



WORLDWIDE



**THE STANDARD
IN TIG WELDING**

TORCH MANUAL

for CK24 and CK24W
8 Series



FORM TM-8 APRIL 2019

Toll Free: (800) 426.0877

www.CKWORLDWIDE.com

Congratulations on your purchase of a CK Worldwide TIG Torch!

CK Worldwide's premium quality TIG torches perform with a reliability and efficiency you can always depend on. CK equipment and technical support is available online at www.CKWORLDWIDE.com or by calling (800) 426-0877 between 7:00AM and 3:30PM, Monday through Friday.



Phone: 1.800.426.0877
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*Need technical information?
Call or email to request a copy of our
Technical Guide (Form 116)*

The information in this manual represents the best judgement of CK Worldwide, Inc. and is intended for use by experienced personnel. Never operate any equipment without carefully reading, understanding, and following all of the related safety rules and practices. CK Worldwide makes no claims, expressed or implied, as to the viability of this information for any application or use. The individual user is solely responsible for any and all uses of the information contained herein, since CK Worldwide has no means to confirm the correct use of, or control any of the variables to the use of any and all information herein.

IN THIS MANUAL you will find technical and ordering information for CK24 and CK24W TIG torches, hoses, and accessories.

TORCH SPECIFICATIONS

CK24*

5/16"-24



CK24W

5/16"-24



**Fail-Safe™
Hose Connectors**

**CK80 and CK90 uses the same thread pattern and hose connections as the CK24.*



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.

CALIFORNIA PROPOSITION 65

WARNING: This product contains or produces a chemical known to the state of California to cause cancer and birth defects or other reproductive harm) (California Health and Safety Code Section 25249.5 et seq.)

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 (California Health and Safety Code Section 25249.5 et seq.)

INFORMATION SOURCES

California Health and Safety Code, Section 25249.4 through 25249.13. The California Office of Environmental Health Hazard Assessment, 301 Capitol Mall, Sacramento, CA 95814; Telephone 916-445-6900.
California Proposition 65 Website: www.oehha.ca.gov/prop65.html.
American National Standards Institute (ANSI). Product Safety Signs And Labels (ANSI Z535.4), available from ANSI, 25 West 43rd Street, New York, NY 10036; Telephone 212-642-4900; Website www.ansi.org.

SAFETY INFORMATION

Welding and cutting equipment can be dangerous to both the operator and people in or near the surrounding working area, if the equipment is not correctly operated. Equipment must only be used under the strict and comprehensive observance of all relevant safety regulations. Read and understand this instruction manual carefully before the installation and operation of this equipment.



ELECTRIC SHOCK:
It can kill



FUMES AND GASES ARE DANGEROUS



ARC RAYS: Harmful to people's eyes and skin



ELECTRIC SHOCK: It can kill. Touching live electrical parts can cause fatal shocks or severe burns. The electrode and work circuit is electrically live whenever the output is on. The input power circuit and internal machine circuits are also live when power is on. Incorrectly installed or improperly grounded equipment is dangerous.

- Connect the primary input cable according to American standards and regulations. ANSI Z49.1.
- Avoid all contact with live electrical parts of the welding circuit, electrodes and wires with bare hands. The operator must wear dry welding gloves while he/she performs the welding task.
- The operator should keep the work piece insulated from himself/herself.
- Keep cords dry, free of oil and grease, and protected from hot metal and sparks.
- Frequently inspect input power cable for wear and tear, replace the cable immediately if damaged, bare wiring is dangerous and can kill.
- Do not use damaged, under-sized, or badly joined cables.
- Do not drape cables over your body.

FUMES AND GASES ARE DANGEROUS: Smoke and gas generated while welding or cutting can be harmful to people's health. Welding produces fumes and gases. Breathing these fumes and gases can be hazardous to your health.

- Do not breathe the smoke and gas generated while welding or cutting, keep your head out of the fumes.
- Keep the working area well ventilated, use fume extraction or ventilation to remove welding fumes and gases.
- In confined or heavy fume environments always wear an approved air-supplied respirator. Welding fumes and gases can displace air and lower the oxygen level causing injury or death. Be certain the air in your work environment is safe to breathe.
- Do not weld in locations near degreasing, cleaning, or spraying operations. The heat and rays of the arc can react with vapors to form highly toxic and irritating gases.
- Materials such as galvanized, lead, or cadmium plated steel, contain elements that can give off toxic fumes when welded. Do not weld these materials unless the area is very well ventilated, and or wearing an air supplied respirator.

ARC RAYS: Harmful to people's eyes and skin. Arc rays from the welding process produce intense visible and invisible ultraviolet and infrared rays that can burn eyes and skin.

- Always wear a welding helmet with correct shade of filter lens and suitable protective clothing including welding gloves while the welding operation is performed.
- Measures should be taken to protect people in or near the surrounding working area. Use protective screens or barriers to protect others from flash, glare and sparks; warn others not to watch the arc.

HOT PARTS: Items being welded generate and hold high heat and can cause severe burns. Do not touch hot parts with bare hands. Allow a cooling period before working on the welding gun. Use insulated welding gloves and clothing to handle hot parts and prevent burns.

FIRE HAZARD: Welding on closed containers, such as tanks, drums, or pipes, can cause them to explode. Flying sparks from the welding arc, hot work piece, and hot equipment can cause fires and burns. Accidental contact of electrode to metal objects can cause sparks, explosion, overheating, or fire. Check and be sure the area is safe before doing any welding.

