

Product Range  
International  
2010

Utilities  
Machines and tools





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Truly all-terrain

The new MSA Plus  
Electrofusion Units

# MSA Plus overview



MSA Plus 250

MSA Plus 300

MSA Plus 350

MSA Plus 400

Temperature-dependent energy control	●	●	●	●
Wide input voltage range (180 - 264 V)	●	●	●	●
Suitable for generator operation	●	●	●	●
Automatic fusion data recording via barcode pen/scanner	●	●	●	●
For series and long-run fusion	●	●	●	●
Dust and spray water protected (IP 65)	●	●	●	●
Maximum protection from electrical hazards, protection class 1	●	●	●	●
Light, robust aluminum housing	●	●	●	●
Sturdy transport box	●	●	●	●
Active housing cooling	●	●	●	●
Manual entry of fusion time	●	●	●	●
Indication of fusion time and fusion energy	●	●	●	●
Menu guidance in more than 27 languages	●	●	●	●
Programmable maintenance intervals	●	●	●	●
User guidance	●	●	●	●
Individual configuration	●	●	●	●
Log book software MSA WIN-WELD	●	●	●	●
Internal safety protocol storage	●	●	●	●
Fusion data logging	●	●	●	●
Memory card for 1700 welds	●	●	●	●
Complete traceability of individual piping components according to ISO 12176-4)	●	●	●	●

# Technical data

Technical data	MSA Plus 250	MSA Plus 300	MSA Plus 350	MSA Plus 400
Input voltage range	180 - 264 V AC			
Frequency range	45 - 65 Hz			
Current consumption	16 A			
Power rating	3500 W			
Output voltage	8 - 42 V (48 V)			
Output current	0.5 - 90 .			
Safety cutout upstream	16 A surge-proof			
Protection class	IP 65			
Protection rating	1			
Housing	aluminum			
Active housing cooling	yes			
Connecting cable	3 m			
Fusion cable	3 m			
Weight (operational, incl. cable)	11.5 kg			
Dimensions (W/H/T)	284/440/195			
Processable barcodes	Code 1 2/5 Code 128 C			
Working temperature range	-10°C to +45°C			
Automatic temperature compensation	yes			
Fusion current monitoring	yes			
Coil short-circuit recognition	yes			
Display	LED 7- Seg x 4 N	LCD graphic	LCD graphic	LCD graphic
Documentation of fusion data	-	-	yes	yes
Documentation of traceability data	-	-	-	yes
Internal data storage	-	-	yes, 2500	yes, 2500
External data storage, memory card	-	-	-	yes, 1700
USB interface type A	-	yes	yes	yes
USB interface type B	-	yes	yes	yes
Protocolling software MSA WIN-WELD	-	-	yes	yes
Data transmission cable	-	-	optional	optional
Memory card	-	-	-	yes, 32 MB
Welder pass (configurable as mandatory entry)	-	-	yes	yes
Manual fusion data entry	yes			
Language versions	-	27	27	27
Angle plug 4.0 mm	yes			
Barcode scanner	optional			
Transport box (aluminum/wood)	yes			
Recommended generator power	3.5 kVA			
Norms: CE, EN 55014, EN 50081-1, EN 50082-1, EN 61000-3-3, EN 60335-1, EN 60335-2-45	yes			

# Machines & Equipment for Electrofusion

## Electrofusion Units

### MSA Plus 400 Traceability Electrofusion Unit with USB interfaces



**NEW, environmentally friendly manufactured Electrofusion unit in accordance with EU directive 2002/95/EU (RoHS).**

Professional Electrofusion unit for traceability of piping system components from raw material to completed Electrofusion joint (in accordance with ISO 12176). The MSA units with the unique inverter technology and the active cooling system for trouble-free operation from generator or mains supply. Suitable for jointing in series. The unit is equipped with compact flash memory card (exchangeable data carrier) and either a barcode reader pen or barcode scanner. The unit is robust, light and easy to use. The menu has up to 27 different languages. Scope of delivery includes: 1 transport case, 1 USB memory stick, 1 pair of angle adapter clips 4.0 mm, operating instructions, configuration card and Software MSA WIN-WELD.

For printer or PC communication, the USB cable (799350619) is required.

#### Technical Data

Ambient temperature	-10 °C to +45 °C
Mains voltage	180 V - 264 V AC
Mains frequency	45Hz - 65 Hz
Fusion voltage	8 - 42 (48) V AC
Fusion current	max. 80 A
Power	max. 3500 W
Protection	1 / IP 65
Interfaces	USB (type A) for printer communication and to load software updates USB (type B) for PC communication
Mains cable	3 m
Fusion cable	3 m
Dimensions (WxHxD)	284 x 440 x 195 mm
Weight incl. cables	ca. 11,5 kg, light-weight aluminium housing
Display	LCD graphic, background light, contrast adjustment
Size display (WxH)	132 x 39 mm
Type size	8 mm
Languages	Brasilian, Bulgarian, Chinese, Croatian, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Hungarian, Italian, Korean, Latvian, Lithuanian, Macedonian, Malaysian, Norwegian, Polish, Portuguese, Rumanian, Russian, Slovakian, Slovenian, Spanish, Swedish, Turkish
Warranty	24 months

Type	Code	kg	Description
MSA Plus 400	<b>799 350 580</b>	16.800	barcode reader pen, transport case
MSA Plus 400	<b>799 350 581</b>	16.800	barcode scanner, transport case

PF 2 51 306 003

# Machines & Equipment for Electrofusion

## MSA Plus 350 Record Electrofusion Unit with USB interfaces



**NEW, environmentally friendly manufactured Electrofusion unit in accordance with EU directive 2002/95/EU (RoHS).**

Professional Electrofusion unit for recording jointing data of Electrofusion components as a basis for electronic joint recording. The MSA units with the unique inverter technology and the active cooling system for trouble-free operation from generator or mains supply. Suitable for jointing in series. The unit is equipped with either a barcode reader pen or with barcode scanner. The unit is robust, light and easy to use. The menu has up to 27 different languages. Scope of delivery includes: transport box, 1 USB memory stick, 1 pair of angle adapter clips 4.0 mm, operating instructions, configuration card and Software MSA WIN-WELD.

To read out the fusion protocols, either the USB cable (799 350 619) or the USB memory stick (799 350 622) is required.

### Technical Data

Ambient temperature	-10 °C to +45 °C
Mains voltage	180 V - 264 V AC
Mains frequency	45Hz - 65 Hz
Fusion voltage	8 - 42 (48) V AC
Fusion current	max. 80 A
Power	max. 3500 W
Protection	1 / IP 65
Interfaces	USB (type A) for printer communication and to load software updates USB (type B) for PC communication
Mains cable	3 m
Fusion cable	3 m
Dimensions (WxHxD)	284 x 440 x 195 mm
Weight incl. cables	ca. 11,5 kg, light-weight aluminium housing
Display	LCD graphic, background light, contrast adjustment
Size display (WxH)	132 x 39 mm
Type size	8 mm
Languages	Brasilian, Bulgarian, Chinese, Croatian, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Hungarian, Italian, Korean, Latvian, Lithuanian, Macedonian, Malaysian, Norwegian, Polish, Portuguese, Rumanian, Russian, Slovakian, Slovenian, Spanish, Swedish, Turkish
Warranty	24 months

Type	Code	kg	Description
MSA Plus 350	<b>799 350 570</b>	16.800	barcode reader pen, transport case
MSA Plus 350	<b>799 350 571</b>	16.800	barcode scanner, transport case

PF 2 51 306 003

# Machines & Equipment for Electrofusion

## MSA Plus 300 Automatic Electrofusion Unit with USB interfaces



**NEW, environmentally friendly manufactured Electrofusion unit in accordance with EU directive 2002/95/EU (RoHS).**

Automatic Electrofusion unit with barcode reader pen, optional with barcode scanner. The MSA units with the unique inverter technology and the active cooling system for trouble-free operation from generator or mains supply. Suitable for jointing in series. The unit is robust, light and easy to use. The menu has up to 27 different languages. Scope of delivery includes: transport box, 1 pair of angle adapter clips 4.0 mm, operating instructions and configuration card.

To load software updates the USB memory stick (799 350 622) is required.

### Technical Data

Ambient temperature	-10 °C to +45 °C
Mains voltage	180 V - 264 V AC
Mains frequency	45Hz - 65 Hz
Fusion voltage	8 - 42 (48) V AC
Fusion current	max. 80 A
Power	max. 3500 W
Protection	1 / IP 65
Interfaces	USB (type A) to load software updates USB (type B) for PC communication
Mains cable	3 m
Fusion cable	3 m
Dimensions (WxHxD)	284 x 440 x 195 mm
Weight incl. cables	ca. 11,5 kg, light-weight aluminium housing
Display	LCD graphic, background light, contrast adjustment
Size display (WxH)	132 x 39 mm
Type size	8 mm
Languages	Brasilian, Bulgarian, Chinese, Croatian, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Hungarian, Italian, Korean, Latvian, Lithuanian, Macedonian, Malaysian, Norwegian, Polish, Portuguese, Rumanian, Russian, Slovakian, Slovenian, Spanish, Swedish, Turkish
Warranty	24 months

Type	Code	kg	Description
MSA Plus 300	<b>799 350 560</b>	16.800	barcode reader pen, transport case
MSA Plus 300	<b>799 350 561</b>	16.800	barcode scanner, transport case

PF 2 51 306 003

# Machines & Equipment for Electrofusion

## MSA Plus 250 Automatic Electrofusion Unit



**NEW, environmentally friendly manufactured Electrofusion unit in accordance with EU directive 2002/95/EU (RoHS).**

Automatic Electrofusion unit with barcode reader pen, optional with barcode scanner. The MSA units with the unique inverter technology and the active cooling system for trouble-free operation from generator or mains supply. Suitable for jointing in series. The unit is robust, light and easy to use. Single push-button operation, display shows fusion time and energy consumed. Scope of delivery includes: transport box, 1 pair of angle adapter clips 4.0 mm and operating instructions.

### Technical Data

Ambient temperature	-10 °C to +45 °C
Mains voltage	180 V - 264 V AC
Mains frequency	45Hz - 65 Hz
Fusion voltage	8 - 42 (48) V AC
Fusion current	max. 80 A
Power	max. 3500 W
Protection	1 / IP 65
Mains cable	3 m
Fusion cable	3 m
Dimensions (WxHxD)	284 x 440 x 195 mm
Weight incl. cables	ca. 11,5 kg, light-weight aluminium housing
Display	LED 1 x 4 N, 7 Segments
Size display (WxH)	50 x 18 mm
Type size	14 mm
Warranty	24 months

Type	Code	kg	Description
MSA Plus 250	<b>799 350 550</b>	16.800	barcode reader pen, transport case
MSA Plus 250	<b>799 350 551</b>	16.800	barcode scanner, transport case

PF 2 51 306 002

# Machines & Equipment for Electrofusion

## MSA 230 Standard Electrofusion unit with jointing data recording



Monovalent Electrofusion unit equipped with barcode reader pen or barcode scanner for automated data entry. Recording of jointing data and operator identification code.  
Easy to handle, robust machine for the whole product range of ELGEF fittings (diameter up to dn 630).  
Reliable process by controlled energy output, including ambient temperature correction factor. Suitable for jointing in series.  
Easy interaction by choosing the favourite language of the operator. Scope of delivery includes: 1 pair of straight adapter clips 4.0 ->4.7 mm and operating instructions. To read out the fusion protocols, the data transfer cable (790 128 112) is required. No need for dedicated software, therefore no XP/ VISTA compatibility issues.

### Technical Data

Ambient temperature	-10°C to +45°C
Mains voltage	230 V (190 - 265 V)
Mains frequency	50 Hz (40 ÷70 Hz)
Fusion voltage	39 ÷ 40 V AC
Internal Fuse	75 A (max. 90 A)
Power consumption	2.75 kW (max. 3.5 kW)
Protection	IP 54, Class 1
Interfaces	RS 232
Memory capacity	350 records
Mains cable	4 m
Fusion cable	3 m
Dimensions (WxHxD)	270 x 480 x 150 mm
Weight incl. cables	ca. 21 kg
Display	LCD graphic, background light
Size display (WxH)	60 x 17 mm
Character size	2.95 x 5.5 mm
Languages	EN, FR, DE, IT, PL, SP
Warranty	12 months

### Scope of Delivery

MSA 230 Standard Pen	Barcode reader pen with pouch, straight adapter clips 4.0 ->4.7 mm
MSA 230 Standard Scanner	Barcode scanner with pouch, straight adapter clips 4.0 ->4.7 mm

Type	Code	kg	
MSA 230 Standard Pen	<b>790 128 007</b>	22.000	
MSA 230 Standard Scanner	<b>790 128 009</b>	22.000	

PF 3 10 588 100

# Machines & Equipment for Electrofusion

## MSA 230 All-In

### Electrofusion unit with jointing data recording



Monovalent electrofusion unit equipped with barcode reader pen or barcode scanner for automated data entry. Recording of jointing data and operator identification code. Easy to handle, robust machine for the whole product range of ELGEF fittings (diameter up to dn 630). Reliable process by controlled energy output, including ambient temperature correction factor. Suitable for jointing in series. Easy interaction by choosing the favourite language of the operator.

To the "All-In" version a cable drum for safe and time-saving cable storage is already assembled, also the data transfer cable is in the scope of delivery.

No need for dedicated software, therefore no XP/VISTA compatibility issues. Inclusive 1 pair of straight adapter clips 4.0 ->4.7 mm, operating instructions.

#### Technical Data

Ambient temperature	-10°C to +45°C
Mains voltage	230 V (190 - 265 V)
Mains frequency	50 Hz (40 ÷ 70 Hz)
Fusion voltage	39 ÷ 40 V AC
Internal Fuse	75 A (max. 90 A)
Power consumption	2.75 kW (max. 3.5 kW)
Power plug	Schuko
Protection	IP 54, Class 1
Interfaces	RS 232
Memory capacity	350 records
Mains cable	4 m
Fusion cable	3 m
Dimensions (WxHxD)	270 x 480 x 150 mm
Weight incl. cables	ca. 21 kg
Display	LCD graphic, background light
Size display (WxH)	60 x 17 mm
Character size	2.95 x 5.5 mm
Languages	EN, FR, DE, IT, PL, SP
Warranty	12 months

#### Scope of Delivery

MSA 230 All-In Pen	Barcode reader pen with pouch, data transfer cable, cables drum, straight adapter clips 4.0 -> 4.7 mm
MSA 230 All-In Scanner	Barcode scanner with pouch, data transfer cable, cables drum, straight adapter clips 4.0 ->4.7 mm

Type	Code	kg
MSA 230 All-In Pen	<b>790 128 008</b>	23.000
MSA 230 All-In Scanner	<b>790 128 010</b>	23.000

PF 3 10 588 100

# Machines & Equipment for Electrofusion

## MSA 210 Manual Electrofusion Unit



Monovalent Electrofusion unit with easy manual entry of fusion time by the operator according to the fitting requirements. The unit can be used to weld +GF+ Electrofusion fittings up to a nominal diameter of 500 mm SDR 17. Suitable for jointing in series, temperature excess protected. The unit stores the last fusion time and generates a consecutive fusion counter. A buzzer indicates the start and the end of the fusion cycle.

### Technical Data

Ambient temperature	-10°C to +40°C
Mains voltage	180 V - 250 V AC
Mains frequency	45 Hz - 65 Hz
Fusion voltage	39,5 V
Internal Fuse	20 A
Power consumption	max. 2750 W
Protection	IP 65
Mains cable	4 m
Fusion cable	3 m
Connector	4,0 mm / 90
Dimensions (WxHxD)	270 x 480 x 150 mm
Weight incl. cables	ca. 21 kg
Display	LED 1 x 4 N, 7 segments
Size display	50 x 18 mm
Type size	14 mm
Warranty	12 months

Description	Code	kg	
Standard edition	<b>790 128 001</b>	21.000	

PF 3 10 588 100

# Machines & Equipment for Electrofusion

## Tools and Accessories for MSA Plus Machines

### Software MSA WIN WELD



#### General functions:

- Reading and management of fusion data
- Sort- and filter functions
- Issuing of single records, collected records
- Reading and formatting of memory cards
- Reading and management of traceability data according to ISO 12176-4
- Export functions for conversion to conventional data base files, Excel or Access
- Installed languages: German, English, French, Italian, Dutch, Croatian, Spanish
- Creating individual barcodes
- Individual configuration of fusion devices
- Professional software for analysis and data management of Electrofusion data, traceability data and for configuration barcodes (Z functions).
- Compatibility with MSA 350/MSA Plus 350 (fusion data) and MSA 400/MSA Plus 400 (fusion and traceability data).
- The software is suitable for use with Windows ME/NT4/2000/XP/Vista.
- Scope of delivery: CD-ROM, installation guide (manuals and additional information on CD-ROM)

Code	kg	Description
799 350 365	0.180	Software for MSA 350-400 and MSA Plus 350-400

PF 2 51 306 001

### Software PIPE WIN WELD / SUVI WIN WELD



- Professional software for analysis and documentation of installed piping systems or of a defined part of it: i. e. Pipe book. With PIPE WIN WELD it is possible to create a complete electronic documentation of the installed pipes and pipe connection elements. The software works with the data bases of MSA WIN WELD and SUVI WIN WELD. The software makes it possible to work with data from other manufacturers (CSV module for data transfer).
- The software is suitable for use with Windows ME/NT4/2000/XP/Vista.
- Scope of delivery: CD-ROM, USB hardlock (PIPE WIN-WELD, PIPE WIN-WELD CSV), installation guide (manuals and additional information on CD-ROM)

Type	Code	kg	Description
PIPE CSV	790 119 301	0.180	Complete package incl. CSV module for data transfer, USB hardlock
PIPE	790 119 302	0.180	Complete package, USB hardlock
SUVI	790 119 303	0.180	Complete package

PF 3 25 117 312

### Transport Cases MSA Fusion Units



#### Note:

Large Transport Case for MSA 250-400, MSA Plus 250-400 Units and accessories (barcode scanner, manuals)

Code	kg	Description
799 350 401	5.540	Transport Case MSA (30x33x20 cm)
799 350 472	5.540	Transport Case large MSA Plus (33x47x22 cm)

PF 2 51 306 004

# Machines & Equipment for Electrofusion

## Barcode Reader Pen for MSA and MSA Plus



PF 2 51 306 001

- Compatible with MSA 250-400 and MSA Plus 250-400 Electrofusion control units. (As additional/replacement component. A bar code reader pen or scanner is provided with all MSA 250-400 and MSA Plus 250-400 units).

Code	kg	Description
799 350 335	0.165	Barcode reader pen
799 350 337	0.046	Pouch for pen suitable for MSA 500/3000

## Barcode Scanner for MSA and MSA Plus



PF 2 51 306 001

- Robust, handy barcode scanner with a high reading performance made for the construction site. Quick, safe and professional!  
Compatible with MSA 500, MSA 3000, MSA 250-400 and MSA Plus 250-400 Electrofusion control units.

Code	kg	Description
799 350 419	0.350	Barcode scanner with pouch and instructions

## USB memory stick



PF 2 51 306 005

- Memory stick to update MSA Plus 300-400 fusion units with new software and languages
- Download protocols
- Compatible with MSA Plus 300-400

Code	kg	Description
799 350 622	0.300	Memory stick (for software or languages updates)

## USB cable



PF 2 51 306 005

- PC and printer transmission cable to transfer fusion data directly to PC or to printer
- Compatibility with MSA Plus 350-400

Code	kg	Description
799 350 619	0.300	USB cable (type A/B) for printer and PC connection

## Compact flash card



PF 2 51 306 005

- Memory card type I to record fusion and traceability data
- Reliable and resistant data carrier for industrial use
- Compatible with MSA Plus 400
- In connection with the PCMCIA-CF Adapter (799 350 623) this compact flash card is **unsuitable for MSA 400 units!**

Code	kg	Description
799 350 621	0.050	Memory card (32 MB capacity for 1700 fusion protocols)

# Machines & Equipment for Electrofusion

## Card reader



- Flexible card reader with slots for different cards
- To read in fusion and traceability data from the compact flash card (799 350 621) in the PC via USB (type A) interface
- Compatible with MSA Plus 400



PF 2 51 306 005

Code	kg	Description	
799 350 620	0.200	multiple card reader	

## Adapter Card PCMCIA-CF



- To read in fusion and traceability data from the compact flash card (799 350 621) into a PC via PCMCIA slot
- Can only be used for compact flash cards type I
- Compatible with MSA Plus 400

PF 2 51 306 005

Code	kg	Description	
799 350 623	0.100	Adapter Card PCMCIA-CF	

## Adapters



- Adapters for Electrofusion units with 4 mm connectors.
- Compatible with electrofusion units MSA 210-230, MSA 250-400 and MSA Plus 250-400.

