MIG Welding Guns & Consumables
WHY TREGASKISS AND BERNARD?

The Tregaskiss® and Bernard® brands are backed by a shared team that is focused on helping you achieve success in your MIG welding operations.

YOU ASK. WE LISTEN.
Your needs and challenges are something we listen closely to as we improve existing products and launch innovative yet practical new products. Recent examples include our new AccuLock™ S and AccuLock R Consumables (see pages 4-8 for more information).

YOU NEED RELIABILITY. WE UNDERSTAND.
You need reliable MIG guns, consumables and welding products that are readily available and offer consistent performance. Simplicity, ease of maintenance and durability are always part of our design specifications.

YOU WANT QUALITY. WE DELIVER.
You prefer to use best-in-class welding products and components in your welding applications. Our premium quality welding consumables are precision-engineered for superior performance and longer life. To further support you, our MIG guns are designed to be universally compatible with most brands of welding machines and robots on the market.

YOUR NEEDS ARE UNIQUE. WE CUSTOMIZE.
You understand the efficiency benefits of using best-fit products that optimize your welding applications. Our configured and custom MIG product solutions help you achieve your goals.

YOU EXPECT ONGOING SUPPORT. WE VALUE OUR PARTNERSHIP.
You need supplier partners who stand firmly behind their products. We support you long after the sale by offering you competitive warranties as well as technical support via phone and email, 24/7 online resources, and an extensive authorized partner network (see page 45 for more information).

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MIG GUN CONSUMABLES OVERVIEW

Genuine Bernard® and Tregaskiss® consumables enhance the performance of your MIG welding gun. They are manufactured to the same durable, high-performance standards as every MIG welding product we build, and they deliver the improved performance you’ve come to know and expect from us.

CONSUMABLES COMPARISON CHART

<table>
<thead>
<tr>
<th>Bernard BTB Semi-Automatic</th>
<th>AccuLock™ S</th>
<th>AccuLock R</th>
<th>Centerfire®</th>
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Looking for a consumable series that is compatible with your existing Bernard semi-automatic or Tregaskiss robotic or fixed automatic MIG welding gun? Consult the reference chart below:

CONSUMABLES AND MIG GUN SERIES COMPATIBILITY CHART

<table>
<thead>
<tr>
<th>Bernard BTB Semi-Automatic</th>
<th>AccuLock™ S*</th>
<th>AccuLock R*</th>
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*For use with AccuLock S Liners

*For use with QUICK LOAD® Liners

GUIDE: ✔ Compatible
      ☑ Compatible but may require special parts (check spec sheet for details)
Bernard® AccuLock™ S Consumables are designed to address liner trim length errors and erratic wire feeding. Both are common contributors to troubleshooting, rework, and production downtime.

The AccuLock S Consumables system requires the use of all of the following MIG welding consumables:

- AccuLock Contact Tips
- AccuLock S Liners
- AccuLock S Nozzles
- AccuLock S Power Pins and Caps

LOAD AND LOCK TO REDUCE TROUBLESHOOTING, DOWNTIME AND REWORK

As you support more inexperienced welders, choosing equipment with fewer points of failure and simplified maintenance can reduce training and shorten your troubleshooting list.

Error-Proof Replacement – With AccuLock S Consumables, the liner replacement process has been error-proofed. No more measuring means no more liniers trimmed incorrectly!

1. Remove the nozzle, gas diffuser and power pin cap.
2. LOAD the liner through the neck until the brass liner lock bottoms on the neck.
3. LOCK and center the liner by reinstalling the diffuser and then the power pin cap.
4. TRIM the liner flush with the power pin.

Optimized Wire Feeding – AccuLock S Liners are locked and concentrically aligned to both the contact tip and the power pin without the use of fasteners to guarantee smooth, uninterrupted delivery of the wire to the weld puddle. This means you’ll benefit from reduced troubleshooting and downtime caused by burnbacks, birdnests, and erratic arc, plus 2-3x extended contact tip life.

LOAD AND LOCK LINERS ACCURATELY AND EASILY

Error-Proof Replacement

1. Remove the nozzle, gas diffuser and power pin cap.
2. LOAD the liner through the neck until the brass liner lock bottoms on the neck.
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Optimized Wire Feeding

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2. LOAD the liner through the neck until the brass liner lock bottoms on the neck.
3. LOCK and center the liner by reinstalling the diffuser and then the power pin cap.
4. TRIM the liner flush with the power pin.

KEY FEATURES

- Diffuser locks and aligns liner with contact tip for flawless wire feeding path
- Coarse thread speeds tip replacement
- Tapers lock consumables for excellent electrical conductivity

Nozzle is held in place by a steel retaining ring on the gas diffuser for reliable tip-to-work distance

COMMON CONSUMABLE PLATFORM™

Bernard AccuLock S Series and Tregaskiss® AccuLock R Series Consumables share a common contact tip. If you have a combination of semi-automatic and robotic MIG guns in your facility, you’ll benefit from the simplified inventory of a Common Consumable Platform.

PART NUMBERS

**SMALL NOZZLES**

- NS-A5000C: 5/8" Bore, Flush, Copper
- NS-A5100C: 5/8" Bore, 1/8" Recess, Copper
- NS-A5200C: 5/8" Bore, 1/4" Recess, Copper
- NS-A5300C: 5/8" Bore, 1/8" Recess, Copper

**LARGE NOZZLES**

- N-A3400C: 1/4" Bore, Flush, Copper
- N-A4100C: 1/4" Bore, 1/8" Recess, Copper
- N-A4114C: 1/4" Bore, 1/4" Recess, Copper
- N-A4116C: 1/4" Bore, 1/8" Recess, Copper
- N-A5800C: 1/8" Bore, Flush, Copper
- N-A5810C: 1/8" Bore, 1/8" Recess, Copper
- N-A5814C: 1/8" Bore, 1/4" Recess, Copper
- N-A5818C: 1/8" Bore, 1/8" Recess, Copper
- N-A5800C: 1/8" Bore, Flush, Copper

**T CONTACT TIPS**

- TT-A093CH: 1/16" (1.6 mm)
- TT-A092CH: 3/32" (2.4 mm)
- TT-A091CH: 5/64" (2.0 mm)
- TT-A109CH: 7/64" (2.8 mm)
- TT-A125CH: 1/8" (3.2 mm)
- TT-A125CH: 1/8" (3.2 mm)
- TT-A109CH: 1/8" (3.2 mm)
- TT-A125CH: 1/8" (3.2 mm)

**'T' CONTACT TIPS**

- T-A039CH: 0.023" (0.6 mm)
- T-A035CH: 0.023" (0.6 mm)
- T-A030CH: 0.023" (0.6 mm)
- T-A023CH: 0.023" (0.6 mm)
- T-A052CH: 0.052" (1.3 mm)
- T-A045CH: 0.052" (1.3 mm)
- T-A039CH: 0.052" (1.3 mm)
- T-A023CH: 0.052" (1.3 mm)

**DIFFUSERS**

- Small: Large (D-A1) Slip-On
- Large: Large (D-A2) Slip-On

**LINERS**

- Small: Large (D-A2) Slip-On
- Large: Large (D-A2) Slip-On

**POWER PIN & POWER PIN CAPS**

- Wire Size: Liner Color
- 1/16" (1.6 mm): Blue
- 3/32" (2.4 mm): Red
- 5/64" (2.0 mm): Yellow
- 7/64" (2.8 mm): Green

**WEBSITE QUICKLINK:**

BernardWelds.com/AccuLockS

**CONTACT TIPS**

- T-A039CH: 0.023" (0.6 mm)
- T-A035CH: 0.025" (0.6 mm)
- T-A030CH: 0.025" (0.6 mm)
- T-A023CH: 0.025" (0.6 mm)
- T-A052CH: 0.052" (1.3 mm)
- T-A045CH: 0.052" (1.3 mm)
- T-A039CH: 0.052" (1.3 mm)
- T-A023CH: 0.052" (1.3 mm)

**DOWNTIME AND REROW**

- Bernard & AccuLock Consumables share a common contact tip. If you have a combination of semi-automatic and robotic MIG guns in your facility, you’ll benefit from the simplified inventory of a Common Consumable Platform.
### ACCULOCK R CONSUMABLES

In robotic MIG welding applications, MIG gun consumables require frequent replacement, contributing to both planned and unplanned production downtime. If you are looking for new ways to increase throughput and efficiency with minimal risk and effort, it’s time to take a fresh look at your MIG gun consumables.

**The ACCULOCK R Consumables system requires the use of all of the following MIG welding consumables and components:**
- ACCULOCK Contact Tips
- ACCULOCK R Gas Diffusers
- QUICK LOAD™ Liners
- Tregaskiss Nozzles

#### ACCULOCK R CONTACT TIPS

- **5/8” Bore, 1/4” Recess, Copper, Slip On, Tapered, 1.062”, HD**
- 0.030”-5/64”, compatible with Tregaskiss and Bernard MIG Guns
- 0.078”-3/32”, compatible with Tregaskiss and Bernard MIG Guns

- **5/8” Bore, 1/8” Stick-Out, Copper, Slip On, Tapered, 0.938”, SD**
- 0.030”-5/64”, compatible with most Tweco MIG Guns
- 0.045”-1/16”, High Carbon Steel, Round Wound, 25’

#### ACCULOCK R GAS DIFFUSERS

- **5/8” Bore, 1/8” Recess, Copper, Slip On, Tapered, 0.938”, SD**

#### ACCULOCK R QUICK LOAD™ LINERS

- ACCULOCK R Quick Load™ Liners function automatically with MIG guns in robotic and semi-automatic MIG applications in your facility, benefiting you from the simplified inventory of a Common Consumable Platform.

