



SPECIALTY WELDING PRODUCTS



COB
INDUSTRIES, INC.

ARGWELD®
TECHWELD™





ARGWELD® PURGE BLADDER SYSTEMS

Argweld® Inflatable Purge Bladders are the most effective systems available for pipe purging. The system is pulled into position and inert gas is used to inflate the bladders (dams) which provide a 100% airtight seal on either side of the weld joint, after which the pressure in the system opens the purge valve and the gas purges the space between the bladders ensuring a clean, even penetration bead. Once the weld is completed, the gas is turned off and the bladders are deflated so the system can be pulled through the pipe to the next weld. These systems are specifically designed to be easily pulled into position through long sections of pipe and around elbows without the risk of getting jammed or stuck in the pipe.

This uniquely designed system has become an industry standard worldwide for applications involving stainless steel, chrome or other types of pipe that require an oxygen-free weld. The Argweld® systems are used extensively at LNG sites, refineries, power plants, food processing, pharmaceutical and fabrication facilities.

FEATURES

Compared to other methods of gas purging for pipe welding the Argweld® Purge Bladder systems have a number of distinct advantages that lead to consistently clean welds and significant savings.

- **Reliable.** A good purge can be achieved and maintained every time without the fear of the dams becoming dislodged or compromised during the weld process.
- **Faster.** These systems are the fastest method of pipe purging by far with no time wasted building, taping or gluing dams in place, and no time wasted purging long sections of pipe. Due to their superior design, the purge time required is up to 8 times faster than foam, paper or other conventional purging methods. For example, an 8" pipe can be purged to less than 1% O₂ in less than 60 seconds and a 12" pipe in about 90 seconds.
- **Use less inert gas.** Argweld® purge systems also offer huge savings from reduced gas consumption for weld purging. They typically use less than 1/3 of the amount of gas required with other types of purge dams.
- **Easy to use.** Argweld® purge bladders greatly simplify the process of inert gas purging. With minimal training bright shiny welds that pass inspection can be achieved in no time.

As a result of the reduced waiting time, faster purge times and reduced gas consumption Argweld® purge systems pay for themselves in just a few welds. Don't put your weld at risk with "make-do" devices that can tear or become dislodged and end up costing time and money.

THE ARGWELD® PURGE BLADDER SYSTEM IS BASED ON A SIMPLE IDEA. IT COMPRISES TWO PROTECTED BLADDERS CONNECTED BY A SPINAL TUBE. THE TUBE CARRIES THE GAS TO INFLATE THE BLADDERS AND RELEASE VALVE TO PURGE THE SPACE BETWEEN THEM.



12" QUICK PURGE SYSTEM
IN PIPE SECTION

ARGWELD® QUICK-PURGE™ MK II SYSTEMS

The Quick-Purge™ MK II systems are specifically designed for larger diameter pipe. They offer a primary gas intake and an auxiliary line which gives the welder the ability to pump as much or as little gas into the purge area as needed for a fast purge with the appropriate amount of pressure. This is particularly important when welding larger bore pipe. The tandem inflatable bladders are connected by a sleeve instead of a spinal hose which serves **2 critical purposes:**

1. The sleeve contains flexible supports that maintain the shape of the larger bladders even when deflated so that when they are pulled into position and the gas is turned on, they automatically seat themselves properly in the pipe and provide a 100% airtight seal on either side of the weld every time. The support of the sleeve prevents the bladders from folding over or getting jammed up while providing enough flexibility to allow the system to be pulled through long sections of pipe and around elbows with ease.

2. The sleeve design also further reduces the amount of air volume that needs to be purged, which dramatically speeds up the process. Not only do the inflatable dams isolate the section of pipe around the weld joint for purging, the sleeve eliminates the majority of volume between the dams, making this the fastest purge system available. In side-by-side comparison studies Quick-Purge™ systems have proven to be up to 8 times faster than foam, paper or other conventional pipe purging methods.

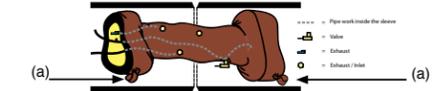
These systems are rugged and durable, designed to be used over and over to produce hundreds of clean, high-quality welds. The sleeve and inner portions of the bladders are all made from heat-resistant silicone material to withstand the high temperatures encountered in the welding process. Available for sizes 8" and up.