- Welding sparks may cause fire, therefore remove any flammable materials away from the working area, at least 40 feet (12m) from the welding arc. Cover flammable materials and containers with approved covers if unable to be moved from the welding area.
- Do not weld on closed containers such as tanks, drums, or pipes, unless they are properly prepared according to the required Safety Standards to insure that flammable or toxic vapors and substances are totally removed, these can cause an explosion even though the vessel has been “cleaned.” Vent hollow castings or containers before heating, cutting or welding. They may explode.
- Do not weld where the atmosphere may contain flammable dust, gas, or liquid vapors such as gasoline.
- Have a fire extinguisher nearby and know how to use it. Be alert that welding sparks and hot materials from welding can easily go through small cracks and openings to adjacent areas. Be aware that welding on a ceiling, floor, bulkhead, or partition can cause fire on the hidden side.

GAS CYLINDERS: Shielding gas cylinders contain gas under high pressure. If damaged, a cylinder can explode. Because gas cylinders are normally part of the welding process, be sure to treat them carefully. **CYLINDERS** can explode if damaged.

- Protect gas cylinders from excessive heat, mechanical shocks, physical damage, slag, open flames, sparks, and arcs.
- Insure cylinders are held secure and upright to prevent tipping or falling over.
- Never allow the welding electrode or earth clamp to touch the gas cylinder, do not drape welding cables over the cylinder.
- Never weld on a pressurized gas cylinder, it will explode and kill you.
- Open the cylinder valve slowly and turn your face away from the cylinder outlet valve and gas regulator.

GAS BUILD UP: The build up of gas can cause a toxic environment by depleting the air's oxygen content and potentially resulting in injury or death.

- Shut off shielding gas supply when not in use.
- Always ventilate confined spaces or use approved air-supplied respirator.

ELECTRONIC MAGNETIC FIELDS: **MAGNETIC FIELDS** can affect implanted medical devices.

- Wearers of pacemakers and other implanted medical devices should keep away.
- Implanted medical device wearers should consult their doctor and the device manufacturer before going near any electric welding, cutting or heating operation.

NOISE CAN DAMAGE HEARING: Noise from some processes or equipment can damage hearing. Wear approved ear protection if noise level is high.



FIRE HAZARD



GAS CYLINDERS
Shielding gas cylinders contain gas under high pressure. If damaged, a cylinder can explode



