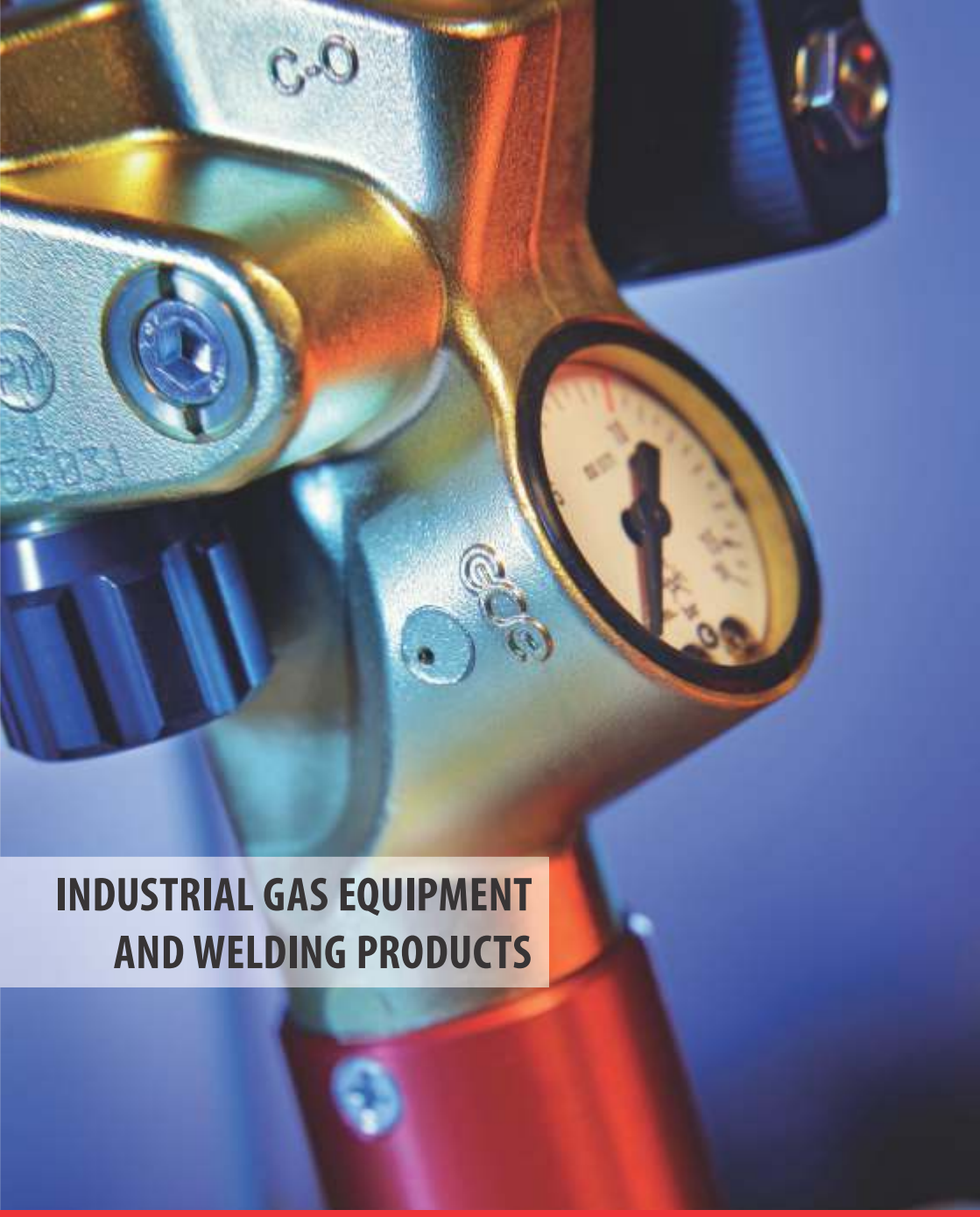


INDUSTRIAL GAS EQUIPMENT AND WELDING PRODUCTS

EDITION 1/2016

Security in action

GCE IN GLOBAL LEAD

GCE´s main business originally concentrated in the oxy-acetylene cutting and welding market, but with almost 100 years of experience in the handling of high pressure gases, the product range has grown rapidly. Today´s product portfolio fits a large variety of applications, from simple pressure regulators and blowpipes for welding and cutting to highly sophisticated gas supply systems for medical or electronics industry or analytical laboratory equipment.

GCE Group includes four business areas:
– Cutting & Welding
– Process Applications
– Medical
– High Purity

ORIGINS

The origins of GCE (Gas Control Equipment) go back as the beginning of the twentieth century when oxy-acetylene cutting and welding methods were first invented. GCE group as an independent entity was formed in 1987 through the merging of gas equipment activities by two of the world's leading industrial gas and welding equipment companies into one independent entity. The GCE Group has grown rapidly since its establishment and is leading the restructuring of the European gas-equipmen industry through mergers and acquisitions. hrough the years, GCE Group's R&D work has resulted in innovative solutions that have quickly become field standards.

A COMPLETE RANGE FOR CUTTING & WELDING

GCE Group is one of the world's leading producers of industrial regulators for cutting and welding. The range covers a broad spectrum of products, for different applications, that have been designed according to the requirements of most European standards such as DIN, Afnor, BSI and Nordic. The torch range includes products for heating, cutting, brazing and flame-cleaning applications designed in accordance with the preferences of individual markets and customers. Regulators, torches, nozzles and other products are also increasingly combined in sets and sold to users in a single package. GCE Group is a pioneer in the field of safety equipment and currently produces a comprehensive range of flashback arrestors and hose check valves. A range of nozzles, including the longlife Coolex® nozzle, completes GCE's Cutting & Welding range. GCE Group's ranges include various types of gas equipment enabling safe handling of gases in central gas supply systems and brewery equipment, to machine cutting products. We offer cylinder valves and combination valves, pressure control units, gas manifolds, outlet points, shut-off valves, alarm and safety units, high-pressure flexible hoses and accessories for different applications, gases, pressures and flow rates. All products have to meet demanding requirements for rugged durability, leak- proof sealing and overall safety. Uniquely qualifies in this area, GCE stands at the forefront of international development of these products.

GLOBAL LEADER IN OXY-FUEL TECHNOLOGY

With extensive experience in the development and production of machine cutting torches and cutting nozzles, GCE Group is a global leader in oxy-fuel cutting technology. The designof the products is based on GCE's extensive knowledge and expertise in the oxy-fule area.

CONTENT

PROGEN- SINGLESTAGE CYLINDER REGULATORS

Progen are a pressure regulators fully conforming to all paragraphs of International Standard ISO2503. The main focus during product design and manufacture was on providing excellent performance, robustness and durability and guaranteeing its uncompromised safety. The pogen regulators use a filter protected fully encapsulated heart valve, well proven over several generations of GCE regulators. The body is made of solid forged, high quality brass, polished and chemically stabilized. The zinc die-cast bonnet is protected by a double layer powder painting to guarantee corrosion resistance even in very aggressive environments. For operational safety the integrated Pressure Relief Valve, located on the rear of the body is designed to prevent end users from changing the factory setting.

These regulators are independently type-tested and certified by BAM Berlin (The German State Testing Institute) to work safely with up to 300 bar inlet pressure.

TECHNICAL DATA

Body	Forged Brass, chemically stabilized (acid bright dipped)
Bonnet	Die-cast Zinc alloy, chemically stabilized and powder painted
Diaphragm	Diam. 55 mm fabric-reinforced EPDM rubber
Heart Valve	Encapsulated unit, brass body sealed by PA or high-grade chloroprene rubber
Pressure Gauges	Triple Scale Non-bulkhead 63mm gauges, class 2,5%, scale calibrated in Bar
Inlet Stem & Nut	Brass, geometry complying to BS-341 standard
Safety Valve	Non-adjustable, plastic housing
Control elements	Ergonomic PA handwheel, captive pressure adjusting screw

