



Truly all-terrain

The new MSA Plus  
Electrofusion Units

**+GF+**

**GEORG FISCHER**  
PIPING SYSTEMS

# ● The new generation: MSA Plus

**New handle**  
robust design and  
easy carrying

**Bend protection**  
to protect cables  
from breaking

**Graphic display**  
clearly legible and with  
adjustable contrast

**USB A interface**  
to print, download and  
to add software updates

**Practical keypad**  
to navigate easily  
through the menu

**Compact  
flash memory card**  
for reliable data  
storage

**STOP button**  
to interrupt  
the fusion process

**Extended safety protocol storage**  
storage of up to 2500 fusion welds

**USB B interface**  
to export fusion  
protocols to a PC

**Sturdy housing**  
ideal for on-site use in aluminum die-cast and  
with seals to protect against spray or splash water

Note: Functions and configuration can vary depending on the unit type  
(see Overview: Technical data).



# MSA Plus Family



A directive enacted by the European Union requires manufacturers of electrical and electronic equipment to use exclusively lead-free soldering. Furthermore, only electrical and electronic components are permitted which comply with the new limit values for heavy metals, such as lead, mercury or cadmium.

## The environmentally friendly generation

The new MSA Plus electrofusion units from GF Piping Systems satisfy the stringent specifications of the EU Directive and are therefore compatible with the RoHS\* guideline.

The new MSA Plus electrofusion units additionally feature numerous details which contribute to user comfort.

\* Restriction of the use of certain hazardous substances in electrical and electronic equipment

## Sturdy handle

The new handle has been notably reinforced. It is ideally suited to the often rough conditions on construction sites and also makes it easier to carry the fusion devices.

## Easier communication

The USB interfaces enable easier communication with peripheral devices. They allow fast data transmission to computers, printers or USB memory sticks.

## New protocol storage

The extended protocol storage is another exciting feature worth mentioning. With this protocol storage, important fusion data can be reliably stored.

## Control button

To conveniently interrupt fusion when necessary, the new MSA Plus fusion devices have a new STOP button on the control panel which conforms with DVS 2208.

**MSA Plus fusion units have the right solution for everyone: from fusion data recording to professional evaluation software.**

# MSA Plus in detail

The Georg Fischer name has been closely associated with reliability and longevity for over 200 years. Our products guarantee quality, innovation and functionality. And this also holds true for the MSA electrofusion units used in the water and gas utility sectors. These devices are highly reliable and exceptionally practical in use due to their sturdy aluminum die-cast housing, quality workmanship, wide range of components, low weight and state-of-the-art technology. And we continually strive to improve our products even further in order to always offer you the best possible solution. Our latest product innovation is the MSA Plus series.

## Easy to handle

An especially remarkable feature of the MSA Plus electrofusion units is the ease of handling and transportation. The remodeled handle is made of high-strength, fiberglass-reinforced polypropylene. Its ruggedness withstands the rough and tumble of building site situations. Even dirt has a hard time, the smooth surface makes it nearly impossible for deposits to form. The improved design and partitioning of the handle also help to keep things tidy by providing space to wind the power and fusion cables separately.

## Increased storage capacity

Maximum on-site safety is in the interest of the operator as well as the installer. One way

to ensure maximum safety is to have complete data recording and management, in addition to having traceable fusion processes. That is why the MSA Plus 350/400 now features an internal storage capacity for up to 2500 fusion protocols. Compact Flash cards are additionally be used for the MSA Plus 400. This entirely robust and transportable means of data storage can store 1700 fusion protocols. The card provided is particularly suited for extreme applications because it offers highest data security even under difficult climate conditions.

## Uncomplicated communication

The new MSA Plus units are equipped with a USB 2.0 interface, thus enabling fast and convenient data transmission to computers, printers or USB memory sticks. With the MSA Plus 350/400, you can now organize your work individually. For instance, you can either print out the stored logs directly on site or analyze them later on the computer in your office.

## Red stop button

Safety is on your side thanks to the new stop button. With the optimized stop button, it is now easier and faster to interrupt the fusion process if necessary and in accordance with DVS 2208 and ISO 12176-1 guidelines.







