



MCS-500

**MANUAL
SEMI-AUTOMATIC
NOZZLE CLEANING
STATION**

INSTALLATION, OPERATIONS AND REPLACEMENT PARTS MANUAL

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INTRODUCTION

Thank you for purchasing an American Weldquip product. The American Weldquip product you have purchased has been carefully manufactured, assembled and fully tested. This manual contains information on the installation, operation, maintenance and replacement part breakdown. Please read, understand and follow all safety instructions, warnings and procedures. Keep this manual handy for referencing installation, operation, maintenance and part ordering information. While every precaution has been taken as to the accuracy in this manual, American Weldquip, Inc. assumes no responsibility for errors or omissions. American Weldquip, Inc. assumes no liability for damages resulting from the use of the information contained in this manual. American Weldquip, Inc. shall have no liability to the buyer for consequential damages or expenses by any defect whatsoever.

WARRANTY

AMERICAN WELDQUIP MIG Guns and parts are warranted to be free of defects in material and/or workmanship for the period of time listed below. For any product found to be defective under normal use, AMERICAN WELDQUIP, INC. at their option, will repair, replace or issue a credit for the value of the defective product. All warranty claims must be submitted by the original purchaser. Use of non-genuine AMERICAN WELDQUIP parts and/or consumables may damage and/or severely limit the performance of the equipment which may limit or void any warranties. AMERICAN WELDQUIP, INC. will not assume responsibility for incidental damages or expenses related to any defect.

A Return Authorization Number (RA#) must be attained from the factory for any product being returned for Warranty Repair or Replacement. All returned product must be shipped freight prepaid by the sender. No-charge replacements, repaired products, or credit will be issued, once the returned product has been evaluated and warranty condition has been verified. If an immediate replacement is required before proper warranty evaluation, a purchase order number is required and the goods will be invoiced. A credit will be issued once it is determined that a warranty condition exists.

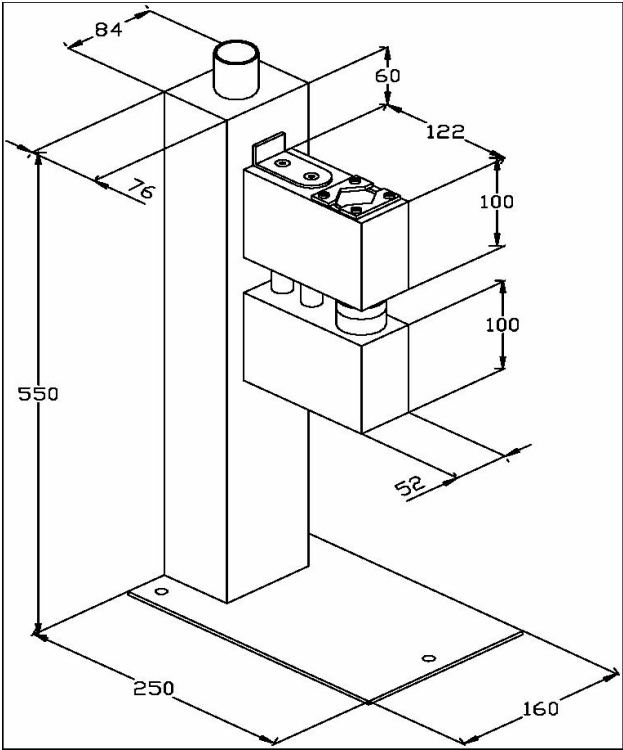
MIG TORCHES and Components	= 120 Days
MIG Torch Trigger Switches (Contacts only) -Excludes Smoke Extraction	= Lifetime
Robotic Nozzle Cleaning Stations	= 90 Days
Robotic Peripherals, ArcSafe, Wire Cutter, Gun Mounts	= 90 Days
TIG POINT Tungsten Electrode Grinders	= 90 Days

MCS-500 ROBOTIC NOZZLE CLEANING STATION

SPECIFICATIONS

Air Requirements – 80-120 PSI @ 5 S.C.F.M(Min) Clean Shop Air
Nominal Rotation - 2500 Rpm
Dimensions – 6 3/8”(160mm) x 9 7/8”(250mm) x 21 5/8”(550mm)
Weight – 15Lbs (6.80Kg)
Rotational Speed – 2500 RPM

DIMENSIONS



DESCRIPTION

The MCS-500 Cleaning Station is designed to remove welding spatters from the face and inside of the gas nozzle used on semi-automatic MIG/MAG Welding torches.

