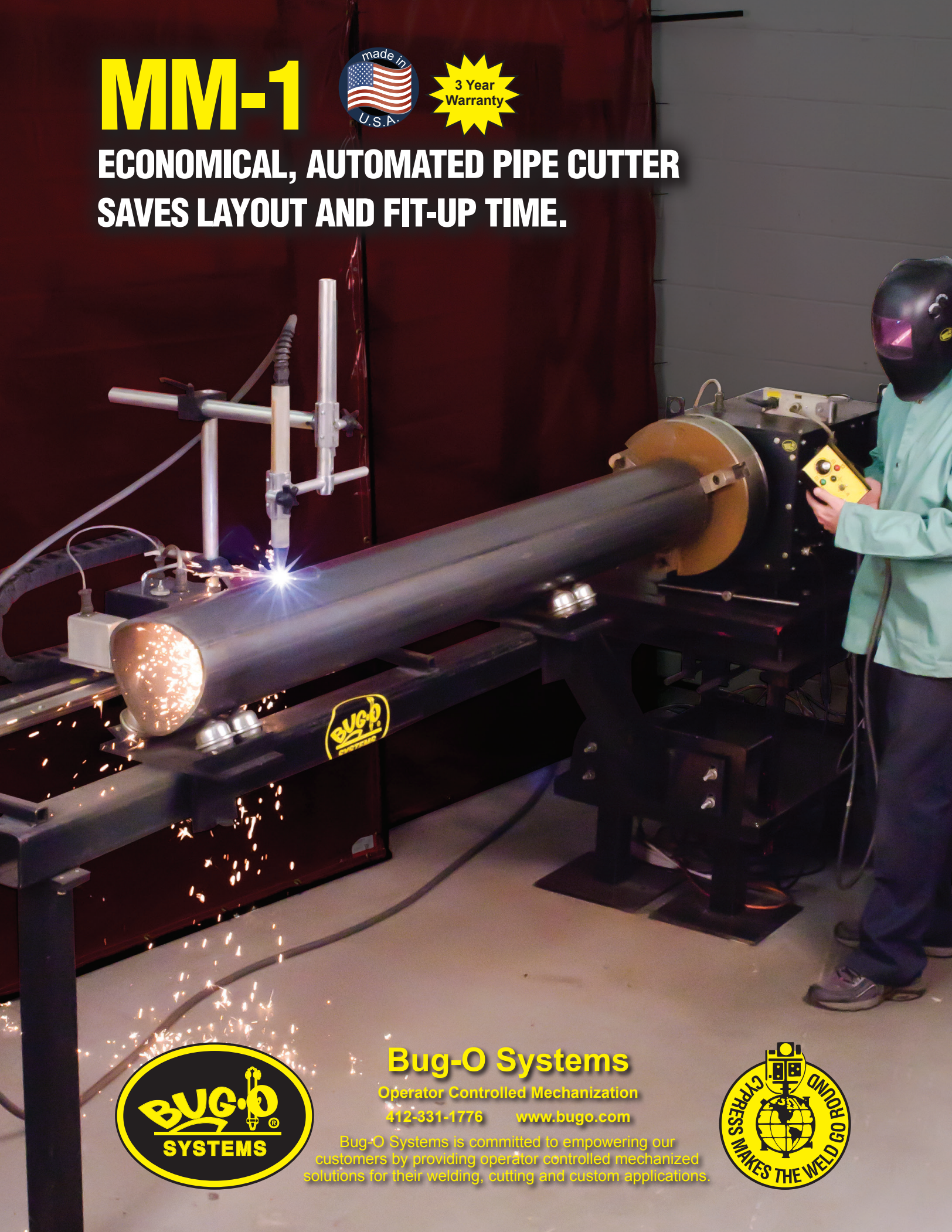
MM-1

made in U.S.A.

3 Year Warranty

ECONOMICAL, AUTOMATED PIPE CUTTER SAVES LAYOUT AND FIT-UP TIME.



