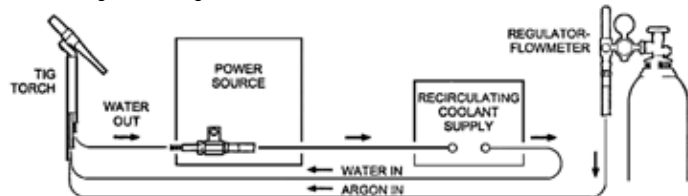


**WARRANTY:** CK Worldwide, Inc. warrants products manufactured by CK Worldwide, Inc. to be free of defects in materials and workmanship. CK Worldwide, Inc. limits this warranty to replacement of the product or parts thereof and excludes liability for injury, property damage or economic loss attributable to product use or misuse. In any event, CK Worldwide, Inc. will only be responsible for its products when used with accessory items manufactured by CK Worldwide, Inc.

**INSTALLATION:** Before using this torch, - tighten regulator, hose and power cable fittings with proper wrenches. Using small pliers, securely tighten all knurled hose fittings (Slide the torch handle back for access to the torch connections). Purge the regulator and TIG torch with inert gas at 20 cubic feet per hour. Following these steps will ensure contamination free welds. Repeat this procedure whenever torch or regulator fittings have been detached.

**CONNECTION DIAGRAM:**

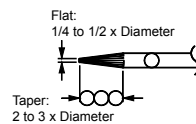


**INFORMATION CHART:**

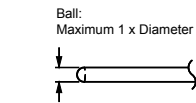
Electrode Diameter in inches (mm)	Cup Size	WELDING CURRENT (AMPS) - TUNGSTEN TYPE				ARGON FLOW - FERROUS METALS		ARGON FLOW - ALUMINUM	
		AC Pure	AC Thoriated	DCSP Pure	DCSP Thoriated	Standard Body (Liters)	Gas Lens Body (Liters)	Standard Body (Liters)	Gas Lens Body (Liters)
.020 (0.50)	4 or 5	5 - 15	5 - 20	5 - 15	5 - 20	5-8 (3-4)	5-8 (3-4)	5-8 (3-4)	5-8 (3-4)
.040 (1.00)	4 or 5	10 - 60	15-80	15 - 70	20 - 80	5-10 (3-5)	5-8 (3-4)	5-12 (3-6)	5-10 (3-5)
1/16 (1.60)	4, 5 or 6	50 - 100	70 - 150	70 - 130	80 - 150	7-12 (4-6)	5-10 (3-5)	8-15 (4-7)	7-12 (4-6)
3/32 (2.40)	6, 7 or 8	100 - 160	140 - 235	150 - 220	150 - 250	10-15 (5-7)	8-10 (4-5)	10-20 (5-10)	10-15 (5-7)
1/8 (3.20)	7, 8 or 10	150 - 210	220 - 325	220 - 330	240 - 350	10-18 (5-9)	8-12 (4-6)	12-25 (6-12)	10-20 (5-10)
5/32 (4.00)	8 or 10	200 - 275	300 - 425	375 - 475	400 - 500	15-25 (7-12)	10-15 (5-7)	15-30 (7-14)	12-25 (6-12)
3/16 (4.80)	8 or 10	250 - 350	400 - 525	475-800	475-800	20-35 (10-17)	12-25 (6-12)	25-40 (12-19)	15-30 (7-14)
1/4 (6.40)	10	325 - 700	500 - 700	750 - 1000	700 - 1100	25-50 (12-24)	20-35 (10-17)	30-55 (14-26)	25-45 (12-21)

**TUNGSTEN PREPARATION:**

**END PREPARATION: DCSP (EN)**  
General Purpose:

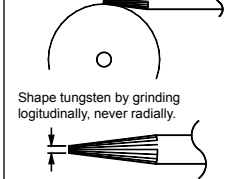


**ACHF**  
General Purpose:



Ball tip by arcing on clean metal at low current DCRP (EP) then slowly increase current to form the desired ball diameter.

