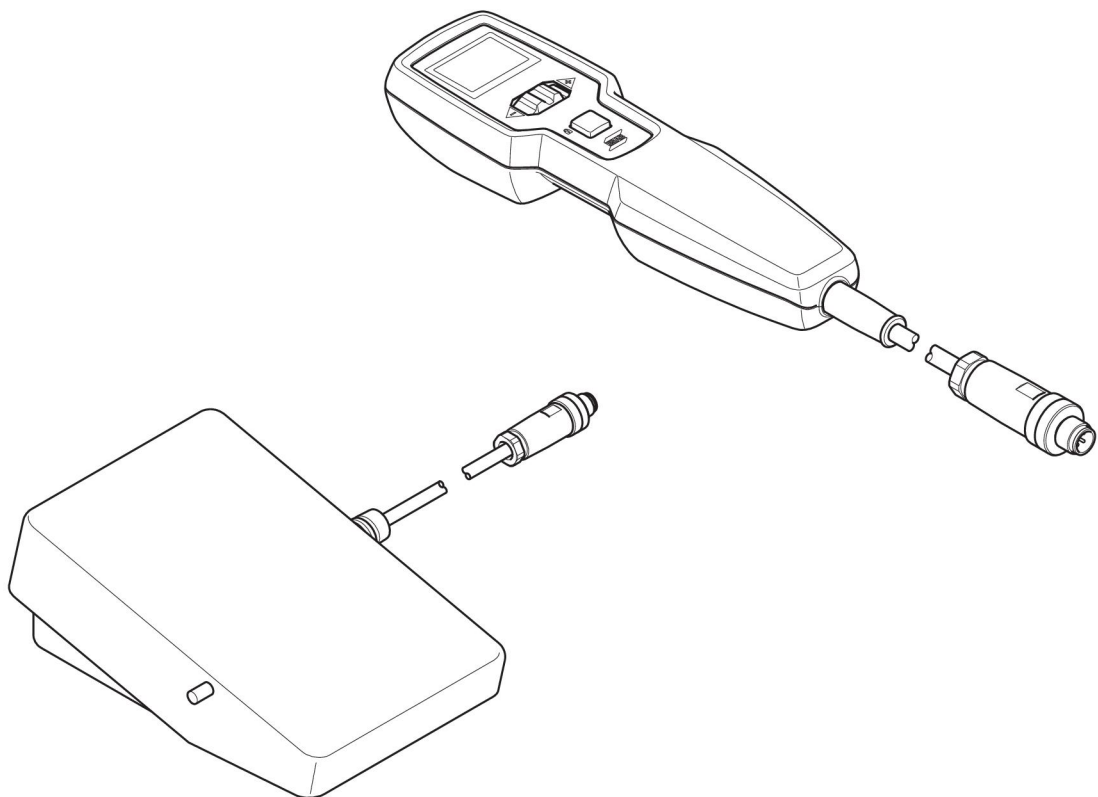




# ***ER 1, ER 1F***

## ***Remote controls***



## **Instruction manual**



## EU DECLARATION OF CONFORMITY

According to  
The Low Voltage Directive 2014/35/EU, entering into force 20 April 2016  
The EMC Directive 2014/30/EU, entering into force 20 April 2016  
The RoHS Directive 2011/65/EU, entering into force 2 January 2013

**Type of equipment**  
Remote Control Unit

**Type designation**  
ER 1F from serial number 705 xxx xxxx (2017 w/05)  
ER 1 from serial number 705 xxx xxxx (2017 w/05)

**Brand name or trade mark**  
ESAB

**Manufacturer or his authorised representative established within the EEA**  
**Name, address, and telephone No:**  
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**The following harmonised standard in force within the EEA has been used in the design:**  
EN 60974-1:2017, Arc Welding Equipment – Part 1: Welding Power Sources  
EN 60974-10:2014/A1:2015, Arc Welding Equipment – Part 10: Electromagnetic Compatibility (EMC) requirements

**Additional Information:**  
Restrictive use, Class A equipment, intended for use in location other than residential

**By signing this document, the undersigned declares as manufacturer, or the manufacturer's authorised representative established within the EEA, that the equipment in question complies with the safety requirements stated above.**

**Date**

**Signature**

**Position**

Gothenburg  
2017-05-03

Stephen Argo

Global Director Equipment

CE 2017

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# 1 INTRODUCTION

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The remote control ER 1 can be used to control current, arc force and memory selection. The available functions and number of memories depend on the power source the remote control is connected to.

