

# WELDERS' WORLD

PRODUCT CATALOGUE Edition 9 - 2023

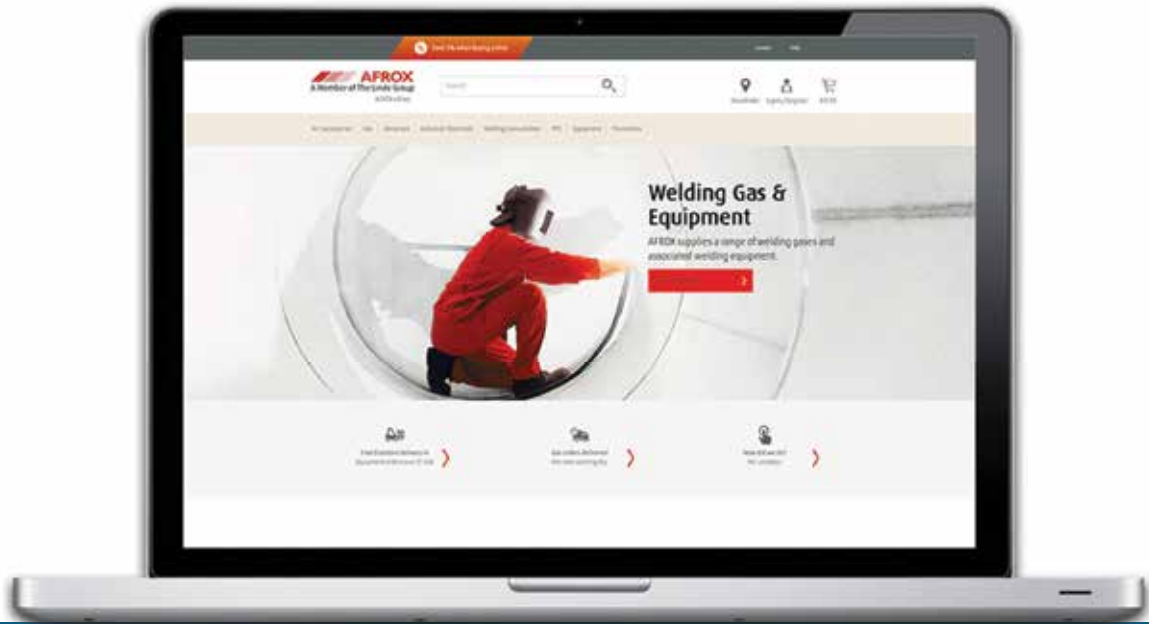
 **AFROX**  
A Linde company





## Start shopping online in 3 easy steps!

Get your gases and welding products, right at your fingertips



Improved look & feel



Faster navigation



Responsive



When buying online

Afrox eShop combines online purchasing for gas, welding and safety products with account management including cylinder holdings, copy documents and much more.

The digital service makes it quicker and easier to do business with Afrox, complementing existing sales and services channels to provide you with the additional choice about how you interact and transact with us.

### Who can use the Afrox eShop

As an Afrox account holding customer you can register for the eShop in 3 easy clicks by going to our website on [www.afroxshop.co.za](http://www.afroxshop.co.za).

If you are a new customer you will need to open an Afrox account; go to our online eShop and click "Open an Afrox account" or contact us on tel: 011 821 3028 or email [eshop.support@afrox.linde.com](mailto:eshop.support@afrox.linde.com).

# The Afrox Offer

- Afrox offers a fit-for-purpose product range of welding, cutting and heating solutions. Our retail stores and selected partners (agents and distributors) stock a core range of welding-related PPE, gas and arc equipment and spares, gas regulators, flashback arrestors, welding hoses, cutting torches and nozzles, welding accessories, and gas and arc welding consumables.
- Afrox offers customer deliveries as well as a customer collect offer. We are able to deliver to customers through an extensive network of conveniently located branches, stores and agents/distributors nationwide. Customers may also collect directly from any of these outlets.
- Afrox deliveries are dependent on geographical location and the date and time the order is received. Fast-track emergency deliveries can be arranged on request. Our Central Scheduling Centre is dedicated to planning and scheduling all product deliveries to our customers, according to their requirements.
- We are committed to fulfilling completed core product order requirements on time and in full.
- With us, quality is guaranteed.

Our national Customer Service Centre uses a computerised event tracking system enabling and empowering our entire service and sales organisation to meet your needs.

## CONTACT OUR NATIONAL CUSTOMER SERVICE CENTRE

**Phone** 0860 020202  
**Fax** 0860 020201  
**E-mail** customer.service@afrox.linde.com  
**Website** www.afrox.co.za  
**Shop online** www.afroxshop.co.za

## PLACING AN ORDER

We'll process your order quickly and accurately. A reference number will be supplied with each order for easy tracking.

## COPY DOCUMENTATION

We can retrieve a delivery note or invoice and fax or e-mail you a copy on request.

## ACCOUNT QUERIES OR QUESTIONS ABOUT INVOICING

We have well trained staff that can review and resolve your account queries.

Our event tracking system will ensure fast resolution of queries. Our multi-skilled staff are customer service experts and product champions, offering specialised advice on all products and services that Afrox offers.

For your convenience, the Afrox Customer Service Centre has an online customer interaction system giving you access to the:

- Service Office - for orders, problems and requests for information; and
- Support Office - for all your account queries (please have your 8 digit Afrox account number ready).

**Our operating hours are 07h00 - 17h00 Monday to Friday (excluding public holidays).**



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The 2023 Welders' World Product Catalogue prices for account holders are available on the Afrox e-shop at [www.afroxshop.co.za](http://www.afroxshop.co.za)

# Individual Cylinder Tracking

Afrox has launched a pioneering tracking system that will enable us to operate the most effective and fully integrated cylinder tracking system available in the market today; ensuring that we are better positioned to serve the needs of our customers.

All Afrox Industrial, Special, Hospitality and Medical cylinders are tracked on this system. Refrigerants and LPG cylinders are excluded.



## How does cylinder tracking work?

- All Afrox gas cylinders (Industrial, Special and Medical gas cylinders) now carry a unique barcode, which is scanned during delivery using a state-of-the-art handheld device.
- All tracked cylinders supplied by Afrox have their barcode scanned at each stage of delivery and return to Afrox.
- Customers are required to acknowledge receipt and collection of cylinders by providing our delivery drivers with an electronic signature on a handheld device.
- The Delivery Advice Note is created after all cylinders have been scanned.
- The Delivery Advice Note lists the serial numbers of all tracked gas cylinders supplied and returned, providing detailed information to help you manage cylinder stocks.
- Every transaction will be recorded and uploaded to our fully integrated Cylinder Tracking Management System.
- Every cylinder supplied by us will be scanned and automatically allocated to the customer's account.
- Every cylinder returned to or collected by us will be scanned and automatically removed from your account.



### What benefits does cylinder tracking offer to our customers?

- Peace of mind through increased levels of traceability of tracked gas cylinders.
- Improved invoice accuracy and cylinder management, making it easier to do business with Afrox.
- Greater reliability and accuracy of stock holdings to help you improve internal cost management.
- Improved handling of gas cylinder enquiries, saving time and effort.

### An important change to how you may currently manage your cylinders

It is important to be aware that if you have swapped, or inadvertently changed cylinders with another Afrox customer, any returned cylinders will be deducted from the original customer account, not from the returning account.

However, if cylinders are moved within a customer's own organisation, this does not impact the overall cylinder holdings, as the system automatically updates the account accordingly.

### Additional benefits in doing business with Afrox

#### Safety First

- No need to worry about testing your cylinders and valves – we do it for you.
- We look after cylinder repair and replacements.
- With us, you can work according to the highest safety standards.

### Zero Investment

- We invest in cylinders for you – meaning no cylinder purchasing or deposit costs.
- You don't need to hold extra cylinders during maintenance.
- We free up your time so you can get on with the job at hand.

### Flexible Solutions

- You are free to select and swap between gas types and cylinder sizes.
- You can choose to pick up from any of our retail outlets or agents or have your cylinders delivered.
- Pricing is flexible, adapting to your consumption.

### Latest Technologies

- We invest in new cylinder packages for you.
- You have access to state-of-the-art technologies such as lightweight cylinders and high-tech valves.
- We constantly innovate new technologies to add value to your business.

### Reliable Partner

- Get access to our broad product range.
- Benefit from our large scope of services.
- We offer extensive technical and safety support.
- You have the convenience of a dense network of retail outlets and agents with one-stop shopping at selected stores.



## SECTION 1

## INDUSTRIAL GASES



## Afrox Industrial Gas Cylinder Colour Identification

## Atmospheric Gases



**Air Dry**  
 • 3,9 kg cylinder  
 13-KB  
 • 8,5 kg dry  
 13-RC



**Nitrogen Technical**  
 • 2,2 kg cylinder  
 42-IE  
 • 4,4 kg cylinder  
 42-JE  
 • 11,0 kg cylinder  
 42-SE  
 • 15 x 11,0 kg MCP  
 42-ME15  
 • 120,0 kg PCC  
 41-PA  
 • PCC 35 Bar  
 41-PC  
 • Dewar PVT kg  
 P4Z

**High Purity**  
 • 2,2 kg cylinder  
 98-IE  
 • 11,0 kg cylinder  
 98-SE  
 • 15 x 11,0 kg MCP  
 98-ME15

**Laser Gas**  
 • 15 x 11,0 kg MCP  
 98-ME15-LAS



**Oxygen Technical**  
 • 11,5 kg cylinder  
 1-QD  
 • 15 x 12,3 kg MCP  
 1-MR15  
 • PortaPak®  
 1,43 kg cylinder  
 3-GD  
 • 180 kg PCC  
 554-PA

**Laser Gas**  
 • 15 x 11,5 kg MCP  
 317-MR15



**Argon Technical**  
 • 17,4 kg cylinder  
 10-SE  
 • 220 kg PCC  
 556-PA

**High Purity**  
 • 17,4 kg cylinder  
 11-SE  
 • 15 x 17,4 kg MCP  
 11-ME15

**PortaTIG®**  
 • 1,9 kg cylinder  
 10-GD1

## Fuel Gases



**Acetylene Technical**  
 • 8 kg cylinder  
 15-DE  
 • 12 x 8 kg MCP  
 15-MD12  
 • PortaPak®  
 0,9 kg cylinder  
 16-DA



**Hydrogen Technical**  
 • 0,74 kg cylinder  
 54-SH  
 • 15 x 0,74 kg MCP  
 54-MH15



**Carbon Dioxide Technical**  
 • 31,3 kg cylinder  
 40-RC  
 • 180 kg PCC  
 573-PA

**Wet**  
 • 31,3 kg cylinder  
 40-RC-W

## Notes

1. Designated cylinder colours comply with SANS 10019
2. Numbers in grey are Afrox's item numbers

The gas contents of Afrox cylinders are identified by the labels affixed to the cylinders. A cylinder without a label should not be used, and should be returned to the supplier. An important part of the label is the class diamond, which represents the characteristic of the gas, as illustrated. A label with multiple class diamonds indicates multiple associated hazards.



## Shielding Gases

 <p><b>Argoshield<sup>®</sup> Light</b>            • 3,6 kg cylinder            24-IE            • 17,8 kg cylinder            24-SE-LIG            • 15 x 17,8 kg            cylinder            24-ME15-LIG</p>	 <p><b>Argoshield<sup>®</sup> Universal</b>            • 18,5 kg cylinder            28-SE</p>	 <p><b>Argoshield<sup>®</sup> Heavy</b>            • 19,6 kg cylinder            25-SE</p>	 <p><b>Argoshield<sup>®</sup> 5</b>            • 8,4 kg cylinder            24-KE            • 17,8 kg cylinder            24-SE</p> <p><b>Portashield<sup>®</sup></b>            • 1,8 kg cylinder            27-GD</p>	 <p><b>Stainshield<sup>®</sup> Heavy</b>            • 10,4 kg cylinder            99-SE</p>
 <p><b>Stainshield<sup>®</sup> TIG Plus</b>            • 12,3 kg cylinder            187-SE-C</p>	 <p><b>TIGshield<sup>®</sup></b>            • 3,5 kg cylinder            87-IE</p>	 <p><b>Alushield<sup>®</sup></b>            • 8,4 kg cylinder            94-SE</p>	 <p><b>Copashield<sup>®</sup></b>            • 4,8 kg cylinder            395-SE</p>	 <p><b>Fluxshield<sup>®</sup></b>            • 20,5 kg cylinder            26-SE</p>
 <p><b>Stainshield<sup>®</sup></b>            • 17,4 kg cylinder            27-SE</p>	 <p><b>Stainshield<sup>®</sup> Plus</b>            • 17,6 kg cylinder            30-SE</p>			

### Class Diamonds



Class 2.2 / 5.1  
 Oxidising Gas  
 Yellow / Black lettering



Class 2.1  
 Flammable Gas  
 Red / Black lettering



Class 2.3  
 Toxic Gas  
 White / Black lettering



Class 2.2  
 Non-Flammable, Non-Toxic Gas  
 Green / Black lettering



## Complete solutions for complex tasks

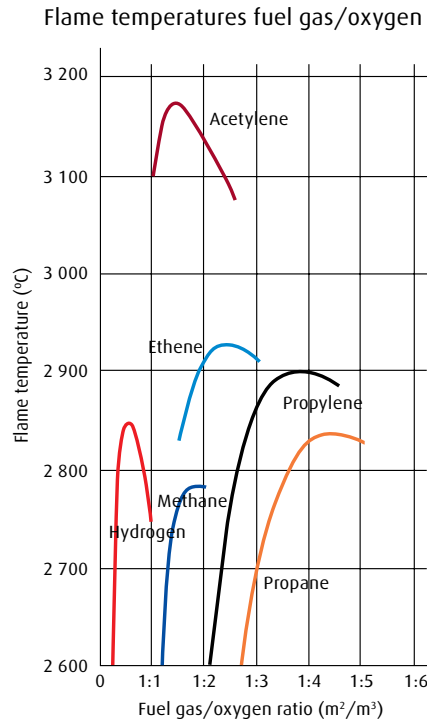
Whether you are preheating, postheating, flame straightening, flame hardening, flame brazing, fusing or hot forming, you want to be sure you are using the appropriate gas and the best equipment. Afrox can help you make the right decision. Our complete LINDOFLAMM® flame solutions ensure that you always deliver the optimum performance with the highest possible cost efficiency.

### The classic combination: oxygen and acetylene

#### Acetylene: The perfect fuel gas

When efficiency, precision and accuracy are required, there is no better choice than acetylene:

- Acetylene produces the highest flame temperatures, providing rapid and concentrated heating
- The unique temperature distribution in an acetylene flame means that most of the energy is contained within the primary flame, allowing for precise heating
- Acetylene also has the highest flame propagation rate, increasing thermal efficiency
- Acetylene produces the lowest moisture content in exhausted gases, reducing corrosion and quality issues.



Flame setting

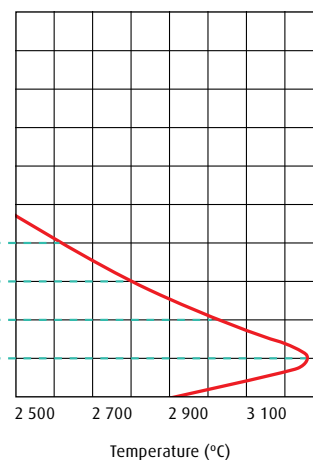
#### Oxygen: The right selection

In order to achieve optimal heating of the workpiece, the flame properties have to be tailored to the specific application. Therefore, the oxygen source (oxygen gas, compressed air, aspirated air) has to be selected carefully:

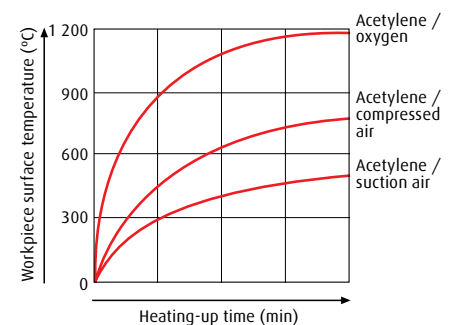
- Oxygen is used for hot forming, flame hardening, flame cleaning and fusing of sprayed coatings. It gives a rapid rise in temperature at the workpiece surface and causes a build-up of heat with a high temperature gradient inside the workpiece
- Compressed air is used for preheating, postheating, flame brazing and flame drying. It lowers the temperature and combustion velocity, producing a mild and gentle, yet intense and economical flame, which can be better controlled. The heating of the workpiece and the temperature gradient inside the part are less than when oxygen is employed. The workpiece is thoroughly heated at a lower surface temperature
- Aspirated-air burners are sometimes used for brazing. They provide lower surface temperatures, a very slight temperature gradient and thorough heating.



Temperature distribution within an oxy-acetylene flame



Effect of oxygen source on workpiece surface temperature



# THE PORTA CYLINDER RANGE

## IDEAL FOR DIY & LIGHT FABRICATION

### PORTATIG VALVES

PortaTIG cylinder valves are identical to larger similar cylinders, eliminating the need for an additional regulator, ensuring easy change-over when needed.

### PORTATIG VALVES

Oxygen and acetylene PortaPak cylinders have unique valves specifically made to fit the existing PortaPak regulator.

### PORTASHIELD VALVES

Portashield cylinder valves are identical to larger similar cylinders, eliminating the need for an additional regulator, ensuring easy change-over when needed.

PortaTIG



A SHIELDING GAS SPECIFICALLY MADE AVAILABLE FOR TIG WELDING

PortaPak



OXYGEN & ACETYLENE IDEAL FOR WELDING AND CUTTING OF VARIOUS THICKNESS OF STEEL

Portashield



AN ARGON BASED MIXTURE USED AS A SHIELDING GAS FOR GMAW (MIG) WELDING



INDUSTRIAL GASES

SECTION 1

# Shielding Gases



## Stainshield® Heavy

Description	Item Number
10,4 kg	99-SE

Stainshield® Heavy is an argon rich three component of argon-helium-CO<sub>2</sub> mixture developed primarily for the MIG welding of stainless steels above 10 mm thick, but it also has applications in the MIG welding of other metals. It is slightly oxidising, making it ideal for use with metals or processes that can tolerate the presence of oxidising gases.

The addition of helium to the shielding gas increases the amount of energy transferred into the weld, producing smooth, even and defect-free welds. Stainshield® Heavy has been developed to greatly improve welding speed, increase deposition rates and, in some cases, reduce preheat requirements.

- All stainless steels
- Tubing and pipework
- Tanks and vessels
- Catering equipment
- Components for the petrochemical industry
- Ship repair industry.



## Stainshield® Plus

Description	Item Number
17,6 kg	30-SE

Stainshield® Plus has been formulated specifically for welders using the GMAW process on all stainless steels, particularly 3CR12. It provides a strong weld and is suitable across a wide range of metal thicknesses, particularly where the final appearance of the weld is important to the product. Its low oxidation potential, stable arc and fluid weld pool produce a decorative finish to the weld.

- All stainless steels
- Tubing and pipework
- Tanks and vessels
- Catering equipment
- Components for the petrochemical industry.



## Stainshield® TIG Plus

Description	Item Number
12,3 kg	187-SE-C

Argon-helium shielding gas mixtures are two component mixtures of argon and helium developed primarily for MIG and TIG welding of non-ferrous metals of between 3-10 mm.

Argon-helium rich shielding gases input more heat into the weld than pure argon, but the addition of argon improves the arc stability. These gases will help a skilled welder to produce smooth, even and defect-free welds. They are also suitable for TIG welding of copper, copper alloys and nickel alloys where high heat input is required.

Mixtures with a high helium content have the ability to transfer heat more effectively to the weld pool. This makes them ideal for welding thick metals that have to be preheated before welding. Preheat can be reduced or, in some cases, dispensed with altogether.

- Automatic and orbital welding
- Pipework
- Electronics
- Petrochemical
- Power generation
- Tubing and seams.



## Stainshield®

Description	Item Number
17,4 kg	27-SE

Stainshield® is a general formulation gas for welders using the GMAW process on all stainless steels. It offers an economical solution, suitable for many applications on a wide range of metal thicknesses. Stainshield® is particularly suitable where minimal oxidation of the weld is required and where there is a risk of carbon contamination of the product. Stainshield® performs well across a range of applications providing good arc stability in dip, pulse and spray transfer modes.

- All stainless steels
- Tubing and pipework
- Tanks and vessels.



## Argoshield® Light

Description	Item Number
17,8 kg	24-SE-LIG
3,6 kg	24-IE
267 kg	24-ME15-LIG

Argoshield® Light has been formulated specifically for welders using the GMAW process on carbon steel typically less than 4 mm thick. This gas mixture, which can be used in all positions, produces low heat input and narrow weld beads, so reducing distortion and burn-through. Together with its excellent arc stability and high speed capability for welding thin sheet, Argoshield® Light is easy to use, provides a quality weld and minimises overall cost.

- Duct and sheet metal engineering industries
- Automotive components manufacture
- Vehicle repair
- Cabinets/steel furniture manufacture
- Domestic appliance manufacture
- Light gauge storage tanks.



## Argoshield® 5

Description	Item Number
17,8 kg	24-SE
8,4 kg	24-KE
1,8 kg	27-GD

Argoshield® 5 has been formulated specifically for welders using the GMAW process on carbon steel typically less than 4 mm thick. This gas mixture, which can be used in all positions, produces low heat input and narrow weld beads, thereby reducing distortion and burn-through. Together with its excellent arc stability and high speed capability for welding thin sheet, Argoshield® 5 is easy to use, provides a quality weld and minimises overall cost.

- Duct and sheet metal engineering industries
- Automotive components manufacture
- Vehicle repair
- Cabinets/steel furniture manufacture
- Domestic appliance manufacture
- Light gauge storage tanks.



## Argoshield® Heavy

Description	Item Number
19,6 kg	25-SE

Argoshield® Heavy has been formulated for welders using the GMAW process on constructional steelworks typically greater than 10 mm thick. Its higher carbon dioxide content gives welds in carbon steel good rounded penetration profiles that are deep and wide. This produces consistently reliable strong welds, which can be used for bridges, buildings, boilers, plant and machinery. Argoshield® Heavy is ideal for multi-pass welds in spray mode on heavy sections, allowing fast welding speeds which reduce costs. It also has the advantage of tolerating contaminants such as dirt, oil, grease and rust and poor joint fit-up.

- Heavy engineering
- Heavy structural steel
- Boiler manufacture
- Shipbuilding and repair
- Heavy vehicle manufacture
- Thick-walled pipes and pressure vessels
- Pad-eyes and lifting lugs
- Earth-moving equipment.



## Argoshield® Universal

Description	Item Number
18,5 kg	28-SE

Argoshield® Universal has been formulated for general fabrication of carbon steel over the typical thickness range 5-12 mm. This gas mixture is easy to use, giving good weld performance across a wide range of applications and welding parameters. It can be used in any position, for single- and multi-pass welds in dip, spray, pulsed or synergic mode. Combined with its excellent arc stability, low spatter and broad weld profile, these advantages make Argoshield® Universal an excellent choice for quality and economy in general engineering applications.

- General fabrication
- General industrial products
- Light to medium-plate fabrication
- Structural steelworks
- Bridgework
- Pipe and tube joining
- Vehicle manufacture/heavy trucks.





### Copashield®

Description	Item Number
4,8 kg	395-SE

Copper and copper-based alloys are typically characterised by a high thermal conductivity and high heat capacity. The high helium content of Copashield® provides a very intense arc which allows these materials to be welded more readily than by using other gases. In many cases, preheating can be eliminated by the high arc energy available. Copashield® is suitable for both GMAW and GTAW welding. Copashield® can also be used on aluminium and aluminium alloys above 6 mm and is ideal because it is a fast welding gas with hotter arc, with low porosity at high productivity levels.

- Copper-lined steel pressure vessels
- Bus-bar manufacture
- Spirit distillation vessels
- Arc furnace electrode holders
- Heat exchangers
- Petrochemical equipment
- Calorifiers.



### TIGshield®

Description	Item Number
3,5 kg	87-IE

TIGshield® is an argon shielding gas developed primarily for TIG welding. Welding with argon produces a relatively cold arc suitable for welding thin section materials. As it has a low ionisation potential and is a completely inert gas, it easily forms a welding arc without reacting with the metal components being welded.

When welding thicker material, other gases are added to the argon base to produce a hotter welding arc and to improve fusion characteristics when MIG welding, if the metallurgy of the material permits it.

Argon, a colourless, odourless and tasteless gaseous element, is heavier than air.



