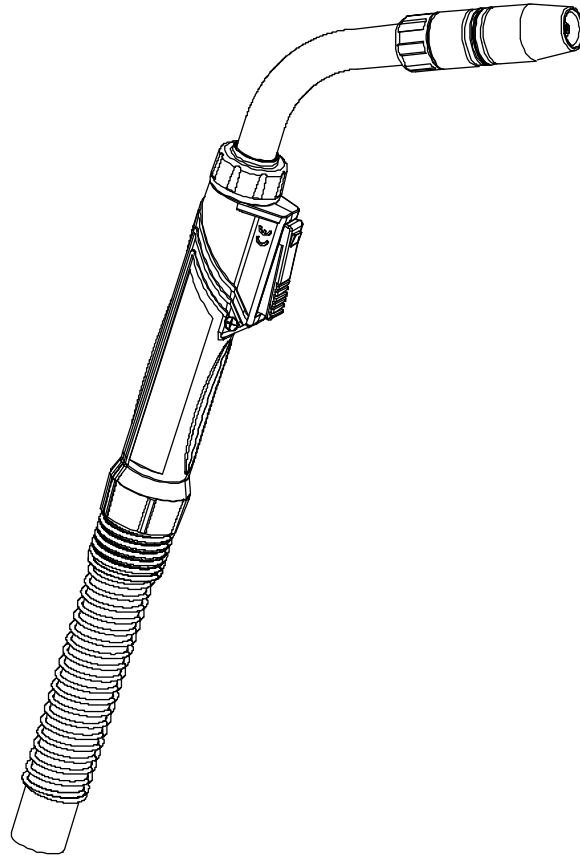




PARTS GUIDE

For 400 amp
Semi-Automatic Compact Series
Water-Cooled MIG Guns



AMPERAGE RATINGS

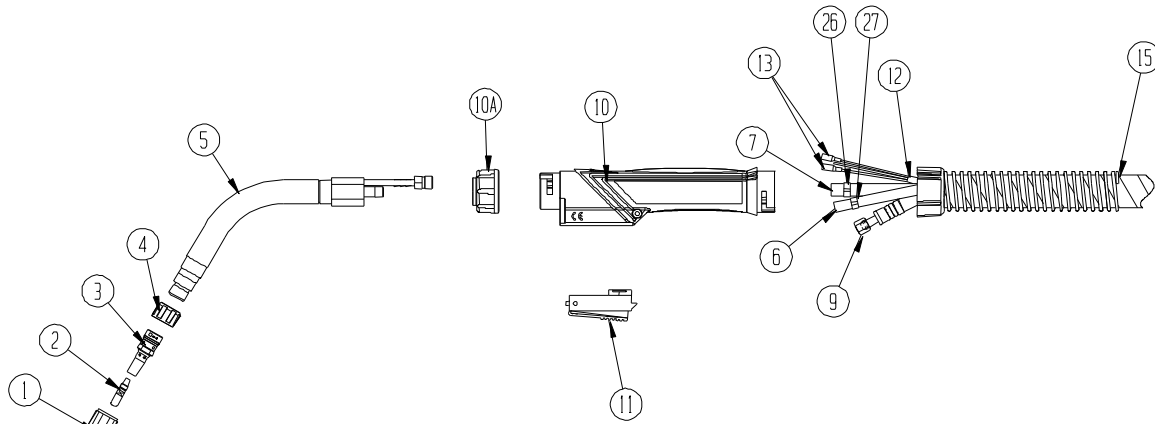
GUN MODEL	60% DUTY CYCLE - MIXED GASES OR 100% DUTY CYCLE - CO ₂
400 amp	425 amp

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

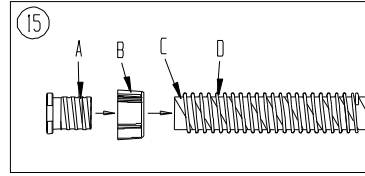
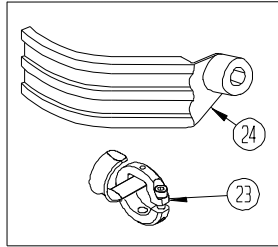
STANDARD PARTS

GUN MODEL	GOOSENECK	NOZZLE	RETAINING HEAD	GOOSENECK INSULATOR	CONTACT TIPS
400 amp	455-60	401-6-62	404-20	402-7	403-20-XX