**GRINDING PREPARATION:**  
Use a 60 Grit or finer aluminum oxide wheel

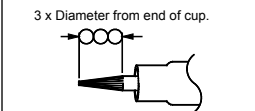


Remove sharp point to leave a truncated point with a flat spot. Diameter of flat spot determines amperage.

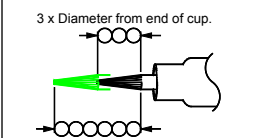


The included angle determines weld bead shape and size. Generally, as the included angle increases, penetration increases and bead width decreases.

**EXTENSION INSTRUCTION: STANDARD PARTS**  
General Purpose:



**GAS LENS PARTS**  
General Purpose:



Maximum extension: 6 x Diameter from end of cup. (In draft - free areas)

**CAUTION:** Personal harm will result from touching the hot parts of a TIG torch without insulative protection, or from looking directly or indirectly at an arc or reflected arc. At no time should bare skin be exposed to a welding arc.



TIG TORCH MANUAL



FL250 WATER COOLED

TECHNICAL INFORMATION

RATING @ 100% DUTY CYCLE: 250 AMP ACHF OR DCSP  
COOLING METHOD: WATER COOLED

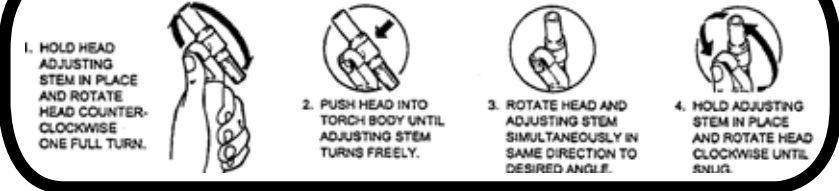
ACCESSORY ITEMS REQUIRED FOR COMPLETE INSTALLATION:

HEAD ACCESSORIES: 3 SERIES HEAD ACCESSORIES  
POWER CABLE ADAPTOR: 45V11 (2PCA)

MODEL SELECTOR - TORCH PACKAGES

BODY STYLE - CABLE STYLE	HEAD	CABLE LENGTH	HI-FLEX CABLE	SUPERFLEX CABLE
FL250-NO VALVE 1 PIECE HI-FLEX CABLE	FL3L	12-1/2 ft. (3.8m)	FL2512	FL2512SF
		25 ft (7.6m)	FL2525	FL2525SF

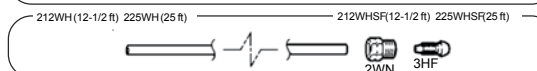
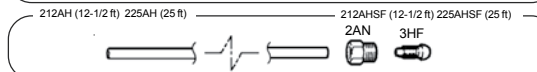
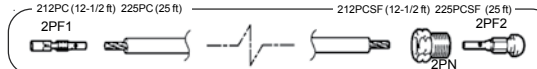
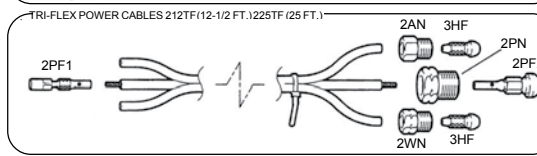
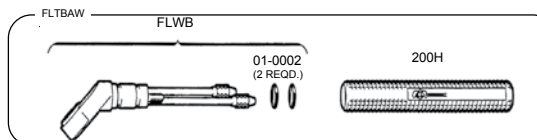
HEAD ADJUSTMENT FOR FLEX-LOC



CK WORLDWIDE INC.  
3501 "C" ST. N.E.  
AUBURN, WA. 98002  
USA

PHONE: (253) 854-5820  
PHONE: (800) 426-0877  
FAX: (253) 939-1746

www.ckworldwide.com  
ck@ckworldwide.com



- FL3L..... 3 SERIES HEAD ASSEMBLY (INCLUDES HEATSHIELD AND ADJUSTING STEM)  
 01-0009..... ADJUSTING STEM (INCLUDED O-RING)  
 300HS..... HEATSHIELD  
 300R..... O-RING-FOR ADJUSTING STEM
- FOR:  
 FL2512  
 FL2525  
 FL2512SF  
 FL2525SF
- 300S..... SHORT BACKCAP, 3 SERIES (INCLUDES O-RING)  
 300R..... O-RING-FOR BACKCAP
- 3 SERIES.....HEAD ACCESSORIES