### Alushield®

Description	Item Number
8,4 kg	94-SE

Alushield® is a gas mixture of argon and helium for GMAW and GTAW welding of aluminium and its alloys. It is a versatile, high specification gas suitable for welding over a range of thicknesses, giving consistently good penetration and bead shape. The mixture is chemically inert providing a stable, steady and controllable arc. Alushield® can also be used on automated welding processes and by allowing faster welding speeds with lower defect rates, can significantly reduce fabrication costs.

Helium content provides a higher arc energy to combat the high thermal conductivity of these alloys, increasing penetration and minimising the need for preheating.

- Ship and marine superstructures
- Pressure vessels
- Chemical and petrochemical plant
- Pipework.



### Fluxshield®

Description	Item Number
20,5 kg	26-SE

Fluxshield® is an argon/carbon dioxide-based shielding gas specifically designed for high quality single- and multi-pass welding of mild, low alloy and stainless steels using the flux cored and metal cored wire processes. It can be used in all positions either manually or semi-automated, depending on the wire type. Fluxshield® exhibits excellent arc stability, generates good penetration profiles, a very smooth weld appearance with low spatter levels and promotes excellent slag detachability. Fluxshield® is also tolerant of poor fit-up and less than ideal joint cleanliness.

- General plate fabrications
- Structural steel and bridgework
- Heavy engineering type fabrications
- Pressure vessels, piping and tank manufacture
- Offshore drilling rigs and shipbuilding
- Fabrications previously limited to SMAW using AWS-E7018 electrodes, with stringent mechanical strength requirements, i.e., for low temperature impact toughness, high yield and UTS requirements
- Ideal for HSLA, mild, structural and stainless steels.

- All types of stainless steels 0-3 mm
- 95% of TIG applications up to 3 mm for stainless steel; 5 mm for carbon steel
- Excellent purging gas
- Thin applications.

## SECTION 2

# HOSPITALITY GASES



As the leading supplier of gases to the hospitality industry in South Africa, Afrox provides a dedicated gases solution, which includes Handigas for cooking and heating, Suremix for draught beer and soft drink beverage dispensing, and Partigas for decorative balloon inflation.

Sureserve simplifies administration, by providing a high level service of regular gas deliveries by highly experienced teams, led by sales and service coordinators, on one consolidated account for all gases required.

### Handigas

A clean burning liquid petroleum gas (LPG) that provides all energy users with a safe, efficient and economical alternative for a diverse range of cooking and heating applications.

### Suremix

A range of carbon dioxide/nitrogen based gases, for the beverage dispensing of draught beers, wines and soft drinks. Special mixtures for different lagers, pilsners, ales, stouts and draught beers ensure a perfect pour every time.

### Partigas

Afrox helium balloon gas that takes special events to new heights. It's the quick, clutter-free promotional tool that is at the heart of a floating balloon fantasy and turns any bare, bleak space into a special occasion.

## Handigas

Handigas represents a significant portion of the hospitality service offer to the hospitality sector (hotels, resorts, conferencing centres, restaurants, fast foods, lodges and B&Bs) and is mainly used for cooking and heating. In major centres, Handigas, Suremix and Partigas deliveries are carried out by specialised hospitality sales and service distribution teams.

### Handipack

Cylinder colours:

- Gas withdrawal - Dark Admiralty Grey, with Handigas branding

Available at all Afrox outlets

Please check with your local Afrox branch or call 0860 020202

MSDS available from [www.afrox.co.za](http://www.afrox.co.za)

\*Note: Privately owned cylinder

Material	Description	Gas Content (kg)	Pressure kPa @ 20°C	Valve Outlet Connection	Item Number
Handipack Cyl/Cooker		6,0	± 500	3/8" RH-F (camping)	W902216

### Cooker Ring and Deflector Plate

Item Number	W902125
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### Mixer Tube and Burner

Item Number	W902126
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### Regulator (Low Pressure) Handigas

Item Number	W010004
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## Afrox LPG 2 Burner Hotplate

Item Number	W012671
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## Suremix Gases

### Carbon Dioxide (CO<sub>2</sub>) and CO<sub>2</sub> - Nitrogen (N<sub>2</sub>) Mixtures

#### Applications

- Controlled storage and dispensing of all draught beers such as lagers, ales, pilsners and stouts
- Controlled storage and dispensing of soda fountain soft drinks
- Controlled storage and dispensing of non-carbonated wines and fruit juices
- Afrox recommends the use of particular percentage mixtures for specific applications in line with the requirements of each beverage supplier.

Features	Benefits	Hazards
Colourless and odourless gas	Acts to blanket beers and soft drinks from the atmosphere	CO <sub>2</sub> and N <sub>2</sub> are asphyxiants (do not support life)
CO <sub>2</sub> is soluble in water at moderate temperatures	Acts to maintain equilibrium of the gas content in beverages	CO <sub>2</sub> is toxic in high concentrations
Food grade certification	Provides better control of non-refrigerated beverages	
Approved by beer and soft drink companies	Enhances appearance, aroma and taste	
CO <sub>2</sub> is heavier than air	CO <sub>2</sub> can be added to beverages in controlled conditions to increase soluble levels	
CO <sub>2</sub> is slightly corrosive in the presence of moisture		No hazard

### Suremix 100

Gas	Purity
Carbon dioxide	>99,9%
	Food grade

Cylinder colour: White valved guard, ivory body, shoulder and neck  
 Not all cylinder sizes are available at all Afrox outlets  
 Please check with your local Afrox branch or dial 0860 020202  
 MSDS available from [www.afrox.co.za](http://www.afrox.co.za)

Material Description	Cylinder Size (ℓ)	Valve Outlet Connection	Item Number
Suremix 100 large	50	No 8 Male RH	569 SE
Suremix 100 small	10	No 8 Male RH	569 IE





## Suremix 60

Gas	Purity
Carbon dioxide/nitrogen	>99,9%
	Food grade

Contains 60% CO<sub>2</sub> and 40% nitrogen

Cylinder colour: White valved guard, ivory body, purple shoulder and neck

Not all cylinder sizes are available at all Afrox outlets

Please check with your local Afrox branch or dial 0860 020202

MSDS available from [www.afrox.co.za](http://www.afrox.co.za)

Material Description	Cylinder Size (ℓ)	Valve Outlet Connection	Item Number
Suremix 60 large	50	No 3 Female RH-F G5/8"	566 SE
Suremix 60 small	10	No 3 Female RH-F G5/8"	566 IE



## Suremix 30

Gas	Purity
Carbon dioxide/nitrogen	>99,9%
	Food grade

Contains 30% CO<sub>2</sub> and 70% nitrogen

Cylinder colour: White valved guard, ivory body, green shoulder and neck

Not all cylinder sizes are available at all Afrox outlets

Please check with your local Afrox branch or dial 0860 020202

MSDS available from [www.afrox.co.za](http://www.afrox.co.za)

Material Description	Cylinder Size (ℓ)	Valve Outlet Connection	Item Number
Suremix 30 large	50	No 3 Female RH G5/8"	564 SE
Suremix 30 small	10	No 3 Female RH G5/8"	564 IE



## Suremix N

Gas	Purity
Nitrogen	>99,9%
	Food grade

Cylinder colour: Ivory body, grey shoulder and neck

Not all cylinder sizes are available at all Afrox outlets

Please check with your local Afrox branch or dial 0860 020202

MSDS available from [www.afrox.co.za](http://www.afrox.co.za)

Material Description	Cylinder Size (ℓ)	Valve Outlet Connection	Item Number
Suremix N large	50	G3/4" RH-F	567 SE
Suremix N small	10	G3/4" RH-F	567 IE



## Suremix Regulators

Content	Material Description	Item Number
1	Suremix 60/30 Regulator	W003038
1	Suremix N Regulator	W003038

Note: For Suremix N a nitrogen (G 3/4" RH-F) valve, inlet stem and nut (Item Number W003082) must be fitted.



# Partigas

SECTION 2

HOSPITALITY GASES



## Helium (He)

Gas	Purity
Helium	>99,9%
Impurities - air/methane	<0,9%

Balloons are the answer to making any event special, creating an impact or raising awareness. They are recognised as a cost-effective way to create eye-catching and effective displays, and as a giveaway to customers they represent low-cost advertising for you.

Whatever your idea, Afrox can offer you the solution. Latex balloons will float for six to eight hours whereas self-sealing metallic foil balloons should last several days.

It will take one person approximately two hours to inflate 500 balloons. Latex balloons fitted with plastic valves and foil balloons with self-seal valves are quicker to fill. Using balloon clips also saves time. Talk to your nearest party balloon outlet or consult the local Yellow Pages.

Partigas cylinders come in three sizes. To work out the size of the cylinder you require, you need to answer a few simple questions:

- What type of balloons do you want to use?
- What size balloons do you want to use?
- How many balloons do you want to inflate?

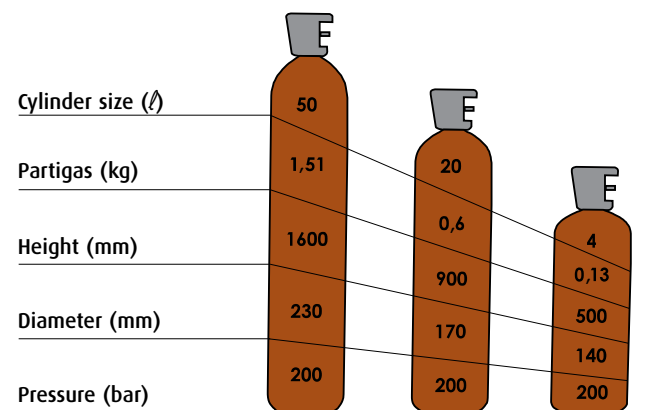
Using the above right diagram, you can determine the most appropriate cylinder for your needs. Note that the diagrams show the approximate number of balloons that can be filled. Numbers will vary according to balloon manufacturer and the shape of the balloon.

## Useful Tips

- It is very important not to over-inflate your balloons. For instance, if you inflate a 300 mm balloon to 375 mm, you will use almost twice as much helium
- Filling balloons is quick and simple with an Afrox inflator
- Depending on your requirements, an inflator can be purchased or rented
- Rent an inflator by paying a refundable deposit.



Partigas Cylinder Diagram



Size	Large	Medium	Small
Item Number	528-SE	528-JE	528-UE
Cylinder weight (kg)	76	29,6	9
Approximate number of balloons (300 mm)	650	250	50

# Balloon Inflator

Content	Material	Description	Item Number
1	Conwin Classic Inflator		W101531

(Available on payment of a refundable deposit)

Conwin's Classic Inflators are designed for convenience and reliability. The classic line is available with either a Soft-Touch Push Valve or a Flex-Tilt Valve outlet to suit your personal preference. The Soft-Touch Push Valve Extension Tip or Flex-Tilt Valve enables the Classic inflator to inflate latex and foil balloons. Optional pressure gauge measures how much helium is in the cylinder and enables users to calculate the number of balloons that can be inflated.

### Manually inflates latex balloons

Place the balloon over the latex outlet and press downward on the Soft-Touch Push Valve until balloon has reached desired size. Use Conwin's Balloon Tying Discs to quickly and easily tie and attach ribbon.

### Manually inflates foil balloons

Place the neck of the foil onto extension tip of the Soft-Touch Push Valve and begin inflating. For best results, inflate foil balloons as slowly as possible and remove balloon from the outlet while there are still wrinkles along the seam line.



The Classic Inflator includes:

- The Balloon Outlet (Soft-Touch Push Valve)
- 1 Pressure Gauge (models available with or without gauge)
- 1 Ribbon Cutter
- 1 Disc Tyer Post



# SECTION 3

## SPECIAL PRODUCTS & CHEMICALS

### Refrigerants



#### Refrigerants R427A

- Non-toxic, non-flammable zero-ODP (Ozone Depletion Potential) refrigerant with a lower GWP (Global Warming Potential) among other retrofit solutions since its GWP below 2000
- Assigned A1 safety classification by ASHRAE Standard 34
- Can be used to replace R22 in existing equipment for a wide range of temperatures
- Can be used to retrofit low temperature refrigeration units as well as air-conditioning installations

Item Number	Cylinder Size	Contents (kg)	Valve Outlet Connection
578042-LA-N	Cylinder	10,0	5/8" BSPF right hand female



#### Refrigerants R404A

- Colourless, non-flammable gas mixture at atmospheric pressure with a slight ethereal odour. Supplied in low pressure cylinders
- Can be used in commercial and medium temperature refrigeration applications
- Ozone-friendly replacement for R502
- Installations designed with R404A will reach the end of its life without needing a refrigeration change

Item Number	Cylinder Size	Contents (kg)	Valve Outlet Connection
W341079	Disposable cylinder	10,9	1/4" flare
578040-LG-C	Cylinder	44,0	5/8" BSPF right hand male



#### R134A

- Increasing use as a replacement for CFC-12
- Has a high critical temperature, which ensures a good coefficient of performance especially at high condensing temperatures in air-cooled systems
- Wide household use in medium temperature food cabinets, water chillers and fountains, heat pumps and dehumidifiers
- Blowing agent for various foams
- Propellant for aerosol pharmaceuticals, mousses, insecticides, cleaning and other household products

Item Number	Cylinder Size	Contents (kg)	Valve Outlet Connection
W341045	Disposable	13,6	1/4" flare
578013-LG-N	Cylinder	60,0	5/8" BSPF right hand male
578013-TC-N	Drum	850,0	



### Refrigerants R410A

- Non-flammable and non-toxic and is mostly used in new equipment for small and medium sized air-conditioning applications as an R22 alternative
- Small and medium commercial air-conditioning systems, chillers and commercial refrigerations
- Suitable replacement for new applications previously operating with HCFC-22

Item Number	Cylinder Size	Contents (kg)	Valve Outlet Connection
W341134	Disposable	11,3	1/4" flare



### Refrigerants R507A

- Colourless, non-flammable gas mixture at atmospheric pressure with a slight ethereal odour. Supplied in low pressure cylinders
- Commercial and medium temperature refrigeration applications
- A replacement for CFC-502

Item Number	Cylinder Size	Contents (kg)	Valve Outlet Connection
W341080	Disposable	11,3	1/4" flare



### Refrigerants R22

- Colourless, non-flammable, non-toxic gas. In low concentrations, it is odourless. In higher concentrations, its odour is mild. It is shipped in steel cylinders as a liquefied gas

Item Number	Cylinder Size	Contents (kg)	Valve Outlet Connection
W341078	Disposable	13,6	1/4" flare
577022-LG-N	Cylinder	59,0	5/8" BSPF right hand male
577022-TA-N	Drum	785,0	

\*R22 is an HCFC refrigerant and is part of the refrigerant gases being phased out as part of the Montreal Protocol. A complete ban on all HCFC refrigerants is planned to be in place by 2030.





### Refrigerants R152A

- Commonly used as a component within other refrigerant blends, as a propellant, and in some XPS foams. Its relatively low global warming potential when compared to other HFCs is desirable; however, its flammability creates challenges, thus limiting its use
- Suitable for use in new equipment
- Replacement for R134a

Item Number	Cylinder Size	Contents (kg)	Valve Outlet Connection
578015-LG-N	Cylinder	47,0	5/8" BSPF right hand male
578015-TA-N	Drum	730,0	



### Refrigerants R407C

- HFC blend
- Colourless and non-flammable gas mixture at atmospheric pressure with a slight odour
- Supplied in low pressure cylinders
- R407C is suitable for use in new equipment
- Can also be used to retrofit some old R22 systems with an oil change
- Replacement for R22

Item Number	Cylinder Size	Contents (kg)	Valve Outlet Connection
W341107	Disposable	13,0	1/4" flare



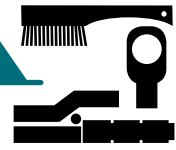
### Refrigerants R417A

- Developed to replace R22 in air-conditioning applications but has also been successfully utilised in refrigeration applications such as commercial refrigeration
- Suitable for use in new equipment. It can also be used to retrofit some old R22 systems with an oil change
- Replacement for R22

Item Number	Cylinder Size	Contents (kg)	Valve Outlet Connection
W341083	Disposable	13,0	1/4" flare

# SECTION 4

## ARC ACCESSORIES



### Accessories



#### Cable Lugs - Fixing Hole

- Soldering type
- Type numbers denote amps and fixing hole size

Description	Item Number
200 A 14 mm	W053021
150 A 13 mm	W053022
300 A 17 mm	W053023



#### Cable Lugs - Crimping

- Crimping type
- 35 to 90: cable mm
- 12 = fixing hole (mm)

Description	Item Number
35 x 12 mm (300 A)	W053011
50 x 12 mm (400 A)	W053012
70 x 12 mm (500 A)	W053013
95 x 12 mm (600 A)	W053014



#### Cable Connector

Description	Item Number
CC 20 Plug/Socket	W054154
CC 20 Plug	W054155



#### Cable Connectors

Description	Item Number
CC 17 Plug	W054151



#### Cable Connectors

Description	Item Number
CC 18 Socket	W054152



#### Plug

Description	Item Number
Male Dinse Plug (50 - 70)	W033718
Male Dinse Plug (10 - 25)	W054489



#### Female Dinse Plug (50 - 70)

Description	Item Number
Socket Welding Female	W035751



#### Panel Mount Female Socket

Description	Item Number
Panel Mount Female Socket (10 - 25)	W054488
Panel Mount Female Socket (50 - 70)	W035692





### Earth Clamp - Crocodile

Description	Item Number
150 A	W053025



### Earth Clamp - Crocodile

Description	Item Number
300 A	W054146



### Earth Clamp - Crocodile

Description	Item Number
600 A	W054148



### Earth Clamp - Screw Type

- Screw type 600 A

Description	Item Number
600 A TRC	W054147
600 A EC600	W054149



### Earth Clamp - EC Screw Type

Description	Item Number
600 A	W054149



### Chipping Hammer

- Steel heavy duty long life hammer

Item Number	W053020
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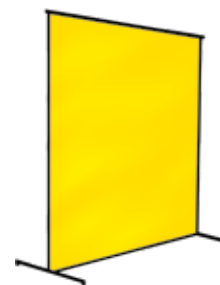
### Wire Brush

Description	Item Number
5 Row - Mild Steel	W053003



### Wire Brush

Description	Item Number
6 Row - Stainless Steel	W053081



### Welding Screen 2 x 3 m

- Flame retardant dipped
- Excludes stands

Description	Item Number
Wire brush 5 row MS	W092020



### Hot Box 10 kg 220 V Thermostat Controlled

- 220 V thermostat controlled
- Max temp 250°C
- 10 kg

Item Number	W052005
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## Abrasives, Cleaning & Preparation Products



### Cutting Discs - Inox (Stainless Steel)

Description	Item Number
Superflex 350x3,4x25,4 Inox Cutting Disc	W053379
Superflex 230x2,5 Inox Ultra Cutting Disc	W053407
Superflex 115x2,4 Inox Ultra Cutting Disc	W053411
Superflex 180x2,5 Inox Ultra Cutting Disc	W053408
Superflex 150x2,5 Inox Ultra Cutting Disc	W053409
Superflex 125x2,4 Inox Ultra Cutting Disc	W053410



### Cutting Discs - Carbon Steel (Professional)

Description	Item Number
Superflex 125x2,5 Prof Steel Cutting Disc	W053446
Superflex 115x2,5 Prof Steel Cutting Disc	W053447
Superflex 180x3 Prof Steel Cutting Disc	W053442
Superflex 230x3 Prof Steel Cutting Disc	W053441
Superflex 150x3 Prof Steel Cutting Disc	W053443
Superflex 100x2,5x16 Prof Steel Cutting Disc	W053448



### Cutting Discs - Carbon Steel (Professional 2-1 / Stainless & Carbon Steel)

Description	Item Number
Superflex 230x1,9 Prof 2-in-1 Cutting Disc	W053405
Superflex 125x1,0 Prof 2-in-1 Cutting Disc	W053406
Superflex 115x1,0 Prof 2-in-1 Cutting Disc	W053440



### Cutting Discs - Carbon Steel (Industrial 2-1 / Stainless & Carbon Steel)

Description	Item Number
Superflex 100x1,0x16 IND 2-in-1 Cutting Disc	W053272
Superflex 115x1,6 2-in-1 Cutting Disc	W053403
Superflex 115x1,0 IND 2-in-1 Cutting Disc	W053273
Superflex 230x1,9 IND 2-in-1 Cutting Disc	W053275
Superflex 115x1,0 IND 2-in-1 Cutting Disc (P05)	W053402





## Cutting & Grinding Disc

Description	Item Number
Superflex 115x2,2 CG-27 Cutting & Grinding Disc	W053263



## Cutting Discs - Carbon Steel (Industrial)

Description	Item Number
Superflex 115x3 IND Steel Cutting Disc	W053285
Superflex 230x3 IND Steel Cutting Disc	W053279
Superflex 350x3,6 IND Steel Cutting Disc	W053274



## Grinding Discs - Inox

Description	Item Number
Superflex 230x7 Inox Ultra Grinding Disc	W053416
Superflex 115x6 Inox Ultra Grinding Disc	W053436
Superflex 180x7 Inox Ultra Grinding Disc	W053415
Superflex 150x6,5 Inox Ultra Grinding Disc	W053434
Superflex 125x6 Inox Ultra Grinding Disc	W053435
Superflex 100x6x16 Inox Ultra Grinding Disc	W053437



## Grinding Discs - Carbon Steel (Professional)

Description	Item Number
Superflex 115x6 Prof Steel Grinding Disc	W053445
Superflex 125x6 Prof Steel Grinding Disc	W053439
Superflex 100x6x16 Prof Steel Grinding Disc	W053444
Superflex 150x6,5 Prof Steel Grinding Disc	W053438



## Grinding Discs - Carbon Steel (Industrial)

Description	Item Number
Superflex 115x6 IND Steel Grinding Disc	W053287
Superflex 230x7,2 IND Steel Grinding Disc	W053291



## Grinding Discs - Heavy Duty

Description	Item Number
Superflex 180x7 Heavy Grinding Disc	W053414
Superflex 230x4,1 Heavy Grind (Back)	W053412
Superflex 230x7 Heavy Grinding Disc	W053413
Superflex 230x5,2 Heavy Duty Back Grind	W053417



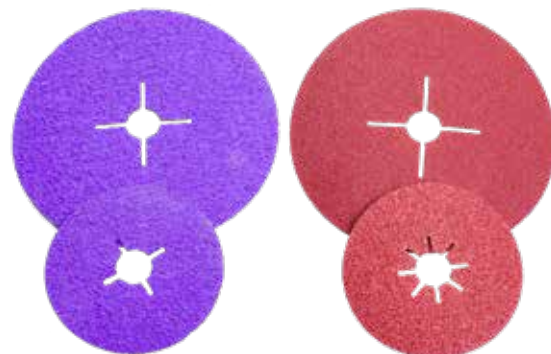
## Flap Discs

Description	Item Number
Superflex 115x22 AZ60 IND Flap Disc	W053243
Superflex 115x22 AZ80 IND Flap Disc	W053245
Superflex 180x22 AZ60 IND Flap Disc	W053296
Superflex 180x22 AZ80 IND Flap Disc	W053299
Superflex 150x22 AZ60 IND Flap Disc	W053271
Superflex 115x22 AZ40 IND Flap Disc	W053241
Superflex 115x22 AZ120 IND Flap Disc	W053247
Superflex 180x22 AZ40 IND Flap Disc	W053293
Superflex 180x22 AZ120 IND Flap Disc	W053302
Superflex 125x22 AZ60 IND Flap Disc	W053282



## Spindle Mounted Flap Wheel

Description	Item Number
Superflex 50x25x6 P320 Flap Wheel	W053229
Superflex 50x25x6 P120 Flap Wheel	W053429
Superflex 50x25x6 P240 Flap Wheel	W053430
Superflex 50x25x6 P80 Flap Wheel	W053428
Superflex 50x25x6 P60 Flap Wheel	W053251



## Fibre Discs

Description	Item Number
Superflex Deerfos 125x22 P60 Fibre Disc	W053424
Superflex Deerfos 125x22 P80 Fibre Disc	W053426
Superflex Deerfos 125x22 P100 Fibre Disc	W053427
Superflex P36 115x22 Bora 9 Cer Fibre D	W053423
Superflex P36 178x22 Bora 9 Cer Fibre D	W053425





## Wire Wheels

Description	Item Number
115x10xM14 1 Row Knotted Wire Wheel	W053253
Superflex 50x25x6 MW912 Mounted Wire Wheel	W053257
115x10x22,2 1 Row Knotted Wire Wheel	W053255
180x10xM14 1 Row Knotted Wire Wheels	W053259
180x10x22,2 1 Row Knotted Wire Wheels	W053265



## Mounted Points

Description	Item Number
Superflex A12 HC Ruby Mounted Point	W053421
Superflex A11 Ruby Mounted Point	W053227
Superflex A3 Mini HC Ruby Mounted Point	W053225
Superflex IPDS Point Black	W053420
Superflex A3 Jumbo Ruby Mounted Point	W053419
Superflex A1 Ruby Mounted Point	W053231
Superflex A15 Ruby Mounted Point	W053235

## Tungsten Burrs

Description	Item Number
Superflex CP102006-A Cyl Pl Tungsten Burr	W053205
Superflex CR102006-C Cyl Rd Tungsten Burr	W053220
Superflex TP102006-G Pointed Tungsten Burr	W053236
Superflex TR102006-F Round Tungsten Burr	W053242
Superflex TR122506-F Round Tungsten Burr	W053244
Superflex T103006-L Ball Nose Tungsten Burr	W053246
Superflex T123006-L Ball Nose Tungsten Burr	W053249
Superflex CP122506-A Cyl Pl Tungsten Burr	W053210
Superflex CR122506-C Cyl Rd Tungsten Burr	W053232
Superflex TP122506-G Pointed Tungsten Burr	W053238
Superflex CP061606-A Cyl Pl Tungsten Burr	W053200
Superflex CR061606-C Cyl Rd Tungsten Burr	W053215
Superflex TP061606-G Pointed Tungsten Burr	W053234
Superflex TR061606-F Round Tungsten Burr	W053240



## Penetrant, Developer and Remover

Afrox offers a non-destructive range of testing products. These are used to identify weld defects and clean the affected area before welding.



