With over 25 years experience specializing in robotic MIG welding solutions, Tregaskiss has developed its TOUGH GUN™ welding products to ensure they are robust, resilient and repeatable in the TOUGHest automation applications of high volume production environments.

Tregaskiss set the bar with industry firsts such as built-to-order MIG guns, high-performance welding consumables, keyed alignment for robotic MIG gun systems, and other innovations that have become expected by customers. More recent advances such as the front-loading QUICK LOAD™ Liner AutoLength™ System and TOUGH GUN™ TT3E Reamer continue to address customer needs by providing increased uptime, ease of maintenance and maximum throughput.

Utilizing our state-of-the-art R&D facility, Tregaskiss ensures the precision and reliability of all our products. Tregaskiss has the ability to react quickly with engineering, technical support and service, and will strive to continue to be our customers’ #1 choice.

TREGASKISS.COM
For immediate access to the most up-to-date information, visit us online!
• Build your Tregaskiss Robotic MIG Welding Gun or Reamer online at Tregaskiss.com/ConfigureMyGun
• Locate your nearest Authorized Tregaskiss Distributor
• Download product literature and technical documentation in PDF format
• Watch how-to and product videos
• Get the most out of your welding applications by reading technical articles and case studies at Tregaskiss.com/Articles

Have a question?
Email us at info@tregaskiss.com

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Engineered for Reliability, Resiliency and Repeatability

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See page 19 for our expanded Consumables Reference Chart foldout!

Subject to Change – The information presented in this catalog is accurate to the best of our knowledge at the time of printing. Please visit Tregaskiss.com for the most up-to-date information.
TOUGH GUN™ TA3 Robotic Air-Cooled MIG Guns

TOUGH GUN™ TA3 Robotic Air-Cooled MIG Guns were designed with a unique and durable Low-Stress Robotic (LSR) Unicable exclusive to Tregaskiss that feeds through the arm of today’s newer style through-arm robots and provides outstanding precision and reliability.

The TOUGH GUN TA3 Robotic Air-Cooled MIG Gun combines the most valuable product options of our legacy TOUGH GUN ThruArm™ G1 and G2 Series platforms, along with new features that provide increased durability.

These high-performance MIG welding guns are available as a complete package – from the power pin to the contact tip – for clutch and solid mount systems, including Motoman®, FANUC®, ABB®, KUKA®, OTC Daihen®, COMAU®, Panasonic® and Kawasaki®.

FEATURES & BENEFITS

• Durable neck clamp provides consistent clamping force for repeatability and TCP accuracy
• Choose between seven different standard necks for expanded tool center point options and variety of working envelopes
• Direct replacement for legacy TOUGH GUN ThruArm G1 Series
• Features a precision-engineered keyway system for accurate alignment and quick replacement

THE CONSUMABLE ADVANTAGE

• Innovative TOUGH LOCK™ Consumables provide the improved performance and reliability you need to maximize production and minimize downtime (see page 19 for more information)
• Compatible with TOUGH ACCESS™ Consumables for even greater accessibility (see page 20 for more information)
• QUICK LOAD™ Liners require less than half the time and effort to replace compared to conventional liners (see page 21 for more information)

• The QUICK LOAD Liner AutoLength™ System minimizes downtime, wire feeding and quality issues commonly associated with short liner length (see page 23 for more information)

AVAILABLE OPTIONS

• Air Blast
• Wire Brake
• TOUGH GUN I.C.E.™ Technology (see page 11 for more information) is available for select models

AMPERAGE RATINGS*

• 100%: 350 amps with Mixed Gases
*Gun performance unchanged. Ratings are based on tests that comply with new 2013 IEC 60974-7 standards.

TOUGH GUN LOW-STRESS ROBOTIC (LSR) UNICALES

TOUGH GUN Low-Stress Robotic (LSR) Unicables from Tregaskiss are the core feature of TOUGH GUN TA3 Robotic Air-Cooled MIG Guns.

TOUGH GUN LSR Unicables incorporate unique features to prevent production downtime. Unlike conventional-style unicables, this product allows for stress-free rotation. It includes a rotating power connection and a protective conduit to shield the unicable components from harsh welding environments.

STRESS-RELIEVING FEATURES

• Unique design allows for stress-free rotation
• Limits the influence of torsion and extends the usable life of the unicable

WEBSITE QUICK LINK:

Tregaskiss.com/LSR
Ready to take on any challenge, TOUGH GUN™ TA3 Robotic Air-Cooled Mig Guns minimize downtime and improve welding performance on today’s through-arm robotic welding systems.

### CONTACT TIPS

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**Wire size option determines contact tip, liner type and their respective O.D.