PF 2 51 306 001

Type	Code	kg	Description	
4,0 mm	799 350 340	0.055	Angle adapter, black	
4,7 mm	799 350 341	0.055	Angle adapter, grey	
4,0 mm	799 350 461	0.055	Adapter, black	
4,7 mm	799 350 462	0.055	Adapter, white	

# Machines & Equipment for Electrofusion

## Tools and Accessories

### for MSA 230 and MSA 210



PF 3 10 588 500

#### Barcode Reader Pen

- Automated data entry to MSA 230 Electrofusion units

Type	Code	kg	
MSA 230	<b>790 128 111</b>	0.125	



PF 3 10 588 500

#### Barcode Scanner

- Automated data entry to MSA 230 Electrofusion units

Type	Code	kg	
MSA 230	<b>790 128 119</b>	0.250	



PF 3 10 588 500

#### Data Transfer Cable

- RS 232 data transfer from MSA 230 to PC

Type	Code	kg	
MSA 230	<b>790 128 112</b>	0.125	



PF 2 51 306 001

#### Adapters

- Adapters for Electrofusion units with 4 mm connectors.
- Compatible with electrofusion units MSA 210-230, MSA 250-400 and MSA Plus 250-400.

Type	Code	kg	Description	
4,0 mm	<b>799 350 340</b>	0.055	Angle adapter, black	
4,7 mm	<b>799 350 341</b>	0.055	Angle adapter, grey	
4,0 mm	<b>799 350 461</b>	0.055	Adapter, black	
4,7 mm	<b>799 350 462</b>	0.055	Adapter, white	



PF 3 10 588 500

#### Cables Drum

- Fast and safe cable winding
- Easy to fix to MSA 210 and MSA 230 units
- MSA 230 All-In already assembled with the cables drum

Type	Code	kg	
MSA 210 / MSA 230	<b>790 128 117</b>	0.700	



PF 3 10 588 500

#### Pouch For Barcode Reader Pen

- Suitable for barcode reader pen MSA 230 (790 128 111) and other reader pens like 799 350 335 used with the MSA and SUVI units
- 2 separate pockets for storage of reader and adapter clips

Type	Code	kg	
MSA 230	<b>790 128 110</b>	0.075	

# Machines & Equipment for Electrofusion

## Pouch For Barcode Scanner



PF 3 10 588 500

- Suitable for barcode scanner MSA 230 (790 128 119)
- 2 separate pockets for storage of reader and adapter clips

Type	Code	kg	
MSA 230	<b>790 128 120</b>	0.125	



PF 3 10 588 500

## Transport Box

- Large transport box suitable for all MSA 230 versions

Type	Dimension	Code	kg	
MSA 230	273x263x464	<b>790 128 121</b>	6.300	

# Machines & Equipment for Electrofusion

## Tools for preparing pipe surfaces

### Rotary Peeler RS



This innovative Rotary Peeler RS is designed for universal peeling at the pipe end for electrofusion couplings, tees and elbows and as well as for electrofusion saddles. Suitable for peeling PE80, PE100, PEX and PP pipes.

#### Features and your advantage:

**Spring loaded peeling blade:**Peeling quality independent of pipe ovality or tolerances

**Pivoted mounted peeling blade:**To compensate the shape of coiled pipe

**Optimized cutting geometry:**Defined chip thickness with cutting width overlap

**One tool per dimension:**Minimized swivel radius for peeling in narrow locations

**Peeling length:**No limitation of peeling length

**Guidance rolls:**3-point-support for dimensional optimized cutting feed

**Time saving:**Tool is always ready for use, it can be used for the next peeling without having to set the peeling blade back in its origin position

**Your advantage:**Time saving and highest repeatable peeling quality at smallest rotation radius. No operator errors possible when changing dimension

**Included:**1 x Rotary Peeler RS, Transport case, Operating manual, Spare parts list

Article	d [mm]	Code	kg
RS 40	40	<b>790 136 001</b>	2.096
RS 50	50	<b>790 136 002</b>	1.250
RS 63	63	<b>790 136 003</b>	2.038
RS 75	75	<b>790 136 004</b>	1.450
RS 90	90	<b>790 136 005</b>	1.450
RS 110	110	<b>790 136 006</b>	1.450
RS 125	125	<b>790 136 007</b>	1.650
RS 140	140	<b>790 136 008</b>	1.650
RS 160	160	<b>790 136 009</b>	1.650
RS 180	180	<b>790 136 010</b>	1.850
RS 200	200	<b>790 136 011</b>	1.850
RS 225	225	<b>790 136 012</b>	1.850
RS 250	250	<b>790 136 013</b>	2.150
RS 280	280	<b>790 136 014</b>	2.150
RS 315	315	<b>790 136 015</b>	2.150

PF 3 25 879 100



### Replacement blade to Rotary Peeler RS

d-d [mm]	Description	Code	kg
40 - 315	HSS	<b>790 136 112</b>	0.090

PF 3 25 118 906



### Transport cases for Rotary Peeler RS

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

Article	Code	kg	Description	Dimension [mm]
RSTC 40-110	<b>790 136 211</b>	0.720	for RS 40-RS 110	326 x 222 x 116
RSTC 125-160	<b>790 136 212</b>	1.212	for RS 125-RS 160	437 x 395 x 116
RSTC 180-225	<b>790 136 213</b>	1.925	for RS 180-RS 225	450 x 360 x 132
RSTC 250-315	<b>790 136 214</b>	2.910	for RS 250-RS 315	566 x 435 x 156

PF 3 25 879 100

# Machines & Equipment for Electrofusion

9 300 725



## Peeling Tool PT 1 E

- The rotating Peeling Tool PT 1 E is suitable for preparing pipe ends with diameters d 20 - 90 mm (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.
- Scope of delivery: 1 basic tool in a plastic carrying case, without pipe inserts. The case has sufficient space for approximately 6 pipe inserts.

d-d [mm]	Code	kg	Description
20 - 90	<b>799 150 382</b>	3.400	Basic Tool PT 1 E

PF 2 51 305 004

9 300 725



## Pipe Inserts for Peeling Tool PT 1 E

d [mm]	e [mm]	Code	kg	Description
20	1.9	<b>799 300 739</b>	0.220	Pipe Insert SDR 11
20	3.0	<b>799 300 741</b>	0.220	Pipe Insert SDR 7
25	2.3	<b>799 300 740</b>	0.230	Pipe Insert SDR 11
25	3.0	<b>799 300 742</b>	0.230	Pipe Insert SDR 9
32	3.0	<b>799 300 743</b>	0.230	Pipe Insert SDR 11
40	3.7	<b>799 300 744</b>	0.230	Pipe Insert SDR 11
40	1.8	<b>799 300 760</b>	0.220	Pipe Insert SDR 26
50	4.6	<b>799 300 745</b>	0.350	Pipe Insert SDR 11
50	2.0	<b>799 300 761</b>	0.220	Pipe Insert SDR 26
56	2.2	<b>799 300 762</b>	0.220	Pipe Insert SDR 26
63	3.8	<b>799 300 725</b>	0.475	Pipe Insert SDR 17
63	5.8	<b>799 300 746</b>	0.475	Pipe Insert SDR 11
63	2.5	<b>799 300 763</b>	0.220	Pipe Insert SDR 26
75	4.5	<b>799 300 727</b>	0.601	Pipe Insert SDR 17
75	6.9	<b>799 300 747</b>	0.601	Pipe Insert SDR 11
75	2.9	<b>799 300 764</b>	0.220	Pipe Insert SDR 26
90	5.4	<b>799 300 748</b>	0.834	Pipe Insert SDR 17
90	8.2	<b>799 300 749</b>	0.220	Pipe Insert SDR 11

PF 2 51 305 004

## Replacement blade for Peeling Tool PT 1 E



PT 1 E

d-d [mm]	Piece	Code	kg	Description
20 - 90	1	<b>799 150 383</b>	0.150	Replacement blade, 1 piece

PF 2 51 305 004

9 300 750



## Peeling Tool PT 2

- 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.
- Scope of delivery: 1 tool (size 1, 2 or 3) in a case (size 1 in aluminium, size 2 and 3 in plastic).

d-d [mm]	Code	kg	Description
90 - 250	<b>799 300 753</b>	5.100	Size 1, peeling length 140 mm
110 - 400	<b>799 300 755</b>	7.320	Size 2, peeling length 150 mm
110 - 500	<b>799 300 756</b>	11.000	Size 3, peeling length 175 mm

PF 2 51 305 004

# Machines & Equipment for Electrofusion

## Spare Parts for PT 2 Peeling Tool

- Firm metal blade usable on four sides

d-d [mm]	Piece	Code	kg	Description
90 - 500	1	<b>799 150 355</b>	0.008	Replacement blade, 1 piece
90 - 500	1	<b>799 150 321</b>	0.100	Tool holder

PF 2 51 305 004

## Repair kit spindles for peeling tool PT 2

- Consisting of 1 main spindle, 1 fixing bolt, 1 end plate, 2 rollers and 1 spacing disk

d-d [mm]	Code	kg
90 - 250	<b>799 150 360</b>	1.000
110 - 400	<b>799 150 361</b>	0.420
110 - 500	<b>799 150 362</b>	1.000

PF 2 51 305 004

## Screws and springs repair kit for peeling tool PT 2

- Consisting of 1 assembly screw long, 1 clamping screw, 1 handle, 1 screw for flat spring, 1 screw for cutting plate, 1 nut for feed, 1 flat spring, 1 spring for rapid adjustment and 1 clamping spring

d-d [mm]	Code	kg
90 - 500	<b>799 150 369</b>	0.300

PF 2 51 305 004

## Repair kit feed for peeling tool PT 2

- Consisting of 1 carriage bolt, 1 guide unit and 1 guide end plate

d-d [mm]	Code	kg
90 - 250	<b>799 150 363</b>	0.500
110 - 400	<b>799 150 364</b>	0.346
110 - 500	<b>799 150 365</b>	0.500

PF 2 51 305 004

## Tool holder repair kit for peeling tool PT 2

- 1 feed nut,
- 1 nut for feed,
- 1 spring for rapid adjustment,
- 1 washer
- 1 fixing screw

d-d [mm]	Code	kg
90 - 500	<b>799 150 370</b>	0.069

PF 2 51 305 004

# Machines & Equipment for Electrofusion

9 300 700



## Peeling Tool PT 4

- The easy-to-use peeling tools PT 4 are suitable for preparing pipe ends (when installing Electrofusion couplers and fittings). The tools ensure a constant peeling quality on the whole peeled area and are suitable for PE80 and PE100 pipes. There is no tool service arrangement for the PT 4.
- Scope of delivery: 1 tool with exchangeable blade (4 cutting surfaces).

e [mm]	d [mm]	Code	kg	Description
1.9	20	<b>799 300 704</b>	0.271	Pipe Insert SDR 11
3.0	20	<b>799 300 705</b>	0.255	Pipe Insert SDR 7
2.3	25	<b>799 300 706</b>	0.308	Pipe Insert SDR 11
3.0	25	<b>799 300 707</b>	0.290	Pipe Insert SDR 9
3.0	32	<b>799 300 708</b>	0.340	Pipe Insert SDR 11
3.7	40	<b>799 300 709</b>	0.380	Pipe Insert SDR 11
4.6	50	<b>799 300 710</b>	0.436	Pipe Insert SDR 11
5.8	63	<b>799 300 711</b>	0.540	Pipe Insert SDR 11

PF 2 51 305 004

9 300 700



PT 4

## Replacement blade for Peeling Tool PT 4

d-d [mm]	Piece	Code	kg	Description
20 - 63	1	<b>799 150 275</b>	0.006	Replacement blade with 4 cutting surfaces

PF 2 51 305 999



## Peeling Tool RTC-710

The peeling tool RTC-710 is suitable for preparing pipe ends in big dimensions (d 355-710 mm). The tool ensures a constant peeling quality on the complete peeling surface of max. 530 mm length and is suitable for PE 80 and PE 100 pipes.

Scope of delivery: 1 Scraper arm, 1 Self-centering chuck base, 2 Aluminium transport cases, 1 screwdriver, 1 spare blade, 1 deburring knife, 1 accessories bag.

d-d [mm]	Code	kg	Description
355 - 710	<b>799 300 757</b>	16.000	max. working-range 530 mm

PF 2 51 305 001

# Machines & Equipment for Electrofusion

## Rotary Peeling Tool RST 800



PF 2 51 305 001

- The flexible peeling tool RST 800 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 d800 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

d-d [mm]	Code	kg	Description
250 - 800	<b>799 300 800</b>	10.750	Rotary Peeling Tool RST 800

## Replacement blade for Rotary Peeling Tool RST 800



PF 2 51 305 001

d-d [mm]	Code	kg	Description
250 - 800	<b>799 300 802</b>	0.020	Replacement blade in carbide

9 198 033

## Hand Scraper



PF 2 51 305 002

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

Code	kg	Description
<b>799 198 094</b>	0.100	Hand scraper with long handle

# Machines & Equipment for Electrofusion

## Clamps and installation aids

### Multiple use Assembly Tool Branch fitting d140mm



PF 2 51 336 001

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

d [mm]	Code	kg	
140	<b>193 281 027</b>	0.740	

9 350 358

### Swivel Clamp



PF 2 51 305 008

- 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	kg	
63 - 180	<b>799 350 358</b>	18.000	

9 301 475

### Double Clamp



PF 2 51 305 008

- 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	kg	
63 - 125	<b>799 301 484</b>	2.795	
110 - 225	<b>799 301 486</b>	10.000	
225 - 500	<b>799 301 488</b>	15.000	

# Machines & Equipment for Electrofusion

9 301 450



## Quadruple Clamp

- 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.



d-d [mm]	Code	kg	
63 - 125	<b>799 301 459</b>	6.900	
110 - 225	<b>799 301 461</b>	19.000	
225 - 500	<b>799 301 463</b>	28.500	

PF 2 51 305 008

9 301 525



## Twin Clamp

- 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	kg	
20	<b>799 301 536</b>	0.498	
25	<b>799 301 537</b>	0.471	
32	<b>799 301 538</b>	0.756	
40	<b>799 301 539</b>	0.876	
50	<b>799 301 540</b>	1.167	
63	<b>799 301 541</b>	1.438	

PF 2 51 305 003

9 301 575



## 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.

d-d [mm]	Code	kg	
20 - 63	<b>799 301 575</b>	1.409	

PF 2 51 305 008

9 301 575

## Inserts for Multi Clamp

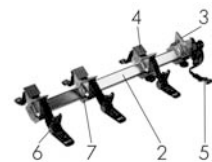


d-d [mm]	Code	kg	Description
25 - 20	<b>799 150 385</b>	0.806	Inserts, Sets
32 - 20	<b>799 150 386</b>	0.520	Inserts, Sets
32 - 25	<b>799 150 387</b>	0.520	Inserts, Sets
40 - 32	<b>799 150 388</b>	0.520	Inserts, Sets
50 - 40	<b>799 150 389</b>	0.520	Inserts, Sets
63 - 32	<b>799 150 390</b>	0.520	Inserts, Sets
63 - 40	<b>799 150 391</b>	0.520	Inserts, Sets
63 - 50	<b>799 150 392</b>	0.520	Inserts, Sets

PF 2 51 305 008

# Machines & Equipment for Electrofusion

## Spare parts for clamps



PF 2 51 305 999

Pos	Dimension	Code	kg	Description
1	63-125, 45mm	<b>799 900 414</b>	1.700	square support short
	110-225, 60mm	<b>799 900 405</b>	3.500	square support short
	225-500, 80mm	<b>799 900 394</b>	6.000	square support short
2	63-125, 45mm	<b>799 900 413</b>	3.600	square support long
	110-225, 60mm	<b>799 900 404</b>	6.500	square support long
	225-500, 80mm	<b>799 900 387</b>	11.500	square support long
4	63-125	<b>799 900 421</b>	0.977	prism wide
	110-225	<b>799 900 423</b>	2.000	prism wide
	225-500	<b>799 900 425</b>	4.500	prism wide
	63-125	<b>799 150 312</b>	0.270	ratch 25/15/0.7
	110-225	<b>799 150 313</b>	0.232	ratch 25/25/0.7
	110-225	<b>799 150 315</b>	0.496	ratch 35/35/1.1
	225-500	<b>799 150 319</b>	1.415	ratch 50/50/1.5
7		<b>799 150 314</b>	0.050	clamping screw

### Clamping device Topload 400



PF 2 51 305 008

- This clamp and mounting tool is used for top-load Saddles on pipes of dimensions d 280 - 400 mm.
- Scope of delivery: 1 base mounting clamp, 1 bracket, 2 clamping screws, 2 ratchet scraps, 1 transport box

d-d [mm]	Code	kg
280 - 400	<b>799 350 475</b>	25.000

### Clamping device Topload 630



PF 2 51 305 008

- This clamp and mounting tool is used for top-load Saddles on pipes of dimensions d 280 - 400 mm and branch fittings for dimensions d 280 mm – 630 mm.
- Scope of delivery: 1 base mounting clamp, 1 clamping attachment, 1 bracket, 2 clamping screws, 2 ratchet scraps, 1 transport box

d-d [mm]	Code	kg
280 - 630	<b>799 350 477</b>	35.000

9 150 090



PF 2 51 305 002

### Spring Clamp for ELGEF® 24 V Reinforcing Saddles

- The Spring Clamp is used to install ELGEF® 24 V reinforcing saddles d 40 - 225 mm. The tool ensures a constant jointing pressure during the entire fusion cycle.

d-d [mm]	Code	kg
40 - 225	<b>799 150 090</b>	1.289

# Machines & Equipment for Electrofusion

## Tapping Tools

### Assembly and Tapping Key for ELGEF Plus Saddles



PF 2 51 305 009

Type	Code	kg	Description
8/10/17	799 198 047	0.803	For all saddles

### Tapping Key for ELGEF Plus Saddles

- With adjustable tapping depth.



PF 2 51 305 999

Type	Code	kg	Description
10	799 198 080	0.120	for Monobloc d 40 mm and d 50 mm
17	799 198 079	0.555	for Monobloc d 63 mm, d 90 - 160 mm and all Duobloc saddles
12.7	799 198 091	0.600	for socket with cutter

### Hexagon Key for ELGEF Plus Saddles and Branch Fittings



PF 2 51 305 009

Type	Code	kg	Description
SW8	799 150 378	0.152	For all saddles and branch fittings

### Tapping Adapter for ELGEF Plus Saddles

- 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).



PF 2 51 305 002

Type	Code	kg	Description
S 54	799 100 061	0.813	for Tapping Tee d 32 mm
S 67	799 100 062	1.011	for Tapping Tee d 63 mm

### Pressure Test Cap for ELGEF Plus Tapping Saddles

- The cap has a Rp 3/8" connection thread and is made from galvanised steel.
- **Overview of Tapping Adapter types and Pressure Test Cap**
- M For Monoblock d 40 and 50 mm (outlets d 20 - 32 mm)
- S 54 For Monoblock d 63 (outlets d 20 - 32 mm) and all saddles with rotatable outlet (outlets d 20 - 40 mm) i.e. Tapping Tee d 32 mm.
- S 67 For all Saddles with rotatable outlet (outlets d 50 and 63 mm) i.e. Tapping Tee d 63 mm.



