

Combination Torch Heavy-Duty Outfits

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Gas
Equipment



Quick Specs

Typical Applications

Shipbuilding
Railroad
Salvage
Pipeline
Metal fabrication
Construction and demolition

Oxy-Fuel Processes

Cutting
Heating
Welding
Brazing

Fuel Gases

Acetylene
Propane
Propylene
Natural gas

Cutting Capacity

Up to 1-1/4 in. (32 mm) with included tips,
up to 8 in. (203 mm) with optional tips

Heating Capacity

Up to 830,000 Btu with optional tips

Welding Capacity

Up to 1/2 in. (13 mm) with optional tips

Heavy-duty oxy-fuel combination torch systems for your cutting, heating and welding needs.



HBA-40510 (shown) / HBA-40300 outfits include SC209 cutting attachment, WH200A handle, cutting tips, heating tip, welding tip, Series™ 40 oxy and fuel regulators, hose, flashback arrestors, single-flint lighter, shade 5 safety glasses, and tip cleaner. See page 2 for additional outfits and descriptions.

DESIGNED FOR SAFETY

Three-tube construction keeps gases separate in the cutting attachment until mixed at the tip for safety.

In-tip gas mixing ensures lowest amount of mixed gas in the system. Sustained backfire can be isolated in the tip, helping protect the operator and the torch.

Concave-shaped tip end reduces backfire and resists flameout during accidental contact with the base metal while cutting.

Flo-Trol™ valve prevents seat burnout due to reverse flow of mixed gases, helping to reduce maintenance costs.

External relief valve protects regulator from damage due to inadvertent high-pressure surge. Relief valve will release excessive pressure and automatically reset.

Dual filters including Sure Seat™ protect regulator high-pressure seat from debris for reliable operation and long service life.

HIGH PERFORMANCE

Silver-brazed torch joints provide strength, leak resistance and heat protection.

Nickel-plated torch assembly provides heat protection.

Stainless steel ball-style valves provide smooth adjustment and positive seating to eliminate leaks.

Internal threads on handle protect threads from damage if torch is dropped.

O-ring seals on cutting attachment and welding tip allow for easy 360-degree rotation to reduce operator fatigue.

Hand-tighten only to seat the tip and attachments, saving time and tools when changing tips.

Graf-Tite™ soft seats on tips compress and conform to the shape of the torch head for positive seating, eliminating leaks even when tips are nicked. Soft seat withstands extremely high temperature for longer tip life.

Easy-to-read gauges with shatter-resistant polycarbonate lens covers.



Torches are warrantied for 25 years, parts and labor.
Regulators are warrantied for three years, parts and labor.



Underwriters Laboratories (UL) Listed
for gas pressure regulators.



Electrical Testing Laboratories (ETL) Listed
for oxy-fuel torches and tips.

Intertek



Smith Equipment

A Brand of Miller Electric Mfg. LLC
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Combination Torch Heavy-Duty Outfits Include



HBA-30510 / HBA-30300 (shown) outfits include SC209 cutting attachment, WH200A handle, cutting tip, heating tip, welding tip, Series 30™ oxy and fuel regulators, hose, flashback arrestors, single-flint lighter, shade 5 safety glasses, and tip cleaner.



HBA-30510LP outfit includes SC209 cutting attachment, WH200A handle, cutting tip, heating tip, Series 30™ oxy and fuel regulators, hose, check valves, single-flint lighter, shade 5 safety glasses, and tip cleaner.

SC209 Heavy-Duty Cutting Attachment



Handles heavy-duty cutting requiring high gas flow.

Cuts up to 8-inch (203 mm) thick steel. For use with WH200A heavy-duty torch handle.

Materials of construction

- Handle, lever and butt: nickel-plated brass
- Tubes: nickel-plated stainless steel
- Valve stem: stainless steel
- Valve packing: PTFE
- Flo-Trol™ diaphragm: Buna-N
- Springs: stainless steel
- Silver-brazed assembly
- Stem: stainless steel
- Cutting seat: Buna-N
- Seat retainer: brass
- Gasket: polyester
- Spring retainer: nickel-plated brass
- Backend: nickel-plated brass
- Backend nut: nickel-plated brass
- O-rings: Buna-N