GAS BUILD UP



ELECTRONIC MAGNETIC FIELDS can affect implanted medical devices



NOISE CAN DAMAGE HEARING

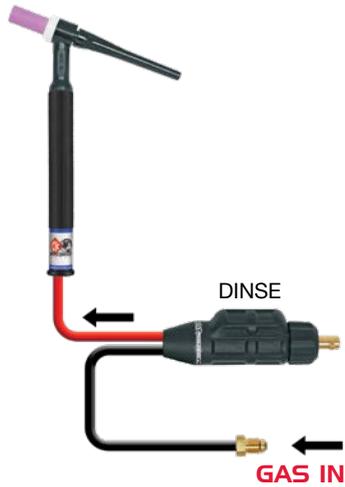
CONNECTION DIAGRAMS

GAS-COOLED

2 PIECE



1 PIECE

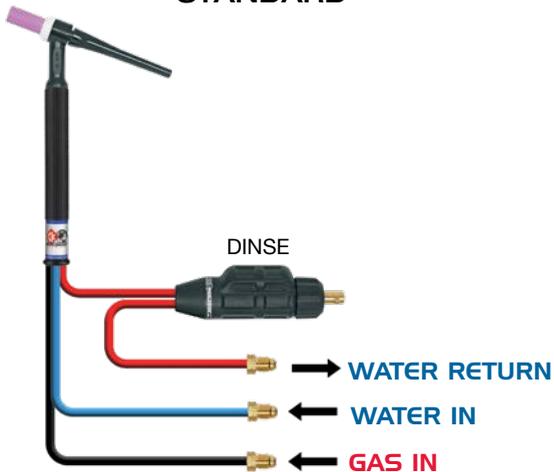


1 PIECE GAS-THRU

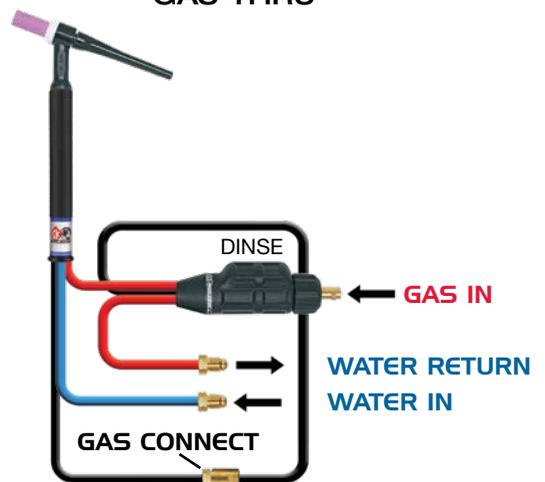


WATER-COOLED

STANDARD

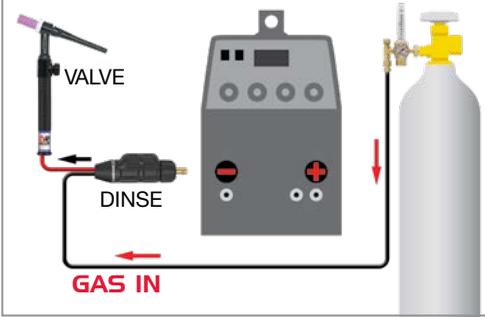


GAS-THRU

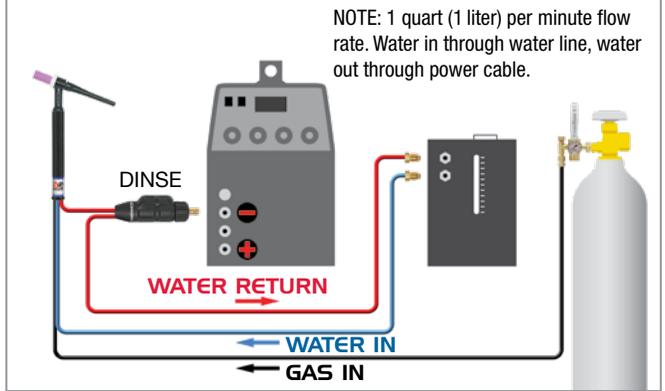


MACHINE CONNECTION DIAGRAMS

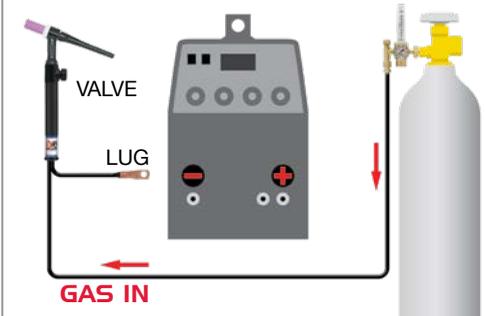
1 PIECE GAS-COOLED



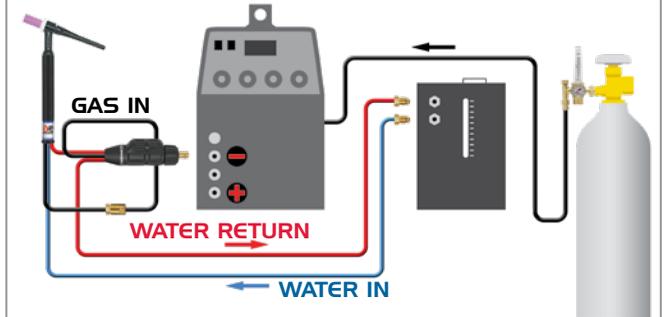
WATER-COOLED



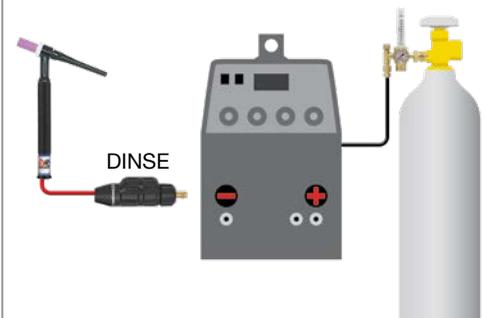
2 PIECE GAS-COOLED



WATER-COOLED GAS-THRU



1 PIECE GAS-THRU



QUICK DISCONNECTS

Adapters for gas-cooled and water-cooled torch setups that have quick-disconnect female adapters on either the machine or water-cooler.

QDWAP

WATER COOLED

9mm male quick disconnect for water.



QDGAP

GAS COOLED

9mm male quick disconnect for argon.



CK24

GAS COOLED | SAME AS CK80 / CK90
 80 / 90 amp ACHF or DCSP @ 100%
 8 Series Head Accessories

CK24 & CK24V | RIGID | 80 AMP

HEAD STYLE	CABLE	CABLE LENGTH	STANDARD #	SUPER-FLEX #	SPECIFICATIONS
RIGID	1 Piece	12.5 ft. (3.8m)	CK24-12-R RG	CK24-12-RSF RG	8-1/4" (20.9cm)
		25 ft. (7.6m)	CK24-25-R RG	CK24-25-RSF RG	
	2 Piece	12.5 ft. (3.8m)	CK24-12-2 RG	CK24-12-2SF RG	2-1/4 oz (64gm)
		25 ft. (7.6m)	CK24-25-2 RG	CK24-25-2SF RG	
RIGID + VALVE	1 Piece	12.5 ft. (3.8m)	CK24V-12-R RG	CK24V-12-RSF RG	8-1/4" (20.9cm)
		25 ft. (7.6m)	CK24V-25-R RG	CK24V-25-RSF RG	
	2 Piece	12.5 ft. (3.8m)	CK24V-12-2 RG	CK24V-12-2SF RG	2-1/4 oz (64gm)
		25 ft. (7.6m)	CK24V-25-2 RG	CK24V-25-2SF RG	

CK24 RG
 Same as CK80 RG



CK24 FX
 Same as CK90 FX

CK24 & CK24V | FLEX | 90 AMP

HEAD STYLE	CABLE	CABLE LENGTH	STANDARD #	SUPER-FLEX #	SPECIFICATIONS
FLEX	1 Piece	12.5 ft. (3.8m)	CK24-12-R FX	CK24-12-RSF FX	8-1/4" (20.9cm)
		25 ft. (7.6m)	CK24-25-R FX	CK24-25-RSF FX	
	2 Piece	12.5 ft. (3.8m)	CK24-12-2 FX	CK24-12-2SF FX	2-1/4 oz (64gm)
		25 ft. (7.6m)	CK24-25-2 FX	CK24-25-2SF FX	
FLEX + VALVE	1 Piece	12.5 ft. (3.8m)	CK24V-12-R FX	CK24V-12-RSF FX	8-1/4" (20.9cm)
		25 ft. (7.6m)	CK24V-25-R FX	CK24V-25-RSF FX	
	2 Piece	12.5 ft. (3.8m)	CK24V-12-2 FX	CK24V-12-2SF FX	2-1/4 oz (64gm)
		25 ft. (7.6m)	CK24V-25-2 FX	CK24V-25-2SF FX	

