

PurgElite®

Inflatable Tube and Pipe

WELD PURGING SYSTEM



© HFT®

USER INSTRUCTIONS

Purge your pipes the 'Elite' way!



This Quick Start guide to using PurgElite® is not intended to replace the User Instruction Manual, which we request that you read in its entirety at some time, however where it is important to use the system immediately, these quick steps can be used.

1. The pipe purging system that you have purchased, has a specific range. If it is a 6" model, the range for example is for pipes with an internal diameter of 124 to 162 mm. For other sizes see page 12. Please check that your pipe does conform to the American Pipe Institute standard given here. Some 6" pipes may not conform. If the internal diameter is greater than 162 mm then use the next size up, otherwise your weld may not be completed satisfactorily and damage to your system could occur.
2. If you purchased the "PurgeGate®" to give your system an anti burst facility, connect it to the Inflatable system, taking care to follow the arrow in the centre of PurgeGate® that shows direction of gas flow.
3. Connect one end of your 6 mm OD purge gas line to your argon supply ensuring that you have a two stage regulator and a flowmeter on the gas supply.
4. Connect the far end of your gas supply hose to your PurgElite® system using the 6 mm leaktight quick connect coupling.
5. Set the gas flow to 7.5 litres/sec and inflate the system, checking that it functions correctly and releases gas from the IntaCal® purge valve. Once the inflatable dams become hard, turn the gas supply off.
6. Connect your pull wires to the loops on each end of the PurgElite® so that you can position the RootGlo® strip right under the weld joint.
7. Centralise the purge system and start the purging process according to your WPS (Weld Procedure Specification).



Quick start	2
Index	3
Introduction	4
Range and system operation	5
System operation explained	6
Instructions for use	7
Simple steps for perfect results - Every time	8
Simple steps for perfect results continued	9
Additional applications	10
Purge times, replacement dams and accessories	11
Size range	12
The Family series of Weld Purge Monitors ®	11
Range of purge accessories for welding	12
Other languages	13
Customer support and worldwide care	14
Warranty	15
Address and contact details	back cover



Thank you for purchasing one of our advanced **PurgElite®** Inflatable Tube and Pipe Weld Purging Systems.

We hope that this will be successful for you and for the best results **please read instructions before use.** If other people use this system, please ensure that all users either read these instructions or receive training. Each system is provided with this instruction manual.

These instructions are designed to help the operator obtain the best results and to prevent damage to the system by incorrect operation. The procedures outlined must be followed to prevent the risk of any damage or operator injury.

Should the operator experience difficulty in understanding these instructions or the operation of this system, please contact your local HFT® exclusive distributor who is trained in the correct operation of these devices. In the event of further problems please notify the manufacturer, Huntingdon Fusion Techniques HFT®, prior to making any alterations or repairs.

It is intended that the device should be connected to the chosen inert purge gas supply. The purge gas will first inflate the system and then purge the interspace between the two dams. A two stage regulator should be used to ensure a regular gas output pressure.



© HFT®

The complete range of **PurgElite**[®] Inflatable Tube and Pipe Weld Purging Systems has 16 models from 1" up to 24". Each model has a variation in size capability, that covers sizes immediately above and below (see page 12).

Why use **PurgElite**[®] instead of **QuickPurge**[®] II Tube, Pipe and Pipeline Inflatable Weld Purge Systems from 6" upwards?

The 6" up to 24" **QuickPurge**[®] II Systems are more suitable to those users with large numbers of the same diameter joint to weld. Time and gas saving are dramatic.

SYSTEM OPERATION

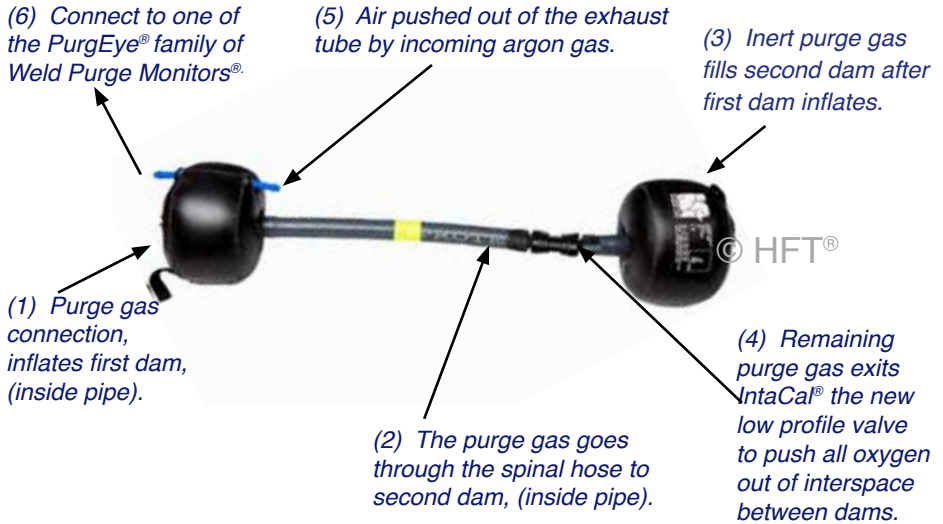
Correct installation and use of the system will ensure clean, good and even penetration beads on all pipe joints. By localising the volume to be purged, savings can be made on waiting time as well as inert gas costs.

