



Equipment and Tooling Product Guide



Fusion Group is a multinational company with its headquarters and principal manufacturing site located in Chesterfield, England.

When you choose Fusion Group as your supply partner you get much more than just a product.

Scale

With a turnover in 2014 of £43m and a main manufacturing and distribution site covering 5 hectares, you will be partnering with a major player in the world of polyethylene pipe jointing.



Range

Complete range of Butt fusion and Electrofusion welding equipment and tooling for use on polyethylene piping systems.



Stability

Established in 1971, Fusion has supported its clients through global recessions and technological revolutions. We will be here when you need us.





Quality

Fusion has extensive manufacturing, test and inspection facilities. Fusion are ISO9001 accredited and have a continued commitment to improving quality standards and customer satisfaction.



Service and support

Fusion has a global network of wholly-owned distribution subsidiaries, joint-venture companies and agents which sells and supports all Fusion products in markets as diverse as Australia, China, Kazakhstan, Poland, South America, Italy, Malaysia, Romania, Indonesia and - of course - the United Kingdom. You will never be far away from expert advice, guidance and support.



Knowledge

Fusion is one of the original pioneers in polyethylene pipe joining systems. You have the reassurance of partnering with a company which truly understands your needs.

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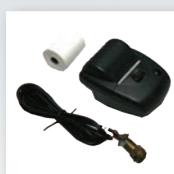
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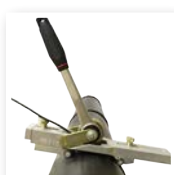
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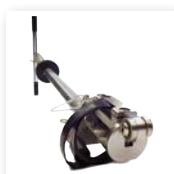
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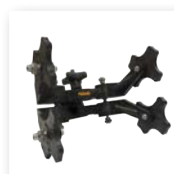
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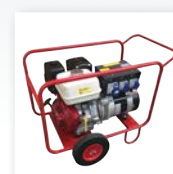
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Gator - Automatic Butt Fusion

The gator range of machines have been designed and developed to be used on gas and water pressure polyethylene pipes for distribution networks. The best possible control of the joining process is achieved through an integral computer which will control and monitor all the joining parameters: time, temperature, pressure, movement and sequence. The welding process will not continue if any of these parameters are not within the specified limits contained in the selected welding standard.

Designed and manufactured to meet or exceed GIS/PL2-3:2006 and ISO 12176-1:2012



- New computer, simplified and improved user interface, bright screen display and multilingual operation.
- New blue-tooth connectivity to facilitate real time transfer and control of joint data, using BlueWeld by ControlPoint.
- Will work in conjunction with new BDI bead testing equipment to ensure 100% success on every joint.
- On screen access to joint records, download to USB, and upload in JointManager website.

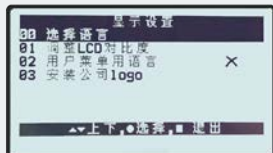
PUT SIMPLY - THE BEST FULLY AUTOMATIC BUTT FUSION MACHINE IN THE WORLD



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Gator - NEW Computer

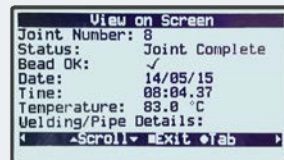
PROVIDES THE ULTIMATE IN CONTROL AND USER EXPERIENCE



Multilingual display



Download to USB and upload in the JointManager website



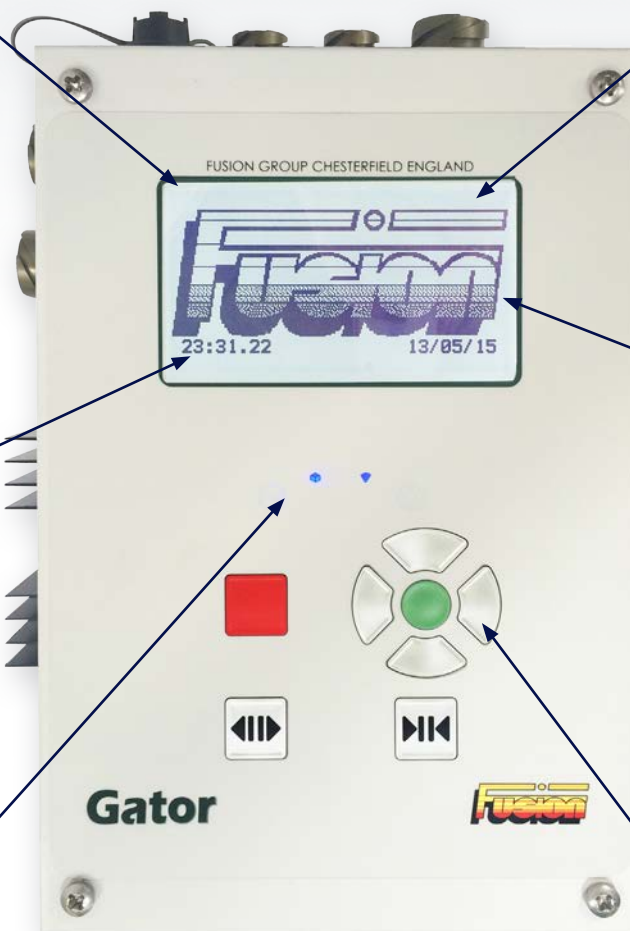
Bright screen with strong back light



Simple user interface



On screen access to joint records



Bluetooth connectivity to facilitate real time transfer and control of joint data using BlueWeld by ControlPoint



Works in conjunction with new BDI testing equipment

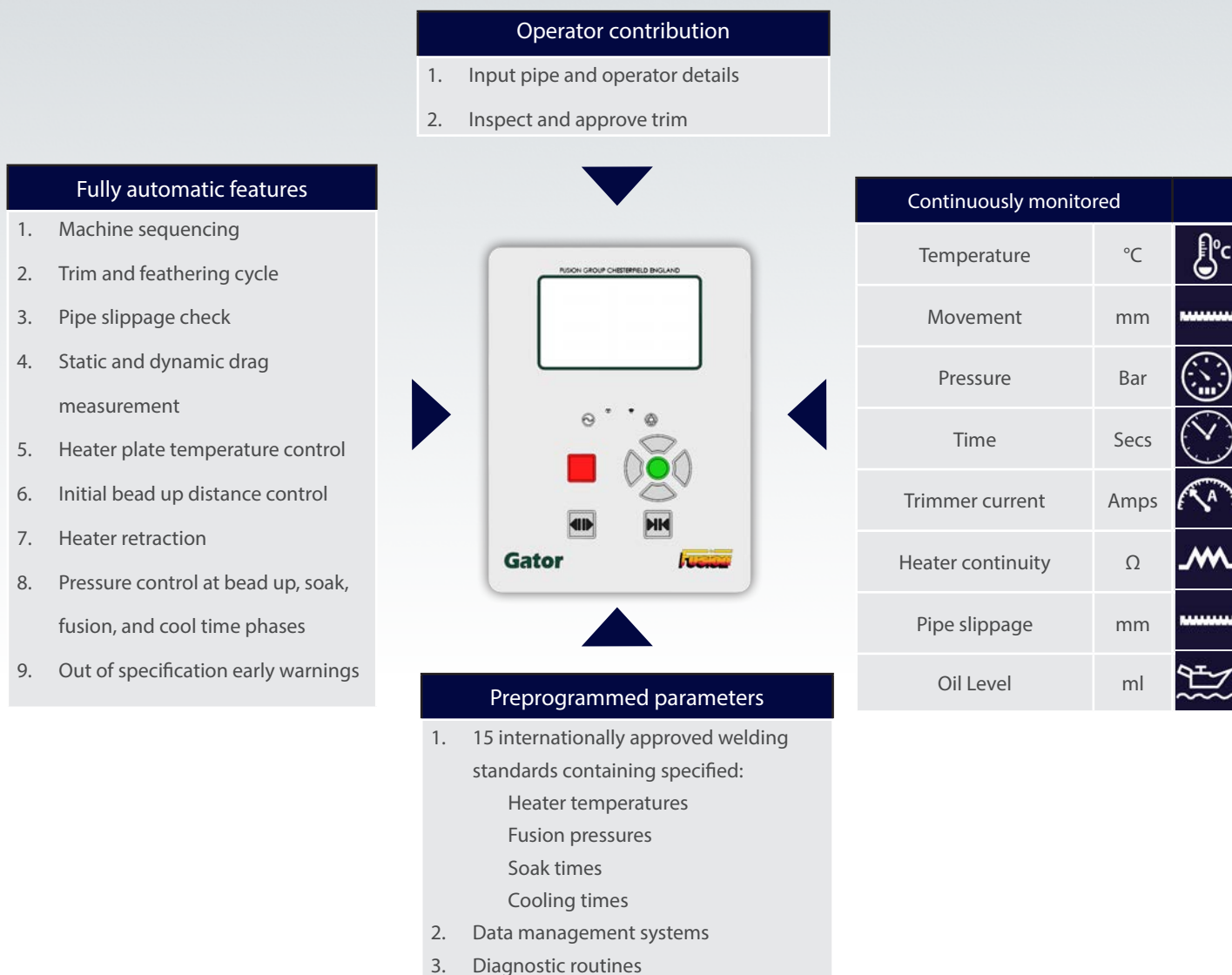


Improved data entry



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Fully Automatic Process



SPECIFICATION

	GATOR 180		GATOR 250		GATOR 315		GATOR 400	
Range (mm)	63 - 180		63 - 250		90 - 315		160 - 400	
Nominal Input voltage (V)	110	220	110	220	110	220	110	220
Input frequency (Hz)	50 /60	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Generator rating (KVA)	3.5	3.5	4.0	4.0	6.0	6.0	7.0	7.0

DATA OUTPUT	
Printer	Thermal paper
USB Memory device	Text file/JointManager
Bluetooth	ControlPoint/BlueWeld

MEMORY	
Internal memory capacity	Up to 2,000 records
Back up to SD card	Up to 100,000 records
Via ControlPoint	Unlimited



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Gator - Automatic Butt Fusion

ORDER CODES

	GATOR 180	GATOR 250	GATOR 315	GATOR 400	
110 volt - yellow 3 pin plug	G180110AFE	G250110AFE	G315110AFE	G400MK2110AFE	
220 volt - black 2 pin plug	G180220AFG	G250220AFG	G315220AFG	G400MK2220AFG	
220 volt - blue 3 pin plug	G180220AFE	G250220AFE	G315220AFE	G400MK2220AFE	

OPTIONAL EXTRAS	PRODUCT CODE
Liners	See page 10 overleaf
Advanced thermal printer	705892
Barcode reader for ISO standard traceability	704504
BlueWeld	Contact ControlPoint for details

STANDARDS

- ISO12176 - 1: 2012
- GIS / PL2 - 3 : 2006
- ISO12176 - 3 Operator Badge (with optional barcode reader fitted)
- ISO12176 - 4 Traceability Coding (with optional barcode reader fitted)

AVAILABLE ON REQUEST

- Knife-edge conversion
- Stub flange adaptor

REMOVABLE CLAMP

- The fourth clamp on the Gator can be removed to facilitate the butt fusion of long spigot fittings.

