



TORCH WIZARD®
NOZZLE CLEANING STATIONS

INSTALLATION & OPERATION MANUAL

Installation,
Maintenance
and Warranty
Information

Models

EL-NCS-A-20-SC
EL-NCS-AC-20-SC
EL-NCS-20-SC
EL-NCS-C-20-SC



SHIP DATE

SERIAL #



**FAMILY OWNED
AMERICAN MADE**

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wire-wizard.com

TABLE OF CONTENTS

1.0 INTRODUCTION	1
1.1 Warranty	1
1.2 Product Registration	2
1.3 Model Information	2
1.4 Safety	2
2.0 INSTALLATION	3
2.1 Mounting the Torch Wizard®	3
2.2 Pneumatic Connection	4
2.3 Electrical Connection	4
2.4 Adjusting the V-Block	5
2.5 Reamer Adjustment	6
2.6 Anti-Spatter Dispensing	7
2.7 Sequence of Operations	8
3.0 ADD-ON WIRE CUTTER INSTALLATION (IF APPLICABLE)	9
4.0 MAINTENANCE OF CLEANING STATION & WIRE CUTTER	11
4.1 Maintenance Schedule	12
4.2 Recommended Spare Parts	12
5.0 ELECTRICAL SCHEMATIC (9-PIN)	13
6.0 EXPLODED VIEWS & PARTS LIST	14
6.1 Exploded View 1	14
6.2 Exploded View 2	15
6.3 Exploded View 3	15
6.4 Parts List	16
7.0 OPTIONAL COMPONENTS & ACCESSORIES	17

1.0 INTRODUCTION

This guide is designed to assist the user whose primary responsibility is to maintain and operate the Torch Wizard® Nozzle Cleaning Station. This manual provides specific information on installation, safety, basic operation, and maintenance.

Please read, understand and follow all safety procedures.

Torch Wizard® Nozzle Cleaning Stations offer fast and efficient cleaning cycle times for high production rates. The anti-spatter solution is applied via a venturi style sprayer on the front of the reamer.

The complete sequence of the Torch Wizard® Nozzle Cleaning Station must be started and controlled by a robot controller, programmable logic controller (PLC), or some other superior control system. See sequence of operations on page 8 for details.

In order to obtain the optimum cleaning performance, the interior of the nozzle should be sprayed with **Blue Magic®** or **Blue Chill® Anti-Spatter** after cleaning.

1.1 WARRANTY

TWO YEAR EXTENDED WARRANTY TERMS AND CONDITIONS: ELC Co Enterprises, Inc. (hereinafter “ELCo”) shall warrant the Torch Wizard® Nozzle Cleaning Station (hereinafter “Torch Wizard”) to be free of defects in material and/or workmanship for two (2) years from the date of shipment to the Buyer. This two year warranty requires the exclusive use of **Blue Magic®** or **Blue Chill® Anti-Spatter (or other anti-spatter supplied by ELC Co Enterprises)**, along with an **ELCo-supplied Filter/Regulator/Lubricator (FRL) with auto-drain**. The warranty shall cover 100% of all parts and labor with the exception of misuse, abuse, neglect and typical consumables as determined by ELC Co. **Failure to follow proper installation and maintenance procedures specified in this operation manual will void this warranty. This includes the use of a Filter/Regulator/Lubricator (FRL) without auto-drain functionality.** ELC Co will, at its option, repair, replace or issue a credit for the value of the defective Torch Wizard®. The use of anti-spatter agents other than **Blue Magic®** or **Blue Chill®** and non-ELCo parts and/or consumables with the Torch Wizard® may damage or limit the performance of the Torch Wizard® and will void this extended warranty on all components.

ONE YEAR LIMITED WARRANTY TERMS AND CONDITIONS: For units using anti-spatter agents other than **Blue Magic®** or **Blue Chill®**, ELC Co Enterprises, Inc. shall warrant the Torch Wizard® Nozzle Cleaning Station to be free of defects in material and/or workmanship for one (1) year from the date of shipment to the Buyer. The warranty shall cover 100% of all parts and labor with the exception of misuse, abuse, neglect and typical consumables as determined by ELC Co. This limited warranty excludes all sprayer components, which are warranted to be free from defects and/or workmanship for 90 days from the date of shipment to the buyer. **Failure to follow proper installation and maintenance procedures specified in this operation manual will void this warranty. This includes the use of a Filter/Regulator/Lubricator (FRL) without auto-drain functionality.** ELC Co will, at its option, repair, replace or issue a credit for the value of the defective Torch Wizard®.

Buyer accepts all responsibility for compliance with any/all Local, State and Federal Laws or Regulations including Regulations of Foreign Governments.

No equipment shall be returned to ELC Co without a Return Authorization Number from ELC Co. Upon evaluation and determination of warranty, replacements or repairs will be sent to the Buyer. If a replacement is needed immediately, a purchase order is required to cover the cost of the product until the warranty is determined.

ELCo’s warranty is limited to replacing any goods that are proved to be defective and ELC Co in no event shall have any liability for paying incidental or consequential damages including and without limitation, damages resulting in personal or bodily injury or death, or damages to, or loss of use of any property. Notwithstanding any of these terms and conditions, the warranties set forth shall apply in connection with any sales of goods, services or design by ELC Co and are in lieu of all other warranties, express or implied, including warranties of merchantability and fitness for a particular purpose.

1.2 PRODUCT REGISTRATION

Please register this product online or by phone within 14 days after receipt.

Register this product online by going to **wire-wizard.com/register** or scanning the QR code on the right, or you may call 517.782.8040 to register by phone. Registering this product will allow us to provide firmware and software updates via email, as well as expedited service should there be any problems potentially covered by this warranty in the future.



Please record the following information for this product and retain for your records:

Model #: _____ Lot #: _____ Shipment Date: _____

1.3 MODEL INFORMATION

Model EL-NCS-A-20-SC

- ▶ Base Unit
- ▶ Integrated Venturi Style Anti-spatter spray unit
- ▶ Self-cleaning air blast feature

Model EL-NCS-AC-20-SC

- ▶ Base Unit
- ▶ Integrated Venturi Style Anti-spatter spray unit
- ▶ Self-cleaning air blast feature
- ▶ Wire Cutter

Model EL-NCS-20-SC

- ▶ Base Unit
- ▶ Self-cleaning air blast feature
- ▶ No anti-spatter (for aluminum applications)

Model EL-NCS-C-20-SC

- ▶ Base Unit
- ▶ Self-cleaning air blast feature
- ▶ Wire Cutter
- ▶ No anti-spatter (for aluminum applications)

1.4 SAFETY

The Torch Wizard® Nozzle Cleaning Station is designed to be safe to operate, provided the user reads, understands and adheres to the safety precautions listed below. Failure to adhere to these precautions may result in personal injury and/or damage to the equipment.

