

Product range

IR & BCF fusion machines

IR-M, IR-A, IR-Plus &
BCF-Plus fusion machines



Redefine progress

Discover your perfect machine tailored to your project's unique needs. GF has over 30 years of IR technology expertise and offers a diverse range of solutions to ensure your project's success.



Specifications	IR-63 M	IR-110 Plus
Operation mode	Manual	Manual
Dimensions	d20-d63 mm (½ "-2")	d20-d110 mm (½ "-4")
Materials	PVDF SYGEF ECTFE SYGEF PP-H PROGEF PP-n PROGEF Natural PE100 ecoFit PVC-U metric PFA inch	PVDF SYGEF ECTFE SYGEF PP-H PROGEF PP-n PROGEF Natural PE100 ecoFit PFA inch
Languages	Chinese, Czech, Danish, Dutch, English, Finnish, French, German, Hindi (IR-M), Hungarian (IR-M), Italian, Japanese, Korean, Malay (IR-M), Norwegian, Polish, Russian, Spanish, Swedish, Taiwanese	
Adjustable facing option	Yes (0.5 - 3 mm)	No (always 2 mm)
Remote fusion	Yes	No
Power supply	230 V 50 / 60 Hz, max. 2,500 W	230 V 50 / 60 Hz, max. 1,500 W
Working temperature range	+5° C to +40° C	
Fusion data storage	More than 100,000 fusion data (Protocol and label data)	2,500 fusion data (Protocol and label data)
Maintenance	2,500 fusions	2,500 fusions
Calibration check	18 months	18 months
Weight machine / incl. transport case	31.6 kg / 59 kg Standard 31.6 kg / 63 kg Complete	50 kg / 110 kg
Weight working table / incl. transport case	–	–
Dimensions transport case machine L x W x H	0.80 x 0.40 x 0.45 m	0.80 x 0.60 x 0.80 m
Dimensions transport case working table L x W x H	–	–
Conformance / standards	DVS 2007-6, DVS 2203-1	
Compliance with	2006/42/EC (MD), 2014/30/EU (EMC), 2011/65/EU (RoHS)	2006/42/EC (MD) + 2004/108/ EC (EMC)
Applications	Designed for industrial applications and clean room conditions	
Order number	790180001 standard 790180003 complete with extension cable set and CONNECT box	790132001



IR-225 M

Manual

d63-d225 mm (2"-8")

PVDF SYGEF
ECTFE SYGEF
PP-H PROGEF
PP-n PROGEF Natural
PE100 ecoFit
PVC-U metric

Same as IR-63 M

Yes (0.5 - 5 mm)

400 / 230 V 50 / 60 Hz,
max. 3,500 W

More than 100,000 fusion data
(Protocol & label data)

2,500 fusions
18 months

187 kg / 413 kg

–

1.20 x 0.80 x 1.50 m

–

2006/42/EC (MD), 2014/30/EU
(EMC), 2011/65/EU (RoHS)

790182001
working table included
and CONNECT box

IR-110 A

Automated

d20-d110 mm (½ "-4")

PVDF SYGEF
ECTFE SYGEF
PP grey PROGEF
PP-n PROGEF Natural
PE100 ecoFit
PVC-U metric

Chinese, Czech, Danish, Dutch, English, Finnish, French, German, Italian, Japanese, Korean,
Norwegian, Polish, Spanish, Swedish, Taiwanese

Yes (0.5 - 5 mm)

No

230 V 50 / 60 Hz, max. 2,000 W
Integrated UPS

+5° C to +40° C

More than 20,000 fusion data (protocol, label, and video file)

4,000 fusions
18 months

130 kg / 250 kg (incl. transport
case and working table)

–

1.00 x 0.80 x 1.35 m

–

2006/42/EC (MD) + 2004/108/EC (EMC)

Designed for industrial applications and clean room conditions

790164001
working table included

IR-315 A

Automated

d110-d315 mm (4"-12")

PVDF SYGEF
PP grey PROGEF
PE100 ecoFit

Yes (0.5 - 5 mm)

400 V 50 / 60 Hz,
max. 5,000 W
Integrated UPS

1,500 fusions
18 months

643 kg / 711 kg

275 kg / 315 kg

1.20 x 0.80 x 1.67 m

2006/42/EC (MD) + 2004/108/EC (EMC)

