

TOUGH GUN® TT4 REAMER

ROBOTIC NOZZLE CLEANING STATION

MIG (GMAW) ROBOTIC
WELDING PERIPHERAL



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APPLICATIONS	• Automotive • General Manufacturing & Fabrication • Heavy Equipment
DIMENSIONS	L: 13.74" (349.0 mm)* W: 10.36" (263.2 mm)* H: 22.18" (563.4 mm)* *Base unit only. Optional features may change weight and dimensions
WEIGHT	≈41 lbs (18.6 kg)* *Base unit only. Optional features may change weight and dimensions
RATED INPUT/OUTPUT	24 VDC

POWER THROUGH WELD SPATTER FOR INCREASED UPTIME AND WELD QUALITY

TOUGH GUN® TT4A (analog) and TT4E (ethernet) nozzle cleaning stations maximize uptime through superior cleaning performance, high durability components, and features that allow quick and easy maintenance. You'll spend less time maintaining and troubleshooting your robotic welding equipment and more time getting product out the door as your orders increase.

These reamers power through the toughest spatter with a .95HP motor and 236 lbs. of lifting force at 95 psi. Automated cleaning improves gas flow for reduced weld porosity, rework and scrap in robotic applications.

KEEP YOUR WELDING OPERATION UP AND RUNNING FOR EXTENDED PERIODS OF TIME WITH HIGH PERFORMANCE COMPONENTS:

- Powerful, lubricated motor lasts up to 18M cycles at 80+ psi
- Durable valves and cylinders rated for 10M+ cycles
- Wire cutter can run 1M+ cycles without requiring maintenance

NEW STANDARD FEATURES REDUCE DOWNTIME, SAFETY INCIDENTS AND COSTLY WELD DEFECTS RELATED TO ANTI-SPATTER:

NEW ANTI-SPATTER RESERVOIR (COMES STANDARD)

- A tethered cap and easy-clean filter help prevent anti-spatter contamination which can lead to weld quality issues
- Larger 20-oz capacity increases uptime between refills

NEW LOW FLUID LEVEL INDICATOR (COMES STANDARD)

- Sends a signal to the PLC / robot when anti-spatter is running low

NEW SPRAY CONTAINMENT UNIT (COMES STANDARD)

- Reduces slip / trip hazards and minimizes cleaning downtime costs
- Easy to remove and clean

4-sided v-block eliminates the need to purchase new v-blocks when changing nozzle styles

TOUGH GUN® wire cutter cuts a variety of wire types, including stainless steel, aluminum and cored wires, in sizes up to 1/16" (optional)

External setup switches allow independent operation of the sprayer, clamp and spindle during manual setup

New cutter blades (not visible) are engineered from harder, stronger material, making them more resistant to breaking, chipping or cracking

Spray containment unit improves the working quality of the cell. Reduces slip / trip accidents and cleaning downtime costs (comes standard)

Dedicated motor lubricator improves longevity of the motor (comes standard)

Quick change base plate

NEW! Double capacity sprayer reservoir includes tethered cap, removeable filter, and low fluid level indicator. Low fluid level indicator provides an alert when running low to reduce the risk of running out. Multi-feed compatible. (comes standard)



ETHERNET OPTION FOR
GREATER CONTROL
& FLEXIBILITY



INCREASE PRODUCTION
UPTIME & THROUGHPUT
EXTEND LIFE OF CONSUMABLES
AND INCREASE PRODUCTION UPTIME

2 YEAR

INDUSTRY-LEADING
2 YEAR WARRANTY
EXTEND WARRANTY TO 3 YEARS
WITH EXCLUSIVE USE OF
TOUGH GARD® ANTI-SPATTER LIQUID

TREGASKISS®

2570 North Talbot Road
Windsor, Ontario N0R 1L0, Canada

1-855-MIGWELD (644-9353)
(US & Canada)

