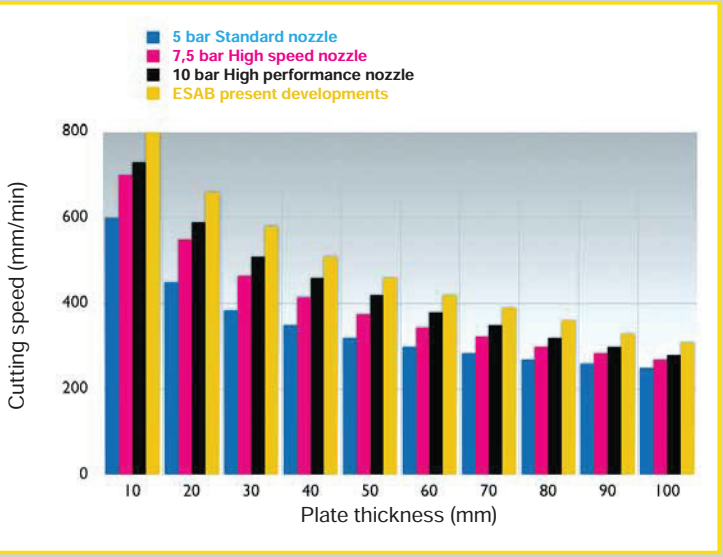
Machine cutting nozzles



Standard-nozzles
5 bar Type
IAA 250 K
IPA 250 K
GAA 300 L

High speed nozzles
7,5 bar Type
IAD 300 L
IPB 300 L
GPB 300 L
GYB 300 L

High performance nozzles 10 bar Type
IAC 300 L
GAC 100 L
IPD 300 L

ESAB present developments

Today's, labour costs and hourly rates for machines genarate the majority of the costs for mechanised cutting.

A higher cutting speed enables to reduce the major costs and makes cutting once more efficient.

ESAB offers a range in 3 performance classes, which allow an individual solution of the cutting task.

Only ESAB genuine nozzles assure the demands on cut quality, reliability and mostly safety of the complete cutting system.

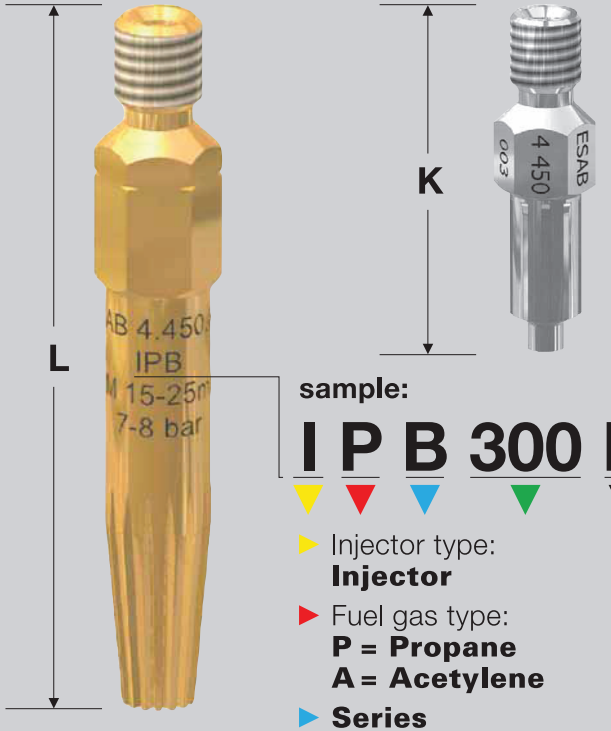
GENUINE ESAB CUTTING NOZZLES

ESAB

ESAB naming of nozzles EN ISO 5172

Long version

Short version



sample:

I P B 300 L

- Injector type: **Injector**
- Fuel gas type: **P = Propane** **A = Acetylene**
- **Series**
- **Max. cutting range**
- Long: **L = Long version** **K = Short version**

Standard nozzle IAA 250 K for Injector cutting torches – Acetylene

IAA 250 K is a two piece cutting nozzle and operates with with an convergent- divergent cutting channel for cutting ox-pressures between 4-7,5 bar.

The ring shaped preheating flame profile wraps totally the cutting oxygen jet for equal preheating.

Application:

- straight cutting and contour cutting 3-250 mm in acc. to EN ISO 9013
- hole piercing up to 80 mm
- Fits into torch series, *COOLJET*-BIE and BID

Customer benefits:

- good value standard system
- chrome plated for longer service life
- easy and safe to handle

Cutting data:

- Cutting and consumption table 0.300.038

Cutting range	Art. No. Cutting nozzle	Art. No. Heating nozzle
2 - 4 mm	0004450000	0004450500
4 - 10 mm	0004450001	
10 - 20 mm	0004450002	0004450501
20 - 40 mm	0004450003	
40 - 75 mm	0004450004	
75 - 125 mm	0004450005	
125 - 200 mm	0004450006	0004450502
200 - 250 mm	0004450007	

High speed nozzle IAD 300 L for Injector torches – Acetylene

The IAD 300 L provide a higher cutting speed and uses the high performing properties of acetylene gases.The cutting nozzle operates with an expansion cutting oxygen channel for pressures between 6,5 and 8,5 bar.

