

**KOIKE'S QUALITY TIPS ASSURE MORE ACCURATE, ECONOMICAL,
AND SAFER CUTTING**

GAS CUTTING TIP

Koike has gained a world-wide reputation as a leading manufacturer in the field of the gas cutting machines.

Most of the reputation is indebted to the tips which Koike has considered as the core of the cutting machine. Since the tip is the essential part of the gas cutting machine, as the poor tip can not afford quality cutting no matter how the cutting machine itself is excellent, Koike has made every endeavor for research and development of the tips.

Having fulfilled the highly technical requirements from the steel manufacturing industry, Koike has succeeded in improving and manufacturing tips of superior quality.

Koike considers that manufacturing the tip is beyond the powers of the simple tip maker. Because, manufacturing the

excellent tip is not a matter of making a tip alone, but it is achieved as a result of a steady endeavor on research and development over the whole cutting machines.

Koike has an experience over a long time to manufacture the gas cutting machines, to research torches, and to cut various materials. Based on this valuable experience, Koike has developed the test machine to check the tip efficiency.

Superior tips can be supplied only by these supports.

As a total supplier of the gas cutting machine, Koike manufactures the tips through the rigorous quality inspection to fulfill accurate, safe and economical cutting operation.

Try our tips to satisfy your needs.

102D7 • Divergent high speed tip



106D7 • Divergent high speed tip



HOW IS THE MOST ACCURATE CUTTING ACHIEVED?

On determining the tip quality, Koike checks the surface obtained by real cutting, and the criteria to achieve the quality cutting surface Koike aims at are:

- (1) Even cutting surface (small kerf)
- (2) Of no under slag
- (3) Of little upper edge melt
- (4) Of no upper slag

In order to fulfill these four criteria, Koike assigns itself three cutting conditions.

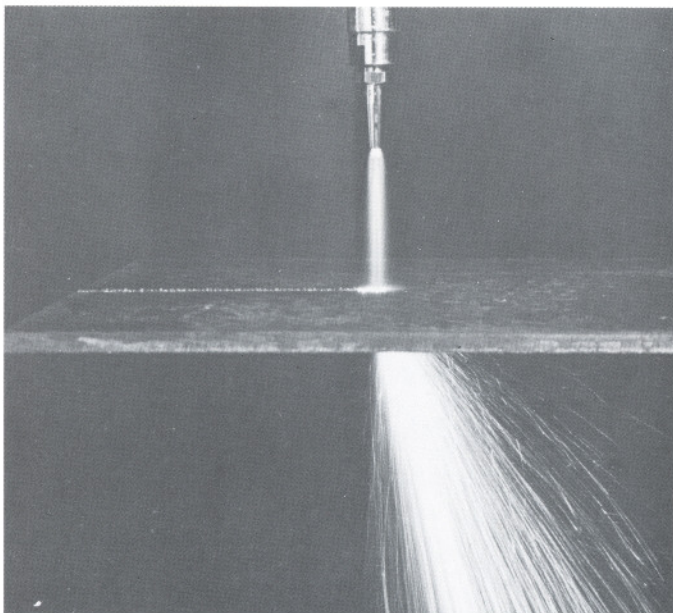
- (1) Cutting operation with high speed
- (2) Steady and safe cutting operation
- (3) Cutting operation with a small amount of gas

Essential points to satisfy these conditions are the supreme cutting oxygen flow and pre-heat flame of uniformity and of high efficiency. To achieve these two substances depends on the shapes and the sizes of the inlet part of the cutting oxygen, pre-heat oxygen and the fuel gas, of the pipes, of the gas mixing chamber and of the ejection outlet.

On determining these shapes and sizes, Koike has made various trial tips and performed the cutting inspections.

One of the successful results out of these researches is a divergent tip. The cutting oxygen outlet of the tip is called a divergent shape and it is designed through a high technical calculation. Moreover, in order to make the most of the divergent shape for a long term of the operation, Koike employs the unique patented stainless steel lining. It shows how Koike strives for maintaining the quality of the products. In addition, every endeavor and strife for better tips during the design and the inspection might be in vain if the idea is not perfectly realized in manufacturing products. Koike has developed the unique technique to process deep and small holes of non-flight metal.

Koike tips are the results of these techniques; research, design, inspection and manufacturing tools.



HOW KOIKE TIPS INCREASE CUTTING SAFETY.

Since gas welding and cutting operations are particularly vulnerable to explosions and other disastrous accidents, any small flame and flash-up must be scrupulously avoided. Consequently, Koike has endeavored extensively to ensure safe cutting operations.

In the area of tips, great attention has been paid to the prevention of the backfire.

The backfire are divided into three types.

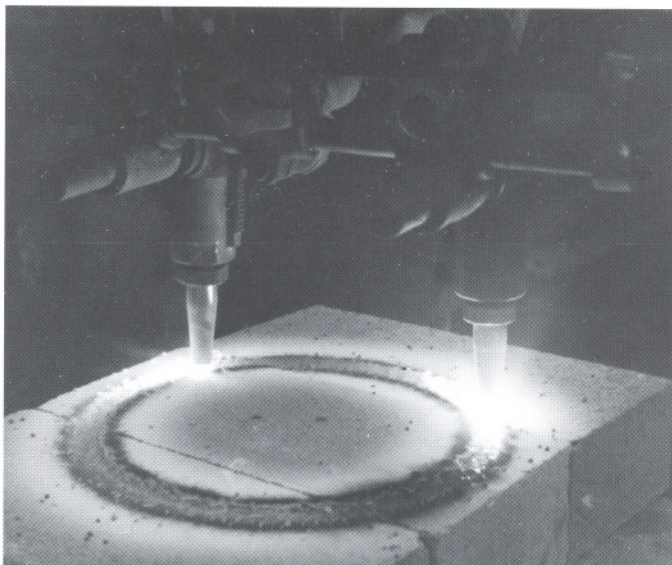
- (1) Back fire : Pre-heat oxygen flows back into the torch
- (2) Sustained backfire : Flows back to the gas mixing point of the tip and melts it.
- (3) Flashback : The flame flashes at the tip edge.

Two significant backfires which might lead to big accidents are the backfire and the sustained backfire. Koike has resolved these two problems.

As for the backfire, Koike has developed the suction effect of the tip for acetylene. Conventional middle-pressure tips might bring force the backflow of the pre-heat oxygen into the fuel gas to produce the mixing gas in the torch pipe when something wrong happens in the torch or in the sheet. That causes the backfire when acetylene is supplied. The solution to this by Koike is to provide the suction effect to the acetylene tip. By means of the high-speed pre-heat oxygen, fuel-gas is sucked into the tip in order not to produce the mixing gas in the torch pipe, and thus backfire during the ignition is prevented.

The sustained backfire might occur in case that the tip is clogged up with the cutting plate during the operation. Koike has reached to the conclusion that the ideal proportion of the diameter between pre-heat oxygen, fuel gas and gas mixing chamber will bring force the turn-off effect of the flame when the tip is clogged up. The sustained backfire as well as the flashback is thus prevented.

Prevention of the backfire is one of the examples how Koike strives for better products, sparing no efforts in its research, design and manufacturing.



WHY KOIKE TIPS ARE ECONOMICAL.

Economical cutting operation by reducing the cost. To do so, the following 3 conditions must be fulfilled.

- (1) Save idling time and give steady and accurate cutting.
- (2) Highspeed efficient cutting.
- (3) Gas saving by pre-heating/cutting oxygen.

These above 3 are inter-related.

To perform the steady accurate cutting operation pre-heat flame and cutting oxygen are required. When these two are fulfilled, high-speed cutting operation can be achieved.

