Adjustable 4.9-9.6 Feet Per Hour / 1.5 ÷ 6.0m/h max. (To cut alloy steel, use lower speed.)
Control Systems	Cutting and forward speed are governed separately.	Cutting and forward speed are governed separately.
Working Clearance	Clearance along the pipe (axial) 25 5/8" / 650mm Clearance around the pipe (radial) 24 3/5" / 630mm	Clearance along the pipe (axial) 25 5/8" / 650mm Clearance around the pipe (radial) 24 3/5" / 630mm
Shipping Weight	265 lbs / 120Kg and *551 lbs / 250Kg (Case Included.)	265 lbs / 120Kg and *551lbs / 250Kg (Case Included.)
Dimensions L x W x H	22" x 25 5/8" x 14 1/8" / 560mm x 650mm x 360mm	22" x 25 5/8" x 14 1/8" / 560mm x 650mm x 360mm
Standard Configuration	Manual Service Keys (including Torque Key) Linking Bolts and Locking Nuts 32ft / 10m Inlet Air Hose with Quick Fastening Oiler Steel Machine Case 1 Liter of Lubrication	Manual Service Keys (including Torque Key) Linking Bolts and Locking Nuts 32ft / 10m Inlet Air Hose with Quick Fastening Oiler Steel Machine Case 1 Liter of Lubrication
On Request	Additional Chain Length Special Cutters Cutter Lubrication Liquid Additional Inlet Air Hose Length	Additional Chain Length Special Cutters Cutter Lubrication Liquid Additional Inlet Air Hose Length

Pneumatic CGM-1 Cold Cutting Machine



CGM-1 "A"
Air Driven Model

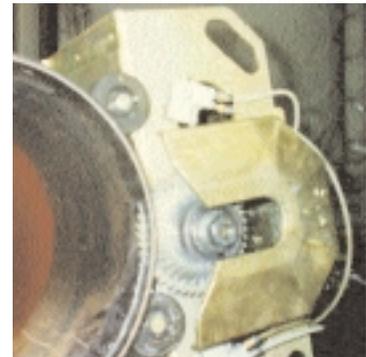
The Pneumatic Drive CGM-1 "A" is an excellent tool for shop or field. The machine will *simultaneously cut and bevel the pipe*. The machine is excellent for use in explosive environments such as refineries or pipelines conveying natural gas, crude oil or crude oil by-products.

The Machine Speed and Blade RPM are precisely controlled by means of Two (2) Metering Valves located on the Machine Control Panel. Airflow to the Blade Motor and Main Drive Motor can be *shut-off simultaneously* with the Shut-Off Valve located on the lower part of the Control Panel.

The *highly reliable* Heavy-Duty Pneumatic Air Motors are incorporated into the design of CGM-1 "A". A 3.7 H.P. / 2.8kw Pneumatic Motor coupled to an Extra Heavy-Duty Transmission rotates Cutting Blades at *speeds of 20 - 70 R.P.M.* A 7/16 H.P. / .33kw Pneumatic Motor Drive and a Heavy-Duty Transmission move the machine around the pipe at a *speed of 1 - 2 inches per minute / 1.5 - 3 meters per hour*.

To reach its *maximum cutting potential* the CGM-1 "A" requires an Air Compressor that *delivers 120 pounds per square inch at 142 cubic feet/minutes / 8 bar at 4000 liters/minute*.

CGM-1 has a maximum cutting depth of 2 5/16" / 58mm. Beveling Blades are available in various configurations such as 30 Degrees or 37 1/2 Degrees Bevel Angles and "U-Joint" and "J" Prep Configurations.