790165001
working table included

IR-400 A

Automated

d355-d400 mm (14"-16")

PVDF SYGEF

Yes (0.5 - 5 mm)

400 V 50 / 60 Hz,
max. 5,000 W
Integrated UPS

1,000 fusions
18 months

860 kg / 951 kg

257 kg / 297 kg

1.20 x 1.51 x 1.55 m

1.20 x 0.83 x 1.07 m

2006/42/EC (MD) + 2004/108/EC (EMC)

790166001 rental-only
working table included

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IR-63 M Manual Fusion Machine



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

Model:

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

Option:

- Half shells PFA inch
- Extension cable set for remote weldings
- CONNECT Welding Data Box

Suitable for		Code	Weight (kg)
1/2"-2"	d20-63 mm	790 180 001	59.0



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

Model:

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

Option:

- Half shells PFA inch

Suitable for		Code	Weight (kg)
1/2"-2"	d20-63 mm	790 180 003	63.0



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

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

Code	Weight (kg)
790 180 019	0.200



Extension cable set IR-63 M

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

Suitable for	Code	Weight (kg)
1/2"-2" d20-63 mm	790 180 013	3.560



Half shells IR-63 M

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

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



Half shells IR-63 M PFA inch

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

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



Fix pipe stop IR-63 M

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

Suitable for	Code	Weight (kg)
1/2"-2" d20-63 mm	790 180 011	0.398



Adjustable pipe stop IR-63 M

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

Suitable for	Code	Weight (kg)
1/2"-2" d20-63 mm	790 180 012	0.740



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

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

Suitable for	Code	Weight (kg)
1/2"-2" d20-63 mm	790 180 018	0.016



Torx bolt tool T10

- For changing and turning the facing knives

Code	Weight (kg)
790 180 077	0.029



Allen key 4mm

- For setting the overlap and to loosen the clamping slide

Code	Weight (kg)
790 180 078	0.029



Extension cable for clamping slide IR-63 M

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

Suitable for		Code	Weight (kg)
1/2"-2"	d20-63 mm	790 180 014	0.700



Extension cable for facer IR-63 M

- 6 Meter (19 ft) extension cable for facer

Suitable for		Code	Weight (kg)
1/2"-2"	d20-63 mm	790 180 015	0.438



Extension cable for heater IR-63 M

- 6 Meter (19 ft) extension cable for heater

Suitable for		Code	Weight (kg)
1/2"-2"	d20-63 mm	790 180 016	0.767



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

Code	Weight (kg)
790 180 017	0.150



Brush IR-63 M & IR-63 Plus

Code	Weight
	(kg)
790 180 080	0.013

IR-225 M Manual Fusion Machine



IR-225 M Fusion Machine

Model:

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

Code Weight

	(kg)
790 182 001	413

Half shells IR-225 M



Model:

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

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

Fix pipe stop IR-225 M



- Fix pipe stop with 2mm facing on both sides

Code Weight

	(kg)
790 182 011	0.250



Adjustable pipe stop IR-225 M

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

Code	Weight (kg)
790 182 012	0.630



Pipe stop with angle markings IR-225 M

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

Code	Weight (kg)
790 182 013	1.500



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

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

Code	Weight (kg)
790 182 018	0.125



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

- For changing and turning the facing knives

Code	Weight (kg)
790 182 077	0.500



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

- For setting the overlap

Code	Weight (kg)
790 182 078	0.015



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

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

Code	Weight
	(kg)
790 180 019	0.200



Brush IR-225 M & IR-225 Plus

Code	Weight
	(kg)
790 182 080	0.013

IR-110 Plus Manual Fusion Machine



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

Model:

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

Note:

Clamping inserts PFA (inch) on request

Clamping inserts CONTAIN-IT Plus on request

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

Clamping inserts d20-50mm, IR-110 Plus



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

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

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



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

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

CONTAIN-IT Plus Clamping inserts IR-110 Plus



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

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

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



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

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

Pipe stop IR-110 Plus



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

Suitable for	Code	Weight (kg)
d20- 110 mm	790 132 059	0.700

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



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

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



Torx bolt tool T10

- For changing and turning the facing knives

Code	Weight (kg)
790 180 077	0.029



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

Code	Weight (kg)
790 180 017	0.150



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

Code	Weight (kg)
790 041 017	0.013



Set of inner clamping units IR-110 Plus

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

Note:

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

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

IR-225 Plus Manual Fusion Machine



IR-225 Plus Fusion Machine (soon to be replaced by IR-225 M)

Model:

- Fully-equipped manually operated infrared fusion machine with integrated working table for use under clean room conditions
- Welding of PVDF SYGEF (Standard/Plus), ECTFE SYGEF, PP-H PROGEF (Standard/Plus), PP-n PROGEF Natural, PE100 ecoFIT
- Dimensions d63-225 mm
- Monochrome display with icons and various languages
- 2 USB interfaces
- Heating and facing element
- Clamping slide with movable clamping units
- Cooling fan
- Clamping inserts d63-225 mm (8 pcs. per dimension)
- End caps PE d63-225 mm (4 pcs. per dimension)
- Pipe stop
- Transport box with integrated pallet (stainless steel)
- 1-phase AC (50/60 Hz) 230V L/N/PE or 3-phase AC (50/60 Hz) 400V/230VL1/L2/L3/N/PE
- Connecting cable 400V - 230V
- Additional tools
- Integrated label printer (including white ribbon 24mm)

Note:

Clamping inserts CONTAIN-IT Plus on request

Suitable for	Code	Weight (kg)
d63 - 225 mm	790 133 009	453



Clamping inserts IR-225 Plus

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

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



CONTAIN-IT Plus Clamping inserts IR-225 Plus

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

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



Pipe stop IR-225 Plus

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

Code	Weight (kg)	Pieces
790 133 047	0.150	1



Set of facing knives IR-225/315 Plus

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

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



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

- For facing knives

Code	Weight (kg)
790 133 577	0.063



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

Code	Weight (kg)
790 133 198	0.055

IR-110 A Automated Fusion Machine



IR-110 A Automated Fusion Machine

Model:

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

Note:

Clamping inserts PVC-U metric on request

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

Clamping inserts d20-50mm, IR-110 A



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

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

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



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

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



Clamping inserts IR-110 A PVC-U metric

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

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



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

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

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



Torx bolt tool T10

- For changing and turning the facing knives

Code	Weight (kg)
790 180 077	0.029



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

Code	Weight (kg)
790 133 198	0.055



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

Code	Weight (kg)
790 180 017	0.150



Set of inner clamping units IR-110 A

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

Note:

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

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

IR-315 A Automated Fusion Machine



IR-315 A Automated Fusion Machine

Model:

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

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



Clamping inserts IR-315 A

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

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



Set of facing knives IR-315/400 A

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

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



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

Code	Weight (kg)
790 133 198	0.055



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

- For facing knives

Code	Weight (kg)
790 133 577	0.063

IR-400 A Automated Fusion Machine



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

Model:

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

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



Clamping inserts IR-400 A

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

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



Set of facing knives IR-315/400 A

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

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

WBI Tool



WBI-63 Tool

- Weld bead inspection of PVDF SYGEF (Standard/Plus), ECTFE SYGEF, PP-H PROGEF (Standard/Plus), PE100 ecoFIT
- Dimensions d20-d63 mm
- Clamping units d20-d63 mm
- Tablet with accessories
- Label printer Brother PT-P900W (including blue ribbon 24mm)

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



WBI-225 Tool

- Weld bead inspection of PVDF SYGEF (Standard/Plus), ECTFE SYGEF, PP-H PROGEF (Standard/Plus), PE100 ecoFIT
- Dimensions d20-d225 mm
- Clamping units d20-d225 mm
- Tablet with accessories
- Label printer Brother PT-P900W (including blue ribbon 24mm)

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



Clamping units WBI Tool

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

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



Ribbon blue label WBI Tool

- Only use for WBI Tool

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

BCF Plus Fusion Machines



BCF-63 Plus Fusion Machine

Model:

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

Note:

Bladders to be ordered separately.

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



BCF-63 Plus Basic Machine

Model:

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

Code	Weight (kg)
790 121 004	144.000



BCF-110 Plus Fusion Machine

Model:

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

Note:

Bladders to be ordered separately.

