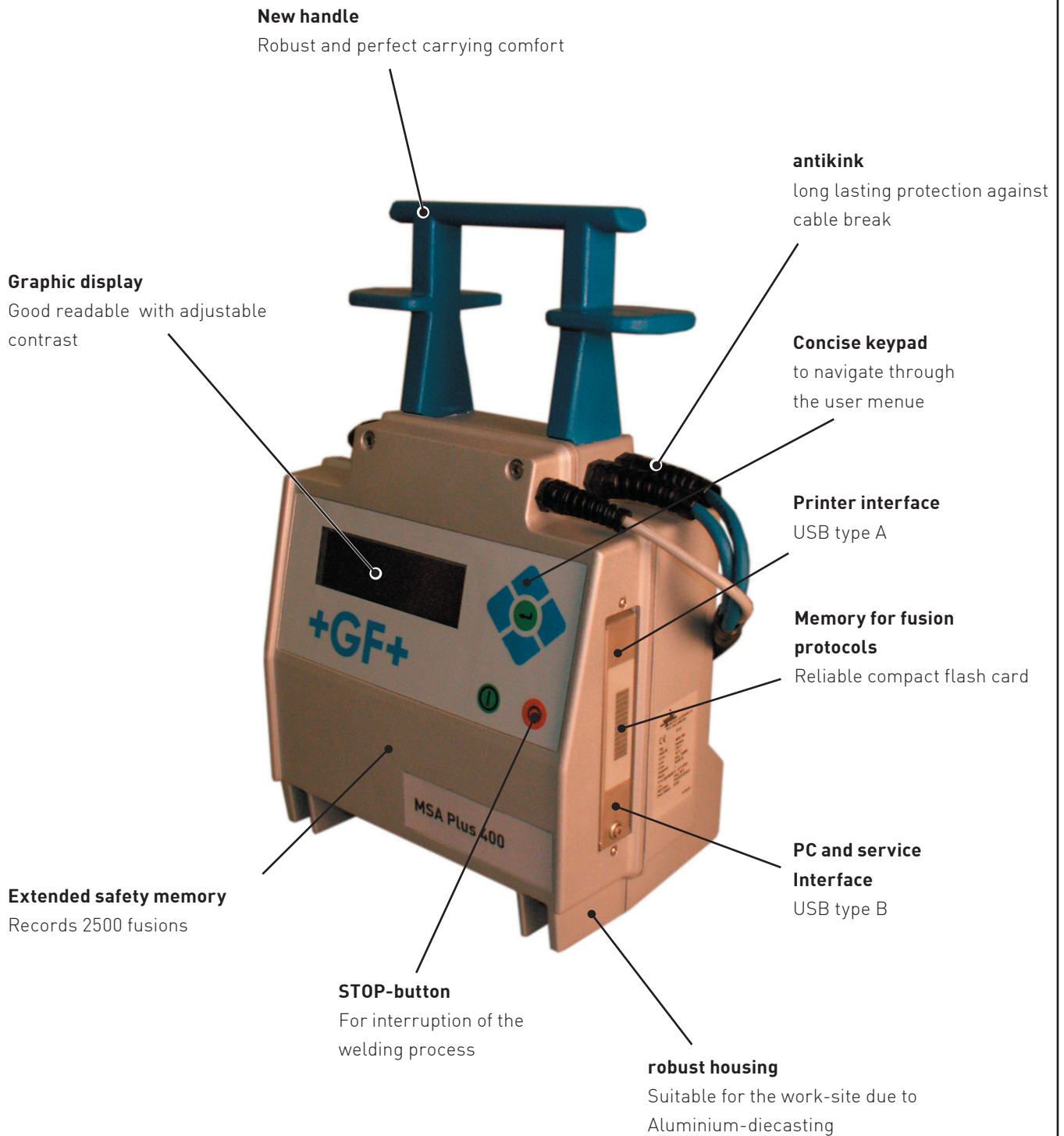


Product Range

MSA Plus
Electrofusion Units



New generation MSA Plus units



The new generation of electrofusion units complies with the EU directive 2002/95/EU (RoHS). All soldering connexions are leadfree and electronic components fulfil the limits for hazardous substances.

