

## **TECHNICAL GUIDE**

***NEW PRODUCT***  
**TOUGH GUN ThruArm™ G2**  
**Series Robotic MIG Guns**

- AVAILABLE PRODUCTS
- EXPLODED VIEW & PARTS LIST
- ORDERING INFORMATION



*Certified ISO 9001 : 2008*  
*Please read instructions prior to use.*  
*Save this manual for future reference*

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## THANK YOU....

...for selecting a TOUGH GUN ThruArm™ G2 Series Robotic MIG Gun from Tregaskiss. Manufacturing operations demand extremely dependable robotic equipment. With this in mind, the TOUGH GUN™ MIG Gun was designed and engineered to be a reliable tool to support high production within a robotic cell. As the name implies, the TOUGH GUN MIG Gun is made from durable materials and components engineered to perform in a rugged welding environment. Your TOUGH GUN MIG Gun is completely assembled and ready to weld, and has undergone numerous quality checks to ensure high performance.

The instructions and illustrations in this technical guide make it easy for you to maintain your TOUGH GUN MIG Gun. **Please read, understand, and follow all safety procedures.** Keep this Technical Guide booklet as a handy reference when ordering complete guns, parts and special options. **For technical support and special applications, please call the Tregaskiss Technical Service Department at 1-877-737-3111 or fax 1-877-737-2111.** Our trained technicians are available between 8:30 AM and 5:00 PM EST, and will answer your application or repair questions.

Tregaskiss employees build TOUGH GUN MIG Guns for the world's welding professionals. We are always striving to improve our products and services, and would appreciate receiving your suggestions or comments. Please contact us immediately if you experience any safety or operating problems.

## GENERAL SAFETY INFORMATION

Before installation or operation of TOUGH GUN MIG Guns, please read the safety precautions listed below.

1. Do not touch live electrical parts. The following should be checked to prevent electrical shock:
  - Faulty or damaged equipment is repaired or replaced.
  - Equipment is off when not in use.
2. Ensure that all safety devices, guards, shields or barriers are properly in place and connected correctly before allowing operation of the equipment.
3. CSA Standard W117.2 CODE FOR SAFETY IN WELDING AND CUTTING obtainable from the Canadian Standards Association, Standards Sales, 178 Rexdale Boulevard, Rexdale, Ontario, Canada M9W 1R3.  
ANSI Standard Z49.1 CODE FOR SAFETY IN WELDING AND CUTTING obtainable from the American National Standards Institute, 1430 Broadway, New York, NY 10018.

### CALIFORNIA PROPOSITION 65 WARNING

This product, when used for welding or cutting, produces fumes or gases which contain chemicals known to the State of California to cause birth defects and, in some cases, cancer.

This product contains chemicals, including lead, known to the State of California to cause cancer, and birth defects or other reproductive harm. *Wash hands after use.*

(California Health & Safety Code Section 25249.5 at seq.)



## WARRANTY

Product is warranted to be free from defects in material and workmanship for the period specified below after the sale by an authorized Buyer. Should there be a defect please refer to our Return Merchandise Policy.

PRODUCT	WARRANTY PERIOD
TOUGH GUN™ MIG Guns and Components	180 days
TGX™ Chassis and TGX™ Ready To Weld MIG Guns	90 days
TOUGH GUN™ Reamer	1 year
TOUGH GARD™ Spatter Cleaner	1 year
TOUGH GUN™ Robotic Peripherals (Clutch, Sprayer, Wire Cutter, Clutch Disc, Mounting Arms)	1 year
Low-Stress Robotic Unicables (LSR Unicables)	2 years

Tregaskiss reserves the right to repair, replace or refund the purchase price of non-conforming product. Product found not defective will be returned to the Buyer after notification by Customer Service.

Tregaskiss makes no other warranty of any kind, expressed or implied, including, but not limited to the warranties of merchantability or fitness for any purpose. Tregaskiss shall not be liable under any circumstances to Buyer, or to any person who shall purchase from Buyer, for damages of any kind, including, but not limited to any, direct, indirect incidental or consequential damages or loss of production or loss of profits resulting from any cause whatsoever, including, but not limited to, any delay, act, error or omission of Tregaskiss.

