Katje Welding bv, Industrieterrein De Haven, De Steven 4, 9206 AX Drachten,
tel. +31-512-532829, e-mail: info@katjewelding.nl, website: www.katjewelding.nl

CATALOGUE

General Terms and Conditions of Delivery and Payment

Art. 1 APPLICABILITY

1. These General Terms and Conditions apply to all current and future quotations, offers and (repeating) agreements of purchase and sale and/or services of and with Katje Welding bv and its affiliated legal entities.
2. In these General Terms and Conditions, Katje Welding bv, or the legal entity affiliated to Katje Welding bv using these Terms and Conditions, is referred to as the seller. The other party is referred to as the buyer.
3. By entering into an agreement with the seller, the buyer declares to be familiar with and to agree to these General Terms and Conditions and any changes to them. (Standard) terms and conditions and stipulations used by the buyer are hereby rejected and set aside by the seller; these (standard) terms and conditions and stipulations do not apply, unless their applicability has been explicitly accepted by the seller in writing before or at the time of entering into the agreement.
4. If one or more provisions of these General Terms and Conditions are null and void or are annulled, the other provisions shall remain in full force and effect.

Art. 2 OFFER

1. Every quotation or offer made by the seller is without obligation unless explicitly stated otherwise in writing.
2. The contents of folders, websites, printed matter, etc. are not binding on the seller, unless the quotation, offer or agreement explicitly refers to them.

Art. 3 AGREEMENT

1. An agreement is only concluded after explicit acceptance by the seller.
2. The explicit acceptance as referred to in paragraph 1 is apparent from the seller's written confirmation or from the fact that the seller executes the agreement, for example by sending goods to be delivered on the basis of the agreement.
3. Agreements entered into with subordinate employees of the seller - i.e. employees without power of procuration - do not bind the seller, unless these have been confirmed in writing by the seller.

Art. 4 INTELLECTUAL PROPERTY RIGHTS

1. Unless expressly agreed otherwise in writing, the seller and/or any third party entitled retains the copyrights and all intellectual and industrial property rights to the quotations/offers and agreements made by the seller and to all illustrations, designs, drawings, sketches, models, software, etc. provided by the seller. If and insofar as any action by the buyer is required to establish these rights, the buyer undertakes to cooperate unconditionally. The aforementioned documents remain the property of the seller, even if costs have been charged for them, and may not be copied, multiplied, made available to third parties, made available for inspection or used in any other way by the buyer in whole or in part without the seller's express prior written consent. For each breach of this provision, the buyer will owe the seller an immediately due and payable fine of € 10,000.00.
2. The documents referred to in the previous paragraph must be returned to the seller on first request, at the latest after the expiry of the period given by the seller in this respect. In the event of a breach of this provision, the buyer will owe the seller an immediately due and payable fine of € 500.- per day.
3. The fines referred to in paragraphs 1 and 2 may be claimed by the seller in addition to damages by virtue of the law. The forfeiture of fines shall therefore not affect the right to claim damages.
4. The buyer indemnifies the seller against all claims from third parties and direct and indirect damage resulting from actions by the buyer in violation of the provisions of this Article.

Art. 5 PRICES

1. Unless another delivery condition is stated or agreed, the prices stated for delivery ex warehouse, exclusive of VAT, import and export duties and other government levies, now or later determined, shall apply.
2. The agreed prices are based on the costs applicable on the day of the quotation/offer. If after the conclusion of the agreement changes occur in one or more price-determining factors, the seller is entitled to pass these on to the buyer if, in the opinion of the seller, this can be considered fair. Price determining factors shall in any case include raw material prices, material, wage and transport costs, exchange rates, import and export duties and taxes or other levies.
3. The seller will inform the buyer of the price increase as soon as possible but no later than three working days before delivery. The price increase shall be explained in this notification.
4. If a price increase takes place within three months of the agreement being concluded, the buyer shall be entitled to dissolve the agreement. If the price increase takes place after these three months, the buyer is only entitled to dissolve the agreement if the price increase in relation to the price stated in the quotation/offer is 10% or more. The right to dissolve does not apply if the price changes are the result of government measures.
5. The buyer must notify the seller in writing of his/her intention to dissolve the agreement within three working days of notification of the price increase. In absence thereof, the agreement, including the price increase, will remain in force.
6. A dissolution due to a price increase does not entitle the buyer to compensation for any damage.

Art. 6 PAYMENT

1. Payment must be made no later than 30 days after the invoice date at the office of the seller or to a bank account number designated by the seller.
2. The invoice amounts owed shall be immediately due and payable upon expiry of the payment term of 30 days. From that moment of default until the day of payment in full, the buyer shall owe interest on the amount due and payable at the statutory commercial interest rate, increased by 2% surcharge.
3. The buyer shall not be entitled to deduct any amount from the price stated in the invoice or to suspend payment in whole or in part on account of a counterclaim. The buyer's right of set-off and/or suspension is excluded.
4. If the seller takes extrajudicial and/or judicial measures in the event of the buyer's breach of the agreement, including but not limited to the timely and full payment of (invoice) amounts to be paid, all costs thereof shall be borne by the buyer. The costs are payable by the buyer, in any case if the seller turns to a third party as a result of the buyer's default. The extrajudicial costs shall at least be set at the amounts resulting from the graduated scale pursuant to the law on extrajudicial collection costs and the associated decision. If the seller demonstrates that it actually incurred higher costs, which were reasonably necessary, all these costs are eligible for reimbursement.
5. The seller is entitled to demand sufficient security - for example in the form of a bank guarantee or deposit - before proceeding with (further) delivery, even if a credit has been stipulated. The seller may dissolve the agreement in writing or suspend its obligation to deliver if the buyer refuses to provide the required security in good time. This is without prejudice to the seller's right to compensation for related damage.
6. Any payment of a sum of money by the buyer will first serve to reduce costs, then to reduce the interest due and finally to reduce the principal sum (longest outstanding invoices first) and the current interest.

Art. 7 TESTING

1. Before shipment, the seller will, if agreed in writing, examine and test the goods to be delivered. In that case, the buyer has the right to attend the testing and will be informed in good time by the seller that the goods are ready for testing. The seller will provide the buyer, at his/her request, with a certified copy of its inspection and test reports. If the buyer so requires and has informed the seller of this in good time, this inspection and testing must be carried out at the buyer's expense by an Independent research institute to be specified by the buyer.

Art. 8 DELIVERY AND RISK

1. Delivery shall take place ex warehouse, unless the parties agree otherwise.
2. If a delivery period has been agreed, it shall commence on the date on which the seller has confirmed the agreement in writing and has received all information necessary for the execution of the agreement.
3. The delivery periods are indicative and are considered to be a careful estimate. Exceeding the delivery time, for whatever reason, does not entitle the buyer to compensation, suspension or dissolution of the agreement, or to non-fulfilment of any obligation that may arise for him/her from this or any other agreement concluded with the seller.
4. If it is agreed that the seller will deliver the goods purchased to a destination designated by the buyer, all goods will be at the buyer's expense and risk from the moment of dispatch by/on behalf of the seller. The seller is not liable for damage related to the transport. The transport is at all times at the risk of the buyer. If desired, the buyer must insure him/herself against this risk.
5. The buyer is obliged to take the goods/services to be delivered by the seller at the time they are prepared for delivery or made available by the seller. If, for whatever reason, the buyer does not receive them, does not receive them on time or does not receive them in full, the goods will be stored at the expense and risk of the buyer. In that case, the buyer shall owe compensation for all related costs, including in any case the storage costs.
6. If the buyer fails to collect the goods thus stored (which have been made available by the seller) within one month at the latest against payment of all that is owed, the seller is entitled to sell the goods on behalf of the buyer (or have them sold) under the obligation to pay the proceeds to the buyer, after deduction of all claims to which the seller is entitled, including storage costs.

Art. 9 RETENTION OF TITLE

1. The seller retains title to the products delivered to the buyer now and in the future until all current and future claims against the buyer, for whatever reason, have been settled in full. Only after full payment thereof will the ownership of the goods pass to the buyer.
2. The buyer is obliged to store the goods delivered subject to retention of title as the seller's recognisable property and with due care.
3. If the buyer fails to fulfil his/her (payment) obligations arising from the seller's claims - including claims relating to earlier deliveries, fines, interest and costs - in a timely and complete manner or if there is a well-founded fear that he/she will not do so, the seller is irrevocably entitled and authorised to take back the delivered goods (or have them taken back) without notice of default and/or judicial intervention being required. If necessary, the buyer will cooperate fully.
4. As long as the ownership of the delivered goods has not been transferred to the buyer, the buyer may not pledge them or grant third parties any other right to them.
5. If third parties wish to establish or assert any right to the goods delivered subject to retention of title, the buyer shall inform the seller of this as soon as possible. The buyer undertakes to cooperate within reasonable limits with all measures that the seller would then like to take to protect its right of ownership.

Art. 10 FORCE MAJEURE

1. The seller is not liable for non-performance as a result of force majeure. Force majeure shall be understood to mean any circumstance or event beyond the seller's control and as a result of which the seller cannot reasonably be expected to fulfil its obligations, including in any case war, mobilisation, unrest, natural disasters or extreme weather conditions, transport obstructions, stagnation and/or limitation and/or discontinuation of delivery by utility companies, machine breakdowns and other calamities, strikes, lockouts, trade union actions, export restrictions, other measures taken by the government, non-delivery (on time) of the necessary raw materials, materials and/or semi-finished products by third parties, intent or gross negligence on the part of auxiliary persons, as well as other similar circumstances independent of the seller's will, including force majeure on the part of the seller's suppliers.
2. In the event of force majeure, (further) fulfilment of the seller's obligations cannot reasonably be required. The seller will then be entitled to suspend the execution of the agreement.
3. If the delivery or the execution of the work is delayed by more than two months due to force majeure, both the seller and the buyer are entitled to dissolve the agreement without judicial intervention, without either party being liable to pay damages to the other party.
4. If the force majeure occurs while the agreement has already been partially executed, the seller is entitled to invoice the part already delivered or deliverable separately. The buyer is then obliged to pay this invoice as if it were a separate agreement, unless the buyer invokes it in a reasoned manner and demonstrates that the part already delivered, or deliverable has no independent value. In the latter case, the buyer is not obliged (after dissolution) to pay for the goods already delivered to him, but must return them to the seller (or have them returned) within a reasonable period and in good condition.

Art. 11 DISSOLUTION

1. The buyer is in default by operation of law if he/she is declared bankrupt, or if he/she is granted a suspension of payment, or in the event of a request to that effect, or if he/she decides or proceeds to (partial) shutdown or liquidation of his/her company, or if one or more of his/her assets are seized at his/her expense. In that case, the seller is entitled, without any summons or notice of default or judicial intervention being required:
   - to suspend, in whole or in part, the performance or execution of one or more of its obligations under the agreement(s) concluded with the buyer;
   - and/or to immediately demand payments to be made by the buyer;
   - and/or to require cash payment;
   - to dissolve all or part of the agreement(s) concluded with the buyer with immediate effect.
2. The provisions of paragraph 1 do not affect the seller's right to full compensation for damage, interest and costs.

Art. 12 GUARANTEE

1. The seller guarantees that the goods (a) are free of defects for one year after delivery, which means that they do not contain any material or production defects, (b) comply with the regulations issued by the Dutch government in this respect that are in force at the time of the conclusion of the agreement, and (c) comply with the specifications as stated by the seller, with due observance of the tolerances that apply to such materials in the sector.
2. The guarantee referred to in paragraph 1 does not relate to advice given by the seller relating to welding and/or cutting, the processing and selection of welding consumables and the use of machines and accessories. The buyer cannot derive any rights from this. The advice only indicates which possibilities the buyer and/or user have. The practical application of the information provided in these recommendations is entirely at the expense and risk of the buyer and/or user.
3. In order to claim under the guarantee, the buyer will inform the seller immediately and before the end of the guarantee period of any alleged defects. In the event that the seller establishes that the guarantee claim is valid, the seller will either repair defective goods - the buyer must always give the seller the opportunity to do so - or offer a replacement product within a reasonable period and at its own discretion. In the event of repair or replacement of defective (parts of) goods, the buyer shall bear the costs of dismantling and assembly thereof.
4. If, despite reasonable efforts, the seller is unable to repair or replace a defective good, the seller shall offer the buyer appropriate compensation or refund the purchase price.
5. Defects caused by normal wear and tear, improper handling or use, injudicious or incorrect maintenance, or which occur after modification or repair by or on behalf of the buyer him/herself or by third parties, fall outside the guarantee.
6. Unless otherwise agreed, the guarantee conditions set by the factory shall apply to goods delivered in deviation from the above. If the factory does not provide a guarantee, the seller will not provide a guarantee either.
7. The guarantee only applies if the buyer has fulfilled all his/her obligations towards the seller (both financially and otherwise) or has provided sufficient security for this.

Art. 13 COMPLAINTS

1. The buyer will check the goods on or immediately after delivery for correctness, quantity and quality.
2. The visible defects of the goods that were found or could reasonably be found during the inspection must be reported to the seller immediately, but no later than eight days after delivery, in writing or by telephone (with written confirmation), stating the order number, waybill, invoice, etc.
3. The invisible (hidden) defects must be reported to the seller immediately but no later than eight days after discovery or after they could reasonably have been discovered, but in no case later than two months after delivery, in the manner referred to in paragraph 2.
4. Complaints about invoices sent by the seller must be submitted in writing within eight days of receipt of the invoice.
5. The buyer loses all rights and powers that were at his/her disposal on the grounds of inaccuracy or defectiveness if he/she has not complained within the periods specified in this Article and/or he/she has not given the seller the opportunity to investigate or repair the defects.

Art. 14 LIABILITY

1. The seller is only liable for damage suffered by the buyer, which is the direct and exclusive result of a shortcoming attributable to the seller, on the understanding that only damage against which the seller is insured is eligible for compensation, or should reasonably have been insured in view of the customs applicable in the sector. The following limitations must be observed:
   (i) Damage to business and/or consequential loss (business interruption, expenses, loss of income, lost savings, reputational damage, loss of goodwill, etc.) for whatever reason is not eligible for compensation. If desired, the buyer must take out insurance against this damage.
   (ii) The seller is not liable for any damage caused by or during the installation of delivered goods to goods on which work is being carried out or to goods and/or persons in the vicinity of the place where work is being carried out, except and insofar as the seller is insured for this.
   (iii) The seller is not liable for damage caused by intent or gross negligence on the part of auxiliary persons.
   (iv) The seller is not responsible for damage caused by:
      - incorrect observance of the (operating) instructions;
      - incorrect use of the delivered goods or use for a purpose for which the goods are not suitable.
   (v) The damage to be compensated by the seller shall at all times be limited to a maximum amount equal to the invoice amount in respect of the goods or services delivered or work performed by the seller to which the liability relates.
2. The buyer is liable for all damage as a result of theft, fire or damage to the goods, tools and materials of the seller as soon as they are on the buyer's premises, insofar as this cannot be attributed to a shortcoming on the part of the seller.
3. From the moment of delivery of the goods, the seller is indemnified by the buyer against all claims of third parties, including payment of damages, regardless of whether the damage has arisen as a result of the composition and/or manufacturing faults or by any other cause.
4. In accordance with the provisions of Article 12, paragraph 2, the seller shall never be liable for direct or indirect damage resulting from advice given by the seller in any form whatsoever, and regardless of whether or not it was given against payment.

Art. 15 EXPORT

1. Any delivery by the seller is subject to the condition that the buyer does not export, transit or otherwise use and/or transfer the goods in violation of any national or international export and import control laws and regulations that prohibit, sanction or restrict the (re-)export or transfer of certain items to certain countries, entities or persons, such as UN, EU and US laws and regulations ("Export Regulations").
2. The buyer guarantees the seller that he/she (a) is not him/herself the subject of any national or international embargo/sanction measure, and (b) will comply with the aforementioned "Export Regulations" when (re-)exporting and/or transiting goods supplied by the seller.
3. The buyer indemnifies the seller against all claims from third parties and direct and indirect damage - including fines, (subsequent) levies etc., imposed by governments, agencies and/or institutions - which is the result of actions by the buyer in violation of the provisions of this Article.

Art. 16 APPLICABLE LAW

1. Dutch law shall apply to quotations, offers made and agreements to which these General Terms and Conditions apply.
2. The applicability of the Vienna Sales Convention is excluded, as is that of any future international regulation on the purchase of movable property whose effect can be excluded by the parties.

Art. 17 DISPUTES

1. All disputes arising from this agreement or from further agreements for its implementation shall be settled by means of arbitration in accordance with the Regulations of the Netherlands Arbitration Institute.
2. However, the parties are always (also) entitled to submit a dispute to the civil court of the District Court of Noord-Nederland, at the Leeuwarden location. In addition to the Netherlands Arbitration Institute, this court has exclusive jurisdiction.

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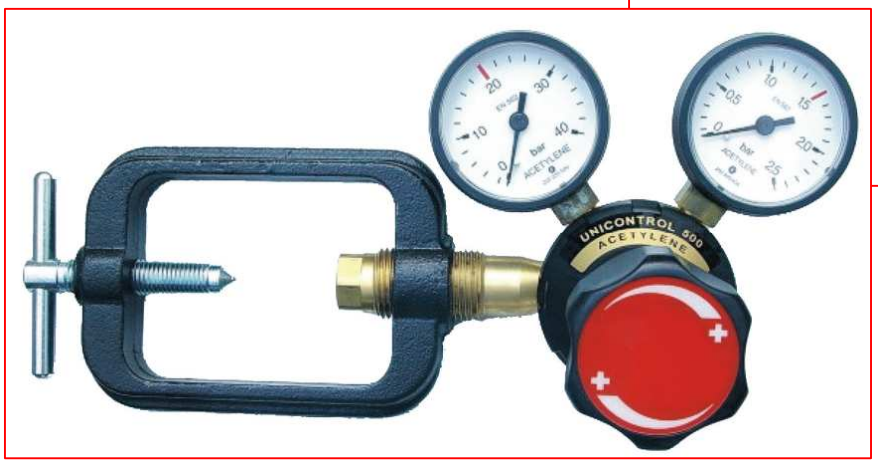
Regulators

Regulators Unicontrol

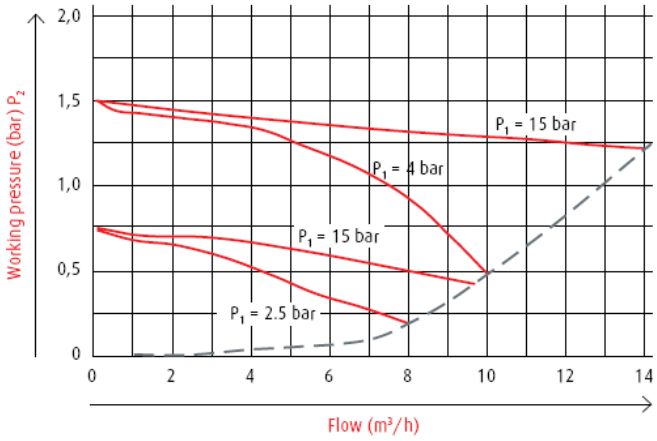
Description
Unicontrol regulators are a completely new regulator range. The Unicontrol series consists of regulators designed for the most common industrial gases.
The design is simple, safe and wear resistant. The operation of the regulators is first-rate and they provide highly efficient and precise regulation of gas supplies. Unicontrol regulators are made to satisfy national standards in most countries as regards inlet and outlet fittings, pressure rating, pressure gauges as well as safety requirements. The design is compact and rugged yet the flow capacity is sufficient for the majority of gas processes in the cutting and welding field. All variants in the range are of the same basic design.



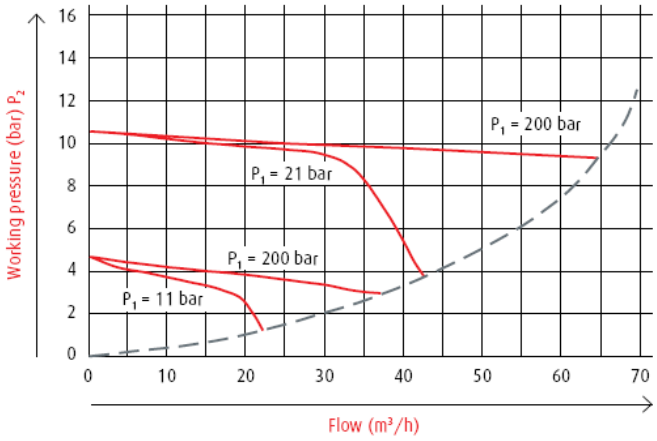
The major components are common throughout the range thus limiting the number of spares and accessories that need to be held for repair and in service use. All regulators are subject to individual tests before leaving the factory.
The horizontal position of the pressure relief valve prevents water from penetrating the regulator.
The service life of the regulator will increase significantly.

Flow diagrams

Acetylene



Oxygen



The capacity graphs show the outlet pressure as a function of the flow rate at different pressures (P1).

Unicontrol 500, 2 pressure gauges, EN 2503. Max primary pressure 200 bar

Art.no.	Gas	Nominal working pressure bar	Primary pressure gauge scale bar	Secondary pressure gauge scale bar	Side entry according NEN 3268		
A044700	Acetylene NL	0- 1.5	0- 40	0- 2.5	Connection yoke		
A044701	Acetylene PP AGA	0- 1.5	0- 40	0- 2.5	W 28.806 x 1/14”	RU 6	RH
A044702	Acetylene NO	0- 1.5	0- 40	0- 2.5	G 3/4”		
A044703	Methane	0-10.0	0-315	0-16.0	W 21.8 x 1/14”	LU 1	LH
A044704	Acetylene 5/8” BSP	0- 1.5	0- 40	0- 2.5	G 5/8” (22.9 x 1/14”)	LI 2	LH
A044705	Acetylene FR	0- 1.5	0- 40	0- 2.5	G 5/8” (22.9 x 1/14”)	LI 2	LH
A044710	Oxygen NL	0-10.0	0-315	0-16.0	G 5/8” (22.9 x 1/14”)	RI 2	RH
A044711	Oxygen GE	0-10.0	0-315	0-16.0	G 3/4”		
A044712	Oxygen NO	0-10.0	0-315	0-16.0	W 21.8 x 1/14”	RU 1	RH
A044713	Oxygen FR	0-10.0	0-315	0-16.0			
A044720	Carbon Dioxide	0-10.0	0-315	0-16.0	W 21.8 x 1/14”	RU 1	RH
A044725	Carbon Dioxide	0-10.0	0-315	0-16.0	W 21.8 x 1/14”	RU 1	RH
A044730	Formeer (backinggas)	0-10.0	0-315	0-16.0	W 21.8 x 1/14”	LU 1	LH
A044740	Argon-Helium-Nitrogen	0-10.0	0-315	0-16.0	W 24.32 x 1/14”	RU 3	RH
A044742	Nitrogen Airco 1 fixed 10 bar	-	0-315	0-16.0	W 24.32 x 1/14”	RU 3	RH
A044743	Nitrogen Airco 2 fixed 10 bar	-	0-315	0-16.0	W 24.32 x 1/14”	RU 3	RH
A044750	Air	0-10.0	0-315	0-16.0	W 28.806 x 1/14”	RU 6	RH
A044751	Air fixed 8 bar	-	0-315	0-16.0	W 28.806 x 1/14”	RU 6	RH
A044752	CO/N_2 calibration gases	0-10.0	0-315	0-16.0	W 1” (25.4 x 1/8”)	LU 4	LH

Unlike common regulators, Unicontrol regulators incorporate a fully encapsulated valve for consistent flow characteristics, longer life and improved performance. A sinter filter within the encapsulated valve prevents particles from entering the seat.

Unicontrol 500 Oxygen

Unicontrol 300, 2 gauges (l/min), EN 2503. Max primary pressure 200 bar
The regulator has a content pressure gauge and a flow pressure gauge showing the gas flow in litres per minute, as well as single wheel adjustment of the gas flow. Unicontrol 300 is intended for MIG/MAG welding processes.

Art.no.	Gas	Nominal flow gauge l/min	Primary pressure gauge scale bar	Secondary flow gauge scale l/min	Side entry according NEN 3268		
A044765	Carbon Dioxide	0-35 l/min	0-315	0-45 l/min	W 21.8 x 1/14”	RU 1	RH
A044766	Formeer (backinggas)	0-35 l/min	0-315	0-45 l/min	W 21.8 x 1/14”	LU 1	LH
A044767	Argon/mixtures	0-35 l/min	0-315	0-45 l/min	W 24.32 x 1/14”	RU 3	RH
A044768	Mison	0-35 l/min	0-315	0-45 l/min	W 1” (25.4 x 1/8”)	RU 4	RH

Unicontrol 300 Argon/CO_2

Regulators Unicontrol

Unicontrol 100, 1 pressure gauge and 1 flowmeter, EN 2503. Max primary pressure 200 bar
The regulator is especially available for TIG welding processes. It is pre-set at a working pressure of 4.5 bar to produce an accurate flow setting. The regulator has a content pressure gauge and a flowmeter with a ball floating device showing the flow in l/min against a graduated scale. The scale's graduation is adapted for Argon. The flow is read off at the upper edge of the ball floating device.

Art.no.	Gas	Preset working pressure bar	Primary pressure gauge scale bar	Max capacity flowmeter l/min	Side entry according NEN 3268		
A044780	Carbon Dioxide	4.5	0-315	2-30 l/min	W 21.8 x 1/14”	RU 1	RH
A044782	Carbon Dioxide/gassaver	4.5	0-315	2-30 l/min	W 21.8 x 1/14”	RU 1	RH
A044784	Formeer (backinggas)	4.5	0-315	2-30 l/min	W 21.8 x 1/14”	LU 1	LH
A044785	Hydrogen	4.5	0-315	2-30 l/min	W 21.8 x 1/14”	LU 1	LH
A044786	Argon/mixtures	4.5	0-315	2-30 l/min	W 24.32 x 1/14”	RU 3	RH
A044788	Mison	4.5	0-315	2-30 l/min	W 1” (25.4 x 1/8”)	RU 4	RH
A044797	Helium	4.5	0-315	2-30 l/min	W 24.32 x 1/14”	RU 3	RH
A044790	Air	4.5	0-315	2-30 l/min	W 28.806 x 1/14”	RU 6	RH
A044792	Calibration gas/flowmeter	< 3	0-315		W 1” (25.4 x 1/8”)	LU 4	LH
A044794	Calibration gas	< 1	0-315	2-30 l/min	W 1” (25.4 x 1/8”)	LU 4	LH
A044796	Calibration gas/gassaver	< 0.3	0-315	2-30 l/min	W 1” (25.4 x 1/8”)	LU 4	LH

Unicontrol 100 Argon/CO_2

Unicontrol 500, 1 pressure gauge, EN 2503
Whether you need to heat, power or grill, propane cylinders and tanks are used daily across the globe. The required cylinder regulators are used strictly for outdoor appliances and function to regulate pressure between the bottle and the hose.

Art.no.	Gas	Secondary pressure gauge scale bar	Side entry according NEN 3268		
A044759	Propane (BENEGAS)	0-6.0	POL		
A044760	Propane (SHELL), Mapp, Apachi	0-6.0	W 21.8 x 1/14”	LU 1	LH

Unicontrol 500 Propane

Regulators Unicontrol

Jetcontrol 600, 2 pressure gauges, EN 2503. Max primary pressure 200 bar
Jetcontrol 600 regulators are single stage, two gauge regulators of simple and compact design giving long and trouble free service. Jetcontrol 600 regulators are extensively used in oil refineries, chemical research laboratories and any area requiring safety and reliability in the control of high pressure gases up to a maximum of 200 bar outlet pressure. Diaphragms are manufactured from stainless steel and the inlet is fitted with an efficient metal filter ensuring long service life.

Art.no.	Gas	Nominal working pressure bar	Primary pressure gauge scale bar	Secondary pressure gauge scale bar	Side entry according NEN 3268		
A261348#	Argon-Helium-Nitrogen	0-100.0	0-315	0-160.0	W 24.32 x 1/14”	RU 3	RH
A261350#	Argon-Helium-Nitrogen	0-200.0	0-315	0-315.0	W 24.32 x 1/14”	RU 3	RH
A261352#	Hydrogen	0-200.0	0-315	0-315.0	W 21.8 x 1/14”	LU 1	LH

Jetcontrol 600 Nitrogen

Unicontrol 500, 2 pressure gauges, EN 2503. Max primary pressure 300 bar

Art.no.	Gas	Nominal working pressure bar	Primary pressure gauge scale bar	Secondary pressure gauge scale bar	Side entry according NEN 3268 according NEVOC 5145		
A044810	Oxygen	0-12.0	0-450	0-16.0	NEVOC		
A044815	Argon-Helium-Nitrogen	0-12.0	0-450	0-16.0	NEVOC		
A044811	Oxygen	0-12.0	0-450	0-16.0	G 5/8” (22.9 x 1/14”)	RI 2	RH
A044816	Argon-Helium-Nitrogen	0-12.0	0-450	0-16.0	W 24.32 x 1/14”	RU 3	RH

Unicontrol 300 bar

Pluscontrol 101
Pluscontrol 101 is a gassaver for the reduction of the initial gas surge when welding with shielding gas. At the welding start a solenoid valve is opened to let the shielding gas flow from the cylinder via the regulator or outlet through the shielding gas hose to the welding unit and on the welding torch and the weld. The volume of the hose between the regulator and the solenoid valve of the welding unit determines the size of the gas surge; the longer the hose the bigger the surge. Pluscontrol 101 will keep the gas surge at a minimum and save gas. Furthermore the device is adjustable for a certain gas surge or maximum flow and fits all kinds of shielding gas regulators and outlets.

Art.no.	Description	Connection Inlet	thread	Connection Outlet	thread
A042802	Gassaver GS41	G 3/8”	female	G 3/8”	male
A291967#	Balloon regulator flexible				

Balloon regulator

GS41

R 200/1 single stage regulator, 2 pressure gauges, EN 2503. Max primary pressure 200 bar
HiQ® single stage regulators, especially suitable for specialty gases where the demands on purity, thightness and safety are high.
HiQ® is designed to achieve a unique performance in combining outstanding safety, tightness, pressure stability, flow rate span and ergonomics.
A line of compact single stage regulators and two-stage regulators is available.

R 200/1 is a high pressure regulator capable of dealing with high flows. Material chromium plated (RB) brass or stainless steel (RS), suitable for corrosive or non-corrosive gases.

Art.no.	Description	Nominal working pressure bar	Primary pressure gauge scale bar	Secondary pressure gauge scale bar	Side entry according NEN 3268
A420411##	RB 200/1/6	0- 6.0	0-315	-1.0- 10.0	On request
A420413##	RS 200/1/6	0- 6.0	0-315	-1.0- 10.0	On request
A420415##	RB 200/1/14	0- 14.0	0-315	0 - 25.0	On request
A420417##	RS 200/1/14	0- 14.0	0-315	0 - 25.0	On request
A420419##	RB 200/1/50	0- 50.0	0-315	0 - 80.0	On request
A420421##	RS 200/1/50	0- 50.0	0-315	0 - 80.0	On request
A420423##	RB 200/1/200	0-200.0	0-315	0 -315.0	On request
A420425##	RS 200/1/200	0-200.0	0-315	0 -315.0	On request

R200/2 two-stage regulator, 2 pressure gauges, EN 2503. Max primary pressure 200 bar
R 200/2 is a high pressure, two-stage regulator for specialty gases, with one-stage preset and the other adjustable, to obtain a very constant pressure. Material chromium plated (RB) brass or stainless steel (RS), suitable for corrosive or non-corrosive gases.