### FEEDER BRANDS

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</table>

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*Solid-Mount models only

**Clutch Mount models only

***For use with ECR100 and ABB®. Not compatible with TOUGH ACCESS™ Consumables; XXXX represents inside O.D.

**XX = wire size

*If you are configuring a gun that will plug into a Pinnacle™ or Euro Robotic Feed Support with feeder model number, please consult Pinnacle Tech Support with feeder model number.

---

**Contact tips designed to accommodate wire sizes between 0.030” and 0.045”, X=8; For wire sizes between 0.052” and 0.065”, X=9 (See page 23 for more information about the TOUCH LOCK™ Heavy Duty Snub Nose).**

---

*Wire size option determines nozzle O.D.

### POWER PINS

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*Wire size option determines nozzle O.D.
TOUGH GUN CA3 ROBOTIC AIR-COOLED MIG GUNS

Designed for high-volume production environments, fully configurable TOUGH GUN™ CA3 Robotic Air-Cooled MIG Guns are engineered for precision, durability, accuracy, repeatability, minimal downtime and fast and easy maintenance.

The TOUGH GUN CA3 Robotic Air-Cooled MIG Gun combines the most valuable product features of our legacy TOUGH GUN G1 and G2 Series platforms, along with performance improvements in our unicable technology that extends service life.

FEATURES & BENEFITS

• Replaceable conventional unicable design offers extended service life and ease of serviceability
• Dual layer cable outer jacket, cable guide and increased copper content contribute to extended service life
• Durable neck clamp provides consistent clamping force for repeatability and TCP accuracy
• Many tool center point and working envelope options due to wide variety of standard necks and mounting arms
• Replacement for legacy TOUGH GUN G1 Series
• Clutch and Solid Mount models available

THE CONSUMABLE ADVANTAGE

• Innovative TOUGH LOCK™ Consumables provide the improved performance and reliability you need to maximize production and minimize downtime (see page 19 for more information)
• Compatible with TOUGH ACCESS™ Consumables for even greater accessibility (see page 20 for more information)
• QUICK LOAD™ Liners require less than half the time and effort to replace compared to conventional liners (see page 21 for more information)

• The QUICK LOAD Liner AutoLength™ System minimizes downtime, wire feeding and quality issues commonly associated with short liner length (see page 23 for more information)

AVAILABLE OPTIONS

• Air Blast
• Wire Brake
• TOUGH GUN I.C.E.™ Technology (see page 11 for more information)

THE CONSUMABLE ADVANTAGE

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AMPERAGE RATINGS*

• 100%: 385 amps with Mixed Gases
*Gun performance unchanged. Ratings are based on tests that comply with new 2013 IEC 60974-7 standards.

TOUGH GUN ROBOTIC PERIPHERALS

TOUGH GUN Insulating Discs help protect your investment by insulating robots and their controllers from the weld currents. Discs are available with different bolt patterns for attaching TOUGH GUN Robotic MIG Guns to various brands of robots.

LEGACY TOUGH GUN CLUTCH

Compatible with legacy TOUGH GUN G1 Series MIG Guns, the original TOUGH GUN Clutch is designed to e-stop your robot with a deflection of only 1° in the event of a robotic collision.

LEGACY TOUGH GUN SOLID ARM MOUNT

Made of high-strength aluminum, the TOUGH GUN Solid Arm Mount can replace a clutch on legacy TOUGH GUN G1 Series systems using collision detection software.

TOUGH GUN CLAMPS AND MOUNTING ARMS

TOUGH GUN™ Clamps and Mounting Arms are made of tough yet resilient aluminum. These products are engineered to provide a robust and durable connection for the TOUGH GUN CA3 Robotic Air-Cooled MIG Gun.

The TOUGH GUN Clutch Clamp triggers an emergency stop in the event of a robotic collision and its compact design allows for a larger working envelope. The TOUGH GUN Solid Mount Clamp is available for clutchless models, offering the same increased working envelope.

For precision and repeatability, the TOUGH GUN Mounting Arm features a positive-stop keyway that locates the key on the front housing body in the same position every time when components, or the entire MIG gun, is replaced.

TOUGH GUN NECK CHECKING FIXTURES

For applications where verification of tooling is a requirement, the TOUGH GUN Neck Checking Fixture provides the opportunity to verify the accuracy of the neck to the intended tool center point (TCP). Further, an adjustment handle is provided to help implement minor adjustments if required.

• Accommodates a wide variety of standard necks
• Special kits are available for customized Tregaskiss™ Necks

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• Special kits are available for customized Tregaskiss™ Necks

AMPERAGE RATINGS*

• 100%: 385 amps with Mixed Gases
*Gun performance unchanged. Ratings are based on tests that comply with new 2013 IEC 60974-7 standards.