## Penetrant, Developer and Remover

Description	Item Number
NDT - Arox HF-P Penetrant 300 g	W033570
NDT - Arox HF-P Remover 300 g	W033572
NDT - Arox HF-P Developer 300 g	W033571

## Pickling and Passivating Paste

To improve your stainless steel weld quality after welding, apply Arox's pickling and passivating paste. It forms a thin layer that will protect your welds from corrosion and rust.



Description	Item Number
Passivating Paste AOX 1 ℓ	W053574
Pickling Paste AOX 1 ℓ	W053575

## Anti-Spatter

Afrox offers a variety of anti-spatter to meet customer requirements. We have a non-silicone based anti-spatter as well as a water based version. The latter does not contain hydrocarbons which makes it environmentally friendly.



## Anti-Spatter

Description	Item Number
Spatter Off (Water based)	W034009
Spatter Release 640 NO/SI 500 ml	W034010
TRC Spatter Release Aerosol 500 ml	W034015
Anti-Spatter AOX Liquid 500 ml	W034013
Anti-Spatter AOX Liquid Refill 5 ℓ	W034014

## Torch Coolant

Torch coolant is used for plasma cutting to circulate around the electrode and nozzle and prevent it from melting.



## Afrox Torch Coolant 5 ℓ

Item Number	W053576
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## Electrode Holders & Gouging Torches



### Electrode Holder Suhan Jaw Type

- Suhan jaw type
- Light to medium construction
- Fully insulated

Description	Item Number
300 A	W053090
500 A	W053092



### Electrode Holder Jackson Type

- Heavy duty construction
- Heat resistant insulation

Description	Item Number
500 A	W053098



### Electrode Holder Twist Lock

- Twist lock
- Heavy duty
- Fibre lined and heat resistant

Description	Item Number
400 A	W054202
600 A	W054204



### Electrode Holder Safegrip Jaw Type

- Heavy duty construction with double ball point cable connections

Description	Item Number
300 A up to 4 mm	W054200
400 A up to 5 mm	W054201
500 A up to 5 mm	W054203
600 A up to 8 mm	W054208



### Electrode Holder Optimus Type

- Heavy duty construction
- Heat resistant insulation

Description	Item Number
300 A	W053095
400 A	W053096

### Carbon Gouge TRC

- Fast metal removal process
- Easy to control
- Low equipment cost
- Economical to operate
- Easy to operate



Description	Item Number
4,0 x 305 mm - 100 pack	W054915
6,4 x 305 mm - 50 pack	W054917
8,0 x 305 mm - 50 pack	W054918
9,5 x 305 mm - 50 pack	W054919
16 x 355 mm joint - 50 pack	W054922
13 x 355 mm joint - 50 pack	W054926
9,5 x 355 mm joint - 50 pack	W054933
5,0 x 305 mm - 100 pack	W054934

# Welding Cable

Afrox welding cable is available with a choice of rubber and PVC insulation. Rubber insulated cable is recommended for use outdoors and is available in different amperages and duty cycles. PVC-insulated cable is used indoors only and is also available in a range of amperages.

Rated Area (mm <sup>2</sup> )	Welding current in amps for duty cycle of:					Colour	Item Number
	100%	85%	60%	30%	20%		
<b>Natural Rubber Selection Guide</b>							
35	165	180	215	305	370	Black/Grey	W053007
50	210	230	275	385	470	Black/Red	W053008
70	265	285	410	580	710	Black/Brown	W053015

<b>PVC Selection Guide</b>							
16	110	120	145	200	250	Green	W053100
25	150	165	195	275	340	Blue	W053101
35	185	200	240	340	415	Grey	W053102
50	230	250	300	420	520	Red	W053103
70	290	315	380	530	650	Brown	W053104
95	355	385	465	650	800	Yellow	W053105

Description	Dimensions	Item Number
PVC welding cable	35 mm x 5 m	W053107
PVC welding cable	50 mm x 5 m	W053108
PVC welding cable	70 mm x 5 m	W053109
PVC welding cable	35 mm x 10 m	W053110
PVC welding cable	50 mm x 10 m	W053111
PVC welding cable	70 mm x 10 m	W053113

Classes of Welding	Automatic (Submerged arc, MIG)	Manual (MMA, HG)	Very intermittent (MMA, MIG, MAG, HG)
	Semi-automatic (MIG, MAG, flux cored)		



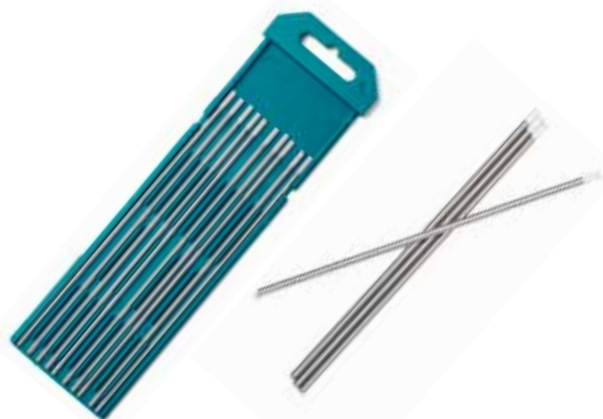
## TIG Tungsten

### Zirconiated TIG Electrodes (White tips)

Zirconiated tungsten electrodes exhibit good performance characteristics in AC welding, especially under high load current. These electrodes can retain a balled end when welding, which results in less tungsten permeation and good corrosion resistance. It balls up well in AC welding and has a more stable arc than pure tungsten. Displays excellent performance in high load AC welding. Not replaceable by any other electrodes. Resists contamination well in AC welding.

**Application:** Zirconiated tungsten is most commonly used for AC welding of aluminium and magnesium alloys. Preferred when tungsten contamination of weld is intolerable.

The surface condition of zirconiated tungsten electrode is polish grounded. It is bright and tipped with the brown and white colour for its different composition of zirconium in tungsten zirconiated electrode.



Description	Item Number
Wolfram 2% Zirconiated 4,0 mm	W031005
Wolfram 2% Zirconiated 3,2 mm	W031004
Wolfram 2% Zirconiated 2,4 mm	W030908
Wolfram 2% Zirconiated 1,6 mm	W030907

### Witstar TIG Tungsten (Teal tips)

Witstar TIG electrodes are made from rare earth materials. They are safe to use and not harmful, unlike thoriated tungsten which is radioactive. Witstar TIG electrodes are used for alloyed and non-alloyed metals, alloyed and non-alloyed coppers, nickel and nickel alloys, aluminium and aluminium alloys, magnesium and magnesium alloys and titanium and titanium alloys.

Description	Item Number
Witstar TIG Tungsten 3,2 mm (Pack of 10)	W031002
Witstar TIG Tungsten 2,4 mm (Pack of 10)	W031012
Witstar TIG Tungsten 1,6 mm (Pack of 10)	W031014



### Transarc® Thoriated TIG Tungsten (Red tips)

Thoriated tungsten electrodes provide excellent resistance against weld pool contamination while at the same time offer the welder easier arc starting capabilities and a more stable arc. Thoriated tungsten electrodes are the most commonly used tungsten material; thoria is low-level radioactive material, but it was the first to display a significant improvement over pure tungsten.

**Application:** Thoriated tungsten electrodes are generally used in DC electrode negative or straight polarity applications such as carbon and stainless steels, nickel alloys and titanium, as they operate well even when overloaded with extra amperage, then improving the performance of welding.

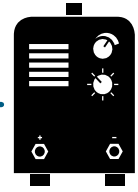


Description	Item Number
Transarc® 2% Thoriated 3,2 mm	W031032
Transarc® 2% Thoriated 2,4 mm	W031024
Transarc® 2% Thoriated 1,6 mm	W031016



## SECTION 5

# ARC EQUIPMENT & PROCESSES



## Miller Range

### MIG Power Sources

#### Miller XPS 450 Deluxe Package



**Please note:**

- Shielding gas and welding consumable requirements are excluded from above packages and should be selected according to customer requirements.
- Please refer to the Shielding Gases and Welding Consumables section in the Product Reference Manual for detailed product specification and description.

Three-phase 380 VAC +-15%, 50 Hz. Rated at 450 A, 45% duty cycle.

The Miller XPS 450 with a segregated (remote) wire feeder provides greater flexibility for the operator. This industrial heavy-duty package comes standard with a rugged four-drive-roll wire feeder that features an adjustable run-in control that allows for optimal arc starting. The Miller XPS 450 comes standard with 40 voltage step selection for exceptional arc stability. Additional features include trigger latch option, gas purging and burn back control and multiple inductance selection ports.

Applications include; medium to heavy engineering, fabrication and manufacturing of mining and construction equipment, with the use of the MIG, FCAW and MCAW processes.

Package includes:

- Miller XPS 450 DC CV power source
  - Power source supplied with undergear
- Drive roll kit:
  - \*Double-sided V-Groove 1,0 mm & 1,2 mm
- \*\*Binzel MB 40 KD MIG gun
- Earth clamp and welding cable
- Shieldmaster® flowmeter regulator CO<sub>2</sub>/Argon
- Noryl basket adaptor
- 3 m inert gas hose and fittings

\* Drive roll kit comprises one drive roll per pack

\*\* Binzel MIG gun includes liner, tip adaptor/gas diffuser, contact tip and gas shroud.

Item Number

W034450



## TIG Power Sources

### Miller Maxstar 161 STH Package



Single-phase 50/60 Hz. Rated at 160 A 20% duty cycle, 110 A 100% duty cycle. High frequency TIG (GTAW), pulsed TIG (GTAW-P), MMA.

Ideal for light industrial applications. Built-in voltage reduction device.

Package includes:

- Maxstar 161 power source
- 2 m power cable (no plug)
- X-CASE provides protection in transport and storage
- RCCS-6M remote finger tip control (W195184)
- Weldcraft A-150 (WP-17) 3,8 m TIG torch with connector
- Stick electrode holder with 4 m cable
- Earth clamp with 3 m cable
- Shieldmaster® flowmeter with gas hose
- AK2C accessory kit
- Handle/shoulder strap

Item Number

W052151

### Miller Maxstar 280 DX 208 V-575 V CPS



Auto-line 208 V - 575 V 50/60 Hz. Rated at 235 A, 60% duty cycle. High frequency DC TIG, pulsed TIG, stick (SMAW) and air carbon capability.

Applications include; fabrication, petrochemical aerospace, food/beverage industry and shipyards.

Power source includes:

- 2,5 m power cable
- Cooler power supply
- 2 x male dinse plugs

Optional extras:

- W031186 TWP 26 HF TIG Kit
- W030911 RFCS-14 HD Foot Control
- W030912 RHC-14 Hand Control
- W030913 RCC-14 Finger Tip Control
- Weldcraft TIG Torches
- Wireless remote controls

Item Number

W030151

## Miller Dynasty 210 DX 120 V - 480 V CPS



Auto-line 120 V-480 V 50/60 Hz. Rated at 210 A. 60% duty cycle.

The Miller Dynasty 210 DX with its AC balance and frequency control makes welding of aluminium an easy task.

Applications include; DIY, precision, heavy fabrication, pipe and tube fabrication and aerospace.

Process capabilities:

- AC/DC TIG (GTAW)
- Pulsed TIG (GTAW-P)
- Stick (SMAW)

Power source includes:

- 2 x male dinse plugs

Optional extras:

- W031186 TWP26 HF TIG Kit
- W030911 RFCS-14 HD Foot Control
- W030912 RHC-14 Hand Control
- W030913 RCC-14 Finger Tip Control

Available from Afrox Service Engineering Department:

- Weldcraft TIG torches
- Wireless remote controls
- Coolmate 1,3 Cooler

Item Number

W030200

### Please note:

- Shielding gas, arc accessories and welding consumable requirements are excluded from above packages and should be selected according to customer requirements.
- Please refer to the Shielding Gases, Arc Accessories and Welding Consumables section for detailed product specification and description.





## MMA Power Sources

### Miller Blue-Thunder Series

The Miller Blue-Thunder MMA (stick) welding power sources with electromagnetic shunt control combine good welding performance with practicality.

The Afrox range comprises two models; Blue-Thunder 443 and Blue-Thunder 343.

Applications include; mining fabrication, structural fabrication, trailer fabrication, maintenance and repair.

#### Miller Blue-Thunder 443 DC CC Power Source



Three-phase 380/525 VAC +-15%, 50/60 Hz. Rated at 420 A, 45% duty cycle.

Package includes:

- Miller Blue-Thunder 443 DC CC power source
- Power source supplied with running gear

Optional equipment:

- Earth clamp and welding cable
- Electrode holder and welding cable
- External voltage reducer

Item Number

W052420

**Please note:**

- Arc accessories and welding consumable requirements are excluded from above packages and should be selected according to customer requirements.
- Please refer to the Arc Accessories and Welding Consumables section for detailed product specification and description.

## Multiprocess Power Sources

### Miller XMT 350 DC CC/CV Power Source



Auto-line 208 – 575 VAC +-10%, 50/60 Hz. Rated at 350 A, 60% duty cycle.

This power source features multiprocess selection. By simply changing accessories an operator can select between the MMA, MIG, FCAW, MCAW and TIG processes. Miller XMT 350 comes standard with wind tunnel technology, adaptive hot start and line voltage compensation. Auto-line is a standard feature on the XMT 350 that allows input voltage selection from single- to three-phase power supplies.

Applications include; petrochemical, construction, shipbuilding, railroad, truck/trailer manufacturing, fabrication and power generation plants.

Package includes:

- Miller XMT 350 DC CC/CV power source

Item Number

W034305

### Miller XMT 350 MPa CC/CV Power Source



Auto-line 208 – 575 VAC +-10%, 50/60 Hz. Rated at 350 A, 60% duty cycle, 300 A, 100% duty cycle.

This power source features multiprocess selection. Processes include MIG, pulsed MIG, Stick, TIG (DC-lift), flux cored, air carbon arc cutting and gouging (CAC-A). Auto-line power management technology allows for any input voltage hook-up (208 – 575 V). 115 VAC auxiliary power provides 10 A of circuit-breaker-protected power for water circulations, etc.

Package includes:

- Miller XMT 350 MPa CC/CV power source W/aux power
- Miller S-74 MPa plus wire feeder (no euro adapter)
- Extension cable 24 VAC 14 pin 25 ft (7,6 m)
- 1,2 mm V-Groove drive roll kit X 1
- 1,2 mm U-Groove drive roll kit X 1

Item Number

W035350



#### Please note:

- Arc accessories and welding consumable requirements are excluded from above packages and should be selected according to customer requirements.
- Please refer to the Arc Accessories and Welding Consumables section in the Product Reference Manual for detailed product specification and description.





## Miller Dimension Rectifier Series

The Miller Dimension series features rugged multiprocess power sources capable of producing welds with the MIG, FCAW, MCAW, scratch-start TIG and MMA processes with the addition of the air carbon arc gouging process. Power sources come standard with hot start and line voltage compensation.

Applications include; fabrication and construction, heavy manufacturing, maintenance, repair, pressure vessel fabrication, pipe welding, shipbuilding and earth-moving equipment manufacturing.



### Miller Dimension 650 Power Source

Dimension 650; 650 A at 44 VDC, 100% duty cycle, three-phase power 380/460 V, 50/60 Hz power source only.

An unbeatable combination of durability, output, efficiency and capability - all in a smaller, easier-to-handle package. Inside its tough, corrosion-resistant, all-aluminum case is big power for heavy welding jobs and carbon arc gouging. In addition to excellent stick and Lift-Arc™ TIG, the Dimension 650 also has excellent short-arc MIG characteristics for precise thin metal welding performance.

Remote control of the power source without a cord. ArcReach® technology uses the existing weld cable to communicate welding control information between the feeder or remote and power source. This technology eliminates the need for control cords, and their associated problems and costs.

Item Number

W052650



### Miller SubArc DC 1250 Digital

Available on request:

- Three-phase 380 V, 1 000 A, 100% duty cycle

Processes:

- Submerged arc (SAW)
- Electro slag (ESW)
- Air carbon arc cutting and gouging (CAC-A)

Heavy industrial applications include railcar, shipbuilding, heavy fabrication, pipe manufacturing and pressure vessels.

Optional extras:

- W054024 Locally manufactured undergear
- W054025 Locally manufactured cylinder and vertical cooler rack
- W054026 Locally manufactured single cylinder rack

Item Number

W034983

## Engine Driven Power Sources

### Miller Blue Star 185 DC CC Power Source



Petrol engine driven power source. Rated at 185 A, 20% duty cycle. Auxiliary voltage 230 VAC, 7,5 kVA peak and 5,5 kVA continuous output, 50 Hz.

Miller Blue Star 185 is a DC petrol engine driven welding power source capable of producing welds with the MMA and scratch-TIG process.

Applications include; maintenance, repair, farm applications, construction and as a stand-alone generator.

Package includes:

- Miller Blue Star 185 DC CC engine driven power source
- Power source supplied with 230 VAC auxiliary plug

Optional extras:

- Miller Running Gear #301246
- Miller Lifting Eye #195353
- Miller Protective Cover #301245
- Miller Spectrum 375 X-TREME W006001

Above available on request from Afrox Service Engineering Department (SED)

Item Number

W052185

## Miller Big Blue Series Engine Driven Power Sources

The Miller Big Blue series features rugged diesel engine driven power sources capable of producing welds with the MMA, TIG and FCAW processes with the addition of the air carbon arc gouging process.

The Afrox range comprises three models; Miller Big Blue 400 X, Miller Big Blue 500 X and the Miller Big Blue 600 X power sources.

Applications include; maintenance, repair, farm applications, construction and as a stand-alone generator.



### Miller Big Blue 400X PRO

Diesel engine driven welder. Rated at 400 A at 24 VDC, 100% duty cycle. Low OCV Stick (VRD) reduces the open-circuit. Voltage to 15 V when the power source is not in use. Auxiliary voltage 230 VAC, 12 kVA peak and 10 kVA continuous output, 50 Hz.

Package includes:

- Miller Big Blue 400 X CC/CV engine driven power source

Item Number

W052400



### Miller Big Blue 500 X CC Power Source

Diesel engine driven power source. Rated at 500 A, 40% duty cycle CC/DC. Auxiliary voltage 230 VAC, 5,5 kVA peak and 4 kVA continuous output, 50 Hz.

Package includes:

- Miller Big Blue 500 X CC engine driven power source

Item Number

W052500





## Miller Big Blue 600 X CC Power Source

Diesel engine driven power source. Rated at 600 A, 40% duty cycle CC/DC. Auxiliary voltage 230 VAC, 5,5 kVA peak and 4 kVA continuous output, 50 Hz.

Package includes:

- Miller Big Blue 600 CX CC engine driven power source

Item Number	W052601
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Optional extra:

- Locally manufactured trailer (W052086)



## Miller Big Blue 800 X Duo Air Pak



Item Number	W052090
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Diesel engine driven welder. Rated at 800 A, 38 V, 100% duty cycle paralleled (combined). Rated at 400 A, 36 V CC/DC, 34 V CV/DC, 100% duty cycle, separate (dual outputs).

Generator power output:

- Three-phase: 27 kVA peak and 20 kVA continuous
- Single-phase: 15 kVA peak and 12 kVA peak and 12 kVA continuous

The most powerful line-up of diesel welder/generator in the industry. Ideal for dual-operator applications on labour intensive jobsites or jobsites with limited space. All-in-one welder/generator eliminates the need for an auxiliary air compressor. The industrial Ingersoll Rand screw-type air compressor is ideal for gouging and running pneumatic tools. International model comes with 400 volt three-phase power ArcReach® and vandalism lockout kit.

Optional extras:

- Miller supplied or locally manufactured trailer
- Miller Suitcase Wire Feeders
- Miller Dynasty 210 Series
- Miller Spectrum 375 X-TREME
- Miller Spectrum 875 X-TREME
- Stick/TIG remote controls

Accessories available from Afrox Service Engineering Department (SED)

## Miller Spectrum Plasma Cutting Power Sources



Description	Item Number
Miller Spectrum 375 120-240 VAC	W006001
Miller Spectrum 875 Auto-line 208-575 V	W006002

Miller Spectrum Plasma Cutting Power Sources available on request.



# Genuine Miller Accessories

## Miller Wire Feeders

### Miller Wire S-74S Wire Feeder



70 Series, S-74 S Wire Feeder 4-Roll has input power of 24 VAC, 10 A, 50/60 Hz. 3m 14 pin interconnecting cord for connecting to any Miller 14 pin power source. Interconnecting cord is attached internally to wire feeder.

Drive rolls and drive roll kits sold separately.

S-74 MPa Plus, dual feeders available on request.

Drive Roll Kits – S – 74 S 4-Roll Feeder

- |                    |         |
|--------------------|---------|
| • 0,9 mm V-Groove  | W034228 |
| • 1,2 mm V-Groove  | W034227 |
| • 1,6 mm V-Groove  | W034226 |
| • 1,2 mm U-Groove  | W034225 |
| • 1,2 mm V-Knurled | W034291 |
| • 2,0 mm V-Knurled | W034220 |
| • 2,4 mm V-Knurled | W034219 |

Drive Roll Kits – 20 Series 4-Roll Feeder

- |                    |         |
|--------------------|---------|
| • 0,9 mm V-Groove  | W034638 |
| • 1,2 mm V-Groove  | W034639 |
| • 1,6 mm U-Groove  | W034644 |
| • 1,2 mm V-Knurled | W034651 |
| • 1,6 mm V-Knurled | W034652 |

NB: Interkon kits made on request.

NB: All other drive roll requirements available on request from Afrox Service Engineering Department.

NB: 20 Series Wire Feeders available on request

- 22 A
- 24 A
- ST-24

Item Number	W034070
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### Miller ArcReach® SuitCase® 12 Roll Feeder



Voltage sensing wire feeder, 14-48 VDC operating voltage.

The SuitCase® wire feeder provides wire feed speed that is accurate and consistent from the start of the weld to the finish and from one weld to the next.

Plastic case design, potted PC board and double-fitted as valve ensures Suitcase withstands the harshest industrial environments. Drive rolls and drive roll kits sold separately.

Drive Roll Kits – Miller ArcReach® 12 Roll Feeder

- |                    |         |
|--------------------|---------|
| • 1,2 mm V-Groove  | W034610 |
| • 1,6 mm V-Groove  | W034612 |
| • 1,2 mm U-Groove  | W034613 |
| • 1,2 mm V-Knurled | W034292 |

Item Number	W034012
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## Remote Controls



Miller RFCS – 14 HD Foot Control

Item Number W030911



Miller RHC – 14 Hand Control

Item Number W030912



Miller RCC – 14 Finger Tip Control

Item Number W030913

Wireless remote control available on request from Afrox Service Engineering Department.



