

Re Think!

It's time to innovate Oxy-Fuel cutting.



The next step
in Oxy-Fuel Cutting
from the market leaders!

Automated Oxy-Fuel Cutting Systems

FIT+ with tool free nozzle exchange

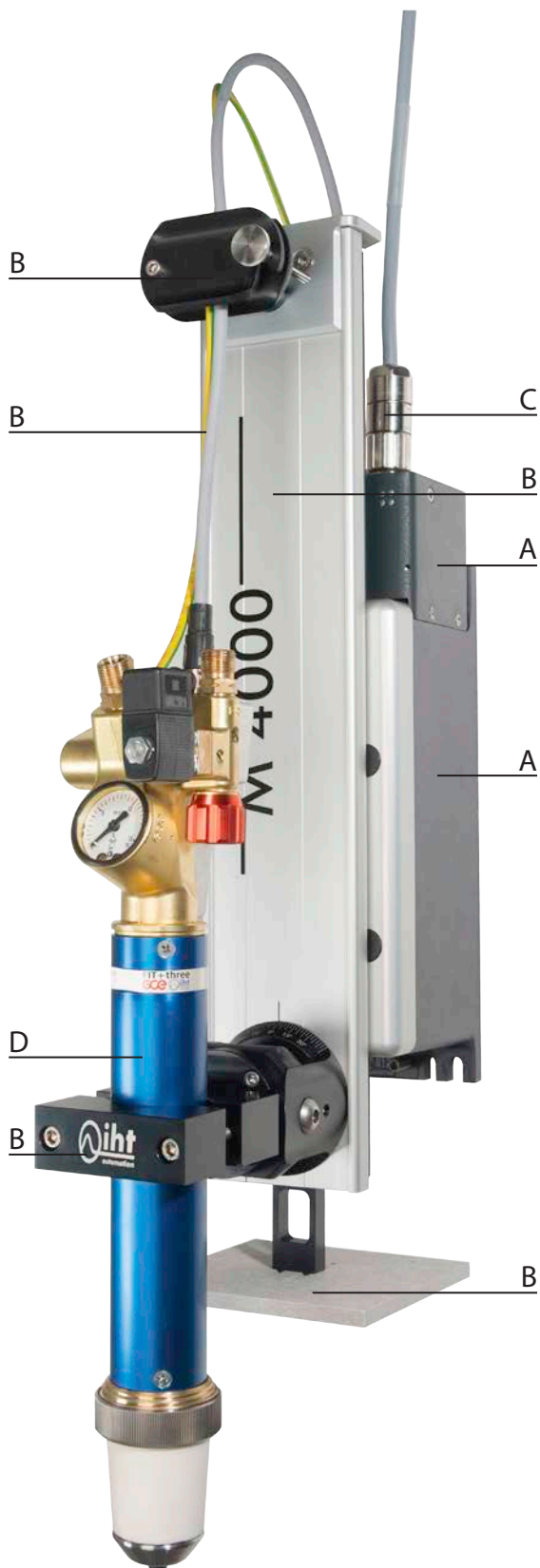
FIT+ two with integrated ignition

FIT+ three with integrated ignition and height sensing

M 4000 FIT+ with integrated ignition and height control



M 4000 FIT+



Oxy-Fuel Height Control System with Cutting Torch and Integrated Ignition

- Fully integrated Oxy-Fuel Cutting System with Cutting Torch, Flame Ignition, Height Sensing* and Lifter- all in one package
- Flashback detection
- Fits on all carriages
- Easy integration with the CNC controller
- Works with all common CNC controllers on the market
- Optional fieldbus connectivity
- Modular approach allows highest flexibility
- Selection of best components ensures high cutting quality and productivity

Application Fields

- Oxy-Fuel cutting machines for straight cutting of up to 300 mm thick sheets
- Single or multi torch applications
- 100 % compatible with the plasma systems IHT M 4000 PCS and M 4000 BAS
- Cut sheets up to 100 mm thickness when used with active height sensor and up to 300 mm with Splash Protector

CNC Connections

- In: Automatic, control of torch height On/Off
- In: Clearance Setpoint (0-10 V), torch height setting during cutting process
- In: Piercing Setpoint (0-5 V), torch height setting during piercing process
- In: Ignite, start ignition command
- In: Manual Up, manual torch movement
- In: Manual Down, manual torch movement
- Out: Error/Collision/Flashback
- Out: In Position, confirmation of set position
- Out: Upper Limit, highest possible point
- Power: 24 V DC, use of IHT power supply strongly recommended