### KEY FEATURES

- Coarse thread speeds tip replacement and prevents cross-threading
- More mass at front of tip to withstand heat
- Tapered connections for excellent electrical conductivity
- Liner seat in diffuser ensures good wire feeding
- Long tail ensures tip concentricity

### PART NUMBERS

#### MOZZLES

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<td>5/8” Bore, 1/8” Stick-Out, Copper, Thread-On, Tapered, 0.938”, SD</td>
</tr>
<tr>
<td>401-4-32</td>
<td>5/8” Bore, 1/8” Stick-Out, Copper, Thread-On, Tapered, 0.938”, SD</td>
</tr>
<tr>
<td>401-5-32</td>
<td>5/8” Bore, 1/8” Stick-Out, Copper, Thread-On, Tapered, 0.938”, SD</td>
</tr>
</tbody>
</table>

#### DIFFUSERS

<table>
<thead>
<tr>
<th>Part No</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-ATSH</td>
<td>Slip-On, Thread-On</td>
</tr>
<tr>
<td>D-ATTH</td>
<td>Slip-On, Thread-On</td>
</tr>
</tbody>
</table>

#### CONTACT TIPS

<table>
<thead>
<tr>
<th>Part No</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>401-0302</td>
<td>5/8” Bore, 1/8” Stick-Out, Brass, Slip-On, Tapered, 0.938”, SD</td>
</tr>
</tbody>
</table>

#### QUICK LOAD™ LINERS & RETAINERS

<table>
<thead>
<tr>
<th>Part No</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>415-116-25Q</td>
<td>0.045”-1/16”, High Carbon Steel, Round Wound, 6’</td>
</tr>
<tr>
<td>415-116-15Q</td>
<td>0.045”-1/16”, High Carbon Steel, Round Wound, 15’</td>
</tr>
<tr>
<td>415-116-062Q</td>
<td>0.045”-1/16”, High Carbon Steel, Round Wound, 6’</td>
</tr>
<tr>
<td>415-116-10Q</td>
<td>0.045”-1/16”, High Carbon Steel, Round Wound, 10’</td>
</tr>
<tr>
<td>415-116-15Q</td>
<td>0.045”-1/16”, High Carbon Steel, Round Wound, 15’</td>
</tr>
<tr>
<td>415-116-25Q</td>
<td>0.045”-1/16”, High Carbon Steel, Round Wound, 25’</td>
</tr>
<tr>
<td>415-116-30Q</td>
<td>0.045”-1/16”, High Carbon Steel, Round Wound, 30’</td>
</tr>
<tr>
<td>415-116-35Q</td>
<td>0.045”-1/16”, High Carbon Steel, Round Wound, 35’</td>
</tr>
<tr>
<td>415-116-40Q</td>
<td>0.045”-1/16”, High Carbon Steel, Round Wound, 40’</td>
</tr>
<tr>
<td>415-116-50Q</td>
<td>0.045”-1/16”, High Carbon Steel, Round Wound, 50’</td>
</tr>
<tr>
<td>415-30-6Q</td>
<td>0.045”-1/16”, High Carbon Steel, Round Wound, 6’</td>
</tr>
<tr>
<td>415-30-10Q</td>
<td>0.045”-1/16”, High Carbon Steel, Round Wound, 10’</td>
</tr>
<tr>
<td>415-30-15Q</td>
<td>0.045”-1/16”, High Carbon Steel, Round Wound, 15’</td>
</tr>
<tr>
<td>415-30-25Q</td>
<td>0.045”-1/16”, High Carbon Steel, Round Wound, 25’</td>
</tr>
</tbody>
</table>

#### QUICK LOAD PRO L INERS

<table>
<thead>
<tr>
<th>Part No</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>415-35-6Q</td>
<td>0.045”-1/16”, Galvanized, D-Wound, 6’ (requires 415-26)</td>
</tr>
<tr>
<td>415-35-10Q</td>
<td>0.045”-1/16”, Galvanized, D-Wound, 10’ (requires 415-26)</td>
</tr>
</tbody>
</table>

#### QUICK LOAD LINER RETAINERS (SOLD SEPARATELY)

<table>
<thead>
<tr>
<th>Part No</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>401-30-15Q</td>
<td>0.78”-3/32”, High Carbon Steel, Round Wound, 15’</td>
</tr>
<tr>
<td>401-30-25Q</td>
<td>0.78”-3/32”, High Carbon Steel, Round Wound, 25’</td>
</tr>
</tbody>
</table>

### LOAD AND LOCK TO REDUCE UNPLANNED DOWNTIME

#### LOAD AND LOCK TO REDUCE UNPLANNED DOWNTIME

Challenged by a shortage of experienced welding operators? The longer lifespan of ACCULOCK™ Contact Tips means fewer human interactions within your welding cells and fewer accidental errors as a result. With contact tip cross-threading issues also virtually eliminated from your list of failure modes, you’ll spend less time troubleshooting and more time on proactive weld quality and productivity initiatives.

### LOAD AND LOCK TO REDUCE PLANNED DOWNTIME

Achieve your annual cost reduction and throughput goals by decreasing planned downtime for consumable replacement.

Acculock R Consumables offer an enhanced contact-tip-to-diffuser design which increases tip life over comparable consumables, reducing your replacement frequency. Upgrading from copper tips to Acculock R Contact Tips can increase life by an additional 6-10x depending on your application.

### MINIMIZE ERRORS

- **Coarse thread on contact tip virtually eliminates risk of cross-threading during replacement**
- **Long contact tip tail concentrically aligns the tip within the diffuser prior to thread engagement, ensuring quick, accurate replacement without cross-threading**

### MAXIMIZE PERFORMANCE

- **Contact tips last longer due to increased mass and being buried within the diffuser, away from the heat of the weld**
- **Acculock R HDPT Contact Tips can extend life by 6-10x in pulsed welding applications (see page 8 for more information)**
- **Tapered mating surfaces ensure optimal electrical conductivity for longer life and keep consumables locked in place**
- **No change to TCP – easily upgrade from TOUGH LOCK™ Consumables without the need to reprogram**
- **Copper, chrome zirconium and HDPT contact tips available**
- **For use with front-loading QUICK LOAD™ Liners**

For robotic and semi-automatic MIG guns in your facility, you’ll benefit from the simplified inventory of a Common Consumable Platform.
**ACCULOCK HDP CONTACT TIPS**

REGAIN AS MUCH AS 95% OF LOST PRODUCTIVITY FOR CONTACT TIP CHANGES

With new AccuLock™ HDP Contact Tips, you can now enjoy all the benefits of pulse welding plus dramatically extended contact tip life for increased production throughput. Engineered with a special alloy that has superior resistance to arc erosion and wear, these tips last 6-10x longer than copper and chrome-zirconium tips. Additional benefits include increased arc stability for improved weld quality and reduced spatter.

**RESISTANCE TO WEAR**

<table>
<thead>
<tr>
<th>Tip Type</th>
<th>0 minutes arc on time</th>
<th>120 minutes arc on time</th>
</tr>
</thead>
<tbody>
<tr>
<td>C122 Copper Tip</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chrome Zirconium Tip</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HDP Tip</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Test parameters: 120 minutes arc on time (20 min x 6 cycles), High Speed Pulse waveform, ER70S-6 .045" Co-axial electrode from bulk package, ER70S-6 (Canada), .045" pin on feed speed, 40-45 ipm travel speed, 90/10 mixed gas, 240-260 average amps, Tregaskiss TOUGH GUN® CA3 Gun with 22 degree neck.

This system features our well-known TOUGH LOCK® Contact Tips and Retaining Heads. TOUGH LOCK Contact Tips are precision-machined using a process that tightly controls tip tolerances. TOUGH LOCK Retaining Heads are manufactured with a tapered design at both ends that keep the consumables locked from tip to neck for improved weld consistency and to maximize heat dissipation. TOUGH LOCK Consumables with Dual Taper Technology keep consumables running cooler for longer tip life and improved performance.

Please refer to the TOUGH LOCK Consumables spec sheet (SP-TLC) at Tregaskiss.com/spec for a complete list of part numbers.

New AccuLock R Consumables are the next evolution of TOUGH LOCK Consumables and offer additional benefits (see page 6 for more information).

**CENTERFIRE CONSUMABLES**

Centerfire™ Consumables are easy to use and provide better arc starts, less spatter and more consistent welds. Centerfire Consumables are ideal for heavy-duty and light commercial applications.

**CENTERFIRE HD CONSUMABLES**

Looking for consumables for heavy-duty applications such as shipbuilding, fabrication and other heavy equipment manufacturing operations? Consider Bernard Centerfire HD Series Consumables. Centerfire HD Nozzles feature a removable nozzle cone, thicker wall and a high-temperature insulator. The removable nozzle cone lowers downtime and consumables costs by allowing operators to replace only the cone (the most frequently damaged part of the nozzle) without removing and replacing the entire nozzle body for spatter removal.

Please refer to the Centerfire Consumables spec sheet (SP-CFC) at BernardWelds.com/spec for a complete list of part numbers.

**QUIK TIP CONSUMABLES**

Bernard Quik Tip™ Contact Tips are designed with a threaded taper lock that increases tip life by providing excellent heat transfer and electrical conductivity.

