

Note: This data has been compiled by Uniweld... We share this information and acknowledge that Uniweld's information is to the "best of its ability" for accuracy. Please use safe practices when welding, cutting and heating with oxygen-acetylene process. Confirm this data and use with discretion...

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Weld/Braze Tip Data

IMPORTANT: Use proper type of tip for each type torch

Weld/ Braze Tips Metal Thickness	Victor Type Seat	N U M B E R D R I L S I Z E	D E C I M A L S I Z E	Harri s Type Seat	N U M B E R D R I L S I Z E	D E C I M A L S I Z E	Airc o Type Seat	N U M B E R D R I L S I Z E	D E C I M A L S I Z E	Pressure*		Acet scfh* *
	Type 1, 4, 13, 17			Type 79			Type 96			Oxy psi	Ace t psi	
Up to 1/32"	000	75	(.021)	0	70	(.028)	00	76	(.020)	3-5	3-5	1-2
1/16"- 3/64"	00	70	(.028)	1	67	(.032)	0	72	(.025)	3-5	3-5	1.5-3
1/32 5/64	0	65	(.035)	2	62	(.038)	1	68	(.031)	3-5	3-5	2-4
3/64 3/32	1	60	(.040)	3	57	(.043)	2	62	(.038)	3-5	3-5	3-6
1/16 1/8	2	56	(.0465)	4	56	(.0465)	3	56	(.0465)	3-5	3-5	5-10

1/8 3/16	3	53	(.0595)	5	55	(.052)	4	54	(.055)	4-7	3-6	8-18
3/16 1/4	4	49	(.073)	6	53	(.0595)	5	51	(.067)	5-10	4-7	10-25
1/4 1/2	5	43	(.089)	7	50	(.070)	6	48	(.076)	6-12	5-8	15-35
1/2 3/4	6	36	(.1065)	8	47	(.0785)	7	45	(.082)	7-14	6-9	25-45
3/4 1-1/4	7	30	(.1285)	9	43	(.089)	8	40	(.098)	8-16	8-10	30-60
1-1/4" - 2"	8	29	(.136)	10	40	(.098)	9	35	(.110)	10-19	9-12	35-75
2-1/2" - 3"	10	27	(.144)				10	30	(.1258)	12-24	12-15	50-100
3-1/2" - 4"	12	25	(.1495)							18-28	12-15	80-160

* The approx. Oxygen consumption ration for various gasses is as follows:

1 oxygen to 1 acetylene

2 oxygen to 1 Mapp®/Natural gas

4 oxygen to 1 propane/propylene

Gas consumption data is merely for estimating purposes. It will vary due to the material, skill of the operator and working conditions

**Use same pressures for fuel gas for brazing and one size or larger tip. Pressures are approximate for hose length up to 25 feet, increase for longer lengths about 3 psi for every 25 feet, increase working pressure 2-3 psi for check valves.

NOTE: *Oxy-acetylene must be used to produce satisfactory welds in steel.*

Acetylene cylinder gas withdrawal should not exceed 1/7 (15%) of cylinders contents per hour. Do not allow gas cylinders (especially oxygen) to empty in use - this can cause unbalanced pressures and reverse flow of gasses. An adequate cylinder of manifold system should be provided for large gas usage operations with 3/8" hose for larger size tips. Approximate heat output B.T.U./HR per cubic foot: acetylene 1470, propane 2498, Mapp® 2406 propylene 2371, natural gas 1000. SCFH, std. cu. ft. per hr. PSIG, pounds per square inch gauge.

WARNING: Do not operate this equipment until you fully understand its safe and proper use. The safe and effective use of the equipment depends on the user fully understanding and carefully following practical time-tested safety operation instructions to prevent and avoid unnecessary painful injuries and costly property damages and losses.

Read all operating instructions carefully before using equipment. Do not light torch until all connections are leak tight. Purge out torch before lighting.