Pneumatic CGM-1 Cold Cutting Machine

Machine Includes:

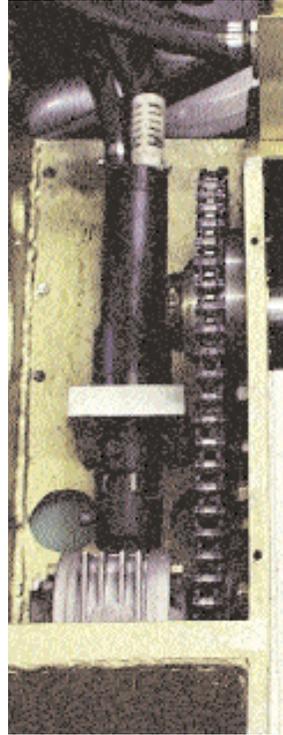
- Base Machine
- Wrenches and Service Keys needed for operation
- Torque Wrench for Tensioning Chain
- 32 Feet / 10M of Air Hose
- Quadruple Width (4-mesh) Chain for 6" diameter pipe.
- One (1) Liter of Cutting Lubricant
- Oiler
- Steel Storage Case
- Parts and Operating Manual

Options:

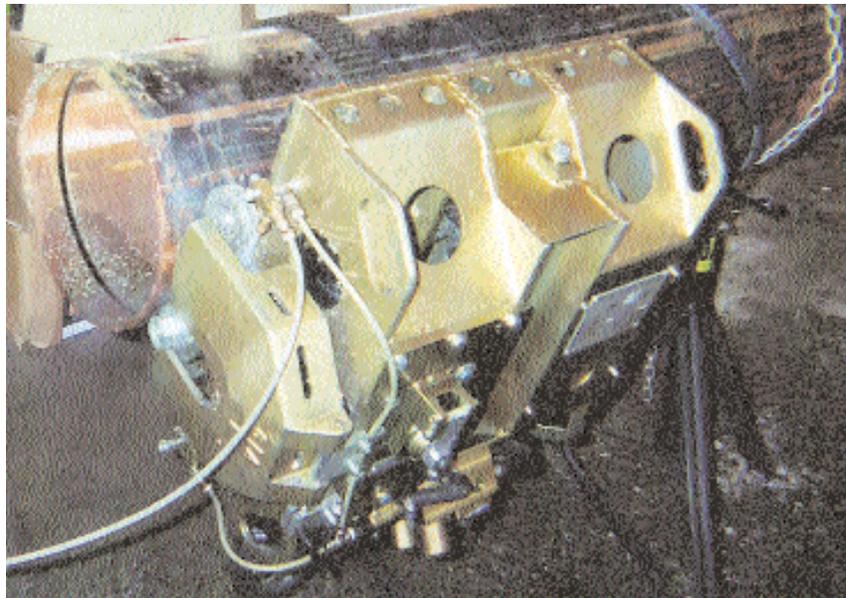
- Two diameters of Right and Left Beveling Blades are available for most Weld Prep Configurations.
- Chain Kits for any diameter of pipes.
- Double Mist Lubrication System
- Air Hoses are available in various lengths to accommodate the customer's requirements.
- Grooved Wheels facilitate use of a Guide Strip for improved cutting accuracy on larger diameter pipe.
- Cutter Lubricant.

Power Supplies

- Combustion Engine Driven Air Supply.
Refer to Page 45. (Priced on Request.)

