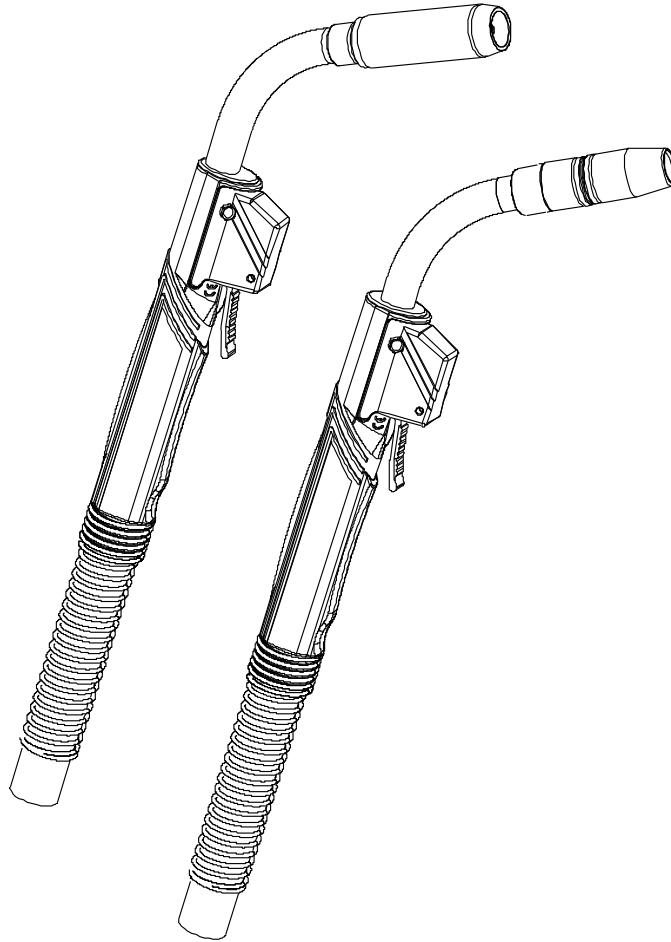




# SPEC SHEET

For 450 amp and 600 amp  
**T-Gun™ Semi-Automatic Water-Cooled MIG Guns**



## AMPERAGE RATINGS

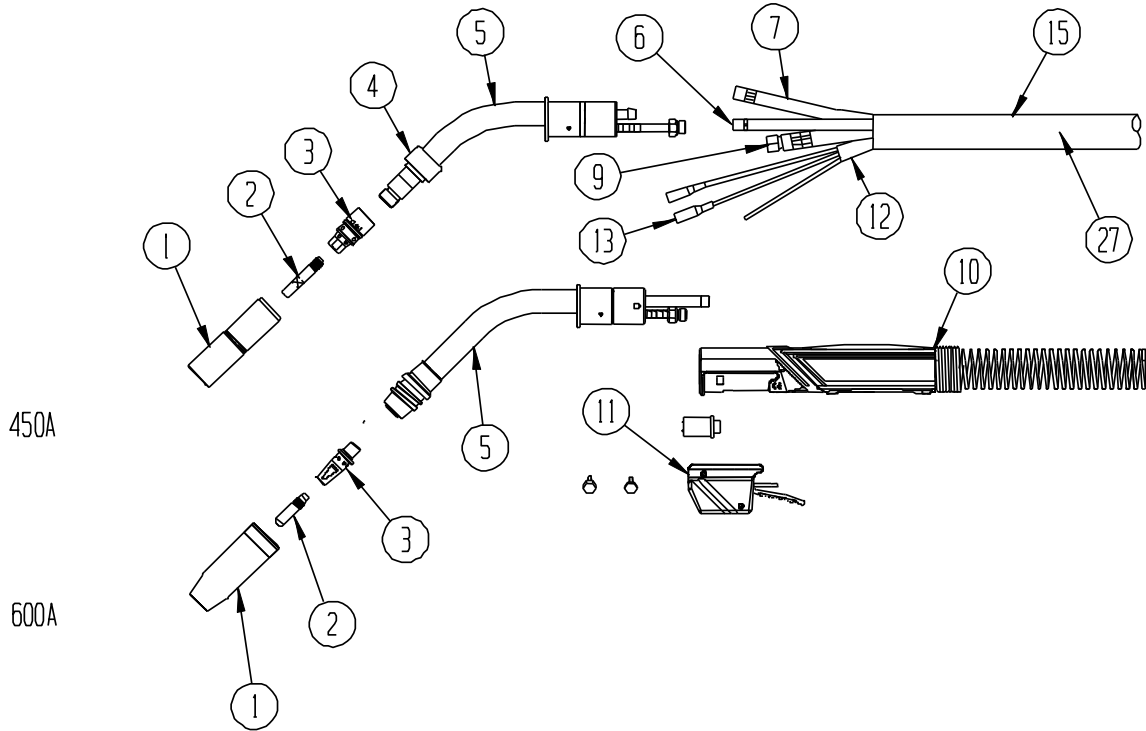
GUN MODEL	60% DUTY CYCLE – MIXED GASES OR 100% DUTY CYCLE – CO <sub>2</sub>
450 amp	450
600 amp	600

