

# KOIKE CUTTING NOZZLES

## The Trademark for High Quality Cutting

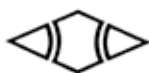
### Features and Benefits

- **Sharp, high quality cuts**
- **Small kerf**
- **Limited upper edge melt**
- **Limited upper edge slag**
- **Limited under slag**
- **Steady and safe cutting operation**
- **Cutting with small gas consumption**
- **Variety of selections**
  - \* Standard nozzle
  - \* Divergent high-speed nozzle
  - \* Out-mixing heavy duty nozzle
  - \* Speciality nozzles
- **Excellent quality management**

All KOIKE 100 Series cutting tips are designed to mix the fuel and the oxygen used for preheating inside the cutting-tip. This is recognized as one of the safest methods. The KOIKE D7 cutting tips are one of the most technically advanced cutting tips available, providing safety and accuracy while saving money in time and gas costs. Our high speed D7 Series cutting tips with the divergent tip increases cutting speed up to 28% over standard tips and gas consumption is reduced to 26%. A stainless steel liner helps them to last up to 5 times longer.

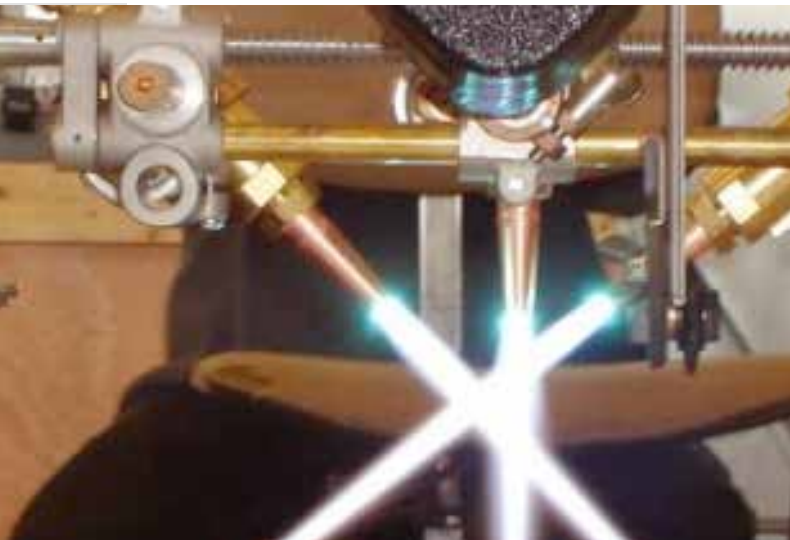


*Strong cutting oxygen stream from a divergent nozzle: Photo taken from KOIKE in-house performance test. Nozzle tip at 275 mm above the plate, nozzle 106-D7#0*



### The trademark of quality

All genuine KOIKE cutting nozzles are marked with KOIKE Japan logo.



## Designed for High Quality Cutting

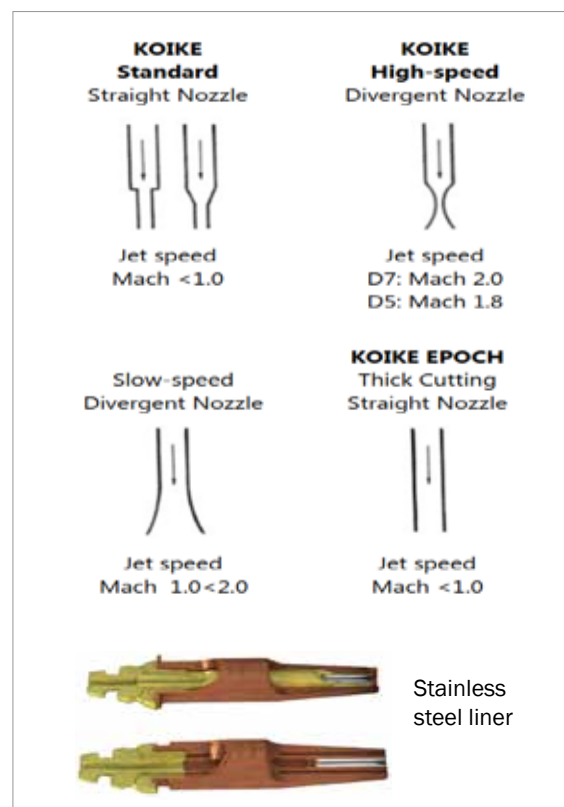
### Commitment to research, design, manufacturing and inspection

- **Design**  
Each KOIKE cutting nozzle is designed for economic cutting and to provide the highest cutting accuracy.
- **Quality**  
Made in Japan at KOIKE's top level production facility and quality management system, the KOIKE nozzles ensure each cutting nozzle to be of the KOIKE quality.
- **Safety**  
All 100 series cutting nozzles are designed to help prevent damaging flashbacks and backfires into the torch.