Basic Operation

- 1) The weld torch gas nozzle is inserted into the cutter/cleaning guide.
- 2) Push torch/nozzle down which activates the reamer blade rotation.
- 3) Continue to push down on torch until spatter is removed and release pressure on torch and remove.
- 4) Apply anti-spatter by inserting torch nozzle into spray nozzle and push down to activate.

INSTALLATION AND SETUP

Mounting

Mount the MCS-500 nozzle cleaning station in a convenient location within easy access. Make sure to take into consideration movable fixtures and other confines within the cell. For proper operation the reamer must be mounted on a solid, vibration free stand or mount.

Air Supply

The MCS-500 nozzle cleaning station requires 80-120 psi @ 8 S.C.F.M (5.0-7.0 BAR @ 450 LPM) of clean shop air minimum for proper operation. The unit is equipped with a ¼" NPT female fitting for the air supply connection. It is important to use a supply line with at least 3/8" ID to insure proper air volume to the reamer.

Reamer Tooling

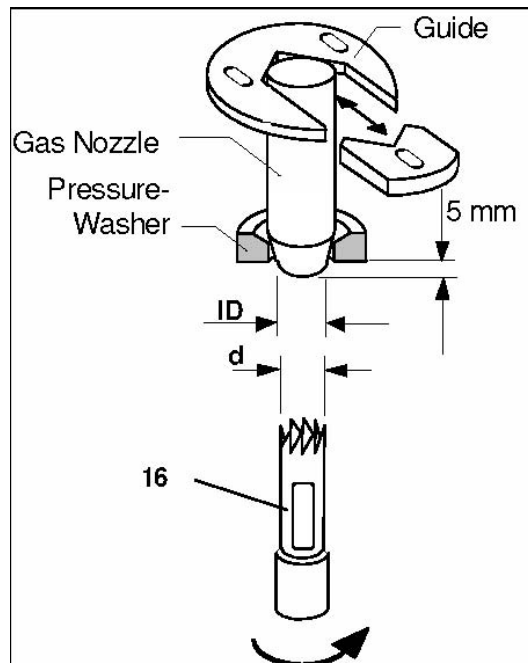
Choose the appropriate size reamer blade for your welding application and welding nozzle I.D. (See page 8 for available sizes). To remove/install reamer blade use a 14mm wrench to hold the top of the air motor shaft from turning. Using a 17mm wrench turn reamer blade counter-clockwise to remove or clockwise to install. Considerable force may be necessary to remove the reamer blade as the blade is designed to self-tighten during operation.

Nozzle Alignment/ Adjustment

CAUTION: Always use extreme caution to avoid moving parts, pinch or crush points on the reamer. Failure to heed warnings can result in serious bodily harm.

For optimum cleaning it is necessary to set the unit according to the OD of the gas nozzle. This is done using the correct center piece and pressure washer. The MCS-500 is adjustable for different nozzles ranging in diameters from ½" (15mm) to 1" (25.4mm).

1. Select correct pressure washer that fits the gas nozzle dimensions. (see Parts Listing)
2. Remove guide piece and spacer.
3. Insert selected pressure washer into spacer.
4. Reinstall guide and adjust to gas nozzle diameter and tighten screws.



Anti-Spatter

The integrated spray unit offers optimal Anti-Spatter Solution coverage for the gas nozzle. To ensure best cleaning results the gas nozzle should be sprayed with Anti-Spatter Solution before the first use. The cleaning cycle time is influenced by the operator, depending on the size of the nozzle and spatter build up.

OPERATION

- 1) The MCS-500 operates with an air pressure of 6 to 8 bar. The recommended compressed air should be clean and oiled.
- 2) In order to achieve the best cleaning results the cleaning tool (reamer blade) must be adjusted to the gas nozzle.
- 3) The MCS-500 is turned on automatically when the torch is inserted into the center of the guide unit and while depressed to its lower position.
- 4) The cleaning depth can be altered by adjusting the stroke limiter screw. All units are shipped with a default factory setting.
- 5) The gas nozzle only takes seconds to be cleaned. After the nozzle is cleaned pull the MIG torch out of the MCS-500 unit. The unit will turn off automatically.
- 6) After the cleaning cycle is complete spray the gas nozzle with Anti-Spatter Solution. Insert the welding nozzle into the spray nozzle on the top of the MCS-500. Push down for a determined time limit to apply anti-spatter.

