Product range

Machines & Tools 2026

Jointing Solutions

Utilities, Water Treatment and Marine Range

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Utility Range

MSA Machines

Product Range Overview

Characteristic	MSA 160	MSA 315	MSA 340	MSA 2.0	MSA 2.1	MSA 2 MULTI	MSA 2 CF	MSA 4.0
Fittings material	PE,PP	PE,PP	PE,PP	PE,PP	PE,PP	PE,PP,PB, PVDF	PE,PP,PB, PVDF	PE,PP
Working temperature range (°C)	-10/+45	-10/+45	-10/+45	-20/+50	-20/+50	-20/+50	-20/+50	-20/+50
Protection factor	IP54	IP65	IP65	IP65	IP65	IP65	IP65	IP65
Electrical switch	√	√	√		√		√	√
Input voltage (Vac)	230	230	230/115	230	230	230	115	230
Output voltage (Vac)	8-42	8-42	8-48	8-48	8-48	3.6-40	3.6-40	8-48
Output current (Amps)	50	70	100	90	90	90	90	110
Barcode input via scanner	Optional	√	√	√	√	√	√	√
Manual fusion input	√	√	√	√	√	√	√	√
Operator badge/Job code		√	√		√	√	√	√
Data records	500	500	1000	350	1000	500	1000	5000
Data protocol format	PDF, CSV	PDF, CSV	PDF, CSV		PDF, BIN	PDF, BIN	PDF, BIN	PDF, BIN
Traceability (ISO 12176-4)			√					√
GPS			√					√
Communication interface	USB	USB	USB	USB	USB	USB	USB	USB
Built in Bluetooth					√			√
Configurable/admin. protected menus			√		√		√	√
Weight (Kg)	13	17	19	11.9	11.9	11.9	12.5	12.5
Mains / fusion cable length	4m/3m	4m/3m	4m/4m	4m/3m	4m/4m	4m/3m	4m/4m	4m/4m
Connectors / adapters	4mm	4mm	4-4.7mm	4mm	4-4.7mm	4mm	4mm	4-4.7mm
Transport box	√	Optional	Optional	√	√	√	√	√
Digital protocol management	Optional	Optional	Optional		√	√	√	√
GF welding App			Optional		√		Optional	√
Rental time App			√					√

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MSA 4

MSA 4.0
Electrofusion Unit with full traceability, GPS and Bluetooth functions

High-performance, lightweight electrofusion unit based on advanced inverter technology. The machine provides complete welding documentation in accordance with ISO 12176, including operator badge identification, job codes, full traceability data, and automatically recorded GPS coordinates for each fusion.
Designed to simplify daily operations, the unit features a long-range barcode scanner, an efficient cooling system that enables consecutive jointing, an intuitive icon-based user interface, and a configurable workflow adaptable to both basic and highly detailed operational requirements.
The entire welding process is continuously monitored and regulated, with automatic energy output compensation according to ambient temperature and clear indication of cooling times.
An integrated Bluetooth module enables data entry, remote monitoring of the fusion process, and wireless collection of stored records via smartphone, with the possibility of seamless data transfer to the office.
A connected 1D barcode scanner, or 2D scanner when unitary QR codes are available. supports operator identification, job assignment, and fusion data input.
The internal memory can store up to 5000 jointing records, which can be exported via a USB stick. Fusion protocols are generated as PDF files. For advanced data management, BIN files are also available, allowing sorting, filtering, and combination of protocols and photos from multiple MSA units using the GF application.
The robust aluminum die-cast enclosure and ergonomic plastic handle ensure durability and balanced handling.
A programmable rental period can be set by the owner, with automatic unit lock upon expiry. Reactivation is possible via a dynamic reset code.
Scope of delivery: transport case, angle adapters (4.0 mm and 4.7 mm), operating instructions, START/STOP badge, configuration chart, and USB flash drive with PC software.

Technical Data:

- Mains frequency: 50-60 Hz
- Fusion data input mode: bar code, manual
- Mains voltage: 230V (190V - 265V)
- Suggested power generators: 3.5 kVA
- Welding technique: Voltage controlled
- Fusion voltage: 8-48 V
- Fusion current: 110 A (max)
- USB Port: Type A
- Operating temperature: -20°C to +50°C
- Internal memory capacity: 5000 protocols
- Protocols format: PDF and BIN (compatible with GFs application)
- Protection factor: Class 1 / IP 65
- Mains cable: 4 m
- Fusion cable: 4 m
- Dimensions: 280 x 480 x 220 mm
- Weight: ca. 12.8 kg
- Display: Graphical LCD, adjustable contrast
- Languages support: 27
- Bluetooth radio interface

Description	Code	Weight (kg)
MSA 4.0 with 2D barcode scanner (QR code reading)	**790 156 012**	19.500

MSA 2

MSA 2.0 Automatic Electrofusion Unit

The MSA 2.0 automatic electro fusion unit combines light weight and high efficiency, thanks to its inverter technology. The unit is extremely fast and simple, with three basic operations required to operator: connect, scan, start the fusion.
The MSA 2.0 can keep up to 350 protocols permanently stored in the internal memory.
Robust, safe, and ergonomic, it is designed for reliable use in demanding conditions.
Every feature is focused on simplifying the operator's work, including a long-range barcode scanner, a cooling system that enables consecutive jointing, and an intuitive icon-based interface that ensures clear interaction between the user and the machine.
The entire welding process is continuously monitored and regulated, with automatic energy output compensation according to ambient temperature and clear indication of cooling times.
Scope of delivery includes: transport box, 4.0 mm angle adapters, START/STOP badge and operating instructions.

Technical Data:

- Operating temperature: -20°C to +50°C
- Mains voltage and frequency: 230V (190V - 265V), 50-60Hz
- Fusion current: 90 A (max)
- Suggested power generators: 3.5 kVA
- Fusion voltage: 8-42 V (48 V)
- Fusion data input mode: bar code, manual
- USB Port: Type A
- Protection factor: Class 1 / IP 65
- Mains cable: 4 m / Fusion cable: 3 m
- Dimensions: 280 x 480 x 220 mm
- Weight: ca. 11.9 kg
- Display: Graphical LCD, adjustable contrast
- Independent from languages

Description	Code	Weight (kg)
Barcode scanner, transport case	**790 156 001**	11.900
Barcode scanner, transport case, Swiss plug	**790 156 004**	11.900

MSA 2.1 Automatic Electrofusion Unit with Bluetooth connectivity and protocols export

The MSA 2.1 automatic electrofusion unit combines lightweight design with high efficiency, thanks to advanced inverter technology, and provides comprehensive fusion documentation in PDF format. The unit is fast and easy to operate, requiring only three basic steps: connect, scan, and start the fusion.
Robust, safe, and ergonomic, it is designed for reliable use in demanding conditions.
Every feature is focused on simplifying the operator's work, including a long-range barcode scanner, a cooling system that enables consecutive jointing, and an intuitive icon-based interface that ensures clear interaction between the user and the machine.
The entire welding process is continuously monitored and regulated, with automatic energy output compensation according to ambient temperature and clear indication of cooling times.
An integrated Bluetooth module enables data entry, remote monitoring of the fusion process, and wireless collection of stored records via smartphone, with the possibility of seamless data transfer to the office.
The internal memory can permanently store up to 1000 fusion protocols. Fusion reports can be exported to a USB stick and printed in PDF format.
Scope of delivery: transport box, angle adapters (4.0 mm and 4.7 mm), operating instructions, START/STOP badge, and USB flash drive with PC applications.

Technical Data:

- Operating temperature: -20°C to +50°C
- Mains voltage and frequency: 230V (190V - 265V), 50-60Hz
- Fusion voltage: 8-42 V (48 V)
- Fusion data input mode: bar code, manual
- Fusion current: 90 A (max)
- Suggested power generators: 3.5 kVA
- USB Port: Type A
- Protection factor: Class 1 / IP 65
- Mains cable: 4 m / Fusion cable: 4 m (8 m only for code 790156010)
- Weight: ca. 11.9 kg
- Display: Graphical LCD, adjustable contrast
- Independent from languages
- Bluetooth radio interface

Description	Code	Weight (kg)
Barcode scanner, transport case, mini Welding Book, Swiss plug	**790 156 006**	11.900
Barcode scanner, transport case, mini Welding Book	**790 156 003**	11.900
Barcode scanner, transport case, mini Welding Book, 8m fusion cable	**790 156 010**	12.900

MSA 2 MULTI Automatic Electrofusion Unit for PE/PP/PVDF/PB

The MSA 2 MULTI automatic electro fusion unit combines light weight and high efficiency, thanks to its inverter technology. The unit is suitable for welding PE, PP, INSTAFLEX PB d125-225, Fuseal d1 1/2"-12" and PPro-Seal 1/2"-3".
Robust, safe, and ergonomic, it is designed for reliable use in demanding conditions.
Every feature is focused on simplifying the operator's work, including a long-range barcode scanner, a cooling system that enables consecutive jointing, and an intuitive icon-based interface that ensures clear interaction between the user and the machine.
The entire welding process is continuously monitored and regulated, with automatic energy output compensation according to ambient temperature and clear indication of cooling times.
The internal memory can permanently store up to 1000 fusion protocols. Fusion reports can be exported to a USB stick and printed in PDF format.
Scope of delivery includes: 1 pair of angle adapter clips 4.0 mm, operating instructions, START/STOP badge, USB memory stick and robust transport case

Technical Data:

- Operating temperature: -20°C to +50°C
- Mains voltage and frequency: 230V (190V - 265V), 50-60Hz
- Fusion data input mode: bar code, manual
- Fittings range: d16-630 mm , 1/2"-12"
- Fusion voltage: 3.6-40 V
- Fusion current: 90 A (max)
- Suggested power generators: 3.5 kVA
- USB Port: Type A
- Protection factor: Class 1 / IP 65
- Mains cable: 4 m / Fusion cable: 3 m
- Weight: ca. 11.9 kg
- Display: Graphical LCD, adjustable contrast

Description	Code	Weight (kg)
Full package plus mini Welding Book, SeaDrain adapters and barcodes	**790 156 022**	11.900

MSA 2 CF @ 115V - Automatic Electrofusion Unit with protocols export

The MSA 2 CF electro fusion unit combines light weight and high efficiency, thanks to its power switching technology and furthermore provides fusion documentation in PDF. The unit is extremely fast and simple, like COOL-FIT installations, with three basic operations required to the operator: connect, scan, start the fusion.
Robust, safe, and ergonomic, it is designed for reliable use in demanding conditions.
Every feature is focused on simplifying the operator's work, including a long-range barcode scanner, a cooling system that enables consecutive jointing, and an intuitive icon-based interface that ensures clear interaction between the user and the machine.
The entire welding process is continuously monitored and regulated, with automatic energy output compensation according to ambient temperature and clear indication of cooling times.
The internal memory can permanently store up to 1000 fusion protocols. Fusion reports can be exported to a USB stick and printed in PDF format.
Scope of delivery includes: transport box, standard and long angle adapters (4.0 mm), operating instructions, START/STOP badge and USB memory stick with PC applications.
The unit is suitable for welding PE, PP, INSTAFLEX PB d125-225, Fuseald1 1/2"-12" and PPro-Seal 1/2"-3".

Technical Data:

- Operating temperature: -20°C to +50°C
- Mains voltage: 90V - 135V AC
- Mains frequency: 50-60 Hz
- Fusion data input mode: bar code, manual
- Fusion voltage: 3.6-42 V
- Fusion current: 90 A (max)
- Suggested power generators: 3.5 kVA
- Fittings range: d20-d450 (inner diameter) COOL-FIT 2.0/4.0
- Protocols format: PDF and binary (compatible with GFs application)
- USB Port: Type A
- Protection factor: Class 1 / IP 65
- Mains cable: 4 m / Fusion cable: 4 m
- Weight: ca 12.5 kg
- Display: Graphical LCD, adjustable contrast
- Independent from languages

Description	Code	Weight (kg)
Barcode scanner, transport case, mini Welding Book	**790 156 023**	13.000

MSA 315 / MSA 340

MSA 315 Automatic Electrofusion Unit

The MSA 315 automatic electro fusion unit combines performance and compact design, for installers who need to weld fittings up to diameter 315mm, in building technology and gas/water distribution applications. The unit is extremely simple to use, with a few basic operations required to operator: connect, confirm, scan, and start the fusion. The installer can also track operator and job code if needed.
Robust, safe, and ergonomic, it is designed for reliable use in demanding conditions.
The entire welding process is continuously monitored and regulated, with automatic energy output compensation according to ambient temperature and clear indication of cooling times.
The internal memory can permanently store up to 1000 fusion protocols. Fusion reports can be exported to a USB stick and printed in PDF format.
Scope of delivery includes: 1 pair of angle adapter clips 4.0 mm, operating instructions and optionally a transport case

Technical Data:

- Operating temperature: -10°C to 45°C
- Fusion data input mode: bar code, manual
- Welding technique: Voltage controlled
- Mains voltage and frequency: 230V (190V - 265V), 50-60Hz
- Fusion voltage: 8-42 V
- Fusion current: 70 A (max)
- Fittings range: d20-315 mm
- Internal memory capacity: 500 protocols
- Protocols format: PDF, CSV
- Protection factor: Class 1 / IP 65
- USB Port: Type A
- Mains cable: 4 m / Fusion cable: 3 m
- Weight: 17 kg
- Display: Graphical LCD, adjustable contrast

Description	Code	Weight (kg)
Manual mode, carton box	**790 128 040**	17.000
Transport box, automatic with barcode reader	**790 128 042**	17.000

MSA 340 Electrofusion Unit with traceability and GPS function

High performance electrofusion unit providing fusion documentation, including traceability data (ISO 12176-4) , operator ID, job code and automatic GPS coordinates in each fusion record. The internal memory has a capacity of 1000 jointing records. For data transfer the unit is equipped with an USB interface. The record formats are PDF and CSV, both manageable with common and free PC software applications. An intuitive operation menu guides you through the complete jointing process. For fusion data input a barcode scanner is connected. The entire welding process is controlled and regulated with energy output compensation depending on ambient temperature and indication of cooling time. Robust aluminum housing with convenient cable winding and handle for weight balanced transport. The unit is suitable for jointing in series.
Scope of delivery: transport case, angle adapters (4.0 mm and 4.7 mm), operation instructions and configuration chart.

Technical Data:

- Ambient temperature: -10°C to +45°C
- Mains voltage: 230 V (±15%) or 115 V (±15%)
- Mains frequency: 40 Hz - 70 Hz
- Fusion voltage: 8 - 48V AC
- Fusion current: 100 A (max)
- Suggested power generator: 3.5 kVA (5.0 kVA for fittings with d>200mm)
- Mains cable: 4 m / Fusion cable: 4 m
- Protection factor: Class 1 / IP 65
- Interface: USB (type A) for PC communication and software updates
- Weight: 19 kg
- Dimensions (WxHxD): 280 x 480 x 240 mm
- Display: LCD (20 alphanumerical char. x 4 lines), contrast adjustment
- Configurable languages: 11

Description	Code	Weight (kg)
Barcode scanner, transport box	**790 160 063**	18.000
Barcode scanner, transport box	**790 160 073**	18.000

MSA 160

MSA 160 Automatic Electrofusion Unit

The MSA 160 automatic electro fusion unit combines light weight and compact design, for installers who need to weld fittings up to diameter 160mm (180mm when using GF ELGEF+) , in building technology and gas/water distribution applications. The unit is extremely simple to use, with a few basic operations required to operator: connect, confirm, scan, and start the fusion. Robust, safe, and ergonomic, it is designed for reliable use in demanding conditions.
The entire welding process is continuously monitored and regulated, with automatic energy output compensation according to ambient temperature and clear indication of cooling times.
The unit can keep up to 500 fusion protocols permanently stored in the internal memory. The user can export the fusion reports to an USB stick to print them out in PDF format.
Scope of delivery includes: 1 pair of angle adapter clips 4.0 mm, operating instructions and robust transport case

Technical Data:

- Operating temperature: -10°C to 45°C
- Fusion data input mode: bar code, manual
- Mains voltage: 230V (205V - 255V)
- Mains frequency: 50-60 Hz
- Welding technique: Voltage controlled
- Fusion voltage: 8-42 V
- Fusion current: 50 A (max)
- Internal memory capacity: 500 protocols
- Fittings range: d20-160 mm (180 mm for GF ELGEF+)
- Protocols format: PDF, CSV
- USB Port: Type A
- Protection factor: Class 1 / IP 54
- Fusion cable: 3 m
- Mains cable: 4 m
- Weight: 13 kg
- Display: Graphical LCD, adjustable contrast
- Languages support: English, Italian, Chinese and French

Description	Code	Weight (kg)
Manual mode version	**790 160 065**	12.000
Barcode (scanner) and manual mode version	**790 160 066**	15.000

MSA Accessories

Barcode Scanner

Barcode scanner for automatic fusion and traceability data reading of fittings and pipes

- Refer to machine S/N to check the proper version with sales support
- The product codes indicated with * do not include the connection cable, just the barcode scanner, therefore the cable must be ordered separately (refer to the specific item "Cable for barcode scanner" to check the correct code to order); all other codes already include the cable.

Description	Code	Weight (kg)
MSA 2.0 barcode scanner*	**790 156 160**	0.250
MSA 2.1 barcode scanner*	**790 156 260**	0.250
MSA 4.0 barcode scanner*	**790 156 261**	0.250
MSA 125 / MSA 160 barcode scanner and cable	**790 160 251**	0.250
MSA 160 new USB barcode scanner and cable (no fixing cap)	**790 160 289**	0.225
MSA330/MSA340 rugged USB scanner and cable	**790 160 252**	0.350
MSA 330/340 V3 and MSA 315 barcode scanner*	**790 160 256**	0.225

Cable for barcode scanner

Cable to connect the barcode scanner to the corresponding MSA electro-fusion unit

Description	Code	Weight (kg)
Cable for scanner of MSA 2.0 (ref. code 790 156 160), MSA 2.1 (ref. code 790 156 260), MSA 4.0 (ref. code 790 156 261)	**790 156 308**	0.100
Cable for MSA 125 / 160 scanner (ref. code 790 160 251)	**790 128 234**	0.100
Cable for MSA 160 new USB (no fixing cap) (ref. code 790 160 289)	**790 128 186**	0.100
Cable for MSA 330 / 340 rugged USB scanner (ref. code 790 160 252)	**790 128 244**	0.100
Cable for MSA 330 / 340 V3 and MSA 315 barcode scanner (ref. code 790 160 256)	**790156308B**	0.100

Geothermal cables kit

- Ability to joint in parallel 2 couplers of a Y fitting
- Welding voltage: 0 – 48 Volt
- Welding current: 40 A (max.)
- Content of delivery: 2 cables, pouch, protection caps, operation manual
- Recommended in combination with ELGEF fittings
- Compatible with all MSA Units
- Connector: 4 mm (90°)
- Cable length: 290 mm

Description	Code	Weight (kg)
MSA geothermal cables	**790 160 176**	0.385

Adapters 4.0mm for MSA

- Adapters for Electrofusion units with 4 mm connectors.
- Compatible with all MSA Units

Description	Code	Weight (kg)
Angle adapter, black, 4.0mm	**799 350 340**	0.058

Adapters 4.7mm angle for MSA

- Adapters for Electrofusion units with 4 mm connectors.
- Compatible with all MSA Units

Description	Code	Weight (kg)
Angle adapter, grey, 4.7mm	**799 350 341**	0.057

Adapters 4.7mm straight for MSA

- Adapters for Electrofusion units with 4 mm connectors.
- Compatible with all MSA Units

Description	Code	Weight (kg)
Adapter, white, 4.7mm	**799 350 462**	0.014

Long adapters

- Adapters for Electrofusion units with 4 mm connectors.
- Longer version, suitable for all COOL-FIT 4.0 dimensions.

Description	Code	Weight (kg)
Angle adapters pair, black, 4.0mm	**790 128 035**	0.058

COOL-FIT Y cables kit

- The COOL-FIT Y cables are used to speed up the installation of the fixed points electrofusion tapes. The Y cables allow the welding in parallel of 2 E-Tapes, halving the total duration of the fusion process.
- Compatible with all MSA Units

Description	Code	Weight (kg)
4 leads cable with 2mm plugs in output	**790 156 032**	0.385

SeaDrain/FUSEAL cable adapters

- Ability to joint in parallel up to 4 coils, for SeaDrain, SeaDrain PLUS, Fuseal, PPRo-Seal and Fuseal 25/50
- Compatible with all MSA Units

Cable length (m)	Code	Weight (kg)
0.6	**790 156 184**	0.400
1.6	**790 156 195**	0.400

Barcode cards set

Barcodes kit for SeaDrain and SeaDrain+ fittings, including coil tester
Compatible with MSA 2 MULTI, MSA 2 CF and MSA 250 EX-MULTI.

Type	Code	Weight (kg)
Barcode set and tester for MSA 2 CF and MULTI	**790 156 194**	0.400

Transport Box MSA electro-fusion units

- Large, robust transport box for MSA machines
- Refer to machine S/N to check the proper version with sales support

Suitable for	Code	Weight (kg)	L (mm)	W (mm)	H (mm)
MSA330 / MSA340 / MSA230 Ver.2	**790 160 010**	8.000	370	350	520
MSA 2 / MSA 4	**790 156 228**	6.600	315	315	525
MSA330 / MSA340 Ver.3 & MSA315	**790 156 328**	6.000	315	315	525

Utility Range

MSA Machines

Accessories Code

Machine type	Transport Box	Scanner	Cable for scanner	Adapters	CoolFit Y cables	Long adapters	Geothermal kit
MSA 4.0	790 156 228	790 156 261**	790 156 308	799 350 340/1	790 156 032	790 128 035	790 160 176
MSA 2.1	790 156 228	790 156 260**	790 156 308	799 350 340/1	790 156 032	790 128 035	790 160 176
MSA 2.0	790 156 228	790 156 160**	790 156 308	799 350 340/1	790 156 032	790 128 035	790 160 176
MSA 2 MULTI*	790 156 228	790 156 160**	790 156 308	799 350 340/1	790 156 032	790 128 035	790 160 176
MSA 2 CF	790 156 228	790 156 260**	790 156 308	799 350 340/1	790 156 032	790 128 035	790 160 176
MSA 340 V3	790 156 328	790 160 256**	790 156 308B	799 350 340/1	790 156 032	790 128 035	790 160 176
MSA 330 V3	790 156 328	790 160 256**	790 156 308B	799 350 340/1	790 156 032	790 128 035	790 160 176
MSA 315	790 156 328	790 160 256***	790 128 234	799 350 340/1	790 156 032	790 128 035	790 160 176
MSA 125-160	-	790 160 251***	790 128 234	799 350 340/1	-	-	790 160 176
MSA 160 new USB	-	790 160 289***	790 128 186	799 350 340/1	-	-	790 160 176

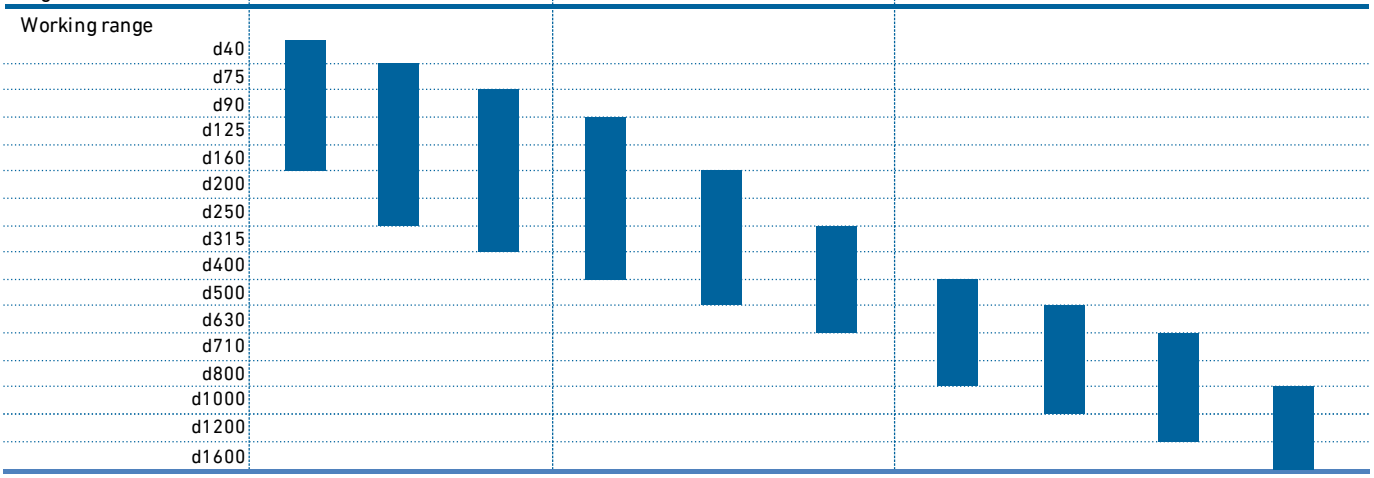
* Just for this electrofusion unit type, the SeaDrain cable adapters are available as accessory with code 790 156 195
** Cable not included (see next column to check the correct cable code if needed)
*** This code also includes the cable

Utility Range

Trench Machines

Product Range Overview

Characteristic	ECOS-TOP-CNC 160	250	315	ECOS-TOP-CNC 400	500	630	GF 800	1000	1200	1600
Max jointing diameter (mm)	160	250	315	400	500	630	800	1000	1200	1600
Jointing material	PE, PP, PB			PE,PP,PB			PE,PP			
Working range (°C)	-10/+45			-10/+45			-10/+45			
Input voltage (Vac)	230/115	230	230	400	400	400	400	400	400	400
Operation control	Manual, CNC			Manual, CNC			Manual			
Performance (W)	1900	3250	3850	5700	6300	11000	15000	19500	20500	55000
Reduction inserts / Flange adapter clamp	Optional			Optional			Optional			
Hoist unit				Optional			Optional			
Chamfered upper clamp	Optional			Optional						
Fusion protocols, transfer via USB stick	WR 200 (Optional), CNC			WR 200 (Optional), CNC			WR 200 (Optional)			
Remote data transfer via smartphone	TOP, CNC			TOP, CNC						
Traceability	CNC			CNC						
Weight – base machine (Kg)	22	47	53	95	169	222	690	1238	1370	3350



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ECOS 160 - 250 - 315

ECOS 160 - 250 - 315
Butt fusion machine for construction site

Butt Fusion machine to joint PE, PP, PB pipes and fittings for pressure piping systems on building sites and in trenches.
Hydraulically operated with manual control unit.
Temperature controller integrated in the heating element handle.
Including transport packaging (carton pallet); reduction clamping inserts and other accessories to be ordered separately.

- **BASE MACHINE**
- High precision design, distortion-free and sturdy machine frame
- Good accessibility thanks to 35° inclination
- The movable (sliding) 3rd clamp allows easy and time-saving fixation of bends or tees without need of additional tools
- Clamps are hinged on the top side and tilting. Whenever necessary, the four clamps can be quickly removed
- Double-sided heating element pull-off mechanism to optimise the change-over phase
- Weight: Type 160 = 22 kg, Type 250 = 47 kg, Type 315 = 53 kg
- **HYDRAULIC UNIT**
- Compact construction with protection frame
- Precise pressure setting and fine adjusting
- Joystick operation of machine carriage
- Clearly visible, vibration-free pressure gauge with precision scaling
- Accumulator for pressure equalization during the cooling phase
- Integrated interface for welding recorder
- Max operating pressure: Type 160 = 100 bar, Type 250 - 315 = 160 bar
- Weight: 22 kg
- **PLANER**
- Powerful parallel planer for single or double-sided facing of pipe ends
- Ergonomic, weight-balanced handling
- Self-locking mechanism in working position
- Safety microswitch to prevent undesired start-up
- Weight: Type 160 = 7 kg, Type 250 = 14 kg, Type 315 = 17 kg
- **HEATING ELEMENT**
- High performance, electronically controlled heating element
- High-quality, non-stick PTFE-coating with long service life
- Temperature indicator integrated into the handle
- Weight: Type 160 = 5.5 kg, Type 250 = 8 kg, Type 315 = 10 kg
- Input power: Type 160 = 1200 W, Type 250 = 2000 W, Type 315 = 2500 W
- **CASE**
- For safe storage of planer and heating element
- Weight: Type 160 = 4.8 kg, Type 250 = 8 kg, Type 315 = 9 kg

d1 (mm)	d2 (mm)	Power	Description	Code	Weight (kg)
40	160	230 V/1900 W	Without crate (carton pallet only)	**790 150 009**	78.000
75	250	230 V/3270 W	Without crate (carton pallet only)	**790 151 013**	116.000
90	315	230 V/3870 W	Without crate (carton pallet only)	**790 152 028**	129.000
40	160	230 V/1900 W	With wooden transport crate	**790 150 073**	108.000
75	250	230 V/3270 W	With wooden transport crate	**790 151 073**	166.000
90	315	230 V/3870 W	With wooden transport crate	**790 152 073**	179.000

TOP 2.0 160 - 250 - 315

TOP 2.0 160 - 250 - 315
Butt fusion machine for construction site

Butt Fusion machine to joint PE, PP, PB pipes and fittings for pressure piping systems on building sites and in trenches.
Hydraulically operated with manual control unit.
TOP hydraulic unit with integrated control panel and power outlets.
Including transport packaging (wooden crate); reduction clamping inserts and other accessories to be ordered separately.
Available both in the standard version and in the alternative version with reverse motion of the base machine carriage.