PF 2 51 305 002

Type	Code	kg	Description
M	799 199 282	0.119	for Monoblock d 40 mm and d 50 mm
S 54	799 199 283	0.283	for Monoblock d 63 mm and Tapping Tee d 32 mm
S 67	799 199 286	0.461	for Tapping Tee d 63 mm

# Machines & Equipment for Electrofusion

## 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	kg	Description
30	<b>799 198 013</b>	0.131	accessories Basic Tool Box
39	<b>799 198 012</b>	0.215	accessories Basic Tool Box
50	<b>799 198 057</b>	0.278	accessories Basic Tool Box

PF 2 51 305 002



## PE Repair Plug

- PE Repair Plugs are suitable for use with ELGEF® 24 V PE Reinforcement Saddles 53 127 000.

d [mm]	Code	kg
30	<b>799 199 088</b>	0.012
39	<b>799 199 089</b>	0.019

PF 2 51 305 002



## Hexagon Key for PVC Saddles

- The Hexagon Key is suitable for tapping water and gas mains under pressure.
- Scope of delivery: 1 hexagon key, protective cover, without rotating pin.

d-d [mm]	Code	kg	s [mm]	G [inch]
16 - 25	<b>799 150 007</b>	0.345	19	30
32 - 40	<b>799 150 008</b>	0.496	27	38
50 - 63	<b>799 150 009</b>	0.690	27	47

PF 2 51 305 002



## Rotating pin for Hexagon Key

description	Code	kg
10x350 mm	<b>799 150 011</b>	0.220

PF 2 51 305 002

# Machines & Equipment for Electrofusion

## Squeeze-off and Rerounding tools

9 350 107



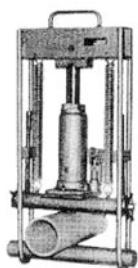
PF 2 51 305 005

### 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	kg	Description
20 - 63	<b>799 350 107</b>	4.449	S1 for PE pipes SDR 11

9 350 108



PF 2 51 305 005

### 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	kg	Description
63 - 180	<b>799 350 108</b>	35.800	S2 for PE pipes SDR 11 and SDR 17

9 350 270



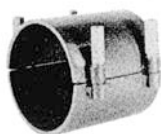
PF 2 51 305 005

### Squeeze-off Tool, 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.

d-d [mm]	Code	kg	Description
160 - 250	<b>799 350 270</b>	60.000	A25 for PE pipes SDR 11 and SDR 17

9 350 110



PF 2 51 305 005

### Re-rounding Clamp

- Re-rounding Clamps are used to re-round pipes after squeezing. They can be left on the squeezed-off part of the pipe as a support if so desired.

d [mm]	Code	kg
63	<b>799 350 113</b>	3.000
75	<b>799 350 114</b>	3.600
90	<b>799 350 115</b>	3.500
110	<b>799 350 116</b>	5.750
125	<b>799 350 117</b>	5.690
160	<b>799 350 118</b>	7.500
180	<b>799 350 119</b>	27.000
200	<b>799 350 120</b>	27.500
225	<b>799 350 121</b>	11.595
250	<b>799 350 172</b>	34.000

# Machines & Equipment for Electrofusion

## Re-rounding Tool



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

d [mm]	Code	kg
25	<b>799 199 127</b>	0.750
32	<b>799 199 128</b>	0.500
40	<b>799 199 129</b>	1.500
50	<b>799 199 130</b>	1.250
63	<b>799 199 131</b>	1.250
75	<b>799 199 132</b>	1.500
90	<b>799 199 133</b>	1.500
110	<b>799 199 134</b>	2.000
125	<b>799 199 135</b>	2.000
160	<b>799 199 137</b>	2.250
180	<b>799 199 138</b>	3.000
200	<b>799 199 139</b>	2.500
225	<b>799 199 140</b>	3.000
250	<b>799 199 141</b>	3.630

PF 2 51 305 005

## Pressure Pad Kit



- Complete kit of assembly equipment
- Consists of 3 air pressure pads, control unit with manifold, pressure hoses, strap corset, detailed instruction leaflets and transport case
- For operation with pressurized air up to 10 bar according to EN 292
- Tool for dual use: Pipe re-rounding and fusion pressure reinforcement

d-d [mm]	Code	kg
560 - 630	<b>799 301 561</b>	47.900

PF 2 51 305 005

# Machines & Equipment for Electrofusion

## KS Tangit Cleaner

- Special cleaning agent for plastic fusion connections with PP, PE, PVDF and PB.



PF 2 28 473 002

Code	kg	
799 298 023	0.890	

5311

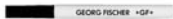
## Tangit KS-Cleaning Tissues



PF 2 28 473 002

Code	kg	
799 298 024	2.850	

## Marker



PF 2 55 338 999

Type	Code	kg	
silver	799 350 364	0.012	

# Machines & Equipment for Electrofusion

## Accessories for job sites

### 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

d-d [mm]	Code	kg	
20 - 315	<b>790 109 110</b>	4.000	

PF 3 25 117 328

### 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

d-d [mm]	Code	kg	
110 - 630	<b>790 109 109</b>	4.115	

PF 3 25 117 328

# Machines & Equipment for Electrofusion

## PPC Plastic pipe cutter and KS 355

90 10 90



PF 3 25 117 309

### PPC Plastic pipe cutter

- For cutting plastic pipes d10 - d160

d-d [mm]	Article	Code	kg	Closest inch
10 - 63	PPC 63, s max. = 7.2mm	<b>790 109 001</b>	0.710	1/8 - 2
50 - 110	PPC 110, s max. = 12.7mm	<b>790 109 002</b>	1.400	1 1/2 - 4
110 - 160	PPC 160, s max. = 19.0mm	<b>790 109 003</b>	2.220	4 - 6

90 10 90



PF 3 25 117 909

### Replacement cutting wheels

- for plastic pipe cutter

d-d [mm]	Article	Code	kg
10 - 63	SR 63 max. s=7,2 mm	<b>790 109 011</b>	0.004
50 - 110	SR 110/160 max. s=12,7 mm	<b>790 109 012</b>	0.015
110 - 160	SR 160 max. s=19,0 mm	<b>790 109 013</b>	0.023

90 20 20



PF 3 25 129 760

### Plastic pipe cutter

- The KS 355 is the ideal tool for simple right angle precision cutting of PVC, PE and PP pipes, Size range d 160 to 355 mm with a wall thickness up to 40 mm. Including transport box.
- Unique clamping mechanism, no additional tools like belts, chains or reduction inserts necessary

d-d [mm]	Code	kg
160 - 355	<b>790 202 001</b>	15.400



PF 3 25 119 107

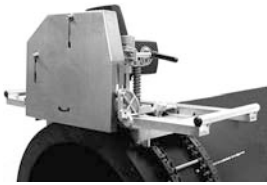
### Saw blade Ø 180x30

Code	kg
<b>790 202 011</b>	0.485

# Machines & Equipment for Electrofusion

## KS 1600

### Plastic pipe cutter



The KS 1600 is used for cutting plastic pipes fast, cleanly and properly right-angled from diameter 355 mm up to 1600 mm with a wall thickness of max. 60 mm. For each pipe diameter, the appropriate chain length is necessary. The saw is to be put on the tensioned chain as per user manual which serves as a guiding device for the saw over a full 360° turn.

The guard plate covers the saw blade also during operation and provides full protection for the user at all times.

The KS 1600 basic kit consists of a circular-hand saw, 230 V / 2200 W with carriage, 2 tension chains for d560 mm and d630 mm as well as a chain tensioner. The whole equipment comes in a convenient and robust transport box.

The easy handling and the optimal safety features make this tool indispensable on every building site.

#### Scope of delivery:

1 Circular-hand saw, 1 tensioning chain d560 mm, 1 tensioning chain d630 mm, 1 chain tensioner, 1 hex-wrench size 5, 1 hex-wrench size 6, 1 operating instruction, transport-box

#### Technical data:

Dimension range:	d355 –1600 mm (In combination with the respective tensioning chain)
Plug:	EU-Plug
Voltage:	230 V AC
Power:	2200 Watt
Frequency:	50-60 Hz
Circular saw blade outer-Ø:	240 mm
RPM:	4100
Sound level:	104 dB (A)
Weight saw:	15, 5 kg
Weight KS 1600 Basic-Kit:	43,5 kg
Dimensions saw (WxHxD):	790 x 330 x 335 mm
Dimensions Transport-Box:	950 x 400 x 395 mm

d-d [mm]	Type	Code	kg
355 - 1600	KS 1600 Basic Kit	<b>790 109 600</b>	43.000

PF 2 51 305 006

### Saw blade

description	Code	kg
Saw Blade 240X3,0X30, 18 teeth punched	<b>790 109 618</b>	0.653

PF 3 25 119 106



### Chain tensioner

- Chain tensioner is included in the scope of delivery of the KS 1600 Basic Kit (790 109 600).

d-d [mm]	Code	kg
355 - 1600	<b>790 109 616</b>	0.430

PF 3 25 119 106

### Tensioning Chains

- Chains for d560 and d630 mm are included in the scope of delivery of the KS 1600 Basic-Kit (790 109 600).

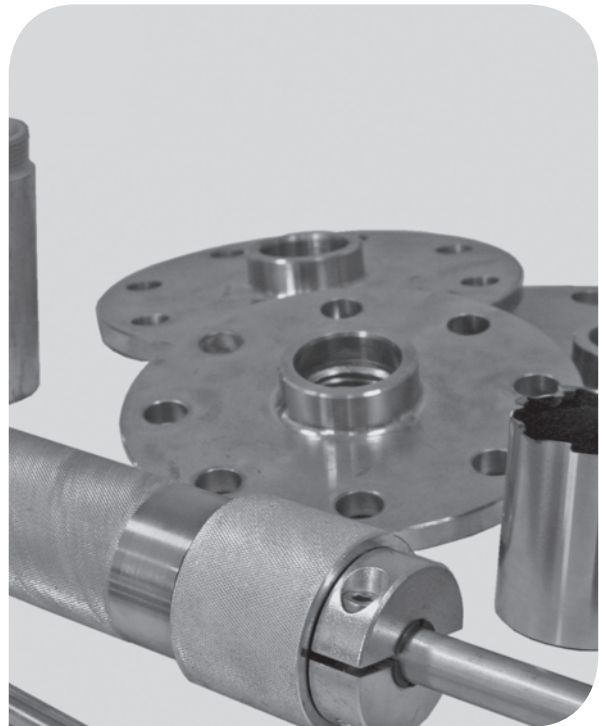
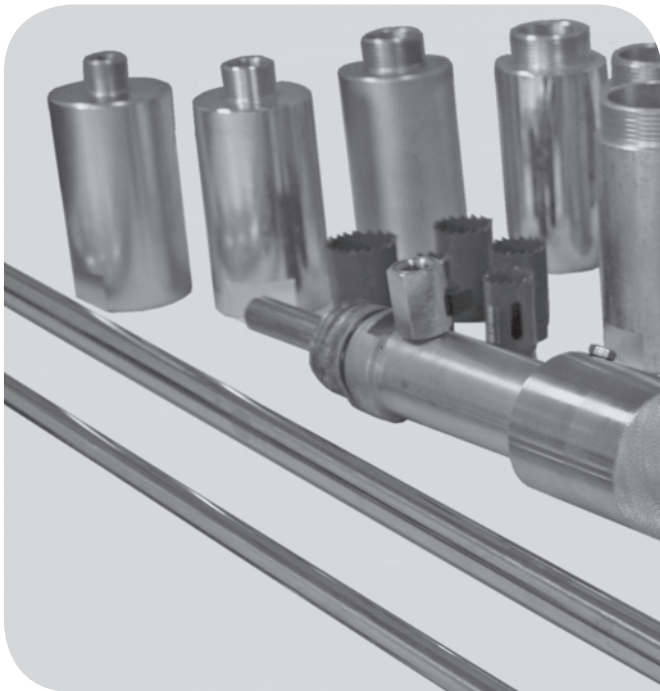
d [mm]	Code	kg
355	<b>790 109 602</b>	3.700
400	<b>790 109 603</b>	4.100
450	<b>790 109 604</b>	4.700

table continued next page

# Machines & Equipment for Electrofusion

d [mm]	Code	kg	
500	<b>790 109 605</b>	5.200	
560	<b>790 109 606</b>	5.600	
630	<b>790 109 607</b>	6.630	
710	<b>790 109 608</b>	7.900	
800	<b>790 109 609</b>	8.600	
900	<b>790 109 610</b>	10.174	
1000	<b>790 109 611</b>	11.000	
1100	<b>790 109 612</b>	12.000	
1200	<b>790 109 613</b>	13.500	
1400	<b>790 109 614</b>	15.500	
1600	<b>790 109 615</b>	17.800	

PF 3 25 119 106



## W400/410 drilling device

# Machines & Equipment for Electrofusion

## W400 drilling device (3/4" - 2")



### Basic Drilling Device W400

including ratchet and drill shaft (accessories to be added)

PF 1 54 326 005

Description	Code	kg
basic device including ratchet and drill shaft	709 700 000	6.094



### Male threaded adaptors for W400 drilling device

#### Model:

- Suitable to connect to Multi/Saddle Plus 200 and 201 saddles

PF 1 54 326 005

Description	Code	kg
male threaded adaptor 3/4	709 702 257	1.440
male threaded adaptor 1	709 702 258	1.720
male threaded adaptor 1 1/4	709 702 259	1.760
male threaded adaptor 1 1/2	709 702 260	1.800
male threaded adaptor 2	709 702 261	1.440



### Female threaded adaptors for W400 drilling device

#### Model:

- Suitable to connect to Multi/Saddle Plus 301 saddles

PF 1 54 326 005

Description	Code	kg
female threaded adaptor d25 + d32	709 702 262	1.900
female threaded adaptor d40 + d50	709 702 263	1.750



### Mandrel combined with drill pilot

#### Model:

- mandrel including special pilot drill 6mm with retention wires

PF 1 54 326 005

Description	Code	kg
hole saw mandrel 9/16 inch - 1 3/16 inch with retain drill pilot	709 701 260	0.085
hole saw mandrel 1 1/4 inch - 6 inch with retain drill pilot	709 701 261	0.206



### Drill pilot

#### Model:

- pilot drill 6 mm with dual retention wires

PF 1 54 326 005

Description	Code	kg
pilot drill 6 mm with dual retention wires	709 800 006	0.042



### Cup drill PRO-FIT

#### Model:

- Suitable for PE and PVC pipes

Inch	Description	Code	kg
11/16	PRO-FIT PE/PVC cutter 17,5 mm	709 810 711	0.030
3/4	PRO-FIT PE/PVC cutter 19,1 mm	709 810 712	0.034
7/8	PRO-FIT PE/PVC cutter 22,2 mm	709 810 714	0.046
1	PRO-FIT PE/PVC cutter 25,4 mm	709 810 716	0.056

table continued next page

# Machines & Equipment for Electrofusion

Inch	Description	Code	kg
1 1/4	PRO-FIT PE/PVC cutter 31,8 mm	<b>709 810 720</b>	0.096
1 1/2	PRO-FIT PE/PVC cutter 38,1 mm	<b>709 810 724</b>	0.104
1 3/4	PRO-FIT PE/PVC cutter 44,5 mm	<b>709 810 728</b>	0.120
1 7/8	PRO-FIT PE/PVC cutter 48,2 mm	<b>709 810 730</b>	0.128

PF 1 54 326 005



## Cup drill Blu-mol HSS

### Model:

- suitable for steel and (ductile) cast iron

Inch	Description	Code	kg
11/16	HSS bi-metal cutter 17,5 mm	<b>709 810 511</b>	0.300
3/4	HSS bi-metal cutter 19,1 mm	<b>709 810 512</b>	0.300
7/8	HSS bi-metal cutter 22,2 mm	<b>709 810 514</b>	0.300
15/16	HSS bi-metal cutter 23,8 mm	<b>709 810 515</b>	0.300
1	HSS bi-metal cutter 25,4 mm	<b>709 810 516</b>	0.066
1 1/8	HSS bi-metal cutter 28,6 mm	<b>709 810 518</b>	0.300
1 3/16	HSS bi-metal cutter 30,2 mm	<b>709 810 519</b>	0.300
1 1/4	HSS bi-metal cutter 31,8 mm	<b>709 810 520</b>	0.088
1 3/8	HSS bi-metal cutter 34,9 mm	<b>709 810 522</b>	0.300
1 7/16	HSS bi-metal cutter 36,5 mm	<b>709 810 523</b>	0.300
1 1/2	HSS bi-metal cutter 38,1 mm	<b>709 810 524</b>	0.087
1 3/4	HSS bi-metal cutter 44,5 mm	<b>709 810 528</b>	0.300
2	HSS bi-metal cutter 50,8 mm	<b>709 810 532</b>	0.142

PF 1 54 326 005



## Cup drill Blu-mol Carbide tipped

### Model:

- suitable for abrasive materials such as asbestos cement and cement lined (ductile) iron pipes

Inch	Description	Code	kg
3/4	carbide tipped HSS bi-metal cutter 19,1 mm	<b>709 810 612</b>	0.300
7/8	carbide tipped HSS bi-metal cutter 22,2 mm	<b>709 810 614</b>	0.300
1	carbide tipped HSS bi-metal cutter 25,4 mm	<b>709 810 616</b>	0.070
1 1/8	carbide tipped HSS bi-metal cutter 28,6 mm	<b>709 810 618</b>	0.300
1 1/4	carbide tipped HSS bi-metal cutter 31,8 mm	<b>709 810 620</b>	0.096
1 3/8	carbide tipped HSS bi-metal cutter 34,9 mm	<b>709 810 622</b>	0.300
1 1/2	carbide tipped HSS bi-metal cutter 38,1 mm	<b>709 810 624</b>	0.300
1 3/4	carbide tipped HSS bi-metal cutter 44,5 mm	<b>709 810 628</b>	0.300
2	carbide tipped HSS bi-metal cutter 50,8 mm	<b>709 810 632</b>	0.134

PF 1 54 326 005



## Heavy duty transport case for W400 drilling device

### Model:

- Including: hex key 3 mm, hex key 6 mm and screwdriver
- Outside dimension transport case: 80 x 40 x 20 cm

Code	kg	Description
<b>709 706 416</b>	8.100	Heavy duty transport case for W400 drilling device

PF 1 54 326 005

# Machines & Equipment for Electrofusion

## W410 drilling device (3/4" - 8")



### Basic Drilling Device W410 including ratchet (all accessories to be added)

PF 1 54 326 005

Description	Code	kg
basic device including ratchet	<b>709 700 100</b>	7.800



### Drill shafts

#### Model:

- Drill shafts to be selected depending on build up length of your configuration

PF 1 54 326 005

Description	Code	kg
drill shaft 620 mm	<b>709 700 010</b>	1.200
drill shaft 775 mm	<b>709 700 021</b>	1.500
drill shaft 920 mm	<b>709 700 022</b>	1.780
drill shaft 1070 mm	<b>709 700 023</b>	2.070



### Flange adaptors

#### Model:

- Flange adaptor for W410
- Suitable for Plast/Joint® flange adaptor
- Suitable for flange to flange connections
- Not included flange bolts / gasket

PF 1 54 326 005

Description	Code	kg
flange adaptor DN50	<b>709 702 045</b>	1.850
flange adaptor DN65	<b>709 702 046</b>	2.400
flange adaptor DN80	<b>709 702 047</b>	3.090
flange adaptor DN100	<b>709 702 048</b>	3.840
flange adaptor DN125	<b>709 702 049</b>	4.870
flange adaptor DN150	<b>709 702 050</b>	6.530
flange adaptor DN200	<b>709 702 051</b>	8.800



### Mandrel combined with pilot drill

#### Model:

- mandrel including special pilot drill 6mm with retention wires

PF 1 54 326 005

Description	Code	kg
hole saw mandrel 9/16 inch - 1 3/16 inch with retain drill pilot	<b>709 701 260</b>	0.085
hole saw mandrel 1 1/4 inch - 6 inch with retain drill pilot	<b>709 701 261</b>	0.206



### Pilot drill

#### Model:

- pilot drill 6 mm with dual retention wires

PF 1 54 326 005

Description	Code	kg
pilot drill 6 mm with dual retention wires	<b>709 800 006</b>	0.042

# Machines & Equipment for Electrofusion

## Cup drill

### PE chipless Ø45, Ø60, Ø63, Ø80 and Ø84 mm



#### Model:

- For demanding drillings on PE
- Maximum PE pipe d630 SDR11
- Suitable for under pressure drilling
- Push rod for coupon release out of the cup drill

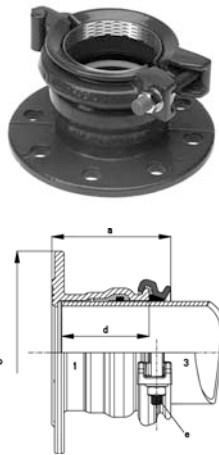
Description	Code	kg	
PE cup drill chipless 63 mm x 60 mm	<b>709 810 414</b>	0.590	
PE cup drill chipless 84 mm x 60 mm	<b>709 810 416</b>	0.910	
PE cup drill chipless 63 mm x 120 mm	<b>709 810 424</b>	0.890	
PE cup drill chipless 84 mm x 120 mm	<b>709 810 426</b>	1.370	
PE cup drill push rod	<b>709 700 024</b>	0.400	

PF 1 54 326 005

## Plast/Joint® 8057 Flange Adaptor, restraint

#### Model:

- For connection to PE Spigot ends
- Ductile Cast iron GGG45 body and clamping ring(s), acc. to EN-GJS-450-10
- RESICOAT® epoxy powder coating, according to GSK standards and EN 14901
- Stainless steel A2 quality (AISI 304) or A4 quality (AISI 316) bolts, nuts and washers
- Gasket: NBR
- Suitable for water and gas
- Flange drilling according to EN 1092-2
- Gripping in brass



d [mm]	DN [mm]	Drilling pattern	NBR / A2 Code	kg	a [mm]	b [mm]	PN Water [bar]	PN Gas [bar]	
63	50	PN16	<b>709 257 210</b>	3.647	102	165	16.0	8.0	
75	65	PN16	<b>709 257 212</b>	4.075	102	185	16.0	8.0	
90	80	PN16	<b>709 257 214</b>	4.906	107	200	16.0	8.0	
110	100	PN16	<b>709 257 216</b>	5.998	122	220	16.0	8.0	
125	100	PN16	<b>709 257 218</b>	6.111	126	220	16.0	8.0	
160	150	PN16	<b>709 257 222</b>	11.165	144	285	16.0	8.0	
200	200	PN16	<b>709 257 226</b>	15.902	157	340	16.0	8.0	