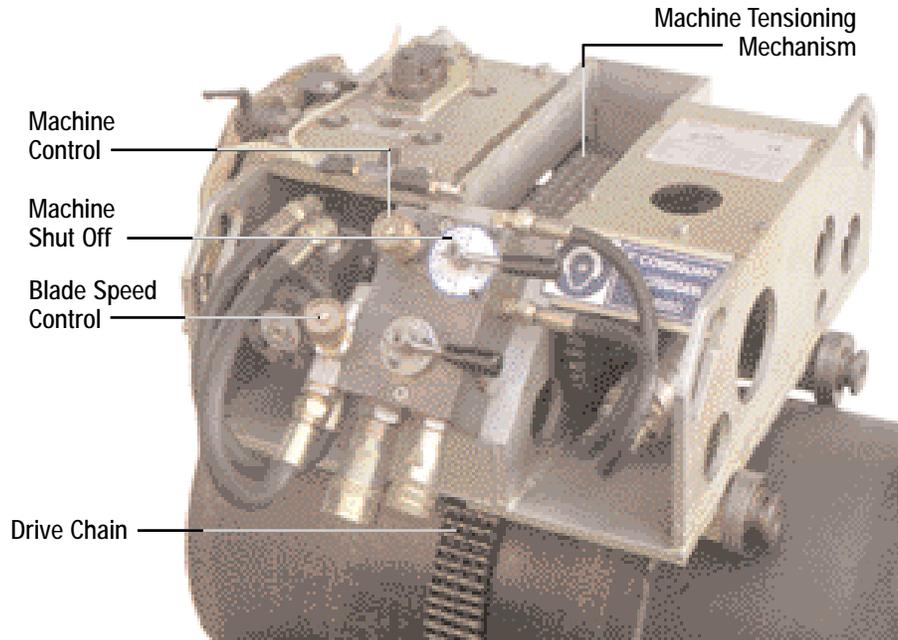


The Blade Speed and Forward Motion are held constant by the Powerful *Heavy-Duty Pneumatic Motor Drive and a Heavy-Duty Transmission* .



The Heavy-Duty Air Motor of the Pneumatic CGM-1 allows the machine to cut pipes regardless of diameter in a minimum amount of time and effort.

Hydraulic CGM-1 "O" Cold Cutting Machine



CGM-1 "O"
Hydraulically Driven

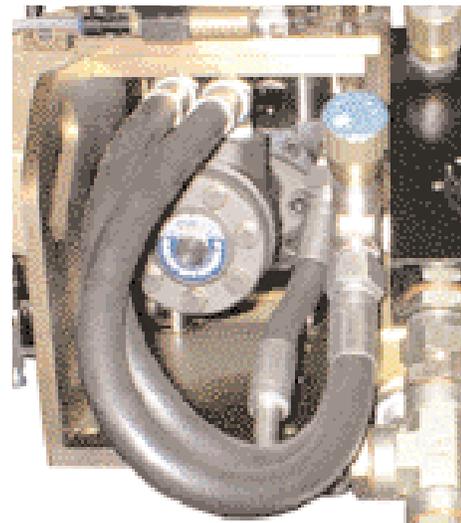
The Hydraulic Driven CGM-1 "O" Chain Driven Cold Cutting System was specifically designed for the continuous cutting and beveling of high alloy heavy wall materials. The CGM-1 "O" will cut material thickness up to 2 5/16" / 60mm in a single pass.

The Close Loop Hydraulic System of the CGM- 1 "O" insures proper lubrication to the motor and extends the life of the machine. *Maintenance Free* Dual Hydraulic Motors are infinitely adjustable and deliver consistent horsepower to Cutting and Beveling Blades and Drive Motor.

A 5.4 H.P (4kw) Hydraulic Motor coupled to an extra *Heavy-Duty* Transmission rotates Cutting Blade at *speeds of 0 – 70 R.P.M.* A 1 5/16 H.P. (1kw) Hydraulic Motor Drive and *heavy-duty* Transmission moves the machine around the pipe at *speeds from 1 – 3.9 inches per minute / 1.5 – 6 meters per hour.*

The Hydraulic CGM-1 "O" can be connected to any Hydraulic Power Source having an *output of 1450 PSI at 20 GPM / 100 Bar at 72 liter/minute.*

A *special model* of the Hydraulic Driven CGM-1 "O" is available for *operation at ocean depth up to 130 feet / 40M.*



Hydraulic force applied to the Hydraulic Motor insures constant speed of the Cutting and Beveling Blades and rotation of the machine around the pipe.

Hydraulic CGM-1 "O" Cold Cutting Machine

Machine Includes:

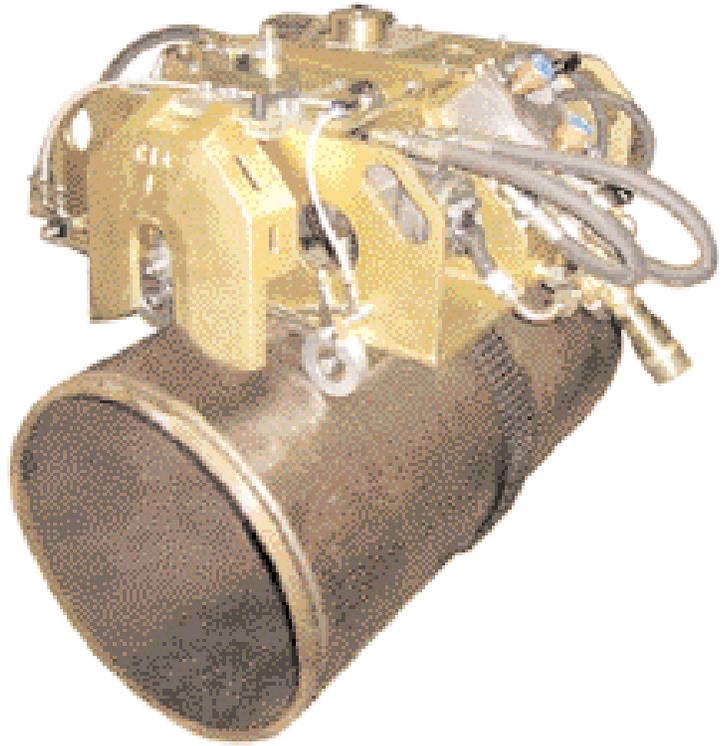
- Base Machine
- Wrenches and Service Keys needed for operation
- Torque Wrench for Tensioning Chain
- Two (2) Each of 32 Feet / 10M of Hydraulic Hoses with Quick Disconnects.
- Quadruple Width (4-mesh) Chain for 6" diameter pipe.
- One Liter of Cutting Lubricant
- Oiler
- Steel Storage Case
- Parts and Operating Manual

Options:

- Two diameters of Right and Left Beveling Blades are available for most weld prep configurations.
- Two diameters of 3/16" / 4.76mm wide Severing Blades are available.
- Chain Kits for any diameter of pipe.
- Double Mist Lubrication System
- Hydraulic Hoses are available in various lengths to accommodate the customer's requirements.
- Grooved Wheels facilitate use of a Guide Strip for improved cutting accuracy on larger diameter pipe.
- Cutter Lubricant.

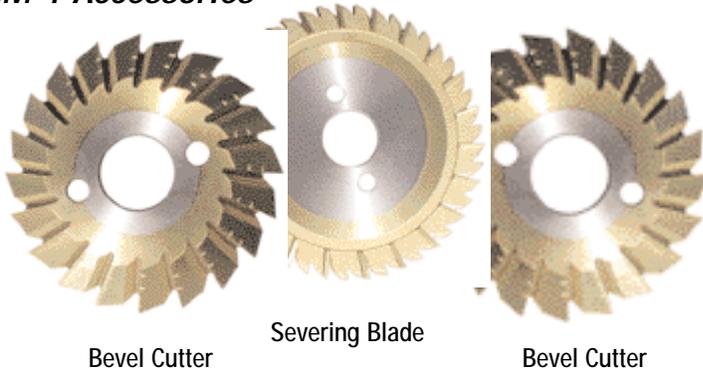
Power Supplies

- Electric Motor Driven Hydraulic Power Supply.
Refer to Page 45. (Priced on Request.)
- Combustion Engine Driven Hydraulic Power Supply
Refer to Page 45. (Priced on Request.)



The Hydraulic CGM-1 is able to handle the continuous cutting of high alloy heavy wall coated pipe.

CGM-1 Accessories



Bevel Cutter

Severing Blade

Bevel Cutter



Center Cutter with "J" Prep Beveling Cutters

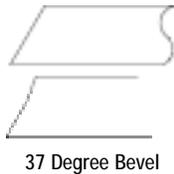
Various wall thickness or joint configuration can be cut by changing the Cutting and Beveling Blades. In the case of extra heavy-wall pipe, used on pipeline and high pressure pipe system of powerplants, oil refineries, and chemical plants, Compound Bevel, "U" or "J" Prep Configurations are designed to open the weld capability, allowing the introduction of the welding tip below the outside diameter (OD) for *proper root pass penetration* and for *oscillation movement* as filler metal is built up into the weld profile. Precision "U" or "J" Prep Configurations can be cut on pipes of almost any size. The Prep Configuration gives the joint the maximum of strength with the minimum of filler material.

In these instances, Compound Bevel, "U" or "J" can be machined on the pipe ends with CGM-1, which has Weld Prep Angles Configuration ground into its cutting face.