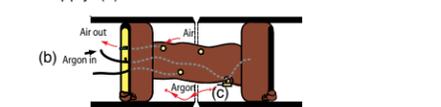
ARGWELD® QUICK-PURGE™ MK II SYSTEMS

HOW AN INFLATABLE PIPE PURGING SYSTEM WORKS

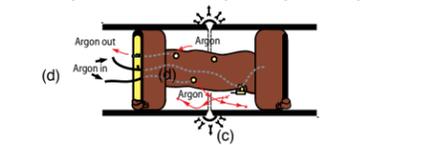
1 The Argweld® Quick Purge Purging System is positioned using the pull tags. (a)



2 The Purging System is inflated using the inert gas supply. (b)



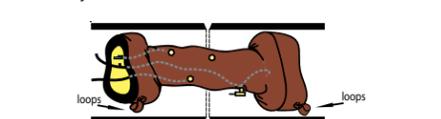
3 Once the Purging System is inflated and seals in the pipe, the pressure opens the purge valve (c), the air space is purged by the inert gas, displacing the air between the dams to the outside (d) via the exhausts. Until the oxygen level is low enough to begin welding.



Note: Outside of the weld joint will normally be taped when the joint design is not closed

4 During welding the flow rate of inert gas should be maintained to purge any oxygen released by the increasing temperature.

5 When the weld is completed and allowed to cool below oxidation temperature, the purge gas can be shut off, the system will deflate and then can be removed.





ARGWELD® PURGELITE® TANDEM PURGE BLADDERS

USE THE RIGHT TOOL FOR THE JOB!

ARGWELD® PURGELITE® TANDEM PURGE BLADDERS

The PurgElite® systems are the newest generation of the popular tandem purge bladders that have been an industry favorite for years. They have been re-designed to make them even simpler and easier to use, and more affordable than previous models. PurgElite® bladders have no valves to set or adjust, and they are the industry's only inflatable purge bladders that can be used on 1" pipe and up. Just connect them to the inert gas supply and pull them into position for fast, effective and reliable pipe purging and clean, shiny welds every time.

ARGWELD® MULTI-PORT PURGE BLADDERS

The latest version of the Argweld® Tandem Purge Bladders now offers multiple inlet / exhaust ports for faster, more effective weld purging. The user is able to increase the gas flow without fear of over-pressurizing the weld by utilizing additional inlets / exhausts while maintaining an airtight seal on the pipe ID.

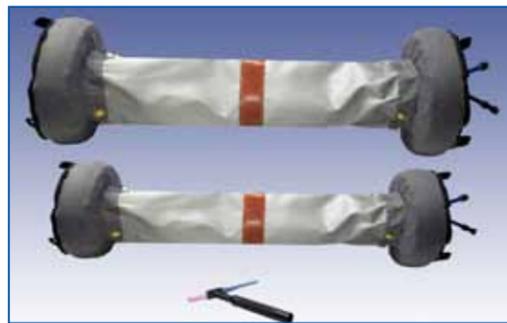
The multiple exhaust ports can also be utilized to accommodate a pressure gauge to monitor gas pressure for orbital welding applications. This is an important new feature added to the already popular Argweld® Tandem Purge Bladders. Available in sizes for 2" through 7" pipe.

ARGWELD® HEAT-RESISTANT QUICK-PURGE™ SYSTEMS

These are based on the Quick-Purge™ design, modified with longer sleeves and completely encased in heat-resistant materials to handle the higher temperatures encountered with pre-heat welding processes on chrome and other exotic pipe materials.



ARGWELD® MULTI-PORT PURGE BLADDERS



ARGWELD® HEAT-RESISTANT QUICK-PURGE™ SYSTEMS



ARGWELD® PIPE PURGING PLUGS ARE USED ON SMALLER DIAMETER (1/2" TO 6") AND SHORTER LENGTH TUBE OR PIPE APPLICATIONS. GREAT FOR SEALING OUTLETS WHEN PURGING VESSELS, AS LOW PRESSURE TEST PLUGS FOR PIPE JOINTS, OR TO STOP CONTAMINANTS FROM ENTERING TUBING. MADE FROM HIGH QUALITY NYLON, THESE PLUGS WON'T RUST OR CORRODE, ARE VIRTUALLY SHATTER PROOF, AND RESIST MANY CHEMICALS.

ARGWELD® PIPE PURGING / TEST PLUGS

Argweld® Pipe Purging Plugs are used on smaller diameter (1/2" – 6") pipes, tubing, fittings, and in applications where purge bladders or purge film can not be utilized.