REPLACEMENT TORCH BODIES

PART #	STYLE
CK24	RIGID
CK24V	VALVED RIGID
CK24 FX	RIGID
CK24V FX	VALVED RIGID



Accessories For 8 Series TIG Torch

2 Collets 2 Collet Bodies 3 Cups

2 Tungsten Electrodes

AK-5 ACCESSORY KIT
 24 TORCHES
 0.40" (1.0mm), 1/16" (1.6mm)

www.CKWORLDWIDE.com

8 Series Accessory Kits, available on page 15, are convenient, pre-packaged kits containing common consumables.

POWER CABLES/HOSES

1 PIECE STANDARD POWER CABLE



1 PIECE SUPER-FLEX POWER CABLE



2 PIECE STANDARD POWER CABLE



2 PIECE SUPER-FLEX POWER CABLE



LENGTH	STANDARD	SUPER-FLEX
	1 PIECE CABLE	1 PIECE CABLE
12-1/2 ft. (3.8m)	112PCHF (56Y38R)	112PCSF (56Y38RSF)
25 ft. (7.6m)	125PCHF (56Y97R)	125PCSF (56Y97RSF)

LENGTH	2 PIECE CABLES	2 PIECE CABLES
	12-1/2 ft. (3.8m)	112PCN (56Y38-2)
25 ft. (7.6m)	125PCN (56Y97-2)	125PCNSF (56Y97-2SF)

LENGTH	WELD LEAD
	12-1/2 ft. (3.8m)
25 ft. (7.6m)	125CN

LENGTH	ARGON HOSE	ARGON HOSE
	12-1/2 ft. (3.8m)	212AH (45V09)
25 ft. (7.6m)	225AH (45V10)	225AHSF (45V10SF)

POWER CABLE ADAPTER

1PCA | 53N43



HANDLE Part # HS



DINSE CONNECTORS

DINSE 25
(3/8" 9.5mm)



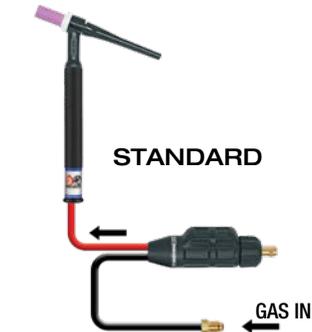
DINSE 35
(1/2" 12.8mm)



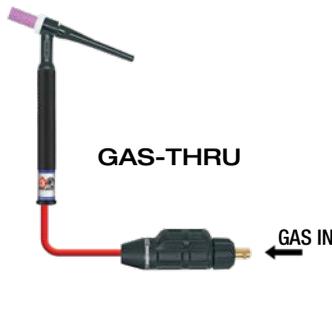
DINSE 25M
(3/8" 9.5mm)



DINSE 35M
(1/2" 12.8mm)



STANDARD



GAS-THRU



**TWECO OR
CAM-LOCK**

STANDARD

DINSE SIZE	ORDER #
3/8" (9mm)	SL2-25-24
1/2" (12.8mm)	SL2-35-24

GAS-THRU

DINSE SIZE	ORDER #
3/8" (9mm)	SL2-25M-24
1/2" (12.8mm)	SL2-35M-24

TWECO / CAM-LOCK

DINSE STYLE	ORDER #
TWECO	SL-2-24
CAM-LOCK	SL2-CL-24

CK24W

WATER COOLED | **SAME AS CK180**
180 amp ACHF or DCSP @ 100%
8 Series Head Accessories

CK24W & CK24WV | RIGID

HEAD STYLE	CABLE	CABLE LENGTH	STANDARD #	SUPER-FLEX #	SPECIFICATIONS
RIGID	3 Piece	12.5 ft. (3.8m)	CK24W-12-R RG	CK24W-12-RSF RG	8-1/8" (20.6cm)
		25 ft. (7.6m)	CK24W-25-R RG	CK24W-25-RSF RG	
RIGID + VALVE	3 Piece	12.5 ft. (3.8m)	CK24W-12-R RG	CK24W-12-RSF RG	3-1/2 oz (99gm)
		25 ft. (7.6m)	CK24W-25-R RG	CK24W-25-RSF RG	

CK24W RG
Same as
CK180 RG

CK180 RIGID | EXTRA LENGTH SERIES

HEAD STYLE	CABLE	CABLE LENGTH	TRI-FLEX #	SUPER-FLEX #
LONG HEAD 4-1/2" Neck	Tri-Flex/ SUPER-FLEX	12.5 ft. (3.8m)	CKL1812	CKL1812SF
		25 ft. (7.6m)	CKL1825	CKL1825SF
X-LONG HEAD 7-1/2" Neck	Tri-Flex/ SUPER-FLEX	12.5 ft. (3.8m)	CKXL1812	CKXL1812SF
		25 ft. (7.6m)	CKXL1825	CKXL1825SF
XX-LONG HEAD 11-1/2" Neck	Tri-Flex/ SUPER-FLEX	12.5 ft. (3.8m)	CKXXL1812	CKXXL1812SF
		25 ft. (7.6m)	CKXXL1825	CKXXL1825SF

4-1/2" (11.4cm) Neck



CKL180 Overall Length: 10" (25.4cm)

7-1/2" (19.0cm) Neck



CKXL180 Overall Length: 13" (33.0cm)

11-1/2" (29.2cm) Neck



CKXXL180 Overall Length: 17" (43.2cm)