Art.Nr.	Gas	Max Inlet Pressure	Outlet Pressure	Nominal Flowrate	ISO 2503 class	Inlet connection	Outlet connection	Pressure/Flow indication	Aprox weight
0783976	OXYGEN	300 bar	0-10 bar	30 m³/h	O3	G 5/8" RH M	G 3/8" RH	2 gauges (63 mm)	1.45 kg
0783977	OXYGEN	300 bar	0-20 bar	50 m³/h	O5	G 5/8" RH M	G 3/8" RH	2 gauges (63 mm)	1.45 kg
0783979	LPG	25 bar	0-4 bar	5 m³/h	P1	W21.8x1/14" LH	G 3/8" LH	2 gauges (63 mm)	1.35 kg
0783980	ACETYLENE	25 bar	0-1.5 bar	5 m³/h	A2	G 5/8" LH M	G 3/8" LH	2 gauges (63 mm)	1.45 kg
0783981	NEUTRAL (Ar/N/He)	300 bar	0-10 bar	30 m³/h	N3	G 3/4" RH M	G 3/8" RH	2 gauges (63 mm)	1.45 kg
0783982	NEUTRAL (Ar/N/He)	300 bar	0-20 bar	50 m³/h	N5	G 3/4" RH M	G 3/8" RH	2 gauges (63 mm)	1.45 kg
0783983	CO_2	200 bar	0-10 bar	30 m³/h	N	0.860x1/14" F	G 3/8" RH	2 gauges (63 mm)	1.45 kg
0783984	ARGON flow gauge	300 bar	N/A	3-30 l/min full scale	N10	G 3/4" RH M	G 3/8" RH	2 gauges (63 mm)	1.45 kg
0783985	CO_2flow gauge	200 bar	N/A	3-30 l/min full scale	N10	0.860x1/14"	G 3/8" RH	2 gauges (63 mm)	1.45 kg
0783986	ARGON - Tube flowmeter	300 bar	N/A	3-30 l/min	N10	G 3/4" RH M	G 3/8" RH	1 gauge + flowmeter	1.65 kg
0783987	CO_2- Tube flowmeter	200 bar	N/A	3-30 l/min	N10	0.860x1/14" F	G 3/8" RH	1 gauge + flowmeter	1.65 kg
0783988	HYDROGEN	300 bar	0-10 bar	30 m³/h	H3	G 5/8" LH M	G 3/8" LH	2 gauges (63 mm)	1.42 kg

S2+ MULTISTAGE - HEAVY DUTY DOUBLESTAGE CYLINDER REGULATORS

GCE multi-stage regulators are designed to provide accurate, luctuation free delivery for precision applications such as machine cutting or laboratory use. The irst stage reduces the inlet pressure by over 90% and the large second stage diaphragm ensures accurate delivery pressure. GCE multistage regulators are precision built to latest EN ISO 2503 and EN ISO 7291 standards to provide maximum accuracy and safety.

These regulators have the additional feature of being able to pipe away gases from the relief valve port, and comply with the stringent requirements of EN ISO 7291 even for strict manifold application.

TECHNICAL DATA

Body:	Forged Brass, chemically stabilized and gold powder-painted
First stage Bonnet:	Forged Brass, chemically stabilized and powder painted
Second stage Bonnet:	Die-cast Zinc alloy, chemically stabilized and powder painted
First stage Diaphragm:	Diam. 40 mm, pre-shaped stainless steel
Second stage Diaphragm:	Diam. 82 mm EPDM fabric-reinforced rubber
Heart Valves:	Brass body sealed by PA (first stage) or high-grade chloroprene rubber (second stage)
Pressure Gauges:	Safe design, 63 mm gauges, Triple scales, accuracy class 2,5%
Inlet Stem & Nut:	High-tensile brass, geometry complying with BS-341 standard
Safety Valves:	On both regulator stages, non-adjustable,
Control elements:	Plastic contol knob + captive pressure adjusting screw
Setting:	Ergonomic PA control knob, adjustable limitation of P2 max

Art. Nr.	Gas	inlet pressure	Outlet pressure	Nominal flowrate	ISO 2503 class	Inlet connection	Outlet conection	Pressure/flow indication	Approx. weight
N0772028	OXYGEN	230 bar	0-10 bar	30 m^3/h	O3	G5/8" RH M	G 3/8" RH	2 gauges (63 mm)	2,55 kg
N0772029	ACETYLENE	25 ba	0-1.5 bar	5 m^3/h	A2	G5/8" LH M	G 3/8" LH	2 gauges (63 mm)	2,55 kg
N0772030	NEUTRAL (Ar/N/He)	230 bar	0-10 bar	30 m^3/h	N3	G5/8" RH M	G 3/8" RH	2 gauges (63 mm)	2,55 kg
N0772031	CO_2	200 bar	0-10 bar	30 m^3/h	N	0.860x1/14" F	G 3/8" RH	2 gauges (63 mm)	2,55 kg
N0772032	ARGON low gauge	230	N/A	3-30 l/min full scale	N10	G5/8" RH M	G 3/8" RH	2 gauges (63 mm)	2,55 kg
N0772033	CO_2 flow gauge	200	N/A	3-30 l/min full scale	N10	0.860x1/14" F	G 3/8" RH	2 gauges (63 mm)	2,55 kg
N0772034	HYDROGEN	230 bar	0-10 bar	30 m^3/h	H3	G5/8" LH M	G 3/8" LH	2 gauges (63 mm)	2,55 kg

SPECIAL PURPOSE REGULATORS

"M600" SERIES

"M600" series – improved delivery pressure control is achieved from two stage regulation. Typical applications are those left unattended for periods of time such as cable pressurization, chemical and laboratory. Range up to 41 bar delivery pressure.

Art. Nr.	Type	Gas	Entry	Inlet (bar)	Outlet (bar)	Flow m^3/h
0762350	M 600	Inert	bottom	300	41	108
0762359	M 600	Oxygen	bottom	300	41	100
0762372	M 600	Co2	bottom	200	41	80
0762368	M 600	Hydrogen	bottom	300	41	100

PRODUCT VARIANTS FOR JET CONTROL 600

Art. Nr.	Gas	Inlet pressure	Outlet pressure	Flowrate	Inlet connection	Outlet connection	Approx. weight
0766022	OXYGEN	230 bar	206 bar	180 m^3/h	G 5/8" RH Male (BSP 341 #3) - side	0.860x1/14" + 6mm nipple	1.75 kg
0766024	OXYGEN	230 bar	100 bar	150 m^3/h	G 5/8" RH Male (BSP 341 #3) - side	0.860x1/14" + 6mm nipple	1.75 kg
0766026	NEUTRAL (Ar/N/He)	230 bar	206 bar	180 m^3/h	G 5/8" RH Male (BSP 341 #3) - side	0.860x1/14" + 6mm nipple	1.75 kg
0766028	NEUTRAL (Ar/N/He)	230 bar	100 bar	150 m $^3/h$	G 5/8" RH Male (BSP 341 #3) - side	0.860x1/14" + 6mm nipple	1.75 kg
0766030	HYDROGEN	230 bar	206 bar	180 m^3/h	G 5/8" Male LH (BSP 341 #4) - side	0.860x1/14" + 6mm nipple	1.75 kg
0766032	HYDROGEN	230 bar	100 bar	150 m^3/h	G 5/8" Male LH (BSP 341 #4) - side	0.860x1/14" + 6mm nipple	1.75 kg
0762867	OXYGEN	230 bar	100 bar	150 m^3/h	G 5/8" Male (BSP 341 #3) - bottom	0.860x1/14" + 6mm nipple	1.65 kg
0762511	OXYGEN	230 bar	170 bar	160 m^3/h	G 5/8" Male (BSP 341 #3) - bottom	0.860x1/14" + 6mm nipple	1.65 kg
0762865	NEUTRAL (Ar/N/He)	230 bar	100 bar	150 m^3/h	G 5/8" Male (BSP 341 #3) - bottom	0.860x1/14" + 6mm nipple	1.65 kg
0762866	NEUTRAL (Ar/N/He)	230 bar	170 bar	160 m^3/h	G 5/8" Male (BSP 341 #3) - bottom	0.860x1/14" + 6mm nipple	1.65 kg

PRODUCT VARIANTS FOR MR60

Art. Nr.	Gas	Inlet pressure	Outlet pressure	Flowrate	Inlet connection	Outlet connection	Pressure/flow indication	Approx. weight
0762918	OXYGEN	200 bar	15 bar	180 m^3/h	G 5/8" RH (M)	G 1" RH + 8mm hose adaptor	2 gauges (50 mm)	4,75 kg
0762920	OXYGEN	200 bar	50 bar	580 m^3/h	G 5/8" RH (M)	G 1" RH + 8mm hose adaptor	2 gauges (50 mm)	4,75 kg
0762922	NEUTRAL (Ar/N/He)	200 bar	15 bar	180 m^3/h	G 5/8" RH (M)	G 1" RH + 8mm hose adaptor	2 gauges (50 mm)	4,75 kg
F272100	NEUTRAL (Ar/N/He)	200 bar	50 bar	580 m^3/h	G 5/8" RH (M)	G 1" RH + 8mm hose adaptor	2 gauges (50 mm)	4,75 kg
0762926	HYDROGEN	200 bar	15 bar	180 m^3/h	G 5/8" LH (M)	G 1" RH + 8mm hose adaptor	2 gauges (50 mm)	4,75 kg
0762928	HYDROGEN	200 bar	50 bar	580 m^3/h	G 5/8" LH (M)	G 1" RH + 8mm hose adaptor	2 gauges (50 mm)	4,75 kg

∗ M-male, F-female

∗∗ The 230 bar inlet pressure may be used instead of 200 bar, no risk of damage.

