

Designed to make your job easier

**MSA 2.0 and MSA 2.1
Electrofusion Units**



Your challenges are our drive

Customers are asking for high efficiency, low cost of ownership, low weight and ease of use. These requirements have driven our engineering team in designing the new MSA 2 family. The MSA 2.0 and MSA 2.1 electrofusion units are the results of our effort.

+ Strong in details

Comfortable, anti-shock plastic handle with hooks to quickly wrap the cables

Graphic display, with large fonts and adjustable contrast to read in all light conditions

Emergency switch, to interrupt the on-going process in case of problems in the trench (MSA 2.1)

Fast USB port for software updates and protocols export (MSA 2.1)

Service friendly, long lasting and easy-to-operate keypad, ISO12176-2 compliant

Sturdy aluminum die-cast housing, to protect the unit against dust, splash and spray water

Plastic feet to keep the electronic core out of mud and dust

Self-protected from accidental damage during the fusion process, thanks to sensors for controlling the internal heating and two fuses

Active cooling, with radial air flow solution to keep the unit safer



Our state-of-the-art electrofusion units for welding in all circumstances

+ Intuitive, reliable and cost effective



No matter what your application requires, MSA 2.0 and MSA 2.1 electrofusion units are the right choice. Maximum performance in all weather conditions from -20°C to +50°C.

Intuitive

- Intuitive user interface, based on icons, big characters and international symbols.
- Quick user guide, language independent, in addition to the user manual, for operating the machine in a snap
- Clear error messages, audible signals and remote START/STOP commands on a badge, to interact from 3m away
- USB type A port for fusion record transfer (MSA 2.1 only) with simple lock/unlock position, to extract the fusion protocols right away

Cost effective

- Barcode scanner as standard, not as expensive option
- High power efficiency, to weld with small power generators
- Very compact, to save space in your van
- Mechanical parts exchange done by the customer himself, to save time and costs

Delivering state-of-the-art solutions

- Inverter technology inside, with forced ventilation to weld large couplers in series
- Fast USB connectivity only, to get rid of obsolete optical pen emulation interface
- Large graphical display, with adjustable brightness, to adapt to sunlight

We protect your investment

MSA 2.0 and MSA 2.1 greatly enhance your daily operations. These units encompass numerous features which support safety, speed and reliability. From automatic temperature compensation to a detailed fusion report, the machines work hand in hand with the operator on the construction site. And when training and after-sales service are needed, you can rely on our experts and worldwide service center network.



Simply handy

The entire fusion process is automatically supervised by the MSA 2.0/MSA 2.1.

The installer just has to connect the leads to the fitting, scan the fusion parameters and leave the control to the machine.

Depending on the ambient temperature, the welding time is automatically adjusted for the correct distribution of energy to the fitting, a soft start is applied to minimize the load on the power generator, and fusion is carried out to completion.

In case of anomalies, like inadequate input current or fitting wires fault, the machine stops immediately and informs the operator with a specific error message.

In case of a damaged barcode label on the fitting, the installer can switch right away to manual mode by pressing the START button and then inserting fusion time and voltage.



Simple handling

The cables are wound on separate sides of the machine and can be quickly wrapped when moving from joint to joint. Two hooks are integrated in the handle for convenient storage of fusion and power cables.

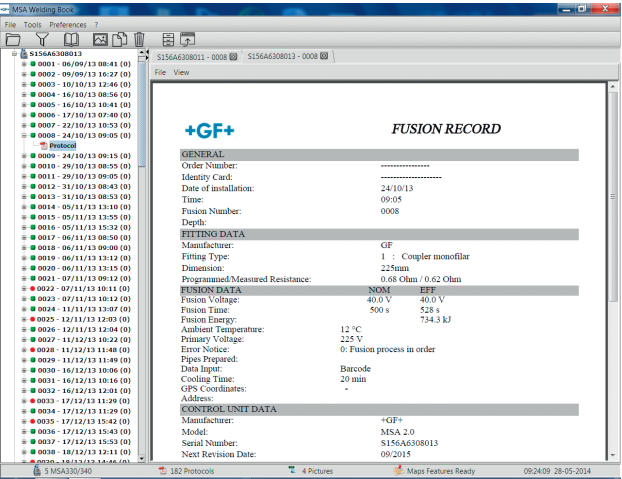
The fusion unit is ideally balanced in weight and the design of the handle ensures ergonomic handling and transportation. The professional storage box – suitable for even the roughest conditions – completes the package.

The robust design of the long-lasting aluminum housing protects the electronics of the MSA 2.0 and MSA 2.1, providing excellent heat dissipation to weld in series. All annoying sharp edges have been eliminated and thanks to the compact housing, usage in cramped spaces is facilitated.

Our electrofusion units track your success

At construction sites, jointing is done in a professional manner. MSA 2.0 and MSA 2.1 record the fusion data to ensure traceability and long term quality.