1. Do not remove or deface any labels that are attached to the unit.
2. Ensure that all equipment in the area is disabled and locked out prior to entering the work zone where the Torch Wizard® is located.
3. Ensure that all electrical and air power is disconnected prior to performing any maintenance on the Torch Wizard®.
4. Keep hands and face away from clamp, reamer and spray operating space during both automatic and manual operation.
5. Ensure that all electrical and pneumatic connections comply with the codes relevant to the country and/or state where the Torch Wizard® is installed.
6. Do not exceed the specified operating air pressure.
7. Ensure that there is no equipment (e.g., robot) in the Torch Wizard® prior to shutting down the system.
8. Additional safety information can be found at the following websites:
 - ▶ osha-slc.gov/SLTC/robotics/index.html
 - ▶ ansi.org
 - ▶ nfpa.org

2.0 INSTALLATION

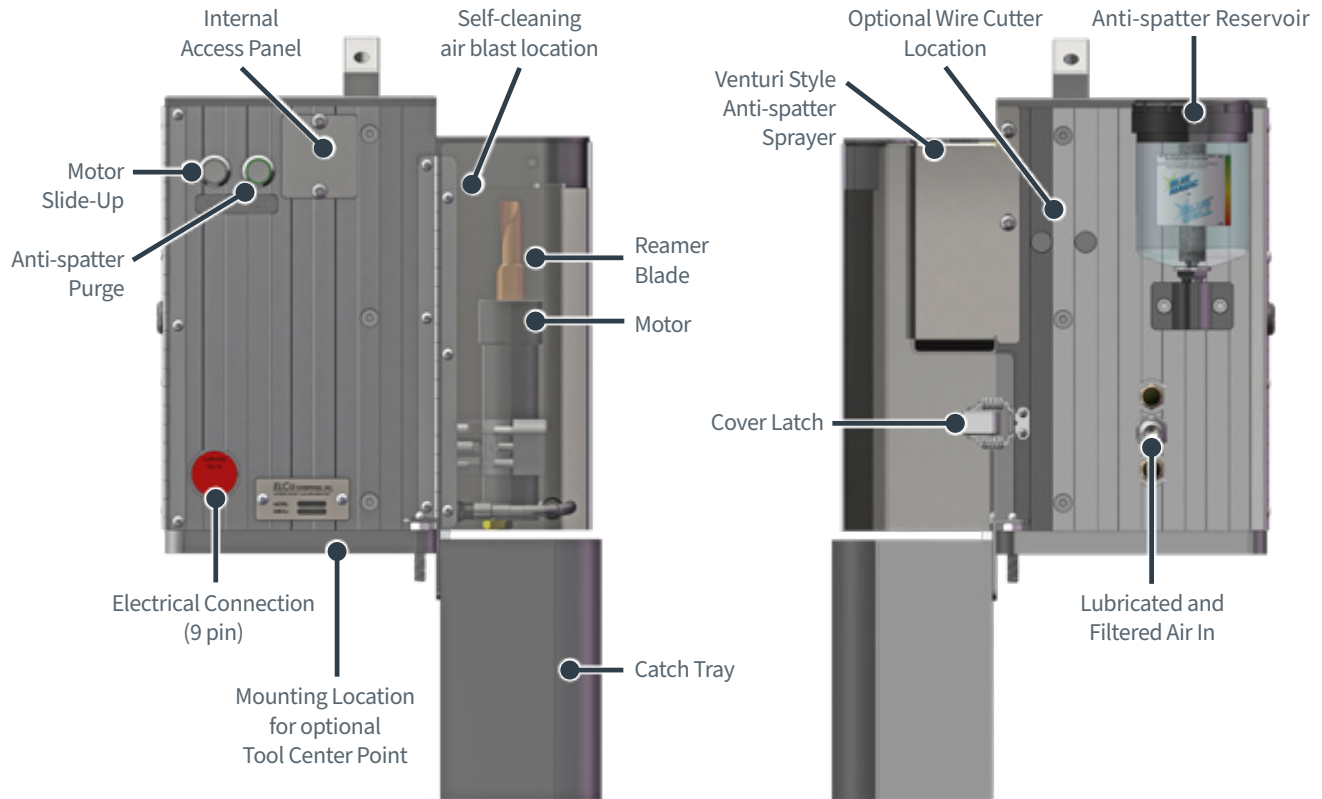


Figure 1: Torch Wizard Components with Venturi Style Anti-spatter Spray System (EL-NCS-A-20-SC shown)

2.1 MOUNTING THE TORCH WIZARD®

Select a location within the robotic workcell that provides the robot with the shortest approach points. It is important to consider the robot work envelope and any fixed obstructions or potential interference.

- ▶ Mount the Torch Wizard® to a stable platform that is parallel to the floor for best results (an optional stand is available). Use the (4) 11/32 mounting holes provided on base of the Torch Wizard® to secure the unit to the platform.
- ▶ It is recommended that (4) M8 – 1.25 SHCS (Socket Head Cap Screws) are used to mount the Torch Wizard® to the platform (the optional stand provides M8 – 1.25 tapped holes for mounting).

BOLT PATTERN (same for all models)

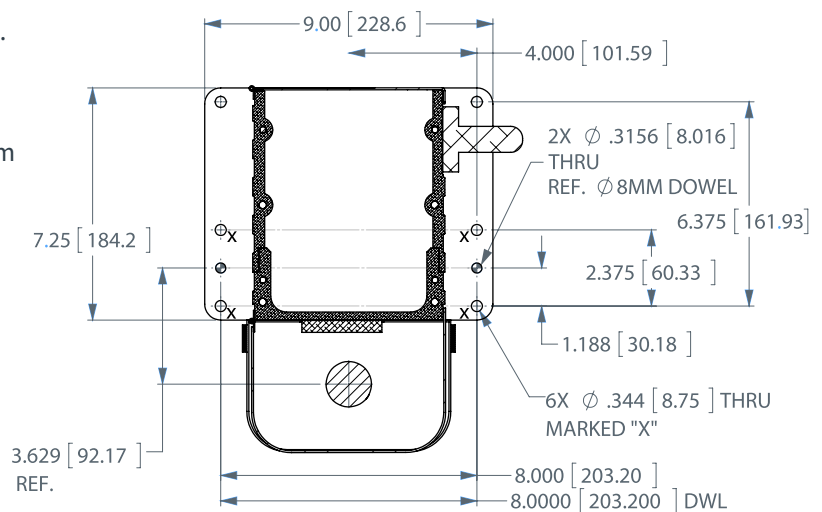


Figure 2

2.2 PNEUMATIC CONNECTION

We recommend “Push-to Lock” style fittings on the Torch Wizard® for supplying air to the unit. Use an air line with a 5/16" outside diameter to supply air to the Torch Wizard®. There is just one location that supplies air to the unit (refer to Fig. 3).

Air Supply Requirements

Air **must** be filtered and regulated with a Filter/Regulator/Lubricator with auto-drain functionality and **lubricated**.

- ▶ Use an Air Supply Line with an inside diameter of 1/2", connect to the 1/4" N.P.T. female inlet located on the side of the Reamer.
- ▶ Minimum 80 psi recommended at 16 CFM (5.0 – 7.0 BAR at 450 LPM) at the Reamer during operation.
- ▶ **Lubricator Adjustment:** Set the lubricator to deliver one drop of pneumatic oil for every two minutes of operation. **Do not over-lubricate.**



Figure 3

Use of unfiltered, dirty air may result in damage to the unit and will void the warranty.

2.3 ELECTRICAL CONNECTION

The complete sequence of the Torch Wizard® Nozzle Cleaning Station must be started and controlled by a robot controller, programmable logic controller (PLC), or other superior control system.