- **BASE MACHINE**
- High precision design, distortion-free and sturdy machine frame
- Good accessibility thanks to 35° inclination
- The movable (sliding) 3rd clamp allows easy and time-saving fixation of bends or tees without need of additional tools
- Clamps are hinged on the top side and tilting. Whenever necessary, the four clamps can be quickly removed
- Double-sided heating element pull-off mechanism to optimise the change-over phase
- Weight: Type 160 = 22 kg, Type 250 = 47 kg, Type 315 = 53 kg
- **HYDRAULIC UNIT**
- Compact aluminium case with innovative design
- Clear control panel consisting of digital system pressure display, electronic heating element temperature control, timer with 2 stop times
- Automatic pressure control during the cooling time
- Built-in data logger and realtime communication with mobile devices during the welding process and fusion data download, working in combination with GFs mobile application
- Precise pressure setting and fine adjusting
- Carriage movements are carried out by means of pushbuttons
- Integrated power outlets for planer, heating element
- Accumulator for pressure equalization during the cooling phase
- Max operating pressure: 160 bar
- Weight: 31 kg
- **PLANER**
- Powerful parallel planer for single or double-sided facing of pipe ends
- Ergonomic, weight-balanced handling
- Self-locking mechanism in working position
- Safety microswitch to prevent undesired start-up
- Weight: Type 160 = 7 kg, Type 250 = 14 kg, Type 315 = 17 kg
- **HEATING ELEMENT**
- High performance, electronically controlled heating element
- High-quality, non-stick PTFE-coating with long service life
- Temperature indicator integrated into the handle
- Weight: Type 160 = 5.5 kg; Type 250 = 8 kg; Type 315 = 10 kg
- Input power: Type 160 = 1200 W, Type 250 = 2000 W, Type 315 = 2500 W
- **CASE**
- For safe storage of planer and heating element
- Weight: Type 160 = 4.8 kg, Type 250 = 8 kg, Type 315 = 9 kg

Type	d1 (mm)	d2 (mm)	Power	Code	Weight (kg)
TOP 2.0 160	40	160	230 V/1900 W	**790 150 011**	126.000
TOP 2.0 250	75	250	230 V/3270 W	**790 151 011**	191.000
TOP 2.0 315	90	315	230 V/3870 W	**790 152 026**	206.000
TOP 2.0 160 Swiss plug	40	160	230 V/1900 W	**790 150 060**	126.000
TOP 2.0 250 Swiss plug	75	250	230 V/3270 W	**790 151 083**	191.000
TOP 2.0 315 Swiss plug	90	315	230 V/3870 W	**790 152 081**	206.000
TOP 2.0 160 Reverse	40	160	230 V/1900 W	**790 150 025**	126.000
TOP 2.0 250 Reverse	75	250	230 V/3270 W	**790 151 028**	191.000
TOP 2.0 315 Reverse	90	315	230 V/3870 W	**790 152 035**	206.000
TOP 2.0 160 Reverse, Swiss plug	40	160	230 V/1900 W	**790 150 026**	126.000
TOP 2.0 250 Reverse, Swiss plug	75	250	230 V/3270 W	**790 151 029**	191.000
TOP 2.0 315 Reverse, Swiss plug	90	315	230 V/3870 W	**790 152 049**	206.000

CNC 4.0 160 - 250 - 315

CNC 4.0 160 - 250 - 315
Automatic butt fusion machine for construction site

Butt Fusion machine to joint PE, PP, PB pipes and fittings for pressure piping systems on building sites and in trenches.
Hydraulically operated with automatic CNC control unit.
Including transport packaging (wooden crate); reduction clamping inserts and other accessories to be ordered separately.
Available both in the standard version and in the alternative version with reverse motion of the base machine carriage.

- **BASE MACHINE**
- High precision design, distortion-free and sturdy machine frame
- Good accessibility thanks to 35° inclination
- The movable (sliding) 3rd clamp allows easy and time-saving fixation of bends or tees without need of additional tools
- Clamps are hinged on the top side and tilting. Whenever necessary, the four clamps can be quickly removed
- Double-sided heating element pull-off mechanism to optimise the change-over phase
- The distance control (potentiometer) mounted into the base machine grants control and safety throughout the complete working process
- Weight: Type 160 = 22 kg, Type 250 = 47 kg, Type 315 = 53 kg
- **HYDRAULIC UNIT**
- Compact aluminium case with innovative design
- Intuitive colour touch screen interface
- Operator guidance from preparation to the end of the jointing process by use of symbols and graphics
- Automatic calculation, regulation and control of the fusion parameters - pressure, time and temperature - according to country specific guidelines
- Real time communication with mobile devices during the welding process, the data transfer and fusion protocols collection, in combination with GFs mobile application
- Operator ID (ISO 12176-3), job number and pipe codes (ISO 12176-4) input by means of the smartphone
- Seamless transfer of collected fusion data from the jobsite to the office via smartphone
- Compatible with label printer
- Integrated GPS receiver
- 10 freely programmable fusion cycles (e.g. for non standard pipe dimensions)
- Selection of language
- On site check of the memorized fusion protocols status directly on the touchscreen
- Transfer of memorized fusion protocols to an external PC via USB memory stick (included)
- Fusion protocols compatible with GFs application
- Integrated power outlets for planer, heating element
- Accumulator for pressure equalization during the cooling phase
- Max operating pressure: 160 bar
- Weight: 33 kg
- **PLANER**
- Powerful parallel planer for single or double-sided facing of pipe ends
- Ergonomic, weight-balanced handling
- Self-locking mechanism in working position
- Safety microswitch to prevent undesired start-up
- Weight: Type 160 = 7 kg, Type 250 = 14 kg, Type 315 = 17 kg
- **HEATING ELEMENT**
- High performance, electronically controlled heating element
- High-quality, non-stick PTFE-coating with long service life
- Temperature indicator integrated into the handle
- Weight: Type 160 = 5.5 kg, Type 250 = 8 kg, Type 315 = 10 kg
- Input power: Type 160 = 1200 W, Type 250 = 2000 W, Type 315 = 2500 W
- **CASE**
- For safe storage of planer and heating element
- Weight: Type 160 = 4.8 kg, Type 250 = 8 kg, Type 315 = 9 kg

Type	d1 (mm)	d2 (mm)	Power	Code	Weight (kg)
CNC 4.0 160	40	160	230 V/2000 W	**790 150 076**	125.000
CNC 4.0 250	75	250	230 V/3150 W	**790 151 076**	195.000
CNC 4.0 315	90	315	230 V/3750 W	**790 152 076**	215.000
CNC 4.0 160, Swiss plug	40	160	230 V/2000 W	**790 150 061**	125.000
CNC 4.0 250, Swiss plug	75	250	230 V/3150 W	**790 151 084**	195.000
CNC 4.0 315, Swiss plug	90	315	230 V/3750 W	**790 152 082**	215.000
CNC 4.0 160 Reverse	40	160	230 V/1900 W	**790 150 027**	125.000

table continued on the next page

Type	d1 (mm)	d2 (mm)	Power	Code	Weight (kg)
CNC 4.0 250 Reverse	75	250	230 V/3270 W	**790 151 023**	195.000
CNC 4.0 315 Reverse	90	315	230 V/3870 W	**790 152 054**	215.000
CNC 4.0 160 Reverse, Swiss plug	40	160	230 V/1900 W	**790 150 028**	125.000
CNC 4.0 250 Reverse, Swiss plug	75	250	230 V/3270 W	**790 151 036**	195.000
CNC 4.0 315 Reverse, Swiss plug	90	315	230 V/3870 W	**790 152 055**	215.000

CNC 4.0 250 - 315 AHE
Automatic butt fusion machine for construction site with heating element ejection system

Butt Fusion machine to joint PE, PP, PB pipes and fittings for pressure piping systems on building sites and in trenches.
Hydraulically operated with automatic CNC control unit.
Automatic ejection system for the heating element.
Including transport packaging (wooden crate); reduction clamping inserts and other accessories to be ordered separately.
Available both in the standard version and in the alternative version with reverse motion of the base machine carriage.

- **BASE MACHINE**
- High precision design, distortion-free and sturdy machine frame
- Good accessibility thanks to 35° inclination
- The movable (sliding) 3rd clamp allows easy and time-saving fixation of bends or tees without need of additional tools
- Clamps are hinged on the top side and tilting. Whenever necessary, the four clamps can be quickly removed
- The heating element is removed automatically during the change-over phase
- The distance control (potentiometer) mounted into the base machine grants control and safety throughout the complete working process
- Weight: Type 250 = 54 kg, Type 315 = 60 kg
- **HYDRAULIC UNIT**
- Compact aluminium case with innovative design
- Intuitive colour touch screen interface
- Operator guidance from preparation to the end of the jointing process by use of symbols and graphics
- Automatic calculation, regulation and control of the fusion parameters - pressure, time and temperature - according to country specific guidelines
- Real time communication with mobile devices during the welding process, the data transfer and fusion protocols collection, in combination with GFs mobile application
- Operator ID (ISO 12176-3), job number and pipe codes (ISO 12176-4) input by means of the smartphone
- Seamless transfer of collected fusion data from the jobsite to the office via smartphone
- Compatible with label printer
- Integrated GPS receiver
- 10 freely programmable fusion cycles (e.g. for non standard pipe dimensions)
- Selection of language
- On site check of the memorized fusion protocols status directly on the touchscreen
- Transfer of memorized fusion protocols to an external PC via USB memory stick (included)
- Fusion protocols compatible with GFs application
- Integrated power outlets for planer, heating element
- Accumulator for pressure equalization during the cooling phase
- Max operating pressure: 160 bar
- Weight: 33 kg
- **PLANER**
- Powerful parallel planer for single or double-sided facing of pipe ends
- Ergonomic, weight-balanced handling
- Self-locking mechanism in working position
- Safety microswitch to prevent undesired start-up
- Weight: Type 250 = 14 kg, Type 315 = 17 kg
- **HEATING ELEMENT**
- High performance, electronically controlled heating element
- High-quality, non-stick PTFE-coating with long service life
- Temperature indicator integrated into the handle
- Weight: Type 250 = 15 kg, Type 315 = 19 kg
- Input power: Type 250 = 2000 W, Type 315 = 2500 W
- **CASE**
- For safe storage of planer and heating element
- Weight: Type 250 = 9 kg, Type 315 = 10 kg

Type	d1 (mm)	d2 (mm)	Power	Code	Weight (kg)
CNC 4.0 250 AHE	75	250	230 V/3150 W	**790 151 077**	208.000
CNC 4.0 315 AHE	90	315	230 V/3750 W	**790 152 077**	223.000
CNC 4.0 250 AHE Reverse	75	250	230 V/3270 W	**790 151 043**	208.000
CNC 4.0 315 AHE Reverse	90	315	230 V/3870 W	**790 152 056**	223.000

ECOS / TOP / CNC 160 - 250 - 315 Accessories

ECOS / TOP / CNC / WM Reduction clamping inserts

- Each code number represents 1 piece of reduction clamping insert (half-ring)
- Per each code number, maximum 8 pieces can be can be assembled on the ECOS/TOP/CNC machine (4 clamps)
- Per each code number, maximum 4 pieces can be can be assembled on the WM machine (2 clamps)
- As general purpose, to fit a specific pipe diameter, a combination of 4 wide and 4 narrow inserts is recommended for ECOS/TOP/CNC machine
- Reductions in inch sizes or special diameters upon request

Note:
* For ECOS/TOP/CNC 400, the wide reduction clamping insert d 315 (code 790 127 101) is also needed to assemble it on the machine.
** For ECOS/TOP/CNC/WM 630, the wide reduction clamping insert d 500 (code 790 117 012) is also needed to assemble it on the machine.

d (mm)	Type	narrow Code	Weight (kg)	wide Code	Weight (kg)
40	ECOS/TOP/CNC 160	**790 114 027**	0.330	**790 114 023**	0.300
50	ECOS/TOP/CNC 160	**790 114 016**	0.310	**790 114 009**	0.290
63	ECOS/TOP/CNC 160	**790 114 017**	0.300	**790 114 010**	0.293
75	ECOS/TOP/CNC 160	**790 114 018**	0.280	**790 114 011**	0.270
90	ECOS/TOP/CNC 160	**790 114 019**	0.260	**790 114 012**	0.250
110	ECOS/TOP/CNC 160	**790 114 020**	0.220	**790 114 013**	0.220
125	ECOS/TOP/CNC 160	**790 114 021**	0.190	**790 114 014**	0.200
140	ECOS/TOP/CNC 160	**790 114 022**	0.130	**790 114 015**	0.180
75	ECOS/TOP/CNC 250	**790 115 029**	0.768	**790 115 028**	0.902
90	ECOS/TOP/CNC 250	**790 115 016**	0.719	**790 115 008**	0.940
110	ECOS/TOP/CNC 250	**790 115 017**	0.734	**790 115 009**	0.841
125	ECOS/TOP/CNC 250	**790 115 018**	0.661	**790 115 010**	0.829
140	ECOS/TOP/CNC 250	**790 115 019**	0.762	**790 115 011**	0.647
160	ECOS/TOP/CNC 250	**790 115 020**	0.574	**790 115 012**	0.727
180	ECOS/TOP/CNC 250	**790 115 021**	0.561	**790 115 013**	0.676
200	ECOS/TOP/CNC 250	**790 115 022**	0.479	**790 115 014**	0.733
225	ECOS/TOP/CNC 250	**790 115 023**	0.385	**790 115 015**	0.477
90	ECOS/TOP/CNC 315; WM 315	**790 112 098**	1.265	**790 112 088**	1.000
110	ECOS/TOP/CNC 315; WM 315	**790 112 099**	1.220	**790 112 089**	0.945
125	ECOS/TOP/CNC 315-400*; WM 315	**790 112 100**	1.215	**790 112 090**	0.957
140	ECOS/TOP/CNC 315-400*; WM 315	**790 112 101**	1.139	**790 112 091**	0.950
160	ECOS/TOP/CNC 315-400*; WM 315	**790 112 102**	1.080	**790 112 092**	0.980
180	ECOS/TOP/CNC 315-400*; WM 315	**790 112 103**	1.006	**790 112 093**	0.931
200	ECOS/TOP/CNC 315-400*; WM 315	**790 112 104**	0.945	**790 112 094**	0.880
225	ECOS/TOP/CNC 315-400*; WM 315	**790 112 105**	0.833	**790 112 095**	0.940
250	ECOS/TOP/CNC 315-400*; WM 315	**790 112 106**	0.712	**790 112 096**	0.754
280	ECOS/TOP/CNC 315-400*; WM 315	**790 112 107**	0.562	**790 112 097**	0.750

ECOS / TOP / CNC Reduction clamping inserts-set

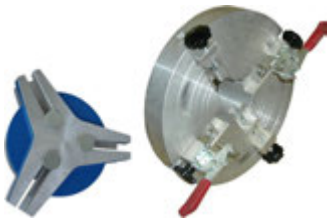
- 4 wide and 4 narrow clamping inserts of each dimension
- For machine type 400 (d 125 - d 355), 8 wide clamping inserts d 315 are included
- For machine type 500 a complete set (d 200 - d 450) and a reduced set (d 250 - d 450) are available
- For machine type 630 (d 315 - d 560), 8 wide clamping inserts d 500, d 560 are included
- Reductions in inch sizes or special diameters upon request

Type	d-d (mm)	Code	Weight (kg)
ECOS/TOP/CNC 160	40 - 140	**790 114 156**	17.000
ECOS/TOP/CNC 250	75 - 225	**790 115 156**	63.000
ECOS/TOP/CNC 315	90 - 280	**790 112 156**	78.000

ECOS / TOP / CNC Chamfered upper clamp

- Necessary for welding short-leg bends having diameters equal of the machine dimension: e.g. bend d 250 mm with a ECOS/TOP/CNC 250 machine
- Left: bend is clamped left from the heating element position
- Right: bend is clamped right from the heating element position
- With ECOS/TOP/CNC 400-500-630 the left code can be used also at right side

Type	Left Code	Right Code	Weight (kg)
ECOS/TOP/CNC 160	**790 150 205**	**790 150 206**	0.800
ECOS/TOP/CNC 250	**790 151 205**	**790 151 206**	1.850
ECOS/TOP/CNC 315	**790 152 205**	**790 152 206**	2.681



ECOS / TOP / CNC Flange adapter clamping units

- For correct clamping and fusion jointing of short-ended stub ends

Type	d-d (mm)	Code	Weight (kg)
ECOS/TOP/CNC 160	40 - 160	**790 319 007**	5.800
ECOS/TOP/CNC 250	75 - 250	**790 115 044**	5.594
ECOS/TOP/CNC 315	90 - 315	**790 112 073**	11.000

TOP / CNC 160-315 Pipe lifter

- Convenient movement of the welded pipes through the base machine
- Lifting the pipes out of the clamps or inserts, to let the bead pass without blocking
- Supporting the welded pipes on height adjustable rollers
- The pipe lifter could be easily assembled to the base machine
- The delivery contains one left and one right pipe lifter and one lever

Type	Code	Weight (kg)
TOP/CNC 160	**790 150 050**	9.000
TOP/CNC 250	**790 151 050**	11.000
TOP/CNC 315	**790 152 050**	12.500

ECOS / TOP / CNC / GF / WM / IM Set of replacement blades for planer

- Blade has 2 cutting edges (1 set = 2 blades)

Type	Code	Weight (kg)	Remarks
ECOS/TOP/CNC 160; IM 160; MD 160; PSO 701	**790 113 056**	0.059	
ECOS/TOP/CNC 250	**790 115 024**	0.083	
ECOS/TOP/CNC 315-400; IM 315	**790 112 110**	0.129	

ECOS / TOP 250-315 Pressure Shut-Off Valve

- Time saving in the butt fusion process, by working with 2 base machines
- Enabling to disconnect the base machine under pressure from the hydraulic unit during the cooling time
- Close the pressure valve, release pressure at the hydraulic unit, disconnect the hoses from the base machine. Keep the joint cooling down
- Use the cooling time for pipe preparation and welding of the next join by connecting the hydraulic unit hoses to a second base machine

Type	Code	Weight (kg)
ECOS/TOP 250-315	**790 151 002**	1.500

Label printer cable for CNC machines

- Cable to connect the CNC 4.0 to label printer.
- In case of existing CNC 4.0 control unit with former Bluetooth device, the label printer to order is the same used for IR/BCF machines - code 790 180 081.
- In case of new CNC 4.0 control unit (with GEN.2 Bluetooth device), the label printer code 790 152 414 is to be ordered. The same spare code 790 180 082 for the ribbon of the IR/BCF printer is to be used.

Type	Code	Weight (kg)
Cable with special connector	**790 155 343**	0.120

ECOS 400 - 500 - 630

ECOS 400 - 500 - 630
Butt fusion machine for construction site

Butt Fusion machine to joint PE, PP, PB pipes and fittings for pressure piping systems on building sites and in trenches.
Hydraulically operated with manual control unit.
Separate remote temperature controller for the heating element.
Including transport packaging (wooden crate); reduction clamping inserts and other accessories to be ordered separately.

- **BASE MACHINE**
- High precision design, distortion-free and sturdy machine frame
- Good accessibility thanks to 45° inclination
- The movable (sliding) 3rd clamp allows easy and time-saving fixation of bends or tees without need of additional tools
- Double-sided heating element pull-off mechanism to optimise the change-over phase
- Weight: Type 400 = 80 kg, Type 500 = 157 kg, Type 630 = 222 kg
- **HYDRAULIC UNIT**
- Compact and robust, with full closed cast aluminium housing
- Precise pressure setting and fine adjusting
- Joystick operation of machine carriage
- Clearly visible, vibration-free pressure gauge with precision scaling
- Accumulator for pressure equalization during the cooling phase
- Interface for welding recorder available as accessory
- Max operating pressure: 160 bar
- Weight: 31 kg
- **PLANER**
- Powerful parallel planer for single or double-sided facing of pipe ends
- Self-locking mechanism in working position
- Safety microswitch to prevent undesired start-up
- Weight: Type 400 = 47 kg, Type 500 = 58 kg, Type 630 = 102 kg
- **HEATING ELEMENT**
- High performance, electronically controlled heating element
- High-quality, non-stick PTFE-coating with long service life
- Temperature indicator integrated into the handle
- Weight: Type 400 = 16 kg, Type 500 = 26 kg, Type 630 = 51 kg
- Input power: Type 400 = 3.5 kW, Type 500 = 4.0 kW, Type 630 = 8.0 kW
- **CASE**
- For safe storage of planer and heating element
- Weight: Type 400 = 30 kg, Type 500 = 38 kg, Type 630 = 62 kg

Type	d-d (mm)	Performance	Code	Weight (kg)
ECOS 400	125 - 400	230 V/5700 W	**790 127 013**	336.000
ECOS 500	200 - 500	400 V/7000 W	**790 140 010**	463.000
ECOS 630	315 - 630	400 V/11000 W	**790 345 012**	593.000

TOP 2.0 400 - 500 - 630

TOP 2.0 400 - 500 - 630
Butt fusion machine for construction site

Butt Fusion machine to joint PE, PP, PB pipes and fittings for pressure piping systems on building sites and in trenches.
Hydraulically operated with manual control unit.
TOP hydraulic unit with integrated control panel and power outlets.
Including transport packaging (wooden crate); reduction clamping inserts and other accessories to be ordered separately.
Available both in the standard version and in the alternative version with reverse motion of the base machine carriage.

- **BASE MACHINE**
- High precision design, distortion-free and sturdy machine frame
- Good accessibility thanks to 45° inclination
- The movable (sliding) 3rd clamp allows easy and time-saving fixation of bends or tees without need of additional tools
- Double-sided heating element pull-off mechanism to optimise the change-over phase
- Weight: Type 400 = 80 kg, Type 500 = 157 kg, Type 630 = 222 kg
- **HYDRAULIC UNIT**
- Compact aluminium case with innovative design
- Clear control panel consisting of digital system pressure display, electronic heating element temperature control, timer with 2 stop times
- Automatic pressure control during the cooling time
- Built-in data logger and realtime communication with mobile devices during the welding process and fusion data download, working in combination with GFs mobile application
- Precise pressure setting and fine adjusting
- Carriage movements are carried out by means of pushbuttons
- Integrated power outlets for planer, heating element
- Accumulator for pressure equalization during the cooling phase
- Max operating pressure: Type 400 = 160 bar, Type 500 - 630 = 200 bar
- Weight: 34 kg
- **PLANER**
- Powerful parallel planer for single or double-sided facing of pipe ends
- Ergonomic, weight-balanced handling
- Self-locking mechanism in working position
- Safety microswitch to prevent undesired start-up
- Weight: Type 400 = 47 kg, Type 500 = 58 kg, Type 630 = 102 kg
- For Type 500 a special version is available, with enhanced performance to work with PP pipes and fittings up to d 500 mm SDR 11
- **HEATING ELEMENT**
- High performance, electronically controlled heating element
- High-quality, non-stick PTFE-coating with long service life
- Temperature indicator integrated into the handle
- Weight: Type 400 = 16 kg, Type 500 = 26 kg, Type 630 = 51 kg
- Input power: Type 400 = 3.5 kW, Type 500= 4.0 kW, Type 630 = 8.0 kW
- **CASE**
- For safe storage of planer and heating element
- Weight: Type 400 = 30 kg, Type 500 = 38 kg, Type 630 = 62 kg

Type	d1 (mm)	d2 (mm)	Power	Code	Weight (kg)
TOP 2.0 400	125	400	400 V/5700 W	**790 153 011**	310.000
TOP 2.0 500	200	500	400 V/6300 W	**790 154 011**	448.000
TOP 2.0 630	315	630	400 V/11000 W	**790 155 011**	588.000
TOP 2.0 400 Reverse	125	400	400 V/5700 W	**790 153 029**	310.000
TOP 2.0 500 Reverse	200	500	400 V/6300 W	**790 154 018**	448.000
TOP 2.0 630 Reverse	315	630	400 V/11000 W	**790 155 016**	588.000

CNC 4.0 400 - 500 - 630

CNC 4.0 400 - 500 - 630
Automatic butt fusion machine for construction site

Butt Fusion machine to joint PE, PP, PB pipes and fittings for pressure piping systems on building sites and in trenches.
Hydraulically operated with automatic CNC control unit.
Including transport packaging (wooden crate); reduction clamping inserts and other accessories to be ordered separately.
Available both in the standard version and in the alternative version with reverse motion of the base machine carriage.

- **BASE MACHINE**
- High precision design, distortion-free and sturdy machine frame
- Good accessibility thanks to 35° inclination
- The movable (sliding) 3rd clamp allows easy and time-saving fixation of bends or tees without need of additional tools
- Double-sided heating element pull-off mechanism to optimise the change-over phase
- The distance control (potentiometer) mounted into the base machine grants control and safety throughout the complete working process
- Weight: Type 400 = 80 kg, Type 500 = 157 kg, Type 630 = 222 kg
- **HYDRAULIC UNIT**
- Compact aluminium case with innovative design
- Intuitive colour touch screen interface
- Operator guidance from preparation to the end of the jointing process by use of symbols and graphics
- Automatic calculation, regulation and control of the fusion parameters - pressure, time and temperature - according to country specific guidelines
- Real time communication with mobile devices during the welding process, the data transfer and fusion protocols collection, in combination with GFs mobile application
- Operator ID (ISO 12176-3), job number and pipe codes (ISO 12176-4) input by means of the smartphone
- Seamless transfer of collected fusion data from the jobsite to the office via smartphone
- Compatible with label printer
- Integrated GPS receiver
- 10 freely programmable fusion cycles (e.g. for non standard pipe dimensions)
- Selection of language
- On site check of the memorized fusion protocols status directly on the touchscreen
- Transfer of memorized fusion protocols to an external PC via USB memory stick (included)
- Fusion protocols compatible with GFs application
- Integrated power outlets for planer, heating element
- Accumulator for pressure equalization during the cooling phase
- Max operating pressure: Type 400 = 160 bar, Type 500 - 630 = 200 bar
- Weight: 37 kg
- **PLANER**
- Powerful parallel planer for single or double-sided facing of pipe ends
- Ergonomic, weight-balanced handling
- Self-locking mechanism in working position
- Safety microswitch to prevent undesired start-up
- Weight: Type 400 = 47 kg, Type 500 = 58 kg, Type 630 = 102 kg
- For Type 500 a special version is available, with enhanced performance to work with PP pipes and fittings up to d 500 mm SDR 11
- **HEATING ELEMENT**
- High performance, electronically controlled heating element
- High-quality, non-stick PTFE-coating with long service life
- Temperature indicator integrated into the handle
- Weight: Type 400 = 16 kg, Type 500 = 26 kg, Type 630 = 51 kg
- Input power: Type 400 = 3.5 kW, Type 500= 4.0 kW, Type 630 = 8.0 kW
- **CASE**
- For safe storage of planer and heating element
- Weight: Type 400 = 30 kg, Type 500 = 38 kg, Type 630 = 62 kg

table continued on the next page

Type	d1 (mm)	d2 (mm)	Power	Code	Weight (kg)
CNC 4.0 400	125	400	400 V/5700 W	**790 153 076**	320.000
CNC 4.0 500	200	500	400 V/6300 W	**790 154 076**	455.000
CNC 4.0 630	315	630	400 V/11000 W	**790 155 076**	595.000
CNC 4.0 400 Reverse	125	400	400 V/5700 W	**790 153 031**	320.000
CNC 4.0 500 Reverse	200	500	400 V/6300 W	**790 154 019**	455.000
CNC 4.0 630 Reverse	315	630	400 V/11000 W	**790155018**	595.000

ECOS / TOP / CNC 400 - 500 - 630 Accessories

ECOS / TOP / CNC / WM Reduction clamping inserts

- Each code number represents 1 piece of reduction clamping insert (half-ring)
- Per each code number, maximum 8 pieces can be can be assembled on the ECOS/TOP/CNC machine (4 clamps)
- Per each code number, maximum 4 pieces can be can be assembled on the WM machine (2 clamps)
- As general purpose, to fit a specific pipe diameter, a combination of 4 wide and 4 narrow inserts is recommended for ECOS/TOP/CNC machine
- Reductions in inch sizes or special diameters upon request

Note:
* For ECOS/TOP/CNC 400, the wide reduction clamping insert d 315 (code 790 127 101) is also needed to assemble it on the machine.
** For ECOS/TOP/CNC/WM 630, the wide reduction clamping insert d 500 (code 790 117 012) is also needed to assemble it on the machine.

d (mm)	Type	narrow Code	Weight (kg)	wide Code	Weight (kg)
315	ECOS/TOP/CNC 400	**790 127 111**	1.200	**790 127 101**	1.830
355	ECOS/TOP/CNC 400	**790 127 112**	0.900	**790 127 102**	1.830
200	ECOS/TOP/CNC 500	**790 116 016**	3.714	**790 116 008**	3.650
225	ECOS/TOP/CNC 500	**790 116 017**	3.443	**790 116 009**	3.640
250	ECOS/TOP/CNC 500	**790 116 018**	3.700	**790 116 010**	3.569
280	ECOS/TOP/CNC 500	**790 116 019**	3.891	**790 116 011**	3.612
315	ECOS/TOP/CNC 500-630**	**790 116 020**	3.622	**790 116 012**	3.698
355	ECOS/TOP/CNC 500-630**	**790 116 021**	3.267	**790 116 013**	3.727
400	ECOS/TOP/CNC 500-630**	**790 116 022**	2.383	**790 116 014**	3.836
450	ECOS/TOP/CNC 500-630**	**790 116 023**	2.273	**790 116 015**	3.276
500	ECOS/TOP/CNC/WM 630	**790 117 238**	3.700	**790 117 012**	4.500
560	ECOS/TOP/CNC/WM 630	**790 117 239**	4.280	**790 117 013**	5.550

ECOS / TOP / CNC Reduction clamping inserts-set

- 4 wide and 4 narrow clamping inserts of each dimension
- For machine type 400 (d 125 - d 355), 8 wide clamping inserts d 315 are included
- For machine type 500 a complete set (d 200 - d 450) and a reduced set (d 250 - d 450) are available
- For machine type 630 (d 315 - d 560), 8 wide clamping inserts d 500, d 560 are included
- Reductions in inch sizes or special diameters upon request

Type	d-d (mm)	Code	Weight (kg)
ECOS/TOP/CNC 400	125 - 355	**790 127 156**	95.000
ECOS/TOP/CNC 500	200 - 450	**790 116 157**	241.000
ECOS/TOP/CNC 500	250 - 450	**790 116 156**	165.000
ECOS/TOP/CNC 630	315 - 560	**790 117 021**	201.000

ECOS / TOP / CNC Chamfered upper clamp

- Necessary for welding short-leg bends having diameters equal of the machine dimension: e.g. bend d 250 mm with a ECOS/TOP/CNC 250 machine
- Left: bend is clamped left from the heating element position
- Right: bend is clamped right from the heating element position
- With ECOS/TOP/CNC 400-500-630 the left code can be used also at right side

Type	Left Code	Right Code	Weight (kg)
ECOS/TOP/CNC 400	**790 153 117**		3.750
ECOS/TOP/CNC 500	**790 340 261**		8.000
ECOS/TOP/CNC 630	**790 345 233**		10.490

ECOS / TOP / CNC Hoist unit

- To be assembled on the base machine
- Consisting of framework, rotating arm and weight compensator (type 400, 500) / electric motor (type 630)
- Motor (type 630) 400 V with 2 hoisting speeds

d (mm)	Code	Weight (kg)
400	**790 153 028**	93.000
500	**790 340 066**	80.000
630	**790 155 027**	261.000

ECOS / TOP / CNC 630 Hoist lifting cylinder

- Accessory for type 630 hoist unit
- To raise up the hoist column during the installation, operated by means of the machine hydraulic unit

Code	Weight (kg)
790 117 094	13.000

ECOS / TOP / CNC / GF / WM / IM Set of replacement blades for planer

- Blade has 2 cutting edges (1 set = 2 blades)

Type	Code	Weight (kg)	Remarks
ECOS/TOP/CNC 315-400; IM 315	**790 112 110**	0.129	
ECOS/TOP/CNC 500	**790 340 045**	0.157	
ECOS/TOP/CNC 630; GF 800	**790 117 041**	0.229	

Label printer cable for CNC machines

- Cable to connect the CNC 4.0 to label printer.
- In case of existing CNC 4.0 control unit with former Bluetooth device, the label printer to order is the same used for IR/BCF machines - code 790 180 081.
- In case of new CNC 4.0 control unit (with GEN.2 Bluetooth device), the label printer code 790 152 414 is to be ordered. The same spare code 790 180 082 for the ribbon of the IR/BCF printer is to be used.