*NOTE: Ratings are based on tests that comply with IEC 60974-4 standards.*

## STANDARD PARTS

GUN MODEL	NECK	NOZZLE	RETAINING HEAD	NECK INSULATOR	CONTACT TIPS
450 amp	455-45	451-6-62	454-1	452-1	403-1
600 amp	595-60	601-6-62	404-38	452-1	403-20

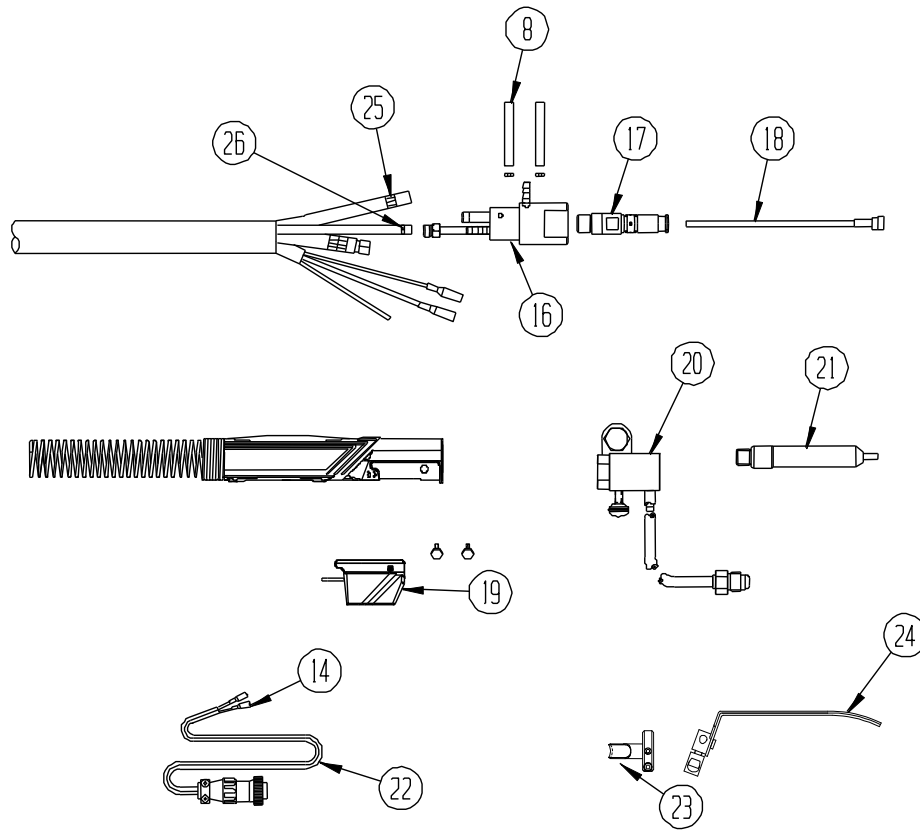
# EXPLODED VIEW AND PARTS LIST



Numbers in this column correspond to the exploded view images above.

