



Remote control  
**RT50 7POL**

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# General instructions

## CAUTION



### **Read the operating instructions!**

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

- Read the operating instructions for all system components!
- Observe accident prevention regulations!
- Observe all local regulations!
- Confirm with a signature where appropriate.



***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](http://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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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 Safety instructions

### 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.

#### **CAUTION**

**Working and operating procedures which must be followed precisely to avoid damaging or destroying the product.**

- The safety information includes the "CAUTION" keyword in its heading without a general warning symbol.
- The hazard is explained using a symbol at the edge of the page.






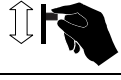








#### **Special technical points which users must observe.**

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.

## 2.2 Explanation of icons

Symbol	Description
	Special technical points which users must observe.
	Correct
	Wrong
	Press
	Do not press
	Press and keep pressed
	Turn
	Switch
	Switch off machine
	Switch on machine
<b>ENTER</b>	enter the menu
<b>NAVIGATION</b>	Navigating in the menu
<b>EXIT</b>	Exit the menu
4 s 	Time display (example: wait 4s/press)
	Interruption in the menu display (other setting options possible)
	Tool not required/do not use
	Tool required/use

## 2.3 General

### **DANGER**



#### **Electric shock!**

**Welding machines use high voltages which can result in potentially fatal electric shocks and burns on contact. Even low voltages can cause you to get a shock and lead to accidents.**

- Do not touch any live parts in or on the machine!
- Connection cables and leads must be free of faults!
- Switching off alone is not sufficient!
- Place welding torch and stick electrode holder on an insulated surface!
- The unit should only be opened by specialist staff after the mains plug has been unplugged!
- Only wear dry protective clothing!
- Wait for 4 minutes until the capacitors have discharged!



#### **Electromagnetic fields!**

**The power source may cause electrical or electromagnetic fields to be produced which could affect the correct functioning of electronic equipment such as IT or CNC devices, telecommunication lines, power cables, signal lines and pacemakers.**

- Observe the maintenance instructions - See 6 Maintenance, care and disposal chapter!
- Unwind welding leads completely!
- Shield devices or equipment sensitive to radiation accordingly!
- The correct functioning of pacemakers may be affected (obtain advice from a doctor if necessary).

### **WARNING**



#### **Risk of accidents due to non-compliance with the safety instructions!**

**Non-compliance with the safety instructions can be fatal!**

- Carefully read the safety instructions in this manual!
- Observe the accident prevention regulations and any regional regulations!
- Inform persons in the working area that they must comply with the regulations!



#### **Validity of the document!**

**This document is valid only in combination with the operating instructions for the product being used!**

- Read and observe the operating instructions for all system components, especially the safety instructions!



#### **Fire hazard!**

**Flames may arise as a result of the high temperatures, stray sparks, glowing-hot parts and hot slag produced during the welding process.**

**Stray welding currents can also result in flames forming!**

- Check for fire hazards in the working area!
- Do not carry any easily flammable objects such as matches or lighters.
- Keep appropriate fire extinguishing equipment to hand in the working area!
- Thoroughly remove any residue of flammable substances from the workpiece before starting welding.
- Only continue work on welded workpieces once they have cooled down.  
Do not allow to come into contact with flammable material!
- Connect welding leads correctly!

 **WARNING****Risk of injury due to radiation or heat!****Arc radiation results in injury to skin and eyes.****Contact with hot workpieces and sparks results in burns.**

- Use welding shield or welding helmet with the appropriate safety level (depending on the application)!
- Wear dry protective clothing (e.g. welding shield, gloves, etc.) according to the relevant regulations in the country in question!
- Protect persons not involved in the work against arc beams and the risk of glare using safety curtains!

**Hazards due to improper usage!****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 proper usage and by trained or expert staff!
- Do not modify or convert the equipment improperly!

 **CAUTION****Noise exposure!****Noise exceeding 70 dBA can cause permanent hearing damage!**

- Wear suitable ear protection!
- Persons located within the working area must wear suitable ear protection!

**CAUTION****Obligations of the operator!****The respective national directives and laws must be observed for operation of the machine!**

- National implementation of the framework directive (89/391/EWG), as well as the associated individual directives.
- In particular, directive (89/655/EWG), on the minimum regulations for safety and health protection when staff members use equipment during work.
- The regulations regarding work safety and accident prevention for the respective country.
- Setting up and operating the machine according to IEC 60974-9.
- Check at regular intervals that users are working in a safety-conscious way.
- Regular checks of the machine according to IEC 60974-4.

**Damage due to the use of non-genuine parts!****The manufacturer's warranty becomes void if non-genuine parts are used!**

- Only use system components and options (power sources, welding torches, electrode holders, remote controls, spare parts and replacement parts, etc.) from our range of products!
- Only insert and lock accessory components into the relevant connection socket when the machine is switched off.

**Trained personnel!****Commissioning is reserved for persons who have the relevant expertise of working with arc welding machines.**

## 2.4 Transport

### CAUTION



**Damage due to supply lines not being disconnected!**

During transport, supply lines which have not been disconnected (mains supply leads, control leads, etc.) may cause hazards such as connected equipment tipping over and injuring persons!

- Disconnect supply lines!

## 2.5 Scope of delivery

The delivery is checked and packaged carefully before dispatch, however it is not possible to exclude the possibility of damage during transit.

### Receiving inspection

- Check that the delivery is complete using the delivery note!

### In the event of damage to the packaging

- Check the delivery for damage (visual inspection)!

### In the event of complaints

If the delivery has been damaged during transport:

- Please contact the last haulier immediately!
- Keep the packaging (for possible checking by the haulier or for the return shipment).

### Packaging for returns

If possible, please use the original packaging and the original packaging material. If you have any queries on packaging and protection during transport, please contact your supplier.

