

Machine Cutting Equipment

Torches and Nozzles
for High Performance

EDITION 9/2007

Machine Cutting Equipment

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1. Machine Cutting Torch BIR+

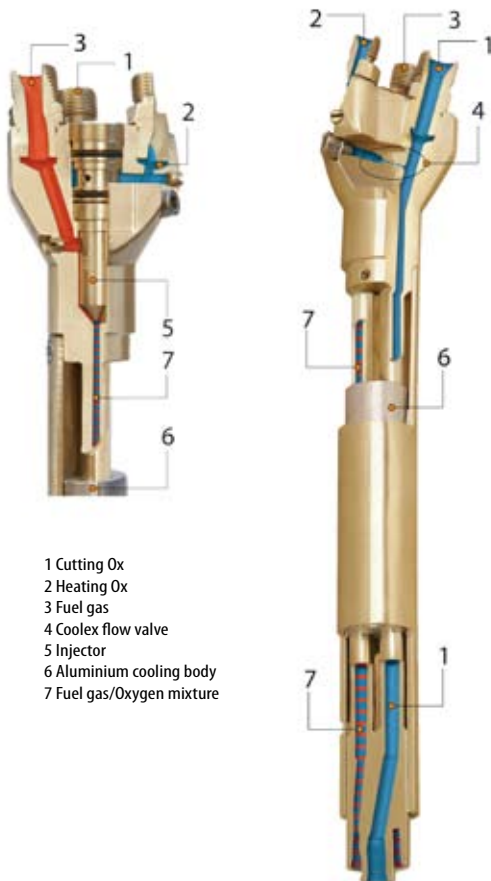
Machine Cutting Torch BIR+ - Injector type



Suitable for use with cutting nozzle types (AC, A-SD, A-HD 10) for Acetylene and (PUZ 89, P-SD, P-HD 10) for Propane, natural gas and mixed fuel gases.

Machine cutting torches are provided with an Oxygen cool flow valve (GCE patent). This effects a higher nozzle service life by an efficient cooling of the cutting system while preheating the material to combustion temperature.

	Length/Dia (mm)	Gas	Connection	incl.
14 055 250	110/30	A	G3/8", G3/8"LH, G1/4"	
14 055 239	110/32	A	G3/8", G3/8"LH, G1/4"	
14 055 235	220/30	A	G3/8", G3/8"LH, G1/4"	
14 055 218	220/32	A	G3/8", G3/8"LH, G1/4"	
14 055 170	220/32	A	2xUNF 9/16", 1xUNF 9/16"LH	BV12
14 055 160	220/32	A	2xUNF 9/16", 1xUNF 9/16"LH	BV12 + valves
14 055 237	320/30	A	G3/8", G3/8"LH, G1/4"	
14 055 241	320/32	A	G3/8", G3/8"LH, G1/4"	
14 055 233	320/34	A	G3/8", G3/8"LH, G1/4"	
14 055 243	415/34	A	G3/8", G3/8"LH, G1/4"	
14 055 217	220/32	F	G3/8", G3/8"LH, G1/4"	
14 055 245	85/32	PM	G3/8", G3/8"LH, G1/4"	
14 055 242	110/32	PM	G3/8", G3/8"LH, G1/4"	
14 055 236	220/30	PM	G3/8", G3/8"LH, G1/4"	
14 055 219	220/32	PM	G3/8", G3/8"LH, G1/4"	
14 055 161	220/32	PM	2xUNF 9/16", 1xUNF 9/16"LH	BV12 + valves
14 055 168	220/35	PM	2xUNF 9/16", 1xUNF 9/16"LH	BV12 + valves
14 055 238	320/30	PM	G3/8", G3/8"LH, G1/4"	
14 055 240	320/32	PM	G3/8", G3/8"LH, G1/4"	
14 055 234	320/34	PM	G3/8", G3/8"LH, G1/4"	



Features Machine Cutting Torch BIR+

Integrated Cool flow valve

- The BIR+ contains a cool flow valve which provides a small amount of Oxygen during preheating the basic material. This small Oxygen flow is streaming through the cutting Oxygen channel to cool down the complete torch system and prevents the reverse flow of hot gases in to the cutting nozzle. The nozzle will be protected against early contamination.

- Less nozzle consumption
- Lower system temperature
- Max. 40 °C at mixing system
- Constant flow channels
- Constant gas flows

Safety Injector

A safety injector covered in a stable brass body is the basis for a safe function. Any overheating will be transported away from the injector which protects the torch against sustained backfire.

Downstream of the injector an aluminium cooling unit completes the cooling function of the BIR torch which guarantees high operation safety. Sustained backfire is practically impossible, also during extremely high load.

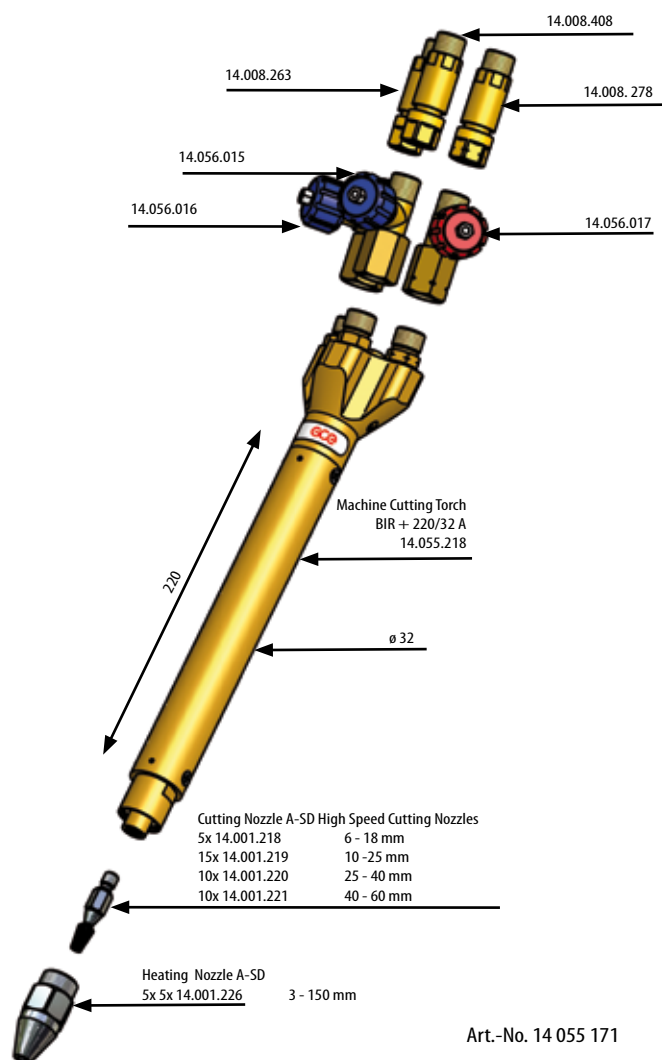
- High operation safety while hole piercing
- High service life of torch + nozzle
- High economy
- Less maintenance

Conversion kits for BIR+

These kits can be used for machine conversions to BIR+ torches. Each set includes 60 parts and ensures quick conversion and restart of manufacturing process. A certain amount of nozzles, valves and safety devices in the set guarantees sufficient long term cutting work, until ordering the next wear parts.

	Type	Gas	Shaft-Ø	Nozzle type
14 055 171	MA	Acetylene	32 mm	A-SD
14 076 825	MA HD	Acetylene	32 mm	A-HD10
14 055 172	MP	Propane/nat. gas/mixed fuel gas	32 mm	P-SD
14 055 175	MP HD	Propane/mixed fuel gas	32 mm	PY-HD10
14 055 173	ZA	Acetylene	34 mm	A-SD
14 055 176	ZA HD	Acetylene	34 mm	A-HD10
14 055 174	ZP	Propane/nat. gas/mixed fuel gas	34 mm	P-SD
14 055 177	ZP HD	Propane/mixed fuel gas	34 mm	PY-HD10

MA and MP type kits are suitable for conversion of machines with torch clamp diameter 32 mm, except ESAB cutting machines. ZA and ZP type kits are suitable for use with torch clamp diameter 34 mm with and without rack SA and SP could be used together with burner clamps diameter 32 mm including rack. Other kits on request.