Art.no.	Description	Nominal working pressure bar	Primary pressure gauge scale bar	Secondary pressure gauge scale bar	Side entry according NEN 3268
A420431##	RB 200/2/3	0- 3.0	0-315	-1.0- 5.0	On request
A420433##	RS 200/2/3	0- 3.0	0-315	-1.0- 5.0	On request
A420435##	RB 200/2/6	0- 6.0	0-315	-1.0-10.0	On request
A420437##	RS 200/2/6	0- 6.0	0-315	-1.0-10.0	On request
A420439##	RB 200/2/10.5	0-10.5	0-315	-1.0-18.0	On request
A420441##	RS 200/2/10.5	0-10.5	0-315	-1.0-18.0	On request

Rear entry G 3/8” female and side entry G 1/4” female. Outlet connection G 1/4” female.

Optional HiQ® components on request, for instance:
- Points of use wall design and bench design
- Gas panels
- High pressure valves.

When ordering always state the type of gas and the outlet connection.

Regulators medical

The demands made on regulators in the medical field are extremely high. Components must be capable of dealing with high and low pressures, large and small flows. Medired and Mediline have been developed to match tomorrow's fast increasing demands.

Mediline (medicinal oxygen) single stage regulator, 1 pressure gauge, CE marked. Max primary pressure 200 bar

Art.no.	Gas	Nominal flow l/min	Primary pressure gauge scale bar	Side entry according NEN 3268			
A150001#	Oxygen	0-0.05-0.1-0.2-0.3-0.4-0.5-0.6-0.7-1.0	0-315	G 5/8" (22.9 x 1/14")	RI 2	RH	Handwheel
A150005#	Oxygen	0-0.5-0.75-1.0-1.5-2.0-2.5-3.0-4.0-5.0	0-315	G 5/8" (22.9 x 1/14")	RI 2	RH	Handwheel
A150015#	Oxygen	0-1.0-2.0-3.0-4.0-5.0-6.0-9.0-12.0-15.0	0-315	G 5/8" (22.9 x 1/14")	RI 2	RH	Handwheel

Medired (medicinal oxygen) single stage regulator, 2 gauges (l/min), CE marked. Max primary pressure 200 bar

Art.no.	Gas	Nominal flow gauge l/min	Primary pressure gauge scale bar	Side entry according NEN 3268			
A150120#	Oxygen	0.2- 1.0	0-315	G 5/8" (22.9 x 1/14")	RI 2	RH	Handwheel
A150119#	Oxygen	0.5- 2.0	0-315	G 5/8" (22.9 x 1/14")	RI 2	RH	Handwheel
A150121#	Oxygen	1.0- 6.0	0-315	G 5/8" (22.9 x 1/14")	RI 2	RH	Handwheel
A150122#	Oxygen	4.0-15.0	0-315	G 5/8" (22.9 x 1/14")	RI 2	RH	Handwheel

Medired "click" (medicinal oxygen) two-stage regulator, 1 pressure gauge, CE marked. Max primary pressure 200 bar

Art.no.	Gas	Nominal flow l/min	Primary pressure gauge scale bar	Side entry according NEN 3268			
A150161#	Oxygen	0-0.5-0.75-1.0-1.5-2.0-2.5-3.0-4.0-5.0	0-315	G 5/8" (22.9 x 1/14")	RI 2	RH	Handwheel
A150162#	Oxygen	0-1.0-2.0-3.0-4.0-5.0-6.0-7.0-12.0-15.0	0-315	G 5/8" (22.9 x 1/14")	RI 2	RH	Handwheel

Medired (medicinal oxygen) single stage medium pressure regulator

Art.no.	Gas	Nominal flow l/min	Secondary flow gauge scale l/min	Connection
A150150#	Oxygen	0.2- 1.0	0- 1 l/min	DIN
A150151#	Oxygen	1.0- 6.0	0- 6 l/min	DIN
A150152#	Oxygen	4.0-15.0	0-15 l/min	DIN

Therapy accessories

A150060#	Medidave regulator, 0-10 bar, handwheel RI-2, rear entry
A150061#	Varimed regulator, 0-10 bar, handwheel RI-2, side entry
A150062#	Y-piece, entry DIN, outlets DIN
A150065#	Medicinal medium pressure regulator 0 - 1 l/min
A150066#	Medicinal medium pressure regulator 0 - 5 l/min
A150067#	Medicinal medium pressure regulator 0 -15 l/min

Optional Pin Index type fittings available upon request.

Regulators manifolds (low pressure)

A central gas distribution system reduces the risk of accidents as there is no need to handle gas cylinders inside the work place. Gas cylinders are collected under one roof which facilitates removal. Jetset and Unicontrol medium pressure regulators for safe and reliable gas distribution make gases available when and where they are needed. Optional features supervises the gas supply and avoids gas flow interruption by channel specific optical and acoustic alarm monitoring.

Jetset/Unicontrol medium pressure regulator, EN 2503

Art.no.	Description	Nominal working pressure gauge bar	Secondary pressure gauge scale bar	Connection
B263001	Jetset Acetylene complete	0- 1.5	0- 2.5	G1/2” LH
B263002	Jetset Oxygen complete	0-10.0	0-16.0	G1/2” RH
B263003	Jetset Acetylene/Oxygen complete	0-1.5/10.0	0-2.5/16.0	G1/2” LH - G1/2” RH
B263009	Jetex R-13 Oxygen (>100 nm^3)	0-16.0	0-25.0	G3/4” RH
B263012	Jetset Propane/Tetrene complete	0- 6.0	0- 6.0	G1/2” LH
B263060	Unicontrol 700 Acetylene	0- 1.5	0- 2.5	G3/8” LH
B263062	Unicontrol 700 Oxygen	0-10.0	0-16.0	G3/8” RH
B263063	Unicontrol 700 Propane/Tetrene	0- 6.0	0- 6.0	G3/8” LH

Jetset/Unicontrol medium pressure regulator (l/min), EN 2503

Art.no.	Description	Preset working pressure bar	Max capacity flowmeter l/min	Connection
B263006	Jetset flowmeter Argon	2.5	2-30 l/min	G1/2” RH
B263011	Jetset flowmeter Formeer (backinggas)	4.5	2-30 l/min	G1/2” LH
B263064	Unicontrol 700 Argon/mixtures	2.5	2-30 l/min	G3/8” RH
B263065	Unicontrol 700 Argon/mixtures	2.5		G3/8” RH

Unicontrol 700 Oxygen

Regulators manifolds (high pressure)

Regulator high capacity, 2 pressure gauges, EN 2503. Max primary pressure 200 bar

Art.no.	Description	Nominal working pressure gauge bar	Primary pressure gauge scale bar	Secondary pressure gauge scale bar	Connection			
B260104	Unicontrol 501 Acetylene	0- 1.5	0- 40	0- 2.5	3/4”		RH	
B260204	Unicontrol 501 Oxygen	0-10.0	0-315	0-16.0	W 21.8 x 1/14”	RU 1	RH	
B260206	Unicontrol 500 Nitrogen	0-18.0	0-450	0-25.0	W 21.8 x 1/14”	RU 1	RH	
B260110	MR-60 Acetylene	0- 1.5	0- 40	0- 2.5	3/4”		RH	
B260112	MR-60 Acetylene	0- 1.5	0- 40	0- 2.5	3/4”		RH	Rear entry
B260210	MR-60 Oxygen	0-12.0	0-315	0-25.0	W 21.8 x 1/14”	RU 1	RH	
B260212	MR-60 Oxygen	0-12.0	0-315	0-25.0	W 21.8 x 1/14”	RU 1	RH	Rear entry
B260214	MR-60 Mison	0-12.0	0-315	0-25.0	W 21.8 x 1/14”	RU 1	RH	
B260216	MR-60 Nitrogen	0-50.0	0-450	0-80.0	W 21.8 x 1/14”	RU 1	RH	

Unicontrol 501

MR-60

Many-Flow gas supply systems

The compact Many-Flow gas supply sytems with its modular design establishes a complete range of gas control units either for cylinders or for bundle gas supply with Acetylene or high pressure gases up to 300 bars. This pressure control device is delivered as a basic unit together with high pressure hoses, related to the gas type. Once chosen this kind of modular concept you are always provided with the opportunity to extend your gas supply to your particular operating conditions.

Art.no.	Description	Regulator	HP hoses	Side entry acoording NEN 3268		
B231512	Many-Flow gas supply system 1 x 2 cylinders Acetylene	Unicontrol 501	2	Connection yoke		
B231513	Many-Flow gas supply system 1 x 3 cylinders Acetylene	Unicontrol 501	3	Connection yoke		
B231522	Many-Flow gas supply system 2 x 2 cylinders Acetylene	Unicontrol 501	4	Connection yoke		
B231523	Many-Flow gas supply system 2 x 3 cylinders Acetylene	Unicontrol 501	6	Connection yoke		
B231533	Many-Flow gas supply system 2 x 3 cylinders Acetylene	MR-60	6	W 28.806 x 1/14”	RU 6	RH
B231542	Many-Flow gas supply system 1 x 2 bundles Acetylene	MR-60	2	W 28.806 x 1/14”	RU 6	RH
B231812	Many-Flow gas supply system 1 x 2 cylinders Oxygen	Unicontrol 501	2	G 5/8” (22.9 x 1/14”)	RI 2	RH
B231813	Many-Flow gas supply system 1 x 3 cylinders Oxygen	Unicontrol 501	3	G 5/8” (22.9 x 1/14”)	RI 2	RH
B231822	Many-Flow gas supply system 2 x 2 cylinders Oxygen	Unicontrol 501	4	G 5/8” (22.9 x 1/14”)	RI 2	RH
B231823	Many-Flow gas supply system 2 x 3 cylinders Oxygen	Unicontrol 501	6	G 5/8” (22.9 x 1/14”)	RI 2	RH
B231833	Many-Flow gas supply system 2 x 3 cylinders Oxygen	MR-60	6	G 5/8” (22.9 x 1/14”)	RI 2	RH
B231842	Many-Flow gas supply system 1 x 2 bundles Oxygen	MR-60	2	G 5/8” (22.9 x 1/14”)	RI 2	RH
B232012	Many-Flow gas supply system 1 x 2 cylinders Argon	Unicontrol 501	2	W 24.32 x 1/14”	RU 3	RH
B232013	Many-Flow gas supply system 1 x 3 cylinders Argon	Unicontrol 501	3	W 24.32 x 1/14”	RU 3	RH
B232022	Many-Flow gas supply system 2 x 2 cylinders Argon	Unicontrol 501	4	W 24.32 x 1/14”	RU 3	RH
B232023	Many-Flow gas supply system 2 x 3 cylinders Argon	Unicontrol 501	6	W 24.32 x 1/14”	RU 3	RH
B232033	Many-Flow gas supply system 2 x 3 cylinders Argon	MR-60	6	W 24.32 x 1/14”	RU 3	RH
B232042	Many-Flow gas supply system 1 x 2 bundles Argon	MR-60	2	W 24.32 x 1/14”	RU 3	RH

Many-Flow gas supply system

Many-Flow gas supply systems

Many-Flow valve block up to 300 bar inlet pressure

Art.no.	Description	Side entry according NEN 3268		
B260020	Many-Flow valve block Acetylene	G 3/4”		RH
B260021	Many-Flow valve block compressed gases	W 21.8 x 1/14”	RU 1	RH

High pressure flexible hoses + cylinder connections

Art.no.	Description	Thread connection			
B264322#	High pressure flexible hose Acetylene L= 1000 mm	1/4“ x 1/4”			
B264323#	High pressure flexible hose Acetylene L= 2000 mm	1/4” x 1/4”			
B264332#	High pressure flexible hose Solef up to 200 bar L= 800 mm	1/4” x 21.8			
B264333#	High pressure flexible hose Solef up to 200 bar L= 2000 mm	1/4” x 21.8			
B264302#	High pressure flexible hose Teflon up to 200 bar L= 800 mm	1/4“ x 1/4”			
B264304#	High pressure flexible hose Teflon up to 200 bar L= 2000 mm	1/4“ x 1/4”			
B264306	Cylinder connection Acetylene	Connection yoke			NEN 3268
B264308	Cilinderaansluiting Argon	W 24.32 x 1/14”	RU 3	RH	NEN 3268
B264309	Cilinderaansluiting Air	W 28.806 x 1/14”	RU 6	RH	NEN 3268
B264311	Cilinderaansluiting Oxygen	G 5/8” (22.9 x 1/14”)	RI 2	RH	NEN 3268

Many-Flow valve block

High pressure flexible hose equipped with a loop

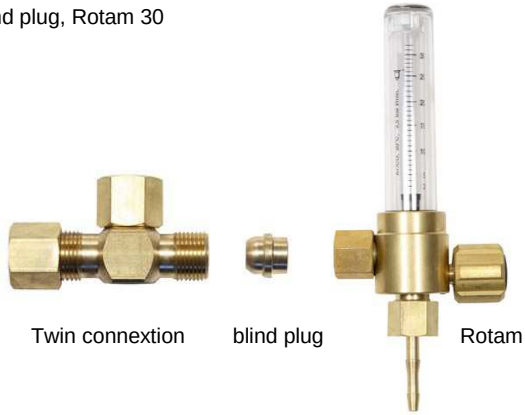
Wall brackets

B260033	Stainless steel wall bracket 1 cylinder
B260034	Stainless steel wall bracket 2 cylinders
B260036	Stainless steel wall bracket 3 cylinders
B260037	Stainless steel wall bracket 4 cylinders

Rotam flowmeter 0-30 l/min brass

A045058	Rotam 30 Plus AR/CO_2	0-30 l/min	4.5 bar	inlet G 3/8” female outlet G 3/8” male
A045059	Rotam 30 Plus AR/CO_2	0-30 l/min	2.5 bar	inlet G 3/8” female outlet G 3/8” male
A045070	Rotam 30 Plus Helium	0-30 l/min	4.5 bar	inlet G 3/8” female outlet G 3/8” male

A045047 Twin connection, blind plug, Rotam 30



Twin connextion blind plug Rotam 30 Plus

Regulators CATWELD Dincontrol

Catweld Dincontrol, 2 pressure gauges, EN 2503. Max primary pressure 200 bar

Art.no.	Gas	Nominal working pressure bar	Primary pressure gauge scale bar	Secondary pressure gauge scale bar	Side entry according NEN 3268		
A046000	Acetylene NL	0- 1.5	0- 40	0- 2.5	Connection yoke		
A046010	Oxygen NL	0-10.0	0-315	0-16.0	G 5/8" (22.9 x 1/14")	RI 2	RH
A046011	Carbon Dioxide	0-10.0	0-315	0-16.0	W 21.8 x 1/14"	RU 1	RH
A044712	Argon-Helium-Nitrogen	0-10.0	0-315	0-16.0	W 24.32 x 1/14"	RU 3	RH
A044713	Air	0-10.0	0-315	0-16.0	W 28.806 x 1/14"	RU 6	RH
A044714	Formeer (backinggas)	0-10.0	0-315	0-16.0	W 21.8 x 1/14"	LU 1	LH

Catweld Dincontrol Oxygen

Catweld Dincontrol, 2 gauges (l/min), EN 2503. Max primary pressure 200 bar
Designed for MIG welding processes.

Art.no.	Gas	Nominal flow gauge l/min	Primary pressure gauge scale bar	Secondary flow gauge scale l/min	Side entry according NEN 3268		
A046020	Argon/mixtures	0-24 l/min	0-315	0-32 l/min	W 24.32 x 1/14"	RU 3	RH
A046021	Mison	0-24 l/min	0-315	0-32 l/min	W 1" (25.4 x 1/8")	RU 4	RH
A046022	Carbon Dioxide	0-24 l/min	0-315	0-32 l/min	W 21.8 x 1/14"	RU 1	RH
A046023	Formeer (backinggas)	0-50 l/min	0-315	0-75 l/min	W 21.8 x 1/14"	LU 1	LH
A046024	Calibration gas	0-24 l/min	0-315	0-32 l/min	W 1" (25.4 x 1/8")	LU 4	LH

Catweld Dincontrol with flowmeter Argon/CO_2

Catweld Dincontrol, 1 pressure gauge and 1 flowmeter, EN 2503. Max primary pressure 200 bar
Designed for TIG welding processes.

Art.no.	Gas	Preset working pressure bar	Primary pressure gauge scale bar	Max capacity flowmeter l/min	Side entry according NEN 3268		
A046050	Carbon Dioxide	4.5	0-315	2-30 l/min	W 21.8 x 1/14"	RU 1	RH
A046052	Argon/mixtures	4.5	0-315	2-30 l/min	W 24.32 x 1/14"	RU 3	RH
A046054	Carbon Dioxide	4.5	0-315	2-16 l/min	W 21.8 x 1/14"	RU 1	RH
A046056	Argon/mixtures	4.5	0-315	2-30 l/min	W 24.32 x 1/14"	RU 3	RH
A046057	Mison	4.5	0-315	2-16 l/min	W 1" (25.4 x 1/8")	RU 4	RH
A046058	Mison	4.5	0-315	2-30 l/min	W 1" (25.4 x 1/8")	RU 4	RH
A046059	Formeer (backinggas)	4.5	0-315	2-30 l/min	W 21.8 x 1/14"	LU 1	LH

Catweld Dincontrol, 1 pressure gauge, EN 2503

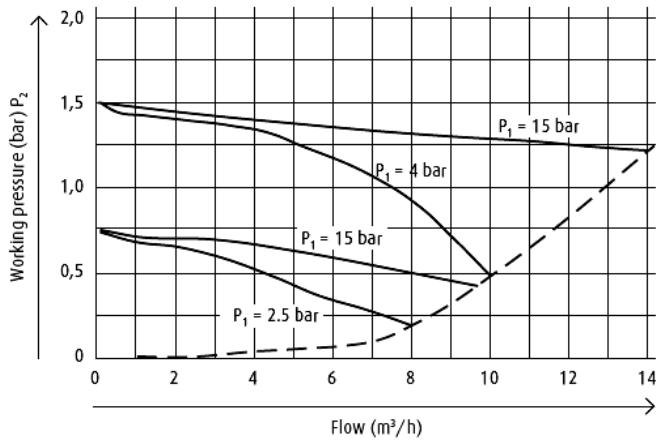
Art.no.	Gas	Nominal working pressure bar		Secondary pressure gauge scale bar	Side entry according NEN 3268		
A046015	Propane (SHELL)	0-1.5		0-2.5	W 21.8 x 1/14”	LU 1	LH

Catweld Dincontrol, 2 pressure gauges, EN 2503. Max primary pressure 200 bar

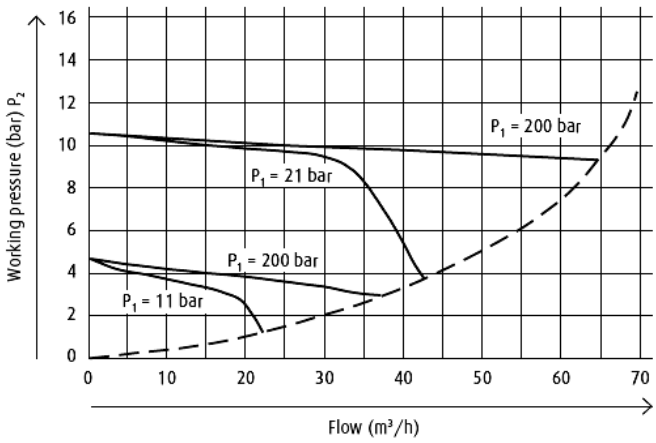
Art.no.	Gas	Nominal working pressure bar	Primary pressure gauge scale bar	Secondary pressure gauge scale bar	Side entry according NEN 3268		
A046030	Argon-Helium-Nitrogen	0-30.0	0-315	0-60.0	W 24.32 x 1/14”	RU 3	RH
A046031#	Airco 2 ACME/FLARE	0-30.0	0-315	0-60.0	W 24.32 x 1/14”	RU 3	RH
A046032#	Airco 1 FLARE	0-30.0	0-315	0-60.0	W 24.32 x 1/14”	RU 3	RH
A046033	Air	0-30.0	0-315	0-60.0	W 28.806 x 1/14”	RU 6	RH

Flow diagrams

Acetylene



Oxygen



The capacity graphs show the outlet pressure as a function of the flow rate at different pressures (P1).

Art.no.	Gas	Nominal working pressure bar	Primary pressure gauge scale bar	Secondary pressure gauge scale bar	Side entry according NEVOC 5145
A046061	Argon-Helium-Nitrogen	0-10.0	0-400	0-16.0	NEVOC
A046062	Nitrogen	0-10.0	0-400	0-16.0	NEVOC
A046063	Argon/mixtures	0-24 l/min	0-400	0-32 l/min	NEVOC

Wika (pressure) gauges EN 562 Ø 62 mm 1/4” bottom entry

A049900	Oxygen	0-10/16	bar
A049901	Oxygen	0-20/40	bar
A049902	Oxygen	0-200/315	bar
A049903	Acetylene	0-1.5/2.5	bar
A049904	Acetylene	0-18/40	bar
A049905	Formeer	0-50	l/min
A049906	Argon/mixtures	0-200/315	bar
A049907	Argon/mixtures	0-32	l/min
A049908	Neutral	0-10/16	bar
A049909	Neutral	0-200/315	bar
A049911	Neutral	0-30/60	bar
A049910	Neutral	0-1.5/2.5	bar
A049912	Neutral	0-300	bar

AGA pressure gauges EN 562 Ø 50 mm 1/4” rear entry

B260350	Acetylene	0-40	bar
B260352	Oxygen	0-315	bar
B260354	Acetylene	0-2.5	bar
B260356	Oxygen	0-25	bar

AGA (pressure) gauges EN 562 Ø 50 mm 1/4” bottom entry

A045030	Acetylene	0-40	bar
A045040	Oxygen	0-315	bar
A045041	Oxygen	0-400	bar
A045032	Acetylene	0-2.5	bar
A045042	Oxygen	0-16	bar
A045044	Argon/mixtures	0-35	l/min
A045034	Propane	0-6	bar
A045036	Argon/mixtures	0-32	l/min (PC 101)

Regulators CATWELD Standard

Catweld Standard, 2 pressure gauges, EN 2503. Max primary pressure 200 bar

Art.no.	Gas	Nominal working pressure bar	Primary pressure gauge scale bar	Secondary pressure gauge scale bar	Side entry according NEN 3268
A047000	Acetylene NL	0- 1.5	0- 40	0- 2.5	Connection yoke
A047010	Oxygen	0-10.0	0-315	0-16.0	G 5/8" (22.9 x 1/14") RI 2 RH

Catweld Standard Acetylene

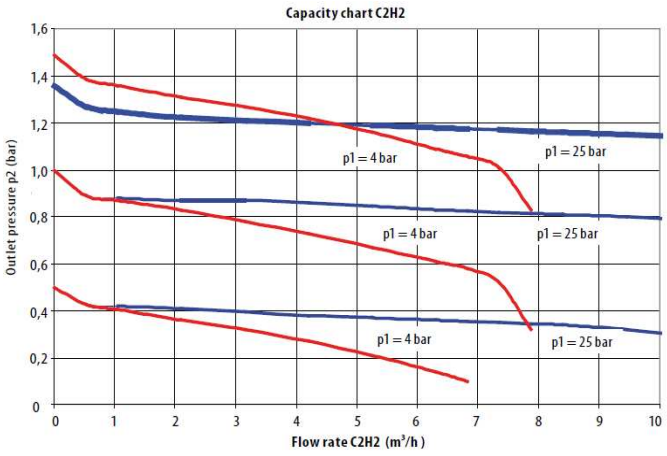
Catweld Dincontrol, 2 gauges (l/min), EN 2503. Max primary pressure 200 bar
Designed for MIG welding processes.

Art.no.	Gas	Nominal flow gauge l/min	Primary pressure gauge scale bar	Secondary flow gauge scale l/min	Side entry according NEN 3268
A047020	Argon/mixtures	0-24 l/min	0-315	0-32 l/min	W 24.32 x 1/14" RU 3 RH

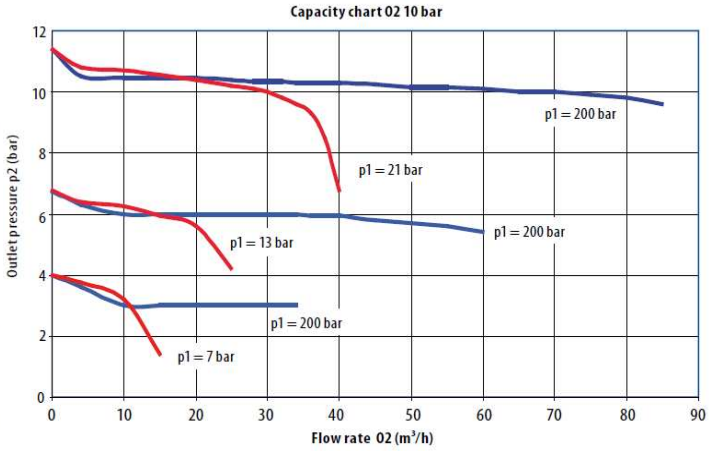
Catweld Standard Argon/CO_2

Flow diagrams

Acetylene



Oxygen



Regulators CATWELD

Catweld regulator, 2 pressure gauges, EN 2503. Max primary pressure 200 bar

Art.no.	Gas	Nominal working pressure bar	Primary pressure gauge scale bar	Secondary pressure gauge scale bar	Side entry according NEN 3268
A048000	Acetylene NL	0- 1.5	0- 40	0- 2.5	Connection yoke
A048010	Oxygen NL	0-10.0	0-315	0-16.0	G 5/8" (22.9 x 1/14") RI 2 RH

Catweld regulator, 2 gauges (l/min), EN 2503. Max primary pressure 200 bar
Designed for MIG welding processes.

Art.no.	Gas	Nominal flow gauge l/min	Primary pressure gauge scale bar	Secondary flow gauge scale l/min	Side entry according NEN 3268
A048020	Argon/mixtures	0-25 l/min	0-315	0-32 l/min	W 24.32 x 1/14" RU 3 RH

Catweld Oxygen

Catweld regulator, 1 pressure gauge and 1 flowmeter, EN 2503. Max primary pressure 200 bar
Designed for TIG welding processes.

Art.no.	Gas	Preset working pressure bar	Primary pressure gauge scale bar	Max capacity flowmeter l/min	Side entry according NEN 3268
A048040	Catweld Flowmeter Argon/mixtures	3.5	0-315	0-25 l/min	W 24.32 x 1/14" RU 3 RH

Catweld with flowmeter Argon/CO_2

Cylinder coupling adapters, gaskets

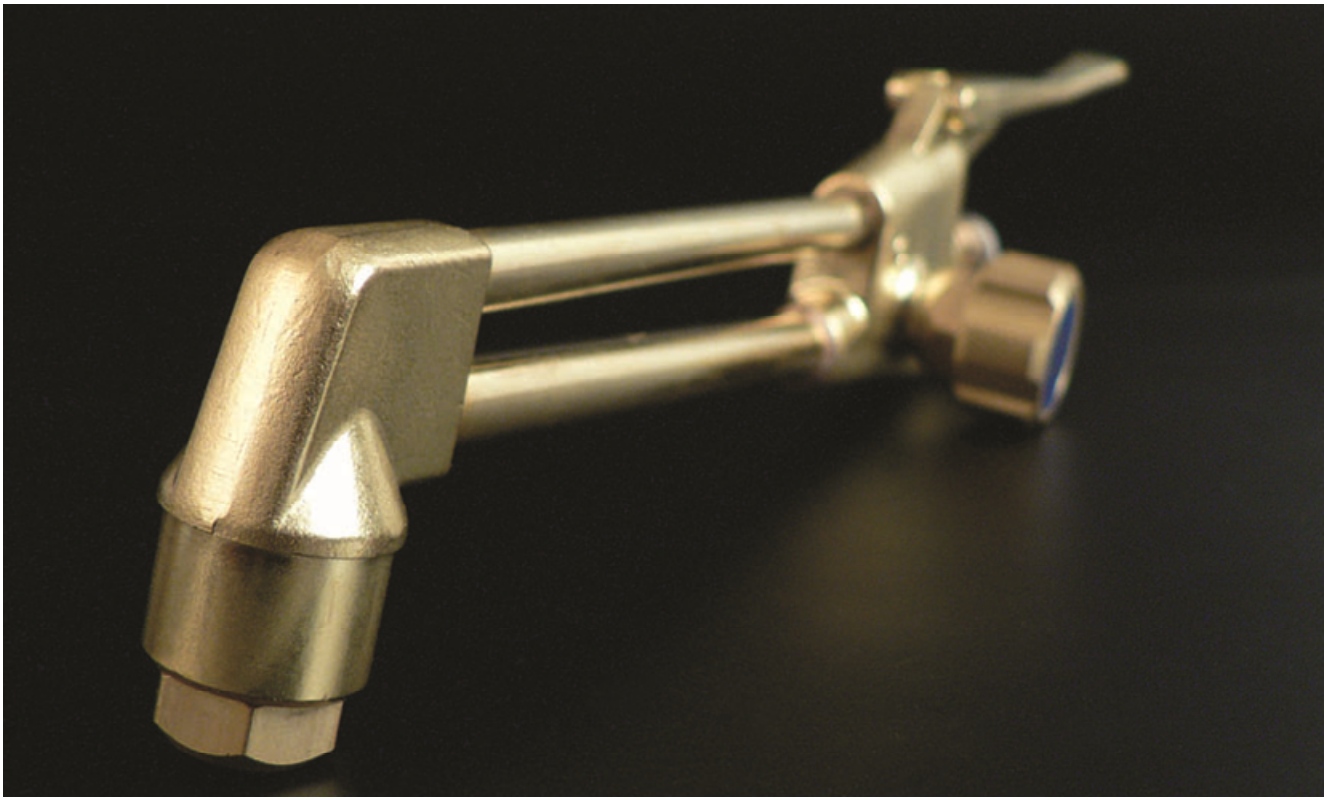
	Cylinder coupling adapters			Cylinder	Regulator
A265408#	21.8 LH-female	x	24.32 RH-male	LU 1	RU 3
A265410#	21.8 RH-female	x	5/8” RH-female	RU 1	RI 2
A265412#	21.8 RH-female	x	24.32 RH-male	RU 1	RU 3
A265414#	24.32 RH-female	x	5/8” RH-female	RU 3	RI 2
A265415#	24.32 RH-female	x	25.4 RH-male	RU 3	RU 4
A265416#	24.32 RH-female	x	21.8 RH-male	RU 3	RU 1
A265417#	24.32 RH-female	x	28.8 RH-male	RU 3	RU 6
A265418#	25.4 RH-female	x	24.32 RH-male	RU 4	RU 3
A265424#	28.8 RH-female	x	5/8” RH-female	RU 6	RI 2
A265425#	28.8 RH-female	x	24.32 RH-male	RU 6	RU 3
A265428#	5/8” RH-male	x	21.8 RH-male	RI 2	RU 1
A265434#	5/8” RH-male	x	24.32 RH-male	RI 2	RU 3
A265436#	21.8 RH-female	x	21.8 LH-male	RU 1	LU 1
A265438#	21.8 LH-female	x	5/8” LH-female	LU 1	POL
A265439#	24.32 RH-female	x	25.4 LH-male	RU 3	LU 4
A265450#	Adapter Mison			RU 4	RU 3
A265446#	POL LH swivel adapter male x SHELL LH male				

MOST ADAPTERS SHOULD ONLY BE USED FOR SHORT PERIODS OF TIME. A SPECIFIC REGULATOR WILL BE REQUIRED FOR EACH SPECIFIC TYPE OF GAS IN CYLINDERS AND CENTRAL GAS SYSTEMS.