Miller Spool Gun - 220/250 DX

Spool gun with auto-detect provides reliable and economical welding of aluminium. Supplied with euro adaptor and amphenol remote plug

Item Number W034089

## Optional Extras



Miller Coolmate 3 115 V Horizontal

Item Number W034735



Miller Hydracool 2 115 V Horizontal

Item Number W034093



Miller Hydracool 1 115 V Vertical

Item Number W034733

# Afrox Industrial Range

## MIG Power Sources



### Afrox Industrial MIG 251C

230 V single-phase DC machine capable of delivering 250 A @ 60% duty cycle.

- Multiprocess MIG, MMA and Lift-TIG functionality
- Built-in 2 roll wire feeding system
- 18 kg spool capacity
- Digital voltage and amperage display
- Close loop current control
- Inductance control
- 2T / 4T
- Built-in Voltage Reduction Device (VRD)
- Undergear with integrated cylinder rack
- Arc spot timer
- Burn back control

Item Number

W500251

Package includes:

- \* Afrox Industrial MIG 251C DC compact power source
- \* 4 m earth cable and clamp

Optional extras:

- |         |  |
|---------|--|
| W500063 | Transarc® OHE410 Auto Darkening Helmet |
| W500252 | MIG Kit: MIG 251C                      |
| W500255 | MMA Kit: Afrox Industrial Compact MIG  |
| W500256 | TIG Kit: Afrox Industrial Compact MIG  |

Afrox Industrial MIG 251C DC Compact power source is backed by a two-year warranty and is subject to the terms and conditions stipulated in the owner's manual.

#### W500252 MIG Kit

MIG 251C includes:

- 1 x W032003 MIG Gun – BZL – MB 25 AK A/C MIG Gun 4 m
- 2 x W053033 Skull Cap with Back Flap
- 1 x W033980 MIG Accessories – Noryl Basket Adaptor
- 1 x W003037 Shieldmaster® Flowmeter 30 LPM CO<sub>2</sub> /AR
- 1 x W051023 Classic Blue and Yellow Welding Gauntlet
- 1 x 6 m Inert Gas Hose 5 mm with Fittings for Shieldmaster® Flowmeter + 1 x 5 mm O-Clip Loose

#### W500255 MMA Kit

Afrox Industrial Compact MIG includes:

- 1 x Suhan Jaw Type Electrode Holder 300 A + 4 m Grey PVC Welding Cable 300 A 35 mm<sup>2</sup> with Male Dinse Plug (50 – 70)
- 1 x W051021 Classic Red Welding Gauntlet

#### W500256 TIG Kit

Afrox Industrial Compact MIG includes:

- 1 x TWP 26 V 3,8 m 200 A A/C TIG Torch with Male Dinse Plug (50 – 70)
- 1 x W031012 Witstar TIG Tungsten Pack 2,4 mm
- 1 x W031160 TIG Spares – Nozzle 10 mm #6
- 1 x W031152 TIG Spares – Collet 2,4 mm
- 1 x W031156 TIG Spares – Collet Body 2,4 mm
- 1 x W051024 TIG Welders' Glove



#### Please note:

- Shielding gas and welding consumable requirements are excluded from above packages and should be selected according to customer requirements.
- Please refer to the Shielding Gases and Welding Consumables section in the Product Reference Manual for detailed product specification and description.



## Afrox Industrial MIG 313C

380 V three-phase DC machine capable of delivering 310 A @ 60% duty cycle.

- Multiprocess MIG, MMA and Lift-TIG functionality
- Built-in 2 roll wire feeding system
- 18 kg spool capacity
- Digital voltage and amperage display
- Close loop current control
- Inductance control
- 2T / 4T
- Built-in Voltage Reduction Device (VRD)
- Undergear with integrated cylinder rack
- Arc spot timer
- Burn back control

Item Number	W500313
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Package includes:

- \* Afrox Industrial MIG 313C DC Compact power source
- \* 4 m earth cable and clamp

Optional extras:

W500063	Transarc® OHE410 Auto Darkening Helmet
W500253	MIG Kit: MIG 313C
W500255	MMA Kit: Afrox Industrial Compact MIG
W500256	TIG Kit: Afrox Industrial Compact MIG

Afrox Industrial MIG 313C DC Compact power source is backed by a two-year warranty and is subject to the terms and conditions stipulated in the owner's manual.

### W500253 MIG Kit

MIG 313C includes:

- 1 x W032004 MIG Gun – BZL – MB 36 KD A/C MIG Gun 4 m
- 2 x W050533 Skull Cap with Back Flap
- 1 x W033980 MIG Accessories – Noryl Basket Adaptor
- 1 x W003037 Shieldmaster® Flowmeter 30 LPM CO<sub>2</sub> /AR
- 1 x W051023 Classic Blue and Yellow Welding Gauntlet
- 1 x 6 m Inert Gas Hose 5 mm with Fittings for Shieldmaster® Flowmeter + 1 x 5 mm O-Clip Loose

### W500255 MMA Kit

Afrox Industrial Compact MIG includes:

- 1 x Suhan Jaw Type Electrode Holder 300 A + 4 m Grey PVC Welding Cable 300 A 35 mm<sup>2</sup> with Male Dinse Plug (50 – 70)
- 1 x W051021 Classic Red Welding Gauntlet

### W500256 TIG Kit

Afrox Industrial Compact MIG includes:

- 1 x TWP 26 V 3,8 m 200 A A/C TIG Torch with Male Dinse Plug (50 – 70)
- 1 x W031012 Witstar TIG Tungsten Pack 2,4 mm
- 1 x W031160 TIG Spares – Nozzle 10 mm #6
- 1 x W031152 TIG Spares – Collet 2,4 mm
- 1 x W031156 TIG Spares – Collet Body 2,4 mm
- 1 x W051024 TIG Welders' Glove



## Afrox Industrial MIG 403C

380 V three-phase DC machine capable of delivering 400 A @ 60% duty cycle.

- Multiprocess MIG, MMA and Lift-TIG functionality
- Built-in 4 roll wire feeding system
- 18 kg spool capacity
- Digital voltage and amperage display
- Close loop current control
- Inductance control
- 2T / 4T
- Built-in Voltage Reduction Device (VRD)
- Undergear with integrated cylinder rack
- Arc spot timer
- Burn back control

Item Number	W500403
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Package includes:

- \* Afrox Industrial MIG 403C DC Compact power source
- \* 4 m earth cable and clamp

Optional extras:

W500063	Transarc® OHE410 Auto Darkening Helmet
W500254	MIG Kit: MIG 403C
W500255	MMA Kit: Afrox Industrial Compact MIG
W500256	TIG Kit: Afrox Industrial Compact MIG

Afrox Industrial MIG 403C DC Compact power source is backed by a two-year warranty and is subject to the terms and conditions stipulated in the owner's manual.

### W500254 MIG Kit

MIG 403C includes:

- 1 x W032007 MIG Gun – BZL – MB 40 KD A/C MIG Gun 4 m
- 2 x W050533 Skull Cap with Back Flap
- 1 x W033980 MIG Accessories – Noryl Basket Adaptor
- 1 x W003037 Shieldmaster® Flowmeter 30 LPM CO<sub>2</sub> /AR
- 1 x W051023 Classic Blue and Yellow Welding Gauntlet
- 1 x 6 m Inert Gas Hose 5 mm with Fittings for Shieldmaster® Flowmeter + 1 x 5 mm O-Clip Loose

### W500255 MMA Kit

Afrox Industrial Compact MIG includes:

- 1 x Suhan Jaw Type Electrode Holder 300 A + 4 m Grey PVC Welding Cable 300 A 35 mm<sup>2</sup> with Male Dinse Plug (50 – 70)
- 1 x W051021 Classic Red Welding Gauntlet

### W500256 TIG Kit

Afrox Industrial Compact MIG includes:

- 1 x TWP 26 V 3,8 m 200 A A/C TIG Torch with Male Dinse Plug (50 – 70)
- 1 x W031012 Witstar TIG Tungsten Pack 2,4 mm
- 1 x W031160 TIG Spares – Nozzle 10 mm #6
- 1 x W031152 TIG Spares – Collet 2,4 mm
- 1 x W031156 TIG Spares – Collet Body 2,4 mm
- 1 x W051024 TIG Welders' Glove

## TIG Power Sources

### Afrox Industrial TIG 185 CC Package



Single-phase 230 VAC  $\pm$ 15%, 50/60 Hz. Rated at 185 A, 35% duty cycle.

A lightweight AC/DC inverter power source that provides a consistent welding arc for the TIG and MMA processes. Power source comes standard with frequency, post flow and down slope control.

Applications include; DIY and light maintenance for welding of aluminium, carbon steel and stainless steel applications.

Package includes:

- Arox Industrial TIG AC/DC CC power source
- Air-cooled CK HF-TIG torch kit
- Electrode holder and welding cable
- Earth clamp and welding cable
- S6000 Regulator 40l CO<sub>2</sub>/Argon
- 3 m inert gas hose and fittings

Item Number

W035186

### Afrox Industrial TIG 201P 230 V



Single-phase 230 VAC  $\pm$ 15%, 50/60 Hz. Rated at 200 A, 60% duty cycle.

A lightweight DC inverter power source that provides a consistent welding arc for the TIG and MMA processes. Power source comes standard with high frequency, pulsating feature, post flow and down slope control. Remote capabilities

Applications include; DIY and light maintenance for welding of carbon steel and stainless steel applications.

Power source includes:

- 2 x male dinse plugs

Optional extras:

- W031186 TWP 26 HF TIG Kit
- W030911 RFCS-14HD Foot Control
- W030912 RHC-14 Hand Control
- W030913 RCC-14 Finger Tip Control

Item Number

W500201

#### Please note:

- Shielding gas and welding consumable requirements are excluded from above packages and should be selected according to customer requirements.
- Please refer to the Shielding Gases and Welding Consumables section for detailed product specification and description.





## Afrox Industrial TIG 303PU 380 V



Three-phase 380 VAC  $\pm$ 15%, 50/60 Hz. Rated at 300 A, 60% duty cycle.

Inverter based TIG/MMA power source which incorporates high frequency ignition, line voltage protection and a built-in voltage reduction device. Includes USB data logging of welding parameters. DC TIG/MMA. Remote capability.

Applications include; DIY and light maintenance for welding of carbon steel and stainless steel applications.

Power source includes:

- 2 x male dinse plugs

Optional extras:

W031186 TWP 26 HF TIG Kit

W030911 RFCS-14HD Foot Control

W030912 RHC-14 Hand Control

W030913 RCC-14 Finger Tip Control

Item Number

W500303

### Please note:

- Shielding gas and welding consumable requirements are excluded from above packages and should be selected according to customer requirements.
- Please refer to the Shielding Gases and Welding Consumables section for detailed product specification and description.

## Multiprocess Power Sources

### Afrox Industrial Multiprocess 175 DC CC/CV Package



Single-phase 230 VAC  $\pm$ 15%, 50/60 Hz. Rated at 175 A, 35% duty cycle.

A versatile portable DC multiprocess power source capable of producing welds with the MIG, TIG and MMA processes.

Applications include; DIY, light maintenance and engineering.

Package includes:

- Afrox Industrial Multiprocess 175 DC CC/CV power source
- Drive roll kit:
  - \*Double-sided V-Groove 0,6 mm - 0,8 mm, 0,8 mm - 0,9 mm
  - \*Double-sided U-Groove 0,8 mm - 1,0 mm
- \*\*Binzel MB 25 AK MIG gun
- Air-cooled Lift-TIG torch kit
- Electrode holder and welding cable
- Earth clamp and welding cable
- S6000 Regulator 40 $\ell$  CO<sub>2</sub>/Argon
- Noryl basket adaptor
- 3 m inert gas hose and fittings

\* Drive roll kit comprises two drive rolls per pack

\*\*Binzel MIG gun includes liner, tip adaptor/gas diffuser, contact tip and gas shroud.

Item Number

W035175

## Afrox Industrial 453M



Three-phase 380/525 VAC  $\pm 15\%$ , 50/60 Hz. Rated at 450 A, 60% duty cycle.

The Afrox Industrial 453M 380 V/525 V Multiprocess inverter power source is capable of delivering high integrity welds and its dual input power option can accommodate various input power requirements.

Applications include: Medium to heavy maintenance, engineering, fabrication and manufacturing of mining and construction equipment.

Power source includes:

- Built-in voltage reducer for MMA/TIG
- 2 x male dinse plugs

Optional extras:

W500400 Afrox Industrial 4-Roll Wire Feeder Base  
W500401 Afrox Industrial 4-Roll Wire Feeder Deluxe  
Undercarriage, wire feeder and cylinder rack available on request from Afrox Service Engineering Department.

Item Number

W500453

## Afrox Industrial 4-Roll Wire Feeder Base



Wire feeder includes:

- 1,0 mm/1,2 mm V-groove drive rolls
- 5 m air-cooled interkon kit for Afrox Industrial 453M Power Source

Item Number

W500400

## Afrox Industrial 4-Roll Wire Feeder Deluxe



- The Afrox Industrial 4-Roll Wire Feeder Deluxe is compatible only with the Afrox Industrial 453M power source
- V-knurlled and U-groove drive rolls available on request from Afrox Service Engineering Department

Wire feeder includes:

- 1,0 mm/1,2 mm V-groove drive rolls
- 5 m air-cooled interkon kit for Afrox Industrial 453M Power Source

Item Number

W500401

### Please note:

- Arc accessories and welding consumable requirements are excluded from above packages and should be selected according to customer requirements.
- Please refer to the Arc Accessories and Welding Consumables section in the Product Reference Manual for detailed product specification and description.



## MMA Power Sources

### Afrox Industrial 220i 220 V DC Inverter



The Afrox Industrial 220i is a 230 V single-phase DC MMA/Lift DC TIG machine. Rated at 220 A, 80% duty cycle.

A lightweight, durable industrial inverter power source, backed by a two-year warranty, subject to terms and conditions stipulated in the owner's manual. Afrox Industrial 220i power source comes standard with digital amp meter and built-in voltage reduction device.

Applications including medium and light industrial sectors. It is particularly suitable for the mining industry.

Power source includes:

- 2 x male dinse plugs

Optional extras:

W500063 Transarc® OHE410 Auto Darkening Helmet

W051021 Classic Red Welding Gauntlet

W051024 TIG Welders' Glove

W053102 Welding Cable PVC 300 A 35 mm<sup>2</sup> Grey/metre

W054146 Earth Clamp 300 A Crocodile

W053011 Cable Lugs Crimping 35 x 12 mm

W053090 Suhan Jaw Type 300 A Electrode Holder

W053095 Optimus Type 300 A Electrode Holder

W031263 TIG Torches – TWP 26 V 3,8 m 200 A A/C  
(Consumables sold separately)

W003037 Shieldmaster® Flowmeter 30 LPM CO<sub>2</sub>/AR

Item Number

W046223

### Afrox Industrial MMA 221S



The Afrox Industrial MMA 221S is a 230 V single-phase DC MMA machine for the medium and light industrial sectors. Rated at 220 A. 60% duty cycle. It features DIG (arc force), anti-stick and adjustable hot start functions. Power source is capable of producing welds with the MMA and Lift-TIG processes. The Afrox Industrial MMA 221S comes standard with digital amp meter display and built-in voltage reduction device.

Power source includes:

- \* 2 x male dinse plugs

Afrox Industrial 221S DC CC Inverter power source is backed by a two-year warranty and is subject to the terms and conditions stipulated in the owner's manual.

Optional extras:

W500063 Transarc® OHE410 Auto Darkening Helmet

W051021 Classic Red Welding Gauntlet

W051024 TIG Welders' Glove

W053102 Welding Cable PVC 300 A 35 mm<sup>2</sup> Grey/metre

W054146 Earth Clamp 300 A Crocodile

W053011 Cable Lugs Crimping 35 x 12 mm

W053090 Suhan Jaw Type 300 A Electrode Holder

W053095 Optimus Type 300 A Electrode Holder

W031263 TIG Torches – TWP 26 V 3,8 m 200 A A/C  
(Consumables sold separately)

W003037 Shieldmaster® Flowmeter 30 LPM CO<sub>2</sub>/AR

Item Number

W500221





The Afrox Industrial MMA 323S is a 380 V/525 V three-phase DC MMA machine for the medium and light industrial sectors. It is particularly suitable for the mining industry. It features DIG (arc force), anti-stick and adjustable hot start functions. Power source is capable of producing welds with the MMA and Lift-TIG processes. The Afrox Industrial MMA 323S comes standard with digital amp meter display, built-in VRD, close loop current control for accurate current setting and line voltage protection to compensate for electrical spikes from input supply. Rated at 320 A, 60% duty cycle.

## Afrox Industrial MMA 323S

Power source includes:  
\* 2 x male dinse plugs

Afrox Industrial 323S DC CC Inverter power source is backed by a two-year warranty and is subject to the terms and conditions stipulated in the owner's manual.

Optional extras:

W500063 Transarc® OHE410 Auto Darkening Helmet  
W051021 Classic Red Welding Gauntlet  
W051024 TIG Welders' Glove  
W053102 Welding Cable PVC 300 A 35 mm<sup>2</sup> Grey/metre  
W053103 Welding Cable PVC 400 A 50 mm<sup>2</sup> Grey/metre  
W054148 Earth Clamp 600 A Crocodile  
W053012 Cable Lugs Crimping 50 x 12 mm  
W053096 Electrode Holder – TRC – 400 A Optimus Type  
W054201 Electrode Holder – AOX – 400 A Jaw Type  
W054202 Electrode Holder – AOX – 400 A Twist Lock  
W031263 TIG Torches – TWP 26 V 3,8 m 200 A A/C  
(Consumables sold separately)  
W003037 Shieldmaster® Flowmeter 30 LPM CO<sub>2</sub>/AR

Item Number

W500323



Three-phase 380 V/525 VAC +- 15%, 50/60 Hz. Rated at 320 A, 80% duty cycle.

The Afrox Industrial 320i 380 V/525 V inverter power source with its dual power option is suitable for various work environments. Applications include; medium to heavy maintenance, fabrication and manufacturing of mining and construction equipment where three-phase 380 V - 525 V is a requirement.

## Afrox Industrial 320i 380 V/525 V DC Inverter

Power source includes:  
\* 2 x male dinse plugs

Optional extras:

W500063 Transarc® OHE410 Auto Darkening Helmet  
W051021 Classic Red Welding Gauntlet  
W051024 TIG Welders' Glove  
W053102 Welding Cable PVC 300 A 35 mm<sup>2</sup> Grey/metre  
W053103 Welding Cable PVC 400 A 50 mm<sup>2</sup> Grey/metre  
W054148 Earth Clamp 600 A Crocodile  
W053012 Cable Lugs Crimping 50 x 12 mm  
W053096 Electrode Holder – TRC – 400 A Optimus Type  
W054201 Electrode Holder – AOX – 400 A Jaw Type  
W054202 Electrode Holder – AOX – 400 A Twist Lock  
W031263 TIG Torches – TWP 26 V 3,8 m 200 A A/C  
(Consumables sold separately)  
W003037 Shieldmaster® Flowmeter 30 LPM CO<sub>2</sub>/AR

Item Number

W046321

### Please note:

- Arc accessories and welding consumable requirements are excluded from above packages and should be selected according to customer requirements.
- Please refer to the Arc Accessories and Welding Consumables section in the Product Reference Manual for detailed product specification and description.



# Afrox Transarc® Range

## MIG Power Sources

### Transarc® 180P PortaMIG DC CV Package



**Please note:**

- Welding consumable requirements are excluded from above package and should be selected according to customer requirements.
  - Please refer to the Welding Consumables section in the Product Reference Manual for detailed product specification and description.

Single-phase 230 VAC +-15%, 50/60 Hz. Rated at 180 A, 35% duty cycle.

The Transarc® 180P offers a compact (built-in wire feeder) inverter technology power source with infinitely variable voltage, amperage and inductance control for easy setting of welding parameters.

Applications include; DIY, light maintenance and engineering.

Package includes:

- Afrox Transarc® 180P PortaMIG DC CV power source
- PortaMIG trolley
- Portashield® gas cylinder
- Drive roll kit:
  - \*Double-sided V-Groove 0,6 mm & 0,8 mm, 0,8 mm & 1,0 mm, 1,0 mm & 1,2 mm
  - \*Single-sided V-Knurled 0,9 mm
- \*\*Binzel MB 15 AK MIG gun
- S6000 Regulator 40l CO<sub>2</sub>/Argon
- Noryl basket adaptor
- 3 m inert gas hose and fittings

\* Drive roll kit comprises one drive roll per pack

\*\*Binzel MIG gun includes liner, tip adaptor/gas diffuser, contact tip and gas shroud.

Item Number

W034181

## Plasma Power Sources



Single-phase 230 VAC +-15%, 50/60 Hz. Rated at 40 A, 35% duty cycle.

The Transarc® Plasma Cut 40 offers a lightweight (weighs only 8 kg) inverter technology plasma power source for the cutting of various metals. Plasma Cut 40 requires air at 4 bar input pressure and features a post flow selector switch and air control connector.

**Please note:**

- Gas requirements are excluded from above package and should be selected according to customer requirements.
  - Please refer to the Compressed Gases section in the Product Reference Manual for detailed product specification and description.

### Transarc® Plasma Cut 40 Power Source

Applications include; art sculptures, hobby and DIY enthusiasts

Cutting thickness; carbon steel 9 mm, stainless steel 8 mm, aluminium 4 mm

Package includes:

- Afrox Transarc® Plasma Cut 40 power source
- \*PT-31 plasma torch
- Air control connector
- Earth clamp and cable

\*Plasma torch supplied with first set of consumables

W036441 Transarc® Plasma 40 Torch

W036443 Transarc® Plasma 40 Electrode PT-31

W036444 Transarc® Plasma 40 Cutting Tip PT-31

W036445 Transarc® Plasma 40 Shield Cup PT-31

W036446 Transarc® Plasma 40 Switch PT-31

W036447 Transarc® Plasma 40 Diverter PT-31

Item Number

W036440

## MIG Torches & Consumables

### MB 15 AK A/C MIG Gun 3 m



180 A @ 60% duty cycle air-cooled

Item Number W032001

### Neck Spring MB 15



Item Number W032013

### Tip Holder MB 15



Item Number W032014

### Shroud Taper MB 15



Item Number W032011

### Insulator MB 15



Item Number W032015

### Swan Neck MB 15



Item Number W032017

### Insulator Sleeve MB 15

Item Number W032016

### Contact Tip



Description	Item Number
M6 MB 15 0,6 mm	W032021
M6 MB 15 0,8 mm	W032022
M6 MB 15 1,0 mm	W032024
M6 MB 15/2 1,2 mm	W032041



## MB 25 AK A/C MIG Gun 4 m



230 A @ 60% duty cycle air-cooled

Item Number	W032003
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## TIP Adaptor MB 25



Item Number	W032034
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## Neck Spring MB 25



Item Number	W032035
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## Swan Neck MB 25



Item Number	W032036
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## Shroud



Description	Item Number
Conical MB 25	W032030
Taper MB 25	W032031
Cylinder MB 25	W032032

## Contact Tip



Description	Item Number
M6 0,9 mm	W032023
M6 MB 25/36 0,8 mm	W032025
MB 25/36 0,9 mm	W032026
M6 MB 25/36 1,0 mm	W032027
M6 HD M 1,0 mm	W032028
M6 MB 25/36 1,2 mm	W032029

## Tip



Description	Item Number
HD M6 MB 25/37 1,2 mm	W032040
HD M6 MB 25 1,0 mm	W032144
HD M6 MB 25 1,2 mm	W032145

## MB 36 KD A/C MIG Gun 4 m



300 A @ 60% duty cycle air-cooled

Item Number	W032004
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## Shroud Conical



Description	Item Number
Conical MB 36	W032050
Taper MB 36	W032051
Cylinder MB 36	W032052

## Tip



Description	Item Number
M8 MB 36/40/501 0,9 mm	W032042
M8 MB 36/40/501 1,0 mm	W032043
M8 MB 36/40/501 1,2 mm	W032044
M8 HD MB 36/40/5 1,2 mm	W032045
M8 HD MB 36/40/5 1,2 mm	W032046
M8 HD MB 36/40/50 1,6 mm	W032047
M8 MB 36/40/501 0,8 mm	W032146

## Tip Adaptor



Description	Item Number
M6 MB 36	W032053
M8 MB 36	W032054

## Swan Neck MB 36



Item Number	W032056
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## Gas Diffuser White MB 36



Item Number	W032055
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## MB 40 KD A/C MIG Gun 4 m



380 A @ 60% duty cycle air-cooled

Item Number	W032007
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## Gas Diffuser MB 40



Item Number	W032061
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## Shroud



Description	Item Number
Conical MB 40	W032057
Taper MB 40	W032058
Cylinder MB 40	W032059

## Swan Neck MB 40



Item Number	W032062
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## Tip Adaptor M8 MB 40



Item Number	W032060
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## Adaptor Block KZ-2 MB 40



Item Number	W032102
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## Adaptor Support MB 40 & R



Item Number	W032122
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## MB 501 D W/C MIG Gun 4 m



500 A @ 100% duty cycle water-cooled

Item Number W032008

## Gas Diffuser White MB 501



Item Number W032084

## Adaptor Block WZ-2 MB 501



Item Number W032104

## Tip Adaptor M8 MB 501



Item Number W032085

## Shroud



Description	Item Number
Conical MB 501	W032078
Taper MB 501	W032079
Cylinder MB 501	W032080

## Insulating Washer MB 501



Item Number W032086

## Adaptor Support MB 501



Item Number W032123

## Swan Neck MB 501



Item Number W032088



## RB 61 HD A/C MIG Gun 4 m



650 A @ 100% duty cycle air-cooled

Item Number W032009

## Adaptor Block RGZ-2 RB 61



Item Number W032103

## Tip Adaptor M10 RB 61



Item Number W032073

## Liner Positioner Nut RB 61



Item Number W032127

## Gas Diffuser RB 61



Item Number W032074

## Swan Neck RB 61



Item Number W032075

## Contact Tips M10 – RB61

Description	Item Number
1,2 mm HD M10	W032067
1,6 mm HD M10	W032068
2,0 mm HD M10	W032069
2,4 mm HD M10	W032070
2,8 mm HD M10	W032071
3,2 mm HD M10	W032072



## PP 36 D Straight Neck MIG Gun 8 m

300 A CO<sub>2</sub>, 270 A mixed gas 60% duty cycle

Item Number W032006

Push-Pull welding torches guarantee constant and problem free wire feeding. Push-Pull guns are ideally suited for hard to feed wire like aluminium, thin wire and for extended cable assemblies that allow welding at longer distance from the wire drive unit

Push-Pull torches have become industry standard in shipbuilding, container and tank manufacture and used extensively in the construction of automobiles, railroad cars and rolling stock

Please note: Bernard MIG guns available on request from Afrox Service Engineering Department.



