



EN

Factory-fit option

OW LG 1.0
OW WLG 1.0

LAN/WLAN Gateway

099-OW0090-EW501

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23.01.2017

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General instructions

WARNING



Read the operating instructions!

The operating instructions provide an introduction to the safe use of the products.

- Read and observe the operating instructions for all system components, especially the safety instructions and warning notices!
- Observe the accident prevention regulations and any regional regulations!
- The operating instructions must be kept at the location where the machine is operated.
- Safety and warning labels on the machine indicate any possible risks. Keep these labels clean and legible at all times.
- The machine has been constructed to state-of-the-art standards in line with any applicable regulations and industrial standards. Only trained personnel may operate, service and repair the machine.
- Technical changes due to further development in machine technology may lead to a differing welding behaviour.



In the event of queries on installation, commissioning, operation or special conditions at the installation site, or on usage, please contact your sales partner or our customer service department on +49 2680 181-0.

A list of authorised sales partners can be found at www.ewm-group.com.

Liability relating to the operation of this equipment is restricted solely to the function of the equipment. No other form of liability, regardless of type, shall be accepted. This exclusion of liability shall be deemed accepted by the user on commissioning the equipment.

The manufacturer is unable to monitor whether or not these instructions or the conditions and methods are observed during installation, operation, usage and maintenance of the equipment.

An incorrectly performed installation can result in material damage and injure persons as a result. For this reason, we do not accept any responsibility or liability for losses, damages or costs arising from incorrect installation, improper operation or incorrect usage and maintenance or any actions connected to this in any way.

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Dr. Günter-Henle-Straße 8

56271 Mündersbach

Germany

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The content of this document has been prepared and reviewed with all reasonable care. The information provided is subject to change; errors excepted.

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2 For your safety

2.1 Notes on the use of these operating instructions

DANGER

Working or operating procedures which must be closely observed to prevent imminent serious and even fatal injuries.

- Safety notes include the "DANGER" keyword in the heading with a general warning symbol.
- The hazard is also highlighted using a symbol on the edge of the page.

WARNING

Working or operating procedures which must be closely observed to prevent serious and even fatal injuries.

- Safety notes include the "WARNING" keyword in the heading with a general warning symbol.
- The hazard is also highlighted using a symbol in the page margin.

CAUTION

Working or operating procedures which must be closely observed to prevent possible minor personal injury.

- The safety information includes the "CAUTION" keyword in its heading with a general warning symbol.
- The risk is explained using a symbol on the edge of the page.



Special technical points which users must observe.


Instructions and lists detailing step-by-step actions for given situations can be recognised via bullet points, e.g.:

- Insert the welding current lead socket into the relevant socket and lock.

2.1.1 Explanation of icons

Symbol	Description	Symbol	Description
	Indicates technical aspects which the user must observe.		Activate and release/tap/tip
	Switch off machine		Release
	Switch on machine		Press and keep pressed
			Switch
	Wrong		Turn
	Correct		Numerical value – adjustable
	Menu entry		Signal light lights up in green
	Navigating the menu		Signal light flashes green
	Exit menu		Signal light lights up in red
	Time representation (e.g.: wait 4 s/activate)		Signal light flashes red
	Interruption in the menu display (other setting options possible)		
	Tool not required/do not use		
	Tool required/use		

2.2 Part of the complete documentation

 **These operating instructions are part of the complete documentation and valid only in combination with all other parts of these instructions! Read and observe the operating instructions for all system components, especially the safety instructions!**

The illustration shows a general example of a welding system.