Monitoring the purge with one of the **PurgEye**[®] Family of Weld Purge Monitors[®] will guarantee oxide free welds, leading to no loss of corrosion resistance and minimised cleaning and pickling.

Productivity will increase and costs will drop when changing over from homemade or paper dam systems.

The **PurgElite**[®] Tube & Pipe Weld Purging System comprises two inflatable synthetic rubber devices with low vapour pressure protective covers, connected by a low vapour pressure, high temperature resistant, synthetic, intumescent joining hose that will not scratch the inside of polished tubes or pipes. Burn through of the purge gas hose is almost impossible.





See also page 8

The spinal tube is fabricated from a low vapour pressure synthetic material to avoid scratching internally polished tubes.



To ensure consistent results the following 'set up' and operational procedures should be adhered to:

Pull wires can be attached to the 1,000 lb breaking strain handles to pull the purge system into place.

If the weld joint uses the open root process, the brightly illuminating **RootGlo**® can be used to see when the centre of the purge system is below the weld joint.

In use, the purge system will need a constant gas flow and pressure.

Set the outlet pressure on your two stage gas regulator (pressure gauge) between 5 and 7 Psi (0.35 - 0.5 bar).

At no time should this exceed 7.5 Psi (0.5 bar).

It is not necessary to use a flowmeter with **PurgElite**® Systems.

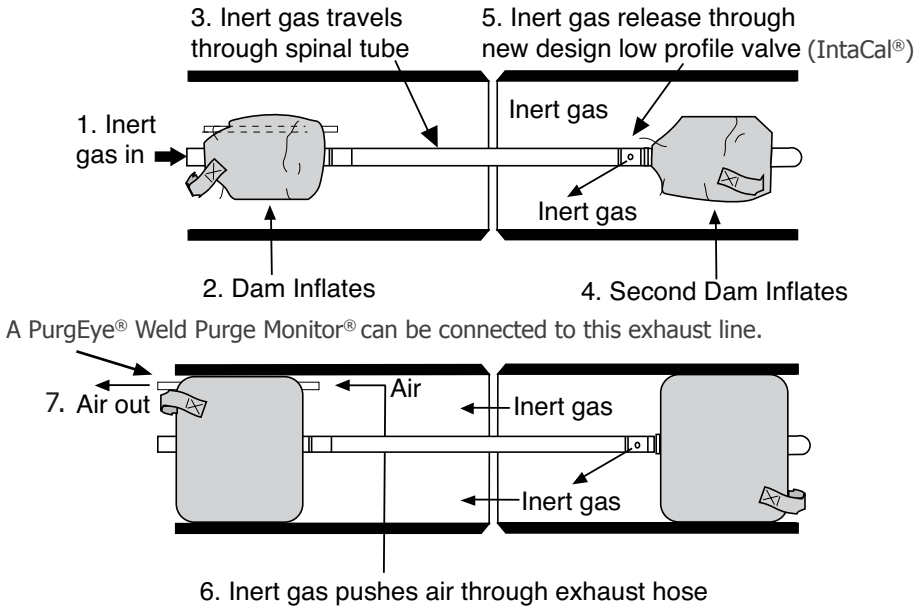
The system is fitted with a low profile **IntaCal**® argon release system to purge the interspace after the dams have inflated.

Pressure must be kept constant for good results by using a two stage regulator. By localising a purge, traditional purging methods using high flow rates are no longer appropriate.



© HFT®





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

1. The **PurgElite®** Tube and Pipe Inflation Weld Purge System is positioned using the strong purpose designed pull tags.
2. Each **PurgElite®** System is inflated using the inert gas supply. Once the Purge System is inflated, the inert gas displaces the air between the dams through the exhaust port.
3. When the required oxygen level has been measured with the **PurgEye®** Monitor, the joint is ready for welding.
4. During welding, the purging process should be maintained to purge any outgassing released by the increasing temperature.