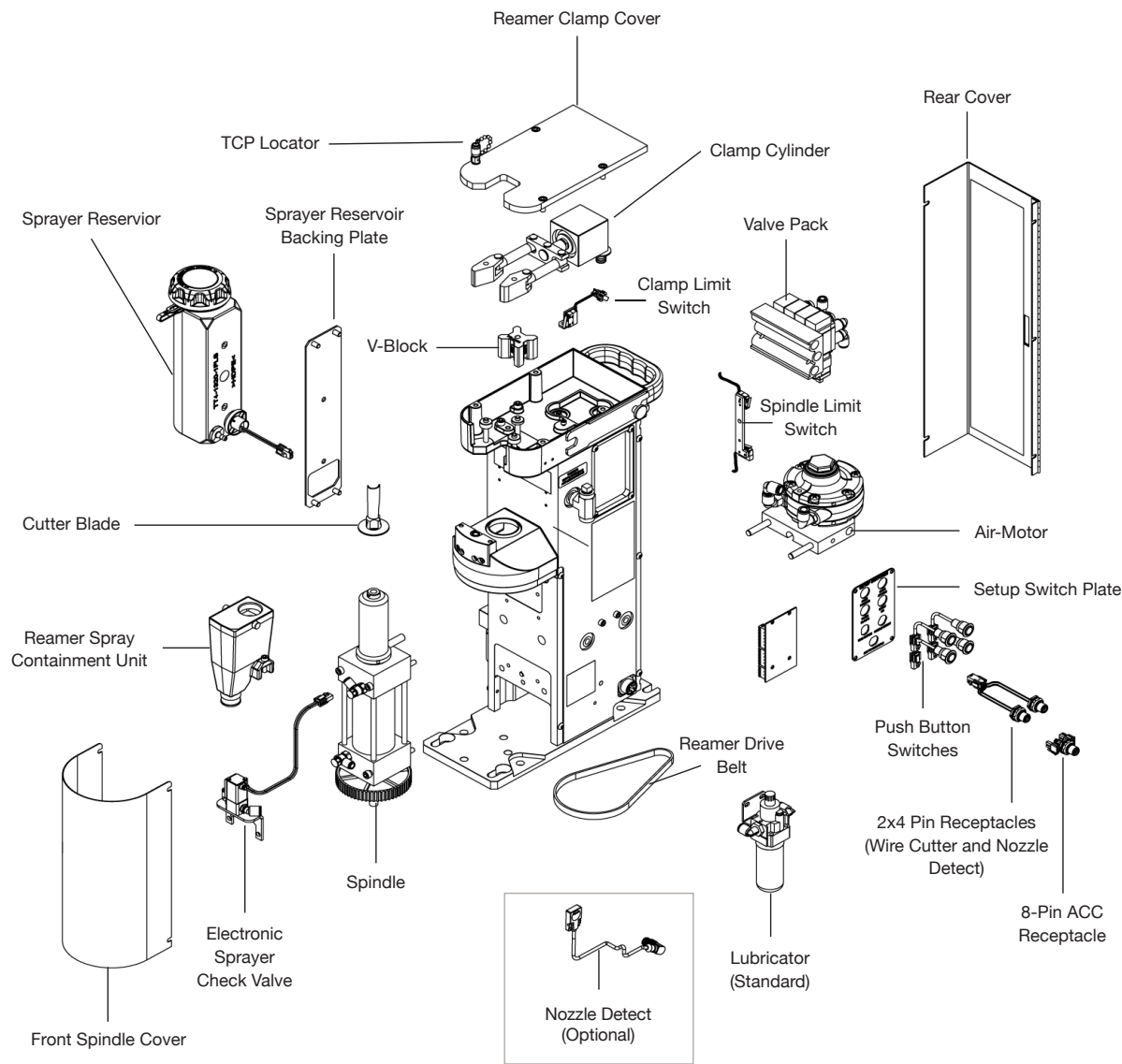
For more information,
visit us at bernardtregaskiss.com

SPECIFICATIONS [SUBJECT TO CHANGE WITHOUT NOTICE]