### 2.5.1 Ambient conditions

#### CAUTION



**Equipment damage due to dirt accumulation!**

Unusually high quantities of dust, acid, corrosive gases or substances may damage the equipment.

- Avoid high volumes of smoke, vapour, oil vapour and grinding dust!
- Avoid ambient air containing salt (sea air)!

#### 2.5.1.1 In operation

**Temperature range of the ambient air:**

- -25 °C to +40 °C

**Relative air humidity:**

- Up to 50% at 40 °C
- Up to 90% at 20 °C

#### 2.5.1.2 Transport and storage

**Storage in an enclosed space, temperature range of the ambient air:**

- -30 °C to +70 °C

**Relative air humidity**

- Up to 90% at 20 °C



### 3 Intended use

Remote control for welding machine and accessory functions.

#### WARNING



**Hazards due to improper usage!**

**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 proper usage and by trained or expert staff!
- Do not modify or convert the equipment improperly!

### 3.1 Documents which also apply

#### 3.1.1 Warranty



*For more information refer to the "Warranty registration" brochure supplied and our information regarding warranty, maintenance and testing at [www.ewm-group.com](http://www.ewm-group.com)!*

#### 3.1.2 Declaration of Conformity



**The designated machine conforms to EC Directives and standards in terms of its design and construction:**

- EC Low Voltage Directive (2006/95/EC),
- EC EMC Directive (2004/108/EC),

This declaration shall become null and void in the event of unauthorised modifications, improperly conducted repairs, non-observance of the deadlines for the repetition test and / or non-permitted conversion work not specifically authorised by the manufacturer.

The original copy of the declaration of conformity is enclosed with the unit.

#### 3.1.3 Service documents (spare parts)

#### DANGER



**Do not carry out any unauthorised repairs or modifications!**

**To avoid injury and equipment damage, the unit must only be repaired or modified by specialist, skilled persons!**

**The warranty becomes null and void in the event of unauthorised interference.**

- Appoint only skilled persons for repair work (trained service personnel)!

Spare parts can be obtained from the relevant authorised dealer.

## 4 Machine description – quick overview

### 4.1 Front view

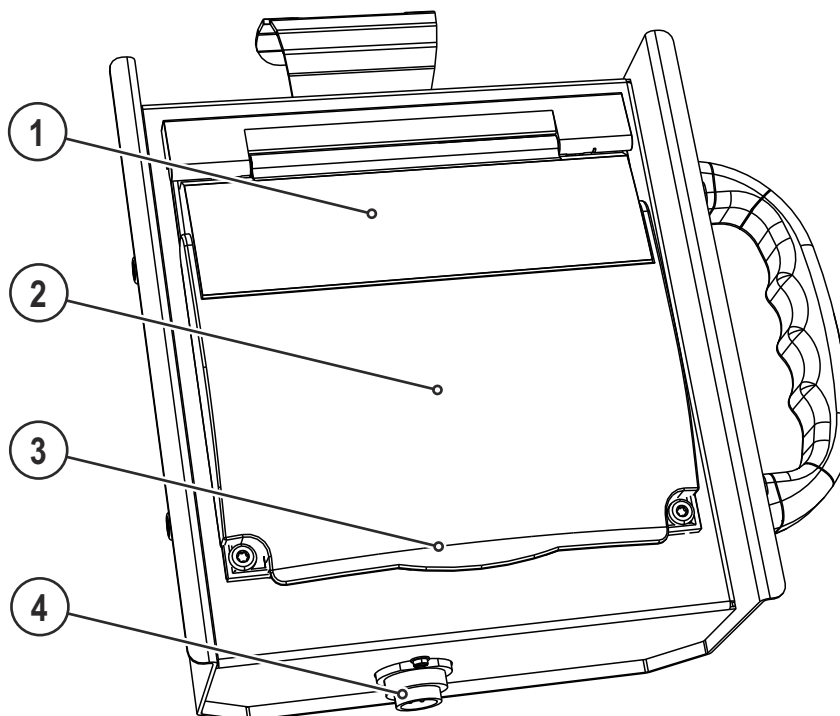


Figure 4-1

Item	Symbol	Description
1		Lid
2		Machine control- See 4.3 Machine control – Operating elements chapter
3		Protective cap
4		Connection socket, 7-pole (digital) Connection to the digital remote control connection on power source.