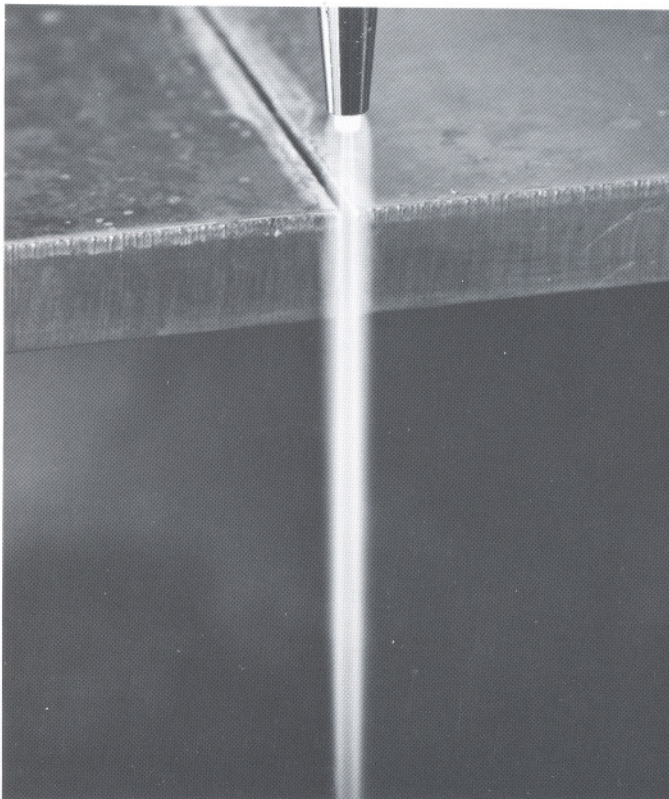
In other words, the solution of these three conditions depends on the tip. The quality tips of Koike have already satisfied these conditions.

The divergent tips show example of how much precision they give along with labor and cost savings. Compare the cutting speed of the divergent tips at Table 1. Moreover, the tip life is from 3 to 5 times longer that of the conventional for the stainless steel lining.

Table 1

Plate thickness	Tip No.	Average cutting speed mm/min.		Speed-up ratio %
		Straight tip	Divergent tip	
9	0	570	650	14
12	1	500	600	20
16	2	450	550	22
32	3	340	420	23

The Table 1: shows the comparative cutting speeds of the divergent and the straight tips of Koike for the cutting plates of 9mm, 12mm, 16mm and 32mm as thickness.



PERFECT MANUFACTURING SYSTEM TO PRODUCE THE QUALITY TIPS.

Koike offers users high precision and safe products to fulfill the cost reduction of the cutting operation.

Even a tip is not produced without Koike's perfect manufacturing system, of the four departments as follows.

Research Department

Research Department deals with the development of the new products and the inspection and analysis of the trial products. Setting the various themes, the staffs engage in the collection and the analysis of the data, and determine the idea of the new products.

Inspection and analysis is performed by the original machines developed by the Research Department itself.

Design Department

Based on the idea of the new products presented by the Research Department, Design Department pursues desing of the trial product until its completion.

Manufacturing Department

At the newest systematic fully-automated factories, this department is engaged in manufacturing the new products yielded by the Research and Design Department.

Inspection Department

Co-operating with the Manufacturing Department, Inspection Department performs inspections on all the products ever manufactured.

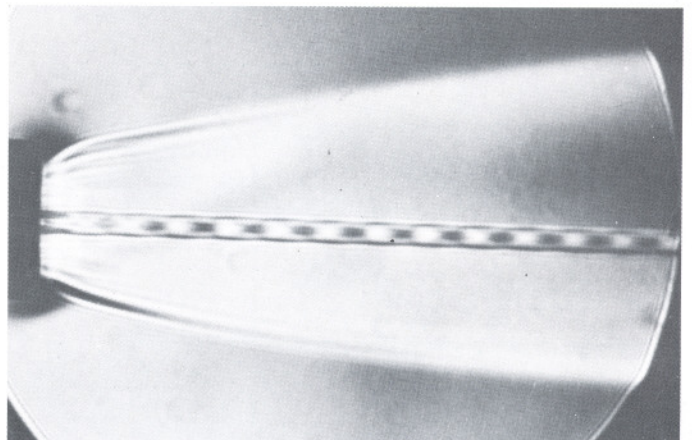
Rigorous checks are given especially on the shape and the size of the cutting oxygen outlet and pipes, of the inlet part of the pre-heat oxygen and the fuel-gas, and of the gas mixing chamber.

All the tips are ignited finally to examine the pre-heat oxygen flame and the cutting oxygen flow.

Koike tip has a trace to be ignited once which shows that it has passed all the severe inspection, and it is nothing but a mark of the quality guarantee.

Besides 100 model series as a typical Koike tip, Koike tip has variety over four hundreds types according to the gas and the cutting machine to be used, according to the cutting plate thickness.

All the Koike tips are manufactured through the perfect process mentioned above, and its rich variety affords to meet any requirements of the customers.



KOIKE TIPS: RICH IN VARIETY FOR ANY PURPOSE.

FOR ACETYLENE

Koike's standard	102	Standard tip
	102D5	Divergent high speed tip
	102D7	Divergent high speed tip
	402ST	Standard tip (Only for IK-56, 64, 68)
	502A	Standard tip (Only for Skill cut torch)
Other manufacturer's standard	502L	Standard tip (Only for IK-76)
	2VA	Standard tip (Only for Victor type torch)
	2VA7	Divergent high speed tip (Only for Victor type torch)
	OA	Standard tip (Only for Oxxweld type torch)
	OA7	Divergent high speed tip (Only for Oxxweld type torch)

FOR LPG GAS

Koike's standard	106	Standard tip
	106D5	Divergent high speed tip
	106D7	Divergent high speed tip
	106M	Heavy pre-heat oxygen tip (Standard type)
	106M7	Heavy pre-heat oxygen tip (Divergent high speed type)
	106-O	Standard tip (Only for one touch torch)
	106-O5	Divergent high speed tip (Only for one touch torch)
	106-O7	Divergent high speed tip (Only for one touch torch)
	406NT	Standard tip (Only for IK-56, 64, 68)
	506A	Standard tip (Only for Skill cut torch)
Other manufacturer's standard	506L	Standard tip (Only for IK-76)
	2VP	Standard tip (Only for Victor type torch)
	2VP7	Divergent high speed tip (Only for Victor type torch)
	OP	Standard tip (Only for Oxxweld type torch)
	OP7	Divergent high speed tip (Only for Oxxweld type torch)

FOR ETHYLENE

Koike's standard	103	Standard tip
	103D7	Divergent high speed tip

FOR NATURAL GAS

Koike's standard	107	Standard tip
	107D7	Divergent high speed tip

102

- For acetylene
- Standard tip



Inch

Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/8	00	27	20	20	2.8	0.04
1/4	0	24	30	30	2.8	0.05
3/8	0	22	30	30	2.8	0.06
1/2	1	21	40	40	2.8	0.07
3/4	2	18	45	45	2.8	0.08
1	2	17	45	45	2.8	0.08
1-1/2	3	14	45	45	2.8	0.09
2	4	12.5	45	45	3.6	0.11
2-1/2	5	11	55	55	4.3	0.12
3	5	10	55	55	4.3	0.12
4	6	8	55	55	5.0	0.14
5	6	7	55	55	5.0	0.14
6	7	6	65	65	5.7	0.16
8	7	5	65	65	5.7	0.17
10	8	3	65	65	5.7	0.23
12	8	2	65	65	5.7	0.27

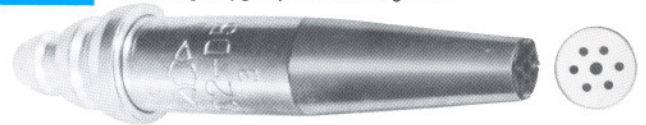
* Preheat oxygen pressure: for 3 hose torch only

Metric

Plate thickness	Tip No.	Pressure kg/cm ²		Consumption NI/hr.			Cutting speed mm/min.
		Oxygen	Fuel gas	Cutting oxygen	Preheat oxygen	Fuel gas	
- 5	00	1.5	0.2	690	410	370	- 660
5- 10	0	2.0		1200			660- 550
10- 15	1	2.5	2100	480	430	550-490	
15- 30	2	3.0	3400			490- 400	
30- 40	3		4300	400- 350			
40- 50	4	3.5	0.25	6500	550	500	350- 320
50- 100	5	4.0	0.3	11000	690	630	320- 200
100- 150	6		0.35	15000	770	700	200- 150
150- 250	7	4.5	0.4	22000	1060	960	150- 80
250- 300	8			28000			80- 45