5. After the the weld is completed and the post purging time has passed, the purge gas can be closed and the line detached. The PurgElite® System automatically deflates once the purge gas supply has been closed or the line has been removed (see overleaf).
6. If the PurgElite® system is going to be used again, particularly on different materials, clean it as best possible to ensure that no contamination of any kind is carried over to the next job.

Note: It may be advisable to allow a cooling time before removal of the PurgElite® System.

Another perfect pipe weld!

Do not use old fashioned purge bladders with complex valves or "makeshift" devices like paper, cardboard dams or foam bungs. They contain a lot of water, water vapour, air, possibly material contamination that has been taken into the holes in the sponge and put your weld at risk and end up costing you more money.

Use the proper tool for the job!



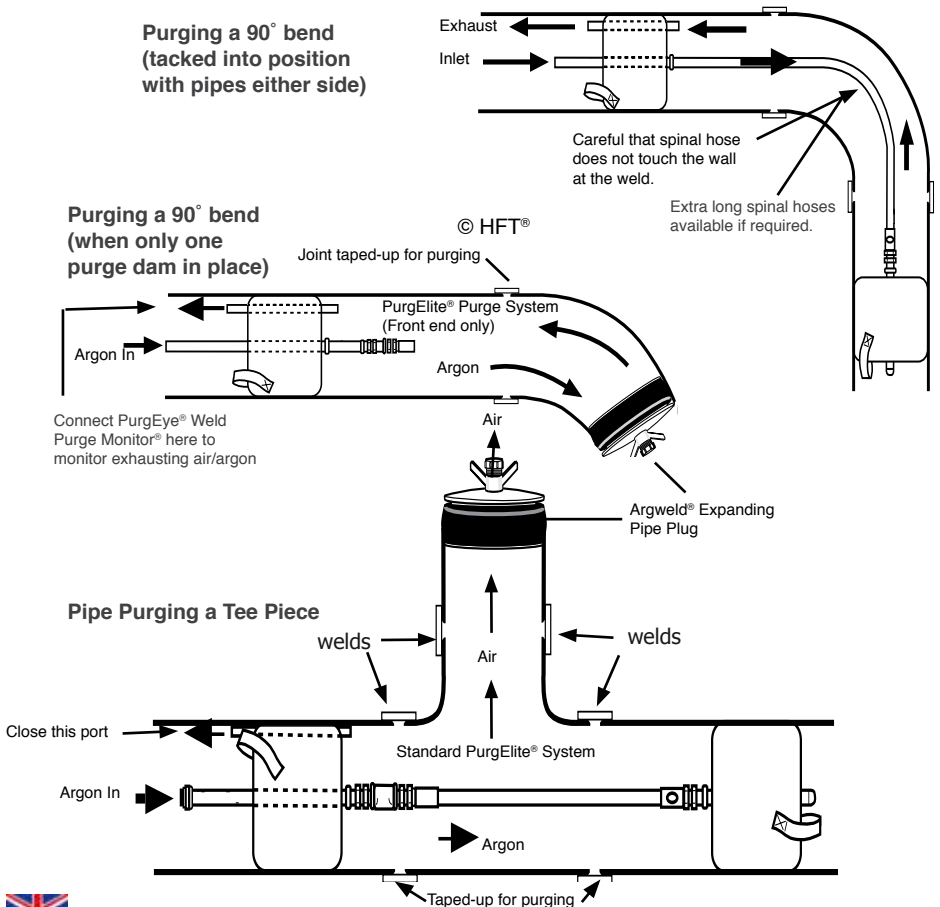
WARNING

Failure to comply with these instruction procedures may lead to damage being caused to the dam assembly which may not be covered by our warranty terms



Due to the flexibility of the **PurgElite®** Tube and Pipe Inflatable Weld Purging System with the low profile inert gas release valve, it is possible to use the product for purging applications where fittings such as elbows, tee's and reducers are used. Below are diagrams that show suggested procedures.

The expandable pipe plugs are also available from Huntingdon Fusion Techniques HFT® or from your local distributor.



Note: An alternative method of purging a tee piece is available using a 3 piece dam system. Please contact us for further information about this system.

Purge Time Length	Pipe Diameter	Normal Purge Time at 10 l/m	PurgElite® at 10 l/m
10 m (33')	100 mm (4")	26 mins	1.5 mins
10 m (33')	200 mm (8")	83 mins	4 mins
10 m (33')	300 mm (12")	173 mins	8 mins

REPLACEMENT DAMS

In the event of one of the dams being damaged, replacement dams are available.

The dams are easily changed and can be changed with different diameter ends.

Please contact us or your local distributor for information.