Especially the nozzle size 7-15 mm produces excellent cuts free from slag, even with oversized nozzle to plate distances.

Application:

- straight cutting and contour cutting 3-300 mm in acc. to EN ISO 9013
- Hole piercing up 150 mm
- Fits into torch series *COOLJET*-BIE, BID and *MULTIJET*-BIF

Customer benefits:

- up to 15% higher cutting speed compared to standard nozzles
- No additional adaptation required to the oxygen supply
- chrome plated for longer service life
- insensitive against nozzle to plate variations

Cutting data:

- Cutting and consumption table 0.300.053 for BIE und BID
- 0.300.055 for *MULTIJET*-BIF

Cutting range	Art. No. Cutting nozzle	Art. No. Cutting nozzle
3 - 6 mm	0004450290	0004450590
7 - 15 mm	0004450291	
15 - 25 mm	0004450292	
25 - 40 mm	0004450293	
40 - 60 mm	0004450294	
60 - 100 mm	0004450295	
100 - 150 mm	0004450296	
150 - 240 mm	0004450297	0004450591
240 - 300 mm	0004450298	

High performance nozzle IAC 300 L for Injector torches – Acetylene

The IAC 300 L provides a super high cutting speed and makes cutting more economical. IAC operates with an expansion cutting oxygen channel (Laval) for oxygen pressures between 8,5 and 11 bar. Together with acetylene shortest preheating times will be ensured.

In addition IAC shows excellent hole piercing performance and makes here with cutting much more efficient.
The use of this nozzle presume an oxygen supply pressure of min.11 bar at torch inlet.

Application:

- Straight cutting and contour cutting 3-300 mm in acc. to EN ISO 9013
- Hole piercing up to 150mm
- Fits into torch series *COOLJET*-BIE, BID and *MULTIJET*-BIF

Customer benefits:

- Up to 35% higher cutting speed compared to standard nozzles
- Short preheating time
- Excellent hole piercing properties, also above 150mm
- Chrome plated for a longer service life
- Premium cut quality at high cutting speeds
- Together with *COOLJET* and *MULTIJET* highest cutting economy will be achieved

Cutting data:

- Cutting and consumption table 0.300.047 for *COOLJET*-BIE und BID
- Cutting and consumption table 0.300.054 for *MULTIJET*-BIF

Cutting range	Art. No. Cutting nozzle	Art. No. Heating nozzle
3 - 6 mm	0004450220	
7 - 15 mm	0004450221	
10 - 25 mm	0004450222	0004450526
25 - 50 mm	0004450223	or
50 - 75 mm	0004450224	0004450594
60 - 100 mm	0004450225	(Heating nozzle IAC-S)
100 - 150 mm	0004450226	
150 - 240 mm	0004450297	0004450591 or
240 - 300 mm	0004450298	0004450595 (Heating nozzle IAC-S)

Standard nozzle for Injector torches

IPA 250 K for Propane and mixed fuel gases · **IMA 250 K for** Natural gas

IPA 250 K is two piece cutting nozzle and operates with a convergent - divergent channel for cutting ox-pressures between 4-7,5 bar.

IMA systems consists of the same inner nozzle. The external nozzle is designed with a special flame stabilisation for the use of natural gas.

For mixed fuel gases an external nozzle with lower flame stabilisation than for propane will be used.

Application:

- Straight cutting and contour cutting up to 3-250mm in acc.to EN ISO 9013
- Hole piercing up to 125 mm
- Fits into torch series, *COOLJET*-BIE and BID

Customer benefits:

- Good value standard system
- Easy and safe to handle
- Outer nozzle chrome plated

Cutting data:

- Cutting and consumption table 0.300.039 Propane
- Cutting and consumption table 0.300.040 Natural gas

Cutting range	Art. No. Cutting nozzle	Art. No. Heating nozzle
2 - 4 mm	0004450020	
4 - 10 mm	0004450021	0004450521 (propane)
10 - 20 mm	0004450022	0004800269 (mixed fuel gas)
20 - 40 mm	0004450023	0004450561 (natural gas)
40 - 75 mm	0004450024	
75 - 125 mm	0004450025	
125 - 200 mm	0004450026	0004450522 (propane)
200 - 250 mm	0004450027	0004800279 (mixed fuel gas)
		0004450562 (natural gas)