PART #	DESCRIPTION
--------	-------------

**TORCH**  
 FLTBAW..... TORCH BODY ASSEMBLY (INCL. TORCH BODY, O-RINGS & HANDLE)  
 FLWB..... TORCH BODY (INCLUDES O-RINGS)  
 01-0002..... O-RING - FOR BODY (2 REQUIRED)  
 200H..... HANDLE

**TRI-FLEX POWER CABLE**  
 212TF..... TRI-FLEX POWER CABLE & HOSE ASSEMBLY -12-1/2 FOOT (INCLUDES FITTINGS)  
 225TF..... TRI-FLEX POWER CABLE & HOSE ASSEMBLY -25 FOOT (INCLUDES FITTINGS)

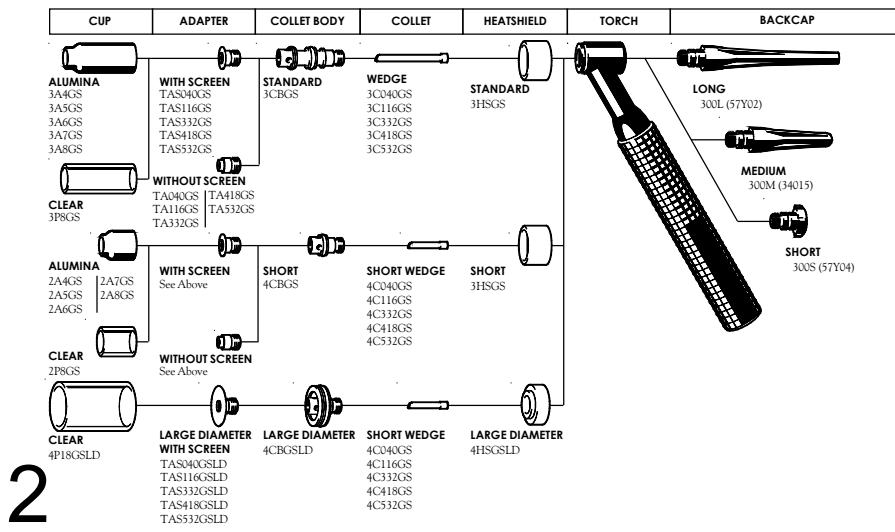
01-0032..... CABLE TIE  
 2AN..... GAS HOSE NUT  
 2PF1..... POWER CABLE FITTING  
 2PF2..... POWER CABLE FITTING  
 2PN..... POWER CABLE NUT  
 2WN..... WATER HOSE NUT  
 3HF..... HOSE FITTING (2 REQUIRED)

**INDIVIDUAL CABLE HOSES**  
 212AH..... GAS HOSE-12-1/2 FOOT (INCLUDES FITTINGS)  
 212AHSF..... GAS HOSE-12-1/2 FOOT (INCLUDES FITTINGS)  
 212PC..... POWER CABLE-12-1/2 FOOT (INCLUDES FITTINGS)  
 212PCSF..... POWER CABLE-12-1/2 FOOT (INCLUDES FITTINGS)  
 212WH..... WATER HOSE-12-1/2 FOOT (INCLUDES FITTINGS)  
 212WHSF..... WATER HOSE-12-1/2 FOOT (INCLUDES FITTINGS)  
 225AH..... GAS HOSE-25 FOOT (INCLUDES FITTINGS)  
 225AHSF..... GAS HOSE-25 FOOT (INCLUDES FITTINGS)  
 225PC..... POWER CABLE-25 FOOT (INCLUDES FITTINGS)  
 225PCSF..... POWER CABLE-25 FOOT (INCLUDES FITTINGS)  
 225WH..... WATER HOSE-25 FOOT (INCLUDES FITTINGS)  
 225WHSF..... WATER HOSE-25 FOOT (INCLUDES FITTINGS)

