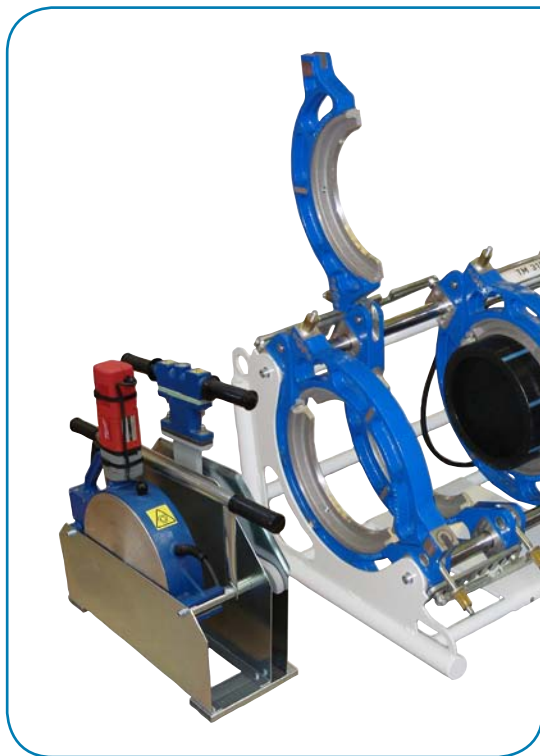


**Product Range
International
2008**

Distribution
Machines & Tools



+GF+

GEORG FISCHER
PIPING SYSTEMS

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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 I 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 Electro Fusion

Electrofusion Units

MSA Plus 400 Traceability Electrofusion Unit with USB interfaces



NEW, environmental friendly manufactured electrofusion unit according EU directive 2002/95/EU (RoHS).

Professional electrofusion unit for traceability of piping system components from raw material to completed electrofusion joint (to 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), barcode reader pen or optional barcode scanner. The unit is robust, light and easy to use. The menu has up to 27 different languages. Inclusive 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 - +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, Latvian, Lithuanian, Malaysian, Norwegian, Polish, Portuguese, Rumanian, Russian, Slovakian, Slovenian, Spanish, Swedish, Turkish
Warranty	24 months

Type	Code	kg	Description
MSA Plus 400	799 350 580	16.800	barcode reader pen, transport case
MSA Plus 400	799 350 581	16.800	barcode scanner, transport case
MSA Plus 400	799 350 585	16.800	CH power plug with barcode reader pen, transport case

PF 2 51 306 003

Machines & Equipment for Electro Fusion



MSA Plus 350 Record Electrofusion Unit with USB interfaces



NEW, environmental friendly manufactured electrofusion unit according 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 barcode reader pen, optional with barcode scanner. The unit is robust, light and easy to use. The menu has up to 27 different languages. Inclusive 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 the USB cable (799 350 619) or the USB memory stick (799 350 622) required.

Technical Data

Ambient temperature	-10 °C - +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
Interface	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, Latvian, Lithuanian, Malaysian, Norwegian, Polish, Portuguese, Rumanian, Russian, Slovakian, Slovenian, Spanish, Swedish, Turkish
Warranty	24 months

Type	Code	NRF	kg	Description
MSA Plus 350	799 350 570	183 35 98	16.800	barcode reader pen, transport case
MSA Plus 350	799 350 571	246 28 52	16.800	barcode scanner, transport case
MSA Plus 350	799 350 575		16.800	CH Power plug, with barcode reader, transport case

PF 2 51 306 003

Machines & Equipment for Electro Fusion



MSA Plus 300 Automatic Electrofusion Unit with USB interfaces



NEW, environmental friendly manufactured electrofusion unit according 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. Inclusive 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 - +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, Latvian, Lithuanian, Malaysian, Norwegian, Polish, Portuguese, Rumanian, Russian, Slovakian, Slovenian, Spanish, Swedish, Turkish
Warranty	24 months

Type	Code	NRF	kg	Description
MSA Plus 300	799 350 560	183 35 96	16.800	barcode reader pen, transport case
MSA Plus 300	799 350 561	246 28 51	16.800	barcode scanner, transport case
MSA Plus 300	799 350 565		16.800	CH Power plug, with barcode reader pen, transport case

PF 2 51 306 003

Machines & Equipment for Electro Fusion



MSA Plus 250 Automatic Electrofusion Unit



NEW, environmental friendly manufactured electrofusion unit according 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. Inclusive transport box, 1 pair of angle adapter clips 4.0 mm and operating instructions.

Technical Data

Ambient temperature	-10 °C - +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	799 350 550	16.800	barcode reader pen, transport case
MSA Plus 250	799 350 551	16.800	barcode scanner, transport case
MSA Plus 250	799 350 555	16.800	CH Power plug, barcode reader pen, transport case

PF 2 51 306 002

Machines & Equipment for Electro Fusion

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 on the product range of +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 - +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	790 128 001	21.000	

PF 3 10 588 100

Adapter



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

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	

PF 2 51 306 001

Machines & Equipment for Electro Fusion

Tools and Accessoires



Software MSA WIN WELD

General functions:

- Reading and management of fusion data
 - Sort- and filter functions
 - Issue single records, collected records
 - Reading and formatting of memory cards
 - Reading and management of traceability data, according 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 Pus 350 (fusion data) and MSA 400/MSA Plus 400 (fusion and traceability data).
 - The software is suitable for Windows ME/NT4/2000/XP.
 - 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: 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 Windows ME/NT4/2000/XP.
- 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)

Dimension	Code	kg	Description
300x330x200 mm	799 350 401	5.540	Transport Case MSA
325x470x215 mm	799 350 472	5.540	Transport Case large MSA Plus

PF 2 51 306 004

Machines & Equipment for Electro Fusion

Cables and Data Carriers (MSA 350 - 400)



PF 2 51 306 001

- PC data transmission cable: to transfer fusion data directly to a PC.
- Printer transmission cable: serial/parallel interface adapter cable to provide data print-outs directly from a printer.
- Supplementary memory card: to be used as an exchangeable data carrier. A memory card is supplied with MSA 400 control units.

Type	Code	kg	Description
MSA 350/MSA 400	799 350 385	0.095	Data transmission cable (PC connection)

Interface Adaptor Cable (MSA 350 - 400)



PF 2 51 306 001

Type	Code	kg	Description
MSA 350-400	799 350 387	0.042	Serial-/parallel interface adapter cable, serial RJ 45/Centronics 36 (printer connection)

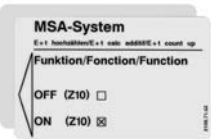
Memory Cards (MSA 350 - 400)



PF 2 51 306 001

Type	Code	kg	Description
MSA 350-400	799 350 395	0.020	Memory card (record card 256 kB capacity for 400 Fusions protocols)

Z Function Cards for MSA 2000/3000



PF 2 51 306 999

Type	Code	kg	Pieces	Description
MSA 2000/3000	173 281 189	0.494	100	Master card (Z3) coded
MSA 2000/3000	173 281 190	0.004	100	Order card (Z4) uncoded
MSA 2000/3000	173 281 191	0.005	100	Service card (Z6) uncoded
MSA 2000/3000	173 281 192	0.005	100	Memory card (Z8) uncoded
MSA 3000	799 350 344	0.500	100	Operator card settings (Z22) uncoded
MSA 2000/3000	173 281 247	0.242	1	Identification card set

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 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 250-400 and MSA Plus 250-400 electrofusion control units.

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

Machines & Equipment for Electro Fusion



USB memory stick



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

PF 2 51 306 005

Type	Code	kg	Description
MSA Plus 300-400	799 350 622	0.300	Memory stick (for software or languages updates)



USB cable



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

PF 2 51 306 005

Type	Code	kg	Description
MSA Plus 350-400	799 350 619	0.300	USB cable (type A/B) for printer and PC connection



Compact flash card



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

PF 2 51 306 005

Type	Code	kg	Description
MSA Plus 400	799 350 621	0.050	Memory card (32 MB capacity for 1700 fusion protocols)



Card reader



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



PF 2 51 306 005

Type	Code	kg	Description
MSA Plus 400	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) in the PC via PCMCIA slot
- Can only be used for compact flash cards type I

PF 2 51 306 005

Type	Code	kg	Description
MSA Plus 400	799 350 623	0.100	Adapter Card PCMCIA-CF

Machines & Equipment for Electro Fusion

Tools for preparing pipe surfaces

Rotary Peeler RS

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



Feature and your advantage:

Spring loaded peeling blade:Independent peeling quality 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

Divisible tool:Peeling for saddles with the same tool

Peeling length:No limitation of peeling length

Guidance rolls:3 point support for dimensional optimized cutting feed, time saving

Time saving:Tool is always ready to use, it

can be used for the next peeling without setting 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 for change of dimension

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

Article	d [mm]	Code	LVI	kg
RS 40	40	790 136 001	183 35 53	2.096
RS 50	50	790 136 002	183 35 54	1.250
RS 63	63	790 136 003	183 35 55	2.038
RS 75	75	790 136 004	183 35 56	1.450
RS 90	90	790 136 005	183 35 57	1.450
RS 110	110	790 136 006	183 35 58	1.450
RS 125	125	790 136 007	183 35 59	1.650
RS 140	140	790 136 008	183 35 60	1.650
RS 160	160	790 136 009	183 35 61	1.650
RS 180	180	790 136 010	183 35 62	1.850
RS 200	200	790 136 011	183 35 63	1.850
RS 225	225	790 136 012	183 35 64	1.850
RS 250	250	790 136 013	183 35 65	2.150
RS 280	280	790 136 014	183 35 66	2.150
RS 315	315	790 136 015	183 35 67	2.150

PF 3 25 879 100



Replacement blade to Rotary Peeler RS

d-d [mm]	Code	kg
40 - 315	790 136 112	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	description	Dimension	Code
RSTC 40-110	for RS 40-RS 110	326x222x116 mm	790 136 211
RSTC 125-160	for RS 125-RS 160	437x395x116 mm	790 136 212
RSTC 180-225	for RS 180-RS 225	450x360x132 mm	790 136 213
RSTC 250-315	for RS 250-RS 315	566x435x156 mm	790 136 214