- In case of burnback, a quick twist will get you back on the job within moments
- Quik Tip Gas Diffusers have positive nozzle stops to secure Quik Tip Contact Tips in a fixed position for dependable repeatability and consistent, quality welds
- Quik Tip Nozzles are available in two styles – threaded or slip-on – with a variety of orifice diameters for optimal shielding gas coverage

**QUIK TIP HD CONSUMABLES**

Designed for heavy-duty applications such as shipbuilding, trailer fabrication and other heavy equipment manufacturing operations, Bernard Quik Tip HD Series Consumables feature a two-piece nozzle comprised of a nozzle cone and nozzle body. The removable nozzle cone lowers downtime and consumables costs by allowing replacement of the cone (the most frequently damaged part of the nozzle) without removing and replacing the entire nozzle.

Please refer to the Quik Tip Consumables spec sheet (SP-QTC) at BernardWelds.com/spec for a complete list of part numbers.
Not currently using a Bernard or Tregaskiss MIG Gun? You can still experience immediate benefits from Centerfire™ (semi-automatic) or TOUGH LOCK® (semi-automatic or robotic) Consumables with competitive conversion parts. Enhance performance and standardize consumables for all your gun brands to minimize inventory management costs.

**COMPETITIVE CONVERSION SERIES CONSUMABLES**

**QUICK LOAD LINERS**

Quick Load® Liners load from the front of the MIG gun and require less than half the time and effort to replace when compared with conventional liners.

- Remove front-end consumables and slide liner over the wire, using it as a guide
- Ease of installation simplifies routine maintenance
- No need to cut and waste wire!

**MAINTENANCE MADE EASY**

- Avoid having to remove MIG gun from wire feeder
- Change liner from a safe zone within the robotic work cell during routine pauses in production
- No need to climb up to change liners in semi-automatic MIG guns connected to boom mounted feeders

**COMPATIBILITY**

- Available for semi-automatic and automation applications
- The Quick Load Liner is an important component of the AccuLock R Consumables system
- Compatible with AutoLength™ Technology (see page 12 for more information)

*Not recommended for guns equipped with wire brake; Not compatible with robotic water-cooled or ARC Fixed Automatic Water-Cooled MIG Guns

Please refer to the Quick Load® Liner and AutoLength® Pins spec sheet (SP-QLL) at Tregaskiss.com/spec or BernardWelds.com/spec for a complete list of part numbers.

**CONVENTIONAL LINERS**

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

Please refer to the Tregaskiss® Conventional Liner spec sheet (SPEC TRG-CVL) at Tregaskiss.com/spec or BernardWelds.com/spec for a complete list of part numbers.

---

**CENTERFIRE CONVERSION CHART**

<table>
<thead>
<tr>
<th>GUN MANUFACTURER</th>
<th>GUN MODEL</th>
<th>DESIGNED NOZZLE</th>
<th>ADAPTOR</th>
<th>INSULATOR</th>
<th>GAS DIFFUSER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bernard®</td>
<td>ALPHA 3, ALPHA 3 Automatic</td>
<td>Small</td>
<td>Not Required</td>
<td>4323R</td>
<td>D-183</td>
</tr>
<tr>
<td>Lincoln®</td>
<td>MAGNUM® 250, MAGNUM® 400</td>
<td>Small</td>
<td>Not Required</td>
<td>4323R</td>
<td>D-184</td>
</tr>
<tr>
<td>Miller®</td>
<td>X3 Edge</td>
<td>Large</td>
<td>Not Required</td>
<td>4323R</td>
<td>D-1</td>
</tr>
<tr>
<td>Tweco®</td>
<td>No. 3, No. 4, Small-Diameter, Sprayer® XT (HD Consumables)</td>
<td>Large</td>
<td>Not Required</td>
<td>4323R</td>
<td>D-1</td>
</tr>
</tbody>
</table>

**TOUGH LOCK CONVERSION CHART**

<table>
<thead>
<tr>
<th>GUN MANUFACTURER</th>
<th>GUN MODEL</th>
<th>GUN NOCK</th>
<th>TOUGH LOCK HD RETAINING HEAD</th>
<th>NOCK INSULATOR</th>
<th>ADAPTOR</th>
<th>QUICK LOAD® LINER RETAINER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bernard®</td>
<td>ALPHA 4</td>
<td>N/A</td>
<td>404-44</td>
<td>402-11</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Lincoln®</td>
<td>MAGNUM® 300</td>
<td>K10403, K10433</td>
<td>404-27</td>
<td>4423R</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Miller®</td>
<td>No. 3</td>
<td>63-2-60</td>
<td>404-28</td>
<td>4423R</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**NOTICE:**

- All product names shown above are trademarks of their respective owners.
- Please refer to BernardWelds.com/Conversion for a complete list of part numbers.
QUICK LOAD PRO LINERS

Part of the front-loading QUICK LOAD Liner family, the QUICK LOAD Pro Liner features a special profile and a galvanized coating that improves wire feedability and protects the integrity of the wire material in humid or damp welding environments.

• Ideal for solid and cored wire
• Larger coil profile strengthens the rigidity of the liner which improves wire support
• Fewer touch points during wire passage improves wire feeding and minimizes gun chatter
• Available for 0.035”–1/16” wire sizes in lengths up to 6 feet
• Compatible with AutoLength™ Technology (see below for more information)

QUICK LOAD LINER AUTOLENGTH SYSTEM

The QUICK LOAD® Liner AutoLength™ System is designed to minimize wire feeding and quality issues commonly associated with short liner length. This innovative 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 birdnesting 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 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 11 for more information)
• Liner portion feeds from the front—no need to cut and waste wire!
• Compatible with Tregaskiss® Robotic and Automatic Air- and Water-Cooled MIG Guns*; and Bernard® BTB Semi-Automatic and Clean Air™ Fume Extraction MIG Guns, when equipped with a QUICK LOAD Liner

BERNARD CONVENTIONAL LINERS

Bernard Conventional Liners are compatible with all legacy Q-Gun™, S-Gun™ and T-Gun™ Semi-Automatic Air-Cooled MIG Guns and all BTB Semi-Automatic MIG Guns, which allows you to simplify and reduce your inventory. Color-coded by wire size for ease of identification, these liners are made of high carbon music wire for smooth wire feeding and long life and are available in lengths up to 25’ (7.6 m) for various wire sizes. Please see chart below for part numbers and wire sizes.

<table>
<thead>
<tr>
<th>Wire Size</th>
<th>Liner Color</th>
<th>15’ (4.57 m)</th>
<th>12’ (3.66 m)</th>
<th>10’ (3.05 m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.023”–0.030”</td>
<td>Yellow</td>
<td>L1A-15</td>
<td>L1A-25</td>
<td>L1A-25</td>
</tr>
<tr>
<td>0.030”–0.035”</td>
<td>Green</td>
<td>L2A-15</td>
<td>L2A-25</td>
<td>L2A-25</td>
</tr>
<tr>
<td>0.035”–0.045”</td>
<td>White</td>
<td>L3A-15</td>
<td>L3A-25</td>
<td>L3A-25</td>
</tr>
<tr>
<td>0.045”–1/16”</td>
<td>Blue</td>
<td>L4A-15</td>
<td>L4A-25</td>
<td>L4A-25</td>
</tr>
<tr>
<td>5/64”</td>
<td>Grey</td>
<td>L5A-15</td>
<td>L5A-25</td>
<td>L5A-25</td>
</tr>
</tbody>
</table>

* Standard liner for 0.035” & 0.045” Guns
** Standard liner for 1/16” Guns
Please see the Bernard Conventional Liner Spec Sheet (SP-L) at BernardWelds.com/spec for a complete list of part numbers.

BERNARD JUMP LINER

VERY COST-EFFECTIVE AND GETS YOU BACK ON THE JOB WITHIN MINUTES!

Bernard Jump liners replace only the most commonly worn and clogged liner area to reduce the amount of time a gun is offline and to minimize inventory. These jump liners enable quick and easy neck change-out so guns can be easily adapted to fit multiple applications. The Bernard Jump Liners connect with conventional liners at the base of the neck and run through the most commonly worn area up to the contact tip. For use with Bernard Conventional Liners, jump liners are available in sizes to fit 0.023” to 1/16” wire.

Trim damaged liner where it enters neck, slip jump liner over existing liner and tighten neck into place.

See this product in action at
YouTube.com/TregaskissWelds or
YouTube.com/TheBernardDifference

Please see the Jump Liner Spec Sheet (SP-JL) at BernardWelds.com/spec for a complete list of part numbers.
BERNARD BTB AIR-COOLED MIG GUNS

OPTIMIZE FOR PRODUCTIVITY. STANDARDIZE FOR SIMPLICITY.

According to the American Welding Society (AWS), there will be a shortage of 400,000 welders by 2024. In the face of this challenge, it’s critical to keep your skilled welders healthy while also increasing their productivity. The configurable BTB MIG Gun line helps you do exactly that. Choose from a variety of necks, handles and trigger styles to optimize welder ergonomics and weld access. Then standardize with a single line of consumables to simplify maintenance and contain costs.

You can count on Bernard BTB MIG Guns to deliver industrial-grade performance and reliability in the most demanding and abusive environments.

DOUBLY LIFE MIG GUN SYSTEM*

The Double-Life MIG Gun System features identical handles and internal connections on the front and back. Once the front end of the cable becomes worn, simply “flip-flop” the switch and neck from the front of the gun with the power pin on the back and get twice the life out of your MIG gun!

*Available for BTB MIG Guns with T and C Series Straight Handles. Not available with Bernard®, OXO™ or Euro power pins.