+ Good memory, universal communication



Fusion data recording

Both machines allow fusion data recording to an internal memory. Fusion data can be browsed by just pressing MENU and the arrow buttons. Data sets are in compliance with ISO 12176-2, using the same symbols of ISO 13950 (Automatic recognition systems for electrofusion joints).

Data printout

The MSA 2.1 allows data to be easily copied on a standard USB memory stick, without special formatting. Files can be read with any personal computer, Windows or OS X based, for printing out in a simple PDF format, without additional data management software.

Compatible with MSA App Suite

MSA 2.1 data can be included in a digital archive based on a mini-MSA Welding Book. There the user can prepare extended PDF files, in different languages, including protocols belonging to many electrofusion units. Furthermore, fusion data captured by the MSA 2.1 can be combined with photographs taken during the pipe preparation process, using the powerful functionalities of the MSA Welding Book.

Technical overview

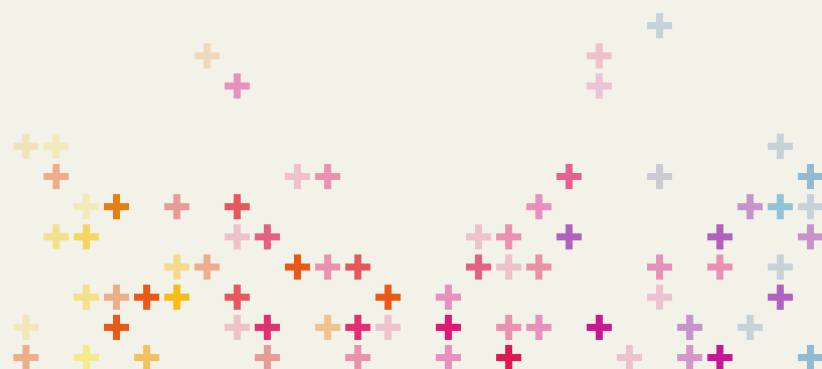
The MSA 2 family gives you the freedom to choose the appropriate type for your daily business – a significant cost advantage for you.



MSA 2 Family Overview	MSA 2.0	MSA 2.1
Fittings dimension range (Ø mm)	20 – 1200 (*)	20 – 1200 (*)
Multiple weldings in sequence	✓	✓
Operating procedures check		
Automatic ambient temperature compensation	✓	✓
Fusion current monitoring (short/interrupt)	✓	✓
Emergency switch		✓
Fusion data		
Barcode scanner (ISO 13950 format)	✓	✓
Manual fusion input	✓	✓
Data recording		
Documentation of fusion	✓	✓
Fusion protocol export		✓
Mini-Welding Book Software		optional
MSA App Suite		optional
Operations control		
Display brightness configurable	✓	✓
Acoustic alert	✓	✓
Serviceability		
Programmable maintenance interval	✓	✓
Software upload via USB memory stick	✓	✓
Usability		
Problem recognition (fittings, generators)	✓	✓
Clear messages to the operator in the display	✓	✓
Command via barcode scanner	✓	✓
User guidance	✓	✓
Indication of energy, fusion and cooling time	✓	✓
Data protocol format (bin, pdf) Windows® independent		✓
Separate cable winding support	✓	✓
Transport box	✓	✓

Specifications

Engineering at its best: High-quality components and materials combined with effective work flow.



Technical specifications	MSA 2.0	MSA 2.1
Operating conditions		
Working temperature range	min. -20 °C, max. +50 °C	min. -20 °C, max. +50 °C
Electrical data		
Input voltage range (Vac)	190 – 265	190 – 265
Frequency range (Hz)	40 – 70	40 – 70
Current consumption (Max, A)	16 A	16 A
Output voltage (V ac)	8 – 42 [48]	8 – 42 [48]
Output current (max, A)	90	90
Input power (KW)	3.5	3.5
Type of protection	IP65	IP65
Protection class	I	I
Unit fuse	20A slow blow	20A slow blow
Data and operation control		
Data recording capacity (Number of protocols)	350	500
Communication port	USB Type A	USB Type A
Buttons	5+Start+Stop	5+Start+Stop
Display	graphical LCD	graphical LCD
Mechanical data		
Dimensions (mm)	280x280x420	280x280x420
Weight (Kg)	11.9	11.9
Case material	Aluminium	Aluminium
Mains cable length	4 m	4 m
Fusion cable length	3 m	4 m
Mains plug	Schuko 16A	Schuko 16A
Connectors	4 mm	4 mm
Adapters [90°]	4.0 – 4.0 mm	4.0 – 4.0 mm/4.0 – 4.7 mm
Norms compliance		
EMC (EN61000)	✓	✓
Safety (EN60335)	✓	✓
ISO12176-2	✓	✓

GF Piping Systems

Argentina / Southern South America

Georg Fischer Central Plastics
Sudamérica S.R.L.
Buenos Aires, Argentina
Phone +54 11 4512 02 90
gfcentral.ps.ar@georgfischer.com
www.gfps.com/ar

Australia

George Fischer Pty Ltd
Riverwood NSW 2210 Australia
Phone +61 (0) 2 9502 8000
australia.ps@georgfischer.com
www.gfps.com/au