Type	Code	Weight (kg)
Cable with special connector	**790 155 343**	0.120

Connecting interface to WR200 for ECOS 400-500-630

- To connect the ECOS hydraulic unit to the welding recorder WR 200 ECO version, for fusion pressure monitoring in real time
- Just plug it directly in between the hydraulic quick couplers of the unit and the outlet hose, no need of tools to assemble

Type	Code	Weight (kg)
Connecting interface to WR200	**790 117 060**	1.300

GF 800 - 1000 - 1200

GF 800 - 1000 - 1200
Butt fusion machine for construction site

Butt Fusion machine to joint PE, PP pipes and fittings for pressure piping systems on building sites and in trenches.
Hydraulically operated with manual control unit.
Control box with integrated temperature controller and power outlets.
For proper handling of the heating element and planer we recommend the assembling of the hoist unit (to be ordered separately).
Including transport packaging (wooden crate); reduction clamping inserts and other accessories to be ordered separately.

- **BASE MACHINE**
- High precision design, distortion-free and sturdy machine frame
- Good accessibility thanks to 45° inclination
- The movable (sliding) 3rd clamp allows easy and time-saving fixation of bends or tees without need of additional tools
- Double-sided heating element pull-off mechanism to optimise the change-over phase
- Weight: Type 800 = 690 kg, Type 1000 = 1238 kg, Type 1200 = 1370 kg
- **HYDRAULIC UNIT**
- Compact and robust, with full closed metal housing and two handles for carrying
- Precise pressure setting and fine adjusting
- Joystick operation of machine carriage
- Clearly visible, vibration-free pressure gauge with precision scaling
- Accumulator for pressure equalization during the cooling phase
- Max operating pressure: 200 bar
- Weight: 41 kg
- **PLANER**
- Powerful parallel planer for single or double-sided facing of pipe ends
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up
- Weight: Type 800 = 185 kg, Type 1000 = 308 kg, Type 1200 = 356 kg
- **HEATING ELEMENT**
- High performance, electronically controlled heating element
- High-quality, non-stick PTFE-coating with long service life
- Temperature indicator integrated into the handle
- Input voltage: 400 V
- Weight: Type 800 = 56 kg, Type 1000 = 88 kg, Type 1200 = 101 kg
- Input power: Type 800 = 12 kW, Type 1000= 15 kW, Type 1200 = 16 kW
- **CONTROL BOX**
- Contains all safety and functional components such as static relay, FI protective switch, temperature control
- Compact unit in steel box with enamel-coated protective frame
- Integrated power outlets for all machine components, only 1 plug to the generator
- Weight: 29 kg
- **CASE**
- For safe storage of planer and heating element
- Weight: Type 800 = 226 kg, Type 1000 = 341 kg, Type 1200 = 412 kg

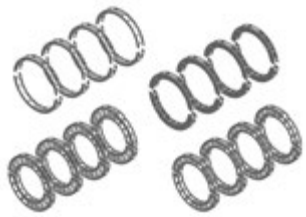
Type	d-d (mm)	Performance	Code	Weight (kg)
GF 800	500 - 800	400 V/15000 W	**790 123 025**	1550.000
GF 1000	630 - 1000	400 V/19500 W	**790 124 025**	2443.000
GF 1200	710 - 1200	400 V/20500 W	**790 125 025**	2668.000

GF 800 - 1000 - 1200 Accessories

GF 800-1000-1200 Reduction clamping inserts

- Each code number represents 1 piece of wide reduction clamping insert (half-ring)
- Per each code number, maximum 8 pieces can be can be assembled on the machine (4 clamps).
- Per each pipe diameter and machine type, just one specific code number is needed.
- Reductions inserts in inch sizes or special diameters upon request.
- For machine type GF 1000, narrow reduction clamping inserts are also available for pipe d 630 (code 790 123 219) and d 710 (code 790 123 220). To assemble them into the machine, the wide reduction clamping insert d 800 (code 790 124 252) is also needed.
- For machine type GF 800, narrow reduction clamping inserts are also available for pipe d 630 (code 790 123 219) and 710 (code 790 123 220).
- For machine type GF 800, narrow reduction clamping inserts are also available for pipe d 500 (code 790 117 238) and 560 (code 790 117 239). To assemble them into the machine, the wide reduction clamping insert d 630 (code 790 123 252) is also needed.

d (mm)	Type	wide Code	Weight (kg)
500	GF 800	**790 123 250**	16.900
560	GF 800	**790 123 251**	15.500
630	GF 800	**790 123 252**	14.100
710	GF 800	**790 123 253**	9.500
630	GF 1000	**790 124 250**	25.200
710	GF 1000	**790 124 251**	22.500
800	GF 1000	**790 124 252**	18.500
900	GF 1000	**790 124 253**	12.500
710	GF 1200	**790 125 250**	33.200
800	GF 1200	**790 125 251**	30.600
900	GF 1200	**790 125 252**	26.400
1000	GF 1200	**790 125 253**	22.300



GF 800-1000-1200 Reduction clamping inserts-set

- 8 wide clamping inserts per dimension

d-d (mm)	Type	Code	Weight (kg)
500 - 710	GF 800	**790 123 037**	450.000
630 - 900	GF 1000	**790 124 037**	630.000
710 - 1000	GF 1200	**790 125 037**	900.000

GF 800-1000-1200 Flange adapter clamping unit

- For correct clamping and fusion jointing of short-ended stub ends

d-d (mm)	Code	Weight (kg)
500 - 800	**790 123 029**	120.000
630 - 1000	**790 124 029**	153.000
710 - 1200	**790 125 029**	231.000

GF 800-1000-1200 Hoist unit

- To be assembled on the base machine
- Consisting of framework, rotating arm and electric motor
- Motor 400 V with 2 hoisting speeds
- Height from floor: Type 800 = 4.06 m, Type 1000 = 4.65 m, Type 1200 = 5.00 m

d (mm)	Code	Weight (kg)
800	**790 123 060**	220.000
1000	**790 124 060**	350.000
1200	**790 125 060**	368.000

ECOS / TOP / CNC / GF / WM / IM Set of replacement blades for planer

- Blade has 2 cutting edges (1 set = 2 blades)

Type	Code	Weight (kg)	Remarks
ECOS/TOP/CNC 630; GF 800	**790 117 041**	0.229	
GF 1000; WM 630	**790 124 021**	0.299	
GF 1200	**790 125 021**	0.405	

GF 1600

GF 1600 Butt fusion machine for construction site

Butt Fusion machine to joint PE, PP pipes and fittings for pressure piping systems on building sites and in trenches.
Hydraulically operated with manual control unit.
Control box with integrated temperature controller and power outlets.
For proper handling of the heating element and planer we recommend the assembling of the hoist unit (to be ordered separately).
Including transport packaging (wooden crate); reduction clamping inserts and other accessories to be ordered separately.

- **BASE MACHINE**
- High precision design, distortion-free and sturdy machine frame
- Good accessibility thanks to 45° inclination
- Removable outer clamp to fix bulky short-end fittings or to reduce machine length and weight (narrow working space / easier transportation)
- Double-sided heating element pull-off mechanism to optimise the change-over phase
- Pressure cylinders separated from the guiding shafts for easier maintenance on site
- Weight: 3350 kg
- **HYDRAULIC UNIT**
- Compact and robust, with full closed metal housing and two handles for carrying
- Precise pressure setting and fine adjusting
- Joystick operation of machine carriage
- Clearly visible, vibration-free pressure gauge with precision scaling
- Accumulator for pressure equalization during the cooling phase
- Integrated interface for welding recorder
- Max operating pressure: 200 bar
- Weight: 80 kg
- **PLANER**
- Powerful parallel planer for single or double-sided facing of pipe ends
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up
- Weight: 935 kg
- **HEATING ELEMENT**
- High performance, electronically controlled heating element
- High-quality, non-stick PTFE-coating with long service life
- Temperature indicator integrated into the handle
- Weight: 415 kg
- Input power: 400 V / 47000 W
- **CONTROL BOX**
- Contains all safety and functional components such as static relay, FI protective switch, temperature control
- Compact unit in steel box with enamel-coated protective frame
- Integrated power outlets for all machine components, only 1 plug to the generator
- Assembled on the storage case for easier transportation
- Weight: 29 kg
- **CASE**
- For safe storage of planer and heating element
- Integrated power cables winder
- Weight: 795 kg
- Including transport packaging (wooden crate), without accessories and without reduction inserts
- Robust heating element-butt fusion machine for jointing PP and PE pipes and fittings
- For proper handling of the heating element and planer we recommend the assembling of the hoist unit (790146018)
- The powerful hydraulic unit (max. hydraulic pressure 200 bar) allows jointing of big wall thickness pipes by keeping provision for dragging the pipes. Example: PE 100 , SDR 11, dn 1600 mm requires a fusion pressure of 132 bar according to DVS 2207 –1 (0,15 MPa)

d-d (mm)	Performance	Code	Weight (kg)
1000 - 1600	400 V/55000 W	**790 146 001**	6900.000

GF 1600 Accessories

GF 1600 Reduction clamping inserts, wide

- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- Reductions in inch sizes or special diameters upon request

d (mm)	Code	Weight (kg)
1000	**790 146 147**	92.667
1200	**790 146 148**	78.163
1400	**790 146 149**	62.295

GF 1600 Reduction clamping inserts-set

- 8 wide clamping inserts dn 1000, 1200, 1400 mm

Description	Code	Weight (kg)
d 1000 - 1200 - 1400 mm	**790 146 030**	1860.000

GF 1600 Flange adapter clamping unit

- For correct clamping and fusion jointing of short-ended stub ends

Code	Weight (kg)
790 146 019	333.000

GF 1600 Electric hoist unit

- Hoist capacity 1000 kg
- Arm length 4 m, pivoting, back/forward, max. column height from floor 6.16 m, 2 hoisting speeds (2.5 m/min and 5.5 m/min)

Code	Weight (kg)
790 146 018	1270.000

RU 160-630

RU Repair Unit

- Frameless butt fusion machine with 2 clamping devices
- Designed to fit narrow working spaces or to be used directly on piping systems
- For repairing or installing pipelines into trenches or inside buildings and industrial plants
- To be used in combination with heating element, planer, hydraulic unit of corresponding manually operated machine size TOP 2.0 (all sizes) or ECOS (up to d 315 mm)
- Fully compatible with clamp reduction inserts of standard TOP/ECOS butt fusion machines
- Additional outer clamp available as optional to improve the alignment of the components to be welded

Code	Weight (kg)
790 150 045	8.800
790 151 045	18.000
790 152 045	20.000
790 153 045	31.000
790 154 045	62.000
790 155 045	73.000

RU Outer Clamp

- An additional clamping device can be mounted on the cylinders to improve the alignment of the components to be welded.

Code	Weight (kg)
790 150 046	2.000
790 151 046	4.400
790 152 046	5.400
790 153 046	9.300
790 154 046	13.500
790 155 046	24.700

WR 200

WR 200 / WR 200 S
Welding Recorder for manually operated butt fusion machines (ECOS, TOP, GF)

The WR 200 / WR 200 S assists the welder to ensure the quality of the butt-fusion jointing according to country specific standards. The user is guided through all preparation and fusion steps. The selection of the fusion data like the used material, welding standard, diameter and wall thickness (SDR) is supported by a menu. The complete fusion sequence is supervised and recorded. The welding protocols can be easily exported via USB stick to any personal computer for further management or printout. The welding protocols can be directly printed out at jobsite by means of the on-board printer (WR 200 only). The recorder is protected by a robust plastic case of IP 65 protection class. The power and connecting cables are stored in a separate box (WR 200) or in a compartment directly integrated in the case (WR 200 S). The WR 200 can be connected to hydraulically operated butt-fusion machines for construction site, even by later retrofitting of machines in service centres. The WR 200 S **ECO version** is also available, to specifically work in combination with ECO S machine models: particularly, to fit the ECO S 400 - 500 - 630, a special connection interface for the hydraulic unit is needed (available as accessory - product code 790 117 060).

Description:

Dimensions: 350x300x250 mm

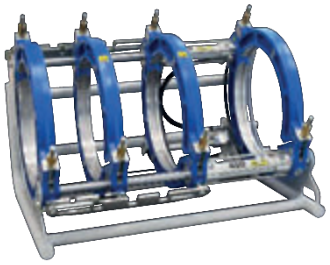
- Intuitive user guidance menu
- Welding standard selection e.g. DVS, UNI, WIS, ISO
- Welding process customisable: 4 user-defined cycles available
- Additional data input as: operator-ID, job and order number, joint number, GPS coordinates from an independent device
- On-board printer for direct print pout of welding protocols at jobsite (WR 200 only)
- USB interface for welding protocols transfer
- Internal memory capacity: 250 protocols
- Selection of operator language
- Battery support for an autonomy of 10 hours (no data loss during power interruption)
- “Rent Guardian” function to set and control the rental period of the unit
- Available protocols format: TXT for easy printout, CSV for database management with GFs application
- Fully compatible with butt-fusion machines already working with former welding recorder models SUVI® 50 and WR 100
- Working temperature range: -10°C to +50°C

	Power Supply	Code	Weight (kg)
WR 200 S - ECO	230 V	**790 119 452**	5.000
WR 200 S	230 V	**790 119 451**	5.000
WR 200	230 V	**790 119 401**	5.000
WR 200 S - ECO CYRILLIC	230 V	**790 119 455**	5.000
WR 200 S CYRILLIC	230 V	**790 119 454**	5.000
WR 200 CYRILLIC	230 V	**790 119 425**	5.500

Utility Range

Trench Machines

IPS dimensional range



IPS Nominal pipe diameter	Machine size								
	160	250	315	400	500	630	800*	1000*	1200*
1 ½"									
2"									
2 ½"									
3"									
4"									
5"									
6"									
8"									
10"									
12"									
13"									
14"									
16"									
18"									
20"									
22"									
24"									
26"									
28"									
30"									
32"									
36"									
40"									
42"									
48"									

* Machine suitable for the maximum dimension of the range (32" for GF 800, 40" for GF 1000, 48" for GF 1200) available on request

Utility Range

Trench Machines

Components codes

Machine type	Base Machine (Standard/Reverse)	Hydraulic Unit	Planer	Heating Element	Case	Temp. controller / Control Box
ECOS 160	790 150 001	790 150 013	790 150 014	790 150 031	790 150 295	-
ECOS 250	790 151 030	790 152 009	790 151 041	790 151 056	790 151 027	-
ECOS 315	790 152 024	790 152 009	790 152 041	790152 034	790 152 027	-
TOP 2.0 160	790 150 001 / 004	790 151 006	790 150 000	790 114 004	790 150 295	-
TOP 2.0 250	790 151 001 / 039	790 151 006	790 151 038	790 115 004	790151 027	-
TOP 2.0 315	790 152 001 / 085	790 151 006	790 152 038	790 112 083	790 152 027	-
CNC 4.0 160	790 150 001 / 004 + 790 150 002*	790 151 026	790 150 000	790 114 004	790 150 295	-
CNC 4.0 250	790 151 001 / 039 + 790 152 002*	790 151 026	790 151 038	790 115 004	790 151 027	-
CNC 4.0 315	790 152 001 / 085 + 790 152 002*	790 151 026	790 152 038	790 112 083	790 152 027	-
ECOS 400	790 153 007	790 340 042	790 127 003	790 127 004	790 127 005	790 153 017
TOP 2.0 400	790 153 007 / 016	790 153 012	790 153 002	790 127 004	790 127 005	-
CNC 4.0 400	790 153 007 / 016 + 790 153 010*	790 153 026	790 153 002	790 127 004	790 127 005	-
ECOS 500	790 340 001	790 340 005	790 154 020	790 116 004	790 116 006	790 340 013
TOP 2.0 500	790 340 001 / 006	790 154 012	790 154 022	790 154 003	790 116 006	-
CNC 4.0 500	790 340 001 / 006 + 790 116 043*	790 154 026	790 154 022	790 154 003	790 116 006	-
ECOS 630	790 117 034	790 340 005	790 117 003	790 117 017	790 117 018	790 340 013
TOP 2.0 630	790 117 034 / 016	790 154 012	790 155 008	790 155 007	790 117 018	-
CNC 4.0 630	790 117 034 / 016 + 790 117 031*	790 154 026	790 155 008	790 155 007	790 117 018	-
GF 800	790 123 023	790 123 010	790 123 030	790 123 004	790 123 007	790 123 009
GF 1000	790 124 023	790 123 010	790 124 003	790 124 004	790 124 006	790 123 009
GF 1200	790 125 023	790 123 010	790 125 003	790 125 004	790 125 006	790 125 009
GF 1600	790 146 002	790 146 014	790 146 012	790 146 013	790 146 016	790 146 015

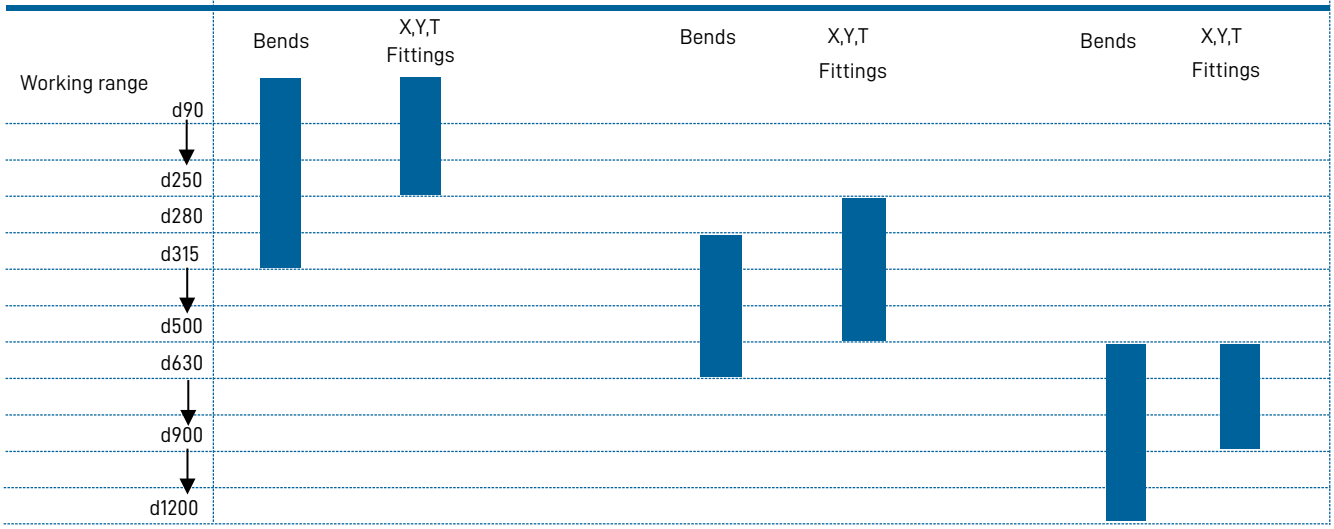
* Potentiometer kit

Utility Range

Workshop Machines

Product Range Overview

Characteristic	WM 315	WM 630	WM 1200
Max jointing diameter (mm)	315	630	1200
Jointing material		PE, PP, PB, PVDF	
Working range (°C)	-10/+45	-10/+45	-10/+45
Input voltage (Vac)	400	400	400
Operation control	Manual, CNC	Manual, CNC	Manual+WR
Performance (W)	4620	15600	41000
clamping inserts	√	√	√
Wide clamps for pipes	√	√	√
fittings	Optional	Optional	
Flange adapter clamping unit	Optional	Optional	
T, X, Y clamping units	Optional	Optional	Optional
Fusion protocols, transfer via USB stick	CNC version	CNC version	√
Weight without package (Kg)	460	1870	8000



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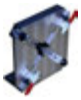	WM 315 Accessories	46
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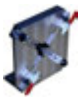	WM 630 Accessories	50
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WM 315

WM 315 TOP 2.0
Workshop butt fusion machine

- Machine for jointing segmented fittings for applications with pressure piping systems
- Maximum jointing angle 45°
- Dimensional range d90 - 315 mm
- To produce T and Y fittings in the dimensional range d90 - 250 mm, special accessories are required
- **Machine description**
- Clear control panel consisting of digital system pressure display, electronic heating element temperature control, timer with 2 stop times
- Automatic pressure control during the cooling time
- Built-in data logger and realtime communication with mobile devices during the welding process and fusion data download, working in combination with GFs mobile application
- Precise pressure setting and fine adjusting
- Carriage movements are carried out by means of pushbuttons
- The clamping units are mounted on supports, each of which can be adjusted transversely
- Each clamping unit can be turned up to 22.5°
- Each clamping unit is provided with a complete set of reductions d90 - 280 mm
- Precision heating element with electronic temperature control (3000 W)
- High-quality PTFE coating with long service life
- Heating element pull-off mechanism
- Powerful planer (1200 W) with optimized cutting geometry for even and chatter-free planing
- Load transfer via robust chain drive
- Mechanical stops to provide single sided planing and accurate facing depth
- Planer is secured with a mechanical locking system and a micro switch
- Including transport packaging, without accessories

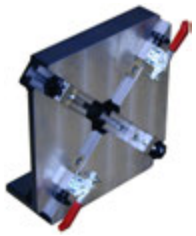
d1 (mm)	d2 (mm)	Power	Description	Code	Weight (kg)
90	315	400 V/4620 W	With wide clamping units for pipes	**790 118 005**	522.000
90	315	400 V/4620 W	With narrow clamping units for fittings	**790 118 006**	522.000

WM 315 CNC 4.0
Automatic workshop butt fusion machine

- Machine for jointing segmented fittings for applications with pressure piping systems
- Fully automated fusion process by the use of state of the art PLC and touch screen
- Maximum jointing angle 45°
- Dimensional range d90 - 315 mm
- To produce T and Y fittings in the dimensional range d90 - 250 mm, special accessories are required
- **Machine description**
- Intuitive colour touch screen interface
- Operator guidance from preparation to the end of the jointing process by use of symbols and graphics
- Automatic calculation, regulation and control of the fusion parameters - pressure, time and temperature - according to country specific guidelines
- Real time communication with mobile devices during the welding process, the data transfer and fusion protocols collection, in combination with GFs mobile application
- Integrated LAN port on a built-in advanced communication module to directly connect the machine with the IT control system operating in the workshop, for real time monitoring of the fusion parameters and to make possible for the customer to implement on his own (according to his specific needs) the digital information flow from/to the machine
- Seamless transfer of collected fusion data from the jobsite to the office via smartphone
- Compatible with label printer
- 10 freely programmable fusion cycles (e.g. for non standard pipe dimensions)
- Selection of language
- On site check of the memorized fusion protocols status directly on the touchscreen
- Transfer of memorized fusion protocols to an external PC via USB memory stick (included)
- Fusion protocols compatible with GFs application
- The clamping units are mounted on supports, each of which can be adjusted transversely
- Each clamping unit can be turned up to 22.5°
- Each clamping unit is provided with a complete set of reductions d90 - 280 mm
- Precision heating element with electronic temperature control (3000 W)
- High-quality PTFE coating with long service life
- The heating element is removed automatically during the change-over phase
- Powerful planer (1200 W) with optimized cutting geometry for even and chatter-free planing
- Load transfer via robust chain drive
- Mechanical stops to provide single sided planing and accurate facing depth
- Planer is secured with a mechanical locking system and a micro switch
- Including transport packaging, without accessories

d-d (mm)	Performance	Description	Code	Weight (kg)
90 - 315	400 V/4620 W	With wide clamping units for pipes	**790 118 009**	546.000
90 - 315	400 V/4620 W	With narrow clamping units for fittings	**790118016**	546.000

WM 315 Accessories



WM 315 Flange adapter clamping unit

- For centric fusion of flange adapters
- Easy, correct attachment of clamping unit in the basic machine

d1 (mm)	d2 (mm)	Code	Weight (kg)
90	315	**790 118 031**	16.000

WM 315 Base clamping unit for fittings with adapter ring, wide

- For clamping fittings of d315 mm as well as for fastening reduction clamping inserts for fittings d90 to 280 mm. Guide shaft for pipe support und back stop, with pipe support d315 mm
- Each clamping unit can be turned up to 15°
- L = left
- R = right

d (mm)	Type	Code	Weight (kg)
315	L	**790 118 011**	15.000
315	R	**790 118 012**	15.000

ECOS / TOP / CNC / WM Reduction clamping inserts

- Each code number represents 1 piece of reduction clamping insert (half-ring)
- Per each code number, maximum 8 pieces can be can be assembled on the ECOS/TOP/CNC machine (4 clamps)
- Per each code number, maximum 4 pieces can be can be assembled on the WM machine (2 clamps)
- As general purpose, to fit a specific pipe diameter, a combination of 4 wide and 4 narrow inserts is recommended for ECOS/TOP/CNC machine
- Reductions in inch sizes or special diameters upon request

Note:
* For ECOS/TOP/CNC 400, the wide reduction clamping insert d 315 (code 790 127 101) is also needed to assemble it on the machine.
** For ECOS/TOP/CNC/WM 630, the wide reduction clamping insert d 500 (code 790 117 012) is also needed to assemble it on the machine.

d (mm)	Type	narrow Code	Weight (kg)	wide Code	Weight (kg)
90	ECOS/TOP/CNC 315; WM 315	**790 112 098**	1.265	**790 112 088**	1.000
110	ECOS/TOP/CNC 315; WM 315	**790 112 099**	1.220	**790 112 089**	0.945
125	ECOS/TOP/CNC 315-400*; WM 315	**790 112 100**	1.215	**790 112 090**	0.957
140	ECOS/TOP/CNC 315-400*; WM 315	**790 112 101**	1.139	**790 112 091**	0.950
160	ECOS/TOP/CNC 315-400*; WM 315	**790 112 102**	1.080	**790 112 092**	0.980
180	ECOS/TOP/CNC 315-400*; WM 315	**790 112 103**	1.006	**790 112 093**	0.931
200	ECOS/TOP/CNC 315-400*; WM 315	**790 112 104**	0.945	**790 112 094**	0.880
225	ECOS/TOP/CNC 315-400*; WM 315	**790 112 105**	0.833	**790 112 095**	0.940
250	ECOS/TOP/CNC 315-400*; WM 315	**790 112 106**	0.712	**790 112 096**	0.754
280	ECOS/TOP/CNC 315-400*; WM 315	**790 112 107**	0.562	**790 112 097**	0.750

WM 315 Clamping insert, narrow, d 315

- For clamping of elbows, flange adapters, etc., d = 315 mm, 1 piece = 1 Alu-half-shell
- Each code number defines 1 piece reduction clamping insert. Per outer base clamping unit 2 reduction clamping inserts are needed.

d (mm)	Code	Weight (kg)
315	**790 118 028**	0.741

WM 315 Set of pipe supports for fittings clamping unit

d-d (mm)	Code	Weight (kg)
90 - 280	**790 118 025**	6.700

WM 315 T-fitting clamping unit

- For the rational manufacturing of 90° T-fittings in the sizes d 90 - 250 mm
- Three-piece, precise clamping tool for easy mounting on the machine bed
- Integrated eyelets for lifting
- **Complete** with reduction clamping inserts d 90 - 225 mm

d1 (mm)	d2 (mm)	Code	Weight (kg)
90	250	**790 118 032**	120.000

WM 315 Y-fitting clamping unit

- For the rational manufacturing of 30° to 45° Y-fittings in the sizes d 90 to 250 mm
- Three-piece, precise clamping tool for easy mounting on the machine bed
- **Complete** with reduction clamping inserts d 90 - 225 mm

d1 (mm)	d2 (mm)	Code	Weight (kg)
90	250	**790 118 033**	179.000

WM 315 Back stop

- Prevents the components from slipping out of the clamping device during fusion.

Code	Weight (kg)
790 118 026	4.000

ECOS / TOP / CNC / GF / WM / IM Set of replacement blades for planer

- Blade has 2 cutting edges (1 set = 2 blades)

Type	Code	Weight (kg)	Remarks
WM 315	**790 118 042**	0.220	Long blades set
WM 315; MC110	**790 118 043**	0.045	Short blades-set for WM 315

Label printer cable for CNC machines

- Cable to connect the CNC 4.0 to label printer.
- In case of existing CNC 4.0 control unit with former Bluetooth device, the label printer to order is the same used for IR/BCF machines - code 790 180 081.
- In case of new CNC 4.0 control unit (with GEN.2 Bluetooth device), the label printer code 790 152 414 is to be ordered. The same spare code 790 180 082 for the ribbon of the IR/BCF printer is to be used.