* Height sensing for dry cuts

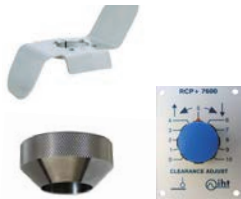
MACHINE CUTTING SYSTEM



Item No.	Description	Position
140700	M 4000 FIT+ Basic kit	A
140710	Guiding Rail kit 220+	B
140711	Guiding Rail kit 350	B
140712	Guiding Rail kit 500	B
100196	Linear Drive Cable, IHT 7500-2-901 (10/20/30m)	C
140110	Sensor Torch FIT+ three 220/45PMY DIG (cutting torch with digital torch controller)	D
140111	Sensor Torch FIT+ three 220/45A DIG (cutting torch with digital torch controller)	D

For heating and cutting nozzles see page 11

ACCESSORIES



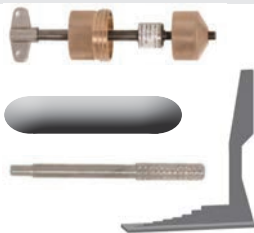
Item No.	Description
140522	Heat Shield FIT+ three
140551	Splash Protector
101158	Remote Control Potentiometer

SPARE PARTS



Item No.	Description
140300	Cutting Torch FIT+ three 220/45PMY (without torch controller)
140301	Cutting Torch FIT+ three 220/45A (without torch controller)
140502	FIT+ three Torch Controller DIG

TOOLS



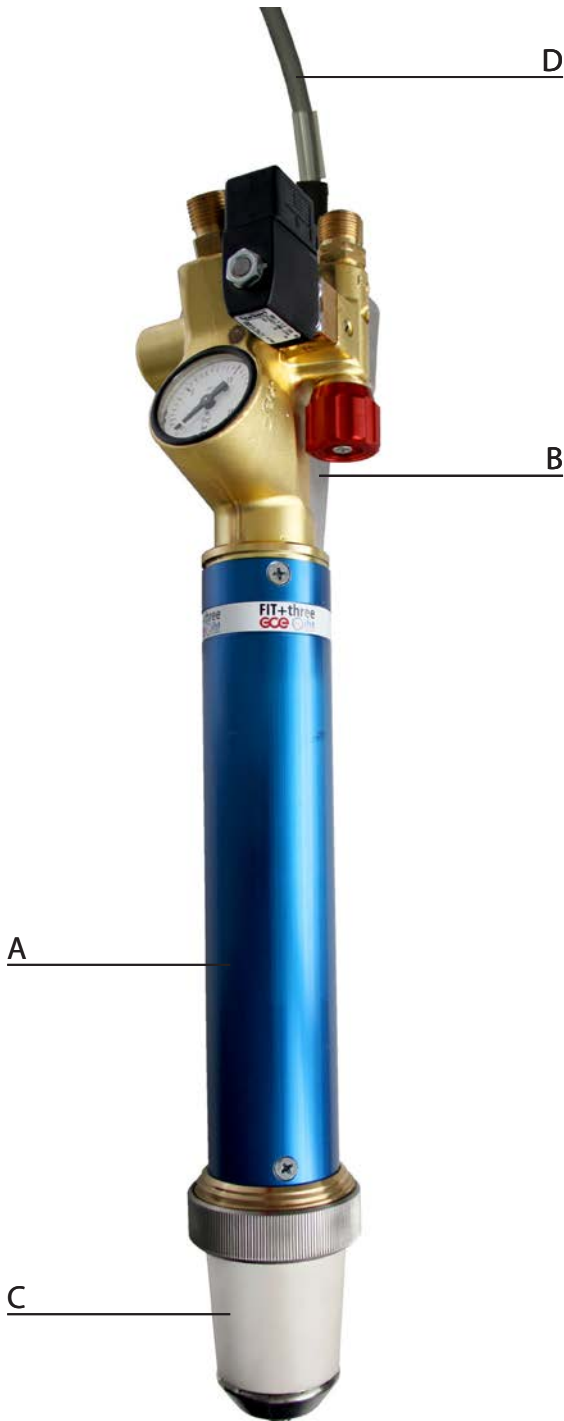
Item No.	Description
100775	Clearance Sensor Tool
100781	Clearance Sensor Ejector
100778	Pin Tool
100779	Torch Setting Tool