## 4.2 Rear view

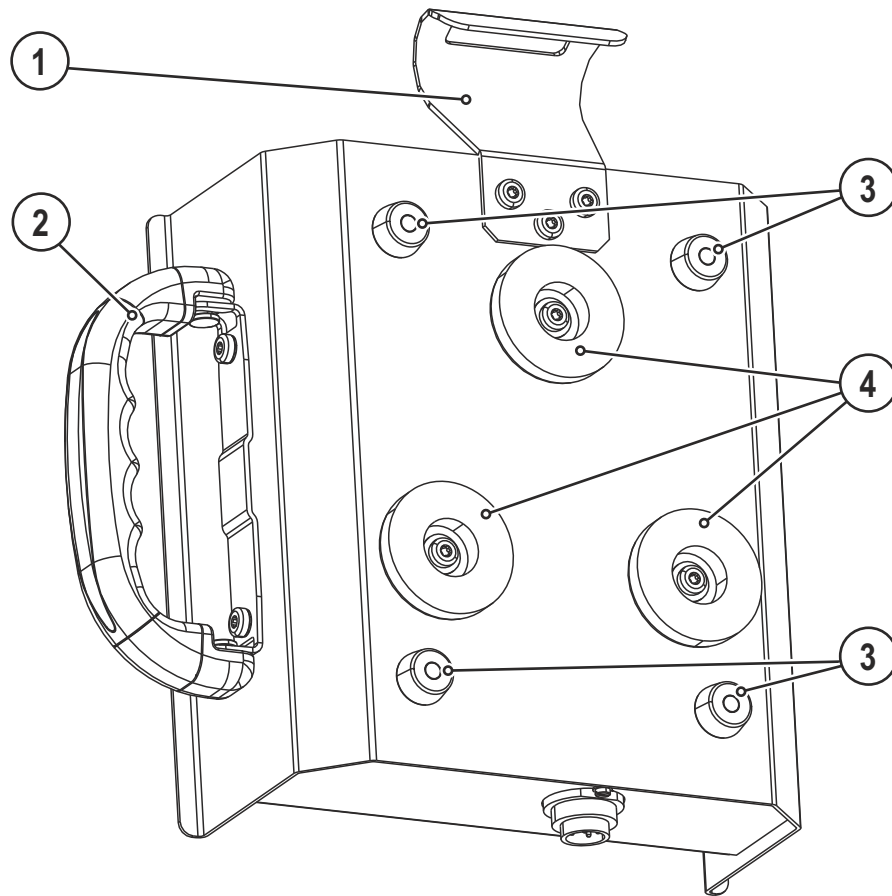


Figure 4-2

Item	Symbol	Description
1		Holder for suspending the remote control
2		Carrying handle
3		Machine feet
4		Fixing magnet To mount remote control on magnetisable surfaces

## 4.3 Machine control – Operating elements



Basically, all descriptions on the process settings in the standard operating instructions shall apply. This operating manual exclusively describes deviating control functions.