Type	Code	Weight (kg)
Cable with special connector	**790 155 343**	0.120

WM 630

WM 630

- Machine for jointing segmented fittings for applications with pressure piping systems
- Maximum jointing angle 45°
- Dimensional range d315 - 630 mm
- To produce T and Y fittings in the dimensional range d280 - 500 mm, special accessories are required
- Control panel assembled with pressure adjustment valve, pressure selection switch (planing or fusion pressure), selection switch for single or double sided planing process, gauge, joy stick and emergency stop
- The clamping units are mounted on supports, each of which can be adjusted transversely
- Each clamping unit can be turned up to 22.5°
- Each clamping unit is provided with a complete set of reductions d315 - 560 mm
- Hydraulically opening and closing of the upper clamping tools, manual locking with bolts and nuts
- Hydraulically operated insertion of planer and heating element
- Precision heating element with electronic temperature control (12000 W)
- High-quality PTFE coating with long service life
- Powerful planer (1100 W) with optimized cutting geometry for even and chatter-free planing
- Load transfer via robust chain drive
- During the planing process each slide could be moved separately (single sided planing)
- Including transport packaging, without accessories

d-d (mm)	Performance	Code	Weight (kg)
315 - 630	400 V / 15600 W	**790 108 020**	1870.000

WM 630 CNC 4.0
Automatic workshop butt fusion machine

- Machine for jointing segmented fittings for applications with pressure piping systems
- Fully automated fusion process by the use of state of the art PLC and touch screen
- Maximum jointing angle 45°
- Dimensional range d315 - 630 mm
- To produce T and Y fittings in the dimensional range d280 - 500 mm, special accessories are required
- Intuitive colour touch screen interface
- Operator guidance from preparation to the end of the jointing process by use of symbols and graphics
- Automatic calculation, regulation and control of the fusion parameters - pressure, time and temperature - according to country specific guidelines
- Real time communication with mobile devices during the welding process, the data transfer and fusion protocols collection, in combination with GFs mobile application
- Integrated LAN port on a built-in advanced communication module to directly connect the machine with the IT control system operating in the workshop, for real time monitoring of the fusion parameters and to make possible for the customer to implement on his own (according to his specific needs) the digital information flow from/to the machine
- Compatible with label printer
- 10 freely programmable fusion cycles (e.g. for non standard pipe dimensions)
- Selection of language
- Transfer of memorized fusion protocols to an external PC via USB memory stick (included)
- On site check of the memorized fusion protocols status directly on the touchscreen
- Fusion protocols compatible with GFs application
- The clamping units are mounted on supports, each of which can be adjusted transversely
- Each clamping unit can be turned up to 22.5°
- Each clamping unit is provided with a complete set of reductions d315 - 560 mm
- Hydraulically opening and closing of the upper clamping tools, manual locking with bolts and nuts
- Hydraulically operated insertion of planer and heating element
- Precision heating element with electronic temperature control (12000 W)
- High-quality PTFE coating with long service life
- Powerful planer (1100 W) with optimized cutting geometry for even and chatter-free planing
- Load transfer via robust chain drive
- During the planing process each slide could be moved separately (single sided planing)
- Including transport packaging, without accessories

d1 (mm)	d2 (mm)	Power	Code	Weight (kg)
315	630	400 V/15600 W	**790 108 101**	1870.000

WM 630 Accessories

WM 630 Flange adapter clamping unit

- For centric fusion of flange adapters
- Easy, correct attachment of clamping unit in the basic machine

d1 (mm)	d2 (mm)	Code	Weight (kg)
315	630	**790 108 031**	194.000

WM 630 Base clamping unit for fittings

- For clamping fittings of d630 mm as well as for the reduction clamping inserts for fittings of d315 to 560 mm. Guide shaft for pipe support and back stop, with pipe support d630 mm
- L = left
- R = right

d (mm)	Type	Code	Weight (kg)
630	L	**790 108 017**	150.000
630	R	**790 108 018**	150.000

ECOS / TOP / CNC / WM Reduction clamping inserts

- Each code number represents 1 piece of reduction clamping insert (half-ring)
- Per each code number, maximum 8 pieces can be can be assembled on the ECOS/TOP/CNC machine (4 clamps)
- Per each code number, maximum 4 pieces can be can be assembled on the WM machine (2 clamps)
- As general purpose, to fit a specific pipe diameter, a combination of 4 wide and 4 narrow inserts is recommended for ECOS/TOP/CNC machine
- Reductions in inch sizes or special diameters upon request

Note:
* For ECOS/TOP/CNC 400, the wide reduction clamping insert d 315 (code 790 127 101) is also needed to assemble it on the machine.
** For ECOS/TOP/CNC/WM 630, the wide reduction clamping insert d 500 (code 790 117 012) is also needed to assemble it on the machine.

d (mm)	Type	narrow Code	Weight (kg)	wide Code	Weight (kg)
315	ECOS/TOP/CNC 500-630**	**790 116 020**	3.622	**790 116 012**	3.698
355	ECOS/TOP/CNC 500-630**	**790 116 021**	3.267	**790 116 013**	3.727
400	ECOS/TOP/CNC 500-630**	**790 116 022**	2.383	**790 116 014**	3.836
450	ECOS/TOP/CNC 500-630**	**790 116 023**	2.273	**790 116 015**	3.276
500	ECOS/TOP/CNC/WM 630	**790 117 238**	3.700	**790 117 012**	4.500
560	ECOS/TOP/CNC/WM 630	**790 117 239**	4.280	**790 117 013**	5.550

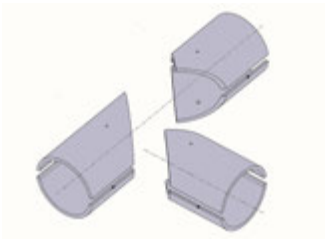
WM 630 Set of pipe supports for fittings clamping unit

d1 (mm)	d2 (mm)	Code	Weight (kg)
315	560	**790 108 009**	16.000

WM 630 T-fitting clamping unit

- For the rational manufacturing of 90° T-fittings in the sizes d 315 to 500 mm
- Three-piece, precise clamping tool for easy mounting on the machine bed
- Integrated eyelets for lifting
- Complete with reduction clamping inserts

d1 (mm)	d2 (mm)	Code	Weight (kg)
315	500	**790 108 032**	491.000



WM 630 Additional clamping inserts set d280 mm for T-fitting

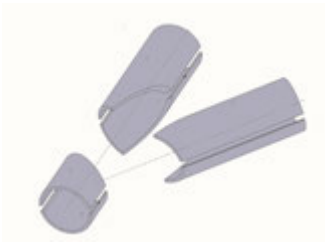
- To be used in combination with clamping unit code 790 108 032 for the manufacturing of T-fittings with pipe size d280 mm (from SDR 33 to SDR 11) with WM630
- If to be used with already existing WM630 machines, please, get in touch with GF Omicron directly to get information about compatibility and relevant machine upgrade

d (mm)	Code	Weight (kg)
280	**790 108 359**	49.300

WM 630 Y-fitting clamping unit

- For the rational manufacturing of 30° to 45° Y-fittings (branches) in the sizes d 315 - 500 mm
- Three-piece, precise clamping tool for easy mounting on the machine bed
- Integrated eyelets for lifting
- Complete with reduction clamping inserts

d1 (mm)	d2 (mm)	Code	Weight (kg)
315	500	**790 108 033**	650.000



WM 630 Additional clamping inserts set d280 mm for Y-fitting

- To be used in combination with clamping unit code 790 108 033 for the manufacturing of Y-fittings with pipe size d280 mm (from SDR 33 to SDR 11) with WM630
- If to be used with already existing WM630 machines, please, get in touch with GF Omicron directly to get information about compatibility and relevant machine upgrade

d (mm)	Code	Weight (kg)
280	**790 108 360**	70.600

WM 630 Back stop

- Prevents the components from slipping out of the clamping device during fusion.

Code	Weight (kg)
790 108 026	32.000

ECOS / TOP / CNC / GF / WM / IM Set of replacement blades for planer

- Blade has 2 cutting edges (1 set = 2 blades)

Type	Code	Weight (kg)	Remarks
WM 315; MC110	**790 118 043**	0.045	Short blades-set for WM 315
GF 1000; WM 630	**790 124 021**	0.299	

Label printer cable for CNC machines

- Cable to connect the CNC 4.0 to label printer.
- In case of existing CNC 4.0 control unit with former Bluetooth device, the label printer to order is the same used for IR/BCF machines - code 790 180 081.
- In case of new CNC 4.0 control unit (with GEN.2 Bluetooth device), the label printer code 790 152 414 is to be ordered. The same spare code 790 180 082 for the ribbon of the IR/BCF printer is to be used.

Type	Code	Weight (kg)
Cable with special connector	**790 155 343**	0.120

WM 1200

WM 1200
Workshop butt fusion machine

- Machine for jointing segmented fittings for applications with pressure piping systems
- Equipped with Welding Recorder
- Maximum jointing angle 45°
- Dimensional range d630 - 1200 mm
- To produce T and Y fittings in the dimensional range d630 - 900 mm, special accessories are required
- **Machine description**
- Moveable control panel assembled with potentiometer to adjust the fusion and the planing pressure, selection switch for single or double sided planing process, gauge, Open/Close and pressure release button, emergency stop
- Built in data logger
- Transfer of memorized fusion protocols to an external PC via USB memory stick (included)
- Fusion protocols compatible with GFs application
- The clamping units are mounted on supports, each of which can be adjusted transversely
- Each clamping unit can be turned up to 22.5°
- Each clamping unit is provided with a complete set of reductions d630 - 1000 mm
- Hydraulically opening and closing of the clamping units
- Hydraulic locking mechanism of the clamping units
- Hydraulically operated insertion of planer and heating element
- Additional hydraulic cylinder assembled on top of the clamping units to guarantee an optimized application of the fusion force, especially for pipe sizes bigger than d900 mm
- Hardened, hard chrome plated linear guide rails for extreme loads
- Precision heating element with electronic temperature control (30000 W)
- High-quality PTFE coating with long service life
- Powerful planer (2200 W) with optimized cutting geometry for even and chatter-free planing
- Load transfer via robust chain drive
- During the planing process each slide could be moved separately (single sided planing)
- Including transport packaging, without accessories
- Dimensions: 2400 L x 1400 W x 2070 H in mm

d-d (mm)	Performance	Code	Weight (kg)
630 - 1200	400 V/41000 W	**790 126 001**	8000.000

WM 1200 Accessories

WM 1200 T-fitting clamping unit

- For the rational manufacturing of 90° T-fittings in the sizes d 630 - 900 mm
- Three-piece, precise clamping tool for easy mounting on the machine bed
- Integrated eyelets for lifting
- Complete with reduction clamping inserts

d1 (mm)	d2 (mm)	Code	Weight (kg)
630	900	**790 126 011**	4620.000

WM 1200 Y-fitting clamping unit

- For the rational manufacturing of 30° to 45° Y-fittings (branches) in the sizes d 630 - 900 mm
- Three-piece, precise clamping tool for easy mounting on the machine bed
- Integrated eyelets for lifting
- Complete with reduction clamping inserts

d1 (mm)	d2 (mm)	Code	Weight (kg)
630	900	**790 126 012**	5500.000

WM 1200 X-fitting clamping unit

- To weld a X-piece the T-piece unit is necessary

d1 (mm)	d2 (mm)	Code	Weight (kg)
630	900	**790 126 013**	2900.000

WM 1200 Base Plate T-Y-X pieces

- To mount the T-Y-X pieces to the support plate

Code	Weight (kg)
790 126 014	1000.000

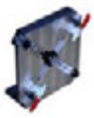
WM 1200 Set of replacement blades for planer

- 4 blades mounted on each planer disk
- (1 set = 4 blades)

Code	Weight (kg)
790 126 043	0.500

Workshop

Accessories codes

Machine Type	Clamping unit for fittings	Clamping unit for pipes	 Flange adapter clamping unit	T-fitting clamping unit	Y-fitting clamping unit	X-fitting clamping unit	Back stop
WM 315 FC	Included	790 302 020	790 118 031	790 118 032 *(d 90 - 250)*	790 118 033 *(d 90 - 250)*	790 118 032 + 790 118 038 + 790 118 039 *(d 90 - 250)*	790 118 026
WM 315 PC	790 118 011* (Left) 790 118 012* (Right)	Included					
WM 630	790 108 017* (Left) 790 108 018* (Right)	Included	790 108 031	790 108 032 *(d 315 - 500)* + 790 108 359 *(d 280)*	790 108 033 *(d 315 - 500)* + 790 108 360 *(d 280)*	790 108 032 + 790 108 077 + 790 108 081 *(d 315 - 500)* + 790 304 374 + 790 001 447 *(d 280)*	790 108 026
WM 1200	-	Included	-	790 126 011 + 790 126 014 *(d 630 - 900)*	790 126 012 + 790 126 014 *(d 630 - 900)*	790 126 011 + 790 126 013 *(d 630 - 900)*	-

* Without reduction inserts for clamps (narrow type) and pipe supports: to be ordered separately

Utility Range

Peeling Tools

Product Range Overview

Working range (mm)	Rotary Peeler	RST 1000	RSE	RSE Multi			PT 2	RTC
20								
25								
32								
40								
50								
63								
75								
90								
110								
125								
140								
160								
180								
200								
225								
250								
280								
315								
355								
400								
450								
500								
560								
630								
710								
800								
900								
1000								
1200		Optional						

Rotary peelers

Rotary Peeler RS

Note:

- Universal peeling for the preparation of all electrofusion joints
- For pipe ends and saddles
- Materials: PE 80, PE100, PE100-RC, PE-X, PP

* Suitable for PB

	d (mm)	Article	Code	SP	Weight (kg)
	40	RS 40	**790 136 001**	1	2.340
	50	RS 50	**790 136 002**	1	2.115
	63	RS 63	**790 136 003**	1	2.090
	75	RS 75	**790 136 004**	1	2.350
	90	RS 90	**790 136 005**	1	2.460
	110	RS 110	**790 136 006**	1	2.430
*	125	RS 125	**790 136 007**	1	3.895
	140	RS 140	**790 136 008**	1	3.890
	160	RS 160	**790 136 009**	1	3.790
	180	RS 180	**790 136 010**	1	4.150
	200	RS 200	**790 136 011**	1	3.995
*	225	RS 225	**790 136 012**	1	3.935
	250	RS 250	**790 136 013**	1	5.575
	280	RS 280	**790 136 014**	1	5.440
*	315	RS 315	**790 136 015**	1	5.380

Replacement blade to Rotary Peeler RS

d-d (mm)	Description	Code	SP	Weight (kg)
40 - 315	Hard metal	**790 136 100**	1	0.013

Transport cases for Rotary Peeler RS

- Included in the scope of delivery of the Rotary Peeler RS

Suitable for	Code	Weight (kg)	L (mm)	H (mm)	W (mm)
RS 40-RS 63	**790 136 221**	0.718	343	277	125
RS 75-RS 110	**790 136 222**	0.870	343	277	125
RS 125-RS 160	**790 136 223**	0.870	490	400	153
RS 180-RS 225	**790 136 213**	1.796	450	360	132
RS 250-RS 315	**790 136 214**	3.100	566	435	156

Rotary peeling tool RST 1000

- The flexible peeling tool RST 1000 is suitable for preparing welding zones of saddle and coupler jointings for Electrofusion fittings
- To ensure the constant removal of the oxidation layer for PE80 and PE100, a long lasting peeling blade made of carbide is used
- Easy-to-hinge chain links enable the staged operation of pipes d250 to d1000 mm
- Compensation for ovality and variable pipe diameters with loaded spring component in the chain
- Scope of delivery includes: various chain links, spare blade, transport box
- Size transport box = 58 x 48 x 15cm

d-d (mm)	Code	Weight (kg)
250 - 1000	**799 300 799**	10.552

Replacement blade for rotary peeling tool RST 1000

d-d (mm)	Code	SP	Weight (kg)	Description
250 - 1000	**799 300 802**	1	0.020	Replacement blade in carbide

Transportbox RST 1000 with inlays

- Included in the scope of delivery of the Rotary Peeler RST 1000
- Size transport box = 58 x 48 x 15cm

d-d (mm)	Code	Weight (kg)
250 - 1000	**799 300 806**	3.000

Spare part RST 1000

d-d (mm)	Code	Weight (kg)	Description	L (mm)
250 - 1000	**799 300 795**	0.50	Roller wagon w/link piece 55 mm	215
250 - 1000	**799 300 796**	0.54	Roller wagon w/link piece 85 mm	245

Pipe end peelers

Pipe end peeler RSE SDR11

- **Rotary peeler for reliable pipe preparation prior to electrofusion**
- Consisting of 1 tool including corresponding pipe insert
- Applicable on pipe ends and spigot ends of fittings (straight and coiled pipes)
- Applicable for straight and coiled pipes
- Applicable for metric pipes according to EN12201 und EN1555
- Applicable on pipe material: PE100RC, PE100, PE-Xa, PP
- Operation: manual or with cordless screwdriver
- Maximum peeling length = 85mm
- Peeling blade as reversing knife with 2 cutting edges
- Delivery in transport box

d (mm)	Code	Weight (kg)	e (mm)	L (mm)	W (mm)	H (mm)
20	**799 300 376**	0.60	2.0	280	50	50
25	**799 300 377**	0.65	2.3	280	50	50
32	**799 300 378**	0.65	3.0	280	50	50
40	**799 300 379**	0.70	3.7	280	55	55
50	**799 300 380**	0.80	4.6	280	65	65
63	**799 300 381**	1.00	5.8	280	85	85
75	**799 300 382**	1.15	6.8	280	95	95

Pipe end peeler RSE multi

- **Rotary peeler for reliable pipe preparation prior to electrofusion**
- The adjustable basic tool is suitable for holding dimensional pipe inserts from d20 to d75 mm.
- Applicable on pipe ends and spigot ends of fittings (straight and coiled pipes)
- Applicable for straight and coiled pipes
- Applicable for metric pipes according to EN12201 und EN1555
- Applicable on pipe material: PE100RC, PE100, PE-Xa, PP
- Operation: manual or with cordless screwdriver
- Maximum peeling length = 75mm
- Peeling blade as reversing knife with 2 cutting edges
- Scope of delivery either without or with the pipe inserts specified in the description
- Supplementary pipe inserts to be ordered separately

Description	Suitable for	Code	Weight (kg)	e (mm)	L (mm)	W (mm)	H (mm)
Basic tool + box		**799 300 350**	0.58		280	95	98
Basic tool + case		**799 300 351**	1.45		391	304	134
Basic tool+case+d32+d63	d20 - d75	**799 300 352**	1.88		391	304	134
Basic tool+case +d32+d40+d50+d63	d20 - d75	**799 300 353**	2.18		391	304	134
Insert RSE	d20, SDR7	**799 300 354**	0.30	3.0	45	20	20
Insert RSE	d20, SDR11	**799 300 356**	0.05	2.0	45	20	20
Insert RSE	d25, SDR9	**799 300 355**	0.10	3.0	45	25	25
Insert RSE	d25, SDR11	**799 300 357**	0.10	2.3	45	25	25
Insert RSE	d32, SDR11	**799 300 358**	0.10	3.0	50	30	30
Insert RSE	d40, SDR11	**799 300 359**	0.10	3.7	50	40	40
Insert RSE	d50, SDR11	**799 300 360**	0.20	4.6	60	50	50
Insert RSE	d50, SDR17	**799 300 370**	0.20	3.0	60	50	50
Insert RSE	d63, SDR11	**799 300 361**	0.33	5.8	60	60	60
Insert RSE	d63, SDR17	**799 300 371**	0.33	3.8	60	60	60
Insert RSE	d75, SDR11	**799 300 362**	0.47	6.8	60	70	70
Insert RSE	d75, SDR17	**799 300 372**	0.47	4.5	60	70	70
Blade RSE		**799 300 347**	0.01		7	7	3
Handle RSE		**790 308 450**	0.08		60	50	50

Pipe end peeler RSE multi
SDR11-17

- **Rotary peeler for reliable pipe preparation prior to electrofusion**
- Applicable on pipe ends and spigot ends of fittings (straight and coiled pipes)
- Applicable for metric pipes according to EN12201 und EN1555
- Applicable for inch pipes of the corresponding sizes (d90-180mm corr. to 3"-6")
- Applicable on pipe material: PE100RC, PE100, PE-Xa, PP
- Operation: manual
- Hard metal peeling blade (Code-no. 790136100, identical to RS peeler)
- Delivery in solid transport case

d (mm)	d1 (mm)	Code	Weight (kg)	L (mm)	W (mm)	H (mm)
90	180	**799 300 364**	4.80	494	402	156

Pipe end peeler RSE 400
SDR11-17

- **Rotary peeler for reliable pipe preparation prior to electrofusion**
- Applicable on pipe ends and spigot ends of fittings (straight and coiled pipes)
- Applicable for metric pipes according to EN12201 und EN1555
- Applicable for inch pipes of the corresponding sizes (d180-400mm corr. to 8"-16")
- Applicable on pipe material: PE100RC, PE100, PE-Xa, PP
- Operation: manual
- Hard metal peeling blade (Code-no. 790136100, identical to RS peeler)
- Delivery in solid transport case

d (mm)	d1 (mm)	Code	Weight (kg)	L (mm)	W (mm)	H (mm)
180	400	**799 300 365**	13.00	665	562	250

Transport cases for pipe end peeler RSE multi

- Transport case is included in the scope of delivery of the peeling tool
- Replacement case including foam inlay

d (mm)	d1 (mm)	Code	Weight (kg)	L (mm)	B (mm)	H (mm)
20	75	**790 308 312**	1.055	391	304	134
90	180	**790 308 313**	1.900	494	402	156
180	400	**790 308 344**	6.000	665	562	250

Peeling tool PT 2

- Scope of delivery: 1 tool (size 1, 2 or 3) in a metal carrying case.
- The rotating Peeling Tools PT 2 are suitable for preparing pipe ends (when installing Electrofusion couplers and fittings). The tool ensures a constant peeling quality on the complete peeling surface and is suitable for PE80, PE100 and PEX pipes.

d-d (mm)	Code	Weight (kg)	Description
63 - 250	**799 300 752**	7.500	Size 1, peeling length 140 mm
110 - 400	**799 300 755**	9.900	Size 2, peeling length 150 mm
110 - 500	**799 300 756**	3.900	Size 3, peeling length 175 mm

Spare parts for PT 2 peeling tool

- Firm metal blade usable on four sides

d-d (mm)	Piece	Code	SP	Weight (kg)	Description
63 - 500	1	**799 150 355**	1	0.008	Replacement blade, 1 piece
90 - 500	1	**799 150 321**	0	0.100	Tool holder

Peeling tool RTC

- **Rotary peeler for reliable pipe preparation prior to electrofusion**
- Applicable on pipe ends and spigot ends of fittings (straight and coiled pipes)
- **Scope of delivery 315**: 1 Scraper arm, 1 Self-centering chuck base, 1 Aluminium transport case
- **Scope of delivery 710**: 1 Scraper arm, 1 Self-centering chuck base, 2 Aluminium transport case

d-d (mm)	Code	Weight (kg)	Description
75 - 315	**799 150 423**	9.616	max. working-range 185 mm
355 - 710	**799 300 757**	31.400	max. working-range 530 mm

Replacement blade for peeling tool RTC

d-d (mm)	Piece	Code	Weight (kg)	Description
75 - 710	1	**799 300 586**	0.020	Replacement blade, 1 piece

COOL-FIT 2.0/4.0 Foam removal and peeling tool

Model:

- Tool for foam removal and peeling of COOL-FIT 2.0 and 4.0 pipes

d (mm)	Code	Weight (kg)	SDR
32-90	**799 738 001**	10.500	SDR11
110-225	**799 738 003**	16.500	SDR11 - SDR17
250-450	**799 738 004**	71.000	SDR17

Hand scraper

- The Hand Scraper can be used to prepare the fusion zone on PE80 pipes.

Description	Code	Weight (kg)
Hand scraper with long handle	**799 198 094**	0.143

Clamping and Installation Tools

Product Range Overview

Working range (cm)	Multi Clamp	Twin Clamp	Double & Quadruple Clamp	Double & Quadruple Clamp with Link	Swivel Clamp	Clamping Device Topload 630	Installation Set Topload TL225	Installation Set Topload TL500
20								
25								
32								
40								
50								
63								
75								
90								
110								
125								
140								
160								
180								
200								
225								
250								
280								
315								
355								
400								
450								
500								
560								
630								
710								
800								
900								
1000								
1200								
1400								
1600								
1800								
2000								

Pipe clamps

Clamping tool
Double, single size

- The easy-to-use Twin Clamp is suitable for coupler connections on straight or coiled pipe. The clamps prevent pullout and pipe movements during the fusion and cooling time.
- Scope of delivery: 1 complete tool.

d (mm)	Code	Weight (kg)	L (mm)	H (mm)	W (mm)
20	**799 301 536**	0.658	190	70	80
25	**799 301 537**	0.471	190	70	80
32	**799 301 538**	0.756	300	80	190
40	**799 301 539**	1.079	300	90	200
50	**799 301 540**	1.326	300	100	210
63	**799 301 541**	1.618	300	110	230

Multi clamp

- This tool is quick and easy to use and is suitable for straight forward connections to straight lengths of pipe or saddle branch outlets with electrofusion couplers.
- Scope of delivery: 1 tool without accessories.

Suitable for	Code	Weight (kg)	L (mm)	W (mm)	H (mm)
d20 - d63 mm	**799 301 575**	0.800	220	80	140

Inserts for multi clamp

- The inserts are easily and quickly exchanged. A set consists of 4 inserts, each insert with 2 different dimensions.

Suitable for	Code	Weight (kg)	Description	L (mm)
d25 - d20 mm	**799 150 385**	0.500	Inserts, Sets	200
d32 - d20 mm	**799 150 386**	0.500	Inserts, Sets	200
d32 - d25 mm	**799 150 387**	0.500	Inserts, Sets	220
d40 - d32 mm	**799 150 388**	0.500	Inserts, Sets	200
d50 - d40 mm	**799 150 389**	0.500	Inserts, Sets	200
d63 - d32 mm	**799 150 390**	0.500	Inserts, Sets	220
d63 - d40 mm	**799 150 391**	0.500	Inserts, Sets	200
d63 - d50 mm	**799 150 392**	0.500	Inserts, Sets	200

Clamping tool
Double, multi size

- The user-friendly Double Clamps are suitable for coupler connections. They are quickly and easily put into position and prevent pullout and pipe movements during the fusion time and cooling time.
- Scope of delivery: 1 tool consisting of 1 beam (compact), 2 V-clamps complete with ratchet and belt.

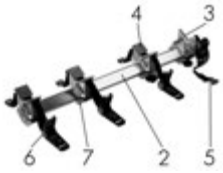
d-d (mm)	Code	Weight (kg)	Length (mm)	Width (mm)	Height (mm)
63 - 125	**799 301 484**	3.506	340	180	130
110 - 225	**799 301 486**	7.918	500	240	190
225 - 500	**799 301 488**	14.735	650	300	250

Clamping tool
Quadruple, multi size

- The professional Quadruple Clamps are suitable for coupler connections. They are quickly and easily put into position and ensure a stress-free fusion. They prevent pullout and pipe movements during the fusion and cooling times.
- Recommended for difficult site conditions with large installation-induced stresses.
- Scope of delivery: 1 tool consisting of 1 beam (long), 4 V-clamps complete with ratchet and belt.