These plugs are great for sealing outlets when purging, pressure testing pipe joints, or for FME purposes (keeping contaminants out of pipe). They are made from high quality nylon and won't rust or corrode, are virtually shatter-proof and resist many chemicals. The popular Purge Plug Kit offers multiples of each size from 1/2" – 4" in a custom foam-lined carrying case. These plugs are also offered up to 36" in Aluminum.

FEATURES:

- Made from high quality nylon with natural rubber seals (replacement seals available in Nitrile, Viton and Silicone)
- Available with Solid Stems or Vented Stems
- Shatter-proof
- Will not rust or corrode
- Easily cleaned
- Friction-reducing acetyl copolymer thrust washer inserted between the top plate and wing nut provides easy expansion
- Threaded stems are standard BSP sizes (adapts to NPT)
- Nozzles to accept 3/8" gas hose



1/2" TO 4" PURGE PLUG KIT

ALL-NEW ARGWELD® PURGEYE® WELD PURGE MONITORS®

WORLD LEADERS IN WELD PURGE MONITOR® TECHNOLOGY

Argweld® continues to lead the industry with the ONLY full-line "family" of Weld Purge Monitors® for any weld purging application.

PURGEYE® 100

The latest technology in hand-held Weld Purge Monitors®

This handheld monitor reads from 20.94% down to 0.01% with unmatched accuracy and functions, and is perfect for stainless steel, super duplex, and other high-purity welding applications. It is lightweight, rugged, and easy to use, with many added features:

- Push-button instant calibration down to 0.01% O₂ with "Zero-Calibration" feature for increased accuracy at very low O₂ levels (± 0.02)
- Long lasting sensor (full 1 yr. warranty with life expectancy of approximately 2 yrs.)
- Larger, easy to read LCD display (24mm)
- Low Battery and Sensor Indicators
- Total Weight: 2 lbs.
- Available accessories including protective rubber case, "Gorilla" tripod mount for easy hands-free visibility

PURGEYE® 300

Weld Purge Monitor™ that reads from 1000 Parts per Million (PPM) down to 10 PPM for critical high purity weld applications that require very low O₂ content such as titanium. Features include:

- Automatic alarms if O₂ level exceeds pre-set limits.
- Data Logging capability with optional PurgeLog™ software
- Maintenance-free, long lasting sensor (5 yrs)
- Ability to interface with welding machines to suspend welding process if O₂ levels exceed pre-set limits
- Designed for applications with free-flowing purge exhaust such as welding enclosures or chambers

PURGEYE® 300 "NANO"

The "Nano" is a simplified version of the PurgEye® 300 offering all of the accuracy without all the bells and whistles. The PurgEye® 300 Nano is the industry's most affordable Weld Purge Monitor® capable of accurately reading O₂ levels down to 10 Parts Per Million (PPM).

- Small, lightweight and portable
- Reads from 900 PPM down to 10 PPM
- Low maintenance, long-lasting sensor

PURGEYE® 500

The PurgEye® 500 is a Parts Per Million Weld Purge Monitor® that reads from 1000 PPM down to 10 PPM with a built in pump for extracting purge samples for applications where a constant positive pressure flow may not be possible.

- Automatic alarms if O₂ level exceeds pre-set limits.
- Data Logging capability with optional PurgeLog™ software
- Long lasting, maintenance-free sensor with 5 yr Guarantee
- Ability to interface with welding machines to suspend welding process if O₂ levels exceed pre-set limits

PURGEYE® 600

The most advanced purge monitor available with revolutionary new technology! The world's first Weld Purge Monitor™ capable of accurately reading O₂ levels from ambient (20.94%) all the way down to 10 PPM.

- Touch-screen technology
- Internal sampling pump
- Capable of connecting to welding power supply to suspend welding process if O₂ levels exceed pre-set limits
- Graphing and Data logging functions with real-time clock for QA / QC records
- USB port for data storage



ARGWELD® PURGE MONITORS DETECT THE LEVELS OF OXYGEN IN PURGING GAS TO INDICATE WHEN IT IS AT A SAFE LEVEL TO WELD.



THE ARGWELD® TITANIUM PURGE MONITOR HAS BEEN SPECIFICALLY DESIGNED FOR INDICATING OXYGEN LEVELS IN ARGON GAS FOR WELD PURGING.





ARGWELD® BACKING TAPE

Typically for the welding of thin wall stainless steel sheet and vessels from one side only, the Backing Tape can be attached to the backside of the weld to support the weld pool, keep the argon from the torch surrounding the weld pool, and eliminate the need to back-purge while giving a consistent high quality under bead profile.

