



THE HARRIS PRODUCTS GROUP

HVAC/R & PLUMBING ALLOY & EQUIPMENT CATALOG



A WORLD CLASS LEADER



About The Harris Products Group

The Harris Products Group is an American based company with quality expectations that are the highest in the industry. We provide our customers with competitive prices and on-time delivery. With an average of over 29 years experience in the brazing industry, our sales and technical representatives are product application experts. Harris products are recognized in the brazing industry as world-class brands. No other manufacturer brings the breadth and depth of products to the distributor channel that Harris does. Our products are 100% tested to ensure we meet and/or exceed industry specifications. Behind the Harris Products Group is the financial strength and resources of Lincoln Electric one of the most respected companies in the industry today.



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These brazing filler metals are primarily used to join copper to copper, copper to brass, and brass to brass. The phosphorus content serves as a “self-fluxing” agent in joining copper to copper. When brazing brass to copper or brass to brass, use Stay-Silv® White Brazing Flux. The phos/copper and silver/phos/copper filler metals are not recommended for brazing steel or nickel alloys. The amount of phosphorus in the phos/copper filler metals (AWS-BCuP series) is critical in determining precise melting range and performance. Proprietary computer based technology is used to accurately control the phosphorus content to exacting standards.

Each heat of metal is precisely checked before pouring to assure users a phosphorus content to within + or - 1/10 of a percent. Even more significant, a liquidus variation of no more than +or- 6°F. The advantages of this precise control is apparent in automated brazing operations, where even modest variations in flow temperatures can significantly increase the incidence of rejects. Equally important, manual operators no longer need to make adjustments in heating practice from one batch of filler metal to the next to achieve uniform results.

DYNAFLOW®

Dynaflow melts and flows at temperatures very close to Stay Silv 15, and provides comparable brazed mechanical properties. This makes Dynaflow an excellent cost effective alternative to the 15% silver alloys. This premium, medium range silver alloy has been meticulously formulated to even tighter specifications than our standard copper-to-copper alloys.

**HARRIS
EXCLUSIVE**

PART NO.	SIZE
D520R	3/32" DIA x 20" - 25# PKG
D536R	3/32" DIA x 36" - 25# PKG
D620F	.050" x 1/8" x 20" - 25# PKG
D620F1	.050" x 1/8" - 28 STICK TUBE
D636S	1/8" SQ x 36" - 25# PKG



PN: D520R
3/32" DIA x 20" - 25# PKG

**USA
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RoHS
COMPLIANT**

Chemical Composition	Solidus	Liquidus	Fluidity Rating*	Recommended Joint Clearance	Product Features
Silver-6% Phosphorus-6.1% Copper-87.9	1190° F 643° C	1465° F 796° C	3	.003" / .006"	Good Ductility

*The higher the fluidity rating, the faster the alloy flows within the melting range.





BRAZING ALLOYS

PART NO.	SIZE
BK220R	2MM DIA x 20" - 25# PKG
BK220R1	2MM DIA - 20 STICK TUBE
BK520R	3/32" DIA x 20" - 25# PKG
BK536R	3/32" DIA x 36" - 25# PKG
BK636R	1/8" DIA x 36" - 25# PKG
BKFC2500R1	2MM DIA x 500MM - 20 STICK TUBE



PN: BK220R1
2MM Dia. - 20 STICKS

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BLOCKADE®

Blockade is a proprietary phosphorus-tin-silicon alloy engineered to provide a low cost alternative to silver bearing filler metals. It is self fluxing on copper and its lower melting temperature makes it an excellent choice for brass. Blockade flows rapidly but can be used to "cap" brazed joints.

Chemical Composition	Solidus	Liquidus	Fluidity Rating*	Recommended Joint Clearance	AWS A5.8 Class	Product Features
Silver-0% Phosphorus-6% Copper-94%	1178° F 637° C	1247° F 674° C	***	.002" / .005"	BCuP-9	For copper or brass. Reduced brazing temperature, visible braze allows easy joint inspection. Excellent for HVAC application.
*The higher the fluidity rating, the faster the alloy flows within the melting range.						
***Blockade has good fluidity, yet it has the unique ability to form a cap at the joint.						

PART NO.	SIZE
0320R	1/16" DIA x 20" - 25# PKG
0320R1	1/16" DIA - 51 STICK TUBE
0336R	1/16" DIA x 36" - 25# PKG
0520R	3/32" DIA x 20" - 25# PKG
0520R1	3/32" DIA - 24 STICK TUBE
0536R	3/32" DIA x 36" - 25# PKG
0536S	3/32" SQ x 36" - 25# PKG
0620F	.050" x 1/8" x 20" - 25# PKG
0620F1	.050" x 1/8" - 28 STICK TUBE
0620R	1/8" DIA x 20" - 25# PKG
0620R1	1/8" DIA - 14 STICK TUBE
0620S	1/8" SQ x 20" - 25# PKG
0620S1	1/8" SQ - 11 STICK TUBE
0636F	.050" x 1/8" x 36" - 25# PKG
0636R	1/8" DIA x 36" - 25# PKG
0636S	1/8" SQ x 36" - 25# PKG
0936RK	1/4" DIA x 36" - 25# PKG BLANK



PN: 0620F1
.050 x 1/8" - 28 STICKS

HARRIS 0

This low cost alloy is suitable for most copper-to-copper or brass joints where good fit-up exists, and the assemblies are not subject to excessive vibration nor movement.

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Chemical Composition	Solidus	Liquidus	Fluidity Rating*	Recommended Joint Clearance	AWS A5.8 Class	Product Features
Silver-0% Copper- 92.9 Phosphorus-7.1%	1310° F 710° C	1475° F 802° C	5	.002" / .007"	BCuP-2	Requires medium fit up
*The higher the fluidity rating, the faster the alloy flows within the melting range.						

PART NO.	SIZE
2520R	3/32" DIA x 20" - 25# PKG
2536R	3/32" DIA x 36" - 25# PKG
2620F	.050" x 1/8" x 20" - 25# PKG
2620F1	.050" x 1/8" - 28 STICK TUBE
2620R	1/8" DIA x 20" - 25# PKG
2636F	.050" x 1/8" x 36" - 25# PKG
2636R	1/8" DIA x 36" - 25# PKG



PN: 2620F1
.050 x 1/8" - 28 STICKS

STAY-SILV® 2

This economical, low silver alloy, is designed to broaden the melting range of Harris 0, and has proven useful in some specific applications where mechanical properties are less critical.

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Chemical Composition	Solidus	Liquidus	Fluidity Rating*	Recommended Joint Clearance	AWS A5.8 Class	Product Features
Silver-2% Phosphorus-7% Copper-91%	1190° F 643° C	1450° F 788° C	4	.003" / .005"	BCuP-6	Broader melting range than 0
*The higher the fluidity rating, the faster the alloy flows within the melting range.						

STAY-SILV® 5

This medium-range alloy is well suited where close fit-up cannot be maintained. This filler metal is somewhat more ductile than Harris 0 or Stay-Silv 2.

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PN: 5320R1

1/16" DIA - 51 STICKS

Chemical Composition	Solidus	Liquidus	Fluidity Rating*	Recommended Joint Clearance	AWS A5.8 Class	Product Features
Silver-5% Phosphorus-6% Copper-89%	1190° F 643° C	1500° F 816° C	3	.003" / .006"	BCuP-3	Used to bridge gaps where close fit-up can't be maintained

*The higher the fluidity rating, the faster the alloy flows within the melting range.

PART NO.	SIZE
5320R	1/16" DIA x 20" - 25# PKG
5320R1	1/16" DIA - 51 STICK TUBE
5336R	1/16" DIA x 36" - 25# PKG
5520R	3/32" DIA x 20" - 25# PKG
5520R1	3/32" DIA - 24 STICK TUBE
5536R	3/32" DIA x 36" - 25# PKG
5536S	3/32" SQ x 36" - 25# PKG
5620F	.050" x 1/8" x 20" - 25# PKG
5620F1	.050" x 1/8" - 28 STICK TUBE
5620F5	.050" x 1/8" x 20" - 5# TUBE
5620R	1/8" DIA x 20" - 25# PKG
5620R1	1/8" DIA - 14 STICK TUBE
5636F	.050" x 1/8" x 36" - 25# PKG
5636R	1/8" DIA x 36" - 25# PKG
5636S	1/8" SQ x 36" - 25# PKG
5620FMPOP	.050" x 1/8" - 8 STICKS

STAY-SILV® 6

This medium-range alloy is well suited where close fit-up cannot necessarily be maintained. This filler metal is somewhat more ductile than Phos Copper or Stay-Silv 2.

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PN: 6620F1

.050 x 1/8" - 28 STICKS

Chemical Composition	Solidus	Liquidus	Fluidity Rating*	Recommended Joint Clearance	Product Features
Silver-6% Phosphorus-6.5% Copper-87.5%	1190° F 643° C	1425° F 774° C	5	.002" / .005"	Used to bridge gaps where more ductile filler metal is required

*The higher the fluidity rating, the faster the alloy flows within the melting range.