Twin tip holder



Max. cutting thickness 75 mm

14 055 509 Twin tip holder BIR + for Acetylene, Propane, nat. gas

Cutting Nozzles for BIR+

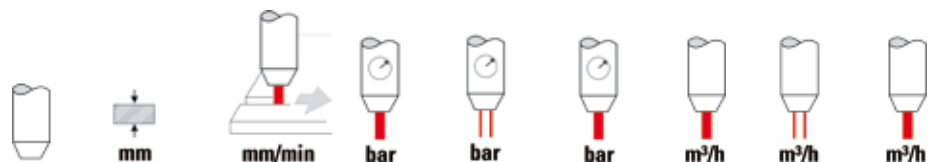
Cutting nozzles AC - Acetylene

Standard cutting nozzle for application on cutting machines and on simple cutting devices. Chrome plated cutting nozzle and heating nozzle. Minimal order quantity of cutting nozzles: 5 pieces, heating nozzles 1 piece.

Cutting nozzle



heating nozzle



			Cutting ox bar	Heating ox bar	Acet. bar	Cutting ox m ³ /h	Heating ox m ³ /h	Acet. m ³ /h
14 001 010	3 – 10	600 – 730	2,0 – 3,0	2	0,5	1,3 – 1,7	0,4	0,3
14 001 011	10 – 25	410 – 620	4,5 – 5,0	2,5	0,5	2,3 – 2,8	0,5	0,35
14 001 012	25 – 40	340 – 410	4,0 – 5,0	2,5	0,5	2,3 – 2,8	0,5	0,35
14 001 013	40 – 60	310 – 340	4,0 – 5,0	2,5	0,5	4,1 – 5,1	0,5	0,35
14 001 014	60 – 100	250 – 320	5,0 – 6,0	3	0,5	8,1 – 9,5	0,5	0,4
14 001 015	100 – 200	210 – 270	6,5 – 7,5	3,5	0,5	12,0 – 13,0	0,6	0,5
14 001 016	200 – 300	110 – 150	6,5 – 7,5	6,5 – 7,5	0,5	28,5 – 32,5	1,1	0,8
14 001 020	3 – 100	Heating nozzle						
14 001 021	100 – 300	Heating nozzle						

Machine cutting nozzle for cuts of quality level 1 in according to EN ISO 9013. It is possible to reach maximal cutting speed by set-up cutting parameters above (measured at the torch inlet) and by using of clean metal sheet surface, quality cutting machine, undamaged cutting nozzle and oxygen with purity 99,5% or better.

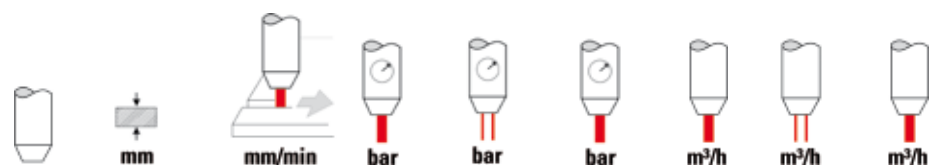
Cutting nozzles A-SD – Acetylene

High speed machine cutting nozzle, chrome plated cutting nozzle and heating nozzle. Minimal order quantity of cutting nozzles: 5 pieces, heating nozzles 1 piece.

Cutting nozzle



Heating nozzle



			Cutting ox bar	Heating ox bar	Acet. min. bar	Cutting ox m ³ /h	Heating ox m ³ /h	Acet. m ³ /h
14 001 217	3 – 5	750 – 800	2,0 – 3,0	2,0 – 2,5	0,6	0,4 – 0,5	0,4	0,3
14 001 218	6 – 10	700 – 750	4,0 – 5,0	2,5	0,6	1,2 – 1,5	0,5	0,35
14 001 219	10 – 25	500 – 650	6,5 – 7,5	2,5	0,6	3,2 – 3,7	0,5	0,35
14 001 220	25 – 40	420 – 500	6,5 – 8,5	2,5	0,6	4,6 – 5,5	0,5	0,35
14 001 221	40 – 60	360 – 420	6,5 – 8,5	2,5	0,6	5,6 – 7,1	0,5	0,35
14 001 222	60 – 100	270 – 360	6,5 – 8,5	2,5	0,6	9,1 – 11,0	0,5	0,35
14 001 223	100 – 150	210 – 270	6,5 – 7,0	3,5	0,6	12,1 – 12,9	0,6	0,5
14 001 224	140 – 210	140 – 210	6,5 – 7,5	6,5 – 7,5	0,6	19,4 – 22,0	1,1	0,85
14 001 225	110 – 250	110 – 150	6,5 – 7,5	6,5 – 7,5	0,6	28,5 – 32,5	1,1	0,85
14 001 226	3 – 150	Heating nozzle						
14 001 238	150 – 300	Heating nozzle						

High Speed Cutting

Machine cutting nozzle for cuts of quality level 1 in according to EN ISO 9013. It is possible to reach maximal cutting speed by set-up cutting parameters above (measured at the torch inlet) and by using of clean metal sheet surface, quality cutting machine, undamaged cutting nozzle and oxygen with purity 99,5% or better.

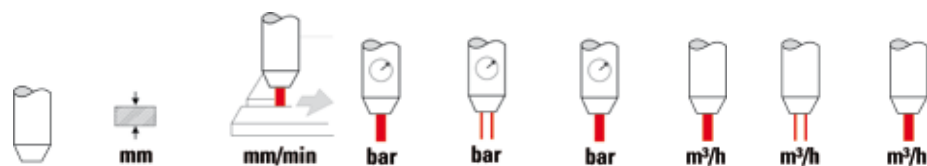
Machine Cutting Nozzle A-HD 10 – Acetylene

Cutting nozzle



Heating nozzle

High performance machine cutting nozzle, chrome plated cutting nozzle and heating nozzle. Minimal order quantity of cutting nozzles: 5 pieces, heating nozzles 1 piece



			Cutting ox	Heating ox	Acet.	Cutting ox	Heating ox	Acet.
14 001 519	3 – 5	750 – 800	2,0 – 3,0	2,5	0,5	0,4 – 0,5	0,4	0,35
14 001 520	6 – 10	700 – 750	4,0 – 5,0	3	0,5	1,0 – 1,2	0,5	0,4
14 001 521	10 – 25	530 – 725	9,0 – 12,0	3	0,5	2,7 – 3,6	0,5	0,4
14 001 522	25 – 50	420 – 530	8,5 – 11,5	3	0,5	3,6 – 4,6	0,5	0,4
14 001 523	50 – 75	330 – 420	9,0 – 12,0	3	0,5	6,7 – 8,6	0,5	0,4
14 001 524	75 – 100	280 – 300	9,5 – 11,5	3	0,6	8,9 – 10,1	0,5	0,4
14 001 525	100 – 150	210 – 280	6,5 – 7,0	4	0,6	12,1 – 12,9	0,6	0,5
14 001 224	150 – 230	140 – 210	6,5 – 7,5	6,5 – 7,5	0,6	19,4 – 22,0	1,1	0,85
14 001 225	230 – 300	110 – 150	6,5 – 7,5	6,5 – 7,5	0,6	28,5 – 32,5	1,1	0,85
14 001 526	3 – 150	Heating nozzle						
14 001 238	150 – 300	Heating nozzle						

High Performance
Cutting

Machine cutting nozzle for cuts of quality level 1 in according to EN ISO 9013. It is possible to reach maximal cutting speed by set-up cutting parameters above (measured at the torch inlet) and by using of clean metal sheet surface, quality cutting machine, undamaged cutting nozzle and oxygen with purity 99,5% or better.

This nozzle requires 12 bar oxygen to be controlled at the torch inlet.

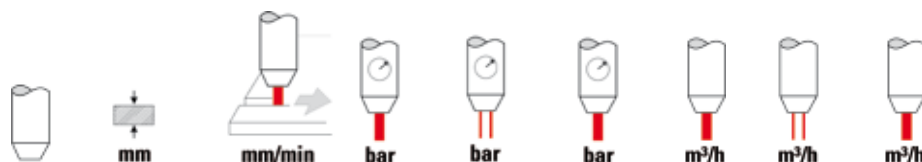
Cutting nozzle PUZ 89 – PROPANE/NATURAL GAS and MIXED FUEL GASES

Cutting nozzle



Heating nozzle

Standard cutting nozzle for application on cutting machines and on simple cutting devices, cutting nozzle plain brass, heating nozzle chrome plated. Minimal order quantity of cutting nozzles: 5 pieces, heating nozzles 1 piece.