## KOIKE Divergent Nozzle

- **State-of-the-Art design**  
The cutting oxygen outlet of KOIKE High-speed nozzles forms a divergent shape, designed through a high technical calculation to accelerate cutting oxygen flow up to 2 times faster the speed of sound.
- **Productivity**  
Cutting speed is increased by up to 28% over standard nozzles.
- **Cost efficiency**  
Due to faster cutting speeds, gas consumption is reduced to 26%. (Compared to non-divergent nozzle).
- **Durability**  
Stainless steel insert at the nozzle tip improves life time of the nozzle and ensures long lasting performance.
- **100% ignition tested**  
All divergent nozzles are manually tested prior to packaging, ensuring every nozzle to perform as designed. Carbon adherence may remain on a new nozzle, but it is the sign of our quality.

## Designed to perform



## 102-HC



### Standard nozzle

Acetylene

Stock #	Thickness (mm)	Tip #	Pressure (bar)		Consumption (NI/h)			Cutting speed (mm/min)
			Oxygen	Fuel Gas	Cutting O <sup>2</sup>	Preheat O <sup>2</sup>	Fuel gas	
80011	<5	00	1.5	0.2	690	410	370	>660
80012	5-10	0	2.0	0.2	1200	410	370	660-550
80013	10-15	1	2.5	0.2	2100	480	430	550-490
80014	15-30	2	3.0	0.2	3400	480	430	490-400
80015	30-40	3	3.0	0.2	4300	480	430	400-350
80016	40-50	4	3.5	0.3	6500	550	500	350-320
80017	50-100	5	4.0	0.3	11000	690	630	320-200
80018	100-150	6	4.0	0.4	15000	770	700	200-150
80019	150-250	7	4.5	0.4	22000	1060	960	150-80
80051	250-300	8	4.5	0.4	28000	1060	960	80-45

## 102-D5



### High-speed nozzle (5 bar)

Acetylene

Stock #	Thickness (mm)	Tip #	Pressure (bar)		Consumption (NI/h)			Cutting speed (mm/min)
			Oxygen	Fuel Gas	Cutting O <sup>2</sup>	Preheat O <sup>2</sup>	Fuel gas	
80201	<5	00	5.0	0.2	850	520	470	>700
80202	5-10	0	5.0	0.2	1600	520	470	700-625
80203	10-15	1	5.0	0.2	2400	600	550	625-550
80204	15-30	2	5.0	0.2	3600	600	550	550-475
80205	30-40	3	5.0	0.2	4800	600	550	475-425
80206	40-50	4	5.0	0.2	5600	750	680	425-350
80207	50-100	5	5.0	0.3	8800	860	780	350-250
80208	100-150	6	5.0	0.3	13500	950	860	250-175
80209	150-250	7	5.0	0.3	24000	1330	1210	175-90
80210	250-300	8	5.0	0.4	31000	1600	1450	90-600

## 102-D7



### High-speed nozzle (7 bar)

Acetylene

Stock #	Thickness (mm)	Tip #	Pressure (bar)		Consumption (NI/h)			Cutting speed (mm/min)
			Oxygen	Fuel Gas	Cutting O <sup>2</sup>	Preheat O <sup>2</sup>	Fuel gas	
80221	<5	00	7.0	0.2	750	520	470	>750
80222	5-10	0	7.0	0.2	1100	520	470	750-680
80223	10-15	1	7.0	0.2	2500	600	550	680-600
80224	15-30	2	7.0	0.2	3800	600	550	600-500
80225	30-40	3	7.0	0.2	5400	600	550	500-450
80226	40-50	4	7.0	0.2	7300	750	680	450-400
80227	50-100	5	7.0	0.3	10000	860	780	400-260
80228	100-150	6	7.0	0.3	14000	950	860	260-180
80229	150-250	7	7.0	0.3	22000	1330	1210	180-100
80230	250-300	8	7.0	0.4	35000	1600	1450	100-70