MSA units at a glance

Features	MSA Plus 250	MSA Plus 300	MSA Plus 350	MSA Plus 400
Temperature-dependent power control	●	●	●	●
Wide input voltage range (180 - 264 V)	●	●	●	●
Suitable for generator operation	●	●	●	●
Automatic fusion data input via barcode reader/scanner	●	●	●	●
For serial and long-time fusion	●	●	●	●
Washdown and dustproof (IP 65)	●	●	●	●
Maximum protection against electrical hazards, Protection class 1	●	●	●	●
Lightweight, robust aluminium housing	●	●	●	●
Sturdy transport box	●	●	●	●
Integrated active cooling	●	●	●	●
Manual entry of fusion time	●	●	●	●
Fusion time and energy display Energie	●	●	●	●
Menu guidance in more than 24 languages	●	●	●	●
Programmable maintenance intervals	●	●	●	●
User guidance	●	●	●	●
Individual configuration	●	●	●	●
Pipe logbook software MSA WIN-WELD	●	●	●	●
Internal safety protocol storage	●	●	●	●
Fusion data recording	●	●	●	●
Memory card for 1700 fusions	●	●	●	●
Complete traceability is possible for individual piping components (Traceability according to ISO 12176-4)	●	●	●	●

Technical data	MSA Plus 250	MSA Plus 300	MSA Plus 350	MSA Plus 400
Input voltage range	180 - 264 V AC	180 - 264 V AC	180 - 264 V AC	180 - 264 V AC
Frequency range	45 - 65 Hz	45 - 65 Hz	45 - 65 Hz	45 - 65 Hz
Current consumption	16 A	16 A	16 A	16 A
Power	3500 W	3500 W	3500 W	3500 W
Output voltage	8 - 42 V [48 V]	8 - 42 V [48 V]	8 - 42 V [48 V]	8 - 42 V [48 V]
Output current	0,5 - 90 A	0,5 - 90 A	0,5 - 90 A	0,5 - 90 A
Upstream safety cutout	16 A inert	16 A inert	16 A inert	16 A inert
Protection rating	IP 65	IP 65	IP 65	IP 65
Protection class	1	1	1	1
Housing	Aluminium	Aluminium	Aluminium	Aluminium
Integrated cooling	Yes	Yes	Yes	Yes
Connecting cables	3 m	3 m	3 m	3 m
Fusion cables	3 m	3 m	3 m	3 m
Weight (operative, incl. cable)	11,5 kg	11,5 kg	11,5 kg	11,5 kg
Measurements (W/H/D)	284/440/195	284/440/195	284/440/195	284/440/195
Processable barcodes	Code I 2/5 Code 128 C	Code I 2/5 Code 128 C	Code I 2/5 Code 128 C	Code I 2/5 Code 128 C
Working temperature range	-10°C to +45°C	-10°C to +45°C	-10°C to +45°C	-10°C to +45°C
Automatic temperature compensation	Yes	Yes	Yes	Yes
Fusion current monitoring	Yes	Yes	Yes	Yes
Coil short-circuit recognition	Yes	Yes	Yes	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
Protocol software MSA WIN-WELD	-	-	Yes	Yes
Data transfer cable	-	-	Optional	Optional
Memory card	-	-	-	Yes, 32 MB
Welder ID (can be configured as mandatory entry)	-	-	Yes	Yes
Manual fusion data entry	Yes	Yes	Yes	Yes
Languages	-	24	24	24
Elbow connector plug 4.0 mm	Yes	Yes	Yes	Yes
Barcode scanner	Optional	Optional	Optional	Optional
Transport box (aluminium/wood)	Yes	Yes	Yes	Yes
Recommended generator power	3,5 kVA	3,5 kVA	3,5 kVA	3,5 kVA
Standards: CE, EN 55014, EN 50081-1, EN 50082-1, EN 61000-3-3, EN 60335-1, EN 60335-2-45	Yes	Yes	Yes	Yes