The foot pedal ER 1F can be used to control current. It also has a trigger function, which can be used for weld start.

**ESAB accessories for the product can be found in the "ACCESSORIES" chapter of this manual.**

## 1.1 Equipment

The ER 1 remote control is supplied with:

- 5 m (16.4 ft) connection cable
- instruction manual

The ER 1F remote control (foot pedal) is supplied with:

- 5 m (16.4 ft) connection cable
- instruction manual

## 1.2 Meaning of symbols

**As used throughout this manual: Means Attention! Be Alert!**



### **DANGER!**

Means immediate hazards which, if not avoided, will result in immediate, serious personal injury or loss of life.



### **WARNING!**

Means potential hazards which could result in personal injury or loss of life.



### **CAUTION!**

Means hazards which could result in minor personal injury.



### **WARNING!**

Before use, read and understand the instruction manual and follow all labels, employer's safety practices and Safety Data Sheets (SDSs).





**NOTE!**

**Dispose of electronic equipment at the recycling facility!**

In observance of European Directive 2012/19/EC on Waste Electrical and Electronic Equipment and its implementation in accordance with national law, electrical and/or electronic equipment that has reached the end of its life must be disposed of at a recycling facility.

As the person responsible for the equipment, it is your responsibility to obtain information on approved collection stations.

For further information contact the nearest ESAB dealer.



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## 2 TECHNICAL DATA

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	<b>ER 1</b>	<b>ER 1F</b>
<b>Operating voltage</b>	12–24 V DC	12–24 V DC
<b>Dimensions L × W × H</b>	205 × 59 × 38 mm ±10% (8.0 × 2.3 × 1.5 in. ±10%)	225 × 152 × 82 mm ±10% (8.9 × 6.0 × 3.2 in. ±10%)
<b>Weight</b> unit with 5 meter (16.4 ft) cable	475 g (1.05 lb)	2250 g (4.96 lb)
<b>Operating temperature</b>	-20 to +60 °C (-4 to 140 °F)	-20 to +60 °C (-4 to 140 °F)
<b>Transportation temperature</b>	-40 to +80 °C (-40 to 176 °F)	-40 to +80 °C (-40 to 176 °F)
<b>Enclosure class</b>	IP53	IP23

## 3 OPERATION ER 1









### 3.1 Start up

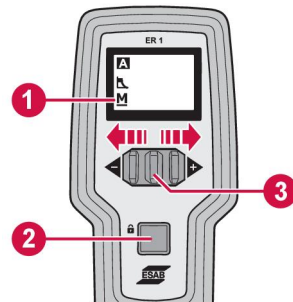
Connection of the remote control to the power source is described in the instruction manual for the power source.

The software version of the remote control is shown during the startup sequence of the remote control.

### 3.2 The remote control menu

Symbols shown in the remote control display (1)

<b>A</b>	Current
	Arc Force
	Soft/Crisp
<b>M</b>	Memory
	Pulse peak current
	Pulse background current
	Locked
	Unlocked
	USB mode active on the power source. No changes can be made from the remote control while this symbol is shown.
	The power source panel is active. No changes can be made from the remote control. The remote control is inactive.



1. Symbols shown in the remote control display
2. Button for activation of functions
3. Wheel for value adjustment



#### NOTE!

The available functions and number of memories depend on the power source the remote control is connected to.

### 3.3 Activate the remote control

**When connected to a power source with manual activation:**

1. Activate the remote control from the power source as described in the instruction manual for the power source.
2. The power source panel will be locked for interaction, but will reflect the changes made on the remote control.