BUG-O SYSTEMS

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Operator Controlled Mechanization

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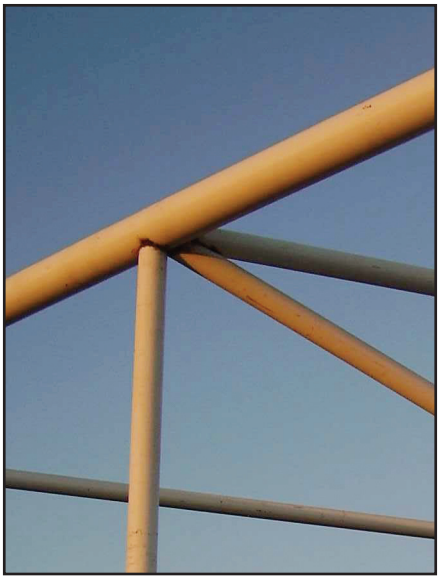
Bug-O Systems is committed to empowering our customers by providing operator controlled mechanized solutions for their welding, cutting and custom applications.

CYPRESS MAKES THE WELD GO ROUND

MM-1 Programmable Pipe Cutter - Dimensions

MM-1 Application Photos



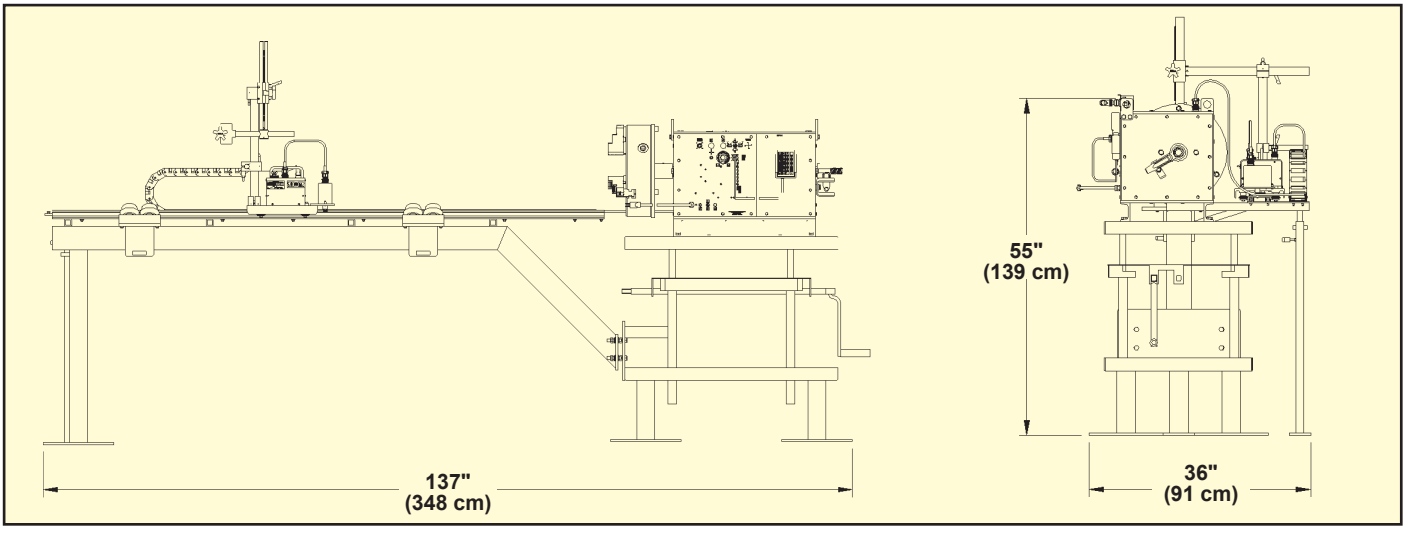




The MM-1 is a computer-controlled machine that automates the cutting of profiles, holes, nozzles and shapes on pipe with diameters from 4" to 16" (10-40 cm). A 4" to 24" (10-61 cm) model is available. It rotates the pipe on its roller bed with a three jaw chuck, while simultaneously moving a cutting torch back and forth along the pipe's axis. Pre-programmed shapes such as saddle, hillside, lateral and miter cuts can be made by simply selecting the type of cut from the menu, then entering the diameters of the pipe and pressing the run button to cut your pipe. There is no need for templates, time consuming layout or calculations to do. In addition, irregular or uncommon shapes can be plotted, programmed and saved for future use.