			Cutting ox	Heating ox	Fuel g.	Cutting ox	Heating ox	Fuel g.
14 001 350	3 – 10	550 – 600	2,0 – 3,0	2	0,2	1,3 – 1,7	1,3	0,33
14 001 351	10 – 25	400 – 560	4,5 – 5,0	2,5	0,2	2,8 – 3,4	1,5	0,38
14 001 352	25 – 40	340 – 400	4,0 – 5,0	2,5	0,2	2,8 – 3,4	1,5	0,3
14 001 353	40 – 60	310 – 340	4,5 – 5,5	2,5	0,2	4,6 – 5,6	1,5	0,38
14 001 354	60 – 100	260 – 310	5,0 – 6,0	2,5	0,2	8,1 – 9,5	1,5	0,38
14 001 355	100 – 200	180 – 260	5,5 – 6,5	3,0 – 5,0	0,3	12,6 – 14,4	1,7 – 2,5	0,50 – 0,70
14 001 356	200 – 300	110 – 180	6,5 – 8,5	5,0 – 7,0	0,3	12,6 – 14,4	2,5 – 3,3	0,70 – 0,90
14 001 147	3 – 100	Heating nozzle, Propane/ natural gas						
14 001 148	100 – 300	Heating nozzle, Propane/ natural gas						
14 001 587	3 – 100	Heating nozzle, mixed fuel gas						
14 001 588	100 – 300	Heating nozzle, mixed fuel gas						

Machine cutting nozzle for cuts of quality level 1 in according to EN ISO 9013. It is possible to reach maximal cutting speed by set-up cutting parameters above (measured at the torch inlet) and by using of clean metal sheet surface, quality cutting machine, undamaged cutting nozzle and oxygen with purity 99,5% or better.

Cutting Nozzle P-SD – PROPANE/NATURAL GAS and MIXED FUEL GASES

High speed machine cutting nozzle, cutting nozzle and heating nozzle chrome plated. Minimal order quantity of cutting nozzles: 5 pieces, heating nozzles 1 piece



	mm	mm/min	bar	bar	bar	m ³ /h	m ³ /h	m ³ /h
			Cutting ox	Heating ox	Fuel g.	Cutting ox	Heating ox	Fuel g.
14 001 227	3 – 6	740 – 750	2,0 – 5,0	1,5	0,2	0,5 – 1,0	1	0,25
14 001 228	7 – 15	560 – 670	5,0 – 7,0	2	0,2	1,6 – 2,0	1,3	0,32
14 001 229	15 – 25	460 – 560	6,0 – 7,0	2	0,2	2,5 – 3,1	1,3	0,32
14 001 230	25 – 40	400 – 460	6,0 – 7,5	2	0,2	3,8 – 4,5	1,3	0,32
14 001 231	40 – 60	340 – 400	5,5 – 7,5	2	0,2	4,2 – 5,6	1,3	0,32
14 001 232	60 – 100	270 – 340	6,0 – 8,5	2	0,2	7,6 – 10,6	1,3	0,32
14 001 250*	100 – 150	180 – 270	6,5 – 7,5	2,5	0,3	11,5 – 13,0	1,4	0,35
14 001 233	100 – 200	180 – 270	7,5 – 9,5	4,5	0,6	13,3 – 15,6	2,4	0,6
14 001 234	200 – 250	130 – 180	6,5 – 8,5	4,5	0,6	18,0 – 22,0	2,4	0,6
14 001 235	250 – 300	110 – 130	6,5 – 8,5	5	0,6	23,0 – 30,0	2,5	0,62
14 001 236	3 – 100	Heating nozzle						
14 001 237	100 – 300	Heating nozzle						

*Cutting nozzle 14.001.250 preferable for hole piercing. Please use it only together with heating nozzle 14 001 236 !

High Speed Cutting

Machine cutting nozzle for cuts of quality level 1 in according to EN ISO 9013. It is possible to reach maximal cutting speed by set-up cutting parameters above (measured at the torch inlet) and by using of clean metal sheet surface, quality cutting machine, undamaged cutting nozzle and oxygen with purity 99,5% or better. This nozzle requires max. 9,5 bar oxygen to be controlled at torch inlet.

Cutting Nozzle PY-HD 10 – PROPANE/NATURAL GAS and MIXED FUEL GASES

High performance machine cutting nozzle, cutting nozzle and heating nozzle chrome plated. Minimal order quantity of cutting nozzles: 5 pieces, heating nozzles 1 piece.



	mm	mm/min	bar	bar	bar	m ³ /h	m ³ /h	m ³ /h
			Cutting ox	Heating ox	Fuel g.	Cutting ox	Heating ox	Fuel g.
14 001 511	3 – 5	750 – 800	2,0 – 3,0	2,0 – 2,5	0,2	0,4 – 0,5	1	0,25
14 001 512	6 – 10	690 – 750	4,0 – 5,0	2,5	0,2	1,0 – 1,2	1,3	0,33
14 001 513	10 – 25	500 – 690	9,0 – 12,0	2,5	0,2	2,7 – 3,6	1,3	0,38
14 001 514	25 – 50	390 – 500	8,5 – 11,0	2,5	0,2	3,6 – 4,6	1,3	0,38
14 001 515	50 – 80	320 – 390	9,0 – 12,0	2,5	0,2	6,7 – 8,6	1,3	0,38
14 001 516	80 – 100	280 – 320	9,5 – 11,0	2,5	0,2	8,9 – 10,1	1,3	0,38
14 001 250*	100 – 150	180 – 270	6,5 – 7,5	2,5	0,3	11,5 – 13,0	1,4	0,35
14 001 233	100 – 200	180 – 270	7,5 – 9,5	4,5	0,6	13,3 – 15,6	2,4	0,6
14 001 234	200 – 250	130 – 180	6,5 – 8,5	4,5	0,3	18,0 – 22,0	2,4	0,6
14 001 235	250 – 300	110 – 130	6,5 – 8,5	5	0,3	23,0 – 30,0	2,5	0,62
14 001 517	3 – 100	Heating nozzle, Propane						
14 001 518	3 – 100	Heating nozzle, mixed fuel gas						
14 001 237	100 – 300	Heating nozzle						

*Cutting nozzle 14 001 250 preferable for hole piercing. Please only use it together with heating nozzle P-SD 14 001 236 ! Machine cutting nozzle for cuts of quality level 1 in according to EN ISO 9013. It is possible to reach maximal cutting speed by set-up cutting parameters above (measured at the torch inlet) and by using of clean metal sheet surface, quality cutting machine, undamaged cutting nozzle and oxygen with purity 99,5% or better. This nozzle requires 12 bar oxygen to be controlled at the torch inlet.

High Performance Cutting

2. Machine Cutting Torch BGR (X541)

Machine Cutting Torch BGR (X541) - Nozzle mix type



Suitable for use with nozzle mix tips for all fuel gases. The torch types BGR are defined for the adaptation of 30° nozzle cones (IC). The outer design corresponds to the BIR torch types and is robust and reliable.
Connection: G3/8", G3/8"LH, G1/4"

	Type	Length/dia. (mm)	Gas	Note
203 021 298	X541	220/32	APMY	incl. BV12 + hose nipple 2x8, 1x6,3 + valves
203 021 299	X541	320/32	APMY	incl. BV12 + hose nipple 2x8, 1x6,3 + valves
203 021 310	X541	150/32	APMY	incl. BV12 + hose nipple 2x8, 1x6,3 + valves
ARZ 0068	X541	320/34	APMY	incl. BV12 + hose nipple 2x8, 1x6,3 + valves + rack m=1,25
14 056 220	BGR	220/32	APMY	
14 056 320	BGR	320/32	APMY	incl. rack m=1,25

Twin tip holder for BGR



Max. cutting thickness 75 mm

14 056 012	Twin tip holder	for all fuel gases
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Bevel cutting device for BGR



219 200 073	Cutting device
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Nozzle nut for machine cutting torch BGR



3 551 506	Nozzle nut
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Cutting Nozzles for BGR (X541)