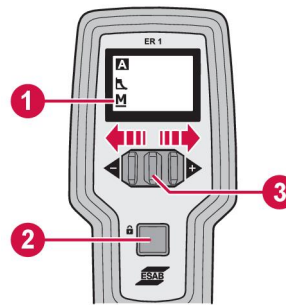
**When connected to a power source with automatic activation:**

1. The remote control is activated when connected to the power source.
2. The power source panel will be active together with the remote control. Both displays will reflect the changes made.

The remote control display reflects all supported changes done on the power source panel. When changing values from the power source panel are not supported by the remote control, the remote control display will show the previous supported value.

### 3.4 Set value

1. Press the button (2) on the remote control to toggle between the available functions (1) and select a function.
2. Rotate the wheel (3) to the left to decrease and to the right to increase the value.
3. The value change is shown in the remote control display. The value on the power source panel display will change accordingly and reflect the change made with the remote control.



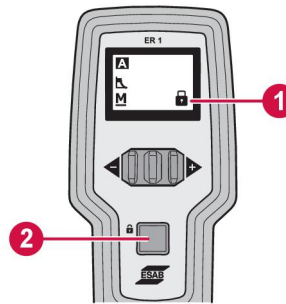
### 3.5 Activate and deactivate memory

1. In the menu, select the memory symbol (1). The memory symbol is highlighted without a memory number.
2. Rotate the wheel (3) to select a memory number. For memory settings, see the power source instruction manual.
3. Press the button (2) to activate the chosen memory. The memory value is shown on the display. The power source reflects the memory value.
4. To deactivate a memory and the values from it, rotate the wheel (3) to change a value or go to memory mode and select *Empty memory* (no number).



### 3.6 Lock and unlock the remote control

1. Press and hold the button (2) for 2 seconds to lock the remote control for interaction.
2. A big lock symbol will appear shortly on the display. A small lock symbol (1) is shown in the right corner to indicate that the remote control is locked for interaction.
3. To unlock the remote control press and hold the button (2) for 2 seconds. An unlock symbol indicates that the remote control is unlocked.



### 3.7 Deactivate the remote control

#### When connected to a power source with manual activation:

1. Deactivate the remote control from the power source as described in the instruction manual for the power source.
2. When the remote control is deactivated, the remote control is inactive and locked for interaction.



#### When connected to a power source with automatic activation:

1. Unplug the remote control from the power source to deactivate the remote control as described in the instruction manual for the power source.

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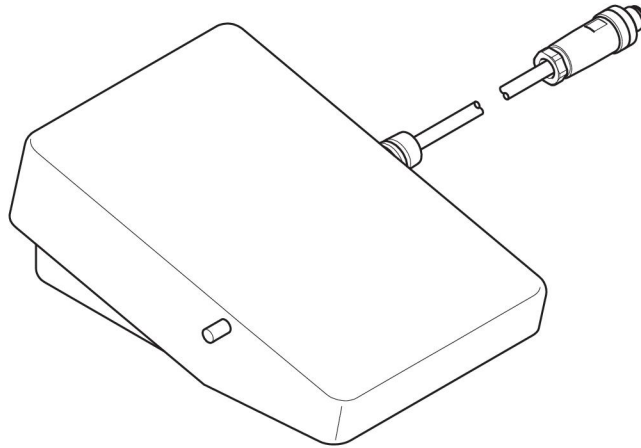
## 4 OPERATION ER 1F

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### 4.1 Start up

The remote control ER 1F (foot pedal) is used for TIG welding only.

Connect the foot pedal to the power source as described in the instruction manual for the power source.



### 4.2 Activate the foot pedal

**When connected to a power source with manual activation:**

1. Activate the foot pedal from the power source as described in the instruction manual for the power source.
2. Use the foot pedal for weld start and control of welding current. The available current range depend on the settings made on the power source.

It is possible to change current value from the power source panel. The power source panel will be locked for all other interaction, but will reflect the value changes done with the foot pedal.

**When connected to a power source with automatic activation:**

1. The foot pedal is activated when connected to the power source.
2. Use the foot pedal for weld start and setting of welding current. The available current range depend on the settings made on the power source. The power source panel and the foot pedal are both active.



### 4.3 Deactivate the foot pedal

**When connected to a power source with manual activation**

Deactivate the foot pedal from the power source as described in the instruction manual for the power source.