ECO SAVER

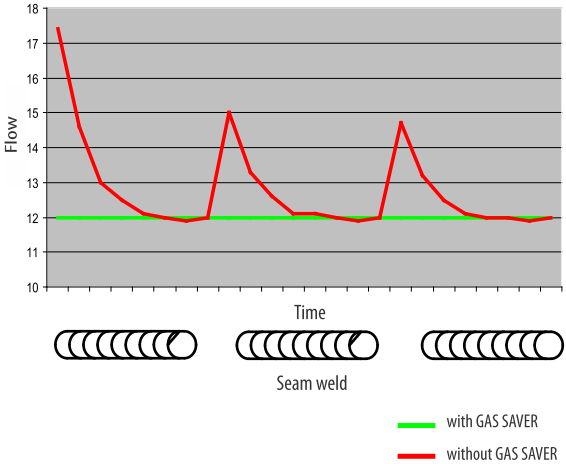
The ECO SAVER device reduce the waste of gas especially in case of tanon-continues welding process.

Argon / CO_2 regulator with flow meter and integrated gas saver function

Functions:

- Cylinder regulator - 300 bars inlet pressure to 30 l/min
- Reduce the inlet pressure from 300 bar in two stages
- Saves gas during inlet pressure changes (consumption of cylinder)
- Saves gas during flow changes (non-continues welding)
- Available with connections for most markets in Europe

Compare of regulator with and without GAS SAVER



Technical Data

ECO SAVER

Inlet pressure	300 bar
Outlet pressure	3-30l/min

The ECO SAVER keeps a constant level of the gas pressure on the downstream side at the end and beginning of each weld. This prevents that pressure and flow-surges are created in the pipe line system. The pressure and flow-surge create gas waste and can cause a poor weld.
The gas saver device eliminates all mentioned spurious effects.

ECO SAVER

Art. N	Gas	Inlet connection	Outlet Connection
9615600	Ar/CO_2	W21,8×1/14"	G1/4"
9615610	Ar/CO_2	G3/4"	G1/4"
9615620	Ar/CO_2	G5/8"	G3/8"
9615630	Ar/CO_2	G5/8"	G3/8"
9615640	Ar/CO_2	W24,32×1/14"	G3/8"
9615650	Ar	Ø24,5W×1/14 EXT	G3/8"
9615660	Ar/CO_2	SI21,7×1,814	M12x1"
9615670	Ar	G1/2"	G1/4"
9615600	CO_2	W21,8×1/14"	G1/4";G3/8"

Gas Saver GS40

Art. No	Gas	Inlet Conn	Outlet Conn	Material
F2131009	Ar/CO_2	G3/8"	G3/8"	Al, Bon. ZN/Al
	2		"	
	2			

SAFETY EQUIPMENT

If using high quality equipment kept in good condition and if such equipment is used properly maintaining all health and safety rules, oxy-fuel cutting and heating equipment is safe to handle. There is no substitute for proper training, safety procedures and adequate caution among those that operate oxy-fuel equipment. The right torch, nozzle and a stable source of gas as well as their professional handling is essential but still may not be sufficient. Daily practice shows that Backfire and Flashbacks not only may happen but happen quite frequently. Extra hardware in the form of reliably working flashback arrestors provides an additional safety barrier protecting the cutting/welding operator and surrounding property against health and safety risks and material damages.

NATURE OF OXY-FUEL RISKS

In the course of proper operation the highly flammable mixture of gases is precisely mixed in the injector, mixer or directly in the cutting nozzle and then ignited and fully combusted right and only at the cutting / welding nozzle orifice. In reality the equipment may get damaged or worn, the gas supply pressure unstable or skills and concentration of the operator not reach necessary levels. Any of these reasons and several others may initiate a chain of events resulting in an accident. The most common mishaps are as follows:

BACKFLOWING

Backflow is a dangerous situation whereby oxygen is pushed into the flammable gas hose (or vice versa) creating a highly flammable / explosive gas mixture inside the flexible hoses. A damaged injector or mixer or – more often - clogged or blocked welding tip or damaged cutting nozzle can also cause a change of inner pressure conditions in the system resulting in backflow. Another case is where the reverse flow of a gas occurs when one cylinder runs out during operation, creating an imbalance of pressure in the system. The non-return valve units – both in check valves and/or flashback arrestors are the only devices able to minimize this serous risk.

FLASHBACK

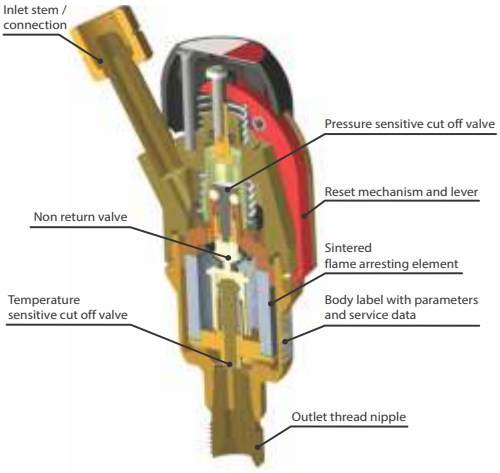
A flashback is a momentary or sustained retrogression of the flame upstream of the mixer, usually in the torch or hoses. This is a potentially dangerous situation, particularly if the flame reaches the hoses, where an explosion will occur, causing a rupture or separation of the hose.

SUSTAINED BACKFIRE

Sustained backfire is the continuous burning of the flame back inside the torch, usually at the mixer or injector. Flames can also travel further upstream and in extreme cases can reach the regulator and gas cylinders. Sustained backfires are often accompanied by a hissing or squealing sound and/or a smoky, sharp-pointed flame. The user should immediately close all torch valves to avoid damage or injury. If a sustained backfire continues to burn without closing torch valves, severe damage to the torch, as well as an increased risk of fire, would result.

FLASHBACK ARRESTORS

Flashback arrestors (FBAs) are common safety devices that stop or impede the progress of a flame upstream of the insertion point, avoiding back flow and build up of explosive mixtures inside of hoses and can protect the system in case of fire and stop pressure wave in the gas lines. Different FBA provides a different combination of basic safety features:



NON-RETURN VALVE (NRV)

Device which prevents the passage of gas in the opposite direction to normal flow. NRV is an essential unit preventing gas back flow.

FLAME ARRESTOR (FA)

Unit designed to extinguish fire and stop burning propagation by high heat dissipation when passing internal FBA sintered filter. A negative feature of every sintered Flame Arresting filter is flow restriction and pressure drop which gets worse when the filter gets clogged by gas impurities or burning products.

TEMPERATURE-SENSITIVE CUT-OFF VALVE (TV)

Device which stops gas flow if the surrounding or internal temperature reaches a specific level. The flow is stopped by a spring valve actuated by the melting of a thermal fuse and is not resettable.

PRESSURE SENSITIVE CUT-OFF VALVE (PV)

Device which stops the gas flow in case of a reverse-pressure wave travelling upstream through the system towards FBA. The pressure sensitive valve on a GCE FBA is resettable.

Check valves and FBA are not designed to substitute proper practice for safe operation. Thorough training and 100% focus on operation is irreplaceable. All the same a flashback arrestor – if properly chosen and installed effectively prevents a flashback from invading the gas supply system or cylinder.

SG -2 FUNCTION FLASHBACK ARRESTORS

SG2 is robust but lightweight torch flashback arrestor specially designed for torch fitting. Its all-brass design and high-grade soft sealing elements makes FR20 fully compatible with all common technical gases.
The unit incorporates the following features

- FA SINTERED FLASH ARRESTOR element to quench a flashback.
- NV NON-RETURN VALVE to prevent reverse flow of gases.

High capacity sintered metal filter prevents foreign matter entering the unit but guarantees capacity enough for all manual and medium-duty machine cutting applications. All FR20 flashback arrestors conform to EN 730

Art. Nr.	Gas	Application	Safety functions	Max operation pressure	Connection thread	Weight
0870326	OXY Flashback Arrestor SG-2 T OXY G1/4"RH	Torch mounted	2-functions - NRV, FA	10 bar	G 1/4" RH	0.13 kg
0870327	FUEL Flashback Arrestor SG2 T FUEL G1/4"LH	Torch mounted	2-functions - NRV, FA	5 bar*	G 1/4" LH	0.13 kg
081910	OXY Flashback Arrestor SG-2T OXY G3/8"RH	Torch mounted	2-functions - NRV, FA	10 bar	G 3/8" RH	0.13 kg
081960	FUEL Flashback Arrestor SG2 T FUEL G3/8"LH	Torch mounted	2-functions - NRV, FA	5 bar*	G 3/8" LH	0.13 kg

* ACE / 1.5 bar

SG-3 FUNCTION FLASHBACK ARRESTORS

The SG 3 flashback arrestors are basic models of 3-function FBA designed to be mounted on the regulator side. Flow capacity of SG 3 is sufficient for a whole range of manual cutting or welding applications and even for basic machine cutting up to 200mm. these arrestors fully comply with EN730 and ISo5175. FR34 offers three safety functions.

- FA Sintered flame arresting element.
- NV Non return valve to prevent reverse flow of gases.
- TV thermal trip device, activated by heat to permanently cut off gas supply.