## General Consumables - MIG Torches

Product	Size	Item Number
Liner Nut		W032020
Plain Liner	1,6 - 2,4 mm 4,0 m	W032076
Plain Liner	2,8 - 3,2 mm	W032077
Liner Blue	0,8 - 0,9 mm 4,0 m	W032018
Liner Red	1,0 - 1,2 mm 4,0 m	W032037
Liner Red	1,0 - 1,2 mm 5,0 m	W032038
Liner Yellow	1,6 mm 5,0 m	W032063
Steel Liner	1,0 - 1,2 mm	W032097
Steel Liner	1,6 mm 4,0 m	W032098
Steel Liner	1,0 - 1,2 mm	W032099
Carbon Teflon Liner	1,6 mm	W032133
Liner Teflon	1,0 - 1,2 mm	W032019
Liner Teflon	1,0 - 1,2 mm	W032039
Liner Teflon	1,6 mm 5,0 m	W032064

Product	Item Number
Plate, Feed Assy	W032039
O-Ring 4XI	W032129
Trigger 2POL	W032126
Ergonomic Handle	W032124
Industrial Handle Complete	W032125
Adaptor Block KZ-2	W032101
Adaptor Support MB 15 - 18	W032121
Shroud Conical MB 15	W032012
Power Cable 3 m MB 15	W032106
Power Cable 4 m MB 25	W032108
Power Cable 4 m MB 40	W032113
Cup Gasket	W031165
Adaptor Nut MB 36/38	W032118



## TIG Torches & Consumables



W031182



W031261/ W031262



W031263/W031264

Product	Description	Item Number
TWP 17V-12-2 CK 150 A 3,8 m	150 A @ 100% duty cycle air-cooled	W031171
TWP 18-25 CK 350 A 7,6 m	350 A @ 100% duty cycle water-cooled	W031182
TWP 26-12-2 CK 200 A 3,8 m	200 A @ 100% duty cycle air-cooled	W031261
TWP 26-25-2 CK 200 A 7,6 m	200 A @ 100% duty cycle air-cooled	W031262
TWP 26V-12-2 CK 200 A 3,8 m	200 A @ 100% duty cycle air-cooled	W031263
TWP 26V-25-2 CK 200 A 7,6 m	200 A @ 100% duty cycle air-cooled	W031264

### Torch Body

Description	Item Number
TWP 17V	W031172
26V	W031178
26	W031180
TWP 18	W031183

### TIG Remote (Amperage) Controls

Description	Item Number
Miller RFCS-14 Pin Foot Control	W030911
Miller RHC-14 Pin Hand Control	W030912
Miller RCC-14 Pin Finger Tip Control	W030913



RFCS – 14 HD Foot Control



RHC – 14 Hand Control



RCC – 14 Finger Tip Control



Please note: Weldcraft TIG torches and accessories available on request from Afrox Service Engineering Department.

Product	Size (mm)	Item Number
Collet Body	1,6	W031155
Collet Body	2,4	W031156
Collet Body	3,2	W031157

Product	Size (mm)	Item Number
Collet	1,6	W031151
Collet	2,4	W031152
Collet	3,2	W031153
Collet	4,0	W031154

Product	Size (mm)	Item Number
Nozzle	8,0	W031159
Nozzle	10,0	W031160
Nozzle	11,0	W031161
Nozzle	12,5	W031162



## Back Cap Long



Item Number W031163

## Adaptor Power Cable



Item Number W031166

## Back Cap Short



Item Number W031164

## Valve 26 V



Item Number W031267

3 Series Gas Saver Torch		
Size (mm)	Product	Item Number
	Gas Saver Collet Body	W031270
	Cup Gasket Gas Saver	W031169
	Back Cap Short	W031164
	Back Cap Long	W031165
	Valve 26 V	W031267
10,0	Gas Saver Nozzle	W031258
11,0	Gas Saver Nozzle	W031259
1,6	Wedge Collet	W031174
2,4	Wedge Collet	W031175
1,6	Gas Screen	W031271
2,4	Gas Screen	W031272

3 Series Gas Lens Torch	
Product	Item Number
Cup Gasket Gas Saver	W031169
Heat Shield Gas Lens	W031173
Back Cap Short	W031164
Back Cap Long	W031165
Valve 26 V	W031267





# New GYS Plasma Cutting Range

Afrox brings to South Africa a world class product with features and benefits that set global standards. We have the pleasure to introduce our new plasma range fit for any market and sector in South Africa with tough, rigid, durability and quality in mind.

## Plasma Power Sources



### Plasma CUTTER 45 CT - With Torch

The CUTTER 45 CT is a 45 A plasma cutter equipped with the TPT 40 torch as standard. It offers a clean cutting capacity of 15 mm thick on a multitude of materials. The HF-free arcing system preserves and increases the lifetime of consumables. Designed to be used in difficult environments, it has a very robust mechanics and a user-friendly control panel.

#### Maximum Productivity

- Faster cutting speed using oxygas
- Cuts all types of steel (mild, stainless, tempered, HLE), aluminium, copper, etc.
- Optimised cooling using the ventilation corridor that helps insulating the electronic components from the dust
- Consumables setting up is easy for maximum productivity
- Duty cycle 41 A at 60% (40°C).
- Flexible voltage hose (85 to 265V), accepts very long network connections (100 m)
- PFC technology, the electrical network is better exploited and allows an energy saving of 30%.

Item Number

W006050

#### Effective In Every Workplace

- User friendly interface :
  - 3 working modes : plain metal sheet / open metal sheet / locked
  - manual setting of the air pressure using front screen chart
- HF-free ignition to prevent disturbances that could damage nearby electronic equipment
- Compatible with CNC kit for automatic cutting tables
- Disconnectable earth cable for easy storage and replacement.

#### Designed To Last

- Reinforced metal case and non-slip rubber pads
- IP 23 certified for external use
- Compact and portable.

#### Performances

Capacity	Max. Thickness
Separation	20 mm
Clean Cut	15 mm
Piercing	8 mm



## Plasma CUTTER 70A CT - Torch Included

The CUTTER 70 CT is a 70 A plasma cutter with a cutting capacity of 35 mm thick on a multitude of materials. The HF-free arcing system preserves and increases the lifetime of consumables. Designed to be used in difficult environments, it has very robust mechanics and a user-friendly control panel. It is prewired for use on automatic cutting tables.

### Maximum Productivity

- Faster cutting speed using oxygas
- Cuts all types of steel (mild, stainless, tempered, HLE), aluminium, copper, etc.
- Optimised cooling using the ventilation corridor that helps isolate the electronic components from the dust
- Replacement of consumables is fast and easy for maximum productivity
- Duty cycle 70 A at 60% (40°C).

### High-Performance Torch

- Premium torch TECMO (leading supplier in Europe)
- Premium cutting quality: the torch is air cooled offering a great arc stability for all types of work
- Consumables compatible with Hypertherm
- Designed to be shock and heat resistant
- Quick connect/disconnection of the torch, no tools required for transport or maintenance
- Easy to use trigger mechanism for added comfort.

### Effective In Every Workplace

- User friendly interface :
  - 3 working modes : cutting/mesh/locked
  - manual setting of the air pressure (4,1 < 6,5 bars) using front LED Indicator
- HF-free ignition to prevent disturbances that could interfere with nearby electronic equipment
- Compatible with CNC kit for automatic cutting tables.

### Designed To Last

- Reinforced metal case and non-slip rubber pads
- IP 23 protection rated
- Compact and portable.

### Performances

Capacity	Thickness
Separation	35 mm
Clean Cut	25 mm
Piercing	15 mm
Capacity	Removal Rate
De-gouging	4,8 kg/h

Item Number

W006051





## Plasma NEOCUT 125A CT - Torch Included

The NEOCUT 125 is a plasma cutter with a duty cycle of 100% at 125 A for cutting work up to 57 mm thick in industrial environments. It is equipped with an automatic air pressure management, in all modes, offering an optimum cutting quality throughout the lifespan of the consumables. Also connectable to a cutting table, its Marking mode is perfect for tracing and identifying parts.

### Synergic Air Pressure

- Automatic management of pressure and air flow independent of the torch length and the operating mode (cutting, gouging and marking)
- Optimised consumable lifespan.

### Maximum Productivity

- Duty cycle 100% at 125 A (40°C)
- Marking mode, ideal for tracing and identifying parts
- Cuts most materials (mild, stainless, tempered, HLE), aluminium, copper, etc.
- Optimised cooling design to operate in an industrial environment
- Connectable through one of the 3 optional CNC kits for use on automated cutting table
- Reinforced case IP 23.

### Simple To Use

- Ergonomic interface with OLED screen (7 languages)
- 6 working modes: Cutting, Cutting with locked trigger, Gouging, Gouging with locked trigger, Cutting of perforated sheets, Marking
- Counter to follow the wear of the consumables (nozzle and electrode)
- Pneumatic diagnosis (moisture presence test and air pressure control)
- HF-free arc ignition to prevent disturbances that could damage nearby electronic equipment
- Simplified software update via USB cable without any tools or disassembly.

### Performances

Cutting	Fe	Al/CrNi
	25 mm	25 mm
	40 mm	40 mm
	57 mm	57 mm

### Gouging

### Withdrawal Rate

12 kg/h

Item Number

W006052

# Afrox Arc Equipment – RENT OR BUY?

In the construction industry, a general rule of thumb is that if you don't utilise a piece of equipment at least 60 to 70 percent of the time, you should consider renting. Afrox has partnered with Miller to offer tailor-made welding equipment rental packages to the South African market, affording customers the option to rent a selection of premium arc welding machines for short- to medium-

term projects. The Afrox equipment rental offer incorporates four models from the Miller range of premium quality welding machines for large industrial applications, and provides customers with the option of selecting equipment for various processes: MMA/Stick, TIG (DC), MIG/FCAW/MCAW and gouging.



For all rental equipment enquiries, email [equipment.rental@afrox.linde.com](mailto:equipment.rental@afrox.linde.com) and/or call the Afrox Service Engineering Department (SED) on 011 876 1113.



## SECTION 6

## GAS EQUIPMENT

## Regulators &amp; Flowmeters



### Afrox Saffire® Multi-Stage Medium-Heavy Duty Regulator - Oxygen

- Series 8500
- For heavy duty welding, cutting and heating
- ISO 2503
- 'Set-and-forget' technology for ultimate safety

Description	Item Number
400 kPa	W003852
1 000 kPa	W003854



### Afrox Saffire® Multi-Stage Medium-Heavy Duty Regulator - Acetylene

- Series 8500
- 150 kPa max outlet pressure
- For heavy duty welding, cutting and heating
- ISO 2503
- 'Set-and-forget' technology for ultimate safety

Description	Item Number
150 kPa	W003851



### Oxygen Single-Stage Regulator

- Series 6000
- For medium duty welding and cutting
- 600 kPa max outlet pressure
- ISO 2503

Description	Item Number
Series 6000	W003903



### Acetylene Single-Stage Regulator

- Series 6000
- For medium duty welding and cutting
- 150 kPa max outlet pressure
- ISO 2503

Description	Item Number
Series 6000	W003601





### Afrox Saffire® Series 6000 Flow-Gauge Regulator

- Combined regulator/flowmeter, with gauges for MIG/TIG welding using argon or carbon dioxide
- Max gas flow of 40 l/min

Description	Item Number
S6000	W003610



### Series 6000 Single-Stage Single-Gauge LPG Regulator

- S6000 LGS 400
- Now with outlet pressure gauge
- 400 kPa max outlet pressure
- Adequate flow rate for the full range of Afrox LPG nozzles and Sievert® equipment

Description	Item Number
S6000	W010611



### Saffire® 916 Multi-Stage Regulator - Oxygen

- Certified to ISO 2503
- Five-year warranty
- 100% tested for superior operator safety and control
- Quadflo encapsulated valve technology
- Offers multi-stage functionality & delivers constant pressure as the cylinder pressure reduces.

Description	Item Number
Legend 916 OGM 1 000 kPa	W232017
Legend 916 OVM 1 000 kPa	W232013
Legend 916 OPM 350 kPa	W232303



### Saffire® 916 Multi-Stage Regulator - Acetylene

- Certified to ISO 2503
- Five-year warranty
- 100% tested for superior operator safety and control
- Quadflo encapsulated valve technology
- Offers multi-stage functionality & delivers constant pressure as the cylinder pressure reduces.

Description	Item Number
Legend 916 AGM 150 kPa	W232018
Legend 916 AVM 150 kPa	W232015
Legend 916 APM 55 kPa	W232304





### Afrox Saffire® Integrated Regulator Flowmeter

- Pre-set flowmeter regulator with accurate flow setting for MIG/TIG welding using argon or carbon dioxide
- Max gas flow of 30 l/min

Description	Item Number
Flowmeter	W003037



### ARCmate Argon Pressure Regulator

- Designed according to ISO 2503
- Fully encapsulated valve with sintered filter
- Pressure gauges with safety backs
- Captive pressure-adjusting knob
- Bonnet design with protection against over pressurisation

Description	Item Number
Argon Pressure Regulator	W003863



### ARCmate Oxygen Pressure Regulator

- Designed according to ISO 2503
- Fully encapsulated valve with sintered filter
- Pressure gauges with safety backs
- Captive pressure-adjusting knob
- Bonnet design with protection against over pressurisation

Description	Item Number
Oxygen Pressure Regulator	W003861



### ARCmate Acetylene Pressure Regulator

- Designed according to ISO 2503
- Fully encapsulated valve with sintered filter
- Pressure gauges with safety backs
- Captive pressure-adjusting knob
- Bonnet design with protection against over pressurisation

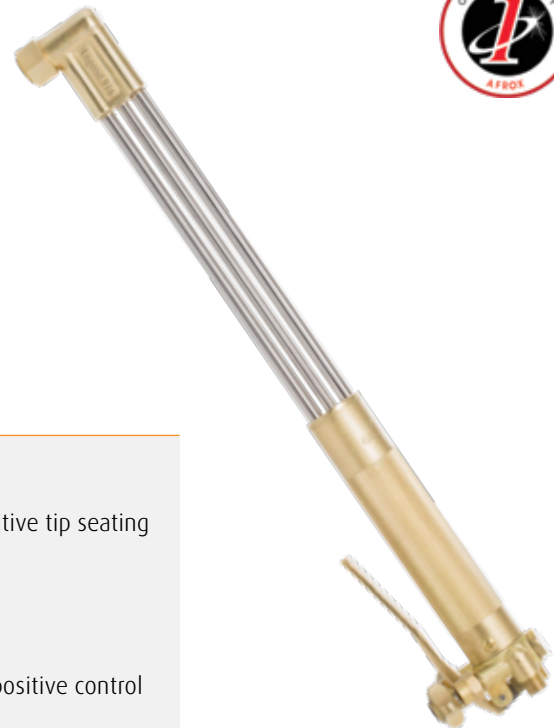
Description	Item Number
Acetylene Pressure Regulator	W003862

## Afrox Tip

Cylinder pressures vary with the different compressed gases. Therefore, select the correct regulator for the gas type you are using as well as your application.

For cutting operations, it is essential to select an oxygen regulator which allows the correct working pressure.

## Saffire® Torches & Attachments



### Afrox Saffire® Legend 916 Heavy Duty Cutting Torch

- Tip mix principle - maximum operator safety
- Cutting capacity up to 460 mm thick steel
- Robust forged brass angle head for high strength, minimum distortion, positive tip seating and long service life
- Use with screw-in F tips
- Ease-on feature for cutting oxygen
- Needle torch control valves for fast, accurate flame adjustment
- Brass underslung cutting oxygen lever for comfort, ease of operation and positive control
- Stainless steel tubes for maximum strength and corrosion resistance.

#### Saffire® Legend 916 Heavy Duty Cutting Torch

Description	Gas	Head	Length (mm)	Inlet Connection	Item Number
Saffire® Legend 916	Acetylene	90 degree	510	9/16" UNF	W231001

### Afrox Saffire® Universal® Cutting Torch 500 mm - 90 deg

- The Afrox Universal® is a versatile, robust and well-balanced torch capable of cutting steel up to 300 mm thick
- The torch may be used with acetylene or LPG depending on type of nozzle fitted
- Pre-heated oxygen and fuel gas are mixed in the nozzle for greater safety and resistance to backfire
- 3/8" BSP hose connection
- Note: Special nozzles for gouging are also available

Description	Item Number
Universal® Cutting Torch	W005803

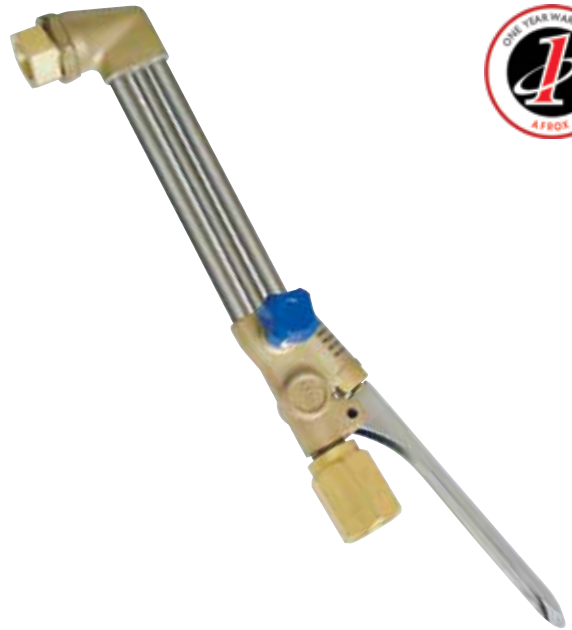




### Afrox Saffire® Type 2 Shank

- Manufactured from extruded aluminium
- Hose connections 3/8" BSP

Description	Item Number
Type 2 Shank	W005800



### Type 2 Cutting Attachment

- Cuts steel up to 75 mm with acetylene or LPG

Description	Item Number
Type 2 Cutting Attachment	W005801



### PortaPak® Combi-Lite Shank

- Used in conjunction with either the Combi-Lite Mixer or the Combi-Lite Cutting Attachment
- When used with the Combi-Lite Mixer and DH nozzles, the Combi-Lite turns into a welding and brazing torch
- Capable of welding and brazing materials up to 8 mm in thickness
- Ideally suited for use in workshops, garages, laboratories and production lines
- 1/4" inlet connection

Description	Item Number
PortaPak® Combi-Lite Shank	W005716



### PortaPak® Combi-Lite Cutting Attachment

- Used in conjunction with the Combi-Lite Shank and can be used for cutting or welding by simply changing to the appropriate nozzle
- Use the LC nozzles for welding (capable of welding and brazing materials up to 4 mm)
- Use the AF-N nozzles for cutting (capable of cutting steel up to 35 mm).

Description	Item Number
PortaPak® Combi-Lite Cutting Attachment	W005719



### ARCmate Torch Handle and Mixer

- Designed according to ISO 5172
- Suitable for light duty welding and cutting applications
- For cutting use with acetylene A-FN nozzles
- For welding use with light duty welding tips
- Suitable for cutting steel up to 35 mm thick

Description	Item Number
ARCmate Torch Handle	W005851



### ARCmate Cutting Attachment

- Designed according to ISO 5172
- Suitable for light duty welding and cutting applications
- For cutting use with acetylene A-FN nozzles
- For welding use with light duty welding tips
- Suitable for cutting steel up to 35 mm thick

Description	Item Number
ARCmate Cutting Attachment	W005852



### Afrox Saffire® Type 2 Mixer

- The Afrox Type 2 Mixer is made of precision-machined brass and weighs only 150 g

Description	Item Number
Type 2 Mixer	W005802



### Type 2 High Capacity Mixer

- Used for LPG heating and superheating applications

Description	Item Number
Type 2 Mixer	W010402



### PortaPak® Combi-Lite Mixer

- To be used with the Combi-Lite Shank and DH nozzles

Description	Item Number
PortaPak® Combi-Lite Mixer	W005718



### ARCmate Mixer

- To be used with the ARCmate Cutting Attachment and Torch Handle

Description	Item Number
ARCmate Mixer	W005853



# Flashback Arrestors & Quick Release Couplings



## Flashback Arrestor F5 Regulator Mounted

3/8" BSP inlet connection

Description	Item Number
Fuel Gas (3/8" LH)	W012028
Oxygen (3/8" RH)	W012029



## Flashback Arrestor F7 Torch Mounted

3/8" BSP inlet connection

Description	Item Number
Fuel Gas (3/8" LH)	W012030
Oxygen (3/8" RH)	W012031



## Quick Release Coupling & Flashback Arrestor CPN-460

3/8" BSP inlet connection

Description	Item Number
Fuel Gas (3/8" LH)	W012089
Oxygen (3/8" RH)	W012088



## Flashback Arrestor Regulator Mounted PortaPak®

SANS 50730-1 approved  
Safety features include:

- Flashback arrestor
- Temperature activated cut-off valve
- Non-return valve
- Replaceable inlet filter
- 1/4" BSP inlet connection

Description	Item Number
Fuel Gas	W012016
Oxygen	W012017



## Flashback Arrestor F8 Torch Mounted PortaPak®

SANS 50730-1 approved  
Safety features include:

- Flashback arrestor
- Non-return valve
- Replaceable inlet filter
- 1/4" BSP inlet connection

Description	Item Number
Fuel Gas	W012032
Oxygen	W012033

## Afrox Tip

When fuel gases are mixed with oxygen under pressure, there is a chance of one gas mixing back into the other. Once the gases are mixed, there is the risk that this mixture may ignite and explode. This explosion, called a flashback, can travel all the way back into the system, to the point of mixing. It can cause considerable damage to equipment and poses substantial risk to life and limb.

Afrox recommends that each regulator outlet and torch inlet be fitted with a SABS-approved flashback arrestor.

## Nozzles



### Acetylene Hand Cutting – A-NM6

- Hand cutting
- Use with Universal® and Type 2 torches

Description	Item Number
0,8 short patt.	W005014
1,2 short patt.	W005015
1,6 short patt.	W005016
2,0 short patt.	W005017
2,4 short patt.	W005018
3,2 short patt.	W005020



### Acetylene Machine Cutting – A-NM6

- Machine cutting
- Long pattern

Description	Item Number
0,8 long patt.	W005021
1,2 long patt.	W005022
1,6 long patt.	W005023
2,0 long patt.	W005024
2,4 long patt.	W005025
3,2 long patt.	W005026



### LPG Cutting – P-NM

- Use with Universal® and Type 2 torches

Description	Item Number
0,8 short patt.	W010236
1,2 short patt.	W010237
1,6 short patt.	W010238
2,0 short patt.	W010239
2,4 short patt.	W010240
3,2 short patt.	W010242



### Afrox Saffire® Type 2 Welding Nozzles

- Use with Type 2 torches

Description	Item Number
0,9 mm	W005037
1,2 mm	W005038
2,0 mm	W005039
2,6 mm	W005040
3,2 mm	W005041
4,0 mm	W005042
5,0 mm	W005043



### Combi-Lite Torch Welding Nozzle (PortaPak®)

- Use with Combi-Lite torches

Description	Item Number
0,9 mm	W005701
1,2 mm	W005702
2,0 mm	W005703
2,6 mm	W005704
3,2 mm	W005705
4,0 mm	W005706



### Combi-Lite Welding Nozzle (PortaPak®)

- Acetylene cutting
- Use with Combi-Lite torches

Description	Item Number
0,9	W005090
1,2	W005091
2,0	W005092
2,6	W005093
3,2	W005094
4,0	W005095

## Afrox Tip

The Afrox range of nozzles utilises the nozzle-mix principle, whereby the fuel gas and preheat oxygen are kept separate right up to the nozzle and are only mixed once inside the preheat orifices.