Machine Cutting Nozzles K50 PUZ 89 and K70 PUZ 89 - Propane, Natural Gas



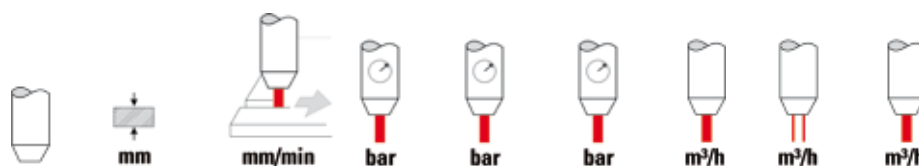
Cutting nozzle complete



Nozzle adapter



Heating nozzle



			Cutting ox	Heating ox	Fuel g.	Cutting ox	Heating ox	Fuel g.
14 001 749	3 – 10	550 – 660	2-3	2,5	0,3	1,3-1,7	1,4	0,36
14 001 750	10 – 25	400 – 560	3-4,5	3	0,3	1,7-2,6	1,6	0,41
14 001 751	25 – 40	340 – 400	4-5	3	0,3	2,8-3,4	1,6	0,41
14 001 753	40 – 60	300 – 340	4,5-5,5	3	0,3	4,6-5,6	1,6	0,41
14 001 755	60 – 100	260 – 310	5-6	3	0,3	8,1-9,5	1,6	0,41
14 001 761	100 – 200	180 – 260	5,5-6,5	3,5-5,5	0,4	12,6-14,4	1,8-2,6	0,49-0,7
14 001 762	200 – 300	110 – 180	6,5-8,5	5,5-7,5	0,4	23,1-29,1	2,6-3,4	0,7-0,92
14 001 765	Spare part, nozzle adapter (3 cone, 30° IC)							
14 001 763	Spare part, heating nozzle separate							

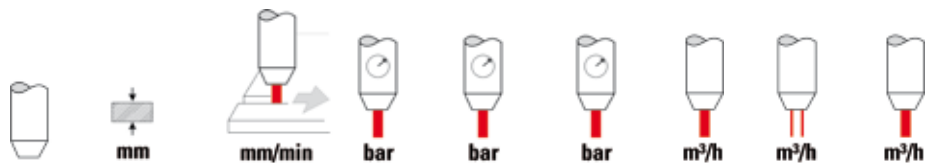
Machine cutting nozzle for cuts of quality level 1 in according to EN ISO 9013. It is possible to reach maximal cutting speed by set-up cutting parameters above (measured at the torch inlet) and by using of clean metal sheet surface, quality cutting machine, undamaged cutting nozzle and oxygen with purity 99,5% or better.

Machine Cutting Nozzle COOLEX A-MD – Acetylene



All advantages on one spot: Cutting oxygen pressure maximum 8 bar, 2-piece design, outer nozzle and inner nozzle chrome plated.

Simple cleaning procedure, COOLEX effect. 2-part special Acetylene high speed cutting nozzle.



	mm	mm/min	Cutting ox bar	Heating ox bar	Acet. bar	Cutting ox m³/h	Heating ox m³/h	Acet. m³/h
14 001 450	3 - 5	750 - 800	2 - 3	1	0,3	0,4 - 0,55	1	0,5
14 001 451	6 - 10	700 - 750	4 - 5	1	0,3	1,2 - 1,4	1	0,5
14 001 452	10 - 25	500 - 650	6,5 - 7,5	1	0,3	3,2 - 3,7	1	0,5
14 001 453	25 - 40	420 - 500	6,5 - 8	1	0,3	4,6 - 5,5	1	0,5
14 001 454	40 - 60	360 - 420	6,5 - 8,5	1,5	0,3	5,6 - 7,1	1	0,7
14 001 455	60 - 100	270 - 360	6,5 - 8	1,5	0,3	9,1 - 11	1	0,7
14 001 456	100 - 150	210 - 270	6,5 - 7	1,5	0,4	12,2 - 12,9	1	0,7
14 001 457	150 - 230	130 - 210	6,5 - 7,5	2	0,4	19,4 - 22	2	1,4
14 001 458	230 - 300	110 - 140	6,5 - 7,5	2	0,6	28,5 - 32,5	2	1,4


High Speed Cutting

Machine cutting nozzle for cuts of quality level 1 in according to EN ISO 9013. It is possible to reach maximal cutting speed by set-up cutting parameters above (measured at the torch inlet) and by using of clean metal sheet surface, quality cutting machine, undamaged cutting nozzle and oxygen with purity 99,5% or better.

Machine Cutting Nozzle TRITEX – Acetylene



All advantages on one spot: Cutting oxygen pressure maximum 11 bar, modern high performance cutting oxygen channel, outer and inner nozzle chrome plated. 2-piece design, simple cleaning procedure, COOLEX-effect. 2-part special Acetylene high performance cutting nozzle.



	mm	mm/min	Cutting ox bar	Heating ox bar	Acet. bar	Cutting ox m³/h	Heating ox m³/h	Acet. m³/h
219 144 464	3-5	700-760	3-4	1	0,6	0,5-0,6	1	0,5
219 144 465	6-10	650-700	5-7,5	1	0,6	1,6-2,1	1	0,5
219 144 466	10-25	530-725	9-11	1	0,6	4,2	1	0,5
219 144 467	25 - 50	410-530	9-11	1	0,6	4,3-5,2	1	0,5
219 144 468	50 - 75	330-410	10-11	1,5	0,7	6,7-8,1	0,55-0,7	0,5-0,7
219 144 469	75 - 100	280-330	10-11	1,5	0,7	8,9-10,2	1	0,7
219 144 470	100 - 150	210-280	9-10	1,5	0,7	9,5-11,5	0,8-1,3	0,7-1
219 144 471	150 - 240	130-210	6,5-7,5	2	0,8	19-22	1,5-1,8	1,2-1,5
219 144 472	240 - 300	110-130	6,5-7,5	2	0,8	28-32	3	2,2

High Performance Cutting

Machine cutting nozzle for cuts of quality level 1 in according to EN ISO 9013. It is possible to reach maximal cutting speed by set-up cutting parameters above (measured at the torch inlet) and by using of clean metal sheet surface, quality cutting machine, undamaged cutting nozzle and oxygen with purity 99,5% or better.

This nozzle requires 11 bar oxygen to be controlled at the torch inlet

3. Machine Cutting Torch JETSTREAM

Machine Cutting Torch JETSTREAM - Injector type



The machine cutting torch includes the same features like the shown BIR+ torches. The nozzle seat is designed to fix the GCE nozzles with flat nozzle sealing, MA 133-D, MP133, JETEX and PROPEX. Jetstream is provided with COOLFLOW valve and the torch set includes 3 adjustment valves and 3 non return valves.

	Length/dia. (mm)	Gas	Connection	incl. BV12 and
203 021 243	100/28	A	G3/8", G3/8"LH, G1/4"	hose nipple 2x8, 1x6,3
203 021 245	100/32	A	G3/8", G3/8"LH, G1/4"	hose nipple 2x8, 1x6,3
203 021 244	160/28	A	G3/8", G3/8"LH, G1/4"	hose nipple 2x8, 1x6,3
203 021 246	160/32	A	G3/8", G3/8"LH, G1/4"	hose nipple 2x8, 1x6,3
203 021 300	220/30	A	G3/8", G3/8"LH, G1/4"	hose nipple 2x8, 1x6,3 + valves
203 021 311	220/32	A	2xUNF 9/16", 1xUNF 9/16"LH	hose nipple 3x6,3 + valves
203 021 301	220/32	A	G3/8", G3/8"LH, G1/4"	hose nipple 2x8, 1x6,3 + valves
203 021 302	220/35	A	G3/8", G3/8"LH, G1/4"	hose nipple 2x8, 1x6,3 + valves
203 021 315	400/32	A	2xUNF 9/16", 1xUNF 9/16"LH	hose nipple 3x6,3 + valves
203 021 306	400/32	A	G3/8", G3/8"LH, G1/4"	hose nipple 2x8, 1x6,3 + valves
203 021 309	400/35	A	G3/8", G3/8"LH, G1/4"	hose nipple 2x8, 1x6,3 + valves
203 021 303	220/30	P	G3/8", G3/8"LH, G1/4"	hose nipple 2x8, 1x6,3 + valves
203 021 313	220/32	P	2xUNF 9/16", 1xUNF 9/16"LH	hose nipple 3x6,3 + valves
203 021 304	220/32	P	G3/8", G3/8"LH, G1/4"	hose nipple 2x8, 1x6,3 + valves
203 021 305	220/35	P	G3/8", G3/8"LH, G1/4"	hose nipple 2x8, 1x6,3 + valves
203 021 317	400/32	P	2xUNF 9/16", 1xUNF 9/16"LH	hose nipple 3x6,3 + valves
203 021 318	400/35	P	2xUNF 9/16", 1xUNF 9/16"LH	hose nipple 3x6,3 + valves

Nozzle nut



201 032 270 Nozzle nut

Twin tip holder



Max. cutting thickness 75 mm

202 235 504 for JETSTREAM for Acetylene, Propane, Natural gas

Bevel cutting device

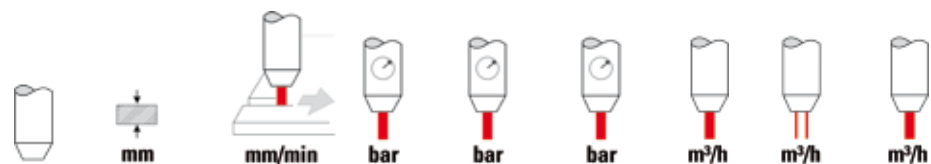


202 135 166 for JETSTREAM

Cutting Nozzles for JETSTREAM

The capability of high cutting speed and quality in acc. to EN ISO 9013 is guaranteed. The inner nozzle is plain copper (MA 133D) and brass (MP133), the outer nozzles are chrome plated. MA and MP are supplied only as couple and each nozzle twin is individually packed in a plastic tube.