PF 3 25 879 100

Machines & Equipment for Electro Fusion

9 300 725



PF 2 51 305 004

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	NRF	kg	Description
20 - 90	799 150 382	246 28 54	3.400	Basic Tool PT 1 E

9 300 725



PF 2 51 305 004

Pipe Inserts for Peeling Tool PT 1 E

d [mm]	e [mm]	Code	NRF	kg	Description
20	1.9	799 300 739	246 28 55	0.220	Pipe Insert SDR 11
20	3.0	799 300 741	246 28 56	0.220	Pipe Insert SDR 7
25	2.3	799 300 740	246 28 57	0.230	Pipe Insert SDR 11
25	3.0	799 300 742	246 28 58	0.230	Pipe Insert SDR 9
32	3.0	799 300 743	246 28 59	0.230	Pipe Insert SDR 11
40	3.7	799 300 744	246 28 61	0.230	Pipe Insert SDR 11
50	4.6	799 300 745	246 28 62	0.350	Pipe Insert SDR 11
63	3.8	799 300 725	246 28 63	0.475	Pipe Insert SDR 17
63	5.8	799 300 746	246 28 64	0.475	Pipe Insert SDR 11
75	4.5	799 300 727	246 28 65	0.601	Pipe Insert SDR 17
75	6.9	799 300 747	246 28 66	0.601	Pipe Insert SDR 11
90	5.4	799 300 748	246 28 67	0.834	Pipe Insert SDR 17
90	8.2	799 300 749	246 28 68	0.220	Pipe Insert SDR 11

Accessories for Peeling Tool PT 1 E

- Replacement blade.



PT 1 E

PF 2 51 305 004

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

9 300 750



PF 2 51 305 004

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	LVI	kg	Description
90 - 250	799 300 753	183 35 76	5.100	Size 1, peeling length 140 mm
110 - 400	799 300 755	246 28 71	7.320	Size 2, peeling length 150 mm
110 - 500	799 300 756	183 35 78	11.000	Size 3, peeling length 175 mm

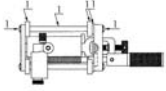
Machines & Equipment for Electro Fusion

Spare Parts for PT 2 Peeling Tool

- Firm metal knife usable on four sides

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

PF 2 51 305 004

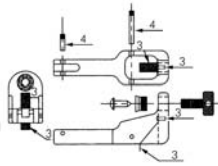


Repair kit spindles for peeling tool PT 2

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

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

PF 2 51 305 004

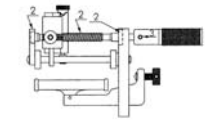


Repair kit screws and springs for peeling tool PT 2

- Comprising 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	799 150 369	0.300

PF 2 51 305 004



Repair kit feed for peeling tool PT 2

- Comprising 1 carriage bolt, 1 guide unit and 1 guide end plate

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

PF 2 51 305 004



Repair kit tool holder for peeling tool PT 2

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

d-d [mm]	Code	kg
90 - 500	799 150 370	0.069

PF 2 51 305 004

Machines & Equipment for Electro Fusion

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	799 300 704	0.271	Pipe Insert SDR 11
3.0	20	799 300 705	0.255	Pipe Insert SDR 7
2.3	25	799 300 706	0.308	Pipe Insert SDR 11
3.0	25	799 300 707	0.290	Pipe Insert SDR 9
3.0	32	799 300 708	0.340	Pipe Insert SDR 11
3.7	40	799 300 709	0.380	Pipe Insert SDR 11
4.6	50	799 300 710	0.436	Pipe Insert SDR 11
5.8	63	799 300 711	0.540	Pipe Insert SDR 11

PF 2 51 305 004

9 300 700



PT 4

PF 2 51 305 999

Accessories for Peeling Tool PT 4

- Replacement blade.

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



Peeling Tool RTC-710



The peeling tool RTC-710 is suitable to prepare 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 span cleaning knife, 1 accessories bag.

d-d [mm]	Code	LVI	kg	Description
355 - 710	799 300 757	183 35 79	16.000	max. working-range 530 mm

PF 2 51 305 001

9 198 033



PF 2 51 305 002

Hand Scraper

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

Code	kg	Description
799 198 094	0.100	with long handle

Machines & Equipment for Electro Fusion

Clamps and installation aids



PF 2 51 336 001

Multiple use Assembly Tool Branch fitting d140mm

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

d [mm]	Code	kg	
140	193 281 027	0.740	

9 350 358

Swivel Clamp

- The Swivel Clamp centralises pipes with dimensions from d 63 - 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.



PF 2 51 305 008

d-d [mm]	Code	kg	
63 - 180	799 350 358	18.000	

Machines & Equipment for Electro Fusion

9 301 475



Double Clamp

- 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 vee-clamps complete with ratchet and belt.

d-d [mm]	Code	NRF	kg
63 - 125	799 301 484	246 28 88	2.795
110 - 225	799 301 486	246 28 89	10.000
225 - 500	799 301 488	246 28 91	15.000



PF 2 51 305 008

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 vee-clamps complete with ratchet and belt.

d-d [mm]	Code	NRF	kg
63 - 125	799 301 459		6.900
110 - 225	799 301 461	246 28 92	19.000
225 - 500	799 301 463	246 28 93	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	799 301 536	0.498
25	799 301 537	0.471
32	799 301 538	0.756
40	799 301 539	0.876
50	799 301 540	1.167
63	799 301 541	1.438

PF 2 51 305 003

Machines & Equipment for Electro Fusion

9 301 575



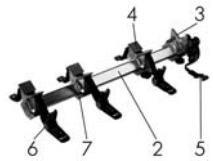
PF 2 51 305 008

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	799 301 575	1.409	

Spare parts for clamps



PF 2 51 305 999

Pos	Dimension	Code	kg	Description
1	63-125, 45mm	799 900 414	1.700	square support short
	110-225, 60mm	799 900 405	3.500	square support short
	225-400, 80mm	799 900 394	6.000	square support short
2	63-125, 45mm	799 900 413	3.600	square support long
	110-225, 60mm	799 900 404	6.500	square support long
4	225-400, 80mm	799 900 387	11.500	square support long
	63-125	799 900 421	0.977	prism wide
	110-225	799 900 423	2.000	prism wide
7	225-400	799 900 425	4.500	prism wide
	63-125	799 150 312	0.270	ratch 25/15/0.7
	110-225	799 150 313	0.232	ratch 25/25/0.7
	110-225	799 150 315	0.496	ratch 35/35/1.1
	225-400	799 150 319	1.415	ratch 50/50/1.5
		799 150 314	0.050	clamping screw

9 301 575

Inserts for Multi Clamp

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



PF 2 51 305 008

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

9 370 000

Clamp for coiled pipe

- These clamps are easily mounted on coiled pipes. They hold the pipes in position during the fusion time and cooling phase.
- Scope of delivery: 1 tool with clamp and belt.



PF 2 51 305 008

d-d [mm]	Code	kg	
25 - 63	799 370 007	4.000	
63 - 125	799 370 011	10.000	

Machines & Equipment for Electro Fusion

Clamping device Topload 400



PF 2 51 305 008

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

d-d [mm]	Code	kg	
280 - 400	799 350 475	25.000	

Clamping device Topload 630



PF 2 51 305 008

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

d-d [mm]	Code	kg	
280 - 630	799 350 477	35.000	

9 150 090

Spring Clamp for ELGEF® 24 V Reinforcing Saddles



PF 2 51 305 002

- 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	799 150 090	1.289	

Machines & Equipment for Electro Fusion

Tapping Tools



Assembly and Tapping Key for ELGEF® Plus Saddles

- Combination tool for tapping and tightening of fixation screws.

PF 2 51 305 009

Type	Code	NRF	kg	Description
8/10/17	799 198 047	246 28 95	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 and all Duobloc saddles
12.7	799 198 091	0.600	for socket with cutter



Hexagon Key for ELGEF® Plus Saddles and Branch Fittings

- For tightening fixation screws.

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**
- Typ Bezeichnung description
- M For Monobloc d 40 and 50 mm (outlets d 20 - 32 mm)
- S 54 For Monobloc 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 Monobloc d 40 mm and d 50 mm
S 54	799 199 283	0.283	for Monobloc 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 Electro Fusion

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	799 198 013	0.131	accessories Basic Tool Box
39	799 198 012	0.215	accessories Basic Tool Box
50	799 198 057	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	799 199 088	0.012
39	799 199 089	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	799 150 007	0.345	19	30
32 - 40	799 150 008	0.496	27	38
50 - 63	799 150 009	0.690	27	47

PF 2 51 305 002

Rotating pin for Hexagon Key

description	Code	kg
10x350 mm	799 150 011	0.220

PF 2 51 305 002

Machines & Equipment for Electro Fusion

Squeeze-off and Rerounding tools

9 350 107



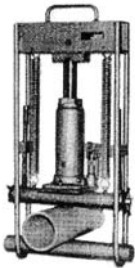
PF 2 51 305 005

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	799 350 107	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	799 350 108	35.800	S2 for PE pipes SDR 11 and SDR 17

9 350 270



PF 2 51 305 005

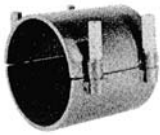
Squeeze-off Tool, A25

- 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	799 350 270	60.000	A25 for PE pipes SDR 11 and SDR 17

Machines & Equipment for Electro Fusion

9 350 110



Re-rounding Clamp

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

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

PF 2 51 305 005



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	799 199 127	0.750	
32	799 199 128	0.500	
40	799 199 129	1.500	
50	799 199 130	1.250	
63	799 199 131	1.250	
75	799 199 132	1.500	
90	799 199 133	1.500	
110	799 199 134	2.000	
125	799 199 135	2.000	
160	799 199 137	2.250	
180	799 199 138	3.000	
200	799 199 139	2.500	
225	799 199 140	3.000	
250	799 199 141	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	LVI	kg	
560 - 630	799 301 561	183 35 87	47.900	

PF 2 51 305 005

Machines & Equipment for Electro Fusion

Miscellaneous Tools

By-pass Unit, complete



PF 2 51 305 006

- The By-pass Unit (Series II) suits ELGEF® Plus Stop-off saddles 53 149 200. Scope of delivery: pressure guage, valve, snap coupling, tee with lock nut, screw cap and sealing plug. The matching connecting parts for a By-pass line are PE pipes d 40 x 3.7 with PE pipe assembly PVP 1 1/4" 721506950 (PN10) or PE pipe d 40 x 2.3 with PE pipe assembly PVP 1 1/4 721506952 (PN6).

