



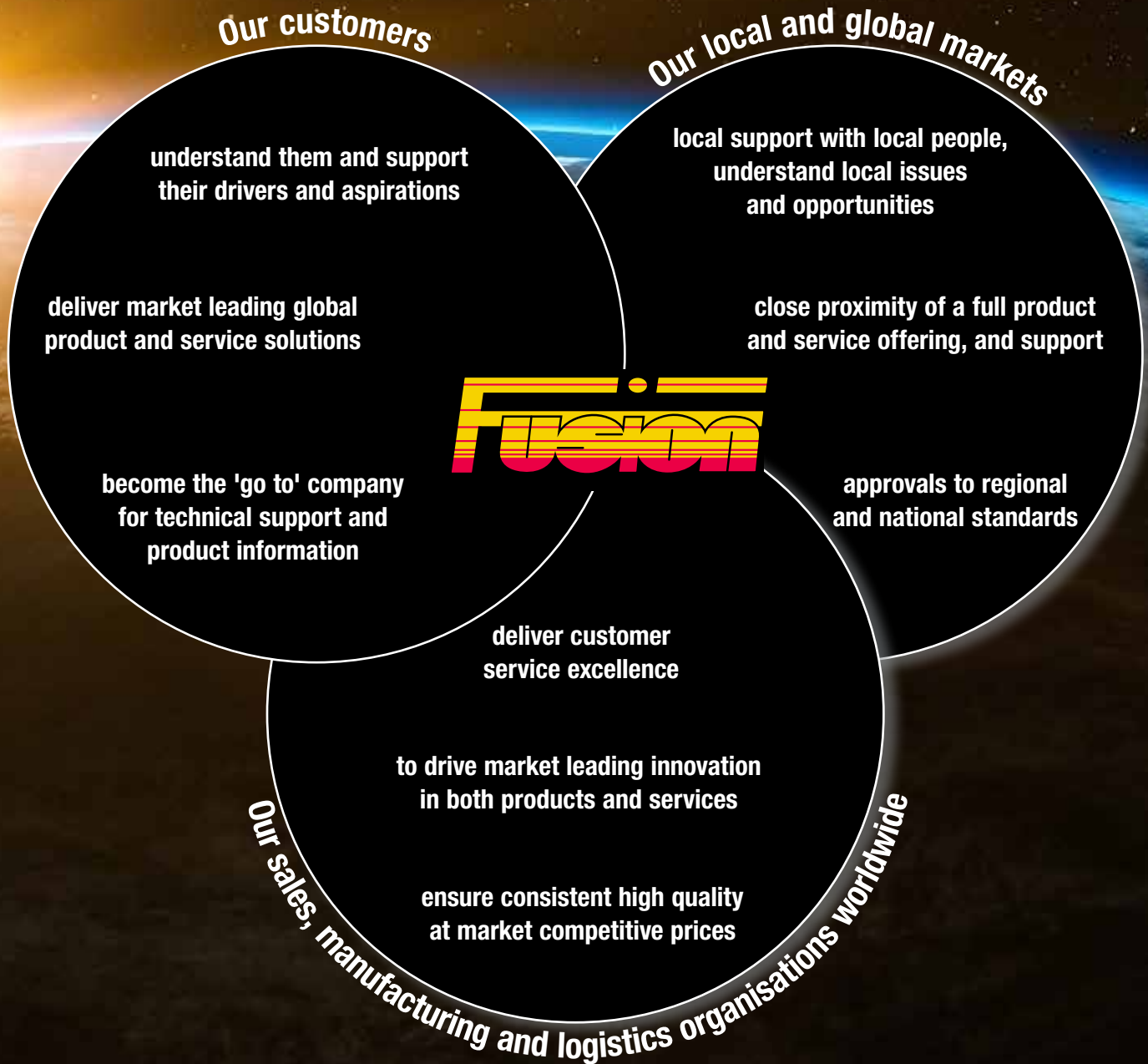
GLOBAL PE PRODUCT OVERVIEW

FOR GAS, WATER, MINING
AND IRRIGATION APPLICATIONS



MISSION

“The Fusion Group Strategy is to become the customers’ preferred partner as the leading innovator, manufacturer and supplier of products and services for gas and water polyethylene pipeline systems, worldwide...”



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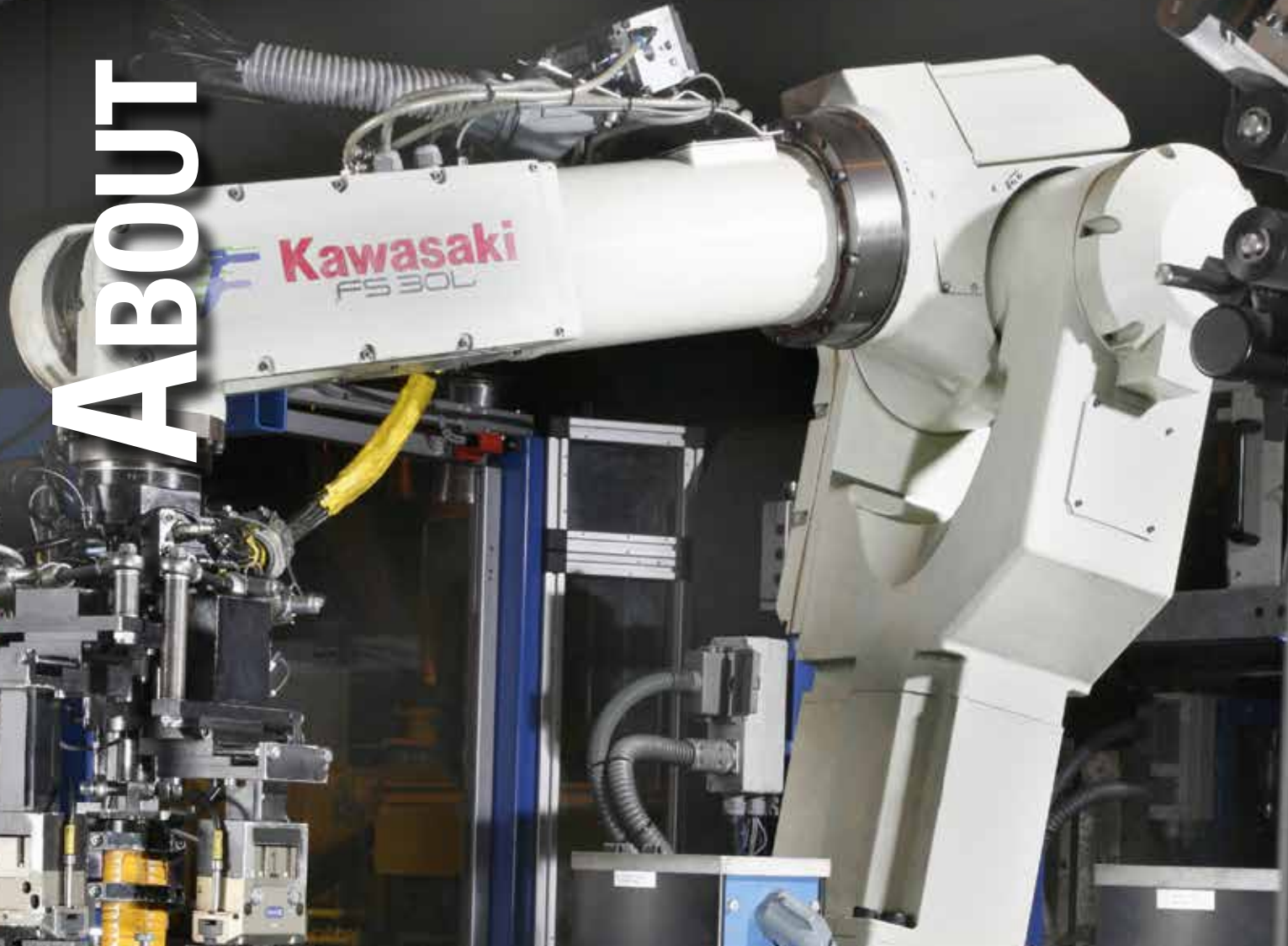


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Access Systems



ABOUT



Fusion Group pioneered polyethylene pipe jointing in the UK and across the globe, and continues to provide innovative solutions for multiple industries. In 2017, Fusion became a member of the AVK Group of Companies, a partnership that has resulted in a broader product and service offer, a strengthened manufacturing base, and an amalgamation of expertise and ideas.

Polyethylene Solutions for over 50 years

Fusion is built around the knowledge and expertise of our people and their passion to deliver innovation. For over 50 years we have been supporting you with a complete polyethylene solutions package for your gas and water infrastructure, mining, energy and agricultural projects.

Our specialist teams are able to work with you throughout every step of your customer journey - from advice on site specification and product selection, all the way to providing installer training to your teams. When you work with Fusion, our promise to you is that you can expect quality throughout every step of the process and can trust that we will always be here for you.

World-Class Manufacturing

Fusion boasts world class manufacturing, testing, and inspection facilities, with lean principles of continuous improvement integrated into our manufacturing culture.

We pride ourselves on our products being fully traceable, right down to the core components.

High Standards

Fusion and AVK believe in much more than simply supplying a finished product to a customer. In order to assure you of our continued excellence, we have achieved ISO 9001 and ISO/TS 29001 certification.

We also hold many 3rd party product approvals and are regularly audited by organisations such as Bureau Veritas, AMI, BSI, DVGW, INSTA-CERT and others to ensure our products meet – and often exceed – the highest standards of safety and durability.

For further information on the Fusion Group product range download the Global PE Product Offer and Gross Price List from our website - www.fusiongroup.com

The PE product offer brochure for gas and water features our extensive product range; PE ball and butterfly valves, electrofusion, spigot and transition fittings, access systems and associated equipment and ancillaries.



CUSTOMER PROMISES

Our unique selling propositions enable us to give eight important promises to our customers:

SOLUTIONS, NOT JUST PRODUCTS

GLOBAL LEADERSHIP AND LOCAL COMMITMENT

QUALITY IN EVERY STEP

PROMPT RESPONSE

LASTING INNOVATIONS

TOTAL SAVINGS

A LONG-TERM PARTNERSHIP

TO BE EFFECTIVE AND EASY

Fusion ...Assist

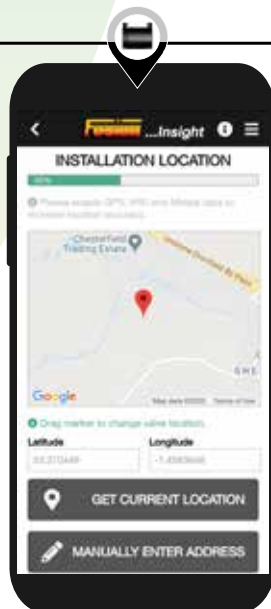
FUSION GROUP HAS A REPUTATION FOR BEING A LEADING INNOVATOR AND SOLUTIONS PROVIDER IN THE GLOBAL GAS, WATER AND INDUSTRIAL SECTORS. FUSION ASSIST IS THE LATEST INNOVATION THAT DRIVES THIS REPUTATION.