# Cutting nozzles

## 103-D7



### High-speed nozzle (7 bar)

### Ethylene

Stock #	Thickness (mm)	Tip #	Pressure (bar)		Consumption (NI/h)			Cutting speed (mm/min)
			Oxygen	Fuel Gas	Cutting O <sup>2</sup>	Preheat O <sup>2</sup>	Fuel gas	
80179	5	00	7.0	0.2	750	800	460	>750
80180	5-10	0	7.0	0.2	1100	800	460	750-680
80181	10-15	1	7.0	0.2	2500	800	460	680-600
80182	15-30	2	7.0	0.25	3800	900	500	600-500
80183	30-40	3	7.0	0.25	5400	900	500	500-450
80184	40-50	4	7.0	0.35	7300	1200	660	450-400
80185	50-100	5	7.0	0.35	10000	1200	660	400-260
80186	100-150	6	7.0	0.35	14000	2200	1280	260-180
80187	150-250	7	7.0	0.35	22000	2200	1280	180-100
80188	250-300	8	7.0	0.35	35000	2200	1280	100-70

## 107



### Standard nozzle

### Natural gas

Stock #	Thickness (mm)	Tip #	Pressure (bar)		Consumption (NI/h)			Cutting speed (mm/min)
			Oxygen	Fuel Gas	Cutting O <sup>2</sup>	Preheat O <sup>2</sup>	Fuel gas	
80061	5	00	1.5	0.15	690	1000	600	>660
80062	5-10	0	2.0	0.15	1200	1000	600	660-550
80063	10-15	1	2.5	0.15	2100	1200	700	550-490
80064	15-30	2	3.0	0.15	3400	1200	700	490-400
80065	30-40	3	3.0	0.15	4300	1350	800	400-350
80066	40-50	4	3.5	0.15	6500	1350	800	350-320
80067	50-100	5	4.0	0.15	11000	1700	1000	320-200
80068	100-150	6	4.0	0.15	15000	1700	1000	200-150

## 107-D7



### High-speed nozzle (7 bar)

### Natural gas

Stock #	Thickness (mm)	Tip #	Pressure (bar)		Consumption (NI/h)			Cutting speed (mm/min)
			Oxygen	Fuel Gas	Cutting O <sup>2</sup>	Preheat O <sup>2</sup>	Fuel gas	
80282	5-10	0	7.0	0.15	1100	1350	800	750-680
80283	10-15	1	7.0	0.15	2500	1500	900	680-600
80284	15-30	2	7.0	0.15	3800	1500	900	600-500
80285	30-40	3	7.0	0.15	5400	1700	1000	500-450
80286	40-50	4	7.0	0.15	7300	1700	1000	450-400
80287	50-100	5	7.0	0.15	10000	1850	1100	400-260
80288	100-150	6	7.0	0.2	14000	2200	1300	260-180

## 106-HC



### Standard nozzle

Propane

Stock #	Thickness (mm)	Tip #	Pressure (bar)		Consumption (NI/h)			Cutting speed (mm/min)
			Oxygen	Fuel Gas	Cutting O <sup>2</sup>	Preheat O <sup>2</sup>	Fuel gas	
80041	5	00	1.5	0.2	690	1180	310	>660
80042	5-10	0	2.0	0.2	1200	1180	310	660-550
80043	10-15	1	2.5	0.2	2100	1180	310	550-490
80044	15-30	2	3.0	0.25	3400	1370	360	490-400
80045	30-40	3	3.0	0.25	4300	1370	360	400-350
80046	40-50	4	3.5	0.3	6500	1860	490	350-320
80047	50-100	5	4.0	0.3	11000	1860	490	320-200
80048	100-150	6	4.0	0.3	15000	3040	800	200-150
80049	150-250	7	4.5	0.4	22000	3720	980	150-80
80050	250-300	8	4.5	0.4	28000	3720	980	80-45

## 106-D5



### High-speed nozzle

Propane

Stock #	Thickness (mm)	Tip #	Pressure (bar)		Consumption (NI/h)			Cutting speed (mm/min)
			Oxygen	Fuel Gas	Cutting O <sup>2</sup>	Preheat O <sup>2</sup>	Fuel gas	
80191	<5	00	5.0	0.2	850	1180	310	>700
80192	5-10	0	5.0	0.2	1600	1180	310	700-625
80193	10-15	1	5.0	0.2	2400	1180	310	625-550
80194	15-30	2	5.0	0.25	3600	1370	360	550-475
80195	30-40	3	5.0	0.25	4800	1370	360	475-425
80196	40-50	4	5.0	0.3	5600	1860	490	425-350
80197	50-100	5	5.0	0.3	8800	1860	490	350-250
80198	100-150	6	5.0	0.3	13500	3040	800	250-175
80199	150-250	7	5.0	0.4	24000	3720	980	175-90
80200	250-300	8	5.0	0.4	31000	3720	980	90-60