CONSUMABLES



Item No.	Description
140550	FIT+ three Clearance Sensor kit
100772	Sensor Holder
100773	Clearance Sensor type B 14/19
100774	O-Ring (5 pcs)
100780	Contact Pin (5 pcs)

FIT+ three



Oxy-Fuel Machine Cutting Torch with Height Sensing* and Integrated Ignition

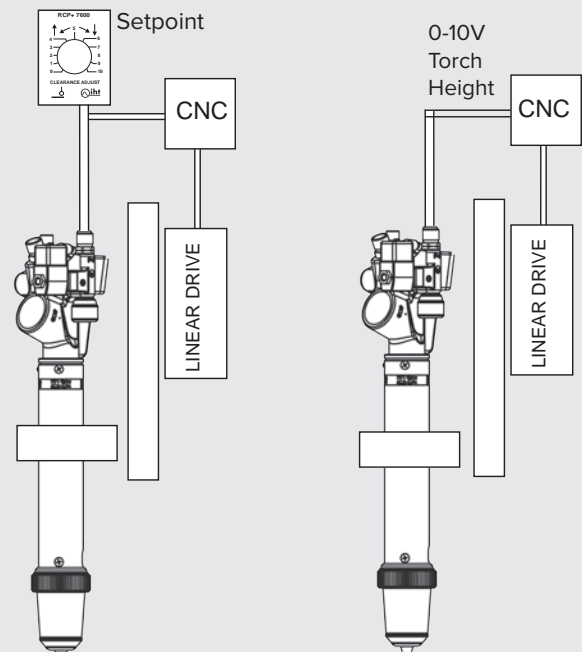
- Increased cutting machine performance thanks to unique IHT height sensing system
- Integrated torch electronics can easily be connected to CNC systems
- Torch Controller with two modes: Remote setpoint (position) or height measurement output
- Tool-Free nozzle and sensor system means reduced downtime
- Integrated control valves for heating oxygen and fuel gas for a quicker installation
- Built in pressure gauge for cutting oxygen improves cut quality
- Flashback detection for safe operation and longer life time

Application Fields

- Oxy-Fuel cutting machines with integrated z-axis and motor controller
- The Torch Controller, attached to the Sensor Torch handles all required signals shown under CNC connections
- Cutting sheets to 100 mm thickness used with active height sensor and up to 300 mm with Splash Protector

Deviation Mode

Height Mode



- | | |
|---|--|
| <ul style="list-style-type: none"> • In: Setpoint (0-10 V) • In: Ignite • Out: Deviation Position (0-10 V) • Out: In Position • Out: Error/Collision/Flashback • Power: 24 V DC/0,6 A | <ul style="list-style-type: none"> • In: Calibrate height • In: Ignite • Out: Torch Height (0-10 V) • Out: Error/Collision/Flashback • Power: 24 V DC/0,6 A |
|---|--|

* Height sensing for dry cuts

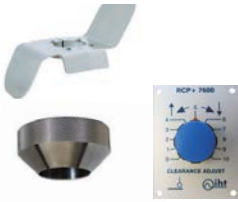
MACHINE CUTTING SYSTEM



Item No.	Description	Position
140100	Sensor Torch FIT+ three 220/45 PMY ANA (cutting torch with Torch Controller) Propane, Natural gas	A, B, C
140101	Sensor Torch FIT+ three 220/45 A ANA (cutting torch with Torch Controller) Acetylene	A, B, C

For heating and cutting nozzle see page 11

ACCESSORIES



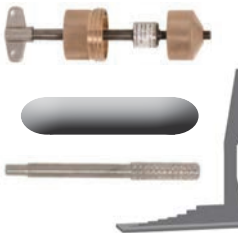
Item No.	Description	
140522	Heat Shield FIT+ three	
140551	Splash Protector	
101158	Remote Control Potentiometer+for TC ANA POSITION	
140524	TC Cable three ANA, one end with wires (2/5/10/20 m)	D

