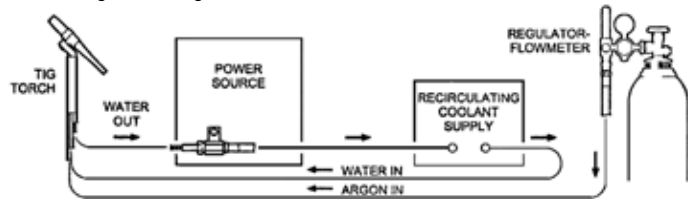


WARRANTY: CK Worldwide, Inc. warrants products manufactured by CK Worldwide, Inc. to be free of defects in materials and workmanship. CK Worldwide, Inc. limits this warranty to replacement of the product or parts thereof and excludes liability for injury, property damage or economic loss attributable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

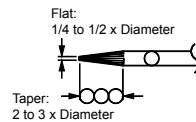


INFORMATION CHART:

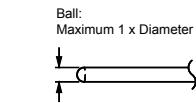
Electrode Diameter in inches (mm)	Cup Size	WELDING CURRENT (AMPS) - TUNGSTEN TYPE				ARGON FLOW - FERROUS METALS		ARGON FLOW - ALUMINUM	
		AC Pure	AC Thoriated	DCSP Pure	DCSP Thoriated	Standard Body (Liters)	Gas Lens Body (Liters)	Standard Body (Liters)	Gas Lens Body (Liters)
.020 (0.50)	4 or 5	5 - 15	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:

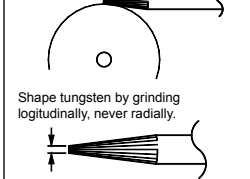


ACHF
General Purpose:



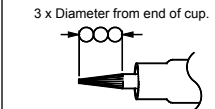
Ball tip by arcing on clean metal at low current DCRP (EP) then slowly increase current to form the desired ball diameter.

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

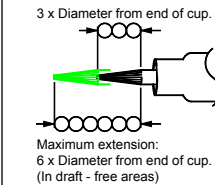


Remove sharp point to leave a truncated point with a flat spot. Diameter of flat spot determines amperage.
The included angle determines weld bead shape and size. Generally, as the included angle increases, penetration increases and bead width decreases.

EXTENSION INSTRUCTION: STANDARD PARTS
General Purpose:



GAS LENS PARTS
General Purpose:



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



TL300 & TL300V RIGID

TECHNICAL INFORMATION

RATING @ 100% DUTY CYCLE: 300 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

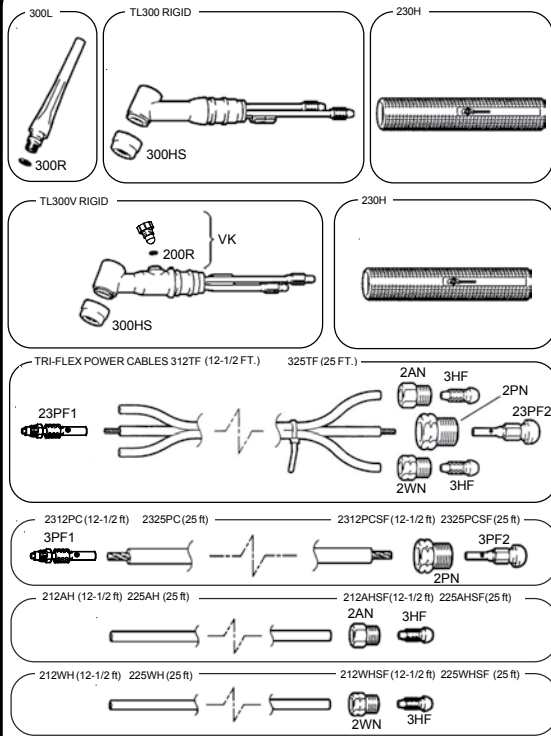
HEAD STYLE	CABLE	LENGTH	STANDARD #	SUPERFLEX #
Rigid Head w/o Valve	TriFlex/ SuperFlex	12 1/2ft (3.8m)	TL312	TL312SF
		25ft (7.6m)	TL325	TL325SF
Rigid Head with Valve	TriFlex/ SuperFlex	12 1/2ft (3.8m)	TL312V	TL312VSF
		25ft (7.6m)	TL325V	TL325VSF

IMPORTANT !!
READ AND UNDERSTAND THE INFORMATION CONTAINED IN THIS MANUAL BEFORE OPERATING THE EQUIPMENT !