Art. Nr.	Gas	Application	Safety functions	Max operation pressure	Connection thread	Weight
0764470	OXY Flashback Arrestor FR-34R OXY G3/8" RH	Regulator mounted	3-functions - NRV, FA, TV	10 bar	G 3/8 RH	0.16 kg
0764471	FUEL Flashback Arrestor FR-34R FUEL G3/8" LH	Regulator mounted	3-functions - NRV, FA, TV	5 bar*	G 3/8 LH	0.16 kg

* ACE / 1.5 bar

SG5 - 5 FUNCTION HIGH FLOW FLASHBACK ARRESTORS

A regulator mounted safety device suitable for all welding and cutting operations, fully complying with EN730, this „lift to reset" unit incorporates the following features:

- FA Sintered lame arresting element
- NV Non return valve to prevent reverse low of gases
- PV Pressure trip device, activated by pressure wave accompanying a lashback
- TV Thermal trip device, activated by heat to permanently cut of the gas supply
- Lever lifts up in the event of a Flashback & Reset mechanism clearly advises for the unit activation, by pressing down the lever back to its normal position.

Art. Nr.	Gas		Safety functions	Max operation pressure	Connection thread	Weight
0764458	OXY	FBA SG5 OXY G1/4" RH	5-functions**	11 bar	G 1/4" RH	0.55 kg
0764457	OXY	FBA SG5 OXY G3/8" RH	5-functions**	10 bar	G 3/8" RH	0.55 kg
0764456	FUEL	FBA SG5 FUEL G3/8" LH	5-functions**	5 bar*	G 3/8" LH	0.55 kg

* ACE / 1.5 bar
** NRV, FA, TV, PV
Regulator mounted

MK 3A/4/5 COMBINED WELDING & CUTTING TORCH FOR MEDIUM DUTY APPLICAT IONS

The GCE MK3A /4/5 is a high pressure, sturdily constructed and well balanced welding and cutting torch. Each component (shank, mixer, cutting attachment) is inter-changeable with other leading makes of type 3/4/5 equipment.
It has front mounted colour coded control valves, employing stainless valve spindles fitted with both 'O' ring and nylon seals; providing fine adjustment and leak-free conditions. The shank is common to both welding and cutting heads, the same quick positive positioning and leak-free means of attachment being used for both. GCE torches and nozzles conform to EN ISO 5172.

WELDING AND HEATING

Designed for welding work from 18swg to 8 mm thickness using type 3/4/5 swaged nozzles sizes 1 - 25. The mixer seats on serrated toothed faces allowing the operator a selection of positive nozzle positioning through 360°. Also can be used for heating, with either acetylene or propane heating nozzles, together with a heating neck.

CUTTING

The cutting head is nozzle mixing, enabling the operator to use either acetylene or propane fuel gases by fitting the appropriate nozzle. A range of ANM and PNM nozzles are available for clean efficient cutting of material thickness from sheet metal to 150 mm (6") using both acetylene and propane fuel gas. It's versatility allows gouging, flame cleaning etc., to be supplied to customer's requirements.

PROPANE / LPG / BMCG SUPER HEATING

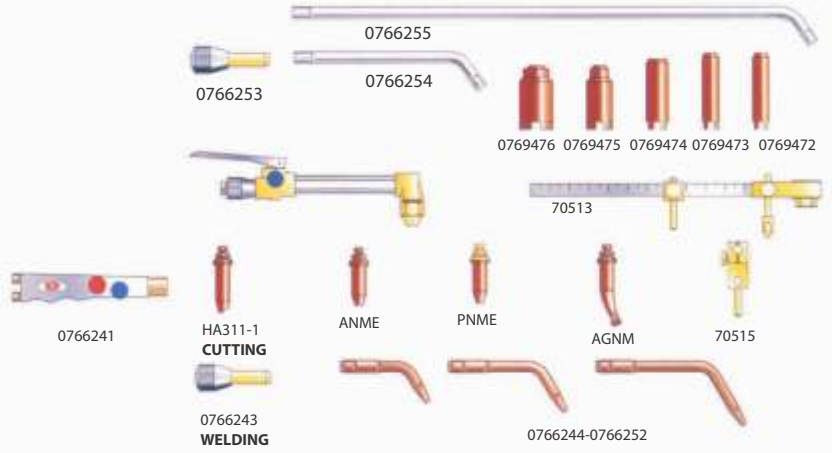
Using a propane super heating mixer and 255 mm (10") or 710 mm (28") stainless steel super heating neck an intense heat output of up to 180 kW (600,000 Btu/H) is obtained. Ideal for heating castings and similar large articles.

TECHNICAL DATA

Hose connection	G3/8"
Welding capacity	8 mm
Cutting capacity	150 mm
Welding nozzles	Type 2/3 Swaged Welding Nozzles Sizes 1-25
Cutting nozzles	ANM (Acetylene) Cutting Nozzles
	PNM (Propane) Cutting Nozzles
	HA311-1 Sheet Metal Nozzles
	AGNM Gouging Nozzles
	ARCNM Rivet Cutting Nozzles
Super heating nozzles:	Super Heating Nozzles (Propane) Sizes 1H-5H

Art Nr.	Description
0766241	MK 3A/4/5 shank
0766243	MK 3A welding mixer
0766253	MK 3A/4/5 propane superheating mixer
0766242	MK 3A/4/5 cutting attachment
0766254	255 mm (10") stainless steel super heating neck
0766255	710 mm (28") stainless steel super heating neck

TYPICAL ASSEMBLIES - MK 3A/4/5 SYSTEM



MK 3A/4/5 COMBINED WELDING & CUTTING OUTFIT

Art Nr	Descriptions	Quantity
77000	MK 3A/4/5 combined outfit	1

CONSISTING OF

- GCE MK 3A/4/5 Shank
- Cutting Attachment
- MK 3A welding mixer
- Type 3 Swaged Welding Nozzles Size 2, 5, 7, 10, 13, 18, 25
- 1/16" ANM Cutting Nozzle
- 3/64" ANM Cutting Nozzle
- Nozzle Cleaner Outfit
- Headnut Spanner
- Data Card
- Plastic Carrying Case

UNIVERSAL NM 250 AND NOZZLES

UNIVERSAL NM250

GCE cutters are engineered from solid brass stamping with silver soldered joints and provide lightweight, well balanced, durable cutter giving reliability. With rear mounted valves and cutting lever and round handle. Cutter employs the nozzle mix principle, in which the combustible gas mixing is confined to the cutting nozzle. This results in a cutter which is highly resistant to backfire and flashback. A wide range of accessories are available for this cutter, such as attachments for heating, gouging, sheet metal nozzles, circle attachments, etc., to give maximum possible versatility. GCE torches and nozzles conform to EN ISO 5172.

TECHNICAL DATA

Hose connections	G3/8" – G3/8"LH
Cutting capacity	300mm(12")
Cutting nozzles	ANME(Acetylene) cutting nozzles
	PNME(Propane) cutting nozzles
	HA311-1 sheet metal nozzles
	AGNM Gouging nozzles
Gas	Acetylene or Propane

Art Nr.	Description	Head Angles	Weight
0766225	460mm(18")	90°	1.25Kg
0766226	700mm(27")	90°	1.4Kg
0764510	855mm(33")	90°	1.5Kg
0764511	1150mm(45")	90°	1.8Kg
0870398	1500mm(59")	180°	2.0Kg

WELDING TORCH JETSOUD

This torch is light and easy to handle; it has been studied specifically for refrigerator technicians and installers of airconditioning equipment, who require a torch being easy to handle for reaching narrow of difficult points. JETSOUD torch allows reducing the movement of the operator's wrist. People who have already used the JETSOUD torch appreciate its perfect flame regulation also with low flow-rates, thanks to the possibility of regulating oxygen flow by means of a pin (microregulation). This means that the attachment and the knob are on the same axis.

Art. Nr.	Fuel gas	Connections	Lenght	Weight
0766277	Acetylene	G1/4" / G1/4" LH	360 mm	0,51 kg
0767904	Propane	G1/4" / G1/4" LH	360 mm	0,51 kg
0764572	Acetylene	G1/4" / G1/4" LH	360 mm	0,62 kg

JETSOUD ACCESSORIES

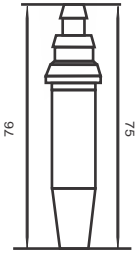
No	Product	Pack	Position
548800100112P	Nozzles for welding (6 pcs) - Acetylene	1 piece	2
548800100122P	Nozzles for welding (6 pcs) - Propane	1 piece	2
9429810	Double flame attachment	1 piece	3
A290270EMB	Flexible welding attachment 160 l/h	1 piece	4
A290271EMB	Flexible welding attachment 250 l/h	1 piece	4
A290272EMB	Flexible welding attachment 315 l/h	1 piece	4

CUTTING NOZZLES

ANM SHORT PATTERN NOZZLES

6 heating holes, 76mm long used for Acetylene gas

Art Nr.	Range	Size	Qty
0768554	3-6mm	Size 1/32"	1
0768555	5-12mm	Size 3/64"	1
0768556	10-75mm	Size 3/64"	1
0768557	70-100mm	Size 5/64"	1
0768558	90-150mm	Size 3/32"	1
0768559	190-300mm	Size 1/8"	1