SPARE PARTS



Item No.	Description
140300	Cutting Torch FIT+ three 220/45PMY (without torch controller)
140301	Cutting Torch FIT+ three 220/45A (without torch controller)
140501	FIT+ three Torch Controller ANA

TOOLS



Item No.	Description
100775	Clearance Sensor Tool
100781	Clearance Sensor Ejector
100778	Pin Tool
100779	Torch Setting Tool

CONSUMABLES



Item No.	Description
140550	FIT+ three Clearance Sensor kit
100772	Sensor Holder
100773	Clearance Sensor type B 14/19
100774	O-Ring (5 pcs)
100780	Contact Pin (5 pcs)

FIT+ two



Oxy-Fuel Machine Cutting Torch with Integrated Ignition

- Automatic ignition system build into the torch
- Improved productivity of the Oxy-Fuel cutting machine due to use of high-speed cutting nozzles
- Fast installation and safe operation with integrated control valves
- Easier for machine operators to handle thanks to use of Tool-Free nozzle changing system
- High speed cutting nozzles for further improved cutting quality

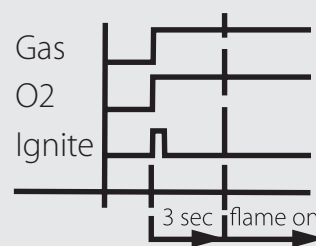
Application Fields

- Oxy-Fuel cutting of straight and shaped cuts in accordance with ISO 9013
- Oxy-Fuel cutting from 3 to 300 mm
- Hole piercing up to 150 mm
- Can be used with with different fuel gases
- Compatible with all cutting machines
- Suitable for new installations as well as retrofitting

Connections

- In: Ignite 24 V DC/1 mA, start ignition command
 - Out: Error
 - Power 24 V DC /1 A
 - Earth/Ground
- In: = from CNC
Out: = to CNC

Ignition Process



MACHINE CUTTING TORCH



Item No.	Description
140200	Cutting Torch FIT+ two 220/40 PMY
140201	Cutting Torch FIT+ two 220/40 A

For heating and cutting nozzles see page 11

SPARE PARTS / CONSUMABLES / TOOLS

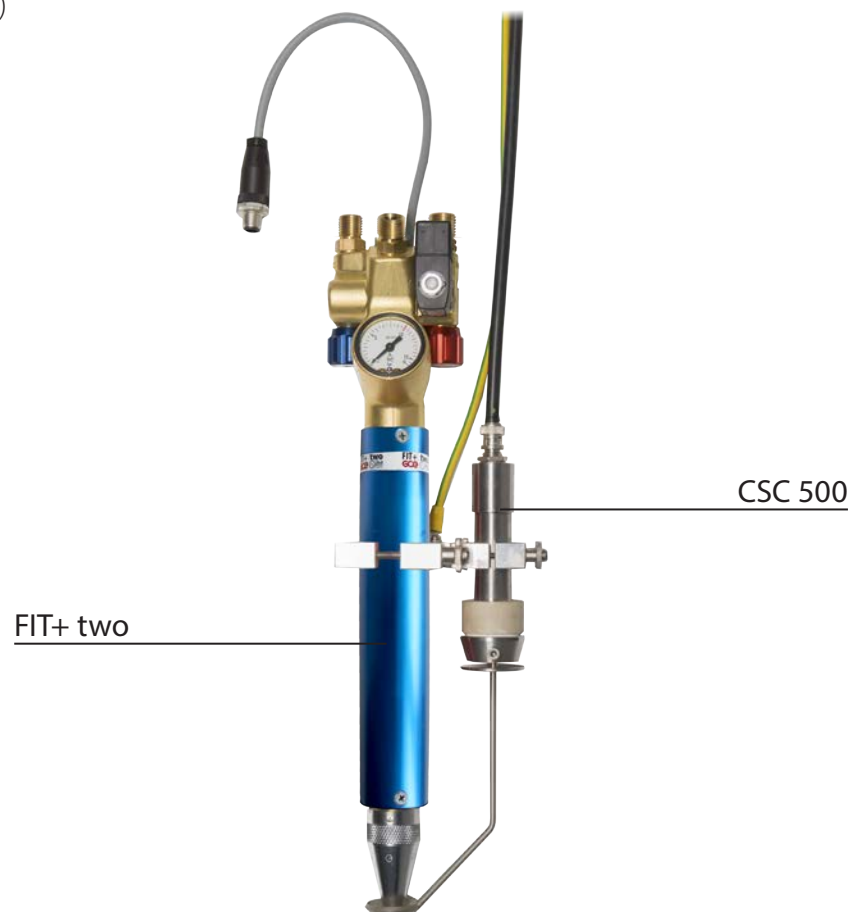
See page 11

ACCESSORIES



Item No.	Description
100383	CSC 500 Height Sensor system with Ring (Ø 34 mm)
100383	EXTENSION CABLE FIT+ two CABLE open, (10/20/30m)