Suitable for	Code	Weight (kg)	L (mm)	W (mm)	H (mm)
d63 - d125 mm	**799 301 459**	7.142	760	180	130
d110 - d225 mm	**799 301 461**	16.490	1120	240	190
d225 - d500 mm	**799 301 463**	28.500	1510	300	250

Spare parts for clamps



Description	Size	Code	Weight (kg)
(1) square support short	63-125, 45mm	**799 900 414**	1.700
(1) square support short	110-225, 60mm	**799 900 405**	3.500
(1) square support short	225-500, 80mm	**799 900 394**	6.000
(2) square support long	63-125, 45mm	**799 900 413**	3.600
(2) square support long	110-225, 60mm	**799 900 404**	6.500
(2) square support long	225-500, 80mm	**799 900 387**	11.500
(4) prism wide	63-125 mm	**799 900 421**	0.977
(4) prism wide	110-225 mm	**799 900 423**	2.000
(4) prism wide	225-500 mm	**799 900 425**	4.500

Clamping tool
Double, multi size with universal link

- Recommended for the installation of fittings ELGEF Plus and ecoFIT d40 - 200 and d160 - 630mm
- Recommended for the installation of fittings COOL-FIT d32/D75 - d140/D200 and d160/D250 - d450/D630
- The clamping allows installation without tension and avoids movement during fusion and cooling time
- The centrally located adjustable universal link allows installation of electrofusion couplers, elbows and reducers
- Works above, below and alongside the joint
- Adaptor for use with Tee-pieces available (see accessories)

d (mm)	d1 (mm)	Code	Weight (kg)
40	200	**799 301 490**	4.200
160	630	**799 301 496**	14.100

d (mm)	Description	Length (mm)	Width (mm)	Height (mm)
40	Scope of delivery: 2 x V-block, 2 x Straight bar, 1 x Universal link, Transport bag (600x380x250)	900	290	230
160	Scope of delivery: 2 x V-block, 2 x Straight bar, 1 x Universal link, Transport bag (780x780x580)	1300	670	550

Clamping tool
Quadruple, multi size with universal link

- Recommended for the installation of fittings ELGEF Plus and ecoFIT d40 - 200 and d160 - 630mm
- Recommended for the installation of fittings COOL-FIT d32/D75 - d140/D200 and d160/D250 - d450/D630
- The clamping allows installation without tension and avoids movement during fusion and cooling time
- The centrally located adjustable universal link allows installation of electrofusion couplers, elbows and reducers
- Universal use; works above, below and alongside the joint
- Adaptor for use with Tee-pieces available (see accessories)

d (mm)	d1 (mm)	Code	Weight (kg)	Description	L (mm)	W (mm)	H (mm)
40	200	**799 301 489**	8.300	Scope of delivery: 4 x V-block, 2 x Straight bar, 1 x Universal link	900	290	230
160	630	**799 301 495**	23.300	Scope of delivery: 4 x V-block, 2 x Straight bar, 1 x Universal link	1300	670	550

Tee adaptor

- Suitable for clamping tool (799301495)

d (mm)	d1 (mm)	Code	Weight (kg)	Description	Length (mm)	Width (mm)	Height (mm)
40	200	**799 301 491**	0.610	Tee adaptor	600	50	40
160	630	**799 301 497**	3.500	Tee adaptor	1070	75	60

V-block

- Suitable for clamping tool (799301495)

d (mm)	d1 (mm)	Code	Weight (kg)	Description	Length (mm)	Width (mm)	Height (mm)
40	200	**799 301 492**	1.000	V-block complete	290	230	65
160	630	**799 301 498**	3.200	V-block complete	660	430	90

Bar extension

- Suitable for clamping tool (799301495)

d (mm)	d1 (mm)	Code	Weight (kg)	Description	L (mm)	W (mm)	H (mm)
160	630	**799 301 499**	1.000	Bar extension	1000	40	40

Clamping tool
Double, multi size with link

- The Swivel Clamp centralises pipes with dimensions from d63 to 180 mm automatically. Suitable for coupler connections as well as reductions and bends. The 15° adjustment makes an exact positioning from 15° to 90° possible.

d-d (mm)	Code	Weight (kg)	Length (mm)	Width (mm)	Height (mm)
63 - 180	**799 350 358**	13.000	1500	370	390

Toploads clamps

ELGEF Plus Clamping device topload 630

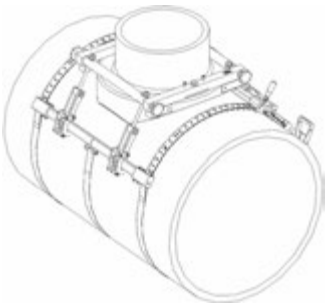
- This clamp and mounting tool is used for top-load Saddles on pipes.
- Proper use: ELGEF Plus Branch fitting for dimension d280-630mm with outlet d90/110/125mm
- Scope of delivery: 1 base mounting clamp, 1 clamping attachment, 1 bracket, 2 clamping screws, 2 ratchet straps, 1 transport box

d-d (mm)	Code	Weight (kg)
280 - 630	**799 350 477**	28.400

ELGEF Plus Installation set topload TL 225

- Suitable for branch saddle d315-1000mm with spigot outlet d160/d225
- Use of set is mandatory for the installation of branch saddles
- Set includes frame with tension belts, peeling tool, clamp and transport box
- Patent pending

Code	Weight (kg)
799 300 807	48.000



ELGEF Plus Installation set topload TL 500

- Suitable for ELGEF Plus branch saddle d450-2000mm with spigot outlet d315 and d500
- Use of set is mandatory for the installation of branch saddles
- Set includes frame with tension belts, peeling tool, clamp for outlet d315mm/500mm and transport box
- Patent pending

Code	Weight (kg)
799 300 809	124.000

Accessories / single parts for Installation set Topload

Description	Code	SP	Weight (kg)
Transport box TL 225 (860x700x180)	**799 300 923**	1	18.500
Frame TL 225 incl. tension belt up to 1000mm	**799 300 820**	1	14.000
Peeling tool TL 225	**799 300 835**	1	5.600
Clamp TL 225	**799 300 920**	1	9.900
Peel cutter TL	**799 300 831**	1	0.066

ELGEF Plus Multiple use assembly tool branch saddle PE100 d140mm

- Only to be used with Branch Saddle d140mm
- Delivered as complete Kit including screws and belt

d (mm)	Code	Weight (kg)
140	**193 281 027**	0.724

Cleaning and Accessories for job sites

Cleaners and markers

Tangit KS-Cleaning Tissues

- Special cleaner for plastic fusion connections in the material of PE, PP, PB, PVDF, ECTFE and PVC-U
- Suitable for Tangit Rapid. Must not be used for solvent cementing
- for plastic welding joints PB, PE, PP, PVDF
- DW 5290 BR 0464
- DVGW approved

Description	Code	Weight (kg)
1 dispenser with 100 tissues	**799 298 024**	0.333

Tangit KS Cleaner

- Special cleaner for plastic fusion connections in the material of PE, PP, PB, PVDF, ECTFE and PVC-U
- Suitable for Tangit Rapid. Must not be used for solvent cementing
- DVGW approved
- DW 5290 BR 0464

Size	Code	Weight (kg)
1 liter	**799 298 023**	0.872

Degreasing Tissues

- For degreasing the PE pipe surface prior to fusion

Description	Code	Weight (kg)
For pipes up to d225 mm	**799 496 011**	0.008

Marker

Type	Code	Weight (kg)
silver	**799 350 364**	0.010

Support tools

Chamfering tools

- Chamfering tool (15° bevel) for plastic pipes. Fast and reliable adjustment to the different pipe diameters and wall thickness.

d1 (mm)	d2 (mm)	Description	Code	Weight (kg)
25	110	Special version for INSTAFLEX PB	**790 309 005**	1.100
25	110	Standard version	**790 309 006**	1.100
25	200	Standard version	**790 309 003**	1.300
63	400	Standard version	**790 309 004**	2.600

Spare blades for chamfering tool

- 1 piece of each code mounted on every chamfering tool

d-d (mm)	Description	Code	Weight (kg)
25 - 400	Spare blade	**790 309 015**	0.010
25 - 400	Counter blade	**790 309 016**	0.012

Outer bead remover

- Each outer bead remover size code is provided complete with the blade.
- Spare blade codes are also given below for replacement.
- 1 piece of each spare blade code is to be mounted on the correspondent outer bead remover tool size.

d-d (mm)	Description	Code	Weight (kg)
90 - 400	Outer bead remover size 400	**790 109 250**	2.100
90 - 400	Spare blade for outer bead remover size 400	**790 109 251**	0.200
355 - 630	Outer bead remover size 630	**790 109 252**	3.600
355 - 630	Spare blade for outer bead remover size 630	**790 109 253**	0.250
500 - 900	Outer bead remover size 900	**790 109 254**	3.800
500 - 900	Spare blade for outer bead remover size 900	**790 109 255**	0.300
710 - 1200	Outer bead remover size 1200	**790 109 256**	5.000
710 - 1200	Spare blade for outer bead remover size 1200	**790 109 257**	0.300

Deburring tool

- Replacable blade

Code	SP	Weight (kg)
790 205 082	1	0.058

Spare blades for deburring tool

- 10 pieces

Code	SP	Weight (kg)
790 205 083	1	0.031

Chamfering / deburring tool

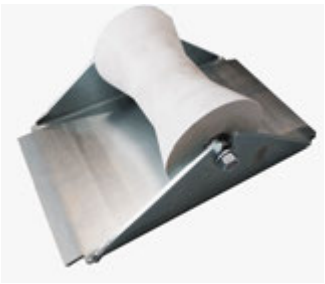
- 10 mm - 54 mm / 1/2" - 2"
- Inside and outside
- Ideal for adhesive jointing

Code	SP	Weight (kg)
790 205 085	1	0.450

Measuring tape (circumference and diameter)

- Circumference: 2 m / 79 inch
- Diameter: 630 mm / 25 inch

Code	SP	Weight (kg)
790 205 087	1	0.045



Roller support 315

- For pipes up to d 315 mm, with base plate, galvanised
- The piping can be pulled with little effort
- Protects pipes from damage
- Reduces resistance during fusion
- Maximum load 300 kg

d1 (mm)	d2 (mm)	Code	Weight (kg)
20	315	**790 109 110**	5.950

Roller support 630

- Up to d 630 mm, with base plate, galvanised
- **adjustable height** (60 mm)
- The piping can be pulled with little effort
- Protects pipes from damage
- Reduces resistance during fusion
- Maximum load 1000 kg

d1 (mm)	d2 (mm)	Code	Weight (kg)
110	630	**790 109 109**	4.725

Rerounding and Squeeze-off tools

Rerounding tools

Re-rounding tool 1
Type nut cracker

- Re-rounding tools are used to re-round oval pipes during fusion as well as during the cooling time.

d (mm)	Code	SP	Weight (kg)	Description
25	**799 199 127**	1	0.577	Type nut cracker
32	**799 199 128**	1	0.500	Type nut cracker
40	**799 199 129**	1	1.500	Type nut cracker
50	**799 199 130**	1	1.616	Type nut cracker

Re-rounding tool 2
Type hinged collar

- Re-rounding tools are used to re-round oval pipes during fusion as well as during the cooling time.

d (mm)	Code	SP	Weight (kg)	Description
63	**799 199 131**	1	0.742	Type hinged collar
75	**799 199 132**	1	0.791	Type hinged collar

Re-rounding tool 3
Type hinged collar

- Re-rounding tools are used to re-round oval pipes during fusion as well as during the cooling time.

d (mm)	Code	SP	Weight (kg)	Description
90	**799 199 133**	1	1.690	Type hinged collar
110	**799 199 134**	1	1.537	Type hinged collar
125	**799 199 135**	1	1.917	Type hinged collar
160	**799 199 137**	1	2.318	Type hinged collar
180	**799 199 138**	1	2.493	Type hinged collar

Re-rounding tool 4
Type split collar

- Re-rounding tools are used to re-round oval pipes during fusion as well as during the cooling time.

d (mm)	Code	SP	Weight (kg)	Description
200	**799 199 139**	1	2.500	Type split collar
225	**799 199 140**	1	3.361	Type split collar
250	**799 199 141**	1	1.872	Type split collar

Re-rounding tool Multi

- Enables mechanical re-rounding of out-of-roundness PE pipes for fusion preparation
- Recommended for installation of electrofusion couplers and electrofusion saddles
- We generally recommend the use of 2 re-rounding tools (1 x left and 1 x right of the installed fitting)
- Facilitates the installation and improves connection quality
- Pipe ovality before re-rounding max. 6% at +20°C (3% at ambient temperature of 0°C)
- Required ringspanner is not included in scope of delivery

[1] Material: Galvanized steel, Scope of delivery: 2 x Crossbar, 2 x Spindle, 2 x Nut AF 30, 2 x Spindle protection, Transport box

[2] Material: Aluminium, Scope of delivery: 2 x Crossbar, 2 x Spindle, 2 x Nut AF 55, 2 x Spindle protection

	d (mm)	d1 (mm)	Code	Weight (kg)	L (mm)	B (mm)	H (mm)
1	280	450	**799 350 688**	25.000	650	290	260
1	450	630	**799 350 689**	38.000	830	290	260
1	630	900	**799 350 690**	49.000	1100	290	260
2	900	1400	**799 350 695**	192.300	2000	650	600
2	1400	2000	**799 350 696**	254.200	2650	650	600

Transport box for Re-rounding tool

- Suitable for Re-rounding tool (799350688 - 696)

d (mm)	d1 (mm)	Code	Weight (kg)
280	450	**799 350 691**	7.800
450	630	**799 350 692**	9.200
630	900	**799 350 693**	11.000
900	1400	**799 350 697**	40.000
1400	2000	**799 350 698**	50.000

Crossbeam for Re-rounding tool

- Suitable for Re-rounding tool (799350688 - 696)

d (mm)	d1 (mm)	Code	Weight (kg)
280	450	**799 350 706**	9.500
450	630	**799 350 707**	15.700
630	900	**799 350 708**	19.800
900	1400	**799 350 709**	55.000
1400	2000	**799 350 710**	75.000

Pipe gauge

- Pipe gauge enables check of pipe ovality on existing pipelines
- Applicable on any user-defined spot within the pipeline
- Strongly recommended for all installations of brach saddles on pipes d315mm and above (193135402-748)
- Plug gauge (799350659) for exact measuring of out-of roundness deviations is not included in scope of delivery
- Material: aluminium

d (mm)	Code	Weight (kg)
315	**799 350 660**	0.271
355	**799 350 661**	0.255
400	**799 350 662**	0.257
450	**799 350 663**	0.245
500	**799 350 664**	0.334

table continued on the next page

d (mm)	Code	Weight (kg)
560	**799 350 665**	0.324
630	**799 350 666**	0.319
710	**799 350 667**	0.310
800	**799 350 668**	0.311
900	**799 350 669**	0.425
1000	**799 350 670**	0.420
1200	**799 350 671**	0.413
1400	**799 350 672**	0.410
1600	**799 350 673**	0.407
2000	**799 350 674**	0.403

Pipe gauge set

- Pipe gauge set enables check of pipe ovality on existing pipelines
- Applicable on any user-defined spot within the pipeline
- Strongly recommended for all installations of brach saddles on pipes d315mm and above (193135402-748)
- Scope of delivery: Pipe gauges of listed dimension range; plug gauge (799350659) for exact measuring of out-of roundness deviations
- Each with 1 pipe gauge per main dimension
- Material: aluminium

d (mm)	d1 (mm)	Code	Weight (kg)	Description
315	2000	**799 350 685**	12.200	Pipe gauge set complete; 15 pipe gauges, 1 plug gauge, 1 transport box

Crossbeam for Re-rounding tool

- Suitable for Re-rounding tool (799350688 - 696)

d (mm)	d1 (mm)	Code	Weight (kg)
280	450	**799 350 706**	9.500
450	630	**799 350 707**	15.700
630	900	**799 350 708**	19.800
900	1400	**799 350 709**	55.000
1400	2000	**799 350 710**	75.000

Spindle for Re-rounding tool

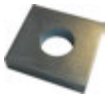
- Suitable for Re-rounding tool (799350688 - 696)

d (mm)	d1 (mm)	Code	Weight (kg)
280	450	**799 350 701**	1.150
450	630	**799 350 702**	1.650
630	900	**799 350 703**	2.300
900	1400	**799 350 704**	14.400
1400	2000	**799 350 705**	20.000

Nut for Re-rounding tool

- Suitable for Re-rounding tool (799350688 - 696)

d (mm)	d1 (mm)	Code	Weight (kg)	Description
280	900	**799 350 700**	0.220	AF 30/SW 30
900	2000	**799 350 724**	0.440	AF 55/SW 55



Washer for Re-rounding tool

- Suitable for Re-rounding tool (799350688 - 696)

d (mm)	d1 (mm)	Code	Weight (kg)
280	900	**799 350 735**	0.100
900	2000	**799 350 736**	0.330

Bolt for Re-rounding tool

- Suitable for Re-rounding tool (799350688 - 696)

d (mm)	d1 (mm)	Code	Weight (kg)
280	900	**799 350 728**	0.240
900	2000	**799 350 727**	1.400

Spring cotter pin for Re-rounding tool

- Suitable for Re-rounding tool (799350688 - 696)

d (mm)	d1 (mm)	Code	Weight (kg)
280	2000	**799 350 737**	0.100

Safety bolt for Re-rounding tool

- Suitable for Re-rounding tool (799350688 - 696)

d (mm)	d1 (mm)	Code	Weight (kg)
900	2000	**799 350 729**	0.370

Transport box for Re-rounding tool

- Suitable for Re-rounding tool (799350688 - 696)

d (mm)	d1 (mm)	Code	Weight (kg)
280	450	**799 350 691**	7.800
450	630	**799 350 692**	9.200
630	900	**799 350 693**	11.000
900	1400	**799 350 697**	40.000
1400	2000	**799 350 698**	50.000

Single parts for pipe gauge

- Suitable for pipe gauge (799350660 - 685)

d (mm)	d1 (mm)	Code	SP	Weight (kg)	Description
315	2000	**799 350 659**	1	0.112	For exact measuring of out-of roundness deviations
		799 350 686	1	7.000	Empty transport box for all pipe gauge set (1+2+3+4)

Squeeze-off tools

Squeeze-off tool type S1

- This mechanical device is used to squeeze-off PE pipes during repair and extension work. In order not to over-stress the pipe, the tool is equipped with adjustable end stops for SDR 11 (ISO S5) pipes. Due to different wall thickness` of the pipes, the squeezing degree may differ up to 0,8.

d-d (mm)	Code	Weight (kg)	Description
20 - 63	**799 350 107**	4.901	S1 for PE pipes SDR 11

Squeeze-off tool type S2

- This mechanical device is used to squeeze off PE pipes during repair and extension work. In order not to over-stress the pipe, the tool is equipped with adjustable end stops for SDR 11 (ISO S5) and SDR 17 (ISO S8) pipes.

d-d (mm)	Code	Weight (kg)	Description
63 - 180	**799 350 108**	36.500	S2 for PE pipes SDR 11 and SDR 17; Jack Force: 15 t

Squeeze-off tool type A25

- This mechanical device is used to squeeze off PE pipes during repair and extension work. In order not to over-stress the pipe, the tool is equipped with adjustable end stops for SDR 11 (ISO S5) and SDR 17 (ISO S8) pipes.

Suitable for	Code	Weight (kg)	Description
d160 - d250 mm	**799 350 270**	60.000	A25 for PE pipes SDR 11 and SDR 17; Jack Force: 25 t

Utility Range

Cutting Tools

Product Range Overview

Working range (mm)	Plastic Pipe Cutter	RPC 63-200	RPC 90-315	Plastic Pipe Cutter KS 355	Plastic Pipe Cutter PEcut 1200
6					
10					
16					
20					
25					
32					
40					
50					
63					
75					
90					
110					
125					
140					
160					
180					
200					
225					
250					
280					
315					
355					
400					
450					
500					
560					
630					
710					
800					
900					
1000					
1200					
1400					
1600					
1800					
2000					

Manual cutting tools

PPC Plastic pipe cutter

Model:

- For cutting of plastic pipes d6 - d160
- Suitable for all GF plastic types PE, PVC-U, PVC-C, ABS, PP, PVDF, ECTFE
- Removable deburring tool integrated

Note:

* Additional spare cutting wheel included in the handle

	d (mm)	Description	Code	Weight (kg)	Closest inch (inch)
*	6 - 63	Plastic Pipe cutter (s max. 7.00mm)	**790 109 094**	0.785	⅛ - 2
	50 - 125	Plastic Pipe cutter (s max. 16.00mm)	**790 109 095**	1.875	1 ½ - 4
	110 - 160	Plastic Pipe cutter (s max. 16.00mm)	**790 109 096**	2.255	4 - 6
	6 - 63	Spare cutting wheel d6-63mm (3 Pcs./Pu.)	**790 109 097**	0.010	
	50-125 / 110-160	Spare cutting wheel d50-125mm / d110-160mm (2 Pcs./Pu.)	**790 109 098**	0.030	

Rotary Pipe Cutter d63-200 mm / d90-315 mm

- Tool for simple right-angle precision cutting of plastic pipe with a wall thickness PVDF/PVC up to 12 mm (up to 15mm with bigger cutter 790109851) and for PP/PE up to 20 mm (up to 30 mm with bigger cutter 790109851) --> blade for PP/PE must be ordered separately Code 790109861
- Including transport box

d-d (mm)	Code	Weight (kg)
63 - 200	**790 109 850**	7.000
90 - 315	**790 109 851**	5.000

Knife for Rotary Pipe Cutter d63-200 and d90-315 for PP/PE pipe

d-d (mm)	Code	Weight (kg)
63 - 315	**790 109 861**	0.050

Electric cutting tools

KS 355 Plastic pipe cutter

- The KS 355 is the ideal tool for right-angled cuts with no misalignment of PE, PP and PVC pipes
- Pipe outer dimension from 160 – 355 mm, wall-thickness from 8 – 40 mm
- Unique clamping mechanism, no additional tools like belts, chains or reduction inserts necessary
- Weight of the saw: 13,0 kg
- Supplied with transport box: Dimension 700 x 350 x 500 mm; Weight 17,0 kg

d1 (mm)	d2 (mm)	Code	Weight (kg)	Frequency
160	355	**790 202 001**	15.400	1750 W; 230 V; 50/60 Hz

Replacement saw blade Ø 180x30 for KS 355

Code	Weight (kg)
790 202 011	0.354

Plastic pipe cutter PEcut 1200

- **Plastic pipe cutter for precise and safe cutting of plastic pipes**
- Battery powered, oil-free chain saw with unique clamping and guiding mechanism
- Large application range from d250 - 1200mm, 10" - 46"
- Large application range COOL-FIT 160/250mm (d/D) - 450/630mm (d/D)
- Applicable for pipe wall thickness from 10 - 180mm
- Recommended for solid wall PE pipes and pre-insulated COOL-FIT pipes
- Recommended on pipe material: PE 100, PE 100-RC, PP
- Minimum axial space requirement = 37 cm
- Minimum radial space requirement = 35 cm
- **Scope of delivery:**
- Please observe the description to select the country-specific variant
- Battery powerded cordless chain saw
- Support wagon
- 3 x Roller wagon, 2 x Tensioning belt with roll-on system, 2 x Quick link
- 2 x Battery pack CAS 5.5Ah, 1 x Charger LG 12/18 V
- Delivery in solid transport case (L x B x H = 665 x 562 x 250 mm)

d (mm)	d1 (mm)	Size (inch)	Code	Weight (kg)	Description	L (mm)	B (mm)	H (mm)
250	1200	10 - 46	**799 198 150**	19.70	PEcut 1200-230V, Charger LG12/18V	665	562	250
250	1200	10 - 46	**799 198 151**	19.70	PEcut 1200-115V US, Charger LG12/18V US	665	562	250
250	1200	10 - 46	**799 198 152**	19.70	PEcut 1200-230V UK, Charger LG12/18V UK	665	562	250

Accessories Plastic pipe cutter PEcut 1200

- Extension kit d1400-2000mm, 48" - 80"
- **Scope of delivery:**
- 3 x Roller wagon, 1 x Tensioning belt, 3 x Quick link, 1 x Transport case small

d (mm)	d1 (mm)	Size (inch)	Code	Weight (kg)	Description	L (mm)	B (mm)	H (mm)
1400	2000	48 - 80	**799 198 155**	10.50	Extension set PEcut 1200	500	420	225

Transport case PEcut 1200

- Spare and wear parts Plastic pipe cutter PEcut 1200

Suitable for	Size (inch)	Code	Weight (kg)	L (mm)	B (mm)	H (mm)
d250 - d1200	10 - 46	**799 198 153**	5.20	665	562	250

Tensioning belt B=25mm L=3.5m

- Spare and wear parts Plastic pipe cutter PEcut 1200

Suitable for	Size (inch)	Code	Weight (kg)	L (mm)	B (mm)	H (mm)
d250 - d1200	10 - 46	**799 198 154**	0.75	150	70	80

Roller wagon

- Spare and wear parts Plastic pipe cutter PEcut 1200

Suitable for	Size (inch)	Code	Weight (kg)	L (mm)	B (mm)	H (mm)
d250 - d1200	10 - 46	**799 198 156**	1.90	260	180	200

Support wagon

- Spare and wear parts Plastic pipe cutter PEcut 1200

Suitable for	Size (inch)	Code	Weight (kg)	L (mm)	B (mm)	H (mm)
d250 - d1200	10 - 46	**799 198 157**	2.10	260	180	320

Marker holder complete

- Spare and wear parts Plastic pipe cutter PEcut 1200

Suitable for	Size (inch)	Code	Weight (kg)	L (mm)	B (mm)	H (mm)
d250 - d1200	10 - 46	**799 198 158**	0.25	80	100	45

Hexagon spanner 13mm L152mm

- Spare and wear parts Plastic pipe cutter PEcut 1200

Suitable for	Size (inch)	Code	Weight (kg)	L (mm)	B (mm)	H (mm)
d250 - d1200	10 - 46	**799 198 159**	0.20	160	40	20

Charger LG 12 / 18 V

- Spare and wear parts Plastic pipe cutter PEcut 1200

Suitable for	Size (inch)	Code	Weight (kg)	L (mm)	B (mm)	H (mm)
d250 - d1200	10 - 46	**799 198 160**	0.60	150	140	80

Charger LG 12 / 18V US

- Spare and wear parts Plastic pipe cutter PEcut 1200

Suitable for	Size (inch)	Code	Weight (kg)	L (mm)	B (mm)	H (mm)
d250 - d1200	10 - 46	**799 198 161**	0.60	150	140	80

Charger LG 12 / 18V UK

- Spare and wear parts Plastic pipe cutter PEcut 1200

Suitable for	Size (inch)	Code	Weight (kg)	L (mm)	B (mm)	H (mm)
d250 - d1200	10 - 46	**799 198 162**	0.60	150	140	80

Battery pack CAS 5.5 Ah / 18V

- Spare and wear parts Plastic pipe cutter PEcut 1200

Suitable for	Size (inch)	Code	Weight (kg)	L (mm)	B (mm)	H (mm)
d250 - d1200	10 - 46	**799 198 163**	1.00	125	85	75

Saw chain complete set

- Spare and wear parts Plastic pipe cutter PEcut 1200

Suitable for	Size	Code	Weight (kg)	L (mm)	B (mm)	H (mm)
d250 - d1200	10 - 46	**799 198 166**	0.70	300	75	25

Gearbox

- Spare and wear parts Plastic pipe cutter PEcut 1200

Suitable for	Size	Code	Weight (kg)	L (mm)	B (mm)	H (mm)
d250 - d1200	10 - 46	**799 198 167**	1.30	190	150	140

Electric drive complete

- Spare and wear parts Plastic pipe cutter PEcut 1200

Suitable for	Size	Code	Weight (kg)	L (mm)	B (mm)	H (mm)
d250 - d1200	10 - 46	**799 198 168**	1.30	150	75	230

Tapping and Pressure testing tools

Tapping tools

ELGEF Plus Tapping and assembly key
For electrofusion saddle

- Combination tool for tapping and tightening of fixation screws.

Suitable for	Type	Code	SP	Weight (kg)	Description
d40-400	8/10/17	**799 198 047**	1	0.798	For all saddles

ELGEF Plus Tapping key
For electrofusion saddle

- With adjustable tapping depth.

Suitable for	Description	Code	Weight (kg)
Monobloc d63-400 and all Duobloc saddles	Type WS - 17	**799 198 079**	0.556

ELGEF Plus Tapping key
For electrofusion saddle

Suitable for	Description	Code	Weight (kg)
Monobloc d40 and d50	Type WS - 10	**799 198 080**	0.114

ELGEF Plus Tapping key
For electrofusion saddle

Suitable for	Description	Code	Weight (kg)
Spigot saddle with cutter	Type WS - 12.7	**799 198 091**	0.600

ELGEF Plus Tapping key
With integrated sealing cap

- The Adapter is used for gas-free tapping under pressure. Type S 54 for tapping saddles with rotatable outlet d 20 - 40 mm (Tapping Tee d 32 mm). Type S 67 for tapping saddles with rotatable outlet d 50 - 63 mm (Tapping Tee d 63 mm).

Suitable for	Description	Code	Weight (kg)
Tapping Tee d32	Type S 54	**799 100 061**	0.785
Tapping Tee d63	Type S 67	**799 100 062**	1.011

ELGEF Plus Assembly key
For electrofusion saddle

- For tightening fixation screws.

