FUSAMATIC™
LARGE DIAMETER ELECTROFUSION
ELBOWS AND EQUAL TEES
FOR GAS AND WATER
“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…”

CUSTOMER PROMISES

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

**SOLUTIONS, NOT ONLY 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 Group Limited pioneered polyethylene pipe jointing in the UK and across the globe. Fusion became a member of the AVK Group of Companies in 2017. A partnership that has resulted in a broader product and service offer and strengthened manufacturing base.

**Products and Innovations**

Fusion designs and manufactures electrofusion fittings, creates polyethylene fabrications, and distributes electrofusion boxes, automatic butt fusion machines and tooling. Fusion also offers an extensive range of spigot fittings. Our products are used in a multitude of applications worldwide, from gas and water infrastructure, to mining, energy and agricultural projects. Our people are valued for their knowledge and experience of polyethylene and their passion to deliver innovation.

**World-Class Manufacturing**

Fusion has extensive manufacturing, test and inspection facilities and have integrated lean principles of continuous improvement within its manufacturing culture. Fusion is much more than just manufacturing, it has world-class facilities which give confidence to an end product which is fully traceable - right down to the core components.

**High Standards**

With ISO9001, ISO/TS 29001 certification and multi-national approvals, both Fusion and AVK believe in much more than just passing the finished product on to the customer, but to give them the quality assurance they need on all the products supplied to the utilities industry.

Products meet and often exceed the highest standards of safety and durability, as well as being regularly audited by various institutions such as Bureau Veritas, AMI, KIWA, BSI, DVGW, INSTA-CERT and others.

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

The Global PE Product Offer brochure features our extensive product range; PE ball and butterfly valves, electrofusion, spigot and transition fittings, access systems and associated equipment and ancillaries.
Features and Benefits

- Now available with 4mm or 4.7mm Fusamatic automatic welding pins supplied as standard - providing a totally automatic method for ensuring the correct welding parameters are used.
- Single coil design - one fusion cycle per fitting for time efficient installation.
- Suitable for jointing in ambient temperatures between -10ºC and +40ºC.
- No temperature compensation required - single fusion time across installation temperature range.

Manufactured in our world-class facilities, a new range of large diameter electrofusion elbows and equal tees in sizes 200, 225 and 250mm.

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.

Sizes

Fusamatic large diameter electrofusion elbows and equal tees are available in the following size range: 200mm, 225mm and 250mm. Elbows are available in 90º or 45º degrees.

Pressure / SDR ratings

Fusamatic large diameter electrofusion elbows and equal tees are manufactured in PE100 black polyethylene and pressure rated up to 16 bar for water applications and 10 bar for gas applications.

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.

Specifications

All Fusamatic large diameter electrofusion elbows and equal tees are tested and have 3rd party approval against the following standards:

- EN12201-3 / UNI EN 12201-3
- EN555-3 / UNI EN 555-3
- ISO 4427-3
- ISO 4437-3
- MS1058 Part 3
- AS/NZS 4129 and ISO Type 5
- AS/NZS 4129 and WaterMark Level 1

The appropriate pipe SDR range for Fusamatic large diameter electrofusion elbows and equal tees is as per the list below:

- 200mm - 225mm: SDR11 - 17.6
- 250mm: SDR11 - 21
- 45º elbows are now available in sizes d32-250mm.
- 90º elbows are now available in sizes d20-250mm.

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.

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.

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.

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.

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

Permanently marked batch number

Barcode / QR Code

The appropriate pipe SDR range for Fusamatic large diameter electrofusion elbows and equal tees is as per the list below:

- 200mm - 225mm: SDR11 - 17.6
- 250mm: SDR11 - 21
**Large Diameter Equal Tee**

<table>
<thead>
<tr>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>• PE100</td>
</tr>
<tr>
<td>• Water PN16</td>
</tr>
<tr>
<td>• Gas 10 Bar</td>
</tr>
<tr>
<td>• 200 / 225mm: Pipe SDR range SDR11 - 17.6</td>
</tr>
<tr>
<td>• 250mm: Pipe SDR range SDR11 - 21</td>
</tr>
<tr>
<td>• d200 - 250</td>
</tr>
<tr>
<td>4mm and 4.7mm manual fittings available upon request</td>
</tr>
</tbody>
</table>

**Large Diameter 90° Elbow**

<table>
<thead>
<tr>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>• PE100</td>
</tr>
<tr>
<td>• Water PN16</td>
</tr>
<tr>
<td>• Gas 10 Bar</td>
</tr>
<tr>
<td>• 200 / 225mm: Pipe SDR range SDR11 - 17.6</td>
</tr>
<tr>
<td>• 250mm: Pipe SDR range SDR11 - 21</td>
</tr>
<tr>
<td>• d200 - 250</td>
</tr>
</tbody>
</table>

| Fusionmatic electrofusion equal tees are now available in sizes ranging from d200 - 250mm. |
|                                                                                         |
| Visit our website [www.fusiongroup.com](http://www.fusiongroup.com) to view the full range. |

| Fusionmatic electrofusion 90° elbows are now available in sizes ranging from d200 - 250mm. |
|                                                                                         |
| Visit our website [www.fusiongroup.com](http://www.fusiongroup.com) to view the full range. |

| Fusionmatic electrofusion 45° elbows are now available in sizes ranging from d32 - 250mm. |
|                                                                                         |
| Visit our website [www.fusiongroup.com](http://www.fusiongroup.com) to view the full range. |

**Delivery Codes**

Products are categorised into 3 delivery codes which are based on our delivery commitments, these are as follows:

- A = Available ex-stock, or up to 6 weeks
- B = Up to 6 weeks
- C = Upon enquiry

The above lead times are provided as an indication only and are manufacturing replenishment times in the event of a stock-out.

If your request is of an urgent nature, please email sales@fusiongroup.com or telephone +44(0)1246 268666 for further details regarding delivery commitments.
**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°

**Multiseal tapping tee**
Delivering security, safety and speed at the point of installation
Stackload or underclamp
Sizes range from 40 – 355mm
20, 25, 32, 40, 50 and 63mm outlets

**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

**Electrofusion coupler**
Sizes 20 - 630mm

**Stub flange adaptor**
Sizes range from 20 - 1200mm

**Electrofusion coupler**
Sizes 20 - 630mm

**Series 158 under pressure drilling valve - GAS**
Over bore construction valve for use in under pressure gas distribution systems.
Product G: Compatible with Fusion’s large diameter branch saddle (LDBS) range to facilitate underpressure drilling installations.

**Series 555 cast iron gate valve - GAS**
Fused gate valve for the isolation of natural and manufactured gas.

**Series 21 resilient seated gate valve - WATER**
Resilient seat, wedge gate valve for isolation purposes in water and sewage networks.

**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
ASSOCIATED PRODUCTS
PRODUCT SELECTOR GUIDE

Fusion Group are a leading innovator, manufacturer and supplier of products and services for gas and water polyethylene pipeline systems. For the full range visit our website www.fusiongroup.com

BIM AND CAD MODELS
2D AND 3D DRAWING DATA

Direct access to Fusion’s BIM and CAD models at www.fusiongroup.com

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.

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 design extension and therefore, reserves the right to modify product specifications in line with market requirements. All dimensions in this catalogue are nominal. For more information visit our website www.fusiongroup.com

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