Genuine Tregaskiss parts must be used for safety and performance reasons or the warranty becomes invalid. Warranty shall not apply if accident, abuse, or misuse damages a product, or if a product is modified in any way except by authorized Tregaskiss personnel.

# 1.0 – AVAILABLE THRUARM G2 PRODUCTS

TOUGH GUN ThruArm G2 is available for the following robot brands and models. Also available in the chart below are part numbers to key components of the system. For additional parts, see **Section 2.1.2** on page 5 and **Section 2.2.2** on page 7.

ROBOT BRAND	ROBOT MODEL	CLUTCH	SOLID MOUNT	LSR UNICABLE	
				CLUTCH	SOLID MOUNT
ABB	IRB1600ID	A58G2	A58G2S	58CA024	58SA024
ABB	IRB2600ID-15/1.85	A58G2	A58G2S	58CA028	58SA028
ABB	IRB2600ID-8/2.00	A58G2	A58G2S	58CA029	58SA029
KUKA	KR 5 ARC HW	K58G2	K58G2S	58CK023	58SK023
KUKA	KR 16 ARC HW	K58G2	K58G2S	58CK030	58SK030
KUKA	KR 16 L8 HW	K58G2	K58G2S	58CK027	58SK027
MOTOMAN	EA1400 XRC	58G2	58G2S	58CM016	58SM016
MOTOMAN	EA1900 XRC	58G2	58G2S	58CM017	58SM017
MOTOMAN	EA1400N	58G2	58G2S	58CM001	58SM001
MOTOMAN	EA1900N	58G2	58G2S	58CM002	58SM002
MOTOMAN	SSA2000	58G2	58G2S	58CM001	58SM001
MOTOMAN	MA1400	58G2	58G2S	58CM001	58SM001
MOTOMAN	VA1400	58G2	58G2S	58CM001	58SM001
OTC/DAIHEN	AII-B4	D58G2	D58G2S	58CD025	58SD025
OTC/DAIHEN	AII-B4L	D58G2	D58G2S	58CD026	58SD026
OTC/DAIHEN	AX-V4	D58G2	D58G2S	58CD003	58SD003
OTC/DAIHEN	AX-V4L	D58G2	D58G2S	58CD022	58SD022
PANASONIC*	TB-1800	P58G2	P58G2S	N/A	N/A

\*An SG# is required for a Panasonic configuration.

Additional TOUGH GUN ThruArm G2 products will be released for other robot models as soon they become available.