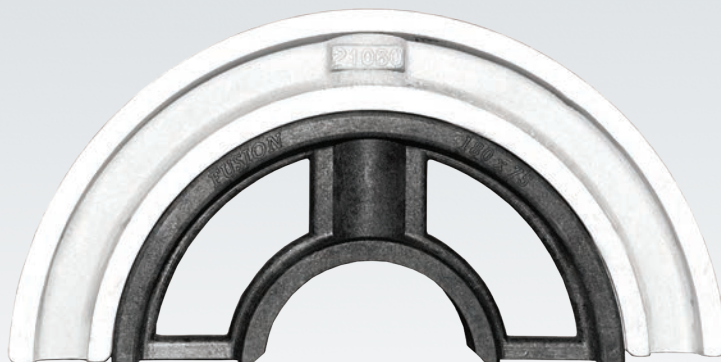
ANCILLARIES

- Pipe support rollers
- Debeaders
- Generators



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Gator Liners



SPECIFICATION

Size (mm)	Aluminium product code	Plastic product code	To fit machine sizes
400x355	BFL400355	N/A	400
400X315	BFL400315	N/A	400
400X250	BFL400250	N/A	400
315x280	BFL315280	N/A	400, 315
315x250	BFL315250	N/A	400, 315
315x200	BFL315200	N/A	400,315
250x225	BFL250225	N/A	400,315,250
250x200	BFL250200	N/A	400,315,250
250x180	BFL250180	BFL250180PT	400,315,250
250x160	BFL250160	N/A	400,315,250
180x160	BFL180160	BFL180160PT	400,315,250,180
180x140	BFL180140	BFL180140PT	315,250,180
180x125	BFL180125	BFL180125PT	315,250,180
180x110	BFL180110	BFL180110PT	315,250,180
180x90	BFL18090	BFL18090PT	315,250,180
180x75	BFL18075	BFL18075PT	250,180
180x63	BFL18063	BFL18063PT	250,180

Butt Fusion liners are designed to maximise the size range of the machine. All sizes are available in cast aluminium, and sizes up to 180mm diameter are also available in an engineering plastic called Noryl. Noryl liners are extremely tough and very light.

Manual Butt Fusion



SPECIFICATION

Machine	Range (mm)	Weight (kg)	Voltage - frequency	Power specification (kW)	Product code
Welda 160	40-160	90	230V - 50/60Hz	2.6	W160230OM
Welda 250	90-250	118	230V - 50/60Hz	3.1	W250230OM
Welda 315	90-315	143	230V - 50/60Hz	3.8	W315230OM
Welda 500	250-500	300	230V - 50/60Hz	6.0	W500230OM
Welda 630	250-630	430	400V 3P+N - 50/60Hz	10.7	W630400OM
Welda 800	400-800	1020	400V 3P+N - 50/60Hz	15.7	W800400OM
Welda 1000	500-1000	1934	400V 3P+N - 50/60Hz	20.9	W1000400OM
Welda 1200	630-1200	2130	400V 3P+N - 50/60Hz	20.0	W1200400OM

All machines supplied without liners. Please specify liners when ordering if required.

STUB FLANGE ADAPTORS

Product code	Machine (mm)	Overall dimension (mm)	Weight (kg)
WSFA160	160	Ø 215	4
WSFA250	250	Ø 318	8
WSFA315	315	Ø 385	10
WSFA500	500	Ø 585	32
WSFA630	630	Ø 685	40
WSFA800	800	Ø 905	90
WSFA1000	1000	Ø 1110	105
WSFA1200	1200	Ø 1330	140

LIFTING CRANE

Product code
N/A
N/A
N/A
N/A
WLC630
WLC800
WLC1000
WLC1200

Welda machines are part of the hydraulic range of butt fusion machines. They are suitable for welding polyethylene pipes for gas and water pipeline projects and also polypropylene pipes used in industrial applications.

FEATURES

- 150 bar system pressure
- Versatile 4 piece design ideal for in trench work
- Protective heater and trimmer stand
- Sliding 3rd chassis clamp allows for jointing of fittings
- Anti-drip quick release hydraulic couplings
- Electronic adjustment of temperature
- Safety micro switch on trimmer
- Double edge trimmer blades



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Manual Butt Fusion Liners



SPECIFICATION

Size (mm)	Product code	To fit machine sizes
1200x1000	WFL12001000	1200
1000x900	WFL1000900	1200, 1000
1000x800	WFL1000800	1200, 1000
800x710	WFL800710	1200, 1000, 800
800x630	WFL800630	800
630x560	WFL630560	800, 630
630x500	WFL630500	800, 630
500x450	WFL500450	630, 500
500x400	WFL500400	630, 500
500x355	WFL500355	630, 500
500x315	WFL500315	630, 500
315x280	WFL315280	500, 315
315x250	WFL315250	500, 315
250x225	WFL250225	315, 250
250x200	WFL250200	315, 250
250x180	WFL250180	315, 250
250x160	WFL250160	315, 250
250x140	WFL250140	315, 250, 160
250x125	WFL250125	315, 250, 160
250x110	WFL250110	315, 250, 160
250x90	WFL25090	315, 250, 160
160x140	WFL160140	250, 160
160x125	WFL160125	250, 160
160x110	WFL160110	250, 160
160x90	WFL16090	250, 160
160x75	WFL16075	160
160x63	WFL16063	160
160x50	WFL16050	160
160x40	WFL16040	160

External Debeaders



SPECIFICATION

Product code	Range (mm)	Weight (kg)	Spare blade code
EXTDB	75mm - 400mm	3	EXTDBBLADE
EXTDBL	355mm - 630mm	4	EXTDBLBLADE
EXTDBXL	400mm - 900mm	5	EXTDBXLBLADE

Used to remove external beads after butt fusion joint completion. External bead removal plays a key role in establishing joint integrity and is necessary when undertaking slip-lining or swage lining projects.

FEATURES

- Easily adjusts to pipe diameter, allowing the blade to cut under the bead without damaging the surface of the pipe
- High quality heat treated ground cutting blades
- Replacement blades available
- Comes complete with storage box
- National Grid approved (GIS/PL2-3:2006)

Internal Debeaders



SPECIFICATION

Product code	Description	Weight (kg)
IBRTKIT	Internal bead removing tool 110 - 400mm	70
31681	Spare blade for head 1 and 2	N/A
32187	Spare blade for head 3 and 4	N/A

IBRTKIT CONTAINS

Product code	Description
11769	1 x storage box
11560	1 x drive handle
21459	1 x no. 1 size head
21457	1 x no. 2 size head
21453	1 x no. 3 size head
21451	1 x no. 4 size head
N/A	2 x Allen keys
N/A	1 x set operating instructions
32740	3 x size 1 rod supports
31754	3 x size 2 rod supports
21803	3 x size 3 rod supports
21310	3 x size 4 rod supports
21859	3 x size 4b rod supports
69046	1 x rod bag
21560	6 x 2 meter rods
21618	1 x 1 meter rod

Note: the above items are also available as spares

SELECTION CHART

SDR	44	32	26	17	11	7.3
O/D	Head Size					
110				1(B)	1(A)	
125				1(D)	1(C)	1(A)
140				1(A)	1(D)	1(C)
160	2(B)	2(B)	2(B)	2(B)	2(B)	1(D)
180	3(A)	2(C)	2(C)	2(C)	2(B)	2(B)
200	3(A)	3(A)	3(A)	3(A)	2(C)	2(B)
225	3(B)	3(B)	3(B)	3(B)	3(A)	2(C)
250	3(C)	3(C)	3(C)	3(C)	3(B)	3(A)
280	4(B)	4(B)	4(B)	3(C)	3(C)	3(B)
315	4(C)	4(C)	4(C)	4(B)	4(A)	3(C)
355	4(D)	4(D)	4(D)	4(C)	4(C)	4(A)
400				4(D)	4(C)	4(B)
450				4(D)	4(D)	

Note: Each debeader head size has multiple settings. These are referred to in the table as A, B, C or D. To select the correct head size you will need to know the outer diameter of the pipe you wish to debead (see first column) and its SDR (see top row).

Internal Debeaders

OPTIONAL EXTRAS

Product code	Description
91425	Adaptor for 450mm SDR11
91474	Adaptor for 450mm SDR17.6
51416	Screw (2 per adaptor)

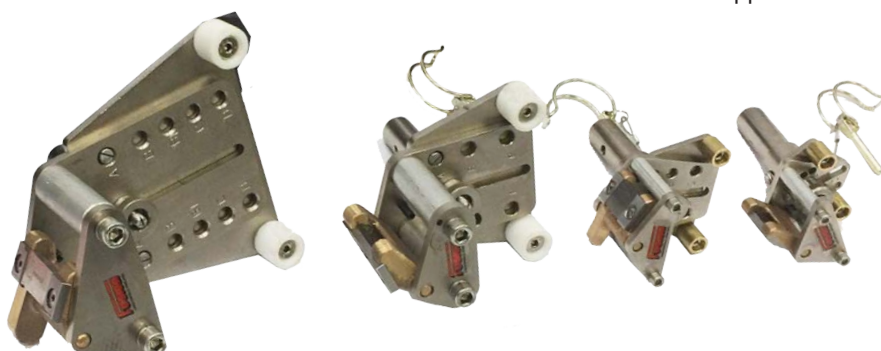
The internal debeader is a manual kit for the simple and effective removal of internal beads formed during the butt fusion process. The internal debeader can debeat polyethylene pipes in the size range 110mm - 400mm (450mm with adaptor).

