



PE BALL VALVES
FOR GAS AND WATER

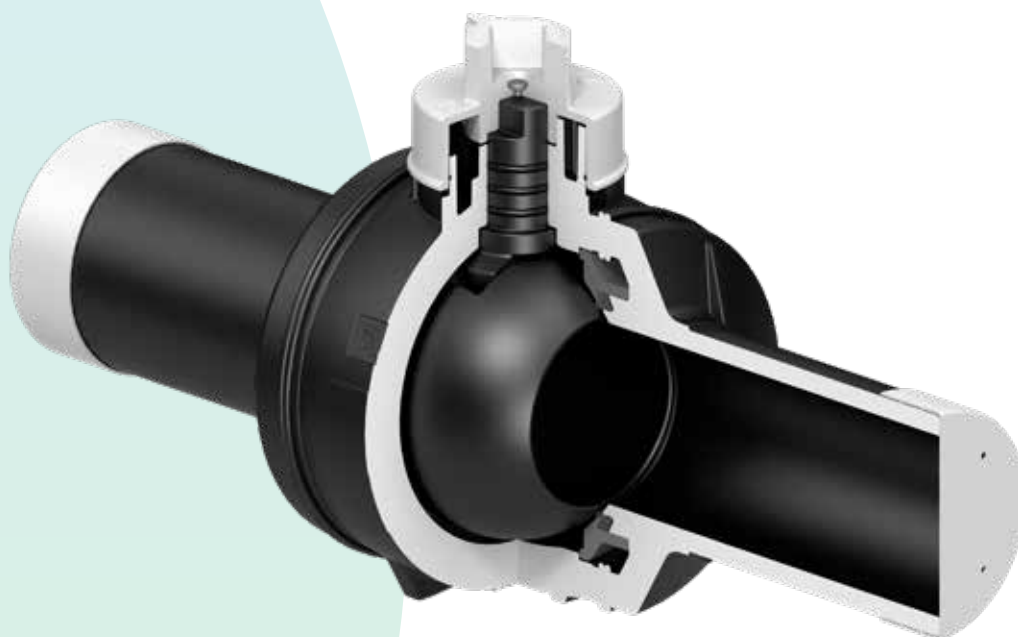


FUSION PE BALL VALVES

FOR GAS AND WATER

Series 85 PE ball valves are an extensive range of PE100 ball valves ranging from d20 up to d180mm, which have been independently type tested against worldwide leading standards such as EN12201-4 and EN1555-4.

Series 85 PE100 ball valves are manufactured at AVK Syntec, a modern purpose built and well equipped manufacturing facility, which uses state of the art machinery and methods to produce high quality products. All of the manufacturing processes are managed to the exacting standards of ISO9001 and ISO/TS 29001:2010.



PE ball valves can be welded to all PE100 and PE80 pipes making the valve an integral part of the fully welded leak-free pipe system.

Pressure ratings

PE ball valves are pressure rated up to 16 bar for water applications and 10 bar for gas applications. Depending on the requested pressure rating, the valves are available with SDR11 or SDR17.6 spigot ends.

CERTUS PE Ball Valves

- Sizes range from d20 - 180mm
- Manufactured from high performance PE100
- The valves meet all the requirements of EN1555-4, ISO4437-4, GISV7-2 and EN12201-4.
- The main internal construction of the PE ball valve is based on a sophisticated seat arrangement for reliable sealing performance. By means of a seat retainer, the ball seat is firmly kept in place. The seat compression is accurately set during the welding.

MAGNUS PE Ball Valves

- Sizes range from d25 - 180mm
- Manufactured from PE100-RC which offers excellent resistance to slow crack propagation.
- The valves meet all the requirements of the EN1555-4, ISO4437-4, GB15558.3 and EN12201-4.
- The main internal construction of the PE ball valve is based on a large ball seat arrangement for reliable sealing performance. By means of a seat retainer and dedicated support ring, the ball seat is firmly kept in place. The seat compression is accurately set by fixating the ball seat arrangement into the body prior to welding.

Construction and material selection

The spigots are butt welded to the body for long term reliability. Welding is performed to the leading DVS2207-1 guidelines. The skimming and welding steps are performed by fully automated welding stations, guaranteeing ultimate consistency of the ball valves.