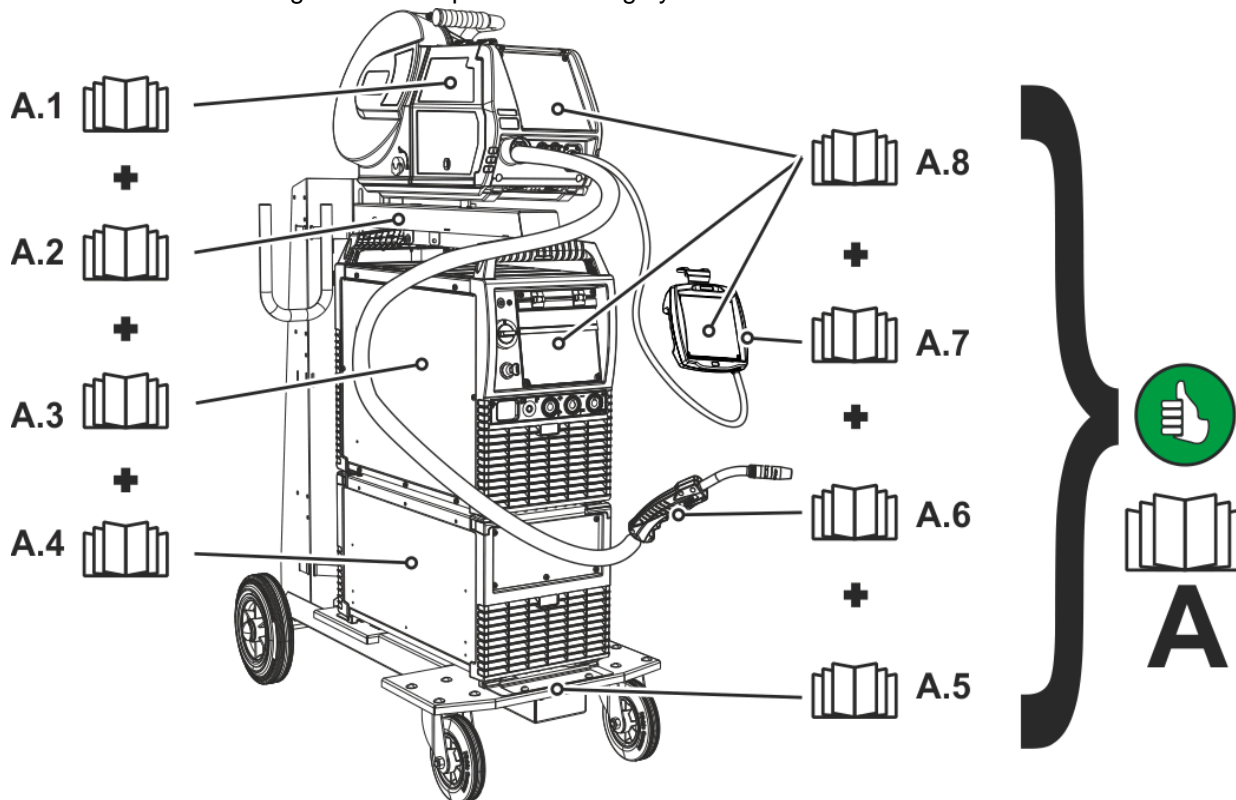


Figure 2-1

Item	Documentation
A.1	Wire feeder
A.2	Conversion instructions
A.3	Power source
A.4	Cooling unit, voltage converter, tool box etc.
A.5	Trolley
A.6	Welding torch
A.7	Remote control
A.8	Control
A	Complete documentation

3 Intended use

WARNING



Hazards due to improper usage!

The machine has been constructed to the state of the art and any regulations and standards applicable for use in industry and trade. It may only be used for the welding procedures indicated at the rating plate. Hazards may arise for persons, animals and material objects if the equipment is not used correctly. No liability is accepted for any damages arising from improper usage!

- The equipment must only be used in line with its designated purpose and by trained or expert personnel!
- Do not improperly modify or convert the equipment!



Comprehensive and additional welding safety precautions can be found in the operating instructions for the welding machine. A list of the standards and specifications currently in force can also be found in these instructions.



You should be familiar with the basic functions of the operating system and a PC and should have some experience in using software.