Electrical Draw: 0.5 Amps

See Electrical Schematic on page 13 for detailed wiring information

2.4 ADJUSTING THE V-BLOCK

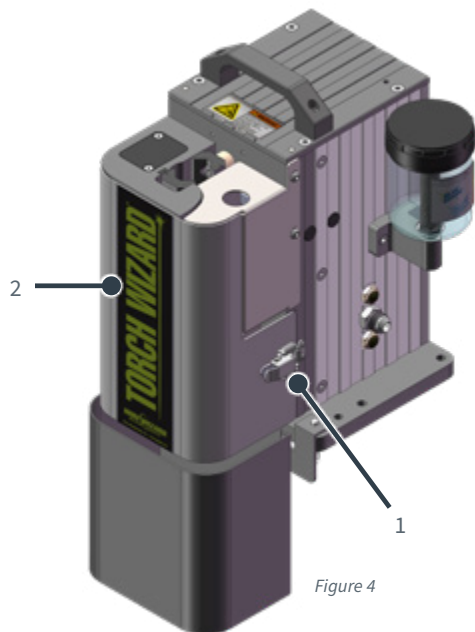


Figure 4

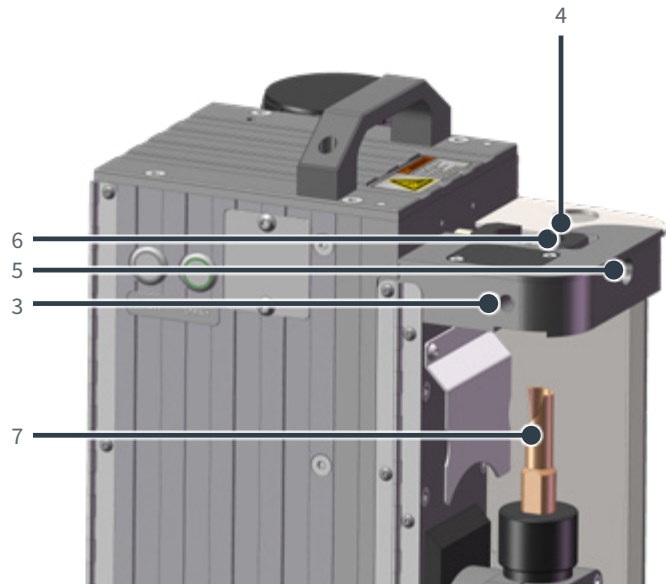
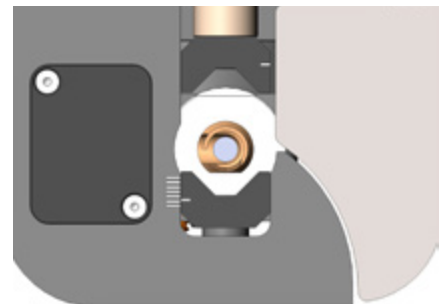


Figure 5

The Torch Wizard® Nozzle Cleaning Station incorporates an adjustable V-Block feature. This feature eliminates the need to replace the V-Block when changing to different diameter gas nozzles. To adjust the V-Block, follow the procedure below (along with Figs. 4 and 5). **Ensure that there is no air pressure or electrical power to the unit before performing this procedure.**

1. Open the Stainless Steel Guard (2) by unlocking the latch.
2. Install the reamer blade (7). Use the slim profile wrench provided to hold the motor in place when securing the reamer blade.
3. Loosen Set Screw (3).
4. Loosen the Low Head Socket Head Cap Screw in the clamp (4).
5. Adjust the V-Block (6) using the Adjuster Screw (5) so that when the air motor is at its upper point, the reamer is centered in the gas nozzle. To check this, hold a gas nozzle in V-Block and raise the air motor slide by hand.
6. Tighten Low Head Socket Head Cap Screw (4).
7. Tighten Set Screw (3).
8. Replace the Stainless Steel Guard and Catch Tray (2) and tighten screws, or leave open if performing the initial setup and proceed to reamer adjustment.



The graphic above represents the approximate location of the V-Block when set up for a gas nozzle with a 1 inch outside diameter.

2.5 REAMER ADJUSTMENT

In order to ensure adequate cleaning of the gas nozzle, it is essential that the correct reamer insertion depth is obtained.

The reamer insertion depth will vary based upon the nozzle, tip and diffuser on the torch. In general, the reamer can be inserted up until it is approximately 1/16" to 1/8" away from making contact with the diffuser (see example in Fig. 6b). Removing the nozzle from the torch to ensure the proper depth and clearance from the diffuser is recommended. **It is imperative that the reamer not make contact with the gas diffuser as this will cause damage to both the reamer and the gas diffuser. The Torch Wizard® is not designed to clean the contact tip or gas diffuser.**

To adjust the reamer depth, use the following procedure and refer to Fig. 6a: **(Ensure that there is no air pressure or electrical power to the unit before performing this procedure).**

1. Remove the Stainless Steel Guard (refer to Fig. 4 and the procedure for adjusting the V-Block on page 5).
2. With one hand, hold a gas nozzle in the V-Block at the position that will be used when programming the robot. With the other hand, raise the reamer and check the insertion depth of the reamer bit (1).
3. If the insertion depth is incorrect, loosen the Socket Head Cap Screws (2). Move the Air Motor (3) up or down to obtain the correct insertion depth. If the motor will not move, screw in the Jack Screws (4) to loosen the motor clamp.
4. Back out the Jack Screws (4) if necessary, and tighten the Socket Head Cap Screws (2). Repeat steps 1 – 3 until the correct insertion depth is obtained.

Note: The air motor on this reaming station has a max torque of 7.3 ft/lbs @ 90 psi at the motor.

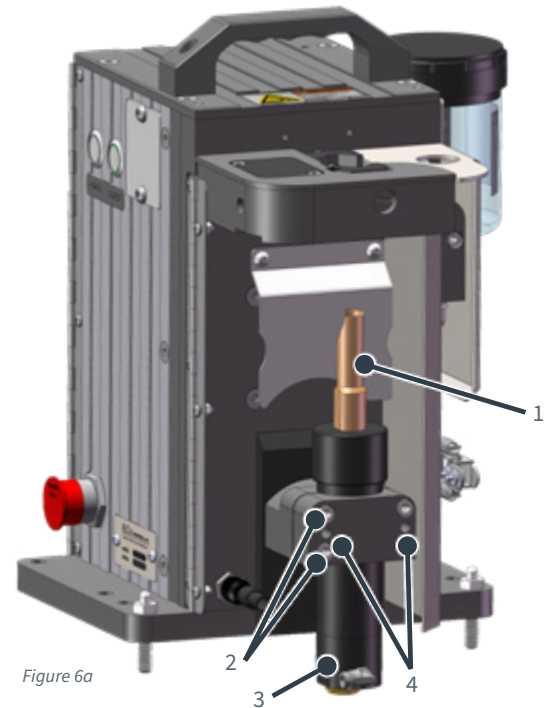


Figure 6a

Blade depth should be set to ream just below the gas holes in the diffuser



Figure 6b
Example of typical reamer insertion depth. End of blade should be set just below the gas holes on the diffuser. This location will vary based on the torch design.

Figure 6b

Positioning Robot

The robot **must** be positioned such that the O.D. of the nozzle rests evenly against the V-Block. Failure to program the robot so that the nozzle rests against the V-Block could result damage to the robot due to reactionary forces transmitted to the robot axes when the nozzle is clamped with the air cylinder.

See page 13 for the electrical schematic for your Torch Wizard® model.

