FIRST CHOICE

B

Bullant Worksafe Module. 1st Edition

Aerpro First Choice

bullant

Ear Plugs

Earmuffs

Worksite Radios

Welding Helmets

Lens Covers

Q2 2009

Ear Plugs

3 Pairs of Orange Earplugs

- 3 Pairs of foam ear plugs
- Packed in individual tear away poly bags in a single hang sell pack
- Orange highly visible colour

ABA106

9 317114 897565

2 Pairs of Ear Plugs with Orange Cord

- 2 Pairs of reusable ear plugs
- Packed in a single hang sell pack
- Each pair is individually packed in a tearaway poly bag
- Washable and comfortable to use

ABA102

9 317114 897558

Passive Earmuffs

Rear Metal Band Earmuff

- Behind the head earmuffs with metal pressure band
- Yellow with black ear cushions and black plastic covered metal rear band
- Allows use with safety helmets and other head wear
- Lightweight and comfortable to wear
- Packed in hang sell giftbox

ABA101

9 317114 897572

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Blue MAX Series Active Earmuffs

Noise Cancelling Earmuffs

- Volume control
- Lightweight and comfortable
- Complies to Aus/NZ standards
- Powered by 2 x AA batteries (not included)
- Attenuates noise levels above 85dB
- Tested to standard: AS/NZS 1270:2002
  SLC80 rating: 22, Class 4

ABA268 NEW

9 317114 900098

Allows the user to hear sounds such as speech without having to remove earmuffs. If any sound reaches levels above 85dB the system cuts the incoming signal to protect the user.

AM/FM Tuner · USB Input · MP3 Playback

Multimedia Electronic Earmuffs

- Built in AM/FM radio
- Built in MP3 player that plays music from USB flash drive
- MP3 Controller with Next/Previous/Pause controls
- USB port for the MP3 player located in concealed compartment
- SLC Rating 80:11 Class 1
- Comfortable cushioned ear muffs with adjustable headband
- Powered by 2 x AA batteries (not included)

ABA858 NEW

9 317114 899750

USB Port

for MP3 flash drive with fully integrated MP3 controls and protective cover

AM/FM Tuner · USB Input MP3 Playback · Bluetooth 2.0

"Super-media" Electronic Earmuffs

- AM/FM Radio & Bluetooth 2.0
- MP3 Player that plays music from USB flash drive
- MP3 Controller with Next Track/Previous Track/Pause Control
- Comfortable cushioned earmuffs that cuts out unwanted sounds
- Powered by 2 X AA batteries (not included)
- SLC Rating 80:11:Class 1
- Blue with yellow control buttons

Bluetooth 2.0

New Enhanced Data Rate allows for handsfree telephone operations and stereo music streaming from portable devices

ABA888 NEW

9 317114 900081

USB Port

for MP3 flash drive with fully integrated MP3 controls and protective cover

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Classic Series Active Earmuffs

Earmuffs with Electronic Noise Control

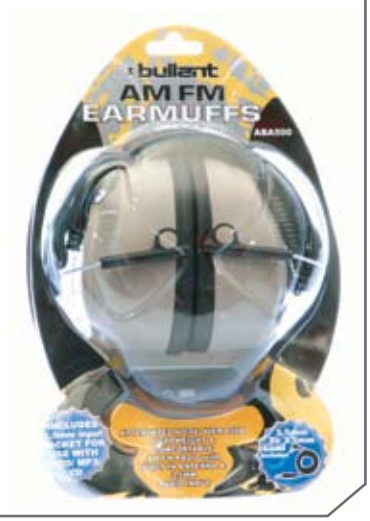
- Electronic earmuffs with built-in noise cancellation
- Attenuates noise over 85dB
- Electronic volume control to adjust noise level
- Complies to Australian and NZ standards AS/NZS 1270:2002
- SLC80 rating: 11, class 1
- Powered by 2 x AA batteries (not included)

ABA300

9 317114 868237

AM/FM Stereo Earmuffs with 3.5mm Audio Input

- Earmuffs with AM/FM radio and 3.5mm audio input socket for MP3 player, iPod, etc.
- SLC80 Rating:11 Class 1
- Grey with black headband and controls
- Powered by 2 x AA batteries (not included)



ABA500

9 317114 894847

AM/FM Stereo Earmuffs with Bluetooth Handsfree

- Earmuffs with AM/FM radio and Bluetooth handsfree
- SLC80 Rating: 11 Class 1
- Grey with black headband and controls
- Powered by 2 x AA batteries (not included)

ABA700

9 317114 897640

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Worksite Radio

Worksite Radio

- Super rugged AM/FM radio
- 3.5mm Aux In socket for playing audio from iPod or MP3 player
- Water resistant compartment for storing iPod or MP3 player
- USB Charging port for iPod or mobile phone
- Water resistant
- Flexible folding antenna
- Rotary geared metal analogue tuner
- Powered by 8 x C size batteries (not included)
- Dial scale with back light
- LED Torch
- 5 Inch coaxial speaker
- 15 Watts maximum power output
- Supplied with SAA AC adapter

Fold Away Antenna

Fold Away Handle

Capable of holding music device or mobile phone for MP3 Playback. Music players and mobile phones can be charged from the built-in USB Port.