MA133 D – Acetylene

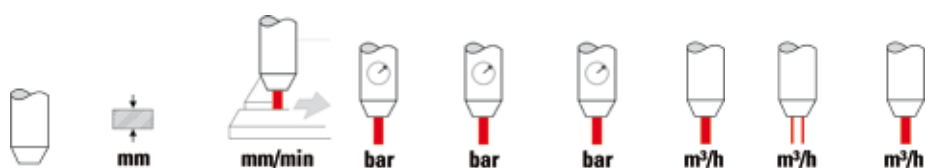


			Cutting ox	Heating ox	Acet.	Cutting ox	Heating ox	Acet.
202 150 330	3 – 8	650-900	3-5	1,5	0,2 - 0,8	1,25-1,85	0,55	0,5
203 150 331	8-15	600-800	5-6	1,5	0,2 - 0,8	2,15-2,6	0,55	0,5
202 150 332	15 – 30	460-680	6-7	1,5	0,2 - 0,8	3,6-4,15	0,55	0,5
202 150 333	30 – 50	360-575	6,5-7,5	1,5	0,2 - 0,8	5,2-5,85	0,55	0,5
202 150 334	50 – 70	340-475	7,5	2,3	0,2 - 0,8	7,8-8	0,715	0,65
202 150 335	70 – 100	250-365	7-8	2,3	0,2 - 0,8	11,1-12,3	0,715	0,65
202 150 336	100 – 200	150-250	5,5-7,5	2,0-2,5	0,6	11,7-15,7	0,75-0,85	0,58-0,77
202 150 337	200 – 300	110-180	5,5-6,5	4-5	0,6	28,6-31	1,12-1,47	1,02-1,34

High Speed Cutting

Machine cutting nozzle for cuts of quality level 1 in according to EN ISO 9013. It is possible to reach maximal cutting speed by set-up cutting parameters above (measured at the torch inlet) and by using of clean metal sheet surface, quality cutting machine, undamaged cutting nozzle and oxygen with purity 99,5% or better.

MP133 - Propane, Natural Gas

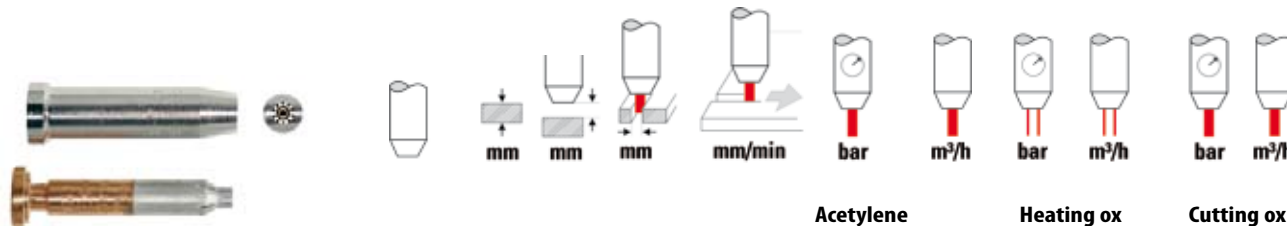


			Cutting ox	Heating ox	Acet.	Cutting ox	Heating ox	Acet.
202 150 320	3 – 10	600-750	4-5	2	0,1 – 0,8	2	2	0
204 150 321	10 – 15	540-635	5-6	2	0,1 – 0,8	2,32-2,6	2	0
204 150 322	15 – 30	440-610	6-7	2	0,1 – 0,8	3,6-4	1,6-1,75	0,40-0,44
204 150 323	30 – 50	380-510	6,5-7,5	2	0,1 – 0,8	4,85-5,7	2	0
204 150 324	50 – 70	320-460	7-7,5	2	0,1 – 0,8	7,4-7,75	2	1
204 150 325	70 – 100	280-400	7-8	2	0,1 – 0,8	11,1-12,3	2	1
204 150 326	100 – 200	150-250	5,5-7,5	2	0,3 – 0,8	11,7-15,7	2	1
204 150 327	200 – 300	110-180	5,5-6,5	3	0,3 – 0,8	26,8-31	3	1

High Speed Cutting

Machine cutting nozzle for cuts of quality level 1 in according to EN ISO 9013. It is possible to reach maximal cutting speed by set-up cutting parameters above (measured at the torch inlet) and by using of clean metal sheet surface, quality cutting machine, undamaged cutting nozzle and oxygen with purity 99,5% or better.

JETEX® – Acetylene

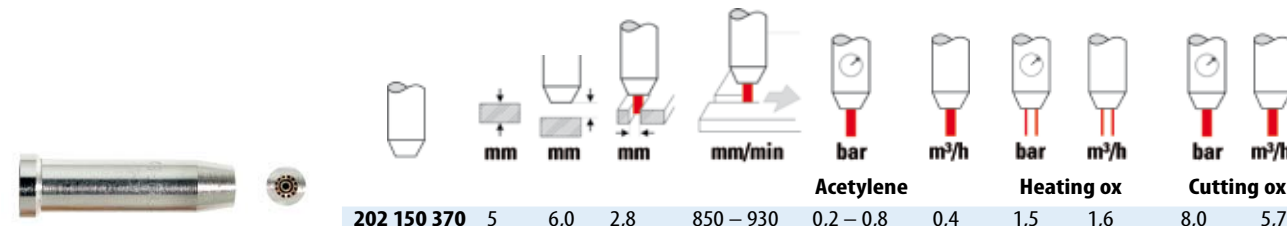


					Acetylene	Heating ox	Cutting ox			
202 150 191	3	4,0	2,6	1050 – 1100	0,2 – 0,8	0,5	1,5	0,6	8,0	5,7
	5	4,0	2,6	950 – 1000	0,2 – 0,8	0,5	1,5	0,6	8,0	5,7
	10	6,0	2,6	870 – 920	0,2 – 0,8	0,5	1,5	0,5	8,0	5,7
	15	6,0	2,7	780 – 820	0,2 – 0,8	0,5	1,5	0,6	10,0	7,0
	20	6,0	2,7	680 – 740	0,2 – 0,8	0,5	1,5	0,6	10,0	7,0
	25	6,0	2,7	610 – 670	0,2 – 0,8	0,5	1,5	0,6	10,0	7,0
	30	6,0	2,7	550 – 600	0,2 – 0,8	0,5	1,5	0,6	10,0	7,0
	40	6,0	2,7	420 – 480	0,2 – 0,8	0,5	1,5	0,6	10,0	7,0
202 150 192	3	4,0	3,0	1050 – 1100	0,2 – 0,8	0,5	1,5	0,6	8,0	9,2
	5	4,0	3,0	950 – 1000	0,2 – 0,8	0,5	1,5	0,6	8,0	9,2
	10	6,0	3,0	870 – 920	0,2 – 0,8	0,5	1,5	0,5	8,0	9,2
	15	6,0	3,2	780 – 820	0,2 – 0,8	0,5	1,5	0,6	10,0	11,1
	20	6,0	3,2	680 – 740	0,2 – 0,8	0,5	1,5	0,6	10,0	11,1
	25	6,0	3,2	610 – 670	0,2 – 0,8	0,5	1,5	0,6	10,0	11,1
	30	6,0	3,2	550 – 600	0,2 – 0,8	0,5	1,5	0,6	10,0	11,1
	40	6,0	3,2	420 – 480	0,2 – 0,8	0,5	1,5	0,6	10,0	11,1
	50	9,0	3,3	380 – 460	0,2 – 0,8	0,7	2,25	0,8	10,0	11,1
	70	12,0	3,5	260 – 320	0,2 – 0,8	0,7	2,25	0,8	10,0	11,1

High Performance Cutting

The high performance cutting system JETEX and PROPEX is designed for cutting medium up to large dimensioned steels plates and long strip cutting. The nozzle operates with an oxygen curtain, which has the function of a shielding gas protecting oxygen stream against atmosphere and decontamination. The system provides a high cutting quality with smooth cut surfaces and sharp cutting top edges even achieving very high cutting speeds. Its unique design offers a wide cutting range while cutting different plate thickness by reducing the number of nozzle exchanges. JETEX and PROPEX are supplied only as twin individually packed in a plastic tube. Please note: Both cutting systems needs training and education of the operators. Machine cutting nozzle for cuts of quality level 1 in according to EN ISO 9013. It is possible to reach maximal cutting speed by set-up cutting parameters above (measured at the torch inlet) and by using of clean metal sheet surface, quality cutting machine, undamaged cutting nozzle and oxygen with purity 99,5% or better.