Your Benefits

- maximum safety for the user
- individual configuration
- the right machine for every application
- reliable fusion process
- user guidance in 24 languages
- polyvalent system
- simple updating of software
- more rational working
- improved work quality
- long service life
- easy-to-follow user guidance menu
- easy to transport
- robust design
- less non-productive time
- easy fusion data processing
- user-friendly

WIN-WELD Software

The WIN-WELD Software Package is a valuable tool for documentation of your piping network or individual sections of it. It offers continuous documentation of fusion connections and the piping components used (fittings, pipes, mechanical parts) and the whole piping installation.

The following options are also available to you with the WIN-WELD Software Package:

- single and collective fusion protocols
- individual configuration of fusion devices
- welder ID according to ISO 12176-3
- fusion data processing and organisation
- importing fusion data in CSV format
- exporting data in EXCEL or ACCESS
- formatting MSA Plus memory cards
- creating individual barcodes
- reading out of fusion data
- creation of a pipe book
- using the pipe book to calculate the volume of your piping network
- piping system documentation according to ISO 12176-4



Recording of fusion and/or Traceability data with the MSA Plus 350, MSA Plus 400



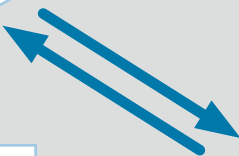
Saving of fusion and/or traceability protocols and also for updating new software or languages



Transferring to database and/or printing out of single or collective protocols



Downloading the fusion and traceability data, formatting the memory cards and configuring the individual fusion units



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 barcode reader pen and a compact flash memory card (exchangeable data carrier). The unit is robust, light and easy to use. The menu has up to 24 different languages. Inclusive 1 transport case, 1 pair of angle adapter clips 4.0 mm, operating instructions, configuration card and Software MSA WIN-WELD.

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 USB (type B) for PC communication
Mains cable	3 m
Fusion cable	3 m
Dimensions (WxHxD)	285 x 360 x 200 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	German, English, French, Chinese, Czech, Hungarian, Italian, Norwegian, Dutch, Polish, Rumanian, Slovakian, Portuguese, Danish, Spanish, Estonian, Finnish, Croatian, Lithuanian, Swedish, Slovenian, Turkish, Russian, Bulgarian
Warranty	24 months

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



MSA Plus 350 Record Electrofusion Unit



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 24 different languages. Inclusive transport box, 1 pair of angle adapter clips 4.0 mm, operating instructions, configuration card and Software MSA WIN-WELD. (to read out fusion protocols the data transfer cable, Code 799 350 619 or the USB stick, Code 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
Mains cable	3 m
Fusion cable	3 m
Dimensions (WxHxD)	285 x 360 x 200 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	German, English, French, Chinese, Czech, Hungarian, Italian, Norwegian, Dutch, Polish, Rumanian, Slovakian, Portuguese, Danish, Spanish, Estonian, Finnish, Croatian, Lithuanian, Swedish, Slovenian, Turkish, Russian, Bulgarian
Warranty	24 months

Type	Code	kg	Description
MSA 350	799 350 570	16.800	with barcode reader pen+transport case
MSA 350	799 350 571	16.800	with barcode scanner+transport case
MSA 350	799 350 575	16.800	CH Power plug, with barcode reader+transport case



MSA Plus 300 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. The menu has up to 24 different languages. Inclusive transport box, 1 pair of angle adapter clips 4.0 mm, operating instructions and configuration card.