ORDERING INFORMATION

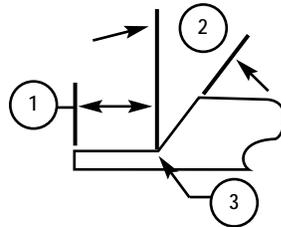
J Prep Beveling Blades

1. Length of Land _____
2. Bevel Angle _____
3. Radius at Point Land Meets Beveling Angle _____



Beveling Blades - if other than 30° or 37 1/2°

1. Pipe Outside Diameter _____
2. Pipe Wall Thickness _____
3. Bevel Angle _____
4. 2nd Bevel Angle if Compound Bevel _____
5. Height of Second Bevel _____



CGM-1 Accessories

Part Number	Description	Estimated Shipping Weight lbs. / kg
05-5500-517	Special Oil For Blade Lubrication	2 / 1
Severing Blade		
05-5500-239	Standard, 6 5/61 x 3/16 / 60 x 4.76	1 / .5
05-5500-579	Special, 8 3/8 x 3/16 / 212m x 4.76	2 / 1
Bevel Cutters		
05-5500-228	Right Standard, 30° ø 5 x 1/2 / 127 x 12.76	2 / 1
05-5500-530	Right Standard, 37 1/2° ø 5 x 1/2 / 127 x 12.76	2 / 1
05-5500-229	Left Standard, 30° ø 5 x 1/2 / 127 x 12.76	2 / 1
05-5500-531	Left Standard, 37 1/2° ø 5 x 1/2 / 127 x 12.76	2 / 1
05-5500-251	Right Special, 30° ø 7 1/4 x 5/8 / 184 x 16.45	3 / 1.4
05-5500-510	Right Special, 37 1/2° ø 7 1/4 x 5/8 / 184 x 16.45	3 / 1.4
05-5500-252	Left Special, 30° ø 7 1/4 x 5/8 / 184 x 16.45	3 / 1.4
05-5500-511	Left Special, 37 1/2° ø 7 1/4 x 5/8 / 184 x 16.45	3 / 1.4



CGM-1 Blade Sharpening Machine

The Blade Sharpening Machine enables the Pneumatic or Hydraulic CGM-1 Customer to get the maximum utilization of the Blades and can be accurately sharpened on site reducing blade inventory and down time. It is designed to sharpen each tooth of the Center Cutter and 30° or 37 1/2° Beveling Blade to the precise depth and bevel and clearance angle. It is not difficult to operate, but does require a person with some machinist experience.

Part Number	Description	Weight lbs / kg	Dimensions
05-5500-502	CGM-1 Blade Sharpening Machine	220 / 100	23 x 23 x 52 / 570 x 570 / 1320

CGM-1 Power Supply



Part No. : 05-5500-501

Hydraulic Power Supply is available with 380vac Three (3) Phase 50/60Hz Diesel motor. Outlet couplings are 1/2"-3/4" / 12.7-19mm.



Part No. : 05-5500-501H

The Hydraulic Power Supply is available powered by a gas or diesel engine.



Part No. : 05-5500-556

Engine Driven Air Compressor. The Air Compressor is available powered by a gas or diesel engine.

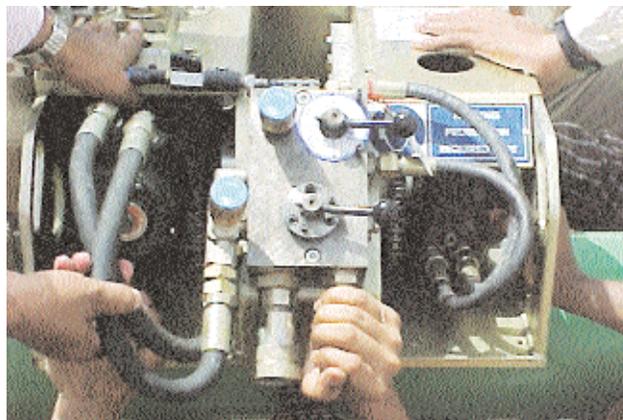
The Air Compressor *delivers 120 pounds per square inch at 142 cubic feet/minute / 8 bar at 4000 liters/minute.* Mounted on a Trailer— the Unit is easily towed behind most vehicles. The Compressor is available with Gas or Diesel Engine.