PART #	DESCRIPTION	
	450 AMP	600 AMP
1		<b>STANDARD NOZZLES</b> 3/8" (10 mm) BORE - FLUSH TIP
	401-5-62	601-5-62 1/2" (16 mm) BORE - 1/8" (3 mm) TIP RECESS
	401-5-75	601-5-75 5/8" (16 mm) BORE - 1/4" (6 mm) TIP RECESS
	401-6-62	601-6-62 3/4" (19 mm) BORE - 1/4" (6 mm) TIP RECESS
	401-6-75	601-6-75 5/8" (16 mm) BORE - 1/8" (3 mm) TIP RECESS (STD)
	401-8-62	601-8-62 3/4" (19 mm) BORE - 1/8" (3 mm) TIP RECESS
		601-5-75-3 5/8" (16 mm) BORE - 1/8" (3 mm) TIP STICK-OUT NOZZLE INSULATOR (CERAMIC) ALL 601 NOZZLE'S ABOVE
		<b>HEAVY DUTY NOZZLES</b>
	401-1-62	5/8" (16 mm) BORE - 1/4" (6 mm) TIP RECESS
	401-1-75	3/4" (19 mm) BORE - 1/4" (6 mm) TIP RECESS
2		<b>HEAVY DUTY TREGASKISS™ TOUGH LOCK™ CONTACT TIPS - 5/16" (7.9 mm) O.D.</b>
	403-20-30	403-20-30 FOR .030" (0.8 mm) WIRE
	403-20-35	403-20-35 FOR .035" (0.9 mm) WIRE
	403-20-1.0	403-20-1.0 FOR 1 mm WIRE
	403-20-45	403-20-45 FOR .045" (1.2 mm) WIRE
	403-20-364	403-20-364 FOR 3/64" (1.2 mm) WIRE
	403-20-1.4	403-20-1.4 FOR 1.4 mm WIRE
	403-20-52	403-20-52 FOR .052" (1.3 mm) WIRE
	403-20-116	403-20-116 FOR 1/16" (1.6 mm) WIRE
	403-20-1.8	403-20-1.8 FOR 1.8" (1.8 mm) WIRE
	403-20-564	403-20-564 FOR 5/64" (2.0 mm) WIRE
	403-20-332	403-20-332 FOR 3/32" (2.4 mm) WIRE
		HEAVY DUTY CONVENTIONAL CONTACT TIPS - 5/16" O.D.
	403-1-35	FOR .035" (0.8 mm) WIRE
	403-1-1.0	FOR 1 mm WIRE
	403-1-45	FOR .045" (1.2 mm) WIRE
	403-1-52	FOR .052" (1.3 mm) WIRE
	403-1-116	FOR 1/16" (1.6 mm) WIRE
	403-1-564	FOR 5/64" (2.0 mm) WIRE
	403-1-332	FOR 3/32" (2.4 mm) WIRE
	403-1-364	FOR 3/64" (1.2 mm) ALUMINUM WIRE
	403-1-1.8	FOR 1/16" (1.8 mm) ALUMINUM WIRE
3	454-1	CONVENTIONAL RETAINING HEAD - FOR HD TIPS (STD)
	404-20	TREGASKISS TOUGH LOCK RETAINING HEAD - FOR HD TIPS
	404-3	HEAVY DUTY CONVENTIONAL RETAINING HEAD
	454-1-2	RETAINING RING
		404-38 DIFFUSER - FOR HD TREGASKISS TOUGH LOCK (STD)
	402-6	N/A O-RING FOR TREGASKISS TOUGH LOCK RETAINING HEAD

PART #	DESCRIPTION	
	450 AMP	600 AMP
4	452-1	NECK INSULATOR (CONVENTIONAL)
	452-3	NECK INSULATOR (not shown TREGASKISS TOUGH LOCK)
5		<b>NECKS (C/W (1) 656-1 AND (1) 657-1 CLAMP</b>
	455-45	595-45 NECK - 45°
	455-60	595-60 NECK - 60°
	455-180	595-180 NECK - 180° STRAIGHT
		652-8 O-RING (SMALL, quantity 2)
	495-7	O-RING (LARGE, quantity 4)
		652-5 O-RINGS (3)
6		<b>INTERNAL WATER LINE (C/W (2) 656-1 CLAMPS)</b>
	656-15	656-15 15' SERVICE (CUT TO SIZE FOR OTHER LENGTHS)
7		<b>CONDUIT (C/W (2) 657-1 CLAMPS)</b>
	657-15	657-15 15' SERVICE (CUT TO SIZE FOR OTHER LENGTHS)
8	658	658 RED WATER LINE - OUT (c/w (1) 656-1 clamp)
	658-1	658-1 BLUE WATER LINE - IN (c/w (1) 656-1 clamp) (Located at quick connect power block assembly).
9		<b>POWER CABLE ASSEMBLY</b>
	659-10	659-10 10' SERVICE (ACTUAL LENGTH - 9.5')
	659-12	659-12 12' SERVICE (ACTUAL LENGTH - 11.5')
	659-15	659-15 15' SERVICE (ACTUAL LENGTH - 14.5')
10	610	610 HANDLE - FRONT (c/w mounting screws)
	610	610 HANDLE - REAR
11	411-1	411-1 SWITCH ONLY
	411-2	411-2 SWITCH HOUSING (c/w mounting screws)
	411-3M	411-3M MOUNTING SCREW
	411-4	411-4 LOCK-ON TRIGGER HOUSING
	411-12	411-12 DUAL SCHEDULE SWITCH HOUSING
	411-13	411-13 LOCK-ON TRIGGER HOUSING
	411-23	411-23 EXTENDED LEVER
	411-11	411-11 TWO POSITION SWITCH - HOUSING ONLY