EXPLODED VIEW AND PARTS LIST



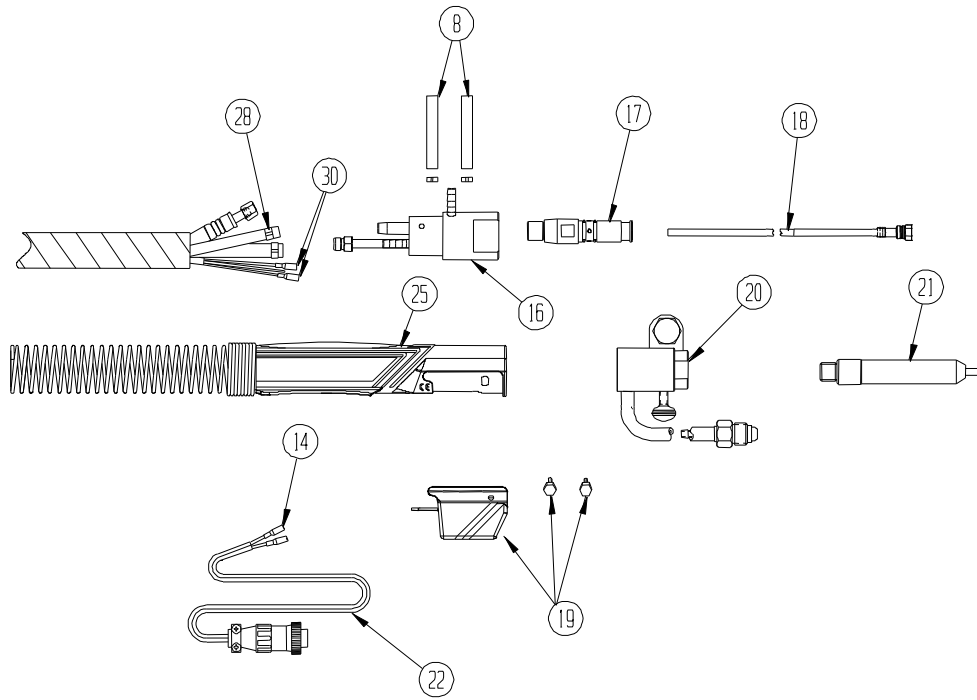
OPTIONAL ACCESSORIES



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

ITEM	PART #	DESCRIPTION		
1	401-40-38	STANDARD NOZZLES (SELF-INSULATED)		
	401-4-38	SUPER TAPERED NOZZLE - 3/8" BORE (BRASS)		
	401-4-50	3/8" (10 mm) BORE - FLUSH TIP		
	401-4-62	1/2" (13 mm) BORE - 1/8" (3 mm) TIP RECESS		
	401-4-75	5/8" (16 mm) BORE - 1/8" (3 mm) TIP RECESS		
	401-4-75	3/4" (19 mm) BORE - 1/8" (3 mm) TIP RECESS		
	401-8-62	SHORT ARC NOZZLE		
		401-8-62	5/8" (16 mm) BORE - 1/8" (3 mm) TIP STICKOUT	
		401-5-62	HEAVY DUTY NOZZLES (SELF-INSULATED)	
			401-5-62	5/8" (16 mm) BORE - 1/4" (6 mm) TIP RECESS
		401-5-75	3/4" (19 mm) BORE - 1/4" (6 mm) TIP RECESS	
		401-6-50	1/2" (13 mm) BORE - 1/8" (3 mm) TIP RECESS	
		401-6-62	5/8" (16 mm) BORE - 1/8" (3 mm) TIP RECESS	
		401-6-75	3/4" (19 mm) BORE - 1/8" (3 mm) TIP RECESS	
401-7-62		5/8" (16 mm) BORE - 1/4" (6 mm) TIP RECESS (BRASS)		
401-7-87		7/8" (22 mm) BORE - 1/4" (6 mm) TIP RECESS (BRASS)		
2	HEAVY DUTY TOUGH LOCK™ CONTACT TIPS 5/16" (7.9 mm) O.D.			
	403-20-30	FOR .030" (0.8 mm) WIRE		
	403-20-35	FOR .035" (0.9 mm) WIRE		
	403-20-1.0	FOR 1 mm WIRE		
	403-20-45	FOR .045" (1.2 mm) WIRE		
	403-20-364	FOR 3/64" (1.2 mm) WIRE		
	403-20-1.4	FOR 1.4 mm WIRE		
	403-20-52	FOR .052" (1.3 mm) WIRE		
	403-20-116	FOR 1/16" (1.6 mm) WIRE		
	403-20-564	FOR 5/64" (2.0 mm) WIRE		
	403-20-332	FOR 3/32" (2.4 mm) WIRE		
	HEAVY DUTY TAPERED TOUGH LOCK CONTACT TIP 5/16" (7.9 mm) O.D.			
	403-21-30	FOR .030" (0.8 mm) WIRE		
	403-21-35	FOR .035" (0.9 mm) WIRE		
	403-21-1.0	FOR 1 mm WIRE		
	403-21-45	FOR .045" (1.2 mm) WIRE		