***These supplementary sheets are valid in addition to the standard document!
These supplementary sheets are only valid in combination with the relevant standard operating instructions and expand on or replace a section in the corresponding standard descriptions.***



***Keep the conversion instructions with the machine documentation!
When ordering spare parts, ensure that the item number and serial number of the machine are quoted!***

4 Design and function

4.1 Machine control – Operating elements

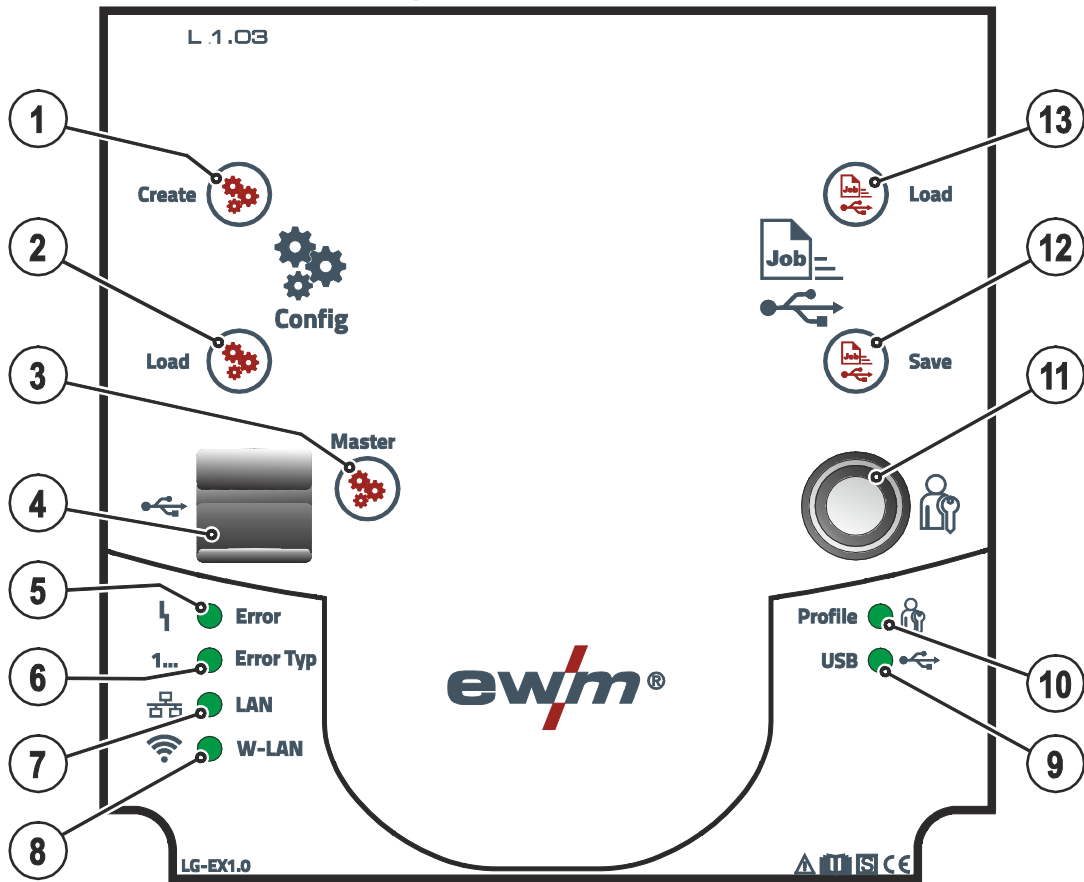






Figure 4-1

Item	Symbol	Description
1		Create push-button Generate an advanced configuration file.
2		Load push-button Load an advanced configuration file.
3		Master push-button Load or generate an advanced configuration file.
4		USB interface for offline data transfer Connection capability for a USB flash memory (industrial USB flash memory recommended).
5		Error signal light
6		Error Type signal light
7		LAN signal light Wired local network (LAN).
8		WiFi signal light Wireless local network (WiFi).
9		USB signal light Indicates an active USB function.