FEATURES

- Rods can be quickly clipped together to debeat pipe lengths up to 13m
- Bead retained in head after removal process for later inspection/archiving
- Robust build quality
- Simple to assemble
- Facilitates quality control procedures from visual bead inspection and bend back test
- Rods come in robust canvas bag
- Heads and ancillary components are housed in a steel box with carry handles
- National Grid approved (GIS/PL2-3:2006)



Rod Supports



Debeader Heads



Allen Keys



Drive Handle

ClearBore Internal Debeader



SPECIFICATION

Product code	Description	Range (mm)	Weight (kg)
IBRTKIT100	Internal bead removal tool	110 - 250mm (SDR 9 and 11)	63

Note - Other sizes are available upon request.

The ClearBore internal debeader is specifically designed to leave an absolutely 'snag free' passage in cable ducting applications.

FEATURES

- Simple to use and similar functionality to Fusion's standard internal debeader.
- Simple and solid construction with a sprung cutter giving positive location on the bead.
- The debeader works on both PE80 and PE100 pipe up to 13m in length and diameters up to 250mm

Note - Not suitable for pressure pipe applications

IBRTKIT100 CONTAINS

Description	Quantity
Debeading head	1
Drive plate	1*
Drive adaptor	1
2 metre rod	6
1 metre rod	1
Handle	1
Rod supports	3*
Rod bag	1
Storage box	1
Flat blade screw driver	1
17mm spanner	1
6mm Allen Key	1
Operating instructions	1

SELECTION CHART

Pipe Diameter	SDR	Drive plate No.	Rod Support part number	Support Diameter (mm)
110	11	23475	36119/110SDR11	80
125	9	23513	36119/125SDR9	87
125	11	23477	36119/125SDR11	92
160	11	23479	36119/160SDR11	121
180	11	23481	36119/180SDR11	137
200	11	23511	36119/200SDR11	154
225	11	23483	36119/225SDR11	174
250	11	23485	36119/250SDR11	195

Note - * Kit includes 1 drive plate and corresponding rod supports. Please specify size of drive plate and rod supports required at the time of ordering from the table above.



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Pipe Lifter 400



SPECIFICATION

Product code	Description	Range (mm)	Weight (kg)
PIPELIFT400	Pipe Lifter 400	up to 400mm	22

The Pipe Lifter 400 is a simple, robust and effective device which assists with the ejection and movement of polyethylene pipes during the welding process.

FEATURES

- Simple lever mechanism which improves productivity
- Heavy duty construction
- Folds flat for easy storage and transportation
- Works in conjunction with pipe support rollers
- Compatible with all butt fusion machines from 180mm to 400mm
- National Grid approved (GIS/PL2-3:2006)

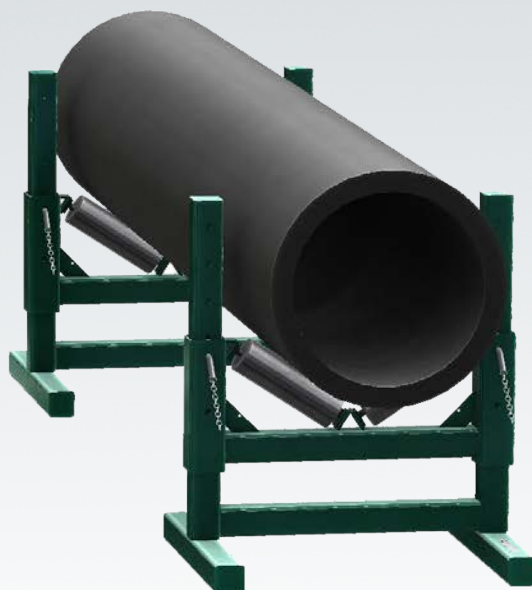
Pipe Support Rollers



315 Adjustable roller



400 Adjustable roller



630 Adjustable roller

SPECIFICATION

Product code	Description	Range (mm)	Weight (kg) per roller
PSROLL315	315 adjustable roller (pair)	63-315mm	5
PSROLL400	400 adjustable roller (pair)	63-400mm	18
PSROLL630	630 adjustable roller (pair)	315-630mm	52

A range of adjustable pipe support rollers, used to assist the butt fusion welding process

FEATURES

- 3 adjustable pipe rollers covering the range 63mm to 630mm
- Rigid construction, with all models supplied as a pair
- National Grid approved (GIS/PL2-3:2006)



Printer, lead and roll



Gator controller with printer in operation

SPECIFICATION

Product code	Description
705892	Advanced thermal printer, lead and roll
705893	Lead only
705799	Paper roll

Portable printer for use with Gator controller.

FEATURES

- The printer provides the installer with documentary evidence of good working practices
- Lightweight, compact and portable

SBOX-Max - Electrofusion



SBOX-Max you are in control

- SBOX-Max can weld fittings from 20mm to 630mm diameter.
- The screen is protected by hard-wearing scratch-resistant polycarbonate.
- Pin adaptors included as standard. You can weld both 4mm and 4.7mm pin fittings.
- Comes with hard protective carry case. Easy to carry and designed to withstand knocks and scratches.
- On screen instructions in 15 languages. New languages being added all the time.
- Graphics display with adjustable contrast and a wide viewing angle.
- The SBOX-Max's internal 'Black Box' SD card holds up to 100,000 joint records: a lifetime's joints safely stored.



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Only 18kg in tough protective case



Display your logo on screen



Welds fittings between 20mm and 630mm



Cable tidy



USB data download



Multiple languages



Welds 4mm and 4.7mm pin fittings



ControlPoint ready



Barcode, manual and Fusamatic fittings

SBOX-Max - Electrofusion

SPECIFICATION

	SBOX-Max/SBOX-MaxBC		
SUPPLY	MINIMUM	TYPICAL	MAXIMUM
Input Voltage	195v	230v	265v
Input Frequency	40Hz	50Hz	60Hz
Generator Rating	4.2KVA	-	6KVA

	SBOX-Max/SBOX-MaxBC		
OUTPUT	MINIMUM	TYPICAL	MAXIMUM
Output 40v Auto Fitting	39.0v	39.5v	40.0v
Output Voltage Barcode and Manual	10.0v	-	48.0v
Output Current	2A	-	60A
60% Duty Cycle output ISO12176-2	60A		
Peak Current <60seconds	80A		

OPERATING MODES	SBOX-Max	SBOX-MaxBC
Fusamatic	20 - 900 Seconds	
Manual	10 - 3500 Seconds	
Barcode	NO	YES

MEMORY	SBOX-Max/SBOX-MaxBC
Internal Memory Capacity	Up to 2,000 records
Backup to SD Card	Up to 100,000 records
Via ControlPoint	Unlimited

DATA OUTPUT	SBOX-Max/SBOX-MaxBC
USB memory device	YES - text file/JointManager
Bluetooth	ControlPoint

	SBOX-Max/SBOX-MaxBC	
ENVIRONMENT	MINIMUM	MAXIMUM
Operating Temperature	-10°C	+50°C
Storage Temperature	-15°C	+55°C
Environmental Protection	IP54	

WEIGHTS	SBOX-Max	SBOX-MaxBC
Box with leads	16.8Kg	17.0Kg

CABLE LENGTH	SBOX-Max/SBOX-MaxBC
Input Cable	3m
Output Cable	2.5m

DIMENSIONS	WIDTH	DEPTH	HEIGHT
(with cables coiled in cable storage)	30cm	29cm	43cm

STANDARDS	SBOX-Max	SBOX-MaxBC
ISO12176-2 Electrofusion	YES	
ISO12176-2 Classification	P23US2FVKADX	
ISO12176-3 Operator Badge	-	YES
ISO12176-4 Traceability Coding	-	YES

ORDER CODES

All 220/230V automatic electrofusion control boxes come with carry case and 4.0mm/4.7mm lead end adaptors as standard.

PRODUCT CODE	PLUG TYPE	BAR CODE SCANNER
SBOXMAXBCG		
SBOXMAXBCE		
SBOXMAXG		X
SBOXMAXE		X

Joint Data - ControlPoint

What is ControlPoint?

- ControlPoint is a patented quality assurance system which helps you – contractors and utilities – to improve the installation quality on your gas and water pipelines. The result? Reduced leakage, fewer costly repairs, better service levels for customers.

How does ControlPoint work?

- ControlPoint uses an app on your smartphone linked via Bluetooth to your SBOX-Max. The app sends your SBOX-Max joint data – including photographs of the joint prior to fusion, machine parameters, GPS location, ISO12176-4 traceability data and more – to ControlPoint's inspection team for real time verification. If there is any doubt about the integrity of a joint you will receive an alert by text or email. You can also view and analyse all your data, including photographs, via the JointManager website.

Can I access ControlPoint with my SBOX-Max?

- Yes. Your SBOX-Max comes with basic ControlPoint functionality and support as standard:
- BlueBox communications app for Apple, Android and Windows platforms
- JointManager web account: 24/7 access to your joint data
- JointManager search and analysis including full ISO12176 traceability
- GPS location within the joint record

How can I activate ControlPoint?