Can be powered by Batteries or from Supplied mains power adapter.

NEW

ABA50WR

9 317114 899651

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Welding Helmets

Auto-Dark Fixed Shade Welding Helmet

- Full face flip
- Viewing area: 50.8 x 108mm
- Light state: DIN 3
- Dark state: DIN 11
- Switching time: 1/20,000 sec
- Finish: Black
- Arc detection sensitivity adjustment: Non adjustable
- UV-IR Protection: Up to shade 16
- Arc sensors: 2

WBA103

9 317114 874054

Full Face Welding Helmet

- Full face flip
- Dark state: DIN 11
- Finish: Black
- UV-IR Protection up to shade 16

WBA100

9 317114 874047

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Auto-Dark Variable Shade Welding Helmet

- Full face flip
- Viewing area: 89 x 110mm
- Light state: DIN 4
- Dark state: DIN 9-13 (adjustable)
- Switching time: 1/25,000 sec
- Finish: Black with artistic overlay
- Arc detection sensitivity adjustment: Hi/Lo switchable
- Weld pool delay: Hi/Lo switchable
- UV-IR Protection: Up to shade 16
- Arc sensors: 2

HOT ITEM

WBA400T

9 317114 874474

Auto-Dark Variable Shade Welding Helmet

- Full face flip
- Viewing area: 89 x 110mm
- Light state: DIN 4
- Dark state: DIN 9-13 (adjustable)
- Switching time: 1/25,000 sec
- Finish: Black
- Arc detection sensitivity adjustment: Hi/Lo switchable
- Weld pool delay: Hi/Lo switchable
- UV-IR Protection: Up to shade 16
- Arc sensors: 2

WBA400

9 317114 874344

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Aerpro First Choice

bullant

Variable Shade Quick Glass 500 Series

Most notable feature above the 400 series is the stepless adjustment for the arc sensor and delay. The adjustable sensitivity is helpful when welding in brightly lit areas (lower sensitivity) and where the initial arc may be hidden from view (higher sensitivity). As with the 400 Series filter it also has twin arc sensors and an inbuilt lithium battery.

Welding type	Amps
SMAW:(Common ARC Welding)	20~500
MIG(heavy)	60~500
MIG(light)	60~350
TIG,GTAW	5~300
MAG/CO2	Up to 300
SAW	Up to 350
PAC	over 500
PAW	10~225

New

Auto-Dark Variable Shade Welding Helmet

- Full face flip
- Viewing area: 89 x 110mm
- Light state: DIN 4
- Dark state: DIN 9-13 (adjustable)
- Switching time: 1/25,000 sec
- Finish: Black
- Arc detection sensitivity adjustment: CONTINUOUSLY VARIABLE
- Weld pool delay: CONTINUOUSLY VARIABLE
- UV-IR Protection: Up to shade 16
- Arc sensors: 2

WBA500B

9 317114 874528

Auto-Dark Variable Shade Welding Helmet

- Full face flip
- Viewing area: 89 x 110mm
- Light state: DIN 4
- Dark state: DIN 9-13 (adjustable)
- Switching time: 1/25,000 sec
- Finish: Black
- Arc detection sensitivity adjustment: CONTINUOUSLY VARIABLE
- Weld pool delay: CONTINUOUSLY VARIABLE
- UV-IR Protection: Up to shade 16
- Arc sensors: 2

WBA500T

9 317114 874535

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Lens Cover

Replacement Carbite Lens Cover

- Suits models WBA103 and many other standard helmet visors
- Finish: Clear

WBAL1

9 317114 874887

Replacement Carbite Lens Cover

- Suits models WBA400 and WBA500
- Finish: Clear

WBAL45

9 317114 875020

CUSTOM WORX

WBA500* and WBA400* Variations available by request (Minimum quantity 300 pcs).
Your own custom designs and/or logos also welcome.