WEBSITE QUICK LINK:
Tregaskiss.com/CA3
Tough Gun CA3 Robotic Air-Cooled Mig Gun Configurator

Fully configurable, Tough Gun™ CA3 Robotic Air-Cooled Mig Guns are engineered for precision, durability, accuracy and repeatability and can withstand even the harshest welding environments.

### Wire Size Options

- 0.035" (0.9 mm) Quick Load Liner C
- 0.040" (1.0 mm) Quick Load Liner D
- 0.045" (1.2 mm) Quick Load Liner E
- 0.050" (1.3 mm) Quick Load Liner F
- 0.055" (1.4 mm) Quick Load Liner G
- 0.065" (1.7 mm) Quick Load Liner H

### FEEDER BRANDS

- Lincoln® (North American Style) 214-1 M
- Miller® (Short Robotic) 214-1 M
- Panasonic® (Short Series) 214-30 P
- Tweco #4 214-60 1
- Tweco #5 214-121 2

### POWER PINS

- Euro 425-300 6
- Panasonic® (North American Style) 214-17 D
- Lincoln® (Short Style) 214-17 M
- Miller® (Short Robotic) 214-1 M

### Control Cables

- No Cable 0
- Bare End - 5 meter 1
- Bare End - 2 meter 2
- 18" 6-pin Quick Connect Connector (Metal/Non-Metal) 3
- 24" 3-pin Connector 4
- 24" 5-pin Mini Plug 6

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### Wire Size List

- 0.035" (0.9 mm) Alum. R
- 0.040" (1.0 mm) Alum. S
- 0.045" (1.2 mm) Alum. T
- 0.050" (1.3 mm) Alum. U
- 0.055" (1.4 mm) Alum. V

### Torque Access™

**Standard Duty (SD) Nozzles**

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<td>401-6-52</td>
<td>HD</td>
<td>5/8&quot; Bore, 1/8&quot; Stick Out - Short Taper</td>
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<td>5/8&quot; Bore, 1/8&quot; Stick Out - Short Taper</td>
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<td>401-6-32</td>
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<td>401-6-12</td>
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</table>

### Tooling Access™ Heavy Duty (HD) Nozzles

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>RECESS</th>
<th>CONTACT TIP</th>
</tr>
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<tbody>
<tr>
<td>401-7-62</td>
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<td>5/8&quot; Bore, 1/8&quot; Stick Out - Short Taper</td>
</tr>
<tr>
<td>401-9-62</td>
<td>HD</td>
<td>5/8&quot; Bore, 1/8&quot; Stick Out - Short Taper</td>
</tr>
</tbody>
</table>

### Retaining Heads & Contact Tips

- No Option A
- Wire Brake B
- Air Blast C
- Wire Brake + Air Blast E

### Options

- Solid Mount* 2
- Clutch 1
- Wire Brake 3
- Air Blast 4
- No Option 6
- Bottle Nozzle 7

### Torque Access™ Pin compatable only with Quick Load® Liner; For wire sizes between 0.052" and 3/32", X="9" (See page 23 for more information about the Quick Load® Liner family).
TOUGH GUN MA1 AND MW1 AUTOMATIC MIG GUNS

Designed for fixed tooling applications, all models of our TOUGH GUN™ MA1 Air-Cooled and MW1 Water-Cooled Automatic MIG Guns (also known as TOUGH GUN Machine Torches) feature a strong, lightweight housing and a spring-guard strain relief to prevent kinking and abrasion. TOUGH GUN MA1 Automatic Air-Cooled and TOUGH GUN MW1 Automatic Water-Cooled MIG Guns are available in a variety of amperages, and air-cooled models are compatible with TOUGH GUN I.C.E.™ Technology which boosts the duty cycle by 50 amps (see page 11 for more information).

THE CONSUMABLE ADVANTAGE

• Innovative TOUGH LOCK™ Consumables provide the improved performance and reliability you need to maximize production and minimize costly downtime (see page 19 for more information).

AMPERAGE RATINGS*

TOUGH GUN MA1 AUTOMATIC AIR-COOLED MIG GUNS

- 500 amp - 100%: 300 amps with Mixed Gases
- 600 amp - 100%: 385 amps with Mixed Gases

TOUGH GUN MW1 AUTOMATIC WATER-COOLED MIG GUNS

- 450 amp - 100%: 450 amps with Mixed Gases
- 600 amp - 100%: 600 amps with Mixed Gases

*Gun performance unchanged. Ratings are based on tests that comply with new 2013 IEC 60974-7 standards.

TOUGH GUN AUTO HEADS

The TOUGH GUN Auto Head is designed for direct connection to a wire feeder in automatic applications, and incorporates the same robust features as our popular TOUGH GUN Automatic MIG Guns. TOUGH GUN Auto Heads are available in air-cooled models and models enhanced with TOUGH GUN I.C.E. Technology.