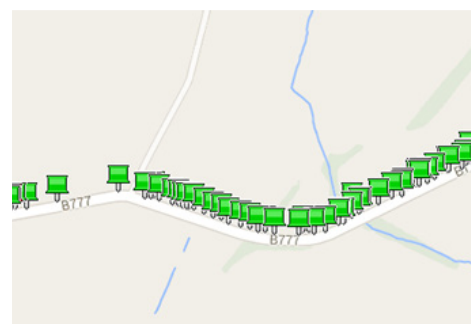
- Simply contact your local SBOX-Max distributor. Your distributor can also talk you through the benefits of a ControlPoint subscription.
- You can also contact the ControlPoint international support team on +44(0)1246 262383 or email: info@controlpointllp.com



ControlPoint works with your smartphone



ControlPoint verifies your joints



You can map the GPS location of your joints with JointManager



JointManager stores your joint data

SBOX-Lite 220v - Electrofusion



SPECIFICATION

SBOXLITE220BC	
Diameters range (OD)	20 - 125mm *
Weldable materials	PE / PP/ PP-R
Dimensions (W x D x H)	200 x 250 x 210mm
Weight	8 kg
Power supply (V)	230V \pm 15%
Frequency	50 - 60 Hz
Maximum absorbed power	2000W
Nominal absorbed current	8A
Peak output current	60 A
Welding nominal current	23A
Duty cycle 60% (ISO 12176-2)	
Working temperature	- 10 °C to + 40 °C
Welding voltage (V)	8V-48V
Protection degree	IP 54
Barcode scanner	Yes
Pin connector sizes	4mm and 4.7mm universal
Memory capacity	350 joints
Ambient temperature compensation	Yes

* OD 140mm and 160mm couplers can also be welded but with precaution; wait for the machine to cool off completely after each welding cycle.

ORDER CODES

Product code	Description	Range (mm)	Weight (kg)
SBOXLITE220BC	SBOX-Lite 220 volts	20-125mm	8

The SBOX-Lite is a lightweight and versatile electrofusion control box which is capable of welding any brand of electrofusion fittings for gas, water and other pressure pipe applications.

- Can weld electrofusion fittings in sizes 20mm - 125mm (140mm and 160mm couplers can be welded by letting the machine cool down between operations).
- The 220V SBOX-Lite can be used in 2 different modes -
 1. By barcode reading (8 - 48 volts)
 2. Manual entry of fusion voltage and time

FEATURES

- Extremely lightweight - only 8kg
- Joint data memory of 350 welds- downloadable to USB memory stick
- Fusion data transfer CD and USB cable adaptor included
- Ambient temperature compensation is applied when required
- 4.0 - 4.7mm diameter universal collet adaptor
- Multi-lingual selectable display
- Manual scraper included
- Transport bag included



Universal lead ends



I/P Plug

SBOX-Lite 110v - Electrofusion



SPECIFICATION

SBOXLITE110	
Diameters range (OD)	20 - 125mm *
Weldable materials	PE / PP/ PP-R
Dimensions (W x D x H)	200 x 250 x 210mm
Weight	8 kg
Power supply (V)	110V \pm 10%
Frequency	50 - 60 Hz
Maximum absorbed power	2000W
Nominal absorbed current	16A
Peak output current	60 A
Welding nominal current	23A
Duty cycle 60% (ISO 12176-2)	
Working temperature	- 10 °C to + 40 °C
Welding voltage (V)	8V-48V
Protection degree	IP 54
Barcode scanner	No
Fusamatic auto pin recognition	Yes
Pin connector sizes	4.7mm diameter
Memory capacity	350 joints
Ambient temperature compensation	No

* OD 140mm and 160mm couplers can also be welded but with precaution; wait for the machine to cool off completely after each welding cycle.

ORDER CODES

Product code	Description	Range (mm)	Weight (kg)
SBOXLITE110	SBOX-Lite 110 volts	20-125mm	8

The SBOX Lite is a lightweight and versatile electrofusion control box which is capable of welding any brand of electrofusion fittings for gas, water and other pressure pipe applications.

- Can weld electrofusion fittings in sizes 20mm - 125mm (140mm and 160mm couplers can be welded by letting the machine cool down between operations).
- The 110V SBOX-Lite can be used in 2 different modes -
 1. Fusamatic - automatic pin recognition
 2. Manual entry of fusion voltage and time

FEATURES

- Extremely lightweight - only 8kg
- Joint data memory of 350 welds- downloadable to USB memory stick
- Fusion data transfer CD and USB cable adaptor included
- Multi-lingual selectable display
- Manual scraper included
- Transport bag included

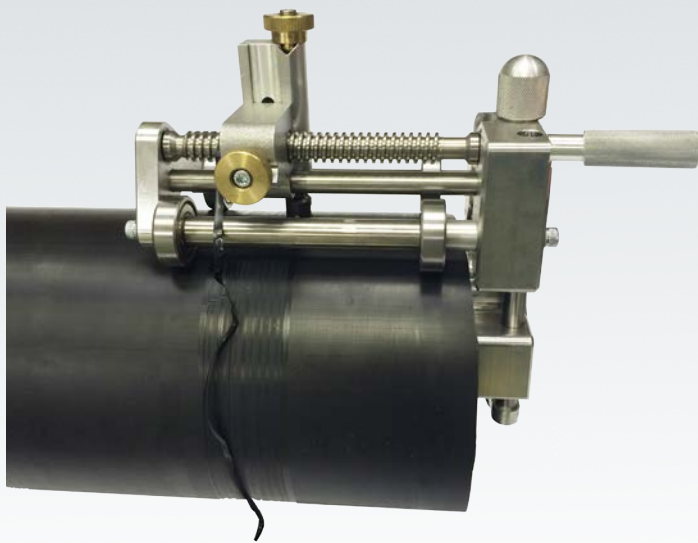


Lead ends



I/P Plug

Uniprep Scraper



SPECIFICATION

Product code	Description	Weight (kg)	Spare blade code
UNIPREP250	Uniprep scraper 63mm - 250mm	3	UNIPREP22
UNIPREP400	Uniprep scraper 90mm - 400mm	3.5	UNIPREP22
UNIPREP500	Uniprep scraper 125mm - 500mm	4	UNIPREP22
UNIPREP710	Uniprep scraper 450mm - 710mm	5	UNIPREP22

Uniprep scrapers are high productivity tools, used for preparing pipe ends prior to electrofusion. Suitable for all pipe SDR's and pipe with ovality.

FEATURES

- Fast scraping action
- Heat treated ground steel cutting blade
- Accurately controlled depth of cut
- Quick release after pipe scraping using post locking screw
- National Grid approved (GIS/PL2-5:2006)

Universal Scraper



SPECIFICATION

Product code	Description	Weight (kg)	Spare blade code
UNISCRP	Universal scraper 63mm-250mm	4.5	370300

The universal scraper provides a convenient means of preparing pipe ends prior to electrofusion jointing. It can operate on all pipe diameters and commonly used SDR sizes from 63mm to 250mm inclusive, and can be used on coiled pipe and pipes with ovality.

FEATURES

- Correct length of scrape is pre-set
- Fixed, serrated blade driven around the pipe using ratchet handle
- Internal roller action holds the cutting blade against the pipe
- Carry case, spare blade and cleaning brush
- National Grid approved (GIS/PL2-5:2006)

Multi Scrape



SPECIFICATION

Diameter range	SDR Range	Case dimensions	Weight (kg) complete kit
20, 25, 32, 40, 50, 55 and 63mm	11 and 17	275 x 225 x 90mm	2.5

Product code	Description
MULTISCRAPKIT	Tool including complete set of solid mandrels and spare blade in case
MULTISCRKITUK	Tool including 63mm SDR11/32mm/25mm solid mandrels only in case
MULTISCRKITEM	Tool including 20mm and 25mm solid mandrels and small, medium and large expanding mandrels in case

Multi Scrape is a versatile pipe scraper designed specifically with coiled pipe in mind. Mandrels support the pipe ends and a spring loaded blade, ensures that the optimum depth of cut is achieved.

FEATURES

- Comes with choice of solid or expandable mandrels
- Hardened steel blade design, indexable with two cutting edges
- Blade design ensures a consistent depth of cut
- Sprung loaded arm facilitates use on coiled and oval pipe
- All mandrels aid pipe re-rounding and cover a variety of pipe sizes and SDR's
- National Grid approved (GIS/PL2-5:2006)



EXPANDING MANDRELS KIT

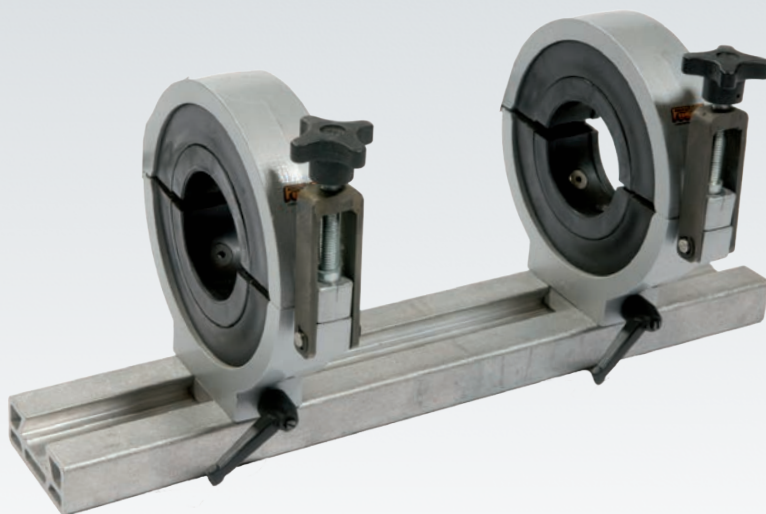


SOLID MANDRELS KIT

SPARE PARTS

Product code	Description
MULTISCAPE	Tool only
35571	20mm solid mandrel
35572	25mm solid mandrel
35573	32mm solid mandrel
35574	40mm solid mandrel
35575	50mm SDR11 solid mandrel
35576	50mm SDR17 solid mandrel and 55mm SDR11
35577	63mm SDR11 solid mandrel
35578	63mm SDR17 solid mandrel
35559	Spare blade
22902	Case
35794	Small expanding mandrel covers 32mm and 40mm
35795	Medium expanding mandrel covers 50mm (all SDR's)
35796	Large expanding mandrel covers 63mm (all SDR's)

Multi Clamp



SPECIFICATION

BASIC

Product code	Weight (kg)
MCKIT180B	21
1 x carrying bag	
2 x basic 180mm rings + slide blocks	
4 x 180mm x 125mm liner segments	
4 x 125mm x 90mm liner segments	
4 x 125mm x 63mm liner segments	
1 x 600mm base	
1 x allen key	

UNIVERSAL

Product code	Weight (kg)
MCKIT180	31
1 x plastic container	
2 x basic 180mm rings + slide blocks	
4 x 180mm x 125mm liner segments	
4 x 125mm x 90mm liner segments	
4 x 125mm x 63mm liner segments	
2 x 460mm bases	
1 x allen key	
1 x spanner	
1 x 'T' connector	

OPTIONAL EXTRAS AND SPARES

Product code	Description
12390	180mm ring
132000	460mm base
148500	600mm base
22541	180mm x 160mm liner segments
22540	180mm x 140mm liner segments
21607	180mm x 125mm liner segments
31784	160mm x 110mm liner segments

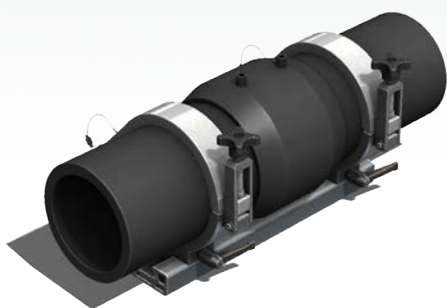
Product code	Description
33812	160mm x 75mm liner segments
33354	125mm x 90mm liner segments
33356	125 x 63mm liner segments
33358	T-connector
33470	Locking handle with screw (for base)
21692	45° convertor

The multi-clamp kit has been specifically designed for easier alignment and restraint of a whole range of electrofusion fittings and suits narrow trenching techniques.