PNM SHORT PATTERN

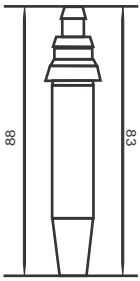
9 spline inner, 76mm long, used for Propane Gas

Art Nr.	Range	Size	Qty
0768880	3-6mm	Size 1/32"	1
0768865	5-12mm	Size 3/64"	1
0768879	10-75mm	Size 1/16"	1
0768878	70-100mm	Size 5/64"	1
0769481	90-150mm	Size 3/32"	1
0769482	190-300mm	Size 1/8"	1

ANME LONG PATTERN NOZZLES

6 heating holes, 88mm long, used for Acetylene gas

Art Nr.	Range	Size	Qty
0768670	3-6mm	Size 1/32"	1
0768635	5-12mm	Size 3/64"	1
0768599	10-75mm	Size 1/16"	1
0768536	70-100mm	Size 5/64"	1
0768662	90-150mm	Size 3/32"	1
0768698	140-200mm	Size 7/94"	1
0769041	190-300mm	Size 1/8"	1



PNME LONG PATTERN

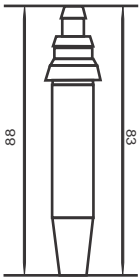
9 spline inner, 88mm long, used for Propane Gas

Art Nr.	Range	Size	Qty
0769494	3-6mm	Size 1/32"	1
0769495	5-12mm	Size 3/64"	1
0769496	10-75mm	Size 1/16"	1
0769497	70-100mm	Size 5/64"	1
0769498	90-150mm	Size 3/32"	1
0769499	140-200mm	Size 7/94"	1
0769501	190-300mm	Size 1/8"	1

ANME COOLEX NOZZLES

6 heating holes, 88mm long, used for Acetylene gas

Art. Nr.	Range
0768691	AGN 3-10 COOLEX
0768692	AGN 10-25 COOLEX
0768693	AGN 25-40 COOLEX
0768694	AGN 40-60 COOLEX
0768695	AGN 60-150 COOLEX



PNME COOLEX NOZZLES

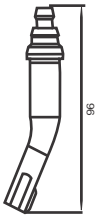
9 heating holes, 83mm long, used for Propane gas

Art. Nr.	Range
0768652	PNME 3-10 COOLEX
0768653	PNME 10-25 COOLEX
0768696	PNME 25-40 COOLEX
0768697	PNME 40-60 COOLEX
0768654	PNME 60-150 COOLEX

AGNM GOUGING NOZZLES

96 mm long, Acetylene.

Art Nr	Range	Size
0768698	6- 8mm width X 3 - 9 mm depth	Size 13 – 1/32"
0768661	8-11mm width X 6 -11mm depth	Size 19 – 3/64"
0768699	9-12mm width X 9 -12mm depth	Size 25 – 1/16"

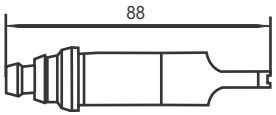


PGNM GOUGING NOZZLES

96 mm long. Fuel gas: Propane

Art Nr	Range	Size
0870238	6- 8mm width X 3 - 9 mm depth	No6
0870239	8-11mm width X 6 -11mm depth	No8
0870240	10-12mm width X 9 -12mm depth	No10

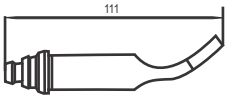
HA311-1 SHEET METAL NOZZLE



88mm long, Acetylene

Art Nr	Range	Size	Quantity
0768641	0 -3 mm	0.3	1

ARCNM RIVET CUTTING NOZZLE



111mm long, Acetylene

Art Nr	Range	Size	Quantity
0769230	Ø 50mm	1/16	1

SUPERHEATING NOZZLES

For use on type 3/4/5 blowpipe in conjunction with heavy duty mixer 0766253 and necks 0766254 or 0766255. Can also be used with NM250 in conjunction with superheating adaptor 0766256.
Fuel gas: Propane

Art. Nr.	Size	Output	Quantity
0769472	1H	72 000 - 163 000 Btu/H	1
0769473	2H	102 000 - 188 000 Btu/H	1
0769474	3H	183 000 - 361 000 Btu/H	1
0769475	4H	236 000 - 406 000 Btu/H	1
0769476	5H	250 000 - 618 000 Btu/H	1
0766256	Superheating adaptor for NM Cutters		1

For heating and setting data see please page 39.

CUTTING - ACETYLENE - MK 3/A & 18/90 CUTTERS (ANM NOZZLES)

Material Tk'ness mm	in	Nozzle size	Operating pressure Oxygen bar	PSI	Acetylene bar	PSI	Gas consumption Cutting Ox l/h	ft³/h	Heating Ox l/h	ft³/h	Acetylene l/h	ft³/h	Approx. Cutting Speeds mm/m	in/m
Sheet		ASNM	1,5	20	0,14	2	800	28	85	3	85	3	-	-
6	1/4	1/32	1,8	25	0,14	2	800	28	480	15	400	14	510	20
13	1/2	3/64	2,1	30	0,21	3	1900	67	570	20	510	18	480	19
25	1	1/16	2,8	40	0,14	2	4000	140	540	19	470	17	400	16
50	2	1/16	3,2/3,5	45/50	0,14	2	4500	160	620	22	560	19	300	12
75	3	1/16	3,5/4,2	50/60	0,14	2	4800	170	680	24	620	22	205	8
100	4	5/64	3,2/4,8	45/70	0,14	2	6800	240	850	30	790	27	150	6
150	6	3/32	3,2/5,5	45/80	0,21	3	9400	330	960	34	850	30	125	5
200	8	1/8	4,2	60	0,28	4	14800	510	1380	48	1250	44	100	4
250	10	1/8	5,3	75	0,28	4	31500	760	1560	55	1420	50	75	3
300	12	1/8	6,3	90	0,28	4	25000	880	1560	55	1420	50	50	2

CUTTING - PROPANE - MK 3/A & 18/90 CUTTERS (PNM NOZZLES)

Material Tk'ness mm	in	Nozzle size	Operating pressure Oxygen bar	PSI	Propane bar	PSI	Gas consumption Cutting Ox l/h	ft³/h	Heating Ox l/h	ft³/h	Propane l/h	ft³/h	Approx. Cutting Speeds mm/m	in/m
6	1/4	1/32	2,1	30	0,2	3	1000	36	1300	48	300	12	430	17
13	1/2	3/64	2,1	30	0,2	3	1800	65	1600	57	300	14	360	14
25	1	1/16	2,8	40	0,2	3	3000	140	1700	62	400	15	280	11
50	2	1/16	3,2	45	0,3	4	4500	160	1800	66	400	16	205	8
75	3	1/16	3,5	50	0,3	4	4800	170	2000	73	500	18	205	8
100	4	5/64	3,5	50	0,3	4	7300	260	2600	93	600	23	152	6
150	6	3/32	4,2	60	0,4	6	12300	435	3300	120	800	30	125	5
250	10	1/8	5,6	80	0,6	8	22300	790	4600	165	1100	42	50	2
300	12	1/8	6,7	95	0,8	8	26300	930	5900	210	1400	50	50	2

WELDING / ORBIT & MK 3/A TORCHES

Mid Steel Tk'ness mm	in	swg	Nozzle size	Operating pressure Acetylene bar	PSI	Oxygen bar	PSI	Gas consumption Acetylene l/h	ft³/h	Oxygen l/h	ft³/h
0,9		20	1	0,14	2	0,14	2	28	1	28	1
1,2		18	2	0,14	2	0,14	2	57	1	57	2
2		14	3	0,14	2	0,14	2	86	3	86	3
2,6		12	5	0,14	2	0,14	2	140	5	140	5
3,2	1/8	10	7	0,14	2	0,14	2	200	7	200	7
4	5/32	8	10	0,21	3	0,21	3	280	10	280	10
5	3/16	6	13	0,28	4	0,28	4	370	13	370	13
6,5	1/4	3	18	0,28	4	0,28	4	520	18	520	18
8,2	5/16	0	25	0,42	6	0,42	6	710	25	710	25
10	3/8	4/0	35	0,63	9	0,63	9	1000	35	1000	35
13	1/2	7/0	45	0,35	5	0,35	5	1300	45	1300	45
25	1+		90	0,63	9	0,63	9	2500	90	2500	90

1. Data is for guidance only and may vary with operating conditions, materials etc.
2. Gas pressures are shown in BAR- 1 bar - 1 kg cm2 1 PSI - 0,069 bar.
3. Gas consumption in LITRES PER HOUR (l/h).