CK24WV
Same as
CK180V

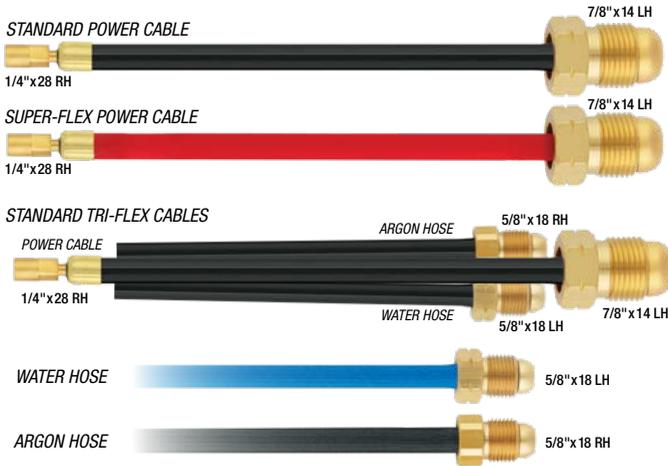
REPLACEMENT TORCH BODIES

PART #	STYLE	PART #	STYLE
CK24W	RIGID	CKL180	4-1/2" RIGID
CK24WV	VALVED RIGID	CKXL180	7-1/2" RIGID
		CKXXL180	11-1/2" RIGID



CK24W

POWER CABLES/HOSES



LENGTH	STANDARD	SUPER-FLEX
	POWER CABLE	POWER CABLE
12-1/2 ft. (3.8m)	212PC (45V03)	212PCSF (45V03SF)
25 ft. (7.6m)	225PC (45V04)	225PCSF (45V04SF)

LENGTH	TRI-FLEX CABLES	3-PIECE ASSEMBLY
	12-1/2 ft. (3.8m)	212TF
25 ft. (7.6m)	225TF	225SF

LENGTH	WATER HOSE	WATER HOSE
	12-1/2 ft. (3.8m)	212WH (45V07)
25 ft. (7.6m)	225WH (45V08)	225WHSF (45V08SF)

LENGTH	ARGON HOSE	ARGON HOSE
	12-1/2 ft. (3.8m)	212AH (45V09)
25 ft. (7.6m)	225AH (45V10)	225AHSF (45V10SF)

POWER CABLE ADAPTER

2PCA | 45V11 | 7/8"-14 LH | 5/8"-18 LH



HANDLE Part # HS



DINSE CONNECTORS

DINSE 25
(3/8" 9.5mm)



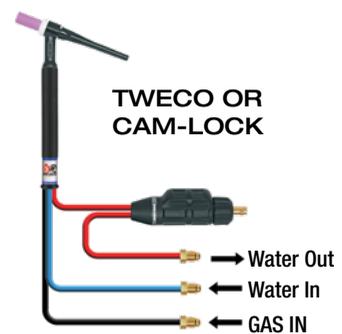
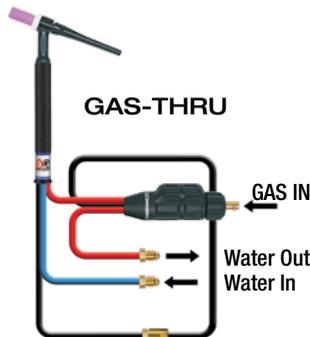
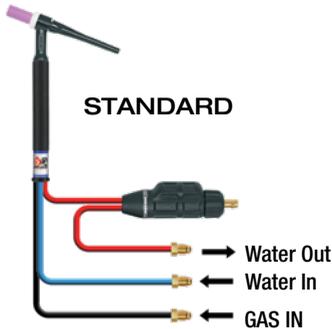
DINSE 35
(1/2" 12.8mm)



DINSE 25M
(3/8" 9.5mm)



DINSE 35M
(1/2" 12.8mm)



STANDARD

DINSE SIZE	ORDER #
3/8" (9mm)	SLWHAT-25
1/2" (12.8mm)	SLWHAT-35

GAS-THRU

DINSE SIZE	ORDER #
3/8" (9mm)	SLWHAT-25M
1/2" (12.8mm)	SLWHAT-35M

TWECO / CAM-LOCK

DINSE STYLE	ORDER #
TWECO	SLWHAT-T
CAM-LOCK	SLWHAT-CL

OZMO & CUT-DOWN LOW-PROFILE TORCH PACKAGES

OZMO TORCH

80AMP OZMO | GAS COOLED

HEAD STYLE	CABLE	CABLE LENGTH	SUPER-FLEX #
RIGID	1 Piece SUPER-FLEX	12.5 ft. (3.8m)	CK24-12SF-OZMO
		25 ft. (7.6m)	CK24-25SF-OZMO

180AMP OZMO | WATER COOLED

HEAD STYLE	CABLE	CABLE LENGTH	SUPER-FLEX #
RIGID	3 Piece SUPER-FLEX	12.5 ft. (3.8m)	CK24W-12SF-OZMO
		25 ft. (7.6m)	CK24W-25SF-OZMO



TORCHES USED ON:
CK24 **CK24W**
CK80 **CK90**
CK180



OZMO KIT | ORDER #KIT-OZMO



NEED JUST THE KIT? OZMO CONVERSION KIT

Part # KIT-OZMO includes 1 heatshield, 2 gas lenses, 2 collets, 2 alumina cups, and 5 pieces of 3/32" (2.4mm) tungsten. For use on CK24, CK24W, CK80, CK90, and CK180 torches.