Specifications

Length: 12.5 in. (318 mm)
Weight: 1.83 lb. (0.83 kg)
Head angle: 90 degrees

Repair kit SC101

Warranty 25 years

FUEL GAS	TORCH HANDLE		CUTTING AND GOUGING TIPS	
	STOCK NO.	LENGTH	STOCK NO.	DESCRIPTION
Acetylene	WH200A	7.5 in. (191 mm)	SC12-00 to SC12-5 SC12-4X9 SC14-3 SC13-3 and SC13-5	General cutting tips Extra-long cutting tip Rivet/riser cutting tip Gouging tips
Propane/natural gas			SC40-0 to SC40-4 SC46-2 and SC46-4 SC50-0 to SC50-5 SC2-2 and SC2-4	General cutting tips Dirty or coated metal cutting tips Heavy preheat cutting tips Gouging tips
Propylene			SC60-0 to SC60-5	General cutting tips

WH200A Heavy-Duty Handle



Handles heavy-duty cutting, heating and welding requiring high gas flow.

Cuts up to 8-inch (203 mm) thick steel with SC200 series cutting attachments.

Materials of construction

- Handle, head, tube and butt: nickel-plated brass
- Valve ball: stainless steel
- Valve stem: bronze
- Valve packing: PTFE
- Valve nut: nickel-plated brass
- Valve knob: nickel-plated zinc
- Silver-brazed assembly

Specifications

Length: 7.5 in. (191 mm)
Weight: 1.01 lb. (0.46 kg)
Handle diameter: 1 in. (25.4 mm)

Inlet connection

“B” size, 9/16”-18 RH and LH

Valve assembly replacement G729-5A

Warranty 25 years

FUEL GAS	CUTTING ATTACHMENT		HEATING TIPS		WELDING TIPS	
	STOCK NO.	HEAD ANGLE	STOCK NO.	BTU PER HOUR	STOCK NO.	METAL THICKNESS
Acetylene	SC205 SC209	75° 90°	ST602 ST603 ST605* ST610**	41,160 73,500 141,120 220,500	SW201 SW203 SW205 SW207 SW209 SW210	1/32 in. (0.7 mm) 5/64 in. (1.9 mm) 1/8 in. (3 mm) 3/16 in. (5 mm) 3/8 in. (10 mm) 1/2 in. (13 mm)
Propane/ natural gas			ST615 ST625 ST635***	244,000 propane / 155,145 natural gas 455,000 propane / 313,950 natural gas 614,195	—	—
Propylene			ST815 ST825	273,000 830,000	—	—

*Two 350 cubic foot cylinders need to be manifolded together to use this tip.

**Three 350 cubic foot cylinders need to be manifolded together to use this tip.

***ST635 tip requires 3/8-inch I.D. hose and heavy-duty regulators.

Heavy-Duty Cutting and Gouging Tips



SC12-1

(included in HBA-40510, HBA-40300, HBA-30510 and HBA-30300 outfits)

Materials of construction

- Body: tellurium copper
- Seats: graphite
- Seat collars: brass



SC12-2

(included in HBA-40510 and HBA-40300 outfits)

Materials of construction

- Body: tellurium copper
- Seats: graphite
- Seat collars: brass



SC40-1

(included in HBA-30510LP outfit)

Materials of construction

- Insert and sleeve: brass
- Shell: tellurium copper
- Seats: graphite
- Seat collars: brass

GENERAL CUTTING TIPS (Except as Noted)

STOCK NO.	METAL THICKNESS INCH (MM)	REGULATOR PRESSURE (PSIG)		GAS CONSUMPTION (SCFH)	
		OXYGEN	ACETYLENE	OXYGEN	ACETYLENE
SC12-00	3/16 (5)	20	10	31	6.5
SC12-0	1/4-3/8 (6-10)	30-35	10	47.5-57.5	7
SC12-1	1/2-5/8 (13-16)	35-40	10	86-96	9.5
SC12-2	3/4-1-1/4 (19-32)	36-51	10	117-147	10.5
SC12-3	1-1/2-2 (38-51)	42-47	10	184-194	12
SC12-4	2-1/2-4 (64-102)	38-54	10	255-331	13-14
SC12-5	5-8 (127-203)	56-78	10	450-580	26*
SC12-4X9 (Extra Long)	4 (102)	50	10	331	14
SC14-3 (Rivet/Riser)	1-1/2 (38) rivets	40	10	190	20
SC13-3 (Gouging)	3/8 x 1/4 (10 x 6)	20	10	151	35
SC13-5 (Gouging)	1/2 x 3/8 (13 x 10)	25	10	246	50*

*Minimum of one 350 cubic foot cylinder required.