Cutting torch FIT+ two and external height sensor system with ring electrode (Ø 34 mm)



FIT+



Oxy-Fuel Machine Cutting Torch

- Unique system for Oxy-Fuel machine cutting technology
- The product concept created based on the long-term partnership with the customers
- High productivity of Oxy-Fuel machine cutting process due to high-speed cutting nozzles
- Safe operations and high resistance against flashback ensured by integrated COOLEX® and axial injector with application of Resonator Mixing system in acetylene variants
- Working efficiency with minimized nozzle exchange time
- Easy to handle for machine operators because of Tool-Free nozzle changing system
- Nozzle fixation done manually by special bayonet system, without a wrench
- One type of heating nozzle for all fuel gases
- Extended lifetime of consumable nozzles
- Conform to ISO 5172

Application Fields

- Oxy-Fuel cutting of straight and shaped cuts in accordance with ISO 9013
- Oxy-Fuel cutting from 3 to 300 mm
- Hole piercing up to 150 mm
- Can be used with with different fuel gases
- Compatible with all cutting machines
- Suitable for new installations as well as retrofitting

MACHINE CUTTING TORCH



Item No.	Description
101170	Cutting Torch GCE FIT+ 220/32A
101172	Cutting Torch GCE FIT+ 320/32A
101174	Cutting Torch GCE FIT+ 110/32A
101171	Cutting Torch GCE FIT+ 220/32PMY
101173	Cutting Torch GCE FIT+ 320/32PMY
101175	Cutting Torch GCE FIT+ 110/32PMY

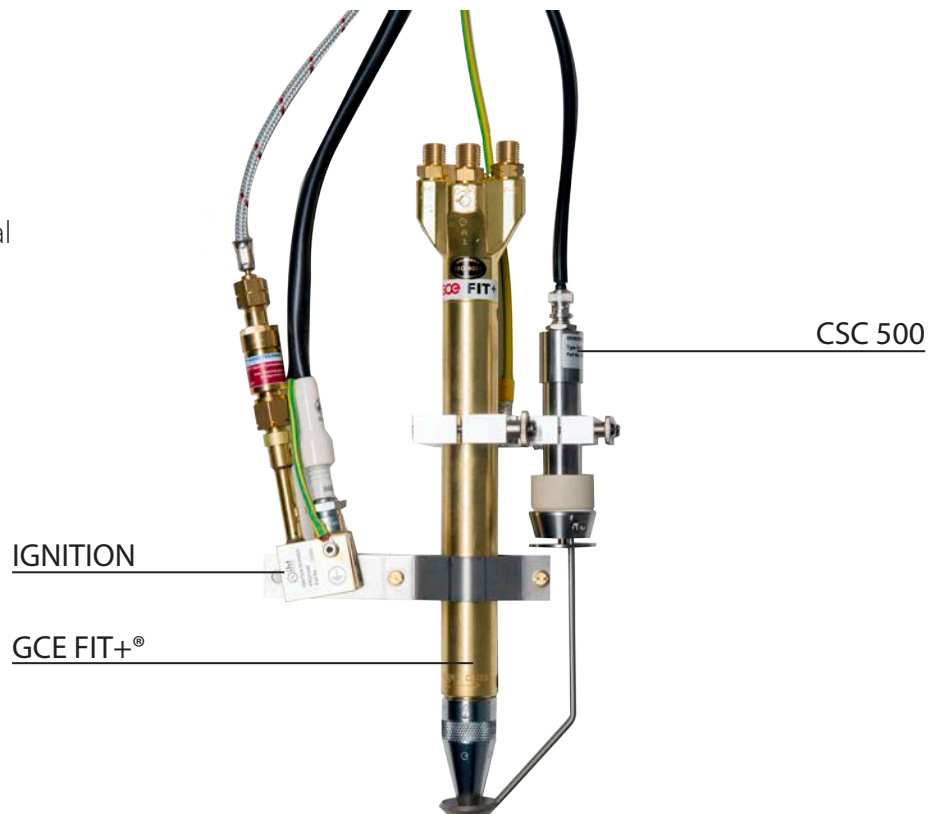
For heating and cutting nozzles see page 11