ITEM	PART #	DESCRIPTION
3	404-20	TOUGH LOCK™ RETAINING HEAD - FOR HD TIPS
	454-1-2	RETAINING RING
	402-6	O-RING
4	402-7	GOOSENECK INSULATOR
5	GOOSENECKS (INCL. C/W (1) 357-2 AND (1) 413-5 CLAMP)	
	445-45	GOOSENECK - 45°
	445-60	GOOSENECK - 60°
6	656-15	INTERNAL WATER LINE (INCL. C/W (1) 357-2 CLAMP FOR FRONT & (1) 656-1 CLAMP FOR REAR) 15' SERVICE (CUT FOR OTHER LENGTHS)
7	657-15	CONDUIT (INCL. C/W (2) 657-1 CLAMPS) 15' SERVICE (CUT FOR OTHER LENGTHS)
8	658	RED WATER LINE - OUT (C/W (1) 656-1 CLAMP)
	658-1	BLUE WATER LINE - IN (C/W (1) 656-1 CLAMP) (LOCATED AT QUICK CONNECT POWER BLOCK ASSEMBLY)
9	POWER CABLE ASSEMBLY	
	659-10	10' SERVICE (ACTUAL LENGTH - 9.5')
	659-12	12' SERVICE (ACTUAL LENGTH - 11.5')
	659-15	15' SERVICE (ACTUAL LENGTH - 14.5')
10	320	HANDLE - FRONT
10A	320-2	HANDLE LOCK NUT (FOR FRONT)
11	211-5	SWITCH ASSEMBLY
	211-5-8	SWITCH WITH EXTENDED LEVER
12	CONTROL WIRE	
	662-10	10' SERVICE
	662-15	12' SERVICE
	662-15	15' SERVICE



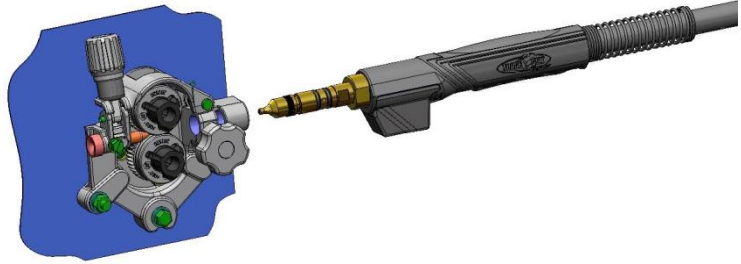
PART #	DESCRIPTION
13	412-8 SWITCH LEAD CONNECTOR
15	642-XX OUTER JACKET ASSEMBLY
15A	320-5 JACKET BUSHING
15B	320-4 REAR HANDLE CAP
15C	663-1-XX OUTER JACKET
15D	663-1 STRAIN RELIEF
16	664-400 POWER PIN BLOCK
17	214 TWECO® 214-2 LINCOLN® 214-6-116 MILLER® 214-12 TWECO® 5 214-13 PANASONIC® 414-1 O-RING FOR TWECO 414-2 LINER SET SCREW 414-11-2 O-RING FOR MILLER® POWER PIN 214-6-9 MILLER (FOR ALUMINUM)
18	CONVENTIONAL LINERS 415-23-15 FOR .023" (0.6 mm) WIRE - 15' (5 m) 415-30-15 FOR .030" (0.8 mm) WIRE - 15' (5 m) 415-35-10 FOR .035" - .045" (0.9 mm - 1.2 mm) WIRE - 10' (3 m) 415-35-15 FOR .035" - .045" (0.9 mm - 1.2 mm) WIRE - 15' (5 m) 415-35-25 FOR .035" - .045" (0.9 mm - 1.2 mm) WIRE - 25' (8 m) 415-35-2 FOR .035" (0.9 mm) ALUMINUM WIRE - 15' (5 m) 415-116-10 FOR .045" - 1/16" (1.2 mm - 1.6 mm) WIRE - 10' (3 m) 415-116-15 FOR .045" - 1/16" (1.2 mm - 1.6 mm) WIRE - 15' (5 m) 415-116-25 FOR .045" - 1/16" (1.2 mm - 1.6 mm) WIRE - 25' (8 m) 415-116-2 FOR 3/64" - 1/16" (1.2 mm - 1.6 mm) ALUM. WIRE - 15' (5 m) 415-332-15 FOR 5/64" - 3/32" (2.0 mm - 2.4 mm) WIRE - 15' (5 m) FLAT WOUND 415-332-153 FOR 5/64" - 3/32" (2.0 mm - 2.4 mm) WIRE - 15' (5 m) ROUND WOUND 415-332-251 FOR 5/64" - 3/32" (2.0 mm - 2.4 mm) WIRE - 15' (5 m) ROUND WOUND 415-332-25 FOR 5/64" - 3/32" (2.0 mm - 2.4 mm) WIRE - 25' (8 m) FLAT WOUND 415-564-15 FOR ALL 5/64" (2.0 mm) WIRE & 1/16" (1.6 mm) FLUX CORE WIRE 415-332-15 FOR .078" - 3/32" (2.24 mm) WIRE - 15' (5 m) FLAT WOUND 415-1M LINER O-RING 415-25 JUMP LINER 415-45-01 FOR .035" - 3/64" WIRE - 6' 415-45-02 FOR .035" - 3/64" WIRE - 10' 415-45-03 FOR .035" - 3/64" WIRE - 15' 415-116-21 FOR 3/64" - 1/16" WIRE - 6' 415-116-22 FOR 3/64" - 1/16" WIRE - 10' 415-116-23 FOR 3/64" - 1/16" WIRE - 15'