		OXYGEN	PROPANE/ NATURAL GAS	OXYGEN	PROPANE/ NATURAL GAS
SC40-0	1/4-3/8 (6-10)	30-35	10	78-88	8
SC40-1	1/2-5/8 (13-16)	35-40	10	113-123	8
SC40-2	3/4-1-1/4 (19-32)	36-51	10	143-173	8
SC40-3	1-1/2-2 (38-51)	42-47	10	208-218	8
SC40-4	2-1/2-4 (64-102)	38-54	10	305-380	15
SC2-2 (Gouging)	5/16 x 1/8 (8 x 3)	60	22	389	53
SC2-4 (Gouging)	3/8 x 1/4 (10 x 6)	75	22	564	53

		OXYGEN	PROPYLENE	OXYGEN	PROPYLENE
SC60-0	1/4-3/8 (6-10)	30-35	10	78-88	9
SC60-1	1/2-5/8 (13-16)	35-40	10	113-123	9
SC60-2	3/4-1-1/4 (19-32)	36-51	10	143-173	9
SC60-3	1-1/2-2 (38-51)	42-47	10	208-218	12
SC60-4	2-1/2-4 (64-102)	38-54	10	298-373	15
SC60-5	5-8 (127-203)	56-78	10	478-608	15

Heavy-Duty Cutting and Gouging Tips (continued)

DIRTY OR COATED METAL CUTTING TIPS

STOCK NO.	METAL THICKNESS INCH (MM)	REGULATOR PRESSURE (PSIG)		GAS CONSUMPTION (SCFH)	
		OXYGEN	PROPANE/NATURAL GAS	OXYGEN	FUEL GAS
SC46-2	3/4-1-1/4 (19-32)	36-51	10	175-205	15 (propane)
SC46-4	2-1/2-4 (64-102)	38-54	10	310-385	41 (natural gas)

HEAVY PREHEAT CUTTING TIPS

		REGULATOR PRESSURE (PSIG)		GAS CONSUMPTION (SCFH)	
		OXYGEN	PROPANE/NATURAL GAS	OXYGEN	FUEL GAS
SC50-0	1/4-3/8 (6-10)	30-35	10	87-97 (with propane) 102-112 (with natural gas)	13 (propane) 38 (natural gas)
SC50-1	1/2-5/8 (13-16)	35-40	10	145-155	15 (propane) 40 (natural gas)
SC50-2	3/4-1-1/4 (19-32)	36-51	10	175-210 (with propane) 175-205 (with natural gas)	15-16 (propane) 40 (natural gas)
SC50-3	1-1/2-2 (38-51)	42-47	10	245-255 (with propane) 240-250 (with natural gas)	16 (propane) 40 (natural gas)
SC50-4	2-1/2-4 (64-102)	38-54	10	315-395 (with propane) 315-390 (with natural gas)	16-17 (propane) 45 (natural gas)
SC50-5	5-8 (127-203)	56-78	10	500-640 (with propane) 502-632 (with natural gas)	17-20 (propane) 50 (natural gas)

Heavy-Duty Heating Tips

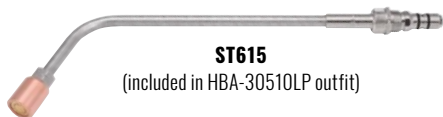


ST602

(included in HBA-40510, HBA-40300, HBA-30510 and HBA-30300 outfits)

Materials of construction

- Head and tube: copper
- Nut: nickel-plated brass
- Mixing section: nickel-plated brass
- O-rings: Buna-N



ST615

(included in HBA-30510LP outfit)

Materials of construction

- Head shell: copper
- Head insert: brass
- Head nut: nickel-plated brass
- Tube: stainless steel
- Nut: nickel-plated brass
- Mixing section: nickel-plated brass
- O-rings: Buna-N