ACCESSORIES

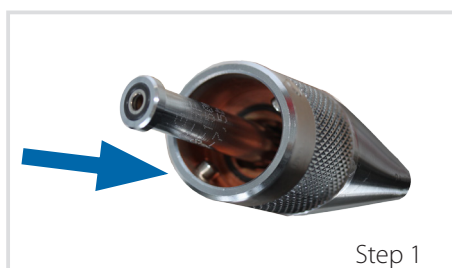
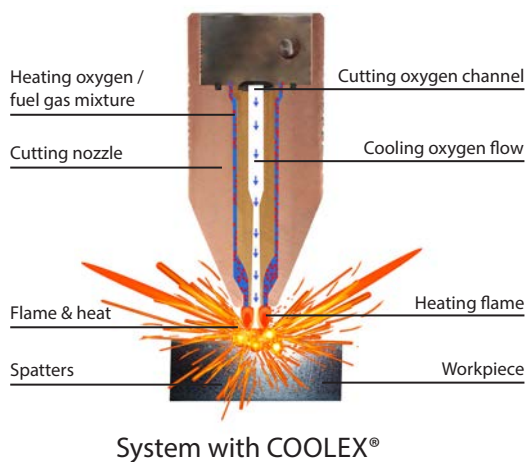
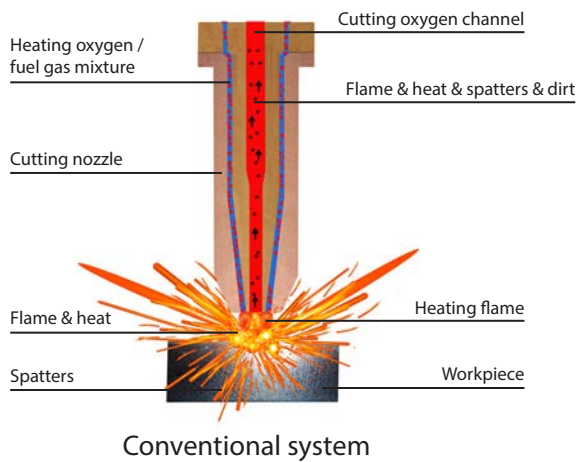


Item No.	Description
100383	CSC 500 Height Sensor system with Ring (Ø 34 mm)
100926	External Ignition system Propane
100925	External Ignition system Acetylene
101249	Strip Cutting Head
101321	Bevel Cutting Head

Cutting torch FIT+ and external height sensor system with ring electrode (Ø 34 mm) and external ignition



General



General Features and Benefits

- All torches and nozzles conform to ISO 5172
- High speed cutting nozzles with improved performance
- Increased cutting speed with Rapid Cutting oxygen curtain nozzles
- One type of heating nozzle for all fuel gases and all types of cutting nozzles

Integrated COOLEX® System

- Long torch lifetime
- Higher cutting quality with constant dimensions of the cutting oxygen channel
- Extends operational life of both cutting and heating nozzles

RMS - Resonator Mixing System in Acetylene Range

- Safe operation with axial spiral injector
- Constant flame power with homogenous mixture of fuel gas and heating oxygen

Tool-Free Nozzle Connection

- Single handed operation thanks to bayonet type connector
- Less time needed to change nozzles
- Savings in gas use as appropriately sized nozzle can be used for plate being cut

Gas Connections

- Cutting oxygen G3/8"
- Heating oxygen G1/4"
- Fuel gas G3/8"LH
- Adapters are available for other connections

3 Step Nozzle Change, Tool-Free

- Step 1
Place inner cutting nozzle into outer heating nozzle
- Step 2
Locate the pins of the outer heating nozzle in the grooves of the torch head
- Step 3
Manually turn the outer heating nozzle through 90° until the pins reach the end of the groove