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PART #	DESCRIPTION
TORCH	
TL300 RIGID.....	TORCH BODY
TL300V RIGID.....	TORCH BODY w/VALVE
3 0 0 H.....	HANDLE
TRI-FLEX POWER CABLE	
2312TF.....	TRI-FLEX POWER CABLE & HOSE ASSEMBLY -12-1/2 FT. (INCLUDES FITTINGS)
2325TF.....	TRI-FLEX POWER CABLE & HOSE ASSEMBLY -25 FT. (INCLUDES FITTINGS)
01-0032.....	CABLE TIE
2AN.....	GAS HOSE NUT
23PF1.....	POWER CABLE FITTING
23PF2.....	POWER CABLE FITTING
2PN.....	POWER CABLE NUT
2WN.....	WATER HOSE NUT
3HF.....	HOSE FITTING (2 REQUIRED)
INDIVIDUAL CABLE HOSES	
212AH (45V09).....	GAS HOSE-12-1/2 FT. (INCLUDES FITTINGS)
212AHSF (45V09SF).....	GAS HOSE-12-1/2 FT. (INCLUDES FITTINGS)
2312PC(45V03).....	POWER CABLE-12-1/2 FT. (INCLUDES FITTINGS)
2312PCSF (45V03SF).....	POWER CABLE-12-1/2 FT. (INCLUDES FITTINGS)
212WH (45V07).....	WATER HOSE-12-1/2 FT. (INCLUDES FITTINGS)
212WHSF (45V07SF).....	WATER HOSE-12-1/2 FT. (INCLUDES FITTINGS)
225AH(45V10).....	GAS HOSE-25 FOOT (INCLUDES FITTINGS)
225AHSF 45V10SF).....	GAS HOSE-25 FOOT (INCLUDES FITTINGS)
2325PC(45V04).....	POWER CABLE-25 FOOT (INCLUDES FITTINGS)
2325PCSF(45V04SF).....	POWER CABLE-25 FOOT (INCLUDES FITTINGS)
225WH(45V08).....	WATER HOSE-25 FOOT (INCLUDES FITTINGS)
225WHSF (45V08SF).....	WATER HOSE-25 FOOT (INCLUDES FITTINGS)

ACCESSORIES	
2PCA (45V11).....	POWER CABLE ADAPTER (ORDER SEPARATELY)
SAFE-LOC QUICK CONNECT	
SLWHAT-T.....	TWECO POWER CABLE ADAPTER
SLWHAT-25.....	DINSE 25 POWER CABLE ADAPTER
SLWHAT-35.....	DINSE 35 POWER CABLE ADAPTER
SLWHAT-35 M.....	DINSE 35 FLOW-THRU GAS POWER CABLE ADAPTER
300R.....	O-RING
300L.....	BACKCAP
300HS.....	HEATSHIELD

