



Polyvalent  
Electrofusion  
Unit

Electrofusion Units  
MSA 330  
MSA 340

# Benefits

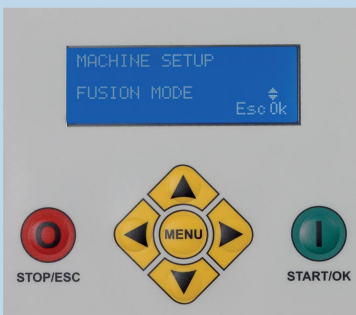
The new generation of polyvalent Electrofusion machines facilitates work on construction sites, while also guaranteeing quality and efficiency.

With the two different machine types, everyone will find the right solution. The polyvalent MSA 330 and MSA 340 fusion units are designed for water as well as gas applications. They provide high performance at a reasonable price. All the components and the machine design ensure a long life with low maintenance costs.



## Safety

- Robust, cast aluminium housing
- Stands firmly on all surfaces (safe placement in working areas)
- Protective transport box and pouch for scanner and pen
- Made of high quality components (cable, switch, electric components)
- Prevention of electrical damages
- Worldwide training, support and service network
- Designed according to latest standards



## Simplicity

- Intuitive user guidance menu
- Clear and explicit error messages
- USB interface for foolproof data transfer and software update
- Fusion protocol in pdf format (use of common software application)
- Different possibilities for cable winding (main cable/fusion cables)



## Efficiency

- Full traceability including GPS if required
- Choice of either barcode reader or scanner
- Individual configuration to fit your work flow
- Selectable menu language

# Features

Reliable, easy to use and ready for current and upcoming international standards – these are the main characteristics of the new MSA family.

The MSA 330 and MSA 340 enhance your daily operations tremendously. These state-of-the-art tools encompass numerous features which support safety, speed and reliability.

From automatic temperature compensation to a detailed fusion report and traceability data – these machines work hand in hand with the operator on the construction site. For

training and after-sales service you can rely on the worldwide network of GF Piping Systems Service Centers.

## Transport

- Ergonomic transport
- Cable holder

## Communication interface

- USB type A to export fusion protocols and download software updates

## Temperature sensors

- Energy compensation depending on ambient temperature
- Internal temperature check before starting the fusion process

## Housing

- Sturdy die-cast aluminium
- Optimal heat dissipation

## Adapters

4 mm – 4,7 mm

## Safety equipment

- Automatic thermal switch
- Inert fuse

## GPS antenna

(MSA 340 only)

## User interface

- Work flow and error messages on LCD display
- Acoustic tones to signal welding completion, errors, data consistency
- START/STOP and menu navigation buttons

## Data input

- Bar code reader (housed in a protective pouch)
- Manual data input (via buttons) if necessary



# The system

The right solution for everyone thanks to different types.

The MSA 330 and MSA 340 both comprise an easy and intuitive handling. In addition, the MSA 340 offers the ability to record GPS data and has an embedded rental duration control feature.



Easy-to-handle navigation keypad



Protective and long-lasting housing

## Easy and intuitive

Easy and intuitive operation on site is given by the practical seven-button keypad to navigate through the clearly structured menu. With one-button (START/OK) operation the user is guided from preparation to the finalization of the fusion process. For fusion data input a barcode reader pen or a scanner is connected; manual entry can also be configured in the set-up menu. There the work flow and the menu language can be adjusted to the personal requirements. At the beginning of each welding, additional information like operator ID (ISO 12176-3) and job number can be attached to the fusion record.

## Robust design

The robust design of the aluminium housing protects the high quality electrical components and provides excellent heat dissipation to weld in series. The power cord and the fusion cables are stored securely and tidily on the sturdy cable drum. The fusion unit is ideally balanced in weight and the clever design of the

handle ensures ergonomic handling and transportation. The professional storage box – suitable for even the roughest conditions – completes the package.

## Traceability data

Both machines allow fusion data recording to an internal memory; the data is easily transferred via standard USB interface to a personal computer for print out or to a digital archive. No additional data management software has to be installed, the fusion protocol is already available in PDF format.