MULTIPLE HANDLE AND TRIGGER OPTIONS

• Choose between seven different curved and straight handle styles
• C Series Straight Handle features comfortable overmolding and ergonomic rear swivel at no extra cost!
• Wide selection of handles and easy-to-change trigger options allow guns to be matched to user preference and welding application
• Triggers are designed and built to last more than one million cycles

See page 18 for more information

FIXED OR ROTATABLE NECKS

• Wide variety of angle and length options
• Aluminum armored necks withstand abuse and offer outstanding heat dissipation
• No tools required to adjust rotatable necks

See page 19 for more information

ACCESSORIES

• Neck coupler
• Neck guard and grip
• Heat shield
• Gun hanger
• Flex necks

UNICABLE DESIGN

• Cone and cone nut threaded cable connections for optimal electrical conductivity
• Internal gas hose resists kinking for consistent gas flow
• Choose Industrial Grade or Steel Monocoil cable (upgrade for extra pinch/kink resistance)

See page 19 for more information

HIGH PERFORMANCE CONSUMABLES

• Available with NEW! AccuLock™ S, Centerfire™, Quik Tip™ or TOUGH LOCK® Consumables

See pages 4-9 for more information

WARRANTY

• One year manufacturer’s warranty
• Lifetime warranty on rear straight strain relief and on all T Series and C Series Straight Handles and trigger switches

See page 20 for more information

LINER OPTIONS

AccuLock™ S Liners are locked and concentrically aligned to both the contact tip and the power pin without the use of fasteners to guarantee a flawless wire-feed path

Compatible with all BTB and Clean Air Fume Extraction MIG Guns, Bernard Conventional Liners allow you to simplify and reduce inventory

Save time by loading your liner from the front of your gun with the innovative QUICK LOAD® Liner

The QUICK LOAD Liner AutoLength™ System is designed to minimize downtime, wire feeding and quality issues commonly associated with short liner length

See page 12 for more information

See page 11 for more information

See page 14 for more information
**CHOOSE YOUR WEAPON – BTB MIG GUN CONFIGURATOR**

Welders and welding applications differ—a MIG gun optimized for weld access and ergonomics can help increase productivity. This chart shows the many options available to help you optimize your MIG gun:

**Handle and Trigger**

- **Standard Trigger**
- **Locking Trigger**
- **Dual Pull Trigger**

**Cable Type and Ampereage**

- **HYTREL® POLYMER CABLE**
- **Steel MonocoiL Cable**

**Neck**

- **Rotatable, Short**
- **Fixed, Short**
- **Rotatable, Medium**
- **Fixed, Medium**
- **Rotatable, Long**
- **Fixed, Long**

**Wire Size**

- A: 0.023" (0.6 mm)
- B: 0.030" (0.8 mm)
- C: 0.035" (0.9 mm)
- D: 0.045" (1.2 mm)
- E: 0.052" (1.4 mm)
- F: 0.059" (1.5 mm)
- G: 0.063" (1.6 mm)

**Liner**

- **TOUGH LOCK® HD**
- **Quick Tip**
- **Centerfire**
- **AccuLock™**

**Diffusers and Nozzles**

- **ACCULOCK S**
- **CENTERFIRE**
- **QUICK TIP**
- **TOUGH LOCK**

**Contact Tip**

- **AccuLock™**
- **Centerfire**
- **Quik Tip**
- **TOUGH LOCK**

**Power Pin**

- **E**
- **L**
- **M**
- **S**
- **T**
- **U**
- **X**

**ALUMINUM WIRE**

- **Q**
- **R**
- **S**

**STEEL WIRE**

- **A**
- **B**
- **C**
- **D**
- **E**
- **F**
- **G**
- **H**
- **I**
- **J**
- **K**
- **L**
- **M**
- **N**
- **O**
- **P**

**The diffusers and nozzles in the chart below come factory installed based on gun amperage:**

- **Not available for wire sizes between 0.030" and 3/32"**
- **Not available for aluminum wire**
- **Not compatible with Bernard Power Pin or OXO Power Pin option.**

**USA QUICKLINKS:**

- [BernardWelds.com](https://BernardWelds.com)
- [ConfigureMyGun](https://ConfigureMyGun)

**WEBSITE QUICKLINKS:**

- [BernardWelds.com/BTB](https://BernardWelds.com/BTB)
- [BernardWelds.com/ConfigureMyGun](https://BernardWelds.com/ConfigureMyGun)
BERNARD BTB MIG GUNS

GUN AMPERAGE RATINGS*

<table>
<thead>
<tr>
<th>GUN MODEL</th>
<th>60% DUTY CYCLE — MIXED GASES</th>
<th>100% DUTY CYCLE — CO₂</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q20</td>
<td>200 amp</td>
<td></td>
</tr>
<tr>
<td>Q30, S30</td>
<td>300 amp</td>
<td></td>
</tr>
<tr>
<td>Q40, S40</td>
<td>400 amp</td>
<td></td>
</tr>
<tr>
<td>Q50, S50</td>
<td>500 amp</td>
<td></td>
</tr>
<tr>
<td>Q60, S60</td>
<td>600 amp</td>
<td></td>
</tr>
</tbody>
</table>

*Ratings are based on tests that comply with IEC 60974-7 standards.

NOTE: Q indicates Hytrel® Polymer Cable; S indicates Steel Monocoil Cable.

BTB MIG GUN HANDLE AND TRIGGER OPTIONS

Handle shape and size as well as trigger style can have a significant impact on welder ergonomics and overall comfort. Choose from one of the following seven handles and their respective trigger options:

<table>
<thead>
<tr>
<th>GUN AMPERAGE RATING</th>
<th>HANDLE OPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 amp</td>
<td>B Series Small Curved Handle</td>
</tr>
<tr>
<td>300 amp</td>
<td>O Series Small Curved Handle</td>
</tr>
<tr>
<td>400 amp</td>
<td>T Series Small Straight Handle</td>
</tr>
<tr>
<td>500 amp</td>
<td>C Series Straight Handle</td>
</tr>
<tr>
<td>600 amp</td>
<td>B Series Curved Handle</td>
</tr>
<tr>
<td>700 amp</td>
<td>O Series Curved Handle</td>
</tr>
<tr>
<td>800 amp</td>
<td>T Series Straight Handle</td>
</tr>
<tr>
<td>900 amp</td>
<td>C Series Straight Handle</td>
</tr>
</tbody>
</table>

**HANDLE OPTIONS**

<table>
<thead>
<tr>
<th>FEATURES</th>
<th>B SERIES SMALL CURVED HANDLE</th>
<th>B SERIES CURVED HANDLE</th>
<th>O SERIES SMALL CURVED HANDLE</th>
<th>O SERIES CURVED HANDLE</th>
<th>T SERIES SMALL STRAIGHT HANDLE</th>
<th>T SERIES STRAIGHT HANDLE</th>
<th>C SERIES STRAIGHT HANDLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amperage</td>
<td>200, 300</td>
<td>400</td>
<td>200, 300, 400</td>
<td>400, 500, 600</td>
<td>200, 300, 400, 500, 600</td>
<td>200, 300, 400, 500, 600</td>
<td>200, 300, 400, 500, 600</td>
</tr>
<tr>
<td>Style</td>
<td>Curved</td>
<td>Curved</td>
<td>Curved</td>
<td>Curved</td>
<td>Straight</td>
<td>Straight</td>
<td>Straight</td>
</tr>
<tr>
<td>Neck</td>
<td>Fixed or Rotatable</td>
<td>Fixed or Rotatable</td>
<td>Fixed or Rotatable</td>
<td>Fixed</td>
<td>Fixed or Rotatable</td>
<td>Fixed or Rotatable</td>
<td>Fixed or Rotatable</td>
</tr>
<tr>
<td>Cable</td>
<td>Hytrel® Polymer (Industrial Grade)</td>
<td>Hytrel Polymer (Industrial Grade) or Steel Monocoil for 300, 400 amp only</td>
<td>Hytrel Polymer (Industrial Grade) or Steel Monocoil for 300, 400 amp only</td>
<td>Hytrel Polymer (Industrial Grade) or Steel Monocoil for 300, 400 amp only</td>
<td>Hytrel Polymer (Industrial Grade) or Steel Monocoil for 300, 400 amp only</td>
<td>Hytrel Polymer (Industrial Grade) or Steel Monocoil for 300, 400 amp only</td>
<td>Hytrel Polymer (Industrial Grade) or Steel Monocoil for 300, 400 amp only</td>
</tr>
<tr>
<td>Double-Life MIG Gun System</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

**BTB MIG GUN NECK OPTIONS**

Optimize weld access by choosing your neck style, angle and length:

<table>
<thead>
<tr>
<th>Neck Type</th>
<th>Angle/Length</th>
<th>Part #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed</td>
<td>O 45, Short</td>
<td>205-45</td>
</tr>
<tr>
<td></td>
<td>P 60, Short</td>
<td>205-60</td>
</tr>
<tr>
<td></td>
<td>R 45, Medium</td>
<td>315-45</td>
</tr>
<tr>
<td></td>
<td>S 60, Medium</td>
<td>315-60</td>
</tr>
<tr>
<td></td>
<td>U 45, Long</td>
<td>405-40NB</td>
</tr>
<tr>
<td></td>
<td>V 60, Long</td>
<td>405-60NB</td>
</tr>
</tbody>
</table>

**Neck Type**

<table>
<thead>
<tr>
<th>Neck Type</th>
<th>Angle/Length</th>
<th>Part #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rotatable</td>
<td>B 45, Short</td>
<td>QT2-45</td>
</tr>
<tr>
<td></td>
<td>C 60, Short</td>
<td>QT2-60</td>
</tr>
<tr>
<td></td>
<td>E 45, Medium</td>
<td>QT3-45</td>
</tr>
<tr>
<td></td>
<td>F 60, Medium</td>
<td>QT3-60</td>
</tr>
<tr>
<td></td>
<td>H 45, Long</td>
<td>QT5-45</td>
</tr>
<tr>
<td></td>
<td>I 60, Long</td>
<td>QT5-60</td>
</tr>
</tbody>
</table>

Didn’t find the neck you need? See page 27 for additional Specialty Neck options.
Bernard Dura-Flux Series

A Flux-Cored Gun Built for the Way You Weld

Self-shielded flux-cored welding can be rough on both you and your welding equipment. That’s why Bernard designed the Dura-Flux™ Self-Shielded FCAW Gun to be extremely durable, yet comfortable to hold and use.