**When connected to a power source with automatic activation**

Unplug the foot pedal from the power source to deactivate the remote control as described in the instruction manual for the power source.

## 5 MAINTENANCE

**DANGER!**

Disconnect the power supply when engaged in electrical enclosures and electric motors. Work with high voltage upon contact may result in death.

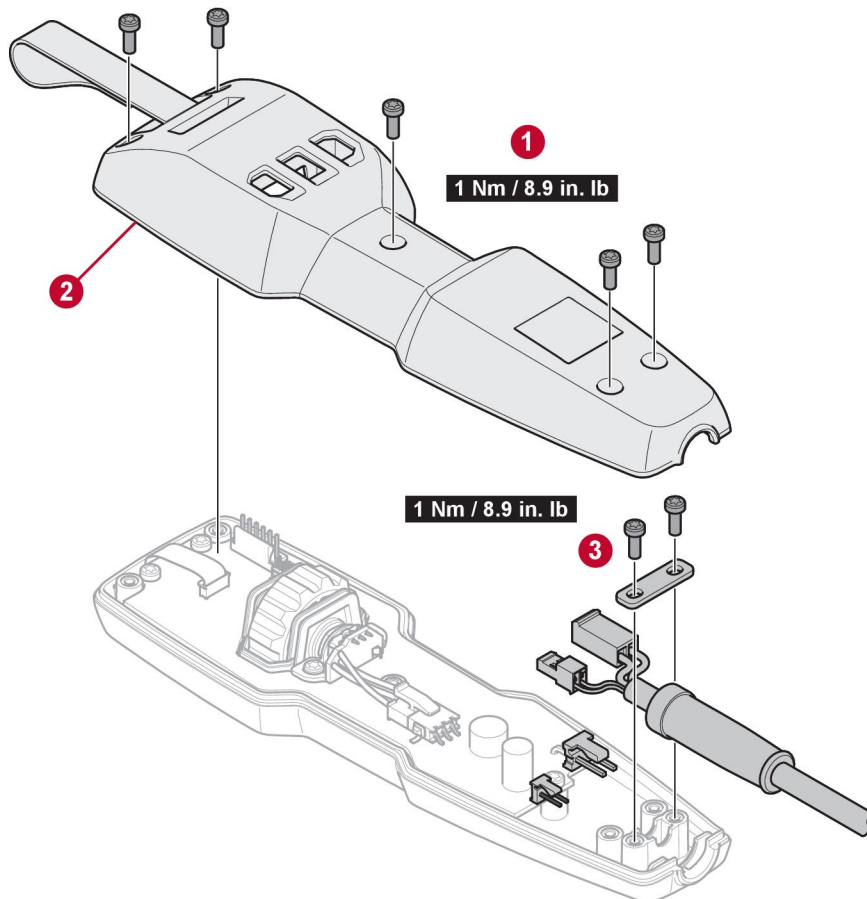
**WARNING!**

Maintenance and repair work should be performed by an experienced person, and electrical work only by a trained electrician.

- Inspect all cables.
- Check all electrical connections.