## Advanced functions

The MSA 340 contains advanced functions to comply with more sophisticated requirements especially in gas applications. The traceability data (ISO 12176-4) of the fitting and the pipes can be saved to the fusion record as well as the GPS coordinates of the weld position. The GPS antenna is mounted to the housing of the fusion unit in a sheltered position.

# System details

To ensure high quality fusion cycles, the MSA units automatically adjust the welding time.

The entire fusion process is supervised, in case of anomalies – like inadequate input voltage – a specific error message will pop up. Depending on the ambient temperature, the machine automatically adjusts the welding time for the correct distribution of energy to the fitting. When the fusion process has been completed, the cooling time of the joint is displayed.



Ready to go

<b>+GF+</b>		<b>GEORG FISCHER PIPING SYSTEMS</b>	
<b>GENERAL INFORMATION</b>			
Job number :	-----		
Operator identity :	-----		
Date/time of installation :	17/03/10 17:55		
Next revision date :	03/2012		
Fusion number :	0003		
Error number :	ERR 4		
<b>FITTING DATA</b>			
Manufacturer :	GF		
Fitting type :	COUPLER		
Fitting size :	63 mm		
Resistance nominal/actual :	2.25/ 2.22 Ohm		
<b>FUSION DATA</b>			
Ambient temp. :	25 C deg		
Starting primary voltage :	220 Vac		
Data input :	BARCODE INPUT		
Fusion voltage nominal/average :	40.0/ 40.0 Vac		
Fusion time nominal/actual :	72/ 9 Sec		
Fusion energy :	4.0 kJ		
Nominal cooling time :	10 Min		
Pipes prepared :	NA		
GPS coordinates latitude/longitude:	45 24.46238 / 011 49.01882 deg		
<b>TRACEABILITY</b>			
	FITTING	PIPE 1	PIPE 2
Manufacturer :	GF	--	--
Component type :	SOCKET	-----	-----
Production batch :	200902/05	-----/f	-----/f
Raw material :	VIRGIN MATERIAL/PE 100	-----/Not used	-----
Others :			

Detailed fusion report

## Comfortable handling

The housing, handle and cable drum have been designed to adjust to the needs of end users, e.g. for comfortable cable winding and ergonomic transport. The power cord and the fusion cable, which is flexible and made of high quality material, can also be wound separately. Pin adaptors to weld all types of fittings (4 mm and 4.7 mm) are supplied in the pouch of the barcode pen or scanner. No annoying sharp edges on the housing get in the way when using, especially under rough conditions.

## Easy data transfer

The MSA 330/340 fusion units have a state-of-the-art USB interface for fusion record transfer and software update. During daily use the interface is protected against dirt with a plastic screw cap. When transferring records from the internal memory to the standard formatted USB stick, the protection cap has to be removed.



Comfortable handling and ergonomic housing

## Greatest scope of recorded data

The record is delivered in PDF or CSV format; both are manageable with customary and free (no license) PC software applications. The protocol may contain up to 20 different types of data, including fusion parameters, operator ID, job number. The MSA 340 additionally stores the GPS coordinates of the jointing to identify the geographical location (i.e. with Google Earth) and the traceability codes of fitting and pipeline components (ISO).



USB interface and GPS receiver (MSA 340)



End-user oriented design

# Technical overview

The MSA family gives you the freedom to choose the appropriate tool for your day-to-day business – a significant cost benefit for you.



MSA 330 Family Overview	MSA 330	MSA 340
Fittings dimension range (Ø mm)	20-800	20-800
Multiple weldings in sequence	✓	✓
Operating procedures check		
Automatic temperature compensation	✓	✓
Fusion current monitoring (short/interrupt)	✓	✓
Electrical (thermal and fuse) protection	✓	✓
Data input		
Barcode reader pen	✓	
Barcode scanner	Optional	✓
Manual fusion input	✓	✓
Welder pass	✓	✓
Data recording		
Documentation of fusion	✓	✓
Traceability documentation (ISO 12176-4)		✓
GPS support		✓
Operations control		
Display brightness configurable	✓	✓
Acoustic alert	✓	✓
Different levels of access (admin/user)	✓	✓
Configurable languages	10	10
Serviceability		
Programmable maintenance interval	✓	✓
Programmable rental time interval		✓
Software upload via USB memory stick	✓	✓
Usability		
Immediate availability	✓	✓
Configurable workflow	✓	✓
Problem recognition (fittings, generators)	✓	✓
Clear messages to the operator in the display	✓	✓
User guidance	✓	✓
Indication of energy, fusion and cooling time	✓	✓
Data protocol format (csv, pdf) Windows® independent	✓	✓
Separate cable winding support	✓	✓
Transport box	✓	✓

# Technical specifications

Engineering at its best: high-end components in liaison with the possibility of individual configuration support your work flow perfectly.