#### Sophisticated

The new generation of electrofusion units - MSA Plus 250/ 300/ 350/400

#### Your benefits at a glance:

- sturdy aluminum die-cast housing
- lightweight, only 11.5 kg
- convenient handle
- bend protection for cables to prevent breakage
- active cooling – ventilator on rear panel
- individual configuration
- high-efficient, inverter technology in the transformer
- protected interfaces
- splash and jet water-proof according to IP 65
- energy input controlled according to ambient temperature
- fast USB 2.0 interfaces
- menu guidance in 27 languages
- barcode reading with pen or scanner



#### Clever solution

Sturdy handle for separate cable winding

#### Clearly visible

Stop button as required by DVS standards



#### Consistency

New USB 2.0 interface for modern communication

#### Flexibility

Compact flash card, a reliable, portable means of storage

# MSA Plus 350/400 multi-talented comm

## Safer data transfer

A clear advantage of the MSA Plus 350/400 electrofusion units from GF Piping Systems is the individual choice of data storage. Up to 2500 fusion welds can be recorded in the internal memory. When the fusion processes have been completed, the individual fusion protocols can be called up on the display and selected. Documentation is simple: the data can be sent directly from the fusion device via USB A interface to a printer. All you need is a conventional printer with emulation, such as a PCL, EPSON FX or IBM Proprinter.

## Any way you choose

The MSA Plus fusion devices offer outstanding application-oriented solutions. **Collective protocols** provide a general overview: all the records are listed numerically in table form. It is easy to identify when and by whom all the fusion welds were made and whether the fusion process was completed successfully. **Single protocols** list the details of the individual welds, for example the energy input, the ambient temperature and the name of the operator. Your benefit: Fast and transparent documentation of your work with the MSA Plus 350/400.

## Fast data selection with MSA WIN-WELD

It is a sign of the times that we expect increasingly rapid transmission of the recorded fusion data. The MSA Plus 350/400 easily satisfies this need. The data can be read from the internal memory via the fast USB B interface, or for the MSA Plus 400 directly from the Compact Flash card and transferred to the computer. All you need to do is install the MSA WIN-WELD software included in the delivery.

## Flexible data import and export

Frequently on site, there is neither a laptop, PC nor printer in the vicinity of your electrofusion unit and yet a fusion protocol should be made. With the USB memory stick you can transfer all the data quickly and flexibly onto a portable storage medium.

## Updates for languages and software

As a special service to our customers, the equipment software and menu guidance is being continually expanded with more languages. It is no problem to add these updates to the fusion device via a USB memory stick. You are prepared for future software updates as well.



# unication pros

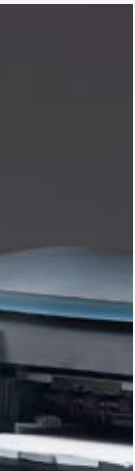


## Documentation from start to finish

The WIN-WELD software package produces complete documentation from the fusion connections and the components used in the installed piping network

## The functions offered by the WIN-WELD software are:

- reading in fusion protocols
- formatting the USB stick or CF cards for MSA Plus units
- creating welder identity cards as per ISO 12176-3
- generating individual barcodes
- drawing up single and collective protocols
- individual configuration of the fusion devices
- processing and sorting fusion data
- importing fusion data in CSV format
- exporting data in EXCEL or ACCESS
- creating a pipe book
- pipe book analysis to determine the volume in your piping network
- pipeline documentation according to ISO 12176-4



## Quick solution

Printer connection with USB interface



## Convenient data transfer

PC communication with USB interface

# 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			

# Reliable know-how transfer

One of the strengths of GF Piping Systems is the consistently high level of product quality. Research and development are fundamental for our success. That is why we demand innovativeness on the part of our partners as well. We have found in Brüttsch Electronics, Switzerland, a business partner who fulfils our requirements and

over the years we have established a trustful cooperation with them. The new MSA Plus electrofusion units represent the fifth generation of micro-processor-controlled MSA fusion machines developed by Brüttsch Electronics for GF Piping Systems. Customers benefit from the close cooperation of these two enterprises and from

the extensive product know-how of the competent staff at Brüttsch Electronics. Some of the engineers involved in the new generation have already worked on the development of the very first generation of electrofusion devices. Naturally, our partner is also SN EN ISO 9001:2000 certified.



## Customer-focused development

Experienced engineers work dedicatedly on developing new and innovative hardware and software solutions, which focus specifically on the needs of our customers. Some of the priorities being worked on in the course of development are achieving a high level of efficiency, electromagnetic compatibility (EMC) and shock testing.