**CLUTCH SYSTEM:**



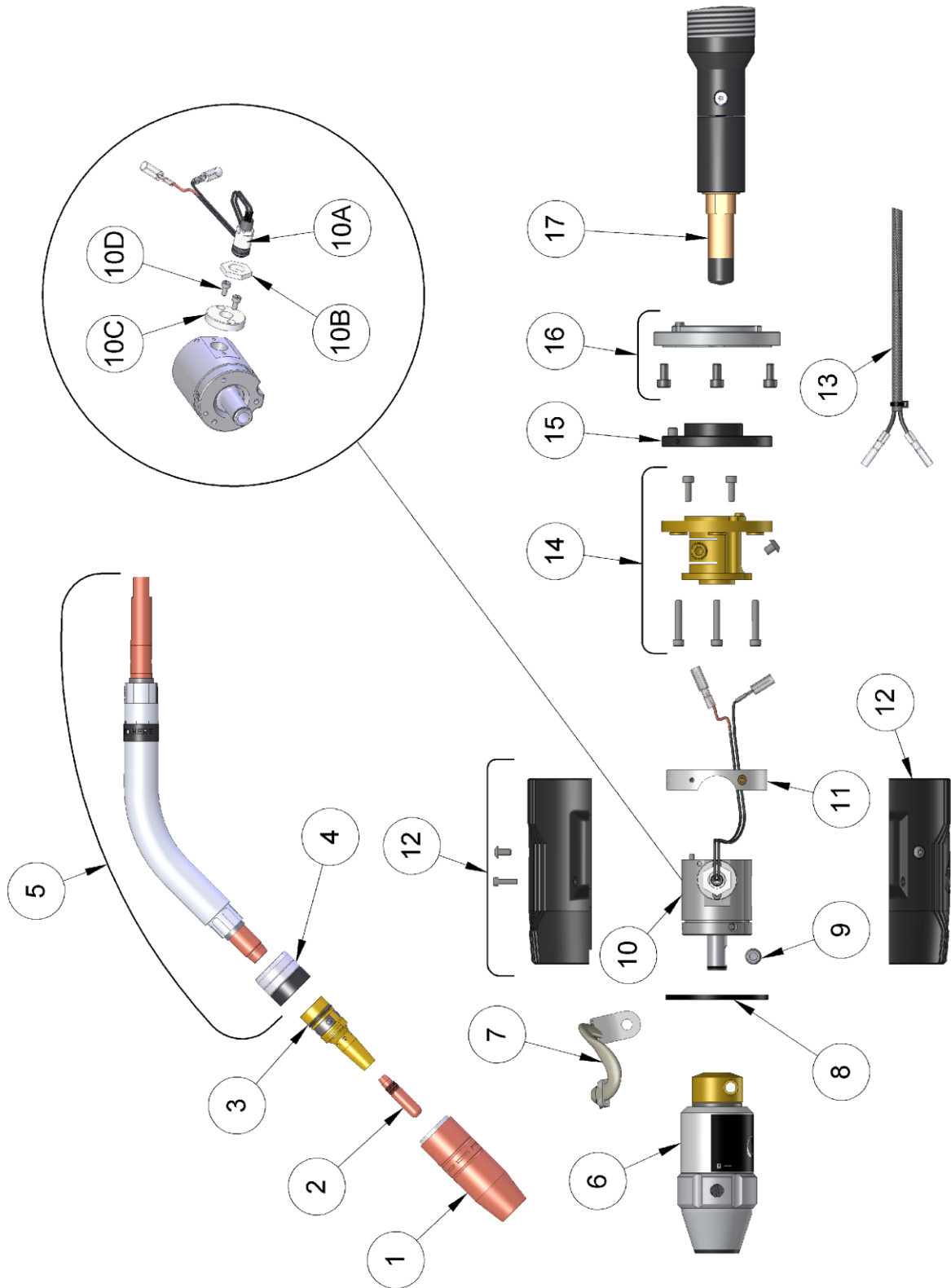
**SOLID MOUNT SYSTEM:**



## 2.0 – EXPLODED VIEWS & PARTS LISTS

### 2.1 CLUTCH SYSTEM

#### 2.1.1 CLUTCH SYSTEM EXPLODED VIEW



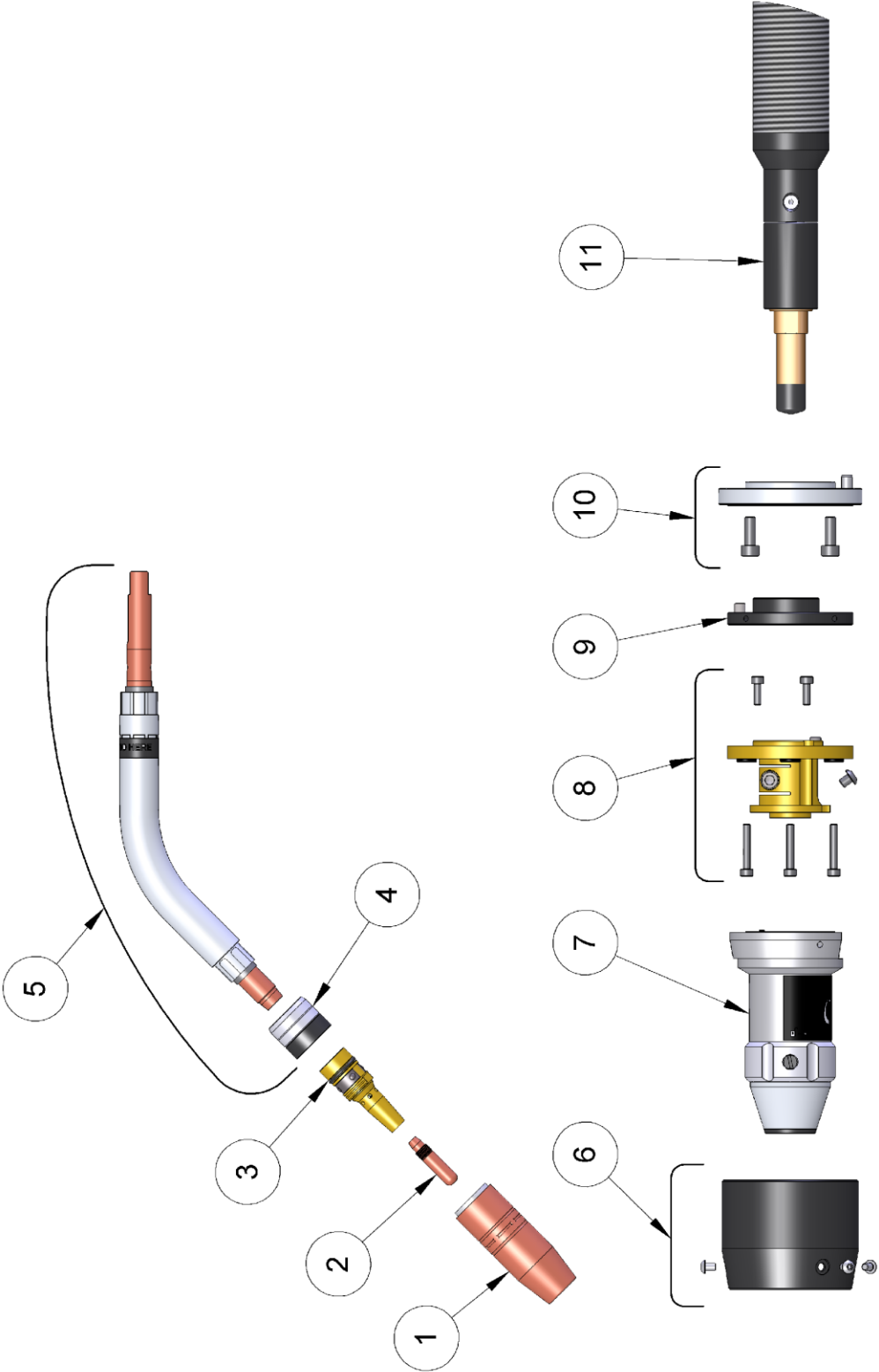
## 2.1.2 CLUTCH SYSTEM PARTS LIST

PART #	DESCRIPTION
1	401-X-XX NOZZLE
2	403-XX-XX CONTACT TIP
3	404-32 RETAINING HEAD
4	59GI G2 GOOSENECK INSULATOR
5	59G22 G2 GOOSENECK – 22 DEG
	59G22L G2 GOOSENECK – 22 DEG
	59G22L1 G2 GOOSENECK – 22 DEG
	59G45 G2 GOOSENECK – 45 DEG
	59G45L G2 GOOSENECK – 45 DEG
	59G45L1 G2 GOOSENECK – 45 DEG
	59G45L2 G2 GOOSENECK – 45 DEG
6	580-200 GOOSENECK CONNECTOR ASSY
7	580-4 SHUNT CABLE ASSEMBLY
	N/A M6X1.8mm LG. SBHCS
	N/A M6 WASHER
8	580-2-3 RUBBER WASHER
9	580-3 LOCK PIN AND SCREW
10	AS-714 CLUTCH ASSEMBLY
10A	AS-714-9 CLUTCH SWITCH ASSEMBLY
10B	AS-714-7-3 HEX NUT
10C	AS-714-7-2 SWITCH BASE
10D	N/A M3X0.5-6mm LG. SHCS
11	AS-114-3 COVER MOUNTING RING
12	580-5A OUTER COVER – AC KIT (INCLUDES OUTER COVER, M4X0.7-8 LG. SBHCS, M3X0.5-12 LG. SHCS)
13	AS-714-19 CONTROL CABLE
14	580-19 MOTOMAN CABLE CONNECTOR KIT (INCLUDES FLANGE CABLE CONNECTOR, M4X0.7-12 LG. SHCS, M4X0.7-25 LG. SHCS, M3X0.5-6 LG. SBHCS)
	580-19 ABB CABLE CONNECTOR KIT (INCLUDES FLANGE CABLE CONNECTOR, M4X0.7-12 LG. SHCS, M4X0.7-25 LG. SHCS, M3X0.5-6 LG. SBHCS)
	580-19 OTC CABLE CONNECTOR KIT (INCLUDES FLANGE CABLE CONNECTOR, M4X0.7-12 LG. SHCS, M4X0.7-25 LG. SHCS, M3X0.5-6 LG. SBHCS)
	580-20 KUKA CABLE CONNECTOR KIT (INCLUDES FLANGE CABLE CONNECTOR, M4X0.7-12 LG. SHCS, M4X0.7-20 LG. SHCS, M3X0.5-6 LG. SBHCS)
	580-21 PANASONIC CABLE CONNECTOR KIT (INCLUDES FLANGE CABLE CONNECTOR, M4X0.7-12 LG. SHCS, M5X0.8-25 LG. SHCS, M3X0.5-6 LG. SBHCS)

PART #	DESCRIPTION
15	AS-114-1 ABB INSULATING DISC
	AS-114-1 MOTOMAN INSULATING DISC