TOUGH GUN I.C.E. TECHNOLOGY

TOUGH GUN I.C.E.™ Technology boosts the duty cycle of our already highly robust air-cooled TOUGH GUN™ MIG Guns by providing water-cooled benefits through our I.C.E. (Integrated Cooling Enhancer) component. This component circulates water at the nozzle, keeping front-end consumables running cooler and lasting longer.

TOUGH GUN I.C.E. Technology is an option for TOUGH GUN Robotic and Automatic Air-Cooled MIG Guns, resulting in a hybrid air- and water-cooled MIG gun solution.

MAINTENANCE MADE EASY

• Air-cooled unicable runs independently of water lines
• All water-cooling components are external
• Shut-off valves are located at the I.C.E. connections

COOLING

• Existing TOUGH GUN Robotic and Automatic Air-Cooled MIG Guns can be retrofitted with TOUGH GUN I.C.E. Technology
• TOUGH GUN I.C.E. Technology boosts gun rating by 50 amps
• If water-cooling capability is lost, the original air-cooled product remains operational
• Cooler running front-end parts extend the life of consumables

INCREASED SAFETY

• Water avoids contact with power leads and remains virtually uncontaminated, preventing water from becoming electrically charged
• Neck runs cooler than typical air-cooled products

COMPATIBILITY & CONVENIENCE

• Compatible with the TOUGH GUN TT3 and TT3E Reamer (see page 14 for more information)
• Compatible with TOUGH LOCK™ Consumables (see page 19 for more information)

WEBSITE QUICK LINK:

Tregaskiss.com/ICE
Designed for conventional (CWD) and through-arm (TWD) style robots, these robotic water-cooled MIG guns offer superior cooling power for longer gun and consumable life and zero gas loss for an unparalleled total cost of ownership.

Flowing through a dedicated gas line from the back of the gun directly to the gas diffuser, costly shielding gas has zero opportunity to escape.

**FEATURES AND BENEFITS**

**SUPERIOR COOLING CAPABILITY**
- Unique dual-circuit cooling system achieves lower operating temperatures *(See below)*
- Longer lasting consumables, due to direct cooling of the contact tip and nozzle, minimizes downtime for changing consumables
- Spatter does not adhere to the nozzle which results in less time required for cleaning, longer nozzle life, and lower consumable costs

**PRECISION ENGINEERED**
- Robust neck engagement for excellent durability, repeatability and accuracy
- Easily increase duty cycle by upgrading the neck and consumables
- Clutch and solid mount models available
- Variety of mounting arm and neck options to achieve desired tool center point (TCP)
- Integrated air blast

**AVAILABLE OPTIONS**
- Wire Brake

**AMPERAGE RATINGS**
- 350 amp Model – 100%: 350 amps with Mixed Gases
- 400 amp Model – 100%: 400 amps with Mixed Gases
- 500 amp Model – 100%: 500 amps with Mixed Gases
- 600 amp Model – 100%: 600 amps with Mixed gases

*Ratings based on tests that comply with new 2013 IEC 60974-7 standards*

**WEBSITE QUICK LINKS:**
- Tregaskiss.com/TWD
- Tregaskiss.com/CWD
NEW ETHERNET COMMUNICATIONS CAPABILITY
The new TOUGH GUN™ TT3E Reamer robotic nozzle cleaning station from Tregaskiss continues to offer the same high levels of durability, serviceability and repeatability, and is now further enhanced by digital Ethernet communications that can help increase productivity in your welding applications.

REDUCED INTEGRATION TIME (COMPAReD TO ANALOG MODELS)
• Eliminates the need for an analog switch
• Reduces cabling requirements in the robotic cell by up to two sets, depending on the number of additional peripherals
• Fewer components = fewer potential points of failure

REMOTE MONITORING CAPABILITY
• Error diagnostic and recording capability to minimize troubleshooting time
• Enables remote monitoring and troubleshooting of the I/O of each reamer function and their allowable parameters through the PLC

GREATER CONTROL OPTIMIZATION
• Discrete control enables flexibility to monitor and adjust all motions for increased productivity in your specific welding application

SAFE AND ACCURATE SETUP
• External setup switches allow independent operation of the sprayer, clamp and spindle during manual setup
• Cutter blade lifts into position but does not spin when activated by the spindle setup switch

• Manual override switches are momentary for increased safety during setup / troubleshooting
• Air blast and wire cutter are integrated through the Ethernet block, reducing setup time and maintenance of these options

SCALABILITY AND FLEXIBILITY
• Use the TOUGH GUN TT3E Reamer as a switch to link robots with a single Ethernet port to an Ethernet welder or other peripheral devices for increased flexibility
• The base unit (configured with no options) has 6 configurable I/O, which allow monitoring or control of additional devices in the robotic cell

WEBSITE QUICK LINK:
Tregaskiss.com/ReamerTT3E

Please see the TOUGH GUN TT3 and TT3E Reamer Spec Sheet (SP-TT3) at Tregaskiss.com/spec for a complete list of parts and ordering information.