PF 1 54 932 001

## Heavy duty transport / storage box for W410 drilling device



#### Model:

- Including: hex key 3 mm, hex key 6 mm and screwdriver
- Outside dimension transport / warehouse box: 120 x 40 x 40 cm

Code	kg	Description	
<b>709 706 414</b>	4.500	Heavy duty transport / storage box for W410 drilling device	

PF 1 54 326 005



**+GF+**



**Product Range**

Distribution  
Machines for  
Processing Plastic Pipes



# Machines & Equipment for Butt Fusion

## TM 160 - 250 - 315 ECO Butt fusion machines

### TM 160 - 250 - 315 ECO Machine complete (wooden crate)



- Flexible and user-friendly heating element Butt Fusion machine for fusion jointing PE, PP, PB and PVDF pipes and fittings on building sites and in trenches
- Scope of delivery includes: lightweight ECO hydraulic unit, flexible base machine, powerful planer, high performance heating element with electronic temperature control box, storage case for the planer and heater
- Including transport packaging (wooden crate), without accessories and without reduction inserts

Type	d-d [mm]	Performance	Code	kg	
TM 160 ECO	40 - 160	230V/1900W	<b>790 150 017</b>	114.000	
TM 250 ECO	75 - 250	230V/3270W	<b>790 151 017</b>	160.000	
TM 315 ECO	90 - 315	230V/3870W	<b>790 152 017</b>	165.000	

PF 3 10 597 011

### TM 160 - 250 - 315 Base machine



- Tubular frame provides increased rigidity and easy movement of the machine on the ground
- 4 lifting lugs
- Metal shield provides protection of the main welding area
- 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
- Clamps are hinged on the top side and tilting. Whenever necessary, the four clamps can be quickly removed
- Quick-action and drip-proof oil connections located in a protected position
- The base machine can be tilted to achieve a second operating position

Type	d-d [mm]	Code	kg	
TM 160	40 - 160	<b>790 150 001</b>	25.000	
TM 250	75 - 250	<b>790 151 001</b>	50.000	
TM 315	90 - 315	<b>790 152 001</b>	57.000	

PF 3 10 597 012

### TM 160 - 250 - 315 ECO Planer



- Powerful parallel planer for single or double-sided facing of pipe ends
- Reliable torque transmission via robust worm-gear device
- Ergonomic, weight-balanced handling
- Optimised cutting geometry for even and chatter-free planing
- Safety switch to prevent undesired start-up
- Self-locking mechanism in working position

Type	d-d [mm]	Performance	Code	kg	
TM 160 ECO	40 - 160	230V/630W	<b>790 150 014</b>	10.000	
TM 250 ECO	75 - 250	230V/1200W	<b>790 151 014</b>	16.000	
TM 315 ECO	90 - 315	230V/1200W	<b>790 152 014</b>	19.000	

PF 3 10 597 012

# Machines & Equipment for Butt Fusion

## TM 160 - 250 - 315 Heating element



- High performance, electronically controlled heating element
- Uniform temperature distribution over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life
- Temperature indicator integrated into the handle
- Easy placement in the correct working position with automatic heater release mechanism

Type	d-d [mm]	Performance	Code	kg
TM 160	40 - 160	230V/900W	<b>790 114 004</b>	5.500
TM 250	75 - 250	230V/1700W	<b>790 115 004</b>	9.000
TM 315	90 - 315	230V/2300W	<b>790 112 083</b>	11.700

PF 3 25 117 316

## TM 160 - 250 - 315 Case



- For safe storage of planer and heating element

Type	d-d [mm]	Code	kg
TM 160	40 - 160	<b>790 150 295</b>	7.500
TM 250	75 - 250	<b>790 151 027</b>	14.000
TM 315	90 - 315	<b>790 152 027</b>	18.500

PF 3 10 573 500

## TM 160 - 250 - 315 ECO Hydraulic unit



- Clearly visible, vibration-free pressure gauge with precision scaling
- Compact construction with protection frame
- Fine adjustment of pressure
- High pressure consistency during cooling phase
- Fix attached hydraulic hose

Type	Performance	Code	kg
TM 160 ECO	230V/370W	<b>790 150 013</b>	21.000
TM 250 - 315 ECO	230V/370W	<b>790 152 009</b>	21.000

PF 3 10 597 002

## TM 160 - 250 - 315 Temperature controller



- Electronic temperature control
- Accurate adjustment (set point) of heating element temperature
- Digital display of current and set-point temperature

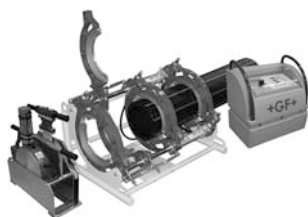
Type	Performance	Code	kg
TM 160- 315 ECO	230V/3000W	<b>790 152 006</b>	2.000

PF 3 10 597 022

# Machines & Equipment for Butt Fusion

## TM 160 - 250 - 315 TOP Butt fusion machines

### TM 160 - 250 - 315 TOP Machine complete



- High quality, flexible and user-friendly heating element Butt Fusion machine for fusion jointing PE, PP, PB and PVDF pipes and fittings on building sites and in trenches
- Scope of delivery includes: innovative TOP hydraulic unit, flexible base machine, powerful planer, WR 100, high performance heating element, storage case for the planer and heater
- Including transport packaging (wooden crate), without accessories and without reduction inserts

Type	d-d [mm]	Performance	Code	kg
TM 160 TOP	40 - 160	230V/1900W	<b>790 150 011</b>	125.000
TM 250 TOP	75 - 250	230V/3270W	<b>790 151 011</b>	195.000
TM 315 TOP	90 - 315	230V/3870W	<b>790 152 026</b>	210.000

PF 3 10 597 011

### TM 160 - 250 - 315 TOP Planer



- Powerful parallel planer for single or double-sided facing of pipe ends
- Reliable torque transmission via robust worm-gear device
- Optimised cutting geometry for even and chatter-free planing
- Ergonomic, weight-balanced handling
- Safety microswitch to prevent undesired start-up
- Self-locking mechanism in working position

Type	Performance	Code	kg
TM 160 TOP	230V/630W	<b>790 150 000</b>	10.000
TM 250 TOP	230V/1200W	<b>790 151 000</b>	16.000
TM 315 TOP	230V/1200W	<b>790 152 000</b>	19.000

PF 3 10 597 012

### TM 160 - 250 - 315 TOP Hydraulic unit



- Integrated interface for welding recorder WR 100
- Shock-absorbing plastic housing in attractive design
- Intuitive control panel provided with digital indication of hydraulic pressure, electronic heating element temperature controller, 2-channel welding timer
- Push-button operation of machine carriage
- Pressure release button for safe changeover from equalization to heat soak phase
- Integrated power outlets for planer, heating element
- Internal aluminium frame providing high rigidity and resistance
- Precise pressure setting and fine adjusting
- Integrated additional power socket (230V-AC)
- Oil level control and refilling without disassembling the unit

Type	Performance	Code	kg
TM 160 - 315 TOP	230V/370W	<b>790 151 004</b>	30.000

PF 3 10 597 012

### TM 160 - 250 - 315 TOP Hydraulic hose package



- Flexible hydraulic hoses, with drip-proof, quick-coupling action

Type	Code	kg
TM 160 - 315 TOP	<b>790 152 003</b>	4.000

PF 3 10 597 022

# Machines & Equipment for Butt Fusion

## TM 160 - 250 - 315 WR

### TM 160 - 250 - 315 WR Machine complete



- Welding Recorder WR 100 configured to the machine and calibrated to the TOP hydraulic unit
- High quality, flexible and user-friendly heating element Butt Fusion machine for fusion jointing PE, PP, PB and PVDF pipes and fittings on building sites and in trenches
- Scope of delivery includes: innovative TOP hydraulic unit, flexible base machine, powerful planer, WR 100, high performance heating element, storage case for the planer and heater
- Including transport packaging (wooden crate), without accessories and without reduction inserts

Type	d-d [mm]	Performance	Code	kg	
TM 160 WR	40 - 160	230V/1910W	<b>790 150 015</b>	136.000	
TM 160 WR CYRILLIC	40 - 160	230V/1910W	<b>790 150 016</b>	136.000	
TM 250 WR	75 - 250	230V/3280W	<b>790 151 015</b>	185.000	
TM 250 WR CYRILLIC	75 - 250	230V/3280W	<b>790 151 016</b>	185.000	
TM 315 WR	90 - 315	230V/3880W	<b>790 152 025</b>	219.000	
TM 315 WR CYRILLIC	90 - 315	230V/3880W	<b>790 152 016</b>	219.000	

PF 3 10 597 011

### WR 100 Fusion welding recording device



The WR 100 supports you to ensure the quality of the jointing done according to the country specific standards. The concept of the fusion data recording device enables configuration and retrofitting of hydraulically operated butt-fusion machines for field applications.

The whole fusion sequence is recorded and can be retraced later. The user is guided through all the fusion steps. The selection of the fusion data like the used material, diameter and wall thickness (SDR) is supported by a menu. The highly accurate recording device WR100 controls the fusion process according to the valid national guidelines (e.g. DVS, WIS or UNI). The recorder with its on-board printer comes in a hard plastic PE case of IP65 protection class.

#### Performance:

- Easy configuration by operator to the different GF/KL/TM machines
- Internal memory fusion protocol with a capacity of up to 100 records
- Easy-to-follow user guidance
- Battery support for data recording (8 hours), no data loss during power interruption
- Configuration: User identity, Job site and order no.
- Different menu languages
- Country specific fusion parameter
- Interchangeable with SUVI®50 data logger

#### Data Processing:

- Individual print out directly from serial on board printer
- Collective and individual print out directly from WR 100 to external printer (only HP) (parallel interface 790 119 402)
- Collective and individual protocol download to PC using the hyper terminal communicator windows (serial interface 790 119 403)

Power connector: Schuko, 16A

Working temperature range: -10°C up to +50°C

Includes connecting cables to butt fusion machine

Type	Performance	Dimensions [mm]	Code	kg	
WR 100	230 V	350x300x150 mm	<b>790 119 401</b>	6.000	
WR 100 CYRILLIC	230 V	350x300x150 mm	<b>790 119 425</b>	5.500	

PF 3 25 132 100

# Machines & Equipment for Butt Fusion

## Retrofit kits

The Retrofit kit consists of all the necessary components to be assembled in the machine in order to connect the WR 100. The connection cables between the WR 100 and the hydraulic unit / heating element are part of the data recorder set (790 119 401). The installation of the retrofit kits has to be done by a regional service centre or by GF Omicron.

Description	Code	kg	
KL 160	<b>790 119 090</b>	1.000	
KL 250-630	<b>790 119 078</b>	0.300	
GF 160-250	<b>790 119 032</b>	0.300	
GF 315	<b>790 119 039</b>	0.790	
GF 500-1200	<b>790 119 036</b>	3.500	

PF 3 25 117 313

## Accessories

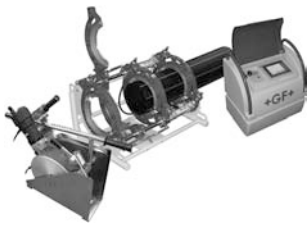
description	Code	kg	
Serial/parallel printer cable (WR 100-Printer)	<b>790 119 402</b>	0.400	
Serial Data transfer cable (WR100-PC)	<b>790 119 403</b>	0.250	
USB Converter cable	<b>790 119 407</b>	0.300	
Serial Adapter M/F	<b>790 119 408</b>	0.100	

PF 3 25 117 312

# Machines & Equipment for Butt Fusion

## TM 160 - 250- 315 CNC

### Machine complete



- High quality, reliable and user-friendly heating element butt fusion machine for automated fusion jointing of PE and PP pipes and fittings on building sites.
- Designed for applications in gas and water distribution.
- Machine equipped with innovative CNC hydraulic control unit and the machine components of the TM TOP machines: sturdy base machine, powerful planer, high performance heating element, storage case for the planer and heater.
- The distance control (potentiometer) mounted into the base machine grants control and safety throughout the complete welding process.
- Scope of delivery includes transport packaging (wooden crate), not the reduction inserts and other accessories !

### CNC Control Unit

- Operator guidance from preparation to the end of the jointing process by use of symbols and graphics.
- Intuitive data input by touch screen operation (welding standard, material, diameter, SDR, traceability data).
- Automatic calculation, regulation and control of the fusion parameters - pressure, time and temperature - according to country specific guidelines.
- 10 freely programmable welding cycles available (e.g. for non standard dimensions (Relining), special materials etc.).
- Various configuration possibilities, such as cooling time reduction according to the measured ambient temperature (CTC) and automatic bead build-up phase.
- Selection of language.
- Welding report storage on removable standard USB memory key (memory key supplied with the machine).
- Data transfer to PC (SUVI WIN-WELD software supplied with the machine) via USB interface.
- Shock absorbing plastic housing in attractive design.
- Integrated power outlets for planer and heating element.
- Preinstalled socket for connection of the barcode scanner (Accessory).
- Oil level control and refilling without disassembling the unit.
- Two handles to carry the hydraulic unit.

Type	d-d [mm]	Performance	Code	kg	
TM 160 CNC	40 - 160	230V/2000W	<b>790 150 012</b>	125.000	
TM 250 CNC	75 - 250	230V/3150W	<b>790 151 012</b>	195.000	
TM 315 CNC	90 - 315	230V/3750W	<b>790 152 012</b>	210.000	

PF 3 10 597 011

# Machines & Equipment for Butt Fusion

## TM 250 –315 CNC Machine with automatic heating element



### Machine complete

- High quality, reliable and user-friendly heating element butt fusion machine for automated fusion jointing of PE and PP pipes and fittings on building sites.
- Designed for applications in gas and water distribution.
- Machine equipped with innovative CNC hydraulic control unit, sturdy base machine, powerful planer, high performance heating element, storage case for the planer and heater.
- The heating element is ejected automatically from the working position during change-over phase.
- Quick change of the heating element position from the central to the outer welding position when welding e.g. a T-Piece to a pipe.
- The distance control (potentiometer) mounted into the base machine grants control and safety throughout the complete welding process.
- Scope of delivery includes transport packaging (wooden crate), not the reduction inserts and other accessories !

### CNC Control Unit

- Operator guidance from preparation to the end of the jointing process by use of symbols and graphics.
- Intuitive data input by touch screen operation (welding standard, material, diameter, SDR, traceability data).
- Automatic calculation, regulation and control of the fusion parameters - pressure, time and temperature - according to country specific guidelines.
- 10 freely programmable welding cycles available (e.g. for non standard dimensions (Relining), special materials etc.).
- Various configuration possibilities such as cooling time reduction according to the measured ambient temperature (CTC) and automatic bead build-up phase.
- Selection of language.
- Welding report storage on removable standard USB memory key (memory key supplied with the machine).
- Data transfer to PC (SUVI WIN-WELD software supplied with the machine) via USB interface.
- Shock absorbing plastic housing in attractive design.
- Integrated power outlets for planer and heating element.
- Preinstalled socket for connection of the barcode scanner (Accessory).
- Oil level control and refilling without disassembling the unit.
- Two handles to carry the hydraulic unit.

Type	d-d [mm]	Performance	Code	kg	
TM 250 CNC	75 - 250	230V/3150W	<b>790 151 071</b>	195.000	
TM 315 CNC	90 - 315	230V/3750W	<b>790 152 071</b>	210.000	

PF 3 10 597 011

# Machines & Equipment for Butt Fusion

## TM 160 - 250 - 315 Accessories

### TM 160 Reduction clamping inserts, wide



- d 40 - 140 mm
- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

d [mm]	Code	kg	
40	<b>790 114 023</b>	0.300	
50	<b>790 114 009</b>	0.320	
63	<b>790 114 010</b>	0.300	
75	<b>790 114 011</b>	0.300	
90	<b>790 114 012</b>	0.280	
110	<b>790 114 013</b>	0.245	
125	<b>790 114 014</b>	0.265	
140	<b>790 114 015</b>	0.180	

PF 3 25 117 316

### TM 160 Reduction clamping inserts, narrow



- d 40 - 140 mm
- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

d [mm]	Code	kg	
40	<b>790 114 027</b>	0.300	
50	<b>790 114 016</b>	0.310	
63	<b>790 114 017</b>	0.310	
75	<b>790 114 018</b>	0.280	
90	<b>790 114 019</b>	0.255	
110	<b>790 114 020</b>	0.225	
125	<b>790 114 021</b>	0.200	
140	<b>790 114 022</b>	0.140	

PF 3 25 117 316

### TM 250 Reduction clamping inserts, wide



- d 75 - 225 mm
- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

d [mm]	Code	kg	
75	<b>790 115 028</b>	0.815	
90	<b>790 115 008</b>	0.835	
110	<b>790 115 009</b>	0.825	
125	<b>790 115 010</b>	0.785	
140	<b>790 115 011</b>	0.735	
160	<b>790 115 012</b>	0.695	
180	<b>790 115 013</b>	0.660	
200	<b>790 115 014</b>	0.715	
225	<b>790 115 015</b>	0.465	

PF 3 25 117 305

# Machines & Equipment for Butt Fusion

## TM 250 Reduction clamping inserts, narrow



- d 75 - 225 mm
- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

d [mm]	Code	kg
75	<b>790 115 029</b>	0.740
90	<b>790 115 016</b>	0.715
110	<b>790 115 017</b>	0.690
125	<b>790 115 018</b>	0.680
140	<b>790 115 019</b>	0.625
160	<b>790 115 020</b>	0.595
180	<b>790 115 021</b>	0.520
200	<b>790 115 022</b>	0.455
225	<b>790 115 023</b>	0.390

PF 3 25 117 305

## TM 315 Reduction clamping inserts, wide



- d 90 - 280 mm
- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

d [mm]	Code	kg
90	<b>790 112 088</b>	1.000
110	<b>790 112 089</b>	1.050
125	<b>790 112 090</b>	0.988
140	<b>790 112 091</b>	0.975
160	<b>790 112 092</b>	1.062
180	<b>790 112 093</b>	0.988
200	<b>790 112 094</b>	0.937
225	<b>790 112 095</b>	0.975
250	<b>790 112 096</b>	0.937
280	<b>790 112 097</b>	0.800

PF 3 25 117 307

## TM 315 Reduction clamping inserts, narrow



- d 90 - 280 mm
- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

d [mm]	Code	kg
90	<b>790 112 098</b>	0.995
110	<b>790 112 099</b>	1.285
125	<b>790 112 100</b>	1.245
140	<b>790 112 101</b>	1.205
160	<b>790 112 102</b>	1.135
180	<b>790 112 103</b>	1.010
200	<b>790 112 104</b>	0.950
225	<b>790 112 105</b>	0.865
250	<b>790 112 106</b>	0.770
280	<b>790 112 107</b>	0.560

PF 3 25 117 307

# Machines & Equipment for Butt Fusion

## TM 160 - 250 - 315 Reduction clamping inserts-set



- 4 wide and 4 narrow clamping inserts of each dimension

d-d [mm]	Code	kg	
40 - 140	<b>790 114 156</b>	17.000	
75 - 225	<b>790 115 156</b>	48.000	
90 - 280	<b>790 112 156</b>	78.000	

PF 3 25 117 316

## TM 160 - 250 - 315 Chamfered upper clamp

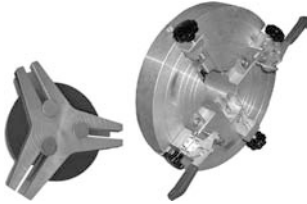


- Necessary for welding short-leg bends having diameters equal of the machine dimension: e.g. bend Ø250 mm with a TM 250
- Left: bend is clamped left from the heating element position
- Right: bend is clamped right from the heating element position

Type	Left Code	Right Code	kg	
TM 160	<b>790 150 205</b>	<b>790 150 206</b>	0.800	
TM 250	<b>790 151 205</b>	<b>790 151 206</b>	1.400	
TM 315	<b>790 152 205</b>	<b>790 152 206</b>	1.800	

PF 3 10 597 012

## TM 160 - 250 - 315 Flange adapter clamping units



- For correct clamping and fusion jointing of short-ended fittings

d-d [mm]	Code	kg	
40 - 160	<b>790 319 007</b>	5.400	
75 - 250	<b>790 115 044</b>	7.900	
90 - 315	<b>790 112 073</b>	10.100	

PF 3 10 571 500

## TM 160 - 250 - 315 RU Repair unit



- Repair unit with 2 clamping devices and a pair of cylinders, especially convenient for butt-fusion joints in narrow trenches or inside of buildings and industrial plants. Heating element, planer, hydraulic unit and reduction inserts could be used from the corresponding TM machine line such as TM 250 ECO.