By building relationships with our partners, through listening and responding to both their key strategies and to their daily operational challenges, we are able to develop solution led products and services which help deliver and resolve.

Network management and asset mapping are 2 key subjects highlighted in the majority of utility strategies as ongoing issues, the **FUSION ASSIST** mobile app can make a major contribution on the journey to a resolution of the issues.

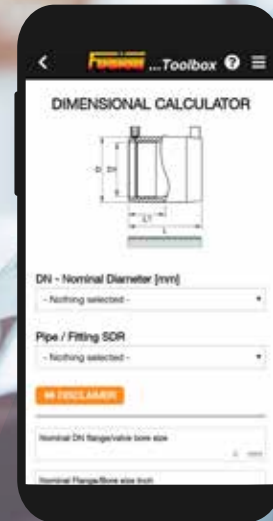
FUSION ASSIST is a free app aimed at utility and industrial, gas and water network engineers. The app is made up of 4 key elements which will help specify, select and then record the installation quality and GPS location of an asset.

The **FUSION ASSIST** APP is available to download for free;



FUSION TOOLBOX

Provides a central area to access practical tips, tools and reference guides which support installation, training and design of piping systems.



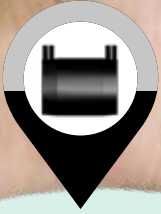
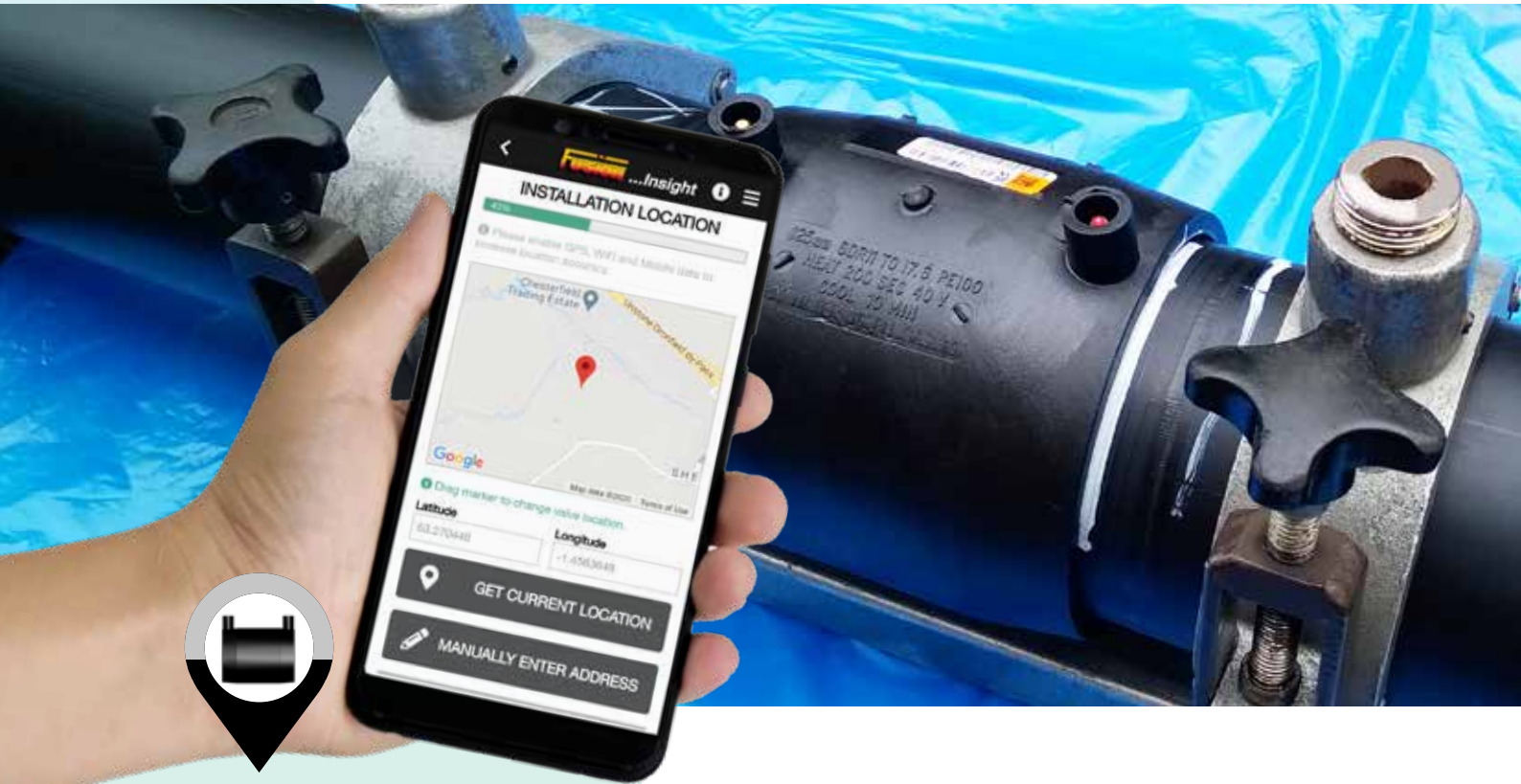
FUSION AR

Use augmented reality to get inside our product offer.

ABOUT FUSION

An insight into the history of Fusion Group and helps the user to understand our business drivers and strategies.





FUSION INSIGHT IS A COMPLETE ASSET MANAGEMENT SYSTEM

Fusion Insight uses a QR/barcode platform, designed to give full traceability of your assets providing the data on each installed asset, and gives the opportunity to review the quality of the installation.

This, combined with a unique GPS pin location and a picture of each installation ensures that you have a complete, accurate and auditable record of every installation. Furthermore, all the data recorded can be exported into standard data formats for integration into existing mapping systems.

FULL TRACEABILITY IN A FEW SIMPLE STEPS...



QR/barcodes are critical tools to increase traceability of assets both above and below ground. Fusion Insight is a growing development to capture such barcodes and wider traceability data about an electrofusion fitting, AVK valve or other assets being installed.

Fusion Insight can specifically capture traceability data for an electrofusion asset by scanning the ISO 12176-4 standard barcode system. In addition the app will also record asset location via GPS, core installation parameters and reference images for that asset within one central record.

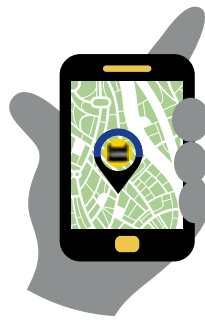
When a Fusamatic fitting is scanned, the app will even prompt the user to record Fusion's unique QR code which contains an individual fitting number providing enhanced traceability right down to the raw materials used to manufacture the fittings.



**SELECT
FUSION INSIGHT***



**SCAN THE
QR/BARCODE**



**SET
LOCATION**



**TAKE THE
INSTALLATION PICTURES**




FUSION INSIGHT IN CONJUNCTION WITH OUR **NEW** 4MM FUSAMATIC AUTOMATIC PIN ELECTROFUSION FITTINGS DRIVES CONSISTENCY AND CONTROL, FROM RAW MATERIAL TO INSTALLING YOUR ASSETS IN THE GROUND.

By providing all markets with the option to weld Fusamatic electrofusion fittings automatically, coupled with the use of Fusion Insight gives you the perfect solution towards end-to-end control over the welding process.



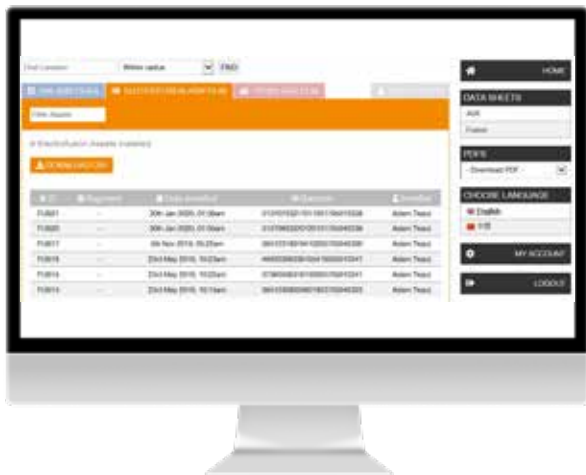
FUSION INSIGHT IS THE PERFECT SOLUTION TO MANAGE FUTURE TRACEABILITY

Access to the recorded data collected from the Fusion Assist App is via a user friendly web portal* which provides at-a-glance accurate records.

-  **INCREASED ASSET TRACEABILITY**
-  **RECORD INDIVIDUAL ASSET INSTALLATIONS**
-  **ACCURATE GPS PIN LOCATION**
-  **VISUALLY AUDIT THE INSTALLATION QUALITY**
-  **EXPORTABLE DATA INTO STANDARD FORMATS**
-  **PERIODIC INSTALLATION AUDIT REPORT AVAILABLE**

THE WEB PORTAL*

**Note: To access Fusion Insight and the dedicated web portal an account needs to be created by our technical team. For new account requests please email tech@fusiongroup.com to set up your FREE Fusion Insight account.*



Secure Customer log in



Asset location on map (colours represent different assets)



Verify pictorial record



Data record includes: asset type, materials, size, pressure and who installed the asset

Note: Every effort has been made to ensure the information in this brochure is correct at the date of issue. Fusion operates a policy of continuous product improvement and range extension and, therefore, reserves the right to modify product specifications in line with market requirements. All dimensions in this catalogue are nominal. Occasionally, box quantities may differ from catalogue information. For more information visit our website www.fusiongroup.com

FUSAMATIC™ ELECTROFUSION FITTINGS FOR GAS AND WATER



Fusion Group is a world-leader in the manufacture of electrofusion fittings. All Fusion's electrofusion fittings are individually inspected using a computerised monitoring system that utilises advanced barcode technology. The barcode provides full individual fitting traceability right down to the polymer batch.

Together, electrofusion fittings and polyethylene pipes enable utilities, designers and contractors to create fully welded pipe networks. The production quality, reliability and flexibility of Fusion's electrofusion fittings provides the certainty and peace of mind needed for polyethylene pipe jointing.

Sizes

Sizes range from d20 to 630+, d710 to 1200 available on request

Pressure Ratings

All fittings are manufactured in virgin PE100 black polyethylene and pressure rated up to 10 bar for gas applications and 16 bar for water applications, unless stated otherwise.

NOTE: For UK gas applications (GIS PL2 Part 4) the maximum operating pressure can be either 5.5 bar or 7 bar dependant on the Class rating. For more detailed information contact us.

SDR Ratings

The appropriate pipe SDR rating for electrofusion fittings is in accordance with:

FITTING SIZES BELOW 63mm - Pipe SDR11

- Coupler
- Elbow
- Reducer
- Equal tee
- Tapping tee
- Branch saddle
- Transition fittings

FITTING SIZES 63mm AND ABOVE - Pipe SDR11 to 17.6

- Coupler
- Elbow
- Reducer
- Equal tee
- Tapping tee*
- Branch saddle
- Hydrant products
- Transition fittings

* Tapping tees for 63mm mains only are not suitable for SDR17 pressurised pipe applications.