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

3 SERIES HEAD ACCESSORIES GAS SAVER

CUP	ADAPTER	COLLET BODY	COLLET	HEATSHIELD	TORCH	BACKCAP
ALUMINA 3A4GS 3A5GS 3A6GS 3A7GS 3A8GS	WITH SCREEN TAS040GS TAS116GS TAS332GS TAS418GS TAS532GS	STANDARD 3CBGS	WEDGE 3C040GS 3C116GS 3C332GS 3C418GS 3C532GS	STANDARD 3HSGS	LONG 300L (57Y02)	LONG 300L (57Y02)
CLEAR 3P8GS	WITHOUT SCREEN TA040GS TA418GS TA116GS TA532GS TA332GS				MEDIUM 300M (34015)	MEDIUM 300M (34015)
ALUMINA 2A4GS 2A5GS 2A6GS	WITH SCREEN See Above	SHORT 4CBGS	SHORT WEDGE 4C040GS 4C116GS 4C332GS 4C418GS 4C532GS	SHORT 3HSGS		SHORT 300S (57Y04)
CLEAR 2P8GS	WITHOUT SCREEN See Above					
CLEAR 4P18GSLD	LARGE DIAMETER WITH SCREEN TAS040GSLD TAS116GSLD TAS332GSLD TAS418GSLD TAS532GSLD	LARGE DIAMETER 4CBGSLD	SHORT WEDGE 4C040GS 4C116GS 4C332GS 4C418GS 4C532GS	LARGE DIAMETER 4HSGSLD		

2

3 SERIES HEAD ACCESSORIES

CUP	COLLET BODY	COLLET	HEATSHIELD	TORCH	BACKCAP
ALUMINA 3A4 (10N50) 3A5 (10N49) 3A6 (10N48) 3A7 (10N47)	STANDARD 3CB20 (10N29) 3CB40 (10N30) 3CB116 (10N31) 3CB332 (10N32) 3CB418 (10N28) 3CB532 (406488)	STANDARD 3C20 (10N21) 3C40 (10N22) 3C116 (10N23) 3C332 (10N24) 3C418 (10N25) 3C532 (54N20)	STANDARD 300HS		LONG 300L (57Y02) MEDIUM 300M (34015) SHORT 300S (57Y04)
ALUMINA - LONG 3A5L (10N49L) 3A6L (10N48L)	STANDARD 3A7L (10N47L)				
CERAMIC 3C4 (105243) 3C5 (105242) 3C6 (105244) 3C7 (105245)	WEDGE 3C040GS 3C116GS 3C332GS	REVERSE 3C418GS 3C532GS			
CERAMIC - LONG 3C4L (12N03) 3C5L (105260)	WEDGE 3C6L (12N02) 3C7L (105261)	REVERSE 7C20 7C40 7C116	GAS LENS 3GH5		
ALUMINA - GAS LENS 3AG4 (54N18) 3AG5 (54N17) 3AG6 (54N16)	GAS LENS 3AG7 (54N15) 3AG8 (54N14) 3AG11 (54N19)	STANDARD See Above	GAS LENS 3GH5		
ALUMINA LONG - GAS LENS OVERALL LENGTH 3 IN. 3AG5L (54N17L) 3AG6L (54N16L) 3AG7L (54N15L) 3AG8L (54N14L)	GAS LENS 3GL20 (45V29) 3GL40 (45V24) 3GL116 (45V25) 3GL332 (45V26) 3GL418 (45V27) 3GL532 (45V28)	STANDARD See Above	WEDGE See Above		
CERAMIC - GAS LENS 3CG4 (54N35) 3CG5 (54N34) 3CG6 (54N33) 3CG7 (54N32) 3CG8 (54N31)	GAS LENS 3CG11 (54N36) 3CG12 3CG14 3CG16	REVERSE See Above			
ALUMINA - LARGE DIAMETER 3AG6LD (57N75) 3AG8LD (57N74) 3AG10LD (53N88) 3AG11LD (53N89) 3AG12LD (53N87)	LARGE DIAMETER 3GL116LD (45V116) 3GL332LD (45V64) 3GL418LD (995795) 3GL532LD (45V63)	STANDARD See Above	LARGE DIAMETER 3GHSLD		
ALUMINA LONG - LARGE DIAMETER OVERALL LENGTH 2.75 IN. 3AG6LDL (57N75L) 3AG8LDL (57N74L) 3AG10LDL (53N88L) 3AG12LDL (53N87L)		REVERSE See Above			

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