STOCK NO.	AVERAGE BTU/HOUR	REGULATOR PRESSURE (PSIG)		GAS CONSUMPTION (SCFH)		LENGTH INCH (MM)	FUEL CYLINDERS REQUIRED
		OXYGEN	ACETYLENE	OXYGEN	ACETYLENE		
ST602	41,160	15	15	31	28	16 (406)	1 (350 cu. ft.)
ST603	73,500	15	15	55	50	16 (406)	1 (350 cu. ft.)
ST605	141,120	15	15	96	87	19 (483)	2 (350 cu. ft.)
ST610	220,500	15	15	150	136	19 (483)	3 (350 cu. ft.)
		OXYGEN	FUEL GAS	OXYGEN	FUEL GAS		
ST615	244,000	23-65	10-28 (propane)	225-535	70-160 (propane)	15.5 (394)	1-2** (100 lb. cylinders)
	155,145	18-55	10-28 (natural gas)	175-450	92-267 (natural gas)		N/A
ST625	455,000	50-110	17-28 (propane)	480-1,000	140-280 (propane)	31.5 (800)	2-3** (100 lb. cylinders)
	313,950	43-80	18-28 (natural gas)	390-785	200-450 (natural gas)		N/A
ST635*	614,195	70-115	18-40 (propane)	670-1,580	185-480 (propane)	31.5 (800)	2-4** (100 lb. cylinders)
		OXYGEN	PROPYLENE	OXYGEN	PROPYLENE		
ST815	273,000	37-77	13-37	390-655	120-235	16 (406)	1-2** (100 lb. cylinders)
ST825	830,000	60-110	20-35	580-1,500	225-525	16 (406)	2-5** (100 lb. cylinders)

*ST635 requires 3/8 inch (10 mm) I.D. hose and 40-50-510 propane cylinder regulator.

**Continuous use with 100 lb. propane or propylene tank at 70 degrees Fahrenheit.

Heavy-Duty Welding Tips



SW205

(included in HBA-40510, HBA-40300, HBA-30510 and HBA-30300 outfits)

Materials of construction

- Tube: copper
- Nut: nickel-plated brass
- Mixing section: nickel-plated brass
- O-rings: Buna-N

STOCK NO.	WELDING CAPACITY INCH (MM)	REGULATOR PRESSURE (PSIG)		GAS CONSUMPTION (SCFH)		LENGTH INCH (MM)	FUEL CYLINDERS REQUIRED
		OXYGEN	ACETYLENE	OXYGEN	ACETYLENE		
SW201	1/32 (0.7)	10	10	2.3	2.3	8 (203)	1 (350 cu. ft.)
SW203	5/64 (1.9)	10	10	3.2	3.2	8 (203)	1 (350 cu. ft.)
SW205	1/8 (3)	10	10	6	6	8 (203)	1 (350 cu. ft.)
SW207	3/16 (5)	10	10	12	12	9.5 (241)	1 (350 cu. ft.)
SW209	3/8 (10)	10	10	23	23	9.5 (241)	1 (350 cu. ft.)
SW210	1/2 (13)	15	15	36	36	12.5 (318)	1 (350 cu. ft.)

Series 40™ Heavy-Duty Single-Stage Regulators



40-175-540

(included with HBA-40510 and HBA-40300 outfits)



40-15-510

(included with HBA-40510 outfit)



40-15-300

(included with HBA-40300 outfit)

STOCK NO.	GAS	GAUGES (2.5 INCH / 63.5 MM)		MAX. DELIVERY PRESSURE	MAX. INLET PRESSURE	OUTLET CONNECTION	INLET CONNECTION
		INLET	OUTLET				
40-175-540 40-175-540S*	Oxygen	4,000 psig (276 bar)	200 psig (14 bar)	175 psig (12 bar)	3,000 psig (207 bar)	9/16"-18 RH "B"	CGA 540
40-275-540	Oxygen	4,000 psig (276 bar)	400 psig (28 bar)	275 psig (19 bar)	400 psig (28 bar)	9/16"-18 RH "B"	CGA 540
40-15-300 40-15-300S*	Acetylene	400 psig (28 bar)	30 psig (2 bar)	15 psig (1 bar)	400 psig (28 bar)	9/16"-18 LH "B"	CGA 300
40-15-510 40-15-510S*	Acetylene	400 psig (28 bar)	30 psig (2 bar)	15 psig (1 bar)	400 psig (28 bar)	9/16"-18 LH "B"	CGA 510
40-50-510	LP gas**	400 psig (28 bar)	60 psig (4 bar)	50 psig (3 bar)	400 psig (28 bar)	9/16"-18 LH "B"	CGA 510

*40-175-540S showing the HB190 regulator guard is pictured at right.