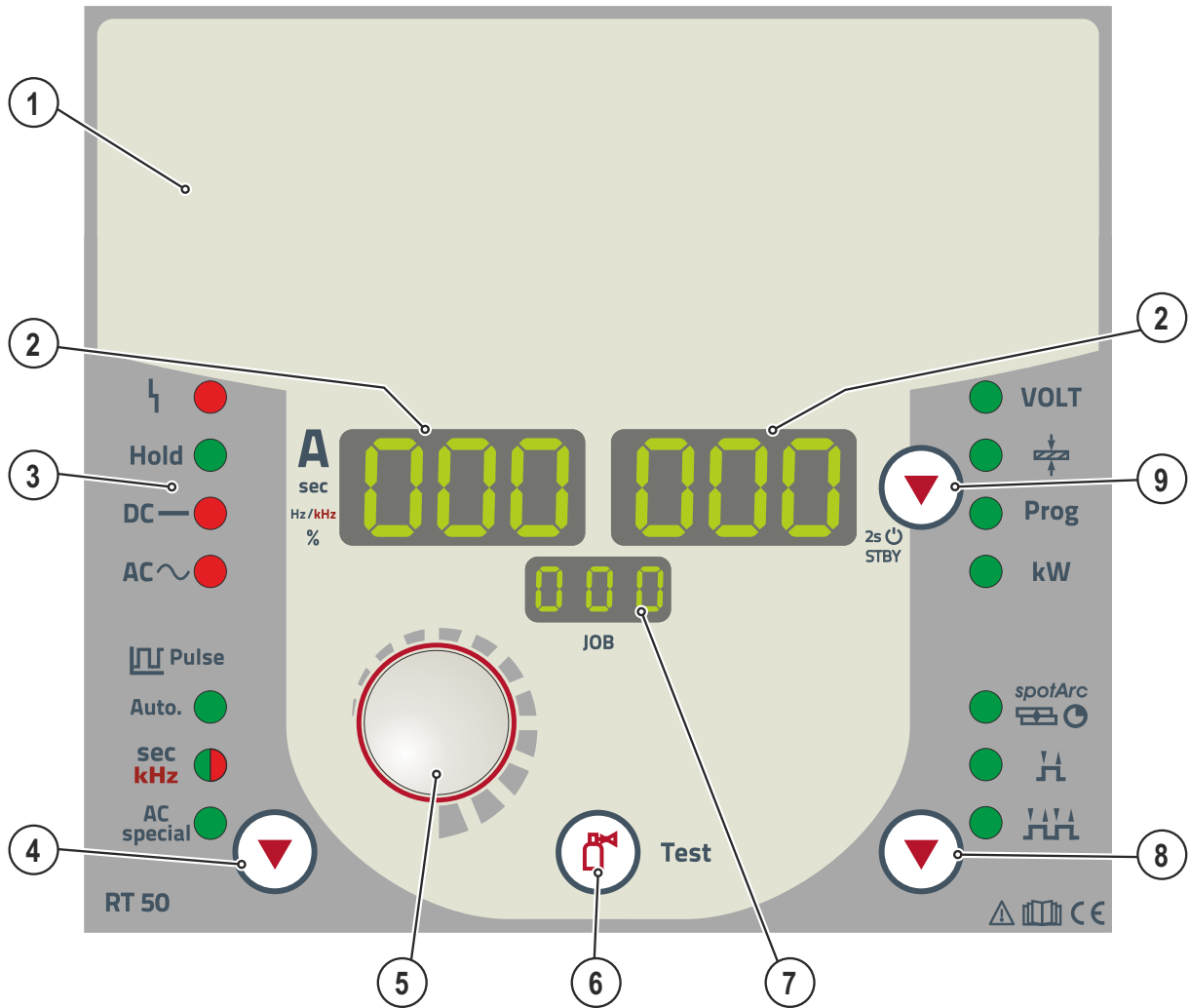


Figure 4-3

Item	Symbol	Description
1		Lid - See 4.3.1 Machine control – Concealed operating elements chapter
2		<b>Welding data display (3-digit)</b> Displays the welding parameters and the corresponding values
3		<b>Status displays</b> Collective interference signal light <b>HOLD</b> After each completed welding task, the last values used in the welding process for the welding current and welding voltage are shown on the displays, and the signal light will be on <b>DC</b> — Direct current welding <b>AC</b> ~ Alternating current welding <b>DC</b> — and <b>AC</b> ~ simultaneously: Alternating current welding, AC special
4		<b>TIG pulse welding</b> <b>Auto. sec kHz</b> TIG automated pulses (frequency and balance) TIG pulses with times, green light / Fast TIG DC pulses with frequency and balance, red light <b>AC special</b> TIG AC special
5		<b>Welding parameter setting rotary transducer</b> Setting of all parameters such as welding current, sheet metal thickness, gas pre-flow time, etc.
6		<b>Gas test / rinse button</b> <ul style="list-style-type: none"> <li>Gas test: For setting the shielding gas quantity</li> <li>Rinse: For rinsing longer hose packages</li> </ul> - See 5.3 Shielding gas setting chapter
7		<b>Display, JOB</b> Shows the currently selected welding task (JOB number).
8		<b>Operating mode</b> <b>spotArc</b> spotArc / Spotmatic (spot time setting range) Non-latched Latched
9		<b>Display/Power-saving mode switching push-button</b> <b>VOLT</b> Welding voltage display Material thickness display <b>PROG</b> Program number display <b>kW</b> Welding performance display Press for 3 s to put machine into power-saving mode. To reactivate, activate one of the operating elements- See 5.7 Power-saving mode (Standby) chapter.

## 4.3.1 Machine control – Concealed operating elements

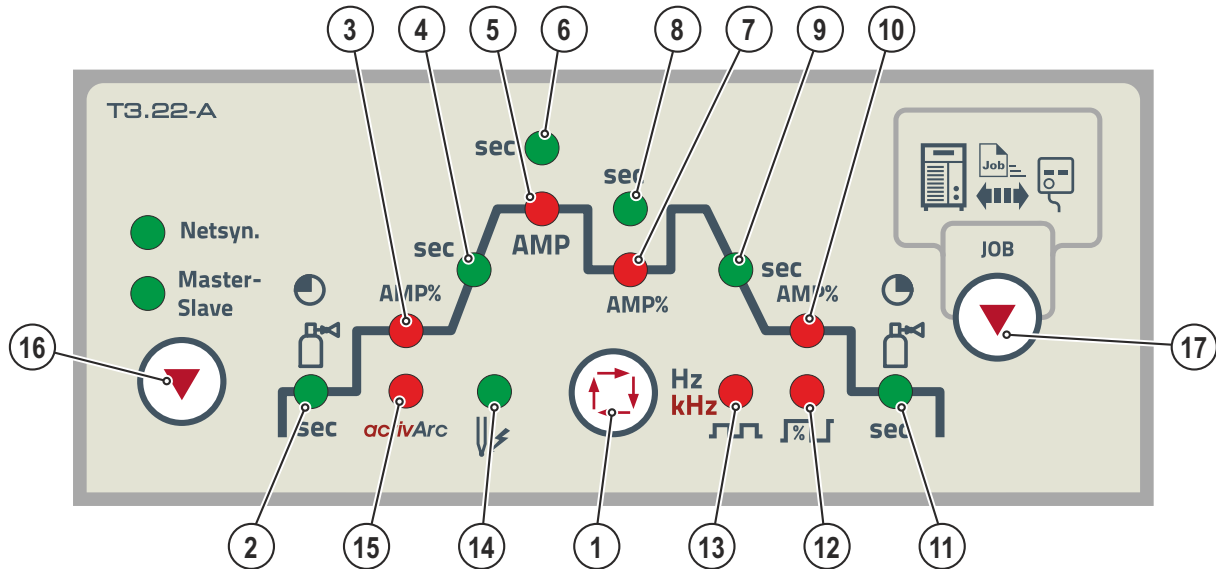









Figure 4-4

Item	Symbol	Description
1		<b>Select welding parameters button</b> This button is used to select the welding parameters depending on the welding process and operating mode used.
2	sec	<b>Gas pre-flow time (TIG)</b> absolute setting range 0.0 sec to 20.0 sec (0.1s increments).
3	AMP%	<b>Ignition current (TIG)</b> Percentage of the main current. Setting range 1 % to 200 % (1 % increments). There are no pulses during the ignition current phase.
		<b>Hotstart current (MMA)</b> Percentage of the main current. Setting range 1 % to 200 % (1 % increments).
4	sec	<b>Up-slope time (TIG)</b> Setting ranges: 0.00 s to 20.0 s (0.1 s increments). The up-slope time can be set separately for non-latched and latched.
		<b>Hotstart time (MMA)</b> Setting ranges: 0.00 s to 20.0 s (0.1 s increments).
5	AMP	<b>Main current (TIG) / pulse current</b> I min to I max (1 A increments)
		<b>Main current (MMA)</b> I min to I max (1 A increments)
6	sec	<b>Pulse time / slope time from AMP% to AMP</b> <ul style="list-style-type: none"> <li>Pulse time setting range: 0.01 s to 20.0 s (0.01 s increments &lt; 0.5 s; 0.1 s increments &gt; 0.5 s)</li> <li>Slope time (tS2) setting range: 0.0 s to 20.0 s</li> </ul>
		<b>TIG pulses</b> The pulse time applies to the main current phase (AMP) for pulses.
		<b>TIG AC Special</b> The pulse time applies to the AC phase for AC special.
7	AMP%	<b>Secondary current (TIG) / pulse pause current</b> Setting range 1 % to 100 % (1 % increments). Percentage of the main current.
8	sec	<b>Pulse break time/slope time from AMP to AMP%</b> <ul style="list-style-type: none"> <li>Pulse break setting range: 0.01 sec to 20.0 sec (0.01 sec increments &lt; 0.5 sec; 0.1 sec increments &gt; 0.5 sec)</li> <li>Slope time (tS1) setting range: 0.0 sec to 20.0 sec</li> </ul>
		TIG pulses: The pulse break time applies to the secondary current phase (AMP%) TIG AC Special: The pulse break time applies to the DC phase with AC special.