## 106-D7



### High-speed nozzle

Propane

Stock #	Thickness (mm)	Tip #	Pressure (bar)		Consumption (NI/h)			Cutting speed (mm/min)
			Oxygen	Fuel Gas	Cutting O <sup>2</sup>	Preheat O <sup>2</sup>	Fuel gas	
80241	<5	00	7.0	0.2	750	1180	310	>750
80242	5-10	0	7.0	0.2	1100	1180	310	750-680
80243	10-15	1	7.0	0.2	2500	1180	310	680-600
80244	15-30	2	7.0	0.25	3800	1370	360	600-500
80245	30-40	3	7.0	0.25	5400	1370	360	500-450
80246	40-50	4	7.0	0.3	7300	1860	490	450-400
80247	50-100	5	7.0	0.3	10000	1860	490	400-260
80248	100-150	6	7.0	0.3	14000	3040	800	260-180
80249	150-250	7	7.0	0.4	22000	3720	980	180-100
80250	250-300	8	7.0	0.4	35000	3720	980	100-70

# Cutting nozzles

## 106-M7



### High-speed heavy preheat nozzle

Propane

Stock #	Thickness (mm)	Tip #	Pressure (bar)		Consumption (NI/h)			Cutting speed (mm/min)
			Oxygen	Fuel Gas	Cutting O <sup>2</sup>	Preheat O <sup>2</sup>	Fuel gas	
80151	5	00	7.0	0.2	750	1710	450	>750
80152	5-10	0	7.0	0.2	1100	1710	450	750-680
80153	10-15	1	7.0	0.2	2500	1710	450	680-600
80154	15-30	2	7.0	0.2	3800	2470	650	600-500
80155	30-40	3	7.0	0.2	5400	2470	650	500-450
80156	40-50	4	7.0	0.2	7300	2470	650	450-400
80157	50-100	5	7.0	0.25	10000	2890	760	400-260
80158	100-150	6	7.0	0.25	14000	3570	940	260-180
80159	150-250	7	7.0	0.3	22000	3990	1050	180-100
80160	250-300	8	7.0	0.3	35000	3990	1050	100-70

## EPOCH-300



### Thick plate cutting nozzle

Propane

Stock #	Thick- ness (mm)	Pressure (bar)			Consumption (NI/h)			Cutting speed mm/min	Kerf (mm)
		Cuttung O <sup>2</sup>	Preheat O <sup>2</sup>	Fuel Gas	Cutting O <sup>2</sup>	Preheat O <sup>2</sup>	Fuel gas		
80397	100	4	0.5-0.6	0.3-0.4	27	3.3-4.0	2.3-2.7	250-290	5.5-7.0
	200	4.5	0.5-0.6	0.3-0.4	30	3.3-4.0	2.3-2.7	170-190	6.0-8.0
	300	5	0.6-0.7	0.4-0.5	32	4.0-4.8	2.7-3.1	130-150	7.0-9.0

## EPOCH-600



### Thick plate cutting nozzle

Propane

Stock #	Thick- ness (mm)	Pressure (bar)			Consumption (NI/h)			Cutting speed mm/min	Kerf (mm)
		Cuttung O <sup>2</sup>	Preheat O <sup>2</sup>	Fuel Gas	Cutting O <sup>2</sup>	Preheat O <sup>2</sup>	Fuel gas		
80398	300	5	0.6-0.7	0.4-0.5	60	4.0-4.8	2.7-3.1	130-150	8.0-12.0
	400	6	0.7-1.0	0.5-0.6	70	4.8-7.0	3.1-3.4	80-90	10.0-13.0
	500	7	0.7-1.0	0.5-0.6	80	4.8-7.0	3.1-3.4	60-70	11.0-14.0
	600	10	0.7-1.0	0.5-0.6	110	4.8-7.0	3.1-3.4	50-60	12.0-15.0

# CNC cutting machines



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