TOUGH GUN TT3 AND TT3E REAMER SPECIFICATIONS

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated Voltage</td>
<td>24 VDC</td>
</tr>
<tr>
<td>Operating Voltage</td>
<td>±10% of rated voltage</td>
</tr>
<tr>
<td>Power Requirements</td>
<td>0.3 W</td>
</tr>
<tr>
<td>Air Requirements (minimum)</td>
<td>80 to 100 PSI (5.6 to 7.0 bar) at 16 CFM (7.5 L/s)</td>
</tr>
<tr>
<td>Air Water (at min. air requirements)</td>
<td>80 to 100 PSI (5.6 bar) = 83 lbf./lbs. (0.4 bar)</td>
</tr>
<tr>
<td>Weight</td>
<td>50 lbs. (23 kg)</td>
</tr>
<tr>
<td>Product Dimensions (L x W x H)</td>
<td>13.5&quot; x 11.25&quot; x 21.0&quot; (343 mm x 286 mm x 534 mm)</td>
</tr>
<tr>
<td>Dedicated Air Lubricator</td>
<td>Optional*</td>
</tr>
<tr>
<td>Mini Cutter</td>
<td>Optional*</td>
</tr>
<tr>
<td>Needle Deflect</td>
<td>Optional*</td>
</tr>
<tr>
<td>Filter / Regulator</td>
<td>Optional*</td>
</tr>
<tr>
<td>Spray Condition</td>
<td>Optional*</td>
</tr>
<tr>
<td>Compatible With</td>
<td>TTOUGH GUN Reamer Stand (see page 17 for more information)</td>
</tr>
</tbody>
</table>

*The optional features are available individually or added as options when ordering, and can change the weight and physical dimensions of the product.

TOUGH GUN TT3 REAMER

A SPATTER REMOVAL WORKHORSE
The TOUGH GUN TT3 Reamer is TOUGH on spatter and operates reliably in even the harshest welding environments. Automating spatter removal will help to extend the life of your robotic MIG guns and consumables, benefitting both your bottom line and your production uptime and throughput.

FEATURES AND BENEFITS
• New wiring harness provides increased reliability and takes up less space inside the reamer, making it easier to service and replace
• New easy access setup switches are durable, waterproof, and fully protected from the elements
• Check valve has been upgraded to a more robust and durable design
• New wiring harness, setup switches and check valve are common across both the TOUGH GUN TT3 and TT3E Reamer (see page 14 for more information) platforms
• Sprayer comes standard

SAFE AND ACCURATE SETUP
• External setup switches allow independent operation of the sprayer, clamp and spindle during manual setup
• Cutter blade lifts into position but does not spin when activated by the spindle setup switch

EASE OF MAINTENANCE
• All wiring connections are built into the new harness, reducing the risk of wiring errors during maintenance
• Improved wire labeling for easy identification

DEPENDABLE PERFORMANCE
DURABILITY
• ¾ Horsepower lubricated air motor with gear reducer provides the high torque required for spatter removal at the lower speed needed to protect the spindle and cutter blade from excessive wear
• No damage will occur to the air motor if stalling occurs
• Operates in any position

REPEATABILITY
• Spindle has rotating rod accuracy of 0.001” – 0.004” at its extended position for cutting repeatability and optimized spatter removal
• Fixed motor, clamp and v-block provide cutting accuracy and repeatability – No manual adjustments to nozzle clamps, cutter height, or motor height are required

INCREASED RELIABILITY
• Sprayer reservoir is located on the opposite side of the unit as an additional safeguard against overfilling / leakage onto internal electronics
• All pneumatic valves are internally mounted
• External setup switches are protected and seals protect points of entry

WEBSITE QUICK LINK
Tregaskiss.com/ReamerTT3

Please see the TOUGH GUN TT3 and TT3E Reamer Spec Sheet (SP-TT3) at Tregaskiss.com/spec for a complete list of parts and ordering information.

CONFIGURE ONLINE at Tregaskiss.com/ConfigureMyGun
TOUGH GUN REAMER ACCESSORIES

LUBRICATOR

This dedicated motor lubricator maximizes performance and protects your TOUGH GUN™ Reamer investment by extending the life of the motor, and is highly recommended for use in damp and moisture rich environments. Factory set for optimal pneumatic oil lubrication, the lubricator is available as an option when configuring your new unit* or is retrofittable to your existing TOUGH GUN TT3 Reamer.