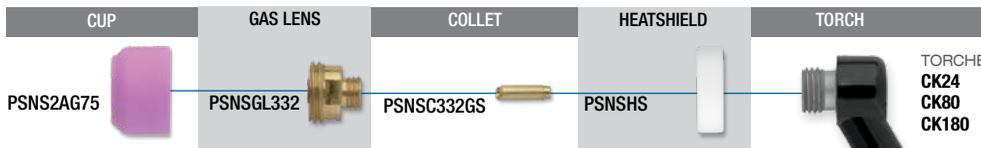
CUT-DOWN TORCH

80AMP CUT-DOWN | GAS COOLED

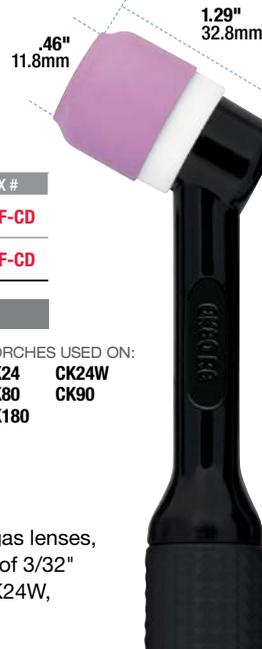
HEAD STYLE	CABLE	CABLE LENGTH	SUPER-FLEX #
RIGID	1 Piece SUPER-FLEX	12.5 ft. (3.8m)	CK24-12SF-CD
		25 ft. (7.6m)	CK24-25SF-CD

180AMP CUT-DOWN | WATER COOLED

HEAD STYLE	CABLE	CABLE LENGTH	SUPER-FLEX #
RIGID	3 Piece SUPER-FLEX	12.5 ft. (3.8m)	CK24W-12SF-CD
		25 ft. (7.6m)	CK24W-25SF-CD



TORCHES USED ON:
CK24 **CK24W**
CK80 **CK90**
CK180



CUT-DOWN KIT | ORDER #KIT-CD



NEED JUST THE KIT? CUT DOWN CONVERSION KIT

Part # KIT-CD includes 1 heatshield, 2 gas lenses, 2 collets, 2 alumina cups, and 5 pieces of 3/32" (2.4mm) tungsten. For use on CK24, CK24W, CK80, CK90, and CK180 torches.

8 SERIES PARTS (13N) TORCH MODELS 24, 24W

CUP		COLLET BODY	COLLET	HEATSHIELD	TORCH
CERAMIC 8C4 (53N24) 8C5 (53N25)		STANDARD 8CB20 (53N17) 8CB40 (53N18) 8CB116 (53N19) 8CB332 (24CB332)	STANDARD 8C20 (53N15) 8C40 (53N16) 8C116 (53N14) 8C332 (24C332)	STANDARD 80THS	 <p>TORCHES USED ON: CK80 CK90 CK180 CWH180 CK24 CK24W</p>
ALUMINA 8A1 (A53N23) 8A4 (A53N24)					
CERAMIC - LONG 8C4L (53N28) 8C6L (53N26)					
ALUMINA - GAS LENS 2AG4 (53N58) 2AG6 (53N60) 2AG5 (53N59) 2AG7 (53N61)		GAS LENS 2GL20 (45V41) 2GL40 (45V42) 2GL116 (45V43) 2GL332 (45V44)	GAS LENS 8CG20 (53N62) 8CG40 (53N63) 8CG116 (53N64) 8CG332 (24GLC332)	GAS LENS 8GHS	
ALUMINA LONG - GAS LENS 2AG5L (53N59L) 2AG7L (53N61L) 2AG6L (53N60L)		WEDGE 8CG116GS 8CG332GS			
CERAMIC 8C4 (53N24) 8C5 (53N25)		GAS LENS 8GL040 8GL116 8GL332	GAS LENS 8C332 (24C332) 8C040 8C116	GAS LENS 8GHS	
ALUMINA 8A1 (A53N23) 8A4 (A53N24)					
CERAMIC - LONG 8C4L (53N28) 8C6L (53N26)					

TUNGSTEN ELECTRODE CONVERSION CHART

SIZE SUFFIX	INCHES	MILLIMETERS
20	.020"	.5mm
40	.040"	1.0mm
116	1/16"	1.6mm
332	3/32"	2.4mm
418	1/8"	3.2mm
532	5/32"	4.0mm
316	3/16"	4.8mm
14	1/4"	6.4mm

8C332 Size Suffix

ACCESSORY KITS

Pre-packaged kits containing common consumables for our 8 Series torches.

8 SERIES | ORDER #AK-5



ITEM (Quantity 1 Each)	PART #
.040" (1.0mm) Collet	8C40 (53N16)
1/16" (1.6mm) Collet	8C116 (53N14)
.040" (1.0mm) Collet Body	8CB40 (53N18)
1/16" (1.6mm) Collet Body	8CB116 (53N19)
#4 (1/4" 6.4mm) Ceramic Cup	8C4 (53N24)
#5 (5/16" 8.0mm) Ceramic Cup	8C5 (53N25)
#6 (3/8" 9.6mm) Ceramic Cup	8C6 (53N27)
.040" (1.0mm) x 7" 2% Ceriated Tungsten	T0407GC2
1/16" (1.6mm) x 7" 2% Ceriated Tungsten	T1167GC2

TUNGSTEN RETAIL PACKS

Oxides used are primarily zirconium, thorium, lanthanum or cerium. Additions are usually 1% – 4%. These oxides greatly improve arc initiation, especially when direct current (DC) welding is employed. Thorium oxide (thoria) has been used for many years, having been found effective in terms of long life and thermal efficiency. Zirconium oxide (zirconia) has been commonly used for alternating (AC) TIG welding, normally for welding aluminum.