PART #	DESCRIPTION
	QUICK LOAD™ LINERS (LINER AND RETAINER SOLD SEPARATELY)
415-26	LINER RETAINER
415-35-6Q	FOR .035" - .045" (0.9 mm - 1.2 mm) WIRE - 6' (1.8 m)
415-35-10Q	FOR .035" - .045" (0.9 mm - 1.2 mm) WIRE - 10' (3 m)
415-35-15Q	FOR .035" - .045" (0.9 mm - 1.2 mm) WIRE - 15' (5 m)
415-35-25Q	FOR .035" - .045" (0.9 mm - 1.2 mm) WIRE - 25' (8 m)
415-116-6Q	FOR .045" - 1/16" (1.2 mm - 1.6 mm) WIRE - 6' (1.8 m)
415-116-10Q	FOR .045" - 1/16" (1.2 mm - 1.6 mm) WIRE - 10' (3 m)
415-116-15Q	FOR .045" - 1/16" (1.2 mm - 1.6 mm) WIRE - 15' (5 m)
415-116-25Q	FOR .045" - 1/16" (1.2 mm - 1.6 mm) WIRE - 25' (8 m)
19	416-15 EURO HOUSING BLANK (C/W SCREWS) 416-5 CONTROL HOUSING (C/W SCREWS) 411-3M MOUNTING SCREWS (METRIC)
20	FEEDER ADAPTOR REQUIREMENTS (SOLD SEPARATELY) 417 QUICK CONNECT BLOCK ASSEMBLY TWECO #4 417-50 QUICK CONNECT BLOCK ASSEMBLY EURO 417-60 QUICK CONNECT BLOCK ASSEMBLY TWECO #5
21	FEEDER ADAPTORS (TO BE USED WITH QUICK CONNECT BLOCK)
22	CONTROL PLUGS (C/W PLUGS LEAD & FEMALE CONNECTORS)
	OPTIONAL ACCESSORIES
23	422 GUN HANGER
24	421 HEAT SHIELD
25	610 HANDLE (REAR W/STRAIN RELIEF)
	REPLACEMENT CABLE BUNDLES
	661-10 10 FT. CABLE BUNDLE
	661-12 12 FT. CABLE BUNDLE
	661-15 15 FT. CABLE BUNDLE
26	413-5 OETIKER CLAMP - 11.3 mm
27	357-2 OETIKER CLAMP - 8.7 mm
28	656-1 OETIKER CLAMP - 9.5 mm
30	412-1 SWITCH LEAD CONNECTOR

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.
5. If using a water-cooled gun, securely clamp blue hose on rear housing to water-out on water cooler and red hose on rear housing to water-in on water cooler.



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 TOUGH GUN MIG Torches, 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 his 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, gooseneck dimensions, options, accessories and troubleshooting, please visit the Technical Support section of the Tregaskiss website at www.tregaskiss.com.



For Technical Support:

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

International Phone: +1-519-737-3000

Email: techservices@tregaskiss.com

www.tregaskiss.com

TREGASKISS is an industry leader in the development and manufacture of semi-automatic and robotic MIG welding guns and robotic peripherals.

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