	Gaskets, cylinder coupling adapters female					
A711650	Rubber gasket universal Acetylene					
A264338	Delrin®	16	x	9.2 x 2 mm	LU 0	
A264340	Delrin®	18	x	12.2 x 2 mm	LU 1	RU 1
A264341	Delrin®	20	x	12.2 x 2 mm	RU 3	
A264342	Delrin®	25	x	12.2 x 2 mm	RU 6	
A264345	Delrin®	21	x	8 x 2 mm	RU 4	LU 4

Adapters foreign countries available upon request, always state the type of gas and country.

Welding and cutting sets



Welding system The Little Torch

A023000# **Welding system The Little Torch**
Packaged in a display box.
Contents:
1 aluminum alloy body
5 welding attachments
5-36-65-77-94 ltr/h (nr. 3 t/m 7)
Fuel gas hose (red) L=173 cm
Oxygen hose (green) L=173 cm
1 adapter G1/4” - G3/8”.

The Little Torch feels right in your hand. It is just a fraction wider and longer than your middle finger.
It has unmatched flexibility:
- jewellery & art repair
- soldering
- electronics.

The Little Torch superbly balanced torch with a rugged aluminum alloy body weighs only 43 gram.
The Little Torch can be used with several fuels including acetylene, hydrogen, propane, propylene, MAPP® or natural gas.
The Little Torch produces a perfectly controlled, stable flame up to 3200°C.
The Little Torch includes an aluminum alloy body, size 3-7 curved tips and colour coded oxy-fuel hoses.

Welding system The Little Torch

A023000#	Welding system The Little Torch
	Welding attachment straight
A023012#*	LT welding attachment straight nr. 2
A023013#*	LT welding attachment straight nr. 3
A023014#*	LT welding attachment straight nr. 4
A023015#*	LT welding attachment straight nr. 5
A023016#*	LT welding attachment straight nr. 6
A023017#*	LT welding attachment straight nr. 7

	Welding attachment curved
A023021#*	LT welding attachment curved nr. 1
A023022#	LT welding attachment curved nr. 2
A023023#	LT welding attachment curved nr. 3
A023024#	LT welding attachment curved nr. 4
A023025#	LT welding attachment curved nr. 5
A023026#	LT welding attachment curved nr. 6
A023027#	LT welding attachment curved nr. 7
	Welding attachment twin
A023031#*	LT welding attachment twin nr. 1
A023032#*	LT welding attachment twin nr. 2
A023033#	LT welding attachment twin nr. 3
A023034#	LT welding attachment twin nr. 4
A023035#	LT welding attachment twin nr. 5
A023036#	LT welding attachment twin nr. 6

	Heating attachment multi flame Acetylene
A023042#	LT heating attachment multiflame AC/H_2 nr. 2
	Heating attachment multiflame Natural gas/ Propane
A023048#	LT heating attachment multiflame PR nr. 3
	Extension pipe
A023051#	LT extension pipe 3”
A023058#	LT magnetic torch stand
	Hose
A023003##	Litlle Torch flexible hose oxygen
A023004##	Little Torch flexible hose fuel gas
A023005##	Little Torch hoseclamp (brass collar)

Soldering and brazing torch HBL

	Soldering and brazing torch HBL Acetylene*
A023070#	Soldering and brazing set HBL Acetylene
A023071#	Shank HBL
A023072#	Extension pipe HBL
A023073#	Nozzle nr. 1 HBL
A023074#	Nozzle nr. 2 HBL
A023075#	Nozzle nr. 3 HBL
A023076#	Nozzle nr. 4 HBL
A023077#	Nozzle nr. 5 HBL

Soldering is a process in which two metal items are joined together by melting and flowing a filler metal (solder) into the joint, the filler metal having a lower melting point than the workpiece.

Nozzle operating data HBL

Nozzle	**AC consumption**	**Working pressure**
Nr. 1	14 ltr/h	0.5 bar
Nr. 2	28 ltr/h	0.5 bar
Nr. 3	165 ltr/h	0.5 bar
Nr. 4	310 ltr/h	0.5 bar
Nr. 5	850 ltr/h	0.8 bar

***As long as supplies last.**

Welding and cutting system AGA X-11 Original

A023101 **Welding and cutting system X-11 Original Injector EN ISO 5172**
In synthetic casing.
Cutting capacity max 100 mm.
Contents:
1 shank with quick connecting nut
6 welding attachments DIN 80-160-315-500-800-1000 ltr
1 cutting attachment 90° lever
3 cutting nozzles type HA-411 (3-50 mm)
1 set cleaning needles
1 spanner 6-gap
3 teflon washers
1 set non return valves BV-11.

A023102 **Welding and cutting system X-11 Original Nozzle Mix EN ISO 5172**
In synthetic casing.
Cutting capacity max 150 mm.
Contents:
1 shank with quick connecting nut
6 welding attachments DIN 80-160-315-500-800-1000 ltr
1 cutting attachment 90° lever
2 cutting nozzles type Coolex® A-311 (3-10 mm, 25-50 mm)
1 set cleaning needles
1 spanner 6-gap
3 teflon washers
1 set non return valves BV-11.

A023103 **Welding system X-11 Original Mini EN ISO 5172**
In metal casing.
Contents:
1 shank with quick connecting nut
3 welding attachments DIN 160-230-315 ltr
3 teflon washers.

A023104 **Welding system X-11 Original CV EN ISO 5172**
In metal casing.
Contents:
1 shank with quick connecting nut
3 welding attachments DIN 160-230-315 ltr
2 flexible welding attachments 90° 160-315 ltr
3 teflon washers.

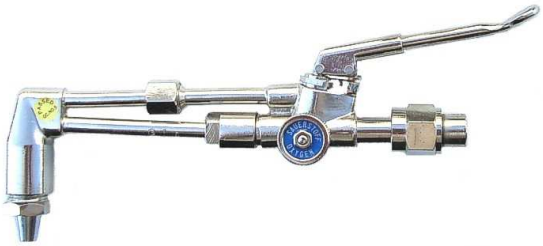
A023105 **Welding system X-11 Original Pro Plus EN ISO 5172**
In synthetic casing.
Contents:
1 shank with quick connecting nut
4 welding attachments DIN 160-315-500-800 ltr
1 cutting attachment 90° lever
3 cutting nozzles type HA-411 (3-50 mm)
1 heating attachment 1000 ltr
1 set cleaning needles
1 spanner 6-gap
3 teflon washers
1 set non return valves BV-11.

X-11 is a complete system comprising of everything you need for general purpose welding and cutting requirements. The welding attachments are made of chrome plated copper for efficient heat dissipation and are fully swaged to give a perfect flame. The quick connecting nut enables rapid exchange of the welding head and the cutting attachment. A large number of accessories increase the flexibility of the X-11 torch system.

Welding and cutting system LX-14

A026500 **Welding and cutting system LX-14**
In metal casing.
Cutting capacity max 100 mm.
Contents:
1 shank with connection nut and hose nipples
5 welding attachments DIN 80-160-315-500-800 ltr
1 cutting attachment 90° lever
2 cutting nozzles (3-40 mm)
1 twin wheel cutting guide
1 radius arm with centre point
2 spanners
1 set cleaning needles.

A026501 **Welding system LX-14**
In metal casing.
Contents:
1 shank with connection nut and hose nipples
2 flexible welding attachments DIN 160-400 ltr
2 welding attachments DIN 300-500 ltr
1 heating attachment multiflame DIN 500 ltr.



A026502 **Welding and cutting system LX-14 Plus**
Contents:
1 welding and cutting system LX-14
1 regulator CATWELD Acetylene with connection yoke
1 flashback arrestor 3/8”L
1 regulator CATWELD Oxygen RI 2

LX-14 is a professional kit especially designed for installation purposes. Flow adjustment is easily done by means of the compact oxygen- and gas valve. The welding nozzles, mounted separately on the welding attachments, can be replaced easily.

A021300 **Welding and cutting system X-21 balanced pressure principle EN ISO 5172**
In metal casing.
Cutting capacity max 500 mm.
Contents:
1 shank round, with connection nut and hose nipples
6 welding attachments DIN 80-160-315-500-800-1250 ltr
1 cutting attachment nozzle mix 90° lever
3 cutting nozzles type Coolex® A-311 (3-50 mm)
1 twin wheel cutting guide
1 spanner 6-gap
1 set cleaning needles
1 set O-rings.

A021301 **Welding and cutting system X-21 balanced pressure principle EN ISO 5172**
According A021300, however equipped with an oval shank, connection nut and hose nipples.

A021302 **Welding and cutting system X-21, cutting attachment injector AC EN ISO 5172**
Equipped with a round shank and a cutting attachment 90° lever, including MA-133D cutting nozzles.

A021303 **Welding and cutting system X-21, cutting attachment injector AC EN ISO 5172**
According A021302, however equipped with an oval shank, connection nut and hose nipples.

Accessories

A051041	Non return valves BV-11 3/8”L
A051042	Non return valves BV-11 3/8”
A051120	Non return valves BV-12 3/8” x 9.0 mm
A051121	Non return valves BV-12 3/8”L x 9.0 mm

X-21 is a versatile, complete torch system, cutting attachment 90° with injector or balanced pressure principle, round or oval shank for all medium and heavy duty cutting, welding and heating jobs.

X-21 can be used in the following operations:
- welding in thicknesses up to 14 mm
- cutting in carbon steel in thicknesses up to 500 mm, circle cutting, hole cutting, bevel cutting, rivet washing
- brazing and braze welding
- heating, bending, straightening
- gouging
- flame-cleaning.

A021678 Cutting attachment 75° lever, elongated 955 mm

A021677 Cutting attachment 75° lever, elongated 655 mm

A021500 Cutting attachment 90° lever

Cutting torches

Cutting torch AGA X-511 Diamond

A024105	**Cutting torch X-511 Diamond** cutting Oxygen lever	**nozzle head**	**90°**	**length**	**470 mm**	**1/4" x 3/8"L**
A024108	**Cutting torch X-511 Diamond** cutting Oxygen lever	**nozzle head**	**90°**	**length**	**470 mm**	**3/8" x 3/8"L**
A024107	**Cutting torch X-511 Diamond** cutting Oxygen lever	**nozzle head**	**105°**	**length**	**470 mm**	**1/4" x 3/8"L**
A024106	**Cutting torch X-511 Diamond** cutting Oxygen lever	**nozzle head**	**180°**	**length**	**470 mm**	**1/4" x 3/8"L**
A024097	**Cutting torch X-511 Diamond** cutting Oxygen lever	**nozzle head**	**105°**	**length**	**855 mm**	**1/4" x 3/8"L**
A024096	**Cutting torch X-511 Diamond** cutting Oxygen lever	**nozzle head**	**180°**	**length**	**855 mm**	**1/4" x 3/8"L**
A024101	**Cutting torch X-511 Diamond** cutting Oxygen lever	**nozzle head**	**105°**	**length**	**1115 mm**	**1/4" x 3/8"L**

Accessories

A051041	Non return valves BV-11 3/8"L
A051042	Non return valves BV-11 3/8"
A051120	Non return valves BV-12 3/8" x 9.0 mm
A051121	Non return valves BV-12 3/8"L x 9.0 mm
A021541	Nozzle nut (heavy duty)

- Safe and robust
- Low weight
- Large capacity
- Accessories for several applications

X-511 Diamond is made for nozzle mix nozzles and has capacity enough for cutting more than 500 mm.

Easy to handle.

Oval handle for positive grip. The screw valves for regulation of preheating oxygen and fuel gas are forward mounted for easiest control of the flame. The cutting oxygen lever is specially designed to give maximum control of all operations, ideal for piercing, gouging and rivet washing.

Safe and robust.

Control knobs, handles, tubes AC/OX with a long track record for durability.

The special valves have a self centering stainless steel valve stem for positive seating and long life.

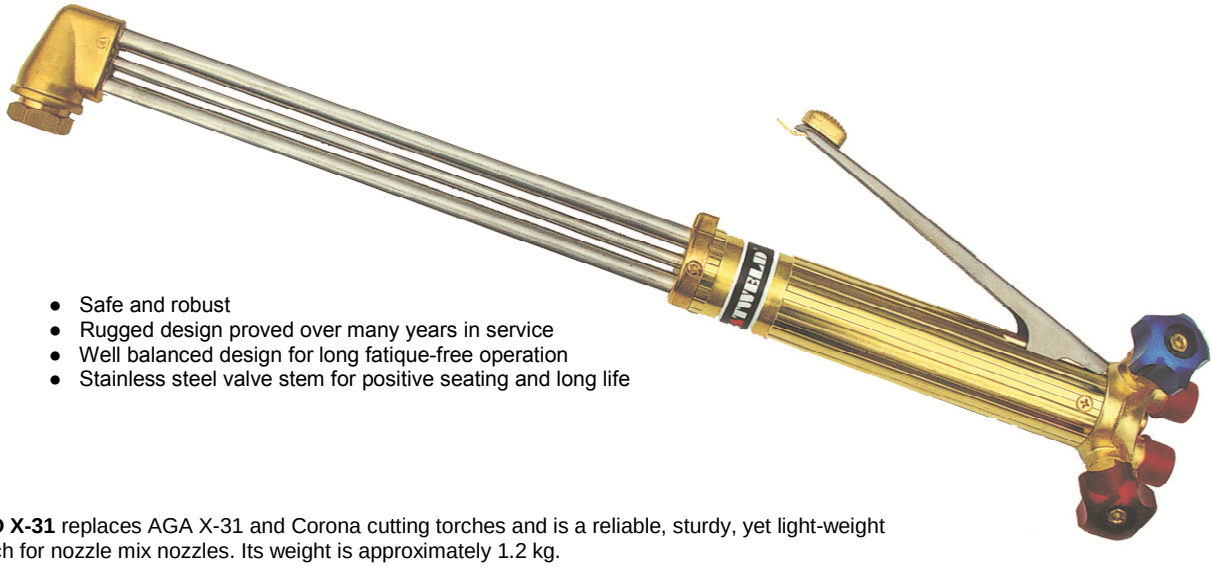
Several accessories available upon request.

Cutting torch CATWELD X-31

A024150	**Cutting torch CATWELD X-31** cutting Oxygen lever	**nozzle head**	**90°**	**length**	**500 mm**	**3/8” x 3/8”L**
A024151	**Cutting torch CATWELD X-31** cutting Oxygen lever	**nozzle head**	**90°**	**length**	**500 mm**	**1/4” x 3/8”L**
A024148	**Cutting torch CATWELD X-31** cutting Oxygen lever	**nozzle head**	**180°**	**length**	**500 mm**	**3/8” x 3/8”L**
A024152	**Cutting torch CATWELD X-31** cutting Oxygen lever	**nozzle head**	**105°**	**length**	**700 mm**	**3/8” x 3/8”L**
A024154	**Cutting torch CATWELD X-31** cutting Oxygen lever	**nozzle head**	**105°**	**length**	**900 mm**	**3/8” x 3/8”L**
A024156	**Cutting torch CATWELD X-31** cutting Oxygen lever	**nozzle head**	**105°**	**length**	**1100 mm**	**3/8” x 3/8”L**

Accessories

A051041	Non return valves BV-11 3/8”L
A051042	Non return valves BV-11 3/8”
A051120	Non return valves BV-12 3/8” x 9.0 mm
A051121	Non return valves BV-12 3/8”L x 9.0 mm



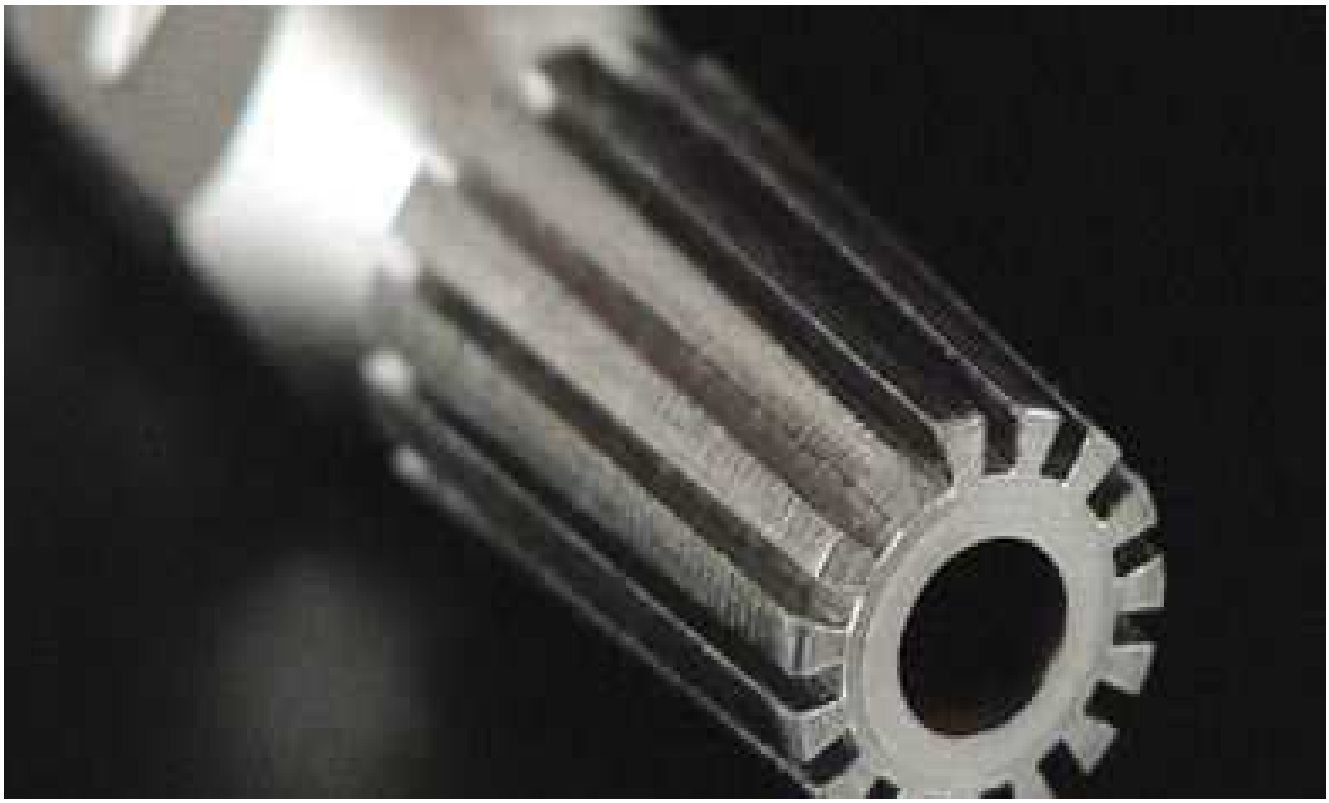
- Safe and robust
- Rugged design proved over many years in service
- Well balanced design for long fatique-free operation
- Stainless steel valve stem for positive seating and long life

CATWELD X-31 replaces AGA X-31 and Corona cutting torches and is a reliable, sturdy, yet light-weight cutting torch for nozzle mix nozzles. Its weight is approximately 1.2 kg.

The fuel gas and the oxygen are mixed in the nozzle, thereby restricting the volume of gas mixture and ensuring a high degree of safety against backfire and flashback.

A large number of nozzles and accessories enables **CATWELD X-31** to be used for cutting sheet metal, general cutting work, cutting on heavy gauge materials, cutting circles and bevels, cutting of rivets, scrap cutting, gouging etcetera.

Cutting nozzles



Cutting nozzles (injector) Acetylene

AGA X-11/AGA Kombi 14-G Maxi

A023401	Cutting nozzle	1 -	3	HA-411-1
A023402	Cutting nozzle	3 -	8	HA-411-2
A023403	Cutting nozzle	8 -	20	HA-411-3
A023404	Cutting nozzle	20 -	50	HA-411-4
A023405	Cutting nozzle	50 -	100	HA-411-5

AGA X-311/BM-30-31/Jetstream/AGA X-501-A/AGA X-21 INJ

A051929	Cutting nozzle	2.5 -	5	TINEX

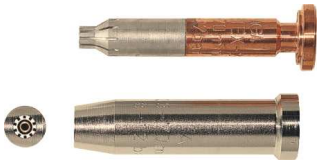
Tinex is specially designed for thin plate cutting purposes. The heating flame is extremely low and specially adapted for thin plate. The inner nozzle with its cylindrical cutting orifice eliminates the need of high cutting oxygen pressures.

AGA X-311/BM-30-31/Jetstream/AGA X-501-A/AGA X-21 INJ

A051930	Nozzle complete	3 -	8	MA-133D-0
A051931	Nozzle complete	8 -	15	MA-133D-1
A051932	Nozzle complete	15 -	30	MA-133D-2
A051933	Nozzle complete	30 -	50	MA-133D-3
A051934	Nozzle complete	50 -	70	MA-133D-4
A051935	Nozzle complete	70 -	100	MA-133D-5
A051936	Nozzle complete	100 -	200	MA-133D-6
A051937	Nozzle complete	200 -	300	MA-133D-7
A051948	Outer nozzle	3 -	100	MA-133D
A051949	Outer nozzle	100 -	300	MA-133D
A051940	Inner nozzle	3 -	8	MA-133D-0
A051941	Inner nozzle	8 -	15	MA-133D-1
A051942	Inner nozzle	15 -	30	MA-133D-2
A051943	Inner nozzle	30 -	50	MA-133D-3
A051944	Inner nozzle	50 -	70	MA-133D-4
A051945	Inner nozzle	70 -	100	MA-133D-5

BM-30-31/Jetstream

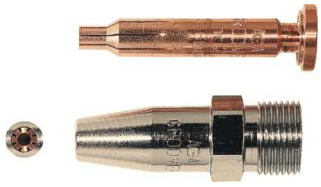
A051008	Cutting nozzle Jetex 1	3 -	40	MA-143-1
A051009	Cutting nozzle Jetex 2	3 -	70	MA-143-2



JETEX high speed cutting nozzles which uses acetylene as a fuel gas and a protective oxygen curtain surrounding the cutting stream. In spite of extremely high cutting speed, the cutting surface is of top quality, which means shorter cutting time and less finishing work. The nozzle is manufactured in 3 parts; an outer nozzle and a two-part inner nozzle. The nozzle is made completely of copper, for good heat dissipation, and the outer nozzle is furthermore nickel/chromium plated to reject cutting spatter and to improve heat dissipation. The slot part of the inner nozzle has a surface treatment of chromium plating.

Gouging nozzle AGA X-311/AGA X-501-A/AGA X-21 INJ

A022430	Jet Groover 0	2 -	4	joint depth
A022431	Jet Groover 1	4 -	6	joint depth
A022432	Jet Groover 2	5 -	8	joint depth



Jet Groover heating flames shortens the start-up time of the gouging process. The whole gouging nozzle is made of copper for better heat dissipation; the outer nozzle is also chromium plated.

Cutting nozzle HL-Precioso

A022120	Cutting nozzle	3 -	10	HL-PRECIOSO
A022121	Cutting nozzle	10 -	20	HL-PRECIOSO
A022122	Cutting nozzle	20 -	50	HL-PRECIOSO
A022123	Cutting nozzle	50 -	100	HL-PRECIOSO
A022124	Cutting nozzle	100 -	150	HL-PRECIOSO

Accessories

A051050	Nozzle cleaning powder KR-21
A051051	Wire brush, brass, small
A051052	Wire brush, brass, 4 rows
A072262	Set cleaning needles AGA

Cutting tables available upon request.

Cutting nozzles (injector) Propane

	AGA X-11			
A023411	Cutting nozzle	1 -	3	HP-433-1
A023412	Cutting nozzle	3 -	10	HP-433-2
A023413	Cutting nozzle	10 -	20	HP-433-3
A023414	Cutting nozzle	20 -	50	HP-433-4
	AGA X-311/Jetstream/AGA X-21 INJ			
A022410	Cutting nozzle	5 -	10	MP-133-0
A022411	Cutting nozzle	10 -	15	MP-133-1
A022412	Cutting nozzle	15 -	30	MP-133-2
A022413	Cutting nozzle	30 -	50	MP-133-3
A022414	Cutting nozzle	50 -	70	MP-133-4
A022415	Cutting nozzle	70 -	100	MP-133-5
A022416	Cutting nozzle	100 -	200	MP-133-6
A022417	Cutting nozzle	200 -	300	MP-133-7
	X-501-PH (Harris)			
A022440	Cutting nozzle	2 -	5	000-NX
A022441	Cutting nozzle	5 -	10	00-NX
A022442	Cutting nozzle	10 -	15	0-NX
A022443	Cutting nozzle	15 -	25	1-NX
A022444	Cutting nozzle	25 -	50	2-NX
A022445	Cutting nozzle	50 -	75	3-NX
A022446	Cutting nozzle	75 -	150	4-NX
A022447	Cutting nozzle	150 -	200	5-NX
A022448	Cutting nozzle	200 -	300	6-NX
	Scrap cutting nozzle X-501-PH (Harris)			
A022450	Cutting nozzle	6 -	25	1-NFF
A022451	Cutting nozzle	25 -	50	2-NFF
A022452	Cutting nozzle	50 -	75	3-NFF
A022453	Cutting nozzle	75 -	150	4-NFF
A022454	Cutting nozzle	150 -	200	5-NFF
A022455	Cutting nozzle	200 -	300	6-NFF
	BM-30-31/Jetstream			
A022419	Cutting nozzle	5 -	40	PROPEX 1
A022420	Cutting nozzle	5 -	70	PROPEX 2

Propex nozzles are ultra high speed cutting nozzles for propane. The nozzle is manufactured in three parts; the outer nozzle is made of copper, nickel and chromium. The extra protective oxygen curtain and the expanding cutting orifice will result in extreme high cutting speeds.

Cutting nozzles (injector) Tetrene - Mapp - Apachi - Thermolene

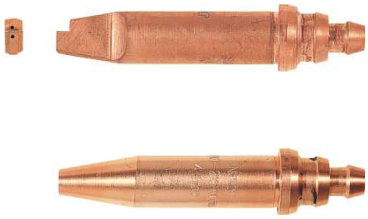
	AGA X-311/BM-30-31/Jetstream/AGA X-21 INJ			
A022390	Cutting nozzle	6 -	10	MY-133-0
A022391	Cutting nozzle	10 -	15	MY-133-1
A022392	Cutting nozzle	15 -	30	MY-133-2
A022393	Cutting nozzle	30 -	50	MY-133-3
A022394	Cutting nozzle	50 -	70	MY-133-4
A022395	Cutting nozzle	70 -	100	MY-133-5
A022396	Cutting nozzle	100 -	200	MY-133-6

	Accessories
A051050	Nozzle cleaning powder KR-21
A051051	Wire brush, brass, small
A051052	Wire brush, brass, 4 rows
A072262	Set cleaning needles AGA

Cutting tables available upon request.

Cutting nozzles (nozzle mix) Acetylene

	Cutting nozzle			
A021600*	Cutting nozzle	1 -	3	HA-311-1
A021610*	Cutting nozzle	3 -	10	HA-311-2
A021611*	Cutting nozzle	10 -	25	HA-311-3
A021612*	Cutting nozzle	25 -	50	HA-311-4
A021613*	Cutting nozzle	50 -	100	HA-311-5
A021614*	Cutting nozzle	100 -	200	HA-311-6
A021616*	Cutting nozzle	200 -	300	HA-311-7
A021617*	Cutting nozzle	300 -	500	HA-311-8



	Rivet cutting nozzle (consult Coolex®)			
A021640	Joint depth	10 -	75	ARC

	Gouging nozzle (consult Coolex®)			
A021636*	Joint depth	10 -	15	SA-355-12

	Gouging nozzle (stellite support)			
A021637	Joint depth	3 -	9	R-FGA-1
A021638	Joint depth	6 -	11	R-FGA-2
A021639	Joint depth	9 -	12	R-FGA-3

	Gouging nozzle (stellite support)			
A025440	Joint depth	3 -	8	A-351-B-13
A025441	Joint depth	6 -	11	A-351-B-19
A025442	Joint depth	10 -	13	A-351-B-25

***As long as supplies last.**

CATWELD cutting nozzles (nozzle mix) Acetylene

	Cutting nozzle			
A021552	Cutting nozzle	3 -	10	A-311-2
A021553	Cutting nozzle	10 -	25	A-311-3
A021554	Cutting nozzle	25 -	50	A-311-4
A021555	Cutting nozzle	50 -	100	A-311-5

Cutting tables available upon request.

KOIKE cutting nozzles (nozzle mix)

	Acetylene standard			
A051300	Cutting nozzle	3 -	5	00-102
A051301	Cutting nozzle	5 -	10	0-102
A051302	Cutting nozzle	10 -	15	1-102
A051303	Cutting nozzle	15 -	30	2-102
A051304	Cutting nozzle	30 -	40	3-102
A051305	Cutting nozzle	40 -	50	4-102
A051306	Cutting nozzle	50 -	100	5-102
A051307	Cutting nozzle	100 -	150	6-102
A051308	Cutting nozzle	150 -	250	7-102
A051309	Cutting nozzle	250 -	300	8-102
	Acetylene high speed			
A051310#	Cutting nozzle	3 -	5	00-102D7
A051311#	Cutting nozzle	5 -	10	0-102D7
A051312#	Cutting nozzle	10 -	15	1-102D7
A051313#	Cutting nozzle	15 -	30	2-102D7
A051314#	Cutting nozzle	30 -	40	3-102D7
A051315#	Cutting nozzle	40 -	50	4-102D7
A051316#	Cutting nozzle	50 -	100	5-102D7
A051317#	Cutting nozzle	100 -	150	6-102D7
A051318#	Cutting nozzle	150 -	250	7-102D7
A051319#	Cutting nozzle	250 -	300	8-102D7

	Propane standard			
A051320	Cutting nozzle	3 -	5	00-106
A051321	Cutting nozzle	5 -	10	0-106
A051322	Cutting nozzle	10 -	15	1-106
A051323	Cutting nozzle	15 -	30	2-106
A051324	Cutting nozzle	30 -	40	3-106
A051325	Cutting nozzle	40 -	50	4-106
A051326	Cutting nozzle	50 -	100	5-106
A051327	Cutting nozzle	100 -	150	6-106
A051328	Cutting nozzle	150 -	250	7-106
A051329	Cutting nozzle	250 -	300	8-106
	Propane high speed			
A051330#	Cutting nozzle	3 -	5	00-106D7
A051331#	Cutting nozzle	5 -	10	0-106D7
A051332#	Cutting nozzle	10 -	15	1-106D7
A051333#	Cutting nozzle	15 -	30	2-106D7
A051334#	Cutting nozzle	30 -	40	3-106D7
A051335#	Cutting nozzle	40 -	50	4-106D7
A051336#	Cutting nozzle	50 -	100	5-106D7
A051337#	Cutting nozzle	100 -	150	6-106D7
A051338#	Cutting nozzle	150 -	250	7-106D7
A051339#	Cutting nozzle	250 -	300	8-106D7

Alternative KOIKE cutting nozzles available upon request.