Code	kg
799 150 376	1.064

Stop-off Bag with Coupling



- The Stop-off bags (Series II) can be used with the By-pass Unit (Series II) and are suitable for stopping-off gas mains with a maximum operating pressure of 1 bar.

d [mm]	Code	kg	SDR 11	SDR 17	e [mm]
63	799 100 082	0.156	X	X	3,6-6,6
75	799 100 083	0.156	X	X	4,3-7,8
90	799 100 084	0.174	X	X	5,1-9,3
110	799 100 085	0.206	X	X	6,3-11,2
125	799 100 086	0.208	X	X	7,1-12,8
140	799 100 087	0.270	X	X	8,3-12,7
160	799 100 088	0.273	X	X	9,1-16,3
180	799 100 089	0.250	X	-	16,4-18,3
180	799 100 090	0.281	-	X	10,2-11,5
200	799 100 091	0.397	X	-	18,2-20,3
200	799 100 092	0.414	-	X	11,4-12,8
225	799 100 093	0.407	X	-	20,5-22,8
225	799 100 094	0.372	-	X	12,8-14,3
250	799 100 095	0.423	-	X	14,2-15,9
250	799 100 096	0.431	X	-	22,8-25,3
315	799 100 097	0.565	-	-	7,7-11,2
315	799 100 098	0.541	X	X	17,9-43,5

PF 2 51 305 006

Transition Coupling



PF 2 51 305 006

- Transition Couplings to convert earlier By-pass Units (Series I, Code no. 799150142) to second series stop-off bags (Code no. 799100082 to 098).

Code	kg
799 150 374	0.010

Connecting Nipple



PF 2 51 305 006

- To convert earlier By-pass Units (Code no. 799100042 to 057) to later By-pass Units (Series II, Code no. 799150376).

Code	kg
799 150 375	0.010

Machines & Equipment for Electro Fusion

KS Tangit Cleaner

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



PF 2 28 473 002

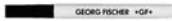
Code	kg	
799 298 023	0.890	

5311

Tangit KS-Cleaning Tissues



Code	kg	
799 298 024	3.245	



Marker

PF 2 55 338 999

Type	Code	kg	
silver	799 350 364	0.012	

Machines & Equipment for Electro Fusion

Accessories for job sites



Roller support 315

- 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	790 109 110	4.000	

PF 3 25 117 328



Support 750

- Up to d 750 mm, with base plate, galvanised
- **height adjustable** (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 - 750	790 109 109	4.115	

PF 3 25 117 328



Alignment Tool

- To align and position pipes in the dimension range d 110 - 400 mm. The pipes are clamped in the vice, the axial movement takes place by a chain drive. The chain is totated by the ratched (square 19 mm).

Article	Code	kg	
Alignment Tool	790 109 108	15.000	
Ratch	790 109 107	1.220	

PF 3 25 117 325

Machines & Equipment for Electro Fusion

PPC Plastic pipe cutter and KS 355

PPC Plastic pipe cutter



PF 3 25 117 309

- For cutting plastic pipes d10 - d160

d-d [mm]	Article	Code	kg	
10 - 63	PPC 63, s max. = 7.2mm	790 109 001	0.710	
50 - 110	PPC 110, s max. = 12.7mm	790 109 002	1.400	
110 - 160	PPC 160, s max. = 19.0mm	790 109 003	2.220	

Replacement cutting wheels



PF 3 25 117 909

- for plastic pipe cutter

d-d [mm]	Article	Code	kg	
10 - 63	SR 63 max. s=7,2 mm	790 109 011	0.004	
50 - 110	SR 110/160 max. s=12,7 mm	790 109 012	0.017	
110 - 160	SR 160 max. s=19,0 mm	790 109 013	0.023	



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	790 202 001	15.400	



PF 3 25 119 107

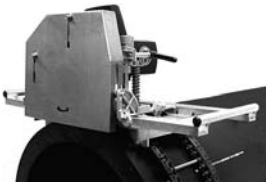
Saw blade Ø 180x30

Code	kg	
790 202 011	0.485	

Machines & Equipment for Electro Fusion

KS 1600

Plastic pipe cutter



The KS 1600 is prepared to cut plastic-pipes from diameter 355 mm up to 1600 mm with a wall thickness of max. 60 mm, fast, clean and properly right-angled. For each pipe-diameter the appropriate chain length is necessary. The saw is to put on the tensioned chain as per user manual and 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 all the time.

The KS 1600 Basis-Kit consists of a hand-circular saw, 230 V / 2200 W with carriage, 2 tension chains for d 560 mm and d 630 mm as well as a chain tensioner. The whole equipment is to be placed easily into the convenient and robust transport box.

The easy handling and the optimal safety factor do make this tool indispensable on each building site.

Scope of delivery:

1 Hand-circular saw, 1 tensioning chain d 560 mm, 1 tensioning chain d 630, 1 chain tensioner, 1 hex-wrench size 5, 1 hex-wrench size 6, 1 operating instruction, transport-box

Technical data:

Dimension range:	355 –1600 mm (By usage of 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	790 109 600	43.000	

Saw blade

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

PF 3 25 119 106

Machines & Equipment for Electro Fusion



Chain tensioner

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

PF 3 25 119 106

d-d [mm]	Code	kg	
355 - 1600	790 109 616	0.430	

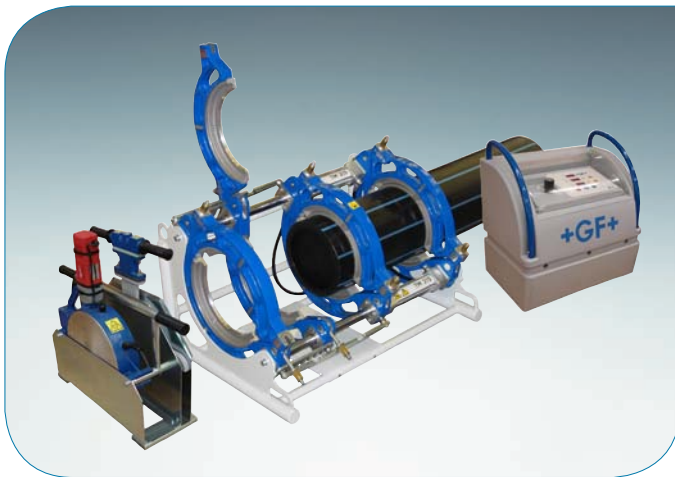
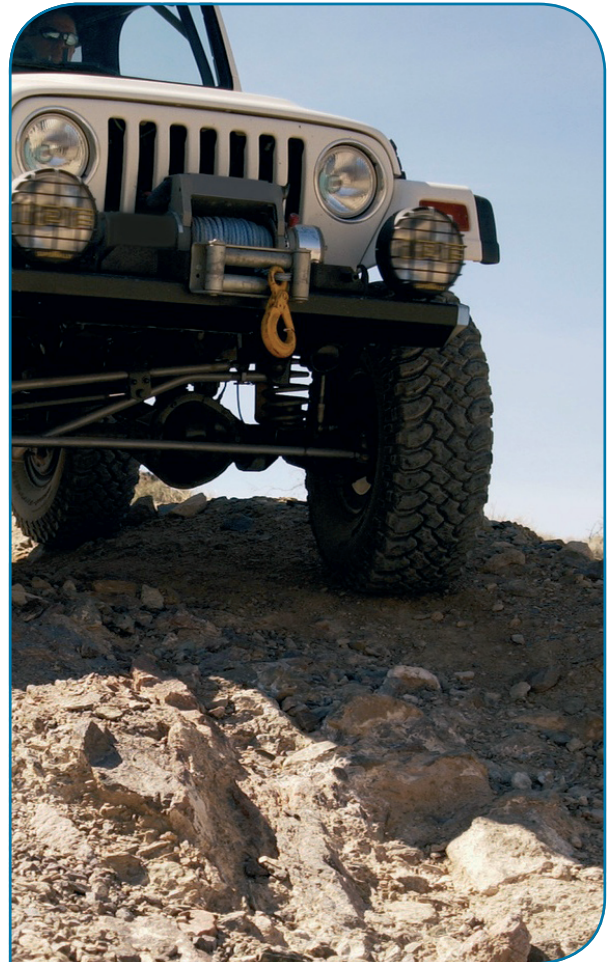
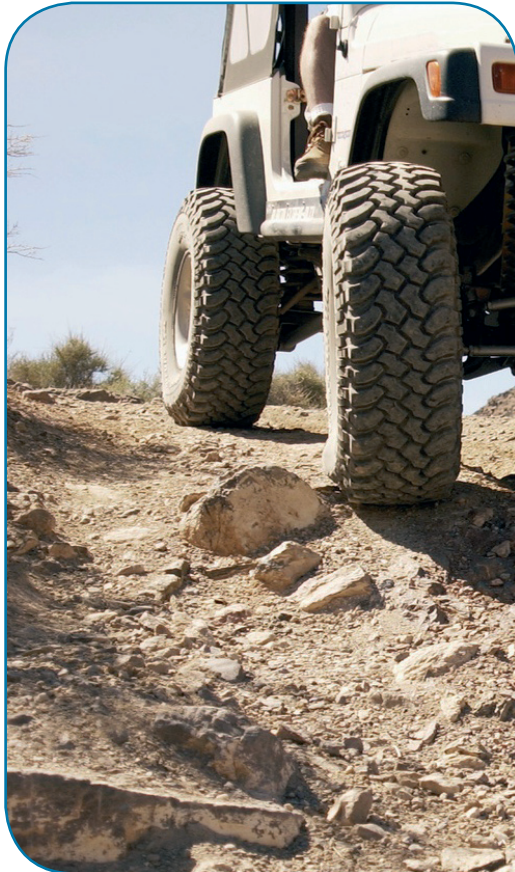


Tensioning Chains

- Chain d 560 and d 630 mm are included in the scope of delivery of the KS 1600 Basic-Kit (790 109 600).