Item	Symbol	Description
9	sec	<b>Down-slope time (TIG)</b> The down-slope time can be set separately for non-latched and latched. Setting range 0.00 s to 20.0 s (0.1 s increments).
10	AMP%	<b>End-crater current (TIG)</b> Setting range 1 % to 200 % (1 % increments). Percentage of the main current.
11	sec	<b>Gas post-flow time (TIG)</b> Setting ranges: 0.00 sec to 40.0 sec (0.1 sec increments).
12		<b>Balance</b> TIG AC Optimising cleaning effect and penetration characteristics. Max. setting range: -30% to +30% (increments of 1%). Depending on the factory settings, the setting range can be smaller as well. TIG DC kHz-pulsing (metallurgical pulsing) Setting range: 1% to +99% (increments of 1%) MMA pulse welding Setting range: 1% to +99% (increments of 1%)
13		<b>Frequency</b> <b>TIG AC</b> Constriction and stabilisation of the arc: The cleaning effect increases with a higher frequency. Especially thin metal sheets (welding with low current), anodised aluminium sheets or very impure weld metals can be welded and cleaned immaculately with higher frequency. 50 Hz to 200 Hz (increments of 1 Hz). <b>TIG DC kHz-pulsing (metallurgical pulsing)</b> Setting range: 0.05 kHz to 15 kHz <b>MMA pulse welding</b> Setting range: 0.2 Hz to 500 Hz
14		<b>Signal lamp, Spherical cap formation button / Ignition optimisation</b> Lights up when the spherical cap formation button function is active.
15		<b>activArc TIG welding process</b> <ul style="list-style-type: none"> <li>• Switch activArc on or off</li> <li>• Correct the activArc characteristic (setting range: 0 to 100)</li> </ul>
16		<b>Synchronisation types key button (two-sided, simultaneous welding)</b> <ul style="list-style-type: none"> <li>• Synchronisation via mains voltage</li> <li>• Synchronisation via cable</li> </ul>
17		<b>Press organise welding tasks (JOB) push-button</b> Briefly pressing the button = display of welding task selected in welding system Holding the button down for long (> 3 s) = "Organise welding tasks (JOB)" mode: <ul style="list-style-type: none"> <li>• Load welding task (JOB) from welding machine to remote control</li> <li>• Copy welding task (JOB) from remote control to welding machine</li> </ul>

## 5 Design and function

### 5.1 General

-  **Basically, all descriptions on the process settings in the standard operating instructions shall apply. This operating manual exclusively describes deviating control functions.**

### 5.2 Establishing the connections

#### CAUTION



**Damage to the machine due to improper connection!**

**The remote controls have been developed to be connected to welding machines or wire feed units only. Connecting them to other machines may cause damage to the machines!**

- Observe the operating instructions for the welding machine or wire feed unit!
- Switch off the welding machine before connecting!

-  **Observe documentation of other system components when connecting!**

- Switch off the welding machine.
- Insert the male connector plug (socket) into the remote control connection socket and lock by turning to the right.
- Insert the male connector plug (pin) into the remote control connection socket of the welding machine and lock by turning to the right.



### 5.3 Shielding gas setting



**Rule of thumb for the gas flow rate:**

**Diameter of gas nozzle in mm corresponds to gas flow in l/min.**



**Example: 7mm gas nozzle corresponds to 7l/min gas flow.**





**Incorrect shielding gas setting!**

- **If the shielding gas setting is too low or too high, this can introduce air to the weld pool and may cause pores to form.**
- **Adjust the shielding gas quantity to suit the welding task!**

#### 5.3.1 Gas test

Operating element	Action	Result
	1 x 	<b>Select gas test</b> "Gas pre-flow time (TIG)" signal light is on. Shielding gas flows for approx. 20 seconds. The gas test can be ended immediately by pressing it once more.


#### 5.3.2 "Purge hose package" function

Operating element	Action	Result
	5 s 	<b>Select hose package rinsing</b> "Gas pre-flow time (TIG)" signal light flashes. The function is ended by pressing the button again.



**If the "Rinse hose package" function is not ended by pressing the "Gas and current parameters" button again, shielding gas will flow until the gas cylinder is empty!**

## 5.4 Organising welding tasks (Mode "JOB Manager")

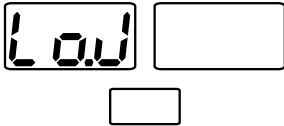
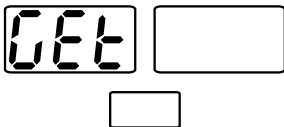
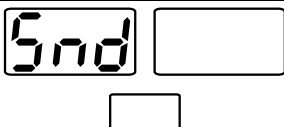
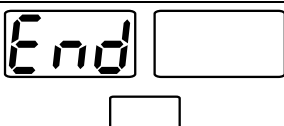
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**After carrying out any of the actions described, the machine switches back to the default parameters such as current and voltage.**  
**To ensure that all the changes are active, the welding machine should only be switched off after 5 seconds have elapsed.**



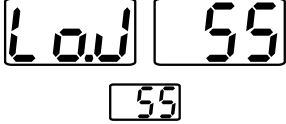


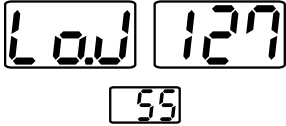


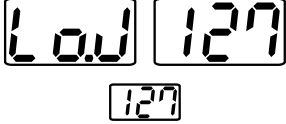
The JOB manager enables the loading of the current JOB from the welding machine to the remote control. Likewise, it is also possible to copy this JOB to other welding systems that have been approved for this remote control.