102D5

- For acetylene
- Divergent high speed tip (Cutting oxygen pressure: 5kg/cm²)



Inch

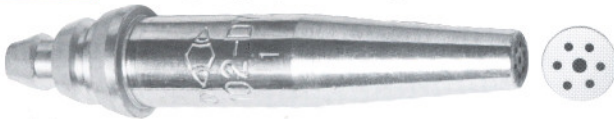
Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/8	00	29.5	71	20	2.8	0.04
1/4	0	27.5	71	30	2.8	0.04
3/8	0	25	71	30	2.8	0.05
1/2	1	23	71	40	2.8	0.06
3/4	2	20.5	71	45	2.8	0.07
1	2	19.5	71	45	2.8	0.08
1-1/2	3	17	71	45	2.8	0.09
2	4	14	71	45	2.8	0.10
2-1/2	5	12.5	71	55	3.6	0.12
3	5	11.5	71	55	3.6	0.12
4	6	9.5	71	55	4.3	0.14
5	6	8.5	71	55	4.3	0.15
6	7	6.5	71	65	4.3	0.16
8	7	5	71	65	4.3	0.20
10	8	3.5	71	65	5.7	0.21
12	8	2.5	71	65	5.7	0.25

Metric

Plate thickness	Tip No.	Pressure kg/cm ²		Consumption NI/hr.			Cutting speed mm/min.
		Oxygen	Fuel gas	Cutting oxygen	Preheat oxygen	Fuel gas	
- 5	(00)	0.2	5.0	850	520	470	- 700
5- 10	0			1600			700- 625
10- 15	1	0.25	5.0	2400	600	550	625- 550
15- 30	2			3600			550- 475
30- 40	3	0.3	5.0	4800	750	680	475- 425
40- 50	4			5600			425- 350
50- 100	5	0.4	5.0	8800	860	780	350- 250
100- 150	6			13500	950	860	250- 175
150- 250	7	0.4	5.0	24000	1330	1210	175- 90
250- 300	8			31000	1600	1450	90- 60

102D7

- For acetylene
- Divergent high speed tip (Cutting oxygen pressure: 7kg/cm²)



Inch

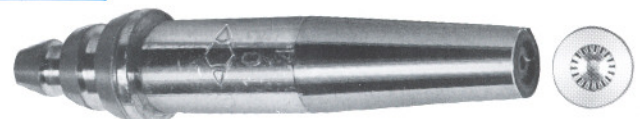
Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/8	00	31.5	100	20	2.8	0.03
1/4	0	29	100	30	2.8	0.04
3/8	0	27	100	30	2.8	0.05
1/2	1	25	100	40	2.8	0.05
3/4	2	22	100	45	2.8	0.06
1	2	20	100	45	2.8	0.07
1-1/2	3	18	100	45	2.8	0.08
2	4	16	100	45	2.8	0.10
2-1/2	5	14	100	55	3.6	0.11
3	5	12.5	100	55	3.6	0.11
4	6	10	100	55	4.3	0.13
5	6	9	100	55	4.3	0.14
6	7	7	100	65	4.3	0.14
8	7	5.5	100	65	4.3	0.18
10	8	4	100	65	5.7	0.20
12	8	3	100	65	5.7	0.24

Metric

Plate thickness	Tip No.	Pressure kg/cm ²		Consumption NI/hr.			Cutting speed mm/min.
		Oxygen	Fuel gas	Cutting oxygen	Preheat oxygen	Fuel gas	
- 5	(00)	7.0	0.2	750	520	470	- 750
5- 10	0			1100			750- 680
10- 15	1	0.25	7.0	2500	600	550	680- 600
15- 30	2			3800			600- 500
30- 40	3	0.3	7.0	5400	750	680	500- 450
40- 50	4			7300			450- 400
50- 100	5	0.4	7.0	10000	860	780	400- 260
100- 150	6			14000	950	860	260- 180
150- 250	7	0.4	7.0	22000	1330	1210	180- 100
250- 300	8			35000	1600	1450	100- 70

103

- For ethylene
- Standard tip



Inch

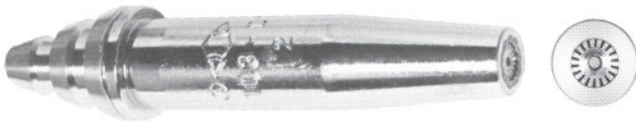
Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/8	00	27	20	20	2.9	0.04
1/4	0	24	30	30	2.9	0.05
3/8	0	22	30	30	2.9	0.06
1/2	1	21	40	40	2.9	0.07
3/4	2	18	45	45	3.6	0.08
1	2	17	45	45	3.6	0.08
1-1/2	3	14	45	45	3.6	0.09
2	4	12.5	45	45	5	0.11
2-1/2	5	11	55	55	5	0.12
3	5	10	55	55	5	0.12
4	6	8	55	55	5	0.14
5	6	7	55	55	5	0.14
6	7	6	65	65	5	0.16
8	7	5	65	65	5	0.17
10	8	3	65	65	5	0.23
12	8	2	65	65	5	0.27

Metric

Plate thickness	Tip No.	Pressure kg/cm ²		Consumption NI/hr.			Cutting speed mm/min.
		Oxygen	Fuel gas	Cutting oxygen	Preheat oxygen	Fuel gas	
- 5	00	1.5	0.2	690	800	460	- 660
5- 10	0	2.0		1200			660- 550
10- 15	1	2.5	0.25	2100	900	500	550- 490
15- 30	2	3.0		3400			490- 400
30- 40	3		0.35	4300	1200	660	400- 350
40- 50	4	6500		350- 320			
50- 100	5	0.4	7.0	11000	15000	1280	320- 200
100- 150	6			15000			200- 150
150- 250	7	0.4	7.0	22000	2200	1280	150- 80
250- 300	8			28000			80- 45

103D7

- For ethylene
- Divergent high speed tip
(Cutting oxygen pressure: 7kg/cm²)



Inch

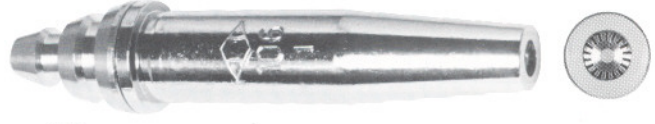
Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/8	00	31.5	100	20	2.9	0.03
1/4	0	29	100	30	2.9	0.04
3/8	0	27	100	30	2.9	0.05
1/2	1	25	100	40	2.9	0.05
3/4	2	22	100	45	3.6	0.06
1	2	20	100	45	3.6	0.07
1-1/2	3	18	100	45	5	0.08
2	4	16	100	45	5	0.10
2-1/2	5	14	100	55	5	0.11
3	5	12.5	100	55	5	0.11
4	6	10	100	55	5	0.13
5	6	9	100	55	5	0.14
6	7	7	100	65	5	0.14
8	7	5.5	100	65	5	0.18
10	8	4	100	65	5	0.20
12	8	3	100	65	5	0.24

Metric

Plate thickness	Tip No.	Pressure kg/cm ²		Consumption NI/hr.			Cutting speed mm/min.
		Oxygen	Fuel gas	Cutting oxygen	Preheat oxygen	Fuel gas	
- 5	(00)			750			- 750
5- 10	0		0.2	1100	800	460	750 - 680
10- 15	1			2500			680 - 600
15- 30	2		0.25	3800	900	500	600 - 500
30- 40	3			5400			500 - 450
40- 50	4			7300	1200	660	450 - 400
50- 100	5		0.35	10000			400 - 260
100- 150	6			14000			260 - 180
150- 250	7			22000	2200	1280	180 - 100
250- 300	8			35000			100 - 70

106

- For LPG gas
- Standard tips



Inch

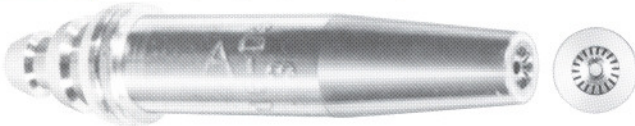
Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/8	00	27	20	20	2.8	0.04
1/4	0	24	30	30	2.8	0.05
3/8	0	22	30	30	2.8	0.06
1/2	1	21	40	40	2.8	0.07
3/4	2	18	45	45	3.6	0.08
1	2	17	45	45	3.6	0.08
1-1/2	3	14	45	45	3.6	0.09
2	4	12.5	45	45	4.3	0.11
2-1/2	5	11	55	55	4.3	0.12
3	5	10	55	55	4.3	0.12
4	6	8	55	55	5.7	0.14
5	6	7	55	55	5.7	0.14
6	7	6	65	65	5.7	0.16
8	7	5	65	65	5.7	0.17
10	8	3	65	65	5.7	0.23
12	8	2	65	65	5.7	0.27