PART NO.	SIZE
6536R	3/32" DIA x 36" - 25# PKG
6620F	.050" x 1/8" x 20" - 25# PKG
6620F1	.050" x 1/8" - 28 STICK TUBE
6636R	1/8" DIA x 36" - 25# PKG
6636S	1/8" SQ x 36" - 25# PKG
6836R	3/16" DIA x 36" - 25# PKG SPECIAL ORDER

STAY-SILV® 15

For many years the standard of the industry, the 15% silver alloy has proven its value. This filler metal is excellent for situations in which close fit-up does not exist, and where thermal expansion and service vibration are involved.

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PN: 15636F

.050 x 1/8" x 36" - 25# PKG

Chemical Composition	Solidus	Liquidus	Fluidity Rating*	Recommended Joint Clearance	AWS A5.8 Class**	Product Features
Silver-15% Phosphorus-5% Copper-80%	1190° F 643° C	1480° F 804° C	3	.002" / .006"	BCuP-5	Premium alloy Excellent strength and ductility

*The higher the fluidity rating, the faster the alloy flows within the melting range.
** Stay-Silv 15 also meets Fed. Spec. QQ-B-654A, Grade III.

PART NO.	SIZE
15320F	.050" x 1/16" x 20" - 25# PKG
15320F1	.050" x 1/16" x 20" - 51 STICK TUBE
15320R	1/16" DIA x 20" - 25# PKG
15320R1	1/16" DIA - 51 STICK TUBE
15336R	1/16" DIA x 36" - 25# PKG
15520R	3/32" DIA x 20" - 25# PKG
15520R1	3/32" DIA - 24 STICK TUBE
15520S	3/32" SQ x 20" - 25# PKG
15536R	3/32" DIA x 36" - 25# PKG
15536S	3/32" SQ x 36" - 25# PKG
15620F	.050" x 1/8" x 20" - 25# PKG
15620F1	.050" x 1/8" - 28 STICK TUBE
15620F5	.050" x 1/8" x 20" - 5# TUBE
15620R1	1/8" DIA - 14 STICK TUBE
15620S	1/8" SQ x 20" - 25# PKG
15620S1	1/8" SQ - 11 STICK TUBE
15636F	.050" x 1/8" x 36" - 25# PKG
15636R	1/8" DIA x 36" - 25# PKG
15636S	1/8" SQ x 36" - 25# PKG
15636S10	1/8" SQ x 36" - 10# TUBE
1520FMPOP	.050" x 1/8" - 8 STICKS



BRAZING ALLOYS

Harris silver brazing alloys are produced with precise wire size and chemical composition. Safety-Silv® brazing alloys are offered in coil, straight lengths, and bare or flux coated rods. To protect the health of operators the use of cadmium-bearing filler metals should be discontinued. Cadmium oxide fumes produced during brazing operations are highly toxic and a listed carcinogen. Harris offers no silver brazing alloys containing cadmium.

SAFETY-SILV® 40

Ductile, free-flowing alloy that offers economy, good penetration into tight connections and medium temperature. Silver to light yellow color as in polished brass.

PN: 4033
1/16" - 3 TO PKG



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PART NO.	SIZE
4031	1/16" - 1 t.o. PKG
4033	1/16" - 3 t.o. PKG
4035	1/16" - 5 t.o. PKG
40350H	1/16" - 50 t.o. COIL
40550H	3/32" - 50 t.o. COIL
40F3184	FC - 1/16" x 18" - 4 OZ TUBE

Chemical Composition	Solidus	Liquidus	Fluidity Rating*	Product Features
Silver-40% Copper-30.5% Zinc-29.5%	1250° F 677° C	1350° F 732° C	5	For Copper, nickel and steel. Suitable for wider clearance yet provides good ductility.
*The higher the fluidity rating, the faster the alloy flows within the melting range.				

PART NO.	SIZE
4511	1/32" - 1 t.o. PKG
4513	1/32" - 3 t.o. PKG
4515	1/32" - 5 t.o. PKG
45150H	1/32" - 50 t.o. COIL
4521	3/64" - 1 t.o. PKG
4525	3/64" - 5 t.o. PKG
45250H	3/64" - 50 t.o. COIL
4531	1/16" - 1 t.o. PKG
45318L	1/16" x 18" - 15 t.o. TUBE
45325H	1/16" - 25 t.o. COIL
4533	1/16" - 3 t.o. PKG
45336L	1/16" x 36" - 50 t.o. TUBE
4535	1/16" - 5 t.o. PKG
45350H	1/16" - 50 t.o. COIL
4551	3/32" - 1 t.o. PKG
45518L	3/32" x 18" - 15 t.o. TUBE
4553	3/32" - 3 t.o. PKG
45536L	3/32" x 36" - 50 t.o. TUBE
4555	3/32" - 5 t.o. PKG
45550H	3/32" - 50 t.o. COIL
45618L	1/8" x 18" - 15 t.o. TUBE
45650H	1/8" - 50 t.o. COIL
45F3184	1/16" x 18" - 40Z 9 STICKS
45F318L	1/16" x 18" - (2) 1# BAG IN TUBE
45F5184	3/32" x 18" - 4 OZ TUBE
45F518L	3/32" x 18" - (2) 1# BAG IN TUBE
45F6184	1/8" x 18" - 4 OZ TUBE
45F618L	1/8" x 18" - (2) 1# BAG IN TUBE

SAFETY-SILV® 45

Excellent general purpose brazing alloy. Good ductility and capillary flow. Color is silver to light yellow.

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AVAILABLE IN KIT
WITH FLUX



PN: 45F3184
Safety-Silv® 45 1/16" x 18"
FLUX COATED - 9 STICKS

Chemical Composition	Solidus	Liquidus	Fluidity Rating*	AWS A5.8 Class	Product Features
Silver-45% Copper-30% Zinc-25%	1225° F 663° C	1370° F 743° C	6.5	BAG-5	General purpose filler for steel and copper alloys. Melting range useful for wide clearances
*The higher the fluidity rating, the faster the alloy flows within the melting range.					

SAFETY-SILV® 45 BRAZING KIT

General purpose filler for steel and copper alloys. Melting range useful for wide clearances. Kit contains 1 oz. of braze wire and 1.75 oz. of Stay-Silv White Flux.

Chemical Composition	Solidus	Liquidus	Fluidity Rating*	AWS A5.8 Class	Product Features
Silver-45% Copper-30% Zinc-25%	1225° F 663° C	1370° F 743° C	6.5	BAG-5	General purpose filler for steel and copper alloys. Melting range useful for wide clearances
*The higher the fluidity rating, the faster the alloy flows within the melting range.					

PART NO.	SIZE
45KPOP	1/16" BRAZING KIT

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SAFETY-SILV® 45T

Performs like a 45% silver cadmium-bearing alloy but is cadmium-free. Lower melting temperature than Safety-Silv 45. Excellent fillet-forming qualities produces high-strength, ductile joints. NSF Certified to NSF 51.

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NSF

Chemical Composition	Solidus	Liquidus	Fluidity Rating*	AWS A5.8 Class	Product Features
Silver-45% Copper-27% Zinc-25% Tin-3%	1195° F 646° C	1265° F 685° C	7	BAG-36	For copper, brass, and steel. Good flow properties with lower brazing temperature

*The higher the fluidity rating, the faster the alloy flows within the melting range.

PN: 45T31
Safety-Silv® 45T
1/16" - 1 t.o. PKG



PART NO.	SIZE
45T225SP	3/64" - 25# SPOOL
45T31	1/16" - 1 t.o. PKG
45T318L	1/16" x 18" - 15 t.o. TUBE
45T33	1/16" - 3 t.o. PKG
45T35	1/16" - 5 t.o. PKG
45T350	1/16" - 50 t.o. COIL
45TF3184	1/16" x 18" - 4 OZ TUBE
45TF318L	1/16" x 18" - (2) 1# BAG IN TUBE

SAFETY-SILV® 56

High silver content alloy; makes premium-quality brazes. Free-flowing with unsurpassed capillary attraction and deep penetration with high ductility. Suitable for use in the food processing industry. Silver color is excellent match for stainless steel and silverware applications. NSF Listed.

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COMPLIANT

NSF



PN: 5631
1/6" DIA. - 1 TO PKG



PN: 56
1/16" x 18"
FLUX COATED

Chemical Composition	Solidus	Liquidus	Fluidity Rating*	AWS A5.8 Class	NSF	Product Features
Silver-56% Copper-22% Zinc-17% Sn-5%	1145° F 618° C	1205° F 652° C	8	BAG-7	51	For ferrous and nonferrous alloys. Often used to braze stainless steel for food service.

*The higher the fluidity rating, the faster the alloy flows within the melting range.

PART NO.	SIZE
5611	1/32" - 1 t.o. PKG
5615	1/32" - 5 t.o. PKG
56150	1/32" - 50 t.o. COIL
56225SP	3/64" - 25# SPOOL
5625	3/64" - 5 t.o. PKG
56250	3/64" - 50 t.o. COIL
5631	1/16" - 1 t.o. PKG
56318L	1/16" x 18" - 15 TO TUBE
56325	1/16" - 25 t.o. COIL
5633	1/16" - 3 t.o. PKG
56336L	1/16" x 36" - 50 t.o. TUBE
5635	1/16" - 5 t.o. PKG
56350	1/16" - 50 t.o. COIL
56518L	3/32" x 18" - 15 t.o. TUBE
5653	3/32" - 3 t.o. PKG
5655	3/32" - 5 t.o. PKG
56550	3/32" - 50 t.o. COIL
56618L	1/8" x 18" - 15 t.o. TUBE
56650	1/8" - 50 t.o. COIL
56F3184	1/16" x 18" - 4 OZ TUBE
56F318L	1/16" x 18" - (2) 1# BAG IN TUBE
56F5184	3/32" x 18" - 4 OZ TUBE
56F518L	3/32" x 18" - (2) 1# BAG IN TUBE

SAFETY-SILV® 56 BRAZING KIT

Safety-Silv 56 in a convenient kit containing 1 oz. of braze wire and 1.75 oz. of Stay-Silv white flux.

Chemical Composition	Solidus	Liquidus	Fluidity Rating*	AWS A5.8 Class	NSF
Silver-56% Copper-22% Zinc-17% Sn-5%	1145° F 618° C	1205° F 652° C	8	BAG-7	51

*The higher the fluidity rating, the faster the alloy flows within the melting range.

PART NO.	SIZE
56KPOP	BRAZING KIT WITH FLUX

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NSF





ALUMINUM ALLOYS

AL-BRAZE 1070

A superior brazing alloy for the joining of aluminum to aluminum. Al-Braze is free-flowing with unequaled capillary attraction, ductility and penetration. Not recommended for brazing Aluminum directly to non-Aluminum alloys as the joint may be brittle.

Procedure:

- Clean the braze area
- Remove all plating or anodized finish
- Heat the wire and dip into dry flux for extra coverage
- Mix powdered flux with water to form a paste
- Use a reducing flame
- Keep torch in constant motion
- Melt the alloy with the heat from the work piece not with the torch

Features:

- Tensile strength - Up to 35,000 PSI
- Solidus - 1070°F / 577°C
- Liquidus - 1080°F / 582°C
- Excellent corrosion resistance
- Specific gravity - 2.66

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Description	Chemical Composition	Solidus	Liquidus	Product Features
Al-Braze 1070 Aluminum Brazing Kit	88% Al 12% Si	1070° F 577° C	1080° F 582° C	Superior brazing alloy for joining aluminum to aluminum. Excellent capillary attraction.

PART NO.	SIZE
1070K	ALBRAZE 1070 KIT

ALCOR

A very easy to use aluminum alloy with non-corrosive flux inside the wire; no external flux is required with this product. Designed for the repair of heat exchangers, air conditioners, aluminum alloy condensers and other applications. Very good fluidity with good capillary attraction. Post-braze cleaning unnecessary. Better than tin-zinc and aluminum silicon alloys for aluminum coil repair.

Procedure:

- Clean the surface of the aluminum to be joined
- Use a stainless steel brush
- Heat the surface evenly, apply ALCOR

Features:

- Tensile strength - Up to 35,000 psi
- Melts at 824°F / 440°C

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Description	Chemical Composition	Solidus	Liquidus	Product Features
Alcor Flux-Cored Aluminum Alloy	Zn Al	824° F 440° C	824° F 440° C	A new approach to joining aluminum. A low temperature, free flowing, flux-cored solder for aluminum joining or repair.

PART NO.	SIZE
AL200RC	ALCOR-2MM DIA. - COIL

ALSOLDER 500 - ALUMINUM SOLDER

Solder alloy for torch or iron. Used to join all solderable aluminum alloys to each other and to dissimilar metals. Also for zinc die-cast. Forms excellent, corrosion resistant joints on the tough to solder aluminum alloys. Also beneficial as a high temperature solder on most other metals. Not recommended for magnesium.

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Procedure:

- Clean the area to be soldered
- Apply Stay Clean aluminum flux
- If using an open flame, heat indirectly with the torch in motion (do not direct the torch on the flux)
- Heat until the flux becomes a nut brown color
- Apply the alloy
- Discontinue heat as soon as flow
- Allow to cool. Remove flux residue with wire brush and hot water

Features:

- Tensile strength - Up to 20,000 PSI
- Solidus - 391°F
- Liquidus - 482°F
- Good color match on aluminum and zinc die cast

**PN: 500K
KIT**



Description	Chemical Composition	Solidus	Liquidus	Product Features
Alsolder 500 Aluminum Solder Kit	15% Zn 85% Sn	391° F 199° C	482° F 250° C	Forms excellent corrosion-resistant joints on the tough-to-solder aluminum alloys. Use for copper to aluminum connections.

PART NO.	SIZE
50061H	1/8" DIA - 1# SPOOL SPECIAL ORDER
500K	ALSOL500 ALUM KT(ORM-D) NO AIR

LEAD FREE SOLDERS



STAY-BRITE® SILVER SOLDER - LEAD FREE

Silver-bearing solders are often used throughout the refrigeration/air conditioning industry instead of brazing alloys. Both Stay-Brite and Stay-Brite 8 produce an overall component with greater strength than a brazed component whose base metals are weakened by annealment from high brazing heat. Stay-Brite solders bond with all of the ferrous and nonferrous alloys. Joints soldered with Stay-Brite solders exhibit considerably higher than necessary elongation for sound, dissimilar metal joints and vibration applications. Stay-Brite 8 is especially effective in filling loosely fitted couplings. Use for all metals with the exception of aluminum. This is a low temperature solder excellent for many HVAC connections.

Product	Chemical Composition	Specifications	Solidus	Liquidus	Product Features
Stay-Brite	4% Ag 96% Sn	ASTM B32 Sn96 NSF 51 • J-STD-006 Sn96Ag 04A	430°F 221°C	430°F 221°C	Use for all metals with the exception of aluminum. Low temperature solder used in HVAC joints.

Product	Chemical Composition	Specifications	Solidus	Liquidus	Product Features
Stay-Brite 8	6% Ag 94% Sn	NSF 51	430°F 221°C	430°F 279°C	Similar to Stay-Brite with a plastic range that is useful in bridging wider gaps

PART NO. SB8	SIZE
SB811	1/32" DIA - 1# SPOOL SPECIAL ORDER
SB831	1/16" DIA - 1# SPOOL
SB855	3/32" DIA - 5# SPOOL
SB861	1/8" - 1# SPOOL
SBRC65	SBRC-1/8" DIA - 5# SPOOL

PART NO. STAY-BRITE	SIZE
SB11	1/32" - 1# SPOOL
SB31	1/16" - 1# SP
SB51	3/32" - 1# SPOOL
SB61	1/8" - 1# SPOOL
SB625	1/8" - 25# SPOOL
SB65	1/8" - 5# SPOOL



PN: SB861
Stay-Brite 8
1/8" - 1# SPOOL



**USA
MADE IN**

**RoHS
COMPLIANT**

STAY-BRITE® KIT - LEAD FREE SOLDER

Use for all metals with the exception of aluminum. Low temperature solder excellent for many HVAC connections.

Chemical Composition	Specifications	Solidus	Liquidus
4% Ag 96% Sn	ASTM B32 Sn 96 NSF 51 • J-STD-006 Sn96 Ag 04A	430°F 221°C	430°F 221°C

PART NO.	SIZE
SBSKPOP	KIT WITH FLUX



**USA
MADE IN**

**RoHS
COMPLIANT**

BRIDGIT®

Lead-free solder widely used in plumbing applications where lead-bearing solders are prohibited. Contains nickel, making joints tremendously strong. Wide range makes Bridgit an excellent alloy for large diameter fittings and ill-fitted or non-concentric pipes. Fills gaps and caps off easily and effectively.

Specifications	Solidus	Liquidus	ASTM B32	Product Features
ASTM B32 HB • NSF to ANSI NSF61 Conforms to 1986 Safe Drinking Act	460°F 238°C	630°F 332°F	Alloy Grade HB	Contains nickel, making joints tremendously strong. Wide plastic range makes Bridgit an excellent alloy for large diameter fittings and ill-fitted or non-concentric pipes. Fills gaps and caps off easily and effectively.

PART NO.	SIZE
BRGT31	1/16" - 1# SPOOL SPECIAL ORDER
BRGT51	3/32" - 1# SPOOL
BRGT61	1/8" - 1# SPOOL
BRGT65	1/8" - 5# SPOOL
BRGT625	1/8" - 25# SPOOL



**USA
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**RoHS
COMPLIANT**

PN: BRGT61
BRIDGIT SOLDER
1/8" - 1# SPOOL



COMMON SOLDERS

40/60

With some exceptions, these tin-lead solders can be used to join copper and most copper alloys, lead, nickel alloys and steel. Tin-lead solders are not recommended for joints subject to high stress or vibration in the cooling industry due to lack of sufficient elongation properties. These solders are also available with rosin or acid core.

Chemical Composition	Solidus	Liquidus	ASTM B32	Product Features
Sn-40% PB-60%	360° F 182° C	460° F 238° C	Sn40A	A general purpose solder with a wider melting range. This allows it to be worked easier than other tin/lead alloys. Often used to solder sheet metal and radiator coils. NOTE: Illegal for potable water systems.

PART NO.	SIZE
406061	1/8" - 1# SPOOL
40A61	ACID CORE 1/8" - 1# SPOOL
40A65	ACID CORE 1/8" - 5# SPOOL
40R61	ROSIN CORE 1/8" - 1# SPOOL



CAUTION:

Lead-bearing solders are not to be used in public or private potable water systems.

**USA
MADE IN**

60/40

With some exceptions, these tin-lead solders can be used to join copper and most copper alloys, lead, nickel alloys and steel. Tin-lead solders are not recommended for joints subject to high stress or vibration in the cooling industry due to lack of sufficient elongation properties. These solders are also available with rosin or acid core. Similar to 50/50 but flows faster due to narrow melting range.

Chemical Composition	Solidus	Liquidus	ASTM B32	Product Features
Sn-60% Pb-40%	360° F 182° C	375° F 191° C	Sn60	Similar to 50/50 but flows faster due to narrow melting range. NOTE: Illegal for potable water systems.

PART NO.	SIZE
60401B	1# BAR
604031	1/16" - 1# SPOOL
604061	1/8" - 1# SPOOL
60R11	ROSIN CORE-1/32" - 1# SPOOL
60R31	ROSIN CORE-1/16" - 1# SPOOL
60R51	ROSIN CORE 3/32" - 1# SPOOL
60R61	ROSIN CORE-1/8" - 1# SPOOL
60R61/2POP	1/8" - 8 oz ROSIN CORE
60R31/2POP	1/16" - 8 oz. SPOOL ROSIN CORE

PN: 60R61/2POP
60/40
1/8" - 8 oz. SPOOL



**USA
MADE IN**



CAUTION:

Lead-bearing solders are not to be used in public or private potable water systems.

50/50

With some exceptions, these tin-lead solders can be used to join copper and most copper alloys, lead, nickel alloys and steel. Tin-lead solders are not recommended for joints subject to high stress or vibration in the cooling industry due to lack of sufficient elongation properties. These solders are also available with rosin or acid core. Note: It is illegal to use lead solders in both public and private potable water systems.

Chemical Composition	Solidus	Liquidus	ASTM B32	Product Features
Sn-50% PB-50%	360°F 182°C	420°F 216°C	Sn50, J-STD-006 Sn50,Pb50a	Can be used, with some exceptions, to join copper to most copper, lead, nickel, and steel. NOTE: Illegal for potable water systems.

PART NO.	SIZE
5050TB	TRI BAR - 1#
50501B	1# BAR
505061	1/8" DIA - 1# SPOOL
505065	1/8" DIA - 5# SPOOL
5050620	1/8" - 20# SPOOL
50R31	ROSIN CORE 1/16" - 1# SPOOL
50R51	ROSIN CORE 3/32" - 1# SPOOL
50R61	ROSIN CORE 1/8" - 1# SPOOL
505061/2POP	1/8" - 8 oz SPOOL POP
50A61	ACID CORE 1/8" - 1# SPOOL

PN: 505061/2POP
50/50
1/8" - 8 oz. SPOOL



**USA
MADE IN**



CAUTION:

Lead-bearing solders are not to be used in public or private potable water systems.

STAY-CLEAN® ALUMINUM FLUX

A liquid flux for use with aluminum soldering. Use with Al-Solder 500. Works to join aluminum to dissimilar metals.

**USA
MADE IN**

STAY-CLEAN® PASTE FLUX

An active soldering flux formulated for use with tin-lead, tin-antimony, and tin-silver solders. Superior flux for most metals, copper, brass, bronze, steel, stainless steel, galvanized, Monel®, Not recommended for aluminum, magnesium, or titanium. Not recommended for electrical or electronic applications.

**USA
MADE IN**

STAY-CLEAN® LIQUID FLUX

A general purpose zinc chloride flux for soldering with all soft solders use with tin-lead solder, tin-antimony solder, Stay-Brite solder, for soldering virtually all metals, except aluminum, magnesium or titanium. Not recommended for use in electrical or electronic applications.

**USA
MADE IN**

Specification	Active Temperature	Product Features
Meets Commercial Spec. A-A-51145C	Below 700°F	Excellent flux for joining copper to copper and copper to brass. Not recommended for electrical or electronic applications.

PART NO.	SIZE	DESCRIPTION
SCLF4	40Z BTL	LIQUID
SCLF16	160Z BTL	LIQUID
SCLF32	320Z BTL	LIQUID
SCLF1G	1GL	LIQUID
SCLF55	55GL	LIQUID
SCPF4	40Z JAR	PASTE
SCPF1	1# JAR	PASTE



PN: SCLF16
160z



PN: SCPF4POP
40z

BRIDGIT® FLUXES

PASTE FLUX: Designed for use with lead-free solders. Works extremely well with Bridgit lead-free solder in potable water systems and equally well with other solders. Meets all requirements of the Safe Drinking Water Act. Stays active to 8000F and will not burn at soldering temperature. This reduces black carbon formations that can result in voids and leaks.

WATER SOLUBLE FLUX: A water flushable paste that holds its shape and will not slump. Use with plumbing applications, copper and copper-alloy tubes, heating, airconditioning, mechanical piping, and fire sprinklers. Water-soluble alternative to petroleum-based plumbing fluxes, begins cleaning metals at room temperature, excellent solderability with lead-free solders.

Specification	Active Temperature	Product Features
Conforms to ASTM B813	Below 800°F	Designed for lead-free solders and well suited for use in larger connections where prolonged heating will cause other fluxes to burn.

PART NO.	SIZE	DESCRIPTION
BRPF4	40Z BTL	PASTE FLUX
BRPF1	1# BTL	PASTE FLUX
BRPF4WS	40Z BTL	WATER SOLUBLE
BRPF4POP	40Z BTL	WATER SOLUBLE



PN: BRPF4POP
40z
BOTTLE



PN: BRPF4
40z
BOTTLE

**USA
MADE IN**



HARRIS FILLER METAL SELECTION CHART

METALS TO BE JOINED	FILLER METALS				MELTING RANGE		FLUIDITY RATING*	FLUXES	TORCHES & FLAMES**
	SOLDERS	BRAZING FILLER METALS	SOLIDUS °F / °C	LIQUIDUS °F / °C					
Copper or Brass To Copper or Brass	Stay-Brite® Stay-Brite® 8 Bridgit®		430 / 221 535 / 279 430 / 221	430 / 221 535 / 279 630 / 332			10 8 6	Stay-Clean® Soldering Fluxes	Harris Powertorch® Air - Fuel Equipment
		Blockade®	460 / 233	630 / 332			7	Bridgit® Water Soluble Paste Flux	Harris Powertorch® Air - Fuel Equipment
		Harris 0	1178 / 637	1247 / 674			3	No flux required for copper-to-copper joints with the phosphorus-bearing filler metals	Harris Powertorch® or Classic Oxy-Acetylene Equipment (neutral flame)
		Stay-Silv® 5	1310 / 710	1475 / 802			5	For brass and other alloys of copper, use Stay-Silv® White Brazing Flux	
			Dynaflo®	1500 / 816			1465 / 796		
Copper or Brass To		Stay-Silv® 6	1190 / 643	1190 / 643			5		
		Stay-Silv® 15	1190 / 643	1435 / 774			3		
Copper or Brass To	Stay-Brite® Stay-Brite® 8		430 / 221 430 / 221	430 / 221 535 / 279			10 8	Stay-Clean® Soldering Flux	Harris Powertorch® Air - Fuel Equipment
		Safety-Silv® 56	1145 / 618	1205 / 652			8		
Steel or Stainless		Safety-Silv® 40	1250 / 677	1350 / 732			5	Stay-Silv® White Brazing Flux Stay-Silv® Black Flux for Stainless	Harris Powertorch® or Classic Oxy-Acetylene Equipment (slightly reducing flame)
		Safety-Silv® 45	1225 / 663	1370 / 743			6.5		
Steel or Stainless To		Safety-Silv® 45T	1195 / 646	1265 / 685			7		
	Stay-Brite® Stay-Brite® 8		430 / 221 430 / 221	430 / 221 535 / 279			10 8	Stay-Clean® Soldering Flux	Harris Powertorch® Air - Fuel Equipment
		Safety-Silv® 56	1145 / 618	1205 / 652			8		
		Safety-Silv® 40	1250 / 677	1350 / 732			5	Stay-Silv® White Brazing Flux Stay-Silv® Black Flux for Stainless	Harris Powertorch® or Classic Oxy-Acetylene Equipment (slightly reducing flame)
		Safety-Silv® 40N12	1220 / 660	1435 / 779			4.5		
Steel or Stainless To		Safety-Silv® 45	1225 / 663	1370 / 743			6.5		
		Safety-Silv® 45T	1195 / 646	1265 / 685			7		
Steel or Stainless To		Safety-Silv® 50N	1220 / 660	1305 / 707			7		
	NOT RECOMMENDED								
Steel or Stainless To		Safety-Silv® 40N12	1220 / 660	1435 / 779			4.5	Stay-Silv® White Brazing Flux	Harris Powertorch® or Classic Oxy-Acetylene Equipment (reducing flame)
		Safety-Silv® 50N	1220 / 660	1305 / 707			7		
Aluminum To Aluminum (1) Aluminum To Copper Or Brass (2)* Aluminum To Steel Or Stainless (2)*	Alsoldr® 500		391 / 199	482 / 250			NOT RATED	Stay-Clean® Aluminum Soldering Flux No Flux Required	Harris Powertorch® Air - Fuel Equipment Harris Powertorch® Air - Fuel Equipment
	Alcor®	Abraze® 1070	1070 / 577	824 / 440			NOT RATED		
		(1) Can be directly brazed or soldered. (2) Solder directly with Alsoldr® 500, or coat steel side with aluminum and solder with Alcor® or Braze with Abraze® 1070		1080 / 582			NOT RATED	Abraze® 1070 Flux	Harris Powertorch® Air - Fuel Equipment or Classic Oxy-Acetylene Equipment (reducing flame)

* The higher the fluidity rating, the faster the alloy flows within the melting range.

** For best results and strong leak proof joints, filler metals should be applied to the joint area only after the parts are heated to the proper brazing or soldering temperature. Oxy-Acetylene torches may be substituted for air-fuel but may require care to prevent overheating of the base metal/flux with the higher temperature flame.

Safety Information: WARNING: PROTECT yourself and others. Read and understand this information. FUMES AND GASES can be hazardous to your health. HEAT RAYS (INFRARED RADIATION) from flame or hot metal can injure eyes. Before use, read and understand the manufacturer's instructions, Material Safety Data Sheet (MSDS) and your employer's safety practices. Keep your head out of fumes. Use enough ventilation, exhaust at the flame, or both, to keep fumes and gases from your breathing zone and the general area. Wear correct eye, ear and body protection. See American National Standard Z49.1, Safety in Welding, Cutting, and Allied Processes, published by the American Welding Society, 550 N.W. LeJeune Road, Miami, Florida 33126. OSHA Safety Standards, available from the U.S. Government Office, Washington, DC 20402. STATEMENT OF LIABILITY - DISCLAIMER Any suggestion of product applications or results is given without representation or warranty, either expressed or implied. Without exception or limitation, there are no warranties of merchantability or of fitness for particular purpose or application. The user must fully evaluate every process and application in all aspects, including suitability, compliance with applicable law and non-infringement of the rights of others. The Harris Products Group and its affiliates shall have no liability in respect thereof.

CONSUMABLES: 4501 Quality Place, Mason OH 45040 U.S.A., Tel: 513-754-2000 Fax: 513-754-8778

www.harrisproductsgroup.com

EQUIPMENT: 2345 Murphy Blvd., Gainesville, GA 30504 U.S.A., Tel: 770-536-8801 Fax: 770-535-8358



FEATURES:

- Available in “B” or “MC” tank configurations
- Quick Disconnect Handle & Tip(s)
- 12ft. Hose (A x A Fittings)
- Instruction manual

**USA
MADE IN**



SOFT SOLDERS up to 3"	SILVER BRAZING 1-5/8"	MODEL NO. HQA4520A311 HQA4200A311	TANK CONNECTION “B” Acetylene (H-3B) “MC” Acetylene (H-3MC)
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**USA
MADE IN**



SOFT SOLDERS 1-1/2"	SILVER BRAZING 3/4"	MODEL NO. HQA4520A5 HQA4200A5	TANK CONNECTION “B” Acetylene (H-5B) “MC” Acetylene (H-5MC)
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**USA
MADE IN**



SOFT SOLDERS UP TO 3-1/2"	SILVER BRAZING UP TO 2"	MODEL NO. HQA4520A514	TANK CONNECTION “B” Acetylene (H-4B)
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**USA
MADE IN**



SOFT SOLDERS UP TO 2"	SILVER BRAZING UP TO 1"	MODEL NO. HQA4520A8	TANK CONNECTION “B” Acetylene (H-6B)
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ACETYLENE OUTFIT WITH SWIRL TIPS

PART NO.	MODEL NO.	TANK CONNECTION	TORCH HANDLE	ACETYLENE TIPS	REGULATOR	CGA	ACCESSORIES
4400052	HQA4520A311	B (CGA 520)	HQA-4	A3, A11	601-15-B	(520)	12ft. Hose (AXA)
4400053	HQA4200A311	MC (CGA 200)	HQA-4	A3, A11	601-15-MC	(200)	12ft. Hose (AXA)
4400054	HQA4520A5	B (CGA 520)	HQA-4	A5	601-15-B	(520)	12ft. Hose (AXA)
4400055	HQA4200A5	MC (CGA 200)	HQA-4	A5	601-15-MC	(200)	12ft. Hose (AXA)
4400056	HQA4520A514	B (CGA 520)	HQA-4	A5, A14	601-15-B	(520)	12ft. Hose (AXA)
4400057	HQA4520A8	B (CGA 520)	HQA-4	A8	601-15-B	(520)	12ft. Hose (AXA)

**FEATURES:**

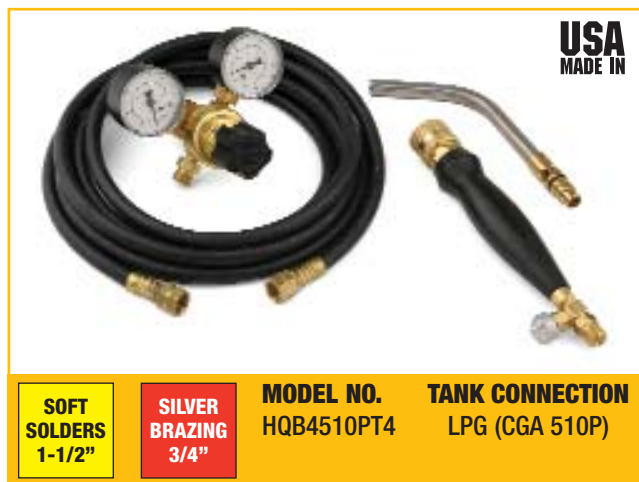
- Available in “B” or “MC” tank configurations
- Screw connect Handle & Tip
- 12ft. Hose (A x A Fittings)
- Instruction manual

**ACETYLENE OUTFIT WITH SOFT FLAME TIP**

PART NO.	MODEL NO.	TANK CONNECTION	TORCH HANDLE	ACETYLENE TIPS	REGULATOR	CGA	ACCESSORIES
4400058	HAS4520S3	B (520)	HSA-400	S3	601-15-B	(520)	12ft. Hose (AXA)
4400059	HAS4200S3	MC (CGA 200)	HSA-400	S3	601-15-MC	(200)	12ft. Hose (AXA)

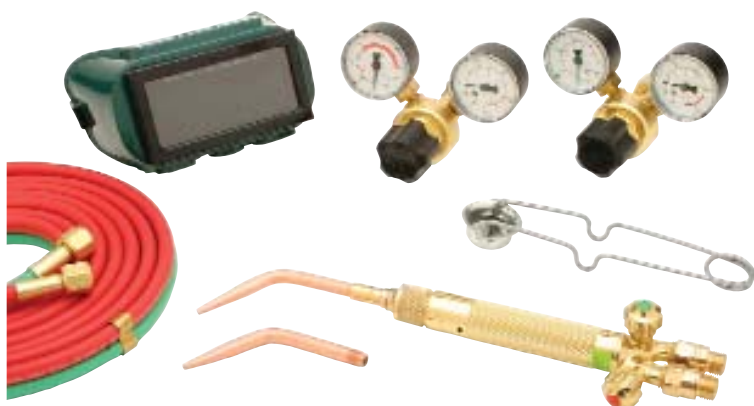
FEATURES:

- Available in LPG (CGA 510P) tank configuration
- Quick Disconnect Handle & Tip
- 12ft. Hose (B x B Fittings)
- Instruction manual

**PROPANE OUTFIT WITH SWIRL TIP**

PART NO.	MODEL NO.	TANK CONNECTION	TORCH HANDLE	PROPANE TIPS	REGULATOR	ACCESSORIES
4400051	HQB4510PT4	LP (CGA 510P)	HQB-4	HT-4	601-50-510P	12ft. Hose (BxB)

OXY/ACETYLENE KITS



Industrial duty kits for cutting welding and brazing with acetylene. Torch Handles are equipped with FlashGuard® checkvalves

* Acetylene "B" Cylinder = CGA 520

* Acetylene "MC" Cylinder = CGA 200

WELDING & BRAZING - Weld or Braze 3/32" with tips supplied

PART NUMBER	MODEL NUMBER	TORCH HANDLE	MIXER	WELDING TIP	SINGLE STAGE OXYGEN REG. 0-125 PSIG	SINGLE STAGE* FUEL GAS REG. 0-15 PSIG	ACCESSORIES
4400061	16601-200 L/CA	16	H-16-2E	23A90-1,4	601-80-540	601-15-200	Goggles, Striker 12'x 3/16" Hose (BxB)
4400065	19601-200 L/CA	19-6A	H-16-2E	23A90-1,4	601-80-540	601-15-200	Goggles, Striker 12'x 3/16" Hose (AxA)
4400063	16601-520 L/CA	16	H-16-2E	23A90-1,4	601-80-540	601-15-520	Goggles, Striker 12'x 3/16" Hose (BxB)
4400067	19601-520 L/CA	19-6A	H-16-2E	23A90-1,4	601-80-540	601-15-520	Goggles, Striker 12'x 3/16" Hose (AxA)