WARNING: Ensure that the adjustable V-Block and the air motor have been correctly set prior to positioning the robot and running the Torch Wizard® in the automatic mode. Refer to sections 2.4 Adjusting V-Block and 2.5 Reamer Adjustment. **Failure to adjust these two items properly will result in damage to Torch Wizard® and possibly the robot.**

2.6 ANTI-SPATTER DISPENSING

The Torch Wizard with Anti-Spatter option provides the user with the ability to ream then spray the nozzle using a venturi style sprayer. The anti-spatter solution is supplied from the anti-spatter reservoir (included with unit).

Anti-spatter Dispensing with the Reservoir

The Anti-spatter Reservoir dispensing option is shipped loose. On models ordered with the reservoir, simply attach the bowl to the connection point on the side of the unit. For all others, use the following procedure and refer to Fig. 7a on how to attach the reservoir bottle to the Torch Wizard®:

1. Open the back cover by loosening the two screws. Remove the Bulkhead Connector.
2. Attach Reservoir to Reaming Station using the two supplied bolts.
3. Insert the anti-spatter tube (the one that was connected to the bulkhead) into the fitting on the Reservoir assembly.
4. Reattach back cover and ensure all screws and fittings are tight.

Once the Reservoir has been secured, remove the Fill Cap and fill the Reservoir with **Blue Magic®** or **Blue Chill®** anti-spatter solution.

The use of other anti-spatters will void the warranty on sprayer components. This is due to the corrosiveness of many anti-spatters, which is not found in either Blue Magic® or Blue Chill®.

The anti-spatter liquid volume and air volume have been factory set and should be evaluated before making any adjustments to the system. You may also adjust the length of the spray time when programming the unit.

Anti-spatter Volume Adjustment

Note: In most cases, the factory setting for the anti-spatter spray should be sufficient, this setting should only be adjusted if absolutely necessary.

To adjust the anti-spatter volume, unlock the two panel latches on the back cover and open to reveal the interior of the reaming station. The anti-spatter volume can be adjusted using the volume control knob located on the left side of the unit (Fig. 7c). Turn the control knob clockwise to reduce the air flow and increase the amount of anti-spatter, turn it counter-clockwise to increase the air flow and reduce the amount of spatter. Settings can be tested by pressing the manual Spray button on the side of the unit, and visibly observed from the sprayer (Fig. 7b). Replace cover when desired setting is achieved.



Figure 7a
Anti-spatter Reservoir Attachment

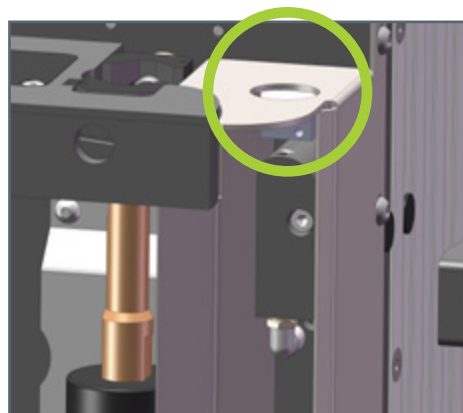


Figure 7b
Anti-spatter Spray Block



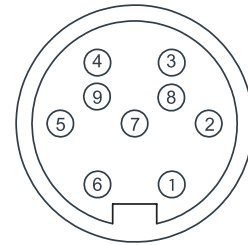
Figure 7c
Anti-spatter Adjustment

2.7 SEQUENCE OF OPERATIONS

Model EL-NCS-A-20-SC or EL-NCS-20-SC (no Wire Cutter)

1. Verify Signal at Pin #3 is On (Home)
2. Energize Pin #4 - Motor and Clamp On
3. Verify Signal at Pin #3 is Off - Clamped
4. Short Delay
5. Energize Pin #5 - Vertical Slide Up
6. Short Dwell for Torch Clean
7. De-energize Pin #5 - Vertical Slide Down
8. Short Delay
9. De-energize Pin #4 - Unclamp and Motor Off
10. Energize Pin #6 - Spatter Spray Application*
11. Short Dwell
12. De-energize Pin #6 - Spatter Spray Off
13. Verify Signal at Pin #3 is On (Home)
14. Cycle Complete

Skip for EL-NCS-20-SC model
(dry ream only)



1. (ORANGE) - +24 VDC
2. (BLUE) - 0 VDC
3. (RED/BLK) - NOZZLE UNCLAMPED/SLIDE DOWN
4. (GRN/BLK) - AIR MOTOR/CLAMP
5. (WHITE) - SLIDE UP
6. (RED) - ANTI-SPATTER SPRAY
7. (GRN/YEL) - GROUND
8. (WHT/BLK) - WIRE CUTTER ADVANCE, IF APPLICABLE
9. (BLACK) - SELF-CLEANING AIR BLAST, PLC CONTROLLED

Model EL-NCS-AC-20-SC or EL-NCS-C-20-SC (includes Wire Cutter)

1. Verify Signal at Pin #3 is On (Home)
2. Energize Pin #8 - Wire Cutter Advance
3. Short Dwell
4. De-Energize Pin #8 - Wire Cutter Retract
5. Move Torch to Cleaner Position
6. Energize Pin #4 - Motor and Clamp On
7. Verify Signal at Pin #3 is Off - Clamped
8. Short Delay
9. Energize Pin #5 - Vertical Slide Up
10. Short Dwell for Torch Clean
11. De-energize Pin #5 - Vertical Slide Down
12. Short Delay
13. De-energize Pin #4 - Unclamp and Motor Off
14. Energize Pin #6 - Spatter Spray Application*
15. Short Dwell
16. De-energize Pin #6 - Spatter Spray Off
17. Verify Signal at Pin #3 is On (Home)
18. Cycle Complete

Skip for EL-NCS-C-20-SC model
(dry ream only)

See Ethernet Model supplement for operation on models with Ethernet connectivity.

Complete electrical drawing is on page 13.

Self-cleaning Air Blast Feature

The self-cleaning air blast is PLC controlled and may be activated when desired.

**Duration of energize determines the amount of spatter spray applied*

3.0 ADD-ON WIRE CUTTER INSTALLATION (IF APPLICABLE)

Tools required

- ▶ Needle-nose Pliers
- ▶ 4 mm Allen Wrench
- ▶ 5 mm Allen Wrench
- ▶ Small Tube Cutters

Instructions

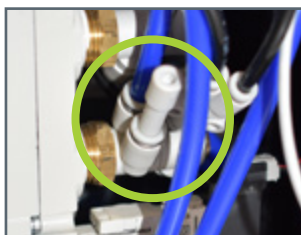
1. Install the two mufflers and push-to-lock fitting into the valve assembly as shown.



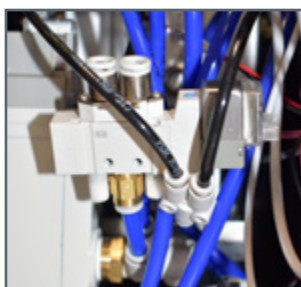
2. Cut approx. 2" of tubing and insert into the push-to-lock fitting on the valve assembly.



3. Open the back cover of the cleaning station and remove the air outlet plug in the circled location.



4. Install the tubing from the valve assembly into the push-to-lock fitting where the plug was just removed. The assembly should have the solenoid plug location on the right side.