Coolex® cutting nozzles (nozzle mix) Acetylene

	Cutting nozzle			
A025401	Cutting nozzle Coolex®	1 -	3	A-311-1
A025402	Cutting nozzle Coolex®	3 -	10	A-311-2
A025403	Cutting nozzle Coolex®	10 -	25	A-311-3
A025404	Cutting nozzle Coolex®	25 -	50	A-311-4
A025405	Cutting nozzle Coolex®	50 -	100	A-311-5
A025406	Cutting nozzle Coolex®	100 -	200	A-311-6
A025407	Cutting nozzle Coolex®	200 -	300	A-311-7
A025408	Cutting nozzle Coolex®	300 -	500	A-311-8
A025409	Cutting nozzle Coolex®	3 -	25	A-191-2 (elongated L= 178 mm)
A025410	Cutting nozzle Coolex®	25 -	38	A-191-3 (elongated L= 178 mm)

	Gouging nozzle (elongated)			
A025430	Joint depth	3 -	8	A-353-BL- 6 Coolex®
A025431	Joint depth	6 -	11	A-353-BL- 8 Coolex®
A025432	Joint depth	8 -	11	A-353-BL-10 Coolex®
A025433	Joint depth	10 -	13	A-353-BL-12 Coolex®

	Gouging nozzle (stellite support)			
A021647	Joint depth	3 -	9	R-FGA-1 Coolex®
A021648	Joint depth	6 -	11	R-FGA-2 Coolex®
A021649	Joint depth	9 -	12	R-FGA-3 Coolex®

	Gouging nozzle			
A025420	Joint depth	3 -	8	A-355-L- 6 Coolex®
A025421	Joint depth	6 -	11	A-355-L- 8 Coolex®
A025422	Joint depth	8 -	11	A-355-L-10 Coolex®

	Rivet cutting nozzle			
A025412	Joint depth	5 -	25	A-341-BL-2 Coolex®
A025413	Joint depth	25 -	50	A-341-BL-3 Coolex®
A025414	Joint depth	50 -	100	A-341-BL-4 Coolex®
A025415	Joint depth	100 -	200	A-341-BL-5 Coolex®

	Scrap cutting nozzle			
A021641	Cutting nozzle	3 -	50	A-317-1 Coolex®
A021642	Cutting nozzle	50 -	100	A-317-2 Coolex®
A021643	Cutting nozzle	100 -	200	A-317-3 Coolex®
A021644	Cutting nozzle	200 -	300	A-317-4 Coolex®
A021645	Cutting nozzle	300 -	500	A-317-5 Coolex®

Cutting tables available upon request.

	Accessories
A051050	Nozzle cleaning powder KR-21
A051051	Wire brush, brass, small
A051052	Wire brush, brass, 4 rows
A072262	Set cleaning needles AGA

COOLEX® means a major breakthrough of cutting nozzles all over the world. **COOLEX®** is the result of an extensive development program from GCE, world's major producer of cutting nozzles.
The basic construction of the conventional (nozzle mix) cutting nozzles has been unchanged throughout the years. However, GCE developed **COOLEX®** cutting nozzles with a minute hole connecting the heating oxygen and the cutting oxygen channels. During preheating a thin stream of heating oxygen flows (cooling flow) into the cutting oxygen channel.

COOLEX® extends effective service life by up to 600%.

Tests have shown that the **COOLEX®** cutting nozzle lasts up to six times longer than its traditional counterpart. Channel wear and tear is minimized as cleaning is seldom if ever required. The secret lies in the thin stream of heating oxygen that flows into the cutting oxygen channel during preheating. The nozzle is consequently cooled and hinders the build up of metallic ash and metal spray. The increased oxygen consumption is very modest, some 25-50 l/h.

Cutting nozzles (nozzle mix) Propane - Tetrene - Mapp - Apachi

	AGA Tetrene, Mapp, Apachi			
A021771	Cutting nozzle Tetrene	4 -	12	AFS- 1
A021772	Cutting nozzle Tetrene	12 -	25	AFS- 2
A021773	Cutting nozzle Tetrene	25 -	40	AFS- 3
A021774	Cutting nozzle Tetrene	40 -	60	AFS- 4
A021775	Cutting nozzle Tetrene	60 -	80	AFS- 5
A021776	Cutting nozzle Tetrene	80 -	150	AFS- 6
A021777	Cutting nozzle Tetrene	150 -	200	AFS- 7
A021778	Cutting nozzle Tetrene	200 -	250	AFS- 8
A021779	Cutting nozzle Tetrene	250 -	300	AFS- 9
A021780	Cutting nozzle Tetrene	300 -	350	AFS- 10

	CATWELD Propane 10 pre-heat channels			
A021760	Cutting nozzle Propane	3 -	6	229- 0
A021761	Cutting nozzle Propane	6 -	12	229- 1
A021762	Cutting nozzle Propane	12 -	25	229- 2
A021763	Cutting nozzle Propane	25 -	37	229- 3
A021764	Cutting nozzle Propane	37 -	50	229- 4
A021765	Cutting nozzle Propane	50 -	100	229- 5
A021766	Cutting nozzle Propane	100 -	150	229- 6
A021767	Cutting nozzle Propane	150 -	250	229- 7
A021768	Cutting nozzle Propane	250 -	300	229- 8

	CATWELD Propane 9 pre-heat channels			
A021571	Cutting nozzle Propane	3 -	10	PRO- 1
A021572	Cutting nozzle Propane	10 -	25	PRO- 2
A021573	Cutting nozzle Propane	25 -	40	PRO- 3
A021574	Cutting nozzle Propane	40 -	60	PRO- 4
A021575	Cutting nozzle Propane	60 -	150	PRO- 5
A021576	Cutting nozzle Propane	150 -	300	PRO- 6
A021577	Cutting nozzle Propane	300 -	500	PRO- 7

Coolex® cutting nozzles (nozzle mix) Propane

	Cutting nozzle			
A025611	Cutting nozzle Coolex®	1 -	3	P-331-1
A025612	Cutting nozzle Coolex®	3 -	10	P-331-2
A025613	Cutting nozzle Coolex®	10 -	25	P-331-3
A025614	Cutting nozzle Coolex®	25 -	50	P-331-4
A025615	Cutting nozzle Coolex®	50 -	100	P-331-5
A025616	Cutting nozzle Coolex®	100 -	200	P-331-6
A025617	Cutting nozzle Coolex®	200 -	300	P-331-7
A025618	Cutting nozzle Coolex®	300 -	500	P-331-8

	Scrap cutting nozzle			
A021751	Cutting nozzle Coolex®	3 -	50	P-337-1
A021752	Cutting nozzle Coolex®	50 -	100	P-337-2
A021753	Cutting nozzle Coolex®	100 -	200	P-337-3
A021754	Cutting nozzle Coolex®	200 -	300	P-337-4
A021755	Cutting nozzle Coolex®	300 -	500	P-337-5

	Accessories
A051050	Nozzle cleaning powder KR-21
A051051	Wire brush, brass, small
A051052	Wire brush, brass, 4 rows
A072262	Set cleaning needles AGA

Cutting tables available upon request.

COOLEX® cuts preheating time.

The heating oxygen that is continuously siphoned off into the cutting oxygen channel, flows out into the flame. In this way the flow of cooling oxygen speeds up the actual combustion process, this results in a shorter preheating time and most cutting work can begin within a few seconds.

COOLEX® gives you a cleaner cut.

As the COOLEX® cutting nozzle is chilled during preheating, there is little or no build up of metallic ash and metal spray. This means that not only is the service life of the nozzle significantly increased, as cleaning is virtually eliminated, but also the COOLEX® cutting nozzle retains its original shape and precision throughout its life.

High Speed cutting nozzles (nozzle mix) Acetylene

	High speed cutting nozzle (machine cutting)			
A051230	Cutting nozzle Coolex®	3-	5	A-MD-HS
A051231	Cutting nozzle Coolex®	5-	10	A-MD-HS
A051232	Cutting nozzle Coolex®	10-	25	A-MD-HS
A051233	Cutting nozzle Coolex®	25-	40	A-MD-HS
A051234	Cutting nozzle Coolex®	40-	60	A-MD-HS
A051235	Cutting nozzle Coolex®	60-	100	A-MD-HS
A051236	Cutting nozzle Coolex®	100 -	150	A-MD-HS
A051237	Cutting nozzle Coolex®	150 -	230	A-MD-HS
A051238	Cutting nozzle Coolex®	230 -	300	A-MD-HS

Coolex® high speed cutting nozzles:

- high speed cutting nozzle
- stable heating flame
- extremely short starting time
- efficient cooling flow
- long service life
- chromium inner- and outer nozzles
- designed for use with almost all nozzle mix (machine) cutting torches
- can be cleaned on site

	High speed cutting nozzle (machine cutting)			
A051220	Cutting nozzle Tritex®	3 -	5	
A051221	Cutting nozzle Tritex®	5 -	10	
A051222	Cutting nozzle Tritex®	10 -	25	
A051223	Cutting nozzle Tritex®	25 -	50	
A051224	Cutting nozzle Tritex®	50 -	75	
A051225	Cutting nozzle Tritex®	75 -	100	
A051226	Cutting nozzle Tritex®	100 -	150	
A051227	Cutting nozzle Tritex®	150 -	240	
A051228	Cutting nozzle Tritex®	240 -	300	

Tritex® high speed cutting nozzles:

- high cutting accuracy
- high speed cuts of superior quality (according DIN EN ISO 9013)
- 30% increase in speed compared to standard tips
- less plate deformation (thin plate)
- stable heating flame
- extremely short starting time
- efficient cooling flow
- long service life
- chromium/nickel plated outer nozzles, chromium slot part inner nozzles
- designed for use with almost all nozzle mix (machine) cutting torches
- can be cleaned on site

A072264# Cleaning needles HS conical Tritex®

Hoses and accessories

ACETYLENE HOSE RED // OXYGEN HOSE BLUE EN 559

Description	highly flexible and kink resistant top quality Acetylene // Oxygen hose.
Standard	EN 559.
Liner	black smooth, synthetic rubber SBR/NR, gastight.
Inlays	textile cord reinforcements.
Cover	red // blue ribbed cover, excellent abrasion, weather resistant.
Branding	EN 559.
Temperature	-30°C up to +70°C.
Pressure	working pressure 20 bar, burst pressure 60 bar.
Lengths	50 // 100 meter.

Acetylene hose red EN 559

A070005	Acetylene hose	5 x 11 mm
A070015	Acetylene hose	6.3 x 13.3 mm
A070025	Acetylene hose	8 x 16 mm
A070035	Acetylene hose	9 x 16 mm
A070036	Acetylene hose	10 x 18 mm
A070045	Acetylene hose	13 x 23 mm
A070037	Acetylene hose	16 x 26 mm

Oxygen hose blue EN 559

A070105	Oxygen hose	5 x 11 mm
A070115	Oxygen hose	6.3 x 13.3 mm
A070125	Oxygen hose	8 x 16 mm
A070135	Oxygen hose	9 x 16 mm
A070136	Oxygen hose	10 x 18 mm
A070138	Oxygen hose	13 x 23 mm
A070137	Oxygen hose	16 x 26 mm

Twin welding hose Oxygen-Acetylene EN 559 (red/blue) smooth

A070140	Twin welding hose	5 x 5 mm
A070141	Twin welding hose	6 x 6 mm
A070142	Twin welding hose	8 x 8 mm
A070143	Twin welding hose	6 x 9 mm
A070146	Twin welding hose	10 x 10 mm

Twin welding hose Oxygen- Acetylene acc. EN 559 (red/blue)

A070000	Twin welding hose	6 x 6 mm
A070002	Twin welding hose	6 x 9 mm

PROPANE HOSE ORANGE EN 559

Description	highly flexible and kink resistant top quality Propane hose.
Standard	EN 559.
Liner	black smooth, synthetic rubber SBR/NR, gastight.
Inlays	textile cord reinforcements.
Cover	orange cover, excellent abrasion, weather resistant.
Branding	EN 559.
Temperature	-30°C up to +70°C.
Pressure	working pressure 20 bar, burst pressure 60 bar.
Lengths	50 // 100 meter.

Twin hose for Oxygen-Mapp gases EN 559 (orange/blue)

A070145	Twin hose	6 x 8 mm

Propane hose orange NEN 5654 EN 559

A070325	Propane hose	8 x 15 mm

Polyethylene hose (MIG/TIG/Plasma/Laser)

A070194	LP PE low permeating hose black	6 x 4 mm
A070195	LP PE low permeating hose black	8 x 5 mm
A070196	LP PE low permeating hose black	9 x 6 mm
A070197	LP PE low permeating hose black	10 x 6 mm
A070198	LP PE low permeating hose black	12 x 8 mm

Dry Flow rubber hose for argon, special developed to prevent moisture from permeating the hose

A070200	Argon Dry Flow rubber hose black	6 x 14 mm
A070201	Argon Dry Flow rubber hose black	10 x 18 mm

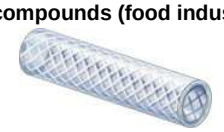
Air/nitrogen hose black, flexible

A070148	Air/nitrogen hose	6 x 14 mm
A070149	Air/nitrogen hose	8 x 16 mm
A070150	Air/nitrogen hose	10 x 18 mm

Lengths 50 // 100 meter.

Transparent PVC hose, guaranteed non toxic compounds (food industry)

A070189	PVC hose	6 x 12 mm
A070190	PVC hose	10 x 16 mm
A070193	PVC hose	12 x 19 mm
A070191	PVC hose	25 x 34 mm



Top grade transparent PVC hose with polyester reinforcements (KTW potable water approved).
Suitable for:
- air
- water
- chemicals
- food.

Worm drive hose clamp

A070220	Hose clamp stainless steel (complete)	8 - 14 mm
A070221	Hose clamp stainless steel (complete)	11 - 17 mm
A070222	Hose clamp stainless steel (complete)	13 - 20 mm
A070223	Hose clamp stainless steel (complete)	15 - 25 mm

A070224	Crimp hose clamp Oetiker 2-ear	5 - 7 mm
A070225	Crimp hose clamp Oetiker 2-ear	7 - 9 mm
A070226	Crimp hose clamp Oetiker 2-ear	9 - 11 mm
A070227	Crimp hose clamp Oetiker 2-ear	11 - 13 mm
A070228	Crimp hose clamp Oetiker 2-ear	13 - 15 mm
A070229	Crimp hose clamp Oetiker 2-ear	15 - 17 mm
A070230	Crimp hose clamp Oetiker 2-ear	16 - 19 mm
A070231	Crimp hose clamp Oetiker 2-ear	19 - 22 mm

A070250	Double hose clamp	13 - 15.5 mm
A070252	Double hose clamp	14 - 21.5 mm

A070240 Heavy duty hose cutter. Heat treated cutting blade and cuts hoses up to 1 1/4". Anti-rust and anti-wear constructed for long lasting use.

A070242# Monier plier for mounting hose clamps.

Quick-action couplings

	AGA quick-action coupling regulator	
A075607	Quick-action coupling Acetylene/Propane 3/8”L with coupling pin	4.8 mm
A075608	Quick-action coupling Acetylene/Propane 3/8”L with coupling pin	6.3 mm
A075609	Quick-action coupling Acetylene/Propane 3/8”L with coupling pin	8.5 mm
A075606	Coupling pin Acetylene/Propane	4.8 mm
A075602	Coupling pin Acetylene/Propane	6.3 mm
A075601	Coupling pin Acetylene/Propane	8.5 mm
A075617	Quick-action coupling Oxygen 3/8” with coupling pin	4.8 mm
A075618	Quick-action coupling Oxygen 3/8” with coupling pin	6.3 mm
A075619	Quick-action coupling Oxygen 3/8” with coupling pin	8.5 mm
A075616	Coupling pin Oxygen	4.8 mm
A075613	Coupling pin Oxygen	6.3 mm
A075611	Coupling pin Oxygen	8.5 mm

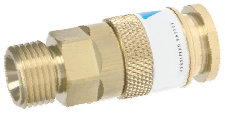
	AGA quick-action coupling hose to hose	
A075620	Quick-action coupling hose to hose Acetylene/Propane	4.8 mm
A075615	Quick-action coupling hose to hose Acetylene/Propane	6.3 mm
A075621	Quick-action coupling hose to hose Acetylene/Propane	8.5 mm
A075622	Quick-action coupling hose to hose Oxygen	4.8 mm
A075623	Quick-action coupling hose to hose Oxygen	6.3 mm
A075624	Quick-action coupling hose to hose Oxygen	8.5 mm

Quick-action couplings according DIN 8544 ISO DVS 7289 EN 561

	RH IB quick-action coupling hose to hose	
A075850#	RH IB quick-action coupling hose to hose Oxygen	5.0 mm
A075833#	RH IB quick-action coupling hose to hose Oxygen	6.3 mm
A075852#	RH IB quick-action coupling hose to hose Oxygen	8.0 mm
A075855#	RH IB quick-action coupling hose to hose Acetylene/Propane	5.0 mm
A075856#	RH IB quick-action coupling hose to hose Acetylene/Propane	6.3 mm
A075834#	RH IB quick-action coupling hose to hose Acetylene/Propane	8.0 mm

	RH IB stainless steel coupling pin torch side	
A075838#	RH IB stainless steel coupling pin torch side Oxygen	3/8”
A075839#	RH IB stainless steel coupling pin torch side Oxygen	1/4”
A075843#	RH IB stainless steel coupling pin torch side Acetylene/Propane	3/8”L
A075868#	RH IB stainless steel coupling pin torch side Oxygen	9/16”
A075867#	RH IB stainless steel coupling pin torch side Acetylene/Propane	9/16”L

	RH IB quick-action coupling	
A075848#	RH IB quick-action coupling Oxygen	3/8” male
A075849#	RH IB quick-action coupling Oxygen	1/4” male
A075853#	RH IB quick-action coupling Acetylene/Propane	3/8”L male



	RH IB quick-action coupling regulator	
A075844#	RH IB quick-action coupling regulator Oxygen	3/8”
A075831#	RH IB quick-action coupling regulator Oxygen	1/4”
A075845#	RH IB quick-action coupling regulator Acetylene/Propane	3/8”L
A075866#	RH IB quick-action coupling regulator Oxygen	9/16”
A075865#	RH IB quick-action coupling regulator Acetylene/Propane	9/16”L

	RH IB stainless steel coupling pin	
A075835#	RH IB stainless steel coupling pin Oxygen	5.0 mm
A075847#	RH IB stainless steel coupling pin Oxygen	6.3 mm
A075837#	RH IB stainless steel coupling pin Oxygen	8.0 mm
A075840#	RH IB stainless steel coupling pin Acetylene/Propane	5.0 mm
A075841#	RH IB stainless steel coupling pin Acetylene/Propane	6.3 mm
A075846#	RH IB stainless steel coupling pin Acetylene/Propane	8.0 mm

Quick-action couplings for Acetylene/Propane and Oxygen. Safe interruption of gas flow with automatic gas cut-off when disconnecting. No mixing up by different coding of coupling pins and quick-action couplings.

Hose connections and fittings

Hose nipple

A070445	Hose nipple	1/8” x	3.5 mm
A070449**S**	Hose nipple	1/4” x	3.0 mm
A070450	Hose nipple	1/4” x	3.5 mm
A070451	Hose nipple	1/4” x	4.0 mm
A070452	Hose nipple	1/4” x	6.0 mm
A070453	Hose nipple	1/4” x	8/9 mm
A070455**S**	Hose nipple	3/8” x	3.0 mm
A070456	Hose nipple	3/8” x	3.5 mm
A070457	Hose nipple	3/8” x	4.0 mm
A070454**S**	Hose nipple	3/8” x	5.0 mm
A070458	Hose nipple	3/8” x	6.0 mm
A070459	Hose nipple	3/8” x	8.0 mm
A070460	Hose nipple	3/8” x	9.0 mm
A070462	Hose nipple	1/2” x	6.0 mm
A070463	Hose nipple	1/2” x	8.0 mm
A070464	Hose nipple	1/2” x	9.0 mm
A070465	Hose nipple	1/2” x	11.0 mm
A070466	Hose nipple	1/2” x	13.0 mm
A070467	Hose nipple	5/8” x	14.0 mm
A070468	Hose nipple	3/4” x	6.0 mm
A070469	Hose nipple	3/4” x	9.0 mm
A070470	Hose nipple	3/4” x	11.0 mm

Hose nipple angled 90°

A070515	Hose nipple angled 90° connection nut 1/4”	x 6.0 mm
A070516	Hose nipple angled 90° connection nut 1/4”L	x 6.0 mm
A070517	Hose nipple angled 90° connection nut 3/8”	x 6.0 mm
A070518	Hose nipple angled 90° connection nut 3/8”L	x 6.0 mm

Connection nut

A070520	Connection nut	1/8”
A070521	Connection nut	1/4”
A070522	Connection nut (hose nipple 8/9 mm)	1/4”
A070523	Connection nut	3/8”
A070524	Connection nut	1/2”
A070525	Connection nut	5/8”
A070526	Connection nut	3/4”
A070527	Connection nut	1”
A070531	Connection nut	M10 x 1.0 mm
A070533	Connection nut	M12 x 1.0 mm
A070535	Connection nut	M12 x 1.5 mm
A070539	Connection nut	1/8”L
A070540	Connection nut	1/4”L
A070541	Connection nut (hose nipple 8/9 mm)	1/4”L

Hose tail adapter male

A070575S	Hose tail adapter	1/8” x	4.0 mm
A070577S	Hose tail adapter	1/4” x	4.0 mm
A070578	Hose tail adapter	1/4” x	6.0 mm
A070579	Hose tail adapter	1/4” x	9.0 mm
A070580	Hose tail adapter	1/4”L x	4.0 mm
A070581S	Hose tail adapter	1/4”L x	6.0 mm
A070584S	Hose tail adapter	3/8” x	4.0 mm
A070585	Hose tail adapter	3/8” x	6.0 mm
A070586	Hose tail adapter	3/8” x	9.0 mm
A070587S	Hose tail adapter	3/8”L x	4.0 mm
A070588	Hose tail adapter	3/8”L x	6.0 mm

Hose splicer

A070621	Hose splicer	4.0 mm
A070622	Hose splicer	5.0 mm
A070623	Hose splicer	6.0 mm
A070624	Hose splicer	8.0 mm
A070625	Hose splicer	9.0 mm
A070626	Hose splicer	11.0 mm
A070627	Hose splicer	13 (12.5) mm
A070628	Hose splicer	16.0 mm

A070640	PVC Hose splicer compact	3.0 mm
A070641	PVC Hose splicer compact	4.0 mm
A070642	PVC Hose splicer compact	6.0 mm

A070645	Hose splicer small	3.0 mm
A070647	Hose splicer small	6.0 mm

S = small version.

Hose nipple

A070471	Hose nipple	3/4” x 13.0 mm
A070472	Hose nipple	3/4” x 16.0 mm
A070475	Hose nipple	1” x 16.0 mm
A070476	Hose nipple	1” x 20.0 mm
A070477	Hose nipple	1” x 25.0 mm
A070480**S**	Hose nipple	M10 x 4.0 mm
A070481**S**	Hose nipple	M10 x 6.0 mm
A070483	Hose nipple	M12 x 4.0 mm
A070484	Hose nipple	M12 x 6.0 mm
A070499	Hose nipple	9/16” UNF x 4.0 mm
A070500	Hose nipple	9/16” UNF x 6.0 mm
A070501	Hose nipple	9/16” UNF x 8.0 mm

A070505	Hose nipple elongated	5/8” UNF 4.0 mm
A070506	Hose nipple elongated	5/8” UNF 5.0 mm
A070507	Hose nipple elongated	5/8” UNF 6.0 mm
A070508	Hose nipple elongated	5/8” UNF 7.0 mm
A070509	Hose nipple elongated	5/8” UNF 8.0 mm
A070511	Connection nut	5/8” UNF R male
A070512	Connection nut	5/8” UNF L male

Connection nut

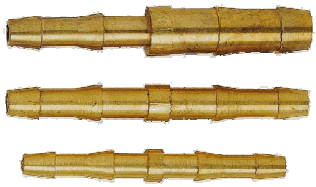
A070542	Connection nut	3/8”L
A070543	Connection nut	1/2”L
A070544	Connection nut	3/4”L
A070545	Connection nut	1”L
A070548	Connection nut	M10 x 1.0 mm LH
A070549	Connection nut	M12 x 1.0 mm LH
A070550	Connection nut	M12 x 1.5 mm LH
A070554	Connection nut	9/16” UNF x Ø 9.5 mm
A070555	Connection nut	9/16”L UNF x Ø 9.5 mm
A070556	Connection nut	9/16” UNF x Ø 11.0 mm
A070557	Connection nut	9/16”L UNF x Ø 11.0 mm
A070558	Connection nut	5/8” UNF x Ø 11.0 mm
A070559	Connection nut	5/8”L UNF x Ø 11.0 mm

Hose tail adapter male

A070589	Hose tail adapter	3/8”L x 9.0 mm
A070593	Hose tail adapter	1/2” x 6.0 mm
A070594	Hose tail adapter	1/2” x 9.0 mm
A070595	Hose tail adapter	1/2” x 11.0 mm
A070596	Hose tail adapter	1/2” x 13.0 mm

Hose splicer

A070629	Hose splicer	19.0 mm
A070630	Hose splicer	20.0 mm
A070634	Hose splicer	4.0 to 6.0 mm
A070635	Hose splicer	4.0 to 9.0 mm
A070636	Hose splicer	6.0 to 9.0 mm



Hose connections and fittings

	Double nipple conical male	male
A070652**C**	Double nipple conical	1/8” x 1/8”
A070653**C**	Double nipple conical	1/8”L x 1/8”L
A070654**C**	Double nipple conical	1/8” x 1/4”
A070655**C**	Double nipple conical	1/8” x 3/8”
A070658	Double nipple conical	1/4” x 1/4”
A070659	Double nipple conical	1/4” x 1/4”L
A070660	Double nipple conical	1/4”L x 1/4”L
A070661	Double nipple conical	1/4” x 3/8”
A070662	Double nipple conical	1/4” x 3/8”L
A070663	Double nipple conical	1/4”L x 3/8”L
A070664	Double nipple conical	1/4”L x 3/8”
A070666	Double nipple conical	3/8” x 3/8”
A070667	Double nipple conical	3/8” x 3/8”L
A070668	Double nipple conical	3/8”L x 3/8”L
A070669	Double nipple conical	3/8” x 1/2”
A070670	Double nipple conical	3/8”L x 1/2”
A070671	Double nipple conical	3/8”L x 1/2”L
A070673	Double nipple conical	1/2” x 1/2”

	Bulk head adapter	
A070714	Bulk head adapter	1/4” x 1/4”
A070716	Bulk head adapter	3/8” x 3/8”
A070717	Bulk head adapter	3/8”L x 3/8”L

	Locking nut	
A070725	Locking nut	1/8”
A070726	Locking nut	1/4”
A070727	Locking nut	3/8”
A070728	Locking nut	3/8”L

	Reducing nipple	female male
A070734	Reducing nipple	1/8” x 1/8”
A070735	Reducing nipple	1/8” x 1/4”
A070736	Reducing nipple	1/4” x 1/8”
A070737	Reducing nipple	1/4” x 1/4”
A070738	Reducing nipple	1/4” x 3/8”
A070739	Reducing nipple	3/8” x 1/4”
A070740	Reducing nipple	3/8” x 3/8”
A070741	Reducing nipple	3/8” x 1/2”
A070742	Reducing nipple	1/2” x 3/8”
A070743	Reducing nipple	1/2” x 1/4”
A070744	Reducing nipple	1/2” x 1/2”
A070745	Reducing nipple	3/4” x 1/2”
A070746	Reducing nipple	3/4” x 3/4”
A070748	Reducing nipple	1/4” x 1/4”L
A070749	Reducing nipple	1/4” x 3/8”L
A070750	Reducing nipple	1/4”L x 3/8”

	Hex coupling nut	female female
A070774	Coupling nut	1/8” x 1/8”
A070775	Coupling nut	1/4” x 1/4”
A070776	Coupling nut	3/8” x 3/8”
A070777	Coupling nut	1/2” x 1/2”
A070778	Coupling nut	3/4” x 3/4”
A070779	Coupling nut	1” x 1”
A070782	Coupling nut	3/8” x 3/8”L

	Elbow 90°	
A070790	Elbow 90°	2 x 1/8” male
A070791	Elbow 90°	2 x 1/4” male
A070792	Elbow 90°	2 x 3/8” male
A070793	Elbow 90°	2 x 1/2” male
A070794	Elbow 90°	2 x 3/8”L male
A070796	Elbow 90°	2 x 1/8” female
A070797	Elbow 90°	2 x 1/4” female
A070798	Elbow 90°	2 x 3/8” female
A070799	Elbow 90°	2 x 1/2” female
A070800	Elbow 90°	2 x 3/4” female
A070801	Elbow 90°	2 x 1” female
A070802	Elbow 90°	1/4” female x 1/4” male

	Tee	
A070805	Tee	3 x 1/8” male
A070806	Tee	3 x 1/4” male
A070807	Tee	3 x 3/8” male
A070808	Tee	3 x 1/2” male
A070809	Tee	3 x 3/8”L male
A070812	Tee	3 x 1/8” female
A070813	Tee	3 x 1/4” female
A070815	Tee	3 x 3/8” female
A070816	Tee	3 x 1/2” female
A070817	Tee	3 x 3/4” female

	Double nipple conical male	male
A070674	Double nipple conical	1/2” x 1/2”L
A070675	Double nipple conical	1/2”L x 1/2”L
A070676	Double nipple conical	1/2” x 3/4”
A070677	Double nipple conical	1/2” x 3/4”L
A070678	Double nipple conical	1/2”L x 3/4”L
A070682	Double nipple conical	3/4” x 3/4”
A070683	Double nipple conical	3/4” x 3/4”L
A070684	Double nipple conical	3/4”L x 3/4”L
A070685	Double nipple conical	3/4” x 1”
A070686	Double nipple conical	1” x 1”
A070687	Double nipple conical	1” x 1”L
A070688	Double nipple conical	1”L x 1”L
A070695	Double nipple conical	9/16” UNF x 9/16” UNF
A070696	Double nipple conical	9/16”L UNF x 9/16”L UNF
A070700	Double nipple conical	M12/1x 1/4”

C = compact version.