Hydraulic Power Supply is available driven by an Electric Motor, Gas or Diesel Engine. The Electric Motor Driven Hydraulic Power utilizes 380 volt/50Hz - Electric Motor 15 HP to drive the Vane Type Hydraulic Pump. The Electric Motor IEC - UNEL MEC Standards. The Unit has a *maximum output of 2,000 psi / 138 bar* that is regulated with a Pressure Relief Valve.

The Unit has a reservoir capacity of approximately 52 Gallons / 200 liters. An Indicator Level located on the side of the Reservoir indicates fluid level.

A 25-Micron Steel Mesh Filter is incorporated into the Reservoir. The Unit is available upon request. The Pressure Outlet Coupling is 1/2" / 12.7mm and the Return Coupling is 3/4" / 19mm. The Unit is moved about the shop easily with a Forklift or Pallet Truck. Lifting Lugs come standard for moving the Power Supply in the field.

The Combustion Engine Driven Hydraulic Power utilizes a Four (4) Cycle Air-cooled Gas or Diesel Engine to drive the Axial Piston Hydraulic Pump. An Adjustable Volume Stop provides a means of tuning flow to the CGM-1 "O". The Unit has a *maximum output of 2,000-psi / 138 bar* that is regulated with a Pressure Relief Valve.



The Controls of the Pneumatic and Hydraulic CGM-1, that Control Blade Speed and Machine Speed and Direction, are within easy reach of the operator.

CGM-1 Accessories

CGM Chain Kits

Description	Wheel Position	Part Number	Estimated Shipping Weight lbs / kg
Chain Kit for 6" Pipe	3 - 4	01-5500-006	7 / 3
Chain Kit for 8" Pipe	3 - 4	01-5500-008	8 / 4
Chain Kit for 10" Pipe	3 - 4	01-5500-010	9 / 4
Chain Kit for 12" Pipe	3 - 4	01-5500-012	10 / 5
Chain Kit for 16" Pipe	3 - 5	01-5500-016	11 / 5
Chain Kit for 18" Pipe	3 - 5	01-5500-018	13 / 6
Chain Kit for 20" Pipe	2 - 5	01-5500-020	14 / 6
Chain Kit for 24" Pipe	2 - 5	01-5500-024	15 / 7
Chain Kit for 30" Pipe	2 - 5	01-5500-030	18 / 8
Chain Kit for 36" Pipe	2 - 6	01-5500-036	22 / 10
Chain Kit for 42" Pipe	2 - 6	01-5500-042	25 / 11
Chain Kit for 48" Pipe	1 - 6	01-5500-048	27 / 12
Chain Kit for 54" Pipe	1 - 6	01-5500-054	29 / 13
Chain Kit for 60" Pipe	1 - 6	01-5500-060	34 / 16
Chain Kit for 72" Pipe	1 - 6	01-5500-072	39 / 18