Metric

Plate thickness	Tip No.	Pressure kg/cm ²		Consumption NI/hr.			Cutting speed mm/min.
		Oxygen	Fuel gas	Cutting oxygen	Preheat oxygen	Fuel gas	
- 5	00	1.5		690			- 660
5- 10	0	2.0	0.2	1200	1180	310	660 - 550
10- 15	1	2.5		2100			550 - 490
15- 30	2		0.25	3400	1370	360	490 - 400
30- 40	3	3.0		4300			400 - 350
40- 50	4	3.5		6500	1860	490	350 - 320
50- 100	5		0.3	11000			320 - 200
100- 150	6	4.0		15000	3040	800	200 - 150
150- 250	7		0.4	22000			150 - 80
250- 300	8	4.5		28000	3720	980	80 - 45

106D5

- For LPG gas
- Divergent high speed tip
(Cutting oxygen pressure: 5kg/cm²)



Inch

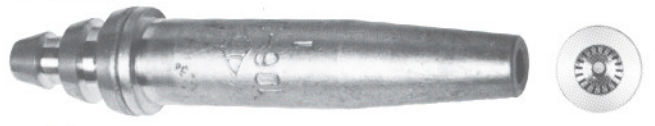
Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/8	00	29.5	71	20	2.8	0.04
1/4	0	27.5	71	30	2.8	0.04
3/8	0	25	71	30	2.8	0.05
1/2	1	23	71	40	2.8	0.06
3/4	2	20.5	71	45	3.6	0.07
1	2	19.5	71	45	3.6	0.08
1-1/2	3	17	71	45	3.6	0.09
2	4	14	71	45	4.3	0.10
2-1/2	5	12.5	71	55	4.3	0.12
3	5	11.5	71	55	4.3	0.12
4	6	9.5	71	55	5.7	0.14
5	6	8.5	71	55	5.7	0.15
6	7	6.5	71	65	5.7	0.16
8	7	5	71	65	5.7	0.20
10	8	3.5	71	65	5.7	0.21
12	8	2.5	71	65	5.7	0.25

Metric

Plate thickness	Tip No.	Pressure kg/cm ²		Consumption NI/hr.			Cutting speed mm/min.
		Oxygen	Fuel gas	Cutting oxygen	Preheat oxygen	Fuel gas	
- 5	(00)			850			- 700
5- 10	0		0.2	1600	1180	310	700 - 625
10- 15	1			2400			625 - 550
15- 30	2		0.25	3600	1370	360	550 - 475
30- 40	3			4800			475 - 425
40- 50	4			5600	1860	490	425 - 350
50- 100	5		0.3	8800			350 - 250
100- 150	6			13500	3040	800	250 - 175
150- 250	7		0.4	24000			175 - 90
250- 300	8			31000	3720	980	90 - 60

106D7

- For LPG gas
- Divergent high speed tip
(Cutting oxygen pressure: 7kg/cm²)



Inch

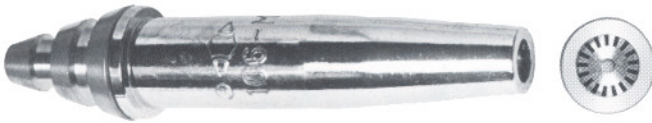
Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/8	00	31.5	100	20	2.8	0.03
1/4	0	29	100	30	2.8	0.04
3/8	0	27	100	30	2.8	0.05
1/2	1	25	100	40	2.8	0.05
3/4	2	22	100	45	3.6	0.06
1	2	20	100	45	3.6	0.07
1-1/2	3	18	100	45	3.6	0.08
2	4	16	100	45	4.3	0.10
2-1/2	5	14	100	55	4.3	0.11
3	5	12.5	100	55	4.3	0.11
4	6	10	100	55	5.7	0.13
5	6	9	100	55	5.7	0.14
6	7	7	100	65	5.7	0.14
8	7	5.5	100	65	5.7	0.18
10	8	4	100	65	5.7	0.20
12	8	3	100	65	5.7	0.24

Metric

Plate thickness	Tip No.	Pressure kg/cm ²		Consumption NI/hr.			Cutting speed mm/min.
		Oxygen	Fuel gas	Cutting oxygen	Preheat oxygen	Fuel gas	
- 5	(00)			750			- 750
5- 10	0		0.2	1100	1180	310	750 - 680
10- 15	1			2500			680 - 600
15- 30	2		0.25	3800	1370	360	600 - 500
30- 40	3			5400			500 - 450
40- 50	4			7300	1860	490	450 - 400
50- 100	5		0.3	10000			400 - 260
100- 150	6			14000	3040	800	260 - 180
150- 250	7		0.4	22000			180 - 100
250- 300	8			35000	3720	980	100 - 70

106M

- For LPG gas
- Heavy pre-heat oxygen tip
- Standard type



Inch

Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/8	00	27	20	20	2.8	0.04
1/4	0	24	30	30	2.8	0.05
3/8	0	22	30	30	2.8	0.06
1/2	1	21	40	40	2.8	0.07
3/4	2	18	45	45	2.8	0.08
1	2	17	45	45	2.8	0.08
1-1/2	3	14	45	45	2.8	0.09
2	4	12.5	45	45	2.8	0.11
2-1/2	5	11	55	55	3.6	0.12
3	5	10	55	55	3.6	0.12
4	6	8	55	55	3.6	0.14
5	6	7	55	55	3.6	0.14
6	7	6	65	65	4.3	0.16
8	7	5	65	65	4.3	0.17
10	8	3	65	65	4.3	0.23
12	8	2	65	65	4.3	0.27

Metric

Plate thickness	Tip No.	Pressure kg/cm ²		Consumption NI/hr.			Cutting speed mm/min.
		Oxygen	Fuel gas	Cutting oxygen	Preheat oxygen	Fuel gas	
- 5	00	1.5		690			- 660
5- 10	0	2.0		1200	1710	450	660 - 550
10- 15	1	2.5	0.2	2100			550 - 490
15- 30	2	3.0		3400			490 - 400
30- 40	3	3.0		4300	2470	650	400 - 350
40- 50	4	3.5		6500			350 - 320
50- 100	5	4.0	0.25	11000	2890	760	320 - 200
100- 150	6	4.0		15000	3570	940	200 - 150
150- 250	7	4.5	0.3	22000			150 - 80
250- 300	8	4.5		28000	3990	1050	80 - 45

106M7

- For LPG gas
- Heavy pre-heat oxygen tip
- Divergent high speed type
(Cutting oxygen pressure: 7kg/cm²)



Inch

Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/8	00	31.5	100	20	2.8	0.04
1/4	0	29	100	30	2.8	0.05
3/8	0	27	100	30	2.8	0.06
1/2	1	25	100	40	2.8	0.07
3/4	2	22	100	45	2.8	0.08
1	2	20	100	45	2.8	0.08
1-1/2	3	18	100	45	2.8	0.09
2	4	16	100	45	2.8	0.11
2-1/2	5	14	100	55	3.6	0.12
3	5	12.5	100	55	3.6	0.12
4	6	10	100	55	3.6	0.14
5	6	9	100	55	3.6	0.14
6	7	7	100	65	4.3	0.16
8	7	5.5	100	65	4.3	0.17
10	8	4	100	65	4.3	0.23
12	8	3	100	65	4.3	0.27

Metric

Plate thickness	Tip No.	Pressure kg/cm ²		Consumption NI/hr.			Cutting speed mm/min.
		Oxygen	Fuel gas	Cutting oxygen	Preheat oxygen	Fuel gas	
- 5	(00)			750			- 750
5- 10	0			1100	1710	450	750 - 680
10- 15	1		0.2	2500			680 - 600
15- 30	2			3800			600 - 500
30- 40	3			5400	2470	650	500 - 450
40- 50	4			7300			450 - 400
50- 100	5		0.25	10000	2890	760	400 - 260
100- 150	6			14000	3570	940	260 - 180
150- 250	7		0.3	22000			180 - 100
250- 300	8			35000	3990	1050	100 - 70