Testing can be carried out on SDR rated pipe outside the stated ranges if required. Please contact Fusion's sales team on +44 (0)1246 260111 for details.

Testing

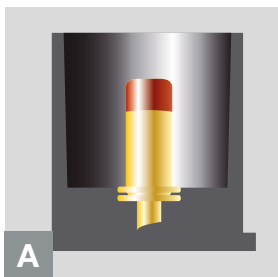
Fusamatic branded electrofusion fittings are tested, accredited and approved against many international performance standards* including:

- Kitemark GIS/PL2-4
- Kitemark GIS/PL2-6
- AS/NZS 4129, Watermark and ISO Type 5 Licence
- EN 1555-3
- UNI EN 1555-3
- INSTA SBC EN 1555-3
- EN 12201-3
- UNI EN 12201-3
- INSTA SBC EN 12201-3
- EN ISO 15494
- UNI EN ISO 15494
- WRAS
- ACS
- DVGW GW 335-B2-B1
- KIWA BRL-K17105

*Due to size and fitting type regulations across standards, some items listed in this brochure may not be certified under the standards listed above.

Please contact Fusion's sales team on +44 (0)1246 260111 before placing your order.

FUSAMATIC



Fusamatic Pin

Invented by Fusion, the Fusamatic pin provides a totally automatic method for ensuring the correct welding parameters are used. Within each Fusamatic pin is a resistor. When the electrofusion box is connected to the fitting, the Fusamatic pin enables it to automatically identify the correct fusion time required to make the joint. All the operator has to do is press go!

Indicators

Pressure, created by the expanding molten plastic in the jointing area (inside the fitting) during the electrofusion process, will force out the indicator lugs. This is a visible sign that the necessary jointing pressure has been achieved.

Moulded-in welding parameters

Manual welding parameters are moulded into the body of all Fusion's fittings. Information provided includes fitting size, material (PE100), applicable pipe SDRs, weld parameters, and pressure ratings for gas and water applications.

Permanently marked batch number

The injection moulded batch number is just one of numerous quality control identifiers on each Fusamatic fitting. It is replicated on the fitting's barcode.

Barcode / QR Code

Quality control is central to the success of Fusion's fittings. The unique barcode configuration, including QR code, provides full traceability of raw material for each individual fitting and welding information when used in conjunction with electrofusion boxes equipped with a barcode scanner.

TYPICAL APPLICATION SCHEMATIC

EXAMPLE OF SOLUTIONS PACKAGE

New
Extended range
of electrofusion
elbows and tees



A NEW range of large diameter electrofusion elbows and equal tees
Sizes 200, 225 and 250mm | Elbows available in 90° and 45°



Electrofusion coupler
Sizes 20 - 630mm



Large diameter branch saddle (LDBS)
Simple, safe and cost-effective live connections on water and gas networks
Sizes 250 - 630mm | 150, 200 and 250 NP16 outlet size



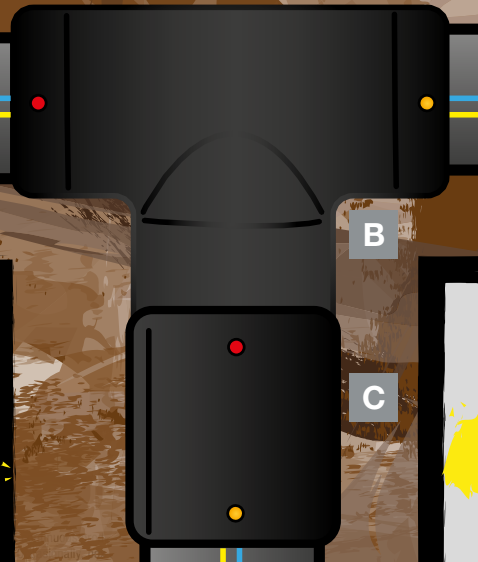
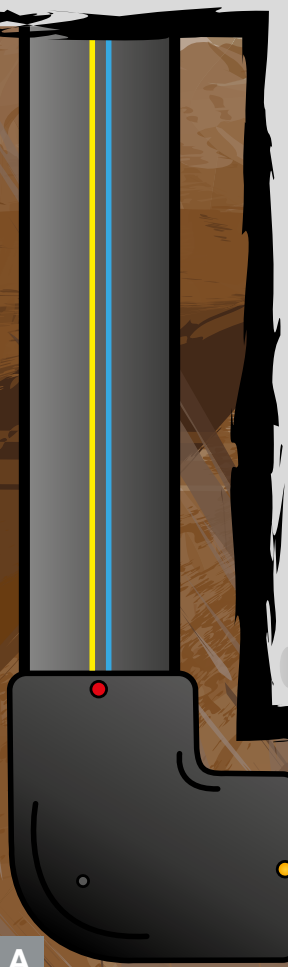
Stub flange adaptor
Sizes 20 - 1200mm



Multiseal tapping tee
Delivering security, safety and speed at the point of installation
Stackload or underclamp
Sizes range from 40 - 400/450mm
20, 25, 32, 40, 50 and 63mm outlets



Flextee tapping tee
Provides a solution to the jointing of tapping tees to oval and coiled pipe
Understrap
Sizes 63 - 180mm
20, 25, and 32mm outlets



Fusion Group are here to support you with a complete polyethylene solutions package for your gas and water infrastructure project. For the full range visit www.fusiongroup.com

G



Series 158 under pressure drilling valve - GAS

Clear bore construction valve for use in drilling operations on under pressure gas distribution systems.

G



Series 555 cast iron gate valve - GAS

Flanged gate valve for the isolation of natural and manufactured gas.

G



Series 21 resilient seated gate valve - WATER

Resilient seat, wedge gate valve for isolation purposes in water and sewage networks.

Product G: Compatible with Fusion's large diameter branch saddle (LDBS) range to facilitate underpressure drilling installations.

F

C

E

G

D



SBOX Max - Electrofusion

The SBOX Max electrofusion welding machine gives you functionality, reliability and is capable of welding electrofusion fittings for gas, water and other pressure pipe applications from 20 - 630mm



Gator - Automatic Butt Fusion

The Gator range of automatic butt fusion machines have been designed and developed to be used on gas and water pressure polyethylene pipes for distribution networks. Various options available to weld pipe in the size range 63 - 400mm

FUSAMATIC™ ELECTROFUSION FITTINGS FOR GAS AND WATER



COUPLER

PE100
Water PN16
Gas 10 Bar
d20-400



LARGE DIAMETER COUPLER

PE100
SDR 11-26 -
Water PN16 / Gas 10 Bar
SDR 17-26 -
Water PN10 / Gas 6 Bar
d450 - 630 (d710-1200
available upon request)



END CAP

PE100
Water PN16
Gas 10 Bar
d20-250



REDUCER

PE100
Water PN16
Gas 10 Bar
d25x20-180x125



90° ELBOW

PE100
Water PN16
Gas 10 Bar
d20-250



45° ELBOW

PE100
Water PN16
Gas 10 Bar
d32-250



22.5° ELBOW

PE100
Water PN16
Gas 10 Bar
d180



EQUAL TEE

PE100
Water PN16
Gas 10 Bar
d20-250



REDUCING TEE

PE100
Water PN16
Gas 10 Bar
d20x20x32-180x180x125



FLANGED TEE

PE100
Water PN16
Gas 10 Bar
d63xDN50-180xDN150



MULTISEAL TAPPING TEE STACKLOAD

PE100
Water PN16 / Gas 10 Bar
(UK Gas Applications -
Gas 5.5 Bar (Class B) /
Gas 7 Bar (Class C))
20-32mm Outlet
d63x20-355x32



MULTISEAL TAPPING TEE STACKLOAD

PE100
Water PN16 / Gas 10 Bar
(UK Gas Applications -
Gas 5.5 Bar (Class B) /
Gas 7 Bar (Class C))
63mm Outlet
d250x63-400/450x63



MULTISEAL TAPPING TEE UNDERCLAMP

PE100
Water PN16 / Gas 10 Bar
(UK Gas Applications -
Gas 5.5 Bar (Class B) /
Gas 7 Bar (Class C))
20-32mm Outlet
d40x20-225x32



MULTISEAL TAPPING TEE UNDERCLAMP

PE100
Water PN16 / Gas 10 Bar
(UK Gas Applications -
Gas 5.5 Bar (Class B) /
Gas 7 Bar (Class C))
40-63mm Outlet
d63x40-225x63



FLEXTEE TAPPING TEE UNDERSTRAP

PE100
Water PN16
Gas 10 Bar
d40x20-180x32



BRANCH SADDLE STACKLOAD

PE100
Water PN16
Gas 10 Bar
63mm Outlet
d250x63-400/450x63



BRANCH SADDLE UNDERCLAMP

PE100
Water PN16
Gas 10 Bar
40-63mm Outlet
d63x40-225x63



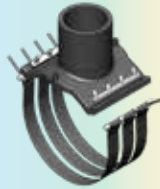
BRANCH SADDLE UNDERCLAMP

PE100
Water PN16
Gas 10 Bar
20-63mm Outlet
d40x20-90x63

FUSAMATIC



BRANCH SADDLE UNDERCLAMP
PE100
Water PN16
Gas 10 Bar
90-125mm Outlet
d90x90-250x125



BRANCH SADDLE UNDERSTRAP
PE100
Water PN16
Gas 10 Bar
110-180mm Outlet
d315x110-630x180



FLANGED BRANCH SADDLE UNDERCLAMP
PE100
Water PN16
Gas 10 Bar
d110xDN80-630xDN100

For use with large diameter under pressure drill



FLANGED BRANCH SADDLE UNDERCLAMP - FASTCUT
PE100
Water PN16
Gas 10 Bar
d250xDN150-630xDN150
Only available through approved fastcut installers



FLANGE BRANCH SADDLE UNDERSTRAP - ALH FLOWSTOP
PE100
Gas 10 Bar
d315xDN150-400xDN150
Only available through approved fastcut installers



BALLOON SADDLE
PE100
Water PN16
Gas 10 Bar
d90x2½"-250x2½"



TRANSITION SADDLE
PE100
Water PN16
Gas 10 Bar
d63x1¼"-250x2"



DUCKFOOT BEND
PE100
Water PN16
d90x90



DUCKFOOT BEND KIT
PE100
Water PN16
d63xDN80-180xDN80



HYDRANT BRANCH SADDLE KIT
PE100
Water PN16
d90xDN80-250xDN80

SPIGOT FITTINGS FOR GAS AND WATER

The Fusion range of spigot fittings is one of the most extensive in the world, with over 3,000 different product lines.



Fusion have a whole range of moulded, machined and butt welded spigots including elbows, bends, tees, stub flanges and many more in a range of different sizes and SDR's needed for polyethylene pipe jointing. Our spigot range allows for complicated yet high performance pipeline systems with a more diverse range of fittings than electrofusion, especially for larger diameter fittings.