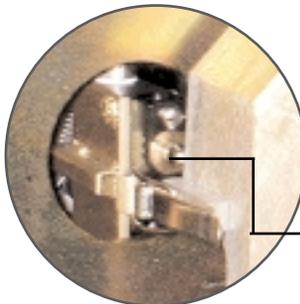
Quadruple Width - Four (4) Mesh Chain



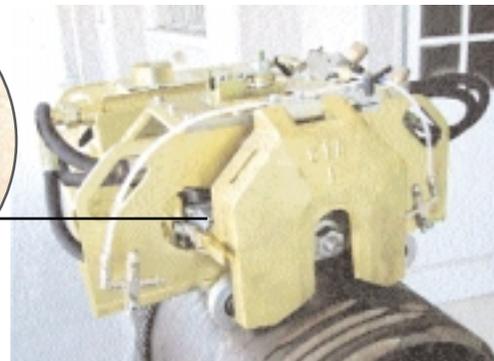
CGM Guide Strip Information Chart

Nominal Pipe Size		Wheel Position	Chain Length		Quantity to Purchase in Feet	Depth of Cut			
						Cutter 6" / 154mm		Cutter 8 3/8" / 212	
Inches	mm		Inches	mm		Inches	mm	Inches	mm
6	152	3&4	42	1065	4	1 3/8	35	2 5/16	60
8	203	3&4	47	1192	4	1 1/16	28	2 1/16	53
10	254	3&4	55	1395	5	3/4	20	1 3/4	45
12	305	3&4	61	1547	6	9/16	15	1 9/16	40
14	356	3&5	63	1598	6	1 1/8	30	2 1/8	55
16	408	3&5	69	1750	6	7/8	25	1 15/16	50
18	457	3&5	76	1918	7	3/4	20	1 3/4	45
20	508	2&5	82	2070	7	1 3/8	35	2 5/16	60
24	610	2&5	92	2335	8	1 1/16	28	2 1/16	53
30	762	2&5	114	2892	10	3/4	20	1 3/4	45
32	810	2&5	116	2940	10	9/16	15	1 9/16	40
36	914	2&6	137	3476	12	1 1/8	30	2 1/8	55
40	1016	2&6	144	3650	12	7/8	25	1 15/16	50
42	1067	2&6	156	3950	13	3/4	20	1 3/4	45
48	1200	1&6	165	4180	14	1 3/8	35	2 5/16	60
54	1400	1&6	183	4644	16	1 1/8	30	2 1/8	55
60	1500	1&6	214	5431	18	1 1/16	28	2 1/16	53
72	1800	1&6	244	6193	21	3/4	20	1 3/4	45

- **DEPENDABLE** pipe cutting and beveling of thin or thick wall pipes or tubes.
- **PRECISE CONTROL** of cutter and machine speeds produce a machine finish required for automated welding.
- A **SECOND CUT NOT REQUIRED** as the CGM bevels both sides of the cut **SIMULTANEOUSLY**.
- **ONE MACHINE** can cut and bevel pipe or tube 6" to 72" / 152 to 1826mm in diameter.
- **RUGGED DESIGN** permits the machine to be operated in desert, ocean or mountainous type environments.
- **ACCURATE** cold cutting and beveling of large pipes and vessels.
- **SAFETY SHUT-OFF VALVE** turns the machine off automatically if the Blade Guard is raised.
- **ELIMINATES RISK** of fire or explosion due to *no spark or flame*.



Blade Shut-Off Device does not allow the machine to be operated until the Blade Guard is locked into position.



Adjustable Jets of the Heavy-Duty Mist Lubrication System Direct Coolant at Cutting and Beveling Blades to achieve *maximum blade life*.



More Ways to Help Welders and Pipefitters. • More Ways to Help Welders and Pipefitters. • More Ways to Help Welders and Pipefitters.

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Customer Rating

Description	Saddle Machine	Super II	MagnaCut II	MagnaCut XM	Mignon	Mini	Maxi	Monarch Band Machine	Porta Mill	CGM-1
Accuracy	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Efficiency	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Ease of Use	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Minimum Set-Up Time	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Single Pipe Diameter	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Multiple Pipe Diameters	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Clearance Around Pipe	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Cuts Vertical	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Out-of-Round Capability	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Contour or Miter Pipe End	★★★★★	★★★★★	NA	NA	NA	NA	★★★★★	NA	NA	NA
Weight	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Is Price a Consideration?	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★

★★★★★ Best
 ★★★★★ Better
 ★★★★★ Average
 ★★ Below Average
 ★ Worse
 NA Not Applicable

Pipe Condition and Cutting Method

Pipe Condition & Cutting Method	Saddle Machine	Super II	MagnaCut II	MagnaCut XM	Jolly Mignon	Mini Jolly	Maxi Jolly	Band Machine	Porta Mill *	CGM-1
Oxy/Fuel or Plasma Torch									Cold Cutting	
Horizontal Uncoated Pipe	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Vertical Uncoated Pipe	NR	NR	NR	NR	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	NR
Horizontal Coated Pipe	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Vertical Coated Pipe	NR	NR	NR	NR	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	NR
Horizontal Spiral Welded Pipe	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Vertical Spiral Welded Pipe	NR	NR	NR	NR	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	NR
Horizontal Cast Iron Pipe	★★★★★	★★★★★	NR	NR	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★