5. Insert the wire cutter solenoid plug (labeled "wire cutter sol.") into the right side of the valve assembly.



6. Detach the steel guard by removing the two screws (Fig. A). Insert the shorter guard for the wire cutter in its place, with the two mounting hole locations lined up (Fig. B). Close and latch the cleaning station cover down to secure the new guard in place while installing the wire cutter.



Figure A



Figure B

7. Remove the two screws to slide off the wire cutter steel cover in order to access the two mounting bolts.



8. Remove the two black plugs for the pneumatic tubing.



9. Push in the two air line reducers (8 mm to 6 mm) into the push-to-lock fittings on the wire cutter.



10. Cut two pieces of approx. 10" tubing. Insert the first piece of tubing into the front hole on cleaning station (Fig. 10a) and install into the push-to-lock fitting on the left side of the valve assembly (port B) (Fig. 10b).



Figure C



Figure D

11. Insert the second piece of tubing into the back hole on cleaning station (Fig. 11a) and install into the push-to-lock fitting on the right side of the valve assembly (port A) (Fig. 11b).



Figure E



Figure F

12. Install the wire cutter by securing the two mounting bolts with a 5 mm Allen wrench.

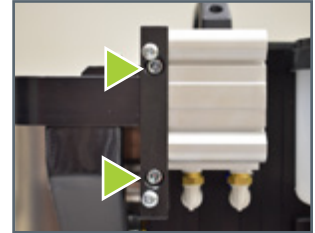


Figure G

13. Using a pair of needle-nose pliers, firmly push in the two air lines into the push-to-lock fittings on the wire cutter (Figs. 13a and 13b).

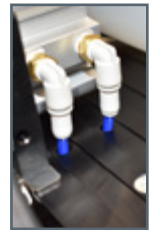


Figure H

14. Re-install the steel cover on the wire cutter using the two screws to secure cover back in place (Fig. 14).



15. Test wire cutter functionality per the instructions in the Torch Wizard® Cleaning Station operation manual.

4.0 MAINTENANCE OF CLEANING STATION & WIRE CUTTER

The Torch Wizard® is for the most part, a low maintenance peripheral. However, maintenance of this unit should still be added to your preventive maintenance schedule. The following should be checked at regular intervals:

- ▶ Visually inspect unit for damage, especially mechanically stressed components
- ▶ Clean the filter
- ▶ Check that the air lines are free of leaks
- ▶ Clean and test anti-spatter sprayer(s)
- ▶ Ensure the lubricator has lubricant and fill if necessary
- ▶ Check blade for chips or cracks, replace if necessary
- ▶ Check for loose parts
- ▶ Ensure the proper depth of blade in the nozzle
- ▶ Ensure the blade is not making contact with the diffuser
- ▶ Ensure all covers are in place before operating

Wire Cutter Maintenance (if applicable)

The wire cutter blade and back plate should be checked occasionally for wear. Replace blade (pt. #NCS-WCS-08) if worn. If the back plate is worn, it may be removed and flipped around to the other end. To disassemble and install a new blade, remove the two screws on the top of the cutter with a 4 mm wrench. Remove the slide piece that rests on top of the blade and then remove the screw holding the blade with a 2.5 mm wrench. Install the new blade with the **angled side facing up** as shown in Fig. 9. Reassemble unit.

The wire back plate may be flipped by removing the screw on the bottom of the cutter with a 5 mm wrench. Replacement blades and other wire cutter components are available from ELC0 Enterprises.

The wire cutter should also be greased approximately once every 10,000 cycles with multi-purpose grease.

Wire Cutter Replacement Parts:

Cutting Blade	Pt. #NCS-WCS-19
Wire Back Plate	Pt. #NCS-WCS-16
Clamping Block	Pt. #NCS-WCS-07
Replacement Spring	Pt. #C0240-045-1000-S

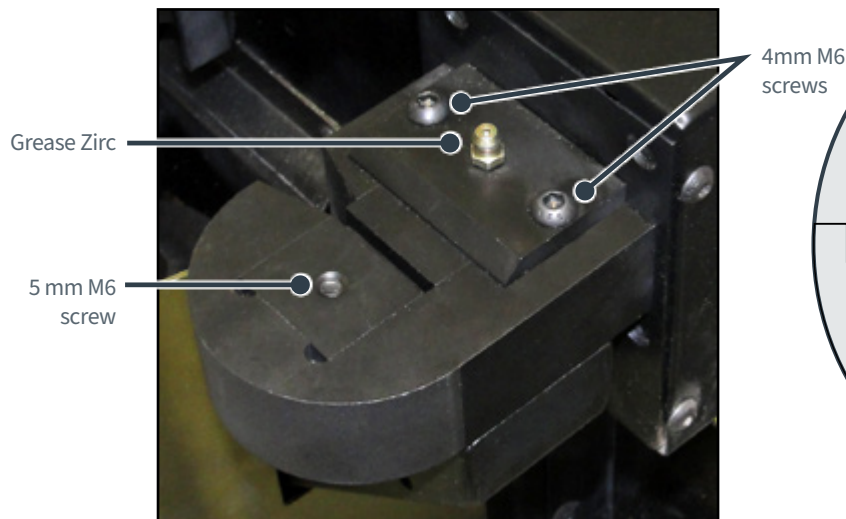


Figure 8: Wire Cutter, Exterior View

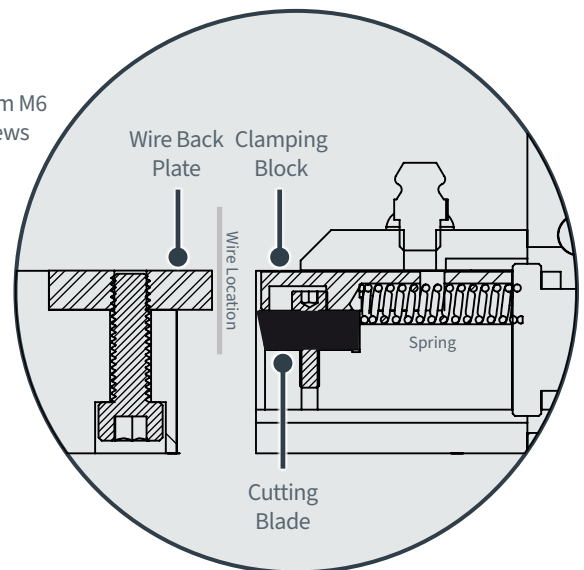


Figure 9: Wire Cutter, Interior View

4.1 MAINTENANCE SCHEDULE

Description	Recommended Quantity
Empty Catch Pan	As needed*
Grease Wire Cutter	Every 10,000 Cycles
Ensure Lubricator has Pneumatic Lubricant	Daily*
Inspect and Clean Air Filter if Necessary	Daily*
Inspect Reamer Blade for Wear	Weekly
Inspect and Test Reaming Station for Proper Functionality	Weekly
Check Wire Cutter Functionality and Inspect Blade for Wear	Weekly
Check Positioning of Torch Nozzle & Reamer Blade	Weekly
Inspect Cleaning Station for Excess Debris, Wipe Down if Needed	Weekly
Clean Anti-spatter Lines	Monthly

* It is recommended to document the frequency of these tasks as it will vary based on your welding application.