Manufacturing

All Fusamatic branded spigots are manufactured from PE100 virgin polyethylene polymer supplied by recognised international market leaders such as Borealis and Ineos. All materials comply with the requirements of relevant standards including EN 12201 for drainage, sewerage and potable water, and EN 1555 for gas. The recommended temperature range for Fusamatic spigots is +5°C and +40°C with butt fusion jointing methods, or between -10°C and +40°C using Fusamatic electrofusion systems.

All Fusamatic branded spigot fittings are available with long spigot welding ends suitable for butt fusion and electrofusion on site; short spigot welding ends are also available for cost effective factory assembled fabrications.

Fusamatic branded spigots comply with the requirements of:

- EN 12201-3 Plastics piping systems for water supply, and for drainage and sewerage under pressure. Polyethylene (PE) Fittings.
- EN 1555-3 Plastics piping systems for the supply of gaseous fuels. Polyethylene (PE) Fittings.

International performance standards and regulations

Fusamatic branded spigots have the following international approvals:

- EN1555-3
- EN12201-3
- INSTA SBC EN 12201-3
- INSTA SBC EN 1555-3
- AS/NZS 4129 and ISO Type 5
- WRAS (UK)

*Due to size and fitting type regulations across standards, some items listed in this brochure may not be certified under the standards listed above.

Please contact Fusion's sales team on +44 (0)1246 260111 before placing your order.

Sizes

Note: SDR ratings, brand supplied and stated diameters are subject to availability.

Contact us for specific details on +44 (0)1246 260111 or via the website - www.fusiongroup.com

Backing Rings

Fusion are able to provide a range of backing rings for mechanical connections in galvanised, stainless and polypropylene coated steel.

These can be supplied drilled in accordance to local standards, but typically available in stock for EN 1092 - PN10, EN 1092 - PN16 and ANSI Class 150.

Other ancillary items such as gaskets and bolting sets can be provided upon request.

Applications

- Potable water mains, service pipes and house connections
- Gas transmission, distribution and house connections
- Wastewater systems including sewers
- Water and wastewater treatment plants
- Rain water and grey water collection
- Syphonic roof drainage
- Trenchless pipeline techniques including directional drilling
- Pumped slurry systems in mines and quarries
- Ducting for electrical, telecommunications and fibre optic cabling including subsea
- Open water and marine fish cages
- Industrial applications including process pipework and compressed air networks
- Agricultural irrigation



NOW AVAILABLE BIM and CAD Models on Fusamatic range of spigot fittings

Visit the Fusion Group website - www.fusiongroup.com for direct access to Fusion's BIM and CAD models, in .dxf, .igs and .step file formats. The models provide customers with the ability to transfer 2D and 3D drawing data between a variety of CAD and BIM infrastructure design systems.

SPIGOT FITTINGS FOR GAS AND WATER



90° ELBOW

PE100
SDR 11 - Water PN16 /
Gas 10 Bar
SDR 17 - Water PN10 /
Gas 6 Bar
SDR 7.4 - Water PN25
SDR 9 - Water PN20
d20-500



45° ELBOW

PE100
SDR 11 - Water PN16 /
Gas 10 Bar
SDR 17 - Water PN10 /
Gas 6 Bar
SDR 7.4 - Water PN25
SDR 9 - Water PN20
d20-500



90° MULTI BEND

PE100
SDR 11 - Water PN16 /
Gas 10 Bar
SDR 17 - Water PN10 /
Gas 6 Bar
d32-315



90° BEND – SHORT SPIGOT

PE100
SDR 11 - Water PN16 /
(Gas 10 Bar-upon request)
SDR 17 - Water PN10 /
(Gas 6 Bar-upon request)
SDR 33 - Water PN5
d20-500



SEAMLESS BEND 90°

PE100
SDR 11 - Water PN16 /
(Gas 10 Bar-upon request)
SDR 17 - Water PN10 /
(Gas 6 Bar - upon request)
SDR 7.4 - Water PN25
SDR 9 - Upon request
d32-900



SEAMLESS BEND 60°

PE100
SDR 11 - Water PN16 /
(Gas 10 Bar-upon request)
SDR 17 - Water PN10 /
(Gas 6 Bar-upon request)
SDR 7.4 - Water PN25
SDR 9 - Upon request
d32-900



SEAMLESS BEND 45°

PE100
SDR 11 - Water PN16 /
(Gas 10 Bar-upon request)
SDR 17 - Water PN10 /
(Gas 6 Bar-upon request)
SDR 7.4 - Water PN25
SDR 9 - Upon request
d32-900



SEAMLESS BEND 30°

PE100
SDR 11 - Water PN16 /
(Gas 10 Bar-upon request)
SDR 17 - Water PN10 /
(Gas 6 Bar-upon request)
SDR 7.4 - Water PN25
SDR 9 - Upon request
d32-900



SEAMLESS BEND 22°

PE100
SDR 11 - Water PN16 /
(Gas 10 Bar-upon request)
SDR 17 - Water PN10 /
(Gas 6 Bar-upon request)
SDR 7.4 - Water PN25
SDR 9 - Upon request
d32-900



SEAMLESS BEND 11°

PE100
SDR 11 - Water PN16 /
(Gas 10 Bar-upon request)
SDR 17 - Water PN10 /
(Gas 6 Bar-upon request)
SDR 7.4 - Water PN25
SDR 9 - Upon request
d32-900



EQUAL TEE

PE100
SDR 11 - Water PN16 /
Gas 10 Bar
SDR 17 - Water PN10 /
Gas 6 Bar
SDR 7.4 - Water PN25
SDR 9 - Water PN20
d20-630



EQUAL TEE – SHORT SPIGOT

PE100
SDR 11 - Water PN16 /
(Gas 10 Bar-upon request)
SDR 17 - Water PN10 /
(Gas 6 Bar-upon request)
SDR 33 - Water PN5
d20-500



REDUCING TEE

PE100
SDR 11 - Water PN16 /
Gas 10 Bar
SDR 17 - Water PN10 /
Gas 6 Bar
SDR 7.4 - Water PN25
SDR 9 - Water PN20
d50x25-630x250



REDUCING TEE – SHORT SPIGOT

PE100
SDR 11 - Water PN16 /
(Gas 10 Bar-upon request)
SDR 17 - Water PN10 /
(Gas 6 Bar-upon request)
d90x32-180x125



REDUCING AND EQUAL TEE (MACHINED)

PE100
SDR 11 - Water PN16 /
(Gas 10 Bar-upon request)
SDR 17 - Water PN10 /
(Gas 5 Bar-upon request)
d250x63-1200x1200



REDUCING AND EQUAL TEE – SHORT SPIGOT (MACHINED)

PE100
SDR 11 - Water PN16 /
(Gas 10 Bar-upon request)
SDR17 - Water PN10 /
(Gas 5 Bar-upon request)
d280x63-1200x1200



REDUCING TEE ECCENTRIC LEVEL INVERT (MACHINED)

PE100
SDR 11 - Water PN16 /
(Gas 10 Bar-upon request)
SDR17 - Water PN10 /
(Gas 5 Bar-upon request)
d280x63-710x560



45° ANGLE BRANCH TEE

PE100
SDR 11 - Water PN16 /
Gas 10 Bar
SDR17 - Water PN10 /
Gas 6 Bar
d63x45-250x45



Y PIECE

PE100
SDR 11
Water PN16
Gas 10 Bar
d32x25-50x40



CROSS PIECE

PE100
SDR 11 - Water PN16 /
Gas 10 Bar
SDR 17 - Water PN10 /
Gas 6 Bar
SDR 7.4 - Water PN25
d63-355



REDUCED CROSS PIECE

PE100
SDR 11
Water PN16
Gas 10 Bar
d125x90

**REDUCER**

PE100
 SDR 11 - Water PN16 / Gas 10 Bar
 SDR 17 - Water PN10 / Gas 6 Bar
 SDR 7.4 - Water PN25
 SDR 9 - Water PN20
 d25x20-1000x900

**REDUCER – SHORT SPIGOT**

PE100
 SDR11 - Water PN16 / (Gas 10 Bar-upon request)
 SDR 17 - Water PN10 / (Gas 6 Bar-upon request)
 SDR 7.4 - Water PN25
 SDR 9 - Water PN20
 SDR 26 - Water PN6
 SDR 33 - Water PN5
 d25x20-1200x1000

**STEP REDUCER – SHORT SPIGOT**

PE100
 SDR 11 - Water PN16 / Gas 10 Bar
 SDR 17 - Water PN10 / Gas 6 Bar
 d225x160-900x630

**ECCENTRIC REDUCER**

PE100
 SDR 11 - Water PN16
 SDR 17 - Water PN10
 SDR 33 - Water PN5
 d160x90-1200x1000

**ECCENTRIC REDUCER – SHORT SPIGOT**

PE100
 SDR 11 - Water PN16
 SDR 17 - Water PN10
 SDR 33 - Water PN5
 d160x90-1200x1000

**END CAP**

PE100
 SDR 11 - Water PN 16 / Gas 10 Bar
 SDR17 - Water PN10 / Gas 6 Bar
 SDR 7.4 - Water PN25
 SDR 9 - Water PN20
 d20-1200

**END CAP – SHORT SPIGOT**

PE100
 SDR 11 - Water PN16 / (Gas 10 Bar-upon request)
 SDR 17 - Water PN10 / (Gas 6 Bar-upon request)
 SDR 7.4 - Water PN25
 SDR 9 - Water PN20
 SDR 33 - Water PN5
 d250-1200

**STUB FLANGE ADAPTOR**

PE100
 SDR 11 - Water PN16 / Gas 10 Bar
 SDR 17 - Water PN10 / Gas 6 Bar
 SDR 7.4 - Water PN25
 SDR 9 - Water PN20
 d20-1200

**STUB FLANGE ADAPTOR – CHAMFERED (SUITABLE FOR BUTTERFLY VALVES)**

PE100
 SDR 11 - Water PN16 / Gas 10 Bar
 SDR 17 - Water PN10 / Gas 6 Bar
 d160-630

**STUB FLANGE ADAPTOR – AUSTRALIAN DESIGN**

PE100
 SDR 11 - Water PN16 / Gas 10 Bar
 SDR 17 - Water PN10 / Gas 6 Bar
 d40-630

**STUB FLANGE ADAPTOR – SHORT SPIGOT**

PE100
 SDR 11 - Water PN16 / Gas 10 Bar
 SDR17 - Water PN10 / Gas 6 Bar
 SDR 7.4 - Water PN25
 SDR9 - Water PN20
 SDR26 - Water PN6
 SDR33 - Water PN5
 d20-1200

**STUB FLANGE ADAPTOR – CHAMFERED - SHORT SPIGOT (SUITABLE FOR BUTTERFLY VALVES)**

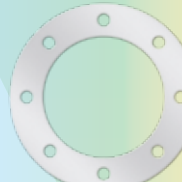
PE100
 SDR 11 - Water PN16 / Gas 10 Bar
 SDR 17 - Water PN10 / Gas 6 Bar
 d200-1000

**STUB FLANGE ADAPTOR – AUSTRALIAN DESIGN – SHORT SPIGOT**

PE100
 SDR 11 - Water PN16 / Gas 10 Bar
 SDR17 - Water PN10 / Gas 6 Bar
 d560 - 630

**FLANGE - POLYPROPYLENE WITH STEEL CORE**

EN1092-1 - PN 16 Drilling
 EN1092-1 - PN 10 Drilling
 ANSI B16.5 - C150 Drilling
 d20-630 (Pipe Diameter)
 Sizes d710 and above upon request

**FLANGE – GALVANISED AND STAINLESS STEEL**

EN1092 - PN16 Drilling
 EN1092 - PN10 Drilling
 d20-630 (Pipe Diameter)

**LONG SPIGOT PUDDLE FLANGE - EPDM**

PE100
 SDR11
 SDR17
 Water tight 3 bar up to d315
 Water tight 1 bar d355 and above
 d90-630

**FULL FACE GASKETS - EPDM / NBR DUO**

EPDM - WATER
 NBR - GAS
 EN1092 - PN16 Drilling
 EN1092 - PN10 Drilling
 d20-630

CERTUS™ PE BALL VALVES FOR GAS AND WATER

Body and spigots manufactured from high performance **PE100**. This material can be welded to all PE100 and PE80 pipes.