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

Large Dimension Package BCF Plus d75-110mm

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

Note:

Heating stations not included

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



Heating stations BCF Plus

d (mm)	Code	Weight (kg)
20	790 121 111	1.818
25	790 121 112	1.822
32	790 121 113	1.910
40	790 121 114	2.396
50	790 121 115	2.406

table continued on the next page

d (mm)	Code	Weight (kg)
63	790 121 116	2.197
75	790 121 117	3.600
90	790 121 118	3.600
110	790 121 119	3.520



Bladder BCF Plus for SYGEF PVDF

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

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



Bladder BCF Plus for PROGEF Natural PP-n

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

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



Bladder/hose remove tool (BRet) BCF Plus

- Helpful to remove bladders easily.

Code	Weight (kg)
790 121 075	0.079



Supporting tool BCF Plus

- Helpful to fix 45°- angle components.

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



Clamping units BCF Plus

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

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



Clamping inserts IR-63 Plus / BCF Plus

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

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



Clamping inserts BCF Plus

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

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



Adapter for clamping unit BCF Plus d 75-110 mm

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

Code	Weight (kg)
790 121 038	0.250



Facing tool BCF Plus

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

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



Clamping inserts for the facing tool BCF Plus

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

d (mm)	Code	Weight (kg)
20	790 121 061	0.160
25	790 121 062	0.146
32	790 121 063	0.135
40	790 121 064	0.125
50	790 121 065	0.100
63	790 121 066	0.050
75	790 121 067	0.300
90	790 121 068	0.200
110	790 121 069	0.090



Facing tool mounting plate BCF Plus

- To fix the facing tool on the workbench.

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



Hose BCF Plus

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

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



Hose box incl. hose BCF Plus

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

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



Socket for compressed air hose BCF Plus

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



Hose cutter BCF Plus

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



Extension cable BCF Plus

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

Code	Weight (kg)
790 122 989	1.000



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

Code	Weight (kg)
790 180 017	0.150

IR-63 Plus Fusion Machine Accessories



Clamping inserts IR-63 Plus / BCF Plus

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

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



Clamping inserts IR-63 Plus CONTAIN-IT Plus

- The clamping inserts are different for each dimension. They are used to clamp and position the pipe components.
- 4x CONTAIN-IT Plus clamping inserts are needed for the two inner clamping devices.
- IR weldable materials: PVDF, ECTFE, PP-H, PP-n, PE100
- **Not compatible with PVC-U metric** (special clamping inserts needed)

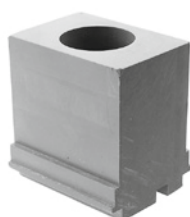
d (mm)	D (mm)	Code	Weight (kg)
20	50	790 131 090	0.060
25	50	790 131 091	0.060
32	63	790 131 092	0.060
40	75	790 131 093	0.050



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

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

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



Pipe stop IR-63 Plus

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

Code	Weight (kg)
790 131 046	0.430



Heater protection shield IR-63 Plus

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

Code	Weight (kg)	Pieces
790 131 051	0.205	1



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

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

Suitable for	Code	Weight (kg)
1/2"-2" d20-63 mm	790 180 018	0.016



Torx bolt tool T10

- For changing and turning the facing knives

Code	Weight (kg)
790 180 077	0.029



Extension cable for clamping slide IR-63 Plus

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

Code	Weight (kg)
790 131 047	0.700



Extension cable for facing tool IR-63 Plus

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

Code	Weight (kg)
790 131 048	0.438



Extension cable for heater IR-63 Plus

- 6 Meter (19 ft) extension cable for heater

Code	Weight (kg)
790 131 049	0.767



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

Code	Weight (kg)
790 180 017	0.150



Brush IR-63 M & IR-63 Plus

Code	Weight (kg)
790 180 080	0.013

IR/BCF Fusion Machines Accessories



Set of end caps IR

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

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



Label printer Brother PT-P900Wc

- For IR & BCF fusion machines only
- Label 36 mm included
- Order Label 24 mm separately

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



Tangit KS Cleaner

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

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



Cleaning tissue K0-TON-R

Minimum order quantity 100 pieces

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

Code Weight

(kg)

790 122 085	0.005
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USB Stick IR Plus

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

Code Weight

(kg)

790 180 083	0.050
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IR-Plus Win Weld

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

Code Weight

(kg)

790 131 471	0.151
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BCF Plus Win Weld

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

Suitable for	Code	Weight
		(kg)

(kg)

d20- 110 mm	790 121 471	0.080
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Notes

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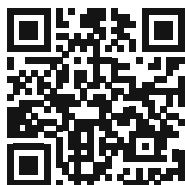
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