PF 3 25 119 106

d [mm]	Code	kg	
355	790 109 602	3.700	
400	790 109 603	4.100	
450	790 109 604	4.700	
500	790 109 605	5.200	
560	790 109 606	5.600	
630	790 109 607	6.630	
710	790 109 608	7.900	
800	790 109 609	8.600	
900	790 109 610	10.174	
1000	790 109 611	11.000	
1100	790 109 612	12.000	
1200	790 109 613	13.500	
1400	790 109 614	15.500	
1600	790 109 615	17.800	



Truly all-terrain ►

Butt-fusion machines for use on site in tough conditions

Perfect welding equipment for PE and PP pipes in Gas & Water distribution

Machines & Equipment for Butt Fusion

TM 160 - 315 ECO Butt fusion machine



TM 160 - 315 ECO Machine complete

- 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
- Consisting of: 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 (carton pallet), without accessories and without reduction inserts

Type	d-d [mm]	Performance	Code	kg
TM 160 ECO	40 - 160	230V/1900W	790 150 010	81.000
TM 250 ECO	75 - 250	230V/3270W	790 151 010	139.000
TM 315 ECO	90 - 315	230V/3870W	790 152 010	155.000

PF 3 10 597 011



TM 160 - 315 Basic machine

- Tubular frame providing increased rigidity and easy movement of the machine on the ground
- 4 lifting lugs
- Metal shield providing protection of the main welding area
- The movable (sliding) 3rd clamp allows easy and time saving fixing 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 protected position
- By rotating of the base machine a second operating position available

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

PF 3 10 571 100



TM 160 - 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	790 150 014	10.000
TM 250 ECO	75 - 250	230V/1200W	790 151 014	16.000
TM 315 ECO	90 - 315	230V/1200W	790 152 014	19.000

PF 3 10 571 500

Machines & Equipment for Butt Fusion



TM 160 - 315 Heating element

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

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

PF 3 10 571 500



TM 160 - 315 Case

- For safe storage of planer and heating element

d-d [mm]	Code	kg
40 - 160	790 114 006	7.500
75 - 250	790 115 005	14.000
90 - 315	790 325 006	18.500

PF 3 10 571 500



TM 160 - 315 ECO Hydraulic unit

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

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

PF 3 10 572 500



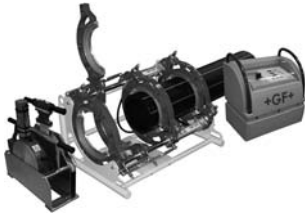
Temperature controller

- 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	790 152 006	2.000

Machines & Equipment for Butt Fusion

TM 160 - 315 TOP Butt fusion machine



TM 160- 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
- Consisting of: innovative TOP hydraulic unit, flexible base machine, powerful planer, 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	790 150 011	131.000	
TM 250 TOP	75 - 250	230V/3270W	790 151 011	180.000	
TM 315 TOP	90 - 315	400V/3870W	790 152 011	214.000	

PF 3 10 597 011



TM 160 - 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	790 150 000	10.000	
TM 250 TOP	230V/1200W	790 151 000	16.000	
TM 315 TOP	230V/1200W	790 152 000	19.000	

PF 3 10 571 500



TM 160 - 315 TOP Hydraulic unit

- Interface for welding recorder WR 100 already installed
- 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
- Operation of machine carriage executed through push-buttons
- 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
- Additional power socket (230V-AC)

Type	Performance	Code	kg	
TM 160 - 250 TOP	230V/370W	790 151 004	30.000	
TM 315 TOP	400V/370W	790 152 004	30.000	

PF 3 10 571 500



Hydraulic hose package

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

Type	Code	kg	
TM 160 - 315 TOP	790 152 003	4.000	

Machines & Equipment for Butt Fusion

TM 160 - 315 WR



TM 160 - 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
- Consisting of: innovative TOP hydraulic unit, flexible base machine, powerful planer, high performance heating element, storage case for the planer and heater
- Including transport packaging (wooden crate), without accessories and without reduction inserts

Type	Performance	Code	kg	
TM 160 WR	230V/1910W	790 150 015	136.000	
TM 250 WR	230V/3280W	790 151 015	185.000	
TM 315 WR	400V/3880W	790 152 015	219.000	

PF 3 10 597 011



WR 100 welding recorder

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, appropriate listing see next page.

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 guideline (e.g. DVS, WIS or UNI). Hard plastic PE case IP65 locates a printer on board.

Performance:

- Easy configuration by operator to the different GF/KL machines
- Internal memory fusion protocol with a capacity up to 100 records
- Easy 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 of windows (serial interface 790 119 403)

Power connector: Schuko, 16A

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

Including connecting cables to butt fusion machine

Performance	Dimensions [mm]	Code	kg	
230 V	350x300x150 mm	790 119 401	6.000	

PF 3 25 132 100

Machines & Equipment for Butt Fusion

TM Accessories



TM 160 Reduction clamping inserts, wide

- d 40 - 140 mm
- Each code number defines 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	790 114 023	0.300	
50	790 114 009	0.320	
63	790 114 010	0.300	
75	790 114 011	0.300	
90	790 114 012	0.280	
110	790 114 013	0.245	
125	790 114 014	0.265	
140	790 114 015	0.180	

PF 3 25 117 316



TM 160 Reduction clamping inserts, narrow

- d 40 - 140 mm
- Each code number defines 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	790 114 027	0.300	
50	790 114 016	0.310	
63	790 114 017	0.310	
75	790 114 018	0.280	
90	790 114 019	0.255	
110	790 114 020	0.225	
125	790 114 021	0.200	
140	790 114 022	0.140	

PF 3 25 117 316

TM 160 Reduction clamping inserts-set

- 4 wide and 4 narrow clamping inserts of each dimension

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

PF 3 25 117 316



TM 160 Flange adapter clamping unit

- For correct clamping and fusion jointing of short end fittings

Code	kg	
790 319 007	5.400	
790 115 044	7.900	
790 112 073	10.100	

PF 3 10 571 500

Machines & Equipment for Butt Fusion



TM 250 Reduction clamping inserts, wide

- d 75 - 225 mm
- Each code number defines 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	790 115 028	0.815	
90	790 115 008	0.835	
110	790 115 009	0.825	
125	790 115 010	0.785	
140	790 115 011	0.735	
160	790 115 012	0.695	
180	790 115 013	0.660	
200	790 115 014	0.715	
225	790 115 015	0.465	

PF 3 25 117 305



TM 250 Reduction clamping inserts, narrow

- d 75 - 225 mm
- Each code number defines 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	790 115 029	0.740	
90	790 115 016	0.715	
110	790 115 017	0.690	
125	790 115 018	0.680	
140	790 115 019	0.625	
160	790 115 020	0.595	
180	790 115 021	0.520	
200	790 115 022	0.455	
225	790 115 023	0.390	

PF 3 25 117 305

TM 250 Reduction clamping inserts-set

- 4 wide and 4 narrow clamping inserts of each dimension

d-d [mm]	Code	kg	
75 - 225	790 115 156	48.000	

PF 3 25 117 305



TM 250 Special clamping bracket tapered

- For clamping of fittings d 250 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	
250	L	790 115 025	1.825	
250	R	790 115 026	1.560	

PF 3 25 117 305

Machines & Equipment for Butt Fusion



PF 3 25 117 305

TM 250 Flange adapter clamping unit

- For correct clamping and fusion jointing of short end fittings

d [mm]	Code	kg	
250	790 115 045	9.600	



TM 315 Reduction clamping inserts, wide

- d 90 - 280 mm
- Each code number defines 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	790 112 088	1.000	
110	790 112 089	1.050	
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	

PF 3 25 117 307



TM 350 Reduction clamping inserts, narrow

- d 90 - 280 mm
- Each code number defines 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	790 112 098	0.995	
110	790 112 099	1.285	
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	

PF 3 25 117 307

TM 350 Reduction clamping inserts-set

- 4 wide and 4 narrow clamping inserts of each dimension

d-d [mm]	Code	kg	
90 - 280	790 112 156	78.000	

PF 3 25 117 307

Machines & Equipment for Butt Fusion



TM 350 Special clamping bracket tapered

- For clamping of fittings 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	
315	L	790 112 111	2.780	
315	R	790 112 112	2.335	

PF 3 25 117 307



TM 350 Flange adapter clamping unit

- For correct clamping and fusion jointing of short end fittings

d-d [mm]	Code	kg	
90 - 315	790 112 038	15.400	

PF 3 25 117 307

Machines & Equipment for Butt Fusion

GF 160 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)
- **Base machine**
 - Technical features as for manual versions
 - Position measurement of the carriage (safety, process monitoring)
- **Planer, Heating element, Hydraulic hose package, Case, Tool 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	
40 - 160	230 V/1850 W		790 114 069	119.000	
40 - 160	115 V/1850 W		790 114 068	119.000	
40 - 160	230 V/1850 W	Russian	790 114 067	119.000	
40 - 160	230 V/1850 W	Chinese	790 114 178	119.000	

PF 3 25 133 610

Machines & Equipment for Butt Fusion

GF 160 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)
- **Base machine**
 - Technical features same as for manually operated machines
 - Position measurement of the carriage (safety, process monitoring)
- **Planer, Heating element, Hydraulic hose package, Case, Tool set**
 - Technical features as for manual versions
 - 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.
- Including transport packaging, without accessories and without reduction inserts

d-d [mm]	Performance	Type	Code	kg	
40 - 160	230 V/1850 W		790 114 191	122.000	
40 - 160	230 V/1850 W	Russian	790 114 179	122.000	
40 - 160	230 V/1850 W	Chinese	790 114 184	129.000	

PF 3 25 133 610

Machines & Equipment for Butt Fusion

GF 160 Accessories



Reduction clamping inserts, wide

- d 40 - 140 mm
- Each code number defines 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	790 114 023	0.300	
50	790 114 009	0.320	
63	790 114 010	0.300	
75	790 114 011	0.300	
90	790 114 012	0.280	
110	790 114 013	0.245	
125	790 114 014	0.265	
140	790 114 015	0.180	