Type	Code	kg	
RU 160	<b>790 150 045</b>	8.800	
RU 250	<b>790 151 045</b>	18.000	
RU 315	<b>790 152 045</b>	20.000	

PF 3 10 597 012

## TM 160 - 250 - 315 RU Outer Clamp



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

Type	Code	kg	
RU 160	<b>790 150 046</b>	2.000	
RU 250	<b>790 151 046</b>	4.400	
RU 315	<b>790 152 046</b>	5.400	

PF 3 10 597 012

## TM 160 - 250 - 315 TOP Clamp tightening knobs



Type	Code	kg	
TM 160 TOP	<b>790 150 225</b>	1.000	
TM 250 - 315 TOP	<b>790 152 225</b>	1.500	

PF 3 10 597 022

# Machines & Equipment for Butt Fusion

## TM 160 - 250 - 315 Hydraulic adapter hose package



- Flexible hydraulic hoses, with drip-proof, quick-coupling action
- Required when assembling a TM base machine to GF or KL hydraulic units
- Required when connecting a GF or KL base machine to the TM TOP hydraulic unit
- Hoses with quick action couplers (M3/8" – F 1/4" , F 3/8" – M 1/4")

Code	kg
790 150 003	4.000

PF 3 10 597 002

## TM 160 - 250 - 315 Set planer blades



- (1 set = 2 blades)

d-d [mm]	Code	kg
40 - 160	<b>790 113 056</b>	0.080
75 - 250	<b>790 115 024</b>	0.060
90 - 315	<b>790 112 110</b>	0.115

PF 3 25 117 311

## TM 160 - 250 - 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	kg
TM 160	<b>790 150 050</b>	9.000
TM 250	<b>790 151 050</b>	11.000
TM 315	<b>790 152 050</b>	12.500

PF 3 10 597 012

## TM 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



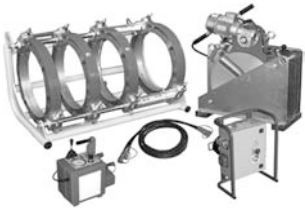
Type	Code	kg
TM 250 - 315	<b>790 151 002</b>	1.500

PF 3 10 597 012

# Machines & Equipment for Butt Fusion

## KL 500 TOP1 Butt fusion machine

### Machine complete



- Compact and robust heating element-but fusion machine for fusion jointing PP and PE pipes and fittings. For complete pressure range up to PN 16.
- Control box containing electronic temperature control and power distribution for heating element and planer
- The butt fusion machine can be assembled with the welding recorder WR 100.
- Machine provided with Hydromat hydraulic unit
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg
200 - 500	400 V/6250 W	<b>790 340 000</b>	475.000

PF 3 10 574 100

### Base machine



- Double clamping device for secure hold and exact radial and axial alignment of components
- Good accessibility thanks to 45° inclination
- drip-proof quick action coupling for the connection of the hydraulic hoses

d-d [mm]	Code	kg
200 - 500	<b>790 340 001</b>	159.000

PF 3 10 574 500

### Planer



- Powerful parallel planer for single or double-sided facing of pipe ends
- Load transfer via maintenance-free, robust chain
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg
200 - 500	400 V/750 W	<b>790 340 002</b>	55.000

PF 3 10 574 500

### Heating element



- High temperature accuracy over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life
- Easy placement in the correct working position with heater release mechanism

d-d [mm]	Performance	Code	kg
200 - 500	400 V/4000 W	<b>790 116 004</b>	26.000

PF 3 25 117 306

### 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

Voltage	Code	kg
400 V	<b>790 116 038</b>	15.500

PF 3 25 117 306

# Machines & Equipment for Butt Fusion

## KL 500 TOP2 Butt fusion machine

### Machine complete



- Compact and robust heating element-butt fusion machine for fusion jointing PP and PE pipes and fittings. For complete pressure range up to PN 16.
- The butt fusion machine can be assembled with the welding recorder WR 100.
- Machine provided with Hydromat hydraulic unit and remote control
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg
200 - 500	400 V/6250 W	<b>790 140 010</b>	312.000

PF 3 10 574 100

### Base machine



- Double clamping device for secure hold and exact radial and axial alignment of components
- Good accessibility thanks to 45° inclination
- drip-proof quick action coupling for the connection of the hydraulic hoses

d-d [mm]	Code	kg
200 - 500	<b>790 340 001</b>	159.000

PF 3 10 574 500

### Planer



- Powerful parallel planer for single or double-sided facing of pipe ends
- Load transfer via maintenance-free, robust chain
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg
200 - 500	400 V/750 W	<b>790 340 002</b>	55.000

PF 3 10 574 500

### Heating element



- High temperature accuracy over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life
- Easy placement in the correct working position with heater release mechanism

d-d [mm]	Performance	Code	kg
200 - 500	400 V/4000 W	<b>790 116 004</b>	26.000

PF 3 25 117 306

### Remote control

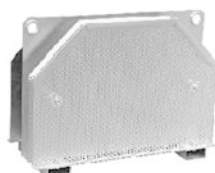


- Electronic temperature control
- Accurate adjustment of heating element temperature

Code	kg
<b>790 340 003</b>	5.000

PF 3 10 574 500

### Case



- For safe storage of planer and heating element

Code	kg
<b>790 116 006</b>	41.000

# Machines & Equipment for Butt Fusion

## Hydromat



- Clearly visible, vibration-free pressure gauge with precision scaling
- Fine adjustment of pressure
- High pressure consistency during cooling phase

Performance	Code	kg	
230 V/1500 W	<b>790 340 005</b>	29.000	

PF 3 10 574 500

# Machines & Equipment for Butt Fusion

## KL 500 Accessories

### 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.
- We recommend 4 wide and 4 narrow half shells.

In order to mount the inserts d 200/d 225, the reduction clamping insert 790 116 015 must also be used

d [mm]	Code	kg
200	<b>790 116 008</b>	4.160
225	<b>790 116 009</b>	3.300
250	<b>790 116 010</b>	3.300
280	<b>790 116 011</b>	3.500
315	<b>790 116 012</b>	3.600
355	<b>790 116 013</b>	3.700
400	<b>790 116 014</b>	3.400
450	<b>790 116 015</b>	3.500

PF 3 25 117 306

### Reduction clamping inserts, narrow



- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

In order to mount the inserts d 200/d 225, the reduction clamping insert 790 116 015 must also be used

d [mm]	Code	kg
200	<b>790 116 016</b>	3.680
225	<b>790 116 017</b>	4.100
250	<b>790 116 018</b>	4.100
280	<b>790 116 019</b>	3.800
315	<b>790 116 020</b>	3.500
355	<b>790 116 021</b>	3.200
400	<b>790 116 022</b>	2.500
450	<b>790 116 023</b>	2.500

PF 3 25 117 306

### Reduction clamping inserts-set



- 4 wide and 4 narrow clamping inserts of each dimension

d-d [mm]	Code	kg
250 - 450	<b>790 116 156</b>	162.000

PF 3 25 117 306

### Hoist unit frame



- Hoist unit (consists of frame and swivel arm)
- Mounted to the base machine

Code	kg
<b>790 116 026</b>	22.000

PF 3 25 117 306

# Machines & Equipment for Butt Fusion

## Weight compensator to hoist unit



- For heating element, planer weight is partially compensated
- For hoist unit 790 116 026

Code	kg	
790 116 027	12.500	

PF 3 25 117 306

## Flange adapter clamping unit



- For correct clamping and fusion jointing of short-ended fittings

d [mm]	Code	kg	
500	790 116 045	19.000	

PF 3 25 117 306

## 1 Set planer blades



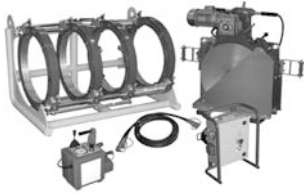
description	Code	kg	
Blade has 2 cutting edges (1 set = 2 blades)	790 116 041	0.700	

PF 3 25 117 306

# Machines & Equipment for Butt Fusion

## KL 630 TOP1 Butt fusion machine

### Machine complete



- Compact and robust heating element-butt fusion machine for fusion jointing PP and PE pipes and fittings. For complete pressure range up to PN 16.
- Control box containing electronic temperature control and power distribution for heating element and planer
- The butt fusion machine can be assembled with the welding recorder WR 100.
- Machine provided with Hydromat hydraulic unit
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg
315 - 630	400 V/11000 W	<b>790 345 000</b>	627.000

PF 3 10 575 100

### Base machine



- Double clamping device for secure hold and exact radial and axial alignment of components
- Good accessibility thanks to 45° inclination
- drip-proof quick action coupling for the connection of the hydraulic hoses

d-d [mm]	Code	kg
315 - 630	<b>790 117 002</b>	225.000

PF 3 10 573 100

### Planer



- Powerful parallel planer for single or double-sided facing of pipe ends
- Load transfer via maintenance-free, robust chain
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg
315 - 630	400 V/1500 W	<b>790 117 003</b>	98.000

### Heating element



- High performance, electronically controlled heating element
- High temperature accuracy over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life
- Additional thermometer for fast check of the fusion temperature

d-d [mm]	Performance	Code	kg
315 - 630	400 V/8000 W	<b>790 117 004</b>	36.000

PF 3 10 573 500

### Control box



- 400 V
- 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

Code	kg
<b>790 117 038</b>	14.000

PF 3 25 117 319

# Machines & Equipment for Butt Fusion

## KL 630 TOP2 Butt fusion machine

### Machine complete



- Compact and robust heating element-butt fusion machine for fusion jointing PP and PE pipes and fittings. For complete pressure range up to PN 16.
- The butt fusion machine can be assembled with the welding recorder WR 100.
- Machine provided with Hydromat hydraulic unit and remote control
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg
315 - 630	400 V/11000 W	<b>790 345 012</b>	627.000

PF 3 10 575 100

### Base machine



- Double clamping device for secure hold and exact radial and axial alignment of components
- Good accessibility thanks to 45° inclination
- drip-proof quick action coupling for the connection of the hydraulic hoses

d-d [mm]	Code	kg
315 - 630	<b>790 117 002</b>	225.000

PF 3 10 573 100

### Planer



- Powerful parallel planer for single or double-sided facing of pipe ends
- Load transfer via maintenance-free, robust chain
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg
315 - 630	400 V/1500 W	<b>790 117 003</b>	98.000

### Heating element



- High performance, electronically controlled heating element
- High temperature accuracy over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life
- Additional thermometer for fast check of the fusion temperature

d-d [mm]	Performance	Code	kg
315 - 630	400 V/8000 W	<b>790 117 004</b>	36.000

PF 3 10 573 500

### Remote control



- Electronic temperature control
- Accurate adjustment of heating element temperature

Code	kg
<b>790 340 003</b>	5.000

### Case



- For safe storage of planer and heating element

Code	kg
<b>790 117 006</b>	55.000

# Machines & Equipment for Butt Fusion

## KL 630 Accessories

### 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.
- We recommend 4 wide and 4 narrow half shells.

In order to mount the inserts d 315/d 355/d 400/d 450 to the base clamp d 630, the reduction clamping insert d 500 mm, code 790 117 012, must also be used

d [mm]	Code	kg
315	<b>790 116 012</b>	3.600
355	<b>790 116 013</b>	3.700
400	<b>790 116 014</b>	3.400
450	<b>790 116 015</b>	3.500
500	<b>790 117 012</b>	4.600
560	<b>790 117 013</b>	4.300

PF 3 25 117 319

### Reduction clamping inserts, narrow



- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

In order to mount the inserts d 315/d 355/d 400/d 450 to the base clamp d 630, the reduction clamping insert d 500 mm, code 790 117 012, must also be used

d [mm]	Code	kg
315	<b>790 116 020</b>	3.500
355	<b>790 116 021</b>	3.200
400	<b>790 116 022</b>	2.500
450	<b>790 116 023</b>	2.500

### Reduction clamping inserts-set



- 4 wide and 4 narrow clamping inserts d 315, d 355, d 400, d 450
- 8 wide reduction inserts d 500, d 560

d-d [mm]	Code	kg
315 - 560	<b>790 117 021</b>	201.000

PF 3 25 117 319

### Hoist unit, complete



- Hoist unit (consists of frame and swivel arm)
- Arm length 2m, pivoting, back/forward, max. column height from floor 3.30m
- Electrical unit 400 V / 600 W
- Hoist capacity 250 kg
- 2 hoisting speeds (1,7 m/min. and 7.0 m/min.)

Code	kg
<b>790 117 023</b>	196.000

PF 3 25 117 319

### Flange adapter clamping unit



- For correct clamping and fusion jointing of short-ended fittings

d [mm]	Code	kg
630	<b>790 117 029</b>	27.000

PF 3 25 117 319

# Machines & Equipment for Butt Fusion

## 1 Set planer blades

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



PF 3 25 117 319

Code	kg	
790 117 041	0.470	

# Machines & Equipment for Butt Fusion

## GF 160 - 250 - 315 CNC Butt fusion machine



### Machine complete

- For fusion jointing of PP and PE pipes and fittings. The automatic CNC, hydraulically-operated butt fusion machines are designed for applications in gas and water distribution piping systems as well as for use in trenches, outdoors or in the workshop.
- The CNC control unit (SUVI® 400) controls and regulates the complete fusion process according to the approved national guidelines (e.g. DVS guidelines).
- All fusion parameters (set/actual comparison) are recorded on a memory card and can be called up and shown on the display. External fusion data processing is easy with the exchangeable memory card or with the build-in interface for the PC, printer or laptop. The integrated error analysis system recognizes deviations from the defined parameters and interrupts the fusion cycle while simultaneously recording the error source.

### SUVI® 400 CNC - Control unit

- Controlling of the cooling phase according to the ambient temperature (CTC)
- This unit consists of the hydraulic and the control unit with data recording
- Automatic control of planing with even-out function
- Automatically controlled temperature of the heating element
- User-friendly operation (keyboard)
- Minimal weight of complete CNC control unit with two handles for carrying
- Tamper-safe, easy data recording with exchangeable memory card (256 kB)
- Clear overview, 2-line LCD with backlighting
- Temperature sensor for accurate recording of ambient temperature
- Serial interface (RS 232, 9-in) to connect PCs or laptops
- Parallel standard printer interface (Centronics)
- Configuration of specific fusion parameters according to national guidelines
- Barcode reader for data input (optional)

### Planer, Heating element, Hydraulic hose package, Case, Tools set

- Including transport packaging, without accessories and without reduction inserts

Type	d-d [mm]	Performance	Description	Code	kg
GF 160	40 - 160	230 V/1850 W		<b>790 114 069</b>	119.000
GF 160	40 - 160	115 V/1850 W		<b>790 114 068</b>	119.000
GF 160	40 - 160	230 V/1850 W	Russian	<b>790 114 067</b>	119.000
GF 160	40 - 160	230 V/1850 W	Chinese	<b>790 114 178</b>	119.000
GF 250	75 - 250	230 V/2490 W		<b>790 115 069</b>	175.000
GF 250	75 - 250	115 V/2490 W		<b>790 115 068</b>	175.000
GF 250	75 - 250	230 V/2490 W	Russian	<b>790 115 067</b>	175.000
GF 250	75 - 250	230 V/2490 W	Chinese	<b>790 115 178</b>	175.000
GF 315	90 - 315	230 V/4170 W		<b>790 112 069</b>	213.000
GF 315	90 - 315	115 V/4170 W		<b>790 112 068</b>	213.000
GF 315	90 - 315	230 V/4170 W	Russian	<b>790 112 067</b>	213.000
GF 315	90 - 315	230 V/4170 W	Chinese	<b>790 112 178</b>	213.000

PF 3 25 133 610

# Machines & Equipment for Butt Fusion

## GF 160 - 250- 315 CNC with automatic heating element



### Machine complete

- For fusion jointing of PP and PE pipes and fittings. The fully automatic CNC, hydraulically-operated butt fusion machines are designed for applications in gas and water distribution piping systems as well as for use in trenches, outdoors or in the workshop.
- The CNC control unit (SUVI® 400) controls and regulates the complete fusion process according to the approved national guidelines (e.g. DVS guidelines).
- All fusion parameters (set/actual comparison) are recorded on a memory card and can be called up and shown on the display. External fusion data processing is easy with the exchangeable memory card or with the build-in interface for the PC, printer or laptop. The integrated error analysis system recognizes deviations from the defined parameters and interrupts the fusion cycle while simultaneously recording the error source.

### SUVI® 400 CNC - Control unit

- Controlling of the cooling phase according to the ambient temperature (CTC)
- This unit consists of the hydraulic and the control unit with data recording
- Automatically controlled fusion cycle with built-in linear measurement unit (safety)
- Automatically controlled temperature of the heating element
- Minimal weight of complete CNC control unit with two handles for carrying
- Clear overview, 2-line LCD with backlighting
- Temperature sensor for accurate recording of ambient temperature
- Serial interface (RS 232, 9-in) to connect PCs or laptops
- Parallel standard printer interface (Centronics)
- Safe two-handed operation according to TÜV for machine carriage movement
- 6 languages, variable
- Configuration of specific fusion parameters according to national guidelines
- Barcode reader for data input (optional)
- In the **fully automatic** version, the heating element is inserted manually by the operator and after the heat soak phase automatically removed from the working position.

### Planer, Heating element, Hydraulic hose package, Case, Tools set

- Including transport packaging, without accessories and without reduction inserts

Type	d-d [mm]	Performance	Description	Code	kg	
GF 160	40 - 160	230 V/1850 W		<b>790 114 191</b>	122.000	
GF 160	40 - 160	230 V/1850 W	Russian	<b>790 114 179</b>	122.000	
GF 250	75 - 250	230 V/2490 W		<b>790 115 191</b>	175.000	
GF 250	75 - 250	230 V/2490 W	Russian	<b>790 115 179</b>	175.000	
GF 315	90 - 315	230 V/4170 W		<b>790 112 191</b>	213.000	
GF 315	90 - 315	230 V/4170 W	Russian	<b>790 112 179</b>	213.000	

PF 3 25 133 610

# Machines & Equipment for Butt Fusion

## GF 160 - 250 - 315 Accessories

### GF 160 Reduction clamping inserts



- d 40 - 140 mm
- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

d [mm]	narrow Code	wide Code	kg
40	790 114 027	790 114 023	0.300
50	790 114 016	790 114 009	0.320
63	790 114 017	790 114 010	0.300
75	790 114 018	790 114 011	0.300
90	790 114 019	790 114 012	0.280
110	790 114 020	790 114 013	0.245
125	790 114 021	790 114 014	0.265
140	790 114 022	790 114 015	0.180

PF 3 25 117 316

### GF 250 Reduction clamping inserts



- d 75 - 225 mm
- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

d [mm]	narrow Code	wide Code	kg
75	790 115 029	790 115 028	0.815
90	790 115 016	790 115 008	0.835
110	790 115 017	790 115 009	0.825
125	790 115 018	790 115 010	0.785
140	790 115 019	790 115 011	0.735
160	790 115 020	790 115 012	0.695
180	790 115 021	790 115 013	0.660
200	790 115 022	790 115 014	0.715
225	790 115 023	790 115 015	0.465

PF 3 25 117 305

### GF 315 Reduction clamping inserts



- d 90 - 280 mm
- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

d [mm]	narrow Code	wide Code	kg
90	790 112 098	790 112 088	1.000
110	790 112 099	790 112 089	1.050
125	790 112 100	790 112 090	0.988
140	790 112 101	790 112 091	0.975
160	790 112 102	790 112 092	1.062
180	790 112 103	790 112 093	0.988
200	790 112 104	790 112 094	0.937
225	790 112 105	790 112 095	0.975
250	790 112 106	790 112 096	0.937
280	790 112 107	790 112 097	0.800

PF 3 25 117 307

# Machines & Equipment for Butt Fusion

## GF 160 - 250 - 315 Reduction clamping inserts-set



- 4 wide and 4 narrow clamping inserts of each dimension

d-d [mm]	Code	kg	
40 - 140	<b>790 114 156</b>	17.000	
75 - 225	<b>790 115 156</b>	48.000	
90 - 280	<b>790 112 156</b>	78.000	

PF 3 25 117 316

## GF 160 - 250 - 315 Special clamping bracket tapered



- For clamping of fittings d 160 - 315 mm
- For left-sided mounting (stationary side) with shell adapter
- Version for right-sided mounting (slide)
- L = left
- R = right

d [mm]	Type	Code	kg	
160	L	<b>790 114 025</b>	0.820	
160	R	<b>790 114 026</b>	0.680	
250	L	<b>790 115 025</b>	1.825	
250	R	<b>790 115 026</b>	1.560	
315	L	<b>790 112 111</b>	2.780	
315	R	<b>790 112 112</b>	2.335	

PF 3 25 117 316

## GF 160 - 250 - 315 Flange adapter clamping unit



- For correct clamping and fusion jointing of short-ended fittings

d-d [mm]	Code	kg	
40 - 160	<b>790 114 045</b>	6.400	
75 - 250	<b>790 115 045</b>	9.600	
90 - 315	<b>790 112 038</b>	15.400	