Type	Code	Weight (kg)	Description
SW8	**799 150 378**	0.129	For all saddles and branch fittings

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PE repair plug

- PE Repair Plugs are suitable for use with ELGEF Plus Repair Saddles

d (mm)	Code	SP	Weight (kg)
39	**799 199 089**	10	0.019

Plastic pipe cutter
Core cuttter set for PE pipes

- Suitable for drilling of pressureless PE pipes
- Set includes core cutter, centre drill, adapter SDS max, ejector rod and transport box
- Suitable for branch saddle with spigot outlet (193135202 - 748)
- Enables quick drilling
- Cutout stays in the core cutter

Technical information: Core cutter: L = 300 mm; d= spigot outlet fitting in mm; d1= spot boring diameter in mm; Max. wall thickness = 120 mm, **Pilot drill:** d = 14mm; L = 400 mm, **Ejector rod:** d = 12mm; L = 500 mm, **Connection drill machine:** SDS max, **Connection core cutter:** G 1/2" (female thread) d160, 225, 315; G 1 1/4" (female thread) d500, **Machine suggestion:** Effective power minimum 100 watt; Rotation speed 100-200 rpm

d (mm)	d1 (mm)	Code	Weight (kg)	Description
160	123	**799 198 101**	7.200	Core cutter set in transport box
225	172	**799 198 102**	10.000	Core cutter set in transport box
315	238	**799 198 103**	13.400	Core cutter set in transport box
500	420	**799 198 104**	34.000	Core cutter set in transport box

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Transport box for Core cutter set

- Suitable for core cutter set (799198101 - 104)

d (mm)	Description	Code	SP	Weight (kg)
160	Transport box 160; 565x170x180mm	**799 198 121**	1	3.900
225	Transport box 225; 565x220x230mm	**799 198 122**	1	4.700
315	Transport box 315; 280x280x565mm	**799 198 123**	1	7.500
500	Transport box 500; 465x465x565mm	**799 198 124**	1	9.000

Plastic pipe cutter
Drill stand for core cuttter set

- Suitable for safe and guided drilling of pressureless PE pipes
- Set includes drill stand, drilling machine, extension arm and standtracks
- Suitable for branch saddle with spigot outlet (193135402 - 748)
- Suitable for core cutter set (799198101 - 104)
- Tension belts for the fixation of the drill stand onto the PE pipe are not included in scope of delivery
- Use of Core cutters 160/225/315 requires additionaly adaptor 1 1/4" - 1/2" (799198138)
- In case of using the pilot drill for core cutters 160/225/315 adaptor 1/2"M - 1/2" F (799198106) is required

Description	Code	SP
Drill stand BS400 with vulcanised-rubber bonded standtracks. Extension arm suitable for branch saddle 4-drift drill machine D38-BB	**799 198 137**	1

Description	Weight (kg)
Drill stand BS400 with vulcanised-rubber bonded standtracks. Extension arm suitable for branch saddle 4-drift drill machine D38-BB	68.000

Accessories for Core cutter set

- Suitable for core cutter set (799198101 - 104)

Suitable for	Description	Code	SP	Weight (kg)
d160, d225, d315, d500	Pilot drill d = 14mm; L = 365 mm	**799 198 133**	1	0.300
d160, d225, d315, d500	Ejector rod d = 12mm; L = 500 mm	**799 198 131**	1	0.450
d160, d225, d315, d500	Adaptor 1 ¼" UNC-R- ½"	**799 198 138**	1	0.520
d160, d225, d315, d500	Adaptor drill chuck 13	**799 198 105**	1	0.160
d160, d225, d315, d500	Adaptor thread	**799 198 106**	1	0.180
d160, d225, d315, d500	Adaptor SDS-max	**799 198 107**	1	0.300

ELGEF Plus Pressure test cap
For electrofusion saddle

- Connecting thread for pressure test is female thread G 3/8"
- **Overview of Tapping Adapter types and Pressure Test Cap**
- M For Monobloc d40 and d50 (outlets d20 - d32)
- S 54 For all saddles with rotatable outlet (outlets d20 - d40) i.e. Tapping Tee d20 - d40.
- S 67 For all saddles with rotatable outlet (outlets d50 and d63) i.e. Tapping Tee d63.
- Y for Y-Tapping Saddle d180 to d315

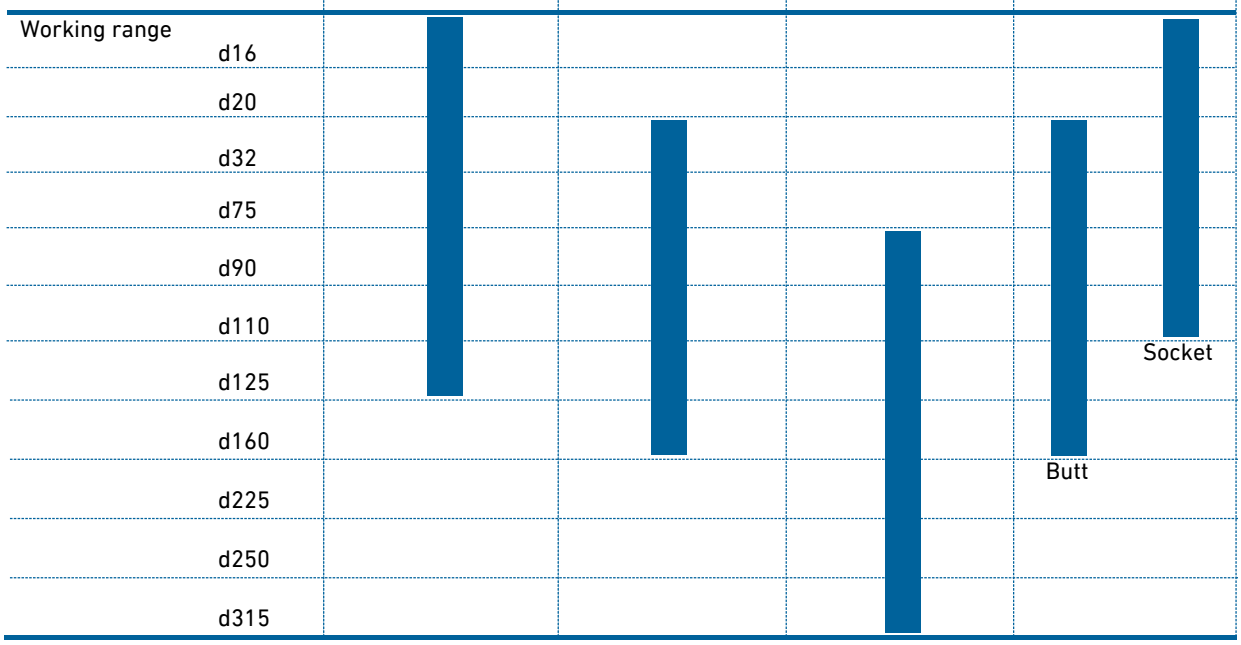
Suitable for	Description	Code	Weight (kg)
Monobloc d40 and d50	Type M	**799 199 282**	0.116
Tapping Tee d20 to d40	Type S 54	**799 199 283**	0.260
Tapping Tee outlet d63	Type S 67	**799 199 286**	0.430
Monobloc d63 to d160 and Branch saddle outlet d160/225	Type MB	**799 199 287**	0.037
Y-Tapping Saddle d180 to d315	Type Y	**799 199 290**	0.037

Industry Range

Butt/socket fusion machines

Product Range Overview

Characteristics	SG 125	IM 160	IM 315	SG 160
Max jointing diameter (mm)	125	160	315	160
SDR Range	-	41-11	41-11	41-11
Jointing technology	Socket	Butt	Butt	Butt-Socket
Jonting materia	PE, PP, PVDF	PE, PP, PB, PVDF	PE, PP, PB, PVDF	PE, PP, PB, PVDF
Working range (°C)	-10/+45	-10/+45	-10/+45	-10/+45
Input voltage (Vac)	230/115	230/115	230/115	230/115
Performance (W)	1500	1700	2300	2200
Segmented fitting fabrication			✓	
Digital force measurement			Optional	
Back stop	✓	✓	✓	✓
Transport box	✓	✓	✓	✓
Weight - without box (kg)	52	55	169	53-59



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SG 125

SG 125
Socket fusion machine

- Portable heating element - socket fusion machine for use in the workshop and on job sites.
- For fusion jointing of PP and PE pipes and fittings
- **BASE MACHINE**
- Compact, sturdy design, distortion-free machine bed
- Handwheel with torque locking mechanism for the slide movement
- Fast selection of insertion depth according to the pipe dimension
- **HEATER**
- With electronic temperature control
- High temperature accuracy over the entire heating surface
- **ADDITIONAL STANDARD EQUIPMENT**
- Universal, left and right prismatic clamping devices, complete, for clamping pipe and fittings. Additional set of prismatic clamping devices for outer clamping of pipes available as an option.
- V-shaped pipe support
- Back stop
- Machine specific tool set
- Timer to clock fusion times
- Including transport packaging, without accessories

d1 (mm)	d2 (mm)	Power	Code	Weight (kg)
16	125	230 V/1500 W	**790 310 034**	65.000
16	125	115 V/1500 W	**790 310 036**	65.000

SG 125 Accessories

Heating spigots and bushes

- For socket fusion systems in PP, PE
- For specific PVDF socket fusion jointing
- Always delivered in pairs (also usable for SG 110, SG 125, not for SG 160)
- Type B according to DVS 2208-1 (mechanical calibrated pipe ends)

d (mm)	Code	Weight (kg)
16	**799 300 155**	0.085
20	**799 300 156**	0.090
25	**799 300 157**	0.154
32	**799 300 158**	0.211
40	**799 300 159**	0.309
50	**799 300 160**	0.434
63	**799 300 161**	0.594
75	**799 300 162**	0.981
90	**799 300 163**	1.452
110	**799 300 164**	2.008
125	**799 300 165**	2.200

Set heating spigots and bushes Type B

- For socket fusion systems in PP, PE
- For specific PVDF socket fusion jointing
- Always delivered in pairs (also usable for SG 110, SG 125, not for SG 160)
- Type B according to DVS 2208-1 (mechanical calibrated pipe ends)

d1 (mm)	d2 (mm)	Code	Weight (kg)
16	125	**790 310 023**	8.700

Tempil stick

Temperature (°C)	Code	Weight (kg)
253	**799 496 008**	0.169

Manual pipe peeling and chamfering tools

d (mm)	Code	Weight (kg)
20	**799 300 260**	0.087
25	**799 300 270**	0.080
32	**799 300 280**	0.099
40	**799 300 290**	0.240
50	**799 300 300**	0.244
63	**799 300 310**	0.507
75	**799 300 320**	0.680
90	**799 300 330**	1.006
110	**799 300 340**	1.355

Spare blades for calibration tools
Peeling tool blade

- 3 pieces are required per dimension

d (mm)	Code	SP	Weight (kg)
20	**799 300 266**	1	0.013
25	**799 300 276**	1	0.015
32	**799 300 286**	1	0.005
40	**799 300 296**	1	0.018
50	**799 300 306**	1	0.019
63	**799 300 316**	1	0.024
75	**799 300 326**	1	0.028
90	**799 300 336**	1	0.041
110	**799 300 346**	1	0.043

Spare konus handle for calibration tools

Suitable for	M	Code	Weight (kg)
d45-50 mm	M6	**799 300 295**	0.021
d63-110 mm	M8	**799 300 315**	0.056

SG 125 Special transport crate

Code	Weight (kg)
790 141 064	47.500

IM 160

IM 160
Butt fusion machine for industrial applications

- Butt fusion machine for PP, PE, PB and PVDF pipes and fittings for industrial applications with pressure piping systems.
- Compact and sturdy design for use in the workshop and on jobsites.
- Designed to provide the highest flexibility to adapt to different sizes or shapes of fittings.
- Dimensional range: d32 - 160 mm, from SDR 41 up to SDR 11 with PE, PP d160 mm.
- **BASE MACHINE**
- High precision, distortion-free and robust machine base
- Handwheel for easy moving of machine carriage
- Exact pressure adjustment via direct spring load transfer
- Fast-locking base clamping plates, right and left, d 160 mm
- Weight (including planer and heater): 53 kg
- **PLANER**
- Load transfer via robust chain drive
- Optimized cutting geometry for even and chatter-free planing
- Swivel mounted for ergonomic handling
- Mechanical stop to provide single sided planing and defined facing depth
- **HEATER**
- High performance, electronically controlled heating element
- High accuracy of +/- 4°C over the entire heating surface
- High quality, non-stick PTFE coating
- Metal sheet cover to protect the heating plate in idle position
- The heating element can be used as manual fusion tool
- **ADDITIONAL STANDARD EQUIPMENT**
- Complete reduction clamping inserts set d 32 - 140 mm
- V-shaped pipe support with inserts d 32 - 140 mm
- Timer to clock fusion times
- Machine specific tool set
- Wooden transport crate, usable as working bench, also available as special version made of coated plywood with aluminium profiles, optmized design for pallet truck handling and storage drawer for reduction inserts and tools

d1 (mm)	d2 (mm)	Power Supply	Power	Description	Code	Weight (kg)
32	160	230 V	1700 W	Standard transport crate	**790 141 001**	123.000
32	160	230 V	1700 W	Special transport crate	**790 141 003**	157.000
32	160	230 V	1700 W	Standard transport crate, Swiss plug	**790 141 011**	123.000
32	160	230 V	1700 W	Special transport crate, Swiss plug	**790 141 012**	157.000
32	160	115 V	1700 W	Special transport crate	**790 141 009**	157.000
32	160	115 V	1700 W	Standard transport crate	**790 141 008**	123.000

IM 160 Accessories

IM 160 Back-stop

- Prevents the components from slipping out of the clamping device during fusion.

Code	Weight (kg)
790 141 061	1.919

IM 160 Special transport crate

- Optimized design for pallet truck handling, with storage drawer for reduction inserts and tools

Code	Weight (kg)
790 141 065	93.000

ECOS / TOP / CNC / GF / WM / IM Set of replacement blades for planer

- Blade has 2 cutting edges (1 set = 2 blades)

Type	Code	Weight (kg)	Remarks
ECOS/TOP/CNC 160; IM 160; MD 160; PSO 701	**790 113 056**	0.059	

IM 160 Reduction inserts set for outer base clamping device

- Dedicated to a single clamping device: 2 clamping inserts of each dimension.

d-d (mm)	Code	Weight (kg)
32 - 140	**790 141 068**	5.800

IM 160 Outer base clamping devices

	d (mm)	Code	Weight (kg)
Type: Left	160	**790 141 066**	3.500
Type: Right	160	**790 141 067**	3.500

IM 315

IM 315
Butt fusion machine for industrial applications

- Butt fusion machine for PP, PE, PB and PVDF pipes and fittings for industrial applications with pressure piping systems.
- Extremely sturdy design for use in the workshop and on job sites.
- Designed to provide the highest flexibility to adapt to different sizes or shapes of fittings.
- Angular jointing provided up to 30° (2x15°) for prefabrication of segmented fittings.
- Dimensional range for straight jointing: d90-315 mm, from SDR 41 up to SDR 11 with PE,PP d315 mm. Limitations in the dimensional range are to be considered for angular jointing, depending on the angle (refer to user's manual).
- **BASE MACHINE**
- High precision, distortion-free and robust machine base
- Integrated swivel tables for angular jointing up to 30° (2x15°)
- Handwheel for easy moving of machine carriage
- Exact pressure adjustment via direct spring load transfer
- Fusion pressure is maintained with a user friendly fast-locking handle
- Inner left and right clamping elements, for picking up reduction clamping inserts d 90-315 mm, with fast-locking handle
- Optional outer, horizontally removable clamping devices available
- Weight (including planer and heater): 169 kg
- **PLANER**
- Optimized cutting geometry for even and chatter-free planing
- Swivel mounted for ergonomic handling
- Mechanical stop to provide single sided planing and defined facing depth
- Integrated safety switch to prevent unintentional start-up
- Self-locking mechanism in working position
- **HEATER**
- High-performance and precision heater with electronic temperature control (2500W)
- High accuracy of +/- 4°C over the entire heating surface
- High quality, non-stick PTFE coating
- Pull-off mechanism to automatically detach the heating plate from pipe ends
- Metal sheet cover to protect the heating plate in idle position
- Integrated thermometer for fast visual check of plate temperature
- **ADDITIONAL STANDARD EQUIPMENT**
- Reduction clamping inserts set d 90-315 mm
- Pipe supports for picking up reduction supporting inserts d 90-315 mm
- Reduction pipe supporting inserts set d 90-315 mm
- Timer to clock fusion times
- Machine specific tool set

d1 (mm)	d2 (mm)	Power	Description	Code	Weight (kg)
90	315	230 V / 3500 W	Without transport crate	**790 143 005**	229.000
90	315	230 V / 3500 W	With standard transport crate	**790 143 001**	269.000
90	315	230 V / 3500 W	With special transport crate	**790 143 003**	366.000
90	315	230 V / 3500 W	Without transport crate, Swiss plug	**790 143 033**	229.000
90	315	230 V / 3500 W	With standard transport crate, Swiss plug	**790 143 034**	269.000
90	315	230 V / 3500 W	With special transport crate, Swiss plug	**790 143 035**	366.000

IM 315 - D
Butt fusion machine for industrial applications

- Butt fusion machine for PP, PE, PB and PVDF pipes and fittings for industrial applications with pressure piping systems.
- Equipped with a load cell and digital display for easy viewing and precise indication of the welding force.
- Extremely sturdy design for use in the workshop and on job sites.
- Designed to provide the highest flexibility to adapt to different sizes or shapes of fittings.
- Angular jointing provided up to 30° (2x15°) for prefabrication of segmented fittings.
- Dimensional range for straight jointing: d90-315 mm, from SDR 41 up to SDR 11 with PE,PP d315 mm. Limitations in the dimensional range are to be considered for angular jointing, depending on the angle (refer to user's manual).
- **BASE MACHINE**
- High precision, distortion-free and robust machine base
- Integrated swivel tables for angular jointing up to 30° (2x15°)
- Handwheel for easy moving of machine carriage
- Exact pressure adjustment via direct spring load transfer
- Digital display for force indication
- Fusion pressure is maintained with a user friendly fast-locking handle
- Inner left and right clamping elements, for picking up reduction clamping inserts d 90-315 mm, with fast-locking handle
- Optional outer, horizontally removable clamping devices available
- Weight (including planer and heater): 169 kg
- **PLANER**
- Optimized cutting geometry for even and chatter-free planing
- Swivel mounted for ergonomic handling
- Mechanical stop to provide single sided planing and defined facing depth
- Integrated safety switch to prevent unintentional start-up
- Self-locking mechanism in working position
- **HEATER**
- High-performance and precision heater with electronic temperature control (2500W)
- High accuracy of +/- 4°C over the entire heating surface
- High quality, non-stick PTFE coating
- Pull-off mechanism to automatically detach the heating plate from pipe ends
- Metal sheet cover to protect the heating plate in idle position
- Integrated thermometer for fast visual check of plate temperature
- **ADDITIONAL STANDARD EQUIPMENT**
- Reduction clamping inserts set d 90-315 mm
- Pipe supports for picking up reduction supporting inserts d 90-315 mm
- Reduction pipe supporting inserts set d 90-315 mm
- Timer to clock fusion times
- Machine specific tool set

d1 (mm)	d2 (mm)	Power	Description	Code	Weight (kg)
90	315	230 V / 3500 W	With standard transport crate	**790 143 002**	269.000
90	315	230 V / 3500 W	With special transport crate	**790 143 004**	366.000
90	315	230 V / 3500 W	With standard transport crate, Swiss plug	**790 143 036**	269.000
90	315	230 V / 3500 W	With special transport crate, Swiss plug	**790 143 037**	366.000

IM 315 / IM 315 - D Accessories

IM 315 Outer base clamping devices

	d (mm)	Code	Weight (kg)
Type: Left	315	**790 143 030**	15.867
Type: Right	315	**790 143 031**	15.867

IM 315 Reduction inserts set for outer base clamping device

- Dedicated to a single clamping device: 2 clamping inserts of each dimension.

d1 (mm)	d2 (mm)	Code	Weight (kg)
90	280	**790 143 032**	17.500

IM 315 Back stop

- Prevents the components from slipping out of the clamping device during fusion.

Code	Weight (kg)
790 142 061	3.175

IM 315 Tool box

- Wooden case designed for storage and transportation of machine standard reduction inserts set and tools.

Code	Weight (kg)
790 143 066	27.187

IM 315 Special transport crate

- Especially designed for easy transportation of the machine with standard equipment and complete accessories set, providing the most comfortable working position for the operator.

Code	Weight (kg)
790 143 065	148.125

ECOS / TOP / CNC / GF / WM / IM Set of replacement blades for planer

- Blade has 2 cutting edges (1 set = 2 blades)

Type	Code	Weight (kg)	Remarks
ECOS/TOP/CNC 315-400; IM 315	**790 112 110**	0.129	

SG 160

SG 160
Combined butt and socket fusion machine for industrial applications

Mobile, very compact and universal plastic fusion machine for PP, PE and PVDF pipes and fittings for use in the workshop and on job sites. Butt fusion d 32 - 160 mm, all pressure ratings up to PE/PP SDR 11; PVDF SDR 21. Socket fusion d 16 - 110 mm

- **BASE MACHINE**
- High precision design, distortion-free and sturdy machine frame
- Handwheel for easy moving of machine carriage
- Exact pressure adjustment via direct spring load transfer
- Hardened and hard chrome-plated guide shafts for extreme loads
- All clamping possibilities for base clamping plates, pipe supports, back stop and prismatic clamping devices
- **PLANER**
- Planing device made of light cast aluminium
- Optimized cutting geometry for even and chatter-free planing
- Powerful parallel planer for single or double-sided facing of pipe ends
- Integrated pick up for easy mounting of calibration tools for machining of pipe ends in socket fusion
- **HEATER**
- High performance, electronically controlled heating element
- High accuracy of +/- 4°C over the entire heating surface
- Exact LCD adjustment of heater temperature
- High-quality, easy to replace, non-stick PTFE fabric for the heater
- **ADDITIONAL STANDARD EQUIPMENT**
- Including complete set of accessories as: 4 clamps for butt fusion with reduction inserts d 32-160 mm, 2 prismatic clamps for socket fusion with V-shaped supports and calibration tools for machining of pipe ends d 16 - 110 mm, heating spigots and bushings for socket fusion d 16 - 110 mm, tempil sticks 253°C and 274°C
- Timer to clock fusion times
- Including transport packaging and machine specific tool set

d1 (mm)	d2 (mm)	Power	Code	Weight (kg)
16	160	230 V/2200 W	**790 103 004**	223.000

IR A, IR Plus, BCF Plus Fusion Machine

Product Range Overview

Working range (mm)	IR-63 M	IR-110 Plus	IR-225 M	IR-110 A	IR-315 A	IR-400 A	BCF-63 Plus	BCF-110 Plus
20								
25								
32								
40								
50								
63								
75								
90								
110								
125								
140								
160								
180								
200								
225								
250								
280								
315								
355								
400								

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IR-63 M Manual Fusion Machine

IR-63 M Standard Fusion Machine (with CONNECT box, without extension cable set)

Model:

- Manually operated infrared fusion machine with integrated remote welding unit
- Welding of PVDF SYGEF (Standard/Plus), ECTFE SYGEF, PP-H PROGEF (Standard/Plus), PP-n PROGEF Natural, PE100 ecoFIT, PVC-U metric & PFA inch
- Dimensions d20-63 mm
- A safety glass protected 7" touchscreen
- 2x USB-A, 2x USB-C ports & Ethernet port
- Clamping slide with movable & exchangeable clamping units
- Half shells d20-50 mm (8 pcs. per dimension)
- End caps PE d20-63 mm (4 pcs. per dimension)
- Pipe stop fix, 2mm facing distance
- Pipe stop adjustable, 0.5-3mm facing distance
- 1-phase AC (50/60 Hz) 230V L/N/PE
- Power supply cable 230 V
- Label printer
- CONNECT Welding box

Option:

- Half shells PFA inch
- Extension cable set for remote weldings

Suitable for	Code	Weight (kg)
d20-63 mm	**790 180 001**	59.0

IR-63 M Complete Fusion Machine (with extension cable set & CONNECT box)

Model:

- Manually operated infrared fusion machine with integrated remote welding unit
- Welding of PVDF SYGEF (Standard/Plus), ECTFE SYGEF, PP-H PROGEF (Standard/Plus), PP-n PROGEF Natural, PE100 ecoFIT, PVC-U metric & PFA inch
- Dimensions d20-63 mm
- A safety glass protected 7" touchscreen
- 2x USB-A, 2x USB-C ports & Ethernet port
- Pipe stop adjustable, 0.5-3mm facing distance
- Clamping slide with movable & exchangeable clamping units
- Half shells d20-50 mm (8 pcs. per dimension)
- End caps PE d20-63 mm (4 pcs. per dimension)
- Pipe stop fix, 2mm facing distance
- 1-phase AC (50/60 Hz) 230V L/N/PE
- Power supply cable 230 V
- Integrated label printer (including white ribbon 24mm)
- Extension cable
- CONNECT Welding box

Option:

- Half shells PFA inch

Suitable for	Code	Weight (kg)
d20-63 mm	**790 180 003**	63.0

CONNECT Welding box IR-63 M & IR-225 M

- The CONNECT Welding box enables seamless transfer of fusion data to "CONNECT Welding"

Code	Weight (kg)
790 180 019	0.200

Extension cable set IR-63 M

- The extension cable set makes it possible to carry out remote weldings in places that are difficult to access
- The set includes extension cables for facer, heater & clamping slide, 6 Meter (19 ft) each

Suitable for	Code	Weight (kg)
d20-63 mm	**790 180 013**	3.560

Half shells IR-63 M

- The half shells are different for each dimension. They are used to clamp and position the pipe components
- Angle markings on the half shells enable a precise and fast installation
- IR weldable materials: PVDF, ECTFE, PP-H, PP-n, PE100 & PVC-U

d (mm)	Code	Weight (kg)
20	**790 180 022**	0.031
25	**790 180 023**	0.029
32	**790 180 024**	0.028
40	**790 180 025**	0.025
50	**790 180 026**	0.018

Half shells IR-63 M PFA inch

- The half shells are different for each dimension. They are used to clamp and position the pipe components
- For PFA Schedule 40 rigid pipe

d (inch)	Code	Weight (kg)
¼	**790 180 031**	0.031
½	**790 180 032**	0.030
¾	**790 180 033**	0.029
1	**790 180 034**	0.027
1 ½	**790 180 035**	0.019
2	**790 180 036**	0.006

Fix pipe stop IR-63 M

- Fix pipe stop with angle markings and 2 mm facing on both sides
- Angle markings enable a precise and fast installation

Suitable for	Code	Weight (kg)
d20-63 mm	**790 180 011**	0.398

Adjustable pipe stop IR-63 M

- Adjustable pipe stop for individual facing of 0.5 - 3 mm on both sides

Suitable for	Code	Weight (kg)
d20-63 mm	**790 180 012**	0.740

Set of facing knives IR-63 M & IR-63 Plus

- A set includes two facing knives and six screws. Each facing knife has four blades. In case of a blunt blade the facing knife may be turned three times before it must be replaced

Suitable for	Code	Weight (kg)
d20-63 mm	**790 180 018**	0.016

Torx bolt tool T10

- For changing and turning the facing knives

Code	Weight (kg)
790 180 077	0.029

Allen key 4mm

- For setting the overlap and to loosen the clamping slide

Code	Weight (kg)
790 180 078	0.029

Extension cable for clamping slide IR-63 M

- 6 Meter (19 ft) extension cable for clamping slide

Suitable for	Code	Weight (kg)
d20-63 mm	**790 180 014**	0.700

Extension cable for facer IR-63 M

- 6 Meter (19 ft) extension cable for facer

Suitable for	Code	Weight (kg)
d20-63 mm	**790 180 015**	0.438

Extension cable for heater IR-63 M

- 6 Meter (19 ft) extension cable for heater

Suitable for	Code	Weight (kg)
d20-63 mm	**790 180 016**	0.767

Power supply cable 230 V IR-63 M, IR-63/110 Plus, IR-110 A & BCF Plus

Code	Weight (kg)
790 180 017	0.150

Brush IR-63 M & IR-63 Plus

Code	Weight (kg)
790 180 080	0.013

IR-225 M Manual Fusion Machine

IR-225 M Fusion Machine

Model:

- Manually operated infrared fusion machine with integrated working table for use under clean room conditions
- Welding of PVDF SYGEF (Standard/Plus), ECTFE SYGEF, PP-H PROGEF (Standard/Plus), PP-n PROGEF Natural, PE100 ecoFIT & PVC-U metric
- Dimensions d63-225 mm (2" - 8")
- Active cooling system
- A safety glass protected 7" touchscreen with intuitive and multilingual user interface
- Clamping slide with movable & exchangeable clamping units
- Half shells d63-200 mm (8 pcs. per dimension), d225 mm integrated in clamping unit
- End caps PE d63-225 mm (4 pcs. per dimension)
- Pipe stop fix, 2mm facing distance
- Pipe stop adjustable, 0.5-5mm facing distance
- Pipe stop with angle markings, 2mm facing distance
- 2x USB-A, 1x USB-C ports & Ethernet port
- CONNECT Welding box
- 1-phase AC (50/60 Hz) 230V L/N/PE or 3-phase AC (50/60 Hz) 400V/230VL1/L2/L3/N/PE
- Power supply cable 400V (with adapter cable 230 V possible)
- Transport box with integrated euro-pallet (stainless steel)
- Integrated label printer (including white ribbon 24mm)

Suitable for	Code	Weight (kg)
d63-d225 mm	**790 182 001**	413

Half shells IR-225 M

Model:

- The half shells are different for each dimension. They are used to clamp and position the pipe components.
- IR weldable materials: PVDF, ECTFE, PP-H, PP-n, PE100 & PVC-U
- CONTAIN-IT Plus can be welded with this half shells in d63 - d140 mm

d (mm)	Code	Weight (kg)	Pieces
63	**790 182 022**	0.761	1
75	**790 182 023**	0.721	1
90	**790 182 024**	0.692	1
110	**790 182 025**	0.643	1
125	**790 182 026**	0.600	1
140	**790 182 027**	0.552	1
160	**790 182 028**	0.478	1
180	**790 182 029**	0.394	1
200	**790 182 030**	0.298	1

Fix pipe stop IR-225 M

- Fix pipe stop with 2mm facing on both sides

Code	Weight (kg)
790 182 011	0.250

Adjustable pipe stop IR-225 M

- Adjustable pipe stop for individual facing of 0.5 - 5 mm on both sides.

Code	Weight (kg)
790 182 012	0.630

Pipe stop with angle markings IR-225 M

- Fix pipe stop with angle markings and 2 mm facing on both sides
- Angle markings enable a precise and fast installation

Code	Weight (kg)
790 182 013	1.500

Set of facing knifes IR-225 M & IR-225 Plus

- A set includes 2 facing knives and 8 screws (T25). Each facing knife has four blades. In case of a blunt blade the facing knife may be turned 3 times before it must be replaced.

Code	Weight (kg)
790 182 018	0.125

Torx bolt tool T25 IR-225 M, IR-225/315 Plus & IR-315 A

- For changing and turning the facing knives

Code	Weight (kg)
790 182 077	0.500

Allen key 6mm IR-225 M & IR-225 Plus

- For setting the overlap

Code	Weight (kg)
790 182 078	0.015

CONNECT Welding box IR-63 M & IR-225 M

- The CONNECT Welding box enables seamless transfer of fusion data to "CONNECT Welding"

Code	Weight (kg)
790 180 019	0.200

Brush IR-225 M & IR-225 Plus

Code	Weight (kg)
790 182 080	0.013

IR-110 Plus Manual Fusion Machine

IR-110 Plus Fusion Machine (without PVC-U parameter)

Model:

- Fully-equipped manually operated infrared fusion machine for use under clean room conditions
- Welding of PVDF SYGEF (Standard/Plus), ECTFE SYGEF, PP-H PROGEF (Standard/Plus), PP-n PROGEF Natural, PE100 ecoFIT, PFA
- Dimensions d20-110 mm
- Monochrome display with icons and various languages
- 2 USB interfaces
- Heating and facing element
- Clamping slide with movable clamping units
- Clamping inserts d20-90 mm (8 pcs. per dimension)
- End caps PE d20-110 mm (4 pcs. per dimension)
- Pipe stop
- Clean-room compatible accessory tray with tools
- Transport box with integrated pallet
- 1-phase AC (50/60 Hz) 230V L/N/PE
- Power supply cable 230V
- Integrated label printer (including white ribbon 24mm)

Note:

Clamping inserts PFA (inch) on request
Clamping inserts CONTAIN-IT Plus on request

Suitable for	Code	Weight (kg)
d20- 110 mm	**790 132 001**	110

Clamping inserts d20-50mm, IR-110 Plus

- The clamping inserts are different for each dimension. They are used to clamp and position the pipe components.
- IR weldable materials: PVDF, ECTFE, PP-H, PP-n, PE100
- **Not compatible with PVC-U metric** (special clamping inserts needed)

d (mm)	Code	Weight (kg)
20	**790 132 051**	0.108
25	**790 132 052**	0.106
32	**790 132 053**	0.104
40	**790 132 054**	0.100
50	**790 132 055**	0.095

Clamping inserts d63-90mm, IR-110 Plus/A

- The clamping inserts are different for each dimension. They are used to clamp and position the pipe components.
- IR weldable materials: PVDF, ECTFE, PP-H, PP-n, PE100
- **Not compatible with PVC-U metric** (special clamping inserts needed)

d (mm)	Code	Weight (kg)
63	**790 132 156**	0.085
75	**790 132 157**	0.087
90	**790 132 158**	0.064

CONTAIN-IT Plus Clamping inserts IR-110 Plus

- The clamping inserts are different for each dimension. They are used to clamp and position the pipe components.
- 4x CONTAIN-IT Plus clamping inserts are needed for the two inner clamping devices.
- IR weldable materials: PVDF, ECTFE, PP-H, PP-n, PE100

d (mm)	D (mm)	Code	Weight (kg)
20	50	**790 132 190**	0.100
25	50	**790 132 191**	0.130
32	63	**790 132 192**	0.120
40	75	**790 132 193**	0.120
50	90	**790 132 194**	0.110

Clamping inserts IR-110 Plus PFA Sch. 40 rigid pipe

- The clamping inserts are different for each dimension. They are used to clamp and position the pipe components.
- For PFA Schedule 40 rigid pipe

d (inch)	Code	Weight (kg)
¼	**790 132 062**	0.109
½	**790 132 063**	0.107
¾	**790 132 064**	0.106
1	**790 132 065**	0.103
1 ½	**790 132 067**	0.096
2	**790 132 066**	0.088

Pipe stop IR-110 Plus

- The pipe stop defines the allowance when the pipes are clamped into position.