Item	Symbol	Description
10		Profile signal light Signal light shows the current authentication state.
11		Interface (Xbutton) <ul style="list-style-type: none"> • Login and identification of users for welding data recording. • Sharing network functions.
12		Save push-button Save the current JOB to the USB flash memory.
13		Load push-button Load and Activate the current JOB from the USB flash memory.

4.2 Logon to integrated gateway

- Hold the Xbutton against the interface (Xbutton) until the “Profile” signal light is permanently on.

4.3 Data communication via USB flash memory

The gateways can be used without any direct connection (offline) to the Xnet quality management software. In this case, the data is transferred between welding machines or between welding machines and the Xnet quality management software using a USB flash memory.

4.3.1 Machine-specific parameters

The machine-specific parameters of the welding machine connected to the gateway can be read using a USB flash memory for data communication. They can then be edited with the Xnet quality management software and loaded into this welding machine again.

4.3.1.1 Transfer machine-specific parameters

- Connect the USB flash memory to the gateway.
- Press and release the “Create” push-button.
- Once the “USB” signal light has stopped flashing, disconnect the USB flash memory from the gateway.

4.3.1.2 Load machine-specific parameters

- Connect the USB flash memory to the gateway.
- Press and release the “Load” push-button.
- Once the “USB” signal light has stopped flashing, disconnect the USB flash memory from the gateway.

4.3.2 System-wide parameters

System-wide parameters of the welding machine connected to the external gateway can be loaded and transferred to another welding machine using a USB flash memory.

4.3.2.1 Transfer system-wide parameters

- Connect the USB flash memory to the gateway.
- Simultaneously press and hold the “Create” and “Master” push-buttons.
- Once the “USB” signal light has stopped flashing, disconnect the USB flash memory from the gateway.

4.3.2.2 Load system-wide parameters

- Connect the USB flash memory to the gateway.
- Simultaneously press and hold the “Create” and “Load” push-buttons.
- Once the “USB” signal light has stopped flashing, disconnect the USB flash memory from the gateway.

4.3.3 Load and transfer JOBs (welding tasks)

The current JOB can be transferred to another welding machine using a USB flash memory.

4.3.3.1 Transfer JOB (welding task)

- Connect the USB flash memory to the gateway.
- Press and release the “Save” push-button.
- Once the “USB” signal light has stopped flashing, disconnect the USB flash memory from the gateway.

4.3.3.2 Load JOB (welding task)

- Connect the USB flash memory to the gateway.
- Press and release the “Load” push-button.
- Once the “USB” signal light has stopped flashing, disconnect the USB flash memory from the gateway.

4.4 Record welding data

The gateways can be used to save welding data recorded to a USB flash memory, or to record welding data during welding to a USB flash memory. These welding data can then be loaded into the Xnet quality management software.



To increase long-term availability and reliability, we recommend using an industrial USB stick.

4.4.1 Initialising a USB stick

Before use, the USB flash memory has to be registered once with the gateway to be used. During registration, the USB flash memory is checked for functionality.

- Connect the USB flash memory to the gateway.
- Press and hold the “Master” push-button.
- Switch on the welding machine.
- Hold the Xbutton against the interface (Xbutton) until the “Profile” signal light is permanently on.
 - Once the “USB” signal light starts flashing, the registration of the USB flash memory has been completed.

4.4.1.1 Manual recording

- Connect the USB flash memory to the gateway.
- Press and release the “Master” push-button.
 - The “USB” signal light starts flashing and the data recording starts.
- To stop recording, press the “Master” push-button.



The current weld seam will still be fully recorded. Recording is complete when the LEDs are no longer flashing on the controller.

4.4.1.2 Automatic recording

- Connect the USB flash memory to the gateway.
- Switch on the welding machine.
 - The “USB” signal light starts flashing and the data recording starts.
- To stop recording, press the “Master” push-button.