FEATURES

- Facilitates full rerounding and restraint during electrofusion
- Top clamp hinges facilitates use in narrow trenches
- The dovetail assembly allows complete rotation through 360° to suit any pipe and fitting configuration (large diameter tees require extra base, ring and liners)
- Extruded lightweight base
- National Grid approved (GIS PL2-5:2006)

APPLICATION AND USAGE - (See pictures below)



Couplers and reducers



90° Electrofusion Elbows
(1 base / 2 Rings)



45° Electrofusion Elbows
(1 base / 2 Rings)

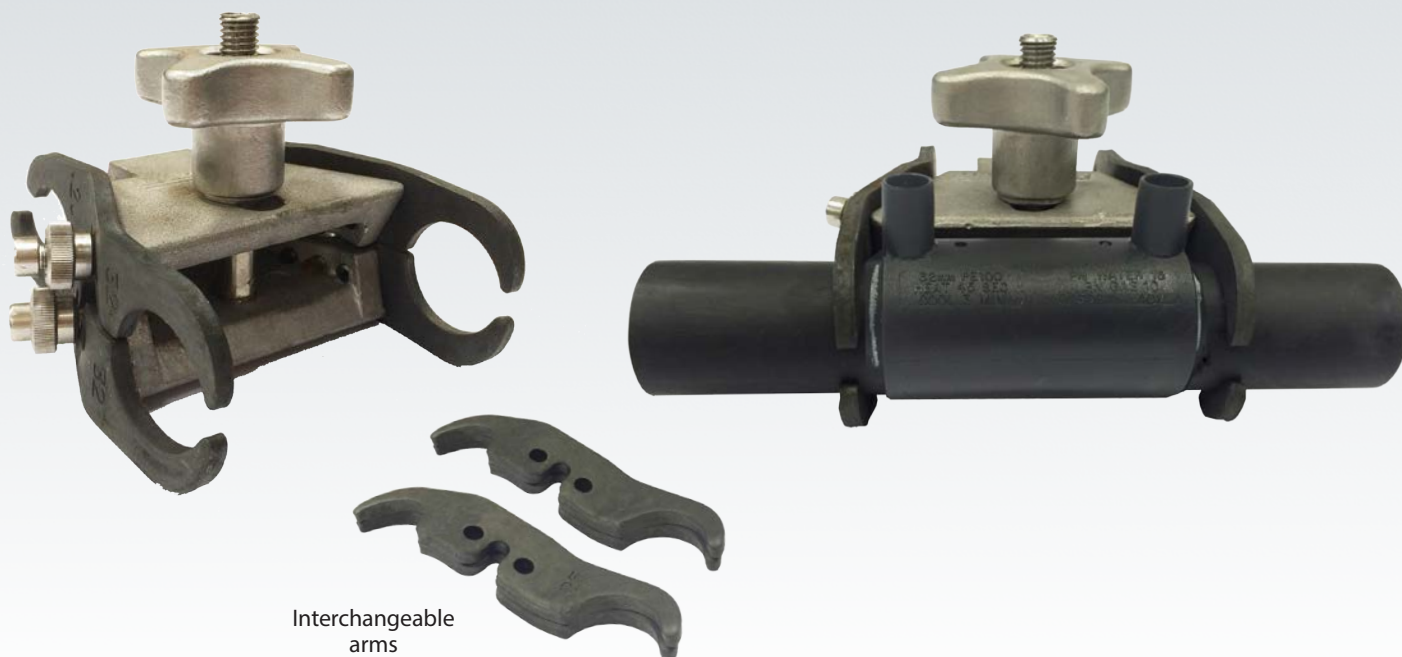


E/F tees and reducing tees
(3 bases / 3 rings / 1 'T' connector)



Electrofusion of Seamless Bends (2 bases / 4 rings)

Mini Clamps



SPECIFICATION

Product code	Description	Weight (kg)
MINICLAMP	20, 25 and 32mm mini clamp	1

Mini clamps are designed to retain and align pipe and fittings for service connections during the electrofusion process. The mini clamp is suitable for pipe sizes 20, 25 and 32mm.

FEATURES

- Interchangeable arms for each pipe size
- Reducers, couplers and tapping tee outlets can be accommodated
- Robust construction with cast aluminium body
- Promotes re-rounding and restraint during electrofusion
- National Grid approved (GIS/PL2-5:2006)

Versaclamp



SPECIFICATION

Product code	Description	Weight (kg)
VERSACLAMP20	20mm multi angled clamp	0.2
VERSACLAMP25	25mm multi angled clamp	0.2
VERSACLAMP32	32mm multi angled clamp	0.2

A range of clamps that can be used on 90° and 45° elbows and straight connections. Available for use with 20, 25 and 32mm diameter pipe.

FEATURES

- Pocket size and ultra lightweight design
- Manufactured from a tough engineering plastic (Noryl)
- Works in tight spaces with flextee and multiseal
- National Grid approved (GIS/PL2-5:2006)



Straight Connections



45° Elbows



90° Elbows

Elbow Clamps



SPECIFICATION

Product code	Description	Weight (kg)
ELBOWCLAMP20	Elbow clamp 20mm	0.1
ELBOWCLAMP25	Elbow clamp 25mm	0.1
ELBOWCLAMP32	Elbow clamp 32mm	0.1

A very simple hand tool for clamping either 20, 25 or 32mm service pipe when fusing 90° elbows giving stress free joints.

FEATURES

- Compact lightweight design
- Manufactured from a tough engineering plastic (Noryl)
- National Grid approved (GIS/PL2-5:2006)



90° Elbow clamp - 20mm pipe



90° Elbow clamp - 25mm pipe



90° Elbow clamp - 32mm pipe

Mini and Maxi Posi Clamps



SPECIFICATION

Product code	Description	Range	Weight (kg)
MINIPOS	Couplers, reducers, end caps, equal and reducing tees, 45° and 90° elbows	20mm, 25mm, 32mm and 40mm	0.5
MAXIPOS	Couplers, reducers, end caps, equal and reducing tees, 45° and 90° elbows	32mm, 40mm, 50mm and 63mm	1.0

Two lightweight versatile electrofusion clamps working in the range 20 - 40mm and 32 - 63mm.

FEATURES

- Can be used for couplers, reducers, end caps, equal tees, 45° and 90° elbows and reducing tees
- Can be used on multiseal tapping tees where couplers are connected to the outlet
- Aligns, and secures the pipe to prevent movement of fittings during fusion and cooling
- Made from a tough engineering plastic (Noryl)
- All nuts and adjustments are fully captive and therefore cannot be lost
- National Grid approved (GIS/PL2-5:2006)



Maxi Posi clamp 90° Elbow



Maxi Posi clamp on Multiseal tapping tee

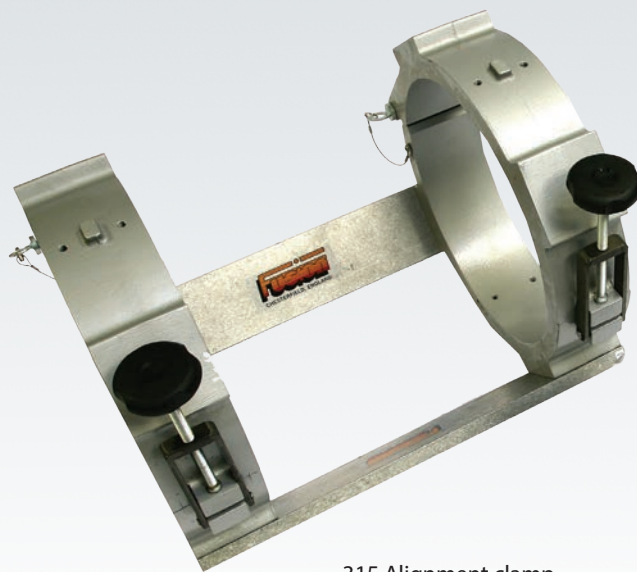


Maxi Posi clamp coupler

Alignment Clamps



250 Alignment clamp



315 Alignment clamp

SPECIFICATION

Product code	Description	Weight (kg)
MC250H	250mm alignment clamp	14
MC315H	315mm alignment clamp	29

Heavy duty alignment clamps, used for jointing of 250mm and 315mm electrofusion couplers.

FEATURES

- Hinged with pins for ease of pipe positioning in trench - facilitates use in narrow trenches
- Offers full rerounding and restraint of pipe and fitting during welding
- Fixed clamp position
- Robust construction
- Liners available for smaller sizes
- National Grid approved (GIS/PL2-5:2006)

Top Load Clamp



Quality Check - When the indicator at the top of the clamp is flush this shows that the correct clamping force is applied to the fitting.