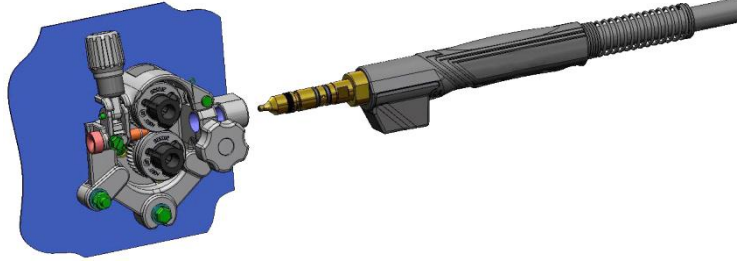
PART #	DESCRIPTION		
	450 AMP	600 AMP	
12	662-10	662-10	CONTROL WIRE
	662-15	662-15	10' SERVICE
	662-15	662-15	12' SERVICE
	662-15	662-15	15' SERVICE
			<b>DUAL SCHEDULE CONTROL WIRE</b>
	662-210	662-210	10' SERVICE
	662-212	662-212	12' SERVICE
	662-215	662-215	15' SERVICE
13	412-1	412-1	SWITCH LEAD CONNECTOR
14	412-4	412-4	CONTROL PLUG LEAD
15			OUTER JACKET
	663-1-15	663-1-15	15' SERVICE
16	664-400	664-400	POWER PIN BLOCK
17	214	214	TWECO® #4
	214-2	214-2	LINCOLN®
	214-4	214-4	L-TEC® MT SERIES®
	214-6-116	214-6-116	MILLER®
	214-7	214-7	LINCOLN SHORT
	214-12	214-12	TWECO #5
	214-13	214-13	PANASONIC®
	414-1	414-1	O-RING
	414-2	414-2	LINER SET SCREW
	414-11-2	414-11-2	O-RING FOR MILLER POWER PIN
18			<b>TREGASKISS QUICK LOAD™ LINERS</b>
	415-26	415-26	<b>LINER RETAINER (Sold Separately)</b>
	415-35-10Q	415-35-10Q	FOR .035"-.045" (0.9 mm-1.2 mm) WIRE - 10' (3 m)
	415-35-15Q	415-35-15Q	FOR .035"-.045" (0.9 mm-1.2 mm) WIRE - 15' (5 m)
	415-35-25Q	415-35-25Q	FOR .035"-.045" (0.9 mm-1.2 mm) WIRE - 25' (8 m)
	415-116-10Q	415-116-10Q	FOR .045"-1/16" (1.2 mm-1.6 mm) WIRE - 10' (3 m)
	415-116-15Q	415-116-15Q	FOR .045"-1/16" (1.2 mm-1.6 mm) WIRE - 15' (5 m)
	415-116-25Q	415-116-25Q	FOR .045"-1/16" (1.2 mm-1.6 mm) WIRE - 25' (8 m)