PF 3 25 117 316



Reduction clamping inserts, narrow

- d 40 - 140 mm
- Each code number defines 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	790 114 027	0.300	
50	790 114 016	0.310	
63	790 114 017	0.310	
75	790 114 018	0.280	
90	790 114 019	0.255	
110	790 114 020	0.225	
125	790 114 021	0.200	
140	790 114 022	0.140	

PF 3 25 117 316

Reduction clamping inserts-set

- 4 wide and 4 narrow clamping inserts of each dimension

d-d [mm]	Code	kg	
40 - 140	790 114 156	17.000	

PF 3 25 117 316



Special clamping bracket tapered

- For clamping of fittings d 160 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	790 114 025	0.820	
160	R	790 114 026	0.680	

PF 3 25 117 316

Machines & Equipment for Butt Fusion



1 Set planer blades

- (1 set = 2 blades)

d-d [mm]	Code	kg	
40 - 160	790 113 056	0.080	

PF 3 25 117 311

Machines & Equipment for Butt Fusion

GF 250 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
 - 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, Tool 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	
75 - 250	230 V/2490 W		790 115 069	175.000	
75 - 250	115 V/2490 W		790 115 068	175.000	
75 - 250	230 V/2490 W	Russian	790 115 067	175.000	
75 - 250	230 V/2490 W	Chinese	790 115 178	175.000	

PF 3 25 125 610

Machines & Equipment for Butt Fusion

GF 250 CNC Butt fusion machine with automatic heating element



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
 - Automatically controlled fusion cycle with built-in linear measurement unit (safety)
 - Automatically controlled temperature of the heating element
 - Automatically controlled facing process
 - 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)
 - Safe two-handed operation according to TÜV for machine carriage movement
 - Barcode reader for data input (optional)
 - Technical features as for manual versions
 - Position measurement of the carriage (safety, process monitoring)
- **Base machine**
 - Built-in linear measurement unit for accurate slide positioning (safety, control of the fusion pressure build-up, control of the automatic fusion steps)
- **Planer, Heating element, Hydraulic hose package, Case, Tool set**
 - Technical features same as for manually operated machines
 - 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.
- Including transport packaging, without accessories and without reduction inserts

d-d [mm]	Performance	Type	Code	kg	
75 - 250	230 V/2490 W		790 115 191	175.000	
75 - 250	115 V/2490 W		790 115 194	175.000	
75 - 250	230 V/2490 W	Russian	790 115 179	175.000	
75 - 250	230 V/2490 W	Chinese	790 115 184	175.000	

PF 3 25 125 610

Machines & Equipment for Butt Fusion

GF 250 Accessoires



Reduction clamping inserts, wide

- d 75 - 225 mm
- Each code number defines 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	790 115 028	0.815	
90	790 115 008	0.835	
110	790 115 009	0.825	
125	790 115 010	0.785	
140	790 115 011	0.735	
160	790 115 012	0.695	
180	790 115 013	0.660	
200	790 115 014	0.715	
225	790 115 015	0.465	

PF 3 25 117 305



Reduction clamping inserts, narrow

- d 75 - 225 mm
- Each code number defines 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	790 115 029	0.740	
90	790 115 016	0.715	
110	790 115 017	0.690	
125	790 115 018	0.680	
140	790 115 019	0.625	
160	790 115 020	0.595	
180	790 115 021	0.520	
200	790 115 022	0.455	
225	790 115 023	0.390	

PF 3 25 117 305

Reduction clamping inserts-set

- 4 wide and 4 narrow clamping inserts of each dimension

d-d [mm]	Code	kg	
75 - 225	790 115 156	48.000	

PF 3 25 117 305

Machines & Equipment for Butt Fusion



Special clamping bracket tapered

- For clamping of fittings d 250 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	
250	L	790 115 025	1.825	
250	R	790 115 026	1.560	

PF 3 25 117 305



Flange adapter clamping unit

- For correct clamping and fusion jointing of short end fittings

d [mm]	Code	kg	
250	790 115 045	9.600	

PF 3 25 117 305



1 Set planer blades

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

d-d [mm]	Code	kg	
75 - 250	790 115 024	0.060	

PF 3 25 117 305

Machines & Equipment for Butt Fusion

GF 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
 - 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, Tool set**
 - Technical features same as for manually operated machines
 - Including transport packaging (carton pallet), without accessories and without reduction inserts

d-d [mm]	Performance	Type	Code	kg	
90 - 315	230 V/4170 W		790 112 069	213.000	
90 - 315	115 V/4170 W		790 112 068	213.000	
90 - 315	230 V/4170 W	Russian	790 112 067	213.000	
90 - 315	230 V/4170 W	Chinese	790 112 178	213.000	

PF 3 25 127 610

Machines & Equipment for Butt Fusion

GF 315 CNC Butt fusion machine with automatic heating element



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
 - Automatically controlled fusion cycle with built-in linear measurement unit (safety)
 - Automatically controlled temperature of the heating element
 - Automatically controlled facing process
 - 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)
 - Safe two-handed operation according to TÜV for machine carriage movement
 - Barcode reader for data input (optional)
 - Technical features as for manual versions
 - Barcode reader for pipe code (logbook recording. Optional)
- **Base machine**
 - Built-in linear measurement unit for accurate slide positioning (safety, control of the fusion pressure build-up, control of the automatic fusion steps)
- **Planer, Heating element, Hydraulic hose package, Case, Tool set**
 - Technical features same as for manually operated machines
 - 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.
- Including transport packaging, without accessories and without reduction inserts

d-d [mm]	Performance	Type	Code	kg	
90 - 315	230 V/4170 W		790 112 191	213.000	
90 - 315	115 V/4170 W		790 112 194	213.000	
90 - 315	230 V/4170 W	Russian	790 112 179	213.000	
90 - 315	230 V/4170 W	Chinese	790 112 184	213.000	

PF 3 25 127 610

Machines & Equipment for Butt Fusion

GF 315 Accessories



Reduction clamping inserts, wide

- d 90 - 280 mm
- Each code number defines 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	790 112 088	1.000	
110	790 112 089	1.050	
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	

PF 3 25 117 307



Reduction clamping inserts, narrow

- d 90 - 280 mm
- Each code number defines 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	790 112 098	0.995	
110	790 112 099	1.285	
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	

PF 3 25 117 307

Reduction clamping inserts-set

- 4 wide and 4 narrow clamping inserts of each dimension

d-d [mm]	Code	kg	
90 - 280	790 112 156	78.000	

PF 3 25 117 307

Machines & Equipment for Butt Fusion



Special clamping bracket tapered

- For clamping of fittings 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
315	L	790 112 111	2.780
315	R	790 112 112	2.335

PF 3 25 117 307



Flange adapter clamping unit

- For correct clamping and fusion jointing of short end fittings

d-d [mm]	Code	kg
90 - 315	790 112 038	15.400

PF 3 25 117 307



1 Set planer blades

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

d-d [mm]	Code	kg
90 - 315	790 112 110	0.115

PF 3 25 117 307

Machines & Equipment for Butt Fusion

GF 400 Butt fusion machine



GF 400

- High quality, long-lasting heating element butt fusion machine for fusion jointing PP, PE and PVDF pipes and fittings. For complete pressure range up to PN 16.
- Machine complete with remote control
- The GF butt fusion machines could be assembled with the welding recorder WR 100 or configured as a CNC machine with the SUVI® 400.
- Including transport packaging, without accessories and without reduction inserts

PF 3 25 870 100

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



Machine GF 400 complete, 400 V

- The GF400 butt fusion machine could 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, PE and PVDF pipes and fittings. For complete pressure range up to PN 16.
- Assembled with control box to supply all components with power, only 1 power connection required !
- Including transport packaging, without accessories and without reduction inserts

PF 3 25 870 100

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



Basic machine

- High precision design, distortion-free and sturdy machine bed
- 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 without losing stability on the guiding shafts relocatable
- Double clamping device for secure hold and exact radial and axial alignment of components
- Machine specific tool set

PF 3 25 117 332

d-d [mm]	Code	kg
125 - 400	790 127 002	95.000



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

PF 3 25 117 332

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

Machines & Equipment for Butt Fusion



PF 3 25 117 332

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
125 - 400	230 V/3500 W	790 127 004	15.000



PF 3 25 117 332

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
- Memory for automatic pressure equalization during the cooling phase
- Easy level control and refilling of hydraulic oil

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

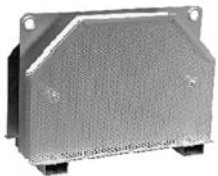


PF 3 25 117 332

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

Performance	Code	kg
400 V	790 127 008	15.500



PF 3 25 117 332

Case

- For safe storage of planer and automatic heating element

Code	kg
790 127 005	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, Tool set**
 - Technical features same as for manually operated machines
 - Including transport packaging (carton pallet), without accessories and without reduction inserts

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

PF 3 25 870 610

Machines & Equipment for Butt Fusion

GF 400 Accessories

Hoist unit



PF 3 25 117 332

- For carrying the weight compensator mounted at the backside of the basic machine
- Weight compensator included

Code	kg	
790 127 026	50.000	



Reduction clamping inserts, wide

- d 125-355 mm
- Each code number defines 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 defines 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

d-d [mm]	Code	kg	
125 - 355	790 127 156	30.000	

PF 3 25 117 332

Machines & Equipment for Butt Fusion

KL 500 TOP1 Butt fusion machine



Machine complete

- Compact and robust heating element-butt fusion machine for fusion jointing PP, PE and PVDF 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 could be assembled with the welding recorder WR 100.
- Machine provided with Hydromat hydraulic unit
- Including transport packaging (carton pallet), without accessories and without reduction inserts

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

PF 3 10 574 100



Basic 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	790 340 001	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	790 340 002	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	790 116 004	26.000	

PF 3 25 117 306

Machines & Equipment for Butt Fusion

Control box



PF 3 25 117 306

- 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	
790 116 038	15.500	

Machines & Equipment for Butt Fusion

KL 500 TOP2 Butt fusion machine



Machine complete

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

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

PF 3 10 574 100



Basic 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	790 340 001	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	790 340 002	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	790 116 004	26.000