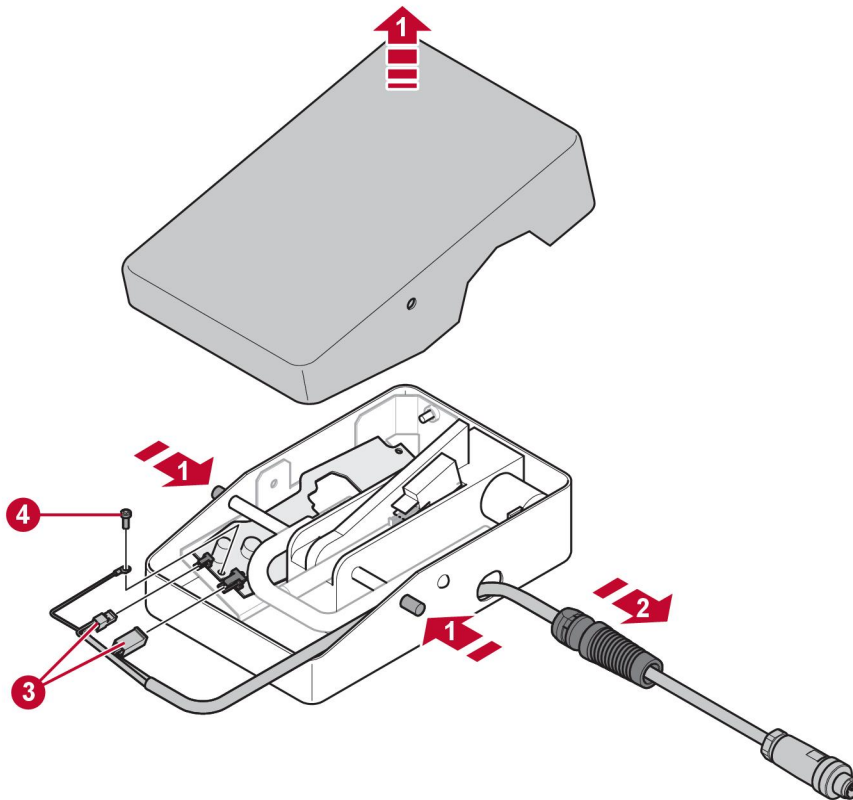
### 5.1 Replace cable ER 1

1. Remove the five screws (1).
2. Remove the back cover of the remote control (2).
3. Remove the three screws (3).
4. Remove the connectors.
5. Replace the cable.
6. Insert the connectors and tighten the screws using the correct tightening torque according to the illustration.
7. Replace the back cover.



## 5.2 Replace cable ER 1F

1. Press the two spring latches (1) to release the top cover.
2. Press and release the cable gland (2). The PCBA and connectors are covered by an IP protection sheet.
3. Remove the connectors (3).
4. Remove the screw connecting the shield of cable to the metal plate used for mounting the PCBA (4).
5. Replace the cable.
6. Insert the connectors (3).
7. Ensure that the IP protection sheet is covering the PCBA and connectors.
8. Replace the top cover.



## **6 TROUBLESHOOTING**

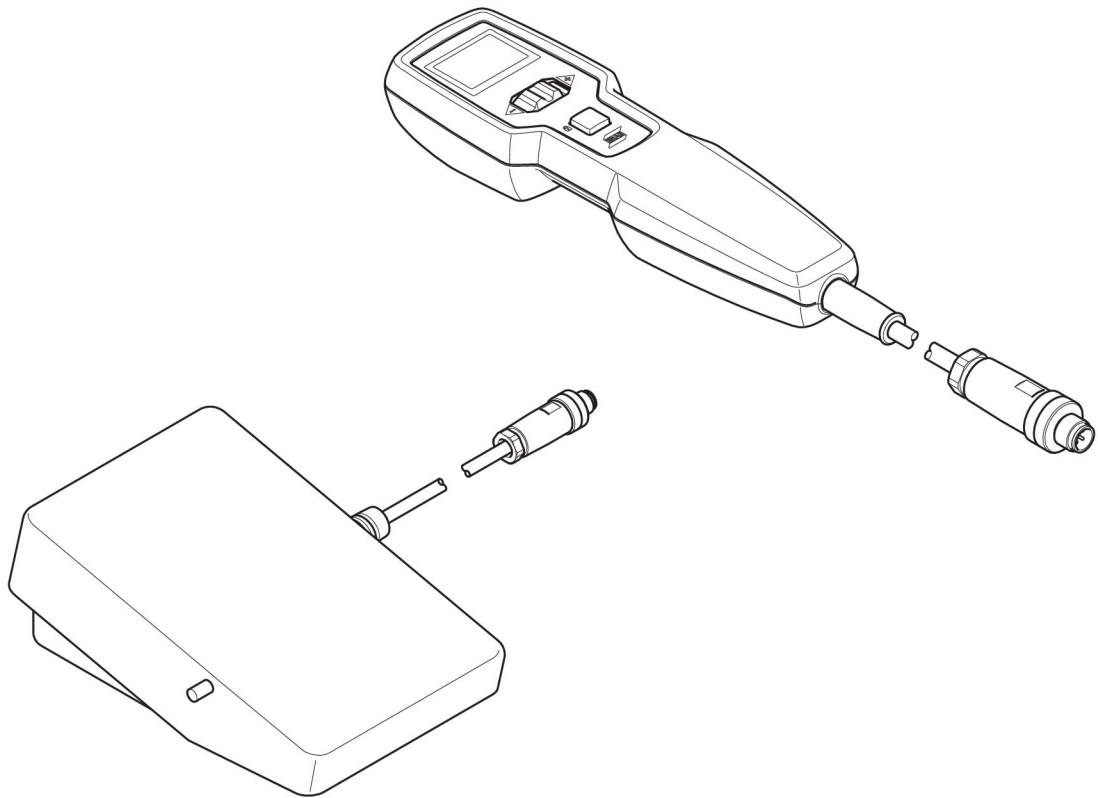
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For troubleshooting and error codes, see the power source instruction manual.