Dura-Flux Guns meet the demanding needs and harsh environments of construction, shipbuilding, heavy manufacturing and rental applications. Triggers are non-metallic to absorb less heat. The triggers are also made with a sealed micro switch that helps keep out dust and dirt to provide a long-lasting work life.

Bernard offers two lines of Dura-Flux Series Self-Shielded Flux-Cored FCAW Guns. One gun features a replaceable power cable liner, while the other one features a fixed liner.

Can’t decide which gun line best suits your needs? See the comparison chart below:

<table>
<thead>
<tr>
<th>Features</th>
<th>Dura-Flux Gun with Replaceable Power Cable Liner</th>
<th>Dura-Flux Gun with Fixed Power Cable Liner</th>
</tr>
</thead>
<tbody>
<tr>
<td>350 amp</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Internal Trigger Leads</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Replaceable Liner</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Fixed Liner</td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>Optional Dual Schedule Switch</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Hi-Viz™ Neck</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Quik Tip™ Contact Tips</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Centerfire™ Contact Tips</td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>Wire Size 0.045” - 3/32”</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Wire Size 1/16” - 3/32”</td>
<td></td>
<td>✔</td>
</tr>
</tbody>
</table>

Dura-Flux™ Self-Shielded Flux-Cored Guns with Replaceable Power Cable Liner

- Internal trigger leads, which means no trigger cord to get caught on surrounding objects
- Replaceable power cable liner that allows quick and easy power cable maintenance
- Optional dual schedule switch allows wire speed adjustment while welding and is integrated into the handle to keep it protected from weld spatter

Consumables: Quik Tip Contact Tips can be easily installed or changed with a simple twist after a burnback

Dura-Flux Self-Shielded Flux-Cored Guns with Fixed Power Cable Liner

- Ultra heavy-duty steel monocoil power cables that are highly resistant to kinking for exceptional wire feed in abusive environments
- Centerfire™ Contact Tips are easy to use, high performing and provide better arc starts, less spatter and more consistent welds — and last up to three times longer than most competitive brands
- Sleeved and aluminum-armored necks are available in multiple lengths for optimal accessibility and improved operator comfort
- Trigger is sealed from outside contaminants, is simple to replace and absorbs less heat than a metal trigger for long life, greater arc-on time and lower heat output

Consumables: Easy-to-use Centerfire Contact Tips provide better arc starts, less spatter and more consistent welds

Please see the Dura-Flux Spec Sheet (SP-DF) at BernardWelds.com/spec for a complete list of part numbers.
**BERNARD CLEAN AIR™ FUME EXTRACTION MIG GUNS**

**GET RIGHT TO THE SOURCE!**

For a cleaner, more compliant work environment, get right to the source and extract fumes at the weld with the Clean Air Fume Extraction MIG Gun. Closely matching the weight, handle size, durability and industrial-grade performance of Bernard BTB Semi-Automatic Air-Cooled MIG Guns, Clean Air Fume Extraction Guns are fully configurable with your choice of curved handle (formerly Bernard FILTAFIR™ Fume Extraction Series) or straight handle.

- Ideal for large weldment and confined space welding applications
- For use with most solid and flux-cored wires
- Compatible with weld fume exhaust systems and welding machines from most major manufacturers
- Available with Bernard Conventional Liners, front-loading QUICK LOAD® Liners or the QUICK LOAD Liner AutoLength™ System

**CONSUMABLES**

- Choose between Centerfire™, Quik Tip™ or TOUGH LOCK®

**Features**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Clean Air Curved Handle Series</th>
<th>Clean Air Straight Handle Series</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amperage</td>
<td>300, 400</td>
<td>300, 400, 500, 600</td>
</tr>
<tr>
<td>Neck Angle</td>
<td>30°, 45°, 60°</td>
<td>45°, 60°</td>
</tr>
<tr>
<td>Trigger</td>
<td>Standard</td>
<td>Standard</td>
</tr>
<tr>
<td>Adjustable Vacuum Chamber</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>Centerfire™ Contact Tips</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>Quik Tip™ Contact Tips</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>TOUGH LOCK® Contact Tips</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>Bernard Conventional Liners</td>
<td></td>
<td>✅</td>
</tr>
<tr>
<td>QUICK LOAD® Liners</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>QUICK LOAD Liner AutoLength™ System</td>
<td></td>
<td>✅</td>
</tr>
<tr>
<td>Handle Overmolding</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>360 Degree Hose Swivel</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

**NOZZLE SHROUD**

- Adjusts to one of four positions
- Smaller vacuum chamber improves joint access and visibility

**SUCTION CONTROL VALVE**

- Allows balance of suction with shielding gas flow to protect against porosity

**HANDLE OVERMOLDING**

- Rubber overmold on handle provides comfort and control (straight handle only)

**VACUUM HOSE**

- Crush and snag resistant vacuum hose features a threaded connection for easy replacement

**VACUUM HOSE SWIVEL**

- 360° hose swivel for greater flexibility and balance (straight handle only)

**IS WELD JOINT VISIBILITY AND ACCESS AN ISSUE?**

Consider the new short nozzle shroud for use on your Clean Air Fume Extraction MIG Gun.

This optional smaller vacuum chamber offers improved visibility and better access when working in confined spaces, and is compatible with TOUGH LOCK Heavy Duty (HD) Consumables, large Centerfire Consumables and large Quik Tip Consumables.

- **Short Nozzle Shroud**
  - 1.43" tall

- **Standard Nozzle Shroud**
  - 3.5" tall

**NOTE:** The short nozzle shroud is not a configurable option, and must be purchased separately.
CLEAN AIR FUME EXTRACTION MIG GUN CONFIGURATOR

For a cleaner, more compliant work environment, get right to the source and extract fumes at the weld with the fully configurable Clean Air Fume Extraction MIG Gun.

1. AMPERAGE
   - CL30: 300 amp
   - CL40: 400 amp
   - CL50: 500 amp
   - CL60: 600 amp

2. CABLE LENGTH
   - 08: 8 ft (2.44 m)
   - 10: 10 ft (3.05 m)
   - 12: 12 ft (3.66 m)
   - 15: 15 ft (4.57 m)
   - 20: 20 ft (6.16 m)
   - 25: 25 ft (7.63 m)

3. HANDLE AND TRIGGER
   - N: Straight Handle, Standard Trigger
   - T: Curved Handle, Standard Trigger

4. NECK
   - I: Medium, 30 degree, 2" radius**
   - J: Medium, 45 degree, 2" radius
   - K: Medium, 60 degree, 2" radius

5. CONTACT TIP
   - CENTERFIRE
     - L: 5/16" O.D. (7.94 mm)
   - QUIK TIP
     - L: 5/16" O.D. (7.94 mm)
   - TOUGH LOCK™ HD™
     - L: 5/16" O.D. (7.94 mm)

6. WIRE SIZE
   - A: 0.035" (0.8 mm)
   - B: 0.030" (0.8 mm)
   - C: 0.035" (0.8 mm)
   - D: 0.039" (1.0 mm)
   - E: 0.045" (1.2 mm)
   - F: 0.052" (1.4 mm)
   - G: 1/16" (1.6 mm)
   - H: 3/32" (2.4 mm)
   - I: 7/64" (2.8 mm)
   - J: 1/8" (3.2 mm)
   - K: 5/64" (2.0 mm)
   - L: 3/32" (2.4 mm)
   - M: 7/64" (2.8 mm)
   - N: 1/8" (3.2 mm)

7. POWER PIN
   - B: Bernard®
   - E: Euro
   - L: Lincoln®
   - M: Miller®
   - S: Tweco® #4 (Lincoln Lead)
   - T: Tweco #4 (Standard Lead)
   - U: Tweco #4 (Two-Prong Twist Lead)
   - W: Tweco #5 (Standard Lead)

8. LINER STYLE
   - C: Bernard Conventional Liner
   - Q: QUICK LOAD® Liner™
   - L: QUICK LOAD Liner AutoLength™ System™

9. ALUMINUM WIRE
   - Q: 0.035" (0.9 mm)
   - R: 0.040" (1.2 mm)
   - S: 0.052" (1.4 mm)
   - T: 0.056" (1.4 mm)
   - U: 0.062" (1.6 mm)
   - V: 0.067" (1.7 mm)
   - W: 0.072" (1.8 mm)
   - X: 0.079" (2.0 mm)
   - Y: 0.085" (2.2 mm)
   - Z: 0.091" (2.3 mm)

Some limitations exist. Please consult our online configurator or your Customer Service Representative to ensure that the part number configured using these pages is accurate prior to placing an order.