ACCESSORIES

Have you purchased a "Purgegate®" for use with your PurgElite® System(s)? If not ask for details. PurgeGate® will prevent your dams from bursting due to over inflation. This makes the system burst proof.

PurgEye® 100 IP65 WELD PURGE MONITOR®



Using evolving scientific technology to manufacture a 'State of the Art' instrument showing precise oxygen levels for perfect weld purging.



INFLATABLE TUBE and PIPE PURGE SYSTEMS SMALL BORE TUBES and PIPES

	Nominal Pipe mm	Size Inch	Weight KG	Internal Diameter
PL10001	25 mm	1"	0.28 kg	24-31 mm
PL10002	50 mm	2"	0.30 kg	44-57 mm
PL10003	75 mm	3"	0.32 kg	58-84 mm
PL10004	100 mm	4"	0.30 kg	80-110 mm
PL10005	125 mm	5"	0.31 kg	103-135 mm
PL10006	150 mm	6"	0.32 kg	124-162 mm
PL10007	175 mm	7"	0.32 kg	164-190 mm
PL10008	200 mm	8"	0.32 kg	175-213 mm
PL10010	250 mm	10"	0.32 kg	216-285 mm
PL10012	300 mm	12"	0.32 kg	285-315 mm
PL10014	350 mm	14"	0.34 kg	342-368 mm
PL10016	400 mm	16"	0.36 kg	393-419 mm
PL10018	450 mm	18"	0.38 kg	444-469 mm
PL10020	500 mm	20"	0.40 kg	495-520 mm
PL10022	550 mm	22"	0.42 kg	533-571 mm
PL10024	600 mm	24"	0.44 kg	584-622 mm

**Sizes from 6" upwards are also available in the
Argweld® QuickPurge® format.**



Argweld® PURGEYE® FAMILY RANGE of WELD PURGE MONITORS®

Huntingdon Fusion Techniques HFT® is the only Company to have a complete Family Range of Weld Purge Monitors® .

Pioneering the way in weld purging technology where real science has been used to create a family range to suit all weld purging, purity levels and budgets.

The Argweld® **PurgEye**® family range includes:

PurgEye® 100 IP65 for levels from 20.94% to 0.01% (100 ppm).

PurgEye® 200 IP65 new rechargeable battery powered, hand held model, with integrated electro-mechanical pump and measuring down to 10 ppm.

PurgEye® 300 Nano low cost entry level model for titanium welding, 1,000 to 10 ppm.

PurgEye® 300 fully programmable with data recording for 1,000 to 10 ppm and two switching points to be used for high and low oxygen levels.

PurgEye® 500 like the 300 with an integral electro-mechanical pump.

PurgEye® 600 fully computerised colour touch screen model with wireless USB download of recorded data from atmosphere (20.94%) down to 10 ppm.

PurgEye® 1000 Remote Weld Purge Monitor® with it's sensing head. The sensing head contains an electro-mechanical pump and can read very accurately down to 10 ppm and can transmit information by data cable up to 1,000 metres.



Argweld® FAMILY RANGE of INFLATABLE TUBE, PIPE and PIPELINE WELD PURGING SYSTEMS

Argweld® **PurgElite®** and **PurgExtra™** Inflatable Tube, Pipe and Pipeline Weld Purging Systems simplify the process of inert gas purging and are quick and easy to install. New, low profile Intacal® technology, eliminates the big metal valves that are difficult to set. Suitable for tubes and pipes from 1" - 24" (25 - 600mm).



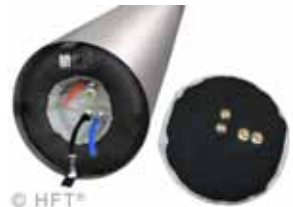
Argweld® **QuickPurge®** Inflatable Tube, Pipe and Pipeline Systems are used for larger diameter, high quality, reliable welding of stainless steels, duplex steels and titanium tube and pipe joints to ensure a very fast weld purge time and a very high quality weld root, free from oxidation and discolouration. Suitable for pipes of 6" - 96" (150 - 2400 mm). With new **RootGlo®** accessory and new **IntaCal®** purge gas release.



The Argweld® **HotPurge®** Pipe Weld Purging Systems For Heat Treated Chrome and High Strength Stainless Steels where the post weld heat treatment temperatures may be as high as 760°C (1400°F). These high quality manufactured heat protected systems are suitable for the welding of pre-heated pipework, such as chrome steels, typically P91, CMV, etc.



Single ended Argweld® Inflatable **Weld Purge Dams** for closure welds, T piece joints, dome end connections and so on, where a conventional Tandem Purge System cannot be used. Manufactured for pipe diameters from 6 - 96 inch (150 mm up to 2,440 mm).