PF 3 25 117 306



Remote control

- Electronic temperature control
- Accurate adjustment of heating element temperature

Code	kg
790 340 003	5.000

PF 3 10 574 500

Machines & Equipment for Butt Fusion



Case

- For safe storage of planer and heating element

Code	kg	
790 116 006	41.000	



Hydromat

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

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

PF 3 10 574 500

Machines & Equipment for Butt Fusion

KL 500 Accessories



Reduction clamping inserts, wide

- Each code number defines 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	790 116 008	4.160	
225	790 116 009	3.300	
250	790 116 010	3.300	
280	790 116 011	3.500	
315	790 116 012	3.600	
355	790 116 013	3.700	
400	790 116 014	3.400	
450	790 116 015	3.500	

PF 3 25 117 306



Reduction clamping inserts, narrow

- Each code number defines 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	790 116 016	3.680	
225	790 116 017	4.100	
250	790 116 018	4.100	
280	790 116 019	3.800	
315	790 116 020	3.500	
355	790 116 021	3.200	
400	790 116 022	2.500	
450	790 116 023	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	790 116 156	162.000	

PF 3 25 117 306

Hoist unit

- Hoist unit (consists of frame and swivel arm)

Code	kg	
790 140 026	22.000	

PF 3 25 117 334

Machines & Equipment for Butt Fusion

Weight compensator to hoist unit

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



PF 3 25 117 306

Code	kg	
790 116 027	12.500	



PF 3 25 117 306

Flange adapter clamping unit

- For correct clamping and fusion jointing of short end fittings

d [mm]	Code	kg	
500	790 116 045	19.000	



PF 3 25 117 306

1 Set planer blades

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

Code	kg	
790 116 041	0.700	

Machines & Equipment for Butt Fusion

GF 500 Butt fusion machine

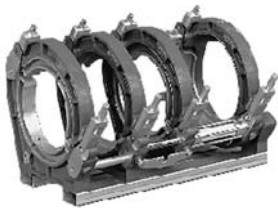


Machine GF 500 complete

- High quality, long-lasting heating element butt fusion machine for fusion jointing PP, PE and PVDF pipes and fittings. Size range d 200-500 mm, for complete pressure range up to PN 16.
- The GF500 butt fusion machine could 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 (carton pallet), without accessories and without reduction inserts

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

PF 3 25 126 200



Basic machine

- High precision design, distortion-free and sturdy machine bed
- 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 without losing stability on the guiding shafts relocatable
- 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	790 116 002	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	790 116 003	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	790 116 004	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
- Memory for automatic pressure equalization during the cooling phase
- Easy level control and refilling of hydraulic oil

PF 3 25 117 306

Performance	Code	kg
400 V/1500 W	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

PF 3 25 117 306

Code	kg
790 116 038	15.500

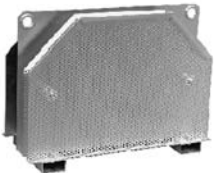


Hydraulic hose package

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

PF 3 25 117 307

Code	kg
790 112 085	4.250



Case

- For safe storage of planer and automatic heating element

PF 3 25 117 306

Code	kg
790 116 006	41.000

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, Tool 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		790 116 069	476.000	
200 - 500	400 V/6250 W	Russian	790 116 067	476.000	
200 - 500	400 V/6250 W	Chinese	790 116 178	476.000	

PF 3 25 126 610

Machines & Equipment for Butt Fusion

GF 500 Accessories



Reduction clamping inserts, wide

- Each code number defines 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	790 116 008	4.160	
225	790 116 009	3.300	
250	790 116 010	3.300	
280	790 116 011	3.500	
315	790 116 012	3.600	
355	790 116 013	3.700	
400	790 116 014	3.400	
450	790 116 015	3.500	

PF 3 25 117 306



Reduction clamping inserts, narrow

- Each code number defines 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	790 116 016	3.680	
225	790 116 017	4.100	
250	790 116 018	4.100	
280	790 116 019	3.800	
315	790 116 020	3.500	
355	790 116 021	3.200	
400	790 116 022	2.500	
450	790 116 023	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	790 116 156	162.000	

PF 3 25 117 306

Hoist unit

- Hoist unit (consists of frame and swivel arm)

Code	kg	
790 116 026	22.000	

PF 3 25 117 334

Machines & Equipment for Butt Fusion

Weight compensator to hoist unit

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



PF 3 25 117 306

Code	kg	
790 116 027	12.500	



PF 3 25 117 306

Flange adapter clamping unit

- For correct clamping and fusion jointing of short end fittings

d [mm]	Code	kg	
500	790 116 045	19.000	



PF 3 25 117 306

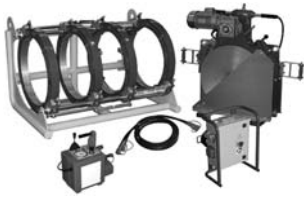
1 Set planer blades

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

Code	kg	
790 116 041	0.700	

Machines & Equipment for Butt Fusion

KL 630 TOP1 Butt fusion machine



Machine complete

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

PF 3 10 575 100

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



Basic 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

PF 3 10 573 100

d-d [mm]	Code	kg
315 - 630	790 117 002	225.000



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

PF 3 10 573 100

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



Heating element

- High performance, electronic 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

PF 3 10 573 500

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

Machines & Equipment for Butt Fusion

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



PF 3 25 117 319

Code	kg	
790 117 038	14.000	

Machines & Equipment for Butt Fusion

KL 630 TOP2 Butt fusion machine



Machine complete

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

PF 3 10 575 100

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



Basic 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

PF 3 10 573 100

d-d [mm]	Code	kg
315 - 630	790 117 002	225.000



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	790 117 003	98.000



Heating element

- High performance, electronic 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

PF 3 10 573 500

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

Machines & Equipment for Butt Fusion



Remote control

- Electronic temperature control
- Accurate adjustment of heating element temperature

Code	kg	
790 340 003	5.000	



Case

- For safe storage of planer and heating element

Code	kg	
790 117 006	55.000	

Machines & Equipment for Butt Fusion

KL 630 Accessories



Reduction clamping inserts, wide

- Each code number defines 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, the reduction clamping insert d 500 mm, code 790 117 012, must also be used

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

PF 3 25 117 319



Reduction clamping inserts, narrow

- Each code number defines 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, the reduction clamping insert d 500 mm, code 790 117 012, must also be used

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



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	
790 117 023	196.000	

PF 3 25 117 319



Flange adapter clamping unit

- For correct clamping and fusion jointing of short end fittings

d [mm]	Code	kg	
560	790 117 029	27.000	

PF 3 25 117 319

Machines & Equipment for Butt Fusion



1 Set planer blades

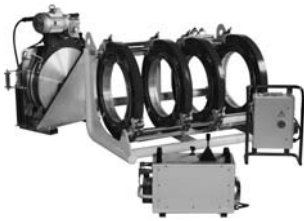
- Blade has 2 cutting edges (1 set = 2 blades)

PF 3 25 117 319

Code	kg	
790 117 041	0.470	

Machines & Equipment for Butt Fusion

GF 630 Butt fusion machine

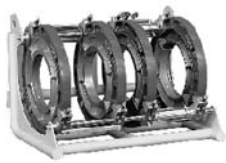


Machine GF 630 complete

- High quality, long-lasting heating element butt fusion machine for fusion jointing PP, PE and PVDF pipes and fittings. Size range d 315-630 mm, for complete pressure range up to PN 16.
- The GF630 butt fusion machine could 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 (carton pallet), without accessories and without reduction inserts

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

PF 3 25 136 100



Basic machine

- High precision design, distortion-free and sturdy machine bed
- 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	790 117 002	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	790 117 003	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	790 117 004	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
- Memory for automatic 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 automatic heating element

Code	kg	
790 117 006	55.000	

PF 3 25 117 319

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, Tool 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		790 117 069	613.000	
315 - 630	400 V/11000 W	Russian	790 117 067	613.000	
315 - 630	400 V/11000 W	Chinese	790 117 178	613.000	

PF 3 25 136 610

Machines & Equipment for Butt Fusion

GF 630 Accessories



Reduction clamping inserts, wide

- Each code number defines 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, the reduction clamping insert d 500 mm, code 790 117 012, must also be used

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

PF 3 25 117 319



Reduction clamping inserts, narrow

- Each code number defines 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, the reduction clamping insert d 500 mm, code 790 117 012, must also be used

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



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	
790 117 023	196.000	

PF 3 25 117 319



Flange adapter clamping unit

- For correct clamping and fusion jointing of short end fittings

d [mm]	Code	kg	
560	790 117 029	27.000	

PF 3 25 117 319



1 Set planer blades

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

Code	kg	
790 117 041	0.470	

PF 3 25 117 319

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 GF 800 butt fusion machine could be assembled with the welding recorder WR 100
- Including transport packaging (carton pallet), without accessories and without reduction inserts

PF 3 25 136 200

d-d [mm]	Performance	Code	kg
500 - 800	400 V/15000 W	790 123 001	1546.000



Basic machine

- Heater release mechanism
- High precision design, distortion-free and sturdy machine bed
- 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

PF 3 25 136 200

d-d [mm]	Code	kg
500 - 800	790 123 002	690.000



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

PF 3 25 117 322

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



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

PF 3 25 117 322

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

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
- Memory for automatic 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	790 123 005	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

PF 3 25 117 319

Code	kg
790 123 009	29.000



Hydraulic hose package

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

PF 3 25 117 322

Code	kg
790 123 006	6.000



Case

- For safe storage of planer and automatic heating element

PF 3 25 117 322

Code	kg
790 123 007	230.000

Machines & Equipment for Butt Fusion

GF 800 Accessories



Reduction clamping inserts, wide

- d 500 - 710 mm
- Each code number defines 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]	Code	kg	
500	790 117 012	4.600	
560	790 117 013	4.300	
630	790 123 011	11.000	
710	790 123 012	9.500	