106-O

- For LPG gas
- Only for quick tip-loading/unloading torch
- Standard type



Inch

Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/8	00	27	20	20	2.8	0.04
1/4	0	24	30	30	2.8	0.05
3/8	0	22	30	30	2.8	0.06
1/2	1	21	40	40	2.8	0.07
3/4	2	18	45	45	3.6	0.08
1	2	17	45	45	3.6	0.08
1-1/2	3	14	45	45	3.6	0.09
2	4	12.5	45	45	4.3	0.11
2-1/2	5	11	55	55	4.3	0.12
3	5	10	55	55	4.3	0.12
4	6	8	55	55	5.7	0.14
5	6	7	55	55	5.7	0.14
6	7	6	65	65	5.7	0.16
8	7	5	65	65	5.7	0.17
10	8	3	65	65	5.7	0.23
12	8	2	65	65	5.7	0.27

Metric

Plate thickness	Tip No.	Pressure kg/cm ²		Consumption NI/hr.			Cutting speed mm/min.
		Oxygen	Fuel gas	Cutting oxygen	Preheat oxygen	Fuel gas	
- 5	00	1.5		690			- 660
5- 10	0	2.0	0.2	1200	1180	310	660 - 550
10- 15	1	2.5		2100			550 - 490
15- 30	2	3.0		3400			490 - 400
30- 40	3	3.0	0.25	4300	1370	360	400 - 350
40- 50	4	3.5		6500	1860	490	350 - 320
50- 100	5	4.0	0.3	11000			320 - 200
100- 150	6	4.0		15000	3040	800	200 - 150
150- 250	7	4.5	0.4	22000			150 - 80
250- 300	8	4.5		28000	3720	980	80 - 45

106-O5

- For LPG gas
- Only for quick tip-loading/unloading torch
- Divergent high speed type
(Cutting oxygen pressure: 5kg/cm²)



Inch

Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/8	00	29.5	71	20	2.8	0.04
1/4	0	27.5	71	30	2.8	0.04
3/8	0	25	71	30	2.8	0.05
1/2	1	23	71	40	2.8	0.06
3/4	2	20.5	71	45	3.6	0.07
1	2	19.5	71	45	3.6	0.08
1-1/2	3	17	71	45	3.6	0.09
2	4	14	71	45	4.3	0.10
2-1/2	5	12.5	71	55	4.3	0.12
3	5	11.5	71	55	4.3	0.12
4	6	9.5	71	55	5.7	0.14
5	6	8.5	71	55	5.7	0.15
6	7	6.5	71	65	5.7	0.16
8	7	5	71	65	5.7	0.20
10	8	3.5	71	65	5.7	0.21
12	8	2.5	71	65	5.7	0.25

Metric

Plate thickness	Tip No.	Pressure kg/cm ²		Consumption NI/hr.			Cutting speed mm/min.
		Oxygen	Fuel gas	Cutting oxygen	Preheat oxygen	Fuel gas	
- 5	(00)			850			- 700
5- 10	0		0.2	1600	1180	310	700 - 625
10- 15	1			2400			625 - 550
15- 30	2			3600			550 - 475
30- 40	3		0.25	4800	1370	360	475 - 425
40- 50	4			5600	1860	490	425 - 350
50- 100	5		0.3	8800			350 - 250
100- 150	6			13500	3040	800	250 - 175
150- 250	7		0.4	24000			175 - 90
250- 300	8			31000	3720	980	90 - 60

106-07

- For LPG gas
- Only for quick tip-loading/unloading torch
- Divergent high speed type
(Cutting oxygen pressure: 7kg/cm²)

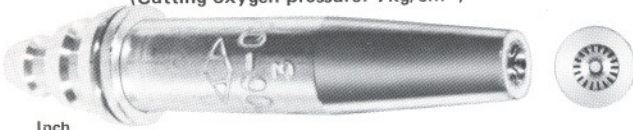


Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/8	00	31.5	100	20	2.8	0.03
1/4	0	29	100	30	2.8	0.04
3/8	0	27	100	30	2.8	0.05
1/2	1	25	100	40	2.8	0.05
3/4	2	22	100	45	3.6	0.06
1	2	20	100	45	3.6	0.07
1-1/2	3	18	100	45	3.6	0.08
2	4	16	100	45	4.3	0.10
2-1/2	5	14	100	55	4.3	0.11
3	5	12.5	100	55	4.3	0.11
4	6	10	100	55	5.7	0.13
5	6	9	100	55	5.7	0.14
6	7	7	100	65	5.7	0.14
8	7	5.5	100	65	5.7	0.18
10	8	4	100	65	5.7	0.20
12	8	3	100	65	5.7	0.24

Plate thickness	Tip No.	Pressure kg/cm ²		Consumption NI/hr.			Cutting speed mm/min.
		Oxygen	Fuel gas	Cutting oxygen	Preheat oxygen	Fuel gas	
- 5	(00)	7.0	0.2	750	1180	310	- 750
5- 10	0			1100			750 - 680
10- 15	1			2500			680 - 600
15- 30	2			3800			600 - 500
30- 40	3			5400			500 - 450
40- 50	4			7300			450 - 400
50- 100	5			10000			400 - 260
100- 150	6			14000			260 - 180
150- 250	7			22000			180 - 100
250- 300	8			35000			100 - 70

107

- For natural gas
- Standard tip

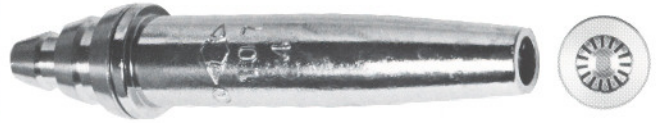


Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/8	00	27	20	20	2.1	0.04
1/4	0	24	30	30	2.1	0.05
3/8	0	22	30	30	2.1	0.06
1/2	1	21	40	40	2.1	0.07
3/4	2	18	45	45	2.1	0.08
1	2	17	45	45	2.1	0.08
1-1/2	3	14	45	45	2.1	0.09
2	4	12.5	45	45	2.1	0.11
2-1/2	5	11	55	55	2.1	0.12
3	5	10	55	55	2.1	0.12
4	6	8	55	55	2.1	0.14
5	6	7	55	55	2.1	0.14
6	7	6	65	65	2.1	0.16
8	7	5	65	65	2.1	0.17
10	8	3	65	65	2.1	0.23
12	8	2	65	65	2.1	0.27

Plate thickness	Tip No.	Pressure kg/cm ²		Consumption NI/hr.			Cutting speed mm/min.	
		Oxygen	Fuel gas	Cutting oxygen	Preheat oxygen	Fuel gas		
- 5	00	0.15	1.5	690	1000	600	- 660	
5- 10	0			2.0			1200	660 - 550
10- 15	1			2.5			2100	550 - 490
15- 30	2			3.0			3400	490 - 400
30- 40	3						4300	400 - 350
40- 50	4			4.0			6500	350 - 320
50- 100	5						11000	320 - 200
100- 150	6			15000			200 - 150	

107 D7

- For natural gas
- Divergent high speed tip
(Cutting oxygen pressure: 7kg/cm²)

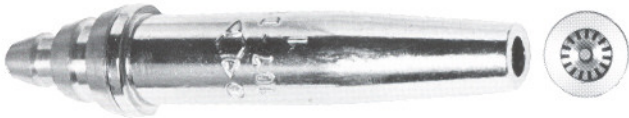


Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/8	00	31.5	100	20	2.1	0.03
1/4	0	29	100	30	2.1	0.04
3/8	0	27	100	30	2.1	0.05
1/2	1	25	100	40	2.1	0.05
3/4	2	22	100	45	2.1	0.06
1	2	20	100	45	2.1	0.07
1-1/2	3	18	100	45	2.1	0.08
2	4	16	100	45	2.1	0.10
2-1/2	5	14	100	55	2.1	0.11
3	5	12.5	100	55	2.1	0.11
4	6	10	100	55	2.1	0.13
5	6	9	100	55	2.1	0.14
6	7	7	100	65	2.1	0.14
8	7	5.5	100	65	2.1	0.18
10	8	4	100	65	2.1	0.20
12	8	3	100	65	2.1	0.24