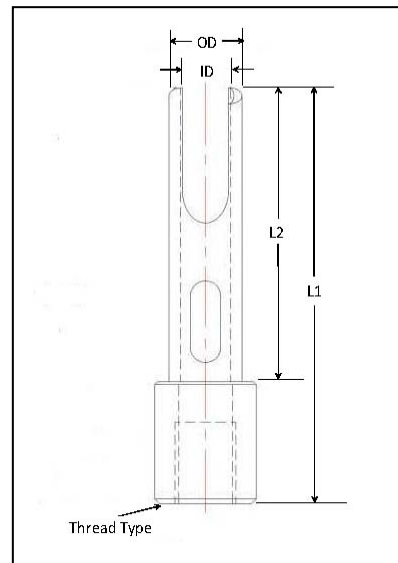
CARE AND MAINTENANCE

Frequent cleaning will increase the torches life. Be sure to check daily the reamer blade, solution level and air pressure. The recommended solution is Anti-Spatter.

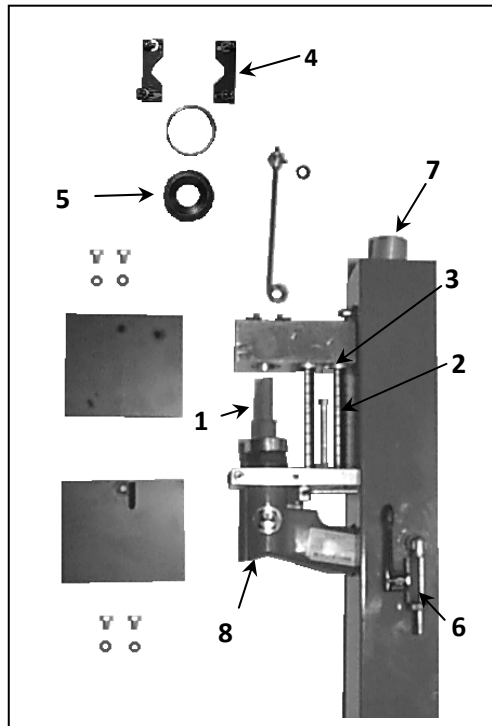
REAMER BLADE SELECTION CHART

PART NUMBER	NOZZLE BORE SIZE	OD	ID	L1	L2	THREAD TYPE
RB-500	1/2" (13mm)	.470"(12mm)	.354"(9mm)	2.56"(65mm)	1.76"(44.7mm)	Female - 3/8-24
RCT-04	1/2" (13mm)	.470"(12mm)	.354"(9mm)	1.65"(42mm)	1.10"(28mm)	Male - 3/8-24
RB-625	5/8" (16mm)	.610"(15.5mm)	.511"(13mm)	2.69"(68mm)	2.14"(54mm)	Female - 3/8-24
RB-625-01	5/8" (16mm)	.610"(15.5mm)	.453"(11.5mm)	2.56"(65mm)	1.76"(44.7mm)	Female - 3/8-24
RB-625-02	5/8" (16mm)	.610"(15.5mm)	.453"(11.5mm)	2.95"(75mm)	1.76"(44.7mm)	Female - 3/8-24
RB-625-03	5/8" (16mm)	.590"(15mm)	.433"(11mm)	2.56"(65mm)	1.76"(44.7mm)	Female - 3/8-24
RCT-01	5/8" (16mm)	.610"(15.5mm)	.511"(13mm)	2.69"(68mm)	2.14"(54mm)	Male - 3/8-24

Other Reamer Blades Available Upon Request



PARTS LIST – MCS-500



Item #	Part Number	Description
1	See Blade Chart	Reamer Blade
2	MS-100	Spring
3	MS-101	Bearing
4	MS-102	Guide Piece
5	MS-103	Pressure Washer 1/2" – 5/8" ID
	MS-104	Pressure Washer 5/8" – 3/4" ID
	MS-105	Pressure Washer 3/4" – 7/8" ID
	MS-106	Pressure Washer 7/8– 15/16" ID
6	MS-107	Valve
7	MS-108	Sprayer Guide
8	MS-109	Air Drill DW 310
9	RS-129	Anti-Spatter Bottle
10	RS-128	Bracket Anti-Spatter Bottle-Not Shown
11	MS-110	Valve
12	MS-111	Manifold