	Locking nut	
A070729	Locking nut	1/2”
A070730	Locking nut	3/4”
A070731	Locking nut	1”

	Reducing nipple	female male
A070751	Reducing nipple	1/4”L x 3/8”L
A070753	Reducing nipple	3/8”L x 1/4”
A070754	Reducing nipple	3/8” x 3/8”L
A070755	Reducing nipple	3/8”L x 3/8”L
A070756	Reducing nipple	3/8”L x 3/8”
A070757	Reducing nipple	3/8”L x 1/4”L
A070758	Reducing nipple	3/8”L x 1/2”L
A070759	Reducing nipple	1/2”L x 3/8”L
A070762	Reducing nipple 9/16”L UNF	x 3/8”L
A070763	Reducing nipple 9/16”R UNF	x 1/4”R
A070766	Reducing nipple 1/4” male x 7/16” UNF male FLARE	
A070767#	Reducing nipple 1/4” male x ACME 1/2” x 16	
A070768#	Reducing nipple ACME ½/16” fem.x 7/16” UNF male FLARE	
A070770	Reducing nipple M10/1 male	x 3/8” male
A070771	Reducing nipple M12/1 female	x 3/8” male

Hose connections and fittings

	Elbow (swivel)	**male**	**female**	
A070821	Elbow	1/4”	x 1/4”	(swivel)
A070822	Elbow	1/4”	x 1/4”L	(swivel)
A070823	Elbow	1/4”	x 3/8”	(swivel)
A070824	Elbow	3/8”L	x 3/8”	(swivel)
A070825	Elbow	3/8”L	x 3/8”L	(swivel)
A070826	Elbow	3/8”L	x 1/4”L	(swivel)
A070827	Elbow	3/8”	x 3/8”	(swivel)
A070828	Elbow	3/8”	x 3/8”L	(swivel)
A070829	Elbow	3/8”	x 1/4”	(swivel)

	Cap nut and gasket	
A070831	Cap nut 1/8”	incl. gasket
A070832	Cap nut 1/4”	incl. gasket
A070833	Cap nut 3/8”	incl. gasket
A070834	Cap nut 3/8”L	incl. gasket
A070835	Cap nut 1/2”	incl. gasket

	Cap nut and gasket		
A070836	Cap nut 3/4”		incl. gasket
A070837	Cap nut 21.8	x 1/14”	incl. gasket
A070839	Cap nut 21.8	x 1/14”L	incl. gasket
A070840	Cap nut 24.32	x 1/14”	incl. gasket
A070841	Cap nut 1/2”L		incl. gasket

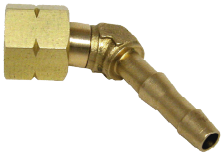
	Blind plug conical
A070845	Blind plug conical 1/4”
A070846	Blind plug conical 3/8”
A070847	Blind plug conical 1/2”
A070848	Blind plug conical 3/4”

	Socket cap screw
A070849	Socket cap screw 1/8” male
A070850	Socket cap screw 1/4” male
A070851	Socket cap screw 3/8” male
A070852	Socket cap screw 1/2” male
A070853	Socket cap screw 3/4” male

	Adapter	**male**		**female**
A070854	Adapter	3/8”	x	1/4”
A070855	Reducing nipple	1/4”	x	1/8”
A070856	Reducing nipple	3/8”	x	1/4”
A070857	Reducing nipple	3/8”	x	1/8”
A070858	Reducing nipple	1/2”	x	1/8”
A070859	Reducing nipple	1/2”	x	1/4”
A070860	Reducing nipple	1/2”	x	3/8”

	Reducing nipple	**male**		**female**
A070861	Reducing nipple	3/4”	x	1/4”
A070862	Reducing nipple	3/4”	x	3/8”
A070863	Reducing nipple	3/4”	x	1/2”
A070864	Reducing nipple	1”	x	1/2”
A070865	Reducing nipple	1”	x	3/4”
A070866	Reducing nipple	M20/1	x	1/4”

A034503 Swivelling angled connection 3/8”L

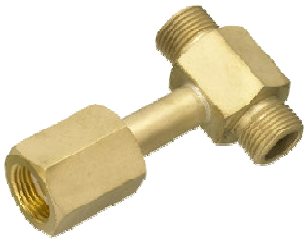


A075780 Manifold 2-way 3/8” female
A075782 Manifold 3-way 3/8” female
A070871 Manifold 2-way 1/2” female
A070873 Manifold 3-way 1/2” female

A075783 Manifold 5-way 1/2” female (wall connection)

	Ball valve			
A075784	Ball valve	1/4” female	x 1/4”	female 15 bar
A075790	Ball valve	1/4” female	x 1/4”	female 50 bar
A075791	Ball valve	3/8” female	x 3/8”	female 50 bar
A075792	Ball valve	1/2” female	x 1/2”	female 50 bar
A075793#	Ball valve 3-way “T”		1/4”	female 25 bar
A075794#	Ball valve 3-way “L”		1/4”	female 25 bar
A075798	Ball valve	1/4” female	x 1/4”	female 30 bar
A075799	Ball valve	3/8” female	x 3/8”	female 30 bar
A075800	Needle valve	1/4” female	x 1/4”	male 12 bar
A075795#	Needle valve	1/4”		male 15 bar
A075796#	Needle valve	3/8”		male 15 bar
A075797#	Needle valve	1/2”		male 15 bar
A075785#	Needle valve	1/4”		female 15 bar
A075786#	Needle valve	3/8”		female 15 bar
A075787#	Needle valve	1/2”		female 15 bar

	T-piece cylinder connection	
A075695#	T-piece cylinder connection	RI 2
A075696#	T-piece cylinder connection	RU 1
A075697#	T-piece cylinder connection	RU 3
A075698#	T-piece cylinder connection	RU 6
A075699#	T-piece cylinder connection	LU 1



Accessories

Anti leakage device

Leaking hoses and connections escaping gas or oxygen will often not be noticed and an explosive gas mixture may be formed. There might be a change that the gasmixture can ignite and explode. OM STOP anti leakage device prevents unintentional and unnoticed escape of (liquid) fuel gas in the event of damaged hoses, loose connections and burning of hoses. Especially when working in:
- tank compartments
- small vessels and reactors
- inside pipe constructions.

	OM STOP anti leakage device Propane (17 kg/h)	
A070406#	OM STOP GS-17 Propane 3/8”L	
A070407#	OM STOP GS-17 double-hose	L= 5 mtr
A070408#	OM STOP GS-17 double-hose	L= 10 mtr
A070409#	OM STOP GS-17 double-hose	L= 20 mtr
A070410#	OM STOP GS-17 connection nipple 3/8”L	
A070411#	OM STOP GS-17 double nipple	
A034465	PROPALINE regulator (brass) with pressure gauge, SHELL, inlet connection W21.8 x 1/14”L	
	OM STOP anti leakage device Oxygen (8 nm^3/h)	
A070415#	OM STOP S-8 Oxygen 1/4”R	
A070416#	OM STOP S-8 double-hose	L= 5 mtr
A070417#	OM STOP S-8 double-hose	L= 10 mtr
A070418#	OM STOP S-8 double-hose	L= 20 mtr
A070419#	OM STOP S-8 connection nipple 1/4”R	
A070420#	OM STOP S-8 connection nipple 3/8”R	
A070421#	OM STOP S-8 double nipple	

Alternative models available upon request.

OM STOP anti leakage device works fully automatic:
- prevents unnoticed escape from fuel gas and oxygen in the event of damaged hoses and loose connections
- after determining the cause of the problem it is possible to start the work procedures again
- “easy control” safety device.

Hose reels

	Hose reels
A076030##	Catweld hose reel Oxygen // Acetylene, 15 meter twin welding hose
A076035##	Adjustable arm guide (wall connection) for hose reel

Hose length	: 15 meter
Medium	: Oxygen, Acetylene
Inner diameter	: 6.3 mm Oxygen, 9 mm Acetylene
Working pressure	: 20 bar
Material	: high-quality steel construction
Arm guide	: wall connection
Colour housing	: white // blue.

Propane equipment air aspiration

Proparange handle

A034400 Proparange handle, with gas save lever
A034402# Proparange handle, without gas save lever

Proparange hard/soft soldering blowpipe Turbo

A034410 Proparange hard/soft soldering blowpipe Turbo TT-12 1.93 kW/h
A034411 Proparange hard/soft soldering blowpipe Turbo TT-14 3.22 kW/h
A034412 Proparange hard/soft soldering blowpipe Turbo TT-17 4.06 kW/h
A034413 Proparange hard/soft soldering blowpipe Turbo TT-20 5.66 kW/h

Proparange hard/soft soldering blowpipe

A034420 Proparange hard/soft soldering blowpipe BT-3 0.50 kW/h
A034421 Proparange hard/soft soldering blowpipe BT-5 1.55 kW/h
A034422 Proparange hard/soft soldering blowpipe BT-7 2.77 kW/h

Lorch/Propaline heating torch

A034405 Lorch/Propaline heating torch GT-I 1/2" 4.50 kW/h
A034406 Lorch/Propaline heating torch GT-I 1" 5.79 kW/h

Lorch/Propaline paint stripping torch

A034408 Lorch/Propaline paint stripping torch AT-I 1.37 kW/h

Proparange stainless steel heating heads

A034435 Proparange stainless steel heating heads HT-30 15.5 kW/h
A034436 Proparange stainless steel heating heads HT-40 27.0 kW/h
A034437 Proparange stainless steel heating heads HT-50 47.6 kW/h
A034438 Proparange stainless steel heating heads HT-60 70.8 kW/h
A034439 Proparange stainless steel heating heads HT-80 83.6 kW/h

Proparange stainless steel extension tubes

A034450 Proparange stainless steel extension tubes 75 mm
A034451 Proparange stainless steel extension tubes 150 mm
A034452 Proparange stainless steel extension tubes 220 mm
A034453 Proparange stainless steel extension tubes 350 mm
A034454 Proparange stainless steel extension tubes 600 mm
A034455 Proparange stainless steel extension tubes 750 mm
A034456 Proparange stainless steel extension tubes 1.000 mm

Proparange stainless steel fork extension

A034460 Proparange stainless steel fork extension 2-flame
A034461 Proparange stainless steel fork extension 4-flame

Regulators

A034463	Lorch pressure regulator,	12 kg/h,	0.5-4 bar,	excess flow valve, SHELL
A034464	Lorch pressure regulator,	14 kg/h,	4 bar,	excess flow valve, SHELL
A034470	Lorch pressure regulator, pressure gauge,	12 kg/h,	0.5-4 bar,	excess flow valve, SHELL

Piëzo

Propane soldering equipment with electronic ignition

A034330#	Piëzo handle without arresting device control lever		
A034331#	Piëzo handle with arresting device control lever		
A034332#	Piëzo heating torch	L-500 mm	D-50 mm
A034333#	Piëzo heating torch	L-750 mm	D-60 mm
A034334#	Piëzo heating torch	L-900 mm	D-60 mm
A034338#	Piëzo heating torch incl. handle	L-500 mm	D-50 mm
A034339#	Piëzo heating torch incl. handle	L-750 mm	D-60 mm
A034340#	Piëzo heating torch incl. handle	L-900 mm	D-60 mm
A034345#	Piëzo point brazing torch	5 mm	
A034346#	Piëzo point brazing torch	7 mm	
A034350#	Piëzo turbo brazing torch	15 mm	
A034351#	Piëzo turbo brazing torch	17 mm	
A034352#	Piëzo turbo brazing torch	22 mm	
A034355#	Piëzo shrinkage torch	22 mm	
A034356#	Piëzo shrinkage torch	30 mm	
A034359#	Piëzo shrinkage torch, hot air	30 mm	
A034362#	Piëzo soldering torch		
A034363#	Soldering tip "Hammer" 350 gram		
A034364#	Soldering tip "Pointed" 250 gram		

Lorch soldering equipment with electronic ignition, sturdily constructed ensuring reliability and safety.
The multi-purpose handle offers the possibility of:
- electronic ignition
- rotating hose connection
- valve for specific flame adjustment
- quick change soldering torches
- torch can be revolved in the shank (360°).

Gas pressure up to 4 bar. Capacity max. 12 kg/h.

Classic

Propane equipment Classic

A034509	Soldering torch incl. soldering tip "Hammer" 350 gram WT-1 Classic
A034510	Isolating wooden handle Classic
A034511	Soldering torch KT-S Classic
A034512	Windshield Classic
A034513	Torch support Classic
A034444	Soldering tip "Hammer" 350 gram WT-I Classic
A034514	Point brazing torch PT-S 5 Classic
A034515	Point brazing torch PT-S 7 Classic
A034516	Paint stripping torch AT-S Classic

Professional, isolating wooden handle. Free rotating valve/hose nipple G 3/8"L gives no hose drag. Sliding air control for setting from hard to soft flames.

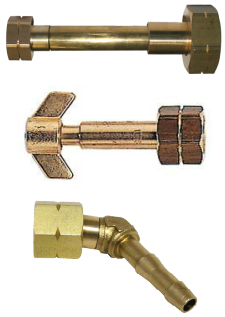
Regulators

Pressure regulators

A034465	Propaline pressure regulator, pressure gauge,	8.0 kg/h,	0.5-4	bar,	SHELL
A034466	Propaline pressure regulator, pressure gauge,	8.0 kg/h,	0.5-4	bar,	POL
A034469	Lorch pressure regulator,	4.0 kg/h,	2.0	bar, excess flow valve,	SHELL
A034472	Pressure regulator, refillable LP gas cylinder,	3.0 kg/h,	1.5	bar	
A034467	Pressure regulator, refillable LP gas cylinder,	4.0 kg/h,	1.5	bar	
A034480	Catweld pressure regulator,	1.5 kg/h,	30	mbar, 1/4"L,	SHELL
A034481	Catweld pressure regulator,	1.5 kg/h,	30	mbar, hose nipple,	SHELL
A034482	Catweld pressure regulator,	1.5 kg/h,	50	mbar, 1/4"L,	SHELL
A034483	Catweld pressure regulator,	1.5 kg/h,	50	mbar, hose nipple,	SHELL
A035580	Catweld pressure regulator,	1.5 kg/h,	30	mbar, 1/4"L, pressure relief valve,	SHELL
A035582	Catweld pressure regulator,	1.5 kg/h,	50	mbar, 1/4"L, pressure relief valve,	SHELL
A034478	GG pressure regulator,		50	mbar, hose nipple,	POL
A034485	GG pressure regulator,	4.0 kg/h,	20-90	mbar, 1/4" in 3/8" out	
A034487	Pressure regulator,	6.0 kg/h,	0-4	bar, 3/8"L in 3/8"L out	
A034488	Pressure regulator,	6.0 kg/h,	0-4	bar,	SHELL

Propane equipment accessories

A034550#	Refillable LP gas cylinder 450 gram safety valve and suspension hook	
A034551#	Refillable gas cylinder 450 gram safety valve and suspension hook	
A034496#	Refill connection right angle,	SHELL
A034497#	Refill connection straight,	SHELL
A034504	Refill connection straight, handwheel,	SHELL
A034505	Refill connection straight, connection nut,	SHELL
A034499	Hose nipple,	SHELL
A034500	Hose nipple,	POL
A034501#	Excess flow valve,	SHELL
A034502#	Excess flow valve,	POL
A034503	Swivelling angled connection 3/8"L	
A034495	Propaline torch support	
A035410#	Set cleaning needles 0.1-0.9 mm	



A034541 Hard soldering set Pro/Ox CW

Contents:
- handle LX-14, hard soldering blowpipe nr. 3 (2-4 mm)
- 5 meter Oxygen // Propane hose, regulator Oxygen
- regulator Propane, 0.3 bar fixed outlet pressure
- refillable LP gas cylinder 425 gram
- refillable Oxygen cylinder 4 ltr
- carrying frame.

Excess flow valve type 651

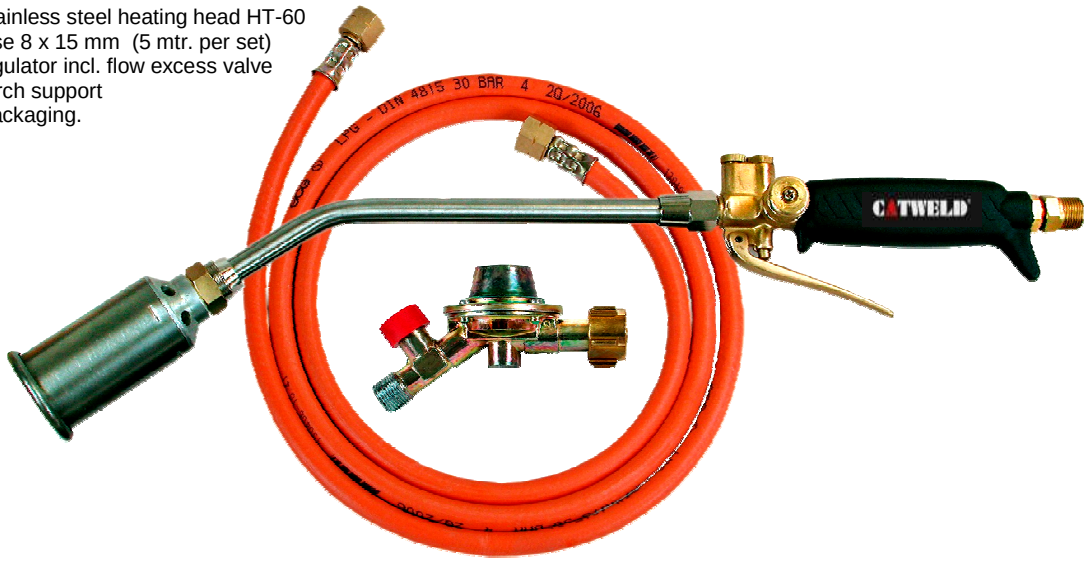
A034473	Lorch 651	1.5	- 2.2	kg/h
A034475	Lorch 651	4.0	- 6.0	kg/h
A034476	Lorch 651	6.0	- 8.5	kg/h
A034477	Lorch 651	10.0	- 14.0	kg/h

Anti leakage device prevents unintentional and unnoticed escape of (liquid) fuel gas.

A034315 Lorch/Propaline compact heating torch (cup) 40 mm

A035474 Lorch/Propaline set complete

Including:
- Propaline handle Vari
- Propaline stainless steel extension tube 600 mm
- Propaline stainless steel heating head HT-60
- Propane dose 8 x 15 mm (5 mtr. per set)
- Pressure regulator incl. flow excess valve
- Propaline torch support
- full colour packaging.



Gas welding accessories

A072016	Welding goggles Stroof 5A DIN
A072017#	Cutting goggles Ultra-Safe 5A DIN
A072040#	Welding goggles flip-up AGA GS-31
A072041#	Welding goggles flip-up Amigo
A072042#	Anti spatter lenses 10 pcs. (splinter free glasses)
A072043#	Anti spatter lenses Vinylite 10 pcs. (AGA GS-31)
A072044	Welding lenses 10 pcs. shade 4 Ø 50 mm
A072045	Welding lenses 10 pcs. shade 5 Ø 50 mm
A072046	Welding lenses 10 pcs. shade 6 Ø 50 mm

Welding goggles GS-31

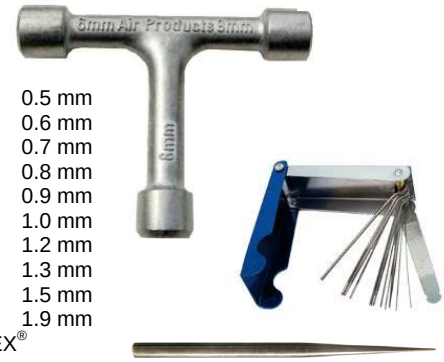
Welding goggles Stroof

A072160	Manometer cover red 63 mm
A072161	Manometer cover black 63 mm
A072162	Manometer cover blue 63 mm
A072165	Manometer cover red 50 mm
A072166	Manometer cover blue 50 mm
A072168	Manometer cover grey 50 mm
A072167	Manometer cover DIN-Plus 2 x 63 mm
A072163	Manometer cover Unicontrol

A072250	Spark lighter “round cup”
A072251	Spark lighter “pistol”
A072252	Flints 10 pcs. “round cup”
A072253	Flints 10 pcs. “pistol”

Spark lighter “round cup”

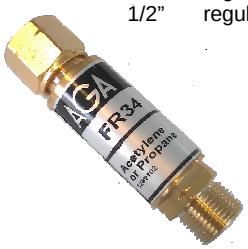
A072257	Cylinder spindle key Combi “AGA”, “AP”, “Linde”
A072260	Cleaning needles universal
A072261	Cleaning needles “smooth”
A072262	Cleaning needles AGA
A072263	Cleaning needles AGA elongated
A072430	Cleaning needles AGA 10 pcs. 0.5 mm
A072431	Cleaning needles AGA 10 pcs. 0.6 mm
A072432	Cleaning needles AGA 10 pcs. 0.7 mm
A072433	Cleaning needles AGA 10 pcs. 0.8 mm
A072434	Cleaning needles AGA 10 pcs. 0.9 mm
A072435	Cleaning needles AGA 10 pcs. 1.0 mm
A072436	Cleaning needles AGA 10 pcs. 1.2 mm
A072437	Cleaning needles AGA 10 pcs. 1.3 mm
A072438	Cleaning needles AGA 10 pcs. 1.5 mm
A072440	Cleaning needles AGA 10 pcs. 1.9 mm
A072264#	Cleaning needles HS conical TRITEX®



A075510	CW	flashback arrestor AC/PR		3/8”L	regulator	FANVTS
A075511	CW	flashback arrestor OX		3/8”	regulator	FANVTS
A075513	CW	flashback arrestor OX		1/4”	regulator	FANVTS
A075515	AGA	flashback arrestor FR-20 AC/PR		3/8”L	handle	FANVT
A075516	AGA	flashback arrestor FR-20 OX		3/8”	handle	FANVT
A075517	AGA	flashback arrestor FR-20 AC/PR		1/4”L	handle	FANVT
A075518	AGA	flashback arrestor FR-20 OX		1/4”	handle	FANVT
A075519	AGA	flashback arrestor FR-20 AC/PR	B” UNF	9/16”L	handle	FANVT
A075520	AGA	flashback arrestor FR-20 OX	B” UNF	9/16”	handle	FANVT
A075521 set	AGA	flashback arrestor FR-20	B” UNF	9/16”	handle	FANVT
A075525	CW	flashback arrestor OX		3/8”	machine cutting torch	FANVT
A075526	CW	flashback arrestor OX		1/4”	machine cutting torch	FANVT
A075527	CW	flashback arrestor AC/PR		3/8”L	machine cutting torch	FANVT
A075550	CW	flashback arrestor AC/PR DG-91		3/8”L	regulator	FANVTS
A075573 set	AGA	flashback arrestor FR-50 SAFE-GUARD-4		3/8”L	regulator	FANVTSR
A075575	AGA	flashback arrestor FR-50 SAFE-GUARD-4		3/8”L	regulator	FANVTSR
A075576	AGA	flashback arrestor FR-50 SAFE-GUARD-4		3/8”	regulator	FANVTSR
A075590	AGA	flashback arrestor FR-34 AC/PR		3/8”L	regulator	FANVTS
A075591	AGA	flashback arrestor FR-34 OX		3/8”	regulator	FANVTS
A075592	AGA	flashback arrestor FR-34 AC/PRO	B” UNF	9/16”L	regulator	FANVTS
A075593	AGA	flashback arrestor FR-34 OX	B” UNF	9/16”	regulator	FANVTS
A075597	AGA	flashback arrestor FR-50 SAFE-GUARD-5		3/8”L	regulator	FANVTSR
A075598	AGA	flashback arrestor FR-50 SAFE-GUARD-5		3/8”	regulator	FANVTSR
A075586#	AGA	flashback arrestor FR-63		1½”	gas supply system	FANVTS
A075588#	WITT	flashback arrestor 85-10 AC/PRO		3/8”L	regulator	FANVTS
A075589#	WITT	flashback arrestor 85-10 OX		1/2”	regulator	FANVTS

FR-50 Safe-Guard-5

FA = Sintered flame arresting element
NV = Non return valve
TS = Temperature sensitive cut-off valve
R = Reset by lifting and releasing the bonnet



FR-34

Gas welding accessories

Non return valves
Non return valves are installed on several (machine) cutting torches. They effectively prevent a reverse flow of gas.

Flashback arrestors
Flashback arrestors effectively prevent a flashback from entering the cylinder or gas supply system. Flashback arrestors are available in the form of torch-mounted and regulator-mounted arrestors. They stop the flame with the help of a flame arrestor.

A051040	Non return valve BV-11	1/4”
A051041	Non return valve BV-11	3/8”L
A051042	Non return valve BV-11	3/8”
A051043	Non return valve BV-11	1/4”L

A051101	Non return valve BV-12	1/4” x 5.0 mm excl. connection nut
A051102	Non return valve BV-12	1/4” x 6.3 mm excl. connection nut
A051103	Non return valve BV-12	3/8” x 5.0 mm excl. connection nut
A051104	Non return valve BV-12	3/8” x 6.3 mm excl. connection nut
A051105	Non return valve BV-12	3/8” x 9.0 mm excl. connection nut
A051110	Non return valve BV-12 complete	1/4” x 5.0 mm
A051111	Non return valve BV-12 complete	1/4”L x 5.0 mm
A051112	Non return valve BV-12 complete	1/4” x 6.3 mm
A051113	Non return valve BV-12 complete	1/4”L x 6.3 mm
A051116	Non return valve BV-12 complete	3/8” x 5.0 mm
A051117	Non return valve BV-12 complete	3/8”L x 5.0 mm
A051118	Non return valve BV-12 complete	3/8” x 6.3 mm
A051119	Non return valve BV-12 complete	3/8”L x 6.3 mm
A051120	Non return valve BV-12 complete	3/8” x 9.0 mm
A051121	Non return valve BV-12 complete	3/8”L x 9.0 mm

AGA twin outlet valve OX/AC

A075650#	Twin outlet valve Oxygen	3/8”	90°
A075660#	Twin outlet valve Acetylene	3/8”L	90°
A075661	Twin outlet valve Oxygen	1/4”	70°
A075662	Twin outlet valve Oxygen	3/8”	70°
A075663	Twin outlet valve Acetylene	3/8”L	70°

Gas saver

A074200#	AGA gas saver GS-10	AC/OX
A074201#	KW gas saver	AC/OX
A074202#	KW gas saver	PR/OX

Spare parts GS-10

A074212#	Beam assembly
A074214#	Valve insert assembly Acetylene/Oxygen
A074216#	Gas control valve
A074218#	Cover Acetylene/Oxygen
A074220#	Pilot burner
A074222#	Pin

A076000#	Welding mirror, metal arm
A076001#	Welding mirror, flexible arm on magnetic holder
A076002#	Metal welding mirror 1.5 mm
A077001	Leak detection spray (12 pcs.)

Gas welding wire

The original AGA H-44 Mo
AGA H-44 Mo is a blank drawn, molybdenum alloyed quality wire. AGA H-44 Mo does not spatter and gives an absolute porous free weld deposit. With AGA H-44 Mo it is easy to control the weld puddle. The wire is mainly used for quality work in St. 37, but is also suitable for steel qualities with a tensile strength of 440-540 N/mm2. Furthermore, AGA H-44 Mo is excellent for welding parts of boilers and pipelines that are used at high temperatures up to 450°C.

Principal analysis				Mechanical properties of all weld metal (as welded)	
C	0.080 - 0.15	Cr	<= 0.15	Test temp.	20°C
Mn	0.90 - 1.10	Ni	<= 0.15	Re N/mm2	>= 295 N/mm2
Si	0.10 - 0.25	Mo	0.45 - 0.60	Rm N/mm2	> 440 / 540 N/mm2
P	<= 0.20	Cu	<= 0.30	A (Lo=5 do)%	>= 22%
S	<= 0.020	V	<= 0.030	KV J (ISO-V)	0°C / >= 27 J

AGA H-44 Mo blank drawn welding wire for steel L= 700 mm

A060002	AGA H-44 Mo blank drawn welding wire	1.6 mm
A060004	AGA H-44 Mo blank drawn welding wire	2.0 mm
A060006	AGA H-44 Mo blank drawn welding wire	2.5 mm
A060008	AGA H-44 Mo blank drawn welding wire	3.15 mm
A060010	AGA H-44 Mo blank drawn welding wire	4.0 mm
A060012	AGA H-44 Mo blank drawn welding wire	5.0 mm

Delivered in 5 kg. packages. Minimum quantity 20 kg. per diameter.

KW copper coated welding wire GI II L= 1000 mm

A060020	KW copper coated welding wire GI II	1.0 mm
A060021	KW copper coated welding wire GI II	1.6 mm
A060022	KW copper coated welding wire GI II	2.0 mm
A060023	KW copper coated welding wire GI II	2.5 mm
A060024	KW copper coated welding wire GI II	3.0 mm
A060025	KW copper coated welding wire GI II	4.0 mm
A060026	KW copper coated welding wire GI II	5.0 mm
A060027	KW copper coated welding wire GI II	6.0 mm

Delivered in 5 kg. packages. Minimum quantity 15 kg. per diameter.

Optional gas welding wire available upon request.

CATWELD bronze brazing rod universal L= 1000 mm (upon request)

A062000#	CW bronze brazing rod universal	1.5 mm
A062001#	CW bronze brazing rod universal	2.0 mm
A062002#	CW bronze brazing rod universal	2.4 mm
A062003#	CW bronze brazing rod universal	3.0 mm
A062004#	CW bronze brazing rod universal	4.0 mm
A062005#	CW bronze brazing rod universal	5.0 mm
A062006#	CW bronze brazing rod universal	6.0 mm

Delivered in 5 kg. packages.

CATWELD flux coated brazing rod (upon request)

A062008#	CW flux coated brazing rod	1.6 x 457 mm
A062009#	CW flux coated brazing rod	2.0 x 500 mm
A062011#	CW flux coated brazing rod	2.5 x 500 mm
A062012#	CW flux coated brazing rod	3.0 x 1000 mm
A062013#	CW flux coated brazing rod	4.8 x 914 mm
A062014#	CW flux coated brazing rod	4.0 x 500 mm

CATWELD flux cored brazing rod L= 500 mm (upon request)

A062015#	CW flux cored brazing rod	2.5 mm □
A062016#	CW flux cored brazing rod	3.5 mm □

Delivered in 5 kg. packages.

CATWELD nickel bronze brazing rod (upon request)

A062020#	CW 10% nickel bronze brazing rod	1.6 x 914 mm
A062021#	CW 10% nickel bronze brazing rod	2.0 x 1000 mm
A062022#	CW 10% nickel bronze brazing rod	2.4 x 914 mm
A062023#	CW 10% nickel bronze brazing rod	3.0 x 1000 mm
A062035#	CW S3 7% nickel bronze brazing rod	1.6 x 1000 mm
A062036#	CW S3 7% nickel bronze brazing rod	2.0 x 1000 mm
A062037#	CW S3 7% nickel bronze brazing rod	2.5 x 1000 mm
A062038#	CW S3 7% nickel bronze brazing rod	3.0 x 1000 mm

Delivered in 5 kg. packages.

CATWELD flux coated nickel bronze brazing rod (upon request)

A062027#	CW flux coated 10% nickel bronze brazing rod	2.0 x 500 mm
A062029#	CW flux coated 10% nickel bronze brazing rod	3.0 x 1000 mm

Silver brazing rod type 610

A064042#	Silver brazing rod AGA-610	1.5 mm	Ag - 40 Cd
A064044#	Silver brazing rod AGA-610	2.0 mm	Ag - 40 Cd
A064039#	Silver brazing rod AGA-610	3.0 mm	Ag - 40 Cd

Silver brazing rod type 610 flux coated

A064047#	Silver brazing rod AGA 610 flux coated	1.5 mm	Ag - 40 Cd
A064048#	Silver brazing rod AGA 610 flux coated	2.0 mm	Ag - 40 Cd
A064049#	Silver brazing rod AGA 610 flux coated	3.0 mm	Ag - 40 Cd

Cadmium free silver brazing rod type 650

A064052#	Cadmium free silver brazing rod AGA 650	1.5 mm	Ag - 55 Sn
A064053#	Cadmium free silver brazing rod AGA 650	2.0 mm	Ag - 55 Sn
A064054#	Cadmium free silver brazing rod AGA 650	3.0 mm	Ag - 55 Sn

Cadmium free silver brazing rod type 650 flux coated

A064056#	Cadmium free silver brazing rod AGA 650 flux coated	2.0 mm	Ag - 55 Sn
A064057#	Cadmium free silver brazing rod AGA 650 flux coated	3.0 mm	Ag - 55 Sn
A064059#	Cadmium free silver brazing rod AGA 650 flux coated	1.5 mm	Ag - 55 Sn

Silver brazing rod type 680 flux coated

A064045#	Silver brazing rod AGA 680 flux coated	1.5 mm	Ag - 30 Cd
A064043#	Silver brazing rod AGA 680 flux coated	2.0 mm	Ag - 30 Cd
A064946#	Silver brazing rod AGA 680 flux coated	3.0 mm	Ag - 30 Cd

Silver-Copper-Phosphorus based brazing rods mainly used for brazing copper and copper alloys. The rod is self fluxing, no need for separate flux, when joining copper to copper.