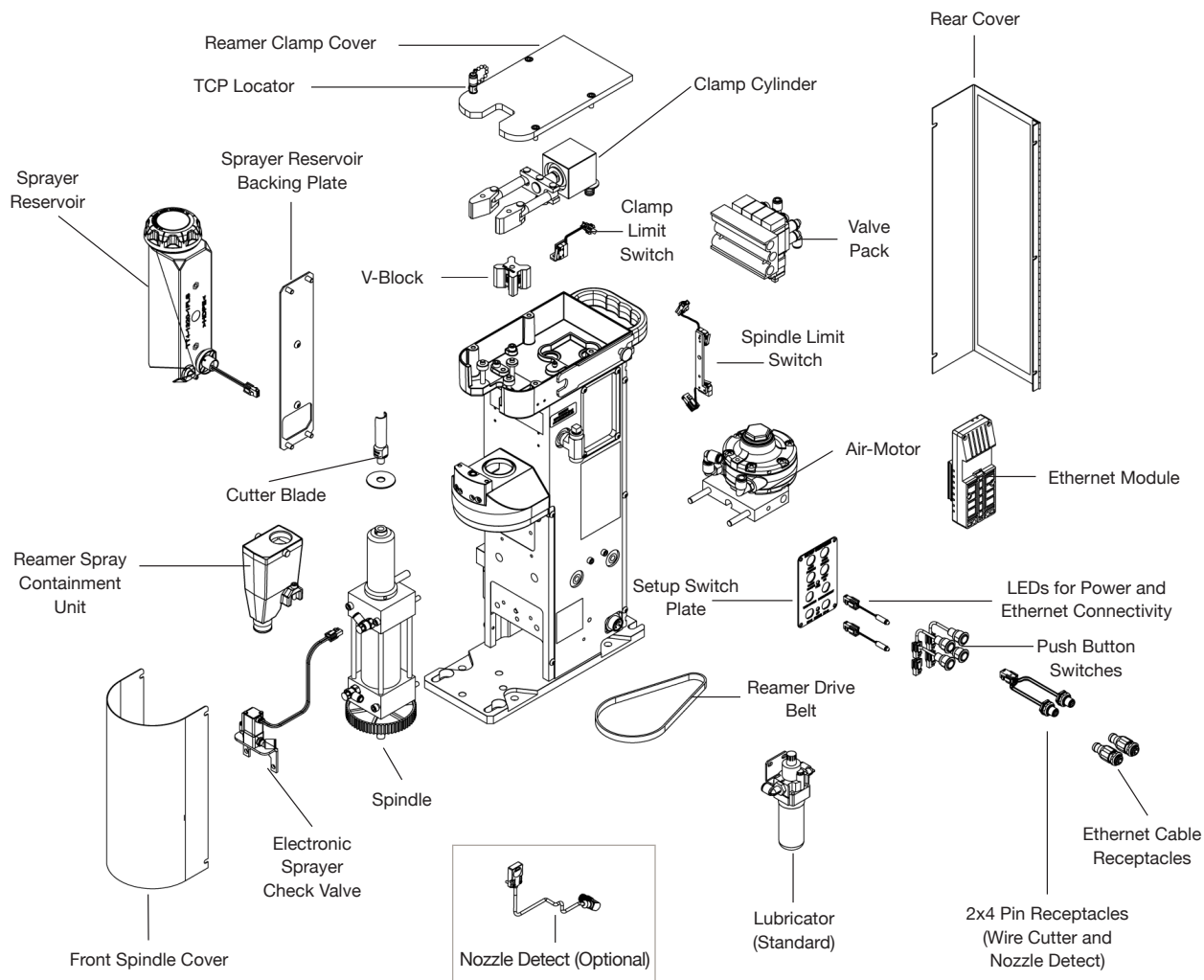
Rated Voltage	Operating Voltage	Power Consumption	Air Requirements (minimum)	Air Motor (at min. air requirement)	Weight	Product Dimensions
24 VDC	±10% of rated voltage	Max. wattage in operation 5.3 W	80 to 100 PSI (5.0 to 7.0 bar) at 16 CFM (450 LPM)	Stall torque at 80 PSI (5.5 bar) = 83 in.-lbs. (9.4 Nm)	≈41 lbs (18.6 kg)*	L: 13.74" (349.0 mm)* W: 10.36" (263.2 mm)* H: 22.18" (563.4 mm)*

*THE OPTIONAL FEATURES (SOLD SEPARATELY OR SELECTED AS OPTIONS WHEN ORDERING) CAN CHANGE THE WEIGHT AND PHYSICAL DIMENSIONS OF THE PRODUCT.

TOUGH GUN® TT4A REAMER [ANALOG]



TOUGH GUN® TT4E REAMER [ETHERNET]



TOUGH GUN® TT4A REAMER AND TT4E REAMER FEATURE COMPARISON

Feature	TOUGH GUN® TT4A Reamer (analog)	TOUGH GUN® TT4E Reamer (ethernet)
Communication protocol	Manual Source/Sink	Signal from PLC
Sprayer comes standard	X	X
Air Motor (0.95 HP)	X	X
Spindle (full stroke distance)	X	X
4-sided v-block for standard size nozzles	X	X
Quick-change base plate	X	X
Daisy chain compatibility to minimize cell wiring		X
Double stroke function		X
Customizable ream cycle		X
Optional wire cutter available*	X	X
Compatible with TOUGH GARD® anti-spatter multi-feed system*	X	X