The valves are equipped with a **weather seal** avoiding ingress of ground water and dirt into the operating mechanism.

All spigot ends are delivered with **double spigot length** allowing for a second electrofusion weld if the first one fails.

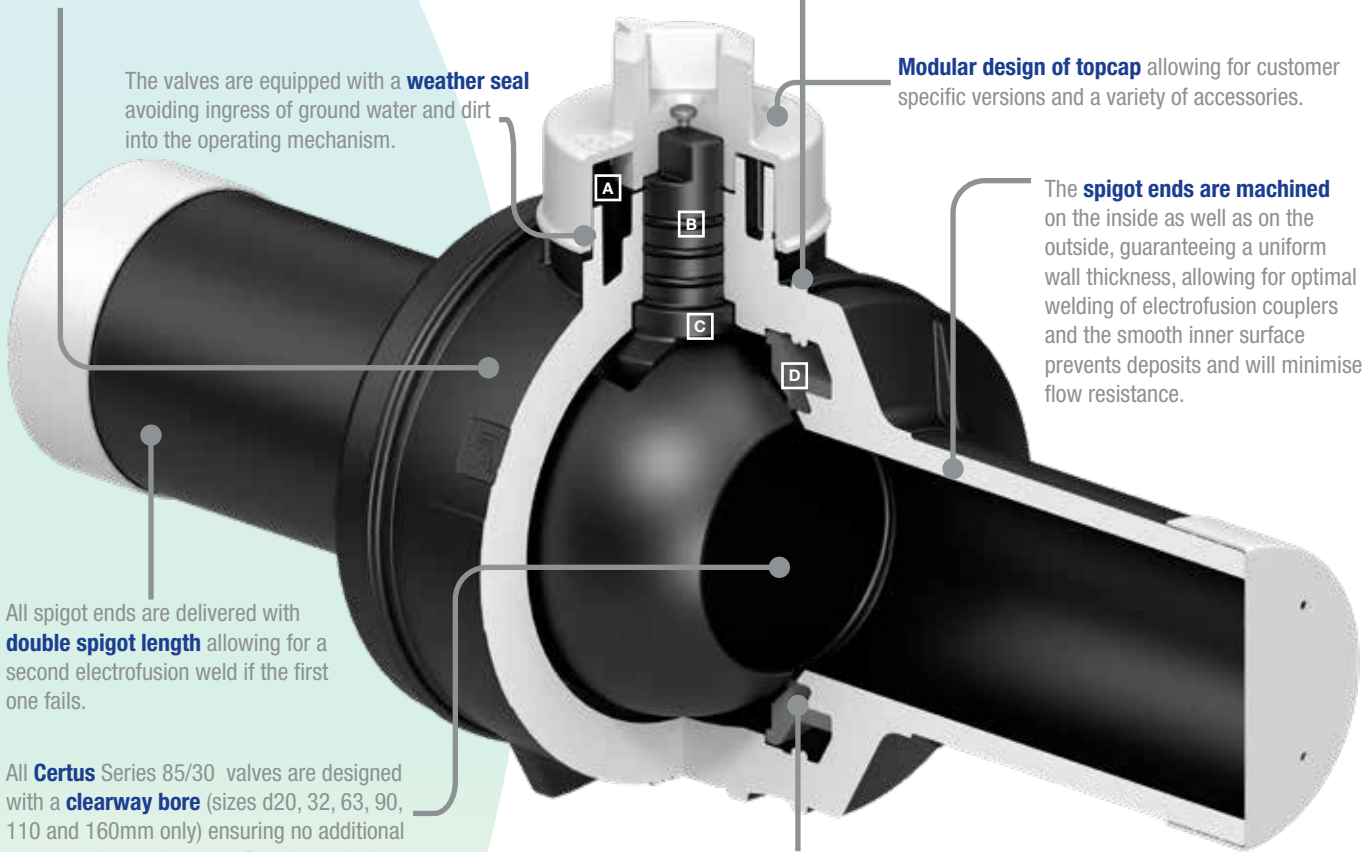
All **Certus** Series 85/30 valves are designed with a **clearway bore** (sizes d20, 32, 63, 90, 110 and 160mm only) ensuring no additional pressure drop and greater flow through the valve for the same pressure. The clearway bore allows for pigging of pipes.

The spigots are butt welded to the body. **Visual beads** reassuring joint quality for each weld.

Modular design of topcap allowing for customer specific versions and a variety of accessories.

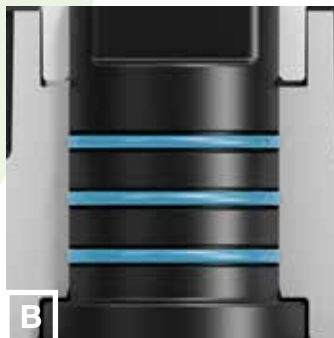
The **spigot ends are machined** on the inside as well as on the outside, guaranteeing a uniform wall thickness, allowing for optimal welding of electrofusion couplers and the smooth inner surface prevents deposits and will minimise flow resistance.

The floating ball principle and **special shaped ball seats** are designed to ensure sealing at all times and be less affected by dirt or debris.



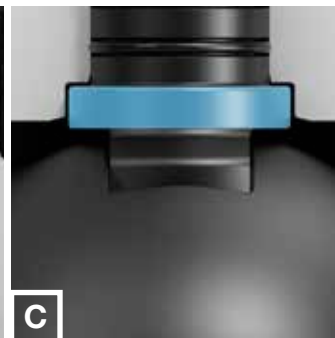
A

If the valve is over torqued, the topcap is designed to fail before the valve seals, thus preventing a leak to atmosphere. The **safety topcap** can be replaced easily under live conditions.



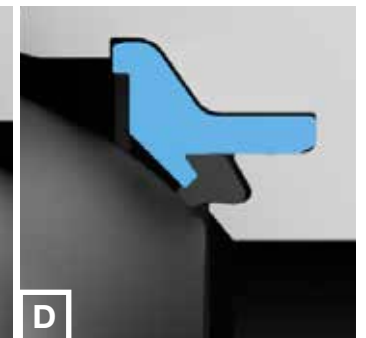
B

Triple O-ring construction around the stem guaranteeing sealing safety at all times, even during ground movement.



C

The intentionally over-designed stem is extremely strong and of the **anti blow-out** type.



D

The **seat retainer** design ensures the ball seat is kept in place at all times. This optimal design prevents the ball seat from being dislodged, which guarantees a good functionality throughout the years.

The **Certus Series 85/30** is an extensive range of PE ball valves up to d180 used for isolation of water and gas service to both domestic and commercial premises.

The Certus PE100 ball valves are manufactured at AVK Syntec, a modern purpose built and well equipped manufacturing facility complying with the international standard ISO/TS 29001:2010 quality management system, uses state of the art machinery and methods to produce high quality products.

These robust PE ball valves have been extensively and independently type tested against worldwide leading standards such as GIS/V7: Part 2, EN 1555-4. Full documented records of type testing are maintained by AVK and are available on request.

Every valve is individually tested and given a unique serial number which can be traced as far back as the raw polyethylene material. All of the manufacturing processes are managed to the exacting standards of the ISO 9001 certification and ISO/TS 29001:2010.



**CERTUS™
PE BALL VALVES**
SERIES 85/30
PE100
GIS/V7 Part 2
EN 1555-4
ISO4437-4
EN12201-4
d20-180



**CERTUS™
INSTALLATION KIT**
SERIES 85
Fits the d20, 32, 40, 63
and 90mm CERTUS™
PE Ball Valves
Available with or without
lid



**CERTUS™
50MM SQUARE DRIVE
TEE KEY**
SERIES 85/00
To suit CERTUS™
PE Ball Valves
Length range 750-
1500mm



MAGNUS™ PE BALL VALVES FOR GAS AND WATER

Body and spigots manufactured from high performance **PE100-RC**. This material is extremely resistant to slow crack propagation and can be welded to all PE100 and PE80 pipes.

The valves are equipped with a **weather seal** avoiding ingress of ground water and dirt into the operating mechanism.

All spigot ends are delivered with the **double spigot length** option allowing for a second electrofusion weld if the first one fails.

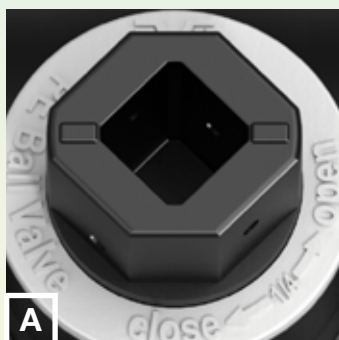
All **Magnus** valves are designed with a **full bore** ensuring a reduced pressure drop and greater flow through the valve for the same pressure. The large bore allows for pigging of pipes.

The spigots are butt welded to the body. **Visual beads** reassuring joint quality for each weld in complete pipe line.

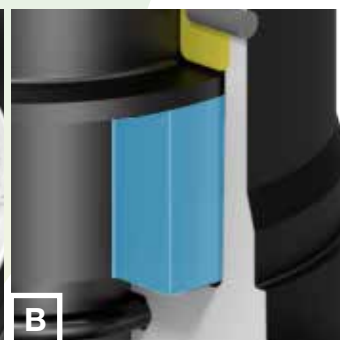
The stem is of the **anti blow-out** type and has a double O-ring seal to guarantee safety at all times.

The **spigot ends are machined** on the inside as well as on the outside, guaranteeing a uniform wall thickness, allowing for optimal welding of electrofusion couplers and the smooth inner surface prevents deposits and will minimise flow resistance.