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## 7 ORDERING NUMBERS

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Ordering number	Denomination	Type
0445 536 880	ER 1 Remote control with 4 pin, 5 m (16.4 ft) cable	Handheld remote
0445 536 881	ER 1 Remote control with 6 pin, 5 m (16.4 ft) cable	Handheld remote
0445 536 882	ER 1 Remote control with 6 pin, 10 m (32.8 ft) cable	Handheld remote
0445 536 883	ER 1 Remote control with 6 pin, 25 m (82 ft) cable	Handheld remote
0445 550 880	ER 1F Remote control with 4 pin, 5 m (16.4 ft) cable	Foot pedal
0445 550 881	ER 1F Remote control with 6 pin, 5 m (16.4 ft) cable	Foot pedal
0445 550 882	ER 1F Remote control with 6 pin, 10 m (32.8 ft) cable	Foot pedal

## 8 ORDERING SPARE PARTS

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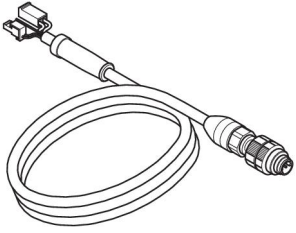
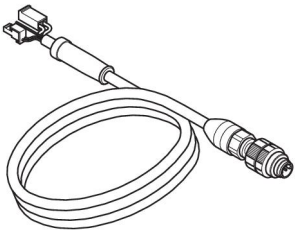
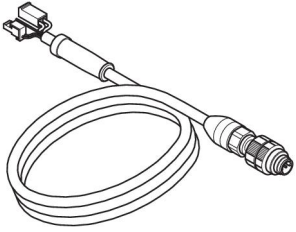
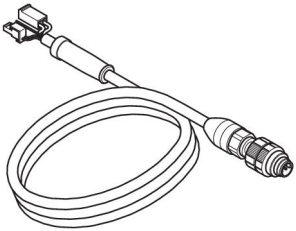


**CAUTION!**

Repair and electrical work should be performed by an authorised ESAB service technician. Use only ESAB original spare and wear parts.

Spare parts and wear parts can be ordered through your nearest ESAB dealer, see the back cover of this document. When ordering, please state product type, serial number, designation and spare part number in accordance with the spare parts list. This facilitates dispatch and ensures correct delivery.

## 9 ACCESSORIES

<b>ER 1 (0445 536 880)</b>		
0445 450 880	Interconnection cable, 4 pin, 5 m (16.4 ft)	
<b>ER 1 (0445 536 881)</b>		
0445 280 880	Interconnection cable, 6 pin, 5 m (16.4 ft)	
0445 280 881	Interconnection cable, 6 pin, 10 m (32.8 ft)	
0445 280 882	Interconnection cable, 6 pin, 25 m (82.0 ft)	
<b>ER 1F (0445 550 880)</b>		
0445 451 880	Interconnection cable, 4 pin, 5 m (16.4 ft)	
<b>ER 1F (0445 550 881)</b>		
0445 254 880	Interconnection cable, 6 pin, 5 m (16.4 ft)	
0445 254 881	Interconnection cable, 6 pin, 10 m (32.8 ft)	





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