Backing Tape offers tremendous savings of purge gas and waiting time particularly when welding large vessels.

The heat resistant adhesive aluminum backing foil is 3" wide with a 1" woven glass fiber cloth strip in the middle. There are now many grades of Backing Tape that will support single pass TIG welding at weld currents up to 240 AMPS, without change to the chemistry or metallurgy of the weld.

EXTENDING THE RANGE OF ARGWELD® PURGING PRODUCTS AND PROVIDING AN ECONOMICAL NON METALLIC WELD BACKING SYSTEM FOR THE BACKING OF WELDS, WHERE PURGING IS REQUIRED BUT NOT EASILY ACHIEVED.



ARGWELD® WATER SOLUBLE PURGE FILM

Argweld® Water Soluble Purge Dam Film can be used for stainless, duplex and chrome-moly steels as well as titanium.

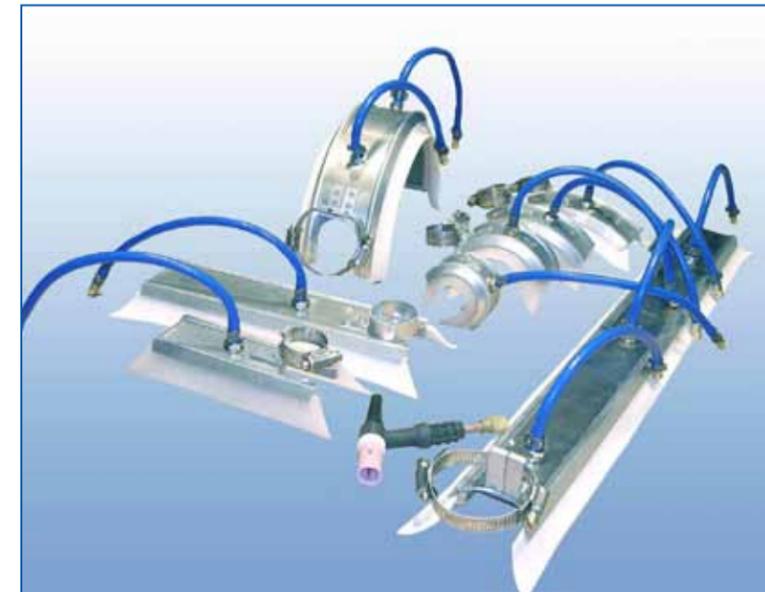
The Argweld® purge material makes dams which produce an impenetrable purge barrier but which can easily be washed away when hydrostatically testing the pipe or just by normal wash out.

It dissolves away completely without leaving any fibers to clog up filters or other sensitive parts in a system and it can resist pressure in all directions so that it can maintain a good gas barrier throughout the purging process.

Trace element certification can be provided to show that Argweld® film does not contain any harmful elements and that the quantity of halides is well below the permissible levels.

The film and adhesive are completely biodegradable and all packaging materials are recyclable.

THE USE OF WATER SOLUBLE FILM FOR MANUFACTURE OF PURGING DAMS IS WELL PROVEN AND THE ARGWELD® FILM GIVES SUPERIOR RESULTS OVER ALL OTHER WATER SOLUBLE PRODUCTS.



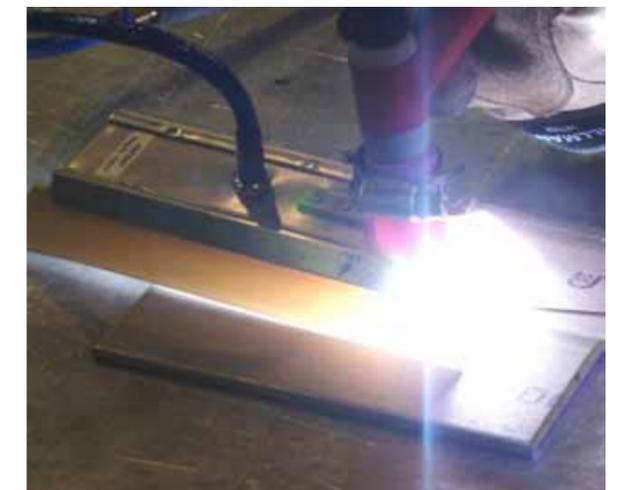
ARGWELD® TITANIUM TRAILING SHIELDS GIVE SECONDARY SHIELDING GAS COVERAGE WHICH PREVENTS THE MATERIAL FROM OXIDIZING FOLLOWING WELDING ON PIPE AND SHEET.