ISO 6848 COLOR CHART	SIZE		PART #	
	INCHES	MILLIMETERS	10 PIECE	3 PIECE P.O.P.
2% Thoriated Red	.020 x 7"	0.5 x 175mm	T0207GT2	
	.040 x 7"	1.0 x 175mm	T0407GT2	
	1/16 x 7"	1.6 x 175mm	T1167GT2	T1167GT2-3
	3/32 x 7"	2.4 x 175mm	T3327GT2	T3327GT2-3
	1/8 x 7"	3.2 x 175mm	T187GT2	T187GT2-3
AWS A5.12 EWTh-2 ISO 6848 WT20	5/32 x 7"	4.0 x 175mm	T5327GT2	
.8% Zirconiated White	.020 x 7"	0.5 x 175mm	T0207GZ	
	.040 x 7"	1.0 x 175mm	T0407GZ	
	1/16 x 7"	1.6 x 175mm	T1167GZ	T1167GZ-3
	3/32 x 7"	2.4 x 175mm	T3327GZ	T3327GZ-3
	1/8 x 7"	3.2 x 175mm	T187GZ	T187GZ-3
AWS A5.12 EWZr-8 ISO 6848 WZ8	5/32 x 7"	4.0 x 175mm	T5327GZ	
1.5% Lanthanated Gold	.020 x 7"	0.5 x 175mm	T0207GL	
	.040 x 7"	1.0 x 175mm	T0407GL	
	1/16 x 7"	1.6 x 175mm	T1167GL	T1167GL-3
	3/32 x 7"	2.4 x 175mm	T3327GL	T3327GL-3
	1/8 x 7"	3.2 x 175mm	T187GL	T187GL-3
AWS A5.12 EWL-1.5 ISO 6848 WL15	5/32 x 7"	4.0 x 175mm	T5327GL	
2% Ceriated Gray	.020 x 7"	0.5 x 175mm	T0207GC2	
	.040 x 7"	1.0 x 175mm	T0407GC2	
	1/16 x 7"	1.6 x 175mm	T1167GC2	T1167GC2-3
	3/32 x 7"	2.4 x 175mm	T3327GC2	T3327GC2-3
	1/8 x 7"	3.2 x 175mm	T187GC2	T187GC2-3
AWS A5.12 EWCe-2 ISO 6848 WC20 (Formerly Orange)	5/32 x 7"	4.0 x 175mm	T5327GC2	
Pure Green	.020 x 7"	0.5 x 175mm	T0207G	
	.040 x 7"	1.0 x 175mm	T0407G	
	1/16 x 7"	1.6 x 175mm	T1167G	T1167G-3
	3/32 x 7"	2.4 x 175mm	T3327G	T3327G-3
	1/8 x 7"	3.2 x 175mm	T187G	T187G-3
AWS A5.12 EWP ISO 6848 WP	5/32 x 7"	4.0 x 175mm	T5327G	
2% Lanthanated Blue	.020 x 7"	0.5 x 175mm	T0207GL2	
	.040 x 7"	1.0 x 175mm	T0407GL2	
	1/16 x 7"	1.6 x 175mm	T1167GL2	T1167GL2-3
	3/32 x 7"	2.4 x 175mm	T3327GL2	T3327GL2-3
	1/8 x 7"	3.2 x 175mm	T187GL2	T187GL2-3
AWS A5.12 EWL-2 ISO 6848 WL20	5/32 x 7"	4.0 x 175mm	T5327GL2	
LaYZr™ Chartreuse	.020 x 7"	0.5 x 175mm	T0207GTM	
	.040 x 7"	1.0 x 175mm	T0407GTM	
	1/16 x 7"	1.6 x 175mm	T1167GTM	T1167GTM-3
	3/32 x 7"	2.4 x 175mm	T3327GTM	T3327GTM-3
	1/8 x 7"	3.2 x 175mm	T187GTM	T187GTM-3
AWS A5.12 EWG ISO 6848	5/32 x 7"	4.0 x 175mm	T5327GTM	

TIG welding electrodes usually contain small quantities of metallic oxides, which can offer the following benefits:

- Facilitate arc starting
- Increase arc stability
- Improve current carrying capacity of the electrode
- Reduce the risk of weld contamination
- Increase electrode life



REMOTE AMPERAGE CONTROLS

- Available in either Steady-Grip™, rotary, linear slide, or spring loaded wheel configurations
- Fits most makes and models of TIG power supplies
- Controls contactor on / off, gas solenoids and full range current output
- Available with a Velcro strap or built into the torch handle
- Contact CK for order numbers



ROTARY
Velcro Straps



LINEAR SLIDE
Built-In – Handle
(For CK torches)



SPRING LOADED WHEEL
Velcro Straps



**ABRASION,
HEAT, OIL, FLAME
AND UV RESISTANT**

LEATHER VELCRO HOSE COVERS

TORCHES	LENGTH*	WIDTH	INSIDE DIAMETER	ORDER#
CK9, CK17, CK20	10 ft. (3.0m)	3-3/4" (95mm)	1" (25mm)	212HCLV
	22 ft. (7.0m)	3-3/4" (95mm)	1" (25mm)	225HCLV
CK18, CK26	10 ft. (3.0m)	4-1/2" (114mm)	1-1/4" (31mm)	312HCLV
	22 ft. (7.0m)	4-1/2" (114mm)	1-1/4" (31mm)	325HCLV