★★★★★ Best
 ★★★★★ Better
 ★★★★★ Average
 ★★ Below Average
 ★ Worse
 NR Not Recommended



COMMERCIAL PIPE SIZES AND WALL THICKNESS

Pipe Size In Inches	O.D. In Inches	Nominal Wall Thickness For								
		Sched. 10	Sched. 20	Sched. 40	Extra Strong	Sched. 80	Sched. 120	Sched. 140	Sched. 160	XX Strong
1/8	0.405	-	-	0.068	0.095	0.095	-	-	-	-
1/4	0.540	-	-	0.088	0.119	0.119	-	-	-	-
3/8	0.675	-	-	0.091	0.126	0.126	-	-	-	-
1/2	0.840	-	-	0.109	0.147	0.147	-	-	0.188	0.294
3/4	1.050	-	-	0.113	0.154	0.154	-	-	0.219	0.308
1	1.315	-	-	0.133	0.179	0.179	-	-	0.250	0.358
1 1/4	1.660	-	-	0.140	0.191	0.191	-	-	0.250	0.382
1 1/2	1.900	-	-	0.145	0.200	0.200	-	-	0.281	0.400
2	2.375	-	-	0.154	0.218	0.218	-	-	0.344	0.436
2 1/2	2.875	-	-	0.203	0.276	0.276	-	-	0.375	0.552
3	3.5	-	-	0.216	0.300	0.300	-	-	0.438	0.600
3 1/2	4.0	-	-	0.226	0.318	0.318	-	-	-	-
4	4.5	-	-	0.237	0.337	0.337	0.438	-	0.531	0.064
4 1/2	5.0	-	-	-	0.355	-	-	-	-	0.710
5	5.563	-	-	0.258	0.375	0.375	0.500	-	0.625	0.750
6	6.625	-	-	0.280	0.432	0.432	0.562	-	0.719	0.864
7	7.625	-	-	-	0.500	-	-	-	-	0.875
8	8.625	-	0.250	0.322	0.500	0.500	0.719	0.812	0.096	0.875
9	9.625	-	-	-	0.500	-	-	-	-	-
10	10.75	-	0.250	0.365	0.500	0.594	0.844	1.000	1.125	1.000
11	11.75	-	-	-	0.500	-	-	-	-	-
12	12.755	-	0.250	0.046	0.500	0.688	1.000	1.125	1.312	1.000
14 O.D.	14.0	0.250	0.312	0.438	0.500	0.750	1.094	1.250	1.406	-
16 O.D.	16.0	0.250	0.312	0.500	0.500	0.844	1.219	1.438	1.594	-
18 O.D.	18.0	0.250	0.312	0.562	0.500	0.938	1.375	1.562	1.781	-
20 O.D.	20.0	0.250	0.375	0.594	0.500	1.031	1.500	1.750	1.969	-
22 O.D.	22.0	0.250	0.375	-	0.500	1.125	1.625	1.875	2.125	-
24 O.D.	24.0	0.250	0.375	0.688	0.500	1.218	1.812	2.062	2.344	-
26 O.D.	26.0	0.312	0.500	-	0.500	-	-	-	-	-
28 O.D.	28.0	0.312	0.500	-	0.500	-	-	-	-	-
30 O.D.	30.0	0.312	0.500	-	0.500	-	-	-	-	-
32 O.D.	32.0	0.312	0.500	0.688	0.500	-	-	-	-	-
34 O.D.	34.0	0.312	0.500	0.688	0.500	-	-	-	-	-
36 O.D.	36.0	0.312	0.500	0.750	0.500	-	-	-	-	-
42 O.D.	42.0	0.312	-	-	0.500	-	-	-	-	-
48 O.D.	48.0	-	-	-	0.500	-	-	-	-	-

The table lists the pipe sizes and wall thickness currently established as standard, or specifically:

1. The traditional standard weight, extra strong, and double extra strong pipe.
2. The pipe wall thickness schedules listed in American Standard B36.10, which are applicable to carbon steel and alloys other than stainless steels.
3. The pipe wall thickness schedules listed in American Standard B36.19, and ASTM Specification A409, which are applicable only to corrosion resistant material.