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Heating Tip Data

Heating Tips Oxy-Acetylene or Fuel Gas	Tip Size	Acetylene/Fuel Gas Pressure*** Range PSIG	Oxygen Pressure*** Range PSIG	Acetylene SCFH	Oxygen SCFH
Type 11, 12	5	7-10	10-15	6-20	7-25
Victor Type	6	7-10	10-15	14-40	15-45
Seat	8	10-15	20-30	30-80	35-90
Type 11-H+	10*	12-15	25-40	40-100	45-115
Harris Type	12*	12-15	40-60	60-150	70-170
Seat					
Type 911					
Airco Type Seat	15*	12-15	40-60	90-220	100-250
Type 28, 29	2	5-7	5-8	3-9	4-10
Victor Type Tip	4	5-7	8-12	7-20	10-20
Type 7928-79+	6	8-12	10-15	14-40	15-45
7928-43	8	10-15	20-30	30-80	35-90
Harris Type Tip					
Type 37					
Airco Type Tip					
Type 13, 17					
Victor Type	15,30	8-12	10-20	15, 30	17, 33
Seat					

+ Oxy/Acetylene/equal pressures for Harris type tips

Heating Tips Fuel Gas (Not Acetylene)	Tip Size	Oxygen Pressure*** PSIG	Fuel Gas Pressure*** PSIG	Consumption, SCFH	
				Oxygen	Fuel Gas
Type 45	10*	70/100	15/25	350/480	150/200
Victor Type Tip	15*	90/120	20/35	600/800	250/350
Type 945	20*	100/150	30/50	900/1150	400/500
2290-H Harris Type Tip	2290-1H	10/25	4/12	160/320	40/80
	2290-2H*	15/45	7/22	220/520	55/130
	2290-3H*	25/70	8/25	340/920	85/230
	2290-4H*	50/110	10/30	640/1300	160/325
	2290-5H*	60/135	14/40	720/1600	180/400

* Use 3/8" hose on large tips for more gas flow.

** Type 12 for fuel gas only (Not Acetylene)

*****IMPORTANT:** Use maximum pressure on large heating tips to avoid backfire and flashback conditions from low gas flows. Fuel gas flame must have excessive smoking cleared to provide adequate gas flow increase fuel regulator pressure enough to clear smoke from flame.

SCFH, std. cu. ft. per hr. PSIG, pounds per square inch gauge.

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Cutting Tip Data

IMPORTANT: Use proper type seat cutting tips for each type of torch and fuel gas. Use proper type tips for fuel gases or acetylene. See manufacture's chart for proper tip selection. Use proper tip size, pressures and flame size to avoid backfire and flashback.

Metal Thickness	Torch and Tip Types			Oxygen		Acet./Fuel Gas		Speed IPM
	Victor Type Seat 2 tapper	Airco Type Seat 3 tapper	Harris Type Seat 2 flat					
	1-101 3-101 5-101 GPM-N-P	144 164	6290	PSIG	SCFH	PSIG	SCFH	
1/8"	000	00	000	20-25	25	5	5	28-32
1/4"	00	0	00	20-25	35	5	6	25-30
3/8"	0	1	00	25-30	60	5	8	24-28
1/2"	0	1	0	30-35	65	5	10	20-24
3/4"	1	2	1	30-40	85	5	13	17-20
1"	2	2	1	35-50	140	6	16	15-20
1-1/2"	2	3	2	40-50	160	7	18	12-17
2"	3	3	3	40-55	180	9	22	12-15
2-1/2"	3	4	3	45-	230	10	26	10-13

				55				
3"	4	5	4	45-60	280	10	30	9-12
4"	5	5	4	45-60	350	12	34	8-11
5"	5	6	4	50-65	420	12	38	7-9
6"	6	6	5	50-70	450	12	40	6-8
8"	6	6	5	55-75	600	14	44	5-6
10"	7	7	6	68-85	700	14	50	4-5
12"	8	8	6	55-95	900	14	55	3-5

CUTTING OXYGEN PRESSURE GUIDE

Type 101 etc. Victor type seat, tube mix lower psig.

Type 144 etc. Airco type seat, tip mix mid psig.

Type 6290 etc. Harris type seat, head mix upper psig.

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