The machine's pipe bed is designed for handling lengths of pipe up to 8' (2.44 m) long. Additional pipe bed extensions of 8' (2.44 m) can be added to make up to a 38' (11.6 m) bed. The method of cutting can be oxy-fuel or plasma. If oxy-fuel is used, the machine will be equipped with solenoids and a three-hose cutting torch. When plasma is used, a rotary ground is installed on the machine. Please note the plasma power sources is not included with the machine. It must be purchased separately.

Dimensions:



MM-1 Programmable Pipe Cutter - Technical Data

Technical Data:

Cutting Diameter:	4"-16" O.D. (10-40 cm) or 4"-24" O.D. (10-61 cm)
Load Capacity:	2200 lb. (998 kg)
Dimensions:	137" L x 36" W x 55" H (348cm L x 91cm W x 140cm H)
Input Power:	120 VAC/50-60 Hz/1Ph 240 VAC/50-60 Hz/1Ph
Net Weight:	1000 lbs (454 kg)
Shipping Weight (for SEO-3500 or SEO-3502 Only):	1450 lbs. (658 kg)

Programming Custom Shapes:

Types of Cuts:

A. Pipe Program

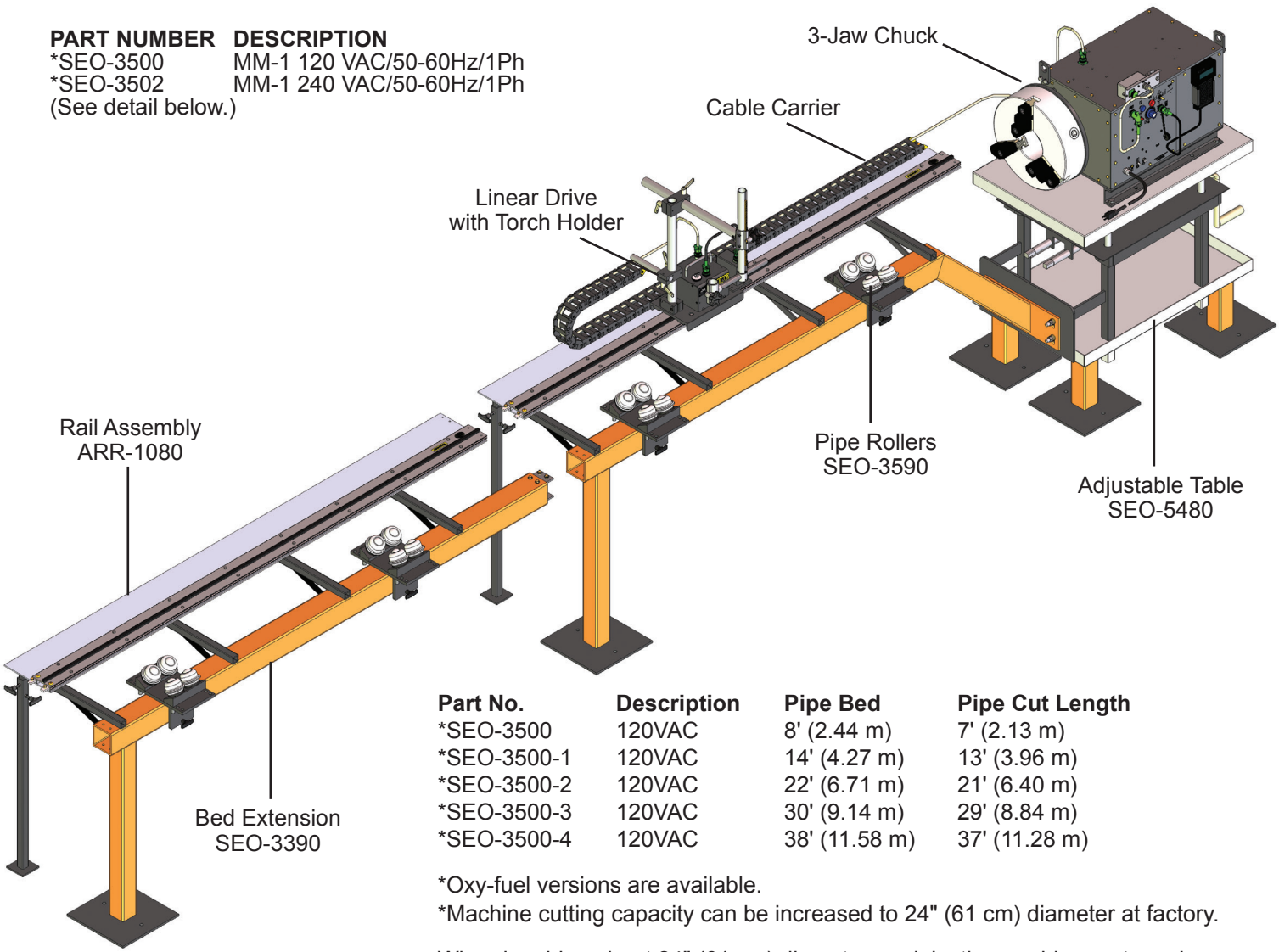
1. Saddle Cuts
2. Offset from Center-Line (Hillside)
3. Lateral Cuts
4. Miter Cuts
5. Hole Cuts