PF 3 25 117 322



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	
790 123 016	270.000	

PF 3 25 117 322



Flange adapter clamping unit

- For correct clamping and fusion jointing of short end fittings

d-d [mm]	Code	kg	
500 - 800	790 123 029	120.000	

PF 3 25 117 322



1 Set planer blades

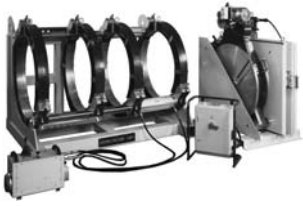
- Blade has 2 cutting edges (1 set = 2 blades)

Code	kg	
790 117 041	0.470	

PF 3 25 117 319

Machines & Equipment for Butt Fusion

GF 1000 Butt fusion machine



Machine GF 1000 complete

- High quality, long-lasting heating element butt fusion machine for fusion jointing PP, PE and PVDF pipes and fittings.
- The GF 1000 butt fusion machine could be assembled with the welding recorder WR 100
- Including transport packaging (carton pallet), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg	
710 - 1000	400 V/19500 W	790 124 001	2528.000	

PF 3 25 136 300



Basic machine

- High precision design, distortion-free and sturdy machine bed
- 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	790 124 002	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	790 124 003	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	790 124 004	82.000	

PF 3 25 117 323

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
- Memory for automatic pressure equalization during the cooling phase
- Easy level control and refilling of hydraulic oil

Performance	Code	kg	
400 V/1500 W	790 123 005	38.000	



Case

- For safe storage of planer and automatic heating element

Code	kg	
790 124 006	345.000	

PF 3 25 117 323

Machines & Equipment for Butt Fusion

GF 1000 Accessories



Reduction clamping inserts, wide

- Each code number defines 1 piece of reduction clamping insert. Per machine and dimension maximum 8 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]	Code	kg	
710	790 123 012	9.500	
800	790 124 011	19.400	
900	790 124 012	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	
790 124 016	300.000	



PF 3 25 117 323

Flange adapter clamping unit

- For correct clamping and fusion jointing of short end fittings

Code	kg	
790 124 029	170.000	



PF 3 25 137 100

1 Set planer blades

- (1 set = 4 blades)

Code	kg	
790 124 021	1.300	

Machines & Equipment for Butt Fusion

GF 1200 Butt fusion machine



Machine GF 1200 complete

- High quality, long-lasting heating element butt fusion machine for fusion jointing PP, PE and PVDF pipes and fittings.
- The GF 1200 butt fusion machine could be assembled with the welding recorder WR 100.
- Including transport packaging (carton pallet), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg
800 - 1200	400 V/20500 W	790 125 001	2932.000

PF 3 25 136 400



Basic machine

- High precision design, distortion-free and sturdy machine bed
- 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	790 125 002	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	790 125 003	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	790 125 004	94.000

PF 3 25 117 324

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
- Memory for automatic pressure equalization during the cooling phase
- Easy level control and refilling of hydraulic oil

Performance	Code	kg	
400 V/1500 W	790 123 005	38.000	



Case

- For safe storage of planer and automatic heating element

Code	kg	
790 125 006	420.000	

PF 3 25 117 324

Machines & Equipment for Butt Fusion

GF 1200 Accessories



Reduction clamping inserts, wide

- Each code number defines 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	790 124 011	19.400	
900	790 124 012	20.000	
1000	790 125 011	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	
790 125 016	308.000	

PF 3 25 117 324



Flange adapter clamping unit

- For correct clamping and fusion jointing of short end fittings

Code	kg	
790 125 029	260.000	

PF 3 25 117 324



1 Set planer blades

- (1 set = 4 blades)

Code	kg	
790 125 021	1.600	

PF 3 25 137 100

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: 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 Windows ME/NT4/2000/XP.
- 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

Barcode reader pen



Code	kg	Description
799 350 335	0.165	Barcode reader pen

PF 2 51 306 001

CTC Cooling Time Control



- Controlling of the cooling phase according to the ambient temperature (CTC)
- Reduction of the process time for PE up to 50% in comparison to DVS
- Currently available for GF 160/250/315 with SUVI® 400
- Access code to unlock the CTC fusion parameter

Code	kg
790 119 274	0.002

PF 3 25 117 312

Memory Card



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

PF 3 25 117 312

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, appropriate listing see next page.

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 guideline (e.g. DVS, WIS or UNI). Hard plastic PE case IP65 locates a printer on board.

Performance:

- Easy configuration by operator to the different GF/KL machines
- Internal memory fusion protocol with a capacity up to 100 records
- Easy 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 of windows (serial interface 790 119 403)

Power connector: Schuko, 16A

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

Including connecting cables to butt fusion machine

Performance	Dimensions [mm]	Code	kg	
230 V	350x300x150 mm	790 119 401	6.000	

PF 3 25 132 100

Machines & Equipment for Butt Fusion

Machines fitted with WR 100

AHE = automatic heating element



Description	Performance	Code	kg	
KL 500 TOP 1 WR 100	400 V	790 340 008	475.000	
KL 500 TOP 2 WR 100	400 V	790 340 035	475.000	
KL 630 TOP 1 WR 100	400 V	790 345 008	600.000	
KL 630 TOP 2 WR 100	400 V	790 345 035	600.000	
GF 400 WR 100	400 V	790 127 015	350.000	
GF 400 WR 100	230 V	790 127 020	350.000	
GF 500 WR 100	400 V	790 116 075	475.000	
GF 630 WR 100	400 V	790 117 075	600.000	
GF 800 WR 100	400 V	790 123 075	1550.000	
GF 1000 WR 100	400 V	790 124 075	3000.000	
GF 1200 WR 100	400 V	790 125 075	3210.000	

PF 3 10 575 600

Accessories

description	Code	kg	
Serial/parallel printer cable (WR 100-Printer)	790 119 402	0.400	
Serial Data transfer cable (WR100-PC)	790 119 403	0.250	

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 d 90 - 315 mm for high pressure applications
- To produce T and Y fittings from d 90 - 250 mm the 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 which could each be adjusted transverse to the pipe axis
- Each clamping tool is max. 22,5° turnable and assembled with a set of reductions d 90 - 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

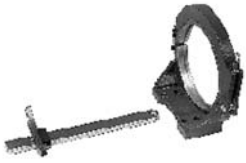
d-d [mm]	Performance	Code	kg	
90 - 315	400 V/4620 W	790 118 060	464.000	

PF 3 25 135 100

Machines & Equipment for Butt Fusion

WM 315 Accessories

Base clamping unit left for fittings with adapter ring, wide



- For clamping fittings of 315 mm as well as for fastening reduction clamping inserts for fittings 90 to 280 mm, Guide shaft for pipe support und back stop, with pipe support 315 mm
- L = left
- R = right

d [mm]	Type	Code	kg
315	L	790 118 011	15.700
315	R	790 118 012	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	790 118 028	0.850

PF 3 25 117 318



Set of pipe supports

d-d [mm]	Code	kg
90 - 280	790 118 025	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	790 112 098	0.995
110	790 112 099	1.285
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

Back stop

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

Code	kg
790 118 026	5.200

PF 3 25 117 318

Machines & Equipment for Butt Fusion



PF 3 25 117 318

Flange adapter clamping unit

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

d-d [mm]	Code	kg	
90 - 315	790 118 031	25.000	



PF 3 25 117 318

T-fitting clamping unit

- 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
- Including packaging

d-d [mm]	Code	kg	
90 - 250	790 118 032	140.000	



PF 3 25 117 318

Y-fitting clamping unit

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

d-d [mm]	Code	kg	
90 - 250	790 118 033	174.000	



PF 3 25 117 318

Set planer of blades

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

description	Code	kg	
long	790 118 042	0.085	
short	790 118 043	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 d 250 - 500 mm for high pressure applications
- To produce T and Y fittings from d 250 - 400 mm the 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 which could each be adjusted transverse to the pipe axis
- Each clamping tool is max. 22,5° turnable and assembled with a set of reductions d 250 - 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	790 120 020	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	790 116 018	4.100	
280	790 116 019	3.800	
315	790 116 020	3.500	
355	790 116 021	3.200	
400	790 116 022	2.500	
450	790 116 023	2.500	



Reduction clamping inserts, wide

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

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

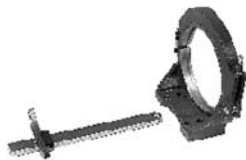


Back stop

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

Code	kg	
790 108 026	34.000	

PF 3 25 117 321



Base clamping unit 500 mm for fittings

- For clamping fittings of 500 mm as well as for the reduction clamping inserts for fittings of 250 to 450 mm, Guide shaft for pipe support and back stop, with pipe support 500 mm
- L = left
- R = right

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

PF 3 25 117 320



Set of pipe supports

d-d [mm]	Code	kg	
250 - 450	790 120 025	10.700	

PF 3 25 117 320

Machines & Equipment for Butt Fusion



PF 3 25 117 320

Flange adapter clamping unit

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

d-d [mm]	Code	kg	
250 - 500	790 120 031	73.000	



PF 3 25 117 320

T-fitting clamping unit

- 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
- Including packaging

d-d [mm]	Code	kg	
250 - 400	790 120 032	415.000	



PF 3 25 117 320

Y-fitting clamping unit

- 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
- Including packaging

d-d [mm]	Code	kg	
250 - 400	790 120 033	610.000	



PF 3 25 117 320

1 Set planer blades

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

Code	kg	
790 117 041	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 d 315 - 630 mm for high pressure applications
- To produce T and Y fittings from d 315 - 500 mm the 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 which could each be adjusted transverse to the pipe axis
- Each clamping tool is max. 22,5° turnable and assembled with a set of reductions d 315 - 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	790 108 020	1870.000	

PF 3 25 138 100

Machines & Equipment for Butt Fusion



Machine WM 630 CNC

- Machine for jointing segmented fittings like bends from d 315 - 630 mm for high pressure applications
- To produce T and Y fittings from d 315 - 500 mm the 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 which could each be adjusted transverse to the pipe axis
- Each clamping tool is max. 22,5° turnable and assembled with a set of reductions d 315 - 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	790 108 101	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, the reduction clamping insert d 500 mm, code 790 117 012, must also be used

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



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, the reduction clamping insert d 500 mm, code 790 117 012, must also be used