*SOLD SEPARATELY

COMPONENTS

SPRAYER AND RESERVOIR COMPONENTS

SPECIFICATIONS

Electrical	24 volts DC 2.5 watts
Pneumatic	80-100 psi at 16 CFM

RECOMMENDED FOR USE WITH TOUGH GARD® ANTI-SPATTER LIQUID (PAGE 8)

COMPONENTS

TT4-500-15	Spray Assembly
TT4-500-20	Spray Check Valve Assembly
TT4-1320	Reservoir with Wire Connect
TT4-1320KIT	Reservoir Filter and Tethered Cap
TT4-1325	Reservoir Fluid Level Sensor

CUTTER BLADES

FOR STANDARD DUTY OR HEAVY DUTY CONSUMABLES

RCT-01	5/8" Bore (configurable), single flute
RCT-04	1/2" Bore (configurable), single flute
RCT-13	3/4" Bore (configurable), double flute

ORDERED SEPARATELY

RCT-16	15.5 mm Panasonic® 350A, double flute
RCT-17	16 mm Panasonic® 500A, double flute
RCT-18	15.5 mm 10 Tip Binzel® WH500T, double flute
RCT-20	0.850 Binzel®, double flute
RCT-21	Fronius®, double flute
RCT-D13	13 mm Dinse®, double flute
RCT-D15	15 mm Dinse®, double flute
RCT-D18	18 mm Dinse®, double flute
RCT-D21	21 mm Dinse®, double flute
RC-01	TR Reamer (5/8" Bore), double flute
RC-04	TR Reamer (1/2" Bore), double flute
RC-06	TR Reamer (3/8" Bore), double flute
RC-08	TR Reamer (15.5 mm Bore), double flute
RC-12	TR Reamer (3/4" Bore), double flute

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 BINZEL® IS A REGISTERED TRADEMARK OF ALEXANDER BINZEL GMBH & CO. KG, GERMANY
 FRONIUS® IS A REGISTERED TRADEMARK OF FRONIUS INTERNATIONAL GMBH
 DINSE® IS A REGISTERED TRADEMARK OF DINSE INC.

4-SIDED V-BLOCKS

V-BLOCK PART # NOZZLE OUTSIDE DIAMETER (O.D.) FOR EACH SIDE

TR-2150	0.850"	0.938"	1.062"	1.106"
TR-2161	0.830"	0.978"	0.984"	1.125"
TR-2162	0.875"	0.813"	0.780"	1.000"
TR-2163	0.938"	1.062"	25 mm	21 mm
TR-2164	0.938"	1.062"	1.180"	1.106"
TR-2165	24 mm	26 mm	28 mm	30 mm

(For Panasonic®)

(For Binzel®)



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CUTTER BLADE AND V-BLOCK CHART