PF 3 25 117 316

## GF 160 - 250 - 315 Set planer blades



- (1 set = 2 blades)

d-d [mm]	Code	kg	
40 - 160	<b>790 113 056</b>	0.080	
75 - 250	<b>790 115 024</b>	0.060	
90 - 315	<b>790 112 110</b>	0.115	

PF 3 25 117 311

# Machines & Equipment for Butt Fusion

## GF 400 Butt fusion machine

### Machine GF 400 complete, 230 V



- High quality, long-lasting heating element butt fusion machine for fusion jointing PP and PE pipes and fittings. For complete pressure range up to SDR 11.
- Machine complete with remote control
- The GF butt fusion machines can be assembled with the welding recorder WR 100 or configured as a CNC machine with the SUVI® 400.
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg
125 - 400	230 V/5700 W	<b>790 127 001</b>	210.000

PF 3 25 870 100

### Machine GF 400 complete, 400 V



- The GF400 butt fusion machine can be assembled with the welding recorder WR 100 or configured as a CNC machine with the SUVI® 400. The different versions are listed on the following pages
- High quality, long-lasting heating element butt fusion machine for fusion jointing PP and PE pipes and fittings. For complete pressure range up to SDR 11.
- Assembled with control box to supply all components with power, only 1 power connection required !
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg
125 - 400	400 V/5700 W	<b>790 127 010</b>	210.000

PF 3 25 870 100

### Base machine



- High precision design, distortion-free and sturdy machine frame
- Good accessibility thanks to 35° inclination
- Hardened and hard chrome-plated guide shafts for extreme loads
- Smooth-running cylinder guides with mechanical seals
- Hydraulic connections protected and integrated in base clamping unit for more flexibility when clamping piping components
- Heater release mechanism to optimize the changeover phase
- For the purpose of welding bends and T-pieces the 2. clamping element is fast and relocatable without losing stability on the guiding shafts
- Double clamping device for secure hold and exact radial and axial alignment of components
- Machine specific tool set

d-d [mm]	Code	kg
125 - 400	<b>790 127 002</b>	95.000

PF 3 25 117 332

### Planer



- Powerful parallel planer for single or double-sided facing of pipe ends
- Right-angled facing due to wide bedding, with side stop for single-sided facing
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg
125 - 400	230 V/1100 W	<b>790 127 003</b>	39.000

PF 3 25 117 332

# Machines & Equipment for Butt Fusion

## Heating element



PF 3 25 117 332

- High temperature accuracy over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life
- Easy placement in the correct working position with heater release mechanism

d-d [mm]	Performance	Code	kg
125 - 400	230 V/3500 W	<b>790 127 004</b>	15.000

## Hydraulic unit



PF 3 25 117 332

- Compact and robust with two handles for carrying
- Precise hydraulic control for consistent fusion pressure
- Variable, fine adjustment of pressure
- Clearly visible, vibration-free pressure gauge with precision scaling
- Accumulator for pressure equalization during the cooling phase
- Easy level control and refilling of hydraulic oil

Performance	Code	kg
400 V/1500 W	<b>790 127 006</b>	40.000

## Hydraulic hose package



PF 3 25 117 307

- Flexible hydraulic hoses, with drip-proof, quick-coupling action

Code	kg
<b>790 112 085</b>	4.250

## Control box

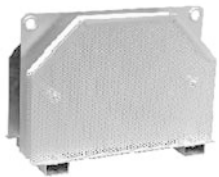


PF 3 25 117 332

- 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

Performance	Code	kg
400 V	<b>790 127 008</b>	15.500

## Case



PF 3 25 117 332

- For safe storage of planer and heating element

Code	kg
<b>790 127 005</b>	29.000

# Machines & Equipment for Butt Fusion

## GF 400 CNC Butt fusion machine



### Machine complete

- For fusion jointing of PP and PE pipes and fittings. The automatic CNC, hydraulically-operated butt fusion machines are designed for applications in gas and water distribution piping systems as well as for use in trenches, outdoors or in the workshop.
- The CNC control unit (SUVI® 400) controls and regulates the complete fusion process according to the approved national guidelines (e.g. DVS guidelines).
- All fusion parameters (set/actual comparison) are recorded on a memory card and can be called up and shown on the display. External fusion data processing is easy with the exchangeable memory card or with the build-in interface for the PC, printer or laptop. The integrated error analysis system recognizes deviations from the defined parameters and interrupts the fusion cycle while simultaneously recording the error source.

### SUVI® 400 CNC - Control unit

- This unit consists of the hydraulic and the control unit with data recording
- Automatic control of planing with even-out function
- Automatically controlled temperature of the heating element
- Automatically controlled facing process
- Minimal weight of complete CNC control unit with two handles for carrying
- Tamper-safe, easy data recording with exchangeable memory card (256 kB)
- Clear overview, 2-line LCD with backlighting
- Temperature sensor for accurate recording of ambient temperature
- Serial interface (RS 232, 9-in) to connect PCs or laptops
- Parallel standard printer interface (Centronics)
- Safe two-handed operation according to TÜV for machine carriage movement
- Barcode reader for data input (optional)

### Base machine

- Technical features as for manual versions
- Position measurement of the carriage (safety, process monitoring)

### Planer, Heating element, Hydraulic hose package, Case, Tools set

- Technical features same as for manually operated machines
- Including transport packaging, without accessories and without reduction inserts

d-d [mm]	Performance	Type	Code	kg	
125 - 400	230 V/5510 W		<b>790 127 069</b>	200.000	
125 - 400	230 V/5510 W	Russian	<b>790 127 070</b>	200.000	

PF 3 25 870 610

# Machines & Equipment for Butt Fusion

## GF 400 Accessories

### Hoist unit



- For carrying planer and heating element.
- The weight compensator is mounted at the backside of the base machine.
- Weight compensator included

Code	kg	
790 127 026	50.000	

PF 3 25 117 332

### Reduction clamping inserts, wide



- d 125-355 mm
- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

In order to mount the inserts d 125/d 140/d 160/d 180/d 200/d 225/d 250/d 280, the reduction clamping insert d 315 mm, code 790 127 101, must also be used

d [mm]	Code	kg	
125	790 112 090	0.988	
140	790 112 091	0.975	
160	790 112 092	1.062	
180	790 112 093	0.988	
200	790 112 094	0.937	
225	790 112 095	0.975	
250	790 112 096	0.937	
280	790 112 097	0.800	
315	790 127 101	1.810	
355	790 127 102	1.650	

PF 3 25 117 332

### Reduction clamping inserts, narrow



- d 125-355 mm
- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

In order to mount the inserts d 125/d 140/d 160/d 180/d 200/d 225/d 250/d 280, the reduction clamping insert d 315 mm, code 790 127 101, must also be used

d [mm]	Code	kg	
125	790 112 100	1.245	
140	790 112 101	1.205	
160	790 112 102	1.135	
180	790 112 103	1.010	
200	790 112 104	0.950	
225	790 112 105	0.865	
250	790 112 106	0.770	
280	790 112 107	0.560	
315	790 127 111	1.180	
355	790 127 112	0.910	

PF 3 25 117 332

# Machines & Equipment for Butt Fusion

## Reduction clamping inserts-set



- 4 wide and 4 narrow clamping inserts of each dimension
- 8 wide clamping inserts d 315 mm

PF 3 25 117 332

d-d [mm]	Code	kg	
125 - 355	<b>790 127 156</b>	30.000	



## Flange adapter clamping unit

- For correct clamping and fusion jointing of short-ended fittings

PF 3 25 117 332

d [mm]	Code	kg	
400	<b>790 127 045</b>	24.600	



## 1 Set planer blades

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

PF 3 25 117 307

Code	kg	
<b>790 112 110</b>	0.115	

# Machines & Equipment for Butt Fusion

## GF 500 Butt fusion machine

### Machine GF 500 complete

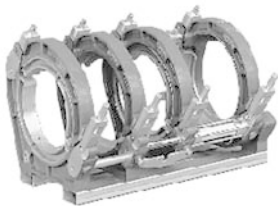


- High quality, long-lasting heating element butt fusion machine for fusion jointing PP and PE pipes and fittings. Size range d 200-500 mm, for complete pressure range up to PN 16.
- The GF500 butt fusion machine can be assembled with the welding recorder WR 100 or configured as a CNC machine with the SUVI® 400. The different versions are listed on the following pages
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg
200 - 500	400 V/6250 W	<b>790 116 040</b>	498.000

PF 3 25 126 200

### Base machine



- High precision design, distortion-free and sturdy machine frame
- Good accessibility thanks to 35° inclination
- Hardened and hard chrome-plated guide shafts for extreme loads
- Smooth-running cylinder guides with mechanical seals
- Hydraulic connections protected and integrated in base clamping unit for more flexibility when clamping piping components
- Heater release mechanism to optimize the changeover phase
- For the purpose of welding bends and T-pieces the 2. clamping element is fast and relocatable without losing stability on the guiding shafts
- Double clamping device for secure hold and exact radial and axial alignment of components
- Machine specific tool set

d-d [mm]	Code	kg
200 - 500	<b>790 116 002</b>	174.000

PF 3 25 126 200

### Planer



- Powerful parallel planer for single or double-sided facing of pipe ends
- Right-angled facing due to wide bedding, with side stop for single-sided facing
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg
200 - 500	400 V/750 W	<b>790 116 003</b>	53.600

PF 3 25 117 306

### Heating element



- High temperature accuracy over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life
- Easy placement in the correct working position with heater release mechanism

d-d [mm]	Performance	Code	kg
200 - 500	400 V/4000 W	<b>790 116 004</b>	26.000

PF 3 25 117 306

# Machines & Equipment for Butt Fusion

## Hydraulic unit



- Compact and robust with two handles for carrying
- Precise hydraulic control for consistent fusion pressure
- Variable, fine adjustment of pressure
- Clearly visible, vibration-free pressure gauge with precision scaling
- Accumulator for pressure equalization during the cooling phase
- Easy level control and refilling of hydraulic oil

Performance	Code	kg
400 V/1500 W	<b>790 116 039</b>	38.000

PF 3 25 117 306

## 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

Voltage	Code	kg
400 V	<b>790 116 038</b>	15.500

PF 3 25 117 306

## Hydraulic hose package

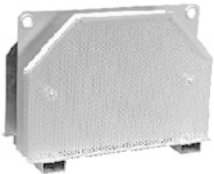


- Flexible hydraulic hoses, with drip-proof, quick-coupling action

Code	kg
<b>790 112 085</b>	4.250

PF 3 25 117 307

## Case



- For safe storage of planer and heating element

Code	kg
<b>790 116 006</b>	41.000

PF 3 25 117 306

# Machines & Equipment for Butt Fusion

## GF 500 CNC Butt fusion machine



### Machine complete

- For fusion jointing of PP and PE pipes and fittings. The automatic CNC, hydraulically-operated butt fusion machines are designed for applications in gas and water distribution piping systems as well as for use in trenches, outdoors or in the workshop.
- The CNC control unit (SUVI® 400) controls and regulates the complete fusion process according to the approved national guidelines (e.g. DVS guidelines).
- All fusion parameters (set/actual comparison) are recorded on a memory card and can be called up and shown on the display. External fusion data processing is easy with the exchangeable memory card or with the build-in interface for the PC, printer or laptop. The integrated error analysis system recognizes deviations from the defined parameters and interrupts the fusion cycle while simultaneously recording the error source.

### SUVI® 400 CNC - Control unit

- This unit consists of the hydraulic and the control unit with data recording
- Automatic control of planing with even-out function
- Automatically controlled temperature of the heating element
- Automatically controlled facing process
- Minimal weight of complete CNC control unit with two handles for carrying
- Tamper-safe, easy data recording with exchangeable memory card (256 kB)
- Clear overview, 2-line LCD with backlighting
- Temperature sensor for accurate recording of ambient temperature
- Serial interface (RS 232, 9-in) to connect PCs or laptops
- Parallel standard printer interface (Centronics)
- Safe two-handed operation according to TÜV for machine carriage movement
- Barcode reader for data input (optional)

### Base machine

- Technical features as for manual versions
- Position measurement of the carriage (safety, process monitoring)

### Planer, Heating element, Hydraulic hose package, Case, Tools set

- Technical features same as for manually operated machines
- Including transport packaging, without accessories and without reduction inserts

d-d [mm]	Performance	Type	Code	kg	
200 - 500	400 V/6250 W		<b>790 116 069</b>	476.000	
200 - 500	400 V/6250 W	Russian	<b>790 116 067</b>	476.000	
200 - 500	400 V/6250 W	Chinese	<b>790 116 178</b>	476.000	

PF 3 25 126 610

# Machines & Equipment for Butt Fusion

## GF 500 Accessories

### 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.
- We recommend 4 wide and 4 narrow half shells.

In order to mount the inserts d 200/d 225, the reduction clamping insert 790 116 015 must also be used

d [mm]	Code	kg
200	<b>790 116 008</b>	4.160
225	<b>790 116 009</b>	3.300
250	<b>790 116 010</b>	3.300
280	<b>790 116 011</b>	3.500
315	<b>790 116 012</b>	3.600
355	<b>790 116 013</b>	3.700
400	<b>790 116 014</b>	3.400
450	<b>790 116 015</b>	3.500

PF 3 25 117 306

### Reduction clamping inserts, narrow



- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

In order to mount the inserts d 200/d 225, the reduction clamping insert 790 116 015 must also be used

d [mm]	Code	kg
200	<b>790 116 016</b>	3.680
225	<b>790 116 017</b>	4.100
250	<b>790 116 018</b>	4.100
280	<b>790 116 019</b>	3.800
315	<b>790 116 020</b>	3.500
355	<b>790 116 021</b>	3.200
400	<b>790 116 022</b>	2.500
450	<b>790 116 023</b>	2.500

PF 3 25 117 306

### Reduction clamping inserts-set



- 4 wide and 4 narrow clamping inserts of each dimension

d-d [mm]	Code	kg
250 - 450	<b>790 116 156</b>	162.000

PF 3 25 117 306

### Hoist unit frame



- Hoist unit (consists of frame and swivel arm)
- Mounted to the base machine

Code	kg
<b>790 116 026</b>	22.000

PF 3 25 117 306

# Machines & Equipment for Butt Fusion

## Weight compensator to hoist unit



PF 3 25 117 306

- For heating element, planer weight is partially compensated
- For hoist unit 790 116 026

Code	kg	
790 116 027	12.500	



PF 3 25 117 306

## Flange adapter clamping unit

- For correct clamping and fusion jointing of short-ended fittings

d [mm]	Code	kg	
500	790 116 045	19.000	



PF 3 25 117 306

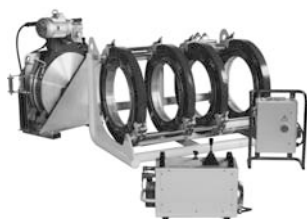
## 1 Set planer blades

description	Code	kg	
Blade has 2 cutting edges (1 set = 2 blades)	790 116 041	0.700	

# Machines & Equipment for Butt Fusion

## GF 630 Butt fusion machine

### Machine GF 630 complete

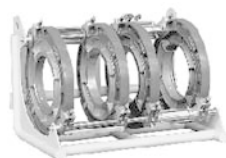


- High quality, long-lasting heating element butt fusion machine for fusion jointing PP, PE pipes and fittings. Size range d 315-630 mm, for complete pressure range up to PN 16.
- The GF630 butt fusion machine can be assembled with the welding recorder WR 100 or configured as a CNC machine with the SUVI® 400. The different versions are listed on the following pages.
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg
315 - 630	400 V/11000 W	<b>790 117 001</b>	589.000

PF 3 25 136 100

### Base machine



- High precision design, distortion-free and sturdy machine frame
- Good accessibility thanks to 45° inclination
- Hardened and hard chrome-plated guide shafts for extreme loads
- Smooth-running cylinder guides with mechanical seals
- Hydraulic connections protected and integrated in base clamping unit for more flexibility when clamping piping components
- Heater release mechanism
- Double clamping device for secure hold and exact radial and axial alignment of components
- Machine specific tool set

d-d [mm]	Code	kg
315 - 630	<b>790 117 002</b>	225.000

PF 3 25 136 100

### Planer



- Powerful parallel planer for single or double-sided facing of pipe ends
- Right-angled facing due to wide bedding, with side stop for single-sided facing
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg
315 - 630	400 V/1500 W	<b>790 117 003</b>	98.000

PF 3 25 117 319

### Heating element



- High performance heating element with electronic, continuously adjustable temperature control
- High temperature accuracy over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life
- Easy placement in the correct working position with heater release mechanism

d-d [mm]	Performance	Code	kg
315 - 630	400 V/8000 W	<b>790 117 004</b>	36.000

PF 3 25 117 319

# Machines & Equipment for Butt Fusion

## Hydraulic unit



- Compact and robust with two handles for carrying
- Precise hydraulic control for consistent fusion pressure
- Variable, fine adjustment of pressure
- Clearly visible, vibration-free pressure gauge with precision scaling
- Accumulator for pressure equalization during the cooling phase
- Easy level control and refilling of hydraulic oil

Code	kg	
790 116 039	38.000	

## Control box



- 400 V
- 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

Code	kg	
790 117 038	14.000	

PF 3 25 117 319

## Case



- For safe storage of planer and heating element

Code	kg	
790 117 006	55.000	

PF 3 25 117 319

## Hydraulic hose package



- Flexible hydraulic hoses, with drip-proof, quick-coupling action

Code	kg	
790 112 085	4.250	

PF 3 25 117 307

# Machines & Equipment for Butt Fusion

## GF 630 CNC Butt fusion machine



### Machine complete

- For fusion jointing of PP and PE pipes and fittings. The automatic CNC, hydraulically-operated butt fusion machines are designed for applications in gas and water distribution piping systems as well as for use in trenches, outdoors or in the workshop.
- The CNC control unit (SUVI® 400) controls and regulates the complete fusion process according to the approved national guidelines (e.g. DVS guidelines).
- All fusion parameters (set/actual comparison) are recorded on a memory card and can be called up and shown on the display. External fusion data processing is easy with the exchangeable memory card or with the build-in interface for the PC, printer or laptop. The integrated error analysis system recognizes deviations from the defined parameters and interrupts the fusion cycle while simultaneously recording the error source.

### SUVI® 400 CNC - Control unit

- This unit consists of the hydraulic and the control unit with data recording
- Automatic control of planing with even-out function
- Automatically controlled temperature of the heating element
- Automatically controlled facing process
- Minimal weight of complete CNC control unit with two handles for carrying
- Tamper-safe, easy data recording with exchangeable memory card (256 kB)
- Clear overview, 2-line LCD with backlighting
- Temperature sensor for accurate recording of ambient temperature
- Serial interface (RS 232, 9-in) to connect PCs or laptops
- Parallel standard printer interface (Centronics)
- Safe two-handed operation according to TÜV for machine carriage movement
- Barcode reader for data input (optional)

### Base machine

- Technical features as for manual versions
- Position measurement of the carriage (safety, process monitoring)

### Planer, Heating element, Hydraulic hose package, Case, Tools set

- Technical features same as for manually operated machines
- Including transport packaging, without accessories and without reduction inserts

d-d [mm]	Performance	Type	Code	kg	
315 - 630	400 V/11000 W		<b>790 117 069</b>	613.000	
315 - 630	400 V/11000 W	Russian	<b>790 117 067</b>	613.000	
315 - 630	400 V/11000 W	Chinese	<b>790 117 178</b>	613.000	

PF 3 25 136 610

# Machines & Equipment for Butt Fusion

## GF 630 Accessories



### 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.
- We recommend 4 wide and 4 narrow half shells.

In order to mount the inserts d 315/d 355/d 400/d 450 to the base clamp d 630, the reduction clamping insert d 500 mm, code 790 117 012, must also be used

d [mm]	Code	kg
315	<b>790 116 012</b>	3.600
355	<b>790 116 013</b>	3.700
400	<b>790 116 014</b>	3.400
450	<b>790 116 015</b>	3.500
500	<b>790 117 012</b>	4.600
560	<b>790 117 013</b>	4.300

PF 3 25 117 319



### Reduction clamping inserts, narrow

- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

In order to mount the inserts d 315/d 355/d 400/d 450 to the base clamp d 630, the reduction clamping insert d 500 mm, code 790 117 012, must also be used

d [mm]	Code	kg
315	<b>790 116 020</b>	3.500
355	<b>790 116 021</b>	3.200
400	<b>790 116 022</b>	2.500
450	<b>790 116 023</b>	2.500

PF 3 25 117 319



### Reduction clamping inserts-set

- 4 wide and 4 narrow clamping inserts d 315, d 355, d 400, d 450
- 8 wide reduction inserts d 500, d 560

d-d [mm]	Code	kg
315 - 560	<b>790 117 021</b>	201.000

PF 3 25 117 319



### Hoist unit, complete

- Hoist unit (consists of frame and swivel arm)
- Arm length 2m, pivoting, back/forward, max. column height from floor 3.30m
- Electrical unit 400 V / 600 W
- Hoist capacity 250 kg
- 2 hoisting speeds (1,7 m/min. and 7.0 m/min.)