The diffusers and nozzles in the chart below come factory installed based on gun amperage:

- CENTERFIRE
  - Diffuser
    - D: 0.035" (0.8 mm)
    - E: 0.030" (0.8 mm)
    - F: 0.035" (0.8 mm)
    - G: 0.039" (1.0 mm)
  - Nozzle
    - D: 0.045" (1.2 mm)
    - E: 0.052" (1.4 mm)
    - F: 1/16" (1.6 mm)

- QUIK TIP
  - Diffuser
    - D: 0.035" (0.8 mm)
    - E: 0.030" (0.8 mm)
    - F: 0.035" (0.8 mm)
    - G: 0.039" (1.0 mm)
  - Nozzle
    - D: 0.045" (1.2 mm)
    - E: 0.052" (1.4 mm)
    - F: 1/16" (1.6 mm)

- TOUGH LOCK™ HD™
  - Diffuser
    - D: 0.035" (0.8 mm)
    - E: 0.030" (0.8 mm)
    - F: 0.035" (0.8 mm)
    - G: 0.039" (1.0 mm)
  - Nozzle
    - D: 0.045" (1.2 mm)
    - E: 0.052" (1.4 mm)
    - F: 1/16" (1.6 mm)
BERNARD W-GUN™ SEMI-AUTOMATIC WATER-COOLED MIG GUNS
Bernard W-Gun Water-Cooled MIG Guns contain a flexible cable assembly with reinforced synthetic rubber hoses to prevent water leakage, provide increased water flow and reduce gas leakage. Heavy-duty necks are available in multiple lengths and bend configurations to allow for optimal weld accessibility and improved operator comfort. Multiple handle and trigger options are available as well to increase operator comfort.

- Water block with interchangeable direct plugs and trigger leads
- Durable and easily replaced power pin housing with a coolant hose strain relief
- Coolant channel keeps consumables temperatures low under high-amperage, high-heat applications
- Compatible with Centerfire or Quik Tip consumables
- Available in 600 amp models

BERNARD T-GUN™ SEMI-AUTOMATIC WATER-COOLED MIG GUNS
The Bernard T-Gun Water-Cooled MIG Guns are engineered for superior performance in production environments requiring extremely high-heat applications. All guns are built to order.

- Neck is insulated and armored with stainless steel to withstand abuse
- All neck joints are silver brazed and 100% leak tested
- Custom gun length options
- Compatible with TOUGH LOCK consumables
- Available in 400 amp (compact series handle), 450 and 600 amp models

SPECIALTY NECKS
If you are unable to reach your weld joints comfortably using one of our wide selection of standard necks, consider adding one of the following specialty necks or neck accessories to your Bernard Semi-Automatic MIG Gun:

<table>
<thead>
<tr>
<th>FLEX NECKS (B/T MIG GUNS)</th>
<th>Q-NECK COUPLER</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Change, rotate or bend neck to desired angle without tools</td>
<td></td>
</tr>
<tr>
<td>• Connection improves conductivity for better weld quality</td>
<td></td>
</tr>
<tr>
<td>• Available in 6” and 8” lengths</td>
<td></td>
</tr>
<tr>
<td>• Designed to connect any two Q-Necks</td>
<td></td>
</tr>
<tr>
<td>• Provides flexibility and cost savings while minimizing the need for special-order necks</td>
<td></td>
</tr>
<tr>
<td>• Compatible with any rotatable neck</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NECK GRIP FOR CURVED HANDLE MIG GUNS</th>
<th>NECK GRIP FOR STRAIGHT HANDLE MIG GUNS WITH FIXED NECKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• High-temperature rubber sleeve</td>
<td></td>
</tr>
<tr>
<td>• Designed to reduce heat exposure and help operator hold neck in a steady position</td>
<td></td>
</tr>
<tr>
<td>• Improves overall weld quality and reduces operator fatigue</td>
<td></td>
</tr>
<tr>
<td>• Heavy-duty metal spring reduces heat exposure and helps operator hold neck in a steady position</td>
<td></td>
</tr>
<tr>
<td>• Improves overall weld quality and reduces operator fatigue</td>
<td></td>
</tr>
</tbody>
</table>

BERNARD SHORTSTUB STICK ELECTRODE HOLDER
One of the first products Bernard ever introduced was the Shortstub™ Stick Electrode Holder and it’s still satisfying customers today:

- Electrode can be used within one inch of the high heat, high impact head, compared to the standard three inches of electrode leftover with typical tong-style holders
- Designed to greatly improve productivity with quick and easy electrode installation and replaceable head
- Over 2,000 lbs of gripping pressure allows the electrode to be bent to a desired shape for access to difficult welds
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 robot arm and provides outstanding precision and reliability.

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 Yaskawa®, 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 a variety of 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
• NEW! AccuLock™ R Consumables offer an enhanced contact tip-to-diffuser design which increases tip life, plus the coarse thread on the contact tip virtually eliminates cross-threading issues (see page 6 for more information)
• QUICK LOAD® Liners require less than half the time and effort to replace compared to conventional liners (see page 12 for more information)
• The QUICK LOAD Liner AutoLength™ System minimizes downtime, wire feeding and quality issues commonly associated with short liner length (see page 13 for more information)

AVAILABLE OPTIONS
• Air Blast
• Wire Brake
• TOUGH GUN I.C.E.® Technology (see page 38 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) UNICABLES
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
Tough Gun TA3 Robotic Air-Cooled MIG Gun Configurator

Ready to take any challenge, TougH Gun® TA3 Robotic Air-Cooled MIG Guns minimize downtime and improve welding performance on through-arm robotic welding systems.

### Robot Makes and Models

<table>
<thead>
<tr>
<th>Robot Make</th>
<th>Model</th>
<th>Digit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yaskawa®</td>
<td>EA14000 or SSA2000**</td>
<td>M01</td>
</tr>
<tr>
<td></td>
<td>EA1400-30E**</td>
<td>M02</td>
</tr>
<tr>
<td></td>
<td>EA1350-32E**</td>
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<tr>
<td></td>
<td>MA120**</td>
<td>M04</td>
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<td>MA1465 **</td>
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<td>MA1520 **</td>
<td>M07</td>
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<td>MM2 **</td>
<td>M08</td>
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<td>FANUC®</td>
<td>EA1900N or MA1900**</td>
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<td></td>
<td>EA1400N or SSA2000**</td>
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<td>IRB2600ID 15/1.85*</td>
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<td>EA1900 (XRC)**</td>
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<td>EA1400 (XRC)**</td>
<td>M16</td>
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<tr>
<td></td>
<td>100iD-10L^^</td>
<td>F14</td>
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<td>120iD-12L^^</td>
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<tr>
<td></td>
<td>IRB1660ID*</td>
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<td>IRB1600ID*</td>
<td>A24</td>
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<td>120iC-10L*</td>
<td>F08</td>
</tr>
<tr>
<td></td>
<td>120iC-8L*</td>
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<td>100iC-6L*</td>
<td>F05</td>
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<td>100iC/8L*</td>
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<tr>
<td></td>
<td>MA3100**</td>
<td>M31</td>
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<td>100iC-10L**</td>
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<td>MA2010</td>
<td>M38</td>
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<td>100iD^^</td>
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<td></td>
<td>120iD^^</td>
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<td></td>
<td>120iC*</td>
<td>F06</td>
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<td></td>
<td>100iC*</td>
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<td></td>
<td>MH24</td>
<td>M40</td>
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### Make Model Digit

<table>
<thead>
<tr>
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<th>Model</th>
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</tr>
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<tbody>
<tr>
<td>ABB®</td>
<td>IRB2600ID 15/1.85*</td>
<td>A28</td>
</tr>
<tr>
<td></td>
<td>IRB2600ID 8/2.00*</td>
<td>A29</td>
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<tr>
<td></td>
<td>IRB1660ID*</td>
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### Nozzles

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>401-45-50***</td>
<td>Bottleneck</td>
<td>1/2&quot; Bore, 1/4&quot; Stick Out Brass 0.938&quot;</td>
</tr>
<tr>
<td>401-48-50***</td>
<td>Bottleneck</td>
<td>1/2&quot; Bore, 1/8&quot; Stick Out Brass 0.938&quot;</td>
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<tr>
<td>401-41-62***</td>
<td>HD</td>
<td>5/8&quot; Bore, 1/8&quot; Stick Out - Short Taper (Thread-On) Brass 1.062&quot;</td>
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<tr>
<td>401-30-62T</td>
<td>SD</td>
<td>5/8&quot; Bore, 1/8&quot; Stick Out - Bottleneck (Thread-On) Brass 0.938&quot;</td>
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<tr>
<td>401-87-62</td>
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<td>401-18-62</td>
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### Gun Mounts and Options

<table>
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<th>Description</th>
<th>Angle</th>
<th>Digit</th>
</tr>
</thead>
<tbody>
<tr>
<td>590-45-XXXX••</td>
<td>Air-Cooled, Medium Length</td>
<td>45</td>
<td>C</td>
</tr>
<tr>
<td>405-22QC</td>
<td>Air-Cooled, Short Length</td>
<td>22</td>
<td>B</td>
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<tr>
<td>405-45QC</td>
<td>Air-Cooled, Medium Length</td>
<td>45</td>
<td>E</td>
</tr>
<tr>
<td>590-45-S000••</td>
<td>TOUGH GUN I.C.E. Short Length</td>
<td>45</td>
<td>B</td>
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### Power Pins

<table>
<thead>
<tr>
<th>Feeder Brand</th>
<th>Part Number</th>
<th>Digit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fronius®</td>
<td>214-X1</td>
<td>M</td>
</tr>
<tr>
<td>Lincoln®</td>
<td>214-X1††</td>
<td>N</td>
</tr>
<tr>
<td>Miller® (Auto-Continuum®)</td>
<td>214-X1††</td>
<td>N</td>
</tr>
<tr>
<td>OTC Daihen®</td>
<td>214-X39</td>
<td>D</td>
</tr>
<tr>
<td>Panasonic®</td>
<td>214-X30</td>
<td>A</td>
</tr>
</tbody>
</table>