The seal is made from high quality and durable NBR rubber. The ball is made from engineering plastic offering scratch resistance and is carefully machined for the lowest operating torque. The grease has been selected following extensive tests to reduce friction and wear, ensuring long term performance of the valve.

Testing

Every valve is individually tested and given a unique serial number which can be traced as far back as the raw polyethylene material.

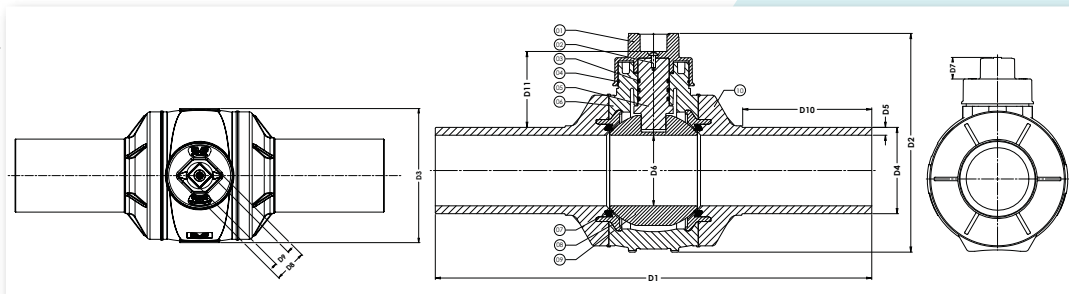
During type testing, the valves are not only submitted to various long and short term leak tightness checks, but also to rigorous pulling, bending and thermal cycling tests. The operating mechanism and topcap can withstand high prescribed torques at extreme temperatures.



Certus PE Ball Valves



- PE100
- GIS/V7: Part 2 / EN 1555-4 / ISO4437-4 / EN12201-4
- MOP dependant on SDR Rating
- Clearway bore - Sizes d20, 32, 63, 90,110 and 160
- Full bore - Sizes d40, 125 and 180
- d20 -180



Code	d	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	Weight	Delivery Code
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Kg	
BV20CER8530N	20	305	155	95	20	3.0	26	46	49.6	20x20	82	76	0.8	A
BV32CER8530N	32	320	155	95	32	3.0	26	46	49.6	20x20	88	70	0.8	A
BV40CER8530N	40	340	155	95	40	3.7	26	46	49.6	20x20	98	66	0.9	A
BV63CER8530N	63	435	205	135	63	5.8	51	46	49.6	20x20	130	84	1.8	A
BV90CER8530N	90	520	285	180	90	8.2	74	46	49.6	20x20	158	123	3.8	A
BV110CER8530N	110	560	280	205	110	10.0	90	31	49.6	20x20	164	96	5.5	A
BV125CER8530N	125	585	280	205	125	11.4	90	31	49.6	20x20	182	89	5.9	A
BV160CER8530N	160	700	370	280	160	14.6	131	35	49.6	20x20	196	120	13.8	A
BV180CER8530N	180	735	370	280	180	16.4	131	35	49.6	20x20	220	110	14.4	A

Certus - Installation Kit



- Installation Kit to suit d20, 32, 40 and 63 Certus Valves
- Available with or without lid

Code	Description	Weight	Delivery Code
		Kg	
CERTUSCHAMKIT	Installation kit including surface box	2.6	A
CERTUSCHAMBER	Installation kit without surface box	2.3	A

Certus - Square Drive Tee Key



- 50mm Square Drive Tee Key to suit Certus PE Ball Valves
- 750-1500mm

Code	Range	Weight	Delivery Code
	mm	Kg	
CERTUSTKEY750MM	750mm long	1.5	A
CERTUSTKEY1M	1,000mm long	2.2	A
CERTUSTKEY1.5M	1,500mm long	3	A

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

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

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

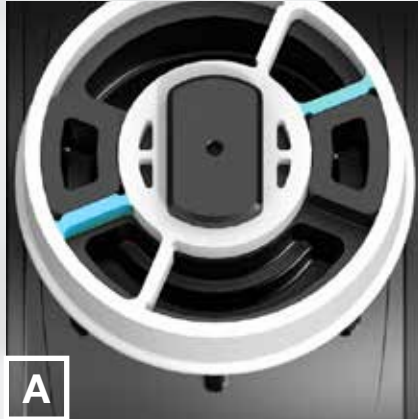


All spigot ends are delivered with **double spigot length** allowing for a second electrofusion weld if the first one fails.