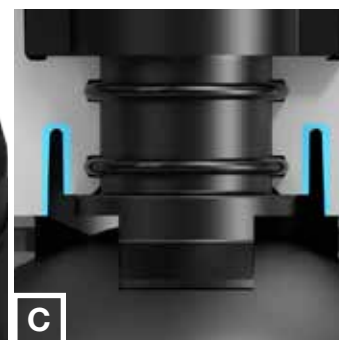
The floating ball principle and **special shaped ball seat** with large sealing surface are designed to ensure sealing at all times and be less affected by dirt or debris that might be in the pipeline.



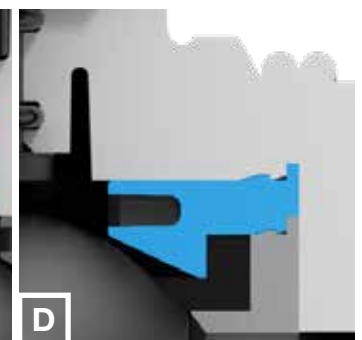
A Due to the **internal and external drive** the valves can be operated by all standardised spindles.



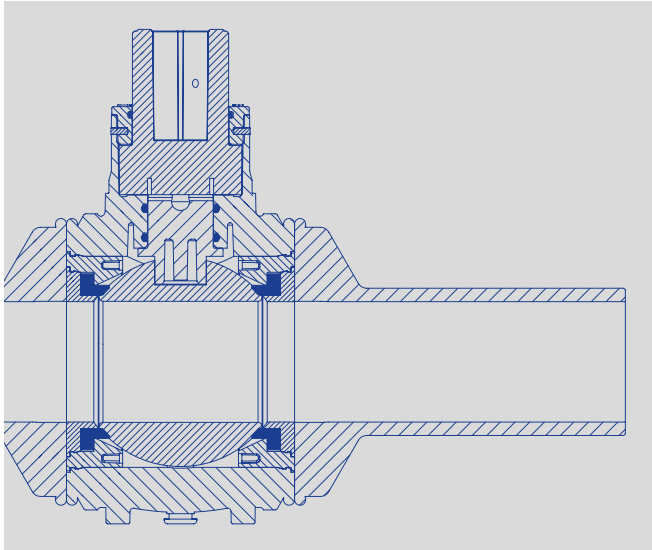
B If the valve is over torqued during opening or closing, the connector is designed to fail before the valve seals, thus preventing a leak to atmosphere. The **safety connector** can be replaced under live conditions.



C The **flexible spindle shaft** ensures equal compression around the O-rings when loaded by internal pressure. At the same time the groove will adapt to any deformation as a result of upstream pressure on the ball when the valve is in the closed position.



D The **seat retainer and support ring** design ensure the ball seat is kept in place at all times. This optimal design prevents the ball seat from being dislodged, which guarantees a good functionality throughout the years.



The **Magnus Series 85/50** is an extensive range of PE ball valves up to d180 used for isolation of water and gas service to both domestic and commercial premises.

The range have been extensively and independently type tested against worldwide leading standards such as EN1555-4, ISO4437-4 and EN12201-4 for water applications.

Magnus ball valves have undergone additional testing over and above that required in the specification. This ensures that the valve is suitable for distribution systems and environments anywhere in the world.

The extensive Magnus ball valve range consists of multiple sizes starting at d25 up to d180. Depending on the requested pressure rating the valves are available with SDR11 or SDR 17 spigot ends. The selected materials are tested and approved for GAS and WATER applications.

The valves are rated as MOP10 for GAS applications and PN16 for WATER applications.



MAGNUS™ PE BALL VALVE
 SERIES 85/50-002
 PE100-RC
 EN 12201-4 / EN 1555-4
 ISO4437-4 / GB15558.3
 Full Bore
 d25-180



MAGNUS™ PE BALL VALVE WITH LEVER
 SERIES 85/50-010
 PE100-RC
 EN 12201-4 / EN 1555-4
 ISO4437-4 / GB15558.3
 Full Bore
 d25-180



MAGNUS™ PE BALL VALVE WITH STEM EXTENSION
 SERIES 85/50-004
 PE100-RC
 EN 12201-4 / EN 1555-4
 ISO4437-4 / GB15558.3
 Full Bore
 d63-180



MAGNUS™ PE BALL VALVE WITH STEM EXTENSION AND 1 PURGE POINT
 SERIES 85/50-006
 PE100-RC
 EN 12201-4 / EN 1555-4
 ISO4437-4 / GB15558.3
 Full Bore
 d63-180



MAGNUS™ PE BALL VALVE WITH STEM EXTENSION AND 2 PURGE POINTS
 SERIES 85/50-008
 PE100-RC
 EN 12201-4 / EN 1555-4
 ISO4437-4 / GB15558.3
 Full Bore
 d63-180

TIMESAVER™ PE BUTTERFLY VALVES FOR GAS AND WATER

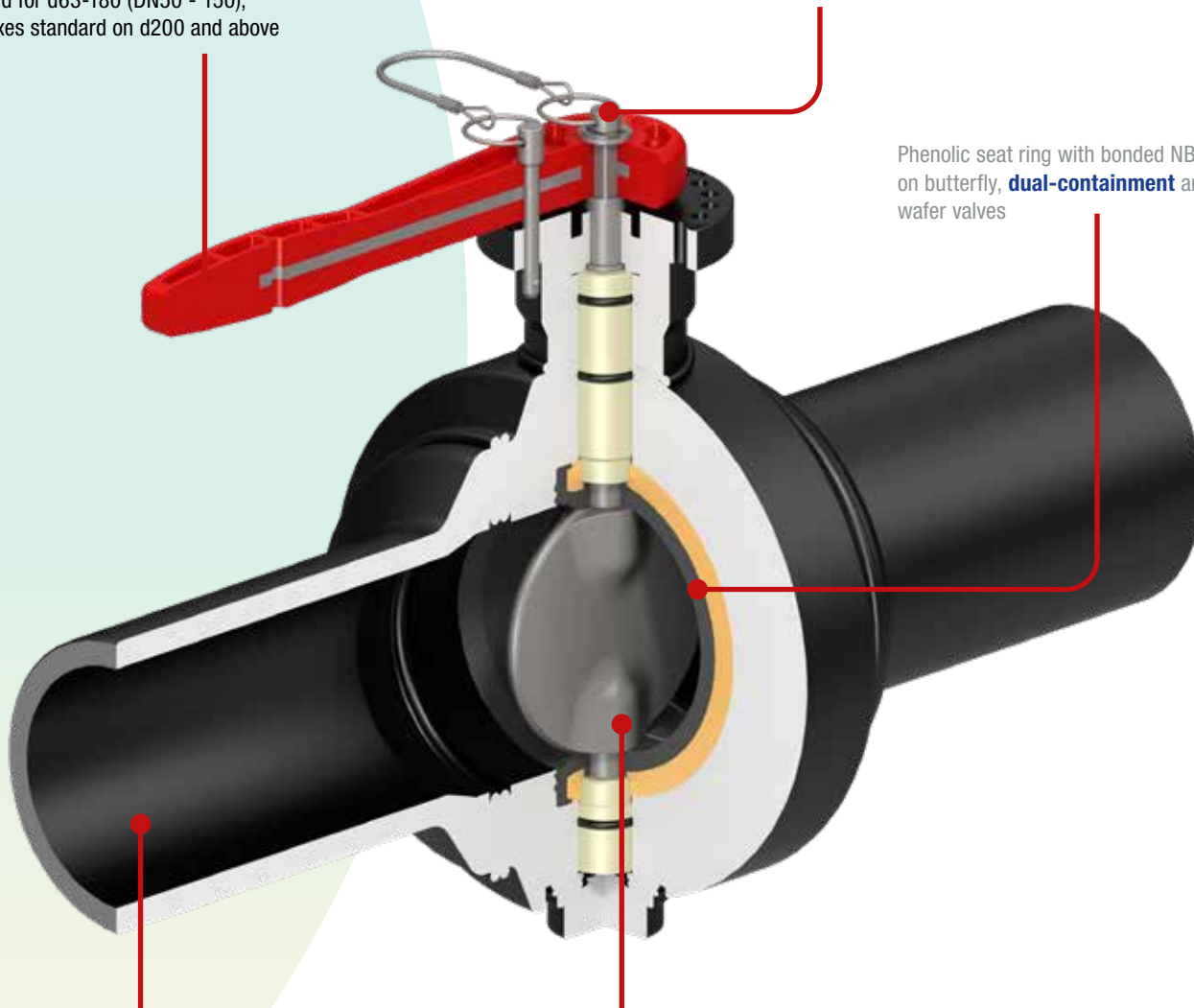
The **Series 89 Timesaver butterfly valves** are designed for quick, direct heat butt fusion or electrofusion into HDPE piping systems up to d315 (DN300).

The Series 89 leak-free system enables ease of installation and eliminates the need for flange adaptors, spacers, backing rings, nuts, bolts or gaskets.

360°C incremental positioning lever standard for d63-180 (DN50 - 150); gearboxes standard on d200 and above

Stem extensions available from d300 to 2700mm, in 150mm increments

Phenolic seat ring with bonded NBR on butterfly, **dual-containment** and wafer valves



The **Timesaver** Series 89 valves (excluding the wafer valve) are **designed for butt fusion or electrofusion into HDPE piping systems**. The Series 89 leak-free system enables ease of installation and eliminates the need for flange adaptors, spacers, backing rings, nuts, bolts or gaskets.

ASTM A582 316 stainless steel stems and discs on butterfly, dual-containment and wafer valves

IPS valve sizes range from **d63 - 315 (DN50 through 300)** with larger sizes and DIPS available upon request



FUSIBLE BUTTERFLY VALVE

Series 89 fusible butterfly valves are designed for butt-fusion or electrofusion into HDPE piping systems. The Series 89 leak-free system enables ease of installation and eliminates the need for flange adaptors, spacers, backing rings, nuts, bolts or gaskets.



WAFER BUTTERFLY VALVE

The Series 891 wafer butterfly valve utilises existing flanges, eliminating the need for valve spacers. The wafer valve is preferred in applications where easy access into piping systems is needed.



FUSIBLE DUAL CONTAINMENT BUTTERFLY VALVE

Series 890, dual-containment butterfly valves include a second pipe housing. This unit can be fused into new or existing dual-containment (double wall) HDPE pipelines, eliminating the need for valve boxes or vaults.



HDPE FUSIBLE END BUTTERFLY VALVE

SERIES 89/BFV
SDR 11 (Standard)
PE100
Stainless Steel Disc,
NBR Seat
d63 - 315
DN50-300



HDPE FUSIBLE END DUAL CONTAINMENT BUTTERFLY VALVE

SERIES 890/DCV
SDR 11 (Standard)
PE100
Stainless Steel Disc,
NBR Seat
d63 x110/125 -
160-180/250-280
DN50x100 - 150x250



HDPE WAFER BUTTERFLY VALVE

SERIES 891/WAF
Bolting pattern to
ASME/ANSI B 16.1
Class 125
PE 100
Stainless Steel Disc,
NBR Seat
d63 x 315
DN50-300

TRANSITION FITTINGS FOR GAS AND WATER



Transition fittings are a quick and easy way to connect various types of metallic pipes to PE pipe systems, using either a traditional flange, threaded or a modern SupaGrip™ fitting.