PROPEX - Propane



					Acetylene	Heating ox	Cutting ox			
202 150 370	5	6,0	2,8	850 – 930	0,2 – 0,8	0,4	1,5	1,6	8,0	5,7
	10	6,0	2,8	760 – 840	0,2 – 0,8	0,4	1,5	1,6	8,0	5,7
	15	6,0	2,9	700 – 760	0,2 – 0,8	0,4	1,5	1,6	10,0	7,0
	20	6,0	2,9	610 – 690	0,2 – 0,8	0,4	1,5	1,6	10,0	7,0
	25	6,0	2,9	540 – 620	0,2 – 0,8	0,4	1,5	1,6	10,0	7,0
	30	6,0	2,9	460 – 540	0,2 – 0,8	0,4	1,5	1,6	10,0	7,0
	40	6,0	2,9	360 – 410	0,2 – 0,8	0,4	1,5	1,6	10,0	7,0
	202 150 371	5	6,0	3,0	850 – 930	0,2 – 0,8	0,4	1,5	1,6	8,0
10		6,0	3,2	760 – 840	0,2 – 0,8	0,4	1,5	1,6	8,0	9,2
15		6,0	3,2	700 – 760	0,2 – 0,8	0,4	1,5	1,6	10,0	11,1
20		6,0	3,2	610 – 690	0,2 – 0,8	0,4	1,5	1,6	10,0	11,1
25		6,0	3,2	550 – 630	0,2 – 0,8	0,4	1,5	1,6	10,0	11,1
30		6,0	3,2	490 – 570	0,2 – 0,8	0,4	1,5	1,6	10,0	11,1
40		6,0	3,2	440 – 490	0,2 – 0,8	0,4	1,5	1,6	10,0	11,1
50		9,0	3,3	350 – 410	0,2 – 0,8	0,5	2,2	2,1	10,0	11,1
70		12,0	3,5	260 – 300	0,2 – 0,8	0,5	2,2	2,1	10,0	11,1

High Performance Cutting

Machine cutting nozzle for cuts of quality level 1 in according to EN ISO 9013. It is possible to reach maximal cutting speed by set-up cutting parameters above (measured at the torch inlet) and by using of clean metal sheet surface, quality cutting machine, undamaged cutting nozzle and oxygen with purity 99,5% or better.

4. Cutting Machine IMP

Cutting Machine IMP-Speed – Acetylene, Propane, Natural Gas



This rugged, portable and economical machine is designed for accuracy and incorporates many great user benefits. A circle cutting attachment is part of the basic delivery package. The rugged body consists of two light alloy castings containing the transformer, electric motor and gear box. For strip, chamfer and plate edge preparation, a second torch can be fitted.

14 088 700	IMP-Speed Acetylene
14 088 704	IMP-Speed Propane/ Natural gas
14 088 705	IMP-Speed basic
14 088 709	IMP-Speed Plasma

Convenient Circle, Strip and Bevel High Speed Cutting

Circle cutting

An attachment is supplied with the machine enabling circles to be cut from 75 up to 1380 mm in single torch form, and up to 1740 mm when fitted with a second torch and a longer radius bar

Strip Cutting

A torch can be mounted onto each side to the machine. Alternatively if narrower strips are required both torches may be positioned on the same side with the counter balance weight fitted to maintain stability

Bevel Cutting

IMP can carry two torches for plate edge preparation

Guided Cutting

The guide bars on the right hand side of the machine enable straight or predetermined curves to be cut with the machine directly on the plate surface

Straight cutting with track guidance

While straight cutting it is convenient to operate the machine with the specially designed 2 m long light alloy track. Sections can be added and secured by means of simple fully interlocking clip.

High Performance

- NEW higher speed version available up to 1300 mm/min
- Speed range permits low power plasma operation

Easy handling

Lightweight

With its sturdy handle it is easy to carry (app. 9 kg) and to steer. It is well balanced due to its ingenious design and the use of light alloy materials. The heaviest part of the machine is located above the wheel drive to ensure good traction.

Hand steering

The castor wheel is released for hand guidance on slow curves and the machine is placed directly onto the plate

Easy to operate

All machine controls within a hand span

Unique clutch design for ease of operation

Changing nozzles is easy by moving the machine to its end

Technical Data

Move:	forward and reverse
Extension:	up to 2 cutting torches
Cutting thickness:	3 – 150 mm / 0,12" – 6"
Cutting speed:	100 – 1300 mm/min
Weight:	9 kg / 20 lbs (complete with single torch and hoses)
Input hoses:	Fuel gas: G3/8"LH, hose diam. 8 mm, Oxygen: G3/8", hose diam. 8 mm
Power supply:	220 V / 110 V, 50 – 60 Hz
Power consumption:	60 W

Basic scale of delivery

IMP – Speed basic: Machine body, machine gas distribution manifold for one torch, torch holder, torch bar (length 342 mm), heat shield, radius pole, centrepiece of radius, connecting cable with shock-proof plug, nozzle nut spanner and instruction manual.

IMP – Speed Acetylene / Propane: Equipment of basic version with nozzle mix torch, torch hoses and high speed cutting nozzle set 3-100 mm.

IMP – Speed plasma: Equipment of basic version with prismatic clamp for plasma torch (ø 25 – 40 mm)

Handling instructions IMP-Speed



IMP for free style contour cuts



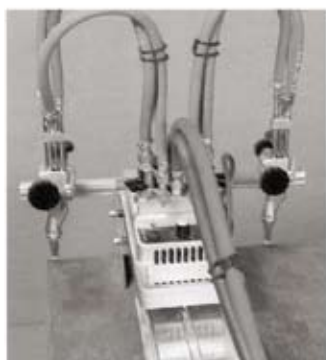
IMP for automatized straight cuts by angled profile guidance



IMP for automatized straight cuts with aluminium track guidance



IMP is easy to carry due to light weight design



IMP with double torch assembly for strip cutting



IMP with one-sided torch installation



IMP with circle cutting device



The IMP placed in upright position allows nozzle changing easily

- With the IMP portable cutting machine, that can be equipped according to demand with 1 or 2 machine cutting torches. The IMP is suitable for straight, contour, strip, bevel and circle cutting. The speed of 100 to 1700 mm/min. is adjustable both forwards and backwards at a knob smoothly .
- The rugged body, in which the gear, the drive motor and the entire electric operation control is built in, consists of 2 light metal housings screwed together. A overriding clutch facilitates the positioning of the machine at the sheet metal plate.
- With its sturdy handle it is easy to carry (app. 9 kg) and to steer. It is well balanced due to its ingenious design and the use of light alloy materials. The heaviest part of the machine is located above the wheel drive to ensure good traction. Moreover the machine is easy to handle, because all machine controls are arranged within a hand span.

Straight cuts

- For precise straight cuts , the IMP could be guided at an angular track, while the machine runs directly on the sheet steel surface. It keeps, through 2 on the machine side place distance pieces, always a constant distance to the track. Straight cutting can be done in the same way through guided tour at a light alloy track. Sections to extend the track are in 2 m pieces available.

Contour cuts

- With IMP contour cuts may be performed. The wanted contour has to be marked or painted on the metal plate and the machine has to be moved along this marking.

Strip Cutting

- For strip cutting on both sides of the machine one torch has to be installed. For small strips, both torches could be mounted on one side, while the circle cutting device is used as counter weight for stability reasons.