## Optimal quality management

In order to be able to offer products with a 100 percent quality guarantee each device is calibrated to the correct energy transfer in the fusion process before leaving assembly and a test weld is performed. Every successful run in this extensive calibration and testing process is recorded in a test protocol and enclosed with the fusion device. For construction site work, this procedure means more reliability and quality for each fusion weld - from the start.

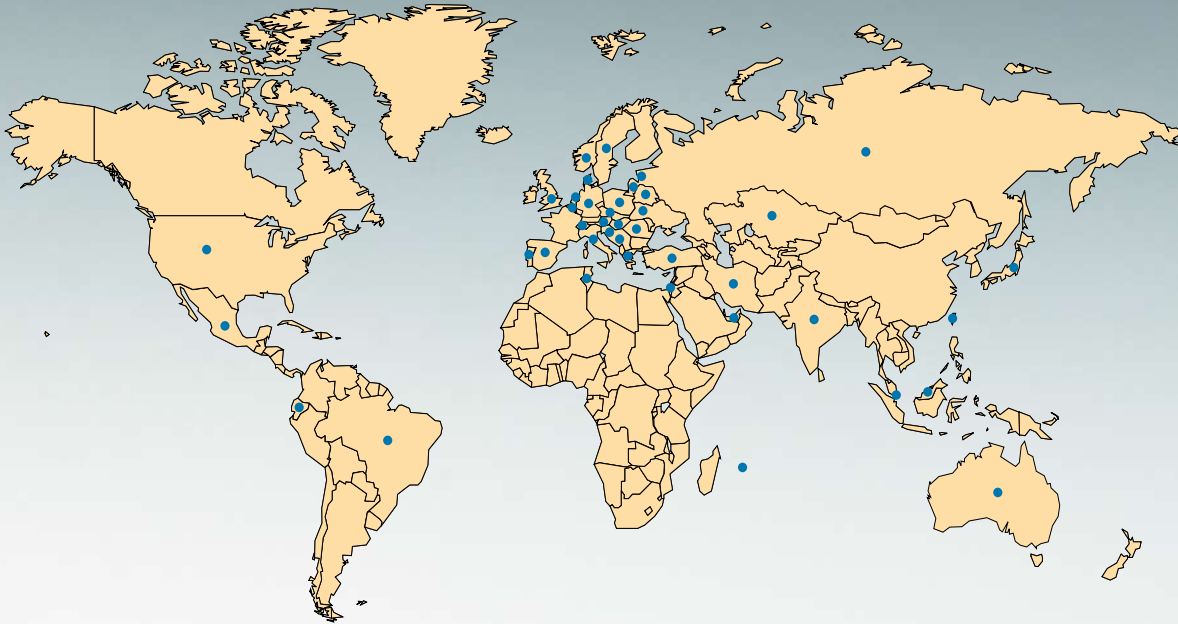
## Top customer service

Proximity to our customers and a service network which spans the globe are of top priority for

us. A team of professionals from Brüttsch Electronics has been doing exemplary work in the area of Service Center training

for years. These courses are the ideal way to transfer know-how from the manufacturer to service personnel.

# Service around the world



With over 62 service centers for MSA electrofusion units in 43 countries around the world, customers benefit greatly from an efficient service network. To bring these services even closer to our customers, specialists

are constantly being trained worldwide. They only become an authorized service center when they have been successfully certified by our partner Brüttsch Electronics. This ensures that the devices are always repaired by

trained specialists. Should your MSA electrofusion unit require servicing, you can save yourself time and expensive shipping costs by taking advantage of our local service centers. You are sure to find a service partner near you.

Service Centers for MSA electrofusion units are located in the following countries:

Australia	Greece	Mauritius	Serbia
Austria	Hungary	Mexico	Singapore
Belarus	India	Montenegro	Slovakia
Belgium	Iran	Netherlands	Slovenia
Brazil	Israel	Norway	Spain
Croatia	Italy	Poland	Taiwan
Czech Republic	Japan	Portugal	Tunesia
Denmark	Kazakhstan	Romania	Turkey
Ecuador	Latvia	Russia	United Arab Emirates
Germany	Lithuania	Sweden	USA
Great Britain	Malaysia	Switzerland	

Ask our local GF Piping Systems Sales Company or our Export Department for the address of the Service Center nearest you.

# GF Piping Systems → worldwide at home

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



The technical data are not binding and not expressly warranted characteristics of the goods. They are subject to change. Please consult our General Conditions of Supply.

## Adding Quality to People's Lives

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GMST 6083/4 (11.07)

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Printed in Switzerland

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