Suitable for	Code	Weight (kg)	Pieces
d20- 110 mm	**790 132 061**	0.007	2

Set of facing knives IR-110 Plus, IR-110 A

- A set includes two facing knives and six screws. Each facing knife has four blades. In case of a blunt blade the facing knife may be turned three times before it must be replaced

d-d (mm)	Code	Pieces

Torx key with T-bar handle IR-63/110 Plus, IR-110 A

- For facing knives

Description	Code	Weight (kg)
T10	**790 131 129**	0.029

Power supply lead 230V
IR-63/110 Plus, IR-110 A, BCF Plus

Code	Weight (kg)
790 122 246	0.150

Cleaning brush IR-110/225/315 Plus, IR-110/315 A

Code	Weight (kg)
790 041 017	0.013

Set of inner clamping units IR-110 Plus

- The set includes the following parts:
  - 2x upper clamping units (right / left)
  - 2x fixing screws

Note:
All existing half-shells for IR-110 Plus machines can be used with the new inner clamping units.

Suitable for	Code	Weight (kg)	Pieces
d20- 110 mm	**790 132 270**	0.228	2

IR-110 A Automated Fusion Machine

IR-110 A Automated Fusion Machine

Model:

- Fully equipped automated infrared fusion machine with integrated working table for use under clean room conditions
- Welding of PVDF SYGEF (Standard/Plus), ECTFE SYGEF, PP grey PROGEF (Standard/Plus), PP-n PROGEF Natural, PE100 ecoFIT, IR PVC-U
- Dimensions d20-110 mm
- User friendly touch-screen interface 12.1" with various languages
- 4 USB interfaces, LAN Ethernet interface, 230 V Output
- Automated facer, clamping slide and heater
- Integrated video camera and temperature sensors
- Movable clamping units
- Clamping inserts d20-90 mm (8 pcs. per dimension), **not for PVC-U metric**
- End caps PE d20-110 mm (4 pcs. per dimension)
- Shavings collection tray
- Transport box with integrated pallet
- 1-phase AC (50/60 Hz) 230V L/N/PE
- Power supply cable 230V EU Standard
- Torx key (T10) for facing knives
- Cleaning brush
- Integrated label printer (including white ribbon 24mm)

Note:

Clamping inserts PVC-U metric on request

Suitable for	Code	Weight (kg)
d20- 110 mm	**790 164 001**	250

Clamping inserts d20-50mm, IR-110 A

- The clamping inserts are different for each dimension. They are used to clamp and position the pipe components.
- IR weldable materials: PVDF, ECTFE, PP-H, PP-n, PE100
- **Not compatible with PVC-U metric** (special clamping inserts needed)

d (mm)	Code	Weight (kg)
20	**790 164 022**	0.099
25	**790 164 023**	0.097
32	**790 164 024**	0.093
40	**790 164 025**	0.088
50	**790 164 026**	0.081

Clamping inserts d63-90mm, IR-110 Plus/A

- The clamping inserts are different for each dimension. They are used to clamp and position the pipe components.
- IR weldable materials: PVDF, ECTFE, PP-H, PP-n, PE100
- **Not compatible with PVC-U metric** (special clamping inserts needed)

d (mm)	Code	Weight (kg)
63	**790 132 156**	0.085
75	**790 132 157**	0.087
90	**790 132 158**	0.064

Clamping inserts IR-110 A PVC-U metric

- The clamping inserts are different for each dimension. They are used to clamp and position the pipe components.
- 4x PVC-U metric clamping inserts are needed for the two inner clamping devices.
- **The clamping inserts can only be used for PVC-U metric**

d (mm)	Code	Weight (kg)
20	**790 132 161**	0.108
25	**790 132 162**	0.105
32	**790 132 163**	0.104
40	**790 132 164**	0.100
50	**790 132 165**	0.096
63	**790 132 166**	0.085

Set of facing knives IR-110 Plus, IR-110 A

- A set includes two facing knives and eight screws. Each facing knife has four blades. In case of a blunt blade the facing knife may be turned three times before it must be replaced.

Suitable for	Code	Weight (kg)	Pieces
d20- 110 mm	**790 132 061**	0.007	2

Torx key with T-bar handle IR-63/110 Plus, IR-110 A

- For facing knives

Description	Code	Weight (kg)
T10	**790 131 129**	0.029

Cleaning brush IR-110/225/315 Plus, IR-110/315 A

Code	Weight (kg)
790 041 017	0.013

Power supply lead 230V IR-63/110 Plus, IR-110 A, BCF Plus

Code	Weight (kg)
790 122 246	0.150

Set of inner clamping units IR-110 A

- The set includes the following parts:
  - 2x upper clamping units (right / left)
  - 2x fixing screws

Note:

All existing half-shells for IR-110 A machines can be used with the new inner clamping units.

Suitable for	Code	Weight (kg)	Pieces
d20- 110 mm	**790 164 270**	0.228	2

IR-315 A Automated Fusion Machine

IR-315 A Automated Fusion Machine

Model:

- Fully equipped automated infrared fusion machine and working table designed for industrial applications and clean room conditions
- Welding of PVDF SYGEF (Standard/Plus), PP grey PROGEF (Standard/Plus), PE100 ecoFIT
- Dimensions d110-315 mm
- Automated facer, clamping slide and heater
- Integrated cooling system
- User friendly touch-screen interface 12.1" with various languages
- 4 USB interfaces, LAN Ethernet interface, 230 V Output
- Integrated video camera and temperature sensors
- Clamping inserts d110-280 mm (8 pcs. per dimension)
- End caps PE d110-315 mm (4 pcs. per dimension)
- Transport cases with integrated euro-pallete (fusion machine and working table)
- 3-phase AC (50/60 Hz) 400 V L1/L2/L3/N/PE
- Set of facing knives (2 pcs.)
- Torx key (T25) for facing knife
- Hexagon keys (10 mm + 8 mm)
- Fork key (24 mm)
- Cleaning brush
- Integrated label printer (including white ribbon 24mm)

Suitable for	Code	Weight (kg)
d110 - 315 mm	**790 165 001**	1049.000

Clamping inserts IR-315 A

- The clamping inserts are different for each dimension. They are used to clamp and position the pipe components.

d (mm)	Code	Weight (kg)
110	**790 165 010**	1.500
125	**790 165 011**	1.400
140	**790 165 012**	1.300
160	**790 165 013**	1.300
180	**790 165 014**	1.200
200	**790 165 015**	1.100
225	**790 165 016**	1.000
250	**790 165 017**	0.900
280	**790 165 018**	0.700

Set of facing knives IR-315/400 A

- A set includes two facing knives and six screws. Each facing knife has four blades. In case of a blunt blade the facing knife may be turned three times before it must be replaced

Suitable for	Code	Weight (kg)	Pieces
d110 - 315 mm	**790 165 549**	0.100	2

Cleaning brush IR-110/225/315 Plus, IR-110/315 A

Code	Weight (kg)
790 041 017	0.013

Torx key with T-bar handle IR-63/110 Plus, IR-110 A

- For facing knives

Description	Code	Weight (kg)
T10	**790 131 129**	0.029

IR-400 A Automated Fusion Machine

IR-400 A Automated Fusion Machine (only a rental pool machine)

Model:

- Fully equipped automated infrared fusion machine and working table designed for industrial applications and clean room conditions
- Welding of PVDF SYGEF Plus
- Dimensions d355-400mm
- Automated facer, clamping slide and heater
- User friendly touch-screen interface 12.1" with various languages
- 4 USB interfaces, LAN Ethernet interface, 230 V Output
- Integrated video camera and temperature sensors
- Clamping inserts d355-400 mm (8 pcs. per dimension)
- End caps PE d355-400 mm (4 pcs. per dimension)
- Transport cases (fusion machine and working table)
- 3-phase AC (50/60 Hz) 400 V L1/L2/L3/N/PE
- Set of facing knives (2 pcs.)
- Torx key (T25) for facing knife
- Hexagon keys (10 mm + 8 mm)
- Cleaning brush
- Integrated label printer (including white ribbon 24mm)

Suitable for	Code	Weight (kg)
d355 - 400 mm	**790 166 001**	1273.000

Clamping inserts IR-400 A

- The clamping inserts are different for each dimension. They are used to clamp and position the pipe components.

d (mm)	Code	Weight (kg)
355	**790 166 010**	2.651
400	**790 166 011**	1.722

Set of facing knives IR-315/400 A

- A set includes two facing knives and ten screws. Each facing knife has four blades. In case of a blunt blade the facing knife may be turned three times before it must be replaced.

d-d (mm)	Code	Weight (kg)	Pieces
110 - 315	**790 165 549**	0.100	2

WBI Tool

WBI-63 Tool

- Weld bead inspection of PVDF SYGEF (Standard/Plus), ECTFE SYGEF, PP-H PROGEF (Standard/Plus), PE100 ecoFIT
- Dimensions d20-d63 mm
- Clamping units d20-d63 mm
- Tablet with accessories
- Label printer Brother PT-P900Wc (including blue ribbon 24mm)

Suitable for	Code	Weight (kg)
d20 - d63	**790 170 001**	14

WBI-225 Tool

- Weld bead inspection of PVDF SYGEF (Standard/Plus), ECTFE SYGEF, PP-H PROGEF (Standard/Plus), PE100 ecoFIT
- Dimensions d20-d225 mm
- Clamping units d20-d225 mm
- Tablet with accessories
- Label printer Brother PT-P900Wc (including blue ribbon 24mm)

Suitable for	Code	Weight (kg)
d20 - d225	**790 170 002**	22

Clamping units WBI Tool

- The clamping units are different for each dimension. They are used to clamp and position the WBI Tool to the pipe components
- The clamping units d20-d63 mm are only compatible with the WBI-63 Tool
- The clamping units d75-d225 mm are only compatible with the WBI-225 Tool

d (mm)	Code	Weight (kg)
20	**790 170 221**	0.018
25	**790 170 222**	0.020
32	**790 170 223**	0.022
40	**790 170 224**	0.023
50	**790 170 225**	0.029
63	**790 170 226**	0.030
75	**790 170 227**	0.063
90	**790 170 228**	0.065
110	**790 170 229**	0.072
125	**790 170 230**	0.000
140	**790 170 231**	0.121
160	**790 170 232**	0.141
180	**790 170 233**	0.150
200	**790 170 234**	0.151
225	**790 170 235**	0.167

Ribbon blue label WBI Tool

- Only use for WBI Tool

Description	Code	Weight (kg)
Ribbon blue label 24 mm Brother TZe-551	**790 170 315**	0.100

BCF Plus Fusion Machines

BCF-63 Plus Fusion Machine

Model:

- Fully-equipped manually operated fusion machine with integrated remote welding unit for bead and crevice free jointing for use under clean room conditions
- Welding of PVDF SYGEF (Standard/Plus), PP-n PROGEF Natural
- Dimensions d20-63 mm
- Monochrome display with icons and various languages
- 2 USB interfaces
- Heating stations d20-63 mm (6 pcs.)
- Facing tool (1 pcs.) incl. facing inserts d20-63 mm (6 pcs.)
- Facing tool support
- Movable clamping units
- Cooling fan
- Clamping units (2 pcs.) with clamping inserts d20-63 mm (4 pcs. per dimension)
- Supporting tools d20-63 mm (2 pcs.)
- Transport box with integrated pallet
- 1-phase AC (50/60 Hz) 115 / 230 V L/N/PE
- Extension cable for remote welding (8m)
- Bladder Remove Tool (BReT)
- Hose box incl. air hose (16m)
- Hose cutter
- Integrated label printer (including white ribbon 24mm)

Note:

Bladders to be ordered separately.

Code	Weight (kg)	Suitable for
790 121 002	153.000	d20-63 mm

BCF-63 Plus Basic Machine

Model:

- Manually operated fusion machine with integrated remote welding unit for beadand crevice free jointing for use under clean room conditions
- Welding of PVDF SYGEF (Standard/Plus), PP-n PROGEF Natural
- Dimensions d20-63 mm
- Monochrome display with icons and various languages
- 2 USB interfaces
- Facing tool (1 pcs.) incl. facing inserts d20-63 mm (6 pcs.)
- Facing tool support
- Movable clamping units
- Cooling fan
- Clamping units (2 pcs.) with clamping inserts d20-63 mm (4 pcs. per dimension)
- Supporting tools d20-63 mm (2 pcs.)
- Transport box
- 1-phase AC (50/60 Hz) 115 / 230 V L/N/PE
- Extension cable for remote welding (8m)
- Bladder Remove Tool (BReT)
- Hose box incl. air hose (16m)
- Hose cutter

Code	Weight (kg)
790 121 004	144.000

BCF-110 Plus Fusion Machine

Model:

- Fully-equipped manually operated fusion machine with integrated remote welding unit for bead and crevice free jointing for use under clean room conditions
- Welding of PVDF SYGEF (Standard/Plus), PP-n PROGEF Natural
- Dimensions d20-110 mm
- Monochrome display with icons and various languages
- 2 USB interfaces
- Heating stations d20-110 mm (9 pcs.)
- Facing tool with facing inserts d20-63 mm (6 pcs.)
- Facing tool with facing inserts d75-110 mm (3 pcs.)
- Facing tool support
- Movable clamping units
- Cooling fan
- Clamping units (2 pcs.) with clamping inserts d20-63 mm (4 pcs. per dimension)
- Clamping units (2 pcs.) with clamping inserts d75-110 mm (4 pcs. per dimension)
- Adapter for clamping unit d75-110 mm (2 pcs.)
- Supporting tools d20-63 mm (2 pcs.)
- Supporting tools d75-110 mm (2 pcs.)
- Transport box with integrated pallet
- 1-phase AC (50/60 Hz) 115 / 230 V L/N/PE
- Extension cable for remote welding (8m)
- Bladder Remove Tool (BReT)
- Hose box incl. air hose (16m)
- Hose cutter
- Integrated label printer (including white ribbon 24mm)

Note:

Bladders to be ordered separately.

Code	Weight (kg)	Suitable for
790 121 001	188.000	d20 - 110 mm

Large Dimension Package BCF Plus d75-110mm

- This package is necessary to complete BCF Plus machines which are only equipped for small dimensions d 20-63 mm.
- **Delivery includes:**
- Facing tool d 75-110 mm with facing inserts d 75-110 mm (3 pcs.)
- Supporting tools d 75-110 mm (2 pcs.)
- Clamping units d75-110 mm (2 pcs.) with clamping inserts d75-110 mm (8 pcs.)
- Adapter for clamping unit d 75-110 mm (2 pcs.)

Note:

Heating stations not included

d-d (mm)	Code	Weight (kg)
75 - 110	**790 121 022**	8.000

Heating stations BCF Plus

d (mm)	Code	Weight (kg)
20	**790 121 111**	1.818
25	**790 121 112**	1.822
32	**790 121 113**	1.910
40	**790 121 114**	2.396
50	**790 121 115**	2.406
63	**790 121 116**	2.197
75	**790 121 117**	3.600
90	**790 121 118**	3.600
110	**790 121 119**	3.520

Bladder BCF Plus for SYGEF PVDF

- d20-d63: Only suitable for welding SYGEF PVDF. **Silver bladder head!**
- d75-110: Suitable for welding SYGEF PVDF and PROGEF Natural PP-n. **Silver bladder head!**

d (mm)	Code	Weight (kg)	Pieces
20	**790 122 041**	0.014	1
25	**790 122 042**	0.020	1
32	**790 122 043**	0.037	1
40	**790 122 044**	0.078	1
50	**790 122 045**	0.132	1
63	**790 122 046**	0.138	1

Bladder BCF Plus for PROGEF Natural PP-n

- d20-63: Only suitable for welding PROGEF Natural PP-n. **Blue bladder head!**
- d75-110: Suitable for welding PROGEF Natural PP-n and SYGEF PVDF. **Silver bladder head!**

d (mm)	Code	Weight (kg)	Pieces
20	**790 122 091**	0.038	1
25	**790 122 092**	0.021	1
32	**790 122 093**	0.040	1
40	**790 122 094**	0.050	1
50	**790 122 095**	0.105	1
63	**790 122 096**	0.138	1
75	**790 121 047**	0.203	1
90	**790 121 048**	0.265	1
110	**790 121 049**	0.552	1

Bladder/hose remove tool (BReT) BCF Plus

- Helpful to remove bladders easily.

Code	Weight (kg)
790 121 075	0.079

Supporting tool BCF Plus

- Helpful to fix 45°- angle components.

Suitable for	Code	Weight (kg)
d20 - d63	**790 121 072**	0.542
d75 - d110	**790 121 073**	0.900

Clamping units BCF Plus

- The clamping units are adjustable, so that all types of pipes and fittings can be clamped.

Suitable for	Code	Weight (kg)
d20 - d63	**790 121 034**	0.600
d75 - d110	**790 121 035**	0.900

Clamping inserts IR-63 Plus / BCF Plus

- The clamping inserts are different for each dimension. They are used to clamp and position the pipe components.
- IR weldable materials: PVDF, ECTFE, PP-H, PP-n, PE100
- BCF weldable materials: PVDF, PP-n

d (mm)	Code	Weight (kg)
20	**790 131 038**	0.140
25	**790 131 039**	0.090
32	**790 131 040**	0.052
40	**790 131 041**	0.074
50	**790 131 042**	0.100
63	**790 131 043**	0.035

Clamping inserts BCF Plus

- The clamping inserts are suitable for the clamping units of the BCF Plus machine. They are used to clamp the piping components.
- **No** clamping inserts are needed for **d 110 mm**!

d (mm)	Code	Weight (kg)
75	**790 121 036**	0.143
90	**790 121 037**	0.095

Adapter for clamping unit BCF Plus d 75-110 mm

- The adapter makes it possible, to insert clamping inserts with d 20-63 mm in clamping units with d 75-110 mm to be able to clamp pipes and fittings with d 20-63 mm with these clamping units.

Code	Weight (kg)
790 121 038	0.250

Facing tool BCF Plus

- Inclusive crank handle, mounting material and clamping inserts. Suitable for SYGEF PVDF as well as for PROGEF Natural PP-n.

Suitable for	Code	Weight (kg)
d20 - d63	**790 121 052**	2.339
d75 - d110	**790 121 053**	3.000

Clamping inserts for the facing tool BCF Plus

- These dimension-specific parts are inserted into the facing tool, in order to be able to face the end of the pipes smoothly and parallel.

d (mm)	Code	Weight (kg)
20	**790 121 061**	0.160
25	**790 121 062**	0.146
32	**790 121 063**	0.135
40	**790 121 064**	0.125
50	**790 121 065**	0.100

table continued on the next page

d (mm)	Code	Weight (kg)
63	**790 121 066**	0.050
75	**790 121 067**	0.300
90	**790 121 068**	0.200
110	**790 121 069**	0.090

Facing tool mounting plate BCF Plus

- To fix the facing tool on the workbench.

Suitable for	Code	Weight (kg)
d20-110 mm	**790 121 055**	1.200

Hose BCF Plus

- Connection hose for the BCF Plus bladder.
- Length: 16m

d (mm)	Code	Weight (kg)
4	**790 122 087**	0.121

Hose box incl. hose BCF Plus

- For the clean and professional storage of the air hose.
- Length: 16m

d (mm)	Code	Weight (kg)
4	**790 121 151**	1.114

Socket for compressed air hose BCF Plus

d (mm)	Code	Weight (kg)
4	**790 122 104**	0.002

Hose cutter BCF Plus

Suitable for	Code	Weight (kg)
d4 - d6	**790 122 106**	0.031

Extension cable BCF Plus

- 8 Meter (26 ft) extension cable for clamping slide

Code	Weight (kg)
790 122 989	1.000

Power supply lead 230V
IR-63/110 Plus, IR-110 A, BCF Plus

Code	Weight (kg)
790 122 246	0.150

IR-63 Plus Fusion Machine Accessories

Clamping inserts IR-63 Plus / BCF Plus

- The clamping inserts are different for each dimension. They are used to clamp and position the pipe components.
- IR weldable materials: PVDF, ECTFE, PP-H, PP-n, PE100
- BCF weldable materials: PVDF, PP-n

d (mm)	Code	Weight (kg)
20	**790 131 038**	0.140
25	**790 131 039**	0.090
32	**790 131 040**	0.052
40	**790 131 041**	0.074
50	**790 131 042**	0.100
63	**790 131 043**	0.035

Clamping inserts IR-63 Plus CONTAIN-IT Plus

- The clamping inserts are different for each dimension. They are used to clamp and position the pipe components.
- 4x CONTAIN-IT Plus clamping inserts are needed for the two inner clamping devices.
- IR weldable materials: PVDF, ECTFE, PP-H, PP-n, PE100

d (mm)	D (mm)	Code	Weight (kg)
20	50	**790 131 090**	0.060
25	50	**790 131 091**	0.060
32	63	**790 131 092**	0.060
40	75	**790 131 093**	0.050

Clamping inserts IR-63 Plus PFA Sch. 40 rigid pipe

- The clamping inserts are different for each dimension. They are used to clamp and position the pipe components.
- For PFA Schedule 40 rigid pipe

d (inch)	Code	Weight (kg)
¼	**790 131 446**	0.057
½	**790 131 447**	0.055
¾	**790 131 448**	0.053
1	**790 131 449**	0.051
1 ½	**790 131 452**	0.043
2	**790 131 450**	0.041

Pipe stop IR-63 Plus

- The pipe stop defines the allowance when the pipes are clamped into position.

Code	Weight (kg)
790 131 046	0.430

Heater protection shield IR-63 Plus

- Protects the heater from plastic chips during the facing process.

Code	Weight (kg)	Pieces
790 131 051	0.205	1

Set of facing knives IR-63 Plus

- A set includes two facing knives and six screws. Each facing knife has four blades. In case of a blunt blade the facing knife may be turned three times before it must be replaced.

Code	Weight (kg)
790 131 045	0.016

Torx key with T-bar handle IR-63/110 Plus, IR-110 A

- For facing knives

Description	Code	Weight (kg)
T10	**790 131 129**	0.029

Extension cable for clamping slide IR-63 Plus

- 6 Meter (19 ft) extension cable for clamping slide

Code	Weight (kg)
790 131 047	0.700

Extension cable for heater IR-63 Plus

- 6 Meter (19 ft) extension cable for heater

Code	Weight (kg)
790 131 049	0.767

Extension cable for facing tool IR-63 Plus

- 6 Meter (19 ft) extension cable for facing tool

Code	Weight (kg)
790 131 048	0.438

Power supply lead 230V
IR-63/110 Plus, IR-110 A, BCF Plus

Code	Weight (kg)
790 122 246	0.150

Cleaning brush IR-110/225/315 Plus, IR-110/315 A

Code	Weight (kg)
790 041 017	0.013

IR-225 Plus Fusion Machine Accessories

Clamping inserts IR-225 Plus

- The clamping inserts are different for each dimension. They are used to clamp and position the pipe components.
- IR weldable materials: PVDF, ECTFE, PP-H, PP-n, PE100

d (mm)	Code	Weight (kg)
63	**790 133 026**	0.700
75	**790 133 027**	0.400
90	**790 133 028**	0.691
110	**790 133 029**	0.644
125	**790 133 030**	0.500
140	**790 133 031**	0.600
160	**790 133 032**	0.600
180	**790 133 463**	0.560
200	**790 133 033**	0.700
225	**790 133 034**	0.270

CONTAIN-IT Plus Clamping inserts IR-225 Plus

- The clamping inserts are different for each dimension. They are used to clamp and position the pipe components.
- 4x CONTAIN-IT Plus clamping inserts are needed for the two inner clamping devices.
- IR weldable materials: PVDF, ECTFE, PP-H, PP-n, PE100

d (mm)	D (mm)	Code	Weight (kg)
63	110	**790 133 090**	0.730
75	125	**790 133 091**	0.700
90	140	**790 133 092**	0.600
110	160	**790 133 093**	0.620
125	180	**790 133 094**	0.580

Pipe stop IR-225 Plus

- The pipe stop defines the allowance when the pipes are clamped into position.

Code	Weight (kg)	Pieces
790 133 047	0.150	1

Set of facing knives IR-225/315 Plus

- A set includes two facing knives and six screws. Each facing knife has four blades. In case of a blunt blade the facing knife may be turned three times before it must be replaced

Suitable for	Code	Weight (kg)	Pieces
d63 - 225 mm	**790 133 046**	0.125	2

Torx key T25 with T-bar handle IR-225/315 Plus, IR-315 A

- For facing knives

Code	Weight (kg)
790 133 577	0.063

Cleaning brush IR-110/225/315 Plus, IR-110/315 A

Code	Weight (kg)
790 041 017	0.013

Accessories for IR/BCF Fusion Machines

Set of end caps IR

- A set includes 4 end caps. The end caps are different for each dimension. The ends of the pipe **must** be closed. The caps prevent heat loss due to airflow in the fusion zone and guarantee optimum fusion results of the pipe components.

d (mm)	Code	Weight (kg)	Suitable for
20	**790 180 052**	0.007	IR-63 M, IR-63 Plus, IR-110 Plus, IR-110 A
25	**790 180 053**	0.008	IR-63 M, IR-63 Plus, IR-110 Plus, IR-110 A
32	**790 180 054**	0.014	IR-63 M, IR-63 Plus, IR-110 Plus, IR-110 A
40	**790 180 055**	0.020	IR-63 M, IR-63 Plus, IR-110 Plus, IR-110 A
50	**790 180 056**	0.016	IR-63 M, IR-63 Plus, IR-110 Plus, IR-110 A
63	**790 180 057**	0.020	IR-63 M, IR-63 Plus, IR-225 M, IR-110 Plus, IR-225 Plus, IR-110 A
75	**790 180 058**	0.034	IR-110 Plus, IR-110 A, IR-225 M
90	**790 180 059**	0.052	IR-225 M, IR-110 Plus, IR-225 Plus, IR-110 A
110	**790 180 060**	0.078	IR-225 M, IR-110 Plus, IR-225 Plus, IR-110 A, IR-315 A
125	**790 180 061**	0.139	IR-225 M, IR-225 Plus, IR-315 A
140	**790 180 062**	0.144	IR-225 M, IR-225 Plus, IR-315 A
160	**790 180 063**	0.204	IR-225 M, IR-225 Plus, IR-315 A
180	**790 180 064**	0.219	IR-225 M, IR-225 Plus, IR-315 A
200	**790 180 065**	0.305	IR-225 M, IR-225 Plus, IR-315 A
225	**790 180 066**	0.355	IR-225 M, IR-225 Plus, IR-315 A
250	**790 134 151**	0.447	IR-315 A
280	**790 134 152**	0.613	IR-315 A
315	**790 134 153**	0.760	IR-315 A
355	**790 134 377**	0.810	IR-400 A
400	**790 134 378**	0.950	IR-400 A

Label printer Brother PT-P900Wc

- For IR / BCF fusion machines and WBI-Tool
- Label 36 mm included
- Order Label 24 mm separately

Description	Code	Weight (kg)
Label printer Brother PT-P900Wc	**790 180 081**	2.470
Ribbon white label 24 mm Brother TZe-251	**790 180 082**	0.100

Tangit KS Cleaner

- Special cleaner for plastic fusion connections in the material of PE, PP, PB, PVDF, ECTFE and PVC-U
- Suitable for Tangit Rapid. Must not be used for solvent cementing
- DVGW approved
- DW 5290 BR 0464

Size	Code	Weight (kg)
1 liter	**799 298 023**	0.872

Cleaning tissue KO-TON-R

Minimum order quantity 100 pieces

- This cleaning tissue is suitable for the cleaning of the welding zone of piping components, because it is lint free and clean room checked.