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.

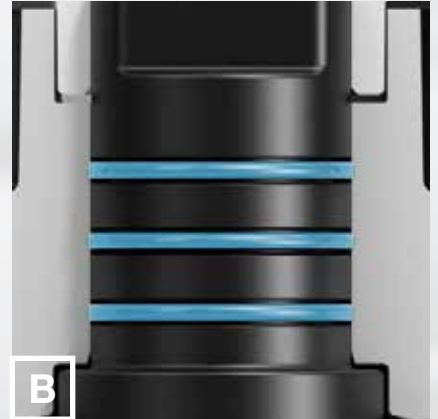
The **spigot ends are machined** on the inside as well as on the outside, guaranteeing a uniform wall thickness, allowing for optimal welding of electrofusion couplers and the smooth inner surface prevents deposits and will minimise flow resistance.

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.



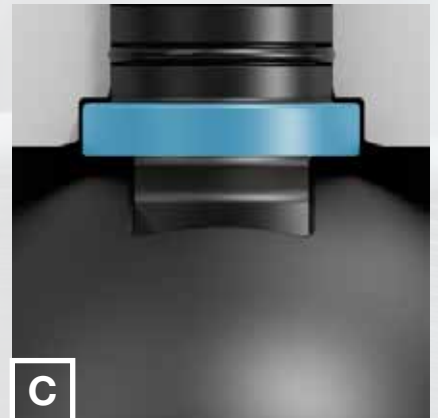
A

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



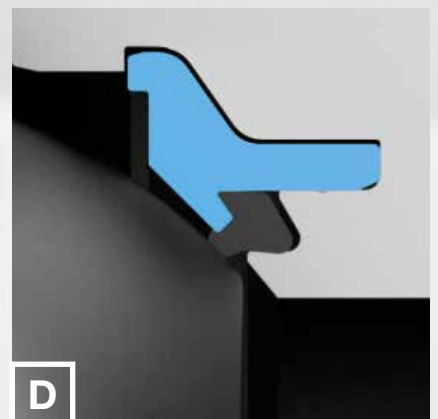
B

Triple O-ring construction around the stem guaranteeing seal integrity 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 reliable long term functionality.

VALVE ACCESS SYSTEM

As with all valves, best practice techniques should be used during installation and operation. To aid this process a series of recommended accessories are available, including; a dedicated 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.