CONSUMABLES AND SPARE PARTS



Item No.	Description	Heating Nozzle
100797	GSF Heating Nozzle 3-150 mm (A), 3-100 mm (PMY)	
101080	GSF Heating Nozzle 150 - 300 mm (A), 100 - 300 mm (PMY)	
100887	PSF High speed cutting nozzle PMY 3-6 mm	100797
100888	PSF High speed cutting nozzle PMY 7-15 mm	100797
100889	PSF High speed cutting nozzle PMY 15-25 mm	100797
100890	PSF High speed cutting nozzle PMY 25-40 mm	100797
100891	PSF High speed cutting nozzle PMY 40-60 mm	100797
100892	PSF High speed cutting nozzle PMY 60-100 mm	100797
101081	PSF High speed cutting nozzle PMY 100-150 mm	100797
101082	PSF High speed cutting nozzle PMY 100-200 mm	101080
101083	PSF High speed cutting nozzle PMY 200-250 mm	101080
101084	PSF High speed cutting nozzle PMY 250-300 mm	101080
101096	PRC Rapid cutting nozzle PMY 5-40 mm	100797
101097	PRC Rapid cutting nozzle PMY 5-70 mm	100797
100893	ASF High speed cutting nozzle A 3-5 mm	100797
100894	ASF High speed cutting nozzle A 6-10 mm	100797
100895	ASF High speed cutting nozzle A 10-25 mm	100797
100896	ASF High speed cutting nozzle A 25-40 mm	100797
100897	ASF High speed cutting nozzle A 40-60 mm	100797
100898	ASF High speed cutting nozzle A 60-100 mm	100797
100899	ASF High speed cutting nozzle A 100-150 mm	100797
101085	ASF High speed cutting nozzle A 150-230 mm	101080
101086	ASF High speed cutting nozzle A 230-300 mm	101080
101098	ARC Rapid cutting nozzle A 3-40 mm	100797
101099	ARC Rapid cutting nozzle A 3-70 mm	100797



Item No.	Description
101180	O-Ring kit for cutting and heating nozzles (10+10 pcs)
100269	Ring Electrode Ø 34 mm
100270	Ring Electrode Ø 60 mm

ACCESSORIES



Item No.	Description
101165	Flashback arrestor cutting oxygen G3/8"
101166	Flashback arrestor heating oxygen G1/4"
101167	Flashback arrestor fuel gas G3/8"LH
101164	Adjustment valve cutting oxygen G3/8"
101163	Adjustment valve heating oxygen G1/4"
101162	Adjustment valve fuel gas G3/8"LH

TOOLS



Item No.	Description
101181	Brass cleaning brush
101182	Cleaning needle for cutting oxygen channels



GCE Global Leader in Oxy-Fuel Technology

GCE is a world leading company in the field of Oxy-Fuel and Gas Control Equipment with over 100 years of experience in the handling of industrial, medical and specialty gases. The GCE Group has grown rapidly since its creation and now a leader in the European gas equipment industry. The Group's Headquarter is based in Malmö, Sweden. The major manufacturing centres are located in the Czech Republic, China and Germany. Worldwide the Group now employs in excess of 950 people who are all ready to fulfil the expectations of their customers worldwide.

The Group's product portfolio covers a wide variety of applications, from simple pressure regulators and torches for welding and cutting, to sophisticated gas supply systems for medical and electronic industry applications. Product design is based on knowledge and expertise that has been built up in Oxy-Fuel cutting over the years with the primary concerns being safety and reliability. GCE provides innovative solutions and complete customerservice.

“There is still significant potential to increase the efficiency of Oxy-Fuel cutting technology.”

Martin Roubicek
Business Development Manager

IHT Automation Focussing on Core Business

Since its creation, IHT Automation has always focused on the development of new solutions and the improvement of existing products so as to benefit its customers in the cutting industry. One area that always received special attention is the control of the height of the cutting torch. Whether cutting with Oxy-Fuel, Plasma or Laser, maintaining the correct distance between the torch and the work-piece is an often underestimated but critical factor for achieving the perfect cut.

IHT Automation realised the importance of this very early on and now relies on more than 40 years experience in the industry to ensure it provide its customers with the best technical advice and solutions. Great products combined with excellent service and unrivalled technical support makes IHT Automation your ideal partner.

“A higher level of integrated automation is the future of Oxy-Fuel cutting.”

Kurt Nachbargauer
Managing Director

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