Ordering your new TOUGH GUN Reamer with the lubricator option increases your warranty from 1 year to 2 years. Or increase your warranty to 3 years with the lubricator option plus exclusive use of Tregaskiss TOUGH GARDE™ Anti-Spatter Liquid.

FILTER / REGULATOR

The Filter/Regulator unit from Tregaskiss is another recommended accessory that helps extend the life of your TOUGH GUN Reamer. The Filter cleans the air supply to the reamer and restricts debris from reaching the motor, keeping it uncontaminated and ensuring maximum performance and longer life. The regulator works to ensure optimal air pressure is achieved at the unit.

NOZZLE DETECT

Nozzle Detect for the TOUGH GUN TT3 and TT3E Reamer uses a proximity sensor mounted on the side of the reamer that can be used independently of the ream cycle. The robot positions the front end of the MIG gun close to the sensor to detect the presence of a nozzle. If the nozzle is present, a signal is then sent back to the robot controller or PLC.

A Nozzle Detect system can help alert maintenance personnel that the nozzle is no longer present before a weld is attempted. This helps to reduce rework and scrap caused by welding without a nozzle.

SPRAY CONTAINMENT

The innovative Spray Containment unit from Tregaskiss helps prevent air contamination by catching anti-spatter overspray in its sealed basin, improving the air quality of the working environment and maintaining the cleanliness of the weld cell. The collected anti-spatter is then channeled away from the Spray Containment unit to a convenient point of disposal which can be shared among several Spray Containment units via an optional manifold.

WIRE CUTTER

The TOUGH GUN™ Wire Cutter removes the ball-end of the welding wire to provide smooth arc starts and consistent wire stick-out. The TOUGH GUN Wire Cutter easily cuts a variety of wire types from stainless steel to aluminum to flux-core in wire sizes up to 1/16”.

Our unique carbide cutter blade design provides eight indexable cutting surfaces that ensure low cost operation over the long haul and are precision-ground to outlast other wire cutters.

The TOUGH GUN Wire Cutter is the perfect complement to your TOUGH GUN TT3 and TT3E Reamer and mounts directly atop the unit. It can also be easily mounted in a remote location which allows it to be used with virtually any robotic welding equipment.

REPLACEMENT CUTTER BLADES

Designed for use with TOUGH GUN TT3 and TT3E Reamer Robotic Nozzle Cleaning Stations, Tregaskiss Cutter Blades are engineered from harder, stronger material for enhanced performance and durability.

FEATURES & BENEFITS
- Twin flute design for improved cutting and cleaning performance
- Harder material with stronger cutting edge
- Increased resistance against breaking, snapping, chipping or cracking
- Improved dimensional accuracy
- Extremely competitive pricing
- Designed to be the perfect fit for TOUGH LOCK™ Consumables

WEBSITE QUICK LINK:
Tregaskiss.com/CutterBlades

V-BLOCKS

Compatible with Tregaskiss™ and most competitive consumables, these 4-sided V-Blocks ensure your cutter is concentric with your consumables and your nozzle bore to guarantee the most effective ream. Choose from five available V-Block options when configuring your new TOUGH GUN TT3 and TT3E Reamer.

TOUGH GUN REAMER STAND

CUSTOM HEIGHT. QUICK INSTALLATION. EASY ON THE BUDGET.

Tregaskiss provides a simple fixed height durable stand for all TOUGH GUN TT3 and TT3E Reamer models. Each TOUGH GUN Reamer Stand can be ordered to a custom height between 18- and 45-inches.

FEATURES & BENEFITS
- Competitively priced due to simplified design
- Facilitates quick and accurate reamer change-outs via compatibility with the reamer quick-change base plate
- Precision manufactured, reamer mounting hole pattern specific to TOUGH GUN TT3 and TT3E Reamers
- Standardized 8.5” x 6.5” hole pattern for mounting the stand to the floor allows stands to be easily swapped between stations
TOUGH GARD™ Anti-Spatter Liquid was developed to address the performance requirements of metal fabricators. TOUGH GARD Anti-Spatter Liquid won’t harm machinery; it cleans up easily with no residue and it’s safe for the environment. Helping prevent spatter adhesion of metal fabricators. TOUGH GARD Anti-Spatter Liquid won’t harm machinery, it cleans up anti-spatter reservoirs on a frequent basis, TOUGH GUN TT3 or TT3E Reamer stations. The TOUGH GARD Multi-Feed System for heavy duty consumable series.