4.2 RECOMMENDED SPARE PARTS

For Models EL-NCS-A-20-SC or EL-NCS-AC-20-SC

Part No.	Description	Recommended Quantity
Varies	Replacement Reamer Blade	1 per 10 cleaning stations
VX212CAB	Solenoid Valve for Anti-spatter Spray	1 per 25 cleaning stations
D-Z73	Air Actuator Sensor	1 per 50 cleaning stations
D-A93V	Clamp Cylinder Sensor	1 per 50 cleaning stations
NCS-16-MOTOR	Pneumatic Motor	1 per 100 cleaning stations
CDQ2B40-40DZ	Clamp Cylinder	1 per 100 cleaning stations
MGQM25-50	Guided Air Actuator (Motor slide up/down)	1 per 100 cleaning stations
NCS-GPBL	Green Push Button Latch On	1 per 50 cleaning stations
ULV4F2BSS335	Lighted Push Button	1 per 50 cleaning stations

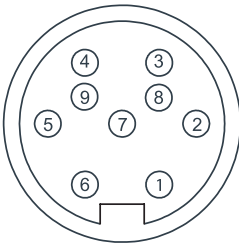
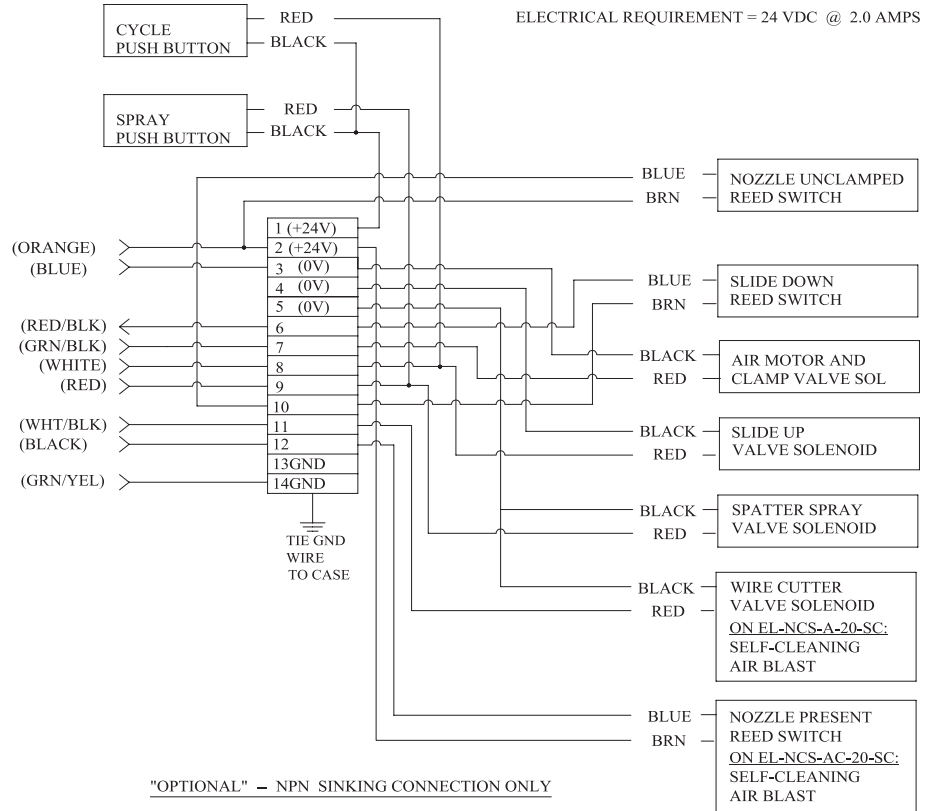
For Model EL-NCS-AC-20-SC Only (unit with wire cutter)

Part No.	Description	Recommended Quantity
NCS-WCS-19	Replacement Blade for Wire Cutter	1 per 25 cleaning stations
C0240-045-1000S	Replacement Spring	1 per 50 cleaning stations
CDQ2B63-10D2	Wire Cutter Cylinder	1 per 100 cleaning stations

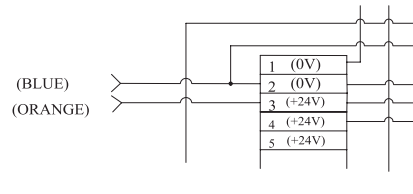
5.0 ELECTRICAL SCHEMATIC (9-PIN)

See page 8 for
sequence of operations
for your cleaning
station model.

(*) Duration of energize determines amount of Spatter Spray Applied.



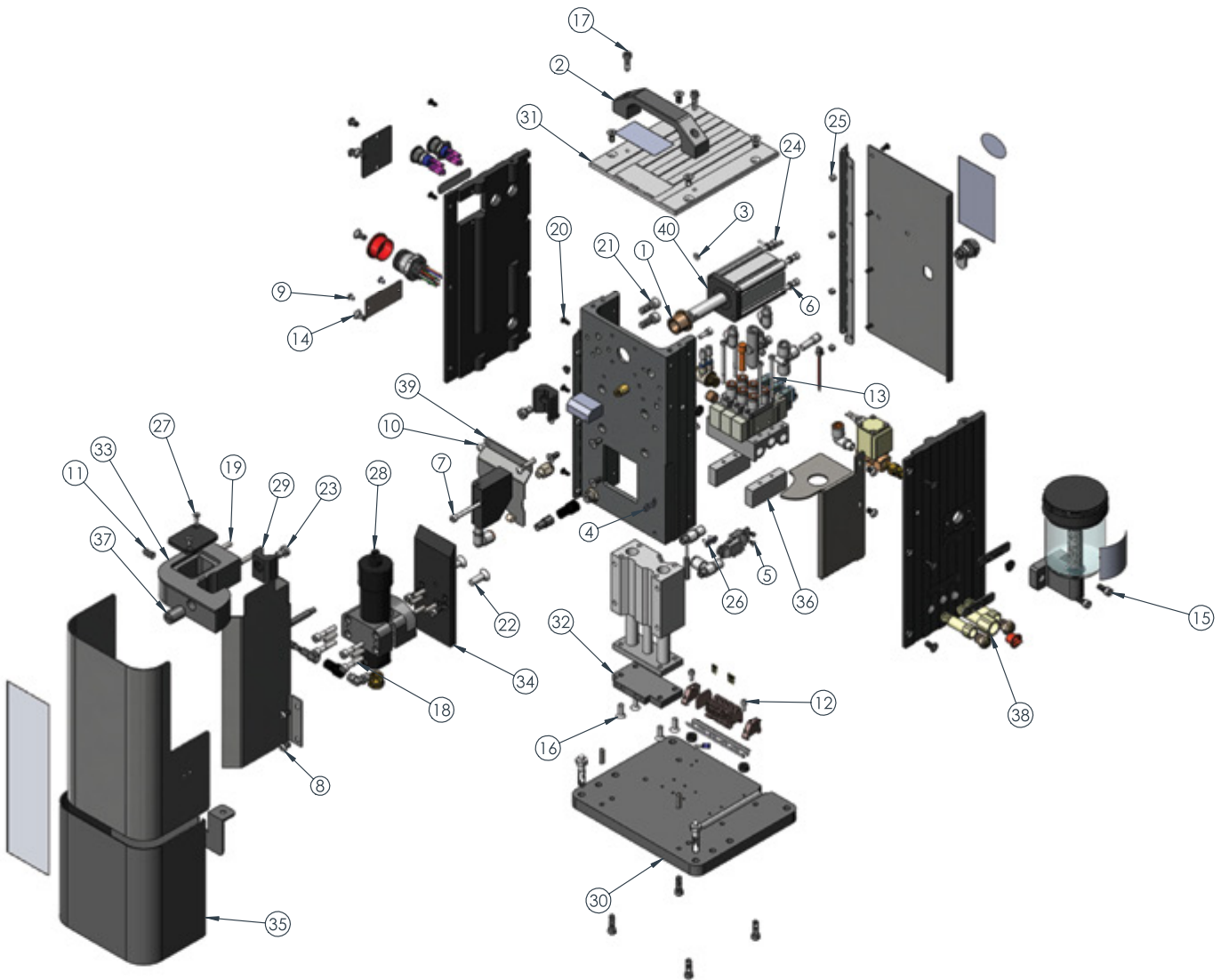
1. (ORANGE) - +24 VDC
2. (BLUE) - 0 VDC
3. (RED/BLK) - NOZZLE UNCLAMPED/SLIDE DOWN
4. (GRN/BLK) - AIR MOTOR/CLAMP, ACTIVATION OF PIN #9
5. (WHITE) - SLIDE UP
6. (RED) - SPATTER SPRAY
7. (GRN/YEL) - GROUND
8. (WHT/BLK) - WIRE CUTTER ADVANCE, OR ON EL-NCS-A-20-SC MODELS: SELF-CLEANING AIR BLAST
9. (BLACK) - SELF-CLEANING AIR BLAST (PLC CONTROLLED) ON EL-NCS-AC-20-SC MODELS ONLY