Silver-Copper-Phosphorus based brazing rod, delivered in 1 kg. packages

A293400#	Silver-Copper-Phosphorus based brazing rod	2.0 x 500 mm	Ag - 15 P
A293402#	Silver-Copper-Phosphorus based brazing rod	3.0 x 500 mm	Ag - 15 P
A293405#	Silver-Copper-Phosphorus based brazing rod	1.5 x 500 mm	Ag - 5 P
A293406#	Silver-Copper-Phosphorus based brazing rod	2.0 x 500 mm	Ag - 5 P
A293407#	Silver-Copper-Phosphorus based brazing rod	3.0 x 500 mm	Ag - 5 P
A293408#	Silver-Copper-Phosphorus based brazing rod	2.0 x 500 mm	Ag - 2 P
A293409#	Silver-Copper-Phosphorus based brazing rod	3.0 x 500 mm	Ag - 2 P
A293412#	Copper-Phosphorus alloy 93/7	2.0 x 500 mm	Cu - P 7
A294315#	Copper-Phosphorus alloy 93/7	2.0 mm spool (±10 kg)	Cu - P 7

Silver (brazing) rods

Type	Ag	Cu	Zn	P	Cd	Sn		WT °C	Sol.	Liq.	DIN
AGA-610	40	19	21		20			610	595	630	L-Ag 40 Cd
AGA-650	55	21	22			2		650	620	660	L-Ag 55 Sn
AGA-680	30	28	21		21			680	600	690	L-Ag 30 Cd
Ag - 15 P	15	rest		5				710	800	800	L-Ag 15 P
Ag - 5 P	5	rest		6.0				710	810	810	L-Ag 5 P
Ag - 2 P	2	rest		6.5				710	810	810	L-Ag 2 P

What is soldering? Soldering is a process in which two or more metal items are joined together by melting and flowing a filler metal into the joint, the filler metal having a relatively low melting point. Soft soldering is characterized by the melting point of the filler metal, which is below 450°C. The filler metal used in the process is called solder.

Stay Brite silver-bearing solder Prices available upon request

Versatile Stay Brite silver-bearing solders are used throughout industry as a better-than-brazing method in many instances. The important advantage of Stay Brite solders is the greater strength of the overall component after joining. Their lower working temperature eliminates the weakening of the base metals caused by annealment from high brazing heat. As shown in the un-retouched photo below, the Stay Brite section retains original pipe strength; the brazed section is greatly weakened.
Stay Brite silver-bearing solders have the same excellent affinity as Silver-Copper-Phosphorus based brazing rods and normal silver brazing rods to bond with all of the ferrous and nonferrous alloys (stainless steel, nickel, copper, brass etc.). Stay Brite joints exhibit considerably higher-than-necessary elongation for sound dissimilar metal joints and vibration applications. Stay Brite alloys range in temperature from 220°C to 280°C.

1. Lower material costs up to 66%	5. Eliminates base metal annealment
2. Lower joining temperature up to 66%	6. Faster post cleaning, little metal discoloration
3. Increases productivity up to 400%	7. Eliminates of oxide scale formed by heat
4. Eliminates base metal distortion	8. Cadmium free and non toxic

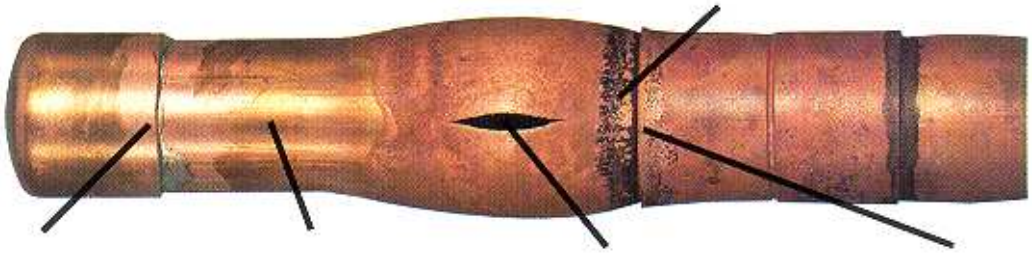
Properties	Brazed joint	Stay Brite	Stay Brite 8
Composition	---	tin and silver	tin and silver
Melting point	---	220°C	220°C
Completely fluid	---	220°C	280°C
Tube strength (before heating)	± 20 N/mm^2	± 20 N/mm^2	± 20 N/mm^2
Tube strength (after joining)	± 5 N/mm^2	± 20 N/mm^2	± 20 N/mm^2
Joint strength	± 207 N/mm^2	± 97 N/mm^2	± 103 N/mm^2
Oxide scale	heavy	none	none
Annealment	heavy	none	none
Electrical conductivity	---	16.4	17.1
Deposit colour	---	bright silver, non-oxidizing	bright silver, non-oxidizing

Stay Brite has been used for over 30 years to join refrigeration/air conditioning tubing. This alloy has been used to fabricate millions of strong, leak proof joints. The graph shows the strength of 5/8" tube sections at room and elevated temperature. Stay Brite connections are excellent for many HVAC applications.

Stay Brite 8 has a higher silver content than regular Stay Brite, effecting a plastic range of 60°C. Just above the melting point of 220°C this alloy becomes somewhat fluid, but has a high surface tension useful in filling loosely fitted couplings.

Flux use Stay Clean soldering flux for all metals other than aluminum.
Material 1/16" (1.6 mm) and 1/8" (3.2 mm) wire diameters.
Packaging 1 lb spools.

Stay Brite (soldered) **Brazed (15% Silver-Copper-Phosphorus based brazing rod)**



No distortion at Stay Brite fitting.

No distortion of copper pipe adjacent to Stay Brite fitting.

Gross distortion and bursting of pipe adjacent to braze.

Brazing temperatures caused distortion at brazed fitting when pressurized.

Strength test: Stay Brite silver-bearing solder vs. 15% Silver-Copper-Phosphorus based brazing rod. Stay Brite soldered on one end, brazed on the other. Pressurized hydraulically until ruptured. Stay Brite silver-bearing alloys have a lower working temperature, eliminating the weakening of base metals caused by annealing from high brazing temperatures. The Stay Brite section retains original pipe strength; the brazed section is greatly weakened.

AGA silver-bearing solder (meets the requirements of the safe drinking water act for use on copper potable water lines)

A064050#	AGA silver-tin 2.0 mm	spool 500 gram	Sn Ag - 5
A064058#	Stay Brite 8 1/16”	spool 1 lb	Sn Ag - 8
A064060#	Stay Brite 8 1/8”	spool 1 lb	Sn Ag - 8

Tin-lead solder

A064065#	Tin-lead solder	2.0 mm spool 500 gram	60 Sn - 40 Pb
A064066#	Tin-lead solder	2.0 mm spool 500 gram	50 Sn - 50 Pb
A064070#	Tin-lead bar	400 x 10 x 2 mm	50 Sn - 50 Pb
A064071#	Tin-lead bar	400 x 10 x 2 mm	60 Sn - 40 Pb

Other soft soldering alloys

A064061#	Speedy solder	2.0 mm spool 250 gram	Sn Cu - 3
A064062#	Bridgit solder	3.2 mm spool 1 lb	CuNiSbSn

Soft soldering alloys

Type	Ag	Cu	Zn	P	Cd	Sn	Ni	Sb		WT °C	Sol.	Liq.	DIN
Sn Ag – 5	3.5					Rest				220	225	240	L-Sn Ag - 5
Stay Brite 8	6					Rest				220	220	280	L-Sn Ag - 8
Speedy		3				Rest				230	230	250	L-Sn Cu - 3
Bridgit	0.1	3				Rest	0.2	5		230	238	332	-

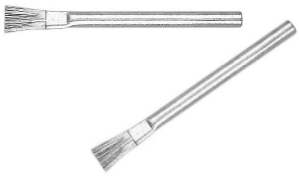
Fluxes

Flux for (silver) brazing alloys

A064503	Stay Silv white paste flux	6.5 oz	(brushcap)
A064504	Stay Silv white paste flux	1 lb	
A064510#	KW flux paste 750-1100°C	500 gram	
A064512	Stay Silv powder flux	250 gram	
A064514	Stay Silv black flux paste	1 lb	

Other fluxes for brazing alloys

A064522	WELCO 600 Bronze powder flux	1 lb	(powder)
A064523	KW aluminum flux	500 gram	(powder)
A064524	KW cast iron welding flux	500 gram	(powder)
A064555#	AGA Cobraflux Protechno	5 ltr	(liquid)
A064570	Brush size 3 dimension 13x140		



Soldering fluxes

A064500	Stay clean liquid flux 4 oz aluminium	spoutcap	(liquid)
A064501	Stay clean paste flux 4 oz	brushcap	(paste)
A064502	Stay clean liquid flux 4 oz	spoutcap	(liquid)
A064506	Bridgit paste flux 1 oz	brushcap	(paste)
A064507	Stay clean paste flux 1 lb		(paste)
A064508	Stay clean liquid flux 1 gallon		(liquid)

TIG welding wire

	Copper coated wire for TIG welding SG-1 L= 1000 mm	
A060130	Copper coated wire for TIG welding SG-1	1.6 mm
A060131	Copper coated wire for TIG welding SG-1	2.0 mm
A060138	Copper coated wire for TIG welding SG-1	2.4 mm
A060139	Copper coated wire for TIG welding SG-1	3.2 mm
	Delivered in 5 kg. packages.	
	Blank drawn wire for TIG welding SG-3 L= 700 mm	
A060126	Blank drawn wire for TIG welding SG-3	1.6 mm
A060127	Blank drawn wire for TIG welding SG-3	2.0 mm
A060128	Blank drawn wire for TIG welding SG-3	2.4 mm
A060129	Blank drawn wire for TIG welding SG-3	3.2 mm
	Delivered in 5 kg. packages.	
	Stainless Steel wire for TIG welding L = 1000 mm	
A060140#	Stainless Steel wire for TIG welding 316 LSi	1.6 mm
A060141#	Stainless Steel wire for TIG welding 308 (304) LSi	1.6 mm
A060144#	Stainless Steel wire for TIG welding 316 LSi	2.0 mm
A060148#	Stainless Steel wire for TIG welding 308 (304) LSi	2.0 mm
	Delivered in 5 kg. packages.	

Blank drawn wire for TIG welding unalloyed structural steels. Typical applications such as work shops and general constructions.

	TIG pen	
A129220#	TIG pen uses any wire from 0.8 to 3.2 mm	

The TIG pen allows the welder to control the tip of the filler wire with great accuracy even at a long distance from the weld seam and helps the welder to obtain a higher welding quality. It also eliminates waste of the filler wire.

Gas welding applications

Thermic lances

A039500#	Lance holder	3/8”
A039501#	Rubber collet seal	3/8”
A039600#	Thermic lance	3/8”

A **thermic lance** is a steel pipe packed with mixed metal wires. Pure oxygen is passed through the pipe from an oxygen cylinder and regulator. The end of the pipe is lit with a high temperature source, e.g. an oxy-acetylene torch. The iron in the steel burns into the oxygen coming down the pipe to produce enormous heat and a liquid slag of iron oxides and other materials, which dribbles and splashes out.

Flame cleaning equipment

A250100#	Handle NEF	
A250120#	Flame cleaning attachment	50 mm
A250122#	Flame cleaning attachment	100 mm
A250124#	Flame cleaning attachment	150 mm
A250126#	Flame cleaning attachment	200 mm
A250128#	Flame cleaning attachment	250 mm
A250140#	Special cleaning needles	

The principle of flame cleaning is based on using the hottest flame possible - acetylene and oxygen - for rapid heating of a limited portion. Since the surrounding materials remains cold, the heated parts such as rust, paint and oil will be removed easily from concrete, metal and bricks.

Flamtech heating torch Acetylene

A250300#	Flamtech heating torch	
A250302#	Flamtech heating torch water cooled	
A250303#	Flamtech heating nozzle MA-3	5.400- 8.500 ltr
A250306#	Flamtech heating nozzle FA-6	6.400-10.000 ltr
A250307#	Flamtech heating nozzle FY-6 (Tetrene, Mapp, Apachi)	

Powder cutting equipment

A030000#	Powder dispenser, filling max. 70 kg.	
A030001#	Powder cutting attachment	
A030002#	Inner nozzle	
A030003#	Tube holder	
A030004#	Outer nozzle	
A030006#	Valve	
A030007#	Powder tube	
A030010#	Powder cutting nozzle HA (AC)	0 - 50 mm
A030011#	Powder cutting nozzle HA (AC)	50 - 100 mm
A030012#	Powder cutting nozzle HA (AC)	100 - 200 mm
A030013#	Powder cutting nozzle HA (AC)	200 - 300 mm
A030015#	Powder cutting nozzle HP (PR)	0 - 50 mm
A030016#	Powder cutting nozzle HP (PR)	50 - 100 mm
A030017#	Powder cutting nozzle HP (PR)	100 - 200 mm
A030018#	Powder cutting nozzle HP (PR)	200 - 300 mm
A039001#	Cutting powder AGA 200 per kg. (25 kg. plastic bag)	

Powder dispenser

X-21 Powder cutting torch

Powder cutting attachment

Powder cutting is a method for quick and economic gas cutting for cast iron, stainless steel etc. with the same precision as for normal carbon steel. This will be achieved through the use of a finely ground metal powder that is blown through the cutting torch into the cutting flame. The cutting nozzle on this torch differs from the normal nozzles only in respect that it is equipped with extra outlet canals for the metal powder. The finely ground metal powder, consisting mainly of iron, is heated to ignition temperature when passing through the heating flame and thereafter burnt into contact with the cutting oxygen, thus setting free a large amount of heat. The iron oxides and leftovers of burnt iron will mix with the viscous metal oxides. Through this, the slag becomes fluent and is driven out by the cutting oxygen flame.

Cylinder trolleys

	Cylinder trolleys			
A071000##	Cylinder trolley Catweld	110/150R	1 x 10 ltr of 1 x 50 ltr	solid rubber wheels
A071003#	Cylinder trolley AGA Fixiflam	KW 210R	2 x 10 ltr	solid rubber wheels
A071004#	Cylinder trolley Oxywheel (medical)	KW 110R	1 x 10 ltr	solid rubber wheels
A071010##	Cylinder trolley AGA Fixiflam	KW 250R	2 x 50 ltr	solid rubber wheels
A071011#	Cylinder trolley AGA Fixiflam	KW 250S	2 x 50 ltr	spoke steel wheels

Handling and storing cylinders can be difficult due to their size and weight. They can be a threat to workers and their workplace if not secured correctly. Current legislation stipulates that cylinders be properly secured in transit and whilst stationary (cylinder holder with chain). All gas and oxygen trolleys are equipped with steel plates between the handles and cylinders to prevent fire heating up the hoses and cylinders. It is preferred that all cylinder trolleys should be equipped with fire extinguishers.

Catweld 110/150R

Fixiflam 210R

Fixiflam 250R

Machine cutting torches

A051002#	Machine cutting torch BM-31 CF	INJ	D= 28	L= 160	AC
A051194#	Machine cutting torch Jetstream	INJ	D= 30	L= 250	AC
A051196#	Machine cutting torch Jetstream	INJ	D= 32	L= 220	AC
A051199#	Machine cutting torch Jetstream	INJ	D= 32	L= 400	AC
A051197#	Machine cutting torch Jetstream	INJ	D= 32	L= 220	PR
A051500#	Machine cutting torch BIR	INJ	D= 32	L= 220	AC
A051501#	Machine cutting torch BIR	INJ	D= 32	L= 220	PR
A051505#	Machine cutting torch BIR	INJ	D= 32	L= 320	AC
A051506#	Machine cutting torch BIR	INJ	D= 32	L= 320	PR
A051007#	Twin tip holder Injector				
A051590#	Machinebrander FIT+	INJ	D= 32	L= 220	AC
A051591#	Machinebrander FIT+	INJ	D= 32	L= 220	PR

Twin tip holder Injector

Jetstream

BM-31 CF

FIT Plus

JETSTREAM, BM 31 CF and **Fit Plus** torches are especially adapted for cutting with high speed nozzles. **Fit Plus** nozzles are removed without any tools, eliminating the possibility of damaging the torch.The patented method for the cooling of the nozzles gives a considerably increased service life to the nozzle. The built in cooling flow valve provides that during preheating a small amount of oxygen flows through the cutting channel that prevents penetration of warm gases in the cutting nozzle and cutting channel.

A built in special spiral injector (also patented) contributes to the extremely high safety and better mixture of flammable gases and oxygen. In the connection of the injector, an aluminum housing is placed to complete the cooling.

JETSTREAM is adapted for acetylene and propane alternatively and available in different sizes.

BM 31 CF for acetylene is specially designed to be used in cutting machines with continued spaces. It is a solid brass construction.
However, the **FIT Plus** cutting nozzles are fixed in the torch head by bayonet-lock without using wrenches, which drastically reduces set-up time.

The cutting nozzle is being cooled while the material is heating up. This means:

longer service life
longer intervals between nozzle changes
less interruption
better measurements
less scrap

IMPROVED CUTTING ECONOMY

Other machine cutting torches available upon request.

	Pressure control gauge			
A051090	Test gauge	0 -10	bar	1/4”
A051091	Test gauge	0 -10	bar	3/8”
A051092	Test gauge	0 - 2.5	bar	3/8”L
A051093	Test gauge	0 -16	bar	3/8”

- Working gloves
- Welding gloves
- Welding jackets
- Welding aprons
- Welding caps

Welding cap KROMER, 100% cotton, available in sizes:

A140956	Welding cap KROMER size 56
A140957	Welding cap KROMER size 57
A140958	Welding cap KROMER size 58
A140959	Welding cap KROMER size 59
A140960	Welding cap KROMER size 60
A140961	Welding cap KROMER size 61
A140962	Welding cap KROMER size 62

Heat protection, work protection, insulation technique

Heat protection up to 1200°C
KW fabrics offers protection against spatters and sparks up to 1200°C. In the field of heat protection KW fabrics allow a flexible product design and protection against thermal effects for men, machines and material. The fabrics are available on full rolls or in various standard sizes.

Fabrics on full rolls

Art.nr.	Size	Up to °C	Description	
A140404#	1.0 x 50 mtr	600	one side aluminum coating, anti-skid	glass fibre, one side Alufix coating
A140405#	1.0 x 50 mtr	850	mechanical applications	silicate fabric, hard wearing, abrasion resistant
A140406#	1.0 x 50 mtr	1150	mechanical applications	silicate fabric, hard wearing, abrasion resistant
A140407#	0.9 x 50 mtr	1300	≠ mechanical applications, anti-skid	silicate fabric, vermiculite coating, flexible
A140408#	1.0 x 50 mtr	1000	thermal resistance, aluminum coating	glass fibre, 1000 gr/m^2, Alufix coating

Fabrics standard dimensions

Art.nr.	Size			Up to °C	Description
A140415#	1000	x	2000 mm	600	seamed, one side aluminum coating
A140416#	2000	x	2000 mm	600	seamed, one side aluminum coating
A140417#	1000	x	2000 mm	850	seamed, both sides high temperature coating
A140418#	2000	x	2000 mm	850	seamed, both sides high temperature coating
A140419#	1000	x	2000 mm	1150	seamed, both sides high temperature coating
A140420#	2000	x	2000 mm	1150	seamed, both sides high temperature coating
A140421#	900	x	2000 mm	1300	seamed, both sides high temperature coating
A140422#	1800	x	2000 mm	1300	seamed, both sides high temperature coating

Advantages:
- Non noxious, asbestos free.
- Top heat resistant.
- Hard wearing, mechanical resistance.

Pipeline construction mats

- Slows the cooling of the welded seems
- Protects the welding seam against moisture direct after welding
- Fasteners made with leather buckles and velcro/velour, metal eyes
- Heat protection up to 500°C, glass fibre
- Heat protection up to 1200°C, silicate fabric

Insulation mats width 300 mm

A140500#	200 pipe	L =	800 mm	500°C
A140501#	300 pipe	L =	1100 mm	500°C
A140502#	400 pipe	L =	1400 mm	500°C
A140504#	600 pipe	L =	2100 mm	500°C
A140505#	700 pipe	L =	2400 mm	500°C
A140506#	800 pipe	L =	2700 mm	500°C
A140507#	900 pipe	L =	3000 mm	500°C
A140508#	1000 pipe	L =	3300 mm	500°C
A140509#	1100 pipe	L =	3600 mm	500°C
A140510#	1200 pipe	L =	4000 mm	500°C
A140511#	1300 pipe	L =	4300 mm	500°C
A140512#	1400 pipe	L =	4600 mm	500°C

Insulation mats width 500 mm

A140513#	200 pipe	L =	800 mm	500°C
A140514#	300 pipe	L =	1100 mm	500°C
A140515#	400 pipe	L =	1400 mm	500°C
A140517#	600 pipe	L =	2100 mm	500°C
A140518#	700 pipe	L =	2400 mm	500°C
A140519#	800 pipe	L =	2700 mm	500°C
A140520#	900 pipe	L =	3000 mm	500°C
A140521#	1000 pipe	L =	3300 mm	500°C
A140522#	1100 pipe	L =	3600 mm	500°C
A140523#	1200 pipe	L =	4000 mm	500°C
A140524#	1300 pipe	L =	4300 mm	500°C
A140525#	1400 pipe	L =	4600 mm	500°C

Other measurements available upon request.

Fire extinguish blanket and container

Made of glass fibre fabric with silicone coating on both sides.

A140425#	Fire extinguish blanket	2000 x 1600 mm 500°C DIN 14155
A140426#	Container	300 x 200 x 300 mm

Heat protection clothing up to 1000ºC

Extreme temperatures of over 1000°C radiation heat ask for extreme protection coatings. Preox/aramid fabrics with aluminum high vacuum coating offers sufficient protection.

A140430#	Heat protection hood with aluminum frame for glass pane	HS KA
A140431#	Heat protection hood with aluminum frame for glass pane	HS KA-3
A140432#	Heat protection hood XL, chest, neck and shoulder protection	HS KA
A140433#	Heat protection hood XL, chest, neck and shoulder protection	HS KA-3
A140434#	Gold steamed glass, bent bonded, 100 x 220 mm	
A140435#	Clear glass, bent bonded, 100 x 220 mm	
A140436#	Gold steamed glass, polycarbonate, 100 x 220 mm	
A140437#	Heat protection jacket L= 80 cm, velcro fastener, upright collar, without pockets	HS KA
A140438#	Heat protection jacket L= 80 cm, velcro fastener, upright collar, without pockets	HS KA-1

Heat protection clothing up to 1000ºC (while stock lasts)

A140439#	Heat protection jacket L= 80 cm, velcro fastener, upright collar, without pockets	HS KA-3
A140440#	Heat protection trousers L= 100 cm, belt loops, without pockets	HS KA
A140441#	Heat protection trousers L= 100 cm, belt loops, without pockets	HS KA-1
A140442#	Heat protection trousers L= 100 cm, belt loops, without pockets	HS KA-3
A140443#	Heat protection coat L= 120 cm, velcro fastener, upright collar, without pockets	HS KA
A140444#	Heat protection coat L= 120 cm, velcro fastener, upright collar, without pockets	HS KA-1
A140445#	Heat protection coat L= 120 cm, velcro fastener, upright collar, without pockets	HS KA-3
A140446#	Heat protection gaiters L= 36 cm, velcro fastener	HS KA
A140447#	Heat protection gaiters L= 36 cm, velcro fastener	HS KA-1
A140448#	Heat protection gaiters L= 36 cm, velcro fastener	HS KA-3
A140449#	Heat protection glove L= 43 cm, thumb side, CE III	HS KA-3
A140550#	Heat protection mask, flip-up glasses, ear, face and head protection	HS
A140551#	Heat protection mask XL, flip-up glasses, ear, face, throat and head protection	HS

Facial protection up to 1000°C with swing frame. Standard for most safety helmets (please indicate helmet type).

A140552#	Facial protection with swing frame	HS KA-3

Universal helmet and neck protection up to 1000°C.

A140553#	Helmet and neck protection	HS KA-3
A140554#	Helmet and neck protection	HS KA-4

Arm protection, covers the full arm, including elastic bands.

A140555#	Arm protection (sleeves) L= 420 mm	HS KA-1
A140556#	Arm protection (sleeves) L= 420 mm	HS KA-3

Aprons, heat protection up to 1000°C, with aluminum high vacuum radiation heat (KA-3) protection.

A140557#	Apron, 80 x 100 cm, 1000°C	HS KA-3
A140558#	Apron, 80 x 100 cm, 1000°C	HS KA-4

Frontal heat protection, up to 1000°C, velcro fastener.

A140559#	Front protection coat, back open	L= 80 cm	HS KA
A140560#	Front protection coat, back open	L= 80 cm	HS KA-3
A140561#	Front protection coat, back open	L= 130 cm	HS KA
A140562#	Front protection coat, back open	L= 130 cm	HS KA-3

HS	= heat (protection) shield.
KA	= preox fabric, approx. 580 gr/m^2, aluminum coating, heavy quality, very good working comfort.
KA-1	= preox/aramide fabrics, approx. 260 gr/m^2, aluminum coating, light quality, good working comfort.
KA-3	= aramide fabric, approx. 500 gr/m^2, aluminum coating, heavy quality, good working comfort.
KA-4	= glass fibre fabric, approx. 660 gr/m^2, aluminum coating.

Heat protection gloves (while stock lasts)

Kevlar knit glove, 5-finger, contact heat up to 200°C, **CE II**, EN 388, EN 407, EN 420, cut resistant, insulating.
Use: glass industry, metal industry, auto motive, food industry.

A140450#	Kevlar knit glove, 5-finger, without lining	200°C	25 cm
A140451#	Kevlar knit glove, 5-finger, without lining	200°C	25 cm metal-enforced
A140452#	Kevlar knit glove, 5-finger, with lining	200°C	25 cm

Aramid fabric glove, contact heat up to 500°C, special insulation, **CE III**, EN 388, EN 407, EN 420, cut resistant, mechanical applications.
Use: metal industry, foundries, glass industry.

A140453#	Aramid fabric glove, insulated	500°C	30 cm
A140454#	Aramid fabric glove, insulated	500°C	43 cm
A140455#	Aramid fabric glove, 3-finger, insulated	500°C	30 cm
A140456#	Aramid fabric glove, 3-finger, insulated	500°C	43 cm
A140457#	Aramid fabric glove, 5-finger, insulated	500°C	30 cm
A140458#	Aramid fabric glove, 5-finger, insulated	500°C	43 cm

Preox/aramid fabric glove, contact heat up to 650°C, special insulation, **CE III**, EN 388, EN 407, EN 420, mechanical applications,
Good working comfort. Use: metal industry, foundries, glass industry.

A140459#	Preox/aramid fabric glove, insulated	650°C	30 cm
A140460#	Preox/aramid fabric glove, insulated	650°C	43 cm
A140461#	Preox/aramid fabric glove, 3-finger, insulated	650°C	30 cm
A140462#	Preox/aramid fabric glove, 3-finger, insulated	650°C	43 cm
A140463#	Preox/aramid fabric glove, 5-finger, insulated	650°C	30 cm
A140464#	Preox/aramid fabric glove, 5-finger, insulated	650°C	43 cm

Glass fibre fabric glove, contact heat up to 900°C, special insulation and High Temperature coating, **CE III**, EN 388, EN 407, EN 420, mechanical applications, abrasion resistant.
Use: metal industry, foundries, glass industry.

A140465#	Glass fibre fabric glove, TM-HT,insulated	900°C	32 cm
A140466#	Glass fibre fabric glove, TM-HT,insulated	900°C	43 cm
A140467#	Glass fibre fabric glove, TS-HT, insulated	900°C	32 cm

Heat resistant gloves (while stock lasts)

High Temperature fabric glove, contact heat up to 1100°C, special insulation, **CE III**, EN 388, EN 407, EN 420, soft and flexible, will not stick to glass.
Use: glass industry, high temperature ovens, laboratory, metal industry.

A140469#	High Temperature fabric glove, TS-HT,insulated	1100°C	32 cm
A140470#	High Temperature fabric glove, TS-HT,insulated	1100°C	43 cm
A140471#	High Temperature fabric glove, TM-HT,insulated	1100°C	32 cm
A140472#	High Temperature fabric glove, TM-HT,insulated	1100°C	43 cm

TS	= thumb side.
TM	= thumb middle.
HT	= high temperature.

Thermal blockers “N” and “J” (insulation paste) up to 3000ºC

Thermal blockers “N” and “J” are needed as a protection against damaging caused by the influence of heat during welding and soldering. Used to prevent heat up to 3000°C.
Thermal blocker “N” can be applied with a spatula and is ideal for long welding seams. The paste is soft and flexible.
Thermal blocker “J” can be applied by hand and will not stick to your fingers or the material to be used. The clay is firm and easy to mould.

Advantages:
- No expensive time consuming disassembling.
- No damage to varnish or deformation of materials.
- The energy being used will be concentrated in the working area.
- Asbestos free.

Thermal blocker ”N”
- Partial liquefied
- Applied with a spatula
- Large surfaces

A140475	Thermal blocker “N”	1 kg
A140476	Thermal blocker “N”	2.5 kg
A140477	Thermal blocker “N”	5 kg

Thermal blocker ”J”
- Paste
- Applied by hand
- Welding/soldering applications

A140480	Thermal blocker “J”	1 kg
A140481	Thermal blocker “J”	2.5 kg
A140482	Thermal blocker “J”	5 kg

Flame protection mats (dry/moist)

Flame protection mats prevent the heat flow (contact to the materials to be protected) damaging the material. Multi layer construction and reusable several times.

Advantages:
- No expensive time consuming disassembling.
- Protects the material from burning; for example from welding sparks/pearls.
- Asbestos free.

Flame protection mats (dry)
- Protection from 700°C up to 1000°C
- Prevent damage to rugs, wall paper, wooden floors
- Special heat protection

Flame protection mats (moist)
- Protection up to 3000°C
- Rewetting afterwards
- Stored in a special plastic bag

Applications:

700°C protection mat
- Usable both sides
- Approx. 5 mm thickness
- Soldering

1000°C protection mat
- Usable one side
- Approx. 20 mm thickness
- Welding

3000°C protection mat
- Usable one side
- Approx. 30 mm thickness
- Welding pearls (± 1000°C)

Flame protection mats (dry/moist)

A140484#	Protection mat, dry, without aluminum	330 x 500 x 5 mm	700°C
A140485#	Protection mat, dry, with aluminum	330 x 500 x 5 mm	700°C
A140486#	Protection mat, dry	300 x 300 x 20 mm	1000°C
A140487#	Protection mat, dry	300 x 500 x 20 mm	1000°C
A140488#	Protection mat, dry	500 x 500 x 20 mm	1000°C
A140489#	Protection mat, dry	1000 x 500 x 20 mm	1000°C
A140490#	Protection mat, dry	1000 x 1000 x 20 mm	1000°C
A140498#	Protection mat, dry	1000 x 1000 x 20 mm	500°C
A140491#	Protection mat, moist	300 x 300 x 30 mm	3000°C
A140492#	Protection mat, moist	300 x 500 x 30 mm	3000°C
A140493#	Protection mat, moist	500 x 500 x 30 mm	3000°C
A140494#	Protection mat, moist	1000 x 500 x 30 mm	3000°C
A140495#	Protection mat, moist	1000 x 1000 x 30 mm	3000°C

Foundry mat

A140499#	Protection mat (slowly cool down hot foundry pieces)	1000 x 1000 x 50 mm	1000°C

Heat protection safety box

Contains everything that is needed as a protection for difficult soldering or welding work to prevent damaging caused by the influence of heat. All well sorted and handy for easy use. Guarantees clean and quick work.

Case contains:

1 x 1 kg thermal blocker “J”	3000°C
1 x (30 x 50 cm) protection mat dry	1000°C
1 x (30 x 30 cm) protection mat moist	3000°C
1 x (200 x 90 cm) welding blanket	1300°C
Velcro fastener	

A140496# Heat protection safety box

Welding cushions

KW welding cushions offers (knee) protection on high temperature materials. The insulation contains non-burnable materials. The heat resistant cover material is made of canvas, split leather or aluminum coating.

A140409#	Welding cushion, aluminum coating	500°C	45 x 45 x 6 cm
A140410#	Welding cushion, aluminum coating	500°C	40 x 40 x 4 cm
A140411#	Welding cushion, canvas	200°C	40 x 40 x 4 cm
A140412#	Welding cushion, split leather	250°C	40 x 40 x 4 cm
A140413#	Welding cushion, split leather	250°C	40 x 40 x 8 cm
A140414#	Welding cushion, aluminum coating	500°C	100 x 40 x 4 cm

Other dimensions available upon request.