TOUGH GARD ANTI-SPATTER LIQUID

- TG-103-200 200' Multi-Feed Hose (UV Rated)
- TG-103-100 100' Multi-Feed Hose (UV Rated)
- TG-103-55-10 For 55-Gallon drum (up to 10 nozzle cleaning stations)
- TG-103-05-10 For 5-Gallon pail (up to 10 nozzle cleaning stations)
- TG-103-50 50' Multi-Feed Hose (UV Rated)
- TG-103-05-2 For 5-Gallon pail (up to 2 nozzle cleaning stations)

TOUGH GARD Multi-Feed System

- Reusable multi-feed cap
- A fluid level indicator clearly displays when pail or drum requires refilling
- Packaging options: 5-gallon and 55-gallon manifolds available for single or drum systems. Siphons anti-spatter liquid away from harsh welding environment.
- Superior performance: Tregaskiss® lab tests show TOUGH GARD Anti-Spatter Liquid outperforms other brands on the market (see Figure 1).

TOUGH GARD MULTI-FEED SYSTEM

- AUTOMATION TOUGH LOCK CONSUMABLE SERIES REFERENCE CHART

TOUGH GARD ACCESSORIES

- STANDARD DUTY CONSUMABLE SERIES
- HEAVY DUTY CONSUMABLE SERIES
- TOUGH GARD SLIP ON CONTACT TIPS

WEBSITE QUICK LINK:
- Tregaskiss.com/TOUGHGARD

PACKAGING OPTIONS

- 5-Gallon Pail (up to 2 nozzle cleaning stations)
- 55-Gallon Drum (up to 10 nozzle cleaning stations)

MANIFOLD SYSTEM

- Quick Connects

AUTOMATION TOUGH LOCK CONSUMABLE SERIES REFERENCE CHART

This chart includes technical and compatibility information for all metal powder models, nozzle heads and contact tips for Automation. If the consumables you require are not in this chart, you can learn about additional welding consumable options by contacting Tregaskiss Technical Services by email at techservices@tregaskiss.com or by phone at 1-855-MIGWELD (644-9353).
TOUGH LOCK CONSUMABLES

WEBSITE QUICK LINK:
Tregaskiss.com/Conversion

FEATURES & BENEFITS
• Use one consumable line on all your MIG guns regardless of brand
• Reduce your inventory
• Enjoy all the features and benefits of the TOUGH LOCK™ Consumable Series
• Available for Bernard®, Binzel®, Lincoln®, and Tweco® style MIG guns

TOUGH ACCESS CONSUMABLES

Quick Load Liners

SAVE MONEY BY REPLACING YOUR LINERS IN HALF THE TIME!

TOUGH ACCESS Consumables from Tregaskiss are our sleekest line of consumables. They allow entry into tightest hard-to-reach places that would otherwise be inaccessible due to complex fixture or weldment design. Available in straight bore (5/8") and bottleneck (1/2") style nozzles, these unique consumables are compatible with our TOUGH LOCK™ Contact Tips and exist with aluminum armored nozzles.

COMPATIBILITY & CONVENIENCE
• Compatible with existing TOUGH GUN™ Contact Tips and TOUGH LOCK Contact Tip
• Compatible with the TOUGH GUN TT3 and TT3E Reamer when using the appropriate cutter blade
• Meets profile needs with 0.500" (12.70 mm) outside diameter, available in straight bore and bottleneck styles

WEBSITE QUICK LINK:
Tregaskiss.com/ToughAccess

SURESTART CONTACT TIPS

REDUCE ARC START FAILURES BY UP TO 50%*

SURESTART® Contact Tips are designed to reduce arc start failures that can lead to costly downtime and expensive rewelds in robotic welding applications. According to field data and lab tests, SURESTART® Contact Tips reduce arc start failures by up to 35% and help prevent early, unscheduled burn-backs, and are especially beneficial for applications with a high volume of building and short welds using solid wire in Constant Voltage (CV) welding modes.

ENSURED PERFORMANCE
• Reduce start failures by up to 50%*
• Prevent early, unscheduled burn-backs
• Ideal for applications with a high volume of building and short welds using solid wire in CV mode
• Compatible with TOUGH LOCK™ Retaining Heads (see page 18 for more information)

WEBSITE QUICK LINK:
Tregaskiss.com/SureStart

CONVENTIONAL LINERS

Tregaskiss™ Conventional Liners for MIG welding guns are made of high carbon music wire for smooths wire feed and long life and are available in lengths of up to 25 feet (7.6 m) for various wire sizes. Liners thread in from the rear of the pan and no need for set screws.