QTY	PART NUMBER	MFG	DESCRIPTION
1	CC09-AE-16-VV-200F	BALLUFF	FEMALE 9 PIN 20FT. LONG CORD
1	ROCCA-09-B-16C-010F	BALLUFF	MALE 9 PIN 1FT LONG LEADS RECEPTICAL

6.0 EXPLODED VIEWS & PARTS LIST

6.1 EXPLODED VIEW 1



6.4 PARTS LIST

Please reference model and serial number when ordering replacement parts.

Item No.	Part No.	Description	Qty
1	5448T21	16MM ID ALLOY 932 FLANGE BUSHING	1
2	5193A2	PLASTIC HANDLE	1
3	40353	M4 ZINC FLAT WASHER	7
4	41451	3/8 ALUMINUM BACK UP WASHER	2
5	41293	M3-.5 X 6 BHCS ZINC	2
6	24766	M5 HIGH COLLAR LOCK WASHER	8
7	35908	M5-.8 X 55 SHCS ZINC	1
8	41317	M6-1.0 X 10MM BHCS ZINC	7
9	41299	M4-.7 X 6MM BHCS ZINC	2
10	41307	M6-1.0 X 14MM SHCS ZINC	2
11	39856	M8-1.25 X 16 FPSS BLACK OXIDE	1
12	35879	M4-0.7 X 10 ZINC SHCS	2
13	35891	M4-0.7 X 60 ZINC SHCS	4
14	41389	M6-1.0 X 14 FHCS ZINC	14
15	35915	M6-1.0 X 14MM SHCS ZINC	4
16	41391	M6-1.0 X 18 FHCS ZINC	4
17	35918	M6-1.0 X 20 SHCS ZINC	6
18	35921	M5-.8 X 14 SHCS ZINC	4
19	40059	M6 X 20MM DOWEL	11
20	41301	M4-.7 X 10 BHCS ZINC	13
21	35934	M8-1.25 X 20 SHCS ZINC	2
22	41406	M8-1.25 X 25 FHCS ZINC	2
23	90597	M8-1.25 X 12 LSHCS BLACK OXIDE	2
24	41705	M5-.8 X 90 SHCS ZINC	4
25	40147	M4-07 NYLOC NUT ZINC	7
26	41212	1/8 X 1/4 POP ALUM. RIVET	2
27	41363	M4-.7 X 10MM FHCS ZINC	2
28	NCS-16-MOTOR	AIR MOTOR	1
29	NCS-24	V-BLOCK	2
30	NCS-25	BASE PLATE	1
31	NCS-112	TOP PLATE	1
32	NCS-31	ADAPTER PLATE	1
33	NCS-32	SUPPORT NEST	1
34	NCS-34	SADDLE PLATE	1
35	NCS-37	CATCH PAN	1
36	NCS-38	RISER BLOCK	2
37	NCS-39	THREADED ROD	1
38	NCS-40	EXTENSION FITTING	1
39	NCS-42	COVER	1
40	NCS-45	CLAMP CYLINDER SPACER	1
41	NCS-46	REAR COVER HINGE	1
42	NCS-47	FRONT COVER HINGE	1
43	NCS-50	VENTURI BLOCK	1
44	NCS-81	CATCH TRAY LOCATOR	2
45	NCS-83-AVBC-18B	FACE PLATE	1
46	NCS-28	SIDE PLATE (RH)	1
47	NCS-86	STAINLESS FRONT COVER	1
48	NCS-90	STAINLESS REAR COVER	1
49	NCS-27	SIDE PLATE (LH)	1
50	NCS-97	MOTOR MOUNT	1
51	NCS-98	MOTOR MOUNT	1
52	NCS-102	SIDE COVER	1
53	NCS-106	INNER GUARD FOR NCS	1
54	NCS-87-1	ANTI-SPATTER SHIELD	1
55	NCS-43	SIDE MOUNT BLOCK	1
56	NCS-41	COVER	1

Item No.	Part No.	Description	Qty
57	NCS-NOZZLE-DEPTH-WARN	NOZZLE DEPTH WARNING LABEL	1
58	NCS-TAG-3	TAG	1
59	NCS-TAG-5	ANTI-SPATTER FLUID INLET ONLY	1
60	NCS-TORCH WIZARD-LABEL	TORCH WIZARD EMBOSSED LABEL	1
61	EL-NCS-A-20-SERIAL TAG	MODEL/SERIAL TAG	1
62	USA STICKER	TAG	1
63	H5161-L27WHP	MOVING PARTS WARNING TAG	1
64	NCS-BM-BC-DECAL	BLUE MAGIC/BLUE CHILL DECAL	1
65	NCS-82	LOCK	1
66	1734A12	FRONT DOOR LATCH	1
67	9688K124	PLASTIC PLUG	3
68	CPT-6	AIR INLET PLUG	1
69	EC-18	CAPLUG	1
70	109AL-04	1/4 NPT BRASS PLUG	3
71	9688K221	PLASTIC PLUG	1
72	1754290000	JUMPER	1
73	0382860000	TERMINAL END BRACKET	2
74	1754190000	END PLATE	1
75	11751	DIN RAIL	1
76	IN-289-2006	WELD SPATTER COVER	2
77	32191	INSULATED TERMINAL FEMALE	8
78	1753280000	TERMINAL BLOCK	12
79	ULV4F2BSS335	PUSH BUTTON	1
80	ROCCA-09-B-16C	9-PIN RECEPTACLE	1
81	D-A93V	SWITCH	2
82	D-Z73	SWITCH	1
83	14RB10	WIRE END W/#10 HOLE-16 GA. WIRE	1
84	NCS-GPBL5 PUSH BUTTON	PUSH BUTTON	1
85	SY100-30-4A	PIG TAIL	1
86	74965K65	2.00" PIECE OF SHRINK TUBE	2
87	W0970530053U	1-4 NPT SFE MUFFLER	2
88	KQ2L08-01S	90 DEGREE FITTING	4
89	AS2201F-01-08ST	FLOW CONTROL	2
90	MGQM25-50	GUIDED AIR ACTUATOR SLIDE	1
91	KQ2T08-00	8MM UNION TEE FITTING	1
92	KQ2P-09	SMC 5-16 TUBE PUSH-IN PLUG	1
93	CDQ2B40-40DZ	SMC 40MM BORE X 40MM STROKE	1
94	AS2052F-08	SMC INLINE FLOW CONTROL	1
95	HHB-108687	SMC 3 STATION MANIFOLD 24V	1
96	109AL-02	1/8 NPT BRASS PIPE PLUG	1
97	123-4-2	1/4 NPT X 1/8 NPT MALE BRASS NIPPLE	1
98	KQ2H08-01A	8MM STRAIGHT FITTING	1
99	VX212CAB	SOLENOID VALVE 1/8" PORT N.C. 24VDC	1
100	KQ2E06-00A	FITTING, BULKHEAD	1
101	KQ2R06-08	6MM TUBE X 8MM REDUCER	1
102	TRB0604B-100	6MM FLAME RESISTANT BLACK TUBING	1
103	KQB2L06-01S	1/4 NPT MALE ELBOW	1
104	NCS-115	EXTENSION FITTING	2
105	KQ2Z06-02AS	1/4 NPT MALE BRANCH ELBOW	1
106	KQ2P-06	PLUG	2
107	M476-RP	10 oz RESERVOIR	1
108	PFA-27	SPACER	2
109	NCS-TAG-1	TAG	1
110	NCS-107	BLOW-OFF BLOCK	1
111	35897	M5-.8 X 14 SHCS ZINC	1
112	KQ2S06-U01A	1/8 NPT, 6MM PUSH LOCK FITTING	1