Always use an approved nozzle cleaner to clean nozzles to avoid nozzle damage and ensure proper cleaning.



## Accessories



### Nozzle Cleaners (Standard)

- For one piece nozzles

Item Number W012172



### Multi-Purpose Spanner

Item Number W012590



### Safetest Leak Detection Spray

- For leak testing of gas equipment & gas pipelines

Item Number W012045



### Afrox Saffire® Boilermaker's Chalk

Item Number W012176



### Triple Flint Spark Lighter

- Includes one spare replacement flint

Item Number W012621



### Triple Flint Replacement Flint

Description	Item Number
3 pack	W012622



### 'O' Clip Crimping Tool

- Suitable for hose 'O' clips

Item Number W012580



### Regulator Spanner - 27 mm

Item Number W012585

### Industrial Cylinder Trolley

- Oxy/DA cylinder trolley
- Industrial strength

Item Number W012035





## Hoses & Fittings



Picture shown with optional hose connections

### Pre-Packed Hose 5 mm PortaPak®

- Pre-packed lengths
- Flame retardant
- ISO 3821 approved

Description	Item Number
3 m Acetylene	W002600
3 m Oxygen	W002601
6 m Acetylene	W002602
6 m Oxygen	W002603



Picture shown with optional hose connections

### Pre-Packed Hose 8 mm Industrial

- Pre-packed lengths
- Flame retardant
- ISO 3821 approved

Description	Item Number
6 m Acetylene	W002560
6 m Oxygen	W002561
12 m Acetylene	W002562
12 m Oxygen	W002563
18 m Acetylene	W002564
18 m Oxygen	W002565



### Cut-to-Length Handigas Hose (Neoprene)

- Flame retardant
- Sold in metre lengths
- ISO 3821 approved

Description	Item Number
5 mm (Handigas) per metre	W002439
8 mm (Handigas) per metre	W002440



### Pre-Packed Inert Gas Hose - 5 mm

Description	Item Number
6 m Inert	W237100
100 m Inert	W237101





### Hose Connection Kits

- Comprise two nipples, two nuts, three 'O' clips

Description	Item Number
5 mm 1/4" BSP R/H	W002270
5 mm 1/4" BSP L/H	W002271
8 mm 3/8" BSP R/H	W002274
8 mm 3/8" BSP L/H	W002275



### Parallel Hose Clips

Description	Item Number
5 mm - 10 pack	W002530
8 mm - 10 pack	W002531



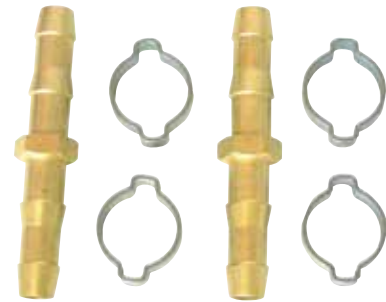
### Hose Connection Nuts

Description	Item Number
1/4" BSP L/H	W002516
1/4" BSP R/H	W002517
3/8" BSP L/H	W002166
3/8" BSP R/H	W002167



### 'O' Clips

Description	Item Number
5 mm - 10 pack	W002543
8 mm - 10 pack	W002544



### Fittings for Hose Joining

- Comprise two nipples, four 'O' clips

Description	Item Number
5 mm	W002171
8 mm	W002172



### Hose Connection Nipples

Description	Item Number
5 mm Hose Nipple, Fits 1/4" Nut	W002518
5 mm Hose Nipple, Fits 3/8" Nut	W002175
8 mm Hose Nipple, Fits 3/8" Nut	W002170

### Equal Hose Coupler

Description	Item Number
3/8" BSP Equal Hose Coupler L/H (2 of)	W002176
3/8" BSP Equal Hose Coupler R/H (2 of)	W002177

## Accessories & PortaPak®

### PortaPak®

The Afrox PortaPak® is the ideal welding and cutting set for those difficult-to-get-to jobs. Light and robust, with man-sized capabilities, it is easily moved by one person, and can be lifted through hatches or into service vehicles. Because of its small size and portability, the set is ideal for emergency vehicles or on maintenance duty in industry where portability is a must.

#### Welding and Cutting Capabilities

The PortaPak® can be used for fusion weld, braze weld, silver solder, heating and cutting. Nozzles provided will fusion weld steel up to 4 mm and cut steel up to 50 mm thick. The cutting capability can be extended to 20 mm by using the AFN 1,2 mm or to ± 35 mm using the AFN 1,6 mm nozzle available as an optional extra.

#### Continuous Operating Times

Brazing and welding with No. 5 nozzle – six hours. Cutting with 0,8 mm nozzle – 45 minutes. These times are for non-stop operation. The average job requires a fair amount of preparation and welding and cutting is normally intermittent, which in practice extends these times considerably.

## Features

#### Regulators

Single-stage regulators that give exceptional performance and reliability. Both are equipped with gauges indicating cylinder and outlet pressures. Gauges are colour-coded for easy and safe setting of welding and cutting pressures. When replacing regulator stem sealing washers, use only the correct Afrox replacement parts (see ordering information).

#### Accessory Box

Convenient robust metal box with provision to hold the full range of nozzles, flint lighter, goggles, and spanner.

#### Cylinders

Capacities: oxygen 1,43 kg, acetylene 0,9 kg.

There are no rentals or deposits on the cylinders but a charge will be made for subsequent refills.

**Cylinders may only be filled by Afrox.**

#### Filler Rod Holder

Easily removable holder allows access to short lengths of filler rods.

#### Trolley

Designed as a robust lightweight unit, it gives maximum mobility and incorporates a positive cylinder-securing device ensuring safe handling of the set. A lifting eye is provided at the centre of gravity to enable safe hoisting of the unit.

#### Torch

The Afrox Combi-Lite Torch converts from welding to cutting by simply changing the nozzle.

#### Flashback Arrestors

For ultimate safety, regulator and torch mounted flashback arrestors are incorporated as standard equipment, thereby eliminating any possibility of ignition of mixed gases in the hoses.

#### Hose

Completely assembled industrial grade 5 mm SANS approved hoses, supplied in 3 m lengths and fitted with safety flashback arrestors that protect against mishaps. The hose is flame retardant, durable and resistant to abrasion.





## Ordering Information

### The Outfit Comprises

Description	Item Number
Oxygen Cylinder	W005740
Acetylene Cylinder	W005782
Complete Accessory Kit	W005772

### The Accessory Kit Comprises

Description	Item Number
Oxygen Regulator	W003031
Acetylene Regulator	W003034
PortaPak® Combi-Lite Shank	W005716
PortaPak® Combi-Lite Cutting Attachment	W005719
3 m Lengths of Fitted Hose Acetylene (DA) *	W002600
3 m Lengths of Fitted Hose Oxygen (O <sub>2</sub> ) *	W002601
Parallel Hose Clips	W002530
Goggles	W012257
Multi-purpose Spanner	W012590
Triple Flint Lighter	W012621
Data Card	N/R
Replacement Inlet Stem Seals (Two x O <sub>2</sub> , one x DA)	W003077
Nozzle Cleaners	W012172
Reg. Mount Flashback Arrestor Acetylene	W012017
Reg. Mount Flashback Arrestor Oxygen	W012016
Torch Mount Flashback Arrestor Acetylene	W012032
Torch Mount Flashback Arrestor Oxygen	W012033
No. 1 LC Nozzle	W005701
No. 3 LC Nozzle	W005703
No. 7 LC Nozzle	W005705
AFN 1,2 Cutting Nozzle	W005709
AFN 1,6 Cutting Nozzle	W005710
No. 3 Welding Nozzle	W005092
No. 5 Welding Nozzle	W005093
No. 7 Welding Nozzle	W005094

\* Fittings sold separately

View the PortaPak® video on 

## Outfits/Kits

### Type 2 Economy Outfit

- A flexible outfit ideal for oxy-acetylene welding and cutting
- Can be customised to suit your needs.

#### Features

- Unique Afrox encapsulated valves providing extremely stable control of gases
- Type 2 shank and cutting attachment are constructed from solid brass forgings and have silver-brazed joints for extra strength.

Description	Item Number
Set	W005860



- |  |                                  |
|--|----------------------------------|
| <b>A</b> Toolbox                                   | <b>I</b> Type 2 shank            |
| <b>B</b> Medium-duty welding nozzle - No. 7        | <b>J</b> Multi-purpose spanner   |
| <b>C</b> Cutting nozzle ANM - 0,8 mm               | <b>K</b> Nozzle cleaners         |
| <b>D</b> Acetylene regulator Series 6000 - 150 kPa | <b>L</b> Triple flint lighter    |
| <b>E</b> Oxygen regulator Series 6000 - 400 kPa    | <b>M</b> Type 2 mixer            |
| <b>F</b> F5 regulator mounted flashback arrestors  | <b>N</b> Fitted hose (oxygen)    |
| <b>G</b> F7 torch mounted flashback arrestors      | <b>O</b> Fitted hose (acetylene) |
| <b>H</b> Type 2 cutting attachment                 | <b>P</b> Goggles                 |

#### Also included but not shown:

- Operation and instruction manual

Please Note: For ultimate safety, always use genuine Afrox Saffire® flashback arrestors and parts. Replacement parts are available for all outfits.





## Type 2 Professional Outfit

- A premium outfit for welding, brazing, heating and cutting application
- Capable of cutting up to 75 mm and welds up to 5 mm.

### Features

- Unique Afrox encapsulated valves providing extremely stable control of gases
- Type 2 shank and cutting attachment are constructed from solid brass forgings and have silver-brazed joints for extra strength.

Description	Item Number
Set	W005861



- |   |                                  |
|---|----------------------------------|
| <b>A</b> Toolbox  | <b>K</b> Type 2 shank            |
| <b>B</b> Heating neck tube                                | <b>L</b> Multi-purpose spanner   |
| <b>C</b> Acetylene heating nozzle                         | <b>M</b> Nozzle cleaners         |
| <b>D</b> Medium-duty welding nozzles - No. 2, 3, 5, 7, 13 | <b>N</b> Triple flint lighter    |
| <b>E</b> Cutting nozzles ANM - 0,8, 1,2, 1,6              | <b>O</b> Type 2 mixer            |
| <b>F</b> Acetylene regulator SMOOTHFLO™ - 150 kPa         | <b>P</b> Fitted hose (oxygen)    |
| <b>G</b> Oxygen regulator SMOOTHFLO™ - 1 000 kPa          | <b>Q</b> Fitted hose (acetylene) |
| <b>H</b> F5 regulator mounted flashback arrestors         | <b>R</b> Goggles                 |
| <b>I</b> F7 torch mounted flashback arrestors             | <b>S</b> Circle cutting guide    |
| <b>J</b> Type 2 cutting attachment                        |                                  |

### Also included but not shown:

- Operation and instruction manual

Please Note: For ultimate safety, always use genuine Afrox Saffire® flashback arrestors and parts. Replacement parts are available for all outfits.

# Sievert® Equipment

Established in 1882, Sievert® AB is a Swedish world-leading manufacturer of LPG and electric-powered heating tools for professionals.

Product development takes place in close collaboration with customers and cooperative partners. Sievert® heating tools and equipment are used by professionals in mining, construction, oil and gas, automotive, plumbing, energy and telecom industries.

Whether you need to preheat large structural steel parts, apply heat shrinking sleeves on telecom connections, heat up mechanical rusted parts to unlock them, or braze HVAC copper pipes, Sievert® offers a complete range of heating tools for maintenance and repairing operations.

## Sievert® Promatic range

Promatic is the most advanced and safest system in the Sievert® range. The patented piezoelectric ignition, universal handle, advanced design and ergonomic appearance make Promatic a superior system for all possible heating tasks where efficiency and professional workmanship are the most important requirements.

Promatic operates with propane and butane gases.



## Promatic Handle

- Plastic composite handle reinforced with 30% glass fibres for maximum durability
- Double moulded soft grip for highest comfort and usability
- Piezo igniton with instant trigger on/off function
- Bayonet fitting for burners: no gas emission until burner is fitted for maximum safety
- Swivelling hose connection to avoid hose drag
- Combined suspension hook and footstand
- Valve for precise flame setting.



Sievert® Model No.	Working Pressure	Length	Height	Weight	Item Number
336611	1,5-4 bar	180 mm	80 mm	290 g	W010020

Hose connections BSP 3/8" LH.



## Promatic Soft Flame Burner

Ideal for cable work and other heat shrinking applications.



### Promatic Soft Flame Burner

Ideal for cable work and other heat shrinking applications.

Sievert® Model No.	Burner Diameter	Gas Consumption	Heat Effect	Item Number
334191	38 mm	900 g/h at 2 bar	11,5 kw	W010028

For thick walled sleeves max, 150 mm. Also for thin walled sleeves.

## Promatic Cyclone Burner

Ideal for brazing and soft soldering thanks to the rotating flame that provide an all-around heat transfer to the pipe.



Sievert® Model No.	Burner Diameter	Gas Consumption	Soft Soldering	Heat Effect	Item Number
333501	19 mm	250 g/h at 2 bar	± 400°C	3,2 kw	W010022

Soft soldering about 400°C max. pipe diameter – 32 mm.  
Brazing up to 720°C max. pipe diameter – 18 mm.

## Sievert® PRO 86-88 Range

Sievert® PRO range is based on two universal handles that can be equipped with different necktubes and burners all compatible, to create the perfect torch system according to specific customer needs.

### Sievert® PRO 86 Handle

- Single-valved handle mainly for smaller burners
- The spindle and valve are designed to give a very exact and quick flame setting
- The spring loaded metal knob gives a precise and stable setting for the finest of flames
- All metal parts made of high quality brass
- Ergonomically designed plastic composite handle
- Double moulded soft grip for highest comfort and usability.



Sievert® Model No.	Working Pressure	Length	Height	Weight	Item Number
348641	1,5-8 bar	180 mm	70 mm	245 g	W010108



## Sievert® PRO 88 Handle

- Double-valved handle mainly for larger burners
- Incorporates one main valve and one economiser valve enabling a gas saving pilot flame
- Trigger for instant shifting between pilot and main flame and for pulsing the main flame
- All metal parts made of high quality brass
- Ergonomically designed plastic composite handle
- Double-moulded soft grip for highest comfort and usability.



Sievert® Model No.	Working Pressure	Length	Height	Weight	Item Number
348841	1,5-8 bar	205 mm	90 mm	385 g	W010109

## Sievert® PRO Neck Tubes

Shorter neck tubes are recommended for smaller heating applications like gold and silver forging. Longer neck tubes are recommended for larger jobs like metal preheating, roofing and road work. Titanium neck tube weighs up to 60% less than brass and provides a better heat transfer, ideal for preheating applications.



Sievert® Model No.	Length	Material	Item Number
350902	180 mm (with hook)	Brass	W010105
351001	350 mm	Brass	NEW (Available on Request)
350701	500 mm	Brass	NEW (Available on Request)
350601	750 mm	Brass	W010106
355601	750 mm	Titanium	NEW (Available on Request)

## Sievert® PRO Burners

Sievert® burners are designed for high-pressure operation (200 kPa) and all of them can be connected to the universal handles by means of the neck tubes. The special design ensures that cool primary air forms a cooling air gap between flame and burner tube, thus ensuring a very long burner lifetime. Each burner is individually flame-tested before delivery.

## Sievert® PRO Pin-point Burners

Finest flame for precision works such as gold and silver forging. Working pressure 2 bar.



Sievert® Model No.	Burner Diameter	Material	Gas Consumption at 2 Bar	Heat Effect	Max Pipe Diameter Soft Soldering	Item Number
393802	17 mm	Brass	20 g/h	0,25 kw	10 mm	W010146



## Sievert® PRO Standard Burners

Brush-type flame for all kinds of soft soldering – small heating applications. Working pressure 2 bar.



Sievert® Model No.	Burner Diameter	Material	Gas Consumption at 2 Bar	Heat Effect	Max Pipe Diameter Soft Soldering	Item Number
394002	17 mm	Brass	90 g/h	1,2 kw	12 mm	W010119



Sievert® Model No.	Burner Diameter	Material	Gas Consumption at 2 Bar	Heat Effect	Max Pipe Diameter Soft Soldering	Item Number
294102	28 mm	Brass	600 g/h	7,7 kw	60 mm	W010120

## Sievert® PRO Power Burners

Heavy duty power burners with extremely strong and windproof flame. Ideal for preheating before welding, bitumen laying, drying, field torching and other heat demanding applications. Working pressure 4 bar. Titanium burner weighs up to 60% less than brass and provides a better heat transfer, ideal for preheating applications.



Sievert® Model No.	Burner Diameter	Material	Gas Consumption at 4 Bar	Heat Effect	Item Number
294302	35 mm	Brass	3,350 g/h	43,5 kw	W010122



Sievert® Model No.	Burner Diameter	Material	Gas Consumption at 4 Bar	Heat Effect	Item Number
294402	50 mm	Brass	6,700 g/h	86,0 kw	W010123



Sievert® Model No.	Burner Diameter	Material	Gas Consumption at 4 Bar	Heat Effect	Item Number
295401	70 mm	Titanium	12,500 g/h	155,0 kw	NEW (Available on Request)

## Gas Cutting Machines

The IK-12MAX3 is a high quality motor driven portable flame cutting machine designed to cut straight lines, circles and bevels with clean, sharp, smooth edges.

- All functions controlled by forward/off/reverse switch, clutch lever and speed adjustment knob
- Versatility and convertibility inherent in the design ensure all types of straight line, circle and bevel cutting are simply performed
- Use of Afrox A-NME oxy-fuel cutting nozzles in conjunction with the uniquely accurate guidance driving system provides unequalled performance in the cutting of clean, sharp and smooth edges

- Plate track for straight line cutting is available in inter-locking sections of 1 800 mm each which may be extended indefinitely
- An adjustable radius bar for circle cutting and a circle cutting track are optionally available
- High speed mode in the range of 240 - 2 400 mm/min at 50 cycle and 300 - 3 000 mm/min at 60 cycle is available
- The exclusive double cone reduction gear system provides very smooth travelling and therefore set speed is kept in any of long time operation.



Description	Item Number
1K-12MAX3 Portable	W014112

Specifications	IK-12MAX3
Cutting Speed (Standard type)	80 - 800 mm/min
Travelling Speed (High speed type)	240 - 2 400 mm/min
Speed Control	Double cone stepless speed control system
Speed Meter	Dial induction (w/conversion scale)
Power	42/110/220 V AC
Machine Dimensions	Length 430 mm Width 170 mm Height 215 mm
Max. Loading Weight	50 kg
Weight	10 kg

Optional Extras / Spares	Afrox Item Number
IK-12MAX3 Track 1,8 m	W014111
IK-12MAX3 Heatshield	W014113
Torch Block Model SP400	W014131



# Transarc<sup>®</sup> Gas Equipment

The Transarc<sup>®</sup> NM250 cutting torch is a versatile, well-balanced torch capable of cutting steel up to 270 mm thick. The torch provides excellent flame control and exceptional handling for all industrial cutting applications.

Transarc<sup>®</sup> NM250 cutting torches feature nozzle mixing technology for added safety and for protecting the torch and operator from accidental backfires.

They can be used with acetylene or LPG, depending on the type of nozzle fitted.



1 year conditional warranty  
ISO 5172 TÜV certified



- A** Nozzle mixing helps contain backfires in the nozzle, protecting the torch from downtime and providing added operator safety
- B** Custom angle head design allows for proficient and rapid nozzle change
- C** Large forged head provides unmatched durability and reduces warping for extended service
- D** Three-tube construction keeps gases separate, allowing gas mixing only in the nozzle for added operator safety
- E** Solid lever for added durability
- F** Fully silver-brazed joints, thick-walled stainless steel tubes and solid brass forged head and tail result in robustness and lower maintenance costs
- G** Easy-grip valves give you full control over your cutting flame
- H** Heavy duty cast handle for positive grip, comfort and control
- I** Colour coded control knobs to improve operator productivity and safety

• For use with standard Arox Saffire<sup>®</sup> A-NM6 & P-NM nozzles.

## Transarc® Regulator Series

The Transarc® series comprises a range of versatile pressure regulators designed to offer a safe and reliable product. The range is ISO 2503 certified and each regulator has been designed to provide optimum flow control utilising Afrox's patented Quadflow encapsulated valve technology. The product has been designed to the latest and most stringent regulatory standards to offer an extended product life.

### Features

- 3rd generation Quadflow technology encapsulated valve
- 62 mm gauges colour-coded for ease of use and setting
- Full technical and back up service from Afrox
- 1 year conditional warranty.



### Afrox Transarc® Single-Stage Regulator

Model	Description	Gas Type	Delivery Pressure	Inlet Connection	Outlet Connection	Max Inlet Pressure	Item Number
S6000 AGS 150	Single-stage general-purpose regulator for welding, cutting and heating	Acetylene	0 - 150 kPa	5/8" LH	3/8" LH	2 750 kPa	W003858
S6000 OGS 600	Single-stage medium outlet pressure regulator for medium duty welding and cutting	Oxygen	0 - 600 kPa	5/8" RH	3/8" RH	30 000 kPa	W003859
S6000 LGS 400	Single-stage 400 kPa Handigas (LPG) regulator suitable for the full range of Afrox LPG nozzles	Handigas (LPG)	0 - 400 kPa	5/8" LH	3/8" LH	2 000 kPa	W003612

## Transarc® Cartridge & Automatic Arrestors

### Afrox Transarc® Cartridge & Automatic Arrestors

Model	Gas	Inlet Connection	Outlet Connection	Description	Item Number
Transarc® TM35	Fuel Gas	8 mm Hose	3/8" BSP	NM250 Torch Mount	W012042
Transarc® TM35	Oxygen	8 mm Hose	3/8" BSP	Type 2 Torch Mount	W012041
Transarc® RM35	Fuel Gas	8 mm Hose	3/8" BSP	Regulator Mount	W012037
Transarc® RM35	Oxygen	8 mm Hose	3/8" BSP	Regulator Mount	W012036



## Fault Finding Reference Guide

Symptom	Cause	Resolution
A. No gas flows when torch valves are open	<ol style="list-style-type: none"> <li>1. No gas in cylinder</li> <li>2. Cylinder valve not open</li> <li>3. Regulator valve not open</li> <li>4. Incorrect flashback arrestors</li> <li>5. Flashback arrestors blocked</li> <li>6. Hoses blocked</li> <li>7. Nozzle blocked</li> </ol>	<ol style="list-style-type: none"> <li>1. Check contents gauges of both cylinders and refill appropriate cylinder</li> <li>2. Crack cylinder valve slowly, open another 1/2 to 1 full turn</li> <li>3. Set correct pressures on regulator before lighting up</li> <li>4. Torch mount arrestors must be fitted on the torch side only. Regulator mount arrestors must be fitted to regulator side only</li> <li>5. Check inlet filters and replace if necessary</li> <li>6. Blow out hoses with high pressure air or replace hoses if necessary</li> <li>7. Clean nozzle with approved nozzle cleaner or replace nozzle if necessary</li> </ol>
B. Gas won't ignite when torch is opened	<ol style="list-style-type: none"> <li>1. Oxygen torch valve is open</li> </ol>	<ol style="list-style-type: none"> <li>1. Acetylene is the fuel gas and must be ignited first, with oxygen fully shut</li> </ol>
C. Explosion occurs when acetylene is ignited	<ol style="list-style-type: none"> <li>1. Pressure not correct for nozzle in use</li> <li>2. Flashback occurs</li> </ol>	<ol style="list-style-type: none"> <li>1. Consult nozzle data chart for the correct pressures for the appropriate nozzles</li> <li>2. Purge each hose separately before use for approximately 2 seconds per 6 m length of hose</li> </ol>
D. Flame around nozzle nut when torch is ignited	<ol style="list-style-type: none"> <li>1. Nozzle nut not tightened</li> <li>2. Torch head seat damaged</li> <li>3. Nozzle seat damaged</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten nozzle nut until flame is extinguished</li> <li>2. Trade in torch for an Afrox Servex replacement</li> <li>3. Replace nozzles</li> </ol>
E. 'Popping' noise heard from torch head	<ol style="list-style-type: none"> <li>1. Gases mixing in torch head causing small sustained flashbacks</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the nozzle and torch seats, replace if damaged. If not damaged, tighten the nozzle nut</li> <li>2. Clean nozzle with approved nozzle cleaner to avoid damage</li> </ol>
F. Nozzle not cutting properly or effectively	<ol style="list-style-type: none"> <li>1. Incorrect nozzle for size and type of material being used</li> </ol>	<ol style="list-style-type: none"> <li>1. Refer to nozzle data chart or Afrox experts for pressure setting and flow rates</li> </ol>

### Afrox Tip

Use the reference guide to find out how to deal with faulty equipment or gas flow irregularities before or after using your gas equipment. If you have any queries about problems concerning gas equipment, don't take a chance with safety, ask Afrox.