	AS-116-1 OTC INSULATING DISC
	AS-114-6 KUKA INSULATING DISC
	AS-115-1 PANASONIC INSULATING DISC
16	AS-114-7 ABB TRANSITION FLANGE + M6X1-16 LG. SHCS
	AS-116-2 OTC TRANSITION FLANGE + M5X0.8-10 LG. SHCS
17	58CM001 MOTOMAN (MODEL EA1400N, SSA2000, MA1400, VA1400) LSR UNICABLE
	58CM002 MOTOMAN (MODEL EA1900N) LSR UNICABLE
	58CM016 MOTOMAN (MODEL EA1400 XRC) LSR UNICABLE
	58CM017 MOTOMAN (MODEL EA1900 XRC) LSR UNICABLE
	58CA024 ABB (MODEL IRB-1600ID) LSR UNICABLE
	58CA028 ABB (MODEL IRB-2600ID 15/1.85) LSR UNICABLE
	58CA029 ABB (MODEL IRB-2600ID 8/2.00) LSR UNICABLE
	58CD003 OTC (MODEL AX-V4) LSR UNICABLE
	58CD022 OTC (MODEL AX-V4L) LSR UNICABLE
	58CD025 OTC (MODEL AII-B4) LSR UNICABLE
	58CD026 OTC (MODEL AII-B4L) LSR UNICABLE
	58CK023 KUKA (MODEL KR5 ARC HW) LSR UNICABLE
	58CK030 KUKA (MODEL KR 16 ARC HW) LSR UNICABLE
	58CK027 KUKA (MODEL KR 16 L8 HW) LSR UNICABLE