B. Shape Program

1. Custom Irregular Shapes

PART NUMBER	DESCRIPTION
*SEO-3500	MM-1 120 VAC/50-60Hz/1Ph
*SEO-3502	MM-1 240 VAC/50-60Hz/1Ph

(See detail below.)



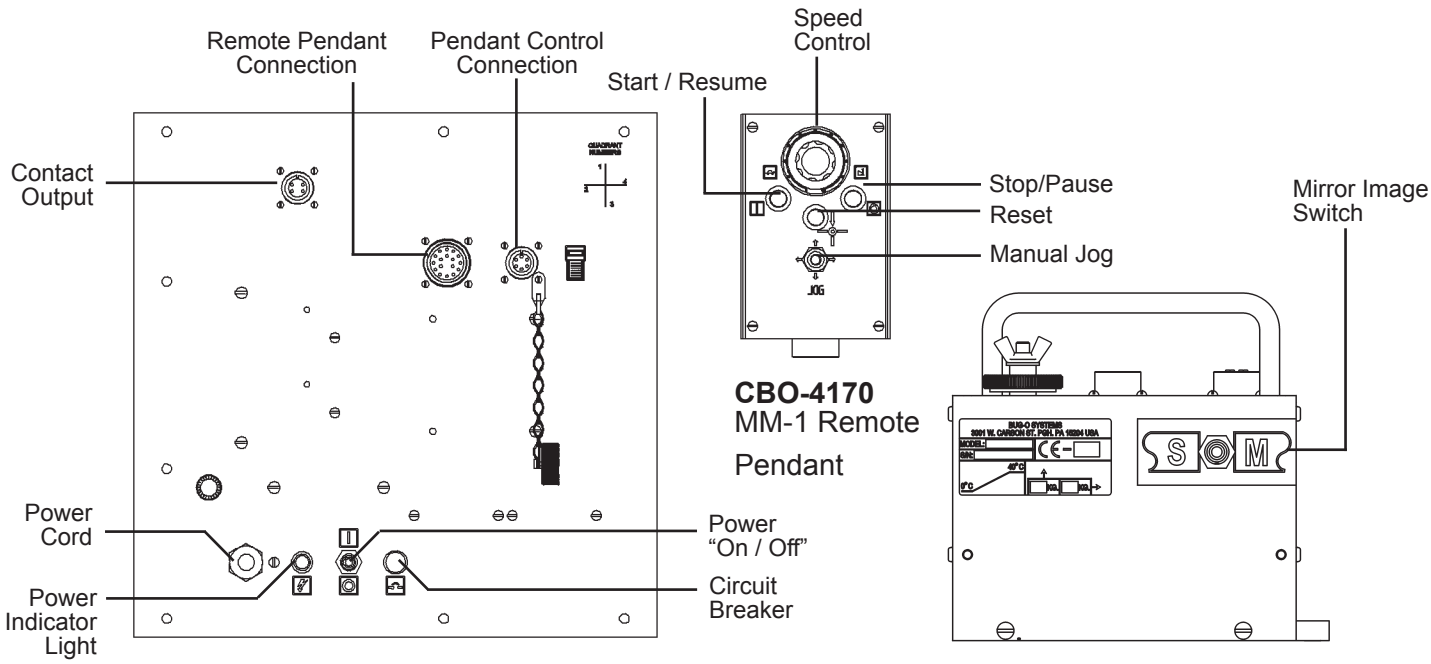
Part No.	Description	Pipe Bed	Pipe Cut Length
*SEO-3500	120VAC	8' (2.44 m)	7' (2.13 m)
*SEO-3500-1	120VAC	14' (4.27 m)	13' (3.96 m)
*SEO-3500-2	120VAC	22' (6.71 m)	21' (6.40 m)
*SEO-3500-3	120VAC	30' (9.14 m)	29' (8.84 m)
*SEO-3500-4	120VAC	38' (11.58 m)	37' (11.28 m)