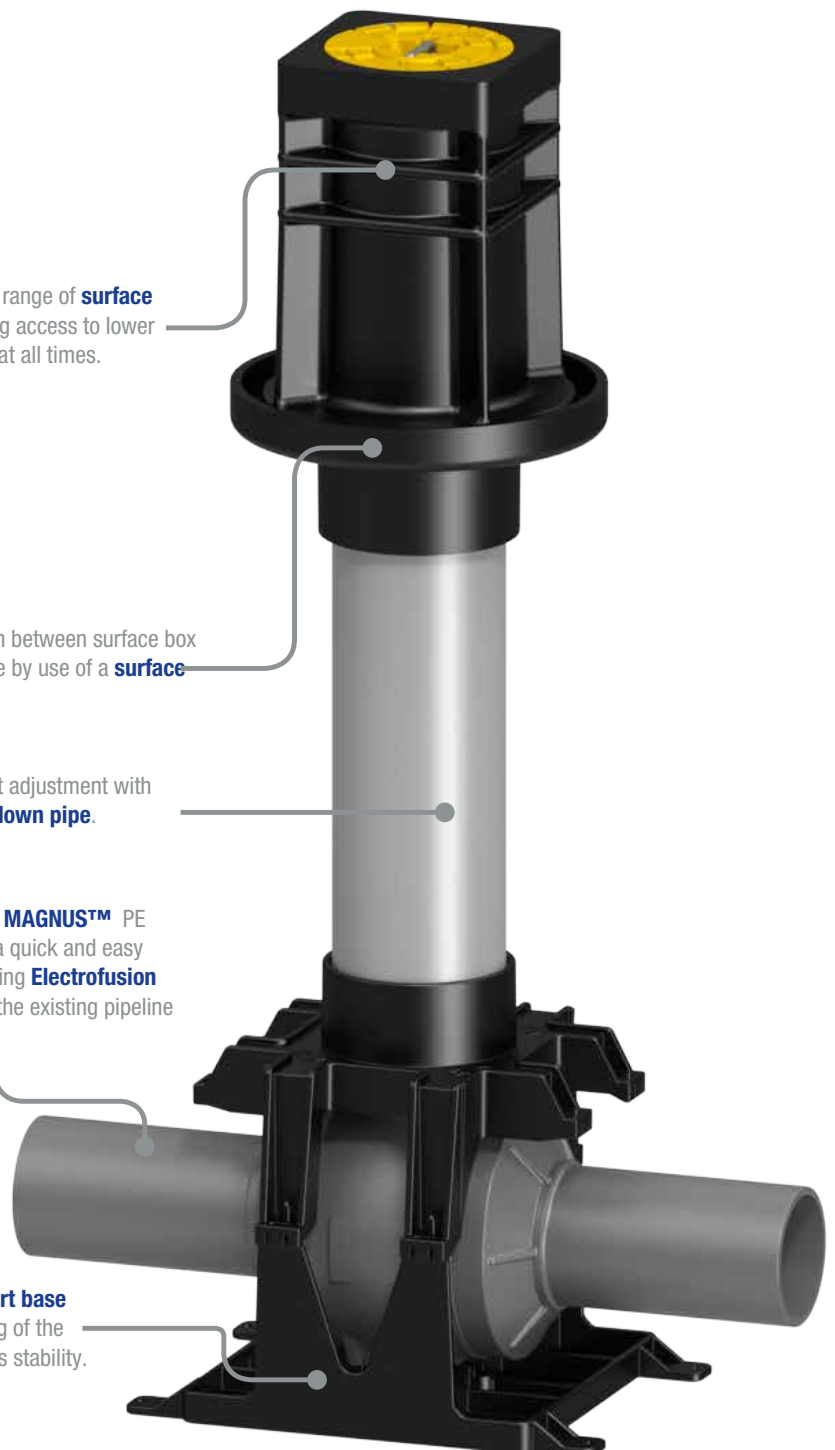
Fusion's wide range of **surface boxes** granting access to lower buried valves at all times.

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.



MAGNUS™ PE BALL VALVES FOR GAS AND WATER

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 has 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 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.

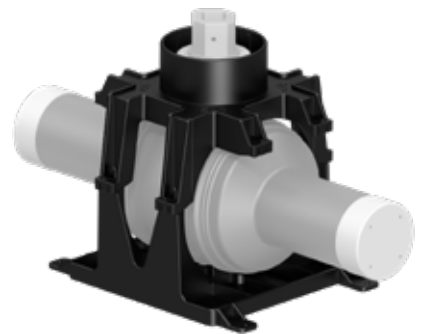
The valves are rated as MOP10 for GAS applications and PN16 for WATER applications.



Stem extension
and purge points



Lever



Support base



**MAGNUS™ FULL BORE
PE BALL VALVES**
SERIES 85/50-002
PE100-RC
d25-180



**MAGNUS™ FULL BORE
PE BALL VALVE
WITH LEVER**
SERIES 85/50-010
PE100-RC
d25-180



**MAGNUS™ FULL BORE
PE BALL VALVE
WITH STEM EXTENSION**
SERIES 85/50-004
PE100-RC
d63-180



**MAGNUS™ FULL BORE
PE BALL VALVE
WITH STEM EXTENSION
AND 1 PURGE POINT**
SERIES 85/50-006
PE100-RC
d63-180



**MAGNUS™ FULL BORE
PE BALL VALVE
WITH STEM EXTENSION
AND 2 PURGE POINTS**
SERIES 85/50-008
PE100-RC
d63-180



AVK INSTALLATION TRACKER IS THE NEW **ASSET MANAGEMENT SYSTEM*** FROM AVK FOR VALVES, FITTINGS AND ASSOCIATED PRODUCTS. UTILISING A NEW, PURPOSE BUILT, USER FRIENDLY MOBILE APP & WEB PORTAL.

AVK installation tracker 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 joints and 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 the clients existing mapping system.

* Patent pending.



FULL TRACEABILITY IN A FEW SIMPLE STEPS...

The QR code is generated when the asset successfully passes all the relevant test procedures. It assigns a unique serial number for the product which is linked to the full material and test records. When installed the data record becomes complete from raw material to accurate position and application.



