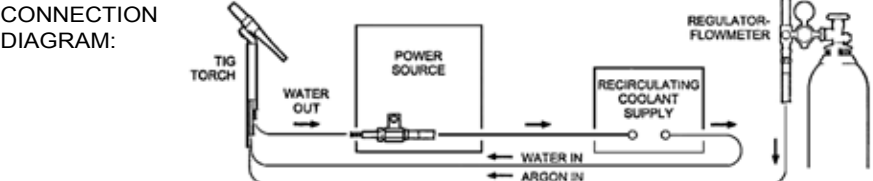


WARRANTY: CK Worldwide, Inc. warrants products manufactured by CK Worldwide, Inc. to be free of defects in materials and workmanship. CK Worldwide, Inc. limits this warranty to replacement of the product or parts thereof and excludes liability for injury, property damage or economic loss attributable 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.



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

Shape tungsten by grinding longitudinally, never radially.

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



FL230 WATER COOLED

TECHNICAL INFORMATION

RATING @ 100% DUTY CYCLE: 230 AMP ACHF OR DCSP
COOLING METHOD: WATER COOLED

ACCESSORY ITEMS REQUIRED FOR COMPLETE INSTALLATION:

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

MODEL SELECTOR - TORCH PACKAGES





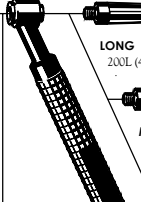






















BODY STYLE - CABLE STYLE	HEAD	CABLE LENGTH	HI-FLEX CABLE	SUPERFLEX CABLE
FL230-NO VALVE 1 PIECE HI-FLEX CABLE	FL2L	12-1/2 ft. (3.8m)	FL2312	FL2312SF
		25 ft (7.6m)	FL2325	FL2325SF

HEAD ADJUSTMENT FOR FLEX-LOC

1. HOLD HEAD ADJUSTING STEM IN PLACE AND ROTATE HEAD COUNTER-CLOCKWISE ONE FULL TURN.
2. PUSH HEAD INTO TORCH BODY UNTIL ADJUSTING STEM TURNS FREELY.
3. ROTATE HEAD AND ADJUSTING STEM SIMULTANEOUSLY IN SAME DIRECTION TO DESIRED ANGLE.
4. HOLD ADJUSTING STEM IN PLACE AND ROTATE HEAD CLOCKWISE UNTIL SNUG.

CUP	ADAPTER	COLLET BODY	COLLET	HEATSHIELD	TORCH	BACKCAP
ALUMINA 2A4GS 2A5GS 2A6GS	WITH SCREEN TAS040GS TAS116GS TAS332GS TAS418GS WITHOUT SCREEN TA040GS TA116GS TA332GS	STANDARD 2CBGS	WEDGE 2C040GS 2C116GS 2C332GS 2C418GS	STANDARD 2HSGS	TORCHES USED ON: CK100 CK110 CK130 CK200 CK230 FL2L CKM230 CWH230 CWM230 CK9 CK20	LONG 20UL (41V24) MEDIUM 200M (41V35) SHORT 20S (41V33)
CLEAR 2P8GS						
CLEAR 2P18GSLD	LARGE DIAMETER WITH SCREEN TAS040GSLD TAS116GSLD TAS332GSLD TAS418GSLD	LARGE DIAMETER 2CBGSLD	WEDGE See Above	LARGE DIAMETER 2HSGSLD		

2 SERIES HEAD ACCESSORIES

CUP	COLLET BODY	COLLET	HEATSHIELD	TORCH	BACKCAP
ALUMINA 2A4 (13N08) 2A5 (13N09) 2A6 (13N10)	 2A7 (13N11) 2A8 (13N12) 2A10 (13N13)	 STANDARD 2CB20 (13N25) 2CB40 (13N26) 2CB116 (13N27) 2CB332 (13N28) 2CB418 (13N29)	 STANDARD 2C20 (13N20) 2C40 (13N21) 2C116 (13N22) 2C332 (13N23) 2C418 (13N24)	 STANDARD 2GHS	 LONG 200L (41V24)
CERAMIC 2C4 (13N14) 2C5 (13N15) 2C6 (13N16)	 2C7 (13N17) 2C8 (13N18) 2C10 (13N19)	 STANDARD 2C040GS 2C116GS 2C332GS 2C418GS	 WEDGE 6C20 6C40 6C116	 REVERSE 6C20 6C40 6C116	 MEDIUM 200M (41V35)
ALUMINA - LONG 2A3L (A796F70) 2A4L (A796F71)	 2A5L (A796F72) 2A6L (A796F73)				 SHORT 200S (41V33)
CERAMIC - LONG 2C3L (796F70) 2C4L (796F71)	 2C5L (796F72) 2C6L (796F73)				
ALUMINA - GAS LENS 2AG4 (53N58) 2AG5 (53N59)	 2AG6 (53N60) 2AG7 (53N61) 2AG8 (53N61S)	 GAS LENS 2GL20 (45V41) 2GL40 (45V42) 2GL116 (45V43) 2GL332 (45V44) 2GL418 (45V45)	 STANDARD See Above	 STANDARD See Above	
ALUMINA - LARGE DIAMETER 3AG6LD (57N75) 3AG8LD (57N74) 3AG10LD (53N88)	 3AG11LD (53N89) 3AG12LD (53N87) 3AG10LD (53N88)	 LARGE DIAMETER 2GL020LD (45V020S) 2GL116LD (45V116S) 2GL332LD (45V64S) 2GL418LD (095795S)	 LARGE DIAMETER 2C020LD (13N20L) 2C040LD (13N21L) 2C116LD (13N22L) 2C332LD (13N23L) 2C418LD (13N24L)	 LARGE DIAMETER 2GHSLD	
ALUMINA 8A4 (A53N24) 8A5 (A53N25)	 8A6 (A53N27)	 SHORT 6CB20 6CB40 6CB116 6CB332 6CB418	 REVERSE See Above	 STANDARD See Above	
CERAMIC 8C4 (53N24) 8C5 (53N25)	 8C6 (53N27)				
CERAMIC - LONG 8C4L (53N28)	 8C6L (53N26)				

TORCHES USED ON:

- CK100
- CK110
- CK130
- CK200
- CK230
- FL2L
- CKM230
- CWH230
- CWM230
- CK9
- CK20

**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 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