All fittings supplied by Fusion are manufactured according to the appropriate industry standards with the mechanical joint between the metal and PE fully end loading.

There is a varied range of fittings available under the title transition fittings including valves, elbows, and straight transitions from d25 to 250 PE in both PE80 and PE100 materials.

Electrofusion coupling for quick and easy installation onto existing PE pipe

Mechanical coupler is **designed to be universal fit**

Lifting eye on sizes with a weight exceeding 10 kilos (DN 100-300)



Assembled **male or female transition adaptor** with coupler allows metric to threaded imperial connections.



Patented SupaGrip™ sealing support system with flexible bracket



PE ends enable the fittings to be directly electrofused to the existing pipeline **saving time and money**

Purpose designed positioning plate secures the fitting to the concrete pad to ensure that the correct height is guaranteed.

4



1. Fusion Male transition coupler for GAS and WATER

Suitable for electrofusion welding on site but also available separately for manifold applications or pre fabrication. Other materials and threads are available upon request depending on specialist applications. A simple but effective solution for house connections, used by many operators internationally.

2. Supa Maxi™ range of universal tensile for WATER.

The patented SupaGrip™ sealing support system with flexible bracket ensures full support of the gasket and full tensile strength on all pipe types up to PN16. Supa Maxi™ couplings are very easy to mount with the possibility of ±4° angular deflection, the permanent protection caps, the lifting eye and that they are tightened from the sleeve side with no need for re-tightening the bolts.

3. Donkin Mechanical Coupler for GAS

The Series 604 mechanical coupler with PE tail has been designed as a transition fitting to join metallic and PE gas pipes. The mechanical coupler is designed to be universal in most diameters whilst the PE end is available in SDR17 PE80 pipe suitable for the low and medium pressure network.

4. Meter Module Riser Fittings for GAS

The Series 218 Meter Module Riser Fittings are transition fittings designed to connect the underground PE pipework to the Emergency Control Valve at the inlet of a Meter Module. They can also be used on the outlet pipework to transition back to PE from the steel. Small diameters are available with threaded ends and the larger sizes with PN16 flanges for easy connection.

3



4 bolts for **quick and easy installation**

Split flange ring for ease of installation and **flexible hole alignment**

TRANSITION FITTINGS FOR GAS AND WATER



**MALE TRANSITION
COUPLER**
PE100
Water PN16
Gas 10 Bar
d25x3/4" - 63x2"



**FEMALE TRANSITION
COUPLER**
PE100
Water PN16
Gas 10 Bar
d25x3/4" - 63x2"



**MALE TRANSITION
90° ELBOW**
PE100
Water PN16
Gas 10 Bar
d25x3/4" - 63x2"



**FEMALE TRANSITION
90° ELBOW**
PE100
Water PN16
Gas 10 Bar
d25x3/4" - 63x2"



**MALE TRANSITION
45° ELBOW**
PE100
Water PN16
Gas 10 Bar
d32x1" - 63x2"



**FEMALE TRANSITION
45° ELBOW**
PE100
Water PN16
Gas 10 Bar
d32x1" - 63x2"



**TRANSITION ADAPTOR
BRASS (NOT COATED) -
MALE**
PE100
SDR11
Water PN16
Gas 10 Bar
d20x1/2" - 125x4"



**TRANSITION ADAPTOR
BRASS (NOT COATED) -
FEMALE**
PE100
SDR11
Water PN16
Gas 10 Bar
d20x1/2" - 125x4"



**TRANSITION ADAPTOR
BRASS DZR - MALE**
PE100
SDR11
Water PN16
Gas 10 Bar
d20x1/2" - 125x4"



**TRANSITION ADAPTOR
BRASS DZR - FEMALE**
PE100
SDR11
Water PN16
Gas 10 Bar
d20x1/2" - 125x4"



**TRANSITION ADAPTOR
STAINLESS STEEL -
MALE**
PE100
SDR11
Water PN16
Gas 10 Bar
d20x1/2" - 63x2"



**TRANSITION ADAPTOR
STAINLESS STEEL -
FEMALE**
PE100
SDR11
Water PN16
Gas 10 Bar
d20x1/2" - 63x2"



**PE - STEEL TRANSITION
PIECE (WELDABLE END)**
PE100
SDR11 - Water PN16 /
Gas upon request
SDR17 - Water PN10 /
Gas upon request
d25x3/4" - 400x16"



**PE - STEEL
TRANSITION PIECE
(THREADED END)**
PE100
SDR11
Water PN16
Gas upon request
d25x3/4" - 125x4"



**PE - STEEL CURVED
TRANSITION PIECE
(WELDABLE END)**
PE100
SDR11
Water PN16
Gas upon request
d25x3/4" - 63x2"



**PE - STEEL CURVED
TRANSITION PIECE
(THREADED END)**
PE100
SDR11
Water PN16
Gas upon request
d25x3/4" - 63x2"



**SUPA MAXI™
TRANSITION COUPLING**
SERIES 635
PN10/PN16
Ductile Iron
EN 14525
DN50-300



**MAINS TO METER
FACTORY ENTRY
ELBOW**

SERIES 217/31-001, 002
PN5.5
GIS/PL3
PE x Screwed 001
PE x Pipe End 002
d40 x 125



**MAINS TO METER
FACTORY ENTRY
ELBOW WITH SPLIT
FLANGE RING**

SERIES 217/31-003
PN5.5
GIS/PL3
d90 - 180



**MAINS TO METER
BUILDING ENTRY TEE**

SERIES 219/31
PN4
GIS/PL3
DN20 - 63



**MAINS TO METER
BELOW GROUND ENTRY
FITTING**

SERIES 218/31-001, 002
PN5.5
GIS/PL3
PE x Screwed 001
PE x Pipe End 002
d25 - 180



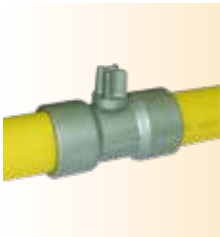
**MAINS TO METER
BELOW GROUND ENTRY
FITTING WITH SPLIT
FLANGE**

SERIES 218/31-003
PN5.5
GIS/PL3
d90 - 180



**MAINS TO METER
METER MODULE RISER
FITTING WITH SPLIT
FLANGE**

SERIES 218/41-001
PN5.5
GIS/PL3
d25 - 250



**BALL VALVE -
PE PIPE ENDS**

SERIES 451/70
PN4
Ductile Iron Body
Stainless Steel Ball
GIS/V4
GIS/PL3
DN32-63



**BALL VALVE -
PE TO SCREW ENDS**

SERIES 451/73
PN4
Ductile Iron Body
Stainless Steel Ball
GIS/V4
GIS/PL3
DN1" - 2" / d25 - 63



**UNIVERSAL TRANSITION
COUPLER**

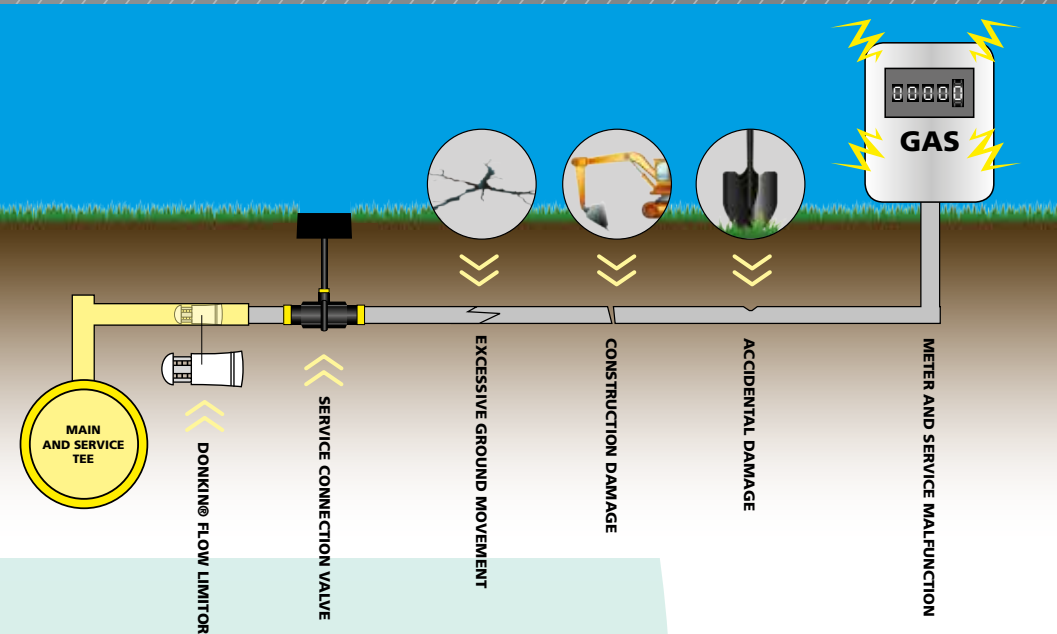
SERIES 604
PN2
GIS/PL3
Ductile Iron
d90 - 355



**PE100 FLANGE
ADAPTOR**

SERIES 39
PN7
PN16 (ASA 150 optional)
Ductile Iron
GIS/PL3
d80-350

FLOW LIMITORS FOR GAS



Series 310 Flow Limitor range of emergency shut-off valves provide service line safety, service line theft protection and automatic shut off.

Should gas flow exceed limits the flow limiter will simultaneously trip and shut-off the gas, remaining closed until repairs have been made. Once the fault has been rectified, a small bleed-by flow enables the service to regain pressure, equalising the pressure with the main. The unit will automatically reset for normal operation without intervention.

The range consists of products that fit in the service pipe, tapping tee outlet and also integrated into electrofusion reducers. Sizes range from d25 to 32 with products approved to standards such as GIS/EFV1, MSS SP 115 or BGE/S/V/5.

Features

- Tamper proof and maintenance free.
- Direction of flow indicator permanently moulded into the valve to ensure correct installation.
- Automatic self-acting operation.
- Installation at any angle.
- Bleed-by design provides automatic reset.
- All units are individually tested.