PART #	DESCRIPTION		
	450 AMP	600 AMP	
			<b>CONDUIT LINERS</b>
	415-23-15	415-23-15	FOR .023" (0.6 mm) WIRE-15' (5 m)
	415-30-15	415-30-15	FOR .030" (0.8 mm) WIRE-15' (5 m)
	415-35-10	415-35-10	FOR .035" - .045" (0.9 mm-1.2 mm) WIRE - 10' (3 m)
	415-35-15	415-35-15	FOR .035" - .045" (0.9 mm-1.2 mm) WIRE - 15' (5 m)
	415-35-25	415-35-25	FOR .035" - .045" (0.9 mm-1.2 mm) WIRE - 25' (8 m)
	415-35-2	415-35-2	FOR .035" (0.9 mm) ALUMINUM WIRE - 15' (5 m)
	415-116-10	415-116-10	FOR .045" - 1/16" (1.2 mm-1.6 mm) WIRE - 10' (3 m)
	415-116-15	415-116-15	FOR .045" - 1/16" (1.2 mm-1.6 mm) WIRE - 15' (5 m)
	415-116-25	415-116-25	FOR .045" - 1/16" (1.2 mm-1.6 mm) WIRE - 25' (8 m)
	415-116-22	415-116-22	FOR 3/64" - 1/16" (1.2 mm-1.6 mm) ALUM. WIRE-15' (5 m)
	*415-25	*415-25	*BRONZE JUMP LINER, MUST USE 414-9 GUIDE CAP ON MILLER STYLE POWER PIN
	415-332-15	415-332-15	FOR 5/64" - 3/32" (2 mm-2.4 mm) WIRE - 15' (5 m) Flat Wd
	415-332-153	415-332-153	FOR 5/64"-3/32" (2 mm-2.4 mm) WIRE-15' (5 m) Round Wd
	415-332-251	415-332-251	FOR 5/64"-3/32" (2 mm-2.4 mm) WIRE-15' (5 m) Round Wd
	415-564-15	415-564-15	FOR all 5/64" (2 mm) WIRE & 1/16" (1.6 mm) flux core wire
	415-332-15	415-332-15	For .078-3/32 (2.24 mm) WIRE - 15' (5 m) FLAT WD
19	416-5	416-5	CONTROL HOUSING (C/W SCREWS)
	411-3M	411-3M	MOUNTING SCREWS (METRIC)
20			<b>FEEDER ADAPTOR REQUIREMENTS (Sold Separately)</b>
	417	417	QUICK CONNECT BLOCK ASSEMBLY TWECO #4
21			<b>FEEDER ADAPTORS (To be used with Quick Connect Block)</b>
22			<b>CONTROL PLUGS (c/w Plugs Lead &amp; Female Connectors)</b>
			<b>OPTIONAL ACCESSORIES</b>
23	422		GUN HANGER
24	421		<b>HEAT SHIELD - 450 AMP ONLY</b>
	421-1		SHIELD MOUNTING SCREW
25	657-1	657-1	OETIKER CLAMP - 11.3mm
26	656-1	656-1	OETIKER CLAMP - 9.5mm
27	661-XX	661-XX	CABLE BUNDLE - XX = LENGTH

# INSTALLING MIG GUN INTO A FEEDER

## For most power pins

1. Insert power pin to shoulder and secure.
2. Insert control plug to control housing of gun.
3. Insert control plug into feeder.
4. Feed welding wire into power pin by hand and tighten drive rolls.



Note: On Lincoln feeders it is necessary to connect the gas hose to the barbed fitting on the power pin.

## GENERAL SAFETY

Before installation or operation of T-Gun MIG Guns, please read the safety precautions listed below.

1. Always wear a properly fitted welding helmet with the proper grade of filter plate and suitable welding gloves.
2. All exposed skin should be covered with flame resistant, protective clothing. **DO NOT WEAR CLOTHING MADE FROM FLAMMABLE SYNTHETIC FIBERS.**
3. Protective screens or barriers should be used to protect others from spatter, flash and glare while welding.
4. Prevent fires by ensuring that hot slag or sparks do not contact combustible solids, liquids or gases.
5. Ensure that operator's head is not too close to the arc and that adequate ventilation is available.
6. Constant repetitive motion may lead to cumulative trauma disorders.
7. Do not touch live electrical parts. The following should be checked to prevent electrical shock:
  - Equipment is adequate for the job, properly grounded and installed according to code.
  - Faulty or damaged equipment is repaired or replaced.
  - Proper operator maintenance is performed to prevent excess spatter accumulation in the nozzle, or the contact tip or other areas of the gun.
  - Electrical insulating components are in place and not damaged. Repair or replace if necessary.
  - Operator and surroundings are not wet.
  - Cables are not wrapped around operator's body.
  - Equipment is off when not in use.
8. 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.
9. 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.)



## FOR ADDITIONAL TECHNICAL DATA:

For additional Technical Data, including installation, maintenance, neck dimensions, options, accessories and troubleshooting, please visit the Technical Support section of the Bernard website at [BernardWelds.com](http://BernardWelds.com).



### For Customer Support:

U.S.A                      800-946-2281  
International            708-946-2281  
[BernardWelds.com](http://BernardWelds.com)

M008 REV B 09/12