The current weld seam will still be fully recorded. Recording is complete when the LEDs are no longer flashing on the controller.

4.5 Online operation

The gateways can be used to establish a direct connection (online) to the Xnet quality management software via LAN or WiFi. For the advanced options and functionalities of the direct connection refer to the Xnet quality management software manual.

5 Rectifying faults

All products are subject to rigorous production checks and final checks. If, despite this, something fails to work at any time, please check the product using the following flowchart. If none of the fault rectification procedures described leads to the correct functioning of the product, please inform your authorised dealer.

 **A welding machine error will be signalled by an error code (see the welding machine operating instructions) on the control display.**

In the event of a machine error, the power unit shuts down.

 **The display of possible error numbers depends on the machine version (interfaces/functions).**

5.1 Error messages

All error messages related to the network node are communicated via the flashing sequences and the corresponding signal lights. The number of flashing signals (0.5 Hz) of the “Error” signal light signals the error category, while the number of flashing signals (1.5 Hz) of the “Error Type” signal light signals the error type of the relevant error category.

- Document machine errors and inform service staff as necessary.
- If multiple errors occur, these are displayed in succession.

Error category (Error)	Error type (Error Type)	Display duration	Possible cause	Remedy
1x	1x	Permanently	The control is ready for operation but has no connection to the system bus.	Establish connection to the system bus, switch machine off and on again.
1x	2x	20 s after switching on	No storage medium detected.	Inform service
1x	3x	2 min. after the initial switching on	The system time required for recording the welding operation has not been recognized.	Connect device to a network and configure connection to the Xnet server
1x	4x	Permanently	Error during internal memory self-test. The control will be stopped.	Inform service
2x	1x	20 s after the initial switching on	No storage medium available or storage medium faulty.	Inform service
2x	2x	20 s after the initial switching on	Incorrect storage medium.	Inform service
2x	3x	20 s after occurrence	General error accessing the storage medium.	Inform service
3x	1x	Permanently	Network access not available.	Inform service
3x	2x	Permanently	WiFi module faulty or not available.	Inform service
3x	3x	Permanently	Error in the communication sequence.	Switch machine off, wait for 30 s and switch on again.
4x	1x	20 s after occurrence	Xbutton not initialised.	Inform service
4x	2x	Once	Missing Xbutton permission.	Reconfigure Xbutton.
5x	1x	Once	USB storage medium faulty or not connected.	Use alternative USB storage medium.

Error category (Error)	Error type (Error Type)	Display duration	Possible cause	Remedy
5x	2x	Once	Unable to read data on the USB storage medium.	Regenerate data.
5x	3x	Once	Data on the USB storage medium are corrupt.	Regenerate data.
5x	4x	Once	USB storage medium faulty or read-only.	Use alternative USB storage medium or format USB storage medium.
5x	5x	Once	Failed to create data on the USB storage medium.	Use alternative USB storage medium or format USB storage medium.
5x	6x	Once	Required administration data not available.	Inform service
5x	7x	Once	Data incompatible with software.	Inform service

6 Appendix A

6.1 Overview of EWM branches

Headquarters

EWM AG
Dr. Günter-Henle-Straße 8
56271 Mündersbach · Germany
Tel: +49 2680 181-0 · Fax: -244
www.ewm-group.com · info@ewm-group.com

Technology centre

EWM AG
Forststraße 7-13
56271 Mündersbach · Germany
Tel: +49 2680 181-0 · Fax: -144
www.ewm-group.com · info@ewm-group.com

Production, Sales and Service

EWM AG
Dr. Günter-Henle-Straße 8
56271 Mündersbach · Germany
Tel: +49 2680 181-0 · Fax: -244
www.ewm-group.com · info@ewm-group.com