Code	Weight (kg)
790 122 085	0.005

USB Stick IR Plus

- Formatted USB Stick to extract fusion protocols from IR-Plus machines and upload to "CONNECT Welding"

Code	Weight (kg)
790 180 083	0.050

IR-Plus Win Weld

- The PC data transfer software makes it possible to read the recorded fusion data from the USB stick (max. 2 GB) on the PC
- Incl. USB stick 2GB

Code	Weight (kg)
790 131 471	0.151

BCF Plus Win Weld

- The PC data transfer software makes it possible to read the recorded fusion data from the USB stick (max. 2 GB) on the PC
- Incl. USB stick 2GB

Suitable for	Code	Weight (kg)
d20- 110 mm	**790 121 471**	0.080

Butt/socket fusion machines

Product Range Overview

Characteristics	MC 110	MD 160	JIG 125	PSO 701
Max jointing diameter (mm)	110	160	125	160
SDR Range	41-11	41-11	-	41-17.6
Jointing technology	Butt	Butt	Socket	Butt
Jonting materia	PE, PP	PE, PP	PE, PP	PE, PP
Working range (°C)	-10/+45	-10/+45	-10/+45	-10/+45
Input voltage (Vac)	230/115	230/115	230/115	230/115
Performance (W)	1360	1800	1500	1360
Heating element useable as manual tool	✓	✓	✓	✓
Heating temperature control	Electronic	Electronic	Electronic	Electronic
Transport box useable as working bench				✓
Weight - Base machine (Kg)	6	14	10	10
Working range d20				
d40				
d50				
d63				
d110				
d125				
d160				

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MC 110

MC 110
Portable butt fusion machine

- Portable butt fusion machine for use in the workshop and on job sites. For fusion jointing of PP and PE pipes and fittings as well as prefabrication of segments in the size range d 20 - 110 mm and up to SDR 11.
- Maximum jointing angle 30°
- For dimensions d20,25 mm the alignment tolerances between pipes are very tight, so they can be influenced by pipes and operating conditions.
- Machine MC 110 complete includes: machine mounting, base machine, 2 base clamping plates (wide), base clamping plate (left narrow) , table clamp and transport box. Depending on the configuration chosen, the planer can be electrically or manually operated, and the heater can be electronic or thermostatic controlled.
- Including transport packaging, without accessories

Description	d1 (mm)	d2 (mm)	Power	Code	Weight (kg)
MC 110 with electric planer, electronic heater	20	110	230V/1360W	**790 109 347**	31.000
MC 110 with manual planer, electronic heater	20	110	230V/800W	**790 109 348**	28.000

MC 110 Accessories

MC 110 Base clamping plate, right narrow

- 110 mm for fitting/pipe joints
- For mounting the narrow reduction clamping inserts

d (mm)	Code	Weight (kg)
110	**790 109 310**	0.945

MC 110 Set reduction clamping inserts

- The set for the wide clamps contains 4 half shells of each dimension
- The set for the narrow clamp contains 2 half shells of each dimension

d1 (mm)	d2 (mm)	wide Code	Weight (kg)	narrow Code	Weight (kg)
20	90	**790 300 019**	4.532	**790 300 029**	3.478

MC 110 Reduction clamping inserts

- 20 - 90 mm
- Each code number defines 1 half shell. Per wide base clamping plate 2 reduction half -shells are needed.

d (mm)	wide Code	Weight (kg)	narrow Code	Weight (kg)
20	**790 109 326**	0.150	**790 109 334**	0.263
25	**790 109 327**	0.139	**790 109 335**	0.135
32	**790 109 328**	0.133	**790 109 336**	0.136
40	**790 109 329**	0.130	**790 109 337**	0.258
50	**790 109 330**	0.113	**790 109 338**	0.239
56	**790 109 342**	0.137	**790 109 343**	0.115
63	**790 109 331**	0.120	**790 109 339**	0.108
75	**790 109 332**	0.110	**790 109 340**	0.193
90	**790 109 333**	0.100	**790 109 341**	0.148

MC 110 Flange adapter clamping unit

- For correct clamping and fusion jointing of short-ended stub ends

d1 (mm)	d2 (mm)	Code	Weight (kg)
25	110	**790 109 316**	1.630

ECOS / TOP / CNC / GF / WM / IM Set of replacement blades for planer

- Blade has 2 cutting edges (1 set = 2 blades)

Type	Code	Weight (kg)	Remarks
WM 315; MC110	**790 118 043**	0.045	Short blades-set for WM 315

MD 160/JIG 125

COMBI MD 160/JIG 125 Compact machine for fusion of PE and PP pipes and fittings

- One single base machine with 2 different specific clamping units and the complete components set for quick set-up for butt fusion (**MD 160** configuration) and socket fusion (**JIG 125** configuration) jointing
- Provided with special transport box for easy transportation of all machine components
- Including machine specific tool set

Description	Performance	Code	Weight (kg)
Type A heating spigots and bushes set for JIG 125	230 V/2500 W	**790 109 004**	97.000
Type A heating spigots and bushes set for JIG 125	115 V/2500 W	**790 109 005**	97.000
Type B heating spigots and bushes set for JIG 125	230 V/2500 W	**790 109 009**	97.000
Type B heating spigots and bushes set for JIG 125	115 V/2500 W	**790 109 010**	97.000

MD 160 Compact butt fusion machine

- Portable butt fusion machine for use in the workshop and on job site
- For jointing PE, PP pipes and fittings in the dimensional range d 50 – 160 mm, up to wall thickness of SDR 11
- Light and sturdy base machine (13.8 kg weight with clamping units) suitable for direct use on the installed pipeline
- Suitable for prefabrication of segmented elbows and bends, with maximum jointing angle of 30° (table support included)
- Each clamping unit consists of a narrow clamp, suitable also for short-end fittings, and the pipe support
- The complete reductions inserts set d 50 – 140 mm for clamps and pipe supports is included
- Additional clamps, to be placed at the left and right outer sides, are available as accessories
- Handwheel for easy moving of machine carriage
- Exact pressure adjustment via direct spring load transfer
- Powerful parallel planer for single or double-sided facing of pipe ends
- High performance, electronically controlled heating element
- Including transport packaging and machine specific tool set

d-d (mm)	Performance	Code	Weight (kg)
50 - 160	230 V/1800 W	**790 109 006**	57.000
50 - 160	115 V/1800 W	**790 109 007**	57.000

JIG 125 Compact socket fusion machine

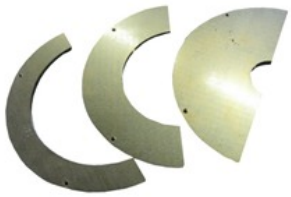
- For jointing PE, PP pipes and fittings in the dimensional range d 63 – 125 mm
- Light and sturdy base machine (10.3 kg weight with clamping units) specifically designed for direct use on the installed pipeline
- Prismatic clamping units, specifically designed for pipes (double clamp) and fittings (single clamp)
- Back-stop included to enhance clamping action onto the fittings
- Handwheel for easy moving of machine carriage
- High performance, electronically controlled heating element
- Complete set of heating spigots and bushes d 63 – 125 mm (Avaliable in Type A or Type B version, according to DVS 2208-1)
- Including transport packaging and machine specific tool set

Description	d1 (mm)	d2 (mm)	Power	Code	Weight (kg)
Type A heating spigots and bushes set	63	125	230 V/1500 W	**790 310 006**	44.000
Type A heating spigots and bushes set	63	125	115 V/1500 W	**790 310 007**	44.000
Type B heating spigots and bushes set	63	125	230 V/1500 W	**790 310 009**	44.000
Type B heating spigots and bushes set	63	125	115 V/1500 W	**790 310 010**	44.000

MD 160 Accessories

MD 160 Additional outer clamps

	d (mm)	Code	Weight (kg)
Type: Left	160	**790 109 058**	2.600
Type: Right	160	**790 109 057**	2.600



MD 160 Reduction inserts set for outer clamp

- Dedicated to a single clamp: 2 clamping inserts of each dimension

d1 (mm)	d2 (mm)	Code	Weight (kg)
50	140	**790 109 064**	5.400

ECOS / TOP / CNC / GF / WM / IM Set of replacement blades for planer

- Blade has 2 cutting edges (1 set = 2 blades)

Type	Code	Weight (kg)	Remarks
ECOS/TOP/CNC 160; IM 160; MD 160; PSO 701	**790 113 056**	0.059	

Table clamp for manual fusion tools SSE / MSE

- Specifically designed for placing the heater on a working bench

Code	Weight (kg)
790 109 315	0.660

PSO 701

PSO 701
Butt fusion machine for sanitary applications

- Compact and mobile butt fusion machine for PE pipes for the use in the workshop and on the building site. Perfect for sanitary installations and wastepipes. The wooden box is usable as working bench as well as for transportation
- Pressure adjustment via direct load transfer (max. force 100 kp). PE max. d 160 mm SDR 17,6.
- Planer and heating element could be swivelled in and out
- High performance heating element thermostatic controlled (PTFE coated)
- The heating element can be used as manual fusion tool
- Fast-locking base clamping plates, right and left, d 160 mm
- Complete reduction clamping inserts set d 40 - 140 mm
- V-shaped pipe support with inserts d 40 - 140 mm
- Machine specific tool set

d1 (mm)	d2 (mm)	Power	Code	Weight (kg)
40	160	230 V/1360 W	**790 301 000**	107.000

PSO 701 Accessories

ECOS / TOP / CNC / GF / WM / IM Set of replacement blades for planer

- Blade has 2 cutting edges (1 set = 2 blades)

Type	Code	Weight (kg)	Remarks
ECOS/TOP/CNC 160; IM 160; MD 160; PSO 701	**790 113 056**	0.059	

Plastic pipe cutter
For PE pipes

- This cutter is suitable for PE pipes and can be used on pipes of up to d 225 mm with a wall thickness of up to 21 mm.

d (mm)	Code	Weight (kg)	Description
39	**799 198 012**	0.215	accessories Basic Tool Box

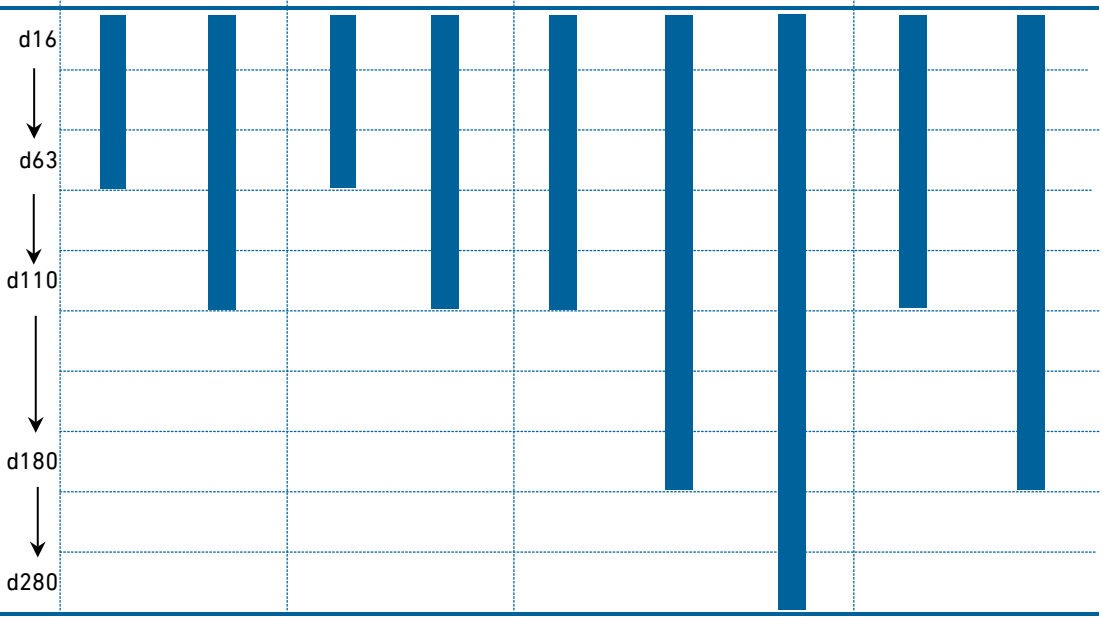
Building Technology Range

Manual fusion tools

Product Range Overview

Characteristics	MSE63	MSE110	MSE63 Toolset	MSE110 Toolset	SSE120	SSE220	SSE300	SSE200 Toolset	SSE300 Toolset
Max jointing diameter (mm)	63	110	1400	1400	1200	1200	800	1400	1400
Jointing technology	Socket	Socket	Socket	Socket	Butt	Butt	Butt	Butt	Butt
Jointing material	PE, PP	PE, PP	PE,PP	PE,PP	PE,PP	PE,PP	PE,PP	PE,PP	PE,PP
Working range (°C)	-10/+45	-10/+45	-10/+45	-10/+45	-10/+45	-10/+45	-10/+45	-10/+45	-10/+45
Input voltage (Vac)	230/115	230/115	230/115	230/115	230	230	230	230	230
Heating temperature control	Electronic		Electronic		Electronic			Electronic	
Performance (W)	800	1500	800	1500	400	800	1500	800	1500
Bushes and spigots included			✓	✓					
Table clamp			✓	✓				✓	✓
Toolbox			✓	✓				✓	✓
Allen screws and key			✓	✓					
Weight (Kg)	1.8	3.2	8.7	17.7	2.4	3.0	4.8	7.7	12.5
Power supply cable length	2m	2m	2m	2m	2m	2m	2m	2m	2m

Working range



Socket fusion tools

MSE 63/MSE 110 Socket fusion toolset

- For fusion jointing of PP and PE pipes and fittings
- All devices equipped with on/off switch, mains and temperature control lamp
- Electronic temperature control
- Support for heating bushes and spigots of d 16 to 63 mm (110 mm)
- Pick up for floor stand or table clamp
- Monitoring and setting of heating element temperature
- High temperature accuracy over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life
- Heating bushes and spigots
- Available as a complete set in a practical metal case
- Table clamp
- Floor stand for MSE 63
- Alen screws and key
- The 115 V type is available both in the version with plug (US standard NEMA 5-15P) and in the version without plug, to make possible for the customer to assemble any other type of plug, compatible with the tool technical specifications, under his own responsibility.

Description	d1 (mm)	d2 (mm)	Power	Code	Weight (kg)
MSE 63 E with Schuko plug	16	63	230 V/800 W	**790 105 086**	8.700
MSE 63 E with Swiss plug	16	63	230 V/800 W	**790 105 073**	8.700
MSE 63 E without plug	16	63	115 V/800 W	**790 105 099**	9.979
MSE 63 E with US plug	16	63	115 V/800 W	**790 105 123**	10.050
MSE 110 E with Schuko plug	16	110	230 V/1500 W	**790 105 088**	16.523
MSE 110 E with Swiss plug	16	110	230 V/1500 W	**790 105 074**	16.523
MSE 110 E without plug	16	110	115 V/1500 W	**790 105 129**	18.000
MSE 63 E with US plug	16	110	115 V/1500 W	**790 105 135**	18.050

MSE 63/MSE 110 Socket fusion tool

- For fusion jointing of PP and PE pipes and fittings
- Electronic temperature control
- Support for heating bushes and spigots of d 16 to 63 mm (110 mm)
- Pick up for floor stand or table clamp
- Monitoring and setting of heating element temperature
- High temperature accuracy over the entire heating surface
- The 115 V type is available both in the version with plug (US standard NEMA 5-15P) and in the version without plug, to make possible for the customer to assemble any other type of plug, compatible with the tool technical specifications, under his own responsibility.

Description	d1 (mm)	d2 (mm)	Power	Code	Weight (kg)
MSE 63 E with Schuko plug	16	63	230 V/800 W	**790 105 082**	1.800
MSE 63 E with Swiss plug	16	63	230 V/800 W	**790 105 071**	1.800
MSE 63 E without plug	16	63	115 V/800 W	**790 105 097**	2.145
MSE 63 E with US plug	16	63	115 V/800 W	**790 105 164**	2.200
MSE 110 E with Schuko plug	16	110	230 V/1500 W	**790 105 084**	3.200
MSE 110 E with Swiss plug	16	110	230 V/1500 W	**790 105 072**	3.200
MSE 110 E without plug	16	110	115 V/1500 W	**790 105 127**	3.200
MSE 110 E with US plug	16	110	115 V/1500 W	**790 105 175**	3.250

Butt fusion tools

SSE 200/SSE 300 Butt fusion toolset

- Heating element diameter 200mm or 300mm
- High-quality, non-stick PTFE-coating with long service life
- Electronic temperature control
- High temperature accuracy over the entire heating surface
- All devices equipped with on/off switch, mains and temperature control lamp
- Monitoring and setting of heating element temperature
- Available as a complete set in a practical metal case
- Table clamp
- Pick up for floor stand or table clamp

Type	d-d (mm)	Performance	Code	Weight (kg)
SSE 200 E	16 - 180	230 V/800 W	**790 105 061**	7.700
SSE 300 E	16 - 280	230 V/1500 W	**790 105 062**	12.500

SSE Butt fusion tools

- All devices equipped with on/off switch, mains and temperature control lamp
- Electronic temperature control
- Heating element diameter 120 mm, 200 mm and 300 mm
- The SSE 120 heater plate is bent 45°
- Pick up for floor stand or table clamp
- High-quality, non-stick PTFE-coating with long service life
- Monitoring and setting of heating element temperature
- High temperature accuracy over the entire heating surface

Type	d (mm)	Performance	Code	Weight (kg)
SSE 120 E	110	230 V/400 W	**790 105 058**	2.400
SSE 200 E	180	230 V/800 W	**790 105 059**	3.000
SSE 300 E	280	230 V/1500 W	**790 105 060**	5.640

Accessories/Wearing parts for manual fusion tools

Heating spigots and bushes

- For socket fusion systems in PP, PE
- For specific PVDF socket fusion jointing
- Always delivered in pairs (also usable for SG 110, SG 125, not for SG 160)
- Type B according to DVS 2208-1 (mechanical calibrated pipe ends)

d (mm)	Code	Weight (kg)
16	**799 300 155**	0.085
20	**799 300 156**	0.090
25	**799 300 157**	0.154
32	**799 300 158**	0.211
40	**799 300 159**	0.309
50	**799 300 160**	0.434
63	**799 300 161**	0.594
75	**799 300 162**	0.981
90	**799 300 163**	1.452
110	**799 300 164**	2.008

Table clamp for manual fusion tools SSE / MSE

- Specifically designed for placing the heater on a working bench

Code	Weight (kg)
790 109 315	0.660

Floor stand for manual fusion tools SSE / MSE

Code	Weight (kg)
790 105 063	0.380

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General Condition of Supply of Georg Fischer Piping Systems Limited, Schaffhausen

1 General

1.1 These General Conditions shall apply to all Products supplied by Georg Fischer Piping Systems Limited («Georg Fischer») to the Purchaser.
They shall also apply to all future business even when no express reference is made to them.

1.2 Any deviating or supplementary conditions especially Purchaser's general conditions of purchase and verbal agreements shall only be applicable if accepted in writing by Georg Fischer.

1.3 The written form shall be deemed to be fulfilled by all forms of transmission, evidenced in the form of text, such as telefax, e-mail, etc.

2 Tenders

Tenders shall only be binding if they contain a specifically stated period for acceptance.

3 Scope of Delivery

3.1 Georg Fischer's product range is subject to change.

3.2 The confirmation of order shall govern the scope and execution of the contract.

4 Data and Documents

4.1 Technical documents such as drawings, descriptions, illustrations and data on dimensions, performance and weight as well as the reference to standards are for information purposes only. They are not warranted characteristics and are subject to change.

4.2 All technical documents shall remain the exclusive property of Georg Fischer and may only be used for the agreed purposes or as Georg Fischer may consent.

5 Confidentiality, Protection of Personal Data

5.1 Each party shall keep in strict confidence all commercial or technical information relating to the business of the other party, of which it has gained knowledge in the course of its dealing with the other party. Such information shall neither be disclosed to third parties nor used for other purposes than those for which the information has been supplied.

5.2 In the context of the contractual relation with the Purchaser personal data may be processed. The Purchaser agrees to the disclosure of said data to third parties such as foreign subcontractors and suppliers etc .

6 Local Laws and Regulations, Export Controls

6.1 The Purchaser shall bring to the attention of Georg Fischer all local laws and regulations at the place of destination which bear connection with the execution of the contract and the adherence to relevant safety regulations and approval procedures.

6.2 In case of re-exports, Purchaser shall be responsible for compliance with pertinent export control regulations.

7 Price

7.1 Unless agreed otherwise, the prices shall be deemed quoted net ex works (according to Incoterms 2010 of the ICC, or latest version) including standard packing. All supplementary costs such as the cost of carriage, insurance, export-, transit- and import- licences etc. shall be borne by the Purchaser. The Purchaser shall also bear the costs of all taxes, fees, duties etc. connected with the contract.

7.2 If the costs of packing, carriage, insurance, fees and other supplementary costs are included in the tender price or contract price or are referred to specifically in the tender or confirmation of order, Georg Fischer reserve the right to revise their prices accordingly should any change occur in the relevant tariffs.

8 Terms of Payment

8.1 The Purchaser shall make payment in the manner agreed by the parties without any deductions such as discounts, costs, taxes or dues.

8.2 The Purchaser may only withhold or off-set payments due against counter claims which are either expressly acknowledged by Georg Fischer or finally awarded to the Purchaser.
In particular, payment shall still be made when unessential items are still outstanding provided that the Products already delivered are not rendered unusable as a result.

9 Retention of Title

9.1 The Products shall remain the property of Georg Fischer until the Purchaser shall have settled all claims, present and future, which Georg Fischer may have against him.

9.2 Should the Purchaser resell Products to which title is reserved, in the ordinary course of business, he shall hereby be deemed to have tacitly assigned to Georg Fischer the proceeds deriving from their sale together with all collateral rights, securities and reservations of title until all claims held by Georg Fischer shall have been settled. Until revoked by Georg Fischer, this assignment shall not preclude Purchaser's right to collect the assigned receivables.

9.3 To the extent the value of the Products to which title is reserved together with collateral securities exceeds Georg Fischer's claims against the Purchaser by more than 20%, Georg Fischer shall re-assign the above proceeds to Purchaser at his request.

10 Delivery

10.1 The term of delivery shall commence as soon as the contract has been entered into, all official formalities such as import and payment permits have been obtained and all essential technical issues have been settled. The term of delivery shall be deemed duly observed when, upon its expiry, the Products are ready for despatch.

10.2 Delivery is subject to the following conditions, i.e. the term of delivery shall be reasonably extended:

a) if Georg Fischer are not supplied in time with the information necessary for the execution of the contract or if subsequent changes causing delays are made by the Purchaser.

b) if Georg Fischer are prevented from performing the contract by force majeure. Force majeure shall equally be deemed to be any unforeseeable event beyond Georg Fischer's control which renders Georg Fischer's performance commercially unpractical or impossible, such as delayed or defective supplies from sub contractors labour disputes, governmental orders or regulations, shortages in materials or energy, serious disturbances in Georg Fischer's works, such as the total or partial destruction of plant and equipment or the breakdown of essential facilities, serious disruptions in transport facilities, e.g. impassable roads.
Should the effect of force majeure exceed a period of six (6) months, either party may cancel the contract forthwith.
Georg Fischer shall not be liable for any damage or loss of any kind whatsoever resulting the refrom, any suspension or cancellation being without prejudice to Georg Fischer's right to recover all sums due in respect of consignments delivered and costs incurred to date.

c) if the Purchaser is in delay with the fulfilment of his obligations under the contract, in particular, if he does not adhere to the agreed conditions of payment or if he has failed to timely provide the agreed securities.

10.3 If for reasons attributable to Georg Fischer the agreed term of delivery or a reasonable extension thereof is exceeded, Georg Fischer shall not be deemed in default until the Purchaser has granted to Georg Fischer in writing a reasonable extension thereof of not less than one (1) month which equally is not met.
The Purchaser shall then be entitled to the remedies provided at law, it being however understood that, subject to limitations of Art. 16, damage claims shall be limited to max. 10% of the price of the delayed delivery.

10.4 Part shipments shall be allowed and Georg Fischer shall be entitled to invoice for such partial deliveries.

10.5 If the Purchaser fails to take delivery within a reasonable time of Products notified as ready for despatch, Georg Fischer shall be entitled to store the Products at the Purchaser's expense and risk and to invoice them as delivered. If Purchaser fails to effect payment, Georg Fischer shall be entitled to dispose of the Products.

10.6 Should Purchaser cancel an order without justification and should Georg Fischer not insist on the performance of the contract, Georg Fischer shall be entitled to a penalty amounting to 10% of the contract price, Georg Fischer's right to prove and claim higher damages remaining reserved. Purchaser shall be entitled to prove, that Georg Fischer has suffered no or a considerably lower damage than the penalty forfeited.

11 Packing

If the Products are provided with additional packing over and above the standard packing, such packing shall be charged additionally.

12 Passing of Risk

12.1 The risk in the Products shall pass to the Purchaser as soon as they have left Georg Fischer's works (EX WORKS, Incoterms 2010 ICC, or latest version), even if delivery is made carriage-paid, under similar clauses or including installation or when carriage is organized and managed by Georg Fischer.

12.2 If delivery is delayed for reasons beyond Georg Fischer's control, the risk shall pass to the Purchaser when he is notified that the Products are ready for despatch.

13 Carriage and Insurance

13.1 Unless agreed otherwise, the Purchaser shall bear the cost of carriage.

13.2 The Purchaser shall be responsible for transport insurance against damage of whatever kind. Even when such insurance is arranged by Georg Fischer it shall be deemed taken out by the order of and for the account of the Purchaser and at his risk.

13.3 Special requests regarding carriage and insurance shall be communicated to Georg Fischer in due time. Otherwise carriage shall be arranged by Georg Fischer at their discretion, but without responsibility, by the quickest and cheapest method possible.
In case of carriage-paid delivery transport arrangements shall be made by Georg Fischer. If the Purchaser specifies particular requirements, any extra costs involved shall be borne by him.

13.4 In the event of damage or loss of the Products during carriage the Purchaser shall mark the delivery documents accordingly and immediately have the damage ascertained by the carrier. Not readily ascertainable damages sustained during carriage shall be notified to the carrier within six (6) days after receipt of the Products.

14 Inspection, Notification of Defects and Damages

14.1 The Products will be subject to normal inspection by Georg Fischer during manufacture. Additional tests required by the Purchaser shall be agreed upon in writing and shall be charged to the Purchaser.

14.2 It shall be a condition of Georg Fischer's obligation under the warranties stated hereinafter that Georg Fischer be notified in writing by the Purchaser of any purported defect immediately upon discovery. Notice concerning weight, numbers or apparent defects is to be given latest within 30 days from receipt of the Products, notice of other defects immediately latest within seven (7) working days after discovery, in any event within the agreed warranty period.

14.3 Purchaser shall not dispose of allegedly defective Products until all warranty and/or damage claims are finally settled. At its request, defective Products are to be placed at Georg Fischer's disposal.

14.4 At its request, Georg Fischer shall be given the opportunity to inspect the defect and/or damage, prior to commencement of remedial work, either itself or by third party experts.

15 Warranty

15.1 At the written request of the Purchaser, Georg Fischer undertakes to repair or replace at its discretion, as quickly as possible and free of charge, all Products supplied which demonstrably suffer from faulty design, materials or workmanship, from faulty operating or installation instructions or which become defective or unusable due to faulty advice.
In order to protect employees from toxic or radioactive substances which may have been transported through defective parts returned to Georg Fischer's sales organisation, said parts must be accompanied by a Material Safety Disclosure Form. The form may be obtained from Georg Fischer's local sales company or via www.piping.georgfischer.com.
Replaced parts shall become property of Georg Fischer, unless Georg Fischer waives such claim.

15.2 For Products which are manufactured to specifications, drawings or patterns supplied by the Purchaser, Georg Fischer's warranty shall be restricted to proper materials and workmanship.

15.3 The Purchaser shall be entitled to rescind the contract or to demand a reduction of the contract price if
- the repair or replacement of the defective Product is impossible
- the defective Product is not repaired or replaced within a reasonable period
- Georg Fischer refuses the repair or replacement or if for reasons attributable to Georg Fischer the repair or replacement is delayed.

15.4 For Products or essential components manufactured by a third party and supplied by Georg Fischer under this contract, Georg Fischer's warranty is limited to the warranty provided by said third party.

15.5 This warranty shall not apply to damage resulting from normal wear and tear, improper storage and maintenance, failure to observe the operating instructions, overstressing or overloading, unsuitable operating media, unsuitable construction work or unsuitable building ground, improper repairs or alterations by the Purchaser or third parties, the use of other than original spare parts and other reasons beyond Georg Fischer's control.

15.6 No action or claim may be brought by the Purchaser on account of any alleged breach of warranty or any other obligation of Georg Fischer after the expiration of twelve (12) months from receipt of the Products by the end user or at the latest within eighteen (18) months of the Products being despatched by Georg Fischer.

15.7 In case of Products for use in domestic installations or in utilities
- Georg Fischer will assume the costs of dismantling the defective Product and restoring the damaged object up to CHF 1'000'000 per occurrence.
- warranty or damage claims - contrary to Section 15.6 – are time-barred five (5) years from the date of installation or seven (7) years from the production date, whichever is earlier.

16 Limitation of Liability

The rights and remedies of the customer shall be exclusively governed by these General Conditions of Supply and shall be in lieu of any remedies at law. All further claims for damages, reduction of the purchase price, termination of or rescission of the contract are excluded.
In no case whatsoever shall the customer be entitled to claim damages other than compensation for costs of remedying defects in the supplies. This in particular refers, but shall not be limited, to loss of production, loss of use, loss of orders, loss of profit, third party recovery claims and other direct or indirect or consequential damages.
This limitation of liability equally applies to the extent Georg Fischer is liable for acts or omissions of its employees or third parties engaged for the performance of its obligations. It does not apply in case unlawful intent or gross negligence on the part of Georg Fischer's management and in case of Georg Fischer's statutory liability, in particular under applicable product liability laws.

17 Severability

Should any term or clause of these General Conditions in whole or in part be found to be unenforceable or void, all other provisions shall remain in full force and effect and the unenforceable or void provision shall be replaced by a valid provision, which comes closest to the original intention of the unenforceable or invalid provision.

18 Place of Performance and Jurisdiction

18.1 Place of performance for the Products shall be the Georg Fischer works from which the Products are despatched.

18.2 The contract shall be governed by Swiss law without regard to conflict of law provisions that would require the application of another law.

18.3 Any civil action based upon any alleged breach of this contract shall be filed and prosecuted exclusively in the courts of Schaffhausen, Switzerland.
Georg Fischer however reserves the right to file actions in any court having jurisdiction over controversies arising out of or in connection with the present contract.

03/2011

Excellence in Flow

Visit our webpage to get in touch with your local specialist:
www.georgfischer.com/locations

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