Symptom	Cause	Resolution
G. Cutting lever does not produce a cutting stream	<ol style="list-style-type: none"> <li>1. Incorrect operation procedure (Type 2 torch only)</li> <li>2. Oxygen pressure not high enough</li> <li>3. Torch internally damaged</li> </ol>	<ol style="list-style-type: none"> <li>1. Open oxygen control valve on shank fully. Control preheat flame by oxygen valve on attachment</li> <li>2. Consult nozzle data chart</li> <li>3. Trade in torch for an Afrox Servex replacement</li> </ol>
H. 'Garlic' or 'fishy' smell occurs when torch is in use	<ol style="list-style-type: none"> <li>1. Fuel gas (DA/LPG) leaking</li> <li>2. 'Garlic' smell – Acetylene leaking from gas set</li> <li>3. 'Fishy' smell – LPG leaking from gas set</li> </ol>	<ol style="list-style-type: none"> <li>1. Test for leaks using Safetest leak detection fluid NB: Oxygen is odourless, colourless and is dangerous when excessive amounts are vented into the atmosphere. Check for leaks regularly on both lines</li> </ol>
I. Loud explosion occurs when cutting, welding or heating	<ol style="list-style-type: none"> <li>1. Flashback has occurred</li> </ol>	<ol style="list-style-type: none"> <li>1. Flashback arrestors must be used to stop back-feeding of gases and quenching of flames</li> </ol>
J. Hoses burst after loud explosion	<ol style="list-style-type: none"> <li>1. Flashback has occurred</li> </ol>	<ol style="list-style-type: none"> <li>1. Flashback arrestors must be used to stop back-feeding of gases and quenching of flames</li> </ol>
K. Acetylene cylinder hot	<ol style="list-style-type: none"> <li>1. Cylinder burning inside</li> </ol>	<ol style="list-style-type: none"> <li>1. Close cylinder valve</li> <li>2. Remove regulator</li> <li>3. Separate acetylene cylinder from oxygen cylinder</li> <li>4. Remove acetylene cylinder outdoors</li> <li>5. Hose down with water from a safe distance</li> <li>6. Call supplier (Do not use cylinder again)</li> </ol>
L. Acetylene cylinder hot. Paint peeling off or cylinder jumping around	<ol style="list-style-type: none"> <li>1. Cylinder burning inside and ready to explode</li> </ol>	<ol style="list-style-type: none"> <li>1. All persons to evacuate immediately</li> </ol>
M. Cylinder/s explode/s	<p>Ensure that your cylinders are always kept in good condition and ensure that flashback arrestors are connected to both the torch and regulator. Ensure that correct nozzles are fitted in accordance with the fuel gas being used as fuel gas/oxygen mixtures vary when using oxy/acetylene and oxy/LPG.</p>	

## Afrox Tip

Cylinder pressures vary with the different compressed gases. Therefore, select the correct regulator for the gas you are using as well as your application.

- For cutting operations it is essential to select an oxygen regulator which allows a sufficiently high rate of flow
- Low pressure oxygen regulators are available for welding applications.



## Standards

### All gas equipment should comply with the following local/international standards:

- Regulators: ISO 2503
- Torches: ISO 5172
- Hoses: ISO 3821 for oxygen and acetylene
- Hose connections: SANS 3253
- Flashback arrestors: SANS 50730-1 / EN 730-1
- Hose assemblies: SANS 8207
- Health & Safety Code of Practice: SANS 10238

### The following guidelines, standards and products are available to assist you and your business:

- ISO approved regulators fitted with encapsulated valves, fit-for-purpose and conforms to ISO 2503 with optional gauge guard, if required
- ISO approved regulator mounted flashback arrestors consisting of a temperature activated cut-off valve, flame arrestor, non-return valve and pressure activated cut-off valve on both oxygen and acetylene lines
- Correct length of hoses, fit-for-purpose and SABS approved
- Approved hose connections in accordance with SANS 8207 which include 'O' clips fitted with correct crimping tool
- Suitable hose holders or parallel hose clips fitted in such a way that hoses can be separated easily and do not have any sharp edges
- Flashback arrestors should be fitted to both the regulator and torch
- Approved torches compliant to ISO 5172
- Nozzles: 100% tested for leaks across the seats and quality of performance
- Quality nozzle cleaner to ensure good and consistent quality performing nozzle
- Before light-up, all gas equipment SHALL be leak tested with the correct leak detection solution such as the Afrox Safetest (Item Number W012045) which is OIL-FREE. NO soapy solutions SHALL be used on gas equipment
- ONLY a spark lighter such as the Afrox triple flint lighter (Item Number W012621) SHALL be used to ignite the gas flowing from the nozzle. UNDER NO circumstances must an open flame be used

- Under NO CIRCUMSTANCES SHALL PTFE tape be used on oxy/fuel equipment. Manufacturer uses special oil-free type tape on gauges and, for example, if spare parts are required for maintenance, equipment will be provided by manufacturer with correct tape attached
- Trolleys to transport oxygen/acetylene cylinders SHALL be in good working condition
- Correct PPE to be worn at all times
- Wall-mounted posters on light-up and shutdown procedures and other posters and data sheets provided by manufacturer to be visible at all times at every station
- Risk assessments to be conducted on a regular basis. Level to be determined by management
- Flashback arrestors SHALL be tested or replaced annually. Afrox flashback arrestors can be tested with a WITT test panel (Item Number W012212)
- NEVER use oil or grease on any gas equipment
- Operators should be trained on the safe use and handling of gas and gas equipment before working on gas equipment
- Training should include product training, correct fitment of equipment and correct safe operating practices (e.g. correct light-up and shutdown procedures).





## It's all good **with quality you can trust**

Customer safety is our number one priority when it comes to our range of gas and cutting equipment products. Afrox ensures purpose-built and bespoke designs, tested and certified for a safe working environment. Insist on Afrox gas equipment which meets the highest international performance and safety standards.

**Africa's leading gases and welding solutions partner.**

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## SECTION 7



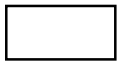






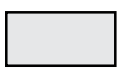
## WELDING CONSUMABLES



## Electrode Selection Chart

SECTION 7

WELDING CONSUMABLES

Afrox Product	Label Colour	Product Characteristics	Product Application
		Ensure that the Open Circuit Voltage (OCV) range of your welding machine is within the specified range for the selected electrode and application	
Vitemax®		General Purpose	Carbon/mild steel – fences, trailers, gates
Transarc® 6013		General Purpose	Burglar bars, fireplaces, furniture, etc.
Afrolux®		High Deposition	High speed welding and general fabrication
312		Problem Steel	Dissimilar steels – tools, dies, springs, etc.
316L		Stainless Steel	Heat exchanges, chemical storage tanks, etc.
Transcast® 55		Cast Iron	Cast iron components and cast iron to steel
78MR & 7018-1		Hydrogen Control	Structural applications, pressure vessels, etc.
Gouge		Gouge/Metal Removal	Gouge, cutting and grooving steels
CR70		Hardfacing	Depositing a wear resistant overlay
Alumoid		Aluminium Alloys	Pulleys, housing, sump pans, impellers, etc.

Average thickness of plate	Electrode diameter (mm)	Recommended Afrox Vitemax® current range (A)
Up to 1,5 mm	2,0 mm	40 – 80
1,5 mm – 2,0 mm	2,5 mm	60 – 95
2,0 mm – 5,0 mm	3,15 mm	100 – 130
5,0 mm – 8,0 mm	4,0 mm	140 – 165
8,0 mm upwards	5,0 mm	170 – 260

## Electrodes



### Vitemax®

- South Africa's premium rutile electrode for welding mild steel in all positions
- Features a smooth arc action, with very little spatter and excellent restriking

\* (multi-kg box)

Description	Item Number
2,0 mm 1 kg box	W072001
2,5 mm 1 kg box	W072002
3,15 mm 1 kg box	W072003
4,0 mm 1 kg box	W072004
2,0 mm Multi kg pack	W075001
2,5 mm Multi kg pack	W075002
3,15 mm Multi kg pack	W075003
4,0 mm Multi kg pack	W075004
5,0 mm Multi kg pack	W075005



### Transarc® 6013

- Excellent strike and restrike characteristics
- Self-lifting slag
- Produces a very stable arc
- Can be used with AC or DC+

Description	Item Number
2,5 mm 5 kg	W075132
3,15 mm 5 kg	W075133
4,0 mm 5 kg	W075134



### ARCmate 6013

- General purpose rutile type electrode for welding mild steels in all positions
- Good striking and arc stability
- Low spatter, easy re-striking and slag removal
- Can be used with AC or DC+

Description	Item Number
2,5 mm 5 kg	W075152
3,15 mm 5 kg	W075153
4,0 mm 5 kg	W075154
2,5 mm 1 kg	W072152
3,15 mm 1 kg	W072153



### Afrolux®

- Heavily coated rutile electrode contains iron powder in the coating which increases the amount of weld metal deposited by approximately 160%
- Recommended for high speed welding of fillet and butt joints in carbon steels in the downhand position

\* (multi-kg box)

Description	Item Number
2,5 mm 4 kg box*	W075202
3,15 mm 5 kg box*	W075203
4,0 mm 5 kg box*	W075204
5,0 mm 5 kg box*	W075205
6,3 mm 5 kg box*	W075207



### Afrox 7018-1®

- All-position basic coated hydrogen-controlled electrode of premium quality
- Used for welding a variety of carbon manganese and low alloy steels and in the fabrication of pressure vessels pipe work and general structural fabrication work

\* (multi-kg box)

Description	Item Number
2,5 mm 4 kg box*	W075282
3,15 mm 4 kg box*	W075283
4,0 mm 4 kg box*	W075284
5,0 mm 6 kg box*	W075285
6,3 mm 6 kg box*	W075287
2,5 mm DriPac 2 kg box	W075482
3,15 mm DriPac 2 kg box	W075483
4,0 mm DriPac 2 kg box	W075484
5,0 mm DriPac 2 kg box	W075485
6,3 mm DriPac 2 kg box	W075487



### Transarc® 7018-1

- Transarc® 7018-1 is an iron-powder low hydrogen type electrode for all-position welding of 490 MPa high tensile steel
- Designed for single and multiple pass applications
- Has good welder appeal
- Produces a stable arc with low spatter generation
- Produces weld metals with excellent mechanical properties and impact toughness at low temperature (-45°C) and low diffusible hydrogen
- Suitable for low alloy steels, medium carbon steels, heavy steel plates, cast steels, aluminium killed steel of LPG and especially for welding of steels with poor weldability
- Suitable for welding sulphur bearing steels and components to be virtuously enamelled

Description	Item Number
2,5 mm 4 kg box*	W075232
3,2 mm 4 kg box*	W075233
4,0 mm 4 kg box*	W075234



### Afrox 308L

- A premium grade stainless steel electrode for welding 304/304L grade stainless steel

\* (multi-kg box)

Description	Item Number
2,5 mm 5 kg box*	W075702
3,25 mm 5 kg box*	W075703
4,0 mm 5 kg box*	W075704



### Afrox 308L (-196)

- Afrox 308L (-196) is a rutile basic coated low carbon electrode for welding 19% chromium, 9% nickel type stainless steel

\* (multi-kg box)

Description	Item Number
2,5 mm 4 kg box*	W087705
3,25 mm 4 kg box*	W087706
4,0 mm 4 kg box*	W087707



## Afrox 309L

- A premium grade stainless steel electrode for dissimilar joints and cladding

\* (multi-kg box)

Description	Item Number
2,5 mm 1 kg box	W072772
3,25 mm 1 kg box	W072773
2,5 mm 4 kg box*	W075772
3,25 mm 4 kg box*	W075773
4,0 mm 4 kg box*	W075774
5,0 mm 4 kg box*	W075775
2,5 mm 2 kg DriPac*	W075776
3,25 mm 2 kg DriPac*	W075777
4,0 mm 2 kg DriPac*	W075778



## Afrox 316L

- A low carbon 19% Cr 12% Ni and 3% Mo rutile basic coated electrode

Description	Item Number
2,5 mm sleeve	W072752
3,25 mm sleeve	W072753
2,5 mm 4 kg box	W075752
3,25 mm 4 kg box	W075753
4,0 mm 4 kg box	W075754



## Afrox 310

- An all-position rutile basic coated electrode of the 25% chromium and 20% nickel type
- Suitable for welding AISI 310 grade materials

\* (multi-kg box)

Description	Item Number
2,5 mm 4 kg box*	W075732
3,25 mm 4 kg box*	W075733
4,0 mm 4 kg box*	W075734



## Afrox 316L (-196)

- A rutile basic coated low carbon electrode for welding 19% chromium, 12% nickel and 3% molybdenum type stainless steel
- Specially formulated for applications requiring low temperature properties at -196°C for use in cryogenic applications

\* (multi-kg box)

Description	Item Number
2,5 mm 4 kg box*	W087755
3,2 mm 4 kg box*	W087756
4,0 mm 4 kg box*	W087757



## Afrox E3CR12

- A heavily coated 13% chromium alloyed electrode suitable for all-position welding of 13% chromium ferritic steels
- Exhibits good toughness at temperatures down to -20°C
- Smooth, stable, low spatter arc on DC+
- Weld bead appearance is good
- Slag readily removed from the weld surface in all positions

\* (multi-kg box)

Description	Item Number
3,2 mm 5 kg box*	W075843
4,0 mm 5 kg box*	W075844

## Wire



### MIG 3000 Plus

- A mild steel welding wire produced from high quality double deoxidised rod. The wire is copper coated for increased shelf life
- For best results, the product should be used with the Argoshield® range of shielding gases

Description	Item Number
0,9 mm 18 kg spool	W033931
1,0 mm 18 kg spool	W033942
1,2 mm 18 kg spool	W033943



### Afrox MIG 6000/Afrox TIG 70S-6

- Produced from high quality deoxidised rod
- Copper coated for increased shelf life, which in the case of MIG/MAG wires, also facilitates good electrical conductivity and pick-up with reduced friction during high speed welding
- Precision layer wound to provide positive uninterrupted feeding in semi-automatic and automated systems

Description	Item Number
0,8 mm 15 kg spool (MIG 6000)	W033900
0,9 mm 18 kg spool (MIG 6000)	W033901
1,0 mm 18 kg spool (MIG 6000)	W033902
1,2 mm 18 kg spool (MIG 6000)	W033903
1,6 mm 18 kg spool (MIG 6000)	W033905
1,6 mm 5 kg tube (TIG 70S-6)	W030501
2,0 mm 5 kg tube (TIG 70S-6)	W030502
2,4 mm 5 kg tube (TIG 70S-6)	W030503



### Coremax 71 Plus

- Carbon steel and stainless steel flux cored wire for general fabrication

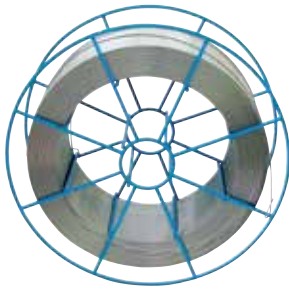
Description	Item Number
1,2 mm 15 kg spool	W081230



### Afrox MIG 9000 GoldFlo

- Premium quality bronze coated MIG wire produced from high quality double deoxidised rod
- Excellent choice for welding on metal with a medium to high presence of mill scale or rust
- Higher silicon levels promote a smooth bead surface and a flat fillet bead profile
- The wire is designed for both single- and multi-pass welding in all positions
- The bronze coating enhances the shelf life and also ensures good electrical conductivity with reduced friction during high speed welding
- Afrox MIG 9000 GoldFlo has excellent, smooth wire feedability
- Suitable for welding with dip (short circuit), spray arc and pulsed arc transfer using Ar/CO<sub>2</sub> or CO<sub>2</sub> shielding gases

Description	Item Number
0,9 mm 15 kg spool	W033971
1,0 mm 18 kg spool	W033972
1,2 mm 18 kg spool	W033973
1,0 mm 250 kg drum	W033992
1,2 mm 250 kg drum	W033993



### MIG 309LSi

- MIG/TIG 309LSi is mainly used under high dilution conditions, particularly dissimilar welds between stainless and CMn steels
- Application: buffer layers and clad steels, dissimilar joints and similar metal joints

Description	Item Number
1,0 mm 15 kg spool	W033227
1,2 mm 15 kg spool	W033228

### MIG 316LSi

- MIG/TIG 316LSi consumables are used for Mo bearing austenitic stainless steels with 1,5 - 3% Mo
- Type 316/316L steels are widely used for their good resistance to pitting, many acids and general corrosion

Description	Item Number
0,8 mm 15 kg spool	W033069
0,9 mm 15 kg spool	W033070
1,0 mm 15 kg spool	W033234
1,2 mm 15 kg spool	W033232
1,6 mm 15 kg spool	W033073
1,6 mm 5 kg	W030445
3,2 mm 5 kg	W030448



### Afrox MIG 6048

- Low alloy steel welding wire
- Premium grade high strength low alloy wire dual classified as an AWS ER 100S-G or ER110S-G
- Copper coated, is suitable for use in all positions
- Argon-based shielding gases are recommended

Description	Item Number
1,0 mm 15 kg spool	W078192
1,2 mm 15 kg spool	W033188
1,2 mm 350 kg	W033189



### MIG/TIG 308L

- MIG/TIG 308L is used to weld 18/8 stainless steels including 301, 302, 303, nitrogen bearing 304LN and similar
- Service temperatures are typically -100°C to about 400°C
- Applications can be found in the brewery, food, architectural and general fabrication industries

Description	Item Number
1,2 mm 15 kg (MIG)	W033010
1,0 mm 220 kg (MIG)	W033447
1,2 mm 220 kg (MIG)	W033448
1,6 mm 5 kg tube (TIG)	W030560
2,0 mm 5 kg tube (TIG)	W030562
2,4 mm 5 kg tube (TIG)	W030561

### MIG/TIG 316L

- MIG/TIG 316L consumables are used for Mo bearing austenitic stainless steels with 1,5 - 3% Mo
- Type 316/316L steels are widely used for their good resistance to pitting, many acids and general corrosion

Description	Item Number
1,2 mm 15 kg (MIG)	W033066
1,6 mm 5 kg (TIG)	W030550
1,6 mm 5 kg (TIG)	W030441
2,0 mm 5 kg (TIG)	W030553
2,4 mm 5 kg (TIG)	W030443
2,4 mm 5 kg (TIG)	W030551



### Duracor 59-0

- Duracor 59-0 is a self-shielded flux cored wire
- It provides excellent abrasion resistance
- Duracor 59-0 is suitable for the hardfacing of sugar cane hammers and knives, mining machinery, buckets, dipper teeth, pulveriser rings, coal crushers and other parts subject to severe abrasive wear

Description	Item Number
2,8 mm 25 kg spool	W071728

## Gas Brazing & Welding



### Flux Brazing M15

- M15 bronze brazing flux
- Stainless steel
- Aluminium

Description	Item Number
500 g jar	W001553



### Easy-Flo (Ordinary Grade)

- Flux powder
- Stainless steel
- Aluminium

Description	Item Number
250 g jar (Flux)	W001852



### Bronze Brazing M15 (Bare)

- A widely used brazing and bronze welding rod depositing metal which has good tensile strength
  - This versatile brazing rod is ideally suited for sheet metal work such as motor bodies, tubular and galvanised iron fabrication as well as for copper and for brazing cast iron, and heavy steel sections
  - The product may be used for fusion-weld brass
- \* (multi-kg box)

Description	Item Number
2,0 mm 5 kg*	W000504
3,2 mm 5 kg*	W000500
5,0 mm 5 kg*	W000501
6,3 mm 5 kg*	W000502



### Silvercoat 30

Description	Item Number
1,5 mm 100 g	W001031
1,5 mm 1 kg	W001032

### Silverflo 55

Description	Item Number
1,5 mm 100 g	W001055
1,5 mm 1 kg	W001056





## Fluxcoat 402

Description	Item Number
Fluxcoat 402 1,5 mm (sleeve)	W001180
Fluxcoat 402 1,5 mm-100 g	W001197



## CR 70 & CR 70 MR

Description	Item Number
Afrox CR70 4 mm 5 kg box	W075644
Afrox CR70 5 mm 5 kg box	W075645
Afrox CR70MR 4 mm 5 kg box	W075648



## Afrox Filmax 5356

- Wires for general purpose welding of the 5XXX series alloys
- Suitable for spray arc and pulsed arc transfer using high purity argon on thin sections or an argon-helium mixture (Alushield®) as a shielding gas on thicker sections
- Applications found in the construction of ships, bulk container, railway and the automotive industries

Description	Item Number
Filmax Alum 5356 (5% mg) 1,2 mm 7 kg spool	W033175
Filmax Alum 5356 (5% mg) 1,6 mm 7 kg spool	W033176



## Afrox Filmax 5183

- Applications found in the shipbuilding, railway and automotive industry
- Also in marine fabrication and repairs, bicycle frames, cryogenic tanks and other high strength low temperature structural aluminium applications

Description	Item Number
Filmax Alum 5183 (4,5% mg) 1,2 mm 7 kg spool	W033156



## Afrox TIG 5356

Description	Item Number
TIG Alum 5356 (5% mg) 3,2 mm 2 kg tube	W030521
TIG Alum 5356 (5% mg) 1,6 mm 2 kg tube	W030522



## Afrox TIG 5183

Description	Item Number
TIG Alum 5183 (4,5% mg) 3,2 mm 2 kg tube	W077532

## Ferrous & Non-Ferrous Metals

There are many ferrous and non-ferrous metals and alloys of great importance to the manufacturing industry and used in fabrication today.

Some of the most commonly used include:

- Aluminium and its alloys
- Carbon steels
- Galvanised and coated steels
- Alloy steels
- Stainless steels
- Cast irons
- Copper and its alloys
- Nickel and its alloys
- Titanium.

Pure aluminium is a relatively soft, ductile material and for most engineering applications it is alloyed with a range of materials to improve its properties. Each alloy is given a four number designation dependent on the main alloying element, for example 4xxx series alloys have silicon as the main alloying element, and 6xxx series are alloyed with magnesium and silicon. Some alloying elements, such as copper, can make an alloy difficult if not impossible to weld.

Carbon steels cover a wide range of commonly used engineering materials including the so-called mild steels. The term carbon steels is also taken to include carbon manganese steels, structural steels, HSLA steels and Q&T steels which include HY and QT types.

Galvanised and coated steels are a very specific group of normally low carbon steels, which have undergone a surface treatment either to improve some property, such as corrosion resistance or to improve its appearance. In a welding and cutting context, these coating materials can often create problems with both weld and cut quality and health hazards in terms of fumes created as they are vapourised.

Alloy steels are carbon and carbon manganese steels which have other alloying elements such as nickel, chromium and molybdenum added to them to improve their mechanical properties. Low temperature alloy steels have small amounts of nickel added. Creep resisting steels are alloyed with chromium and molybdenum. These steels are often used in high temperature environments such as steam boilers. High manganese steels can contain 14% Mn giving these materials high hardness, making them suitable for application such as railway lines.

Stainless steels are defined as steels containing more than 13% Cr. There are four basic categories of stainless steel of which the most common are the austenitic steels such as 316, and 304 alloys which contain both chrome and nickel. Ferritic stainless steels are chrome-containing alloys with low levels of carbon, such as 409 and 430 grades. Martensitic steels are also chrome-containing but have much higher levels of carbon. 410 and 416 are examples of these materials. Duplex stainless steels have a mixed microstructure of ferrite and austenite and properties to match.

The main types of cast iron are grey cast iron, white cast iron, malleable cast iron and alloy cast iron. Grey cast iron contains 2 to 4% C and over 2% Si. White cast iron has the same range of carbon as grey but has less than 1% Si. Malleable cast iron is basically heat-treated white cast iron. Alloy cast irons may be alloyed with chromium, nickel, molybdenum, and other elements to give specific strength, corrosion, or high temperature properties.