EWM HIGHTEC WELDING s.r.o.
9. května 718 / 31
407 53 Jiřikov · Czech Republic
Tel.: +420 412 358-551 · Fax: -504
www.ewm-jirikov.cz · info@ewm-jirikov.cz

EWM HIGH TECHNOLOGY (Kunshan) Ltd.
10 Yuanshan Road, Kunshan · New & Hi-tech Industry Development Zone
Kunshan City · Jiangsu · Post code 215300 · People's Republic of China
Tel: +86 512 57867-188 · Fax: -182
www.ewm.cn · info@ewm.cn · info@ewm-group.cn

Sales and Service Germany

EWM AG
Sales and Technology Centre
Grünauer Fenn 4
14712 Rathenow · Tel: +49 3385 49402-0 · Fax: -20
www.ewm-rathenow.de · info@ewm-rathenow.de

EWM HIGHTEC WELDING GmbH
Centre Technology and mechanisation
Daimlerstr. 4-6
69469 Weinheim · Tel: +49 6201 84557-0 · Fax: -20
www.ewm-weinheim.de · info@ewm-weinheim.de

EWM AG
Rudolf-Winkel-Straße 7-9
37079 Göttingen · Tel: +49 551-3070713-0 · Fax: -20
www.ewm-goettingen.de · info@ewm-goettingen.de

EWM Schweißtechnik Handels GmbH
Karlsdorfer Straße 43
88069 Tettngang · Tel: +49 7542 97998-0 · Fax: -29
www.ewm-tettngang.de · info@ewm-tettngang.de

EWM AG
Dieselstraße 9b
50259 Pulheim · Tel: +49 2238-46466-0 · Fax: -14
www.ewm-pulheim.de · info@ewm-pulheim.de

EWM Schweißtechnik Handels GmbH
Heinkelstraße 8
89231 Neu-Ulm · Tel: +49 731 7047939-0 · Fax: -15
www.ewm-neu-ulm.de · info@ewm-neu-ulm.de

EWM AG
August-Horch-Straße 13a
56070 Koblenz · Tel: +49 261 963754-0 · Fax: -10
www.ewm-koblenz.de · info@ewm-koblenz.de

EWM AG
Eiserfelder Straße 300
57080 Siegen · Tel: +49 271 3878103-0 · Fax: -9
www.ewm-siegen.de · info@ewm-siegen.de

Sales and Service International

EWM HIGH TECHNOLOGY (Kunshan) Ltd.
10 Yuanshan Road, Kunshan · New & Hi-tech Industry Development Zone
Kunshan City · Jiangsu · Post code 215300 · People's Republic of China
Tel: +86 512 57867-188 · Fax: -182
www.ewm.cn · info@ewm.cn · info@ewm-group.cn

EWM HIGHTEC WELDING UK Ltd.
Unit 2B Coopies Way · Coopies Lane Industrial Estate
Morpeth · Northumberland · NE61 6JN · Great Britain
Tel: +44 1670 505875 · Fax: -514305
www.ewm-morpeth.co.uk · info@ewm-morpeth.co.uk

EWM HIGHTEC WELDING GmbH
Wiesenstraße 27b
4812 Pinsdorf · Austria · Tel: +43 7612 778 02-0 · Fax: -20
www.ewm-austria.at · info@ewm-austria.at

EWM HIGHTEC WELDING Sales s.r.o. / Prodejní a poradenské centrum
Tyršova 2106
256 01 Benešov u Prahy · Czech Republic
Tel: +420 317 729-517 · Fax: -712
www.ewm-benesov.cz · info@ewm-benesov.cz

Liaison office Turkey

EWM AG Türkiye İrtibat Bürosu
İkitelli OSB Mah. · Marmara Sanayi Sitesi P Blok Apt. No: 44
Küçükçekmece / İstanbul Türkiye
Tel.: +90 212 494 32 19
www.ewm-istanbul.com.tr · info@ewm-istanbul.com.tr