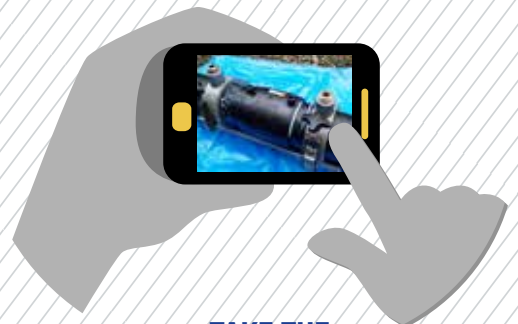
**DOWNLOAD
THE APP**



**SCAN THE
QR/BAR CODE**



**SET
LOCATION**



**TAKE THE
INSTALLATION PICTURE**



THE APP



WEB PORTAL



Scan the QR / barcode using the App



Accurate GPS pin gives location



Secure Customer log in



Asset location on map (colours represent different pressures)



The pin shows asset location



Take an installation picture



Verify pictorial record



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

AVK INSTALLATION TRACKER HAS ALL YOU NEED TO MANAGE FUTURE TRACEABILITY

Access to the recorded data, collected from the app is via a user friendly web portal providing at a glance accurate records.

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

ASSOCIATED PRODUCTS

FOR GAS AND WATER



COUPLER
PE100
Water PN16
Gas 10 Bar
d20-400



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
d20-180



45° ELBOW
PE100
Water PN16
Gas 10 Bar
d32-180



EQUAL TEE
PE100
Water PN16
Gas 10 Bar
d20-180



REDUCING TEE
PE100
Water PN16
Gas 10 Bar
d20x20x32-180x180x125



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
d250x63-355x63



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
d63x20-180x32



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



SBOX MAX - ELECTROFUSION
Welds Fusamatic fittings from
d20 - 630mm



SBOX LITE 220V - ELECTROFUSION
Welds Fusamatic fittings from
d20-125mm



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



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

CUSTOMER PROMISES

“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...”

SOLUTIONS, NOT ONLY PRODUCTS

GLOBAL LEADERSHIP AND LOCAL COMMITMENT

QUALITY IN EVERY STEP

PROMPT RESPONSE

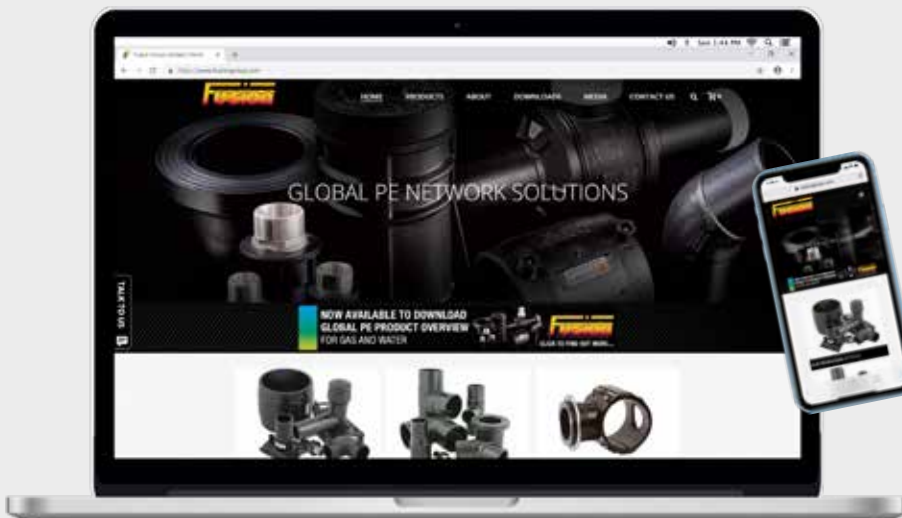
LASTING INNOVATIONS

TOTAL SAVINGS

A LONG-TERM PARTNERSHIP

TO BE EFFECTIVE AND EASY

FUSION GROUP WEBSITE • www.fusiongroup.com



For further information on the market-leading Fusion Group Global PE Product Offer, visit our website at www.fusiongroup.com.

The website is the ‘go to’ place for product and technical information, brochures and best practice guides.

One of the key features of the website is direct access to Fusion’s BIM and CAD models, currently available on Fusion’s electrofusion fittings range, in .dxf, .igs and .step file formats. Providing customers with the ability to transfer 2D and 3D drawing data between a variety of CAD and BIM infrastructure design systems.



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