SPECIFICATION

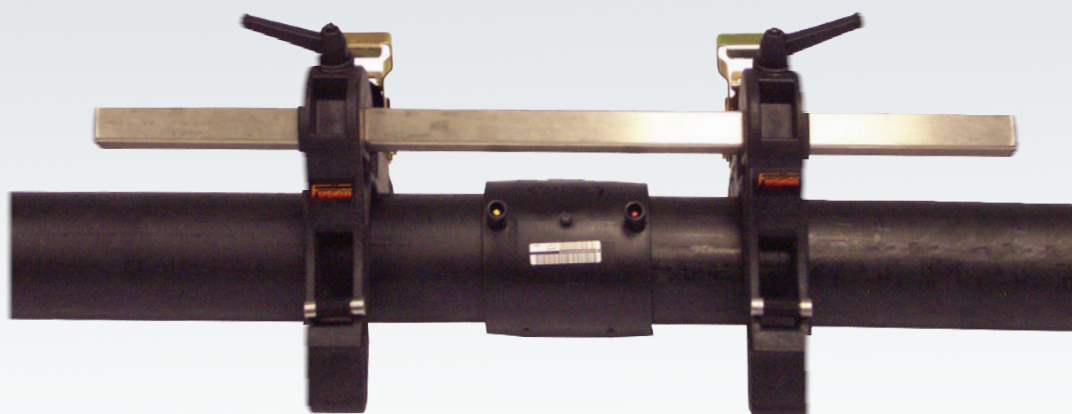
Product code	Description	Weight (kg)
TLOADCLAMPA	63mm - 500mm top load clamp	1

Strap clamp for use on top loaded saddles.

FEATURES

- Lightweight
- Universal
- Ideal for use in confined spaces
- National Grid approved (GIS/PL2-5:2006)

Strap Clamp 200 Straight



SPECIFICATION

Product code	Description	Range	Weight (kg)
SC200-2-S	Straight runner bar with 2 clamps	40mm - 200mm	2.5
SC200-2-S-4	Straight runner bar with 4 clamps	40mm - 200mm	4.6

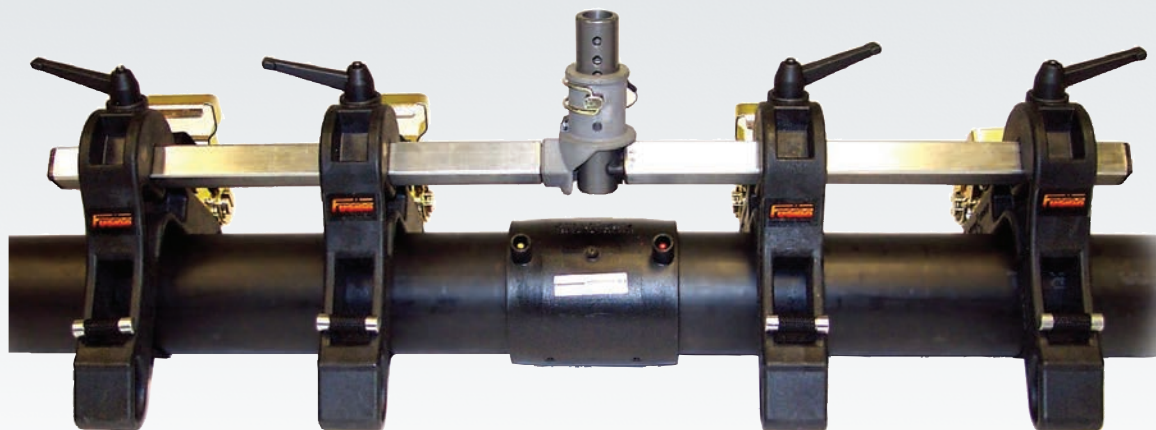
Lightweight, fast set up, alignment clamps for use on 40mm - 200mm pipe. Used on couplers only.

FEATURES

- Lightweight construction
- Fast acting 'tug and tension' straps
- Works above, below or alongside the joint
- Compact design
- No liners required
- National Grid approved (GIS/PL2-5:2006)

Note: to use the strap clamp 200 straight to clamp tees, a T-Adaptor is required - see page 45 for further details.

Strap Clamp 200 Knuckle



SPECIFICATION

Product code	Description	Range	Weight (kg)
SC200-2-K	Knuckle bar with 2 clamps	40mm - 200mm	2.7
SC200-2-K-4	Knuckle bar with 4 clamps	40mm - 200mm	4.6

Lightweight, fast set up, alignment clamps for use on 40mm - 200mm pipe. A centrally located adjustable knuckle allows the SC200-2-K to be used for 22.5°, 45° and 90° elbows, reducers and couplers.

FEATURES

- Lightweight construction
- Fast acting 'tug and tension' straps
- Works above, below or alongside the joint
- Compact design
- No liners required
- National Grid approved (GIS/PL2-5:2006)

Note: to use the strap clamp 200 knuckle to clamp tees, a T-Adaptor is required - see page 45 for further details.

Strap Clamp Titan 200



SPECIFICATION

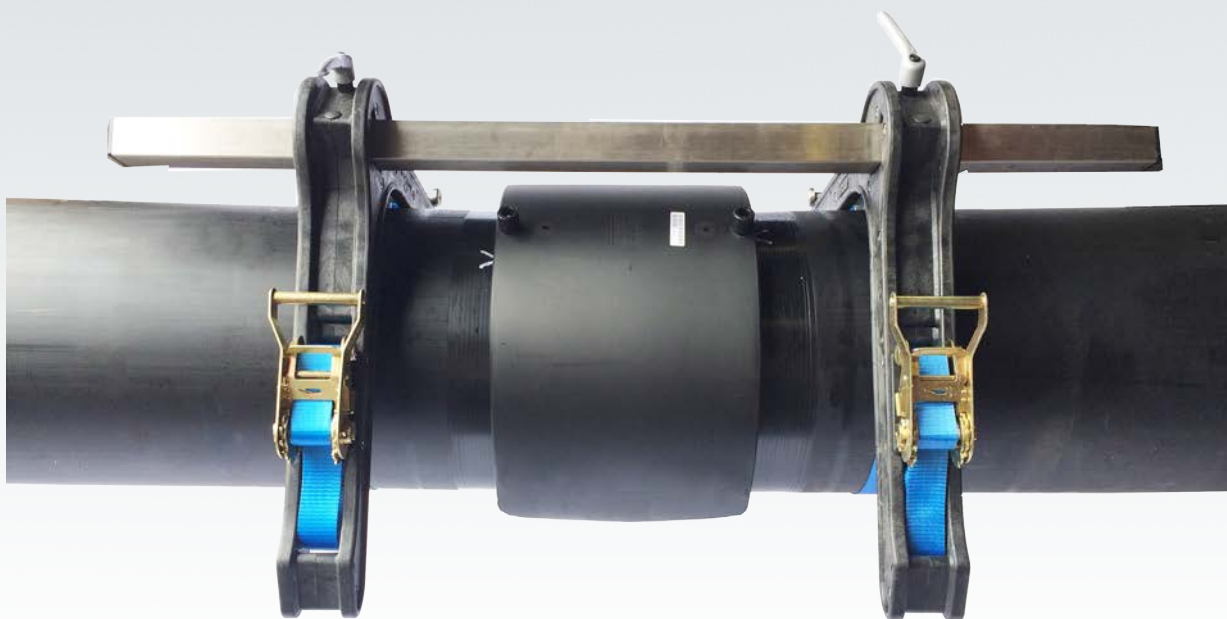
Product code	Description	Range	Weight (kg)
SC200T	Straight ratchet runner bar with 4 clamps	40mm - 200mm	6.5

Lightweight, fast set up, alignment clamp for use on 40mm - 200mm pipe. Used on couplers only. The Titan clamp pulls the pipe into position with minimal effort using a rack and pinion system.

FEATURES

- Ratchet handle included
- Lightweight construction
- Fast acting 'tug and tension' straps
- Works above, below or alongside the joint
- Compact design
- No liners required
- National Grid approved (GIS/PL2-5:2006)

Strap Clamp 500 Straight



SPECIFICATION

Product code	Description	Range	Weight (kg)
SC500	Plain runner bar with 2 clamps	160mm - 500mm	8
12799	V block clamp assembly	160mm - 500mm	1.5

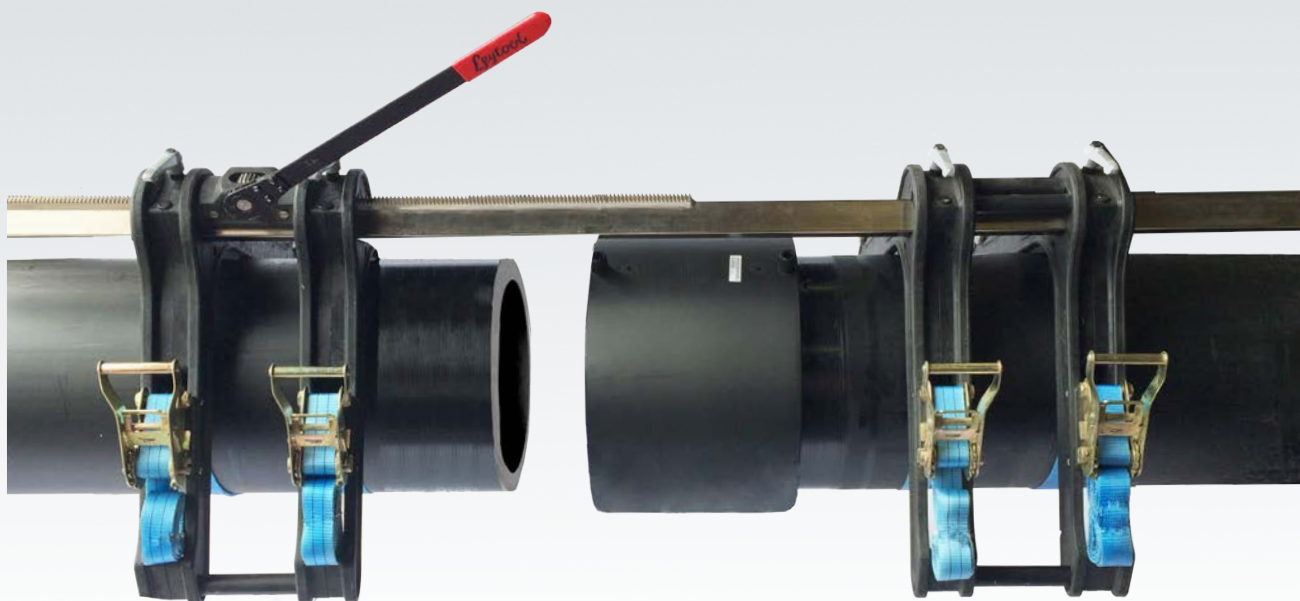
Fast set up alignment clamp, for use on 160mm - 500mm pipe. Used on couplers only.