Code	kg
<b>790 117 023</b>	196.000

PF 3 25 117 319



### Flange adapter clamping unit

- For correct clamping and fusion jointing of short-ended fittings

d [mm]	Code	kg
630	<b>790 117 029</b>	27.000

# Machines & Equipment for Butt Fusion

## 1 Set planer blades

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

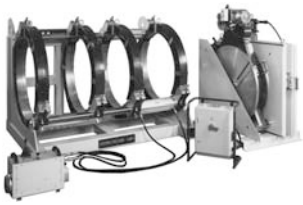


PF 3 25 117 319

Code	kg	
790 117 041	0.470	

# Machines & Equipment for Butt Fusion

## GF 800 Butt fusion machine



### Machine GF 800 complete

- Robust heating element-butt fusion machine for fusion jointing PP and PE pipes and fittings. Size range d 500-800 mm.
- 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 800 mm requires a fusion pressure of 106 bar according to DVS 2207 – 1 (0,15 MPa)
- The GF 800 butt fusion machine can be assembled with the welding recorder WR 100
- For proper handling of the heating element and planer we recommend the assembling of the hoist unit (790123016)
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg
500 - 800	400 V/15000 W	<b>790 123 025</b>	1546.000

PF 3 10 576 100



### Base machine

- Heater release mechanism
- High precision design, distortion-free and sturdy machine frame
- Good accessibility thanks to 45° inclination
- Hardened and hard chrome-plated guide shafts for extreme loads
- Smooth-running cylinder guides with mechanical seals
- Hydraulic connections protected and integrated in base clamping unit for more flexibility when clamping piping components
- Double clamping device for secure hold and exact radial and axial alignment of components
- Machine specific tool set

d-d [mm]	Code	kg
500 - 800	<b>790 123 023</b>	690.000

PF 3 25 136 200



### Planer

- Powerful parallel planer for single or double-sided facing of pipe ends 400 V/1500 W
- Load transfer via maintenance-free chain drive
- Right-angled facing due to wide bedding, with side stop for single-sided facing
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg
500 - 800	400 V/1500 W	<b>790 123 003</b>	175.000

PF 3 25 117 322



### Heating element

- High temperature accuracy over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life
- Easy placement in the correct working position with heater release mechanism

d-d [mm]	Performance	Code	kg
500 - 800	400 V/12000 W	<b>790 123 004</b>	56.000

PF 3 25 117 322

# Machines & Equipment for Butt Fusion

## Hydraulic unit



- Maximum pressure 200 bar
- Compact and robust with two handles for carrying
- Precise hydraulic control for consistent fusion pressure
- Variable, fine adjustment of pressure
- Clearly visible, vibration-free pressure gauge with precision scaling
- Accumulator for pressure equalization during the cooling phase
- Easy level control and refilling of hydraulic oil

PF 3 25 117 319

Performance	Code	kg
400 V/1500 W	<b>790 123 010</b>	38.000

## 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

PF 3 25 117 319

Performance	Code	kg
400 V	<b>790 123 009</b>	29.000

## Hydraulic hose package



- Flexible hydraulic hoses, with drip-proof, quick-coupling action

PF 3 25 117 322

Code	kg
<b>790 123 020</b>	6.000

## Case



- For safe storage of planer and heating element

PF 3 25 117 322

Code	kg
<b>790 123 007</b>	230.000

# Machines & Equipment for Butt Fusion

## GF 800 Accessories

### Reduction clamping inserts



- d 500 - 710 mm
- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.

In order to mount the inserts d 500/d 560, the reduction clamping insert d 630, code 790 123 011 must also be used

d [mm]	wide Code	kg	
500	<b>790 117 012</b>	4.600	
560	<b>790 117 013</b>	4.300	
630	<b>790 123 011</b>	11.000	
710	<b>790 123 012</b>	9.500	

PF 3 10 576 900



### Electric Hoist unit

- Hoist capacity 500 kg
- Arm length 2m, pivoting, back/forward, max. column height from floor 4.65 m, 2 hoisting speeds (2.5 m/min. and 5.5 m/min.)

Code	kg	
<b>790 123 016</b>	270.000	

PF 3 25 117 322



### Flange adapter clamping unit

- For correct clamping and fusion jointing of short-ended fittings

d-d [mm]	Code	kg	
500 - 800	<b>790 123 029</b>	120.000	

PF 3 25 117 322



### 1 Set planer blades

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

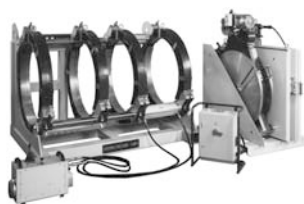
Code	kg	
<b>790 117 041</b>	0.470	

PF 3 25 117 319

# Machines & Equipment for Butt Fusion

## GF 1000 Butt fusion machine

### Machine GF 1000 complete



- Robust heating element-butt fusion machine for jointing PP and PE pipes and fittings
- Size range dn 710 – 1000 mm
- 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 1000 mm requires a fusion pressure of 130 bar according to DVS 2207 – 1 (0,15 MPa)
- The GF 1000 butt fusion machine can be assembled with the welding recorder WR 100
- For proper handling of the heating element and planer we recommend the assembling of the hoist unit (790124016)
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg
710 - 1000	400 V/19500 W	<b>790 124 025</b>	2528.000

PF 3 10 577 100

### Base machine



- High precision design, distortion-free and sturdy machine frame
- Heater release mechanism
- Good accessibility thanks to 45° inclination
- Hardened and hard chrome-plated guide shafts for extreme loads
- Smooth-running cylinder guides with mechanical seals
- Hydraulic connections protected and integrated in base clamping unit for more flexibility when clamping piping components
- Double clamping device for secure hold and exact radial and axial alignment of components
- Machine specific tool set

d-d [mm]	Code	kg
710 - 1000	<b>790 124 023</b>	1240.000

PF 3 25 136 300

### Planer



- Powerful parallel planer for single or double-sided facing of pipe ends
- Right-angled facing due to wide bedding, with side stop for single-sided facing
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg
710 - 1000	400 V/3000 W	<b>790 124 003</b>	325.000

PF 3 25 117 323

### Heating element



- High performance heating element with electronic, continuously adjustable temperature control
- High temperature accuracy over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life

d-d [mm]	Performance	Code	kg
710 - 1000	400 V/15000 W	<b>790 124 004</b>	82.000

PF 3 25 117 323

# Machines & Equipment for Butt Fusion

## Hydraulic unit



- Maximum pressure 200 bar
- Compact and robust with two handles for carrying
- Precise hydraulic control for consistent fusion pressure
- Variable, fine adjustment of pressure
- Clearly visible, vibration-free pressure gauge with precision scaling
- Accumulator for pressure equalization during the cooling phase
- Easy level control and refilling of hydraulic oil

Performance	Code	kg
400 V/1500 W	<b>790 123 010</b>	38.000



## Hydraulic hose package

- Flexible hydraulic hoses, with drip-proof, quick-coupling action

Code	kg
<b>790 123 020</b>	6.000

PF 3 25 117 322



## Control box

- 400 V
- 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

Code	kg
<b>790 123 009</b>	29.000

PF 3 25 117 319



## Case

- For safe storage of planer and heating element

Code	kg
<b>790 124 006</b>	345.000

PF 3 25 117 323

# Machines & Equipment for Butt Fusion

## GF 1000 Accessories

### Reduction clamping inserts



- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.

In order to mount the inserts d 710, the reduction clamping insert d 800 mm, code 790 124 011, must also be used

d [mm]	wide Code	kg	
710	<b>790 123 012</b>	9.500	
800	<b>790 124 011</b>	19.400	
900	<b>790 124 012</b>	20.000	



PF 3 25 137 100

### Electric hoist unit

- Hoist capacity 500 kg
- Arm length 2m, pivoting, back/forward, max. column height from floor 4.65 m, 2 hoisting speeds (2.5 m/min. and 5.5 m/min.)

Code	kg	
<b>790 124 016</b>	300.000	



PF 3 25 117 323

### Flange adapter clamping unit

- For correct clamping and fusion jointing of short-ended fittings

Code	kg	
<b>790 124 029</b>	170.000	



PF 3 25 137 100

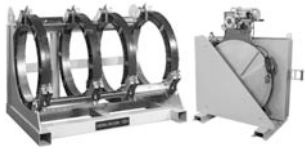
### 1 Set planer blades

- (1 set = 4 blades)

Code	kg	
<b>790 124 021</b>	1.300	

# Machines & Equipment for Butt Fusion

## GF 1200 Butt fusion machine



### Machine GF 1200 complete

- Robust heating element-butt fusion machine for jointing PP and PE pipes and fittings
- 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 17, dn 1200 mm requires a fusion pressure of 125 bar according to DVS 2207 – 1 (0,15 MPa)
- The GF 1200 butt fusion machine can be assembled with the welding recorder WR 100.
- For proper handling of the heating element and planer we recommend the assembling of the hoist unit (790125016)
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg
800 - 1200	400 V/20500 W	<b>790 125 025</b>	2932.000

PF 3 10 578 100



### Base machine

- High precision design, distortion-free and sturdy machine frame
- Heater release mechanism
- Good accessibility thanks to 45° inclination
- Hardened and hard chrome-plated guide shafts for extreme loads
- Smooth-running cylinder guides with mechanical seals
- Hydraulic connections protected and integrated in base clamping unit for more flexibility when clamping piping components
- Double clamping device for secure hold and exact radial and axial alignment of components
- Tool set specified to machine

d-d [mm]	Code	kg
800 - 1200	<b>790 125 023</b>	1340.000

PF 3 25 136 400

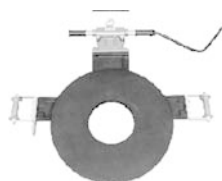


### Planer

- Powerful parallel planer for single or double-sided facing of pipe ends
- Load transfer via maintenance-free chain drive
- Right-angled facing due to wide bedding, with side stop for single-sided facing
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg
800 - 1200	400 V/3000 W	<b>790 125 003</b>	452.000

PF 3 25 117 324



### Heating element

- High performance heating element with electronic, continuously adjustable temperature control
- High temperature accuracy over the entire heating surface

d-d [mm]	Performance	Code	kg
800 - 1200	400V/16000 W	<b>790 125 004</b>	94.000

PF 3 25 117 324

# Machines & Equipment for Butt Fusion

## Hydraulic unit



- Maximum pressure 200 bar
- Compact and robust with two handles for carrying
- Precise hydraulic control for consistent fusion pressure
- Variable, fine adjustment of pressure
- Clearly visible, vibration-free pressure gauge with precision scaling
- Accumulator for pressure equalization during the cooling phase
- Easy level control and refilling of hydraulic oil

Performance	Code	kg	
400 V/1500 W	<b>790 123 010</b>	38.000	



## Case

- For safe storage of planer and heating element

Code	kg	
<b>790 125 006</b>	420.000	

PF 3 25 117 324

# Machines & Equipment for Butt Fusion

## GF 1200 Accessories



### 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.

In order to mount the inserts d 800/d 900, the reduction clamping insert d 1000, code 790 125 011, must also be used.

d [mm]	Code	kg
800	<b>790 124 011</b>	19.400
900	<b>790 124 012</b>	20.000
1000	<b>790 125 011</b>	20.500

PF 3 25 117 323



### Electric Hoist unit

- Hoist capacity 500 kg
- Arm length 2m, pivoting, back/forward, max. column height from floor 4.65 m, 2 hoisting speeds (2.5 m/min. and 5.5 m/min.)

Code	kg
<b>790 125 016</b>	308.000

PF 3 25 117 324



### Flange adapter clamping unit

- For correct clamping and fusion jointing of short-ended fittings

Code	kg
<b>790 125 029</b>	260.000

PF 3 25 117 324



### 1 Set planer blades

- (1 set = 4 blades)

Code	kg
<b>790 125 021</b>	1.600

PF 3 25 137 100

# Machines & Equipment for Butt Fusion

## WR 100

### WR 100 Fusion welding recording device



The WR 100 supports you to ensure the quality of the jointing done according to the country specific standards. The concept of the fusion data recording device enables configuration and retrofitting of hydraulically operated butt-fusion machines for field applications.

The whole fusion sequence is recorded and can be retraced later. The user is guided through all the fusion steps. The selection of the fusion data like the used material, diameter and wall thickness (SDR) is supported by a menu. The highly accurate recording device WR100 controls the fusion process according to the valid national guidelines (e.g. DVS, WIS or UNI). The recorder with its on-board printer comes in a hard plastic PE case of IP65 protection class.

#### Performance:

- Easy configuration by operator to the different GF/KL/TM machines
- Internal memory fusion protocol with a capacity of up to 100 records
- Easy-to-follow user guidance
- Battery support for data recording (8 hours), no data loss during power interruption
- Configuration: User identity, Job site and order no.
- Different menu languages
- Country specific fusion parameter
- Interchangeable with SUVI®50 data logger

#### Data Processing:

- Individual print out directly from serial on board printer
- Collective and individual print out directly from WR 100 to external printer (only HP) (parallel interface 790 119 402)
- Collective and individual protocol download to PC using the hyper terminal communicator windows (serial interface 790 119 403)

Power connector: Schuko, 16A

Working temperature range: -10°C up to +50°C

Includes connecting cables to butt fusion machine

Type	Performance	Dimensions [mm]	Code	kg
WR 100	230 V	350x300x150 mm	<b>790 119 401</b>	6.000
WR 100 CYRILLIC	230 V	350x300x150 mm	<b>790 119 425</b>	5.500

PF 3 25 132 100

### Machines fitted with WR 100



Type	Performance	Code	kg
GF 400 WR 100	400V/5710W	<b>790 127 015</b>	350.000
GF 400 WR 100	230V/5710W	<b>790 127 020</b>	350.000
GF 500 WR 100	400V/6260W	<b>790 116 075</b>	475.000
KL 500 TOP 1 WR 100	400V/6260W	<b>790 340 008</b>	475.000
KL 500 TOP 2 WR 100	400V/6260W	<b>790 340 035</b>	475.000
KL 630 TOP 1 WR 100	400V/11010W	<b>790 345 008</b>	600.000
KL 630 TOP 2 WR 100	400V/11010W	<b>790 345 035</b>	600.000
GF 630 WR 100	400V/11010W	<b>790 117 075</b>	600.000
GF 800 WR 100	400V/15010W	<b>790 123 075</b>	1550.000
GF 1000 WR 100	400V/19510W	<b>790 124 075</b>	3000.000
GF 1200 WR 100	400V/20510W	<b>790 125 075</b>	3210.000

PF 3 10 575 600

### Accessories

description	Code	kg
Serial/parallel printer cable (WR 100-Printer)	<b>790 119 402</b>	0.400
Serial Data transfer cable (WR100-PC)	<b>790 119 403</b>	0.250
USB Converter cable	<b>790 119 407</b>	0.300
Serial Adapter M/F	<b>790 119 408</b>	0.100

PF 3 25 117 312

# Machines & Equipment for Butt Fusion

## SUVI System Accessories

### Software PIPE WIN WELD / SUVI WIN WELD



- Professional software for analysis and documentation of installed piping systems or of a defined part of it: i. e. Pipe book. With PIPE WIN WELD it is possible to create a complete electronic documentation of the installed pipes and pipe connection elements. The software works with the data bases of MSA WIN WELD and SUVI WIN WELD. The software makes it possible to work with data from other manufacturers (CSV module for data transfer).
- The software is suitable for use with Windows ME/NT4/2000/XP/Vista.
- Scope of delivery: CD-ROM, USB hardlock (PIPE WIN-WELD, PIPE WIN-WELD CSV), installation guide (manuals and additional information on CD-ROM)

Type	Code	kg	Description
PIPE CSV	<b>790 119 301</b>	0.180	Complete package incl. CSV module for data transfer, USB hardlock
PIPE	<b>790 119 302</b>	0.180	Complete package, USB hardlock
SUVI	<b>790 119 303</b>	0.180	Complete package

PF 3 25 117 312

### Barcode reader pen



Code	kg	Description
<b>799 350 335</b>	0.165	Barcode reader pen

PF 2 51 306 001

### Memory Card



description	Code	kg
1024 kB/734 records	<b>790 119 157</b>	0.030

PF 3 25 117 312

# Machines & Equipment for Butt Fusion

## WM 315 Workshop butt fusion machine

### Machine WM 315



- Machine for jointing segmented fittings like bends from d90 - 315 mm for high pressure applications
- To produce T and Y fittings from d90 - 250 mm, special accessories are required

#### Machine description:

- Distortion-free, sturdy machine frame
- Electric and hydraulic components separated in the frame
- Control panel assembled with pressure adjustment valve, pressure selection switch (planing or fusion pressure), gauge, joy stick and emergency stop
- The main clamping tools are mounted on supports each of which can be adjusted transversely
- Each clamping tool can be turned a max. 22.5° and assembled with a set of reductions d90 - 280mm
- 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

d-d [mm]	Performance	Code	kg	
90 - 315	400 V/4620 W	790 118 060	464.000	

PF 3 25 135 100

### Machine WM 315 CNC



- Machine for jointing segmented fittings like bends from d90 - 315 mm for high pressure applications
- To produce T and Y fittings from d90 - 250 mm, special accessories are required
- Fully automated fusion process by the use of state of the art PLC and touch screen

#### Machine description:

- Highest flexibility in the pipe preparation process
- The heating element is removed automatically during the change-over phase
- Data storage and transfer via USB to the PC
- Data management by SUVI WIN-WELD
- Distortion-free, sturdy machine frame
- Electric and hydraulic components separated in the frame
- The main clamping tools are mounted on supports each of which can be adjusted transversely to the pipe axis
- Each clamping tool can be turned a max. 22.5° and assembled with a set of reductions d90 - 280mm
- Precision heating element with electronic temperature control (3000 W)
- High-quality PTFE coating with long service life
- 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

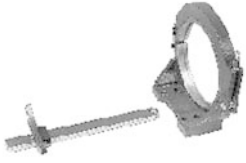
d-d [mm]	Performance	Code	kg	
90 - 315	400 V/4620 W	790 118 009	465.000	

PF 3 25 135 100

# Machines & Equipment for Butt Fusion

## WM 315 Accessories

### Base clamping unit left 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
- L = left
- R = right

d [mm]	Type	Code	kg
315	L	<b>790 118 011</b>	15.700
315	R	<b>790 118 012</b>	15.700

PF 3 25 117 318

### 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	kg
315	<b>790 118 028</b>	0.850

PF 3 25 117 318

### Set of pipe supports



d-d [mm]	Code	kg
90 - 280	<b>790 118 025</b>	6.700

PF 3 25 117 318

### Reduction clamping inserts, narrow



- d 90 - 280 mm
- Each code number defines 1 piece of reduction clamping insert.

d [mm]	Code	kg
90	<b>790 112 098</b>	0.995
110	<b>790 112 099</b>	1.285
125	<b>790 112 100</b>	1.245
140	<b>790 112 101</b>	1.205
160	<b>790 112 102</b>	1.135
180	<b>790 112 103</b>	1.010
200	<b>790 112 104</b>	0.950
225	<b>790 112 105</b>	0.865
250	<b>790 112 106</b>	0.770
280	<b>790 112 107</b>	0.560

### Back stop



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

Code	kg
<b>790 118 026</b>	5.200

PF 3 25 117 318

# Machines & Equipment for Butt Fusion

## Flange adapter clamping unit



PF 3 25 117 318

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

d-d [mm]	Code	kg	
90 - 315	<b>790 118 031</b>	25.000	

## T-fitting clamping unit



PF 3 25 117 318

- For the rational manufacturing of 90° T-fittings in the sizes d 90 to 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
- Packaging included

d-d [mm]	Code	kg	
90 - 250	<b>790 118 032</b>	140.000	

## Y-fitting clamping unit



PF 3 25 117 318

- 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
- Reduction clamping inserts d 90 - 225 mm
- Packaging included

d-d [mm]	Code	kg	
90 - 250	<b>790 118 033</b>	174.000	

## Set planer of blades



PF 3 25 117 318

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

description	Code	kg	
long	<b>790 118 042</b>	0.085	
short	<b>790 118 043</b>	0.045	

# Machines & Equipment for Butt Fusion

## WM 500 Plus Workshop butt fusion machine

### Machine WM 500 Plus



- Machine for jointing segmented fittings like bends from d250 - 500 mm for high pressure applications
- To produce T and Y fittings from d250 - 400 mm, special accessories are required

#### Machine description:

- Distortion-free, sturdy machine frame
- Electric and hydraulic components separated in the frame
- 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 main clamping tools are mounted on supports each of which can be adjusted transversely to the pipe axis
- Each clamping tool can be turned max. 22.5° and assembled with a set of reductions d250 - 450 mm
- Hydraulically opening and closing of the upper clamping tools, manual locking with bolts and nuts
- Precision heating element with electronic temperature control (10000 W)
- High-quality, PTFE coating with long service life
- Insertion hydraulically operated
- Powerful planer (1100 W) with optimized cutting geometry for even and chatter-free planing
- Load transfer via robust chain drive
- Insertion hydraulically operated
- During the planing process each slide could be moved separately (single sided planing)

d-d [mm]	Performance	Code	kg	
250 - 500	400 V/13600 W	<b>790 120 020</b>	1700.000	

PF 3 25 137 100

# Machines & Equipment for Butt Fusion

## WM 500 Plus Accessories

### Reduction clamping inserts, narrow



- Each code number defines 1 piece of reduction clamping insert.

d [mm]	Code	kg
250	<b>790 116 018</b>	4.100
280	<b>790 116 019</b>	3.800
315	<b>790 116 020</b>	3.500
355	<b>790 116 021</b>	3.200
400	<b>790 116 022</b>	2.500
450	<b>790 116 023</b>	2.500

### Reduction clamping inserts, wide



- Each code number defines 1 piece of reduction clamping insert.

d [mm]	Code	kg
250	<b>790 116 010</b>	3.300
280	<b>790 116 011</b>	3.500
315	<b>790 116 012</b>	3.600
355	<b>790 116 013</b>	3.700
400	<b>790 116 014</b>	3.400
450	<b>790 116 015</b>	3.500

### Back stop

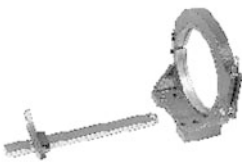


- Prevents the components from slipping out of the clamping device during fusion.