Wire Cutter Replacement Parts

Item Name	Part No.
Cutting Blade	NCS-WCS-19
Wire Back Plate	NCS-WCS-16

Item Name	Part No.
Clamping Block	NCS-WCS-07
Replacement Spring	C0240-045-1000-S

NOTE: Wire cutter not included on
EL-NCS-20-SC or
EL-NCS-A-20-SC models

7.0 OPTIONAL COMPONENTS & ACCESSORIES



Cobot Guarding Kit for Reamer & Wire Cutter
EL-NCS-CGK-C



REDUCE DOWNTIME & COST

By using a multi-station bulk anti-spatter dispensing system



TORCH WIZARD® ROBOTIC NOZZLE CLEANING STATIONS

STANDARD MODELS

Part No.	Description
EL-NCS-A-20	Reaming Station with integrated anti-spatter spray
EL-NCS-AC-20	Reaming Station with integrated anti-spatter spray and wire cutter
EL-NCS-A-20-SC	Reaming Station with self-cleaning air blast and integrated anti-spatter spray
EL-NCS-AC-20-SC	Reaming Station with self-cleaning air blast, integrated anti-spatter spray and wire cutter
EL-NCS-A-TA-20-CL	Reaming Station for tandem arc torches with Cloos® nozzles
EL-NCS-A-TA-20-FR	Reaming Station for tandem arc torches with Fronius® nozzles
EL-NCS-A-TA-20-TR	Reaming Station for tandem arc torches with Tregaskiss® nozzles
EL-NCS-20	Reaming station without anti-spatter for aluminum, no wire cutter
EL-NCS-C-20	Reaming station without anti-spatter for aluminum, with wire cutter
EL-NCS-20-SC	Reaming station with self-cleaning air blast for aluminum, no wire cutter
EL-NCS-C-20-SC	Reaming station with self-cleaning air blast for aluminum, with wire cutter

MODELS WITH INTEGRATED ETHERNET

Part No.	Description
EL-NCS-AE-20	Reaming Station with Ethernet and integrated anti-spatter spray
EL-NCS-ACE-20	Reaming Station with Ethernet, integrated anti-spatter spray and wire cutter
EL-NCS-AE-20-SC	Reaming Station with Ethernet, self-cleaning air blast, integrated anti-spatter spray
EL-NCS-ACE-20-SC	Reaming Station with Ethernet, self-cleaning air blast, int. anti-spatter spray and wire cutter

TORCH WIZARD® OPTIONAL ACCESSORIES

Part No.	Description
EL-NCS-STAND	29.5" (749 mm) Stand (custom heights available) for EL-NCS models
EL-NCS-FRL-14	Filter/Regulator/Lubricator
EL-NCS-CGK	Cobot Guarding Kit for Reamer Only
EL-NCS-CGK-C	Cobot Guarding Kit for Reamer and Wire Cutter
EL-NCS-TB-20	Testing and Diagnostic Box for 20 and 20-SC models (9-pin)
EL-NCS-TCP-F-R	Tool Center Point Mount (attaches to reaming station stand)
EL-NCS-WCS-12	Integrated Wire Cutter (included on AC models)
EL-NCS-WCS-SA-12	Stand Alone Wire Cutter
EL-NCS-CC9-20-3	9 Pin, 20 ft Power/Control Cable

TORCH WIZARD® REAMER BLADES

Part No.	Description	Diameter	Flutes	Thread	Height
EL-NCS-13MM	Reamer Blade	13 mm	2	Female	2.558"
EL-NCS-TL-13MMF	Reamer Blade	13 mm	1	Female	2.687"
EL-NCS-TS-13MMF	Reamer Blade	13 mm	1	Female	2.433"
EL-NCS-15MM	Reamer Blade	15 mm	2	Female	2.558"
EL-NCS-17MM-L	Reamer Blade (ID: .402")	17 mm	2	Female	3.564"
EL-NCS-17MM-1-L	Reamer Blade (R: .329")	17 mm	2	Female	3.564"
EL-NCS-17MM-A	Reamer Blade (R: .467")	17 mm	2	Female	2.634"
EL-NCS-500	Reamer Blade	1/2"	2	Female	2.558"
EL-NCS-TL-50F	Reamer Blade	1/2"	1	Female	2.687"
EL-NCS-TS-50F	Reamer Blade	1/2"	1	Female	2.433"
EL-NCS-625	Reamer Blade	5/8"	2	Female	2.558"
EL-NCS-TL-62F	Reamer Blade	5/8"	1	Female	2.687"
EL-NCS-TS-62F	Reamer Blade	5/8"	1	Female	2.433"
EL-NCS-750	Reamer Blade	3/4"	2	Female	2.558"

Blades compatible with PowerBall® Torch Consumables

BLUE MAGIC® ANTI-SPATTER

Part No.	Description
EAS1000-C32	32 oz Spray Bottle
EAS1000-C1	1 gal Bottle
EAS1000-C5	5 gal Container
EAS1000-C	55 gal Drum
EAS1000-CT	275 gal Bulk Tote
EAS1000-C-CON-1L	1 l (33 oz) Concentrate
EAS1000-C-CON-5	5 gal Concentrate
EAS1000-C-CON	55 gal Concentrate
EAS1000-DP	Manual Drum Pump (55 gal)
EAS1000-DW	Drum Wrench (55 gal)

BLUE CHILL® ANTI-SPATTER

Part No.	Description
EAS1000-BC32	32 oz Spray Bottle
EAS1000-BC1	1 gal Bottle
EAS1000-BC5	5 gal Container
EAS1000-BC	55 gal Drum
EAS1000-BCT	275 gal Bulk Tote

20 ft. (7.6 m) power/control cable included. The reamer bit required is based on the I.D. of the gas nozzle being used.



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