### Wire Size and Liner Type

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Angle</th>
<th>Digit</th>
</tr>
</thead>
<tbody>
<tr>
<td>KG-20-XX</td>
<td>0.035 (0.8 mm)</td>
<td>35</td>
<td>F</td>
</tr>
<tr>
<td>KG-21-XX</td>
<td>0.045 (1.1 mm)</td>
<td>45</td>
<td>C</td>
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<tr>
<td>KG-27-XX</td>
<td>0.052 (1.3 mm)</td>
<td>52</td>
<td>A</td>
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</tbody>
</table>

### Quick Load Pro Liner

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
<th>Angle</th>
<th>Digit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autolength™ Pins***</td>
<td>T-ACHXH</td>
<td>52</td>
<td>A</td>
</tr>
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</table>

### Contact Tips

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
<th>Angle</th>
<th>Digit</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOUGH LOCK® Heavy Duty (HD)</td>
<td>KG-20-XX</td>
<td>35</td>
<td>F</td>
</tr>
<tr>
<td>TOUGH LOCK Standard Duty (SD)</td>
<td>KG-21-XX</td>
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<td>C</td>
</tr>
<tr>
<td>TOUGH LOCK Extended Life Heavy Duty (ERHS)</td>
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### Neck Configuration

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Angle</th>
<th>Digit</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOUGH LOCK® Heavy Duty (HD)</td>
<td>KG-20-XX</td>
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<td>F</td>
</tr>
<tr>
<td>TOUGH LOCK Standard Duty (SD)</td>
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<td>C</td>
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</table>

### Wire Size Options

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
<th>Wire Size</th>
<th>Digit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quick Load Liner comes standard on all configurations UNLESS equipped with wire brake, in which case conventional liner is required</td>
<td>T-ADW8H</td>
<td>72</td>
<td>E</td>
</tr>
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</table>

### Wire Size and Liner Type

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
<th>Wire Size</th>
<th>Digit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quick Load Pro Liner comes standard on all configurations UNLESS equipped with wire brake, in which case conventional liner is required</td>
<td>KG-27-XX</td>
<td>52</td>
<td>A</td>
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</tbody>
</table>

### Feeder Brand

<table>
<thead>
<tr>
<th>Feeder Brand</th>
<th>Part Number</th>
<th>Digit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fronius®</td>
<td>214-X1</td>
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<td>N</td>
</tr>
<tr>
<td>OTC Daihen®</td>
<td>214-X39</td>
<td>D</td>
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<tr>
<td>Panasonic®</td>
<td>214-X30</td>
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<tr>
<td>Tweco® (#4)</td>
<td>214-92</td>
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<td>Tweco® (#5)</td>
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### Quick Load Pro Liner

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
<th>Angle</th>
<th>Digit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autolength™ Pins***</td>
<td>T-ACHXH</td>
<td>52</td>
<td>A</td>
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</tbody>
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### Wire Size Options

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
<th>Wire Size</th>
<th>Digit</th>
</tr>
</thead>
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<td>Quick Load Liner comes standard on all configurations UNLESS equipped with wire brake, in which case conventional liner is required</td>
<td>T-ADW8H</td>
<td>72</td>
<td>E</td>
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### Wire Size Options

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
<th>Wire Size</th>
<th>Digit</th>
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</thead>
<tbody>
<tr>
<td>Zero wire feedability</td>
<td>T-A0XXZH</td>
<td>6</td>
<td>C</td>
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### Summary

- **Tough Lock® Chrome Zirconium+++** (TA1) is not compatible with Contact Tip options 5, 6, or 7.

- **AccuLock® Chrome Zirconium+++** (TA1) is not compatible with wire brake, in which case conventional liner is required.

- **Wire Size Options**
  - For wire sizes between 0.035" and 0.052", you are configuring a pin that all plug into an MIG® feeder, please contact Tregaskiss Tech Support with feeder model number.
  - **Power Pin** is compatible with wire brake selections for wire sizes between 0.035" and 0.052", "X" is for wire sizes between 0.052" and 0.320", "W" is for wire sizes between 0.052" and 3/32", and "‡‡‡" contact Tregaskiss Tech Support with feeder model number.
  - **Quick Load Pro Liner** is compatible with wire brake selections.
  - **AutoLength™ Pins*** are available for wire sizes between 0.035" and 0.052", **AccuLock® Chrome Zirconium+++** is available for wire sizes between 0.052" and 0.320", and **Zero wire feedability** is not available in lengths longer than 6 feet; not compatible with very large feeders.

Some limitations exist. Please consult our online configurator or your Customer Service representative to ensure that the part number configured using these pages is accurate prior to placing an order.
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.

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

• NEW! AccuLock™ R Consumables offer an enhanced contact tip-to-diffuser design which increases tip life, plus the coarse thread on the contact tip virtually eliminates cross-threading issues (see page 6 for more information)
• QUICK LOAD® Liners require less than half the time and effort to replace compared to conventional liners (see page 12 for more information)
• The QUICK LOAD Liner AutoLength™ System minimizes downtime, wire feeding and quality issues commonly associated with short liner length (see page 13 for more information)

AVAILABLE OPTIONS

• Air Blast
• Wire Brake
• TOUGH GUN I.C.E.® Technology (see page 38 for more information)

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 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 INSULATING DISCS

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 ROBOTIC 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
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.

1. **GUN STYLE**
   - **GUN STYLE**
   - **CABLE STYLE**
   - **DIGIT**
   - **No Option**
   - **Wire Brake**
   - **Air Blast**
   - **Wire Brake + Air Blast**

2. **NECK**
   - **PART NUMBER**
   - **DESCRIPTION**
   - **ANGLE**
   - **DIGIT**

3. **OPTIONS**
   - **CABLE STYLE**
   - **DIGIT**
   - **No Option**
   - **Wire Brake**
   - **Air Blast**

4. **CONTACT TIP™ + DIFFUSER**
   - **DESCRIPTION**
   - **CONTACT TIP SERIES NUMBER**
   - **RETAINING HOLD PART NUMBER**
   - **DIGIT**

5. **CABLE LENGTH**
   - **LENGTH**
   - **DIGIT**

6. **SLIP-ON NOZZLE™** (for TOUGH LOCK SERIES)
   - **PART NUMBER**
   - **DESCRIPTION**
   - **MATERIAL**
   - **DIGIT**

7. **CONTROL CABLE**
   - **PART NUMBER**
   - **DESCRIPTION**
   - **DIGIT**

8. **WIRE SIZE** & **LINER TYPE**
   - **PART NUMBER**
   - **DESCRIPTION**
   - **MATERIAL**
   - **DIGIT**

9. **POWER PIN**
   - **PART NUMBER**
   - **DESCRIPTION**
   - **DIGIT**

10. **AUTOLENGTH™ PIN**
    - **PART NUMBER**
    - **DESCRIPTION**
    - **DIGIT**

Some limitations exist. Please consult our online configurator or your Customer Service representative to ensure that the part number configured using these pages is accurate before placing an order.
TREGASKISS FIXED AUTOMATIC MIG GUNS

Tregaskiss Fixed Automatic MIG Guns are engineered for hard tooling applications requiring a simple, durable and repeatable MIG gun. These automatic torches can be configured with the same consumables as your Bernard® semi-automatic or Tregaskiss robotic MIG guns to simplify your inventory.

TREGASKISS MA1 FIXED AUTOMATIC AIR-COOLED MIG GUNS

• Achieve maximum uptime and throughput. With the high-performance consumables, armored neck and body, and simple internal connections, these MIG guns are quick and easy to maintain.

• Available in both cable and cableless (also known as Auto Heads) 500 and 600 amp models

• Power cable equipped guns feature a spring-guard strain relief to prevent kinking and abrasion

• Air-cooled neck is made from aircraft-grade aluminum

• Compatible with TOUGH GUN I.C.E.® Technology which boosts the duty cycle by 50 amps (see page 38 for more information)

Please see the MA1 Fixed Automatic MIG Gun spec sheet (SP-MA1) at Tregaskiss.com/spec for a complete list of part numbers and ordering information.

TREGASKISS MW1 FIXED AUTOMATIC WATER-COOLED MIG GUNS

• These water-cooled MIG welding guns feature high-performance consumables, an armored neck and body, and simple internal connections which allow for quick and easy maintenance

• Available in 450 and 600 amp models

• Spring-guard strain relief prevents kinking and abrasion

• Water-cooled neck is made from stainless steel and is silver brazed and leak tested

• 600 amp water-cooled model has a thread-on heavy duty nozzle

Please see the MW1 Fixed Automatic MIG Gun spec sheet (SP-MW1) at Tregaskiss.com/spec for a complete list of part numbers and ordering information.

TREGASKISS AW2 FIXED AUTOMATIC WATER-COOLED MIG GUNS

Designed for dependable performance in high amperage, high temperature hard tooling welding applications. These guns feature a simple design with threaded connections and minimal number of replacement parts.