**Propane, propylene or natural gas.



Series 30™ Medium-Duty Single-Stage Regulators



30-100-540

(included with HBA-30510 and HBA-30300 outfits)



30-15-510

(included with HBA-30510 outfit)



30-15-300

(included with HBA-30300 outfit)



30-50-510

(included with HBA-30510LP outfit)

STOCK NO.	GAS	GAUGES (2 INCH / 51 MM)		MAX. DELIVERY PRESSURE	MAX. INLET PRESSURE	OUTLET CONNECTION	INLET CONNECTION
		INLET	OUTLET				
30-100-540	Oxygen	4,000 psig (276 bar)	150 psig (10 bar)	100 psig (7 bar)	3,000 psig (207 bar)	9/16"-18 RH "B"	CGA 540
30-15-510	Acetylene	400 psig (28 bar)	30 psig (2 bar)	15 psig (1 bar)	400 psig (28 bar)	9/16"-18 LH "B"	CGA 510
30-15-300	Acetylene	400 psig (28 bar)	30 psig (2 bar)	15 psig (1 bar)	400 psig (28 bar)	9/16"-18 LH "B"	CGA 300
30-15-520	Acetylene	400 psig (28 bar)	30 psig (2 bar)	15 psig (1 bar)	400 psig (28 bar)	9/16"-18 LH "B"	CGA 520
30-50-510	LP gas*	400 psig (28 bar)	60 psig (4 bar)	50 psig (3 bar)	400 psig (28 bar)	9/16"-18 LH "B"	CGA 510

*Propane, propylene or natural gas.

Note: Regulators are also sold in Twin Pack options. **HTP2** includes 30-100-540 and 30-15-510. **HTP5** includes 30-100-540 and 30-15-300.

Ordering Information

OUTFITS	STOCK NO.	DESCRIPTION	QTY.	PRICE
Heavy-Duty Combination Torch Outfits Acetylene	HBA-40510	With SC209 cutting attachment, WH200A handle, SC12-1 and SC12-2 cutting tips, ST602 heating tip, SW205 welding tip, 40-175-540 oxy regulator, 40-15-510 fuel regulator, 25 ft. (7.6 m) 1/4 in. (6 mm) "R"-grade hose, H743 torch-mount flashback arrestors, single-flint lighter, shade 5 safety glasses, and tip cleaner		
	HBA-40300	Same as HBA-40510, but with 40-15-300 fuel regulator		
	HBA-30510	With SC209 cutting attachment, WH200A handle, SC12-1 cutting tip, ST602 heating tip, SW205 welding tip, 30-100-540 oxy regulator, 30-15-510 fuel regulator, 25 ft. (7.6 m) 1/4 in. (6 mm) "R"-grade hose, H743 torch-mount flashback arrestors, single-flint lighter, shade 5 safety glasses, and tip cleaner		
	HBA-30300	Same as HBA-30510, but with 30-15-300 fuel regulator		
Heavy-Duty Combination Torch Outfits Propane or natural gas	HBA-30510LP	With SC209 cutting attachment, WH200A handle, SC40-1 cutting tip, ST615 heating tip, 30-100-540 oxy regulator, 30-50-510 fuel regulator, 20 ft. (6.1 m) 1/4 in. (6 mm) "T"-grade hose, H698 regulator-mount check valves, single-flint lighter, shade 5 safety glasses, and tip cleaner		
REPLACEMENT PARTS				
O-ring Replacements	LW15	For SC200 series cutting attachments, ST heating tips and SW welding tips (25 per package)		
Torch Head Nut	G900-41A	For SC200 series cutting attachments		
Cutting Assembly	SC101	For SC200 series cutting attachments. Seat assembly with o-rings, pin, packing, gasket and diaphragm		
Valve Assembly	G729-5A	For WH200A handle. Valve assembly (pair)		
ACCESSORIES				
Flashback Arrestors	H743	Torch-mount flashback arrestors (pair)		
Check Valves	H697	Torch-mount reverse-flow check valves (pair)		
Twin-Hose	RL935	For acetylene. 20 ft. (6.1 m) "R"-grade twin-hose, 3/16 in. ID, "B" fittings		
	RL1131	For acetylene. 25 ft. (7.6 m) "R"-grade twin-hose, 1/4 in. ID, "B" fittings		
	TRL1131	For propane/natural gas. 20 ft. (6.1 m) "T"-grade twin-hose, 1/4 in. ID, "B" fittings		
Hard Hat™ Regulator Guard	HB190	For Series 40 regulators. Rugged steel with bright yellow, baked-enamel finish		
Cylinder Wrench	N230			
Adjustable Circle Cutting Guide	16229	Cuts from 5/8 to 12 in. diameter holes — works with all MC- and SC-style cutting tips		

DATE:

TOTAL QUOTED PRICE:

Distributed By:

