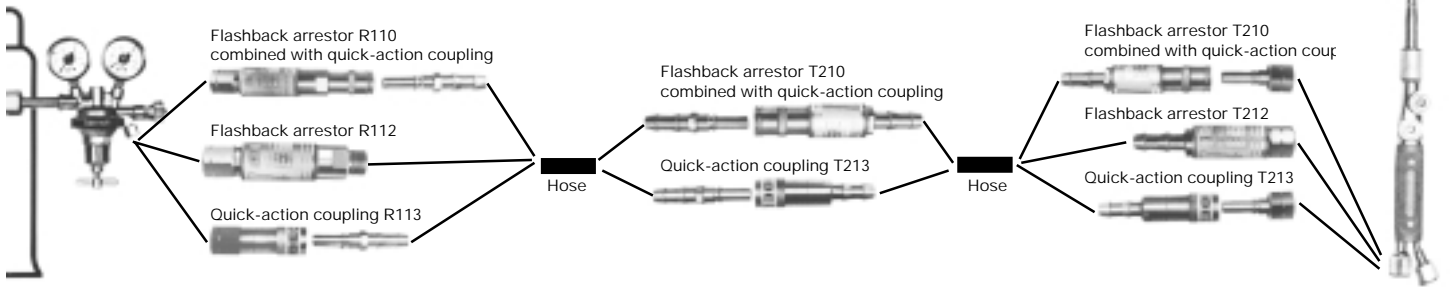


Harris FlashBlack Arrestor

FlashBack Arrestor For Regulator & Touch



For Regulator	Order No.	Size		For Touch	Order No.	Size	
		ACT	QXY			ACT	QXY
Normal Duty	R110	3/8 BSP LH	1/4 BSP RH	Normal Duty	T210	3/8 BSP LH X 8 or 6	3/8 BSP X 8 or 6
		9/16-18 LH	3/8 BSP RH			9/16-18 LH X 8 or 6	9/16-18 X 8 or 6
			9/16-18 RH				
Normal Duty	R112	3/8 BSP LH	1/4 BSP RH	Normal Duty	T211	3/8 BSP LH	1/4 BSP RH
		9/16-18 LH	3/8 BSP RH			9/16-18 LH	9/16-18 RH
			9/16-18 RH				
Heavy Duty For 150mm thick cutting	R110 HD	3/8 BSP LH	1/4 BSP RH	Normal Duty *Automatic gas cut off w/o flashBack Arrestors	T213	8mm	8mm
		9/16-18 LH	3/8 BSP RH			6mm	6mm
			9/16-18 RH				
Normal Duty *Automatic gas cut off w/o flashBack Arrestors	R113	3/8 BSP LH	1/4 BSP RH	Normal Duty	T212	8mm	8mm
		9/16-18 LH	3/8 BSP RH			6mm	6mm
			9/16-18 RH				
Coupling Pin CP N2	CP N2	6mm	6mm			Coupling Pin	N1
		8mm	8mm	8mm	8mm		
				6mm	6mm		
		8mm	8mm				

Always state ACT(A) or OXY(O) when ordering

R112
FlashBack Arrestor w/
Thermal



T210



R110
Quick Coupler + Thermal
Cut-off valve +
FlashBack Arrestor



T211
Cutting Touch FlashBack
Arrestor



R110 HD



T212



R113



T213



Coupling Pins-N2



Coupling Pins



Harris Cutting Torches & Regulator

OXY & ACT Cutting Torches



NM-250

Features:

- Top stainless steel lever with hold-down button
- Cutting capacity - up to 250 mm steel
- Triangular stainless steel gas tubes for maximum strength
- Tip mix principle - maximum operator safety
- Needle valves for fast, accurate flame adjustment
- Ease-on feature for cutting oxygen



62-3/62-3F 90° Head 70° Head 180° Head

Features:

- Heavy duty cutting - up to 300 mm steel
- Triangular stainless steel gas tubes for maximum strength
- Needle valves for fast, accurate flame adjustment
- Head mixing for maximum operator safety
- Built-in safety plug in torch head
- Universal pressure - maintains stable preheat flame during cutting
- Ease-on feature for cutting oxygen

Applications:

- Cutting, heating, rivet cutting and washing, gouging.



142/142-F

Features:

- Top stainless steel lever with hold-down button
- Medium duty cutting - up to 200 mm steel
- Triangular stainless steel gas tubes for maximum strength
- Needle valves for fast, accurate flame adjustment
- Head mixing for maximum operator safety
- Built-in safety plug in torch head
- Universal pressure - maintains stable preheat flame during cutting
- Ease-on feature for cutting oxygen

Applications:

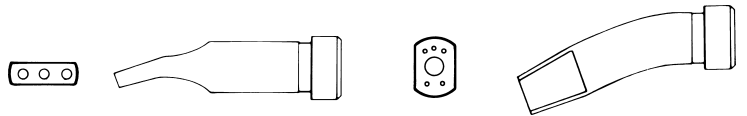
- Cutting, heating, rivet cutting and washing, gouging.

OXY-Acetylene Cutting Torches



6290

- For 62-3, 42-4 and 142 torches.
- 6290: one piece, normal preheat.
- 6290-S: one piece, extra preheat.
- 6290-AC: two piece, extra preheat.



6290 pecialty tips

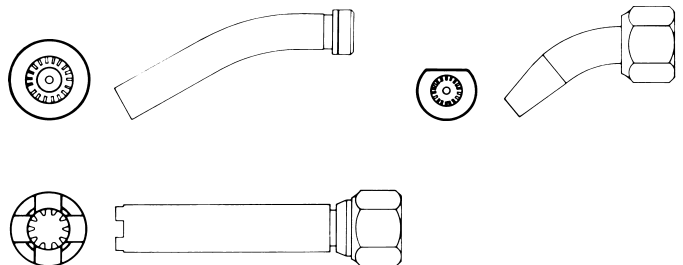
- For 62-3, 42-4 and 142 torches, one piece.

OXY-Propane, LPG, Mapp Cutting Tips



6290

- For 62-3F, 42-4F and 142-F torches.
- 6290-NX: two piece, normal preheat.
- 6290-NFF: two piece, extra preheat.
- 6290-NXPM: two piece, extra preheat for MAPP and specialty gas.



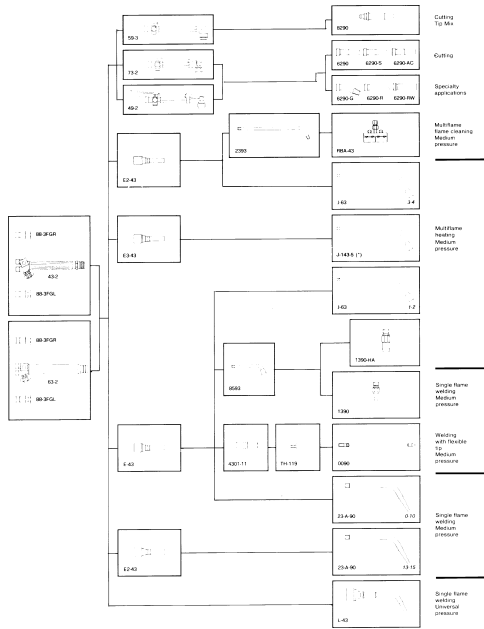
6290 Specialty tips

- For 62-3, 42-4F and 142-F torches, one piece.

Harris Professional Torches, Interchangable Attachments & Multi Use Torches (OXY-Acetylene Gas)

For Welding, Heating, Braging, Rivet Cutting, Gouging.

OXY-Acetylene Professional Equipment



Cutting Attachments



49-2 Professional Cutting Attachment

Features:

- Cuts up to 150 mm • Head and body in forged brass for longer life • Triangular stainless steel tube construction for maximum strength • Universal pressure for maximum economy • Built-in safety plug in head • Head mixing for maximum operator safety • Ease-on feature for cutting oxygen

Applications:

- Hand cutting, gouging, rivet washing and cutting, heating.



73-32

Features:

- Cuts up to 150 mm • Triangular stainless steel tube construction for maximum strength • Head mixing for maximum operator safety • Head and body in forged brass for longer life • Works with all types of gas - just change the tip • Medium pressure design - resists backfire • Ease-on feature for cutting oxygen

Applications:

- Hand cutting, gouging, heating, rivet washing and cutting, heating.

Note: Available with 70° head - just add "A" when ordering



59-3

Features:

- Cuts up to 150 mm • Forged brass body • Tip mix for maximum safety • Works with all types of gas - just change the tip • Triangular stainless steel tube construction for maximum strength • Medium pressure design - resists backfire • Ease-on feature for cutting oxygen

Applications:

- Hand cutting

Note: All above cutting attachments available with round cutting oxygen wheel, just add "V" to product code when ordering.



43-2* Professional handle

Features:

- Stainless steel connection piece for longer life • Tough extruded brass handle • Stainless steel ball valves • Cutting capacity: up to 150 mm • Welding capacity: up to 50 mm

* Note: Also available in economy version with brass connection piece, model 1-43-2



63-2 Handle

Features:

- High precision ball valves • 2 separate gas tubes • Brass handle • Lightweight

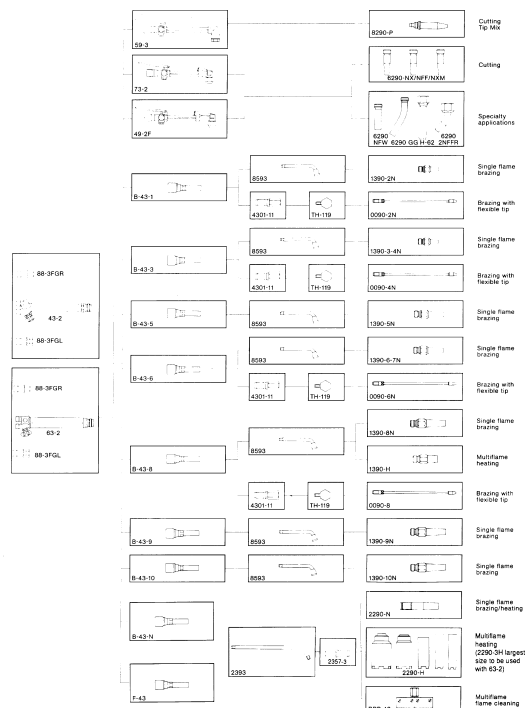
Applications:

- Hand cutting, heating, brazing, flame cleaning, welding, gouging, rivet cutting and washing • Cutting capacity: up to 150 mm • Welding capacity: up to 50 mm

Mixers



OXY-Propane Professional Equipment





Cutting Tips

Oxy-Acetylene Tips

Heavy and Medium Duty Tips



6290-G Tip, Heavy Pre-Heat
For cutting jobs requiring heavy pre-heat. Recommended for scrap cutting steel that is rusted, scaled, or heavily painted. Ideally suited for beveling applications.



6290-S Tip, General Pre-Heat
Fuel efficient pre-heat. Suitable for the majority of cutting applications.

6290-S and 6290 Tip Ordering Information
Hand cutting: Use with cutting attachments and hand cutting torches designed for oxy-acetylene service (see pages 8 & 9).
Machine Cutting: Use with machine cutting torches designed for oxy-acetylene service (see page 15).



Light Duty Tips

3690 Tip Ordering Information
Hand cutting: Use with torches duty 30-2 cutting attachment (page 12).

Tip Charts

Fuel Gas Pressure 4 cc. or more

6290-S & 6290-G Tips

Acetylene Pressure 5-15 PSIG

Tip Size (Inches)	Tip Size	Open Pressure (PSIG)
1/4"	000	15-20
3/8"	001	20-25
1/2"	002	25-30
5/8"	003	30-35
3/4"	004	35-40
7/8"	005	40-45
1"	006	45-50
1 1/8"	007	50-55
1 1/4"	008	55-60

3690 Tip

Acetylene Pressure 5 PSIG

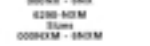
Tip Size (Inches)	Tip Size	Open Pressure (PSIG)
1/4"	0	20-25
3/8"	1	25-30
1/2"	2	30-35

Oxy-Propane, Oxy-Natural Gas, Oxy-MAPP Gas Tips

Heavy and Medium Duty Tips



6290-NFF Tip, Heavy Pre-Heat, Oxy-Propane, Oxy-Natural Gas
For cutting jobs requiring heavy pre-heat. Recommended for scrap cutting steel that is rusted, scaled, or heavily painted. Ideally suited for beveling applications.



6290-NR Tip, General Pre-Heat, Oxy-Propane, Oxy-Natural Gas
Fuel efficient pre-heat. Suitable for the majority of cutting applications.



6290-NM Tip, General Pre-Heat, Oxy-MAPP Gas
Designed specifically for efficient operation with MAPP Gas.



Light Duty Tips

3690-P Oxy-Propane, Oxy-Natural Gas
Hand cutting: Use with the light duty 30-2N cutting attachment (page 12).

Tip Charts

Fuel Gas Pressure 4 cc. or more

6290-NFF Tips

Tip Size (Inches)	Tip Size	Open Pressure (PSIG)
1/4"	000	20-25
3/8"	001	25-30
1/2"	002	30-35
5/8"	003	35-40
3/4"	004	40-45
7/8"	005	45-50
1"	006	50-55
1 1/8"	007	55-60

6290-NR & NM Tips

Tip Size (Inches)	Tip Size	Open Pressure (PSIG)
1/4"	0	20-25
3/8"	1	25-30
1/2"	2	30-35
5/8"	3	35-40
3/4"	4	40-45
7/8"	5	45-50
1"	6	50-55

3690-P Tips

Tip Size (Inches)	Tip Size	Open Pressure (PSIG)
1/4"	0P	20-25
3/8"	1P	25-30
1/2"	2P	30-35
5/8"	3P	35-40
3/4"	4P	40-45



Heating Tips & Assemblies

Multi-Flame Heating Tips and Assemblies

Equal Pressure, Oxy-Acetylene



Heating Tip
J-43
Size 1 thru 8
J-43
Size 5
J-16
Size 1 & 2

Ordering Information For J-43, J-43 and J-16 Heating Tips

Heating Tip Model	Heating Tip	Size	Tip Number
J-43	J-43	1-40	417
J-43	J-43	5-10	418
J-43	J-43	15-20	419
J-43	J-43	25-30	420
J-43	J-43	35-40	421
J-43	J-43	45-50	422
J-43	J-43	55-60	423
J-16	J-16	1-2	35
J-16	J-16	3-4	36

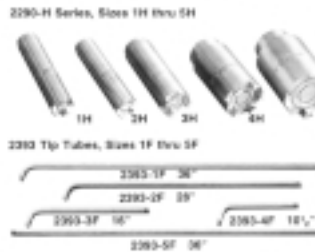
Tip Chart for J-43, J-43 & J-16 Heating Tips

Heating Tip Size	Open & Acetylene Pressure Range (PSIG)	Acetylene Flow Rate (CFH)	Hot Metal Temp. Range (°F)
J-43	24	20-30	2000-2400
J-43	31	30-40	4000-7000
J-43	38	50-60	7000-11000
J-43	45	80-90	11000-20000
J-43	52	100-120	18000-44000

Notes: Maximum Capacity - Heating tips will not heat (steel) above their design temperature. Design temperature is the maximum temperature that the tip can reach. Design temperature is the maximum temperature that the tip can reach. Design temperature is the maximum temperature that the tip can reach. Design temperature is the maximum temperature that the tip can reach.

Multi-Flame Heating Tips

Equal Pressure, Oxy-Propane, Oxy-Natural Gas



2290 Tip Tubes, Sizes 1F thru 5F

Ordering Information For 2290-H Tips

Tip Type	Tip Size	Size	Tip Number
2290-H	2290	1-40	417, 418, 419

For detailed pressure flow, acetylene pressure & hot metal temperature information, see page 12.

Tip Chart for 2290-H Series Heating Tips

Tip Size (PSIG)	Open Pressure (PSIG)	Acetylene Pressure (PSIG)	Hot Metal Temp. Range (°F)
2290-1F	20-30	1-12	100-200
2290-2F	25-35	1-12	100-200
2290-3F	30-40	1-12	100-200
2290-4F	35-45	1-12	100-200
2290-5F	40-50	1-12	100-200

Notes: Hot metal temperature is the maximum temperature that the tip can reach. Hot metal temperature is the maximum temperature that the tip can reach. Hot metal temperature is the maximum temperature that the tip can reach.

High Speed Machine Cutting Tips



6290-NH
Size 3 NH - 3 NH

6290-YVC
Size 3 YVC - 3 YVC

These high speed cutting tips are designed for machine cutting using natural gas or the liquid petroleum fuel gases. The precision cutting oxygen nozzle provides a high speed oxygen flow and a narrow cutting jet. The cutting operation can be performed accurately at high torch speeds. The fast cutting and narrow kerf result in low consumption of oxygen and fuel gas.

6290-NH Tip, Heavy Pre-Heat, Oxy-Propane, Oxy-Natural Gas

For heavy plate cutting. Designed for deep heat penetration.

6290-NHM Tip, Heavy Pre-Heat, Oxy-MAPP Gas

Similar to 6290-NH. Designed specifically for efficient operation with MAPP gas.

6290-YVC Tip, General Pre-Heat, Oxy-Propane, Oxy-Natural Gas

Features divergent nozzle design for supersonic cutting oxygen speeds. Suitable for most machine cutting applications.

6290-YVM Tip, General Pre-Heat, Oxy-MAPP Gas

Similar to 6290-YVC. Designed specifically for efficient operation with MAPP gas.

6290-NH, NHM, 6290-YVC, YVM Tip Ordering Information

Use with the machine cutting torches designed for Oxy-Propane, Oxy-Natural Gas, Oxy-MAPP Gas service (see page 14).