FEATURES

- Lightweight robust construction
- Fast acting 'tug and tension' straps
- Works above, below or alongside the joint
- Compact design
- No liners required
- National Grid approved (GIS/PL2-5:2006)

Note: to use the strap clamp 500 straight to clamp tees, a T-Adaptor is required - see page 45 for further details.

Strap Clamp Titan 500



SPECIFICATION

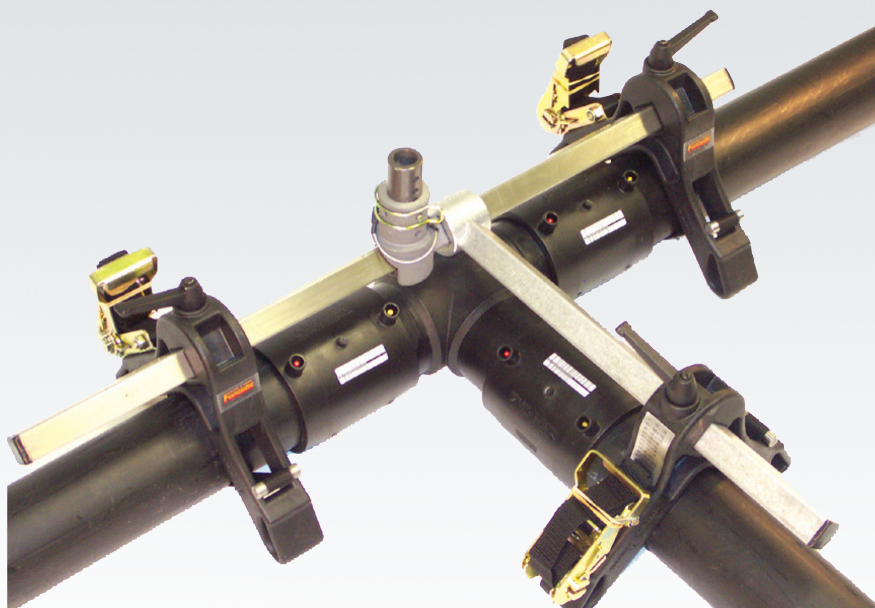
Product code	Description	Range	Weight (kg)
SC500T	Straight ratchet runner bar with 4 clamps	160mm-500mm	20

Fast set up, alignment clamp for use on 160mm - 500mm pipe. Used on couplers only. The Titan clamp is capable of pulling 12m lengths of pipe into position, using a rack and pinion system.

FEATURES

- Ratchet handle included
- Fast acting 'tug and tension' straps
- Works above, below or alongside the joint
- Compact design
- No liners required
- National Grid approved (GIS/PL2-5:2006)

T-Adaptor



Strap clamp with T-Adaptor fixed in place



T-Adaptor

SPECIFICATION

Product code	Description	Range	Weight (kg)
SC200ADT	T-Adaptor for strap clamp 200	40mm-200mm	0.3
SC500ADT	T-Adaptor for strap clamp 500	160mm-500mm	3.4
34989	V block clamp assembly for 200 T-Adaptor	40mm-200mm	0.6
12799	V block clamp assembly for 500 T-Adaptor	160mm-500mm	1.5

The T-adaptor is an add-on tool enabling strap clamps to be used for clamping tees. To use the T-Adaptor a further V-Block clamp needs to be purchased.

FEATURES

- The T-adaptor can either be used on the SC200 or SC500 range.
- National Grid approved (GIS/PL2-5:2006)

Hydraulic Pipe Clamps



SPECIFICATION

Product code	Description	Weight (kg)
HRR400KIT	Hydraulic rerounding clamp 400mm*	50
HRR500KIT	Hydraulic rerounding clamp 500mm*	68
HRR630KIT	Hydraulic rerounding clamp 630mm*	79
HRR710KIT	Hydraulic rerounding clamp 710mm*	89
HRR800KIT	Hydraulic rerounding clamp 800mm	125
HRR900KIT	Hydraulic rerounding clamp 900mm	155

Note - Each kit is supplied with two clamps, two hand pumps, two hydraulic cylinders, and two alignment bars.

Hydraulically powered re-rounding and positioning clamps for supporting and restraining large diameter pipes and couplers throughout the electrofusion process.

FEATURES

- Made from fabricated steel construction
- Hydraulic power provided by 2 hand pumps
- Excellent re rounding capability
- 3 segment pipe clamps, disassemble for ease of transportation
- Available with straight base only
- Can be used as alignment kit
- Steel reducing liners available on request
- Single clamp available on request
- National Grid approved (GIS/PL2-5:2006) where marked*

Rerounding/Post Squeeze Off Clamps



SPECIFICATION

Product code	Range	Weight (kg)
RRC50	50mm	2.9
RRC63	63mm	3
RRC75	75mm	3.5
RRC90	90mm	3.5
RRC110	110mm	5.8
RRC125	125mm	5.5
RRC140	140mm	5.5
RRC160	160mm	7.5
RRC180	180mm	6.8
RRC200	200mm	9.3
RRC225	225mm	11.5
RRC250	250mm	12

Designed for re rounding pipes after squeeze off has been applied.

FEATURES

- Rerounds the pipe effectively covering a large surface area.
- National Grid approved (GIS/PL2-5:2006)



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.

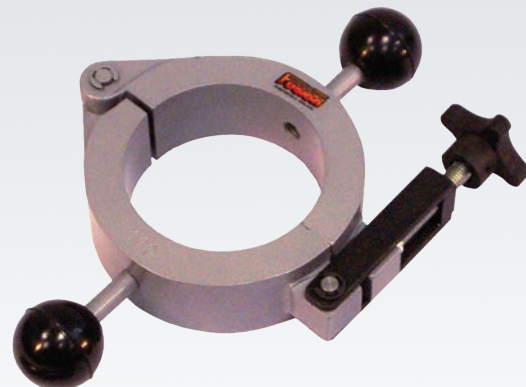
Rerounding Tools



Rerounding tool 20mm - 32mm



Rerounding tool 40mm - 90mm



Rerounding tool 110mm - 250mm

SPECIFICATION

Product code	Range	Weight (kg)
RRT20	20mm	0.5
RRT25	25mm	0.5
RRT32	32mm	0.5
RRT40	40mm	1.5
RRT50	50mm	1.3
RRT63	63mm	1.3
RRT75	75mm	1.5
RRT90	90mm	1.5
RRT110	110mm	2.0
RRT125	125mm	2.0
RRT160	160mm	2.3
RRT180	180mm	3.0
RRT200	200mm	3.0
RRT225	225mm	3.0
RRT250	250mm	3.0

A range of re rounding tools for use on polyethylene coiled or oval pipe prior to electrofusion.

FEATURES

- Quick and simple to use.
- National Grid approved (GIS/PL2-5:2006)

Mini Squeeze Tool



SPECIFICATION

Product code	Description	Weight (kg)
SQT32	16mm - 32mm mini squeeze tool	1

The mini squeeze tool is designed solely for use on SDR 11 service pipes in the range 16mm to 32mm diameter.

FEATURES

- Manufactured from cast stainless steel
- Compact robust design
- User friendly
- Unique design incorporates built-in safety stops to prevent damage to the pipe
- National Grid approved (GIS/PL2-7:2006)

Service Squeeze Tool



SPECIFICATION

Product code	Description	Weight (kg)
SQT63	16mm - 63mm service squeeze tool (UK)	6
SQT63X10	16mm - 63mm service squeeze tool (Export)	6

The service squeeze tool is for flow stopping on 16, 20, 25, 32, 40, 50 and 63mm pipes.

FEATURES

- Cast steel construction
- Hand indexable stops
- National Grid approved (GIS/PL2-7:2006)

Mechanical Squeeze Tool



SPECIFICATION

Product code	Description	Weight (kg)
SQT125M	63 - 125mm mechanical squeeze tool	9

Mechanical squeeze off tool for pipe 63mm-125mm diameter

FEATURES

- Can be used on SDR 11 pipe between sizes 63 and 90mm
- Can be used on SDR17.6 pipe between sizes 90, 110 and 125mm.
- Fabricated steel construction
- Hand indexable stops
- National Grid approved (GIS/PL2-7:2006)

200 Hydraulic Mains Squeeze Tool



SPECIFICATION

Product code	Description	Weight (kg)
SQT200	200mm squeeze tool with stops for SDR 11 and 17	39
SQT200UK	200mm squeeze tool with stops for SDR 11, 17 and SDR21	39

Hydraulic mains squeeze tool used as a flow stop on 63mm - 200mm diameter pipes.

FEATURES

- High quality hydraulic jack
- Spring return after squeeze off
- Fabricated steel construction
- Controlled release through hydraulic shut off valve
- Integral safety relief valve
- National Grid approved (GIS/PL2-7:2006)

250 Mains Squeeze Tool



SPECIFICATION

Product code	Description	Weight (kg)
SQT250AHP	SQT250 manual squeeze off tool 4 beam set with hand pump	180
SQT250AAI	SQT250 auto hydraulic squeeze off tool 4 beam set with air intensifier	190

The 250 mains squeeze tool can be used for flow stopping on 180mm-250mm pipe. Pipe stops need to be ordered separately for each diameter and SDR rating. Tool supplied with 4 beam sets

FEATURES

- 'A' frame design, robust construction for in-trench work
- The 'A' frame can be detached and used with an additional beam set which allows up to four squeeze- off points to be carried out efficiently with one tool.
- Controlled release through hydraulic shut off valve
- National Grid approved (GIS/PL2-7:2006)

400 Mains Squeeze Tool



SPECIFICATION

Product code	Description	Weight (kg)
SQT400	SQT400 auto hydraulic squeeze off tool, 4 beam set with air intensifier	430
SQT400E	SQT400 auto hydraulic squeeze off tool, 4 beam set with electric pump	430

The 400 mains squeeze tool can be used for flow stopping on 250mm-400mm pipe. Pipe stops need to be ordered separately for each diameter and SDR rating. Tool supplied with 4 beam sets.