Plate thickness	Tip No.	Pressure kg/cm ²		Consumption NI/hr.			Cutting speed mm/min.
		Oxygen	Fuel gas	Cutting oxygen	Preheat oxygen	Fuel gas	
5- 10	0	7.0	0.15	1100	1350	800	750 - 680
10- 15	1			2500	680 - 600		
15- 30	2			3800	600 - 500		
30- 40	3			5400	500 - 450		
40- 50	4			7300	450 - 400		
50- 100	5			10000	400 - 260		
100- 150	6			14000	260 - 180		

402ST

- For acetylene
- Only for IK-56, 64, 68

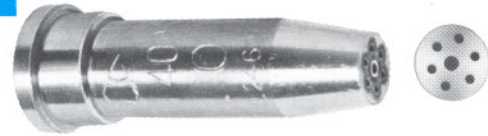


Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/4	0	24	30	30	2.8	0.05
3/8	0	22	30	30	2.8	0.06
1/2	1	21	40	40	2.8	0.07
3/4	2	18	45	45	2.8	0.08
1	2	17	45	45	2.8	0.08
1-1/2	3	14	45	45	2.8	0.09
2	4	12.5	45	45	3.6	0.11
2-1/2	5	11	55	55	4.3	0.12
3	5	10	55	55	4.3	0.12
4	5	8	55	55	4.3	0.14

Plate thickness	Tip No.	Pressure kg/cm ²		Consumption NI/hr.			Cutting speed mm/min.		
		Oxygen	Fuel gas	Cutting oxygen	Preheat oxygen	Fuel gas			
5- 10	0	0.2	2.0	1200	380	340	450 - 500		
10- 15	1			2.5	2100	485	440	400 - 450	
15- 30	2			3.0	3200	550	500	350 - 400	
30- 40	3				4200	500 - 350			
40- 50	4			3.5	0.25	6800	640	580	250 - 300
50- 100	5			4.0	0.3	11000	730	6.60	200 - 250

406NT

- For LPG gas
- Only for IK-56, 64, 68



Inch

Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/4	0	24	30	30	2.8	0.05
3/8	0	22	30	30	2.8	0.06
1/2	1	21	40	40	2.8	0.07
3/4	2	18	45	45	2.8	0.08
1	2	17	45	45	2.8	0.08
1-1/2	3	14	45	45	2.8	0.09
2	4	12.5	45	45	2.8	0.11
2-1/2	5	11	55	55	2.8	0.12
3	5	10	55	55	2.8	0.12
4	5	8	55	55	2.8	0.14

Metric

Plate thickness	Tip No.	Pressure kg/cm ²		Consumption NI/hr.			Cutting speed mm/min.
		Oxygen	Fuel gas	Cutting oxygen	Preheat oxygen	Fuel gas	
5 - 10	0	2.0	0.2	1200	1640	410	450 - 500
10 - 15	1	2.5		2100			400 - 450
15 - 30	2	3.0		3200			350 - 400
30 - 40	3			4200			300 - 350
40 - 50	4	3.5		6800			250 - 300
50 - 100	5	4.5	11000	200 - 250			

502A

- For acetylene
- Only for Skill cut torch (style 100)
- Standard type



Inch

Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/8	0	27	40	40	2.1	0.04
1/4	1	24	40	40	2.8	0.05
3/8	1	22	40	40	2.8	0.06
1/2	2	21	45	45	2.8	0.07
3/4	2	18	45	45	2.8	0.08
1	3	17	55	55	3.6	0.09
1-1/2	3	14	55	55	3.6	0.10
2	3	12.5	55	55	3.6	0.10
2-1/2	4	11	65	65	3.6	0.12
3	4	10	65	65	3.6	0.13
4	4	8	65	65	3.6	0.13

Metric

Plate thickness	Tip No.	Pressure kg/cm ²		Consumption NI/hr.		
		Oxygen	Fuel gas	Cutting oxygen	Preheat oxygen	Fuel gas
- 5	0	2 - 3	0.15	420 - 580	220	200
3 - 15	1					
5 - 20	2	3 - 4	0.2	1300 - 1600	500	450
10 - 50	3	3 - 4.5	0.25	2500 - 3500	660	600
40 - 100	4	4.5 - 6		5200 - 7200		

502L

- For acetylene
- Only for IK-76
- Standard type

Inch

Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/4	1	24	40	40	2.8	0.05
3/8	1	22	40	40	2.8	0.06
1/2	2	21	45	45	2.8	0.07
3/4	2	18	45	45	2.8	0.08
1	3	17	55	55	3.6	0.09
1-1/2	3	14	55	55	3.6	0.10
2	3	12.5	55	55	3.6	0.10

Metric

Plate thickness	Tip No.	Pressure kg/cm ²		Consumption NI/hr.		
		Oxygen	Fuel gas	Cutting oxygen	Preheat oxygen	Fuel gas
3 - 15	1	2 - 3	0.2	600 - 800	255	230
5 - 20	2	3 - 4		1300 - 1600		
10 - 50	3	3 - 4.5	0.25	2500 - 3500	410	370

506A

- For LPG gas
- Only for Skill cut torch (style 100)
- Standard type



Inch

Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/8	0	27	40	40	2.1	0.04
1/4	1	24	40	40	2.8	0.05
3/8	1	22	40	40	2.8	0.06
1/2	2	21	45	45	2.8	0.07
3/4	2	18	45	45	2.8	0.08
1	3	17	55	55	3.6	0.09
1-1/2	3	14	55	55	3.6	0.10
2	3	12.5	55	55	3.6	0.10
2-1/2	4	11	65	65	4.3	0.12
3	4	10	65	65	4.3	0.13
4	4	8	65	65	4.3	0.13

Metric

Plate thickness	Tip No.	Pressure kg/cm ²		Consumption NI/hr.		
		Oxygen	Fuel gas	Cutting oxygen	Preheat oxygen	Fuel gas
- 5	0	2 - 3	0.15	420 - 580	1070	280
3 - 15	1					
5 - 20	2	3 - 4	0.2	1300 - 1600	1370	360
10 - 50	3	3 - 4.5	0.25	2500 - 3500	1600	420
40 - 100	4	4.5 - 6	0.3	5200 - 7200	1750	460

506L

- For LPG gas
- Only for IK-76
- Standard type

Inch

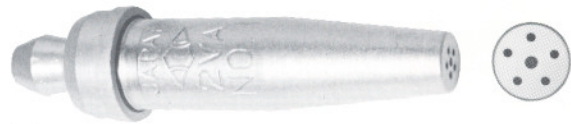
Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/4	1	24	40	40	3.6	0.05
3/8	1	22	40	40	3.6	0.06
1/2	2	21	45	45	3.6	0.07
3/4	2	18	45	35	3.6	0.08
1	3	17	55	55	3.6	0.09
1-1/2	3	14	55	55	3.6	0.10
2	3	12.5	55	55	3.6	0.10

Metric

Plate thickness	Tip No.	Pressure kg/cm ²		Consumption NI/hr.		
		Oxygen	Fuel gas	Cutting oxygen	Preheat oxygen	Fuel gas
3 - 15	1	2 - 3	0.25	600 - 800	1100	290
5 - 20	2	3 - 4				
10 - 50	3	3 - 4.5				

2VA

- For acetylene
- Only for Victor type torch
- Standard type



Inch

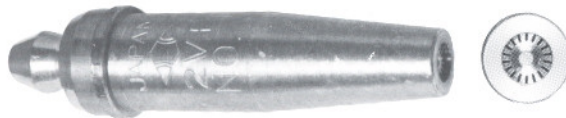
Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/8	00	27	20	20	1.4-3.6	0.04
1/4	0	24	30	30	1.4-3.6	0.05
3/8	0	22	30	30	1.4-3.6	0.06
1/2	1	21	40	40	1.4-3.6	0.07
3/4	2	18	45	45	1.4-3.6	0.08
1	2	17	45	45	1.4-3.6	0.08
1-1/2	3	14	45	45	1.4-3.6	0.09
2	4	12.5	45	45	2.1-4.3	0.11
2-1/2	5	11	55	55	2.1-4.3	0.12
3	5	10	55	55	2.1-4.3	0.12
4	6	8	55	55	2.1-4.3	0.14
5	6	7	55	55	2.1-4.3	0.14
6	7	6	65	65	2.9-5.7	0.16
8	7	5	65	65	2.9-5.7	0.17
10	8	3	65	65	2.9-5.7	0.23
12	8	2	65	65	2.9-5.7	0.27