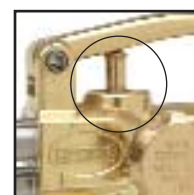
Cutting Attachments Feature:



Solid Forged Head



Brazed Triangular Tube Design



Ease-On Cutting Valve



Protected Torch Union

CUTTING, WELDING & BRAZING - Cuts 5/8", Welds 3/32" with tips supplied

PART NUMBER	MODEL NUMBER	TORCH HANDLE	MIXER	CUTTING ATTACH.	CUTTING TIP	WELDING TIP	SINGLE STAGE OXYGEN REG. 0-125 PSIG	SINGLE STAGE* FUEL GAS REG. 0-15 PSIG	ACCESSORIES
4401138	16601-200	16	H-16-2E	71-3	6290-0	23A90-1,3,4	601-80-540	601-15-200	Goggles, Striker 12'x 3/16" Hose (BxB)
4400064	19601-200	19-6A	H-16-2E	71-3	6290-0	23A90-1,3,4	601-80-540	601-15-200	Goggles, Striker 12'x 3/16" Hose (AxA)
4400062	16601-520	16	H-16-2E	71-3	6290-0	23A90-1,3,4	601-80-540	601-15-520	Goggles, Striker 12'x 3/16" Hose (BxB)
4400066	19601-520	19-6A	H-16-2E	71-3	6290-0	23A90-1,3,4	601-80-540	601-15-520	Goggles, Striker 12'x 3/16" Hose (AxA)



Port-A-Torch®

A rugged molded plastic carrying case containing all the quality equipment needed for cutting, welding and brazing. The outfit is designed to carry one MC acetylene cylinder and one 20 cu.ft. oxygen cylinder. As supplied, the outfit is capable of cutting to 1" and welding to 1/16". Can cut to 4" and weld to 1/2" with larger tips and acetylene cylinder.

CUTTING, WELDING & BRAZING - Cuts 1", Welds to 1/16" with tips supplied

PART NUMBER	MODEL NUMBER	TORCH HANDLE	MIXER	CUTTING ATTACH.	CUTTING TIP	WELDING TIP	SINGLE STAGE OXYGEN REG. 0-125 PSIG	SINGLE STAGE FUEL GAS REG. 0-15 PSIG	ACCESSORIES
4400060	16601-200-PAT-L/CA	16	H-16-2E	-	-	23A90-1,4	601-80-540	601-15-200	Goggles, Striker 12'x3/16" Hose (B x B) 20 CU. FT. OXY CYL., 10 CU.FT. "MC" ACET. CYL. (cylinders shipped empty)
4401141	19601-200-PAT-L/CA	19-6A	H-16-2E	-	-	23A90-1,4	601-80-540	601-15-200	Goggles, Striker 12'x3/16" Hose (A x A) 20 CU. FT. OXY CYL., 10 CU.FT. "MC" ACET. CYL. (cylinders shipped empty)
4401137	16601-200-PAT-DLX	16	H-16-2E	71-3	6290-0	23A90-1,4	601-80-540	601-15-200	Goggles, Striker 12'x3/16" Hose (B x B) 20 CU. FT. OXY CYL., 10 CU.FT. "MC" ACET. CYL. (cylinders shipped empty)
4401140	19601-200-PAT-DLX	19-6A	H-16-2E	71-3	6290-0	23A90-1,4	601-80-540	601-15-200	Goggles, Striker 12'x3/16" Hose (A x A) 20 CU. FT. OXY CYL., 10 CU.FT. "MC" ACET. CYL. (cylinders shipped empty)
PORT-A-TORCH W/GAS AIR ADAPTOR + Air Fuel Tip									
4401668	16601-200-PAT-W/AD	16	H-16-2E	71-3	6290-0	23A90-3	601-80-540	601-15-200	Goggles, Striker 12'x3/16" Hose (B x B) 20 CU. FT. OXY CYL., 10 CU.FT. "MC" ACET. CYL. (cylinders shipped empty)
4401142	19601-200-PAT-W/AD	19-6A	H-16-2E	71-3	6290-0	23A90-3	601-80-540	601-15-200	Goggles, Striker 12'x3/16" Hose (A x A) 20 CU. FT. OXY CYL., 10 CU.FT. "MC" ACET. CYL. (cylinders shipped empty)



P/N: 1400080

SELF LIGHTING TORCH HSLT-604

- Operates on MAPP, Propane or Propylene
- Durable cast aluminum construction
- Precise flame control
- Swirl combustion tip
- Operates in any position
- Trigger lock
- For Brazing and Soldering
- For use with 1lb non-refillable cylinders

REGULATED HAND TORCHES

HTR-HT2

Hand torch with Double
Twister tip

- Swivels 360°
- Built in regulator



USA
MADE IN

P/N: 1400083

HTR-HT6

A Self-Lighting torch which
eliminates the need for a
flint striker. Just pull down
to ignite.

- Swivels 360°
- Built in regulator



USA
MADE IN

P/N: 1400082

HTR-HT5

Hand torch with Single
Swirl tip

- Swivels 360°
- Built in Regulator



USA
MADE IN

P/N: 1400081



AIR FUEL TORCH HANDLES

Air/Fuel torch handles are ergonomically designed with a super tough grip for balance and comfort. Handle options include screw connect with “A” hose connection or quick connect with “A” or “B” hose connection.

Quick Connect Handles HQA, HQB-4



USA
MADE IN

Model HQA-4 shown

HQB-4

■ “B” Hose Connection
P/N: 1400085

HQA-4

■ “A” Hose Connection
P/N: 1400084

Screw Connect Handle HAS-400



USA
MADE IN

HAS-400

■ “A” Hose Connection
P/N: 1400086



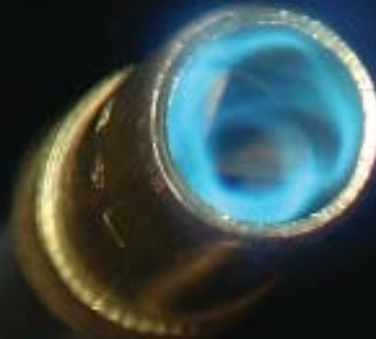
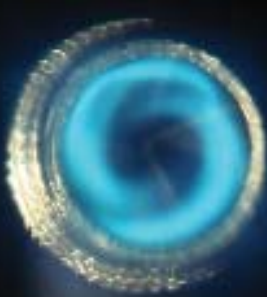
HTA Quick Connect Adaptor

Converts HAS-400 handle to quick connect HA, HT Series tips
P/N: 4300676



16GA

Converts Oxy/Acetylene Model 16, 19 and 19-A torch handle to HS Screw connect tips
P/N: 4300419



A swirl tip is designed to maximize heat output through a stationary tip insert, which swirls the flame and provides greatly improved performance.

ACETYLENE QUICK CONNECT SWIRL TIPS

HA Series Tips

- For Acetylene gas
- Swirl tip design
- Quick connect
- Stainless steel and brass construction

USA
MADE IN



COPPER TUBING CAPACITY

ACETYLENE QUICK CONNECT SWIRL TIPS

ACETYLENE GAS

PART NO.	MODEL NO.	TIP SIZE	GAS FLOW @ 15 PSI	SOFT SOLDER	BRAZING
1601010	HA-3	1/4"	2.7 SCFH	UP TO 1"	UP TO 1/2"
1601011	HA-5	5/16"	4.8 SCFH	3/4" - 1 1/2"	1/4" - 3/4"
1601012	HA-8	3/8"	7.7 SCFH	1" - 2"	1/2" - 1"
1601013	HA-11	7/16"	11.8 SCFH	1 1/4 - 3"	7/8" - 1 5/8"
1601014	HA-14	1/2"	14.3 SCFH	2 - 3 1/2"	1" - 2"
1601015	HA-32	3/4"	35.3 SCFH	4" - 6"	1 1/2" - 4"



PROPANE/MAPP QUICK CONNECT SWIRL TIPS

HT Series Tips

- For Propane/MAPP®/Propylene gas
- Swirl tip design
- Quick connect
- Stainless steel and brass construction

USA
MADE IN



PROPANE/MAPP QUICK CONNECT SWIRL TIPS

COPPER TUBING CAPACITY

PART NO.	MODEL NO.	TIP SIZE	GAS FLOW @ 24 PSI	PROPANE GAS		MAPP/PROPYLENE GAS	
				SOFT SOLDER	BRAZING	SOFT SOLDER	BRAZING
1601030	HT-2	5/16"	1.3 SCFH	1/8" - 1/4"	1/16" - 1/4"	1/8" - 1/2"	1/8" - 1/4"
1601031	HT-3	7/16"	3.6 SCFH	1/4" - 1"	1/8" - 1/2"	1/4" - 1-1/2"	1/4" - 1/2"
1601032	HT-4	1/2"	4.1 SCFH	1/4" - 1-1/2"	1/4" - 3/4"	1/4" - 2-1/2"	1/2" - 1-1/4"
1601033	HT-5	3/4"	9.6 SCFH	1-1/2" - 2-1/2"	1/2" - 1-1/4"	1"-4"	1/2" - 2"