Argweld® RANGE of PURGE ACCESSORIES for WELDING

Argweld® **Water Soluble Weld Purge Film™** is supplied as a kit containing film, soluble adhesive, a cutting knife and instructions. Suitable for pipework where a closure weld is being performed.



The Argweld® range of **Flexible Weld Purging Enclosures®** have been designed for the applications where a rigid chamber may not be economically viable. Typical applications include the occasional repair welding of titanium components for the aerospace, pharmaceutical and sports vehicle industries and for the production welding of titanium and stainless steel components to eliminate the expensive cleaning of oxide discolouration.

© HFT®



Argweld® **Weld Trailing Shields®** allow the user to weld faster, save money, produce bright welds, save re-work, reduce gas use, avoid wasted material costs due to oxidation. Flat models for linear seam welding and radiused models for welding inside and outside of circumferential weld seams.

© HFT®



Argweld® **Weld Backing Tape™** reduces welding costs when joining linear or circumferential seams, a backing tape can be applied to the rear of the weld seam allowing the molten metal to be cast onto the glass fibre matting leaving a smooth, coke free weld root.

© HFT®





Les autres langues sont actuellement dans le progrès. Pour le moment, s'il vous plaît contacter votre Distributeur local



Andere Sprachen sind momentan im Gange. Kontaktieren Sie vorläufig, bitte Ihren örtlichen Verteiler



Otros idiomas son actualmente en progreso. Para ahora, contacta por favor su Distribuidor local





For further information and support, please contact us at:

Internet: www.huntingdonfusion.com
Email: hft@huntingdonfusion.com
Tel: +44 (0) 1554 836 836

Worldwide Offices, Partners and Distributors are listed on our website or contact us and we will direct you to the correct location



For further information and support, please contact us at:

Internet: www.huntingdonfusion.us
Email: general@cob-industries.com
Toll Free: 1-800-431-1311 and 877-431-1311 or 321-723-3200



Umfassende Informationen in deutscher Sprache finden Sie bei unserem strategischen Partner Dänner Industrie Services

Internet: www.formieren.com
Email: info@formieren.com
Tel: +49 (0) 2423 954 051



Veillez contacter notre partenaire en France et en Afrique

France Inertage®

Email: clemenceretel@huntingdonfusion.com
Tel: +33 6 52 84 28 39 HFT® France



Para la información adicional en Español, contacta por favor

Internet: www.codesol.com
Email: codesol@codesol.com
Tel: +34 (0) 93 564 0804

Latino America: dayse@huntingdonfusion.com
Tel: +31 6410 100 77

All products are thoroughly tested to our Quality Control Procedures prior to leaving our manufacturing facility. Should you encounter a problem with your product, please notify us immediately upon receipt.

Huntingdon Fusion Techniques HFT® warrants this product to be free of defects in workmanship and material, with exceptions stated below.

Warranty applies for normal and intended use of the product.

Huntingdon Fusion Techniques HFT® will not be held responsible for any incorrect use of the product.

For further warranty information, please refer to our terms and conditions.

All warranties shall not apply to any product or component which has been repaired or altered by anyone other than Huntingdon Fusion Techniques HFT®.

Huntingdon Fusion Techniques HFT® shall not be liable for indirect, special, incidental or consequential damage or penalties and does not assume any liability of Purchaser, or to others, for injury to persons or property.

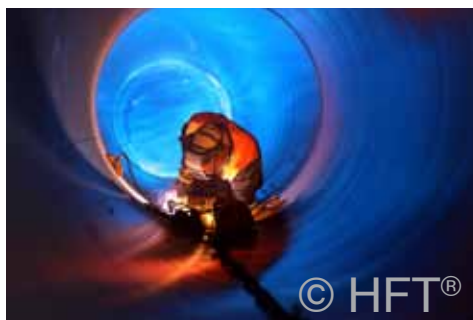
This warranty is in lieu of all other warranties, expressed and implied.

E&OE





Back Inside Cover



PurgElite PL1 UI AA91 27-01-2016 ME



**HUNTINGDON FUSION
TECHNIQUES ■ HFT**

Stukeley Meadow BURRY PORT Carmes SA16 OBU United Kingdom (UK)
Tel +44 (0) 1554 836 836 Fax +44 (0) 1554 836 837
www.huntingdonfusion.com Email hft@huntingdonfusion.com

E&OE Copyright © HFT®. All rights reserved.
This publication may not be reproduced by any means without the written permission of Huntingdon Fusion Techniques HFT®