Metric

Plate thickness	Tip No.	Pressure kg/cm ²		Cutting speed
		Oxygen	Fuel gas	
- 5	00	1.5	0.1 - 0.25	- 660
5 - 10	0	2.0	0.1 - 0.25	660 - 550
10 - 15	1	2.5	0.1 - 0.25	550 - 490
15 - 30	2	3.0	0.1 - 0.25	490 - 400
30 - 40	3	3.0	0.1 - 0.25	400 - 350
40 - 50	4	3.0	0.15 - 0.3	350 - 320
50 - 100	5	4.0	0.15 - 0.3	320 - 200
100 - 150	6	4.0	0.15 - 0.3	200 - 150
150 - 250	7	4.5	0.2 - 0.4	150 - 90
250 - 300	8	4.5	0.2 - 0.4	90 - 60

2VP

- For LPG gas
- Only for Victor type torch
- Standard type



Inch

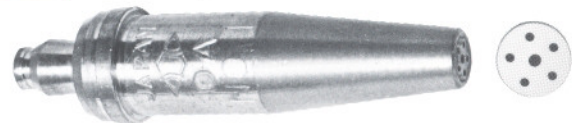
Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/8	00	27	20	20	1.4-3.6	0.04
1/4	0	24	30	30	2.9-3.6	0.05
3/8	0	22	30	30	2.9-3.6	0.06
1/2	1	21	40	40	2.9-3.6	0.07
3/4	2	18	45	45	2.9-3.6	0.08
1	2	17	45	45	2.9-3.6	0.08
1-1/2	3	14	45	45	2.9-3.6	0.09
2	4	12.5	45	45	2.9-5.7	0.11
2-1/2	5	11	55	55	2.9-5.7	0.12
3	5	10	55	55	2.9-5.7	0.12
4	6	8	55	55	5-7.1	0.14
5	6	7	55	55	5-7.1	0.14
6	7	6	65	65	5-7.1	0.16
8	7	5	65	65	5-7.1	0.17
10	8	3	65	65	5-7.1	0.23
12	8	2	65	65	5-7.1	0.27

Metric

Plate thickness	Tip No.	Pressure kg/cm ²		Cutting speed
		Oxygen	Fuel gas	
- 5	00	1.5	0.1 - 0.3	- 660
5 - 10	0	2.0	0.2 - 0.3	660 - 550
10 - 15	1	2.5	0.2 - 0.3	550 - 490
15 - 30	2	3.0	0.2 - 0.3	490 - 400
30 - 40	3	3.0	0.2 - 0.3	400 - 350
40 - 50	4	3.0	0.2 - 0.4	350 - 320
50 - 100	5	4.0	0.2 - 0.4	320 - 200
100 - 150	6	4.0	0.35 - 0.5	200 - 150
150 - 250	7	4.5	0.35 - 0.5	150 - 90
250 - 300	8	4.5	0.35 - 0.5	90 - 80

OA

- For acetylene
- Only for Oxweld type torch
- Standard type



Inch

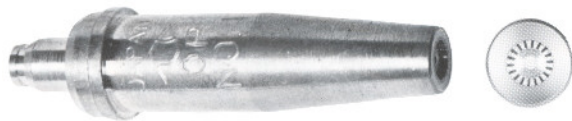
Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/8	00	27	20	20	1.4-3.6	0.04
1/4	0	24	30	30	1.4-3.6	0.05
3/8	0	22	30	30	1.4-3.6	0.06
1/2	1	21	40	40	1.4-3.6	0.07
3/4	2	18	45	45	1.4-3.6	0.08
1	2	17	45	45	1.4-3.6	0.08
1-1/2	3	14	45	45	1.4-3.6	0.09
2	4	12.5	45	45	2.1-4.3	0.11
2-1/2	5	11	55	55	2.1-4.3	0.12
3	5	10	55	55	2.1-4.3	0.12
4	6	8	55	55	2.1-4.3	0.14
5	6	7	55	55	2.1-4.3	0.14
6	7	6	65	65	2.9-5.7	0.16
8	7	5	65	65	2.9-5.7	0.17
10	8	3	65	65	2.9-5.7	0.23
12	8	2	65	65	2.9-5.7	0.27

Metric

Plate thickness	Tip No.	Pressure kg/cm ²		Cutting speed
		Oxygen	Fuel gas	
- 5	00	1.5	0.1 - 0.25	- 660
5 - 10	0	2.0	0.1 - 0.25	660 - 550
10 - 15	1	2.5	0.1 - 0.25	550 - 490
15 - 30	2	3.0	0.1 - 0.25	490 - 400
30 - 40	3	3.0	0.1 - 0.25	400 - 350
40 - 50	4	3.0	0.15 - 0.3	350 - 320
50 - 100	5	4.0	0.15 - 0.3	320 - 200
100 - 150	6	4.0	0.15 - 0.3	200 - 150
150 - 250	7	4.5	0.2 - 0.4	150 - 90
250 - 300	8	4.5	0.2 - 0.4	90 - 60

OP

- For LPG gas
- Only for Oxweld type torch
- Standard type



Inch

Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/8	00	27	20	20	1.4-3.6	0.04
1/4	0	24	30	30	2.9-3.6	0.05
3/8	0	22	30	30	2.9-3.6	0.06
1/2	1	21	40	40	2.9-3.6	0.07
3/4	2	18	45	45	2.9-3.6	0.08
1	2	17	45	45	2.9-3.6	0.08
1-1/2	3	14	45	45	2.9-3.6	0.09
2	4	12.5	45	45	2.9-5.7	0.11
2-1/2	5	11	55	55	2.9-5.7	0.12
3	5	10	55	55	2.9-5.7	0.12
4	6	8	55	55	5-7.1	0.14
5	6	7	55	55	5-7.1	0.14
6	7	6	65	65	5-7.1	0.16
8	7	5	65	65	5-7.1	0.17
10	8	3	65	65	5-7.1	0.23
12	8	2	65	65	5-7.1	0.27

Metric

Plate thickness	Tip No.	Pressure kg/cm ²		Cutting speed
		Oxygen	Fuel gas	
- 5	00	1.5	0.1 - 0.3	- 660
5 - 10	0	2.0	0.2 - 0.3	660 - 550
10 - 15	1	2.5	0.2 - 0.3	550 - 490
15 - 30	2	3.0	0.2 - 0.3	490 - 400
30 - 40	3	3.0	0.2 - 0.3	400 - 350
40 - 50	4	3.0	0.2 - 0.4	350 - 320
50 - 100	5	4.0	0.2 - 0.4	320 - 200
100 - 150	6	4.0	0.35 - 0.5	200 - 150
150 - 250	7	4.5	0.35 - 0.5	150 - 90
250 - 300	8	4.5	0.35 - 0.5	90 - 80

2VA7

- For acetylene
- Only for Victor type torch
- Divergent high speed type (Cutting oxygen pressure: 7kg/cm²)



Inch

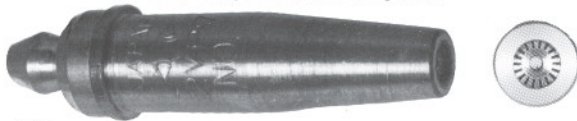
Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/8	00	31.5	100	20	1.4-3.6	0.03
1/4	0	29	100	30	1.4-3.6	0.04
3/8	0	27	100	30	1.4-3.6	0.05
1/2	1	25	100	40	1.4-3.6	0.05
3/4	2	22	100	45	1.4-3.6	0.06
1	2	20	100	45	1.4-3.6	0.07
1-1/2	3	18	100	45	1.4-3.6	0.08
2	4	16	100	45	2.1-4.3	0.10
2-1/2	5	14	100	55	2.1-4.3	0.11
3	5	12.5	100	55	2.1-4.3	0.11
4	6	10	100	55	2.1-4.3	0.13
5	6	9	100	55	2.1-4.3	0.14
6	7	7	100	65	2.9-5.7	0.14
8	7	5.5	100	65	2.9-5.7	0.18
10	8	4	100	65	2.9-5.7	0.20
12	8	3	100	65	2.9-5.7	0.24