HS-6 HS-5 HS-4 HS-3 HS-2 HS-1

ACETYLENE SCREW CONNECT SOFT FLAME TIPS

HS Series Tips

- For Acetylene gas
- Soft flame design
- Screw connect
- All brass construction

USA
MADE IN

COPPER TUBING CAPACITY

ACETYLENE SCREW CONNECT SOFT FLAME TIPS

PART NO.	MODEL NO.	GAS FLOW@8-10 PSI	ACETYLENE GAS	
			SOFT SOLDER	BRAZING
1601020	HS-1	.31 SCFH	1/16" - 1/8"	UP TO 1/16"
1601021	HS-2	.92 SCFH	1/8" - 3/8"	UP TO 1/8"
1601022	HS-3	3.3 SCFH	3/8" - 1/2"	UP TO 3/8"
1601023	HS-4	4.6 SCFH	1/2" - 1"	UP TO 1/2"
1601024	HS-5	6.6 SCFH	1/2" - 1 1/2"	1/2" - 3/4"
1601025	HS-6	12.7 SCFH	3/4" - 4"	3/4" - 1 1/2"

Torch Handle Ordering Information

PART NO.	MODEL NO.	DESCRIPTION
ACETYLENE		
1401016	16	HANDLE
1401143	19-6A	HANDLE
1401585	50-9	HANDLE
PROPANE, MAPP®, PROPYLENE		
1401590	50-10	HANDLE

Model 16 Torch Handle

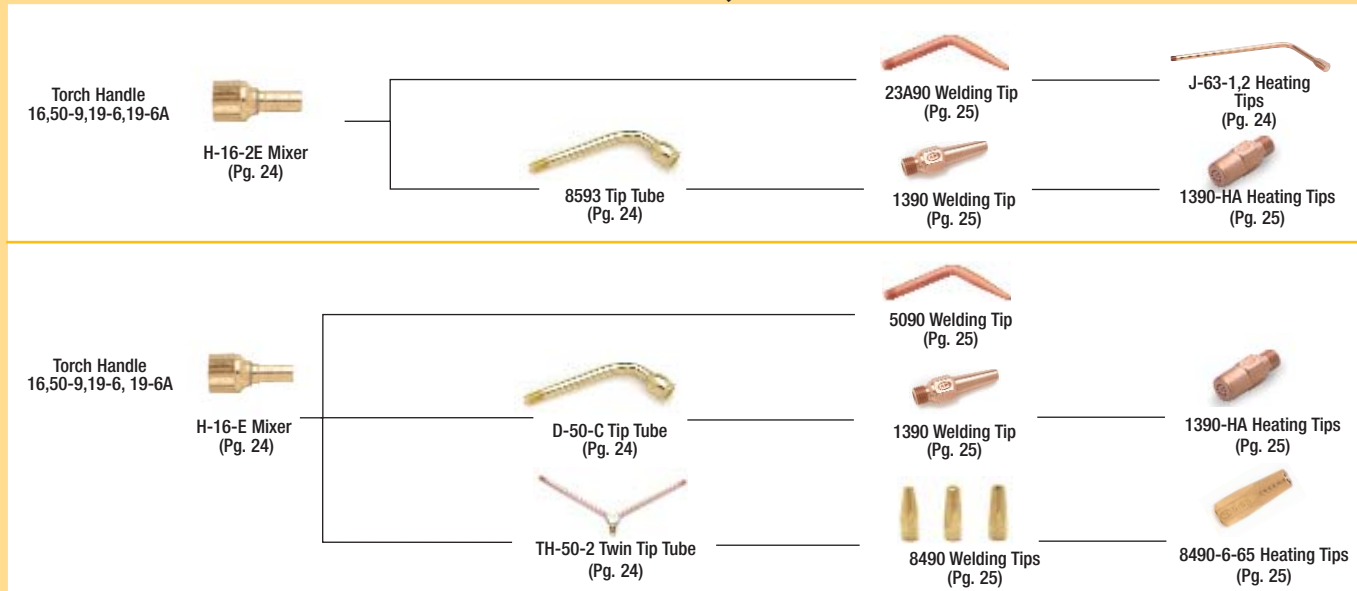
The Harris 16 combination torch handle for cutting, welding, brazing and heating. It can be used with oxy-acetylene or other fuel gases. The Model 16 features silver brazed twin tube construction.



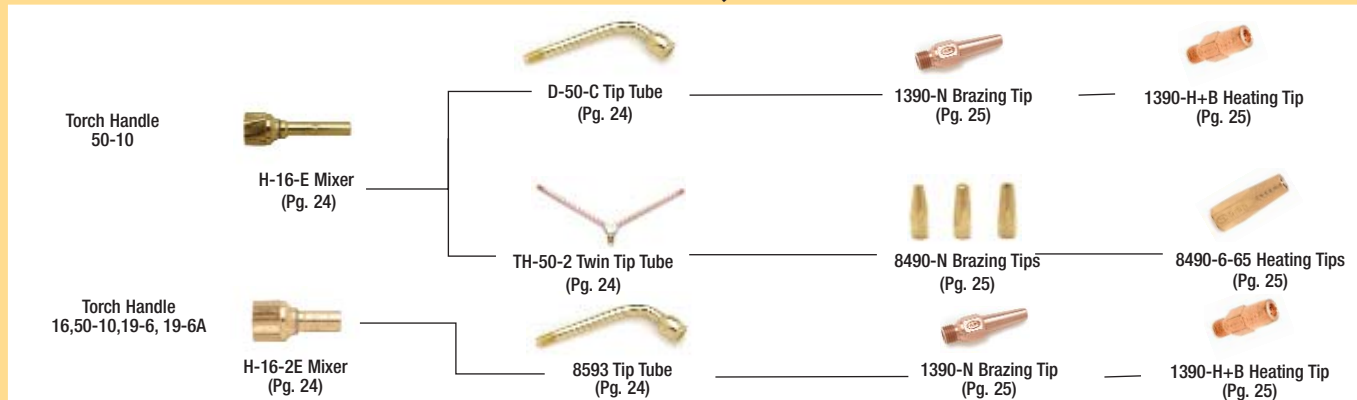
- Equipped with FlashGuard® check valves
- Capacity: cuts 4", welds to 1/2"
- Length: 7 3/4", Weight: 0.9 lbs



RECOMMENDED POSITIVE PRESSURE "E" EQUIPMENT* FOR ACETYLENE/MAPP®



RECOMMENDED POSITIVE PRESSURE "E" EQUIPMENT FOR PROPANE/PROPYLENE





Model 50 Automatic Torch Handle

The Harris 50-9 and 50-10 automatic torch handles feature a unique gas control system to reduce operating cost and improve safety and convenience. The thumb operated on/off gas control and adjustable pilot light eliminate relighting and flame readjustment each time the torch is used. The on/off feature can be used for cutting, brazing, and welding with all oxy-fuel gases. The pilot light feature is not recommended when using cutting attachments or heating tips. Select the Model 50-9 for acetylene and the 50-10 for other fuels.



- Automatic on/off gas control
- Adjustable pilot light
- Equipped with Flash Guard® check valves
- Capacity: cuts 3", welds to 1/2"
- Length: 8", Weight: 0.8 lbs
- See page 22 for Part Number information



Model 19-6A Torch Handle

The Harris 19-6 combination torch handle for cutting, welding, brazing and heating. It can be used with oxy-acetylene or other fuel gases. The Model 19-6 features silver brazed twin tube construction. Valves are located at the front of torch handle for more precise control while brazing.



- Equipped with check valves
- Capacity: cuts 2", welds to 5/16"
- Length: 7 1/2", Weight: 0.7lbs
- "A" 3/8" - 24 Hose Connections
- See page 22 for Part Number information



Hose Adaptors - B x A



71-3 Classic Cutting Attachment



- Solid forged head resists abuse and distortion
- Triangular tube design is compact and lightweight with exceptional strength and rigidity
- Brazed connections prevent leaks
- Protected torch union nut protects seats and O-rings from abuse
- Solid forged lever for exceptional strength
- Ease-on cutting oxygen control for smoother starts



Capacity: 4", Length: 8 1/4"; Weight: 1.4lbs.

Classic or Positive Pressure "E" Cutting Attachment

PART NUMBER	MODEL NUMBER	TORCH HEAD ANGLE	COMPATIBLE HANDLES
1300400	71-3	90°	16, 50, 19-6

Flash-Guard® Check Valves



Check valves fully open with only ounces of pressure. If reverse flow starts, the valve closes immediately for total shutoff.