Bevel Cutting

- Depending on the torch assembly bevel cuts up to 45° for welding edge preparation can be performed.:

V-cut:

- 1 machine cutting torch
- 1 operation cycle

X-cut:

- 1 machine cutting torch
- 2 operation cycles
- 2 machine cutting torch
- 1 operation cycle

Y-cut:

- 1 machine cutting torch
- 2 operation cycles
- 2 machine cutting torch
- 1 operation cycle

K-cut:

- 1 machine cutting torch
- 3 operation cycles
- 2 machine cutting torches
- 2 operation cycle

Circle Cutting

- By using the circle cutting device, circle cuts from 75 to 1380 mm diameter (cantilever 342 mm) resp. from 75 to 1740 mm diameter (cantilever 525 mm) can be performed. Cutting circle rings a second machine cutting torch has to be installed on the same side of the machine - a simple and economical method, to cut circular blanks and rings.




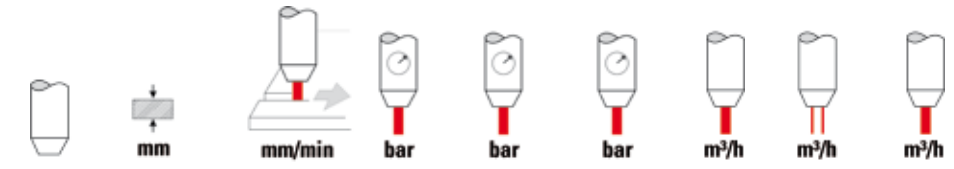
Plasma Cutting

- The speed range of 1700 mm/min permits to use the IMP together with a light plasma torch.
- IMP sub assembly
 - Extension from 1 to 2 machines
 - cutting torches
 - double cantilever for torches (length 525 mm)
 - double gas manifold
 - second machine cutting torch for nozzle mix
 - second torch clamp
 - second hose package
 - second heat protecting shield

Additional accessory


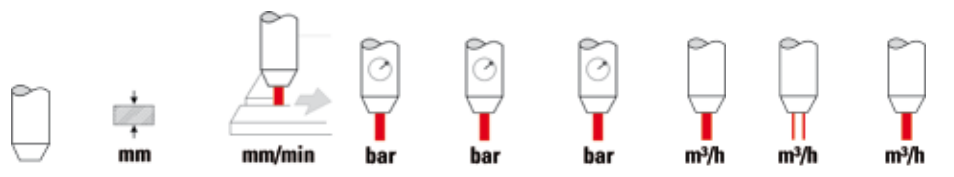
- Torch clamp for 2 plasma torches
- Aluminium track (length 2 m) incl. clamping spring (14 078 120)

Machine Cutting Nozzles K50 PUZ 89, nozzle mix - Propane

			mm	mm/min	bar	bar	bar	m ³ /h	m ³ /h	m ³ /h
					Cutting ox	Heating ox	Fuel g.	Cutting ox	Heating ox	Fuel g.
14 001 749	3 – 10	550 - 660		2-3	2,5	0,3	1,3-1,7	1,4	0,36	
14 001 750	10 – 25	400 - 560		3-4,5	3	0,3	1,7-2,6	1,6	0,41	
14 001 751	25 – 40	340 - 400		4-5	3	0,3	2,8-3,4	1,6	0,41	
14 001 753	40 – 60	300 - 340		4,5-5,5	3	0,3	4,6-5,6	1,6	0,41	
14 001 755	60 – 100	260 - 310		5-6	3	0,3	8,1-9,5	1,6	0,41	
14 001 761	100 – 200	180 - 260		5,5-6,5	3,5-5,5	0,4	12,6-14,4	1,8-2,6	0,49-0,7	
14 050 765	Spare part, nozzle adapter (3 cone, 30° IC)									
14 001 763	Spare part, heating nozzle separate									

Machine Cutting Nozzles COOLEX A-MD - Acetylene

			mm	mm/min	bar	bar	bar	m ³ /h	m ³ /h	m ³ /h
					Cutting ox	Heating ox	Fuel g.	Cutting ox	Heating ox	Fuel g.
14 001 450	3-5	750-800		2-3	1	0,3	0,4-0,55	1	0,5	
14 001 451	6-10	700-750		4-5	1	0,3	1,2-1,4	1	0,5	
14 001 452	10-25	500-650		6,5-7,5	1	0,3	3,2-3,7	1	0,5	
14 001 453	25-40	420-500		6,5-8	1	0,3	4,6-5,5	1	0,5	
14 001 454	40-60	360-420		6,5-8,5	1,5	0,3	5,6-7,1	1	0,7	
14 001 455	60-100	270-360		6,5-8	1,5	0,3	9,1-11	1	0,7	
14 001 456	100-150	210-270		6,5-7	1,5	0,4	12,2-12,9	1	0,7	

Cutting Machine IMP - Accessories

2 221 014	Machine cutting torch, nozzle mix
14 088 708	Prisma torch clamp, for plasma cutting Ø 25 – 40
14 088 703	Aluminium track, incl. clamp spring, length 2 m
14 088 701	Extension set, for second torch without nozzles

Other spare parts on request!

5. Pipe Cutting Machine PCM – Acetylene / Propane, Natural gas

Portable Pipe Cutting Machine PCM - Acetylene / Propane



Robust but lightweight portable pipe cutting machine PCM for Oxygen – Acetylene / Propane, Natural gas cutting of square or bevel cuts. The machine body has a light-alloy cast base. The manual torch movement is realized by the chain wheel and chain with standard length 2,2m (approx. 7ft-8in) supplied with each machine. There are two types of the machine. The standard delivery consists flat wheels for easy movement on the tube surface. The Track band type uses flanged wheels to sit on and be guided by the round steel band mounted on the tube. The track band type for accurate edge preparation is modification of standard machine (field conversion) by special conversion kit supplied on customer request.

60 201 Pipe Cutting Machine PCM

Technical data

Move:	manual forward and reverse
Pipe wall thickness:	square cutting up to 100 mm (4 in), beveling 45° up to 50 mm (2 in)
Pipe diameter:	101 – 610 mm (4 – 24 in) (standard machine)
Maximum pipe diameter	
(on customer request):	1220 mm (48 in)
Weight:	9 kg (20 lb) (standard machine)
Bevel cut angle:	0 – 45 deg.
Input hoses connections:	Oxygen G3/8", Fuel gas G3/8"LH

Machine Cutting Nozzles ANME - Acetylene



	mm	inch	Oxygen (bar)	Fuel gas (bar)	Oxygen (m3/h)	Fuel gas (m3/h)
45 132	3-6	1/32	2,5 - 3,5	0,3	1,25 - 1,65	0,3
45 364	5-12	3/64	3,0 - 4,0	0,3	2,12 - 3,2	0,4
45 116	10-75	1/16	3,5 - 4,5	0,3	3,2 - 4,45	0,45
45 564	70-100	5/64	4,5 - 5,5	0,5	8,4 - 9,8	0,6

Machine cutting nozzle for cuts of quality level 1 in according to EN ISO 9013. It is possible to reach maximal cutting speed by set-up cutting parameters above (measured at the torch inlet) and by using of clean metal sheet surface, quality cutting machine, undamaged cutting nozzle and oxygen with purity 99,5% or better.

Machine Cutting Nozzles PNME - Propane



	mm	inch	Oxygen (bar)	Fuel gas (bar)	Oxygen (m3/h)	Fuel gas (m3/h)
46 132	3-6	1/32	2	0,3	2,1	0,3
46 364	5-12	3/64	3	0,3	3,2	0,4
46 116	10-75	1/16	3	0,3	5,2	0,6
46 564	70-100	5/64	4	0	13,6	1

Machine cutting nozzle for cuts of quality level 1 in according to EN ISO 9013. It is possible to reach maximal cutting speed by set-up cutting parameters above (measured at the torch inlet) and by using of clean metal sheet surface, quality cutting machine, undamaged cutting nozzle and oxygen with purity 99,5% or better.

6. Cutting Machine MG 86 SA

Portable Cutting Machine MG 86 SA - Acetylene / Propane, Natural Gas



This easy to use machine can reproduce profiles from a reusable steel template. The steel template is traced by a powered magnetic roller with a variable speed SCR control system to provide maximum stability. The template mounting arm is fully adjustable. Templates for internal and external tracing are easily produced by simply incorporating an allowance for the tracing roller diameter and kerf.

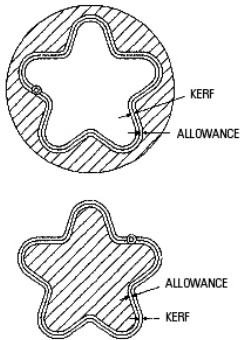
The torch uses standard PNME or ANME tips for use with Oxy-Propane or Oxy-Acetylene and torch holder for square and bevel cuts and can be swivelled up for easy tip maintenance and replacement.