Tip Charts

Fuel gas pressure 4 cc. or more

Tip Size (Inches)	Tip Size	Cutting Speed (In./Min.)	Cutting Depth (In.)	Hot Metal Temp. (°F)
-------------------	----------	--------------------------	---------------------	----------------------

6290-YVC & 6290-YVM Tips

1/4"	0/0	20-30	40	20
3/8"	0/0	20	40	20
1/2"	0/0	20	40	20
5/8"	0/0	20	40	20
3/4"	0/0	20	40	20
7/8"	0/0	20	40	20
1"	0/0	20	40	20
1 1/8"	0/0	20	40	20
1 1/4"	0/0	20	40	20
1 1/2"	0/0	20	40	20
1 3/4"	0/0	20	40	20
2"	0/0	20	40	20
2 1/4"	0/0	20	40	20
2 1/2"	0/0	20	40	20
2 3/4"	0/0	20	40	20
3"	0/0	20	40	20

Note: See notes to YVC and YVM tips.

6290-NH & 6290-NHM Tips

1/4"	0	45	60	20
3/8"	0	45	60	20
1/2"	0	44 1/2	60	20
5/8"	0	44	60	20

Note: See notes to NH and NHM tips.

7490-BTU Tips

7490-BTU Oxy-Propane, Oxy-Natural Gas

Rugged and durable tip is used with the 75 Hand Cutting torch (see page 13).

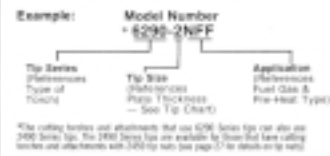


Tip Size (Inches)	Tip Size	Open Pressure (PSIG)	Hot Metal Temp. (°F)
1/4"	0	20-25	1
3/8"	1	25-30	1
1/2"	2	30-35	1
5/8"	3	35-40	1
3/4"	4	40-45	1
7/8"	5	45-50	1
1"	6	50-55	1

7490 Specialty tip for heat and for welding on bevels.

How To Order Cutting Tips

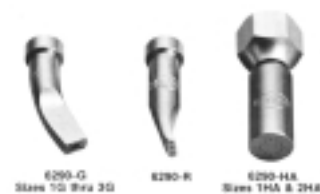
Harris cutting tips are designed for the broadest range of hand cutting and machine cutting applications. Each tip is designed specifically for a particular torch or cutting attachment, plate thickness and a fuel gas or gases.



Note: Cutting torches and attachments that use 6290 Series tips are also on page 14. The 2290 Series tips are available for steel and low alloy cutting torches and attachments with 2290 tip tube (see page 27 for details on tip tube).

Specialty Tips

Oxy-Acetylene



6290-G Size 1G thru 3G
6290-R
6290-HA Size 1HA & 2HA

Ordering Information

These tips fit cutting attachments and hand cutting torches designed for oxy-acetylene service (see page 12 & 13).

Tip Chart for 6290-G, 6290-R & 6290-HA Tips

Tip	Application	Open Pressure (PSIG)	Acetylene Pressure (PSIG)
6290-G	Grinding 1/2" x 1/2" wide	25	0.15
6290-R	Grinding 1/2" x 1/2" wide	30	0.15
6290-HA	Grinding 1/2" x 1/2" wide	30	0.15
6290-R	Bevel Cutting	45	0.15
6290-HA	Bevel Cutting	45	0.15
6290-HA	Bevel Cutting	45	0.15

Oxy-Propane, Oxy-Natural Gas



H-42-P Size 1P thru 3P
6290-GG Size 1GG thru 3GG
6290-NFFL Size 2, 4, and 6
6290-NFFW
6290-NFW

Ordering Information

These tips fit cutting attachments and hand cutting torches designed for oxy-propane and oxy-natural gas service (see page 12 & 13).

Tip Chart for 6290-GG, H-42-P, 6290-NFFL, 6290-NFFW, 6290-NFW & 6290-NFFL Tips

The tips listed below can be used with 4 cc. or more fuel gas pressure.

Tip	Application	Open Pressure (PSIG)
6290-GG	Grinding 1/2" x 1/2" wide	25
6290-GG	Grinding 1/2" x 1/2" wide	30
6290-GG	Grinding 1/2" x 1/2" wide	35
H-42-P	Bevel Cutting	45
H-42-P	Bevel Cutting	50
H-42-P	Bevel Cutting	55
6290-NFFL	Bevel Cutting	45
6290-NFFL	Bevel Cutting	50
6290-NFFL	Bevel Cutting	55
6290-NFW	Bevel Cutting	45
6290-NFW	Bevel Cutting	50

Note: The cutting torches and attachments that use 6290 Series tips are also on page 14. The 2290 Series tips are available for those that have cutting torches and attachments with 2290 tip tube (see page 27 for details on tip tube).