- High Capacity- adequate for cutting steel and for operating the largest heating tips
- Quality Manufacture- valve spring made of stainless steel for long life
- 100% Production Tested- individually tested and packaged immediately to assure cleanliness
- Conforms to OSHA regulations



Regulator Type
Model 88-6CVR (R&L)
9/16-18 Connections
(P/N 4300389)

Torch Type
Model 88-6CVT (R&L)
9/16-18 Connections
(P/N 4300390)

Torch Type
Model 88-6CVTA (R&L)
"A" Connections
(P/N 4300835)

Oxy-Acetylene 6290 General Preheat Cutting Tips



6290 GENERAL PREHEAT PART NO.	PLATE THICKNESS INCHES	TIP SIZE	OXYGEN PSIG	CUTTING ACETYLENE PSIG	ORIFICE DRILL SIZE
1500820	3/16-3/8	00	20-25	5-15	#64
1500830	3/8-5/8	0	35-40	5-15	#60
1500840	5/8-1	1	35-40	5-15	#56
1500850	1-2	2	40-45	5-15	#52*

Larger tips available upon request

Tube and Tip Assembly



"J" Series Heating Tip Information

PART NO	TIP SIZE	ORIFICE SIZE	OXYGEN & ACETYLENE "EQUAL PRESSURE"		ACETYLENE FLOWS		APPROXIMATE GROSS HEATING OUTPUT BTU/HR.	
			MAX. PSI	MIN. PSI	MAX. FLOW CFH	MIN. FLOW CFH	MAX.	MIN.
1800710	1	(6) #60 (.040)	6	2	35	20	51,500	29,500
1800720	2	(8) #60 (.040)	7	3	50*	30	74,000	44,000

1. Maximum Pressure - Neutral flame with no flame blow-off (highest stable flame). 2. Minimum Pressure - Neutral flame with no flame pop-out (lowest stable flame). 3. Acetylene flows shown - Oxygen flow theoretically 1.1 of acetylene flow for neutral flame. 4. Minimum Acetylene cylinder size for #1 tip is 140 SCF and 210 SCF for #2 tip.

⚠ *Exceeds the capacity of one standard 320 CF acetylene cylinder (1/7 rule).



23/64" - 26

H-16-2E



5/16" - 27

H-16-E

Positive Pressure "E" Type Mixers

PART NUMBER	MIXER	FITS HANDLES	TIP TUBES	ACETYLENE WELDING/BRAZING TIPS	ACETYLENE HEATING TIPS	PROPANE/PROPYLENE BRAZING TIPS	PROPANE/PROPYLENE HEATING TIPS
9100787	H-16-2E	16, 19, 50-9 & 10	-	23A90-0 thru 10	J-63-1 & 2	-	-
			8593	1390-0 thru 10	1390-HA	1390-N	1390 H & B
9100096	H-16-E	16, 19, 50-9 & 10	-	5090	J-16-1 & 2	-	-
			D-50-C	1390	1390 HA	1390-N	1390 H & B
			D-50-CXL	1390	1390 HA	1390-N	1390 H & B
			TH-50-2	8490	8490-6-65	8490-N	8490-6-65
			TH-50-2XL	8490	8490-6-65	8490-N	8490-6-65

Tip Tubes for Separable Welding, Brazing and Heating Tips

TORCH HANDLES	MIXER	TIP TUBE	TIP
16,19,50-9 & 10	H-16-2E	8593	1390-0 THRU 10 & HA
	H-16-E	TH-50-2	8490-2 THRU 6 & 6-65
	H-16-E	D-50-C	1390-0 THRU 10 & HA

D-50-CXL
P/N 9100872
LENGTH: 7"



D-50-C
P/N 9100379
LENGTH: 4"

5/16" - 27

3/8" - 24



8593
P/N 9003678
LENGTH: 4"

23/64" - 26

TH-50-2
P/N 1601590
Tube Length: 5-1/2"

TH-50-2XL
P/N 1601596
Tube Length: 7-1/4"

1/4" - 27



1/4" - 27

5/16" - 27



Acetylene & MAPP® Welding, Brazing and Heating Tips

23A90 PART NO.	1390 PART NO.	5090 PART NO.	8490 PART NO.	TIP SIZE	METAL THICKNESS INCHES	OXYGEN PSIG	ACETYLENE PSIG
1600840	1600020	1601690	-	0	1/64	1	1
1600850	1600030	1601700	-	1	1/32	1	1
1600860	1600040	1601710	1601990	2	3/64	2	2
1600870	1600050	1601730	-	3	1/16	3	3
1600880	1600060	1601740	1602010	4	3/32	4	4
1600890	1600070	1601760	-	5	1/8	5	5
1600900	1600080	1601780	1602030	6	3/16	6	6
1600910	1600090	1601800	-	7	1/4	7	7
-	1800025	-	-	HA	HEATING	5	5
-	-	-	1602040	6-65	HEATING	8	8



23A90
23/64" - 26



5090
5/16" - 27



1390
3/8" - 24



8490
1/4" - 27



1390-HA
3/8" - 24



8490-6-65
1/4" - 27

Alternate Fuel Tips Brazing and Light Heating Tips for Propane and Propylene

1390-N/8490-N Tip Chart for "E" Type Mixers: H-16 & H-16-2E

1390-N PART NO.	8490-N PART NO.	TIP SIZE	OXYGEN PSIG	FUEL GAS PSIG
1600180	-	2N	2	1
1600190	-	3N	2	1
1600200	1602090	4N	2	1
1600210	1602100	5N	2	1
1600220	1602110	6N	2	2
1600230	1602120	7N	3	2
1600240	1602130	8N	3	2
1600250	-	9N	4	3
1600260	-	10N	4	3
1800020	-	1390-H*	5-25	2-12
1800015	-	1390-B*	5-25	2-12
-	1602040	8490-6-65	8	8

* BTU/Hr 30-100,000 with Propane

NOTE: All tips on this page require separate tip tubes and mixers, page 24.

Brazing Tips



1390-N
3/8" - 24



8490-N
1/4" - 27



1390-H
3/8" - 24



1390-B
3/8" - 24



8490-6-65
1/4" - 27

Heating Tips

Model 601 Single Stage Regulator

- One-piece encapsulated seat design with an internal filter and a PTFE teflon seat
- Forged brass bonnet and body
- 50mm dual scale gauges
- Featured in the **POWERTORCH®** kits

USA
MADE IN



PART NO.	MODEL NO.	GAS	MAXIMUM INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION
3000407	601-15-200-"A" Fitting	Acetylene	500	0-15	30	400	CGA 200 (MC)
3000295	601-15-200-"B" Fitting	Acetylene	500	0-15	30	400	CGA 200 (MC)
3000409	601-50-510P-"B" Fitting	Propane	500	0-50	60	400	CGA 510P (LPG)
3000408	601-15-520-"A" Fitting	Acetylene	500	0-15	30	400	CGA 520 (B)
3000411	601-15-520-"B" Fitting	Acetylene	500	0-15	30	400	CGA 520 (B)
3000296	601-80-540-"B" Fitting	Oxygen	3000	0-80	100	4000	CGA 540
3000412	601-80-540-"A" Fitting	Oxygen	3000	0-80	100	4000	CGA 540

Model 25 Single Stage Nitrogen Regulator

This regulator is recommended for joint testing and purging on job sites.

- For line purging up to 600 psig.
- One-piece encapsulated seat design with an internal filter and a PTFE teflon seat
- Chrome-plated bonnet with forged brass body
- 2" dual scale gauges
- 1/4" SAE outlet

 **USA**
MADE IN **3 YEAR**
WARRANTY



PART NO.	MODEL NO.	GAS	MAXIMUM INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
MODEL 25 HVAC REGULATOR								
3000615	25-500C-580	Ar,N2,He	3000	0-500	1000	4000	CGA 580	1/4 FLARE



Flame Barrier

HTS12 - 12" x 12"

P/N: 4300679

Protects adjacent surfaces from damage when soldering and brazing.



Hose

Kink proof, double and single line hoses for safety and service. 100 PSI rating



Single Hose

PART NO.	DESCRIPTION
4300775	12' Acetylene hose (A & A Fittings)
4300777	24' Acetylene hose (A & A Fittings)
4300774	12' Propane hose (B & B Fittings)
4300779	24' Propane hose (B & B Fittings)



HMCTS

HBTS

Tank Stands

HMCTS

P/N: 4300678

Use with 2 1lb. NRC or with "MC" Acetylene cylinder. Easy storage of tips, handle, hose and striker.

HBTS

P/N: 4300677

Fits "B" size acetylene tanks. Easy storage of tips, handle, hose and striker.

Twin Hose



PART NO.	DESCRIPTION
4300556	3/16" X 12' twin hose (B & B Fittings)
4300557	3/16" X 20' twin hose (B & B Fittings)
4300005	3/16" X 12' twin hose (A & B Fittings)
4300155	3/16" X 12' twin hose (A & A Fittings)

Tip Cleaner

P/N: 4300833

For cleaning of Oxy/Fuel cutting and welding tips. Fits all tip sizes.



Cylinders

Propane Replacement Tank

P/N: 4300675

- 14.1 oz. Propane
- CGA 600 Connection
- Disposable (non-refillable)
- Sold by the case (12)

MAPP® Replacement Tank

P/N: 4300674

- 16 oz. MAPP®
- CGA 600 Connection
- Disposable (non-refillable)
- Sold by the case (12)



Striker

P/N: 4300834

Economical and dependable. Most popular striker in the industry. Single flint stiker with replaceable flint.



Striker Refills

P/N: 4300418

Fits single flint striker.

CYLINDERS ARE NON REFILLABLE

*NO AIR SHIPMENTS ON FILLED CYLINDERS



The Harris Products Group
4501 Quality Place
Mason, OH 45040
Customer Service: 1-800-733-4533
Fax: 513-754-8778

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