FEATURES

- Very robust construction
- The cylinders can be detached and used with other beam sets which allows up to four squeeze off points to be carried out efficiently with one tool
- Controlled release through hydraulic shut off valve
- National Grid approved (GIS/PL2-7:2006)

Generators



SPECIFICATION

Generator product code	Description
P501	Generator 5KVA on frame (skids)
P501WF	Generator 5KVA on wheeled frame
P750	Generator 7.5KVA on frame (skids)
P750WF	Generator 7.5KVA on wheeled frame

Please state which output voltage and sockets required at the time of ordering.

BUTT FUSION POWER REQUIREMENTS

Machine description	Select generator output voltage (V)		Minimum power required	
	110V single phase	220V single phase	kW	kVA
GATOR 180	✓	✓	2.9	3.6
GATOR 250	✓	✓	3.2	4.0
GATOR 315	✓	✓	4.8	6.0
GATOR 400	✓	✓	5.6	7.0

ELECTROFUSION POWER REQUIREMENTS

Machine description	Select generator output voltage (V)		Minimum power required	
	110V single phase	220V single phase	kW	kVA
SBOX LITE 110	✓	-	2.2	2.8
SBOX LITE 220	-	✓	2.2	2.8
SBOX-MAX	-	✓	4.8	6.0

Fusion's range of generators are specifically manufactured for powering both electrofusion control boxes and automatic butt fusion machines. All Fusion generators produce a high quality, smooth, regular power output. All generators comply with the Tin12 (EC3) specification, are available in petrol or diesel engines, and meet the current EC regulations.

Generators are tailored to suit your own specific requirements, please contact us for further details.



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Fastcut Drill



SPECIFICATION

Product code	Description	Range	Weight (kg)
FASTCUT355110V	Fastcut drill UK	225mm-500mm	197
FASTCUT355220V	Fastcut drill Export	225mm-500mm	197

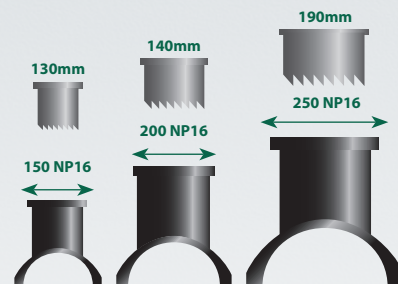
Fusion's range of large diameter electrofusion branch saddles provides the gas and water installer with a simple alternative to the high cost of by-pass systems or the inconvenience and associated costs of supply interruptions. Under pressure drilling provides the operator with a simple, safe and cost-effective method of branch installation.

FEATURES

- Installation training provided
- Modular construction ensures ease of handling and assembly
- Hydraulic operation of cutter head helps the operator with cutting through the pipe
- Can be used with plate or gate valves
- Dedicated cutter drive prevents penetration beyond centre line of main
- Swarf and coupon retained inside cutter
- Drill comes complete with 3 heads as standard - 250, 200 and 150 NP16
- ANSI standard version available upon application
- Rotational/adjustable jack to aid alignment
- Pendant cutter control with timer to allow single operator cut through
- National Grid approved (GIS/PL2-5:2006)

Large Diameter Branch Saddles

- Complete with sacrificial under parts - no additional tooling needed
- Minimal pressure drop due to large bore through fitting
- Large electrofusion area ensures integrity of weld
- 39.5 volt fittings
- Tested in accordance with industry specifications



Outlet sizes available: 150, 200, 250 NP16

		UK GAS APPLICATIONS (GIS)					UK / EUROPEAN WATER APPLICATIONS					EUROPEAN GAS APPLICATIONS				
Branch Saddle Size	Pipe Material	Maximum Operating Pressure	Pipe SDR				Maximum Operating Pressure	Pipe SDR				Maximum Operating Pressure	Pipe SDR			
			11	17.6	21	26		11	17.6	21	26		11	17.6	21	26
250mm x 150 NP16	PE80	5.5 bar	✓	✓	✓	-	16 bar	✓	✓	✓	-	10 bar	✓	✓	✓	-
	PE100			✓	✓	-		✓	✓	✓	-		✓	✓	✓	-
250mm x 200 NP16	PE80	5.5 bar	✓	✓	✓	-	16 bar	✓	✓	✓	-	10 bar	✓	✓	✓	-
	PE100			✓	✓	-		✓	✓	✓	-		✓	✓	✓	-
280mm x 150 NP16	PE80	TBA	-	-	-	-	TBA	-	-	-	-	TBA	-	-	-	-
	PE100															
280mm x 200 NP16	PE80	5.5 bar	✓	✓	✓	-	16 bar	✓	✓	✓	-	10 bar	✓	✓	✓	-
	PE100		-	✓	✓	-		✓	✓	✓	-		✓	✓	✓	-
315mm x 150 NP16	PE80	7 bar	✓	✓	✓	✓	16 bar	✓	✓	✓	✓	10 bar	✓	✓	✓	✓
	PE100		✓	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓
315mm x 250 NP16	PE80	7 bar	✓	✓	✓	✓	16 bar	✓	✓	✓	✓	10 bar	✓	✓	✓	✓
	PE100		✓	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓
355mm x 150 NP16	PE80	7 bar	✓	✓	✓	✓	16 bar	✓	✓	✓	✓	10 bar	✓	✓	✓	✓
	PE100		✓	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓
355mm x 250 NP16	PE80	7 bar	✓	✓	✓	✓	16 bar	✓	✓	✓	✓	10 bar	✓	✓	✓	✓
	PE100		✓	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓
400mm x 150 NP16	PE80	5.5 bar	✓	✓	✓	✓	16 bar	✓	✓	✓	✓	10 bar	✓	✓	✓	✓
	PE100		-	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓
400mm x 250 NP16	PE80	2 bar	-	✓	✓	✓	10 bar	✓	✓	✓	✓	6 bar	✓	✓	✓	✓
	PE100			✓	✓	✓		-	✓	✓	✓		-	✓	✓	✓
450mm x 150 NP16	PE80	2 bar	-	✓	✓	✓	10 bar	✓	✓	✓	✓	6 bar	✓	✓	✓	✓
	PE100			✓	✓	✓		-	✓	✓	✓		✓	-	✓	✓
450mm x 250 NP16	PE80	2 bar	-	✓	✓	✓	10 bar	✓	✓	✓	✓	6 bar	✓	✓	✓	✓
	PE100			✓	✓	✓		-	✓	✓	✓		✓	-	✓	✓
500mm x 150 NP16	PE80	2 bar	-	✓	✓	✓	10 bar	✓	✓	✓	✓	6 bar	✓	✓	✓	✓
	PE100			✓	✓	✓		-	✓	✓	✓		✓	-	✓	✓
500mm x 250 NP16	PE80	2 bar	-	✓	✓	✓	10 bar	✓	✓	✓	✓	6 bar	✓	✓	✓	✓
	PE100			✓	✓	✓		-	✓	✓	✓		✓	-	✓	✓
630mm x 150 NP16	PE80	2 bar	-	✓	✓	✓	10 bar	✓	✓	✓	✓	6 bar	✓	✓	✓	✓
	PE100			✓	✓	✓		-	✓	✓	✓		✓	-	✓	✓
Flow stop 315mm x 150 NP16	PE80	2 bar	-	✓	✓	✓	-	-	-	-	-	-	-	-	-	-
	PE100			✓	✓	✓										
Flow stop 355mm x 150 NP16	PE80	2 bar	-	✓	✓	✓	-	-	-	-	-	-	-	-	-	-
	PE100			✓	✓	✓										
Flow stop 400mm x 150 NP16	PE80	2 bar	-	✓	✓	✓	-	-	-	-	-	-	-	-	-	-
	PE100			✓	✓	✓										

Ancillary Equipment

All ancillary equipment is National Grid approved.



HAND SCRAPER

Product code	Description	Weight (kg)	Spare blade code
HARRIS	1.5" hand scraper	0.1	60122
HARRISLGE	2.5" hand scraper	0.1	60233



SECATEURS

Product code	Description	Weight (kg)
PCS2032M	16mm - 42mm small secateur cutter	0.3
PCS2063SH	20mm - 63mm large secateur cutter (short handle)	1.5
PCS2063	20mm - 63mm large secateur cutter (long handle)	2



JUMBO PIPE CUTTER

Product code	Description	Weight (kg)	Spare blade code
PCJ355	160 - 355mm jumbo pipe cutter	24	PCJBLADE
PCJ630	355mm - 630mm jumbo pipe cutter	28	PCJBLADE
PCJ800	355mm - 800mm jumbo pipe cutter	31	PCJBLADE



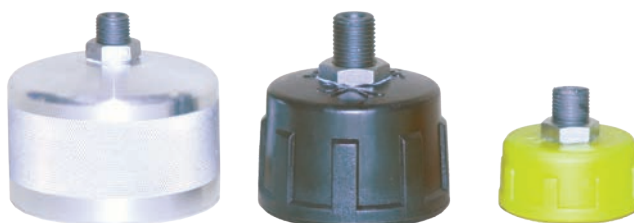
GUILLOTINE CUTTER

Product code	Description	Weight (kg)	Spare blade code
PCG125	63mm - 125mm guillotine cutter	7.5	60449
PCG200	63mm - 225mm guillotine cutter	15	11774
PCG315	63mm - 315mm guillotine cutter	33	11923



CUTTER KEY

Product code	Description	Weight (kg)
CUTKEY12	Universal tapping tee cutter key (with cutter key and wrench)	0.6
CUTTERKEYEXL	Universal tapping tee cutter key extended length - 1000mm	1.3



TEST CAPS

Product code	Description	Weight (kg)
22869	63mm aluminium multiseal test cap	0.4
34571	63mm multiseal test cap	0.1
34263	32mm multiseal test cap	0.1



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