Nozzle Part #	Outside Diameter (O.D.)	Reamer Model	V-Block Part #	Cutter Blade Part # #
401-4-50	0.938" (23.8 mm)	TT4*093804	TR-2150	RCT-04
401-42-50	0.938" (23.8 mm)	TT4*093804	TR-2150	RCT-04
401-44-50	0.938" (23.8 mm)	TT4*093804	TR-2150	RCT-04
401-46-50	0.938" (23.8 mm)	TT4*093804	TR-2150	RCT-04
401-48-50	0.938" (23.8 mm)	TT4*093804	TR-2150	RCT-04
401-6-50	1.060" (26.9 mm)	TT4*106004	TR-2150	RCT-04
401-4-62	0.938" (23.8 mm)	TT4*093801	TR-2150	RCT-01
401-46-62	0.938" (23.8 mm)	TT4*093801	TR-2150	RCT-01
401-48-62	1.060" (26.9 mm)	TT4*106001	TR-2150	RCT-01
401-5-62	1.060" (26.9 mm)	TT4*106001	TR-2150	RCT-01
401-6-62	1.060" (26.9 mm)	TT4*106001	TR-2150	RCT-01
401-7-62	1.106" (28.1 mm)	TT4*110601	TR-2150	RCT-01
401-72-62	1.060" (26.9 mm)	TT4*106001	TR-2150	RCT-01
401-8-62	0.938" (23.8 mm)	TT4*093801	TR-2150	RCT-01
401-81-62	1.060" (26.9 mm)	TT4*106001	TR-2150	RCT-01
401-87-62	1.060" (26.9 mm)	TT4*106001	TR-2150	RCT-01
401-9-62	0.938" (23.8 mm)	TT4*093801	TR-2150	RCT-01
401-4-75	0.938" (23.8 mm)	TT4*093812	TR-2150	RCT-13
401-5-75	1.060" (26.9 mm)	TT4*106012	TR-2150	RCT-13
401-6-75	1.060" (26.9 mm)	TT4*106012	TR-2150	RCT-13
401-7-75	1.106" (28.1 mm)	TT4*110612	TR-2150	RCT-13
451-6-50	0.938" (23.8 mm)	TT4*093804	TR-2150	RCT-04
451-1-62	1.060" (26.9 mm)	TT4*106001	TR-2150	RCT-01
451-5-62	0.938" (23.8 mm)	TT4*093801	TR-2150	RCT-01
451-6-62	0.938" (23.8 mm)	TT4*093801	TR-2150	RCT-01
451-61-62	1.060" (26.9 mm)	TT4*106001	TR-2150	RCT-01
451-8-62	0.938" (23.8 mm)	TT4*093801	TR-2150	RCT-01
451-1-75	1.060" (26.9 mm)	TT4*106012	TR-2150	RCT-13
451-6-75	0.938" (23.8 mm)	TT4*093812	TR-2150	RCT-13
650-5-62	1.060" (26.9 mm)	TT4*106001	TR-2150	RCT-01
650-6-62	1.060" (26.9 mm)	TT4*106001	TR-2150	RCT-01
650-5-75	1.060" (26.9 mm)	TT4*106012	TR-2150	RCT-13
650-6-75	1.060" (26.9 mm)	TT4*106012	TR-2150	RCT-13
651-5-62	1.060" (26.9 mm)	TT4*106001	TR-2150	RCT-01
651-6-62	1.060" (26.9 mm)	TT4*106001	TR-2150	RCT-01
651-5-75	1.060" (26.9 mm)	TT4*106012	TR-2150	RCT-13
651-6-75	1.060" (26.9 mm)	TT4*106012	TR-2150	RCT-13
No Cutter/ No V-Block	—	TT4*XXXXXX	—	—

*PLACEHOLDER FOR COMMUNICATION TYPE; CHOOSE "A" FOR ANALOG MODEL; "E" FOR ETHERNET MODEL

COMPONENTS [CONTINUED]



SPRAY CONTAINMENT — Now Standard!

Improve the working quality of the cell environment. Helps keep areas dry and maintains the cleanliness of the cell. Spray containment ensures anti spatter is captured in an enclosed basin.

TT4-SC-100 TOUGH GUN® TT4 Reamer Spray Containment
663-1-3 TOUGH GUN® TT4 Reamer Spray Containment Hose



MOTOR LUBRICATOR — Now Standard!

This dedicated motor lubricator maximizes performance and protects your 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, now standard.

TT4-2250 TOUGH GUN® TT4 Reamer Motor Lubricator with Fittings



RESERVOIR — Now Standard With Double the Fluid Capacity!

Reservoir mounts directly to the reamer frame for increased durability and protection. All reservoirs contain a built in low fluid level indicator which alerts operators when anti spatter fluid is running low. Includes tethered cap and a removable filter.

TT4-1320 TOUGH GUN® TT4 Reservoir with Wire Connector

ADDITIONAL OPTIONS



WIRE CUTTER

The TOUGH GUN® Wire Cutter from Tregaskiss® removes the ball at the end of the welding wire to provide smooth arc starts and consistent wire stick-out (ideal for Touch Sensing). This system cuts a variety of wire types, including stainless steel, aluminum and flux-core, in sizes up to 1/16" (1.6 mm).

WC-400 TOUGH GUN® Wire Cutter
WC-400C TOUGH GUN® Wire Cutter with shroud (recommended for use in cobot welding applications)



NOZZLE DETECT

Nozzle Detect for the TT4 Reamer uses a proximity sensor mounted on the side of the reamer that can be used independent of the ream cycle. The robot positions the front end of the MIG gun close to the sensor to detect the presence of the 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.

TT3E-2344 Proximity Sensor for Nozzle Detect
519-2 8-pin, 5m cordset

ACCESSORIES



TOUGH GUN® REAMER STAND [OPTIONAL]

Tregaskiss® provides a competitively priced, simple fixed height durable stand for all TOUGH GUN® TT4 Reamer models. TOUGH GUN® reamer stands are available in heights between 18 and 36 inches in 6-inch increments.