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About Welding

Gas metal arc welding (GMAW) Metal inert gas (MIG) Metal active gas (MAG)

GMAW, sometimes referred to by its subtypes - metal inert gas (MIG) welding or metal active gas (MAG) welding, is a semi-automatic or automatic arc welding process in which a continuous and consumable wire electrode and a shielding gas are fed through a welding gun. A constant voltage, direct current power source is most commonly used with GMAW, but constant current systems as well as alternating current can be used. There are four primary methods of metal transfer in GMAW, called globular, short-circuiting, spray, and pulsed-spray, each of which has distinct properties and corresponding advantages and limitations.

Originally developed for welding aluminium and other non-ferrous materials in the 1940s, GMAW was soon applied to steels because it allowed for lower welding time compared to other welding processes. The cost of inert gas limited its use in steels until several years later, when the use of semi-inert gases such as carbon dioxide became common. Further developments during the 1950s and 1960s gave the process more versatility and as a result, it became a highly used industrial process. Today, GMAW is the most common industrial welding process, preferred for its versatility, speed and the relative ease of adapting the process to robotic automation. The automobile industry in particular uses GMAW welding almost exclusively. Unlike welding processes that do not employ a shielding gas such as shielded metal arc welding, it is rarely used outdoors or in other areas of air volatility. A related process, flux cored arc welding, often does not utilize a shielding gas, instead employing a hollow electrode wire that is filled with flux on the inside.

Safety

Gas metal arc welding can be dangerous if proper precautions are not taken. Since GMAW employs an electric arc, Welders wear protective clothing, including heavy leather gloves and protective long sleeve jackets, to avoid exposure to extreme heat and flames. In addition, the brightness of the electric arc can cause arc eye, in which ultraviolet light causes the inflammation of the cornea and can burn the retinas of the eyes. Helmets with dark face plates are worn to prevent this exposure, and in recent years, new helmet models have been produced that feature a liquid crystal-type face plate that self-darkens upon exposure to high amounts of UV light. Transparent welding curtains, made of a polyvinyl chloride plastic film, are often used to shield nearby workers and bystanders from exposure to the UV light from the electric arc.[22]

Welders are also often exposed to dangerous gases and particulate matter. GMAW produces smoke containing particles of various types of oxides, and the size of the particles in question tends to influence the toxicity of the fumes with smaller particles presenting a greater danger. Additionally, carbon dioxide and ozone gases can prove dangerous if ventilation is inadequate. Furthermore, because the use of compressed gases in GMAW pose an explosion and fire risk, some common precautions include limiting the amount of oxygen in the air and keeping combustible materials away from the workplace.[23]

While porosity usually results from atmospheric contamination, too much shielding gas has a similar effect; if the flow rate is too high it may create a vortex that draws in the surrounding air, thereby contaminating the weld pool as it cools. The gas output should be felt (as a cool breeze) on a dry hand but not enough to create any noticeable pressure, this equates to between 20–25 psi (mild and stainless steel). Above 26 volts the gas debit should be augmented slightly since the weld pool takes longer to cool. As a factor that is often ignored, many flow meters are never adjusted and typically run between 35–45 psi. A healthy reduction of gas will not affect the quality of the weld, will save money on shielding gas and reduce the rate at which the tank must be replaced

Gas tungsten arc welding (GTAW) tungsten inert gas (TIG)

Gas tungsten arc welding (GTAW), also known as tungsten inert gas (TIG) welding, is an arc welding process that uses a non consumable tungsten electrode to produce the weld. The weld area is protected from atmospheric contamination by a shielding gas (usually an inert gas such as argon) and a filler metal is normally used, though some welds (known as autogenous welds) do not require it. A constant-current welding power supply produces energy which is conducted across the arc through a column of highly ionized gas and metal vapours known as a plasma.

GTAW is most commonly used to weld thin sections of stainless steel and light metals such as aluminium, magnesium and copper alloys. The process grants the operator greater control over the weld than competing procedures such as shielded metal arc welding and gas metal arc welding, allowing for stronger, higher quality welds. However GTAW is comparatively more complex and difficult to master, and furthermore, it is significantly slower than most other welding techniques. A related process, plasma arc welding, uses a slightly different welding torch to create a more focused welding arc and as a result is often automated.

Safety

Like other arc welding processes, GTAW can be dangerous if proper precautions are not taken. The process produces intense ultra-violet radiation, which can cause a form of sunburn and, in a few cases, trigger the development of skin cancer. Flying sparks and droplets of molten metal can cause severe burns and start a fire if flammable material is nearby, though GTAW generally produces very few sparks or metal droplets when performed properly.

It is essential that the welder wear suitable protective clothing, including leather gloves, a closed shirt collar to protect the neck (especially the throat), a protective long sleeve jacket and a suitable welding helmet to prevent retinal damage or ultraviolet burns to the cornea, often called arc eye.