Quick Load Liners

SAFETY INSTALLATION
• Prevent early, unexpected burn backs
• Reduce arc start failures by up to 50%*
**QUICK LOAD LINERS**

**CONVERTING FROM CONVENTIONAL LINERS COULDN'T BE EASIER!**

QUICK LOAD Liners include wire sizes from 0.023" to 3/32". Find a complete list of QUICK LOAD Liners below, along with their equivalent Tregaskiss Conventional Liner for easy conversion.

<table>
<thead>
<tr>
<th>WIRE SIZE</th>
<th>QUICK LOAD LINER</th>
<th>REPLACES CONVENTIONAL LINER</th>
<th>LENGTH (FT)</th>
<th>DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>0.023&quot;</td>
<td>415-23-10Q</td>
<td>415-23-10</td>
<td>10</td>
<td>High Carbon Steel – Round Wound</td>
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<td>415-30-15Q</td>
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<td>High Carbon Steel – Round Wound</td>
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<td>415-50-10</td>
<td>10</td>
<td>High Carbon Steel – Round Wound</td>
</tr>
<tr>
<td>0.050&quot;</td>
<td>415-50-15Q</td>
<td>415-50-15</td>
<td>15</td>
<td>High Carbon Steel – Round Wound</td>
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<tr>
<td>0.050&quot;</td>
<td>415-50-20Q</td>
<td>415-50-20</td>
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<td>High Carbon Steel – Round Wound</td>
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<tr>
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<td>High Carbon Steel – Flat Wound</td>
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<td>415-78-30Q</td>
<td>415-78-30</td>
<td>30</td>
<td>High Carbon Steel – Flat Wound</td>
</tr>
</tbody>
</table>

**QUICK LOAD LINER AUTOLENGTH SYSTEM**

**INNOVATIVE TECHNOLOGY!**

The QUICK LOAD™ Liner AutoLength™ System is designed to minimize downtime, wire feeding and quality issues commonly associated with short liner length. This revolutionary technology is designed specifically for use with QUICK LOAD Liners.

Short liners are a common root cause of poor wire feeding. A short liner does not have a chance of properly seating in the retaining head – often resulting in “bird-nesting” of the welding wire, or premature contact tip failure and wear.

**HOW IT WORKS**

- Housed inside the power pin, this spring-loaded module applies constant forward pressure on the liner, keeping it seated properly in the retaining head
- Allows for up to one-inch forgiveness if the liner is too short
- Accommodates liner movement during welding

**INCREASED PRODUCTIVITY**

- Reduces issues caused by incorrect liner length
- Decreases burn-backs caused by misalignment between the liner and the contact tip
- Improves wire feedability by enhancing wire alignment with the contact tip

**DESIGNED SPECIFICALLY FOR USE WITH QUICK LOAD LINERS**

- Requires less than half the time and effort to replace compared to conventional liners (see page 21 for more information)
- Liner portion feeds from the front – No need to cut and waste wire!

**AUTOLENGTH PIN PART NUMBERS FOR ROBOTIC APPLICATIONS**

- Requires less than half the time and effort to replace compared to conventional liners (see page 21 for more information)
- Liner portion feeds from the front – No need to cut and waste wire!

**WEBSITE QUICK LINK:**

Tregaskiss.com/AutoLength

Please see the QUICK LOAD Liners and AutoLength Pins Spec Sheet (SP-QLL) at Tregaskiss.com/spec for a complete list of part numbers.

<table>
<thead>
<tr>
<th>WIRE SIZE</th>
<th>FEEDER BRAND</th>
<th>AUTOLENGTH PIN</th>
<th>INTERCHANGEABLE WITH STANDARD POWER PIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.030&quot; - 0.045&quot;</td>
<td>Tweco® #4</td>
<td>214-80</td>
<td>214</td>
</tr>
<tr>
<td></td>
<td>Lincoln® (Short)</td>
<td>214-40</td>
<td>214-80</td>
</tr>
<tr>
<td></td>
<td>Miller® (Short Robotic)</td>
<td>214-81</td>
<td>214-1</td>
</tr>
<tr>
<td></td>
<td>Euro</td>
<td>425-403</td>
<td>214-20</td>
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<td></td>
<td>Panasonic® (Short)</td>
<td>214-630</td>
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<td></td>
<td>Fronius® (North America Style)</td>
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<td></td>
<td>Fronius®</td>
<td>214-491</td>
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<td></td>
<td>OTC Daihen® (Direct Plug)</td>
<td>214-639</td>
<td>214-39</td>
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<tr>
<td>0.050&quot; - 0.062&quot;</td>
<td>Tweco® #4</td>
<td>214-50</td>
<td>214</td>
</tr>
<tr>
<td></td>
<td>Lincoln® (Short)</td>
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Please see the QUICK LOAD Liners and AutoLength Pins Spec Sheet (SP-QLL) at Tregaskiss.com/spec for a complete list of part numbers.
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