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)	285 x 360 x 200 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	German, English, French, Chinese, Czech, Hungarian, Italian, Norwegian, Dutch, Polish, Rumanian, Slovakian, Portuguese, Danish, Spanish, Estonian, Finnish, Croatian, Lithuanian, Swedish, Slovenian, Turkish, Russian, Bulgarian
Warranty	24 months

Type	Code	kg	Description
MSA Plus 300	799 350 560	16.800	with barcode reader pen+transport case
MSA Plus 300	799 350 561	16.800	with barcode scanner+transport case
MSA Plus 300	799 350 565	16.800	CH Power plug, with barcode reader pen+transport case



MSA Plus 250 Automatic Electrofusion Unit



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

Automatic electrofusion unit with barcode scanner, optional with barcode reader pen. 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)	285 x 360 x 200 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 250	799 350 550	16.800	with barcode reader pen+transport case
MSA 250	799 350 551	16.800	with barcode scanner+transport case
MSA 250	799 350 555	16.800	CH Power plug, barcode reader pen+transport case



MSA Plus 250 EX Multi Automatic Electrofusion Unit



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

Monovalent 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.

For PE \varnothing 20-400, INSTAFLEX PB \varnothing 125, 160, 225, Fuseal Sea Drain \varnothing 1 1/2-12.
Only for GF products like ELGEF Plus.

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)	285 x 360 x 200 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 EX Multi	799 350 520	16.800	with barcode reader pen+transport case

MSA Plus accessories



USB memory stick

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

Type	Code	kg	Description
MSA Plus 300-400	799 350 622	0.800	Memory stick (for software or languages updates)



Compact flash card

- SRAM Memory card type I to record fusion and traceability data
- Reliable and resistant data carrier for industrial use
- Compatibility with MSA Plus 400

Type	Code	kg	Description
MSA Plus 400	799 350 621	0.100	Memory card (32 MB capacity for 1700 fusion protocols)



Card reader

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

Type	Code	kg	Description
MSA Plus 400	799 350 620	0.400	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

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



USB cable

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

Type	Code	kg	Description
MSA Plus 350-400	799 350 619	0.180	with type A and type B ends (printer and PC connection)

MSA Plus and MSA accessories

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



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



Barcode Scanner

- 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



Barcode Reader Pen

- 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
799 160 411	0.072	Pouch for pen suitable for MSA 250-400 and MSA Plus 250-400



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



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	Large Transport Case

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 are not binding and not expressly warranted characteristics of the goods. They are subject to change. Our General Conditions of Sale apply.

Australia

George Fischer Pty Ltd
Kingsgrove NSW 2008
Phone +61(0)2/95 54 39 77
australia.ps@georgfischer.com
www.georgfischer.com.au

Austria

George Fischer
Rohrleitungssysteme GmbH
3130 Herzogenburg
Phone +43(0)2782/856 43-0
austria.ps@georgfischer.com
www.georgfischer.at

Georg Fischer Fittings GmbH
AT-3160 Traisen
Phone +43 (0)2762 90300
fittings.ps@georgfischer.com
www.fittings.at

Belgium/Luxembourg

George Fischer NV/SA
1070 Bruxelles/Brüssel
Phone +32(0)2/556 40 20
be.ps@georgfischer.com
www.georgfischer.be

Brazil

George Fischer Ltda
04795-100 São Paulo
Phone +55(0)11/5687 1311
br.ps@georgfischer.com

China

George Fischer
Piping Systems Ltd Shanghai
Pudong, Shanghai 201319
Phone +86(0)21/58 13 33 33
china.ps@georgfischer.com
www.cn.piping.georgfischer.com

Denmark/Iceland

George Fischer A/S
2630 Taastrup
Phone +45 (0)70 22 19 75
info.dk.ps@georgfischer.com
www.georgfischer.dk

France

George Fischer S.A.S.
93208 Saint-Denis Cedex 1
Phone +33(0)1/492 21 34 1
fr.ps@georgfischer.com
www.georgfischer.fr