Tempilstik temperature indicator

- Surface temperature detection
- Inexpensive alternative for temperature measurement
- Simple, no gauges or electronics
- Easy to use by virtually anyone, anywhere
- 85°C temperature measurements available (40°C up to 1200°C)
- Reliably accurate, melts within ± 1% of rated temperature

Applications

Determining surface temperatures during:
- welding and metal fabrication
- “pre-heating, interpass”
- “postweld” heat treatment
- “annealing”, “stress relieving”.

Determining operating temperatures:
- bearings, transformers and steam traps
- PC board preheaters, motors
- electronic components, hydraulic systems
- commercial irons, “hot plates”, heat exchangers.

How to use

Stroke the work piece during heating. When the rated temperature has been reached a distinct melt (smear) will become evident. Tempilstik will make a mark by melting at the point of contact once the surface reaches the specific temperature of the Tempilstik. The holder provides strong grip on the chalk avoiding slippage.
Standard packaging: 10 per box.

A131200#	Tempilstik	40°C	104°F
A131201#	Tempilstik	45°C	113°F
A131202#	Tempilstik	50°C	122°F
A131203#	Tempilstik	55°C	131°F
A131204#	Tempilstik	60°C	140°F
A131205#	Tempilstik	65°C	149°F
A131206#	Tempilstik	70°C	158°F
A131207#	Tempilstik	75°C	167°F
A131208#	Tempilstik	80°C	176°F
A131209#	Tempilstik	85°C	185°F
A131210#	Tempilstik	90°C	194°F
A131211#	Tempilstik	95°C	203°F
A131212#	Tempilstik	100°C	212°F
A131213#	Tempilstik	105°C	221°F
A131214#	Tempilstik	110°C	230°F
A131215#	Tempilstik	115°C	239°F
A131216#	Tempilstik	120°C	248°F
A131217#	Tempilstik	125°C	257°F
A131218#	Tempilstik	130°C	266°F
A131219#	Tempilstik	135°C	275°F
A131220#	Tempilstik	140°C	284°F
A131221#	Tempilstik	145°C	293°F
A131222#	Tempilstik	150°C	302°F
A131223#	Tempilstik	155°C	311°F
A131224#	Tempilstik	160°C	320°F
A131225#	Tempilstik	165°C	329°F
A131226#	Tempilstik	170°C	338°F
A131227#	Tempilstik	175°C	347°F
A131228#	Tempilstik	180°C	356°F
A131229#	Tempilstik	185°C	365°F
A131230#	Tempilstik	190°C	374°F
A131231#	Tempilstik	195°C	383°F
A131232#	Tempilstik	200°C	392°F
A131233#	Tempilstik	205°C	401°F
A131234#	Tempilstik	210°C	410°F
A131235#	Tempilstik	215°C	419°F
A131236#	Tempilstik	220°C	428°F
A131237#	Tempilstik	225°C	437°F
A131238#	Tempilstik	230°C	446°F
A131239#	Tempilstik	235°C	455°F
A131240#	Tempilstik	240°C	464°F
A131241#	Tempilstik	245°C	473°F
A131242#	Tempilstik	250°C	482°F
A131243#	Tempilstik	260°C	500°F
A131244#	Tempilstik	270°C	518°F
A131245#	Tempilstik	280°C	536°F
A131246#	Tempilstik	290°C	554°F
A131247#	Tempilstik	300°C	572°F
A131248#	Tempilstik	310°C	590°F
A131249#	Tempilstik	320°C	608°F
A131250#	Tempilstik	340°C	644°F
A131251#	Tempilstik	350°C	662°F
A131252#	Tempilstik	370°C	698°F
A131253#	Tempilstik	380°C	716°F
A131254#	Tempilstik	390°C	734°F
A131255#	Tempilstik	400°C	752°F
A131256#	Tempilstik	420°C	788°F
A131257#	Tempilstik	460°C	860°F
A131258#	Tempilstik	475°C	887°F
A131259#	Tempilstik	500°C	932°F
A131260#	Tempilstik	520°C	968°F
A131261#	Tempilstik	530°C	986°F
A131262#	Tempilstik	560°C	1040°F
A131263#	Tempilstik	600°C	1112°F
A131264#	Tempilstik	625°C	1157°F
A131265#	Tempilstik	650°C	1202°F
A131266#	Tempilstik	680°C	1256°F
A131267#	Tempilstik	700°C	1292°F
A131268#	Tempilstik	740°C	1364°F
A131269#	Tempilstik	760°C	1400°F
A131270#	Tempilstik	775°C	1427°F
A131271#	Tempilstik	800°C	1472°F
A131272#	Tempilstik	825°C	1517°F
A131273#	Tempilstik	850°C	1562°F
A131274#	Tempilstik	875°C	1607°F
A131275#	Tempilstik	900°C	1652°F
A131276#	Tempilstik	910°C	1670°F
A131277#	Tempilstik	950°C	1742°F
A131278#	Tempilstik	1010°C	1850°F
A131279#	Tempilstik	1075°C	1967°F
A131280#	Tempilstik	1100°C	2012°F
A131281#	Tempilstik	1125°C	2057°F
A131282#	Tempilstik	1150°C	2102°F
A131283#	Tempilstik	1175°C	2147°F
A131284#	Tempilstik	1200°C	2192°F

Alternative Tempil products like TEMPILAQ G available upon request.

CATWELD TIG-electrodes (10 pcs. each) Prices available upon request

TIG-electrodes WC-20 Tungsten, 2% Ceriumoxide, colour sign grey

A129000	TIG-electrodes WC-20 1.0 x 175 mm
A129001	TIG-electrodes WC-20 1.6 x 175 mm
A129002	TIG-electrodes WC-20 2.0 x 175 mm
A129003	TIG-electrodes WC-20 2.4 x 175 mm
A129004	TIG-electrodes WC-20 3.0 x 175 mm
A129005	TIG-electrodes WC-20 3.2 x 175 mm
A129006	TIG-electrodes WC-20 4.0 x 175 mm
A129007	TIG-electrodes WC-20 4.8 x 175 mm

TIG-electrodes Tungsten pure, colour sign green

A129025	TIG-electrodes WP 1.0 x 175 mm
A129026	TIG-electrodes WP 1.6 x 175 mm
A129027	TIG-electrodes WP 2.0 x 175 mm
A129028	TIG-electrodes WP 2.4 x 175 mm
A129029	TIG-electrodes WP 3.0 x 175 mm
A129030	TIG-electrodes WP 3.2 x 175 mm
A129031	TIG-electrodes WP 4.0 x 175 mm
A129032	TIG-electrodes WP 4.8 x 175 mm

TIG-electrodes WZ-03 Tungsten, 0.3% Zirconiumoxide, colour sign brown

A129034	TIG-electrodes WZ-03 1.6 x 175 mm
A129035	TIG-electrodes WZ-03 2.4 x 175 mm
A129036	TIG-electrodes WZ-03 3.2 x 175 mm
A129037	TIG-electrodes WZ-03 4.0 x 175 mm
A129038	TIG-electrodes WZ-03 4.8 x 175 mm

TIG-electrodes WZ-08 Tungsten, 0.8% Zirconiumoxide, colour sign white

A129041	TIG-electrodes WZ-08 1.6 x 175 mm
A129043	TIG-electrodes WZ-08 2.4 x 175 mm
A129045	TIG-electrodes WZ-08 3.2 x 175 mm
A129046	TIG-electrodes WZ-08 4.0 x 175 mm
A129047	TIG-electrodes WZ-08 4.8 x 175 mm

TIG-electrodes WL-20 Tungsten, 2% Lanthanumoxide, colour sign dark blue

A129049	TIG-electrodes WL-20 1.0 x 175 mm
A129050	TIG-electrodes WL-20 1.6 x 175 mm
A129052	TIG-electrodes WL-20 2.4 x 175 mm
A129054	TIG-electrodes WL-20 3.2 x 175 mm
A129055	TIG-electrodes WL-20 4.0 x 175 mm

TIG-electrodes WS-2 Tungsten, 2% “Rare Earths”, colour sign turquoise

A129059	TIG-electrodes WS-2 1.0 x 175 mm
A129060	TIG-electrodes WS-2 1.6 x 175 mm
A129062	TIG-electrodes WS-2 2.4 x 175 mm
A129064	TIG-electrodes WS-2 3.2 x 175 mm

TIG-electrodes WL-15 Tungsten, 1.5% Lanthanumoxide, colour sign gold/yellow

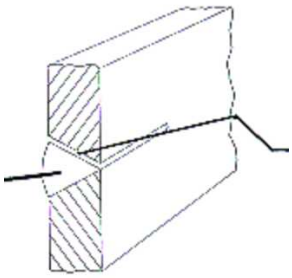
A129070	TIG-electrodes WL-15 1.0 x 175 mm
A129071	TIG-electrodes WL-15 1.6 x 175 mm
A129072	TIG-electrodes WL-15 2.0 x 175 mm
A129073	TIG-electrodes WL-15 2.4 x 175 mm
A129074	TIG-electrodes WL-15 3.0 x 175 mm
A129075	TIG-electrodes WL-15 3.2 x 175 mm

TIG-electrodes WY-20 Tungsten, 2% Yttriumoxide, colour sign blue

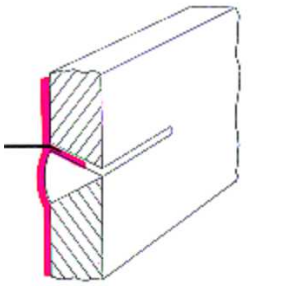
A129080	TIG-electrodes WY-20 1.0 x 175 mm
A129081	TIG-electrodes WY-20 1.6 x 175 mm
A129082	TIG-electrodes WY-20 2.0 x 175 mm
A129083	TIG-electrodes WY-20 2.4 x 175 mm
A129084	TIG-electrodes WY-20 3.0 x 175 mm
A129085	TIG-electrodes WY-20 3.2 x 175 mm
A129086	TIG-electrodes WY-20 4.0 x 175 mm

	Magnaflux		
A077100	Penetrant red	SKL-SP2L	400 ml
A077108	Cleaner	SKC-S	400 ml
A077112	Developer	SKD-S2	400 ml
	Diffu-therm jerrycans (4 per box)		
A077116	Penetrant red	BDR-L	5 ltr
A077121	Cleaner	BRE-2	5 ltr
A077125	Developer	BEA	5 ltr

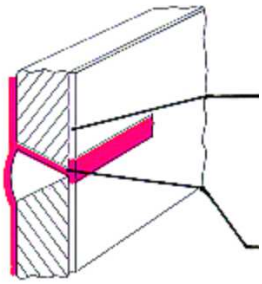
Precleaning of the test surface



Application of penetrant



Application of wet developer



The penetrant method of non-destructive testing is based on capillary penetration of indicator liquid (penetrant) into the surface defects (cracks, pores, etc.). After intermediate cleaning and subsequent drying, a developer is applied as a thin, white layer onto the surface to be inspected.

Accessories electrical

A130040	Earth clamp spring type,	400 Amp. with copper shunt, bolt 10 mm
A130042	Earth clamp spring type,	600 Amp. with copper shunt, bolt 10 mm
A130044	Earth clamp Nevada,	350 Amp.
A130045	Earth clamp Nevada,	600 Amp.
A130049	Earth clamp screw model,	400 Amp. rubber insulation
A130050	Earth clamp screw model,	600 Amp. rubber insulation
A130051#	Earth clamp screw model,	750 Amp.
A130052#	Earth clamp Catweld,	400 Amp. magnetic
A130053#	Earth clamp Catweld,	600 Amp. magnetic
A130054#	Earth clamp screw model,	600 Amp. rubber insulation
A130100	Electrode holder twist and grip KW-400	
A130101	Electrode holder twist and grip KW-600	
A130227	Electrode holder Catweld crocodile type 200 Amp.	
A130228	Electrode holder Catweld crocodile type 400 Amp.	
A130229	Electrode holder Catweld crocodile type 600 Amp.	

Welding gauge

A131001#	Welding gauge adjustable
A131002#	Cambridge gauge adjustable (stainless steel)
A131003#	Welding gauge set (12 pieces) 3-12 mm

Chipping hammer

A130108	Chipping hammer “ALL STEEL” 450 gram
A130109	Chipping hammer “ALL STEEL” 350 gram
A130110	Chipping hammer with spring handle
A130111	Chipping hammer with synthetic grip 470 gram
A130112	Chipping hammer with synthetic grip 320 gram
A130113#	Chipping hammer chromium steel (steel handle) 420 gram

Wire brush

A130114	Wire brush 2-rows steel	
A130115	Wire brush 3-rows steel	
A130116	Wire brush 4-rows steel	
A130117	Wire brush 2-rows stainless steel	
A130118	Wire brush 3-rows stainless steel	
A130119	Wire brush 2-rows stainless steel curved	
A130120	Wire brush 3-rows stainless steel curved	
A130121	Wire brush 4-rows stainless steel curved	
A130122	Wire brush 3-rows brass curved	
A051052	Wire brush 4-rows brass curved	
A130123	Wire brush 3-rows steel	U-butt joint
A130124	Wire brush 3-rows stainless steel	U-butt joint
A051051	Wire brush 3-rows brass compact	

Dinse cable connector

A130076#	Dinse plug	35/50	SK 50	400 Amp.
A130078#	Dinse socket	35/50	BK 50	400 Amp.
A130080#	Dinse plug	50/70	SK 70	400 Amp.
A130082#	Dinse socket	50/70	BK 70	400 Amp.
A130083#	Dinse plug	70/95	SKK 95	500 Amp.
A130084#	Dinse socket	70/95	BKK 95	500 Amp.
A130085#	Dinse plug	95/120	SKS 120	600 Amp.
A130086#	Dinse socket	95/120	BKS 120	600 Amp.

Marking

A131010	Soapstone	100 x 10 x 10 (50)
A131013	Greased marking chalk red	120 x 11 mm (12)
A131014	Greased marking chalk blue	120 x 11 mm (12)
A131015	Greased marking chalk yellow	120 x 11 mm (12)
A131016	Greased marking chalk white	120 x 11 mm (12)
A131017	Greased marking chalk green	120 x 11 mm (12)
A131018	Greased marking chalk black	120 x 11 mm (12)

Electronic flowmeter

A131100#	Gas Turbine Flow Monitor GTFM (in line)	cap. 2-120 l/min
A131110#	Gas Turbine Flow Monitor GTFM (portable)	cap. 2-120 l/min*

GTFM precisely measures flow rates of welding gasses.
GTFM can be used for Argon, Helium, CO_2 or any mixed inert welding gas.
GTFM is “easy to use” (weight: 650 gram, dimension: 138 x 45 mm).

***** This unit includes a hose and rubber cone for testing gas flow at the welding torch.

A040205 Hand (test) flowmeter Argon/mixtures

A130125	MIG torch stand	Original FIX
A130126	TIG torch stand	Original FIX
A130127	MIG torch stand, magnetic	Original FIX
A130128	TIG torch stand magnetic	Original FIX
A130129	Electrode holder stand	Original FIX
A130130	Torch stand clamp 50 mm	Original FIX
A130131	Torch stand magnetic base	350 kg/N

A130234#	CO_2 special purpose plier	Original FIX 1
A130235#	CO_2 special purpose plier	Original FIX 2

The indispensable, multipurpose tool for rapid and precise cutting of the welding wire, time-saving cleaning of the CO_2 gas nozzle and loosening and tightening of the gas supply nozzle.

Size 1 for nozzles Ø 12 – 15 mm
Size 2 for nozzles Ø 15 – 18 mm

A130236# Welper YS-20 CO_2 plier L= 178 mm
A130237# Welper YS-50 CO_2 plier L= 210 mm

The original & best patented multi-purpose MIG plier for hammering, wire cutting, removal of spatter from inside, outside nozzle, etc.

A130490# Auto darkening welding helmet Eclipse II Variable DIN 9-12
A130680 Auto darkening welding helmet Eclipse III Variable DIN 9-12

Professional welding helmet for standard welding applications. Variable shade, range from 9-12 with external controls for shade selection and sensitivity and internal adjustments for delay mode. The helmets features two sensors (Eclipse II), respectively four sensors (Eclipse III).

A130480# Auto darkening welding helmet Mach III Variable DIN 9-13 ’’Fresh air“

MACH III “Fresh air” is an integrated protection system which combines the high technology of a LCD filter (digital control) including a ventilation system with rechargeable batteries. The ventilation system, including the materials used for quickly connecting mask and fan, improves operator safety and comfort and a simplicity of use rarely seen.

A125401# Catweld inverter Arcontrol 160
A125402# Catweld inverter Arcontrol 200

Catweld Arcontrol is reliable, lightweight and gives high efficiency. The stable and concentrative arc of the welding machine provides the best welding line. It can be easily moved from one work site to another, and it adapts to varying welding needs. It is easy to use and is suitable for both professional welding applications and for use at home.

Electrode oven portable HP II
HP II welding rod box is suitable for use on the job. Due to its very small weight and skilful strap the HP II can easily be taken to the workplace. Temperature approximately 110°C; this way cooling down of the electrodes will be avoided.

Specifications

Electrode capacity	: 2 parcels
Voltage	: 230V/115V AC/DC 200 Watt
Option	: 80V/40V AC/DC 350 Watt
Interior dimensions	: 90 x 125 x 460 mm
Exterior dimensions	: 170 x 190 x 500 mm
Net weight	: 9 kg
Gross weight	: 9.5 kg

A131120## Electrode oven portable HP II 110°C fixed 230V

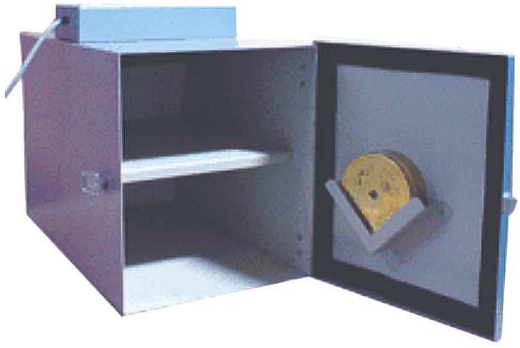
Electrode oven portable HP 4
This electrode oven is similar to HP II, however the inside temperature is adjustable up to 300°C. The capacity of the removable electrode holder varies between 4-6 parcels.

Specifications

Temperature	: 50-300°C
Capacity	: 4-6 parcels
Voltage	: 230V/115V AC 500 Watt
Option	: 80V/40V AC 500 Watt
Interior dimensions	: 165 x 165 x 470 mm
Exterior dimensions	: 300 x 250 x 560 mm
Net weight	: 16 kg
Gross weight	: 16.5 kg

A131126## Electrode oven portable HP 4 50-300°C 230V

Electrode oven EDR 40
With its capacity of 20-30 parcels EDR 40 is suitable for small workshops and electrode cabins. The silicagel cartridges will keep the relative humidity below 40% without temperature increase. The silicagel adsorbs the humidity of the air in the cabinet. When saturated the silicagel colour changes from blue into pink. As from that moment the cartridges should be removed from the cabinet. While heating the cartridges the adsorbed humidity will disappear; the cartridges can easily be used again.



Specifications

Capacity	: 20-30 parcels
Voltage	: 230V 100 Watt
Interior dimensions	: 490 x 300 x 350 mm
Exterior dimensions	: 510 x 530 x 440 mm
Net weight	: 14.5 kg
Gross weight	: 16 kg

A131129## Electrode oven EDR 40 230V

Electrode oven LPD 100
It is well-known that welding powder, exposed to certain amount of humidity, may cause incorrect welds. Professional use of the LPD 100 will help the industry to meet the highest requirements and improve the quality. Constant temperature up to 300°C is achieved by means of a thermostat. LPD 100 is waterproof and the cabinet is equipped with 50 mm mineral wool insulation.

Specifications

Temperature	: 50-300°C
Capacity	: 100 kg
Voltage	: 230V/50Hz
Interior dimensions	: 420 x 420 x 650 mm
Exterior dimensions	: 650 x 530 x 1130 mm
Net weight	: 75 kg
Gross weight	: 96 kg

A131132## Electrode oven LPD 100 230V

Electrode oven ED 120 TC
This double-walled constructed industrial electrode oven with insulation guarantees a long life time. The thermostat is adjustable up to 120°C.

Specifications

Temperature	: 50-120°C
Capacity	: ± 35 parcels
Voltage	: 230V/50-60Hz 650 Watt
Interior dimensions	: 500 x 400 x 625 mm
Exterior dimensions	: 600 x 500 x 880 mm
Net weight	: 61.5 kg
Gross weight	: 84 kg

A131135## Electrode oven ED 120 TC 230V

Electrode oven ED 300 TC
The capacity of this oven is approx. 72 parcels and the electrodes are easy to access. Heated parcels will ensure the welding rods to remain dry (factory quality).

Specifications

Temperature	: 50-300°C
Capacity	: 54-72 parcels
Voltage	: 400V/50-60Hz 3300 Watt
Interior dimensions	: 700 x 450 x 1060 mm
Exterior dimensions	: 820 x 600 x 1300 mm
Net weight	: 131 kg
Gross weight	: 152 kg

A131138## Electrode oven ED 300 TC 400V

Electrode oven ED 400 TTCC
This programmable drying oven ED 400 TTCC is especially designed for baking, drying and subsequently storing welding rods at a lower (pre-selected) holding temperature. The oven is equipped with 2 temperature controllers (high and low) and a 0 - 30 Hr timer.

Specificaties

Temperature high	: 50-400°C
Temperature low	: 50-300°C
Capacity	: ± 125 kg
Voltage	: 230V/50Hz 2000 Watt
Interior dimensions	: 500 x 400 x 525 mm
Exterior dimensions	: 730 x 760 x 920 mm
Net weight	: 90 kg
Gross weight	: 110 kg

A131141## Electrode oven ED 400 TTCC 230V

Electrode oven ED 1500 T
This drying oven features a capacity up to 800 parcels. The oven will be heated electrically with a temperature that exceeds the external temperature approx. 32ºC.

Specifications

Temperature	: ± 32°C
Capacity	: 600-800 parcels
Voltage	: 230V 1000 Watt
Interior dimensions	: 600 x 1600 x 1560 mm
Exterior dimensions	: 750 x 1605 x 1660 mm
Net weight	: 230 kg
Gross weight	: 246 kg

A131144## Electrode oven ED 1500 T 230V

CO_2 applications

KW Hand Air*

A080000	Hand Air blower complete with filled cylinder		
A080002#	Refilling cylinder with 150 gram CO_2		
A080004	Refilling cylinder with 150 gram CO_2 (exchange full against empty)		
A080006#	Synthetic forwarding box (capacity 12 cylinders)		
A080008#	Synthetic forwarding box (capacity 30 cylinders)		
A080010#	Nozzle black	L= 60 mm	Inside diameter = 0.4 mm
A080012#	Nozzle red	L= 60 mm	Inside diameter = 0.3 mm
A080014#	Nozzle black flexible	L= 180 mm	

KW Hand Air CO_2 cleaning is an emerging technology that is very successful within many industries: printing, machine tools and ICT. Dirt and dust will be removed easily, even on difficult places, due to the high pressure CO_2 cylinder (approx. 50 bars) and several exchangeable nozzles.

CO_2 gasheater

A110824#	CO_2 gasheater	Mison	220V	25W	RU 4	max. inlet pressure 200 bar
A110825#	CO_2 gasheater	Ar/N_2/He	220V	25W	RU 3	max. inlet pressure 200 bar
A110826#	CO_2 gasheater	CO_2	220V	25W	RU 1	max. inlet pressure 200 bar
A110828#	Sirocco CO_2 gasheater (incl. thermostat 60°C)		220V	200W	RU 1	max. inlet pressure 180 bar

Fryson set complete*

A080100	Fryson set complete (ex. CO_2)
A080102	Cylinder connecting nut
A080104	Gasket
A080106	High pressure hose
A080108	Synthetic shank
A080110	Cooling nozzle length 120 mm (blue)
A080112	Blowing nozzle length 120 mm (red)
A080114	Nozzle nut
A080116	Stainless steel lever
A080118	Valve assembly complete

Fryson uses the intensely cold properties of carbon dioxide to freeze material quick and simple. The freezing process is based upon the expansion of liquid carbon dioxide through an orifice which forms solid CO_2 or dry ice (-78°C).

***** while stock lasts.

Proportional gasmixer (2 gases) Prices available upon request

Capacity 4.8 - 85.7 l/min.
Material casing stainless steel, transparent Lexan door.

Type KW 85-2

Art.nr.	Gases			Adjustment range			Inlet pressure	Outlet pressure*
B119314	Argon	-	CO_2	0-100%	-	100-0%	3.8-6.9 bar	3.1 bar
B119315	Argon	-	CO_2	80-100%	-	20-0%	3.8-6.9 bar	3.1 bar
B119316	Argon	-	Helium	0-100%	-	100-0%	3.8-6.9 bar	3.1 bar
B119317	Argon	-	Helium	50-100%	-	50-0%	3.8-6.9 bar	3.1 bar
B119318	Nitrogen	-	CO_2	0-100%	-	100-0%	3.8-6.9 bar	3.1 bar
B119319	Argon	-	Hydrogen	50-100%	-	50-0%	3.8-6.9 bar	3.4 bar
B119320	Argon	-	Hydrogen	50-100%	-	50-0%	3.8-6.9 bar	1.4 bar
B119321	Argon	-	Oxygen	0-100%	-	100-0%	3.8-6.9 bar	3.1 bar
B119322	Argon	-	Oxygen	85-100%	-	15-0%	3.8-6.9 bar	3.1 bar

Capacity 4.8 - 330 l/min.
Material casing stainless steel, transparent Lexan door.

Type KW 330-2

Art.nr.	Gases			Adjustment range			Inlet pressure	Outlet pressure*
B119325	Argon	-	CO_2	0-100%	-	100-0%	4.6-6.9 bar	3.4 bar
B119326	Argon	-	CO_2	80-100%	-	20-0%	4.6-6.9 bar	3.4 bar
B119327	Nitrogen	-	CO_2	80-100%	-	20-0%	4.6-6.9 bar	3.4 bar

Proportional gasmixer (3 gases) Prices available upon request

Capacity 4.8 - 85.7 l/min.
Material casing stainless steel, transparent Lexan door.

Type KW 85-3

Art.nr.	Gases						Adjustment range						Inlet pressure	Outlet pressure*
B119330	Argon	-	Oxygen	-	CO_2		85-100%	-	0-15%	-	0-15%		7.2-7.9 bar	3.4 bar
B119331	Helium	-	Argon	-	CO_2		85-100%	-	0-15%	-	0-15%		7.2-7.9 bar	3.4 bar
B119332	Argon	-	Helium	-	Oxygen		50-100%	-	0-50%	-	0-15%		7.2-7.9 bar	3.4 bar

* factory set at no flow.

Proportional gasblender (2 gases) Prices available upon request

Capacity 4.8 - 85.7 l/min.
Material casing stainless steel, transparent Lexan door.
Automatic shutdown if any of the incoming gases falls below a certain pressure level.

Type KW 85-2

Art.nr.	Gases			Adjustment range			Inlet pressure	Outlet pressure*
B119336	CO_2	-	Oxygen	0-100%	-	100-0%	7.2-7.9 bar	1.5-5.5 bar
B119338	Nitrogen	-	CO_2	0-100%	-	100-0%	7.2-7.9 bar	1.4-5.5 bar

Capacity 4.8 - 330 l/min.
Material casing stainless steel, transparent Lexan door.

Type KW 330-2

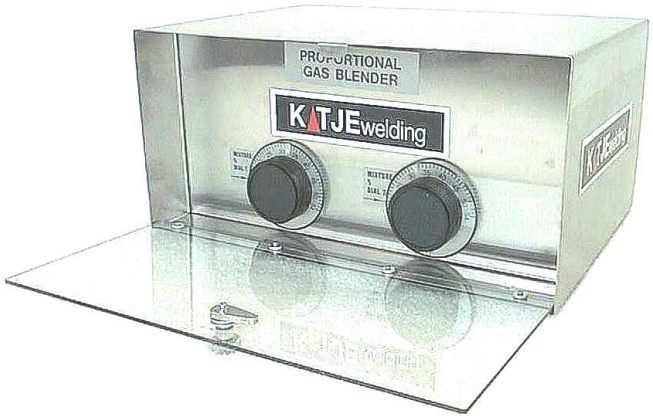
Art.nr.	Gases			Adjustment range			Inlet pressure	Outlet pressure*
B119343	CO_2	-	Oxygen	0-100%	-	100-0%	7.2-7.9 bar	5.5 bar
B119344	Nitrogen	-	CO_2	0-100%	-	100-0%	7.2-7.9 bar	5.5 bar

Proportional gasblender (3 gases) Prices available upon request

Type KW 85-3

Art.nr.	Gases					Adjustment range					Inlet pressure	Outlet pressure*
B119346	Nitrogen	-	Oxygen	-	CO_2	0-100%	-	100-0%	-	100-0%	7.2-7.9 bar	3.4 bar

Capacity 4.8 - 85.7 l/min.
Material casing stainless steel, transparent Lexan door.
Optional electronic monitoring system.



* factory set at no flow.

Alternative gases and mixtures available upon request.

SNOWPACK dry ice pellet maker

SNOWPACK makes individual pellets of dry ice from CO_2 siphon cylinders with internal dip pipes. Dry ice has many uses in the laboratory, research centers, hospitals and SNOWPACK allows you to make your own dry ice pellets as needed. SNOWPACK eliminates waste by letting you make dry ice when you need it, no more trying to find a block of it only to find it has already sublimed. SNOWPACK is simply screwed on to the outlet of the CO_2 cylinder and operated by opening and closing the valve. When connected to a CO_2 siphon cylinder, a pellet of dry ice can be made. Wearing protective gloves, the nylon wrapper is peeled back to remove the dry ice pellet.

SNOWPACK is available in two sizes.

SNOWPACK model	SNOWPACK 30	SNOWPACK 500
Approx. pellet weight	30 gram	500 gram
Pellet size	50 mm Ø x 25 mm	100 mm Ø x 75 mm
Injection time	1 min.	2.5 min.
Number of pellets from 10 kg CO_2 cylinder with internal dip pipe ±	45	3
Net weight of SNOWPACK	400 gram	780 gram

A119915 Snowpack 30
A119916 Snowpack 500

JETFREEZER pipe freezing equipment

JETFREEZER enables plumbers to maintain, repair and extend systems without the need for costly draining of pipes, in the process saving money and time. Jetfreezer uses the intensely cold properties of carbon dioxide to create a temporary plug in a small section of pipe. This allows the plumber to isolate the part of the pipe that is being worked on. Once the job is completed natural convection melts the ice plug, in turn restoring supply within minutes when the job is completed.
JETFREEZER equipment consists of a flexible, thermally insulated jacket, high pressure hose and washers. The jacket is wrapped around the pipe to be frozen and then connected by the high pressure hose to the CO_2 siphon cylinder with internal dip pipe. When the cylinder valve is opened, the liquid carbon dioxide is discharged through the special jet in the jacket and forms solid CO_2 which is trapped by the insulated jacket and packs around the pipe. Because dry ice has an extremely low temperature of -78°C, it quickly freezes the water within the pipe to form a secure ice plug. The range includes five jackets to suit all pipes up to 100 mm. The 80-100 mm sizes require two hoses, a jacket, five washers and a Tee-piece.

The expansion of the liquid CO_2 and the high-speed evaporation of carbon dioxide gas cools the remainder of the liquid down to the freezing point, where it turns directly into a solid.
JETFREEZER is utilising the intensely cold properties of solid carbon dioxide. Protective gloves should always be worn when handling dry ice to prevent the possibility of frost bite or cold burns arising when dry ice is in contact with the skin. Be sure to ventilate any area that contains dry ice, and do not transport it in a closed vehicle. Carbon dioxide is heavier than air, and it can concentrate in low areas or enclosed spaces.