Austria

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

Belgium / Luxembourg

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

Brazil

Georg Fischer Sist. de Tub. Ltda.
04795-100 São Paulo
Phone +55 (0) 11 5525 1311
br.ps@georgfischer.com
www.gfps.com/br

Canada

Georg Fischer Piping Systems Ltd
Mississauga, ON L5T 2B2
Phone +1 (905) 670 8005
Fax +1 (905) 670 8513
ca.ps@georgfischer.com
www.gfps.com/ca

China

Georg Fischer Piping Systems Ltd
Shanghai 201319
Phone +86 21 3899 3899
china.ps@georgfischer.com
www.gfps.com/cn

Denmark / Iceland

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

Finland

Georg Fischer AB
01510 VANTAA
Phone +358 (0) 9 586 58 25
Fax +358 (0) 9 586 58 29
info.fi.ps@georgfischer.com
www.gfps.com/fi

France

Georg Fischer SAS
95932 Roissy Charles de Gaulle Cedex
Phone +33 (0) 1 41 84 68 84
fr.ps@georgfischer.com
www.gfps.com/fr

Germany

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

India

Georg Fischer Piping Systems Ltd
400 076 Mumbai
Phone +91 224007 2001
branchoffice@georgfischer.com
www.gfps.com/in

Italy

Georg Fischer S.p.A.
20063 Cernusco S/N (MI)
Phone +39 02 921 861
it.ps@georgfischer.com
www.gfps.com/it

Japan

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

Korea

Georg Fischer Piping Systems
271-3 Seohyeon-dong Bundang-gu
Seongnam-si, Gyeonggi-do
Seoul 463-824
Phone +82 31 8017 1450
Fax +82 31 8017 1454
kor.ps@georgfischer.com
www.gfps.com/kr

Malaysia

George Fischer (M) Sdn. Bhd.
40460 Shah Alam, Selangor Darul Ehsan
Phone +60 (0) 3 5122 5585
my.ps@georgfischer.com
www.gfps.com/my

Mexico / Northern Latin America

Georg Fischer S.A. de C.V.
Apodaca, Nuevo Leon
CP66636 Mexico
Phone +52 (81) 1340 8586
Fax +52 (81) 1522 8906
mx.ps@georgfischer.com
www.gfps.com/mx

Middle East

Georg Fischer
Piping Systems (Switzerland) Ltd
Dubai, United Arab Emirates
Phone +971 4 289 49 60
gcc.ps@georgfischer.com
www.gfps.com/int

Netherlands

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

New Zealand

Georg Fischer Ltd
13 Jupiter Grove, Upper Hutt 5018
PO Box 40399, Upper Hutt 5140
Phone +64 (0) 4 527 9813
nz.ps@georgfischer.com
www.gfps.com/nz

Norway

Georg Fischer AS
1351 Rud
Phone +47 67 18 29 00
no.ps@georgfischer.com
www.gfps.com/no

Poland

Georg Fischer Sp. z o.o.
05-090 Sekocin Nowy
Phone +48 (0) 22 31 31 0 50
poland.ps@georgfischer.com
www.gfps.com/pl

Romania

Georg Fischer
Piping Systems (Switzerland) Ltd
020257 Bucharest - Sector 2
Phone +40 (0) 21 230 53 80
ro.ps@georgfischer.com
www.gfps.com/int

Russia

Georg Fischer
Piping Systems (Switzerland) Ltd
Moscow 125047
Phone +7 495 258 60 80
ru.ps@georgfischer.com
www.gfps.com/ru

Singapore

George Fischer Pte Ltd
11 Tampines Street 92, #04-01/07
528 872 Singapore
Phone +65 6747 0611
sgp.ps@georgfischer.com
www.gfps.com/sg

Spain / Portugal

Georg Fischer S.A.
28046 Madrid
Phone +34 (0) 91 781 98 90
es.ps@georgfischer.com
www.gfps.com/es

Sweden

Georg Fischer AB
117 43 Stockholm
Phone +46 (0) 8 506 775 00
info.se.ps@georgfischer.com
www.gfps.com/se

Switzerland

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

Taiwan

Georg Fischer Co., Ltd
San Chung Dist., New Taipei City
Phone +886 2 8512 2822
Fax +886 2 8512 2823
www.gfps.com/tw

United Kingdom / Ireland

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

USA / Caribbean

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

Vietnam

George Fischer Pte Ltd
134E Tran Vu, Ba Dinh District, Hanoi
Phone +84 4 3715 3290
Fax +84 4 3715 3285

International

Georg Fischer
Piping Systems (Switzerland) Ltd
8201 Schaffhausen/Switzerland
Phone +41 (0) 52 631 30 03
Fax +41 (0) 52 631 28 93
info.export@georgfischer.com
www.gfps.com/int

The technical data are 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.



GFDO_6379_4 (06.14)

© Georg Fischer Piping Systems Ltd
CH-8201 Schaffhausen/Switzerland, 2014
Printed in Switzerland