Germany

Georg Fischer GmbH
73095 Albershausen
Phone +49(0)7161/302-0
info.de.ps@georgfischer.com
www.vgd.georgfischer.de

Georg Fischer DEKA GmbH
35232 Dautphetal-Mornshausen
Phone +49(0)6468/915-0
deka.ps@georgfischer.com
www.dekapipe.de

India

George Fischer Piping Systems Ltd
400 093 Mumbai
Phone +91(0)22/2820 2362
in.ps@georgfischer.com

Italy

Georg Fischer S.p.A.
20063 Cernusco S/N (MI)
Phone +3902/921 861
it.ps@georgfischer.com
www.georgfischer.it

Georg Fischer Alprene Srl
Via Bonazzi, 32
IT-40013 Castel Maggiore (BO)
Phone +39 051-632 42 11
alprene.ps@georgfischer.com
www.alprene.com

Japan

George Fischer Ltd
556-0011 Osaka,
Phone +81(0)6/6635 2691
jp.ps@georgfischer.com
www.georgfischer.jp

Malaysia

George Fischer (M) Sdn. Bhd.
47500 Subang Jaya
Phone +60 (0)3-8024 7879
conne.kong@georgfischer.com.my

Middle East

George Fischer Piping Systems
Dubai, United Arab Emirates
Phone +971 4 289 41 20
gfdubai@emirates.net.ae
www.piping.georgfischer.com

Netherlands

Georg Fischer N.V.
8161 PA Epe
Phone +31(0)578/678 222
nl.ps@georgfischer.com
www.georgfischer.nl

Norway

Georg Fischer WAGA NV
NL-8160 AG Epe
Phone +31 (0)578-678 378
waga.ps@georgfischer.com
www.waga.nl

Norway

Georg Fischer AS
1351 Rud
Phone +47(0)67 18 29 00
no.ps@georgfischer.com
www.georgfischer.no

Poland

Georg Fischer Sp. z o.o.
02-226 Warszawa
Phone +48(0)22/313 10 50
poland.ps@georgfischer.com
www.georgfischer.pl

Romania

George Fischer
Rohrleitungssysteme AG
70000 Bucharest - Sector 1
Phone +40(0)1/222 91 36
ro.ps@georgfischer.com

Singapore

George Fischer Pte Ltd
528 872 Singapore
Phone +65(0)67 47 06 11
sgp.ps@georgfischer.com
www.georgfischer.com.sg

Spain/Portugal

George Fischer S.A.
280046 Madrid
Phone +34(0)91/781 98 90
es.ps@georgfischer.com
www.georgfischer.es

Sweden/Finland

Georg Fischer AB
12523 Älvsjö-Stockholm
Phone +46(0)8 506 775 00
info.se.ps@georgfischer.com
www.georgfischer.se

Switzerland

Georg Fischer
Rohrleitungssysteme [Schweiz] AG
8201 Schaffhausen
Phone +41(0)52 631 30 26
ch.ps@georgfischer.com
www.piping.georgfischer.ch

Taiwan

Georg Fischer Ltd.
2F, No. 88, Hsing Te Road
San Chung City
Taipei Hsien, Taiwan [R.O.C.]
Phone +886 2 8512 2822
Fax +886 2 8512 2823

United Kingdom/Ireland

George Fischer Sales Limited
Coventry, CV2 2ST
Phone +44(0)2476 535 535
uk.ps@georgfischer.com
www.georgfischer.co.uk

USA/Canada/Latin America/Caribbean

George Fischer Inc.
Tustin, CA 92780-7258
Phone +1(714) 731 88 00
Toll Free 800/854 40 90
us.ps@georgfischer.com
www.us.piping.georgfischer.com

Export

Georg Fischer
Piping Systems [Switzerland] Ltd.
8201 Schaffhausen
Phone +41 (0)52-631 11 11
Fax +41 (0)52-631 28 93
export.ps@georgfischer.com
www.piping.georgfischer.ch