*Oxy-fuel versions are available.
*Machine cutting capacity can be increased to 24" (61 cm) diameter at factory.

When inquiring about 24" (61 cm) diameter models, the machine part number will be followed by -24.

MM-1 Programmable Pipe Cutter - Programming

Main Control Panel



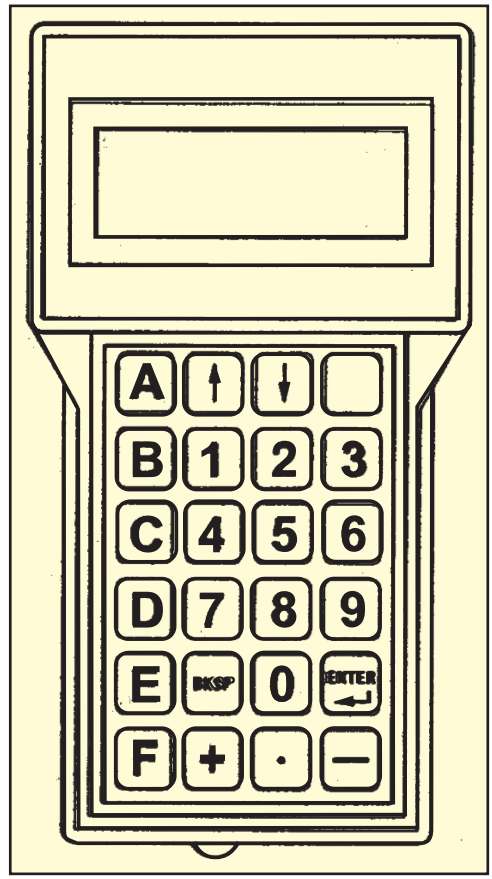
CBO-4170
MM-1 Remote Pendant

CBO-4160
MM-1 Panel with Remote

Programming With The Handheld Terminal

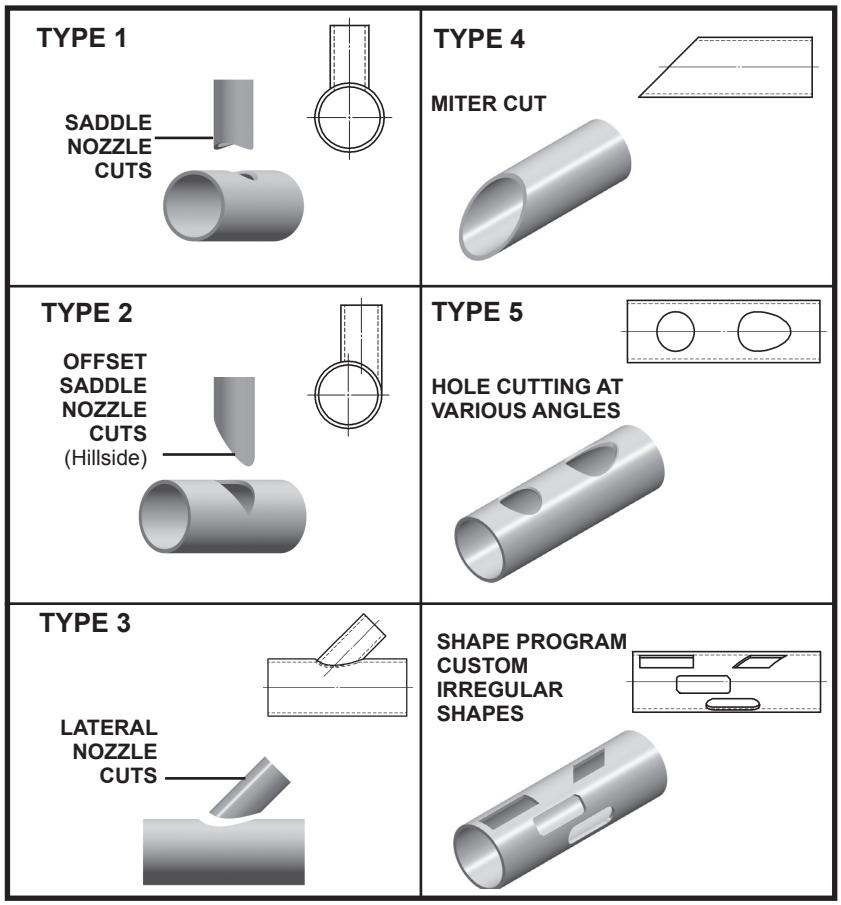
To cut a nozzle or hole, the sequence of actions would be to take the handheld terminal connected to the Control Panel and:

1. Press the reset button on the machine. The handheld terminal will display **"READY"**.
2. Press **"A"** on the terminal. The terminal will ask you what type of cut you want. (See Types 1-5, Page 4).
3. Press the cut type number desired and then press **"ENTER"**.
4. The terminal will ask for the diameter of the small pipe. Press the appropriate dimensions and press **"ENTER"**.
5. The terminal will ask for the diameter of the large pipe. Press the appropriate dimensions and press **"ENTER"**.
6. Enter the offset dimension if cutting a hillside nozzle.
7. Enter the **"ANGLE"** in degrees if cutting a lateral.
8. Press **"START"** on the machine to begin to cut.



MM-1 Programmable Pipe Cutter - Programming

Capabilities



Computer Software

The MM-1 Programmable Pipe Cutter can be programmed from a PC, using either of two software packages described below. Shapes can be created off-line, and downloaded to the machine when required. A cable is supplied to connect to the serial or USB port of the PC.

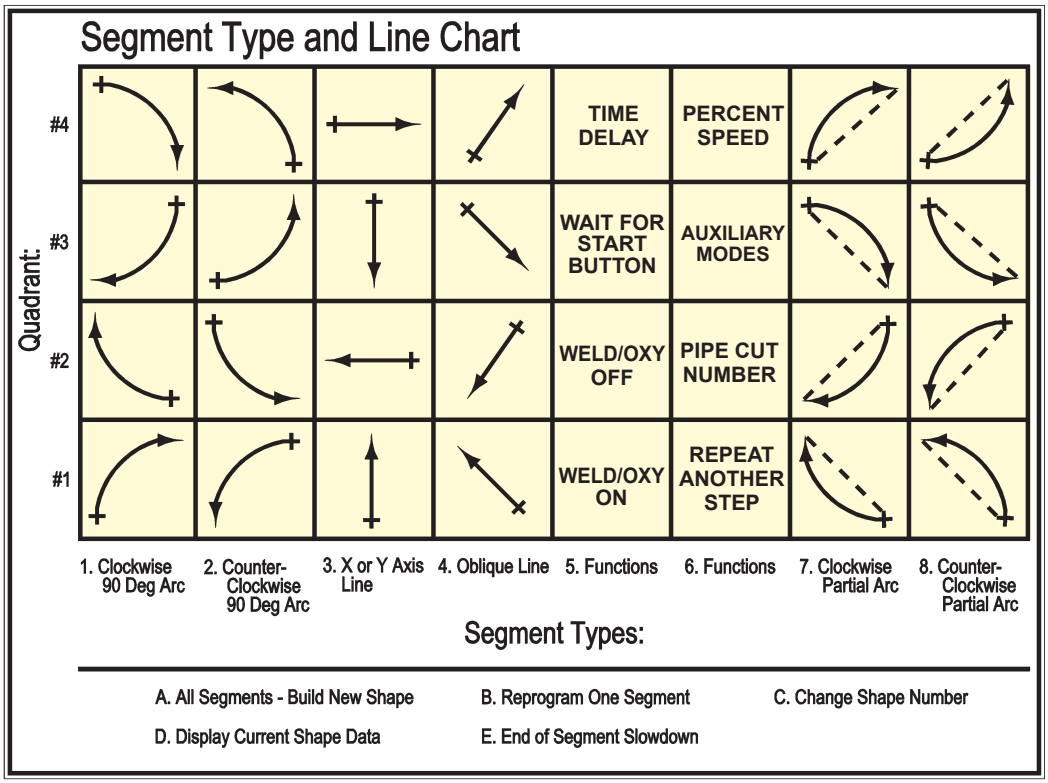
1. PC Option / BUG-6140.
This runs under Windows, and allows you to:

- Create shapes on the PC.
- Save any number of shapes to disk, and retrieve them as necessary.
- View a programmed shape on screen - which helps program verification.
- Download programmed shapes from the PC to the machine.

2. BUG-6240 CAD Interface.

This is a complete package that includes both the PC option and DeskCNC. This will allow you to take two dimensional CAD drawings and convert them to Shape files that you can directly load into your shape machine.

- DeskCNC is used to modify two dimensional CAD drawings (.DXF files) and create a toolpath
- The toolpath is saved as a CNC file using DeskCNC
- The CNC file can be loaded in the PC option for easy integration with the MM-1



Programming Arbitrary Shapes

For custom shapes, select the "shape" software. Programming is simple, but will require a few more steps due to all the variations possible.

First, the developed pattern should be laid out as if the pipe is unrolled flat. The cut is then split into a sequence of straight lines or circular arcs that make up the desired pattern.

Next, these should be listed in a table on paper, with the type, quadrant and required dimensions (referring to the chart in the Instruction Manual).

To program the shape, press **"A"**, then enter the total segments at the prompt.

Next, enter the data for each segment type, quadrant and dimensions in turn, at the prompt. When all segments are entered the program is ready to run.

MM-1 Programmable Pipe Cutter - Accessories



Compatible with Hypertherm Powermax SYNC® Power Source
Requirements:

- Plasma interface cable to the MM-1 Pipe Cutter (MDS-1085-25-HYP / MDS-1085-50-HYP)
- 25' or 50' Machine Barrel Torch
- Must have CPC port



A 3 Hose Machine Barrel Cutting Torch is Required

Example:

- BUG-1274
- BUG-4072
- BUG-1275
- MUG-1568
- MUG-1569

See our Torch Brochure for more information.



Oxy-Acetylene Tips					
Part No.	*Tip Size*	*Plate Thickness*	*Oxygen PSIG*	*Fuel Gas PSIG*	*Orifice Drill Size*
BUG-1270-000	000	Light Gauge to 3/16	15-20	5-15	#68
BUG-1270-00	00	3/16-3/8	20-25	5-15	#64
BUG-1270-0	0	3/8-5/8	35-40	5-15	#60
BUG-1270-1	1	5/8-1	35-40	5-15	#56
BUG-1270-2	2	1-2	40-45	5-15	#52
BUG-1270-3	3	2-3	45-50	5-15	#48
BUG-1270-4	4	3-6	50-75	10-15	#42

* For tips to cut 6" to 15", please consult factory.



Oxy-Propane, Natural Gas Cutting Tips					
Part No.	*Tip Size*	*Plate Thickness*	*Oxygen PSIG*	*Fuel Gas PSIG*	*Orifice Drill Size*
BUG-4070-000	000	Light Gauge to 3/16	15-30	5-15	#68
BUG-4070-00	00	3/16-3/8	20-30	5-15	#64
BUG-4070-0	0	3/8-5/8	30-40	5-15	#60
BUG-4070-1	1	5/8-1	35-50	5-15	#56
BUG-4070-2	2	1-2	40-55	5-15	#52
BUG-4070-3	3	2-3	45-60	5-15	#42
BUG-4070-4	4	3-6	50-75	5-15	#42
BUG-4070-5	5	6-8	65-80	5-15	#35
BUG-4070-6	6	8-12	70-90	5-15	#30

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