ARGWELD® TRAILING SHIELDS

The Argweld® leading and trailing shields are designed for high quality gas coverage of titanium while welding. They can be supplied to fit any make of TIG or plasma welding torch for manual and automatic welding on pipes, vessels or flat plate. By using an Argweld® trailing shield, titanium welds will be left bright and shiny and eliminate discoloration.

Argweld® purge shields will reduce gas consumption, save re-work and eliminate wasted materials cost due to oxidation. Argweld® purging shields can also be used for welding stainless steel, duplexes as well as titanium and any other weldable metal where discoloration or oxidation need to be eliminated.

The shields are manufactured to weld flat plate or any diameter tube, pipe or vessel. They are manufactured with variable radii to suit each diameter, contoured for either outside or inside welding.



TRAILING SHIELD CLOSEUP



ARGWELD® FLEXIBLE WELDING ENCLOSURES

Argweld® Flexible Welding Enclosures are used when space is a concern or a rigid enclosure is not economically viable. Typically used for multiple weld jobs on a single piece of metal within a completely purged environment. They are available in a wide variety of sizes out of stock and can be made to custom specifications. In addition to the standard models, special enclosures can be designed and manufactured to suit most applications.

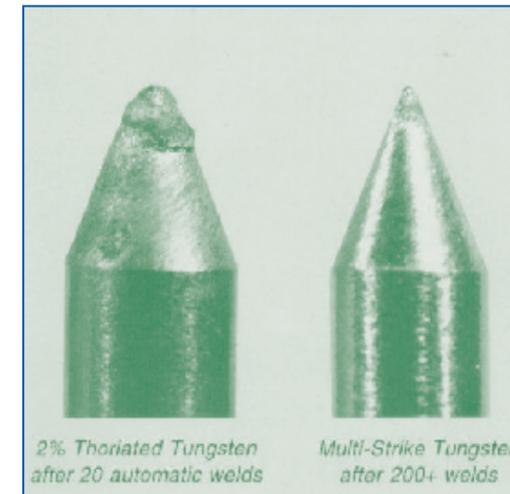
Typical applications include the occasional and production welding of titanium and nickel alloy components for the aerospace, medical and racing industries and for the welding of stainless steel components to eliminate the expensive cleaning of discoloration.

Argweld® Flexible Welding Enclosures are made with the finest quality materials possible, using material formed from multiple layers of UV-resistant clear PVC which typically last several times longer than similar looking units on the market. They are designed to offer the welder the most unobstructed visibility possible, without seams and hardware that can block the welder's view. Argweld® Enclosures also come with a standard exhaust port at the top of the unit which allows for easy interface with a Purge Monitor.



STANDARD ENCLOSURES (INCHES)

DIAMETER:	36"	48"	60"	72"
SIDE HEIGHT:	17 3/4"	21 1/2"	21 1/2"	21 1/2"
OVERALL HEIGHT:	21 1/2"	31 1/2"	31 1/2"	31 1/2"
TOP PANEL:	7 3/4"	17 3/4"	17 3/4"	17 3/4"



TECHWELD™ MULTI-STRIKE™ ELECTRODES

COB and Huntingdon Fusion Techniques Limited is proud to introduce a new TIG welding electrode material.

A tungsten electrode has been developed with a collection of non-thoriated, non-radioactive, noncarcinogenic dopants to make it weld at high, low and medium current ranges on both DC TIG (GTAW) welding of Steels and alloys as well as AC TIG (GTAW) welding of Aluminum and its alloys.

The mix of Dopants:

- greatly enhances electrode life
- multiplies the number of strikes per tungsten
- does not contain any radioactive material.

MULTI-STRIKE™ TUNGSTENS for improved TIG Welding:

- Increase the number of arc strikes before resharping is necessary.
- Contains no radioactive material.
- Lowers the working temperature giving cooler welds.
- Special packaging gives guarantee of quality and tractability.
- Eliminates carcinogenic thoria.



TECHWELD™ MULTI-STRIKE™ TUNGSTEN ELECTRODES ARE THE WORLDS LEADING NON-THORIATED TUNGSTEN ELECTRODE. THEY CAN GIVE TEN TIMES THE LIFE OF STANDARD TUNGSTENS, CAN BE USED FOR ALL APPLICATIONS INCLUDING ALUMINUM AND STEEL AND ARE FULLY BATCH TRACEABLE.



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ARGWELD®

A STAINLESS REPUTATION



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