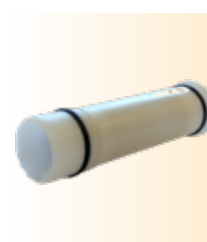
ELECTROFUSION INTEGRAL FLOW LIMITOR
 SERIES 310/080
 (Fits into Electrofusion Coupler or Reducer)
 Range: 0.69 Bar - 7 Bar
 MSS SP-115
 d32x20, 25 and 32



INTEGRAL FLOW LIMITOR
 SERIES 310/061
 (Fits in tapping tee outlet)
 Range: 75 mBar - 5 Bar
 GIS/EFV1
 d32



INTEGRAL FLOW LIMITOR
 SERIES 310/063
 (Fits in tapping tee outlet)
 Range: 0.69 - 6.9 Bar
 MSS SP-115
 d32



INTEGRAL FLOW LIMITOR
 SERIES 310/066
 (Fits into service pipe)
 Range: 500mBar - 4.0 Bar
 BGE/S/V/5
 MSS SP-115
 d25



INTEGRAL FLOW LIMITOR
 SERIES 310/067
 (Fits into service pipe)
 Range: 500mBar - 4.0 Bar
 BGE/S/V/5
 MSS SP-115
 d32

EQUIPMENT AND ANCILLARIES



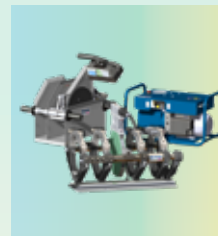
Fusion Group supplies a comprehensive range of equipment and ancillary tooling to help you achieve perfect joints across all pipe diameters.



GATOR - AUTOMATIC BUTT FUSION
Gator 180, 250, 315 and 400



GATOR LINERS
Liners maximise the size of the Gator automatic butt fusion machine
180 – 400mm



WELDA 2 - MANUAL BUTT FUSION
Welda 2 - 180 - 400



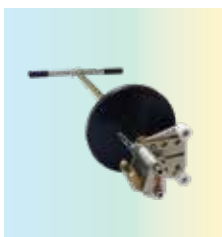
WELDA LINERS
Liners maximise the size of the manual butt fusion machine
180-400mm



WELDA 500 - MANUAL BUTT FUSION
500
Pipe size range - 250 - 500mm Ø



EXTERNAL DEBEADERS
To remove external beads after butt fusion
63-125mm
90-400mm
355-630mm
400-900mm
710-1200mm



INTERNAL DEBEADERS
To remove internal beads after butt fusion
110-400mm
(450mm with adaptor)






PIPE LIFTER 400
Assists with ejection and movement of polyethylene pipes during the welding process
Up to 400mm



PIPE SUPPORT ROLLERS
To assist in the butt fusion welding process
63-315mm
63-400mm
315-630mm

EQUIPMENT AND ANCILLARIES

	<p>SBOX MAX – ELECTROFUSION Welds Fusamatic fittings from d20 – 630mm</p>		<p>SBOX LITE 220V – ELECTROFUSION Welds Fusamatic fittings from d20-125mm</p>		<p>UNIPREP SCRAPER To prepare pipe ends prior to electrofusion 63-250mm 90-400mm 125-500mm 450-710mm</p>
	<p>UNIVERSAL SCRAPER To prepare pipe ends prior to electrofusion 63-250mm</p>		<p>MULTISRAPE KIT To prepare pipe ends prior to electrofusion Designed with coiled pipe in mind 20-63mm</p>		<p>MULTI CLAMP For alignment and restraint of pipe and electrofusion fittings 63-180mm</p>
	<p>MINI CLAMP For alignment and restraint of pipe and electrofusion fittings for service connections 20, 25 and 32mm</p>		<p>VERSACLAMP For alignment and restraint of pipe and electrofusion fittings 20, 25 and 32mm</p>		<p>ELBOW CLAMP For alignment and restraint of pipe and electrofusion fittings 20, 25 and 32mm</p>
	<p>MINI AND MAXI POSI CLAMP For alignment and restraint of pipe and electrofusion fittings MiniPosi (20-40mm) MaxiPosi (32-63mm)</p>		<p>ALIGNMENT CLAMP For alignment and restraint of pipe and electrofusion fittings 250mm</p>		<p>TOP LOAD CLAMP Strap clamp for use on top loaded saddles 63-500mm</p>
	<p>STRAP CLAMP 200 STRAIGHT For alignment and restraint of pipe and electrofusion fittings 40-200mm</p>		<p>STRAP CLAMP 200 KNUCKLE For alignment and restraint of pipe and electrofusion fittings 40-200mm</p>		<p>STRAP CLAMP TITAN 200 For alignment and restraint of pipe and electrofusion fittings 40-200mm</p>
	<p>STRAP CLAMP 500 STRAIGHT For alignment and restraint of pipe and electrofusion fittings 160-500mm</p>		<p>STRAP CLAMP TITAN 500 For alignment and restraint of pipe and electrofusion fittings 160-500mm</p>		<p>T-ADAPTOR Add on tool to enable strap clamps to be used for clamping tees 40-200mm 160-500mm</p>

**HYDRAULIC PIPE CLAMP**

Hydraulically powered re-rounding and positioning clamps for supporting and restraining large diameter pipes and couplers
400–900mm

**REROUNDING/POST SQUEEZE OFF CLAMP**

For re-rounding pipe after squeeze off has been applied

50-250mm

**REROUNDING TOOL**

Re-rounding tools for use on polyethylene coiled or oval pipe prior to electrofusion

20-32mm
40-90mm
110-250mm

**MINI SQUEEZE TOOL**

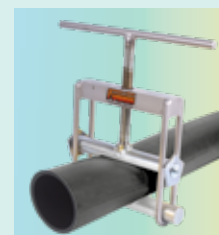
For use on SDR11 service pipes

16-32mm

**SERVICE SQUEEZE TOOL**

Squeeze tool for flowstopping on pipe

16-63mm

**MECHANICAL SQUEEZE TOOL**

Squeeze tool for flowstopping on pipe

63–125mm

**200 HYDRAULIC MAINS SQUEEZE TOOL**

Hydraulic squeeze tool for flowstopping on pipe

63–200mm

**250 MAINS SQUEEZE TOOL**

Mains squeeze tool for flowstopping on pipe

180–250mm

**400 MAINS SQUEEZE TOOL**

Mains squeeze tool for flowstopping on pipe

250-400mm

**GENERATORS**

Manufactured to power electrofusion control boxes and automatic butt fusion machines

5KVA
7.5KVA
Petrol or Diesel

**FASTCUT DRILL**

For use with large diameter electrofusion branch saddles

250–500mm

**HAND SCRAPER**

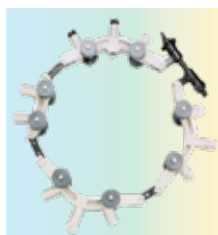
Used for scraping pipe areas prior to electrofusion

1.5"
2.5"

**SECATEURS**

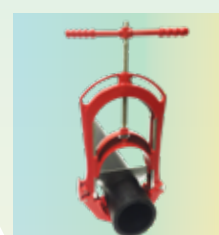
Secateurs for cutting polyethylene pipe

16-42mm
20-63mm

**JUMBO PIPE CUTTER**

For cutting polyethylene pipe

160-355mm
355-630mm
355-800mm

**GUILLOTINE CUTTER**

For cutting polyethylene pipe

63-125mm
63-225mm
63-315mm

**CUTTER KEY**

Drive key tools for service/tapping tee integral cutters with 12mm hexagonal drives

**TEST CAPS**

A range of reusable caps for the pressure testing of service/tapping tee fittings

32 and 63mm

ACCESS SYSTEMS FOR GAS AND WATER



Fusion offers a comprehensive range of surface boxes in various material combinations: synthetic body with synthetic lids, synthetic body with cast iron lids, synthetic body with ductile iron surface plate/lid as well as cast iron body and lid.

Boundary Boxes

The AVK PENTOBX range of Water Meter Boundary Boxes, comprises of a class leading, composite Grade B surface box able to withstand an 8 tonne loading and allowing, if required, Automated Meter Reading Technology (AMR). With patented push-fit connections in d20, 25 and 32mm, ½" HG and also ¾" BSP Female threaded.

Surface boxes

Surface boxes are available in a floating design and a fixed/floating reversible design. The reversible surface box allows for deflection and internal fixation of telescopic extension spindles from both ends.

The fixed surface boxes of grey cast iron are height adjustable using ductile iron distance rings of a height of 10-50 mm.

Fixed height surface boxes

Our fixed height synthetic surface boxes are DIN DVGW approved and designed to withstand heavy traffic loads. Therefore, they are often used in medium and heavy duty application areas.

Our Futura range is a lightweight and price competitive version and is often used in light to medium duty application areas.

Height adjustable surface boxes

Fusion offers a wide range of DIN DVGW approved height adjustable surface boxes specifically designed for tarmac installation. The use of height adjustable surface boxes enables easy and precise installation thanks to flexible positioning of the top part. The top part ensures a safe and lasting alignment with the road surface preventing costly and time consuming corrections after installation and when roads are renovated.

As with all valves, best practice techniques should be used during installation and operation. To aid this process a series of recommended accessories is available, these include a reliable installation and access system and retrofit extension spindles.

The valve access system consists of a support base, down pipe, surface box adaptor and surface box. The support base creates stability for the valve and avoids twisting of the pipe, but it also absorbs high loads and centres the down pipe installed on top of the valve ensuring valve operation at all times. The adaptor and surface box complete the valve access system. Besides giving access to the lower buried valve the surface box can bear media identification for easy recognition and, if required, customer specific logos.



FIXED HEIGHT SURFACE BOX FOR SERVICE CONNECTION VALVES
SERIES 80/32-200
Square top
Cast iron lid
PA+ body



HEIGHT ADJUSTABLE SURFACE BOX FOR SERVICE CONNECTION VALVES ACCORDING TO DIN 4057
SERIES 80/32-100
Cast iron lid
PA+ body

Fusion's wide range of **surface boxes** granting access to lower buried valves at all times.

Ideal transition between surface box and down pipe by use of a **surface box adaptor**.

Flexible height adjustment with cut to length **down pipe**.

CERTUS™ or MAGNUS™ PE ball valve for a quick and easy connection using **Electrofusion couplings** to the existing pipeline

Robust **support base** avoids twisting of the pipe and offers stability.



AVK PENTOBX WATER METER BOUNDARY BOX GRADE B VERSION, SEALED
 SERIES 8054/5211
 PN16
 Polypropylene frame
 d20-32, 3/4" BSP, 1/2" HG



AVK PENTOBX WATER METER BOUNDARY BOX GRADE B VERSION, SEALED
 SERIES 8054/2211
 PN16
 Polypropylene frame
 d20-32, 3/4" BSP, 1/2" HG



AVK PENTOBX WATER METER BOUNDARY BOX GRADE C VERSION, SEALED
 SERIES 8054/6211
 PN16
 Polypropylene frame
 d20-32, 3/4" BSP, 1/2" HG



AVK PENTOBX WATER METER BOUNDARY BOX GRADE B VERSION, UNSEALED
 SERIES 8054/8212
 PN16
 Polypropylene frame
 d20-32, 3/4" BSP, 1/2" HG



AVK PENTOBX WATER METER BOUNDARY BOX, CONTAMINATED GROUND GRADE B VERSION, SEALED
 SERIES 8054/5211
 PN16
 Polypropylene frame
 3/4" BSP



AVK PENTOBX WATER METER BOUNDARY BOX, DOUBLE OUTLET GRADE B VERSION, SEALED
 SERIES 8054/5311
 PN16
 Polypropylene frame
 d25-32, 1/2" HG



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