CUTTING - ACETYLENE - ORBIT TORCH

Material Tk'ness mm	in	Nozzle size	Operating pressure Oxygen bar	PSI	Acetylene bar	PSI	Gas consumption Cutting Ox l/h	ft³/h	Heating Ox l/h	ft³/h	Acetylene l/h	ft³/h	Approx. Cutting Speeds mm/m	in/m
3	1/8	S/M	2,1	30	0,3	4	650	30	120	4,5	220	8	110	4
6	1/4	1/32	2,1	30	0,15	2	710	25	255	9	255	8	255	8
20	3/4	3/64	2,1	30	0,15	2	1415	50	255	9	225	8	225	8
25	1	1/16	3,8	55	0,15	2	3400	120	255	9	225	8	225	8
50	2	1/16	5,3	75	0,20	3	4530	60	310	11	285	10	285	10

GOUGING - MK 3/A & 18/90 CUTTERS (AGNM NOZZLES)

Material Tk'ness mm	in	Nozzle size	Operating pressure Oxygen bar	PSI	Acetylene bar	PSI	Gas consumption Cutting Ox l/h	ft³/h	Heating Ox l/h	ft³/h	Acetylene l/h	ft³/h	Approx. Cutting Speeds mm/m	in/m
8	5/16	13	4,0	60	0,5	7	3680	130	990	35	905	32	610	24
11	7/16	19	5,0	75	0,5	7	9340	330	1870	66	1700	60	1970	42
12	1/2	25	5,5	85	0,55	8	16270	575	2290	81	2100	74	1220	48

SUPER HEATING - PROPANE - MK 3/A & SUPER HEATING TORCHES

The flame size and heat output of these nozzles varies considerable with the pressure settings used. Two typical alternatives are given for each size of nozzle.

Nozzle Type	Propane pres. bar	PSI	Oxygen pres. bar	PSI	Propane cons. l/h	ft³/h	Oxygen cons. l/h	ft³/h	Heat output (app.) W	Btu/h
1H	0,14	2	0,7	10	830	29	350	121	21101	72000
	0,49	7	2,1	30	1900	65	7300	255	47771	163000
2H	0,21	3	1,1	15	1200	41	4800	168	29893	102000
	0,46	8	2,5	35	2100	75	8700	304	55097	188000
3H	0,28	4	1,8	25	2100	75	8300	290	53632	183000
	1,1	15	5,0	70	4100	144	16500	575	105799	361000
4H	0,35	5	2,5	35	2700	94	10600	370	69165	236000
	1,3	18	5,7	80	4800	162	18800	650	118987	406000
5H	0,85	12	3,5	50	3200	112	12700	444	82353	281000
	2,1	30	8,7	125	7000	246	28000	964	181118	618000

VERY HIGH RELIABILITY, VERY GOOD PRICE!

MIGSTAR PRO

The new powerful generation of GCE MIG torches feature extraordinary technical characteristics, advanced technology and an ergonomic anti-slide shank. They're specifically designed to enable the users to a comfortable and practice operations. Available in two variants: Air cooled and water cooled. Excellent value for money.

CE
EN 60974-7

FEATURES

- Optimum cooling (Air or Water)
- Ergonomic handle with anti-slide rubber inserts.
- Ball joint at the handle improving the handling
- Push button feature to protect against accidental starting
- Strong and ergonomic connection EURO type
- Ball joint at the connection extending the cables lifetime and governing the welding wire feeder.
- Textile covers for water hoses ofering maximum protection.
- Non detachable plastic caps for water hoses.
- Contact tip, gas nozzle and liner included.

Anti-slip rubber insert on the handle

Push button feature to protect against accidental starting

Ball joint at the handle improving the handling

Strong and ergonomic connection EURO type

Rotating connection to govern welding wire feeder

AIR COOLED

Art. Nr.	Descr.	CO_2 60%	Mix 60%	Ø	mm²	Qt.	Stock
102P959A30N	TORCH MIGSTAR PRO 150-3	180 A	150 A	0,6-1,0	16 mm²	1	
102P959A40N	TORCH MIGSTAR PRO 150-4	180 A	150 A	0,6-1,0	16 mm	1	
102P959A50N	TORCH MIGSTAR PRO 150-5	180 A	150 A	0,6-1,0	16 mm²	1	
112P959A30N	TORCH MIGSTAR PRO 240-3	250 A	220 A	0,6-1,2	25 mm²	1	
112P959A40N	TORCH MIGSTAR PRO 240-4	250 A	220 A	0,6-1,2	25 mm²	1	
112P959A50N	TORCH MIGSTAR PRO 240-5	250 A	220 A	0,6-1,2	25 mm²	1	
103P959A30N	TORCH MIGSTAR PRO 252-3	230 A	200 A	0,6-1,2	25 mm	1	
103P959A40N	TORCH MIGSTAR PRO 252-4	230 A	200 A	0,6-1,2	25 mm²	1	
103P959A50N	TORCH MIGSTAR PRO 252-5	230 A	200 A	0,6-1,2	25 mm²	1	
114P959A30N	TORCH MIGSTAR PRO 360-3	340 A	300 A	0,8-1,6	42 mm²	1	
114P959A40N	TORCH MIGSTAR PRO 360-4	340 A	300 A	0,8-1,6	42 mm²	1	
114P959A50N	TORCH MIGSTAR PRO 360-5	340 A	300 A	0,8-1,6	42 mm²	1	

WATER COOLED

Art. Nr.	Descr.	CO_2 60%	Mix 60%	Ø	Qt.	Stock class
134P959A30N	TORCH MIGSTAR PRO 511-3	500 A	450 A	0,8-1,6	1	
134P959A40N	TORCH MIGSTAR PRO 511-4	500 A	450 A	0,8-1,6	1	
134P959A50N	TORCH MIGSTAR PRO 511-5	500 A	450 A	0,8-1,6	1	

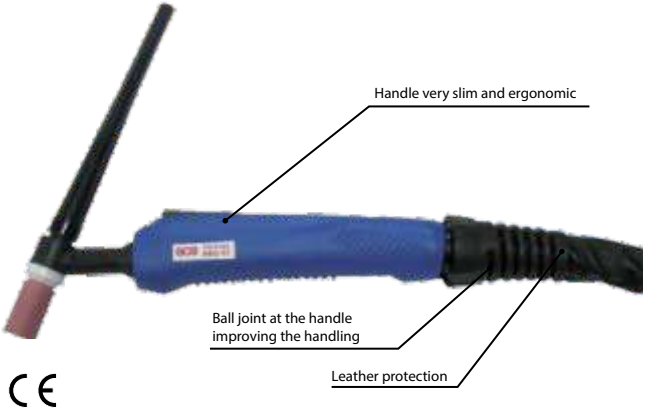
VERY HIGH RELIABILITY, VERY GOOD PRICE!

TIGSTAR PRO

The new generation of GCE TIG Brenner with extraordinary technical characteristics at a very good PRICE! They're provided with a very slim and ergonomic shank, a ball joint at the handle and an ultra soft leather protection for cable (n/a on V version) making them fully handy. Available in two variants: Air cooled and water cooled. The spare parts are fully compatible with standard market Brenner.

FEATURES

- Optimum cooling (Air or Water)
- Very slim and ergonomic handle.
- Ball joint at the handle improving the handling
- Standard trigger version or knob version (model V)
- Plug TIG included (G1/4 - G3/8 - quick connection)
- Soft leather cover for cable (n/a on V version)
- Provided with a spare parts set (ceramic nozzle, collet body, collet, back cup long)



Very flexible

CE

EN 60974-7

THE ONLY ONES WITH LEATHER CLAD CABLE!

The first 75cm of torch cable nearest to operator are clad in soft leather (n/a on Brenner with knob control valve).
This gives great flexibilty of movement and very good protection against spatter.

MAXIMUM EASY USE!

All TIGSTAR Brenner are delivered complete with connection.
The gas connections included in the box are for all possible needs (1/4 or 3/8 or quick)

V version (with knob valve)

AIR COOLED

Art. Nr.	Descr.	Duty DC 35%	Duty AC 35%	Ø		Qt.	Stock class
415P09C104N	TIGSTAR PRO 9 4M	110A	95A	0,5-1,6	25mm (small)	1	
415P09C108N	TIGSTAR PRO 9 8M	110A	95A	0,5-1,6	25mm (small)	1	
405P09V104N	TIGSTAR PRO 9 V 4M	110A	95A	0,5-1,6	25mm (small)	1	
415P17C104N	TIGSTAR PRO 17 4M	140A	125A	0,5-2,4	25mm (small)	1	
415P17C114N	TIGSTAR PRO 17 4M	140A	125A	0,5-2,4	50mm (standard)	1	
415P17C108N	TIGSTAR PRO 17 8M	140A	125A	0,5-2,4	25mm (small)	1	
405P17V104N	TIGSTAR PRO 17 V 4M	140A	125A	0,5-2,4	25mm (small)	1	
405P17V114N	TIGSTAR PRO 17 V 4M	140A	125A	0,5-2,4	50mm (standard)	1	
415P26C104N	TIGSTAR PRO 26 4M	180A	150A	0,5-4,0	50mm (standard)	1	
415P26C108N	TIGSTAR PRO 26 8M	180A	150A	0,5-4,0	50mm (standard)	1	
405P26V104N	TIGSTAR PRO 26 V 4M	180A	150A	0,5-4,0	50mm (standard)	1	

WATER COOLED

Art. Nr.	Descr.	Duty DC 35%	Duty AC 35%	Ø		Qt.	Stock
415P20C104N	TIGSTAR PRO 20 4M	250A	220A	0,5-3,2	50mm (standard)	1	
415P20C108N	TIGSTAR PRO 20 8M	250A	220A	0,5-3,2	50mm (standard)	1	
415P18C104N	TIGSTAR PRO 18 4M	320A	240A	0,5-4,0	50mm (standard)	1	
415P18C108N	TIGSTAR PRO 18 8M	320A	240A	0,5-4,0	50mm (standard)	1	

The automatic LCD welding mask HORUS is a very reliable device for labour protection specially designed for MIG and MMA welding applications.
It can efficiently protect operator's eyes and face from injuries caused by the arc during welding operations.
The Auto-darkening filter protects the user against harmful UV/IR rays, both in the dark and light state.
Thanks to its excellent quality and its intuitive adjustments, it is ideal for all the infrequent welders that want to have a highly-affordable device.