TUNGSTEN ELECTRODE GRINDER

- Enclosed electrode grinder
- Minimizes grinding dust exposure to both the user and the environment
- Standard head for diameters:
.040" (1.0mm)
1/16" (1.6mm)
3/32" (2.4mm)
1/8" (3.2mm)
- Angles adjustable from 20°– 60°
- Consistent tip geometry
- Eliminate grinding wheel contamination

SPECIFICATIONS

Voltage	120V AC
Single Phase.....	60 Hz
Power.....	710 W
Amp.....	6.45 A
No Load Speed	34,000 RPM
Weight	4.1 lbs. (1,860 grams)
Ship Weight	10.1 lbs. (4,581 grams)
Warranty.....	2 years

230V available, contact us for more information

TURBO-SHARP® X



TROUBLESHOOTING GUIDE

PROBLEM	CAUSE	SOLUTION
Excessive Electrode Consumption	Inadequate gas flow	Increase gas flow
	Improper size electrode for current required	Use larger electrode
	Operating of reverse polarity	Use larger electrode or change polarity
	Electrode contamination	Remove contaminated portion, then prepare again
	Excessive heating inside torch	Replace collect, try wedge collet or reverse collet
	Electrode oxidizing during cooling	Increase gas post flow time to 1 sec. per 10 amps
	Shield gas incorrect	Change to proper gas (no oxygen or Co2)
Erratic Arc	Incorrect voltage (arc too long)	Maintain short arc length
	Current too low for electrode size	Use smaller electrode or increase current
	Electrode contaminated	Remove contaminated portion, then prepare again
	Joint too narrow	Open joint groove
	Contaminated shield gas, dark stains on the electrode or weld bead indicate contamination	Most common cause is moisture or aspirated air in gas stream. Use welding grade gas only. Find the source of the contamination and eliminate it promptly.
	Base metal is oxidized, dirty or oily	Use appropriate chemical cleaners, wire brush or abrasives prior to welding.
Inclusion of Tungsten or Oxides in Weld	Poor scratch starting technique	Many codes do not allow scratch starts. Use copper strike plate. Use high-frequency arc starter.
	Excessive current for tungsten size used	Reduce current or use larger electrode
	Accidental contact of electrode with puddle	Maintain proper arc length
	Accidental contact of electrode to filler rod	Maintain a distance between electrode and filler metal
	Using excessive electrode extension	Reduce electrode extension to recommended limits
	Inadequate shielding or excessive drafts	Increase gas flow, shield arc from wind, or use gas lens
	Wrong gas	Do not use Ar-O2 or Ar-Co2 GMA (MIG) gases for TIG welding
Heavy surface oxides not being removed	Use ACHF, adjust balance control for maximum cleaning, or wire brush and clean the weld joint prior to welding.	
Porosity in Weld Deposit	Entrapped impurities, hydrogen, air, nitrogen, water vapor	Do not weld on wet material. Remove condensation from line
	Defective gas hose or loose connection	Check hoses and connections for leaks
	Filler material is damp (particularly aluminum)	Dry filler metal in oven prior to welding
	Filler material is oily or dusty	Replace filler metal
	Alloy impurities in the base metal such as sulphur, phosphorus, lead and zinc	Change to a different alloy composition which is weldable. These impurities can cause a tendency to crack when hot.
	Excessive travel speed with rapid freezing of weld trapping gases before they escape	Lower the travel speed
	Contaminated gas shield	Replace the shielding gas
Cracking in Welds	Hot cracking in heavy section or with metals which are hot shorts	Preheat, increase weld bead cross-section size, change weld bead contour.
	Crater cracks due to improperly breaking the arc or terminating the weld at the joint edge	Reverse direction and weld back into previous weld at edge. Use remote or foot control to manually down slope current.
	Post weld cold cracking, due to excessive joint restraint, rapid cooling, or hydrogen embrittlement	Preheat prior to welding, use pure to non-contaminated gas. Increase the bead size. Prevent craters or notches. Change the weld joint design.
	Centerline cracks in single pass welds	Increase bead size. Decrease root opening, use preheat, prevent craters.
	Underbead cracking from brittle microstructure	Eliminate sources of hydrogen, joint restraint, and use preheat.
Inadequate Shielding	Gas flow blockage or leak in hoses or torch	Locate and eliminate blockage or leak.
	Excessive travel speed exposes molten weld to atmospheric contamination	Use slower travel speed or carefully increase the flow rate to a safe level below creating excessive turbulence. Use trailing shield cup.
	Wind or drafts	Set up screens around the weld area
	Excessive electrode stickout	Reduce electrode stickout. Use a larger size cup.
	Excessive turbulence in gas stream	Change to gas saver parts or gas lens parts.
Arc Blow	Induced magnetic field from DC weld current	Change to ACHF current. Rearrange the split ground connection.
	Arc is unstable due to magnetic influences	Reduce weld current and use arc length as short as possible.
Short Parts Life	Short water cooled leads life	Verify coolant flow direction, return flow must be on the power cable lead.
	Cup shattering or breaking in use	Change cup size or type, change tungsten position, refer to CK Worldwide technical specifications available at www.CKWORLDWIDE.com
	Short collet life	Ordinary style is split and twists or jams, change to wedge style.
	Short torch head life	Do not operate beyond rated capacity, use water cooled model, do not bend rigid torches.
	Gas hoses ballooning, bursting or blowing off while hot	Incorrect flowmeter, TIG flowmeters operate at 35 psi with low flows. MIG flowmeters operate with high flows at 65 psi or more.

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www.CKWORLDWIDE.com

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