Metric

Plate thickness	Tip No.	Pressure kg/cm ²		Cutting speed
		Oxygen	Fuel gas	
- 5	00	7	0.1 - 0.25	- 750
5 - 10	0	7	0.1 - 0.25	750 - 680
10 - 15	1	7	0.1 - 0.25	680 - 600
15 - 30	2	7	0.1 - 0.25	600 - 500
30 - 40	3	7	0.1 - 0.25	500 - 450
40 - 50	4	7	0.15 - 0.3	450 - 400
50 - 100	5	7	0.15 - 0.3	400 - 260
100 - 150	6	7	0.15 - 0.3	260 - 180
150 - 250	7	7	0.2 - 0.4	180 - 110
250 - 300	8	7	0.2 - 0.4	110 - 100

2VP7

- For LPG gas
- Only for Victor type torch
- Divergent high speed type (Cutting oxygen pressure: 7kg/cm²)



Inch

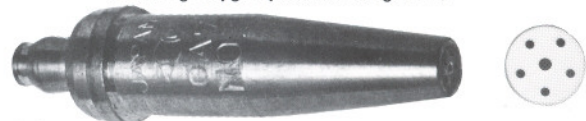
Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/8	00	31.5	100	20	1.4-4.3	0.03
1/4	0	29	100	30	2.9-4.3	0.04
3/8	0	27	100	30	2.9-4.3	0.05
1/2	1	25	100	40	2.9-4.3	0.05
3/4	2	22	100	45	2.9-4.3	0.06
1	2	20	100	45	2.9-4.3	0.07
1-1/2	3	18	100	45	2.9-4.3	0.08
2	4	16	100	45	2.9-5.7	0.10
2-1/2	5	14	100	55	2.9-5.7	0.11
3	5	12.5	100	55	2.9-5.7	0.11
4	6	10	100	55	5-7.1	0.13
5	6	9	100	55	5-7.1	0.14
6	7	7	100	65	5-7.1	0.14
8	7	5.5	100	65	5-7.1	0.18
10	8	4	100	65	5-7.1	0.20
12	8	3	100	65	5-7.1	0.24

Metric

Plate thickness	Tip No.	Pressure kg/cm ²		Cutting speed
		Oxygen	Fuel gas	
- 5	00	7	0.1 - 0.25	- 750
5 - 10	0	7	0.1 - 0.25	750 - 680
10 - 15	1	7	0.1 - 0.25	680 - 600
15 - 30	2	7	0.1 - 0.25	600 - 500
30 - 40	3	7	0.1 - 0.25	500 - 450
40 - 50	4	7	0.15 - 0.3	450 - 400
50 - 100	5	7	0.15 - 0.3	400 - 260
100 - 150	6	7	0.15 - 0.3	260 - 180
150 - 250	7	7	0.2 - 0.4	180 - 110
250 - 300	8	7	0.15 - 0.3	110 - 100

OA7

- For acetylene
- Only for Oxweld type torch
- Divergent high speed type (Cutting oxygen pressure: 7kg/cm²)



Inch

Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/8	00	31.5	100	20	1.4-3.6	0.03
1/4	0	29	100	30	1.4-3.6	0.04
3/8	0	27	100	30	1.4-3.6	0.05
1/2	1	25	100	40	1.4-3.6	0.05
3/4	2	22	100	45	1.4-3.6	0.06
1	2	20	100	45	1.4-3.6	0.07
1-1/2	3	18	100	45	1.4-3.6	0.08
2	4	16	100	45	2.1-4.3	0.10
2-1/2	5	14	100	55	2.1-4.3	0.11
3	5	12.5	100	55	2.1-4.3	0.11
4	6	10	100	55	2.1-4.3	0.13
5	6	9	100	55	2.1-4.3	0.14
6	7	7	100	65	2.9-5.7	0.14
8	7	5.5	100	65	2.9-5.7	0.18
10	8	4	100	65	2.9-5.7	0.20
12	8	3	100	65	2.9-5.7	0.24

Metric

Plate thickness	Tip No.	Pressure kg/cm ²		Cutting speed
		Oxygen	Fuel gas	
- 5	00	7	0.1 - 0.25	- 750
5 - 10	0	7	0.1 - 0.25	750 - 680
10 - 15	1	7	0.1 - 0.25	680 - 600
15 - 30	2	7	0.1 - 0.25	600 - 500
30 - 40	3	7	0.1 - 0.25	500 - 450
40 - 50	4	7	0.15 - 0.3	450 - 400
50 - 100	5	7	0.15 - 0.3	400 - 260
100 - 150	6	7	0.15 - 0.3	260 - 180
150 - 250	7	7	0.2 - 0.4	180 - 110
250 - 300	8	7	0.2 - 0.4	110 - 100

OP7

- For LPG gas
- Only for Oxyweld type torch
- Divergent high speed type
(Cutting oxygen pressure: 7kg/cm²)



Inch

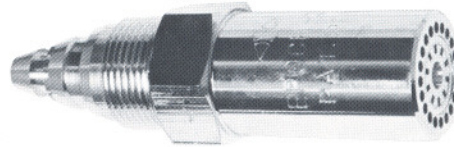
Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat*		
1/8	00	31.5	100	20	1.4-4.3	0.03
1/4	0	29	100	30	2.9-4.3	0.04
3/8	0	27	100	30	2.9-4.3	0.05
1/2	1	25	100	40	2.9-4.3	0.05
3/4	2	22	100	45	2.9-4.3	0.06
1	2	20	100	45	2.9-4.3	0.07
1-1/2	3	18	100	45	2.9-4.3	0.08
2	4	16	100	45	2.9-5.7	0.10
2-1/2	5	14	100	55	2.9-5.7	0.11
3	5	12.5	100	55	2.9-5.7	0.11
4	6	10	100	55	5-7.1	0.13
5	6	9	100	55	5-7.1	0.14
6	7	7	100	65	5-7.1	0.14
8	7	5.5	100	65	5-7.1	0.18
10	8	4	100	65	5-7.1	0.20
12	8	3	100	65	5-7.1	0.24

Metric

Plate thickness	Tip No.	Pressure kg/cm ²		Cutting speed
		Oxygen	Fuel gas	
5	00	7	0.1 - 0.25	750
5 - 10	0	7	0.1 - 0.25	750 - 680
10 - 15	1	7	0.1 - 0.25	680 - 600
15 - 30	2	7	0.1 - 0.25	600 - 500
30 - 40	3	7	0.1 - 0.25	500 - 450
40 - 50	4	7	0.15 - 0.3	450 - 400
50 - 100	5	7	0.15 - 0.3	400 - 260
100 - 150	6	7	0.15 - 0.3	260 - 180
150 - 250	7	7	0.2 - 0.4	180 - 110
250 - 300	8	7	0.15 - 0.3	110 - 100

EPOCH -300

- For LPG gas
- For thick plate cutting
- Out mixing type tip (Only for Epoch torch)



Inch

Plate Thickness	Tip No.	Cutting Speed In/Min.	Oxygen P.S.I.G		Fuel P.S.I.G	Kerf Width
			Cutting	PR-Heat		
4	300	10	60	7	4.3	0.23
8	300	6.5	65	7	4.3	0.31
12	300	5	70	10	7.1	0.39

Metric

Plate thickness	Tip No.	Pressure kg/cm ²			Consumption NI/hr.			Cutting speed mm/min.
		Oxy-gen	Preheat oxygen	Fuel gas	Cutting oxygen	Preheat oxygen	Fuel gas	
100	EPOCH-300	4	0.5	0.3	27	3.3	2.3	250-290
200		4.5	0.6	0.4	30	4.0	2.7	170-190
300		5	0.6	0.4	32	4.0	2.7	130-150
			0.7	0.5		4.8	3.1	



Total system supplier of welding and cutting

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