**2.2 SOLID MOUNT SYSTEM**

**2.2.1 SOLID MOUNT SYSTEM EXPLODED VIEW**



## 2.2.2 SOLID MOUNT SYSTEM PARTS LIST

PART #	DESCRIPTION
1	401-X-XX NOZZLE
2	403-XX-XX CONTACT TIP
3	404-32 RETAINING HEAD
4	59GI G2 GOOSENECK INSULATOR
5	59G22 G2 GOOSENECK – 22 DEG
	59G22L G2 GOOSENECK – 22 DEG
	59G22L1 G2 GOOSENECK – 22 DEG
	59G35 G2 GOOSENECK – 35 DEG
	59G45 G2 GOOSENECK – 45 DEG
	59G45L G2 GOOSENECK – 45 DEG
	59G45L1 G2 GOOSENECK – 45 DEG
	59G45L2 G2 GOOSENECK – 45 DEG
6	580-300-5 OUTER COVER – AC KIT (INCLUDES OUTER COVER, M4X0.7-8 LG. SBHCS)
7	580-300 SOLID MOUNT CONNECTOR
8	580-19 MOTOMAN CABLE CONNECTOR KIT (INCLUDES FLANGE CABLE CONNECTOR, M4X0.7-12 LG. SHCS, M4X0.7-25 LG. SHCS, M3X0.5-6 LG. SBHCS)
	580-19 ABB CABLE CONNECTOR KIT (INCLUDES FLANGE CABLE CONNECTOR, M4X0.7-12 LG. SHCS, M4X0.7-25 LG. SHCS, M3X0.5-6 LG. SBHCS)
	580-19 OTC CABLE CONNECTOR KIT (INCLUDES FLANGE CABLE CONNECTOR, M4X0.7-12 LG. SHCS, M4X0.7-25 LG. SHCS, M3X0.5-6 LG. SBHCS)
	580-20 KUKA CABLE CONNECTOR KIT (INCLUDES FLANGE CABLE CONNECTOR, M4X0.7-12 LG. SHCS, M4X0.7-20 LG. SHCS, M3X0.5-6 LG. SBHCS)
	580-21 PANASONIC CABLE CONNECTOR KIT (INCLUDES FLANGE CABLE CONNECTOR, M4X0.7-12 LG. SHCS, M5X0.8-25 LG. SHCS, M3X0.5-6 LG. SBHCS)

PART #	DESCRIPTION
9	AS-114-1 ABB INSULATING DISC
	AS-114-1 MOTOMAN INSULATING DISC
	AS-116-1 OTC INSULATING DISC
	AS-114-6 KUKA INSULATING DISC
	AS-115-1 PANASONIC INSULATING DISC
10	AS-114-7 ABB TRANSITION FLANGE + M6X1-16 LG. SHCS
	AS-116-2 OTC TRANSITION FLANGE + M5X0.8-10 LG. SHCS
11	58SM001 MOTOMAN (MODEL EA1400N, SSA2000, MA1400, VA1400) LSR UNICABLE
	58SM002 MOTOMAN (MODEL EA1900N) LSR UNICABLE
	58SM016 MOTOMAN (MODEL EA1400 XRC) LSR UNICABLE
	58SM017 MOTOMAN (MODEL EA1900 XRC) LSR UNICABLE
	58SA024 ABB (MODEL IRB-1600ID) LSR UNICABLE
	58SA028 ABB (MODEL IRB-2600ID 15/1.85) LSR UNICABLE
	58SA029 ABB (MODEL IRB-2600ID 8/2.00) LSR UNICABLE
	58SD003 OTC (MODEL AX-V4) LSR UNICABLE
	58SD022 OTC (MODEL AX-V4L) LSR UNICABLE
	58SD025 OTC (MODEL AII-B4) LSR UNICABLE
	58SD026 OTC (MODEL AII-B4L) LSR UNICABLE
	58SK023 KUKA (MODEL KR5 ARC HW) LSR UNICABLE
	58SK030 KUKA (MODEL KR 16 ARC HW) LSR UNICABLE
	58SK027 KUKA (MODEL KR 16 L8 HW) LSR UNICABLE

## 3.0 – ORDERING INFORMATION

To order replacement parts for your TOUGH GUN ThruArm G2 Series Robotic MIG Gun, please contact Tregaskiss Customer Service via phone at 1-877-737-3111 (from Canada and USA) or +1-519-737-3000 (international).



THE FREEDOM TO INNOVATE

Canada & U.S.A. Phone: 1-877-737-3111  
Fax: 1-877-737-2111

International Phone: +1-519-737-3000  
Fax: +1-519-737-2111

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