

OXWELD® Cutting Tips

Steel Industry Products



1400 Series Alternate Fuels

Model	Steel Thickness		Size	One-Piece or Internal Part Number
	in.	mm		
Fits C-43, 66 and 67-1400 Torches	12	305	1427-12	5470099
	14	356	1427-14	5470144
	16	406	1427-16	5470100
	20	508	1427-20	5460192
	24	610	1427-24	5460162
	28	711	1427-28	5460193
	3-6	76-152	1431-120	66Z59
	6-10	152-254	1431-140	66Z60
	10-16	254-406	1431-160	66Z61
	16-20	406-508	1431-200	66Z62
	20-24	508-610	1431-240	66Z63
	24-28	610-711	1431-280	66Z64



1427 & 1431

1427 Series Alternate Fuels Operating Data

Tip			Steel Thickness			Gas Pressure			Cutting Speed		Cleaning Drill Size		Gas Consumption		
Size		Part Number	Steel Thickness		Cutting Oxygen	Preheat Oxygen	Natural Gas	Cutting Speed		Cleaning Drill Size		Cutting Oxygen	Preheat Oxygen	Natural Gas	
in.	mm		in.	mm	psig	psig	psig	ipm	mm/min	Preheat	Cutting	cfh	cfh	cfh	
12	305	5470099	12	305	75-85	8-10	16-19	4-5	102-127	55	31	800-900	100-115	65-75	
14	356	5470144	14	356	60-70	7-9	8-11	3-1/2-4-1/2	89-114	54	28	950-1,100	115-140	75-95	
16	406	5470100	16	406	55-65	9-12	11-15	3-4-1/2	76-114	53	20	1,150-1,330	145-175	95-115	
20	508	5460192	20	508	45-55	13-18	17-23	2-1/4	57	52	8	1,450-1,700	170-225	125-150	
24	610	5460162	24	610	40-50	21-25	28-33	2-3-1/2	51-89	51	C	1,850-2,200	225-285	170-190	
28	711	5460193	28	711	30-40	28-33	39-45	2-3-1/2	51-89	50	K	1,950-2,400	315-350	210-235	

1427 Series Tips: Cutting speeds are based on cutting steel at room temperature and have straight cylindrical cutting bores.

1431 High Speed Series Alternate Fuels Operating Data

Tip			Steel Thickness			Gas Pressure			Cutting Speed		Cleaning Drill Size		Gas Consumption		
Size		Part Number	Steel Thickness		Cutting Oxygen	Preheat Oxygen	Natural Gas	Cutting Speed		Cleaning Drill Size		Cutting Oxygen	Preheat Oxygen	Natural Gas	
in.	mm		in.	mm	psig	psig	psig	ipm	mm/min	Preheat	Cutting	cfh	cfh	cfh	
14	356	66Z60	6-10	152-254	80-115	10	13	10-20	254-508	54	28	1,850	225	130	
16	406	66Z61	10-16	254-406	80-115	11	14	10-20	254-508	53	20	2,100	240	135	
20	508	66Z62	16-20	406-508	80-115	15	20	8-20	203-508	52	8	3,100	275	175	
24	610	66Z63	20-24	508-610	80-115	22	30	6-17	152-432	51	C	4,700	335	225	
28	711	66Z64	24-28	610-711	60-80	30	42	4-16	102-406	50	K	4,900	405	275	

1431 Series Tips: Cutting speeds are based on cutting steel at temperatures over 1,000°F (1,832°C), and have tapered divergent cutting bores. These tips are used in continuous casting cut-off or plate ripping applications where it is necessary to slice through quickly.

Given pressures are torch inlet pressures, not what to set regulator at; hose length, diameter, flash arrestor use, and many other factors affect pressure. Use test gauge adaptors to check pressure at back of torch.

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1702 Series Alternate Fuels

Model	Steel Thickness		Size	One-Piece or Internal Part Number
	in.	m		
Fits C-60 Torch	35-40	0.9-1.0	1702-50	5470081
	45-50	1.1-1.3	1702-60	5470082
	50-60	1.3-1.5	1702-70	5490062



1702

1702 Series Natural Gas Operating Data

Tip			Steel Thickness		Gas Pressure			Cutting Speed		Cleaning Drill Size			Cleaning Drill Size			
Size	Part				Cutting Oxygen ¹	Natural Gas	Preheat Oxygen			Cutting Oxygen	Natural Gas	Preheat Oxygen ²	Cutting		Preheat	
in.	m	Number	in.	m	psig	psig	psig	ipm	mm/min	Oxygen	Gas	Oxygen ²	in.	mm	in.	m
50	1.3	5470081	35-40	0.9	12	12-17	20-26	3	76	4600	380-450	570-675	1/2	13	46	1.2
60	1.5	5470082	45-50	1.1-1.3	7	14-18	25-30	2-2-1/2	51-63.5	5450	450-525	675-790	19/32	15	45	1.1
70	1.8	5490062	50-60	1.3-1.5	6	16-24	30-40	2-1-1/4	51-32	7500	525-650	790-975	11/16	17.5	43	1.1

¹Read from gauge mounted on torch.