An automatic switch enables simultaneous use of the cutting Oxygen and the motor. The machine can be used for circle cutting up to 700 mm diameter and can cut up to 1700 mm diameter using the extended circle attachment. Weighing only 50 kg this machine is easily portable for use in any location.

60 050 Cutting Machine

Technical Data

Weight:	50 kg
Power:	220 V AC
Motor:	24 V DC
Standard circle diameter:	30 - 700 mm
Extended circle diameter:	1700 mm
Square edges length:	30 - 600 mm
Cutting thickness:	3 - 100 mm
Cutting speed:	100 - 1000 mm/min
Cutting accuracy:	+/- 0,5 mm
Template magnet diameter:	10 mm



Machine Cutting Nozzles ANME - Acetylene



	mm	inch	Oxygen [bar]	Fuel gas [bar]	Oxygen [m ³ /h]	Fuel gas [m ³ /h]
45 132	3-6	1/32	2,5 - 3,5	0,3	1,25 - 1,65	0,3
45 364	5-12	3/64	3,0 - 4,0	0,3	2,12 - 3,2	0,4
45 116	10-75	1/16	3,5 - 4,5	0,3	3,2 - 4,45	0,45
45 564	70-100	5/64	4,5 - 5,5	0,5	8,4 - 9,8	0,6

Machine cutting nozzle for cuts of quality level 1 in according to EN ISO 9013. It is possible to reach maximal cutting speed by set-up cutting parameters above (measured at the torch inlet) and by using of clean metal sheet surface, quality cutting machine, undamaged cutting nozzle and oxygen with purity 99,5% or better.

Machine Cutting Nozzles PNME - Propane, Natural Gas



	mm	inch	Oxygen [bar]	Fuel gas [bar]	Oxygen [m ³ /h]	Fuel gas [m ³ /h]
46 132	3-6	1/32	2	0,3	2,1	0,3
46 364	5-12	3/64	3	0,3	3,2	0,4
46 116	10-75	1/16	3	0,3	5,2	0,6
46 564	70-100	5/64	4	0	13,6	1

Machine cutting nozzle for cuts of quality level 1 in according to EN ISO 9013. It is possible to reach maximal cutting speed by set-up cutting parameters above (measured at the torch inlet) and by using of clean metal sheet surface, quality cutting machine, undamaged cutting nozzle and oxygen with purity 99,5% or better.

7. Machine Cutting Accessories

Flashback arresters for machine cutting torches EN 730-1



	Gas	Connection [EN 560]
14 008 408	Cutting Oxygen	G 3/8"
14 008 263	Heating Oxygen	G 1/4"
14 008 278	Fuel gas	G 3/8" LH

Non return valve BV 12 M



This valve can be connected to the inlets of Machine Cutting Torches BIR, BGR and Jetstream.

	Connection
0 863 561	G 1/4"
0 863 563	G 3/8"
203 011 054	G 3/8" LH

Pressure control gauge



To ensure the right pressure values on torch entrance, a pressure control gauge can be fitted to the threaded unions.

	Pressure indication [bar]	Connection [EN 560]
14 008 259	0 – 10	G1/4"
14 008 569	0 – 10	G3/8"
14 008 567	0 – 2,5	G3/8" LH
ARV0027	0 - 16	G3/8"

Brass cleaning brush



14 008 157	Brass cleaning brush
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Conical cleaning needle for High Performance Machine Cutting Nozzles



14 056 010	Conical cleaning needle for high performance machine cutting nozzles
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Cleaning needle set



	Needle diameter
548 814 071 191	0,5 – 1,6 mm

Cleaning and maintenance



218 190 051	Nozzle cleaner
269 111 176	Leak detection spray

Flame lighter



54800003001B	Lighter
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Adjustment valves



	Application	Connection [EN 560]
14 056 015	Cutting Oxygen	G 3/8"
14 056 016	Heating Oxygen	G 1/4"
14 056 017	Fuel gas	G3/8" LH

Adjustment recommendation for perfect machine cutting



Narrowing of kerf (divergent)

- Forward speed of torch too fast
- Distance between nozzle and sheet metal too big
- Dirty and / or damaged nozzle



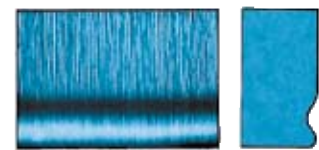
Narrowing of kerf (convergent)

- Forward speed of torch too fast
- Distance between nozzle and sheet metal too big
- Cutting oxygen pressure too high



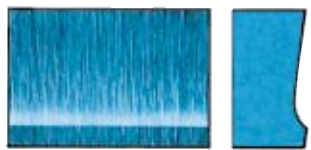
Concave cut surface beneath top edge

- Cutting oxygen pressure too high
- Dirty and / or damaged nozzle
- Distance between nozzle and sheet metal too big



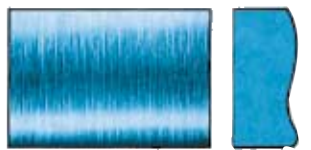
Step at bottom edge

- Forward speed of torch too fast
- Dirty and / or damaged nozzle



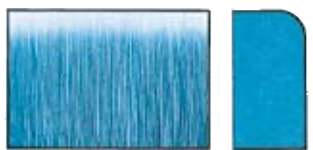
Concave cut surface profile

- Forward speed of torch too fast
- Dirty and/or damaged nozzle or nozzle size too small for the thickness to be cut
- Cutting oxygen pressure too low



Irregular cut surface profile

- Cutting oxygen pressure too low
- Dirty and / or damaged nozzle
- Forward speed of torch too fast



Edge melting on

- Forward speed of torch too slow
- Heating flame too strong
- Distance between nozzle and sheet metal too big to too small
- Nozzle size too big for the thickness to be cut



String of solidified droplets

- Heating flame too strong
- Distance between nozzle and sheet metal too small
- Scaled or corroded sheet metal surface



Melted down top edge with adherent slag

- Cutting oxygen pressure too high
- Heating flame too strong
- Distance between nozzle and sheet metal too big



Lower edge rounded

- Cutting oxygen pressure too high
- Forward speed of torch too fast
- Dirty and / or damaged nozzle



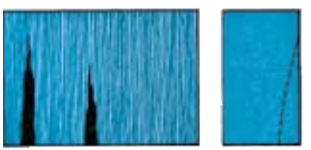
Excessive cut drag line depth

- Forward speed of torch too fast or irregular
- Distance between nozzle and sheet metal too small
- Heating flame too strong



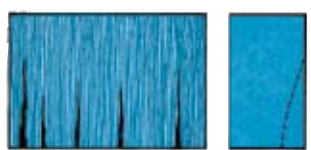
Irregular depth of cut line

- Forward speed of torch too fast or irregular
- Flame too weak



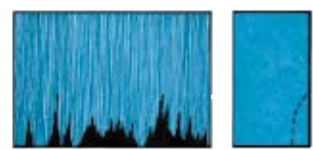
Single gouges

- Forward speed of torch too slow
- Scaled or corroded or dirty sheet metal surface
- Distance between nozzle and sheet metal too small
- Flame too weak
- Flame extinguished with a bang
- Sheet metal with finely divided inclusions



Grouped gouge areas

- Forward speed of torch too fast
- Scaled or corroded or dirty sheet metal surface
- Distance between nozzle and sheet metal too small
- Flame too weak



Grouped gouges in the bottom half of the cut

- Forward speed of torch too slow
- Dirty and / or damaged nozzle



Firmly adherent slag line at bottom edge

- Forward speed of torch too fast or too slow
- Distance between nozzle and sheet metal too big
- Cutting oxygen pressure too low
- Nozzle size too small for the thickness to be cut
- Flame too weak
- Scaled or corroded or dirty (color) sheet metal surface



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Gas Control Equipment

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CUTTING & WELDING



- Cutting and Welding Systems
- Gas supply Systems for Industries

PROCESS APPLICATIONS



- High Pressure Valves for all gases
- Residual Pressure Valves
- Machine Cutting Equipment
- Industrial Process Application Equipment

MEDICAL



- Oxygen Therapy Systems
- Gas Supply Systems for Hospitals
- Emergency Gas Systems

HIGH PURITY



- Regulators and valves
- Gas Supply Panels and Systems
- Accessory