• Available in both cable and cableless 600 amp models

• Power cable equipped guns are available in lengths of 3 to 25 feet in 1/2-foot increments

• Internal threaded connections stay tight inside the anti-vibration compression fit body for good electrical connectivity and longer life

Please see the AW2 Fixed Automatic MIG Gun spec sheet (SP-AW2) at Tregaskiss.com/spec for a complete list of part numbers and ordering information.
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 MA1 Fixed 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 MA1 Fixed Automatic Air-Cooled MIG Guns can be retrofit 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 40-41 for more information)
- Compatible with TOUGH LOCK® and NEW! AccuLock™ R Consumables (see pages 6-8 for more information)

ROBUST CONSTRUCTION
- Durable stainless steel docking body
- Quick-connects allow the cable to swivel and provide support for the liner, resulting in smooth, consistent wire feeding
- Maintenance-friendly features include accessible front housing, quick-change fittings and replaceable components

ENHANCED PERFORMANCE
- Withstands the heat generated from welding thick plate or prolonged duty cycles
- Water-cooled power cable and neck keep front-end consumables running cool
- Neck features four cooling channels to optimize cooling efficiency

THE CONSUMABLE ADVANTAGE
- TOUGH LOCK® Consumables provide improved performance and reliability to maximize production and minimize costly downtime (see page 8 for more information)
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
• Fewer components = fewer potential points of failure

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

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.

A SPATTER REMOVAL WORKHORSE

The TOUGH GUN TT3 (analog) Reamer is tough on spatter and operates reliably even in 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

• Wiring harness provides increased reliability and takes up minimal space inside the reamer, making it easy to service and replace
• Easy access setup switches are durable, waterproof, and fully protected from the elements
• Robust and durable check valve
• Wiring harness, setup switches and check valve are common across both the TOUGH GUN TT3 and TT3E Reamer (see page 40 for more information) platforms
• Sprayer comes standard

TOUGH GUN TT3E VS. TT3 REAMER COMPARISON

<table>
<thead>
<tr>
<th>FEATURE</th>
<th>TOUGH GUN TT3E</th>
<th>TOUGH GUN TT3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Protocol</td>
<td>Ethernet IP</td>
<td>24VDC Discrete I/O</td>
</tr>
<tr>
<td>Anti-Spatter Sprayer (standard)</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Air Motor (standard 24 HP)</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Spindle (3/4HP direct drive)</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Hardened, 4-Sided V-Block</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Hardened, Single Flute Cutter Black</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Quick-Change Face Plate</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Dust Chute Capability (installing cell wiring)</td>
<td>✓</td>
<td>–</td>
</tr>
<tr>
<td>Enable Stroke Function</td>
<td>✓</td>
<td>–</td>
</tr>
<tr>
<td>Customizer Your Reamer Wiring</td>
<td>✓</td>
<td>–</td>
</tr>
<tr>
<td>Air Blast</td>
<td>✓</td>
<td>–</td>
</tr>
</tbody>
</table>

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 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 or TT3E 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 GARD® 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
- Designed 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® and NEW! AccuLock™ R Consumables

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 eliminates issues that may be experienced with third party stands
- Standardized 8.5” x 6.5” hole pattern for mounting the stand to the floor allows stands to be easily swapped between stations

TCP Locator
Wire Catcher
Carbide Blade (4 sides with 8 cutting edges)
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 and extending the life of consumables, TOUGH GARD Anti-Spatter Liquid reduces downtime thus lowering operating and maintenance costs.

SUPERIOR PERFORMANCE
Tregaskiss R&D studies* show that TOUGH GARD Anti-Spatter Liquid outperforms other brands on the market (see Figure 1).

*Results based on continuous GMAW – 6 minutes, 0.045” wire, 40% duty cycle, 30A d.c. 70% gas mix

TOUGH GARD Anti-Spatter Liquid

The TOUGH GARD Multi-Feed System for anti-spatter solution can connect up to ten TOUGH GUN TT3 or TT3E Reamer stations. This system eliminates the need to refill anti-spatter reservoirs on a frequent basis, resulting in lowered operating costs, reduced downtime and increased safety.

TOUGH GARD® Anti-Spatter Liquid reduces downtime thus lowering operating and maintenance costs.

Figure 1

TOUGH GARD MULTI-FEED SYSTEM

The TOUGH GARD Multi-Feed System for anti-spatter solution can connect up to ten TOUGH GUN TT3 or TT3E Reamer stations. This system eliminates the need to refill anti-spatter reservoirs on a frequent basis, resulting in lower operating costs, reduced downtime and increased safety.

PACKAGING OPTIONS
- Multiple nozzle head-cap assemblies available for 5-gallon and 55-gallon reservoirs
- Nozzle cover includes easy cleaning access while or when required

GAP ASSEMBLY
- Distributor nozzle head-caps are available for 5-gallon and 55-gallon reservoirs
- A built-in bilingual decal helps operators when or when required

PACKAGING OPTIONS
- Multiple nozzle head-caps can be purchased in 5-gallon or 55-gallon quantities
- For quick or easy cleaning access while or when required

QUICK CONNECTS
- Quickly and easily connects TOUGH GARD TT3 or TT3E Reamer
- Prevents anti-spatter reservoirs from being accidentally drained

PART # | PACKAGE SIZES
--- | ---
TG-101-14S | 14 fl. oz. / 414 mL
TG-101-05 | 5 fl. oz. / 150 mL
TG-101-30 | 30 fl. oz. / 890 mL
TG-101-01 | 1 U.S. Gal. / 3.78 L
TG-101-55 | 55 U.S. Gal. / 208.3 L
TG-101-100 | 100 fl. oz. / 2.94 L
TG-101-50 | 50 fl. oz. / 1.5 L
TG-101-14 | 14 fl. oz. / 414 mL

TOUGH GARD MULTI-FEED SYSTEM

- TG-101-05-10 For 5-Gallon (up to 10 nozzles cleaning stations)
- TG-101-10-10 For 10-Gallon (up to 10 nozzles cleaning stations)
- TG-101-50-10 For 50-Gallon (up to 10 nozzles cleaning stations)
- TG-101-100-10 For 100-Gallon (up to 10 nozzles cleaning stations)
- TG-101-50-10 For 50-Gallon (up to 10 nozzles cleaning stations)

TOUGH GARD® Anti-Spatter Liquid outperforms competitive anti-spatter solutions.

Tregaskiss R&D studies* show that TOUGH GARD Anti-Spatter Liquid outperforms competitive anti-spatter solutions.

*Results based on continuous GMAW – 6 minutes, 0.045” wire, 40% duty cycle, 30A d.c. 70% gas mix

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 and extending the life of consumables, TOUGH GARD Anti-Spatter Liquid reduces downtime thus lowering operating and maintenance costs.

For replacement parts, see OM-MF owner’s manual for more information.

SERVICE AND SUPPORT

In addition to the online tools and resources we provide that are available 24/7, more personal customer support is also available.

CUSTOMER SERVICE

Phone: 1-855-MIGWELD (644-9330), Option #3
Email: cs@itwmig.com

Our Technical Service team is ready to answer your technical support questions from 7:00 a.m. to 4:30 p.m. CST Monday through Friday. This team provides the following services to support customers both pre- and post-sale:

- Troubleshooting inquiries
- Replacement parts identification and stocking recommendations
- CAD model requests
- Assistance with product configuration
- Training – product, maintenance, technical, etc.
- Consumable optimization

We will respond to all questions as soon as possible, but please note that it could take up to 2 business days to respond to inquiries submitted via email.

ONLINE RESOURCES

Visit us online for immediate access to the most up-to-date information:

BernardWelds.com | Tregaskiss.com

VIDEOS

Check out our WhyBuy videos and find valuable how-to videos on our YouTube channels. Subscribe today!

BernardWelds.com/Amperage | Tregaskiss.com/Amperage

ONLINE PRODUCT CONFIGURATORS

Use our new mobile-friendly online configurators to build the MIG gun or reamer part number you need, plus get access to additional resources and an expanded replacement parts list with diagram.

BernardWelds.com/ConfigureMyGun | Tregaskiss.com/ConfigureMyGun

AMPERAGE E-NEWSLETTER

This electronic publication from Bernard and Tregaskiss features informative articles on improving welding performance, product announcements, contests and more. Subscribe today!

BernardWelds.com/Ampere | Tregaskiss.com/Ampere

TECHNICAL ARTICLES

Whether you are new to welding or a seasoned professional, we have informative technical articles and case studies to help you get the most out of your applications.

BernardWelds.com/articles | Tregaskiss.com/articles

TECH CONNECTION PRODUCT NEWS

Your connection to Bernard and Tregaskiss product improvements, new product information and other product updates.

BernardWelds.com/TechConnection | Tregaskiss.com/TechConnection

YOUR WELDING DISTRIBUTOR

Your welding distributor is also a comprehensive resource for welding and cutting information and process or equipment troubleshooting. Distributors can help you choose the products and accessories that are right for you and your specific application. To locate a welding distributor in your area, visit the Where To Buy link on our websites.

YOU JOIN OUR ONLINE COMMUNITY TODAY!

BernardWelds.com/ConfigureMyGun | Tregaskiss.com/ConfigureMyGun
TREGASKISS

MAXIMIZING THROUGHPUT. MINIMIZING COSTS.

Automated welding applications require flexible, repeatable solutions that maximize production uptime and throughput while minimizing costs. This is why industrial manufacturers rely on Tregaskiss and its proven track record for delivering reliable and resilient robotic MIG welding guns, fixed automatic MIG guns, nozzle cleaning stations and innovative welding gun consumables.

BERNARD

ENGINEERED FOR SIMPLICITY. BUILT FOR DURABILITY.

Industrial semi-automatic welding operations benefit from welding products that are built to withstand the rigors of multi-shift use, high heat, and abusive environments. Long-lasting, easy to maintain Bernard Semi-Automatic MIG Guns combined with a Common Consumable Platform™ means more uptime, fewer errors and less troubleshooting for welders.

THE TEAM BEHIND THE BRANDS

The shared team behind Tregaskiss and Bernard routinely listens and responds to the needs of our customers. Through the strength of our people and their dedication to practical product innovation, ISO production quality standards, and superior service and support, we strive to remain our customers’ #1 choice.