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



PF 3 25 117 321

Set of pipe supports

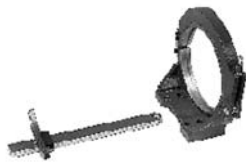
d-d [mm]	Code	kg
315 - 450	790 108 025	6.000



Back stop

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

Code	kg
790 108 026	34.000



Base clamping unit for fittings

- For clamping fittings of 500 mm as well as for the reduction clamping inserts for fittings of 315 to 450 mm, Guide shaft for pipe support and back stop, with pipe support 500 mm
- L = left
- R = right

d [mm]	Type	Code	kg
500	L	790 108 011	141.000
500	R	790 108 012	141.000

PF 3 25 117 321

Machines & Equipment for Butt Fusion



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
- Including packaging

d-d [mm]	Code	kg	
315 - 630	790 108 031	235.000	



PF 3 25 117 321

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
- Including packaging

d-d [mm]	Code	kg	
315 - 500	790 108 032	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
- Including packaging

d-d [mm]	Code	kg	
315 - 500	790 108 033	770.000	



PF 3 25 117 321

1 Set planer blades

- (1 set = 4 blades)

Code	kg	
790 108 043	0.500	

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 d 630 - 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 d 630 - 900 mm the 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 which could each be adjusted transverse to the pipe axis
- Each clamping tool is max. 22,5° turnable and assembled with a set of reductions d 630 - 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)

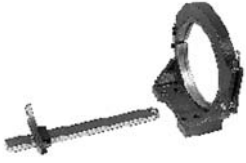
d-d [mm]	Performance	Code	kg	
630 - 1200	400 V/41000 W	790 126 001	8300.000	

PF 3 25 871 100

Machines & Equipment for Butt Fusion

WM 1200 Accessories

Base clamping unit 500 mm for fittings



- For clamping fittings of 500 mm as well as for the reduction clamping inserts for fittings of 315 to 450 mm, Guide shaft for pipe support and back stop, with pipe support 500 mm
- L = left
- R = right

PF 3 25 117 321

d [mm]	Type	Code



PF 3 25 117 321

Set of pipe supports

d-d [mm]	Code



Back stop

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

Code	kg
790 108 026	34.000



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
- Including packaging

d-d [mm]	Code



PF 3 25 117 334

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
- Including packaging

d-d [mm]	Code	kg
630 - 900	790 126 011	2926.000

Machines & Equipment for Butt Fusion



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
- Including packaging

PF 3 25 117 334

d-d [mm]	Code	kg	
630 - 900	790 126 012	2910.000	

X-fitting clamping unit

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

PF 3 25 117 334

d-d [mm]	Code	kg	
630 - 900	790 126 013	2900.000	

Base Plate T-Y-X pieces

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

PF 3 25 117 334

Code	kg	
790 126 014	1000.000	



1 Set planer blades

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

Code	kg	
790 126 043	0.500	

Machines & Equipment for Butt Fusion

PPC Plastic pipe cutter and KS 355

PPC Plastic pipe cutter

- For cutting plastic pipes d10 - d160



PF 3 25 117 309

d-d [mm]	Article	Code	kg
10 - 63	PPC 63, s max. = 7.2mm	790 109 001	0.710
50 - 110	PPC 110, s max. = 12.7mm	790 109 002	1.400
110 - 160	PPC 160, s max. = 19.0mm	790 109 003	2.220

Replacement cutting wheels

- for plastic pipe cutter



PF 3 25 117 909

d-d [mm]	Article	Code	kg
10 - 63	SR 63 max. s=7,2 mm	790 109 011	0.004
50 - 110	SR 110/160 max. s=12,7 mm	790 109 012	0.017
110 - 160	SR 160 max. s=19,0 mm	790 109 013	0.023

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



PF 3 25 129 760

d-d [mm]	Code	kg
160 - 355	790 202 001	15.400

Saw blade Ø 180x30

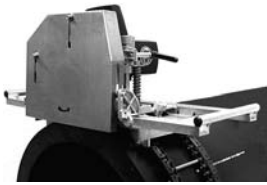


PF 3 25 119 107

Code	kg
790 202 011	0.485

Machines & Equipment for Butt Fusion

KS 1600



Plastic pipe cutter

The KS 1600 is prepared to cut plastic-pipes from diameter 355 mm up to 1600 mm with a wall thickness of max. 60 mm, fast, clean and properly right-angled. For each pipe-diameter the appropriate chain length is necessary. The saw is to put on the tensioned chain as per user manual and 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 all the time.

The KS 1600 Basis-Kit consists of a hand-circular saw, 230 V / 2200 W with carriage, 2 tension chains for d 560 mm and d 630 mm as well as a chain tensioner. The whole equipment is to be placed easily into the convenient and robust transport box.

The easy handling and the optimal safety factor do make this tool indispensable on each building site.

Scope of delivery:

1 Hand-circular saw, 1 tensioning chain d 560 mm, 1 tensioning chain d 630, 1 chain tensioner, 1 hex-wrench size 5, 1 hex-wrench size 6, 1 operating instruction, transport-box

Technical data:

Dimension range:	355 –1600 mm (By usage of 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	790 109 600	43.000	

PF 2 51 305 006

Saw blade

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

PF 3 25 119 106

Machines & Equipment for Butt Fusion

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	790 109 616	0.430	

PF 3 25 119 106

Tensioning Chains



- Chain d 560 and d 630 mm are included in the scope of delivery of the KS 1600 Basic-Kit (790 109 600).

d [mm]	Code	kg	
355	790 109 602	3.700	
400	790 109 603	4.100	
450	790 109 604	4.700	
500	790 109 605	5.200	
560	790 109 606	5.600	
630	790 109 607	6.630	
710	790 109 608	7.900	
800	790 109 609	8.600	
900	790 109 610	10.174	
1000	790 109 611	11.000	
1100	790 109 612	12.000	
1200	790 109 613	13.500	
1400	790 109 614	15.500	
1600	790 109 615	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

PF 3 25 129 700

d-d [mm]	Code	kg
90 - 450	790 109 045	160.000



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

PF 3 25 129 700

d-d [mm]	Code	kg
110 - 630	790 109 047	340.000

BS Wearing Parts

- Saw belt for

PF 3 25 119 105

Article	Code	kg
BS 450	790 109 046	0.400
BS 630	790 109 048	0.500

Other Belt saws

Code
on request

Machines & Equipment for Butt Fusion

Tools for pipeline construction



Outer bead remover

- Usable for clean and fast removal of the outer bead in butt fusion application
- With clamped pipes in the machine
- including transportation case

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

PF 3 25 117 330

Replacement blades

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

PF 3 25 117 330

Machines & Equipment for Butt Fusion

Accessories for job sites



Roller support 315

- 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

PF 3 25 117 328

d-d [mm]	Code	kg	
20 - 315	790 109 110	4.000	



Support 750

- Up to d 750 mm, with base plate, galvanised
- **height adjustable** (60 mm)
- The piping can be pulled with little effort
- Protects pipes from damage
- Reduces resistance during fusion
- Maximum load 1000 kg

PF 3 25 117 328

d-d [mm]	Code	kg	
110 - 750	790 109 109	4.115	



Alignment Tool

- To align and position pipes in the dimension range d 110 - 400 mm. The pipes are clamped in the vice, the axial movement takes place by a chain drive. The chain is totated by the ratched (square 19 mm).

PF 3 25 117 325

Article	Code	kg	
Alignment Tool	790 109 108	15.000	
Ratch	790 109 107	1.220	

Machines & Equipment for Butt Fusion

Miscellaneous accessories org

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	3.245	



Marker

PF 2 55 338 999

Type	Code	kg	
silver	799 350 364	0.012	

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General Condition of Supply of Georg Fischer Piping Systems (Switzerland) 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

- 2.1 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 import duties 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

- 11.1 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.
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

- 16.1 All cases of breach of contract and the relevant consequences as well as all rights and claims on the part of the customer, irrespective of 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

- 17.1 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.

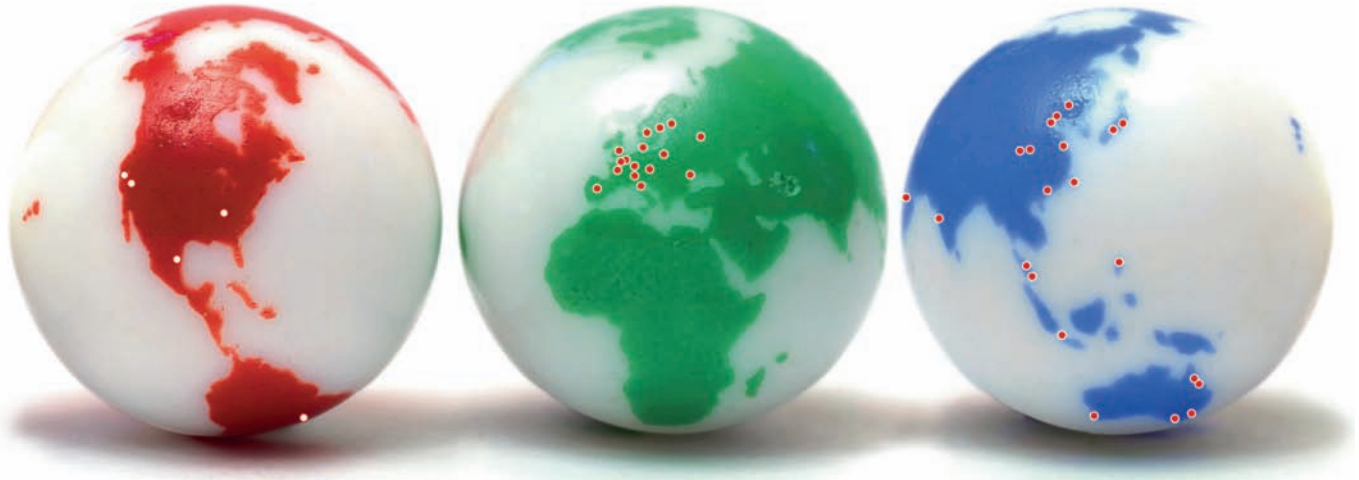
18 Place of Performance and Jurisdiction

- 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



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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