The shade of welding lens will depend upon the amperage of the welding current. Due to the absence of smoke in GTAW, the arc appears brighter than shielded metal arc welding and more ultraviolet radiation is produced. Exposure of bare skin near a GTAW arc for even a few seconds may cause a painful sunburn. Additionally, the tungsten electrode is heated to a white hot state like the filament of a lightbulb, adding greatly to the total radiated light and heat energy. Transparent welding curtains, made of a polyvinyl chloride plastic film, dyed in order to block UV radiation, are often used to shield nearby personnel from exposure.

Welders are also often exposed to dangerous gases and particulate matter. Shielding gases can displace oxygen and lead to asphyxiation, and while smoke is not produced, the arc in GTAW produces very short wavelength ultraviolet light which causes surrounding air to break down and form ozone. Metals will volatilize and heavy metals can be taken into the lungs. Similarly, the heat can cause poisonous fumes to form from cleaning and degreasing materials. For example chlorinated products will break down producing poisonous phosgene. Cleaning operations using these agents should not be performed near the site of welding, and proper ventilation is necessary to protect the Welder.

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Submerged Arc Welding (SAW)

Submerged Arc Welding (SAW) is a common arc welding process, originally evolved by the Linde - Union Carbide Company. It requires a continuously fed consumable solid or tubular (flux cored) electrode. The molten weld and the arc zone are protected from atmospheric contamination by being "submerged" under a blanket of granular fusible flux consisting of lime, silica, manganese oxide, calcium fluoride, and other compounds. When molten, the flux becomes conductive, and provides a current path between the electrode and the work. This thick layer of flux completely covers the molten metal thus preventing spatter and sparks as well as suppressing the intense ultraviolet radiation and fumes that are a part of the SMAW (shielded metal arc welding) process.

SAW is normally operated in the automatic or mechanized mode, however semi-automatic (hand-held) SAW guns with pressurized or gravity flux feed delivery are available. The process is normally limited to the Flat or Horizontal-Fillet welding positions (although Horizontal Groove position welds have been done with a special arrangement to support the flux). Deposition rates approaching 100 lb/h (45 kg/h) have been reported — this compares to ~10 lb/h (5 kg/h) maximum for shielded metal arc welding. Although currents ranging from 300 to 2000 amperes are commonly utilized, currents of up to 5000 amperes have also been used (multiple arcs).
Single or multiple (2 to 5) electrode wire variations of the process exist. SAW strip-cladding utilizes a flat strip electrode (e.g. 60 mm wide x 0.5 mm thick). DC or AC power can be utilized, and combinations of DC and AC are common on multiple electrode systems. Constant Voltage welding power supplies are most commonly used, however Constant Current systems in combination with a voltage sensing wire-feeder are available.

Plasma Arc Welding (PAW)

Plasma Arc Welding uses electrodes and ionized gases to generate an extremely hot plasma jet aimed at the weld area. The higher energy concentration is useful for deeper and narrower welds and increased welding speed.
Plasma is a gas which is heated to an extremely high temperature and ionized so that it becomes electrically conductive. Similar to GTAW (TIG), the plasma arc welding process uses this plasma to transfer an electric arc to a work piece. The metal to be welded is melted by the intense heat of the arc and fuses together. Plasma gases are normally argon. The torch also uses a secondary gas, argon, argon/hydrogen or helium which assists in shielding the molten weld puddle thus minimizing oxidation of the weld.
Several basic PAW process variations are possible by varying the current, plasma gas flow rate, and the orifice diameter, including:
Micro-plasma (< 15 Amperes)
Melt-in mode (15–400 Amperes)
Keyhole mode (>100 Amperes)
Plasma arc welding has a greater energy concentration as compared to GTAW. A deep, narrow penetration is achievable; reducing distortion and allowing square-butt joints in material up to ½" (12 mm) thick.
Greater arc stability allows a much longer arc length (stand-off), and much greater tolerance to arc length changes.

Plasma Arc Cutting (PAC)

The plasma gas flow is increased to a point so that the deeply penetrating plasma jet cuts through the material and molten material is removed as cutting dross. PAC differs from oxy-fuel cutting in that the plasma process operates by using the arc to melt the metal whereas in the oxy-fuel process, the oxygen oxidizes the metal and the heat from the exothermic reaction melts the metal. Unlike oxy-fuel cutting, the PAC process can be applied to cutting metals which form refractory oxides such as stainless steel, cast iron, aluminium, and other non-ferrous alloys. Since PAC was introduced by Praxair Inc. at the American Welding Society show in 1954, many process refinements, gas developments, and equipment improvements have occurred.

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