RST-18	18-inch height
RST-24	24-inch height
RST-30	30-inch height
RST-36	36-inch height



TOUGH GARD® MULTI-FEED SYSTEM

Eliminate the need to frequently refill sprayer reservoirs with the TOUGH GARD® multi-feed system from Tregaskiss®. Feed up to 10 TOUGH GUN® reamer units from a single 5-gallon or 55-gallon drum of TOUGH GARD® anti-spatter liquid.

- All TOUGH GUN® TT4 reamer units are multi-feed ready by removing the sprayer reservoir and adding a multi-feed plate
- Can be gravity fed by elevating the position of TOUGH GARD® liquid source
- Does not require a pump or power
- A low fluid-level indicator displays when pail or drum requires refilling
- Quick-connects allow fast and easy connection to nozzle cleaners
- Increased safety — eliminates the need for operators to enter robotic cells if pails or drums are located outside
- Each circuit has a dedicated check valve to reduce the risk of poor connections causing leaks

TOUGH GARD® MULTI-FEED ADAPTER

TT4-MF-100 Multi-Feed Adapter

TOUGH GARD® MULTI-FEED SYSTEM

TG-103-05-2 for 5 Gallon Pail (up to 2 Reamer Units)

TG-103-05-10 for 5 Gallon Pail (up to 10 Reamer Units)

TG-103-55-10 for 55 Gallon Drum (up to 10 Reamer Units)

TOUGH GARD® MULTI-FEED SYSTEM HOSE (sold separately)

TG-103-100 100' Multi-Feed Hose (UV Rated)

TG-103-200 200' Multi-Feed Hose (UV Rated)

REAMER TEST BOX

Troubleshoot your TOUGH GUN® TT4A (analog) reamer robotic nozzle cleaning station quickly and easily with the reamer test box. This test box comes with a 6-foot, 5-pin cordset which allows you to test your reamer from a safe distance to troubleshoot the following:

- Ream cycle
- SINK/SOURCE function(s)
- Anti-spatter liquid fluid level signal
- Wire cutter operation (if equipped)
- Nozzle detect function (if equipped)

RT-1000 Reamer Test Box



ACCESSORIES [CONTINUED]

TOUGH GARD® ANTI-SPATTER LIQUID



This ready-to-use water-soluble, non-toxic product creates a sacrificial surface that reduces spatter adhesion. This prolongs the life of your consumables and minimizes downtime due to nozzle cleaning which can help reduce your operating and maintenance costs.

3 YEAR

EXTENDED WARRANTY
WHEN REAMER IS USED EXCLUSIVELY
WITH TOUGH GARD® ANTI-SPATTER
LIQUID

TG-101-14S	16.9 fl. oz. / 500 mL
TG-101-32SP	32 fl. oz. / 946 mL (spray bottle)
TG-101-01	1 U.S. Gallon / 3.78 L
TG-101-05	5.28 U.S. Gallon / 20 L
TG-101-55	55 U.S. Gallon / 208 L

FILTER/REGULATOR



The Filter/Regulator unit from Tregaskiss® is another recommended accessory that helps extend the life of your TOUGH GUN® TT4 Reamer. Must be ordered separately.

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.

TT-FR-SMC Filter/Regulator

ORDERING INFORMATION

Model			Version	V-Block	Cutter Blade	Option 1	Option 2
T	T	4	A	0938	01	S	L
			A Analog E Ethernet	0938 0.938" (23.8 mm) Nozzle O.D. 1000 1.000" (25.4 mm) Nozzle O.D. 1060 1.062" (26.9 mm) Nozzle O.D. 1106 1.106" (28.1 mm) Nozzle O.D. XXXX No V-Block	01 5/8" (15.9 mm) Bore Standard or HD Consumables 04 1/2" (12.7 mm) Bore Standard or HD Consumables 13 3/4" (19.1 mm) Bore Standard, HD or Robotic Water-Cooled Consumables XX No Cutter	<u>Robotic Applications</u> S Sprayer (standard) W Sprayer + wire cutter N Sprayer + nozzle detect P Sprayer + nozzle detect + wire cutter <u>Cobot Applications</u> B Sprayer (standard) C Sprayer + wire cutter D Sprayer + nozzle detect A Sprayer + nozzle detect + wire cutter	L Lubricator

Configure your TOUGH GUN® TT4 reamer or reverse lookup your existing TT4 reamer part number to find your replacement parts list!-

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