The remote control can switch between any JOBS that can be selected at the machine.



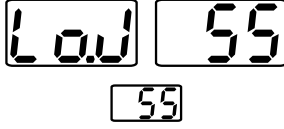


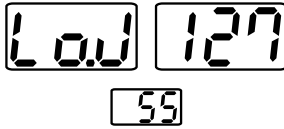


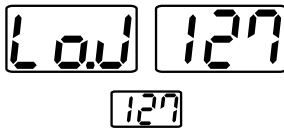




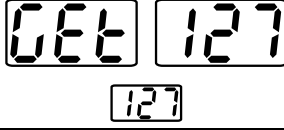


### 5.4.1 Explanation of symbols on the display

Display	Meaning
	Load JOB. (Load JOB)
	Load JOB from welding machine to remote control. (Get JOB)
	Load JOB from remote control to welding machine. (Send JOB)
	Exit JOB manager without any changes. (END)





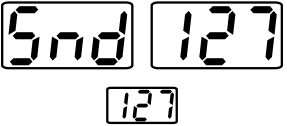


### 5.4.2 Select welding task (JOB)

Operating element	Action	Result	Display
	1 x 	JOB manager mode selection	
		Select the required JOB number (e.g. 127) with the rotary transducer.	
	1 x 	Confirm selection or wait a short moment for the setting to be automatically applied.	

## 5.4.3 Load welding task (JOB) from welding machine to remote control



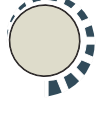





Operating element	Action	Result	Display
	1 x 	JOB manager mode selection.	
		Select the required JOB number (e.g. 127) with the rotary transducer.	
	1 x 	Confirm selection or wait a short moment for the setting to be automatically applied.	
	3 s 	JOB manager mode selection.	
		Select the (Get JOB) function with the rotary transducer.	
	5 s 	Confirm selection; JOB has been loaded into the remote control memory.	Current value and JOB number are displayed.

**5.4.4 Copy welding task (JOB) from remote control to welding machine**

Operating element	Action	Result	Display
	3 s 	JOB manager mode selection	
		Select the (Send JOB) function with the rotary transducer.	
	5 s 	Confirm selection; JOB has been loaded into the welding machine memory.	Current value and JOB number are displayed.

## 5.4.5 Exit JOB Manager without changes

The user is in the JOB manager menu and wants to exit without any changes:

Operating element	Action	Result	Display
	3 s 	JOB manager mode selection.	
		Select the (END) function with the rotary transducer.	 
	1 x 	Confirm selection.	Current value and JOB number are displayed.

## 5.5 Direct menus (direct access to parameters)

Functions, parameters and their values can be accessed directly, e.g. can be selected by pressing a button once.

## 5.6 Expert menu (TIG)

The expert menu includes functions and parameters which are either not set on the machine control, or which do not require regular setting.

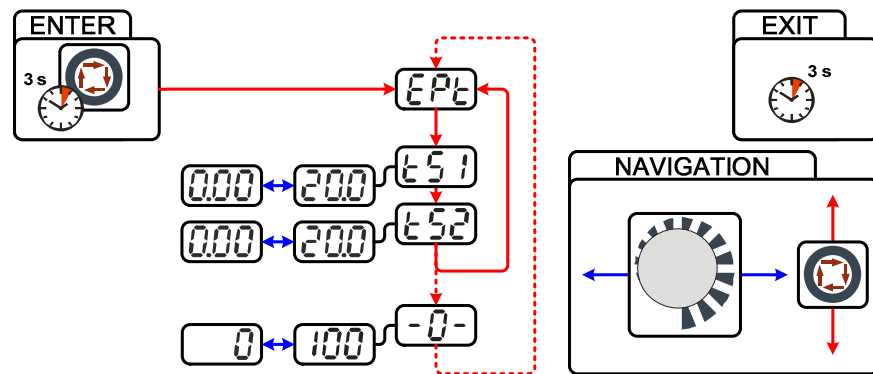


Figure 5-1

Display	Setting/selection
	<b>Expert menu</b>
	<b>Slope time tS1 (main current to secondary current)</b> Setting: 0.00 s to 20.0 s (factory setting 0.00 s)
	<b>Slope time tS2 (secondary current to main current)</b> Setting: 0.00 s to 20.0 s (factory setting 0.00 s)
	<b>activArc parameter</b> Parameter can also be set after activating TIG activArc welding. Display shown = factory setting.
	<b>Filler wire process (cold/hot wire)</b> <ul style="list-style-type: none"> <li>• on = filler wire activated</li> <li>• off = filler wire deactivated (factory setting)</li> </ul>
	<b>Hot wire process (start signal for hot wire power source)</b> <ul style="list-style-type: none"> <li>• on = hot wire activated</li> <li>• off = hot wire deactivated (factory setting)</li> </ul>
	<b>Hot wire process (setting for hot wire current)</b> 5 A to 999 A (5 A ex works, increments of 1 A)
	<b>Wire/pulse function (wire feed characteristics when using TIG pulses)</b> <b>The wire feeding can be disabled during pulse pauses (not in case of pulse automatic or kHz pulses).</b> <ul style="list-style-type: none"> <li>• on = wire feeding switched off during pulse pause</li> <li>• off = wire feeding switched on during pulse pause (ex works)</li> </ul>
	<b>Filler wire diameter (manual setting)</b> Setting of the wire diameter from 0.6 mm to 1.6 mm. The character "d" preceding the wire diameter on the display (d0.8) indicates a pre-programmed characteristics (operating mode KORREKTUR). If there is no characteristics for the selected wire diameter, the parameters have to be set manually (operating mode MANUELL). For information on how to select the operating mode.
	<b>Wire return</b> <ul style="list-style-type: none"> <li>• Increase value = more wire return</li> <li>• Reduce value = less wire return</li> </ul> Parameter can also be set after connecting a TIG cold wire feed unit. Setting: 0 to 255 (factory setting 50).
	<b>Tungsten balling current</b> Set tungsten balling current (setting range defined by the JOB limit values of the selected welding task)
	<b>Diameter of tungsten electrode/ignition optimisation</b> 1 mm to 4 mm or larger (increments of 0.1 mm)