GENERAL APPLICATIONS

GMAW (MIG/MAG) – SMAW (MMA)

REFERENCE STANDARDS

- 89/686/EEC
- EN-379 (LCD filter)
- EN-175 (Helmet)

Art. Nr.	Descr.	Qt.
19006000	MASK LCD HORUS 9-13	1

FILTER SPECIFICATIONS

Optical Class:	1/1/1/2
View Area:	90×40mm (3600 mm^2)
Type of LCD filter:	Analog
Filter Size:	110×90×9mm
ARC Sensing:	2 sensors
Switching Time:	0,1 ms
Light Shade:	#4
Dark Shade:	#9-13 External Adjustment
Sensitivity Control:	3 steps Internal Adjustment
Delay Control:	0.1 – 0.5 – 0.9 sec 3 steps Internal Adjustment
Grinding mode:	YES
Power supply:	Solar Cells + Lithium battery not replaceable
Operating Temperature:	-10 / +65 °C (14 / +149 °F)
UV / IR Protection:	up to Shade 15 (permanent)
Auto power off:	YES

RUBBER HOSES - BULK

SINGLE HOSE OXYGEN (BLUE) ISO 3821 (FOR WELDING AND ALLIED PROCESSES)

Rubber hose for use with Oxygen in cutting and welding and allied processes. Not suitable for LPG, MPS and CNG.

- Inner tube: Synthetic rubber resistant to the welding gases
- Reinforcement: High tensile synthetic textile
- External cover: Blue synthetic rubber resistant to abrasion and weather

TECHNICAL DATA

Temperature:	-20°C / +60°C
Safety factor:	3:1
Marking:	In compliance with the below mentioned standard
Working pressure:	20 bar
Bursting pressure:	60 bar
Standards:	ISO 3821

Art. Nr.	Ø int × Ø ext	Surface	Coil
272321311304	8×15 mm	Grooved	50 m

SINGLE HOSE ACETYLENE (RED) ISO 3821 (FOR WELDING AND ALLIED PROCESSES)

Rubber hose for use with Acetylene in cutting and welding and allied processes. Not suitable for LPG, MPS and CNG.

- Inner tube: Synthetic rubber resistant to the welding gases
- Reinforcement: High tensile synthetic textile
- External cover: Red synthetic rubber resistant to abrasion and weather

Art. Nr.	Ø int × Ø ext	Surface	Coil
272321009035	8×15 mm	Grooved	50 m

SINGLE HOSE PROPANE/BUTANE (ORANGE) ISO 3821 (FOR WELDING AND ALLIED PROCESSES)

ISO 3821

Rubber hose for use with Propane/Butane in cutting and welding and allied processes. Suitable for Liquid Petroleum Gas (LPG), Methylacetylene-propadiene (MPS) gas, Compressed Natural Gas (CNG).

- Inner tube: Synthetic rubber resistant to LPG and Propane/Butane gases
- Reinforcement: High tensile synthetic textile
- External cover: Orange synthetic rubber resistant to abrasion and weather

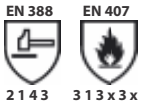
Art. Nr.	Ø int × Ø ext	Surface	Coil
272321009136	8×15 mm	Smooth	50 m

HADES 150° – (GLOVES FOR WELDERS)

CE

Five fingers protection gloves for welders made from cowsplit leather with full lining in cotton and covered seams. Length 35 cm.

- EN 420
- EN 388 (2 1 4 3)
- EN 407 (3 1 3 x 3 x)
- EN 12477 Type A
- Dexterity Level 3



Art. Nr.	Descr.	Size	Qt.
G100550	Hades 150°C	16	10

MACHINE CUTTING TORCH GCE FIT+®

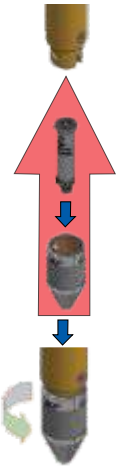
INNOVATIVE TOOL-FREE SOLUTION

GCE FIT+® is unique system for oxy-fuel machine cutting technology. The long-term partnership with the customers resulted in the product concept creation. This product line is based on the wide experience with cutting application, one of the traditional ields of GCE activities. The main philosophy of GCE FIT+® is to make cutting process safe, e cient and operator friendly.

- High productivity of oxygen machine cutting process due to high-speed cutting nozzles
- Safe operations ensured by integrated COOLEX® and axial injector with application of RMS (Resonator Mixing System) in acetylene variants
- Working e ciency with minimized nozzles exchange time
- Easy handling for machine operators because of Tool-Free nozzles changing system
- Nozzles ixation done manually by special bayonet system, without any wrench
- One type of heating nozzle for all fuel gases
- Extended lifetime of heating nozzle
- Provided in accordance with ISO 5172

APPLICATION FIELDS

- Oxygen cutting of straight and shape cuts in accordance with ISO 9013
- Oxygen cutting 3 - 300 mm
- Hole piercing up to 150 mm
- Applications with diferent fuel gases
- Prepared for all cutting machines

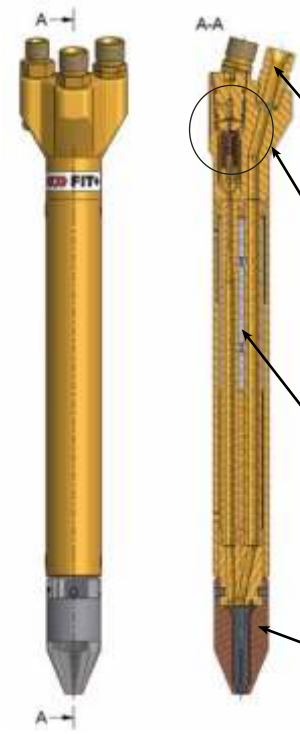


TOOL-FREE NOZZLES
ARE EXCHANGEABLE IN THREE STEPS

1st step
Place inner cutting nozzle into outer heating nozzle

2nd step
Put manually outer heating nozzle with pins into the torch head grooves

3rd step
Turn manually the outer heating nozzle 90° and fix bayonet pins at the grooves ends



GCE FIT+®

INTEGRATED COOLEX® SYSTEM

- special nozzle connecting heating and cutting oxygen low channels
- cooling of cutting oxygen channel during preheating-period
- lower system temperature
- longer nozzle life-time
- constant shape of gas-low channels

RMS (RESONATOR MIXING SYSTEM)

- spiral injector
- efective system against backire
- heating oxygen is coming through cooled copper spiral
- used in acetylene variants

ALUMINIUM COOLER

- heat exchanger made of Al
- mixing tube is cooled by cutting oxygen low

HIGH-SPEED CUTTING NOZZLES

- high-speed cutting
- up to 8,5 bar cutting oxygen pressure
- convergent – divergent cutting channel
- Laval shape of cutting channel
- one heating nozzle for all fuel gases

MACHINE CUTTING TORCH GCE FIT+® ,INJECTOR TYPE

Art. Nr.	Length/diameter*	Fuel gas	Connections
0766121	220/32	Acetylen	G3/8", G3/8"LH, G1/4"
0766164	320/32	Acetylen	G3/8", G3/8"LH, G1/4"
0766223	110/32	Acetylen	G3/8", G3/8"LH, G1/4"
0766122	220/32	PMY	G3/8", G3/8"LH, G1/4"
0766165	320/32	PMY	G3/8", G3/8"LH, G1/4"
0766224	110/32	PMY	G3/8", G3/8"LH, G1/4"

*Other torch variants on request

TOOL-FREE HEATING NOZZLES GSF

Art Nr.	uel Gas	F	Cutting range
0769932		APMYF	3-150 mm (A), 3-100 mm (PMY)
0769933		APMYF	150 - 300 mm (A), 100 - 300 mm (PMY)