²Preheat oxygen flow is given as 50% of natural gas flow for a 1.5 oxygen to 1.0 natural gas ratio. This oxygen/natural gas ratio produces a long inner cone flame length which is used for most heavy cutting operations.

Given pressures are torch inlet pressures, not what to set regulator at; hose length, diameter, flash arrestor use, and many other factors affect pressure. Use test gauge adaptors to check pressure at back of torch.

OXWELD® Cutting Tips

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1808 Series Alternate Fuels

Model	Steel Thickness		Size	One-Piece or Internal Part Number
	in.	m		
Fits C-59 and C-63	20-40	0.5-1.0	1808-30	65Z44
	40-50	1.0-1.3	1808-40	65Z45
	50-60	1.3-1.5	1808-50	65Z46



1808

Tip Data

Size	Part Number	Cleaning Drill Size			
		Cutting		Preheat	
		in.	mm	in.	m
30	65Z44	19/64	7.5	51	1.3
40	65Z45	2/5	10	50	1.3
50	65Z46	1/2	13	48	1.2

Oxy-Propane Operating Data

Metal Thickness		Tip Number	Cutting Oxygen		Propane		Preheat Oxygen	
in.	m		psig	cfh	psig	cfh	psig	cfh
20-40	0.5-1.0	30	50	4,500	12-14	132	45	462
40-50	1.0-1.3	40	50	7,000	13-15	144	50	504
over 50	over 1.3	50	50	9,000	13-15	150	55	525

Oxy-Natural Gas Operating Data

Metal Thickness		Tip Number	Cutting Oxygen		Natural Gas		Preheat Oxygen	
in.	m		psig	cfh	psig	cfh	psig	cfh
20-40	0.5-1.0	30	50	4,500	21-23	330	68	660
40-50	1.0-1.3	40	50	7,000	23-25	360	75	720
over 50	over 1.3	50	50	9,000	24-26	375	78	750

Given pressures are torch inlet pressures, not what to set regulator at; hose length, diameter, flash arrestor use, and many other factors affect pressure. Use test gauge adaptors to check pressure at back of torch.

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PM Tips Alternate Fuels

Model	Steel Thickness		Size	One-Piece or Internal Part Number
	in.	mm		
Fits PM-100, 200, and GST Torches	3-6	76-152	PM-120-85	2118702
	6-10	152-254	PM-140-85	2118701
	6-10	152-254	PM-110-200	2118707
	10-16	254-406	PM-160-85	2118700
	10-24	406-610	PM-160-135	2118703
	4-9	102-229	PM-93-200	2228620



PM-100, 200, and GST

PM - GST Operating Data

Tip Part Number	Steel Thickness		Gas Pressure		Tip Stand-off		Gas Consumption	
			Cutting Oxygen ¹	Natural Gas or Propane			Oxygen	Natural Gas or Propane
	in.	mm	psig	psig	in.	mm	cfh	cfh
2118700	10-16	254-406	80-110	10-30	4-6	102-152	2080	225-500
2118701	6-10	152-254	80-110	10-30	4-6	102-152	1640	225-500
2118702	3-6	76-152	80-110	10-30	4-6	102-152	1260	225-500

PM-100/PM-200/PM-300 Operating Data

Tip Part Number	Steel Thickness		Gas Pressure			Cutting Speed		Tip Stand-off		Gas Consumption		
			Cutting Oxygen	Preheat Oxygen	Natural Gas					Cutting Oxygen	Natural Gas	Preheat Oxygen
	in.	mm	psig	psig	psig	ipm	mm/min	in.	mm	cfh	cfh	cfh
PM-100/200												
2118700	10-20	406-508	85	10-20	4-6	6-9	152-229	4-6	102-152	1800	180-240	345-465
2118701	6-10	152-254	85	10-20	4-6	9-13	229-330	4-6	102-152	1400	180-240	345-465
2118702	3-6	76-152	85	10-20	4-6	12-18	305-457	4-6	102-152	1020	180-240	345-465
2118703	20-30	508-762	135	10-20	4-6	2-10	51-254	4-6	102-152	3040	180-240	345-465
2118707	6-10	152-254	190	10-20	4-6	7-16	178-406	4-6	102-152	2020	180-240	345-465
PM-300												
2228185	20-30	508-762	80	10-20	4-6	3-6	76-152	5-7	127-178	3800	180-240	345-465
2228186	30-40	762-1016	135	10-20	4-6	2-4	51-102	5-7	127-178	5200	180-240	345-465

Oxygen pressure: Set while cutting lever is depressed; pressure measured at the torch.

Natural gas or propane pressure: Set while cutting lever is depressed and fuel gas valve is wide open; pressure measured at the torch.

Given pressures are torch inlet pressures, not what to set regulator at; hose length, diameter, flash arrestor use, and many other factors affect pressure. Use test gauge adaptors to check pressure at back of torch.