*The number of parameters displayed can vary (machine dependent).*



## 5.7 Power-saving mode (Standby)

You can activate the power-saving mode by either pressing the push-button for a prolonged time or by setting a parameter in the machine configuration menu (time-controlled power-saving mode).



When power-saving mode is activated, the machine displays show the horizontal digit in the centre of the display only.

Pressing any operating element (e.g. tapping the torch trigger) deactivates power-saving mode and the machine is ready for welding again.

- See 4.3 Machine control – Operating elements chapter

## 5.8 Aligning the cable resistance

To ensure optimum welding properties, the electric cable resistance should be aligned again whenever an accessory component such as the welding torch or the intermediate hose package (AW) has been changed. The resistance value of the cables can be set directly or can be aligned by the power source. In the delivery state the cable resistance is set to the optimum values. To optimise the welding properties for other cable lengths, an alignment process (voltage correction) is necessary.

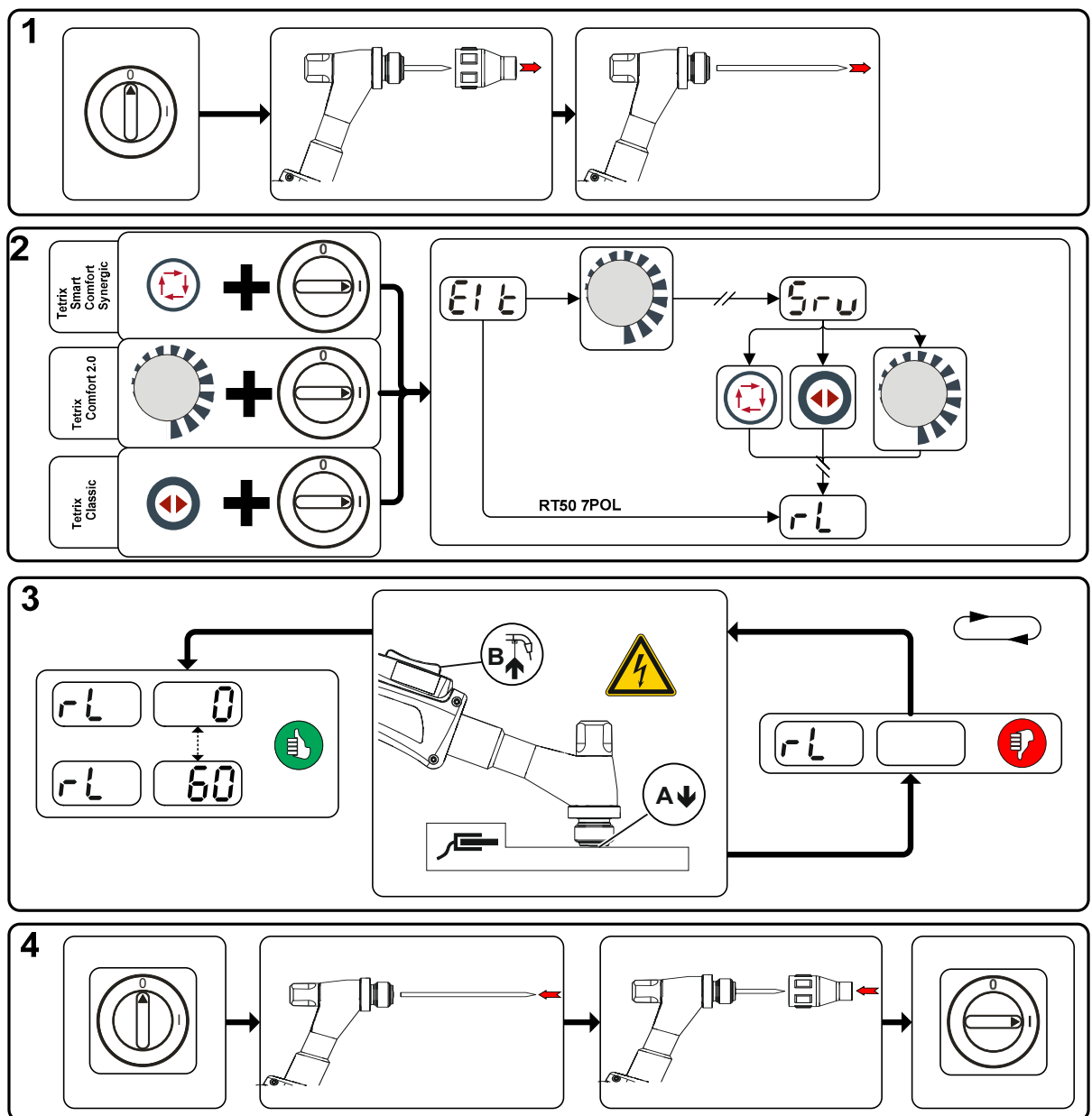





Figure 5-2

### 1 Preparation

- Switch off the welding machine.
- Unscrew the gas nozzle from the welding torch.
- Unfasten the tungsten electrode and extract.