TOOL-FREE CUTTING NOZZLES ASF - ACETYLENE

HIGH SPEED CUTTING

Art Nr.	Cutting range (mm)	Cutting speed (mm/min)	Cutting oxygen (bar)	Heating oxygen (bar)	uel gas (bar)	Cutting oxygen (Nm³/h)	Heating oxygen (Nm³/h)	uel gas (Nm³/h)
0769923	3 - 5	875 - 765	2,0 - 3,0	2,0 - 2,5	0,6	0,4 - 0,5	0,4	0,30
0769924	6 - 10	765 - 720	4,0 - 5,0	2,5	0,6	1,2 - 1,5	0,5	0,35
0769925	10 - 25	720 - 515	6,5 - 7,5	2,5	0,6	3,2 - 3,7	0,5	0,35
0769926	25 - 40	515 - 430	6,5 - 8,5	2,5	0,6	4,6 - 5,5	0,5	0,35
0769927	40 - 60	430 - 375	6,5 - 8,5	2,5	0,6	5,6 - 7,1	0,5	0,35
0769928	60 - 100	375 - 275	6,5 - 8,0	2,5	0,6	9,1 - 11,0	0,5	0,35
0769929	100 - 150	275 - 210	6,5 - 7,0	3,5	0,6	12,1 - 12,9	0,6	0,50
0769930	150 - 230	210 - 140	6,5 - 7,5	6,5 - 7,5	0,6	19,4 - 22,0	1,1	0,85
0769931	230 - 300	150 - 110	6,5 - 7,5	6,5 - 7,5	0,6	28,5 - 32,5	1,1	0,85

TOOL-FREE CUTTING NOZZLES PSF - PROPANE, NATURAL GAS AND MIXED GASES

HIGH SPEED CUTTING

Art Nr.	Cutting range (mm)	Cutting speed (mm/min)	Cutting oxygen (bar)	Heating oxygen (bar)	uel gas (bar)	Cutting oxygen (Nm³/h)	Heating oxygen (Nm³/h)	uel gas (Nm³/h)
0769913	3 - 6	795 - 730	2,0 - 5,0	1,5 - 2,0	0,2	0,5 - 1,0	1,0	0,25
0769914	7 - 15	690 - 575	5,0 - 7,0	2,0	0,2	1,6 - 2,0	1,3	0,32
0769915	15 - 25	575 - 480	6,0 - 7,0	2,0	0,2	2,5 - 3,1	1,3	0,32
0769916	25 - 40	480 - 420	6,0 - 7,5	2,0	0,2	3,8 - 4,5	1,3	0,32
0769917	40 - 60	415 - 355	5,5 - 7,5	2,0	0,2	4,2 - 5,6	1,3	0,32
0769918	60 - 100	350 - 275	6,0 - 8,5	2,0	0,2	7,6 - 10,6	1,3	0,32
0769919*	100 - 150	270 - 195	6,5 - 7,5	2,5	0,3	11,5 - 13,0	1,4	0,35
0769920	100 - 200	270 - 180	7,5 - 9,5	3,0	0,3	13,3 - 15,6	2,4	0,60
0769921	200 - 250	180 - 130	6,5 - 8,5	3,0	0,3	18,0 - 22,0	2,4	0,60
0769922	250 - 300	130 - 110	6,5 - 8,5	3,5	0,3	23,0 - 30,0	2,5	0,62

* It is special nozzle designed for effective hole piercing. It is to be used in combination with GSF 3-100 mm.

MACHINE CUTTING TORCH BIR+™

MACHINE CUTTING TORCH BIR+™ ,INJECTOR TYPE

COOLEX® inside - unique cooling system. Stabile and safe brass injector is placed in the massive torch body. Alu minium cooling heat exchanger downstream the injector completes cooling function of the BIR+™. Heat is trans ported away from the injector which protects the torch against backfire. These features guarantee high process security, operation safety and long equipment life-time. Suitable for use with cutting nozzle types (AC, ASD, AHD) for acetylene and (PUZ, PSD, PHD) for propane, natural gas and mixed fuel gases.

Art. Nr.	Length / diameter	Gas	Connection
14055239	110/32	A	G3/8", G3/8"LH, G1/4"
14055218	220/32	A	G3/8", G3/8"LH, G1/4"
14055241	320/32	A	G3/8", G3/8"LH, G1/4"
14055217	220/32	F	G3/8", G3/8"LH, G1/4"
14055242	110/32	PM	G3/8", G3/8"LH, G1/4"
14055219	220/32	PM	G3/8", G3/8"LH, G1/4"
14055240	320/32	PM	G3/8", G3/8"LH, G1/4"

Other lengths and diameters on customer request.

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.

TORCH TYPE BGR™

Art. Nr.	Length/dia	Gas	Connection	Note
14056220	220/32	APMY	G3/8", G3/8"LH, G1/4"	
14056320	320/32	APMY	G/8", G3/8"LH, G1/4"	incl. rack m 1,25

TORCH TYPE X541

Art. Nr.	Length/dia	Gas	Connection	Note
203021310	150/32	APMY	G3/8", G3/8"LH, G1/4"	BV12, hose nipple 2x8 and 1x6,3, valves
203021298	220/32	APMY	G3/8", G3/8"LH, G1/4"	BV12, hose nipple 2x8 and 1x6,3, valves
203021299	320/32	APMY	G3/8", G3/8"LH, G1/4"	BV12, hose nipple 2x8 and 1x6,3, valves

TORCH TYPE BNM

Art. Nr.	Length/dia	Gas	Connection
0764583	90/28	APMY	2xG1/4", G1/4"LH

Other lengths and diameters on customer request.

CUTTING NOZZLE

UNIVERSAL SHANK

Combined shut-off valve and adjusting knob.
Use: designed for use with soldering, brazing and heating torches UNIVERSAL

Art. Nr.	Torch, tube connection	Quantity
0763216	M14 × 1, with gas saver	1
0763230	M14 × 1, without the gas saver	1

TECHNICAL DATA

Working pressure:	up to 4 bar
Adjustable pilot flame (only for 0763216):	
Capacity:	12 kg/h
Length:	195 mm
Weight:	0,36 kg
Gas:	PB
Hose connection:	G 3/8" LH

NECK TUBE - UNIVERSAL

Manufactured in stainless steel.
Use: designed to connect UNIVERSAL heating torches to shank UNIVERSAL.
Head connection M 20×1 MALE. Torch connection M 14×1 FEMALE.

Art. Nr.	Type	Connection	Weight	Quantity
2279	130 mm	M14 × 1	0,11 kg	1
9381300	230 mm	M14 × 1	0,14 kg	1
9381310	350 mm	M14 × 1	0,19 kg	1
548809394880	500 mm	M14 × 1	0,25 kg	1
9381320	600 mm	M14 × 1	0,29 kg	1
9381330	750 mm	M14 × 1	0,35 kg	1
9381340	1000 mm	M14 × 1	0,44 kg	1

HEATING TORCH H - UNIVERSAL

Use: for industrial heating; roofing and construction work.
Use with neck tube.

M20×1

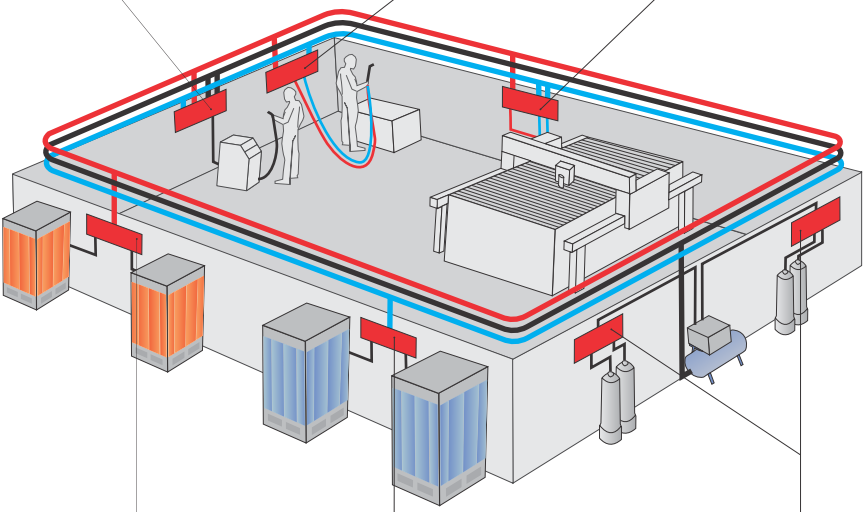
Art. Nr.	Type	Quantity
0763217	30 mm	1
0763218	40 mm	1
4069	45 mm	1
0763219	50 mm	1
0763220	60 mm	1
0763221	80 mm	1

CENTRAL GAS SUPPLY SYSTEM SCHEME

UNISET+

DINSET

HF-SET



MM400 - 2 ACE

MS400 OXY/INERT

MB400 OXY/INERT

GCE Group is one of the world's leading companies in the field of gas control equipment. The headquarters are in Malmo, Sweden, and the major supply unit is located in Czech Republic . The company operates 15 subsidiaries around the world and employs more than 850 people. GCE Group includes four business areas-Cutting & Welding, Process Applications, Medical and High Purity. Today's product portfolio corresponds to a large variety of applications, from single pressure regulators and blowpipes for cutting and welding to sophisticated gas supply systems for medical and electronics industry applications.

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Gas Control Equipment