A109022	Washer for high pressure hose and Tee-piece	
A109753	Tee-piece F x M x M	
A119710	High pressure hose Jetfreezer 2440 mm (+ washer)	
A119903	Hose coupling adaptor	

A119906	Jetfreezer jacket mini	8- 22 mm pipe	
A119907	Jetfreezer jacket 3/4” pipe	10- 22 mm pipe	
A119910	Jetfreezer jacket 1½” pipe	22- 42 mm pipe	
A119902	Jetfreezer jacket 3” pipe	42- 80 mm pipe	
A119911	Jetfreezer jacket 4” pipe	80-100 mm pipe	

Due to its unique design, WT Clamp ensures that the clamping forces are evenly spread round the pipe to be welded, because the distance between clamping points are exactly the same. This is true for all pipe dimensions within the range of the WT Clamp (1 to 14 inches). The adjusting screws have stainless steel balls at their ends. This eliminates the scratching of the objects to be welded, and no corrosion will occur. The arms are made of aluminum plate which allows a clamping force to meet the requirements for all pipe dimensions within the range of the WT Clamp (up to 14 inches) and with wall thicknesses up to 15 mm. WT Clamp can be used for the welding of all kinds of materials such as carbon steel, stainless steel, duplex, super-duplex and titanium. The welding of pipe to pipe and pipe to fittings are easily performed with the WT Clamp.

	WT Clamp					
A300000#	Clamp WT 125	1 -	2.5”	27 -	64	mm
A300001#	Clamp WT 26	2 -	6”	60 -	168	mm
A300002#	Clamp WT 612	6 -	14”	168 -	355	mm

Single Chain Clamps and Double Chain Clamps are easy tools for clamping pipe to pipe, pipe to bend, pipe to tee or pipe to flange. The low weight makes it very easy to operate in the workshop and on site. The chain clamps can adjust and align pipes with wall thicknesses up to 1/2" (12 mm) and a clamping force of 2500 kg.
The chain clamps can be used for several pipe dimensions, simply by removing or taking off the jack-bars. The jack-bars are made of stainless steel on all chain clamps. Both clamps can be used for stainless steel, as only stainless steel is in contact with the pipe. All chain clamps can be used for pipe dimensions from 5".

	Single chain clamp for carbon steel		
A300005#	Chain clamp single	5 -	12”
A300006#	Chain clamp single	5 -	16”
A300007#	Chain clamp single	5 -	20”
A300008#	Chain clamp single	5 -	24”
A300009#	Chain clamp single	5 -	32”
A300010#	Chain clamp single	5 -	36”
A300011#	Chain clamp single	5 -	42”
A300012#	Chain clamp single	5 -	48”
A300013#	Chain clamp single	5 -	54”
A300014#	Chain clamp single	5 -	60”

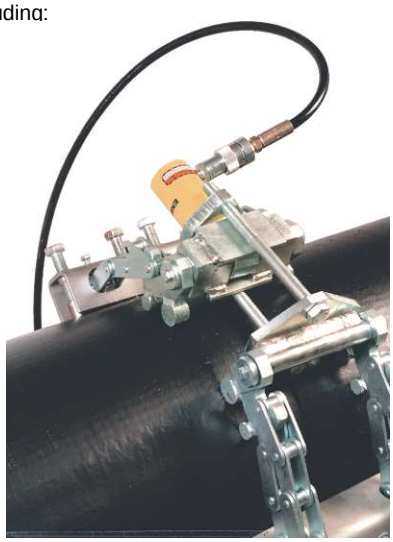
	Single chain clamp for stainless steel		
A300019#	Chain clamp single stainless steel	5 -	12”
A300020#	Chain clamp single stainless steel	5 -	16”
A300021#	Chain clamp single stainless steel	5 -	20”
A300022#	Chain clamp single stainless steel	5 -	24”
A300023#	Chain clamp single stainless steel	5 -	32”
A300024#	Chain clamp single stainless steel	5 -	36”
A300025#	Chain clamp single stainless steel	5 -	42”
A300026#	Chain clamp single stainless steel	5 -	48”
A300027#	Chain clamp single stainless steel	5 -	54”
A300028#	Chain clamp single stainless steel	5 -	60”

	Double chain clamp for carbon steel		
A300034#	Chain clamp double	5 -	12”
A300035#	Chain clamp double	5 -	16”
A300036#	Chain clamp double	5 -	20”
A300037#	Chain clamp double	5 -	24”
A300038#	Chain clamp double	5 -	32”
A300039#	Chain clamp double	5 -	36”
A300040#	Chain clamp double	5 -	42”
A300041#	Chain clamp double	5 -	48”
A300042#	Chain clamp double	5 -	54”
A300043#	Chain clamp double	5 -	60”

	Double chain clamp for stainless steel		
A300049#	Chain clamp double stainless steel	5 -	12”
A300050#	Chain clamp double stainless steel	5 -	16”
A300051#	Chain clamp double stainless steel	5 -	20”
A300052#	Chain clamp double stainless steel	5 -	24”
A300053#	Chain clamp double stainless steel	5 -	32”
A300054#	Chain clamp double stainless steel	5 -	36”
A300055#	Chain clamp double stainless steel	5 -	42”
A300056#	Chain clamp double stainless steel	5 -	48”
A300057#	Chain clamp double stainless steel	5 -	54”
A300058#	Chain clamp double stainless steel	5 -	60”

The HP Clamp is the only hydraulic chain clamp in the world which can operate on pipe diameters from 6" (168 mm) to 60" (1524 mm).
The HP Clamp is able to align and adjust pipes and fittings with wall thicknesses up to 1" (25 mm). Only the length of the chain and the number of jack-bars varies according to the pipe diameter - the rest you buy only once. The very low weight makes equipment such as cranes superfluous. To meet the requirements from pipe manufacturers, nuclear, offshore and petrochemical industries, all parts of the HP Clamp that makes contact with the pipes, are made of stainless steel to avoid markings and contamination on the pipes.
The jack-bars are adjustable and removable. This makes the HP Clamp usable on smaller pipe dimensions.

The HP Clamp consists of jack-bars (number according to size), mounted on two chains including:
1 hydraulic cylinder
1 clamping system
1 hose (1.8 meter)
1 hydraulic hand pump
1 ratchet brace 10 mm
1 ratchet brace 24 mm
1 aluminum tool box.

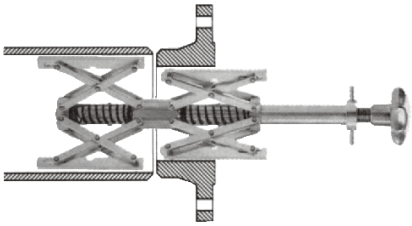


All HP Clamps are available with extra chains for all pipe-diameters and extra jack-bars.
Other sizes available upon request.

Hydraulic pipe clamp external

A300065#	Hydraulic pipe clamp HP612	6 -	12”	external
A300066#	Hydraulic pipe clamp HP616	6 -	16”	external
A300067#	Hydraulic pipe clamp HP620	6 -	20”	external
A300068#	Hydraulic pipe clamp HP624	6 -	24”	external
A300069#	Hydraulic pipe clamp HP632	6 -	32”	external
A300070#	Hydraulic pipe clamp HP636	6 -	36”	external
A300071#	Hydraulic pipe clamp HP642	6 -	42”	external
A300072#	Hydraulic pipe clamp HP648	6 -	48”	external
A300073#	Hydraulic pipe clamp HP652	6 -	52”	external
A300074#	Hydraulic pipe clamp HP656	6 -	56”	external
A300075#	Hydraulic pipe clamp HP660	6 -	60”	external

Internal Manual Pipe Clamp (IMC) for welding flanges to pipes. The clamp has a range from 2.25” (56 mm) and up to 37” (940 mm).
IMC is also available for stainless steel pipes.



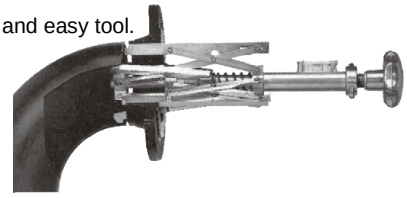
Manual pipe clamp IMC internal

A300117#	Manual pipe clamp IMC	56 -	140	mm	internal
A300118#	Manual pipe clamp IMC	85 -	220	mm	internal
A300119#	Manual pipe clamp IMC	120 -	315	mm	internal
A300120#	Manual pipe clamp IMC	180 -	520	mm	internal
A300121#	Manual pipe clamp IMC	400 -	940	mm	internal

Manual pipe clamp IMC internal for stainless steel

A300125#	Manual pipe clamp IMC	56 -	140	mm	internal stainless steel
A300126#	Manual pipe clamp IMC	85 -	220	mm	internal stainless steel
A300127#	Manual pipe clamp IMC	120 -	315	mm	internal stainless steel
A300128#	Manual pipe clamp IMC	180 -	520	mm	internal stainless steel
A300129#	Manual pipe clamp IMC	400 -	940	mm	internal stainless steel

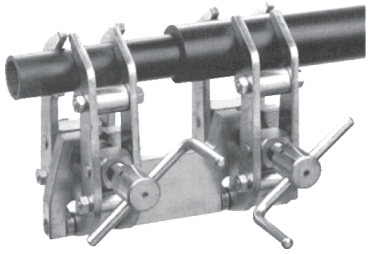
Internal Manual Flange Clamp suitable for clamping in the lining flanges to bends. Fast and easy tool.



Manual flange clamp IMF internal

A300135#	Manual flange clamp IMF	56 -	115	mm	internal
A300136#	Manual flange clamp IMF	85 -	195	mm	internal
A300137#	Manual flange clamp IMF	120 -	315	mm	internal
A300138#	Manual flange clamp IMF	180 -	520	mm	internal

The Double Manual Clamp for orbital welding or normal welding is able to clamp pipes of different dimensions. DMC is also available for carbon and stainless steel pipes.



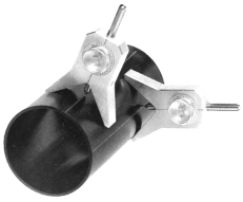
Double manual clamp DMC

A300145#	Double manual clamp DMC	10 -	70	mm
A300146#	Double manual clamp DMC	40 -	140	mm
A300147#	Double manual clamp DMC	75 -	330	mm

Double manual clamp DMC for stainless steel

A300151#	Double manual clamp DMC	10 -	70	mm	stainless steel
A300152#	Double manual clamp DMC	40 -	140	mm	stainless steel
A300153#	Double manual clamp DMC	75 -	330	mm	stainless steel

Finding the exact top of a pipe has always been a problem. WT Centering Head solves this problem in an easy manner.
It can also be used to find any given points at angles from the top of the pipe. Can be used on all pipes from 12 mm (1/2").



WT centring head

A300310#	WT centring head

During the welding of steel, oxidation occurs in the weld seam if oxygen reaches this area unhindered (10 ppm, 0.001% or less). The resulting oxidized surfaces are no longer corrosion-resistant, and further treatment is necessary. Removing oxidation by grinding also removes the metal's passive protection against corrosion. In some cases such as pipe welding, removing oxidation after welding is difficult or impossible to do. Instead of removing oxidation, another solution is to prevent it from occurring in the first place. In essence, this is what purging tries to achieve. With purging, a gas is used to protect the weld seam until it has cooled to the point that oxidation no longer can occur. Usually, an inert gas, such as argon which is heavier than air, is used.

Conventional purge dams such as inflatable rubber bladders or cardboard discs traditionally must be placed far from the weld zone. Remote placement of the purge dams may require large amounts of pure gas to be introduced to fully displace the oxygen into the weld zone. To overcome these limitations, PGE minimizes the amount of gas and time needed to purge the weld zone properly

PGE120 consists of a basic unit and sealing- and support discs in different sizes, depending of the pipe dimensions to be welded.
The unique design of PGE 120 in combination with the flexible sealing discs makes it the perfect choice in the workshop as well as on site.
Use PGE 120 for the welding of pipe to pipe, pipe to bend or pipe to flange.

Going from welding of one pipe dimension to another, you simply change the sealing- and support discs on the basic unit. This is easily and quickly achieved by using a spanner. PGE can be pulled through bends and the sealing discs are resistant to temperatures up to 320°C. Maximum content of oxygen: 25 ppm (0.0025%).

Purge gas system PGE 120*

A300581#	Purge gas system	PGE 120 basic			
A300583#	Sealing discs (2) 2 mm	PGE 120-180	21 -	25	mm
A300584#	Sealing discs (2) 2 mm	PGE 120-180	23 -	26	mm
A300585#	Sealing discs (2) 2 mm	PGE 120-180	26 -	30	mm
A300586#	Sealing discs (2) 2 mm	PGE 120-180	31 -	34	mm
A300587#	Sealing discs (2) 2 mm	PGE 120-180	35 -	37	mm
A300588#	Sealing discs (2) 2 mm	PGE 120-180	38 -	42	mm
A300589#	Sealing discs (2) 2 mm	PGE 120-180	42 -	46	mm
A300590#	Sealing discs (2) 2 mm	PGE 120-180	45 -	51	mm
A300591#	Sealing discs (2) 2 mm	PGE 120-180	52 -	57	mm
A300592#	Sealing discs (2) 2 mm	PGE 120-180	58 -	66	mm
A300593#	Sealing discs (2) 2 mm	PGE 120-180	67 -	73	mm
A300594#	Sealing discs (2) 2 mm	PGE 120-180	77 -	81	mm
A300595#	Sealing discs (2) 2 mm	PGE 120-180	80 -	85	mm
A300596#	Sealing discs (2) 2 mm	PGE 120-180	86 -	94	mm
A300597#	Sealing discs (2) 2 mm	PGE 120-180	95 -	100	mm
A300598#	Sealing discs (2) 2 mm	PGE 120-180	100 -	110	mm
A300599#	Sealing discs (2) 2 mm	PGE 120-180	111 -	117	mm
A300600#	Sealing discs (2) 2 mm	PGE 120-180	118 -	123	mm
A300601#	Sealing discs (2) 2 mm	PGE 120-180	124 -	135	mm
A300602#	Sealing discs (2) 2 mm	PGE 120-180	136 -	144	mm
A300603#	Sealing discs (2) 2 mm	PGE 120-180	145 -	155	mm
A300604#	Sealing discs (2) 2 mm	PGE 120-180	156 -	166	mm
A300605#	Sealing discs (2) 2 mm	PGE 120-180	193 -	201	mm
A300606#	Sealing discs (2) 2 mm	PGE 120-180	201 -	215	mm
A300607#	Sealing discs (2) 2 mm	PGE 120-180	240 -	250	mm
A300608#	Sealing discs (2) 2 mm	PGE 120-180	265 -	275	mm
A300609#	Sealing discs (2) 2 mm	PGE 120-180	290 -	300	mm
A300610#	Sealing discs (2) 2 mm	PGE 120-180	300 -	315	mm
A300620#	Sealing discs (2) 3 mm	PGE 120-180	27 -	36	mm
A300621#	Sealing discs (2) 3 mm	PGE 120-180	35 -	40	mm
A300622#	Sealing discs (2) 3 mm	PGE 120-180	41 -	50	mm
A300623#	Sealing discs (2) 3 mm	PGE 120-180	53 -	60	mm
A300624#	Sealing discs (2) 3 mm	PGE 120-180	65 -	75	mm
A300625#	Sealing discs (2) 3 mm	PGE 120-180	80 -	86	mm
A300626#	Sealing discs (2) 3 mm	PGE 120-180	93 -	103	mm
A300627#	Sealing discs (2) 3 mm	PGE 120-180	103 -	116	mm
A300628#	Sealing discs (2) 3 mm	PGE 120-180	122 -	130	mm
A300629#	Sealing discs (2) 3 mm	PGE 120-180	131 -	136	mm
A300630#	Sealing discs (2) 3 mm	PGE 120-180	142 -	150	mm
A300631#	Sealing discs (2) 3 mm	PGE 120-180	154 -	164	mm
A300632#	Sealing discs (2) 3 mm	PGE 120-180	188 -	200	mm
A300633#	Sealing discs (2) 3 mm	PGE 120-180	203 -	215	mm
A300634#	Sealing discs (2) 3 mm	PGE 120-180	242 -	250	mm
A300635#	Sealing discs (2) 3 mm	PGE 120-180	254 -	275	mm
A300636#	Sealing discs (2) 3 mm	PGE 120-180	294 -	300	mm
A300637#	Sealing discs (2) 3 mm	PGE 120-180	300 -	315	mm
A300640#	Support discs (4)	PGE 120-180	21 -	42	mm
A300641#	Support discs (4)	PGE 120-180	41 -	60	mm
A300642#	Support discs (4)	PGE 120-180	58 -	85	mm
A300643#	Support discs (4)	PGE 120-180	86 -	100	mm
A300644#	Support discs (4)	PGE 120-180	101-	130	mm
A300645#	Support discs (4)	PGE 120-180	124 -	154	mm
A300646#	Support discs (4)	PGE 120-180	142 -	166	mm
A300647#	Support discs (4)	PGE 120-180	188 -	230	mm
A300648#	Support discs (4)	PGE 120-180	240 -	250	mm
A300649#	Support discs (4)	PGE 120-180	265 -	275	mm
A300650#	Support discs (4)	PGE 120-180	290 -	300	mm
A300651#	Support discs (4)	PGE 120-180	300 -	315	mm

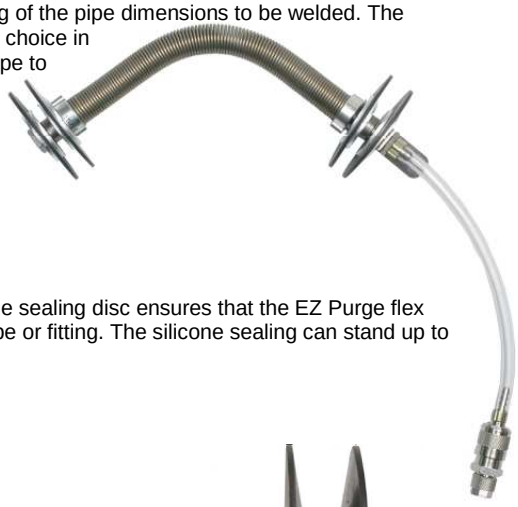
* while stock lasts.

The bigger the pipe, the longer it takes to fill a chamber with gas. Consequently, this cylinder has been developed. The chamber is only 3 cm wide. The time to place PGE 210 and filling the chamber with gas, ensuring max. content of oxygen of 25 ppm (0,0025%) is carried out between 5 and 15 minutes, depending on the pipe size.

Purge gas system PGE 210

A300211#	Purge gas system PGE 210-250	245	-	265	mm
A300212#	Purge gas system PGE 210-300	290	-	310	mm
A300213#	Purge gas system PGE 210-350	330	-	350	mm
A300214#	Purge gas system PGE 210-400	380	-	400	mm
A300215#	Purge gas system PGE 210-450	430	-	450	mm
A300216#	Purge gas system PGE 210-500	480	-	500	mm
A300217#	Purge gas system PGE 210-550	530	-	550	mm
A300218#	Purge gas system PGE 210-600	580	-	600	mm
A300219#	Purge gas system PGE 210-650	630	-	650	mm
A300220#	Purge gas system PGE 210-700	680	-	700	mm
A300221#	Purge gas system PGE 210-750	730	-	750	mm
A300222#	Purge gas system PGE 210-800	780	-	800	mm
A300223#	Purge gas system PGE 210-850	830	-	850	mm
A300224#	Purge gas system PGE 210-900	880	-	900	mm

PGE 180 flex consists of a basic unit and sealing- and support discs in different sizes, depending of the pipe dimensions to be welded. The unique design of PGE 180 flex in combination with the flexible sealing discs makes it the perfect choice in the workshop as well as on site. Use PGE Flex for the welding of pipe to pipe, pipe to bend or pipe to flange. Going from welding of one pipe dimension to another, you simply change the sealing- and support discs on the basic unit. This is easily and quickly achieved by using a spanner.
To choose the correct discs for various pipe dimensions, please refer to the PGE 120 system.



Purge gas system PGE 180 flex

A300582#	Purge gas system	PGE 180 basic flex

The new EZ purge flex is used from 25 mm ID up to 320 mm ID.The unique design of the silicone sealing disc ensures that the EZ Purge flex always makes a perfect seal. It is very user friendly and easy to push, pull and postion in any pipe or fitting. The silicone sealing can stand up to 320°C.

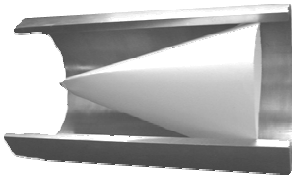
Backing gas system EZ purge flex

A300655#	Backing gas system EZ 032	25	-	31	mm
A300656#	Backing gas system EZ 043	32	-	40	mm
A300657#	Backing gas system EZ 054	41	-	50	mm
A300658#	Backing gas system EZ 064	52	-	61	mm
A300659#	Backing gas system EZ 078	62	-	74	mm
A300660#	Backing gas system EZ 090	75	-	86	mm
A300661#	Backing gas system EZ 110	85	-	101	mm
A300662#	Backing gas system EZ 120	100	-	110	mm
A300663#	Backing gas system EZ 142	120	-	135	mm
A300664#	Backing gas system EZ 160	140	-	155	mm
A300665#	Backing gas system EZ 175	150	-	165	mm
A300666#	Backing gas system EZ 210	175	-	200	mm
A300667#	Backing gas system EZ 230	195	-	215	mm
A300668#	Backing gas system EZ 270	235	-	260	mm
A300669#	Backing gas system EZ 290	255	-	280	mm
A300670#	Backing gas system EZ 310	275	-	300	mm
A300671#	Backing gas system EZ 330	290	-	320	mm
A300672#	Backing gas system EZ 99	25	-	165	mm

WT Dams are used where it is not possible to use standard Purge Gas Equipment (PGE). Using the water soluble dams is a low cost way to purge a pipe, a tee or a bend. The WT Dams are placed in the open ends, a new piece is attached, rinse and weld. The WT Dams will dissolve when water is flowing through the pipes again.

Water soluble purge gas dam

A300290#	Water soluble purge gas dam	WT - 2	2”
A300291#	Water soluble purge gas dam	WT - 3	3”
A300292#	Water soluble purge gas dam	WT - 4	4”
A300293#	Water soluble purge gas dam	WT - 5	5”
A300294#	Water soluble purge gas dam	WT - 6	6”
A300295#	Water soluble purge gas dam	WT - 8	8”
A300296#	Water soluble purge gas dam	WT - 10	10”
A300297#	Water soluble purge gas dam	WT - 12	12”
A300298#	Water soluble purge gas dam	WT - 14	14”
A300299#	Water soluble purge gas dam	WT - 16	16”
A300300#	Water soluble purge gas dam	WT - 18	18”
A300301#	Water soluble purge gas dam	WT - 20	20”
A300302#	Water soluble purge gas dam	WT - 24	24”



FMT is the unique Foldable Marking Tool for pipes and bends. In less than 5 minutes pipes and bends are marked up for cutting in any particular angle.

	Foldable Marking Tool			
A300260#	Foldable Marking Tool FMT-1	33 -	90	mm
A300261#	Foldable Marking Tool FMT-2	100 -	219	mm
A300262#	Foldable Marking Tool FMT-3	244 -	508	mm

WT Flange Leveller is always a good tool to have. The WT Flange Leveller can be used for flanges with bolt holes from 16 mm and up to 32 mm. With this design you avoid the chance of misplacing loose parts, and you will have no need of using adjusting tools.

	WT flange leveller
A300265#	WT flange leveller WT-500 12 mm aluminum centers

Purge Monitor GM1 is a small hand-held instrument which facilitates welding of stainless steel by oxygen concentration monitoring down to 0.01% (100 ppm). GM1 is breast pocket portable (with pump and tubing slung over the shoulder).

Range:	0.01- 25.00% oxygen concentration
Calibration:	20.9% (oxygen concentration in air)
Temperature range:	0°C to 50°C
Dimensions:	130 x 68 x 27mm
Sensor:	Thermo-electric Ø 20 x 30 mm
Advantages:	AA batteries 1.5V, 2 pcs robust battery cover, long battery life, easy sensor replacement, minimum one year life, semi-automatic calibration.

Technical data and conversion tables

Lengths

1 inch (in)	=	0.0254 mtr
1 foot (ft)	=	0.3048 mtr
1 yard (yd)	=	0.9144 mtr
1 mile	=	1609.3 mtr

Volume

1 cubic foot (ft^3)	=	28.32 dm^3
1 UK gallon	=	4.546 dm^3
1 US gallon	=	3.785 dm^3

Mass

1 grain (gr)	=	64.8 kg
1 ounce (oz)	=	28.35 gr
1 pound (lb)	=	453.6 gr
1 UK ton	=	1016.1 kg
1 Sh. ton	=	907.2 kg

Warmth

1 btu/h	=	0.293 kW
1 btu/h	=	0.398 p.k.

IMPORTANT INFORMATION RELATING TO GAS

Oxygen O_2

-182.96ºC	1 nm^3	= 1.148 ltr	= 1.311 kg
90.19 K	1 ltr	= 0.871 nm^3	= 1.142 kg
	1 kg	= 0.763 nm^3	= 0.876 ltr

Nirogen N_2

-195.80ºC	1 nm^3	= 1.419 ltr	= 1.147 kg
77.35 K	1 ltr	= 0.705 nm^3	= 0.808 kg
	1 kg	= 0.872 nm^3	= 1.237 ltr

Argon Ar

-185.87ºC	1 nm^3	= 1.168 ltr
87.29 K	1 ltr	= 0.856 nm^3
	1 kg	= 0.611 nm^3

Carbon dioxide CO_2

	1 nm^3	= 1.811 kg
	1 kg	= 0.552 nm^3

1 nm^3 (at 0.981 bar and 15ºC).
Temperatures (boiling point at 1.013 mbar).

ROUGH AND READY RULE

1 cu.ft.	=	0.02832 m^3
1 cu.ft.	=	28.32 dm^3 of ltr
1 psi	=	0.0703 kg/cm^2
1 kg/cm^2	=	14.22 psi
1 kW	=	0.86 Mcal/h
1 Mcal/h	=	1.163 kW
1 bar	=	1.02 kg/cm^2
1 bar	=	14.5 psi
1 psi	=	0.0689 bar
1 mbar	=	10.2 mm WK
1 mm WK	=	0.0981 mbar
1 kcal	=	3.968 btu
1 US gallon	=	3.785 ltr
1 Imp. gallon	=	4.546 ltr
1 pound (lb)	=	0.454 kg
1 kg	=	2.205 pound (lb)

Pressure

bar	KPa	kp/cm^2 (at)	mm Hg	lbf/in^2 (psi)	Atm.
1.013	101.3	1.033	760	14.7	1
1	100	1.020	750	14.5	0.987
0.98	98	1	736	14.2	0.968
0.0069	6.9	0.070	52.7	1	0.068
1.333	133.3	1.360	1000	19.33	1.316

1 mm water	=	9.81 Pa
1 inch Hg	=	3386.4 Pa
1 torr	=	1/760 atm = 1 mm Hg bij 0ºC
1 micron	=	10-6 mHg

Temperature

Fahrenheit - Celsius	ºC = 5/9 (ºF - 32)
Celsius - Fahrenheit	ºF = 9/5 (ºC) + 32
Celsius - Kelvin	K = ºC + 273

SIDE ENTRY ACCORDING NEN 3268 (GAS CYLINDERS)

Side entry information	Thread according NEN 784	Thread direction
LU 0	M 19 x 1.5	LH
RU 1	W 21.8 x 1/14”	RH
LU 1	W 21.8 x 1/14”	LH
RI 2	G 5/8” (22.9 x 1/14”)	RH
LI 2	G 5/8” (22.9 x 1/14”)	LH
RU 3	W 24.32 x 1/14”	RH
RU 4	W 1” (25.4 x 1/8”)	RH
LU 4	W 1” (25.4 x 1/8”)	LH
RU 6	W 28.806 x 1/14”	RH

Flow

Gas volumetric flow rate is often measured in cubic meters per hour (abbreviation m^3/h) under normal circumstances (see ISO 554), related to the relevant chemical formula of the used gas.

Conversion coefficient *U*

TEST GAS	CONVERSION COEFFICIENT								
	Air	Oxygen	Nitrogen	Argon	Hydrogen	Helium	Acetylene	Propane	CO_2
Air	1	0.950	1.02	0.851	3.81	2.695	1.05	0.800	0.808
Nitrogen	0.983	0.930	1	0.837	3.75	2.65	1.03	0.784	0.792

The conversion coefficient *U* may be empirically determined by the following formula:

$$U = \sqrt{\frac{\gamma 0}{\gamma 1}}$$

$\gamma 0$ = the specific weight of the test gas.
$\gamma 1$ = the specific weight of the process gas.

Brass

any alloy of copper and zinc => *bright gold-like appearance*
melting point approx. 900°C

Bronze

principally an alloy of copper and tin, dark - or brown gold alloy
melting point approx. 1000°C

Copper

chemical element, metallic bronze metal [symbol Cu, atomic number 29]
melting point approx. 1100°C

Pure copper is usually too soft for most uses. People first learned about 5000 years ago that copper can be strengthened if it is mixed with other metals. The two most familiar alloys of copper are bronze and brass.

Bronze, the first alloy created by people, is a mix of copper that contains as much as 25% tin. Early people used bronze to make tools, weaponry, containers and ornamental items.

Brass, a mix of copper that contains between 5% and 45% zinc, was first used about 2500 years ago. The Romans were the first to make extensive use of brass, using it to make such things as coins, kettles and ornamental objects.

Melting point of various metal types

Metal/ alloy	Symbol	ºCelsius	Metal/ alloy	Symbol	ºCelsius
Aluminum	Al	660	Molybdenum	Mo	2620
Antimonium	Sb	630	New silver	--	900
Beryllium	Be	1285	Nickel	Ni	1453
Lead	Pb	327	Niobium	Nb	2470
Borium	B	2300	Palladium	Pd	1552
Bronze	--	± 1000	Platinum	Pt	1770
Cadmium	Cd	321	Rhodium	Rh	1960
Chromium	Cr	1900	Selenium	Se	220
Iron	Fe	1536	Silver	Ag	961
Germanium	Ge	958	Silicium	Si	1420
Gold	Au	1063	Steel	--	± 1500
Cast iron	--	± 1200	Tantalium	Ta	2997
Stainless steel 18/8	--	± 1420	Titanium	Ti	1700
Cobalt	Co	1495	Bismuth	Bi	271
			Tin	Sn	232
Manganese	Mn	1245	Zirconium	Zr	1700
Brass	--	± 900			

Normally soldering is performed with a normal, neutral welding flame (figure 1). That is, parts must be heated up without a carburizing or reducing welding flame. A mildly reducing welding flame is used for braze welding (figure 2) in order to avoid inhalation of zinc oxide fumes. A strongly carburizing flame is used for hard facing with stellite (figure 3). Stainless steel soldering is performed with a slightly, carburizing welding flame in order to prevent carburizing and oxidation of the surface zones of steel. Soft soldering processes will be carried out with a soft, slightly carburizing flame (figure 3).

1. neutral flame

2. reducing flame (Oxygen surplus)

3. carburizing flame (Acetylene surplus)

Average combustion temperatures of gasmixtures

Oxygen - Acetylene	approx. 3200ºC
Oxygen - Propane	approx. 2500ºC
Oxygen - Hydrogen	approx. 2370ºC
Air - Acetylene	approx. 2460ºC
Air - Propane	approx. 1750ºC