### 2 Configuration

- Press the  or  (Tetrix Classic) push-button while simultaneously switching on the welding machine.
- Release push-button.
- The required parameter can now be selected using the  rotary knob.

### 3 Adjustment/measurement

- Applying slight pressure, press the welding torch with the collet against a clean, purged location on the workpiece and then press the torch trigger for approx. 2 seconds. A short-circuit current will flow briefly, which is used to determine and display the cable resistance. The value can be between 0 mΩ and 60 mΩ. The new value is immediately saved without requiring further confirmation. If no value is shown on the right-hand display, then measurement failed. The measurement must be repeated.

### 4 Restoring welding standby mode

- Switch off the welding machine.
- Lock the tungsten electrode in the collet again.
- Screw the gas nozzle onto the welding torch.
- Switch on the welding machine

## 5.9 Protective flap, welding machine control

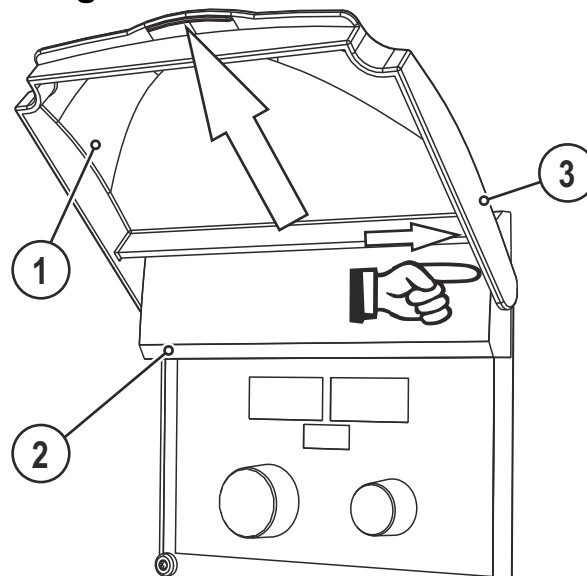


Figure 5-3

Item	Symbol	Description
1		Protective cap
2		Lid
3		Bracket, protective cap

- Push the right-hand bracket of the protective cap to the right and remove the protective cap.

## 6 Maintenance, care and disposal



**DANGER**



### **Improper maintenance and testing**

**The equipment may only be cleaned, repaired or tested by specialist, skilled persons! A skilled person is one who, due to training, knowledge and experience, is able to recognise the dangers that can occur during testing of this equipment as well as possible subsequent damage and who is able to implement the required safety procedures.**

- Complete all tests given in the chapter below!
- Only put the equipment back into operation following a successful test.

Repair and maintenance work may only be performed by qualified authorised personnel; otherwise the right to claim under warranty is void. In all service matters, always consult the dealer who supplied the machine. Return deliveries of defective equipment subject to warranty may only be made through your dealer. When replacing parts, use only original spare parts. When ordering spare parts, please quote the machine type, serial number and item number of the machine, as well as the type designation and item number of the spare part.

### **6.1 General**

When used in the specified environmental conditions and under normal operating conditions, this machine is largely maintenance-free and requires a minimum of care.

There are some points, which should be observed, to guarantee fault-free operation of your welding machine. Among these are regular cleaning and checking as described below, depending on the pollution level of the environment and the length of time the unit is in use.

### **6.2 Maintenance work, intervals**

#### **6.2.1 Monthly maintenance tasks**

- Check control leads and their strain relief for damage.
- Carry out functional test of operating, signalling, safety and/or adjustment devices.
- Other, general condition

## 6.3 Disposing of equipment



### **Proper disposal!**

**The machine contains valuable raw materials, which should be recycled, and electronic components, which must be disposed of.**

- **Do not dispose of in household waste!**
- **Observe the local regulations regarding disposal!**



### 6.3.1 Manufacturer's declaration to the end user

- According to European provisions (guideline 2002/96/EG of the European Parliament and the Council of January, 27th 2003), used electric and electronic equipment may no longer be placed in unsorted municipal waste. It must be collected separately. The symbol depicting a waste container on wheels indicates that the equipment must be collected separately.  
This machine is to be placed for disposal or recycling in the waste separation systems provided for this purpose.
- According to German law (law governing the distribution, taking back and environmentally correct disposal of electric and electronic equipment (ElektroG) from 16.03.2005), used machines are to be placed in a collection system separate from unsorted municipal waste. The public waste management utilities (communities) have created collection points at which used equipment from private households can be disposed of free of charge.
- Information about giving back used equipment or about collections can be obtained from the respective municipal administration office.
- EWM participates in an approved waste disposal and recycling system and is registered in the Used Electrical Equipment Register (EAR) under number WEEE DE 57686922.
- In addition to this, returns are also possible throughout Europe via EWM sales partners.

## 6.4 Meeting the requirements of RoHS

We, EWM AG Mündersbach, hereby confirm that all products supplied by us which are affected by the RoHS Directive, meet the requirements of the RoHS (Directive 2011/65/EU).

## 7 Technical data

 **Performance specifications and guarantee only in connection with original spare and replacement parts!**

### 7.1 RT50 7POL

Interface	7-pole
Dimensions L/W/H	115 x 235 x 300 mm
Weight	3,2 kg
Standards	IEC 60974-1, -10 CE

**8 Accessories****8.1 Connection and extension cables**

Type	Designation	Item no.
FRV 7POL 10 m	Extension/connecting cable	092-000201-00000
FRV 7POL 20 m	Extension/connecting cable	092-000201-00001
FRV 7POL 1 m	Extension/connecting cable	092-000201-00002
FRV 7POL 5 m	Extension/connecting cable	092-000201-00003

## 9 Appendix B

### 9.1 Overview of EWM branches

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