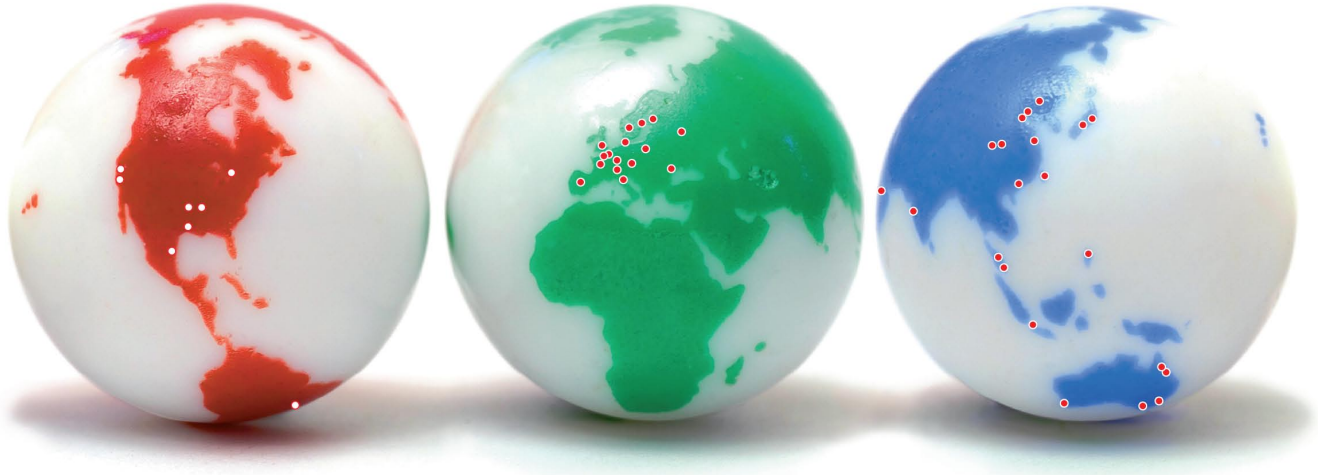


Technical specifications	MSA 330	MSA 340
Operating conditions		
Working temperature range	min. -10 °C, max. +45 °C	min. -10 °C, max. +45 °C
Electrical data		
Input voltage range (Vac)	180–265	180–265
Frequency range (Hz)	40–70	40–70
Current consumption (Max, A)	16 A	16 A
Output voltage (V ac)	8–48	8–48
Output current (max, A)	90	90
Input power (KW)	2.75	2.75
Type of protection	IP54	IP54
Protection class	I	I
Data and operation control		
Data recording capacity (Number of protocols)	500	1000
Communication interface	USB Type A	USB Type A
Buttons	5+Start+Stop	5+Start+Stop
Display	LCD20x4 s	LCD20x4 s
Display colors	Blue/White	Blue/White
GPS accuracy (average)	-	3m
Mechanical data		
Dimensions (mm)	280x480x320	280x480x320
Weight (Kg)	21.7	21.7
Case material	Aluminium	Aluminium
Mains cable length	4 m	4 m
Fusion cable length	4 m	4 m
Mains plug	Schuko 16A	Schuko 16A
Connectors	4mm	4mm
Adapters (90°)	4.0–4.0 mm/4.0–4.7 mm	4.0–4.0 mm/4.0–4.7 mm
Norms compliance		
EMC [EN61000]	✓	✓
Safety [EN60335]	✓	✓
ISO12176-2/3	✓	✓
ISO12176-4		✓
UNI 10566 2009	✓	✓

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