**ACCESSORIES**  
 2PCA (45V11)..... POWER CABLE ADAPTER (ORDER SEPARATELY)  
 SLWHAT-T..... TWECO POWER CABLE ADAPTER  
 SLWHAT-25..... DINSE 25 POWER CABLE ADAPTER  
 SLWHAT-35..... DINSE 35 POWER CABLE ADAPTER  
 SLWHAT-35M..... DINSE 35 FLOW-THRU GAS POWER CABLE ADAPTER

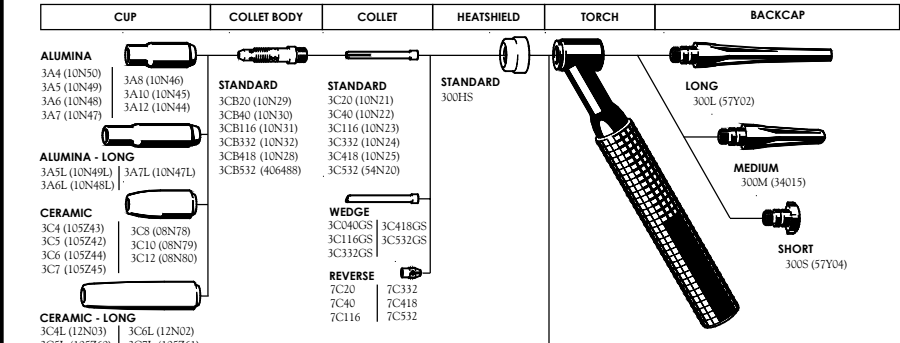
NOTE:  
 TRI-FLEX CABLE CAN BE SEPERATED TO REPLACE GAS HOSE, WATER HOSE OR POWER CABLE INDIVIDUALLY

3 SERIES HEAD ACCESSORIES GAS SAVER



2

3 SERIES HEAD ACCESSORIES



**APPLICATIONS OF: STANDARD PARTS:**  
 ARE FOR GENERAL PURPOSE USE.

**WEDGE COLLETS:**  
 IMPROVE ARC STARTING.  
 IMPROVE ARC STABILITY.  
 IMPROVE ARC CONTROL.

**CERAMIC (LAVA) CUPS:**  
 ARE USED WHEN REFLECTED HEAT IS HIGH.

**ALUMINA CUPS:**  
 ARE USED FOR GENERAL PURPOSE,  
 AND WHEN IMPACT RESISTANT CUPS  
 ARE REQUIRED.

**GAS LENS PARTS:**  
 ARE USED TO REDUCE TURBULENCE  
 AND IMPROVE SHIELD GAS COVERAGE  
 PATTERNS,  
 INCREASES DUTY CYCLE OF TORCH  
 AND INCREASES TUNGSTEN STICK  
 OUT.

**SHORT (STUBBY) PARTS:**  
 ARE USED TO SHORTEN THE OVERALL  
 LENGTH OF THE TORCH HEAD.  
 REDUCES DUTY CYCLE OF TORCH

**GAS SAVER® PARTS:**  
 ARE USED TO SAVE UP TO 40% ON GAS  
 CONSUMPTION.  
 ARE USED TO SAVE UP TO 60% ON  
 CONSUMABLE PARTS.  
 ARE USED TO CLEARLY SEE THE WELD  
 PUDDLE.  
 ARE USED TO ACHIEVE GAS LENS

TUNGSTEN ELECTRODE CONVERSION CHART

Size Suffix	Inches	Millimeters
020	.020"	.5mm
040	.040"	1.0mm
116	1/16"	1.6mm
332	3/32"	2.4mm
418	1/8"	3.2mm
532	5/32"	4.0mm

3