Code	kg
<b>790 108 026</b>	34.000

PF 3 25 117 321

### Base clamping unit 500 mm for fittings



- For clamping fittings of d500 mm as well as for the reduction clamping inserts for fittings of d250 to 450 mm. Guide shaft for pipe support and back stop, with pipe support d500 mm
- L = left
- R = right

d [mm]	Type	Code	kg
500	L	<b>790 120 011</b>	109.000
500	R	<b>790 120 012</b>	112.000

PF 3 25 117 320

### Set of pipe supports



d-d [mm]	Code	kg
250 - 450	<b>790 120 025</b>	10.700

PF 3 25 117 320

# Machines & Equipment for Butt Fusion

## Flange adapter clamping unit



PF 3 25 117 320

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

d-d [mm]	Code	kg	
250 - 500	<b>790 120 031</b>	73.000	

## T-fitting clamping unit



PF 3 25 117 320

- For the rational manufacturing of 90° T-fittings in the sizes d 250 to 400 mm
- Three-piece, precise clamping tool for easy mounting on the machine bed
- Complete with reduction clamping inserts d 250 - 355 mm
- Packaging included

d-d [mm]	Code	kg	
250 - 400	<b>790 120 032</b>	415.000	

## Y-fitting clamping unit



PF 3 25 117 320

- For the rational manufacturing of 30° to 45° Y-fittings in the sizes d 250 to 400 mm
- Three-piece, precise clamping tool for easy mounting on the machine bed
- Complete with reduction clamping inserts d 250 - 355 mm
- Packaging included

d-d [mm]	Code	kg	
250 - 400	<b>790 120 033</b>	610.000	

## 1 Set planer blades



PF 3 25 117 320

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

Code	kg	
<b>790 117 041</b>	0.470	

# Machines & Equipment for Butt Fusion

## WM 630 Plus Workshop butt fusion machine

### Machine WM 630 Plus



- Machine for jointing segmented fittings like bends from d315 - 630 mm for high pressure applications
- To produce T and Y fittings from d315 - 500 mm, special accessories are required

#### Machine description:

- Distortion-free, sturdy machine frame
- Electric and hydraulic components separated in the frame
- 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 main clamping tools are mounted on supports each of which can be adjusted transversely to the pipe axis
- Each clamping tool can be turned max. 22.5° and assembled with a set of reductions d315 - 560 mm
- Hydraulically opening and closing of the upper clamping tools, manual locking with bolts and nuts
- Precision heating element with electronic temperature control (12000 W)
- High-quality PTFE coating with long service life
- Insertion hydraulically operated
- Powerful planer (1100 W) with optimized cutting geometry for even and chatter-free planing
- Load transfer via robust chain drive
- Insertion hydraulically operated
- During the planing process each slide could be moved separately (single sided planing)

d-d [mm]	Performance	Code	kg	
315 - 630	400 V/15600 W	<b>790 108 020</b>	1870.000	

PF 3 25 138 100

# Machines & Equipment for Butt Fusion

## Machine WM 630 CNC



- Machine for jointing segmented fittings like bends from d315 - 630 mm for high pressure applications
- To produce T and Y fittings from d315 - 500 mm, special accessories are required

**Machine description:**

- Fully automated fusion process by the use of state of the art PLC and touch screen
- Highest flexibility in the pipe preparation process
- Data storage and transfer via USB to the PC
- Data management by SUVI® WIN-WELD
- Distortion - free, sturdy machine frame
- Electric and hydraulic components separated in the frame
- The main clamping tools are mounted on supports each of which can be adjusted transversely to the pipe axis
- Each clamping tool can be turned max. 22.5° and assembled with a set of reductions d315 - 560 mm
- Hydraulically opening and closing of the upper clamping tools, manual locking with bolts and nuts
- Precision heating element with electronic temperature control (12000 W)
- High-quality PTFE coating with long service life
- Insertion hydraulically operated
- Powerful planer (1100 W) with optimized cutting geometry for even and chatter-free planing
- Load transfer via robust chain drive
- Insertion hydraulically operated
- During the planing process each slide could be moved separately (single sided planing)

d-d [mm]	Performance	Code	kg	
315 - 630	400 V/15600 W	<b>790 108 101</b>	2300.000	

PF 3 25 138 100

# Machines & Equipment for Butt Fusion

## WM 630 Plus Accessories



### Reduction clamping inserts, narrow

- Each code number defines 1 piece of reduction clamping insert.

In order to mount the inserts d 315/d 355/d 400/d 450 to the base clamp d 630, the reduction clamping insert d 500 mm, code 790 117 012, must also be used

d [mm]	Code	kg
315	<b>790 116 020</b>	3.500
355	<b>790 116 021</b>	3.200
400	<b>790 116 022</b>	2.500
450	<b>790 116 023</b>	2.500

PF 3 25 117 319



### Reduction clamping inserts, wide

- Each code number defines 1 piece of reduction clamping insert.

In order to mount the inserts d 315/d 355/d 400/d 450 to the base clamp d 630, the reduction clamping insert d 500 mm, code 790 117 012, must also be used

d [mm]	Code	kg
315	<b>790 116 012</b>	3.600
355	<b>790 116 013</b>	3.700
400	<b>790 116 014</b>	3.400
450	<b>790 116 015</b>	3.500



### Set of pipe supports

d-d [mm]	Code	kg
315 - 450	<b>790 108 025</b>	6.000

PF 3 25 117 321



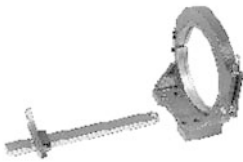
### Back stop

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

Code	kg
<b>790 108 026</b>	34.000

### Base clamping unit for fittings

- For clamping fittings of d500 mm as well as for the reduction clamping inserts for fittings of d315 to 450 mm. Guide shaft for pipe support and back stop, with pipe support d500 mm
- L = left
- R = right



d [mm]	Type	Code

PF 3 25 117 321



### Flange adaptor clamping unit

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

d-d [mm]	Code	kg
315 - 630	<b>790 108 031</b>	235.000

PF 3 25 117 321

# Machines & Equipment for Butt Fusion

## 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
- Packaging included

d-d [mm]	Code	kg	
315 - 500	<b>790 108 032</b>	613.000	

PF 3 25 117 321

## 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
- Packaging included

d-d [mm]	Code	kg	
315 - 500	<b>790 108 033</b>	770.000	

PF 3 25 117 321

## 1 Set planer blades



- (1 set = 4 blades)

Code	kg	
<b>790 108 043</b>	0.500	

PF 3 25 117 321

# Machines & Equipment for Butt Fusion

## WM 1200 Workshop butt fusion machine

### Machine WM 1200 with SUVI®50



- Machine for jointing segmented fittings like bends from d630 - 1200 mm for high pressure applications
- Professional data recording and operator guidance granted by the use of SUVI® 50
- To produce T and Y fittings from d630 - 900 mm, special accessories are required

#### Machine description:

- Dimensions: 2400 L x 1400 W x 2070 H in mm
- Distortion-free, sturdy machine frame
- Hardened, hard chrome plated linear guide rails for extreme loads
- Electric and hydraulic components separated in the frame
- 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
- The data recorder SUVI® 50 is a component of the control panel
- The main clamping tools are mounted on supports each of which can be adjusted transversely to the pipe axis
- Each clamping tool can be turned max. 22.5° and assembled with a set of reductions d630 - 1000 mm
- Hydraulically opening and closing of the upper clamping tools
- Hydraulic locking mechanism of the main clamping tools
- Precision heating element with electronic temperature control (30000 W)
- High-quality PTFE coating with long service life
- Insertion hydraulically operated
- High speed extraction to grant fast change over times
- Powerful planer (2200 W) with optimized cutting geometry for even and chatter-free planing
- Load transfer via robust chain drive
- Insertion hydraulically operated
- During the planing process each slide could be moved separately (single sided planing)

d-d [mm]	Performance	Code	kg	
630 - 1200	400 V/41000 W	<b>790 126 001</b>	8300.000	

PF 3 25 871 100

# Machines & Equipment for Butt Fusion

## WM 1200 Accessories

### 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
- Packaging included

d-d [mm]	Code	kg	
630 - 900	<b>790 126 011</b>	2926.000	

PF 3 25 117 334

### 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
- Packaging included

d-d [mm]	Code	kg	
630 - 900	<b>790 126 012</b>	2910.000	

PF 3 25 117 334

### X-fitting clamping unit

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

d-d [mm]	Code	kg	
630 - 900	<b>790 126 013</b>	2900.000	

PF 3 25 117 334

### Base Plate T-Y-X pieces

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

Code	kg	
<b>790 126 014</b>	1000.000	

PF 3 25 117 334

### 1 Set planer blades



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

Code	kg	
<b>790 126 043</b>	0.500	

PF 3 25 117 334

# Machines & Equipment for Butt Fusion

## PPC Plastic pipe cutter and KS 355

90 10 90



PF 3 25 117 309

### PPC Plastic pipe cutter

- For cutting plastic pipes d10 - d160

d-d [mm]	Article	Code	kg	Closest inch
10 - 63	PPC 63, s max. = 7.2mm	<b>790 109 001</b>	0.710	1/8 - 2
50 - 110	PPC 110, s max. = 12.7mm	<b>790 109 002</b>	1.400	1 1/2 - 4
110 - 160	PPC 160, s max. = 19.0mm	<b>790 109 003</b>	2.220	4 - 6

90 10 90



PF 3 25 117 909

### Replacement cutting wheels

- for plastic pipe cutter

d-d [mm]	Article	Code	kg
10 - 63	SR 63 max. s=7,2 mm	<b>790 109 011</b>	0.004
50 - 110	SR 110/160 max. s=12,7 mm	<b>790 109 012</b>	0.015
110 - 160	SR 160 max. s=19,0 mm	<b>790 109 013</b>	0.023

90 20 20



PF 3 25 129 760

### Plastic pipe cutter

- The KS 355 is the ideal tool for simple right angle precision cutting of PVC, PE and PP pipes, Size range d 160 to 355 mm with a wall thickness up to 40 mm. Including transport box.
- Unique clamping mechanism, no additional tools like belts, chains or reduction inserts necessary

d-d [mm]	Code	kg
160 - 355	<b>790 202 001</b>	15.400



PF 3 25 119 107

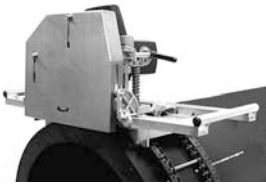
### Saw blade Ø 180x30

Code	kg
<b>790 202 011</b>	0.485

# Machines & Equipment for Butt Fusion

## KS 1600

### Plastic pipe cutter



The KS 1600 is used for cutting plastic pipes fast, cleanly and properly right-angled from diameter 355 mm up to 1600 mm with a wall thickness of max. 60 mm. For each pipe diameter, the appropriate chain length is necessary. The saw is to be put on the tensioned chain as per user manual which serves as a guiding device for the saw over a full 360° turn.

The guard plate covers the saw blade also during operation and provides full protection for the user at all times.

The KS 1600 basic kit consists of a circular-hand saw, 230 V / 2200 W with carriage, 2 tension chains for d560 mm and d630 mm as well as a chain tensioner. The whole equipment comes in a convenient and robust transport box.

The easy handling and the optimal safety features make this tool indispensable on every building site.

#### Scope of delivery:

1 Circular-hand saw, 1 tensioning chain d560 mm, 1 tensioning chain d630 mm, 1 chain tensioner, 1 hex-wrench size 5, 1 hex-wrench size 6, 1 operating instruction, transport-box

#### Technical data:

Dimension range:	d355 –1600 mm (In combination with the respective tensioning chain)
Plug:	EU-Plug
Voltage:	230 V AC
Power:	2200 Watt
Frequency:	50-60 Hz
Circular saw blade outer-Ø:	240 mm
RPM:	4100
Sound level:	104 dB (A)
Weight saw:	15, 5 kg
Weight KS 1600 Basic-Kit:	43,5 kg
Dimensions saw (WxHxD):	790 x 330 x 335 mm
Dimensions Transport-Box:	950 x 400 x 395 mm

d-d [mm]	Type	Code	kg
355 - 1600	KS 1600 Basic Kit	<b>790 109 600</b>	43.000

PF 2 51 305 006

### Saw blade

description	Code	kg
Saw Blade 240X3,0X30, 18 teeth punched	<b>790 109 618</b>	0.653

PF 3 25 119 106



### Chain tensioner

- Chain tensioner is included in the scope of delivery of the KS 1600 Basic Kit (790 109 600).

d-d [mm]	Code	kg
355 - 1600	<b>790 109 616</b>	0.430

PF 3 25 119 106



### Tensioning Chains

- Chains for d560 and d630 mm are included in the scope of delivery of the KS 1600 Basic-Kit (790 109 600).

d [mm]	Code	kg
355	<b>790 109 602</b>	3.700
400	<b>790 109 603</b>	4.100
450	<b>790 109 604</b>	4.700

table continued next page

# Machines & Equipment for Butt Fusion

<b>d</b> [mm]	<b>Code</b>	<b>kg</b>	
500	<b>790 109 605</b>	5.200	
560	<b>790 109 606</b>	5.600	
630	<b>790 109 607</b>	6.630	
710	<b>790 109 608</b>	7.900	
800	<b>790 109 609</b>	8.600	
900	<b>790 109 610</b>	10.174	
1000	<b>790 109 611</b>	11.000	
1100	<b>790 109 612</b>	12.000	
1200	<b>790 109 613</b>	13.500	
1400	<b>790 109 614</b>	15.500	
1600	<b>790 109 615</b>	17.800	

PF 3 25 119 106

# Machines & Equipment for Butt Fusion

## Saws

### BS 450 Belt saw size range d 90 - 450 mm



- For exact cutting of PE, PP, PVC and PVDF plastic pipes, size range d 90 - 450 mm
- Pipe cutter with sturdy tubular steel stand and integrated V-bed
- Variable clamping system for fastening the pipe in the V-bed
- Angles from 0° to 45° to one side can be freely adjusted
- Easy to disassemble into subcomponents and transport to job sites
- Spring-resilient lowering of saw bow
- Easy saw blade replacement system with centering mechanism
- Application: up to d 160 PN 10, up to d 250 PN 6, up to d 450 PN 3,2

d-d [mm]	Code	kg
90 - 450	<b>790 109 045</b>	160.000

PF 3 25 129 700

### BS 630 Belt saw



- Angles from 0° to 45° to one side can be freely adjusted
- For exact cutting of PE, PP, PVC and PVDF pipes, size range d 100 - 315 mm and 200 - 630 mm
- Pipe cutter with sturdy tubular steel stand
- Variable clamping system for fastening the pipe in the V-bed
- Spring-resilient lowering of saw bow
- Easy saw blade replacement system with centering mechanism

d-d [mm]	Code	kg
110 - 630	<b>790 109 047</b>	340.000

PF 3 25 129 700

### BS Wearing Parts

- Saw belt

Article	Code	kg
BS 450	<b>790 109 046</b>	0.400
BS 630	<b>790 109 048</b>	0.500

PF 3 25 119 105

### Other Belt saws

Code
on request

# Machines & Equipment for Butt Fusion

## Tools for pipeline construction

### Outer bead remover



PF 3 25 117 330

d-d [mm]	Code	kg	
110 - 160	<b>790 109 241</b>	1.850	
140 - 250	<b>790 109 242</b>	1.950	
180 - 315	<b>790 109 243</b>	2.697	
280 - 450	<b>790 109 244</b>	2.700	



PF 3 25 117 330

### Replacement blades

d-d [mm]	Code	kg	
110 - 160	<b>790 109 233</b>	0.004	
140 - 315	<b>790 109 234</b>	0.020	

# Machines & Equipment for Butt Fusion

## Accessories for job sites



### 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

d-d [mm]	Code	kg	
20 - 315	<b>790 109 110</b>	4.000	

PF 3 25 117 328



### 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

d-d [mm]	Code	kg	
110 - 630	<b>790 109 109</b>	4.115	

PF 3 25 117 328

# Machines & Equipment for Butt Fusion

## Miscellaneous accessories

### Timer with 2 stop times



PF 3 25 117 316

Code	kg	
790 114 028	0.100	

### KS Tangit Cleaner

- Special cleaning agent for plastic fusion connections with PP, PE, PVDF and PB.



PF 2 28 473 002

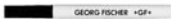
Code	kg	
799 298 023	0.890	

5311

### Tangit KS-Cleaning Tissues



Code	kg	
799 298 024	2.850	



### Marker

PF 2 55 338 999

Type	Code	kg	
silver	799 350 364	0.012	

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709 706 414	41	790 109 606	36	790 114 067	65
709 706 416	39	790 109 607	36	790 114 068	65
709 800 006	38	790 109 608	36	790 114 069	65
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709 810 520	39	790 112 068	65	790 115 014	52
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709 810 523	39	790 112 073	54	790 115 016	53
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709 810 612	39	790 112 089	53	790 115 020	53
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790 116 026	59	790 123 012	86	790 136 004	20
790 116 027	60	790 123 016	86	790 136 005	20
790 116 038	56	790 123 020	85	790 136 006	20
790 116 039	75	790 123 023	84	790 136 007	20
790 116 040	74	790 123 025	84	790 136 008	20
790 116 041	60	790 123 029	86	790 136 009	20
790 116 045	60	790 123 075	93	790 136 010	20
790 116 067	76	790 124 003	87	790 136 011	20
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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 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 of the ICC, latest version) including standard packing. All supplementary costs such as the cost of carriage, insurance, export-, transit- and importances 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 out-standing 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 months, either party may cancel the contract forthwith.  
Georg Fischer shall not be liable for any damage or loss of any kind whatsoever resulting therefrom, 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 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 liquidated damages in the amount of 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.

## 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 ICC, 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 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 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 undertake to repair or replace at their discretion, as quickly as possible and free of charge all Products supplied which demonstrably suffer from faulty design, materials or workman-ship or from faulty operating or installation instructions.  
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](http://www.piping.georgfischer.com). Replaced parts shall become property of Georg Fischer.
- 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 cancel the contract or to demand a reduction in the contract price if also a second attempt to repair or replace the Products has failed.
- 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 as well as, in case of negligence, all other direct damages caused by the defective Product (damage to property and injury to or death of persons) up to CHF 1 000 000 per occurrence.
  - the statute of limitations for warranty or damage claims - contrary to Section 15.6 - will be 5 years from the date of installation.

## 16 Limitation of Liability

- All cases of breach of contract and the relevant consequences as well as all rights and claims on the part of the customer, irrespective on what ground they are based, are exhaustively covered by these general conditions of supply. In particular, any claims not expressly mentioned for damages, reduction of price, termination of or withdrawal from 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 and other direct or indirect or consequential damage. This exclusion of liability, however, does not apply to unlawful intent or gross negligence on the part of Georg Fischer and in case of strict liability under applicable product liability statutes, but does apply to unlawful intent or gross negligence of persons employed or appointed by Georg Fischer to perform any of its obligations.

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

# GF Piping Systems → worldwide at home

Our sales companies and representatives ensure local customer support in over 100 countries.

[www.piping.georgfischer.com](http://www.piping.georgfischer.com)



The technical data is not binding. They neither constitute expressly warranted characteristics nor guaranteed properties nor a guaranteed durability. They are subject to modification. Our General Terms of Sale apply.

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