Copper can be used as an engineering material in its pure form but is normally alloyed with other materials to improve its mechanical properties. The most common alloys of copper are brasses in which zinc is the main alloying element and bronzes, which contain tin. Another widely used alloy group is the cupronickels, which are nickel-containing alloys used mainly for their excellent salt water corrosion properties.

Nickel alloys are used in a wide variety of applications including marine environments, aerospace and high temperature areas. Inconels® and Nimonics are nickel chrome alloys, while Incolloys® are nickel iron alloys. Hastelloys® are nickel, chrome and iron alloys, while Monels are nickel-rich copper-containing alloys.

Titanium is an attractive engineering material because of its low density, excellent corrosion resistance and the high strengths that can be obtained through alloying. Its reactive nature, however, can give problems when it is welded and keeping oxygen levels very low is of fundamental importance.



## It's all good **with Vitemax**

Vitemax delivers the perfect weld with a smooth and spatter-free performance, ease of strikeability, arc stability and excellent slag release. In addition, when you choose Vitemax electrodes, you can expect a seamless combination of safety and quality.

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## SECTION 8

# PERSONAL PROTECTIVE EQUIPMENT

## Eye Protection



### Afrox Wraparound Specs

Ultra-lightweight design for comfort and balance. Large moulded-in side shield for extra protection. Polycarbonate lens for high impact resistance and UV absorption. Available in clear shade lens and amber shade lens. Meets ANSI Z87.1 and CE EN166

Description	Item Number
Clear	W053730



### Afrox Wraparound Vented Specs

Lightweight wraparound design. One-piece distortion-free polycarbonate lens which eliminates lens dislodging on impact. Improved comfort and peripheral vision. Temple venting system which allows air flow to reduce heat build-up. Interlocking temple hinge which reduces temple dislodging. Available in clear shade lens and green shade 2,5 lens. Meets ANSI Z87.1 and CE EN166

Description	Item Number
Clear	W053135



### Afrox Medium Range Specs

Ultra-light and ultra-durable for a consistently secure and comfortable fit. 9,5 base lens provides more than 180 degrees of coverage. High impact 100% polycarbonate lens is scratch resistant, reduces static and eliminates more than 99,9% of harmful UV-A and UV-B rays. Available in clear shade lens and smoke shade lens. Meets ANSI Z87.1 and CE EN166

Description	Item Number
Smoke	W053731



### Grinding Goggles Heavy Duty

Lightweight soft PVC frame fits comfortably to contours of face. Spectacles can be worn underneath. Impact resistant and optically correct lens. Diamond anti-fog coating and anti-scratch. Meets ANSI Z87.1 and CE EN166

Item Number	W012799
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### Welding Goggles

50 mm lift-front goggle. Soft PVC (free from cadmium). Coated frame. Lift-front locks in open or closed position. Adjustable elastic headband. Four capped vents ensure good indirect ventilation. Suitable for use over prescription eyewear. Meets ANSI Z87.1 and CE EN 175

Item Number	W012257
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## Protective Clothing



### Chrome Leather Apron

- Chrome leather welding apron with bib and reinforced straps
- 90 x 60 cm

Item Number

W053076



### Leather Apron

- Furniture leather apron with bib, reinforced strap attachments, suitable for welding
- 60 x 90 cm

Item Number

W050228



### Standard Leather Spats

- Full boot/shoe coverage and protection



Item Number

W053071




## Hand Protection





### Working Leather Gloves

Replacement Item Image	Material Name	Detailed Description	Size and Length of Glove	Material Makeup	Certification	Material Number
	Candy striped cow split leather working glove	Inside elastic back, three-piece patched palm. Leather winged thumb and index finger. Protective leather strap on knuckles. Lined palm and wrist protector	26,67 cm length, 13 cm width of palm. Economic laminated 6,5 cm cuff	Cow split leather and cotton, light cotton or polyester palm lining	CE EN3880-2123	W051001
	Short leather working glove	Chrome cow split leather. Unlined. Polypropelene stitching. Lock and back stitched seams	27 cm length, 12,5 cm width of palm. 7 cm chrome leather cuff	Cow split leather glove and cuff with polypropelene thread	N/A	W051005

### Synthetic Gloves

Replacement Item Image	Material Name	Detailed Description	Size and Length of Glove	Material Makeup	Certification	Material Number
	Latex coated assembling glove	Latex coated glove. Textured natural latex palm on a 10 gauge polycotton knit liner. Comfortable fit. Knit wrist. Excellent grip and flexibility	26 cm length, 11,5 cm width of palm	10 gauge polycotton knit liner. Latex coated palm and fingertips	CE420&388-4142	W051033

## Welders' Gloves

Replacement Item Image	Material Name	Detailed Description	Size and Length of Glove	Material Makeup	Certification	Material Number
	Classic red welders' gauntlet	Red split leather welding gauntlet, fully lined for comfort and feel. Stitched with fire retardant thread to provide extra strength and durability. All cow split leather. Polycotton lining. Lock and back stitched	40 cm length, 13,5 cm width of palm	Cow split leather. 1,3 mm up thickness. Polycotton lining	N/A	W051021
	Classic blue and yellow welders' gauntlet	High quality blue butt hide gauntlet with reinforced palm and knuckle bar. Fire retardant stitching provides additional strength and durability	40 cm length, 13,5 cm width of palm	Cow split leather. Thickness 1,3 mm up. Polycotton sock lining. Sock lined split leather gauntlet with reinforced palm and knuckle bar	N/A	W051023
	TIG welders' glove	High quality TIG glove made from soft pig grain leather on palm, and split leather cuff. Unlined. Lock and back stitched	28 cm length, 11 cm width of palm	Pig grain and split leather. Thickness up to 1,1 mm	N/A	W051024
	Economic welders' gauntlet	All chrome double leather palm. Unlined. Lock and back stitched	30 cm length, 12,5 cm width of palm. 10 cm chrome leather cuff	Chrome leather. 1,2-1,4 mm thickness. Chrome leather gauntlet and cuff with polypropylene thread. Unlined	N/A	W051027



# Hearing Protection

## SECTION 8

## PERSONAL PROTECTIVE EQUIPMENT

Replacement Item Image	Item Description	Features	Noise Reduction	Certification	Item Number
	Afrox Hush disposable corded earplug	Non-allergenic. Designed for high noise exposure	37 dB	N/A	W050781
	Afrox exclusive earmuff	Enhanced noise reduction and comfort. Flexible padded headband. Dielectric design	30 dB	CE EN 352	W053038
	Afrox Hush disposable uncorded earplug	Non-allergenic. Non-irritating. Designed for high noise exposure	37 dB	N/A	W050780
	Laser Lite disposable corded earplug - pack of 100	Non-irritating, non-allergenic. Ideal for small ear canals. Tapered and pre-shaped. Follows the contour of the ear canal. Easy insertion and a comfortable natural seal. Winged end promotes optimum insertion depth and easy grasp for removal	35 dB	N/A	W053702
	Howard Leight QB3 banded hearing protector	Semi-aural protection. Super soft pads rest outside the ear for outstanding comfort. Patented band design prevents ear pads from touching dirty or contaminated surfaces. Lightweight and portable - designed especially for environments with intermittent noise hazards	23 dB	N/A	W053040
	Laser Lite disposable uncorded earplug - pack of 200	Non-irritating, non-allergenic. Ideal for small ear canals. Tapered and pre-shaped. Follows the contour of the ear canal. Easy insertion and a comfortable natural seal. Winged end promotes optimum insertion depth and easy grasp for removal	35 dB	N/A	W053718



## Head & Face Protection



### Transarc® OHE410 Auto-Darkening Helmet

- High quality electronic welding helmet built to exacting professional standards
- Provides complete, reliable lightweight protection and is also extremely comfortable to wear
- Equipped with a high quality shade 4/9-13 electronic auto-darkening filter lens
- Switching time from clear to dark is approx. 0,005 s (0,5 ms), providing quick and effective protection
- Powered by solar cells with an enclosed back-up lithium battery
- Ability to work hands-free
- Optimal protection from eye damage caused by the welding arc

Description	Item Number
Transarc® OHE410 Auto-Darkening Helmet	W500063
Transarc® OHE410 Replacement Auto Lens	W500064
Transarc® OHE410 Inner Protect Lens PO10	W500065
Transarc® OHE410 Headgear Incl Nut Bolts	W500066
Transarc® OHE410 Comfort Band PO2	W500067
Transarc® OHE410 Outer Protect Lens PO10	W500068
Transarc® OHE410 ADF Frame Retainer	W500069



Description	Item Number
Auto-darkening welding helmet	W053280



### Afrox Industrial Self-Darkening Helmet

- Full protection of the ears, neck and throat
- Made from PA material with rubber fibres (almost unbreakable, high temperature resistance)
- Lightweight, well balanced helmet
- Enlarged space in front of the mouth and nose for more comfortable breathing (reduction of CO<sub>2</sub> concentration)
- Smooth round edges all around the perimeter for better comfort
- Aerodynamic design for fume deflection
- Front loaded ADF, easy to change the front cover plates
- Adjustable shade 9 - 13
- Adjustable sensitivity
- TIG detection down to 5 amp
- Optical quality 1/1/1/1
- 3 year warranty

Description	Item Number
Afrox Industrial Self-Darkening Helmet	W053221
Afrox Industrial and Afrox Elite External Lens Covers 10 pck	W053153
Afrox Industrial Internal Lens Covers 10 pck	W053154

### ARCmate DIY

- Viewing area: 96 mm x 42 mm
- Light shade state: 4
- Dark shade state: 9-13
- Switching speed: 0,5 ms
- Sensitivity adjustment: Internal
- Shade controls: External
- Time from dark to light state (delay): 0,1 - 0,9 s
- Delay adjustment: Internal
- Operating temperature: -10°C - +55°C
- Arc sensors: 2
- Power supply: Solar and lithium batteries
- V/IR protection
- DIN 15





### Electronic Lens for Afrox Industrial

- Adjustable shade 9 - 13

Item Number

W053211



### Afrox Scull Cap with Back Flap

- Worn under helmet for head and neck protection
- Applications: MIG and electrical arc welding

Item Number

W053033



### Helmet Flip Front 108 x 51 mm

- Polypropylene welding helmet for MIG, TIG and arc welding
- Lightweight and perfectly balanced for comfort
- Offers full protection and complies with EN175
- Extremely flexible, strong, moisture resistant and naturally heat resistant
- Flip front lens holder
- Fully adjustable ratchet type headgear by push button

Item Number

W053151



### Browguard with Headgear

- ABS crown for impact and splash protection against high concentration of UV radiation
- Excellent optical properties
- Comfortable, readily adjustable ratchet head harness
- Quick and easy replacement of visor
- Meets ANSI Z87.1 and EN166
- Browguard with headgear

Item Number

W053155

## Filter Lenses

Our shaded and clear lenses are a standard size of 108 x 51 mm replacements for flip front helmets. They offer high quality eye protection for all types of arc welding, including the necessary protection against ultra-violet rays. Clear cover plates, inserted in front of the shaded lenses protect them from molten metal spatter and typical wear.

Uom	Description	Weld Current Range	Process	Process Area	Item Number
<b>Proclear</b>					
Each	Clear glass	All	All	Indoor/outdoor	W053046
<b>Protec</b>					
Each	1 000 hr clear lens	All	All	Indoor/outdoor	W053157
<b>Polytec</b>					
Each	Inner clear lens (impact)	All	All	Indoor/outdoor	W053158
<b>Protane 8</b>					
Each	Protane 8	Up to 100 A	MMA	Indoor/outdoor	W053165
<b>Protane 10</b>					
Each	Protane 10	100 to 200 A	MMA	Indoor	W053161
<b>Protane 12</b>					
Each	Protane 12	Over 300 A	MMA	Indoor	W053160

# Important Safety Information

At Afrox, safety is central to everything we do and we strive to ensure it's at the forefront of our customers' minds. Afrox is an industry leader with a wide selection of specialist safety clothing and general work wear.

The information contained herein is intended as a guide to basic safety awareness in the workplace. The type of safety product you choose is dependent on the environment you intend to work in and the materials, tools and machinery you use. Professional or qualified advice should always be sought prior to the purchase and use of safety products and clothing.

## Protect yourself, your safety, your business

Safety in the workplace can never be taken for granted or overlooked. Safety awareness is key to reducing accidents, incidents, personal injury and even death.

Afrox is committed to ensuring your safety at work. Afrox offers a comprehensive range of industry standard and high quality safety products and work wear to ensure you're protected from head to toe.

## How safe are you?

In recent years, significant advances have been made in the materials used in the manufacture of safety wear. Modern safety products are generally lighter and more comfortable to wear and are designed to meet stringent modern safety standards.

If you're using older safety products or clothing, you may be at greater risk of injury or long-term effects such as eye, skin, and lung damage.

## Refer to our simple guide to help choose the right products for the job:

### Head and face protection

Generally, in any industrial working environment, factory, laboratory or food processing unit, appropriate headgear should be worn.

In environments where you are at risk from falling objects or overhanging machinery, hard hats are essential. If you are working with certain chemicals, gases and materials that have potential to come in contact with your face, you may require greater protection.

### Choosing the right head and face protection

- Always wear a hard hat that fits your head
- Make sure it's comfortable and not too tight
- Wear the hard hat for the job
- Always choose compatible safety accessories such as eye/face shields, neck flaps or earmuffs
- Always check for any damage, wear and weak areas before use.



### Eye protection

Your sight is one of your most important assets and is particularly vulnerable to short- and long-term damage. When it comes to protecting your eyes, this is one area that should never be compromised or taken for granted.

Eye damage can be caused by the simplest of things such as dust, sparks, bright artificial light, sunlight, chemical splashes, and splinters from wood and metal. Modern safety glasses, goggles and welding helmets and lenses are ergonomically designed for comfort and are made from tough, light and durable materials.

### Choosing the right eye protection

- Always wear glasses or goggles that fit your face and are comfortable to wear; not too tight or loose
- Wear the right eye protection for the job
- Make sure you have good and wide vision
- If at risk of anything coming into contact with your eyes, wear goggles or all-round safety spectacles
- Always check for any damage to lenses before use.



### Dust and fume protection

Ensure the air that you breathe is pure and not contaminated by dust, dangerous gases or volatile chemicals. Inhalation of poisonous fumes can lead to headaches, nausea, blackouts or even death. In dusty environments, prolonged exposure can lead to permanent lung damage and future disability.

Maintaining air quality can be achieved by the use of respirators. Personal respirators should always be worn in dusty environments or when working with materials that are toxic at high levels. Breathing apparatus should be worn when working in confined areas where exposure to toxic gases or fumes is likely.

### Choosing the right respirator

- Always ensure that the respirator completely covers your nose and mouth
- Ensure that supplied air respirators are airtight
- Ensure you can breathe properly
- Do not use damaged, clogged or dirty respirators
- Check regularly and replace if required.



### Hand protection

Most manual workers will have sustained a hand injury at some point in their life. Whether it's a minor scratch, splinter, cut or more serious injuries such as burns, crushed or severed fingers, all of these can be easily avoided. Gloves can also protect against electrical shock. A variety of gloves in natural and synthetic materials are available to protect your hands from heat, flames and sparks, sharp objects, chemicals and dangerous power tools.

### Choosing the right hand protection

- Know your hand size. Gloves come in different sizes; ensure that your gloves fit correctly
- Choose a glove recommended for the job
- Always check for general wear and tear, holes and rips before use
- Do not wash your gloves with solvents, detergents or chemicals that can cause harm or damage.



### Ear protection

We generally take our hearing for granted. Our ears are delicate instruments. Loud and sustained noise levels damage our hearing and can cause temporary and permanent damage.



Annoying afflictions such as tinnitus, headaches and ringing in the ears can be easily avoided by wearing earplugs or earmuffs. If there is a risk of flying objects and particles entering the ear, earplugs should be worn.

### Choosing the right ear protection

- Assess the audible noise level whether using power tools, operating machinery or where there are high levels of combined background noises
- Remember that prolonged exposure to low noise can cause damage or irritation
- Noises are amplified in small and confined spaces
- Ensure your chosen protection adequately masks the noise.

### Body protection



Industrial clothing is specifically designed to protect the wearer from hazards such as chemical splashes, flames and sparks, electric shock, sunlight, extreme heat and cold and even ionising radiation.

High visibility and reflective clothing should also be worn when working underground, in low light, at night, on construction sites and near traffic and roads.

### Choosing the right safety clothing

- Make sure garments fit properly and are comfortable to wear
- Choose the correct class of high visibility garments if working in low light such as dawn, dusk or poor weather conditions
- Check garments for wear and tear, rips, and holes prior to use.

### Foot protection



Industrial footwear should always be worn in the industrial workplace. Wearing the appropriate industrial footwear reduces the risk of your feet being crushed when using heavy lifting equipment such as a pallet and fork-lift trucks or the development of sole punctures from sharp objects. Protection is also provided from chemical spills and the elements such as fire, water and extreme heat or cold. Some work boots also provide protection against static and electrical hazards.

### Choosing the right foot protection

- Choose the correct boot/shoe for the job
- Assess the risk from falling heavy objects, chemicals, heat and cold, etc.
- Always ensure your boots/shoes fit comfortably; not too tight and not too loose
- Always check for damage to soles and reinforced areas prior to wearing.

### Safety in the workplace

The information provided is a general outline and is not intended to be a definitive statement on the subject matter. Professional advice should be sought before any action is taken in relation to safety in the workplace.

### What is risk assessment?

A risk assessment is a careful examination of what could cause harm to people in the workplace. Risk assessments allow you to evaluate whether you have taken enough precautions or need to do more to prevent potential injuries. The aim is to make sure that

nobody gets hurt or becomes ill. Accidents and ill health can ruin lives and affect your business by impacting on your productivity. If machinery gets damaged, insurance costs increase, or you may have to go to court. The important thing that you need to decide is whether a hazard is significant and whether you have it covered by appropriate precautions so that the risk is minimised.

### How to assess the risks in your workplace:

#### Look for the hazards

Walk around your workplace and consider what could reasonably be expected to cause harm. Ask your employees what they think. They may have noticed things that are not obvious.

#### Identify who might be harmed or is at higher risk

Young workers, trainees, new employees, expectant mothers, contractors, maintenance workers, cleaners, visitors, members of the public, etc. Evaluate the risks and decide whether the existing precautions are adequate or whether more should be done.

#### Record your findings

Write down the significant hazards and conclusions, e.g. electrical installations: insulations and earthing checked and found sound.

#### Review your assessment and revise it if necessary

Sooner or later you will acquire new machines, materials and procedures that could lead to new hazards. If there is any significant change, add it to your original risk assessment.

#### Training control measures\*

After assessment, risks may be controlled by:

**Elimination** - the job can be redesigned to remove the hazard. Identify any acceptable loss in production or less effective process.

**Substitution** - replacing the material or process with a less hazardous one.

**Isolation** - separating the hazards from the operators by methods such as enclosing or guarding dangerous items of machinery.

**Engineering controls** - installing additional machinery such as local exhaust ventilation to control the risk.

**Safer work practices** - an example of this is to reduce the time the worker is exposed to the hazard.

**Personal protective equipment (PPE)** - should be selected and fitted to the person who uses it. Workers must be trained in the function and limitation of each item of PPE.

**Provide welfare facilities** - i.e., first aid and washing facilities for removal of contamination.

**Hazards in the workplace** - look for potential electrical and mechanical hazards.

\* In some circumstances, a combination of control measures may be the most effective method of controlling the risk.



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# SECTION 9

## GAS & GEAR AND SALES CENTRES

### Contact Details in South Africa

#### Gauteng

Alrode	011 908 9418
Boksburg*	011 894 1076
Booyens*	011 493 1717
Carletonville	018 787 4168
Krugersdorp	011 762 1000/2286
Germiston	011 255 5092/3/5
Midrand	011 315 0263
Pretoria	012 380 0239
Roodepoort*	011 858 9507
Silverton	012 804 7854
Spartan	011 392 3660
Springs	011 362 2353
Vereeniging	016 455 1592
Wadeville	011 827 5971
Wynberg	011 262 4043

#### Mpumalanga

Middelburg	013 246 2921
Nelspruit	013 753 2971
Trichardt	017 638 0055
Witbank	013 655 6301

#### Limpopo

Steelpoort	013 230 3810
Lephalale	014 763 6771
Phalaborwa	015 781 2221
Polokwane	015 297 3739

#### North West

Klerksdorp	018 462 5755
Mafikeng	018 381 0175
Potchefstroom	018 297 1702
Rustenburg	014 596 5071

#### Free State

Bethlehem	058 303 6908
Bloemfontein	051 406 0519
Welkom	057 391 4707

#### Eastern Cape

East London	043 731 1511
Port Elizabeth	041 486 1200

#### Northern Cape

Kathu	053 723 1635
Kimberley	053 833 2582
Postmasburg	053 313 1136
Springbok	027 712 1181
Upington	054 332 1803

#### KwaZulu-Natal

Empangeni	035 787 1351
Kokstad	039 727 1879
Newcastle	034 375 7861
North Coast Road	031 564 0622/3
Pietermaritzburg	033 342 9188
Pinetown	031 702 6798
Pongola	034 413 2301
Port Shepstone	039 682 0330
Richards Bay	035 789 1309
Stanger	032 551 4356
Umbilo Road	031 202 3140

#### Western Cape

Cape Town/Epping	021 530 1124/27
George	044 802 8812/00
Montague Gardens	021 551 8100
Ottery	021 704 4690
Paarden Eiland	021 511 2196
Paarl	021 862 6197
Stikland	021 948 4710/11
Vredenburg	022 713 2277
Vredendal	027 213 1717
Worcester	023 342 2474

**Trading Hours:** Mon - Fri: 08h00 - 16h30 \*Sat: 09h00 - 13h00

#### DISCLAIMER

Whilst great care has been taken to ensure the accuracy of the information contained in this product catalogue, this does not exempt the user from verifying his/her own responsibility involved in the application of this information.

#### WARNING

Welding can give rise to electric shock, excessive noise, eye and skin burns due to the arc rays, and a potential health hazard if you breathe in the emitted fumes and gases. Read all the manufacturer's instructions to achieve the correct welding conditions. Refer to [www.afrox.co.za](http://www.afrox.co.za).

## Other African Countries

### Botswana

**Afrox Botswana Oxygen**  
Plot 20595 Mabutswe Road  
Gaborone  
Botswana  
Tel: +267 390 5030

### Kenya

**BOC Kenya**  
14 Kitui Road  
Industrial Area  
Nairobi  
Kenya  
Tel: +254 20 69 44 000 / 733 687 078

### Malawi

**Afrox Malawi Limited**  
Johnstone Road  
Ginnery Corner  
Blantyre 3  
Malawi  
Tel: +265 1 87 1611

### Lilongwe

Plot No 29/9  
Alimaunde  
Kanengo  
Lilongwe  
Malawi  
Tel: +265 1 713 238 / 710 374

### Mauritius

**Lez Gaz Industriels LTD**  
Pailles Road  
G.R.N.W  
Mauritius  
Tel: +230 212 8306

### Mozambique

**BOC Gases – Aprox Mozambique Limitada**  
Av. Das Industrias 600  
Machave  
Maputo  
Mozambique  
Tel: +258 21 750 336 / 752 631/4

### Beira

Tel: +258 23 354336

### Namibia

**IGL (Pty) Limited**  
**T/A Aprox Namibia**  
131 Mandume Ndemufayo Ave  
Southern Industrial Area  
Windhoek  
Namibia  
Tel: +264 61 387 000

### Tsumeb

PO Box 499  
Tsumeb  
Namibia  
Tel: +264 67 220 043

### Walvis Bay

PO Box 1598  
Walvis Bay  
Namibia  
Tel: +264 64 205 818

### Zambia

**Afrox Zambia Ltd**  
Chisokone Avenue  
Plot No 901  
Ndola  
Zambia  
Tel : +260 212 611 801/5 / 621 608/9 /  
621 582

### Lusaka

Sheki Sheki Road  
Plot No 4278  
Light Industrial Area  
Lusaka  
Zambia  
Tel : +260 211 240 954 / 246 665 /  
242 272 / 247 666

### Zimbabwe

**BOC Zimbabwe (Pty) Limited**  
BOC House  
Cnr. Hull & Glasgow Roads  
Southerton  
Harare  
Zimbabwe  
Tel: +263 4 757 171-5 / 755 750-65

### Bulawayo

Steelworks Road  
Westgate  
Zimbabwe  
Tel: +263 9 634 91-5

### Gweru / Electrode Factory

Bristol Road  
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